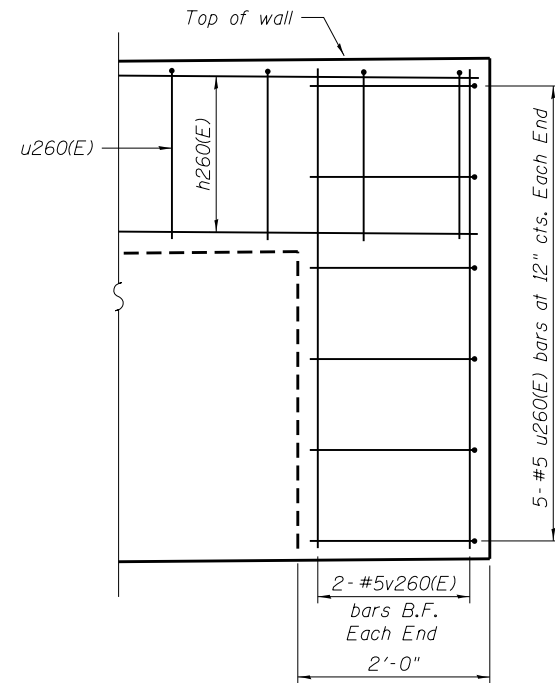
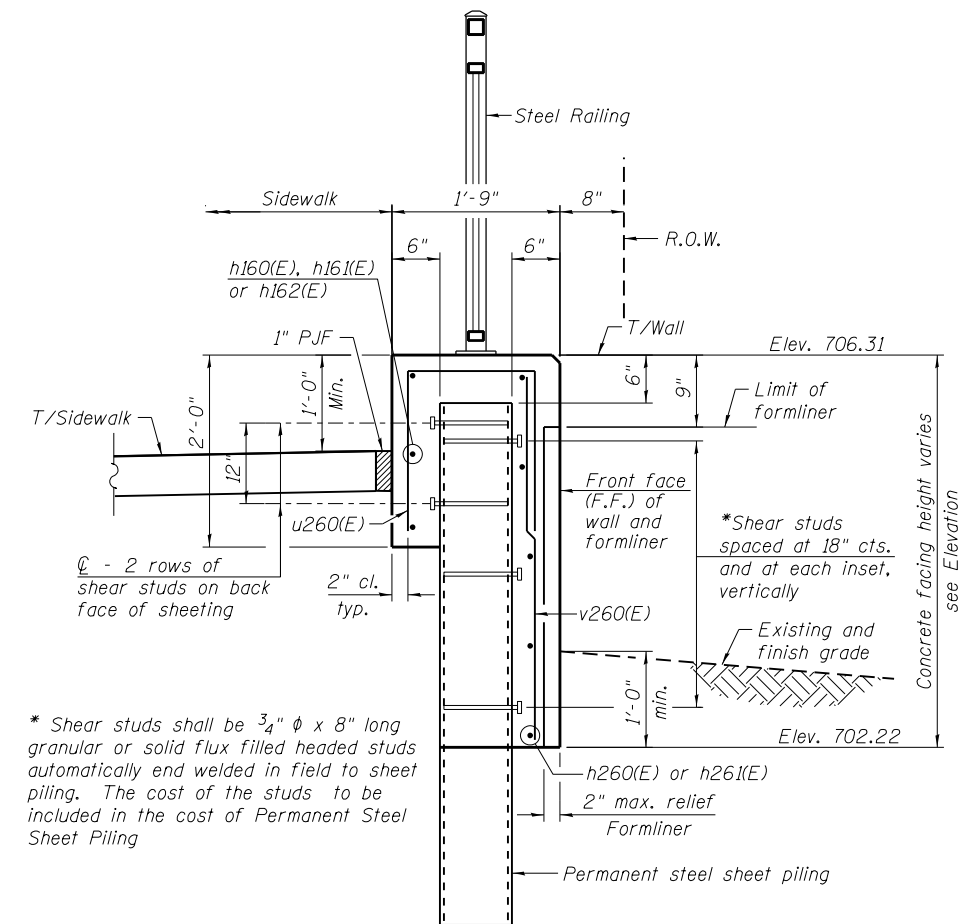


ELEVATION

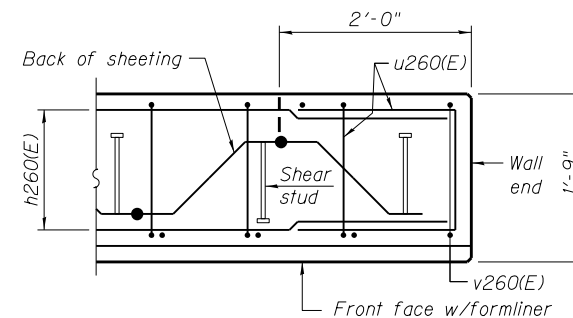


TYPICAL END CAP DETAIL
(v260(E) bars in F.F. not shown for clarity)

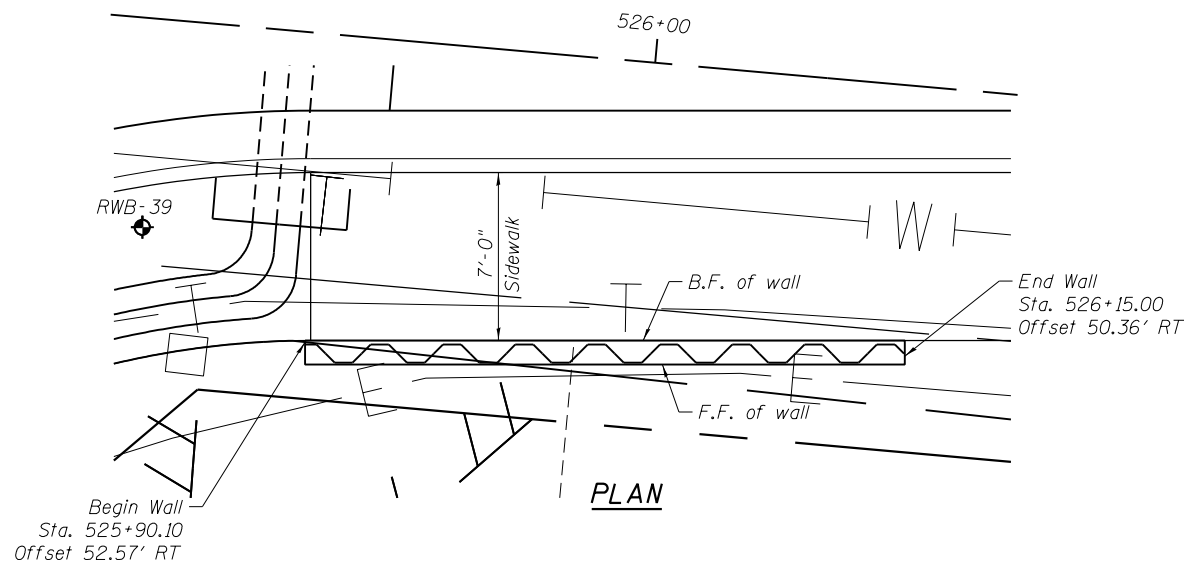


TYPICAL SECTION THROUGH WALL

* Shear studs shall be 3/4" φ x 8" long granular or solid flux filled headed studs automatically end welded in field to sheet piling. The cost of the studs to be included in the cost of Permanent Steel Sheet Piling



PLAN AT END OF WALL



PLAN

LEGEND

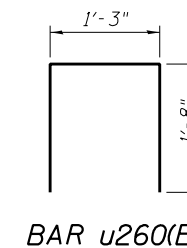
- ① - Panel No.
- ⊕ - Soil Boring
- F.F. - Front Face
- B.F. - Back Face
- E.F. - Each Face

BAR LAPS

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

NOTES:

Wall stations, offsets and dimensions are measured at front face of wall.
All exposed corners shall have a 1" chamfer.
For General Notes, Wall Key Plan and US 45 Profile, see Sheet 1.
For Typical Wall Details and Ornamental Railing see Sheet 2.
The details for the concrete cap, reinforcement and required number of shear stud connectors are based on Section AZ 18 sheet piling. If the Contractor chooses to use any other section, then the Contractor shall submit revised concrete cap and reinforcement configuration for approval by the Engineer. Such changes shall not be cause for additional compensation.



BAR u260(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h260(E)	4	#5	32'-11"	—
h261(E)	4	#5	21'-4"	—
u260(E)	32	#5	4'-7"	□
v260(E)	29	#5	4'-3"	—
Structure Excavation			Cu. Yd.	4
Concrete Structures			Cu. Yd.	7.5
Form Liner Textured Surface			Sq. Ft.	93
Reinforcement Bars, Epoxy Coated			Pound	510
Permanent Sheet Piling			Sq. Ft.	533
Ornamental Railing			Foot	25

FILE NAME = D160M61-SHT-Wall.26-1.dgn	USER NAME = Anthony.Plutz	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE = 8.0000' / in.	DRAWN -	REVISED -
	PLOT DATE = 3/14/2013	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	501
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60M61	

BORING LOG RWB-16

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-1, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 687.20 ft
 North: 1798720.13 ft
 East: 1115547.82 ft
 Station: 179+15.77
 Offset: 75.73 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 (%)
688.94	6.4-inch thick ASPHALT --PAVEMENT--												
688.7	8-inch thick CRUSHED STONE --BASE COURSE--												
684.2	Medium dense, gravelly LOAM --FILL--	1	1	8-15	NP	14							
	Medium stiff to stiff, brown and gray SILTY CLAY LOAM, trace gravel --FILL--	2	2	10-15	1.56	23							
		3	3	10-15	0.98	23							
		4	4	10-15	0.50	21							
678.7	Medium stiff to stiff, brown and gray SILTY CLAY, trace gravel	5	5	10-15	0.82	24							
672.2	Boring terminated at 15.00 ft	6	6	10-15	1.80	22							

GENERAL NOTES

Begin Drilling: 04-22-2011 Complete Drilling: 04-22-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: R&K Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

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.

BORING LOG RWB-17

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-1, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 686.89 ft
 North: 1798819.53 ft
 East: 1115555.70 ft
 Station: 180+14.84
 Offset: 64.46 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 (%)
686.64	6.4-inch thick ASPHALT --PAVEMENT--												
686.1	6-inch thick CRUSHED STONE --BASE COURSE--												
683.9	Loose, brown and gray gravelly LOAM --FILL--	1	1	10-15	NP	20							
	Medium stiff to very stiff, brown and gray SILTY CLAY LOAM, trace gravel --FILL--	2	2	10-15	2.54	20							
		3	3	10-15	0.74	23							
		4	4	10-15	0.57	24							
676.4	Medium stiff to stiff, brown and gray SILTY CLAY, trace gravel	5	5	10-15	0.82	20							
671.9	Boring terminated at 15.00 ft	6	6	10-15	1.31	22							

GENERAL NOTES

Begin Drilling: 04-22-2011 Complete Drilling: 04-22-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: R&K Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

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.

BORING LOG RWB-20

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-3, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 694.05 ft
 North: 1799444.34 ft
 East: 1115548.70 ft
 Station: 186+39.54
 Offset: 50.19 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 (%)
683.83	3-inch thick, brown SILTY CLAY --TOPSOIL--												
	Very stiff, brown and gray SILTY CLAY, trace gravel	1	1	2-4	2.05	20							
		2	2	4-7	5.82	19							
		3	3	5-7	5.00	20							
686.1	Loose to medium dense, brown and gray, fine SAND --WET--	4	4	2-4	NP	20							
		5	5	3-4	NP	17							
681.1	Very stiff, gray SILTY CLAY, trace gravel	6	6	4-6	2.62	17							
		7	7	3-4	2.30	18							
676.1	Medium dense, gray, fine SAND	8	8	5-6	NP	9							
674.1	Boring terminated at 20.00 ft	9	9	5-6	NP	9							

GENERAL NOTES

Begin Drilling: 04-11-2011 Complete Drilling: 04-11-2011
 Drilling Contractor: WTS Drill Rig: D-50 ATV
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

While Drilling: 8.00 ft
 At Completion of Drilling: 10.00 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.

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.



BORING LOG RWB-33

Page 1 of 1

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Fax: 630-953-9938

WEI Job No.: 201-40-01
Client: McDonough Associates Inc.
Project: US 45, Segment 2
Location: Ret. Wall RW-4, Cook Co., T36N, R12E

Datum: NGVD
Elevation: 693.56 ft
North: 1801580.86 ft
East: 1115462.27 ft
Station: 207+77.66
Offset: 63.81 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 (%)
693.15	15-inch thick, ASPHALT												
692.6	6-inch thick, CRUSHED STONE												
692.6	6-inch thick, CRUSHED STONE												
692.6	Stiff, brown SILTY CLAY LOAM, little gravel	1	1	3	1.75	14							
690.0	Stiff, brown and gray CLAY to SILTY CLAY	2	2	3	1.89	24							
		3	3	2	1.31	28							
		4	4	2	1.64	33							
683.1	Very soft to medium stiff, gray SILTY CLAY	5	5	1	0.66	30							
		6	6	1	0.33	28							
		7	7	0	0.25	26							
675.6	Very loose, gray SILT with fine SAND laminations	8	8	0	NP	26							
673.1	Loose to medium dense, gray SANDY LOAM to SAND, little gravel	9	9	0	NP	23							
668.6	Boring terminated at 25.00 ft	10	10	7	NP	13							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-21-2011	Complete Drilling	04-21-2011	While Drilling	18.00 ft		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	20.00 ft		
Driller	R&K	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM	Depth to Water	NA	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			



BORING LOG RWB-36

Page 1 of 1

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WEI Job No.: 201-40-01
Client: McDonough Associates Inc.
Project: US 45, Segment 2
Location: Ret. Wall RW-6, Cook Co., T36N, R12E

Datum: NGVD
Elevation: 700.20 ft
North: 1802457.27 ft
East: 1115562.80 ft
Station: 216+50.23
Offset: 66.51 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 (%)
699.5	8-inch thick, black SILTY CLAY												
699.5	Very stiff, brown and gray SILTY CLAY, trace gravel	1	1	4	3.50	24							
697.2	Medium stiff to very stiff, brown and gray SILTY CLAY	2	2	4	2.13	33							
		3	3	2	0.50	33							
691.3	Very loose, brown and gray SILT	4	4	2	NP	27							
689.7	Medium dense, gray SANDY LOAM	5	5	0	NP	21							
687.2	Stiff to hard, gray SILTY CLAY, trace gravel	6	6	4	1.80	15							
		7	7	4	4.67	15							
		8	8	10	1.72	15							
680.2	Boring terminated at 20.00 ft	20	20	7									

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-13-2011	Complete Drilling	04-13-2011	While Drilling	8.75 ft		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	CAVE AT 8.0		
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM	Depth to Water	NA	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			



BORING LOG RWB-37

Page 1 of 1

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WEI Job No.: 201-40-01
Client: McDonough Associates Inc.
Project: US 45, Segment 2
Location: Ret. Wall RW-6, Cook Co., T36N, R12E

Datum: NGVD
Elevation: 699.69 ft
North: 1802558.00 ft
East: 1115560.87 ft
Station: 217+50.97
Offset: 68.01 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 (%)
699.35	15-inch thick ASPHALT												
698.8	9-inch thick CRUSHED STONE												
698.8	Stiff, brown and gray SILTY CLAY	1	1	5	1.25	24							
696.0	Loose, brown and gray LOAM	2	2	2	NP	23							
		3	3	2	NP	14							
691.7	Medium stiff to stiff, gray SILTY CLAY LOAM, trace gravel	4	4	2	1.64	15							
		5	5	3	0.82	13							
		6	6	0	1.72	14							
		7	7	3	1.31	13							
		8	8	6	1.80	13							
679.7	Boring terminated at 20.00 ft	20	20	9									

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-13-2011	Complete Drilling	04-13-2011	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	DRY		
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM	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) 939-4998



FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISED -
D:\60M61-SHT-Boring03.dgn		CHECKED - JCE	REVISED -
	PLOT SCALE = 0:2.00 '1" / in.	DRAWN - JDK	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - PMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RETAINING WALL
SOIL BORING LOGS

SHEET NO. 28 OF 42 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	504
CONTRACT NO. 60M61			ILLINOIS FED. AID PROJECT	

Note:
For retaining wall key plan see sheet 1.
For typical wall details see sheet 2.
See individual wall sheets for boring locations.

