

July 6, 2023

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Re: Letter Report

Geotechnical Recommendations for Noise Walls, Sign Structures, and DMS/ ITS

Interstate 80 Reconstruction West Mainline

PTB/ Item No. 194/011

IDOT Contract No. 62R27

Will County, Illinois

**Wang No. KE225089/ 7901-15-01**

This letter report presents the results of our geotechnical subsurface investigation, laboratory testing, geotechnical engineering analyses, and recommendations for the design and construction of ground mounted sign structures, noise walls, and DMS/ITS proposed along the Interstate 80 (I-80) West Mainline between Stations 410+00 and 518+00, in Will County, Illinois. The structures are part of the proposed widening and reconstruction of I-80 from Houbolt Road to west of Center Street and will be constructed as part of Contract 62R27. On the USGS Channahon *Quadrangle 7.5 Minute Series* map, the structures are located in the NW  $\frac{1}{4}$  of Section 23, SE  $\frac{1}{4}$  of Section 23, and NW  $\frac{1}{4}$  of Section 24, Tier 35 N, Range 9 E of the Third Principal Meridian. A *Site Location Map* is presented as Exhibit 1.

Based on drawings provided by TranSystems Corporation (TranSystems), Wang Engineering, Inc. (Wang) understands Noise Walls (NW) 13 and NW 14 will be constructed along the south side of the I-80 westbound lanes. Two overhead sign structures and two cantilever sign structure will be installed between Stations 429+00 and 475+00. In addition, one DMS/ ITS is proposed at Station 500+85. The proposed noise walls details are summarized in Table 1 and the proposed sign structures and DMS/ ITS details are summarized in Table 2.

Table 1: Proposed Noise Walls

Noise Wall No.	Start Station	End Station	Offset	Wall Length (feet)	Max Noise Wall Height (feet)
NW 13	312+20	302+60	14.01 RT to 83.66 RT	1110.57	15.0
NW 14	472+25	519+00	63.50 RT to 110.00 RT	5378.96	21.0

Table 2: Proposed Sign Structures and DMS/ ITS

Station	Type	Center-to-Center Supports / Cantilever Length (ft-in)	Total Sign Area (ft <sup>2</sup> )
429+00	Overhead Span I-A	88'-0"	510.5
435+00	Cantilever III-C-A	36'-0"	224.75
459+72	Overhead Span I-A	83'-0"	478.5
475+25	Cantilever III-C-A	31'-0"	137.75
500+85	DMS/ITS	85'-0"	240.0

The purpose of our investigation was to characterize the site soil and groundwater conditions for the design and construction of the proposed structures.

## FIELD AND LABORATORY INVESTIGATIONS

The subsurface investigation consisted of a total of 51 structure borings performed by Wang Testing Services (WTS) between January 27 and April 11, 2023. Eight borings were drilled for noise wall B13, designated as NAW13-01 through NAW13-08, and 35 borings drilled for noise wall B14, designated as NAW14-01 through NAW14-35. Two borings were drilled for each overhead sign, designated as Borings OHS01-01, OHS01-02, OHS03-01, and OHS03-02, one boring for each of the cantilever signs, designated as OHS02-01 and OHS04-01, and two borings for DMS/ ITS structure designated as DMS1-01 and DMS1-02. The subsurface investigation program is summarized in Tables 3 and 4. The boring locations were surveyed by Wang with a mapping-grade GPS. Elevations, stations, and offsets were provided by TranSystems. The as-drilled boring locations are shown in the *Boring Logs* (Appendix A) and on the *Boring Location Plan* (Exhibit 2).

Table 3: Summary of Noise Wall Borings

Noise Wall No.	Stations	Boring ID	Existing Surface Elevations (feet)	Boring Depth (feet)
NW 13	312+20 to 302+60	NAW13-01 through NAW13-08	584.0 to 600.4	18.9 to 22.5
NW 14	475+25 to 519+00	NAW14-01 through NAW14-35	588.8 to 610.7	15.0 to 20.0

Table 4: Summary of Sign Structure and DMS/ ITS Borings

Location	Structure Type	Boring ID	Existing Surface Elevations (feet)	Boring Depth (feet)
429+00	Overhead Span	OHS01-01 and OHS01-02	587.9 and 588.5	28.8 and 28.9
435+00	Cantilever	OHS02-01	590.7	30.0
459+72	Overhead Span	OHS03-01 and OHS03-02	601.4 and 601.7	30.0 and 35.0
475+25	Cantilever	OHS04-01	602.5	35.0
500+85	DMS / ITS	DMS1-01 and DMS1-02	593.5 and 597.7	21.5 and 26.0

A combination of ATV- and truck-mounted drilling rigs, equipped with hollow stem augers, was used to advance and maintain open boreholes. Soil sampling was executed according to AASHTO T 206, "Penetration Test and Split Barrel Sampling of Soils." The soil was sampled at 2.5-foot intervals to the boring termination depth. Soil samples collected from each sampling interval were placed in sealed jars, and the rock cores were placed into marked core boxes and transported to the laboratory for further examination and testing.

Field boring logs prepared and maintained by a Wang field geologist included lithological descriptions, visual-manual soil classifications (IDH textural classification), results of pocket penetrometer or Rimac unconfined compressive strength testing on cohesive soils, and Standard Penetration Test (SPT) results recorded as blows per 6 inches of penetration.

Groundwater observations were made during and at completion of drilling. It should be noted that groundwater levels might vary with seasonal rainfall patterns and long-term climate fluctuations or be

influenced by local site conditions. The boreholes were grouted immediately upon completion and the surface was restored as close as possible to the original condition.

Soil samples were tested in our laboratory for moisture content (AASHTO T 265). Atterberg limits (AASHTO T89 and T90) and particle size analysis (AASHTO T88) tests were performed on selected samples. The laboratory test results are shown in the *Boring Logs* (Appendix A) and in the *Laboratory Test Results* (Appendix B).

## **SOIL AND GROUNDWATER CONDITIONS**

Detailed descriptions of the soil conditions encountered during the subsurface investigation are presented in the attached *Boring Logs* (Appendix A) and in the *Soil Profiles* (Exhibits 3-1 to 3-14). Please note that strata contact lines represent approximate boundaries between soil types. The actual transition between soil types in the field may be gradual in horizontal and vertical directions.

### **Noise Wall 13**

At the surface, Borings NAW13-04 and NAW13-08 encountered six to 15 inches of dark brown silty clay loam topsoil. Boring NAW13-07 revealed six inches of asphalt pavement over six inches of crushed stone base course. In descending order, the general lithological succession encountered at the surface and beneath the topsoil or pavement structure includes: 1) man-made ground (fill); 2) medium dense to very dense sandy loam to sandy gravel; 3) stiff to hard silty clay; 4) medium dense to very dense sand to sandy gravel; 5) soft to very stiff silty clay to clay; 6) loose to very dense silt; 7) medium dense to very dense sandy loam, gravelly loam to sandy gravel; and 8) hard silty clay loam to silty loam.

#### *(1) Man-made ground (fill)*

From the surface and beneath the topsoil or pavement structure, the borings encountered 0.8 to 15.0 feet of granular and cohesive fill. The granular fill consists of medium dense to dense, damp sandy loam and sandy gravel with SPT N-values of 19 to 44 blows per foot. The cohesive fill consists of medium stiff to hard silty clay, silty clay loam to clay loam with unconfined compressive strength ( $Q_u$ ) values of 0.8 to greater than 4.5 tsf and moisture content values of 15 to 33%. Laboratory index testing on a sample from this layer shows  $L_L$  and  $P_L$  values of 48% and 19%, respectively.

At an elevation of 584.9 feet (15.5 feet bgs), Boring NAW13-08 encountered 2.5 feet of hard, black silty clay buried topsoil. The buried topsoil has a  $Q_u$  value of 4.0 tsf and a moisture content value of 34%.

*(2) Medium dense to very dense sandy loam to sandy gravel*

Beneath the fill, at elevations of 583.0 to 589.1 feet (0.7 to 13.0 feet bgs), the borings revealed medium dense to very dense, damp sandy loam to sandy gravel. This soil unit has SPT N-values of 14 blows per foot to greater than 98 blows per nine inches.

*(3) Stiff to hard silty clay*

At elevations of 579.8 to 586.6 feet (3.0 to 8.0 feet bgs), the borings revealed up to five feet of stiff to hard silty clay. This soil unit has  $Q_u$  values of 1.5 to 6.6 tsf and moisture content values of 17 to 21%.

*(4) Medium dense to very dense sand to sandy gravel*

At elevations of 576.0 to 581.6 feet (8.0 to 10.5 feet bgs), the borings revealed 0.4 to 8.3 feet of medium dense to very dense, damp to wet sand to sandy gravel. This soil unit has SPT N-values of 19 blows per foot to greater than 92 blows per 11 inches.

*(5) Soft to very stiff silty clay to clay*

At elevations of 576.3 to 581.2 feet (9.1 to 13.0 feet bgs), the borings revealed up to five feet of soft to very stiff silty clay to clay. This soil unit has  $Q_u$  values of 0.4 to 3.9 tsf and moisture content values of 18 to 25%.

*(6) Loose to very dense silt*

At elevations of 573.3 to 576.2 feet (12.0 to 18.0 feet bgs), the borings encountered up to three feet of loose to very dense, moist to wet silt. This unit has SPT N-values of 6 to greater than 80 blows per foot.

*(7) Medium dense to very dense sandy loam, gravelly loam to sandy gravel*

At elevations of 566.0 to 574.1 feet (14.7 to 18.0 feet bgs), the borings revealed up to 4.5 feet of medium dense to very dense, damp to wet sandy loam, gravelly loam to sandy gravel. This soil unit has SPT N-values of 26 blows per foot to greater than 50 blows per five inches.

*(8) Hard silty clay loam to silty loam*

At elevations of 566.6 to 567.8 feet (16.2 to 18.8 feet bgs), the borings revealed to the end of each

borehole depth hard silty clay loam to silty loam. This soil unit has  $Q_u$  values of greater than 4.5 tsf and moisture content values of 9 to 13%. Auger refusal occurred in Boring NAW13-01 at an elevation of 562.0 feet (22.0 feet bgs) which might indicate possible bedrock.

Groundwater was observed during drilling at elevations of 569 to 576 feet (13 to 21 feet bgs) within the interbedded granular layers. Upon completion of drilling, groundwater was measured within the augers at elevations of 567 and 574 feet (18 and 20 feet bgs).

### **Noise Wall 14**

At the surface, the borings encountered three to 14 inches of dark brown and black silty clay to silty clay loam topsoil. Borings NAW14-05, NAW14-06, and NAW14-16 to NAW14-19 revealed 14 to 18 inches of asphalt pavement. In descending order, the general lithological succession encountered beneath the topsoil or pavement includes: 1) man-made ground (fill); 2) medium stiff to hard silty clay to clay and very soft silty clay loam to silty loam; 3) stiff to hard silty clay to silty clay loam; 4) loose to very dense sand, sandy loam, and sandy gravel and medium dense to very dense silt; 5) stiff to hard silty clay loam to silty loam; 6) medium dense to very dense sandy gravel to gravel weathered bedrock.

#### *(1) Man-made ground (fill)*

Beneath the topsoil or pavement, the borings encountered up to 15 feet of granular and cohesive fill. The granular fill consists of very loose to medium dense, damp to saturated sandy loam and gravelly sand with SPT N-values of three and 16 blows per foot. The cohesive fill consists of medium stiff to hard silty clay, silty clay loam and clay loam with  $Q_u$  values of 0.5 to 5.5 tsf and moisture content values of 10 to 29%.

Below the fill in Borings NAW14-02 and NAW14-16, up to 3.8 feet of very stiff, dark brown and black silty clay buried topsoil was present. The buried topsoil has  $Q_u$  values of 2.0 to 3.0 tsf and moisture content values of 21 to 37%.

#### *(2) Medium stiff to hard silty clay to clay and very soft silty clay loam to silty loam*

Beneath the topsoil and fill, at elevations of 586.6 to 598.4 feet (0.3 to 8.0 feet bgs), the borings revealed 1.6 to 7.5 feet of medium stiff to hard silty clay to clay. The layer has  $Q_u$  values of 0.5 to greater 4.5 tsf and moisture contents ranging from 18 to 56%. Saturated sand lenses were present in this unit.

At an elevation of 586.2 feet (10.5 feet bgs), Boring NAW14-02 revealed 8.4 feet of very soft, moist silty clay loam to silty loam with  $Q_u$  values of less than 0.2 and moisture content values of 15 to 33%. Laboratory index testing on a sample from this layer shows  $L_L$  and  $P_L$  values of 39% and 17%, respectively.

*(3) Stiff to hard silty clay to silty clay loam*

At elevations of 583.1 to 603.0 feet (0.3 to 10.5 feet bgs), the borings revealed up to 14.5 feet of stiff to hard silty clay to silty clay loam. The layer has  $Q_u$  values of 1.1 to 7.4 tsf and moisture content values of 13 to 26%.

At elevations of 584.0 and 591.1 feet (5.5 feet bgs), Borings NAW14-08 and NAW14-14 encountered up to 3.8 feet of medium stiff to hard loam to sandy loam layers within the silty clay to silty clay loam. The loam has  $Q_u$  values of 0.5 to greater than 4.5 tsf and moisture content values of 14 to 21%. At an elevation of 576.5 feet (13 feet bgs), Boring NAW14-14 revealed 3.3 feet of soft silty clay loam with a  $Q_u$  value of 0.4 tsf and a moisture content value of 20%.

*(4) Loose to very dense sand, sandy loam, and sandy gravel and medium dense to very dense silt*

At elevations of 575.8 to 597.0 feet (1.2 to 18.0 feet bgs), the borings encountered 0.8 to 17 feet of loose to very dense, damp to saturated sand, sandy loam, and sandy gravel interfingering unit 3. The unit has SPT N-values of 6 to 65 blows per foot.

At elevations of 574.9 to 585.7 feet (13.0 to 19.4 feet bgs), the borings encountered 0.2 to 3.3 feet of medium dense to very dense, wet to saturated silt interfingering unit 3. The silt has SPT N-values of 11 to 66 blows per foot.

*(5) Stiff to hard silty clay loam to silty loam*

At elevations of 574.1 to 583.4 feet (13.0 to 18.8 feet bgs), the borings encountered up to five feet of stiff to hard silty clay loam to silty loam. This unit has  $Q_u$  values of 1.9 to 7.7 tsf, SPT N-values of 14 blows per foot to greater than 60 blows per 11 inches, and moisture content values of 10 to 14%.

*(6) Medium dense to very dense sandy gravel to gravel weathered bedrock*

At elevations of 570.8 to 576.8 feet (15.5 to 18.0 feet bgs), the borings encountered up to 4.5 feet of medium dense to very dense, wet to saturated sandy gravel to gravel weathered bedrock. The weathered bedrock has SPT N-values of 24 blows per foot to greater than 50 blows per three inches.

At an elevation of 576.7 feet (20 feet bgs), Boring NAW14-02 encountered possible shale bedrock. Auger refusal occurred in Borings NAW14-13 to NAW14-15 and NAW14-25 at elevations of 569.5 to 574.0 feet (18.8 to 20.0 feet bgs). This might be an indication of possible bedrock.

Groundwater was observed during drilling at elevations of 577 to 597 feet (1.0 to 18.5 feet bgs) within the interbedded granular layers. Upon completion of drilling, groundwater was measured within the augers at elevations of 574 and 592 feet (12 and 19 feet bgs). At Borings NAW14-26 to NAW14-29 standing water was present at the time of drilling. In Borings NAW14-08 and NAW14-10 cave in was observed at 13 and 18 feet bgs.

#### **Overhead Sign Structure at Station 429+00 (OHS01-01 and OHS01-02)**

At the surface, Boring OHS01-01 encountered three inches of brown silty clay loam topsoil. From the surface and beneath the topsoil, the borings encountered up to 5.5 feet of stiff to very stiff, silty clay to silty clay loam fill. The fill has  $Q_u$  values of 1.8 to 2.5 tsf and moisture content values of 14 to 19%.

At elevations of 582.4 and 585.5 feet (3.0 and 5.5 feet bgs), the borings encountered up to 20 feet of medium dense to very dense, damp to wet sandy gravel. The sandy gravel has SPT N-values of 27 to 76 blows per foot. At elevations of 564.9 and 565.5 feet (23.0 feet bgs), the borings revealed up to 5.8 feet of stiff to hard, dense to very dense silty clay loam to silty loam. The silty clay loam to silty loam has  $Q_u$  values of 1.5 to greater than 4.5 tsf, SPT N-values of 48 blows per foot to greater than 50 blows per four inches, and moisture content values of 8 to 10%. At an elevation of 560.5 feet (28.0 feet bgs), Boring OHS01-01 encountered 0.9 feet of very dense, saturated sandy gravel with an SPT N-value of 100 blows per five inches.

Groundwater was observed while drilling at elevations of 566 and 587 feet (1.7 and 21.5 feet bgs) within the fill and granular soils. At the completion of drilling groundwater was observed at elevations of 560 and 568 feet (20 and 28 feet bgs).

#### **Cantilever Sign Structure at Station 435+00 (OHS02-01)**

At the surface, Boring OHS02-01 encountered eight inches of dark brown silty clay loam topsoil. Beneath the topsoil, the boring encountered up to 4.8 feet of cohesive fill. The fill consists of very stiff silty clay with  $Q_u$  values of 3.4 and 3.5 tsf and moisture content values of 18 and 22%.



Below the fill, at an elevation of 585.2 feet (5.5 feet bgs), OHS02-01 encountered up to 20 feet of medium dense to very dense, damp to wet sand to sandy gravel. The sand to sandy gravel has SPT N-values of 15 blows per foot to greater than 50 blows per five inches. At an elevation of 565.5 feet (25.5 feet bgs), the boring revealed 4.5 feet of hard to very dense silty clay loam to silty loam. The silty clay loam to silty loam has a  $Q_u$  value of greater than 4.5 tsf, SPT N-values of 66 and 89 blows per foot, and moisture content values of 8 and 9%.

Groundwater was observed while drilling at an elevation of 569 feet (22 feet bgs) within the sandy gravel layer. At the completion of drilling groundwater was observed at an elevation of 563 feet (28 feet bgs).

### **Overhead Sign Structure at Station 459+72 (OHS03-01 and OHS03-02)**

At the surface, the borings encountered four to 10 inches of brown silty clay loam. Beneath the surface, the borings encountered up to 11 feet of granular and cohesive fill. The granular fill consists of medium dense, damp gravel with a SPT N-value 27 blows per foot. The cohesive fill consists of medium stiff to hard clay, clay loam and silty clay with  $Q_u$  values of 0.5 to greater than 4.5 tsf and moisture content values of 6 to 32%. Below the fill, at elevations of 589.7 and 591.2 feet (10.5 and 11.8 feet bgs), the borings encountered very soft to very stiff, black and dark brown silty clay buried topsoil with  $Q_u$  values of 0.2 and 3.0 tsf and a moisture content value of 20%. The presence of this layer most likely indicates the boundary between fill and natural soils.

At elevations of 588.4 and 588.7 feet (13.0 feet bgs), the borings revealed 2.5 to 10.0 feet of very stiff to hard silty clay to clay with  $Q_u$  values of 3.5 to 5.1 tsf and moisture content values of 17 to 25%. At elevations of 585.9 and 586.2 feet (15.5 feet bgs), the borings encountered up to 14.5 feet of medium dense to very dense, damp to wet sand to sandy gravel. The sand to sandy gravel has SPT N-values of 10 blows per foot to greater than 84 blows per 11 inches.

Groundwater was observed while drilling at elevations of 598 and 574 feet (4.0 and 28.0 feet bgs) within the fill and granular layers. At the completion of drilling, Boring OHS03-02 observed a groundwater level at 581 feet (21.0 feet bgs). Boring OHS03-01 observed a cave-in at a depth of 31 feet bgs and was unable to measure a final groundwater level.

### **Cantilever Sign Structure at Station 475+25 (OHS04-01)**

At the surface, Boring OHS04-01 encountered 15 inches of asphalt pavement. Beneath the surface, the boring encountered up to 9.3 feet of cohesive and granular fill. The granular fill consists of medium dense, damp loam to silty clay loam with SPT N-values of 11 blows per foot. The cohesive fill consists of very stiff to hard, silty clay to silty clay loam with  $Q_u$  values of 2.5 to greater than 4.5 tsf and moisture content values of 15 to 30%.

Below the fill, at an elevation of 592.0 feet (10.5 feet bgs), the boring encountered 2.5 feet of very stiff, brown silty clay with a  $Q_u$  value of 2.5 tsf and a moisture content value of 17%. At an elevation of 589.5 feet (13 feet bgs), OHS04-01 encountered five feet of medium dense, damp sandy gravel with SPT N-values of 13 and 21 blows per foot. At an elevation of 584.5 feet (18 feet bgs), the boring drilled through 2.5 feet of very loose, moist to wet silt to silty loam with a SPT N-value of 3 blows per foot. At an elevation of 582.0 feet (20.5 feet bgs), the boring encountered 10 feet of stiff to very stiff silty clay to silty clay loam with  $Q_u$  values of 1.3 to 3.2 tsf and moisture content values of 20 to 26%. Few saturated sand and silt lenses were present within the silty clay to silty clay loam. At an elevation of 572.0 feet (30.5 feet bgs), OHS04-01 revealed 4.5 feet of dense, wet sandy gravel with SPT N-values of 33 to 48 blows per foot.

Groundwater was observed while drilling at an elevation of 583 feet (20 feet bgs) within the silt to silty loam layer. At the completion of drilling groundwater wasn't present within the augers.

### **DMS/ ITS at Station 500+88 (DMS1-01 and DMS1-02)**

At the surface, Boring DMS1-01 encountered one inch of asphalt pavement over 11 inches of concrete pavement. Boring DMS1-02 revealed seven inches of black and dark brown silty clay loam topsoil. Below the pavement or topsoil the borings encountered seven feet of very stiff to hard silty clay to silty clay loam fill. The fill has  $Q_u$  values of 2.8 to greater than 4.5 tsf and moisture content values of 11 to 19%. Below the fill, at elevations of 587.0 and 589.7 feet (6.5 and 8.0 feet bgs), the borings encountered up to 2.5 feet of stiff to hard, black silty clay buried topsoil with  $Q_u$  values of 1.3 and 5.0 tsf and moisture content values of 22 to 24%. The presence of this layer most likely indicates the boundary between fill and natural soils.

At elevations of 585.5 and 587.2 feet (8.0 and 10.5 feet bgs), the borings revealed up to 7.5 feet of stiff to hard clay, clay loam to silty clay with  $Q_u$  values of 1.3 to 4.5 tsf and moisture content values of 20 to 28%. In Boring DMS1-01, at an elevation of 584.7 feet (13 feet bgs), a 1.5-foot thick loose, wet silty

loam layer was encountered within the clay to silty clay unit. The silty loam has a SPT N-value of 4 blows per foot. At elevations of 578.0 and 579.7 feet (15.5 and 18.0 feet bgs), the borings revealed up to six feet of medium dense to very dense, wet to saturated sandy gravel. The sandy gravel has SPT N-values of 16 blows per foot to greater than 50 blows per three inches. In Boring DMS1-01, at an elevation of 577.2 feet (20.5 feet bgs), up to 5.5 feet of very stiff silty clay loam to silty loam was encountered. The silty clay loam to silty loam has  $Q_u$  values of 2.5 tsf and moisture content values of 9 and 13%. Auger refusal was noted in both borings at elevations of 571.7 and 572.0 feet (21.5 and 26.0 feet bgs).

Groundwater was observed while drilling at elevations of 578 and 586 feet (12.0 and 15.5 feet bgs) within the granular layers. At the completion of drilling, groundwater levels were measured at 577 and 583 feet (15.0 and 16.5 feet bgs).

#### **ANALYSES AND RECOMMENDATIONS**

Based on the GPE drawings, the proposed noise walls will be ground mounted. The Contractor should follow the requirements of IDOT District One Special Provision “*Ground Mounted Concrete Noise Abatement Walls (Absorptive and Reflective)*” for material, design, fabrication construction and erection requirements. Noise walls are to be designed per AASHTO Section 15, 2020.

#### Noise Wall 13

Auger and spoon refusals were encountered in Boring NAW13-01 (Sta. 312+26) and NAW13-03 (Sta. 308+79) at elevations 562 to 570 feet. If the bottom of drilled shafts are expected to be below these elevations, the contractor or designer should consider possible top of bedrock at 562 and 570 feet elevation, respectively. A bridge boring (HR-BSB-02) drilled about 350 feet southwest of noise wall 13 shows top of rock elevation at 557.7 feet. Base soil parameters for Noise Wall 13 are provided in Table 5.

Table 5: Recommended Soil Parameters for Noise Wall 13

Soil Description	Moist Unit Weight (pcf)	Shear Strength Properties			
		Short Term		Long Term	
		Cohesion	Friction	Cohesion	Friction
		Cu (psf)	Angle, $\phi$ (Degree)	Cu' (psf)	Angle, $\phi'$ (Degree)
Soft Cohesive (Qu 0.25 to .49 tsf)	115	400	0	50	29
Medium Stiff Cohesive (Qu 0.5 to .99 tsf)	115	900	0	100	30
Stiff Cohesive (Qu 1.0 to 1.99 tsf)	120	1500	0	100	30
Very Stiff Cohesive (Qu 2.0 to 3.99 tsf)	120	3000	0	100	30
Hard Cohesive (Qu greater than 4.0 tsf)	120	4600	0	100	30
Loose Granular (N 4 to 9)	115	0	30	0	30
Medium Dense Granular (N 10 to 29)	120	0	32	0	32
Dense Granular (N 30 to 49)	120	0	34	0	34
Very Dense Granular (N 50 to 80+)	125	0	36	0	36

#### Noise Wall 14

Auger refusal or weather bedrock were encountered in Boring NAW14-13, -14, -15, and 21 at elevations of 566.4 to 572.3 feet. If the bottom of drilled shaft is expected to be below elevation 572.3 feet, the contractor or designer should consider possible top of bedrock at 572.3 feet elevation. A culvert boring (BC1-03) drilled at Station 495+08 revealed top of rock elevation at 572.3 feet. Base soil parameters for Noise Wall 13 are provided in Table 6.

