

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

VARIOUS ROUTES (MISSOURI AVE. PUMP STATION)  
DIST 8 DEEP WELLS 2009-2

ST. CLAIR COUNTY  
INSTALLATION OF DEEP WELL TO REPLACE COLLAPSED  
WELL AT MISSOURI AVE. PUMP STATION

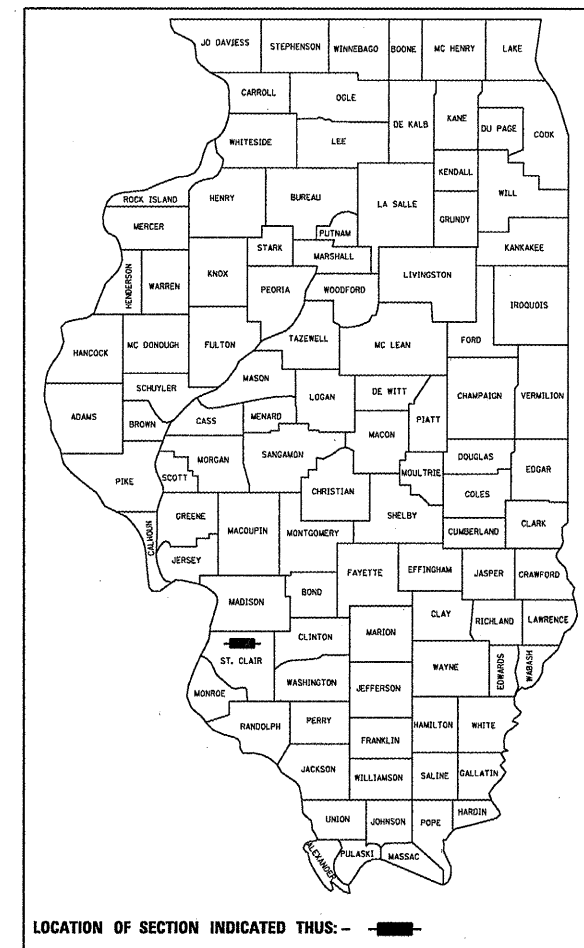
C-98-012-09

★ 7+13-1=19

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
	**	ST. CLAIR	7
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO.	76C71	

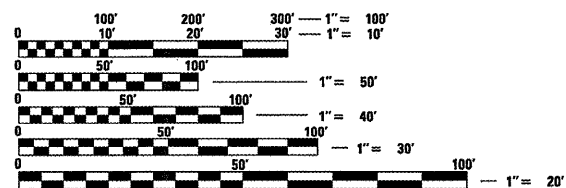
VARIOUS ROUTES  
DISTRICT 8 DEEP WELLS 2009-2

D-98-017-09



INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES, COMMITMENTS, HIGHWAY STANDARDS & BENCHMARK
- 3 SUMMARY OF QUANTITIES
- 4 PLAN VIEW
- 5-6 MISSOURI AVE. TYPICAL WELL DETAILS
- 7 NOT USED
- 7A.-7M. FIELD BORING LOGS

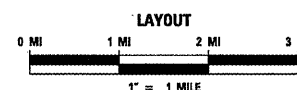


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179  
PROJECT MANAGER: CHERYL KEPLAR (618) 346-3186

CONTRACT NO. 76C71



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED December 11, 20 08  
*Alan C. Jamie*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 1, 20 09  
*Charles J. Ingersoll*  
ENGINEER OF DESIGN AND ENVIRONMENT

May 1, 20 09  
*Christine M. Reed*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

Rev.

GENERAL NOTES

1. THE RESIDENT ENGINEER SHALL LOCATE AND MARK THE EXACT LOCATIONS FOR ALL PROPOSED ITEMS PRIOR TO INSTALLATION BY THE CONTRACTOR.
2. FLUORESCENT ORANGE "ROAD CONSTRUCTION AHEAD" SIGNS SHALL BE PLACED AT THE BEGINNING AND END OF THE PROJECT PLUS THE INTERSECTING SIDE ROADS AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL NOT BE MEASURED FOR PAYMENT.
3. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

Ameren - UE (Aerial & Buried)\*  
 Charter Communications (Buried)\*  
 Illinois American Water Co. (Buried)\*  
 Ameren IP (Buried)\*  
 McLeod USA Telecommunications, Inc. (Buried)  
 Qwest communications (Buried)\*  
 SBC (Aerial & Buried)\*

J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

4. EXCEPT WHERE DESIGNATED OTHERWISE, THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM OFFICE RECORD INFORMATION FURNISHED BY THE UTILITY OWNERS AND MUST BE CONSIDERED APPROXIMATE.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
6. NO LANE CLOSURES WILL BE ALLOWED EXCEPT FOR SHORT TIME OPERATIONS AS SHOWN IN STANDARD 701301 AND SHALL BE PAID FOR AS PER SECTION 701.019(b) OF THE STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.

HIGHWAY STANDARDS

000001-05  
 001001-02  
 001006  
 701301-03  
 701901-01  
 814001-02

COMMITMENTS

NONE

FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED - ___	REVISED - ___	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS	SHEET NO.	
						*	**	ST. CLAIR	7	2	
						SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____		CONTRACT NO. 76C71			
						FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

*Rev.*

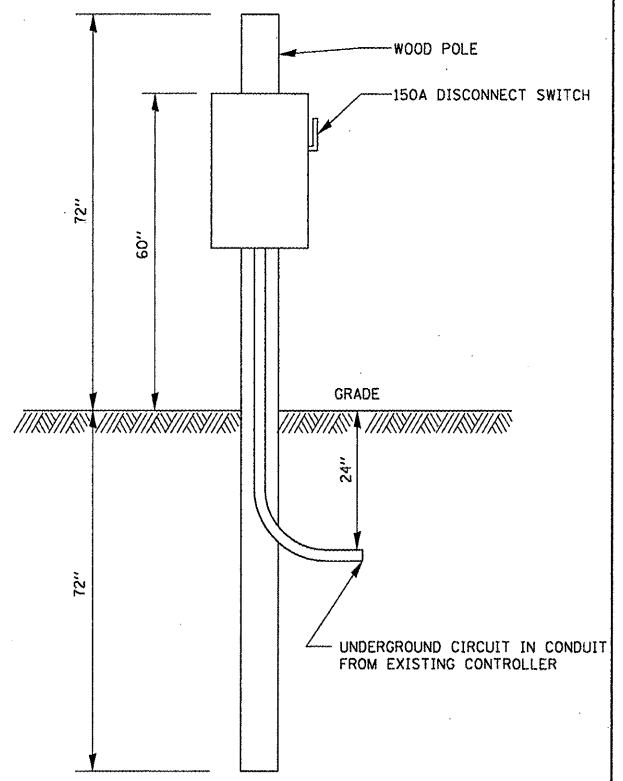
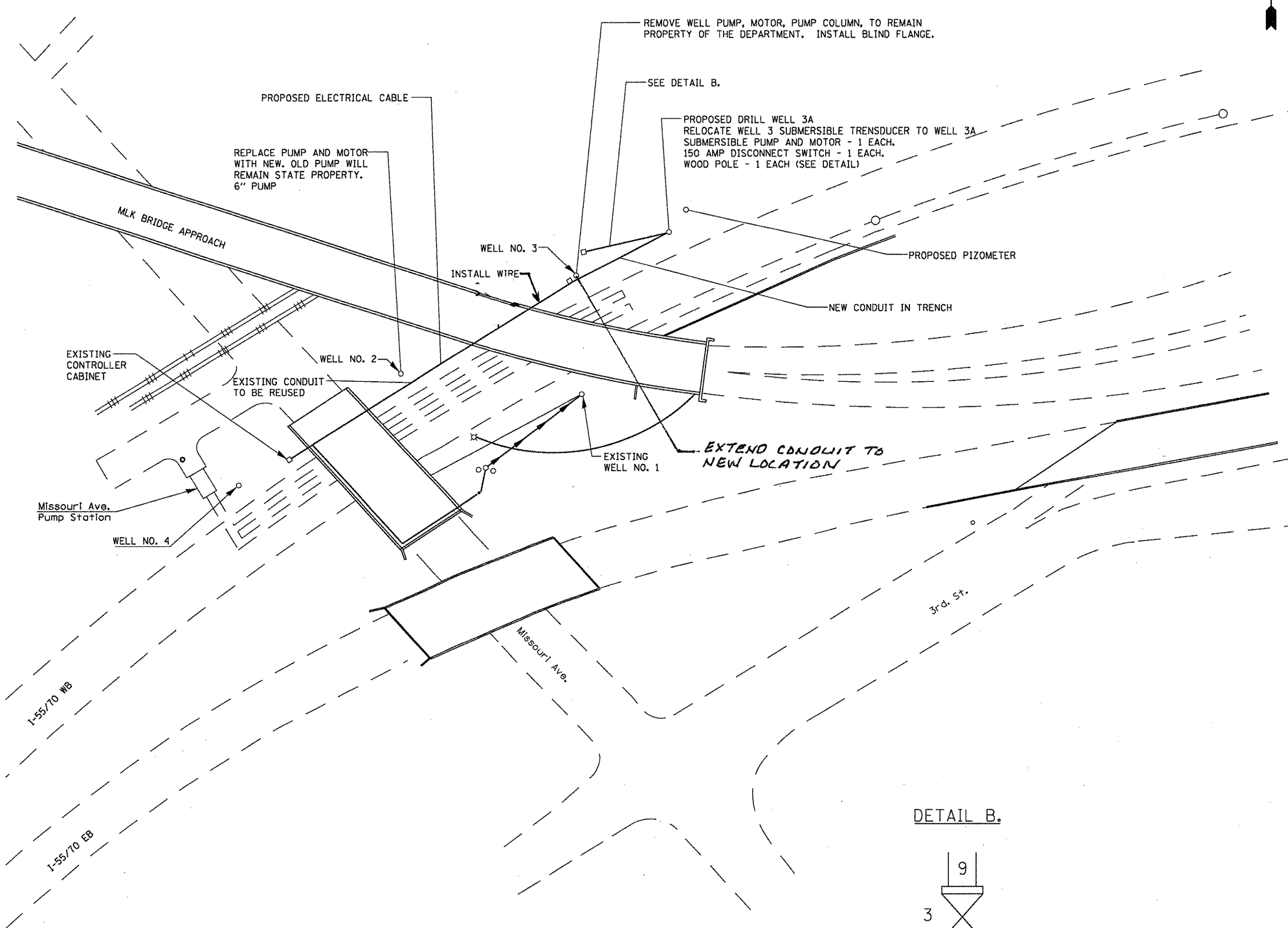
\* VARIOUS ROUTES  
 \*\* DISTRICT 8 DEEP WELLS 2008-2

# SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES			URBAN	100% STATE ST. CLAIR COUNTY CONSTRUCTION TYPE CODE		SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE			
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	100% STATE ST. CLAIR COUNTY	-----	-----	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	-----	-----	-----
67100100	MOBILIZATION	L SUM	1	1									
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	14	14									
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	300	300									
81702410	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 4	FOOT	300	300									
X0323255	DRILLED WELL	EACH	1	1									
X0324741	HIGH DENSITY POLYETHYLENE PIPE 8"	FOOT	16	16									
X0462500	SUBMERSIBLE PUMP	EACH	2	2									
X8570100	DISCONNECT SWITCH	EACH	1	1									
Z0040000	PIEZOMETERS	EACH	1	1									
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	14	14									

*Rev.*

FILE NAME =	USER NAME = #USER#	DESIGNED - ---	REVISED - ---	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - ---	REVISED - ---			*	**	ST. CLAIR	7	3
		CHECKED - ---	REVISED - ---			CONTRACT NO. 76C71				
		PLOT SCALE = #SCALE#	REVISED - ---	SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____		FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT				
		PLOT DATE = #DATE#	REVISED - ---							



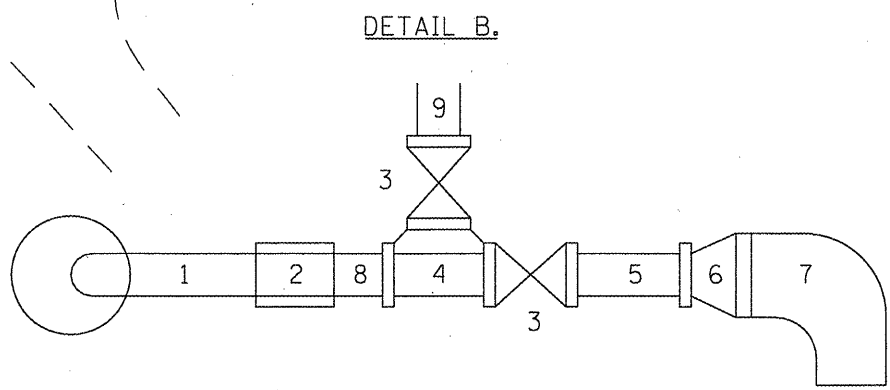
WOOD POLE DETAIL

NOTES

- ALL STAINLESS STEEL IS 304.L
- THE ENGINEER SHALL IDENTIFY SOURCE OF EXISTING ELECTRICAL CIRCUIT FOR SHUT OFF PRIOR TO THE CONNECTION OF THE PROPOSED CIRCUIT.
- THE PROPOSED CONNECTION THE EXISTING CONTROLLER CABINET AND PROPOSED STAINLESS STEEL WELL HEAD SHALL BE APPROVED BY THE ENGINEER AND INCLUDED IN THE PRICE OF ELECTRICAL CABLE IN CONDUIT.
- EXISTING GRADE: 397.90
- VERIFY PHASE ROTATION AND MATCH EXIST. CONNECTION**

LEGEND

1. REUSE EXISTING 8" S.S PIPE.
2. NEW 8" S.S. COUPLING
3. NEW 8" S.S. KNIFE VALVE
4. NEW 8" S.S. TEE, FLANGE
5. NEW 8" S.S. PIPE
6. REUSE EXISTING REDUCER
7. REUSE EXISTING S.S. 90° ELBOW
8. NEW 8" S.S. PIPE
9. NEW 8" HDPE PIPE



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	PLOT DATE = #DATE#	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

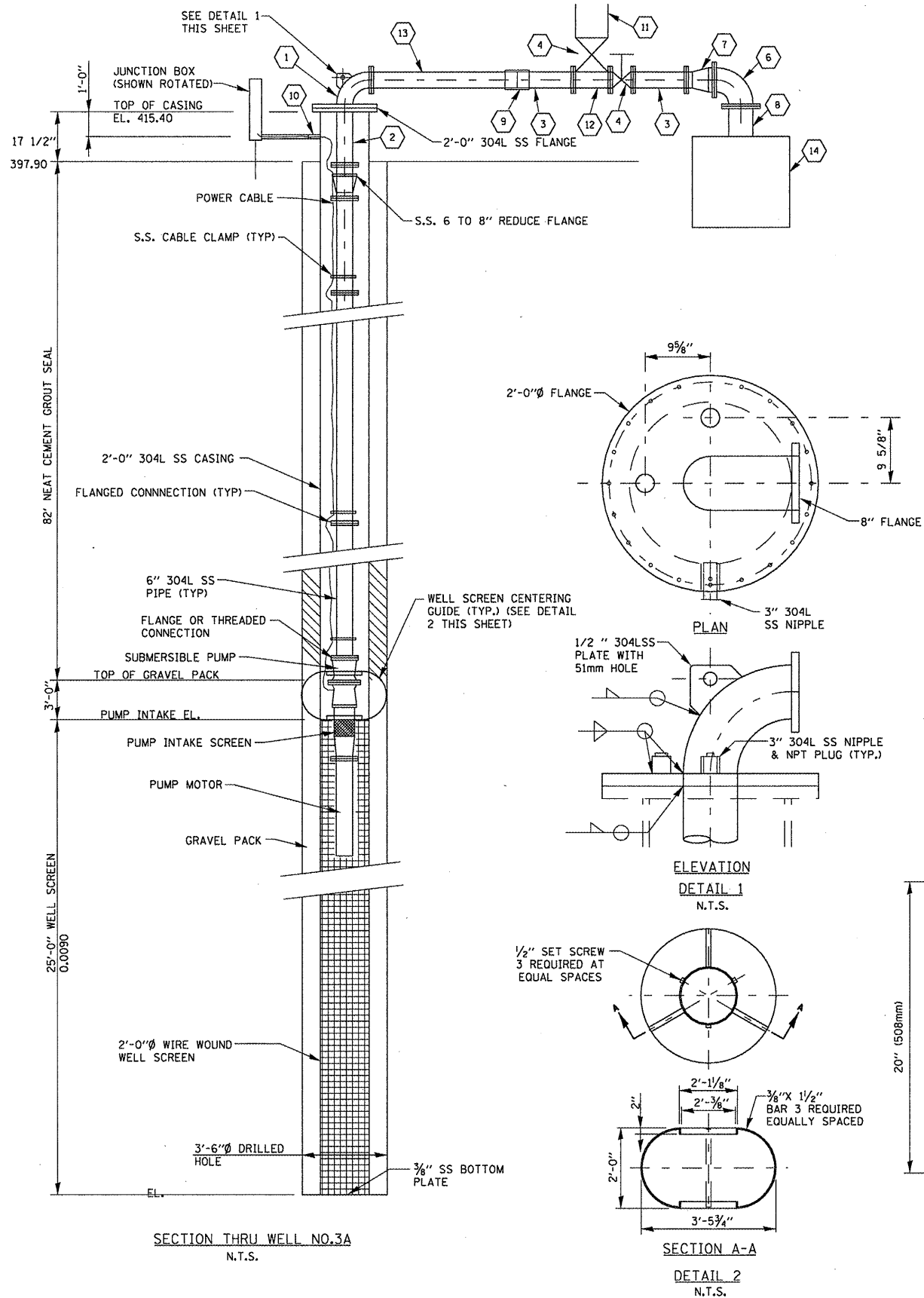
**SITE PLAN MISSOURI WELLS**

SCALE: \_\_\_\_\_ SHEET NO. \_\_\_ OF \_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