BORING LOG RWB-38

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-6, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 700.28 ft
 North: 1802654.60 ft
 East: 1115557.47 ft
 Station: 218+47.62
 Offset: 67.90 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 (%)
700.03	10.3-inch thick ASPHALT -PAVEMENT-												
699.7	10-inch thick CRUSHED STONE -BASE COURSE-												
697.2	Stiff, brown and gray SILTY CLAY	1	1	4 4 4	1.75	23							
694.8	Very loose, brown and gray LOAM	2	2	2 2 2	NP	27							
694.8	Loose, brown SANDY LOAM	3	3	3 3 3	NP	19							
692.3	Stiff to hard, gray SILTY CLAY, trace gravel	4	4	5 5 7	4.02	20							
		5	5	4 5 7	1.56	13							
		6	6	5 5 7	1.97	15							
		7	7	4 5 7	1.97	12							
		8	8	5 5 7	1.56	14							
680.3	Boring terminated at 20.00 ft	20											

GENERAL NOTES

Begin Drilling: 04-13-2011 Complete Drilling: 04-13-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

BORING LOG RWB-39

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-26, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 706.67 ft
 North: 1802963.88 ft
 East: 1115561.47 ft
 Station: 525+82.63
 Offset: 48.46 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 (%)
706.43	4.3-inch thick, brown SILTY CLAY -TOPSOIL-												
	Stiff to very stiff, brown and gray SILTY CLAY LOAM, little gravel -FILL-	1	1	4 4 4	2.50	15							
702.2	Medium stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel	2	2	3 3 3	1.50	28							
		3	3	3 3 3	5.00	18							
		4	4	3 4 4	4.43	14							
		5	5	3 4 4	0.66	14							
		6	6	3 4 4	2.13	14							
691.2	Soft, gray SILTY LOAM, trace gravel	7	7	1 2 4	0.25	14							
688.7	Stiff, gray SILTY CLAY LOAM, trace gravel	8	8	3 3 3	1.97	13							
686.2	Medium dense, gray SANDY GRAVEL -MOIST-	9	9	7 9 10	NP	7							
683.7	Stiff, gray SILTY CLAY LOAM	10	10	7 8 13	1.50	13							
681.7	Boring terminated at 25.00 ft	25											

GENERAL NOTES

Begin Drilling: 04-21-2011 Complete Drilling: 04-21-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: R&K Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

BORING LOG RWB-40

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-7, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 710.25 ft
 North: 1803101.69 ft
 East: 1115417.70 ft
 Station: 222+99.21
 Offset: 56.55 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 (%)
709.85	5-inch thick, ASPHALT -PAVEMENT-												
709.4	5-inch thick, CRUSHED STONE -BASE COURSE-												
702.2	Stiff, brown and gray SILTY CLAY LOAM, little gravel -FILL-	1	1	2 2 2	1.75	19							
704.8	Stiff, black organic SILTY CLAY -BURIED TOPSOIL-	2	2	2 2 2	1.00	16							
702.3	Medium stiff, brown and gray SILTY CLAY	3	3	4 6 7	1.75	35							
		4	4	3 3 4	2.30	23							
		5	5	1 2 2	0.82	31							
697.3	Medium dense, brown SANDY LOAM, some gravel -MOIST-	6	6	3 3 5	NP	19							
695.3	Boring terminated at 15.00 ft	15											

GENERAL NOTES

Begin Drilling: 04-21-2011 Complete Drilling: 04-21-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: R&K Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

BORING LOG RWB-41

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-7, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 710.33 ft
 North: 1803200.72 ft
 East: 1115415.16 ft
 Station: 223+98.28
 Offset: 55.74 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 (%)
710.04	23-inch thick ASPHALT --PAVEMENT--												
709.6	5-inch thick CRUSHED STONE --BASE COURSE--												
	Stiff to hard, brown and gray SILTY CLAY LOAM, trace to little gravel												
	--FILL--												
		1	4	4	4.25	17							
		2	2	2	1.25	21							
		3	3	3	1.00	26							
703.1	Black organic SILTY CLAY --BURIED TOPSOIL--												
702.3	Soft to stiff, brown and gray SILTY CLAY												
		4	3	4	1.97	25							
		5	2	2	0.98	31							
		6	1	1	0.25	28							
694.8	Medium dense, brown and gray SANDY LOAM --MOIST--												
692.8		7	9	10	NP	22							
	Boring terminated at 17.50 ft												

GENERAL NOTES

Begin Drilling: 04-21-2011 Complete Drilling: 04-21-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: R&K Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

BORING LOG RWB-42

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-7, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 710.45 ft
 North: 1803296.10 ft
 East: 1115409.09 ft
 Station: 224+93.81
 Offset: 58.55 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 (%)
710.05	23-inch thick ASPHALT --PAVEMENT--												
709.6	5-inch thick CRUSHED STONE --BASE COURSE--												
	Stiff to very stiff, brown and gray SILTY CLAY LOAM, little to some gravel												
	--FILL--												
		1	2	2	2.50	18							
		2	2	2	1.75	22							
		3	3	3	1.50	21							
703.3	Stiff, black organic SILTY CLAY --BURIED TOPSOIL--												
		4	3	3	1.25	28							
701.0	Stiff, brown and gray SILTY CLAY												
		5	2	2	1.39	32							
697.5	Hard, brown SILTY CLAY LOAM, trace gravel												
695.5	Boring terminated at 15.00 ft												

GENERAL NOTES

Begin Drilling: 04-20-2011 Complete Drilling: 04-20-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

BORING LOG RWB-43

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-7, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 710.45 ft
 North: 1803398.71 ft
 East: 1115408.15 ft
 Station: 225+96.39
 Offset: 56.00 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 (%)
710.23	23-inch thick ASPHALT --PAVEMENT--												
709.6	10-inch thick CRUSHED STONE --WET--												
	Soft to very stiff, brown and gray SILTY CLAY LOAM, trace gravel												
	--FILL--												
		1	3	3	3.36	17							
		2	2	2	0.49	25							
		3	3	3	1.64	27							
705.0	Stiff to very stiff, brown and gray SILTY CLAY												
		4	2	2	2.13	28							
700.0	Soft, brown and gray SILTY LOAM, trace gravel												
		5	1	1	0.25	25							
697.5	Very stiff, brown and gray SILTY CLAY LOAM, trace gravel												
695.5	Boring terminated at 15.00 ft												

GENERAL NOTES

Begin Drilling: 04-22-2011 Complete Drilling: 04-22-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: R&K Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

BORING LOG RWB-47

WEI Job No.: 201-40-01

Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-8, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 714.22 ft
 North: 1803825.39 ft
 East: 1115388.38 ft
 Station: 230+23.49
 Offset: 61.21 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 (%)
713.94	12-inch thick, ASPHALT -PAVEMENT-												
713.2	8-inch thick, CRUSHED STONE -BASE COURSE-												
711.9	Loose, gray LOAM, trace gravel -FILL-		1	10	NP	15							
	Stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel		2	5	5.00	15							
			3	3	1.15	16							
			4	3	3.44	15							
			5	3	1.72	13							
			6	3	2.38	13							
699.2	Boring terminated at 15.00 ft												

GENERAL NOTES

Begin Drilling: 04-20-2011 Complete Drilling: 04-20-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

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

BORING LOG RWB-48

WEI Job No.: 201-40-01

Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-9, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 714.92 ft
 North: 1805054.89 ft
 East: 1115348.35 ft
 Station: 242+53.64
 Offset: 59.37 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 (%)
714.64	12-inch thick, ASPHALT -PAVEMENT-												
713.2	10-inch thick, CRUSHED STONE -BASE COURSE-												
711.9	Very stiff, black SILTY CLAY -BURIED TOPSOIL-		1	3	2.25	29							
	Medium stiff to hard, brown and gray SILTY CLAY, trace gravel		2	3	0.74	30							
			3	3	3.69	21							
			4	3	5.25	20							
704.4	Loose, brown and gray SILTY LOAM, trace gravel		5	4	NP	15							
701.9	Medium stiff to very stiff, gray SILTY CLAY LOAM, trace gravel		6	3	0.57	16							
			7	3	1.07	12							
			8	3	3.03	12							
694.9	Boring terminated at 15.00 ft												

GENERAL NOTES

Begin Drilling: 04-20-2011 Complete Drilling: 04-20-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

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

BORING LOG RWB-50

WEI Job No.: 201-40-01

Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-10, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 715.53 ft
 North: 1805187.80 ft
 East: 1115346.30 ft
 Station: 243+86.54
 Offset: 56.88 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 (%)
714.5	12-inch thick, ASPHALT -PAVEMENT-												
714.2	4-inch thick, CRUSHED STONE -BASE COURSE-												
	Stiff to very stiff, brown and gray SILTY CLAY LOAM, little to some gravel and debris		1	5	1.25	17							
			2	2	2.21	21							
710.0	Stiff, black organic SILTY CLAY -MUCK-		3	2	1.25	50							
707.5	Soft, gray SILTY CLAY, trace organics		4	0	0.33	25							
705.0	Medium stiff to very stiff, gray SILTY CLAY, trace gravel		5	0	0.82	25							
			6	3	1.56	24							
			7	3	2.30	20							
			8	3	3.28	25							
695.5	Boring terminated at 20.00 ft												

GENERAL NOTES

Begin Drilling: 04-20-2011 Complete Drilling: 04-20-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

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

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

BORING LOG RWB-52

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-10, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 716.61 ft
 North: 1805383.18 ft
 East: 1115339.45 ft
 Station: 245+82.05
 Offset: 57.08 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 (%)
716.16	16-inch thick, brown SILTY CLAY --TOPSOIL--		1	4 5 4	NR	12							
	CRUSHED STONE and ASPHALT --FILL--												
713.6	--AUGER SAMPLE--		2	2 5 0	2.50	19							
	Stiff to very stiff, brown and gray SILTY CLAY LOAM, little gravel --FILL--												
			3	0 0 4	1.50	18							
			4	1 2 2	1.00	25							
708.1	Soft, gray SILTY CLAY, some organic matter --MUCK--		5	0 0 1	0.25	59							
703.6	Medium stiff to very stiff, gray SILTY CLAY, trace gravel		6	0 0 4	0.82	25							
			7	0 0 3	1.31	23							
			8	0 0 3	2.89	21							
			9	0 0 3	3.60	23							
			10	0 0 3	2.05	25							
691.6	Boring terminated at 25.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-19-2011	Complete Drilling	04-19-2011	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	DRY		
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM	Drilling Method		2.25" SSA; Boring backfilled upon completion			
				Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

BORING LOG RWB-53-HA

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-12, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 715.49 ft
 North: 1805253.17 ft
 East: 1115463.11 ft
 Station: 244+47.89
 Offset: 62.09 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 (%)
715.06	6-inch thick black CLAY LOAM --TOPSOIL--		1	2 5 0	2.50	19							
713.7	Very stiff, brown and gray CLAY LOAM, trace gravel --FILL--												
	Stiff to very stiff, brown SILTY CLAY, trace gravel --FILL--												
			2	0 0 4	3.00	23							
			3	0 0 4	3.50	21							
			4	0 0 4	2.00	23							
			5	0 0 4	3.00	15							
			6	0 0 4	2.00	16							
			7	0 0 4	1.50	16							
700.5	Boring terminated at 14.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-26-2011	Complete Drilling	04-26-2011	While Drilling	2.50 ft		
Drilling Contractor	WTS	Drill Rig	Geoprobe	At Completion of Drilling	NA		
Driller	N&B	Logger	N. Boddy	Time After Drilling	NA		
Checked by	CLM	Drilling Method		Jackhammer			
				Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

BORING LOG RWB-54

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-11, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 717.93 ft
 North: 1805411.61 ft
 East: 1115337.69 ft
 Station: 246+10.52
 Offset: 57.87 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 (%)
717.64	4-inch thick ASPHALT --PAVEMENT--		1	4 0 6	NP	9							
	Medium dense, gray CRUSHED STONE --BASE COURSE--												
714.9	Very stiff to hard, brown SILTY CLAY LOAM, trace gravel --FILL--												
			2	0 0 4	5.99	16							
			3	0 0 4	3.50	15							
			4	0 0 4	4.5	19							
707.4	Medium stiff to very stiff, gray SILTY CLAY		5	0 0 3	0.75	20							
			6	0 0 7	2.13	25							
702.9	Boring terminated at 15.00 ft												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-19-2011	Complete Drilling	04-19-2011	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	DRY		
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM	Drilling Method		2.25" SSA; Boring backfilled upon completion			
				Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

BORING LOG RWB-55

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-11, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 717.48 ft
 North: 1805522.79 ft
 East: 1115332.76 ft
 Station: 247+21.80
 Offset: 59.02 LT

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 (%)
717.48	15-inch thick ASPHALT --PAVEMENT--	0	1	4	4.00	19							
718.0	8-inch thick CRUSHED STONE --BASE COURSE--	0.5	2	4	0.50	23							
718.0	Medium stiff to hard, brown and gray GRAVELLY CLAY	0.5	3	0	0.82	32							
712.0	--FILL-- -L _c (%)=38, P _c (%)=17-- -%Gravel=23.7-- -%Sand=1.3-- -%Silt=52.4-- -%Clay=46.3-- -A-6 (11)--	1.0	4	2	1.97	24							
712.0	Medium stiff to hard, brown and gray SILTY CLAY, trace gravel	1.0	5	4	6.07	22							
702.5	Boring terminated at 15.00 ft	15.0	6	6	7.30	20							

GENERAL NOTES

Begin Drilling: **04-19-2011** Complete Drilling: **04-19-2011**
 Drilling Contractor: **WTS** Drill Rig: **B-57 TMR**
 Driller: **K&R** Logger: **B. Wilson** Checked by: **CLM**
 Drilling Method: **2.25" SSA; Boring backfilled upon completion**

WATER LEVEL DATA

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

BORING LOG RWB-56

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-11, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 718.94 ft
 North: 1805578.77 ft
 East: 1115331.06 ft
 Station: 247+77.81
 Offset: 58.81 LT

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 (%)
718.94	15-inch thick ASPHALT --PAVEMENT--	0	1	4	27								
719.0	8-inch thick CRUSHED STONE --BASE COURSE--	0.5	2	2	3.28	21							
715.2	Stiff, brown and gray SILTY CLAY LOAM, trace to little gravel	1.0	3	4	7.05	18							
715.2	Very stiff to hard, brown and gray SILTY CLAY, trace gravel	1.0	4	9	8.12	19							
		1.5	5	4	4.92	22							
		2.0	6	4	4.92	26							
703.9	Boring terminated at 15.00 ft	15.0											

GENERAL NOTES

Begin Drilling: **04-19-2011** Complete Drilling: **04-19-2011**
 Drilling Contractor: **WTS** Drill Rig: **B-57 TMR**
 Driller: **K&R** Logger: **B. Wilson** Checked by: **CLM**
 Drilling Method: **2.25" SSA; Boring backfilled upon completion**

WATER LEVEL DATA

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

BORING LOG RWB-60

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-14, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 723.04 ft
 North: 1805762.85 ft
 East: 1115329.29 ft
 Station: 249+61.83
 Offset: 54.30 LT

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 (%)
723.04	22.65-inch thick, brown SILTY CLAY --TOPSOIL--	0	1	4	5.90	17							
	Very stiff to hard, brown and gray SILTY CLAY, trace gravel	0.5	2	5	4.43	20							
		1.0	3	4	4.10	24							
		1.5	4	4	4.92	24							
		2.0	5	4	2.95	21							
		2.5	6	4	4.59	19							
		3.0	7	4	2.71	16							
		3.5	8	5	3.61	15							
703.0	Boring terminated at 20.00 ft	20.0											

GENERAL NOTES

Begin Drilling: **04-19-2011** Complete Drilling: **04-19-2011**
 Drilling Contractor: **WTS** Drill Rig: **B-57 TMR**
 Driller: **K&R** Logger: **B. Wilson** Checked by: **CLM**
 Drilling Method: **2.25" SSA; Boring backfilled upon completion**

WATER LEVEL DATA

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

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISED -
D160M61-SHT-Boring09.dgn		CHECKED - JCE	REVISED -
	PLOT SCALE = 0:2.00' = 1" / 16'	DRAWN - JDK	REVISED -
	PLOT DATE = 3/13/2013	CHECKED - PMH	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	510
CONTRACT NO. 60M61			ILLINOIS FED. AID PROJECT	

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

BORING LOG RWB-61

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-15, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 716.20 ft
 North: 1806177.79 ft
 East: 1115308.33 ft
 Station: 253+77.25
 Offset: 61.13 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 (%)
746.03	10.3-inch thick ASPHALT --PAVEMENT--												
718	10-inch thick, CRUSHED STONE --BASE COURSE--												
712.2	Medium dense CRUSHED STONE and brick --FILL--		1	10	NP	23							
	Medium stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel and debris --FILL--		2	10	NR	25							
			3	4		4.59							
			4	3		0.50							
705.7	Medium stiff, black, organic SILTY CLAY --MUCK--		5	4		0.75							
703.2	Very stiff, brown and gray SILTY CLAY, trace gravel		6	3		2.62							
701.2	Boring terminated at 15.00 ft												

GENERAL NOTES

Begin Drilling: 04-18-2011 Complete Drilling: 04-18-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

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

BORING LOG RWB-62

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-15, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 715.41 ft
 North: 1806257.94 ft
 East: 1115309.34 ft
 Station: 254+57.29
 Offset: 57.40 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 (%)
714.96	14.96-inch thick, brown SILTY CLAY --TOPSOIL--												
	Loose, brown gravelLY LOAM with brick fragments --FILL--		1	10	NP	20							
712.4	Very stiff, brown and gray SILTY CLAY, little gravel --FILL--		2	10	2.00	22							
709.9	Medium dense, brown gravelLY LOAM with brick and wood fragments --FILL--		3	3	NP	28							
707.4	Medium stiff to stiff, brown and gray SILTY CLAY LOAM, trace gravel, brick and wood --FILL--		4	2	0.75	34							
			5	2	1.56	24							
702.4	Stiff, black, organic SILTY CLAY --MUCK--		6	3	1.50	26							
699.9	Soft to stiff, brown and gray SILTY CLAY		7	2	1.56	28							
			8	1	0.25	34							
694.9	Very stiff, brown and gray SILTY CLAY, trace gravel		9	4	3.36	19							
692.9	Boring terminated at 22.50 ft												

GENERAL NOTES

Begin Drilling: 04-18-2011 Complete Drilling: 04-18-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 2.25" SSA; Boring backfilled upon completion

