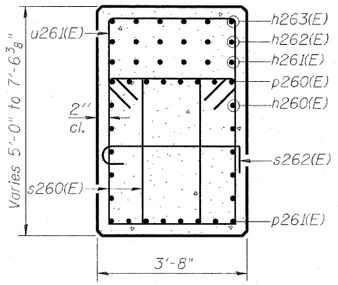
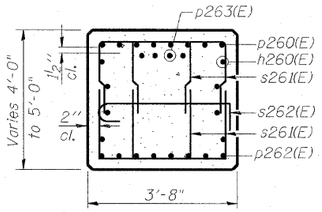
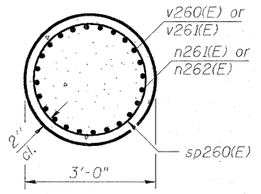


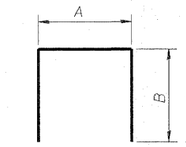
SEC. A-A



SEC. B-B



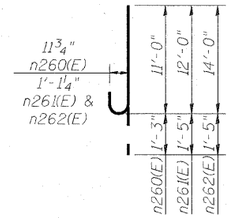
SEC. C-C



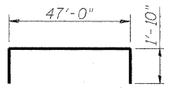
BARS

A & B DIMENSIONS

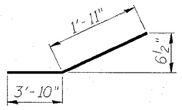
Bar	A	B
s261(E)	2'-2"	4'-0"
s263(E)	3'-2"	2'-3"
s265(E)	3'-2"	11'-0"
t261(E)	12'-8"	1'-10"
u261(E)	3'-4"	4'-2"



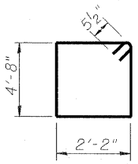
BAR n260(E), n261(E) & n262(E)



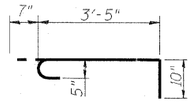
BAR p260(E)



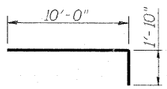
BAR p262(E)



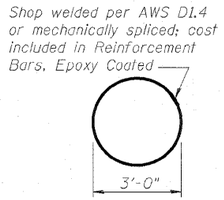
BAR s260(E)



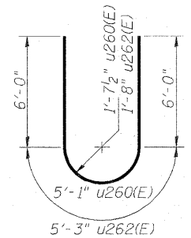
BAR s262(E)



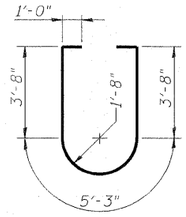
BAR p263(E)



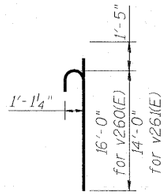
BAR s264(E)



BARS u260(E) & u262(E)



BAR u263(E)



BAR v260(E) or v261(E)

AECOM

USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -	
PLOT DATE = 6/30/2011	DATE - 07-01-11	REVISED -	

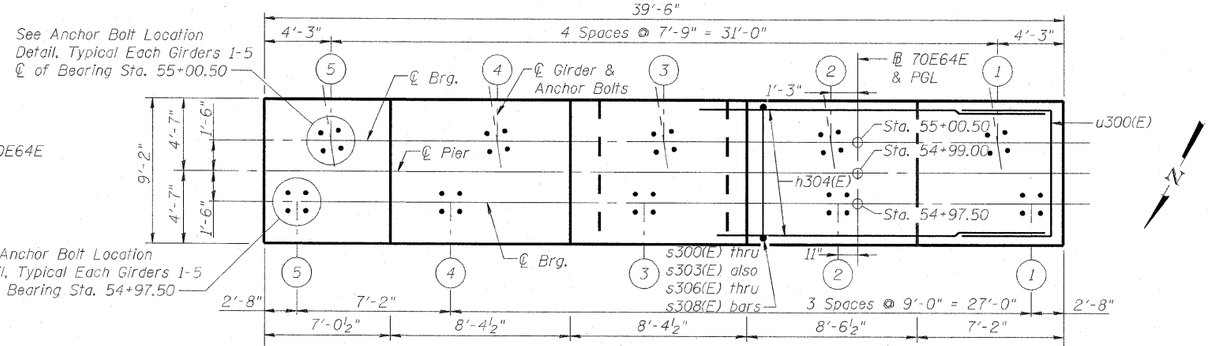
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – UNIT 4 – PIER 13 – DETAILS
I–70E OVER I–55, CSX & KCS RAILROADS

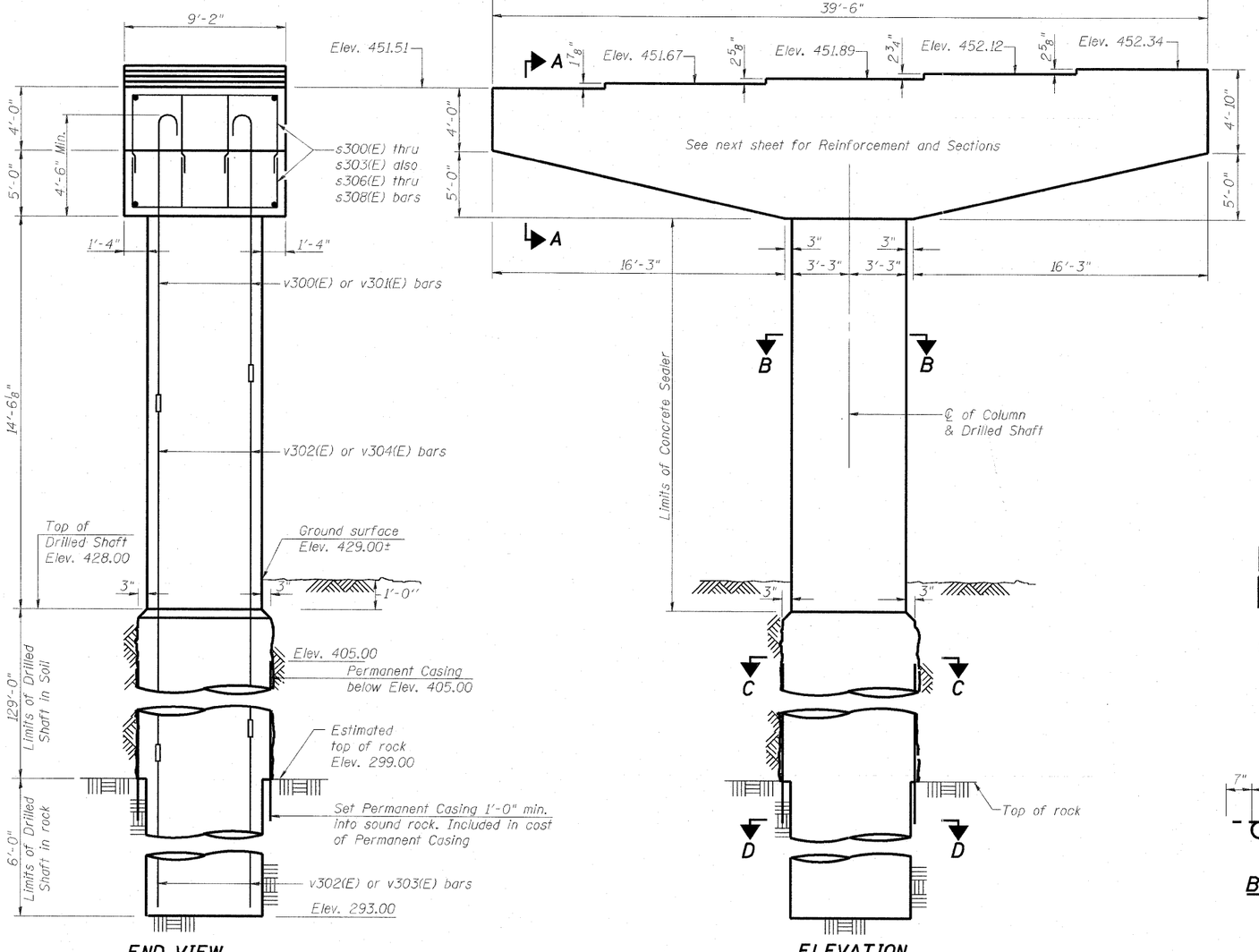
SCALE: | SHEET S-174 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	301
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Notes:
1. Pour steps monolithically with cap.
2. ℄ of Pier is perpendicular to ℄ 70E64E at Sta. 54+99.00.

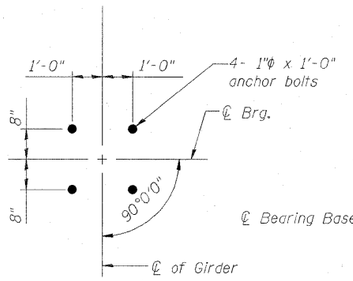


TOP PLAN

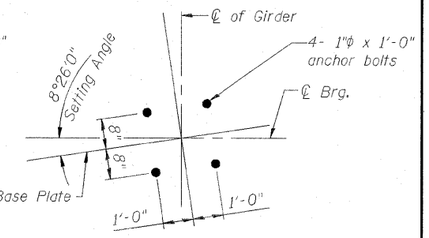


END VIEW

ELEVATION
(Looking Up Station)

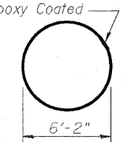


ANCHOR BOLT LOCATION DETAIL, GIRDERS 1-5 ℄ of BEARING STA. 54+97.50

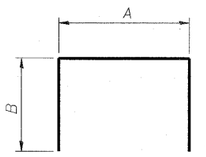


ANCHOR BOLT LOCATION DETAIL, GIRDERS 1-5 ℄ of BEARING STA. 55+00.50

Shop welded per AWS D1.4 or mechanically spliced; cost included in Reinforcement Bars, Epoxy Coated

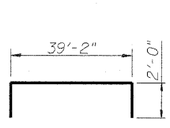


BAR s304(E)

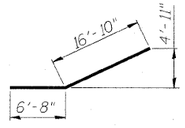


BARS A & B DIMENSIONS

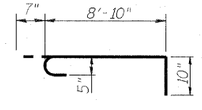
Bar	A	B
s300(E)	5'-10"	3'-6"
s301(E)	5'-10"	4'-0"
s302(E)	5'-10"	4'-10"
s303(E)	5'-10"	6'-2"
s306(E)	5'-10"	4'-0"
s307(E)	5'-10"	4'-4"
s308(E)	5'-10"	5'-3"
u300(E)	8'-9"	6'-0"



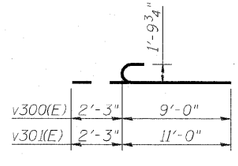
BAR p300(E)



BAR p301(E)



BAR s305(E)



BAR v300(E) & v301(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h300(E)	2	#6	13'-11"	
h301(E)	2	#6	21'-0"	
h302(E)	2	#6	28'-0"	
h303(E)	2	#9	35'-1"	
h304(E)	6	#9	39'-2"	
h305(E)	2	#9	19'-7"	
p300(E)	22	#11	43'-2"	
p301(E)	20	#7	23'-6"	
s300(E)	8	#5	12'-10"	
s301(E)	12	#5	13'-10"	
s302(E)	28	#5	15'-6"	
s303(E)	96	#5	18'-2"	
s304(E)	10	#5	19'-4"	
s305(E)	80	#5	10'-3"	
s306(E)	8	#5	13'-10"	
s307(E)	12	#5	14'-6"	
s308(E)	28	#5	16'-4"	
** sp300(E)	1	#6	43'-0"	
** sp301(E)	1	#5	6'-9"	
** sp302(E)	2	#5	50'-0"	
u300(E)	11	#6	20'-9"	
v300(E)	21	#14	11'-3'	
v301(E)	21	#14	13'-3'	
v302(E)	63	#14	46'-0'	
v303(E)	21	#14	48'-0"	
v304(E)	42	#14	51'-6"	
Structure Excavation			Cu. Yd.	3.5
Concrete Structures			Cu. Yd.	116.3
Reinforcement Bars, Epoxy Coated			Pound	72,100
Drilled Shaft in Soil			Cu. Yd.	183.9
Drilled Shaft in Rock			Cu. Yd.	7.4
Permanant Casing			Lin. Ft.	106
Mechanical Splicers			Each	126
Concrete Sealer			Sq. Ft.	296
Crosshole Sonic Logging			Each	1

** Length is height of spiral.

AECOM

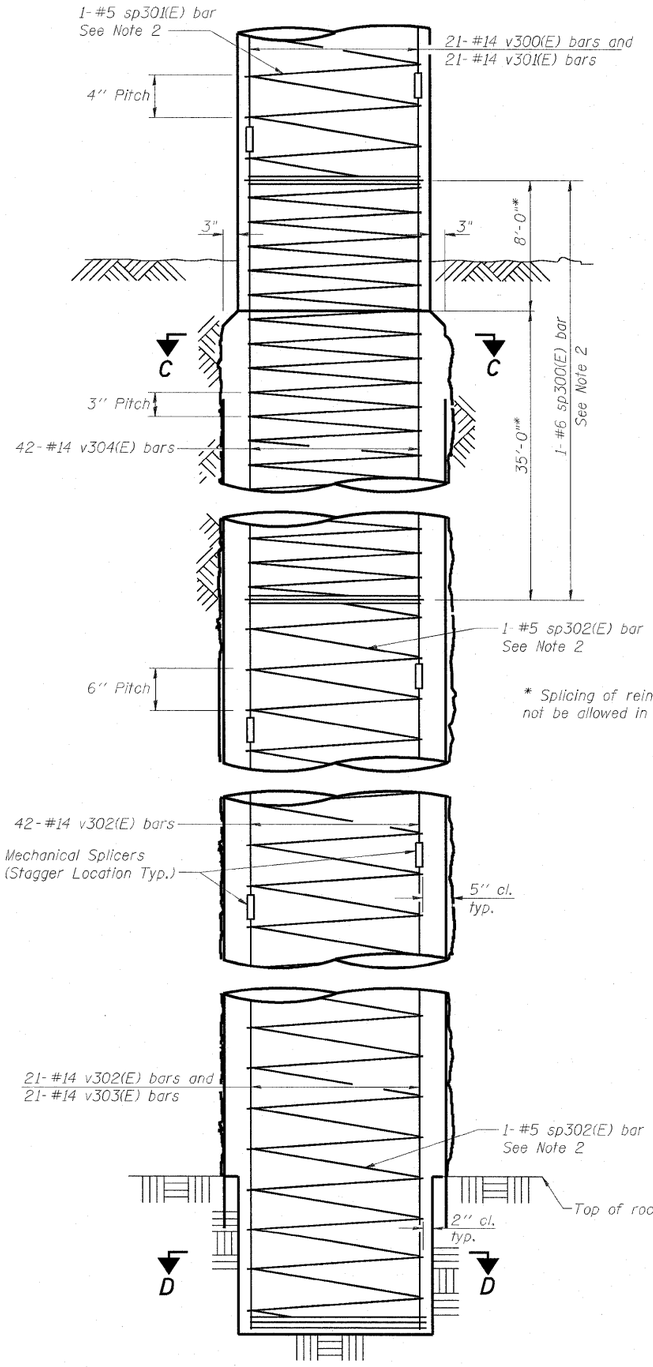
USER NAME =	DESIGNED - DDB	REVISED -
	DRAWN - BRD	REVISED -
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -
PLOT DATE = 8/15/2011	DATE - 08-12-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082-0324 – PIER 1 – PLAN & ELEVATIONS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-175 OF S-234 SHEETS | STA. | TO STA.

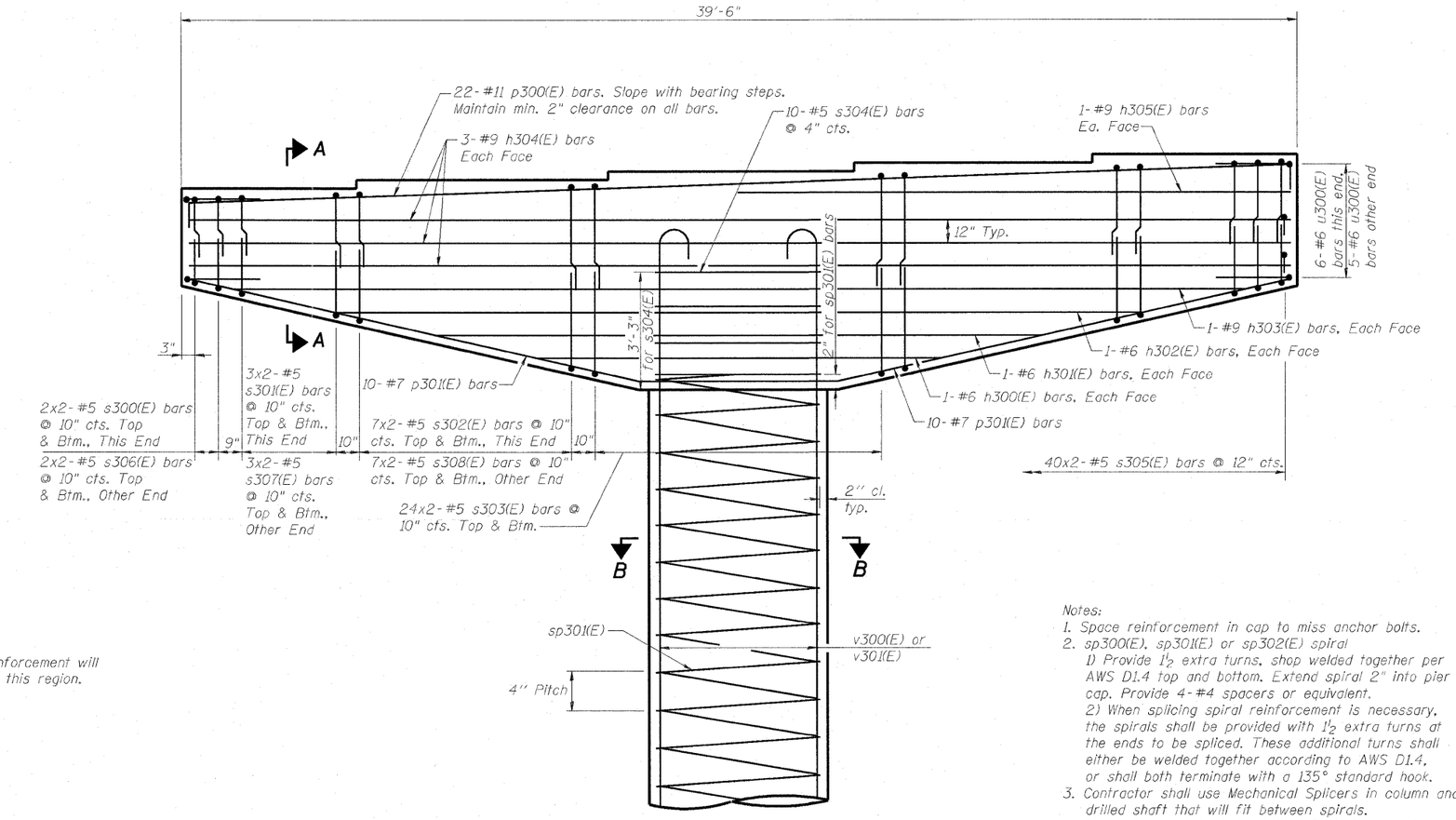
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	302
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

h:\projects\60846894\sn082-0322 & 0324 figures\100_cadd\100_drawings\76c80_master_consolidated\structural\082-0322\sheet\082-0322_0324_76C76_SG28_082-0324-P



ELEVATION
(Looking East)

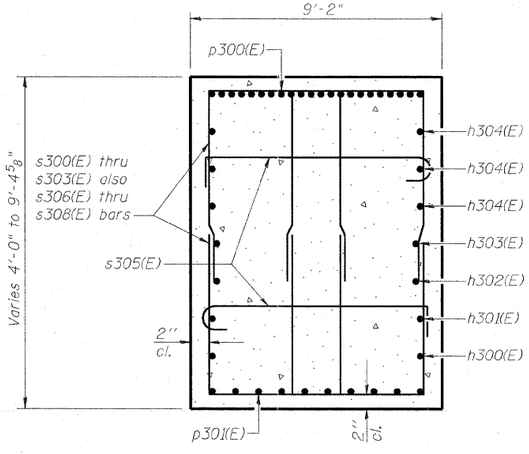
* Splicing of reinforcement will not be allowed in this region.



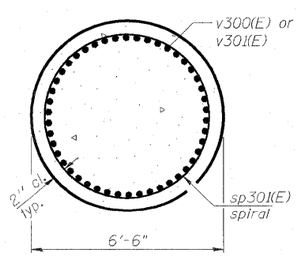
ELEVATION
(Looking Up Station)

Notes:
1. Space reinforcement in cap to miss anchor bolts.
2. sp300(E), sp301(E) or sp302(E) spiral
   1) Provide $1\frac{1}{2}$ extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap. Provide 4-#4 spacers or equivalent.
   2) When splicing spiral reinforcement is necessary, the spirals shall be provided with $1\frac{1}{2}$ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.
3. Contractor shall use Mechanical Splicers in column and drilled shaft that will fit between spirals.
4. Contractor shall test the Drilled Shaft in accordance with special provision for Crosshole Sonic Logging.

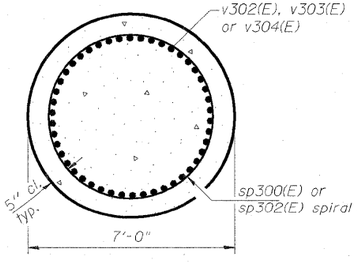
Min. Lap Lengths
#5 bars: 3'-3"



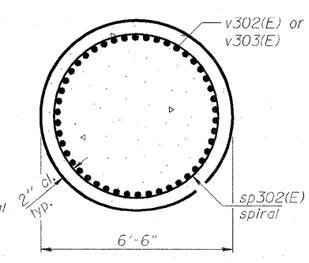
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

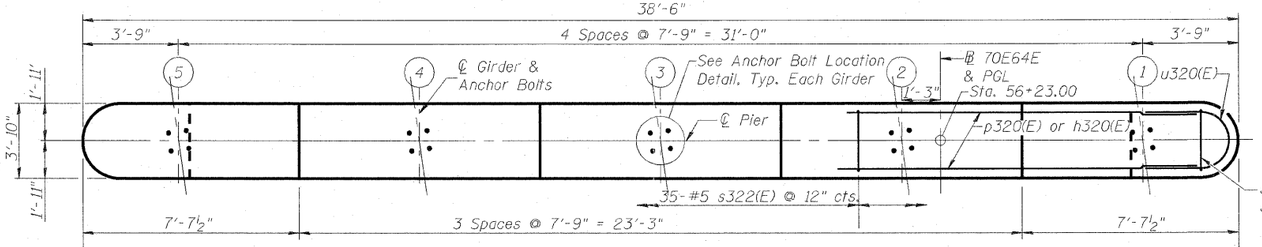
AECOM	USER NAME =	DESIGNED - DDB	REVISED -
		DRAWN - BRD	REVISED -
	PLOT SCALE = 0.66667 ' / IN.	CHECKED - LLV	REVISED -
	PLOT DATE = 8/15/2011	DATE - 08-12-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

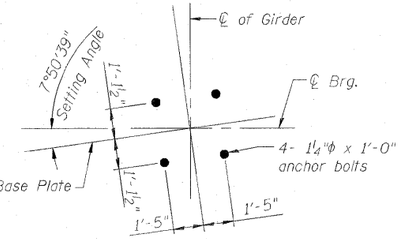
PIER - S.N. 082-0324 - PIER 1 - DETAILS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-176 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	303
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

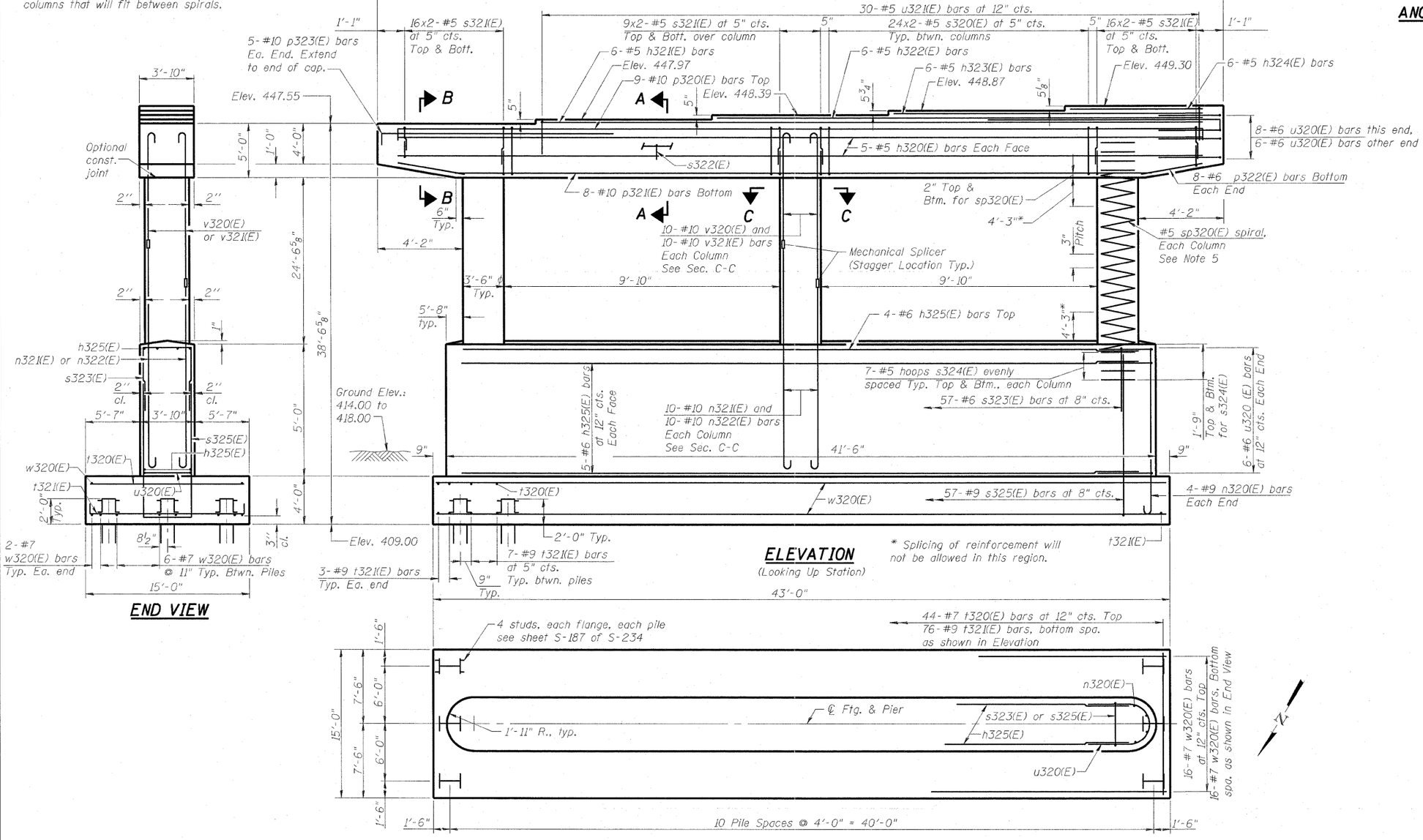
Notes:
1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. For details of piles, see sheet S-187 of S-234.
4. ℄ of Pier is radial to ℄ 70E64E at Sta. 56+23.00.
5. #5 sp320(E) spiral, each column
   1) Provide 1½ extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap & crashwall. Provide 4-#4 spacers or equivalent.
   2) When splicing spiral reinforcement is necessary, the spirals shall be provided with 1½ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.
6. Contractor shall use Mechanical Splicers in columns that will fit between spirals.



TOP PLAN



ANCHOR BOLT LOCATION DETAIL



END VIEW

ELEVATION

(Looking Up Station)

* Splicing of reinforcement will not be allowed in this region.

FOOTING PLAN

PILE DATA

Type: HP 12x63
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 102'
No. Production Piles: 33
No. Test Piles: 0

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h320(E)	10	#5	34'-8"	
h321(E)	6	#5	28'-9"	
h322(E)	6	#5	21'-0"	
h323(E)	6	#5	13'-3"	
h324(E)	6	#5	5'-6"	
h325(E)	14	#6	37'-8"	
n320(E)	8	#9	9'-9"	
n321(E)	30	#10	11'-5"	
n322(E)	30	#10	13'-5"	
p320(E)	9	#10	38'-4"	
p321(E)	8	#10	31'-2"	
p322(E)	16	#6	5'-8"	
p323(E)	10	#10	11'-10"	
s320(E)	96	#5	14'-11"	
s321(E)	164	#5	10'-4"	
s322(E)	35	#5	4'-11"	
s323(E)	57	#6	8'-0"	
s324(E)	42	#5	9'-11"	
s325(E)	57	#9	20'-6"	
** sp320(E)	3	#5	24'-11"	
t320(E)	44	#7	14'-8"	
t321(E)	76	#9	18'-4"	
u320(E)	26	#6	17'-4"	
u321(E)	30	#5	11'-0"	
v320(E)	30	#10	24'-0"	
v321(E)	30	#10	22'-0"	
w320(E)	32	#7	42'-8"	

Structure Excavation	Cu. Yd.	231.5
Concrete Structures	Cu. Yd.	181.7
Reinforcement Bars, Epoxy Coated	Pound	35,740
Furnishing Steel Piles HP12x63	Foot	3,366
Driving Piles	Foot	3,366
Pile Shoes	Each	33
Mechanical Splicers	Each	60

** Length is height of spiral.

See next sheet for Bar Details and Sections.

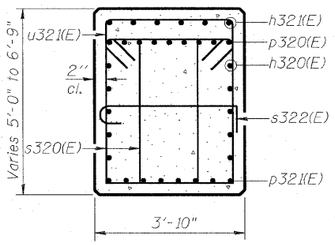
AECOM

USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -	
PLOT DATE = 6/30/2011	DATE - 07-01-11	REVISED -	

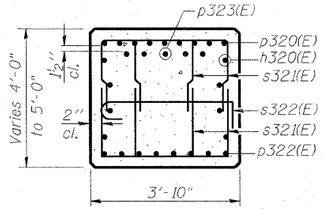
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082-0324 – PIER 2 – PLANS & ELEVATIONS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-177 OF S-234 SHEETS | STA. | TO STA.

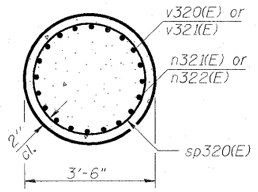
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	304
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



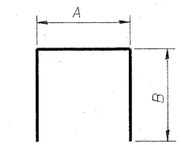
SEC. A-A



SEC. B-B



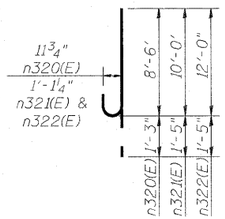
SEC. C-C



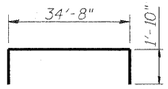
BARS

A & B DIMENSIONS

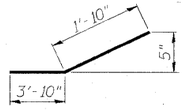
Bar	A	B
s321(E)	2'-4"	4'-0"
s323(E)	3'-6"	2'-3"
s325(E)	3'-6"	8'-6"
t321(E)	14'-8"	1'-10"
u321(E)	3'-6"	3'-9"



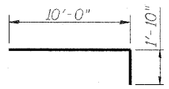
BAR n320(E), n321(E) & n322(E)



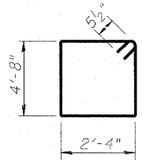
BAR p320(E)



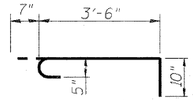
BAR p322(E)



BAR p323(E)

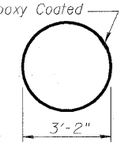


BAR s320(E)

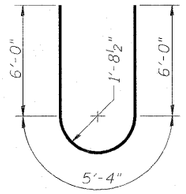


BAR s322(E)

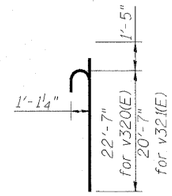
Shop welded per AWS D1.4 or mechanically spliced; cost included in Reinforcement Bars, Epoxy Coated



BAR s324(E)



BAR u320(E)



BAR v320(E) or v321(E)

AECOM

USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -	
PLOT DATE = 6/30/2011	DATE - 07-01-11	REVISED -	

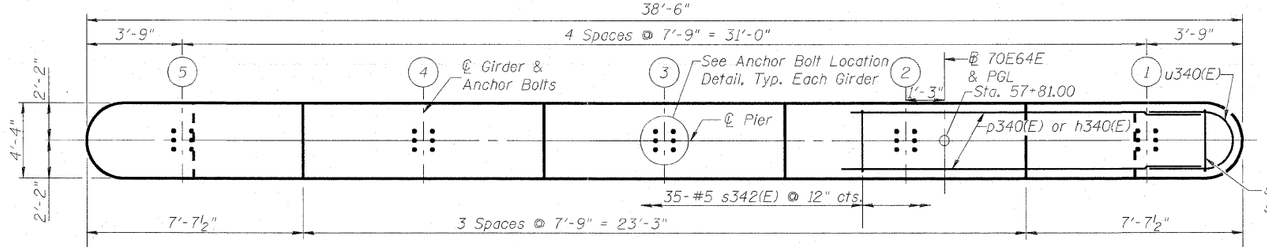
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082–0324 – PIER 2 – DETAILS
I–70E OVER I–55, CSX & KCS RAILROADS

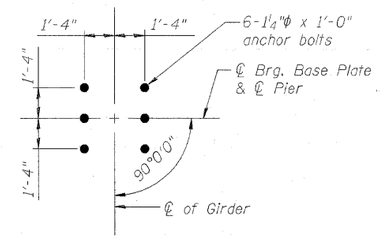
SCALE: | SHEET S-178 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	305
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Notes:
1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. For details of piles, see sheet S-187 of S-234.
4. ℄ of Pier is radial to ℄ 70E64E at Sta. 57+81.00.
5. #5 sp340(E) spiral, each column
   1) Provide 1½ extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap & crashwall. Provide 4-#4 spacers or equivalent.
   2) When splicing spiral reinforcement is necessary, the spirals shall be provided with 1½ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.
6. Contractor shall use Mechanical Splicers in columns that will fit between spirals.



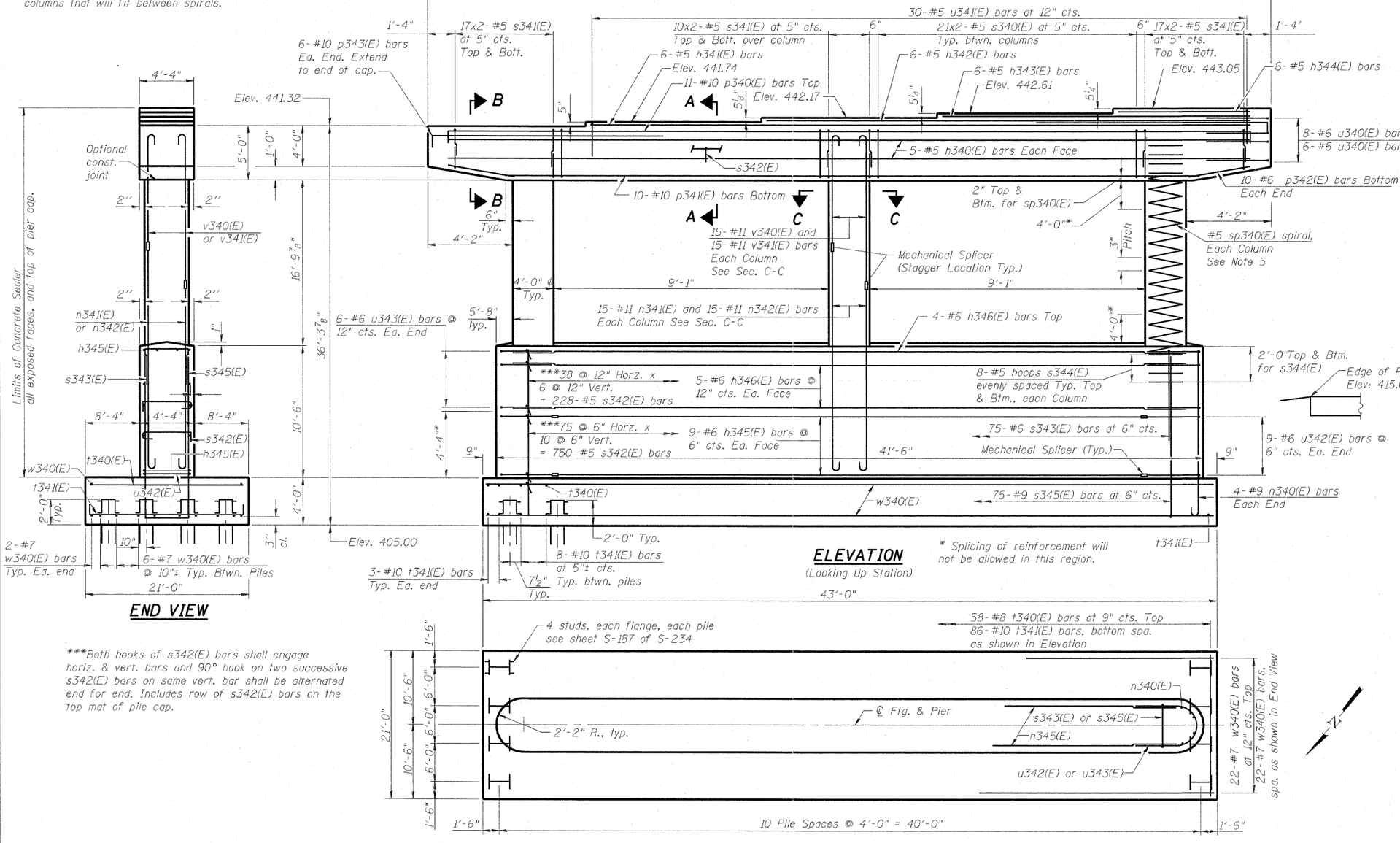
TOP PLAN



ANCHOR BOLT LOCATION DETAIL

PILE DATA

Type: HP 12x63
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 102'
No. Production Piles: 44
No. Test Piles: 0



END VIEW

ELEVATION

(Looking Up Station)

FOOTING PLAN

***Both hooks of s342(E) bars shall engage horiz. & vert. bars and 90° hook on two successive s342(E) bars on same vert. bar shall be alternated end for end. Includes row of s342(E) bars on the top mat of pile cap.

* Splicing of reinforcement will not be allowed in this region.

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h340(E)	10	#5	34'-2"	
	h341(E)	6	#5	28'-6"	
	h342(E)	6	#5	20'-9"	
	h343(E)	6	#5	13'-0"	
	h344(E)	6	#5	5'-3"	
	h345(E)	18	#6	25'-2"	
	h346(E)	14	#6	37'-2"	
	n340(E)	8	#9	15'-3"	
	n341(E)	45	#11	16'-7"	
	n342(E)	45	#11	18'-7"	
	p340(E)	11	#10	37'-10"	
	p341(E)	10	#10	31'-2"	
	p342(E)	20	#6	5'-4"	
	p343(E)	12	#10	11'-10"	
	s340(E)	84	#5	15'-7"	
	s341(E)	176	#5	10'-8"	
	s342(E)	1013	#5	5'-6"	
	s343(E)	75	#6	8'-4"	
	s344(E)	48	#5	11'-6"	
	s345(E)	75	#9	31'-10"	
**	sp340(E)	3	#5	17'-3"	
	t340(E)	58	#8	20'-8"	
	t341(E)	86	#10	24'-4"	
	u340(E)	14	#6	18'-2"	
	u341(E)	30	#5	11'-6"	
	u342(E)	18	#6	18'-3"	
	u343(E)	12	#6	15'-7"	
	v340(E)	45	#11	17'-11"	
	v341(E)	45	#11	15'-11"	
	w340(E)	44	#7	42'-8"	
	Structure Excavation		Cu. Yd.	348.2	
	Concrete Structures		Cu. Yd.	260.6	
	Reinforcement Bars, Epoxy Coated		Pound	61,940	
	Furnishing Steel Piles HP12x63		Foot	4,488	
	Driving Piles		Foot	4,488	
	Pile Shoes		Each	44	
	Mechanical Splicers		Each	126	
	Concrete Sealer		Sq. Ft.	2519	

** Length is height of spiral.

See next sheet for Bar Details and Sections.

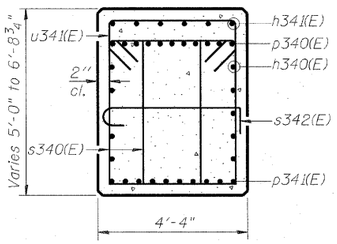
AECOM

USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -	
PLOT DATE = 6/30/2011	DATE - 07-01-11	REVISED -	

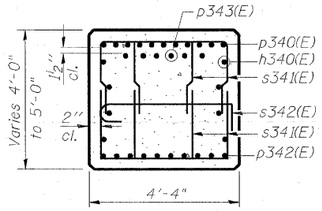
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082-0324 – PIER 3 – PLANS & ELEVATIONS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-179 OF S-234 SHEETS | STA. | TO STA.

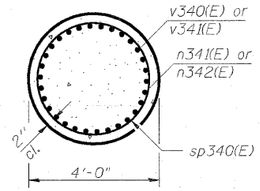
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	306
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



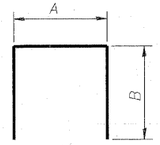
SEC. A-A



SEC. B-B



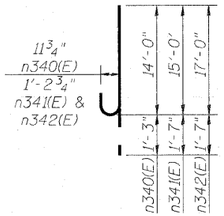
SEC. C-C



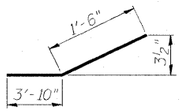
BARS

A & B DIMENSIONS

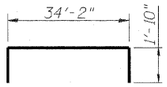
Bar	A	B
s341(E)	2'-8"	4'-0"
s343(E)	3'-10"	2'-3"
s345(E)	3'-10"	14'-0"
t341(E)	20'-8"	1'-10"
u341(E)	4'-0"	3'-9"



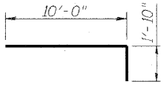
BAR n340(E), n341(E) & n342(E)



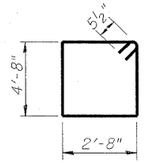
BAR p342(E)



BAR p340(E)



BAR p343(E)



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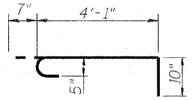
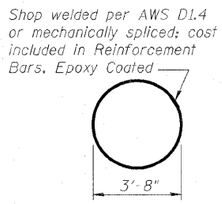
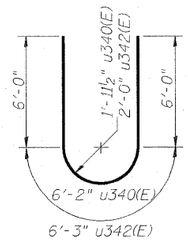


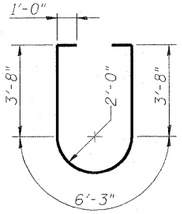
BAR s342(E)



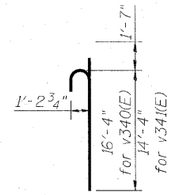
BAR s344(E)



BARS u340(E) & u342(E)



BAR u343(E)



BAR v340(E) or v341(E)

AECOM

USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -	
PLOT DATE = 6/30/2011	DATE - 07-01-11	REVISED -	

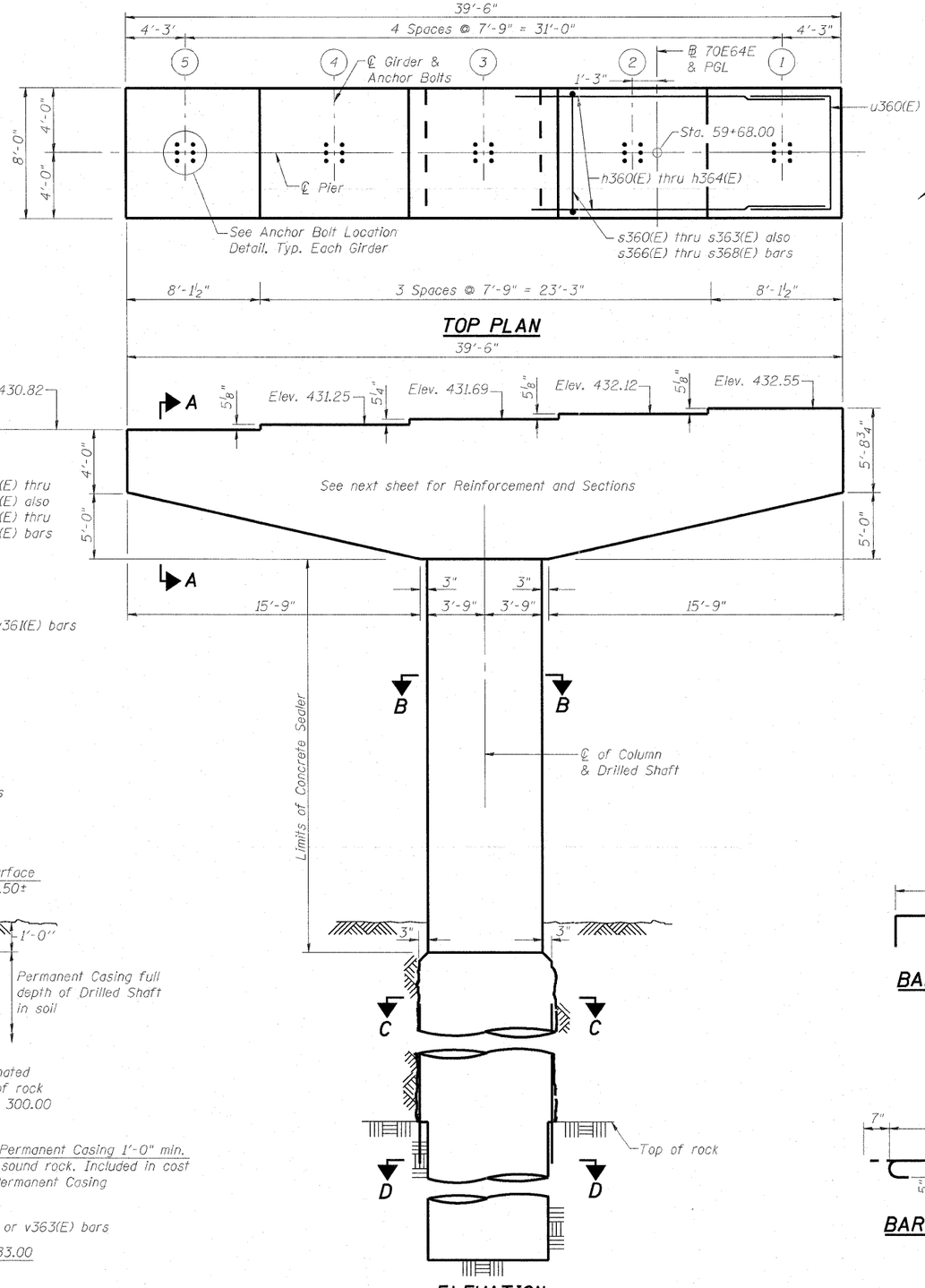
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082-0324 – PIER 3 – DETAILS
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-180 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	307
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

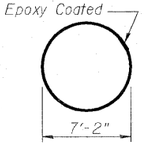
Notes:
1. Pour steps monolithically with cap.
2. ℄ of Pier is perpendicular to ℄ 70E64E at Sta. 59+68.00.



