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

November 3, 2006

SUBJECT: FAP Route 361
Stearns Road
Project HPP-1527(6)
Section 06-00214-03-BR
Kane County
Contract No 83862
Item 97
November 17, 2006 Letting

TO PROSPECTIVE BIDDERS:

To clarify information it is necessary to revise the following:

Specials- Revised Schedule of prices to reflect added, deleted and revised pay items. Revised the Table of Content to show added special provisions. Revised special provision Topsoil Furnish and Place on page 5. Added special provision Storm Sewers, Class B, Type 2 6" on page 7. Added special provision Field Office Equipment on page 20. Added special provision Standby Generator on page 262. Added Special Provision COMED Electrical Service on page 263. Added Special Provision Wetland Mitigation on page 264. Added Environmental Screenings on pages 160-165. Added Geotechnical Report on pages 166-246. Added Soil Test Data on pages 247-261.

Plans: Revised Sheet 3 to reflect added, deleted and revised pay items.

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,

Michael L. Hine
Engineer of Design
and Environment

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

STATE JOB #- C-91-243-06
PPS NBR - 1-20114-0010

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 83862

ECMS002 DTGECM03 ECMR003 PAGE 1
RUN DATE - 11/02/06
RUN TIME - 203858

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
KANE	089	01	06-00214-03-BR	HPP-1527/006/000	FAP 361

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
A2002316	T-BETULA NIGRA 2	EACH	54.000			X =		
A2002916	T-CELTIS OCCID 2	EACH	64.000			X =		
A2005616	T-OSTRYA VIRG 2	EACH	37.000			X =		
A2006516	T-QUERCUS BICOL 2	EACH	68.000			X =		
A2006716	T-QUERCUS MACR 2	EACH	93.000			X =		
A2007116	T-QUERCUS RUBRA 2	EACH	32.000			X =		
A2007516	T-SALIX NIGRA 2	EACH	81.000			X =		
B2001260	T-CORNUS ALT CL 3'	EACH	10.000			X =		
B2001864	T-CRATAE MOLL CL 5'	EACH	5.000			X =		
B2003866	T-MALUS IOEN CL 6'	EACH	5.000			X =		
C2C00524	S-ARONIA MELAN 2'C	EACH	238.000			X =		
C2C015G3	S-CORNUS OBLIQ CG 3G	EACH	257.000			X =		
C2C020G3	S-CORNUS STOLO CG 3G	EACH	244.000			X =		
C2001124	S-CEPHALAN OCCID 2'	EACH	257.000			X =		
C2012424	S-VIBURN LENT 2'	EACH	238.000			X =		

* pay items deleted 11/3/06
and Pay items Quantities changed

ILLINOIS DEPARTMENT OF TRANSPORTATION
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CONTRACT NUMBER - 83862

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
C2012824	S-VIBURN TRIL 2'	EACH	20.000	X			=		
K0038000	PEREN PL WETLND EM TY	UNIT	24.000	X			=		
K1004485	PERENNIAL PLANTS W-TY	UNIT	96.000	X			=		
XX003561	FR & GRATES	EACH	6.000	X			=		
XX004633	FIELD TILE ADJUST	EACH	100.000	X			=		
XX006043	WATER WELL TO BE C&A	EACH	1.000	X			=		
XX006675	FIELD TILE REPLACEMNT	FOOT	100.000	X			=		
XX006700	CONTROL STRUCTURE	EACH	7.000	X			=		
XX006701	SEED CL 4 MOD MES PRA	ACRE	13.800	X			=		
XX006702	SEED CL 4 MOD WET MP	ACRE	4.500	X			=		
XX006703	SEED CL 4 MOD WET P	ACRE	8.900	X			=		
XX006704	SEED CL 4 MOD WET MS	ACRE	0.300	X			=		
XX006705	SEED CL 4 MOD SHAD FL	ACRE	1.300	X			=		
XX006706	SEED CL 4 MOD DET BAS	ACRE	1.600	X			=		
XX006707	SEED CL 4 MOD SED MEA	ACRE	1.400	X			=		

revised 11/3/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
XX006708	SEED CL 4 MOD EME AQU	ACRE	2.700	X			=		
XX006709	SEED CL 5 MOD MES PRA	ACRE	13.800	X			=		
XX006710	SEED CL 5 MOD WET MP	ACRE	4.500	X			=		
XX006711	SEED CL 5 MOD WET PRA	ACRE	8.900	X			=		
XX006712	SEED CL 5 MOD WET MS	ACRE	0.300	X			=		
XX006713	SEED CL 5 MOD SHA FLO	ACRE	1.300	X			=		
XX006714	SEED CL 5 MOD DET BAS	ACRE	1.600	X			=		
XX006715	SEED CL 5 MOD SED MEA	ACRE	1.400	X			=		
XX006716	SEED CL 5 MOD EME AQU	ACRE	2.700	X			=		
XX006717	INTERSEED CL 4 MOD SM	ACRE	1.400	X			=		
XX006718	INTERSEED CL 4 MOD EA	ACRE	2.700	X			=		
XX006719	INTERSEED CL 5 MOD SM	ACRE	1.400	X			=		
XX006720	INTERSEED CL 5 MOD EA	ACRE	2.700	X			=		
XX006721	STRAW MULCH STABILIZ	ACRE	48.200	X			=		
XX006722	TEMP AGG BRM-COUR AGG	TON	1,200.000	X			=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
XX006723	TEMP AGG BRM-RIPRAP	TON	1,500.000	X		=		
XX006724	SOIL ERO & SED CON-EX	CU YD	1,350.000	X		=		
XX006725	SOIL ERO & SED CON-CL	CU YD	3,450.000	X		=		
XX006726	TEMPORARY RIPRAP	TON	50.000	X		=		
XX006727	TEMP DTCH CHKS ROL EX	FOOT	340.000	X		=		
XX006728	TEMP DTCH CHKS SILT F	FOOT	150.000	X		=		
XX006729	PERIMETR EROS BAR, RE	FOOT	14,700.000	X		=		
XX006730	COARSE AGGREGATE CA-3	TON	1,187.900	X		=		
XX006731	LEVEL SPREADER	EACH	1.000	X		=		
XX006732	UTILITY STRUC REMOVAL	EACH	21.000	X		=		
XX006733	TOPSOIL EXC & PLAC 4	SQ YD	25,970.000	X		=		
XX006734	TOPSOIL EXC & PLAC 6	SQ YD	9,480.000	X		=		
XX006735	TOPSOIL EXC & PLAC 12	SQ YD	56,685.000	X		=		
XX006736	PLANTER FENCE (SPL)	FOOT	3,600.000	X		=		
XX006738	CIP RC END SEC 48 SPL	EACH	1.000	X		=		

Revised 11/3/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 83862

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS	TOTAL PRICE DOLLARS	TOTAL PRICE CTS
X0322671	STAB CONSTR ENTRANCE	SQ YD	79.000 X		=		
X0322856	WEED CONT N SEL/N RES	GALLON	600.000 X		=		
X0323426	SED CONT DR ST INL CL	EACH	100.000 X		=		
X0324079	EXIST FIELD TILE REM	FOOT	100.000 X		=		
X0324381	CONC FLAT SLAB TOP	EACH	7.000 X		=		
* X0324777	FIELD OFFICE EQUIP	CAL MO	15.000 X		=		
X0426200	DEWATERING	L SUM	1.000 X		=		
Z0007601	BLDG REMOV NO 1	L SUM	1.000 X		=		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000 X		=		
Z0015550	DEBRIS REMOVAL	CU YD	494.800 X		=		
Z0019600	DUST CONTROL WATERING	UNIT	5,000.000 X		=		
Z0050900	REM CONC FDN	EACH	3.000 X		=		
Z0064800	SELECTIVE CLEARING	UNIT	50.000 X		=		
Z0076600	TRAINEES	HOUR	1,000.000 X	0	.80 =	800	.00
20100110	TREE REMOV 6-15	UNIT	200.000 X		=		

* Added Pay item 11/3/06

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
20100210	TREE REMOV OVER 15	UNIT	200.000	X			=		
20100500	TREE REMOV ACRES	ACRE	3.430	X			=		
20101000	TEMPORARY FENCE	FOOT	13,600.000	X			=		
20101700	SUPPLE WATERING	UNIT	1,000.000	X			=		
20200100	EARTH EXCAVATION	CU YD	174,752.000	X			=		
20201200	REM & DISP UNS MATL	CU YD	23,905.000	X			=		
20400800	FURNISHED EXCAV	CU YD	10,000.000	X			=		
20700220	POROUS GRAN EMBANK	CU YD	13,005.000	X			=		
20800150	TRENCH BACKFILL	CU YD	1,348.000	X			=		
21101615	TOPSOIL F & P 4	SQ YD	40,330.000	X			=		
21101625	TOPSOIL F & P 6	SQ YD	14,720.000	X			=		
21101645	TOPSOIL F & P 12	SQ YD	88,035.000	X			=		
21101805	COMPOST F & P 2	SQ YD	27,640.000	X			=		
25000210	SEEDING CL 2A	ACRE	1.200	X			=		
25000350	SEEDING CL 7	ACRE	12.500	X			=		

revised 11/3/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
25000400	NITROGEN FERT NUTR	POUND	1,250.000	X			=		
25000500	PHOSPHORUS FERT NUTR	POUND	1,250.000	X			=		
25000600	POTASSIUM FERT NUTR	POUND	1,250.000	X			=		
25100120	MULCH METHOD 2	TON	75.000	X			=		
25100630	EROSION CONTR BLANKET	SQ YD	40,000.000	X			=		
28000250	TEMP EROS CONTR SEED	POUND	50,000.000	X			=		
28000500	INLET & PIPE PROTECT	EACH	20.000	X			=		
28000510	INLET FILTERS	EACH	20.000	X			=		
28100105	STONE RIPRAP CL A3	SQ YD	218.000	X			=		
28100205	STONE RIPRAP CL A3	TON	1,840.000	X			=		
28200200	FILTER FABRIC	SQ YD	836.000	X			=		
44000200	DRIVE PAVEMENT REM	SQ YD	2,866.000	X			=		
44000400	GUTTER REM	FOOT	232.000	X			=		
50100300	REM EXIST STRUCT N1	EACH	1.000	X			=		
50100400	REM EXIST STRUCT N2	EACH	1.000	X			=		

revised 11/3/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
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CONTRACT NUMBER - 83862

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
50100500	REM EXIST STRUCT N3	EACH	1.000	X			=		
50100600	REM EXIST STRUCT N4	EACH	1.000	X			=		
50100700	REM EXIST STRUCT N5	EACH	1.000	X			=		
50100800	REM EXIST STRUCT N6	EACH	1.000	X			=		
50100900	REM EXIST STRUCT N7	EACH	1.000	X			=		
50101000	REM EXIST STRUCT N8	EACH	1.000	X			=		
50101100	REM EXIST STRUCT N9	EACH	1.000	X			=		
50102400	CONC REM	CU YD	25.000	X			=		
50105220	PIPE CULVERT REMOV	FOOT	1,037.000	X			=		
50300225	CONC STRUCT	CU YD	5.500	X			=		
50800105	REINFORCEMENT BARS	POUND	425.000	X			=		
54213669	PRC FLAR END SEC 24	EACH	13.000	X			=		
54213687	PRC FLAR END SEC 42	EACH	4.000	X			=		
54213693	PRC FLAR END SEC 48	EACH	1.000	X			=		
54247130	GRATING-C FL END S 24	EACH	13.000	X			=		

revised 11/3/06

	ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
	54247180	GRATING-C FL END S 42	EACH	4.000	X			=		
	54247190	GRATING-C FL END S 48	EACH	1.000	X			=		
	550A0120	STORM SEW CL A 1 24	FOOT	151.000	X			=		
	550A0340	STORM SEW CL A 2 12	FOOT	793.000	X			=		
	550A0380	STORM SEW CL A 2 18	FOOT	305.000	X			=		
	550A0410	STORM SEW CL A 2 24	FOOT	955.000	X			=		
	550A0470	STORM SEW CL A 2 42	FOOT	308.000	X			=		
	550A0780	STORM SEW CL A 3 48	FOOT	119.000	X			=		
*	550B0310	STORM SEW CL B 2 6	FOOT	20.000	X			=		
	60200805	CB TA 4 DIA T8G	EACH	7.000	X			=		
	60204505	CB TA 5 DIA T8G	EACH	4.000	X			=		
	60207605	CB TC T8G	EACH	9.000	X			=		
	60218400	MAN TA 4 DIA T1F CL	EACH	2.000	X			=		
	60221100	MAN TA 5 DIA T1F CL	EACH	3.000	X			=		
	60223800	MAN TA 6 DIA T1F CL	EACH	2.000	X			=		

* Added pay item
11/3006

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 83862

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
60500050	REMOV CATCH BAS	EACH	1.000			=		
66900200	NON SPL WASTE DISPOSL	CU YD	500.000			=		
66900205	SPL WASTE DISPOSAL	CU YD	530.000			=		
66900210	HAZARD WASTE DISPOSAL	CU YD	270.000			=		
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000			=		
66900530	SOIL DISPOSAL ANALY	EACH	4.000			=		
66900630	LEAD/PH SOIL ANALYSIS	EACH	4.000			=		
67100100	MOBILIZATION	L SUM	1.000			=		
70101800	TRAF CONT & PROT SPL	L SUM	1.000			=		
72000100	SIGN PANEL T1	SQ FT	24.000			=		
72900210	METAL POST TY B	EACH	2.000			=		
81017200	CON T 6 HDP COIL	FOOT	1,000.000			=		
81027140	POLY DUCT B&P 6	FOOT	1,000.000			=		
81400100	HANDHOLE	EACH	6.000			=		

*

TOTAL $

NOTE:
*** PLEASE TURN PAGE FOR IMPORTANT NOTES ***

* Pay item Quantities revised and Pay item deleted
11/3/06

INDEX OF SPECIAL PROVISIONS

revised 11/30/06

Revised 11/03/06

TOPSOIL FURNISH AND PLACE

Description:

This work shall be completed in accordance with Section 211 of the Standard Specifications, except as modified herein.

Additional topsoil is available for use from the two following sites that are owned by Kane County.

7N363 Dunham Road
Elgin, Illinois
60120

PIN: 09-01-400-008

33 W. 004 Stearns
Bartlett, Illinois
60177

PIN: 09-01-400-012

The CONTRACTOR will be responsible for all required erosion control at the topsoil sites.

Materials:

Revise the second sentence of Article 1081.05(a) to read as follows:

It must have an organic content between three and one half and ten percent.

revised 11/03/06

PIPE CULVERT REMOVAL

Description:

This work shall consist of the removal of reinforced concrete pipe culverts and corrugated metal pipe culverts.

Existing pipe culverts shall be removed so that all pipe and flared end sections considered suitable by the ENGINEER for future use shall be salvaged. The location and manner of storage of salvaged material shall be as directed by the ENGINEER. Any of the material having salvage value which has been damaged by the Contractor shall be replaced by the Contractor, at his/her own expense, with new pipe of the same kind and size. Material not suitable for salvage shall be disposed of by the Contractor in accordance with Article 202.03 of the Standard Specifications.

Trenches resulting from the removal of pipe culverts shall be backfilled in accordance with the applicable requirements of Article 550.07.

Payment:

Pipe culvert removal will be paid for at the contract unit price per foot for Pipe Culvert Removal of various diameters which price shall include all excavation and backfilling, and removing and salvaging the pipe and flared end sections.

STORM SEWERS, CLASS B, TYPE 2 6"

Description:

This work shall be completed in accordance with Section 550 of the Standard Specifications, except as modified herein.

The storm sewer shall be of the material Polyvinal Chloride (PVC) Pipe as described in Article 1040.03 of the Standard Specifications. This pipe will be used replacement of the irrigation suction and discharging piping due to the relocation of piping away from the excavation area as shown on the plans.

Payment:

STORM SEWERS, CLASS B, TYPE 2 6" will be paid for at the Contract unit price per foot.

Revised 11/03/06

At all times during the excavation period and until completion and acceptance of the Work at Final Inspection, ample means and equipment shall be provided with which to remove promptly and dispose of properly all water entering any excavation or any other parts of the Work.

Water pumped or drained from the work required for this Contract shall be disposed of in a safe and suitable manner without damage to adjacent property or streets or to other work under construction. Water shall not be discharged onto streets without adequate protection of the surface at the point of discharge. No water shall be discharged into sanitary sewers. No water containing settleable solids shall be discharged into storm sewers. Any and all damages caused by dewatering the work shall be promptly repaired by the Contractor. The Contractor is responsible for providing any and all labor, materials and equipment needed for the Dewatering in order to meet the scheduled completion of the project.

Measurement and Payment

Payment for the work specified will be made at the contract lump sum price for Dewatering. The lump sum price for Dewatering shall not exceed three (3) percent of the total bid price. Any additional amount shall be included in the prices for other items in the Bid Proposal.

FIELD OFFICE EQUIPMENT

Description:

This work shall be completed in accordance with Section 670 of the Standard Specifications, except as modified herein.

The FIELD OFFICE EQUIPMENT shall be in accordance with 670.01 and 670.02 of the Standard Specifications. The FIELD OFFICE EQUIPMENT shall be that as listed of Engineer's Field Office Type A.

Payment:

FIELD OFFICE EQUIPMENT will be paid for at the Contract unit price per CAL MO.

revised 11/03/06

Huff & Huff
incorporated
environmental engineers
and consultants

FILE COPY

512 W. Burlington Avenue, Suite 100
LaGrange, IL 60525
Phone: (708) 579-5940
Fax: (708) 579-3526
Website: http://huffnhuff.com

April 8, 2004

Mr. Paul Rogowski
Director of Transportation
Kane County Division of Transportation
41W011 Burlington Road
St. Charles, Illinois 60175

RE: Environmental Screening of PINs:

09-01-300-039	09-02-451-035
09-01-300-040	09-02-477-007
09-02-426-003	09-02-426-008
09-02-476-001	

Dear Mr. Rogowski:

Huff & Huff has completed the environmental screening of 66.6 acres identified by the above-referenced property identification numbers (PINs). This environmental screening consisted of a records review, site inspection, and soil sampling. One recognized environmental condition (REC) was identified as a result of these activities. This condition pertains to lead concentrations in a berm area used for target practice. The conditions are briefly summarized in this letter; however, the *Preliminary Environmental Site Assessment (PESA)* Report presents details of the screening activities.

1. SOIL SAMPLING RESULTS

Soil samples were collected and analyzed to characterize chemical concentrations associated with commercial nursery operations. Herbicides, pesticides and fertilizers were tested for and soil samples were field screened for volatile organic chemicals (VOCs) associated with solvents, such as toluene, and gasoline constituents. In addition, samples were collected from a berm previously used for shooting practice. The berm is approximately 20 feet high and 100 feet in length with an overall thickness at the base of approximately 30 feet.

The analytical results were compared to the Illinois Environmental Protection Agency's (IEPA's) Tiered Approach to Cleanup Objectives (TACO) for residential land uses. The Tier 1 objectives represent the most conservative values and are identified in lookup tables contained in Illinois Administrative Code (*IAC*) 742, Appendix B. Under current IEPA policy, material that exceeds any Tier 1 clean-up objective is termed "contaminated media".

Excavated material is considered "clean fill" only if it achieves all of the Tier 1 residential clean-up objectives for ingestion, inhalation, and migration to groundwater. Excavated material that has any contaminant level above any Tier 1 clean-up objective is classified as a *solid waste* and must be landfilled if taken off site. Disposal of *Special Wastes* or *Hazardous Wastes* in Illinois requires a generator identification number and manifesting of the material to the appropriate landfill.

The only parameter identified above Tier 1 objectives and requiring remediation is the lead contained in the berm area. Four samples were analyzed for total lead and lead by the toxicity characteristic leachate procedure (TCLP). BERM-1 sample location represents the primary target location while samples BERM-3 and BERM-4 were 40 feet west and 45 feet east of BERM-1, respectively. BERM-2 was located on top of the berm approximately 20 feet above the BERM-1 sample location. Figure 1 depicts these sample locations.

The Tier 1 objective for ingestion is based upon the total lead concentration in the soil; however, the TCLP lead values are compared to soil migration to Class I groundwater. TCLP lead concentrations also define a characteristic hazardous waste. Table 1 summarizes comparison of the TCLP lead results to Tier 1 criteria and Table 2 compares the total lead concentrations to the Tier 1 ingestion criteria. (There are no Tier 1 inhalation criteria for lead.) Three of the four samples were above the Class I migration to groundwater criteria and one sample, BERM-1, exceeded the characteristic hazardous waste criteria. These results indicated that portions of the berm, when removed, would need to be handled as a special waste and a portion as a hazardous waste.

2. POTENTIAL REMEDIAL COSTS

The four soil samples collected from the berm provide a limited basis for estimating remedial costs. It is assumed the berm will be removed as part of the proposed project. Soils currently in the berm can be managed as either clean fill, special waste, or hazardous waste, depending upon the total and TCLP lead concentration.

lod back brevit only items

A range of possible costs is presented for estimating potential soil handling costs. The volume of soil contained within the total berm area sampled is estimated as 1,060 cubic yards. This area does not include the ends of the berm that are perpendicular to and wrap around the target area. This represents an area 100 feet in length, 30 feet in width at the base, and 20 feet in height with a 45-degree slope. Approximately 50 per cent of this volume (530 cubic yards or 800 tons) is estimated to require special handling as either special waste or hazardous waste. The soil samples were collected at the surface of the berm, and the lead concentrations are estimated to extend approximately half way into the berm. A maximum volume of 800 cubic yards or 1,200 tons could be generated if the ends of the berm were also affected. These are conservative assumptions based upon existing information.

development of a plan

The TCLP lead concentration in the area of BERM-1 is classified as a hazardous waste as it exceeds the 5.0 mg/L criteria. As the TCLP sample concentration of 117 mg/L exceeds the Universal Treatment Standards of 40 CFR Part 268.48, the soils near BERM-1 will require treatment prior to landfill disposal. (Landfills can only accept hazardous waste with a TCLP lead less than 7.5 mg/L.) All soils with a TCLP lead concentration greater than 7.5 mg/L (see 40

1 Le 1

Added 11/03/06

CFR Part 268.49) will require treatment prior to disposal as a hazardous waste. The treatment must reduce the TCLP lead level to 7.5 mg/L or 90 per cent of concentration. Table 3 summarizes the costs for managing the target area as hazardous waste and the remainder of the berm as special waste.

These costs are provided as an engineering estimate based upon existing information. Additional sampling can be used to provide a more detailed cost estimate. The key assumptions pertain to the volume of hazardous waste and special waste generated during berm removal and soil concentrations define these volumes. The berm disposal cost is currently estimated to range between $95,000 and $147,000 using existing information.

If there are questions regarding these results or the cost estimate, please do not hesitate to contact me.

Sincerely yours,

Linda L. Huff, P.E.
President

R:\Benesch\Midwest Groundcovers\2004 Correspondence\summary ltr.doc

162 Added 11/03/06

TABLE 1
TCLP LEAD RESULTS COMPARED TO CLASS I GW OBJECTIVE
MIDWEST GROUNDCOVERS
ST. CHARLES, ILLINOIS

Sample	Class I GW Objective, mg/L	Characteristic Hazardous Waste, mg/L	Results TCLP, mg/L
BERM-1	0.0075	5.0	**177.000**
BERM-2	0.0075	5.0	0.112
BERM-3	0.0075	5.0	<0.0075
BERM-4	0.0075	5.0	0.0151

Note: **Bold** denotes concentration above Tier 1 and hazardous waste criteria.