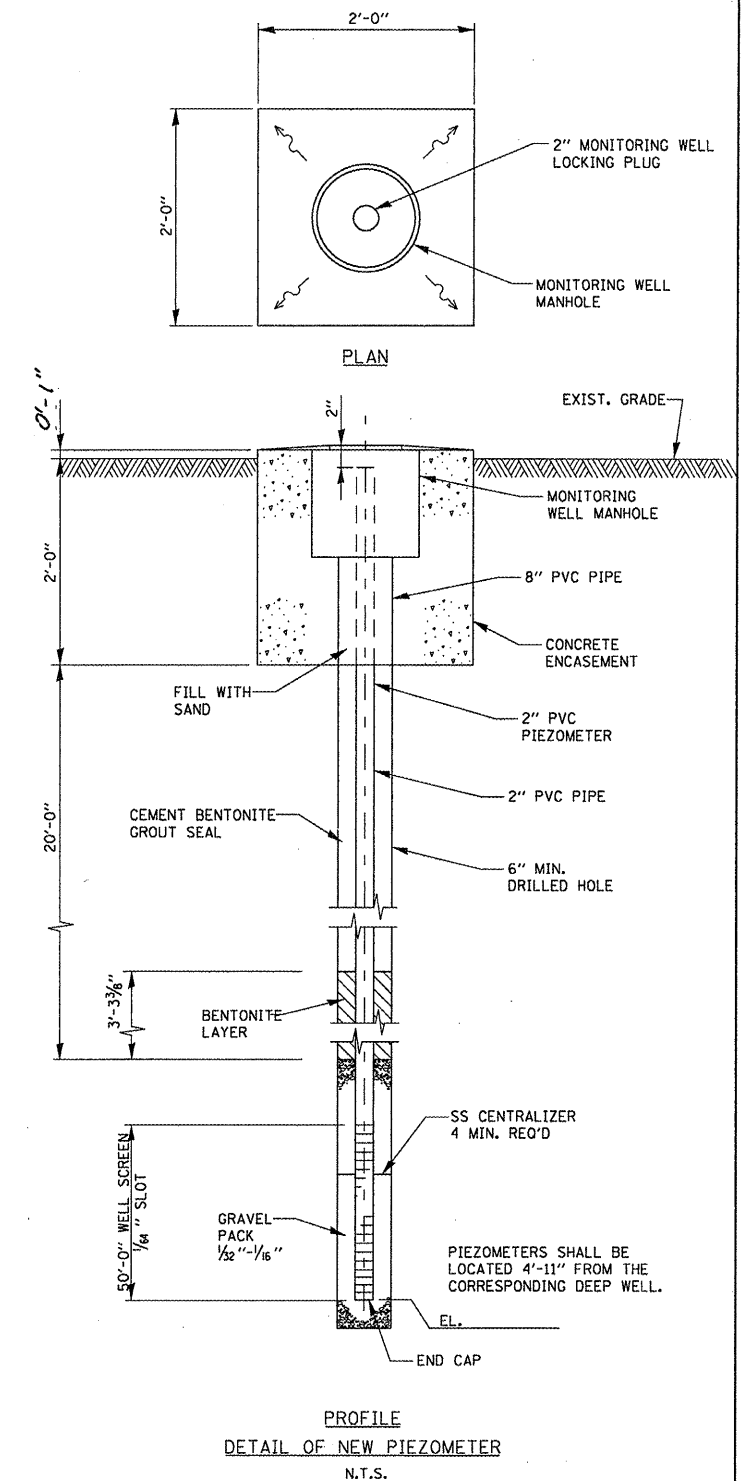
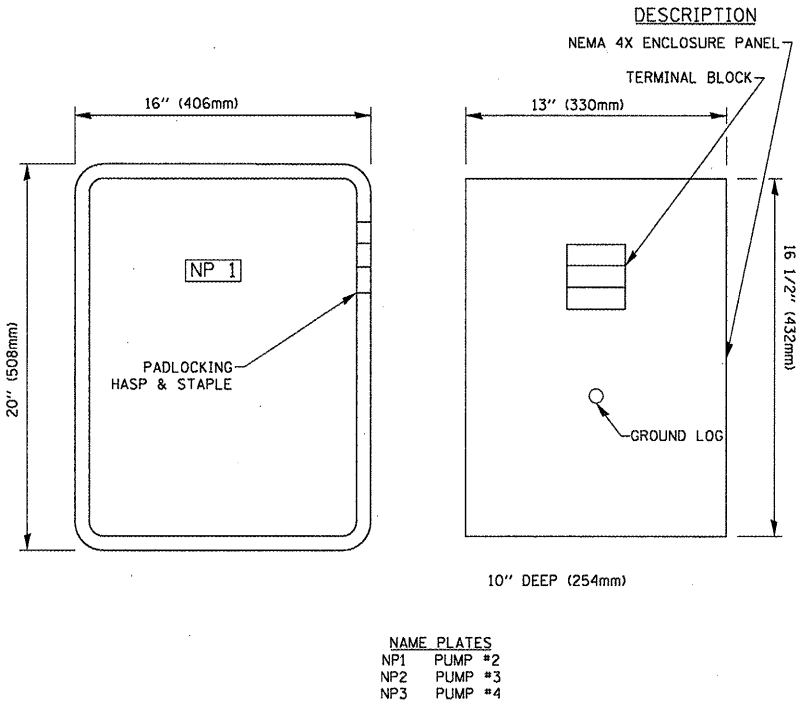
Rev.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	SI. CLAIR	7	4
			CONTRACT NO. 76C71	

FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT



- LEGEND**
- 1 NEW 8" 304 L SS 90° ELBOW W/2'-0" FLANGE AND 8" FLANGE
  - 2 NEW 8" 304 L SS PIPE FLANGE
  - 3 NEW 8" 304 L SS PIPE, FLANGE x PE
  - 4 NEW 8" KNIFE GATE VALVE.
  - 5 EXISTING 8" 304 L SS TEE, FLANGE
  - 6 EXISTING 1'-0" 304 L SS 90° ELBOW FLANGED.
  - 7 EXISTING 8"x1'-0" 304 L SS REDUCER, FLANGED
  - 8 EXISTING 1'-0" 304 L SS PIPE, FLANGED
  - 9 NEW S.S COUPLING, 8"x1'-0 1/2"
  - 10 NEW 3" 304 L SS NIPPLE, WELD TO CASING (SHOWN ROTATED) ORIENT PER ELECTRICAL DRAWINGS.
  - 11 NEW 8" HDPE
  - 12 NEW 8" 304 L S.S. T REUSE
  - 13 EXISTING 8" S.S. PIPE
  - 14 EXISTING CONCRETE THRUST BLOCK
- NOTE:  
ALL NUTS, BOLTS & WASHERS SHALL BE 304 STAINLESS STEEL.  
ALSO PIPES TO BE ALL STAINLESS STEEL  
NOTE PUMP INTAKE IS AT 84"  
ALL BOLTS & NUTS TO BE ALL STAINLESS STEEL  
CONTRACTOR WILL VERIFY ALL DIMENSIONS ON ALL PIPES



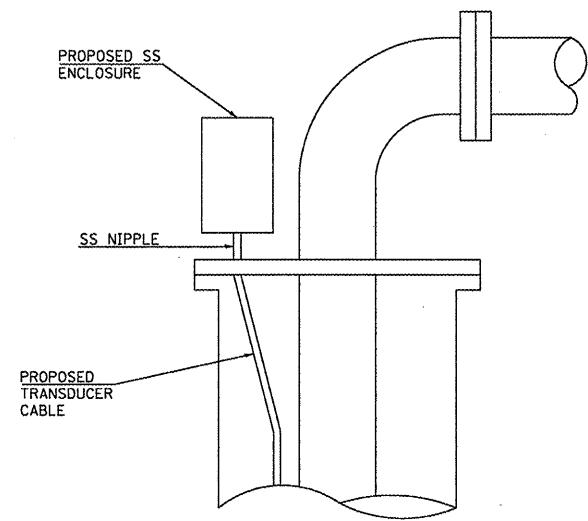
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

