

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630-953-9928
 Fax: 630-953-9938

BORING LOG 3A-B-1
 WEI Job No.: 201-40-01

Datum: NGVD
 Elevation: 682.11 ft
 North: 1809765.73 ft
 East: 1115359.56 ft
 Station: 289+65.48
 Offset: 56.19 RT

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z002, Cook Co., T36N, R12E**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (ksf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (ksf)	Moisture Content (%)
684.1	3-inch thick, dark brown SILTY CLAY --TOPSOIL--														
	Stiff, brown CLAY LOAM --FILL--		1		2	1.23	15								
679.1	Medium stiff, black to dark brown SILTY CLAY, trace organic matter --BURIED TOPSOIL--		2		2	1.25	33								
675.6	Stiff, dark brown to dark gray, organic SILTY CLAY, trace shells and plant material		3		1	0.66	32								
			4		0	0.41	52								
			5		0	0.25	51								
			6		0	0.25	46								
			7		0	0.25	60								
664.1	Stiff, gray SILTY CLAY, trace gravel		8		4	1.72	17								
662.1	Boring terminated at 20.00 ft														

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	10-04-2010	Complete Drilling	10-04-2010
Drilling Contractor	WTS	Drill Rig	B-57 TMR
Driller	K&K	Logger	B. Wilson
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA

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BORING LOG 3A-B-2
 WEI Job No.: 201-40-01

Datum: NGVD
 Elevation: 681.22 ft
 North: 1809889.37 ft
 East: 1115353.47 ft
 Station: 290+87.76
 Offset: 47.00 RT

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z002, Cook Co., T36N, R12E**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (ksf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (ksf)	Moisture Content (%)
680.4	3/4-inch thick, black SILTY CLAY --TOPSOIL--														
	Very stiff, brown CLAY LOAM --FILL--		1		3	2.00	31								
678.2	Soft, dark brown CLAY, trace organic matter		2		3	0.48	30								
674.9	Medium stiff to very stiff, brown to gray SILTY CLAY to SILTY CLAY LOAM, trace gravel		3		2	0.74	26								
	--L _c (%)=26, P _c (%)=16-- --%Gravel=9.0-- --%Sand=16.5--10 --%Silt=51.9-- --%Clay=22.6-- --A-6 (7)--		4		3	1.56	17								
			5		1	1.64	20								
			6		3	2.62	19								
663.9	Loose, gray SANDY LOAM		7		3	2.54	18								
660.7	Loose, gray SILT		8		4	NP	17								
658.2	Stiff, gray SILTY CLAY LOAM, little GRAVEL		9		3	NP	14								
656.2	Boring terminated at 25.00 ft		10		4	1.64	14								

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	10-04-2010	Complete Drilling	10-04-2010
Drilling Contractor	WTS	Drill Rig	B-57 TMR
Driller	K&K	Logger	B. Wilson
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA

100 S. WACKER DR.
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 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4198

URS

FILE NAME = 016Z002-60M62-008-bor.dgn	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISOR -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORINGS STRUCTURE NO. 016-Z002	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 401
PLOT SCALE = 0:2.0000 '1' = 1 in.	DRAWN - WEI	REVISOR -	CONTRACT NO. 60M62							
PLOT DATE = 3/13/2013	CHECKED - PMH	REVISOR -	SHEET NO. 8 OF 9 SHEETS							
	CHECKED - PMH	REVISOR -	ILLINOIS FED. AID PROJECT							

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BORING LOG 3A-B-3
 WEI Job No.: 201-40-01

Datum: NGVD
 Elevation: 695.79 ft
 North: 1810011.14 ft
 East: 1115398.33 ft
 Station: 292+08.99
 Offset: 91.28 RT

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z002, Cook Co., T36N, R12E**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample No. (recovery)	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample No. (recovery)	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
695.79	4-inch thick ASPHALT --PAVEMENT--	0						695.79		0					
694.3	12-inch thick CRUSHED STONE --BASE COURSE--	0-4	1	1	4	4.26	14	694.3		0	11	8	2.87	11	
687.8	Soft to hard, brown CLAY LOAM, little gravel --FILL--	4-5	2	1	3	0.49	20	687.8		5	12	6	NR		
687.8	Very stiff to hard, brown to gray SILTY CLAY to SILTY CLAY LOAM, trace to little gravel	5-10	3	3	4	1.50	19	687.8		10	13	20	2.00	12	
687.8		10-15	4	4	6	5.33	19	687.8		15	14	4	2.54	14	
687.8		15-20	5	3	6	3.61	16	687.8		20	8	3	6.56	20	
687.8		20-25	6	3	6	3.03	24	687.8		25	9	5	4.76	14	
687.8		25-30	7	4	9	6.23	20	687.8		30	10	4	5.17	13	
687.8		30-35	8	3	10	6.56	20	687.8		35	11	3	6.56	20	
687.8		35-40	9	5	8	4.76	14	687.8		40	12	3	2.25	12	
687.8		40-45	10	4	7	5.17	13	687.8		45	13	3	1.47	16	
687.8		45-50						687.8		50	14	3	2.30	12	
687.8		50-55						687.8		55					
687.8		55-60						687.8		60					
687.8		60-65						687.8		65					
687.8		65-70						687.8		70					
687.8		70-75						687.8		75					
687.8		75-80						687.8		80					
687.8		80-85						687.8		85					
687.8		85-90						687.8		90					
687.8		90-95						687.8		95					
687.8		95-100						687.8		100					

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	10-04-2010	Complete Drilling	10-04-2010
Drilling Contractor	WTS	Drill Rig	B-57 TMR
Driller	K&K	Logger	B. Wilson
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA
		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

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BORING LOG 3A-B-4
 WEI Job No.: 201-40-01

Datum: NGVD
 Elevation: 695.22 ft
 North: 1810101.71 ft
 East: 1115396.48 ft
 Station: 292+99.56
 Offset: 89.32 RT

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z002, Cook Co., T36N, R12E**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample No. (recovery)	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample No. (recovery)	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
695.22	4-inch thick ASPHALT --PAVEMENT--	0						695.22		0					
693.7	12-inch thick CRUSHED STONE --BASE COURSE--	0-4	1	1	3	3.20	19	693.7		0	11	3	1.23	12	
687.2	Very stiff, brown CLAY LOAM, some gravel --FILL--	4-5	2	2	3	1.72	28	687.2		5	12	3	1.89	13	
687.2	Medium stiff to very stiff, brown to gray SILTY CLAY, trace to some gravel	5-10	3	3	5	2.38	24	687.2		10	13	3	NP	13	
687.2		10-15	4	4	9	3.28	20	687.2		15	14	5	NP	23	
687.2		15-20	5	4	7	3.00	18	687.2		20	8	5	2.25	12	
687.2		20-25	6	3	5	4.02	19	687.2		25	9	3	1.47	16	
687.2		25-30	7	3	4	0.98	15	687.2		30	10	3	2.30	12	
687.2		30-35	8	5	5	2.25	12	687.2		35	11	3	2.30	12	
687.2		35-40	9	3	4	1.47	16	687.2		40	12	3	2.30	12	
687.2		40-45	10	3	5	2.30	12	687.2		45					
687.2		45-50						687.2		50					
687.2		50-55						687.2		55					
687.2		55-60						687.2		60					
687.2		60-65						687.2		65					
687.2		65-70						687.2		70					
687.2		70-75						687.2		75					
687.2		75-80						687.2		80					
687.2		80-85						687.2		85					
687.2		85-90						687.2		90					
687.2		90-95						687.2		95					
687.2		95-100						687.2		100					

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	10-04-2010	Complete Drilling	10-04-2010
Drilling Contractor	WTS	Drill Rig	B-57 TMR
Driller	K&K	Logger	B. Wilson
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	38.00 ft
		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

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 CHICAGO, IL 60606
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FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISED -
0162002-60M62-009-bor.dgn		CHECKED - PMH	REVISED -
		DRAWN - WEI	REVISED -
		CHECKED - PMH	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORINGS
 STRUCTURE NO. 016-Z002
 SHEET NO. 9 OF 9 SHEETS

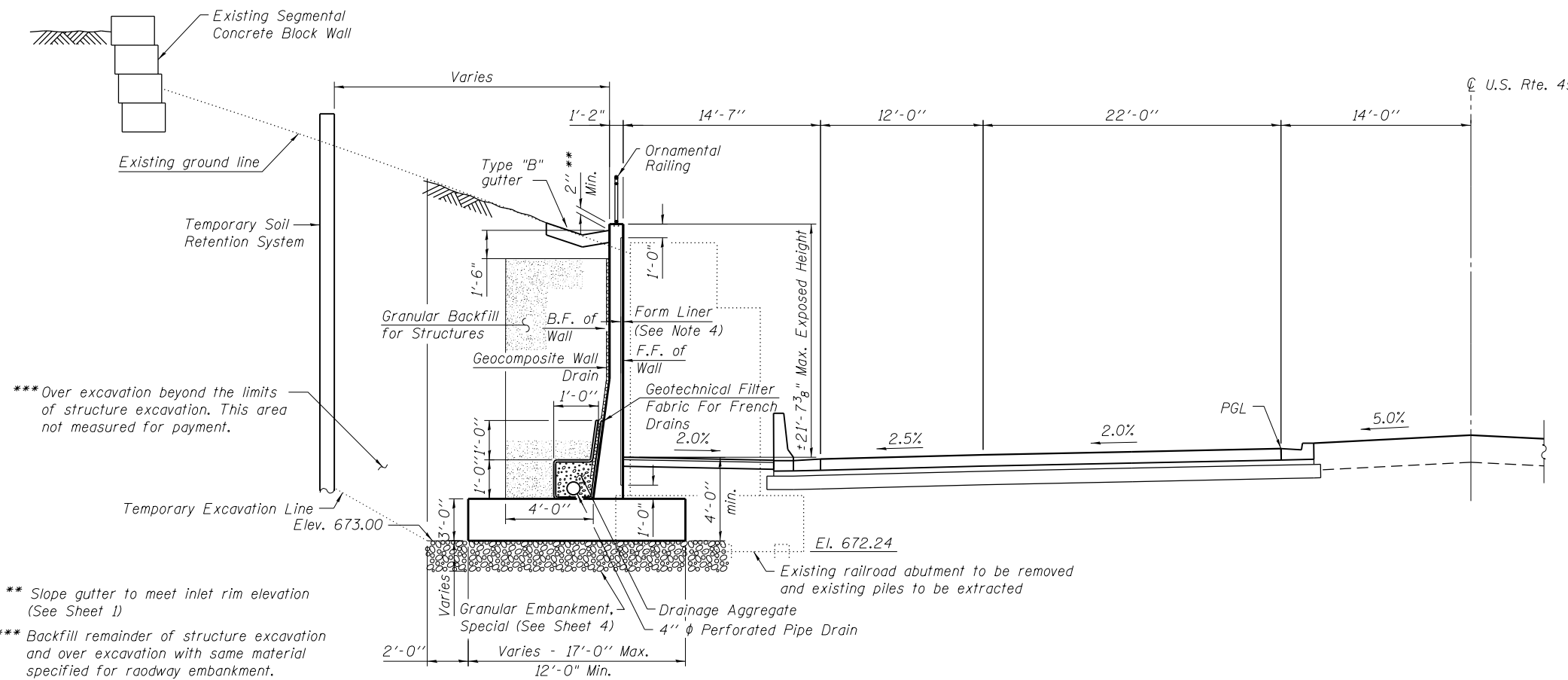
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	402
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

TOTAL BILL OF MATERIAL

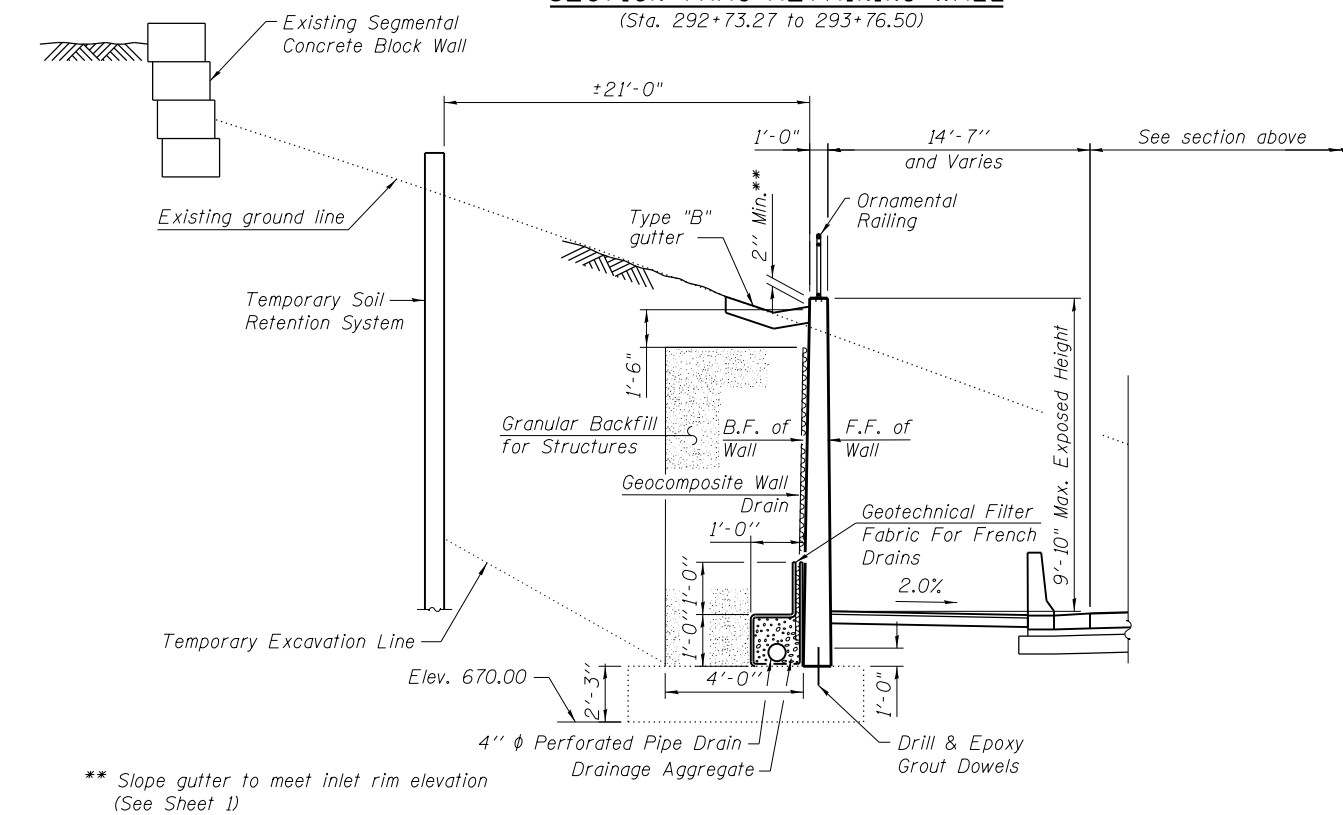
ITEM	UNIT	TOTAL
Granular Embankment, Special	Cu. Yd.	98
Concrete Removal	Cu. Yd.	412
Structure Excavation	Cu. Yd.	1,638
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	93
Concrete Structures	Cu. Yd.	225.7
Form Liner Textured Surface	Sq. Ft.	1,366
Reinforcement Bars, Epoxy Coated	Pound	25,220
Geocomposite Wall Drain	Sq. Yd.	157
Removal of Temporary Soil Retention System	Sq. Ft.	218
Granular Backfill for Structures	Cu. Yd.	258
Ornamental Railing	Foot	182
Pipe Underdrains for Structures 4"	Foot	112
Temporary Soil Retention System	Sq. Ft.	1,427

INDEX OF SHEETS

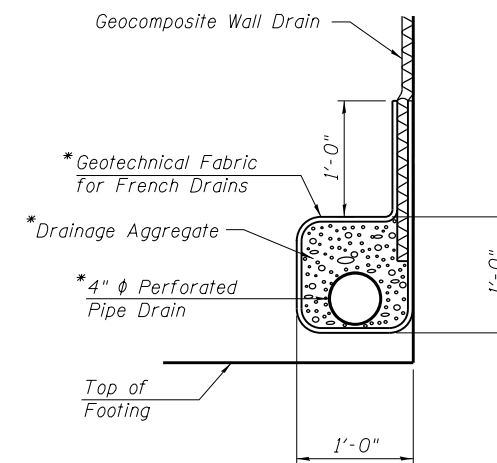
1. General Plan and Elevation
2. General Details and Bill of Material
3. Retaining Wall Plan and Elevation
4. Sections and Details
5. Removal Plan and Soil Retention System
6. Railing Details
7. Soil Borings



SECTION THRU RETAINING WALL
(Sta. 292+73.27 to 293+76.50)

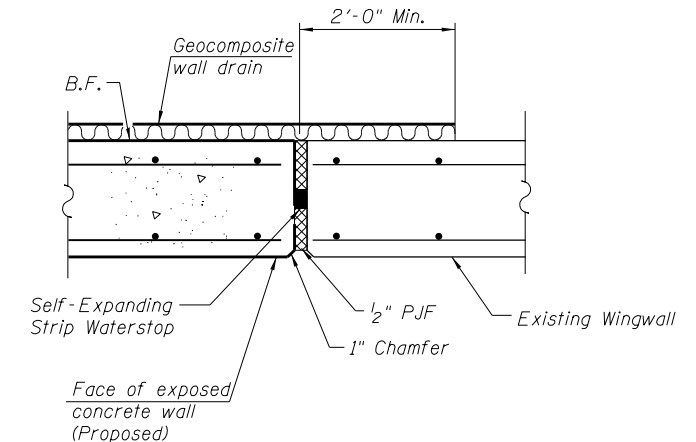


SECTION THRU RETAINING WALL
(Sta. 293+76.50 to 293+90.50)



PIPE UNDERDRAIN DETAIL

*Included in the cost of "Pipe Underdrains for Structures 4".



WATERSTOP DETAIL

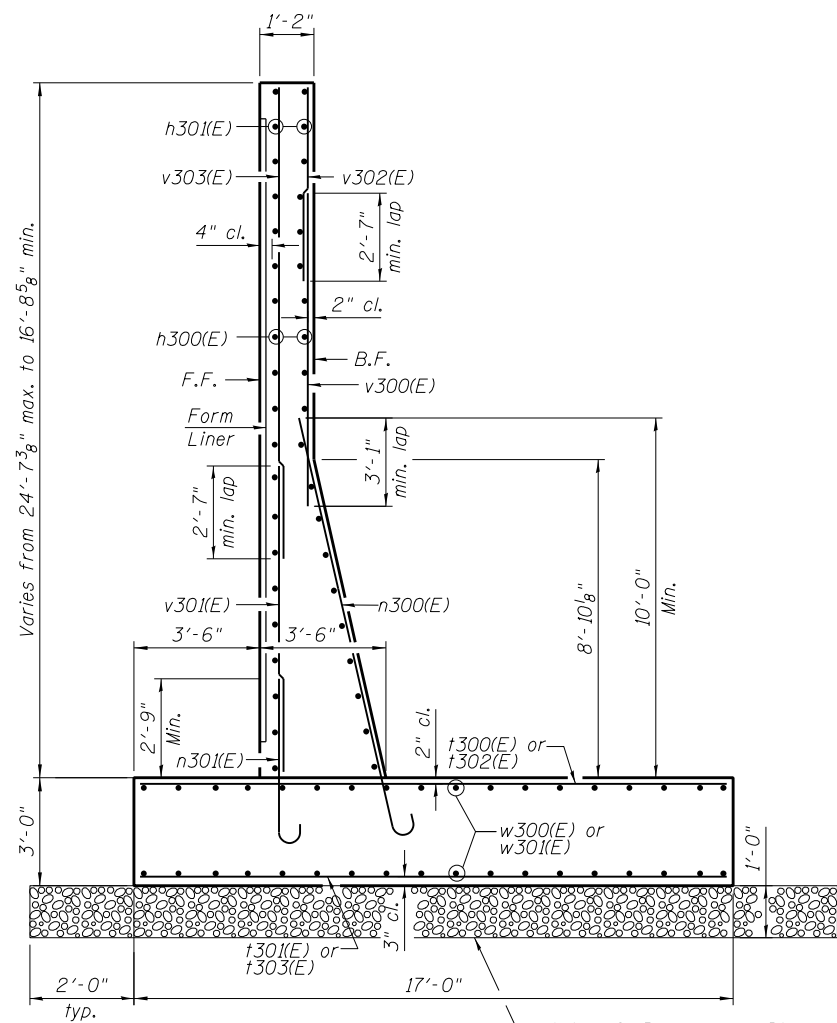
GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Construction joints shall be bonded.
3. The back face of Retaining Wall shall be waterproofed according to Article 503.18 of the Standard Specifications.
4. The form liner shall be a random Ashlar blend pattern consisting of the following block sizes:
 1. 28% - 4" X 18"
 2. 16% - 8" X 8"
 3. 28% - 8" X 11"
 4. 28% - 8" X 18"

WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d300(E)	5	#6	11'-3"	
d301(E)	3	#6	6'-3"	
h300(E)	38	#5	28'-6"	
h301(E)	8	#5	25'-9"	
h302(E)	20	#5	32'-0"	
h303(E)	8	#5	32'-3"	
h304(E)	22	#5	22'-4"	
h305(E)	22	#5	25'-8"	
h306(E)	28	#5	13'-8"	
h307(E)	16	#5	2'-6"	
n300(E)	51	#9	14'-0"	
n301(E)	103	#5	6'-1"	
n302(E)	59	#6	12'-8"	
n303(E)	92	#6	8'-4"	
n304(E)	5	#5	3'-9"	
n305(E)	8	#9	8'-6"	
n306(E)	29	#8	7'-4"	
s300(E)	38	#4	6'-0"	
t300(E)	4	#8	6'-8"	
t301(E)	8	#5	6'-8"	
t302(E)	27	#9	16'-8"	
t303(E)	52	#5	16'-8"	
t304(E)	30	#8	13'-8"	
t305(E)	59	#5	13'-8"	
t306(E)	92	#6	11'-8"	
t307(E)	92	#5	11'-8"	
v300(E)	59	#6	10'-6"	
v301(E)	30	#5	10'-11"	
v302(E)	59	#5	13'-1"	
v303(E)	30	#5	24'-10"	
v304(E)	30	#5	12'-3"	
v305(E)	92	#5	9'-6"	
w300(E)	36	#5	28'-6"	
w301(E)	2	#5	5'-0"	
w302(E)	30	#5	31'-9"	
w303(E)	52	#5	25'-8"	
w304(E)	6	#4	26'-3"	
Concrete Structures	Cu. Yd.	225.7		
Reinforcement Bars, Epoxy Coated	Pound	25,220		

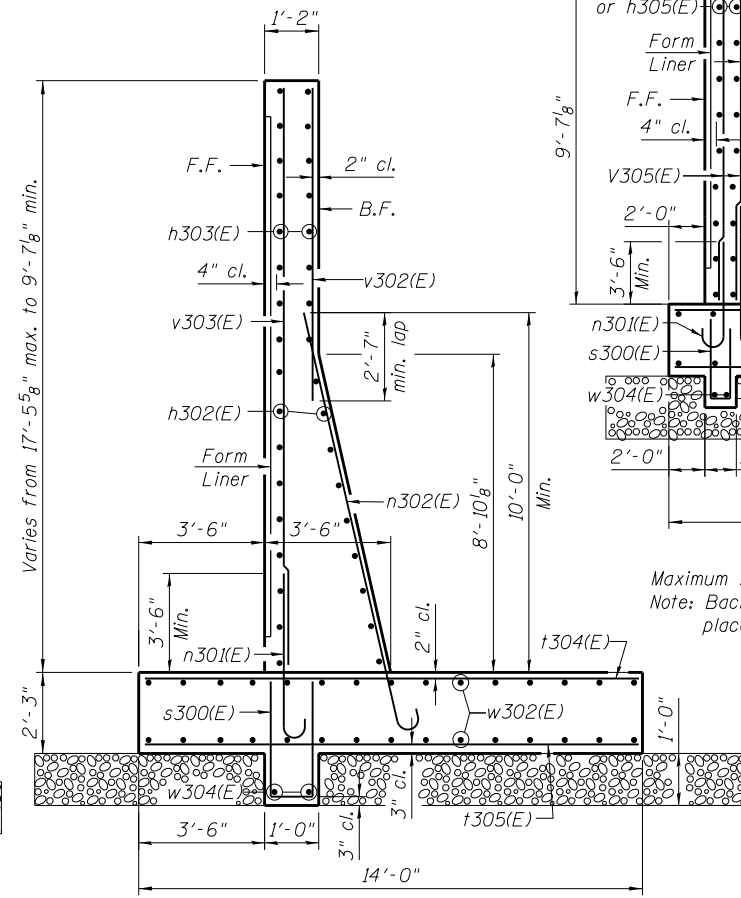
Bars indicated thus 14 x 2 - #5 etc. indicates 14 lines of bars with 2 lengths per line.



SECTION A-A

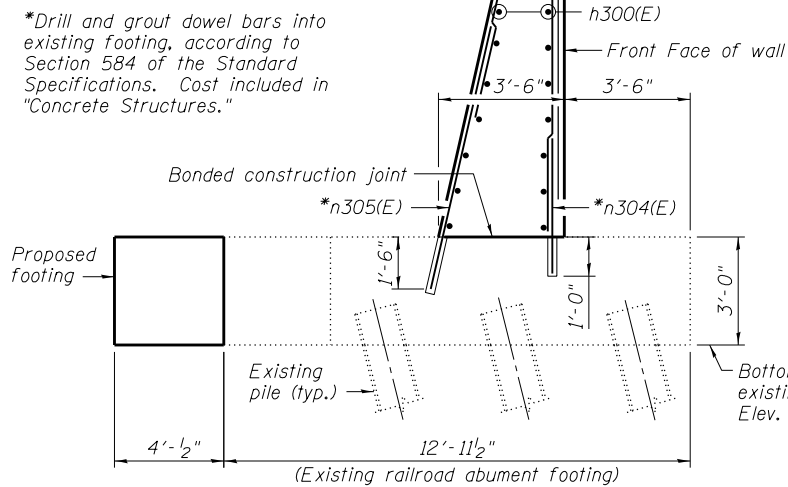
Maximum Applied Bearing Pressure = 4.28 ksf

Limits of "Removal and Disposal of Unsuitable Material for Structures." Backfill with "Granular Embankment, Special" (compacted CA-6), typ.



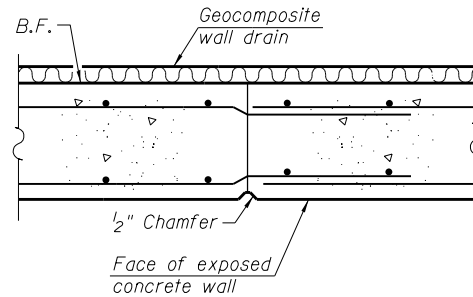
SECTION B-B

Maximum Applied Bearing Pressure = 2.88 ksf
Note: Backfill shall be compacted prior to placement of shear key.

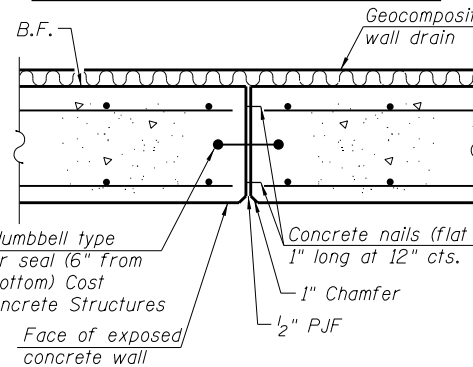


SECTION E-E

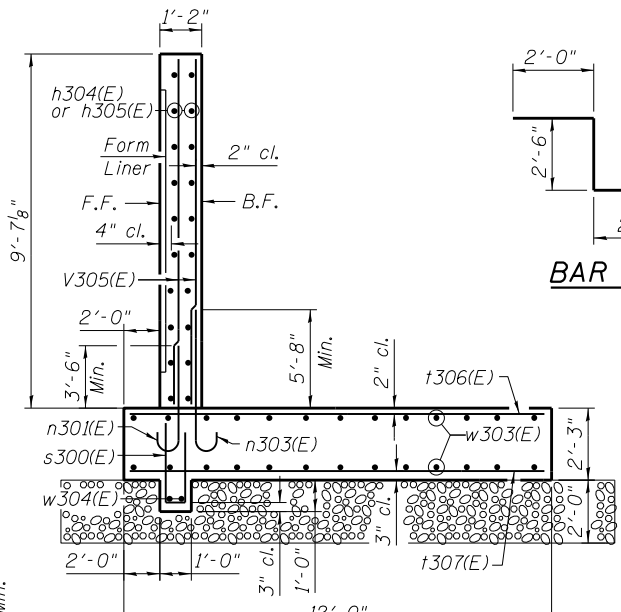
*Drill and grout dowel bars into existing footing, according to Section 584 of the Standard Specifications. Cost included in "Concrete Structures."



CONSTRUCTION JOINT DETAIL

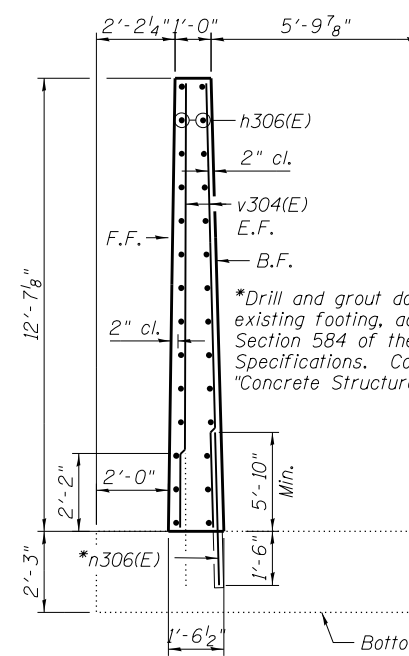


EXPANSION JOINT DETAIL

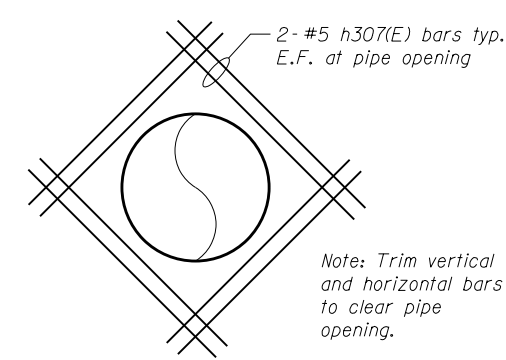


SECTION C-C

Maximum Applied Bearing Pressure = 2.26 ksf
Note: Backfill shall be compacted prior to placement of shear key.



SECTION D-D



PIPE PENETRATION DETAIL

BAR d300(E)

BAR d301(E)

BAR h301(E)

BAR h303(E)

BAR v302(E)

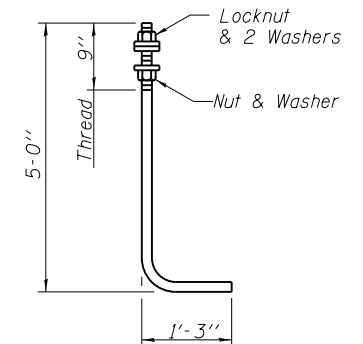
BAR v303(E)

CUTTING DIAGRAMS

Bar	a	b	c
n300(E)	12'-9"	1'-3"	11'-3"
n301(E)	5'-6"	7"	5"
n302(E)	12'-0"	8"	6"
n303(E)	7'-8"	8"	6"

BARS n300(E), n301(E), n302(E) and n303(E)

BAR s300(E)

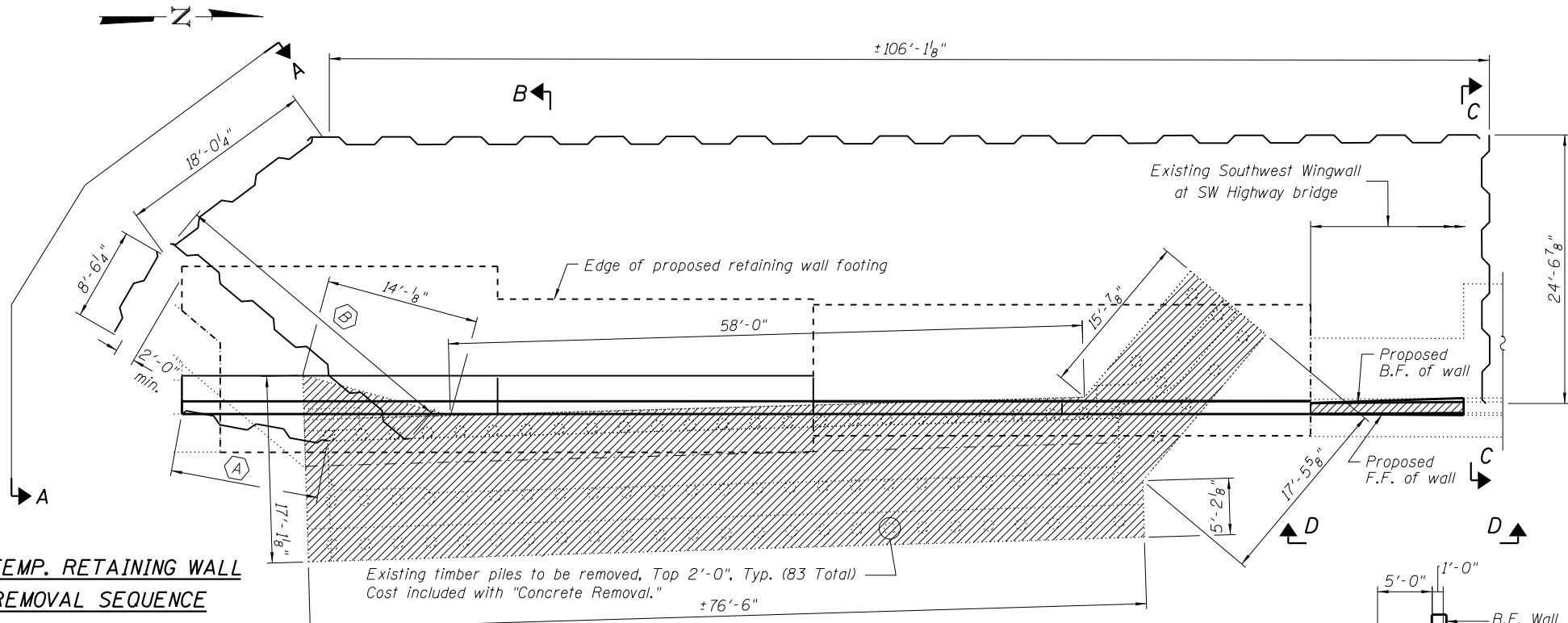


ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105)

FILE NAME = 0162003-60M62-004-det.dgn	USER NAME = Anthony.Plutz	DESIGNED - AMV	REVISED -
		CHECKED - MGB	REVISED -
		DRAWN - AMV/MJL	REVISED -
		CHECKED - MGB	REVISED -
			REVISED -

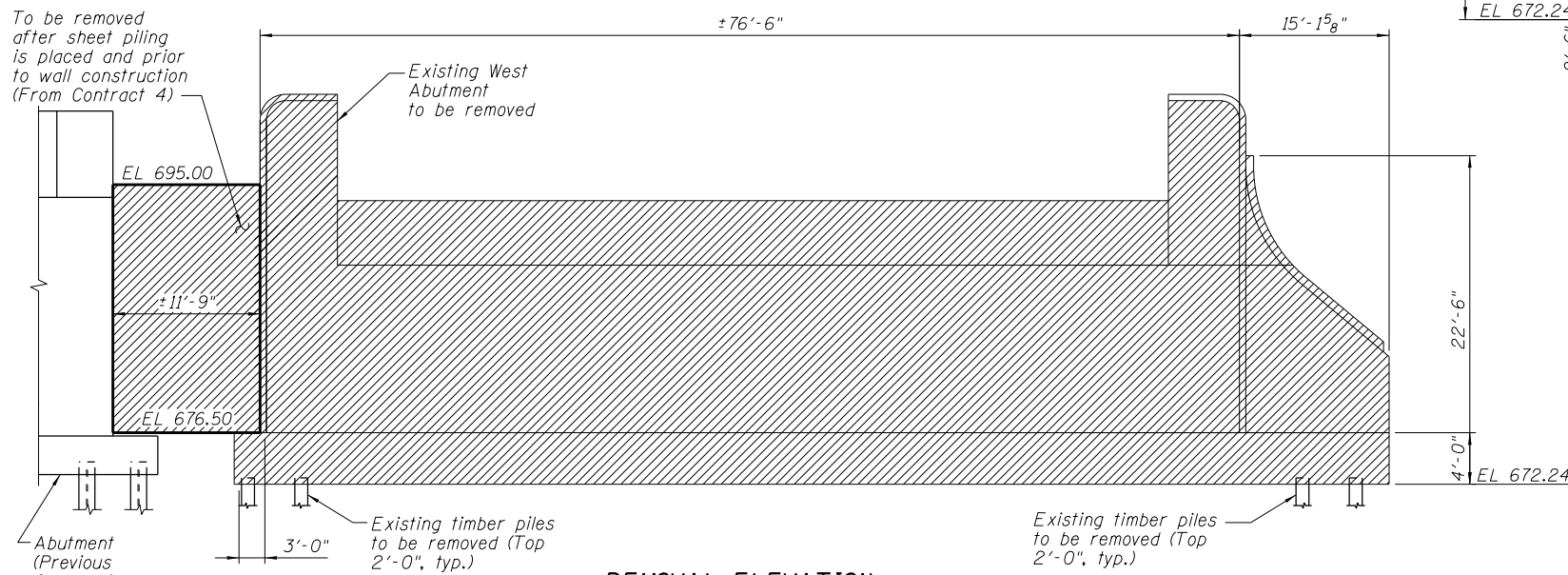
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	406
CONTRACT NO. 60M62			ILLINOIS FED. AID PROJECT	



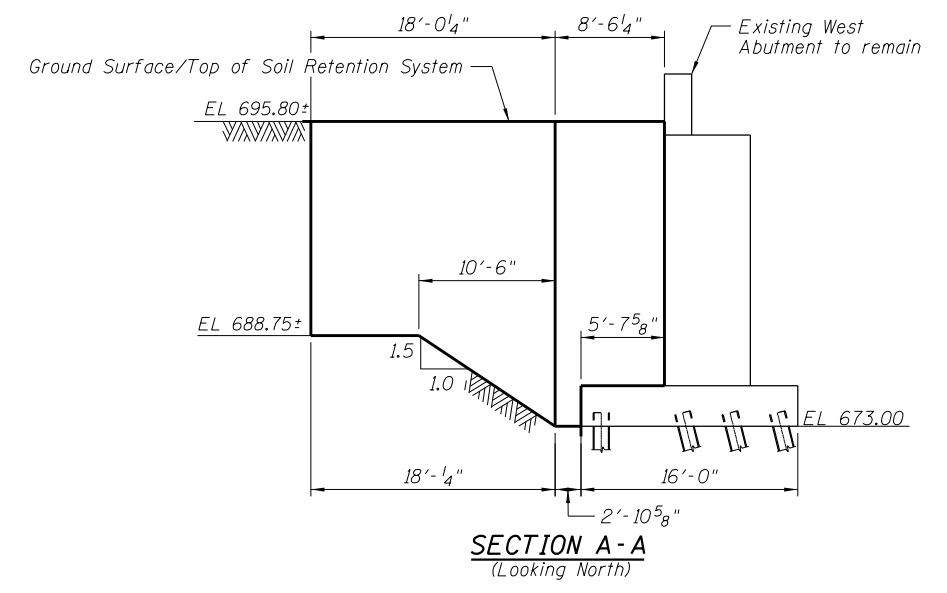
**TEMP. RETAINING WALL
REMOVAL SEQUENCE**

1. Remove section (A), approximate length = ±11'-9"
2. Remove section (B), approximate length = ±28'-6"

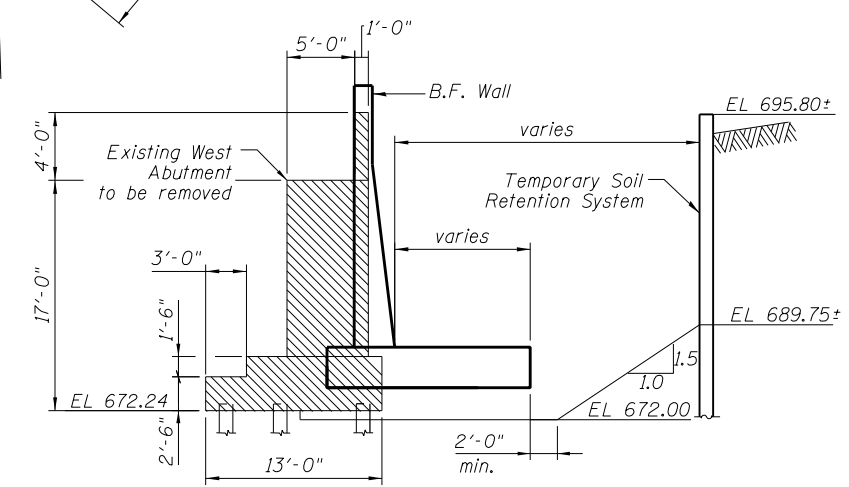
REMOVAL PLAN



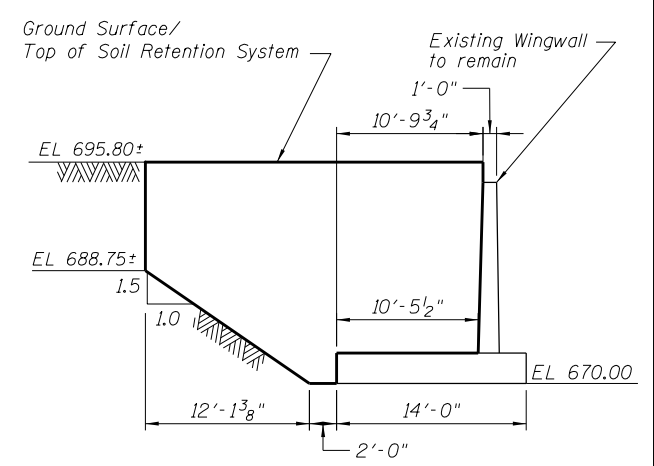
REMOVAL ELEVATION
(Looking West, Existing Only)



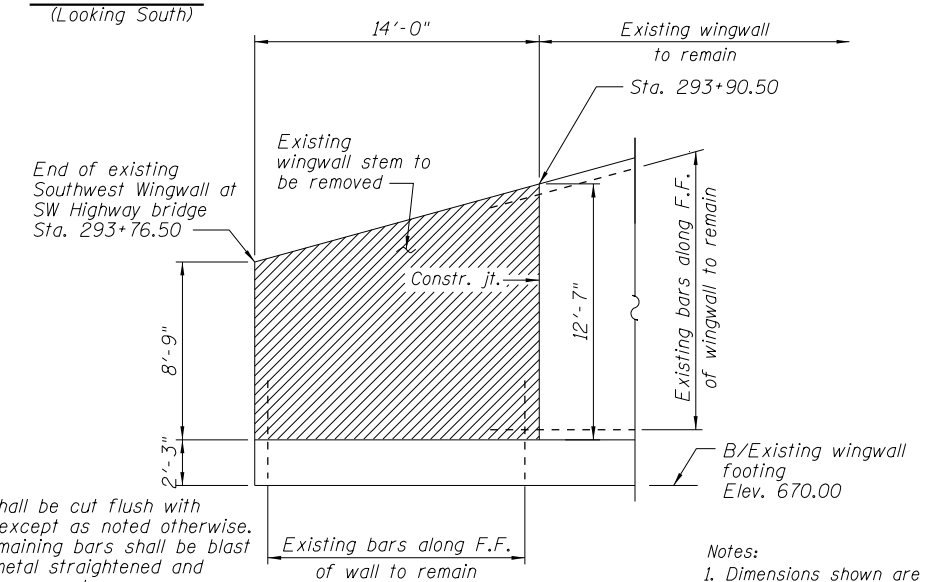
SECTION A-A
(Looking North)



SECTION B-B
(Looking South)



SECTION C-C
(Looking North)



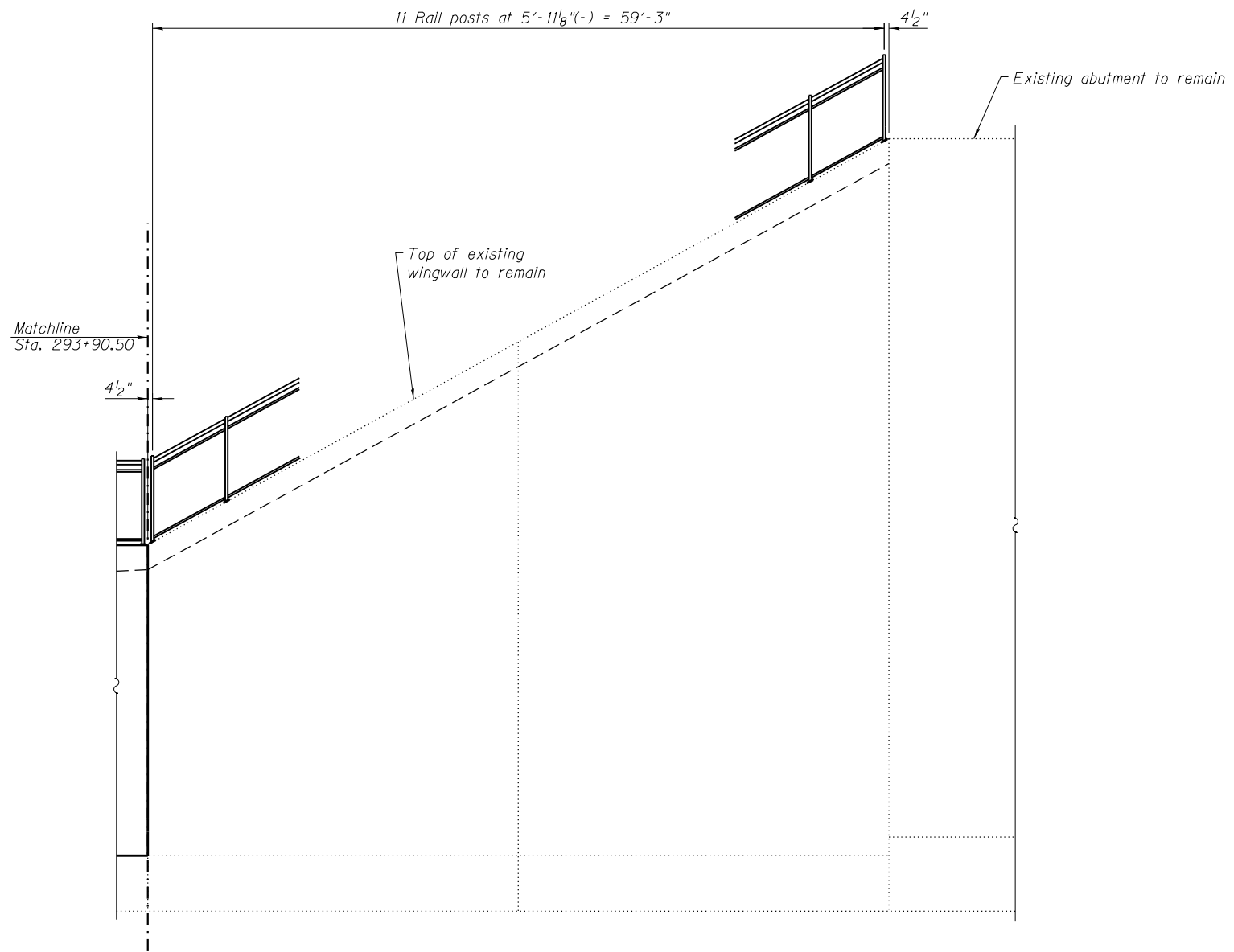
SECTION D-D
(Looking West)

Notes:
Existing bars shall be cut flush with removal concrete except as noted otherwise.
Any existing remaining bars shall be blast cleaned to grey, metal straightened and incorporated with new work.

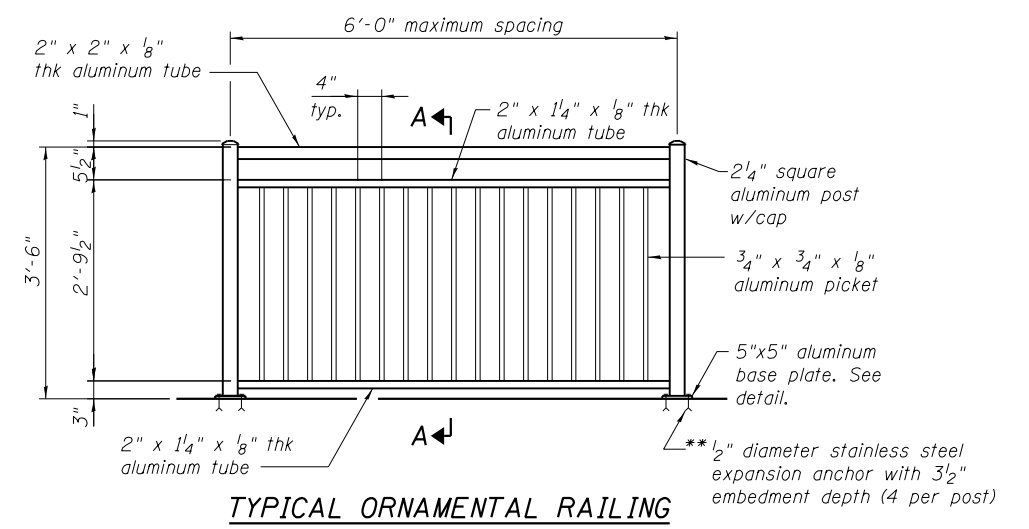
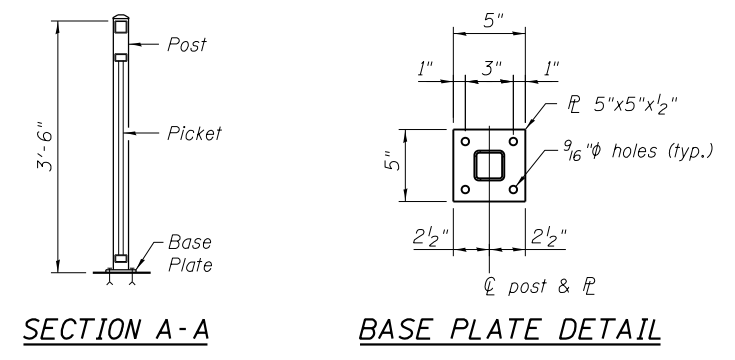
Notes:
1. Dimensions shown are along sheeting as shown in plan view.
2. "Concrete Removal" quantity based on existing drawings, Contractor to verify dimensions in field.

URS
100 S. WACKER DR.
SUITE 600
CHICAGO, IL 60606
TEL (312) 939-1000
FAX (312) 939-4998

FILE NAME = 0162003-60M62-005-Removal.dgn	USER NAME = Anthony.Plutz	DESIGNED - MJL	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVAL PLAN AND SOIL RETENTION SYSTEM STRUCTURE NO. 016-2003	F.A.P. RTE. = 330	SECTION = 103R-5	COUNTY = COOK	TOTAL SHEETS = 778	SHEET NO. = 407	
PLOT SCALE = 1/4" = 1'-0"	DRAWN - MJL/AMV	CHECKED - MGB	REVISIONS -			CONTRACT NO. 60M62					
PLOT DATE = 3/13/2013	CHECKED - MGB	REVISIONS -	REVISIONS -			SHEET NO. 5 OF 7 SHEETS					
ILLINOIS FED. AID PROJECT											



WINGWALL ELEVATION
(Front Face shown)



** At existing wall, Contractor shall drill and set 1/2" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

URS
100 S. WACKER DR.
SUITE 600
CHICAGO, IL 60606
TEL (312) 939-1000
FAX (312) 939-4198

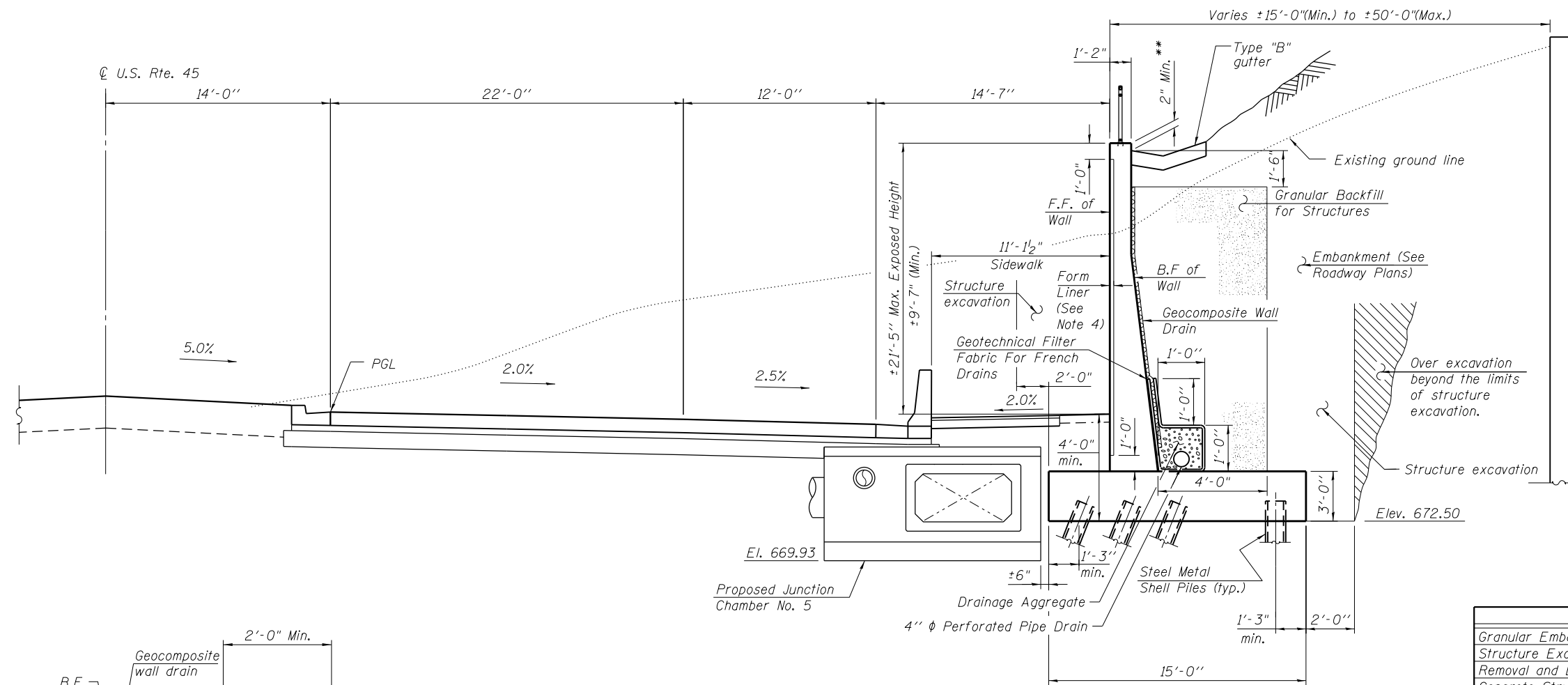
FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
0162003-60M62-006-Rail.dgn		CHECKED - NRP	REVISED -
	PLOT SCALE = 12,500' / 1" =	DRAWN - PMH	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - NRP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RAILING DETAILS
STRUCTURE NO. 016-2003

SHEET NO. 6 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	408
CONTRACT NO. 60M62			ILLINOIS FED. AID PROJECT	



INDEX OF SHEETS

1. General Plan and Elevation
2. General Details and Total Bill of Material
3. Retaining Wall Plan and Elevation
4. Sections and Details 1
5. Sections and Details 2
6. Soil Retention Plan and Section
7. Railing Details
8. Metal Shell Pile Details
9. Soil Borings 1
10. Soil Borings 2

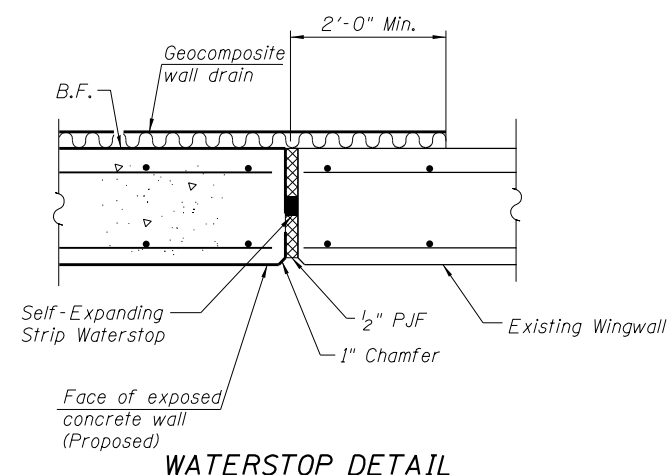
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Granular Embankment, Special	Cu. Yd.	53
Structure Excavation	Cu. Yd.	1,654
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	53
Concrete Structures	Cu. Yd.	329.0
Form Liner Textured Surface	Sq. Ft.	1,676
Reinforcement Bars, Epoxy Coated	Pound	34,450
Furnishing Metal Shell Piles 14" x 0.250"	Foot	1,006
Driving Piles	Foot	1,006
Test Pile Metal Shells	Each	1
Geocomposite Wall Drain	Sq. Yd.	191
Granular Backfill for Structures	Cu. Yd.	312
Ornamental Railing	Foot	176
Pipe Underdrains for Structures 4"	Foot	122
Temporary Soil Retention System	Sq. Ft.	1,073

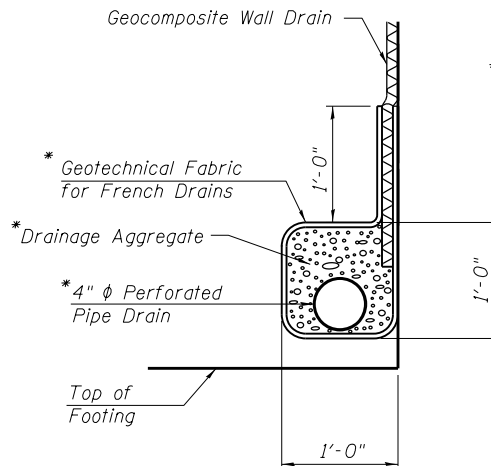
SECTION THRU RETAINING WALL

(Piles only used at Panels 1 and 2)

** Slope gutter to meet inlet rim elevation (See Sheet 1)



WATERSTOP DETAIL



PIPE UNDERDRAIN DETAIL

* Included in the cost of "Pipe Underdrains for Structures 4."

Note: Connect pipe underdrain to existing abutment underdrain. See drainage plans for details.

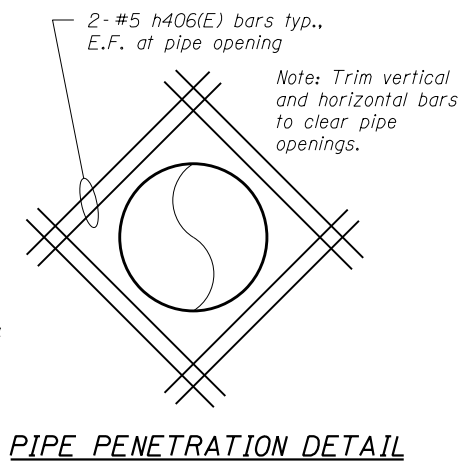
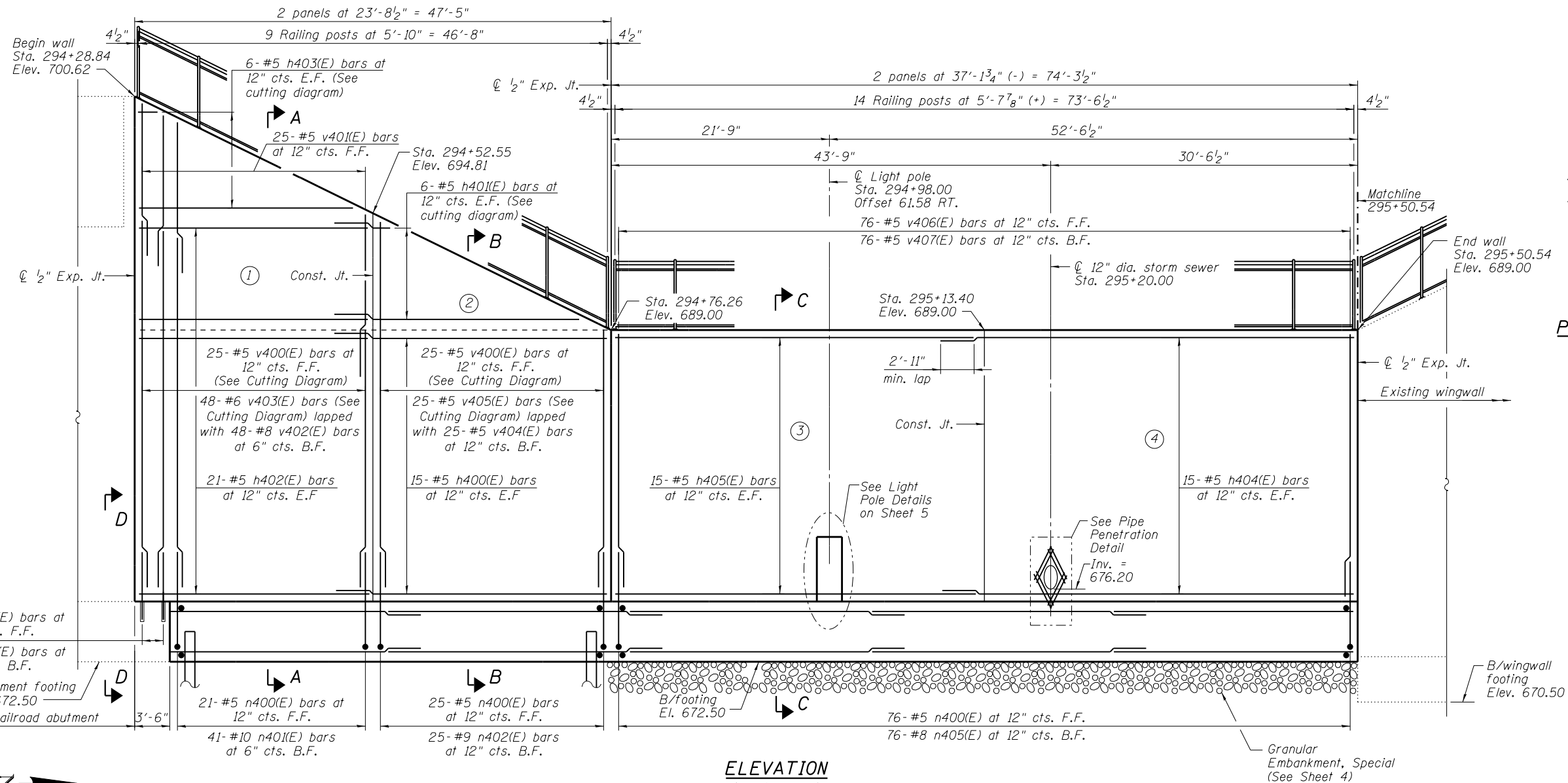
GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Construction joints shall be bonded.
3. The back face of Retaining Wall shall be waterproofed according to Article 503.18 of the Standard Specifications.
4. The form liner shall be a random Ashlar blend pattern consisting of the following block sizes:
 1. 28% - 4" X 18"
 2. 16% - 8" X 8"
 3. 28% - 8" X 11"
 4. 28% - 8" X 18"

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FAX (312) 939-4998



FILE NAME = 0162004-60M62-002-GND.dgn	USER NAME = Anthony.Plutz	DESIGNED - MJL	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DETAILS AND TOTAL BILL OF MATERIAL STRUCTURE NO. 016-2004	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 411
PLOT SCALE = 8.3333' / in.	DRAWN - AMV	REVISIONS -	CONTRACT NO. 60M62							
PLOT DATE = 3/13/2013	CHECKED - MJL	REVISIONS -	ILLINOIS FED. AID PROJECT							
SHEET NO. 2 OF 10 SHEETS										

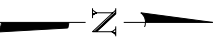


ELEVATION
(Looking West)

PILE DATA

Type: Metal Shell 14" ϕ w/0.25" walls
 Nominal Required Bearing: 360 kips
 Allowable Resistance Available: 120 kips
 Est. Length: 32' (Vertical)
 Est. Length: 34' (Battered)
 No. Production Piles: 30
 No. Test Piles: 1

Notes:
 Wall stations, offsets and dimensions are measured at front face of wall.
 All exposed corners shall have a 1" chamfer.
 For Sections see Sheet 4.
 For Bar Cutting Diagrams and Bill of Material see Sheet 5.
 For Railing Details see Sheet 7.
 For Light Pole Details see Sheet 5.



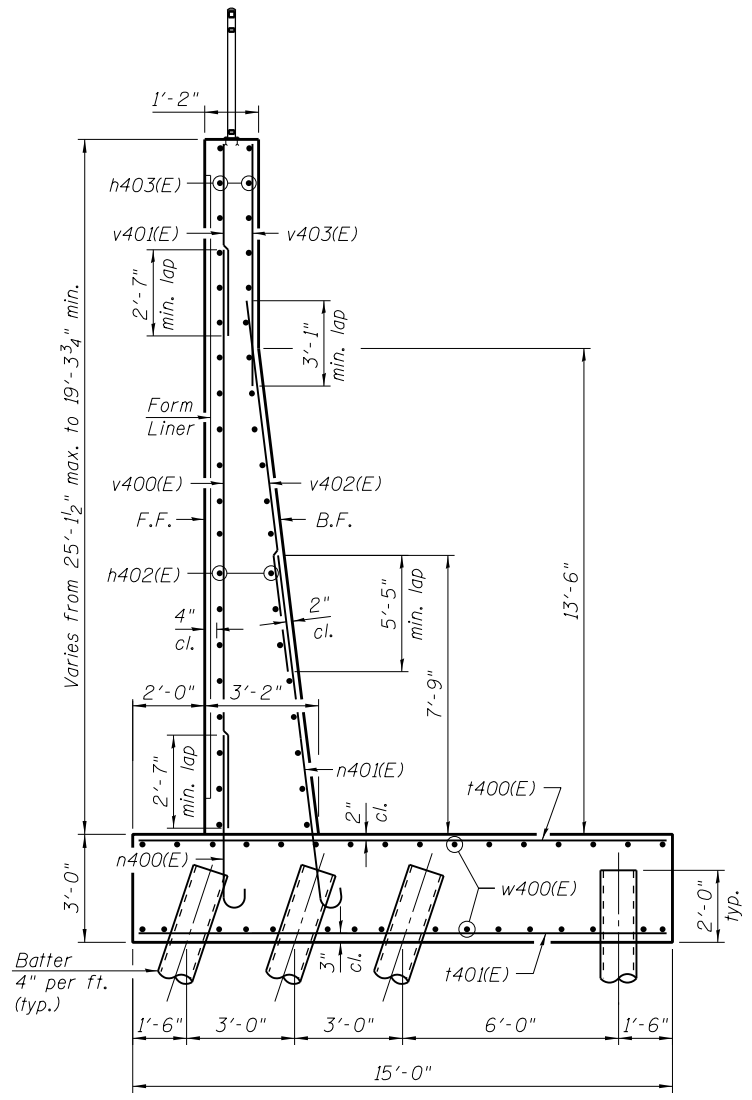
LEGEND

- Vertical Piles
- Battered Piles

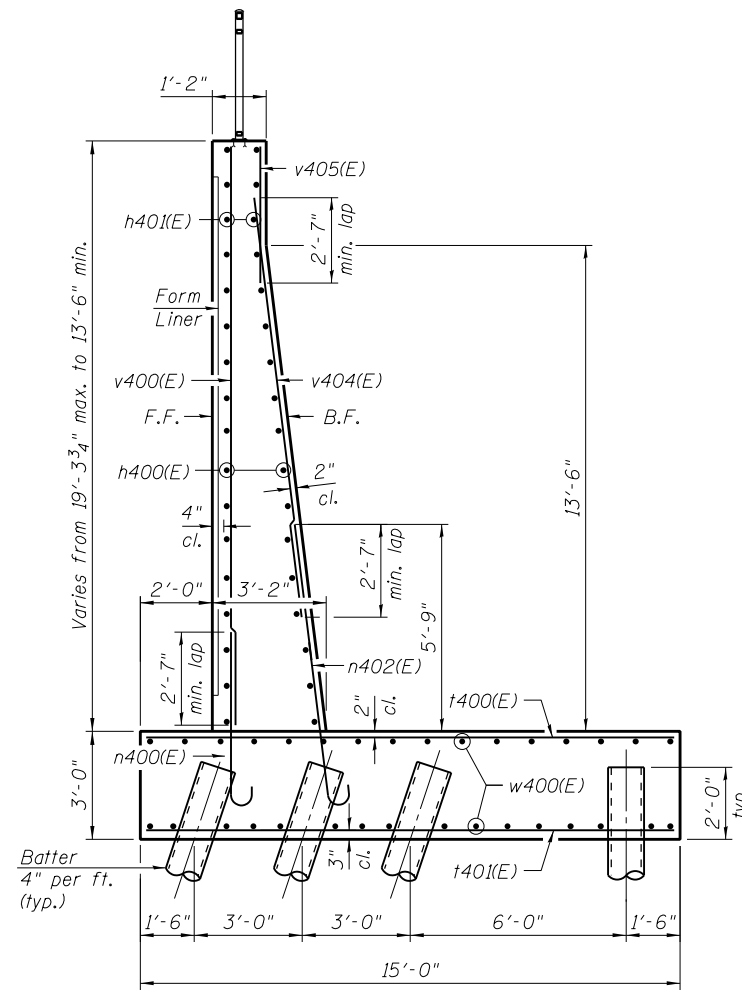
FOOTING PLAN

100 S. WACKER DR.
 CHICAGO, IL 60606
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 FAX (312) 939-4998
URS

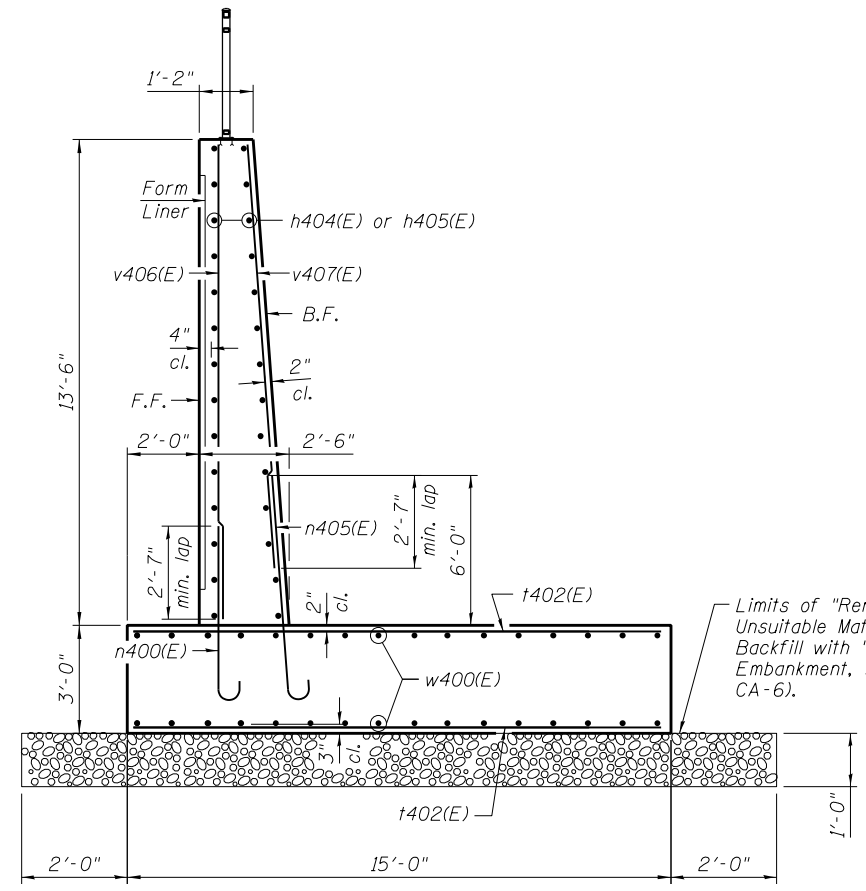
FILE NAME = 0162004-60M62-003-pln.dgn	USER NAME = Anthony.Plutz	DESIGNED - MJL	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RETAINING WALL PLAN AND ELEVATION STRUCTURE NO. 016-2004	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 412	
PLOT SCALE = 1/2" = 1'-0"	PLOT DATE = 3/13/2013	CHECKED - NPP	REVISD -			CONTRACT NO. 60M62					
		DRAWN - AMV	REVISD -			ILLINOIS FED. AID PROJECT					
		CHECKED - MJL	REVISD -			SHEET NO. 3 OF 10 SHEETS					



SECTION A-A
(Panel 1)



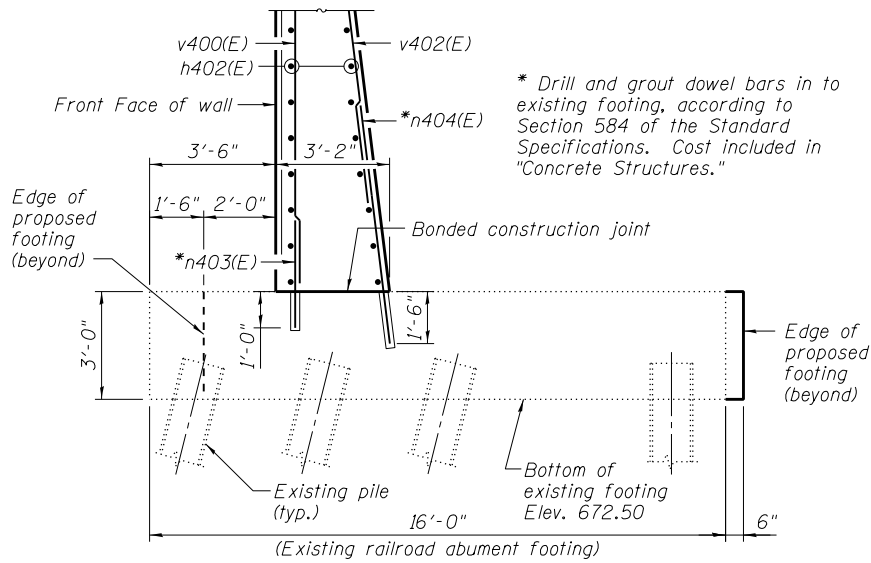
SECTION B-B
(Panel 2)



SECTION C-C
(Panels 3 and 4)

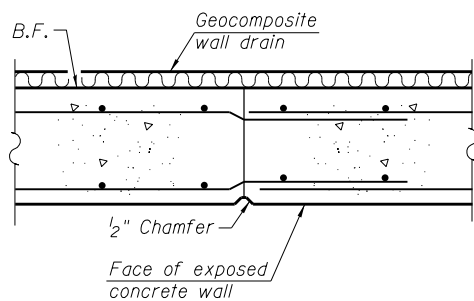
Maximum Applied Bearing Pressure = 3.20ksf

Limits of "Removal and Disposal of Unsuitable Material for Structures." Backfill with "Granular Embankment, Special" (compacted CA-6).

