Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 28, 2007

SUBJECT: FAU Route 8419 (IL Route 140)
Project M-TE-00D7(021)
Section 99-00048-01-PV (Vandalia)
Fayette County
Contract No. 95500
Item 007 (Addendum A)
September 21, 2007 Letting

TO PROSPECTIVE BIDDERS:

In accordance with your request, we have sent you plans and/or a proposal for the subject improvement.

To clarify information it is necessary to revise the following:

SPECIAL PROVISIONS:

1. Remove existing Index page I and replace with attached revision
2. Remove existing page 4 and replace with attached revision
3. Add page 6 which covers "Subsurface Conditions" and "Dewatering"
4. Remove existing page 6a and replace with attached revision
5. Remove existing page 12a and replace with attached revision
6. Replace existing page 58 and replace with attached page 58a
7. Replace existing pages 59a-59i with attached pages 58b-59q

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal. Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Since the proposal sheets are printed back to back, bidders are cautioned to exercise care when inserting revised and/or added special provisions into their proposals.

Please call 217-782-7806 if any of the above-described material is not included in this transmittal.

Very truly yours,

Eric Harm
Interim Engineer of Design
and Environment

By: Ted B. Walschleger, P. E.
Engineer of Project Management

INDEX TO SPECIAL PROVISIONS

*Revised 8-28-07

All traffic control including signs, barricades, flaggers, drums, temporary access, removal of temporary materials, etc. that are necessary to complete the project, but are not included in the designated Highway Standards shall be paid for at the Contract unit price per LUMP SUM for TRAFFIC CONTROL AND PROTECTION. This work shall include furnishing, placing, maintaining, moving, and removal of all traffic control devices and signs required as shown on the traffic control and protection sheet.

All work associated with TRAFFIC CONTROL AND PROTECTION, STANDARD 701501 shall be paid for separately from TRAFFIC CONTROL AND PROTECTION. Standard 701501 & 701502 work is separated from TRAFFIC CONTROL AND PROTECTION and paid for separately as it is intended to be utilized for utility relocation work, including any work associated with water main, sanitary sewer, and drainage systems that does not require full road closure and that can be finished such that there are no open trenches across or adjacent to any street at the end of each day's work operations. Standard 701501 & 701502 requirements shall be utilized by the Contractor when conditions warrant, on different days and at as many different locations as required, and shall be paid for at the Contract unit price per LUMP SUM for TRAFFIC CONTROL AND PROTECTION, STANDARD 701501, and TRAFFIC CONTROL AND PROTECTION 701502. The Contractor shall not receive additional compensation in the event that TRAFFIC CONTROL AND PROTECTION, STANDARD 701501, or TRAFFIC CONTROL AND PROTECTION, STANDARD 701502 is utilized more than one (1) time.

EXISTING FEATURES:

All existing features such as sidewalk, curb and gutter, pavement, street lights, signs, trees, manholes, buildings, etc. that are to remain, shall be in their original condition during and after construction has been completed. If any of these items are damaged by construction related activities, the Contractor shall be responsible for the costs to repair or replace these items, in a timely manner, and to the satisfaction of the Engineer.

All existing features such as signs, manhole and inlet frames, valve boxes, etc. that are to be removed shall be removed with care to preserve their existing condition. The Contractor shall haul and deposit said items at a location designated by the City, within City limits, for stockpiling, or, at the prerogative of the City, the Contractor shall dispose of said items offsite at a proper location determined by the Contractor at no additional cost to the Contract.

All existing ground mounted signs within Right-of-Way shall be removed. Removal of the signs and posts shall be included in the Contract unit price per CU. YD. for EARTH EXCAVATION.

The existing posts and canopies on the front of buildings shall remain in place and be temporarily supported during sidewalk construction. Posts shall be adjusted and supported on new sidewalk as shown in the plans and in accordance with the post base manufacturers recommendations. This work shall not be paid for separately but shall be included in the Contract unit price per SQ. FT for PORTLAND CEMENT CONCRETE SIDEWALK, 4 INCH.

Removed "Subsurface Conditions" (now found on added page 6)

Revised 8-28-07

SUBSURFACE CONDITIONS:

A copy of the subsurface exploration and foundation recommendations performed for the project is enclosed, as Appendix A, for the Contractor's information.

DEWATERING:

All excavations shall be kept dewatered during construction operations until backfill is in place. A trench or other excavation will only be considered sufficiently dewatered per each day's operations. Dewatering of water, sanitary sewer, and storm sewer trenches and service line trenches required for maintaining trench stability due to ground water infiltration determined to be necessary by the Engineer shall be paid by force account in accordance with Article 109.04b of the Standard Specifications. The Contractor will not receive additional compensation for any other dewatering operations determined to be necessary by him/her or those required by the Engineer including, but not limited to, dewatering of trenches and excavations that are otherwise dry, due to rainfall events.

Added 8-28-07

for this work but shall include it in the Contract unit price per FOOT for PVC WATER MAIN AND FITTINGS.

Dewatering
All excavations shall be kept dewatered during construction operations until backfill is in place. A trench or other excavation will only be considered sufficiently dewatered per each day's operations. The Contractor will not receive additional compensation for dewatering operations determined to be necessary by him/her or those required by the Engineer except as described herein. Added *

Bedding and Backfilling
Bedding, haunching, initial backfill, final backfill, and backfilling pay limits shall be as that described herein by Special Provisions titled: BEDDING, HAUNCHING, & INITIAL BACKFILL FOR WATER AND SANITARY SEWER MAINS and SELECT GRANULAR BACKFILL. Bedding and backfilling shall be paid for as noted in said Special Provisions.

Testing
Hydrostatic tests and disinfection checks and testing shall be performed by the Contractor in accordance with applicable sections of the Standard Specifications. The Contractor shall provide all equipment and personnel necessary to carry out testing herein, including payment to the City for water utilized during testing and flushing and shall not receive additional compensation for this work but shall include it in the Contract unit price per FOOT for PVC WATER MAIN AND FITTINGS.

All sections of water main shall be pressure tested in accordance with Section 41-2.13 of the Standard Specifications at a pressure of 150 pounds per square inch (psi) for a period of four (4) hours. Allowable leakage will be calculated in gallons per hour for each pipe section being tested. The Contractor shall provide suitable taps in the line to produce at least two (2) feet per second velocity for flushing the water main where hydrants are not available.

All sections of water main shall be disinfected in accordance with Section 41-2.14 of the Standard Specifications (generally coincides with Article 561.05 of the Standard Specifications for Road and Bridge Construction). The Contractor shall apply either Method (1) or (2) described in Section 41-2.14C, however, Method (3), tablet disinfection, will not be allowed.

All labor, equipment, and materials required for this work shall be paid for at the Contract unit price per FOOT for PVC WATER MAIN AND FITTINGS of the size specified.

CAP & BLOCK:
This work shall be in accordance with the Standard Specifications, the plans, the PVC WATER MAIN AND FITTINGS Special Provision herein, and as modified by this Special Provision.

This work shall include all necessary excavation, bedding, and backfilling, cutting the existing main when applicable, providing and installing the cap or plug, and cast-in-place concrete thrust block. The thrust block shall conform to the Class SI Portland Cement Concrete requirements noted in the Special Provision entitled PVC WATER MAIN AND FITTINGS. Note that capping and blocking existing mains cannot begin until after the

* Revised 8-28-07

Summary of Quantities, shall not be paid for separately but shall be included in the Contract unit price per FOOT for SANITARY SEWER MAIN of the size specified.

All fittings shall be Polyvinyl Chloride (PVC) meeting ASTM 3034, SDR 35 standards and the joints shall be push on with elastomeric joints per ASTM 3212 or approved equal. Fitting shall be installed per manufacturer's recommendations.

Pipe & Service Connections Material:
Polyvinyl Chloride (PVC) pipe shall be utilized for PVC SANITARY SEWER MAIN, of the type specified on the plans. Concrete pressure pipe is not allowed due to clearance issues with other utilities.

PVC pipe shall conform to requirements of Section 40-2.03 and shall:

1. be ASTM Standard;
2. be SDR 35 pipe;
3. have push on joints with rubber (SBR) gaskets.

All tees, wyes, caps, fittings and piping required for each service connection shall be included in the unit price bid for the service connection and no additional compensation will be allowed. The location and depth of the service shall be recorded from the nearest manhole.

Bury Depth
All mains shall be installed as per specified depth on the plans. The sewer main must maintain a separation of no less than ten (10) foot horizontally and eighteen (18) inches separation vertically from water mains and storm sewer. In the event that the eighteen (18) inch separation cannot be obtained the storm sewer shall use water main quality pipe until the separation exceeds the ten (10) foot separation. Conforming to proposed roadway features and existing utilities to remain in place as mentioned previously herein, unless otherwise noted on the plans. The Contractor is responsible for increasing depths at no additional cost to the Contract.