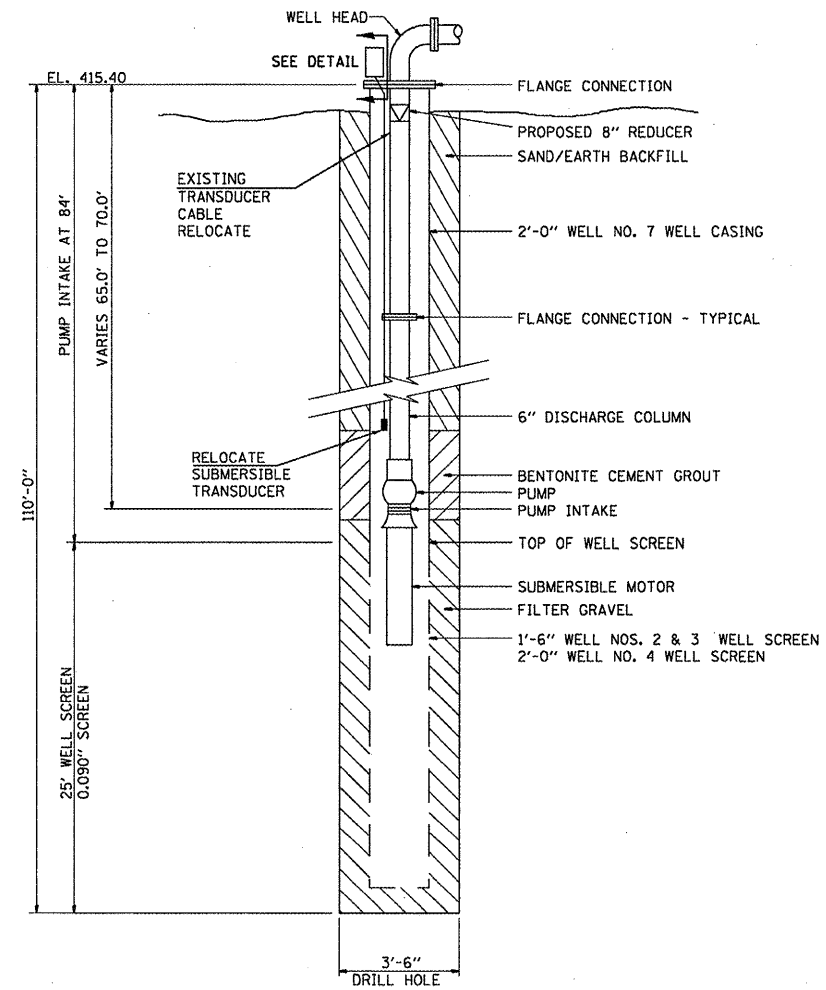
**VARIOUS ROUTES TYPICAL WELL DETAILS**

SCALE: \_\_\_\_\_ SHEET NO. \_\_\_ OF \_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

Rev.	* VARIOUS ROUTES ** DISTRICT 8 DEEP WELLS 2008-2	
F.A. RTE.	SECTION	COUNTY
	**	ST. CLAIR
		TOTAL SHEETS
		7
		5
		CONTRACT NO. 76C71
		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



WELL HEAD DETAIL



PROPOSED

• VARIOUS ROUTES  
 \*\* DISTRICT 8 DEEP WELLS 2008-2

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - ---	REVISED - ---
		DRAWN - ---	REVISED - ---
		CHECKED - ---	REVISED - ---
		DATE - ---	REVISED - ---
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PLLOT DATE = #DATE#			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

VARIOUS ROUTES TYPICAL WELL DETAILS

SCALE: \_\_\_\_\_ SHEET NO. \_\_\_ OF \_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	**	ST. CLAIR	7	6
CONTRACT NO. 1671				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



**Layne-Western Company**  
A Layne Company  
2399 Cassens Drive • Fenton, Missouri 63028

**FIELD BORING LOG**

Project IDOT  
Boring No. TH-1  
Missouri Ave. #3

Project IDOT Job No. \_\_\_\_\_ Date 9-17-07  
Location Missouri Ave. East St. Louis Ave. Dale M., Dave J., 75

Drilling Method:  HSA  CFA  Rotary Wash  Rock Coring  Drilling Fluid

DEPTH, ft.		DESCRIPTION	Sample		SPT Blows N/8"
From	To		Type	Depth, ft.	
0	10'	Fill Rocks, Cinders, Clay, Bricks	S.S.	33-35	90%
10'	20'	Silty clay		38-40	
20'	37'	Dry Silty Fine Sand Brown		43-45	
37'	55'	Wet Brownish Silty Fine to med Sand.		48-50	
				53-55	
55'	75'	med to fine silty wet Grey Sand		58-60	
75'	80'	wet Grey to brown silty sand w/		63-65	
		Black Lignite or Organics.		68-70	
80'	85'	med to coarse sand w/ Heavy Gravel		73-75	
85'	112'	Med to coarse Sands & Gravel		78-80	
112'		Boulders then Refusal some Large		83-85	
		* First Augered to 40' when had trouble Augering to 50' (HCL Pad)	Wash G-Tab	83-88	100%
		used 19 bags Bentonite		88-93	
		From - 85 on Sucked Mud		93-98	
		@ 1 Pit for 5' of Drilling = 2 Bag Pits		98-103	
				103-108	
				108-112	

WATER LEVEL OBSERVATIONS	NOTES	Piezometer Installed: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - Depth _____ ft.
During Drilling <u>±37</u> ft.	Back filled w/ Thick Bent. Mud chips to top then covered w/ cuttings	
At Completion _____ ft.		
After _____ hrs. _____ ft.		
After _____ hrs. _____ ft.		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 83' - 85' Container # 2

	Dirty sample	Washed sample
Wt sample + tare	859.3	844.5
Tare wt	415.1	415.1
Wt Sample	444.2	429.4
 Wt of sample washed past #200 sieve:		 14.8

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2	422.8	7.7	436.5	98.3
3/8	463.2	40.4	396.1	89.2
4	505.7	42.5	353.6	79.6
6	516.3	10.6	343.0	77.2
8	528.3	12.0	331.0	74.5
16	578.2	49.9	281.1	63.3
30	682.5	104.3	176.8	39.8
50	817.2	134.7	42.1	9.5
100	838.4	21.2	20.9	4.7
200	844.5	6.1	14.8	3.3
PAN	844.5	0.0		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 83' - 88' Container # 3

	Dirty sample	Washed sample
Wt sample + tare	1117.8	1112.9
Tare wt	413.0	413.0
Wt Sample	704.8	699.9
 Wt of sample washed past #200 sieve:		 4.9

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	423.2	10.2	694.6	98.6
4	592.9	169.7	524.9	74.5
6	656.8	63.9	461.0	65.4
8	707.5	50.7	410.3	58.2
16	808.3	100.8	309.5	43.9
30	944.3	136.0	173.5	24.6
50	1089.3	145.0	28.5	4.0
100	1111.7	22.4	6.1	0.9
200	1112.9	1.2	4.9	0.7
PAN	1112.9	0.0		

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#FILE#		DRAWN -	REVISED -
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	PLOT DATE = #DATE#	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS

SCALE: \_\_\_\_\_ SHEET NO. \_\_\_\_ OF \_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	SI. CLAIM	I	I
			CONTRACT NO. 76C11	
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

\* VARIOUS ROUTES  
\*\* DISTRICT & DEEP WELLS 2005-2



# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 88' - 93' Container # 13

	Dirty sample	Washed sample
Wt sample + tare	1163.5	1159.6
Tare wt	400.1	400.1
Wt Sample	763.4	759.5
Wt of sample washed past #200 sieve:		3.9

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2	423.2	23.1	740.3	97.0
3/8	444.6	21.4	718.9	94.2
4	628.1	183.5	535.4	70.1
6	724.8	96.7	438.7	57.5
8	821.7	96.9	341.8	44.8
16	962.3	140.6	201.2	26.4
30	1063.3	101.0	100.2	13.1
50	1146.0	82.7	17.5	2.3
100	1158.8	12.8	4.7	0.6
200	1159.6	0.8	3.9	0.5
PAN	1159.6	0.0		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 93' - 98' Container # 14

	Dirty sample	Washed sample
Wt sample + tare	1217.4	1214.4
Tare wt	414.3	414.3
Wt Sample	803.1	800.1
Wt of sample washed past #200 sieve:		3.0

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	432.9	18.6	784.5	97.7
4	531.2	98.3	686.2	85.4
6	594.0	62.8	623.4	77.6
8	666.6	72.6	550.8	68.6
16	828.8	162.2	388.6	48.4
30	1050.6	221.8	166.8	20.8
50	1193.3	142.7	24.1	3.0
100	1213.3	20.0	4.1	0.5
200	1214.2	0.9	3.2	0.4
PAN	1214.4	0.2		

VARIOUS ROUTES  
 DISTRICT # DEPT WELLS 2005-2

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS</b>	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -					ST. CLAIM	I	JK
		CHECKED -	REVISED -			SCALE: _____	SHEET NO. _____ OF _____ SHEETS	CONTRACT NO. 16021		
		DATE -	REVISED -			STA. _____ TO STA. _____		FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 98' - 103' Container # 15

	<u>Dirty sample</u>	<u>Washed sample</u>
Wt sample + tare	1124.0	1121.6
Tare wt	409.2	409.2
Wt Sample	714.8	712.4
Wt of sample washed past #200 sieve:		2.4

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	438.9	29.7	685.1	95.8
4	576.1	137.2	547.9	76.7
6	657.3	81.2	466.7	65.3
8	740.8	83.5	383.2	53.6
16	874.3	133.5	249.7	34.9
30	1027.1	152.8	96.9	13.6
50	1108.2	81.1	15.8	2.2
100	1121.2	13.0	2.8	0.4
200	1121.6	0.4	2.4	0.3
PAN	1121.6	0.0		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 103' - 108' Container # 1