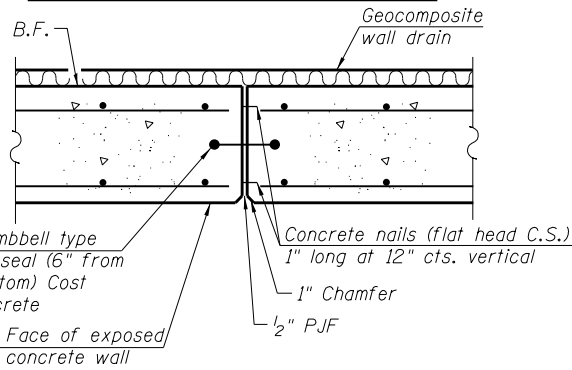


SECTION D-D

* Drill and grout dowel bars in to existing footing, according to Section 584 of the Standard Specifications. Cost included in "Concrete Structures."

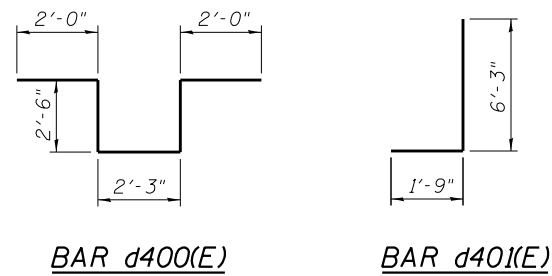


CONSTRUCTION JOINT DETAIL

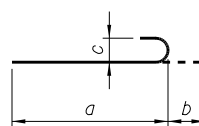


EXPANSION JOINT DETAIL

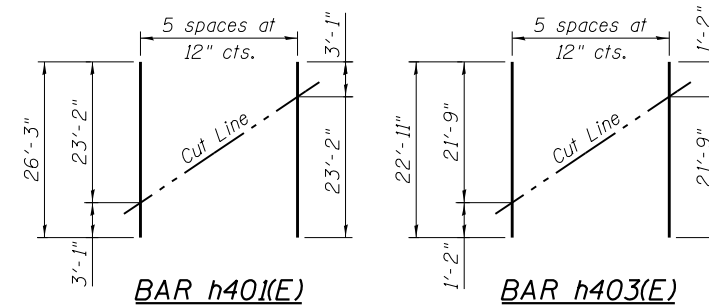
6" Hollow bulb dumbbell type nonmetallic water seal (6" from top of wall to bottom) Cast included with Concrete Structures
 Concrete nails (flat head C.S.) 1" long at 12" cts. vertical
 1" Chamfer
 1/2" P.J.F.
 Face of exposed concrete wall



Bar	a	b	c
n400(E)	5'-6"	7"	5"
n401(E)	10'-5"	1'-5"	1'-1 1/4"
n402(E)	8'-6"	1'-3"	11 3/4"
n405(E)	8'-11"	11"	8"



BARS n400(E), n401(E), n402(E) and n405(E)

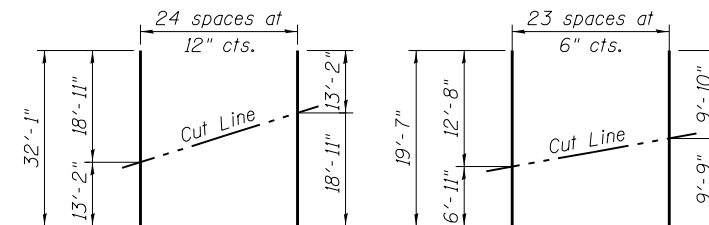


BAR h401(E)

Order h401(E) bars full length. Cut as shown and use remainder of bars in opposite face of panel.

BAR h403(E)

Order h403(E) bars full length. Cut as shown and use remainder of bars in opposite face of panel.

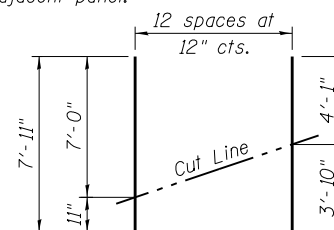


BAR v400(E)

Order v400(E) bars full length. Cut as shown and use remainder in F.F. of adjacent panel.

BAR v403(E)

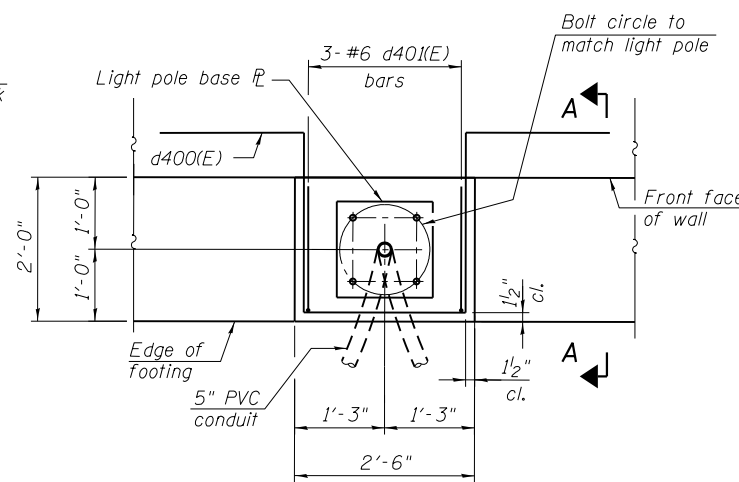
Order v403(E) bars full length. Cut as shown and use all in B.F. of panel.



BAR v405(E)

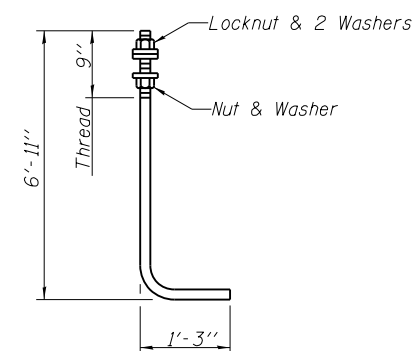
Order v405(E) bars full length. Cut as shown and use all in B.F. of panel.

CUTTING DIAGRAMS



PLAN

Note:
 Cost of anchor rods, conduit and ground rods are included with Concrete Structures.



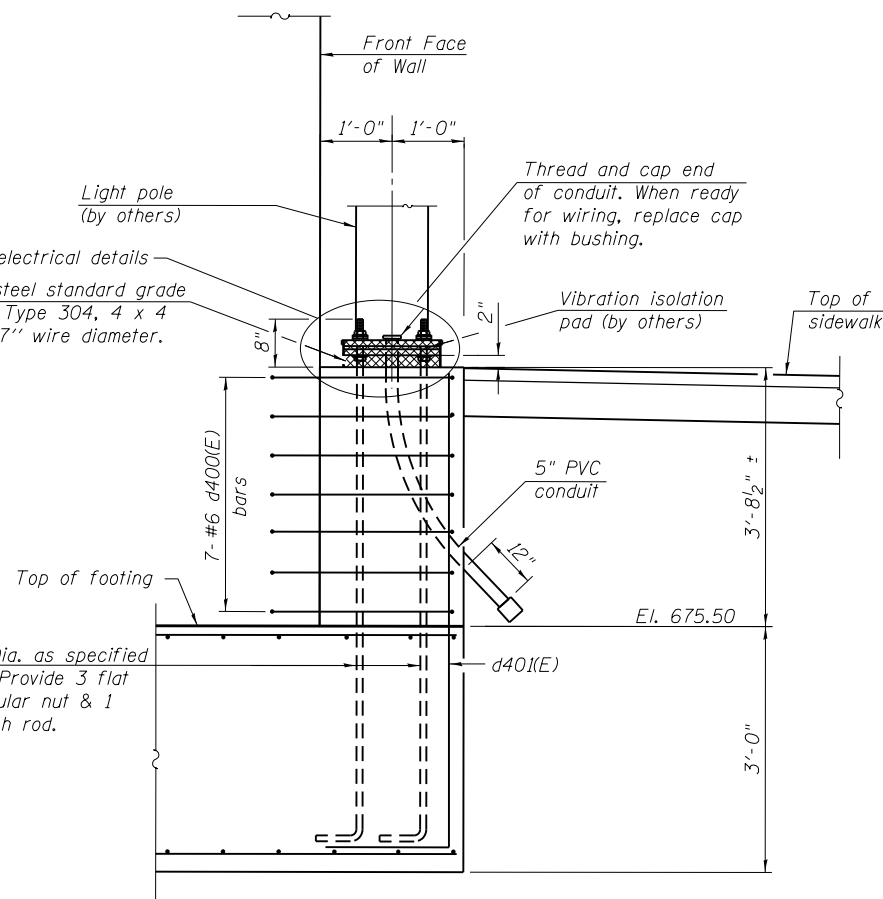
ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105)

WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d400(E)	7	#6	11'-3"	U
d401(E)	3	#6	8'-0"	L
h400(E)	30	#5	26'-8"	—
h401(E)	6	#5	26'-3"	—
h402(E)	42	#5	23'-4"	—
h403(E)	6	#5	22'-11"	—
h404(E)	30	#5	40'-1"	—
h405(E)	30	#5	36'-9"	—
h406(E)	16	#5	2'-11"	—
n400(E)	122	#5	6'-1"	U
n401(E)	41	#10	11'-10"	U
n402(E)	25	#9	9'-9"	U
n403(E)	4	#5	3'-9"	—
n404(E)	7	#10	9'-3"	—
n405(E)	76	#8	9'-10"	U
t400(E)	89	#9	14'-8"	—
t401(E)	65	#5	14'-8"	—
t402(E)	300	#7	14'-8"	—
v400(E)	25	#5	32'-1"	—
v401(E)	25	#5	8'-8"	—
v402(E)	48	#8	13'-2"	—
v403(E)	24	#6	19'-7"	—
v404(E)	25	#5	12'-0"	—
v405(E)	13	#5	7'-11"	—
v406(E)	76	#5	13'-2"	—
v407(E)	76	#5	11'-11"	—
w400(E)	160	#5	26'-0"	—
Concrete Structures		Cu. Yd.	329.0	
Reinforcement Bars, Epoxy Coated		Pound	34,450	

Bars indicated thus 14 x 2-#5 etc. indicates 14 lines of bars with 2 lengths per line.



SECTION A-A

LIGHT POLE DETAILS

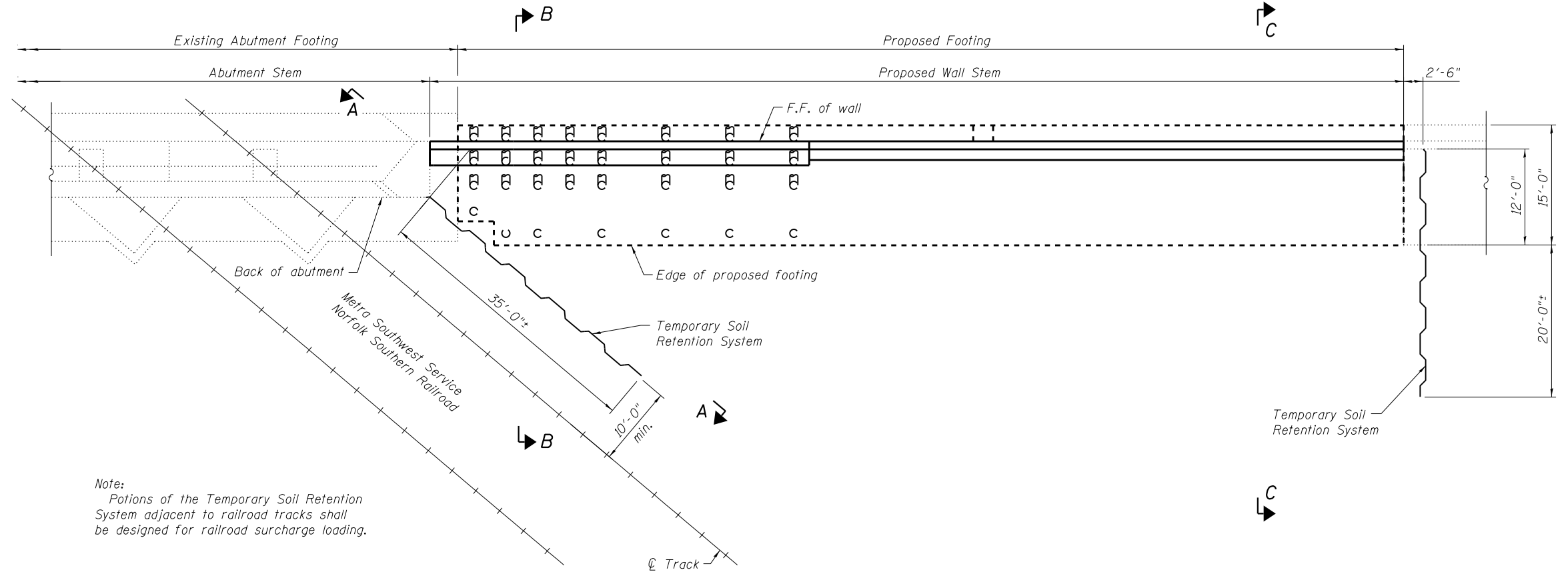
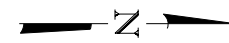
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		CHECKED - NPP	REVISED -
		DRAWN - AMV	REVISED -
		CHECKED - MJL	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTIONS AND DETAILS 2 STRUCTURE NO. 016-2004

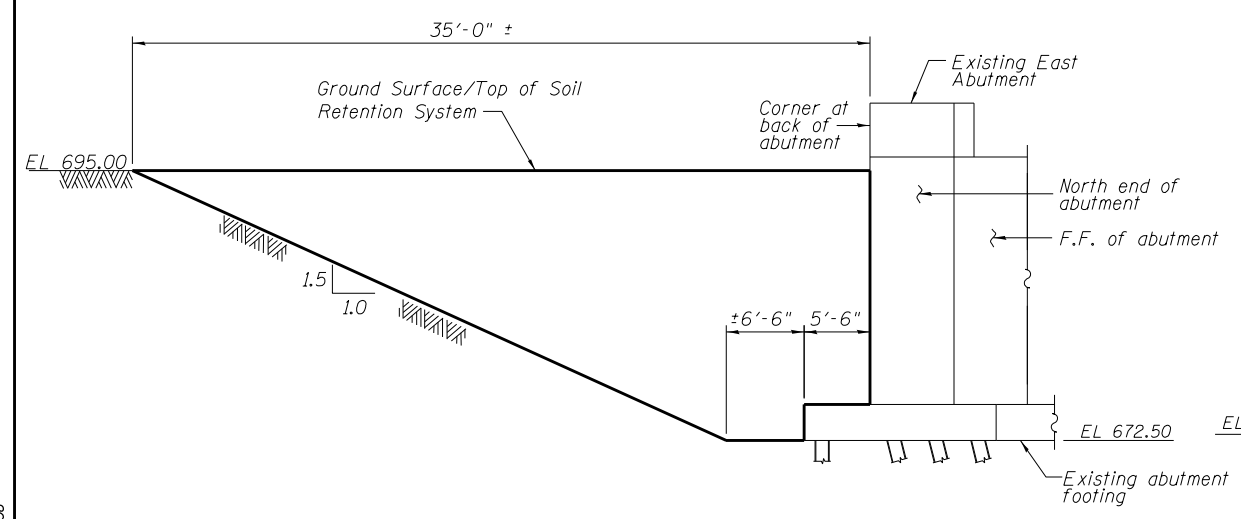
SHEET NO. 5 OF 10 SHEETS

F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 414
CONTRACT NO. 60M62				ILLINOIS FED. AID PROJECT

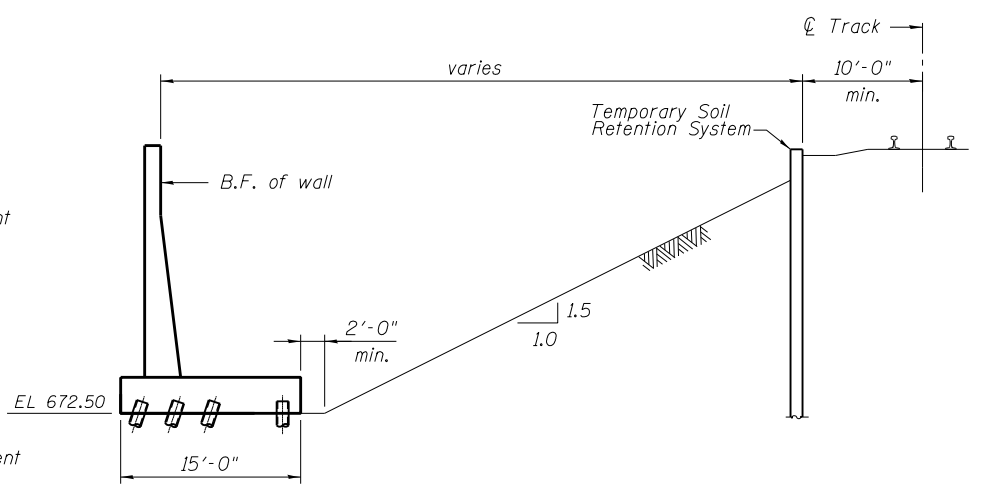


Note:
Portions of the Temporary Soil Retention System adjacent to railroad tracks shall be designed for railroad surcharge loading.

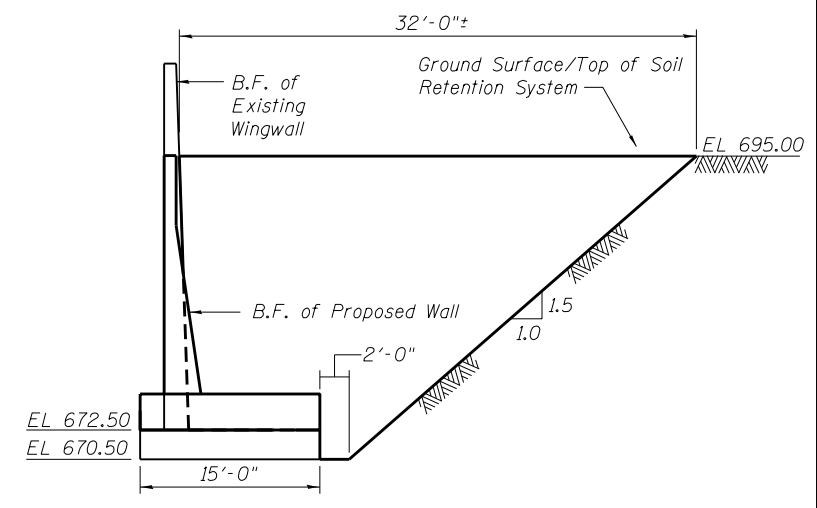
PLAN



SECTION A-A



SECTION B-B



SECTION C-C

100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4998
URS

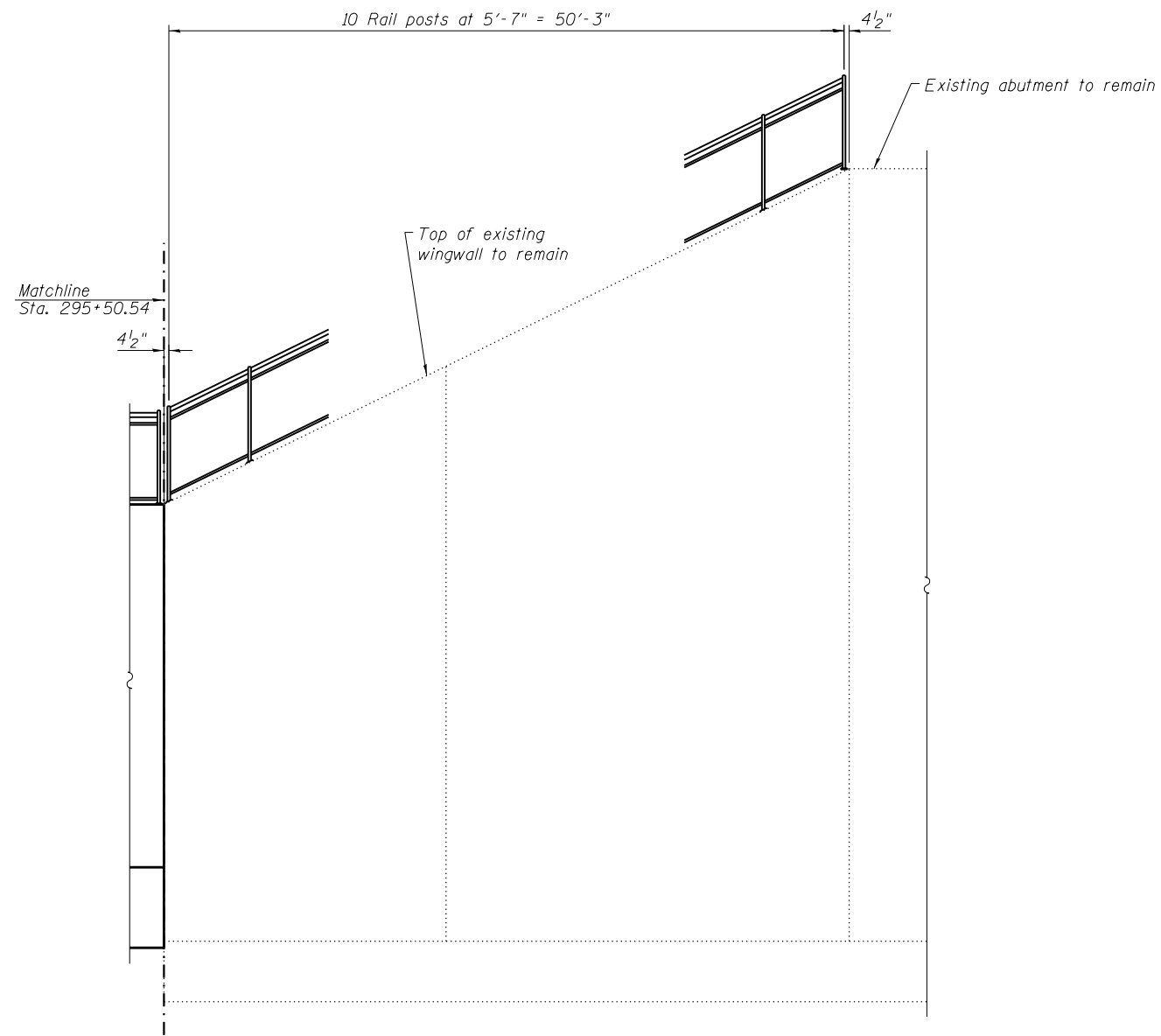
FILE NAME = 0162004-60M62-006-Retention.dgn	USER NAME = Anthony.Plutz	DESIGNED - MAI	REVISED -
		CHECKED - NPP	REVISED -
	PLOT SCALE = 1/8" = 1' / in.	DRAWN - AMV	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - NPP	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

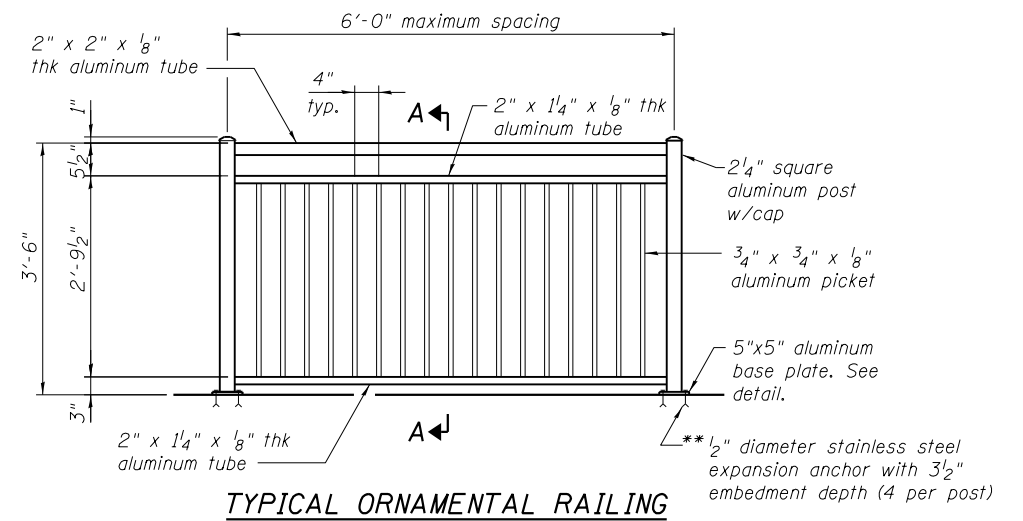
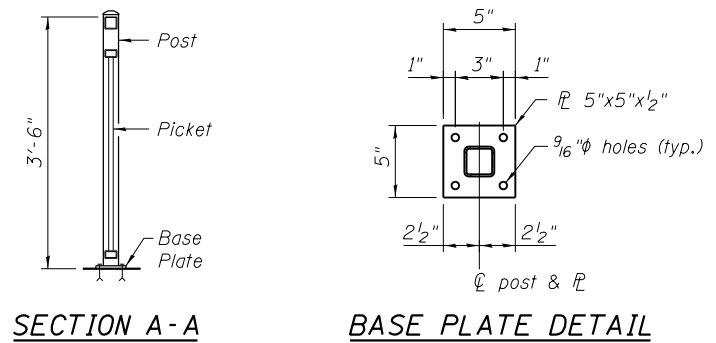
**SOIL RETENTION PLAN AND SECTION
STRUCTURE NO. 016-2004**

SHEET NO. 6 OF 10 SHEETS

F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 415
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



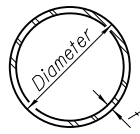
WINGWALL ELEVATION
(Front Face shown)



** At existing wall, Contractor shall drill and set 1/2" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

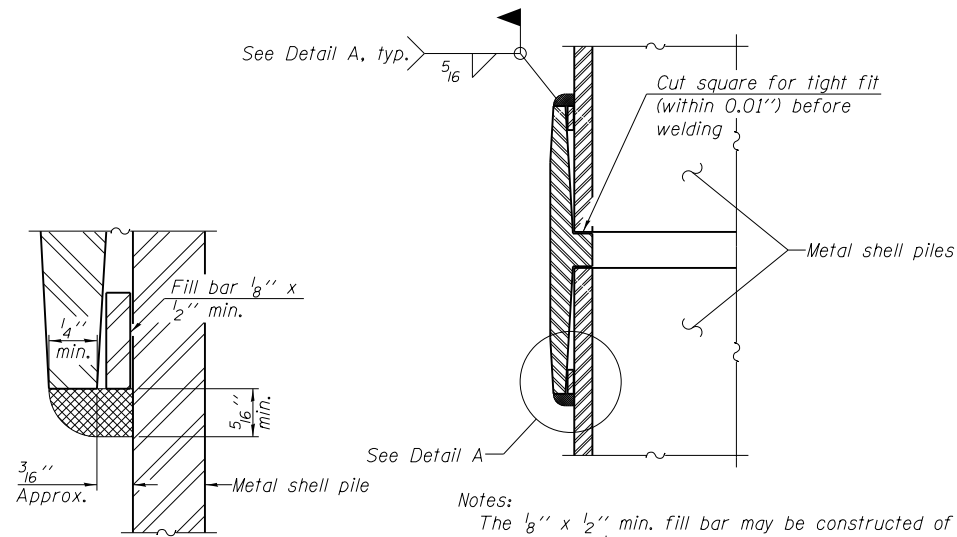
FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
0162004-60M62-007-rail.dgn		CHECKED - NPP	REVISED -
	PLOT SCALE = 12,500' / 1" =	DRAWN - PMH	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - NPP	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	416
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



METAL SHELL PILE TABLE

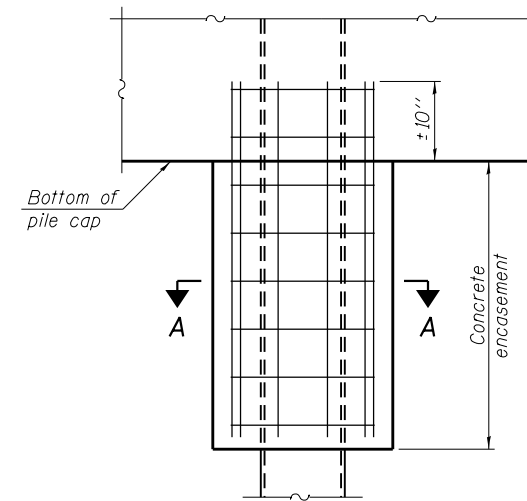
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



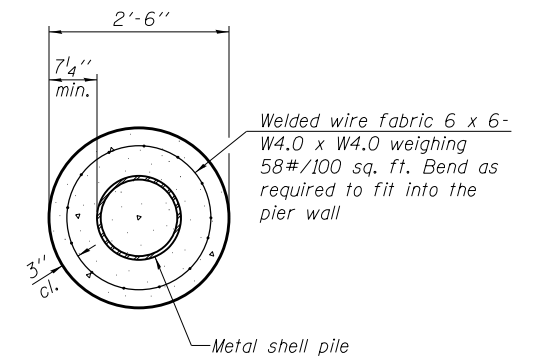
DETAIL A

Notes:
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



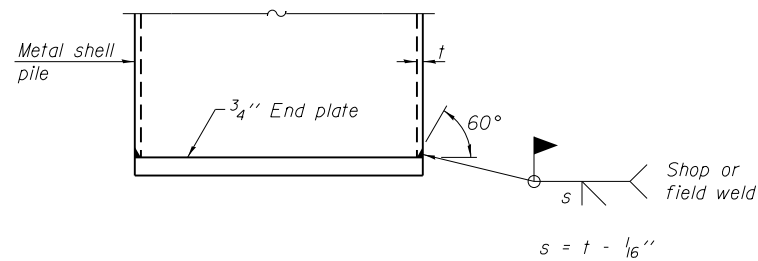
ELEVATION



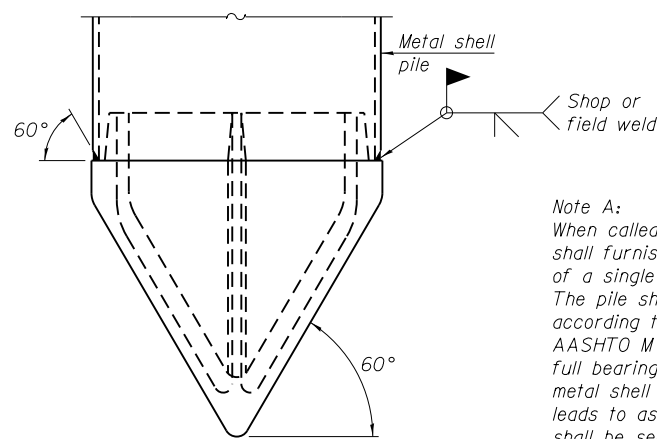
SECTION A-A

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

CONCRETE ENCASEMENT AT PIERS



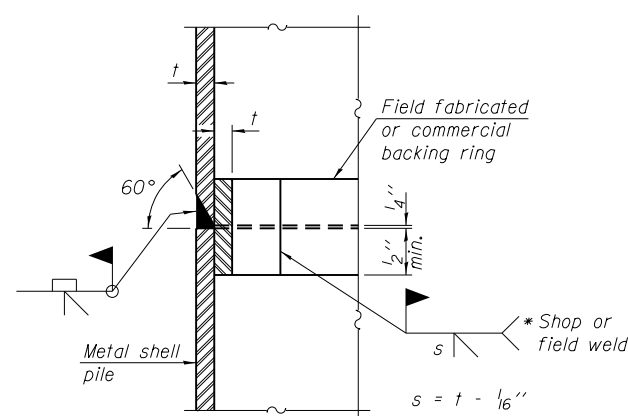
END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

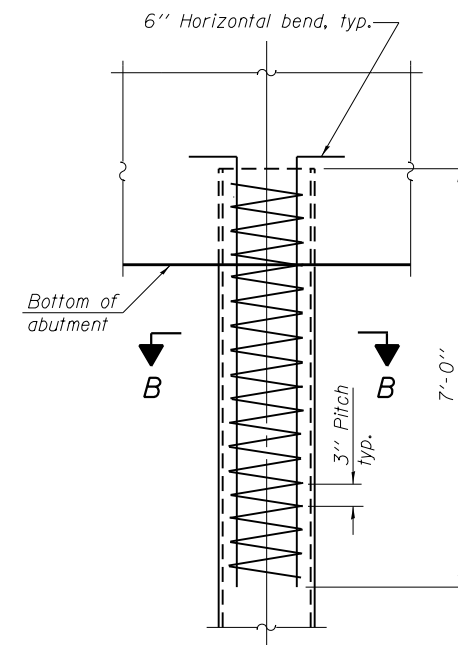
(See Note A)

Note A:
 When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



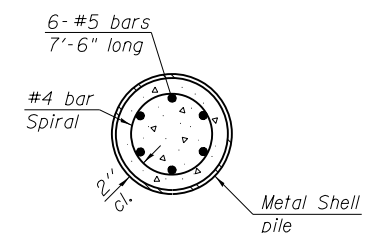
COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION

METAL SHELL REINFORCEMENT AT ABUTMENTS



SECTION B-B

Note:
 The metal shell piles shall be according to ASTM A 252 Grade 3.

FILE NAME = 0162004-60M62-008-Piles.dgn	USER NAME = Anthony.Plutz	DESIGNED - MJL	REVISED -
		CHECKED - NPP	REVISED -
	PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - AMV	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - MJL	REVISED -

F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 417
CONTRACT NO. 60M62				ILLINOIS FED. AID PROJECT

ILLINOIS DEPARTMENT OF TRANSPORTATION STRUCTURE BORING LOG									
ROUTE _____ DESCRIPTION Metra Bridge over LaGrange Road		Page 1 of 2 Date 9/9/04							
SECTION _____ STRUCTURE NO. _____		DRILLED BY SEECO Consultants Inc./GF							
COUNTY Cook LOCATION Orland Park, IL									
Boring No. B-6	D	B		Surf. Wat. El. N.A.	D	B			
Station _____	E	L		Groundwater Elev.: _____	E	L			
Offset _____	P	O		When Drilling 27' (666.3)	P	O			
	T	W	QU	at Completion 19' (674.3)	T	W	QU	W	
	H	S	%	After _____ Hrs	H	S	%		
Surface El. +693.25 +/- M.S.L.									
CLAY LOAM, Brown, Trace Sand, Trace Fine Gravel, Very Stiff to Hard, Moist (A-6)	1.0			42.0					
CLAY LOAM, Brown, Trace Gray, Trace Sand, Trace Fine Gravel, Hard, Moist (A-6)	2.0	15	4.5 P	43.0					
CLAY LOAM, Brown, Trace Gray, Trace Sand, Trace Fine Gravel, Trace Shale, Very Stiff, Moist (A-6)	3.0			44.0	18		19.6		
CLAY LOAM, Brown, Trace Gray, Trace Sand, Trace Fine Gravel, Trace Shale, Very Stiff, Moist (A-6)	4.0			45.0					
CLAY LOAM, Brown, Trace Gray, Trace Sand, Trace Fine Gravel, Trace Shale, Very Stiff, Moist (A-6)	5.0	8	2.0 P	46.0					
CLAY, Brown, Trace Sand, Trace Fine Gravel, Hard to Very Stiff, Moist (A-6)	6.0			47.0					
CLAY, Brown, Trace Sand, Trace Fine Gravel, Hard to Very Stiff, Moist (A-6)	7.0			48.0					
CLAY, Brown, Trace Sand, Trace Fine Gravel, Hard to Very Stiff, Moist (A-6)	8.0	17	4.5 P	49.0	25		23.7		
CLAY, Brown, Trace Sand, Trace Fine Gravel, Hard to Very Stiff, Moist (A-6)	9.0			50.0					
CLAY, Brown, Trace Sand, Trace Fine Gravel, Hard to Very Stiff, Moist (A-6)	10.0			51.0					
CLAY, Brown, Trace Sand, Trace Fine Gravel, Hard to Very Stiff, Moist (A-6)	11.0	14	2.3 P	52.0					
CLAY, Brown, Trace Sand, Trace Fine Gravel, Hard to Very Stiff, Moist (A-6)	12.0			53.0					
CLAY, Brown, Trace Sand, Trace Fine Gravel, Hard to Very Stiff, Moist (A-6)	13.0			54.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	14.0	12	2.7 B	55.0			21.1		
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	15.0			56.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	16.0			57.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	17.0			58.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	18.0			59.0	45		24.2		
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	19.0	9	2.5 P	60.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	20.0			61.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	21.0			62.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	22.0			63.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	23.0			64.0	49		18.5		
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	24.0	9	3.1 B	65.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	25.0			66.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	26.0			67.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	27.0			68.0					
CLAY, Gray, Trace Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)	28.0			69.0					
SILT, Gray, Trace Fine Gravel, Trace Sand, Medium Dense, Moist (A-4)	29.0	18		70.0	53		18.3		
SILT, Gray, Trace Fine Gravel, Trace Sand, Medium Dense, Moist (A-4)	30.0			71.0					
SILT, Gray, Trace Fine Gravel, Trace Sand, Medium Dense, Moist (A-4)	31.0			72.0					
SILT, Gray, Trace Fine Gravel, Trace Sand, Medium Dense, Moist (A-4)	32.0			73.0					
SILT, Gray, Trace Fine Gravel, Trace Sand, Medium Dense, Moist (A-4)	33.0			74.0	59		18.8		
SILT, Gray, Trace Fine Gravel, Trace Sand, Medium Dense, Moist (A-4)	34.0			75.0					
SAND, Gray, Fine Grained, Trace Fine Gravel, Medium Dense to Dense, Saturated (A-1-b)	35.0			76.0					
SAND, Gray, Fine Grained, Trace Fine Gravel, Medium Dense to Dense, Saturated (A-1-b)	36.0			77.0					
SAND, Gray, Fine Grained, Trace Fine Gravel, Medium Dense to Dense, Saturated (A-1-b)	37.0			78.0					
SAND, Gray, Fine Grained, Trace Fine Gravel, Medium Dense to Dense, Saturated (A-1-b)	38.0			79.0	51		17.9		
SAND, Gray, Fine Grained, Trace Fine Gravel, Medium Dense to Dense, Saturated (A-1-b)	39.0	34		80.0					
SAND, Gray, Fine Grained, Trace Fine Gravel, Medium Dense to Dense, Saturated (A-1-b)	40.0			81.0					
SAND, Gray, Fine Grained, Trace Fine Gravel, Medium Dense to Dense, Saturated (A-1-b)	41.0			82.0					

N=Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140lb hammer falling 30"
 (QU)B=Bluge S=Shear P=Penetration Test
 Stations, Depths, Offset, and Elevations are in Feet
 Offset is from edge of traveled Pavement
 SEECO Job No. 7947G

ILLINOIS DEPARTMENT OF TRANSPORTATION STRUCTURE BORING LOG									
ROUTE _____ DESCRIPTION Metra Bridge over LaGrange Road		Page 2 of 2 Date 9/9/04							
SECTION _____ STRUCTURE NO. _____		DRILLED BY SEECO Consultants Inc./GF							
COUNTY Cook LOCATION Orland Park, IL									
Boring No. B-6	D	B		Surf. Wat. El. N.A.	D	B			
Station _____	E	L		Groundwater Elev.: _____	E	L			
Offset _____	P	O		When Drilling 27' (666.3)	P	O			
	T	W	QU	at Completion 19' (674.3)	T	W	QU	W	
	H	S	%	After _____ Hrs	H	S	%		
Surface El. +693.25 +/- M.S.L.									
	83.0			124.0	43		10.6		
	84.0	56		125.0					
	85.0			126.0					
	86.0			127.0					
	87.0			128.0					
	88.0			129.0					
	89.0	50		130.0					
	90.0			131.0					
	91.0			132.0					
	92.0			133.0					
	93.0			134.0					
	94.0	48		135.0					
	95.0			136.0					
	96.0			137.0					
	97.0			138.0					
	98.0			139.0					
	99.0	53		140.0					
	100.0			141.0					
	101.0			142.0					
	102.0			143.0					
	103.0			144.0					
	104.0	26	3.3 P	145.0					
	105.0			146.0					
	106.0			147.0					
	107.0			148.0					
	108.0			149.0					
	109.0	34		150.0					
	110.0			151.0					
	111.0			152.0					
	112.0			153.0					
	113.0			154.0					
	114.0	23		155.0					
	115.0			156.0					
	116.0			157.0					
	117.0			158.0					
	118.0			159.0					
	119.0	30		160.0					
	120.0			161.0					
	121.0			162.0					
	122.0			163.0					
	123.0			164.0					

(QU)B=Bluge S=Shear P=Penetration Test
 Stations, Depths, Offset, and Elevations are in Feet
 Offset is from edge of traveled Pavement

100 S. WACKER DR.
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 CHICAGO, IL 60606
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 FAX (312) 939-4998
URS

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISED -
0162004-60M62-009-bor.dgn		CHECKED - NPP	REVISED -
	PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - AMV	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - NPP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS 1
STRUCTURE NO. 016-2004

SHEET NO. 9 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	418
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 3C-B-1 HA
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45**
 Location: **ORLAND PARK, T 36N, R 12E**

Datum: NGVD
 Elevation: 690.11 ft
 North: 1810320.05 ft
 East: 1115363.13 ft
 Station: 295+17.87
 Offset: 55.71 RT

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
688.1	3-inch thick, brown SILTY LOAM --TOPSOIL--	0	1	PUSH		3.00	15	688.1		0					
688.1	Very stiff, brown CLAY LOAM with some gravel --FILL--	1						688.1		1					
688.1	Very stiff, brown SILTY CLAY, trace gravel --FILL--	2				2.75	20	688.1		2					
688.1		5				2.00	19	688.1		5					
688.1		10				2.75	16	688.1		10					
682.1	Hard, brown and gray SILTY CLAY	10				4.50	20	682.1		10					
680.1	Boring terminated at 10.00 ft	10						680.1		10					

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	11-05-2010	Complete Drilling	11-05-2010
Drilling Contractor	WTS	Drill Rig	Geoprobe
Driller	R&J	Logger	N. Boddy
Checked by	C. Marin	While Drilling	DRY
Drilling Method	Hand Auger	At Completion of Drilling	DRY
		Time After Drilling	NA
		Depth to Water	NA

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

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BORING LOG 3C-B-1
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45**
 Location: **ORLAND PARK, T 36N, R 12E**

Datum: NGVD
 Elevation: 690.87 ft
 North: 1810355.15 ft
 East: 1115341.98 ft
 Station: 295+52.94
 Offset: 34.52 RT

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
677.9	Hard, brown and gray SILTY CLAY LOAM with trace gravel --FILL--	0	1	PUSH		4.00	17	677.9	Stiff to very stiff, SILTY CLAY to SILTY CLAY LOAM with trace GRAVEL	0	11		4.66	2.75	11
677.9	Very stiff to hard, brown and gray SILTY CLAY LOAM with trace gravel	2				2.00	23	677.9		2	12		4.79	1.75	12
677.9		5				4.50	23	677.9		5					
677.9		10				3.00	19	677.9		10					
677.9		15				4.25	16	677.9		15					
677.9		20				2.00	26	677.9		20					
677.9		25				4.47	16	677.9		25					
677.9		30				4.50	16	677.9		30					
677.9		35				4.68	16	677.9		35					
677.9		40				5.69	NP	677.9		40					
677.9		45						677.9		45					
677.9		50						677.9		50					

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	11-05-2010	Complete Drilling	11-05-2010
Drilling Contractor	WTS	Drill Rig	B-57 TMR
Driller	R&J	Logger	N. Boddy
Checked by	C. Marin	While Drilling	20.00 ft
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	At Completion of Drilling	17.00 ft
		Time After Drilling	NA
		Depth to Water	NA

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

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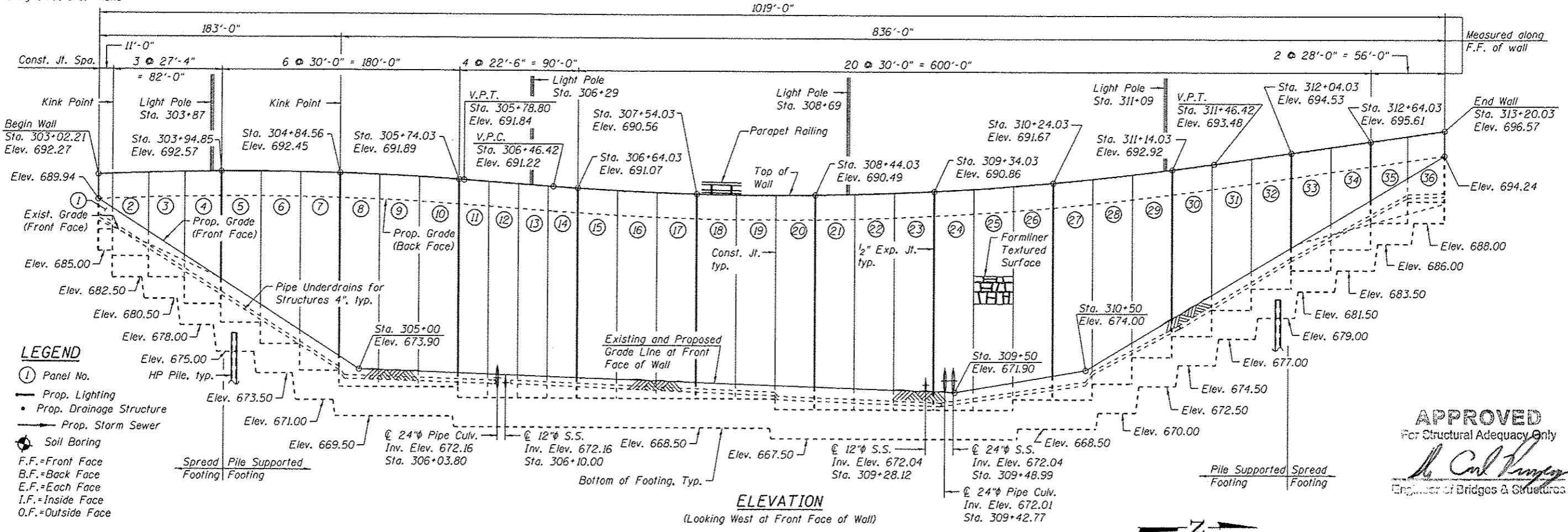
URS

FILE NAME = 0162004-60M62-010-bor.dgn	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORINGS 2 STRUCTURE NO. 016-2004	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 419
	PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - AMV	REVISIED -			CONTRACT NO. 60M62				
	PLOT DATE = 3/13/2013	CHECKED - NPP	REVISIED -			ILLINOIS FED. AID PROJECT				

SHEET NO. 10 OF 10 SHEETS

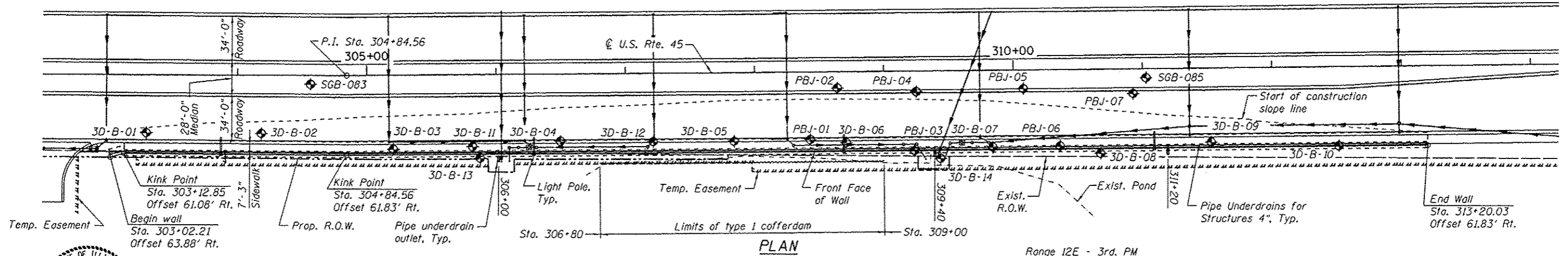
Bench Mark: Elev. 689.00 Top of brass survey monument located at the west edge of the LaGrange Road southbound pavement, 600 feet north of the SouthWest Highway bridge.

Existing Structure: None

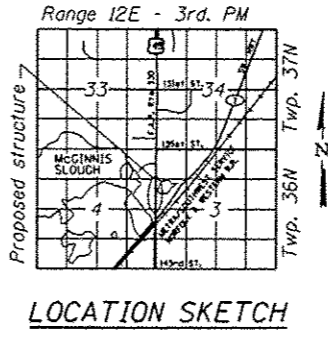


APPROVED
For Structural Adequacy Only
Carl Krueger
Engineer of Bridges & Structures

LEGEND
① Panel No.
— Prop. Lighting
• Prop. Drainage Structure
— Prop. Storm Sewer
⊕ Soil Boring
F.F.=Front Face
B.F.=Back Face
E.F.=Each Face
I.F.=Inside Face
O.F.=Outside Face



Note:
Wall offsets are measured from the @ U.S. Rte. 45 to the front face of wall.



DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

DESIGN SPECIFICATIONS
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition, with 2012 Interims

LEGEND
• Prop. Drainage Structure
— Prop. Storm Sewer
⊕ Soil Boring
F.F.=Front Face
B.F.=Back Face
E.F.=Each Face
I.F.=Inside Face
O.F.=Outside Face

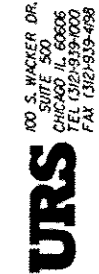
GENERAL PLAN & ELEVATION
U.S. ROUTE 45 - LAGRANGE ROAD
F.A.P. RTE. 330 SEC. 103R-5
COOK COUNTY
STATION 303+02.21 TO 313+20.03
STRUCTURE NO. 016-Z005

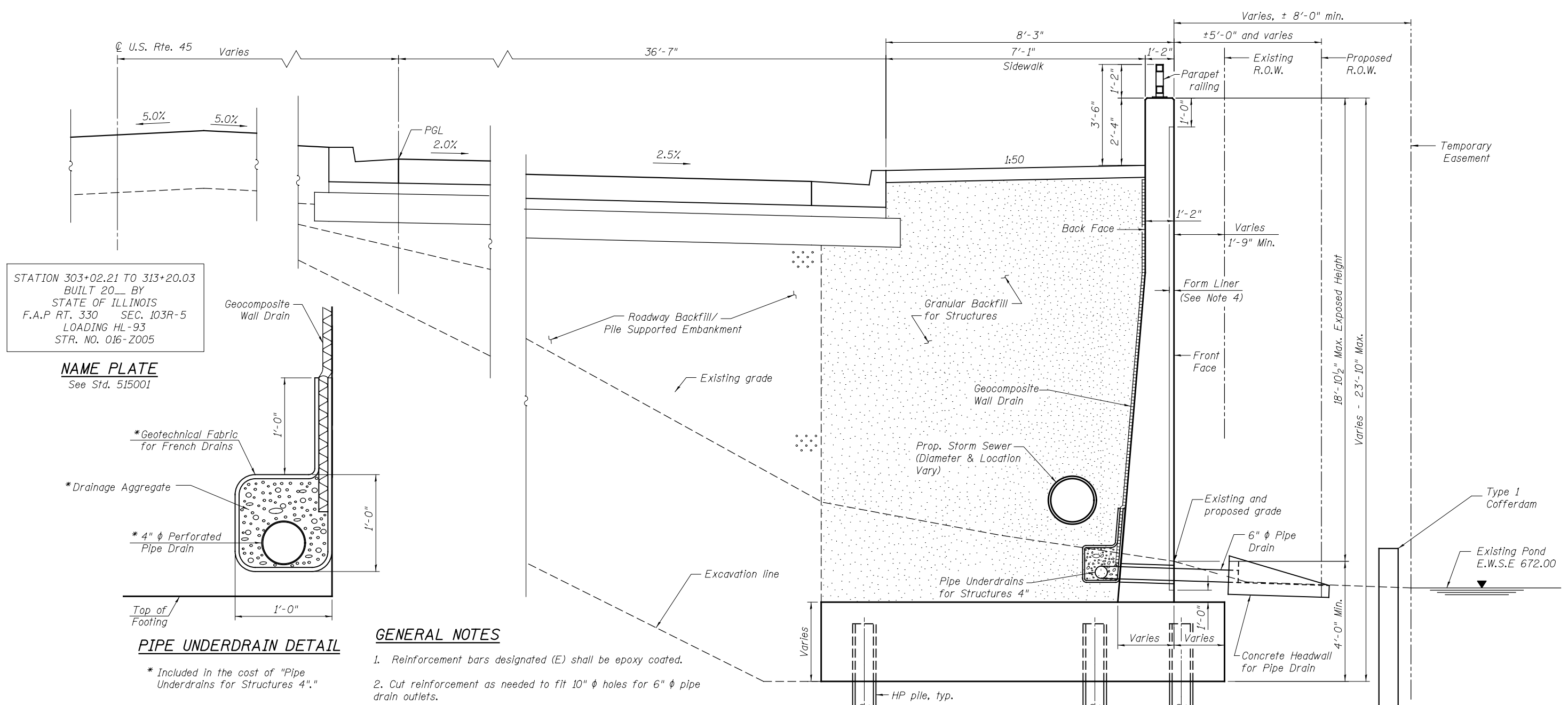


Arsalan M. Khan
ARSALAN M. KHAN, S.E.
LICENSE NO.: 081-006258
EXPIRES: NOVEMBER 30, 2014
DATE: 03-13-2013

FILE NAME : 016Z005-G0M2-001-GPE.dgn	USER NAME : Kyle.Pearl	DESIGNED - PMH	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 420
	PLOT SCALE = 800:8019 1/2" = 1"	CHECKED - MJL	REVISIONS -		SHEET NO. 1 OF 21 SHEETS	CONTRACT NO. 60M62		ILLINOIS FED. AID PROJECT	
	PLOT DATE = 3/15/2013	DRAWN - PMH	REVISIONS -						
		CHECKED - MJL	REVISIONS -						

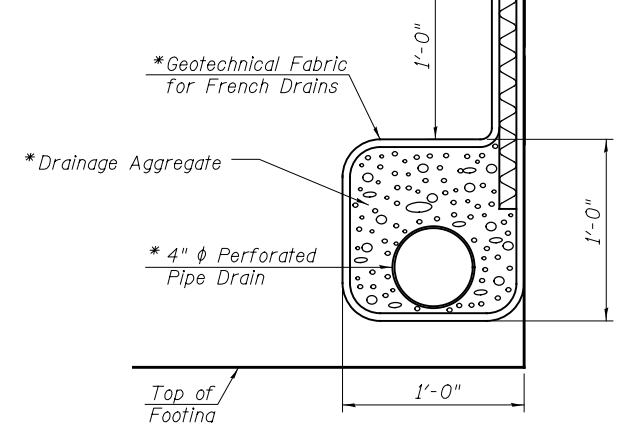
AP 8-15-2013





STATION 303+02.21 TO 313+20.03
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.P RT. 330 SEC. 103R-5
 LOADING HL-93
 STR. NO. 016-Z005

NAME PLATE
 See Std. 515001

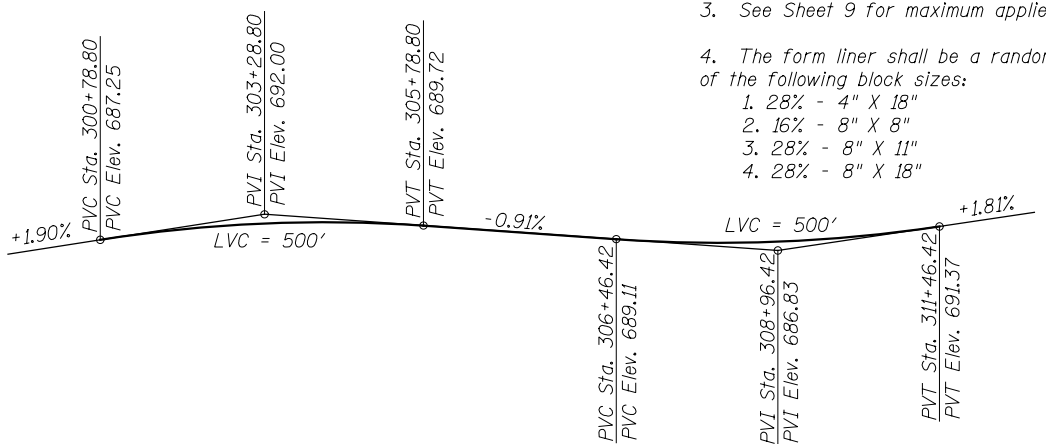


PIPE UNDERDRAIN DETAIL

* Included in the cost of "Pipe Underdrains for Structures 4".

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Cut reinforcement as needed to fit 10" ϕ holes for 6" ϕ pipe drain outlets.
3. See Sheet 9 for maximum applied service bearing pressures.
4. The form liner shall be a random Ashlar blend pattern consisting of the following block sizes:
 1. 28% - 4" X 18"
 2. 16% - 8" X 8"
 3. 28% - 8" X 11"
 4. 28% - 8" X 18"



PROFILE GRADE-PROPOSED LAGRANGE RD
 (along PGL roadway)

INDEX OF SHEETS

1. General Plan & Elevation
2. General Details & Bill of Material
3. Detailed Plan and Elevation 1
4. Detailed Plan and Elevation 2
5. Detailed Plan and Elevation 3
6. Detailed Plan and Elevation 4
7. Detailed Plan and Elevation 5
8. Detailed Plan and Elevation 6
9. Sections and Details
10. Bill of Material
11. Parapet Railing
12. HP Pile Details
13. Soil Borings 1
14. Soil Borings 2
15. Soil Borings 3
16. Soil Borings 4
17. Soil Borings 5
18. Soil Borings 6
19. Soil Borings 7
20. Soil Borings 8
21. Soil Borings 9

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	3,839
Cofferdam (Type 1) (Location - 1)	Each	1
Concrete Structures	Cu. Yd.	2,226.7
Form Liner Textured Surface	Sq. Ft.	15,205
Reinforcement Bars, Epoxy Coated	Pound	250,470
Parapet Railing	Foot	1,019
Furnishing Steel Piles HP14x73	Foot	30,110
Driving Piles	Foot	30,110
Test Pile Steel HP14x73	Each	6
Pile Shoes	Each	450
Geocomposite Wall Drain	Sq. Yd.	1,605
Granular Backfill for Structures	Cu. Yd.	4,610
Pipe Underdrains for Structures 4"	Foot	1,121
Name Plates	Each	1

100 S. WACKER DR.
 5TH FLOOR
 CHICAGO, IL 60606
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URS

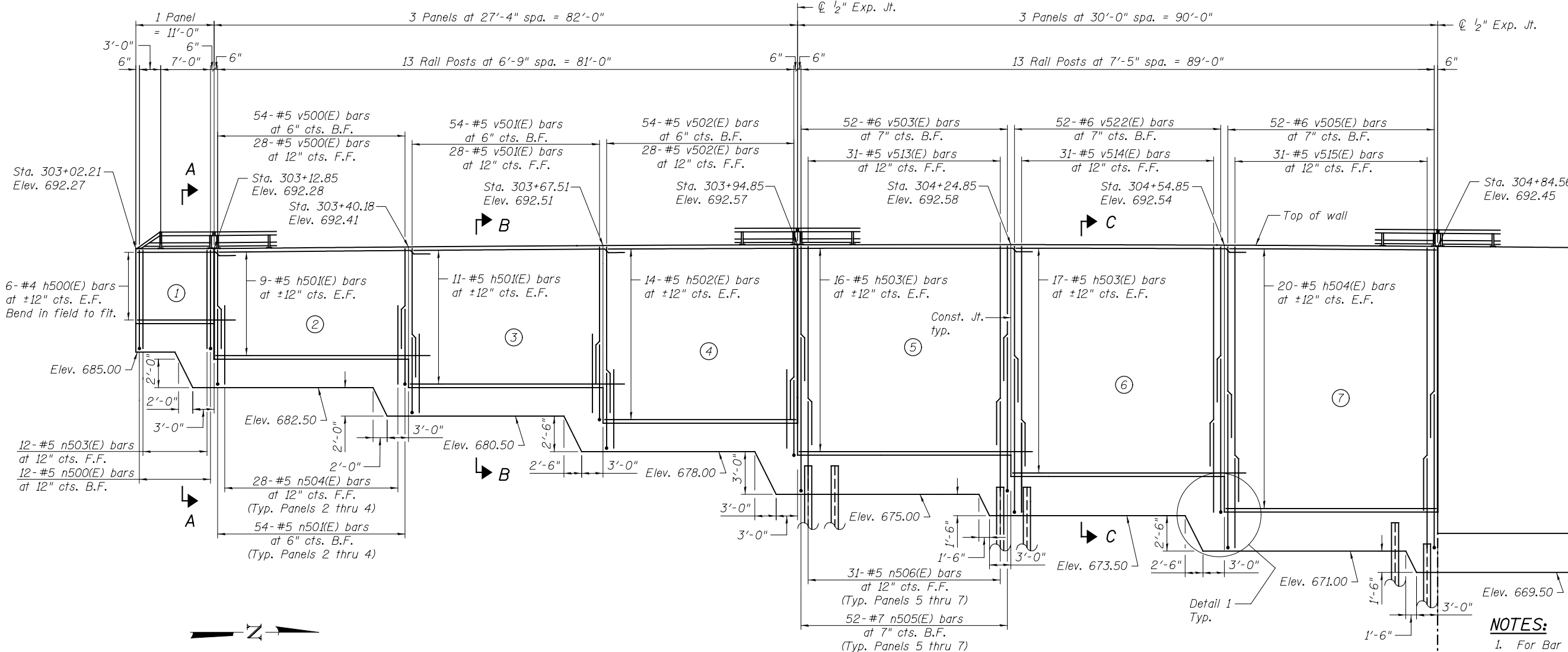
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		CHECKED - AMK	REVISED -
	PLOT SCALE = 5/4.0000' 1" / in.	DRAWN - PMH/RJ	REVISED -
	PLOT DATE = 3/22/2013	CHECKED - AMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DETAILS & BILL OF MATERIAL
STRUCTURE NO. 016-Z005

SHEET NO. 2 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	421
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

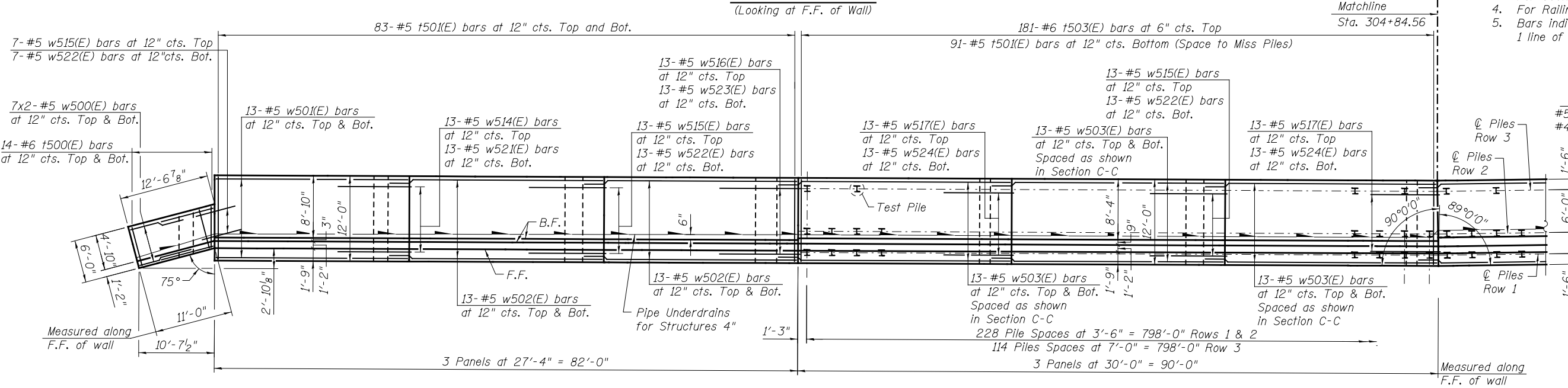


WALL ELEVATION
(Looking at F.F. of Wall)

LEGEND:
 F.F. = Front Face of Wall
 B.F. = Back Face of Wall
 E.F. = Each Face of Wall
 I = Vertical Pile
 ① = Panel No.

NOTES:
 1. For Bar List & Detail 1 see Sheet 10.
 2. For Typical Details see Sheet 2.
 3. For Sections A-A, B-B & C-C see Sheet 9.
 4. For Railing Details see Sheet 11.
 5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

MINIMUM BAR LAP
 Basic Lap Top Bar Lap
 #5 bars - 2'-7" #5 bars - 2'-11"
 #4 bars - 2'-1"



FOOTING PLAN

URS
 100 S. WACKER DR.
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FILE NAME =
 0162005-60M62-003-pln.dgn

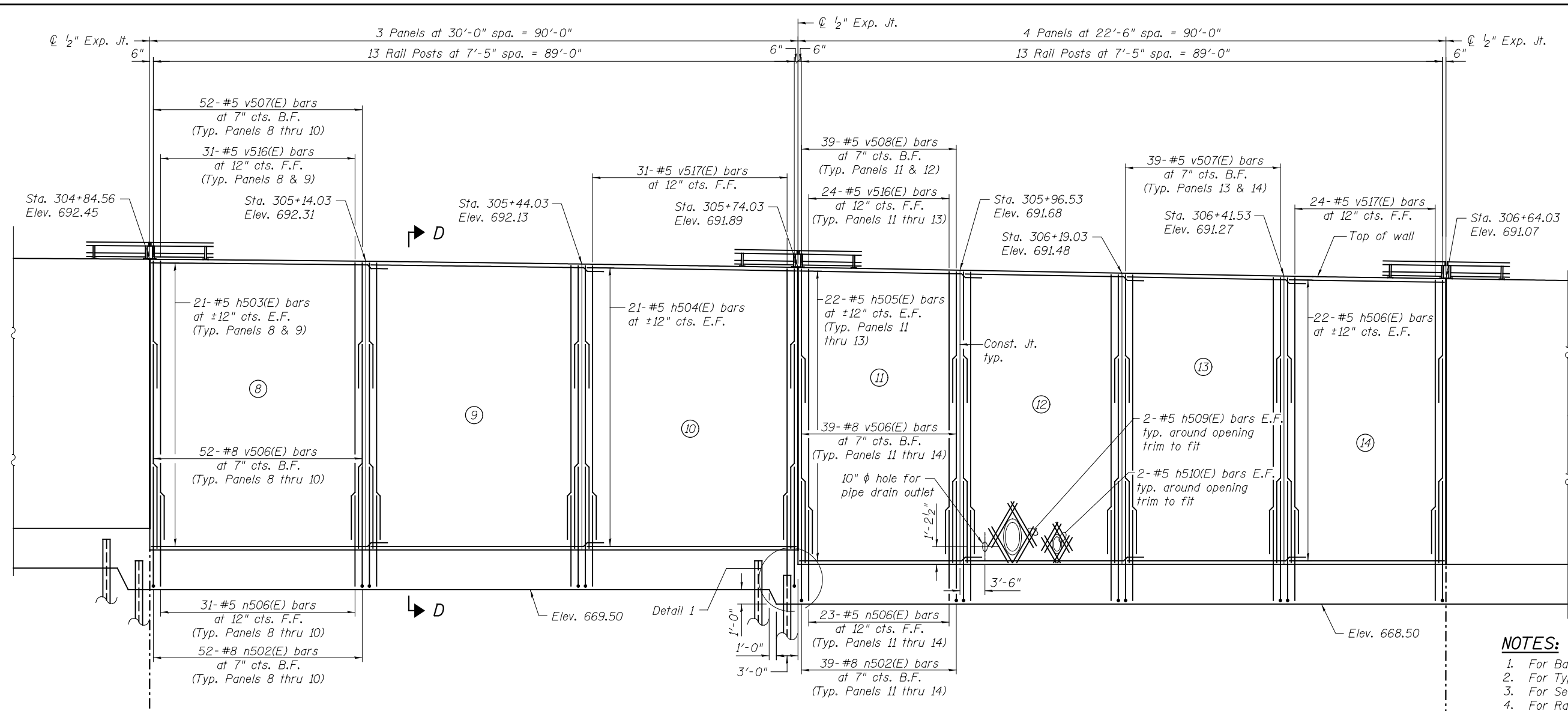
USER NAME = arsalan_khan	DESIGNED - PMH	REVISED -
PLOT SCALE = 1/8" = 1'-0"	CHECKED - AMK	REVISED -
PLOT DATE = 3/22/2013	DRAWN - PMH	REVISED -
	CHECKED - AMK	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION 1
 STRUCTURE NO. 016-2005

SHEET NO. 3 OF 21 SHEETS

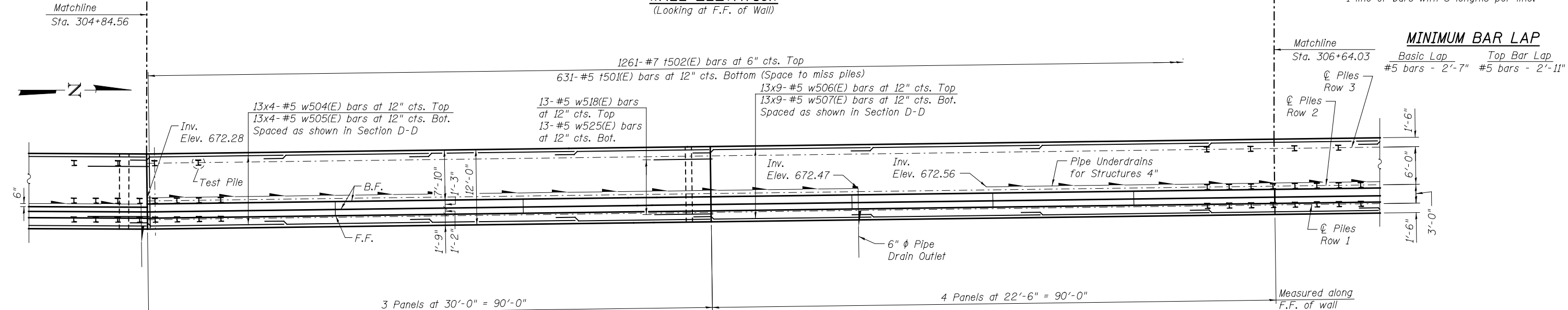
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	422
CONTRACT NO. 60M62			ILLINOIS FED. AID PROJECT	



LEGEND:
 F.F. = Front Face of Wall
 B.F. = Back Face of Wall
 E.F. = Each Face of Wall
 I = Vertical Pile
 (1) = Panel No.