Dewatering
All excavations shall be kept dewatered during construction operations until backfill is in place. A trench or other excavation will only be considered sufficiently dewatered per each day's operations. The Contractor will not receive additional compensation for dewatering operations determined to be necessary by him/her or those required by the Engineer except as described herein. Added *

Bedding and Backfilling
Bedding, haunching, initial backfill, final backfill, and backfilling pay limits shall be as that described herein by Special Provisions titled: BEDDING, HAUNCHING, & INITIAL BACKFILL FOR WATER AND SANITARY SEWER MAINS and SELECT GRANULAR BACKFILL. Bedding and backfilling shall be paid for as noted in said Special Provisions.

Testing
Testing sewers for acceptability shall be conducted by the deflection test for thermo-plastic pipe.

The deflection test is to be run using a "go - no go" mandrel, which shall have a diameter equal to 95% of the base diameter of the pipe as established in proposed ASTM D-3034. The test shall be performed without mechanical pulling devices.

* Revised 8-28-07

SUBSURFACE EXPLORATION AND
FOUNDATION RECOMMENDATIONS
PORPOSED RETAINING WALL ON
GALLATIN STREET
VANDALIA, ILLINOIS

Prepared for:

Henry, Meisenheimer, and Gende, Inc.
P. O. Box 70
1075 Lake Road
Carlyle, IL 62231

Prepared by:

HOLCOMB FOUNDATION ENGINEERING CO.
Carbondale, Illinois
618-529-5262

January 5, 2007

HFE File Number: H-06326

Revised 8-28-07

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HOLCOMB FOUNDATION ENGINEERING CO., INC.

SOILS - BITUMINOUS - CONCRETE - INVESTIGATIONS AND TESTING

www.holcombengineering.com

SHIPPING ADDRESS
Box 393 Wood Road
Carbondale, IL 62901

MAILING ADDRESS
P.O. Box 88
Carbondale, IL 62903

618-529-5262
800-333-1740
FAX 618-457-8991

January 5, 2007

Henry, Meisenheimer, and Gende, Inc.
PO Box 70 Lake Road
Carlyle, Illinois 62231

Attention: Mr. Brad Hummert, P.E., S.E.

Re: Subsurface Exploration and Foundation Recommendations
Proposed Retaining Wall on Gallatin Street
Vandalia, Illinois
HFE File H-06326

Dear Sir:

In accordance with your instructions, we have performed a subsurface exploration for the above referenced project. This project is to consist of construction of a new retaining wall alongside Gallatin and 7th Streets in Vandalia, Illinois. At the time of our field exploration, the proposed site was a sidewalk between Gallatin Street and the residence at 628 Gallatin Street in Vandalia.

On December 28, 2006, we drilled two soil borings at the above referenced site. The borings were advanced to depths of fifteen feet below the existing ground line. Bore hole locations are indicated on the enclosed "Boring Location Diagram".

The soil borings were drilled employing 3.25" ID hollow stem augers. During drilling operations the subsoils were sampled with a split barrel sampling device in accordance with ASTM D-1586. The apparent ground water level in each bore hole was also determined.

In the laboratory, the soil samples were subjected to visual classifications and moisture content determinations. Unconfined compressive strength tests were performed on all cohesive soil samples. Results of all field and laboratory tests are summarized on the enclosed Boring Logs.

Revised 8-28-07

Subsurface conditions encountered at the site consist of a few inches of topsoil overlying six feet of brown mottled gray silty clay to sandy clay (CL classification). Below the silty clay, about five to seven feet of sandy clay (CL) overlies brown clayey sand (SC) that extends down to at least the bottom of the soil borings.

The upper six feet of silty clay is firm to stiff, with unconfined compressive strengths ranging from 0.7 to 1.4 tons per square foot, averaging 1.1 tsf. Moisture contents vary from 15 to 26 percent, averaging 22 percent. These soils have a moderate to low settlement potential.

The sandy clay encountered from about six to thirteen feet in Boring #1, and eleven feet in Boring #2 is also firm to stiff, with unconfined compressive strengths ranging from 0.7 to 1.2 tons per square foot, averaging 1.0 tsf. Moisture contents vary from 16 to 18 percent, averaging 18 percent.

The sand encountered below the sandy clay has standard penetration test values ranging from 7 to 17 blows per foot, averaging 12 bpf. Moisture contents vary from 13 to 19 percent, averaging 16 percent. The sand has a moderate settlement potential.

Ground water was not encountered in the soil borings during drilling operations.

The Illinois Geological Survey indicates no underground coal mining has been performed in the vicinity of this site. Therefore, subsidence does not appear to be a concern at this location.

Based upon the seismic design criteria provided by the I.B.C., this site has a site classification type "D" profile. Based upon this profile, the spectral response acceleration coefficients have been determined as follows:

0.2 Second Period: $S_s = 0.5648$ g x 1.3482 (Soil Factor F_a) = 0.7615
1.0 Second Period: $S_1 = 0.1814$ g x 2.0744 (Soil Factor F_v) = 0.3763

The recommended design spectral response factors are as follows:

$S_{DS} = 0.5076$ g
$S_{D1} = 0.2509$ g

These values were obtained from the IBC Section 1615 and the USGS Earthquake Hazards Program based upon the latitude and longitude of this site.

Revised 8-28-07

Information provided by Henry, Meisenheimer, and Gende, Inc. indicates the proposed retaining wall is to have a maximum height of approximately five to seven feet, with a minimum height of about one foot. Loadings on the footings will be minimal due to the small size of this wall.

Based upon the soil borings, we recommend the following parameters are used for design of the retaining wall:

Design Parameters:

Soil Type	Maximum Net Allowable Soil Pressure (PSF)	Dry Unit Wt. (PCF)	Moisture(%)
Silty CLAY	1500	120.0	22
Sandy CLAY	2000	125.0	18

Coefficients for active and passive pressures acting upon retaining walls in the upper ten feet of this site are estimated as follows:

Coefficient of Active Pressure:	0.36
Coefficient of Passive Pressure:	2.77
Coefficient of At-Rest Pressure:	0.53

It is recommended the retaining wall is backfilled with free draining sand or crushed stone up to within one foot of the final ground line, with perforated PVC pipe at the base of the wall sloped to gravity drain or drain to a sump.

The recommended coefficient of friction between the concrete and soils which may be used for design is 0.33.

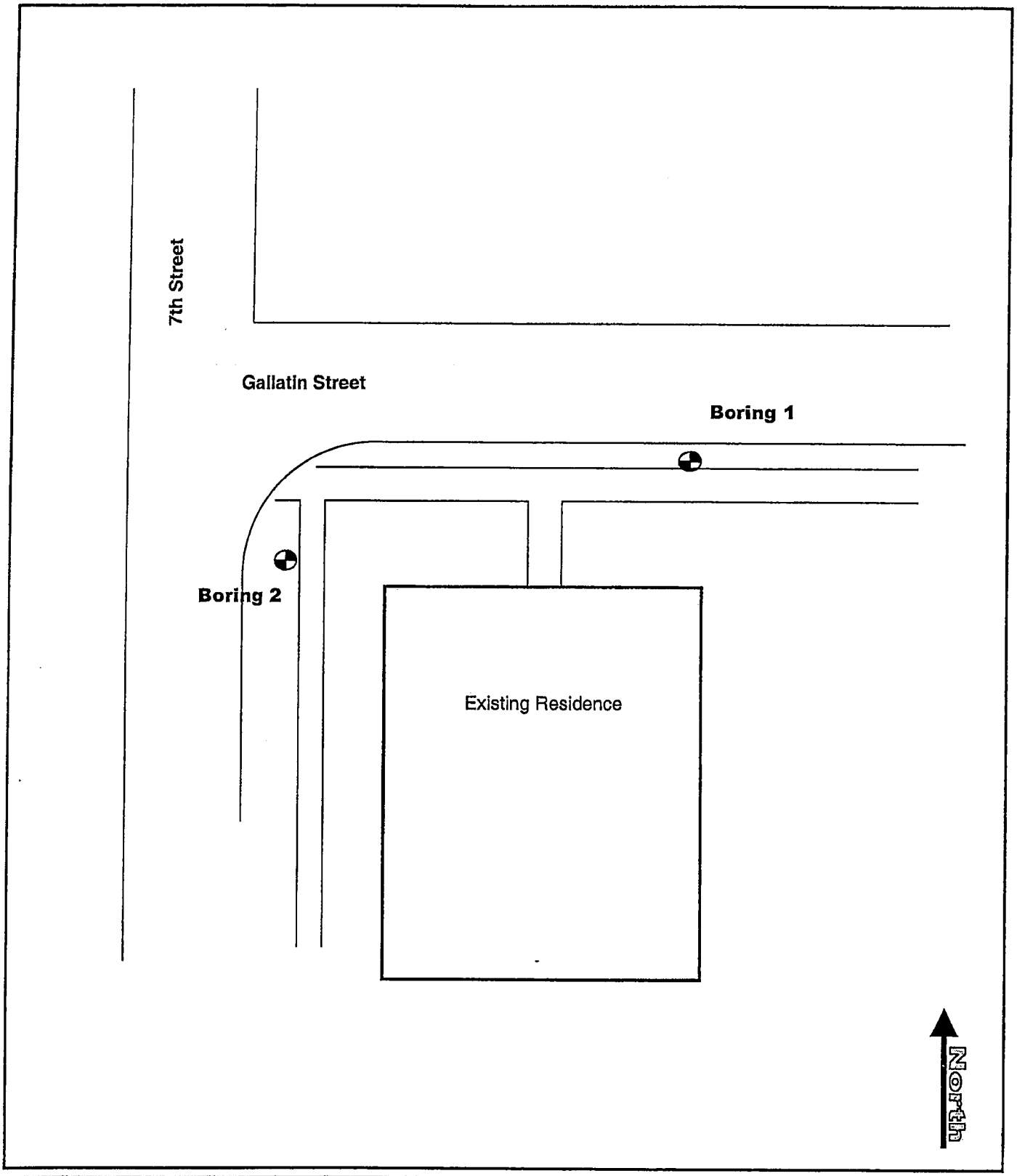
Attached herewith are the Boring Location Diagram and Boring Logs. If you have any questions, please feel free to contact me at your convenience.