	<u>Dirty sample</u>	<u>Washed sample</u>
Wt sample + tare	1137.7	1133.4
Tare wt	412.1	412.1
Wt Sample	725.6	721.3
Wt of sample washed past #200 sieve:		4.3

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	421.2	9.1	716.5	98.7
4	737.9	316.7	399.8	55.1
6	905.9	168.0	231.8	31.9
8	1022.0	116.1	115.7	15.9
16	1100.2	78.2	37.5	5.2
30	1119.8	19.6	17.9	2.5
50	1129.4	9.6	8.3	1.1
100	1131.6	2.2	6.1	0.8
200	1133.4	1.8	4.3	0.6
PAN	1133.4	0.0		

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		CHECKED	REVISED
		DATE	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	ST. CLAIR	7	7
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT			CONTRACT NO. 76C71	

\* VARIOUS ROUTES  
\*\* DISTRICT & DEEP WELLS 2009-3

# Grain Size Analysis

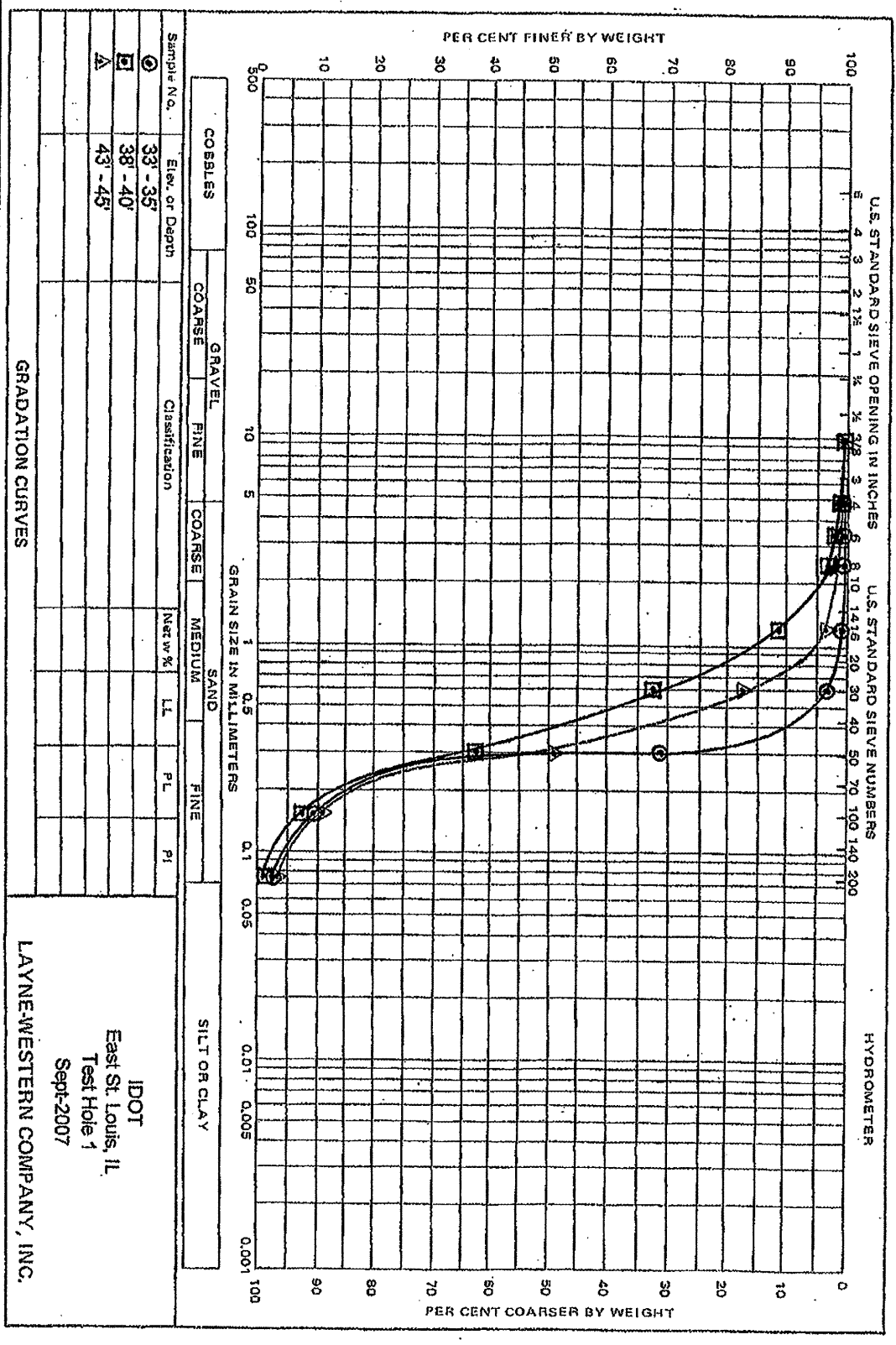
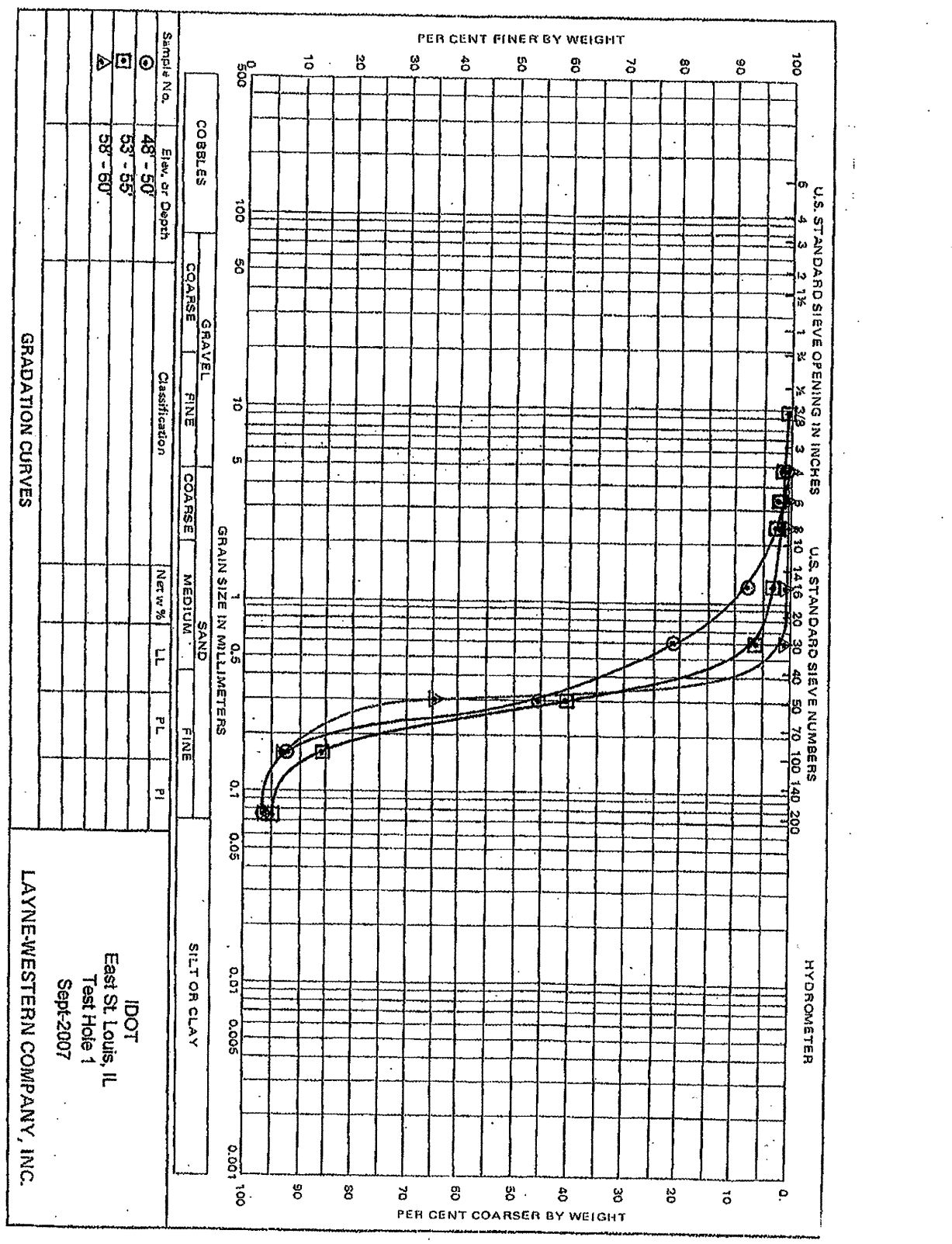
Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 108' - 112' Container # 2

	Dirty sample	Washed sample
Wt sample + tare	1153.2	1149.4
Tare wt	415.1	415.1
Wt Sample	738.1	734.3
 Wt of sample washed past #200 sieve:		 3.8