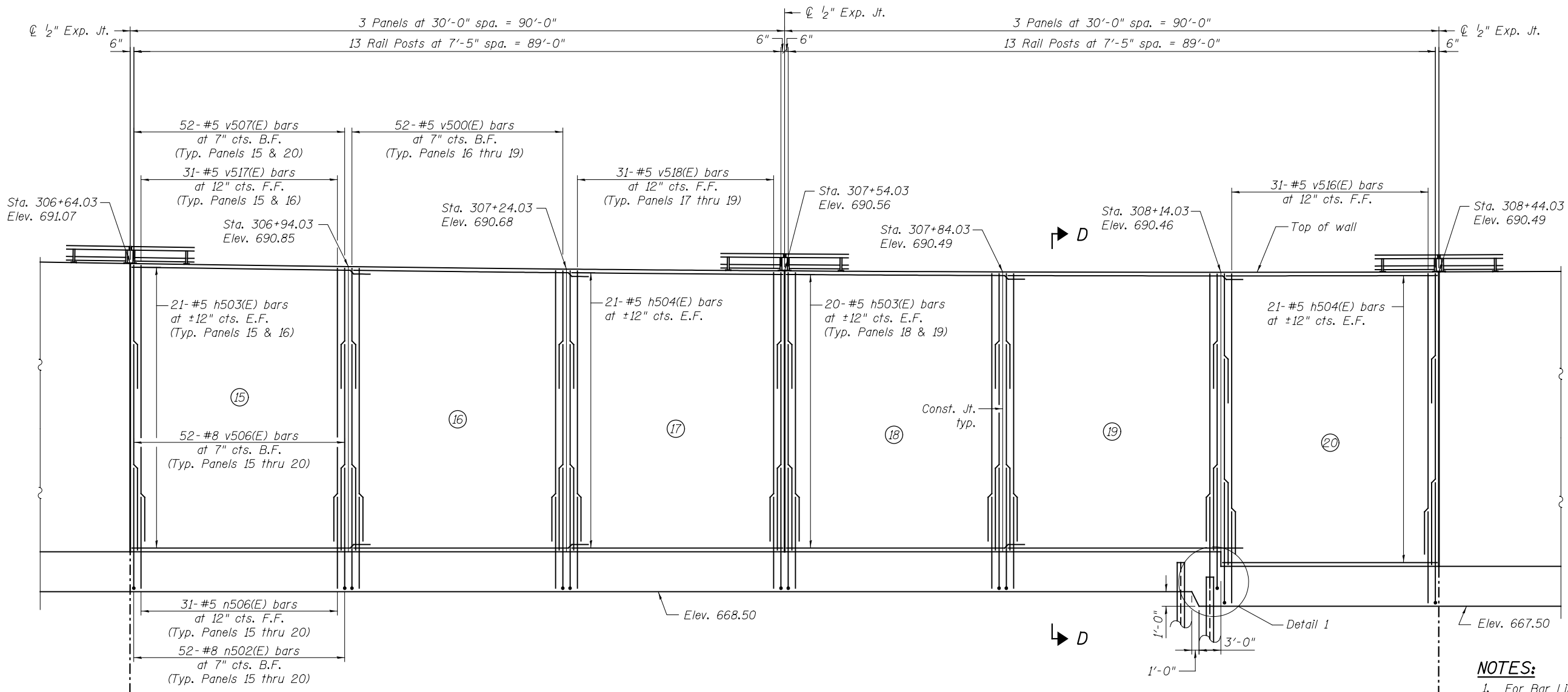
NOTES:
 1. For Bar List & Detail 1 see Sheet 10.
 2. For Typical Details see Sheet 2.
 3. For Section D-D see Sheet 9.
 4. For Railing Details see Sheet 11.
 5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

MINIMUM BAR LAP
 Basic Lap: #5 bars - 2'-7"
 Top Bar Lap: #5 bars - 2'-11"



URS
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 FAX (312) 939-4998

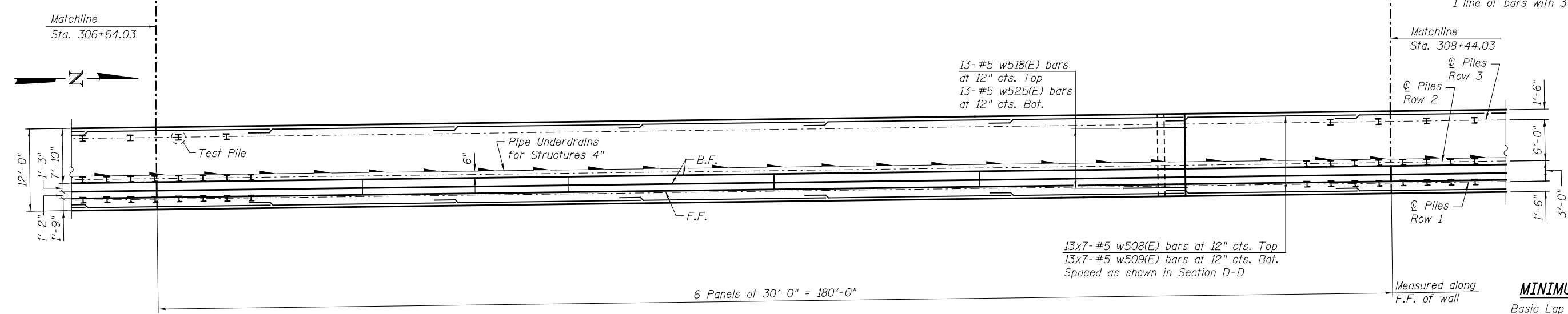
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PLOT SCALE = 1/8" = 1'-0"	DRAWN - PMH	CHECKED - AMK	REVISD -			SHEET NO. 4 OF 21 SHEETS		CONTRACT NO. 60M62		ILLINOIS FED. AID PROJECT	
PLOT DATE = 3/22/2013	CHECKED - AMK	REVISD -	REVISD -								



LEGEND:
 F.F. = Front Face of Wall
 B.F. = Back Face of Wall
 E.F. = Each Face of Wall
 I = Vertical Pile
 (1) = Panel No.

NOTES:
 1. For Bar List & Detail 1 see Sheet 10.
 2. For Typical Details see Sheet 2.
 3. For Section D-D see Sheet 9.
 4. For Railing Details see Sheet 11.
 5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

WALL ELEVATION
 (Looking at F.F. of Wall)

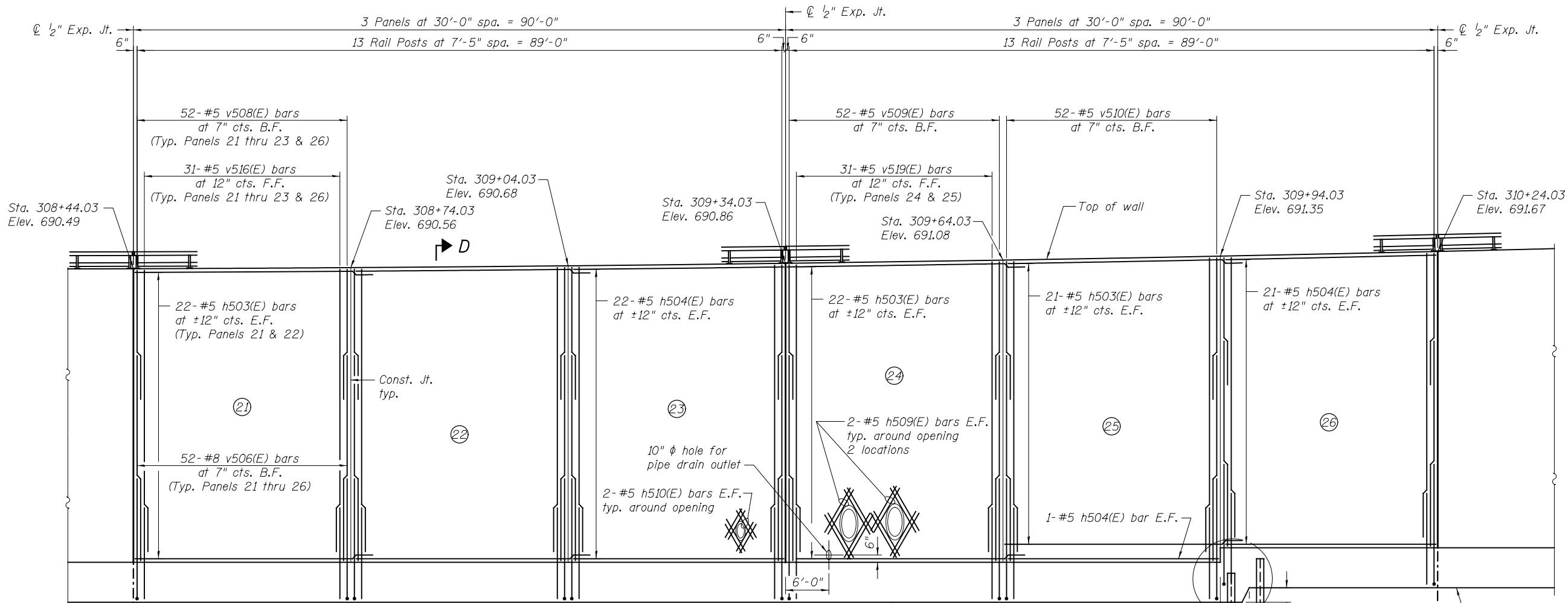


FOOTING PLAN

MINIMUM BAR LAP
 Basic Lap: #5 bars - 2'-7"
 Top Bar Lap: #5 bars - 2'-11"

100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4998
URS

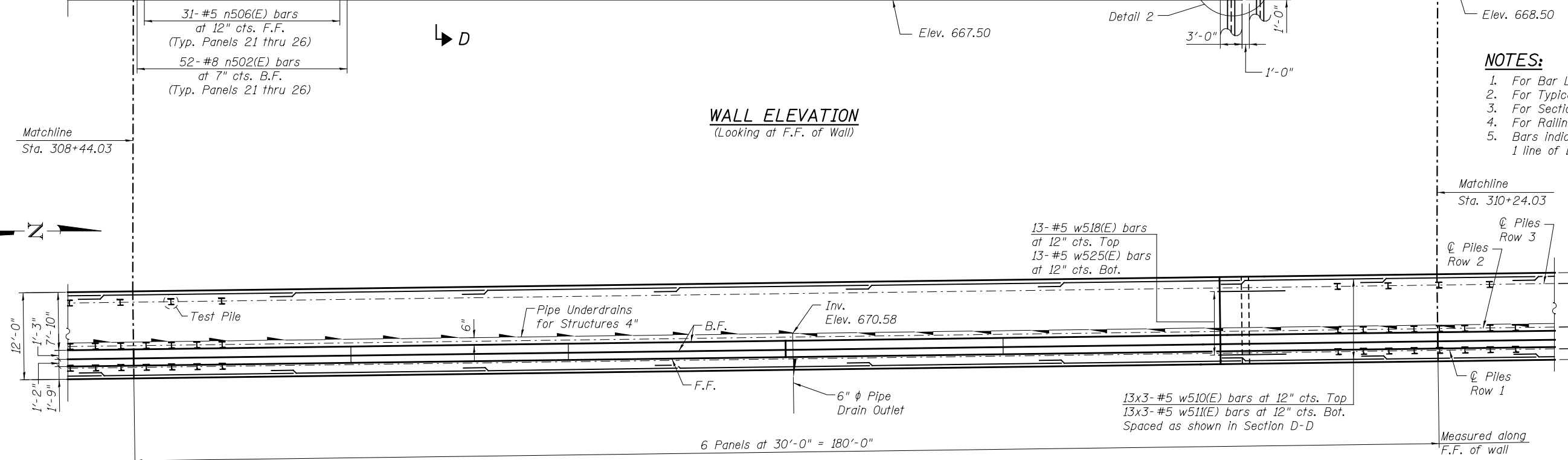
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PLOT SCALE = 1/8" = 1'-0"	DRAWN - PMH	CHECKED - AMK	REVISD -			CONTRACT NO. 60M62					
PLOT DATE = 3/22/2013	CHECKED - AMK	REVISD -	REVISD -			SHEET NO. 5 OF 21 SHEETS					
						ILLINOIS FED. AID PROJECT					



WALL ELEVATION
(Looking at F.F. of Wall)

LEGEND:
 F.F. = Front Face of Wall
 B.F. = Back Face of Wall
 E.F. = Each Face of Wall
 I = Vertical Pile
 (1) = Panel No.

- NOTES:**
1. For Bar List & Detail 2 see Sheet 10.
 2. For Typical Details see Sheet 2.
 3. For Section D-D see Sheet 9.
 4. For Railing Details see Sheet 11.
 5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

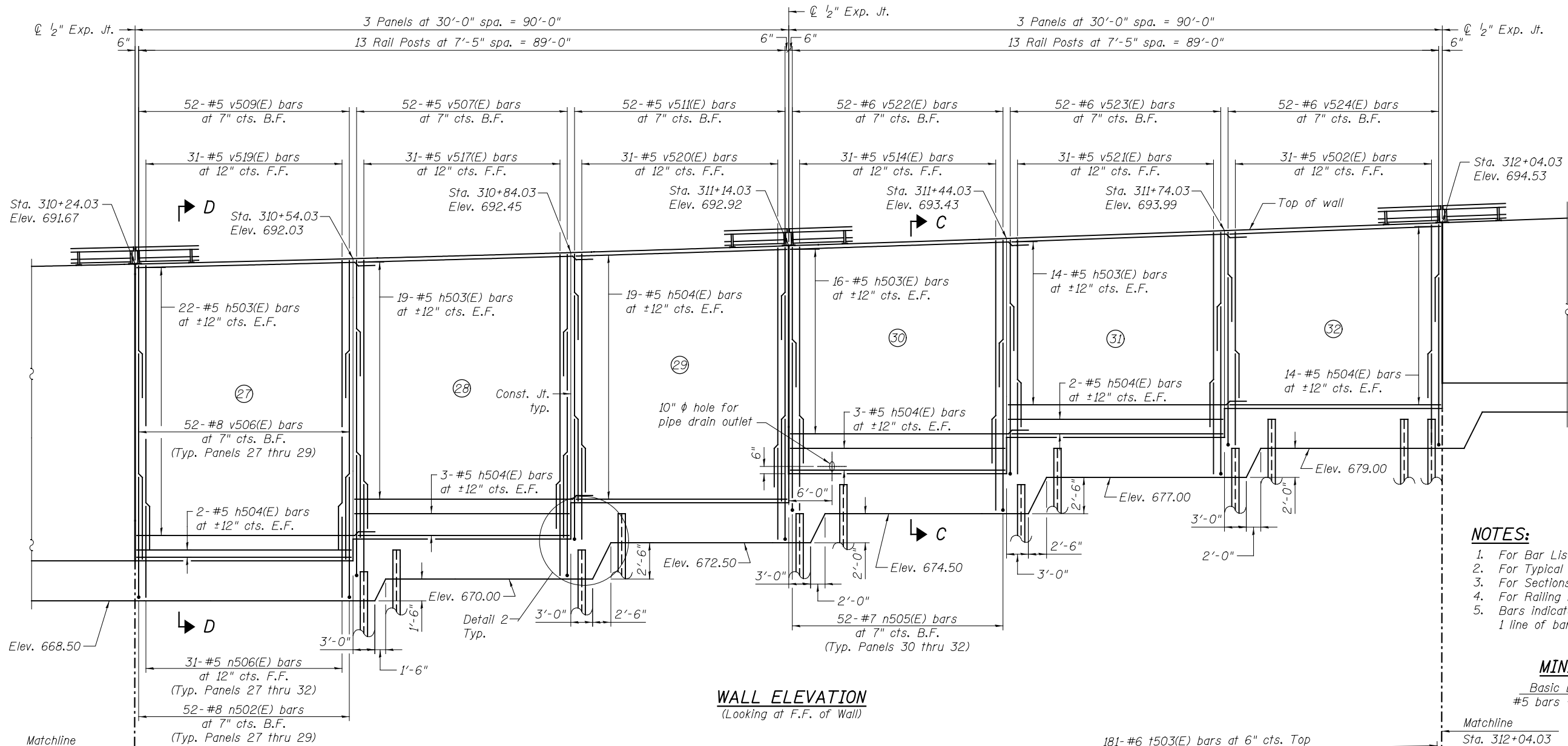


FOOTING PLAN

MINIMUM BAR LAP
 Basic Lap: #5 bars - 2'-7"
 Top Bar Lap: #5 bars - 2'-11"

100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4998
URS

FILE NAME = 0162005-60M62-006-pln.dgn	USER NAME = arsalan_khan	DESIGNED - PMH	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILED PLAN AND ELEVATION 4 STRUCTURE NO. 016-2005	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 425	
PLOT SCALE = 1/8" = 1'-0"	DRAWN - PMH	CHECKED - AMK	REVISD -			CONTRACT NO. 60M62					
PLOT DATE = 3/22/2013	CHECKED - AMK	REVISD -	REVISD -			ILLINOIS FED. AID PROJECT					
SHEET NO. 6 OF 21 SHEETS											

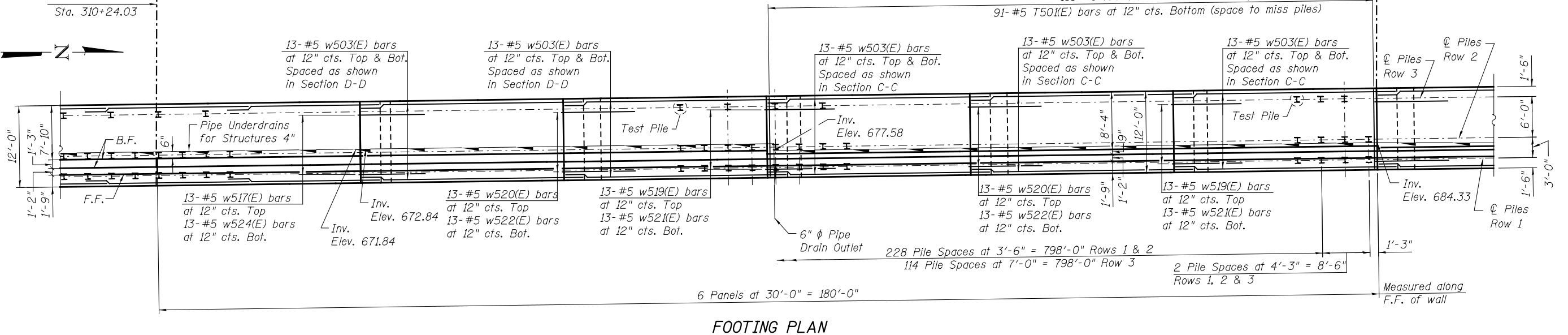


LEGEND:
 F.F. = Front Face of Wall
 B.F. = Back Face of Wall
 E.F. = Each Face of Wall
 I = Vertical Pile
 (1) = Panel No.

- NOTES:**
1. For Bar List & Detail 2 see Sheet 10.
 2. For Typical Details see Sheet 2.
 3. For Sections C-C & D-D see Sheet 9.
 4. For Railing Details see Sheet 11.
 5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

MINIMUM BAR LAP
 Basic Lap Top Bar Lap
 #5 bars - 2'-7" #5 bars - 2'-11"

WALL ELEVATION
 (Looking at F.F. of Wall)



FOOTING PLAN

100 S. WACKER DR.
 100 S/W/TE 600
 CHICAGO, IL 60606
 TEL 312/939-1000
 FAX 312/939-4998



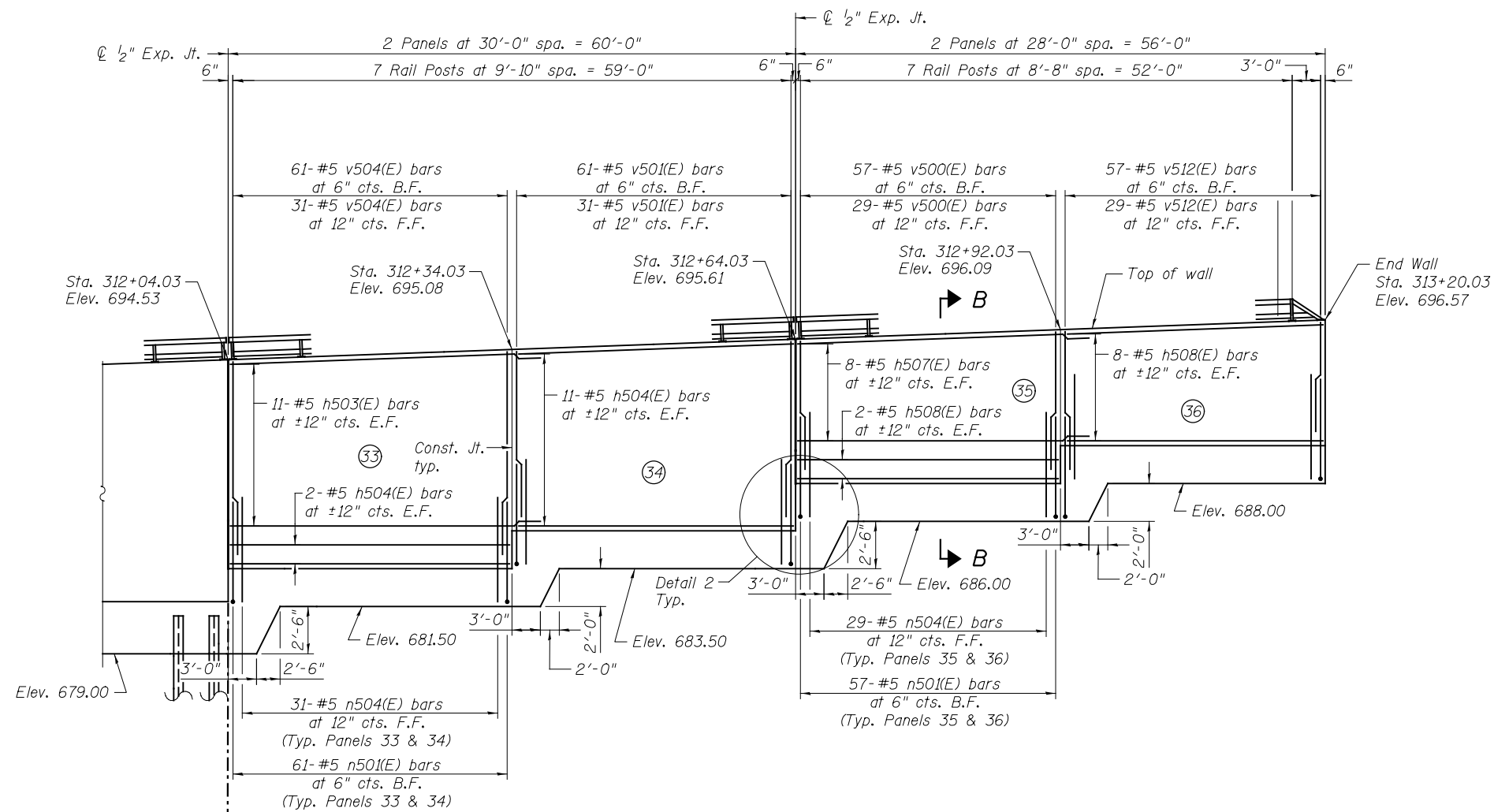
FILE NAME = 0162005-60M62-007-p1n.dgn	USER NAME = arsalan_khan	DESIGNED - PMH	REVISED -
		CHECKED - AMK	REVISED -
		DRAWN - PMH	REVISED -
		CHECKED - AMK	REVISED -
			REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

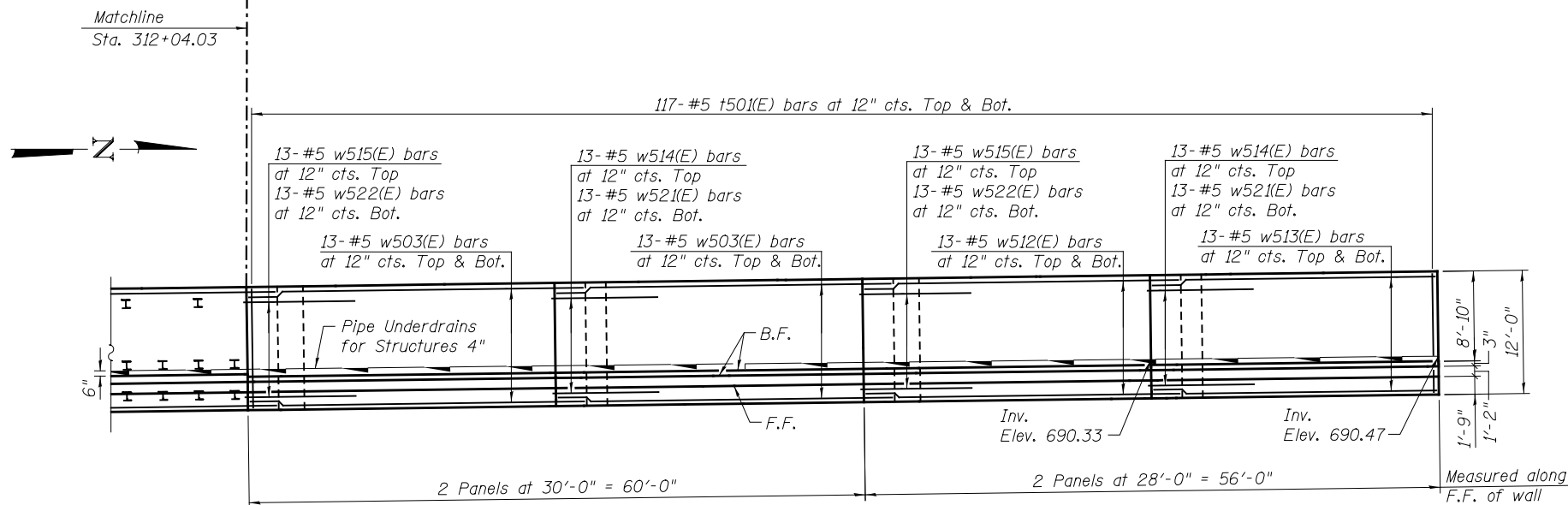
DETAILED PLAN AND ELEVATION 5
 STRUCTURE NO. 016-2005

SHEET NO. 7 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	426
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



WALL ELEVATION
(Looking at F.F. of Wall)



FOOTING PLAN

LEGEND:

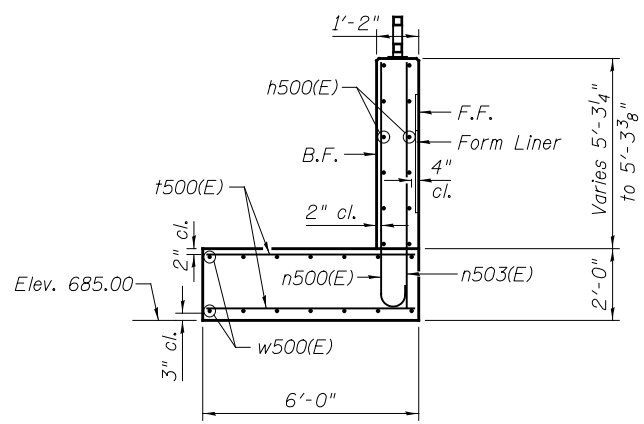
- F.F. = Front Face of Wall
- B.F. = Back Face of Wall
- E.F. = Each Face of Wall
- I = Vertical Pile
- ① = Panel No.

NOTES:

1. For Bar List & Detail 2 see Sheet 10.
2. For Typical Details see Sheet 2.
3. For Section B-B see Sheet 9.
4. For Railing Details see Sheet 11.
5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

MINIMUM BAR LAP

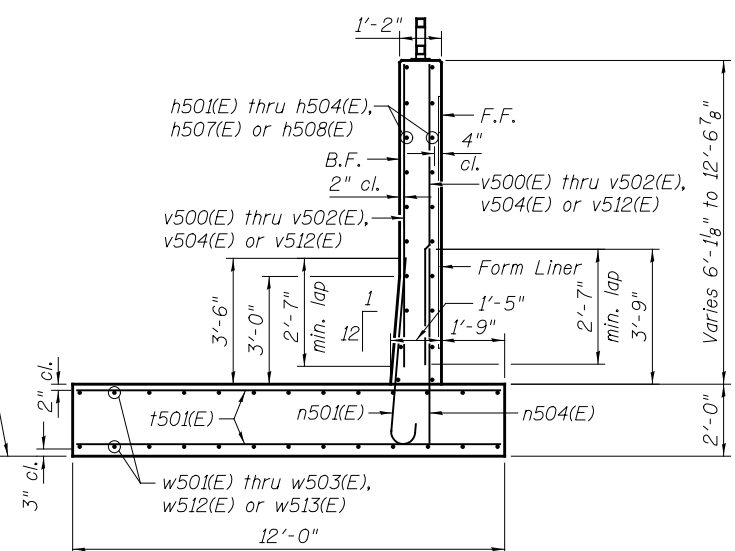
Basic Lap Top Bar Lap
#5 bars - 2'-7" #5 bars - 2'-11"



**SECTION A-A
PANEL 1**

Maximum Applied Service Bearing Pressure $Q_{max} = 1.32 \text{ ksf}$

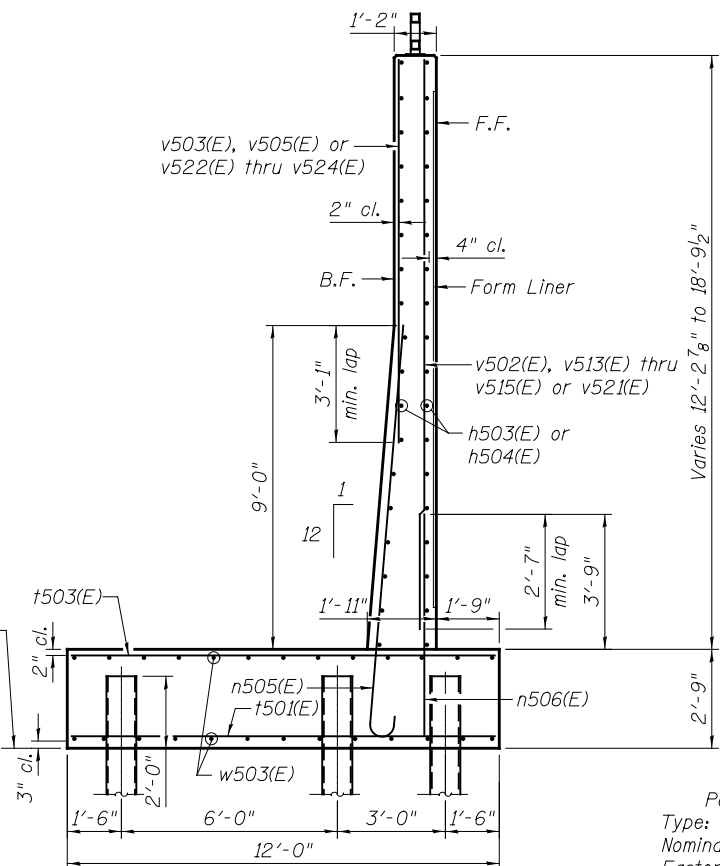
- Elev. 682.50 (Panel 2)
- Elev. 680.50 (Panel 3)
- Elev. 678.00 (Panel 4)
- Elev. 681.50 (Panel 33)
- Elev. 683.50 (Panel 34)
- Elev. 686.00 (Panel 35)
- Elev. 688.00 (Panel 36)



**SECTION B-B
PANELS 2 THRU 4 & 33 THRU 36**

Maximum Applied Service Bearing Pressure $Q_{max} = 2.00 \text{ ksf}$

- Elev. 675.00 (Panel 5)
- Elev. 673.50 (Panel 6)
- Elev. 671.00 (Panel 7)
- Elev. 674.50 (Panel 30)
- Elev. 677.00 (Panel 31)
- Elev. 679.00 (Panel 32)

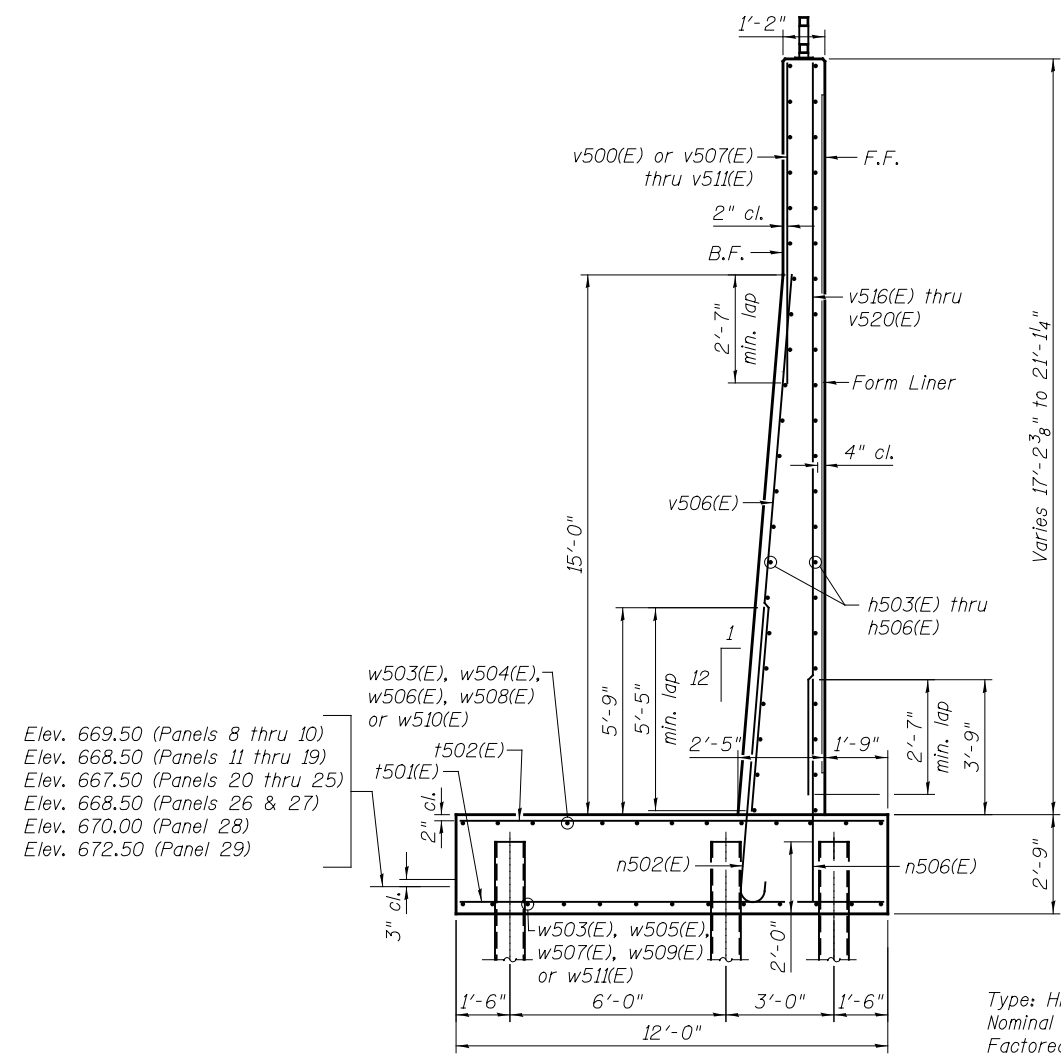


**SECTION C-C
PANELS 5 THRU 7 & 30 THRU 32**

PILE DATA

Panels 5 thru 7 & 30 thru 32
 Type: HP14x73
 Nominal Required Bearing: 240 kips
 Factored Resistance Available: 80 kips
 Est. Length: 45' *
 No. Production Piles: 124
 No. Test Piles: 2

* Pile length is required for fixity to resist lateral load.

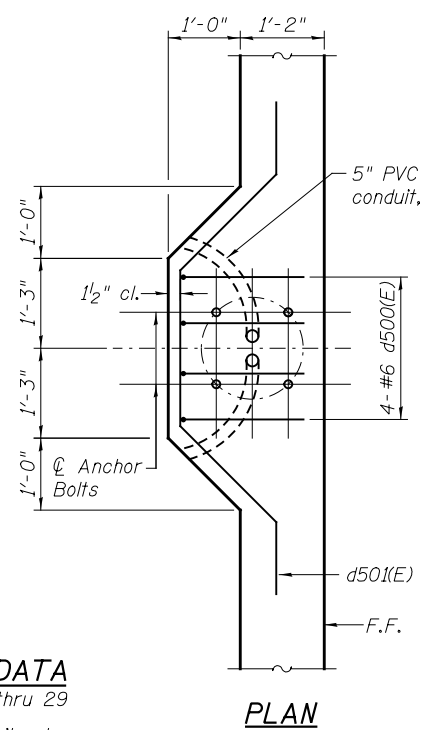


**SECTION D-D
PANELS 8 THRU 29**

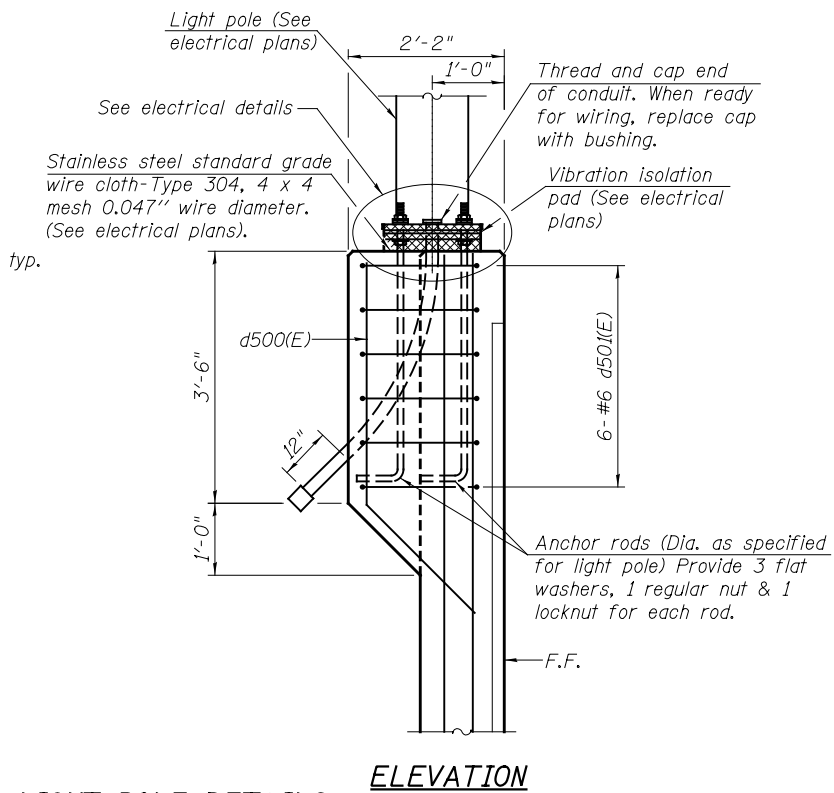
- Elev. 669.50 (Panels 8 thru 10)
- Elev. 668.50 (Panels 11 thru 19)
- Elev. 667.50 (Panels 20 thru 25)
- Elev. 668.50 (Panels 26 & 27)
- Elev. 670.00 (Panel 28)
- Elev. 672.50 (Panel 29)

PILE DATA

Panels 8 thru 29
 Type: HP14x73 with pile shoes
 Nominal Required Bearing: 216 kips
 Factored Resistance Available: 80 kips
 Est. Length: 55'
 No. Production Piles: 446
 No. Test Piles: 4



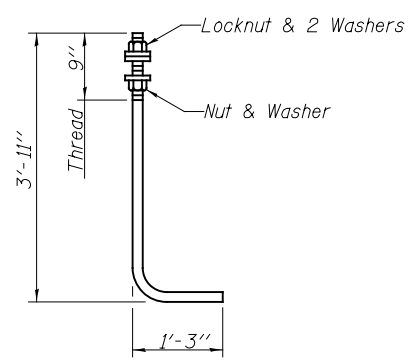
PLAN



ELEVATION

LIGHT POLE DETAILS

Mounted on retaining wall
 Typical, 4 locations
 Note:
 Cost of anchor rods, conduit and ground rods is included with Concrete Structures.



ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105)
 Cost of anchor rods is included with Concrete Structures.

LEGEND:

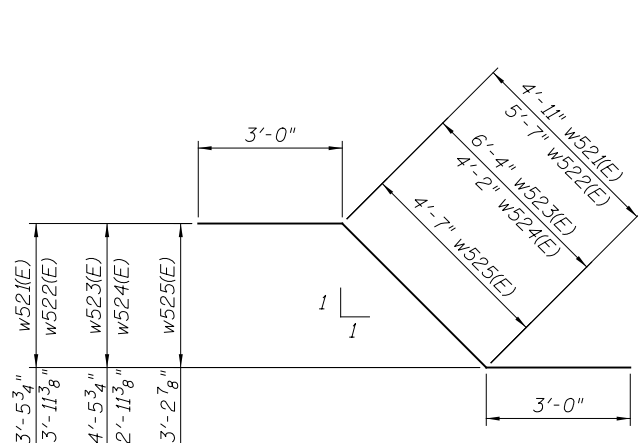
F.F. = Front Face of Wall
 B.F. = Back Face of Wall
 E.F. = Each Face of Wall

NOTES:

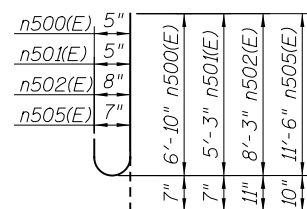
1. For Bar List see Sheet 10.

URS
 100 S. WACKER DR.
 100 S. WACKER DR.
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4998

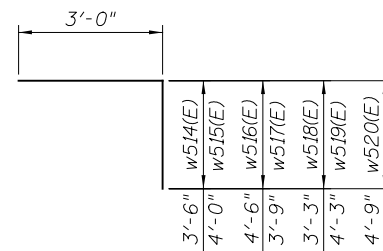
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PLOT SCALE = 5/4,000 1" = 10'	DRAWN - PMH	REVISIONS -	CONTRACT NO. 60M62							
PLOT DATE = 3/22/2013	CHECKED - AMK	REVISIONS -	ILLINOIS FED. AID PROJECT							
SHEET NO. 9 OF 21 SHEETS										



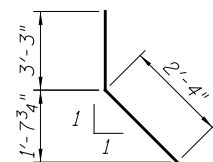
BARS w521(E) THRU w525(E)



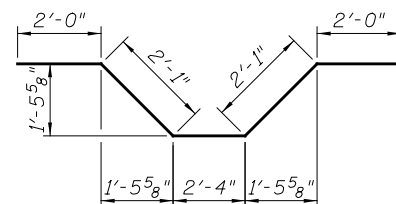
BARS n500(E) THRU n502(E) & n505(E)



BARS w514(E) THRU w520(E)



BARS d500(E)



BARS d501(E)

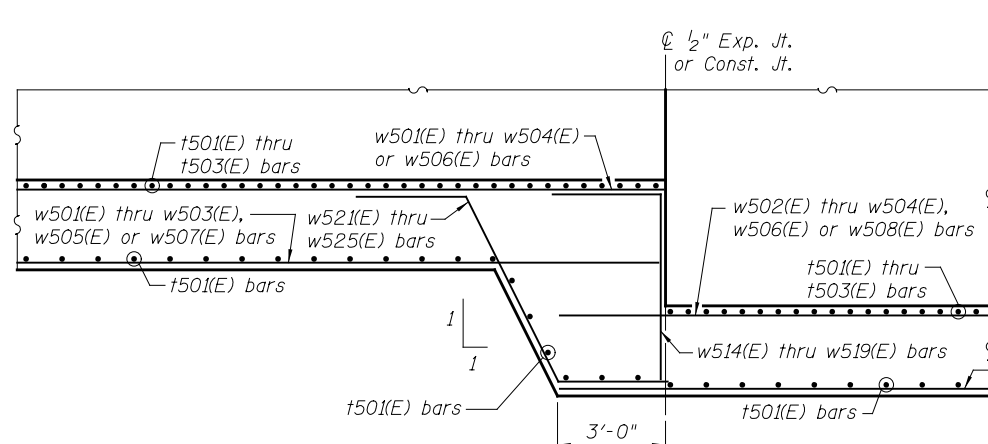
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d500(E)	16	#6	5'-7"	
d501(E)	24	#6	10'-6"	
h500(E)	12	#4	12'-1"	
h501(E)	40	#5	30'-4"	
h502(E)	28	#5	27'-0"	
h503(E)	652	#5	33'-0"	
h504(E)	366	#5	29'-8"	
h505(E)	132	#5	25'-6"	
h506(E)	44	#5	22'-2"	
h507(E)	16	#5	31'-0"	
h508(E)	20	#5	27'-8"	
h509(E)	48	#5	4'-0"	
h510(E)	32	#5	2'-0"	
n500(E)	12	#5	7'-5"	
n501(E)	398	#5	5'-10"	
n502(E)	1092	#8	9'-2"	
n503(E)	12	#5	6'-10"	
n504(E)	204	#5	5'-6"	
n505(E)	312	#7	12'-4"	
n506(E)	836	#5	6'-3"	

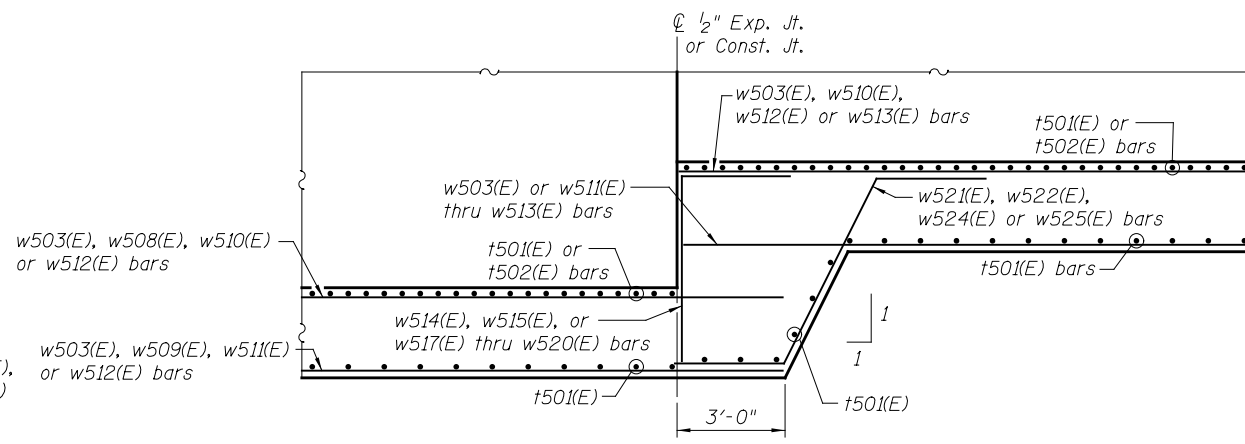
BILL OF MATERIAL (cont.)

Bar	No.	Size	Length	Shape
t500(E)	28	#6	5'-8"	
t501(E)	1213	#5	11'-8"	
t502(E)	1261	#7	11'-8"	
t503(E)	362	#6	11'-8"	
v500(E)	376	#5	7'-3"	
v501(E)	174	#5	9'-3"	
v502(E)	113	#5	11'-9"	
v503(E)	52	#6	8'-11"	
v504(E)	92	#5	10'-8"	
v505(E)	52	#6	12'-11"	
v506(E)	1092	#8	14'-10"	
v507(E)	390	#5	7'-10"	
v508(E)	286	#5	8'-3"	
v509(E)	104	#5	8'-6"	
v510(E)	52	#5	8'-9"	
v511(E)	52	#5	5'-4"	
v512(E)	86	#5	5'-8"	
v513(E)	31	#5	13'-8"	
v514(E)	62	#5	15'-2"	
v515(E)	31	#5	17'-8"	
v516(E)	289	#5	19'-6"	
v517(E)	148	#5	18'-11"	
v518(E)	93	#5	18'-4"	
v519(E)	93	#5	20'-0"	
v520(E)	31	#5	16'-7"	
v521(E)	31	#5	13'-1"	
v522(E)	104	#6	10'-5"	
v523(E)	52	#6	8'-4"	
v524(E)	52	#6	6'-11"	
w500(E)	28	#5	7'-9"	
w501(E)	26	#5	27'-0"	
w502(E)	52	#5	30'-0"	
w503(E)	260	#5	32'-8"	
w504(E)	52	#5	25'-6"	
w505(E)	52	#5	25'-3"	
w506(E)	117	#5	29'-9"	
w507(E)	117	#5	29'-6"	
w508(E)	91	#5	29'-3"	
w509(E)	91	#5	29'-0"	
w510(E)	39	#5	23'-0"	
w511(E)	39	#5	22'-9"	
w512(E)	26	#5	30'-8"	
w513(E)	26	#5	27'-8"	
w514(E)	39	#5	6'-6"	
w515(E)	59	#5	7'-0"	
w516(E)	13	#5	7'-6"	
w517(E)	39	#5	6'-9"	
w518(E)	39	#5	6'-3"	
w519(E)	26	#5	7'-3"	
w520(E)	26	#5	7'-9"	
w521(E)	65	#5	10'-11"	
w522(E)	85	#5	11'-7"	
w523(E)	13	#5	12'-4"	
w524(E)	39	#5	10'-2"	
w525(E)	39	#5	10'-7"	
Reinforcement Bars, Epoxy Coated		Pound	250,470	
Concrete Structures		Cu. Yd.	2,226.7	

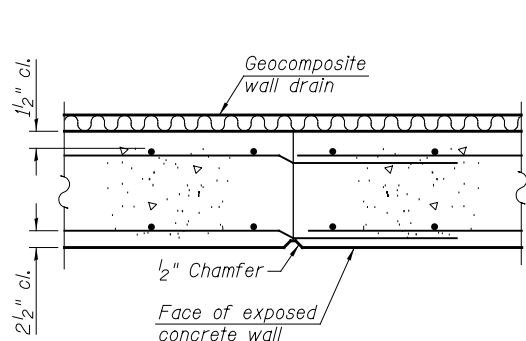
Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.



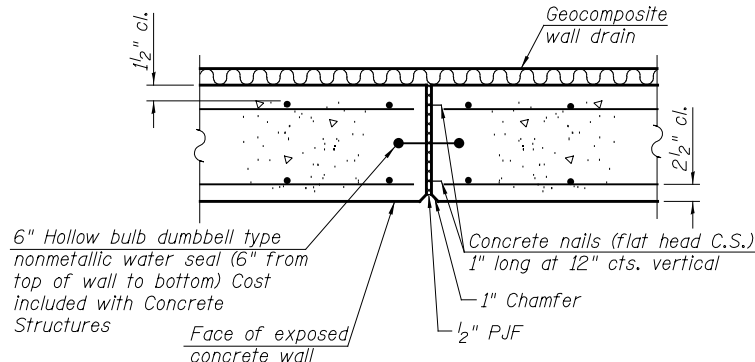
DETAIL 1



DETAIL 2



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL

FILE NAME = 0162005-60M62-010-bom.dgn

USER NAME = arsalan_khan
PLOT SCALE = 5/4,0000 '1' / in.
PLOT DATE = 3/22/2013

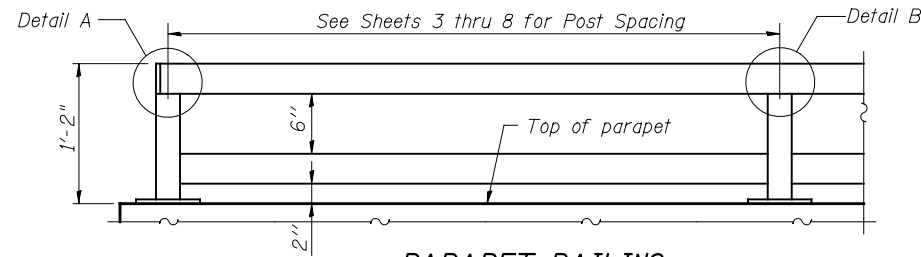
DESIGNED - PMH
CHECKED - AMK
DRAWN - PMH
CHECKED - AMK
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

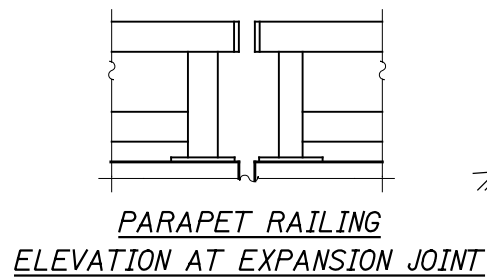
BILL OF MATERIAL
STRUCTURE NO. 016-2005

SHEET NO. 10 OF 21 SHEETS

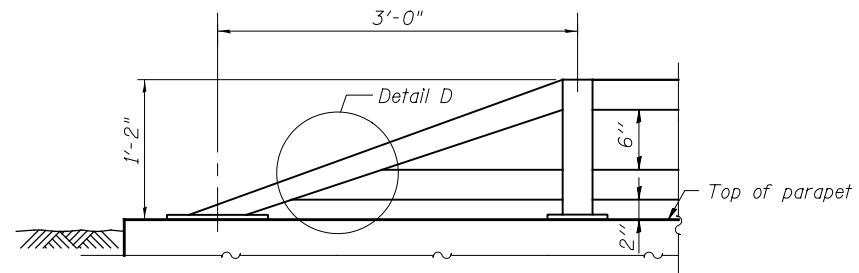
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	429
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60M62	



**PARAPET RAILING
ELEVATION**
(Inside Face of Rail)

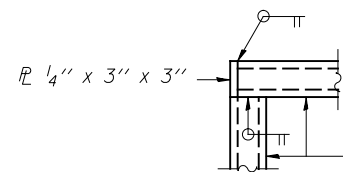


**PARAPET RAILING
ELEVATION AT EXPANSION JOINT**

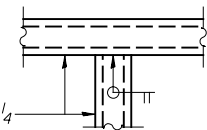


**PARAPET RAILING
AT END SECTION**

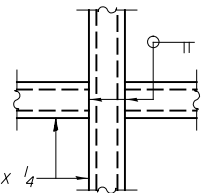
Note:
All post, railing, splices, anchor devices, and bent plates shall be painted using the inorganic zinc-rich/waterborne acrylic paint system as described in the special provision "Cleaning and Painting New Metal Structures." Color of painted railing to be black.



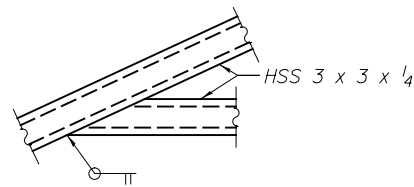
DETAIL A



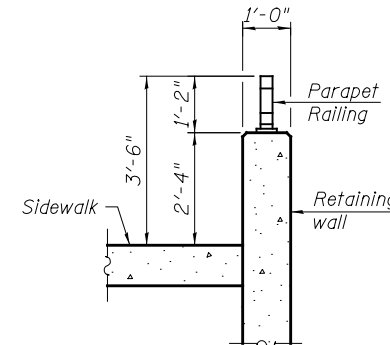
DETAIL B



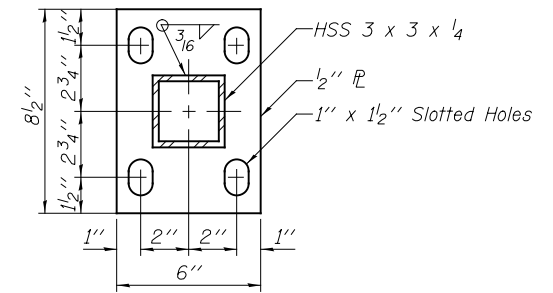
DETAIL C



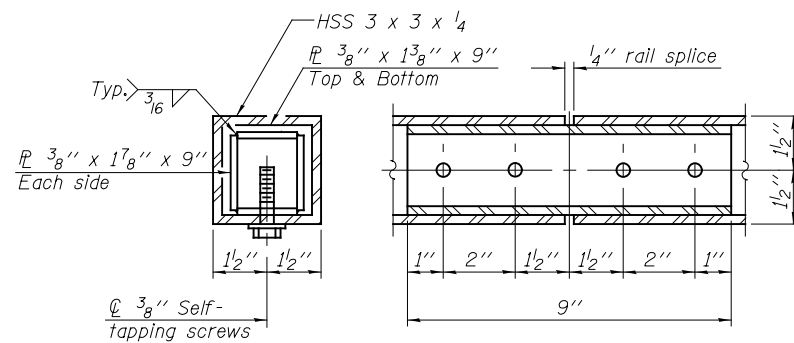
DETAIL D



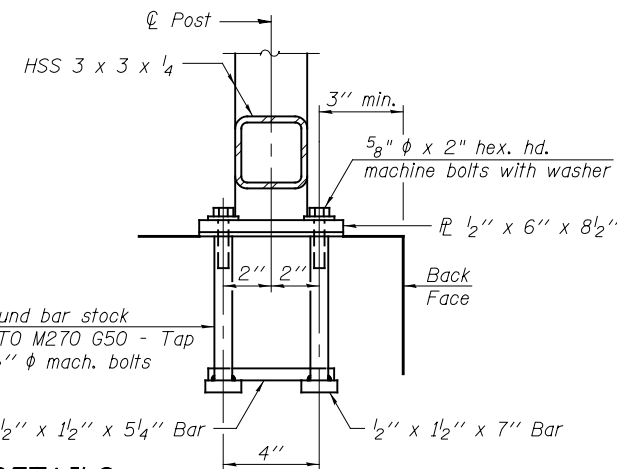
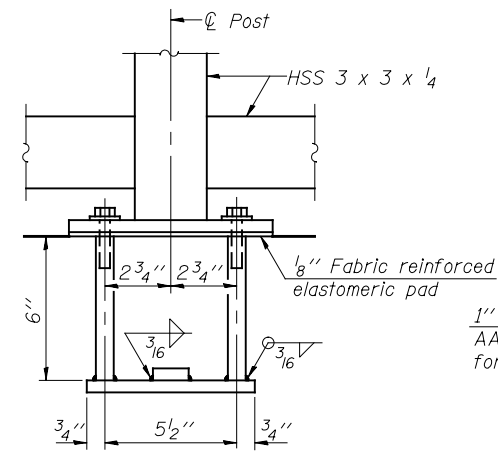
SECTION THRU RAILING



BASE PLATE



RAIL SPLICE



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	1,019

100 S. WACKER DR.
SUITE 600
CHICAGO, IL 60606
TEL (312) 939-1000
FAX (312) 939-4998



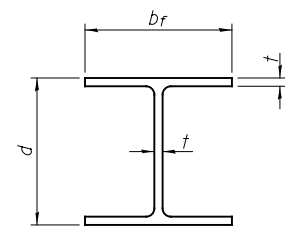
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		CHECKED - AMK	REVISED -
	PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - PMH	REVISED -
	PLOT DATE = 3/22/2013	CHECKED - AMK	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PARAPET RAILING
STRUCTURE NO. 016-2005**

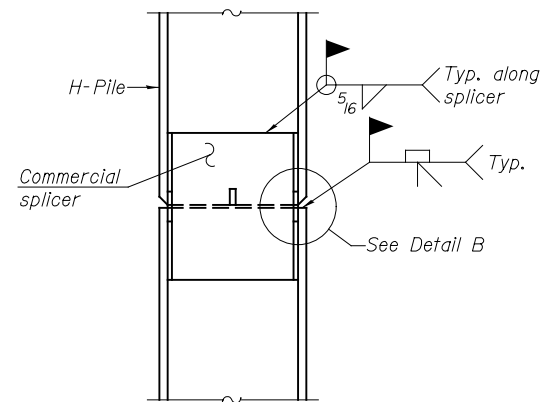
SHEET NO. 11 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	430
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

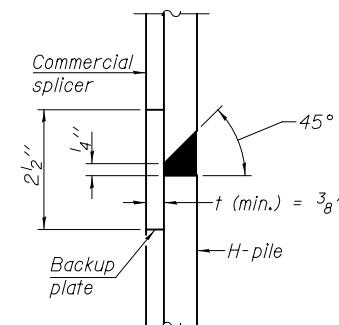


STEEL PILE TABLE

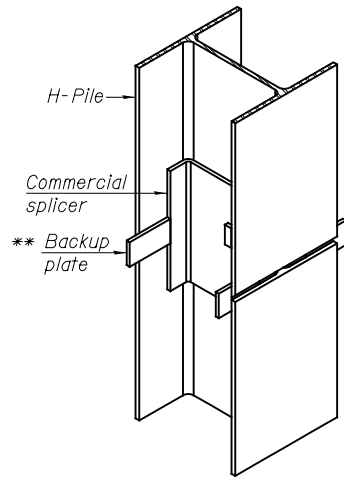
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

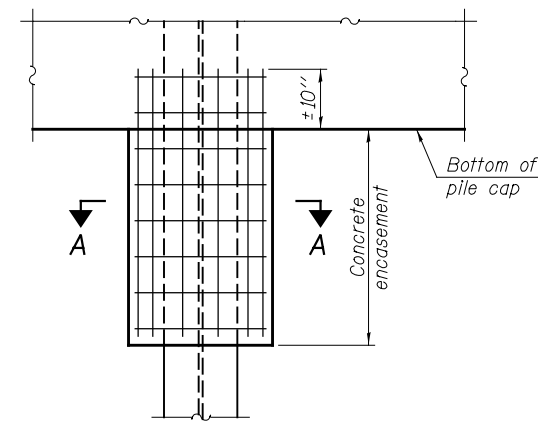


DETAIL "B"



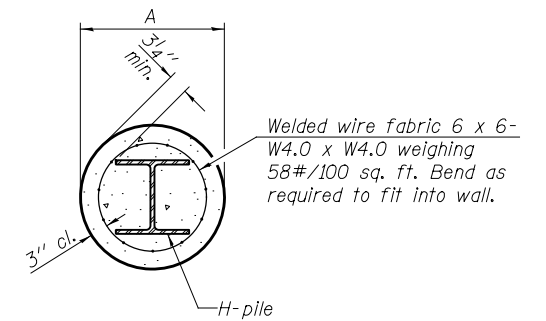
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



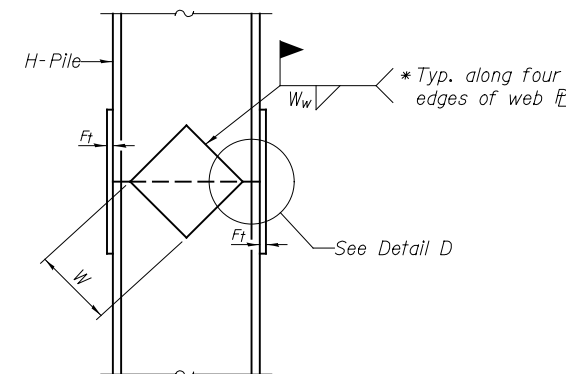
ELEVATION

PILE ENCASEMENT

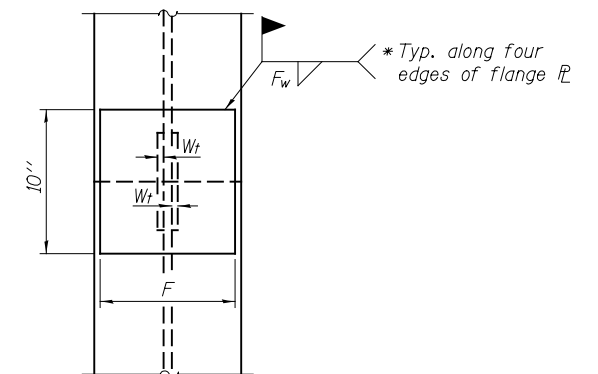


SECTION A-A

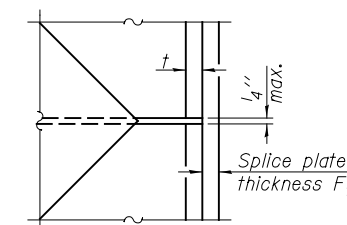
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



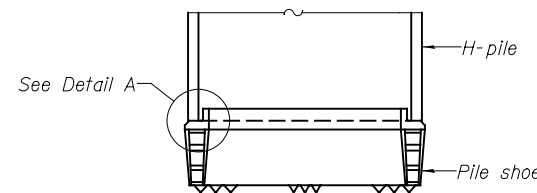
END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

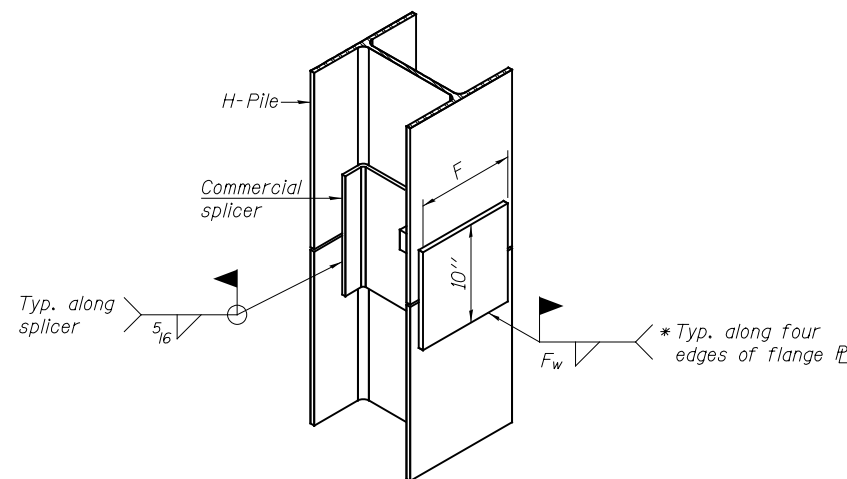
Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"



ELEVATION

DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 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 (5/16" min.).