Sincerely,

HOLCOMB FOUNDATION ENGINEERING CO.

Timothy J. Holcomb, P.E.

Revised 8-28-07

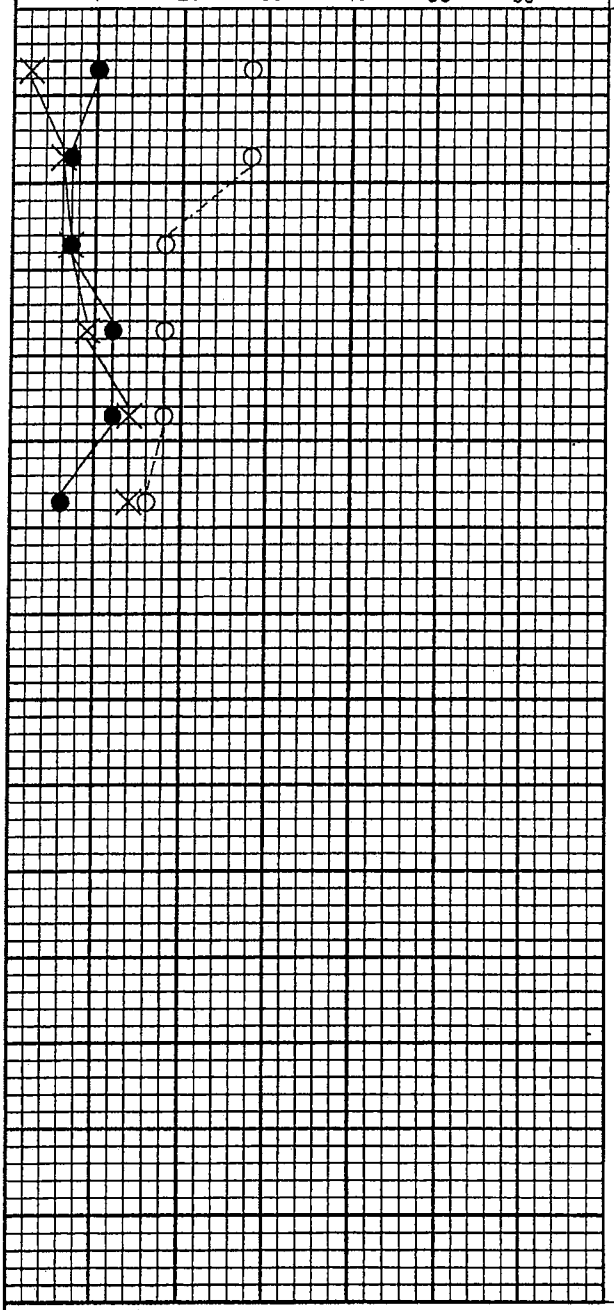


Proposed Retaining Wall **Vandalia, Illinois** **Henry, Meisenheimer & Gende, Inc.** **Carlyle, Illinois**	**Boring Location Diagram**	**Project No. H-06326** **Not to Scale** **December 28, 2006**

Revised 8-28-07

Holcomb Foundation
Engineering Co.
PO Box 88 Carbondale, Illinois

LOG of BORING 1



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				4" Topsoil
	1	ss		Brown Mottled Gray Silty CLAY (CL)
	2	ss		
5				
	3	ss		Brown Sandy CLAY (CL)
	4	ss		
10				
	5	ss		
	6	ss		Brown Clayey SAND (SC)
15				End of Boring @ −15.0'
20				
25				
30				
35				

Ground Water Data
No Ground Water Encountered During Drilling.

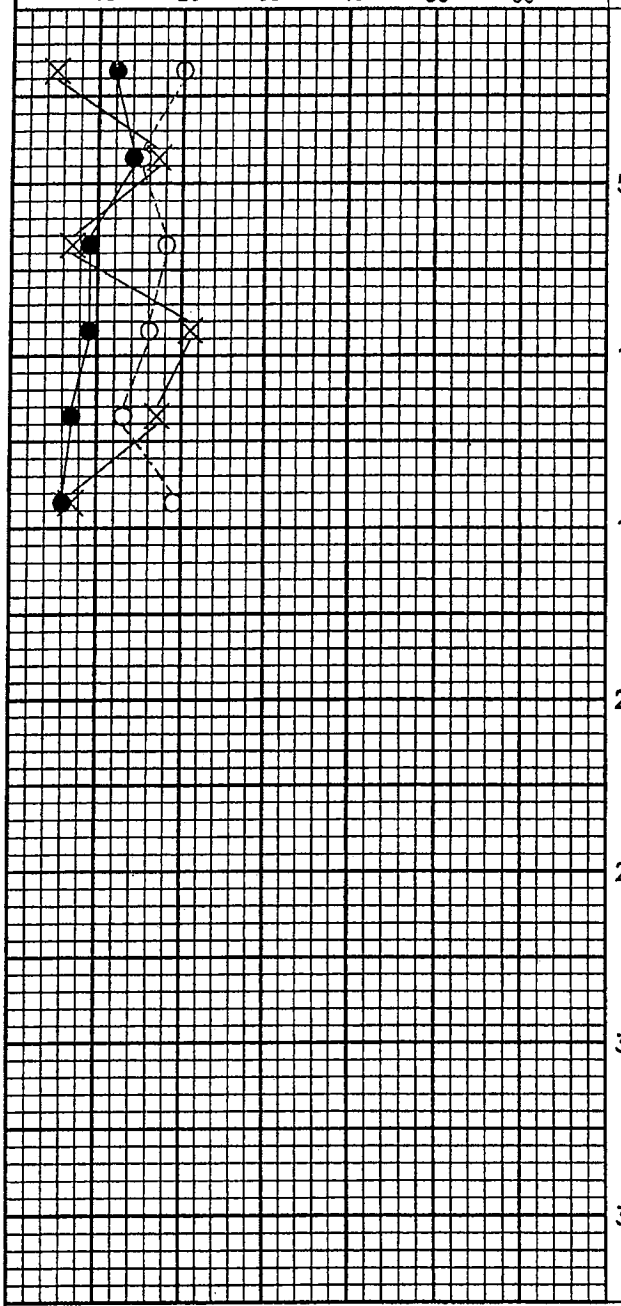
Project: Proposed Retaining Wall Vandalia, Illinois	Date of Boring December 28, 2006
Client: Henry, Meisenheimer & Gende Carlyle, Illinois	Project No. H−06326

Revised 8-28-07

Holcomb Foundation Engineering Co.
PO Box 88 Carbondale, Illinois

LOG of BORING 2

Unconfined Compressive Strength (Tons/Sq. Ft.)
1 2 3 4 5 6
Water Content (%)
Standard N Penetration, Blows/Ft.
10 20 30 40 50 60



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
	1	ss		Brown Mottled Gray Sandy CLAY(CL)
	2	ss		
5	3	ss		Brown Sandy CLAY (CL) with gravel
	4	ss		
10	5	ss		Brown Clayey SAND (SC)
	6	ss		Brown Sandy CLAY (CL) with gravel
15				End of Boring @ −15.0'
20				
25				
30				
35				

Ground Water Data
No Ground Water Encountered During Drilling.

Project: Proposed Retaining Wall
Vandalia, Illinois

Date of Boring
December 28, 2006

Client: Henry, Meisenheimer & Gende
Carlyle, Illinois

Project No.
H−06326

Revised 8-28-07

58h

GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Classification System is used to identify the soil unless otherwise noted.

RELATIVE DENSITY & CONSISTENCY CLASSIFICATION

TERM (NON-COHESIVE SOILS)	BLOWS PER FOOT
Very Loose	0 - 4
Loose	5 - 10
Firm	11 - 30
Dense	31 - 50
Very Dense	Over 50

TERM (COHESIVE SOILS)	QU (tsf)
Very Soft	0 - 0.25
Soft	0.25 - 0.50
Firm	0.50 - 1.00
Stiff	1.00 - 2.00
Very Stiff	2.00 - 4.00
Hard	4.00+

DRILLING & SAMPLING SYMBOLS

ss:	Split Spoon - 1 3/8" I.D., 2" O.D.
st:	Shelby Tube - 2.80"I.D., 3" O.D.
au:	Auger Samples
cs:	Continuous Sampling - 2.0" I.D.