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	419.9	4.8	733.3	99.3
4	543.3	123.4	609.9	82.6
6	653.5	110.2	499.7	67.7
8	791.2	137.7	362.0	49.0
16	982.6	191.4	170.6	23.1
30	1112.6	130.0	40.6	5.5
50	1145.8	33.2	7.4	1.0
100	1149.1	3.3	4.1	0.6
200	1149.4	0.3	3.8	0.5
PAN	1149.4	0.0		

\* VARIOUS ROUTES  
\*\* DISTRICT 8 DEEP WELLS 2009-2

FILE NAME *	USER NAME = #USER#	DESIGNED - ----	REVISED - ----	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FILE#		DRAWN - ----	REVISED - ----			1	2	ST. CLAIR	7	7M	
	PLOT SCALE = #SCALE#	CHECKED - ----	REVISED - ----			SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____		CONTRACT NO. 1BGT1		FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT	
	PLOT DATE = #DATE#	DATE - ----	REVISED - ----								



FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
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	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

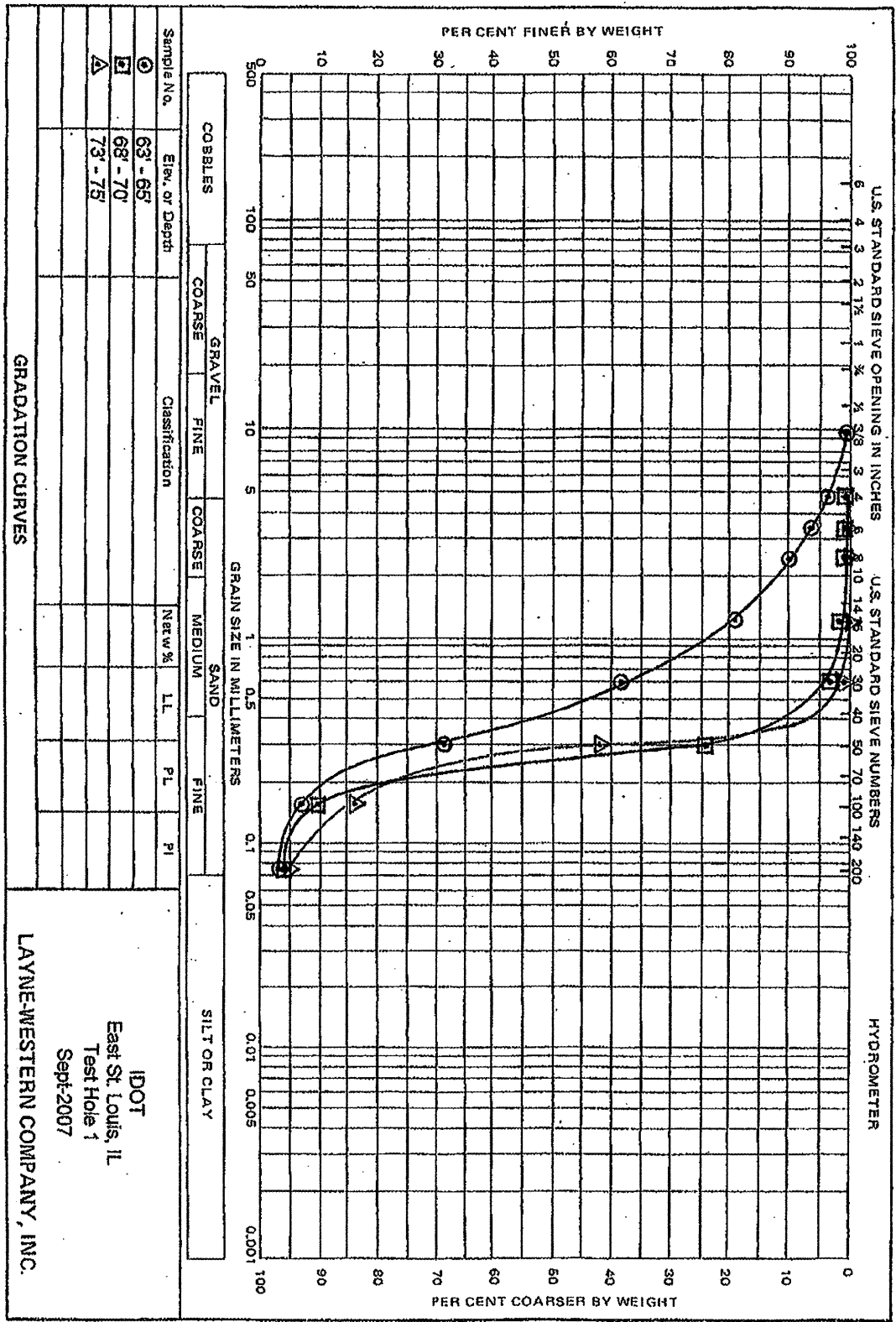
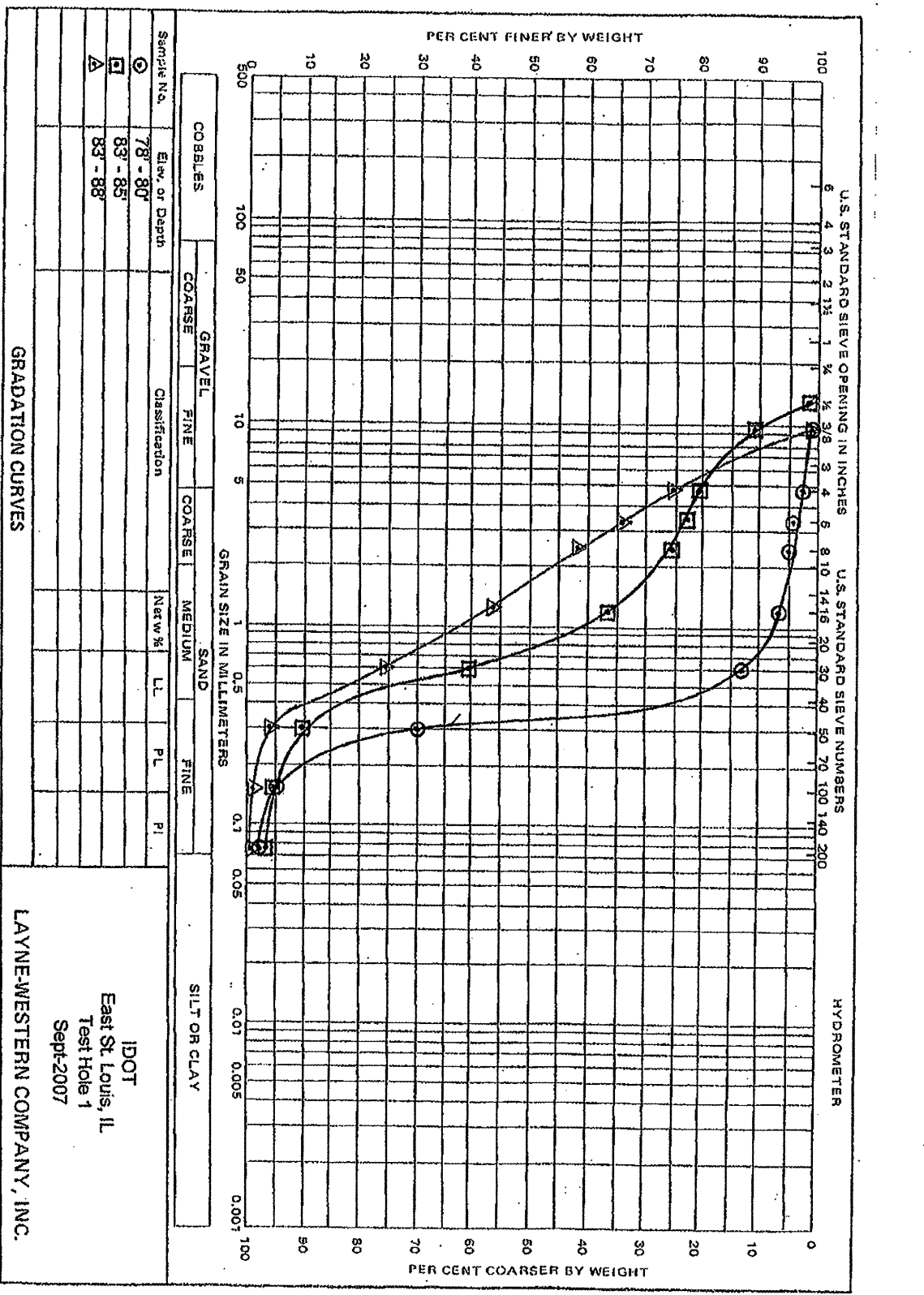
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS

SCALE: \_\_\_\_\_ SHEET NO. \_\_\_\_ OF \_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	ST. CLAIR	7	7B
FED. ROAD DIST. NO. (ILLINOIS) FED. AID PROJECT			CONTRACT NO. 76C71	