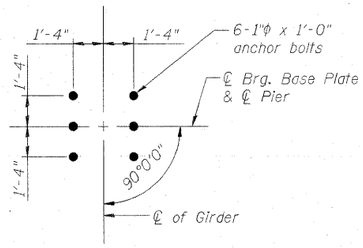
END VIEW

ELEVATION
(Looking Up Station)

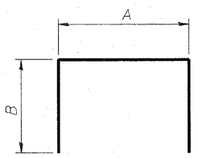
Shop welded per AWS D1.4 or mechanically spliced; cost included in Reinforcement Bars, Epoxy Coated



BAR s364(E)

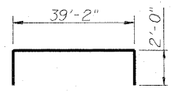


ANCHOR BOLT LOCATION DETAIL

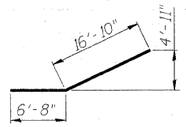


BARS A & B DIMENSIONS

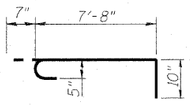
Bar	A	B
s360(E)	5'-1"	3'-8"
s361(E)	5'-1"	4'-7"
s362(E)	5'-1"	5'-9"
s363(E)	5'-1"	6'-4"
s366(E)	5'-1"	5'-4"
s367(E)	5'-1"	5'-6"
s368(E)	5'-1"	6'-0"
u360(E)	7'-7"	6'-0"



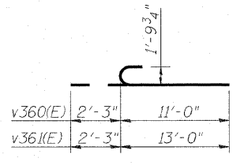
BAR p360(E)



BAR p361(E)



BAR s365(E)



BAR v360(E) & v361(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h360(E)	2	#6	13'-11"	
h361(E)	2	#6	21'-0"	
h362(E)	2	#6	28'-0"	
h363(E)	2	#9	35'-1"	
h364(E)	6	#9	39'-2"	
h365(E)	2	#9	19'-7"	
p360(E)	24	#11	43'-2"	
p361(E)	20	#7	23'-6"	
s360(E)	20	#5	12'-5"	
s361(E)	28	#5	14'-3"	
s362(E)	48	#5	16'-7"	
s363(E)	80	#5	17'-9"	
s364(E)	12	#5	22'-6"	
s365(E)	82	#5	9'-1"	
s366(E)	20	#5	15'-9"	
s367(E)	28	#5	16'-1"	
s368(E)	48	#5	17'-1"	
** sp360(E)	1	#7	51'-0"	
** sp361(E)	1	#5	9'-6"	
** sp362(E)	2	#6	39'-3"	
u360(E)	12	#6	19'-7"	
v360(E)	36	#14	13'-3"	
v361(E)	36	#14	15'-3"	
v362(E)	108	#14	37'-0"	
v363(E)	36	#14	39'-0"	
v364(E)	72	#14	57'-0"	
Structure Excavation		Cu. Yd.	3.5	
Concrete Structures		Cu. Yd.	122.1	
Reinforcement Bars, Epoxy Coated		Pound	110,270	
Drilled Shaft in Soil		Cu. Yd.	192.7	
Drilled Shaft in Rock		Cu. Yd.	27.8	
Permanant Casing		Lin. Ft.	104	
Mechanical Splicers		Each	216	
Crosshole Sonic Logging		Each	1	

** Length is height of spiral.

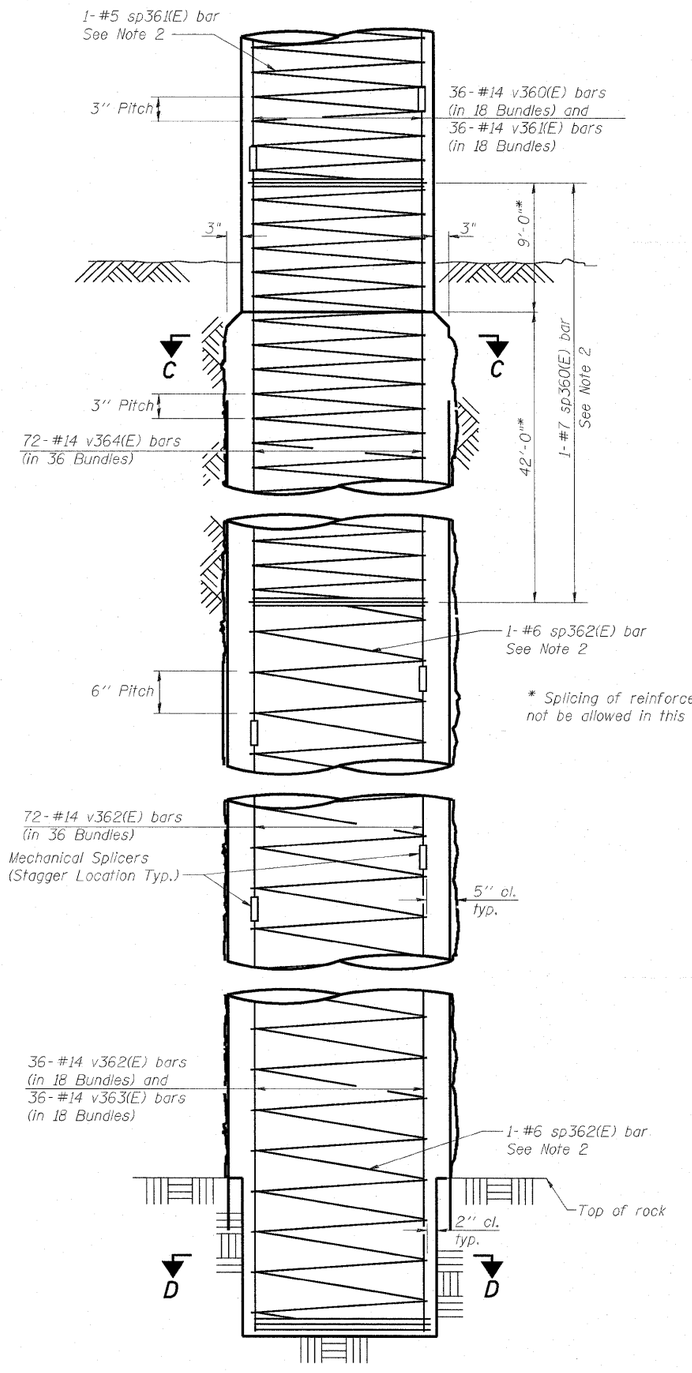
AECOM

USER NAME =	DESIGNED - DDB	REVISED -
	DRAWN - BRD	REVISED -
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -
PLOT DATE = 8/15/2011	DATE - 08-12-11	REVISED -

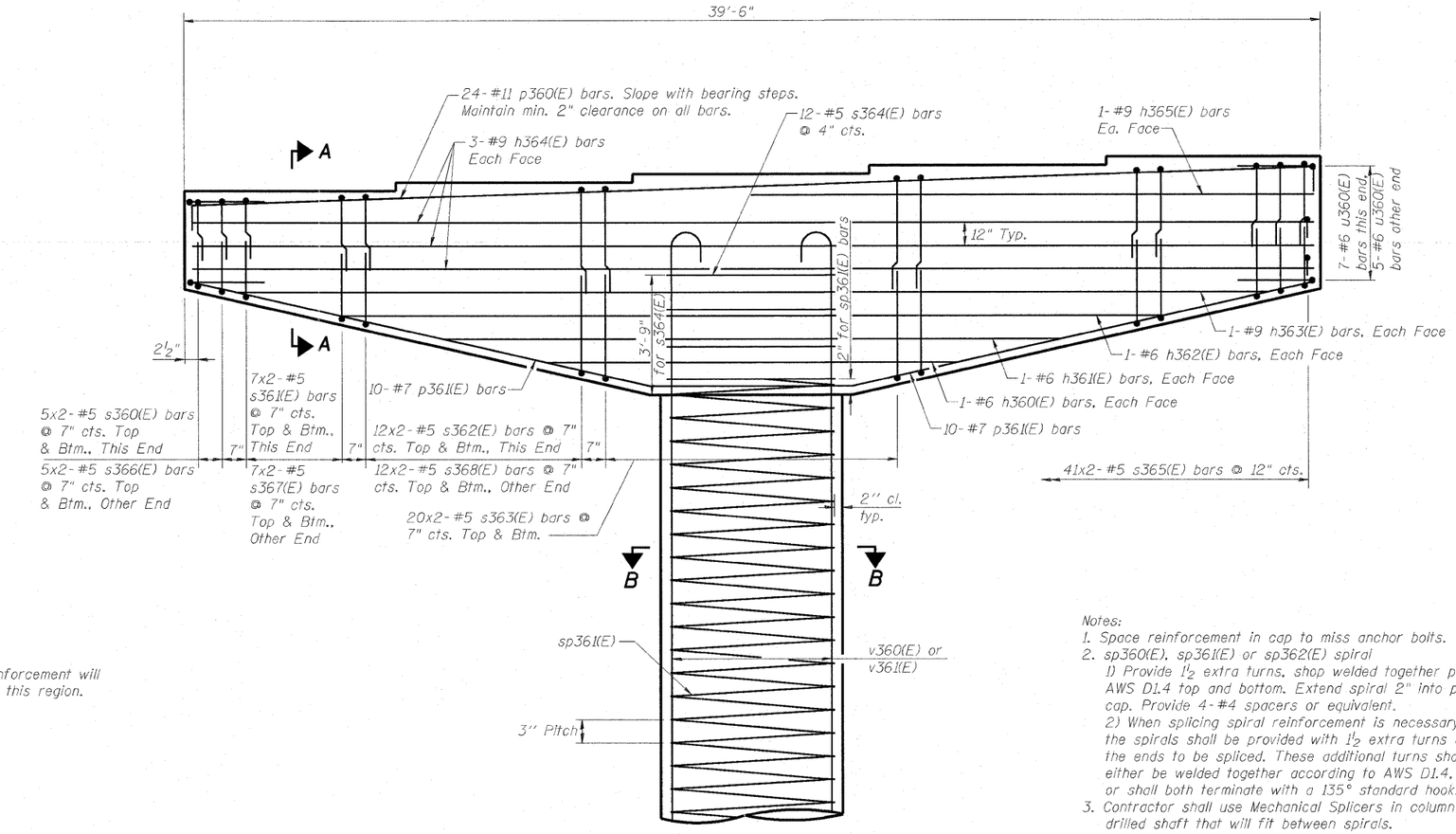
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082-0324 – PIER 4 – PLAN & ELEVATIONS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-181 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	308
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

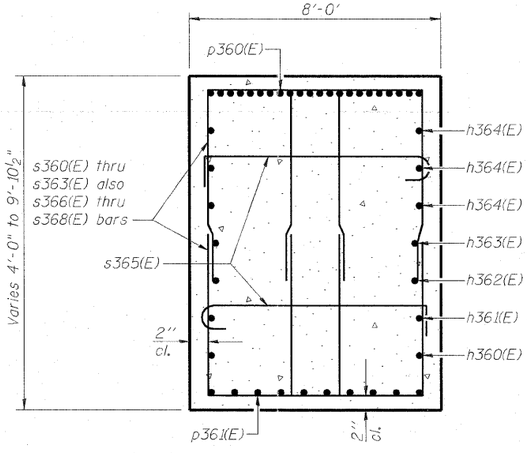


ELEVATION
(Looking East)



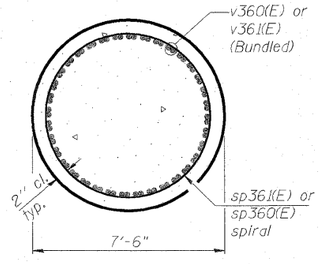
ELEVATION
(Looking Up Station)

Notes:
1. Space reinforcement in cap to miss anchor bolts.
2. sp360(E), sp361(E) or sp362(E) spiral
   1) Provide 1½ extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap. Provide 4-#4 spacers or equivalent.
   2) When splicing spiral reinforcement is necessary, the spirals shall be provided with 1½ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.
3. Contractor shall use Mechanical Splicers in column and drilled shaft that will fit between spirals.
4. Contractor shall test the Drilled Shaft in accordance with special provision for Crosshole Sonic Logging.

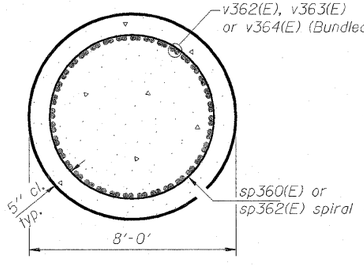


SECTION A-A

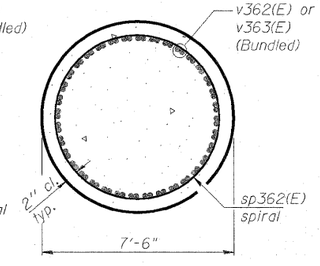
Min. Lap Lengths
#5 bars: 3'-3"



SECTION B-B



SECTION C-C



SECTION D-D

AECOM	USER NAME =	DESIGNED - DDB	REVISED -
		DRAWN - BRD	REVISED -
	PLOT SCALE = 8.166667 ' / IN.	CHECKED - LLV	REVISED -
	PLOT DATE = 8/15/2011	DATE - 08-12-11	REVISED -

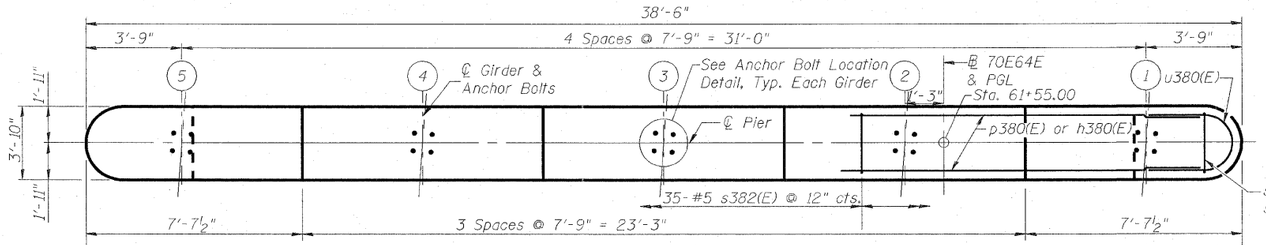
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082-0324 – PIER 4 – DETAILS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-182 OF S-234 SHEETS | STA. | TO STA.

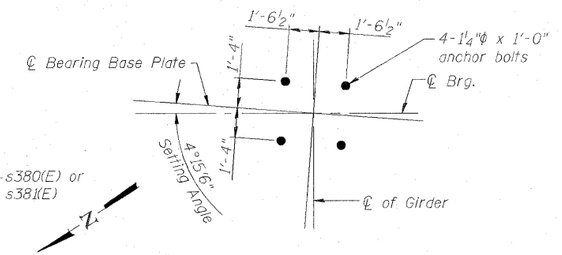
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	309
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

k:\projects\0084\6669\sn082-0322 & 0324 Flyover\100_cad\901_drawings\76c01_master_consolidated\structural\082-0322\sheet\082-0322-0324_76C76-0324_76C76_S055_082-0324-Part4-2.dgn

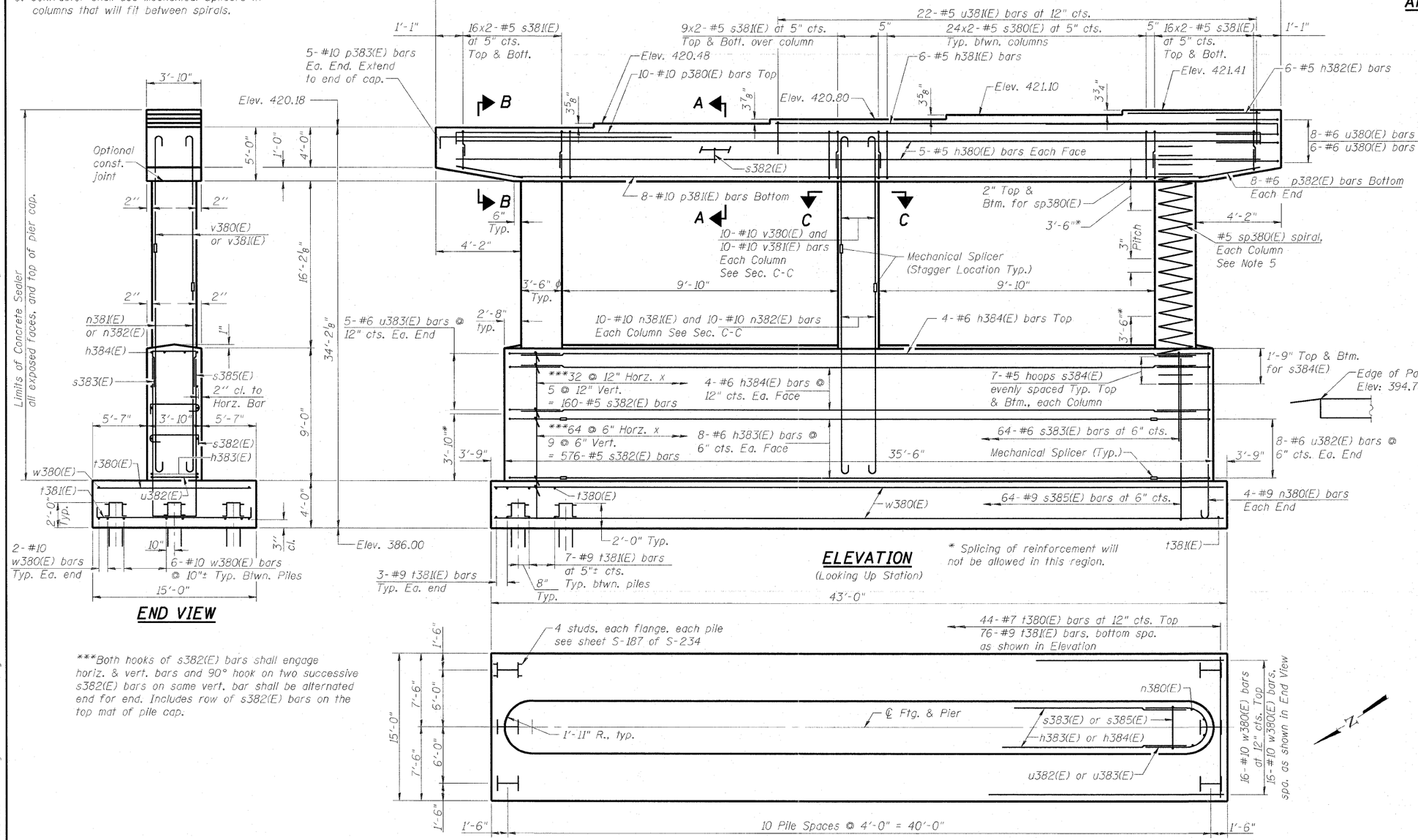
Notes:
1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. For details of piles, see sheet S-187 of S-234.
4. ℄ of Pier is radial to ℄ 70E64E at Sta. 61+55.00.
5. #5 sp380(E) spiral, each column
   1) Provide $1\frac{1}{2}$ extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap & crashwall. Provide 4-#4 spacers or equivalent.
   2) When splicing spiral reinforcement is necessary, the spirals shall be provided with $1\frac{1}{2}$ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.
6. Contractor shall use Mechanical Splicers in columns that will fit between spirals.



TOP PLAN



ANCHOR BOLT LOCATION DETAIL



END VIEW

ELEVATION
(Looking Up Station)

FOOTING PLAN

***Both hooks of s382(E) bars shall engage horiz. & vert. bars and 90° hook on two successive s382(E) bars on same vert. bar shall be alternated end for end. Includes row of s382(E) bars on the top mat of pile cap.

* Splicing of reinforcement will not be allowed in this region.

Limits of Concrete Sealer
all exposed faces, and top of pier cap.

PILE DATA

Type: HP 12x63
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 88'
No. Production Piles: 33
No. Test Piles: 0

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h380(E)	10	#5	34'-8"	
	h381(E)	6	#5	21'-0"	
	h382(E)	6	#5	5'-6"	
	h383(E)	16	#6	19'-8"	
	h384(E)	12	#6	31'-8"	
	n380(E)	8	#9	13'-9"	
	n381(E)	30	#10	15'-5"	
	n382(E)	30	#10	17'-5"	
	p380(E)	10	#10	38'-4"	
	p381(E)	8	#10	31'-2"	
	p382(E)	16	#6	5'-8"	
	p383(E)	10	#10	11'-10"	
	s380(E)	96	#5	14'-11"	
	s381(E)	164	#5	10'-4"	
	s382(E)	771	#5	5'-0"	
	s383(E)	64	#6	7'-10"	
	s384(E)	42	#5	9'-11"	
	s385(E)	64	#9	28'-4"	
**	sp380(E)	3	#5	16'-7"	
	t380(E)	44	#7	14'-8"	
	t381(E)	76	#9	18'-4"	
	u380(E)	14	#6	17'-4"	
	u381(E)	22	#5	10'-0"	
	u382(E)	16	#6	17'-6"	
	u383(E)	10	#6	14'-10"	
	v380(E)	30	#10	15'-7"	
	v381(E)	30	#10	13'-7"	
	w380(E)	32	#10	42'-8"	

Structure Excavation	Cu. Yd.	264.6
Concrete Structures	Cu. Yd.	186.9
Reinforcement Bars, Epoxy Coated	Pound	43,240
Furnishing Steel Piles, HP 12x63	Foot	2,904
Driving Piles	Foot	2,904
Pile Shoes	Each	33
Mechanical Splicers	Each	92
Concrete Sealer	Sq. Ft.	2102

** Length is height of spiral.
See next sheet for Bar Details and Sections.

AECOM

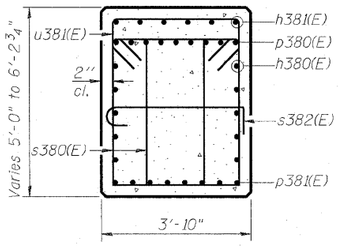
USER NAME =	DESIGNED - DDB	REVISED -
	DRAWN - BRD	REVISED -
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -
PLOT DATE = 8/15/2011	DATE - 08-12-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

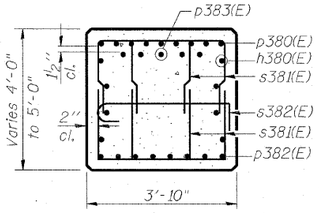
PIER – S.N. 082-0324 – PIER 5 – PLANS & ELEVATIONS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-183 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	310
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

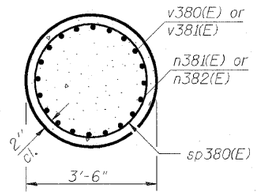
k:\projects\60046689\sn082-0322 & 0324 Flyover\900.cad\90l_drawings\76c60_master_consolidated\structural\082-0322\sheet\082-0322-0324_76C76_5036_082-0324-Pier-5-1.dgn



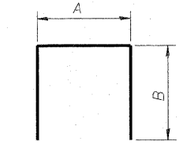
SEC. A-A



SEC. B-B



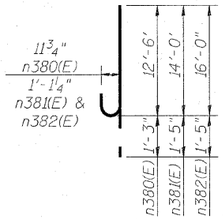
SEC. C-C



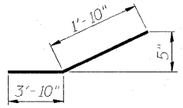
BARS

A & B DIMENSIONS

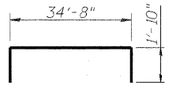
Bar	A	B
s381(E)	2'-4"	4'-0"
s383(E)	3'-4"	2'-3"
s385(E)	3'-4"	12'-6"
t381(E)	14'-8"	1'-10"
u381(E)	3'-6"	3'-3"



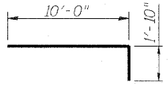
BAR n380(E), n381(E) & n382(E)



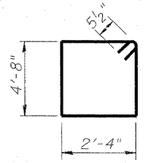
BAR p382(E)



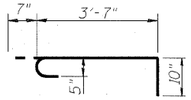
BAR p380(E)



BAR p383(E)

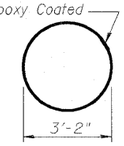


BAR s380(E)

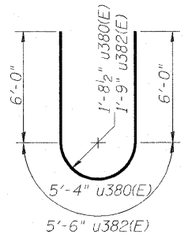


BAR s382(E)

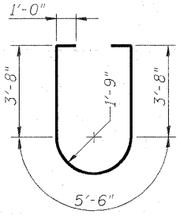
Shop welded per AWS D1.4 or mechanically spliced; cost included in Reinforcement Bars, Epoxy Coated



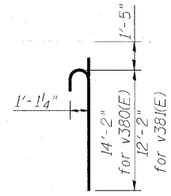
BAR s384(E)



BARS u380(E) & u382(E)



BAR u383(E)



BAR v380(E) or v381(E)

AECOM

USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -	
PLOT DATE = 8/15/2011	DATE - 08-12-11	REVISED -	

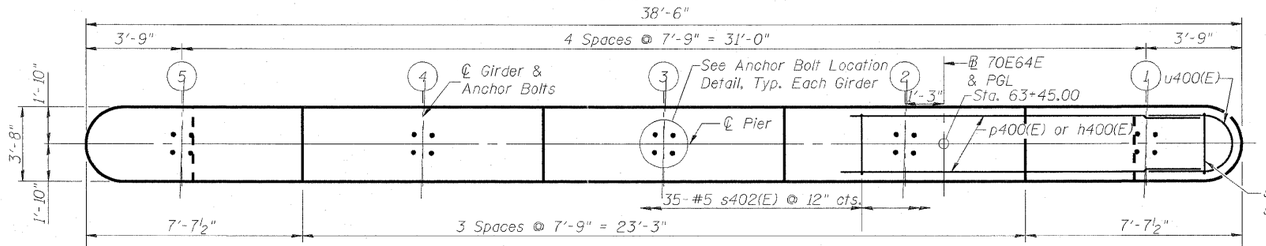
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082–0324 – PIER 5 – DETAILS
I–70E OVER I–55, CSX & KCS RAILROADS

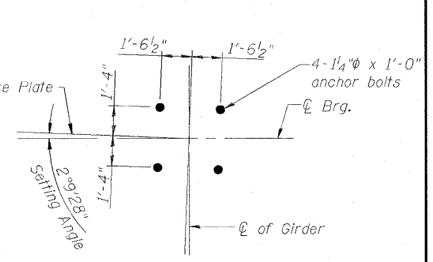
SCALE: | SHEET S-184 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	311
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

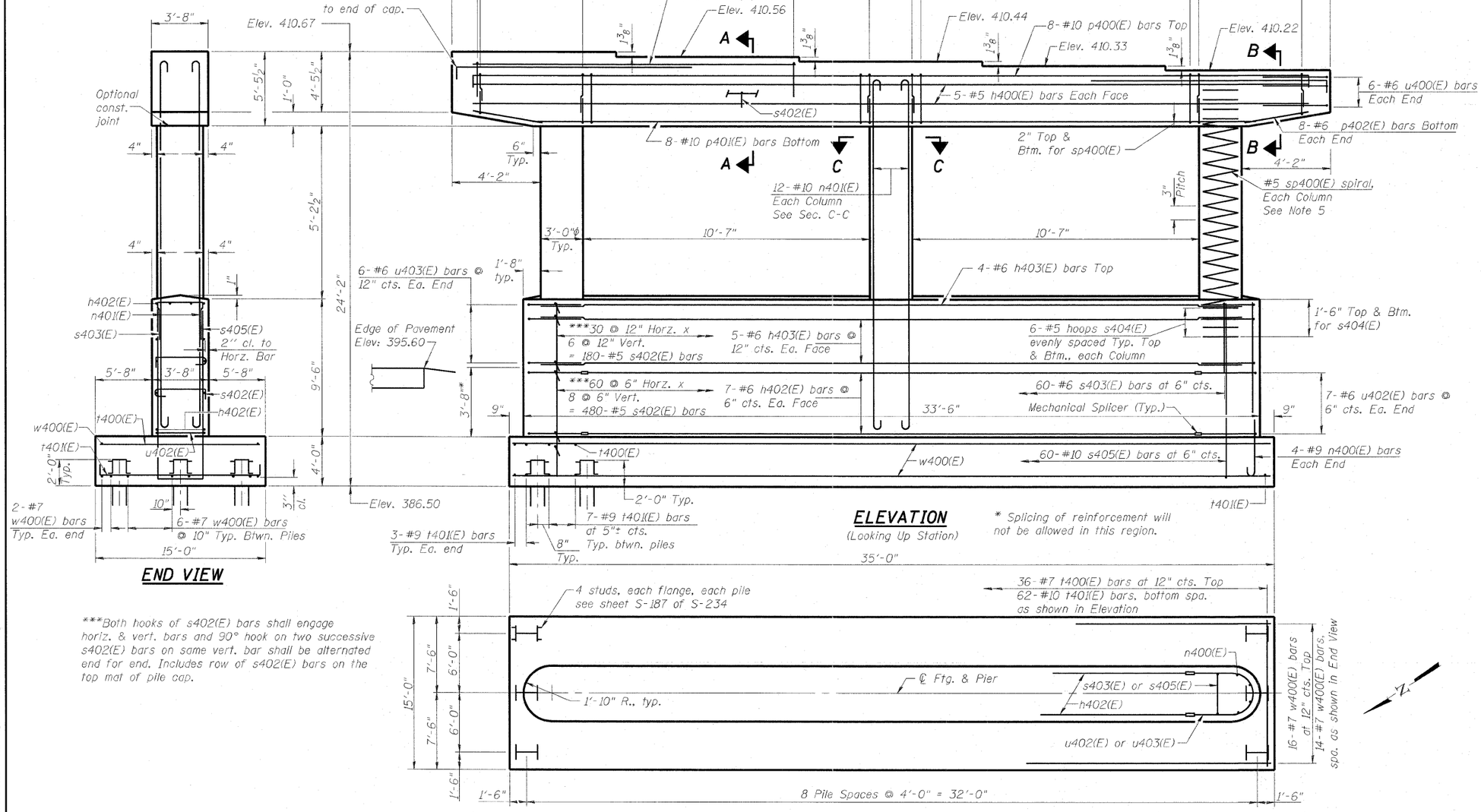
Notes:
1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. For details of piles, see sheet S-187 of S-234.
4. ℄ of Pier is perpendicular to ℄ 70E64E at Sta. 63+45.00.
5. #5 sp400(E) spiral, each column
   1) Provide 1½ extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap & crashwall. Provide 4-#4 spacers or equivalent.
   2) When splicing spiral reinforcement is necessary, the spirals shall be provided with 1½ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.
6. Contractor shall use Mechanical Splicers in crashwall that will fit between stirrups.
7. Splicing of reinforcement will not be allowed in the columns.



TOP PLAN



ANCHOR BOLT LOCATION DETAIL



ELEVATION
(Looking Up Station)

END VIEW

* Splicing of reinforcement will not be allowed in this region.

***Both hooks of s402(E) bars shall engage horiz. & vert. bars and 90° hook on two successive s402(E) bars on same vert. bar shall be alternated end for end. Includes row of s402(E) bars on the top mat of pile cap.

FOOTING PLAN

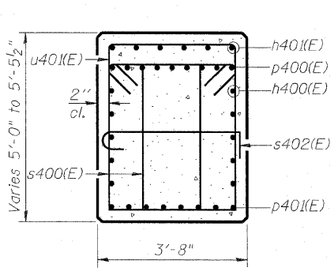
PILE DATA

Type: HP 12x63
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 88'
No. Production Piles: 27
No. Test Piles: 0

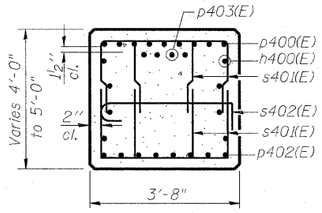
BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h400(E)	10	#5	34'-10"	
	h401(E)	6	#5	13'-5"	
	h402(E)	14	#6	17'-10"	
	h403(E)	14	#6	29'-10"	
	n400(E)	8	#9	13'-9"	
	n401(E)	36	#10	20'-2"	
	p400(E)	8	#10	38'-6"	
	p401(E)	8	#10	31'-2"	
	p402(E)	16	#6	5'-9"	
	p403(E)	8	#10	11'-10"	
	s400(E)	96	#5	14'-3"	
	s401(E)	164	#5	10'-0"	
	s402(E)	695	#5	4'-10"	
	s403(E)	60	#6	7'-8"	
	s404(E)	36	#5	8'-4"	
	s405(E)	60	#10	29'-2"	
**	sp400(E)	3	#5	5'-7"	
	t400(E)	36	#7	14'-8"	
	t401(E)	62	#9	18'-4"	
	u400(E)	12	#6	17'-1"	
	u401(E)	14	#5	9'-4"	
	u402(E)	14	#6	17'-3"	
	u403(E)	12	#6	14'-7"	
	w400(E)	32	#7	34'-8"	
	Structure Excavation		Cu. Yd.	260.7	
	Concrete Structures		Cu. Yd.	150.6	
	Reinforcement Bars, Epoxy Coated		Pound	32,000	
	Furnishing Steel Piles, HP 12x63		Foot	2,376	
	Driving Piles		Foot	2,376	
	Pile Shoes		Each	27	
	Mechanical Splicers		Each	28	

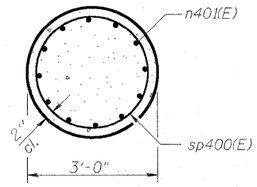
** Length is height of spiral.
See next sheet for Bar Details and Sections.



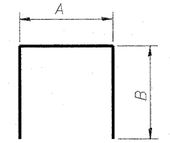
SEC. A-A



SEC. B-B



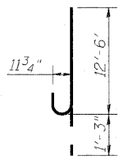
SEC. C-C



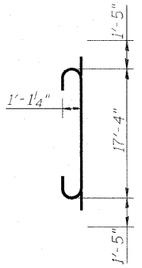
BARS

A & B DIMENSIONS

Bar	A	B
s401(E)	2'-0"	4'-0"
s403(E)	3'-2"	2'-3"
s405(E)	3'-2"	13'-0"
t401(E)	14'-8"	1'-10"
u401(E)	3'-4"	3'-0"



BAR n400(E)



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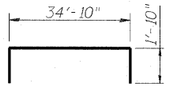
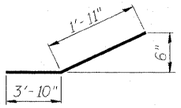
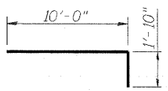


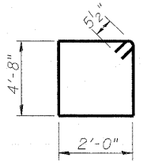
BAR p400(E)



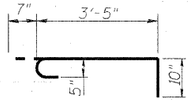
BAR p402(E)



BAR p403(E)

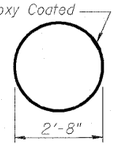


BAR s400(E)

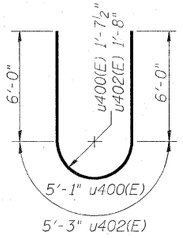


BAR s402(E)

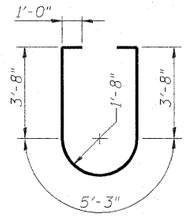
Shop welded per AWS D1.4 or mechanically spliced; cost included in Reinforcement Bars, Epoxy Coated



BAR s404(E)



BARS u400(E) & u402(E)



BAR u403(E)

AECOM

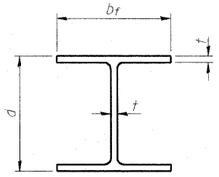
USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -	
PLOT DATE = 6/30/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER – S.N. 082–0324 – PIER 6 – DETAILS
I–70E OVER I–55, CSX & KCS RAILROADS

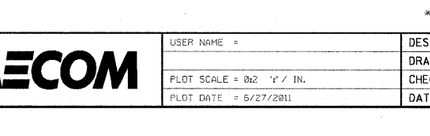
SCALE: | SHEET S-186 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	313
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

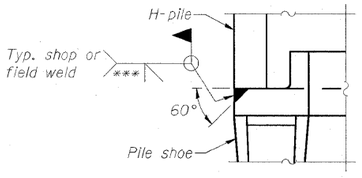


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{13}{16}''$	30''
x102	14''	$14\frac{3}{4}''$	$\frac{11}{16}''$	30''
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30''
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30''
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24''
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24''
x63	12''	$12\frac{1}{8}''$	$\frac{1}{2}''$	24''
x53	$11\frac{3}{4}''$	12''	$\frac{7}{16}''$	24''
HP 10x57	10''	$10\frac{1}{4}''$	$\frac{9}{16}''$	24''
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24''
HP 8x36	8''	$8\frac{1}{8}''$	$\frac{7}{16}''$	18''

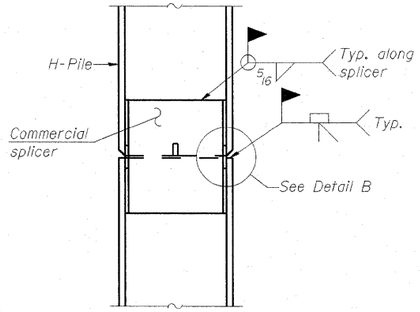


ELEVATION

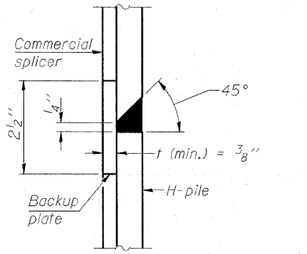


DETAIL A

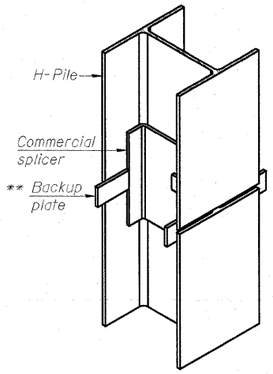
H-PILE SHOE ATTACHMENT



ELEVATION

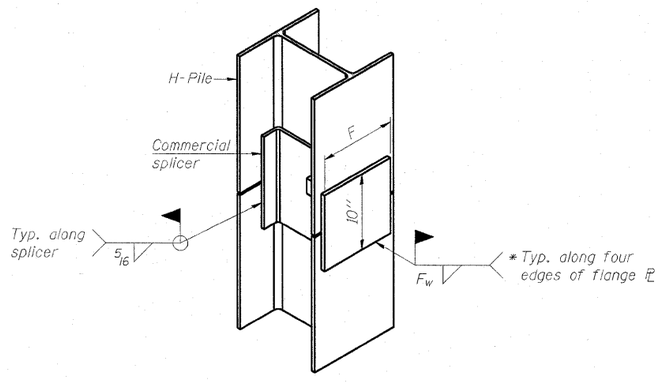


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



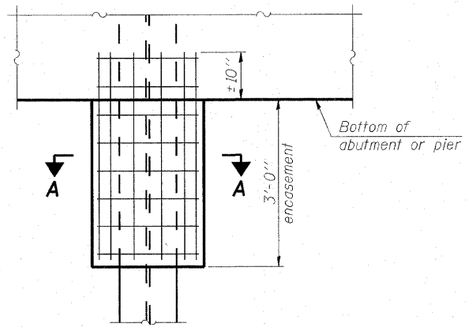
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

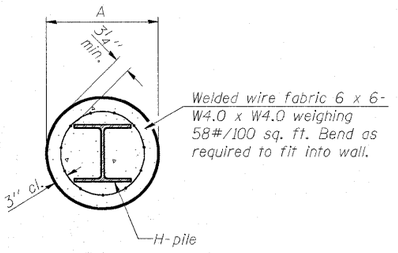
* Interrupt welds $\frac{1}{4}''$ from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).



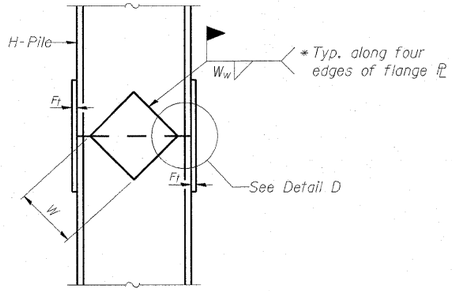
ELEVATION



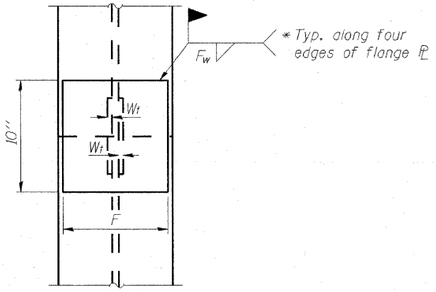
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

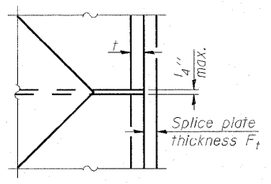
PILE ENCASEMENT



ELEVATION

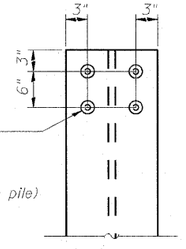


END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	$12\frac{1}{2}''$	1''	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8''	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8''	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7''	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$



STUD DETAIL

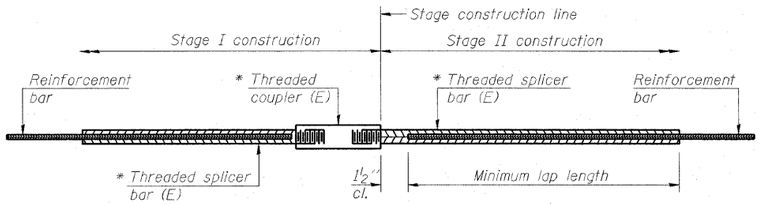
WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

AECOM	USER NAME =	DESIGNED - DDB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - BRD	REVISED -	
	PLOT SCALE = 0.2 '' / IN.	CHECKED - LLV	REVISED -	
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

HP PILE DETAILS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-187 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	314
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



STANDARD BAR SPLICER ASSEMBLY

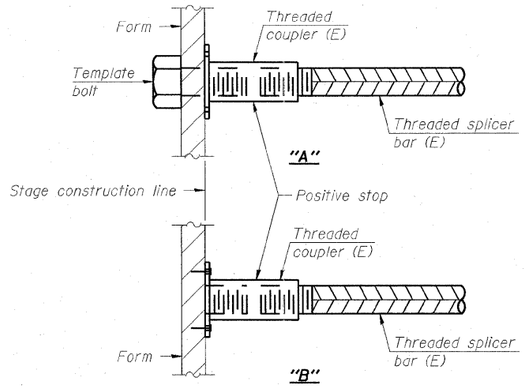
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1½" + thread length

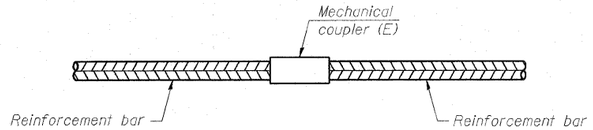
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



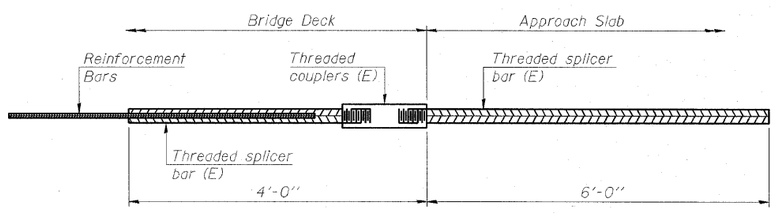
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



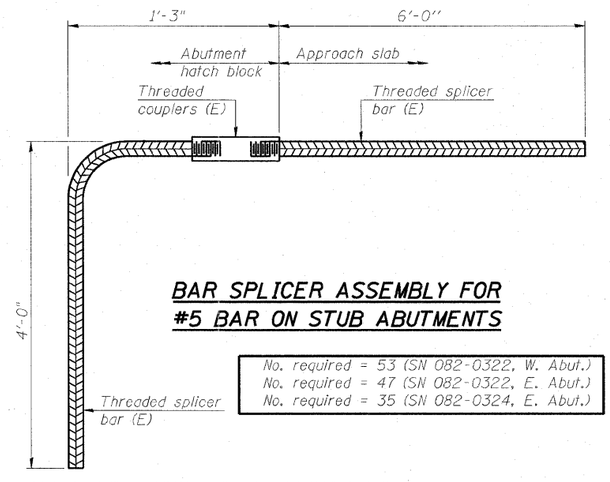
STANDARD MECHANICAL SPLICER

Location	Bar Size	No. assemblies required
Pier 1 (SN 082-0322)	#10	72
Pier 2 (SN 082-0322)	#10	80
Pier 3 (SN 082-0322)	#10	78
Pier 3 (SN 082-0322)	#5	10
Pier 4 (SN 082-0322)	#10	102
Pier 4 (SN 082-0322)	#5	10
Pier 5 (SN 082-0322)	#10	112
Pier 5 (SN 082-0322)	#6	48
Pier 6 (SN 082-0322)	#10	0
Pier 6 (SN 082-0322)	#6	36
Pier 7 (SN 082-0322)	#10	72
Pier 8 (SN 082-0322)	#10	72
Pier 9 (SN 082-0322)	#14	232
Pier 10 (SN 082-0322)	#10	192
Pier 10 (SN 082-0322)	#6	40
Pier 11 (SN 082-0322)	#10	96
Pier 11 (SN 082-0322)	#6	36
Pier 12 (SN 082-0322)	#6	32
Pier 12 (SN 082-0322)	#9	192
Pier 13 (SN 082-0322)	#10	96
Pier 13 (SN 082-0322)	#6	28
Pier 1 (SN 082-0324)	#14	126
Pier 2 (SN 082-0324)	#10	60
Pier 3 (SN 082-0324)	#11	90
Pier 3 (SN 082-0324)	#6	36
Pier 4 (SN 082-0324)	#14	216
Pier 5 (SN 082-0324)	#10	60
Pier 5 (SN 082-0324)	#6	32
Pier 6 (SN 082-0324)	#6	28
TOTAL		2284



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 0



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 53 (SN 082-0322, W. Abut.)
No. required = 47 (SN 082-0322, E. Abut.)
No. required = 35 (SN 082-0324, E. Abut.)

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar Splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See special provision for Mechanical Splicers.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

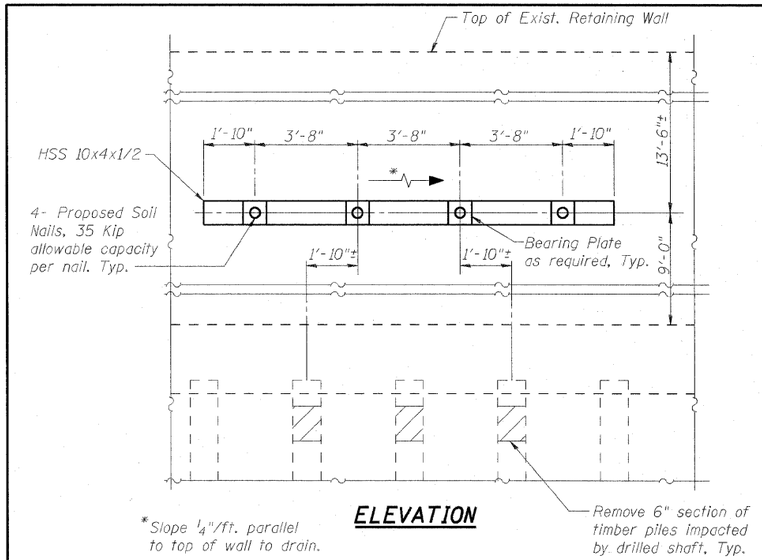
AECOM

USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '' / IN.	CHECKED - LLV	REVISED -	
PLOT DATE = 8/15/2011	DATE - 08-12-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

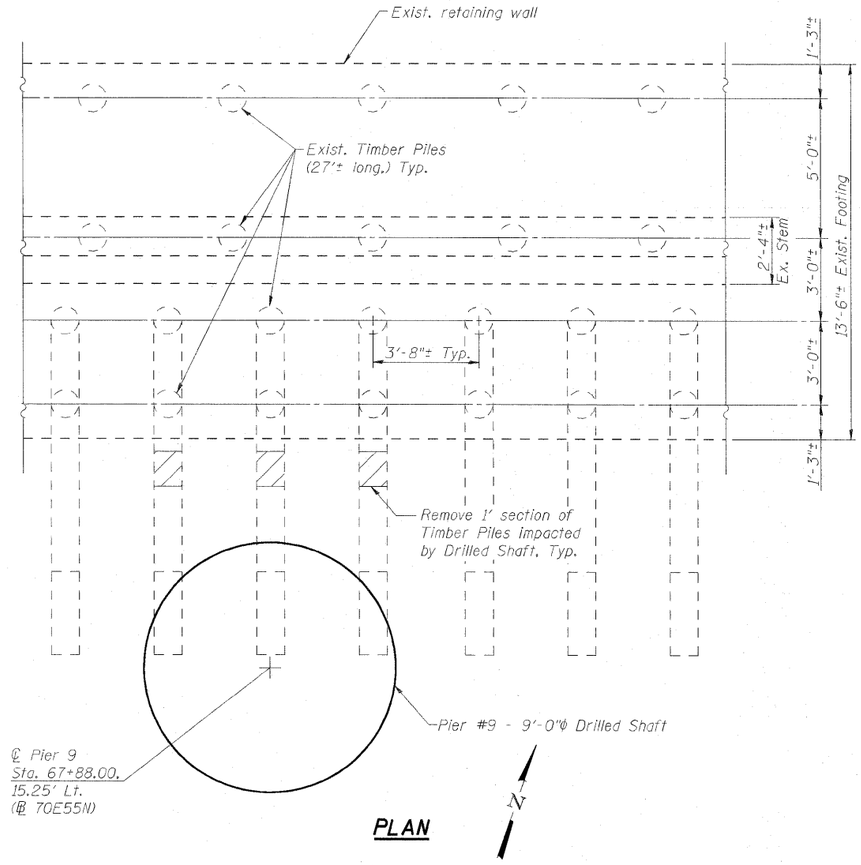
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
I–70E OVER I–55, CSX & KCS RAILROADS
SCALE: | SHEET S-188 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	315
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

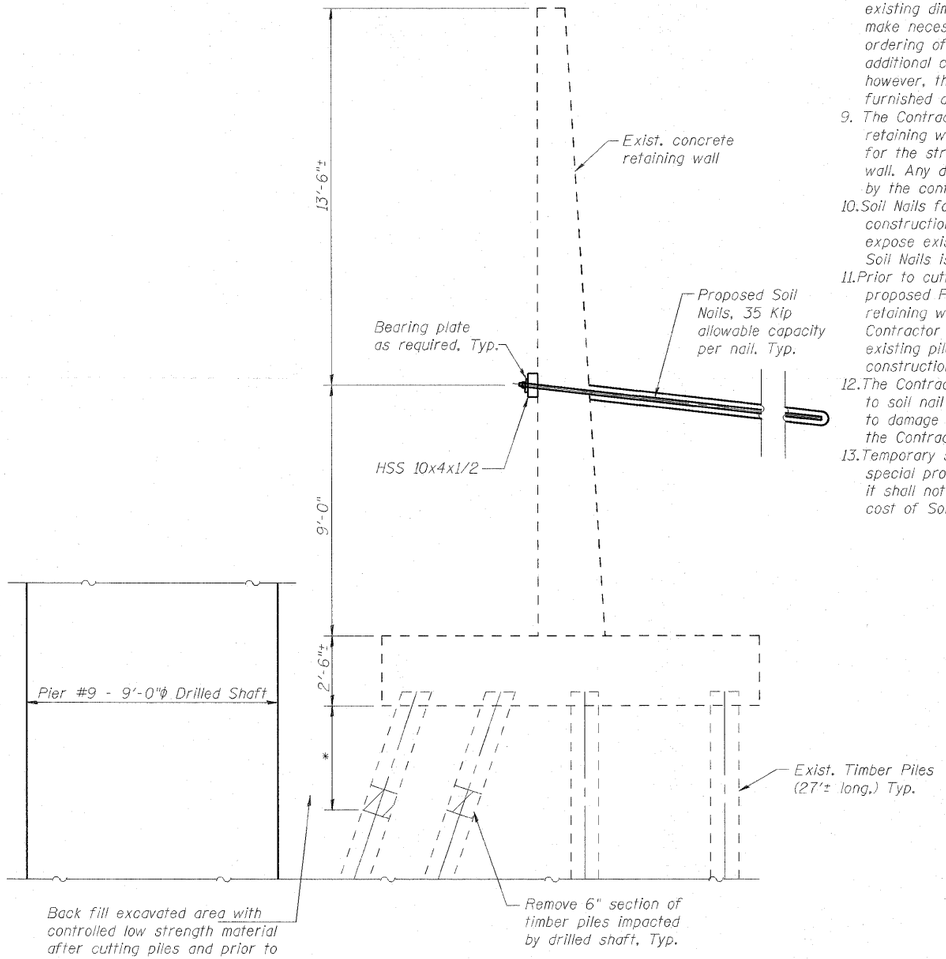


ELEVATION

*Slope $\frac{1}{4}$"/ft. parallel to top of wall to drain.



PLAN



SECTION

* Minimize depth of excavation, 3'-0" Max.

Notes:

1. Contractor shall design and detail Soil Nails in accordance with Special Provision.
2. Excavation, cutting timber piles, any temporary soil retention necessary and controlled low strength material is included in the cost of Soil Nails.
3. Soil Nails shall be installed prior to removing sections of the timber piles.
4. A verification test shall be conducted on one sacrificial nail, in accordance with the Special Provision.
5. The four proposed Soil Nails shall be pre-loaded and locked at the design load of 35 kips, in accordance with the Special Provision.
6. All structural shapes, plates and anchorage devices shall be hot dipped galvanized according to AASHTO M111.
7. See Sheet No. 353A thru. 353C for existing retaining wall plans. The existing plans, however, may not show all modifications that have been made to the structure over the years. The completeness of these plans is not guaranteed and no responsibility is assumed by IDOT for their accuracy.
8. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
9. The Contractor shall take precautions to not to damage existing retaining wall during construction. The Contractor is responsible for the structural integrity and stability of the existing retaining wall. Any damage to the existing retaining wall shall be repaired by the contractor at no additional cost.
10. Soil Nails for the existing wall shall be installed prior to construction of Pier 9 drilled shaft. The Contractor shall not expose existing retaining wall footing until the installation of the Soil Nails is complete.
11. Prior to cutting any existing piles, the Contractor shall layout proposed Pier 9 drilled shaft in the field and determine existing retaining wall piles impacted by drilled shaft construction. The Contractor shall immediately notify the Engineer if more than six existing piles are impacted by the proposed Pier 9 drilled shaft construction.
12. The Contractor shall field verify location of existing utilities prior to soil nail installation. The Contractor shall take precautions not to damage existing utilities. Any such damage shall be repaired by the Contractor at no additional cost.
13. Temporary soil retention system, if required, shall be as per special provision for Temporary Soil Retention System, except that it shall not be measured separately but shall be included in the cost of Soil Nails.