Table 6: Recommended Soil Parameters for Noise Wall 14

Soil Description	Moist Unit Weight (pcf)	Shear Strength Properties			
		Short Term		Long Term	
		Cohesion	Friction	Cohesion	Friction
		Cu (psf)	Angle, $\phi$ (Degree)	Cu' (psf)	Angle, $\phi'$ (Degree)
Soft Cohesive (Qu 0.25 to .49 tsf)	115	300	0	50	29
Medium Stiff Cohesive (Qu 0.5 to .99 tsf)	115	600	0	100	30
Stiff Cohesive (Qu 1.0 to 1.99 tsf)	120	1400	0	100	30
Very Stiff Cohesive (Qu 2.0 to 3.99 tsf)	120	2800	0	100	30
Hard Cohesive (Qu greater than 4.0 tsf)	120	5000	0	100	30
Loose Granular (N 4 to 9)	115	0	30	0	30
Medium Dense Granular (N 10 to 29)	120	0	32	0	32
Dense Granular (N 30 to 49)	120	0	34	0	34
Very Dense Granular (N 50 to 80+)	125	0	36	0	36

IDOT *Sign Structure Manual* provides the sign structure foundations details for various standard sign structures based on the presence of mostly cohesive soils with an average  $Q_u$  value of at least 1.0 tsf for spread footings and 1.25 tsf for drilled shaft foundations. The sign structure drawings provided by TranSystems indicate the proposed sign structures will be supported on drilled shafts.

Initially, we estimated a site-specific drilled shaft design will be required for the overhead sign structures due to presence of granular soils within the shaft embedment depths. However, based on

IDOT comments dated June 28, 2023, we understand that IDOT District One Soils Unit has completed analyses and stated that IDOT standard foundation details can be used. The recommendations regarding the sign structure foundations are summarized in Table 7.

Table 7: Sign Structure Standard Foundation Criteria Evaluation Summary

Structure Number	Sign Type	Station Location	Reference Borings	Use IDOT Standard Foundation Detail
1S099I080L127.6	I-A	429+00	OHS1-01 and OHS1-02	Yes See Note 1
1C099I080127.7	III-C-A	435+00	OHS2-01	Yes See Note 1 See Note 3
1S099I080L128.2	I-A	459+72	OHS3-01 and OHS3-02	Yes See Note 2
1C099I080128.5	III-C-A	475+25	OHS4-01	Yes See Note 1
1S099I080R129.0	III-A (DMS)	500+85	DMS1-01 and DMS1-02	Yes See Note 4

**Note 1:** Granular soils were encountered within the proposed foundation shaft depth, which do not meet the requirements of the standard detail, however, the IDOT District One Soils Unit completed an analysis based on the soil information provided in the report and the sign structure design information provided in the plans, and the standard details in the IDOT Sign Structure Manual (2012) can be used for the sign foundations that are proposed at this location. It should be noted the layers of soft cohesive soils, or granular soils have the potential to squeeze or slough into the shaft excavation. Wet method (516.06b), temporary casing method (516.060c), or a combination of the two may need to be used to maintain the sidewalls of the drilled shaft while excavating to the design depth and placing concrete for the foundation.

**Note 2:** Granular soils were encountered within the proposed foundation shaft depth, which do not meet the requirements of the standard detail. The IDOT District One Soils Unit completed an analysis based on the soil information provided in the report and the sign structure design information provided in the plans. We recommend that the sign foundation shaft depth be increased to 17.5 feet.

**Note 3:** The soil boring completed for this structure did not extend below the bottom of the proposed foundation. It is possible that the foundation excavation may encounter bedrock near the bottom of the foundation shaft.

**Note 4:** The soil borings for this structure encountered cohesive soils that meet the requirements to use the standard detail. The design plans show the bottom of foundation shaft will be at elevation this sign is shown to be at elevation 574.36. The soil borings encountered refusal at elevation 572, which could indicate bedrock. Based on fluctuations in the bedrock surface, it is possible that bedrock will be encountered at the base of the foundations shafts for this structure.

Please note that DMS borings were drilled at Stations 499+85 and 499+82 which are about 100 feet away from the proposed DMS.

We recommend that the following pay items be included in the Schedule of Quantities (SOQ):

- DRILLED SHAFT IN SOIL (CU YD)
- DRILLED SHAFT IN ROCK (CU YD)

If needed, a lateral load analysis via p-y curve (LPILE) method can be performed using the soil and rock parameters provided in Tables 8 through 16.

Table 8: Recommended Soil Parameters for Lateral Load Analysis for Overhead Sign Structure at Sta. 429+00  
 Reference Boring: OHS01-01

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ ( $^\circ$ )	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
Stiff SILTY CLAY LOAM FILL Surface to 586.8 feet	120	1700	0	500	0.7
Dense to V Dense GRAVEL to SANDY GRAVEL 585.5 to 565.5 feet	63 (Submerged)	0	36	100	--
Dense to V Dense SILTY LOAM 565.5 to 560.5 feet	63 (Submerged)	0	35	100	--
V Dense SANDY GRAVEL 560.5 to 559.6 feet (EOB)	63 (Submerged)	0	36	120	--

Table 9: Recommended Soil Parameters for Lateral Load Analysis for Overhead Sign Structure at Sta. 429+00  
 Reference Boring: OHS01-02

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ ( $^\circ$ )	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
V Stiff SILTY CLAY FILL Surface to 582.4 feet	120	2500	0	1000	0.5
Dense to V Dense SANDY GRAVEL 582.4 to 566.4 feet	63 (Submerged)	0	36	100	--
M Dense SANDY GRAVEL 566.4 to 564.9 feet	53 (Submerged)	0	29	60	--
Stiff to Hard SILTY CLAY LOAM to SILTY LOAM 564.9 to 559.1 feet (EOB)	63 (Submerged)	3300	0	1000	0.5

Table 10: Recommended Soil Parameters for Lateral Load Analysis for Overhead Sign Structure at Sta. 435+00  
 Reference Boring: OHS02-01

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ ( $^\circ$ )	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
V Stiff SILTY CLAY FILL Surface to 585.2 feet	120	3400	0	1000	0.5
Dense to V Dense SANDY GRAVEL 585.2 to 568.7 feet	125	0	35	100	--
M Dense SANDY GRAVEL 568.7 to 567.7 feet	53 (Submerged)	0	29	60	--
M Dense SAND 567.7 to 565.2 feet	58 (Submerged)	0	30	60	--
Hard SILTY CLAY LOAM to SILTY LOAM 565.2 to 562.7 feet	63 (Submerged)	4500	0	2000	0.5
V Dense SILTY LOAM 562.7 to 560.74 feet (EOB)	63 (Submerged)	0	36	120	--



Table 11: Recommended Soil Parameters for Lateral Load Analysis for Overhead Sign Structure at Sta. 459+72  
 Reference Boring: OHS03-01

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ ( $^\circ$ )	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
Stiff to Hard SILTY CLAY to CLAY FILL Surface to 589.7 feet	120	2500	0	1000	0.5
V Soft SILTY CLAY (Buried Topsoil) 589.7 to 588.4 feet	110	200	0	30	2.0
V Stiff SILTY CLAY to CLAY 588.4 to 585.9 feet	120	3500	0	1000	0.5
M Dense SANDY GRAVEL 585.9 to 583.4 feet	115	0	29	60	--
V Stiff to Hard SILTY CLAY 583.4 to 578.4 feet	120	3800	0	1000	0.5
Dense to V Dense SAND 578.4 to 573.4 feet	125	0	35	100	--
M Dense to V Dense SAND 573.4 to 569.4 feet	58 (Submerged)	0	32	60	--
V Dense SANDY GRAVEL 569.4 to 566.4 feet (EOB)	63 (Submerged)	0	36	120	--

Table 12: Recommended Soil Parameters for Lateral Load Analysis for Overhead Sign Structure at Sta. 459+72  
 Reference Boring: OHS03-02

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ ( $^\circ$ )	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
M Stiff to Stiff CLAY LOAM FILL Surface to 597.7 feet	115	900	0	100	1.0
M Stiff CLAY LOAM FILL 597.7 to 593.7 feet	53 (Submerged)	500	0	100	1.0
M Dense GRAVEL FILL 593.7 to 591.2 feet	53 (Submerged)	0	29	60	--
V Stiff SILTY CLAY (Buried Topsoil) 591.2 to 588.7 feet	58 (Submerged)	3000	0	1000	0.5
Hard SILTY CLAY 588.7 to 586.2 feet	63 (Submerged)	5100	0	2000	0.4

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ ( $^\circ$ )	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
M Dense to Dense SAND 586.2 to 571.7 feet (EOB)	58 (Submerged)	0	32	60	--

Table 13: Recommended Soil Parameters for Lateral Load Analysis for Overhead Sign Structure at Sta. 475+25  
 Reference Boring: OHS04-01

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ ( $^\circ$ )	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
M Dense LOAM to SILTY CLAY LOAM FILL Surface to 599.0 feet	120	00	30	90	--
V Stiff to Hard SILTY CLAY to SILTY CLAY LOAM FILL 599.0 to 592.0 feet	120	3500	0	1000	0.5
V Stiff SILTY CLAY 592.0 to 589.5 feet	120	2500	0	1000	0.5
M Dense SANDY GRAVEL 589.5 to 584.5 feet	115	0	29	90	--
V Loose SILT to SILTY LOAM 584.5 to 582.0 feet	110	0	28	25	--
Stiff SILTY CLAY 582.0 to 580.2 feet	120	1300	0	500	0.7
Loose SILT 580.2 to 579.5 feet	110	0	28	25	--
Stiff SILTY CLAY 579.5 to 576.0 feet	120	1200	0	500	0.7
M Dense SAND 579.0 to 575.8 feet	120	0	30	90	--
Stiff to V Stiff SILTY CLAY to SILTY CLAY LOAM 575.8 to 572.0 feet	120	2400	0	1000	0.5
Dense SANDY GRAVEL 572.0 to 570.5 feet	120	0	32	225	--
Dense SANDY GRAVEL 572.0 to 567.5 feet (EOB)	58 (Submerged)	0	32	125	--

Table 14: Recommended Soil Parameters for Lateral Load Analysis for Dynamic Message Sign Structure at Sta.

500+85  
Reference Boring: DMS1-01<sup>1)</sup>

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
Hard SILTY CLAY LOAM FILL Surface to 589.7 feet	125	4500	0	2000	0.4
Hard SILTY CLAY (Buried Topsoil) 589.7 to 587.2 feet	125	5000	0	2000	0.4
V Stiff CLAY to SILTY CLAY 587.2 to 585.7 feet	120	2500	0	1000	0.5
V Stiff CLAY to SILTY CLAY 585.7 to 584.7 feet	58 (Submerged)	2500	0	1000	0.5
Loose SILTY LOAM 584.7 to 583.2 feet	48 (Submerged)	0	28	20	--
Stiff CLAY to SILTY CLAY 583.2 to 579.7 feet	58 (Submerged)	1700	0	500	0.7
M Dense SANDY GRAVEL 579.7 to 577.2 feet	53 (Submerged)	0	29	20	--
V Stiff SILTY CLAY LOAM to SILTY LOAM 577.2 to 571.7 feet (TOR)	58 (Submerged)	2500	0	1000	0.5

<sup>1)</sup> Boring DMS1-01 was drilled at Stations 499+93 which is about 92 feet away from the proposed DMS.

Table 15: Recommended Soil Parameters for Lateral Load Analysis for Dynamic Message Sign Structure at Sta.

500+85  
Reference Boring: DMS1-02<sup>1)</sup>

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
V Stiff to Hard SILTY CLAY to SILTY CLAY LOAM FILL Surface to 587.0 feet	125	4100	0	1500	0.4
Stiff SILTY CLAY (Buried Topsoil) 587.0 to 585.5 feet	120	1300	0	500	0.7
Stiff CLAY LOAM 585.5 to 583.0 feet	120	1300	0	500	0.7

Soil Type (Layer) Elevation (feet)	Unit Weight, $\gamma$ (pcf)	Undrained Shear Strength, $c_u$ (psf)	Estimated Friction Angle, $\Phi$ ( $^\circ$ )	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, $\epsilon_{50}$ (%)
Stiff to Hard SILTY CLAY to CLAY 583.0 to 578.0 feet	120	3200	0	1000	0.5
M Dense SANDY GRAVEL 578.0 to 572.0 feet (TOR)	53 (Submerged)	0	29	60	--

<sup>1)</sup> Boring DMS1-02 was drilled at Stations 499+85 which is about 100 feet away from the proposed DMS.

Table 16: Recommended Bedrock Parameters for Lateral Load Analysis

Reference Borings HR-BSB-01 and HR-BSB-02

Bedrock	Total Unit Weight, $\gamma$ (pcf)	Modulus of Rock Mass (ksi)	Uniaxial Compressive Strength (psi)	RQD (%)	Strain Factor
Dolostone	140	300	10,795	7 to 21	0.0005

## CONSTRUCTION CONSIDERATIONS

Excavations should be performed in accordance with local, state, and federal regulations. The potential effect of ground movements upon nearby utilities should be considered during construction.

Drilled shafts should be constructed in accordance with 2022 IDOT Standard Specifications for Road and Bridge Construction Section 516, *Drilled Shafts*. Groundwater may be encountered during drilled shaft excavations; therefore, the contractor should be prepared to use slurry and/or temporary casing during drilled shaft installations.

Rock socketed drilled shafts may be required to achieve fixity. The Contractor should have their means and methods for bedrock excavation.

It should be noted that possible cobbles and boulders were reported mostly within the sandy gravel to gravelly loam layers.

It has been a pleasure to assist TranSystems Corporation, and the Illinois Department of Transportation for this project. If you have any questions, please do not hesitate to contact us.

Respectfully Submitted,

WANG ENGINEERING, INC.

Jessica Bensen, P.G.  
Project Geologist

Andri Kurnia, P.E.  
Senior Engineer

Mohammed Kothawala, P.E., D.GE.  
QC/QA Reviewer

Attachments:

Exhibit 1: Site Location Map

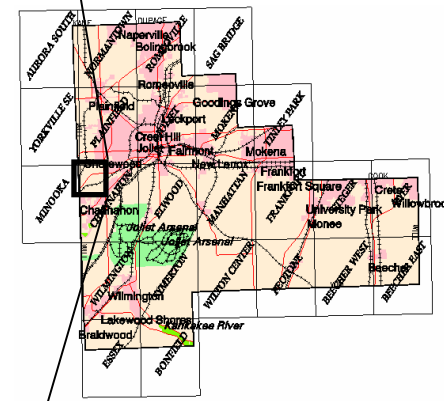
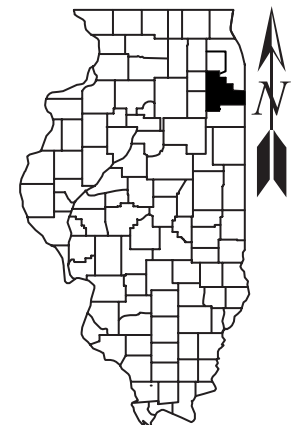
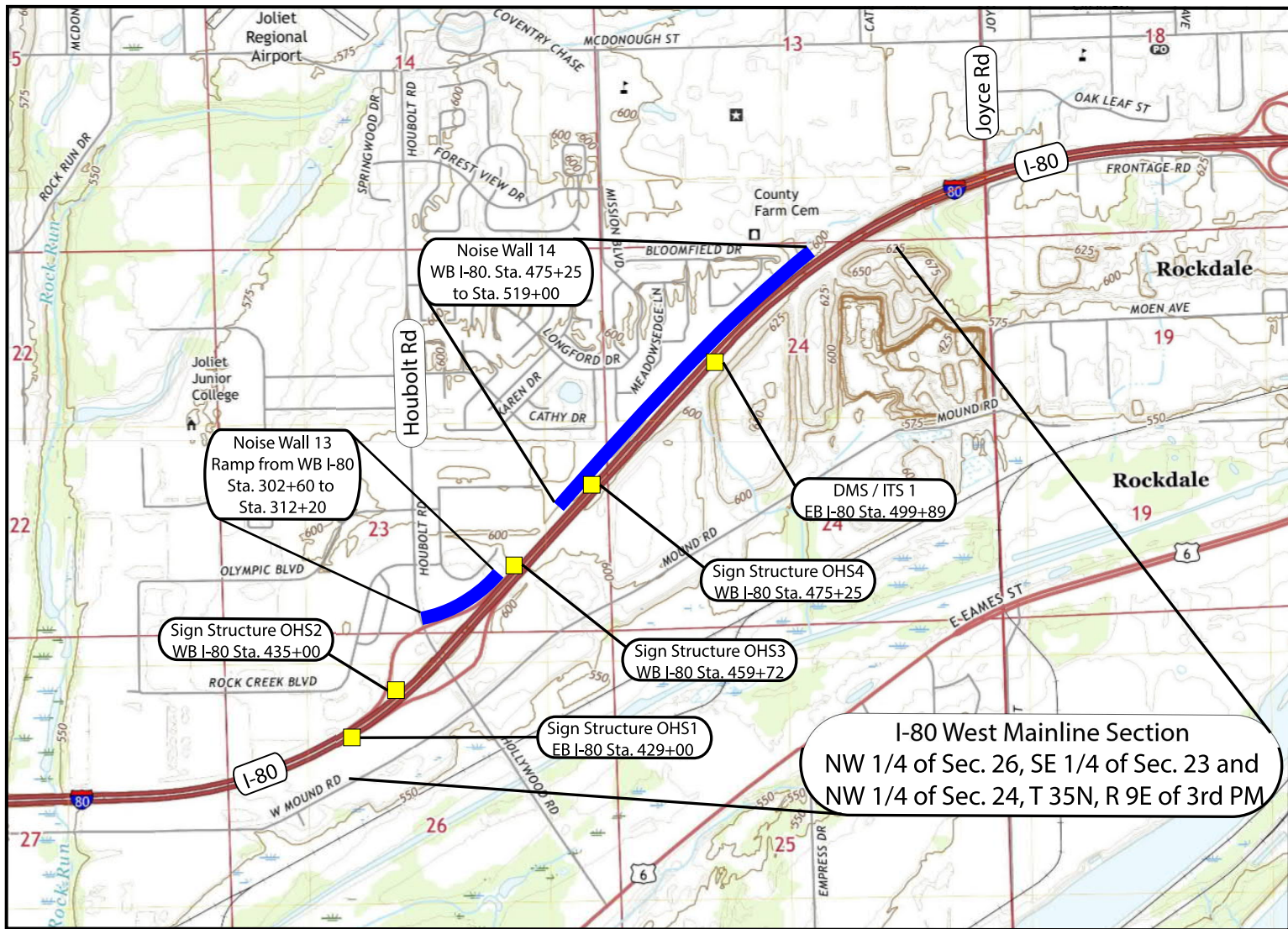
Exhibit 2: Boring Location Plan

Exhibit 3: Soil Profile

Appendix A: Boring Logs

Appendix B: Laboratory Test Results

## **EXHIBITS**

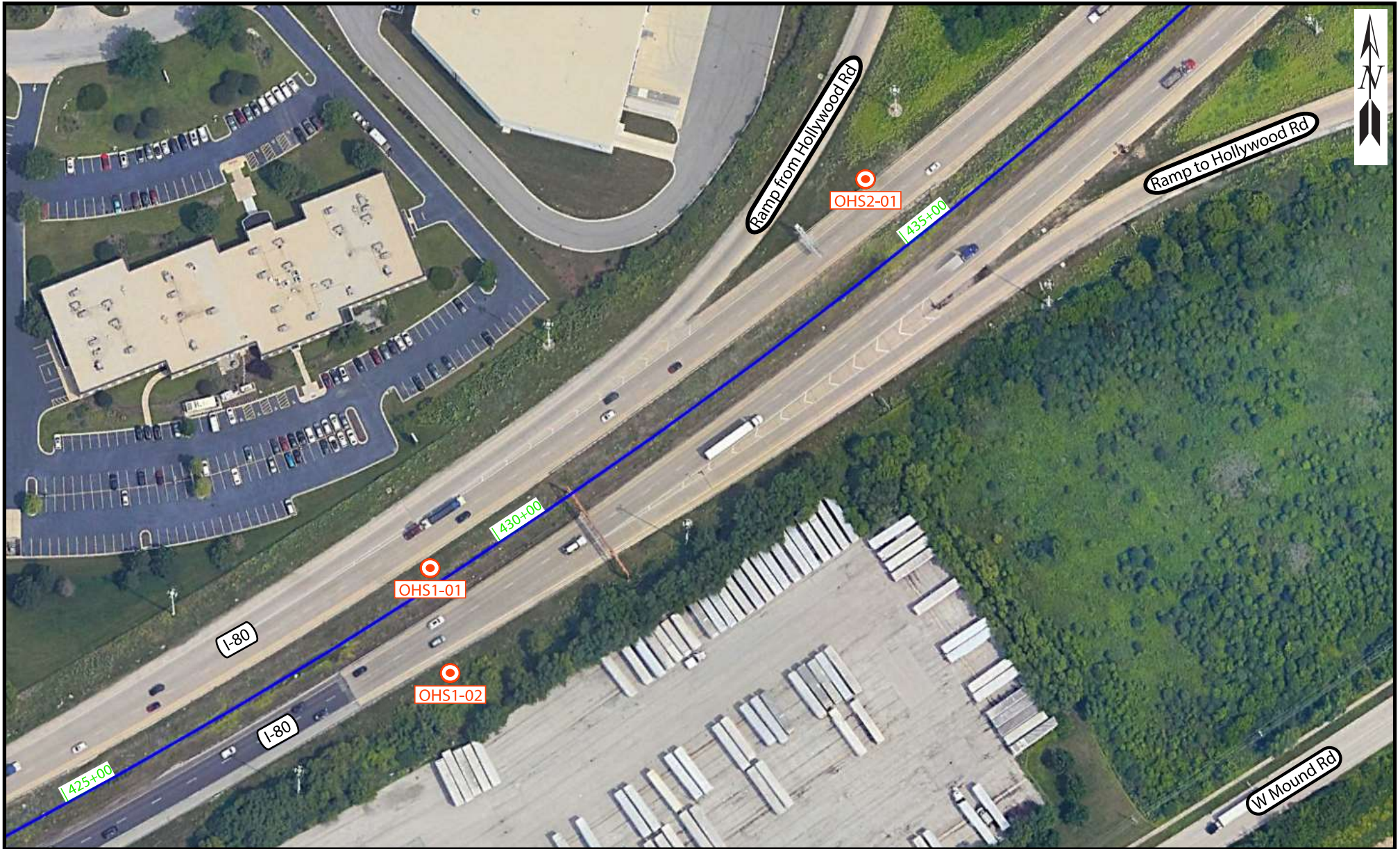


Will County

I-80 West Mainline Section  
 NW 1/4 of Sec. 26, SE 1/4 of Sec. 23 and  
 NW 1/4 of Sec. 24, T 35N, R 9E of 3rd PM



SITE LOCATION MAP: I-80 WEST MAINLINE, CONTRACT 62R27; I-80 RECONSTRUCTION FROM HOUBOLT ROAD TO WEST OF CENTER STREET & LARKIN AVENUE INTERCHANGE, WILL COUNTY, ILLINOIS		
SCALE: GRAPHICAL	<b>EXHIBIT 1</b>	DRAWN BY: D. You CHECKED BY: A. Kurnia
 <b>Wang Engineering</b> A Terracon Company		1145 N. Main Street Lombard, IL 60148 www.wangeng.com
		FOR TRANSYSTEMS



**Legend**

○ Sign Structure Boring

0 150 300 Feet



BORING LOCATION PLAN: I-80 WEST MAINLINE, CONTRACT 62R27; I-80 RECONSTRUCTION FROM HOUBOLT ROAD TO WEST OF CENTER STREET & LARKIN AVENUE INTERCHANGE, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

**EXHIBIT 2-1**

DRAWN BY: D. You  
CHECKED BY: A. Kurmia



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7901-15-01

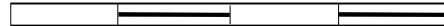




**Legend**

- ⊙ Noise Wall Boring
- ⊙ Sign Structure Boring

0 150 300 Feet



BORING LOCATION PLAN: I-80 WEST MAINLINE, CONTRACT 62R27; I-80 RECONSTRUCTION FROM HOUBOLT ROAD TO WEST OF CENTER STREET & LARKIN AVENUE INTERCHANGE, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

**EXHIBIT 2-2**

DRAWN BY: D. You  
CHECKED BY: A. Kurmia



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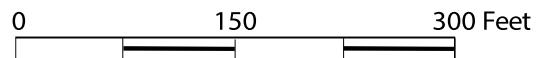
FOR TRANSYSTEMS

KE225089  
7901-15-01



Legend

- ⊙ Noise Wall Boring
- ⊙ Sign Structure Boring



BORING LOCATION PLAN: I-80 WEST MAINLINE, CONTRACT 62R27; I-80 RECONSTRUCTION FROM HOUBOLT ROAD TO WEST OF CENTER STREET & LARKIN AVENUE INTERCHANGE, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

**EXHIBIT 2-3**

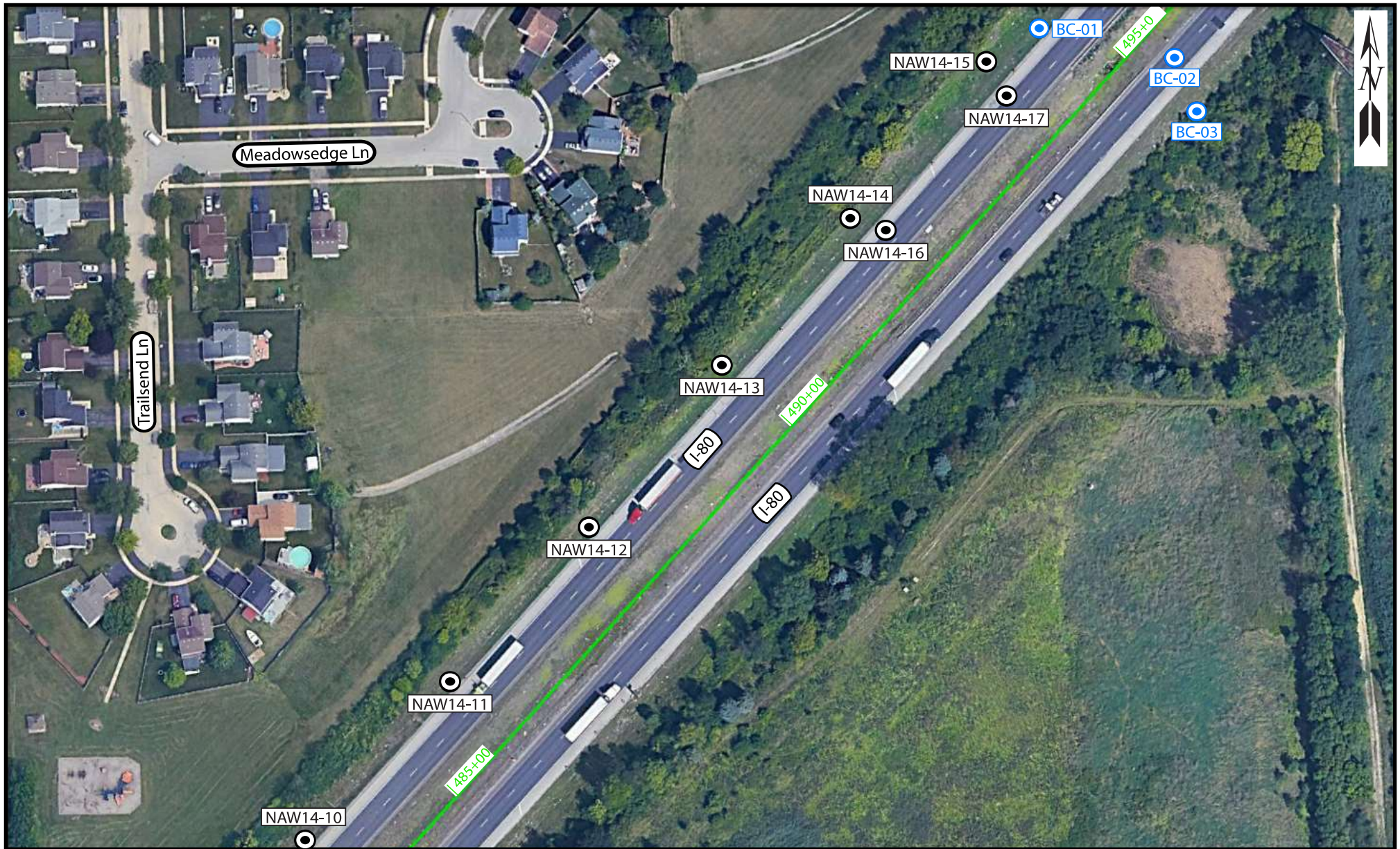
DRAWN BY: D. You  
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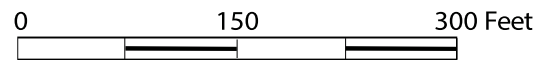
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7901-15-01