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

FILE NAME = 0162005-60M62-012-F-HP.dgn	USER NAME = orsalan.khan	DESIGNED - PMH	REVISIONS -
		CHECKED - AMK	REVISIONS -
		PLOT SCALE = 0:2.0000 '1' / in.	REVISIONS -
		DRAWN - PMH	REVISIONS -
		CHECKED - AMK	REVISIONS -
		PLOT DATE = 3/22/2013	REVISIONS -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	431
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

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 Lombard, IL 60148
 Telephone: 630-953-9928
 Fax: 630-953-9938

BORING LOG 3D-B-01

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 685.91 ft
 North: 1611135.64 ft
 East: 1115355.56 ft
 Station: 303+33.44
 Offset: 47.16 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
686.7	12-inch thick, dark brown SILTY CLAY	0					686.7	12-inch thick, dark brown SILTY CLAY	0				
	---TOPSOIL---							---TOPSOIL---					
	Brown CLAY LOAM	1	1	6	NR			Brown CLAY LOAM	1	1	6	NR	
	---FILL---							---FILL---					
682.9	Medium dense, brown SILTY LOAM, some gravel	2	2	4	NP		682.9	Medium dense, brown SILTY LOAM, some gravel	2	2	4	NP	
680.4	Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel	3	3	6	4.42	16	680.4	Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel	3	3	6	4.42	16
		4	4	9	9.02	16			4	4	9	9.02	16
		5	5	4	3.44	16			5	5	4	3.44	16
		6	6	6	7.30	15			6	6	6	7.30	15
		7	7	4	3.28	16			7	7	4	3.28	16
		8	8	5	2.89	15			8	8	5	2.89	15
665.9	Boring terminated at 20.00 ft	20					665.9	Boring terminated at 20.00 ft	20				

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-05-2010	Complete Drilling	10-05-2010	While Drilling	▽	DRY	
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	▽	DRY	
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

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BORING LOG 3D-B-02

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 683.16 ft
 North: 1811224.42 ft
 East: 1115355.87 ft
 Station: 304+22.22
 Offset: 47.36 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
682.2	12-inch thick, dark brown SILTY CLAY, trace roots	0					682.2	12-inch thick, dark brown SILTY CLAY, trace roots	0				
	---TOPSOIL---							---TOPSOIL---					
	Stiff, dark brown CLAY LOAM, trace gravel	1	1	2	1.50	31		Stiff, dark brown CLAY LOAM, trace gravel	1	1	2	1.50	31
	---FILL---							---FILL---					
679.2	Very stiff to hard, brown and gray SILTY CLAY, trace gravel	2	2	4	4.18	15	679.2	Very stiff to hard, brown and gray SILTY CLAY, trace gravel	2	2	4	4.18	15
		3	3	3	2.87	25			3	3	3	2.87	25
		4	4	4	4.10	16			4	4	4	4.10	16
		5	5	6	6.72	17			5	5	6	6.72	17
669.4	Medium dense, brown SILTY LOAM	6	6	4	NP	17	669.4	Medium dense, brown SILTY LOAM	6	6	4	NP	17
667.7	Hard, brown to gray SILTY CLAY, trace gravel	7	7	4	4.57	19	667.7	Hard, brown to gray SILTY CLAY, trace gravel	7	7	4	4.57	19
		8	8	5	4.18	16			8	8	5	4.18	16
663.2	Boring terminated at 20.00 ft	20					663.2	Boring terminated at 20.00 ft	20				

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-05-2010	Complete Drilling	10-05-2010	While Drilling	▽	DRY	
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	▽	19.00 ft	
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

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BORING LOG 3D-B-03

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 674.21 ft
 North: 1811326.85 ft
 East: 1115367.83 ft
 Station: 305+23.89
 Offset: 59.72 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
672.9	16-inch thick, brown SILTY CLAY LOAM, trace roots	0					672.9	16-inch thick, brown SILTY CLAY LOAM, trace roots	0				
	---FILL---							---FILL---					
	Loose to medium dense, gray CRUSHED STONE (stone size up to 5-inch)	1	1	8	NP			Loose to medium dense, gray CRUSHED STONE (stone size up to 5-inch)	1	1	8	NP	
	---FILL---							---FILL---					
668.7	Very soft to medium stiff, brown, black, and gray organic SILTY LOAM to SILTY CLAY LOAM, trace plant material	2	2	6	NP		668.7	Very soft to medium stiff, brown, black, and gray organic SILTY LOAM to SILTY CLAY LOAM, trace plant material	2	2	6	NP	
		3	3	1	0.50	31			3	3	1	0.50	31
		4	4	1	0.25	39			4	4	1	0.25	39
		5	5	1	0.25	65			5	5	1	0.25	65
		6	6	0	0.25	51			6	6	0	0.25	51
657.7	Medium stiff, gray GRAVELLY SILTY LOAM	7	7	0	0.50	31	657.7	Medium stiff, gray GRAVELLY SILTY LOAM	7	7	0	0.50	31
		8	8	3	0.75	14			8	8	3	0.75	14
		9	9	5	1.39	17			9	9	5	1.39	17
		10	10	3	2.46	15			10	10	3	2.46	15
649.2	Boring terminated at 25.00 ft	25					649.2	Boring terminated at 25.00 ft	25				

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-19-2010	Complete Drilling	10-19-2010	While Drilling	▽	3.00 ft	
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	▽	3.00 ft	
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

100 S. WACKER DR.
 5TH FLOOR
 CHICAGO, IL 60606
 TEL 312-939-1000
 FAX 312-939-4198



FILE NAME =	016Z005-60M62-013-bor.dgn	USER NAME =	arsalan_khan	DESIGNED -	WEI	REVISED -	
				CHECKED -	AMK	REVISED -	
				DRAWN -	PMH	REVISED -	
				CHECKED -	AMK	REVISED -	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORINGS 1
 STRUCTURE NO. 016-Z005

SHEET NO. 13 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	432
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

BORING LOG 3D-B-07

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 674.04 ft
 North: 1611790.49 ft
 East: 1115364.46 ft
 Station: 309+87.54
 Offset: 61.86 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
872.3	14-inch thick, black and brown SILTY CLAY LOAM	1	1	9	NP		848.5	Very stiff to hard, gray SILTY CLAY	11	6	11	3.94	13
	Loose to medium dense, gray CRUSHED STONE (stone size up to 5-inch)	2	2	5	NP				12	4	8	4.24	19
		3	3	9	NP				30				
		4	4	7	NP								
		5	5	9	NP								
		6	6	0	NP								
		7	7	0	NP								
		8	8	0	NP								
		9	9	4	P	1.00							
		10	10	3	B	0.41							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-15-2010	Complete Drilling	10-15-2010	While Drilling	▽	1.50 ft	
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	▽	2.00 ft	
Driller	K&K	Logger	C. Davis	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

BORING LOG 3D-B-08

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 674.38 ft
 North: 1811873.97 ft
 East: 1115369.13 ft
 Station: 310+70.95
 Offset: 67.52 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
871.9	Medium dense, SILTY CLAY LOAM	1	1	13	NR		848.9	Stiff to very stiff, brown to gray SILTY CLAY	11	3	6	1.64	19
	Medium dense CRUSHED STONE (stone size up to 5-inch)	2	2	7	NP				12	4	8	3.03	17
		3	3	0	B	0.25			30				
		4	4	0	B	0.49							
		5	5	0	B	0.25							
		6	6	0	B	0.33							
		7	7	0	B	0.25							
		8	8	0	B	0.25							
		9	9	0	B	0.25							
		10	10	0	NP								

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-15-2010	Complete Drilling	10-15-2010	While Drilling	▽	3.00 ft	
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	▽	2.00 ft	
Driller	K&K	Logger	C. Davis	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

BORING LOG 3D-B-09

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 681.68 ft
 North: 1811959.26 ft
 East: 1115360.43 ft
 Station: 311+56.34
 Offset: 59.84 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
880.0	10-inch thick, dark brown SILTY CLAY LOAM	1	1	9	S	5.25	844.0	Stiff to hard, brown and gray SILTY CLAY LOAM	11	3	6	1.64	19
		2	2	3	B	2.62			12	4	8	3.03	17
		3	3	4	B	1.97			30				
		4	4	7	B	4.59							
		5	5	10	B	4.26							
		6	6	3	B	3.69							
		7	7	4	B	1.80							
		8	8	6	B	3.12							
		9	9	1	B	1.23							
		10	10	4	B	4.10							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-15-2010	Complete Drilling	10-15-2010	While Drilling	▽	DRY	
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	▽	21.00 ft	
Driller	K&K	Logger	C. Davis	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

BORING LOG 3D-B-10

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 687.37 ft
 North: 1612057.98 ft
 East: 1115363.16 ft
 Station: 312+55.02
 Offset: 63.74 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
886.0	16-inch thick, black SILTY CLAY LOAM --TOPSOIL-- Stiff to hard, brown to gray SILTY CLAY, trace gravel	0	1	6 0 4	5.66 B	22							
		5	2	10 0 3	1.72 S	19							
		10	3	6 8 10	5.33 S	16							
		15	4	7 0 3	3.85 B	17							
		20	5	5 0 5	4.92 B	17							
		25	6	4 7 10	4.10 B	18							
		30	7	4 4 5	2.13 B	15							
		35	8	2 4 6	2.30 B	17							
		40											
		45											
		50											

GENERAL NOTES

Begin Drilling 10-15-2010 Complete Drilling 10-15-2010
 Drilling Contractor WTS Drill Rig D 50 ATV
 Driller K&K Logger C. Davis Checked by C. Marin
 Drilling Method 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling 3.00 ft
 At Completion of Drilling 2.00 ft
 Time After Drilling NA
 Depth to Water 3.25 ft
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG 3D-B-11

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 673.33 ft
 North: 1811388.13 ft
 East: 1115365.59 ft
 Station: 305+85.19
 Offset: 58.21 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
872.1	15-inch thick, brown SILTY CLAY --FILL-- Loose to medium dense, gray CRUSHED STONE (stone size up to 5-inch)	0	1	10 8 15	NP	49							
		5	2	10 7 9	NP	22							
		10	3	7 7 10	NP	11							
		15	4	6 5 3	NR	11							
		20	5	2 1 2	NR	74							
		25	6	0 0 0	0.25 P	58							
		30	7	0 0 0	0.25 P	60							
		35	8	0 0 0	0.25 P	39							
		40	9	0 0 0	0.25 P	47							
		45	10	0 0 0	0.25 P	47							
		50											

GENERAL NOTES

Begin Drilling 10-19-2010 Complete Drilling 10-19-2010
 Drilling Contractor WTS Drill Rig D 50 ATV
 Driller K&K Logger B. Wilson Checked by C. Marin
 Drilling Method 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling 1.00 ft
 At Completion of Drilling 2.00 ft
 Time After Drilling NA
 Depth to Water 3.25 ft
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG 3D-B-12

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 673.83 ft
 North: 1811527.77 ft
 East: 1115361.03 ft
 Station: 307+24.87
 Offset: 55.31 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
873.2	8-inch thick, brown SILTY CLAY LOAM --TOPSOIL-- Loose to medium dense, gray CRUSHED STONE (stone size up to 5-inch)	0	1	14 9 11	NP	8							
		5	2	8 10 11	NP	12							
		10	3	10 10 10	NP	9							
		15	4	14 10 10	NP	7							
		20	5	5 6 5	NP	20							
		25	6	7 5 4	NP	45							
		30	7	0 0 0	0.25 B	29							
		35	8	0 0 3	0.25 P	45							
		40	9	3 5 6	1.39 B	16							
		45	10	3 5 5	1.23 B	17							
		50											

GENERAL NOTES

Begin Drilling 10-18-2010 Complete Drilling 10-18-2010
 Drilling Contractor WTS Drill Rig D 50 ATV
 Driller K&K Logger C. Davis Checked by C. Marin
 Drilling Method 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling 3.00 ft
 At Completion of Drilling 2.00 ft
 Time After Drilling NA
 Depth to Water 3.25 ft
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows in)	Cu (tsf)	Moisture Content (%)
647.7	Very loose to medium dense, gray CRUSHED STONE (stone size up to 5-inch)	1	4	8	NP		647.7	Soft, gray SILTY CLAY LOAM with trace plant material and shell fragments	11	0	0	0.49	40
644.7		2	11	7	NP		644.7		12	0	0	0.49	35
641.2		3	8	8	NP		641.2	Very stiff to hard, brown to gray SILTY CLAY, trace gravel	13	4	4	2.30	18
632.2	CRUSHED STONE with gray soft clay	4	8	8	NP	23			14	4	4	2.30	18
629.7	Very soft to soft, black to gray SILTY CLAY	5	1	2	NP	44			15	3	5	2.79	20
		6	0	0	B	62			16	3	4	2.38	15
		7	0	0	B	61			17	4	7	5.08	15
		8	0	0	B	63			18	5	6	2.54	15
		9	0	0	B	50			19	8	8	2.46	14
		10	1	0	B	48			20	5	10	3.25	13

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	08-26-2011	Complete Drilling	08-26-2011	While Drilling	2.00 ft		
Drilling Contractor	Groff	Drill Rig	CME ATV	At Completion of Drilling	2.00 ft		
Driller	T&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA		

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows in)	Cu (tsf)	Moisture Content (%)
647.7		17	4	7	B	5.08	647.7		17	4	7	5.08	15
644.7		18	5	6	B	2.54	644.7		18	5	6	2.54	15
641.2		19	8	8	B	2.46	641.2		19	8	8	2.46	14
632.2		20	5	10	P	3.25	632.2	Boring terminated at 70.00 ft	20	5	10	3.25	13

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	08-26-2011	Complete Drilling	08-26-2011	While Drilling	2.00 ft		
Drilling Contractor	Groff	Drill Rig	CME ATV	At Completion of Drilling	2.00 ft		
Driller	T&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA		

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URS

FILE NAME = 016Z005-60M62-017-bor.dgn	USER NAME = orsalan_khan	DESIGNED - WEI	REVISED -
		CHECKED - AMK	REVISED -
		DRAWN - PMH	REVISED -
		CHECKED - AMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS 5
STRUCTURE NO. 016-Z005
 SHEET NO. 17 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	436
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

BORING LOG 3D-B-14

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 671.96 ft
 North: 1611750.25 ft
 East: 1115373.17 ft
 Station: 309+47.20
 Offset: 70.09 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
671.0	Brown SILTY CLAY LOAM, some gravel	0					671.0		0				
	--FILL--												
	Medium dense, gray CRUSHED STONE (stone size up to 5-inch)	1	1	10	NP	7			1	11	4	2.89	15
	--FILL--												
		2	2	10	NP	13			2	12	3	2.46	16
		3	3	7	NP	18			3	13	4	2.54	18
		4	4	5	NP	14			4	14	5	1.15	13
661.5	CRUSHED STONE with soft, gray SILTY CLAY	10					661.5		10				
660.0	Very soft, gray SILTY CLAY Organic Content=4.4%	15					660.0		15				
		6	6	0	0.08	60			6	15	8	NP	20
		7	7	0	0.25	30			7	16	7	5.00	12
654.0	Very soft, gray SILTY CLAY LOAM with sand seams	20					654.0		20				
651.5	Stiff to very stiff, gray SILTY CLAY, trace gravel	25					651.5		25				
		8	8	3	0.25	18			8	17	12	7.63	11
		9	9	4	3.69	15			9	18	19	20	NR
		10	10	7	3.25	20			10	19	12	7.63	11
		11	11	8	5.00	12			11	20	20	20	NR
		12	12	11	5.00	12			12	21	20	20	NR
		13	13	11	5.00	12			13	22	25	25	NR
		14	14	11	5.00	12			14	23	25	25	NR
		15	15	11	5.00	12			15	24	25	25	NR
		16	16	11	5.00	12			16	25	25	25	NR
		17	17	11	5.00	12			17	26	25	25	NR
		18	18	11	5.00	12			18	27	25	25	NR
		19	19	11	5.00	12			19	28	25	25	NR
		20	20	11	5.00	12			20	29	25	25	NR
		21	21	11	5.00	12			21	30	25	25	NR
		22	22	11	5.00	12			22	31	25	25	NR
		23	23	11	5.00	12			23	32	25	25	NR
		24	24	11	5.00	12			24	33	25	25	NR
		25	25	11	5.00	12			25	34	25	25	NR

GENERAL NOTES

Begin Drilling: 08-25-2011
 Complete Drilling: 08-25-2011
 Drilling Contractor: Groff
 Drill Rig: CME ATV
 Driller: T&K
 Logger: B. Wilson
 Checked by: C. Marin
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 3.50 ft
 At Completion of Drilling: DRY
 Time After Drilling: NA
 Depth to Water: NA

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

BORING LOG 3D-B-14

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z005, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 671.96 ft
 North: 1611750.25 ft
 East: 1115373.17 ft
 Station: 309+47.20
 Offset: 70.09 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
		17	17	4	2.21	12			17				
615.5	Medium dense, gray SILTY LOAM, little gravel	60					615.5		60				
610.5	Dense, gray LOAM, some gravel	65					610.5		65				
604.5	Hard, gray SILTY CLAY, trace gravel	70					604.5		70				
600.5	Boring terminated at 71.50 ft	75					600.5		75				

GENERAL NOTES

Begin Drilling: 08-25-2011
 Complete Drilling: 08-25-2011
 Drilling Contractor: Groff
 Drill Rig: CME ATV
 Driller: T&K
 Logger: B. Wilson
 Checked by: C. Marin
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 3.50 ft
 At Completion of Drilling: DRY
 Time After Drilling: NA
 Depth to Water: NA

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

BORING LOG PBJ-01

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Mainline, Peat Area J, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 673.28 ft
 North: 1811649.39 ft
 East: 1115359.00 ft
 Station: 308+46.51
 Offset: 54.72 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
672.6	Hard, brown SILTY CLAY	1	3	7	4.50	15	672.6		1				
	--FILL--												
	Medium dense, gray CRUSHED STONE (stone size up to 5-inch)	2	11	13	NP	4			2	11	13	NP	4
	--FILL--												
		3	11	12	NP	4			3	11	12	NP	4
		4	11	13	NP	10			4	11	13	NP	10
		5	14	9	NP	6			5	14	9	NP	6
		6	23	15	NP	5			6	23	15	NP	5
		7	4	5	NP	4			7	4	5	NP	4
657.8	Very soft to soft, black and gray SILTY CLAY LOAM, trace organics	8					657.8		8				
	--L _c (%)=38, P _c (%)=19--												
	--%Gravel=0.2--												
	--%Sand=3.7--												
	--%Silt=75.4--												
	--%Clay=20.7--												
	--A-6 (17)--												
652.8	Medium stiff to stiff, brown SILTY CLAY	10					652.8		10				
		11	2	3	1.56	19			11	2	3	1.56	19
648.3	Boring terminated at 25.00 ft	25					648.3		25				

GENERAL NOTES

Begin Drilling: 10-18-2010
 Complete Drilling: 10-18-2010
 Drilling Contractor: WTS
 Drill Rig: D 50 ATV
 Driller: K&K
 Logger: C. Davis
 Checked by: C. Marin
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 2.50 ft
 At Completion of Drilling: 3.00 ft
 Time After Drilling: NA
 Depth to Water: NA

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

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)
884.0	12-inch thick ASPHALT --PAVEMENT--						884.0	Very stiff, gray SILTY CLAY, trace gravel					
883.5	6-inch thick CRUSHED STONE --BASE COURSE--		1	8 8 8	4.50	16	883.5	--WET--		10	6 6 6	3.50	19
	Very stiff to hard, brown SILTY CLAY LOAM, trace to little gravel --FILL--		2	6 6 7	3.50	21		Boring terminated at 27.50 ft					
			3	3 4 8	3.00	14							
			4	4 6 9	4.50	17							
874.5	Medium dense to dense CRUSHED STONE (stone size up to 5-inch) --FILL--		5	10 10 12	NP	8							
			6	16 13 15	NP	8							
			7	14 11 15	NP	6							
			8	15 19 24	NP	10							
			9	10 8 8	NP								

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	10-14-2010	Complete Drilling	10-14-2010
Drilling Contractor	K&S	Drill Rig	D-50 TMR
Driller	T&M	Logger	B. Wilson
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)
882.0	12-inch thick brown SILTY CLAY LOAM --TOPSOIL--		1	6 7 9	NP	2	882.0	Very soft to soft, black and gray, organic SILTY CLAY		6	0 0 0	0.25	70
	Medium dense, gray CRUSHED STONE (stone size up to 5-inch) --FILL--		2	10 9 7	NP	4				7	0 0 0	0.25	47
			3	11 10 8	NP	5				8	1 3 3	NP	17
			4	9 8 6	NP	7				9	1 1 3	NP	24
			5	7 8 14	NP	4				10	3 7 7	2.87	20
			10	10 10 10	NP					11	2 7 10	2.62	19
882.5	Very soft to soft, black and gray, organic SILTY CLAY		6	0 0 0	0.25	70							
882.5	Loose, black coarse SAND		7	0 0 0	0.25	47							
883.5	Medium stiff, black and gray, organic SILTY CLAY (Qu=0.75 tsf)		8	1 3 3	NP	17							
883.5	Very stiff, brown SILTY CLAY		9	1 1 3	NP	24							
848.0	Boring terminated at 25.00 ft		10	3 7 7	2.87	20							
			11	2 7 10	2.62	19							

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	10-18-2010	Complete Drilling	10-18-2010
Drilling Contractor	WTS	Drill Rig	D 50 ATV
Driller	K&K	Logger	C. Davis
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)
884.0	12-inch thick ASPHALT --PAVEMENT--						884.0	Very stiff, gray SILTY CLAY, trace gravel					
883.5	4-inch thick CRUSHED STONE --BASE COURSE--		1	8 8 8	4.50	16	883.5	Boring terminated at 27.50 ft		11	3 4 6	2.50	18
	Very stiff to hard, brown SILTY CLAY LOAM, trace gravel --FILL--		2	8 6 8	3.75	19							
			3	4 6 8	4.50	17							
			4	4 5 8	4.50	16							
			5	13 10 15	4.50	15							
873.5	Medium dense to dense, gray CRUSHED STONE (stone size up to 5-inch) --FILL--		6	10 11 15	NP	4							
			7	13 15 19	NP	6							
			8	7 8 18	NP	5							
			9	9 3 14	0.25	27							
			10	13 14 12	NP	6							
	--Soft, black organic SILTY CLAY in the CRUSHED STONE--												

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	10-14-2010	Complete Drilling	10-14-2010
Drilling Contractor	K&S	Drill Rig	D-50 TMR
Driller	T&M	Logger	B. Wilson
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

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BORING LOG PBJ-05

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Mainline, Peat Area J, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 685.64 ft
 North: 1611813.84 ft
 East: 1115319.16 ft
 Station: 310+11.42
 Offset: 16.84 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
684.4	14-inch thick ASPHALT --PAVEMENT--						680.1	Medium stiff, gray SANDY CLAY	11			0.50	30
684.4	4-inch thick CRUSHED STONE --BASE COURSE--		1	10	4.50	13	658.1	Boring terminated at 27.50 ft					
684.4	Very stiff to hard, brown SILTY CLAY LOAM, little gravel --FILL--		2	7	3.75	18							
			3	5	4.50	22							
			4	6	4.50	14							
			5	9	3.75	24							
673.9	Loose to very dense CRUSHED STONE (stone size up to 5-inch) --FILL--		6	15	NP	11							
			7	18	NP	3							
			8	14	NP	5							
			9	6	NP	5							
			10	6	NP	5							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-14-2010	Complete Drilling	10-14-2010	While Drilling	▽	13.40 ft	
Drilling Contractor	K&S	Drill Rig	D-50 TMR	At Completion of Drilling	▽	14.00 ft	
Driller	T&M	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

BORING LOG PBJ-06

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Mainline, Peat Area J, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 673.56 ft
 North: 1811842.48 ft
 East: 1115363.44 ft
 Station: 310+39.54
 Offset: 61.45 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
672.8	8-inch thick Black SILTY CLAY LOAM --TOPSOIL--		1	20	2.50	14							
671.6	Very stiff, brown SILTY CLAY, some gravel --FILL--		2	12	NP	12							
	Medium dense, black gravelLY LOAM --FILL--		3	8	NP	8							
668.1	Loose to medium dense, gray CRUSHED STONE (stone size up to 5-inch) --FILL--		4	12	NP	7							
			5	8	NP	9							
			6	4	NP	14							
			7	4	NP	26							
658.1	Soft, black and gray SILTY CLAY LOAM, organic traces		8	0	0.25	37							
	-L _c (%)=50, P _c (%)=23- -%Gravel=0.3- -%Sand=8.9- -%Silt=67.9-20- -%Clay=22.9- -A-7-6 (30)-		9	0	0.25	47							
653.1	Loose, black and gray SANDY gravel		10	0	NP	14							
650.6	Stiff, brown SILTY CLAY		11	3	1.80	19							
648.6	Boring terminated at 25.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-15-2010	Complete Drilling	10-15-2010	While Drilling	▽	3.00 ft	
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	▽	3.00 ft	
Driller	K&K	Logger	C. Davis	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

BORING LOG PBJ-07

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Mainline, Peat Area J, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 686.53 ft
 North: 1811898.82 ft
 East: 1115322.67 ft
 Station: 310+96.35
 Offset: 21.36 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Cu (tsf)	Moisture Content (%)
685.5	12-inch thick ASPHALT --PAVEMENT--						681.0	Stiff, gray LOAM, trace gravel	11			1.50	19
685.5	Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel --FILL--		1	4	4.50	18	659.0	Boring terminated at 27.50 ft					
			2	5	3.50	21							
			3	5	3.75	15							
			4	4	3.50	20							
			5	6	4.00	16							
			6	12	NP	8							
			7	3	NP	8							
			8	4	NP	10							
			9	3	NP	18							
			10	4	NP	18							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-15-2010	Complete Drilling	10-15-2010	While Drilling	▽	16.00 ft	
Drilling Contractor	K&S	Drill Rig	D-50 TMR	At Completion of Drilling	▽	13.00 ft	
Driller	T&M	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

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BORING LOG SGB-083
WEI Job No.: 201-40-01
Client: **McDonough Associates Inc.**
Project: **US 45, Segment 3**
Location: **Mainline, Cook Co., T36N, R12E**

Datum: NGVD
Elevation: 689.93 ft
North: 1811262.47 ft
East: 1115317.60 ft
Station: 304+60.23
Offset: 9.1 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type necessary	Sample No.	SPT Values (blows in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type necessary	Sample No.	SPT Values (blows in)	Cu (tsf)	Moisture Content (%)
688.7	14-inch thick ASPHALT --PAVEMENT--														
	Hard, brown CLAY LOAM, trace gravel --FILL--														
		3		1	4.50	16									
		5		2	4.50	15									
		7		3	4.00	19									
		9		4	4.50	18									
679.4	Hard, brown SILTY CLAY LOAM, trace gravel	10		5	4.50	17									
677.9	Boring terminated at 12.00 ft	12													

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	07-27-2010	Complete Drilling	07-27-2010	While Drilling	▽	DRY	
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	▽	DRY	
Driller	K&J	Logger	F. Bozga	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	2.25" SSA; Boring backfilled upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

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BORING LOG SGB-085
WEI Job No.: 201-40-01
Client: **McDonough Associates Inc.**
Project: **US 45, Segment 3**
Location: **Mainline, Cook Co., T36N, R12E**

Datum: NGVD
Elevation: 686.93 ft
North: 1811908.78 ft
East: 1115310.53 ft
Station: 311+06.46
Offset: 9.3 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type necessary	Sample No.	SPT Values (blows in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type necessary	Sample No.	SPT Values (blows in)	Cu (tsf)	Moisture Content (%)
685.7	14-inch thick ASPHALT --PAVEMENT--														
	Hard, brown CLAY LOAM, trace gravel --FILL--														
		3		1	4.50	17									
		5		2	4.50	17									
		7		3	4.50	17									
		9		4	NR										
		11		5	4.50	14									
674.9	Boring terminated at 12.00 ft	12													

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	07-27-2010	Complete Drilling	07-27-2010	While Drilling	▽	DRY	
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	▽	DRY	
Driller	K&J	Logger	F. Bozga	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	▽	NA			
Drilling Method	2.25" SSA; Boring backfilled upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

100 S. WACKER DR.
 5TH FLOOR
 CHICAGO, IL 60606
 TEL: (312) 939-1000
 FAX: (312) 939-4198
URS

FILE NAME =	USER NAME = orsalan_khan	DESIGNED - WEI	REVISED -
0162005-60M62-021-bor.dgn		CHECKED - AMK	REVISED -
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	PLOT DATE = 3/22/2013	CHECKED - AMK	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

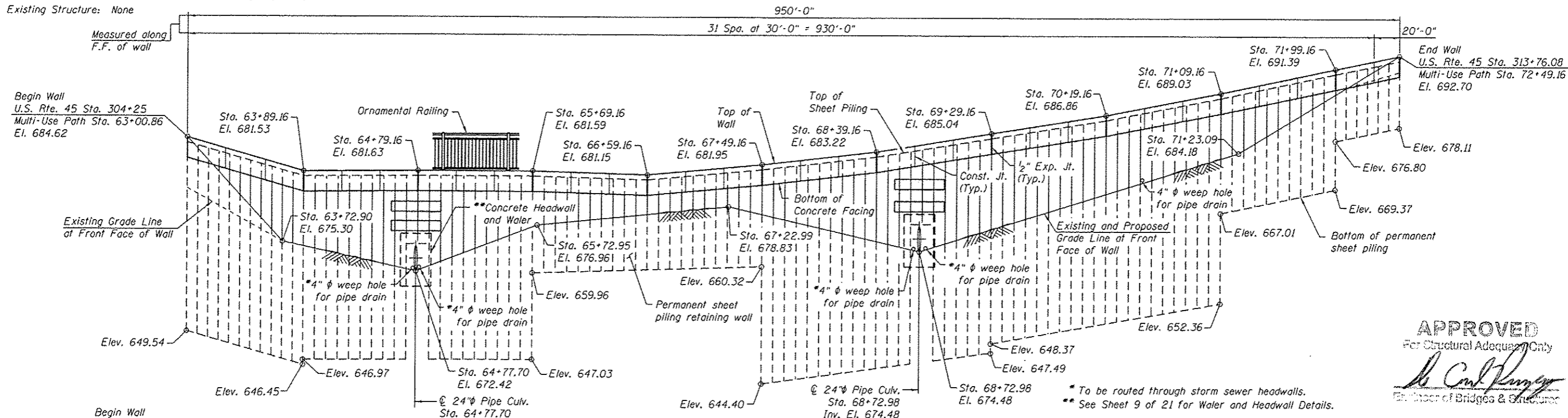
**SOIL BORINGS 9
STRUCTURE NO. 016-Z005**

SHEET NO. 21 OF 21 SHEETS

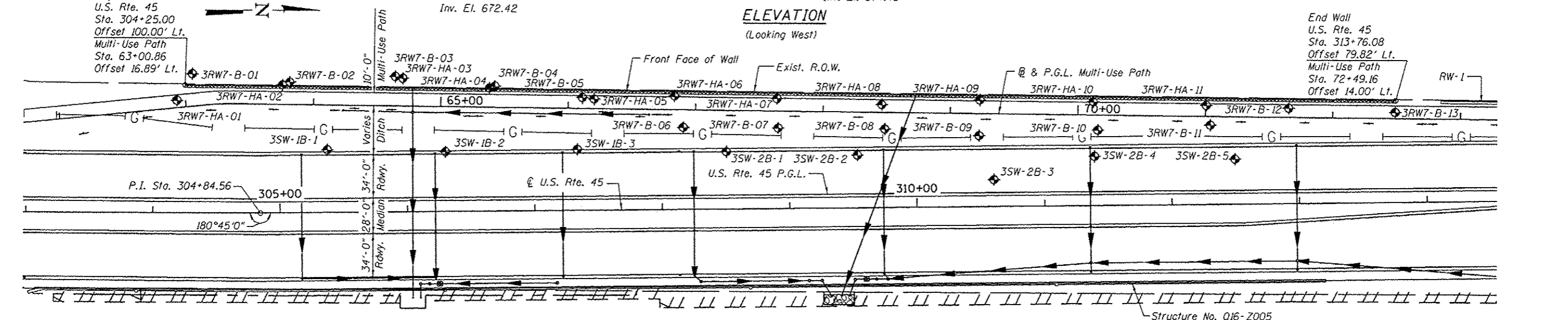
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	440
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

Bench Mark: Elev. 689.00 Top of brass survey monument located at the west edge of the LaGrange Road southbound pavement, 600 feet north of the SouthWest Highway bridge.

Existing Structure: None



APPROVED
For Structural Adequacy Only
[Signature]
Engineer of Bridges & Structures



PLAN

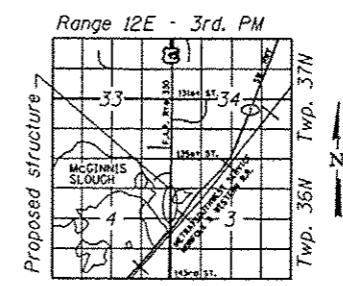
Note: Wall offsets are measured from the centerline of U.S. Rte. 45 & the centerline of Multi-Use Path to the front face of wall.

LEGEND

- Ditch Flow Line
- G- Exist. Gas Line
- Prop. Drainage Structure
- Prop. Storm Sewer/Pipe Culvert
- Soil Boring
- F.F.=Front Face
- B.F.=Back Face
- E.F.=Each Face
- I.F.=Inside Face
- O.F.=Outside Face

CURVE DATA

P.I. STA. = 63+26.57
Δ = 5° 03' 32"
R = 245.00'
P.C. STA. = 63+13.25
P.T. STA. = 63+39.87



LOCATION SKETCH

DESIGN SPECIFICATIONS
2012 AASHTO LRFD Bridge Design Specifications,
6th Edition

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (ASTM A 572 Grade 50 Sheet Piling)

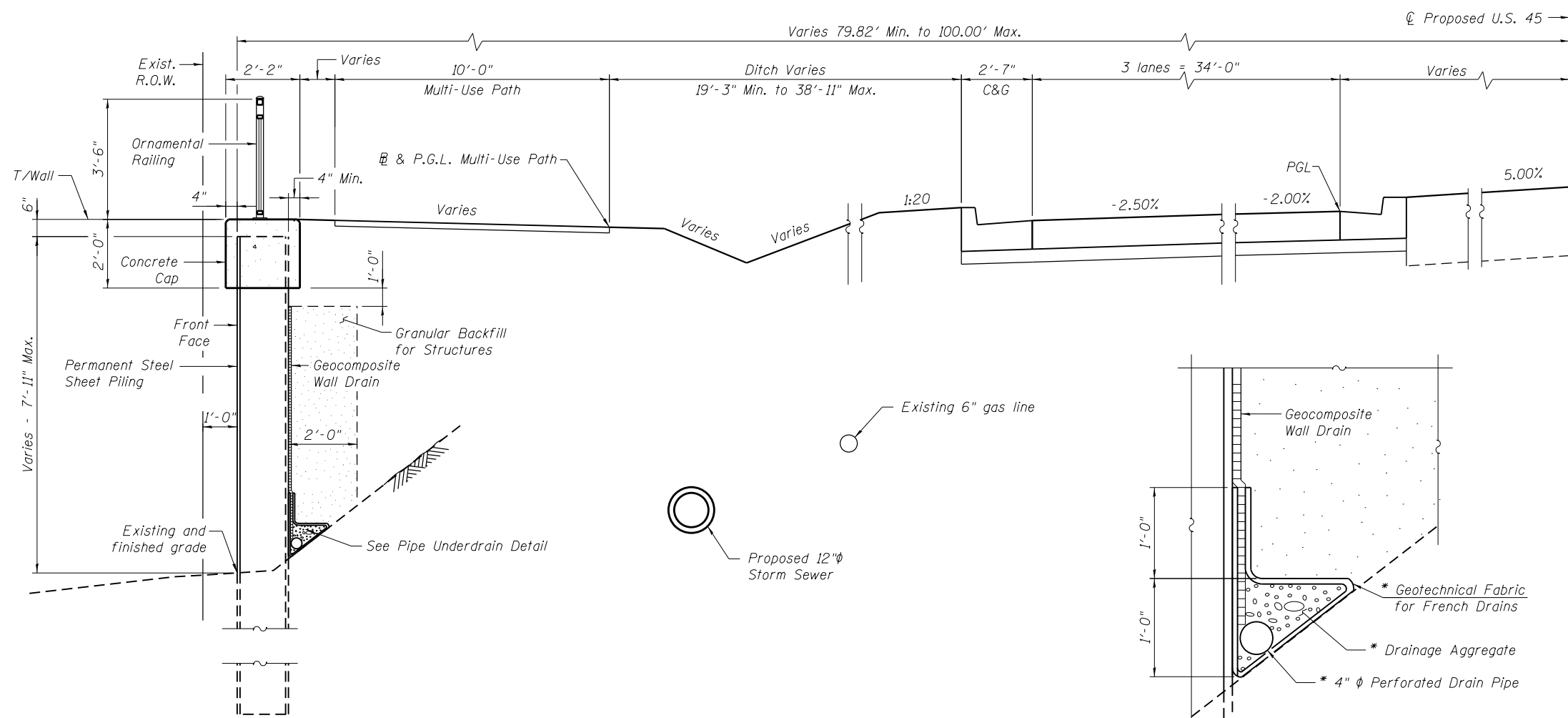
GENERAL PLAN & ELEVATION
U.S. ROUTE 45 - LAGRANGE ROAD
F.A.P. RTE. 330 SEC. 103R-5
COOK COUNTY
STATION 304+25.00 TO 313+76.08
STRUCTURE NO. 016-2006



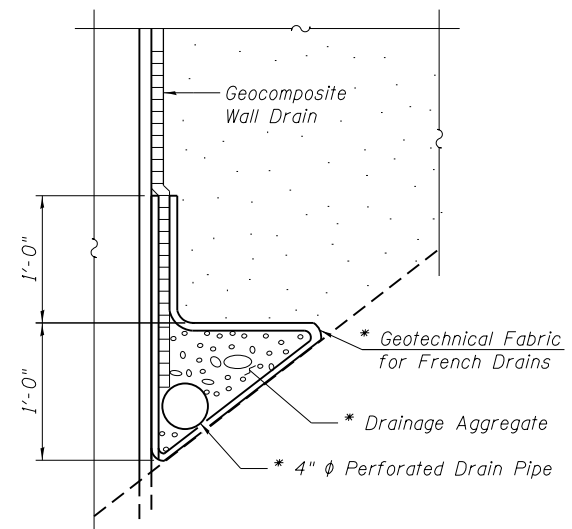
[Signature]
ARSALAN M. KHAN, S.E.
LICENSE NO.: 081-006258
EXPIRES: NOVEMBER 30, 2014
DATE: 03-13-2013

URS
100 S. WACKER DR.
SUITE 500
CHICAGO, IL 60606
TEL (312) 935-9000
FAX (312) 935-4998

FILE NAME: 0162006-60M62-001-GPE.dgn	USER NAME: Kyle.Pearl	DESIGNED: PMH	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 1 OF 21 SHEETS															
PLOT SCALE: 0.010000 1" = 10'	DESIGNED: PMH	CHECKED: AMK	REVISED: -																	
PLOT DATE: 3/15/2013	DESIGNED: PMH	DRAWN: PMH	REVISED: -																	
	CHECKED: AMK	CHECKED: AMK	REVISED: -																	
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.																
330	103R-5	COOK	778	441																
				CONTRACT NO. 60M62																



SECTION THRU SHEET PILE WALL
(Looking North)



PIPE UNDERDRAIN DETAIL

* Included in the cost of "Pipe Underdrains for Structures 4".

TOTAL BILL OF MATERIAL

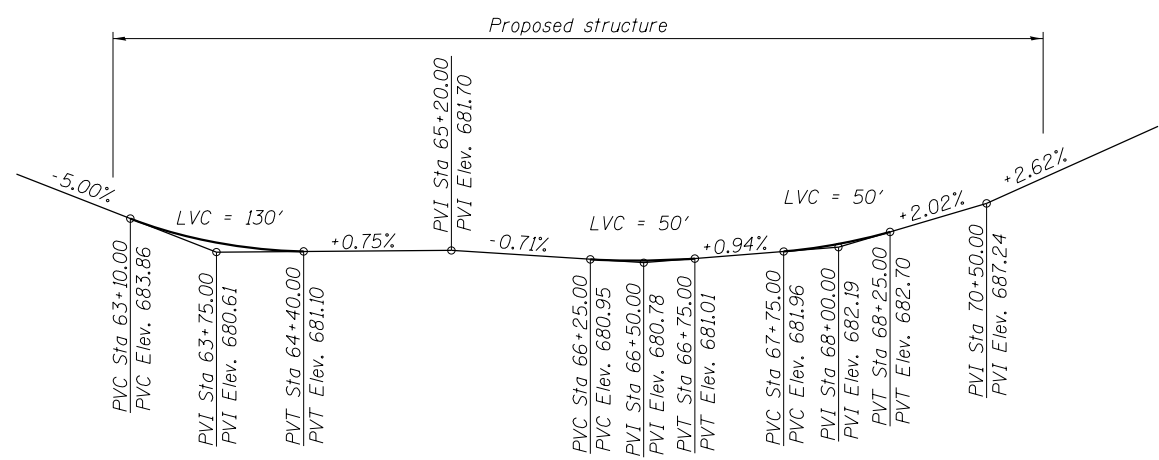
ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	13
Concrete Structures	Cu. Yd.	161.7
Furnishing and Erecting Structural Steel	Pound	5,500
Stud Shear Connectors	Each	1,290
Reinforcement Bars	Pound	680
Reinforcement Bars, Epoxy Coated	Pound	11,620
Geocomposite Wall Drain	Sq. Yd.	114
Permanent Steel Sheet Piling	Sq. Ft.	28,731
Granular Backfill for Structures	Cu. Yd.	189
Ornamental Railing	Foot	950
Pipe Underdrains for Structures 4"	Foot	998

GENERAL NOTES

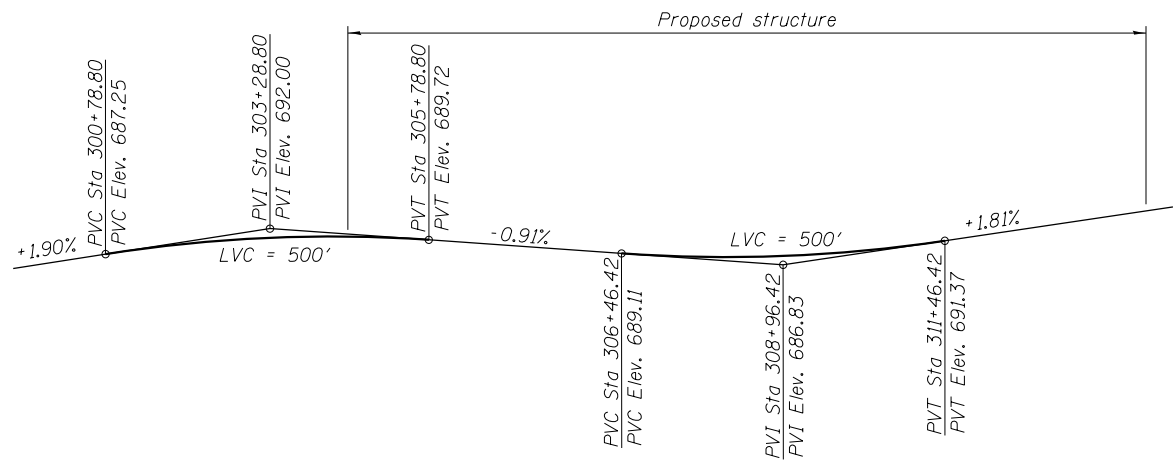
- Fasteners shall be ASTM A325 Type 3, mechanically galvanized bolts. Bolts $\frac{3}{4}$ in. ϕ , holes $\frac{13}{16}$ in. ϕ unless otherwise noted.
- Calculated weight of Structural Steel = 5,500 lbs.
- All structural steel shall be AASHTO M 270 Grade 50W.
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Concrete cap shall be constructed after backfill is in place.
- All exposed corners shall have a 1" chamfer.

INDEX OF SHEETS

- General Plan & Elevation
- General Details & Bill of Material
- Detailed Plan and Elevation 1
- Detailed Plan and Elevation 2
- Detailed Plan and Elevation 3
- Detailed Plan and Elevation 4
- Detailed Plan and Elevation 5
- Detailed Plan and Elevation 6
- Waler and Headwall Details
- Soil Borings 1
- Soil Borings 2
- Soil Borings 3
- Soil Borings 4
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- Soil Borings 6
- Soil Borings 7
- Soil Borings 8
- Soil Borings 9
- Soil Borings 10
- Soil Borings 11
- Soil Borings 12



PROFILE GRADE-PROPOSED MUTLI-USE PATH
(along PGL path)



PROFILE GRADE-PROPOSED LAGRANGE RD
(along PGL roadway)

URS
100 S. WACKER DR.
SUITE 600
CHICAGO, IL 60606
TEL (312) 939-1000
FAX (312) 939-4998

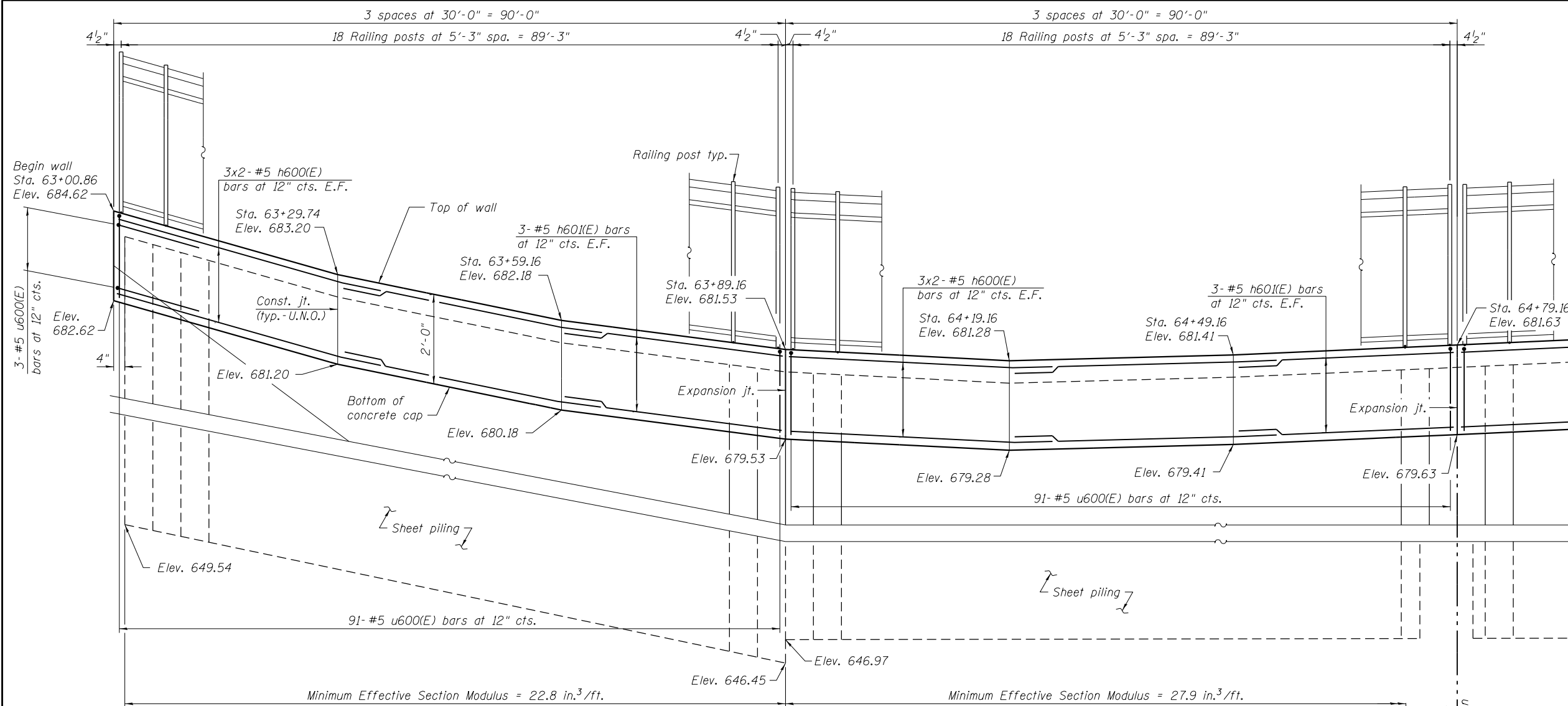
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	PLOT DATE = 3/13/2013	CHECKED - AMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DETAILS & BILL OF MATERIAL
STRUCTURE NO. 016-2006

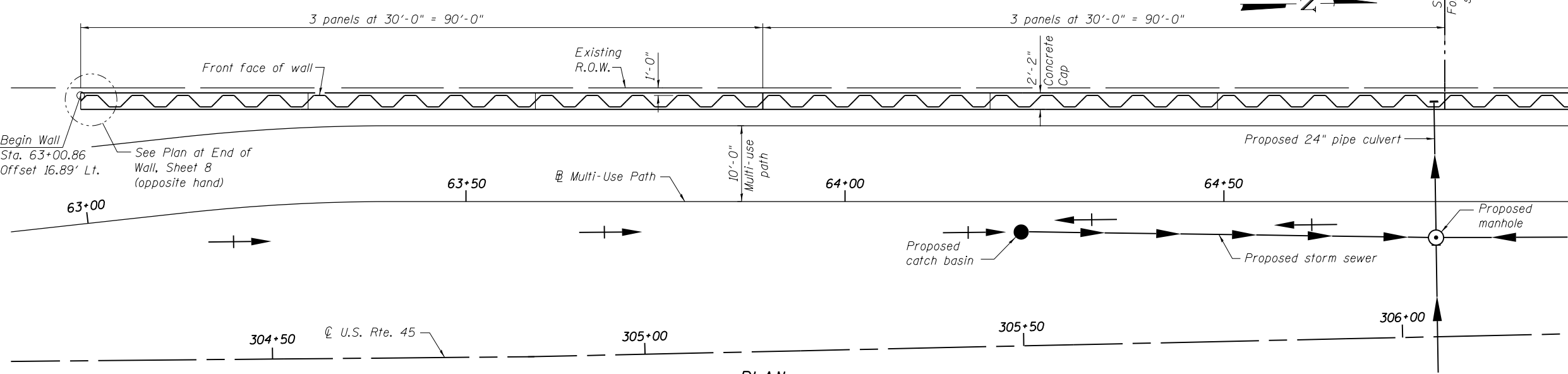
SHEET NO. 2 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	442
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60M62	



MINIMUM BAR LAP
#5 bar = 3'-8"

ELEVATION
(Looking West)



PLAN

- Notes:
1. For Bar List see Sheet 8.
 2. For Typical Details see Sheet 2.
 3. For Railing Details see Sheet 8.
 4. Bars indicated thus 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.

URS
 100 S. WACKER DR.
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FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
0162006-60M62-003-pln.dgn		CHECKED - AMK	REVISED -
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		PLOT DATE = 3/13/2013	CHECKED - AMK
			REVISED -

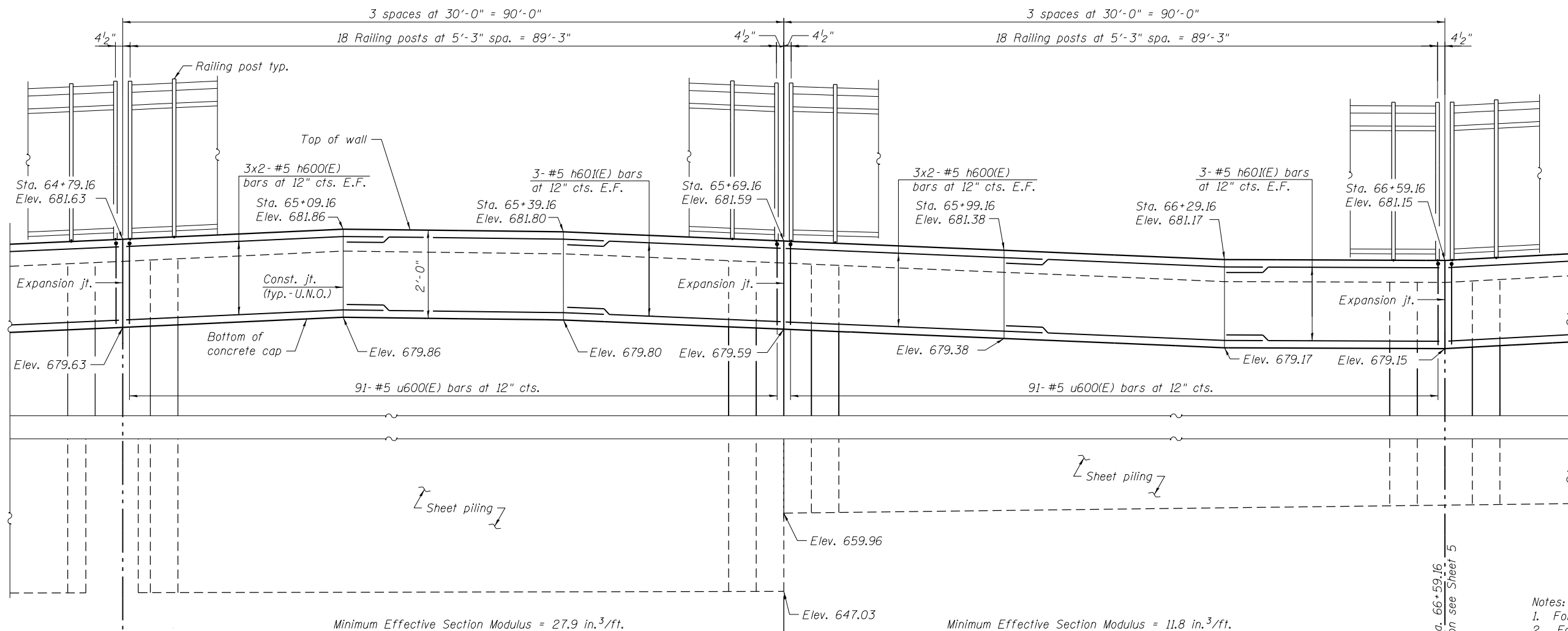
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION 1
STRUCTURE NO. 016-Z006

SHEET NO. 3 OF 21 SHEETS

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330	103R-5	COOK	778	443
CONTRACT NO. 60M62				

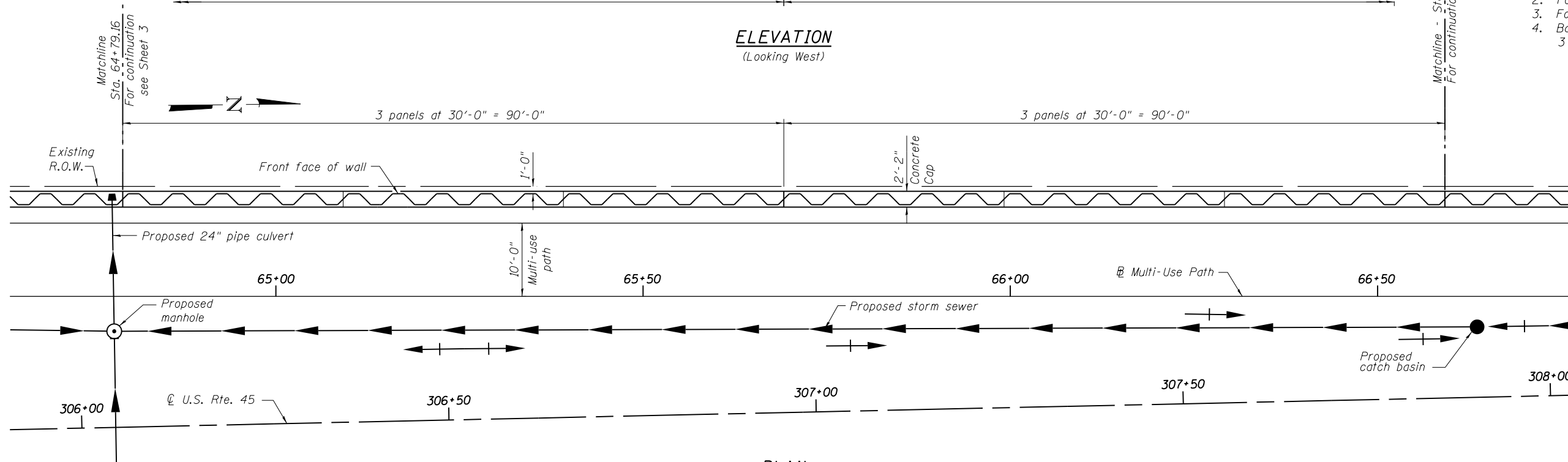
ILLINOIS FED. AID PROJECT



MINIMUM BAR LAP
#5 bar = 3'-8"

- Notes:
1. For Bar List see Sheet 8.
 2. For Typical Details see Sheet 2.
 3. For Railing Details see Sheet 8.
 4. Bars indicated thus 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.

ELEVATION
(Looking West)



PLAN

URS
100 S. WACKER DR.
SUITE 600
CHICAGO, IL 60606
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FAX (312) 939-4998

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
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		DRAWN - AMV	REVISED -
		CHECKED - AMK	REVISED -

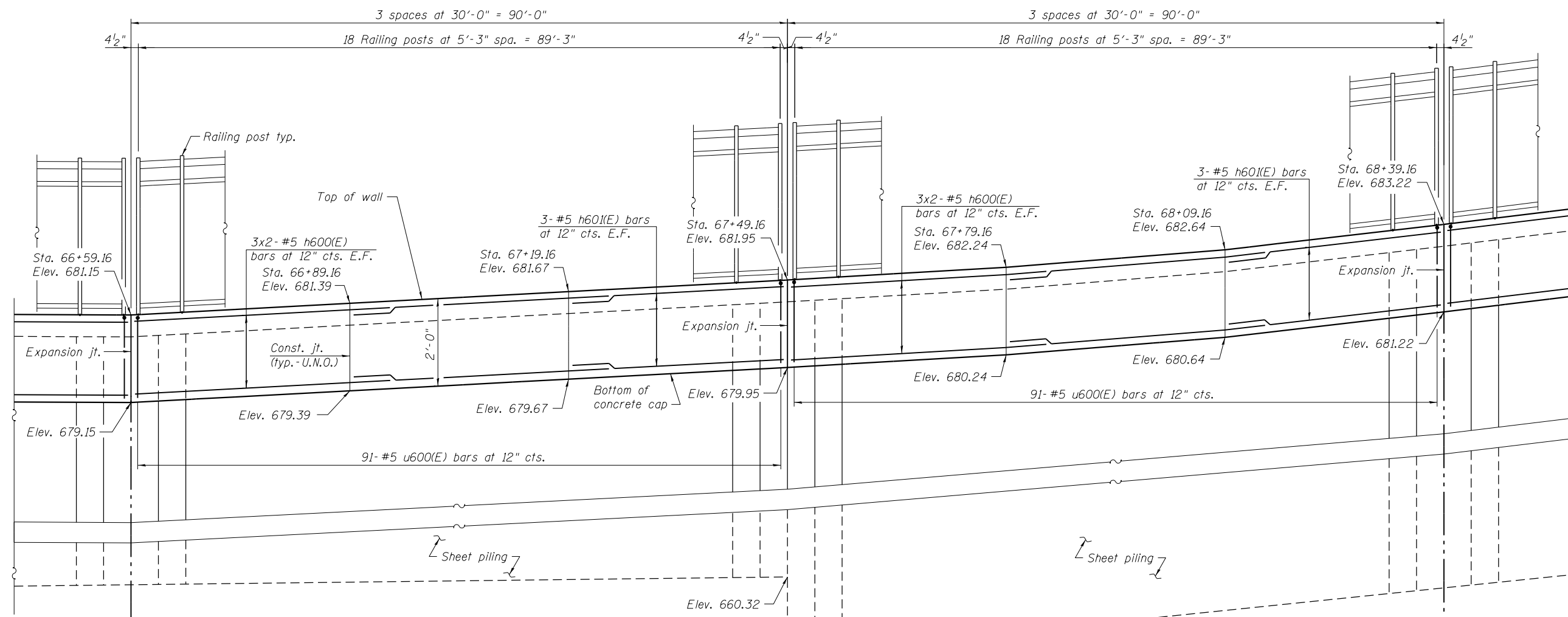
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION 2
STRUCTURE NO. 016-2006

SHEET NO. 4 OF 21 SHEETS

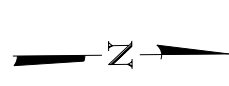
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330	103R-5	COOK	778	444
CONTRACT NO. 60M62				

ILLINOIS FED. AID PROJECT

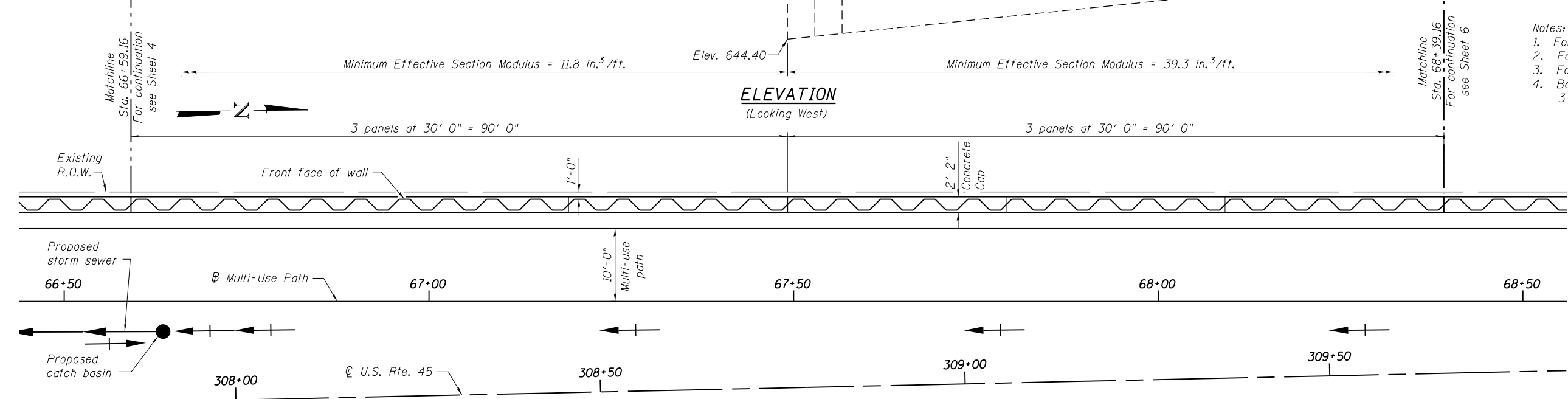


MINIMUM BAR LAP
#5 bar = 3'-8"

- Notes:
1. For Bar List see Sheet 8.
 2. For Typical Details see Sheet 2.
 3. For Railing Details see Sheet 8.
 4. Bars indicated thus 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.



ELEVATION
(Looking West)



PLAN

100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
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URS

FILE NAME = 0162006-60M62-005-pln.dgn	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
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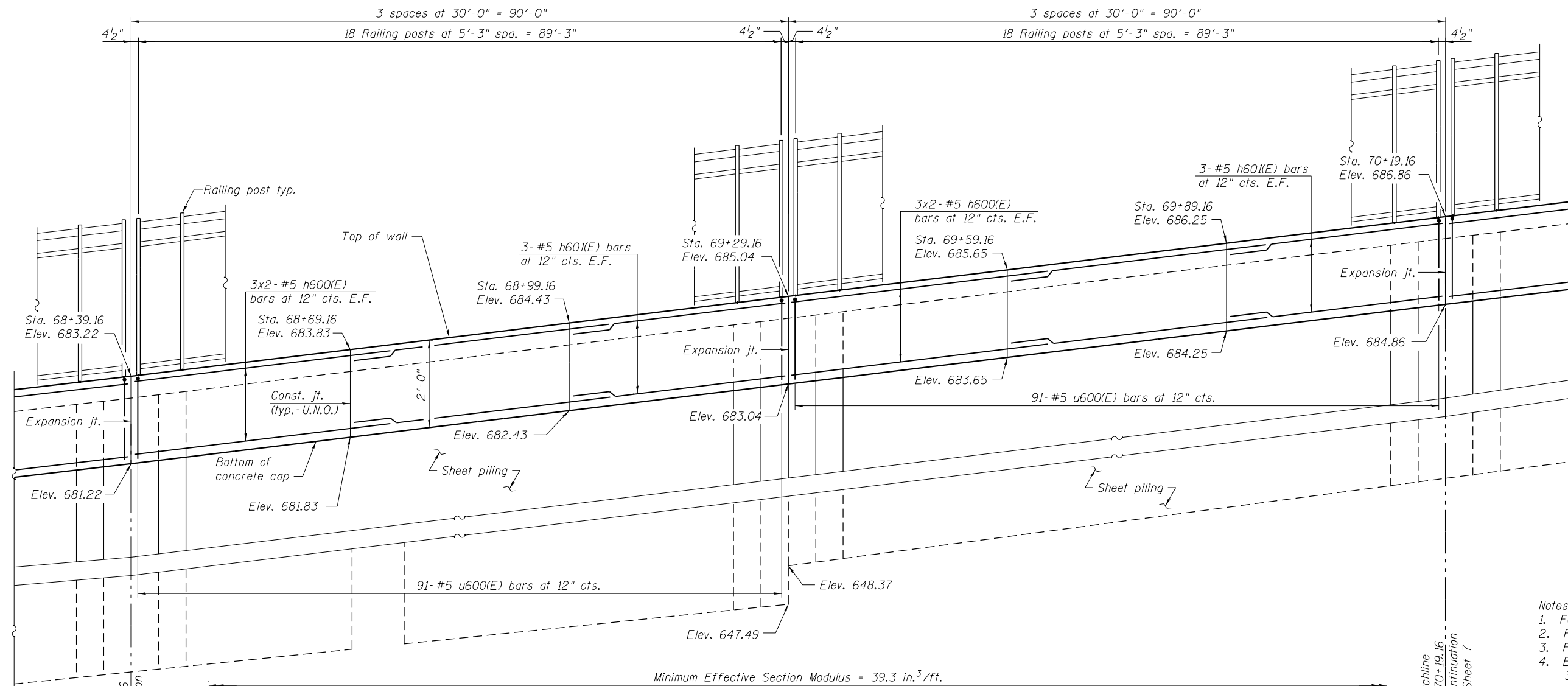
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION 3
STRUCTURE NO. 016-2006

SHEET NO. 5 OF 21 SHEETS

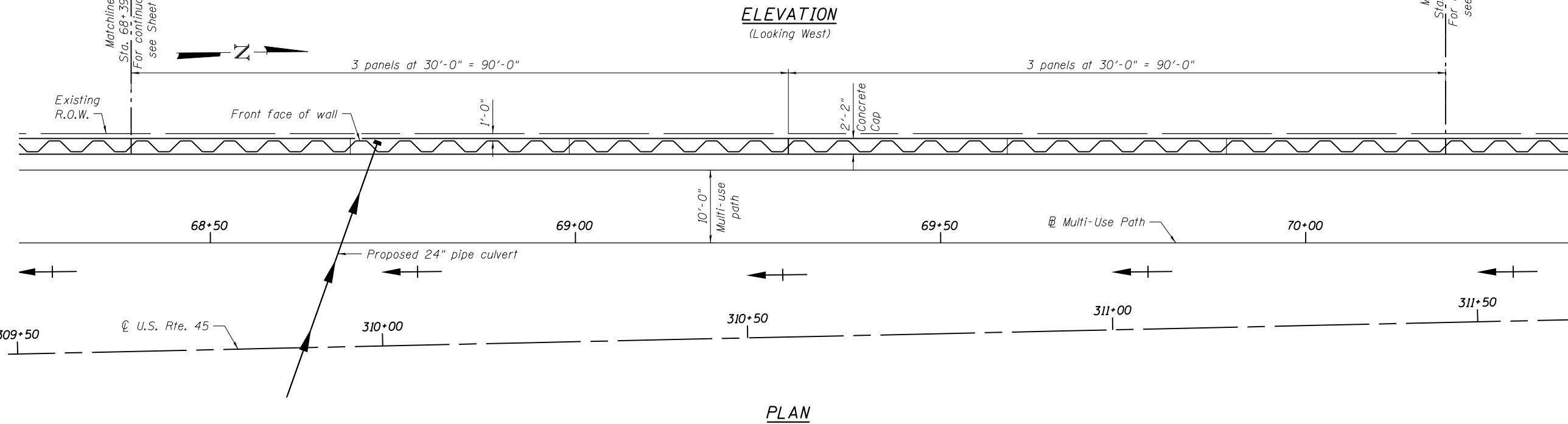
F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 445
CONTRACT NO. 60M62				

ILLINOIS FED. AID PROJECT



MINIMUM BAR LAP
#5 bar = 3'-8"

- Notes:
1. For Bar List see Sheet 8.
 2. For Typical Details see Sheet 2.
 3. For Railing Details see Sheet 8.
 4. Bars indicated thus 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.



ELEVATION
(Looking West)

PLAN

URS
100 S. WACKER DR.
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CHICAGO, IL 60606
TEL (312) 939-1000
FAX (312) 939-4998

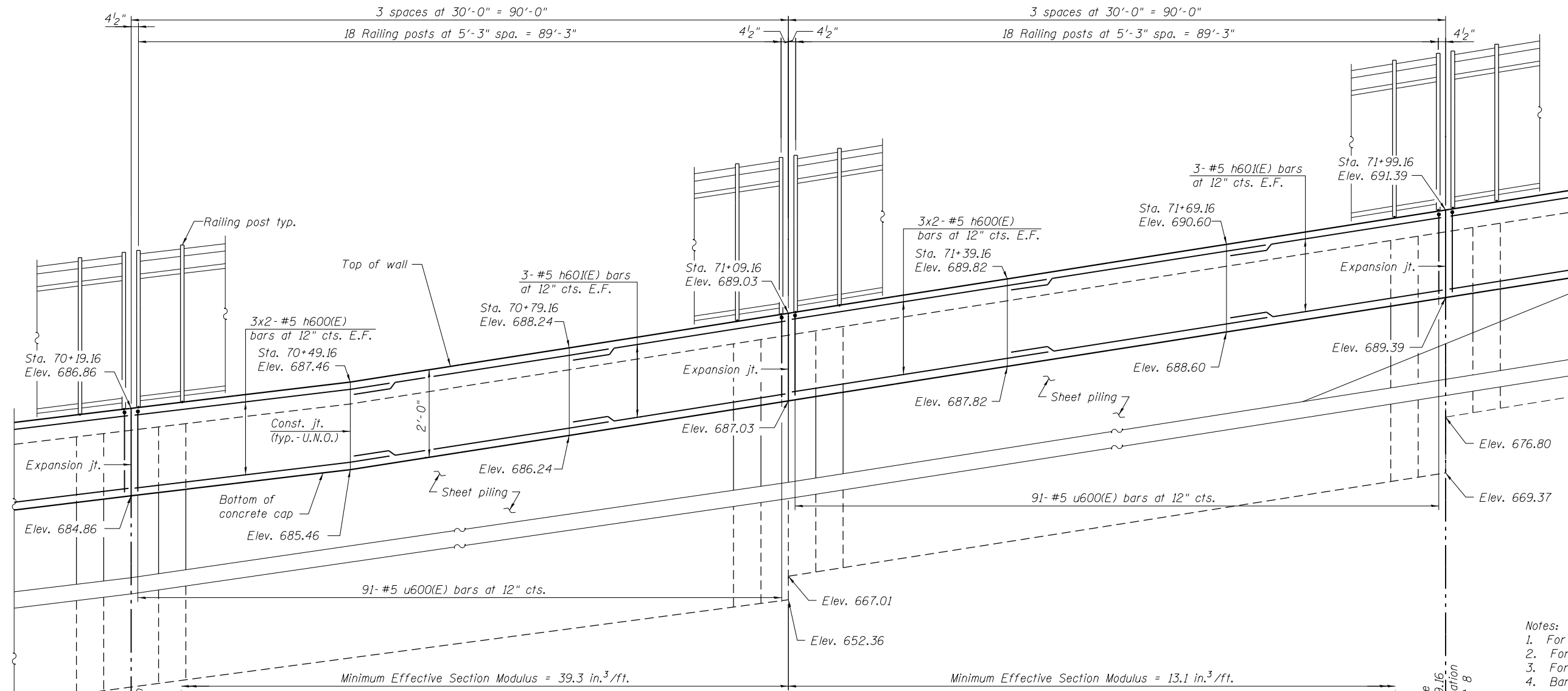
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		DRAWN - AMV	REVISED -
		CHECKED - AMK	REVISED -
			REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION 4
STRUCTURE NO. 016-2006

SHEET NO. 6 OF 21 SHEETS

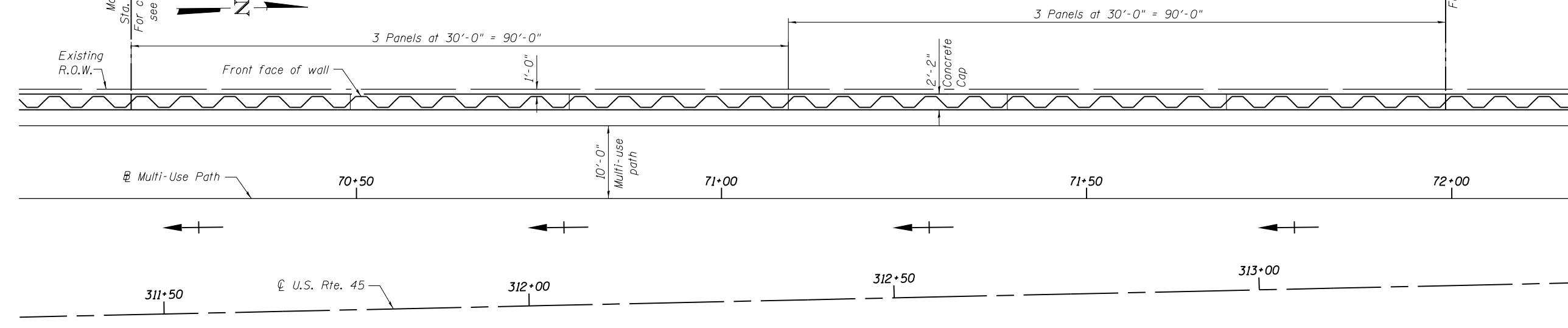
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CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



MINIMUM BAR LAP
#5 bar = 3'-8"

- Notes:
1. For Bar List see Sheet 8.
 2. For Typical Details see Sheet 2.
 3. For Railing Details see Sheet 8.
 4. Bars indicated thus 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.