BILL OF MATERIAL

Item	Unit	Quantity
Soil Nails	Each	4

AECOM	USER NAME =	DESIGNED - DDB	REVISED -
		DRAWN - BRD	REVISED -
	PLOT SCALE = 0.166667 ' / IN.	CHECKED - LLV	REVISED -
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REINFORCEMENT OF EXISTING RETAINING WALL
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-189 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	316
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-3 (Page 1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 10/17/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA and Mud Rotary DRILL RIG/ HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3
Station 52+98.8
Offset 17ft Left
Ground Surface Elev. 417.6 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				gravel/crushed limestone (FILL)
416.1				
	14			
	8	*	21	Stiff to medium stiff, brown, CLAY with cinders, brick/concrete fragments and asphalt (FILL)
	5			
	2			
	2	*	33	
-5	3			
411.8				
	2			Medium stiff, brown, CLAY
411.1				
	2	1.9	29	Medium stiff, Gray-brown, SILTY
	3	S		LOAM
410.1				
				Loose, brown, SANDY LOAM Start mud rotary drilling @ 10'
	1			
	4	*	26	
-10	4			
	3			
	3	*	28	
	4			
404.6				
	3			Stiff, brown, SILTY LOAM with laminations of brown, FINE GRAINED SAND
	4	0.4	34	
402.6	5	B		
				Medium dense, brown, FINE GRAINED SAND with laminations of black organic material @ 16'-17.5'
	4			
	6			
	7			
-20	9			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				Medium dense, brown, FINE GRAINED SAND with laminations of black organic material @ 16'-17.5' *(continued)*
	7			
	11			
	16			
	4			See Attached Gradation Test Results
393.6				
	5			Stiff, brown, SANDY LOAM with Fe staining
393.1				
-25	10			
	7			Loose to dense, brown, FINE GRAINED SAND medium grained in places with layers of black organic material @ 34'-34.25'
	10			
	13			
	8			
	12			
-35	19			
	3			
	3			
	7			
	7			
-40	7			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-3 (Page 2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 10/17/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA and Mud Rotary DRILL RIG/ HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3
Station 52+98.8
Offset 17ft Left
Ground Surface Elev. 417.6 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				Loose to dense, brown, FINE GRAINED SAND medium grained in places with layers of black organic material @ 34'-34.25' *(continued)*
	11			
	16			
-45	16			
	11			
	14			
-60	18			
	9			
	15			
-65	25			
360.6				
				Medium dense to dense, gray, FINE to MEDIUM GRAINED SAND @ 58'-60'
	11			
	13			
-60	15			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				Medium dense to dense, gray, FINE to MEDIUM GRAINED SAND @ 58'-60' *(continued)*
	8			
	18			
-65	26			
	14			
	20			
-70	22			
	16			
	21			
-75	23			
-80				
337.6				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-3 (Page 3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 10/17/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA and Mud Rotary DRILL RIG/ HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3
Station 52+98.8
Offset 17ft Left
Ground Surface Elev. 417.6 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				Medium dense, brown, FINE GRAINED SAND
	10			See Attached Gradation Test Results
-85	11		23	
	14			
-90				
326.6				
				Lenses of light gray, weathered limestone
324.6				
				Medium dense to dense, brown, MEDIUM GRAINED SAND to COARSE GRAINED SAND
	12			
	12			
-95	13			
302.6				
				GRAVEL, BOULDERS (glacial outwash)
-100				
297.6				

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				Medium dense to dense, brown, MEDIUM GRAINED SAND to COARSE GRAINED SAND *(continued)*
	9			
	13			
-105	14			
-110				
-115				
	21			
	22			
-120	14			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '/ IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS I
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-190 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	317
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-3 (Page 4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 10/17/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA and Mud Rotary DRILL RIG/ HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3
Station 52+98.8
Offset 17ft Left
Ground Surface Elev. 417.6 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
CRYSTALLINE LIMESTONE - See Rock Core Log				
287.6 End of Boring				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (S-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-3 CORE (Page 1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Page 1 of 1

Date 10/17/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0322 / 082-0324
Station NA

CORING BARREL TYPE & SIZE NX (2.985 in.)
Core Diameter 2 in
Top of Rock Elev. 297.6 ft
Begin Core Elev. 297.6 ft

BORING NO. B- 3 Core
Station 52+98.8
Offset 17ft Left
Ground Surface Elev. 417.6 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	
LIMESTONE, moderately hard to hard, gray, fine to medium crystalline, fresh to slightly weathered, thickly bedded to massive with occasional dark gray chert nodules mechanical breaks at 121.5', 122', 124'	1	95	79	3.8	751.0	
284.6 Core loss 285.1						
287.6 End of Boring						

Color pictures of the cores Yes
Cores will be stored for examination until September 1, 2002
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS II I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = Ø2 '1' / IN.	CHECKED - DDB	REVISED -		
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		

SCALE: | SHEET S-191 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	318
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-3 ST (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Page 1 of 1

Date 10/11/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY KB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3 ST
Station 52+98.8
Offset 17ft Left

Ground Surface Elev. 417.6 ft Tube Length 24 in
Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Brown, SILTY CLAY with brick/concrete fragments (FILL)		1-1	100			20	0.1	21	CU
Brown, SILTY CLAY with brick/concrete fragments (FILL) (disturbed)		1-2	100						
Brown, SILTY CLAY with brick/concrete fragments (FILL) (disturbed)		1-3	100						
Brown, SILTY CLAY with brick/concrete fragments (FILL) (disturbed)		1-4	83						
Brown and gray, SILTY CLAY (disturbed)		2-1	17						
Brown and gray, SILTY CLAY (disturbed)		2-2	100						
Brown and gray, SILTY CLAY (disturbed)		2-3	100						
Brown and gray, SILTY CLAY		2-4	100	117	0.8	27			Qu
Brown, SILTY CLAY		3-1	100	118	1.8	27			Qu
Brown, SILTY CLAY (disturbed)	5	3-2	100						
Brown, SILTY CLAY		4-1	100	119		28	0.0	26	CU
Brown, SILTY CLAY (disturbed)		4-2	100	114		29			Con
Brown, SILTY CLAY (disturbed)		4-3	100						
Brown, SILTY CLAY (disturbed)		4-4	33						
Brown, SILTY CLAY, trace sand		5-1	100	101		25			
Brown, SILTY CLAY, trace sand (disturbed)		5-2	25						
Brown, SANDY LOAM - No recovery	10	6-1	0						

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-3A ST (1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Page 1 of 2

Date 11/2/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY KB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3A ST
Station 52+98.8
Offset 17ft Left

Ground Surface Elev. 417.8 ft Tube Length 24 in
Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Topsoil		1-1	100						
Topsoil		1-2	100						
Black, SILTY CLAY (FILL)		1-3	100	123	0.9	21			Qu
Black, SILT CLAY, trace glass (FILL) (disturbed)		1-4	83						
Black, SILTY CLAY, trace roots (FILL)		2-1	100	119	2.0	20			Qu
Black, SILTY CLAY, trace roots (FILL) (disturbed)		2-2	100						
Black, SILTY CLAY, trace roots (FILL) (disturbed)		2-3	17						
Brown CLAY, trace roots (FILL)	5	3-1	83	122		23			Con
Green and gray CLAY (FILL) (disturbed)		3-2	100						
Green and gray CLAY (FILL) (disturbed)		3-3	100						
Brown, SILTY CLAY (disturbed)		4-1	17						
Brown, SILTY CLAY (disturbed)		4-2	100						
Brown, SILTY CLAY		4-3	100	113	0.9	24			Qu
Brown, SILTY CLAY		4-4	100	111	0.6	28			Qu
Brown, SILT CLAY		5-1	33						
Greenish brown SILT, trace fine grained sand	10	6-1	100	112	0.4	32			Qu
Greenish brown SILT, trace fine grained sand		6-2	100	116	0.6	35			Qu
Greenish brown SILT, trace fine grained sand		6-3	100	115	0.6	35			Qu
Greenish brown SILT, trace fine grained sand (disturbed)		6-4	100						
Brown SILT, trace fine grained sand (disturbed)		7-1	33						
Brown SILT, trace fine grained sand		7-2	100	117	0.5	29			Qu

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

k:\projects\60046589\rm082-0322 & 0324 flyover\400.cad\401_drawings\76c08_master_consolidated\structural\082-0322\sheet\082-0322-0324_76C76_SJ03_Boring_Log-03.dgn

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS III I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -		SCALE: SHEET S-192 OF S-234 SHEETS STA. TO STA.
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	319
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-3A ST (2 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Page 2 of 2

Date 11/2/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY KB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3A ST
Station 52+98.8 Ground Surface Elev. 417.6 ft Tube Length 24 in
Offset 17ft Left Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Brown and Gray, FINE GRAINED SAND		7-3	100						
Brown and gray SANDY LOAM		7-4	100						
Brown and gray SANDY LOAM		8-1	0						
	15								
	20								
	25								

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-3B ST (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Page 1 of 1

Date 6/26/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY TR

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3B ST
Station 52+98.8 Ground Surface Elev. 417.6 ft Tube Length 24 in
Offset 17ft Left Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Topsoil (FILL)									
Dark brown, SILTY CLAY to CLAY with trace cinders (FILL) (disturbed)									
Dark brown, SILTY CLAY (FILL) (disturbed)		1-1	67						
Dark brown, SILTY CLAY (FILL)		1-2	100	114	1.0	21			Qu
Dark brown, SILTY CLAY (FILL) (disturbed)		1-3	100						
Dark brown, SILTY CLAY (FILL) (disturbed)		1-4	100						
Brown CLAY, trace cinders (disturbed)		2-1	100						
Brown CLAY, trace cinders		2-2	100	117		26	0.0	27	CU
Brown CLAY, trace cinders		2-3	67	117		26			Con
	5								
Brown SILT, trace sand		3-1	100	112		29	0.0	22.5	CU
Brown SILT, trace sand		3-2	100	109		28			Con
Brown SILT, trace sand (disturbed)		3-3	17						
		4-1	100						
Brown, SANDY LOAM		4-2	100						
Brown, FINE GRAINED SAND		4-3	100						
		4-4	67						
		5-1	100						
	10	5-2	100						
		5-3	100						
		5-4	100						

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '/ IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS IV
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-193 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	320
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-3C ST (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Page 1 of 1

Date 6/26/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY TR

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair STRUCT. NO. 082-0322 / 082-0324
Station NA

BORING NO. B- 3C ST
Station 52+98.8 Ground Surface Elev. 417.6 ft Tube Length 24 in
Offset 17ft Left Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA: COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Topsoil (FILL)									
Brown, SILTY CLAY to CLAY									
Brown SILT (disturbed)		1-1	100						
Brown SILT, 2" of brown, SILTY CLAY at bottom (disturbed)		1-2	100						
Brown, SILTY CLAY (disturbed)		1-3	100						
Brown, SILTY CLAY		1-4	67	114	2.0	26			Qu
Brown CLAY to brown SAND, trace silt		2-1	100	120		25			Con
Brown CLAY to brown SAND, trace silt		2-2	100	116		23	0.0	28.8	CU
Brown CLAY to brown SAND, trace silt (disturbed)		2-3	100						
	-5								
Brown, SANDY LOAM		3-1	100						
		3-2	100						
		3-3	67						
		4-1	50						
Brown SANDY LOAM		5-1	100						
Brown SANDY LOAM	-10	5-2	100						
Brown SANDY LOAM		5-3	100						
Brown LOAM		5-4	100	118		31			Con
Brown, FINE GRAINED SAND		6-1	100			24			
		6-2	100						
		6-3	100						
		6-4	100						

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

BORING LOG: B-7 (1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 6/11/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0370
Station NA

BORING NO. B- 7
Station 79+35
Offset 9.00ft Right
Ground Surface Elev. 384.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt with gravel/crushed limestone (fill) - 12 inches			
383.00			
FINE GRAINED SAND with gravel/crushed limestone and asphalt (FILL)	11		
	5		
	6		
381.00			
Brown, SILTY LOAM	2		
	2	0.1	21
-5	1	P	
378.50			
Very loose, brown, MEDIUM GRAINED SAND with some COARSE GRAINED SAND Start Mud Rotary @ 6'	2		
	1		
	3		
	1		
-10	1		
	3		
373.50			
Loose, orange, MEDIUM GRAINED SAND with COARSE GRAINED SAND	2		
	4		
	4		
	6		
369.50	4		
-15	3		
	3		
	5		
	4		
366.00			
Medium dense, gray, FINE GRAINED SAND See Attached Gradation Test Results	2		
	3		
-20	8		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND (continued)	3		
	8		
	15		
	8		
	9		
-25	10		
See Attached Gradation Test Results	4		
	10		
	12		
	5		
	10		
-30	10		
351.00			
Very dense, gray, FINE GRAINED SAND	12		
	30		
-35	34		
346.00			
Medium dense, gray, FINE GRAINED SAND	9		
	7		
-40	7		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS V I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 8:2 '1' / IN.	CHECKED - DDB	REVISED -		
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		

SCALE: | SHEET S-194 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	321
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-7 (2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 6/11/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0370
Station NA

BORING NO. B- 7
Station 79+35
Offset 9.00ft Right
Ground Surface Elev. 384.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND (continued)			
	4		
	6		
-45	14		
See Attached Gradation Test Results	6		
	7		
-50	8		
	7		
	12		
-55	15		
	3		
	6		
-60	12		
Medium dense, gray, FINE GRAINED SAND (continued)			
321.00			
Loose, gray, FINE GRAINED SAND	2		
	2		
-65	6		
316.00			
Medium dense, brown, MEDIUM GRAINED SAND, with fine gravel	3		
	5		
-70	12		
	4		
	8		
-75	16		
307.00			
GRAVEL, BOULDERS (GLACIAL OUTWASH)			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-7 (3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 6/11/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0370
Station NA

BORING NO. B- 7
Station 79+35
Offset 9.00ft Right
Ground Surface Elev. 384.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
GRAVEL, BOULDERS (GLACIAL OUTWASH) (continued)			
302.00			
CRYSTALLINE LIMESTONE - See Rock Core Log	50/2"		
	50/1"		
-85			
-90			
-95			
291.25			
End of Boring			
-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-7 CORE (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Date 6/11/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0370
Station NA

CORING BARREL TYPE & SIZE NX (2.985 in.)
Core Diameter 2 in
Top of Rock Elev. 301.25 ft
Begin Core Elev. 300.25 ft

BORING NO. B- 7 Core
Station 79+35
Offset 9.00ft Right
Ground Surface Elev. 384.00 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
LIMESTONE, light gray to gray, moderately hard to hard, finely crystalline becoming very fine crystalline with depth, oolitic in places, thick bedded with oolitic partings in places, fresh to slightly weathered, occassional stylolites with weathering along fracture. (continued)	1	100	100	2.5	719.0
-85					
298.25					
LIMESTONE, gray, moderately hard, very finely crystalline to micritic, thick bedded, fresh to slightly weathered, horizontal fractures with weathering along fractures, trace pockets of green shaley clay	2	100	83	2	
294.25					
-90					
LIMESTONE, gray, becoming dark gray at 88.75', moderately hard to hard, micritic, sandy, thick bedded to massive, fresh to slightly weathered	3	100	94	2	
291.25					
Becoming shaley with thin beds of green to gray shale and clay					
End of Boring					
-95					
-100					

Color pictures of the cores Yes
Cores will be stored for examination until September 1, 2002
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS VI I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 8\2 '\' / IN.	CHECKED - DDB	REVISED -		
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		SCALE: SHEET S-195 OF S-234 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	322
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-11 (1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 11/28/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0322
Station NA

BORING NO. B- 11
Station 75+50.48
Offset 24.03ft Left
Ground Surface Elev. 416.90 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SANDY LOAM with roots to 1 1/2'			
415.40	2		
Loose, brown, SANDY LOAM	3	0.5	
	3	S	
413.90			
Medium stiff, brown, SILTY LOAM	1		
	3	1.6	
-5	4	S	
	1		
	3	1.5	
	4	S	
	1		
407.40	1	2.1	
Soft, brown with gray, mottles, SILTY CLAY with Fe staining -10	2	S	
406.40			
Soft, brown/gray, mottled, SILT with Fe staining	1		
405.40			
Soft, brown with gray mottles, 404.90	1	1.7	
SILTY CLAY with Fe staining	2	S	
Soft, brown/gray, mottled, SILT with Fe staining 403.90			
Medium stiff, brown/grey, mottled, SILTY CLAY	0		
	2	1.3	
401.90 -15	3	P	
Loose, brown, FINE GRAINED SAND with silt	2		
	3		
	5		
	2		
Start Mud Rotary Drilling @ 20'	4		
-20	5		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
396.40			
Medium stiff, gray, SILTY LOAM with Fe staining	2		
394.90			
Medium stiff to stiff, brown, SILTY LOAM	4		
	4		
	4		
-25	5		
Fe staining @ 26' - 28'	5		
	5		
	4		
388.90			
Medium stiff, brown, SILTY LOAM	3		
	4		
-30	4		
386.40			
Medium dense, brown, SANDY LOAM with laminations of black organic material	5		
	5		
-35	7		
379.90			
Medium dense, brown, FINE GRAINED SAND	7		
	7		
-40	11		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-11 (2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 11/28/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0322
Station NA

BORING NO. B- 11
Station 75+50.48
Offset 24.03ft Left
Ground Surface Elev. 416.90 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, brown, FINE GRAINED SAND (continued)			
374.90			
Medium dense to dense, gray, FINE GRAINED SAND			
Laminations of black organic material @ 42' to 47' and medium grained SAND @ 42' to 47'			
See Attached Gradation Test Results	12		
	13		
-45	14		
	8		
	5		
-50	8		
	8		
	12		
-55	16		
	9		
	9		
-60	11		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, gray, FINE GRAINED SAND			
Laminations of black organic material @ 42' to 47' and medium grained SAND @ 42' to 47' (continued)			
See Attached Gradation Test Results	13		
	18		
-65	20		
	4		
	5		
-70	7		
	12		
	13		
-75	15		
336.90 -80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-11 (3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 11/28/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0322
Station NA

BORING NO. B- 11
Station 75+50.48
Offset 24.03ft Left
Ground Surface Elev. 416.90 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, brown, COARSE GRAINED SAND with lenses of light gray, weathered limestone			
	13		
	11		
-85	10		
326.90 -90			
Medium dense, brown, MEDIUM GRAINED SAND	11		
	9		
	10		
-95			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very dense, brown, FINE to MEDIUM GRAINED SAND			
	13		
	29		
-105	37		
306.90 -110			
Very dense, brown, MEDIUM to COARSE GRAINED SAND with lenses of light gray, weathered limestone	30		
	>50		
302.40			
GRAVEL, BOULDERS (GLACIAL OUTWASH) -115			
299.40			
CRYSTALLINE LIMESTONE - See Rock Core Log -120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

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AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '/ IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS VII
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-196 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	323
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-11 (4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 11/28/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0322
Station NA

BORING NO. B- 11
Station 75+50.48
Offset 24.03ft Left
Ground Surface Elev. 416.90 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CRYSTALLINE LIMESTONE – See Rock Core Log (continued)				
	292.40			
End of Boring	-125			
	-130			
	-135			
	-140			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-11 CORE (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Date 11/28/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0322
Station NA

CORING BARREL TYPE & SIZE NX (2.985 in.)
Core Diameter 2 in
Top of Rock Elev. 302.40 ft
Begin Core Elev. 302.40 ft

BORING NO. B- 11 Core
Station 75+50.48
Offset 24.03ft Left
Ground Surface Elev. 416.90 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Core Loss	-115	1	60	42	3.2	
	300.40					
Glacial outwash with granite, obsidian, rounded quartz and quartzite	299.40					
LIMESTONE, gray, fine to medium crystalline, moderately hard, fresh/slightly weathered, moderately weathered along clay partings from 119.5' to 120'	297.40					
LIMESTONE, gray, fine to medium crystalline, moderately hard, fresh/slightly weathered, with horizontal fractures at 123.5' and 124.5', slightly weathered along fractures	-120	2	100	100	3.6	478.0
	292.40					
End of Boring	-125					
	-130					

Color pictures of the cores Yes
Cores will be stored for examination until September 1, 2002
The "Strength" column represents the unicxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS VIII I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 8±2 '' / IN.	CHECKED - DDB	REVISED -		
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		SCALE: SHEET S-197 OF S-234 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	324
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-11 ST (1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/21/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY PG

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0322
Station NA

BORING NO. B- 11 ST
Station 75+50.48 Ground Surface Elev. 416.9 ft Tube Length 24 in
Offset 24ft Left Begin Sampling Depth -1 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Brown, SANDY LOAM (FILL)		1-1	100						
Brown, SANDY LOAM (FILL)		1-2	100						
Brown, CLAY (FILL) (disturbed)		2-1	58						
Brown, CLAY (FILL)		2-2	100	118	1.6	30			Qu
Brown, SILTY CLAY (FILL) (disturbed)		3-1	50						
Brown, SILTY CLAY (FILL)		3-2	100	113	1.1	26			Qu
Brown CLAY (FILL) (disturbed)		3-3	100			37			
Reddish brown, SILTY CLAY (FILL)		4-1	100	112	1.0	36			Qu
Reddish brown, SILTY CLAY (FILL) (disturbed)		4-2	100						
Greenish brown, SILTY to SANDY LOAM		4-3	67						
Brown CLAY LOAM (disturbed)	10	5-1	50						
Brown CLAY LOAM (disturbed)		5-2	100						
Brown CLAY LOAM		5-3	100	114	0.6	34			Qu
Grenish brown, SILTY LOAM (disturbed)		6-1	83						
Grenish brown, SILTY LOAM (disturbed)		6-2	100						
Brown, silty CLAY, trace clay		6-3	100	116		36			Con
Brown, SILTY CLAY		6-4	100	114		33	0.6	32.6	CU
Brown, FINE GRAINED SAND		7-1	100						
		7-2	100						

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-11 ST (2 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/21/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY PG

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0322
Station NA

BORING NO. B- 11 ST
Station 75+50.48 Ground Surface Elev. 416.9 ft Tube Length 24 in
Offset 24ft Left Begin Sampling Depth -1 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
	15	7-3	100						
		7-4	100						
Brown and gray CLAY LOAM (disturbed)		8-1	83						
Brown and gray CLAY LOAM		8-2	100	113	0.7	25			Qu
Brown, SILT LOAM (disturbed)		8-3	100						
	25								

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS IX I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 0.2 '/ IN.	CHECKED - DDB	REVISED -		
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		SCALE: SHEET S-198 OF S-234 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	325
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-15 (1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 12/4/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC/JCB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0324
Station NA

BORING NO. B- 17
Station 63+72.12
Offset 75.18ft Right
Ground Surface Elev. 415.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray to dark gray, COARSE GRAINED SAND with fine to coarse gravel			
	7		
	5		
-85	9		
-90	8		
	7		
-95	11		
-100			
314.60 Dense, brown to gray, fine to medium GRAVEL	17		
311.10 Dense, tan, FINE to MEDIUM GRAINED SAND	22		
-105	17		
307.60 Very dense, gray, COARSE GRAINED SAND with trace fine to coarse GRAVEL			
-110	35		
	49		
	>50		
302.60			
302.10 CRYSTALLINE LIMESTONE - See Rock Core Log			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-15 (2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 12/4/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC/JCB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0324
Station NA

BORING NO. B- 17
Station 63+72.12
Offset 75.18ft Right
Ground Surface Elev. 415.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CRYSTALLINE LIMESTONE - See Rock Core Log (continued)			
292.60 End of Boring			
-125			
-130			
-135			
-140			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-15 (3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 2/23/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-407
Station 61+78.54
Offset 29.88ft Left
Ground Surface Elev. 427.76 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brownish gray, SILTY CLAY (FILL), with cinders, trace gravel and sand			
	6		
	9		15
	12		
	2		
-5	10		
	10		
	4		
	5		19
	7		
	7		
	14		19
-10	10		
416.76 Medium stiff, brown, SILTY LOAM	2		
415.76 Stiff, greyish brown, CLAY	2		24
	3		
	4		
	3	2.1	24
-15 412.76	6	B	
Soft, brown, SILTY CLAY LOAM	3		
	2		24
409.76	2		
Loose, brown, FINE GRAINED SAND	5		
-20	4		
	4		
405.26 Loose, brown, FINE GRAINED SAND (continued)	7		
	3		30
404.76 Medium stiff, brown, SILTY CLAY LOAM	4		
	9		
	10		
-25	6		
	7		
	8		
399.76	4		
Loose to medium dense, brown, FINE GRAINED SAND, with silt See attached grain size distribution	4		
-30	3		
	6		
	7		
-35	9		
	5		
-40	4		
	8		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

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AECOM

USER NAME =		DESIGNED - PJL	REVISED -
		DRAWN - BRD	REVISED -
PLOT SCALE = 0.2 '' / IN.		CHECKED - DDB	REVISED -
PLOT DATE = 6/27/2011		DATE - 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS X
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-199 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	326
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-15 (4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 2/16/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0324
Station NA

BORING NO. B- 15
Station 59+35.2
Offset 0.02ft Right
Ground Surface Elev. 413.50 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
CRYSTALLINE LIMESTONE – See Rock Core Log (continued)				
290.50 End of Boring				
-125				
-130				
-135				
-140				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-15 CORE (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Page 1 of 1

Date 2/16/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0324
Station NA

CORING BARREL TYPE & SIZE NX (2.985 in.)
Core Diameter 2 in
Top of Rock Elev. 300.50 ft
Begin Core Elev. 300.50 ft

BORING NO. B- 15 Core
Station 59+35.2
Offset 0.02ft Right
Ground Surface Elev. 413.50 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Glacial outwash with quartzite, rounded quartz, granite and diorite 300.00	1	78	33	5.3	
LIMESTONE, moderately hard to hard, gray, very fine crystalline/micritic, fresh to slightly weathered, with chert nodules and stylolites	2	100	100	6.8	
-115					
					294.0
293.50 -120					
LIMESTONE, moderately hard to hard, gray, very fine crystalline/micritic, fresh to slightly weathered, with chert nodules and stylolites, dark gray to greenish gray with bands/thin beds of greenish-gray shale and gray clay 291.00	3	100	73	6.8	
LIMESTONE, moderately hard to hard, tan, very fine crystalline, oolitic in places, fresh to slightly weathered, with chert nodules and stylolites 290.50	4	83	83	7	
End of Boring					
-125					
-130					

Color pictures of the cores Yes
Cores will be stored for examination until September 1, 2002
The "Strength" column represents the unicxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

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AECOM	USER NAME =	DESIGNED - PJL	REVISED -
		DRAWN - BRD	REVISED -
	PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XI
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-200 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	327
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-15 ST (1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/16/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY PG

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0324
Station NA

BORING NO. B- 15 ST
Station 59+35.2 Ground Surface Elev. 413.5 ft Tube Length 24 in
Offset 9ft Right Begin Sampling Depth -1 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	TRIAXIAL DATA: STRENGTH (tsf)	MOISTURE (%)	COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Brown, SANDY CLAY LOAM (disturbed)		1-1	83						
Brown, SANDY CLAY LOAM (disturbed)		1-2	100						
Brown, SANDY CLAY LOAM		1-3	100	126	0.4	19			Qu
Brown, SANDY CLAY LOAM (disturbed)		1-4	100						
Brown, SANDY CLAY LOAM (disturbed)		2-1	50						
Brown, SANDY CLAY LOAM (disturbed)		2-2	100						
Brown, SANDY CLAY LOAM		2-3	100	129	0.8	20			Cu
Brown, SANDY LOAM	5	3-1	29						
Brown, SANDY CLAY LOAM (disturbed)		4-1	100						
Brown, SANDY CLAY LOAM (disturbed)		4-2	33						
Brown, SANDY LOAM	10	5-1	88						
Brown, LOAM (disturbed)		6-1	50						
Brown, LOAM (disturbed)		6-2	100						
Brown, LOAM (disturbed)		6-3	100			17			
Brown, SANDY LOAM		7-1	0						

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-15 ST (2 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/16/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY PG

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0324
Station NA

BORING NO. B- 15 ST
Station 59+35.2 Ground Surface Elev. 413.5 ft Tube Length 24 in
Offset 9ft Right Begin Sampling Depth -1 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	TRIAXIAL DATA: STRENGTH (tsf)	MOISTURE (%)	COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Brown, SANDY CLAY LOAM (disturbed)	15	8-1	100						
Brown, SANDY CLAY LOAM (disturbed)		8-2	100						
Brown, SANDY CLAY LOAM (disturbed)		8-3	100						
Brown, SANDY CLAY LOAM (disturbed)		8-4	100						
Brown, SANDY LOAM		9-1	0						
Brown, SANDY LOAM	20	10-1	0						
Brown, SANDY CLAY LOAM		11-1	0						
Brown, SANDY CLAY LOAM	25	12-1	0						

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 12 '1' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XII
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-201 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	328
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-16 (Page 1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 2/20/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0322
Station NA

BORING NO. B- 16
Station 64+49.44
Offset 24ft Left
Ground Surface Elev. 416.1 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, SILTY CLAY with gravel/crushed limestone (FILL)			
	10		
	9	*	18
	4		
	2		
	3	*	22
	2		
410.6 Gray, SILTY CLAY with gravel/crushed limestone, cinders and brick/concrete fragments (FILL)			
	2		
	4	1.3	24
	5	P	
	1		
	5	*	21
	5		
	7		
	3	*	30
	4		
	2		
	1	0.6	25
	3	P	
	3		
	4	*	15
	4		
	1		
	3	0.8	24
	7	S	
Gray, SILTY CLAY with gravel/crushed limestone, cinders and brick/concrete fragments (FILL) *(continued)*			
	3		
	4	*	22
	5		
393.1 Medium stiff, brown to gray, SANDY LOAM with gravel/crushed limestone and Fe staining			
	2		
	3	*	23
	4		
389.9 Loose to medium dense, brown, FINE GRAINED SAND with silt and layers of brown, SANDY LOAM			
	2		
	2		
	3		
	4		
See Attached Gradation Test Results			
	8		
	7		
384.1 Medium dense to very dense, brown, FINE GRAINED SAND with gravel/crushed limestone and Fe staining Started Mud Rotary @ 40'			
	5		
	7		
	8		
	9		
	15		
	15		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-98)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BORING LOG: B-16 (Page 2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 2/20/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0322
Station NA

BORING NO. B- 16
Station 64+49.44
Offset 24ft Left
Ground Surface Elev. 416.1 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, brown, FINE GRAINED SAND with gravel/crushed limestone and Fe staining Started Mud Rotary @ 40' *(continued)*			
	10		
	20		
	34		
	16		
	9		
	9		
364.1 Medium dense, brown, COARSE GRAINED SAND			
	9		
362.1 Medium dense to very dense, brown, FINE to MEDIUM GRAINED SAND with laminations of black organic material @ (72' - 84.5')			
	7		
	9		
	12		
	15		
	14		
Medium dense to very dense, brown, FINE to MEDIUM GRAINED SAND with laminations of black organic material @ (72' - 84.5') *(continued)*			
See Attached Gradation Test Results			
	25		
	26		
	16		
	10		
	21		
	22		
	7		
	19		
	33		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-98)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BORING LOG: B-16 (Page 3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 2/20/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0322
Station NA

BORING NO. B- 16
Station 64+49.44
Offset 24ft Left
Ground Surface Elev. 416.1 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, brown, FINE to MEDIUM GRAINED SAND with laminations of black organic material @ (72' - 84.5') *(continued)*			
	17		
331.6 Medium dense, brown, MEDIUM to COARSE GRAINED SAND	13		
	8		
	19		
326.1 Medium dense to very dense, brown, MEDIUM GRAINED SAND with trace gravel	12		
	9		
Medium dense to very dense, brown, MEDIUM GRAINED SAND with trace gravel *(continued)*			
See Attached Gradation Test Results	17		
	23		
	32		
307.1 GRAVEL, BOULDERS (glacial outwash)			
	50/3"		
298.6 CRYSTALLINE LIMESTONE - See Rock Core Log			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-98)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BORING LOG: B-16 (Page 4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 2/20/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0322
Station NA

BORING NO. B-16
Station 64+49.44
Offset 24ft Left
Ground Surface Elev. 416.1 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
CRYSTALLINE LIMESTONE - See Rock Core Log *(continued)*				
289.6 End of Boring				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-16 CORE (Page 1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Date 2/20/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0322
Station NA

CORING BARREL TYPE & SIZE NX (2.985 in.)
Core Diameter 2 in
Top of Rock Elev. 299.6 ft
Begin Core Elev. 299.6 ft

BORING NO. B-16 Core
Station 64+49.44
Offset 24ft Left
Ground Surface Elev. 416.1 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
LIMESTONE, hard, gray, micritic, massive, with chert inclusions and occasional stylolites, fresh to slightly weathered with some discoloration along stylolites, broken from 116.5' - 117' with deposits of white clay along breaks	1	97	79	7.1	
264.1					
LIMESTONE, moderately hard to hard, gray, very fine crystalline to fine crystalline, massive with bands/thin beds of greenish gray shale and clay, sandy in places, slightly weathered to moderately weathered at clay beds	2	100	75	5	618.0
282.6					
LIMESTONE, hard, dark gray to gray, becoming lighter gray with depth, very fine to fine crystaline, oolitic in places, massive with bands of greenish-gray shale, slightly weathered to fresh	3	92	92	5	
289.6					
End of Boring					

Color pictures of the cores Yes
Cores will be stored for examination until September 1, 2002
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XIV I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 0.2 '/ IN.	CHECKED - DDB	REVISED -		
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		SCALE: SHEET S-203 OF S-234 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	330
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-16 ST (1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/21/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY PG

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0322
Station NA

BORING NO. B- 16 ST
Station 416+91 Ground Surface Elev. 416.1 ft Tube Length 24 in
Offset 28ft Right Begin Sampling Depth -1 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	TRIAXIAL DATA: STRENGTH (tsf)	MOISTURE (%)	COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Cinders and brick/concrete fragments (FILL)		1-1	0						
		2-1	0						
		3-1	0						
Gray, SILTY CLAY		4-1	79						
Gray, SILTY CLAY		5-1	0						
	10								
Brown, CLAY LOAM to SANDY LOAM (disturbed)		6-1	100						
Brown, CLAY LOAM to SANDY LOAM (disturbed)		6-2	100			22			
		7-1	0						

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

SMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-16 ST (2 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/21/01

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY PG

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0322
Station NA

BORING NO. B- 16 ST
Station 416+91 Ground Surface Elev. 416.1 ft Tube Length 24 in
Offset 28ft Right Begin Sampling Depth -1 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	TRIAXIAL DATA: STRENGTH (tsf)	MOISTURE (%)	COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Brown, CLAY LOAM to SANDY LOAM (disturbed)		8-1	100						
Brown, SILTY CLAY (disturbed)		9-1	96						
Brown, SILTY CLAY		9-2		127		19	0.2	18.8	CU
Brown, SILTY CLAY (disturbed)		9-3				22			
Brown, SILTY CLAY (disturbed)		9-4							
Brown, SILTY CLAY (disturbed)		10-1	100						
	20								
Brown, SILT LOAM (disturbed)		11-1	100			20			
Brown, SILT LOAM (disturbed)		12-1	83			21			
Brown, SILT LOAM (disturbed)		12-2	100						
Brown, SILT LOAM (disturbed)		12-3	100						
	26								

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

SMPR FORM 1004A (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -
	DRAWN - BRD	REVISED -
PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XV
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: SHEET S-204 OF S-234 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	331
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-17 (1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 12/4/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC/JCB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0324
Station NA

BORING NO. B- 17
Station 63+72.12
Offset 75.18ft Right
Ground Surface Elev. 415.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Stiff, brown, SILTY CLAY sandy in places
	2			
	3	*		
	6			
412.60				
				Stiff, light brown, SILTY LOAM
	4			
	6	*		
-5	6			
410.10				
				Medium stiff, brown, SILT with Fe staining
	3			
	4	*		
408.10	4			
				Stiff, brown, SILTY LOAM
	6			
	6	*		
405.60 -10	7			
				Loose, brown, SANDY LOAM
	4			
	4			
401.85				
	2			
	2	0.5		Soft to medium stiff, brown to gray, SILT with Fe staining
-15	3	S		Wet @ 14'
	0			
	1	0.6		
	2	S		
397.60				
				Medium dense, brown, FINE GRAINED SAND with trace silt
	4			
	7			Start Mud Rotary Drilling @ 20'
-20	7			
395.10				
				Medium stiff, brown, SILTY LOAM
	2			
	3	0.3		
393.60	3	P		
				Medium stiff, gray, SILT
392.60				
				Medium dense, brown, FINE GRAINED SAND with silt
	6			
	6			
-25	8			
390.10				
	5			Loose, brown, SANDY LOAM
389.10				
	4			Loose to medium dense, gray, SANDY LOAM
	6			
				See Attached Gradation Test Results
	5			
	7			
-30	8			
383.60				
				Medium dense, gray to dark gray, FINE to MEDIUM GRAINED SAND
	6			
	6			
-35	9			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-17 (2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 12/4/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC/JCB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0324
Station NA

BORING NO. B- 17
Station 63+72.12
Offset 75.18ft Right
Ground Surface Elev. 415.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Medium dense, gray to dark gray, FINE to MEDIUM GRAINED SAND (continued)
	2			
	5			
-45	9			
	13			
	13			
-50	13			
	8			
	10			
-55	15			
	7			See Attached Gradation Test Results
	8			
-60	11			
				Medium dense, gray to dark gray, FINE to MEDIUM GRAINED SAND (continued)
	9			
	11			
-65	15			
348.60				
				Very dense @ 67' to 70'
	16			
	27			
-70	43			
	13			
	13			
-75	17			
335.60 -80				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-17 (3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 12/4/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC/JCB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0324
Station NA

BORING NO. B- 17
Station 63+72.12
Offset 75.18ft Right
Ground Surface Elev. 415.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Medium dense, gray to dark gray, COARSE GRAINED SAND with fine to coarse gravel
	7			
	5			
-85	9			
	8			
	7			
-95	11			
-100				
314.60				
				Dense, brown to gray, fine to medium GRAVEL
	17			
311.10	22			
-105	17			Dense, tan, FINE to MEDIUM GRAINED SAND
307.60				
				Very dense, gray, COARSE GRAINED SAND with trace fine to coarse GRAVEL
-110	35			
	49			
	>50			
302.60				
302.10				
				CRYSTALLINE LIMESTONE - See Rock Core Log
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

H:\projects\60146608\sn082-0322 & 0324 flyover\900.ces\901.drawings\76c66.master_consolidated\structural\082-0322-sheet\082-0322-0324_76C76.S116.Boringlog-15.dgn

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '/ IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XVI
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-205 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	332
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
	FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT		

BORING LOG: B-17 (4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 12/4/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC/JCB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0324
Station NA

BORING NO. B-17
Station 63+72.12
Offset 75.18ft Right
Ground Surface Elev. 415.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
CRYSTALLINE LIMESTONE – See Rock Core Log (continued)				
292.60				
End of Boring				
-125				
-130				
-135				
-140				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-17 CORE (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Page 1 of 1

Date 12/4/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BEC/JCB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0324
Station NA

BORING NO. B-17 Core
Station 63+72.12
Offset 75.18ft Right
Ground Surface Elev. 415.60 ft

CORING BARREL TYPE & SIZE NX (2.985 in.)
Core Diameter 2 in
Top of Rock Elev. 302.10 ft
Begin Core Elev. 302.10 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	
LIMESTONE, light gray to gray, finely to medium crystalline, fresh to slightly weathered, occasional horizontal fractures, with weathering along fractures, moderately hard, fossiliferous from 114' – 116'	1	99	99	2.8		
-115						
Clay parting at 118'					498.0	
297.10						
LIMESTONE, light gray to gray, finely to medium crystalline, fresh to slightly weathered, occasional horizontal fractures, with weathering along fractures, moderately hard, becoming greenish-gray and shaley at 122.75'	2	96	96	2.8		
-120						
Clay parting at 122'						
292.60						
End of Boring						
-125						
-130						

Color pictures of the cores Yes
Cores will be stored for examination until September 1, 2002
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

BORING LOG: RW-69 (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 1

Date 4/3/02

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY KMP

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/HAMMER EFFICIENCY Automatic Hammer

STRUCT. NO. 082-0324
Station NA

BORING NO. RW-69
Station 63+69.3
Offset 9ft Left
Ground Surface Elev. 414.9 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter 403.9 ft ▼
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
Topsoil - 12 inches				
413.9				
Medium stiff, brown, SILTY LOAM	2			
	3		20	
	3			
	1			
	4		19	
-5	4			
	0			
	3		27	
	5			
	3			
	4		7	
-10	4			
See Gradation Test Results				
404.4				
Soft to medium stiff, brown, SILT ▼	1			
	1		32	
	3			
	1			
	4		18	
-15	4			
	1			
	2		28	
	3			
See Gradation Test Results				
	2			
395.0 -20	2		24	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
Medium stiff, gray, SILTY CLAY (continued)				
	0			
392.9	2	0.7	57	
Medium dense, brown, SANDY LOAM	8	S		
	4			
	7			
-25	10			
	4			
	0			
See Gradation Test Results	9			
386.9				
Medium dense, brown, FINE GRAINED SAND	6			
	8			
-30	9			
	5			
	5			
379.9 -35	8			
End of Boring				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '/ / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XVII
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-206 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	333
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-404 (1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 4/17/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-404
Station 53+44.25
Offset 18.65ft Right
Ground Surface Elev. 418.57 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Topsoil - 6 inches 418.07			
Medium stiff, black, CLAY (FILL)	2		
	3		24
	3		
415.57			
Medium stiff, brown, SILTY CLAY (FILL)	2		
	2		27
-5	4		
413.07			
Medium stiff, brown, SILTY LOAM	2		
	3		23
	4		
	2		
	3		17
-10	3		
	3		
	4		25
	3		
405.57			
Medium dense, brownish gray, FINE GRAINED SAND	3		
	4		
-15	7		
	3		
	4		
loose	5		
	4		
	6		
-20	7		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, brownish gray, FINE GRAINED SAND (continued)			
	11		
	12		
	8		
	7		
	7		
-25	10		
	10		
	8		
	10		
	9		
	11		
-30	13		
	9		
	11		
-35	16		
382.57			
Medium dense, brownish gray, FINE TO MEDIUM GRAINED SAND			
See attached grain size distribution	9		
	11		
-40	16		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-404 (2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 4/17/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-404
Station 53+44.25
Offset 18.65ft Right
Ground Surface Elev. 418.57 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, brownish gray, FINE TO MEDIUM GRAINED SAND (continued)			
376.57			
Dense to very dense, brown gray, FINE GRAINED SAND	22		
	19		
-45	14		
	12		
	14		
-50	14		
medium dense			
	14		
	16		
-55	19		
See attached grain size distribution	30		
	40		
-60	40		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dense to very dense, brown gray, FINE GRAINED SAND (continued)			
	16		
	17		
-65	15		
	31		
	43		
-70	50/5"		
	32		
	23		
-80	32		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-404 (3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 4/17/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-404
Station 53+44.25
Offset 18.65ft Right
Ground Surface Elev. 418.57 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dense to very dense, brown gray, FINE GRAINED SAND (continued)			
333.57 -85			
Medium dense to very dense, brown gray, MEDIUM GRAINED SAND	13		
	13		
-90	13		
	9		
	9		
-100	9		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, brown gray, MEDIUM GRAINED SAND (continued)			
	20		
	20		
-110	24		
300.07			
CRYSTALLINE LIMESTONE - See attached rock core log			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XVIII I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 8.2 '' / IN.	CHECKED - DDB	REVISED -		SCALE: SHEET S-207 OF S-234 SHEETS STA. TO STA.
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	334
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-404 (4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 4/17/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 60%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-404
Station 53+44.25
Offset 18.65ft Right
Ground Surface Elev. 418.57 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
CRYSTALLINE LIMESTONE – See attached rock core log (continued)				
-125				
290.07 End of Boring				
-130				
-135				
-140				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-404 CORE (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Page 1 of 1

Date 4/17/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0322
Station NA

CORING BARREL TYPE & SIZE NX
Core Diameter 2 in
Top of Rock Elev. 300.07 ft
Begin Core Elev. 300.07 ft

BORING NO. B-404 Core
Station 53+44.25
Offset 18.65ft Right
Ground Surface Elev. 418.57 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	
Hard, gray, finely crystalline, medium bedded, slightly weathered, LIMESTONE	1	89	69			
-120						
	2	100	90		856.0	
highly weathered seam						
-125						
	3	100	81			
290.07 End of Boring						
-130						
-135						

Color pictures of the cores Yes
Cores will be stored for examination until 9-30-09
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XIX I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -		
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		SCALE: SHEET S-208 OF S-234 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	335
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-404 ST (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 4/21/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY BS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair STRUCT. NO. 082-0322
Station NA

BORING NO. B-404ST
Station 53+44.25 Ground Surface Elev. 418.57 ft Tube Length 24 in
Offset 18.65ft Right Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Black, SILTY LOAM (FILL), with cinders and slag		1-1	100			17			
Black, SILTY LOAM (FILL), with cinders and slag		1-2	100			26			
Black, SILTY CLAY (FILL), with cinders and slag		1-3	100	108	0.6	26			Qu
Brown, SILTY LOAM (FILL)		2-1	100	115		29			
Brown, CLAY (FILL)		2-2	33	113		37			Consd
Brown, CLAY (FILL), with inclusions of cinders, slag, and gravel		3-1	100	109		35			
Brown, CLAY (FILL), with inclusions of cinders, slag, and gravel	-5	3-2	83	121	1.5	26			Qu
Brown, SILTY LOAM		4-1	100						
Brown, CLAY		4-2	100	117		23	0.7		UU
Brown, SILTY LOAM		4-3	67	120		21			Consd
	-10								

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

BORING LOG: B-405 (1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 2/4/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY RFW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-405
Station 56+68.318
Offset 11.40ft Right
Ground Surface Elev. 421.20 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey, black, brown SILT (FILL), with sand, cinders, brick and concrete debris			
	4		
	3		
	50/0"		
	5		
	5		
-5	8		
	2		
	2		
	2		
412.20	2		
Medium stiff, gray, SILT, trace clay	3		
-10	3		
	2		
	2		28
	3		
	2		
	3		26
-15	3		
405.20			
Medium stiff, gray, SILTY CLAY LOAM	2		
	3		29
403.20	3		
Medium dense, grayish brown, SANDY LOAM	6		
	9		
-20	9		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, grayish brown, SANDY LOAM (continued) 400.20			
Medium stiff to stiff, gray, SILTY CLAY LOAM	7		
	9		
	4		
	3		
	3		44
-25	4		
	6		
	6		21
393.20	6		
Medium dense, grayish brown, FINE GRAINED SAND, trace silt	9		
	10		
	15		
-30			
See attached grain size distribution	8		
	10		
	11		
-35			
-40	10 / 15		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

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AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 82 '1' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XX
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-209 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	336
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-405 (2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3
Date 2/4/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY RFW
SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W
COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA
BORING NO. B-405
Station 56+68.318
Offset 11.40ft Right
Ground Surface Elev. 421.20 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft
Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, grayish brown, FINE GRAINED SAND, trace silt (continued)					
		-45	15 / 15 / 15		
		-50	10 / 10 / 15		
		-55	8 / 9 / 10		
		-60	12 / 6 / 21		
Medium dense, grayish brown, FINE GRAINED SAND, trace silt (continued)	359.20				
Dense to very dense, gray, FINE GRAINED SAND, trace silt. See attached grain size distribution		-65	28 / 38 / 38		
		-70	27 / 33 / 27		
		-75			
		-80	10 / 12 / 22		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-405 (3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 3
Date 2/4/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY RFW
SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W
COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA
BORING NO. B-405
Station 56+68.318
Offset 11.40ft Right
Ground Surface Elev. 421.20 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft
Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dense to very dense, gray, FINE GRAINED SAND, trace silt (continued)	336.20	-85			
Medium dense, gray, FINE GRAINED SAND, trace silt		-90	10 / 11 / 13		
		-95			
		-100	9 / 10 / 14		
Medium dense, gray, FINE GRAINED SAND, trace silt (continued)	319.70				
Boulders, cobbles and gravel	318.70				
Dense, gray, FINE GRAINED SAND, with gravel		-105			
		-110	10 / 16 / 20		
		-115			
	305.20				
Boulders, cobbles, and gravel	303.20				
End of Boring		-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-406 (1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4
Date 2/19/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH
SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W
COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA
BORING NO. B-406
Station 60+42.38
Offset 29.61ft Left
Ground Surface Elev. 427.38 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft
Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Black, SAND (FILL), with clay and gravel			4 / 3 / 3		
		-5	3 / 4 / 3		
			6 / 6 / 3		
		-10	2 / 1 / 3		26
			2 / 3 / 4		
	414.38				
Stiff, brown and gray, CLAY	412.38	-15	1 / 2 / 3	1.6 B	27
Soft to medium stiff, brown, SILTY LOAM			2 / 2 / 2		32
		-20	0 / 1 / 2		32
Soft to medium stiff, brown, SILTY LOAM (continued)			4 / 2 / 6		25
	404.38				
Loose to medium dense, brown, SANDY LOAM. See attached grain size distribution		-25	8 / 5 / 4		
			6 / 5 / 3		
		-30	8 / 7 / 10		
		-35	8 / 8 / 9		
	390.38				
Very stiff, gray, SILTY LOAM. See attached grain size distribution		-40	3 / 8 / 9		26

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-406 (2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 2/19/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-406
Station 60+42.38
Offset 29.61ft Left
Ground Surface Elev. 427.38 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very stiff, gray, SILTY LOAM (continued)		9		
		9		27
	-45	7		
	380.38			
Dense, brown, MEDIUM GRAINED SAND		12		
		17		
	-50	19		
		15		
		16		
	-55	26		
		15		
		20		
	-60	23		
Dense, brown, MEDIUM GRAINED SAND (continued)				
	385.38			
Medium dense to very dense, gray, FINE GRAINED SAND		13		
		22		
	-65	36		
		11		
		14		
	-70	21		
	-75			
		9		
		14		
	-80	15		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-406 (3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 2/19/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-406
Station 60+42.38
Offset 29.61ft Left
Ground Surface Elev. 427.38 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, gray, FINE GRAINED SAND (continued)	-85	28		
		33		
	-90	37		
	332.38 -95			
Medium dense, gray, MEDIUM GRAINED SAND				
See attached grain size distribution		19		
		12		
	-100	12		
Medium dense, gray, MEDIUM GRAINED SAND (continued)				
	322.38 -105			
Dense, gray, COARSE GRAINED SAND		14		
		15		
	-110	16		
	312.38 -115			
Medium dense, gray, FINE GRAINED SAND		13		
		12		
	-120	15		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-406 (4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 2/19/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-406
Station 60+42.38
Offset 29.61ft Left
Ground Surface Elev. 427.38 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

	DEPTH (ft)
Medium dense, gray, FINE GRAINED SAND (continued)	
	304.38
End of Boring	
	-125
	-130
	-135
	-140

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

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AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 ' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXII
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-211 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	338
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-407 (1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 2/23/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-407
Station 61+78.54
Offset 29.88ft Left
Ground Surface Elev. 427.76 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Brownish gray, SILTY CLAY (FILL), with cinders, trace gravel and sand
	6			
	9		15	
	12			
	2			
	10			
-9	10			
	4			
	5		19	
	7			
	7			
	14		19	
-19	10			
416.76				
	2			Medium stiff, brown, SILTY LOAM
415.75	2		24	
	3			Stiff, greyish brown, CLAY
	4			
	3	2.1	24	
412.76 -15	6	B		
				Soft, brown, SILTY CLAY LOAM
	3			
	2		24	
409.76	2			
				Loose, brown, FINE GRAINED SAND
	5			
	4			
-20	4			