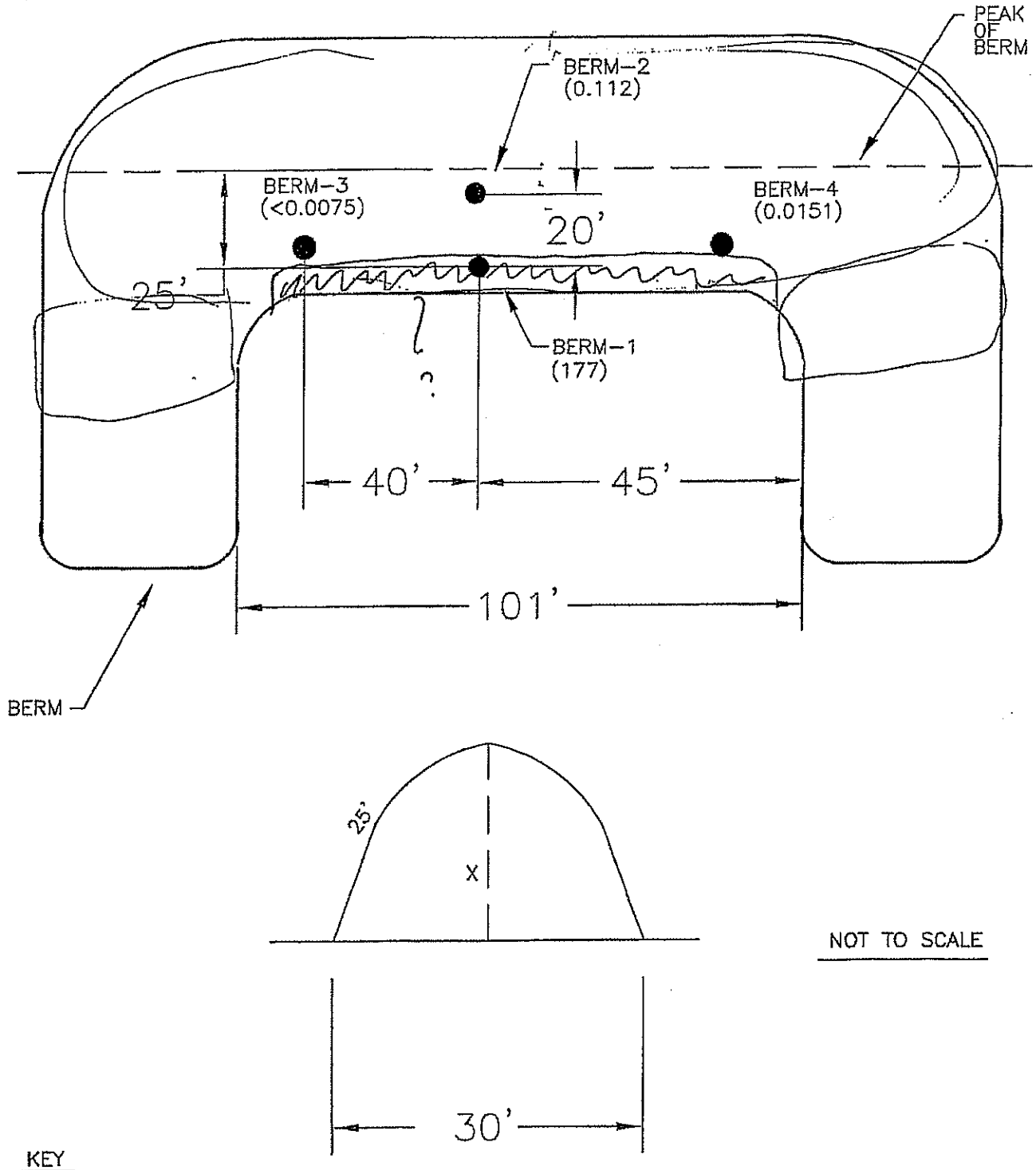
TABLE 2
COMPARISON OF TOTAL LEAD CONCENTRATIONS (mg/kg)
TO TIER 1 INGESTION

Sample	Tier 1 Ingestion, mg/kg	Results, mg/kg
BERM-1	400	5,730.0
BERM-2	400	60.8
BERM-3	400	13.6
BERM-4	400	13.4

TABLE 3
RANGE OF POTENTIAL COSTS

Task	Average Cost, $	Maximum Cost, $
Landfill Application	2,500	2,500
Site Safety Plan	900	900
Soil Disposal	75,500	110,000
Soil Handling Contractor	7,000	14,000
Engineering Oversight/ Sampling	10,000	20,000
TOTAL COST	**$95,900**	**$147,400**

Note: [a] 300 tons @ $135/ton = $40,500
500 tons @ $70/ton = $35,000
400 tons@$135/ton = $54,000
800 tons@ $70/ton = $56,000



NOT TO SCALE

KEY

(X.XXXX) TCLP LEAD CONCENTRATION IN mg/L

● SAMPLE LOCATION

FIGURE 1
LEAD SAMPLING LOCATION AND RESULTS (TCLP LEAD IN mg/L)

CADFILE: BENESCH LEAD BERM

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Geotechnical & Environmental Engineering

Construction Materials Engineering & Testing

Laboratory Testing of Soils, Concrete & Asphalt

Geo-Environmental Drilling & Sampling

Geotechnical Report

Proposed Stearns Road (FAP 361)

Fox River to IL Route 25

LA Section No.: 98-00214-02-BR

Federal Project No.: DPC-CMM-HPD-M-0019 (014)

Kane County

Alfred Benesch & Company

GEOTECHNICAL GROUP
CAROL STREAM

1Lab Added 11/03/06

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Local Office
June 2, 2006

Mr. Michael Kerr
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018-4920

Re: Proposed Stearns Road
Fox River to IL 25
Kane County
TSC Project No. L-59,965

Dear Mr. Kerr;

Enclosed please find one (1) copy of our geotechnical report for the referenced project which is being forwarded at the request of Mr. M. Michael Okrent with Alfred Benesch & Company. A copy of the soil profile sheets is also included with this correspondence.

Please call me or email if there are any questions or if additional information is needed.

Respectfully submitted,

TESTING SERVICE CORPORATION

Mark L. Corbin

Mark L. Corbin, P.E.
Ph (630) 784-4082
Fax (630) 871-5610
mcorbin@tsccorp.com

Cc Mr. M. Michael Okrent

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June 1, 2006
L - 59,965

GEOTECHNICAL INVESTIGATION REPORT
PROPOSED STEARNS ROAD (FAP 361)
Fox River to IL Route 25
LA Section No.: 98-00214-02-BR
Federal Project No.: DPC-CMM-HPD-M-0019(014)
KANE COUNTY

PREPARED FOR:
ALFRED BENESCH & COMPANY
205 NORTH MICHIGAN AVENUE, SUITE 2400
CHICAGO, ILLINOIS 60601

PREPARED BY:
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PROPOSED STEARNS ROAD (FAP 361)
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Federal Project No.: DPC-CMM-HPD-M-0019(014)
KANE COUNTY

1.0 INTRODUCTION

This report presents results of the soils investigation performed for that section of the proposed Stearns Road extension which will cross between the Fox River and IL Route 25 in Kane County. These geotechnical services were provided in accordance with TSC Proposal No. 30,735 and the attached General Conditions, which are incorporated herein by reference.

This section of the Stearns Road project will begin at the east abutment for the bridge over the Fox River (Sta. 576+00) and end at IL Route 25 (Sta. 609+00) for a total distance of about 3,300 feet. The entire length of the project will involve constructing new embankment for the roadway. Embankment heights will reach a maximum of about 27 feet at the Fox River bridge abutment, but will otherwise be in the range of 2 to 12 feet in most other areas of the project.

The proposed Stearns Road will consist of four traffic lanes separated by a 20 foot center median in most areas of the site. The preliminary pavement design calls for a rigid P.C. concrete pavement with curbs. A mixed use path will also be constructed adjacent to the roadway. In addition, several areas adjacent to

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the roadway are proposed for shallow detention basins and wetland areas. These excavations are intended to serve as a primary source of earth borrow for the embankment.

The project will include a new bridge crossing the Fox River and a new bridge crossing the North Arm of Brewster Creek. TSC has completed structure borings for these bridges and previously issued foundation reports. This report addresses stripping and undercutting, subgrade preparation, embankment construction, detention basins and borrow. This report includes all boring logs performed on the site including those previously included with the bridge foundation reports. Please note that plan and soil profile sheets have been prepared and should accompany this report.

2.0 SITE DESCRIPTION, GEOLOGY AND PEDOLOGY

The project is located in east-central Kane County just outside the limits of South Elgin. Over the west half of the site, the proposed roadway alignment will be roughly 250 to 300 feet south of the CC&P Railroad which also crosses the Fox River. Most of the project falls within the southeast one-quarter of Section 2, and the east end falls within the southwest one quarter of Section 1, of St. Charles Township (T 40 N, R 8 E). A general site map is provided in the Appendix and on the cover sheet of the plan & profile sheets.

The site predominately has consisted of a nursery known as Midwest Ground Covers with numerous greenhouse type structures, gravel drive and parking areas, and shrubbery plots covering the site. Much of the site contains 1 to 3 feet of variable Fill associated with the nursery operations. Most areas immediately adjacent to Brewster Creek and the Fox River are heavily wooded.

Topographically, the grade gradually rises from the Fox River (west end of site) to IL 25 (east end of site) along the roadway alignment. The western two-thirds of the alignment has gentle slopes of less than 2 percent and the eastern one-third has a steeper grade on the order of 2 to 6 percent. Brewster Creek crosses IL 25 about 800 feet south of the proposed Stearns Road intersection, and flows northwesterly about 100 to 300 feet south of the proposed roadway. The North Arm of Brewster Creek crosses the roadway alignment at Sta. 590+00 (new bridge structure) and joins Brewster Creek immediately on the south side of the roadway. Brewster Creek then flows southwest to the Fox River.

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Geologically, most of the site lies within the Mackinaw Member of the Henry Formation, which mostly consists of well sorted Sand and Gravel deposited as glacial outwash in terraces of the Fox River valley. These materials are frequently interbedded with Silt and are covered with 1 to 2 feet of loess which is typically described as Silty Loam or Silty Clay Loam. More recent floodplain deposits of silt and sand are found locally, and are associated with the Fox River and Brewster Creek drainage.

The area south of Brewster Creek at the east end of the site is shown to fall within the Minooka Moraine which is a Yorkville Member of the Wedron Formation. These soils typically consist of clayey to silty clayey till which usually exhibit moderate to high shear strengths at relatively moderate moisture contents. The transition from outwash deposits to glacial till is often erratic with interbedded layers of Sand, Silt and clayey till frequently occurring. Dolomitic limestone bedrock of Silurian age is expected to be overlain by about 80 to 100 feet of overburden in the site vicinity.

Included in the Appendix is the Pedological Soil Map for the site as prepared by the Soil Conservation Service. The map shows most areas of the proposed roadway alignment to cross Unit 325 - Dresden Silt Loam and Unit 8082 - Millington Silt Loam. The Millington Silt Loam follows the low areas immediately adjacent to Brewster Creek and the Fox River, and Dresden Silt Loam is located on slightly higher ground. These soil units also predominate within the proposed detention and wetland areas, along with an area of Unit 969 - Casco-Rodman Complex at the east end of the site just north of the proposed Stearns Road alignment. One area of Unit 1103 - Houghton Muck is located along the CC&P Railroad just west of IL 25, which does not extend onto the limits of this project. The following table summarizes the pertinent ratings provided by the Soil Conservation Service for the predominant soil types.

Ratings from Soil Conservation Service

Soil Unit	Restrictions for Local Roads and Streets	Rating as Construction Material - Roadfill -
325 - Dresden Silt Loam	Severe - low strength	Good
969E2 - Casco - Rodman Complex	Severe - slope	Fair - slope
8082 - Millington Silt Loam	Severe - flooding, low strength, ponding	Poor - low strength, wetness

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3.0 FIELD INVESTIGATION AND LABORATORY TESTING

A total of thirty-nine (39) soil borings are included with this report. with the boring logs included in the Appendix. The following table summarizes the general purpose and depth for each of the borings.

Boring Summary

Boring Numbers	Purpose	Boring Depths
B-6 through B-14	Subgrade & embankment borings spaced at 250 to 370 foot intervals	10 feet
B-15 though B-20	Delineate unsuitable soils Sta. 591+50 to 596+50	10 to 15 feet
DB-1 through DB-16	Detention basins and borrow	15 feet
NSNA-1 through NSNA-5	Structure borings for bridge over N. Arm Brewster Creek	75 to 82 feet
STFX-7, 8 & 9	Structure borings for E. abutment & piers for bridge over Fox River Sta.	70 to 100 feet

All of the logs for the above borings are included in the Appendix. The soil profile sheets show the main subgrade borings (B-6 through B-14), a couple closout borings (B-16 & B-20) and the top 10 to 15 feet of a few structure borings (STFX-7, STFX-9, NSNA-2). The specific boring locations are shown on the plan and profile sheets, except for the DB borings which are shown on the overall site plan in the Appendix.

Soil sampling for most of the borings was performed in conjunction with the Standard Penetration Test, for which driving resistance to a 2" split-spoon sampler (in blows per 6" interval) provides an indication of the relative density of granular materials and consistency of cohesive soils. Ten of the subgrade borings (B-6, 7, 9, 10 and 15-20) and three of the detention borings (DB-4, 5, 16) had macro-core soil samples taken using a geoprobe drill rig. Water level readings were taken during and following completion of drilling operations. The bore holes were immediately backfilled preclude possible hazards to the public.

Soil samples were examined in the laboratory to verify field descriptions and to classify them in accordance with the AASHTO Soil Classification System. Laboratory testing included moisture content determinations

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for all cohesive and intermediate (silt or loamy) soil types. An estimate of unconfined compressive strength was obtained for cohesive samples using a calibrated hand penetrometer. For classification purposes and to verify field identifications, tests for Atterberg limits, grain size analysis and organic content were performed on representative subgrade samples. Results of these tests are summarized in the Appendix on soil test data sheets (2).

Reference is made to the soil profile sheets and boring logs which indicate subsurface stratigraphy and soil descriptions, results of field and laboratory tests, as well as water level observations. Definitions of descriptive terminology are also included. While strata changes are shown as a definite line on the boring logs, the actual transition between soil layers will probably be more gradual.

4.0 PRECIPITATION SUMMARY

All of the soil borings included with this report were drilled between March 10 and 29, 2004. Observations made of precipitation during the six months preceding our field work are summarized in the following table. These observations were obtained at the Elgin weather station located about 6 miles north of the project site.

Precipitation Data (in inches)

Month	Total	Departure From Normal
September, 2003	1.80	- 1.86
October, 2003	1.92	- 0.61
November, 2003	5.46	+ 2.34
December, 2003	2.85	+ 0.75
January, 2004	0.68	- 1.07
February, 2004	0.87	- 0.39
March, 2004	4.97	+ 2.83

Based on the above data, it is anticipated that groundwater levels and soil moisture were probably close to normal seasonal conditions.

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5.0 SOIL STRATIGRAPHY and GROUNDWATER

5.1 Sta. 575+00 to 587+00

Structure borings STFX-7 and STFX-8 were located closest to the Fox River where 2 to 3 feet of black Clay and organic Clay were encountered. However, the moisture contents (19-36%) and unconfined compressive strength values (0.6 - 3.2 tsf) of these organic soils were variable. Borings STFX-9, B-6 and B-7 encountered Sand / Gravel or Sandy Loam Fill to depths of 1.5 to 4 feet.

Underlying the Fill and black Clay these borings typically encountered variable stratigraphy of Clay, Clay Loam, Silty Loam or Sandy Loam which extended to depths of 5 to 8 feet. These materials revealed variable moisture contents (16-31%) and strength values mostly indicative of a stiff to very stiff condition. Boring STFX-8 encountered marginally cohesive Sandy Loam (3 - 5.5 ft) which was relatively soft. The soils otherwise encountered below depths of 3 to 8 feet otherwise consisted of Sand or Sand / Gravel which was saturated and bearing free groundwater. Boring B-8 (Sta. 585+84) encountered Sand / Gravel for the full depth of the boring.

The water level in the Fox River was recorded at elevation 688.3 during the drilling operation. Each of the borings performed within this section of the project encountered free groundwater at depths of 3 to 8 feet while drilling, which correlate to elevations 688.1 to 691.3. The free groundwater was typically associated with water bearing layers of Sand or Sand / Gravel.

5.2 Sta. 587+00 to 597+00

The borings performed within the central one-third of the project, including the area of proposed bridge over the N. Arm Brewster Creek and just to the east of the bridge, mostly encountered soft black organic soils extending to depths of 2 to 5 feet which have been shaded on the soil profile sheets. These soils included topsoil, black Clay or Clay Loam and Organic Clay having high moisture contents (30-58%). The black organic soil layer is covered by 1 to 2 feet of Fill at several borings.

Occasional soft layers with high moisture contents were found buried below depths of 6 feet in some of the borings. These layers were somewhat erratic and difficult to profile. The most substantial layer was

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at Boring NSNA-2 where a zone of very soft and loose soils were encountered from 8 to 13 feet. These materials consisted of clayey Sand and organic silty Clay having high moisture contents (36-46%). Boring NSNA-4 also encountered a layer of soft Silty Loam (WC=29%) from 13 to 15.5 feet. It is interesting to note that several feet of loose to medium dense Sand and Sand / Gravel were found overlying these soft layers. Other borings encountering deep buried soft layers are summarized below.

Soft Layers Below 5 Feet

Boring	Station	Depth Interval	Soil	Water Content
NSNA-2	589+16, 15' RT	8 - 13 ft	Clayey Sand & organic silty Clay	36 - 46%
NSNA-4	590+17, 45' RT	13 - 15.5 ft	Soft gray Silty Loam	29%
B-9	592+09, 27' RT	5.5 - 7 ft	Soft organic Silty Loam	46%
B-18	594+28, 40' LT	5.5 - 8 ft	Soft dark gray Silty Loam	30%
B-10	595+08, 24' LT	5.5 - 7.5 ft	Soft dark gray Clay Loam	22%

The stratigraphy in this area below 3 to 5 feet is otherwise variable and difficult to profile. The area represents a transition zone between the granular outwash soils, which predominate to the west, and the cohesive till soils which predominate to the east. The structure borings for the bridge (NSNA borings) mostly encountered Sand or Sand / Gravel underlying the black organic soil layer. These granular soils were saturated and bearing free groundwater. Most of the subgrade borings east of the bridge encountered stiff to hard cohesive till soils below depths of 2 to 5 feet, which were often interbedded with layers of Sand.

Each of the borings encountered free groundwater while drilling at relatively shallow depths of 3 to 5 feet, and at a depth of 8 feet in B-17 and B-18. The free groundwater was typically associated with wet layers of Sand or Sand / Gravel. A 24-hour water level observation at NSNA-3 was recorded at a depth of only 1.0 foot.

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5.3 Sta. 597+00 to 609+00

Borings B-11 through B-14 were performed on the higher ground over the eastern one-third of the new roadway. Fill materials consisting of Sand / Gravel, clayey Sand and Sandy Loam (topsoil) were encountered to depths of 1.5 to 3 feet at borings B-11, B-13 and B-14. Approximately 4 inches of surficial topsoil was encountered at B-12.

Underlying soils in these four borings included variable stratigraphy of Sand / Gravel, Silt and cohesive till soils. Layers of Sand or Sand / Gravel were encountered in B-11 (2.5 - 8 ft) and B-13 (3 - 5.5 ft). Layers of medium dense Silt were also encountered in B-11 and B-12 (8 - 10 ft) and B-14 (3 - 5.5 ft). The remaining soils otherwise consisted of relatively stiff to hard Clay, Clay Loam or Silty Clay Loam having low to moderate moisture contents (12-20%).

Borings B-11 and B-12 encountered free groundwater at 5.5 feet while drilling. The free groundwater was associated with water bearing Sand in B-11 and wet sand seams in Boring B-12. Borings B-13 and B-14 were "dry" during the drilling operation with no free groundwater being encountered.

5.4 Detention and Borrow

Sixteen soil borings (DB prefix) were performed for proposed detention and borrow areas as shown on the overall site plan in the Appendix. Although these borings were located outside the limits of the proposed roadway, variable stratigraphy similar to that described above was generally encountered.

Typically black topsoils and organic Clay were encountered to depths of about 1 to 3 feet and were mostly covered with 5 to 24 inches of Gravel or Sand Fill. Buried layers of unsuitable clay or Clay Loam with high moisture contents (25-40%) were encountered in DB-1 (3 - 8 ft) and DB-14 (5.5 - 7 ft). Most of the borings encountered water bearing layers of Sand or Sand / Gravel at depths of 3 to 7 feet. Variable soil stratigraphy including stiff to hard cohesive till soils were typically interbedded with layers of clayey Sand, Silt or marginally cohesive "loamy" type soils. Free groundwater was recorded at depths of only 3 to 7 feet in each boring except DB-8 (13 ft) and DB-11 (10 ft). The reader is referred to the table summary of Suitability of Earth Borrow - Detention Basins (3 pages) in the Appendix which provides a more detailed summary of materials encountered in these borings.

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6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Subgrade Support Values for Pavement Design

Most areas of the project will consist of constructing the roadway on new earth Fill embankment. A primary source of the earth Fill will be from adjacent detention and wetland areas which are to be excavated. Included in the Appendix is a Subgrade Support Rating (SSR) chart where four (4) representative soil samples obtained from the detention and wetland borings (DB) have been plotted. Three of the four samples (75%) plot within the "Poor" rating and one plots within the "Fair" rating. These results are considered generally representative of the proposed wetland / detention areas. Based on these results, an SSR rating of "Poor" is recommended for this section of the project.

Work performed for this study did not include performing any IBR tests on representative subgrade samples. However, the IBR value used for pavement design is typically based on the worst soil type (lowest IBR) within the limits of the project. Based on the data obtained from the soil borings, an IBR value no greater than 2.5 is recommended for pavement design. This represents a typical design IBR value for similar soil types encountered in the Chicago area and generally correlates to an SSR of "Poor".

The preliminary pavement design for the new Stearns Road includes 10 inches of Jointed P.C. concrete over 4 inches bituminous stabilized subbase and 12 inches Aggregate Subgrade. The proposed subgrade level should be about 2.2 feet below the proposed profile grade line. Summarized on IDOT form BD-507A in the Appendix is the general subgrade information as well as the preliminary pavement design information.

6.2 Stripping Unsuitable Soils

Normal topsoil stripping of all vegetation and root zone materials will be required for the full limits of new embankment prior to placement of Fill materials. The required depth of stripping is quite variable across the site. In some areas, deep undercuts on the order of 2 to 5 feet in depth will be required to remove unsuitable soft cohesive or organic soils having high moisture contents. Conversely, some of the borings indicate little or no stripping required due to suitable Fill materials and no buried soft or organic soils.

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Estimated quantities for undercutting and subgrade treatment are provided in Section 6.5 of this report. Although some borings show little or no stripping required, it is probably more reasonable to estimate a minimum 8 to 10 inches of stripping required due to the variable nature of Fill materials across the site.

6.3 Special Consideration for Bridge Approach Embankments

The borings at the bridge site for North Arm Brewster Creek have typically encountered unsuitable organic Clay and Topsoils to depths of 3 to 5 feet at the abutments and east approach embankment. The materials are considered unsuitable due to high moisture content and black organic composition. They will require stripping prior to embankment construction.

The stratigraphy is quite variable in this area. Borings NSNA-2 and B-9 have encountered buried layers of soft organic soils with high moisture contents (36-46%). These materials extend to depths of 7 to 13 feet below existing grade, indicating that a significant volume of removal and replacement would be required. A settlement analysis for the buried layer at NSNA-2 (8 to 13 feet) results in about 3 to 4 inches of total settlement. This is considered unacceptable for the approach embankment at the bridge structure.

The buried layers of soft organic soils have limited thickness (2 to 5 feet) and are covered top and bottom by permeable Sand layers. It is our opinion that these layers could be adequately surcharged and consolidated over a time period of about eight (8) months. Therefore, removal and replacement of the buried layers of soft organic soils will not be required if an embankment surcharge is placed for at least eight months prior to construction of the bridge. This should be stipulated in the construction contract, and an even longer period would be advantageous to minimize risk of detrimental settlement.