ELEVATION
(Looking West)



PLAN

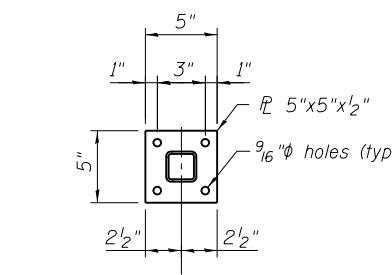
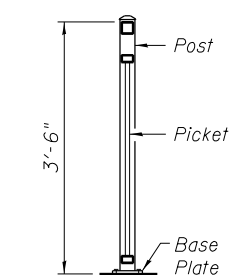
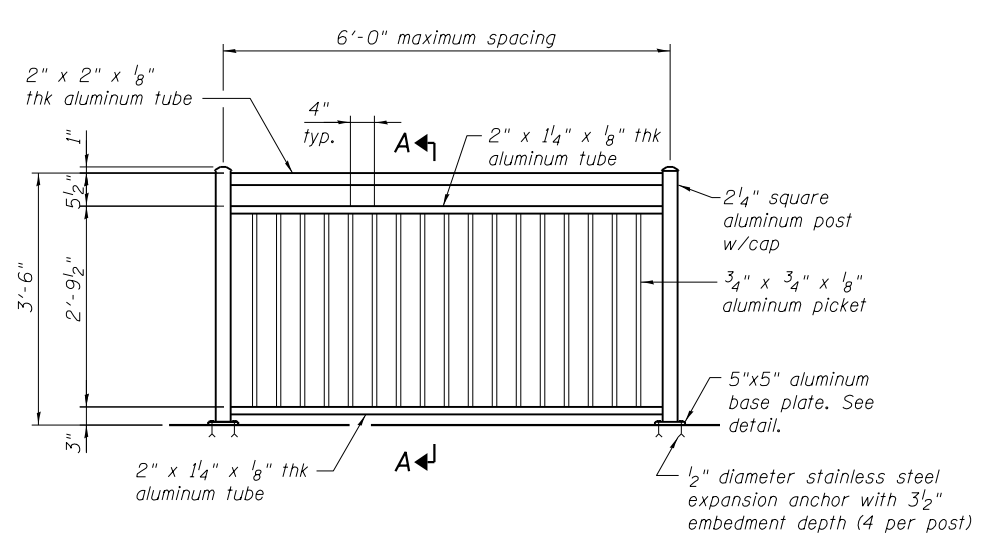
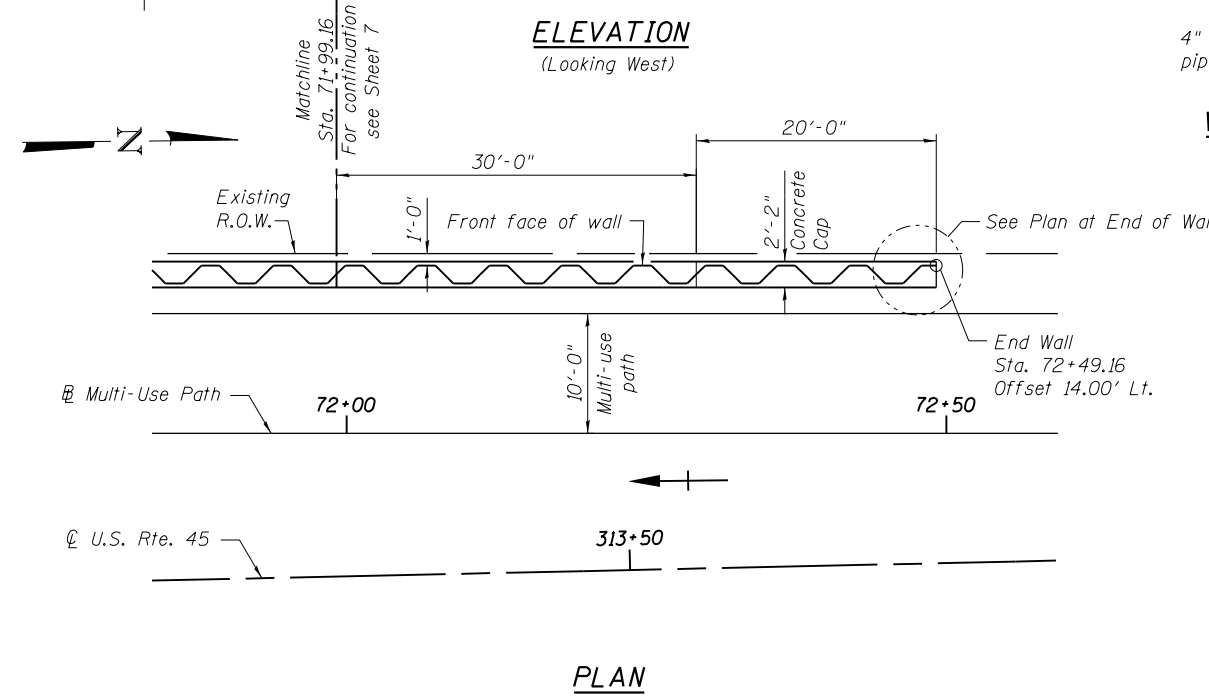
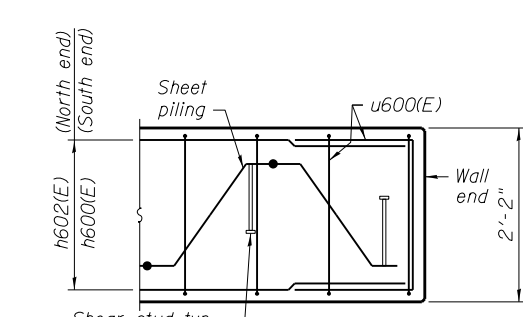
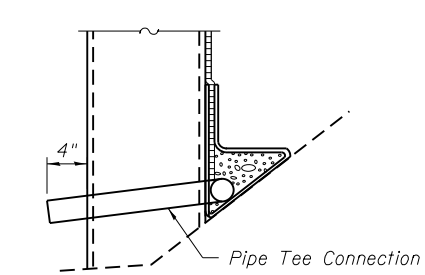
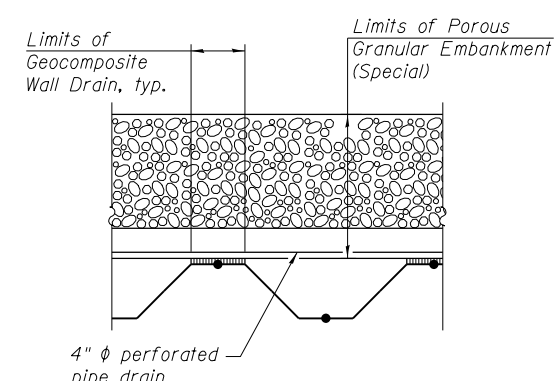
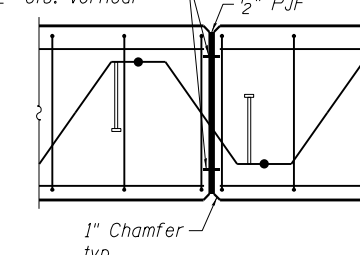
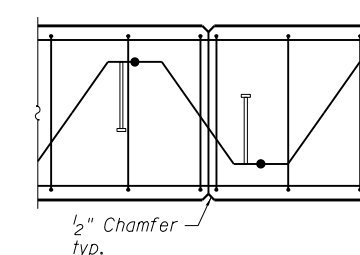
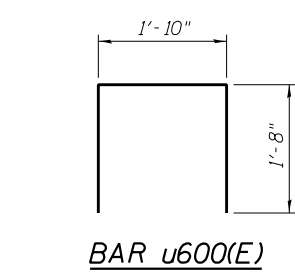
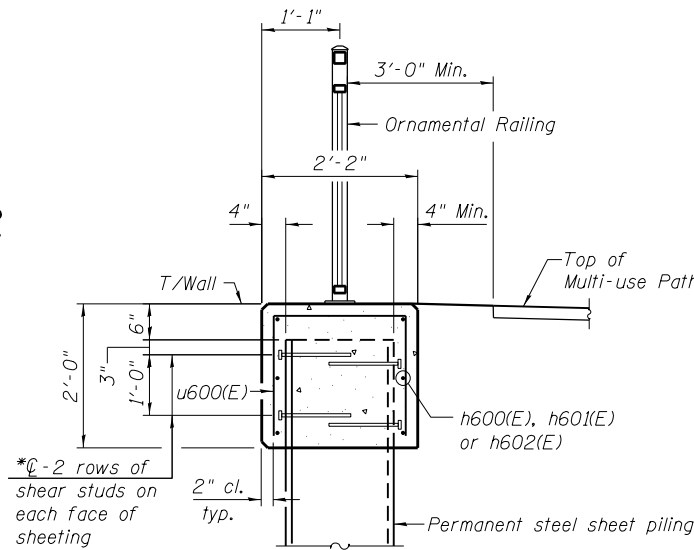
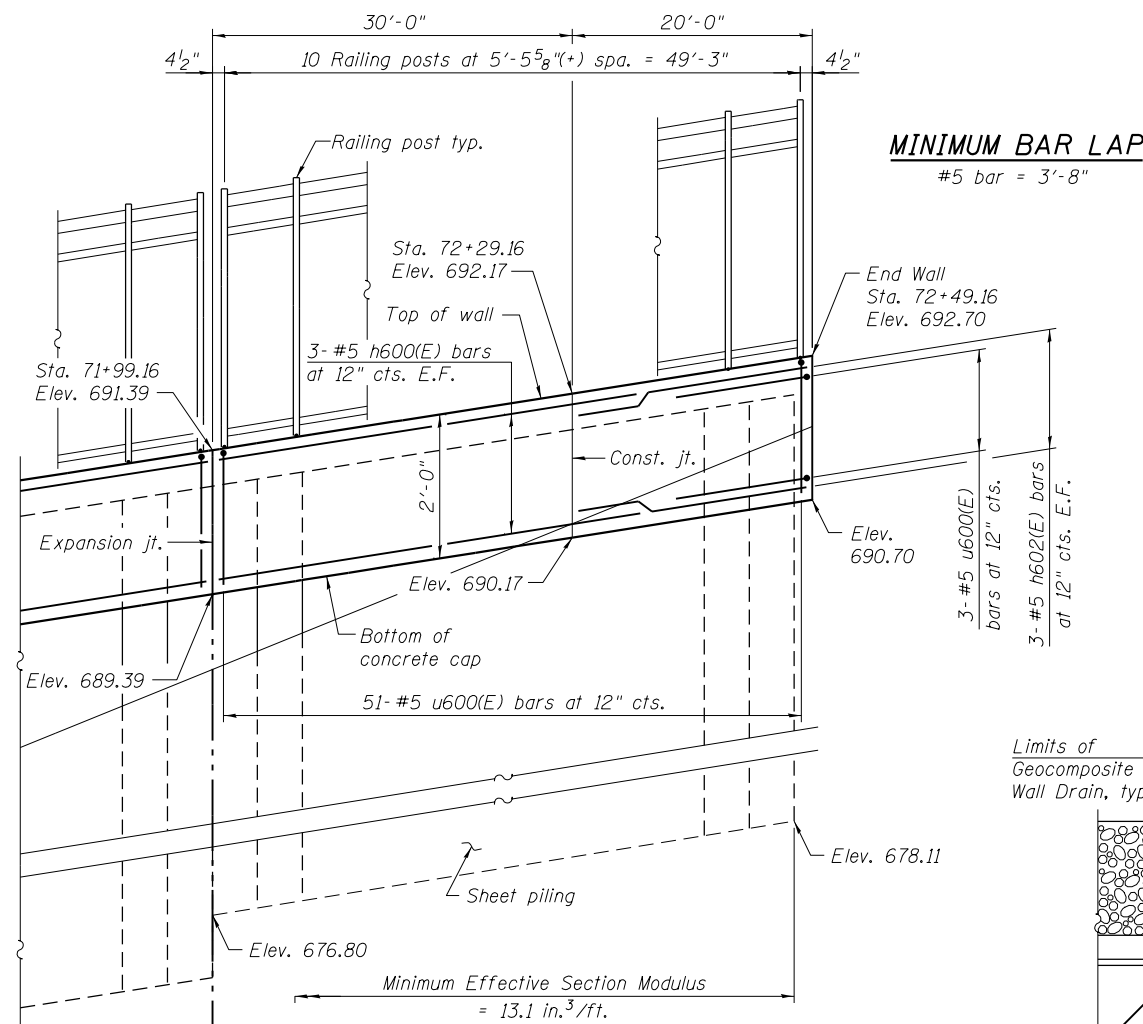
100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4998
URS

FILE NAME = 0162006-60M62-007-pln.dgn	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILED PLAN AND ELEVATION 5 STRUCTURE NO. 016-2006	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 447	
PLOT SCALE = 16.0000' / in.	DRAWN - AMV	CHECKED - AMK	REVISED -			CONTRACT NO. 60M62					
PLOT DATE = 3/13/2013	CHECKED - AMK	REVISED -	REVISED -			SHEET NO. 7 OF 21 SHEETS					
						ILLINOIS FED. AID PROJECT					

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h600(E)	126	#5	33'-8"	—
h601(E)	60	#5	29'-8"	—
h602(E)	6	#5	19'-8"	—
u600(E)	967	#5	5'-2"	⊏
Reinforcement Bars, Epoxy Coated			Pound	11,620
Concrete Structures			Cu. Yd.	152.5

Bars indicated thus 3x2-#5 h600(E) etc. indicates 3 lines of bars with 2 lengths per line.



URS
100 S. WACKER DR.
SUITE 600
CHICAGO, IL 60606
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FAX (312) 939-4998

FILE NAME = 0162006-60M62-008-pln.dgn	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
		CHECKED - AMK	REVISED -
		DRAWN - AMV	REVISED -
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			REVISED -

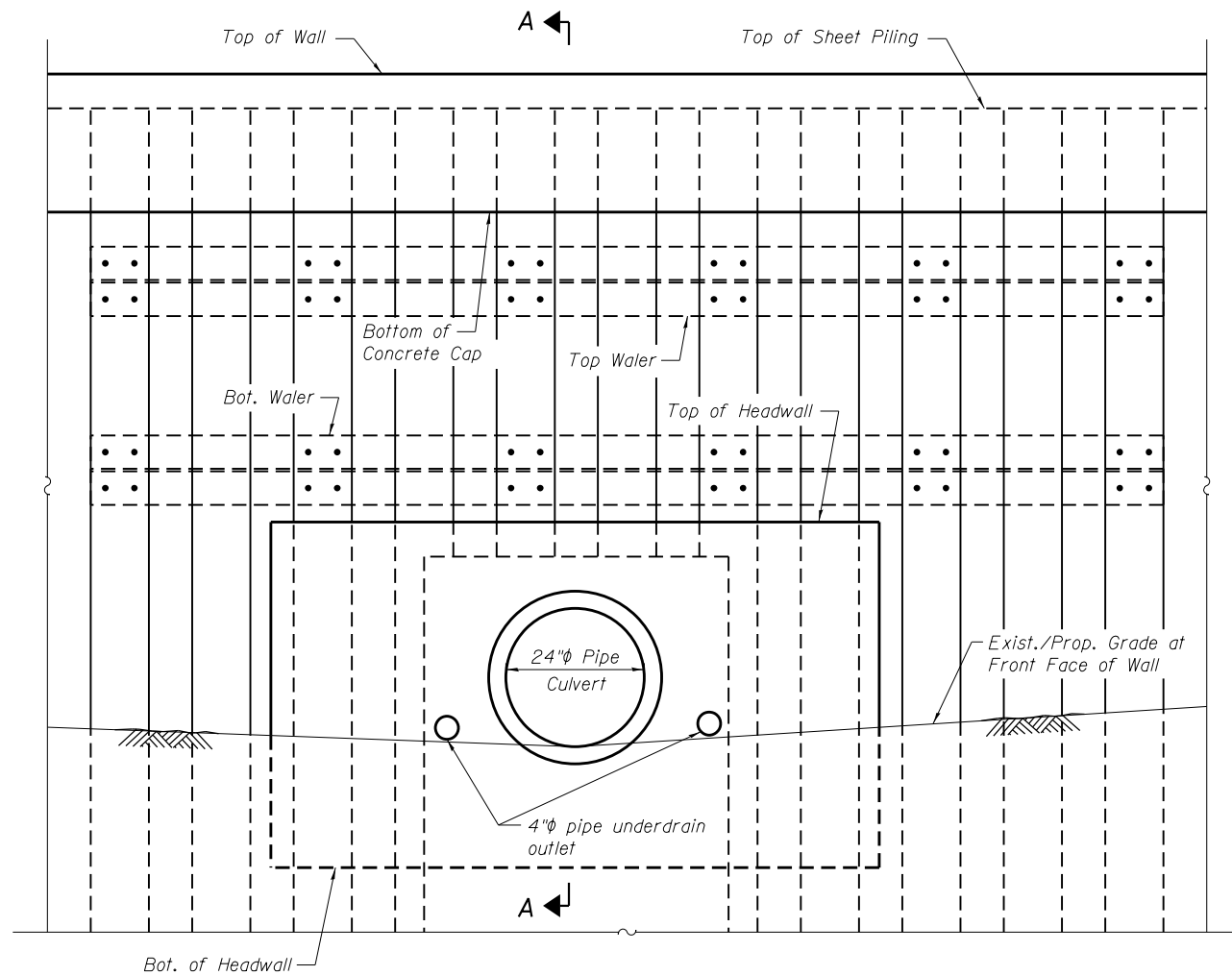
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION 6
STRUCTURE NO. 016-2006

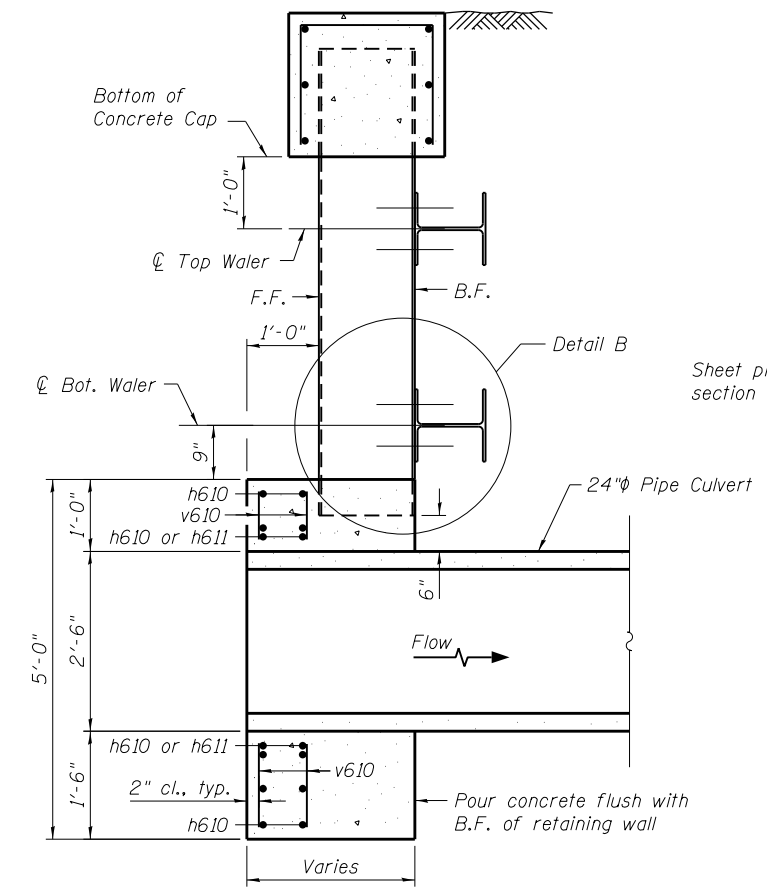
F.A.P. R.E. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 448
CONTRACT NO. 60M62				

SHEET NO. 8 OF 21 SHEETS

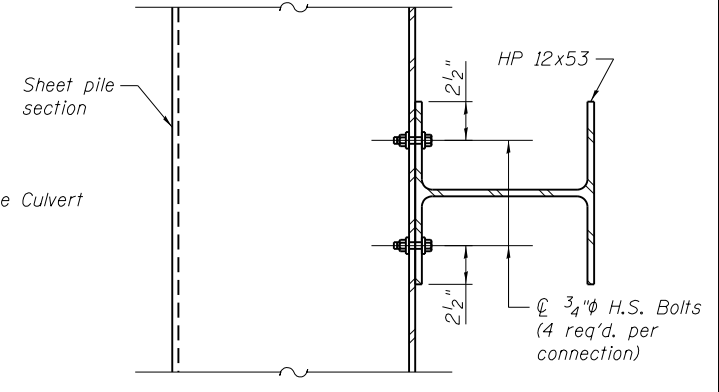
ILLINOIS FED. AID PROJECT



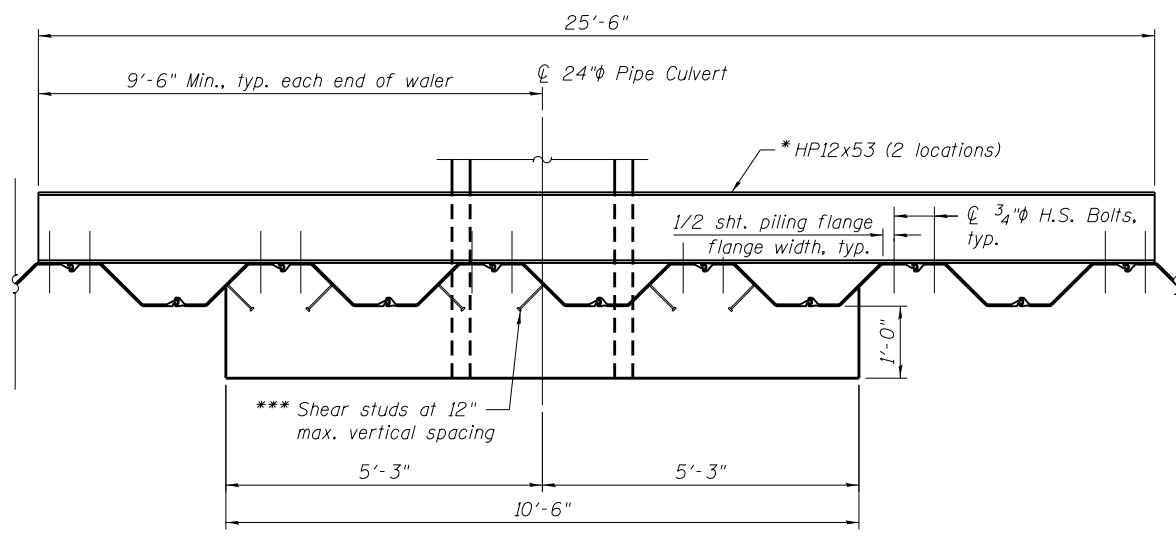
ELEVATION
(Looking at F.F. of wall)



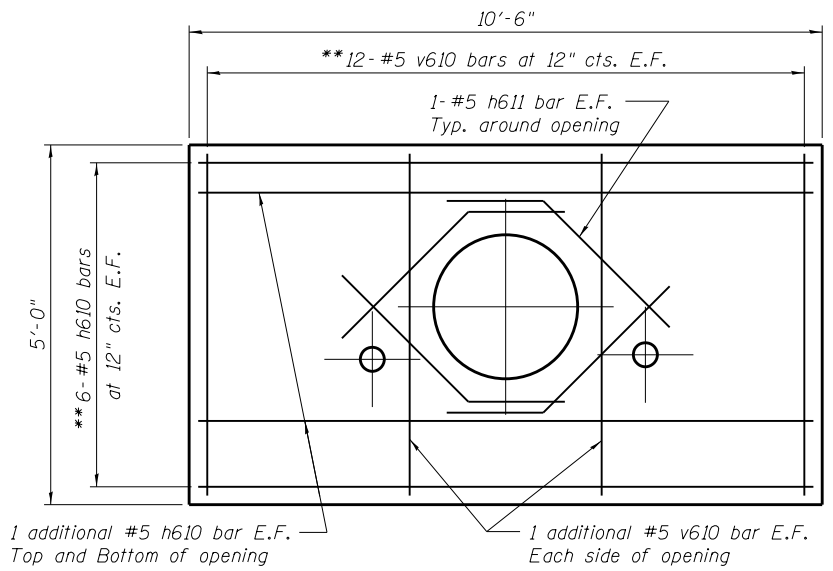
SECTION A-A



DETAIL B



PLAN
Showing opening at Sta. 64+77.70
(Opening at Sta. 68+72.98 similar)

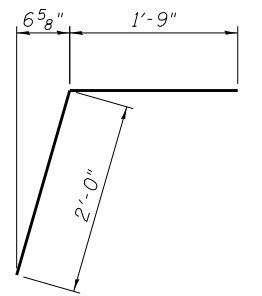


HEADWALL DETAIL
Showing Reinforcement

** Trim to fit around opening

**2 HEADWALLS
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h610	32	#5	10'-2"	—
h611	16	#5	3'-9"	—
v610	56	#5	4'-8"	—
Reinforcement Bars			Pound	680
Concrete Structures			Cu. Yd.	9.2



*** Shear studs shall be 3/4 inch diameter x 12 inch long granular or solid flux filled headed studs automatically end welded in field to sheet piling.

* HP12x53 sections shall be connected at a minimum of 6 flange pairs.

100 S. WACKER DR.
 CHICAGO, IL 60606
 TEL (312) 935-1000
 FAX (312) 935-4998
URS

FILE NAME =	0162006-60M62-009-det.dgn
USER NAME =	Anthony.Plutz
PLOT SCALE =	2:8.0000 '1' / in.
PLOT DATE =	3/13/2013

DESIGNED -	PMH	REVISD -	
CHECKED -	AMK	REVISD -	
DRAWN -	PMH	REVISD -	
CHECKED -	AMK	REVISD -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WALER AND HEADWALL DETAILS
STRUCTURE NO. 016-2006**

SHEET NO. 9 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	449
CONTRACT NO. 60M62			ILLINOIS FED. AID PROJECT	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
681.5	5-inch thick, dark brown SILTY LOAM --TOPSOIL-- Loose, brown and gray SILTY LOAM	0-5	1	3 3 3	NP	12	681.5		0	11	4 2 4	1.72 B	15
679.5	Hard, brown and gray SILTY CLAY LOAM, trace gravel	5-10	2	7 8 8	4.50	10	679.5		5	12	3 3 6	1.72 B	13
671.5	Hard, gray CLAY	10-15	3	7 9 12	5.41	8	671.5		10	13	1 3 6	0.66 B	12
666.5	Very stiff, brown and gray SILTY CLAY LOAM, trace gravel	15-20	4	4 7 8	6.72	15	666.5		15	14	7 8 10	1.25 B	15
662.5	Wet, gray, medium SAND	20-25	5	4 7 8	4.51	29	662.5		20	15	7 8 11	4.50 P	12
651.5	Medium stiff to hard, gray SILTY CLAY LOAM, trace to some gravel	25-30	6	5 5 5	4.26	16	651.5		25	16	4 7 9	NP	11
635.0	Medium dense, gray SILTY LOAM, little gravel	30-35	7	3 4 7	3.53	16	635.0		30	17	5 7 9	3.69 B	17
632.0		35-40	8	5 5 5	4.26	16	632.0		35	18	1 4 4	1.97 B	20
		40-45	9	5 5 5	1.72	14			40	19	4 2 4	1.50 P	16
		45-50	10	6 4 6	4.76	19			45	20	0 0 1	0.25 P	33
		50-55	11	6 4 6	4.76	19			50	21	1 4 4	1.97 B	20

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-13-2011	Complete Drilling	10-13-2011	While Drilling	20.00 ft		
Drilling Contractor	Groff	Drill Rig	CME LL-60 ATV	At Completion of Drilling	32.00 ft		
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	NA				
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion						

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
672.8	Stiff, brown and gray SILTY CLAY, some roots	0-5	1	3 3 3	1.50	21	672.8		0	12	2 3 5	1.07 B	19
668.7	Medium stiff, dark brown organic SILTY CLAY	5-10	2	1 3 3	0.82	23	668.7		5	13	3 4 7	2.87 B	14
667.0	Stiff, brown and gray SILTY CLAY LOAM	10-15	3	1 2 2	1.15	28	667.0		10	14	2 4 5	2.62 B	19
667.0	Medium stiff, brown organic SILTY CLAY, with seams of sand	15-20	4	0 1 1	0.90	34	667.0		15	15	2 6 9	3.61 B	16
665.0	Very soft, black and gray SILTY CLAY LOAM	20-25	5	0 0 0	0.68	44	665.0		20	16	3 5 8	2.00 P	16
654.5	Organic Content (%) = 5.2	25-30	6	0 0 0	0.77	42	654.5		25	17	5 7 9	3.69 B	17
		30-35	7	0 0 0	0.25	57			30	18	1 4 4	1.97 B	20
		35-40	8	0 0 0	0.25	50			35	19	4 2 4	1.50 P	16
		40-45	9	0 0 1	0.25	33			40	20	1 4 4	1.97 B	20
		45-50	10	1 4 4	1.97	20			45	21	4 2 4	1.50 P	16
		50-55	11	4 2 4	1.50	16			50	22	1 4 4	1.97 B	20

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-14-2011	Complete Drilling	10-14-2011	While Drilling	DRY		
Drilling Contractor	Groff/WTS	Drill Rig	CME LL-60 ATV	At Completion of Drilling	26.00 ft		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	NA				
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion						

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
668.7	Very stiff, dark brown SILTY CLAY, trace roots --TOPSOIL--	0-5	1	2 3 4	2.46	27	668.7		0	11	7 12 8	2.13 B	24
664.0	Stiff to hard, brown and gray SILTY CLAY, trace gravel	5-10	2	3 3 3	1.07	26	664.0		5	12	7 8 10	2.95 B	14
664.0	Very stiff, gray CLAY	10-15	3	4 6 7	5.99	17	664.0		10	13	3 4 8	1.80 B	13
661.5	Stiff to very stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel	15-20	4	2 3 5	2.79	24	661.5		15	14	3 7 10	2.71 B	13
654.0	Loose, gray medium SAND, with seams of silt and clay	20-25	5	2 3 4	1.80	19	654.0		20	15	3 5 9	NP	12
651.5	Stiff to very stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace to little gravel	25-30	6	2 3 4	1.80	19	651.5		25	16	1 4 4	1.56 B	22
630.0	Medium dense, gray SILTY LOAM, little gravel	30-35	7	2 3 4	1.80	19	630.0		30	17	4 4 4	1.56 B	22
622.0		35-40	8	0 1 4	NP	19	622.0		35	18	3 5 6	2.05 B	18
		40-45	9	1 4 4	1.56	22			40	19	1 4 4	1.56 B	22
		45-50	10	1 4 4	1.56	22			45	20	1 4 4	1.56 B	22

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-14-2011	Complete Drilling	10-14-2011	While Drilling	18.00 ft		
Drilling Contractor	Groff/WTS	Drill Rig	CME LL-60 ATV	At Completion of Drilling	31.00 ft		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	NA				
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion						

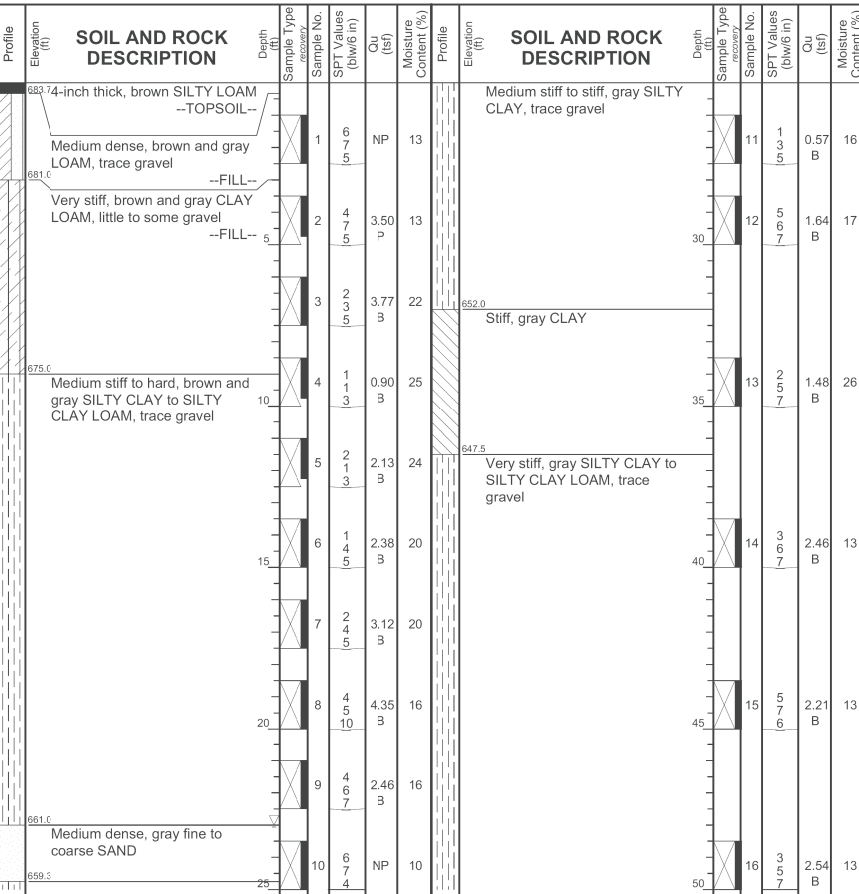
100 S. WACKER DR.
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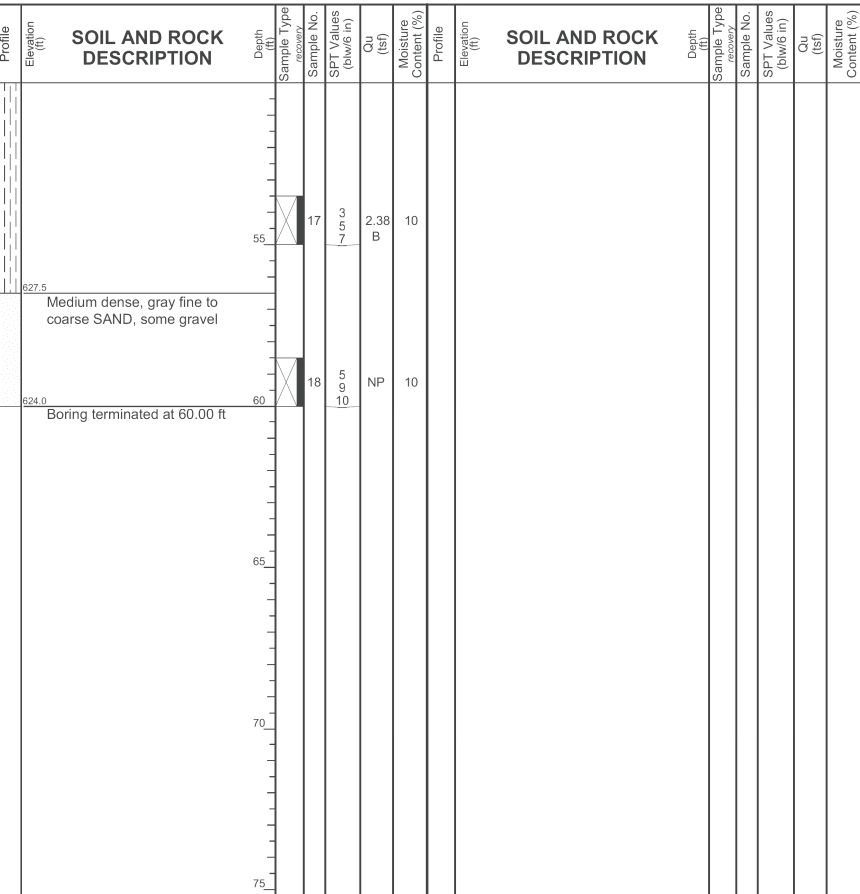
BORING LOG 3RW7-B-04
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z006, Cook Co., IL**

Datum: NGVD
 Elevation: 674.00 ft
 North: 1811474.18 ft
 East: 1115210.84 ft
 Station: 306+73.09
 Offset: 95.50 LT

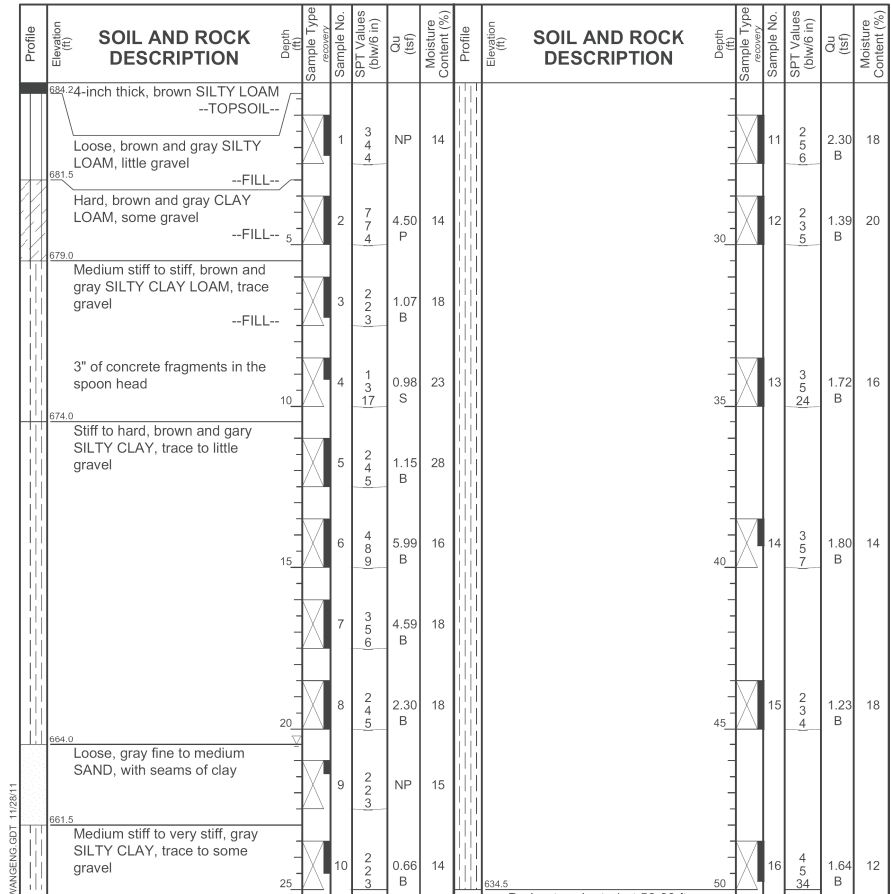
Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
673.0	12-inch thick, brown SILTY CLAY --TOPSOIL-- Hard, brown and gray SILTY CLAY, trace gravel	0	1	4	4.50	17	673.0		0	11	4	2.35	14
		5	2	5	4.51	20			5	12	5	2.46	12
		10	3	5	5.66	15			10	13	4	2.30	14
666.0	Medium stiff to very stiff gray SILTY CLAY LOAM, trace gravel	10	4	3	2.54	18			15	14	5	2.79	12
		15	5	1	0.66	16			20	8	2	1.64	22
	Possible cobble at 13.5'. Rock fragments in nose of spoon	15	6	3	NP	10			25	9	2	1.23	13
		20	7	1	1.31	19			30	10	3	2.38	12
		25	8	1	1.64	22			35	11	5	5.66	15
		30	9	2	1.23	13			40	12	5	4.51	20
		35	10	3	2.38	12			45	13	4	2.54	18
		40	11	4	2.54	18			50	14	5	2.79	12
		45	12	5	4.51	20							
		50	13	5	5.66	15							
			14	3	2.54	18							
			15	1	0.66	16							
			16	3	2.54	18							
			17	1	1.31	19							
			18	1	1.64	22							
			19	2	1.23	13							
			20	3	2.38	12							
			21	4	2.54	18							
			22	5	4.51	20							
			23	5	5.66	15							
			24	3	2.54	18							
			25	1	0.66	16							
			26	3	2.54	18							
			27	1	1.31	19							
			28	1	1.64	22							
			29	2	1.23	13							
			30	3	2.38	12							
			31	4	2.54	18							
			32	5	4.51	20							
			33	5	5.66	15							
			34	3	2.54	18							
			35	1	0.66	16							
			36	3	2.54	18							
			37	1	1.31	19							
			38	1	1.64	22							
			39	2	1.23	13							
			40	3	2.38	12							
			41	4	2.54	18							
			42	5	4.51	20							
			43	5	5.66	15							
			44	3	2.54	18							
			45	1	0.66	16							
			46	3	2.54	18							
			47	1	1.31	19							
			48	1	1.64	22							
			49	2	1.23	13							
			50	3	2.38	12							
			51	4	2.54	18							
			52	5	4.51	20							
			53	5	5.66	15							
			54	3	2.54	18							
			55	1	0.66	16							
			56	3	2.54	18							
			57	1	1.31	19							
			58	1	1.64	22							
			59	2	1.23	13							
			60	3	2.38	12							
			61	4	2.54	18							
			62	5	4.51	20							
			63	5	5.66	15							
			64	3	2.54	18							
			65	1	0.66	16							
			66	3	2.54	18							
			67	1	1.31	19							
			68	1	1.64	22							
			69	2	1.23	13							
			70	3	2.38	12							
			71	4	2.54	18							
			72	5	4.51	20							
			73	5	5.66	15							
			74	3	2.54	18							
			75	1	0.66	16							
			76	3	2.54	18							
			77	1	1.31	19							
			78	1	1.64	22							
			79	2	1.23	13							
			80	3	2.38	12							
			81	4	2.54	18							
			82	5	4.51	20							
			83	5	5.66	15							
			84	3	2.54	18							
			85	1	0.66	16							
			86	3	2.54	18							
			87	1	1.31	19							
			88	1	1.64	22							
			89	2	1.23	13							
			90	3	2.38	12							
			91	4	2.54	18							
			92	5	4.51	20							
			93	5	5.66	15							
			94	3	2.54	18							
			95	1	0.66	16							
			96	3	2.54	18							
			97	1	1.31	19							
			98	1	1.64	22							
			99	2	1.23	13							
			100	3	2.38	12							
			101	4	2.54	18							
			102	5	4.51	20							
			103	5	5.66	15							
			104	3	2.54	18							
			105	1	0.66	16							
			106	3	2.54	18							
			107	1	1.31	19							
			108	1	1.64	22							
			109	2	1.23	13							
			110	3	2.38	12							
			111	4	2.54	18							
			112	5	4.51	20							
			113	5	5.66	15							
			114	3	2.54	18							
			115	1	0.66	16							
			116	3	2.54	18							
			117	1	1.31	19							
			118	1	1.64	22							
			119	2	1.23	13							
			120	3	2.38	12							
			121	4	2.54	18							
			122	5	4.51	20							
			123	5	5.66	15							
			124	3	2.54	18							
			125	1	0.66	16							
			126	3	2.54	18							
			127	1	1.31	19							
			128	1	1.64	22							
			129	2	1.23								



GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	10-20-2011	Complete Drilling	10-21-2011	While Drilling	23.00 ft
Drilling Contractor	Groff/WTS	Drill Rig	CME LL-60 ATV	At Completion of Drilling	NA
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA
Checked by	C. Marin	Depth to Water	NA		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion				



GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	10-20-2011	Complete Drilling	10-21-2011	While Drilling	23.00 ft
Drilling Contractor	Groff/WTS	Drill Rig	CME LL-60 ATV	At Completion of Drilling	NA
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA
Checked by	C. Marin	Depth to Water	NA		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion				



GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	10-20-2011	Complete Drilling	10-20-2011	While Drilling	20.50 ft
Drilling Contractor	Groff/WTS	Drill Rig	CME LL-60 ATV	At Completion of Drilling	NA
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA
Checked by	C. Marin	Depth to Water	NA		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion				

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FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISED -
0162006-60M62-012-bor.dgn		CHECKED - AMK	REVISED -
		DRAWN - AMV	REVISED -
		CHECKED - AMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS 3
STRUCTURE NO. 016-Z006
 SHEET NO. 12 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	452
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

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BORING LOG 3RW7-B-08
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z006, Cook Co., IL**

Datum: NGVD
 Elevation: 686.00 ft
 North: 1811780.40 ft
 East: 1115243.40 ft
 Station: 309+78.88
 Offset: 59.31 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
685.0	14-inch thick SILTY CLAY --TOPSOIL-- Medium dense, brown and gray LOAM, some gravel	1	1	7	NP	14	686.5	Very stiff, gray SILTY CLAY	11	11	7	3.69	19
683.0	Medium dense, brown and gray SILTY LOAM, little gravel	2	2	7	NP	14			12	12	3	2.62	17
680.5	Stiff to very stiff, brown and gray CLAY LOAM, little gravel	3	3	4	3.36	20			13	13	4	3.36	15
675.5	Medium stiff, brown and gray SILTY CLAY	5	5	2	0.82	27			14	14	9	1.80	16
668.0	Stiff, brown and gray SILTY CLAY, trace gravel	8	8	3	1.72	15			15	15	8	1.97	16
662.0	Loose, gray fine to coarse SAND	10	10	3	NP	20			16	16	5	1.97	16

GENERAL NOTES
 Begin Drilling 10-19-2011 Complete Drilling 10-20-2011
 Drilling Contractor **Groff/WTS** Drill Rig **CME LL-60 ATV**
 Driller **K&K** Logger **B. Wilson** Checked by **C. Marin**
 Drilling Method **3.25" IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA
 While Drilling 25.00 ft
 At Completion of Drilling 26.00 ft
 Time After Drilling NA
 Depth to Water NA

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

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BORING LOG 3RW7-B-08
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z006, Cook Co., IL**

Datum: NGVD
 Elevation: 686.00 ft
 North: 1811780.40 ft
 East: 1115243.40 ft
 Station: 309+78.88
 Offset: 59.31 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
621.0	Boring terminated at 65.00 ft	65	19	11	1.84	14			17	17	4	2.35	21

GENERAL NOTES
 Begin Drilling 10-19-2011 Complete Drilling 10-20-2011
 Drilling Contractor **Groff/WTS** Drill Rig **CME LL-60 ATV**
 Driller **K&K** Logger **B. Wilson** Checked by **C. Marin**
 Drilling Method **3.25" IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA
 While Drilling 25.00 ft
 At Completion of Drilling 26.00 ft
 Time After Drilling NA
 Depth to Water NA

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

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BORING LOG 3RW7-B-09
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z006, Cook Co., IL**

Datum: NGVD
 Elevation: 686.00 ft
 North: 1811854.27 ft
 East: 1115248.41 ft
 Station: 310+52.69
 Offset: 53.42 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
686.0	13-inch thick, brown SILTY CLAY --TOPSOIL-- Stiff to hard, brown and gray CLAY LOAM, trace gravel	1	1	8	5.82	16			11	11	2	2.54	16
675.5	Stiff, brown and gray SILTY CLAY LOAM	5	2	7	3.28	14			12	12	4	4.02	20
673.0	Soft to medium stiff, brown and gray SANDY CLAY LOAM, trace gravel	6	3	4	2.54	18			13	13	4	2.71	18
668.0	Very soft, gray SILTY CLAY LOAM, trace organic matter and sand seams	8	0	0	0.25	32			14	14	5	4.26	15
666.0	Medium stiff, gray SILTY CLAY LOAM, trace organic matter and sand seams -L _c (%)=39, P _c (%)=22-- --%Gravel=0.3-- --%Sand=10.6-- --%Silt=67.8-- --%Clay=21.4-- --A-6 (16)	9	0	0	0.95	20			15	15	4	1.89	15
663.0	Very dense, gray SILT, seams of sand	10	2	4	1.89	18			16	16	10	NP	15

GENERAL NOTES
 Begin Drilling 10-19-2011 Complete Drilling 10-19-2011
 Drilling Contractor **Groff/WTS** Drill Rig **CME LL-60 ATV**
 Driller **K&K** Logger **B. Wilson** Checked by **C. Marin**
 Drilling Method **3.25" IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA
 While Drilling 18.00 ft
 At Completion of Drilling 28.00 ft
 Time After Drilling NA
 Depth to Water NA

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

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URS

FILE NAME = 016Z006-60M62-013-bor.dgn	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISER -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORINGS 4 STRUCTURE NO. 016-Z006	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 453
PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - AMV	REVISER -	CONTRACT NO. 60M62							
PLOT DATE = 3/13/2013	CHECKED - AMK	REVISER -	ILLINOIS FED. AID PROJECT							
			SHEET NO. 13 OF 21 SHEETS							

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
679.5	Stiff to hard, brown and gray CLAY LOAM, trace gravel --FILL--	1	1	10	1.64	16	679.5	12-inch thick, brown SILTY LOAM	11	11	4	2.30	16
676.5	Stiff, brown SILTY CLAY LOAM	2	2	10	4.25	16	676.5	Medium dense, brown SILTY LOAM, trace gravel --TOPSOIL--	12	12	3	3.36	16
674.5	Medium stiff, brown and gray SANDY CLAY LOAM, trace gravel	3	3	10	2.50	17	674.5	Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel	13	13	3	2.21	18
674.0	Medium stiff to stiff, brown and gray SILTY CLAY	4	4	10	1.23	21	674.0	Loose, brown SANDY LOAM	14	14	3	1.64	14
668.0	Stiff to very stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel	5	5	10	0.90	18	668.0	Very stiff to hard, brown SILTY CLAY, with seams of silt and sand	15	15	3	1.64	14
640.5	Medium dense, gray SANDY LOAM, some gravel	6	6	10	1.39	22	640.5	Medium dense, brown and gray, fine to coarse SAND	16	16	9	NP	13
637.0	Boring terminated at 50.00 ft	7	7	10	0.98	28	637.0	Stiff to very stiff, brown and gray SILTY CLAY LOAM, trace gravel	17	17	6	3.69	12
		8	8	10	1.80	16			18	18	12	NP	8
		9	9	10	1.56	17			19	19	4	4.18	19
		10	10	10	1.97	15			20	20	4	2.05	11
									21	21	3	3.00	15
									22	22	3	1.23	13
									23	23	3	1.23	13
									24	24	3	1.23	13
									25	25	3	1.23	13

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-18-2011	Complete Drilling	10-18-2011	While Drilling	43.50 ft		
Drilling Contractor	Groff/WTS	Drill Rig	CME LL-60 ATV	At Completion of Drilling	NA		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	NA				
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion						

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
687.0	12-inch thick, brown SILTY LOAM	1	1	4	NP	14	687.0	fine to coarse SAND, some gravel	11	11	9	NP	9
682.5	Medium dense, brown SILTY LOAM, trace gravel --TOPSOIL--	2	2	4	NP	17	682.5	Heaving sand, sample had to be skipped	12	12	3	NP	7
677.5	Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel	3	3	7	4.43	15	677.5	Dense, gray coarse SAND, some gravel	13	13	9	3.69	12
675.0	Loose, brown SANDY LOAM	4	4	7	2.05	13	675.0	Boring terminated at 60.00 ft	14	14	6	NP	18
675.0	Very stiff to hard, brown SILTY CLAY, with seams of silt and sand	5	5	2	NP	8	675.0	Medium dense, gray SILT to SILTY LOAM, little gravel	15	15	7	NP	13
669.0	Medium dense, brown and gray, fine to coarse SAND	6	6	4	4.18	19	669.0	Very stiff, gray SILTY CLAY, trace gravel	16	16	6	3.69	12
667.0	Stiff to very stiff, brown and gray SILTY CLAY LOAM, trace gravel	7	7	3	3.36	26	667.0		17	17	9	NP	9
663.5	Medium dense to sand, gray	8	8	4	NP	11	663.5		18	18	12	NP	8
		9	9	4	3.00	15			19	19	4	4.18	19
		10	10	3	1.23	13			20	20	4	2.05	11
									21	21	3	3.00	15
									22	22	3	1.23	13
									23	23	3	1.23	13
									24	24	3	1.23	13
									25	25	3	1.23	13

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-18-2011	Complete Drilling	10-18-2011	While Drilling	28.50 ft		
Drilling Contractor	Groff/WTS	Drill Rig	CME LL-60 ATV	At Completion of Drilling	24.00 ft		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	NA				
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion						

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
631.0	Dense, gray coarse SAND, some gravel	17	17	9	3.69	12	631.0		11	11	9	NP	9
628.0	Boring terminated at 60.00 ft	18	18	12	NP	8	628.0		12	12	3	NP	7
									13	13	9	3.69	12
									14	14	6	NP	18
									15	15	7	NP	13
									16	16	6	3.69	12
									17	17	9	NP	9
									18	18	12	NP	8
									19	19	4	4.18	19
									20	20	4	2.05	11
									21	21	3	3.00	15
									22	22	3	1.23	13
									23	23	3	1.23	13
									24	24	3	1.23	13
									25	25	3	1.23	13

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-18-2011	Complete Drilling	10-18-2011	While Drilling	28.50 ft		
Drilling Contractor	Groff/WTS	Drill Rig	CME LL-60 ATV	At Completion of Drilling	24.00 ft		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Depth to Water	NA				
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion						

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Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
687.5	3-inch thick, brown SILTY LOAM --TOPSOIL--						687.5						
	Hard, brown and gray SILTY CLAY LOAM, trace gravel	1	8	10	4.50	3			11	12	15	NP	8
		2	8	12	4.50	13			12	17	33	NP	13
		3	14	47	4.50	14			30				
		4	6	9	4.18	13							
677.6	Medium dense, brown SAND	5	12	11	NP	9							
		6	6	9	NP	7							
		7	5	7	NP	17							
668.5	Hard, gray SILTY CLAY with fine sand seams	8	6	7	4.35	19							
667.6	Dense, gray fine SAND	9	12	15	NP	12							
664.5	Dense to very dense, gray GRAVELLY SAND	10	14	23	NP	5							

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	09-22-2011	Complete Drilling	09-22-2011	While Drilling	16.00 ft
Drilling Contractor	WTS	Drill Rig	D-50 TMR	At Completion of Drilling	27.00 ft
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion			Depth to Water	NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
690.7	4-inch thick, brown SILTY CLAY LOAM --TOPSOIL--						690.7						
	Stiff to hard, brown and gray SILTY CLAY, trace gravel	1	6	10	4.50	14			11	7	6	NP	7
		2	5	7	4.50	24			12	10	14	NP	6
		3	9	11	3.77	16							
		4	6	7	4.10	18							
		5	3	4	1.15	18							
		6	6	9	1.23	16							
675.5	Medium dense, brown to gray SANDY LOAM to SAND	7	8	10	NP	7							
		8	8	10	NP	11							
		9	8	9	NP	6							
		10	9	10	NP	6							

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	09-22-2011	Complete Drilling	09-22-2011	While Drilling	DRY
Drilling Contractor	WTS	Drill Rig	D-50 TMR	At Completion of Drilling	DRY
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion			Depth to Water	NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
687.8	3-inch thick, black SILTY LOAM --TOPSOIL--						687.8						
	Brown SILTY LOAM, trace to some gravel	1			NP	8							
		2			NP	17							
		3			NP	15							
		4			NP	15							
680.5	Hard, brown and gray SILTY CLAY LOAM, trace gravel	5			4.98	23							
		6			7.88	20							
		7			6.02	22							
		8			3.84	15							
		9			5.60	15							
		10			8.82	16							
668.0	Boring terminated at 20.00 ft	20											

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	10-07-2011	Complete Drilling	10-12-2011	While Drilling	DRY
Drilling Contractor	WTS	Drill Rig	Geoprobe	At Completion of Drilling	DRY
Driller	F&N	Logger	N. Boddy	Time After Drilling	NA
Drilling Method	Hand Auger			Depth to Water	NA

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Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
675.1	8-inch thick, black SILTY LOAM --TOPSOIL--		1	PUSH			19								
	Brown SILTY LOAM --FILL--														
673.5	Medium stiff to stiff, black, organic SILTY CLAY Organic Content (%) = 10.0		2	PUSH	0.93	3	38								
670.5	Very soft to soft (<0.25P-0.25P), dark gray to gray SANDY CLAY LOAM		3	PUSH	1.24	3	28								
666.1	Soft(0.25P) to stiff, brown and gray SILTY CLAY		4	PUSH	1.87	3	31								
667.1	Dark brown SANDY LOAM		5	PUSH			25								
666.1	Very soft to soft, black, brown and gray SILTY CLAY		6	PUSH	0.25	3	42								
			7	PUSH	0.25	3	40								
			8	PUSH	0.10	3	47								
			9	PUSH	0.25	3	49								
657.5	Wet, gray SILT		10	PUSH	0.42	3	42								
656.4	Soft, gray, black and brown CLAY														
	Boring terminated at 20.00 ft														

GENERAL NOTES			WATER LEVEL DATA		
Begin Drilling	10-06-2011	Complete Drilling	10-07-2011	While Drilling	5.00 ft
Drilling Contractor	WTS	Drill Rig	Geoprobe	At Completion of Drilling	5.00 ft
Driller	F&N	Logger	N. Boddy	Time After Drilling	NA
Drilling Method	Hand Auger	Checked by	C. Marin	Depth to Water	NA

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

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
671.9	7-inch thick, black SILTY LOAM --TOPSOIL--		1	PUSH		1.50	31								
	Stiff, dark brown CLAY LOAM --FILL--														
670.0	Very stiff, brown and gray SILTY CLAY, trace gravel		2	PUSH	2.28	B	24								
667.8	Soft, dark brown CLAY, trace gravel		3	PUSH	0.42	B	40								
666.2	Stiff to hard, brown and gray SILTY CLAY, trace gravel		4	PUSH	4.36	B	22								
			5	PUSH	2.28	B	19								
			6	PUSH	1.45	B	22								
			7	PUSH	1.45	B	20								
658.2	Gray, SANDY LOAM		8	PUSH	0.25	P	37								
657.0	Very soft, gray SILTY CLAY, trace gravel --L _c (%)=35, P _c (%)=17-- --%Gravel=1.7-- --%Sand=16.3-- --%Silt=49.8-- --%Clay=32.3-- --A-6 (14)--		9	PUSH	0.25	P	37								
653.8	Stiff, gray SILTY CLAY, trace gravel		10	PUSH	1.24	B	13								
653.0	Gray GRAVELLY SAND														
	Boring terminated at 20.00 ft														

GENERAL NOTES			WATER LEVEL DATA		
Begin Drilling	10-05-2011	Complete Drilling	10-05-2011	While Drilling	5.50 ft
Drilling Contractor	WTS	Drill Rig	Geoprobe	At Completion of Drilling	3.00 ft
Driller	F&N	Logger	N. Boddy	Time After Drilling	NA
Drilling Method	Hand Auger	Checked by	C. Marin	Depth to Water	NA

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Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
673.56	6-inch thick, black SILTY LOAM --TOPSOIL--		1	PUSH			16								
	Brown SILTY LOAM --FILL--														
671.5	Hard, brown and gray SILTY CLAY LOAM, trace gravel		2	PUSH	4.50	P	18								
669.7	Dark brown, gray and brown SILTY LOAM, trace gravel		3	PUSH			19								
667.7	Stiff to hard, brown to gray, SILTY CLAY to SILTY CLAY LOAM, trace to little gravel		4	PUSH	6.23	S	14								
			5	PUSH	4.98	B	16								
			6	PUSH	1.45	B	15								
			7	PUSH	1.14	B	15								
659.7	Gray GRAVELLY SAND		8	PUSH	0.62	B	16								
659.3	Very stiff, gray SILTY CLAY LOAM, trace gravel		9	PUSH	2.07	B	11								
			10	PUSH	2.28	B	29								
654.0	Boring terminated at 20.00 ft														

GENERAL NOTES			WATER LEVEL DATA		
Begin Drilling	10-05-2011	Complete Drilling	10-06-2011	While Drilling	12.00 ft
Drilling Contractor	WTS	Drill Rig	Geoprobe	At Completion of Drilling	NA
Driller	F&N	Logger	N. Boddy	Time After Drilling	NA
Drilling Method	Hand Auger	Checked by	C. Marin	Depth to Water	NA

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BORING LOG 3RW7-HA-05

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z006, Cook Co., IL

Datum: NGVD
 Elevation: 678.00 ft
 North: 1811552.01 ft
 East: 1115220.57 ft
 Station: 307+50.78
 Offset: 84.86 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
677.0	12-inch thick, black to dark brown LOAM to SILTY LOAM --TOPSOIL--	0	1		NP		677.0	12-inch thick, black to dark brown LOAM to SILTY LOAM --TOPSOIL--	0	1		NP	
675.5	Brown SILTY LOAM --FILL--	1	2		4.50		675.5	Brown SILTY LOAM --FILL--	1	2		4.50	
	Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel	2	3		4.38			Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel	2	3		4.38	
		3	4		5.17				3	4		5.17	
		4	5		7.36				4	5		7.36	
667.5	Gray and brown, fine SAND to SANDY LOAM, trace gravel	10	6		NP		667.5	Gray and brown, fine SAND to SANDY LOAM, trace gravel	10	6		NP	
665.7	Very soft, gray SILTY CLAY, trace organic	12	7		0.25		665.7	Very soft, gray SILTY CLAY, trace organic	12	7		0.25	
		13	8		0.25				13	8		0.25	
662.2	Gray SAND, little gravel --WET--	15	9		0.80		662.2	Gray SAND, little gravel --WET--	15	9		0.80	
660.2	Medium stiff, gray SILTY CLAY LOAM, trace gravel	17	10		NP		660.2	Medium stiff, gray SILTY CLAY LOAM, trace gravel	17	10		NP	
	Gray, fine SAND --WET--	18						Gray, fine SAND --WET--	18				
658.6	Boring terminated at 20.00 ft	20					658.6	Boring terminated at 20.00 ft	20				

GENERAL NOTES

Begin Drilling 10-04-2011 Complete Drilling 10-04-2011
 Drilling Contractor WTS Drill Rig Geoprobe
 Driller F&N Logger N. Boddy Checked by C. Marin
 Drilling Method Hand Auger

WATER LEVEL DATA

While Drilling 12.50 ft
 At Completion of Drilling 13.00 ft
 Time After Drilling NA
 Depth to Water NA

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

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BORING LOG 3RW7-HA-06

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z006, Cook Co., IL

Datum: NGVD
 Elevation: 677.50 ft
 North: 1811615.17 ft
 East: 1115217.90 ft
 Station: 308+13.97
 Offset: 86.77 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
677.0	6-inch thick, black SILTY LOAM --TOPSOIL--	0	1		NP		677.0	6-inch thick, black SILTY LOAM --TOPSOIL--	0	1		NP	
675.5	Brown SILTY LOAM --FILL--	1	2		3.06		675.5	Brown SILTY LOAM --FILL--	1	2		3.06	
	Very stiff to hard, brown to gray SILTY CLAY	2	3		4.11			Very stiff to hard, brown to gray SILTY CLAY	2	3		4.11	
671.5	Brown SILTY LOAM	5	4		NP		671.5	Brown SILTY LOAM	5	4		NP	
670.0	Very stiff to hard, brown to gray SILTY CLAY, trace gravel	6	5		6.97		670.0	Very stiff to hard, brown to gray SILTY CLAY, trace gravel	6	5		6.97	
		7	6		2.48				7	6		2.48	
		8	7		3.44				8	7		3.44	
663.5	Gray, fine to medium SAND	10	8		NP		663.5	Gray, fine to medium SAND	10	8		NP	
		11	9		NP				11	9		NP	
660.0	Very stiff, gray SILTY CLAY	15	10		2.50		660.0	Very stiff, gray SILTY CLAY	15	10		2.50	
657.5	Boring terminated at 20.00 ft	20					657.5	Boring terminated at 20.00 ft	20				

GENERAL NOTES

Begin Drilling 10-17-2011 Complete Drilling 10-17-2011
 Drilling Contractor WTS Drill Rig Geoprobe
 Driller F&N Logger N. Boddy Checked by C. Marin
 Drilling Method Hand Auger

WATER LEVEL DATA

While Drilling 14.00 ft
 At Completion of Drilling 14.00 ft
 Time After Drilling NA
 Depth to Water NA

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BORING LOG 3RW7-HA-07

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 3
 Location: Ret. Wall 016-Z006, Cook Co., IL

Datum: NGVD
 Elevation: 676.50 ft
 North: 1811695.50 ft
 East: 1115219.80 ft
 Station: 308+94.29
 Offset: 83.91 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
676.0	6-inch thick, black SILTY LOAM --TOPSOIL--	0	1		NP		676.0	6-inch thick, black SILTY LOAM --TOPSOIL--	0	1		NP	
	Brown SILTY LOAM	1	2		NP			Brown SILTY LOAM	1	2		NP	
		2	3		NP				2	3		NP	
671.5	Hard, brown and gray SILTY LOAM to SILTY CLAY LOAM, trace gravel	5	4		2.29		671.5	Hard, brown and gray SILTY LOAM to SILTY CLAY LOAM, trace gravel	5	4		2.29	
		6	5		11.46				6	5		11.46	
666.0	Stiff to very stiff, brown to gray SILTY CLAY, trace to little gravel	10	6		4.58		666.0	Stiff to very stiff, brown to gray SILTY CLAY, trace to little gravel	10	6		4.58	
	-0.5-inch thick, dark gray SAND lens --Wet--	11	7		2.48			-0.5-inch thick, dark gray SAND lens --Wet--	11	7		2.48	
		12	8		1.15				12	8		1.15	
		13	9		1.34				13	9		1.34	
657.5	Boring terminated at 19.00 ft	19	10		1.53		657.5	Boring terminated at 19.00 ft	19	10		1.53	

GENERAL NOTES

Begin Drilling 10-17-2011 Complete Drilling 10-18-2011
 Drilling Contractor WTS Drill Rig Geoprobe
 Driller F&N Logger N. Boddy Checked by C. Marin
 Drilling Method Hand Auger

WATER LEVEL DATA

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

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FILE NAME = 016Z006-60M62-017-bor.dgn

USER NAME = Anthony.Plutz
 PLOT SCALE = 0:2.0000 ' / in.
 PLOT DATE = 3/13/2013

DESIGNED - WEI
 CHECKED - AMK
 DRAWN - AMV
 CHECKED - AMK

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORINGS 8
 STRUCTURE NO. 016-Z006

SHEET NO. 17 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	457
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
676.5	Black SILTY LOAM --TOPSOIL--	0	1	NP		17							
676.5		1	2	NP		21							
672.6	Medium stiff to stiff, brown and gray SILTY CLAY LOAM --L _c (%)=41, P _c (%)=16-- --%Gravel=0.4-- --%Sand=14.0-- --%Silt=57.4-- --A-7-6 (21)--	5	3	1.91 3		23							
669.5	Very stiff (3.72B) to hard, brown and gray SILTY CLAY LOAM, trace gravel	10	4	0.76 3		25							
666.5	Wet SILT	15	5	4.97 3		23							
660.0	Hard, gray SILTY CLAY LOAM, little gravel	20	6	8.12 3		16							
663.2	Black SAND	22	7	4.78 3		17							
661.5	Stiff, gray SILTY CLAY LOAM, trace gravel	24	8	1.53 3		17							
661.0	Boring terminated at 15.25 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-19-2011	Complete Drilling	10-19-2011	While Drilling	11.00 ft		
Drilling Contractor	WTS	Drill Rig	Geoprobe	At Completion of Drilling	11.00 ft		
Driller	F&N	Logger	N. Boddy	Time After Drilling	NA		
Drilling Method	Hand Auger	Checked by	C. Marin	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
679.5	6-inch thick, dark brown SILTY LOAM --TOPSOIL--	0	1	NP		14							
676.5	Yellowish brown SILTY LOAM, trace gravel --FILL--	1	2	NP		9							
672.5	Black SILTY LOAM --BURIED TOPSOIL--	5	3	NP		15							
673.7	Brown SILTY LOAM, trace to little gravel	5	3	NP		15							
672.3	Medium stiff, brown SANDY CLAY LOAM	10	4	0.57 B		28							
671.0	Soft (0.25P) to stiff, gray oranic SILTY CLAY, trace shells and decomposed wood fragments	10	5	1.15 B		28							
671.0	Very stiff to hard, gray SILTY CLAY, trace gravel	10	6	3.25 B		18							
671.0	--2-inch thick, gray SANDY LOAM, trace gravel	10	6	3.25 B		18							
671.0		15	7	3.63 B		18							
671.0		20	8	6.40 B		15							
671.0		25	9	6.69 B		16							
671.0		25	10	3.25 B		18							
660.0	Boring terminated at 20.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-21-2011	Complete Drilling	10-21-2011	While Drilling	12.00 ft		
Drilling Contractor	WTS	Drill Rig	Geoprobe	At Completion of Drilling	12.00 ft		
Driller	F&N	Logger	N. Boddy	Time After Drilling	NA		
Drilling Method	Hand Auger	Checked by	C. Marin	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
679.5	74-inch thick, dark brown SILTY LOAM --TOPSOIL--	0	1	NP		12							
676.5	Yellowish brown SILTY LOAM --FILL--	1	2	NP		12							
672.5	Black SILTY LOAM --BURIED TOPSOIL--	5	3	NP		15							
674.7	Brown SILTY LOAM, trace gravel	5	3	1.62 B		15							
673.5	Stiff, brown and gray SILTY CLAY	10	4	1.34 B		22							
672.3	Stiff, brown and gray SANDY CLAY LOAM, trace gravel	10	4	1.34 B		22							
672.3	Medium stiff, gray Organic SILTY CLAY, trace shells	10	5	0.96 B		24							
670.3	Brown GRAVELLY SANDY LOAM --Wet--	10	6	5.35 B		22							
669.3	Very stiff to hard, gray SILTY CLAY, trace gravel	10	6	5.35 B		22							
666.3	Brown GRAVELLY SANDY LOAM --Wet--	15	7	3.82 B		16							
665.3	Hard, gray SILTY CLAY, trace gravel	15	8	3.92 B		15							
662.3	Gray SANDY LOAM, trace gravel	20	9	5.54 B		15							
661.5	Hard, gray SILTY CLAY LOAM, trace gravel	20	10	4.97 B		16							
660.0	Boring terminated at 20.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-21-2011	Complete Drilling	10-21-2011	While Drilling	13.50 ft		
Drilling Contractor	WTS	Drill Rig	Geoprobe	At Completion of Drilling	13.50 ft		
Driller	F&N	Logger	N. Boddy	Time After Drilling	NA		
Drilling Method	Hand Auger	Checked by	C. Marin	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

100 S. WACKER DR.
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URS

FILE NAME =	016Z006-60M62-018-bor.dgn
USER NAME =	Anthony.Plutz
DESIGNED -	WEI
CHECKED -	AMK
REVISER -	
REVISIONS -	
DRAWN -	AMV
CHECKED -	AMK
REVISER -	
REVISIONS -	
PLOT SCALE =	0:2.0000 '1' / in.
PLOT DATE =	3/13/2013

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORINGS 9
 STRUCTURE NO. 016-Z006

SHEET NO. 18 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	458
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 3RW7-HA-11

WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z006, Cook Co., IL**

Datum: NGVD
 Elevation: 684.00 ft
 North: 1812032.37 ft
 East: 1115224.28 ft
 Station: 312+31.06
 Offset: 75.44 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
683.4	12-inch thick, dark brown SILTY LOAM --TOPSOIL--	1			NP	17							
681.4	Yellowish brown, SILTY LOAM --FILL--	2			NP	16							
681.1	Dark brown SILTY LOAM --BURIED TOPSOIL--	3			NP	7							
678.1	Brown SILTY LOAM, trace gravel	4			NP	10							
	Yellowish brown SAND to SANDY LOAM	5			NP	14							
		6			NP	9							
673.6	Brown SILT	7			NP	5							
672.1	Brown GRAVELLY SAND	8			NP	8							
671.6	Brown SAND to SANDY LOAM	9			1.34	12							
669.6	Stiff to very stiff (3.5P), gray SILTY CLAY, trace gravel	10			NA								
665.6	Boring terminated at 18.10 ft												

GENERAL NOTES

Begin Drilling: 10-24-2011 Complete Drilling: 10-24-2011
 Drilling Contractor: **WTS** Drill Rig: **Geoprobe**
 Driller: **F&N** Logger: **N. Boddy** Checked by: **C. Marin**
 Drilling Method: **Hand Auger**

WATER LEVEL DATA

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

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

100 S. WACKER DR.
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URS

FILE NAME = 0162006-60M62-019-bor.dgn

USER NAME = Anthony.Plutz

PLOT SCALE = 0:2.0000 '1' / in.

PLOT DATE = 3/13/2013

DESIGNED - WEI

CHECKED - AMK

DRAWN - AMV

CHECKED - AMK

REVISED -

REVISED -

REVISED -

REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SOIL BORINGS 10
 STRUCTURE NO. 016-Z006**

SHEET NO. 19 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	459
CONTRACT NO. 60M62			ILLINOIS FED. AID PROJECT	

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630-953-9928
 Fax: 630-953-9938

BORING LOG 3SW-1B-3

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z006, Cook Co., IL**

Datum: NGVD
 Elevation: 686.18 ft
 North: 1811539.00 ft
 East: 1115260.03 ft
 Station: 507+37.30
 Offset: 45.55 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
686.2	12-inch thick ASPHALT --PAVEMENT--												
684.2	6-inch thick CRUSHED STONE --BASE COURSE--												
	Very stiff to hard, brown SILTY CLAY, little to some gravel --FILL--	1	1	18	4.50	16							
		2	2	4	3.00	19							
		3	3	7	NR	16							
		4	4	6	5.06	21							
675.7	--HARD DRILLING-- --No recovery--	5	5	5	NR								
672.2	Stiff to hard, brown and gray SILTY CLAY, trace gravel	6	6	4	NR								
		7	7	4	1.48	26							
		8	8	4	4.18	22							
666.2	Boring terminated at 20.00 ft	20											

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-12-2010	Complete Drilling	10-12-2010	While Drilling	DRY		
Drilling Contractor	K&S	Drill Rig	D-50 TMR	At Completion of Drilling	DRY		
Driller	T&M	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA		

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URS

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISED -
0162006-60M62-020-bor.dgn		CHECKED - AMK	REVISED -
	PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - AMV	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - AMK	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SOIL BORINGS 11
 STRUCTURE NO. 016-Z006**

SHEET NO. 20 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	460
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630-953-9928
 Fax: 630-953-9938

BORING LOG 3SW-2B-3

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z006, Cook Co., IL**

Datum: NGVD
 Elevation: 686.44 ft
 North: 1811866.00 ft
 East: 1115282.93 ft
 Station: 510+64.00
 Offset: 18.77 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
686.4	16-inch thick ASPHALT --PAVEMENT--	0	1	50	NR	15	686.4		0	1	50	NR	15
685.1	2-inch thick CRUSHED STONE --BASE COURSE--	1					685.1		1				
683.4	Stiff to hard, brown SILTY CLAY LOAM, little gravel --FILL--	2	2	3	1.75	21	683.4		2	3	1.75	21	
		3	3	4	3.25	22			3	4	3.25	22	
		4	4	3	NR				4	3	NR		
		5	5	3	3.20	14			5	3	3.20	14	
	--HARD DRILLING--	6	6	3	1.25	23			6	3	1.25	23	
672.4	Stiff, black CLAY LOAM --BURIED TOPSOIL--	15	7	1	0.82	29	672.4		15	1	0.82	29	
670.6	Medium stiff, brown and gray SILTY CLAY LOAM, trace roots		8	1	NP	31	670.6			1	NP	31	
668.4	Loose, gray SANDY LOAM, trace gravel	20	9	3	0.75	55	668.4		20	3	0.75	55	
663.4	Medium stiff to very stiff, gray SILTY CLAY LOAM, little gravel	25	10	3			663.4		25	3			

Boring terminated at 27.50 ft

GENERAL NOTES

Begin Drilling: 10-12-2010 Complete Drilling: 10-12-2010
 Drilling Contractor: **K&S** Drill Rig: **D-50 TMR**
 Driller: **T&M** Logger: **B. Wilson** Checked by: **C. Marin**
 Drilling Method: **3.25" IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: 21.00 ft
 At Completion of Drilling: 19.00 ft
 Time After Drilling: NA
 Depth to Water: NA

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

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 FAX (312) 939-4998



FILE NAME = 0162006-60M62-021-bor.dgn

USER NAME = Anthony.Plutz

PLOT SCALE = 0:2.0000 '1' = 1 in.