DEPTH (ft)	BLOWS (/6")	Material
		Loose, brown, FINE GRAINED SAND (continued)
406.26	7	
	3	Medium stiff, brown, SILTY CLAY LOAM
404.76	4	
	9	Medium dense, brown, FINE GRAINED SAND
	10	
-25	6	
	7	
	8	
399.76	4	
	4	Loose to medium dense, brown, FINE GRAINED SAND, with silt See attached grain size distribution
-30	3	
	6	
	7	
-35	9	
	5	
-40	8	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-407 (2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 2/23/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-407
Station 61+78.54
Offset 29.88ft Left
Ground Surface Elev. 427.76 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Loose to medium dense, brown, FINE GRAINED SAND, with silt (continued)
	8			
-45	9 14			
	12			
-50	16 14			
375.76				
				Medium dense to dense, gray, FINE GRAINED SAND
	11			
	19			
-55	14			
				See attached grain size distribution
	11			
-60	13			

DEPTH (ft)	BLOWS (/6")	Material
		Medium dense to dense, gray, FINE GRAINED SAND (continued)
	11	
-65	17 23	
	17	
	19	
-70	23	
-75	11	
-80	11 11	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-407 (3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 2/23/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-407
Station 61+78.54
Offset 29.88ft Left
Ground Surface Elev. 427.76 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Medium dense to dense, gray, FINE GRAINED SAND (continued)
-85				
	31			
	33			
-90	35			
				very dense
332.76 -95				
				Dense to very dense, gray, MEDIUM GRAINED SAND
	14			
	19			
-100	22			

DEPTH (ft)	BLOWS (/6")	Material
		Dense to very dense, gray, MEDIUM GRAINED SAND (continued)
-105		
	19	
	19	
-110	22	
-115		
	18	
	26	
-120	30	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XXIII I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -		SCALE: SHEET S-212 OF S-234 SHEETS STA. TO STA.
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	339
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-407 (4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 2/23/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-407
Station 61+78.54
Offset 29.88ft Left
Ground Surface Elev. 427.76 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dense to very dense, gray, MEDIUM GRAINED SAND (continued)			
304.76			
End of Boring			
-125			
-130			
-135			
-140			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-408 (1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 2/18/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY TW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 55 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-408
Station 63+30.74
Offset 29.15ft Left
Ground Surface Elev. 418.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray CLAY (FILL), with cinders and gravel	2		
	8		33
	4		
	2		
413.60 -5	8		
Stiff, gray, SILTY CLAY	11		
	3		
	5	1.7	23
410.60	5	S	
Loose, brown, FINE GRAINED SAND, trace silt	5		
	4		
-10	3		
	1		
	5		
405.60	5		
Soft to stiff, brown, SILTY LOAM	0		
	1	0.5	6
-15	2	B	
	6		
	4	1.3	25
400.60	4	B	
Loose to medium dense, brown, FINE GRAINED SAND, silt	4		
	5		
-20	5		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Loose to medium dense, brown, FINE GRAINED SAND, silt (continued) See attached grain size distribution	6		
	5		
	6		
	17		
	30		
-25	9		
dense	8		
	9		
	9		
	4		
	5		
-30	5		
	8		
	10		
-35	10		
381.60			
Medium dense to very dense, brown to gray, FINE GRAINED SAND, with trace gravel and silt	11		
	10		
-40	11		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-408 (2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 2/18/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY TW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 55 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-408
Station 63+30.74
Offset 29.15ft Left
Ground Surface Elev. 418.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, brown to gray, FINE GRAINED SAND, with trace gravel and silt (continued)			
	10		
	28		
-45	42		
	12		
	9		
-50	11		
See attached grain size distribution	15		
	32		
-55	16		
	14		
	16		
-60	15		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, brown to gray, FINE GRAINED SAND, with trace gravel and silt (continued)			
356.60			
Loose, gray, SANDY LOAM, with black lignite	5		
	4		
-65	6		
352.60			
Medium dense, gray, FINE GRAINED SAND, with trace silt	12		
	14		
-70	12		
	42		
	31		
-80	28		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

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AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '/ IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXIV
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-213 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	340
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-408 (3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 2/18/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY TW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 12, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 55 / 80%

STRUCT. NO. 082-0322/ 082-0324
Station NA

BORING NO. B-408
Station 63+30.74
Offset 29.15ft Left
Ground Surface Elev. 418.60 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, grey, FINE GRAINED SAND, with trace silt (continued) very dense	-85	14		
	-90	14 15		
Medium dense to very dense, gray, COARSE GRAINED SAND	323.60 -95			
	-100	9 7 14		
Medium dense to very dense, gray, COARSE GRAINED SAND (continued)	-105	28		
	-110	32 32		
End of Boring	307.10 -115			
	-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

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AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXV
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-214 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	341
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-409 (1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 2/19/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 750X / 73%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-409
Station 57+88.06
Offset 38.29ft Left
Ground Surface Elev. 413.65 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown and gray, SANDY CLAY (FILL)			
	5		
	5		16
	5		
	2		
-5	3	1.0	17
	4	S	
	2		
	3		
405.65	3		
Soft to medium stiff, gray, SILTY CLAY (FILL), with trace sand	2		
-10	2	0.7	17
	2	B	
	3		
	2		17
	2		
	2		
-15	2		16
	2		
	3		
	4	0.5	16
	5	S	
	3		
	3		16
-20	3		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Soft to medium stiff, gray, SILTY CLAY (FILL), with trace sand (continued)			
392.65	50/0"		
Concrete rubble (FILL)			
390.65			
Medium dense, tan, FINE GRAINED SAND	6		
	8		
-25	8		
	8		
	8		
	7		
	6		
	8		
-30	7		
381.65			
Medium dense, gray, FINE GRAINED SAND			
See attached grain size distribution	7		
	9		
-35	12		
	10		
	12		
-40	12		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-409 (2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 2/19/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 750X / 73%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-409
Station 57+88.06
Offset 38.29ft Left
Ground Surface Elev. 413.65 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND (continued)			
	10		
	14		
-45	28		
dense			
	7		
	9		
-50	7		
361.65			
Medium dense to dense, gray, FINE GRAINED SAND, trace silt			
	14		
	22		
-55	26		
	12		
	14		
-60	14		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, gray, FINE GRAINED SAND, trace silt (continued)			
	20		
See attached grain size distribution	16		
-65	18		
	10		
	12		
-70	13		
-75			
	12		
	14		
-80	14		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-409 (3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 3

Date 2/19/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 750X / 73%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-409
Station 57+88.06
Offset 38.29ft Left
Ground Surface Elev. 413.65 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, gray, FINE GRAINED SAND, trace silt (continued)			
-85			
	40		
	50/6"		
-90			
very dense			
-95			
317.65			
Medium dense to very dense, grayish brown, COARSE GRAINED SAND	10		
	10		
-100	14		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, grayish brown, COARSE GRAINED SAND (continued)			
-105			
307.65			
Gravel, cobbles, and boulders	50/4"		
-110			
302.65			
End of Boring			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 8x2 '1' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXVI
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-215 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	342
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-410 (1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 2/18/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY TW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 55 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-410
Station 65+06.38
Offset 36.12ft Left
Ground Surface Elev. 416.54 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Black and brown, SILTY CLAY (FILL), with cinders and sand			
	4		
	6		16
	7		
	4		
	6		15
-6	7		
	50/4"		
	9		
	8	0.6	15
-10	8	S	
	11		
	11		
	10		
403.54			
Medium dense to loose, brown, FINE GRAINED SAND, with silt			
	7		
	7		
-15	6		
See attached grain size distribution	7		
	3		
	4		
	4		
	5		
-20	5		
396.04			
Medium dense, brown, FINE GRAINED SAND, with silt			
	7		
	6		
	8		
	6		
	8		
-25	8		
391.04			
Very stiff, brown, SILTY LOAM			
See attached grain size distribution	3		
	8		
	8		
	6		
	8		
-30	8		
	8		
	11		
	10		
	8		
	8		
-35	11		
	10		
379.54			
Medium dense to dense, brown, FINE GRAINED SAND, with silt			
	10		
	10		
-40	17		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-410 (2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 2/18/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY TW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 55 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-410
Station 65+06.38
Offset 36.12ft Left
Ground Surface Elev. 416.54 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, brown, FINE GRAINED SAND, with silt (continued)			
	19		
	17		
-45	25		
370.54			
Medium dense, brown, MEDIUM GRAINED SAND, with silt			
	12		
	11		
-50	11		
364.54			
Medium dense, gray, SANDY LOAM, with coarse grained sand			
	6		
	9		
-55	11		
360.54			
Medium dense to very dense, gray, FINE GRAINED SAND, with trace silt			
	9		
	14		
-60	16		
Medium dense to very dense, gray, FINE GRAINED SAND, with trace silt (continued)			
See attached grain size distribution	10		
	12		
-65	11		
	11		
	14		
-70	12		
-75			
	20		
	26		
-80	31		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-410 (3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 3

Date 2/18/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY TW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 55 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-410
Station 65+06.38
Offset 36.12ft Left
Ground Surface Elev. 416.54 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, gray, FINE GRAINED SAND, with trace silt (continued)			
-85			
	14		
	18		
-90	23		
321.54 -95			
Medium dense, gray, MEDIUM GRAINED SAND, with coarse sand and gravel			
	12		
	15		
-100	15		
Medium dense, gray, MEDIUM GRAINED SAND, with coarse sand and gravel (continued)			
-105			
	28		
307.04	50/5"		
End of Boring -110			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XXVII I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 8.2 '' / IN.	CHECKED - DDB	REVISED -		SCALE: SHEET S-216 OF S-234 SHEETS STA. TO STA.
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	343
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: RW-410 (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 1

Date 3/3/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 15 ft HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. RW-410
Station 77
Offset 36.00ft Right
Ground Surface Elev. 417.57 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter Not Measured ft
Upon Completion Not Measured ft
After ____ Hrs. Not Measured ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey, CLAY (FILL), with cinders and sand		2		
		3		27
		2		35
	413.57	1		
Medium stiff to very stiff, gray, CLAY	-5	4		32
		4		
		2		
		3	2.1	31
		3	S	
	409.57			
Very soft, gray, SILT		0		
		1		30
	407.57 -10	0		
Very soft, gray, SILTY LOAM		0		
		0		28
		0		
	404.57			
Medium stiff, gray, CLAY		0		
		2	0.5	41
	-15	2	B	
		0		
		1	0.9	31
		1	S	
		0		
		1	1.0	39
	397.57 -20	2	S	

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff, grey, SILTY CLAY LOAM		2		
		3		27
	395.07	8		
Medium dense, brown, SANDY LOAM		6		
		8		
	392.57 -25	8		
Very soft, gray, SILT		1		
		1		32
		1		
	388.57	1		
Medium dense, brown, FINE GRAINED SAND		6		
	-30	8		
		11		
		14		
	-35	15		
	380.57			
Medium dense, brown, COARSE GRAINED SAND, with gravel		7		
		6		
	377.57 -40	7		

End of Boring

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

k:\projects\60046608\sn082-0322 & 0324 flyover\900.cad\901.drawings\76c00_master_consolidated\structural\082-0322\sheet\082-0322-0324_76C76.S128.Boring-log-28.dgn

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXVIII
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-217 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	344
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: RW-410 ST (1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 4/21/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY BS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0322
Station NA

BORING NO. RW-410ST
Station 77 Ground Surface Elev. 417.6 ft Tube Length 24 in
Offset 36ft Right Begin Sampling Depth -1 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Gray to black, CLAY (FILL), with roots, cinders, tile fragments, and gravel		1-1	100	108		31			
Gray to black, CLAY (FILL), with roots, cinders, tile fragments, and gravel		1-2	100	91	0.5	45			Qu
Gray to black, CLAY (FILL), with roots, cinders, tile fragments, and gravel		1-3	67			35			
Black, SAND (FILL), cinders, with slag, roots, and brick fragments		2-1	100			21			
Gray to black, CLAY LOAM		2-2	100	112		30			
Gray CLAY, with iron staining		2-3	100	114	0.8	33			Qu
Gray CLAY, with iron staining		2-4	33						
Gray, CLAY		3-1	100	112	1.2	34			Qu
Gray, CLAY		3-2	100	112	1.3	36			Qu
Gray, CLAY		3-3	100	117		29			
Gray, SILTY LOAM, with clay partings		4-1	100	113		31			
Gray, SILTY LOAM, with clay partings		4-2	100						
Gray, SILTY LOAM, with clay partings		4-3	100	112	0.7	29			UU
Gray, SILTY LOAM, with clay partings		4-4	33	114		30			CU
Brown, SILTY LOAM		5-1	100						
Green, CLAY	39	5-2	100	107		45			
Gray, SILTY LOAM		5-3	100	118		37	0.0	39	CU
Gray, SILTY LOAM		5-4	67	113		32			CU
Gray, CLAY		6-1	100			39			
Gray, SANDY CLAY LOAM		6-2	100	114	0.2	34			Qu
Gray, SANDY CLAY LOAM, trace gravel		6-3	100	114	0.4	34			UU
Gray, CLAY		6-4	83	117		33			CU
Gray, SANDY LOAM		7-1	100						
Gray, CLAY, with iron staining		7-2	100	116		33			

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-89)

SHELBY TUBE TEST: RW-410 ST (1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 4/21/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY BS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0322
Station NA

BORING NO. RW-410ST
Station 77 Ground Surface Elev. 417.6 ft Tube Length 24 in
Offset 36ft Right Begin Sampling Depth -1 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Gray, CLAY, with iron staining		7-3	100	113		43	0.0	29	CU
Gray, CLAY, with iron staining	19	7-4	83	111		42			CU
Gray, SILTY CLAY LOAM		8-1	100	110		42			
Gray, SILTY CLAY LOAM		8-2	100	114	0.4	35			Qu
Gray, SILTY CLAY LOAM		8-3	100	110	0.5	43			Qu
Medium stiff, gray, SILTY LOAM with iron staining		9-1	100	117		35			
Medium stiff, gray, SILTY LOAM with iron staining		9-2	100	117	0.8	32			UU
Medium stiff, gray, SILTY LOAM with iron staining		9-3	100	117	0.6	33			Qu
Medium stiff, gray, SILTY LOAM with iron staining		9-4	33						
Brown, SANDY LOAM		10-1	100			22			
Medium stiff, gray, SILTY CLAY LOAM, with iron nodules	29	10-2	100	119		30			
Medium stiff, gray CLAY LOAM, with iron nodules		10-3	100	116	1.0	33			UU
Medium stiff, gray CLAY LOAM, with iron nodules		10-4	33						
Soft, gray, CLAY, with iron staining		11-1	100	116		26			
Medium stiff, gray, SILTY LOAM, with iron nodules		11-2	100			23			
Gray, SANDY LOAM, with iron staining		11-3	100			15			
Brown, SILTY CLAY LOAM		12-1	100	116		24			
Brown, SILTY LOAM		12-2	100			24			
Brown SILTY LOAM	55	12-3	67	112		24			
Brown, SANDY LOAM		13-1	100	108		19			
Brown, SANDY LOAM		13-2	67			11			
Brown, SANDY LOAM		13-3	33	101		7			

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-89)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -
		DRAWN - BRD	REVISED -
	PLOT SCALE = 8x2 '1' / IN.	CHECKED - DDB	REVISED -
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXIX
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-218 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	345
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-411 (1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 4/9/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0324
Station NA

BORING NO. B-411
Station 61+56.06
Offset 22.36ft Left
Ground Surface Elev. 392.30 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
391.80				TOPSOIL - 6 INCHES
	5			Stiff to medium stiff, grayish brown, SILTY LOAM
	7	0.2	19	
	6	S		
	2			
	3	0.4	23	
-5	4	S		
386.80				Loose to medium dense, brown, FINE GRAINED SAND
	3			
	5			
	4			
	3			
-10	3			
	4			See attached grain size distribution
	5		19	
	7			
379.30				Medium dense, brown, MEDIUM GRAINED SAND
	3			
	5			
-15	6			
376.80				Medium stiff, gray, CLAY
	2			
	2	0.6	49	
	5	S		
374.30				Medium dense, gray, MEDIUM GRAINED SAND
	4			
	7			
-20	10			
				Medium dense, gray, MEDIUM GRAINED SAND (continued)
	6			
	9			
	10			
369.30				Medium dense, gray, FINE GRAINED SAND
	7			See attached grain size distribution
	6			
-25	7			
			22	
	5			
	8			
	8		30	
	6			
	9			
-30	9			
			18	
			3	
			2	
	9			
	10			
-35	10			
			5	
	7			
	9			
-40	10			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-411 (2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 4/9/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0324
Station NA

BORING NO. B-411
Station 61+56.06
Offset 22.36ft Left
Ground Surface Elev. 392.30 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Medium dense, gray, FINE GRAINED SAND (continued)
	23			
	32			
-45	26			
				very dense
				See attached grain size distribution
	12			
	14			
-50	14			
	10			
	12			
-55	15			
335.30				Medium dense, gray, MEDIUM GRAINED SAND
	22			
	12			
-60	7			
				Medium dense, gray, MEDIUM GRAINED SAND (continued)
330.30				Medium dense, gray, FINE GRAINED SAND
	10			
	14			
-65	11			
325.30				Medium dense, gray, MEDIUM GRAINED SAND
	10			
	9			
-70	13			
320.30				Dense, gray, COARSE GRAINED SAND
-75				
	15			
	21			
-80	26			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-411 (3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 3

Date 4/9/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0324
Station NA

BORING NO. B-411
Station 61+56.06
Offset 22.36ft Left
Ground Surface Elev. 392.30 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Dense, gray, COARSE GRAINED SAND (continued)
309.30				Gravel, cobbles, and boulders
-85				
	50/2"			
-90				
300.30				End of Boring
-95				
-100				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

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AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '/' IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXX
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-219 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	346
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-412 (Page 1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 3/2/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-412
Station 68+88.13
Offset 8ft Right
Ground Surface Elev. 393.9 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, SANDY LOAM (FILL)			
	4		
	7		
390.9	6		
Medium dense, brown, FINE GRAINED SAND			
	4		
	6		
-5	5		
388.4			
Loose, brown to gray, FINE GRAINED SAND, trace silt	3		
	4		
	3		
	2		
	3		
-10	4		
See attached grain size distribution	3		
	4		
	5		
	2		
	3		
-18	4		
	6		
	5		
	6		
medium dense			
	4		
	3		
-28	4		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
373.4			
Medium stiff, gray, SILTY LOAM			
	0		
	2	0.5	35
	5	B	32
370.9			
Medium dense, gray, FINE GRAINED SAND, trace silt	5		
	7		
-25	8		
368.4			
Loose to medium dense, brownish gray, FINE GRAINED SAND, trace silt	3		
	3		
	4		
	3		
-30	5		
	9		
See attached grain size distribution	8		
	7		
-35	8		
See attached grain size distribution	5		
	5		
-40	9		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-412 (Page 2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 3/2/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-412
Station 68+88.13
Offset 8ft Right
Ground Surface Elev. 393.9 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Loose to medium dense, brownish gray, FINE GRAINED SAND, trace silt *(continued)*			
dense	10		
-45	13		
346.9			
Medium dense, gray, FINE GRAINED SAND	20		
	14		
-60	13		
	8		
	9		
-65	12		
See attached grain size distribution	11		
	10		
-80	11		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND *(continued)*			
loose	7		
	5		
-85	5		
326.9			
Dense, gray, FINE TO MEDIUM GRAINED SAND			
See attached grain size distribution	13		
	18		
-70	24		
	8		
	17		
-80	17		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-412 (Page 3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 3

Date 3/2/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-412
Station 68+88.13
Offset 8ft Right
Ground Surface Elev. 393.9 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dense, gray, FINE TO MEDIUM GRAINED SAND *(continued)*			
308.9 -85			
Dense, gray, COARSE GRAINED SAND, with gravel			
	17		
	17		
-90	23		
300.9			
End of Boring	50/1"		
-95			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-413 (1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 4/8/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-413
Station 70+6.12
Offset 13.03ft Left
Ground Surface Elev. 397.70 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
397.00 TOPSOIL – 7 inches			
Gray, SILTY LOAM (FILL)	1		
	2		26
	2		
394.70 Gray, SILTY CLAY (FILL)			
	2		
-5	2		52
392.20 Soft, gray, CLAY			
	1		
390.70 Loose, brown, FINE GRAINED SAND	3		12
	4		
389.70 Loose, brown, SANDY LOAM			
	3		
	4		
-10	3		
387.20 Loose, brown, FINE GRAINED SAND			
	2		
	3		
	4		
	3		
-15	3		
382.20 Loose, brown, FINE GRAINED SAND, with silt See attached grain size distribution	3		
	3		
	5		
	3		
-20	4		
	5		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
377.20 Medium dense, gray, FINE GRAINED SAND	3		
	5		
	7		
	5		
-25	8		
	7		
	8		
	7		
	5		
	5		
-30	8		
See attached grain size distribution	6		
	7		
-35	9		
	11		
	11		
-40	14		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-413 (2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 4/8/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-413
Station 70+6.12
Offset 13.03ft Left
Ground Surface Elev. 397.70 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND (continued)			
	10		
	13		
-45	16		
350.70 Very dense, gray, SANDY LOAM			
	25		
	30		
-50	31		
346.70 Medium dense to dense,gray, MEDIUM GRAINED SAND			
	8		
	12		
-55	17		
-60	12		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense,gray, MEDIUM GRAINED SAND (continued)			
	11		
	17		
-65	17		
	11		
	14		
-70	14		
320.70 with coarse sand and gravel			
See attached grain size distribution	6		
	6		
-80	8		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-413 (3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 3

Date 4/8/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-413
Station 70+6.12
Offset 13.03ft Left
Ground Surface Elev. 397.70 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
with coarse sand and gravel (continued)			
313.20 Gravel layer			
-85	18		
309.70 Dense, gray, MEDIUM GRAINED SAND			
	18		
	16		
-90			
305.70 Gravel, cobbles, boulders			
-95			
300.70 End of Boring			
-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XXXII I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 0.2 '/' IN.	CHECKED - DDB	REVISED -		SCALE: SHEET S-221 OF S-234 SHEETS STA. TO STA.
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	348
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-414 (Page 1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 4/14/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-414
Station 71+91.35
Offset 0ft Left
Ground Surface Elev. 414.8 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL - 3 inches 414.8				Medium dense, brown, MEDIUM GRAINED SAND *(continued)*			
Brown and black, SILTY CLAY (FILL), with cinders, gravel, and brick fragments	2				6		
	2		15	392.8	2		
	7			Medium stiff, brown, SILT	4		
411.8				391.8			
Soft, brown, SILT				Medium dense, brown, FINE GRAINED SAND			
	2				5		
	1		30		6		
	3			-25	6		
409.3					7		
Very soft, brown, SILTY CLAY							
	0				7		
	0		30		8		
	0			386.8			
406.8				Medium stiff, gray, CLAY	0		
Medium stiff, brown, CLAY					1	0.6	43
	1	0.9	36	-30	1	B	
-10	1	S					
404.3							
Soft, brown, SILT							
	1						
	1		35	382.8			
	2			Stiff to very stiff, brown, SILTY LOAM			
401.8					4		
Soft, brown, SILTY LOAM					4		26
	2		30	-35	6		
	1						
399.3							
Medium stiff, brown, CLAY							
	1						
	2		34				
	3						
396.8					7		
Medium dense, brown, MEDIUM GRAINED SAND							
See attached grain size distribution	4						
	5				8		33
-20	7			-40	9		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-414 (Page 2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 4/14/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-414
Station 71+91.35
Offset 0ft Left
Ground Surface Elev. 414.8 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff to very stiff, brown, SILTY LOAM *(continued)*				Medium dense, gray, FINE GRAINED SAND, trace silt *(continued)*			
372.8					11		
Medium dense, gray, FINE GRAINED SAND, trace silt					10		
	8			-55	6		
See attached grain size distribution	9						
-45	10						
					7		
	7				6		
	5			-70	7		
-55	6						
	8						
	10						
-65	13			-75			
	9			See attached grain size distribution	16		
	11				12		
-80	10			-85	14		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-414 (Page 3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 3

Date 4/14/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR DRILL RIG/ HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-414
Station 71+91.35
Offset 0ft Left
Ground Surface Elev. 414.8 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND, trace silt *(continued)*				Medium dense, grayish brown, COARSE GRAINED SAND *(continued)*			
332.8				309.8 -105			
Medium dense, grayish brown, COARSE GRAINED SAND				Dense, grayish brown, COARSE GRAINED SAND, with gravel			
-85							
	9						
	13						
-90	16			-110			
				-115			
				298.8			
				End of Boring			
	9						
-100	7			-120			
	7						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XXXIII I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 0.2 '/ IN.	CHECKED - DDB	REVISED -		SCALE: SHEET S-222 OF S-234 SHEETS STA. TO STA.
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	349
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-415 (1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 4/15/08

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-415
Station 73+70.67
Offset 33.98ft Left
Ground Surface Elev. 406.20 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL – 14 inches			
405.00			
	2		
Medium stiff, brown, SILT			
404.20	2		33
	3		
Medium stiff, brown, CLAY			
403.20			
Medium stiff, brown, SILTY LOAM	2		
	3		20
-5	3		
	0		
	3		35
	4		
	1		
396.70	1		34
Soft, gray, SILTY CLAY -10	2		
395.70			
Medium stiff, brown, SILTY LOAM	1		
394.20	2	0.7	22
Medium stiff, gray, CLAY	4	B	
393.20			
Medium dense, brown, SANDY LOAM	4		
	6		14
-15	6		
	4		
	7		5
	6		
	3		
	5		9
-20	7		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, brown, SANDY LOAM (continued)			
	4		
	5		14
	7		
	6		
	8		
-25	8		
380.70			
Medium dense, gray, FINE GRAINED SAND, trace silt	6		
	7		
	9		
See attached grain size distribution	6		
	8		
-30	10		
	8		
	9		
	14		
-35	14		
	7		
	9		
-40	6		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-415 (2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 4/15/08

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-415
Station 73+70.67
Offset 33.98ft Left
Ground Surface Elev. 406.20 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND, trace silt (continued)			
	9		
	7		
-45	7		
	21		
	25		
-50	28		
very dense			
	9		
	16		
-55	21		
dense			
	14		
1 inch gravel seam	10		
346.20 -60	7		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, grayish brown, MEDIUM GRAINED SAND			
	10		
See attached grain size distribution			
	12		
-65	15		
	12		
	20		
-70	26		
	7		
331.20 -75			
Medium dense to dense, grayish brown, MEDIUM GRAINED SAND, trace gravel	6		
-80	11		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-415 (3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 3

Date 4/15/08

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-415
Station 73+70.67
Offset 33.98ft Left
Ground Surface Elev. 406.20 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, grayish brown, MEDIUM GRAINED SAND, trace gravel (continued)			
321.20 -85			
Medium dense to dense, grayish brown, MEDIUM GRAINED SAND, trace gravel			
	9		
See attached grain size distribution	9		
-90	9		
-95			
	30		
dense gravel layer	17		
-100	18		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, grayish brown, MEDIUM GRAINED SAND, trace gravel (continued)			
-105			
299.70			
End of Boring			
-110			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXXIV
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-223 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	350
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-416 (1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 4/7/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-W310
Station NA

BORING NO. B-416
Station 64+85.22
Offset 4.54ft Left
Ground Surface Elev. 413.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL – 3 inches 412.70			
Rubble, concrete, and crushed stone (FILL)			
410.00			
Very soft to medium stiff, grayish brown, SANDY CLAY	2		
-5	3 2		23
	1		
	1 1		33
405.00			
Very soft to medium stiff, brown and gray, SILT	1		
-10	2 5		25
	0		
	0 2		30
	1		
-15	2 2		29
397.50			
Loose, tan, SANDY LOAM	3		
	4 3		37
395.00			
Very soft, gray, CLAY	0		
-20	0 1		45

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very soft, gray, CLAY (continued) 392.50			
Loose to medium dense, gray, SANDY LOAM See attached grain size distribution	3		
	3 2		22
	2		
-25	6 8		30
387.50			
Medium dense, gray, FINE GRAINED SAND, trace silt	10		
	12 12		
	8		
-30	6 9		
	8		
See attached grain size distribution			
-35	6 8		
	8		
-40	8 3		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-416 (2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 4/7/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-W310
Station NA

BORING NO. B-416
Station 64+85.22
Offset 4.54ft Left
Ground Surface Elev. 413.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND, trace silt (continued)			
	8		
	13		
-45	13		
	11		
	10		
-50	14		
	10		
	10		
-55	14		
	11		
	12		
-60	16		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE GRAINED SAND, trace silt (continued)			
351.00			
Dense to very dense, gray, FINE GRAINED SAND, trace gravel and silt	20		
	21		
-65	27		
See attached grain size distribution	17		
	30		
-70	50/5"		
-75			
-80	35		
	24		
-80	15		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-416 (3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 4/7/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-W310
Station NA

BORING NO. B-416
Station 64+85.22
Offset 4.54ft Left
Ground Surface Elev. 413.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dense to very dense, gray, FINE GRAINED SAND, trace gravel and silt (continued)			
328.00 -85			
Dense to very dense, gray, FINE TO COARSE GRAINED SAND, with gravel, trace silt	14		
	16		
-90	17		
-95			
	21		
	19		
See attached grain size -100	13		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
distribution Dense to very dense, gray, FINE TO COARSE GRAINED SAND, with gravel, trace silt (continued)			
-105			
305.00			
Gravel, cobbles, and boulders	50/3"		
-110			
302.00			
CRYSTALLINE LIMESTONE – See attached rock core log			
-115			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

H:\projects\60046868\sn082-0322 & 0324 Flyover\700.cad\701.drawings\76c00_master_consolidated\structural\082-0322\sheet\082-0322-0324_76C76_SJ35_Boring.dgn

AECOM

USER NAME =	DESIGNED - PJL	REVISED -
	DRAWN - BRD	REVISED -
PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXXV
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-224 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	351
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-416 (4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 4/7/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-W310
Station NA

BORING NO. B-416
Station 64+85.22
Offset 4.54ft Left
Ground Surface Elev. 413.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CRYSTALLINE LIMESTONE – See attached rock core log (continued) 292.00			
End of Boring			
-125			
-130			
-135			
-140			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-416 CORE (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Page 1 of 1

Date 4/7/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-W310
Station NA

CORING BARREL TYPE & SIZE NX
Core Diameter 2 in
Top of Rock Elev. 392.00 ft
Begin Core Elev. 392.00 ft

BORING NO. B-416 Core
Station 64+85.22
Offset 4.54ft Left
Ground Surface Elev. 413.00 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Hard, buff white, finely crystalline, massive, fresh, excellent quality, LIMESTONE	1	100	100	5	
-115					
	2	96	96	3	763.0
-120					
292.00					
End of Boring					
-125					
-130					

Color pictures of the cores Yes
Cores will be stored for examination until 9-30-09
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

k:\projects\60046001\sn082-0322 & 0324 flyover\900.cad\901.drawings\76c08_master_consolidated\structural\082-0322\sheets\082-0322-0324_76C76_BoringLogs-36.dgn

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 ' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXXVI
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-225 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	352
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-416 ST (1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 4/7/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY BS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-W310
Station NA

BORING NO. B-416ST
Station 64+85.22 Ground Surface Elev. 413.00 ft Tube Length 24 in
Offset 4.54ft Left Begin Sampling Depth -3 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA: COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Gray brown, CLAY LOAM		1-1	100			42			
Gray brown, CLAY LOAM		1-2	100	119		23			
Gray brown, CLAY LOAM		1-3	33	118		25			
	-5								
Gray, CLAY LOAM, with silt		2-1	100						Consol
Gray, CLAY LOAM, with silt		2-2	100	120		23			CU
Brownish gray, CLAY LOAM		3-1	100	121		28			
Brownish gray, CLAY LOAM		3-2	100	118		26	0.1	32	CU
Brownish gray, CLAY LOAM		3-3	100	113		43			CU
Brown, CLAY		4-1	100	120		33			
Brown, CLAY	-10	4-2	100	120	0.5	33			Qu
Grayish brown, CLAY		4-3	100			31			
Grayish brown, CLAY		4-4	100	115	0.6	37			Qu
Gray, CLAY, trace iron stains		5-1	100	117		34			
Gray, CLAY, trace iron stains		5-2	100			36			
Gray, CLAY, trace iron stains		5-3	100			33			
Grayish brown, SANDY LOAM		6-1	100						
Grayish brown, SANDY LOAM		6-2	100						
Gray, CLAY, trace fine sand, silt, iron staining		6-3	100	111	0.5	42			UU
Gray, CLAY, trace fine sand, silt, iron staining	-15	6-4	33						Consol
Brown and gray, CLAY, trace fine sand, iron staining		7-1	100						
Gray, CLAY		7-2	100	113	0.3	30			Qu

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-416 ST (2 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 4/7/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY BS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-W310
Station NA

BORING NO. B-416ST
Station 64+85.22 Ground Surface Elev. 413.00 ft Tube Length 24 in
Offset 4.54ft Left Begin Sampling Depth -3 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA: COHESION (tsf)	PHI ANG. (deg)	TEST TYPE
Brown, SANDY LOAM		7-3	100	114	1.4	34			UU
Brown, MEDIUM GRAINED SAND		7-4	33						
Grayish brown, SILTY LOAM		8-1	100	107	0.5	46			Qu
Grayish brown, SILTY LOAM		8-2	100	117	2.0	31			UU
Grayish brown, SILTY LOAM		8-3	100	111	0.6	42			Qu
Gray, CLAY		8-4	100	107	0.5	46			Qu
Gray, SANDY LOAM		9-1	100	106		49			
Gray, CLAY	-20	9-2	100	107	0.4	47			UU
Gray, FINE GRAINED SAND		9-3	100						
Gray, FINE GRAINED SAND		9-4	100						
Gray, CLAY		10-1	100	98	0.1	34			Qu
Gray, FINE GRAINED SAND		10-2	100			27			
Gray, SANDY LOAM		11-1	100			26			
Gray, FINE GRAINED SAND		11-2	100			12			
Brown, FINE GRAINED SAND, with gravel		11-3	100			7			
	-25								

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 8±2 '1' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XXXVII
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-226 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	353
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-422 (1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 2/26/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0325
Station NA

BORING NO. B-422
Station 65+21.58
Offset 6.88ft Left
Ground Surface Elev. 413.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Stiff to soft, tan, SILT
	4			
	4		16	
	5			
	2			
	2		22	
-5	2			
	0			
	2		26	
	3			
405.00				
	2			Stiff to medium stiff, tan, SILTY LOAM
	2	1.3	19	
-10	5	B		
	3			
	4		15	
	5			
	1			
	2		25	
-15	3			
397.00				
	0			Medium stiff, gray, SILTY CLAY
	0	0.6	42	
	3	B		
395.00				
	5			Medium dense, brown, SANDY LOAM
	7			
-20	9			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
	10			Medium dense, brown, SANDY LOAM (continued)
	12			
	13			
	9			
	9			
-25	13			
387.00				
	6			Loose to medium dense, gray, FINE GRAINED SAND, trace clay
	2			
	3			
	6			
	7			
-30	8			
	10			
	8			
-35	13			
378.00				
	7			Medium dense, gray, FINE GRAINED SAND, trace silt
	7			
-40	11			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-422 (2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 2/26/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0325
Station NA

BORING NO. B-422
Station 65+21.58
Offset 6.88ft Left
Ground Surface Elev. 413.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Medium dense, gray, FINE GRAINED SAND, trace silt (continued)
	6			
	8			
-45	12			
	11			See attached grain size distribution
	9			
-50	11			
	10			
	12			
-55	15			
356.00				
	8			Dense, gray, FINE GRAINED SAND
	15			
-60	18			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Dense, gray, FINE GRAINED SAND (continued)
351.00				
	10			Medium dense, gray, FINE GRAINED SAND
	12			
-65	10			
346.00				
	17			Dense to very dense, gray, MEDIUM GRAINED SAND, with gravel
	18			See attached grain size distribution
-70	16			
-75				
	11			
	17			
-80	36			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-422 (3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 2/26/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0325
Station NA

BORING NO. B-422
Station 65+21.58
Offset 6.88ft Left
Ground Surface Elev. 413.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Dense to very dense, gray, MEDIUM GRAINED SAND, with gravel (continued)
-85				
	16			
	25			
-90	21			
-95				
	13			
	17			
-100	23			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Dense to very dense, gray, MEDIUM GRAINED SAND, with gravel (continued)
308.00				
-105				Very dense, gray, COARSE GRAINED SAND, with gravel
	30			
	50/2"			
-110				
302.00				
				Crystalline LIMESTONE - See rock core log
-115				
-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XXXVIII I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 02 '' / IN.	CHECKED - DDB	REVISED -		SCALE: SHEET S-227 OF S-234 SHEETS STA. TO STA.
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	354
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		

BORING LOG: B-422 (4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 2/26/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR HAMMER TYPE CME 75 / 80%

STRUCT. NO. 082-0325
Station NA

BORING NO. B-422
Station 65+21.58
Offset 6.88ft Left
Ground Surface Elev. 413.00 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Crystaline LIMESTONE - See rock core log (continued) 292.00				
End of Boring				
	-125			
	-130			
	-135			
	-140			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-422 CORE (1 of 1)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Page 1 of 1

Date 2/26/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0325
Station NA

CORING BARREL TYPE & SIZE NX
Core Diameter 2 in
Top of Rock Elev. 302.00 ft
Begin Core Elev. 302.00 ft

BORING NO. B-422 Core
Station 65+21.58
Offset 6.88ft Left
Ground Surface Elev. 413.00 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Hard, brown, very finely crystalline, moderately weathered, LIMESTONE 301.25		1	100	83	2	413.0
Moderately hard, white, very finely crystalline, thick bedded, fresh, excellent quality, LIMESTONE 298.50						
Moderately hard, gray, very finely crystalline, medium bedded, slightly weathered, excellent quality, argillaceous LIMESTONE 296.25	-115	2	100	95	2	
soft, gray, highly weathered, shale layer, 4 inches 295.75						
soft, gray, highly weathered, shale seam, 1 inch 295.00						
Moderately hard, white and olive, finely crystalline, massive bedded, slightly weathered, excellent quality, LIMESTONE	-120					
292.00						
End of Boring	-125					
	-130					

Color pictures of the cores Yes
Cores will be stored for examination until 9-30-09
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

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AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - BRD	REVISED -	
	PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -	
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

BORING LOGS XXXIX
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-228 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	355
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHELBY TUBE TEST: B-422 ST (1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/27/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY MU

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0325
Station NA

BORING NO. B-422ST
Station 65+21.58 Ground Surface Elev. 413.00 ft Tube Length 24 in
Offset 6.88ft Left Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	TRIAXIAL DATA PHI ANG. (deg)	TRIAXIAL DATA TEST TYPE
SILTY CLAY LOAM (FILL), with gravel, asphalt and glass		1-1	100						
SILTY CLAY LOAM (FILL), with gravel, asphalt and glass		1-2	100						
Brown, LOAM		1-3	100	116		18			
Brown, LOAM		1-4	33	113		17			
Brown to gray,LOAM, trace gravel		2-1	100						
Brown to gray,LOAM, trace gravel		2-2	100	114		19			
Brown to gray,LOAM, trace gravel		2-3	100						
Brown to gray,LOAM, trace gravel		2-4	17	115		21			
Brown, SANDY CLAY LOAM, trace gravel		3-1	100						
Brown, SANDY CLAY LOAM, trace gravel	-5	3-2	100	113		24			Consol
Brown, SANDY CLAY LOAM, trace gravel		3-3	100						
Brown, SANDY CLAY LOAM, trace gravel		3-4	33				0.2	29	CU
Brown, SANDY SILTY LOAM		4-1	100						
Brown, SANDY SILTY LOAM		4-2	100	115	0.5	29			QU
Brown, SANDY CLAY LOAM		4-3	100	115	0.5	28			QU
Brown, SANDY LOAM		4-4	83						
Brown, SANDY LOAM		5-1	100						
Brown, SANDY LOAM		5-2	100	92		10			
Brown, SANDY LOAM		5-3	100	115	0.8	28			QU
Brown, CLAY LOAM	-10	5-4	100	117	0.8	27			UU
Brown, SANDY LOAM		6-1	100						
Brown, SANDY LOAM		6-2	100	94		10			
Brown, SANDY LOAM		6-3	83						
Brown, SANDY LOAM		7-1	100						
Brown, SANDY LOAM		7-2	100	114		30			

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-422 ST (2 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/27/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY MU

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0325
Station NA

BORING NO. B-422ST
Station 65+21.58 Ground Surface Elev. 413.00 ft Tube Length 24 in
Offset 6.88ft Left Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	STRENGTH (tsf)	MOISTURE (%)	TRIAXIAL DATA COHESION (tsf)	TRIAXIAL DATA PHI ANG. (deg)	TRIAXIAL DATA TEST TYPE
Brown, SANDY LOAM		7-3	83						
Brown, SANDY LOAM		8-1	100						
Brown, CLAY LOAM, with sand	-15	8-2	100	118	0.6	30			QU
Brown, CLAY LOAM, with sand		8-3	100	109	0.5	30			QU
Brown, CLAY LOAM, with sand		8-4	67	115	0.9	33			UU
Black to gray, SILTY LOAM		9-1	100	117		34			Consol
Black to gray, SILTY LOAM		9-2	100	117	0.7	34			QU
Black to gray, SILTY LOAM		9-3	67						
Brown, SANDY LOAM		10-1	100						
Brown, SANDY LOAM		10-2	100						
Brown, SANDY LOAM	-20	10-3	83	101		15			
	-25								

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

AECOM

USER NAME =	DESIGNED - PJL	REVISED -
	DRAWN - BRD	REVISED -
PLOT SCALE = 02 '1' / IN.	CHECKED - DDB	REVISED -
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XL
I-70E OVER I-55, CSX & KCS RAILROADS

SCALE: | SHEET S-229 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	356
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-426 (Page 1 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 4

Date 9/9/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 25 ft HAMMER TYPE CME 550 / 82%

STRUCT. NO. 082-0324
Station NA

BORING NO. B-426
Station 54+99
Offset
Ground Surface Elev. 428.0 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray, sandy, SILTY CLAY (FILL), trace gravel, brick, concrete and asphalt fragments	3		
	4 6		15
	3		
-5	6 8		24
	3		
	4 7		22
	3		
-10	3 4		37
	3		
	12 6		32
	10		
	3		
-15	2		
	3		
	1 1		
410.0			
Soft, brown CLAY, trace sand	0		
-20	1 2		33

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
407.5			
Soft, brown, SILT	2		
	1 2		33
	0		
-25	1 2	0.5 tsf	37
	2		
	1 2		31
400.0			
Loose to medium dense, brown, FINE GRAINED SAND	2		
-30	3 4		
	6		
	7 6		
-35			
391.0			
Stiff, brown, SILTY LOAM	6		
Grain Size Distribution Conducted	5 7		
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-426 (Page 2 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 4

Date 9/9/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 25 ft HAMMER TYPE CME 550 / 82%

STRUCT. NO. 082-0324
Station NA

BORING NO. B-426
Station 54+99
Offset
Ground Surface Elev. 428.0 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff, brown, SILTY LOAM (continued)			
	5		
	5 5		
-45			
381.0			
Medium dense to dense, gray, FINE GRAINED SAND	6		
Grain Size Distribution Conducted	7 10		
-50			
	10		
	14 14		
-55			
	11		
	21 24		
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, gray, FINE GRAINED SAND (continued)			
	15		
	21 26		
-65			
	8		
Some Medium to Coarse Sand, Grain Size Distribution Conducted	8 11		
-70			
	8		
	20 19		
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING LOG: B-426 (Page 3 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 3 of 4

Date 9/9/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 25 ft HAMMER TYPE CME 550 / 82%

STRUCT. NO. 082-0324
Station NA

BORING NO. B-426
Station 54+99
Offset
Ground Surface Elev. 428.0 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, gray, FINE GRAINED SAND (continued)			
	29		
	38 50		
-85			
338.0			
Medium dense to dense, gray, FINE TO MEDIUM GRAINED SAND	19		
Grain Size Distribution Conducted	15 15		
-95			
-100			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to dense, gray, FINE TO MEDIUM GRAINED SAND (continued)			
	11		
	17 19		
-105			
-110			
	11		
	13 17		
-115			
308.0			
-120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

k:\projects\60046089\sn082-0322 & 0324 flyover\roll drawings\76c80_master_consolidated\structural\082-0322\sheet\082-0322-0324_76C76.S141.Boringlog-41.dgn

AECOM	USER NAME =	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS XLI I-70E OVER I-55, CSX & KCS RAILROADS
		DRAWN - BRD	REVISED -		
	PLOT SCALE = 0.2 '' / IN.	CHECKED - DDB	REVISED -		
	PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -		SCALE: SHEET S-230 OF S-234 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	357
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING LOG: B-426 (Page 4 of 4)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 4 of 4

Date 9/9/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 25 ft HAMMER TYPE CME 550 / 82%

STRUCT. NO. 082-0324
Station NA

BORING NO. B-426
Station 54+99
Offset
Ground Surface Elev. 428.0 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DESCRIPTION
				Very dense, gray, FINE TO COARSE GRAINED SAND
	13			
-125	34			
	50			
296.5				CRYSTALLINE LIMESTONE - See Rock Core Log
				CRYSTALLINE LIMESTONE - See Rock Core Log *(continued)*
-145				
270.5				End of Boring

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

ROCK CORE LOG: B-426 CORE (Page 1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Page 1 of 2

Date 9/9/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0324
Station NA

CORING BARREL TYPE & SIZE NX

BORING NO. B-426 Core
Station 54+99
Offset
Ground Surface Elev. 428.0 ft

Core Diameter 2 in
Top of Rock Elev. 295.5 ft
Begin Core Elev. 295.5 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	DESCRIPTION
	1	100	90			Hard, gray, finely crystalline, massive, fresh, LIMESTONE
-135	2	98	95		945.0	blue clay seam - 1" blue clay seam - 1/2" blue clay seam - 1/4" blue clay seam - 3" argillaceous from 136.8 to 136.8 feet unconfined compressive strength = 484 tsf
-140	3	100	95		1892.0	
-145	4	98	88			soft, gray shale seam - 1/2" soft, gray shale seam - 1"
-150	5	100	100		578.0	shaley

Color pictures of the cores Yes
Cores will be stored for examination until 12-9-10
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

ROCK CORE LOG: B-426 CORE (Page 2 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Page 2 of 2

Date 9/9/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0324
Station NA

CORING BARREL TYPE & SIZE NX

BORING NO. B-426 Core
Station 54+99
Offset
Ground Surface Elev. 428.0 ft

Core Diameter 2 in
Top of Rock Elev. 295.5 ft
Begin Core Elev. 295.5 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	DESCRIPTION
						Hard, gray, finely crystalline, massive, fresh, LIMESTONE *(continued)*
						gray shale seam - 1/2"
-155	6	100	83			
270.5						End of Boring
-160						
-165						
-170						

Color pictures of the cores Yes
Cores will be stored for examination until 12-9-10
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

BORING LOG: B-427 (Page 1 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 3

Date 6/9/11

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL. SEC. 18, TWP. 2N, RNG. 9W

COUNTY St Clair DRILLING METHOD HSA with MR below 15 ft HAMMER TYPE CME 75 / 85%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-427
Station 67+70
Offset 6ft Right
Ground Surface Elev. 384.4 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Loose, brown, MEDIUM GRAINED SAND				
		2		
		2		
	-5	3		
377.4				
Medium dense, grayish brown, FINE GRAINED SAND				
		3		
		4		
	-10	9		
		4		
		5		
	-15	8		
		4		
		9		
	-20	8		

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, grayish brown, FINE GRAINED SAND *(continued)*				
362.4				
Loose, greenish black, MEDIUM GRAINED SAND				
		3		
		3		
	-25	5		
357.4				
Medium dense to very dense, gray, FINE GRAINED SAND				
		6		
		7		
	-30	12		
		9		
		13		
	-35	17		
		22		
		27		
	-40	28		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-89)

BORING LOG: B-427 (Page 2 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 2 of 3

Date 6/9/11

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL. SEC. 18, TWP. 2N, RNG. 9W

COUNTY St Clair DRILLING METHOD HSA with MR below 15 ft HAMMER TYPE CME 75 / 85%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-427
Station 67+70
Offset 6ft Right
Ground Surface Elev. 384.4 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ___ Hrs. ** ft

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, gray, FINE GRAINED SAND *(continued)*				
342.4				
Medium dense, gray, FINE TO MEDIUM GRAINED SAND				
		14		
		11		
	-45	12		
		11		
		15		
	-50	16		
		10		
		10		
	-55	10		
		0		
		10		
	-60	12		

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense, gray, FINE TO MEDIUM GRAINED SAND *(continued)*				
322.4				
Very dense, gray, FINE GRAINED SAND				
		50/3"		
	-65			
317.4				
Medium dense to very dense, gray, FINE TO MEDIUM GRAINED SAND				
		6		
		10		
	-70	14		
	-75			
		24		
		28		
	-80	32		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-89)

BORING LOG: B-427 (Page 3 of 3)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 6/9/11

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 15 ft HAMMER TYPE CME 75 / 85%

STRUCT. NO. 082-0322
Station NA

BORING NO. B-427
Station 67+70
Offset 98 Right
Ground Surface Elev. 384.4 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After Hrs. ** ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium dense to very dense, gray, FINE TO MEDIUM GRAINED SAND *(continued)*				
CRYSTALLINE LIMESTONE - See Rock Core Log	299.4	85		
	90			
	95			
	100			

	DEPTH (ft)	BLOWS (/5")	UCS Qu (tsf)	MOIST (%)
CRYSTALLINE LIMESTONE - See Rock Core Log *(continued)*				
	105			
	110			
End of Boring	259.4	115		
	120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

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AECOM

USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 02 '' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XLIV
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: SHEET S-233 OF S-234 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	360
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ROCK CORE LOG: B-427 CORE (Page 1 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Date 6/9/11

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0322
Station NA

CORING BARREL TYPE & SIZE NX
Core Diameter 2 in
Top of Rock Elev. 299.4 ft
Begin Core Elev. 299.4 ft

BORING NO. B-427 Core
Station 67+70
Offset 6ft Right
Ground Surface Elev. 384.4 ft

DESCRIPTION	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Hard, gray, very finely crystalline, massive, slightly weathered to fresh, LIMESTONE		1	100	100	2	1183.0
moderately weathered stylolite - 0.5"	85					
		2	100	100	2	2161.0
Moderately hard, gray, very finely crystalline, massive, slightly weathered, argillaceous LIMESTONE	291.2					
	95					
		3	100	76	1.8	1131.0
soft, blue, clayey shale seam - 1.25"						
soft, blue, clayey shale seam - 0.75"	287.6					
Moderately hard, gray, very finely crystalline, massive, slightly weathered to fresh, LIMESTONE	100					
		4	100	100	1.7	370.0
Moderately hard, gray, very finely crystalline, thick bedded, slightly weathered, argillaceous LIMESTONE	281.8					
	280.3					
Moderately hard, gray, very finely crystalline to micritic, massive, fresh, LIMESTONE	105					