Boring STFX-8 was located at the east abutment for the Fox River bridge, and STFX-9 farther east along the approach embankment. The embankment in this area should reach a maximum height of about 27 feet at the abutment. STFX-8 did encounter about 3.0 feet of black Clay overlying a layer of marginally cohesive Sandy Loam. These materials had low to moderate moisture contents (19-23%) and SPT blow counts indicating a medium dense condition (13 to 17 bpf). Boring STFX-9 encountered about 3 feet of granular Fill over stiff to very stiff Clay Loam and dense Sand / Gravel. These borings indicate soil conditions that are generally suitable for support of the new embankment where the required stripping would be limited to about 12 inches at STFX-8. However, variable stability and strength of subgrade soils

should be expected due to flood plain deposits and low lying area. Therefore a method of cone penetrometer testing to a depth of at least 5 feet is recommended during construction to identify weak areas where greater stripping depths may be required along the east approach embankment. An embankment surcharge of at least 8 months or more will also help to minimize risk of detrimental settlement adjacent to the abutment.

6.4 Guidelines for Embankment and Subgrade

Guidelines for embankment construction should follow Section 205 of the IDOT Standard Specifications, with modifications noted above for critical approach embankments. Many of the borings have encountered wet Sand or relatively soft "loamy" type soils underlying the unsuitable soils which must be stripped. It should therefore be expected that relatively unstable subgrade conditions will prevail once the above unsuitable soils have been stripped. Embankment construction will probably require an initial bridging layer of 12 to 24 inches of Porous Granular Embankment - Subgrade (PGES) materials which should be included in the contract estimates. The coarse granular Fill should not be placed within limits of proposed abutment piles. Estimated thicknesses of stripping / undercutting and PGES materials are provided in Section 6.5 of this report.

It is our understanding the general earthwork contract and embankment construction will take place many months prior to pavement construction. Apparently stable and satisfactory subgrade may become excessively moist and unstable during the time duration between completion of embankment and pavement construction. Accordingly, exposed subgrade soils should be tested with a Cone Penetrometer in accordance with the IDOT Subgrade Stability Manual immediately prior to pavement construction in order to confirm a satisfactory condition. Observations of heavy construction vehicles on subgrade areas will help to delineate areas which have deficient strength.

Remedial work for unstable subgrade should consist of discing, aerating, and recompacting exposed subgrade soils, as provided for in Art. 301.03 of the IDOT Standard Specifications. Compaction for subgrade materials should be to at least 95 percent Standard Proctor density (AASHTO T-99).

The subgrade stability during embankment construction will be influenced by such factors as surface drainage provided by the contractor as well as the prevailing temperature and precipitation experienced

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during construction. The Contractor should try to make full use of inlets or ditches in order to maintain positive drainage for subgrade areas. Temporary drainage ditches or pumping from depressional areas should be provided as needed during construction in order to prevent ponded water from affecting the stability of the subgrade and embankment.

6.5 Estimated Quantities for Stripping and Aggregate Fill

The following table summarizes the estimated thicknesses of stripping and undercut needed prior to placement of embankment Fill. Also shown is the estimated thickness of PGES materials at each boring. The PGES materials are to be placed as an initial bridging layer over relatively soft and wet soil conditions in order to provide a stable base for placement and compaction of new earth embankment. In order to estimate Contract quantities for stripping / undercutting and PGES materials, the thicknesses shown should extend to the midpoint between borings and extend for the full width of embankment. Although some borings show little or no stripping required, it is probably more reasonable to estimate a minimum 8 to 10 inches of stripping required due to the variable nature of Fill materials across the site.

Estimated Quantities for Undercutting and Porous Granular Embankment -Subgrade (PGES) Replacement Fill

Boring	Station	Proposed Emb. Height	Recommended Undercut		Est. Thickness PGES	Unsuitable Soil
			Depth	Bot. Elevation		
(Subgrade level at 2.2 feet below top of embankment, includes 12 inch Aggregate Subgrade layer)						
STFX-8	576+72	24.1 ft	1.0 ft	692.1	NR	Black Clay
STFX-9	577+69	19.5 ft	None	--	NR	On Sand & Gravel Fill
B-6	579+79	13.0 ft	None	--	NR	On Crushed limestone Fill
B-7	582+70	5.7 ft	0.5 ft	595.8	12 inches	Topsoil Stripping
B-8	585+84	4.5 ft	0.5 ft	698.3	NR	Topsoil Striping
NSNA-1	588+38 RT	8.5 ft	3.0 ft	690.7	24 inches	Soft Black Clay Loam
NSNA-2	589+16 RT	10.6 ft	3.0 ft *	691.4 *	24 inches	Soft Black Clay Loam

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Boring	Station	Proposed Emb. Height	Recommended Undercut		Est. Thickness PGES	Unsuitable Soil
			Depth	Bot. Elevation		
NSNA-3	589+34 LT	10.4 ft	3.0 ft	691.0	24 inches	Blk Clay Lo (WC=46%)
NSNA-4	590+17 RT	10.5 ft	4.0 ft	690.7	24 inches	Black Clay Loam
NSNA-5	590+97 LT	10.9 ft	3.0 ft	692.2	12 inches	Black clayey Sand
B-15	591+87 LT	11.0 ft	3.5 ft	691.8	24 inches	Black Organic Clay
B-9	592+09 RT	11.1 ft	3.5 ft *	691.7 *	24 inches	Black Organic Clay
B-16	593+30 LT	10.0 ft	5.0 ft	692.2	24 inches	Black Organic Clay
B-17	593+50 RT	9.7 ft	5.0 ft	692.4	24 inches	Black Organic Clay
B-18	594+28 LT	11.0 ft	3.5 ft	693.0	24 inches	Black Organic Clay
B-19	594+56 RT	11.5 ft	2.0 ft	694.1	18 inches	Black Organic Clay
B-10	595+08 LT	11.9 ft	2.5 ft	693.6	18 inches	Black Organic Clay
B-20	596+21 CL	12.0 ft	4.0 ft	693.5	18 inches	Black Sandy Loam
B-11	598+13 LT	11.0 ft	None	--	NR	On Sand & Gravel Fill
B-12	601+13 LT	9.5 ft	0.3 ft	707.2	NR	Topsoil
B-13	603+63 RT	6.8 ft	NR	--	NR	On Grav & clayey Sand Fill
B-14	607+34 LT	4.3 ft	NR	--	NR	On Gravel Fill

NR Undercut and/or PGES Fill not required at boring location.
PGES Porous Granular Embankment - Subgrade

* The undercut depths for Borings NSNA-2 and B-9 do not extend deep enough to remove buried layers of soft organic soils with high moisture contents. Therefore the above recommendations are dependant on an embankment surcharge being left in place for at least eight months prior to pile driving activities or pavement construction.

The need for undercutting unstable subgrade and PGES replacement Fill should be based on direct observations made during construction once the subgrade soils are exposed and cone penetrometer testing can be conducted. All quantities of PGES materials not required during construction should be

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deleted from the construction costs. Normal IDOT procedure requires cone penetrometer testing immediately prior to undercutting subgrade in order to document the need for the undercut and PGES Fill.

6.6 Underdrain Placement

The project will consist of constructing the pavement on new earth embankment for the full length of the project. The pavement cross section will include curbs and a 12 inch Aggregate Subgrade layer. The profile sheets show the slope of the pavement (PGL) will be about 0.5% between Sta. 582+00 and 595+00, but will otherwise generally be greater than 1.5% east and west of this limit.

It is recommended that consideration be given to the installation of transverse underdrains at periodic spacing of about 300 feet and at the low point of the roadway profile (Sta. 583+50). All underdrains should outlet into ditches or storm sewers in such manner as to allow positive drainage and should be installed to a depth of at least 42 inches below pavement grade. The underdrains should be installed in accordance with Check Sheet 25 of the IDOT Supplemental Specifications.

6.7 Detention Basins and Earth Borrow

Included with this correspondence is a table summary of soils encountered in each of the 16 Detention Basin (DB) borings. The table categorizes the soil types into unsuitable, restricted, or generally suitable materials for earth embankment or subgrade Fill. The following discussion provides further clarification of the suitability of soils encountered.

Soils which are automatically deemed unsuitable include topsoils, black organic soils and organic Clay. All of these materials are listed under Unsuitable Soils in the table. Other unsuitable soils include soils with excessively high moisture contents where an unreasonable amount of discing and drying would be required to moisture condition these materials. These would include soft cohesive soils with excessively high moisture content.

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Restrictive soils include frost susceptible soils which should be restricted from the top 2.0 feet of subgrade. These include all Silts, clayey Sands, silty fine Sands and some Sandy Loams. These soils were fairly common in most of the borings, especially over the east half of the site. It should be noted that these types of soils are considered moisture sensitive, becoming soft and unstable with a minor amount of excess moisture or otherwise when exposed to precipitation. Most of these types of soils are also considered prone to erosion when placed on embankment slopes.

The borings typically encountered free groundwater while drilling within about 3 to 6 feet of the ground surface. Most of the soils encountered were described as wet or very moist. Therefore, even though many soils are classified as "suitable" for earth Fill, they may still require a significant amount of discing and drying. Particular attention should be paid to relatively stiff cohesive soils with water contents (WC) greater than about 20 to 22 percent. In addition, wet Sand or Sand-Gravel will as a minimum require stockpiling temporarily to drain the excess moisture from these materials. The only soils which will require little or no moisture conditioning include very stiff to hard cohesive soils with low to moderate moisture contents (<20%) and granular soils encountered above the water table.

A Shrinkage Factor of 15 percent should be used to correlate the volume of on-site borrow materials for use as new earth Fill. Unsuitable organic soils should not be included as suitable earth embankment Fill.

Please note that the groundwater level observations made while drilling may be several feet lower than the actual phreatic surface, depending on many factors which may make it difficult or impossible to note the free groundwater when it is first encountered. The free groundwater was typically associated with water bearing layers of Sand and Sand / Gravel.

7.0 CLOSURE

The analysis and recommendations submitted in this report are based upon the data obtained from the thirty-nine (39) soil borings performed at the locations indicated on the soil profile sheets and appended Location Plans. This report does not reflect any variations which may occur between these borings, the nature and extent of which may not become evident until during the course of construction. If variations

 Added 11/03/06

are then identified, recommendations contained in this report should be re-evaluated after performing on-site observations.

We are available to review this report with you at your convenience.

Mark L. Corbin
Registered Professional Engineer
Illinois No. 062-047916

MARK L. CORBIN
62-047916
REGISTERED
PROFESSIONAL
ENGINEER
STATE OF ILLINOIS

Added 11/03/06

TSC

TESTING SERVICE CORPORATION

GENERAL CONDITIONS

Geotechnical and Construction Services

1. PARTIES AND SCOPE OF WORK: "This Agreement" consists of Testing Service Corporation's ("TSC") proposal, TSC's Schedule of Fees and Services, Client's written acceptance thereof, if accepted by TSC, and these General Conditions. The terms contained in these General Conditions are intended to prevail over any conflicting terms in this Agreement. "Client" refers to the person or entity ordering the work to be done or professional services to be rendered by TSC (except where distinction is necessary, either work or professional services are referred to as "services" herein). If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Client shall communicate these General Conditions to each and every third party to whom the Client transmits any report prepared by TSC. Unless otherwise expressly assumed in writing, TSC shall have no duty to any third party, and in no event shall TSC have any duty or obligation other than those duties and obligations expressly set forth in this Agreement. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: Client will arrange and provide such access to the site as is necessary for TSC to perform its services. TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C.§ 6901, et. seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, TSC will report its test results and observations as more specifically set forth elsewhere in this Agreement. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

7. ROOF INVESTIGATIONS: Should it be necessary to make roof cuts, Client agrees to provide a roofing contractor of Client's choice to make such cuts, to remove samples as directed by TSC personnel and to promptly make necessary patches or repairs. In the event that a roof contractor is not so provided by Client, Client agrees that TSC may make and remove such cuts as TSC deems necessary in the course of the investigation and Client assumes all risks of damage to the roof system and the building which may arise as a result thereof.

8. LIMITATIONS OF PROCEDURES, EQUIPMENT AND TESTS: Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

9. SAMPLE DISPOSAL: Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

10. TERMINATION: This Agreement may be terminated by either party upon seven days prior written notice. In the event of termination, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses.

11. PAYMENT: Client shall be invoiced periodically for services performed. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.

12. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with this Agreement and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to $50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.

In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit damages shall be increased to $500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.

13. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suites, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees. In the event both are negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement.

14. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

15. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement, (ii) wherein TSC waives any rights to a mechanics lien or (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party. These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Should litigation be necessary, the parties consent to jurisdiction and venue in an appropriate Illinois State Court in and for the County of DuPage, Wheaton, Illinois or the Federal District Court for the Northern District of Illinois. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

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APPENDIX

SUITABILITY OF EARTH BORROW
DETENTION BASINS (3)

SOIL TEST DATA SHEETS (2)

SUBGRADE SUPPORT RATING (SSR) CHART (1)

SUMMARY REPORT ON PAVEMENT, BASE
AND SUBBASE DESIGN (FORM BD 507A) (1)

SOIL TEXTURAL CLASSIFICATION SYSTEM

AASHTO SOIL CLASSIFICATION SYSTEM

LEGEND FOR BORING LOGS

BORING LOGS
(B) Borings for Subgrade and Embankment (15)
(DB) Detention Basin Borings (16)
(NSNA) Structure Borings n. Arm Brewster Creek Bridge (5)
(STFX) Structure Borings Fox River Bridge (3)

PROJECT LOCATION MAP

PEDOLOGICAL SOIL MAP

OVERALL SITE PLAN

Added 11/03/06

Stearns Road Improvements
Alfred Benesch & Company
TSC Project No. L-59,965

Suitability of Earth Borrow
Detention Basins

Boring Number	**Unsuitable Soils** including Topsoils, Organic and/or Soft Clays with High Moisture Content	**Restrictive Soils** including Silts, clayey Sands, Silty/Sandy Loam	**Generally Suitable Soils** including Stiff to Hard Cohesive Soils & Sands and/or Gravels	Highest Water Level While Drilling
DB-1	0.7 - 3' Black Organic Clay 3' - 8' Soft Clay, high moist. content (25-28%)		Top 8" Gravel Road 8' - 15' Wet Sand and Gravel, below WT	4.0'
DB-2	0.4' - 1.2' Black Clay Topsoil		Top 5" Gravel Road 1.2' - 3' Stiff Brown Clay Loam (WC=17%) 3' - 13' Wet Sand and Gravel, below WT 13' - 15' Dense/hard Silty Loam (WC=14%)	3.0'
DB-3	0.6' - 2' Black Clay Topsoil		Top 7" Gravel Road 2' - 4.5' Stiff Brn-dk Gr Si Clay (WC=22-25%) 4.5' - 13' Wet Sand and Gravel, below WT 13' - 15' Hard Gray Clay (WC=17%)	4.0'
DB-4	Top 1.5' Dark Brown Clay Loam Topsoil		1.5' - 2.5' Stiff Brown Clay Loam (WC=22%) 2.5' - 5' Brn clayey Sand / Gravel (WC=15%) 5' - 15' Wet Sand and Gravel, below WT	5.0'
DB-5	Top 10" Dk Brown / Black Clay Loam (Fill) 2' - 3' Black Clay Loam Topsoil 14' - 15' Med. Stiff Clay Loam , wet		0.8' - 2' Brown Sand (Fill) 3' - 5.5' Wet Sand and Gravel, below WT 5.5' - 8' Hard Silty Clay Loam (WC=18%) 8' - 13' Stiff Clay Loam (WC=17-20%) 13' - 14' Wet Sand, below WT	3.5'

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Added 11/03/06

Suitability of Earth Borrow
Detention Basins

Boring Number	**Unsuitable Soils** including Topsoils, Organic and/or Soft Clays with High Moisture Content	**Restrictive Soils** including Silts, clayey Sands, Silty/Sandy Loam	**Generally Suitable Soils** including Stiff to Hard Cohesive Soils & Sands and/or Gravels	Highest Water Level While Drilling
DB-6		5.5' - 8' Wet cly Sand 8' - 15' Wet Silt	Top 12" Crushed Limestone & Clay Fill 1.0' - 3' Brn clayey Sand / Gravel (WC=9-12%) 3' - 5.5' Wet silty Sand and Gravel, below WT	3.0'
DB-7		0.5' - 3' Si fine Sand 3' - 5.5' Wet fine Sand 8' - 13' sandy Silt, v.m. 13' - 15' clayey Silt	Top 6" Gravel (Fill) 5.5' - 8' Hard Clay (WC=24%)	3.0'
DB-8		3' - 5.5' clayey Sand 13' - 15' Wet cly Sand	Top 12" Gravel (Fill) 1.0' - 3' Stiff dk Brn Clay Loam (WC=24%) 5.5' - 8' Hard brown Clay (WC=30%) 8' - 13' Brown Sand	13.0'
DB-9	Top 2.5' Black Clay Topsoil	4' - 5.5' Brn & Gry Silt 8' - 10.5' Sandy Loam 13' - 15' Wet fine Sand	2.5' - 4' Wet Sand and Gravel, part below WT 5.5' - 8' Very Stiff Si Clay Loam (WC=18%) 10.5' - 13' Hard Clay Loam (WC=12%)	3.5'
DB-10	1.5' - 3' Black Clay Topsoil 3' - 5.5' Wet Black Sandy Loam (WC=32%)	5.5' - 8' Wet cl Sa / Grav	Top 1.5' Sand and Gravel (Fill) 8' - 15' Wet silty Sand and Gravel, below WT	4.5'
DB-11	Top 12" Topsoil (Fill)	5.5' - 10.5' Fine Loam 10.5' - 13' Wet Sa Silt	1.0' - 3' Dk Brn & Gray Sa Loam (WC=12%) 3' - 5.5' Brown Sand and Gravel 13' - 15' Stiff Gray Clay (WC=21%)	10.0'

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Rdad 11/03/06

Suitability of Earth Borrow
Detention Basins

Boring Number	**Unsuitable Soils** including Topsoils, Organic and/or Soft Clays with High Moisture Content	**Restrictive Soils** including Silts, clayey Sands, Silty/Sandy Loam	**Generally Suitable Soils** including Stiff to Hard Cohesive Soils & Sands and/or Gravels	Highest Water Level While Drilling
DB-12	0.8' - 2' Black Sandy Loam Topsoil	7' - 8' Clayey Silt, v.m. 8' - 10.5' Sa Loam, v.m. 10.5 - 15 Si Loam, v.m.	Top 10" Gravel (Fill) 2' - 3' Stiff Gray Clay Loam (WC=19%) 3' - 7' Wet Sand and Gravel, part below WT	6.0'
DB-13	1.0' - 2' Dk Brn & Black Sandy Loam Topsoil		Top 12" Gravel (Fill) 2' - 5.5' Wet Sand and Gravel, part below WT 5.5' - 8' Very Stiff Clay Loam (WC=15%) 8' - 15' Wet Sand and Gravel, below WT	4.0'
DB-14	Top 10" Dk Brn & Black Topsoil (Fill) 5.5' - 7' Dk Brown Clay Loam (WC=40%)	8' - 15' Sa Loam, v.m.	0.8' - 3' Sand and Gravel (Fill) 3' - 5.5' Stiff Sandy Loam (WC=16%) 7' - 8' Wet Sand and Gravel, below WT	4.5'
DB-15	1.0' - 3' Dk Brown Clay Loam Topsoil	5.5' - 8' Silt & Sand	Top 12" Gravel (Fill) 3' - 5.5' Wet Sand and Gravel, below WT 8' - 10.5 Stiff Clay Loam (WC=12%) 10.5' - 15' Clay Loam & Sa Loam (WC=16%)	3.5'
DB-16		4' - 6' Sandy Loam 6' - 7' Clayey Sand.	Top 3.5' Stiff Clay Loam Fill (WC=18%) 3.5' - 4' Sand and Gravel 7' - 15' Wet Sand, below WT	7.0'

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Added 11/03/06

TESTING SERVICE CORPORATION
457 East Gundersen Drive
Carol Stream, Illinois

CLIENT: Alfred Benesch & Company
205 N. Michigan Ave., Suite 2400
Chicago, Illinois 60601

TSC Job No. L - 59,965
May 5, 2004

PROJECT: Proposed Stearns Road
Kane County

SOIL TEST DATA

LOCATION		New Bridge Sta. 589+16	New Stearns Rd Sta. 592+09	New Stearns Rd Sta. 594+28	New Stearns Rd Sta. 596+21	New Stearns Rd Sta. 601+13
BORING NUMBER		NSNA-2	B-9	B-18	B-20	B-12
SAMPLE NUMBER		4	4A	4	2	1
DEPTH IN FEET		8.5 - 10	6 - 7	6 - 7.5	2 - 3.5	1 - 3
HRB CLASSIFICATION & GROUP INDEX		A-6	A-6 (15)	A-6 (8)	A-4 / A-6	A-6 (10)
UNIFIED CLASSIFICATION		SC	OL	CL / OL	SC	CL
GRAIN SIZE CLASSIFICATION		Gray clayey SAND	Dk Brn Organic SILTY LOAM	Dark Gray SILTY LOAM	Black & Gray SANDY LOAM	Br & Gry SILTY CLAY LOAM
GRADATION - PASSING 1" SIEVE %						
GRADATION - PASSING 3/4" SIEVE %					100	100
GRADATION - PASSING 3/8" SIEVE %				100	95	95
GRADATION - PASSING # 4 SIEVE %				100	92	93
GRADATION - PASSING # 10 SIEVE %		100	100	99	90	91
GRADATION - PASSING # 40 SIEVE %		96	98	90	77	85
GRADATION - PASSING # 100 SIEVE %		50	95	76	52	80
GRADATION - PASSING # 200 SIEVE %		40	84	73	41	78
GRAVEL %		0	0	1	10	9
SAND %		60	16	26	49	13
SILT %		32	76	63	34	58
CLAY % (<0.002 MM)		8	8	10	7	20
LIQUID LIMIT %			39	29		30
PLASTIC LIMIT %			21	14		15
PLASTICITY INDEX %			18	15		15
NATURAL MOISTURE CONTENT %			46.1	29.5	32.3	18.6
LIQUIDITY INDEX			1.39	1.03		0.24
BEARING RATIO % (SOAKED IBR)						
STANDARD DRY DENSITY AASHTO T-99 PCF						
OPTIMUM MOISTURE %						
ORGANIC CONTENT	L-O-I %					
	WET COMBUSTION %					

Added 11/03/06

TESTING SERVICE CORPORATION
457 East Gundersen Drive
Carol Stream, Illinois

CLIENT: Alfred Benesch & Company
205 N. Michigan Ave., Suite 2400
Chicago, Illinois 60601