PLOT DATE = 3/13/2013

DESIGNED - WEI
 CHECKED - AMK
 DRAWN - AMV
 CHECKED - AMK

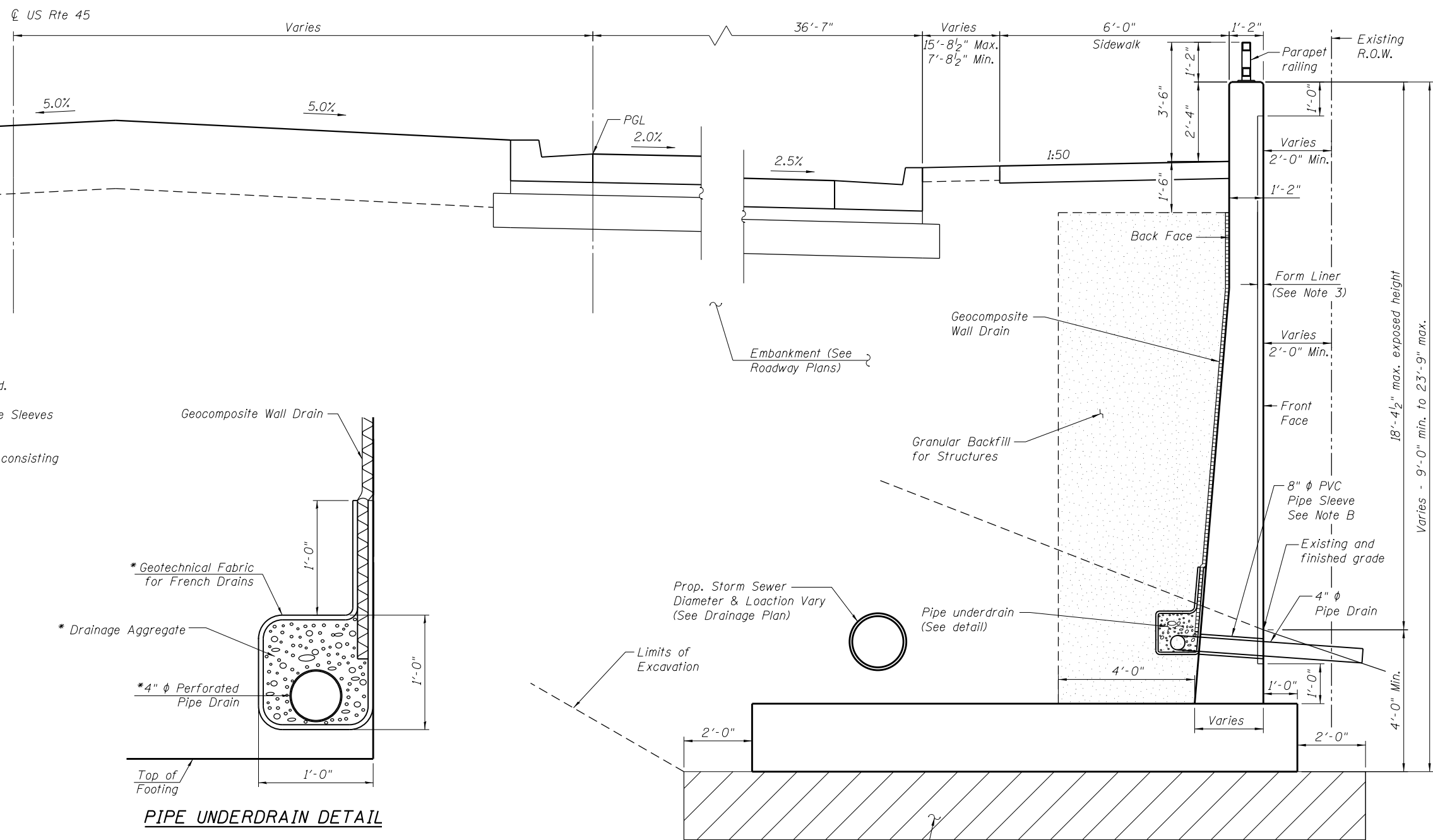
REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SOIL BORINGS 12
 STRUCTURE NO. 016-Z006**

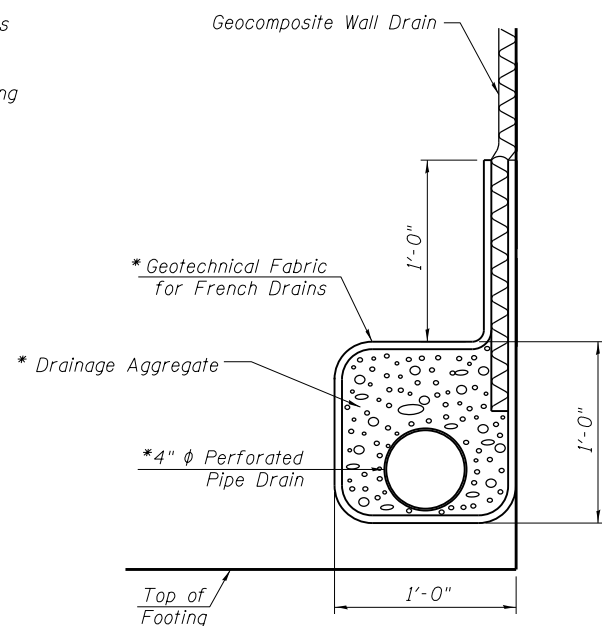
SHEET NO. 21 OF 21 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	461
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Cut wall reinforcement as required to fit 8" ϕ PVC Pipe Sleeves for 4" Pipe Drains.
3. The form liner shall be a random Ashlar blend pattern consisting of the following block sizes:
 1. 28% - 4" X 18"
 2. 16% - 8" X 8"
 3. 28% - 8" X 11"
 4. 28% - 8" X 18"



PIPE UNDERDRAIN DETAIL

* Included in the cost of "Pipe Underdrains for Structures 4."

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Granular Embankment, Special	Cu. Yd.	265
Structure Excavation	Cu. Yd.	3,328
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	265
Concrete Structures	Cu. Yd.	1,397.8
Form Liner Textured Surface	Sq. Ft.	10,272
Reinforcement Bars, Epoxy Coated	Pound	201,020
Parapet Railing	Foot	732
Geocomposite Wall Drain	Sq. Yd.	993
Granular Backfill for Structures	Cu. Yd.	1,498
Pipe Underdrains for Structures 4"	Foot	840

INDEX OF SHEETS

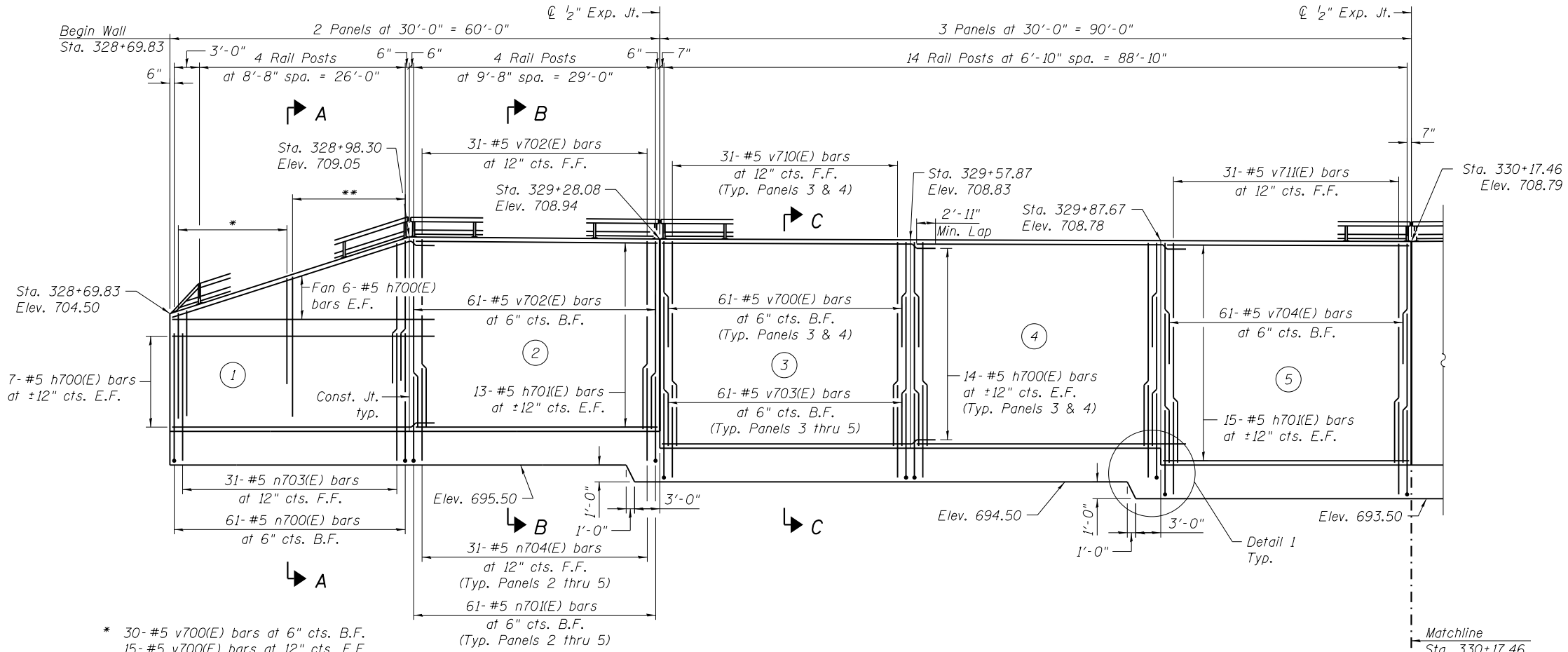
1. General Plan & Elevation
2. General Details & Bill of Material
3. Detailed Plan and Elevation 1
4. Detailed Plan and Elevation 2
5. Detailed Plan and Elevation 3
6. Detailed Plan and Elevation 4
7. Sections and Details
8. Bill of Material
9. Parapet Railing
10. Soil Borings 1
11. Soil Borings 2
12. Soil Borings 3

TYPICAL WALL SECTION

Note B:
Provide 8" ϕ PVC Pipe Sleeve embedded in concrete for 4" ϕ Pipe Drain. Cost included in "Pipe Drains 4." For locations and invert elevations see Sheets 3 thru 6.

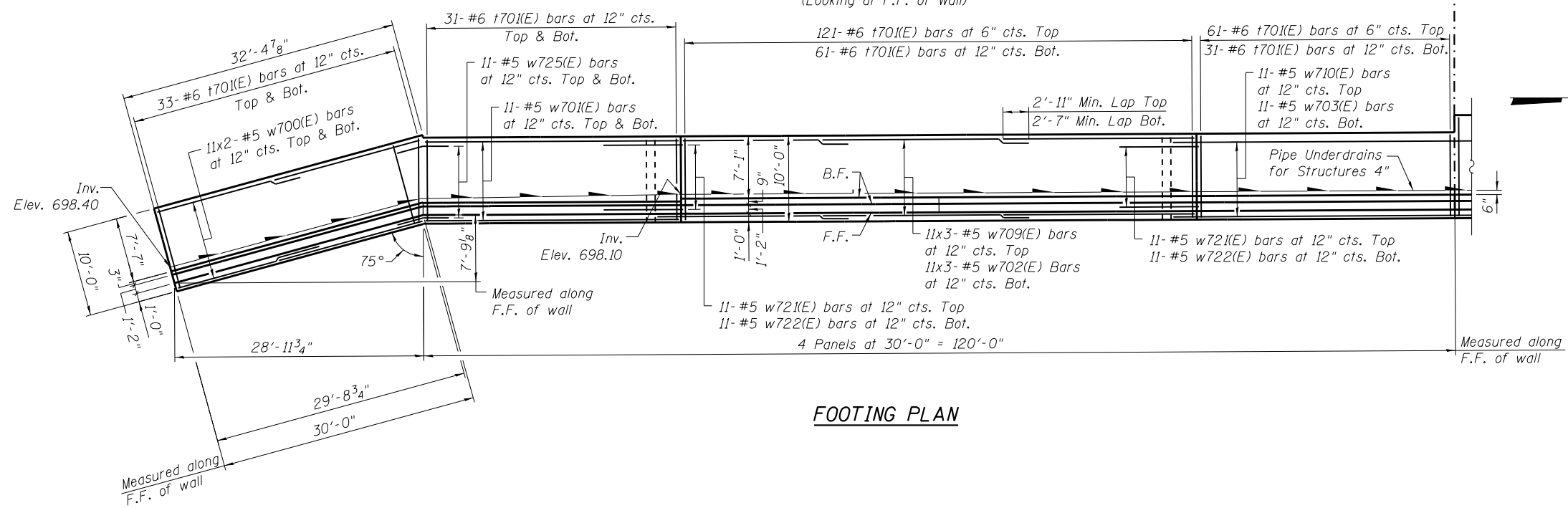
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		CHECKED - MJL	REVISD -
	PLOT SCALE = 5:4.0000 '1' / in.	DRAWN - PMH	REVISD -
	PLOT DATE = 3/13/2013	CHECKED - MJL	REVISD -

F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 463
CONTRACT NO. 60M62				ILLINOIS FED. AID PROJECT



- * 30- #5 v700(E) bars at 6" cts. B.F.
15- #5 v700(E) bars at 12" cts. F.F.
- ** 31- #5 v701(E) bars at 6" cts. B.F.
16- #5 v701(E) bars at 12" cts. F.F.

WALL ELEVATION
(Looking at F.F. of Wall)



FOOTING PLAN

LEGEND

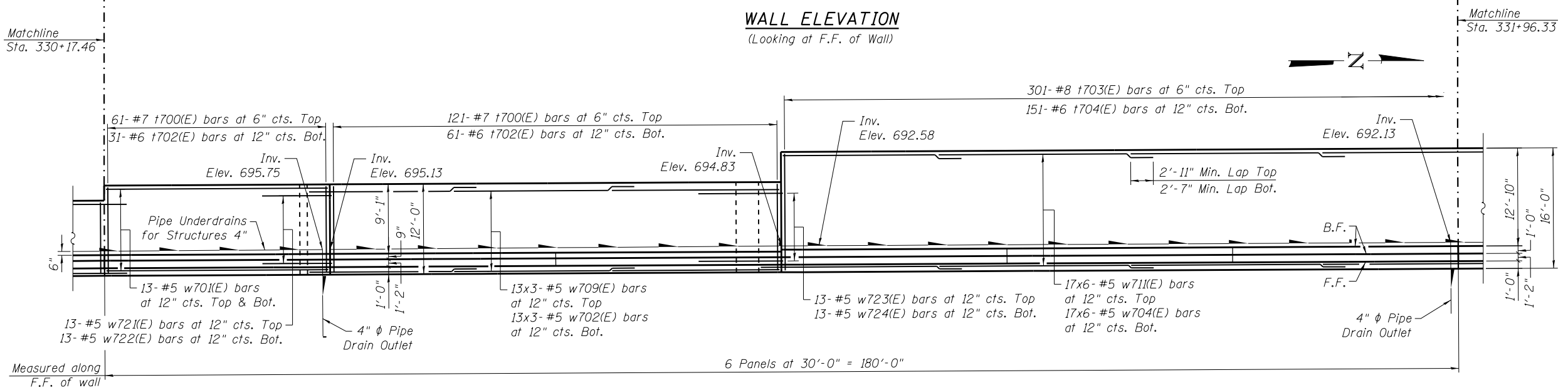
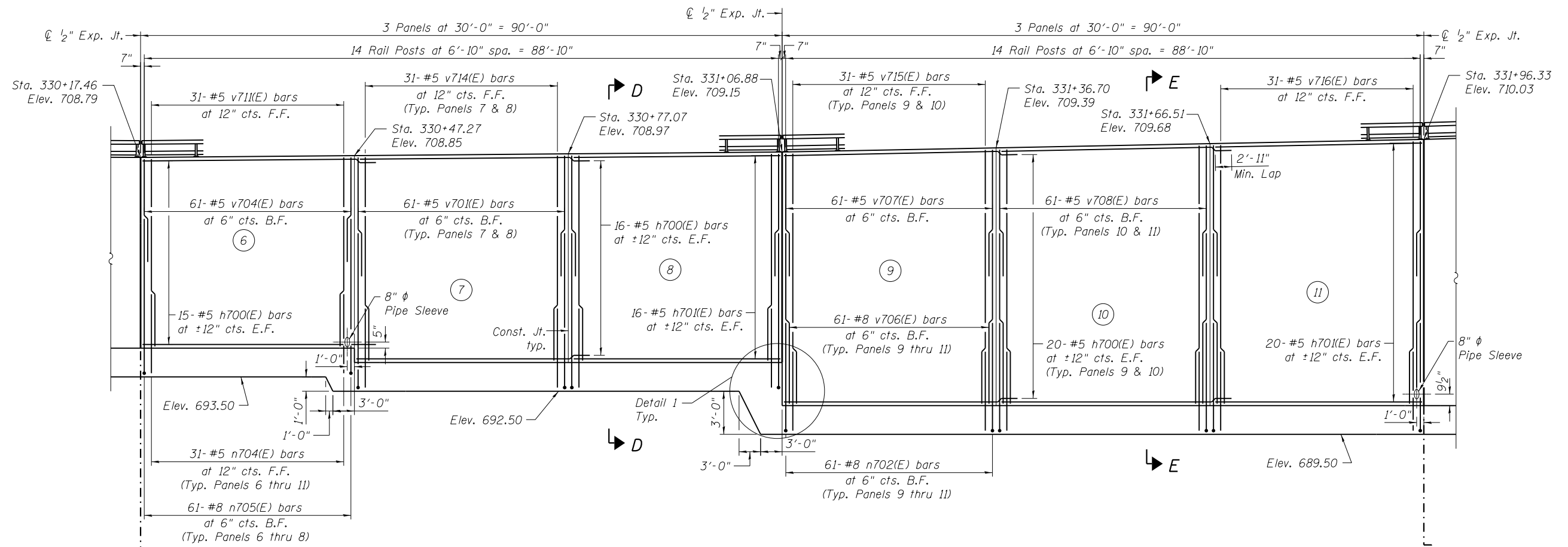
- F.F. = Front Face of Wall
- B.F. = Back Face of Wall
- E.F. = Each Face of Wall
- (1) = Panel No.

NOTES

1. For Bar List & Detail 1 see Sheet 8.
2. For Typical Details see Sheet 2.
3. For Sections A-A, B-B & C-C see Sheet 7.
4. For Railing Details see Sheet 9.
5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

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 CHICAGO, IL 60606
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URS

FILE NAME = 0162007-60M62-003-pln.dgn	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILED PLAN AND ELEVATION 1 STRUCTURE NO. 016-2007	F.A.P. R.T.E. = 330	SECTION = 103R-5	COUNTY = COOK	TOTAL SHEETS = 778	SHEET NO. = 464
PLOT SCALE = 16:0.0004' = 1" = 16'	DRAWN - PMH	REVISD -	SHEET NO. 3 OF 12 SHEETS			CONTRACT NO. 60M62				
PLOT DATE = 3/13/2013	CHECKED - MJL	REVISD -	ILLINOIS FED. AID PROJECT							



LEGEND

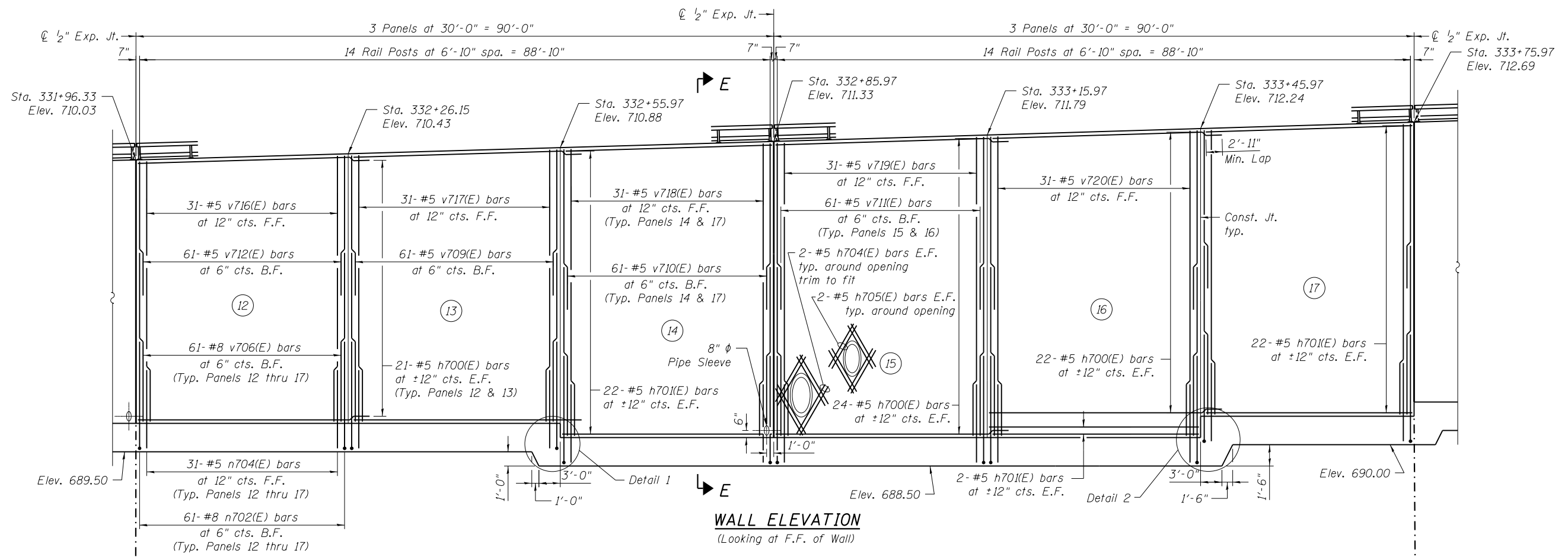
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 B.F. = Back Face of Wall
 E.F. = Each Face of Wall
 (1) = Panel No.

NOTES

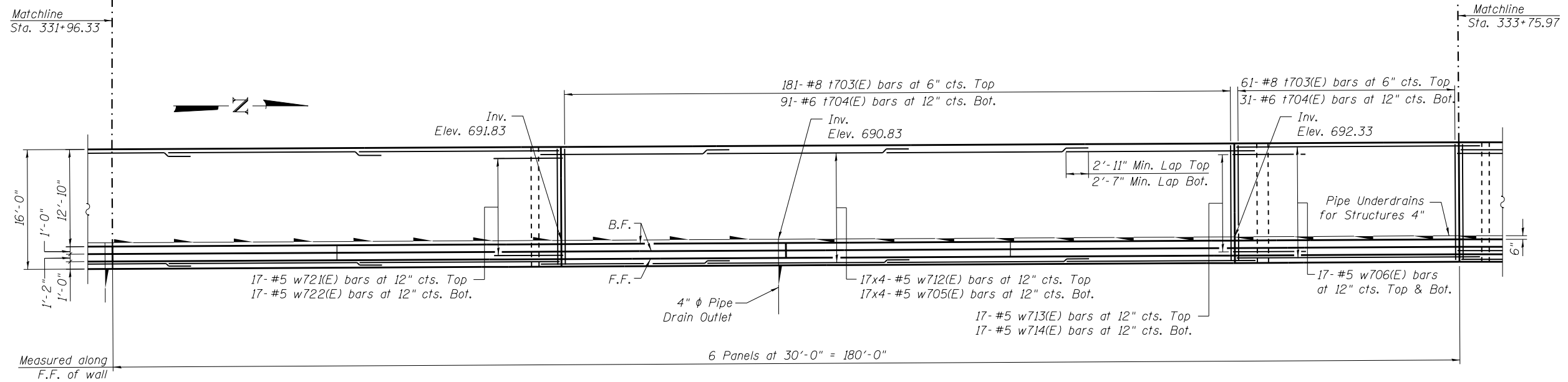
- For Bar List & Detail 1 see Sheet 8.
- For Typical Details see Sheet 2.
- For Sections D-D & E-E see Sheet 7.
- For Railing Details see Sheet 9.
- Bars indicated thus 1 x 3- #8 etc. indicates 1 line of bars with 3 lengths per line.

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
0162007-60M62-004-pln.dgn		CHECKED - MJL	REVISED -
		DRAWN - PMH	REVISED -
		CHECKED - MJL	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	465
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



WALL ELEVATION
(Looking at F.F. of Wall)



FOOTING PLAN

LEGEND

- F.F. = Front Face of Wall
- B.F. = Back Face of Wall
- E.F. = Each Face of Wall
- (1) = Panel No.

NOTES

1. For Bar List & Details 1 & 2 see Sheet 8.
2. For Typical Details see Sheet 2.
3. For Section E-E see Sheet 7.
4. For Railing Details see Sheet 9.
5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

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FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
0162007-60M62-005-pln.dgn		CHECKED - MJL	REVISED -
		DRAWN - PMH	REVISED -
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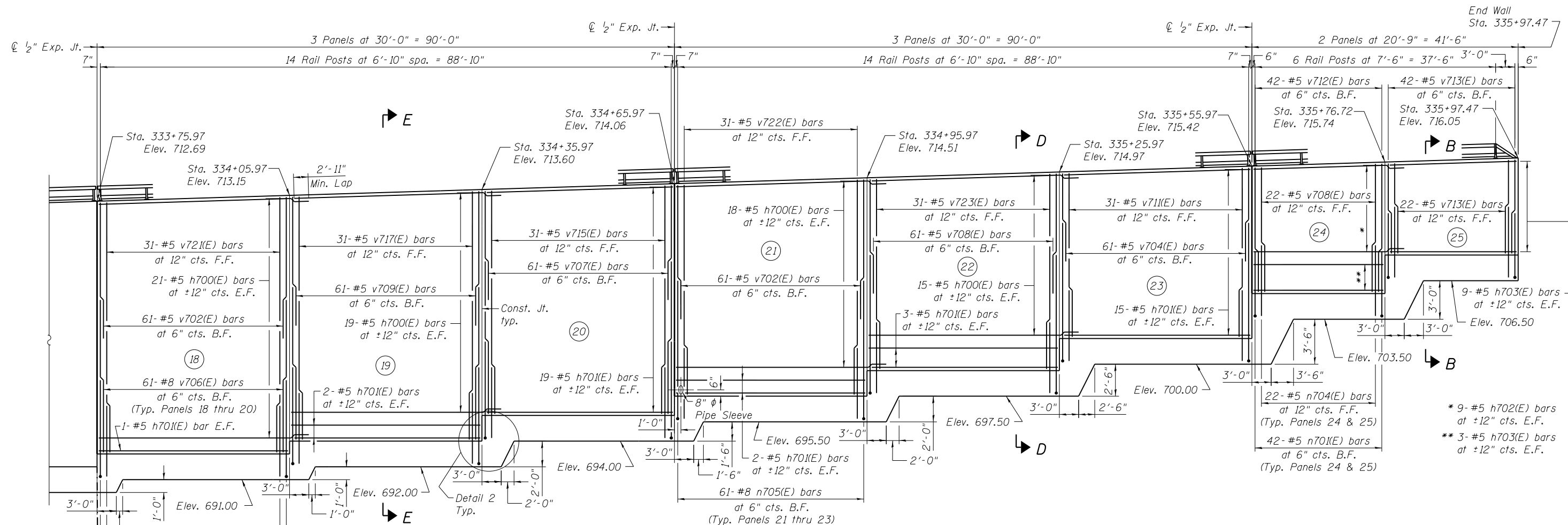
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAILED PLAN AND ELEVATION 3
STRUCTURE NO. 016-2007**

SHEET NO. 5 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	466
CONTRACT NO. 60M62				

ILLINOIS FED. AID PROJECT



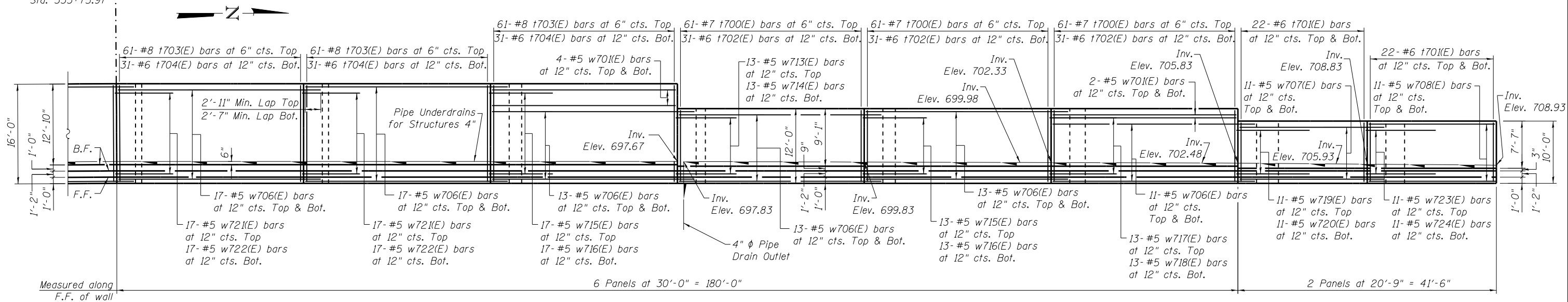
LEGEND

F.F. = Front Face of Wall
 B.F. = Back Face of Wall
 E.F. = Each Face of Wall
 (1) = Panel No.

NOTES

1. For Bar List & Detail 2 see Sheet 8.
2. For Typical Details see Sheet 2.
3. For Sections B-B, D-D & E-E see Sheet 7.
4. For Railing Details see Sheet 9.
5. Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.

WALL ELEVATION
 (Looking at F.F. of Wall)



FOOTING PLAN

100 S. WACKER DR.
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 CHICAGO, IL 60606
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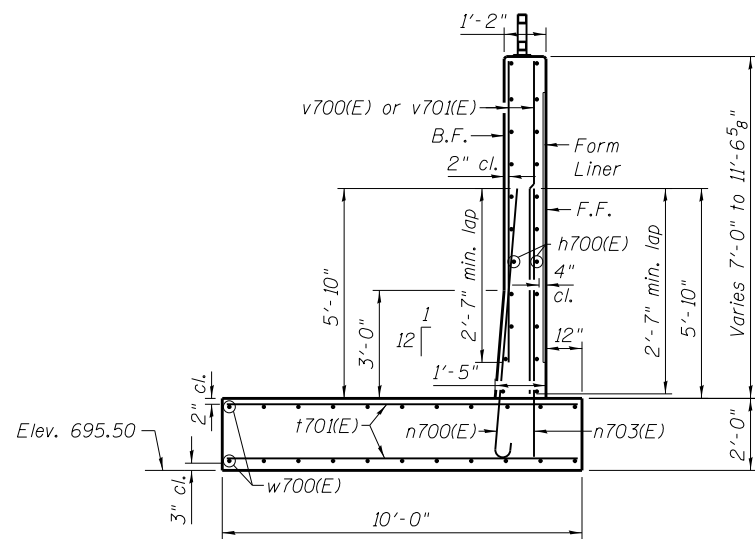
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		DRAWN - PMH	REVISED -
		CHECKED - MJL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION 4
STRUCTURE NO. 016-2007

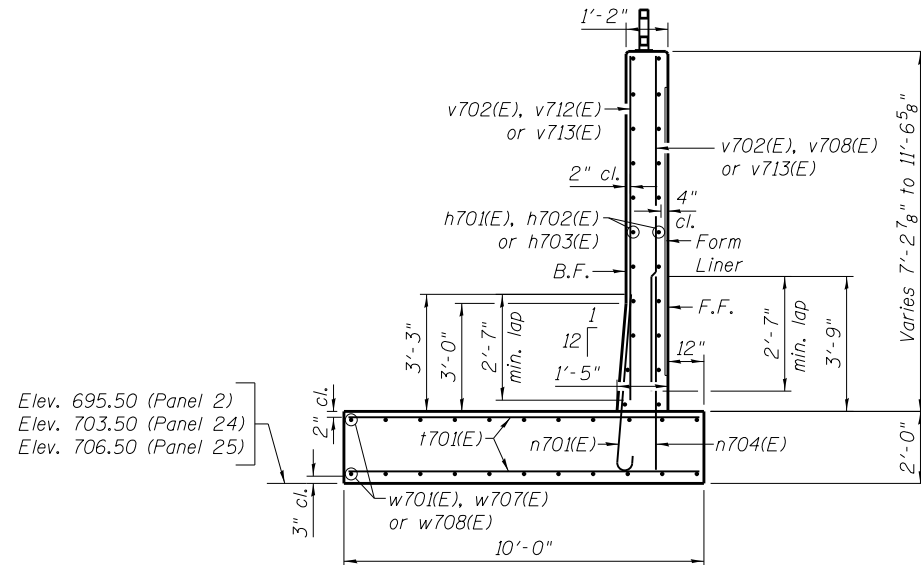
SHEET NO. 6 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	467
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



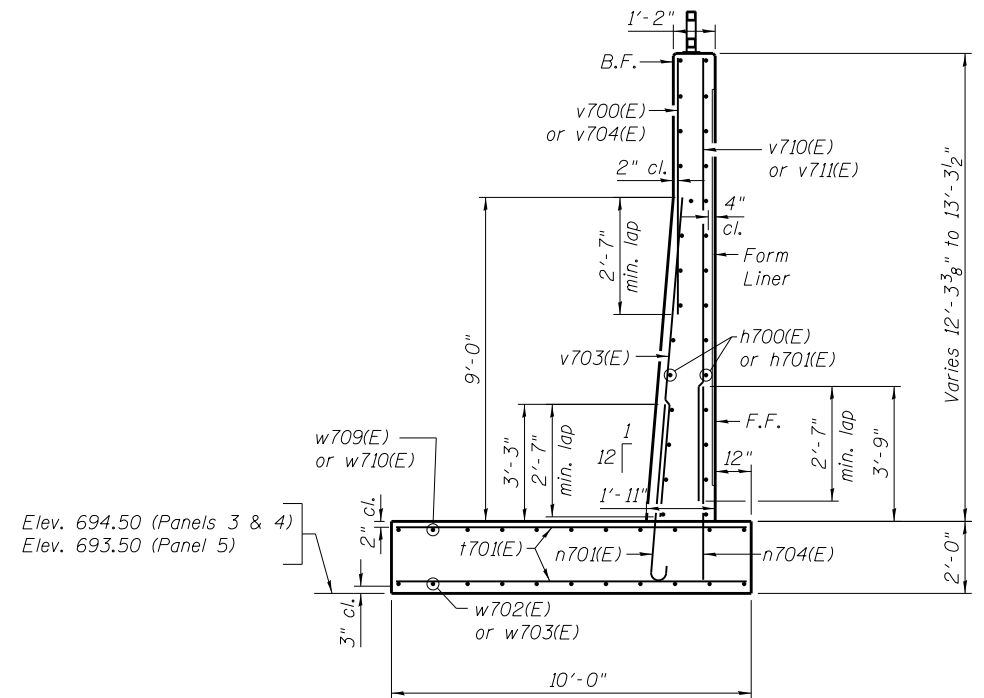
**SECTION A-A
PANEL 1**

Maximum Applied Bearing Pressure = 2.23 ksf



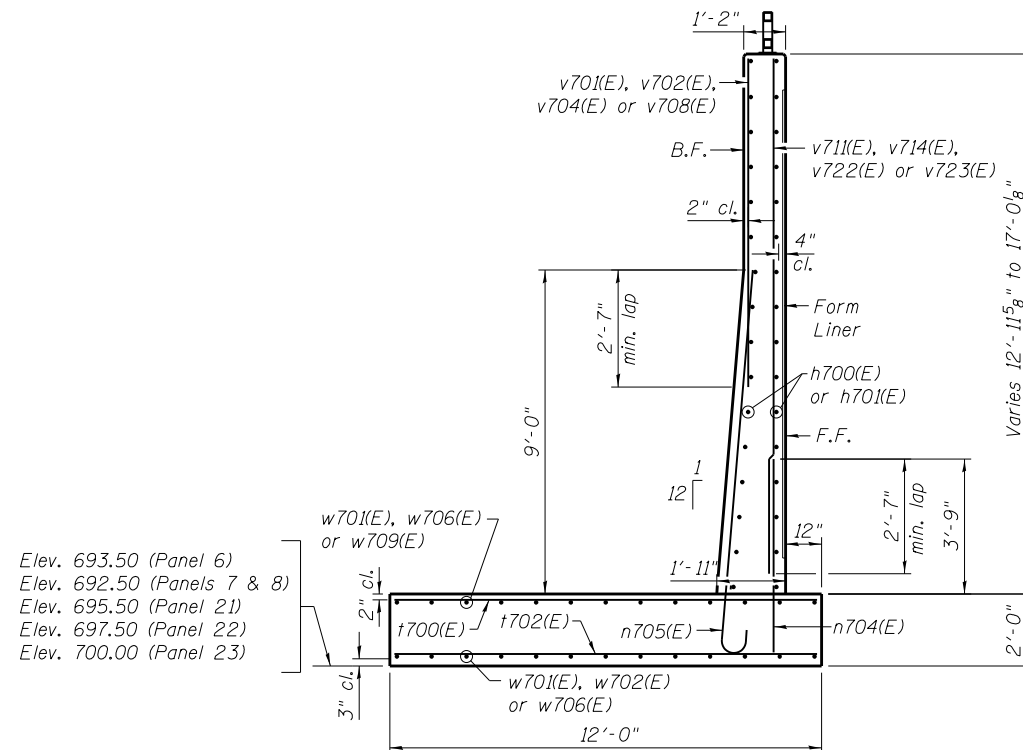
**SECTION B-B
PANELS 2, 24 & 25**

Maximum Applied Bearing Pressure = 2.23 ksf



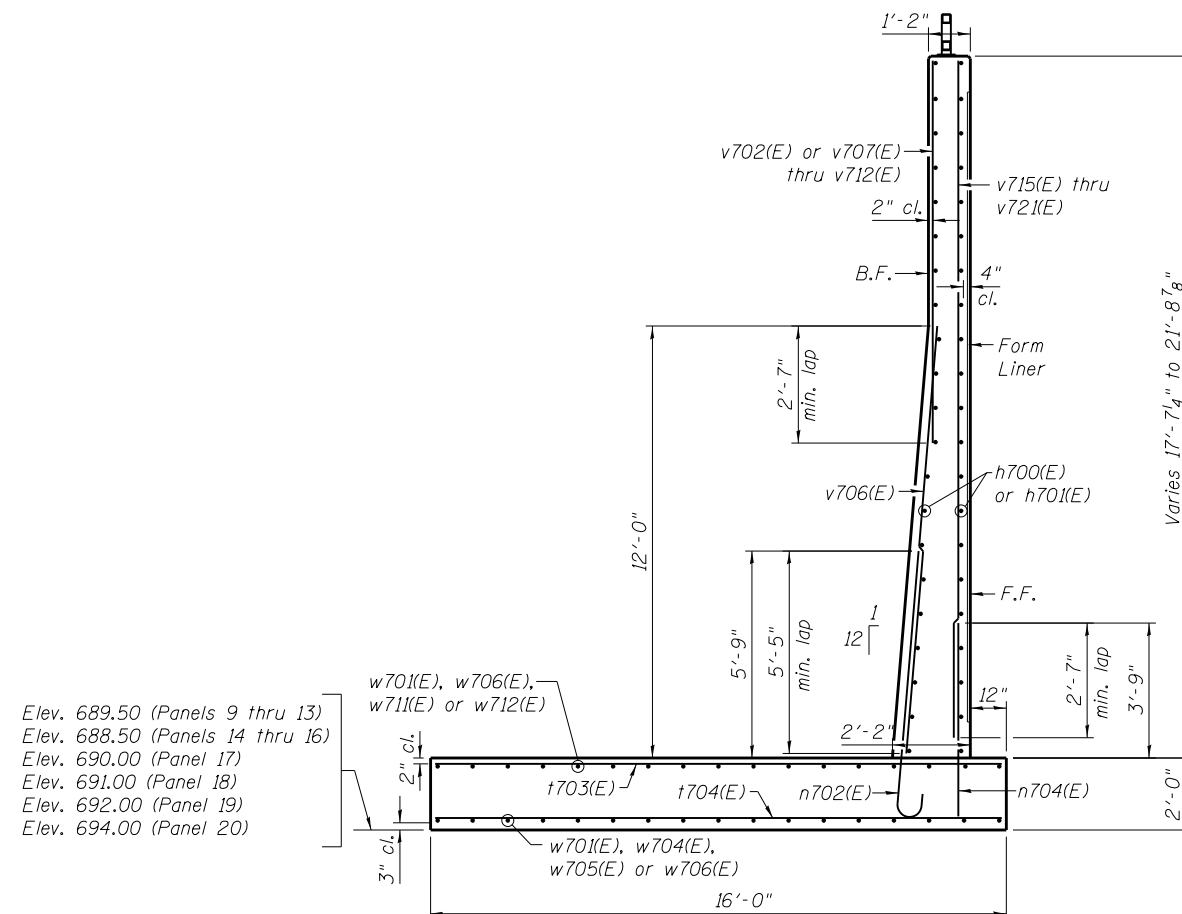
**SECTION C-C
PANELS 3 THRU 5**

Maximum Applied Bearing Pressure = 2.80 ksf



**SECTION D-D
PANELS 6 THRU 8 & 21 THRU 23**

Maximum Applied Bearing Pressure = 3.68 ksf



**SECTION E-E
PANELS 9 THRU 20**

Maximum Applied Bearing Pressure = 4.46 ksf

LEGEND

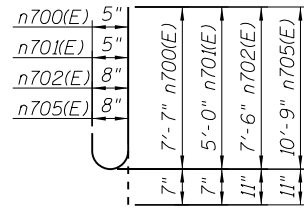
F.F. = Front Face of Wall
B.F. = Back Face of Wall
E.F. = Each Face of Wall

NOTES

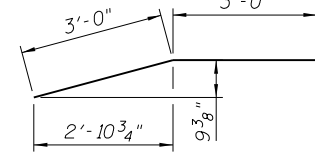
1. For Bar List see Sheet 8.

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
0162007-60M62-007-det.dgn		CHECKED - MJL	REVISED -
		PLOT SCALE = 0:2.0000' = 1" / in.	REVISED -
		DRAWN - PMH	REVISED -
		CHECKED - MJL	REVISED -
		PLOT DATE = 3/13/2013	

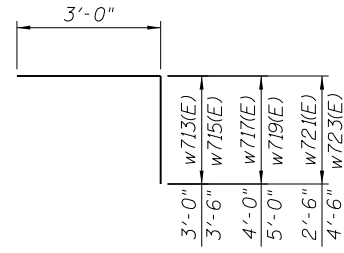
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	468
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



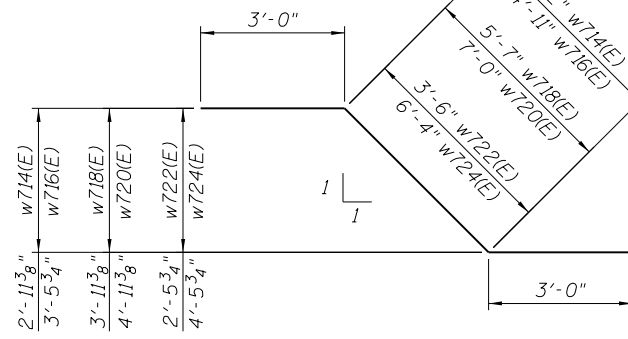
**BARS n700(E), n701(E),
n702(E) & n705(E)**



BAR w725(E)



**BARS w713(E), w715(E), w717(E),
w719(E), w721(E) & w723(E)**



**BARS w714(E), w716(E), w718(E),
w720(E), w722(E) & w724(E)**

BILL OF MATERIAL

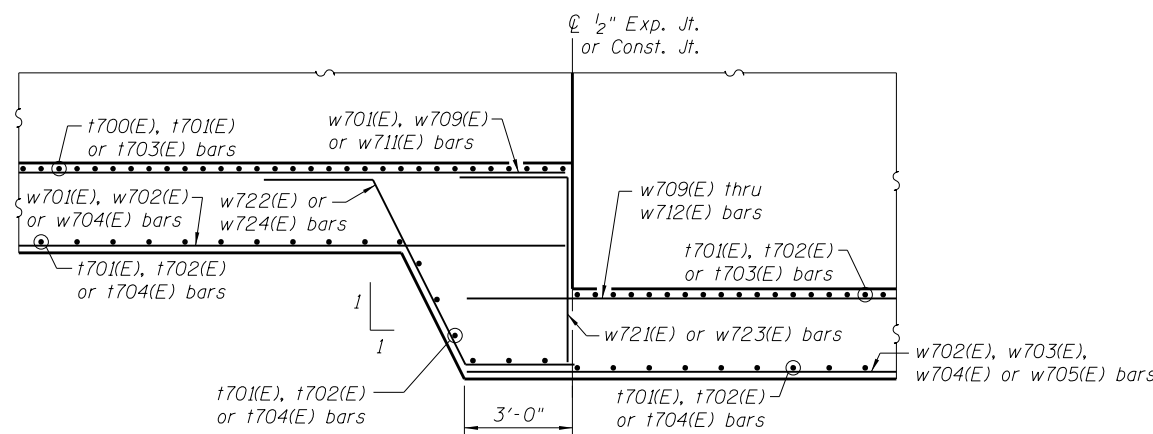
Bar	No.	Size	Length	Shape
h700(E)	546	#5	33'-0"	—
h701(E)	304	#5	29'-8"	—
h702(E)	18	#5	23'-9"	—
h703(E)	24	#5	20'-5"	—
h704(E)	16	#5	4'-6"	—
h705(E)	16	#5	4'-0"	—
n700(E)	61	#5	8'-2"	—
n701(E)	328	#5	5'-7"	—
n702(E)	732	#8	8'-5"	—
n703(E)	31	#5	7'-7"	—
n704(E)	726	#5	5'-6"	—
n705(E)	366	#8	11'-8"	—
t700(E)	365	#7	11'-8"	—
t701(E)	490	#6	9'-8"	—
t702(E)	185	#6	11'-8"	—
t703(E)	726	#8	15'-8"	—
t704(E)	366	#6	15'-8"	—

BILL OF MATERIAL (cont.)

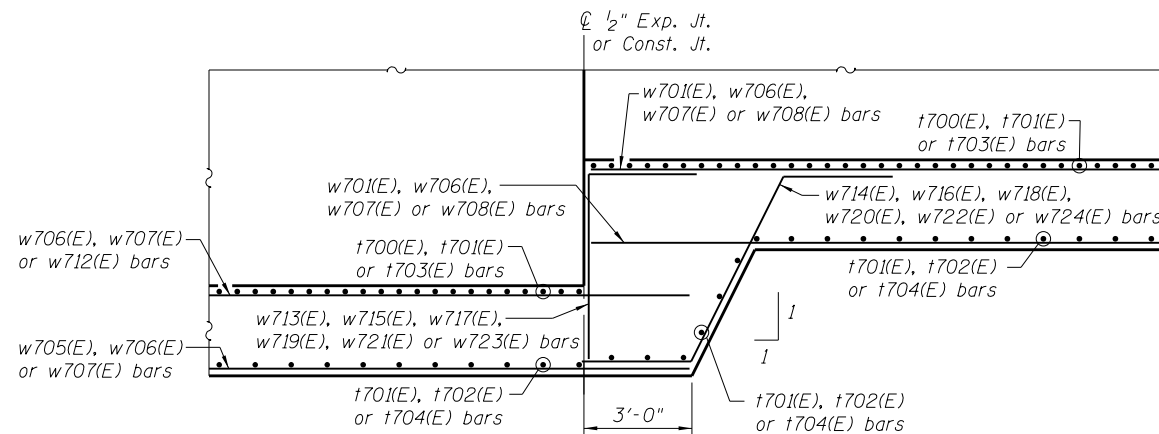
Bar	No.	Size	Length	Shape
v700(E)	167	#5	6'-1"	—
v701(E)	169	#5	8'-4"	—
v702(E)	214	#5	10'-11"	—
v703(E)	183	#5	8'-10"	—
v704(E)	183	#5	7'-1"	—
v706(E)	732	#8	11'-10"	—
v707(E)	122	#5	8'-8"	—
v708(E)	205	#5	9'-2"	—
v709(E)	122	#5	10'-3"	—
v710(E)	184	#5	11'-5"	—
v711(E)	215	#5	12'-4"	—
v712(E)	103	#5	9'-7"	—
v713(E)	64	#5	6'-11"	—
v714(E)	62	#5	13'-6"	—
v715(E)	93	#5	17'-1"	—
v716(E)	62	#5	17'-10"	—
v717(E)	62	#5	18'-6"	—
v718(E)	62	#5	19'-8"	—
v719(E)	31	#5	20'-2"	—
v720(E)	31	#5	20'-8"	—
v721(E)	31	#5	19'-0"	—
v722(E)	31	#5	15'-11"	—
v723(E)	31	#5	14'-4"	—
w700(E)	44	#5	17'-9"	—
w701(E)	60	#5	29'-8"	—
w702(E)	72	#5	22'-9"	—
w703(E)	11	#5	35'-9"	—
w704(E)	102	#5	27'-9"	—
w705(E)	68	#5	26'-0"	—
w706(E)	202	#5	32'-8"	—
w707(E)	22	#5	23'-5"	—
w708(E)	22	#5	20'-5"	—
w709(E)	72	#5	23'-0"	—
w710(E)	11	#5	36'-0"	—
w711(E)	102	#5	28'-0"	—
w712(E)	68	#5	26'-3"	—
w713(E)	30	#5	6'-0"	—
w714(E)	30	#5	10'-2"	—
w715(E)	30	#5	6'-6"	—
w716(E)	30	#5	10'-11"	—
w717(E)	13	#5	7'-0"	—
w718(E)	13	#5	11'-7"	—
w719(E)	11	#5	8'-0"	—
w720(E)	11	#5	13'-0"	—
w721(E)	86	#5	5'-6"	—
w722(E)	86	#5	9'-6"	—
w723(E)	24	#5	7'-6"	—
w724(E)	24	#5	12'-4"	—
w725(E)	22	#5	6'-0"	—

Reinforcement Bars, Epoxy Coated	Pound	201,020
Concrete Structures	Cu. Yd.	1,397.8

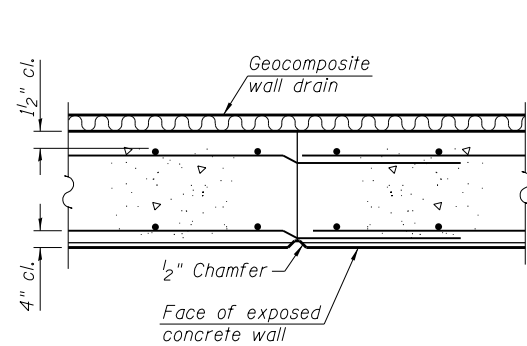
Bars indicated thus 1 x 3-#8 etc. indicates 1 line of bars with 3 lengths per line.



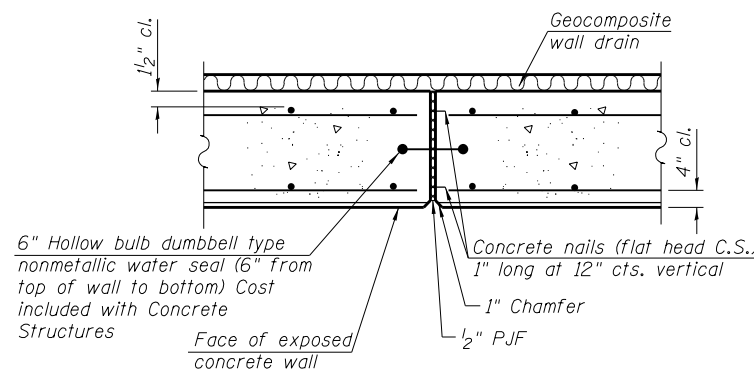
DETAIL 1



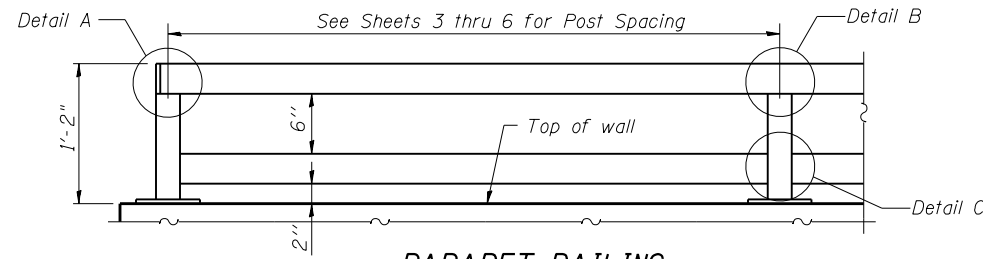
DETAIL 2



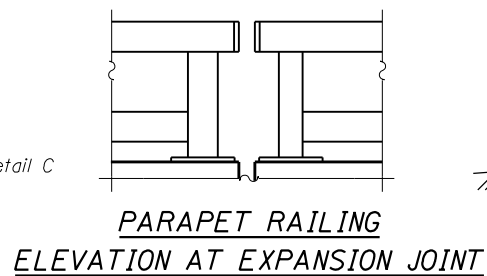
CONSTRUCTION JOINT DETAIL



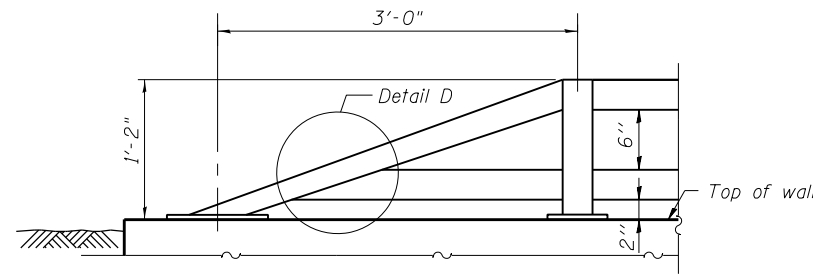
EXPANSION JOINT DETAIL



**PARAPET RAILING
ELEVATION**
(Inside Face of Rail)

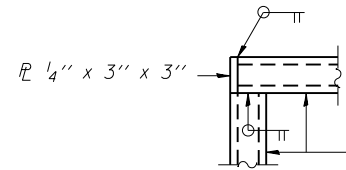


**PARAPET RAILING
ELEVATION AT EXPANSION JOINT**

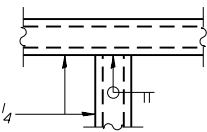


**PARAPET RAILING
AT END SECTION**

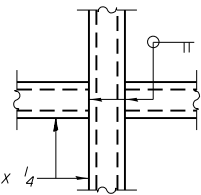
Note:
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



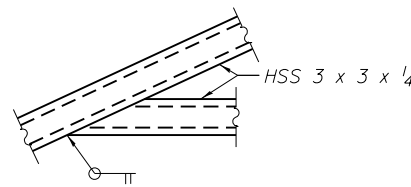
DETAIL A



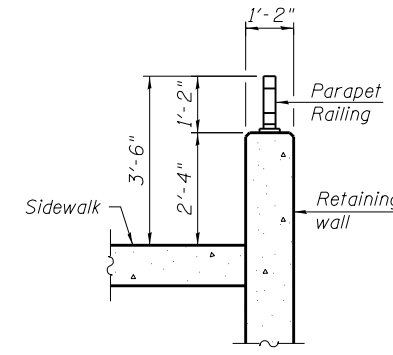
DETAIL B



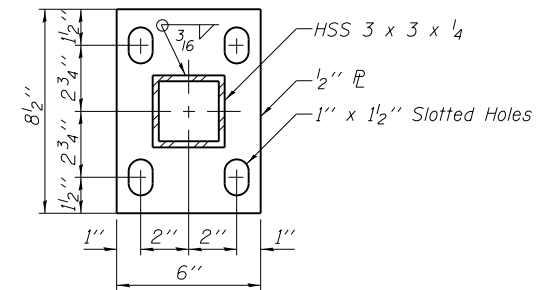
DETAIL C



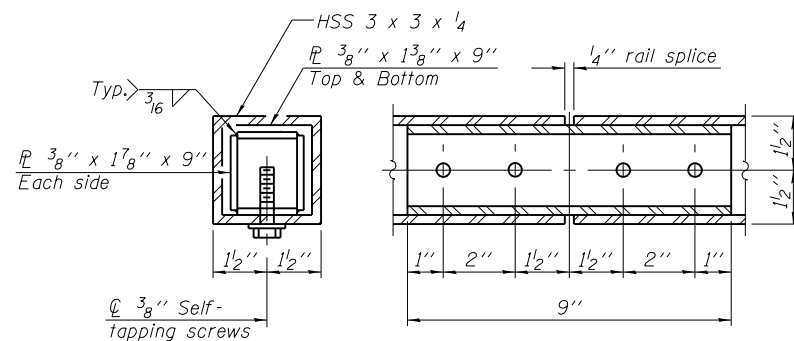
DETAIL D



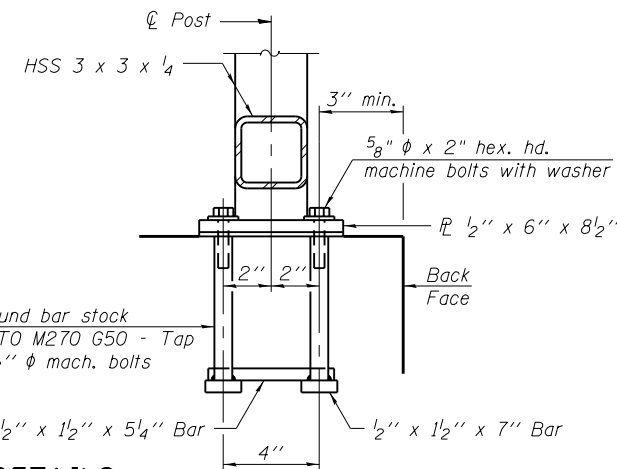
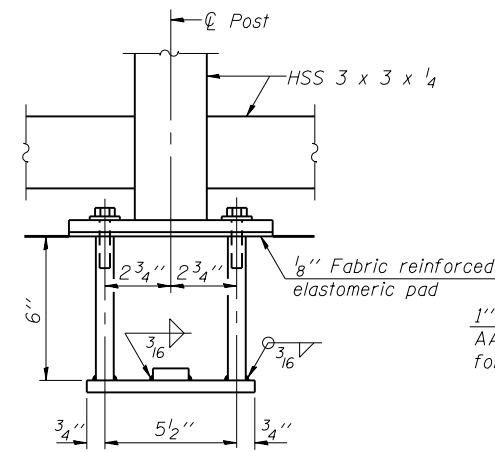
SECTION THRU RAILING



BASE PL



RAIL SPLICE



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" phi anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	732

100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4998
URS

FILE NAME = 0162007-60M62-009-Rail.dgn	USER NAME = Anthony.Plutz	DESIGNED - JCE	REVISED -
		CHECKED - PMH	REVISED -
	PLOT SCALE = 0:2.0000 '1' = 1/4" in.	DRAWN - AMV	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - PMH	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PARAPET RAILING
STRUCTURE NO. 016-2007**

SHEET NO. 9 OF 12 SHEETS

F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 470
CONTRACT NO. 60M62				ILLINOIS FED. AID PROJECT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
699.4	12-inch thick, dark brown SILTY CLAY --TOPSOIL--												
699.0	Brown CLAY LOAM --FILL--		1	6 8 5	NP	19							
697.4	Medium dense, brown SILTY LOAM Hard, brown SILTY CLAY LOAM to LOAM, trace gravel		2	7 8 10	4.50	14							
692.6	Medium stiff, brown LOAM, trace gravel --L _c (%)=39, P _c (%)=18-- --%Gravel=4.8--10 --%Sand=31.8-- --%Silt=45.9-- --%Clay=17.5-- --A-6 (11)--		4	4 5 4	0.82	24							
689.5	Very stiff to hard, brown to gray SILTY CLAY LOAM, trace gravel		5	6 6 3	3.36	14							
683.7	Loose, gray, fine to coarse SAND, moist		7	5 4 3	NP	16							
682.6	Very stiff, gray SILTY CLAY LOAM, little gravel		8	7 5 3	2.30	13							
680.6	Boring terminated at 20.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-05-2010	Complete Drilling	10-05-2010	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	18.00 ft		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion			Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
699.4	13-inch thick, brown SILTY CLAY --TOPSOIL--												
699.0	Loose, brown SILT, trace roots		1	4 4 4	NP	20							
692.8	Hard, brown and gray SILTY CLAY		3	7 5 3	4.84	20							
687.8	Loose, brown to gray SILT		5	4 4 3	NP	23							
685.3	Stiff to very stiff, gray SILTY CLAY, trace gravel		6	5 5 2	1.64	15							
681.3	Medium dense, gray GRAVELLY SAND		7	4 4 4	3.36	17							
678.3	Boring terminated at 20.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-05-2010	Complete Drilling	10-05-2010	While Drilling	17.00 ft		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	15.00 ft		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion			Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
699.4	12-inch thick, dark brown SILTY CLAY --TOPSOIL--												
699.0	Medium dense, brown SILTY LOAM --FILL--		1	3 4 12	NP	12							
692.6	Hard, brown and gray SILTY CLAY, little fine to coarse gravel		2	10 10 9	-	-							
687.8	Loose, gray SILT, wet		3	4 4 5	-	21							
685.3	Medium stiff to hard, gray SILTY CLAY, trace gravel		4	4 6 10	4.00	21							
681.3	Loose, gray SILT, wet		5	4 6 9	-	17							
678.3	Medium stiff to hard, gray SILTY CLAY, trace gravel		6	6 6 9	5.41	18							
678.6	Medium stiff to hard, gray SILTY CLAY, trace gravel		7	2 2 2	NP	20							
678.3	Medium stiff to hard, gray SILTY CLAY, trace gravel		8	3 3 3	0.74	22							
678.3	Medium stiff to hard, gray SILTY CLAY, trace gravel		9	3 4 6	0.98	15							
678.3	Medium stiff to hard, gray SILTY CLAY, trace gravel		10	4 7 8	4.18	15							
671.6	Boring terminated at 25.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-06-2010	Complete Drilling	10-06-2010	While Drilling	16.00 ft		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	17.00 ft		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion			Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

100 S. WACKER DR.
 5TH FLOOR
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4198
URS

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
0162007-60M62-010-bor.dgn		CHECKED - AMK	REVISED -
		DRAWN - PMH	REVISED -
		CHECKED - AMK	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SOIL BORINGS 1
 STRUCTURE NO. 016-Z007**

SHEET NO. 10 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	471
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 3E-B-4
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z007, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 694.55 ft
 North: 1814069.57 ft
 East: 1115363.94 ft
 Station: 332+65.54
 Offset: 66.38 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
694.4	2-inch thick, dark brown SILTY LOAM --TOPSOIL-- Loose, brown SILTY LOAM --FILL--	0	1	4	NP	13	694.6	Loose, gray SILT, wet	11	4	NP	19	
690.8	Soft to medium stiff, black organic SILTY CLAY LOAM, trace plant fibers	5	2	4	0.66 B	25	690.6	Very stiff, gray SILTY CLAY LOAM, trace gravel	12	3	2.46 B	16	
686.6	-L _c (%)=66, P _c (%)=33-- --%Gravel=1.1-- --%Sand=16.3-- --%Silt=53.0-- --%Clay=29.6-- --A-7-5 (31)--	10	3	2	0.25 P	59	684.6	Boring terminated at 30.00 ft	30	6			
686.6	Stiff to very stiff, brown and gray SILTY CLAY LOAM, trace gravel	15	4	2	1.72 B	21							
	-L _c (%)=43, P _c (%)=16-- --%Gravel=0.1-- --%Sand=16.4-- --%Silt=56.3-- --%Clay=27.1-- --A-7-6 (22)--	20	5	2	1.56 B	27							
		25	6	3	3.61 B	17							
		30	7	3	3.69 B	18							
		35	8	3	2.38 B	16							
		40	9	4	2.79 B	18							
		45	10	2	2.95 B	19							

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	10-06-2010	Complete Drilling	10-06-2010	While Drilling	26.00 ft
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	25.00 ft
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA
Checked by	C. Marin	Depth to Water	NA		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion				

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

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 3E-B-5
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z007, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 693.39 ft
 North: 1814193.26 ft
 East: 1115376.85 ft
 Station: 333+88.81
 Offset: 82.86 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
692.4	12-inch thick, dark brown SILTY CLAY --TOPSOIL-- Medium stiff, brown SILTY CLAY, trace organic matter	0	1	2	0.50 P	45	690.4	Very stiff to hard, brown to gray SILTY CLAY to SILTY CLAY LOAM, trace gravel	2	3	2.21 B	23	
690.4		5	2	3	2.21 B	23							
		10	3	2	4.35 B	17							
		15	4	2	3.44 B	19							
		20	5	3	5.17 B	20							
		25	6	3	4.84 B	17							
677.9	Loose, gray SILT, wet	30	7	2	NP	23							
675.4	Very stiff, gray SILTY CLAY, trace gravel	35	8	3	3.44 B	15							
		40	9	3	3.20 B	16							
		45	10	3	2.05 B	14							

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	10-06-2010	Complete Drilling	10-06-2010	While Drilling	15.50 ft
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	15.00 ft
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA
Checked by	C. Marin	Depth to Water	NA		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion				

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

100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 935-1000
 FAX (312) 935-4198

URS

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISED -
0162007-60M62-011-bar.dgn		CHECKED - AMK	REVISED -
	PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - PMH	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - AMK	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SOIL BORINGS 2
 STRUCTURE NO. 016-Z007**

SHEET NO. 11 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	472
CONTRACT NO. 60M62				

ILLINOIS FED. AID PROJECT

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 3E-B-6
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z007, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 702.20 ft
 North: 1814289.17 ft
 East: 1115355.84 ft
 Station: 334+85.28
 Offset: 64.63 RT

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
706.2	0.2-inch thick, dark brown SILTY CLAY --TOPSOIL--	0	1	4	NP	19							
699.2	Medium dense, brown SILTY LOAM	1	2	5	4.50	15							
	Hard, brown and gray SILTY CLAY LOAM, trace gravel	5	3	6	6.56	18							
		10	4	3	6.40	19							
		15	5	3	4.50	18							
689.2	Stiff to hard, brown to gray SILTY LOAM, trace to some gravel	15	6	4	4.26	15							
	--L _c (%)=24, P _c (%)=13-- --%Gravel=6.9-- --%Sand=22.4-- --%Silt=55.0-- --A-6 (5)--	20	7	3	1.23	14							
	Loose, gray SILT	20	8	5	2.50	16							
679.2	Very stiff, gray SILTY CLAY, trace gravel	25	9	3	NP	19							
677.2	Boring terminated at 25.00 ft	25	10	4	2.87	16							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-06-2010	Complete Drilling	10-06-2010	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	DRY		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

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BORING LOG 3E-B-7
 WEI Job No.: 201-40-01
 Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 3**
 Location: **Ret. Wall 016-Z007, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 710.37 ft
 North: 1814398.52 ft
 East: 1115352.09 ft
 Station: 335+94.70
 Offset: 64.04 RT

Page 1 of 1

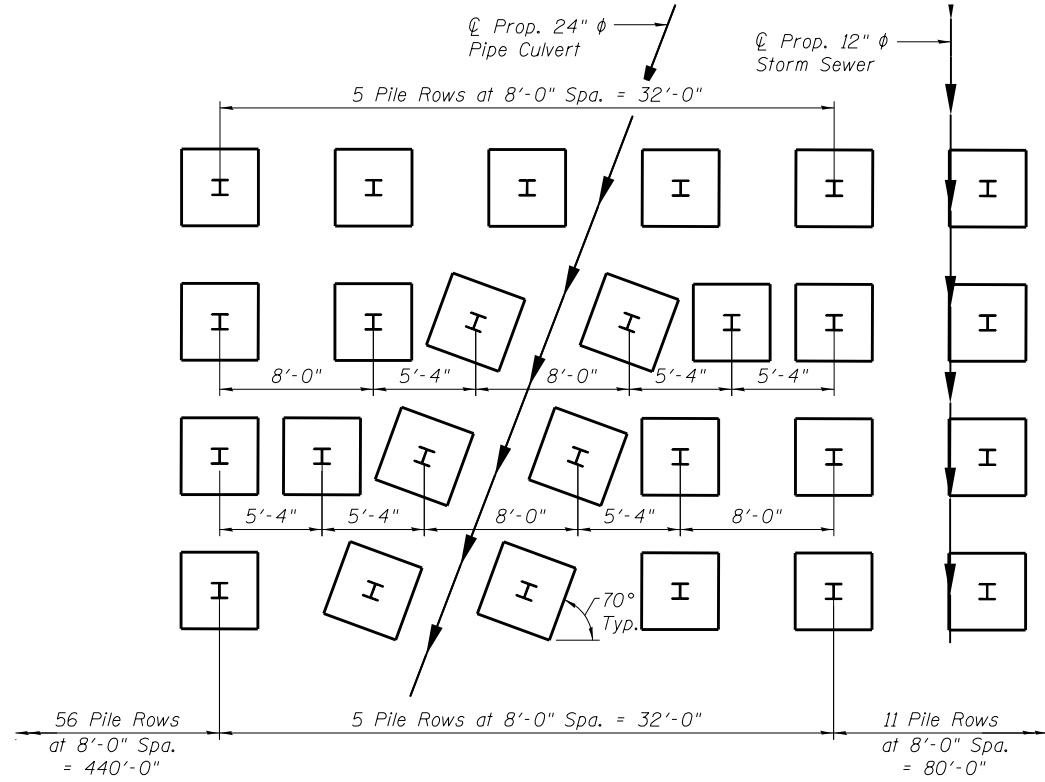
Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
716.2	0.2-inch thick, black SILTY CLAY --TOPSOIL--	0	1	5	NP	13							
	Medium dense, brown and gray SILTY LOAM, little gravel	5	2	5	NP	15							
704.9	Hard, brown and gray SILTY CLAY, trace gravel	5	3	8	6.56	18							
		10	4	8	4.10	18							
699.2	Medium dense, brown SILT, moist	10	5	3	NP	22							
		15	6	6	NP	14							
694.9	Stiff to very stiff, gray SILTY CLAY LOAM, trace gravel	15	7	2	1.56	14							
		20	8	4	2.21	13							
690.4	Boring terminated at 20.00 ft	20											

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	10-06-2010	Complete Drilling	10-06-2010	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	DRY		
Driller	K&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

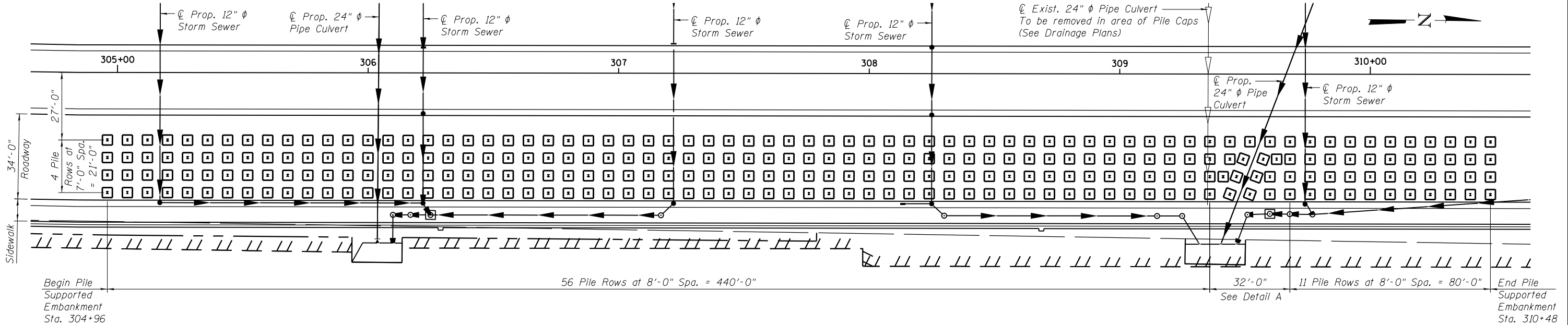
100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4198

URS

FILE NAME = 0162007-60M62-012-bor.dgn	USER NAME = Anthony.Plutz	DESIGNED - PMH	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORINGS 3 STRUCTURE NO. 016-Z007	F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 473
PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - PMH	REVISIED -	CONTRACT NO. 60M62							
PLOT DATE = 3/13/2013	CHECKED - AMK	REVISIED -	SHEET NO. 12 OF 12 SHEETS							
			ILLINOIS FED. AID PROJECT							



DETAIL A



PILE CAP LAYOUT PLAN

NOTES

1. See Wall 016-2005 plans for Soil Borings.
2. See Sheet 2 of 2 for Section thru Pile Supported Embankment, Bill of Material, Pile Data and other details.