WATER LEVEL DATA

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

BORING LOG RWB-63

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-16, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 714.76 ft
 North: 1806327.52 ft
 East: 1115306.56 ft
 Station: 255+26.85
 Offset: 57.85 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 (%)
714.35	4.35-inch thick ASPHALT --PAVEMENT--												
714	4-inch thick, CRUSHED STONE and BRICK --BASE COURSE--												
	Very stiff, black, brown and gray SILTY CLAY, trace gravel --BRICK FRAGMENTS-- --FILL--		1	3	2.50	23							
			2	2	2.00	28							
709.3	Soft to medium stiff, brown and gray CLAY, trace gravel --L _u (%)=45, P _u (%)=18-- --%Gravel=1.6-- --%Sand=7.7-- --%Silt=46.2-- --%Clay=44.5-- --A-7-6 (26)--		3	0	0.25	30							
			4	1	0.66	25							
704.3	Stiff, black, organic SILTY CLAY --MUCK--		5	2	1.75	44							
701.8	Very stiff, brown and gray SILTY CLAY, trace gravel		6	3	3.36	24							
699.8	Boring terminated at 15.00 ft												

GENERAL NOTES

Begin Drilling: 04-18-2011 Complete Drilling: 04-18-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 2.25" SSA; Boring backfilled upon completion

WATER LEVEL DATA

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

BORING LOG RWB-64

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-17, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 726.50 ft
 North: 1806626.68 ft
 East: 1115430.09 ft
 Station: 258+22.25
 Offset: 74.52 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 (%)
728.24	24-inch thick black SILTY CLAY --TOPSOIL-- Very stiff, brown and gray SILTY CLAY, trace to little gravel --FILL--	1	1	2.50	17								
723.0	Very stiff to hard, brown SILTY CLAY	2	2	2.25	21								
		3	3	4.50	19								
		4	4	4.50	21								
		5	5	3.75	26								
716.5	Boring terminated at 10.00 ft												

GENERAL NOTES

Begin Drilling: 04-28-2011 Complete Drilling: 04-28-2011
 Drilling Contractor: WTS Drill Rig: Geoprobe
 Driller: W&B Logger: N. Boddy Checked by: CLM
 Drilling Method: Jackhammer

WATER LEVEL DATA

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

BORING LOG RWB-65

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-17, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 726.73 ft
 North: 1806753.36 ft
 East: 1115420.18 ft
 Station: 259+49.30
 Offset: 67.93 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 (%)
726.26	6-inch thick ASPHALT --PAVEMENT-- 4-inch thick CRUSHED STONE --BASE COURSE-- Hard, brown and gray SILTY CLAY, trace gravel	1	1	4.43	21								
		2	2	4.87	21								
		3	3	5.25	18								
		4	4	6.40	13								
		5	5	5.66	14								
		6	6	4.02	15								
711.7	Boring terminated at 15.00 ft												

GENERAL NOTES

Begin Drilling: 04-15-2011 Complete Drilling: 04-15-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

BORING LOG RWB-66

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-19, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 711.34 ft
 North: 1807221.61 ft
 East: 1115292.85 ft
 Station: 264+20.16
 Offset: 49.66 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 (%)
710.95	6-inch thick ASPHALT --PAVEMENT-- 6-inch thick CRUSHED STONE --BASE COURSE-- Medium stiff to hard, brown and gray SILTY CLAY, trace gravel	1	1	0.50	22								
		2	2	2.62	20								
		3	3	5.17	19								
		4	4	6.72	19								
		5	5	6.81	19								
		6	6	6.23	18								
696.3	Boring terminated at 15.00 ft												

GENERAL NOTES

Begin Drilling: 04-15-2011 Complete Drilling: 04-15-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

BORING LOG RWB-67

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-18, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 713.43 ft
 North: 1807202.48 ft
 East: 1115404.77 ft
 Station: 263+99.17
 Offset: 61.91 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 (%)
713.05	1.25-inch thick ASPHALT -PAVEMENT-	0	1	2	0.90	24							
712.6	5-inch thick CRUSHED STONE -BASE COURSE-	1	2	1	0.90	24							
	Soft to medium stiff, brown and gray SILTY CLAY, trace gravel -FILL-	2	3	1	0.25	25							
707.9	Medium stiff, black, organic SILTY CLAY -MUCK-	3	4	0	0.50	35							
704.7	Soft to medium stiff, brown and gray SILTY CLAY	4	5	1	0.66	37							
		5	6	0	0.33	37							
		6	7	0	0.25	22							
697.9	Stiff to hard, gray SILTY CLAY, trace gravel	7	8	2	1.97	21							
693.4	Boring terminated at 20.00 ft	20			4.43	20							

GENERAL NOTES

Begin Drilling: 04-18-2011 Complete Drilling: 04-18-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

BORING LOG RWB-68

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-20, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 711.79 ft
 North: 1807473.79 ft
 East: 1115408.11 ft
 Station: 266+70.50
 Offset: 69.49 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 (%)
711.62	1.25-inch thick ASPHALT -PAVEMENT-	0	1	4	2.50	19							
710.4	12-inch thick CRUSHED STONE -BASE COURSE-	1	2	3	2.79	21							
	Medium stiff to very stiff, brown and gray SILTY CLAY LOAM, trace to little gravel -FILL-	2	3	1	1.15	15							
		4	4	0	0.98	27							
701.3	Very stiff, brown and gray SILTY CLAY, trace gravel	5	5	3	3.61	22							
		6	6	3	3.61	19							
696.8	Boring terminated at 15.00 ft	15											

GENERAL NOTES

Begin Drilling: 04-15-2011 Complete Drilling: 04-15-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

BORING LOG RWB-69

WEI Job No.: 201-40-01

Client: **McDonough Associates Inc.**
 Project: **US 45, Segment 2**
 Location: **Ret. Wall RW-21, Cook Co., T36N, R12E**

Datum: NGVD
 Elevation: 708.26 ft
 North: 1807701.70 ft
 East: 1115275.86 ft
 Station: 269+00.39
 Offset: 59.29 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 (%)
707.94	1.25-inch thick ASPHALT -PAVEMENT-	0	1	3	4.00	16							
707.3	8-inch thick CRUSHED STONE -BASE COURSE-	1	2	6	3.69	20							
705.3	Hard, brown SILTY CLAY LOAM, little gravel -FILL-	2	3	4	6.81	19							
	Stiff to hard, brown and gray SILTY CLAY, trace gravel	3	4	7	3.44	14							
		4	5	3	4.02	13							
		5	6	3	1.80	11							
693.3	Boring terminated at 15.00 ft	15											

GENERAL NOTES

Begin Drilling: 04-18-2011 Complete Drilling: 04-18-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

WATER LEVEL DATA

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

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

BORING LOG RWB-70

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-22, Cook Co., T36N, R12E
 Datum: NGVD
 Elevation: 708.67 ft
 North: 1807750.23 ft
 East: 1115275.44 ft
 Station: 269+48.92
 Offset: 58.98 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 (%)
708.34	3.25-inch thick ASPHALT --PAVEMENT-- 3-inch thick CRUSHED STONE --BASE COURSE-- Stiff to hard, brown and gray SILTY CLAY, trace gravel	0	1	4 5 7	5.99	19	708.34		0	1	4 5 7	5.99	19
706.1		2	2	5 9 11	7.46	19	706.1		2	2	5 9 11	7.46	19
		3	3	6 9 3	3.77	15			3	3	6 9 3	3.77	15
		4	4	6 9 3	4.43	11			4	4	6 9 3	4.43	11
		5	5	6 9 3	1.89	13			5	5	6 9 3	1.89	13
693.7	Boring terminated at 15.00 ft	15	6	6 9 3	3.28	15	693.7		6	6	6 9 3	3.28	15

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-18-2011	Complete Drilling	04-18-2011	While Drilling	▽	DRY	
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	▽	DRY	
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM	Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	▽	NA	

BORING LOG RWB-71

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-23, Cook Co., T36N, R12E
 Datum: NGVD
 Elevation: 708.45 ft
 North: 1807780.95 ft
 East: 1115274.41 ft
 Station: 269+79.65
 Offset: 59.54 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 (%)
707.8	3.25-inch thick ASPHALT --PAVEMENT-- 6-inch thick CRUSHED STONE --BASE COURSE-- Very stiff to hard, brown and gray SILTY CLAY, trace gravel	0	1	4 3 4	2.87	18	707.8		0	1	4 3 4	2.87	18
		2	2	4 8 10	4.84	20			2	2	4 8 10	4.84	20
		3	3	4 6 7	3.03	16			3	3	4 6 7	3.03	16
		4	4	4 5 6	2.21	18			4	4	4 5 6	2.21	18
		5	5	4 7 7	3.20	14			5	5	4 7 7	3.20	14
693.5	Boring terminated at 15.00 ft	15	6	4 7 9	2.62	12	693.5		6	6	4 7 9	2.62	12

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-15-2011	Complete Drilling	04-15-2011	While Drilling	▽	DRY	
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	▽	DRY	
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM	Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	▽	NA	

BORING LOG RWB-72

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-23, Cook Co., T36N, R12E
 Datum: NGVD
 Elevation: 707.08 ft
 North: 1807849.93 ft
 East: 1115272.72 ft
 Station: 270+49.65
 Offset: 60.18 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 (%)
706.84	3.25-inch thick ASPHALT --PAVEMENT-- 10-inch thick CRUSHED STONE --BASE COURSE-- Very stiff, brown and gray SILTY CLAY LOAM, little gravel	0	1	4 5 10	3.50	18	706.84		0	1	4 5 10	3.50	18
704	--FILL-- Very stiff to hard, brown and gray SILTY CLAY, trace gravel.	2	2	4 5 9	2.50	24	704		2	2	4 5 9	2.50	24
		3	3	4 5 9	4.43	17			3	3	4 5 9	4.43	17
		4	4	4 5 7	4.26	17			4	4	4 5 7	4.26	17
		5	5	4 7 11	4.67	20			5	5	4 7 11	4.67	20
692.1	Boring terminated at 15.00 ft	15	6	4 7 11	5.41	20	692.1		6	6	4 7 11	5.41	20

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-15-2011	Complete Drilling	04-15-2011	While Drilling	▽	DRY	
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	▽	DRY	
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM	Drilling Method	3.25" IDA HSA; Boring backfilled upon completion	Depth to Water	▽	NA	

FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISED -
D:\60M61-SHT-Boring\3.dgn		CHECKED - JCE	REVISED -
		PLOT SCALE = 0:2.00 '1" / in.	REVISED -
		PLOT DATE = 3/13/2013	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	514
CONTRACT NO. 60M61			ILLINOIS FED. AID PROJECT	

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

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

BORING LOG RWB-73

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-24, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 708.36 ft
 North: 1807660.42 ft
 East: 1115400.96 ft
 Station: 268+57.21
 Offset: 65.16 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 (%)
705.4	Very stiff, brown SILTY CLAY LOAM, little gravel --FILL--	1	1	4 3 3	3.50	21							
705.4	Stiff to hard, brown and gray SILTY CLAY, trace gravel	2	2	4 3 3	2.05	27							
		3	3	4 3 3	1.72	21							
		4	4	4 3 3	5.08	19							
		5	5	4 3 3	4.18	20							
693.4	Boring terminated at 15.00 ft	6	6	4 3 3	3.77	18							

GENERAL NOTES

Begin Drilling: 04-15-2011 Complete Drilling: 04-15-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

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.

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 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
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BORING LOG RWB-74

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-24, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 709.83 ft
 North: 1807738.86 ft
 East: 1115393.77 ft
 Station: 269+35.76
 Offset: 59.15 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 (%)
708.1	3-inch thick ASPHALT --PAVEMENT--	1	1	4 3 3	4.92	19							
708.1	6-inch thick CRUSHED STONE --BASE COURSE--	2	2	4 10 11	4.43	18							
	Very stiff to hard, brown and gray SILTY CLAY, trace gravel	3	3	4 6 8	4.67	17							
		4	4	4 6 8	2.46	14							
		5	5	7 11 14	4.50	14							
	--ROCK OBTURATED THE SPOON--	6	6	5 7 11	4.67	15							
694.8	Boring terminated at 15.00 ft	15											

GENERAL NOTES

Begin Drilling: 04-15-2011 Complete Drilling: 04-15-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion.

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.

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 1145 N Main Street
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BORING LOG RWB-75

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-24, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 709.92 ft
 North: 1807824.29 ft
 East: 1115392.48 ft
 Station: 270+21.20
 Offset: 59.16 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 (%)
709.1	10-inch thick black SILTY CLAY LOAM	1	1	4 3 3	1.50	20							
709.1	--TOPSOIL--	2	2	4 3 3	2.75	20							
	Stiff to very stiff, brown SILTY CLAY LOAM, trace gravel	3	3	4 3 3	3.25	16							
	--FILL--	4	4	4 3 3	3.75	15							
703.6	Very stiff to hard, brown SILTY CLAY, trace gravel	5	5	4 3 3	3.75	14							
		6	6	4 3 3	4.00	15							
697.0	Boring terminated at 12.00 ft	12											

GENERAL NOTES

Begin Drilling: 04-28-2011 Complete Drilling: 04-28-2011
 Drilling Contractor: WTS Drill Rig: Geoprobe
 Driller: W&B Logger: N. Boddy Checked by: CLM
 Drilling Method: Jackhammer

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



FILE NAME = D:\60M61-SHT-Boring\4.dgn
 USER NAME = Anthony.Plutz
 DESIGNED - WEI
 CHECKED - JCE
 PLOT SCALE = 0:2.00 '1" / in.
 DRAWN - JDK
 PLOT DATE = 3/13/2013
 CHECKED - PMH
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

RETAINING WALL
 SOIL BORING LOGS

SHEET NO. 39 OF 42 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	515
CONTRACT NO. 60M61			ILLINOIS FED. AID PROJECT	

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

BORING LOG RWB-76

WEI Job No.: 201-40-01

Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-25, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 717.49 ft
 North: 1805608.38 ft
 East: 1115695.79 ft
 Station: 231+79.74
 Offset: 45.34 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 (%)
717.23	717.23-inch thick, brown SILTY CLAY --TOPSOIL--												
	Very stiff to hard, brown SILTY CLAY LOAM, trace gravel												
	--FILL--												
		1	1	3.00	3	16							
		2	2	3.61	3	19							
		3	3	5.08	3	14							
708.7	Medium stiff to hard, brown and gray SILTY CLAY	10	4	0.90	3	34							
		5	5	1.47	3	22							
		6	6	4.43	3	19							
702.5	Boring terminated at 15.00 ft	15											

GENERAL NOTES

Begin Drilling: 04-13-2011 Complete Drilling: 04-13-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

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

BORING LOG RWB-77

WEI Job No.: 201-40-01

Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-25, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 716.21 ft
 North: 1805609.50 ft
 East: 1115769.54 ft
 Station: 232+53.46
 Offset: 42.44 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 (%)
715.94	715.94-inch thick, brown SILTY CLAY --TOPSOIL--												
	Stiff to very stiff, brown SILTY CLAY LOAM, trace gravel												
	--FILL--												
		1	1	2.50	3	27							
		2	2	1.80	3	13							
710.7	Very stiff to hard, brown and gray SILTY CLAY, trace gravel	5	3	2.54	3	21							
		10	4	2.87	3	20							
		15	5	4.67	3	21							
		20	6	2.30	3	22							
701.2	Boring terminated at 15.00 ft	15											

GENERAL NOTES

Begin Drilling: 04-13-2011 Complete Drilling: 04-13-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA

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

BORING LOG RWB-78

WEI Job No.: 201-40-01

Client: McDonough Associates Inc.
 Project: US 45, Segment 2
 Location: Ret. Wall RW-25, Cook Co., T36N, R12E

Datum: NGVD
 Elevation: 717.39 ft
 North: 1805609.89 ft
 East: 1115845.95 ft
 Station: 233+29.84
 Offset: 40.21 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 (%)
717.13	717.13-inch thick, brown SILTY CLAY --TOPSOIL--												
	Stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel												
	--FILL--												
		1	1	4.50	3	13							
		2	2	3.77	3	19							
		3	3	1.56	3	27							
709.4	Very stiff, to hard, brown and gray SILTY CLAY	10	4	2.05	3	23							
		15	5	4.67	3	19							
		20	6	4.43	3	20							
702.4	Boring terminated at 15.00 ft	15											

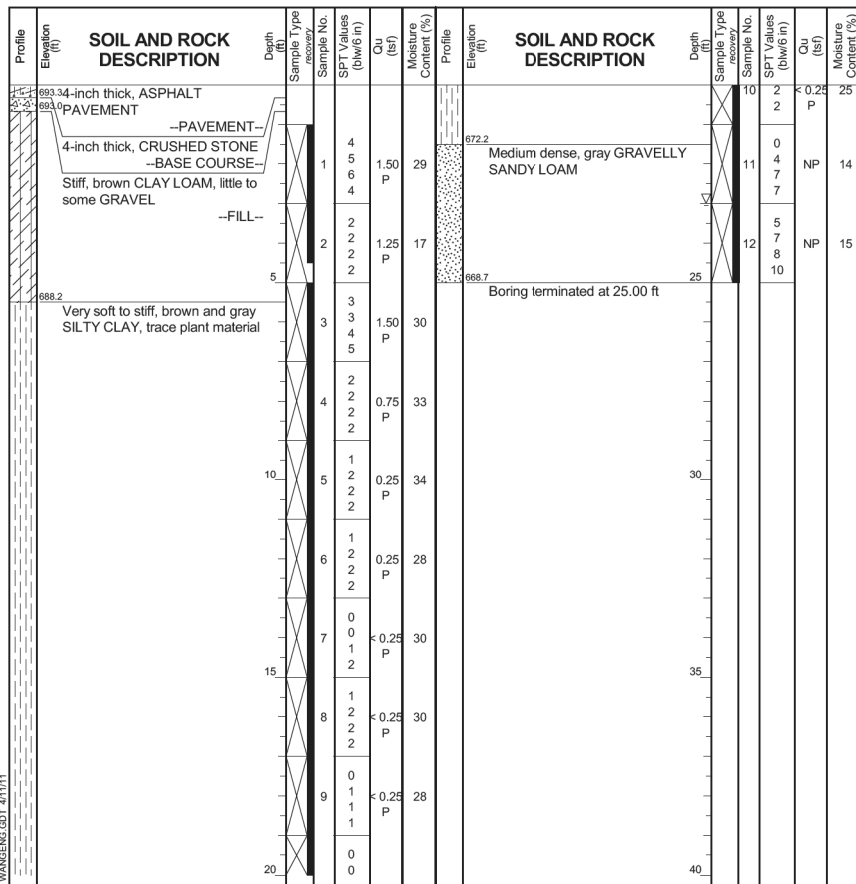
GENERAL NOTES

Begin Drilling: 04-13-2011 Complete Drilling: 04-13-2011
 Drilling Contractor: WTS Drill Rig: B-57 TMR
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