SOIL PROPERTY SYMBOLS

●	Unconfined Compressive Strength, Qu, (tsf)
+	Penetrometer Value, (tsf)
	Plastic Limit (%)
O	Water Content (%)
	Liquid Limit (%)
X	Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2" O.D. Split Spoon

PARTICLE SIZE

Boulders	8 in. +	Medium Sand	0.6 mm to 0.2 mm
Cobbles	8 in. to 3 in.	Fine Sand	0.2 mm to 0.74 mm
Gravel	3 in. to 5 mm	Silt	0.074 mm to 0.0005 mm
Coarse Sand	5 mm to 0.6 mm	Clay	less than 0.005 mm

Revised 8-28-07

UNIFIED SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOL	TYPICAL DESCRIPTION
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS	GW	Well graded gravels, gravel-sand mixtures
			GP	Poorly graded gravels, gravel-sand mixtures
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand silt mixtures
			GC	Clayey gravels, gravel-sand clay mixtures
	SANDS AND SANDY SOILS	CLEAN SANDS	SW	Well-graded sands, gravelly sands
			SP	Poorly graded sands, gravelly sands
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, clay-sand mixtures
FINE GRAINED SOILS	SILTS AND CLAYS LOW PLASTICITY		ML	Inorganic silts of clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS HIGH PLASTICITY		MH	Inorganic silts of high plasticity
			CH	Inorganic clays of high plasticity
			OH	Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS			PT	Peat, humus, swamp soils with high organic contents

Revised 8-28-07

SUBSURFACE EXPLORATION AND ENGINEERING RECOMMENDATIONS PROPOSED SANITARY SEWER UPGRADES VANDALIA, ILLINOIS

Prepared for:

City of Vandalia
C/O Henry, Meisenheimer, and Gende, Inc.
P.O. Box 70
1075 Lake Road
Carlyle, IL 62231

Prepared by:

HOLCOMB FOUNDATION ENGINEERING CO.
Carbondale, Illinois
618-529-5262

August 6, 2007

HFE File Number: H-07192

Added 8-28-07

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P.O. Box 88
Carbondale, IL 62903

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800-333-1740
FAX 618-457-8991

August 3, 2007

City of Vandalia
C/O Henry, Meisenheimer, and Gende, Inc.
PO Box 70 Lake Road
Carlyle, Illinois 62231

Attention: Mr. Lorne Jackson

Re: Subsurface Exploration and Engineering Recommendations
Proposed Sanitary Sewer Upgrades
Vandalia, Illinois
HFE File H-07192

Dear Sir:

In accordance with your instructions, we have performed a subsurface exploration for the above referenced project. This project is to consist of construction of a new sanitary sewer line in Vandalia, Illinois.

On July 26 and 27, 2007, we drilled ten soil borings along Gallatin, Sixth, and Fifth Streets, in locations as indicated on the enclosed Boring Location Diagram.

The borings were advanced to depths of twenty feet below the existing ground line employing 3.25" ID hollow stem augers. During drilling operations the subsoils were sampled with a split barrel sampling device in accordance with ASTM D-1586. Standard penetration tests were taken in conjunction with the split barrel sampling. The apparent ground water level in each bore hole was also determined.

Subsurface conditions encountered at these sites consist of about one foot of pavement overlying gray to brown silty clay to sandy clay (CL classification) that extends to depths ranging from 11 to 20 feet below the existing ground line. Below the clayey soils lies a fine to medium grained sand (SP) that extends down to at least the bottom of the soil borings.

The silty clay to clayey silt has standard penetration test values ranging from 1 to 34 blows per foot, averaging 8 bpf. We estimate the clayey soils have a Type B soil classification per the OSHA 29 CFR Part 1926 Rules for Excavations.

Added 8-28-07

The sandy soils encountered below eleven to eighteen feet at this site have standard penetration test values ranging from 3 to 12 blows per foot, averaging 8 bpf. The sand has a Type C soil classification per the OSHA Rules. Free water was encountered in the sand at the following depths:

Boring No.	Depth to Groundwater (ft.)
1	14'
2	15'
5	15'
6	14'
7	17'
8	11'

The above boring locations and depths are indicative of excavations that will probably require dewatering or sheet piling for installation of the sewer line. Without dewatering the excavation, or using sheet piles, the sand will flow and become "quick", resulting in loss of stability of the bottom of the excavation.

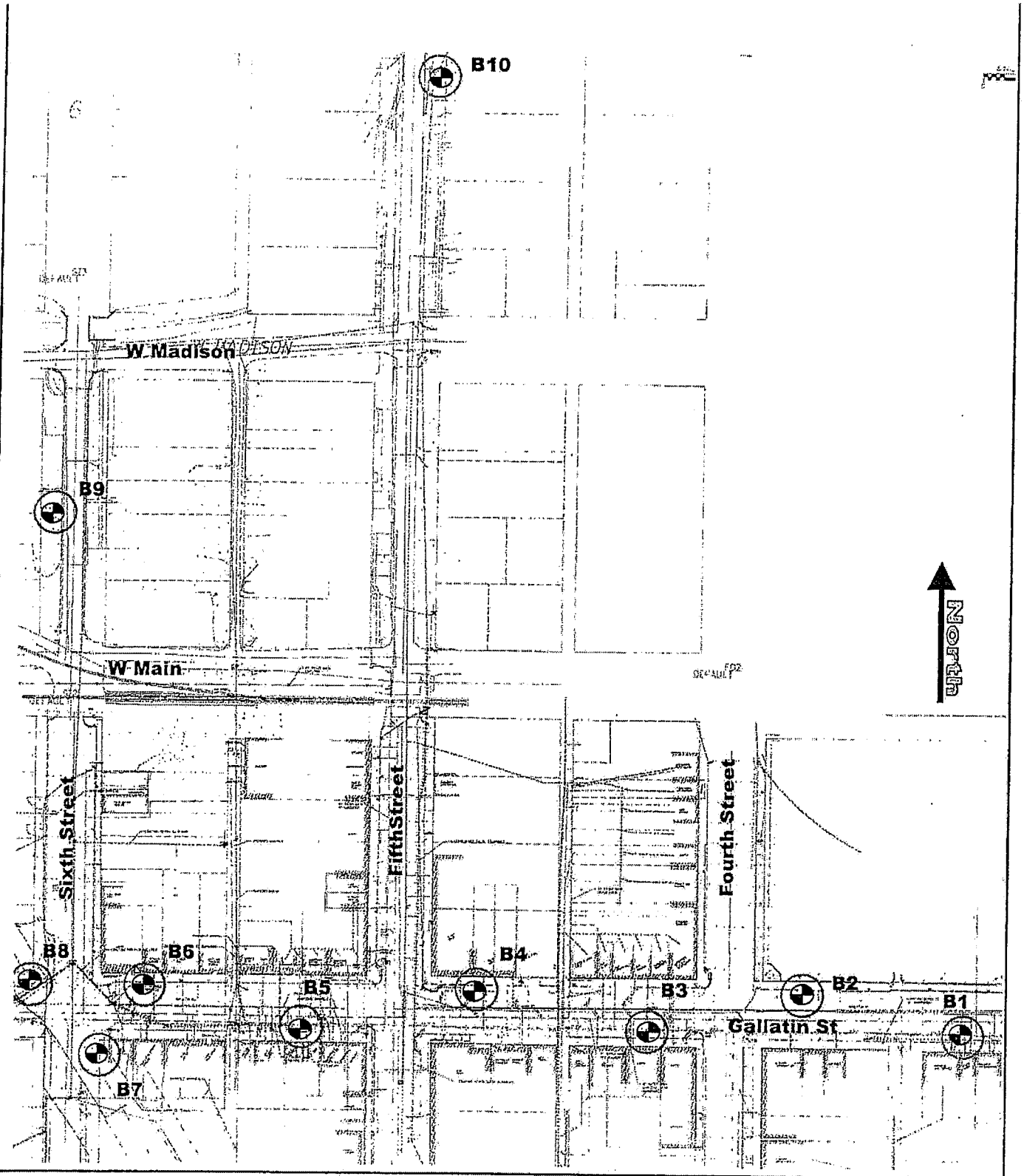
Attached herewith are the Boring Location Diagram and Boring Logs. If you have any questions, please feel free to contact me at your convenience.

Sincerely,

HOLCOMB FOUNDATION ENGINEERING CO.

Timothy J. Holcomb, P.E.