Color pictures of the cores Yes
Cores will be stored for examination until 12-10-11
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

ROCK CORE LOG: B-427 CORE (Page 2 of 2)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

ROCK CORE LOG

Date 6/9/11

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY LAH

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0322
Station NA

CORING BARREL TYPE & SIZE NX
Core Diameter 2 in
Top of Rock Elev. 299.4 ft
Begin Core Elev. 299.4 ft

BORING NO. B-427 Core
Station 67+70
Offset 6ft Right
Ground Surface Elev. 384.4 ft

DESCRIPTION	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Moderately hard, gray, very finely crystalline to micritic, massive, fresh, LIMESTONE *(continued)*		5	100	94	1.6	
argillaceous bands						1042.0
	110					
argillaceous bands		6	100	100	1.5	
argillaceous marbling						611.0
	289.4 115					
End of Boring						
	120					
	125					

Color pictures of the cores Yes
Cores will be stored for examination until 12-10-11
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

AECOM

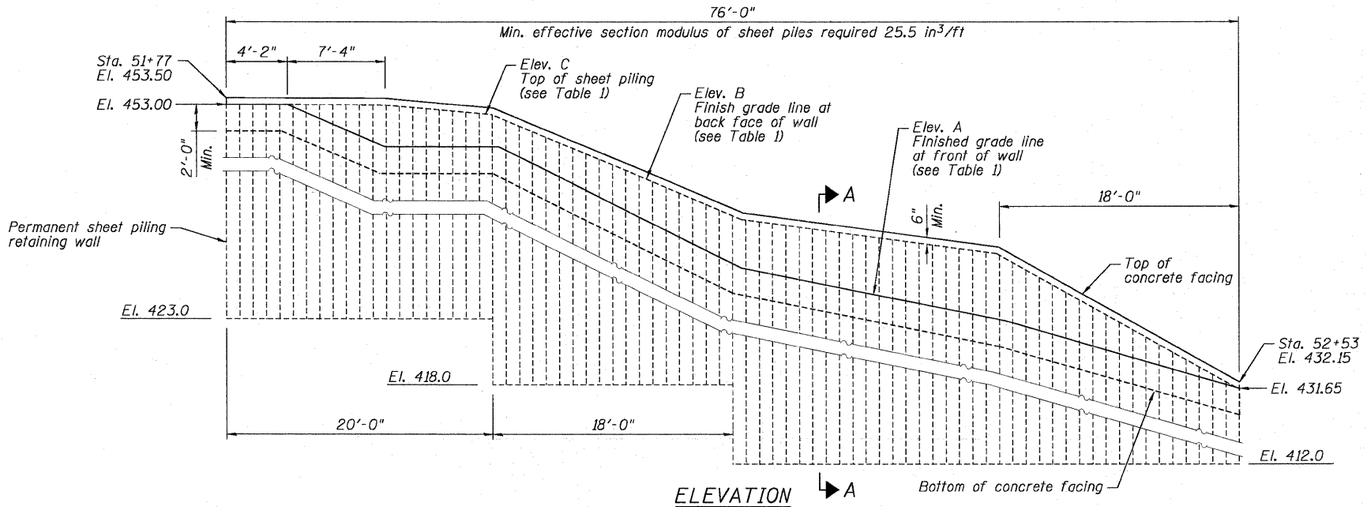
USER NAME =	DESIGNED - PJL	REVISED -	
	DRAWN - BRD	REVISED -	
PLOT SCALE = 0.2 '1' / IN.	CHECKED - DDB	REVISED -	
PLOT DATE = 6/27/2011	DATE - 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS XLV
I-70E OVER I-55, CSX & KCS RAILROADS

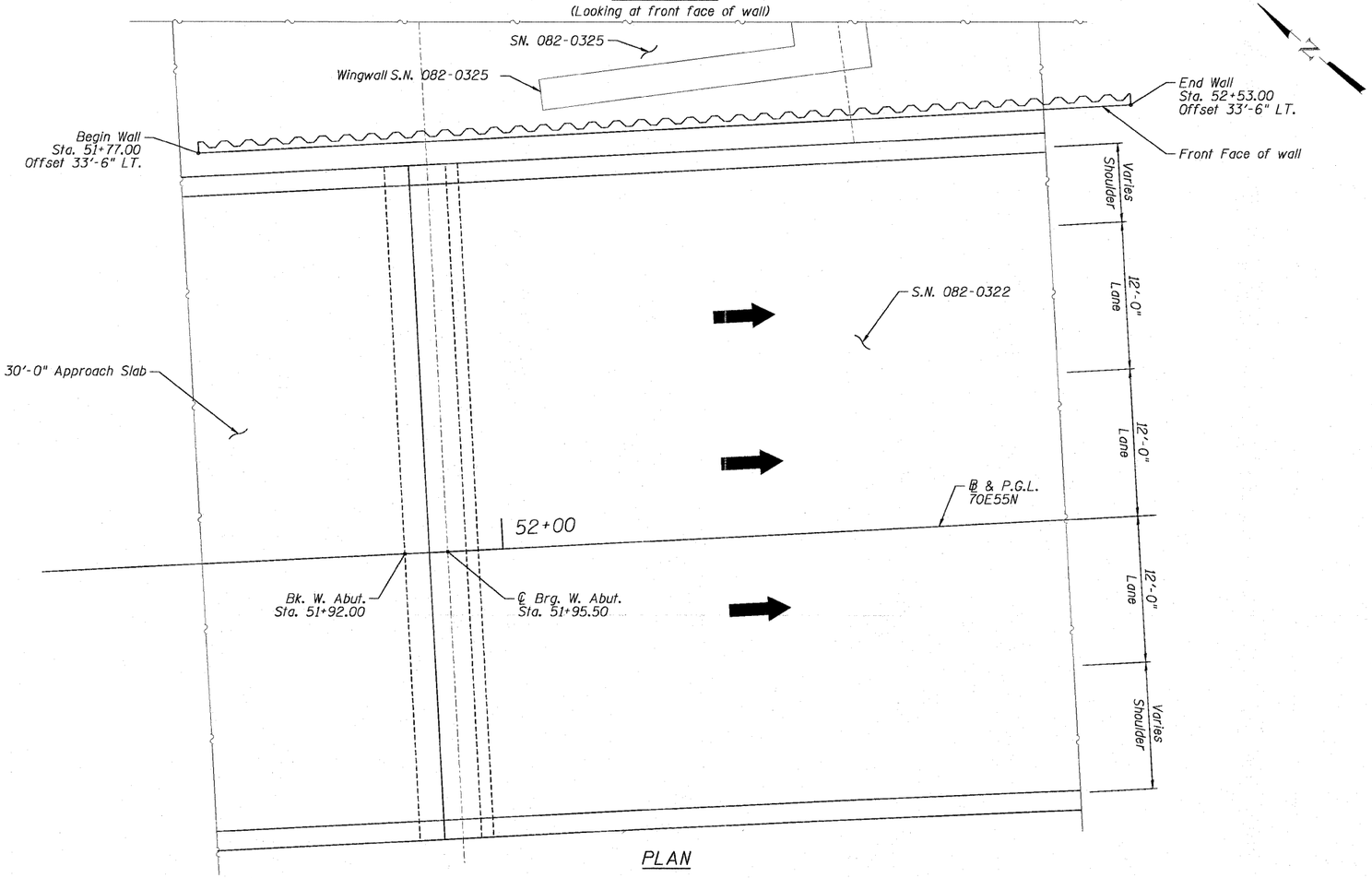
SCALE: | SHEET S-234 OF S-234 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	361
S.N. 082-0322 & S.N. 082-0324		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



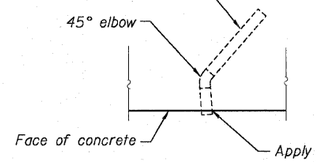
ELEVATION

(Looking at front face of wall)



PLAN

4" dia x 2'-6" long Sch 80 PVC pipe with end cap, 12-½"ϕ evenly distributed holes and fabric wrapped. Pushed or predrilled into backfill. Cost of installing weep holes included with Permanent Steel Sheet Piling.



WEEP HOLE DETAIL

DESIGN SPECIFICATIONS

2002 AASHTO - Standard Specifications for Highway Bridges

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (reinf.)
fy = 39.000 psi (M202 Grade 39)

TABLE 1

Station	Offset	Elev. A (feet)	Elev. B (feet)	Elev. C (feet)
51+77	33'-6"	453.00	453.00	453.00
51+81.17	33'-6"	453.00	453.00	453.00
51+88.5	33'-6"	449.83	452.63	453.00
51+97	33'-6"	449.83	452.25	452.25
52+15	33'-6"	440.90	444.03	444.03
52+35	33'-6"	436.85	441.85	441.85
52+53	33'-6"	431.65	431.65	431.65

Notes:

Station and offest are measured from ℄ 70E55N to the front face of the wall.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	3	#5	12'-6"	———
h2(E)	6	#5	11'-1"	———
h3(E)	3	#5	8'-1"	———
h4(E)	6	#5	22'-8"	———
h5(E)	8	#5	23'-4"	———
h6(E)	8	#5	20'-9"	———
v1(E)	4	#5	2'-2"	———
v2(E)	4	#5	7'-6"	———
v3(E)	4	#5	9'-11"	———
v4(E)	9	#5	9'-11"	———
v5(E)	10	#5	12'-6"	———
v6(E)	9	#5	9'-4"	———
u1(E)	6	#5	4'-6"	⌐¬
Concrete Structures			Cu. Yd.	20
Reinforcement Bars, Epoxy Coated			Pound	1070
Permanent Steel Sheet Piling			Sq. Ft.	2204

P:\P60\46091\900.CAD\10l.Drawings\76C00_Master_Consolidated\Structural\082-0322\PermSheetPileWall\Sheets\S234A_082-0322_0324_76C76_RetWall-1.dgn

AECOM

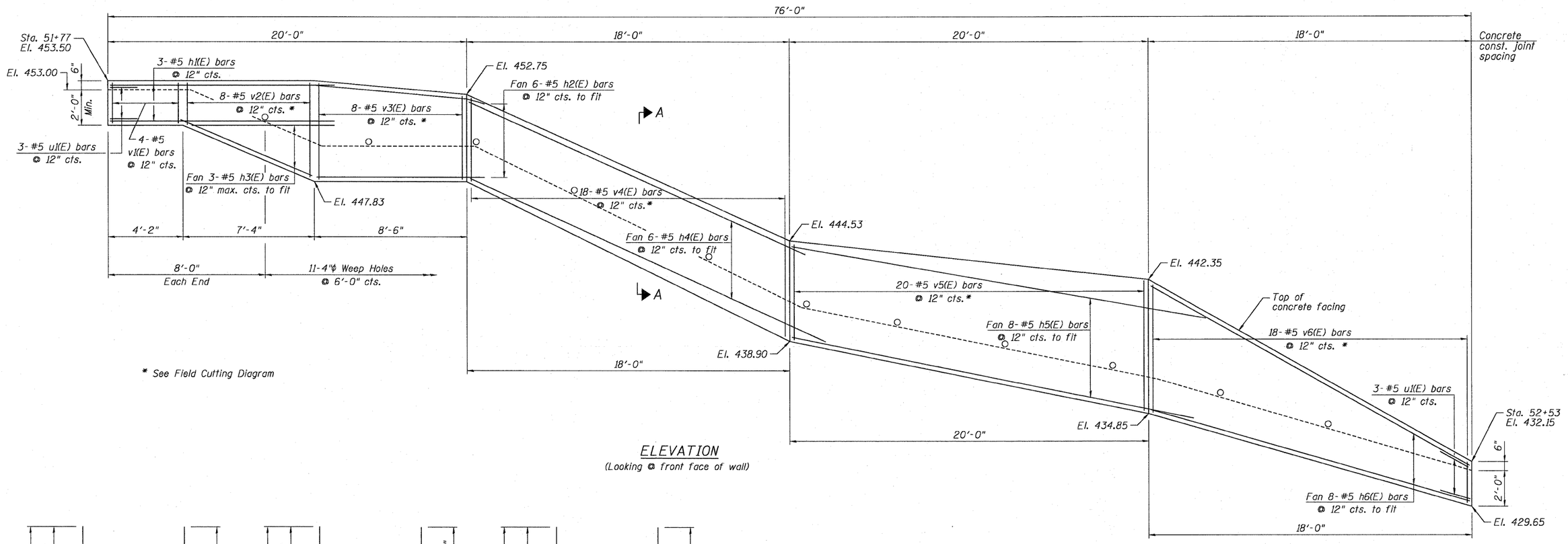
USER NAME =	DESIGNED - DDB	REVISED -	
	DRAWN - GF	REVISED -	
PLOT SCALE = 0.083333 ' / in.	CHECKED - DEV	REVISED -	
PLOT DATE = 8/9/2011	DATE - 08-12-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PERMANENT STEEL SHEET PILE WALL – GENERAL PLAN
I–70E OVER I–55, CSX & KCS RAILROADS

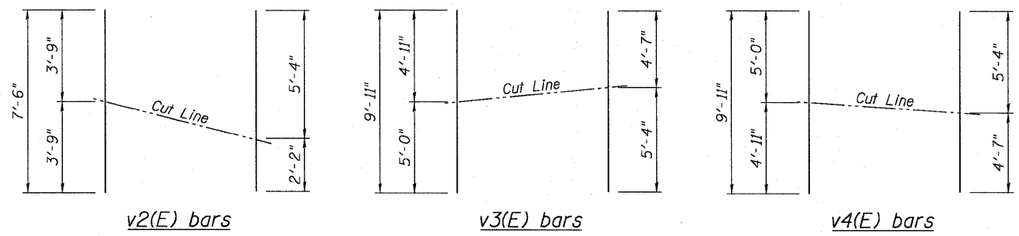
SCALE: | SHEET S-234A OF S-234 SHEETS | STA. 51+77 | TO STA. 52+53

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	361A
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

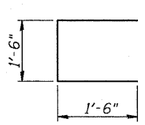


* See Field Cutting Diagram

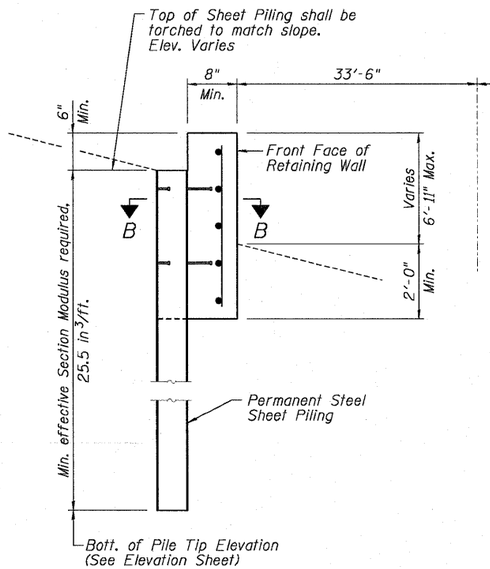
ELEVATION
(Looking @ front face of wall)



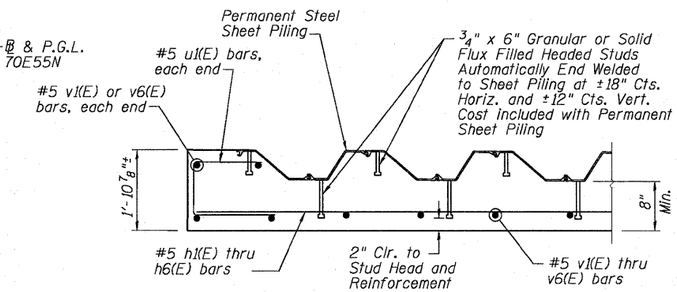
FIELD CUTTING DIAGRAMS
Order bars full length. Cut as shown and place for best fit.



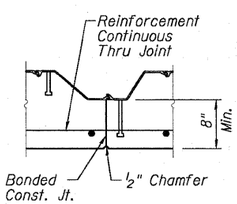
BAR u1(E)



SECTION A-A



SECTION B-B



WALL CONSTRUCTION JOINT

P:\P60\046\01\900_CAD\900_Drawings\76C00_Master_Consolidated\Structural\082-0322\PermSheetPileWall\Sheets\52348_082-0322_0324_76C76_RetWall-2.dgn

AECOM	USER NAME =	DESIGNED - DDB	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 0.083333 ' / in.	CHECKED - DEV	REVISED -
	PLOT DATE = 8/9/2011	DATE - 08-12-11	REVISED -

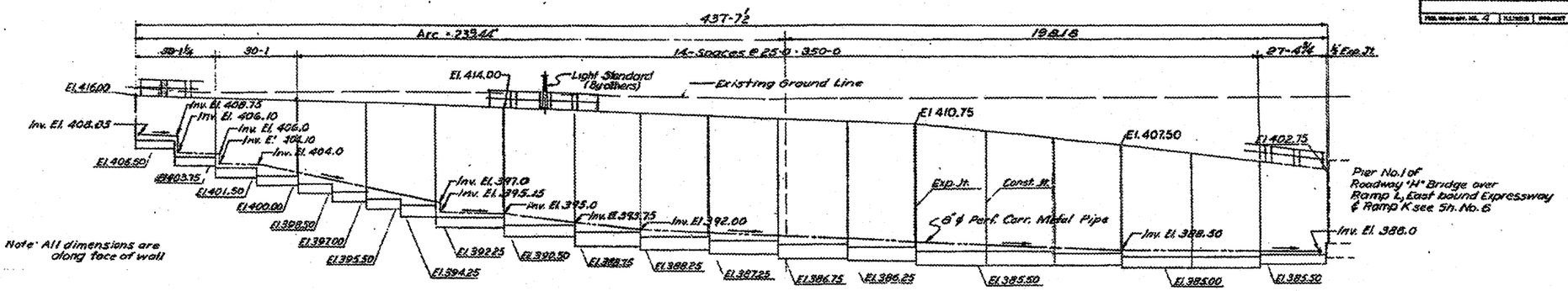
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PERMANENT STEEL SHEET PILE WALL DETAILS
I-70E OVER I-55, CSX & KCS RAILROADS
SCALE: | SHEET S-234B OF S-234 SHEETS | STA. 51+77 | TO STA. 52+53

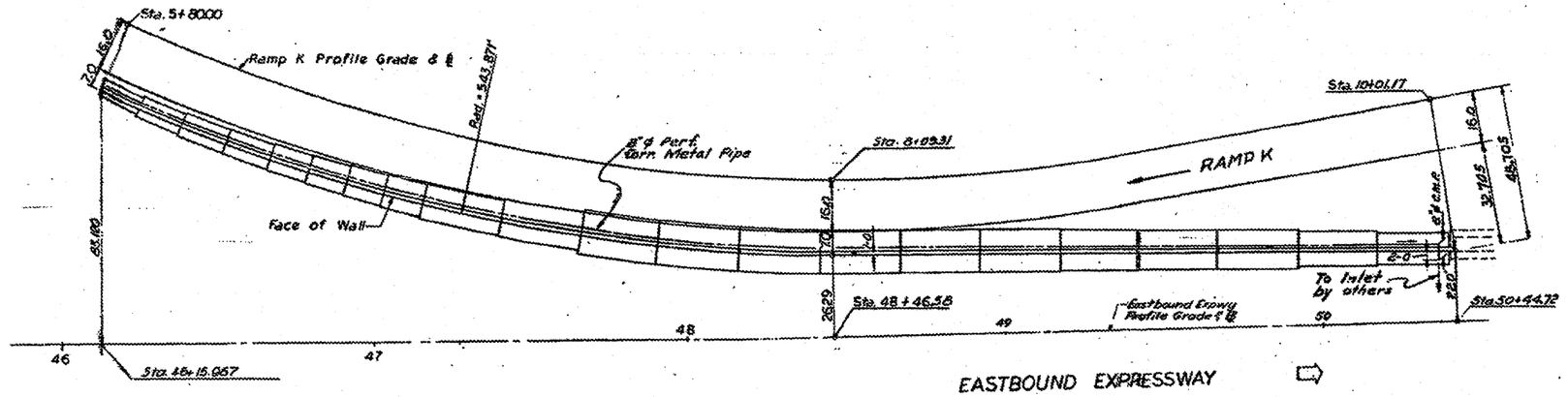
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	361B
	S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	362
		CONTRACT NO. 76C76		



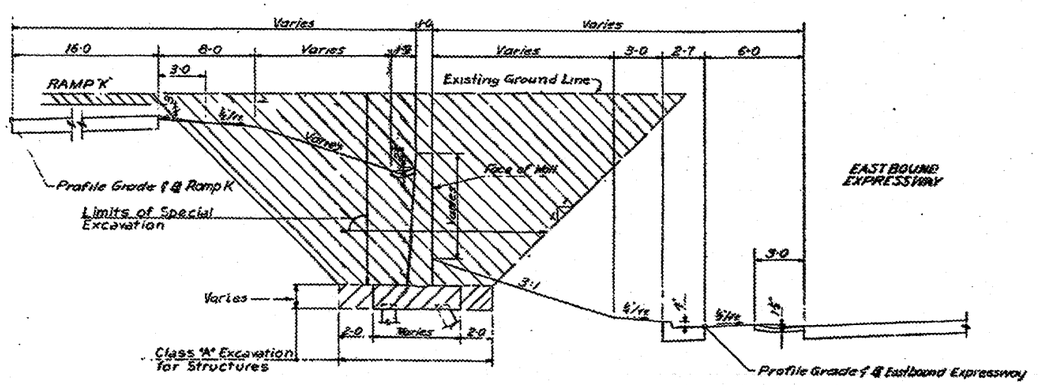
ELEVATION
Scale: Vert: 1"=10'-0" Horiz. 1"=20'



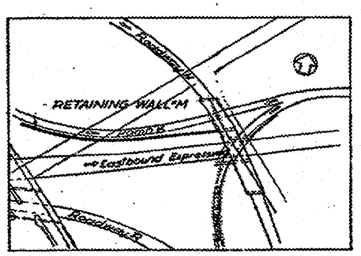
PLAN
Scale 1"=20'

CURVE DATA
RAMP K

P.I. Sta:	7+26.04
Δ	39°-27'-12"
Dc	11°-00'-00"
R	520.87
L	358.67
T	186.77
E	32.47



TYPICAL SECTION
LOOKING EAST



LOCATION PLAN

Drawn By: ES
Checked By: X.K

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "M"
GENERAL PLAN

H. W. LOCHNER, INC.
ENGINEERS
DATE: MAY 1958 CHICAGO, ILLINOIS SHEET NO. 13

FILE NAME = @FILEL@	USER NAME = BhattA	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 40.000 ' / in.	CHECKED - AB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07/01/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

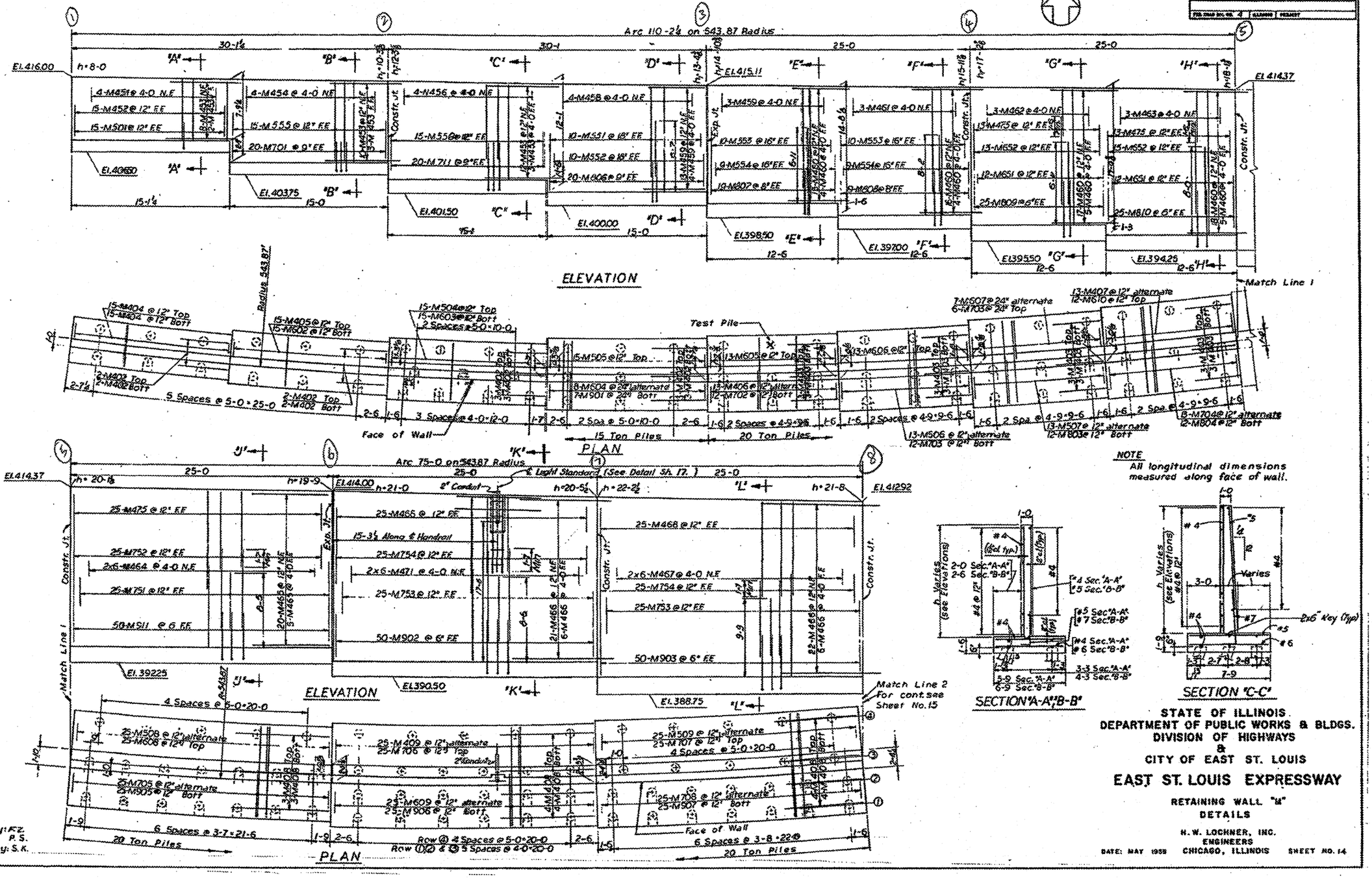
EXISTING RETAINING WALL PLANS

SCALE: NONE | SHEET 1 OF 7 SHEETS | STA. | TO STA.

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

FOR INFORMATION ONLY

FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	ILLINOIS	ST. CLAIR	58	42



Designed by: F.Z.
Drawn by: P.S.
Checked by: S.K.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "M"
DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE: MAY 1958 CHICAGO, ILLINOIS SHEET NO. 14

FILE NAME = #FILE#	USER NAME = BhattA	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 40.000 ' / in.	CHECKED - AB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07/01/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

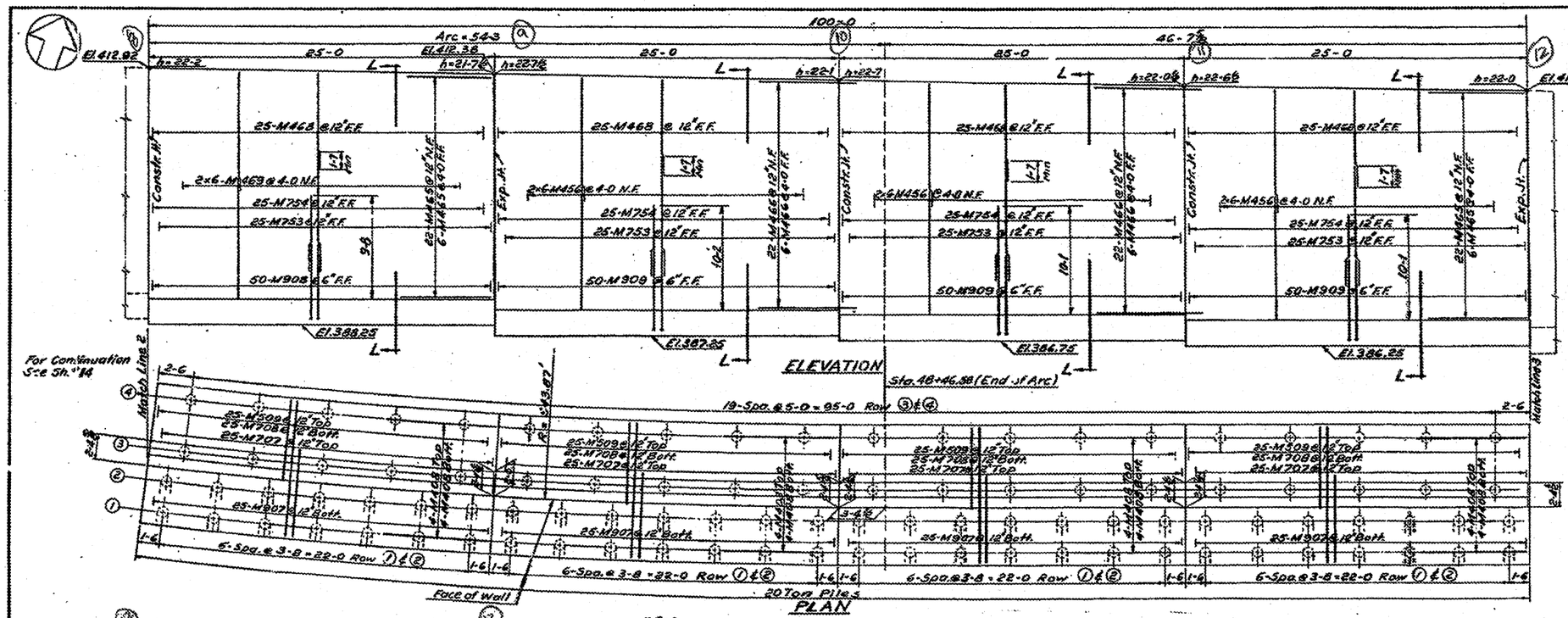
EXISTING RETAINING WALL PLANS

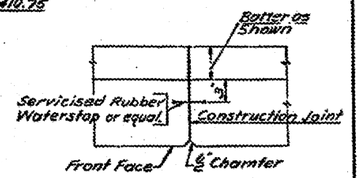
SCALE: NONE | SHEET 2 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	363
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

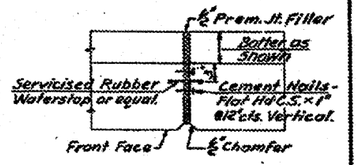
FOR INFORMATION ONLY

FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	ILLINOIS	ST. CLAIR	98	43

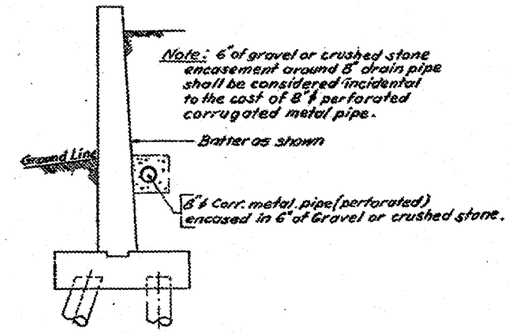




TYPICAL CONSTRUCTION JOINT



TYPICAL EXPANSION JOINT



TYPICAL DRAINAGE DETAIL

For Drainage Layout see General Plan

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "M"
DETAILS

H.W. LOCHNER, INC.
ENGINEERS
DATE: MAY 1958 CHICAGO, ILLINOIS SHEET NO. 15.

FILE NAME = ®FILEL®	USER NAME = BhattA	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 40.000 ' / in.	CHECKED - AB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07/01/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

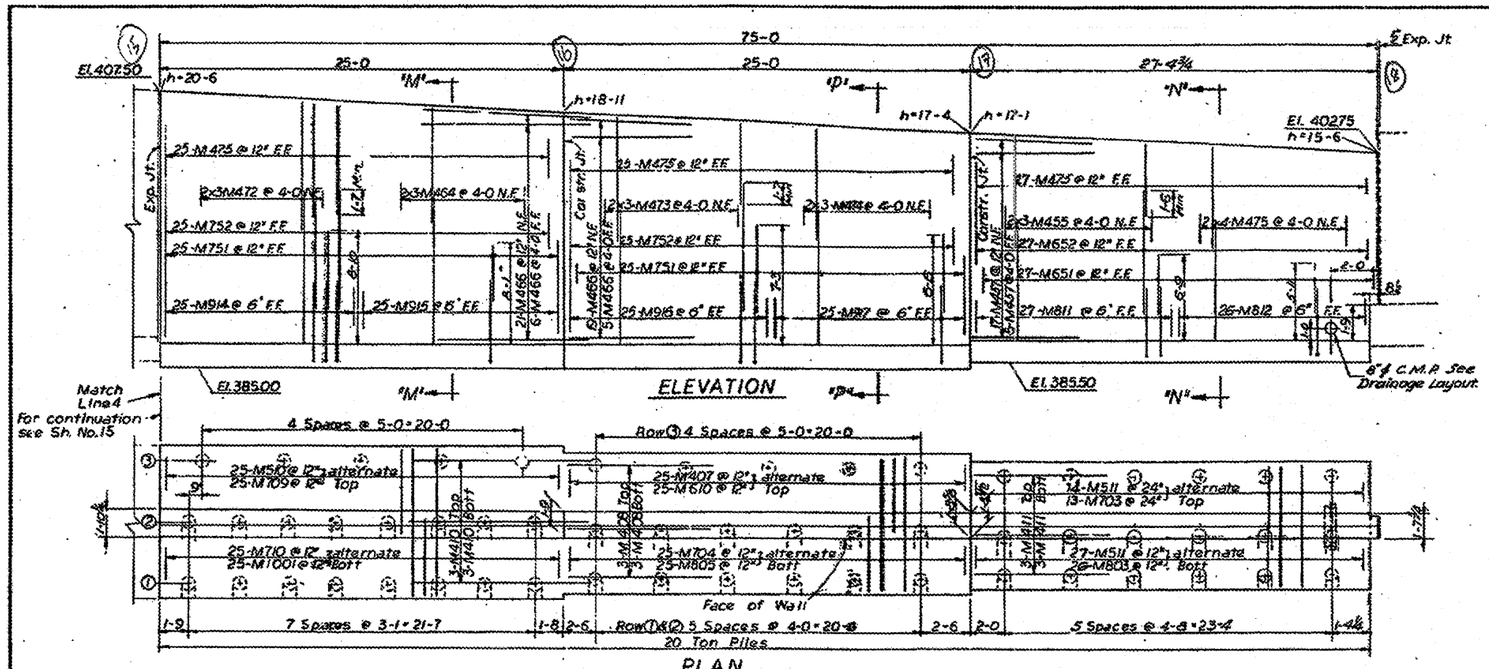
EXISTING RETAINING WALL PLANS

SCALE: NONE | SHEET 3 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	364
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-7	82-2/B-2	St. Clair	58	44
FED. ROAD DIST. NO. 10	ILLINOIS	FED. AID PROJECT		



BAR SCHEDULE

LOC.	MARK	NO. REQ'D.	SIZE	LENGTH	SHAPE
FOOTING	M402	20	#4	14-6	
	M403	24		12-0	
	M404	30		5-3	
	M405	15		6-3	
	M406	13		9-0	
	M407	38		11-0	
	M408	67		24-6	
	M409	50		12-6	
	M410	21		26-0	
	M411	6	#4	26-2	
	M501	15	#5	3-5	
	M504	15		7-3	
	M505	15		8-6	
	M506	13		9-6	
	M507	13		10-6	
	M508	25		11-6	
	M509	150		13-0	
	M510	50		12-0	
	M511	41	#5	10-0	
	M602	15	#6	6-3	
	M603	15		7-3	
	M604	8		8-6	
	M605	13		9-0	
	M606	13		9-6	
	M607	7		10-6	
	M608	25		7-0	
	M609	50		12-6	
	M610	37	#6	6-10	
	M701	20	#7	6-2	
	M702	12		6-0	
	M703	31		6-10	
	M704	38		11-0	
	M705	25		11-6	
	M706	50		7-6	
	M707	150		7-9	
	M708	150		13-0	
	M709	50		7-4	
	M710	50		12-0	
	M711	20	#7	7-11	
	M803	38	#6	6-6	
	M804	12		6-10	
	M805	25		7-1	
	M205	20		7-0	
	M807	19		7-1	
	M808	19		8-4	
	M809	25		6-3	
	M810	25		7-5	
	M811	27		6-0	
	M812	26	#8	5-8	
	M901	7	#9	6-4	
	M902	25	#9	7-8	

BAR SCHEDULE

LOC.	MARK	NO. REQ'D.	SIZE	LENGTH	SHAPE
FOOTING	M903	50	#9	6-8	
	M904	25		9-4	
	M905	25		7-8	
	M906	50		8-3	
	M907	150		8-5	
	M908	75		8-9	
	M909	150		9-2	
	M910	25		8-3	
	M911	50		7-10	
	M912	25		7-8	
	M913	25		6-7	
	M914	25		8-3	
	M915	25		7-6	
	M916	25		6-8	
	M917	25	#9	5-11	
	M1001	50	#10	6-4	
STEM	M451	4	#4	7-8	
	M452	15		7-7	
	M453	38		15-2	
	M454	4		10-2	
	M455	6		9-0	
	M456	46		12-0	
	M457	22		26-6	
	M458	4		13-3	
	M459	20		14-6	
	M460	84		13-6	
	M461	3		15-10	
	M462	3		16-10	
	M463	3		18-0	
	M464	18		10-6	
	M465	108		24-6	
	M466	219		26-0	
	M467	12		11-8	
	M468	225		9-3	
	M469	18		11-6	
	M470	6		11-3	
	M471	24		11-0	
	M472	12		10-9	
	M473	6		10-0	
	M474	6		9-6	
	M475	136		8-8	
	M476	5		4-2	
	M477	4	#4	8-0	
	M551	10	#5	10-10	
	M552	10		4-0	
	M553	20		12-1	
	M554	18		4-3	
	M555	15		8-1	
	M556	15	#5	8-5	
	M651	51	#6	5-4	
	M652	53		8-4	
	M653	4	#6	9-6	
	M751	75	#7	6-0	
	M752	75		10-5	
	M753	225		6-9	
	M754	225	#7	11-5	

NOTE: For General Notes see Sh. No. 1
For Expansion Jt., Construction Jt. & Drainage details see Sh. No. 15.

BILL OF MATERIALS

Class "A" Concrete	C.Y.	662.9
Reinforcement bars	LB.	73,970
Furn. Creosoted Piles (Up to 20.0)	L.F.	640
Furn. Creosoted Piles (20.1' to 38.0)	L.F.	8667
Special Excavation	C.Y.	16,844
Class "A" Excavation for Structures	C.Y.	557
6" ∅ Perf. C.M.P.	L.F.	448
Test Pile (Timber)	Ea.	1
Driving Timber Piles	L.F.	9307

PILE DATA:
32-15 Ton piles, estimated average length 20 ft.
321-20 Ton piles, estimated average length 27 ft.
Test pile indicated thus ⊗

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "M"
DETAILS

H.W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DATE: MAY 1938 SHEET NO. 14

FILE NAME = #FILEL#	USER NAME = BhattA	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 40.000 ' / in.	CHECKED - AB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07/01/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RETAINING WALL PLANS

SCALE: NONE | SHEET 4 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	365
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

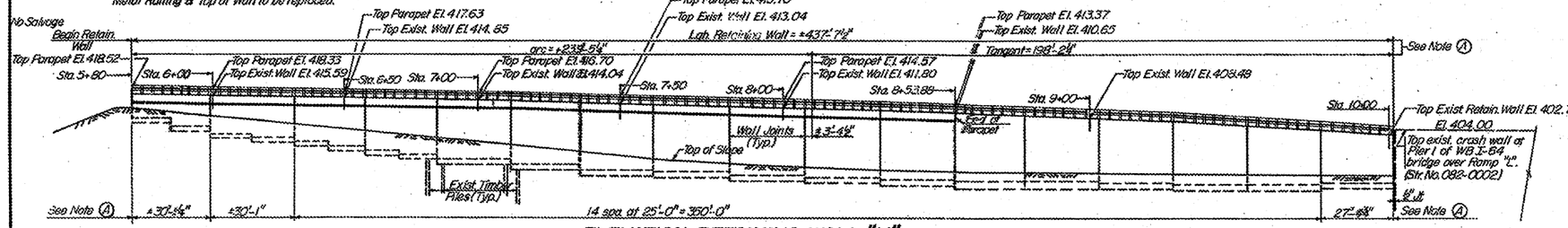
FOR INFORMATION ONLY

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	*	ST. CLAIR	163	131
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

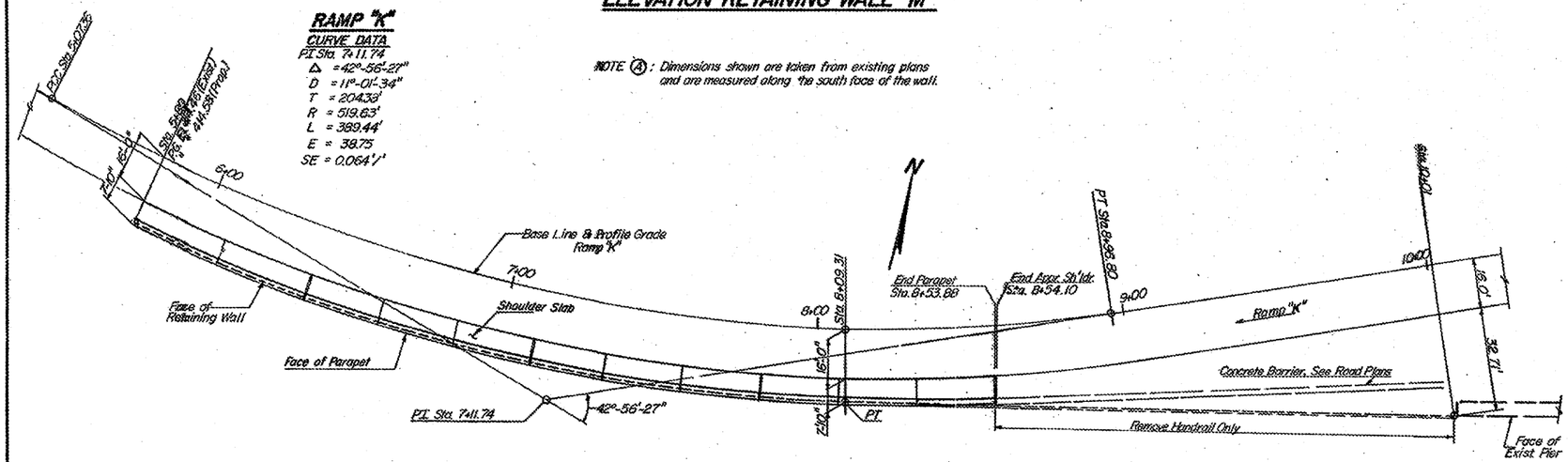
*82-(1,2)R-2 Sh 1 of 3

EM. #57 Chiseled "L" on SW corner of the North Concrete Foundation for sign truss over Ramps K & L, 50'Lt. Sta. 12+54 Ramp L. El. 404.00

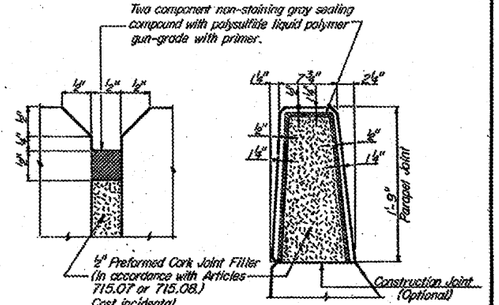
Existing Structure: 4437.7½" Vertical Cantilever RC Retaining Wall on timber piles. Metal Railing & Top of Wall to be replaced.



ELEVATION-RETAINING WALL "M"



NOTE (A): Dimensions shown are taken from existing plans and are measured along the south face of the wall.



DETAILS OF PARAPET JOINT

DESIGN STRESSES

Existing - 1959 AASHO Specifications
fc = 1,000 psi. (Substructure with Earth Pressure)
fs = 20,000 psi. (Reinforcement)

Proposed - 1989 AASHTO Specifications
f'c = 3,500 psi.
fy = 60,000 psi. (Reinforcement)

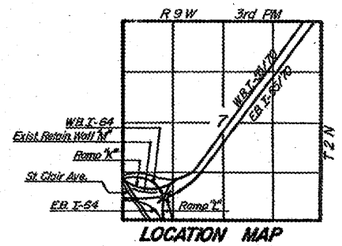
PLAN-RETAINING WALL "M"

GENERAL NOTES

1. Construction Specifications: The 1988 edition of the State of Illinois Department of Transportation's "Standard Specifications for Road and Bridge Construction," addenda and the Special Provisions shall govern.
2. Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.
3. Plan dimensions and details relative to the existing structure have been taken from existing plans or from field surveys, and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
4. All transverse and longitudinal dimensions are measured horizontally.
5. All dimensions are measured at a temperature of 50° F.
6. Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and ¾" ø x 12" hooked bolts.
7. The light standard originally on the retaining wall was previously removed.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Class X Concrete	Cu. Yd.	132.1
Reinforcement Bars Epoxy Coated	Lbs.	19,540
Concrete Removal	Cu. Yd.	10.3
Earth Excavation	Cu. Yd.	32.8
Protective Coat	Sq. Yd.	313.1
Handrail Removal	L. in. Ft.	438.5
Expansion Bolts ¾" x 12"	Each	188



LOCATION MAP

APPROVED
Ralph E. Anderson
Aug 27, 1990

Des. RLA Ck. Dr.
SANDOVAL ENGINEERS, INC.

GENERAL PLAN & ELEVATION
RETAINING WALL "M"

FAI Route 70
SECTION 82-(1,2) R-2
STA. 5+80 to STA. 10+01
ST. CLAIR COUNTY

FILE NAME = $FILEL$	USER NAME = BhattA	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 40.000 ' / in.	CHECKED - AB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07/01/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RETAINING WALL PLANS

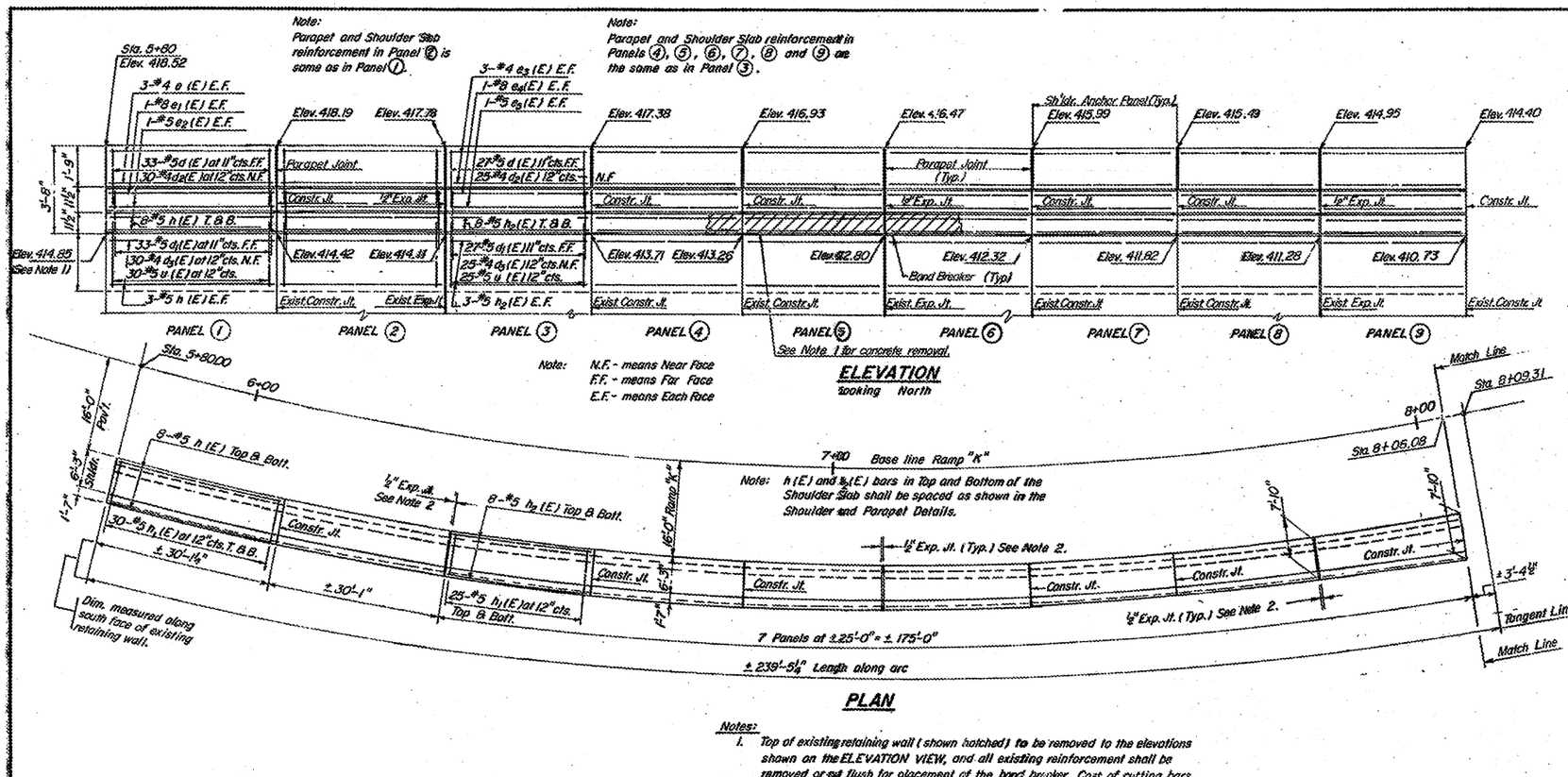
SCALE: NONE | SHEET 5 OF 7 SHEETS | STA. | TO STA.

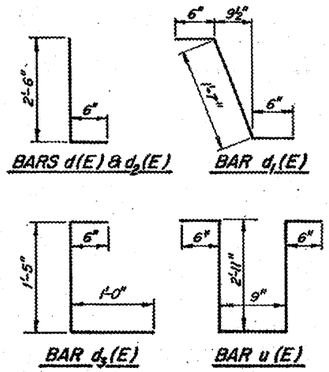
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	366
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	*	ST. CLAIR	163	132
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

*82-(1,2)R-2 Sh. # 2 of 3.