Legend

- ⊙ Noise Wall Boring
- ⊙ Culvert Boring



BORING LOCATION PLAN: I-80 WEST MAINLINE, CONTRACT 62R27; I-80 RECONSTRUCTION FROM HOUBOLT ROAD TO WEST OF CENTER STREET & LARKIN AVENUE INTERCHANGE, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

**EXHIBIT 2-4**

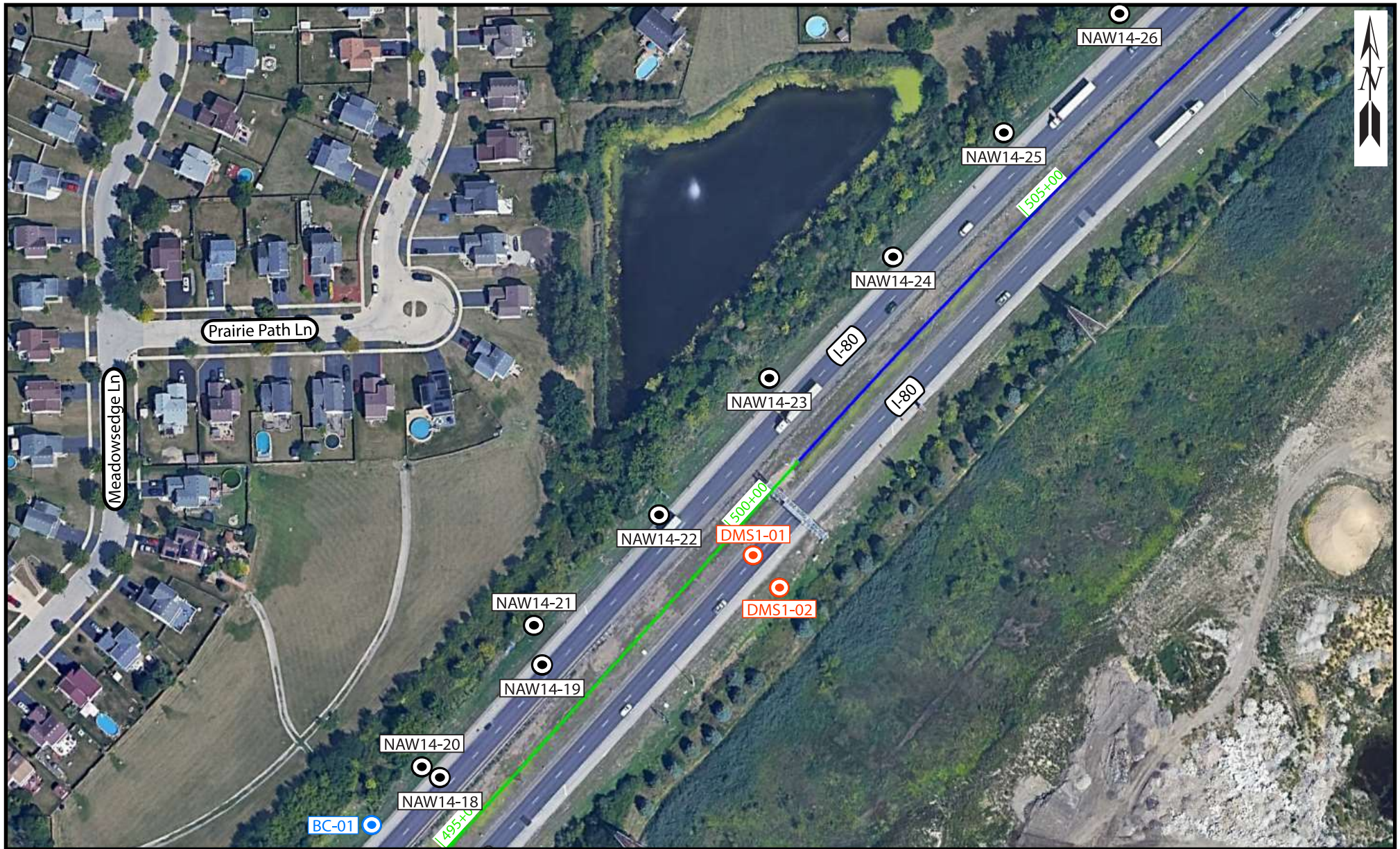
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**Legend**

-  Noise Wall Boring
-  Sign Structure Boring
-  Culvert Boring

0 150 300 Feet



BORING LOCATION PLAN: I-80 WEST MAINLINE, CONTRACT 62R27; I-80 RECONSTRUCTION FROM HOUBOLT ROAD TO WEST OF CENTER STREET & LARKIN AVENUE INTERCHANGE, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

**EXHIBIT 2-5**

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CHECKED BY: A. Kurmia



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7901-15-01



Legend

⊙ Noise Wall Boring

0 150 300 Feet



BORING LOCATION PLAN: I-80 WEST MAINLINE, CONTRACT 62R27; I-80 RECONSTRUCTION FROM HOUBOLT ROAD TO WEST OF CENTER STREET & LARKIN AVENUE INTERCHANGE, WILL COUNTY, ILLINOIS

SCALE: GRAPHICAL

EXHIBIT 2-6

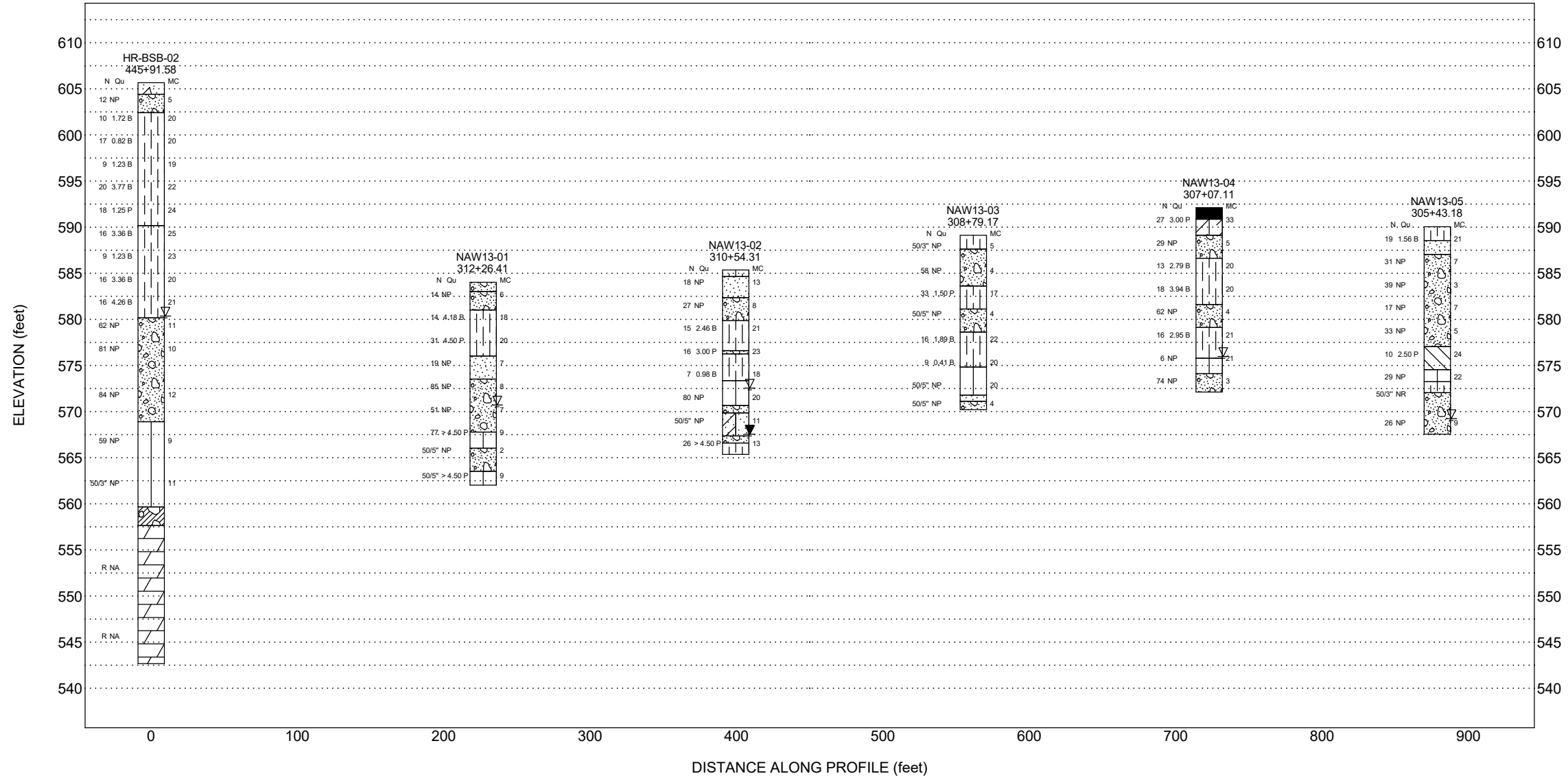
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CHECKED BY: A. Kurmia



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7901-15-01

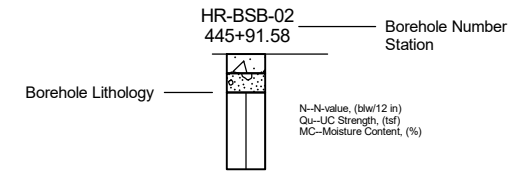


**Lithology Graphics**

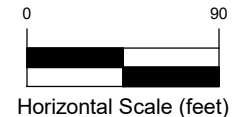
- |                   |                                 |                                 |                      |
|-------------------|---------------------------------|---------------------------------|----------------------|
| Concrete          | Gravelly sand, sandy gravel     | IDH Silty Clay, Silty Clay Loam | IDH Silt, Silty Loam |
| Weathered bedrock | Dolomite or Dolomitic Limestone | IDH Sand, Sandy Loam            | IDH Loam             |
| Topsoil           | IDH Clay Loam                   | IDH Clay                        |                      |

Site Map Scale 1 inch equals 330 feet

**Explanation:**



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 6.5x

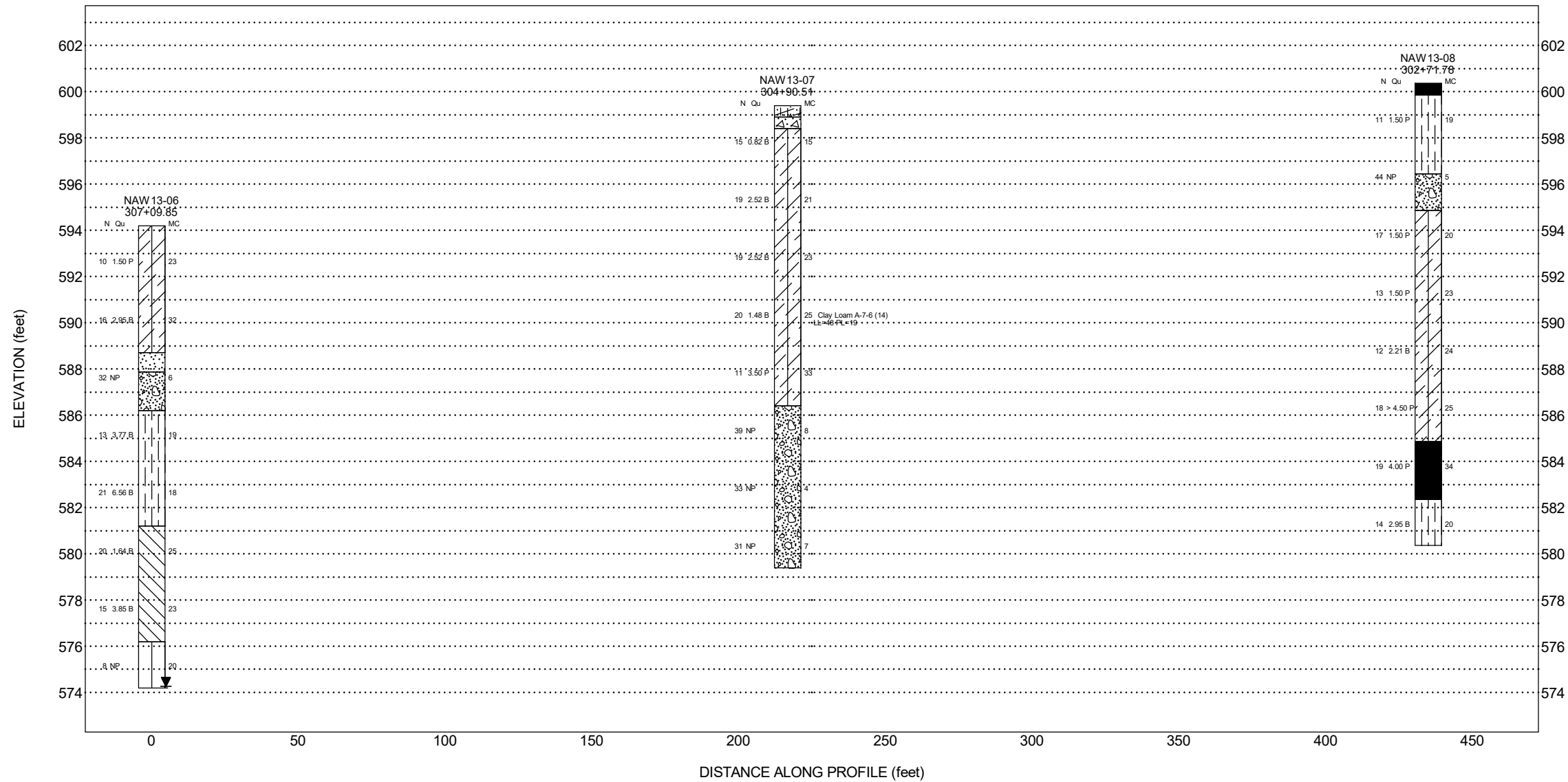
**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile  
Noise Wall 13**

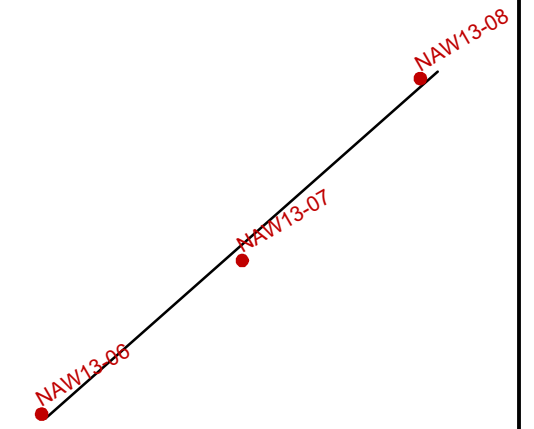
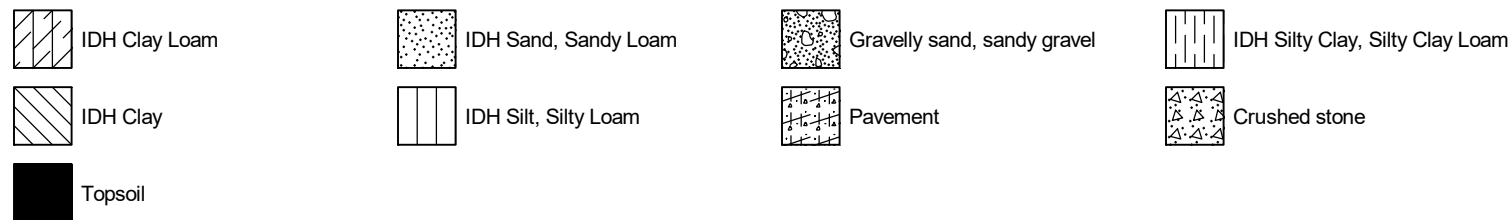


I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-1

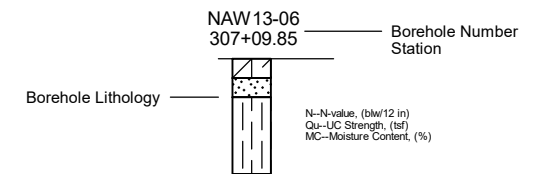


**Lithology Graphics**

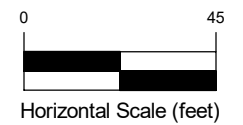


Site Map Scale 1 inch equals 165 feet

**Explanation:**



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 8x

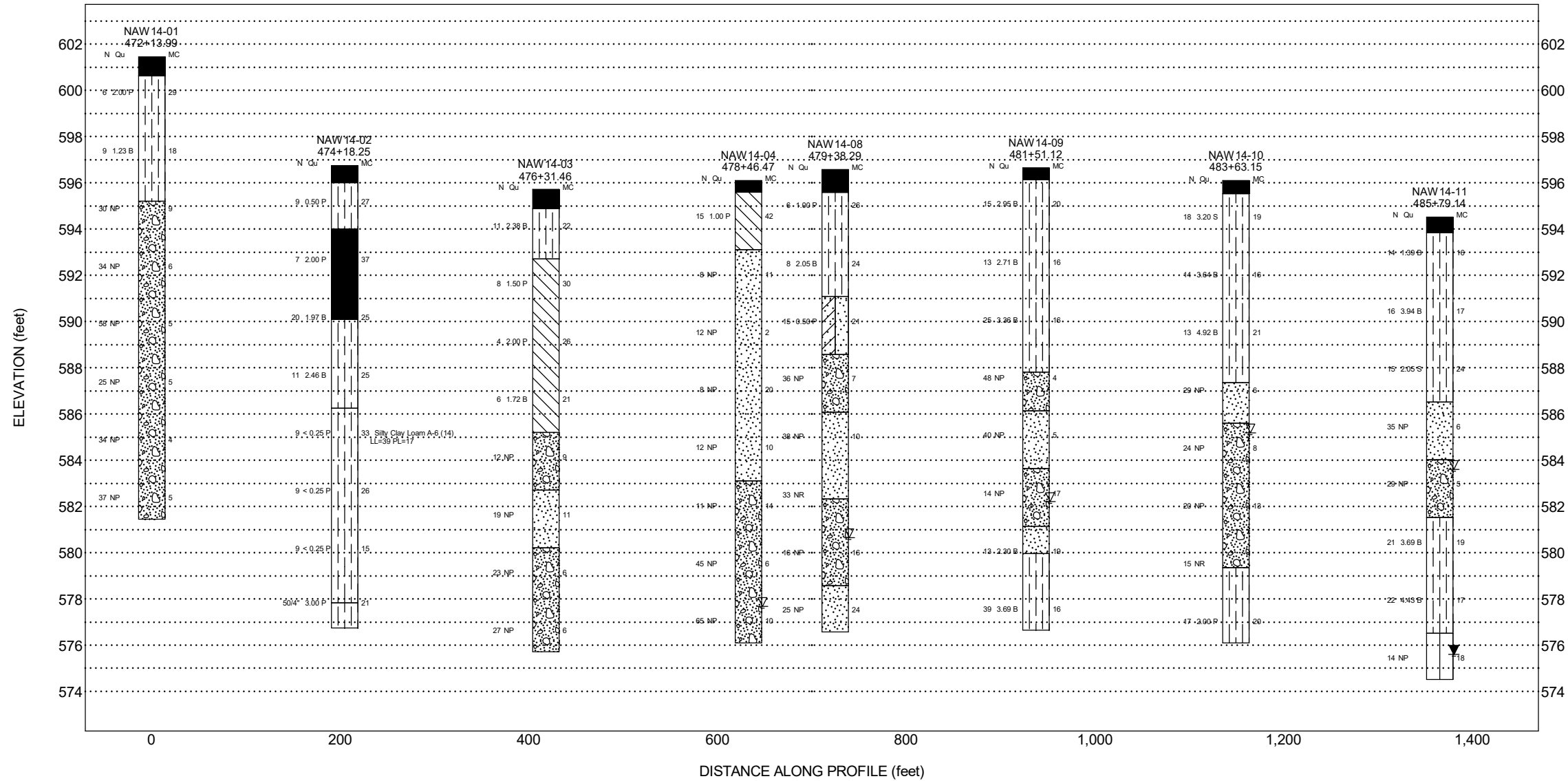
**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile  
Noise Wall 13**

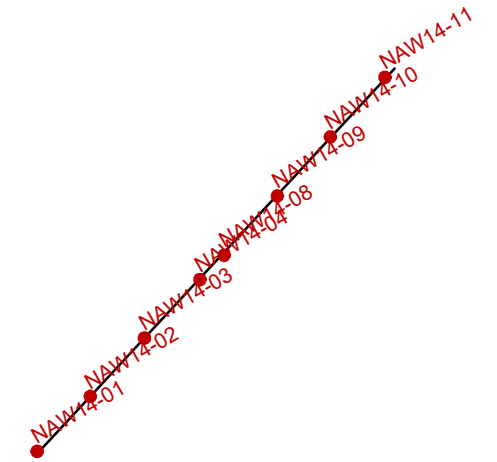
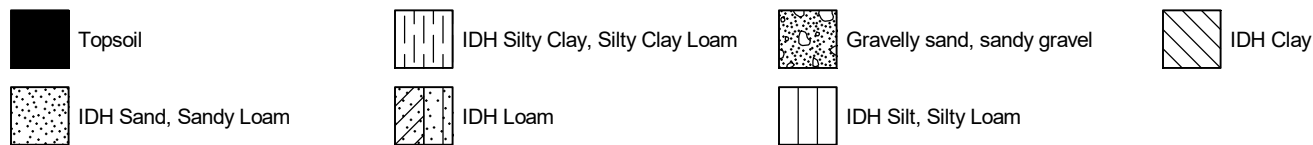


I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-2

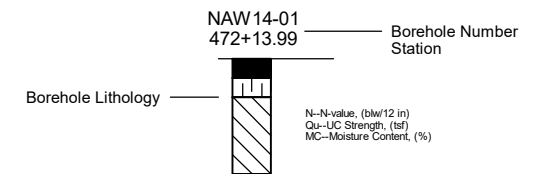


**Lithology Graphics**

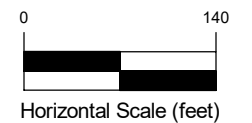


Site Map Scale 1 inch equals 515 feet

**Explanation:**



- ▽ Water Level Reading at time of drilling.
- ▼ Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 24.5x

**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

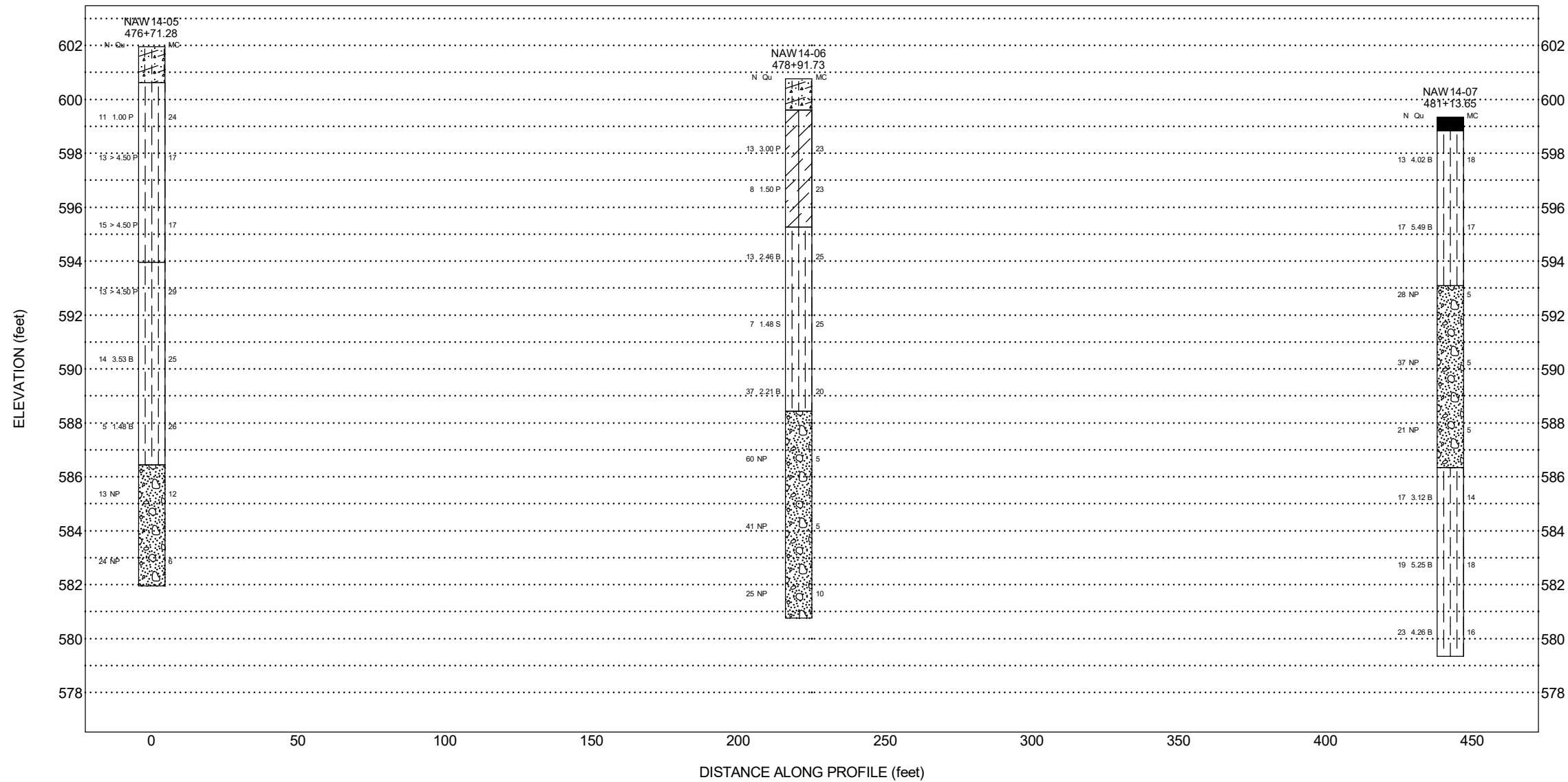
**Soil Profile  
Noise Wall 14**



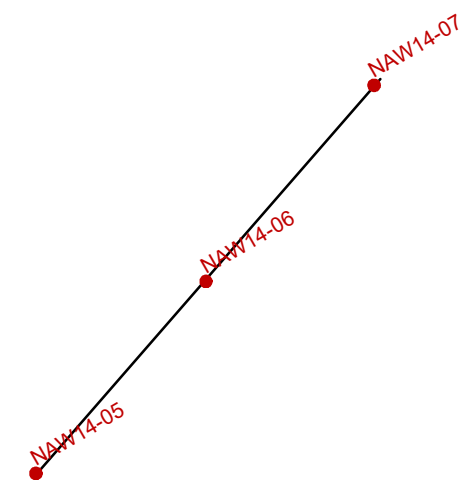
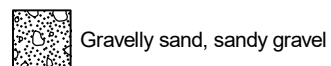
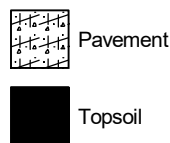
I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-3