Added 8-28-07



Proposed Sanitary Sewer Upgrades **Vandalia, Illinois** **Henry, Meisenheimer & Gende, Inc.** **Carlyle, Illinois**	**Boring Location Diagram**	**Project No. H-07192** **Not to Scale** **July 27, 2007**

Added 8-28-07

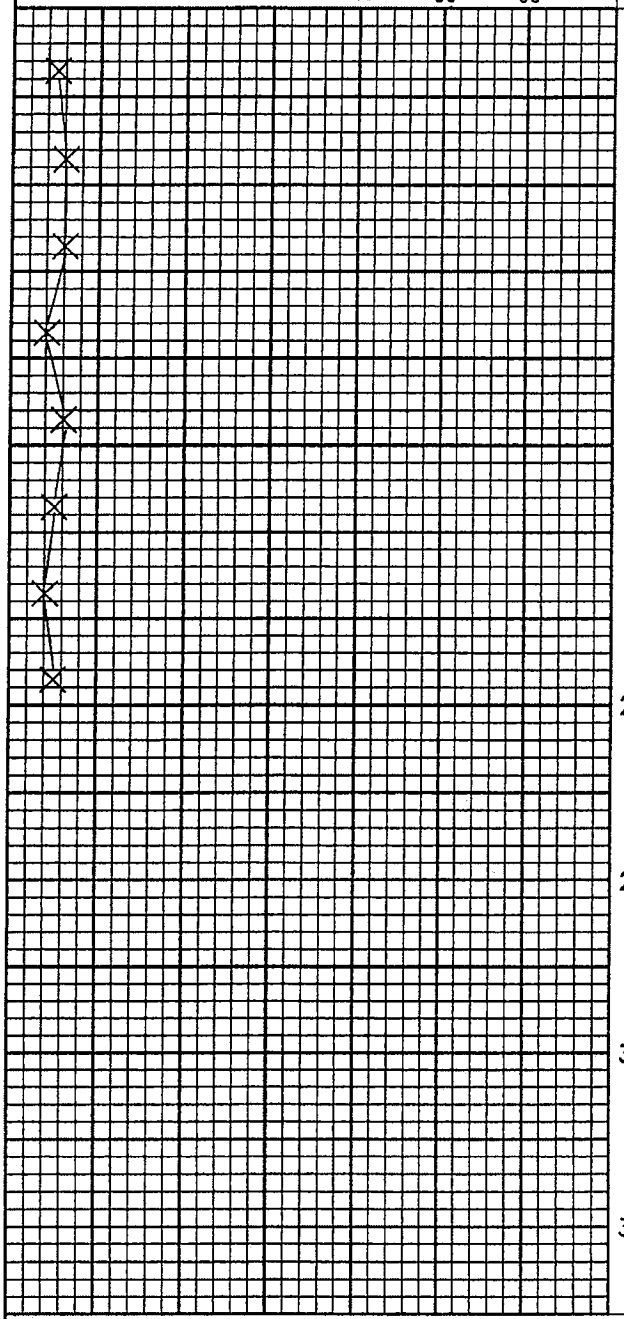
Holcomb Foundation Engineering Co.
PO Box 88 Carbondale, Illinois

LOG of BORING 1

Unconfined Compressive Strength (Tons/Sq. Ft.)
1 2 3 4 5 6

Water Content (%)

Standard N Penetration, Blows/Ft.
10 20 30 40 50 60



Depth In Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				Reddish Brown Silty CLAY (CL) with sand
	1	ss		
	2	ss		
5	3	ss		
	4	ss		
10	5	ss		
	6	ss		Reddish Brown Fine to Medium SAND (SP) with trace clay
15	7	ss		
	8	ss		
20				End of Boring @ −20.0'
25				
30				
35				

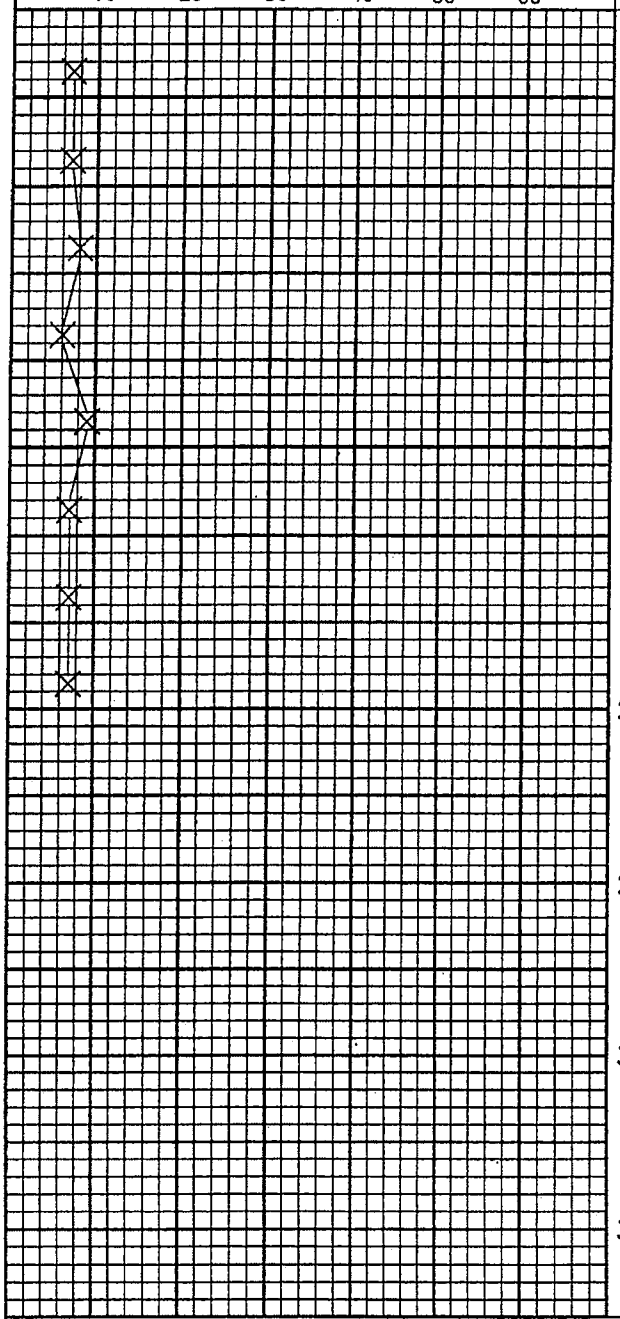
Ground Water Data
Ground Water Encountered @ −14.0' During Drilling.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 26, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H−07192

Added 8-28-07

Holcomb Foundation Engineering Co.
PO Box 88 Carbondale, Illinois

LOG of BORING 2



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				3" Asphalt over Brick and Crushed Stone
	1	ss		Brown Silty CLAY (CL)
	2	ss		
5				
	3	ss		Reddish Brown Sandy CLAY (CL)
	4	ss		
10				
	5	ss		
	6	ss		Reddish Brown Sandy CLAY (CL)
15				
	7	ss		Reddish Brown Fine to Medium SAND (SP)
	8	ss		
20				End of Boring @ -20.0'
25				
30				
35				

Ground Water Data
No Ground Water Encountered During Drilling.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 26, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H-07192

Added 8-28-07

59g

Holcomb Foundation Engineering Co.
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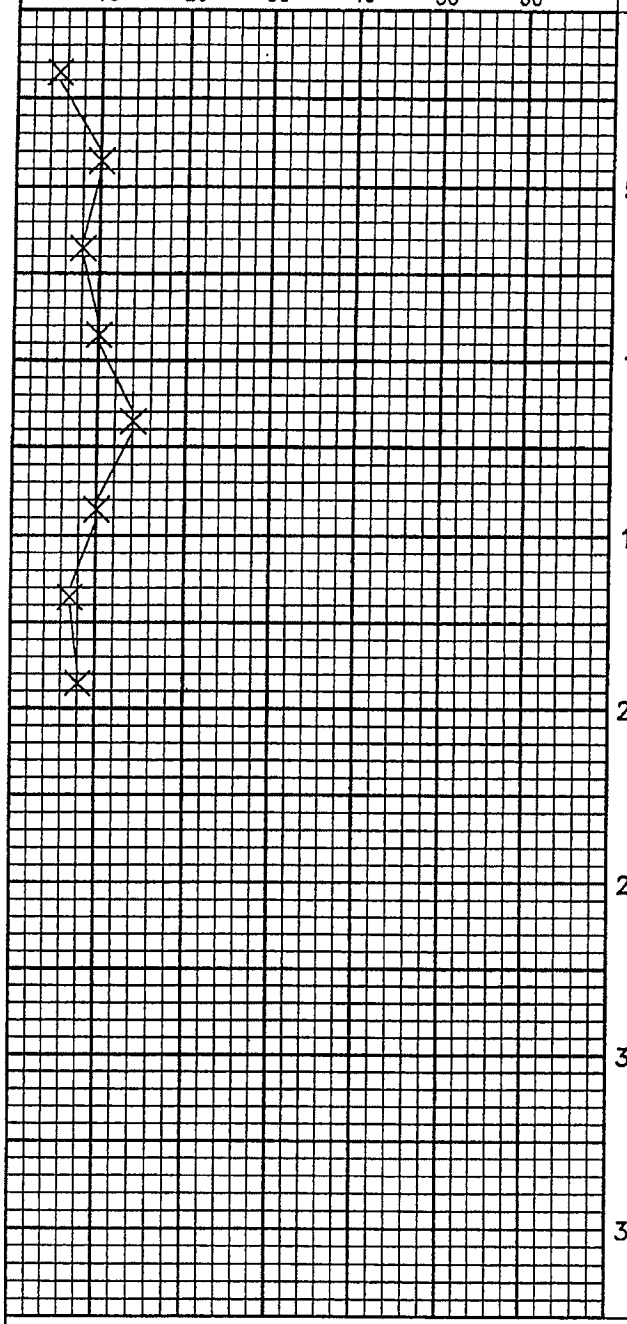
LOG of BORING 3