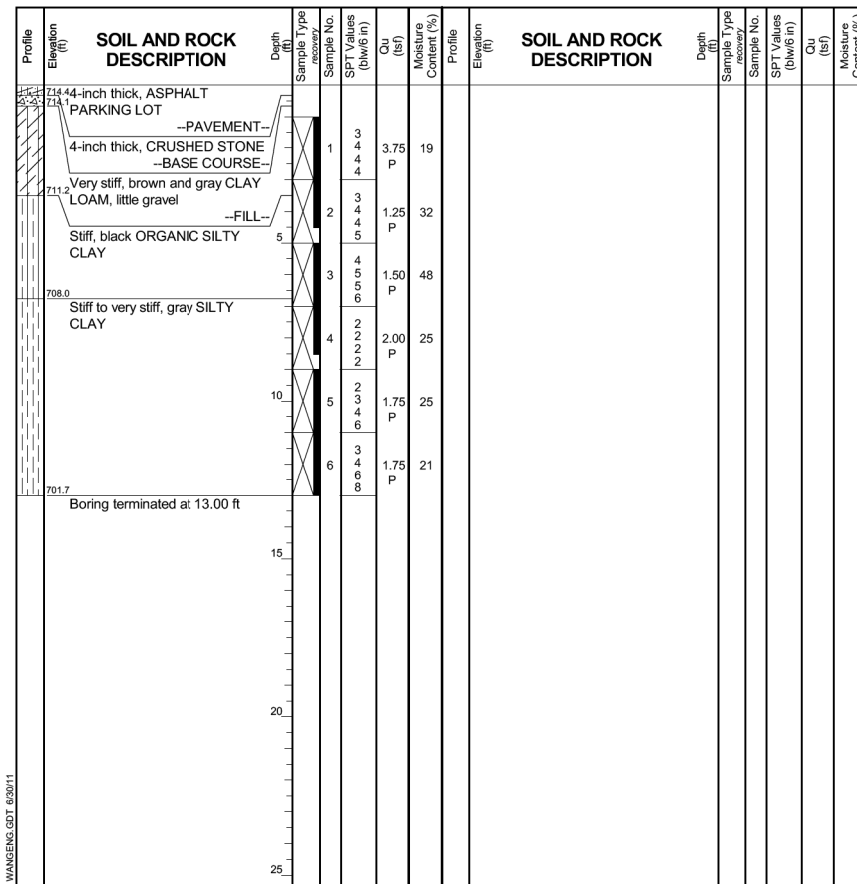
WATER LEVEL DATA

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

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-18-2011	Complete Drilling	02-18-2011	While Drilling	23.00 ft		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	CAVE AT 12.0		
Driller	K&R	Logger	B. Wilson	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.							



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-17-2011	Complete Drilling	02-17-2011	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	DRY		
Driller	K&R	Logger	B. Wilson	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) 939-4998
URS

Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

FILE NAME = D160M61-SHT-Boring16.dgn	USER NAME = Anthony.Plutz	DESIGNED - WEI	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RETAINING WALL SOIL BORING LOGS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - JCE	REVISD -			330	103R-4	COOK	877	517	
		PLOT SCALE = 0:2.00 '1" = 10'	REVISD -			CONTRACT NO. 60M61					
		DRAWN - JDK	REVISD -			ILLINOIS FED. AID PROJECT					
		CHECKED - PMH	REVISD -	SHEET NO. 41 OF 42 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 (%)
724.74	4-inch thick, ASPHALT PARKING LOT												
724.3	4-inch thick, CRUSHED STONE --PAVEMENT-- --BASE COURSE--	1	1	4 3	1.00	20							
709.1	Stiff to very stiff, brown CLAY LOAM, little to some gravel	2	2	10 5 6	2.00	20							
709.1	Medium stiff, black and gray SILTY CLAY, some plant material	3	3	4 4 4	0.75	34							
706.8	Medium stiff to very stiff, brown and gray to gray SILTY CLAY, trace gravel	4	4	1 1 2	0.50	57							
700.1	Boring terminated at 15.00 ft	15	7	6 6 7	2.50	22							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-18-2011	Complete Drilling	02-18-2011	While Drilling	0.50 ft		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	DRY		
Driller	K&R	Logger	B. Wilson	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)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
724.83	4-inch thick, ASPHALT PARKING LOT												
724.3	5-inch thick, CRUSHED STONE --PAVEMENT-- --BASE COURSE--	1	1	4 5 5	0.75	24							
709.1	Medium stiff to very stiff, brown and gray CLAY to CLAY LOAM, trace to little gravel	2	2	6 4 3	2.50	21							
709.1	Stiff to very stiff, gray SILTY CLAY, trace gravel	3	3	6 6 6	0.50	30							
706.2	Very loose, brown PEAT	4	4	2 2 2	0.75	22							
704.5	Soft, brown and gray ORGANIC SILTY CLAY	5	5	0 0 0	NP	147							
702.3	Stiff to very stiff, gray SILTY CLAY, trace gravel	6	6	0 0 0	0.25	65							
698.0	Boring terminated at 17.00 ft	17	7	1 3 4	1.00	26							

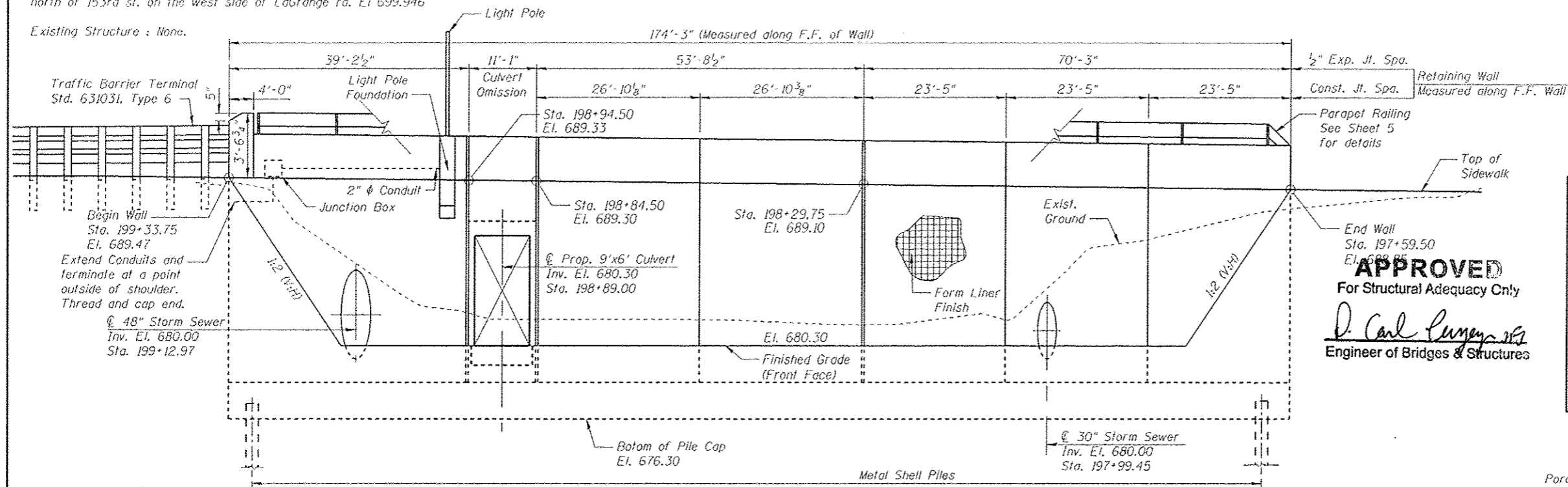
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-18-2011	Complete Drilling	02-18-2011	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	B-57 TMR	At Completion of Drilling	DRY		
Driller	K&R	Logger	B. Wilson	Checked by	C. Marin		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion			Depth to Water	NA		

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Note:
 For retaining wall key plan see sheet 1.
 For typical wall details see sheet 2.
 See individual wall sheets for boring locations.

Benchmark: TBM "G" #569: Southeast bottom of light pole #93-15 +/- 300' north of 153rd st. on the west side of LaGrange rd. El 699.946

Existing Structure: None.



INDEX OF SHEETS

- Sheet No. Title
1. General Plan and Elevation
 2. Wall Reinforcement Details
 3. Wall Details
 4. Sections and Details
 5. Parapet Railing
 6. Metal Shell Pile Details
 7. Boring Logs 1 of 3
 8. Boring Logs 2 of 3
 9. Boring Logs 3 of 3

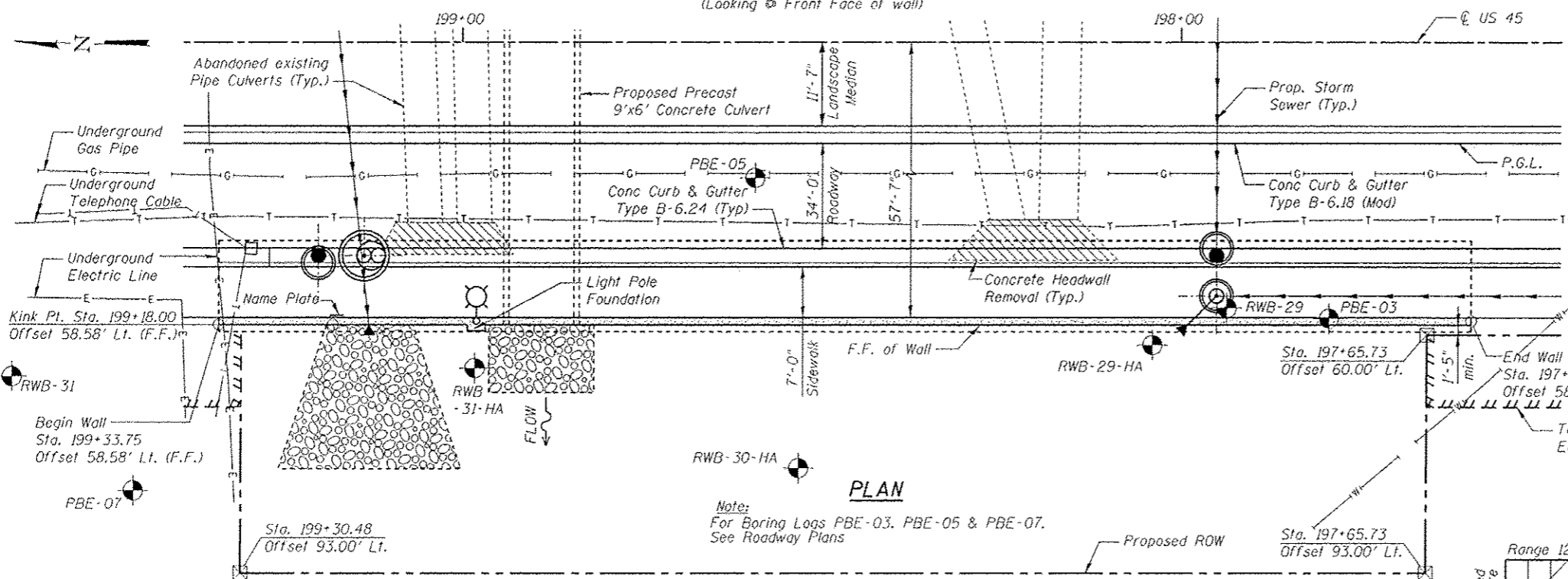
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	1,180
Concrete Structures	Cu. Yd.	250
Form Liner Textured Surface	Sq. Ft.	1,750
Protective Coat	Sq. Yd.	44.4
Reinforcement Bars, Epoxy Coated	Pound	35,290
Parapet Railing	Foot	167.0
Furnishing Metal Shell Piles	Foot	3,510
12" x 0.250"	Foot	3,510
Driving Piles	Foot	3,510
Test Pile Metal Shell	Each	1
Name Plates	Each	1
Geocomposite Wall Drain	Sq. Yd.	151
Porous Granular Embankment, Special	Cu. Yd.	202
Concrete Headwall Removal	Each	2

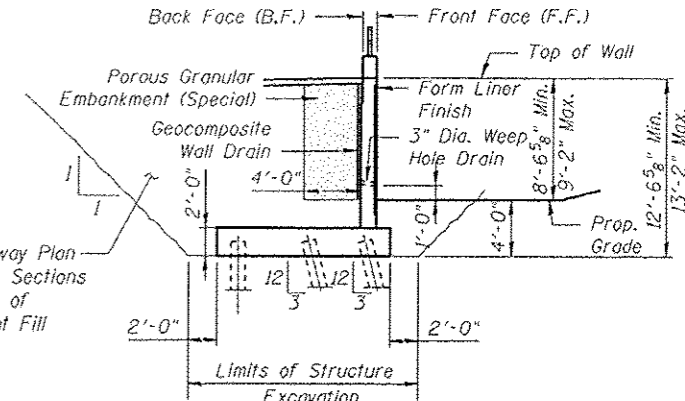
APPROVED
For Structural Adequacy Only
D. Carl Puryer, S.E.
Engineer of Bridges & Structures

ELEVATION

(Looking @ Front Face of wall)



See Roadway Plan and Cross Sections for Limits of Lightweight Fill



TYPICAL WALL SECTION

(Looking South)

PLAN

Note:
For Boring Logs PBE-03, PBE-05 & PBE-07.
See Roadway Plans

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

Field Units
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

PROPOSED PROFILE GRADE

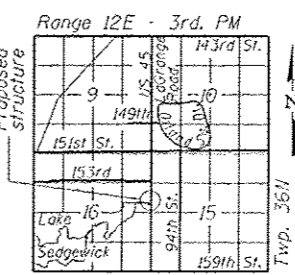
(FAP RTE. 330)

GENERAL NOTES

1. Reinforcement Bars Designated (E) shall be Epoxy Coated.
2. For Details of proposed 9'x6' Culvert, see Roadway Plans

STATION 198+46.63
BUILT BY
STATE OF ILLINOIS
FAP RTE. 330 SEC. 103R-4
LOADING HL-93
STR. NO. 016-W001

NAME PLATE
See Std. 515001



LOCATION SKETCH



Signed: *Olufemi A. Oladeinde*
OLUFEMI A. OLADEINDE, P.E., S.E.
LICENSE EXPIRES 11-30-2014
Date: 03/21/13

GENERAL PLAN & ELEVATION
US 45 (LaGRANGE ROAD)
FAP RTE. 330 - SEC 103R-4
COOK COUNTY
STATION 199+33.75 TO 197+59.50
STRUCTURE NO. 016-W001

SDI STRUCTURE DESIGNS, INCORPORATED
ARCHITECTS & ENGINEERS
PH: (312) 551-9780 • www.structuredesignsinc.com

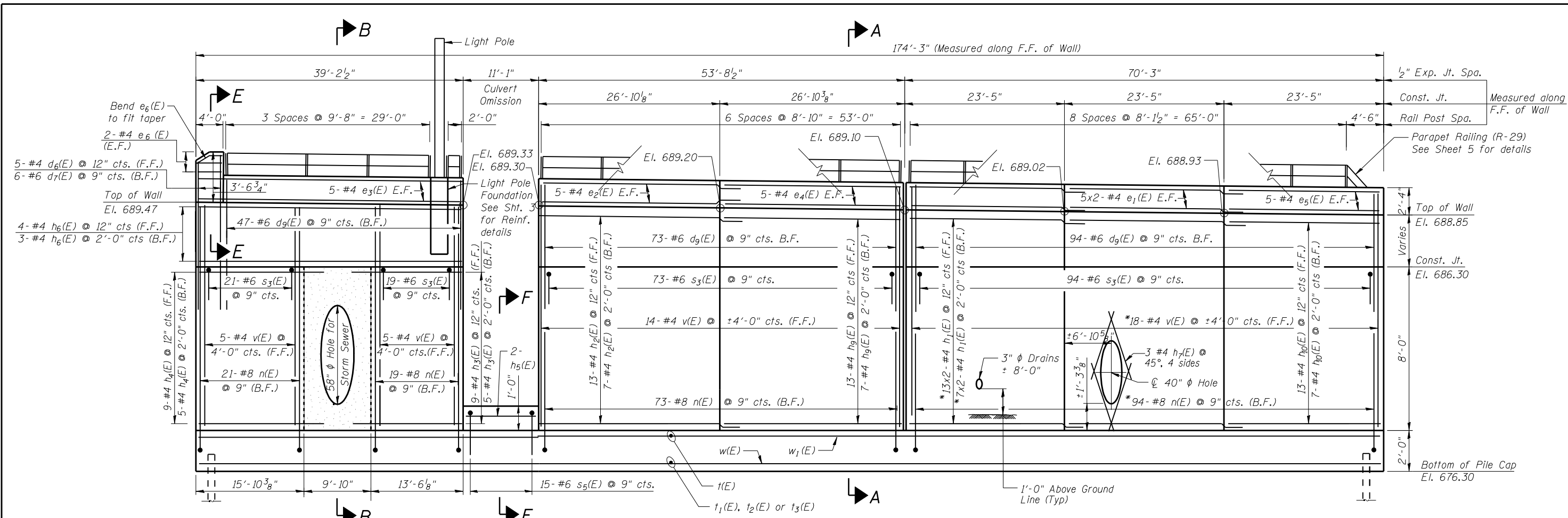
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	CHECKED - DAO	REVISIONS
	DRAWN - TCS/AG	REVISIONS
	CHECKED - LRT	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SHEET NO. 1 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	519