\* VARIOUS ROUTES  
\*\* DISTRICT & DEEP WELLS 2006-2



FILE NAME =  
#FILE#

USER NAME = #USER#  
DESIGNED -  
DRAWN -  
CHECKED -  
DATE -

REVISOR -  
REVISION -  
REVISOR -  
REVISION -

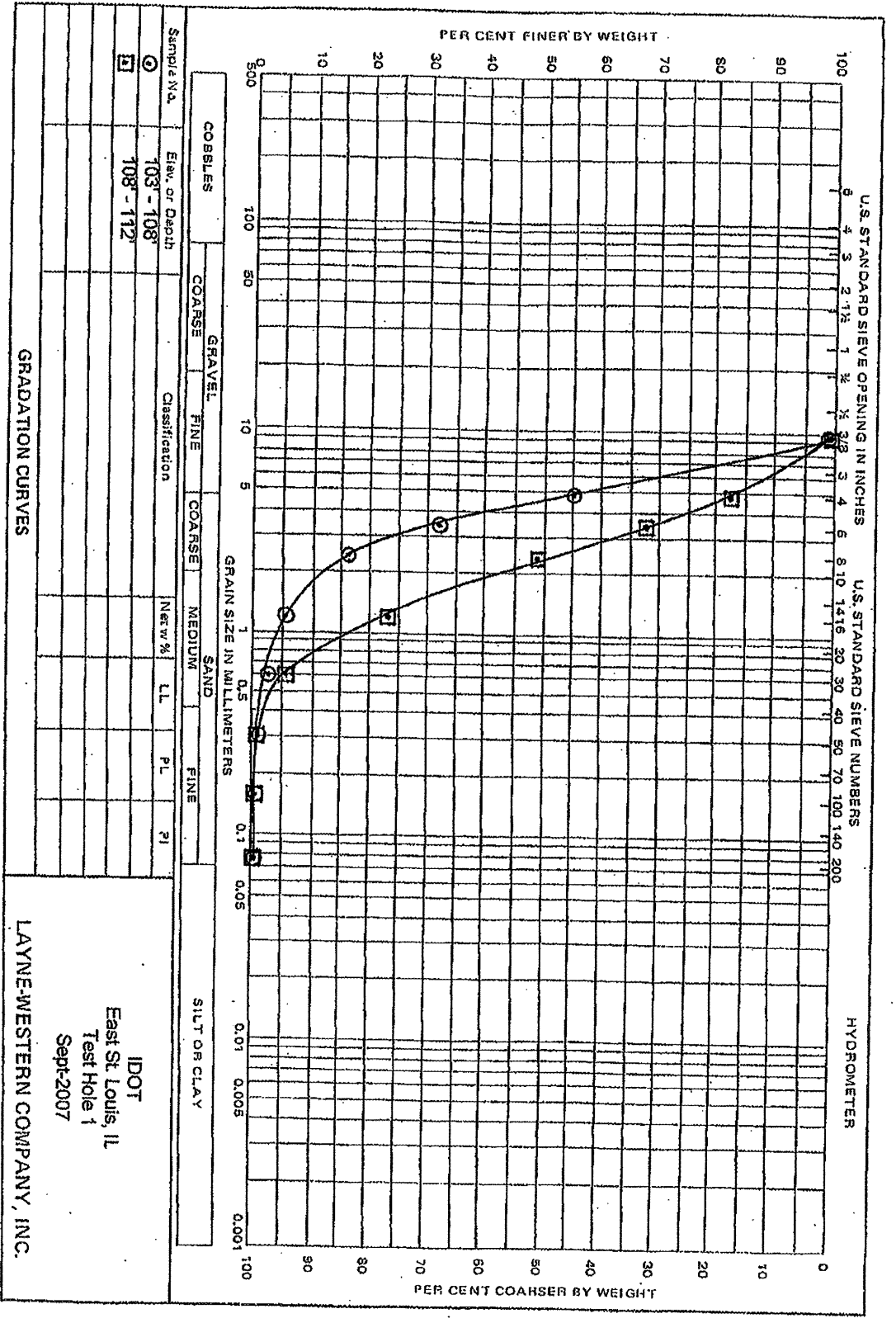
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS**

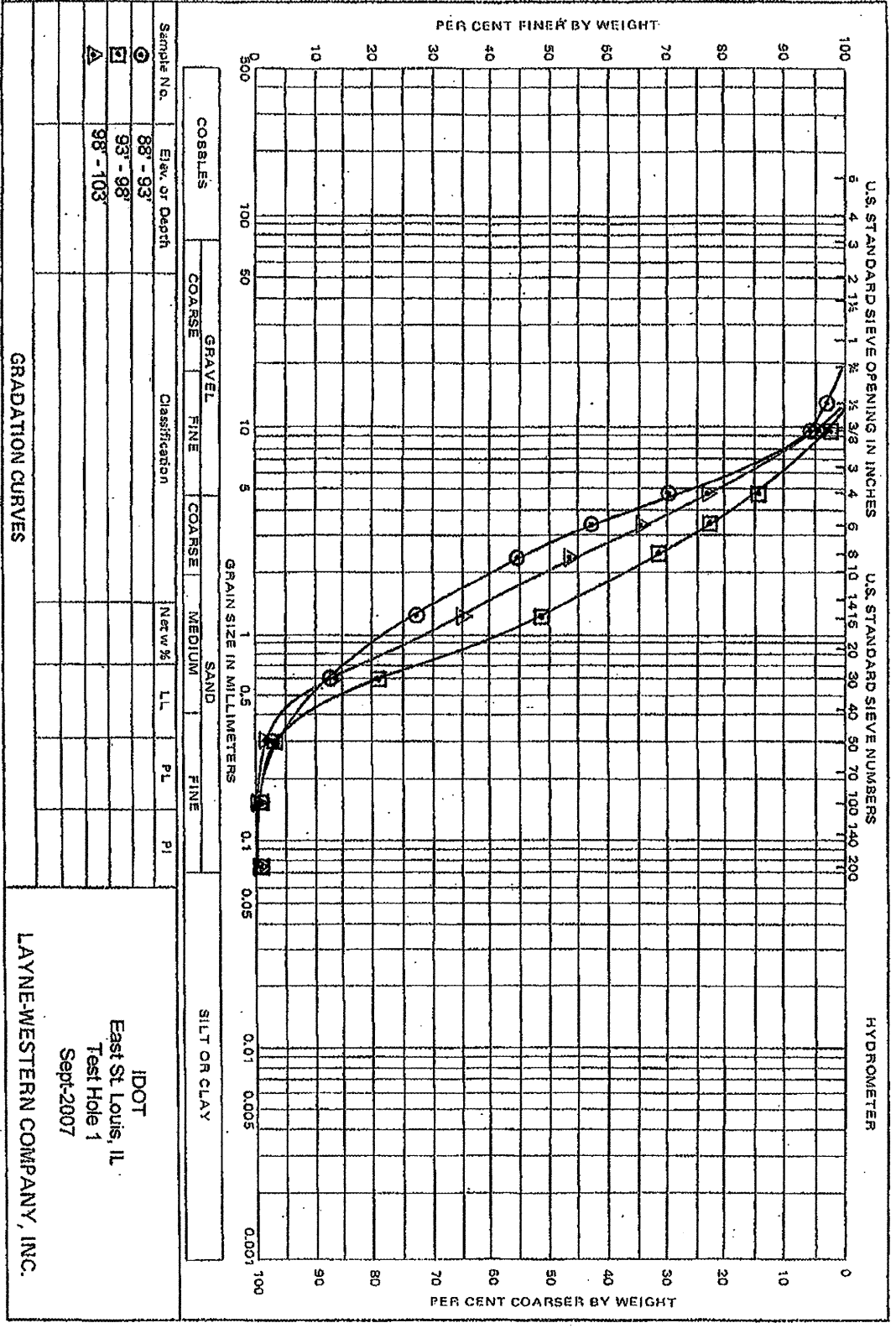
SCALE: \_\_\_\_\_ SHEET NO. \_\_\_ OF \_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	
			ST. CLAIR	IC
#	**		I	IC
			CONTRACT NO. 76C21	
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

\* VARIOUS ROUTES  
\*\* DISTRICT & DEEP WELLS 2009-2



IDOT  
 East St. Louis, IL  
 Test Hole 1  
 Sept-2007  
 LAYNE-WESTERN COMPANY, INC.



IDOT  
 East St. Louis, IL  
 Test Hole 1  
 Sept-2007  
 LAYNE-WESTERN COMPANY, INC.

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
#FILE#		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS  
 SCALE: SHEET NO. OF SHEETS STA. TO STA.