100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4998
URS

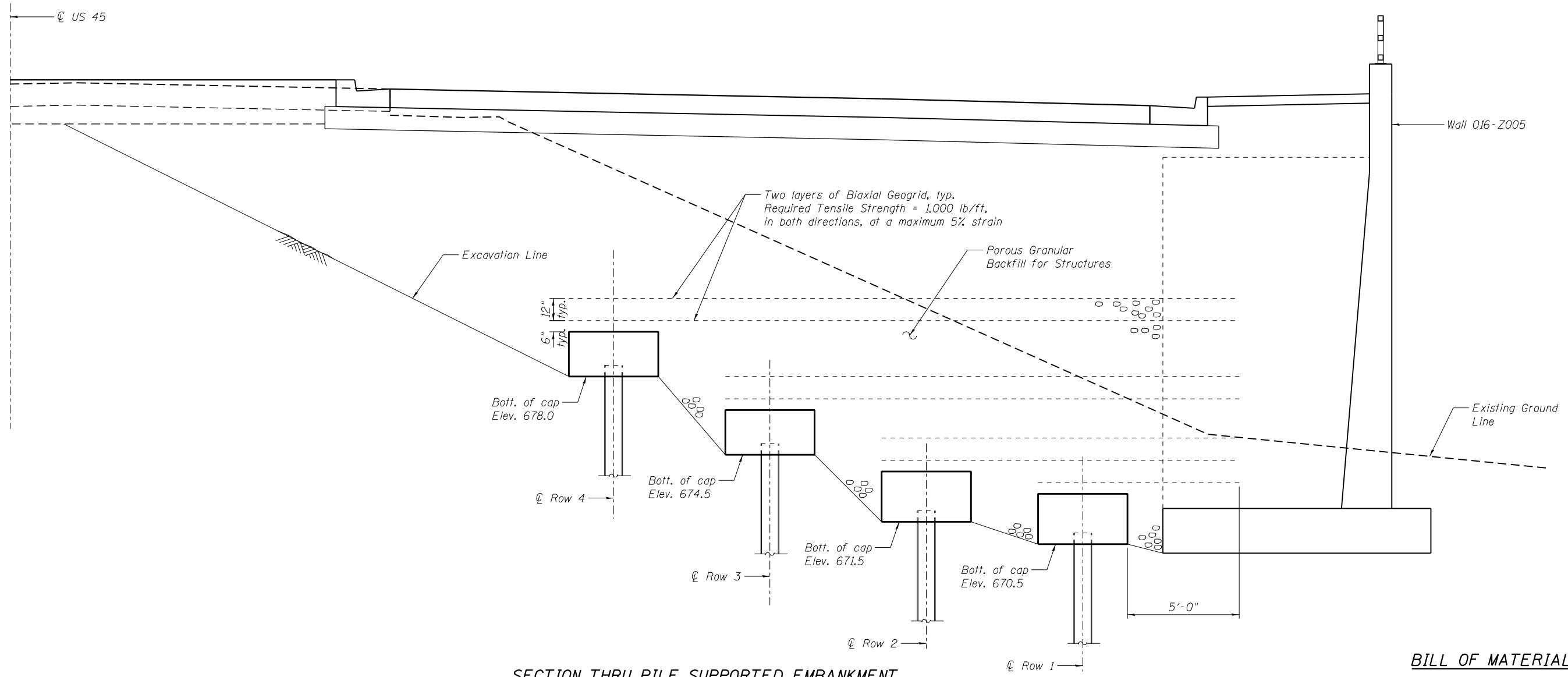
FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - MS (WEI)	REVISED -
D160M62-SHT-PSE01.dgn		CHECKED - MK (WEI)	REVISED -
	PLOT SCALE = 40:0.0010 1" / in.	DRAWN - PMH	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - AMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

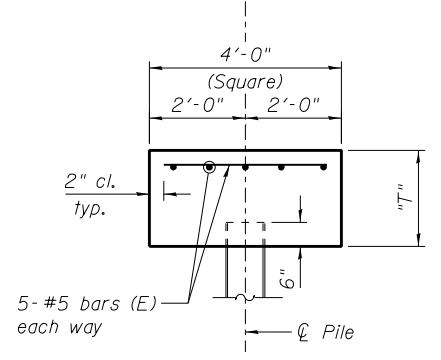
PILE SUPPORTED EMBANKMENT DETAILS 1
STA. 305 + 00 TO STA. 310 + 50

SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	474
CONTRACT NO. 60M62				
ILLINOIS FED. AID PROJECT				



SECTION THRU PILE SUPPORTED EMBANKMENT
Looking North



PILE CAP DETAIL

DIMENSION "T"

Row 1	2'-3"
Row 2	2'-3"
Row 3	2'-0"
Row 4	2'-0"

DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (piles)

NOTES

- All reinforcement shall be epoxy coated.
- A 2'-0" overlap shall be provided between adjacent sections of biaxial geogrid.
- See sheet 1 of 2 for plan view.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Structures	Cu. Yd.	376.0
Reinforcement Bars, Epoxy Coated	Pound	14,710
Furnishing Steel Piles HP10x42	Foot	17,202
Driving Piles	Foot	17,202
Test Pile Steel HP10x42	Each	4
Pile Shoes	Each	282
Biaxial Geogrid	Sq. Yd.	9,534
Granular Backfill for Structures	Cu. Yd.	3,490

PILE DATA

	Row 1	Row 2	Row 3	Row 4
Type (with pile shoes)	HP 10x42	HP 10x42	HP 10x42	HP 10x42
Nominal Required Bearing (kips)	255	242	204	160
Factored Resistance Available (kips)	140	133	112	88
Est. Length (feet)	67	64	58	55
No. Production Piles	69	70	70	69
No. Test Piles	1	1	1	1

100 S. WACKER DR.
 SUITE 600
 CHICAGO, IL 60606
 TEL (312) 939-1000
 FAX (312) 939-4998
URS

FILE NAME = D160M62-SHT-PSE02.dgn
 USER NAME = Anthony.Plutz
 PLOT SCALE = 40:0.0010 1" / 16'
 PLOT DATE = 3/13/2013

DESIGNED - MS (WE1)	REVISD -
CHECKED - MK (WE1)	REVISD -
DRAWN - PMH	REVISD -
CHECKED - AMK	REVISD -

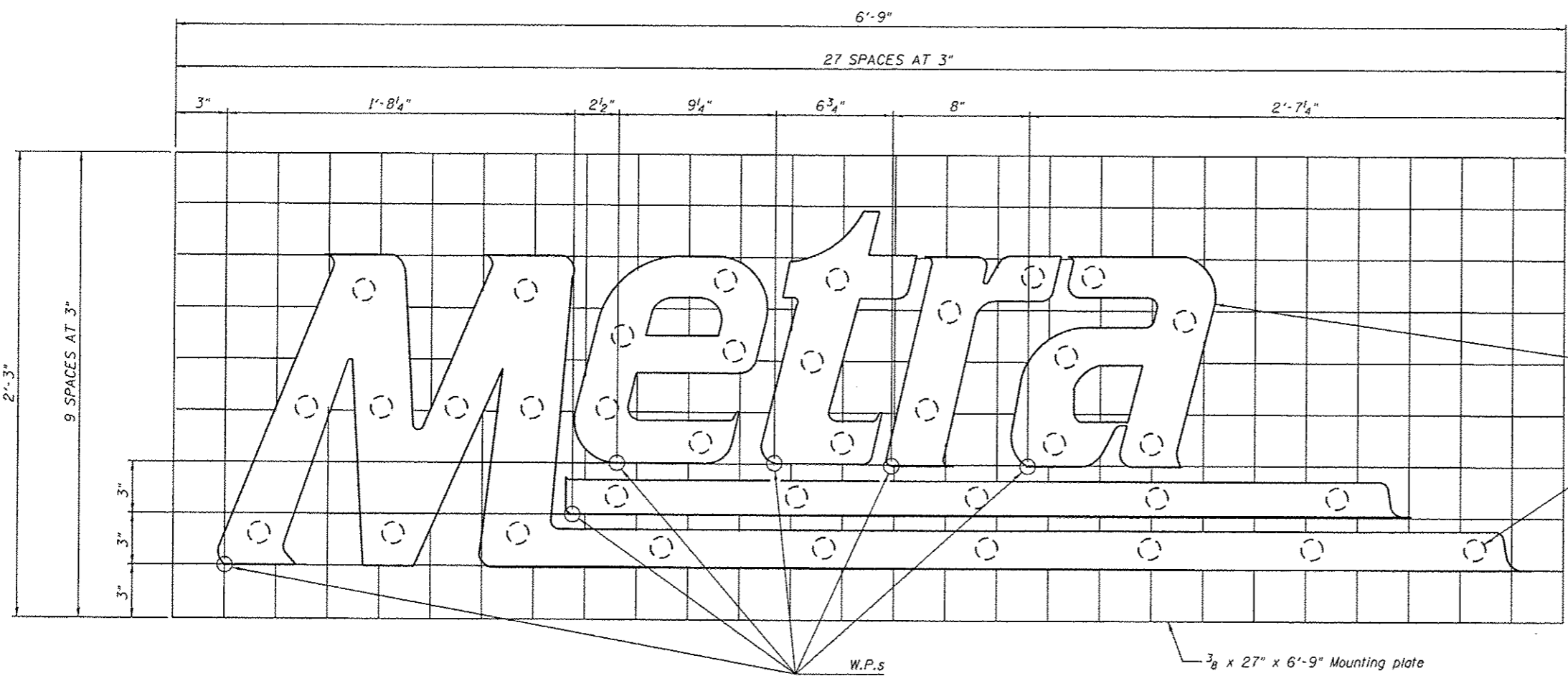
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE SUPPORTED EMBANKMENT DETAILS 2
STA. 305 + 00 TO STA. 310 + 50

SHEET NO. 2 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	475
CONTRACT NO. 60M62				

ILLINOIS FED. AID PROJECT



- NOTES:**
1. Prior to Fabrication of Metra Emblem, the Contractor shall obtain the current Standards and Specifications of the Emblem from Metra.
 2. The cost of mounting plate, stainless steel letters, connection plates, standoff brackets and all other associated connections, hardware and field drilling shall be included in the lump sum bid price for "RAILROAD EMBLEM".
 3. The mounting plate and all associated connections, hardware and brackets shall be painted in accordance with Specification "RAILROAD EMBLEM".

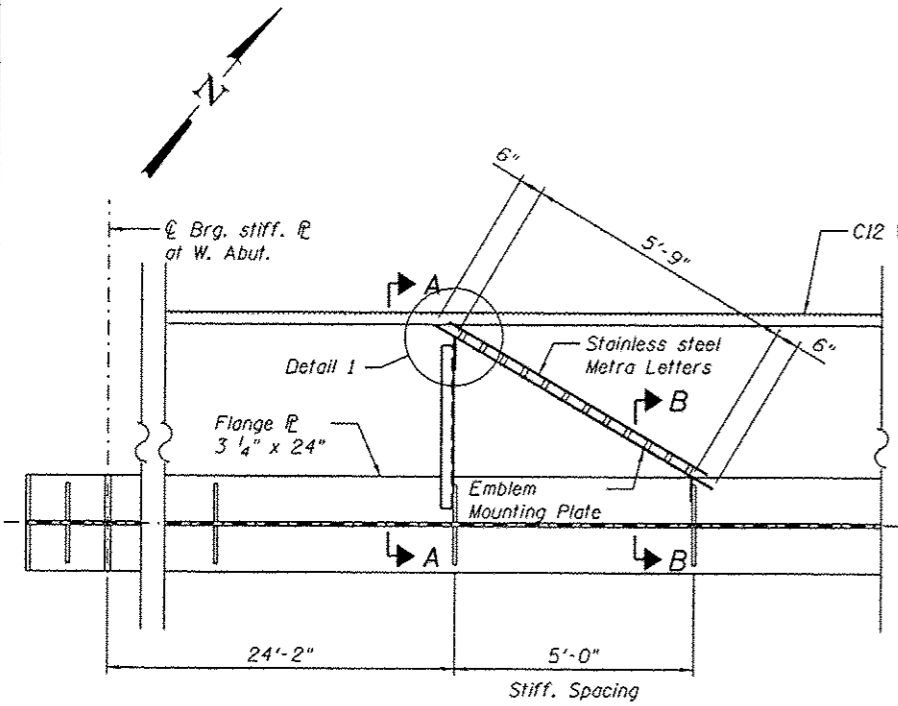
Metra Letters to be cut from 3/8" thick stainless steel plate
 Note: The "bottoms" of each letter shall be horizontal along the grid lines.

Stainless steel pipe spacer (Typ.)
 See detail 2. Spacing to miss connection plates.

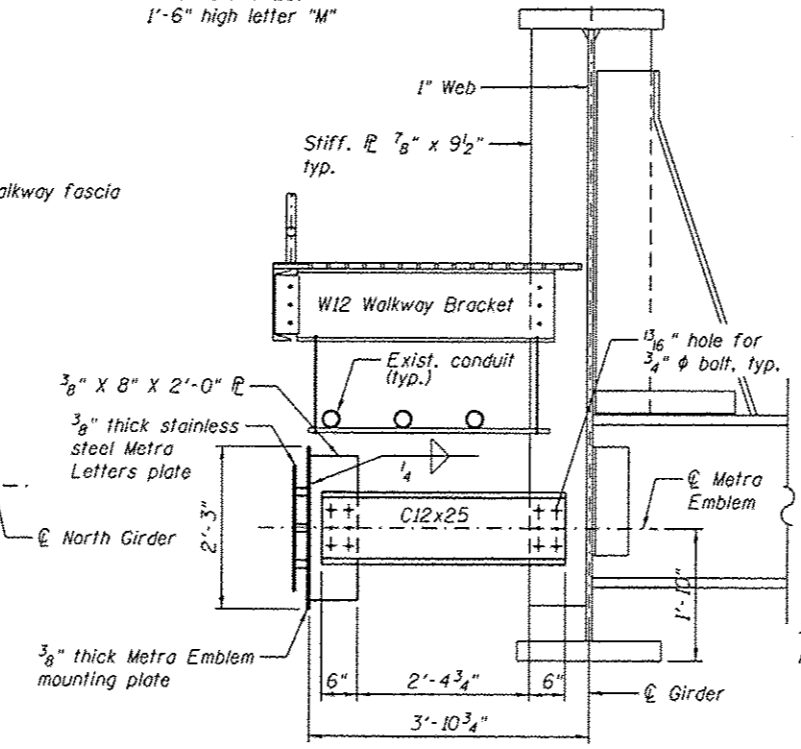


Arsalan M. Khan
 ARSALAN M. KHAN, S.E.
 LICENSE NO.: 081-006258
 EXPIRES: NOVEMBER 30, 2014
 DATE: 03-13-2013

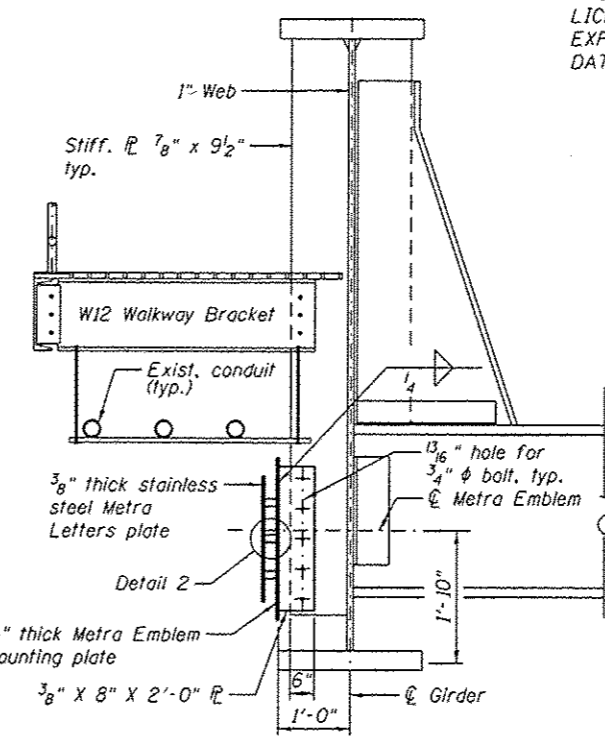
RAILROAD EMBLEM
 (1 REQUIRED)
 1'-6" high letter "M"



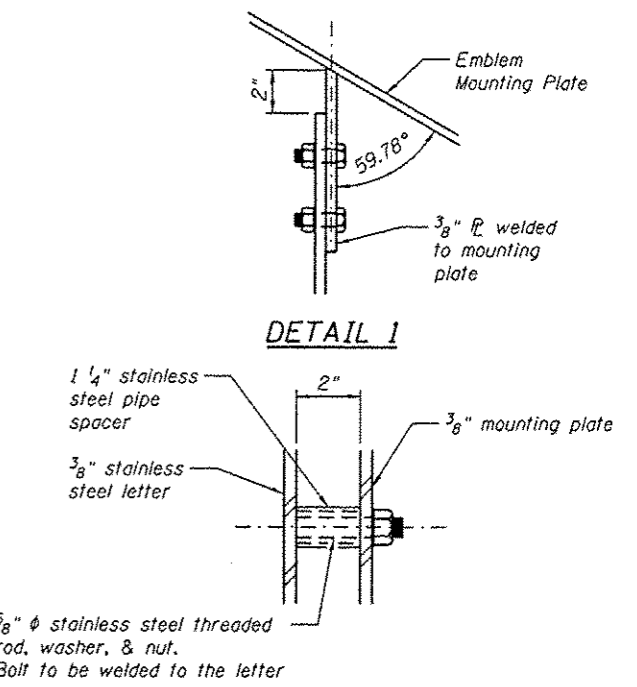
PLAN OF RAILROAD EMBLEM MOUNTING DETAIL



SECTION A-A



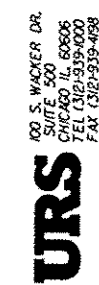
SECTION B-B



DETAIL 1

DETAIL 2

07 315-2013



FILE NAME : 0166201-60M62-001-det1.dgn
 USER NAME : Kyle.Pearl
 DESIGNED - KJZ
 CHECKED - DEM
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 DRAWN - KJZ
 PLOT DATE = 3/15/2013
 CHECKED - DEM
 REVISED -

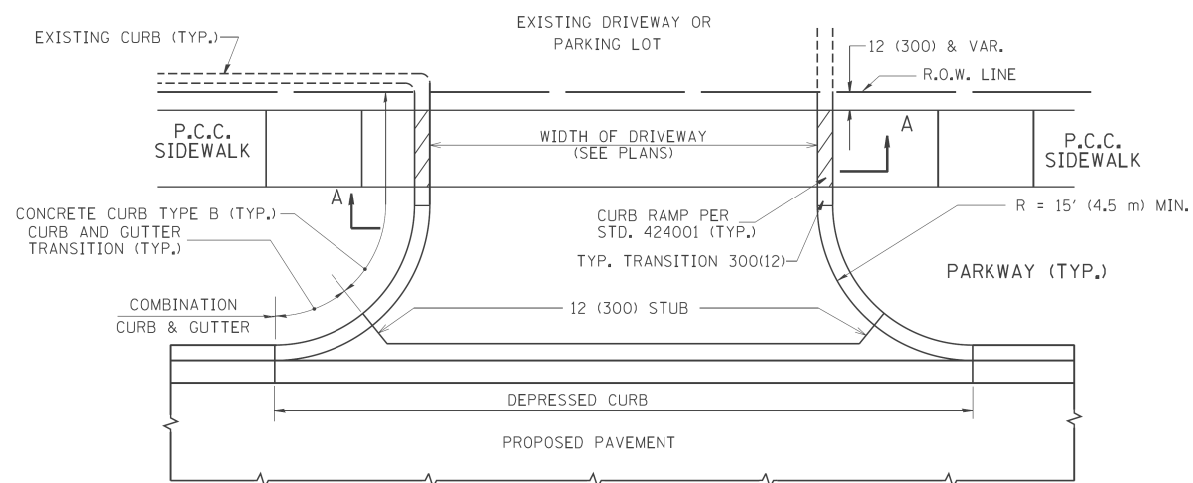
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

RAILROAD EMBLEM MOUNTING DETAILS
 SN: 016-6201

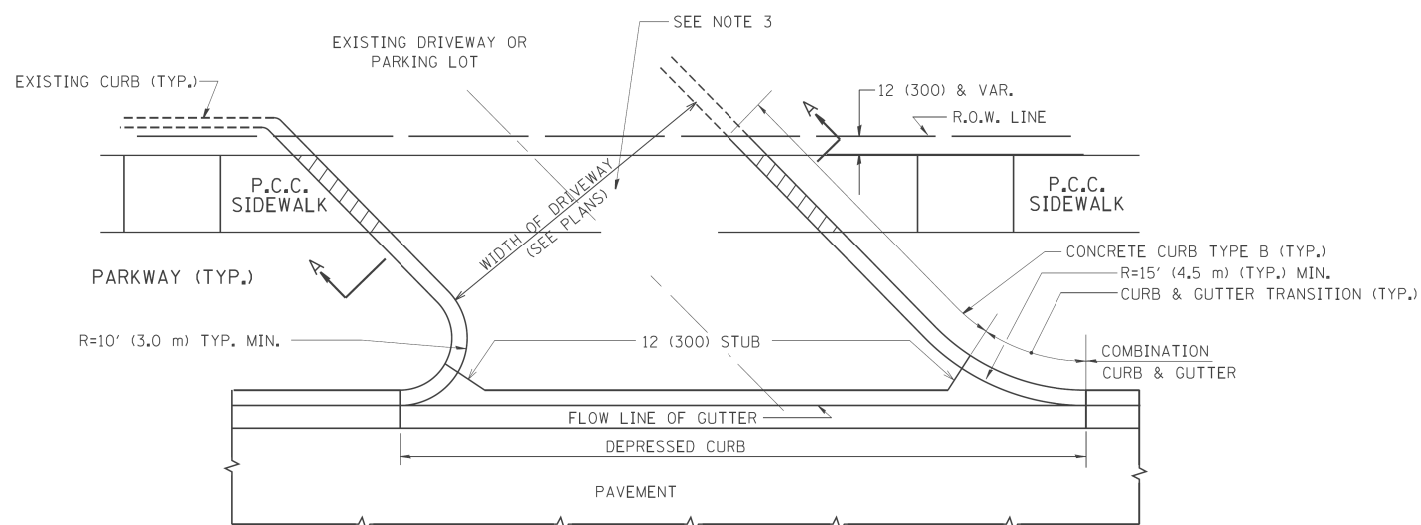
SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	178	476

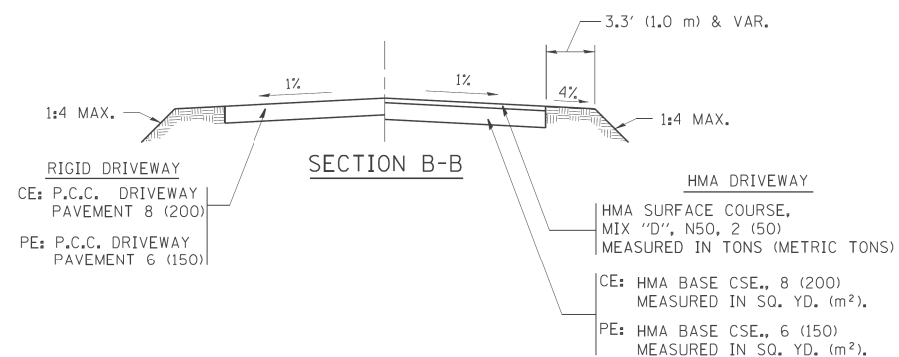
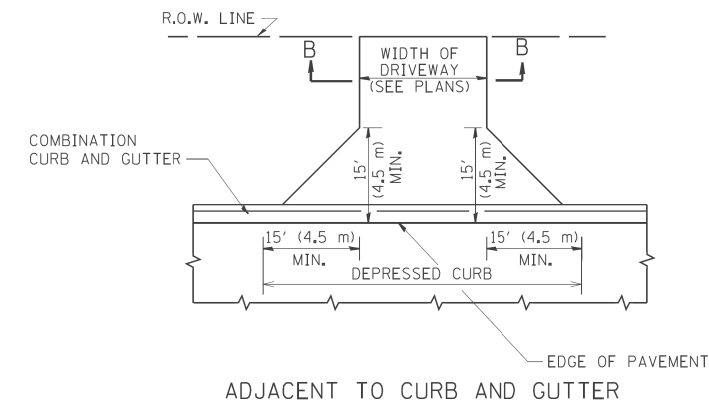
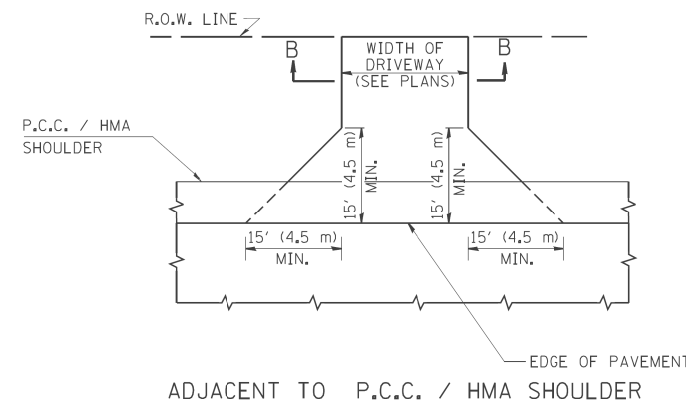
CONTRACT NO. 60M62
 ILLINOIS FED. AID PROJECT



WITH CONCRETE CURB, TYPE B



WITH CONCRETE CURB, TYPE B



GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

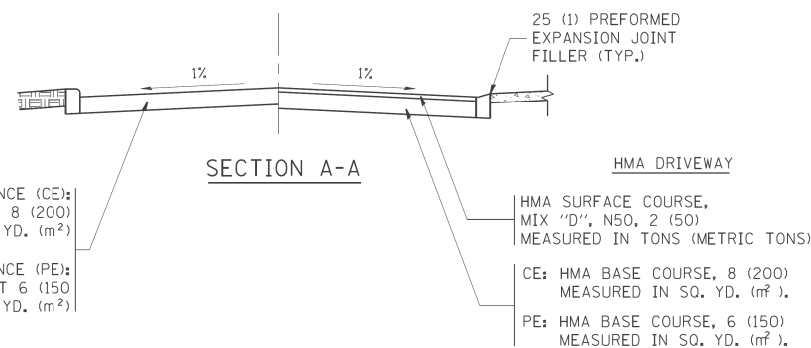
COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.



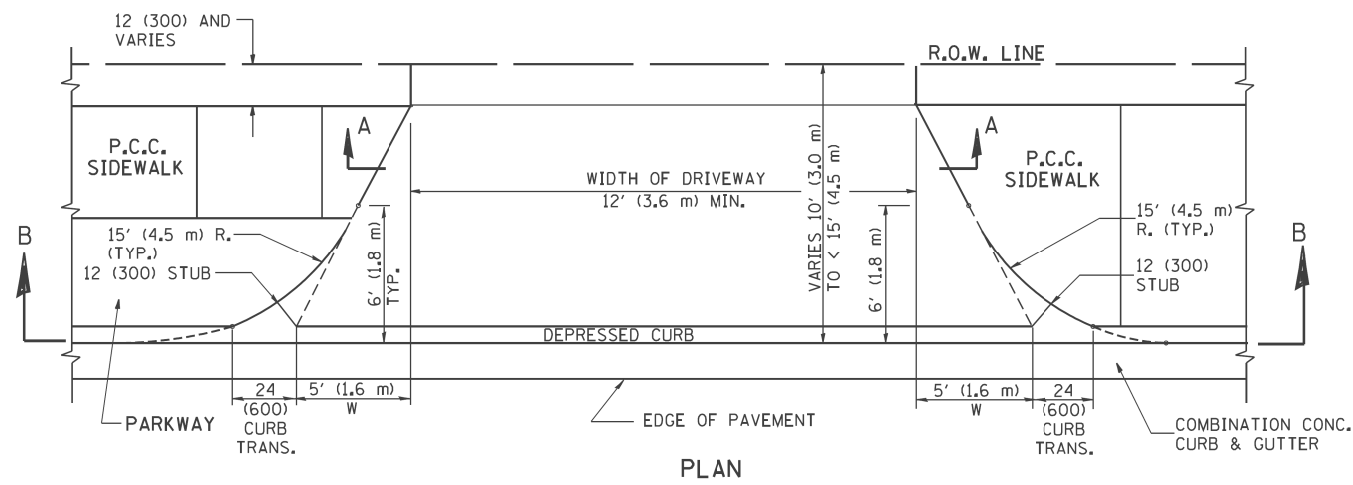
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		CHECKED -	REVISED - R. BORO 06-11-08
		DATE - 11-04-95	REVISED - R. BORO 09-06-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

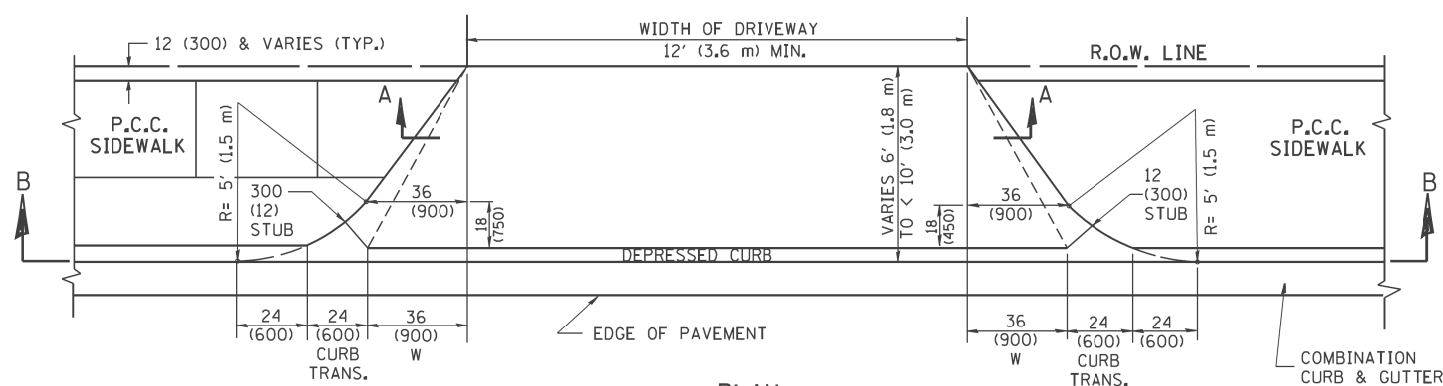
DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W.
AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

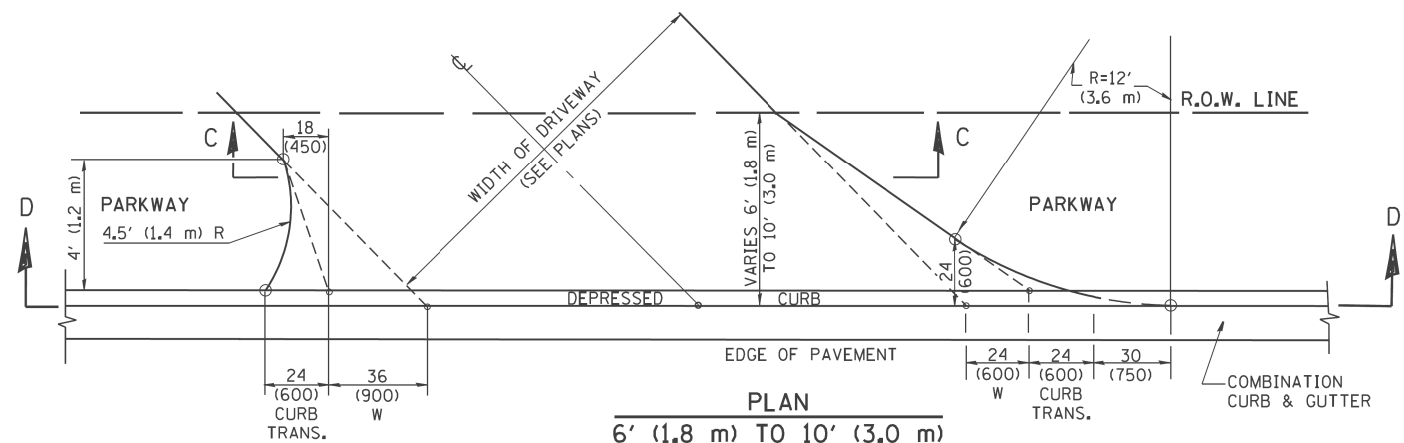
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330	103R-5	COOK	778	478
BD0156-07 (BD-01)			CONTRACT NO. 60M62	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



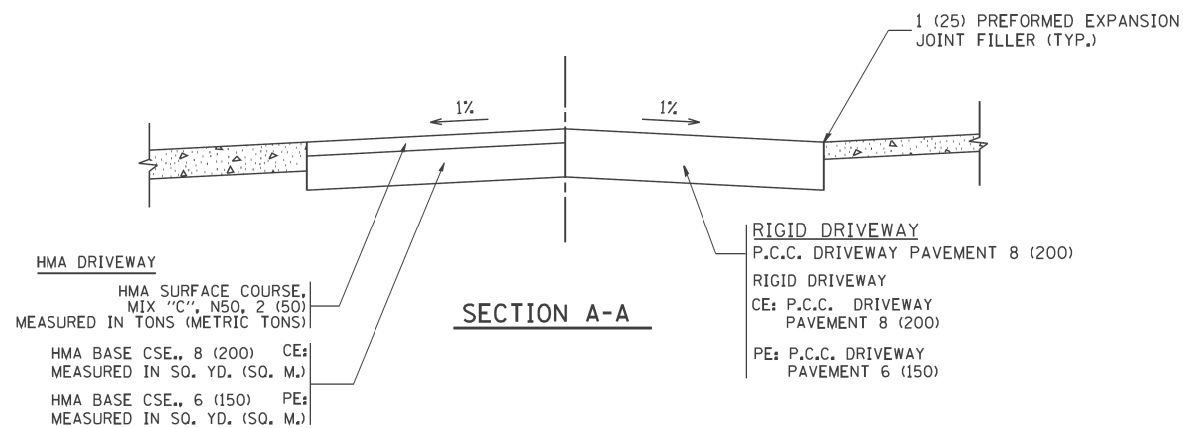
PLAN
10' (3.0 m) TO < 15' (4.5 m)



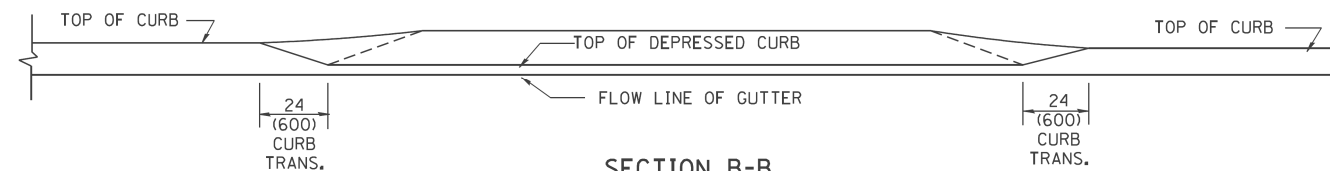
PLAN
6' (1.8 m) TO < 10' (3.0 m)



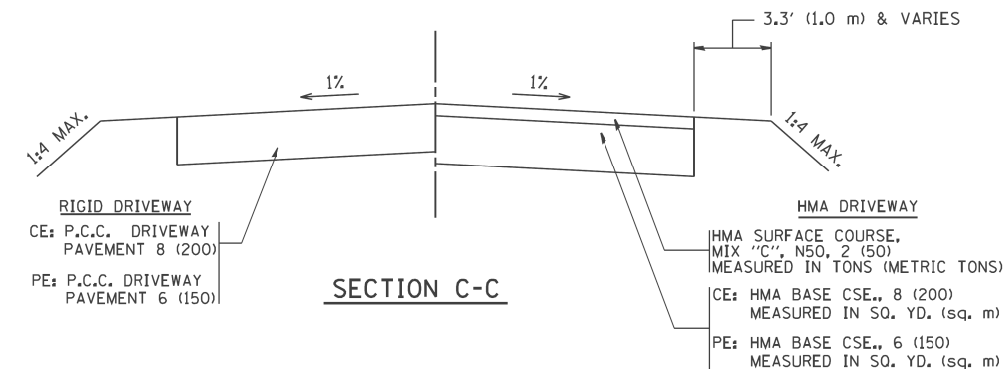
PLAN
6' (1.8 m) TO 10' (3.0 m)



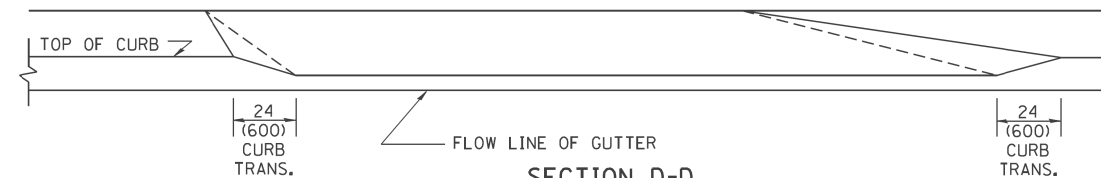
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

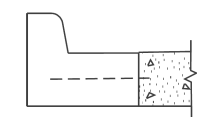
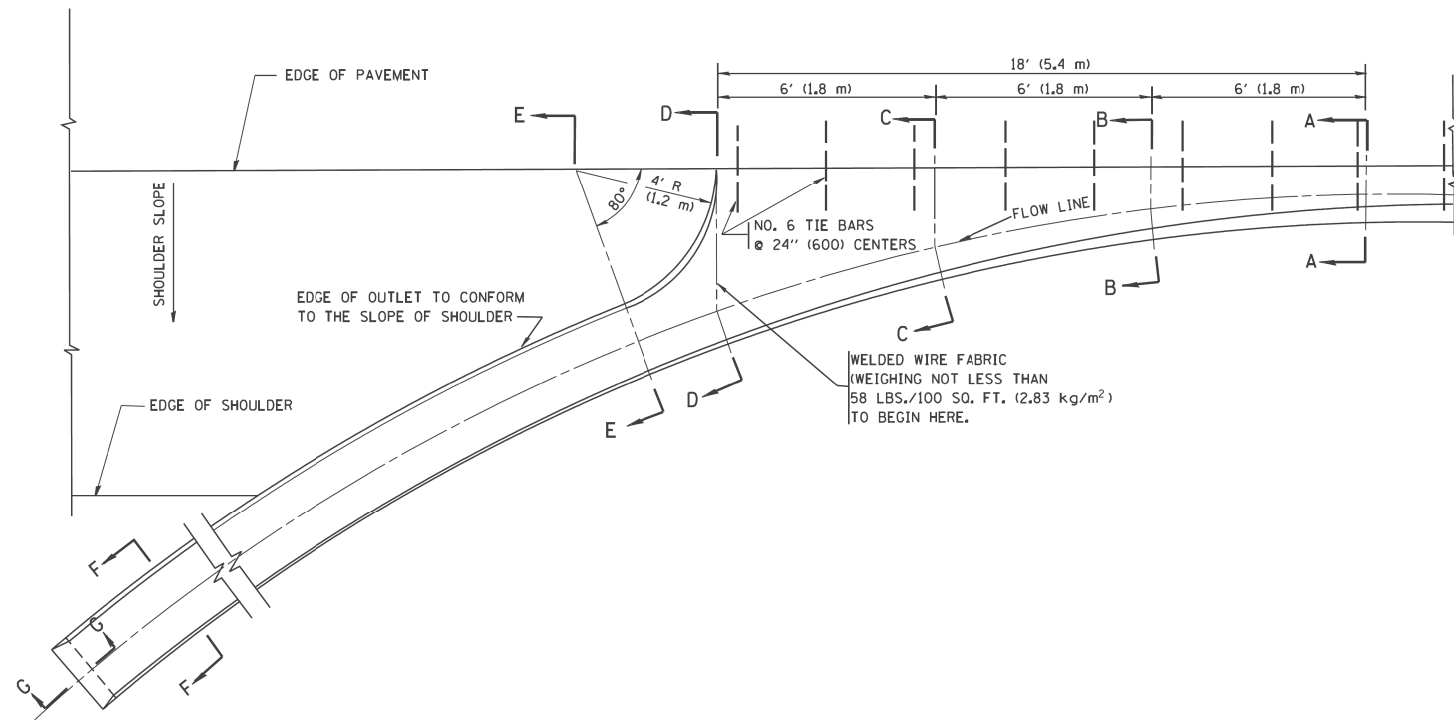
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

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		DRAWN -	REVISED - M. GOMEZ 04-05-01
	PLOT SCALE = 50,0000' / IN.	CHECKED -	REVISED - P. LOFLEUR 04-15-03
	PLOT DATE = 1/4/2008	DATE - 11-06-95	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

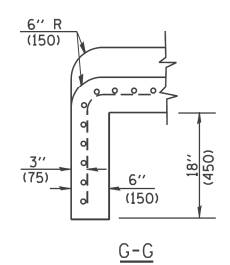
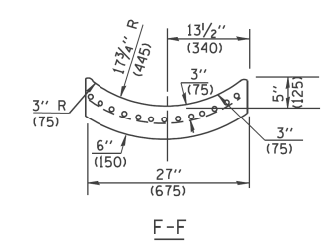
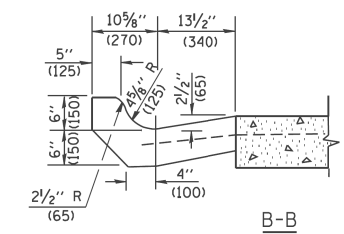
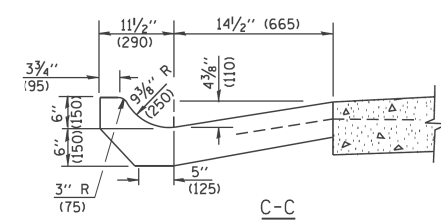
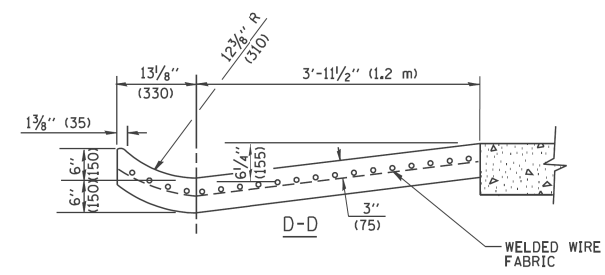
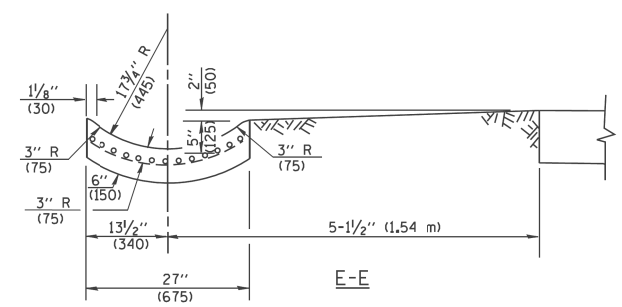
DRIVEWAY DETAILS	
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	479
BD400-02 (BD-02)			CONTRACT NO. 60M62	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



A-A *

* DIMENSIONS OF THE CURB & GUTTER AT SECTION A-A ARE SHOWN ON STATE STANDARD 606001. FOR DETAILS OF OUTLET FOR CONCRETE CURB & GUTTER, TYPE B-6.24 (B-15.60) SEE STATE STANDARD 606006.



GENERAL NOTES

GUTTER OUTLET SHALL BE TIED TO THE PAVEMENT IN ACCORDANCE WITH DETAILS FOR LONGITUDINAL CONSTRUCTION JOINT SHOWN ON STANDARD 420001.

TIE BARS SHALL BE NO. 20 (NO.6) AT 24\"/>

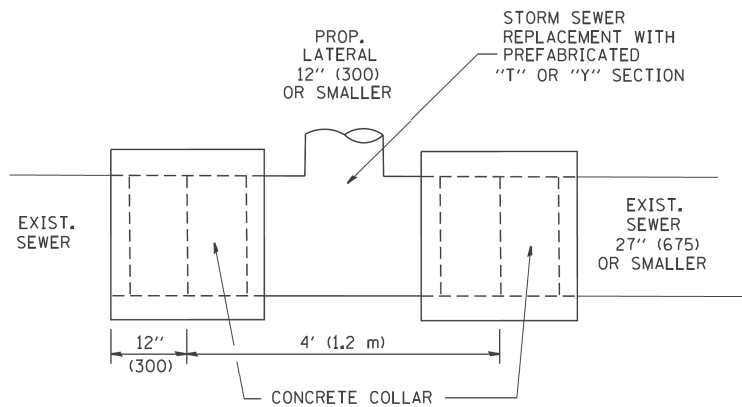
IF THE AVERAGE GRADE OF PAVEMENT FOR THE DISTANCE FROM SECTION A-A TO D-D EXCEEDS 2%, THIS DISTANCE SHALL BE INCREASED 6' (1.8 m) FOR EACH 1% INCREASE IN GRADE.

QUANTITIES

FOR SECTION A-A TO E-E AND CURTAIN WALL =
 1.25 CU. YDS. (0.96 m³) CLASS SI CONCRETE (OUTLET) FOR 9\"/>

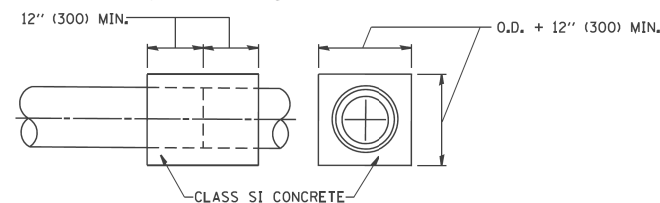
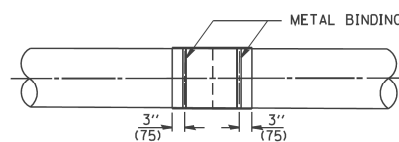
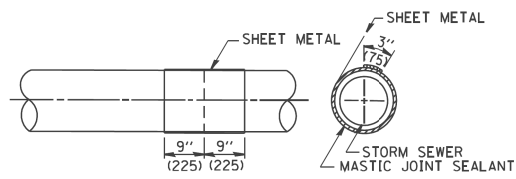
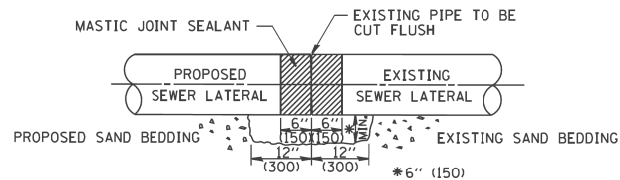
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\dststd\22x34\bd03.dgn	USER NAME = geglano	DESIGNED - M. DE YONG	REVISED - R. SHAH 09-09-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OUTLET FOR CONCRETE CURB AND GUTTER			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50,0000 ' / IN.	CHECKED -	REVISED - R. SHAH 10-25-94					330	103R-5	COOK	778	480
PLOT DATE = 1/4/2008	DATE - 08-04-86	REVISED - E. GOMEZ 12-21-00	REVISED -	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	BD600-01 (BD-03) CONTRACT NO. 60M62 <small>FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT</small>				



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER

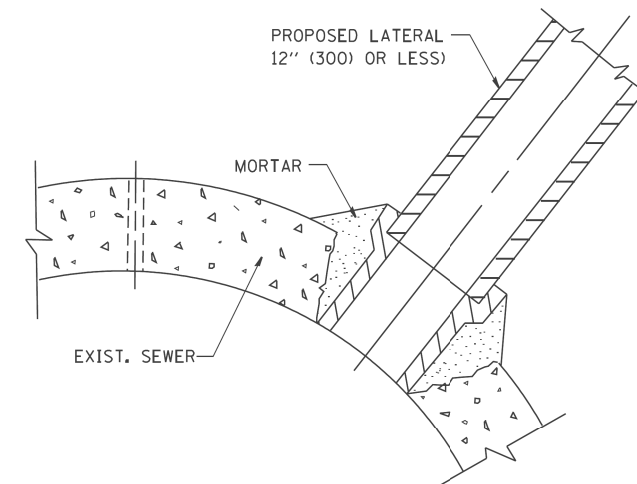


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

- CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
- APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
- BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
- WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
- LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

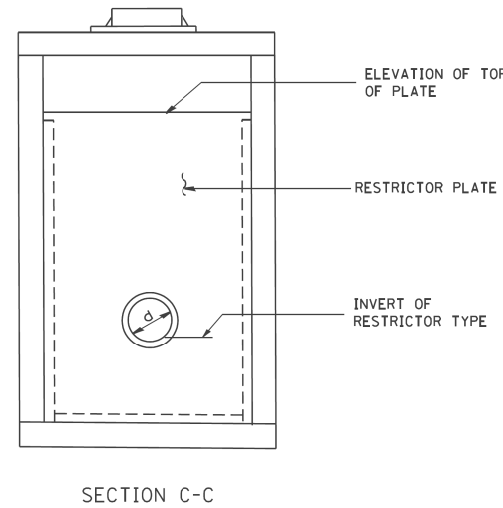
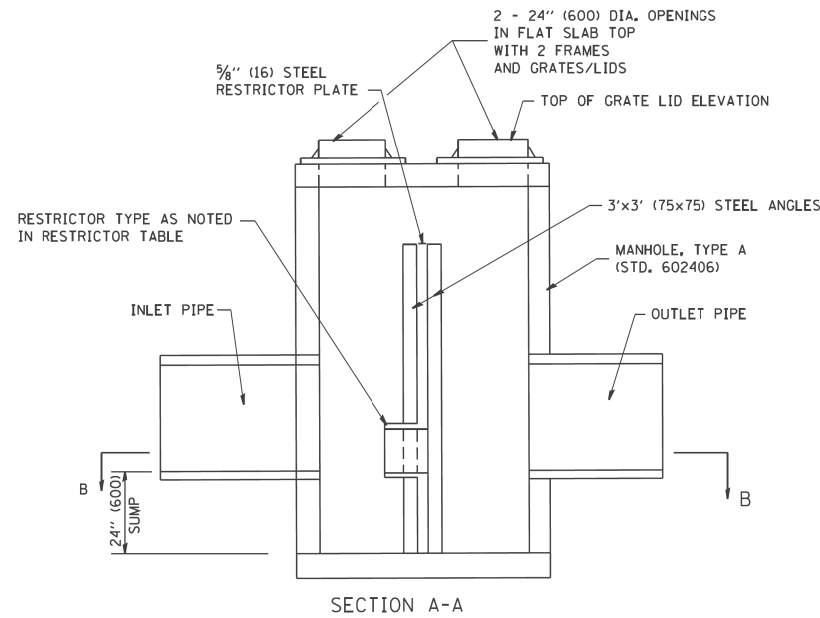
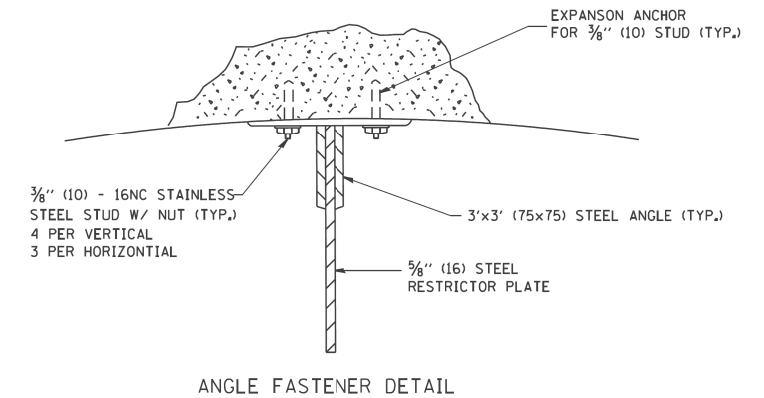
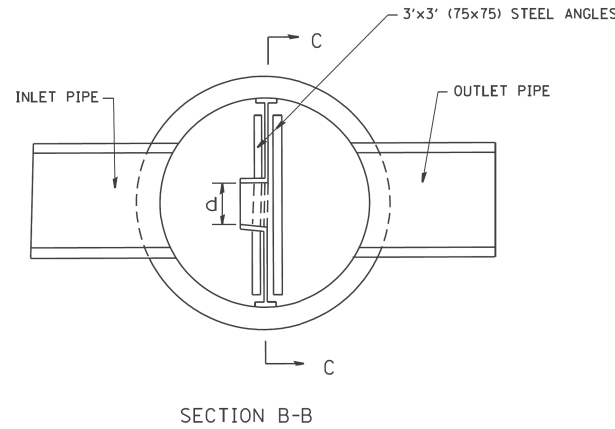
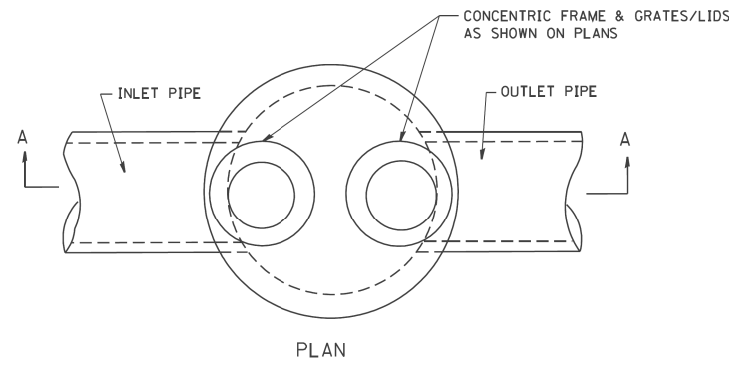
REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

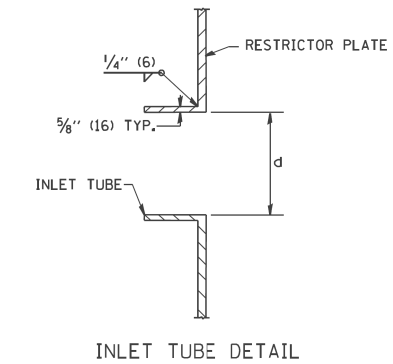
TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED -	REVISED -
D160M62-SHT-DISTANDARD-BD07.dgn		DRAWN -	REVISED -
	PLOT SCALE = 48.000000' / in.	CHECKED -	REVISED -
SHT.PLAN	PLOT DATE = 3/15/2013	DATE - 03/13/13	REVISED -

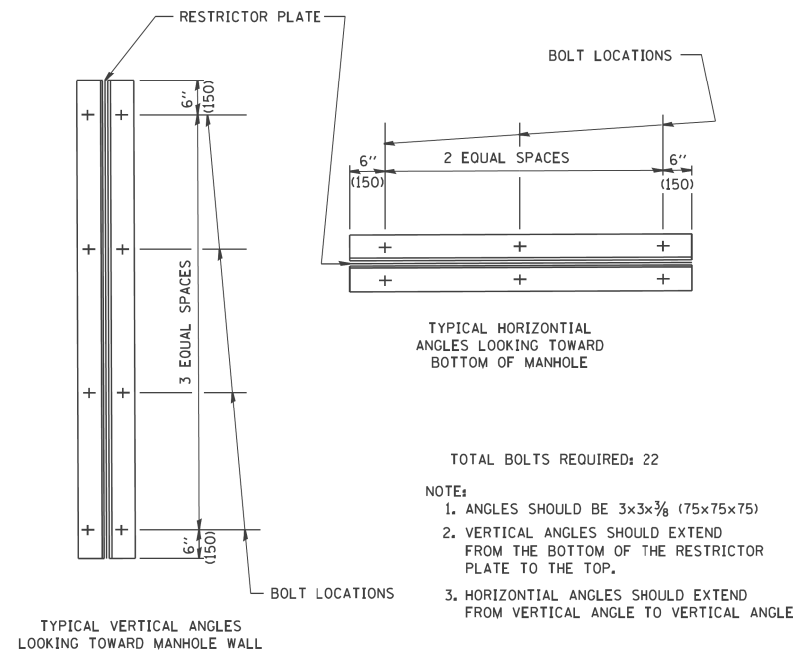
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	481
CONTRACT NO. 60M62			ILLINOIS FED. AID PROJECT	



- NOTES:
1. ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
 2. ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.
 3. BASIS OF PAYMENT: "MANHOLES, TYPE A, 6 FT. (1.8 m)-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE" EACH



MANHOLE, TYPE A WITH 2 - TYPE 1 FRAMES, CLOSED LID, RESTRICTOR PLATE	MH DIA (FT)	RIM ELEVATION (FT)	ELEVATION OF TOP OF PLATE (FT)	RESTRICTOR INVERT (FT)	INSIDE RESTRICTOR DIAMETER (INCH)	RESTRICTOR TYPE
926 STA. 295+00.0 R	8	679.00	677.00	672.26	34.2	3
948 STA. 297+26.0 R	7	680.76	678.70	674.00	12.5	3
808 STA. 306+25.0 R	6	689.03	685.00	680.80	7.8	3
620 STA. 309+60.0 R	5	688.68	686.00	676.00	13.7	3
522 STA. 332+74.0 R	6	709.13	705.00	692.37	15.2	3
412 STA. 344+54.0 R	6	718.50	716.00	713.50	9.0	3
255 STA. 361+01.0 R	6	706.02	704.00	695.43	21.5	3
121 STA. 378+80.0 R	4	679.83	677.50	675.25	17.5	3



RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENTRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENTRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: 1/2 TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA.	LENGTH: 2-1/2 DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

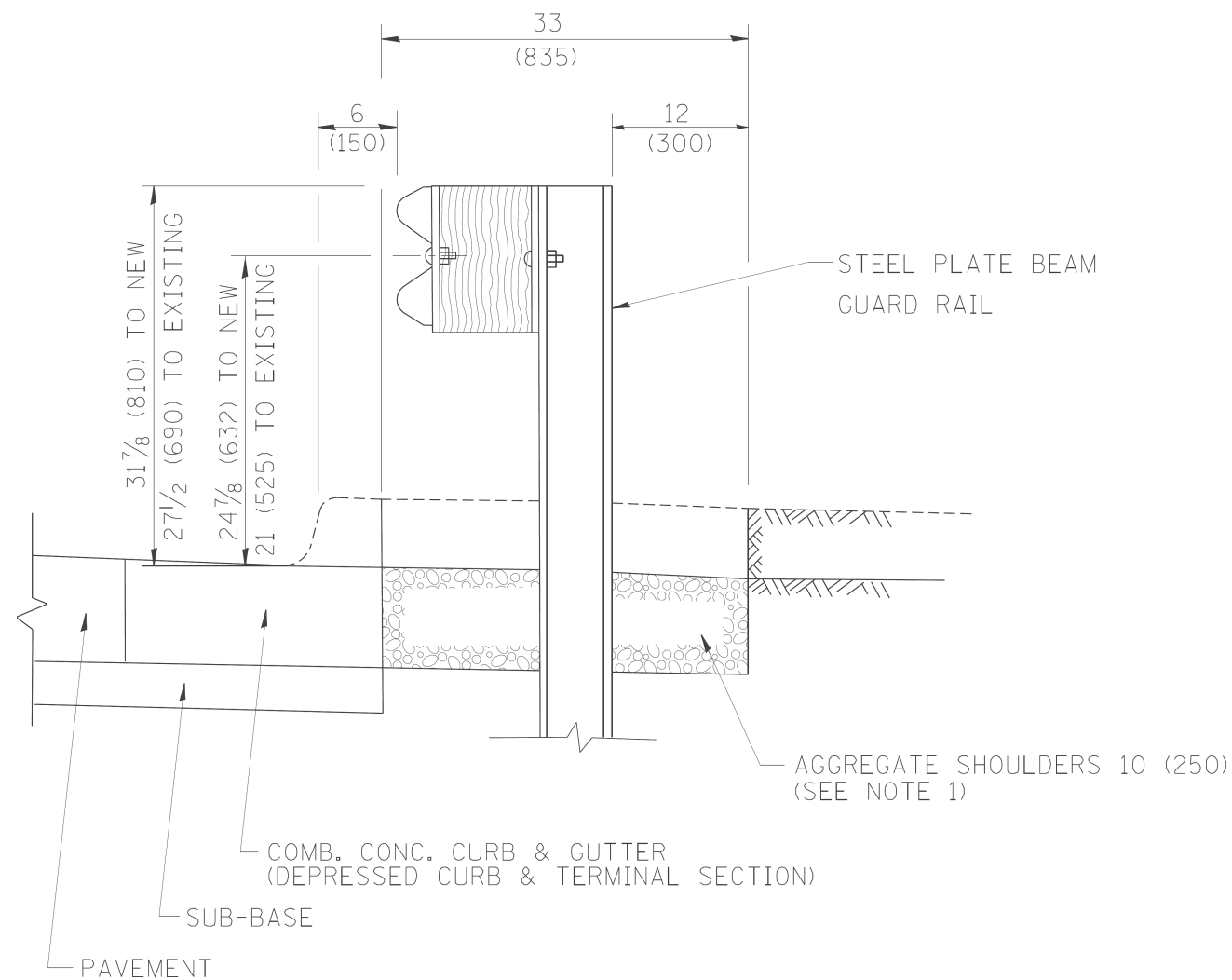
FILE NAME = W:\dststd\22x34\bd12.dgn	USER NAME = gaglanob	DESIGNED - R. SHAH	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - E. GOMEZ 08-28-00
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - M. GOMEZ 01-08-01
	PLOT DATE = 1/4/2008	DATE - 09-09-94	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MANHOLE WITH
RESTRICTOR PLATE

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

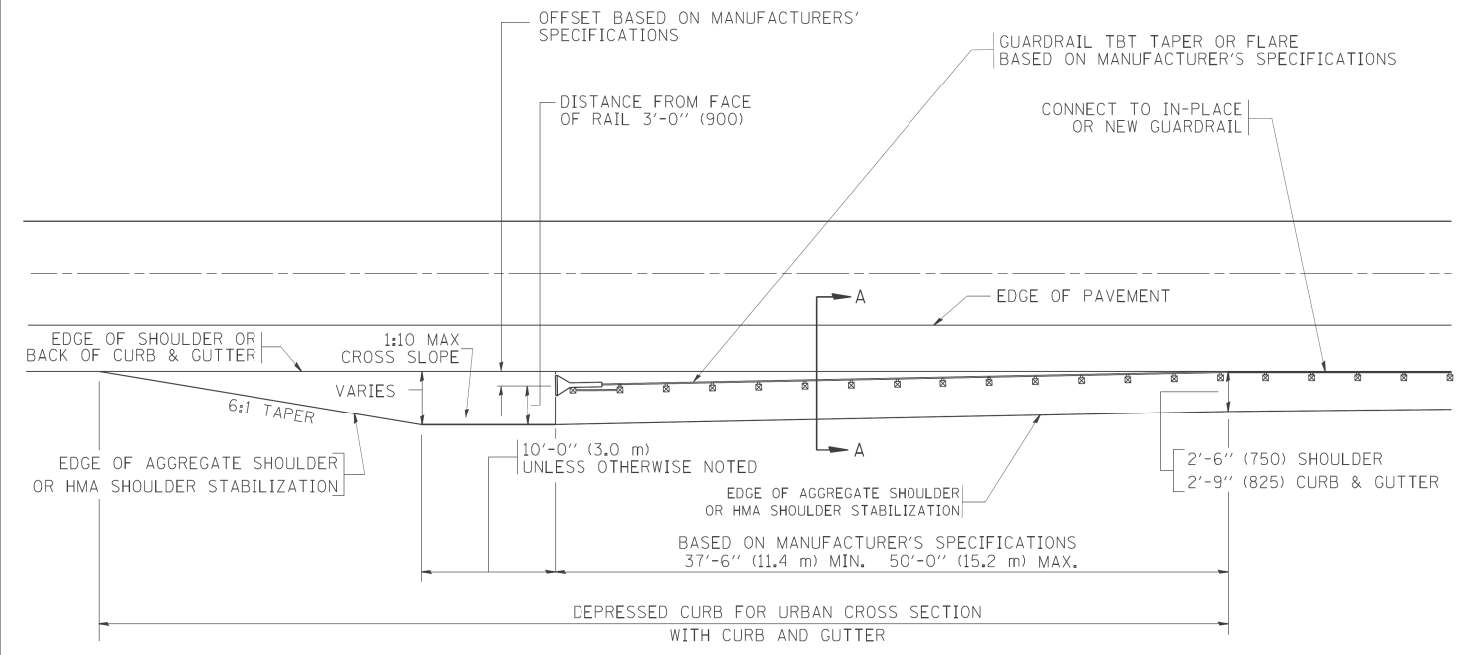
F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 482
BD600-04 (BD-12)		CONTRACT NO. 60M62		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
 2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
 3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER
 [FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



DEPRESSED CURB AND GUTTER AND SHOULDER TREATMENT AT TBT TY. 1 SPL.

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL
 ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

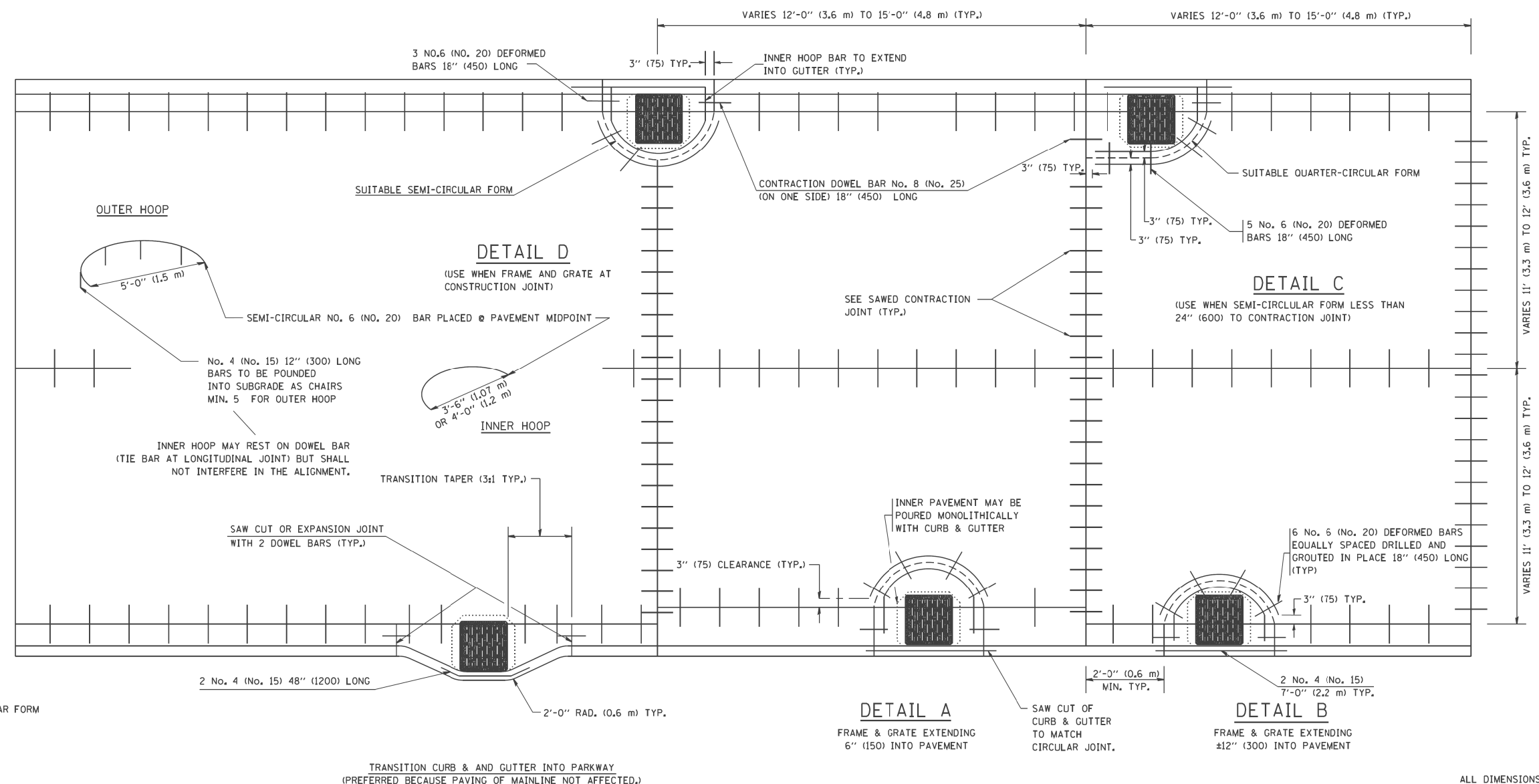
FILE NAME =	USER NAME = drivakosgn	DESIGNED - M. DE YONG	REVISED - E. GOMEZ 08-28-00	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS FOR DEPRESSED CURB & GUTTER AND SHOULDER TREATMENT AT TBT TY 1 SPL.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pwork\PIWID00\DRIVAKOSGN\d0108315\bd34.dgn	DRAWN -	REVISED - R. BORO 01-01-07	330			103R-5	COOK	778	483	
PLOT SCALE = 49.9999' / IN.	CHECKED -	REVISED - R. BORO 12-08-2008	BD600-10 (BD 34)			CONTRACT NO. 60M62				
PLOT DATE = 9/21/2009	DATE - 09-22-90	REVISED - R. BORO 09-14-2009	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS		STA. TO STA.		

FRAME EXTENSION INTO PAVEMENT	INNER HOOP REINFORCEMENT DIAMETER	SEMI CIRCULAR FORM DIAMETER	OUTER HOOP REINFORCEMENT DIAMETER
UP TO 8" (200)	3'-6" (1.1 m)	4'-0" (1.2 m)	5'-0" (1.5 m)
> 8" (200) TO 14" (360)	4'-0" (1.2 m)	4'-6" (1.4 m)	5'-0" (1.5 m)

DESIGNER NOTE:
THIS DETAIL IS TO BE USED WHEN THE GUTTER FLAG IS LESS THAN 24"

NOTES :

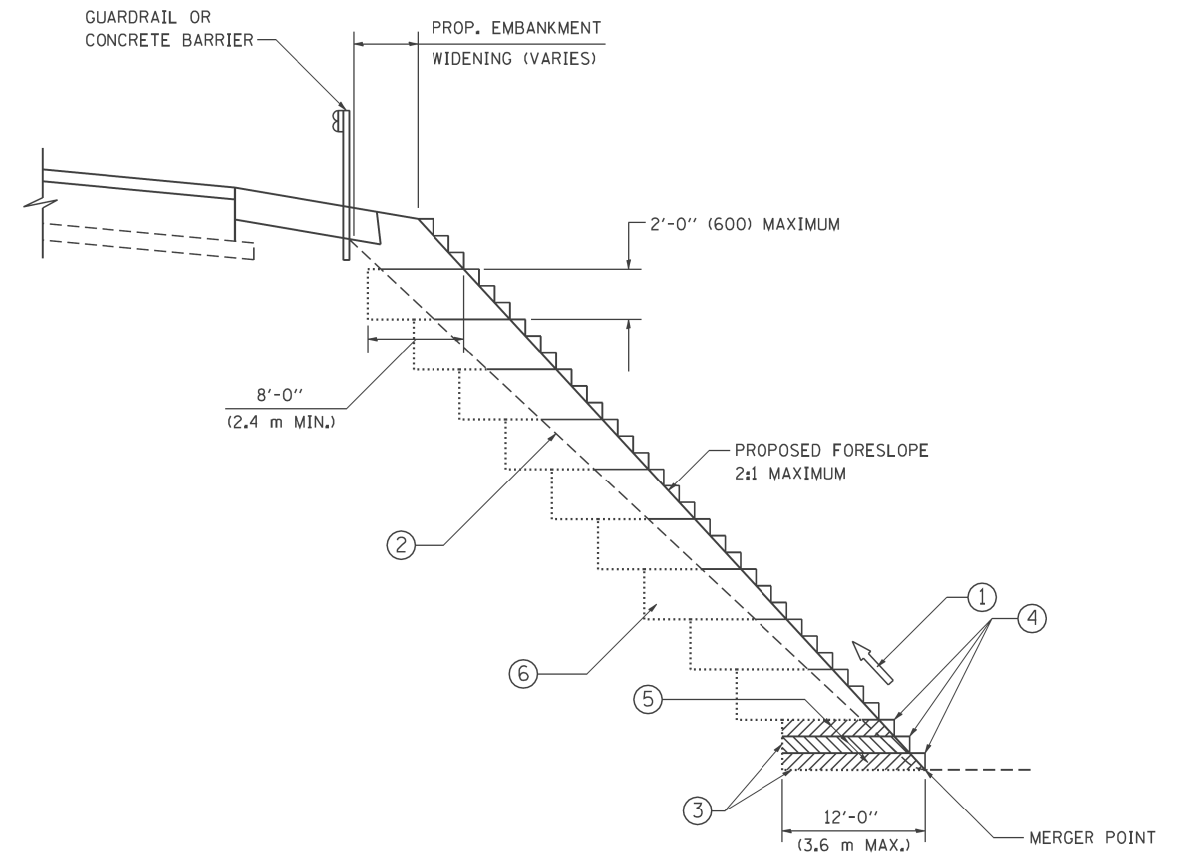
1. THE ROUNDOUT AND ADDED REINFORCEMENT WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE PAVEMENT.
2. TRANSVERSE JOINTS MAY BE MOVED TO ACCOMMODATE ROUNDOUT, EDGE OF CIRCULAR JOINT SHALL BE MINIMUM 12" (300) FROM TRANSVERSE JOINT. RELOCATED TRANSVERSE JOINT SHALL BE CONTINUOUS FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.
3. SEMI-CIRCULAR FORM SHALL BE REMOVED PRIOR TO DRILL AND GROUT OF TIE BARS.
4. ALL REINFORCED BARS SHALL BE EPOXY COATED.
5. DRILL AND GROUT IS PREFERRED, HOWEVER TIE BARS CAN BE POURED IN PLACE IF CLEARANCE IS PROVIDED TO OUTER EDGE OF FRAME. MINIMUM 2" (50) CLEARANCE.
6. WOOD SHIMS SHALL BE USED TO ADJUST ALL FRAMES. AFTER ADJUSTING MORTAR HAS CURED, THE WOOD SHIMS SHALL BE REMOVED AND THE VOIDS UNDER THE FRAMES FILLED WITH NON SHRINK GROUT.
7. HOOP REINFORCEMENT SHALL BE ONE PIECE CONSTRUCTION.
8. CIRCULAR FRAMES AND GRATES MAY BE SUBSTITUTED.
9. CURB DOWELS MUST BE PLACED LEVEL & TRUE TO ALLOW CONTRACTION MOVEMENT.