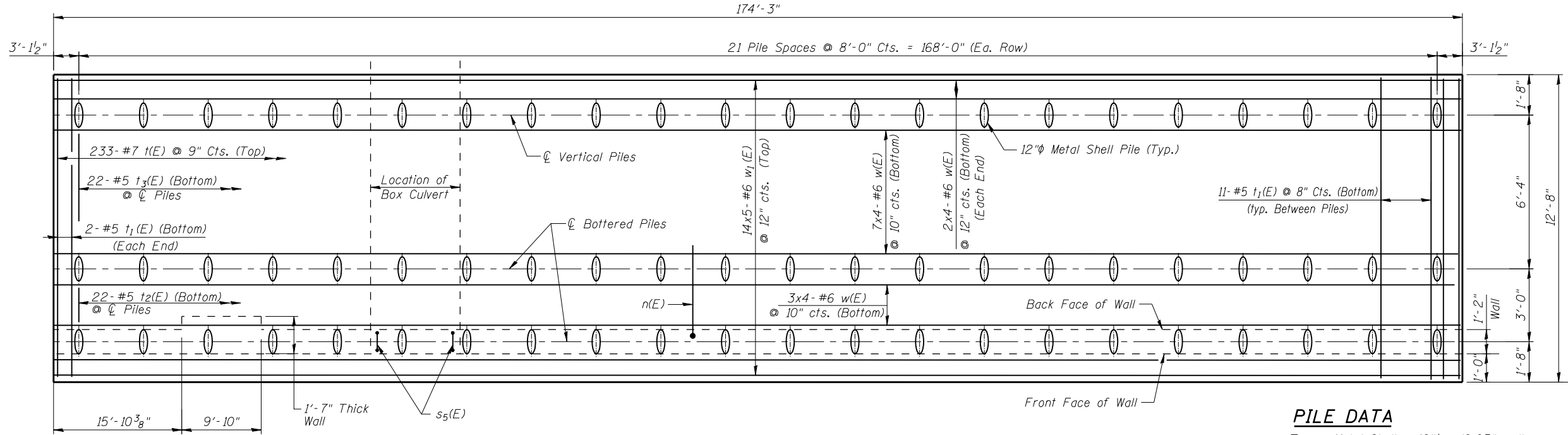
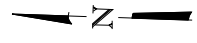
CONTRACT NO. 60M61
ILLINOIS FED. AID PROJECT



ELEVATION
(Looking @ Front Face of wall)

* Cut bars to fit around 40" φ hole

See Detail 1 Elevation-Sheet 3 for reinforcement in thicker Wall



PLAN - PILE CAP

NOTES

1. See Sections and Details on Sheet 4.
2. See Sheet 5 for Parapet Railing Details.
3. Bars indicated thus 5 x 2-#4 etc. indicates 5 lines of bars with 2 lengths per line.

PILE DATA

Type : Metal Shell - 12"φ w/0.25" walls with Pile shoes
 Nominal Required Bearing : 240 K
 Allowable Resistance Available : 80 K
 Estimated Pile Length : 54 ft.
 No. Production Piles : 65
 No. Test Piles : 1

Legend
 F.F. = Front Face of wall
 B.F. = Back Face of wall
 E.F. = Each Face of wall

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 ARCHITECTS & ENGINEERS
 PH: (312) 551-9780 • www.structuredesignsinc.com

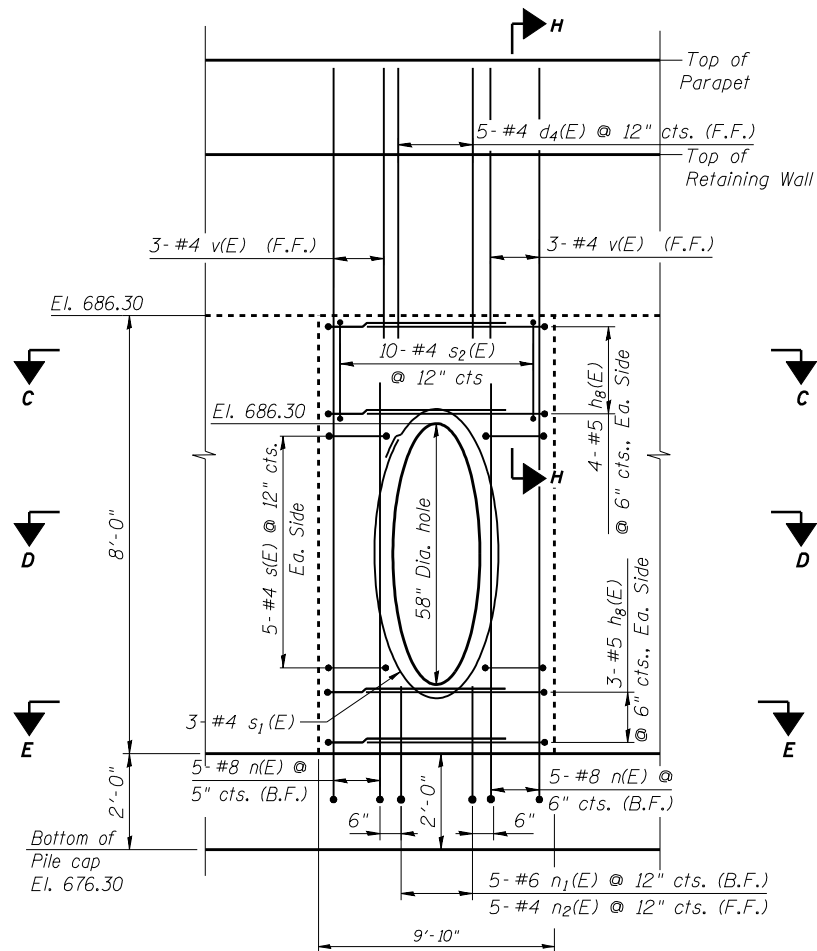
USER NAME =	DESIGNED - LRT/AG	REVISED -
PLOT SCALE =	CHECKED - OAO	REVISED -
PLOT DATE =	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL REINFORCEMENT DETAILS
STRUCTURE NO. 016-W001

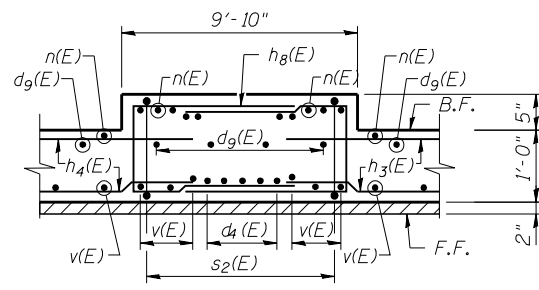
SHEET NO. 2 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				

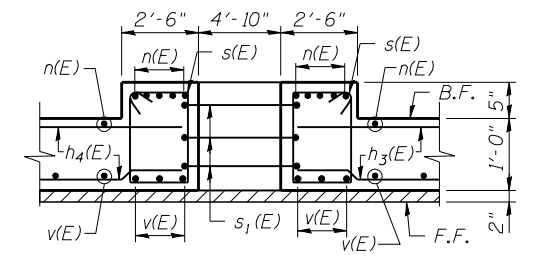


DETAIL 1 ELEVATION

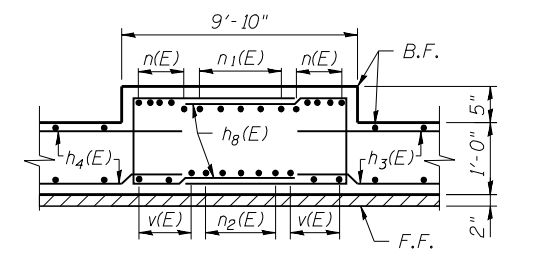
(Looking @ Front face of Wall)
 (See Sheet 4 for Section H)
 Cut n₁(E) & n₂(E) to fit around hole
 maintaining 2" min. clr.



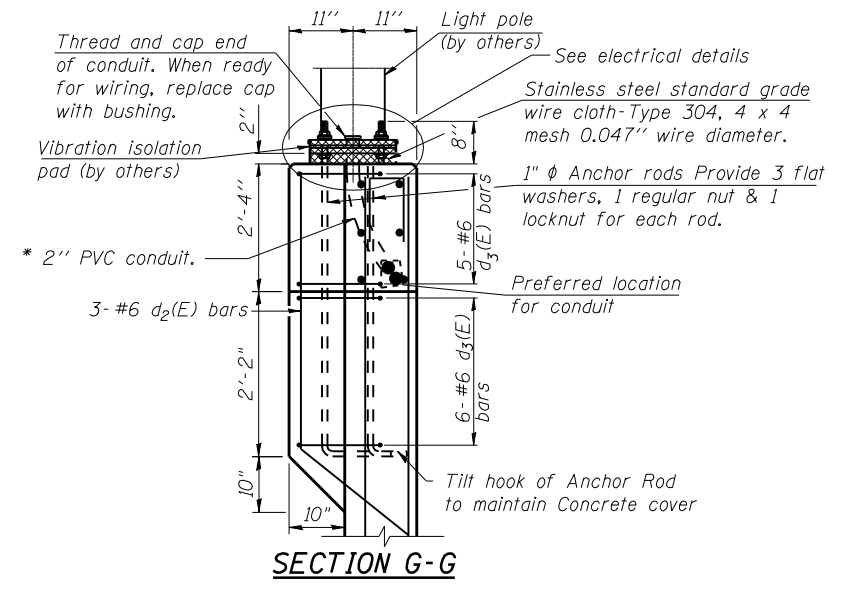
SECTION C-C



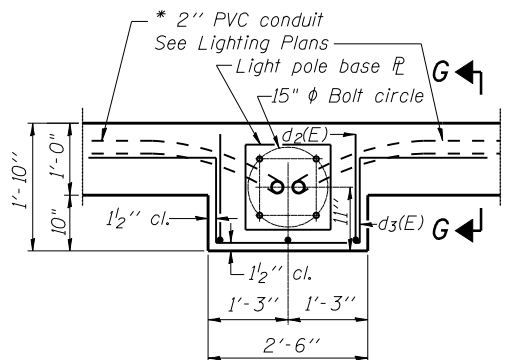
SECTION D-D



SECTION E-E

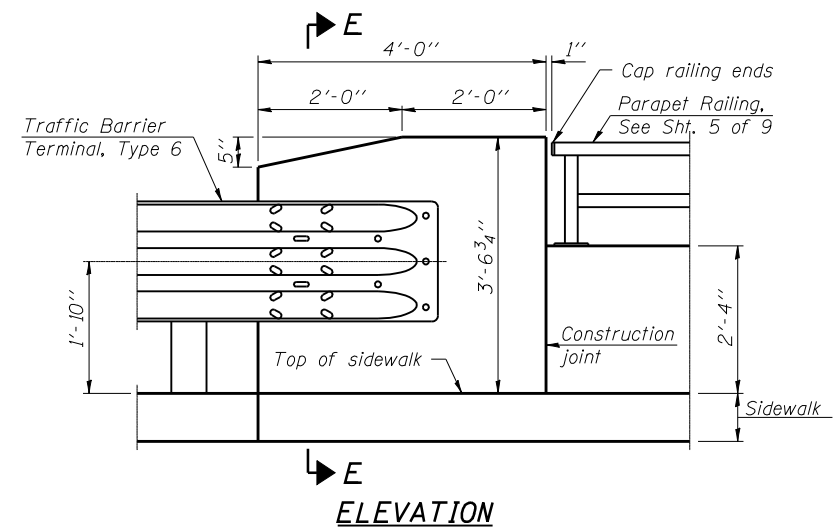


SECTION G-G

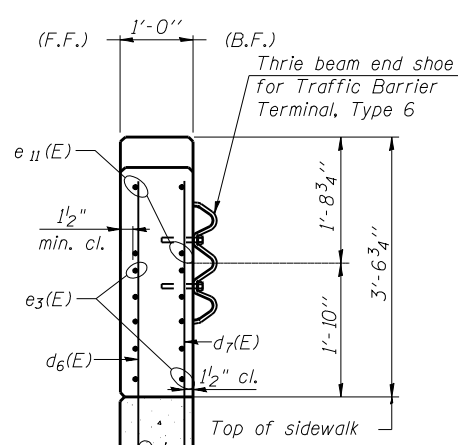


LIGHT POLE FOUNDATION PLAN

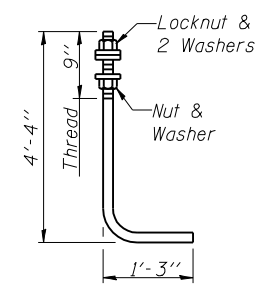
Notes:
 Cost of anchor rods is included with
 Concrete Structures.
 * Maintain 1/2" Clearance From Reinforcement



ELEVATION



SECTION E-E



ANCHOR ROD
 1" φ Diameter as specified for light poles.
 (ASTM F 1554 Grade 105)

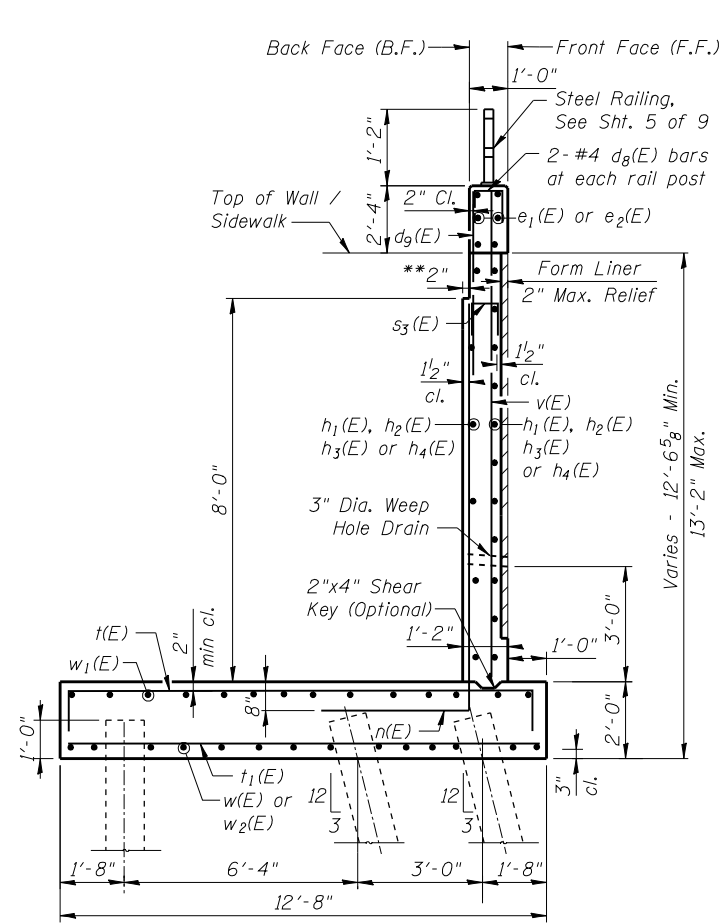
Legend
 F.F. = Front Face
 B.F. = Back Face
 E.F. = Each Face

USER NAME =	DESIGNED - LRT/AG	REVISED -
PLOT SCALE =	CHECKED - OAO	REVISED -
PLOT DATE =	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	521
CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				