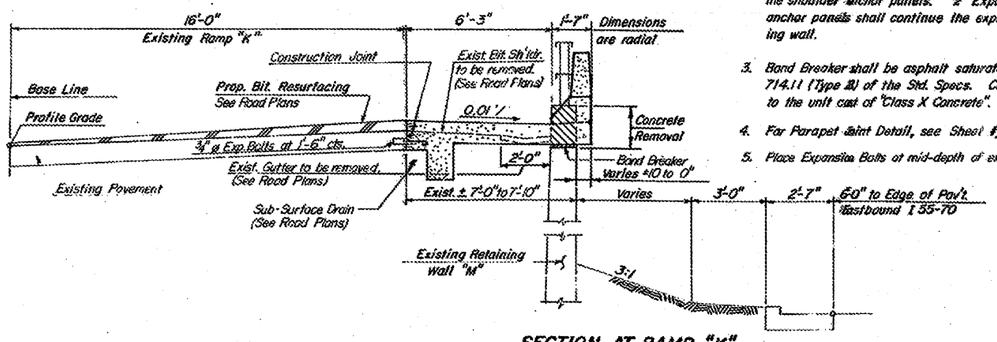


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Sta. 5+80.00 to Sta. 8+06.08				
d (E)	255	#5	3'-0"	L
d_1 (E)	255	#5	2'-7"	
d_2(E)	235	#4	3'-0"	
d_3(E)	235	#4	2'-11"	
e (E)	12	#4	29'-9"	
e_1(E)	4	#8	29'-9"	
e_2(E)	4	#5	29'-9"	
e_3(E)	42	#4	24'-9"	
e_4(E)	14	#8	24'-9"	
e_5(E)	14	#5	24'-9"	
h (E)	44	#5	29'-9"	
h_1(E)	470	#5	7'-7"	
h_2(E)	154	#5	24'-9"	
u (E)	236	#5	7'-7"	

Class X Concrete	Cu. Yd.	107.7
Reinf. Bars Epoxy Coated	Lbs.	15,990
Concrete Removal	Cu. Yd.	8.6
Earth Excavation	Cu. Yd.	27.1
Protective Coat	Sq. Yd.	259.9
Handrail Removal	Lin. Ft.	236
Expansion Brkts ¾" x 12"	Each	155

Bars designated (E) shall be epoxy coated.

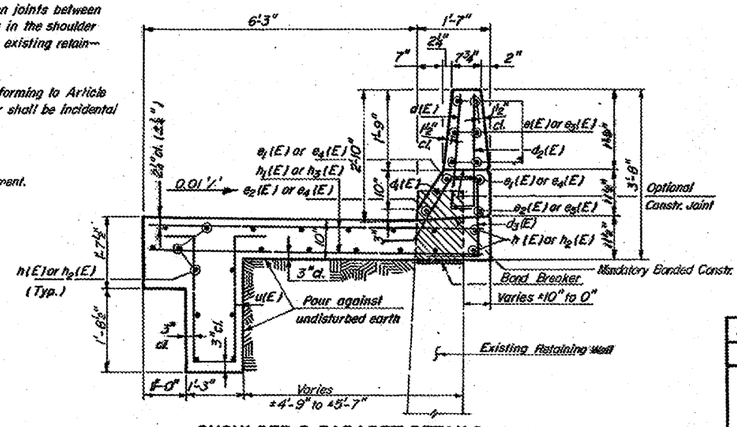


SECTION AT RAMP "K"
STA. 5+80.00 to STA. 8+06.08

NOTE: Horizontal dimensions shown in Sections are measured radially.

Notes:

1. Top of existing retaining wall (shown hatched) to be removed to the elevations shown on the ELEVATION VIEW, and all existing reinforcement shall be removed or cut flush for placement of the bond breaker. Cost of cutting bars and furnishing and placing bond breaker are included in the unit price for "Concrete Removal".
2. Except where shown in the PLAN VIEW, use construction joints between the shoulder anchor panels. ½" Expansion Joints shown in the shoulder anchor panels shall continue the expansion joints in the existing retaining wall.
3. Bond Breaker shall be asphalt saturated roofing felt, conforming to Article 714.11 (Type B) of the Std. Specs. Cost of Bond Breaker shall be incidental to the unit cost of "Class X Concrete".
4. For Parapet Joint Detail, see Sheet # .
5. Place Expansion Bolts at mid-depth of existing concrete pavement.



SHOULDER & PARAPET DETAILS
STA. 5+80.00 to STA. 8+06.08

Des. Ck. Dr.
SANDOVAL ENGINEERS, INC.

SHOULDER & PARAPET DETAILS
STA. 5+80.00 to STA. 8+06.08
FAI Route 70
SECTION 82-(1,2) R-2
STA. 5+80 to STA. 10+01
ST. CLAIR COUNTY

FILE NAME = *FILEL*	USER NAME = BhattA	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 40.000 ' / in.	CHECKED - AB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07/01/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RETAINING WALL PLANS

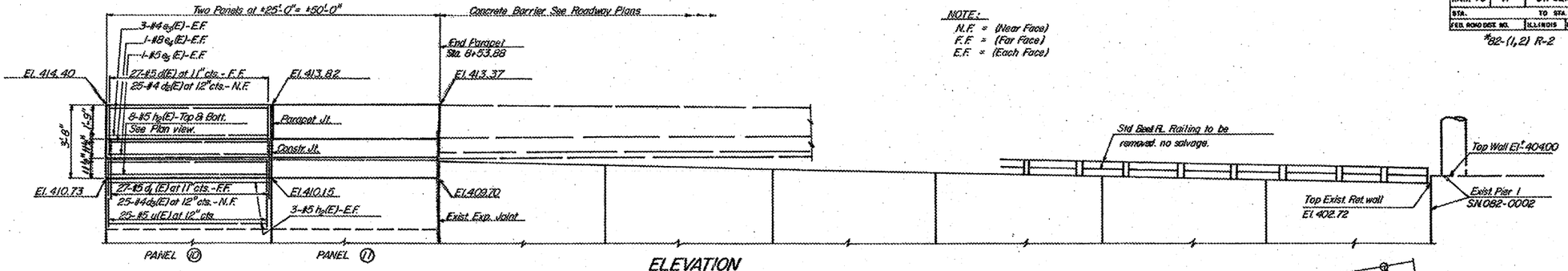
SCALE: NONE | SHEET 6 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	367
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

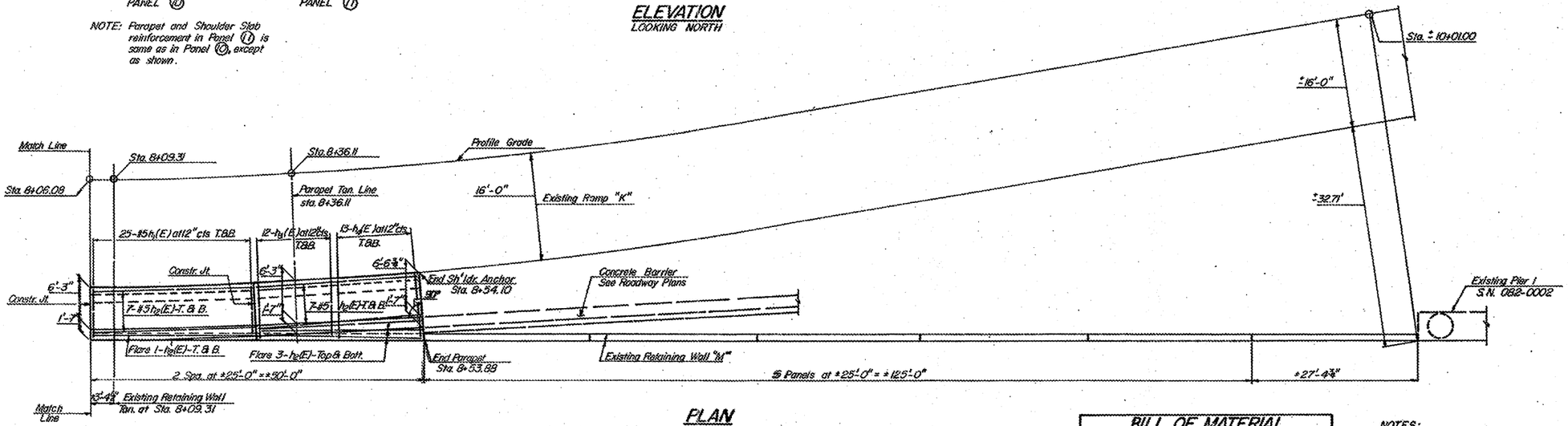
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA.I.-70	*	ST. CLAIR	163	133
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

*82-(1,2) R-2 Sh. #3 of 3.

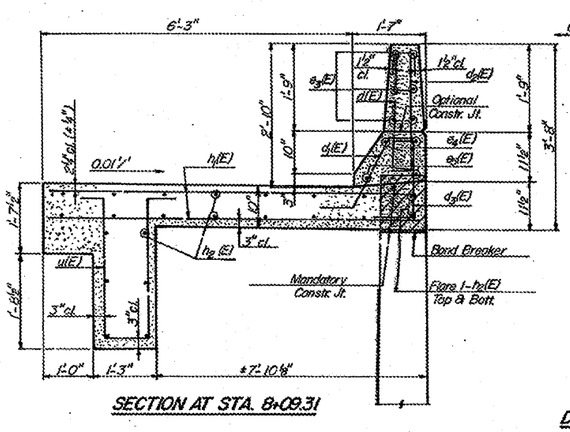


NOTE: Parapet and Shoulder Slab reinforcement in Panel (11) is same as in Panel (10), except as shown.

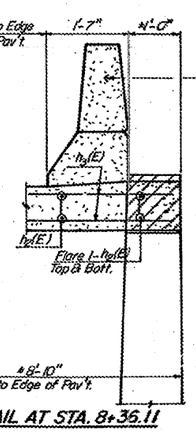
ELEVATION
LOOKING NORTH



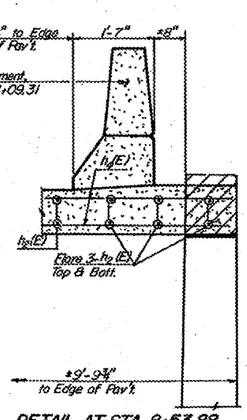
PLAN



SECTION AT STA. 8+09.31



DETAIL AT STA. 8+36.11



DETAIL AT STA. 8+53.88

NOTE: Horizontal dimensions shown in Section and Details are measured radially.

BILL OF MATERIAL
STA. 8+06.08 TO STA. 10+01.00

Bar	No.	Size	Length	Shape
d1(E)	54	#5	3'-0"	L
d6(E)	54	#5	2'-7"	
d2(E)	50	#4	3'-0"	
d3(E)	50	#4	2'-11"	
a3(E)	12	#4	24'-9"	——
e4(E)	4	#8	24'-9"	——
e5(E)	4	#5	24'-9"	——
h1(E)	50	#5	7'-7"	——
h2(E)	49	#5	24'-9"	——
h3(E)	24	#5	8'-0"	——
h4(E)	26	#5	8'-9"	——
u(E)	30	#5	7'-7"	
Class X Concrete			Cu. Yds.	24.4
Reinf. Bars Epoxy Coated			Lbs.	3,550
Concrete Removal			Cu. Yds.	1.7
Protective Coat			Sq. Yds.	53.2
Handrail Removal			L.in. Ft.	202.5
Earth Excavation			Cu. Yds.	5.7
Expansion Bolts ¾" x 12"			Each	33

Bars designated (E) shall be epoxy coated.

NOTES:
1. Bars designated (E) shall be epoxy coated.
2. For reinforcing bar details, see Sheet #2.
3. Notes on Sheet #2 pertaining to Panels (3) thru (9), are applicable to Panels (10) and (11).
4. From Sta. 8+53.88 to the joint at existing Pier 1 of S.N. 082-0002, only the existing metal hand-rail shall be removed, including the existing base plates. Anchor bolts shall be cut or burned off flush. Cost included in item "Handrail Removal".

SHOULDER & PARAPET DETAILS
STA. 8+06.08 to STA. 10+01.00

FAI Route 70
SECTION 82-(1,2) R-2
STA. 5+80 to STA. 10+01
ST. CLAIR COUNTY

Des. Dsd Ck. Dr.
SANDOVAL ENGINEERS, INC.

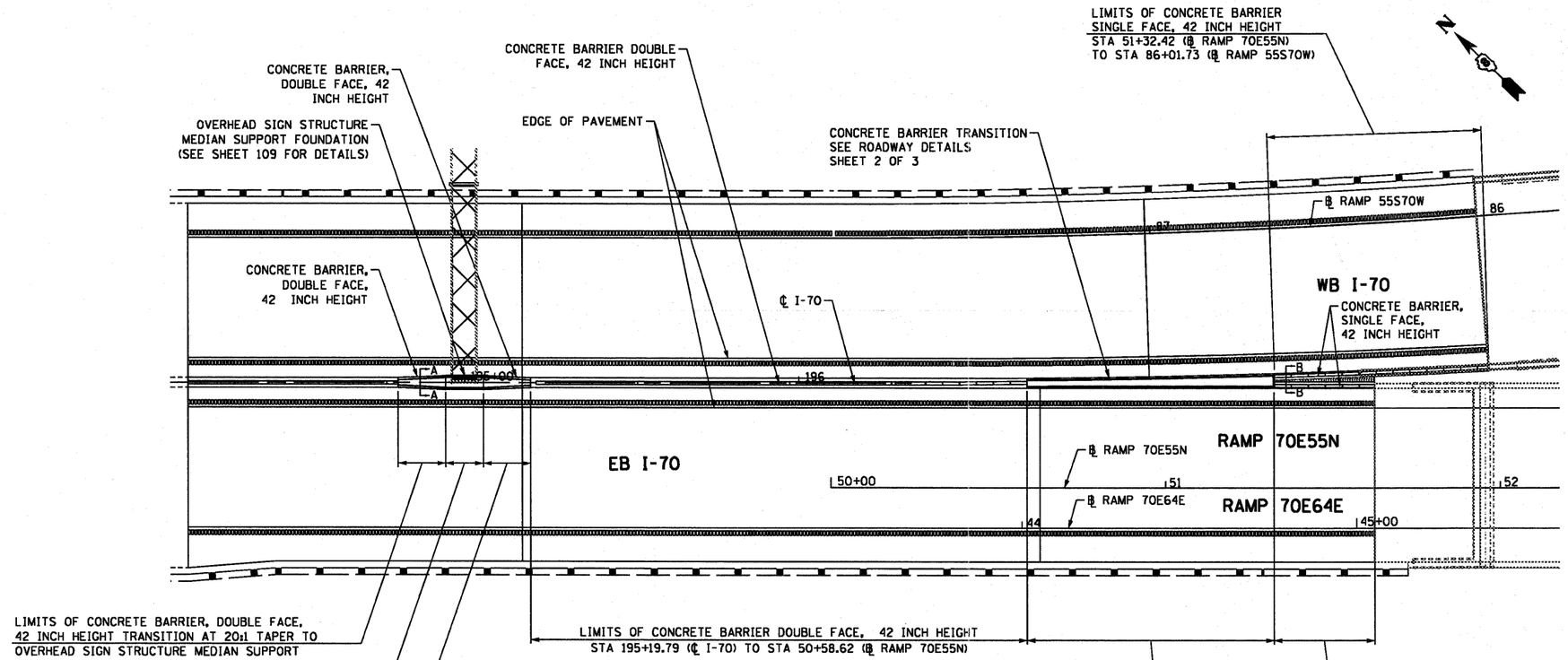
FILE NAME = $FILEL$	USER NAME = BhattA	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 40.000 ' / in.	CHECKED - AB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07/01/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING RETAINING WALL PLANS

SCALE: NONE | SHEET 7 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	368
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

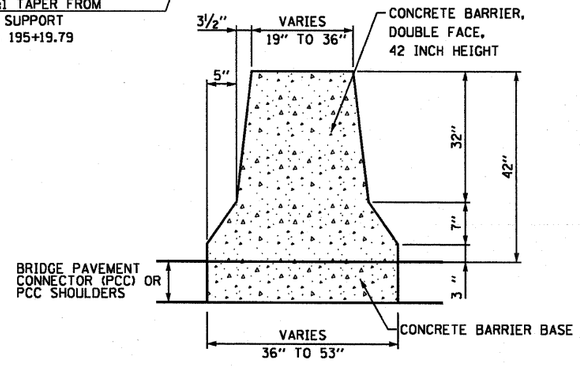


PLAN

SCALE: NONE

NOTES:

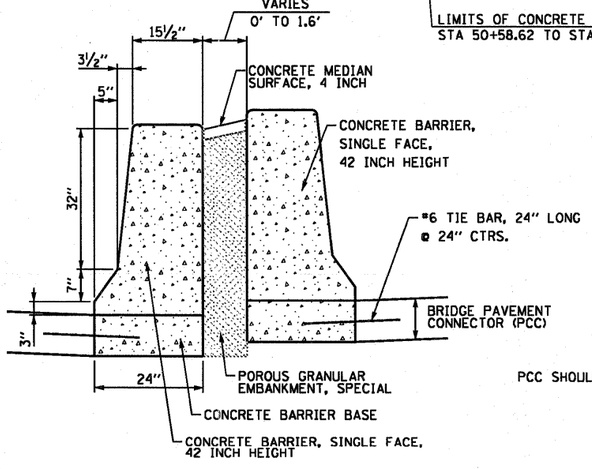
1. DIMENSIONS AND REINFORCEMENT DETAILS APPLY TO ALL CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL) (SPECIAL) SHOWN IN THE PLANS
2. THERE SHALL BE A MINIMUM 6" OVERLAP BETWEEN CONCRETE THICKNESS IN BARRIER WALL BASE AND CONCRETE THICKNESS IN ADJACENT SHOULDER TO PROVIDE ADEQUATE CONCRETE ABOVE AND BELOW THE TIE BAR.
3. TOP SHOULDER EDGE OF BARRIER BASE GUTTER SHALL MATCH THE TOP OF SHOULDER ELEVATION.
4. CONTRACTION AND EXPANSION JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 637.08 OF THE STANDARD SPECIFICATIONS.
5. REINFORCING BARS SHALL MEET THE REQUIREMENTS OF AASHTO M31 (ASTM A615), GRADE 60, AND SHALL CONFORM TO SECTION 508 OF THE STANDARD SPECIFICATIONS.
6. REINFORCING BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
7. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ", ACI 315, LATEST EDITION.
8. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
9. ¾" PREFORMED JOINT FILLER SHALL BE USED WHERE CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT MEETS CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL). PAYMENT SHALL BE INCLUDED IN COST OF CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT



SECTION A–A
CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT TRANSITION TO OVERHEAD SIGN STRUCTURE MEDIAN SUPPORT FOUNDATION

SCALE: NONE

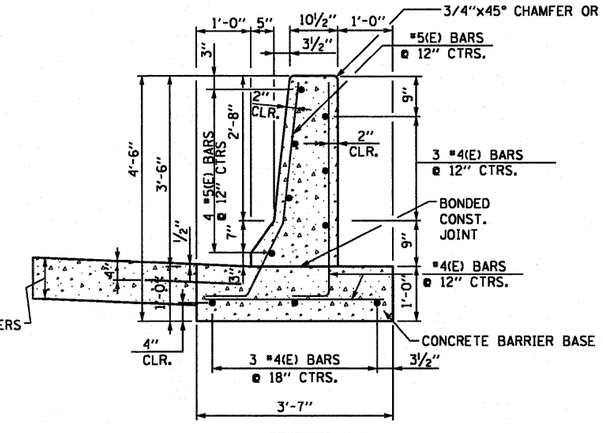
STA 194+80.21 TO STA 194+94.37 (℄ I-70)
STA 195+05.63 TO STA 195+19.79 (℄ I-70)



SECTION B–B
CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT

SCALE: NONE

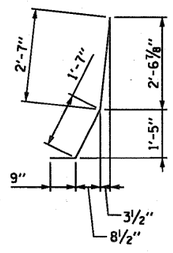
STA 51+32.42 TO STA 51+62.00 (℄ RAMP 70E55N)
STA 51+32.42 (℄ RAMP 70E55N) TO STA 86+01.73 (℄ RAMP 55S70W) AND
STA 57+91.08 TO STA 58+51.43 (℄ RAMP 70E64E) NOT SHOWN



SECTION C–C
CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL)

SCALE: NONE

STA 75+08.00 TO STA 77+50.06 (℄ RAMP 70E55N) - NOT SHOWN
STA 19+51.32 TO STA 20+00.95 - (℄ RAMP P) NOT SHOWN
STA 92+03.08 TO STA 97+94.43 - (℄ SB I-55) NOT SHOWN



BARRIER BARS

USER NAME = searsb	DESIGNED OP	REVISED -	
	DRAWN OP	REVISED -	
PLOT SCALE = 40.000 ' / in.	CHECKED DBM	REVISED -	
PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS

SCALE: NONE | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	369
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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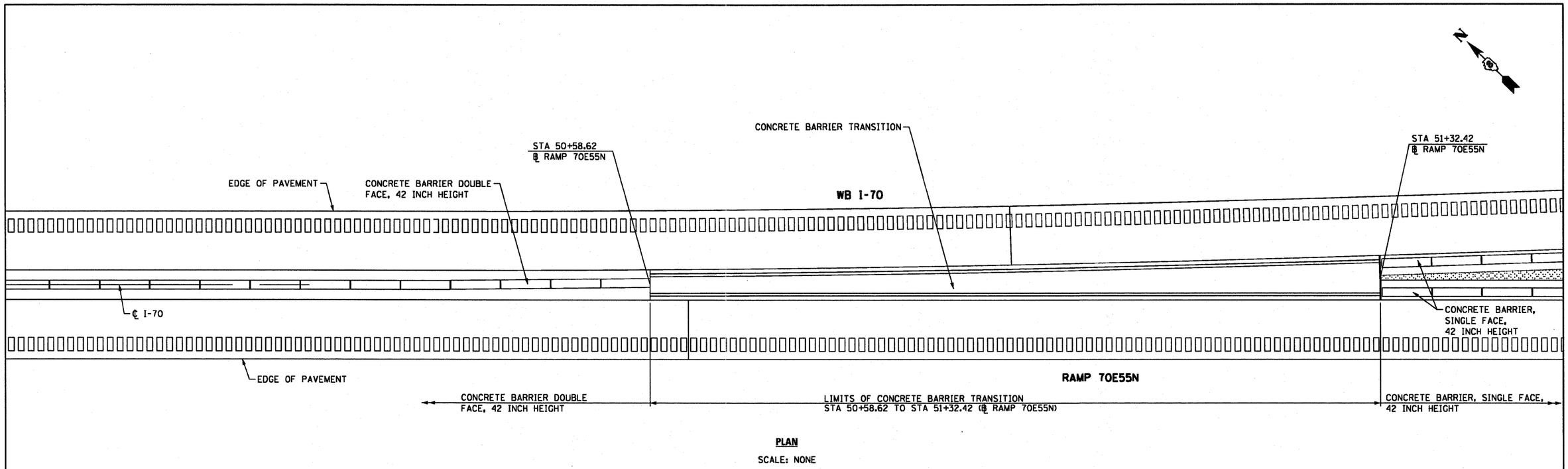
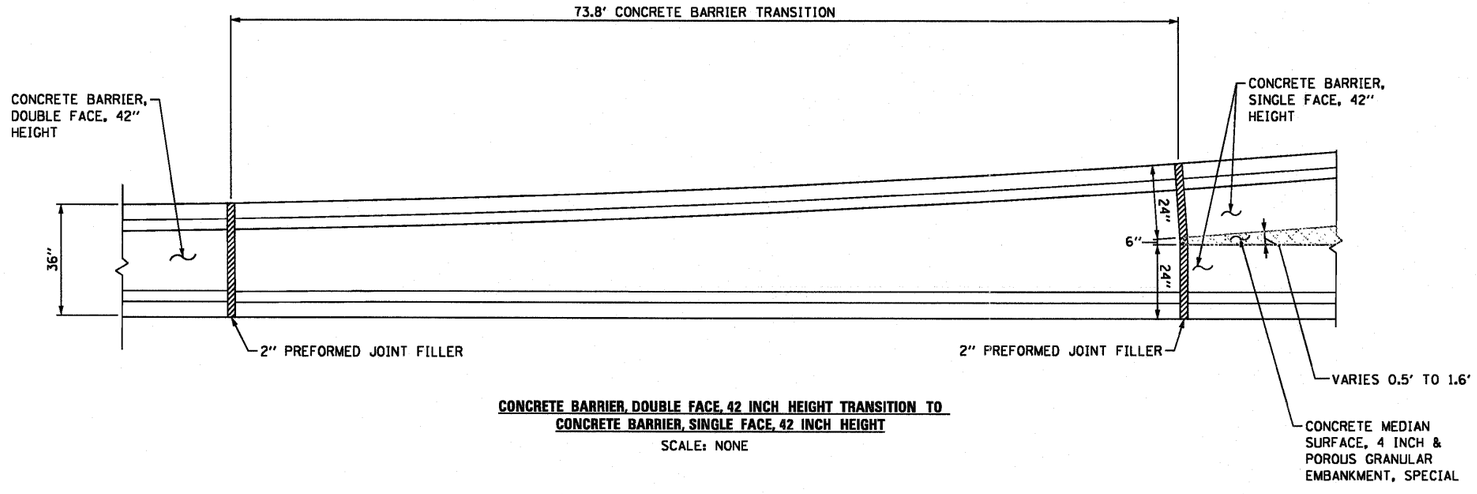


PLAN

SCALE: NONE



CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT TRANSITION TO CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT

SCALE: NONE

GENERAL NOTES

1. CONTRACTOR OPTIONS FOR FILL BETWEEN BARRIER WALLS (WHEN NEEDED):
   A. PLACE 4" CLASS SI CONCRETE.
   B. PLACE 12" OF GRANULAR MATERIAL AT BASE BETWEEN WALLS.
   C. PLACE GRANULAR MATERIAL FROM BASE TO BOTTOM OF 4" CAP.
   FORMING MATERIAL FOR 4" CAP MAY REMAIN IN PLACE.

2. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS. AT JOINTS WITH EXISTING BARRIER WALL TO REMAIN, SEE STANDARD 637006 FOR JOINT DETAILS.

3. EXPANSION JOINTS SHOWN ON THIS DRAWING SHALL BE PREFORMED JOINT MATERIAL (BITUMINOUS TYPE) FILLER SHALL MEET AASHTO DESIGNATION M-33.

4. ALL REINFORCING STEEL SHALL BE GRADE 40 OR GRADE 60 MEETING THE REQUIREMENTS OF AASHTO M31 OR ASTM A615.

5. ALL WORK DETAILED HEREIN SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONCRETE BARRIER PAY ITEMS.

6. PREFORMED JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE CONCRETE BARRIER TRANSITION.

7. JOINTS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ARTICLE 637.08 OF THE STANDARD SPECIFICATIONS

USER NAME = searsb	DESIGNED OP	REVISED -	**STATE OF ILLINOIS**
	DRAWN OP	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 10.000 ' / in.	CHECKED DBM	REVISED -	**ROADWAY DETAILS**
PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -	SCALE: NONE | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	370
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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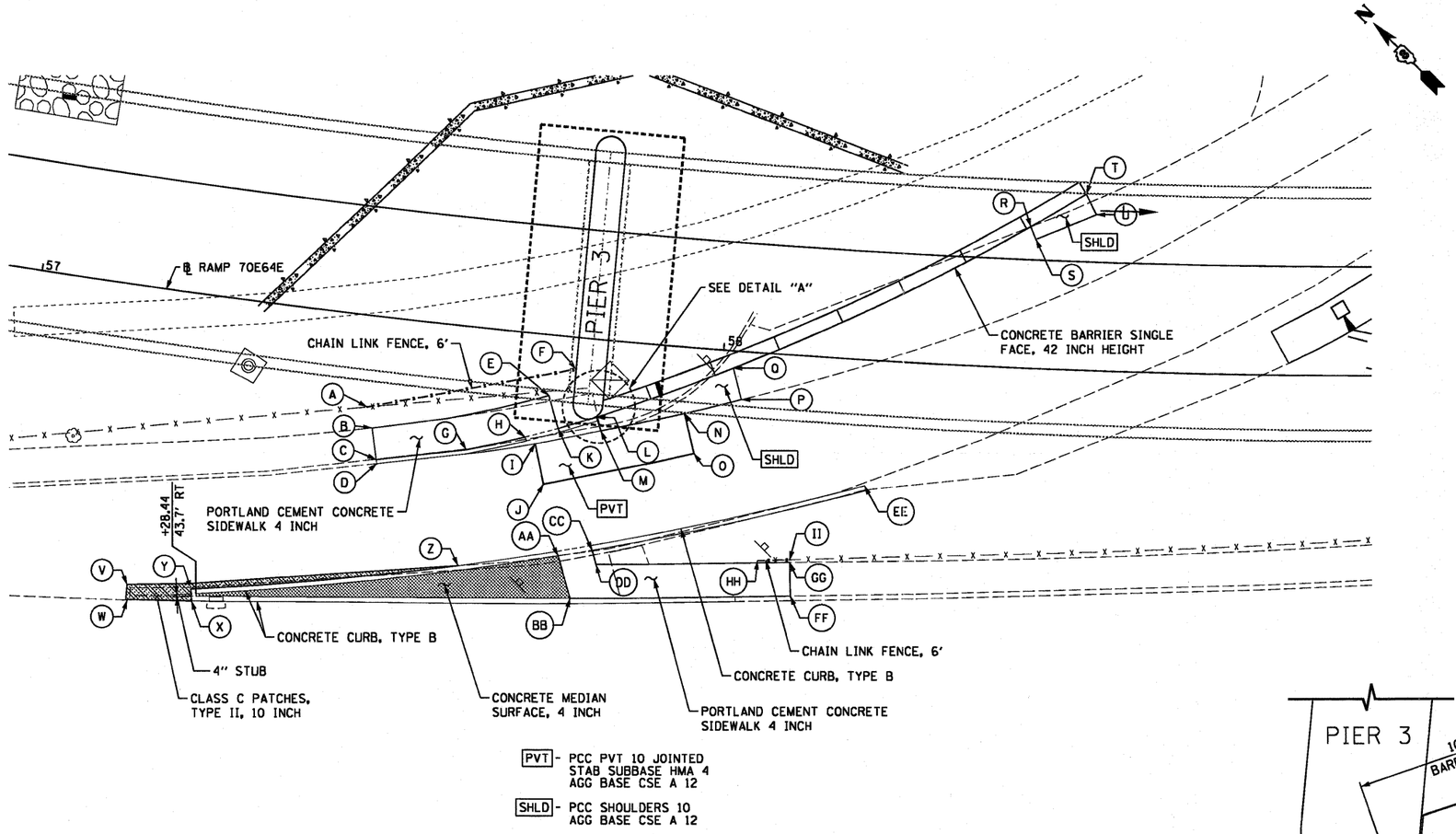


PVT - PCC PVT 10 JOINTED STAB SUBBASE HMA 4 AGG BASE CSE A 12

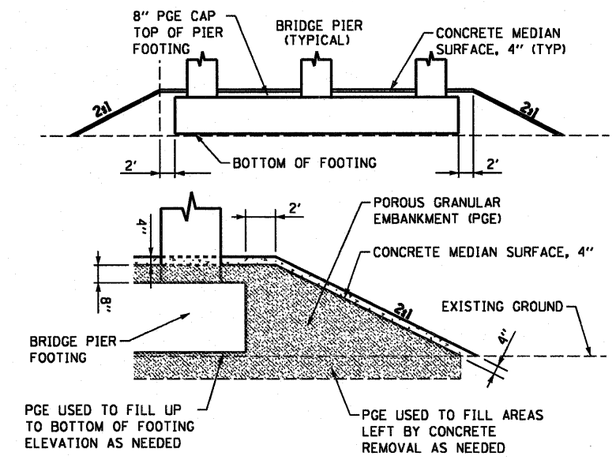
SHLD - PCC SHOULDERS 10 AGG BASE CSE A 12

POINT	STA	O/S	NOTES
A	57+49.33	13.4' RT	BEGIN CHAIN LINK FENCE, 6'
B	57+50.39	16.4' RT	EDGE OF PCC SIDEWALK
C	57+51.49	20.9' LT	EDGE OF PCC SIDEWALK/ BACK OF CONCRETE CURB
D	57+51.63	21.4' RT	FACE OF CONCRETE CURB
E	57+75.23	8.9' RT	EDGE OF PCC SIDEWALK, END OF SIDEWALK
F	57+78.84	4.6' RT	END CHAIN LINK FENCE, 6'
G	57+64.17	18.0' RT	BACK OF CONCRETE CURB
H	57+72.37	15.3' RT	BACK OF CONCRETE CURB, BEGIN DEPRESSED
I	57+73.95	16.1' RT	EDGE OF PCC PAVEMENT
J	57+75.70	21.8' RT	EDGE OF PCC PAVEMENT
K	57+77.01	13.5' RT	BACK OF CONCRETE CURB, END DEPRESSED
L	57+82.38	11.3' RT	BACK OF CONCRETE CURB, END OF CONCRTE CURB
M	57+83.20	13.3' RT	EDGE OF PCC PAVEMENT
N	57+95.02	9.7' RT	EDGE OF PCC PAVEMENT
O	57+96.83	15.4' RT	EDGE OF PCC PAVEMENT
P	58+03.08	7.0' RT	EDGE OF PCC SHOULDER
Q	58+01.59	2.5' RT	EDGE OF PCC SHOULDER
R	58+43.95	20.8' LT	EDGE OF PCC SHOULDER
S	58+44.78	19.0' LT	EDGE OF PCC SHOULDER

POINT	STA	O/S	NOTES
T	58+51.99	25.9' LT	EDGE OF PCC SHOULDER
U	58+53.60	23.0' LT	EDGE OF PCC SHOULDER
V	57+18.64	43.7' RT	EDGE OF CLASS C PATCHES
W	57+18.76	45.9' RT	EDGE OF CLASS C PATCHES/ EX EOP
X	57+27.95	44.8' RT	EDGE OF CLASS C PATCHES/ EX EOP
Y	57+27.64	43.1' RT	EDGE OF CLASS C PATCHES
Z	57+64.71	35.0' RT	EDGE OF CLASS C PATCHES
AA	57+78.74	32.1' RT	BACK OF CONCRETE CURB, BEGIN DEPRESSED
BB	57+80.97	38.1' RT	BACK OF CONCRETE CURB
CC	57+83.47	30.8' RT	BACK OF CONCRETE CURB, END DEPRESSED
DD	57+84.21	32.8' RT	EDGE OF PCC SIDEWALK
EE	58+21.61	18.3' RT	FACE OF CONCRETE CURB
FF	58+12.04	35.2' RT	BACK OF EX CONCRETE CURB
GG	58+11.64	30.3' RT	EDGE OF PCC SIDEWALK
HH	58+07.03	30.4' RT	BEGIN CHAIN LINK FENCE, 6'
II	58+11.60	29.9' RT	END CHAIN LINK FENCE, 6'

NOTES:

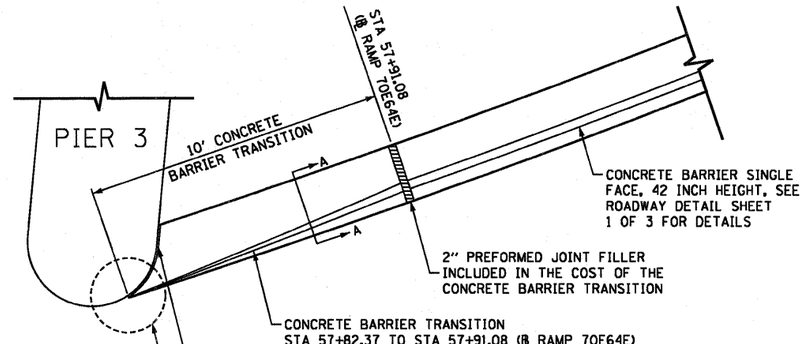
ALL STATIONS AND OFFSETS ARE TAKEN OF RAMP 70E64E



NOTE: MOUNDING AT PIER 2 OF SN 082-0322 MAY NEED TO BE FIELD ADJUSTED TO AVOID ENCROACHING INTO KCS ROW.

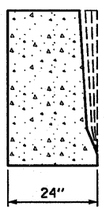
DETAIL FOR MOUNDING OF PIER FOOTINGS

SCALE: NONE



DETAIL "A"

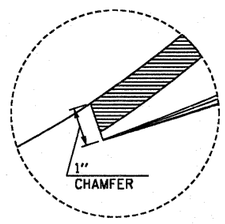
SCALE: NONE



SECTION A–A

SCALE: NONE

CONCRETE BARRIER TRANSITION



DETAIL "B"

SCALE: NONE

USER NAME = pimsarno	DESIGNED	BS/OP	REVISED	-
	DRAWN	BS/OP	REVISED	-
PLOT SCALE = 20.000 ' / in.	CHECKED	DBM	REVISED	-
PLOT DATE = 6/30/2011	DATE	07-01-11	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS

SCALE: NONE | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	371
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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USER NAME = pimsarno	DESIGNED	BS/OP	REVISED -
	DRAWN	BS/OP	REVISED -
PLOT SCALE = 20.000 ' / in.	CHECKED	DBM	REVISED -
PLOT DATE = 8/9/2011	DATE	08-12-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: 1" = 10' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	371A
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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SHEET LEFT INTENTIONALLY BLANK

USER NAME = pimsarno	DESIGNED	BS/OP	REVISED -
	DRAWN	BS/OP	REVISED -
PLOT SCALE = 20.000 ' / in.	CHECKED	DBM	REVISED -
PLOT DATE = 8/9/2011	DATE	08-12-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	371B
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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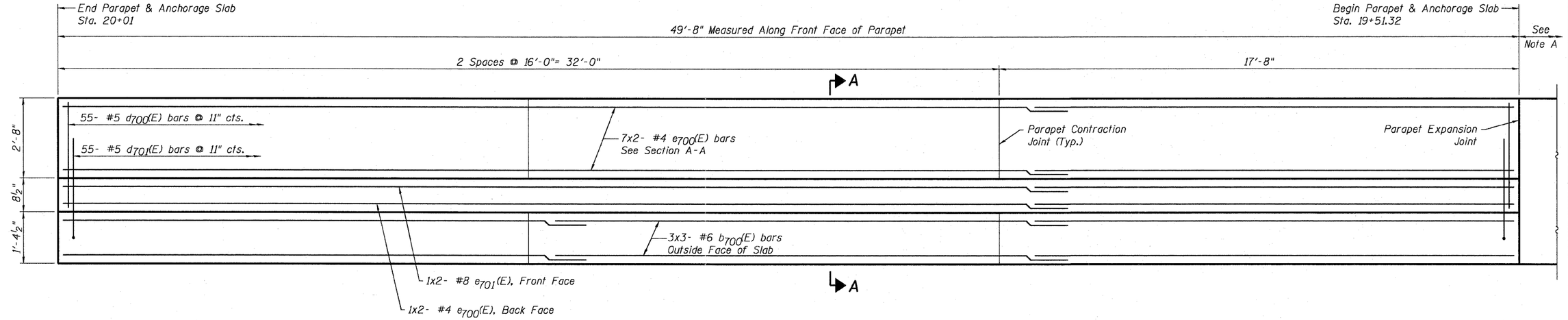
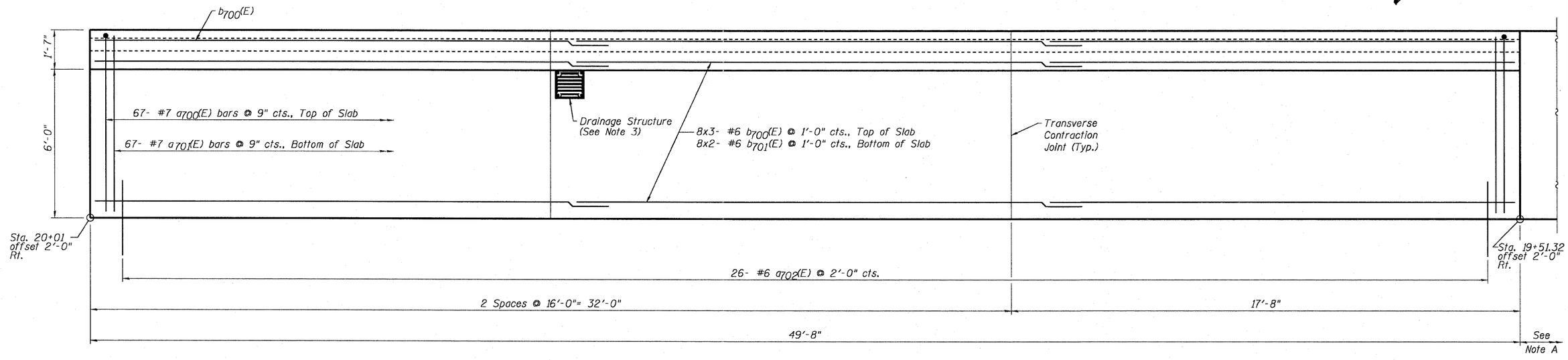


OUTSIDE ELEVATION OF PARAPET

(N.T.S.)

NOTE A:

Parapet & Anchorage Slab by Others under contract 76C51.



PLAN - PARAPET & ANCHORAGE SLAB

(N.T.S.)

Min. Bar Laps

Bar	Length
#4	2'-7"
#6	3'-10"
#8	6'-9"

NOTES:

1. Optional full depth construction joints with ½" chamfers may be placed in Anchorage slab and parapet at contraction joint location(s).
2. Bars indicated thus 7x2-#6 etc. indicates 7 lines of bars with 2 lengths per line.
3. For Drainage Structure location, type, and size, see drainage sheets.
4. For Section A-A see sheet S-2.

FILE NAME = DBTri-76C76-sht-MomentSlab-01.dgn	USER NAME = BhattA	DESIGNED - DEV	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 0:2.00000 '1' / in.	CHECKED - ATB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07-01-11	REVISED -

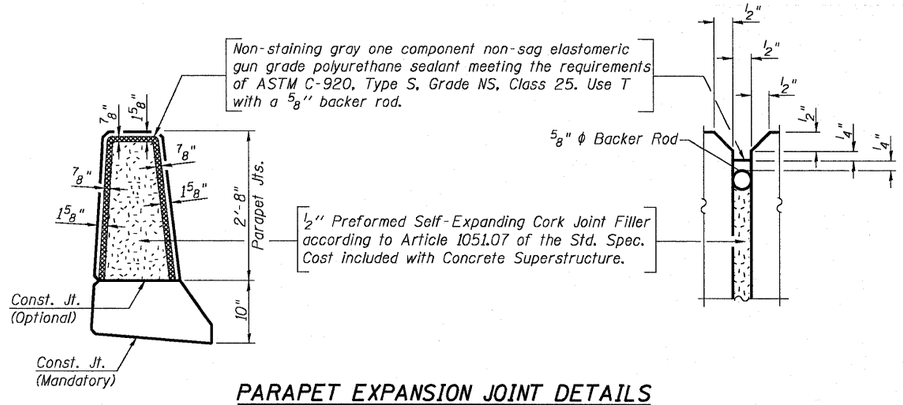
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET & ANCHORAGE SLAB

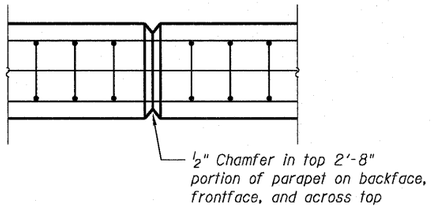
SCALE: N.T.S. | SHEET S-1 OF S-2 SHEETS | STA. 19+51.32 TO STA. 20+01

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	372
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

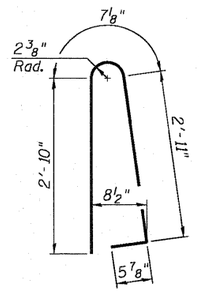
@FILEL@



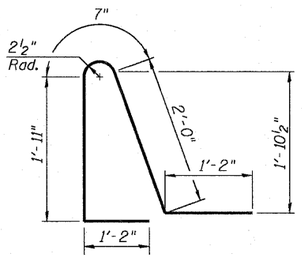
PARAPET EXPANSION JOINT DETAILS



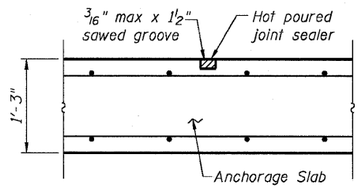
PARAPET CONTRACTION JOINT



BAR d700(E)

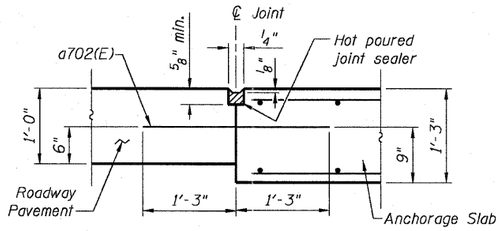


BAR d701(E)



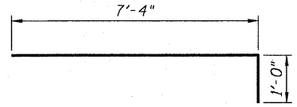
TRANSVERSE CONTRACTION JOINT

See Article 420.05 & 420.12 of the Standard Specifications

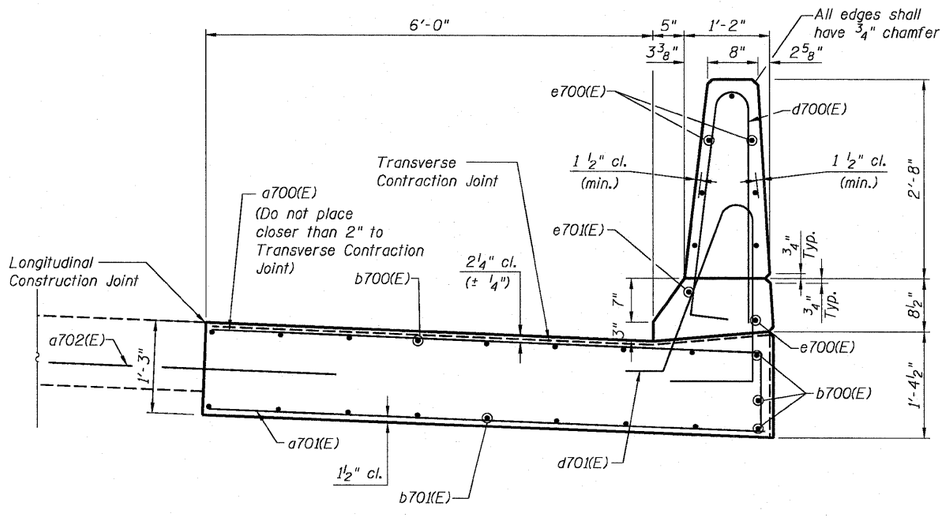


LONGITUDINAL CONSTRUCTION JOINT

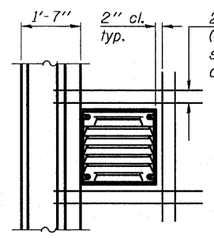
See Article 420.05 & 420.12 of the Standard Specifications



BAR a700(E)



SECTION A-A



PLAN AT DRAINAGE STRUCTURE OPENING

Note:
Cut longitudinal reinforcement to clear drainage scuppers.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a700(E)	67	#7	8'-4"	
a701(E)	67	#7	7'-4"	
a702(E)	26	#6	2'-6"	
a703(E)	6	#5	4'-0"	
b700(E)	24	#6	19'-0"	
b701(E)	16	#6	27'-1"	
d700(E)	55	#5	6'-10"	
d701(E)	55	#5	6'-10"	
e700(E)	16	#4	26'-0"	
e701(E)	2	#8	28'-1"	
Reinforcement Bars, Epoxy Coated			Pound	5,080
Concrete Superstructure			Cu. Yd.	25
Protective Coat			Sq. Yd.	58

FILE NAME = D8Tr1-76C76-sht-MomentSlabDetails-22.dgn	USER NAME = BhattA	DESIGNED - DEV	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - ATB	REVISED -
	PLOT DATE = 6/30/2011	DATE - 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET & ANCHORAGE SLAB DETAILS

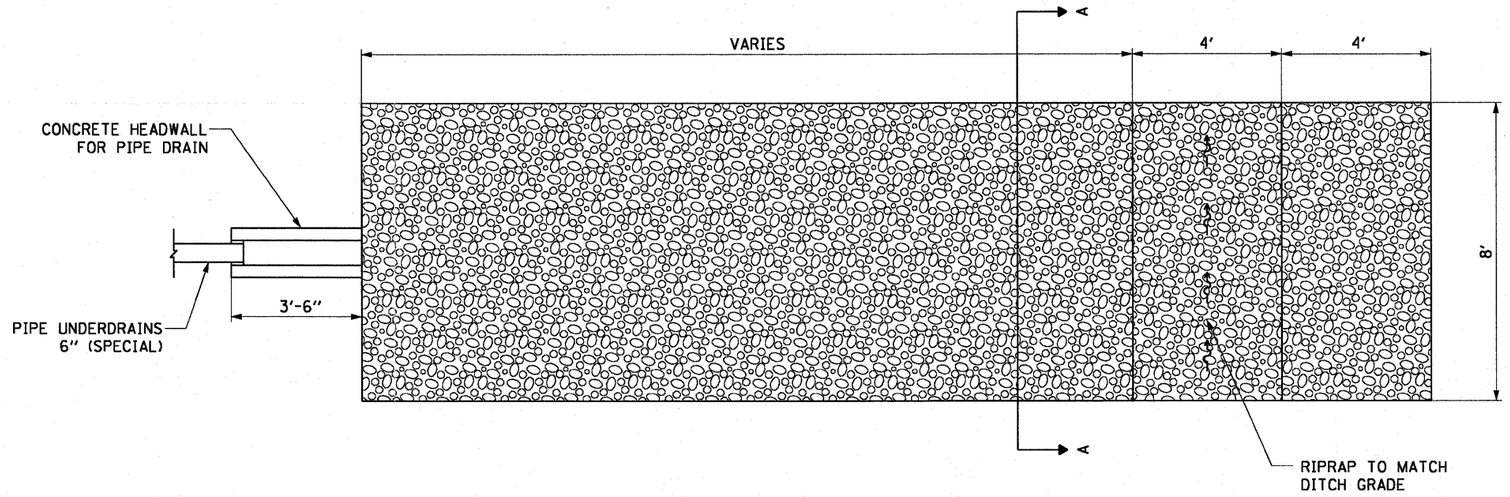
SCALE: N.T.S. | SHEET S-2 OF S-2 SHEETS | STA. 19+51.32 | TO STA. 20+01

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-B-2	ST. CLAIR	399	373
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

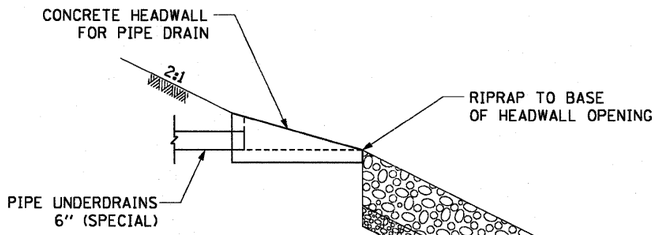
@FILEL@

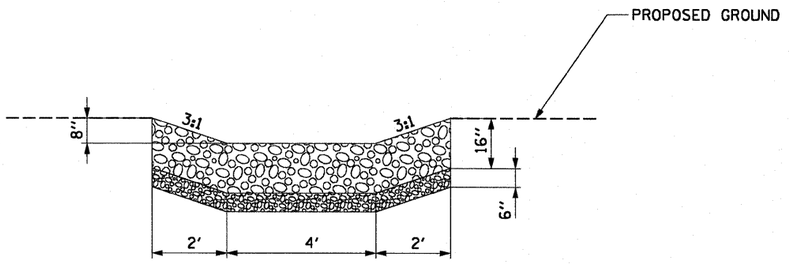
STATION	OFFSET	STRUCTURE NO.	STONE RIPRAP, CLASS A4 SQ YD	FILTER FABRIC SQ YD
℄ I-70				
194+30.00	75.50' LT	S 1-04	61	61
TOTALS			61	61

NOTE: STATION AND OFFSET ARE PROVIDED FOR THE UPSTREAM CENTERLINE OF THE RIPRAP CHANNEL

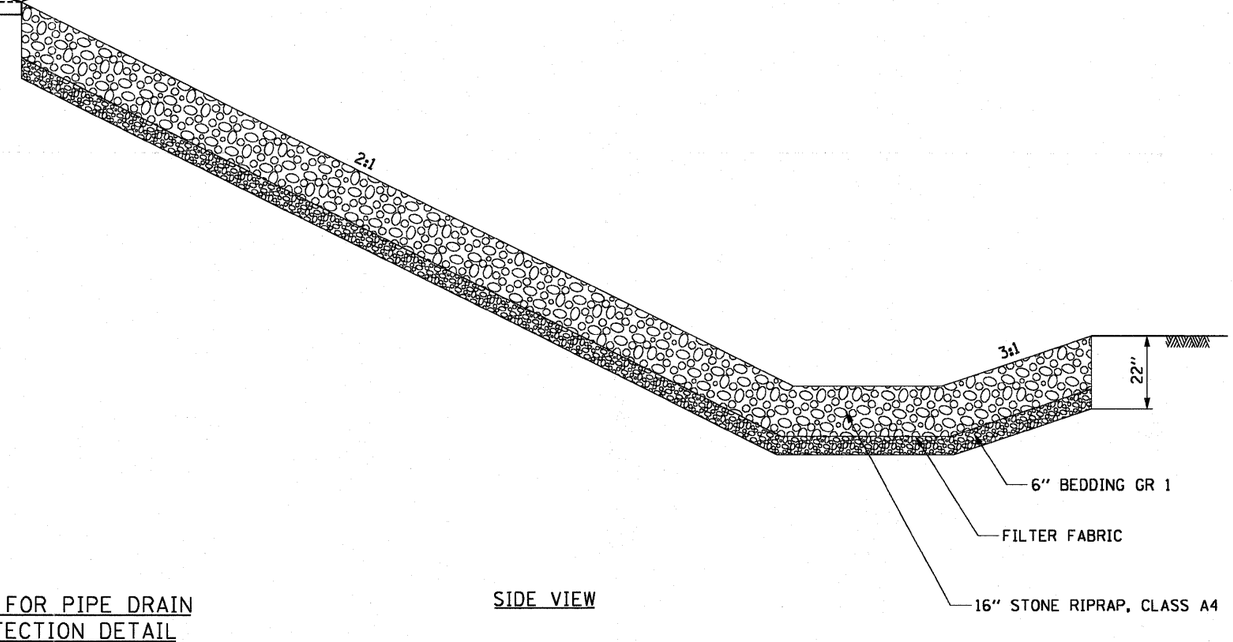


PLAN VIEW





SECTION A-A



SIDE VIEW

CONCRETE HEADWALL FOR PIPE DRAIN STONE RIPRAP PROTECTION DETAIL

FOR PIPE UNDERDRAINS PERPENDICULAR TO DITCH FLOW

℄ I-70: STA 194+30.00

USER NAME = searsb	DESIGNED KLK	REVISED -	
	DRAWN KLK	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED EEY	REVISED -	
PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAIL 1

SCALE: NONE | SHEET NO. 1 OF 5 SHEETS | STA. | TO STA.