TSC Job No. L - 59,965
May 5, 2004

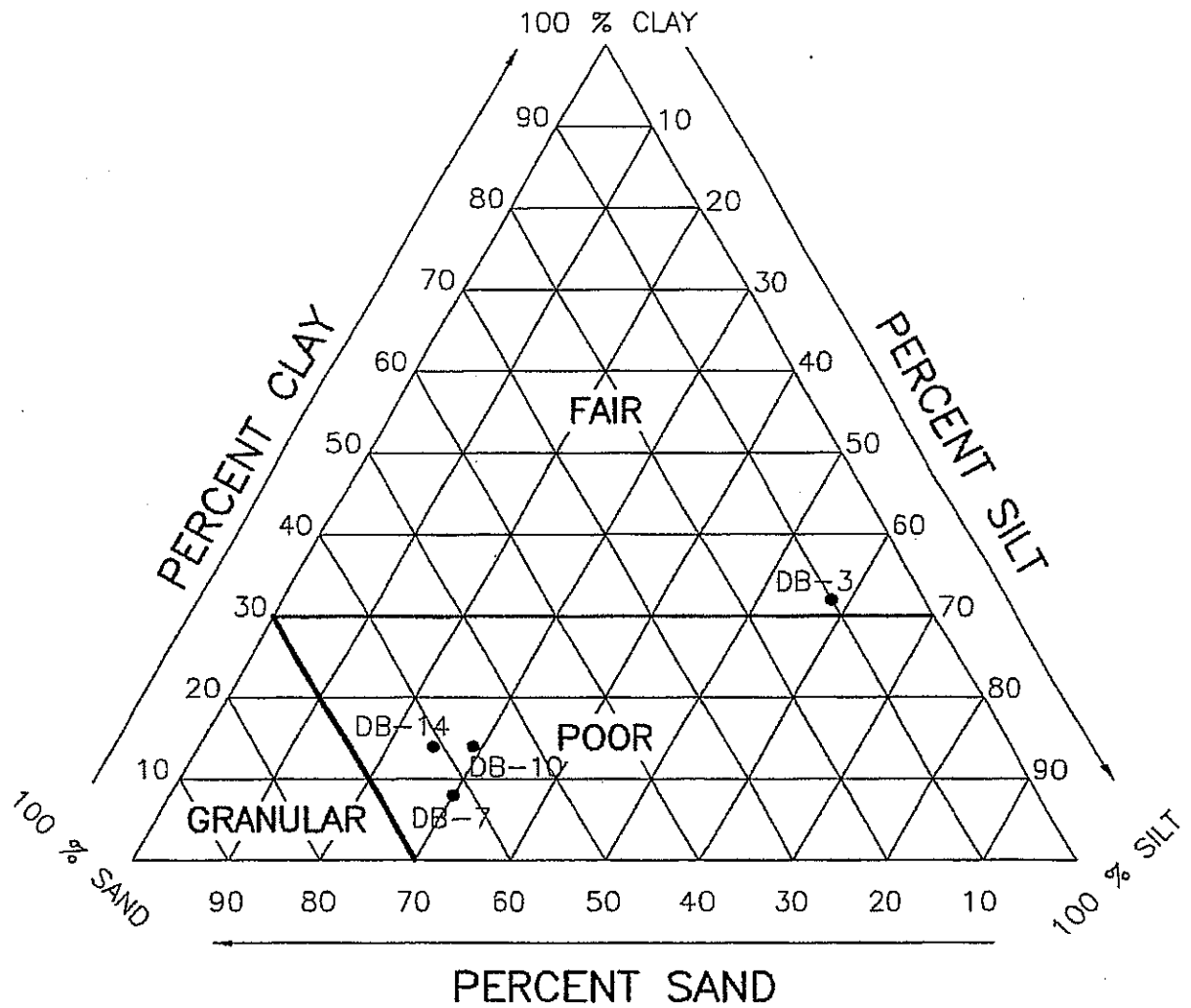
PROJECT: Proposed Stearns Road
Kane County

SOIL TEST DATA

LOCATION		Wet / Del Basin	Wet / Del Basin	Wet / Del Basin	Wet / Del Basin	Wet / Del Basin
BORING NUMBER		DB-3	DB-7	DB-10	DB-11	DB-14
SAMPLE NUMBER		2A	2	2	3	2
DEPTH IN FEET		3 - 4	3 - 5	3 - 5	6 - 7.5	3 - 5
HRB CLASSIFICATION & GROUP INDEX		A-7-6 (26)	A-2-4	A-6 (3)	A-4 (0)	A-6 (1)
UNIFIED CLASSIFICATION		CL	SM	SC	ML	SC
GRAIN SIZE CLASSIFICATION		Brn & Dk Gray SILTY CLAY	Brown silty SAND	Dk Brn & Black SANDY LOAM	Br & Gray fine LOAM	Brown & Dk Brn SANDY LOAM
GRADATION - PASSING 1" SIEVE %					100	
GRADATION - PASSING 3/4" SIEVE %					97	100
GRADATION - PASSING 3/8" SIEVE %					92	94
GRADATION - PASSING # 4 SIEVE %				100	89	92
GRADATION - PASSING # 10 SIEVE %		100	100	99	86	90
GRADATION - PASSING # 40 SIEVE %		98	99	87	74	73
GRADATION - PASSING # 100 SIEVE %		92	90	51	61	41
GRADATION - PASSING # 200 SIEVE %		90	38	43	52	39
GRAVEL %		0	0	1	14	10
SAND %		10	62	56	34	51
SILT %		58	38% Fines	29	45	25
CLAY % (<0.002 MM)		32		14	7	14
LIQUID LIMIT %		45		31	15	25
PLASTIC LIMIT %		17		13	13	13
PLASTICITY INDEX %		28		18	2	12
NATURAL MOISTURE CONTENT %		24.6		32.5	11.9	15.7
LIQUIDITY INDEX		0.27		1.08	0.0	0.23
BEARING RATIO % (SOAKED IBR)						
STANDARD DRY DENSITY AASHTO T-99 PCF						
OPTIMUM MOISTURE %						
ORGANIC CONTENT	L-O-I %					
	WET COMBUSTION %					

Added 11/03/06

SUBGRADE SUPPORT RATING (SSR)
L–59,965 – Proposed
Stearns Road
Kane County, Illinois



PARTICLE–SIZE LIMITS

SAND 2.000 – 0.075 mm
SILT 0.075 – 0.002 mm
CLAY finer than 0.002 mm

Added 11/03/06

Illinois Department of Transportation

Summary Report on Pavement Base and Sub-Base Design

SHEET 1 of 1

STATE JOB NUMBER _____ PROJECT DPC-CMM-HPD-M-0019(014) ROUTE Stearns Road (FAP 361)

SECTION98-00214-02-BR COUNTY KANE DATE _____

ADT _____ YEAR _____ DESIGN PERIOD _____ CLASS HIGHWAY _____

PASSENGER CARS PER DAY _____ TRUCKS S.U. PER DAY _____ TRUCKS M.U. PER DAY _____

** TENTATIVE PAVEMENT STRUCTURE:

TYPE SURFACE COURSE	None	THICKNESS	
TYPE BASE COURSE	P.C. Concrete, Jointed	THICKNESS	10.0 Inches
TYPE BASE COURSE		THICKNESS	
TYPE SUB-BASE MATERIAL	Bituminous Stabilized Aggregate	THICKNESS	4.0 Inches

STA. TO STA.	576+00 to 609+00			
* STA. OF TEST				
* DRAINAGE CLASS	FAIR			
* AVE. FROST PENETRATION	48 Inches			
GRAIN SIZE CLASSIFICATION	New Emb. FILL			
H R B CLASS AND GROUP INDEX				
* PERCENT SILT				
STD. DRY DENSITY AASHTO T99				
BEARING RATIO				
SUBGRADE SUPPORT RATING (SSR)	POOR (recommended)			
OPTIMUM MOISTURE				

REMARKS:

1. Aggregate Subgrade 12" to be placed beneath all areas of new pavement.
2. See Recommendations of report for possible undercut areas and PGES replacement Fill.
3. Periodic underdrains are recommended beneath Aggregate Subgrade Fill as specified in report.

*INDICATES WORST CONDITION WITH THE ABOVE STATION LIMITS

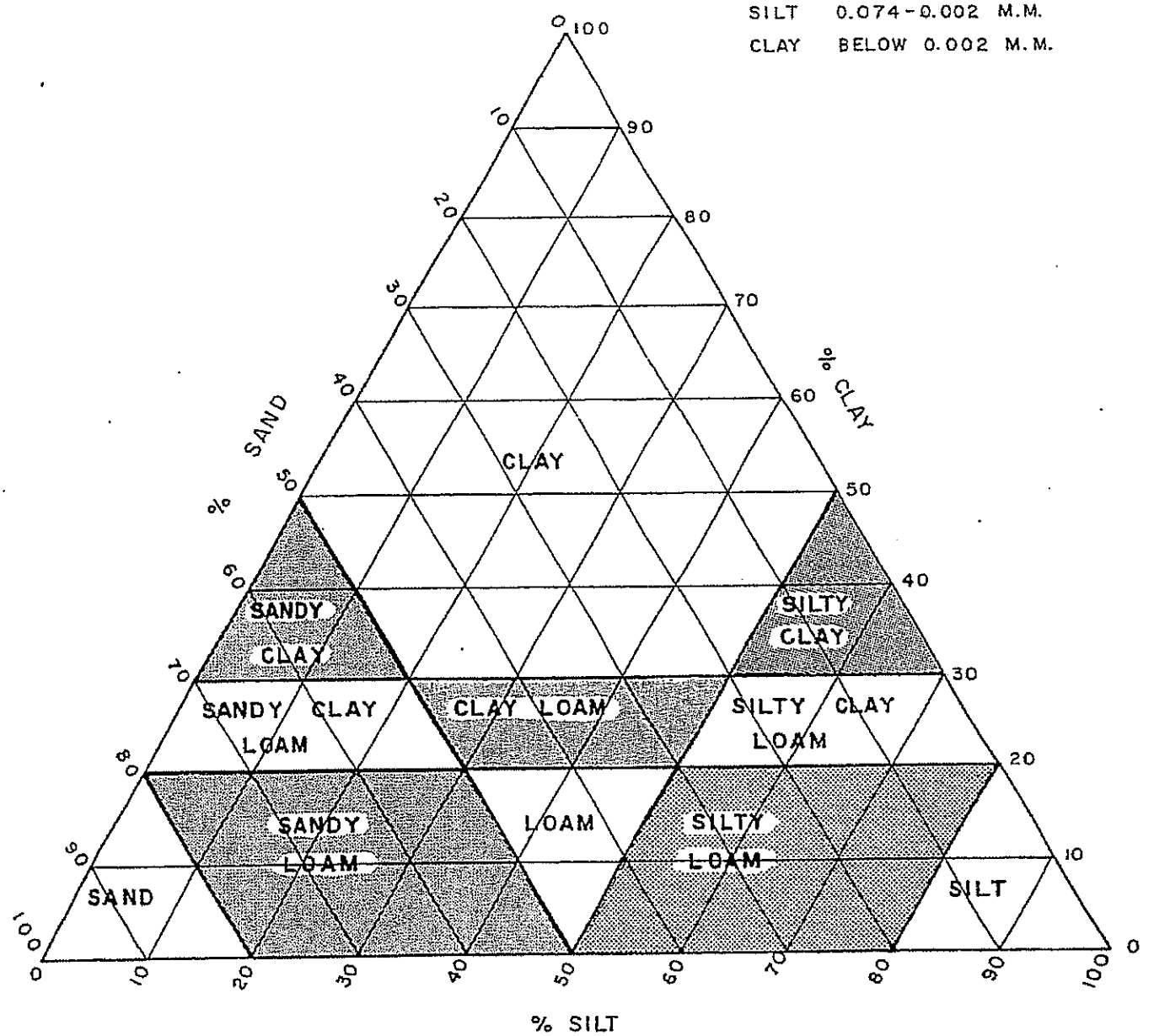
BD 507A (Rev. 9-79)

Added 11/03/06

TESTING SERVICE CORPORATION

IDH TEXTURAL CLASSIFICATION CHART

SIZE LIMITS		
SAND	2.0 - 0.074	M.M.
SILT	0.074 - 0.002	M.M.
CLAY	BELOW 0.002	M.M.



Added 11/03/06

TESTING SERVICE CORPORATION

LEGEND FOR BORING LOGS
(FPS Units)

SAMPLE TYPE:

Most Borings	Standard Penetration Test (split spoon)
Borings with no "N" value	Continuous macro-core (1.5") samples with geo-probe rig

FIELD AND LABORATORY TEST DATA:

BLOWS or "N"	=	Standard Penetration Resistance in Blows per 6 inch interval.
W% or WC	=	In-Situ Water Content in percent
Qu	=	Unconfined Compressive Strength in tons per square foot (tsf).
P or *	=	Hand Penetrometer Measurement; Max. Reading = 4.5+ tsf
B	=	Bulge failure using modified Rimac spring tester
S	=	Shear failure using modified Rimac spring tester

SOIL DESCRIPTION:

MATERIAL	PARTICLE SIZE RANGE
BOULDER	Over 12 inch
COBBLE	12 - 3 inch
Coarse GRAVEL	3 - ¾ inch
Small GRAVEL	¾ inch to No. 10 Sieve
Coarse SAND	No. 10 Sieve to No. 40 Sieve
Fine SAND	No. 40 Sieve to No. 200 Sieve
SILT and CLAY	Passing No. 200 Sieve

COHESIVE SOILS

CONSISTENCY	Qu (tsf)
Very Soft	Less than 0.3
Soft	0.3 to 0.6
Medium Stiff	0.6 to 1.0
Stiff	1.0 to 2.0
Very Stiff	2.0 to 4.0
Hard	4.0 and over

COHESIONLESS SOILS

RELATIVE DENSITY	N
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50 and over

MODIFYING TERM	PERCENT BY WEIGHT
Trace	1 - 10
Little	10 - 20
Some	20 - 35

196 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-6 DATE STARTED 3-12-04 DATE COMPLETED 3-12-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 694.8

END OF BORING 684.8

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 3.5 '

▽ AT END OF BORING 3.5 '

▼ 24 HOURS

New Stearns Road
Sta. 579+79; 7' LT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.6	694.2	FILL - Crushed Limestone
	1	MC		13.0					FILL - Brown clayey SAND and GRAVEL, moist A-1/A-2
	2	MC		11.8					
	A			10.2			3.5	691.3	▼ FILL - Brown SAND and GRAVEL, saturated A-1-a
	3	MC					4.0	690.8	FILL - Dark gray SANDY LOAM, trace gravel, moist A-2-4/A-4
	B			12.0	1.0*		5.0	689.8	Medium stiff to stiff black, brown and gray CLAY LOAM, trace organic, very moist A-6
	4	MC		24.1	1.0*				
							7.5	687.3	Brown SAND and GRAVEL, saturated A-1-a
	5	MC		9.1					
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual

TSC 59955-20.GPJ TSC_ALL.GDT 5/7/04

197 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-7 DATE STARTED 3-12-04 DATE COMPLETED 3-12-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 696.3

END OF BORING 686.3

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 7.5 '

▽ AT END OF BORING 7.5 '

▼ 24 HOURS

New Stearns Road
Sta. 582+70; 21' RT

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
0		A			19.7	1.0*				FILL - Brown and dark gray SANDY LOAM, trace gravel, moist A-4/A-6
		1	MC					1.5	694.8	
		B			20.0	2.5*				Very stiff dark brown CLAY LOAM, moist A-6
		2	MC		21.8	1.75*		2.5	693.8	
		3	MC		25.2	2.5*				Stiff to very stiff brown and gray CLAY, moist A-6/A-7-6
5								6.0	690.3	
		4	MC		11.1					Brown and gray clayey SAND and GRAVEL, moist A-2-4
								7.5	688.8	▼
		5	MC		7.1					Brown SAND and GRAVEL, saturated A-1-a
10										End of Boring at 10.0'
15										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

198 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-8 DATE STARTED 3-15-04 DATE COMPLETED 3-15-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 698.8

END OF BORING 688.8

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 8.0 '

▽ AT END OF BORING 8.0 '

▼ 24 HOURS

New Stearns Road
Sta. 585+84; 21' LT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1	SS	15-11 14-15	4.5					Medium dense to dense brown SAND and GRAVEL, damp to moist A-1-a
	2	SS	13-17 15-17	5.0					
	3	SS	16-17-14	5.8			8.0	690.8	▼
	4	SS	6-8-9	7.2					Medium dense brown SAND and GRAVEL, saturated A-1-a
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

199 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-9 DATE STARTED 3-12-04 DATE COMPLETED 3-12-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 695.2

END OF BORING 685.2

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 4.0 '

▽ AT END OF BORING 4.0 '

▼ 24 HOURS

New Stearns Road
Sta. 592+09; 27' RT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1	MC		42.3	0.5*				Soft to medium stiff black ORGANIC CLAY, very moist A-7-6
	2	MC		42.0	1.25*				
							3.5	691.7	
	3	MC		11.3					▼ Brown SAND and GRAVEL, trace clay, saturated A-1-a
							5.5	689.7	
	A			46.1	0.25*				Soft dark brown and black organic SILTY LOAM, very moist A-6/A-7-6 LL/PL/PI=39/21/18
	4	MC							
	B			27.8			7.0	688.2	Dark gray silty fine SAND, wet A-2-4
							8.0	687.2	
	5	MC		17.6					Dark gray fine SAND, saturated A-3
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

200 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-10 DATE STARTED 3-12-04 DATE COMPLETED 3-12-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 696.1

END OF BORING 686.1

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 4.0 '

▽ AT END OF BORING 4.0 '

▼ 24 HOURS

New Stearns Road
Sta. 595+08; 24' LT

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
									FILL - Brown CLAY LOAM, moist
							0.8	695.3	
1	MC			53.8	1.0*				Medium stiff to soft black ORGANIC CLAY, very moist A-7-6
A							2.5	693.6	
2	MC			48.1	0.5*				Brown silty SAND, trace clay, moist to very moist A-1-b
B				13.2	0.5*		3.5	692.6	
3	MC			15.2	2.5*				▼ Very stiff brown and gray SANDY LOAM, occasional sand seams, trace gravel, moist to very moist A-2-4/A-4
							5.5	690.6	
4	MC			22.2	0.5*				Soft dark gray CLAY LOAM, trace organic, very moist A-6
							7.5	688.6	
A									Brown and gray SAND, trace gravel, saturated A-1-b
5	MC								
B				11.4	1.0*		9.5	686.6	Gray SANDY LOAM, occasional sand seams, very moist A-2-4
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a callibrated pocket penetrometer.

MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types. In-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

201

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-11 DATE STARTED 3-15-04 DATE COMPLETED 3-15-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 701.5

END OF BORING 691.5

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 5.5 '

▽ AT END OF BORING 7.0 '

▼ 24 HOURS

New Stearns Road
Sta. 598+13; 49' LT

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
0										FILL - Gravel with sand
								1.0	700.5	
		1	SS	5-5 6-4	16.6	1.5*				FILL - Black and dark gray SANDY LOAM (topsoil), trace plant debris in fill, moist A-6
								2.5	699.0	
		2	SS	3-8 5-15	10.1					Medium dense brown SAND and GRAVEL, occasional Cobbles, moist A-1-a
5										▼
								5.5	696.0	
		3	SS	4-5 8-8	27.2					Medium dense reddish-brown fine SAND, trace gravel, saturated ▽ A-3
								8.0	693.5	
		4	SS	4- 5-7	20.0					Medium dense brownish-gray clayey SILT, very moist A-4
10										End of Boring at 10.0' * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
15										
20										

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

202 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-12 DATE STARTED 3-15-04 DATE COMPLETED 3-15-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 707.5

END OF BORING 697.5

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 6.0 '

▽ AT END OF BORING 5.5 '

▼ 24 HOURS

New Stearns Road
Sta. 601+13; 33' LT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.3	707.2	FILL - Brown clayey Topsoil
	1	SS	7-8 10-12	18.6	1.5*				Sample 1: LL/PL/PI=30/15/15 Stiff brown and gray SILTY CLAY LOAM, trace gravel, moist A-6(10)
	2	SS	5-8 12-14	16.6	1.75*				
							5.5	702.0	▽ ▼
	3	SS	8- 12-12	16.4	1.0*				Stiff brown CLAY LOAM, occasional sand seams, very moist A-4
							8.0	699.5	
	4	SS	6- 7-9	19.9					Medium dense gray SILT, very moist A-4
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

203 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-13 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 714.2

END OF BORING 704.2

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING Dry

▽ AT END OF BORING Dry

▼ 24 HOURS

New Stearns Road
Sta. 603+63; 25' RT

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.4	713.8	FILL - Gravel with sand
1	SS		2-2 2-2	11.7					FILL - Brown and gray clayey SAND, trace gravel, trace root seams, moist A-1-b
							3.0	711.2	
2	SS		2-3 4-4	7.9					Loose brown SAND, trace gravel, damp A-1-b
							5.5	708.7	
3	SS		4- 5-7	13.5	4.5+*				Hard brown CLAY LOAM, trace gravel, moist A-6
							8.0	706.2	
4	SS		4- 6-8	12.4	4.5+*				Hard gray CLAY LOAM, trace gravel, moist A-6
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

204 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-14 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 721.8

END OF BORING 711.8

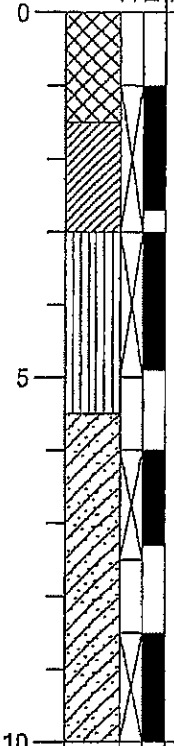
WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING Dry

▽ AT END OF BORING Dry

▼ 24 HOURS

New Stearns Road
Sta. 607+34; 26' LT



SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
						0		
A			3.0			1.5	720.3	FILL - Gray Gravel, little sand and clay A-1-a
1	SS	31-11						
B		9-9	19.7	2.25*				Very stiff brown CLAY, moist A-6
						3.0	718.8	
2	SS	5-5 7-8	19.3					Medium dense brown SILT, trace gravel, very moist A-4
						5.5	716.3	
3	SS	6- 8-11	13.4	3.0*				Very stiff brown CLAY LOAM, trace gravel, moist A-6
4	SS	5- 7-8	13.6	3.0*				
						10		End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types: in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

205 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-15 DATE STARTED 3-29-04 DATE COMPLETED 3-29-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 695.3

END OF BORING 680.3

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 4.0 '

▽ AT END OF BORING 4.0 '

▼ 24 HOURS

New Stearns Road
Sta. 591+87; 53' LT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1	MC		44.1	1.0*				Medium stiff to stiff black ORGANIC CLAY, very moist A-7-6
	A			38.2	1.25*				
	2	MC							
	B			36.0	0.5*		3.0	692.3	
							3.5	691.8	Soft brown and black CLAY, very moist A-7-6
	3	MC		12.2					Dark gray and brown silty SAND and GRAVEL, trace clay, wet A-1
							5.5	689.8	
	4	MC		6.2					Gray SAND and GRAVEL, saturated A-1-a
	5	MC		6.8					
							10.5	684.8	
	6	MC		13.1	4.5+*				Hard gray CLAY and CLAY LOAM, trace gravel, moist A-6
	7	MC		19.8	4.5+*				
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

MC = Continuous 1.5" Diam. GeoProbe Samples

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types. in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

206 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-16 DATE STARTED 3-29-04 DATE COMPLETED 3-29-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 697.2

END OF BORING 687.2

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 5.0 '

▽ AT END OF BORING 5.0 '

▼ 24 HOURS

New Stearns Road
Sta. 593+30; 39' LT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.7	696.5	FILL - Crushed Limestone
	1	MC		18.4	2.5*				FILL - Brown and gray CLAY LOAM, little black clay, moist A-6
							2.0	695.2	
	2	MC		27.9	1.25*				Stiff black CLAY, moist to very moist A-7-6
							3.5	693.7	
	3	MC		58.1	0.5*				Soft black ORGANIC CLAY, very moist A-7-6
									▼
							5.0	692.2	Black silty SAND, trace clay, wet A-1/A-2
							6.0	691.2	
	4	MC		21.7	1.5*				Stiff brown and gray CLAY LOAM, trace gravel, moist A-6
							8.0	689.2	
	5	MC		15.7					Gray silty SAND, saturated A-1-b
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

MC = Continuous 1.5" Diam. GeoProbe Samples

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 127

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 59955-30.GPJ TSC_ALL.GDT 5/7/04

207 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-17 DATE STARTED 3-29-04 DATE COMPLETED 3-29-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 697.4