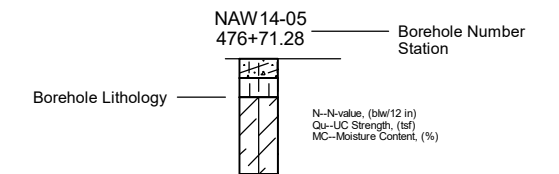


**Lithology Graphics**

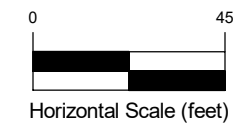


Site Map Scale 1 inch equals 165 feet

**Explanation:**



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 9x

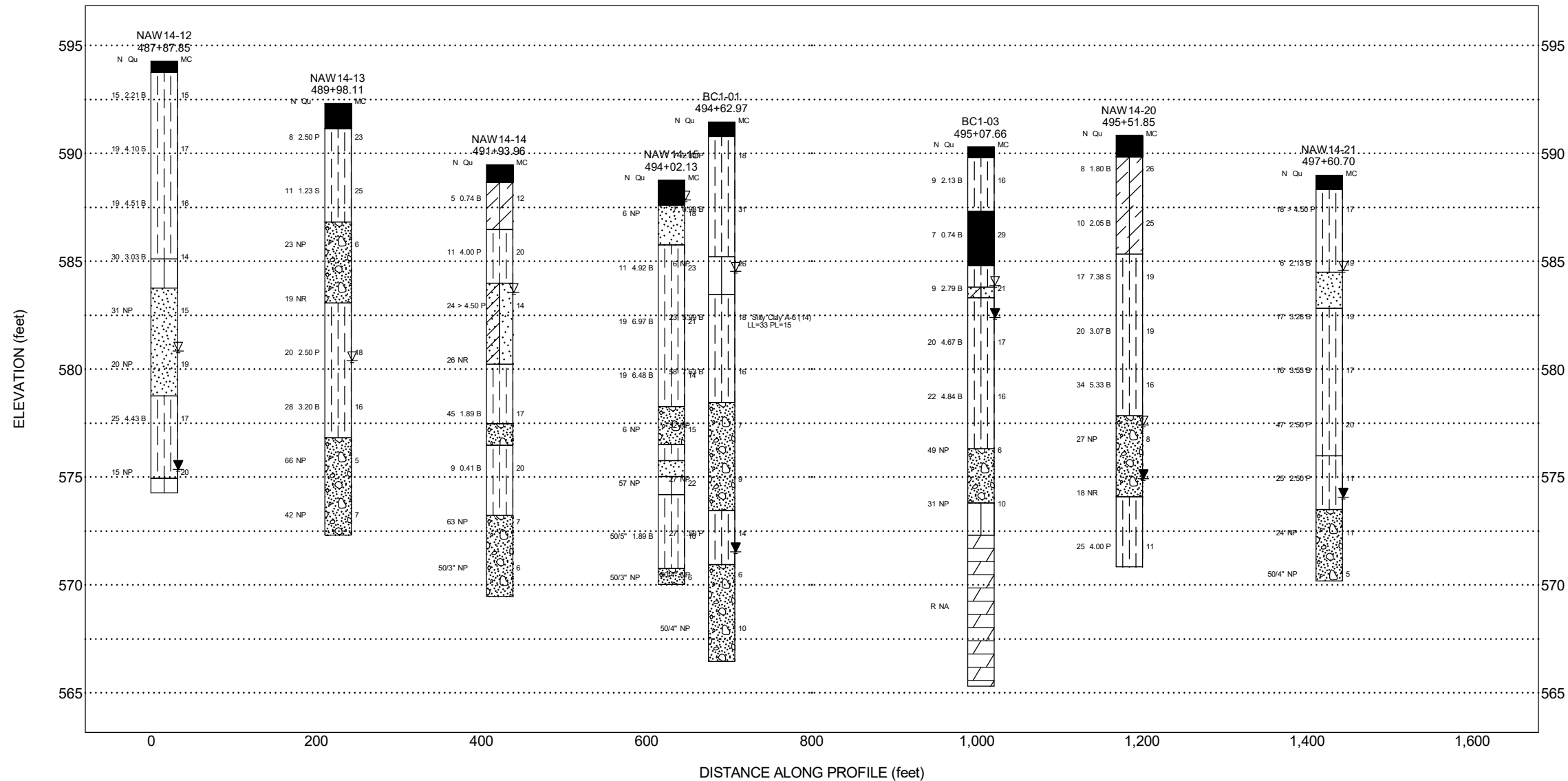
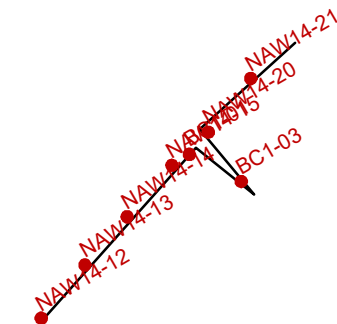
**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile  
Noise Wall 14**



I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-4

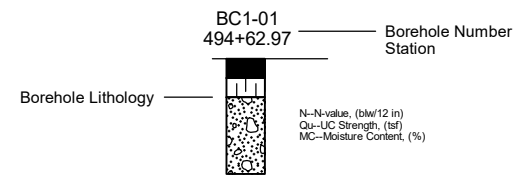


**Lithology Graphics**

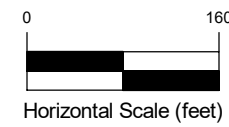
- Topsoil
- IDH Silty Clay, Silty Clay Loam
- IDH Silt, Silty Loam
- Gravelly sand, sandy gravel
- IDH Loam
- Dolomite or Dolomitic Limestone
- IDH Sand, Sandy Loam
- IDH Clay Loam

Site Map Scale 1 inch equals 585 feet

**Explanation:**



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 26x

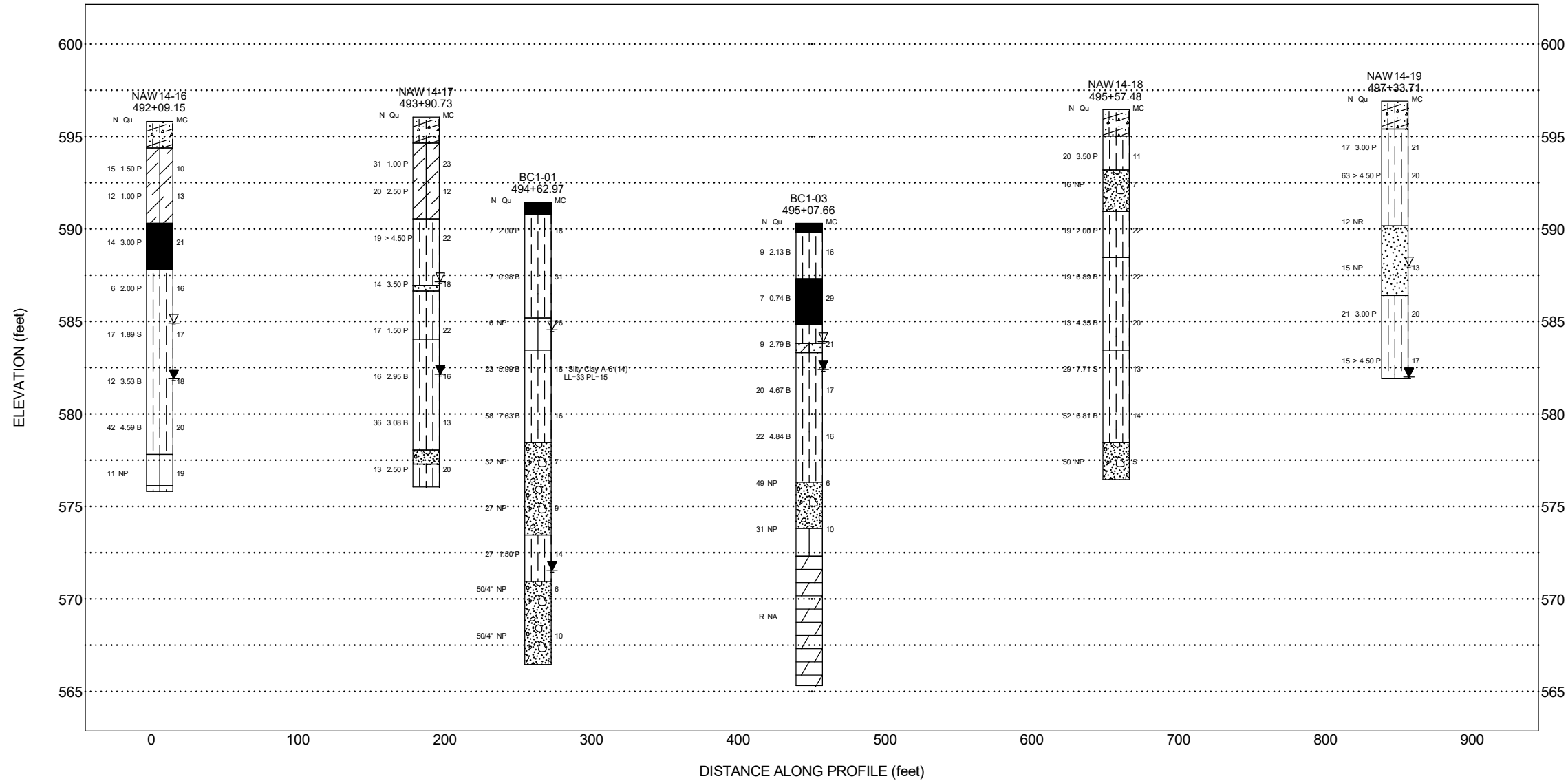
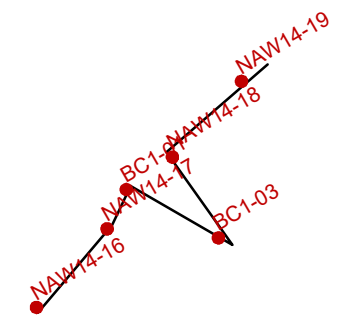
**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile  
Noise Wall 14**

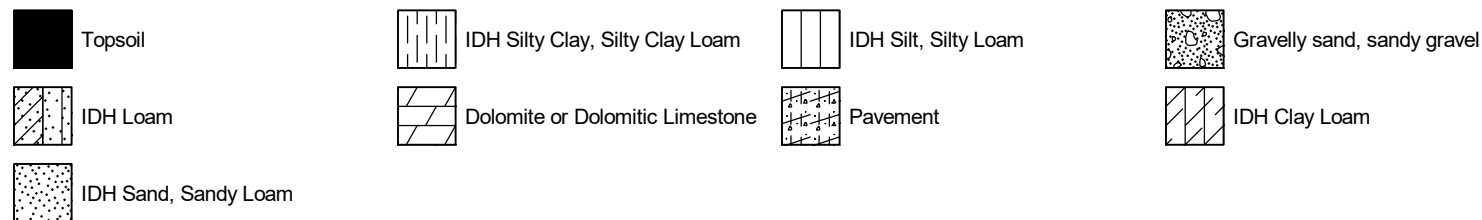


I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-5

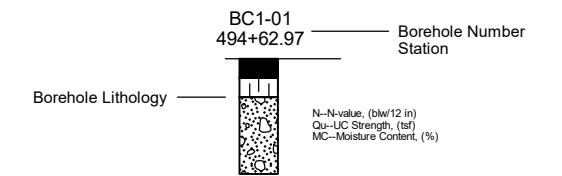


**Lithology Graphics**

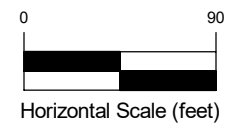


Site Map Scale 1 inch equals 330 feet

**Explanation:**



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 12.5x

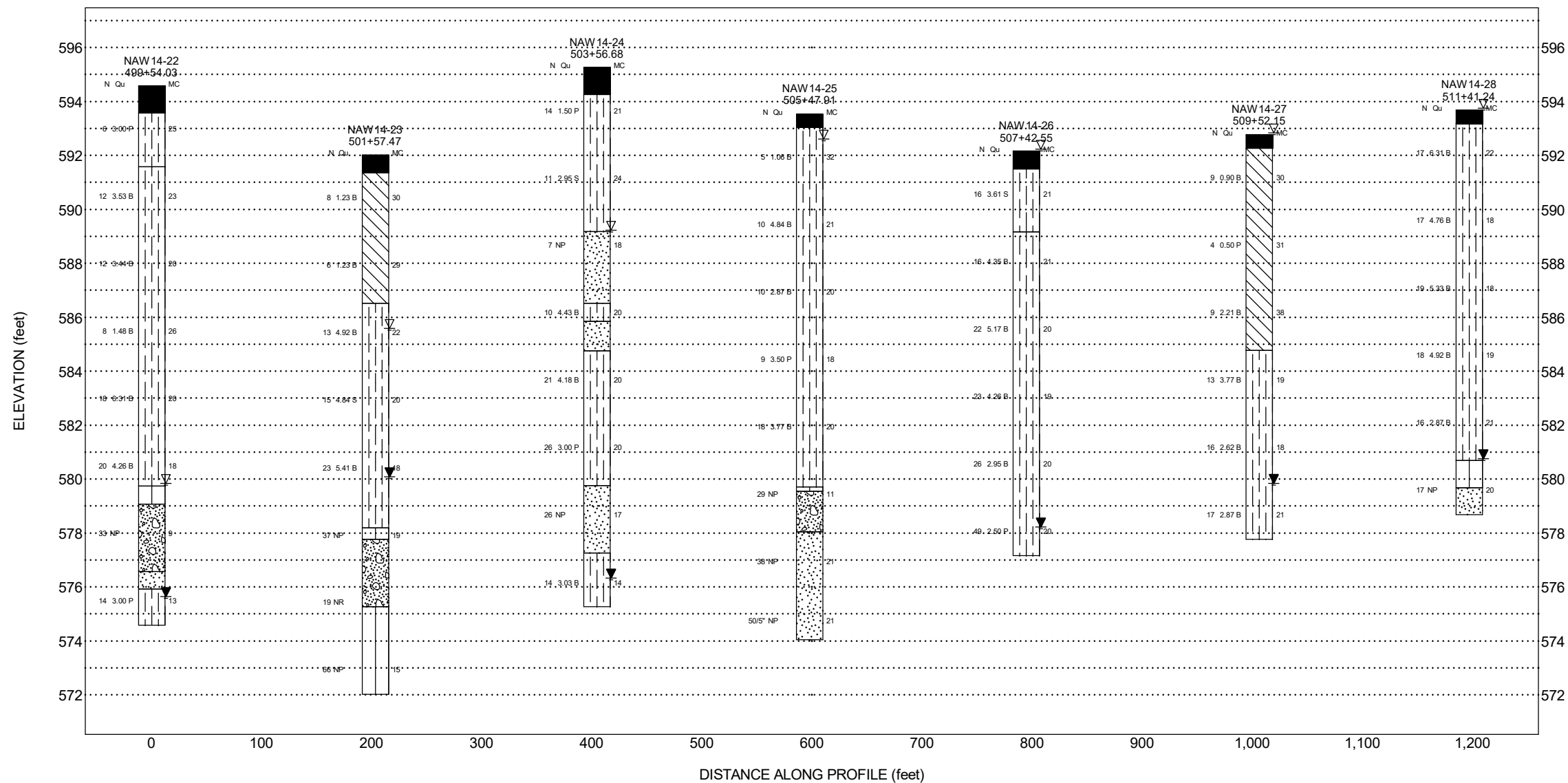
**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile  
Noise Wall 14**

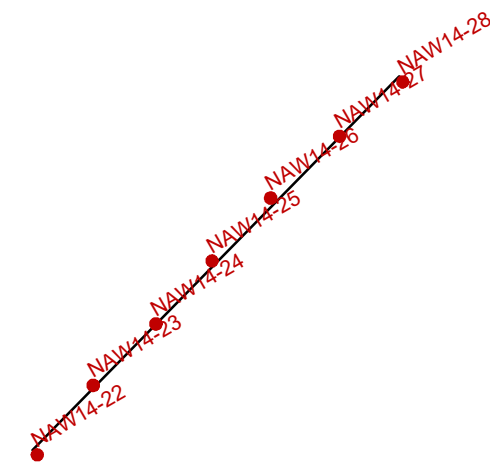
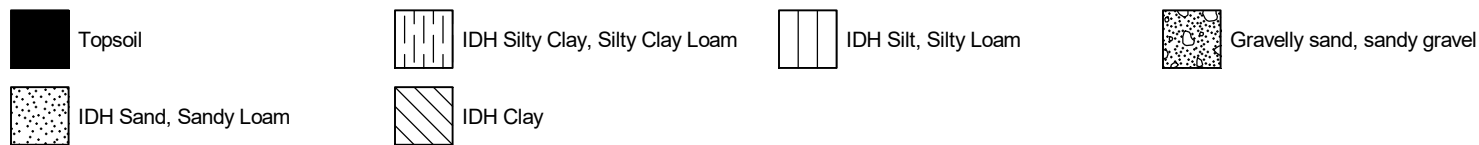


I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-6

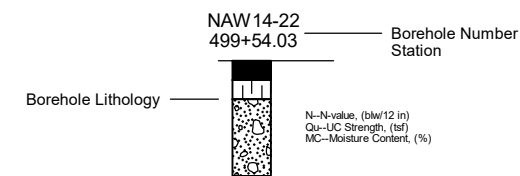


**Lithology Graphics**

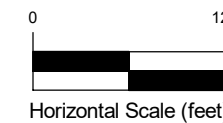


Site Map Scale 1 inch equals 440 feet

**Explanation:**



- ▽ Water Level Reading at time of drilling.
- ▾ Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 24.5x

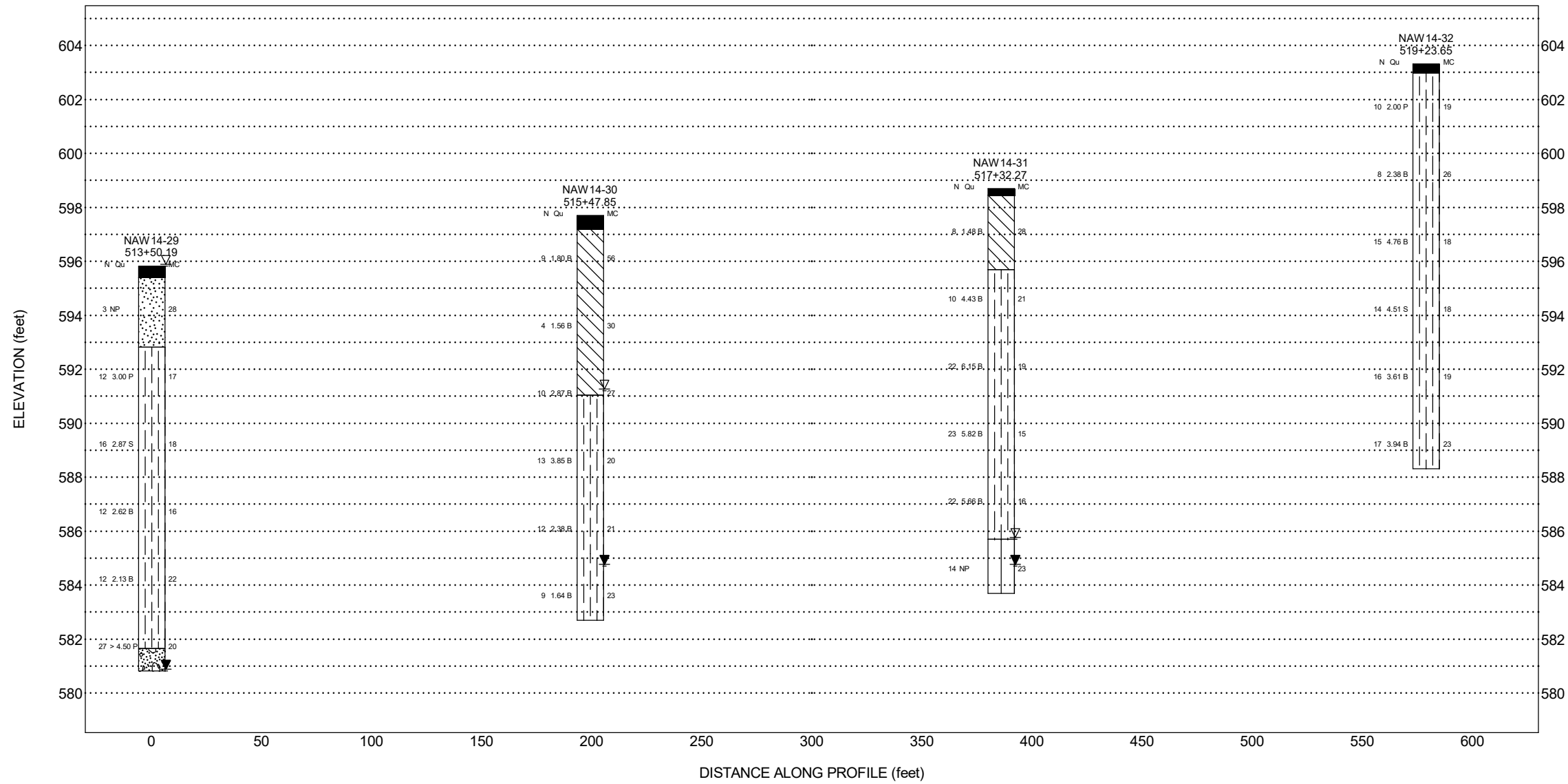
**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile Noise Wall 14**

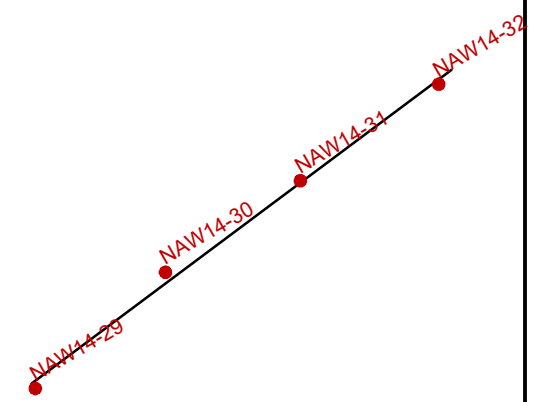


I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-7

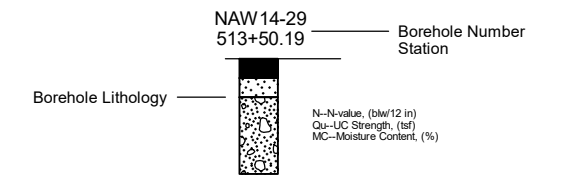


**Lithology Graphics**

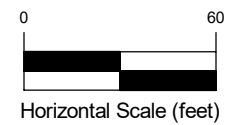


Site Map Scale 1 inch equals 220 feet

**Explanation:**



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 12.5x

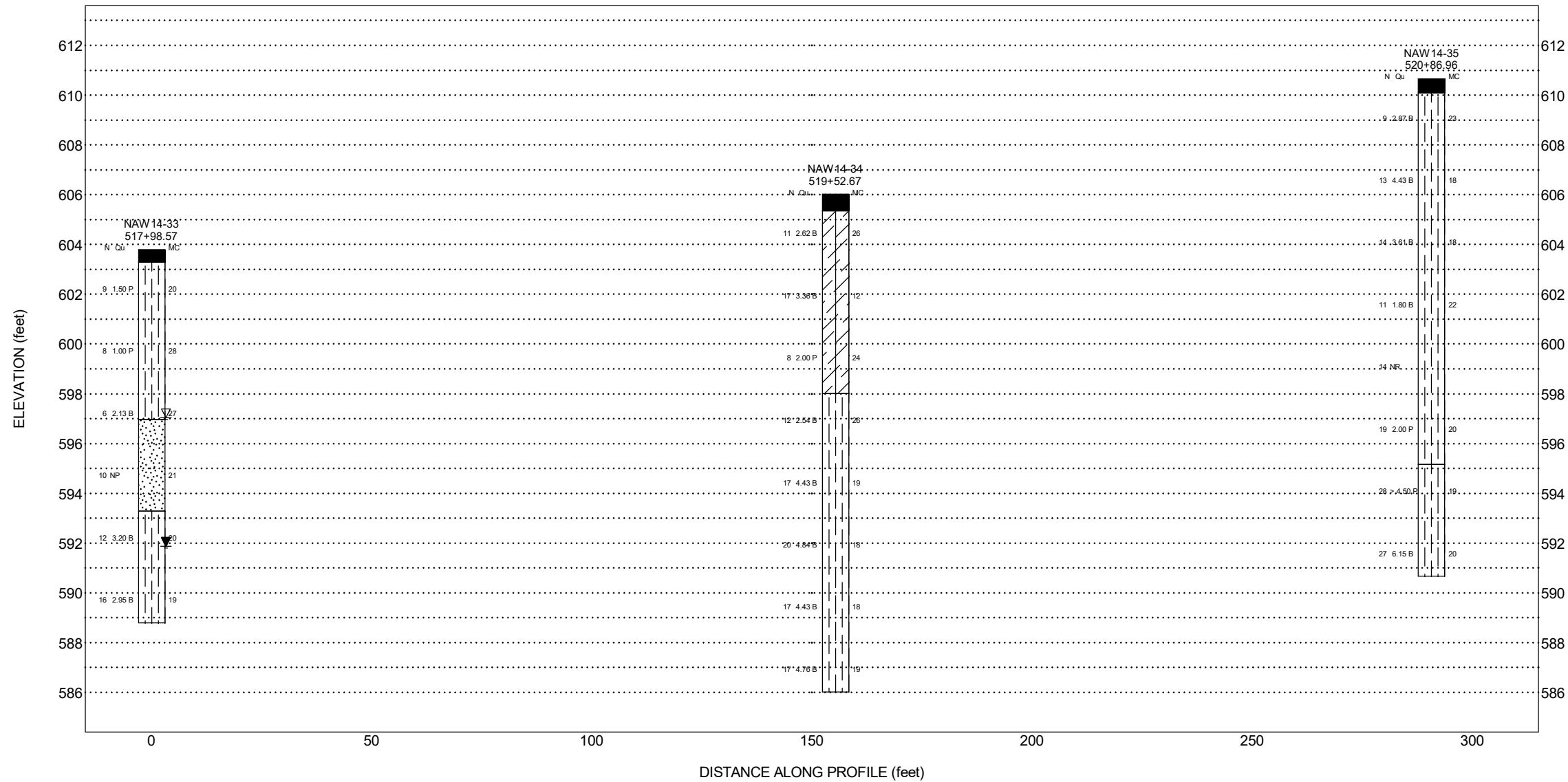
**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile  
Noise Wall 14**