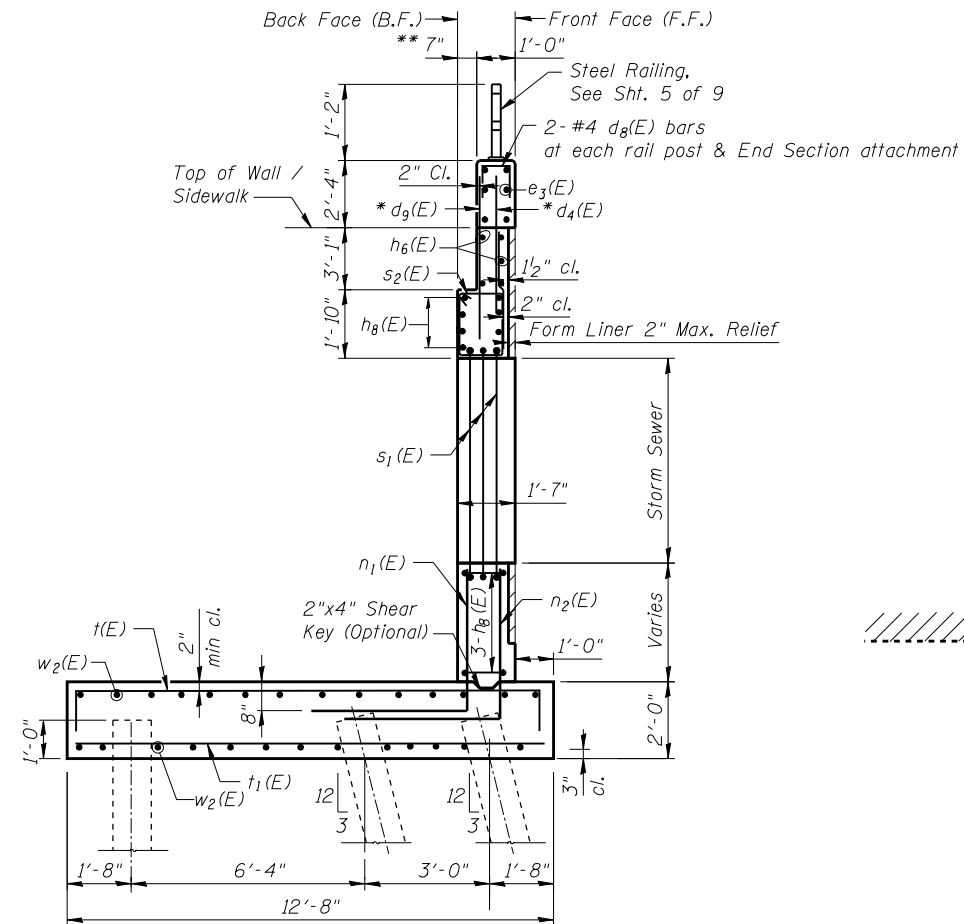
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d ₂ (E)	3	#6	6'-3"	L
d ₃ (E)	11	#6	8'-11"	L
d ₄ (E)	5	#4	7'-0"	L
d ₆ (E)	5	#4	6'-6"	L
d ₇ (E)	6	#6	11'-2"	L
d ₈ (E)	46	#4	2'-2"	L
d ₉ (E)	214	#6	10'-0"	L
e ₁ (E)	20	#4	26'-3"	L
e ₂ (E)	10	#4	29'-9"	L
e ₃ (E)	10	#4	38'-11"	L
e ₄ (E)	10	#4	26'-8"	L
e ₅ (E)	10	#4	23'-3"	L
e ₆ (E)	4	#4	3'-8"	L
h ₁ (E)	40	#4	26'-3"	L
h ₂ (E)	20	#4	29'-9"	L
h ₃ (E)	14	#4	15'-9"	L
h ₄ (E)	14	#4	18'-0"	L
h ₅ (E)	2	#5	10'-8"	L
h ₆ (E)	7	#4	38'-11"	L
h ₇ (E)	12	#4	9'-3"	L
h ₈ (E)	14	#5	15'-0"	L
h ₉ (E)	20	#4	26'-8"	L
h ₁₀ (E)	20	#4	23'-3"	L
n(E)	217	#8	13'-0"	L
n ₁ (E)	5	#6	5'-8"	L
n ₂ (E)	5	#4	4'-11"	L
s(E)	10	#4	7'-3"	L
s ₁ (E)	3	#4	19'-9"	L
s ₂ (E)	10	#4	6'-1"	L
s ₃ (E)	207	#6	4'-4"	L
s ₅ (E)	15	#6	4'-6"	L
t(E)	233	#7	15'-4"	L
t ₁ (E)	235	#5	12'-4"	L
t ₂ (E)	22	#5	1'-9"	L
t ₃ (E)	22	#5	5'-1"	L
v(E)	48	#4	10'-7"	L
w(E)	56	#6	46'-10"	L
w ₁ (E)	70	#6	38'-4"	L
Structure Excavation		Cu. Yd.	1,180	
Concrete Structures		Cu. Yd.	250	
Reinforcement Bars, Epoxy Coated		Pound	35,290	
Furnishing Metal Shell Piles 12" x 0.250"		Foot	3,510	
Driving Piles		Foot	3,510	
Test Pile Metal Shells		Each	1	



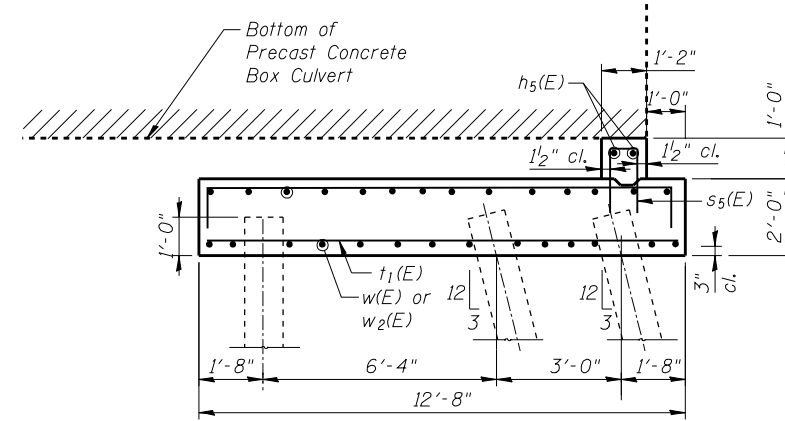
SECTION A-A

** Slope to drain



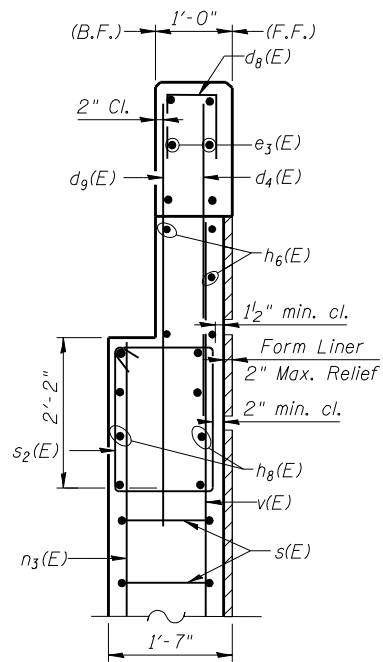
SECTION B-B

Thru Storm Sewer Section
* Cut to fit Hole



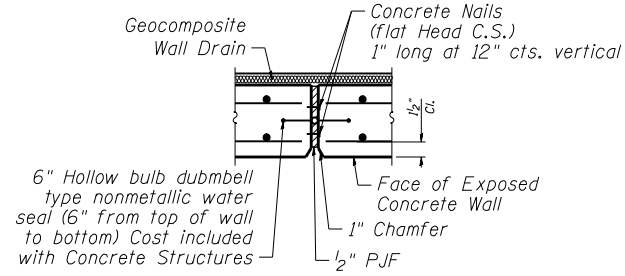
SECTION F-F

(Thru Box Culvert Section)

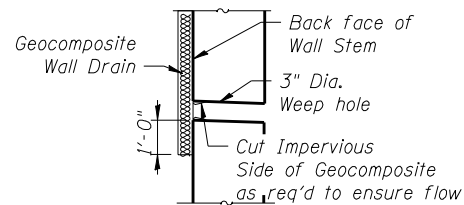


SECTION H-H

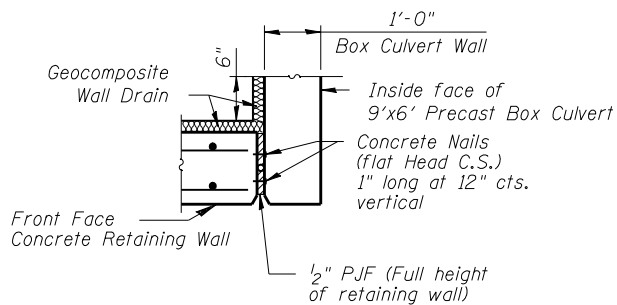
Section Thru Thickened Section of Wall



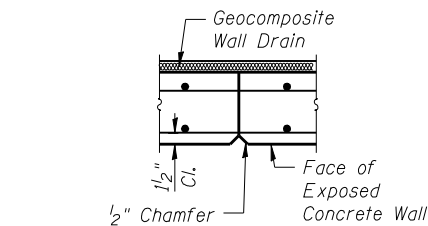
EXPANSION JOINT



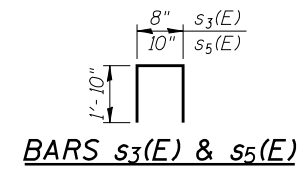
WEEP HOLE DRAIN DETAIL



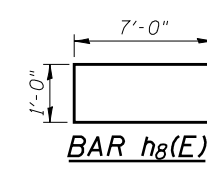
**EXPANSION JOINT AT
RETAINING WALL & CULVERT**



CONSTRUCTION JOINT



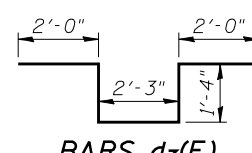
BARS s₃(E) & s₅(E)



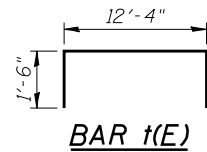
BAR h₈(E)



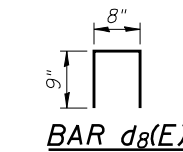
BAR d₂(E)



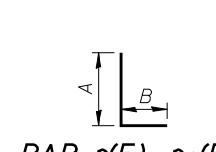
BARS d₃(E)



BAR t(E)

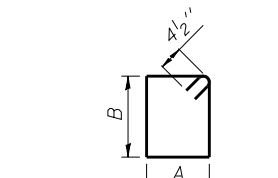


BAR d₈(E)



**BAR n(E), n₁(E)
& n₂(E)**

Bar	A	B
n(E)	8'-6"	4'-6"
n ₁ (E)	3'-5"	2'-3"
n ₂ (E)	3'-5"	1'-6"

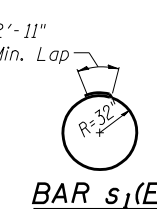


BARS s(E) & s₂(E)

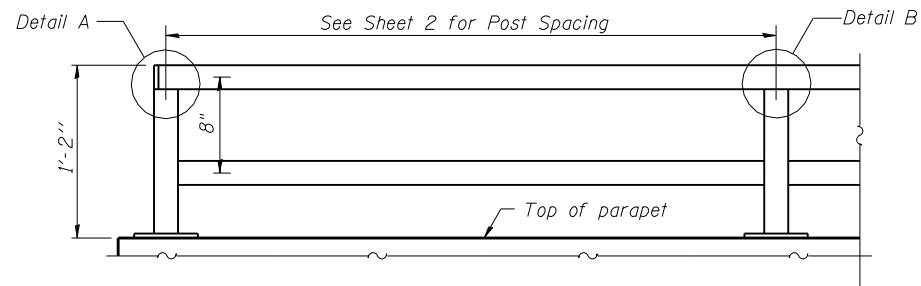
Bar	A	B
s(E)	2'-2"	1'-1"
s ₂ (E)	1'-1"	1'-7"

**MINIMUM
BAR LAPS**

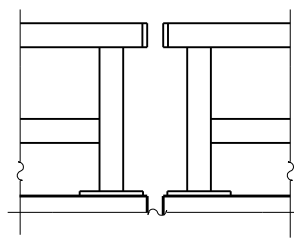
#4	2'-11"
#5	3'-8"
#6	4'-5"



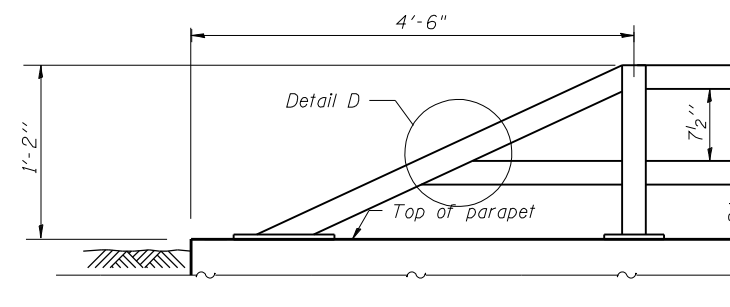
BAR s₁(E)



PARAPET RAILING
ELEVATION
(Inside Face of Rail)

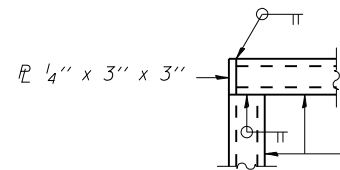


PARAPET RAILING
ELEVATION AT EXPANSION JOINT

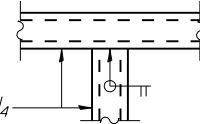


PARAPET RAILING
AT END SECTION

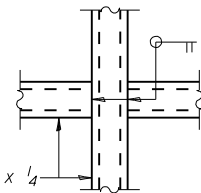
Note:
All post, railing, splices, anchor devices, and bent plates shall be painted using the inorganic zinc-rich/waterborne acrylic paint system as described in the special provision "Cleaning and Painting New Metal Structures." Color of painted railing to be black.



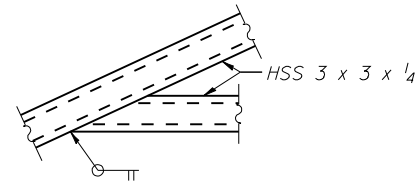
DETAIL A



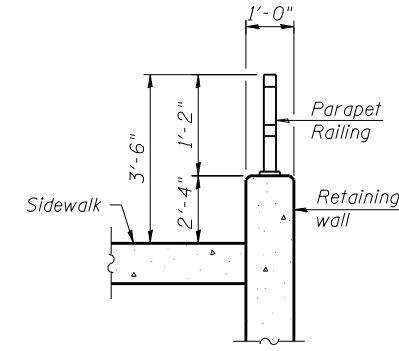
DETAIL B



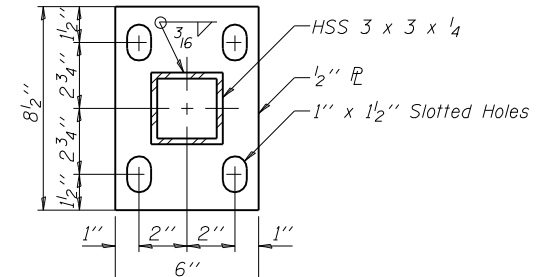
DETAIL C



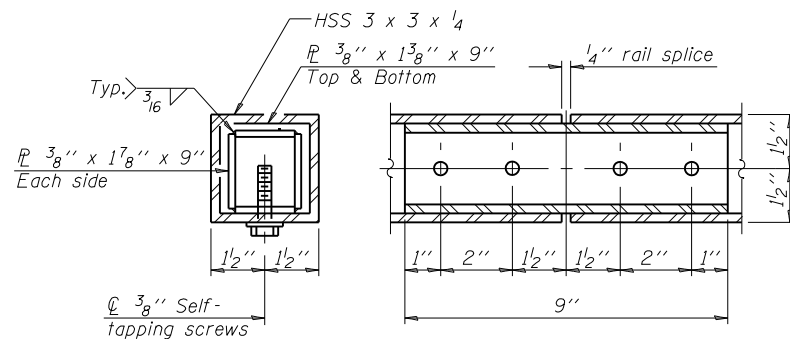
DETAIL D



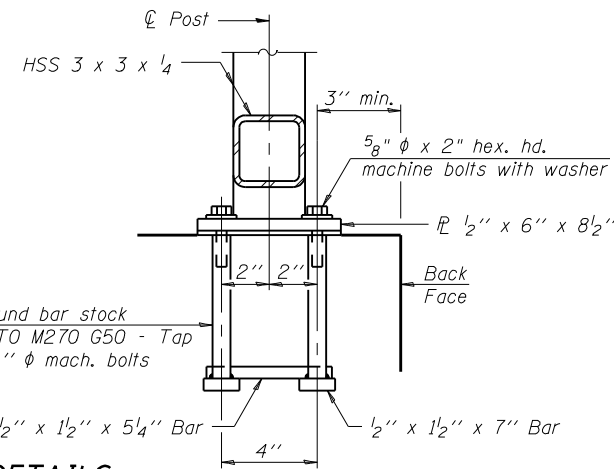
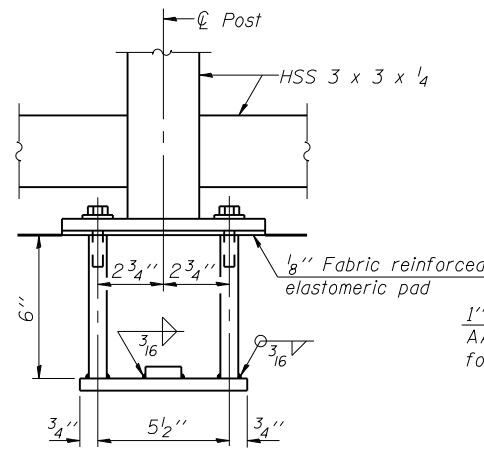
SECTION THRU RAILING



BASE PL



RAIL SPLICE

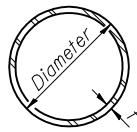


ANCHOR BOLT DETAILS

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.