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				4" Asphalt over 8" Crushed Stone
	1	ss		Brown Silty CLAY (CL)
5	2	ss		Gray Mottled Brown Silty CLAY (CL)
	3	ss		Brown Silty to Sandy CLAY (CL)
10	4	ss		Brown Mottled Gray Silty to Sandy CLAY (CL)
	5	ss		Brown Clayey SAND to SAND(SC-SP)
15	6	ss		Brown Fine SAND (SP)
	7	ss		Brown Mottled Gray Fine to Medium SAND (SP)
20	8	ss		End of Boring @ -20.0'
25				
30				
35				

Ground Water Data
No Ground Water Encountered During Drilling.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 27, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H-07192

Added 8-28-07

59h

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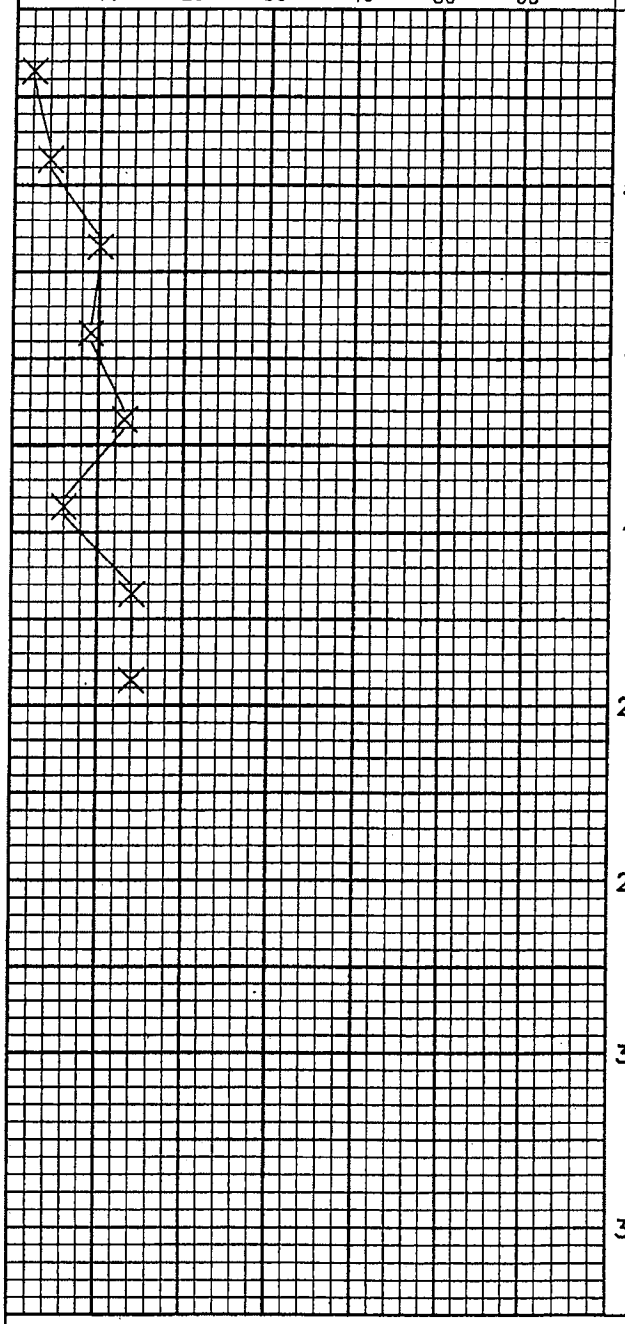
LOG of BORING 4



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				4" Asphalt over 8" Crushed Stone
	1	ss		Gray Silty CLAY (CL) with rubble and brick fragments
5	2	ss		
	3	ss		
	4	ss		Brown Mottled Gray CLAY (CL–CH)
10	5	ss		Brown Sandy CLAY (CL)
	6	ss		Brown Fine SAND (SP)
15	7	ss		Brown Coarse SAND (SP)
	8	ss		
20				End of Boring @ –20.0'
25				
30				
35				

Ground Water Data
Ground Water Encountered @ –19.0' During Drilling.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 27, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H–07192

Added 8-28-07

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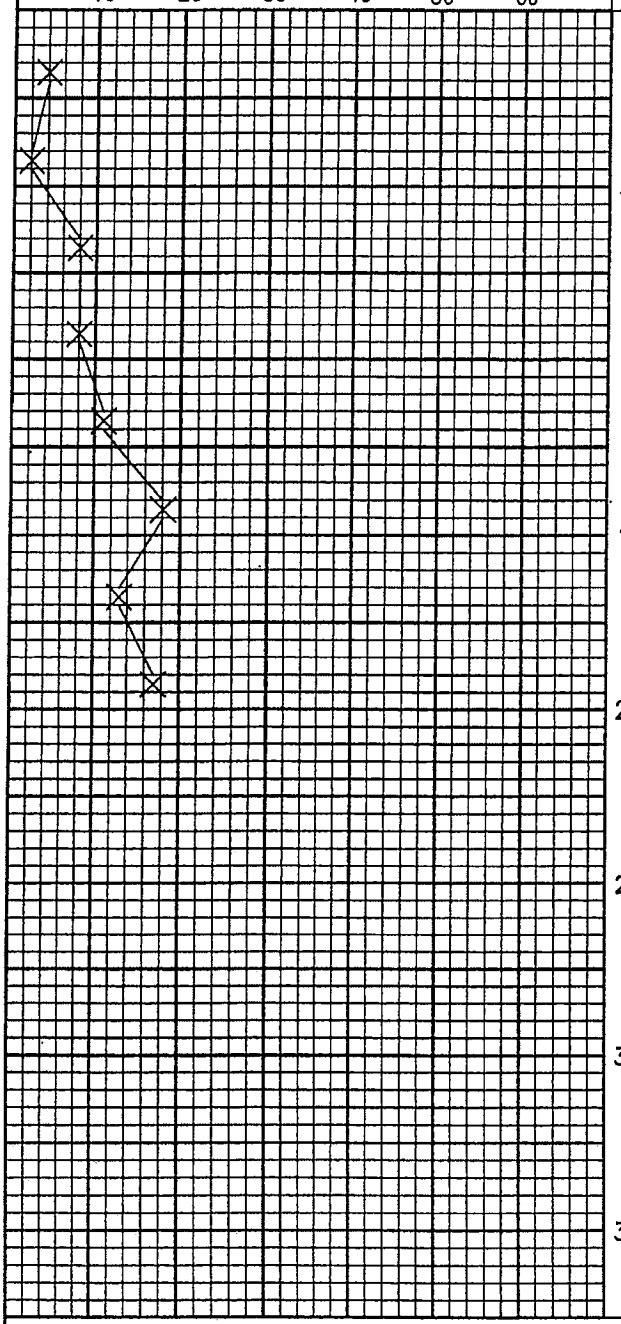
LOG of BORING 5



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				8" Crushed Stone over 5" Concrete
	1	ss		Brown Silty CLAY (CL) with sand and gravel
5	2	ss		
	3	ss		
10	4	ss		Gray–Brown Sandy CLAY (CL)
	5	ss		Brown Mottled Gray Fine to Medium SAND (SP)
15	6	ss		with gravel @ –15.0'
	7	ss		
20	8	ss		End of Boring @ –20.0'
25				
30				
35				

Ground Water Data
Ground Water Encountered @ –15.0' During Drilling and Plugged Upon Completion.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 26, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H–07192

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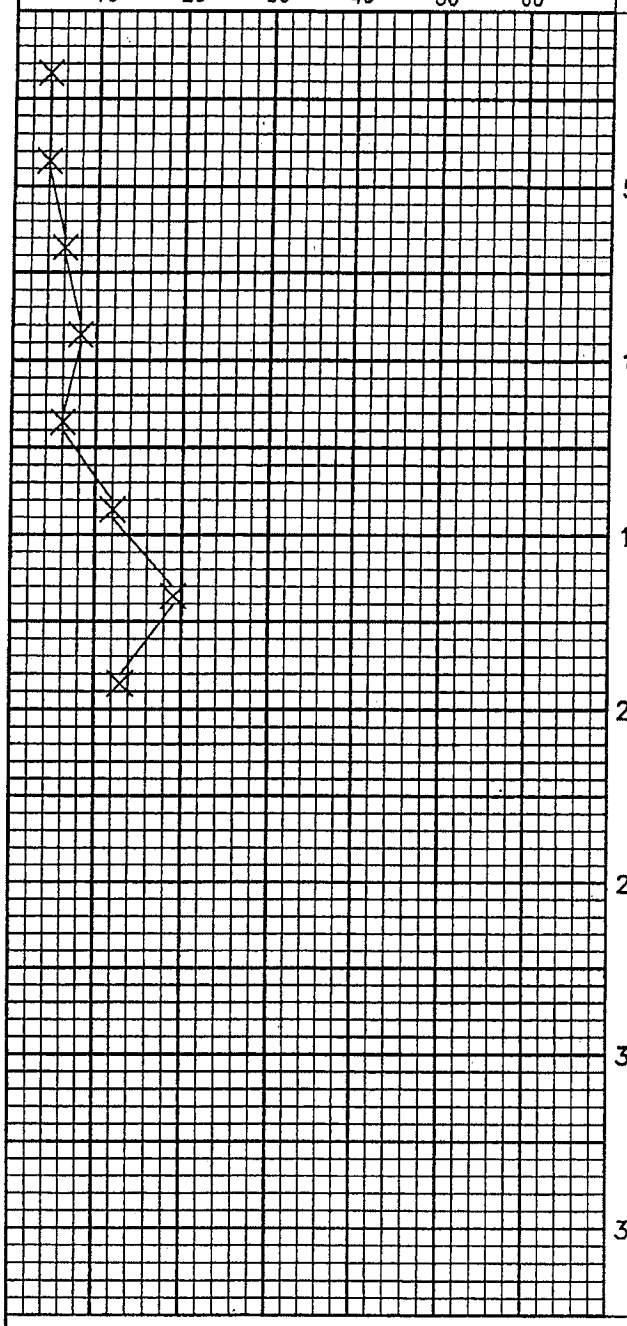
LOG of BORING 6