I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-8



**Lithology Graphics**



Topsoil



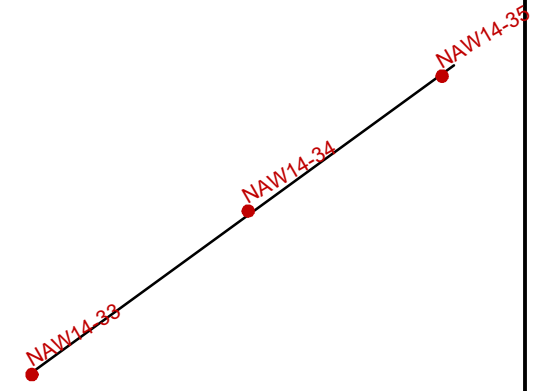
IDH Silty Clay, Silty Clay Loam



IDH Sand, Sandy Loam

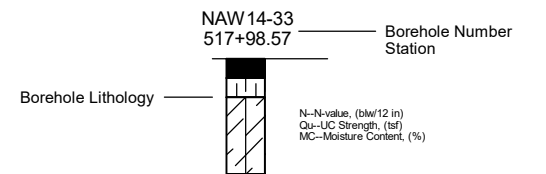


IDH Clay Loam

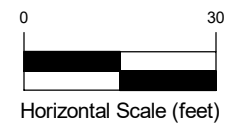


Site Map Scale 1 inch equals 110 feet

**Explanation:**



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 5.5x

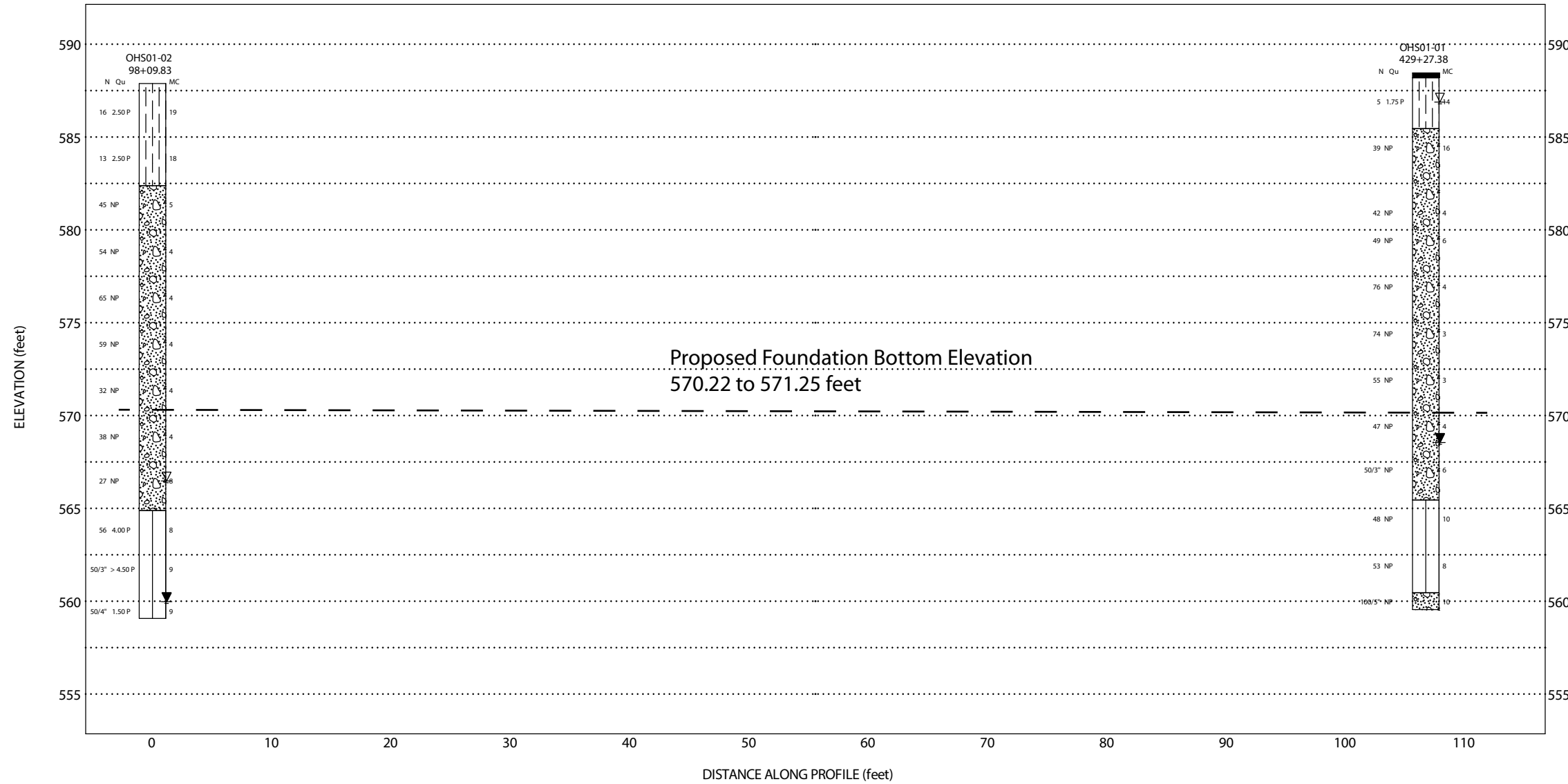
**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile  
Noise Wall 14**



I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-9



Proposed Foundation Bottom Elevation  
570.22 to 571.25 feet

DISTANCE ALONG PROFILE (feet)

Lithology Graphics



Topsoil



IDH Silty Clay, Silty Clay Loam



Gravelly sand, sandy gravel



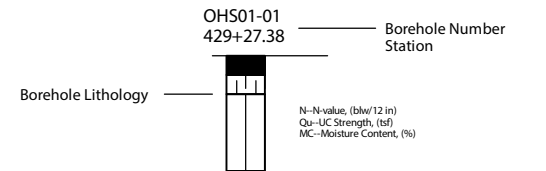
IDH Silt, Silty Loam

OHS01-01

OHS01-02

Site Map Scale 1 inch equals 40 feet

Explanation:



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Horizontal Scale (feet)

Vertical Exaggeration: 1.5x

**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile**  
OHS1

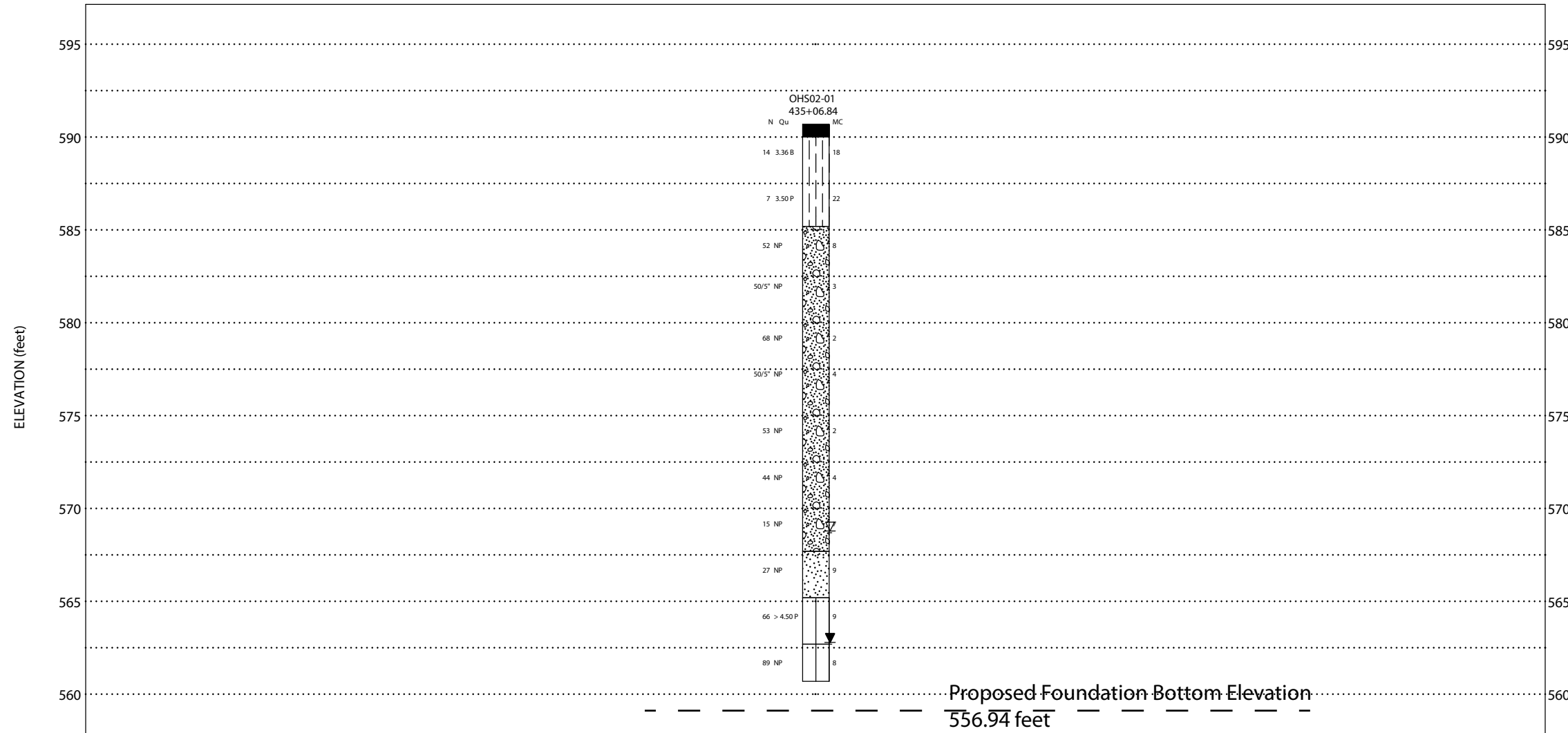


I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-10

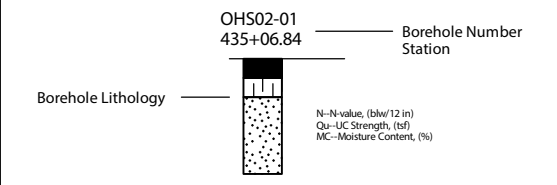


N



Site Map Scale 1 inch equals 0 feet

### Explanation:



- ▽ Water Level Reading at time of drilling.
- ▼ Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 0x

DISTANCE ALONG PROFILE (feet)

### Lithology Graphics

- Topsoil
- ▨ IDH Silt, Silty Loam
- ▨ IDH Silty Clay, Silty Clay Loam
- ▨ Gravelly sand, sandy gravel
- ▨ IDH Sand, Sandy Loam

Terracon  
1145 N. Main Street  
Lombard, IL 60148

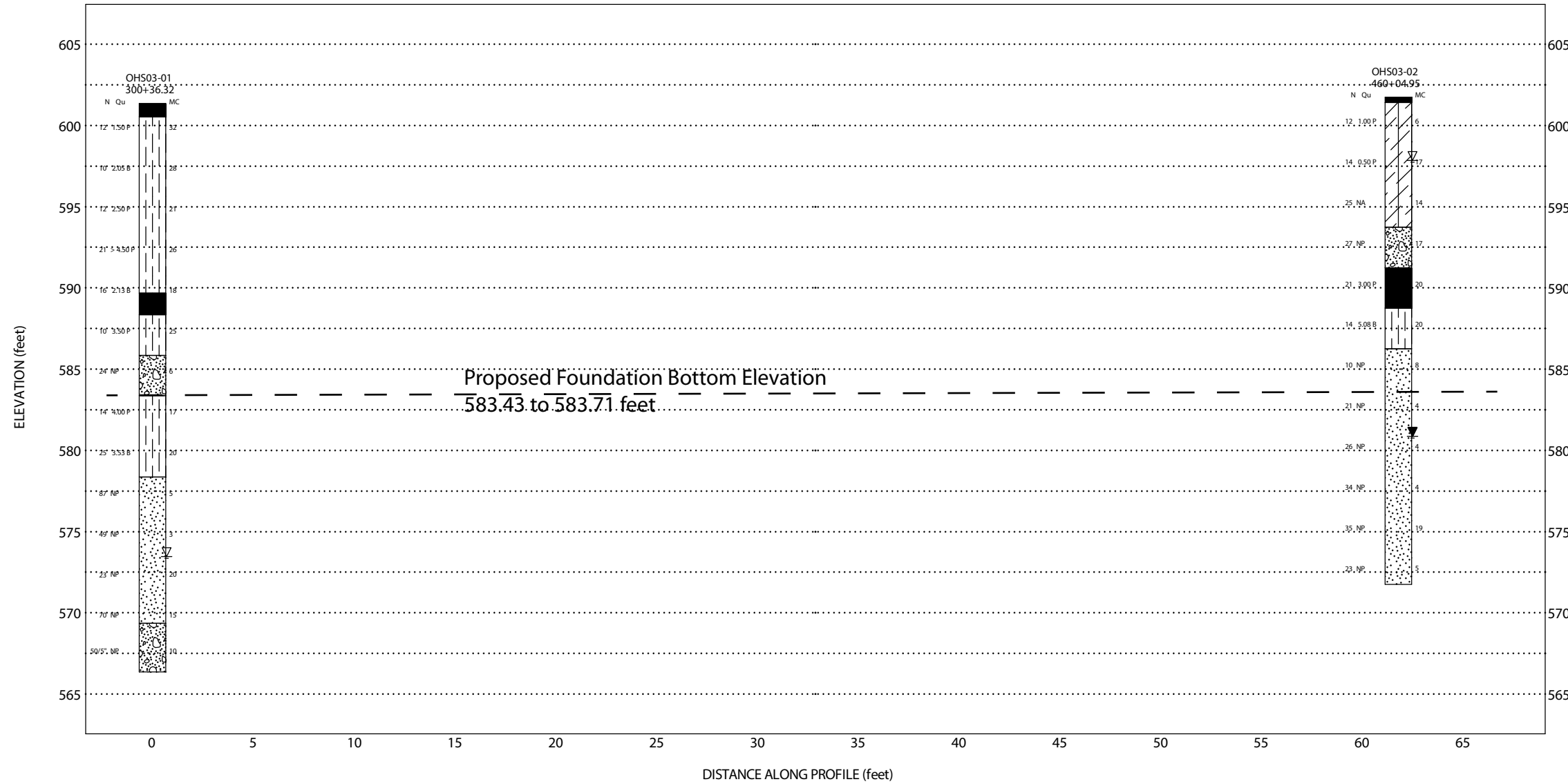
Soil Profile  
OHS2



I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-11



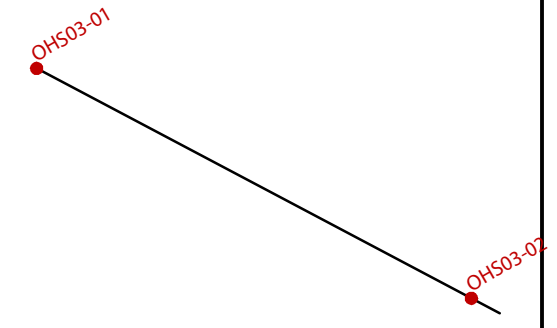


Proposed Foundation Bottom Elevation  
583.43 to 583.71 feet

DISTANCE ALONG PROFILE (feet)

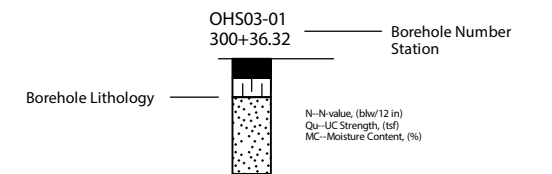
Lithology Graphics

- Topsoil
- IDH Silty Clay, Silty Clay Loam
- Gravelly sand, sandy gravel
- IDH Sand, Sandy Loam
- IDH Clay Loam

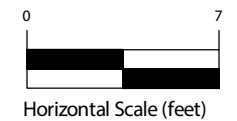


Site Map Scale 1 inch equals 25 feet

Explanation:



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 1x

**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile**  
OHS3



I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

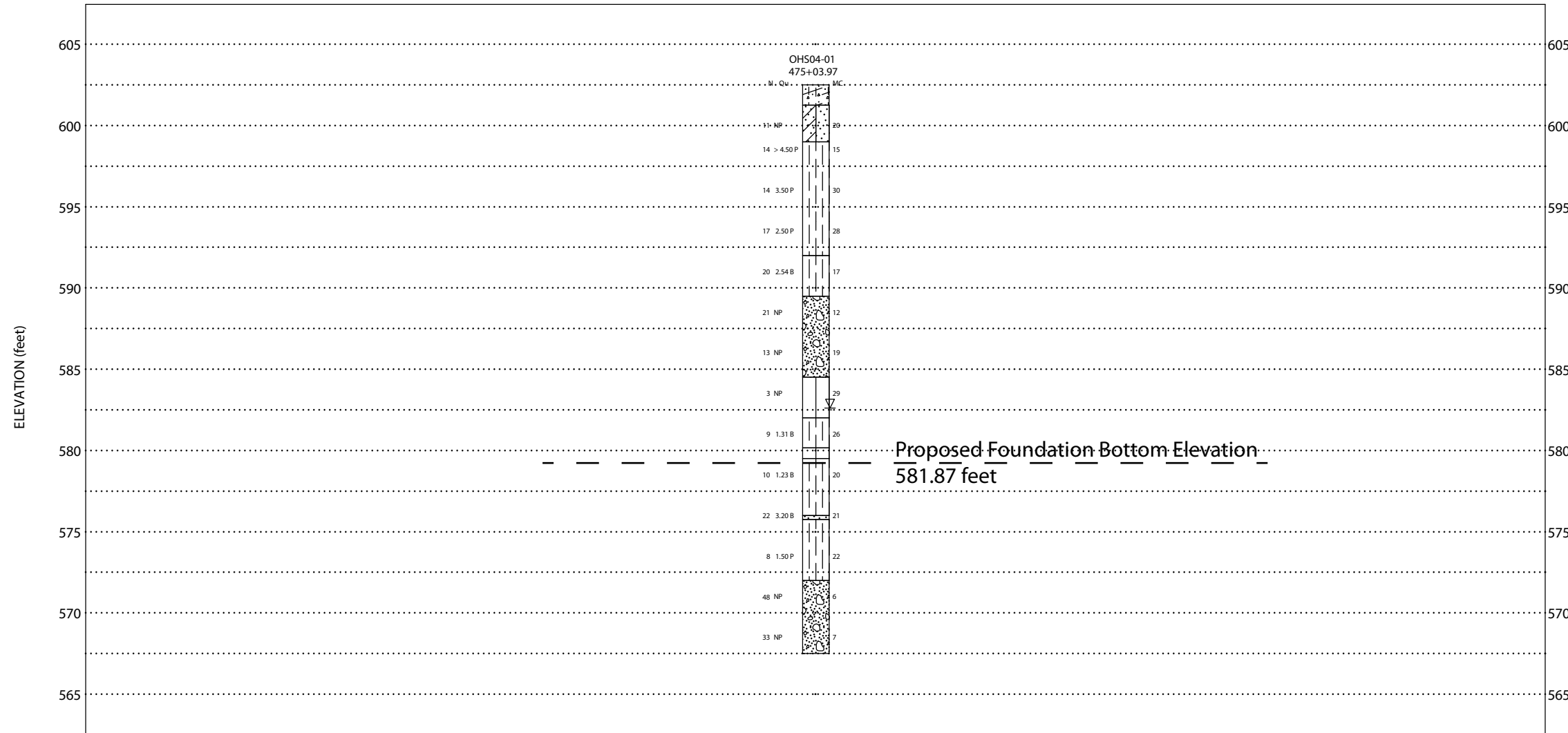
JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-12



N



OHS04-01



Proposed Foundation Bottom Elevation  
581.87 feet

DISTANCE ALONG PROFILE (feet)

Lithology Graphics

Pavement	IDH Loam	IDH Silty Clay, Silty Clay Loam	Gravelly sand, sandy gravel
IDH Silt, Silty Loam	IDH Sand, Sandy Loam		

Site Map Scale 1 inch equals 0 feet

Explanation:

OHS04-01  
475+03.97

Borehole Number Station

Borehole Lithology

N-N-value, (blw/12 in)  
Qu-U.C Strength, (tsf)  
MC-Moisture Content, (%)

- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling



Horizontal Scale (feet)

Vertical Exaggeration: 0x

Terracon  
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Lombard, IL 60148

Soil Profile  
OHS4

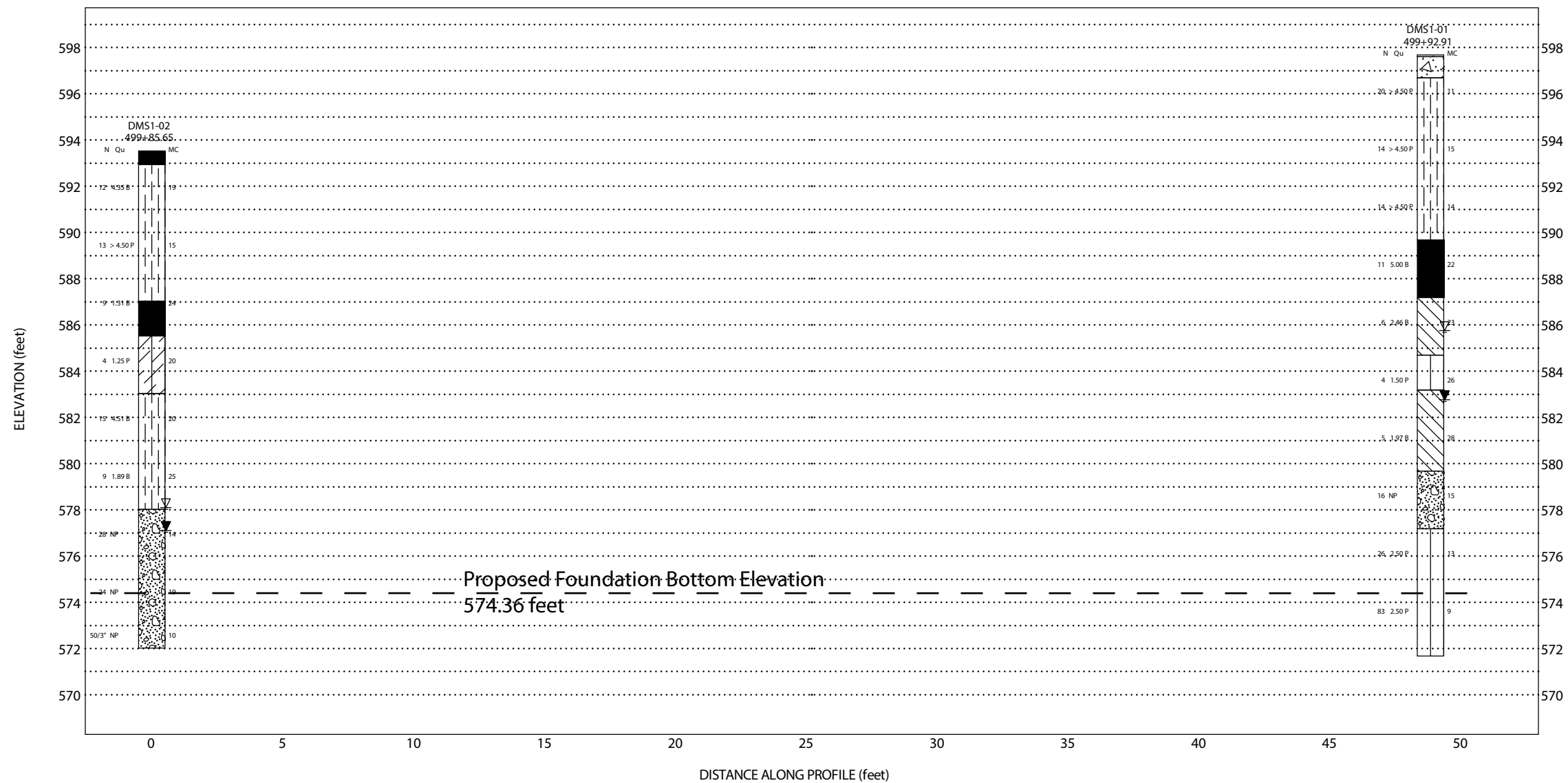


I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-13











N

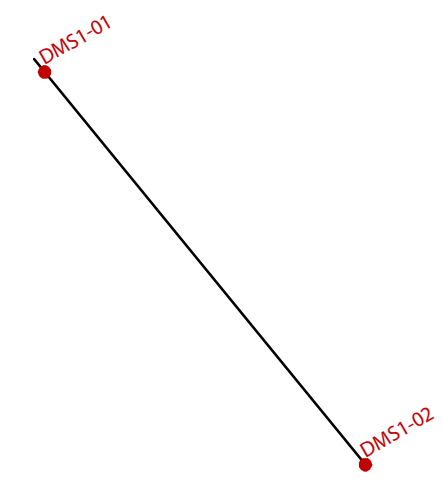


Proposed Foundation Bottom Elevation  
574.36 feet

DISTANCE ALONG PROFILE (feet)