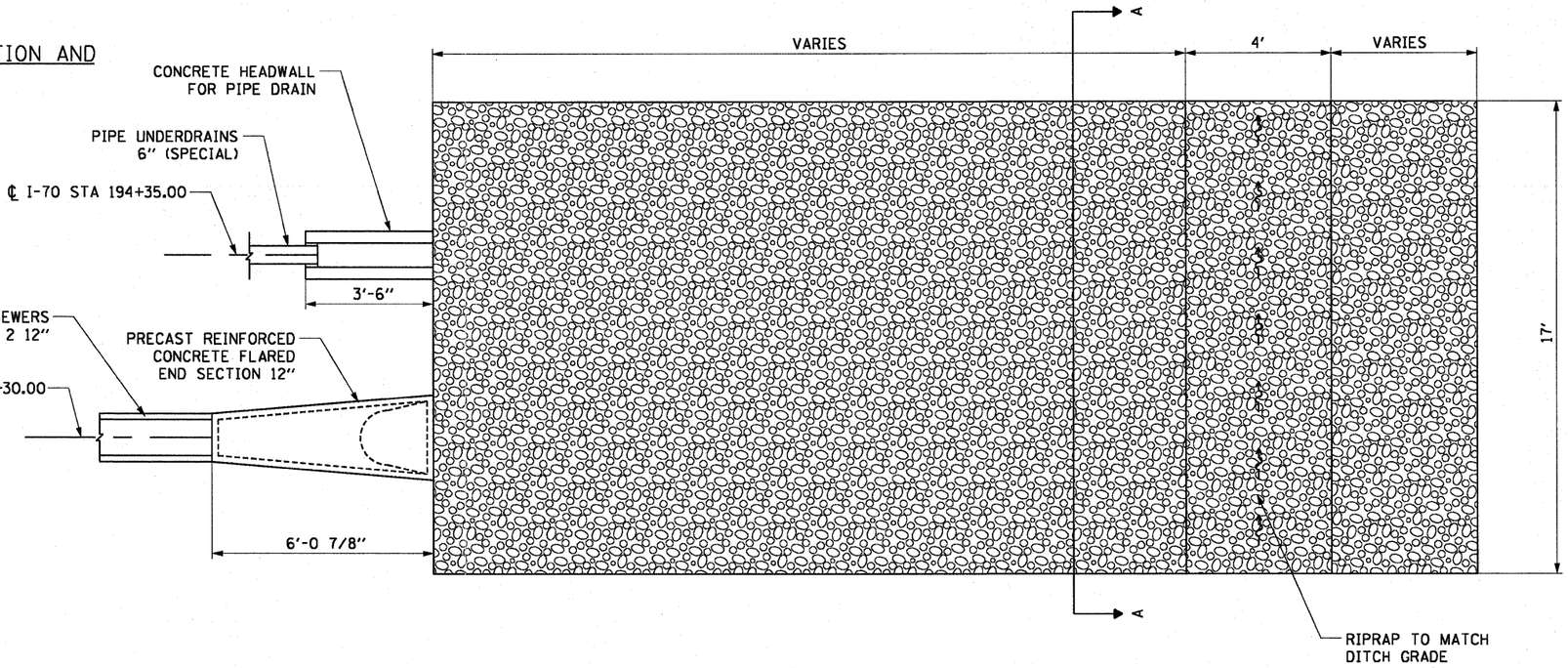
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	374
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = P:\PE0046609\900_CAD\901_Drawings\76C76_Contract\Sheet\Civil\Details\DBTri-76C76-sht-drain-details_01.dgn

PRECAST REINFORCED CONCRETE FLARED END SECTION AND CONCRETE HEADWALL FOR PIPE DRAIN STONE RIPRAP PROTECTION DETAIL

FOR PIPE UNDERDRAINS AND STORM SEWERS PERPENDICULAR TO DITCH FLOW

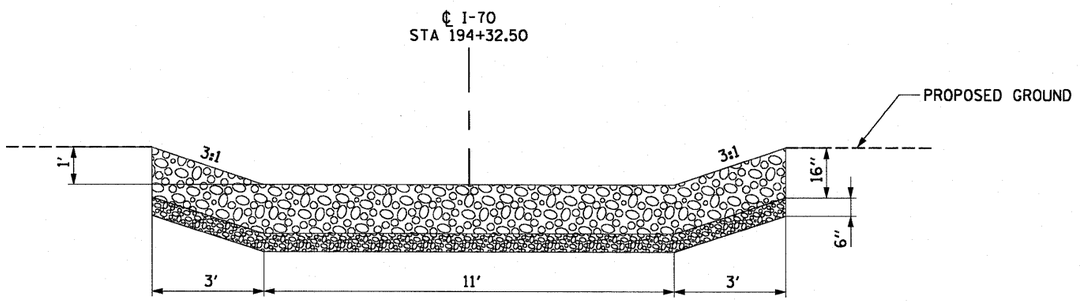
℄ I-70: STA 194+24.00 TO STA 194+41.00



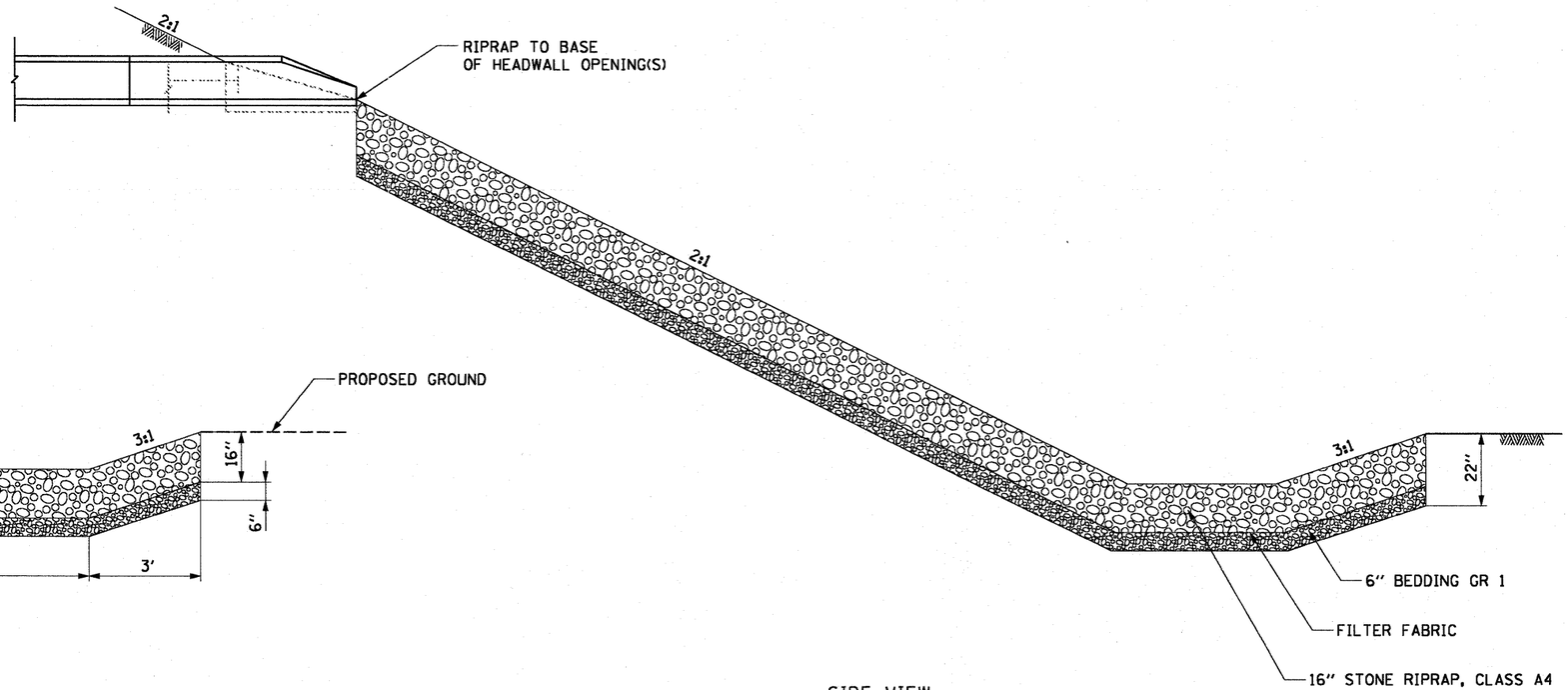
PLAN VIEW

STATION	OFFSET	STRUCTURE NO.	STONE RIPRAP, CLASS A4 SQ YD	FILTER FABRIC SQ YD
℄ I-70				
194+32.50	75.50' LT	S 1-02 S 1-03	168	168
TOTALS			168	168

NOTE: STATION AND OFFSET ARE PROVIDED FOR THE UPSTREAM CENTERLINE OF THE RIPRAP CHANNEL



SECTION A-A



SIDE VIEW

USER NAME = searsb	DESIGNED KLK	REVISED -	
	DRAWN KLK	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED EEY	REVISED -	
PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAIL 2

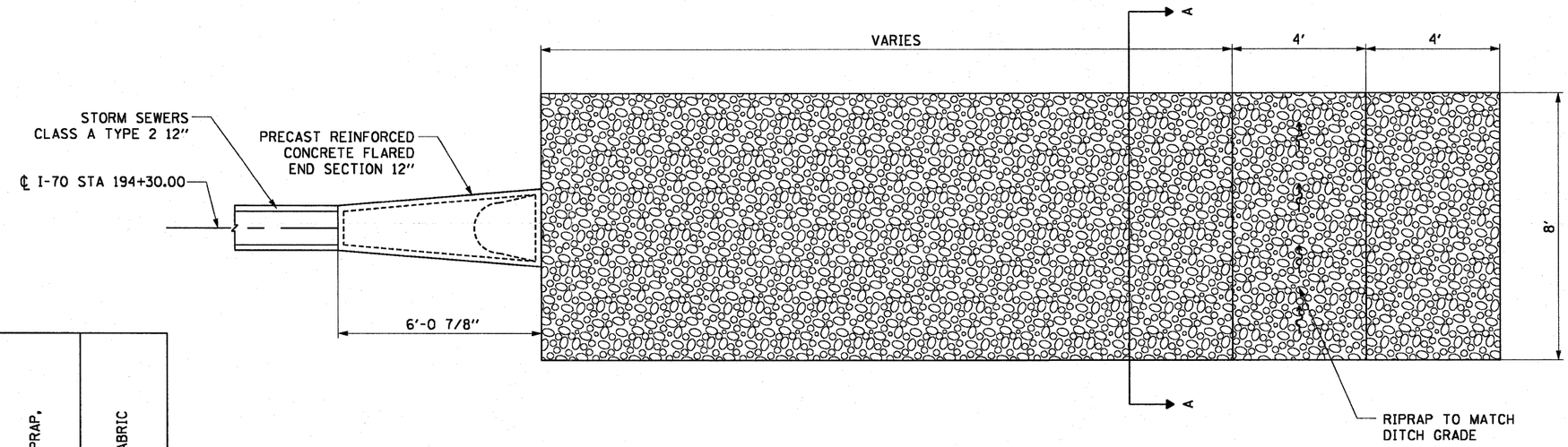
SCALE: NONE | SHEET NO. 2 OF 5 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	375
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

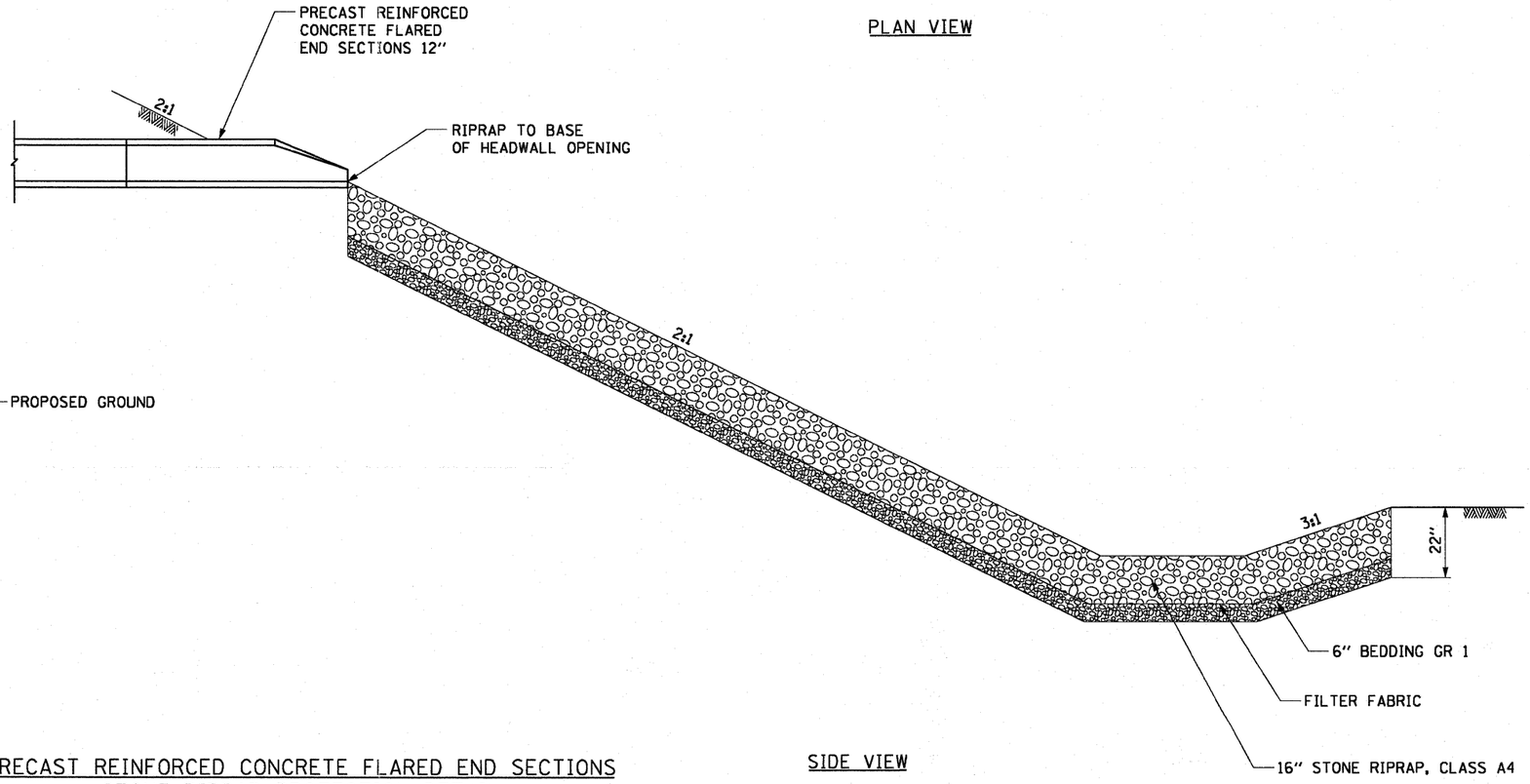
FILE NAME = P:\P62046609\900_CAD\901_Drawings\76C76_Contract\Sheet\Civil\Details\DBTri-76C76-sht-drain-details_02.dgn

STATION	OFFSET	STRUCTURE NO.	STONE RIPRAP, CLASS A4 SQ YD	FILTER FABRIC SQ YD
℄ I-70				
196+30.00	72.00' LT	S 1-06	82	82
TOTALS			82	82

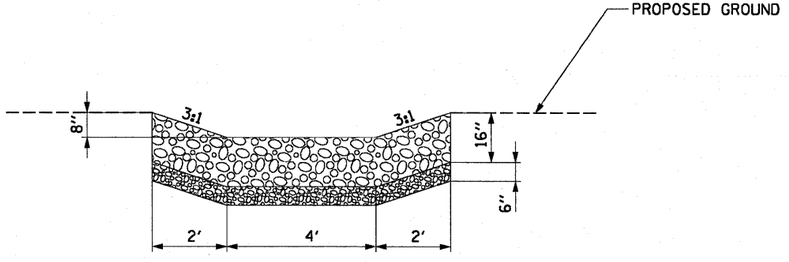
NOTE: STATION AND OFFSET ARE PROVIDED FOR THE UPSTREAM CENTERLINE OF THE RIPRAP CHANNEL



PLAN VIEW



SIDE VIEW



SECTION A-A

PRECAST REINFORCED CONCRETE FLARED END SECTIONS STONE RIPRAP PROTECTION DETAIL

FOR STORM SEWERS PERPENDICULAR TO DITCH FLOW

℄ I-70: STA 196+30.00

USER NAME = searsb	DESIGNED KLK	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
	DRAWN KLK	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED EEY	REVISED -	
PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -	

DRAINAGE DETAIL 3

SCALE: NONE | SHEET NO. 3 OF 5 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	376
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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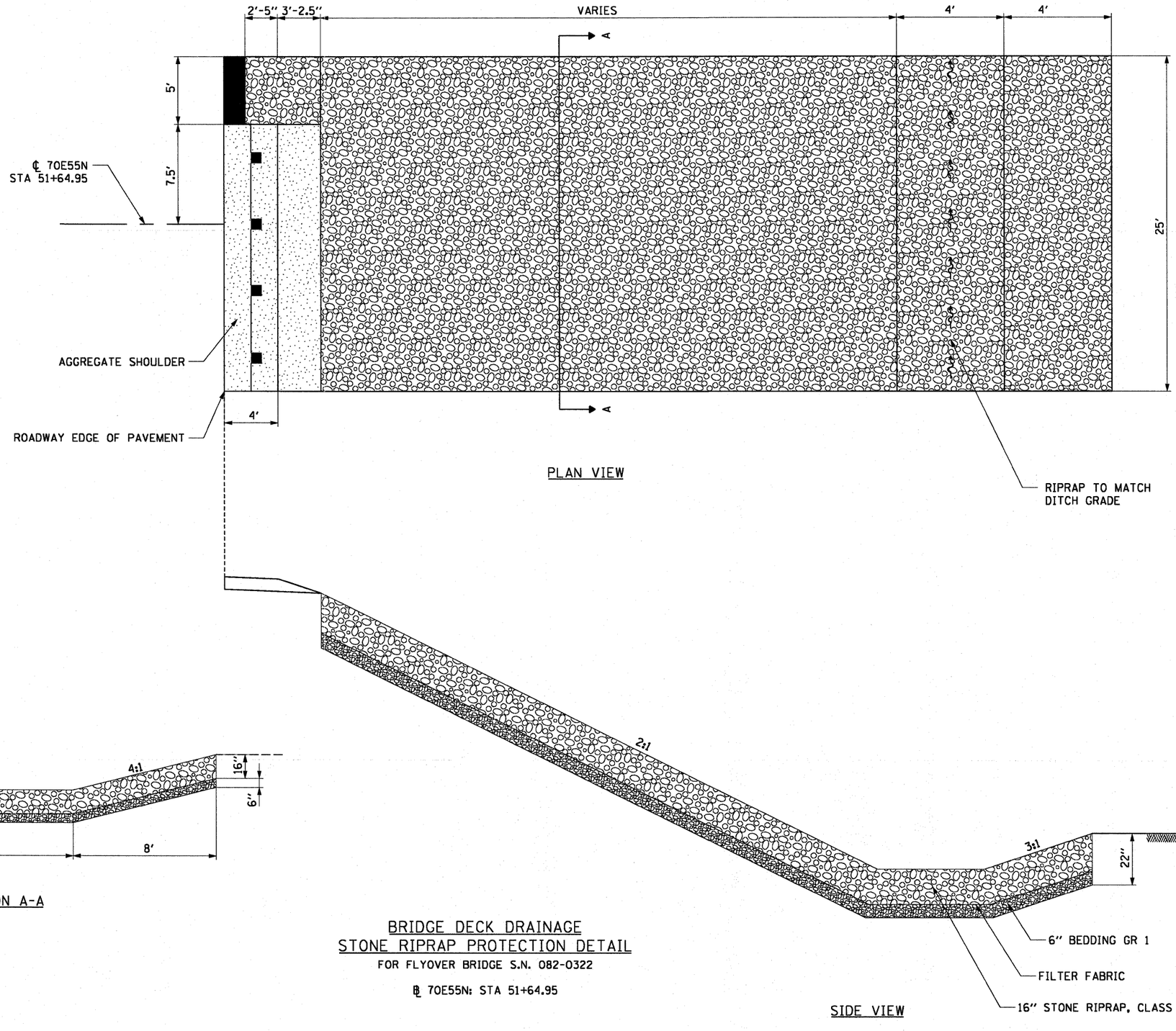
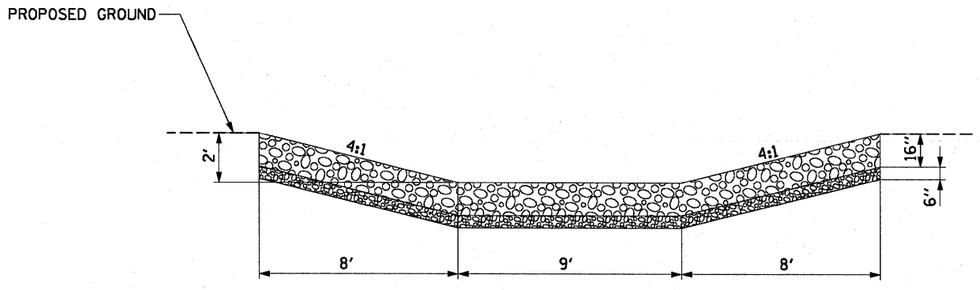
		STONE RIPRAP, CLASS A4	FILTER FABRIC
STATION	OFFSET	SQ YD	SQ YD
℄ 70E55N			
51+64.95	26.00' LT	331	331
TOTALS			

NOTE: STATION AND OFFSET ARE PROVIDED FOR THE UPSTREAM CENTERLINE OF THE RIPRAP CHANNEL





SECTION A-A

BRIDGE DECK DRAINAGE
STONE RIPRAP PROTECTION DETAIL

FOR FLYOVER BRIDGE S.N. 082-0322

℄ 70E55N: STA 51+64.95

USER NAME = searsb	DESIGNED KLK	REVISED -	
	DRAWN KLK	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED EEY	REVISED -	
PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAIL 4

SCALE: NONE | SHEET NO. 4 OF 5 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	377
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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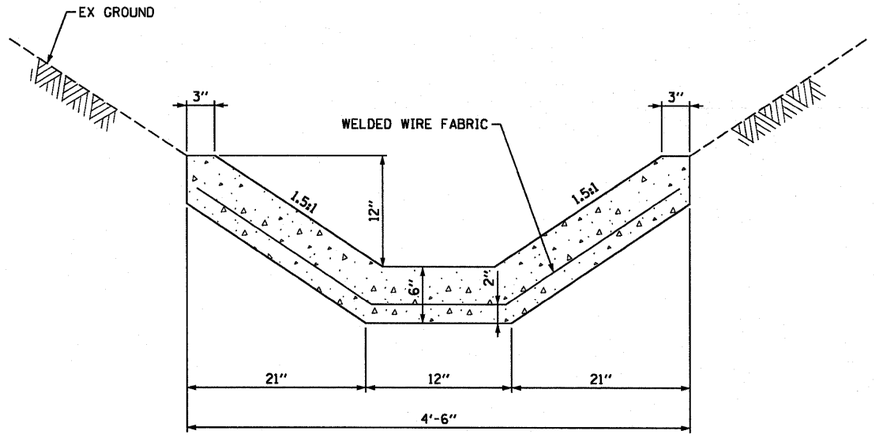
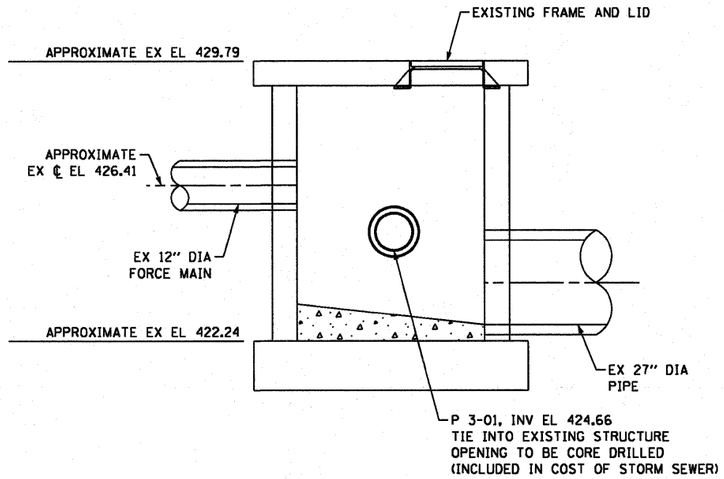


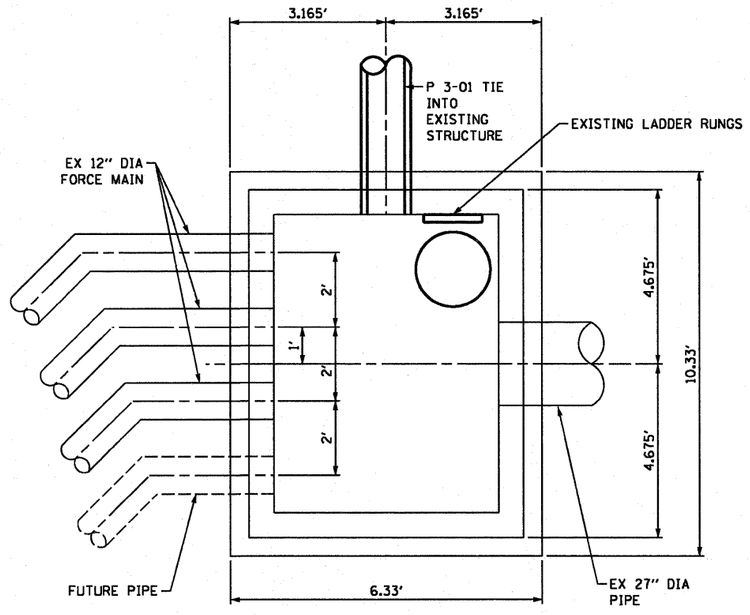
PAVED DITCH (SPECIAL)

SCALE: NONE



SECTIONAL VIEW

SCALE: NONE



PLAN VIEW

SCALE: NONE

NOTE: CONTRACTOR MUST MAINTAIN FLOW IN FORCE MAINS DURING CONSTRUCTION.

FORCE MAIN STRUCTURE TIE-IN DETAIL

SCALE: NONE

USER NAME = searsb	DESIGNED BS/OP	REVISED -	
	DRAWN BS/OP	REVISED -	
PLOT SCALE = 20.000 ' / in.	CHECKED DBM	REVISED -	
PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

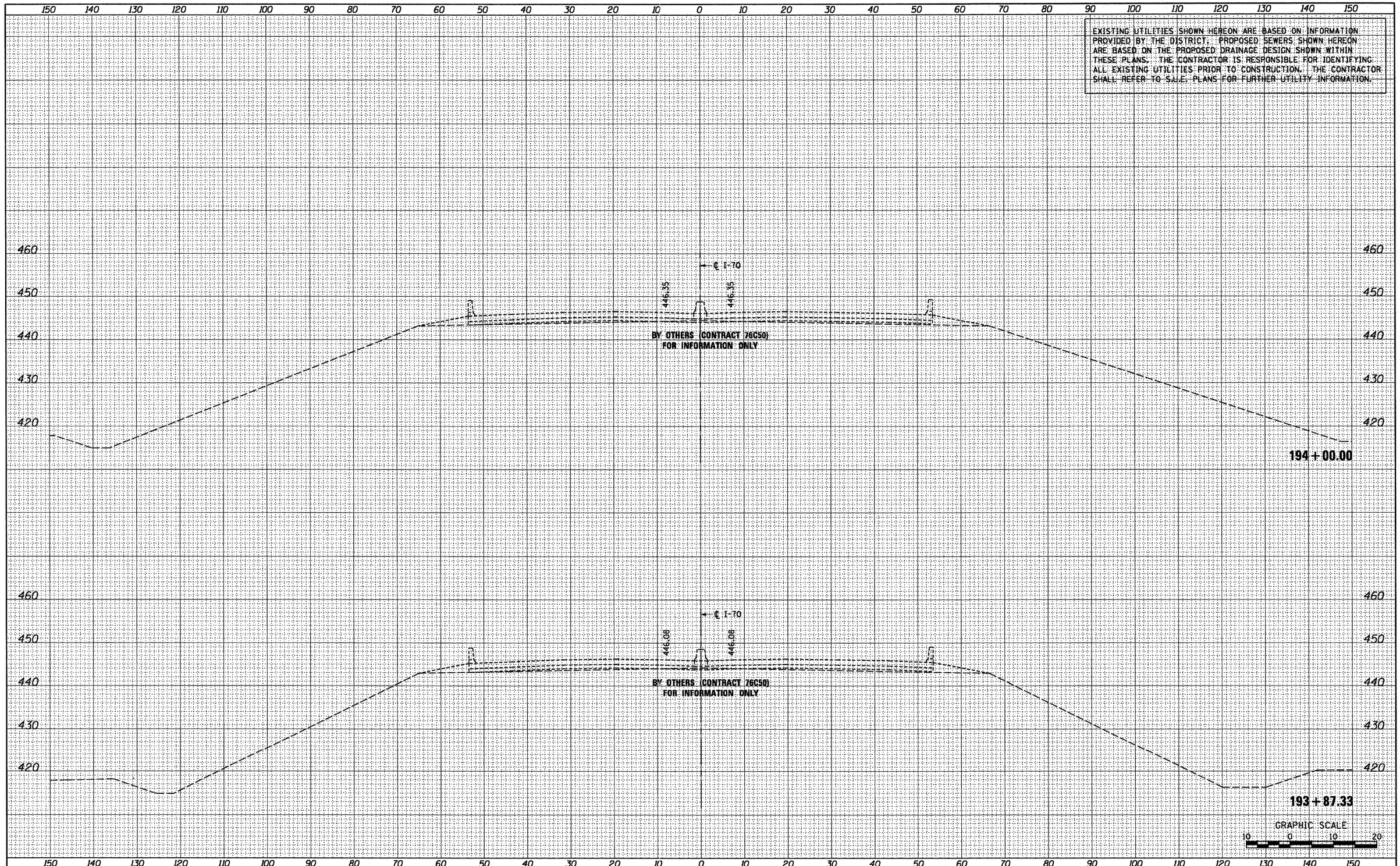
DRAINAGE DETAIL 5

SCALE: NONE | SHEET NO. 5 OF 5 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	377A
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FILE NAME = P:\P62046609\900_CAD\901_Drawings\76C76_Contract\Sheet\Civil\Details\DBTri-76C76-sht-drain-details.05.dgn

EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE PROPOSED DRAINAGE DESIGN SHOWN WITHIN THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.



FINAL SURVEY — NOTE BOOK — NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY — NOTE BOOK — NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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		DRAWN OP	REVISED -
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	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

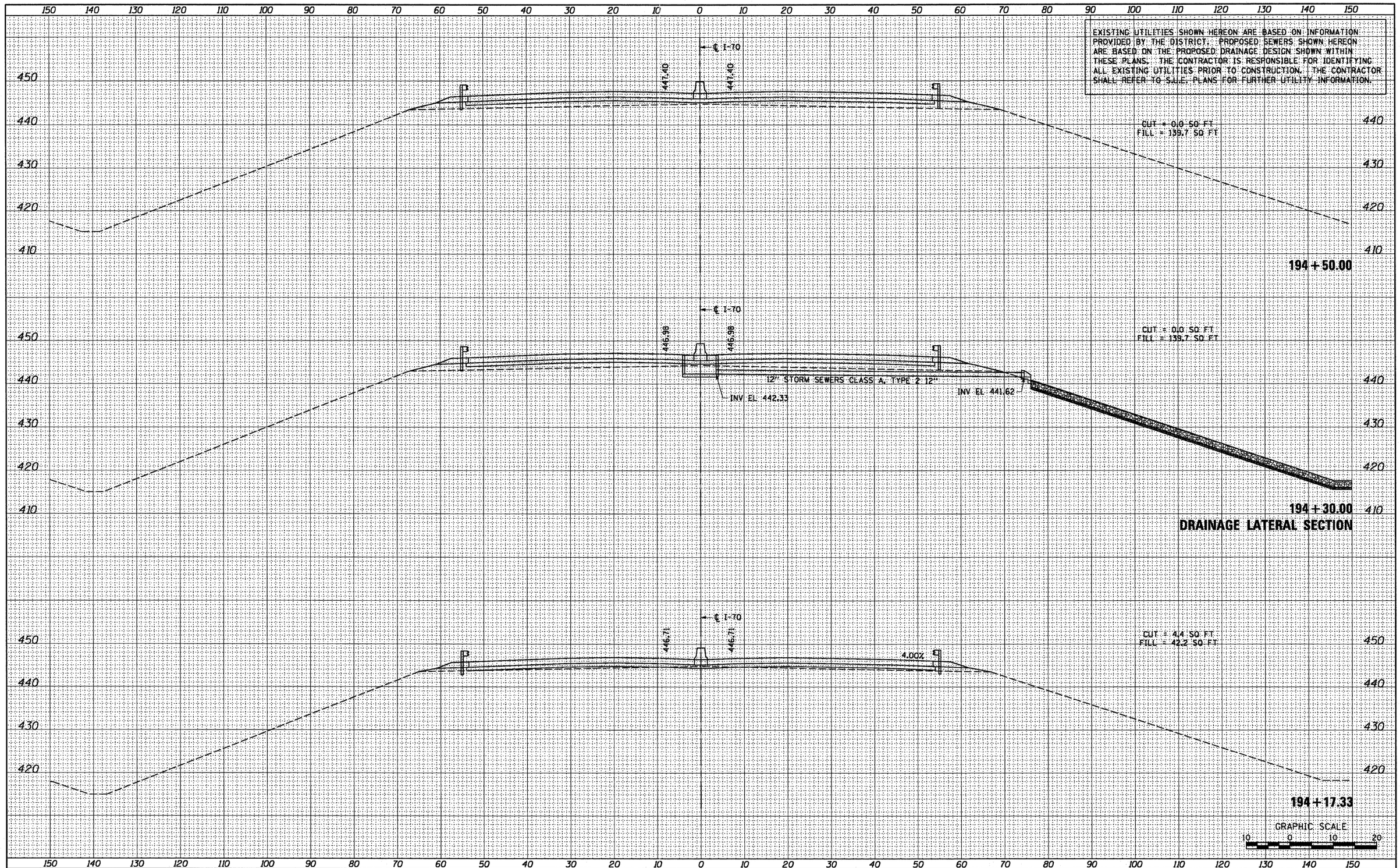
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70

SCALE: 1" = 10' | SHEET NO. 1 OF 4 SHEETS | STA. 193+87.33 | TO STA. 194+00.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	378
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE PROPOSED DRAINAGE DESIGN SHOWN WITHIN THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.I.U.E. PLANS FOR FURTHER UTILITY INFORMATION.



FINAL SURVEY — NOTE BOOK — NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY — NOTE BOOK — NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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		DRAWN OP	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

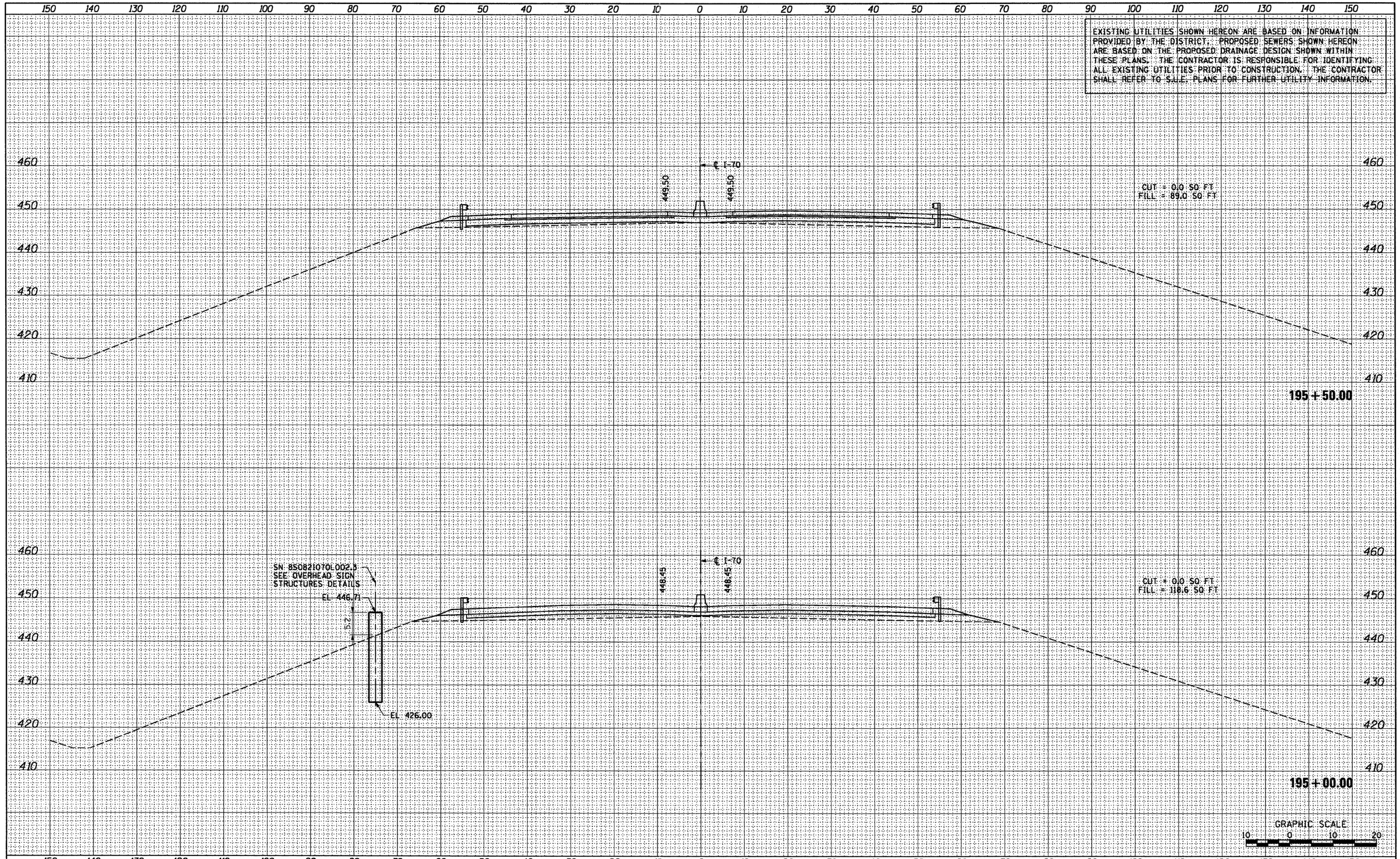
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70

SCALE: 1" = 10' | SHEET NO. 2 OF 4 SHEETS | STA. 194+17.33 | TO STA. 194+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	379
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE PROPOSED DRAINAGE DESIGN SHOWN WITHIN THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.



FINAL SURVEY — NOTE BOOK — NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY — NOTE BOOK — NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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	PLOT SCALE = 20.0000 ' / in.	DRAWN OP	REVISED -	
	PLOT DATE = 6/30/2011	CHECKED DBM	REVISED -	
		DATE 07-01-11	REVISED -	

CROSS SECTIONS – I-70

SCALE: 1" = 10' | SHEET NO. 3 OF 4 SHEETS | STA. 195+00.00 TO STA. 195+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	380
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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℄ I-70

℄ RAMP 70E55N

451.29

451.29

451.29

CUT = 4.0 SQ FT
FILL = 69.0 SQ FT

196 + 35.36

℄ I-70

℄ RAMP 70E55N

451.18

451.18

451.18

CUT = 3.1 SQ FT
FILL = 69.8 SQ FT

12" STORM SEWERS CLASS A, TYPE 2 12"

INV EL 446.77

INV EL 446.06

196 + 30

DRAINAGE LATERAL SECTION

FROM SHLD = 5'

TYPICAL 0.4'S FROM FACE OF GR TO FACE OF FOUNDATION = 3.8'

℄ OF LIGHT POLE

℄ I-70

10'

450.55

450.55

CUT = 0.4 SQ FT
FILL = 74.2 SQ FT

PR LIGHT POLE (30" Ø)

196 + 00.00

GRAPHIC SCALE
10 0 10 20

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		BY
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		DATE

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		BY
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		DATE

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		DRAWN OP	REVISED -
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	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70

SCALE: 1" = 10' | SHEET NO. 4 OF 4 SHEETS | STA. 196+00.00 TO STA. 196+35.36

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	381
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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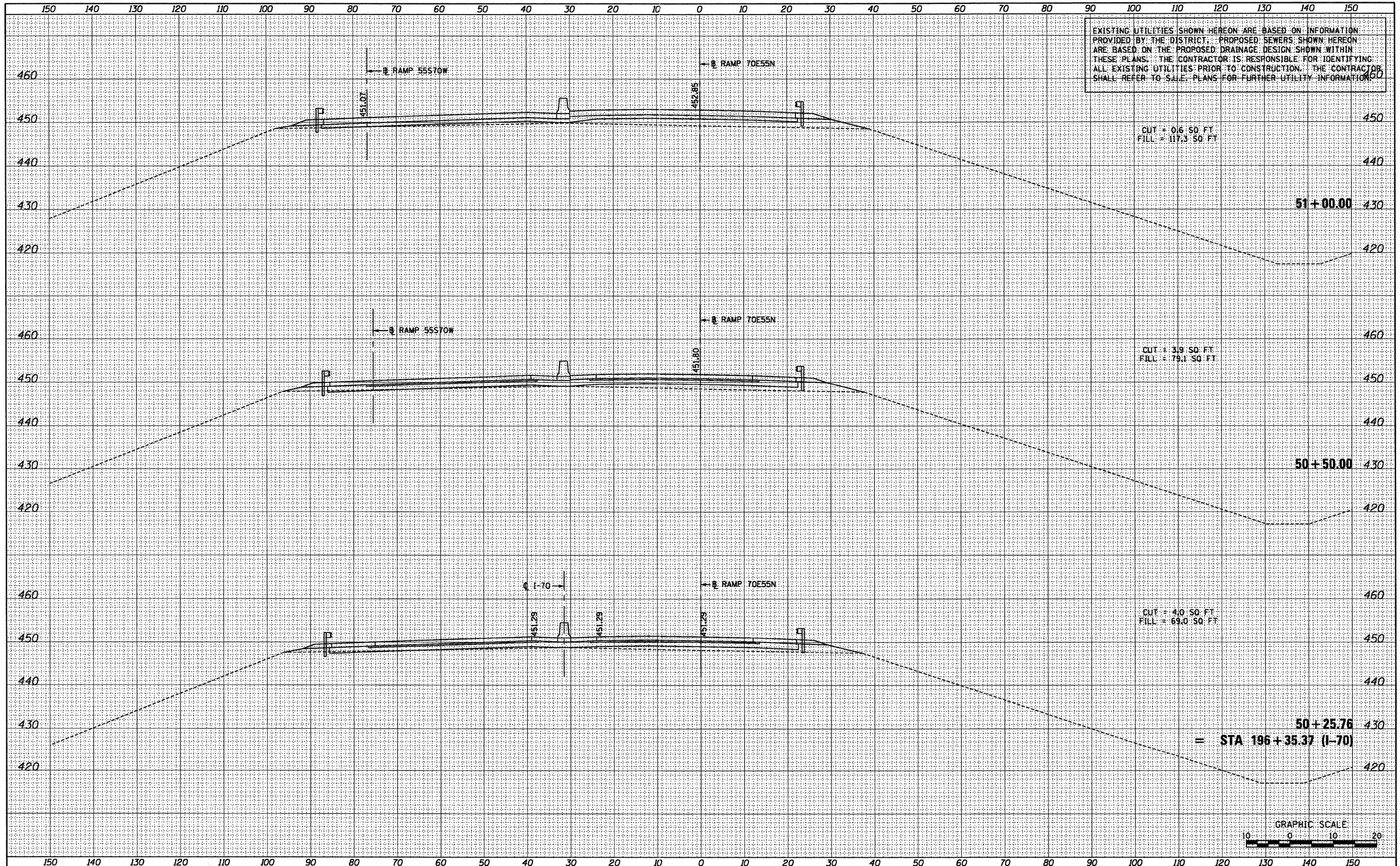

FINAL SURVEY	
NOTE BOOK	
NO.	

SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	

BY	DATE

ORIGINAL SURVEY	
NOTE BOOK	
NO.	

SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	

BY	DATE

FILE NAME = P:\P60046609\1000_Geopak\76C76\XS-Sheets\DBTR-76C76-sht_XS_70E55N.dgn	USER NAME = searsb	DESIGNED OP	REVISED -
		DRAWN OP	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70 /RAMP 70E55N

SCALE: 1" = 10' | SHEET NO. 1 OF 7 SHEETS | STA. 50+25.76 | TO STA. 50+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	382
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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℄ RAMP 70E55N

EAST ABUTMENT SN 082-0324

10:1

2:1

CUT = 0.0 SQ FT
FILL = 1231.3 SQ FT

74+78.50
BACK OF EAST ABUTMENT

4.00 %

3.37 %

4.00 %

391.50

COORDINATE GRADING WITH CONTRACT 76C53

CONTRACT 76C53
WORK BY OTHERS

℄ RAMP 55S70W

452.67

PROPOSED SHEET PILING WALL
(SEE STRUCTURAL PLANS)

℄ RAMP 70E55N

455.15

CUT = 15.4 SQ FT
FILL = 145.7 SQ FT

51+92.00

℄ RAMP 55S70W

451.87

℄ RAMP 70E55N

454.02

CUT = 0.0 SQ FT
FILL = 155.9 SQ FT

51+50.00

GRAPHIC SCALE
10 0 10 20

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	PLOT SCALE = 20.0000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70 /RAMP 70E55N

SCALE: 1" = 10' | SHEET NO. 2 OF 7 SHEETS | STA. 51+00.00 TO STA. 51+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	383
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NO.	BY	DATE
NOTE BOOK			
SURVEYED			
PLOTTED			
TEMPLATE			
AREAS			
AREAS CHECKED			

ORIGINAL SURVEY	NO.	BY	DATE
NOTE BOOK			
SURVEYED			
PLOTTED			
TEMPLATE			
AREAS			
AREAS CHECKED			

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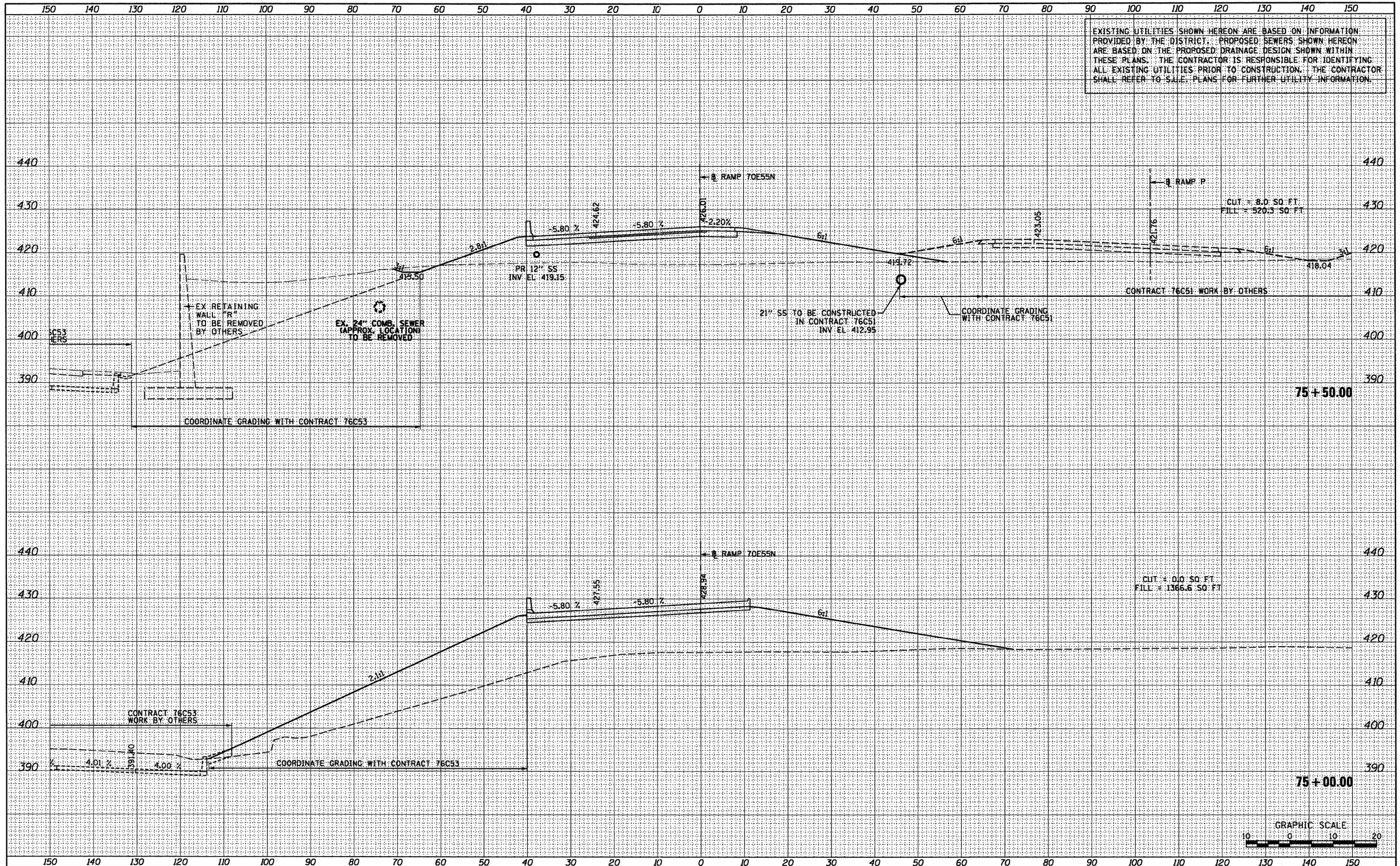

FINAL SURVEY	SURVEYED	BY	
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		DATE

ORIGINAL SURVEY	SURVEYED	BY	
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		DATE

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	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70 /RAMP 70E55N

SCALE: 1" = 10' | SHEET NO. 3 OF 7 SHEETS | STA. 75+00.00 | TO STA. 75+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	384
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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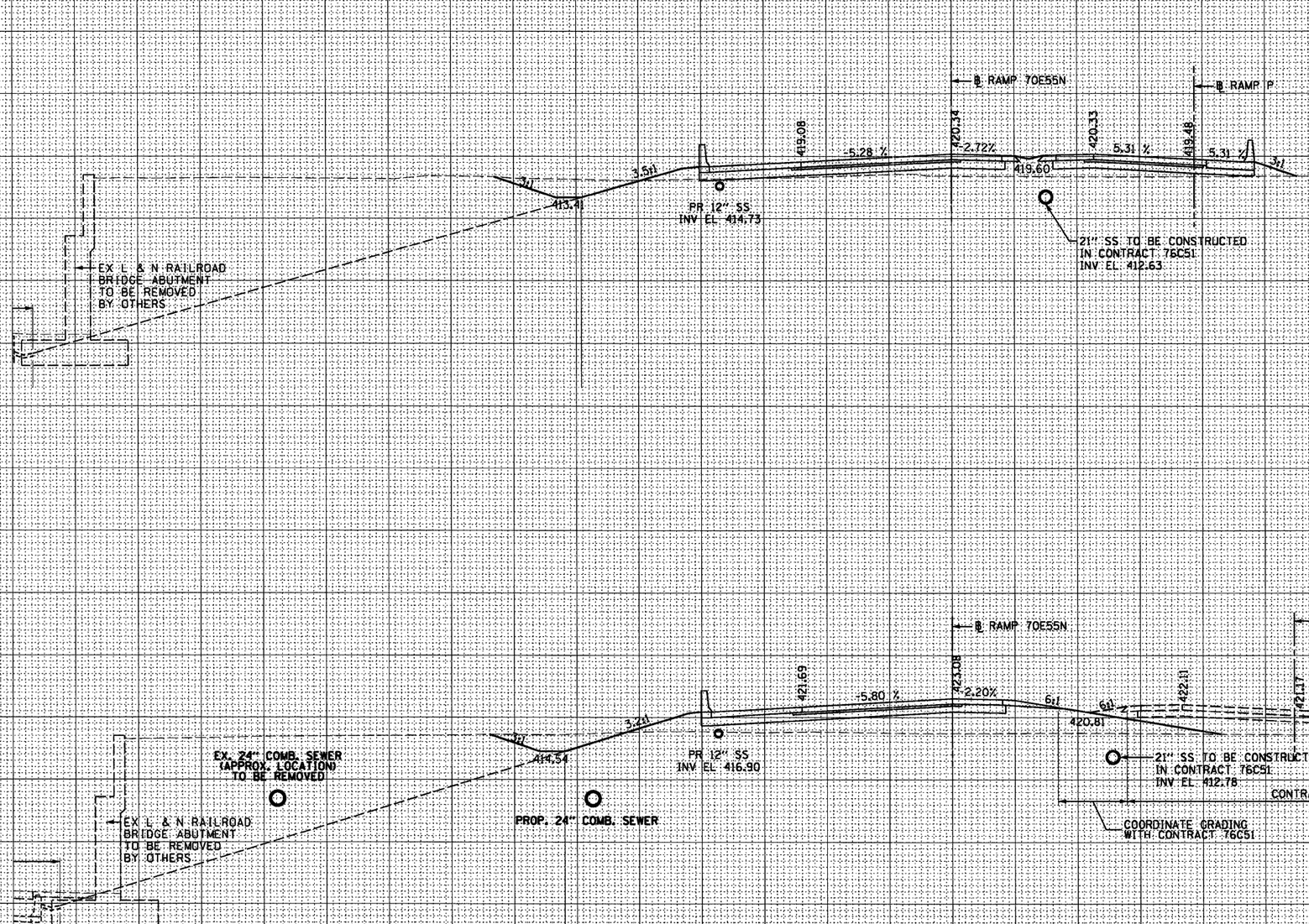
FINAL SURVEY	SURVEYED	BY	
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		DATE



ORIGINAL SURVEY	SURVEYED	BY	
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		DATE

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	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70 /RAMP 70E55N

SCALE: 1" = 10' | SHEET NO. 4 OF 7 SHEETS | STA. 76+00.00 TO STA. 76+48.21

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	385
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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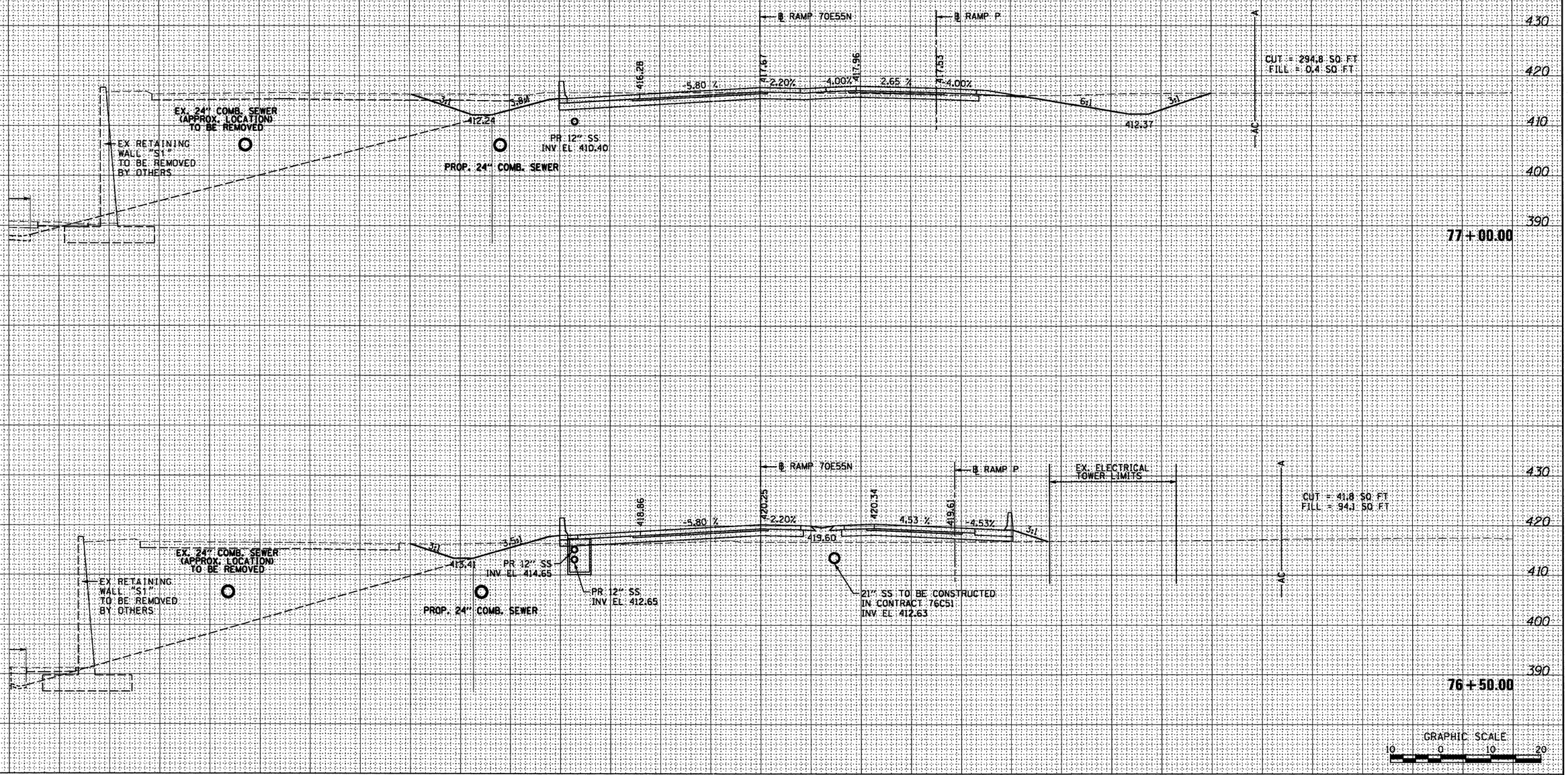

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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	PLOT DATE = 6/30/2011	CHECKED DBM	REVISED -	
		DATE 07-01-11	REVISED -	

CROSS SECTIONS – I-70 /RAMP 70E55N

SCALE: 1" = 10' | SHEET NO. 5 OF 7 SHEETS | STA. 76+50.00 TO STA. 77+00.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	386
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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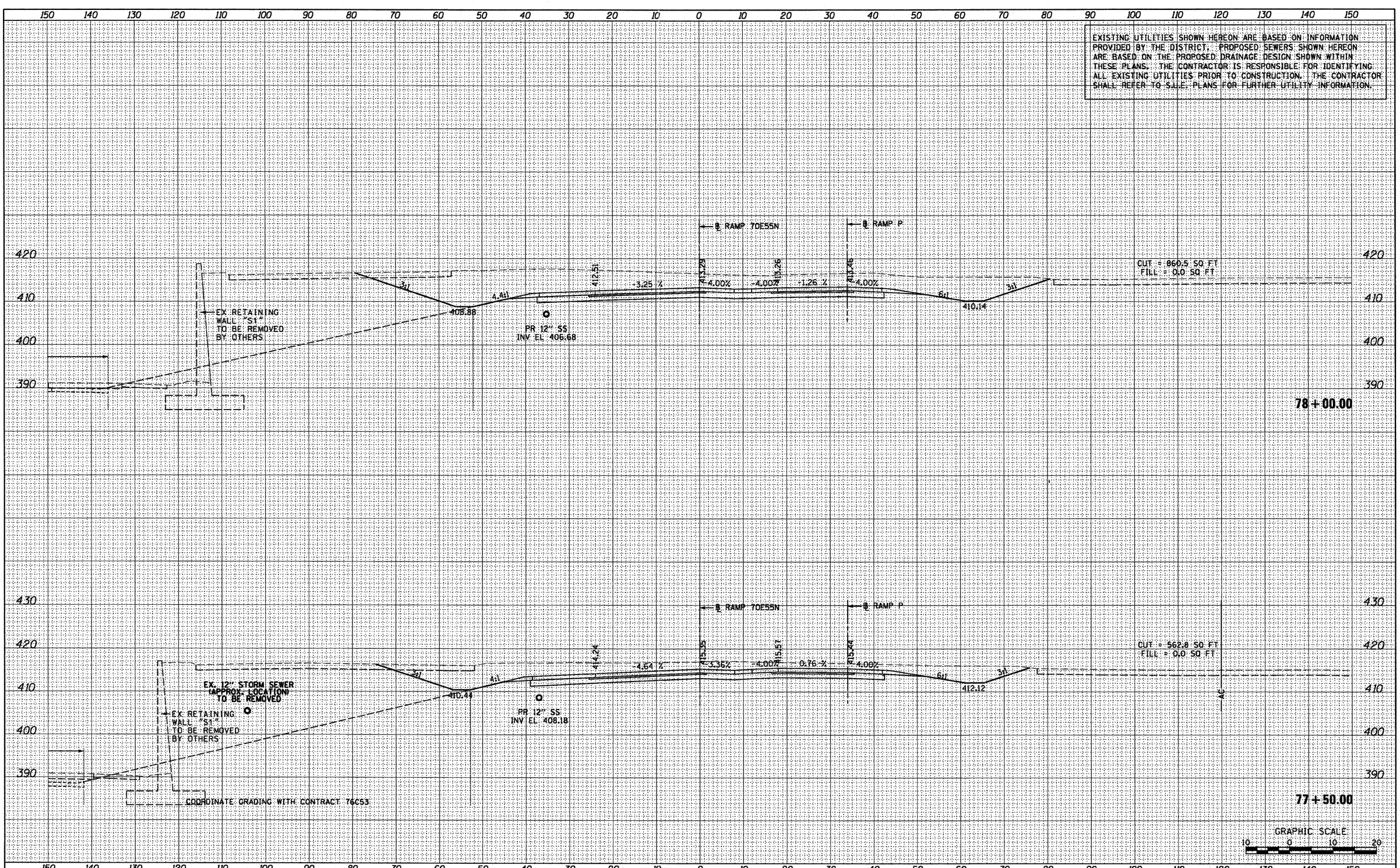
FINAL SURVEY	SURVEYED	BY	
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		DATE



ORIGINAL SURVEY	SURVEYED	BY	
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		DATE

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		DRAWN OP	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70 /RAMP 70E55N

SCALE: 1" = 10' | SHEET NO. 6 OF 7 SHEETS | STA. 77+50.00 TO STA. 78+00.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	387
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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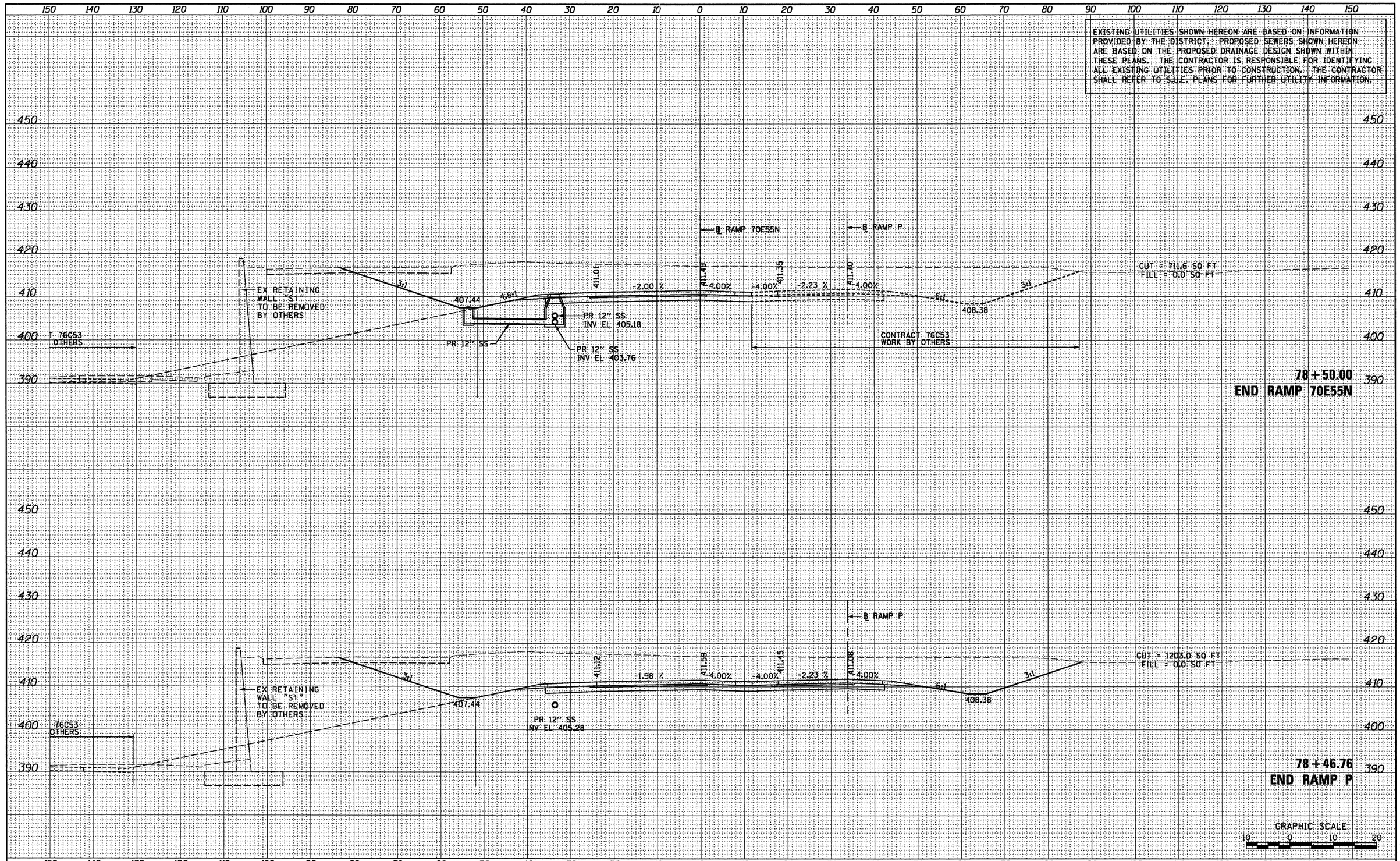

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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	PLOT DATE = 6/30/2011	CHECKED DBM	REVISED -
		DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – I-70 /RAMP 70E55N

SCALE: 1" = 10' | SHEET NO. 7 OF 7 SHEETS | STA. 78+46.76 TO STA. 78+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	388
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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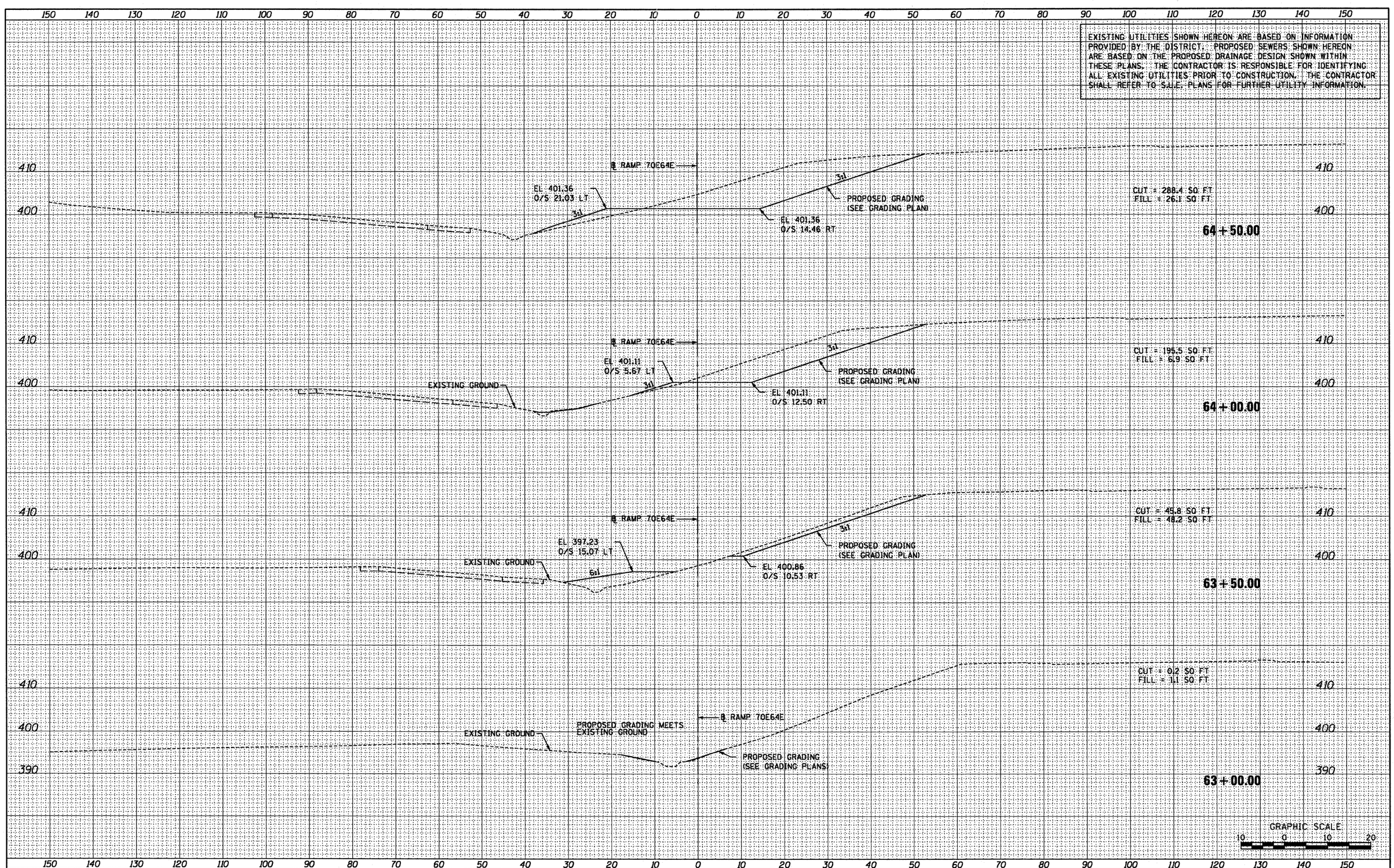

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – RAMP 70E64E

SCALE: 1" = 10' | SHEET NO. 1 OF 2 SHEETS | STA. 63+00.00 TO STA. 64+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	389
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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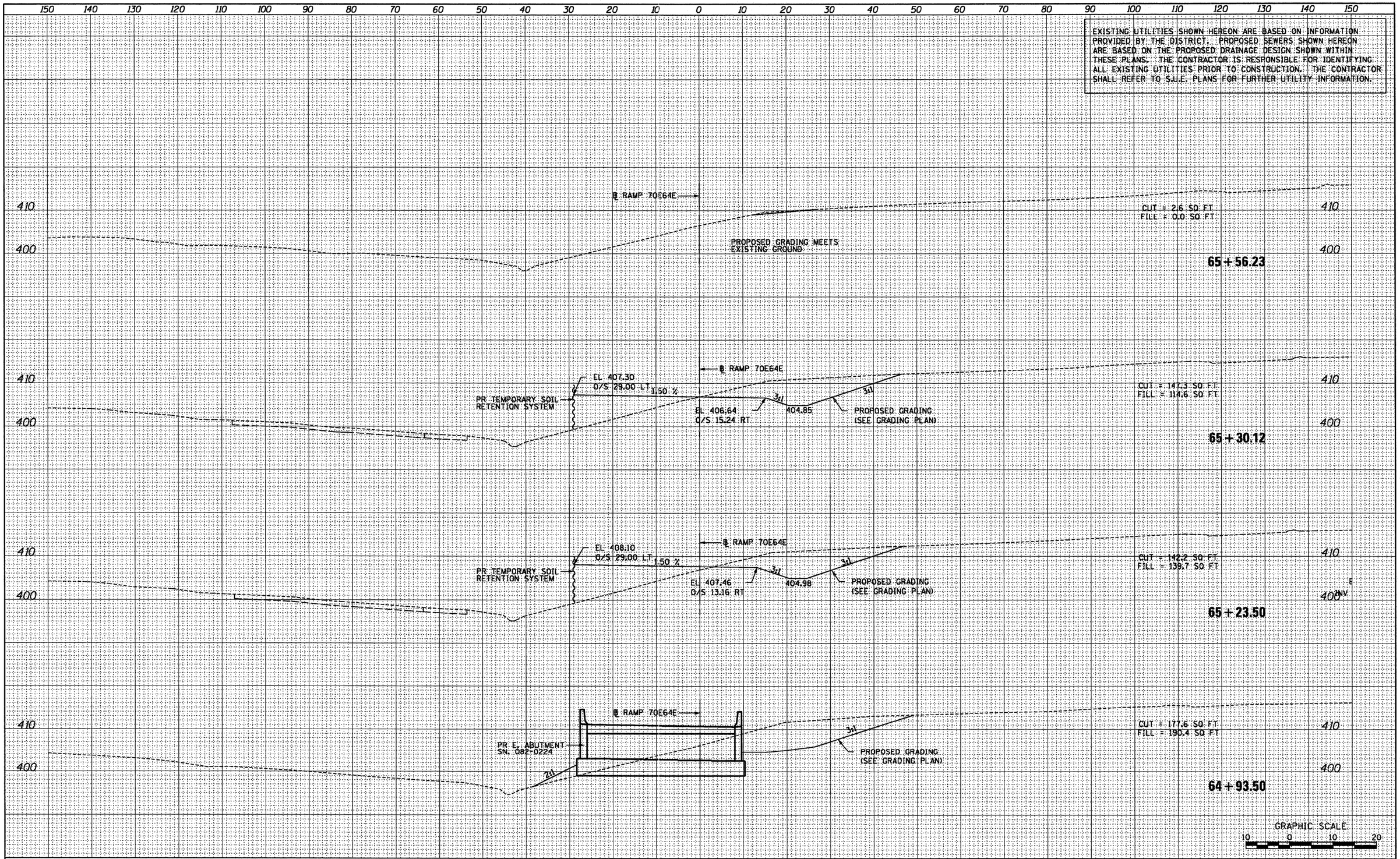

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	PLOT SCALE = 20.0000 ' / in.	CHECKED	DBM	REVISED	-
	PLOT DATE = 6/30/2011	DATE	07-01-11	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – RAMP 70E64E

SCALE: 1" = 10' | SHEET NO. 2 OF 2 SHEETS | STA. 64+93.50 TO STA. 65+56.23

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	390
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

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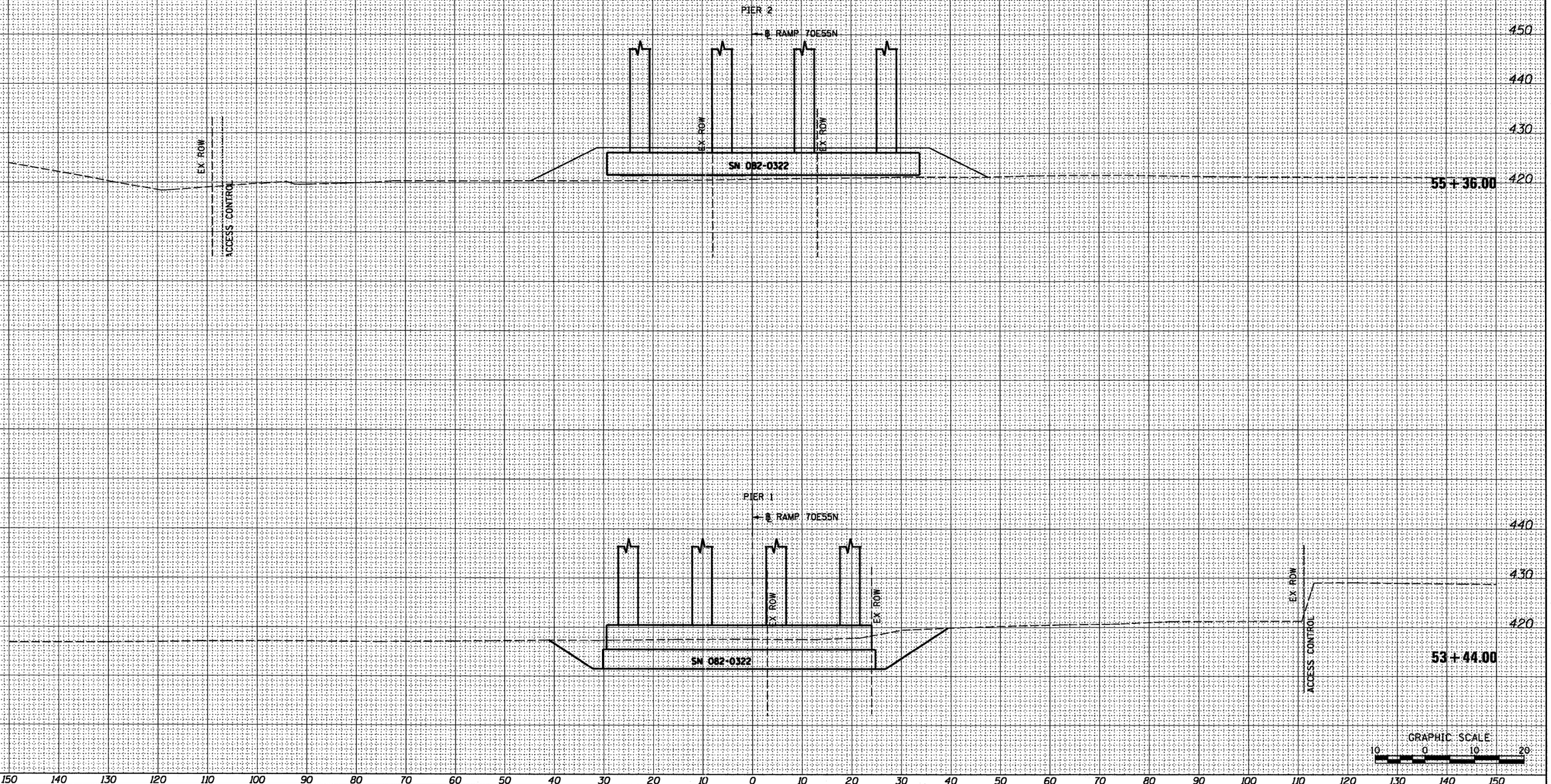

FINAL SURVEY	NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY	NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

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	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0322 PIERS

SCALE: 1" = 10' | SHEET NO. 1 OF 6 SHEETS | STA. 53+44.00 | TO STA. 55+36.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	391
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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FINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		

PIER 4

℄ RAMP 70E55N

EX. ROW

ACCESS CONTROL

EX. ROW

SN 082-0322

58+38.00

450

440

430

PIER 3

℄ RAMP 70E55N

SN 082-0322

56+86.00

GRAPHIC SCALE

10 0 10 20

ORIGINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		

FILE NAME = P:\P60046629\1000_Geopak\76C76\XS-Sheets\D8TR-76C76-sht_XS_082-0322 Piers.dgn	USER NAME = searsb	DESIGNED OP	REVISED -
		DRAWN OP	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0322 PIERS

SCALE: 1" = 10' | SHEET NO. 2 OF 6 SHEETS | STA. 56+86.00 | TO STA. 58+38.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	392
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING UTILITIES SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE PROPOSED DRAINAGE DESIGN SHOWN WITHIN THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.I.E. PLANS FOR FURTHER UTILITY INFORMATION.

PIER 7

℄ RAMP 70E55N

SN 082-0322

EX ROW

63+32.00

EX 60" SS
INV TO BE VERIFIED

PIER 6

℄ RAMP 70E55N

SN 082-0322

EX 24" COMB
INV TO BE VERIFIED

61+78.00

PIER 5

℄ RAMP 70E55N

EX ROW

EX ROW

SN 082-0322

60+27.00

GRAPHIC SCALE
10 0 10 20

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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	PLOT SCALE = 20.0000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 8/9/2011	DATE 08-12-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0322 PIERS

SCALE: 1" = 10' | SHEET NO. 3 OF 6 SHEETS | STA. 60+27.00 TO STA. 63+32.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	393
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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FINAL SURVEY	NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY	NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

EX ROW

PIER 9

℄ RAMP 70E55N

SN 082-0322

EX COMB (SIZE UNKNOWN)
INV TO BE VERIFIED

67+88.00

PIER 8

℄ RAMP 70E55N

SN 082-0322

BOTTOM OF FOOTING
EL 411.50

65+60.00

410 400 390 380 440 430 420 410

GRAPHIC SCALE
10 0 10 20

FILE NAME =	USER NAME = searsb	DESIGNED OP	REVISED -
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	PLOT DATE = 6/30/2011	CHECKED DBM	REVISED -
		DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0322 PIERS

SCALE: 1" = 10' | SHEET NO. 4 OF 6 SHEETS | STA. 65+60.00 TO STA. 67+88.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	394
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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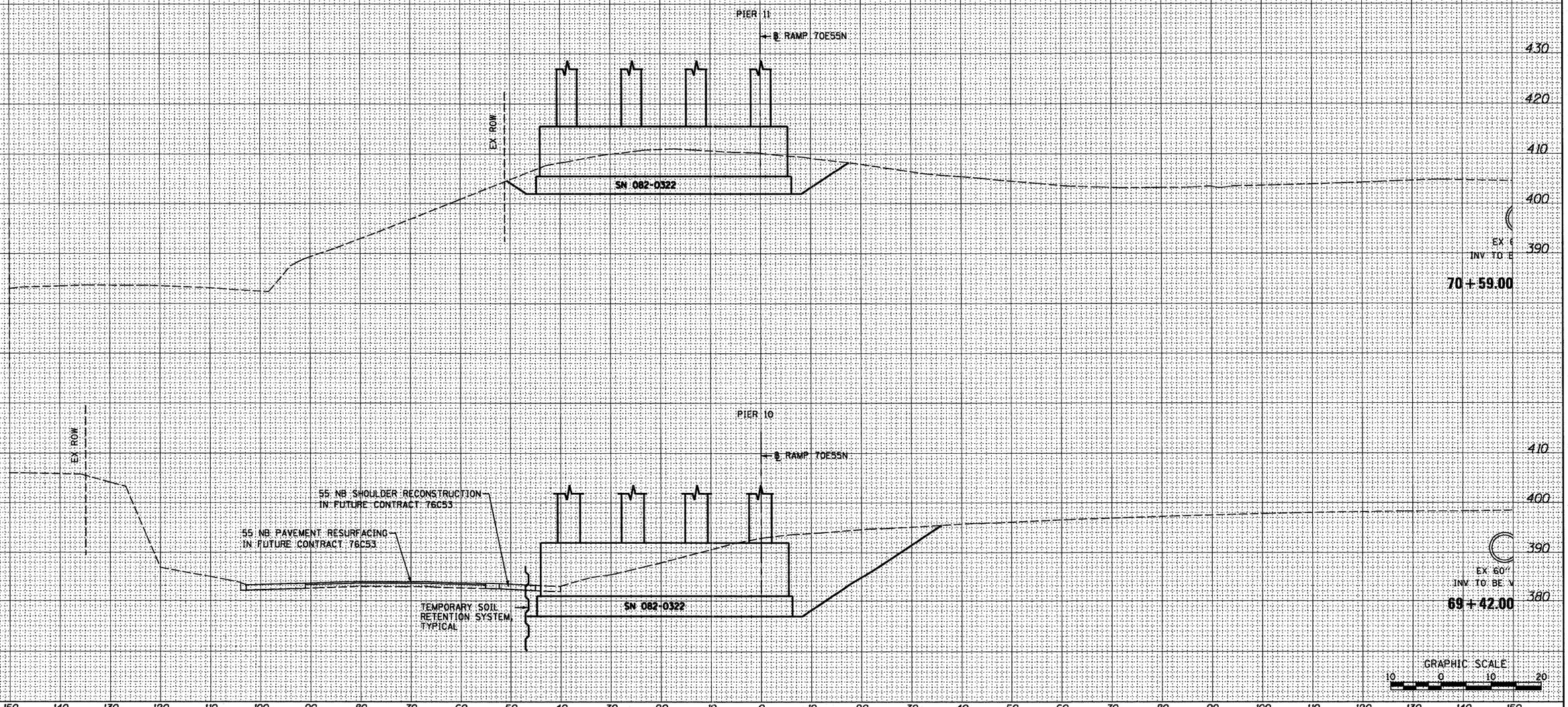

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

BY	DATE

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

BY	DATE

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	PLOT DATE = 8/9/2011	DATE 08-12-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0322 PIERS

SCALE: 1" = 10' | SHEET NO. 5 OF 6 SHEETS | STA. 69+42.00 TO STA. 70+59.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	395
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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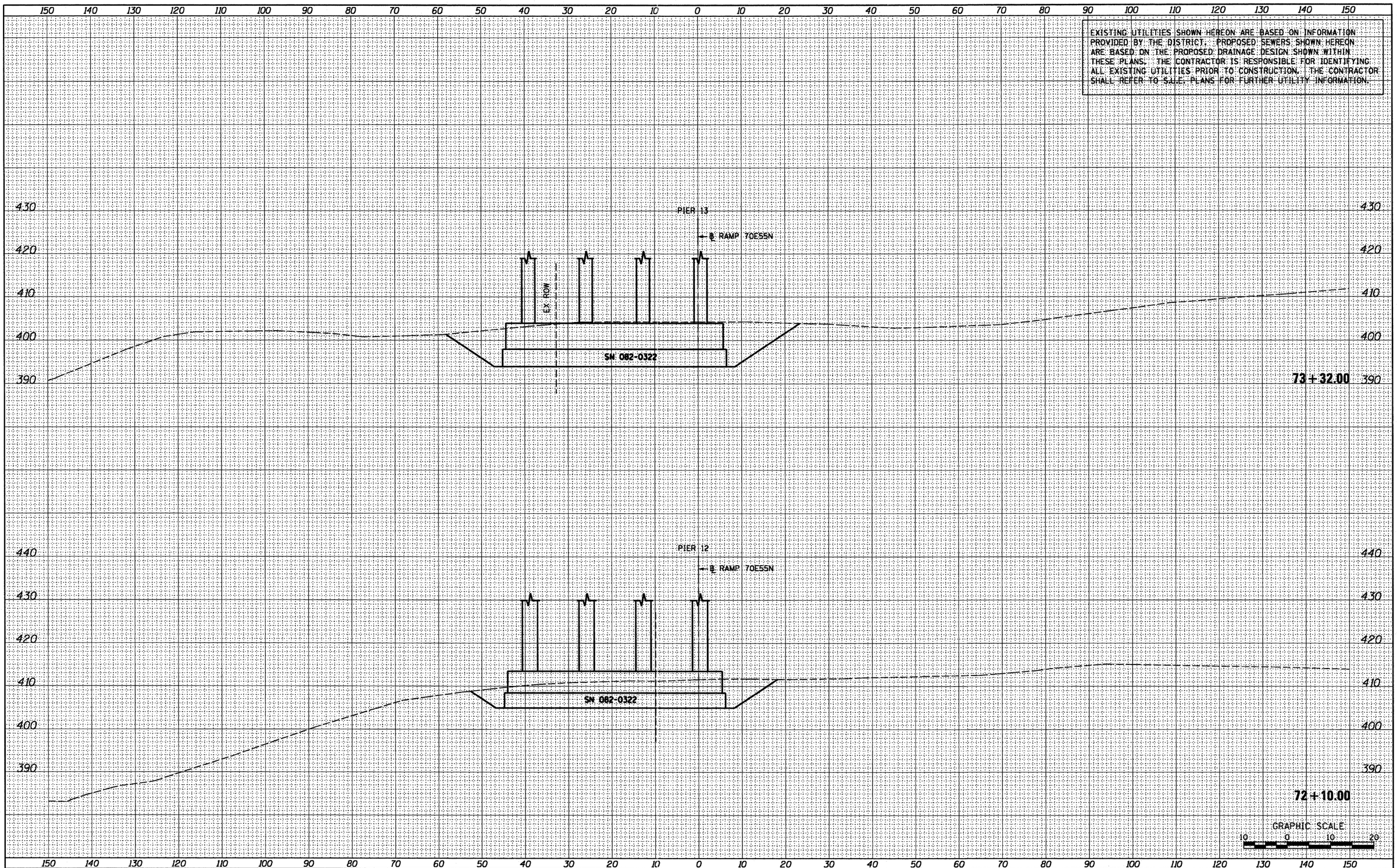

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		BY
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		DATE

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		BY
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		DATE

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	PLOT SCALE = 20.0000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 6/30/2011	DATE 07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0322 PIERS

SCALE: 1" = 10' | SHEET NO. 6 OF 6 SHEETS | STA. 72+10.00 TO STA. 73+32.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	396
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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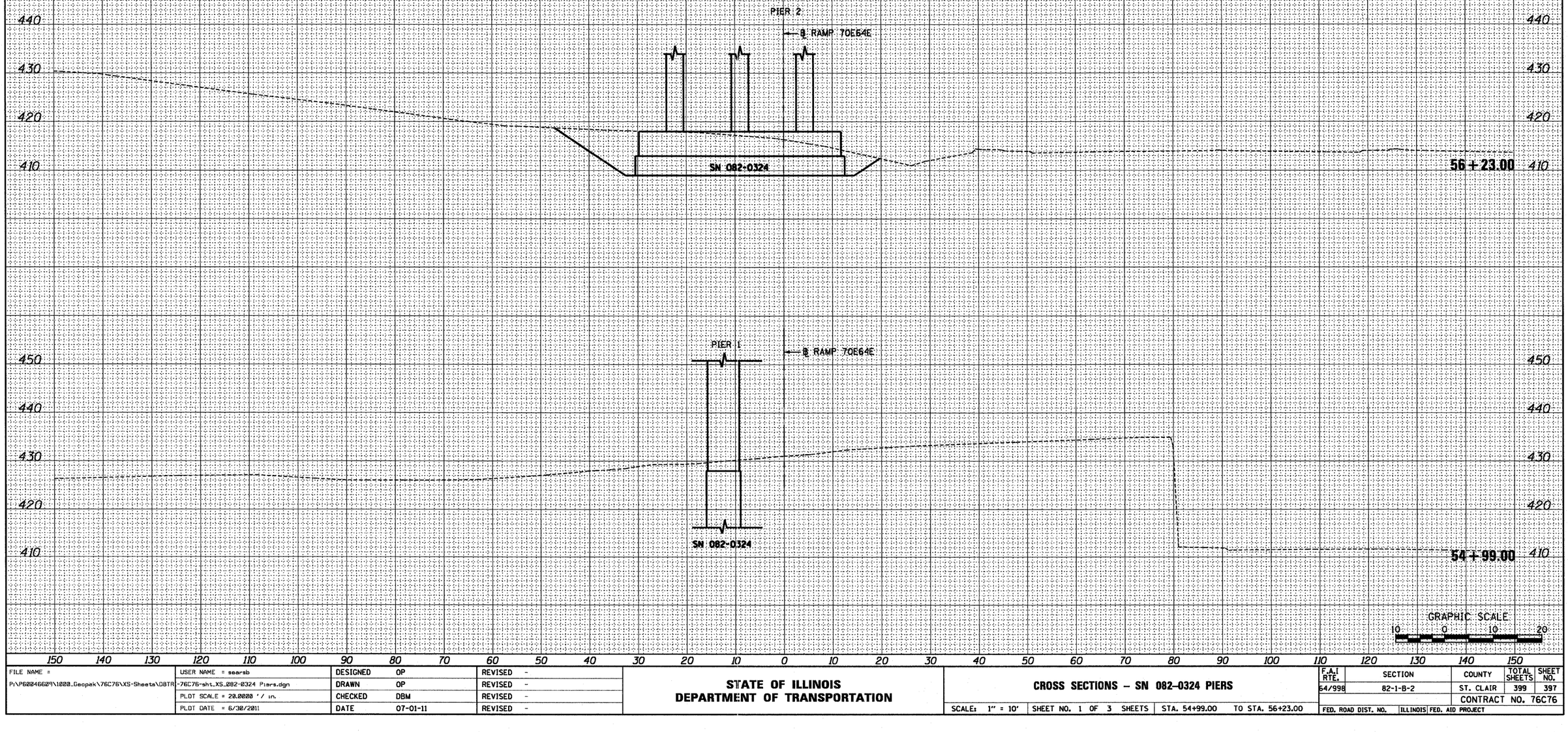
FINAL SURVEY	NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY	NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE



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	PLOT DATE = 6/30/2011	DATE	07-01-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0324 PIERS

SCALE: 1" = 10' | SHEET NO. 1 OF 3 SHEETS | STA. 54+99.00 | TO STA. 56+23.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	397
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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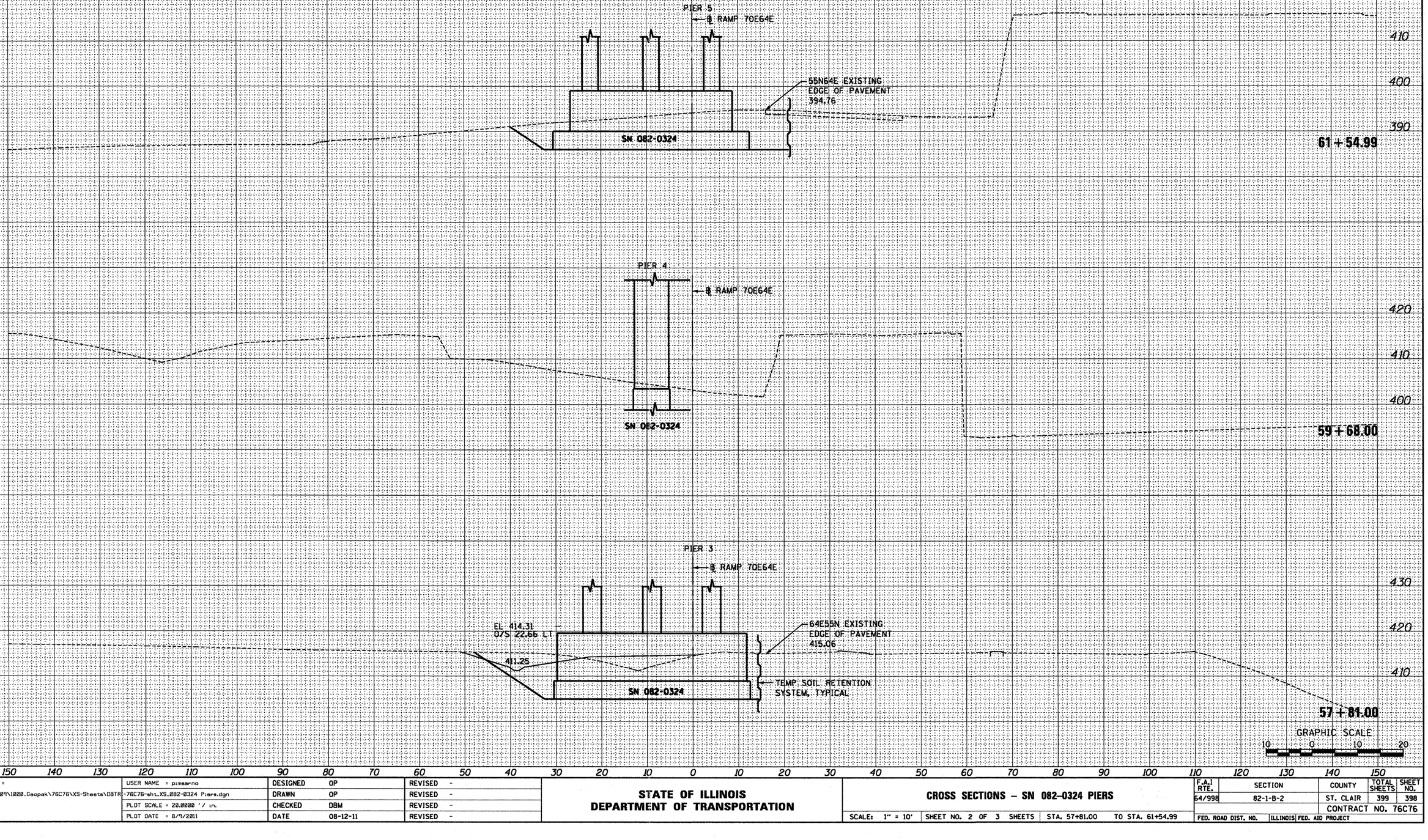

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

BY	DATE

FILE NAME =	USER NAME = pimsarno	DESIGNED	OP	REVISED	-
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	PLOT DATE = 8/9/2011	DATE	08-12-11	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0324 PIERS

SCALE: 1" = 10' | SHEET NO. 2 OF 3 SHEETS | STA. 57+81.00 TO STA. 61+54.99

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	398
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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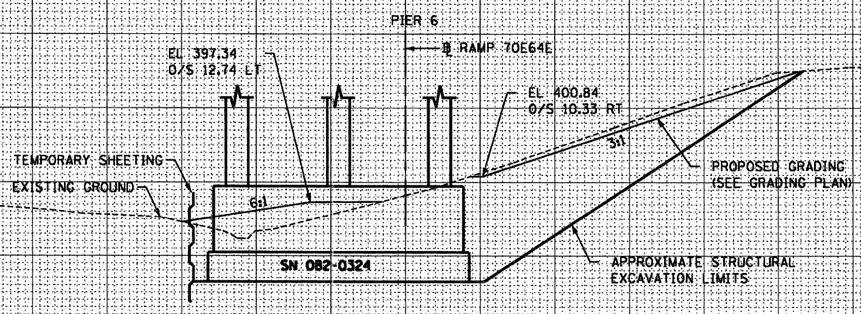
ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		



63+45.00

GRAPHIC SCALE
10 0 10 20

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	PLOT SCALE = 20.0000 ' / in.	CHECKED	DBM	REVISED	-
	PLOT DATE = 6/30/2011	DATE	07-01-11	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS – SN 082-0324 PIERS

SCALE: 1" = 10' | SHEET NO. 3 OF 3 SHEETS | STA. 63+45.00 | TO STA. 63+45.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64/998	82-1-B-2	ST. CLAIR	399	399
		CONTRACT NO. 76C76		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		