END OF BORING 687.4

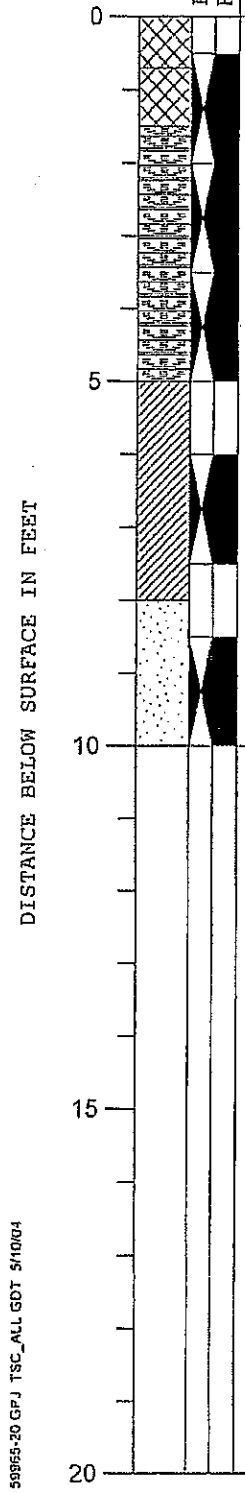
WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 8.0 '

▽ AT END OF BORING 8.0 '

▼ 24 HOURS

New Stearns Road
Sta. 593+50; 35' RT



SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
						0.0		
A			14.5			0.7	696.7	FILL - Crushed Limestone
1	MC							FILL - Brown and gray silty SAND, trace gravel, moist A-1-b
B			30.4	1.5*		1.5	695.9	
2	MC		33.9	0.75*				Medium stiff to stiff black ORGANIC CLAY, very moist A-7-6
3	MC		30.2	1.5*				
						5.0	692.4	
4	MC		22.2	1.5*				Stiff brown and gray CLAY, trace gravel, moist A-6
						8.0	689.4	▽
5	MC		12.1					Gray fine to medium SAND, saturated A-1-b
						10.0		End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

MC = Continuous 1.5" Diam. GeoProbe Samples

DISTANCE BELOW SURFACE IN FEET

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/10/04

208 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-18 DATE STARTED 3-29-04 DATE COMPLETED 3-29-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 696.5

END OF BORING 686.5

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 8.0 '

▽ AT END OF BORING 8.0 '

▼ 24 HOURS

New Stearns Road
Sta. 594+28; 40' LT

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
0								0.4	696.1	FILL - Crushed Limestone
		1	MC		26.6	0.5*				FILL - Black, brown and gray CLAY LOAM, occasional sand seams, little gravel, very moist A-6
								2.0	694.5	
		2	MC		46.5	0.5*				Soft black ORGANIC CLAY, very moist A-7-6
								3.5	693.0	
		3	MC		13.9	1.25*				Stiff brown and gray CLAY LOAM, trace gravel, moist A-4/A-6
5								5.5	691.0	
		4	MC		29.5	0.25*				Soft dark gray SILTY LOAM, trace organic, very moist A-6(8) LL/PL/PI=29/14/15
								8.0	688.5	▼
		5	MC		7.6					Gray SAND and GRAVEL, saturated A-1
10										End of Boring at 10.0'
15										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										MC = Continuous 1.5" Diam. GeoProbe Samples

DRILL RIG NO. 127

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

209 Added 1/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-19 DATE STARTED 3-29-04 DATE COMPLETED 3-29-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 696.1

END OF BORING 686.1

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING Surface

▽ AT END OF BORING Surface

▼ 24 HOURS

New Stearns Road
Sta. 594+56; 35' RT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
	1	MC		57.5	<0.25*				Soft black and dark brown ORGANIC CLAY, very moist A-7-6
							2.0	694.1	
	2	MC		15.6	1.25*				Stiff brown and gray CLAY LOAM, trace gravel moist A-6
							3.5	692.6	
	3	MC		14.5	4.5+*				Hard brown and gray CLAY LOAM, trace gravel, moist A-6
	4	MC		13.5	4.5+*				
							8.0	688.1	
	5	MC		13.9	3.25*				Very stiff gray CLAY LOAM, trace gravel, moist A-6
							10		End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 127

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

210

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING B-20 DATE STARTED 3-29-04 DATE COMPLETED 3-29-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 697.5

END OF BORING 687.5

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 4.0 '

▽ AT END OF BORING 4.0 '

▼ 24 HOURS

New Stearns Road
Sta. 596+21; at CL

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
0								0.5	697.0	FILL - Crushed Limestone
		1	MC		8.8					FILL - Gray SAND, trace gravel, occasional clay seam, moist A-1-b
								2.0	695.5	
		2	MC		32.3	1.0*				Medium stiff to stiff black and dark gray SANDY LOAM (topsoil), very moist A-6/A-7-6
		3	MC		16.7	4.5+*		4.0	693.5	▼
5										Hard brown and gray CLAY, trace gravel, moist A-6
		4	MC		18.3	4.5+*				
								8.0	689.5	
		5	MC		17.4	4.5+*				Hard gray CLAY, trace gravel, moist A-6
10										End of Boring at 10.0'
15										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 59955-20 GPJ TSC_ALL.GDT 5/7/04

211

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-1 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 691.9

END OF BORING 676.9

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 8.0 '

▽ AT END OF BORING 4.0 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 579+50; 215' RT

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.7	691.2	FILL - SAND and GRAVEL
1	SS		5-5 7-7	36.4	1.5*		3.0	688.9	Stiff black ORGANIC CLAY, very moist A-7-6
2	SS		2-2 2-2	28.1	0.25*		5.5	686.4	▽ Soft black and gray CLAY, trace organic, very moist A-6
3	SS		5- 5-6	24.9	0.5*		8.0	683.9	Soft gray CLAY, occasional silt seams, very moist A-6 ▼
4	SS		15- 15-14	7.8			10.5	681.4	Medium dense gray SAND and GRAVEL, saturated A-1-a
5	SS		10- 14-15	9.4					Medium dense to dense gray Gravel and Cobbles (rock fragments recovered), little sand, saturated A-1-a
6	SS		21- 25-31	1.4					End of Boring at 15.0'

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual

TSC 59955-20 GPJ TSC_ALL.GDT 5/7/04

212 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-2 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 3.0 '

▽ AT END OF BORING 3.0 '

▼ 24 HOURS

Wetland/Detention Basin,

DISTANCE BELOW SURFACE IN FEET

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.4		FILL - SAND and GRAVEL
							1.2		Black SILTY CLAY (topsoil), moist A-7-6
	1	SS	5-4 4-6	22.0	1.75*				Stiff brown CLAY LOAM, moist A-6
							3.0		▼▽
	2	SS	5-8 11-14	10.9					
	3	SS	11-15-20	11.0					Medium dense to dense brown and gray SAND and GRAVEL with Cobbles (rock fragments recovered), saturated A-1-a
	4	SS	13-17-16	9.8					
	5	SS	31-34-33	15.8					
							13.0		
	6	SS	15-21-36	13.9	4.5*				Dense gray SILTY LOAM, occasional silt seams, moist A-4/A-6
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types: in-situ, the transition may be gradual

TSC 59965-20 GPJ TSC_ALL.GDT 5/7/04

213

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-3 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 693.8

END OF BORING 678.8

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 4.5'

▽ AT END OF BORING 4.0'

▼ 24 HOURS

Wetland/Detention Basin
Sta. 582+90; 196' RT

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
0								0.6	693.2	FILL - Gravel
		A			23.7	2.25*				Black SILTY CLAY (topsoil), moist A-7-6
		1	SS	6-7 7-9				2.0	691.8	
		B			22.7	1.5*				Stiff brown and dark gray SILTY CLAY, moist to very moist A-7-6(26) ▽ Sample 2A: LL/PL/PI=45/17/28
		A			24.6	1.5*				
		2	SS	7-7 8-8						
		B			19.9			4.5	689.3	▼
5										Medium dense brown clayey SAND, wet A-1-b
								5.5	688.3	
		3	SS	5- 7-9	12.0					Medium dense brown SAND and GRAVEL, saturated A-1-a
								8.0	685.8	
		4	SS	7- 9-13	10.9					Medium dense SAND and GRAVEL, occasional Cobbles (rock fragments recovered), saturated A-1-a
10		5	SS	10- 15-11	8.5					
								13.0	680.8	
		6	SS	7- 8-9	17.4	4.5+*				Hard gray CLAY, trace gravel, moist A-6
15										End of Boring at 15.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										

DRILL RIG NO 217

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

214 Added 11/03/06.

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-4 DATE STARTED 3-12-04 DATE COMPLETED 3-12-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 696.3

END OF BORING 681.3

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 5.0 '

▽ AT END OF BORING 5.0 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 589+36; 403' RT

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
0		A			19.5	1.0*				Dark brown CLAY LOAM (topsoil), very moist A-6
		1	MC					1.5	694.8	
		B			22.6	1.5*				Stiff brown CLAY LOAM, trace gravel moist A-6
								2.5	693.8	
		2	MC		15.5					Brown clayey SAND and GRAVEL, moist A-1/A-2
5								5.0	691.3	▼
		3	MC		7.3					Brown SAND and GRAVEL, saturated A-1-a
		4	MC		6.8					
10								11.0	685.3	
		5	MC		6.2					Gray SAND and GRAVEL, saturated A-1-a
		6	MC		6.8					
15										End of Boring at 15.0'
20										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

215 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-5 DATE STARTED 3-12-04 DATE COMPLETED 3-12-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 697.0

END OF BORING 682.0

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.5 '

▽ AT END OF BORING 3.5 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 594+04; 267' RT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
							0.8	696.2	FILL - Dark brown and black CLAY LOAM
	A			13.0					FILL - Brown SAND, trace gravel, very moist A-1-b
	1	MC							
	B			25.9	1.0*		2.0	695.0	Black CLAY LOAM (topsoil), very moist A-6/A-7-6
							3.0	694.0	
	2	MC		10.3					▽ Brown SAND and GRAVEL, saturated A-1-a
							5.5	691.5	
	3	MC		18.3	4.5+*				Hard brownish-gray SILTY CLAY LOAM, occasional silt seams, trace gravel, moist A-6
							8.0	689.0	
	4	MC		19.5	1.75*				Stiff brownish-gray CLAY LOAM, occasional silt seams, trace gravel, moist A-6
	5	MC		17.4	1.5*				
							13.0	684.0	
	A			17.3					Brown fine SAND, saturated A-3
	6	MC					14.0	683.0	
	B			18.9	0.75*				Medium stiff brownish-gray CLAY LOAM with sand layers, very moist A-6
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/10/04

216

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-6 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 705.2

END OF BORING 690.2

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 3.0 '

▽ AT END OF BORING 3.0 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 599+61; 256' LT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
									FILL - Crushed Limestone and Clay
							1.0	704.2	
	A			12.2	1.25*				Medium dense brown and gray clayey SAND and GRAVEL, moist
	1	SS	3-5						A-1/A-2
	B		5-6	9.4					
							3.0	702.2	▼
	2	SS	6-8	11.0					Medium dense brown silty SAND and GRAVEL, saturated
			8-10						A-1-a
							5.5	699.7	
	3	SS	6-	17.7	0.5*				Medium dense gray clayey SAND, numerous sand seams, wet
			6-4						A-2-4
							8.0	697.2	
	4	SS	4-	23.3					Medium dense gray SILT, occasional clay seams, very moist
			6-6						A-4
	5	SS	6-	21.0					
			6-7						
							13.0	692.2	
	6	SS	5-	21.4					Medium dense sandy SILT, occasional clay seams, very moist
			7-9						A-4
							15		End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 159

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

217 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-7 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 718.7

END OF BORING 703.7

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 3.0 '

▽ AT END OF BORING Dry

▼ 24 HOURS

Wetland/Detention Basin
Sta. 603+52; 351' LT

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	718.2	FILL - Gravel
1	SS		6-7 8-10	9.7					▼ Medium dense brown silty fine SAND, moist to saturated A-3 & A-2-4
2	SS		6-8 8-12	21.8					
							5.5	713.2	
3	SS		5- 7-11	24.2	4.0*				Hard brownish-gray CLAY, moist A-7-6
							8.0	710.7	
4	SS		3- 8-10	20.0					Medium dense brown sandy SILT, very moist A-4
							10.5	708.2	
5	SS		5- 6-7	17.0					Medium dense gray sandy SILT, very moist A-4
							13.0	705.7	
6	SS		3- 3-3	19.0					Loose gray clayey SILT, very moist A-4
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

218

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-8 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 723.2

END OF BORING 708.2

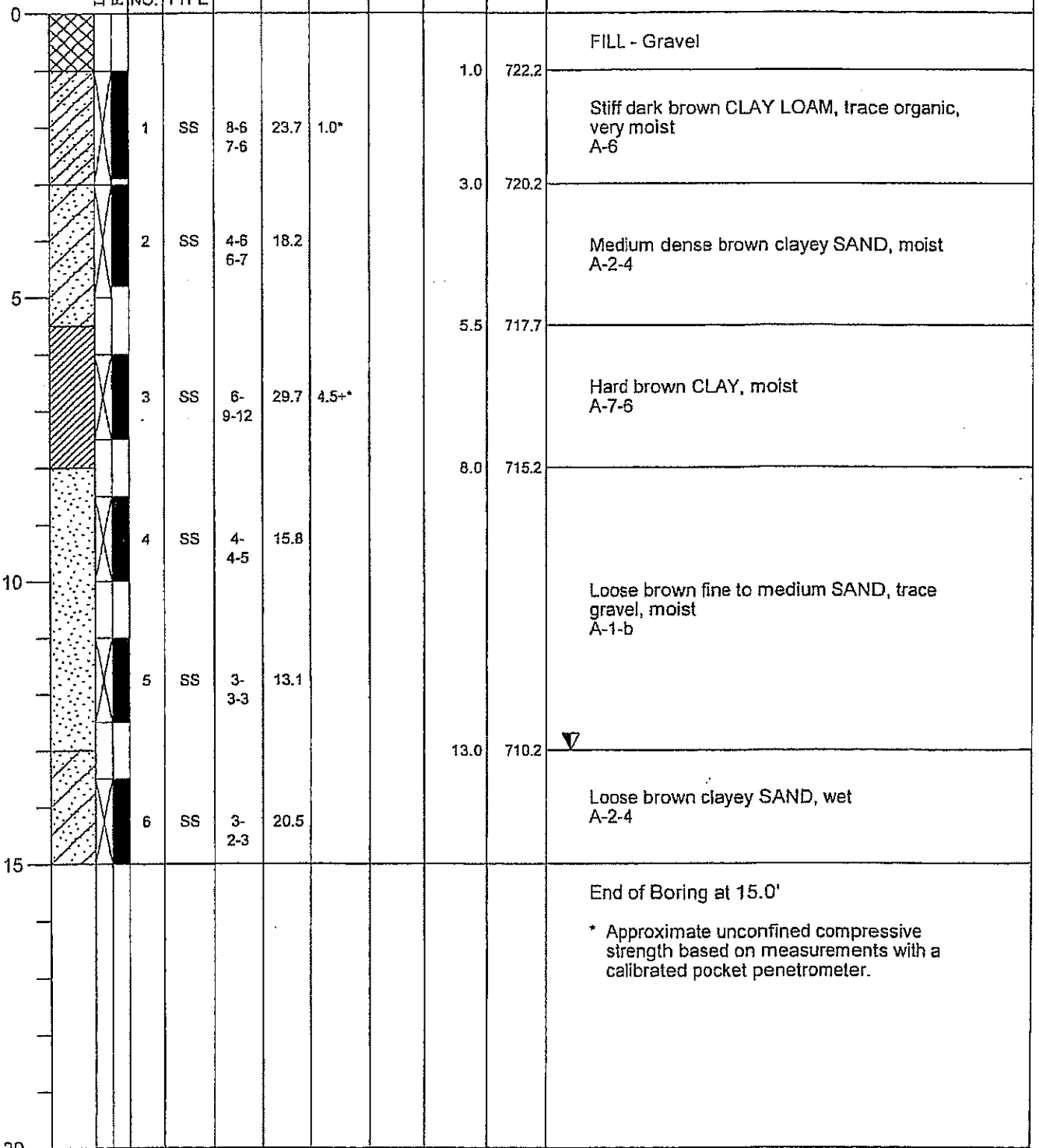
WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 13.0 '

▽ AT END OF BORING Dry

▼ 24 HOURS

Wetland/Detention Basin
Sta. 608+27; 308' LT



LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		FILL - Gravel
							1.0	722.2	
	1	SS	8-6 7-6	23.7	1.0*				Stiff dark brown CLAY LOAM, trace organic, very moist A-6
							3.0	720.2	
	2	SS	4-6 6-7	18.2					Medium dense brown clayey SAND, moist A-2-4
							5.5	717.7	
	3	SS	6- 9-12	29.7	4.5+*				Hard brown CLAY, moist A-7-6
							8.0	715.2	
	4	SS	4- 4-5	15.8					Loose brown fine to medium SAND, trace gravel, moist A-1-b
	5	SS	3- 3-3	13.1					
							13.0	710.2	▼
	6	SS	3- 2-3	20.5					Loose brown clayey SAND, wet A-2-4
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

219

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-9 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 699.5

END OF BORING 684.5

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 3.5 '

▽ AT END OF BORING 13.0 '

▼ 24 HOURS 3.5 '

Wetland/Detention Basin
Sta. 598+65; 183' RT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		Black SILTY CLAY (topsoil), moist A-7-6
	1	SS	6-9 12-15	30.3	2.0*		2.5	697.0	
	A			11.2					▼ Medium dense brown SAND and GRAVEL, saturated A-1-a
	2	SS	6-10 9-7				4.0	695.5	
	B			15.2					Medium dense brown and gray SILT, moist A-4
							5.5	694.0	
	3	SS	5- 7-8	18.4	2.75*				Very stiff gray SILTY CLAY LOAM, occasional silt seams, moist A-6
							8.0	691.5	
	4	SS	4- 5-7	13.3	0.75*				Medium dense gray SANDY LOAM, trace gravel, moist A-2-4
							10.5	689.0	
	5	SS	6- 9-14	11.6	4.5*				Hard gray CLAY LOAM, trace gravel, moist A-6
							13.0	686.5	▽
	6	SS	13- 9-11	17.4					Medium dense brown silty fine SAND, saturated A-1-b
									End of Boring at 15.0' * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

220

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-10 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 700.3

END OF BORING 685.3

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 5.5 '

▽ AT END OF BORING 4.5 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 598+64; 386' RT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
	A			8.3			1.5	698.8	FILL - Brown SAND and GRAVEL, damp A-1-a
	1	SS	8-6						Stiff black SILTY CLAY (topsoil), moist to very moist A-7-6
	B		4-5	25.2	1.5*				
							3.0	697.3	
	2	SS	1-1 2-4	32.5					Loose dark brown and black SANDY LOAM, trace organic, very moist to wet ▽ A-6(3) LL/PL/PI=31/13/18
							5		
							5.5	694.8	▼
	3	SS	7- 14-21	17.1					Dense dark brown clayey SAND and GRAVEL, wet A-1-b
							8.0	692.3	
	4	SS	8- 12-11	11.6			10		
	5	SS	6- 8-11	13.3					Medium dense brownish-gray silty SAND, little to some gravel, wet A-1-b
	6	SS	11- 15-15	10.9			15		
									End of Boring at 15.0' * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
							20		

DISTANCE BELOW SURFACE IN FEET

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual

TSC 59965-20 GPJ TSC_ALL.GDT 5/7/04

221

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-11 DATE STARTED 3-15-04 DATE COMPLETED 3-15-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 704.6

END OF BORING 689.6

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 10.5 '

▽ AT END OF BORING 10.0 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 602+01; 202' RT

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
									FILL - Dark brown and black clayey TOPSOIL
							1.0	703.6	
1	SS		8-9 13-13	12.0	2.0*				Medium dense dark brown and gray SANDY LOAM, trace to little gravel, moist A-4
							3.0	701.6	
2	SS		3-8 10-11	11.5					Medium dense brown SAND and GRAVEL, trace clay, moist A-1-a
							5.5	699.1	
3	SS		10- 11-21	11.9					Sample 3: LL/PL/PI=15/13/2 Medium dense brownish-gray fine LOAM, trace gravel, moist to very moist A-4(0)
4	SS		6- 8-15	11.4					▽ ▼
							10.5	694.1	
5	SS		2- 1-1	15.6					Very loose gray sandy SILT, wet A-4
							13.0	691.6	
6	SS		4- 5-8	20.9	1.75*				Stiff gray CLAY, trace gravel, moist A-6
									End of Boring at 15.0' * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO 217

Division lines between deposits represent approximate boundaries between soil types. in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

222

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-12 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 705.4

END OF BORING 690.4

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 6.5 '

▽ AT END OF BORING 6.0 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 604+36; 427' RT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.8	704.6	FILL - Gravel
	A			15.6	2.5*				Black SANDY LOAM (topsoil), moist A-6
	1	SS	6-7				2.0	703.4	
	B		7-11	18.7	1.5*				Stiff gray CLAY LOAM, trace gravel, moist to very moist A-4/A-6
							3.0	702.4	
	2	SS	16-11 4-5	9.4					Loose to medium dense brown SAND and GRAVEL, occasional Cobbles, moist to saturated A-1 ▽ ▼
	A			14.0					
	3	SS	10-						
	B		8-6	18.4			7.0	698.4	Medium dense brownish-gray clayey SILT with sand seams, very moist A-4
							8.0	697.4	
	4	SS	10- 13-15	11.4	<0.25*				Medium dense brownish-gray SANDY LOAM, trace gravel, very moist A-2-4
							10.5	694.9	
	5	SS	5- 7-8	14.7					Medium dense brownish-gray SILTY LOAM, trace gravel, very moist A-4
	6	SS	4- 5-7	13.0					
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO 217

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

223

added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-13 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 707.2

END OF BORING 692.2

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 4.5 '

▽ AT END OF BORING 4.0 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 606+62; 531' RT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							1.0	706.2	FILL - Gravel
	A			23.2	0.5*				Dark brown and black SANDY LOAM (topsoil), very moist A-2-4/A-4
	1	SS	5-6				2.0	705.2	
	B		7-11	11.9					Medium dense brown SAND and GRAVEL, occasional Cobbles, moist to saturated A-1-a
	2	SS	11-9 7-7	16.8					
							5.5	701.7	
	3	SS	6-9-11	14.8	2.0*				Very stiff brownish-gray CLAY LOAM, trace gravel, moist A-6
							8.0	699.2	
	4	SS	10-22-22	11.8					Dense brownish-gray SAND and GRAVEL, occasional Cobbles, saturated A-1-a
	5	SS	17-17-17	16.0					
	6	SS	17-14-16	10.5					
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

224 Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-14 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 708.9

END OF BORING 693.9

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 7.0 '

▽ AT END OF BORING 8.0 '

▼ 24 HOURS 4.5 '

Wetland/Detention Basin
Sta. 607+08; 324' RT

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.0	708.1	FILL - Dark brown and black clayey TOPSOIL
	1	SS	9-6 8-9	10.8					FILL - Brown SAND and GRAVEL, moist A-1-a
							3.0	705.9	
	2	SS	5-4 5-6	15.7	1.5*				▼ Stiff brown and dark brown SANDY LOAM, trace gravel, moist A-6(1) LL/PL/PI=25/13/12
							5.5	703.4	
	A			39.7	0.75*				Medium stiff dark brown CLAY LOAM, trace gravel, very moist A-7-6
	3	SS	6- 8-11				7.0	701.9	▽ Medium dense brown SAND and GRAVEL, saturated A-1-a
	B			8.4					
							8.0	700.9	
	4	SS	3- 4-5	13.2	0.5*				Loose to medium dense brownish-gray SANDY LOAM, trace gravel, very moist A-2-4
	5	SS	3- 3-4	12.1	<0.25*				
	6	SS	5- 5-6	14.0	<0.25*				
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types, in-situ, the transition may be gradual.