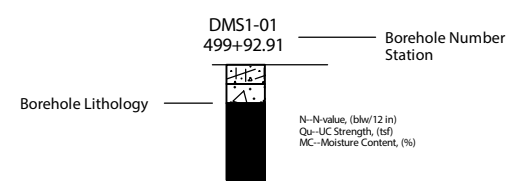
Lithology Graphics



-  Pavement
-  Concrete
-  IDH Silty Clay, Silty Clay Loam
-  Topsoil
-  IDH Clay
-  IDH Silt, Silty Loam
-  Gravelly sand, sandy gravel
-  IDH Clay Loam

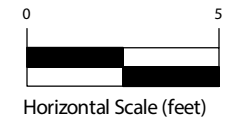


Site Map Scale 1 inch equals 20 feet

Explanation:



-  Water Level Reading at time of drilling.
-  Water Level Reading 24-hr after drilling or at end of drilling



Vertical Exaggeration: 1x

**Terracon**  
1145 N. Main Street  
Lombard, IL 60148

**Soil Profile**  
DMS1



I-80 Reconstruction (Houbolt Rd to Center St)  
Will County, Illinois

JOB NUMBER	PLATE NUMBER
7901-15-01	EXHIBIT 3-14

## **APPENDIX A**



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 1145 N. Main Street  
 Lombard, IL 60148  
 Telephone: 630-953-9928  
 Fax: 630-953-9938

# BORING LOG BC1-01

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 591.45 ft  
 North: 1761251.36 ft  
 East: 1033005.79 ft  
 Station: 494+62.97  
 Offset: 83.678 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
	590.8	8-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Medium stiff to very stiff, black and brown SILTY CLAY to CLAY, trace gravel; damp --FILL--			1	6 3 4	2.00 P	18		570.9	Very dense, GRAVEL; wet			9	50/4	NP	6	
			5		2	3 4 3	0.98 B	31			--AUGER REFUSAL--			10	50/4	NP	10	
	585.2	Loose, brown SILT; moist to wet			3	1 2 4	NP	26			Boring terminated at 25.00 ft							
	583.4	Hard, gray SILTY CLAY, trace gravel; damp --RDR 2-- --L <sub>L</sub> (%)=33, P <sub>L</sub> (%)=15-- --%Gravel=2.7-- --%Sand=10.6-- --%Silt=56.5-- --%Clay=30.2-- --A-6 (14)--			4	5 10 13	5.99 B	18										
					5	8 15 43	7.63 B	16										
	578.4	Medium dense to dense, gray SANDY GRAVEL; wet			6	9 17 15	NP	7										
					7	32 12 15	NP	9										
	573.4	Stiff, gray SILTY CLAY LOAM, trace gravel; damp			8	11 10 17	1.50 P	14										

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-21-2023** Complete Drilling **02-21-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling **7.00 ft**  
 At Completion of Drilling **20.00 ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



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 1145 N. Main Street  
 Lombard, IL 60148  
 Telephone: 630-953-9928  
 Fax: 630-953-9938

# BORING LOG BC1-03

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 590.30 ft  
 North: 1761168.24 ft  
 East: 1033164.33 ft  
 Station: 495+07.66  
 Offset: 89.662 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	589.8	6-inch thick, black and brown SILTY CLAY LOAM --TOPSOIL-- Very stiff, brown SILTY CLAY LOAM, trace gravel --RDR 2-- --FILL--			1	3 4 5	2.13 B	16			<0.2 inch opening, slightly rough walls, and <0.2 inch infill. --RUN 1: 18 to 25 feet-- --Recovery: 99%-- --RQD: 24%--			8			
	587.3	Medium stiff, black and dark brown CLAY --Buried TOPSOIL--	5		2	3 3 4	0.74 B	29									
	584.8	Very stiff, brown SILTY CLAY, trace gravel			3	2 3 6	2.79 B	21			Boring terminated at 25.00 ft						
	583.8	6-inch thick GRAVELLY LOAM; wet			4	4 7 13	4.67 B	17									
	583.3	Hard, brown to gray SILTY CLAY, trace gravel --RDR 2--	10		5	5 9 13	4.84 B	16									
	576.3	Dense, brown SANDY GRAVEL; dry to saturated --RDR 4-- --possible cobbles--	15		6	7 27 22	NP	6									
	573.8	Dense, gray SILTY LOAM, trace gravel; damp			7	11 12 19	NP	10									
	572.3	Very strong, light gray, very poor quality, DOLOSTONE; closely spaced, slightly weathered, horizontal and oblique joints, with	20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-28-2023** Complete Drilling **02-28-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21GeoA[96%]**  
 Driller **AG&EH** Logger **F. Bozga** Checked by **J. Bensen**  
 Drilling Method **3.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **6.50 ft**  
 At Completion of Drilling  $\nabla$  **8.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



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 Lombard, IL 60148  
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 Fax: 630-953-9938

# BORING LOG DMS1-01

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 597.68 ft  
 North: 1761565.01 ft  
 East: 1033449.04 ft  
 Station: 499+92.91  
 Offset: 34.710 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	597.61	1-inch thick ASPHALT								577.2							
	596.7	11-inch thick CONCRETE									Very stiff, gray SILTY CLAY LOAM to SILTY LOAM, little gravel; wet						
		--PAVEMENT--									--RDR 2-3--						
		Hard, brown SILTY CLAY LOAM, trace to little gravel; damp			1	7 8 12	> 4.50 P	11						9	12 9 17	2.50 P	13
		--FILL--															
		--RDR 2--															
					2	6 6 8	> 4.50 P	15						10	11 43 40	2.50 P	9
					3	4 5 9	> 4.50 P	14									
	589.7	Hard, black SILTY CLAY, trace gravel; damp			4	4 5 6	5.00 B	22									
		--Buried TOPSOIL--															
		--RDR 2--															
	587.2	Very stiff, brown and gray CLAY to SILTY CLAY, trace gravel; damp			5	2 3 3	2.46 B	23									
		--wet silt seam @ 12'--															
		--RDR 2--															
	584.7	Loose, gray SILTY LOAM; wet			6	0 2 2	1.50 P	26									
		--RDR 2--															
	583.2	Stiff, brown and gray CLAY to SILTY CLAY, trace gravel; damp			7	2 3 2	1.97 B	28									
		--RDR 2--															
	579.7	Medium dense, gray and brown SANDY GRAVEL; wet			8	3 6 10	NP	15									
		--RDR 2--															

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	01-27-2023	Complete Drilling	01-27-2023	While Drilling	▽	12.00 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	20CME55T[81%]	At Completion of Drilling	▼	15.00 ft	
Driller	KG&TC	Logger	B. Miller	Time After Drilling		NA	
Drilling Method	3.25" IDA HSA; boring backfilled upon completion			Depth to Water	▼	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



# BORING LOG DMS1-02

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 593.52 ft  
 North: 1761527.53 ft  
 East: 1033479.67 ft  
 Station: 499+85.65  
 Offset: 82.565 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	592.9	7-inch thick, black and dark brown SILTY CLAY LOAM --TOPSOIL-- Very stiff to hard, brown SILTY CLAY to SILTY CLAY LOAM, trace gravel --RDR 2-- --FILL--			1	3 4 8	4.35 B	19		572.0	--cobble fragments-- --AUGER REFUSAL-- Boring terminated at 21.50 ft			9	50/3	NP	10
			5		2	3 6 7	4.50 P	15				25					
	587.0	--(2.75 P)-- Stiff, black SILTY CLAY --Buried TOPSOIL--			3	2 3 6	1.31 B	24									
	585.5	Stiff, dark brown CLAY LOAM --RDR 2--			4	2 2 2	1.25 P	20				30					
	583.0	Stiff to hard, brown SILTY CLAY to CLAY, trace gravel --RDR 2--			5	3 5 10	4.51 B	20									
			15		6	3 4 5	1.89 B	25				35					
	578.0	Medium dense to very dense, brown SANDY GRAVEL; saturated --RDR 3-4--			7	5 11 17	NP	14									
			20		8	4 12 12	NP	19				40					

### GENERAL NOTES

Begin Drilling **02-28-2023** Complete Drilling **02-28-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21GeoA[96%]**  
 Driller **AG&EH** Logger **F. Bozga** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **15.50 ft**  
 At Completion of Drilling  $\nabla$  **16.50 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23





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# BORING LOG HR-BSB-01

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 604.87 ft  
 North: 1757424.96 ft  
 East: 1029622.93 ft  
 Station: 443+55.59  
 Offset: 25.83 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		15-inch thick CONCRETE --PAVEMENT--								584.4	Hard, brown SILTY CLAY, trace gravel; damp						
	603.6																
	603.1	Gray SANDY GRAVEL --AGGREGATE BASE--															
		Stiff to hard, brown SILTY CLAY LOAM to SILTY CLAY, trace to some gravel; damp			1	6 8 4	1.00 P	19						9	9 12 18	5.90 B	21
		--FILL-- --RDR 2--			2	6 5 9	2.05 B	19		581.9	Medium dense, gray SANDY GRAVEL; moist			10	15 11 10	NP	10
			5							580.5	Medium dense, brown, medium SAND; damp			25			
					3	6 12 19	4.10 B	20						11	7 9 8	NP	14
		--some gravel--			4	7 10 22	5.30 N/6	6		576.9	Medium dense to very dense, brown SANDY GRAVEL; saturated			30	29 35 35	NP	11
			10														
					5	4 9 13	5.33 B	21									
					6	7 6 8	4.02 B	25						13	14 11 14	NP	9
		--L <sub>L</sub> (%)=42, P <sub>L</sub> (%)=16-- --%Gravel=0.0-- --%Sand=17.2-- --%Silt=57.2-- --%Clay=25.6-- --A-7-6 (21)--	15														
					7	3 4 3	2.87 B	24									
										568.1	--lost drilling mud-- Dense to very dense, gray SILTY LOAM, trace to some gravel; damp						
	586.9	Medium dense, brown, medium SAND; wet			8	6 5 7	NP	21						14	29 25 24	2.46 S	9
		--RDR 2--	20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-21-2021** Complete Drilling **04-21-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

While Drilling  $\nabla$  **28.50 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG HR-BSB-01

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 604.87 ft  
 North: 1757424.96 ft  
 East: 1029622.93 ft  
 Station: 443+55.59  
 Offset: 25.83 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	558.9	Weathered Bedrock								541.9	Boring terminated at 63.00 ft			17			
	556.9	Moderate, light grayish gray, very poor quality, intensely to moderately fractured DOLOSTONE, gouge area; very closely spaced, highly weathered, horizontal, oblique, and vertical joints, with <0.05 inch opening, slightly rough to rough walls, and 0 - 0.2 inch thick clay infill. --RUN 1: 48.0 to 58.0 feet-- --Recovery= 100%-- --RQD= 18%--	45		15	44	NP	8				65					
			50			50/3"						70					
			55									75					
			60									80					

### GENERAL NOTES

Begin Drilling **04-21-2021** Complete Drilling **04-21-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20CME55T[81%]**  
 Driller **R&J** Logger **I. Nenn** Checked by **C. Marin**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **28.50 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG HR-BSB-02

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 605.66 ft  
 North: 1757599.41 ft  
 East: 1029781.34 ft  
 Station: 445+91.58  
 Offset: 25.85 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	604.4	15-inch thick CONCRETE --PAVEMENT--															
	602.4	Medium dense, gray SANDY GRAVEL; damp --AGGREGATE BASE--	1	X	1	9 8 4	NP	5				9	X	9	6 8 8	3.36 B	20
		Medium stiff to very stiff, brown, gray and black SILTY CLAY LOAM to SILTY CLAY, trace gravel; damp --FILL-- --RDR 2-3--	5	X	2	3 3 7	1.72 B	20				25	X	10	6 6 10	4.26 B	21
				X	3	4 8 9	0.82 B	20		580.2	Dense to very dense, brown and gray SANDY GRAVEL; wet to saturated --RDR 2-3--		X	11	20 22 40	NP	11
			10	X	4	3 3 6	1.23 B	19				30	X	12	12 29 52	NP	10
				X	5	4 5 15	3.77 B	22			--rig chatter; possible cobbles-- --cave-in--		X				
			15	X	6	9 10 8	1.25 P	24				35	X	13	36 42 42	NP	12
	590.2	Stiff to hard, brown and gray SILTY CLAY LOAM to SILTY CLAY, trace gravel; damp --RDR 2--		X	7	6 7 9	3.36 B	25		568.9	Very dense, gray SILTY LOAM, some gravel; damp --RDR 3-4--		X				
				X	8	2 3 6	1.23 B	23				40	X	14	23 27 32	NP	9

### GENERAL NOTES

Begin Drilling **04-21-2021** Complete Drilling **04-21-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&J** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **25.50 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG HR-BSB-02

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 605.66 ft  
 North: 1757599.41 ft  
 East: 1029781.34 ft  
 Station: 445+91.58  
 Offset: 25.85 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	559.7	Weathered Bedrock								542.7	Boring terminated at 63.00 ft			17			
	557.7	Strong, light grayish gray, very poor quality, moderately fractured DOLOSTONE; closely spaced, moderately weathered, horizontal, oblique, and vertical joints, with 0-0.2 inch opening, slightly rough walls, and <0.2 inch thick clay infill. --RUN 1: 48.0 to 58.0 feet-- --Recovery= 100%-- --RQD= 7%-- --Q <sub>v</sub> = 10,795 psi--	45		15	28	NP	11				65					
			50									70					
			55									75					
			60									80					

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-21-2021** Complete Drilling **04-21-2021**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **R&J** Logger **M. Sadowski** Checked by **C. Marin**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

While Drilling  $\nabla$  **25.50 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/24/23



# BORING LOG NAW13-01

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 584.03 ft  
 North: 1758002.20 ft  
 East: 1029722.08 ft  
 Station: 312+26.41  
 Offset: 29.957 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	583.0	Brown SANDY GRAVEL; damp --FILL--								583.5	Hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel; damp --RDR 4--						
		Medium dense, brown SANDY GRAVEL; damp --RDR 2--			1	11 9 5	NP	6		582.0	--AUGER REFUSAL-- Boring terminated at 22.00 ft			9	17 50/5"	> 4.50 P	9
	581.0	Hard, gray to brown SILTY CLAY, trace gravel; damp --RDR 2-3--			2	3 6 8	4.18 B	18									
		--silt seam--			3	13 10 21	4.50 P	20									
	576.0	Medium dense, brown, medium SAND, trace gravel; damp --RDR 3--			4	8 9 10	NP	7									
	573.5	Very dense, brown to gray SANDY GRAVEL; moist to wet --RDR 3--			5	23 37 48	NP	8									
					6	15 29 22	NP	7									
	567.8	Hard, gray SILTY CLAY LOAM to SILTY LOAM, little gravel; damp --RDR 2--			7	29 46 31	> 4.50 P	9									
	566.0	Very dense, gray GRAVEL; damp --RDR 3--			8	50/5"	NP	2									

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-22-2023** Complete Drilling **03-22-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **13.50 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW13-02

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 585.35 ft  
 North: 1758099.39 ft  
 East: 1029866.81 ft  
 Station: 310+54.31  
 Offset: 57.785 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	584.7	8-inch thick, brown SILTY CLAY LOAM									Boring terminated at 20.00 ft						
		--FILL--															
		Medium dense, brown SANDY LOAM, trace gravel; damp			1	7 7 11	NP	13									
	582.3	Medium dense, brown SANDY GRAVEL; damp			2	23 20 7	NP	8				25					
		--RDR 4--	5														
	579.8	Very stiff, brown SILTY CLAY, trace gravel; damp			3	5 6 9	2.46 B	21									
		--RDR 3--															
	576.6	Brown SANDY GRAVEL; damp			4	19 10 6	3.00 P	23				30					
	576.3	Medium stiff to very stiff, brown SILTY CLAY, trace gravel; damp															
		--RDR 3--	10														
	573.3	Very dense, gray SILT; moist to wet			5	4 3 4	0.98 B	18									
		--RDR 3--															
	570.7	Brown SANDY GRAVEL; wet			6	3 32 48	NP	20				35					
		--RDR 3--	15														
	569.8	Very dense, brown Gravelly LOAM; moist			7	43 50/5"	NP	11									
		--RDR 3--															
		--possible cobbles--															
	567.3	Brown SANDY GRAVEL; wet															
	566.6	Hard, gray SILTY CLAY LOAM, trace gravel; damp			8	25 17 9	4.50 P	13				40					
		--RDR 3--	20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-06-2023** Complete Drilling **03-07-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling **13.00 ft**  
 At Completion of Drilling **18.00 ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



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# BORING LOG NAW13-03

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 589.12 ft  
 North: 1758158.42 ft  
 East: 1030032.43 ft  
 Station: 308+79.17  
 Offset: 42.208 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Stiff, brown SILTY CLAY, some gravel; damp															
	587.6	--FILL--															
		Very dense, brown SANDY GRAVEL; damp			1	13 48 50/3"	NP	5									
		--RDR 4--															
					2	15 27 31	NP	4									
	583.6																
		Stiff, brown SILTY CLAY, trace gravel; damp			3	12 15 18	1.50 P	17									
	581.1	--RDR 3--															
		Very dense, brown SANDY GRAVEL; damp			4	42 50/5"	NP	4									
		--RDR 3--															
	578.6																
		Soft to stiff, brown to gray SILTY CLAY to CLAY, trace gravel; damp			5	7 8 8	1.89 B	22									
		--RDR 2--															
	574.8																
		Loose to very dense, gray SILT; moist			6	3 4 5	0.41 B	20									
		--RDR 2-3--															
	571.8																
		Brown SANDY LOAM; damp			7	3 10 50/5"	NP	20									
	571.1	--RDR 3--															
		Very dense, brown SANDY GRAVEL; damp			8	50/5"	NP	4									
	570.2																
		--RDR 3--															
		Boring terminated at 18.90 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-06-2023** Complete Drilling **03-06-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



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# BORING LOG NAW13-04

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.11 ft  
 North: 1758245.70 ft  
 East: 1030170.77 ft  
 Station: 307+07.11  
 Offset: 50.819 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	590.9	15-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL--															
		Very stiff, brown CLAY LOAM; damp --FILL-- --RDR 3--			1	7 12 15	3.00 P	33									
	589.1	Medium dense, brown SANDY GRAVEL; damp --RDR 2--			2	15 15 14	NP	5									
	586.6	Very stiff, brown SILTY CLAY, trace gravel; damp --RDR 2-3--			3	5 5 8	2.79 B	20									
					4	6 7 11	3.94 B	20									
	581.6	Very dense, brown SANDY GRAVEL; damp --RDR 3-- --possible cobbles--			5	32 32 30	NP	4									
	579.1	Stiff to very stiff, brown to gray SILTY CLAY, trace gravel; damp			6	6 7 9	2.95 B	21									
	575.8	--Qu: 1.5P-- Loose, gray SILT; wet			7	2 3 3	NP	21									
	574.1	Very dense, brown and gray SANDY GRAVEL; damp			8	37 34 40	NP	3									
	572.1	Boring terminated at 20.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-06-2023** Complete Drilling **03-06-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **16.33 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23





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# BORING LOG NAW13-05

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 590.06 ft  
 North: 1758344.18 ft  
 East: 1030291.88 ft  
 Station: 305+43.18  
 Offset: 47.439 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	588.6	Stiff, brown SILTY CLAY, trace gravel; damp --FILL--								567.6							
	587.1	Medium dense, brown SANDY LOAM, trace gravel; damp --FILL--			1	6 6 13	1.56 B	21			Boring terminated at 22.50 ft			9	1 16 10	NP	9
		Medium dense to dense, brown SANDY GRAVEL; damp	5		2	16 14 17	NP	7				25					
					3	22 22 17	NP	3									
			10		4	10 10 7	NP	7				30					
					5	11 15 18	NP	5									
	577.1	Very stiff, brown CLAY to SILTY CLAY, trace gravel; damp	15		6	4 6 4	2.50 P	24				35					
	574.6	Medium dense, gray SILT; damp			7	4 6 23	NP	22									
	573.2	Very stiff (2.00P), brown SILTY CLAY; damp			8	50/3"	NR					40					
	572.1	Medium dense, brown SANDY GRAVEL; wet	20														

### GENERAL NOTES

Begin Drilling **03-06-2023** Complete Drilling **03-06-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling **21.00 ft**  
 At Completion of Drilling **DRY**  
 Time After Drilling **NA**  
 Depth to Water **NA**

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# BORING LOG NAW13-06

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 594.20 ft  
 North: 1758218.22 ft  
 East: 1030186.74 ft  
 Station: 307+09.85  
 Offset: 19.149 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Stiff to very stiff, black, dark brown and brown CLAY LOAM; trace gravel; damp --FILL-- --RDR 2--			1	3 2 8	1.50 P	23									
					2	3 5 11	2.95 B	32									
	588.7																
	587.9	Brown SANDY LOAM, trace gravel; damp --FILL--			3	8 15 17	NP	6									
	586.2	Dense, brown SANDY GRAVEL; damp --RDR 3--			4	4 5 8	3.77 B	19									
		Very stiff to hard, brown and gray SILTY CLAY, trace gravel; damp --RDR 2--			5	8 9 12	6.56 B	18									
	581.2																
		Stiff to very stiff, brown to gray CLAY to SILTY CLAY, trace gravel; damp --RDR 2--			6	5 6 14	1.64 B	25									
					7	6 6 9	3.85 B	23									
	576.2																
		Loose, gray SILT; moist to wet --RDR 2--			8	4 4 4	NP	20									
	574.2																
		Boring terminated at 20.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-06-2023** Complete Drilling **03-06-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **20.00 ft**  
 At Completion of Drilling  $\nabla$  **20.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW13-07

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 599.40 ft  
 North: 1758350.28 ft  
 East: 1030359.09 ft  
 Station: 304+90.51  
 Offset: 5.255 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	598.9	6-inch thick ASPHALT --PAVEMENT--															
	598.4	6-inch thick CRUSHED STONE --BASE COURSE--															
		Medium stiff to very stiff, brown CLAY LOAM, trace to some gravel; damp			1	10 8 7	0.82 B	15									
		--FILL-- --RDR 2-3--			2	5 9 10	2.52 B	21									
					3	7 7 12	2.52 B	23									
		--L <sub>L</sub> (%)=48, P <sub>L</sub> (%)=19-- --%Gravel=11.3-- --%Sand=30.0-- --%Silt=34.5-- --%Clay=24.2-- --A-7-6 (14)--			4	6 5 15	1.48 B	25									
					5	4 5 6	3.50 P	33									
	586.4	Dense, brown SANDY GRAVEL; damp			6	19 21 18	NP	8									
					7	13 13 20	NP	4									
					8	19 18 13	NP	7									
	579.4	Boring terminated at 20.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-06-2023** Complete Drilling **03-06-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW13-08

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 600.36 ft  
 North: 1758506.66 ft  
 East: 1030512.16 ft  
 Station: 302+71.78  
 Offset: 11.873 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	599.9	6-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Stiff, brown SILTY CLAY, trace gravel; damp --FILL-- --RDR 2--			1	8 4 7	1.50 P	19									
	596.4	Dense, brown SANDY GRAVEL; damp --FILL--			2	13 27 17	NP	5									
	594.9	Stiff to hard, brown and gray CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			3	6 7 10	1.50 P	20									
					4	5 4 9	1.50 P	23									
					5	6 6 6	2.21 B	24									
					6	5 6 12	4.50 P	25									
	584.9	Hard, black SILTY CLAY, trace gravel; damp --Buried TOPSOIL-- --RDR 2--			7	8 8 11	4.00 P	34									
	582.4	Very stiff, brown SILTY CLAY, trace gravel; damp --RDR 2--			8	6 7 7	2.95 B	20									
	580.4	Boring terminated at 20.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-02-2023** Complete Drilling **03-02-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG NAW14-01

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 601.46 ft  
 North: 1759594.97 ft  
 East: 1031484.41 ft  
 Station: 472+13.99  
 Offset: 101.131 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	600.6	10-inch thick, dark brown SILTY CLAY LOAM															
		--TOPSOIL--															
		Stiff to very stiff, brown SILTY CLAY, trace gravel; damp			1	3 3 3	2.00 P	29									
		--FILL--															
		--RDR 2--															
			5		2	3 4 5	1.23 B	18									
	595.2	Medium dense to very dense, brown SANDY GRAVEL; damp			3	12 16 14	NP	9									
		--RDR 3-4--															
			10		4	21 17 17	NP	6									
					5	29 31 27	NP	5									
			15		6	8 12 13	NP	5									
					7	14 17 17	NP	4									
					8	22 18 19	NP	5									
	581.5	Boring terminated at 20.00 ft	20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-02-2023** Complete Drilling **03-02-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-02

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.75 ft  
 North: 1759741.87 ft  
 East: 1031626.49 ft  
 Station: 474+18.25  
 Offset: 94.278 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	596.0	9-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Medium stiff, brown SILTY CLAY, trace gravel; damp --FILL--			1	3 3 6	0.50 P	27			--RDR 2-- --Hit shale, but augered to 25' easily-- Boring terminated at 20.00 ft						
	594.0	Very stiff, dark brown and black SILTY CLAY, trace organic matter; damp --Buried TOPSOIL--	5		2	3 3 4	2.00 P	37				25					
	590.1	Stiff to very stiff, brown SILTY CLAY to CLAY, trace gravel; moist			3	9 9 11	1.97 B	25									
			10		4	3 5 6	2.46 B	25				30					
	586.2	Very soft, brown SILTY CLAY LOAM to SILTY LOAM, trace gravel; moist --RDR 2-- --L <sub>L</sub> (%)=39, P <sub>L</sub> (%)=17-- --%Gravel=6.3-- --%Sand=21.8-- --%Silt=49.7-- --%Clay=22.2-- --A-6 (14)--			5	4 6 3	< 0.25 P	33									
			15		6	3 5 4	< 0.25 P	26				35					
					7	4 4 5	< 0.25 P	15									
	577.8	Very stiff, brown SILTY CLAY, trace gravel; moist			8	8 4	3.00 P	21									
	576.7		20			50/4"						40					

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-02-2023** Complete Drilling **03-02-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG NAW14-03