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				4" Asphalt over 8" Crushed Stone
	1	ss		Gray Silty CLAY to CLAY (CL–CH)
	2	ss		
5	3	ss		Brown Silty CLAY (CL)
	4	ss		Brown Mottled Gray CLAY (CL–CH)
10	5	ss		Brown Mottled Gray Silty CLAY (CL)
	6	ss		Brown Mottled Gray Silty CLAY to Clayey SILT (CL–ML) with sand
15	7	ss		Brown Coarse SAND (SP)
	8	ss		
20				End of Boring @ –20.0'
25				
30				
35				

Ground Water Data
Ground Water Encountered @ –14.0' During Drilling and @ –11.0' Upon Completion.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 26, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H–07192

Added 8-28-07

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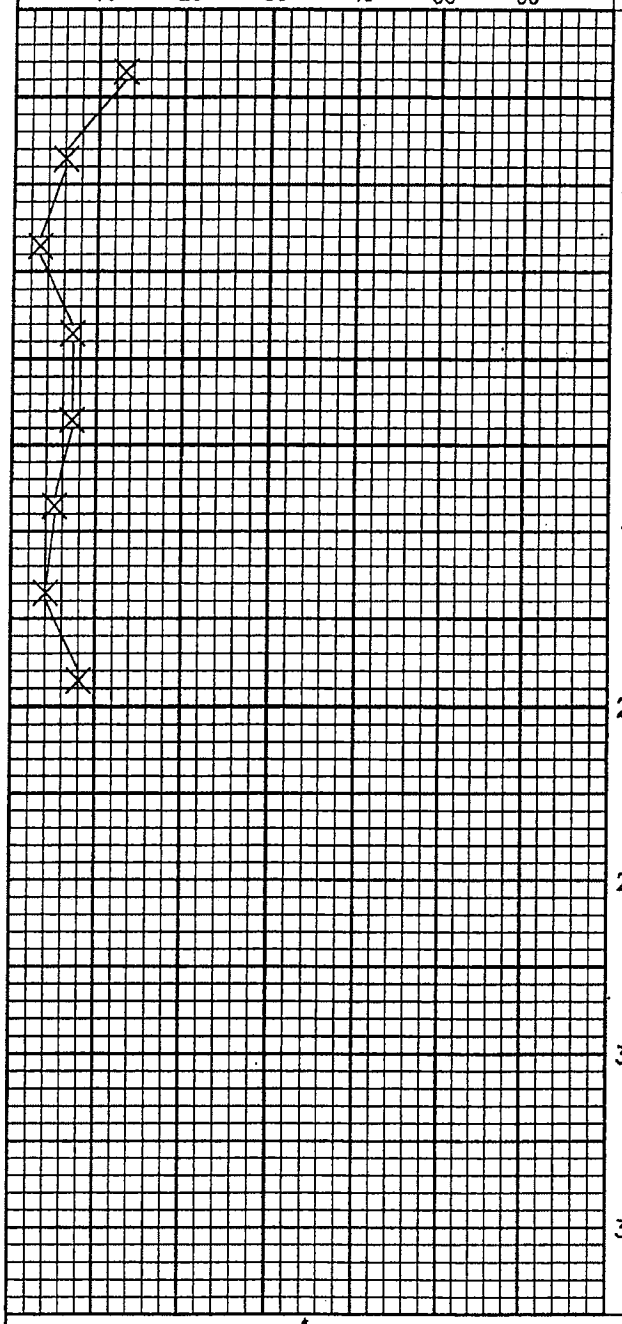
LOG of BORING 7



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				4" Asphalt over 12" Crushed Stone
	1	ss		Dark Gray Silty CLAY (CL) with rubble
5	2	ss		Gray Silty CLAY (CL)
	4	ss		Gray Silty CLAY to Clayey SILT (CL–ML)
10	4	ss		Gray Sandy SILT (CL)
	5	ss		
	6	ss		Brown Mottled Gray Silty CLAY (CL)
15	7	ss		Brown Clayey SAND to SAND (SC–SP)
	8	ss		
20				End of Boring @ –20.0'
25				
30				
35				

Ground Water Data
Ground Water Encountered @ –17.0' During Drilling and @ –14.5' Upon Completion.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 27, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H–07192

Added 8-28-07

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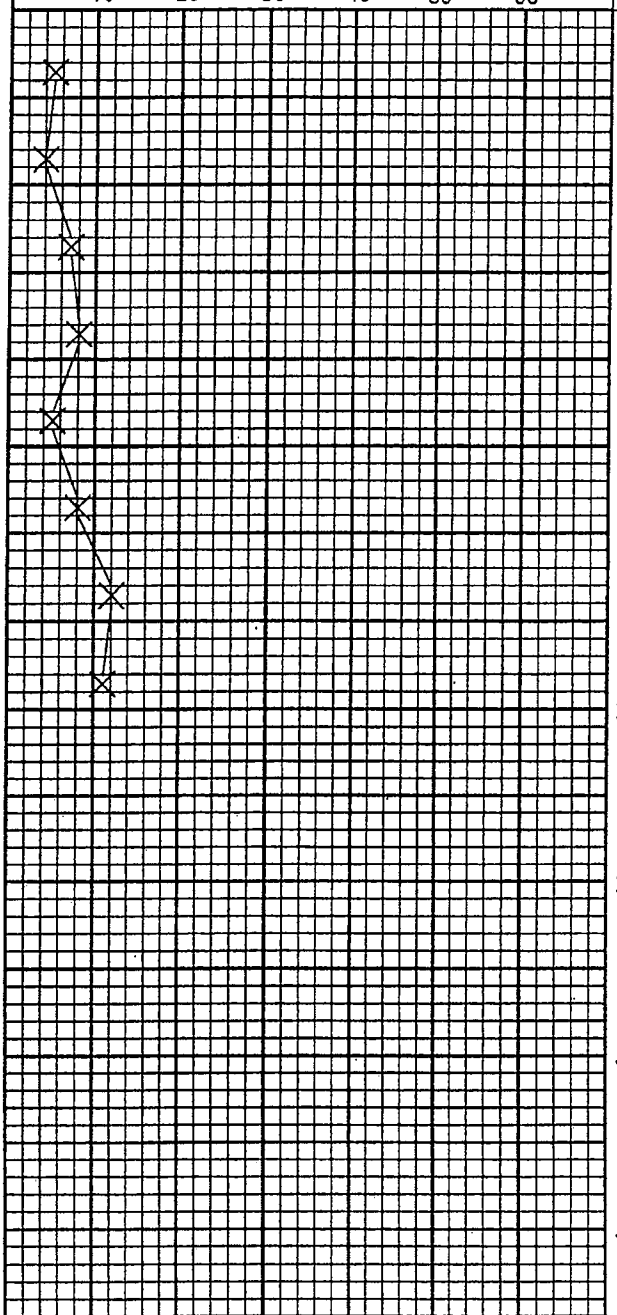
LOG of BORING 8

Unconfined Compressive Strength (Tons/Sq. Ft.)
1 2 3 4 5 6
Water Content (%)
Standard N Penetration, Blows/Ft.
10 20 30 40 50 60



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				4" Asphalt over 8" Crushed Stone
	1	ss		Dark Gray Silty CLAY (CL) with cinders
5	2	ss		Gray Mottled Brown Silty CLAY to CLAY (CL–CH) with sand and pebbles
	3	ss		
10	4	ss		
	5	ss		
15	6	ss		Gray Sandy CLAY (CL)
	7	ss		
20	8	ss		Gray Clayey SILT to SILT (ML)
				End of Boring @ –20.0'
25				
30				
35				

Ground Water Data
Ground Water Encountered @ –16.0' During Drilling and @ –15.0' Upon Completion.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 26, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H–07192