TSC 59965-20.GPJ TSC_ALL.GDT 5/7/04

225

Added 11/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-15 DATE STARTED 3-16-04 DATE COMPLETED 3-16-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 709.6

END OF BORING 694.6

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 3.5 '

▽ AT END OF BORING 4.0 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 608+56; 693' RT

LENGTH	RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
										FILL - Gravel
								1.0	708.6	
		1	SS	4-4 4-8	22.6	0.75*				Dark brown CLAY LOAM, some black topsoil, very moist A-6
								3.0	706.6	
		2	SS	23-21 9-11	14.0					▼ ▽ Medium dense brown SAND and GRAVEL, occasional Cobbles, saturated A-1-a
								5.5	704.1	
		3	SS	6-7 9-11	11.9					Medium dense brownish-gray layers of sandy SILT and SAND, little gravel, very moist A-1 & A-4
								8.0	701.6	
		4	SS	4-6 9-11	11.6	1.5*				Stiff brownish-gray CLAY LOAM, trace gravel, moist A-4
								10.5	699.1	
		5	SS	7-8 8-8	15.8	0.5*				Medium dense reddish-gray CLAY LOAM and SANDY LOAM, trace gravel, very moist A-2-4/A-4
		6	SS	5-7 9-10	16.9	0.75*				
										End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20

DRILL RIG NO. 217

Division lines between deposits represent approximate boundaries between soil types: in-situ, the transition may be gradual.

TSC 59965-20 GPJ TSC_ALL.GDT 5/7/04

226

Added 1/03/06

PROJECT Stearns Road Improvements - Phase I, Kane County

CLIENT Alfred Benesch & Company, Chicago, Illinois

BORING DB-16 DATE STARTED 3-12-04 DATE COMPLETED 3-12-04 JOB L-59,965

ELEVATIONS

GROUND SURFACE 711.7

END OF BORING 696.7

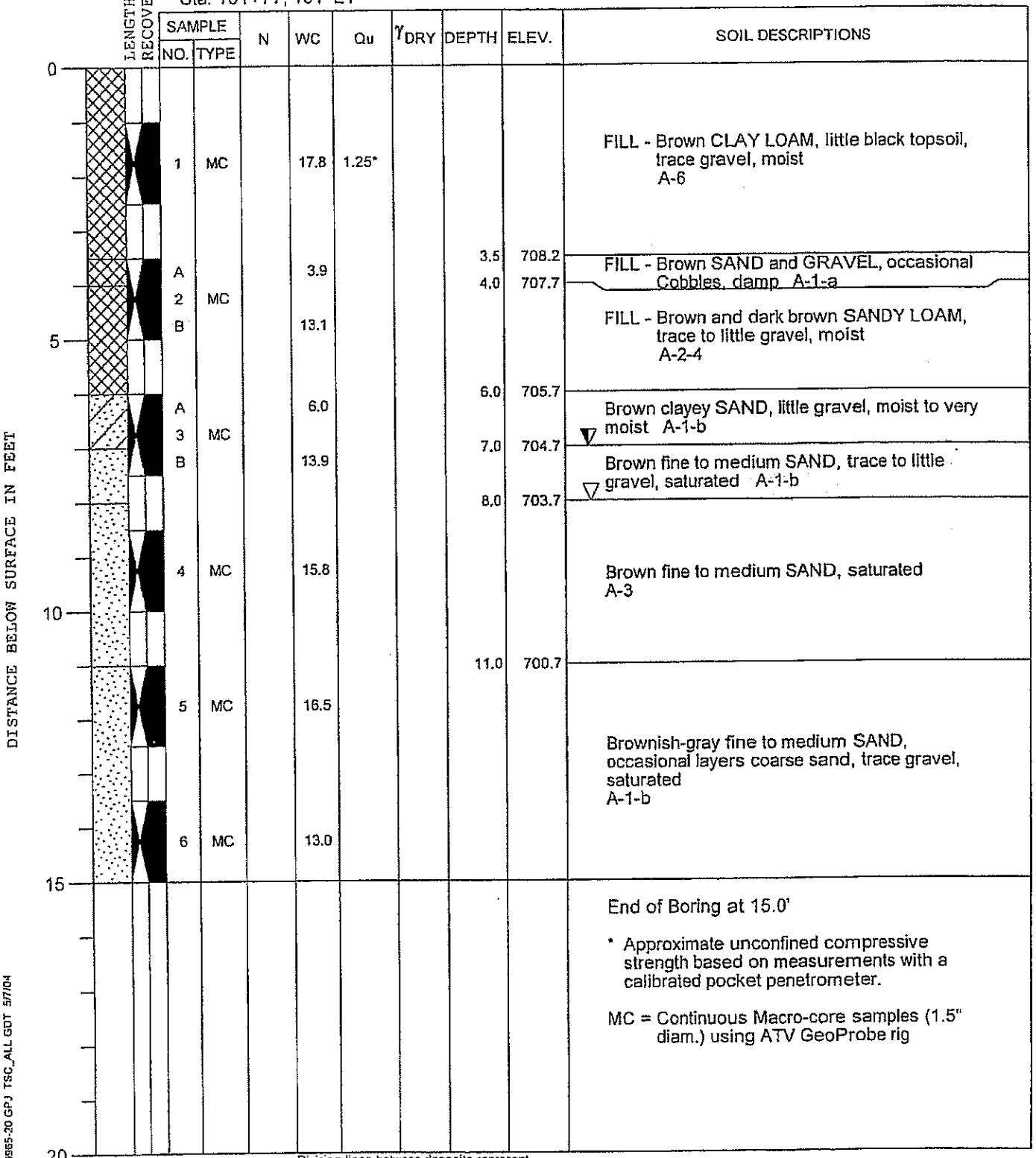
WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 7.0 '

▽ AT END OF BORING 8.0 '

▼ 24 HOURS

Wetland/Detention Basin
Sta. 101+77; 151' LT



LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1	MC		17.8	1.25*				FILL - Brown CLAY LOAM, little black topsoil, trace gravel, moist A-6
							3.5	708.2	
	A			3.9			4.0	707.7	FILL - Brown SAND and GRAVEL, occasional Cobbles, damp A-1-a
	2	MC							
	B			13.1					FILL - Brown and dark brown SANDY LOAM, trace to little gravel, moist A-2-4
							6.0	705.7	
	A			6.0					Brown clayey SAND, little gravel, moist to very moist A-1-b
	3	MC					7.0	704.7	
	B			13.9					Brown fine to medium SAND, trace to little gravel, saturated A-1-b
							8.0	703.7	
	4	MC		15.8					Brown fine to medium SAND, saturated A-3
							11.0	700.7	
	5	MC		16.5					Brownish-gray fine to medium SAND, occasional layers coarse sand, trace gravel, saturated A-1-b
	6	MC		13.0					
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

MC = Continuous Macro-core samples (1.5" diam.) using ATV GeoProbe rig

DRILL RIG NO. Probe

Division lines between deposits represent approximate boundaries between soil types: in-situ, the transition may be gradual.

TSC 59965-20 GPJ TSC_ALL GDT 5/7/04

227

Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/16/04

Date Completed 3/16/04

ROUTE F.A.U. 361 DESCRIPTION New Stearns Road Bridge over N. Arm Brewster Creek

SECT. 98-00214-02-BR STRUCT. NO. 045-3167 DRILLED BY TSC/L-59,965

COUNTY Kane LOCATION South End EB West Abutment S. 2-SE ¼ , TWP. 40 N , RNG. 8 E

Boring No. NSNA-1
Station 588+38
Offset 31.00ft RT
Surface Elev. 693.73 ft

Surface Water Elev. ____
Groundwater Elev.:
when drilling 688.2
at Completion 690.7
after ____ Hrs. ____

DEPTH	BLOWS	Qu tsf	W %
	4 4 5	P 0.5	37.2
Soft black CLAY LOAM (topsoil) A-7-6			
690.73			
	5 5 7		11.9
Medium dense dark gray silty SAND and GRAVEL, wet A-1			
-5			
688.23			
	4 4 6		4.6
Medium dense gray SAND and GRAVEL, saturated A-1-a			
685.73			
	11 10 12		6.4
Medium dense gray GRAVEL, little sand, saturated A-1-a			
-10			
683.23			
	8 10 11		15.1
Medium dense brown and gray SAND and GRAVEL, trace silt, saturated A-1-a			
680.73			
	5 4 5		12.9
-15			
	4 5 5		12.8
Loose to firm brown and gray SAND and GRAVEL, trace silt, saturated A-1-a			
	5 7 7		12.7
-20			
673.23			
	5 6 8	P 3.0	15.6
Very stiff to hard gray CLAY, trace gravel, moist A-6			
	7 10 18	B 5.6 15%	15.7
668.73			
-25			

DEPTH	BLOWS	Qu tsf	W %
	7 10 12	B 5.1 15%	16.7
Hard gray CLAY, trace gravel, moist A-6			
	8 12 12	B 4.8 15%	18.4
-30			
661.73			
	8 8 10		20.4
Medium dense brownish-gray sandy SILT, very moist A-4			
-35			
656.73			
	11 12 10		22.5
Medium dense gray silty fine SAND, saturated A-3			
-40			
651.73			
	9 12 14		16.0
-45			
Medium dense gray fine to medium SAND, saturated A-3			
	9 12 14		15.8
643.73			
-50			

(N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

228 Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/16/04
Date Completed 3/16/04

STRUCTURE NO. 045-3167
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

STRUCTURE NO. 045-3167
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

Boring No. NSNA-1
Station 588+38
Offset 31.00ft RT
Elevation 643.73 ft

Elevation 618.73 ft

DEPTH	BLOWS	Qu tsf	W %	Description
				Medium dense to dense gray fine to medium SAND, saturated A-3
	9 13 19		15.2	
-55				
636.73				
	14 18 25		15.4	
-60				Dense gray fine to medium SAND, saturated A-3
	15 15 17		13.3	(trace gravel)
-65				
626.73				
	21 33 36		18.4	
-70				Very dense gray fine to medium SAND, trace gravel, saturated A-3
	17 25 33		10.3	
618.73 -75				

DEPTH	BLOWS	Qu tsf	W %	Description
-80				
-85				
-90				
-95				Mobile B-57 Ardco ATV Rig (#159) CME Automatic Hammer 3.25" (83 mm) ID HSA
-100				End of Boring at 75.0'

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

229 Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/15/04
Date Completed 3/16/04

ROUTE F.A.U. 361 DESCRIPTION New Stearns Road Bridge over N. Arm Brewster Creek

SECT. 98-00214-02-BR STRUCT. NO. 045-3167 DRILLED BY TSC/L-59,965

COUNTY Kane LOCATION North End EB Center Pier S. 2-SE ¼ , TWP. 40 N , RNG. 8 E

Boring No. NSNA-2
Station 589+16
Offset 15.00ft RT
Surface Elev. 694.35 ft

Surface Water Elev. ______
Groundwater Elev.:
when drilling 691.4
at Completion ______
after ______ Hrs. ______

Description	Bottom Elev.	DEPTH	BLOWS	Qu tsf	W %
Soft black CLAY LOAM (topsoil), very moist A-7-6	691.35		3 3 4	P 0.5	38.5
Loose gray SAND and GRAVEL, saturated A-1-a	688.85	-5	6 5 4		12.4
Medium dense gray silty SAND, trace organic, saturated A-1-b	686.35		4 7 9		16.8
Very loose gray clayey SAND, trace organic, wet A-6	683.85	-10	WOH		36.6
Very soft black and gray organic silty CLAY with sandy clay layers, very moist A-7-6	681.35		WOH	B 0.1 15%	46.3
Medium dense gray fine to medium SAND, trace gravel, saturated A-3		-15	3 6 8		18.4
	676.35		7 9 12		13.4
Medium dense gray SAND and GRAVEL, saturated A-1	673.85	-20	5 7 8		13.1
Very stiff gray SILTY CLAY LOAM, trace gravel, moist A-4/A-6	671.35		7 9 13	P 2.0	11.0
Hard gray CLAY, trace gravel, moist A-6		-25	4 6 11	B 5.2 15%	15.4
Hard gray CLAY, trace gravel, moist A-6			7 9 11	B 6.4 15%	15.9
	662.35	-30	7 10 12	B 5.4 15%	16.5
Medium dense gray clayey SILT, moist to very moist A-4	657.35	-35	8 7 8		18.1
Medium dense brown and gray sandy SILT, very moist A-4	652.35	-40	7 10 12		21.5
Dense brown and gray fine to medium SAND, saturated A-3	647.35	-45	12 15 17		15.3
Dense brown and gray fine SAND, trace silt, saturated A-3		-50	13 18 22		13.0

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

230 Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/15/04
Date Completed 3/16/04

STRUCTURE NO. 045-3167
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

STRUCTURE NO. 045-3167
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

Boring No. NSNA-2
Station 589+16
Offset 15.00ft RT
Elevation 644.35 ft

DEPTH	BLOWS	Qu tsf	W %
Dense brown and gray fine SAND, trace silt, saturated A-3 642.35			
Stiff brown and gray CLAY LOAM, very moist A-4 640.35	11 14 22	B 1.0 15%	15.5 9.5
-55 Dense brown and gray SAND and GRAVEL, saturated A-1-a 637.35			
	16 19 21		11.9
-60 Dense brown and gray silty fine SAND, saturated A-3			
	17 16 23		14.9
-65 627.35			
Very dense gray SAND and GRAVEL, saturated A-1-a	14 23 33		8.3
-70 622.35			
Very dense Cobbles and Boulders, some sand, saturated A-1-a	39 45 50/1"		5.0
-75			

Elevation 619.35 ft

DEPTH	BLOWS	Qu tsf	W %
Very dense Cobbles and Boulders, some sand, saturated A-1-a	39 45 47		7.2
-80			
	34 40 50/3"		10.2
611.85 End of Boring at 82.5'			
Mobile B-57 Ardco ATV Rig (#159) CME Automatic Hammer			
-85 3.25" (83 mm) ID HSA			
WOH = Weight of Hammer			
-90			
-95			
-100			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

231 Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/15/04
Date Completed 3/15/04

ROUTE F.A.U. 361 DESCRIPTION New Stearns Road Bridge over N. Arm Brewster Creek

SECT. 98-00214-02-BR STRUCT. NO. 045-3167 DRILLED BY TSC/L-59,965

COUNTY Kane LOCATION North End WB West Abutment S. 2-SE ¼ , TWP. 40 N , RNG. 8 E

Boring No. NSNA-3
Station 589+34
Offset 46.00ft LT
Surface Elev. 693.97 ft

Surface Water Elev. ____
Groundwater Elev.:
when drilling 691.0
at Completion 691.0
after 24 Hrs. 693.0

DEPTH	BLOWS	Qu tsf	W %
Stiff black CLAY LOAM (topsoil), very moist A-7-6	4 4 5	P 1.25	46.4
690.97			
Medium dense gray SAND and GRAVEL, saturated A-1-a	5 7 7		12.7
-5 688.47			
Medium dense gray SAND and GRAVEL, trace clay, saturated A-1-a	4 6 6		12.1
685.97			
	5 7 8	B 4.8 15%	14.8
-10			
Hard gray CLAY, trace gravel, moist A-6	5 6 9	B 4.4 15%	16.7
	6 8 10	B 4.1 15%	16.7
-15			
M dense SAND, wet A-1-b	7 9 9	B 4.8 15%	17.0
675.97			
Very stiff gray CLAY, moist A-6	7 10 10	B 2.3 15%	16.9 16.0
674.47			
Medium dense gray SILT, moist A-4			
-20 673.47			
Medium dense gray silty fine SAND, wet A-1-b	6 7 9		17.2
670.97			
Very stiff gray CLAY, moist A-6	8 9 9	B 2.3 15%	18.4 17.3
669.47			
668.97 -25			

DEPTH	BLOWS	Qu tsf	W %
	7 9 9		15.6
Medium dense gray fine to medium SAND, trace gravel, saturated A-3	7 10 12		17.9
-30 661.97			
Medium dense gray silty SAND, trace gravel, saturated A-1-b	9 12 13		8.4
-35 656.97			
Medium dense gray silty SAND, some gravel, saturated A-1	7 11 13		10.4
-40 651.97			
Medium dense gray fine to medium SAND, trace silt, saturated A-3	7 7 9		11.9
-45 646.97			
Medium dense gray clayey SILT, moist A-4	9 9 10	S 3.1 5%	14.6
-50			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

3/9/05 PJ IDC 59965 JOT B

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/15/04
Date Completed 3/15/04

STRUCTURE NO. 045-3167
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

STRUCTURE NO. 045-3167
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

Boring No. NSNA-3
Station 589+34
Offset 46.00ft LT
Elevation 643.97 ft

Elevation 618.97 ft

DEPTH	BLOWS	Qu tsf	W %
Medium dense gray clayey SILT, moist A-4 641.97			
-55	19 23 26	B 7.4 15%	10.2
-60	16 20 25	B 10.4 15%	10.5
Hard brown and gray CLAY and CLAY LOAM, trace gravel, damp to moist A-6			
-65	23 31 38	B 10.4 15%	10.2
-70	25 31 33	B 10.4 15%	11.3
618.97 -75	30 33 38	B 10.4 15%	10.0

DEPTH	BLOWS	Qu tsf	W %
-80			
-85			
-90			
-95			
-100			

Mobile B-57 Ardco ATV Rig (#159)
CME Automatic Hammer

3.25" (83 mm) ID HSA

End of Boring at 75.0'

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

233 Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/15/04
Date Completed 3/15/04

ROUTE F.A.U. 361 DESCRIPTION New Stearns Road Bridge over N. Arm Brewster Creek

SECT. 98-00214-02-BR STRUCT. NO. 045-3167 DRILLED BY TSC/L-59,965

COUNTY Kane LOCATION South End EB East Abutment S. 2-SE ¼, TWP. 40 N, RNG. 8 E

Boring No. NSNA-4
Station 590+17
Offset 45.00ft RT
Surface Elev. 694.73 ft

Surface Water Elev.
Groundwater Elev.:
when drilling 690.7
at Completion
after Hrs.

Description	Bottom Elev.	DEPTH	BLOWS	Qu tsf	W %
Dark brown and black CLAY LOAM (topsoil), moist to very moist A-6/A-7-6	690.73		4 4 5	P 3.5	20.0
Medium dense gray SAND and GRAVEL, occasional Cobbles, trace clay, saturated A-1-a		-5	12 12 11	P 0.5	25.9 / 11.2
	686.73		5 7 6		11.9
Medium dense brown fine to medium SAND, trace to little gravel, saturated A-1-b	684.23	-10	5 7 6		21.9
Medium dense brown fine SAND, saturated A-3	681.73		10 13 14		26.4
Soft gray SILTY LOAM, very moist A-6	679.23	-15	4 2 5	P 0.25	29.3
Medium dense gray clayey SAND and SILT, occasional Cobbles, moist A-4 & A-1	676.73		6 8 10		17.2
Medium dense to dense gray SAND and GRAVEL, occasional Cobbles, saturated A-1-a		-20	9 9 7		13.1
			14 11 13		6.0
		-25	15 21 23		8.8

Description	Bottom Elev.	DEPTH	BLOWS	Qu tsf	W %
Medium dense gray SAND and GRAVEL, occasional Cobbles, saturated A-1-a			11 10 9		9.9
		-30	14 11 15		10.2
	662.73				
Dense gray silty SAND, trace clay, wet A-1-b	657.73	-35	9 13 19		18.3
Dense gray SAND and GRAVEL, saturated A-1-a	652.73	-40	13 15 22		9.6
Dense gray fine to coarse SAND, little gravel, saturated A-1	647.73	-45	13 18 20		17.9
Dense brown and gray silty SAND, clay layer at 49 feet, saturated A-1-b & A-6		-50	9 15 22	B 1.2 15%	24.2 19.0 17.4

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

 Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/15/04
Date Completed 3/15/04

STRUCTURE NO. 045-3167
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

Boring No. NSNA-4
Station 590+17
Offset 45.00ft RT
Elevation 644.73 ft

DEPTH	BLOWS	Qu tsf	W %
Dense brown and gray silty SAND, trace gravel, saturated A-1-b			
642.73			
Dense reddish-gray CLAY LOAM and SANDY LOAM, trace gravel, moist A-4	13 15 22	B 1.2 15%	11.0
-55			
637.73			
Very dense brown and gray SAND and GRAVEL, saturated A-1-a	23 28 33		7.0
-60			
632.73			
Very dense grayish-brown SILT, moist A-4	38 50/5"		21.4
-65			
627.73			
	60 50/3"		20.4
-70			
Very dense brown fine SAND, wet A-1-b			
Very dense brownish-gray 620.73	100/3"	P 4.5	13.1
CLAY LOAM, occasional Cobbles, damp A-4			10.0
-75			

Elevation 619.73 ft

DEPTH	BLOWS	Qu tsf	W %
Very dense brownish-gray CLAY LOAM, occasional Cobbles, damp A-4			
618.23	100/1"		
End of Boring at 76.5'			
Gus Pech GP-750 Truck Rig (#217) Rope and Cathead Hammer			
3.25" (83 mm) ID HSA			
-80			
-85			
-90			
-95			
-100			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

235 Added 1V03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/12/04
Date Completed 3/12/04

ROUTE F.A.U. 361 DESCRIPTION New Stearns Road Bridge over N. Arm Brewster Creek

SECT. 98-00214-02-BR STRUCT. NO. 045-3167 DRILLED BY TSC/L-59,965

COUNTY Kane LOCATION South End WB East Abutment S. 2-SE ¼ , TWP. 40 N , RNG. 8 E

Boring No. NSNA-5
Station 590+97
Offset 18.00ft LT
Surface Elev. 695.24 ft

Surface Water Elev. ____
Groundwater Elev.:
when drilling 690.7
at Completion ____
after 24 Hrs. 691.2

	DEPTH	BLOWS	Qu tsf	W %
FILL - Black clayey SAND, little gravel, trace organic, wet A-2-4		6 7 10		27.9
692.24				
Medium dense black and gray clayey SAND, trace to little gravel, wet A-2-4	-5	6 8 9		22.3
689.74				
Medium dense black and gray clayey SAND and GRAVEL, wet A-1		5 8 16		12.5
687.24				
Dense gray GRAVEL, occasional Cobbles, saturated A-1-a	-10	23 20 21		9.7
684.74				
Dense gray SAND and GRAVEL, trace clay, saturated A-1-a		23 20 21		10.6
682.24				
Dense gray SAND, little to some gravel, saturated A-1-b	-15	23 24 18		8.4
		15 16 28		9.4 15.9
678.24				
(occasional Cobbles)				
Dense gray SILTY LOAM, trace to little gravel, moist A-4	-20	10 15 16	B 4.4 15%	11.0
674.74				
(No Recovery)		14 15 19		
Very stiff gray CLAY, trace gravel, moist A-6	-25	14 17 25	B 3.5 15%	16.6

	DEPTH	BLOWS	Qu tsf	W %
Very stiff gray CLAY, trace gravel, moist A-6		10 14 18	B 2.4 15%	17.4
667.24				
Dense gray silty fine SAND, saturated A-1/A-2	-30	15 21 30		17.3
663.24				
Very stiff gray CLAY, occasional silt seams, trace gravel, moist A-6	-35	8 9 15	B 2.8 15%	18.6
658.24				
Very stiff gray CLAY, numerous silt seams, trace gravel, moist A-4/A-6	-40	8 10 15	P 2.5	17.9
653.24				
	-45	30 9 10		11.0
Medium dense to dense gray SAND and GRAVEL, occasional Cobbles, saturated A-1-a				
(occasional Cobbles)	-50	8 8 50/6"		12.6

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

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Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/12/04
Date Completed 3/12/04