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 595.71 ft  
 North: 1759898.05 ft  
 East: 1031771.68 ft  
 Station: 476+31.46  
 Offset: 91.340 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.9	10-inch thick, dark brown SILTY CLAY LOAM															
		--TOPSOIL--															
		Very stiff, brown SILTY CLAY, trace gravel; damp			1	3 5 6	2.38 B	22									
		--FILL--															
	592.7	Stiff to very stiff, brown CLAY to SILTY CLAY, trace gravel; damp			2	3 4 4	1.50 P	30									
		--RDR 2--															
			5														
					3	2 2 2	2.00 P	26									
					4	2 3 3	1.72 B	21									
			10														
	585.2	Medium dense, brown SANDY GRAVEL; damp			5	3 5 7	NP	9									
		--RDR 3--															
	582.7	Medium dense, brown SANDY LOAM, little gravel; damp			6	4 8 11	NP	11									
		--RDR 3--															
			15														
	580.2	Medium dense, brown SANDY GRAVEL; damp			7	15 12 11	NP	6									
		--RDR 3--															
					8	13 14 13	NP	6									
	575.7		20														
		Boring terminated at 20.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-01-2023** Complete Drilling **03-01-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW14-04

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.10 ft  
 North: 1760054.16 ft  
 East: 1031919.60 ft  
 Station: 478+46.47  
 Offset: 86.333 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.6	6-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Stiff, brown CLAY; damp			1	11 9 6	1.00 P	42									
	593.1	Loose to medium dense, brown, medium SAND, trace gravel; damp to moist --RDR 3--			2	4 4 4	NP	11									
					3	8 6 6	NP	2									
					4	1 4 4	NP	20									
					5	5 5 7	NP	10									
	583.1	Medium dense to very dense, brown SANDY GRAVEL; damp to wet			6	5 5 6	NP	14									
					7	23 21 24	NP	6									
					8	26 32 33	NP	10									
	576.1	Boring terminated at 20.00 ft	20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-28-2023** Complete Drilling **02-28-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **18.50 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW14-05

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 601.95 ft  
 North: 1759904.87 ft  
 East: 1031823.50 ft  
 Station: 476+71.28  
 Offset: 57.483 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	600.6	16-inch thick ASPHALT															
		Stiff to hard, brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp															
		--FILL-- --RDR 2--			1	6 5 6	1.00 P	24									
					2	1 3 10	> 4.50 P	17									
					3	4 6 9	> 4.50 P	17									
	593.9	Stiff to hard, brown SILTY CLAY to CLAY, trace gravel; damp															
		--RDR 2--			4	3 5 8	> 4.50 P	29									
					5	6 7 7	3.53 B	25									
					6	3 3 2	1.48 B	26									
	586.4	Medium dense, brown SANDY GRAVEL; damp															
		--RDR 3--			7	3 6 7	NP	12									
					8	14 12 12	NP	6									
	581.9	Boring terminated at 20.00 ft															

### GENERAL NOTES

Begin Drilling **03-01-2023** Complete Drilling **03-01-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW14-06

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 600.76 ft  
 North: 1760069.90 ft  
 East: 1031969.68 ft  
 Station: 478+91.73  
 Offset: 59.740 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	599.6	14-inch thick ASPHALT --PAVEMENT--															
		Stiff to very stiff, brown, dark brown and gray CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	1		1	6 6 7	3.00 P	23									
			2		2	4 3 5	1.50 P	23									
	595.3	Stiff to very stiff, brown SILTY CLAY to CLAY, trace gravel; damp --RDR 2-3--	3		3	5 6 7	2.46 B	25									
			4		4	4 3 4	1.48 S	25									
	588.4	Medium dense to very dense, brown SANDY GRAVEL; damp to moist --RDR 2--	5		5	5 10 27	2.21 B	20									
			6		6	14 25 35	NP	5									
			7		7	14 17 24	NP	5									
	580.8		8		8	14 11 14	NP	10									
Boring terminated at 20.00 ft																	

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-01-2023** Complete Drilling **03-01-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



# BORING LOG NAW14-07

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 599.34 ft  
 North: 1760238.46 ft  
 East: 1032114.15 ft  
 Station: 481+13.65  
 Offset: 65.649 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	598.8	6-inch thick, brown SILTY CLAY LOAM, little gravel --TOPSOIL-- Very stiff to hard, brown SILTY CLAY, trace gravel; damp --FILL-- --RDR 2-3--			1	6 6 7	4.02 B	18									
			5		2	6 7 10	5.49 B	17									
	593.1	--Qu: 2.50P-- Medium dense to dense, brown SANDY GRAVEL; damp --FILL-- --RDR 3--			3	19 17 11	NP	5									
			10		4	13 18 19	NP	5									
					5	15 11 10	NP	5									
	586.3	Very stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			6	7 8 9	3.12 B	14									
			15		7	5 7 12	5.25 B	18									
					8	7 10 13	4.26 B	16									
	579.3	Boring terminated at 20.00 ft	20														

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-22-2023** Complete Drilling **03-22-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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# BORING LOG NAW14-08

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.58 ft  
 North: 1760119.30 ft  
 East: 1031984.47 ft  
 Station: 479+38.29  
 Offset: 81.909 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.6	12-inch thick, dark brown SILTY CLAY --TOPSOIL-- Stiff to very stiff, dark brown to brown SILTY CLAY --RDR 2--			1	2 2 4	1.00 P	26									
			5		2	3 4 4	2.05 B	24									
	591.1	Medium stiff, brown LOAM, trace gravel; damp --RDR 2--			3	2 4 11	0.50 P	21									
	588.6	Dense, brown SANDY GRAVEL; damp --RDR 2--			4	15 17 19	NP	7									
	586.1	Dense, brown SAND, little to some gravel; damp --RDR 2-3--			5	13 20 18	NP	10									
	582.3	Medium dense, brown SANDY GRAVEL; saturated	15		6	10 14 19	NR										
	578.6	Medium dense, brown, medium SAND, trace gravel; saturated --RDR 2--			7	7 7 9	NP	16									
	576.6	Boring terminated at 20.00 ft	20		8	9 14 11	NP	24									

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-28-2023** Complete Drilling **02-28-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

While Drilling  $\nabla$  **16.00 ft**  
 At Completion of Drilling  $\nabla$  **cave in @ 18'**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-09

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.64 ft  
 North: 1760277.74 ft  
 East: 1032126.57 ft  
 Station: 481+51.12  
 Offset: 82.779 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	596.1	6-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Very stiff, brown to gray SILTY CLAY, trace gravel; damp --RDR 2--			1	6 6 9	2.95 B	20									
			5		2	4 5 8	2.71 B	16									
					3	5 8 17	3.36 B	16									
	587.8	Dense, brown SANDY GRAVEL; damp --RDR 2-3--			4	14 25 23	NP	4									
	586.1	Dense, brown SAND, little gravel; damp			5	17 24 16	NP	5									
	583.6	Medium dense, brown SANDY GRAVEL; moist to saturated --RDR 2--			6	5 7 7	NP	17									
	581.1	Medium dense, brown SAND; saturated --RDR 2--			7	4 6 7	2.30 B	19									
	580.0	Very stiff, gray SILTY CLAY, trace gravel; damp --RDR 2--			8	5 20 19	3.69 B	16									
	576.6	Boring terminated at 20.00 ft	20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-28-2023** Complete Drilling **02-28-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

While Drilling  $\nabla$  **14.50 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-10

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.10 ft  
 North: 1760435.47 ft  
 East: 1032268.28 ft  
 Station: 483+63.15  
 Offset: 83.461 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.5	7-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Very stiff to hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			1	7 8 10	3.20 S	19									
			5		2	3 7 7	3.64 B	16									
					3	5 6 7	4.92 B	21									
	587.3	Medium dense, brown SANDY GRAVEL; damp --RDR 2--10			4	13 13 16	NP	6									
	585.6	Medium dense, brown SANDY GRAVEL; wet --RDR 2--			5	11 11 13	NP	8									
			15		6	14 10 10	NP	13									
	579.3	Very stiff, gray SILTY CLAY, trace gravel; damp --RDR 2--			7	6 6 9	NR										
	576.1		20		8	8 7 10	2.00 P	20									
Boring terminated at 20.00 ft																	

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-28-2023** Complete Drilling **02-28-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

While Drilling  $\nabla$  **11.00 ft**  
 At Completion of Drilling  $\nabla$  **cave in @ 13'**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-11

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 594.52 ft  
 North: 1760594.80 ft  
 East: 1032414.11 ft  
 Station: 485+79.14  
 Offset: 82.166 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.9	8-inch thick TOPSOIL															
		Stiff to very stiff, brown to gray SILTY CLAY, trace gravel; damp --RDR 2--			1	5 6 8	1.39 B	16									
					2	4 6 10	3.94 B	17									
					3	4 7 8	2.05 S	24									
	586.5	Dense, brown SANDY LOAM, little gravel; damp --RDR 2--			4	13 17 18	NP	6									
	584.0	Medium dense, gray GRAVEL; wet --RDR 2--			5	14 16 13	NP	5									
	581.5	Very stiff to hard, gray SILTY CLAY, trace gravel; damp --RDR 2--			6	6 9 12	3.69 B	19									
					7	6 9 13	4.43 B	17									
	576.5	Medium dense, gray SILT; saturated --RDR 2--			8	7 8 6	NP	18									
	574.5	Boring terminated at 20.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-28-2023** Complete Drilling **02-28-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **11.00 ft**  
 At Completion of Drilling  $\nabla$  **19.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW14-12

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 594.26 ft  
 North: 1760750.18 ft  
 East: 1032553.44 ft  
 Station: 487+87.85  
 Offset: 83.042 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.8	6-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Very stiff to hard, brown to gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2--			1	9 7 8	2.21 B	15									
			5		2	8 8 11	4.10 S	17									
					3	5 8 11	4.51 B	16									
	585.1	Dense, brown SILT; moist --RDR 2--10			4	6 15 15	3.03 B	14									
	583.8	Medium dense to dense, brown, coarse SAND; moist to wet --RDR 2--			5	7 13 18	NP	15									
			15		6	2 10 10	NP	19									
	578.8	Hard, gray SILTY CLAY, trace gravel; damp --RDR 2--			7	7 10 15	4.43 B	17									
	574.9	Medium dense, gray SILT; wet			8	8 8 7	NP	20									
	574.3	Boring terminated at 20.00 ft	20														

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-28-2023** Complete Drilling **02-28-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **13.50 ft**  
 At Completion of Drilling  $\nabla$  **19.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-13

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.31 ft  
 North: 1760913.05 ft  
 East: 1032686.83 ft  
 Station: 489+98.11  
 Offset: 93.341 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	591.1	14-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL--									--AUGER REFUSAL-- Boring terminated at 20.00 ft						
		Stiff to very stiff, brown SILTY CLAY to CLAY, trace gravel; damp --RDR 2--	1		1	3 5	2.50 P	23									
			5		2	3 4 7	1.23 S	25				25					
	586.8	Medium dense, brown SANDY GRAVEL; damp --RDR 2--			3	24 13 10	NP	6									
	583.1	Very stiff, gray SILTY CLAY, trace gravel; damp --RDR 2-3--	10		4	9 9 10	NR					30					
		--wet spoon--			5	9 10 10	2.50 P	18									
			15		6	6 9 19	3.20 B	16				35					
	576.8	Dense to very dense, gray SANDY GRAVEL; wet to saturated			7	25 41 25	NP	5									
					8	11 18 24	NP	7				40					
	572.3		20														

### GENERAL NOTES

Begin Drilling **02-24-2023** Complete Drilling **02-24-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **12.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



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# BORING LOG NAW14-14

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 589.48 ft  
 North: 1761060.46 ft  
 East: 1032815.81 ft  
 Station: 491+93.96  
 Offset: 96.545 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	588.6	10-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Medium stiff, brown CLAY LOAM, trace gravel; damp --FILL--			1	2 2 3	0.74 B	12			--AUGER REFUSAL-- Boring terminated at 20.00 ft						
	586.5	Hard, brown SILTY CLAY, trace gravel; damp --RDR 2--	5		2	5 6 5	4.00 P	20				25					
	584.0	Hard, brown SANDY LOAM to LOAM, trace gravel; wet --RDR 2--			3	18 13 11	4.50 P	14									
	580.2	Stiff, gray SILTY CLAY, trace gravel; damp --RDR 3--	10		4	13 13 13	NR					30					
	577.5	Gray SANDY GRAVEL; wet --RDR 3--			5	15 26 19	1.89 B	17									
	576.5	Soft, gray SILTY CLAY LOAM, trace gravel; damp to moist --RDR 2-3--	15		6	4 3 6	0.41 B	20				35					
	573.2	Very dense, gray SANDY GRAVEL; saturated --RDR 3-- --Weathered BEDROCK--			7	42 32 31	NP	7									
	569.5		20		8	26 50/3"	NP	6				40					

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-24-2023** Complete Drilling **02-24-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

While Drilling  $\nabla$  **6.00 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW14-15

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.77 ft  
 North: 1761217.50 ft  
 East: 1032952.53 ft  
 Station: 494+02.13  
 Offset: 100.467 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	587.6	14-inch thick, dark brown SILTY CLAY to SILTY CLAY LOAM --TOPSOIL--															
	585.8	Loose, brown SANDY LOAM, trace gravel; wet --RDR 2--			1	2 2 4	NP	18									
	578.3	Hard, brown to gray SILTY CLAY, trace gravel; damp --RDR 2--	5		2	3 5 6	4.92 B	23									
	576.5	Very stiff (2.0P), gray SILTY CLAY; damp			3	10 9 10	6.97 B	21									
	575.8	Loose, gray Gravelly SAND; wet --RDR 2--			4	4 8 11	6.48 B	14									
	575.0	Gray, coarse SAND; wet			5	9 3 3	NP	15									
	574.2	Very dense, gray SILT; saturated --RDR 2--			6	14 29 28	NP	22									
	570.8	Stiff, gray SILTY CLAY LOAM to SILTY LOAM, little gravel; moist to wet --RDR 2-3--	15		7	7 12 50/5"	1.89 B	10									
	570.0	Very dense, gray GRAVEL --Weathered BEDROCK-- --AUGER REFUSAL-- Boring terminated at 18.75 ft	20		8	50/3"	NP	6									

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### GENERAL NOTES

Begin Drilling **02-24-2023** Complete Drilling **02-24-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **1.00 ft**  
 At Completion of Drilling  $\nabla$  **mud in borehole**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-16

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 595.81 ft  
 North: 1761048.75 ft  
 East: 1032851.41 ft  
 Station: 492+09.15  
 Offset: 62.289 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.4	17-inch thick ASPHALT --PAVEMENT--									Very stiff (3.50P), gray SILTY CLAY, trace gravel; damp --RDR 2--						
		Stiff, brown CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--	5		1	6 7 8	1.50 P	10			Boring terminated at 20.00 ft						
			5		2	7 6 6	1.00 P	13									
	590.3	Very stiff, black SILTY CLAY, trace gravel; damp --Buried TOPSOIL-- --RDR 2--			3	7 7 7	3.00 P	21									
	587.8	Stiff to hard, brown to gray SILTY CLAY, trace gravel; damp --RDR 2--	10		4	3 3 3	2.00 P	16									
		--wet spoon--			5	4 8 9	1.89 S	17									
			15		6	4 5 7	3.53 B	18									
					7	7 15 27	4.59 B	20									
	577.8	Medium dense, gray SILT; wet --RDR 2--			8	7 6 5	NP	19									
	576.1 575.8		20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-24-2023** Complete Drilling **02-24-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **11.00 ft**  
 At Completion of Drilling  $\nabla$  **14.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW14-17

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.04 ft  
 North: 1761183.88 ft  
 East: 1032972.70 ft  
 Station: 493+90.73  
 Offset: 62.968 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		17-inch thick ASPHALT --PAVEMENT--									--RDR 2-3--						
	594.6	Stiff to very stiff, brown and dark brown CLAY LOAM, trace gravel; damp			1	7 15 16	1.00 P	23			Boring terminated at 20.00 ft						
		--FILL--			2	9 9 11	2.50 P	12									
			5									25					
	590.5	Very stiff to hard, black SILTY CLAY, trace gravel; damp			3	8 9 10	4.50 P	22									
		--FILL-- --RDR 2--															
	587.0	Gray, coarse SAND; wet			4	5 6 8	3.50 P	18									
	586.6	Stiff to very stiff, greenish gray SILTY CLAY to CLAY, trace gravel; damp	10									30					
		--RDR 2--			5	5 8 9	1.50 P	22									
	584.0	Very stiff, brown and gray SILTY CLAY LOAM, trace gravel; damp															
		--RDR 2-3--			6	5 8 8	2.95 B	16				35					
			15														
					7	12 10 26	3.08 B	13									
	578.0	Gray GRAVEL; wet															
	577.3	Very stiff, gray SILTY CLAY, trace gravel; damp			8	13 7 6	2.50 P	20									
		--RDR 2-3--															
	576.0		20									40					

### GENERAL NOTES

Begin Drilling **02-24-2023** Complete Drilling **02-24-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **9.00 ft**  
 At Completion of Drilling  $\nabla$  **14.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-18

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.44 ft  
 North: 1761306.99 ft  
 East: 1033085.17 ft  
 Station: 495+57.48  
 Offset: 62.116 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		17-inch thick ASPHALT --PAVEMENT--															
	595.0																
		Very stiff, dark brown to brown SILTY CLAY LOAM, little gravel damp			1	3 7 13	3.50 P	11									
	593.2	--FILL--															
		Medium dense, brown Gravelly SAND			2	7 8 8	NP	7									
	590.9	--FILL--	5														
		Very stiff, brown SILTY CLAY, trace gravel; damp			3	7 6 13	2.00 P	22									
	588.4	--RDR 2--															
		Hard, brown SILTY CLAY, trace gravel; damp			4	3 8 11	6.89 B	22									
	583.4	--RDR 2--	10														
		Hard, brown to gray SILTY CLAY LOAM, trace gravel; damp			5	5 6 7	4.35 B	20									
	578.4	--RDR 2--			6	11 7 22	7.71 S	13									
		Very dense, gray Gravelly SAND; damp			7	15 16 36	6.81 B	14									
	576.4	--RDR 2--	15		8	15 34 16	NP	5									
		Boring terminated at 20.00 ft	20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-21-2023** Complete Drilling **02-21-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

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# BORING LOG NAW14-19

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 596.91 ft  
 North: 1761437.29 ft  
 East: 1033203.83 ft  
 Station: 497+33.71  
 Offset: 61.494 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		18-inch thick ASPHALT --PAVEMENT--															
	595.4	Very stiff to hard, brown and black SILTY CLAY, trace gravel; damp --FILL-- --RDR 2--			1	6 8 9	3.00 P	21									
					2	6 42 21	> 4.50 P	20									
	590.2	Medium dense, brown, coarse SAND; moist to wet --RDR 2--			3	7 6 6	NR										
					4	5 7 8	NP	13									
	586.4	Very stiff to hard, brown and gray SILTY CLAY, trace gravel; damp --RDR 2--			5	8 11 10	3.00 P	20									
					6	5 7 8	> 4.50 P	17									
	581.9	Boring terminated at 15.00 ft	15														

### GENERAL NOTES

Begin Drilling **02-21-2023** Complete Drilling **02-21-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **9.00 ft**  
 At Completion of Drilling  $\blacktriangledown$  **15.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\blacktriangledown$  **NA**

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# BORING LOG NAW14-20

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 590.83 ft  
 North: 1761318.71 ft  
 East: 1033063.82 ft  
 Station: 495+51.85  
 Offset: 85.814 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	589.8	12-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Stiff to very stiff, black and brown CLAY LOAM, trace gravel; damp --FILL-- --RDR 2--			1	3 4 4	1.80 B	26									
			5		2	4 4 6	2.05 B	25									
	585.3	Very stiff to hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			3	7 8 9	7.38 S	19									
			10		4	4 8 12	3.07 B	19									
					5	10 9 25	5.33 B	16									
	577.8	Medium dense, gray SANDY GRAVEL; wet --RDR 2-3--			6	8 13 14	NP	8									
	574.1	Hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel; damp --RDR 2--			7	8 8 10	NR										
	570.8		20		8	6 10 15	4.00 P	11									
Boring terminated at 20.00 ft																	

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-20-2023** Complete Drilling **03-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **13.50 ft**  
 At Completion of Drilling  $\blacktriangledown$  **16.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-21

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.98 ft  
 North: 1761482.91 ft  
 East: 1033193.63 ft  
 Station: 497+60.70  
 Offset: 99.663 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	588.3	8-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Very stiff to hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			1	7 8 10	4.50 P	17									
	584.5	Brown SANDY LOAM; wet --RDR 2--	5		2	4 3 3	2.13 B	19									
	582.8	Very stiff, gray SILTY CLAY, trace gravel; damp to moist --RDR 2--			3	6 7 10	3.28 B	19									
					4	4 8 8	3.53 B	17									
					5	25 23 24	2.50 P	20									
	576.0	Very stiff, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel; damp			6	10 8 17	2.50 P	11									
	573.5	Medium dense to very dense, gray GRAVEL; wet --Weathered BEDROCK--			7	15 12 12	NP	11									
	570.2	Boring terminated at 18.80 ft			8	50/4"	NP	5									

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-21-2023** Complete Drilling **02-21-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **4.50 ft**  
 At Completion of Drilling  $\blacktriangledown$  **15.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-22

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 594.58 ft  
 North: 1761611.64 ft  
 East: 1033339.51 ft  
 Station: 499+54.03  
 Offset: 77.807 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.6	12-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Very stiff, dark brown SILTY CLAY, trace gravel; damp --FILL--			1	3 3 3	3.00 P	25			--RDR 3-- Boring terminated at 20.00 ft						
	591.6	Stiff to hard, brown and gray SILTY CLAY, trace gravel; damp --RDR 2-3--	5		2	3 5 7	3.53 B	23				25					
					3	4 6 6	3.44 B	20									
					4	3 3 5	1.48 B	26				30					
					5	6 7 11	6.31 B	20									
					6	5 8 12	4.26 B	18				35					
	579.7	Gray SILT; saturated	15														
	579.1	Dense, gray SANDY GRAVEL; saturated --RDR 3--			7	5 14 19	NP	9									
	576.6	Gray, coarse SAND; saturated															
	575.9	Very stiff, gray SILTY CLAY LOAM; trace gravel; damp --RDR 3--			8	5 7 7	3.00 P	13				40					
	574.6		20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-20-2023** Complete Drilling **03-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **14.80 ft**  
 At Completion of Drilling  $\nabla$  **19.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-23

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.02 ft  
 North: 1761770.72 ft  
 East: 1033467.66 ft  
 Station: 501+57.47  
 Offset: 89.584 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	591.4	8-inch thick, dark brown SILTY CLAY LOAM															
		--TOPSOIL--															
		Stiff, brown CLAY to SILTY CLAY, trace gravel; damp			1	3 3 5	1.23 B	30									
		--RDR 2--															
					2	3 3 3	1.23 B	29									
	586.5	Hard, brown and gray SILTY CLAY, trace gravel; damp															
		--2-inch sandy loam lens; wet--															
		--RDR 2--			3	3 5 8	4.92 B	22									
					4	4 7 8	4.84 S	20									
					5	5 9 14	5.41 B	18									
	578.2	Gray SILT; saturated															
	577.8	--RDR 2--			6	11 18 19	NP	19									
		Dense, gray SANDY GRAVEL; saturated			15												
		--RDR 2--															
	575.3	Very dense, gray SILT; saturated															
		--RDR 2--			7	9 10 9	NR										
					8	13 27 39	NP	15									
	572.0	Boring terminated at 20.00 ft			20												

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-21-2023** Complete Drilling **02-21-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **6.50 ft**  
 At Completion of Drilling  $\nabla$  **12.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-24

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 595.26 ft  
 North: 1761911.63 ft  
 East: 1033611.52 ft  
 Station: 503+56.68  
 Offset: 80.855 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.3	12-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Stiff to very stiff, brown SILTY CLAY, trace gravel; damp --RDR 2--			1	7 7 7	1.50 P	21									
					2	5 5 6	2.95 S	24									
	589.2	Loose, brown SANDY LOAM; wet --RDR 2--			3	3 3 4	NP	18									
	586.5	Hard, brown SILTY CLAY, trace gravel; damp			4	5 5 5	4.43 B	20									
	585.8	Brown SANDY LOAM; damp	10														
	584.8	Very stiff to hard, brown SILTY CLAY, trace gravel; damp --RDR 2--			5	7 9 12	4.18 B	20									
					6	7 12 14	3.00 P	20									
	579.8	Medium dense, brown SANDY LOAM, little gravel; saturated --RDR 2--			7	7 9 17	NP	17									
	577.3	Very stiff, gray SILTY CLAY LOAM, trace gravel; damp --RDR 2--			8	6 6 8	3.03 B	14									
	575.3	Boring terminated at 20.00 ft	20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-20-2023** Complete Drilling **03-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **6.10 ft**  
 At Completion of Drilling  $\nabla$  **19.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-25

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 593.54 ft  
 North: 1762056.02 ft  
 East: 1033740.09 ft  
 Station: 505+47.91  
 Offset: 90.051 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.0	6-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- --wet spoon recovery-- Stiff to hard, brown to gray SILTY CLAY, trace gravel; damp to moist --RDR 2-3--			1	2 3 2	1.06 B	32			Boring terminated at 19.50 ft						
			5		2	3 5 5	4.84 B	21				25					
					3	4 4 6	2.87 B	20									
			10		4	3 4 5	3.50 P	18				30					
					5	4 7 11	3.77 B	20									
	579.7 579.5	Gray SILT; saturated Medium dense, gray SANDY GRAVEL; saturated --RDR 2-3--	15		6	14 15 14	NP	11				35					
	578.0	Dense to very dense, brown, coarse SAND, trace gravel; saturated --RDR 3-4--			7	6 18 20	NP	21									
	574.0	--AUGER REFUSAL--	20		8	9 50/5"	NP	21				40					

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-21-2023** Complete Drilling **02-21-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **1.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-26

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.16 ft  
 North: 1762200.00 ft  
 East: 1033874.54 ft  
 Station: 507+42.55  
 Offset: 99.182 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	591.5	8-inch thick, dark brown SILTY CLAY															
		--TOPSOIL--			1	5 6 10	3.61 S	21									
		Very stiff, brown and gray SILTY CLAY, trace gravel; damp															
		--FILL--															
	589.2	Very stiff to hard, brown to gray SILTY CLAY, trace gravel; damp			2	5 7 9	4.35 B	21									
		--RDR 2--															
			5		3	6 10 12	5.17 B	20									
					4	7 9 14	4.26 B	19									
			10														
					5	5 12 14	2.95 B	20									
					6	14 23 26	2.50 P	20									
			15														
	577.2	Boring terminated at 15.00 ft															

### GENERAL NOTES

Begin Drilling **02-20-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling **0.00 ft**  
 At Completion of Drilling **14.00 ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**  
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW14-27