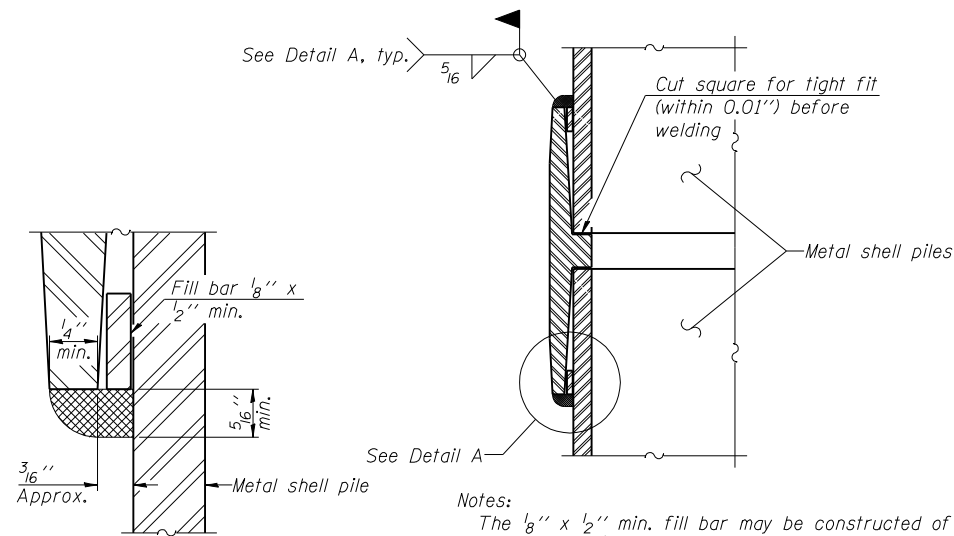
BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	167.0



METAL SHELL PILE TABLE

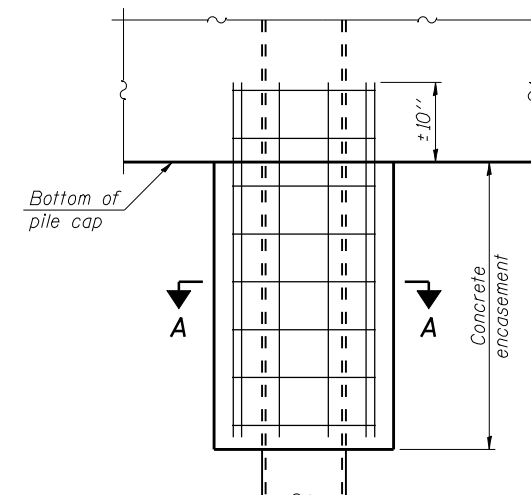
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



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

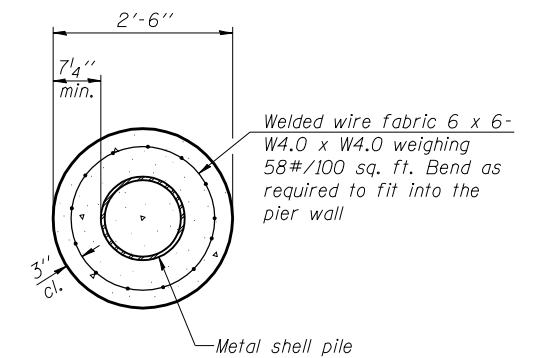
DETAIL A

WELDED COMMERCIAL SPLICE



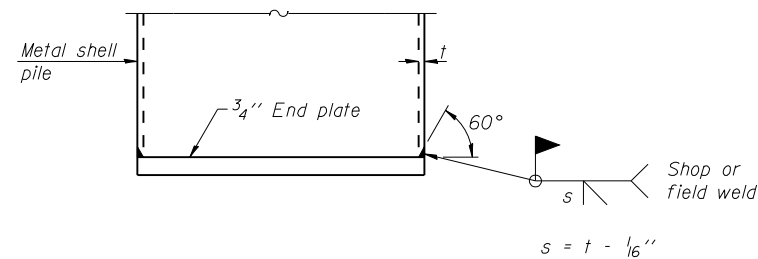
ELEVATION

CONCRETE ENCASEMENT AT PIERS

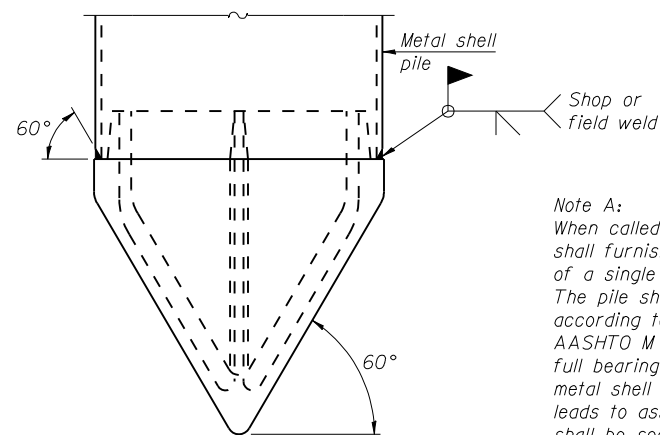


SECTION A-A

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



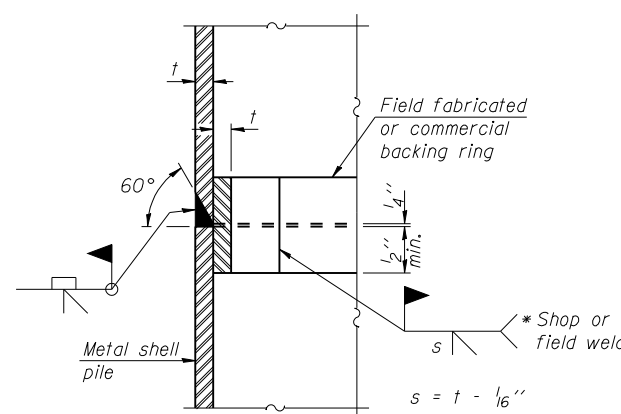
END PLATE ATTACHMENT



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.

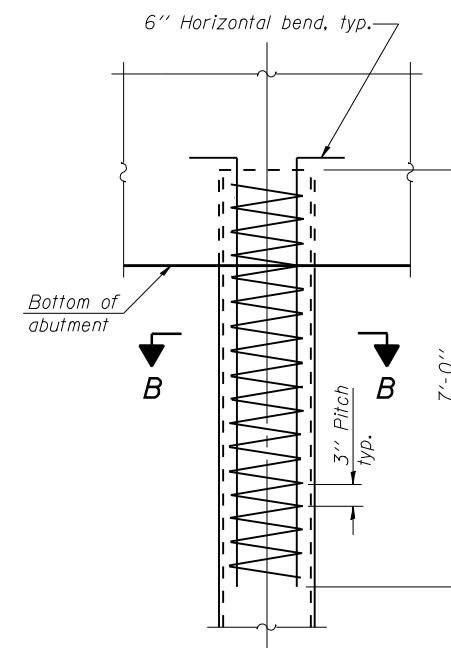
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)



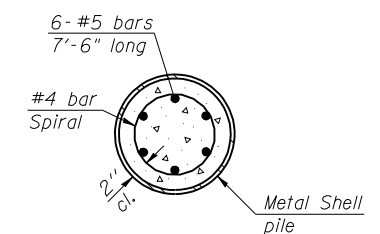
COMPLETE PENETRATION WELD SPLICE

* 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.

F-MS 1-27-12



USER NAME =	DESIGNED - LRT/AG	REVISED -
PLOT SCALE =	CHECKED - OAO	REVISED -
PLOT DATE =	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS
 STRUCTURE NO. 016-W001**

SHEET NO. 6 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	524
CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				

BORING LOG RWB-29 Page 1 of 2

wongeng@wongeng.com WEI Job No.: 201-40-01 Datum: NGVD

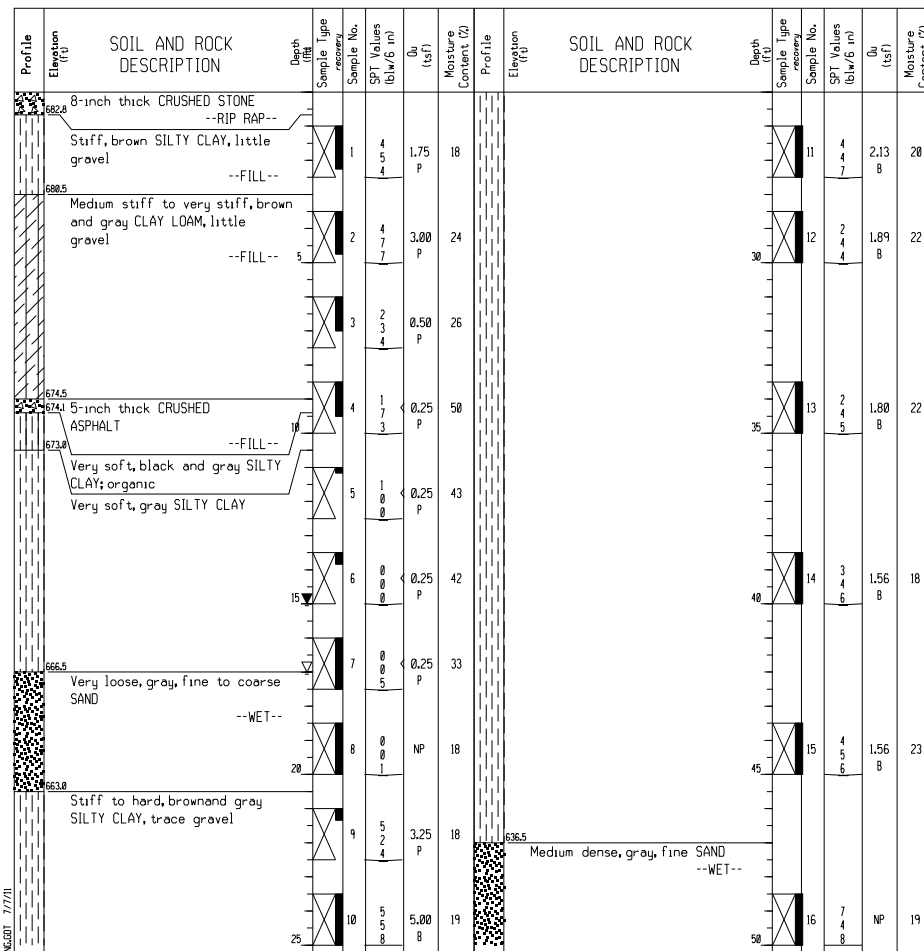
Client: McDonough Associates Inc. Elevation: 683.50 ft

Project: US 45 North: 1800597.53 ft

Location: ORLAND PARK, T 36N, R 12E East: 1115503.36 ft

Telephone: Station: 197+93.60 Offset: 56.23 LT

Fax: Location



GENERAL NOTES	WATER LEVEL DATA
Begin Drilling: 04-06-2011	Complete Drilling: 04-06-2011
Drilling Contractor: WTS	Drill Rig: D-50 ATV
Driller: K&R	Logger: B. Wilson
Checked by: CLM	
Drilling Method: 3.25' IDA HSA; Boring backfilled upon completion	
	While Drilling: 17.00 ft
	At Completion of Drilling: 15.00 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.

BORING LOG RWB-29 Page 2 of 2

wongeng@wongeng.com WEI Job No.: 201-40-01 Datum: NGVD

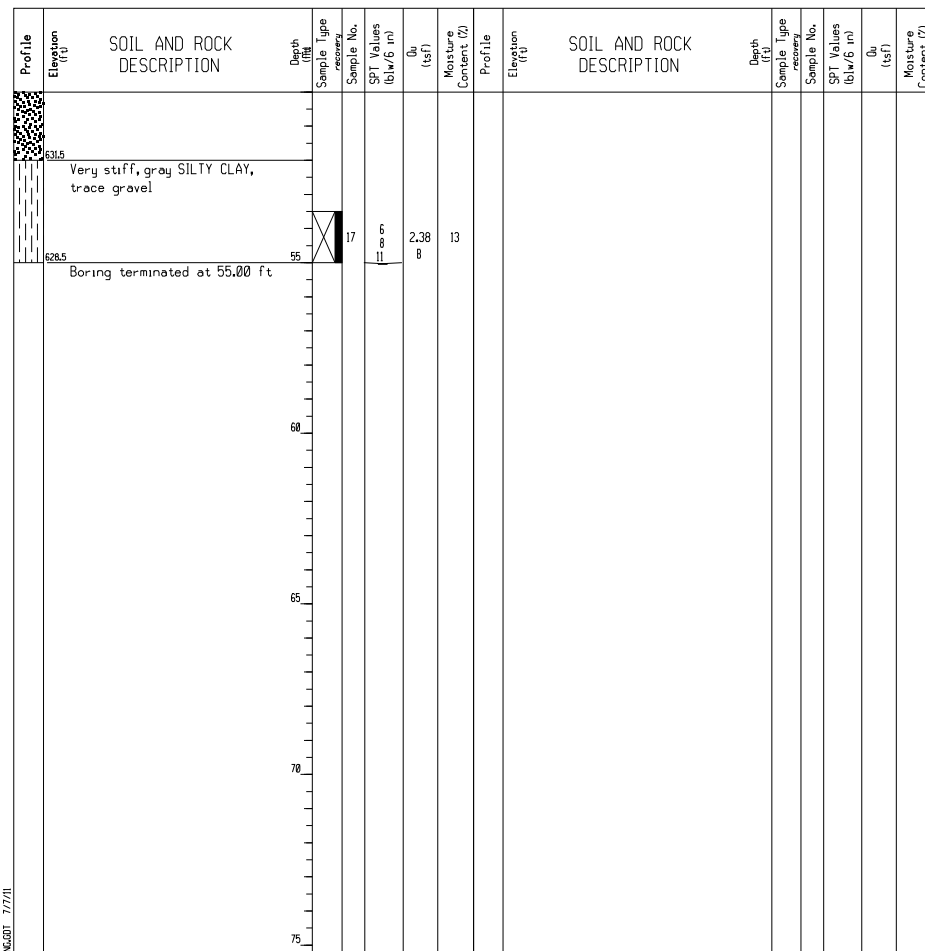
Client: McDonough Associates Inc. Elevation: 683.50 ft

Project: US 45 North: 1800597.53 ft

Location: ORLAND PARK, T 36N, R 12E East: 1115503.36 ft

Telephone: Station: 197+93.60 Offset: 56.23 LT

Fax: Location



GENERAL NOTES	WATER LEVEL DATA
Begin Drilling: 04-06-2011	Complete Drilling: 04-06-2011
Drilling Contractor: WTS	Drill Rig: D-50 ATV
Driller: K&R	Logger: B. Wilson
Checked by: CLM	
Drilling Method: 3.25' IDA HSA; Boring backfilled upon completion	
	While Drilling: 17.00 ft
	At Completion of Drilling: 15.00 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.

BORING LOG RWB-29-HA Page 1 of 1

wongeng@wongeng.com WEI Job No.: 201-40-01 Datum: NGVD

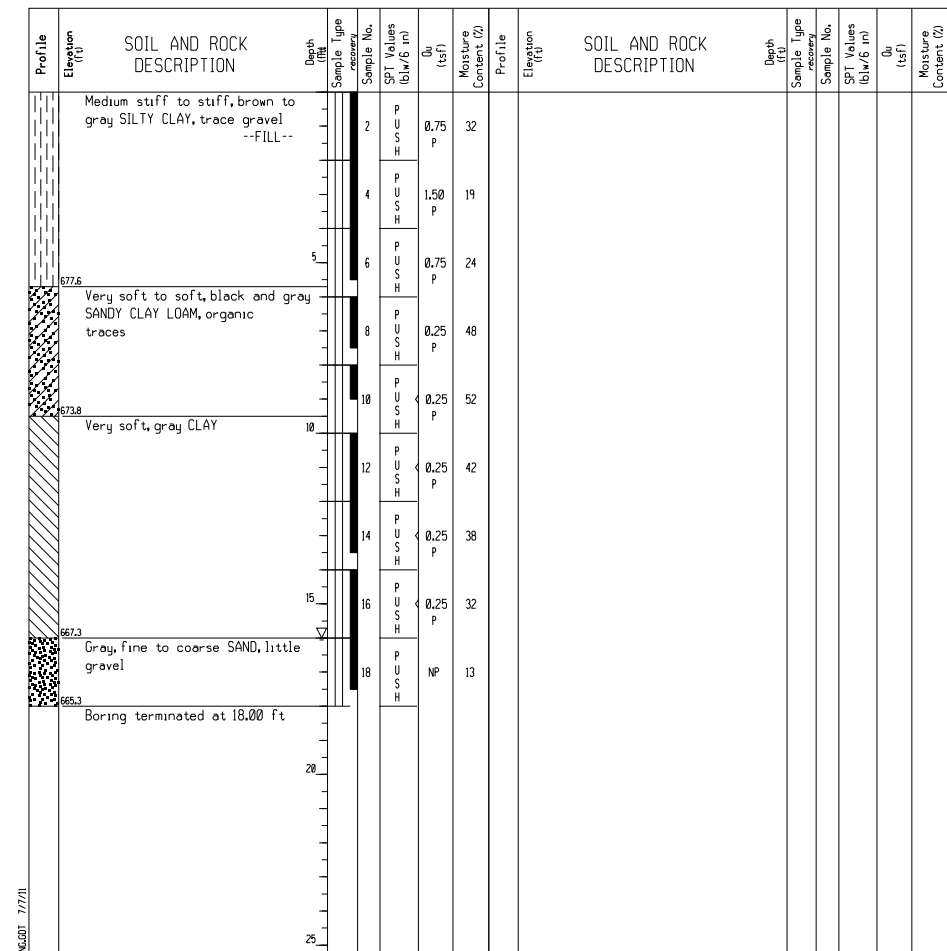
Client: McDonough Associates Inc. Elevation: 683.30 ft

Project: US 45 North: 1800607.65 ft

Location: ORLAND PARK, T 36N, R 12E East: 1115497.85 ft

Telephone: Station: 198+3.90 Offset: 61.39 LT

Fax: Location



GENERAL NOTES	WATER LEVEL DATA
Begin Drilling: 03-17-2011	Complete Drilling: 03-17-2011
Drilling Contractor: WEI	Drill Rig: Geoprobe
Driller: B&C	Logger: B. Wilson
Checked by: CLM	
Drilling Method: Hand Auger	
	While Drilling: 16.00 ft
	At Completion of Drilling: N/A
	Time After Drilling: NA
	Depth to Water: NA

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



USER NAME =	DESIGNED - LRT/AG	REVISED -
PLOT SCALE =	CHECKED - OAO	REVISED -
PLOT DATE =	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1 OF 3
STRUCTURE NO. 016-W001