STRUCTURE NO. 045-3167
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

Boring No. NSNA-5
Station 590+97
Offset 18.00ft LT
Elevation 645.24 ft

DEPTH	BLOWS	Qu tsf	W %
Medium dense to dense gray SAND and GRAVEL, occasional Cobbles, saturated A-1-a 643.24			
-55	38 46 50/4"	B 9.3 15%	11.3
Very hard reddish-gray CLAY LOAM, trace gravel, damp A-6			
-60	33 43 50/3"	B 6.0 15%	10.8
633.24			
(No Recovery)	100/6"		
-65			
Very dense gray SAND, trace to little gravel, occasional Cobbles, saturated A-1			
-70	89 120 104		17.0
623.24			
Very hard reddish-gray CLAY LOAM, trace gravel, moist A-6			
620.24 -75	48 50/4"	B 6.3 15%	9.5

Elevation 620.24 ft

DEPTH	BLOWS	Qu tsf	W %
-80			
-85			
-90			
-95			
-100			

Gus Pech GP-750 Truck Rig (#217)
Rope and Cathead Hammer

3.25" (83 mm) ID HSA to 20 feet

Rotary Wash Drill below 20 feet

End of Boring at 75.0'

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

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Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/12/04
Date Completed 3/12/04

ROUTE F.A.U. 361 DESCRIPTION New Stearns Road Bridge over the Fox River

SECT. 98-00214-02-BR STRUCT. NO. 045-3166 DRILLED BY TSC/L-59,965

COUNTY Kane LOCATION Pier No. 7 S. 2-SW 1/4 , TWP. 40 N , RNG. 8 E

Boring No. STFX-7
Station 575+13
Offset 7.00ft RT
Surface Elev. 691.10 ft

Surface Water Elev. ____
Groundwater Elev.:
when drilling 687.6
at Completion 688.1
after 24 Hrs. 688.6

DEPTH	BLOWS	Qu tsf	W %
Black and dark gray ORGANIC CLAY, very moist A-7-6			
689.10	3 4 4	B 0.6 15%	36.2 30.6
Medium stiff brown and gray CLAY, very moist A-7-6			
688.10			
Medium dense brown and gray SAND and GRAVEL, saturated A-1	5 6 6		20.8
-5			
685.60			
Medium dense gray SILTY LOAM, occasional silt seams, moist A-4	4 6 6	P 2.25	16.7
683.10			
Medium dense to dense gray GRAVEL, little sand, saturated A-1-a	8 13 16		6.0
-10			
680.60			
	18 20 25		4.4
Dense gray GRAVEL, little sand, occasional Cobbles, saturated A-1-a	17 22 25		8.8
-15			
	15 25 22		6.4
	18 21 26		4.7
-20			
670.60			
Very dense gray GRAVEL and COBBLES, saturated A-1-a	23 50/2"		2.2
668.10			
Dense gray fine to medium SAND, trace gravel, saturated A-1-b	15 17 19		10.4
666.10 -25			

DEPTH	BLOWS	Qu tsf	W %
Stiff gray CLAY LOAM, trace gravel, moist A-4/A-6	16 19 17	B 1.7 15%	12.0
653.10			
Very stiff gray SANDY LOAM, trace gravel, moist A-2-4/A-4	9 9 13	B 2.4 15%	8.4
-30			
659.10			
Very hard brownish-gray CLAY LOAM and SANDY LOAM, trace gravel, damp A-4/A-6	11 16 19	S 4.6 10%	9.4
-35			
654.10			
Sample 14: LL/PL/PI=24/13/11	8 12 12	B 5.7 15%	12.4
-40			
Hard to very hard brownish-gray CLAY LOAM, trace gravel, damp to moist A-6(5)	10 12 15	B 6.4 15%	9.8
-45			
642.10			
Dark brown and gray silty fine SAND, wet A-1-b	12 18 25	B 4.6 15%	12.4 10.3
-50			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

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Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/12/04
Date Completed 3/12/04

STRUCTURE NO. 045-3166
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

STRUCTURE NO. 045-3166
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

Boring No. STFX-7
Station 575+13
Offset 7.00ft RT
Elevation 641.10 ft

Elevation 616.10 ft

DEPTH	BLOWS	Qu tsf	W %
Dark brown and gray silty fine SAND, wet A-1-b			
639.10			
Hard gray CLAY, trace gravel, damp A-6	11 13 13	B 5.9 15%	11.6
-55			
634.10			
Dark brown and gray fine to medium SAND, trace silt, saturated A-1-b	13 18 21		14.3
-60			
629.10			
	18 20 23	S 5.0 10%	10.9
-65			
Hard to very hard brownish-gray CLAY LOAM and SANDY LOAM, trace gravel, damp to moist A-4/A-6	13 19 25	B 8.7 15%	9.1
-70			
	26 30 35	B 8.9 15%	11.4 9.2
616.60			
*** 616.10 -75			

DEPTH	BLOWS	Qu tsf	W %
-80			
-85			
***74.5' - 75.0' Very dense gray silty SAND and GRAVEL, saturated A-1-a			
-90			
-95			
Mobile B-57 Ardco ATV Rig (#159) CME Automatic Hammer 3.25" (83 mm) ID HSA			
End of Boring at 75.0'			
-100			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

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Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/10/04

Date Completed 3/11/04

ROUTE F.A.U. 361 DESCRIPTION New Stearns Road Bridge over the Fox River

SECT. 98-00214-02-BR STRUCT. NO. 045-3166 DRILLED BY TSC/L-59,965

COUNTY Kane LOCATION South End East Abutment S. 2-SW 1/4 , TWP. 40 N. , RNG. 8 E

Boring No. STFX-8
Station 576+72
Offset 40.00ft RT
Surface Elev. 693.14 ft

Surface Water Elev. ____
Groundwater Elev.:
when drilling 687.6
at Completion ____
after 24 Hrs. 688.1

DEPTH	Material	BLOWS	Qu tsf	W %
	Very stiff black CLAY, moist A-7-6	6 9 8	B 3.2 15%	19.4
690.14				
-5	Soft black and gray SANDY LOAM, little gravel, very moist A-2-4	5 4 9	P 0.5	23.0
687.64				
	Medium dense brown fine SAND, saturated A-3	8 11 20		21.5 10.4
686.14	Dense brown SAND and GRAVEL, saturated A-1-a			
685.14				
-10	Very dense dark gray and brown SAND and GRAVEL, occasional Cobbles, saturated A-1-a	29 50/6"		16.3
682.64				
		14 17 18		8.6
-15	Dense to very dense gray SAND and GRAVEL, saturated A-1-a	27 26 31		10.2
		21 24 36		7.5
675.14				
-20	Very dense GRAVEL and COBBLES, saturated A-1-a	100/1"		6.2
672.64				
		14 13 16		12.6
	Medium dense gray fine to medium SAND, trace silt, saturated A-1-b			
668.14		16 10 12		12.8
-25	Medium dense gray SANDY LOAM, trace gravel, moist A-2-4/A-4	10 7 11	B 1.6 15%	10.2
665.14				
-30	Very stiff brownish-gray CLAY LOAM and SANDY LOAM, trace gravel, moist A-4	9 13 14	P 2.25	13.2
661.14				
-35	Sample 13: LL/PL/PI=27/11/16	11 14 20	B 3.2 15%	12.4
		8 14 21	B 2.1 15%	13.5
-40	Very stiff reddish-brown CLAY LOAM, trace gravel, A-6(8)			
		19 16 30	B 2.0 15%	12.4
-45				
646.14				
	Dense gray SILTY LOAM, moist A-4/A-6	11 15 22	P 2.0	18.0
-50				

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

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Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/10/04
Date Completed 3/11/04

STRUCTURE NO. 045-3166
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

Boring No. STFX-8
Station 576+72
Offset 40.00ft RT
Elevation 643.14 ft

DEPTH	BLOWS	Qu tsf	W %
Dense gray SILTY LOAM, moist A-4/A-6 641.14			
-55	16 24 25	B 3.3 15%	12.7
-60	20 28 50	B 3.9 15%	12.2
Sample 18: LL/PL/PI=24/12/12			
Very stiff to hard brownish-gray CLAY LOAM, trace gravel, damp to moist A-6(5)			
-65	22 28 36	B 5.4 15%	11.2
Gus Pech GP-750 Truck Rig (#217) Rope and Cathead Hammer			
-70	29 40 50	P 4.5	10.2
3.25" (83 mm) ID HSA			
-75 (No Recovery)	20 19 24		

Elevation 618.14 ft

DEPTH	BLOWS	Qu tsf	W %
(Qp=4.5+ tsf)	19 26 34	B 4.0 15%	11.8
Very stiff to hard brownish-gray CLAY LOAM, trace gravel, damp to moist A-6			
-80	15 33 50	B 3.4 15%	11.4
(Qp=4.5+ tsf)			
-85 (Qp=4.5+ tsf)	22 33 34	B 3.6 15%	11.0
606.14			
Very dense brownish-gray CLAY LOAM and SANDY LOAM, little to some gravel, damp to moist A-2-4/A-4			
-90	53 50/3"	P 4.5	11.4
601.14			
-95	36 50/6"		15.6
Very dense gray fine to medium SAND, trace to little gravel, saturated A-1-b			
End of Boring at 100.0' 593.14 -100	39 50/3"		19.0

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

241 Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/10/04

Date Completed 3/11/04

ROUTE F.A.U. 361 DESCRIPTION New Stearns Road Bridge over the Fox River

SECT. 98-00214-02-BR STRUCT. NO. 045-3166 DRILLED BY TSC/L-59,965

COUNTY Kane LOCATION East of East Abutment S. 2-SW 1/4 , TWP. 40 N , RNG. 8 E

Boring No. STFX-9
Station 577+69
Offset 37.00ft LT
Surface Elev. 694.10 ft

Surface Water Elev. ____
Groundwater Elev.:
when drilling 688.6
at Completion ____
after ____ Hrs. ____

DEPTH	BLOWS	Qu tsf	W %
FILL - Brown SAND and GRAVEL with some layers of clay, moist A-1 & A-6	4 6 7		10.4
691.10			
Stiff dark gray and brown CLAY LOAM, trace gravel, very moist A-6	5 7 7	B 1.9 15%	22.5
-5			
688.60			
Dense brown and gray SAND and GRAVEL, occasional Cobbles (rock fragments recovered), saturated A-1-a	16 19 20		
	17 19 22		
-10			
683.60			
Dense to very dense gray SAND and GRAVEL, occasional Cobbles (rock fragments recovered), saturated A-1-a	20 22 21		
	19 30 50/5"		
-15			
678.60			
(Poor recovery - disturbed sample)	4 7 6		19.8
	8 11 15	B 2.8 15%	13.8
-20			
Very stiff brownish-gray CLAY and SILTY CLAY LOAM, occasional silt and sand seams, trace gravel, moist A-6(11)	8 17 22	B 3.9 15%	16.5
Sample 9: LL/PL/PI=25/10/15			
669.10 -25	9 15 16	B 3.1 15%	17.5

DEPTH	BLOWS	Qu tsf	W %
Dense brown SAND, trace gravel, saturated A-1-b	10 15 20		18.2
667.10			
Dense brownish-gray SILT, moist A-4			
666.10			
Stiff reddish-brown CLAY LOAM with sand lenses, trace gravel, moist to very moist A-4/A-6	6 8 10	B 1.8 15%	16.1
-30			
662.10			
	8 16 22	B 5.0 15%	12.2
-35			
Hard to very stiff reddish-brown CLAY LOAM, trace gravel, moist A-6(7)	11 14 20	B 2.9 15%	12.4
-40			
Sample 14: LL/PL/PI=26/10/16			
(Qp = 4.0 tsf)	13 14 18	B 1.9 15%	12.4
-45			
647.10			
Hard reddish-brown CLAY LOAM, trace gravel, moist A-6	14 22 27	B 5.3 15%	11.3
644.10 -50			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

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Added 11/03/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date Started 3/10/04

Date Completed 3/11/04

STRUCTURE NO. 045-3166
ROUTE F.A.U. 361
SECTION 98-00214-02-BR
COUNTY Kane

Boring No. STFX-9
Station 577+69
Offset 37.00ft LT

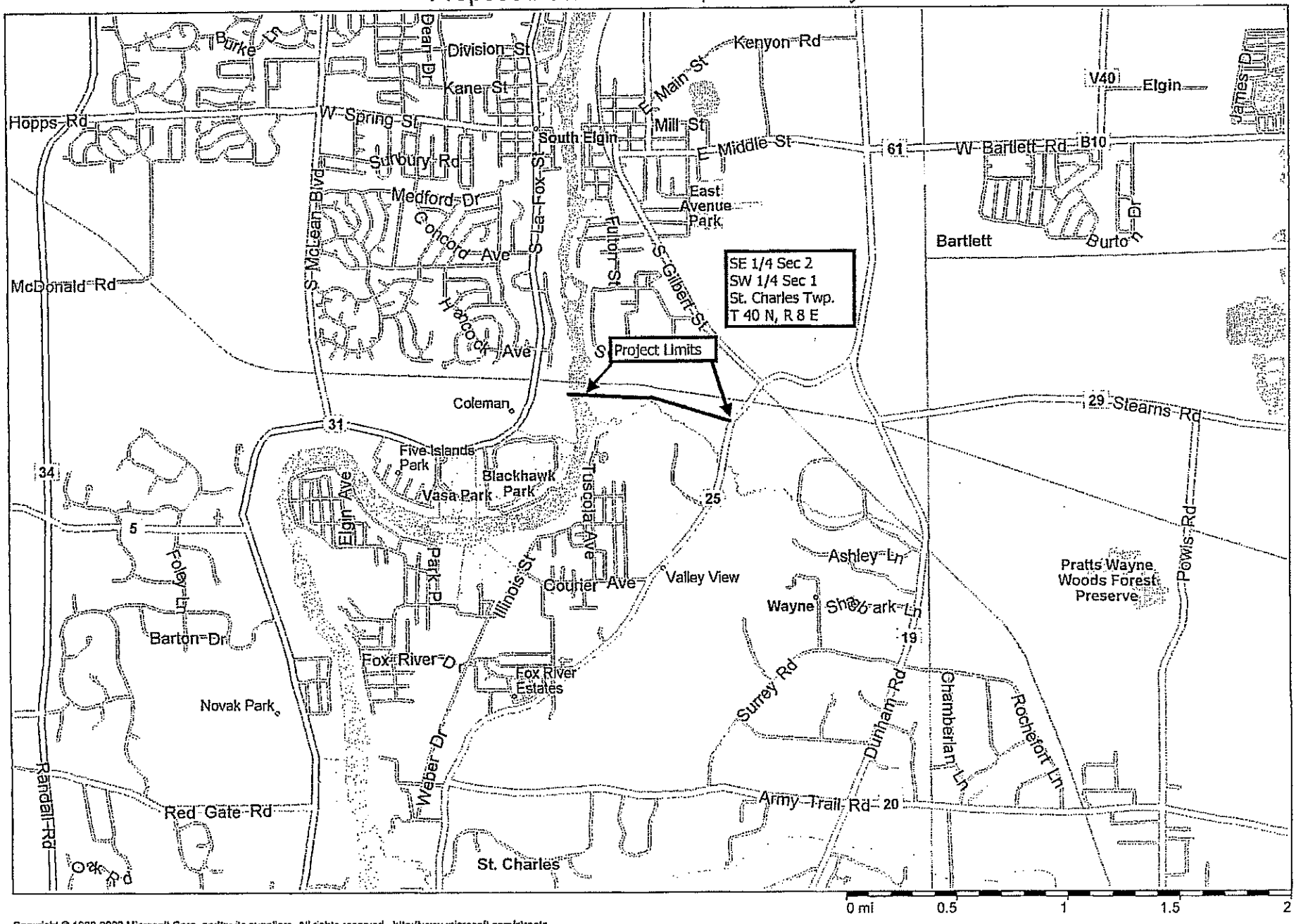
Elevation 644.10 ft

Description	DEPTH	BLOWS	Qu tsf	W %
		17 26 39	B 6.7 15%	13.5
	-55			
Hard reddish-brown CLAY and CLAY LOAM, trace gravel, damp to moist A-6		14 22 34	B 4.7 15%	14.1
	-60			
(Qp = 4.5+ tsf)		15 26 27	B 3.9 15%	12.6
	-65			
624.10		19 30 34	B 5.4 15%	11.6
	-70			
End of Boring at 70.0' Gus Pech GP-750 Truck Rig (#217) Rope and Cathead Hammer Rotary Wash Drill below 20 feet				
	-75			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Added 11/03/06

Proposed Stearns Road, Kane County



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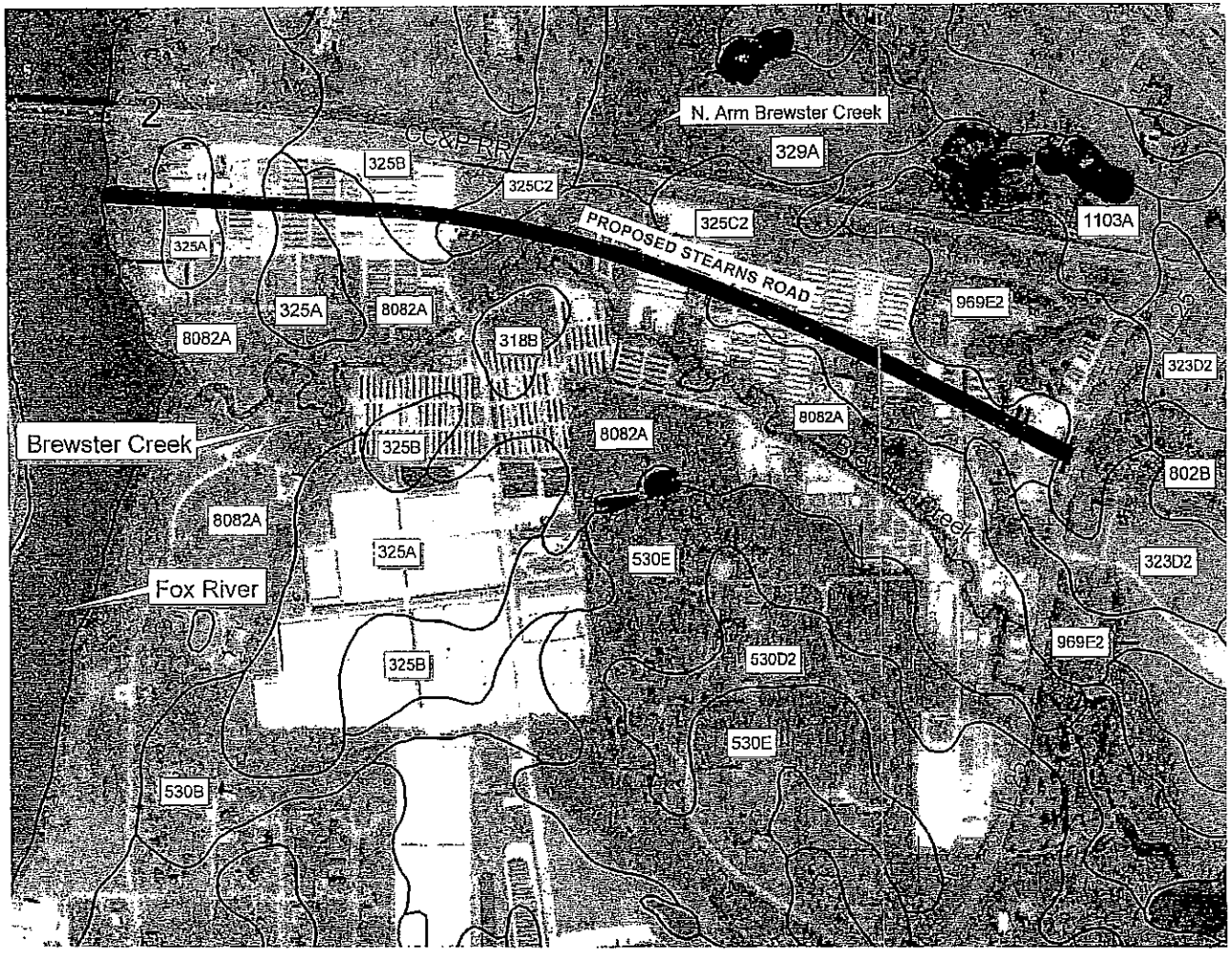
Added 11/03/06



Soil Legend

318	Lorenzo Loam
323	Casco Loam,
325	Dresden Silt Loam,
329	Will Loam,
530	Ozaukee Silt Loam, undulating
802	Orthents, loamy, undulating
969	Casco-Rodman complex
1103	Houghton Muck, undrained
8082	Millington Silt Loam

Modifying Term

A	0 to 2 percent slopes
B	2 to 4 percent slopes
C2	4 to 6 percent slopes, eroded
D2	6 to 12 percent slopes, eroded
E2	12 to 20 percent slopes, eroded

PEDOLOGICAL MAP

PROPOSED STEARNS ROAD
FOX RIVER TO IL RTE 25
KANE COUNTY, ILLINOIS

TSC TESTING SERVICE CORPORATION 457 EAST GUNDERSEN DRIVE CAROL STREAM, ILLINOIS 60188	DRAWN BY:	JPZ	PAGE NO. 1
	CHECKED BY:	MLC	
	JOB NO:	L-59,965	
	DATE:	JUNE 2006	

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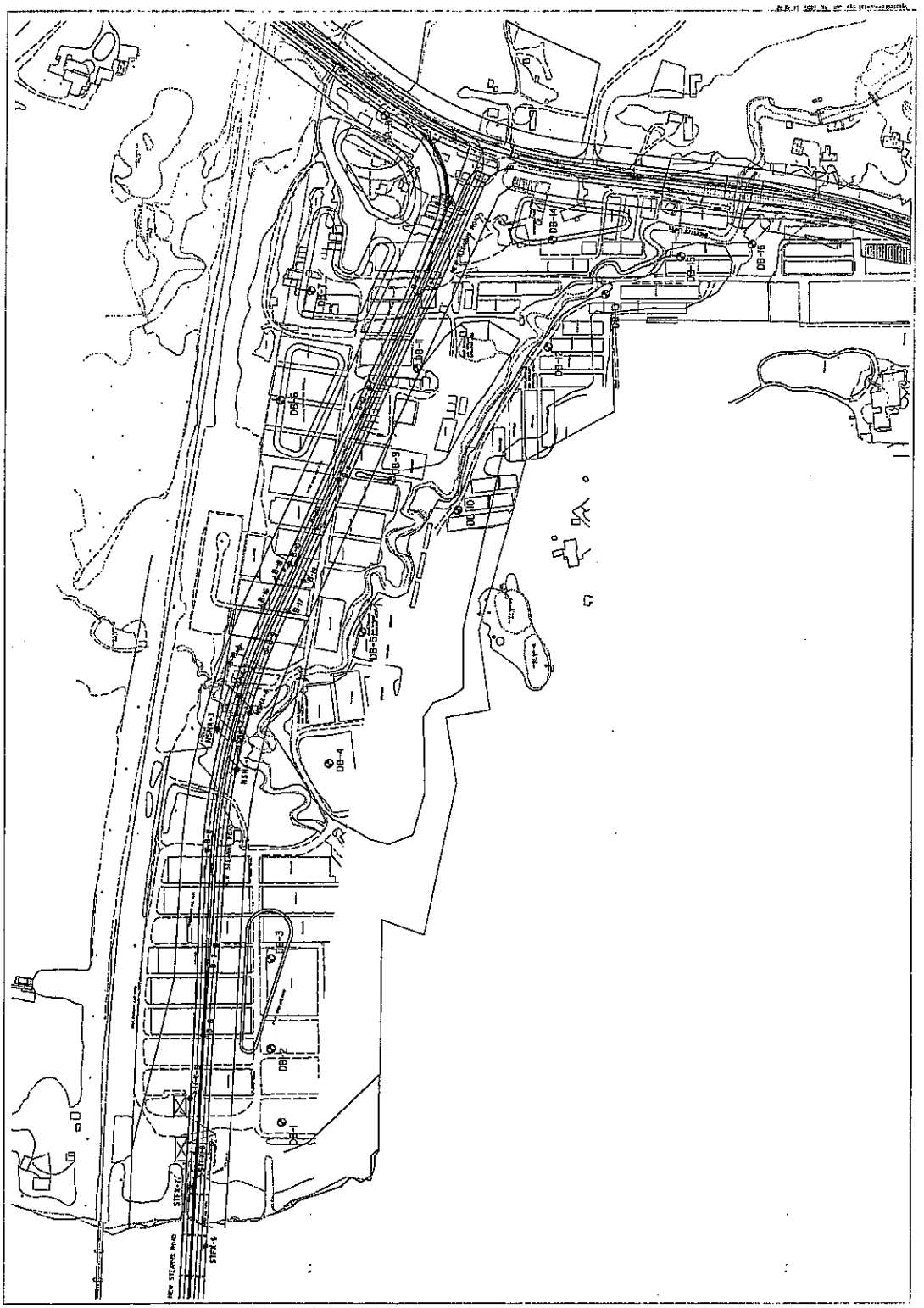
Added 11/03/06