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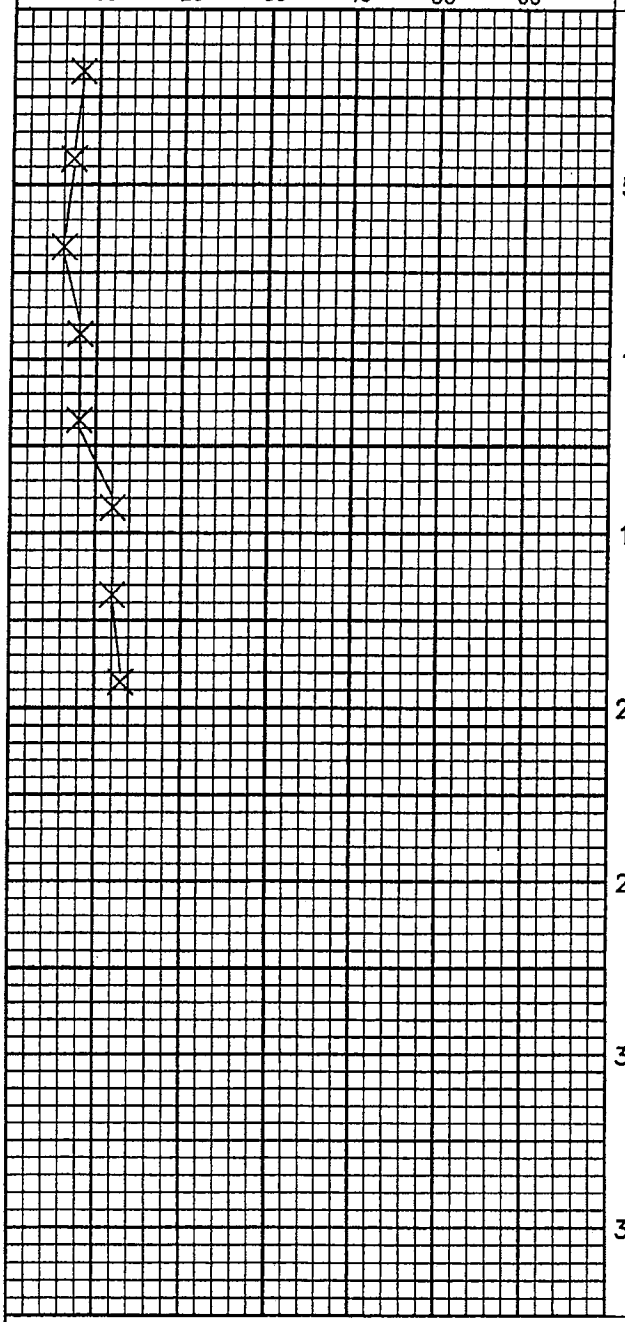
LOG of BORING 9



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				4" Asphalt over 8" Crushed Stone
	1	ss		Gray Silty CLAY to Clayey SILT (CL-ML)
5	2	ss		
	3	ss		
	4	ss		Brown Silty CLAY to CLAY (CL-CH)
10	5	ss		Brown Fine to Medium SAND (SP) with clay and silt
	6	ss		
15	7	ss		
	8	ss		
20				End of Boring @ -20.0'
25				
30				
35				

Ground Water Data
Ground Water Encountered @ -10.0' During Drilling and @ -9.0' Upon Completion.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 26, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H-07192

Added 8-28-07

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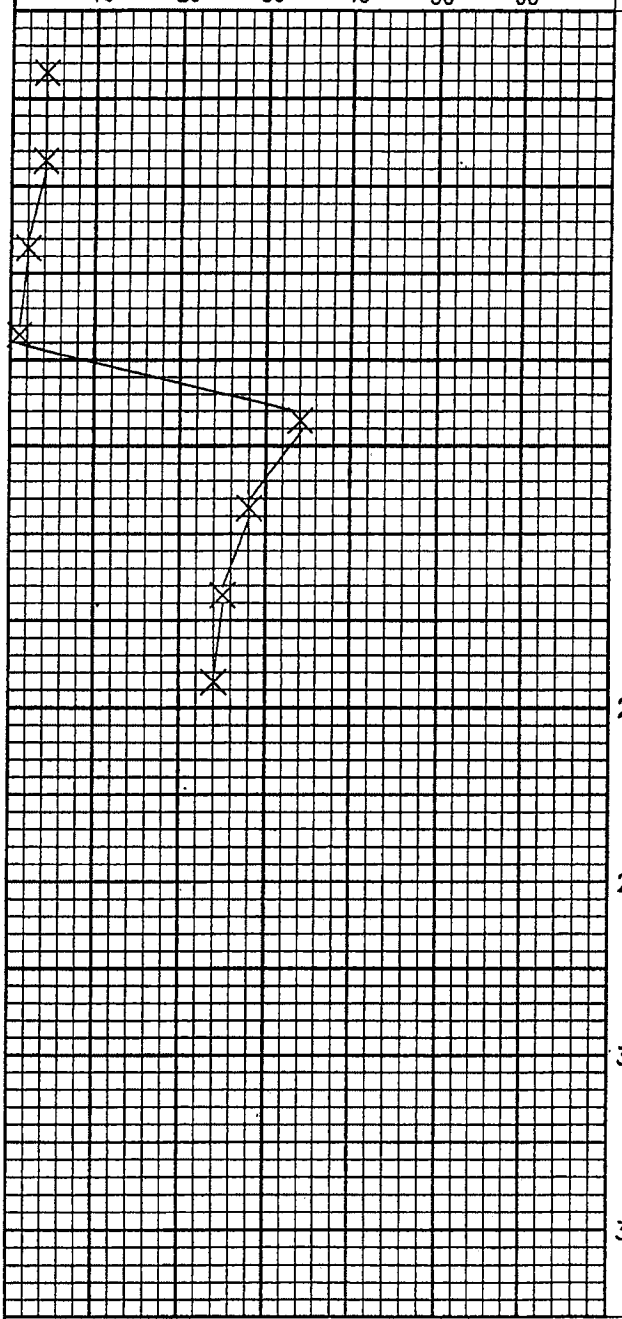
LOG of BORING 10



Depth in Feet	Sample No.	Type Sample	Sample Distance	Description of Material
				Surface Elevation
				4" Asphalt over 8" Crushed Stone
	1	ss		Dark Brown Silty CLAY (CL) with gravel and brick fragments
5	2	ss		
	3	ss		Reddish Brown Silty CLAY (CL) with sand
10	4	ss		Gray Sandy CLAY (CL) with silt
	5	ss		
15	6	ss		Gray Sandy CLAY to CLAY (CL) with gravel
	7	ss		
20	8	ss		
				End of Boring @ −20.0'
25				
30				
35				

Ground Water Data
Ground Water Encountered @ −12.0' During Drilling and @ −10.5' Upon Completion.

Project: Proposed Sanitary Sewer Upgrades Vandalia, Illinois	Date of Boring July 26, 2007
Client: Henry, Meisenheimer & Gende, Inc. Carlyle, Illinois	Project No. H-07192

Added 8-28-07

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GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Classification System is used to identify the soil unless otherwise noted.

RELATIVE DENSITY & CONSISTENCY CLASSIFICATION

TERM (NON-COHESIVE SOILS)	BLOWS PER FOOT
Very Loose	0 - 4
Loose	5 - 10
Firm	11 - 30
Dense	31 - 50
Very Dense	Over 50

TERM (COHESIVE SOILS)	QU (tsf)
Very Soft	0 - 0.25
Soft	0.25 - 0.50
Firm	0.50 - 1.00
Stiff	1.00 - 2.00
Very Stiff	2.00 - 4.00
Hard	4.00+

DRILLING & SAMPLING SYMBOLS

ss:	Split Spoon - 1 3/8" I.D., 2" O.D.
st:	Shelby Tube - 2.80"I.D., 3" O.D.
au:	Auger Samples
cs:	Continuous Sampling - 2.0" I.D.

SOIL PROPERTY SYMBOLS

●	Unconfined Compressive Strength, Qu, (tsf)
+	Penetrometer Value, (tsf)
	Plastic Limit (%)
O	Water Content (%)
	Liquid Limit (%)
X	Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2" O.D. Split Spoon

PARTICLE SIZE

Boulders	8 in. +	Medium Sand	0.6 mm to 0.2 mm
Cobbles	8 in. to 3 in.	Fine Sand	0.2 mm to 0.74 mm
Gravel	3 in. to 5 mm	Silt	0.074 mm to 0.0005 mm
Coarse Sand	5 mm to 0.6 mm	Clay	less than 0.005 mm

Added 8-28-07

UNIFIED SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOL	TYPICAL DESCRIPTION
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS	GW	Well graded gravels, gravel-sand mixtures
			GP	Poorly graded gravels, gravel-sand mixtures
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand silt mixtures
			GC	Clayey gravels, gravel-sand clay mixtures
	SANDS AND SANDY SOILS	CLEAN SANDS	SW	Well-graded sands, gravelly sands
			SP	Poorly graded sands, gravelly sands
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, clay-sand mixtures
FINE GRAINED SOILS	SILTS AND CLAYS LOW PLASTICITY		ML	Inorganic silts of clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS HIGH PLASTICITY		MH	Inorganic silts of high plasticity
			CH	Inorganic clays of high plasticity
			OH	Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS			PT	Peat, humus, swamp soils with high organic contents

Added 8-28-07