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 592.77 ft  
 North: 1762341.72 ft  
 East: 1034032.21 ft  
 Station: 509+52.15  
 Offset: 95.451 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	592.3	6-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Medium stiff to very stiff, black, brown and gray CLAY, trace gravel; damp to moist --RDR 2--			1	3 4 5	0.90 B	30									
			5		2	2 2 2	0.50 P	31									
					3	3 4 5	2.21 B	38									
	584.8	Very stiff, brown to gray SILTY CLAY, trace gravel; damp --RDR 2--			4	6 6 7	3.77 B	19									
			10		5	5 6 10	2.62 B	18									
					6	4 7 10	2.87 B	21									
	577.8	Boring terminated at 15.00 ft	15														

### GENERAL NOTES

Begin Drilling **02-20-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **0.00 ft**  
 At Completion of Drilling  $\nabla$  **13.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-28

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 593.68 ft  
 North: 1762466.40 ft  
 East: 1034177.13 ft  
 Station: 511+41.24  
 Offset: 92.372 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.2	6-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Very stiff to hard, brown and gray SILTY CLAY, trace gravel; damp --RDR 2--			1	5 7 10	6.31 B	22									
			5		2	4 7 10	4.76 B	18									
					3	6 8 11	5.33 B	18									
			10		4	7 8 10	4.92 B	19									
					5	3 7 9	2.87 B	21									
	580.7	Gray SILT; saturated															
	579.7	Medium dense, gray, fine SAND, trace gravel; saturated			6	11 10 7	NP	20									
	578.7	Boring terminated at 15.00 ft	15														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-20-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **0.00 ft**  
 At Completion of Drilling  $\nabla$  **13.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-29

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 595.82 ft  
 North: 1762598.61 ft  
 East: 1034341.82 ft  
 Station: 513+50.19  
 Offset: 86.660 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.45	5-inch thick, dark brown SILTY CLAY LOAM															
		--TOPSOIL--															
		Very loose, brown SANDY LOAM, trace gravel; saturated			1	2 1 2	NP	28									
		--FILL--															
	592.8	Very stiff to hard, brown to gray SILTY CLAY, trace gravel; damp			2	4 5 7	3.00 P	17									
		--RDR 2--															
			5														
					3	5 8 8	2.87 S	18									
					4	4 5 7	2.62 B	16									
			10														
					5	4 5 7	2.13 B	22									
					6	9 10 17	4.50 P	20									
	581.7	Medium dense, brown and gray SANDY GRAVEL; saturated															
	580.8	Boring terminated at 15.00 ft	15														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-20-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **0.00 ft**  
 At Completion of Drilling  $\nabla$  **15.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-30

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 597.70 ft  
 North: 1762731.76 ft  
 East: 1034491.06 ft  
 Station: 515+47.85  
 Offset: 96.391 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	597.2	6-inch thick, dark brown SILTY CLAY LOAM															
		--TOPSOIL--															
		Stiff, brown and gray CLAY, trace gravel; damp			1	3 3 6	1.80 B	56									
		--RDR 2--															
			5		2	2 2 2	1.56 B	30									
	591.0	--2-inch sand lens; wet--			3	3 4 6	2.87 B	27									
		Stiff to very stiff, brown to gray SILTY CLAY, trace gravel; damp															
		--RDR 2--															
		--sand lenses; wet--	10		4	4 6 7	3.85 B	20									
					5	4 6 6	2.38 B	21									
					6	3 4 5	1.64 B	23									
	582.7	Boring terminated at 15.00 ft	15														

### GENERAL NOTES

Begin Drilling **02-20-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **6.50 ft**  
 At Completion of Drilling  $\nabla$  **13.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-31

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 598.70 ft  
 North: 1762836.66 ft  
 East: 1034645.52 ft  
 Station: 517+32.27  
 Offset: 85.004 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	598.43	3-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Stiff, brown and gray CLAY to SILTY CLAY, trace gravel; damp --RDR 2--			1	3 4 4	1.48 B	28									
	595.7	Hard, brown to gray SILTY CLAY, trace gravel; damp --RDR 2--	5		2	3 4 6	4.43 B	21									
					3	7 9 13	6.15 B	19									
			10		4	9 10 13	5.82 B	15									
					5	5 9 13	5.66 B	16									
	585.7	Medium dense, brown SILT, trace gravel; saturated --RDR 2--			6	7 6 8	NP	23									
	583.7	Boring terminated at 15.00 ft	15														
			20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-20-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **13.00 ft**  
 At Completion of Drilling  $\nabla$  **14.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



# BORING LOG NAW14-32

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 603.32 ft  
 North: 1762947.23 ft  
 East: 1034804.03 ft  
 Station: 519+23.65  
 Offset: 79.856 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	603.04	4-inch thick, dark brown SILTY CLAY LOAM															
		--TOPSOIL--															
		Very stiff to hard, brown SILTY CLAY, trace gravel; damp															
		--RDR 2--															
			5		1	4 5 5	2.00 P	19									
			5		2	4 4 4	2.38 B	26									
					3	5 6 9	4.76 B	18									
			10		4	4 6 8	4.51 S	18									
					5	5 7 9	3.61 B	19									
			15		6	7 7 10	3.94 B	23									
	588.3	Boring terminated at 15.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-20-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-33

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 603.80 ft  
 North: 1762862.66 ft  
 East: 1034709.61 ft  
 Station: 517+98.57  
 Offset: 67.380 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	603.3	6-inch thick, dark brown SILTY CLAY LOAM, little gravel --TOPSOIL-- Stiff to very stiff, brown SILTY CLAY, trace gravel; damp --FILL-- --RDR 2--			1	3 4 5	1.50 P	20									
					2	3 4 4	1.00 P	28									
	597.0	Loose to medium dense, brown SAND, trace gravel; wet --RDR 2--			3	3 3 3	2.13 B	27									
					4	4 3 7	NP	21									
	593.3	Very stiff, brown to gray SILTY CLAY, trace gravel; damp --RDR 2--			5	5 5 7	3.20 B	20									
					6	5 8 8	2.95 B	19									
	588.8	Boring terminated at 15.00 ft															

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-20-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **6.83 ft**  
 At Completion of Drilling  $\nabla$  **12.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

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# BORING LOG NAW14-34

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 606.02 ft  
 North: 1762956.39 ft  
 East: 1034833.50 ft  
 Station: 519+52.67  
 Offset: 70.098 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	605.3	8-inch thick, black SILTY CLAY LOAM															
		--TOPSOIL--															
		Very stiff, brown CLAY LOAM, trace gravel			1	2 5 6	2.62 B	26									
		--FILL--															
		--RDR 2--															
			5		2	5 8 9	3.36 B	12									
					3	3 3 5	2.00 P	24									
	598.0	Very stiff to hard, brown SILTY CLAY, trace gravel															
		--RDR 2--															
			10		4	4 5 7	2.54 B	26									
					5	5 7 10	4.43 B	19									
			15		6	5 8 12	4.84 B	18									
					7	4 7 10	4.43 B	18									
					8	4 7 10	4.76 B	19									
	586.0	Boring terminated at 20.00 ft	20														

### GENERAL NOTES

Begin Drilling **02-23-2023** Complete Drilling **02-23-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21GeoA[96%]**  
 Driller **AG&EH** Logger **F. Bozga** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling  $\nabla$  **DRY**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG NAW14-35

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 610.66 ft  
 North: 1763033.71 ft  
 East: 1034944.62 ft  
 Station: 520+86.96  
 Offset: 69.352 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	610.1	7-inch thick, balck SILTY CLAY LOAM															
		--TOPSOIL--															
		Stiff to hard, black, brown and gray SILTY CLAY, trace gravel			1	2 4 5	2.87 B	23									
		--FILL--															
		--RDR 2--															
			5		2	3 6 7	4.43 B	18									
					3	3 6 8	3.61 B	18									
			10		4	3 4 7	1.80 B	22									
					5	5 7 7	NR										
			15		6	5 7 12	2.00 P	20									
	595.2	Hard, brown SILTY CLAY, trace gravel															
		--RDR 2--															
					7	10 14 14	4.50 P	19									
					8	5 11 16	6.15 B	20									
	590.7		20														

Boring terminated at 20.00 ft

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-23-2023** Complete Drilling **02-23-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21GeoA[96%]**  
 Driller **AG&EH** Logger **F. Bozga** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  **DRY**  
 At Completion of Drilling  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG OHS01-01

WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 588.45 ft  
 North: 1756505.53 ft  
 East: 1028541.64 ft  
 Station: 429+27.38  
 Offset: 16.396 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	588.23	3-inch thick, brown SILTY CLAY LOAM, trace gravel; damp --TOPSOIL-- --wet silt seam-- Stiff, brown SILTY CLAY LOAM, trace gravel; damp --FILL--	0-3		1	4 2 3	1.75 P	14		565.5		0-3		9			
	585.5	Dense to very dense, light gray to tan GRAVEL to SANDY GRAVEL; damp --RDR 2-3--  --cobbles or boulder from 6' to 7'--	3-5		2	4 14 25	NP	16		560.5	Dense to very dense, gray SILTY LOAM, trace gravel; moist to wet --RDR 2-3--	3-5		16 19 29			
			5-10		3	29 22 20	NP	4		559.6	Very dense, gray SANDY GRAVEL; saturated --RDR 3-- Boring terminated at 28.90 ft	5-10		14 25 28			
			10-15		4	21 22 27	NP	6				10-15		100/5"			
			15-20		5	12 35 41	NP	4				15-20					
			20-25		6	12 31 43	NP	3				20-25					
			25-30		7	16 27 28	NP	3				25-30					
			30-40		8	19 25 22	NP	4				30-40					

### GENERAL NOTES

Begin Drilling **02-19-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **RH&JD** Logger **B. Miller** Checked by **J. Bensen**  
 Drilling Method **3.25" IDA HSA; boring backfilled upon completion**

### WATER LEVEL DATA

While Drilling **1.66 ft**  
 At Completion of Drilling **20.00 ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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# BORING LOG OHS01-02

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 587.88 ft  
 North: 1756401.88 ft  
 East: 1028561.74 ft  
 Station: 98+09.83  
 Offset: 31.720 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Very stiff, brown SILTY CLAY, trace gravel; damp															
		--FILL-- --RDR 2--			1	17 10 6	2.50 P	19						9	31 17 10	NP	8
	582.4		5		2	6 7 6	2.50 P	18		564.9	Stiff to hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel; damp	25		10 24 32	4.00 P	8	
		Medium dense to very dense, light gray and brown SANDY GRAVEL; damp to wet			3	15 20 25	NP	5						11	36 50/3"	4.50 P	9
		--RDR 2-3--			4	9 27 27	NP	4		559.1	Boring terminated at 28.80 ft	30		12	50/4"	1.50 P	9
			10		5	17 30 35	NP	4									
			15		6	15 33 26	NP	4									
					7	39 17 15	NP	4									
					8	19 20 18	NP	4									
			20														

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **04-11-2023** Complete Drilling **04-11-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21GeoA[96%]**  
 Driller **AG&EH** Logger **B. Miller** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **21.50 ft**  
 At Completion of Drilling  $\nabla$  **28.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



# BORING LOG OHS02-01

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 590.70 ft  
 North: 1756890.26 ft  
 East: 1028972.57 ft  
 Station: 435+06.84  
 Offset: 76.755 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	590.0	8-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Very stiff, dark brown to brown SILTY CLAY, trace gravel; damp --FILL-- --RDR 2--			1	6 7 7	3.36 B	18									
			5		2	3 3 4	3.50 P	22		567.7	Medium dense, brown, coarse SAND, some gravel; wet --RDR 3--	25		10	5 9 18		
	585.2	Medium dense to very dense, brown SANDY GRAVEL; damp to wet --RDR 3--			3	10 21 31	NP	8		565.2	Hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel --RDR 2--			11	15 27 39	> 4.50 P	
			10		4	20 50/5"	NP	3		562.7	Very dense, gray SILTY LOAM, trace gravel; damp --RDR 2--			12	22 40 49	NP	8
					5	15 33 35	NP	2		560.7	Boring terminated at 30.00 ft	30					
			15		6	50/5"	NP	4									
					7	21 26 27	NP	2									
			20		8	18 22 22	NP	4									

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-22-2023** Complete Drilling **03-22-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling **22.00 ft**  
 At Completion of Drilling **28.00 ft**  
 Time After Drilling **NA**  
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



# BORING LOG OHS03-01

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 601.36 ft  
 North: 1758673.60 ft  
 East: 1030678.29 ft  
 Station: 300+36.32  
 Offset: 17.065 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	600.5	10-inch thick, brown SILTY CLAY LOAM															
		--TOPSOIL-- Stiff to hard, black, brown and gray SILTY CLAY to CLAY, trace gravel; damp			1	3 4 8	1.50 P	32						9	7 11 14	3.53 B	20
		--FILL-- --RDR 2--			2	4 4 6	2.05 B	28		578.4	Medium dense to very dense, brown, coarse SAND, trace to little gravel; damp to wet			10	24 38 49	NP	5
					3	5 5 7	2.50 P	21						11	26 27 22	NP	3
					4	12 8 13	4.50 P	26						12	8 8 15	NP	20
	589.7	Very soft (0.16 B), black SILTY CLAY; damp			5	6 7 9	2.13 B	18						13	24 34 36	NP	15
	588.4	--Buried TOPSOIL-- Very stiff, brown SILTY CLAY to CLAY, trace gravel; damp			6	6 5 5	3.50 P	25		569.4	Very dense, brown SANDY GRAVEL; wet			14	34 50/5"	NP	10
	585.9	Medium dense, brown SANDY GRAVEL; damp			7	13 13 11	NP	6		566.4	Boring terminated at 35.00 ft						
	583.4	Very stiff to hard, brown SILTY CLAY, trace gravel; damp			8	4 6 8	4.00 P	17									

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **03-02-2023** Complete Drilling **03-02-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **21D50A [84%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **2.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **28.00 ft**  
 At Completion of Drilling  $\nabla$  **cave in @ 31'**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



# BORING LOG OHS03-02

Datum: NAVD 88

Elevation: 601.74 ft

North: 1758645.08 ft

East: 1030732.25 ft

Station: 460+04.95

Offset: 21.903 LT

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WEI Job No.: 7901-15-01

Client **TranSystems Corporation**

Project **I-80 Reconstruction (Houbolt Rd to Center St)**

Location **Will County, Illinois**

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
	601.44	inch thick, brown SILTY CLAY LOAM, trace gravel; damp --TOPSOIL-- Medium stiff to stiff, tan, brown and gray CLAY LOAM, trace gravel; damp to wet --FILL-- --RDR 2--			1	5 4 8	1.00 P	6						9	9 12 14	NP	4	
			5		2	4 7 7	0.50 P	17				25		10	22 20 14	NP	4	
					3	6 12 13	NA	14						11	9 17 18	NP	19	
	593.7	Medium dense, tan and gray GRAVEL; damp --FILL-- --RDR 2-3--	10		4	6 13 14	NP	17						12	12 11 12	NP	5	
	591.2	Very stiff, dark brown and black SILTY CLAY, trace gravel; damp --Buried TOPSOIL-- --RDR 2--			5	8 10 11	3.00 P	20										
	588.7	Hard, brown SILTY CLAY, trace gravel; damp --RDR 2--	15		6	4 7 7	5.08 B	20										
	586.2	Medium dense to dense, tan SAND, trace to little gravel; damp to wet --RDR 2-3--			7	5 5 5	NP	8										
					8	13 10 11	NP	4										
Boring terminated at 30.00 ft																		

### GENERAL NOTES

### WATER LEVEL DATA

Begin Drilling **02-19-2023** Complete Drilling **02-20-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **RH&JD** Logger **B. Miller** Checked by **J. Bensen**  
 Drilling Method **3.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **4.00 ft**  
 At Completion of Drilling  $\nabla$  **21.00 ft**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23



# BORING LOG OHS04-01

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WEI Job No.: 7901-15-01  
 Client **TranSystems Corporation**  
 Project **I-80 Reconstruction (Houbolt Rd to Center St)**  
 Location **Will County, Illinois**

Datum: NAVD 88  
 Elevation: 602.50 ft  
 North: 1759784.21 ft  
 East: 1031707.49 ft  
 Station: 475+03.97  
 Offset: 62.596 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	601.3	15-inch thick ASPHALT --PAVEMENT--								582.0	Stiff, brown SILTY CLAY, trace gravel; damp						
		Medium dense, brown LOAM, trace gravel; damp			1	16 5 6	NP	20		580.2	Gray SILT, trace gravel; saturated			9	2 4 5	1.31 B	26
	599.0	Very stiff to hard, brown SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp			2	4 7 7	4.50 P	15		579.5	Stiff, gray SILTY CLAY, trace gravel; damp			10	4 4 6	1.23 B	20
					3	4 6 8	3.50 P	30		576.0 575.8	Brown, medium SAND; saturated			11	5 9 13	3.20 B	21
					4	3 8 9	2.50 P	28			Stiff to very stiff, gray SILTY CLAY, trace gravel; moist			12	4 4 4	1.50 P	22
	592.0	Very stiff, brown SILTY CLAY, trace gravel; damp			5	8 8 12	2.54 B	17		572.0	Dense, brown SANDY GRAVEL; wet			13	20 25 23	NP	6
	589.5	Medium dense, brown SANDY GRAVEL; dry to damp			6	10 9 12	NP	12						14	23 22 11	NP	7
					7	9 8 5	NP	19		567.5	Boring terminated at 35.00 ft						
	584.5	Very loose, brown SILT to SILTY LOAM, trace gravel; moist to wet			8	3 1 2	NP	29									

### GENERAL NOTES

### WATER LEVEL DATA

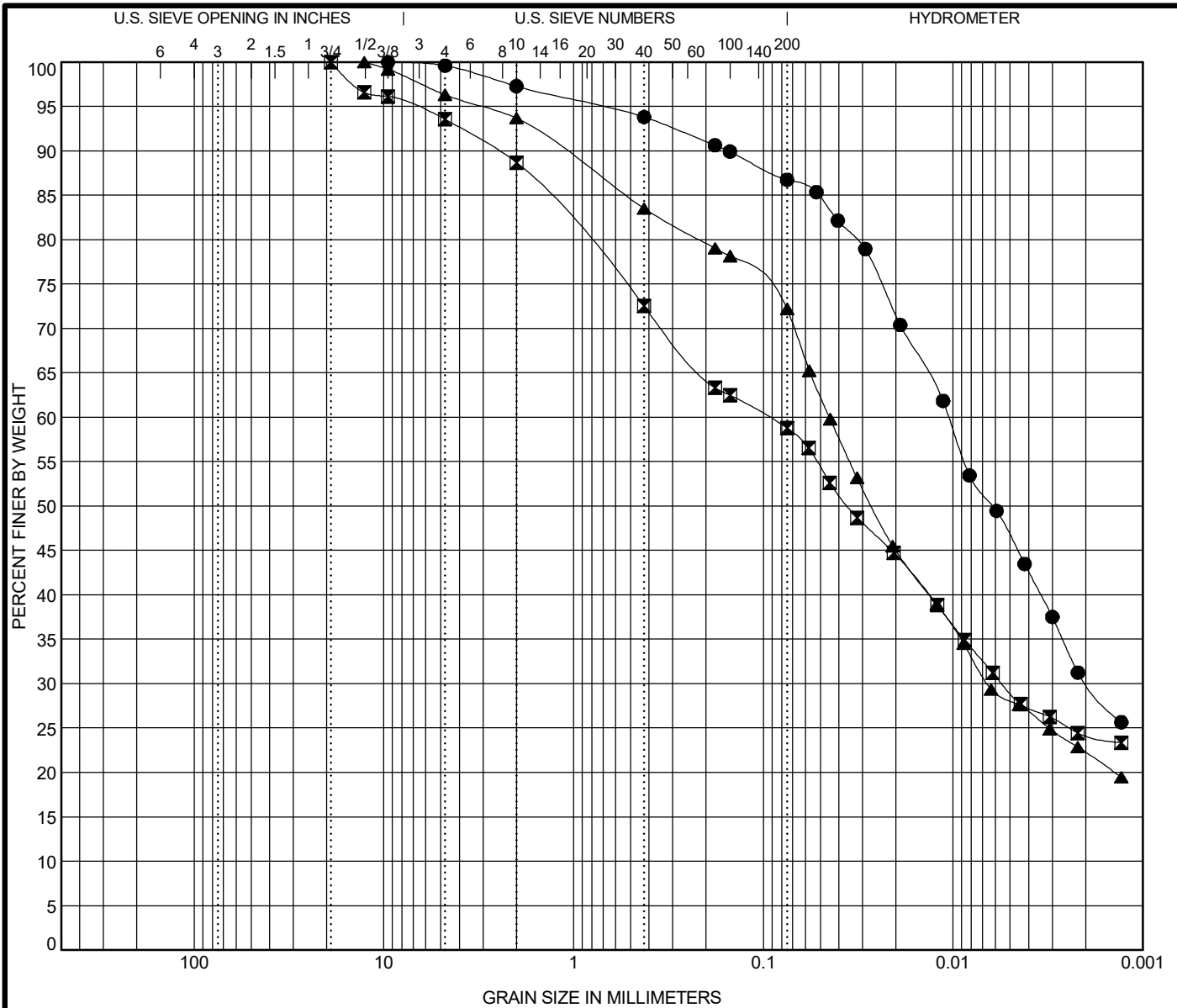
Begin Drilling **03-01-2023** Complete Drilling **03-01-2023**  
 Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**  
 Driller **KS&AP** Logger **N. Karahalios** Checked by **J. Bensen**  
 Drilling Method **3.25" IDA HSA; boring backfilled upon completion**

While Drilling  $\nabla$  **20.00 ft**  
 At Completion of Drilling  $\nabla$  **DRY**  
 Time After Drilling **NA**  
 Depth to Water  $\nabla$  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 79011501.GPJ WANGENG.GDT 5/18/23

## **APPENDIX B**



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification	IDH Classification	LL	PL	PI	Cc	Cu
● BC1-01#4 8.5 ft	<b>Silty Clay</b>	<b>33</b>	<b>15</b>	<b>18</b>		
☒ NAW13-07#4 8.5 ft	<b>Clay Loam</b>	<b>48</b>	<b>19</b>	<b>29</b>		
▲ NAW14-02#5 11.0 ft	<b>Silty Clay Loam</b>	<b>39</b>	<b>17</b>	<b>22</b>		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● BC1-01#4 8.5 ft	<b>9.5</b>	<b>0.011</b>	<b>0.002</b>		<b>2.7</b>	<b>10.6</b>	<b>56.5</b>	<b>30.2</b>
☒ NAW13-07#4 8.5 ft	<b>19</b>	<b>0.094</b>	<b>0.006</b>		<b>11.3</b>	<b>30.0</b>	<b>34.5</b>	<b>24.2</b>
▲ NAW14-02#5 11.0 ft	<b>12.7</b>	<b>0.045</b>	<b>0.007</b>		<b>6.3</b>	<b>21.8</b>	<b>49.7</b>	<b>22.2</b>

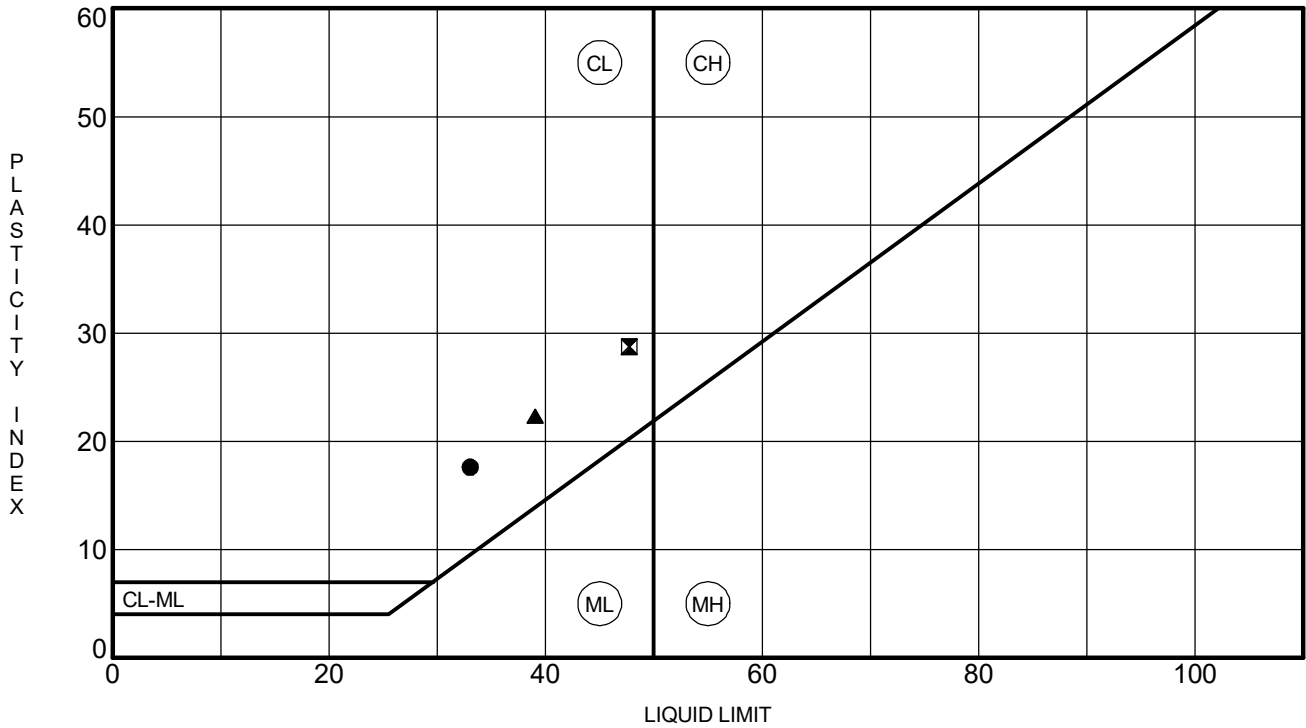
WEI GRAIN SIZE IDH 79011501.GPJ US\_LAB.GDT 5/18/23



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**GRAIN SIZE DISTRIBUTION**

Project: I-80 Reconstruction (Houbolt Rd to Center St)  
 Location: Will County, Illinois  
 Number: 7901-15-01



Specimen Identification	LL	PL	PI	Fines	IDH Classification	
● BC1-01#4	8.5 ft	33	15	18	87	Silty Clay
☒ NAW13-07#4	8.5 ft	48	19	29	59	Clay Loam
▲ NAW14-02#5	11.0 ft	39	17	22	72	Silty Clay Loam

WEI ATTERBERG LIMITS IDH 79011501.GPJ US LAB.GDT 5/18/23



Terracon  
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 Lombard, IL 60148  
 Telephone: 630-953-9928  
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**ATTERBERG LIMITS' RESULTS**  
 Project: I-80 Reconstruction (Houbolt Rd to Center St)  
 Location: Will County, Illinois  
 Number: 7901-15-01