\* VARIOUS ROUTES  
\*\* DISTRICT 9 DEEP WELLS 2009-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2	22	ST. CLAIR	1	20
				CONTRACT NO. 16C71
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

# Grain Size Analysis

Job # 878237                      Date: 09/28/2007

Boring location: IDOT - MO Ave

Boring #: TH - 1

Sample depth: 33' - 35'                      Container # 12

	Dirty sample	Washed sample
Wt sample + tare	955.0	941.8
Tare wt	400.8	400.8
Wt Sample	554.2	541.0

Wt of sample washed past #200 sieve: 13.2

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8				
4	402.6	1.8	552.4	99.7
6	403.0	0.4	552.0	99.6
8	403.4	0.4	551.6	99.5
16	405.5	2.1	549.5	99.2
30	418.8	13.3	536.2	96.8
50	572.2	153.4	382.8	69.1
100	904.6	332.4	50.4	9.1
200	941.8	37.2	13.2	2.4
PAN	941.8	0.0		

# Grain Size Analysis

Job # 878237                      Date: 09/28/2007

Boring location: IDOT - MO Ave

Boring #: TH - 1

Sample depth: 38' - 40'                      Container # 11

	Dirty sample	Washed sample
Wt sample + tare	1134.1	1126.1
Tare wt	411.1	411.1
Wt Sample	723.0	715.0

Wt of sample washed past #200 sieve: 8.0

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	412.5	1.4	721.6	99.8
4	416.0	3.5	718.1	99.3
6	421.0	5.0	713.1	98.6
8	432.6	11.6	701.5	97.0
16	491.7	59.1	642.4	88.9
30	646.8	155.1	487.3	67.4
50	861.5	214.7	272.6	37.7
100	1078.8	217.3	55.3	7.6
200	1126.1	47.3	8.0	1.1
PAN	1126.1	0.0		

FILE NAME * #FILE#	USER NAME * #USER#	DESIGNED - ___	REVISED - ___	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS</b>	F.A. RTE. #	SECTION	COUNTY	TOTAL SHEET NO.
		DRAWN - ___	REVISED - ___					ST. CLAIR	7
		CHECKED - ___	REVISED - ___		SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____			CONTRACT NO. 76C71	
		DATE - _____	REVISED - ___					ILLINOIS FED. AID PROJECT	

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 43' - 45' Container # 10

	Dirty sample	Washed sample
Wt sample + tare	927.1	910.4
Tare wt	396.7	396.7
Wt Sample	530.4	513.7
Wt of sample washed past #200 sieve:		16.7

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	399.8	3.1	527.3	99.4
4	403.7	3.9	523.4	98.7
6	405.2	1.5	521.9	98.4
8	407.4	2.2	519.7	98.0
16	415.2	7.8	511.9	96.5
30	487.7	72.5	439.4	82.8
50	658.0	170.3	269.1	50.7
100	870.0	212.0	57.1	10.8
200	909.5	39.5	17.6	3.3
PAN	910.4	0.9		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 48' - 50' Container # 7

	Dirty sample	Washed sample
Wt sample + tare	1009.4	987.5
Tare wt	412.4	412.4
Wt Sample	597.0	575.1
Wt of sample washed past #200 sieve:		21.9

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8				
4	415.9	3.5	593.5	99.4
6	420.7	4.8	588.7	98.6
8	428.3	7.6	581.1	97.3
16	456.2	27.9	553.2	92.7
30	537.5	81.3	471.9	79.0
50	683.4	145.9	326.0	54.6
100	964.2	280.8	45.2	7.6
200	987.3	23.1	22.1	3.7
PAN	987.5	0.2		

FILE NAME	USER NAME * #USER*	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -			*	**	SI. CLAIR	7	7E	
		CHECKED -	REVISED -			SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____					
		DATE -	REVISED -			FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT CONTRACT NO. 76CZ1					

\* VARIOUS ROUTES  
 \*\* DISTRICT 8 DEEP WELLS 2006-2



# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 53' - 55' Container # 8

	Dirty sample	Washed sample
Wt sample + tare	938.3	913.4
Tare wt	414.4	414.4
Wt Sample	523.9	499.0
Wt of sample washed past #200 sieve:		24.9

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	416.1	1.7	522.2	99.7
4	421.6	5.5	516.7	98.6
6	424.8	3.2	513.5	98.0
8	426.5	1.7	511.8	97.7
16	430.8	4.3	507.5	96.9
30	446.7	15.9	491.6	93.8
50	625.6	178.9	312.7	59.7
100	862.4	236.8	75.9	14.5
200	912.4	50.0	25.9	4.9
PAN	913.4	1.0		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 58' - 60' Container # 9

	Dirty sample	Washed sample
Wt sample + tare	973.0	954.8
Tare wt	413.9	413.9
Wt Sample	559.1	540.9
Wt of sample washed past #200 sieve:		18.2

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8				
4	416.5	2.6	556.5	99.5
6	417.1	0.6	555.9	99.4
8	417.4	0.3	555.6	99.4
16	419.7	2.3	553.3	99.0
30	470.5	50.8	502.5	89.9
50	776.0	305.5	197.0	35.2
100	934.6	158.6	38.4	6.9
200	954.0	19.4	19.0	3.4
PAN	954.8	0.8		

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
#FILE#		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS

SCALE: \_\_\_\_\_ SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

<small>* VARIOUS ROUTES ** DISTRICT 4 DEEP WELLS 2009-3</small>	
F.A. R.T.C.	SECTION
COUNTY	TOTAL SHEETS
SI. CLASB	7
CONTRACT NO. 16C71	IG
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

# Grain Size Analysis

Job # 878237 Date: 09/28/2007

Boring location: IDOT - MO Ave

Boring #: TH - 1

Sample depth: 63' - 65' Container # 4

	Dirty sample	Washed sample
Wt sample + tare	986.0	968.2
Tare wt	412.5	412.5
Wt Sample	573.5	555.7
Wt of sample washed past #200 sieve:		17.8

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	415.0	2.5	571.0	99.6
4	432.0	17.0	554.0	96.6
6	447.6	15.6	538.4	93.9
8	468.7	21.1	517.3	90.2
16	522.6	53.9	463.4	80.8
30	631.1	108.5	354.9	61.9
50	805.9	174.8	180.1	31.4
100	945.7	139.8	40.3	7.0
200	967.9	22.2	18.1	3.2
PAN	968.2	0.3		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007

Boring location: IDOT - MO Ave

Boring #: TH - 1

Sample depth: 68' - 70' Container # 5

	Dirty sample	Washed sample
Wt sample + tare	924.0	904.3
Tare wt	415.2	415.2
Wt Sample	508.8	489.1
Wt of sample washed past #200 sieve:		19.7

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8				
4	418.3	3.1	505.7	99.4
6	419.8	1.5	504.2	99.1
8	420.5	0.7	503.5	99.0
16	423.0	2.5	501.0	98.5
30	431.4	8.4	492.6	96.8
50	539.1	107.7	384.9	75.6
100	874.7	335.6	49.3	9.7
200	904.2	29.5	19.8	3.9
PAN	904.3	0.1		

\* VARIOUS ROUTES  
 \*\* DISTRICT & DEEP WELLS 2009-2  
 COUNTY TOTAL SHEETS: SI. CLAIR 7 TH  
 CONTRACT NO. 76CT1  
 FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT

FILE NAME *	USER NAME * #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS	F.A. RTE.	SECTION
#FILE#		DRAWN -	REVISED -			*	**
	PLOT SCALE * #SCALE#	CHECKED -	REVISED -				
	PLOT DATE * #DATE#	DATE -	REVISED -		SCALE: _____ SHEET NO. ___ OF ___ SHEETS   STA. _____ TO STA. _____		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 73' - 75' Container # 6

	Dirty sample	Washed sample
Wt sample + tare	939.2	914.7
Tare wt	411.8	411.8
Wt Sample	527.4	502.9
Wt of sample washed past #200 sieve:		24.5

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8				
4				
6	412.2	0.4	527.0	99.9
8	412.4	0.2	526.8	99.9
16	412.9	0.5	526.3	99.8
30	419.9	7.0	519.3	98.5
50	632.8	212.9	306.4	58.1
100	853.6	220.8	85.6	16.2
200	913.9	60.3	25.3	4.8
PAN	914.7	0.8		

# Grain Size Analysis

Job # 878237 Date: 09/28/2007  
 Boring location: IDOT - MO Ave  
 Boring #: TH - 1  
 Sample depth: 78' - 80' Container # 1

	Dirty sample	Washed sample
Wt sample + tare	939.7	928.7
Tare wt	412.1	412.1
Wt Sample	527.6	516.6
Wt of sample washed past #200 sieve:		11.0

Sieve #	Sample wt + tare	Wt Retained	Wt Passing	% Passing
1				
3/4				
1/2				
3/8	419.0	6.9	520.7	98.7
4	424.7	5.7	515.0	97.6
6	434.8	10.1	504.9	95.7
8	439.1	4.3	500.6	94.9
16	445.1	6.0	494.6	93.7
30	481.7	36.6	458.0	86.8
50	782.1	300.4	157.6	29.9
100	913.4	131.3	26.3	5.0
200	928.5	15.1	11.2	2.1
PAN	928.7	0.2		

\* VARIOUS ROUTES  
 \*\* DISTRICT 8 DEEP WELLS 2005-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	ST. CLAIR	7	71
CONTRACT NO. 76C71			FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT	

FILE NAME *	USER NAME * #USER#	DESIGNED - ---	REVISED - ---
#FILE#		DRAWN - ---	REVISED - ---
	PLOT SCALE * #SCALE#	CHECKED - ---	REVISED - ---
	PLOT DATE * #DATE#	DATE - ---	REVISED - ---

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS**

SCALE: \_\_\_\_\_ SHEET NO. \_\_\_ OF \_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_