246 Added 11/03/06

TESTING SERVICE CORPORATION
457 East Gundersen Drive
Carol Stream, Illinois

CLIENT: Alfred Benesch & Company
205 N. Michigan Ave., Suite 2400July 21, 2006
Chicago, Illinois 60601

TSC Job No. L - 60,393

PROJECT: Stearns Road Improvements
Kane County

SOIL TEST DATA

LOCATION		Det. Pond #1	Det. Pond #19	Det. Pond #19	Sta. 156+00	Sta. 159+00
BORING NUMBER		DP1 - 2	DP19 - 2	DP19 - 4	ST - 2	ST - 3
SAMPLE NUMBER		3	4	4, 5 & 6	1	4
DEPTH IN FEET		3.5 - 5.0	6.0 - 7.5	6.0 - 12.5	0.5 - 2.0	6.0 - 7.5
HRB CLASSIFICATION & GROUP INDEX		A-7-6 (24)	A-6 (8)	A-1-a	A-7-6 (25)	A-6 (5)
UNIFIED CLASSIFICATION		CL	CL	GP	CL	CL
GRAIN SIZE CLASSIFICATION		Brown CLAY	Brown and Gray LOAM	Brown SAND & GRAV	Dark Brown SILTY CLAY	Brown LOAM
GRADATION - PASSING 1" SIEVE %				94		
GRADATION - PASSING 3/4" SIEVE %		100		83		100
GRADATION - PASSING 3/8" SIEVE %		99		68		96
GRADATION - PASSING # 4 SIEVE %		98		53		94
GRADATION - PASSING # 10 SIEVE %		98	100	41	100	91
GRADATION - PASSING # 40 SIEVE %		95	98	20	97	79
GRADATION - PASSING # 100 SIEVE %		88	65	13	90	69
GRADATION - PASSING # 200 SIEVE %		84	62	10	85	63
GRAVEL %		2	0	59	0	9
SAND %		14	38	31	15	28
SILT %		48	43	10% Fines	52	44
CLAY % (<0.002 MM)		36	19		33	19
LIQUID LIMIT %		43	29		45	23
PLASTIC LIMIT %		14	10	NP	16	10
PLASTICITY INDEX %		29	19		29	13
NATURAL MOISTURE CONTENT %		23.2	21.4	5.1	18.2	13.6
LIQUIDITY INDEX		0.32	0.6		0.08	0.28
BEARING RATIO % (SOAKED IBR)						
STANDARD DRY DENSITY AASHTO T-99 PCF						
OPTIMUM MOISTURE %						
ORGANIC CONTENT	L-O-I %					
	WET COMBUSTION %					

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Added 11/03/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **DP1-1** DATE STARTED **7-6-06** DATE COMPLETED **7-6-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **749.0**

END OF BORING **739.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

Detention Pond #1

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	748.5	Black clayey TOPSOIL
	1	SS	3-7-7	21.6	3.5*				Very stiff dark brown CLAY, trace organic, moist A-6
							2.0	747.0	
	2	SS	2-3-3	22.4	2.5*				Very stiff brown and gray CLAY, trace organic, moist A-6/A-7-6
							3.5	745.5	
	3	SS	4-5-8	18.2	4.5+*				
	4	SS	4-9-13	17.6	4.5+*				Hard brown CLAY, trace gravel, moist A-6
	A			19.5	4.5*				
	5	SS	4-7-9						
	B			14.8			9.5	739.5	
									Med. dense brown SANDY LOAM, very moist A-2-4
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 60393-25.GPJ TSC_ALL.GDT 7/14/06

248 Added 11/03/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **DP1-2** DATE STARTED **7-7-06** DATE COMPLETED **7-7-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **752.4**

END OF BORING **739.9**

Detention Pond #1

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
1	SS		3-4-5	26.3					Black CLAY LOAM (topsoil), very moist A-7-6
2	SS		2-2-3	21.7	3.5*				
							3.5	748.9	
3	SS		3-4-7	23.2	3.5*				Very stiff brown CLAY, trace gravel, moist A-7-6 (24) LL/PL/PI = 43/14/29
							5.5	746.9	
4	SS		4-7-10	16.1	4.5+*				Hard brown CLAY, trace gravel, moist to very moist A-6/A-7-6
5	SS		4-7-12	19.8	4.5+*				
							10.5	741.9	
6	SS		4-6-9	14.0	3.0*				Very stiff reddish-brown CLAY LOAM, trace gravel, moist A-6
									End of Boring at 12.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 60393-25.GPJ TSC_ALL.GDT 7/24/06

249 Added 11/03/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **DP1-3** DATE STARTED **7-7-06** DATE COMPLETED **7-7-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **753.7**

END OF BORING **741.2**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

Detention Pond #1

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
A							0.8	752.9	FILL - Sand and crushed Gravel
1	SS		3-4-6	20.2	4.0*				FILL - Brown and gray CLAY, trace gravel, moist A-7-6
B							2.0	751.7	
2	SS		3-3-4	25.0	3.0*				Very stiff gray CLAY, moist A-7-6
							3.5	750.2	
3	SS		3-5-8	19.1	2.5*				Very stiff brown and gray CLAY LOAM, trace gravel, moist A-6
4	SS		4-7-10	18.6	3.25*				
							8.0	745.7	
5	SS		1-2-2	17.5	0.25*				Very soft brown SILTY LOAM, very moist A-4
							10.5	743.2	
6	SS		6-12-16	9.8	4.5+*				Hard reddish-brown CLAY LOAM, trace gravel, damp A-4/A-6
									End of Boring at 12.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

250 Added 11/03/06

TSC 60393-25.GPJ TSC_ALL.GDT 7/14/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **DP19-1** DATE STARTED **7-7-06** DATE COMPLETED **7-7-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **748.5**

END OF BORING **736.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **8.0'**

▽ AT END OF BORING **10.0'**

▼ 24 HOURS

Detention Pond #19

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
A				14.7			0.8	747.7	Dark brown CLAY LOAM (topsoil), moist
1	SS		2-2-3						Stiff brown SANDY LOAM, moist A-2-4
B				13.1	1.5*		2.0	746.5	
2	SS		2-2-2	17.1					Loose brown fine SILTY SAND, moist A-1-b
							3.5	745.0	
3	SS		2-3-4	22.8	2.0*				Stiff to very stiff brown and gray CLAY, trace gravel, moist A-6
							5.5	743.0	
4	SS		4-5-6	11.3	2.25*				Very stiff brown and gray CLAY LOAM, little gravel, moist A-6
							8.0	740.5	▼
A				13.7					Loose brown SAND, trace gravel, saturated A-1-b
5	SS		4-5-7				9.0	739.5	
B				20.2	4.5*				▽ Hard brown CLAY, trace gravel, moist A-7-6
							10.5	738.0	
6	SS		4-7-11	18.8	2.75*				Very stiff gray CLAY, trace gravel, moist A-6
									End of Boring at 12.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 60393-25.GPJ TSC_ALL.GDT 7/14/06

251

Added 11/03/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **DP19-2** DATE STARTED **7-7-06** DATE COMPLETED **7-7-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **750.8**

END OF BORING **735.8**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **13.0 '**

▽ AT END OF BORING **13.0 '**

▼ 24 HOURS

Detention Pond #19

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
A				19.0					Dark brown CLAY LOAM (topsoil), moist A-6
1	SS		3-4-5				1.5	749.3	
B				21.3	3.0*		2.0	748.8	Very stiff brown CLAY, moist A-6/A-7-6
2	SS		3-4-4	15.1	3.25*		3.5	747.3	Very stiff brown CLAY LOAM, occasional sand seams, moist A-6
3	SS		3-4-6	19.2	1.75*		5.5	745.3	Stiff brown and gray CLAY LOAM, trace gravel, some sand seams, moist A-6
4	SS		4-4-4	21.4	0.25*		8.0	742.8	Soft brown and gray LOAM, very moist A-6 (8) LL/PL/PI = 29/10/19
5	SS		2-1-2	25.6	0.25*		10.5	740.3	Soft gray SILTY LOAM, very moist A-4
6	SS		4-7-27	11.3	2.75*		13.0	737.8	Very stiff gray SILTY CLAY LOAM, trace gravel, moist A-4 ▼
7	SS		5-13-16	11.5					Med. dense brown SAND and GRAVEL, saturated A-1-a
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. 53

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

252

Added 11/03/06

TSC 60393-25.GPJ TSC_ALL.GDT 7/24/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **DP19-3** DATE STARTED **7-6-06** DATE COMPLETED **7-6-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **758.5**

END OF BORING **736.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **21.0 '**

▽ AT END OF BORING **21.0 '**

▼ 24 HOURS

Detention Pond #19

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	758.0	Dark brown and black clayey Topsoil
1	SS		3-4-4	18.3	4.0*				Hard to very stiff brown CLAY, trace gravel, moist A-6/A-7-6
2	SS		2-3-3	21.9	2.25*				
							3.5	755.0	
3	SS		4-5-7	5.2					Med. dense brown SAND and GRAVEL, damp A-1
							5.5	753.0	
4	SS		8-15-15	4.7					Med. dense to dense brown SAND and GRAVEL, damp A-1
5	SS		11-16-19	3.2					
6	SS		8-10-15	4.6					
7	SS		7-9-13	5.1					
8	SS		8-13-18	8.7					
							18.0	740.5	
9	SS		5-7-8	18.6	2.75*				Very stiff gray CLAY, trace gravel, moist A-6
							20.5	738.0	
10	SS		4-5-6	13.5	<0.25*				▼ Very soft brown SANDY LOAM, very moist A-2-4
									End of Boring at 22.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0, 5, 10, 15, 20, 25

DRILL RIG NO. 53

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 60393-25.GPJ TSC_ALL.GDT 7/24/06

253

Added 11/03/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **DP19-4** DATE STARTED **7-6-06** DATE COMPLETED **7-6-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **759.5**

END OF BORING **737.0**

Detention Pond #19

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
A				11.0					Dark brown and black SANDY LOAM (topsoil), moist
1	SS		3-				1.0	758.5	Dark brown SANDY LOAM, little topsoil, moist A-4
B			3-2	11.7			2.0	757.5	
2	SS		3- 3-4	11.2	4.5*				Hard brown CLAY LOAM, trace root seams, moist A-6
							3.5	756.0	
3	SS		4- 5-7	19.0	4.25*				Hard brown CLAY, moist A-6/A-7-6
							5.5	754.0	
4	SS		12- 14-16	3.5					Samples 4, 5, 6: Gravel = 59% Sand = 31% Fines = 10%
5	SS		3- 11-19	5.1					
6	SS		20- 30-30	3.0					Med. dense to dense brown SAND and GRAVEL, damp A-1-a
7	SS		11 12-15	3.5					
8	SS		13 15-16	3.2					
9	SS		11- 14-16	4.0					
							20.5	739.0	
10	SS		2- 3-5	12.3	1.5*				Stiff gray CLAY LOAM, moist to very moist A-4/A-6
									End of Boring at 22.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 60393-25.GPJ TSC_ALL.GDT 7/24/08

254

Added 11/03/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **DP19-5** DATE STARTED **7-6-06** DATE COMPLETED **7-6-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **760.5**

END OF BORING **735.5**

Detention Pond #19

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	760.0	Dark brown and black clayey Topsoil
1	SS		3-4-4	24.0	2.5*				Very stiff brown CLAY, trace gravel, moist A-6/A-7-6
							2.0	758.5	
2	SS		3-4-4	5.9					Loose to med. dense brown and gray SAND, trace gravel, moist A-1-b
							3.5	757.0	
3	SS		4-5-6	16.0					Med. dense brown SANDY LOAM, trace gravel, moist A-2-4
							5.5	755.0	
4	SS		8-15-16	5.2					
5	SS		6-11-13	6.1					
6	SS		7-10-13	4.8					
7	SS		6-9-12	3.7					Dense to med. dense brown SAND and GRAVEL, damp A-1
8	SS		8-13-16	4.4					
9	SS		9-11-15	3.2					
10	SS		13-13-17	7.8					* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
							23.0	737.5	
11	SS		7-9-10	12.0	4.5+*				Hard gray CLAY LOAM, trace gravel, damp A-6

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. 53

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 25.0'

255

Added 11/03/06

TSC 60393-26.GPJ TSC_ALL.GDT 7/24/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **ST-1** DATE STARTED **7-7-06** DATE COMPLETED **7-7-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **745.8**

END OF BORING **735.8**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **6.0 '**

▽ AT END OF BORING **5.0 '**

▼ 24 HOURS

Stearns Road
Sta. 153+00 at CL

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	745.3	Dark brown clayey TOPSOIL (OL)
1	SS		2-2-4	24.7	2.5*				Very stiff to stiff brown and gray CLAY, trace gravel, moist to very moist A-6/A-7-6
2	SS		2-2-3	25.1	1.5*				
							3.5	742.3	
3	SS		4-4-5	37.7	0.5*				Soft brown, gray and black CLAY LOAM with occasional sand and gravel seams, very moist A-6/A-7-6 ▽
							5.5	740.3	▼
4	SS		3-4-5	14.1					Loose brown SAND, trace gravel, saturated A-1-b
							8.0	737.8	
A				20.3	3.5*				Very stiff brown CLAY, trace gravel, moist A-6
5 B	SS		4-5-9	19.6	3.75*		9.5	736.3	Very stiff gray CLAY, trace gravel, moist A-6
									End of Boring at 10.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 60393-25.GPJ TSC_ALL.GDT 7/14/06

256

Added 11/03/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **ST-2** DATE STARTED **7-6-06** DATE COMPLETED **7-6-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **753.3**

END OF BORING **740.8**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

Stearns Road
Sta. 156+00 at CL

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.3	753.0	Dark brown clayey Topsoil
	1	SS	3-4-4	18.2	4.0*				Very stiff to hard dark brown SILTY CLAY, moist A-7-6 (25)
	2	SS	2-2-2	21.7	4.0*				Sample 1: LL/PL/PI = 45/16/29
	3	SS	5-5-6	10.6			3.5	749.8	Med. dense brown clayey SAND and GRAVEL, moist A-1
	4	SS	9-10-11	7.2			5.5	747.8	Med. dense to dense brown SAND, little gravel, damp A-1
	5	SS	15 22-9	5.5					
	6	SS	4-6-10	15.9	4.0*		10.5	742.8	Hard gray CLAY, trace gravel, moist A-6
									End of Boring at 12.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0, 5, 10, 15, 20, 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

257

Added 11/03/06

TSC 60393-25.GPJ TSC_ALL.GDT 7/24/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **ST-3** DATE STARTED **7-6-06** DATE COMPLETED **7-6-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **759.3**

END OF BORING **746.8**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

Stearns Road
Sta. 159+00 at CL

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	758.8	Dark brown and black clayey Topsoil
1	SS		3-6-6	11.6	4.5+*				Hard to very stiff brown CLAY LOAM, trace gravel, damp to moist A-6
2	SS		3-5-5	16.7	4.5+*				
3	SS		4-5-8	14.9	2.5*				(occasional silty loam layer)
							5.5	753.8	
4	SS		4-4-5	13.6	1.5*				Stiff brown LOAM, trace gravel, moist A-6 (5) LL/PL/PI = 23/10/13
							8.0	751.3	
5	SS		4-5-8	16.9	4.5+*				Hard gray CLAY, trace gravel, moist A-6
6	SS		8-10-13	16.9	4.5+*				
									End of Boring at 12.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 60393-25.GPJ TSC_ALL.GDT 7/24/06

258

Added 11/03/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **ST-4** DATE STARTED **7-6-06** DATE COMPLETED **7-6-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **761.7**

END OF BORING **749.2**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

Stearns Road
Sta. 162+00 at CL

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	761.2	Dark brown and black clayey Topsoil
1	SS		3-4-6	13.8	4.5*				Hard brown SILTY CLAY LOAM, moist A-6
2	SS		2-2-2	13.7	4.5+*				
							3.5	758.2	
3	SS		4-5-7	15.9	4.5+*				
4	SS		4-10-12	15.7	4.5+*				Hard brown CLAY LOAM, trace gravel, moist A-6
5	SS		4-7-10	16.5	4.5*				
							10.5	751.2	
6	SS		7-10-13	16.2	4.0*				Very stiff to hard gray CLAY, occasional silt seams, trace gravel, moist A-6
									End of Boring at 12.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

259

Added 11/03/06

TSC 60393-25.GPJ TSC_ALL.GDT 7/14/06

PROJECT **Stearns Road Improvements, Kane County, Illinois**

CLIENT **Alfred Benesch & Company, Chicago, Illinois**

BORING **ST-5** DATE STARTED **7-6-06** DATE COMPLETED **7-6-06** JOB **L-60,393**

ELEVATIONS

GROUND SURFACE **765.9**

END OF BORING **753.4**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

Stearns Road
Sta. 164+50 at CL

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
A				25.6					Dark brown and black CLAY LOAM (topsoil), moist
							1.0	764.9	
1	SS		2-3-5						Stiff to very stiff brown CLAY, moist A-6/A-7-6
B				24.2	2.0*				
							2.0	763.9	
2	SS		3-4-4	15.3	4.0*				
3	SS		4-5-7	12.4	4.25*				
4	SS		5-7-10	15.1	4.5*				Very stiff to hard brown CLAY and CLAY LOAM, trace gravel, moist A-6
5	SS		4-7-10	12.2	4.0*				
							10.5	755.4	
6	SS		5-8-10	17.4	4.0*				Very stiff to hard gray CLAY, trace gravel, moist A-6
									End of Boring at 12.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0, 5, 10, 15, 20, 25

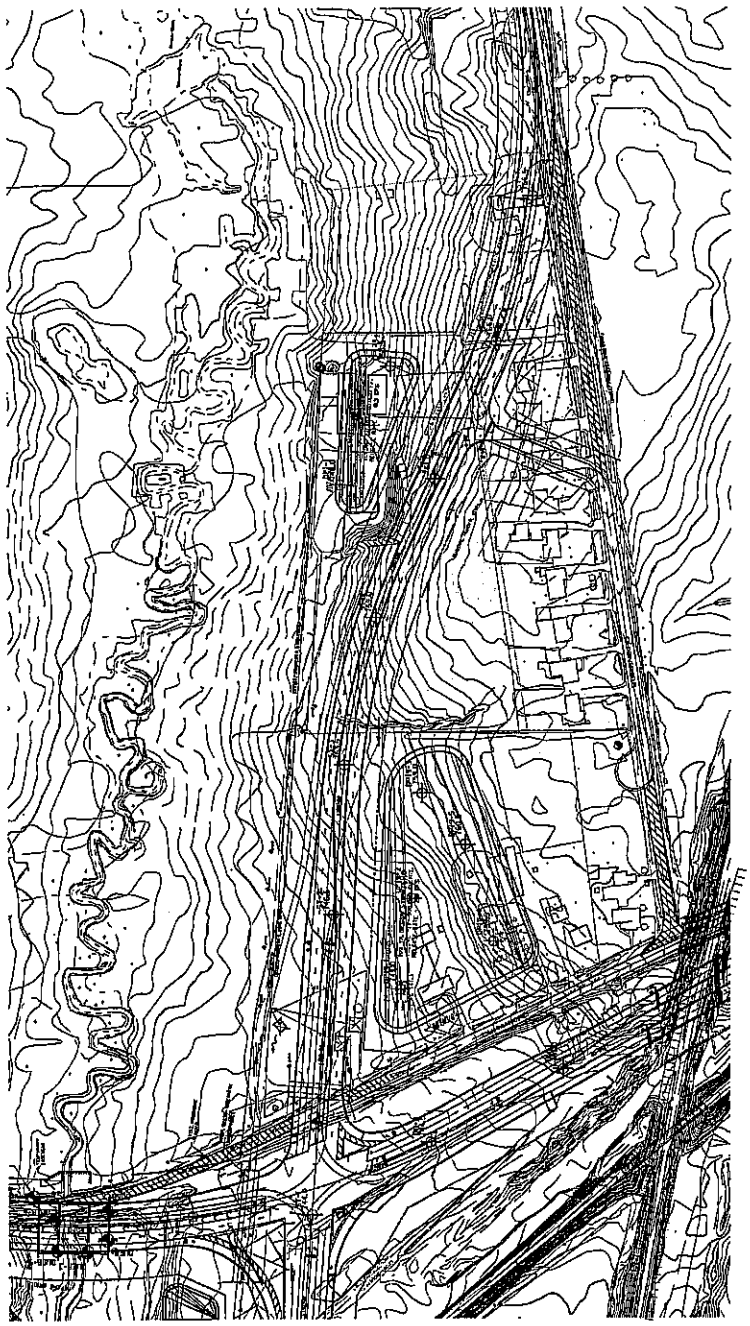
DRILL RIG NO. **53**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

260

Added 11/03/06

TSC 60393-25.GPJ TSC_ALL.GDT 7/14/06



Added 11/03/06

STANDBY GENERATOR

This work consists of coordinating and paying for a standby generator to serve Midwest Groundcovers during service interruptions. The contractor will be reimbursed the actual fees charged by Midwest Groundcover's supplier; no markup is allowed.

This work shall be paid for in accordance with article 109.04, Payment for Extra Work, of the Standard Specifications.

Added 11/03/06

COMED ELECTRICAL SERVICE

This item consists of coordinating and paying for a new COMED service cable to be pulled into contractor installed 6" HDPE duct. The CONTRACTOR will be reimbursed for the actual fees charged by COMED; no markup is allowed.

This work shall be paid for in accordance with article 109.04, Payment for Extra Work, of the Standard Specifications.

Added 11/03/06

Item #97

Contract No. 83862

F.A.P. 361 (STEARNS ROAD CORRIDOR WETLAND MITIGATION SITE)

The Stearns road project site is located in unincorporated Kane County, west of Illinois Route 25, east of the Fox River, south of the Illinois Central Railroad. The site is approximately 70 acres of area without a road. This project is a smaller portion of a larger project because Stearns Road will be extended beyond these project limits. Under this contract the area will be graded and earthwork completed for the proposed Stearns Road embankment and bike path.

The embankment will provide for the road cross section and new intersection of Illinois Route 25, but the actual road and sub grade will be constructed under a separate contract. The embankment will also provide the earthwork for the bridge abutments for the east side of the proposed Fox River structure and the proposed Stearns Road over the North Arm of Brewster Creek. Currently there are no drainage structures on the project site.

Brewster Creek travels through the site from Illinois Route 25 to the Fox River, south of the planned road embankment. Since Brewster Creek is a designated floodway and parts of the site are wetlands, the need for wetland, compensatory storage, and detention storage mitigation is as such. Since this project is a stage of the Stearns Road project, this site will provide for mitigation for this grading project and the completion of this portion of Stearns Road. This project will provide compensatory storage for five structures with commitments to this site.

This project provides the mitigation for the wetlands, the compensatory storage, and detention storage. With all the plantings, this project will return a gravel area to a natural setting that will better able to absorb the impacts of a proposed roadway.

Kane County's Division of Transportation has an informational website devoted to the subject project.

http://www.co.kane.il.us/DOT/Fox_River_Bridges/index.asp

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