LEGEND:
 CASTING
 - - - - - SUITABLE SEMI-CIRCULAR FORM

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

FILE NAME = W:\dststd\22x34\bd48.dgn	USER NAME = geglano	DESIGNED - A. ABBAS	REVISED - T. MATOUSEK 08-28-00	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PCC PAVEMENT ROUNDOUTS AT CURB AND GUTTER		F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 484
PLOT SCALE = 50,0000' / IN.	CHECKED - A. ABBAS	REVISED - T. MATOUSEK 10-02-00	REVISED - T. MATOUSEK 04-25-02				BD-48		CONTRACT NO. 60M62		
PLOT DATE = 1/4/2008	DATE - 01-04-99	REVISED - P. LAFLEUR 08-27-02	SCALE: NONE				SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\bd51.dgn	USER NAME = gegl1enobt	DESIGNED -	REVISED -
		DRAWN - CADD	REVISED -
	PLOT SCALE = 50.0000' / IN.	CHECKED - S.E.B.	REVISED -
	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

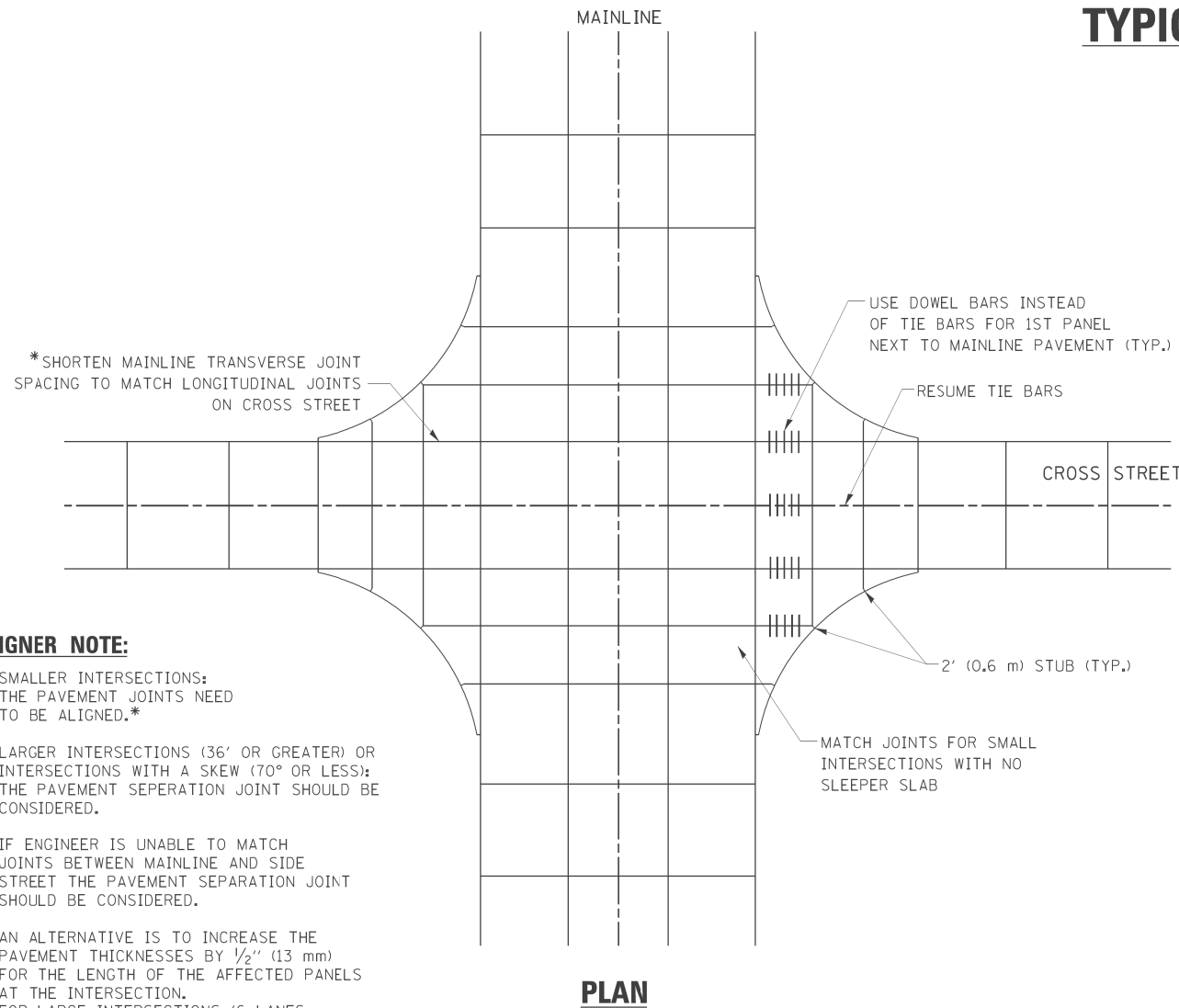
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BENCHING DETAIL FOR EMBANKMENT WIDENING			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	485
BD-51			CONTRACT NO. 60M62	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

TYPICAL APPLICATION

THE USE OF CROSS STREET PAVEMENT SEPARATION JOINTS FOR SKEWED OR LARGE INTERSECTIONS WHERE JOINTS MAY NOT MATCH

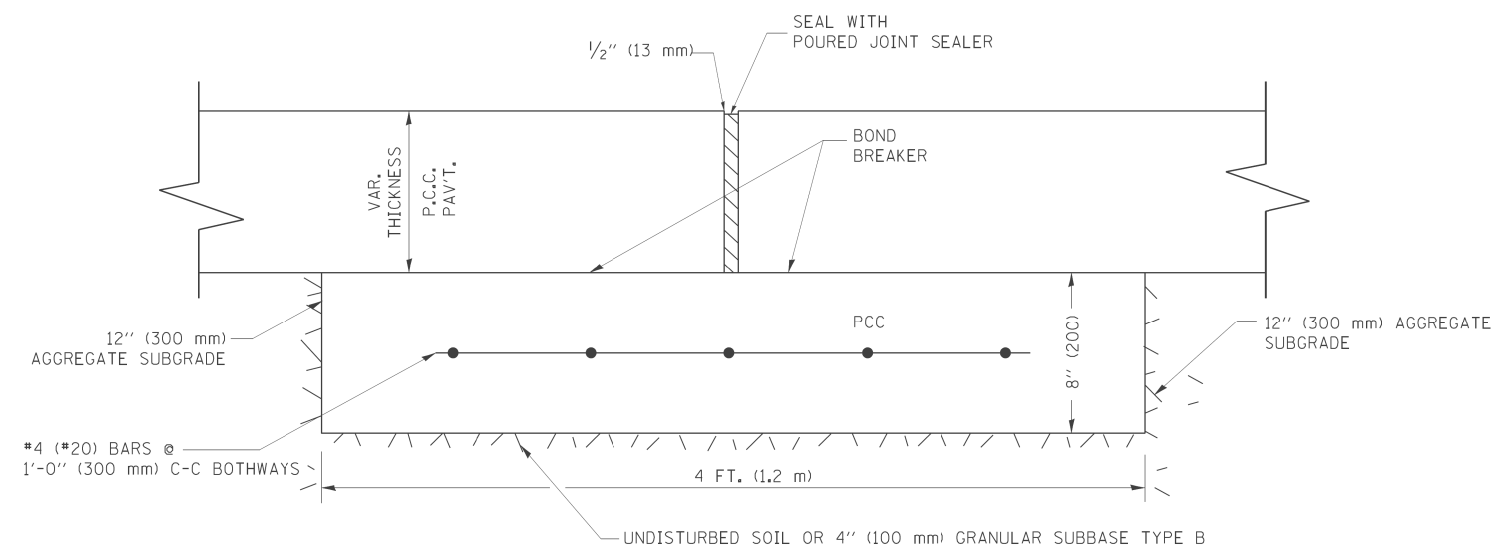
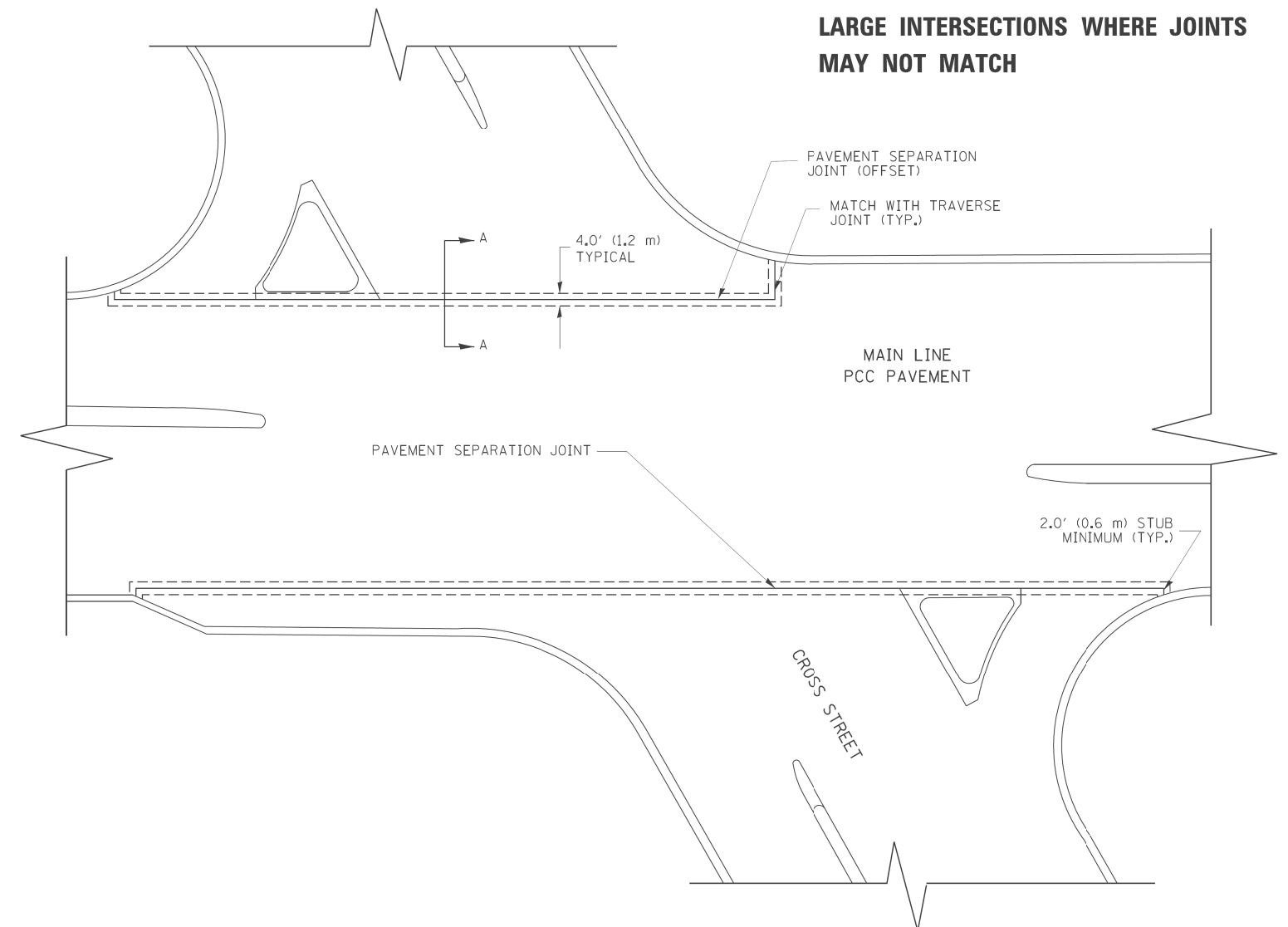


DESIGNER NOTE:

1. SMALLER INTERSECTIONS: THE PAVEMENT JOINTS NEED TO BE ALIGNED.*
2. LARGER INTERSECTIONS (36' OR GREATER) OR INTERSECTIONS WITH A SKEW (70° OR LESS): THE PAVEMENT SEPERATION JOINT SHOULD BE CONSIDERED.
3. IF ENGINEER IS UNABLE TO MATCH JOINTS BETWEEN MAINLINE AND SIDE STREET THE PAVEMENT SEPARATION JOINT SHOULD BE CONSIDERED.
4. AN ALTERNATIVE IS TO INCREASE THE PAVEMENT THICKNESSES BY 1/2" (13 mm) FOR THE LENGTH OF THE AFFECTED PANELS AT THE INTERSECTION. FOR LARGE INTERSECTIONS (6 LANES OR MORE) WHERE JOINTS CAN BE MATCHED, USE #8 (25) DOWEL BARS INSTEAD OF #8 (25) TIE BARS AT EDGE OF MAINLINE PAVEMENT WHEN NO PAVEMENT SEPARATION JOINTS USED.

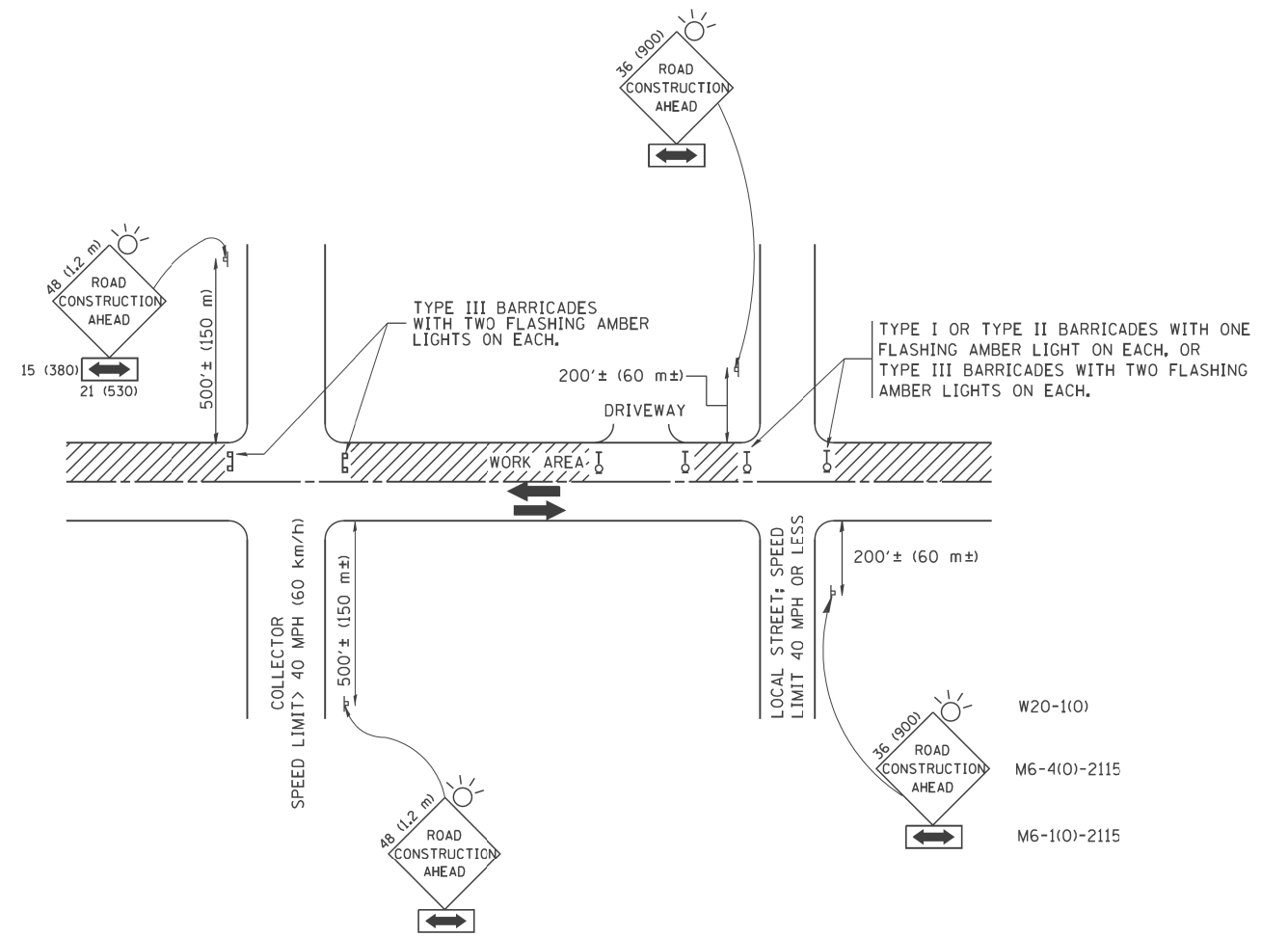
NOTE:

1. JOINT FILLER SHALL CONSIST OF A SHEET OF 1/2" (13 mm) BITUMINOUS PREFORMED FIBER JOINT FILLER CONFORMING TO ARTICLE 1051.03 OF THE STANDARD SPECIFICATIONS.
2. THE JOINT SHALL BE SEALED WITH A HOT POUR JOINT SEALER CONFORMING TO ARTICLE 1050.02 OF THE STANDARD SPECIFICATIONS.
3. A SINGLE LAYER OF FELT ROOFING PAPER SHALL SERVE AS A BOND BREAKER.
4. JOINT SHALL CONTINUE THROUGH COMBINATION CURB & GUTTER OR PCC SHOULDER.
5. PAVEMENT SEPARATION JOINT IS TO BE PAID FOR AS "SLEEPER SLAB" AND IS TO BE MEASURED IN PLACE BY THE LINEAL FOOT.
6. BOND BREAKER AND 1/2" (13 mm) JOINT AND FILLER SHALL BE INCIDENTAL TO THE PAY ITEM "SLEEPER SLAB".



PROPOSED SECTION A-A

FILE NAME = bd52.dgn	USER NAME = 1eysa	DESIGNED - DRAWN -	REVISED - CADD 06-18-10 REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF PAVEMENT SEPARATION JOINT FOR JOINTED PCC PAVEMENTS AT INTERSECTIONS			F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 486
	PLOT SCALE = 49,9999' / IN.	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	BD52		CONTRACT NO. 60M62	
	PLOT DATE = 2/25/2011	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS**
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:**
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.**
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.**

All dimensions are in millimeters (inches) unless otherwise shown.

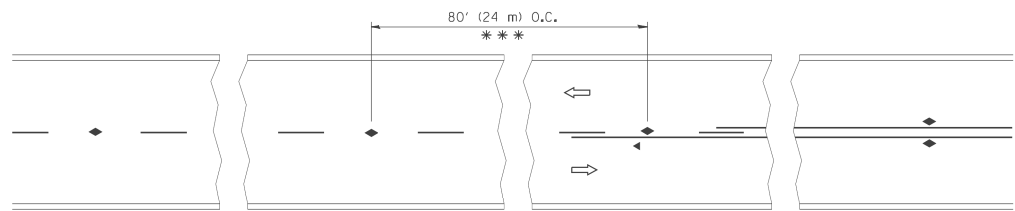
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		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

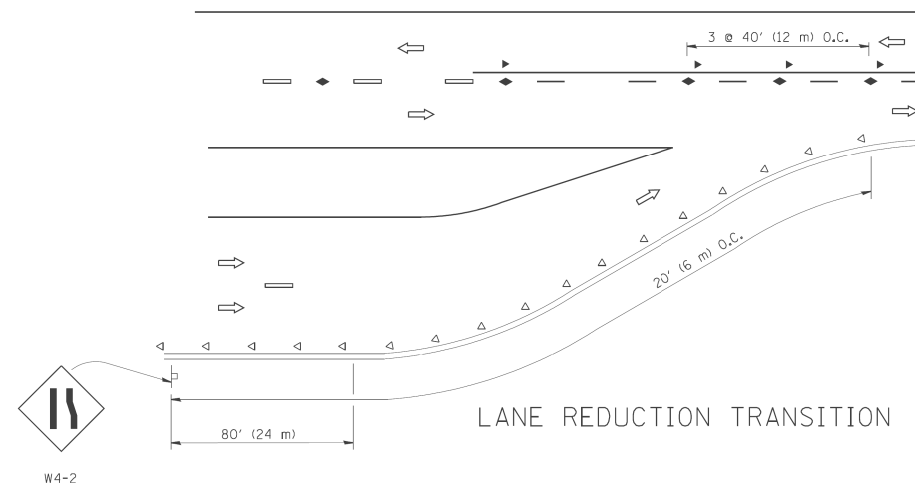
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	487
TC-10			CONTRACT NO. 60M62	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

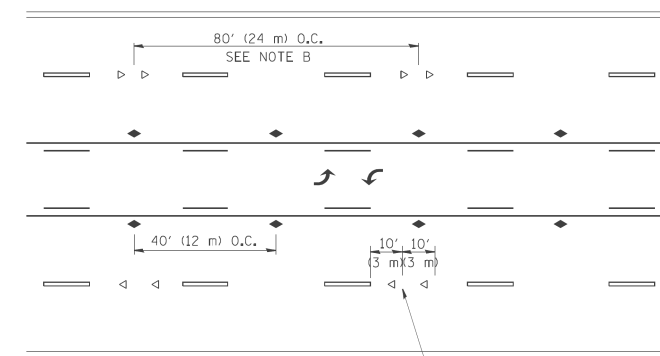


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

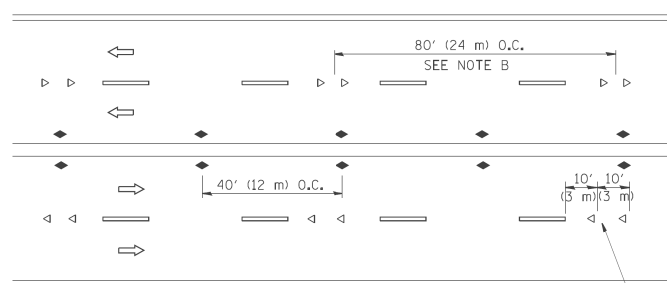
TWO-LANE/TWO-WAY



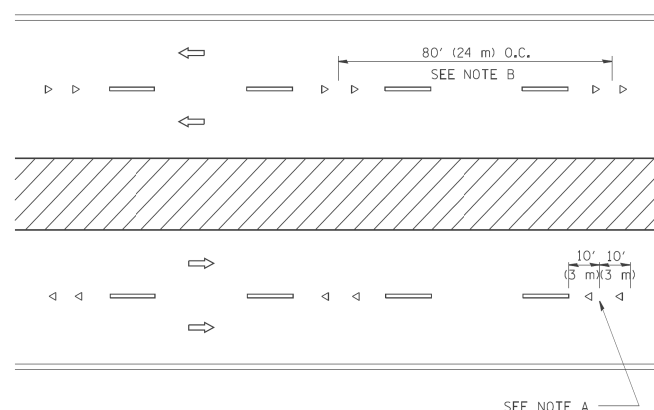
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

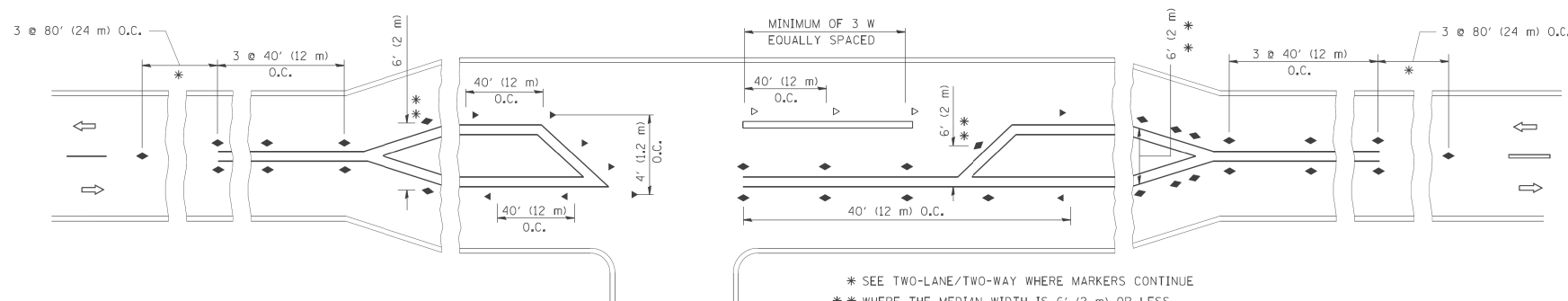
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.

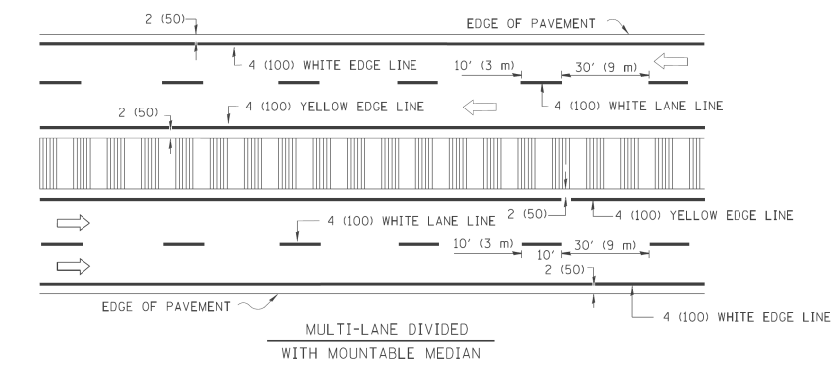
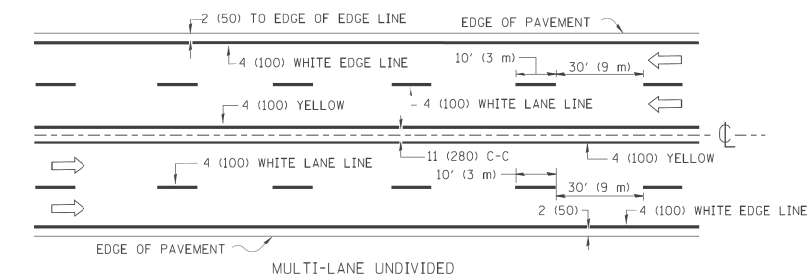
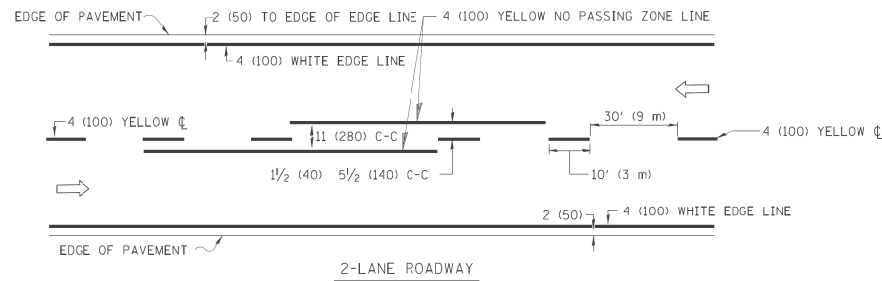
FILE NAME =	USER NAME = drivakosgn	DESIGNED -	REVISED - T. RAMMACHER 09-19-94
ei:\pwork\pwi\dot\drivakosgn\d0108315\tdg	ldgn	DRAWN -	REVISED - T. RAMMACHER 03-12-99
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00
	PLOT DATE = 9/9/2009	DATE -	REVISED - C. JUCIUS 09-09-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

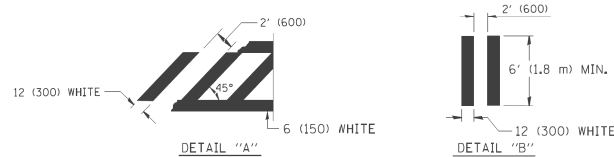
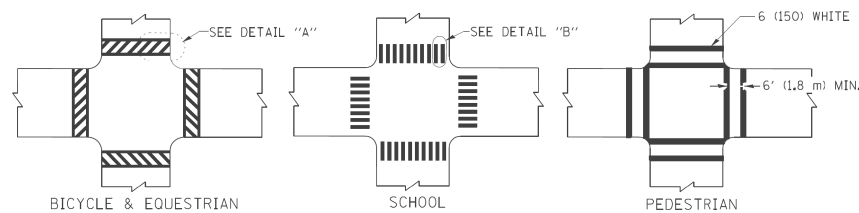
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-11			CONTRACT NO. 60M62	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

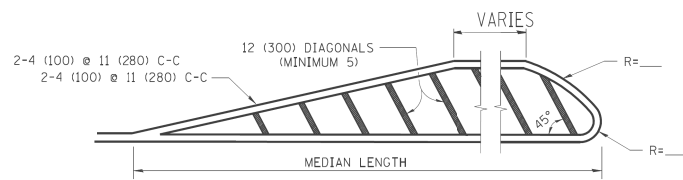
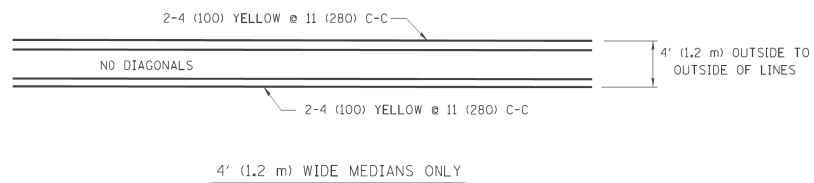


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

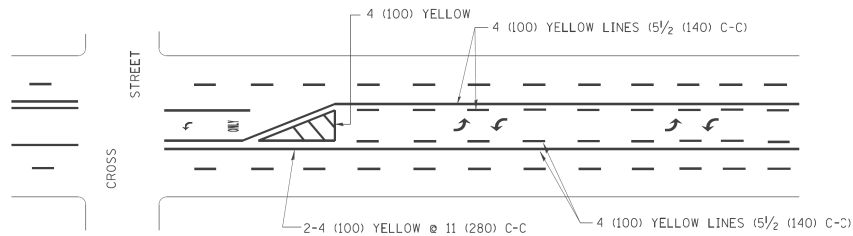


TYPICAL CROSSWALK MARKING

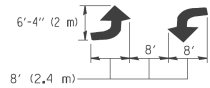


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

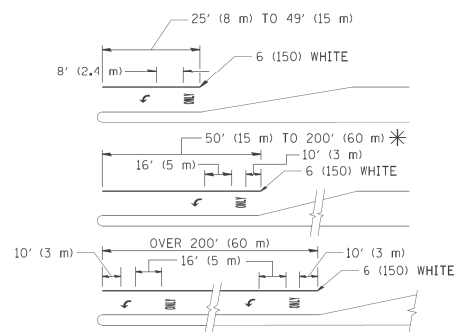


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

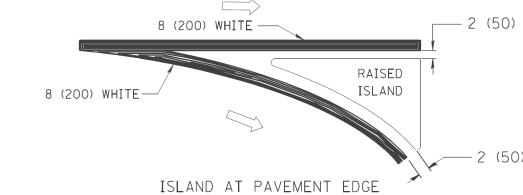
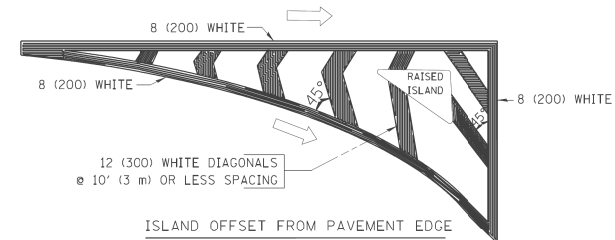


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	4 (100)	SOLID	YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES: FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15 (6' (1.8 m)) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

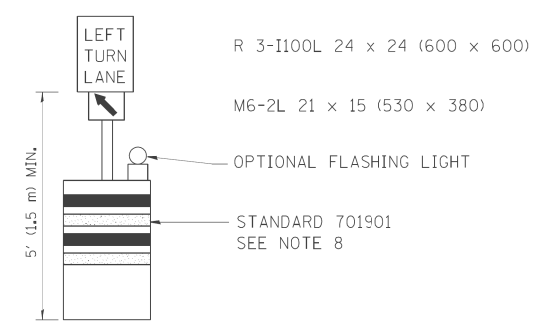
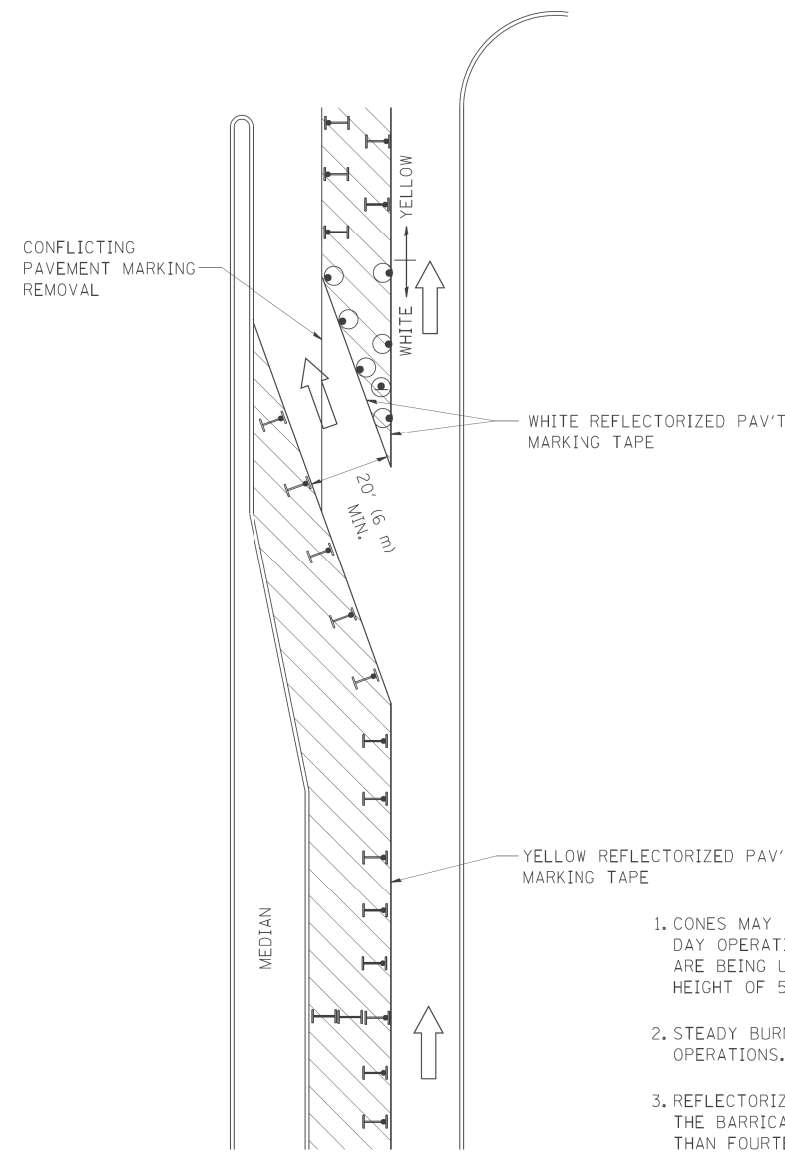
All dimensions are in inches (millimeters) unless otherwise shown.

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	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE			
TYPICAL PAVEMENT MARKINGS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	489
TC-13		CONTRACT NO. 60M62		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				









GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

LEGEND

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

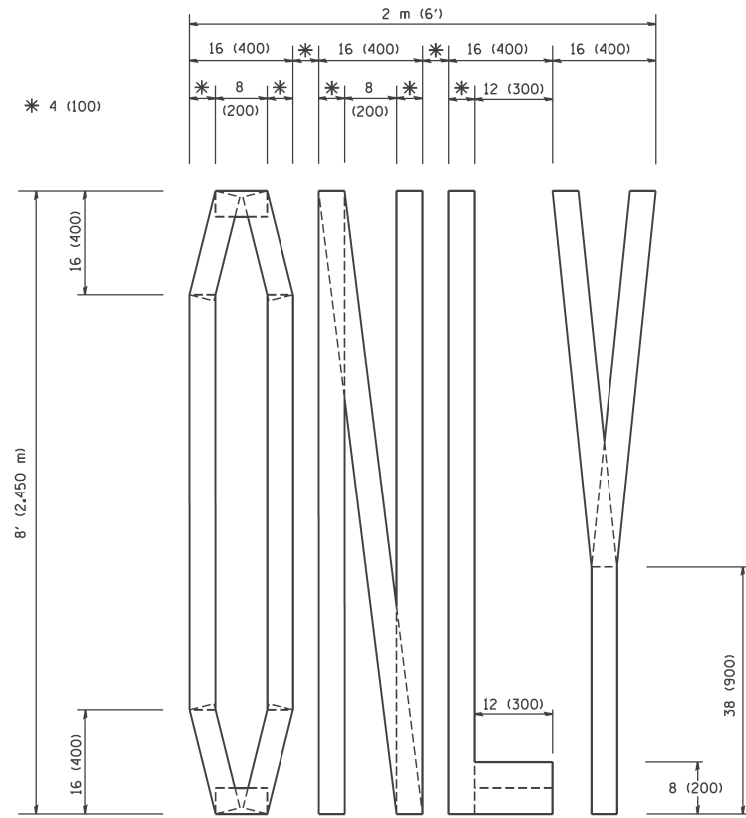
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	PLLOT SCALE = 49,9999' / IN.	REVISED - A. HOUSEH 10-12-96	REVISED -
	PLOT DATE = 9/14/2009	REVISED -T. RAMMACHER 01-06-00	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

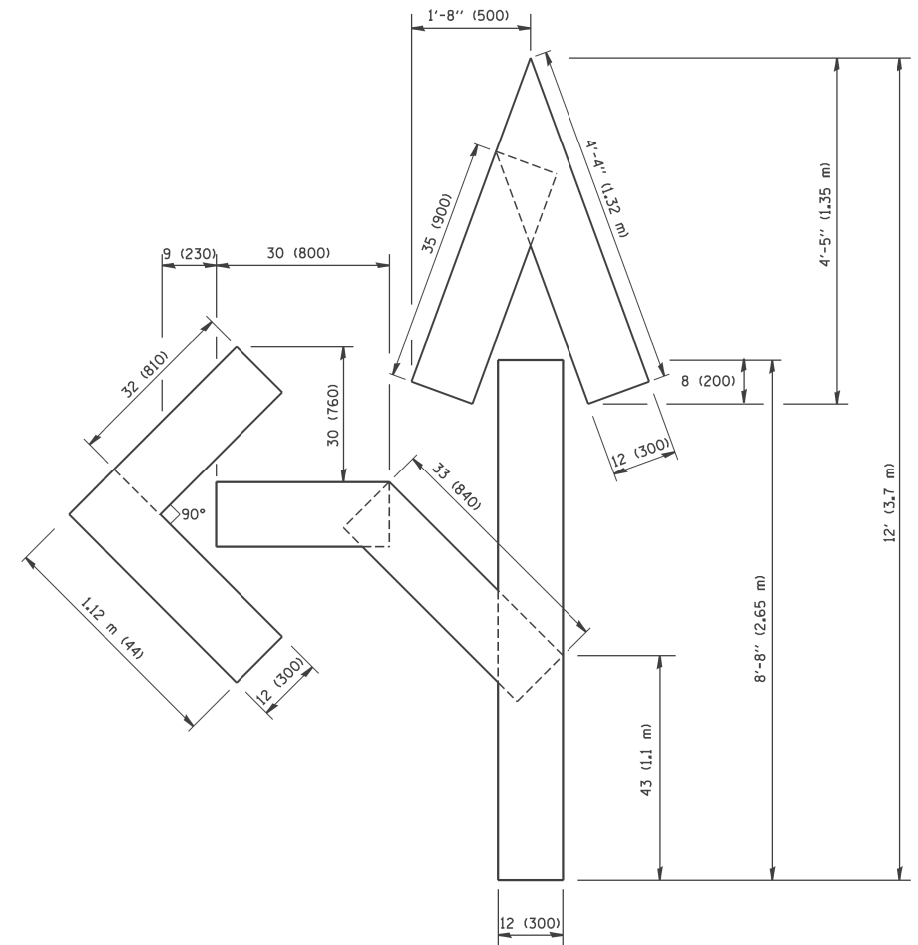
**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

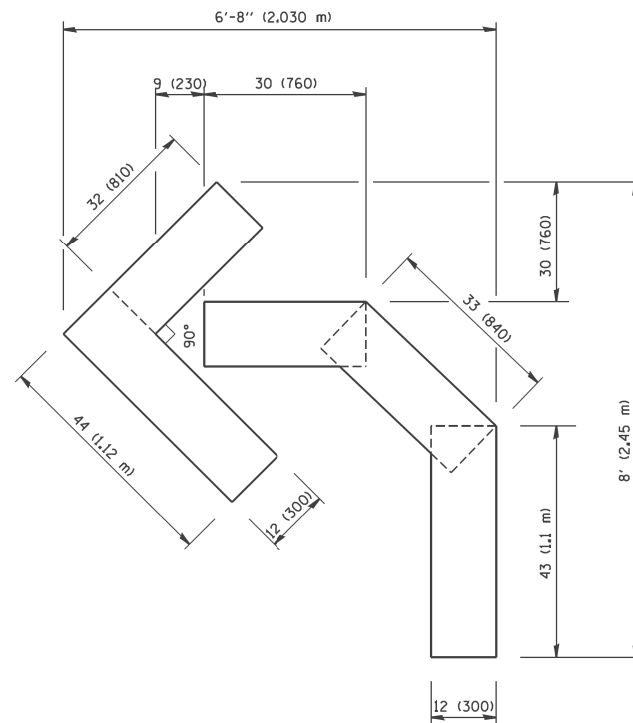
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	490
TC-14		CONTRACT NO. 60M62		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



QUANTITY
 4 (100) LINE = 64.1 ft. (19.7 m)
 21.1 sq. ft. (1.97 sq. m)



QUANTITY
 4 (100) LINE = 82.5 ft. (25.3 m)
 27.5 sq. ft. (2.53 sq. m)



QUANTITY
 4 (100) LINE = 45.5 ft. (13.9 m)
 15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = geglano	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
W:\diststd\22x34\16.dgn		DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	491
TC-16		CONTRACT NO. 60M62		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

ROUTE MARKERS

FOR U.S. ROUTES
M1-40-2424

FOR ILLINOIS ROUTES
M1-50-2424

R.R., UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

ARROWS SIGNS

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-1-2115

M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

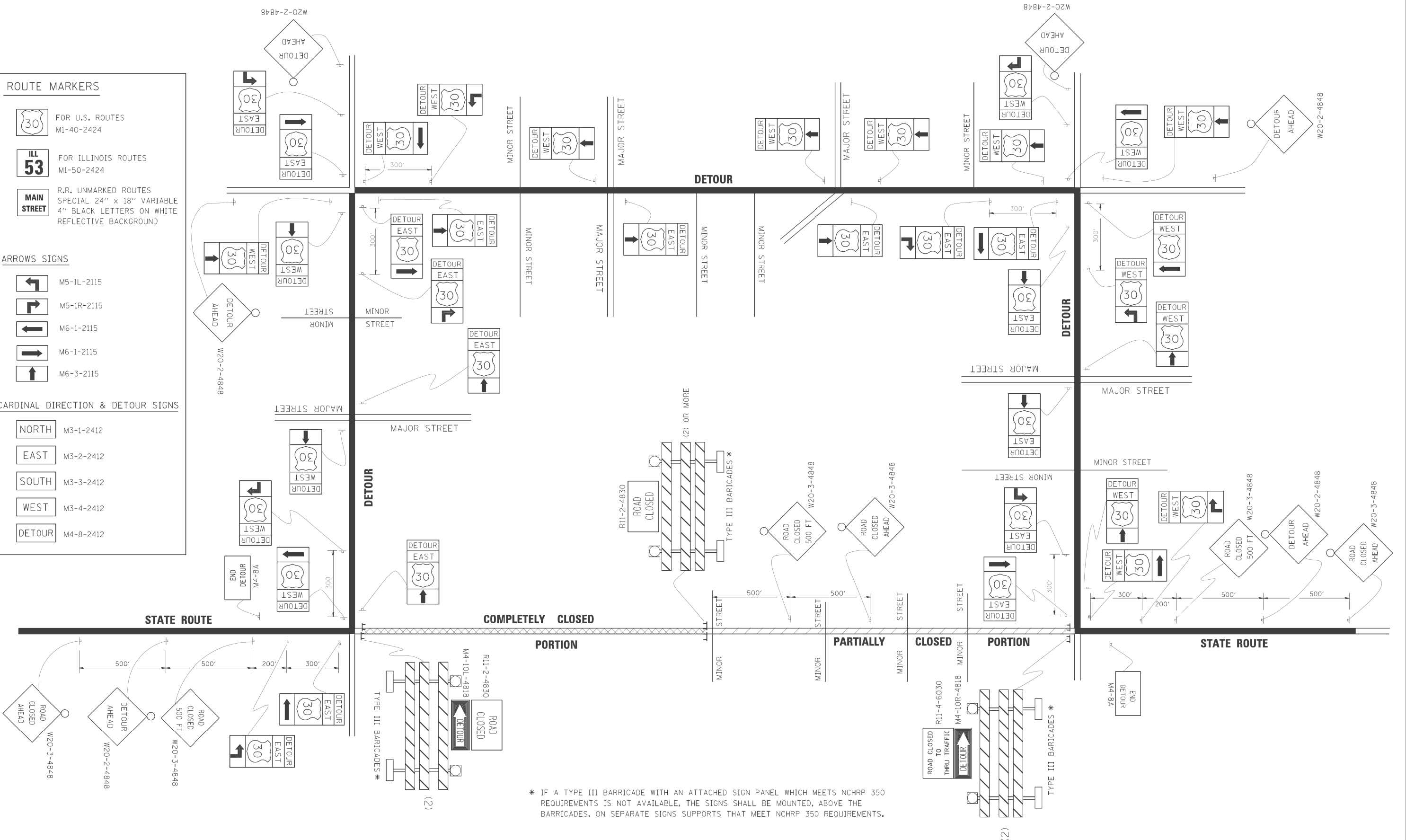
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

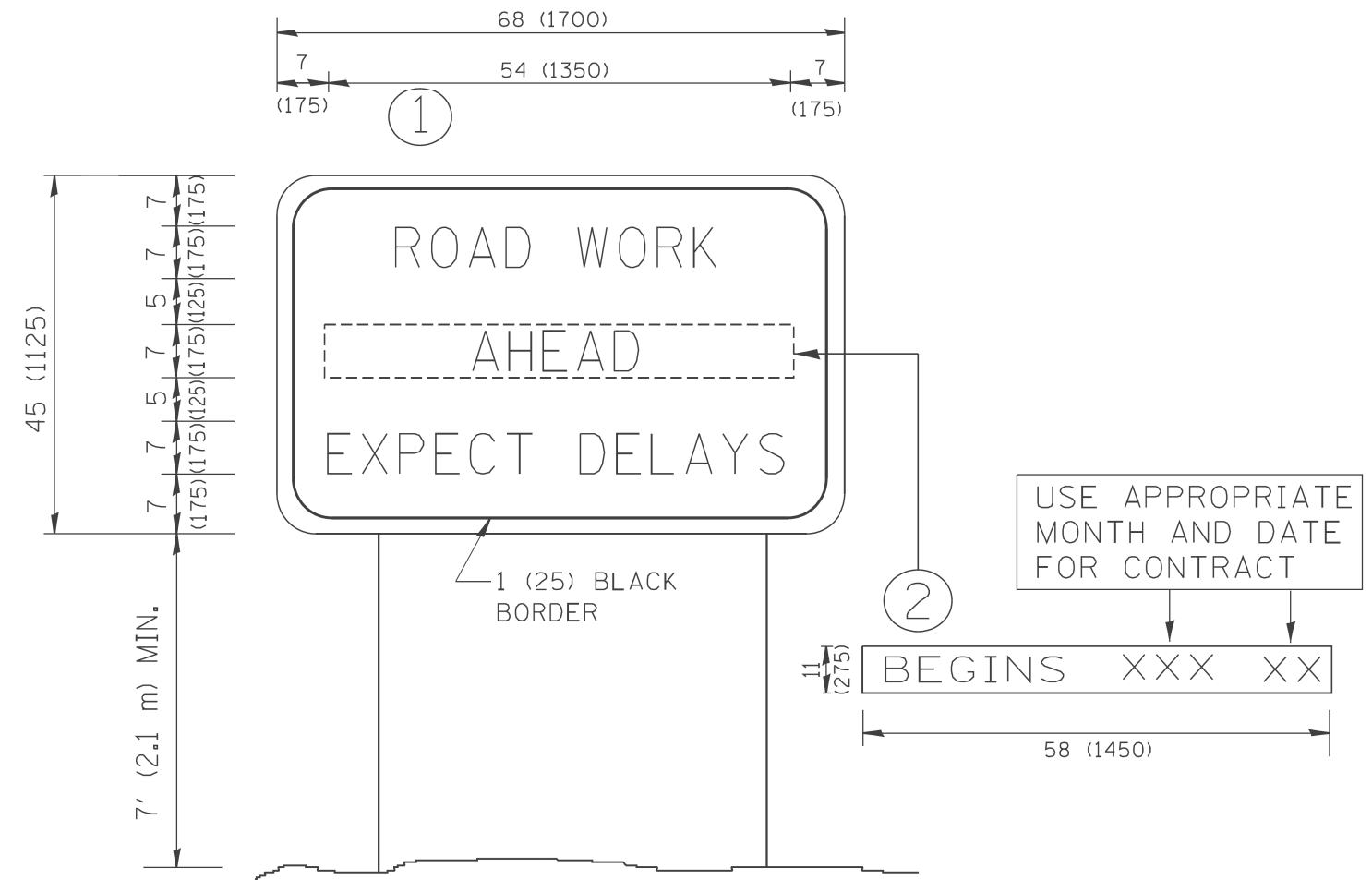
WEST M3-4-2412

DETOUR M4-8-2412



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

FILE NAME = c:\pwork\p\WID00T\DRIVAKOS\N\108315\121.dgn	USER NAME = drivakosgn	DESIGNED - DRAWN -	REVISED - 10-18-02 REVISED - R. BORO 09-14-09	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR SIGNING FOR CLOSING STATE HIGHWAYS			F.A.P. RTE. 330	SECTION 103R-5	COUNTY COOK	TOTAL SHEETS 778	SHEET NO. 493
PLOT SCALE = 49,9999' / IN.	CHECKED -	REVISED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	TC-21		CONTRACT NO. 60M62	
PLOT DATE = 9/14/2009	DATE -	REVISED -	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							

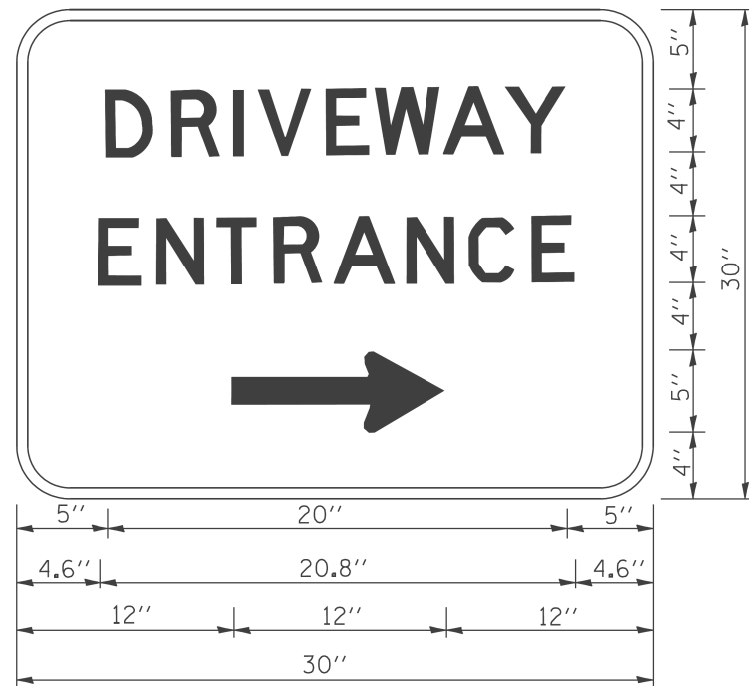


NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = gegl1enobt	DESIGNED -	REVISED - R. MIRS 09-15-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
		DRAWN -	REVISED - R. MIRS 12-11-97		SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	330	103R-5	COOK	778	494
		PLOT SCALE = 50,000' / IN.	CHECKED -		REVISED - T. RAMMACHER 02-02-99	TC-22			CONTRACT NO. 60M62						
		PLOT DATE = 1/4/2008	DATE -		REVISED - C. JUCIUS 01-31-07	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE
 PLACED BACK-TO-BACK; ONE WITH A RIGHT HAND ARROW (SHOWN)
 SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY
 AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE
 FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

FILE NAME = W:\diststd\22x34\ts26.dgn	USER NAME = gegl1enobt	DESIGNED -	REVISED - C. JUCIUS 02-15-07
		DRAWN -	REVISED -
	PLOT SCALE = 50,000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

DRIVEWAY ENTRANCE SIGNING

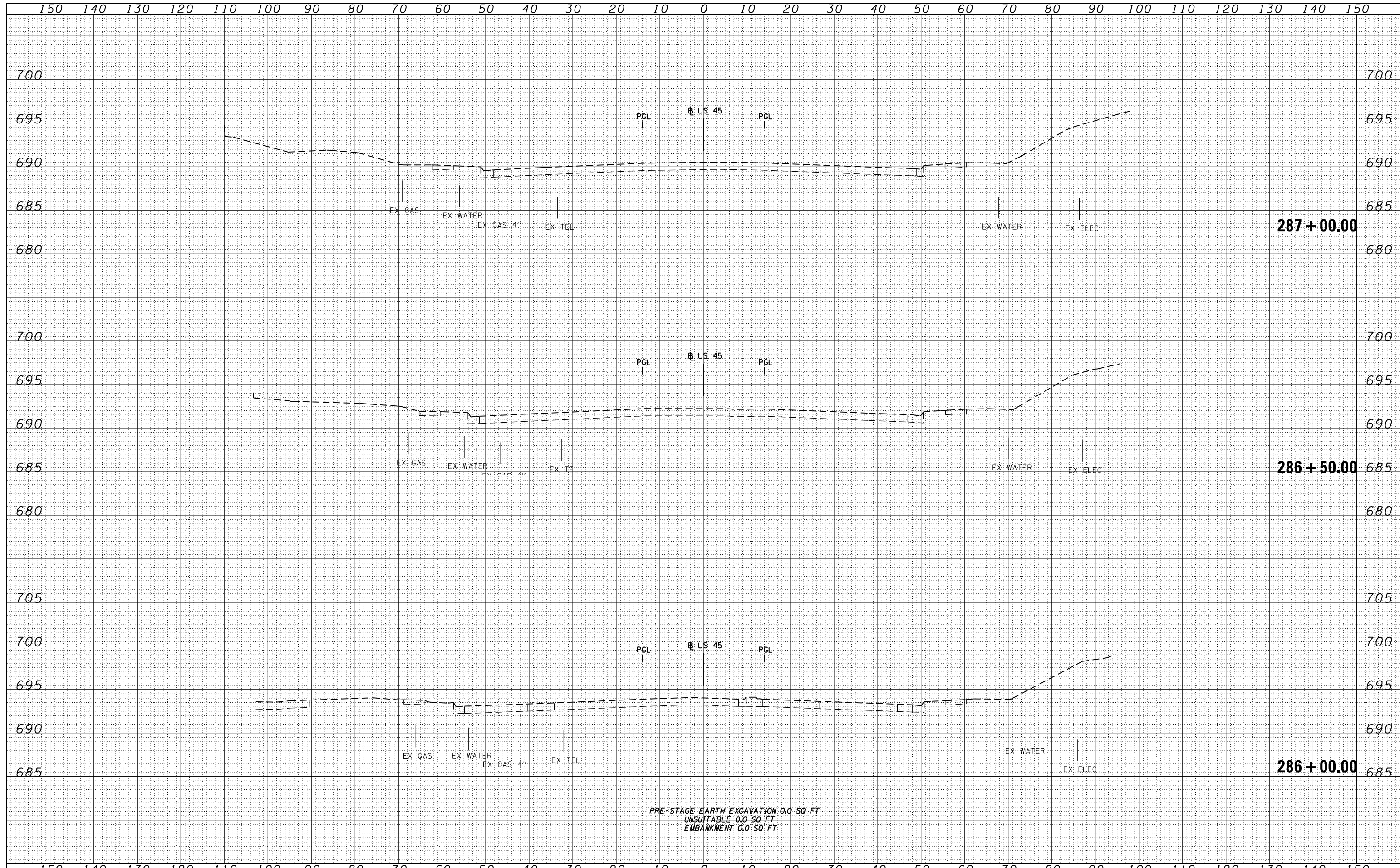
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	495
TC-26			CONTRACT NO. 60M62	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

100 S. WACKER DR.
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 TEL (312) 939-1000
 FAX (312) 939-4198



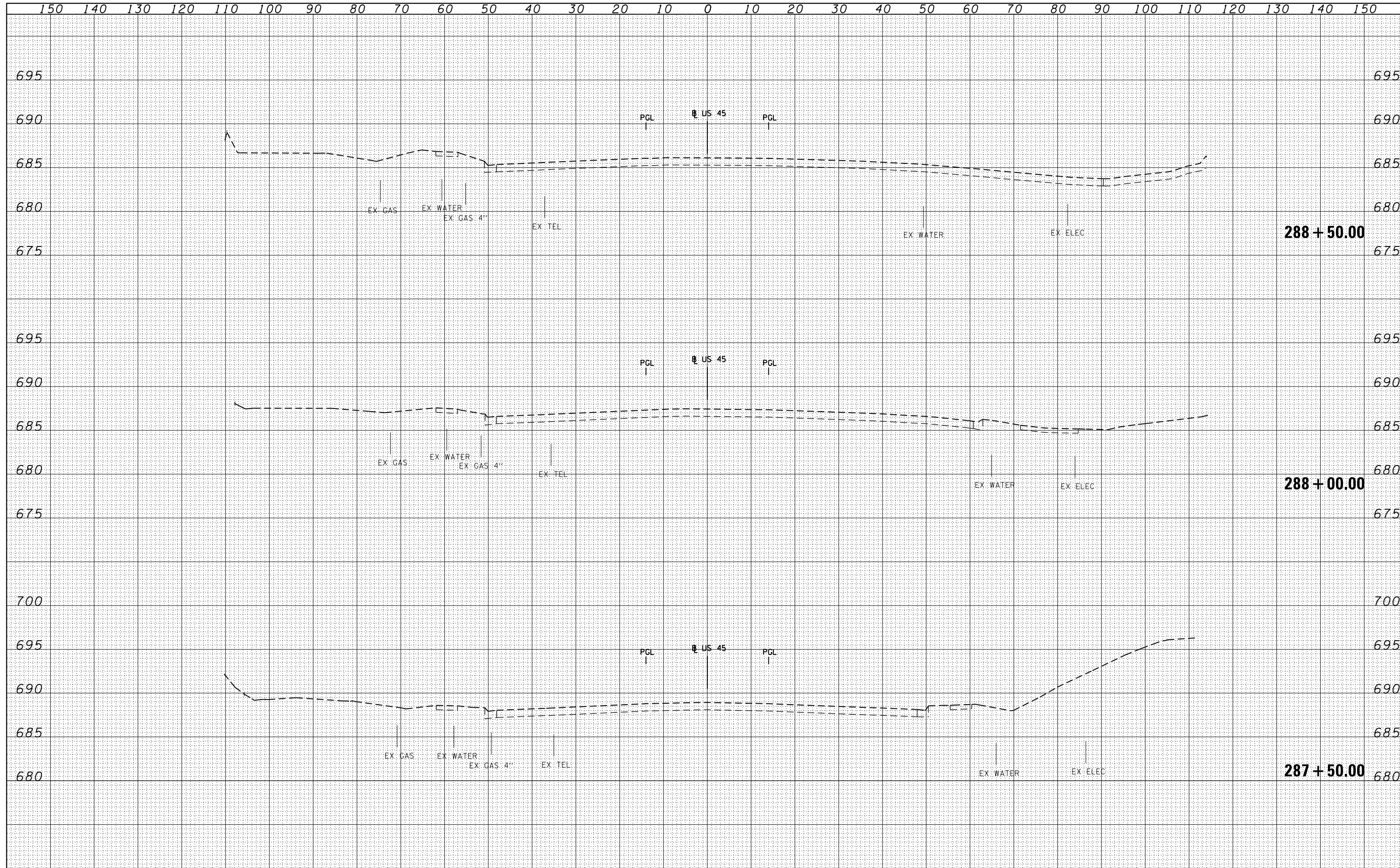
PRE-STAGE EARTH EXCAVATION 0.0 SQ. FT
 UNSUITABLE 0.0 SQ. FT
 EMBANKMENT 0.0 SQ. FT

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - TRK	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US 45 TEMPORARY PAVEMENT CROSS SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D160M62-SHT-XSSHT11.dgn		DRAWN - TRK	REVISIED -		330	103R-5	COOK	778	496			
PLOT SCALE = 20.0000' / in.		CHECKED - MJT	REVISIED -		XS-TUS45-01			CONTRACT NO. 60M62				
PLOT DATE = 3/13/2013		DATE - 03/13/13	REVISIED -		SCALE: 1"=10'H; 1"=5' V			SHEET NO. 1 OF 105 SHEETS STA. 286+00.00 TO STA. 287+00.00				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINISH	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINISH	
NO.	

100 S. WACKER DR.
 CHICAGO, IL 60606
 TEL 312/939-1000
 FAX 312/939-4198



FILE NAME = D160M62-SHT-XSSHT11.dgn
 USER NAME = Anthony.Plutz
 PLOT SCALE = 20.0000' / in.
 PLOT DATE = 3/13/2013

DESIGNED - TRK	REVISD -
DRAWN - TRK	REVISD -
CHECKED - MJT	REVISD -
DATE - 03/13/13	REVISD -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

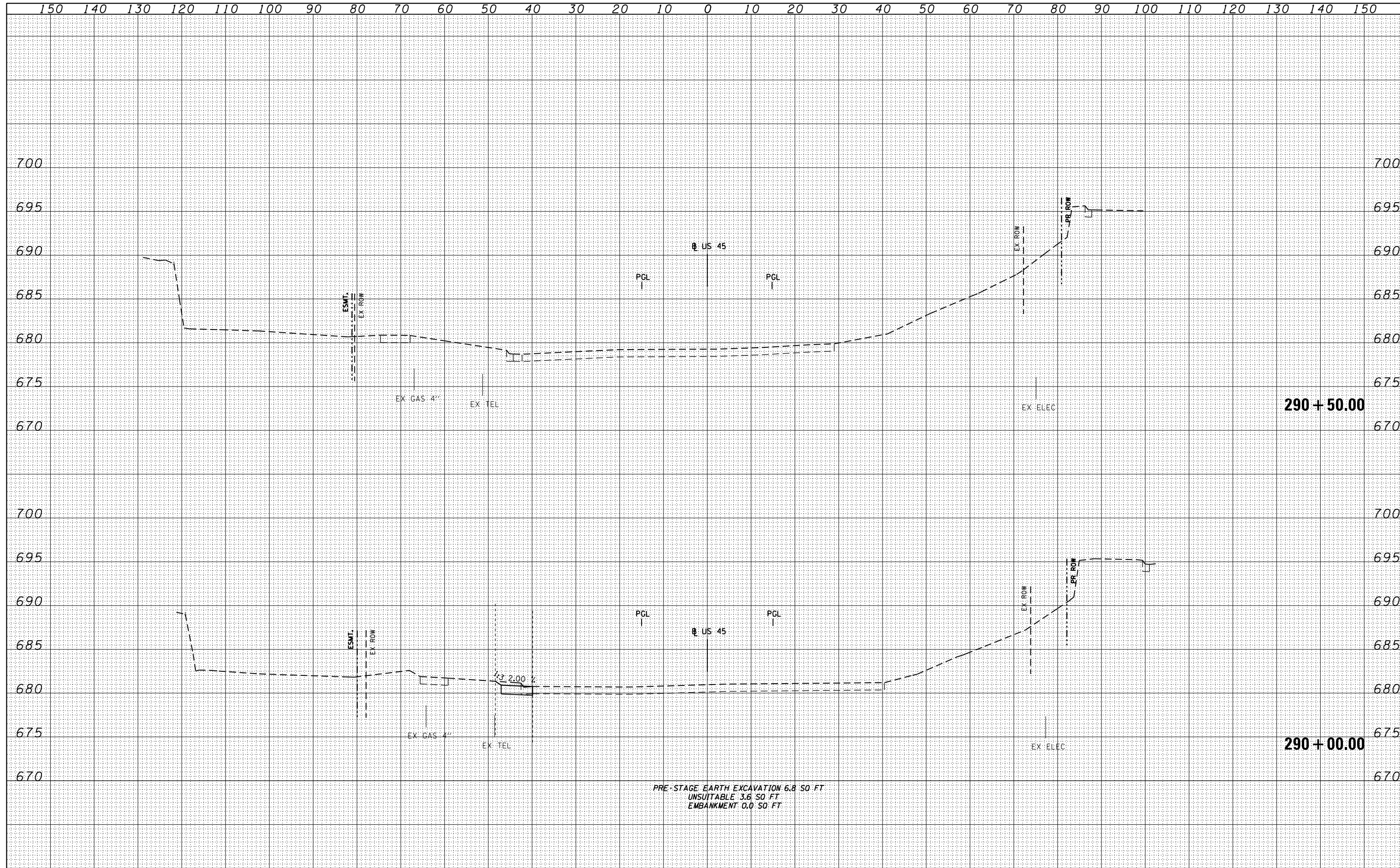
US 55 TEMPORARY PAVEMENT CROSS SECTIONS
 SCALE: 1"=10'H; 1"=5' V SHEET NO. 2 OF 105 SHEETS STA. 287+50.00 TO STA. 288+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	497
XS-TUS45-02			CONTRACT NO. 60M62	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINISHED SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

100 S. WACKER DR.
 CHICAGO, IL 60606
 TEL 312/939-1000
 FAX 312/939-4198



FILE NAME = D:\6062-SHT-XSSHT11.dgn

USER NAME = Anthony.Plutz	DESIGNED - TRK	REVISED -
	DRAWN - TRK	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - MJT	REVISED -
PLOT DATE = 3/13/2013	DATE - 03/13/13	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

US 55 TEMPORARY PAVEMENT CROSS SECTIONS

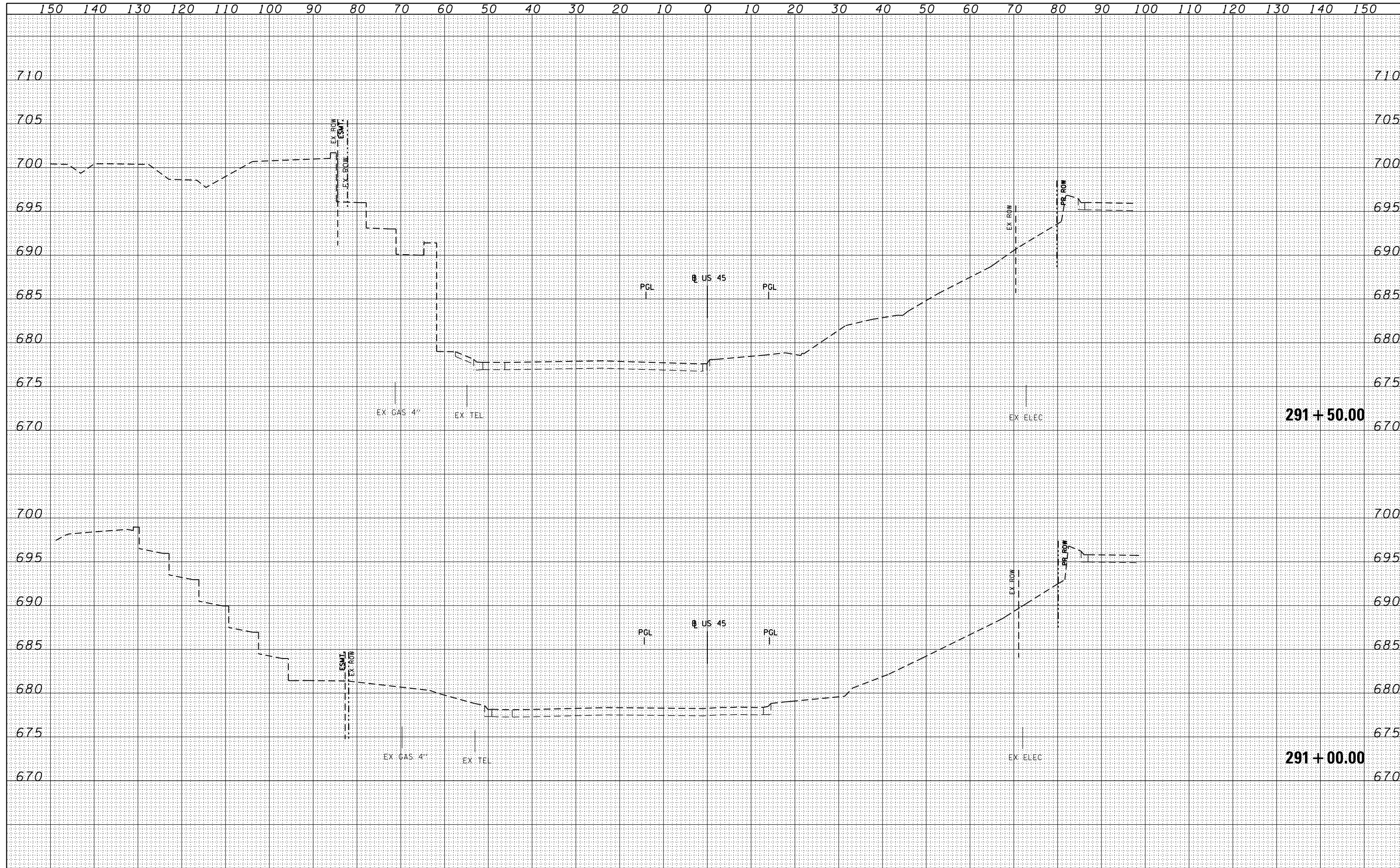
SCALE: 1"=10'H; 1"=5' V SHEET NO. 4 OF 105 SHEETS STA. 290+00.00 TO STA. 290+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	499
XS-TUS45-04			CONTRACT NO. 60M62	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINISHED SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	

100 S. WACKER DR.
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 TEL 312/939-4000
 FAX 312/939-4198



FILE NAME =
 D160M62-SHT-XSSHT11.dgn

USER NAME = Anthony.Plutz	DESIGNED - TRK	REVISED -
	DRAWN - TRK	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - MJT	REVISED -
PLOT DATE = 3/13/2013	DATE - 03/13/13	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

US 45 TEMPORARY PAVEMENT CROSS SECTIONS

SCALE: 1"=10'H; 1"=5'V SHEET NO. 5 OF 105 SHEETS STA. 291+00.00 TO STA. 291+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-5	COOK	778	500
XS-TUS45-05			CONTRACT NO. 60M62	
ILLINOIS FED. AID PROJECT				