SHEET NO. 7 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	525
CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				

BORING LOG RWB-30-HA Page 1 of 1

wangeng@wangeng.com WEI Job No.: 201-40-01 Datum: NGVD

Client: McDonough Associates Inc. Elevation: 683.50 ft North: 1800656.35 ft

Project: US 45 East: 1115479.13 ft Station: 198+53.21

Location: ORLAND PARK, T 36N, R 12E Offset: 78.45 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _v (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _v (tsf)	Moisture Content (%)
681.5	Medium stiff, brown SILTY CLAY, trace gravel --FILL--	2	PUSH		0.75	47							
673.5	Soft, black and gray SANDY CLAY LOAM, trace gravel and organic traces	4	PUSH		0.25	54							
677.8	Brown and gray SILTY LOAM, trace gravel	5	PUSH		NP	57							
677.8	Very soft to soft, brown and gray CLAY	8	PUSH		0.25	40							
673.8	Gray, medium SAND	10	PUSH		0.25	32							
667.8	Stiff, gray SILTY CLAY, trace gravel	18	PUSH		1.25	27							
665.5	Boring terminated at 18.00 ft												

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-17-2011	Complete Drilling	03-17-2011
Drilling Contractor	WEI	Drill Rig	Geoprobe
Driller	B&C	Logger	B. Wilson
Checked by	CLM	Time After Drilling	NA
Drilling Method	Hand Auger	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

BORING LOG RWB-31 Page 1 of 3

wangeng@wangeng.com WEI Job No.: 201-40-01 Datum: NGVD

Client: McDonough Associates Inc. Elevation: 688.30 ft North: 1800770.33 ft

Project: US 45, Segment 2 East: 1115482.98 ft Station: 199+68.65

Location: Rt. Wall 016-W001, Cook Co., T36N, R12E Offset: 60.77 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _v (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _v (tsf)	Moisture Content (%)
688.3	6-inch thick ASPHALT --PAVEMENT--												
688.3	6-inch thick CRUSHED STONE --BASE COURSE--												
688.3	Medium dense, brown SANDY LOAM, some gravel	1	10	15	7	NP	15						
688.3	Very stiff, brown SILTY CLAY LOAM, little gravel	2	4	4	5	2.00	25						
688.3	Soft, brown and gray SILTY CLAY, trace roots	3	2	1	1	0.33	28						
688.3	Loose, gray, fine to coarse SAND, little gravel	4	6	2	2	NP	10						
688.3	Very stiff, gray SILTY CLAY	5	2	2	2	NP	18						
688.3	Stiff to very stiff, gray SILTY CLAY, trace gravel	6	1	2	4	1.81	22						
688.3	Loose, gray GRAVELLY SAND	7	2	2	8	1.07	25						
688.3	Loose, gray, fine SAND	8	2	3	4	1.48	22						
688.3	Loose, gray, fine SAND	9	2	3	5	1.15	22						
688.3	Loose, gray, fine SAND	10	2	3	6	1.66	17						

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-06-2011	Complete Drilling	04-06-2011
Drilling Contractor	WTS	Drill Rig	D-50 ATV
Driller	K&R	Logger	B. Wilson
Checked by	CLM	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.			

BORING LOG RWB-31 Page 1 of 3

wangeng@wangeng.com WEI Job No.: 201-40-01 Datum: NGVD

Client: McDonough Associates Inc. Elevation: 689.30 ft North: 1800770.33 ft

Project: US 45, Segment 2 East: 1115482.98 ft Station: 199+68.65

Location: Rt. Wall 016-W001, Cook Co., T36N, R12E Offset: 60.77 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _v (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _v (tsf)	Moisture Content (%)
689.3	Medium dense, gray GRAVELLY SAND	11	3	5	7	2.02	15						
689.3	Loose to medium dense, gray SILT to SILTY LOAM, laminations of fine sand	12	4	4	4	NP	21						
689.3	Boring terminated at 65.00 ft												

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-06-2011	Complete Drilling	04-06-2011
Drilling Contractor	WTS	Drill Rig	D-50 ATV
Driller	K&R	Logger	B. Wilson
Checked by	CLM	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.			



USER NAME =	DESIGNED - LRT/AG	REVISED -
PLOT SCALE =	CHECKED - OAO	REVISED -
PLOT DATE =	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BORING LOGS 2 OF 3
STRUCTURE NO. 016-W001**

SHEET NO. 8 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	526
CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				

BORING LOG RWB-31-HA

Page 1 of 1

wangeng@wangeng.com

WEI Job No.: 201-40-01

Datum: NGVD
Elevation: 682.50 ft
North: 1800701.84 ft
East: 1115491.43 ft
Station: 198+98.26
Offset: 64.60 LT

Telephone:
Fax:

Client: McDonough Associates Inc.
Project: US 45
Location: ORLAND PARK, T 36N, R 12E

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/6 in)	q _u (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/6 in)	q _u (tsf)	Moisture Content (%)
674.5	Brown, medium SAND --FILL--	2	PUSH	2		NP		674.5							
674.5	Very soft to soft, gray CLAY	4	PUSH	4		NP		674.5							
674.5		6	PUSH	6	0.25	P		674.5							
674.8	Gray, medium SAND	8	PUSH	8	0.25	P		674.8							
668.8		10	PUSH	10		NP		668.8							
668.8		12	PUSH	12		NP		668.8							
668.8		14	PUSH	14		NP		668.8							
666.5	Very stiff, gray SILTY CLAY	16	PUSH	16		2.25	P	666.5							
	Boring terminated at 16.00 ft														

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-18-2011	Complete Drilling	03-18-2011	While Drilling	2.00 ft		
Drilling Contractor	WEI	Drill Rig	Geoprobe	At Completion of Drilling	2.00 ft		
Driller	B&C	Logger	B. Wilson	Time After Drilling	NA		
Checked by	CLM			Depth to Water	NA		
Drilling Method	Hand Auger						
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

WANGENG 20100223 WANGENG.DWG 7/7/11



USER NAME =	DESIGNED - LRT/AG	REVISED -
	CHECKED - OAO	REVISED -
PLOT SCALE =	DRAWN - TCS/AG	REVISED -
PLOT DATE =	CHECKED - LRT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3 OF 3
STRUCTURE NO. 016-W001

SHEET NO. 9 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	527
CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				

Benchmark: TBM "G" #569; Southeast bottom of light pole #93-15 +/- 300' north of 153rd st. on the west side of LaGrange rd. El. 699.946

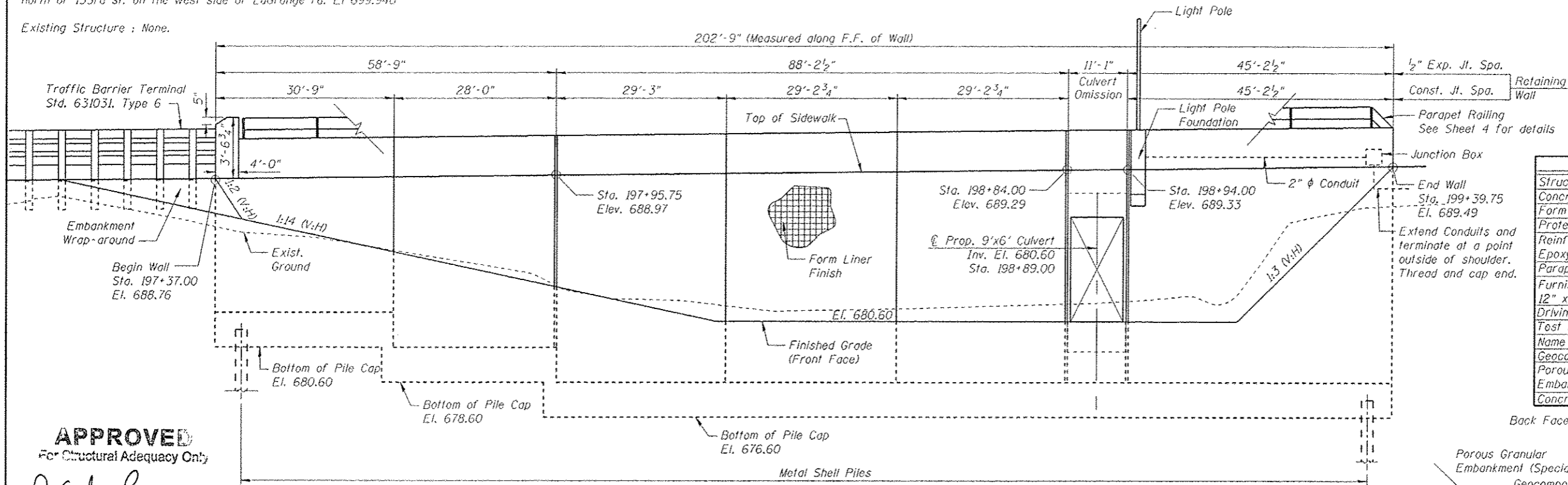
Existing Structure : None.

INDEX OF SHEETS

Sheet No.	Title
1.	General Plan and Elevation
2.	Footling Layout
3.	Details
4.	Details
5.	Parapet Railing
6.	Metal Shell Pile Details
7.	Boring Logs 1 of 3
8.	Boring Logs 2 of 3
9.	Boring Logs 3 of 3

TOTAL BILL OF MATERIAL

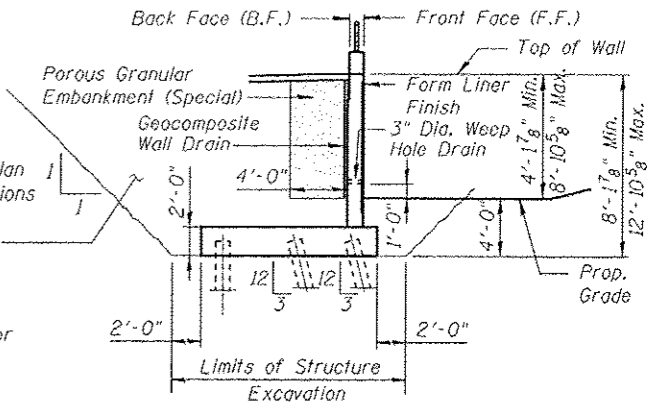
ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd	973
Concrete Structures	Cu. Yd	281.0
Form Liner Textured Surface	Sq. Ft.	1,870
Protective Coat	Sq. Yd.	51.0
Reinforcement Bars, Epoxy Coated	Pound	36,840
Parapet Railing	Foot	196.0
Furnishing Metal Shell Piles 12" x 0.250"	Foot	6,208
Driving Piles	Foot	6,208
Test Pile Metal Shells	Each	1
Name Plates	Each	1
Geocomposite Wall Drain	Sq. Yd.	155
Porous Granular Embankment, Special	Cu. Yd.	208
Concrete Headwall Removal	Each	3



ELEVATION

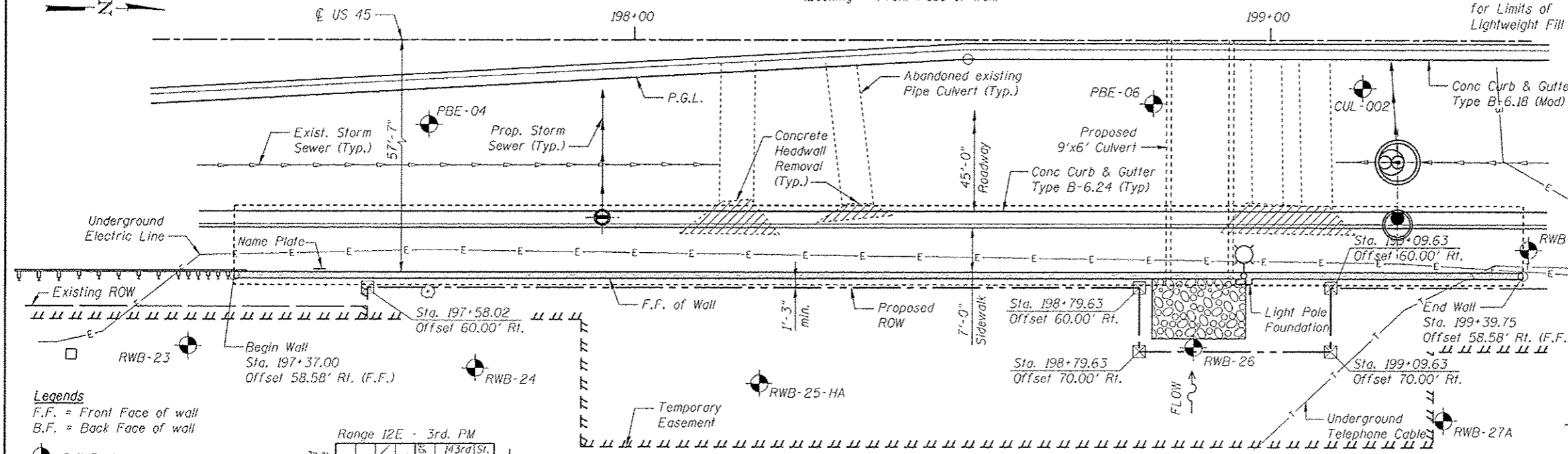
(Looking @ Front Face of wall)

See Roadway Plan and Cross Sections for Limits of Lightweight Fill



TYPICAL WALL SECTION

(Looking North)



PLAN

Note:
For Boring Logs PBE-04 PBE-06 & CUL-002
See Roadway Plans

GENERAL NOTES

1. Reinforcement Bars Designated (E) shall be Epoxy Coated.
2. For Details of Proposed 9'x6' Culvert, see Roadway Plans

STATION 198+38.38
BUILT BY
STATE OF ILLINOIS
FAP RTE. 330 SEC. 103R-4
LOADING HL-93
STR. NO. 016-W002

NAME PLATE

See Std. 515001



Signed: *Olufemi Oladeinde*
OLUFEMI A. OLADEINDE, P.E., S.E.
LICENSE EXPIRES 11-30-2014
03/21/13 Date

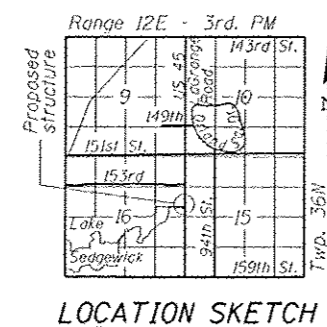
GENERAL PLAN & ELEVATION
US 45 (LaGRANGE ROAD)
FAP RTE. 330 - SEC 103R-4
COOK COUNTY
STATION 197+37.00 TO 199+39.75
STRUCTURE NO. 016-W002

APPROVED
For Structural Adequacy Only
D. Carl Perry
Engineer of Bridges & Structures

Legends
F.F. = Front Face of wall
B.F. = Back Face of wall
Soil Boring Location

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications
for Highway Bridges, 17th Edition

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



PROPOSED PROFILE GRADE
(FAP RTE, 330)



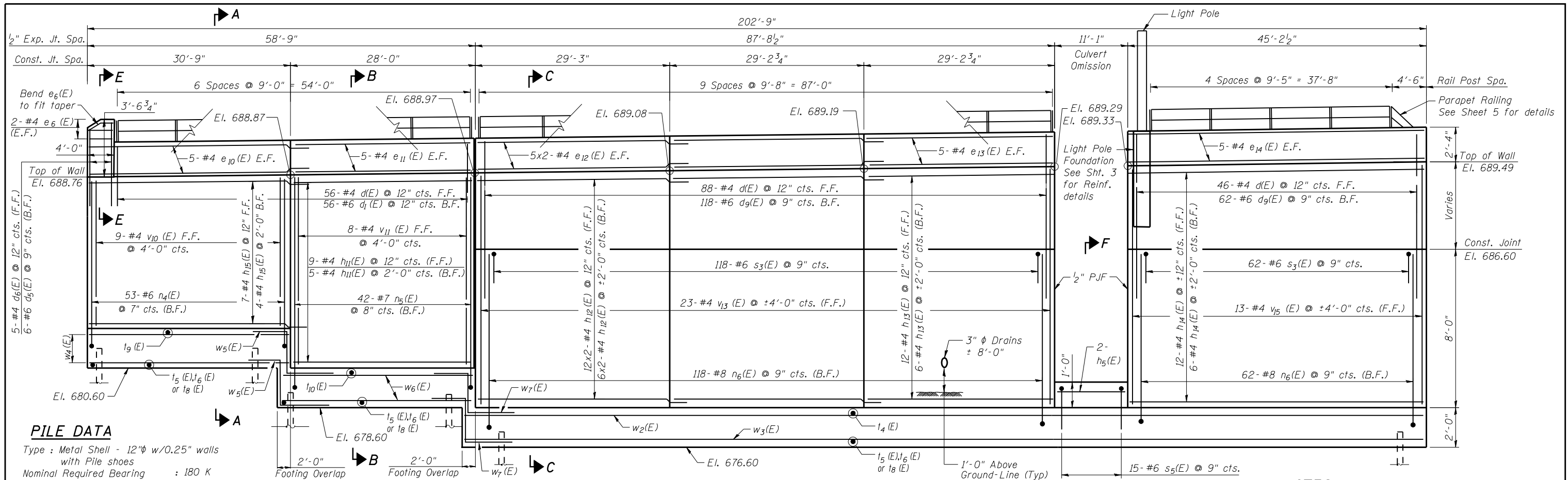
USER NAME	DESIGNED	REVISIONS
LRT/AG	LRT/AG	REVISIONS
OAO	OAO	REVISIONS
TCS/AG	TCS/AG	REVISIONS
LRT	LRT	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SHEET NO. 1 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	528

CONTRACT NO. 60M61
ILLINOIS FED. AID PROJECT



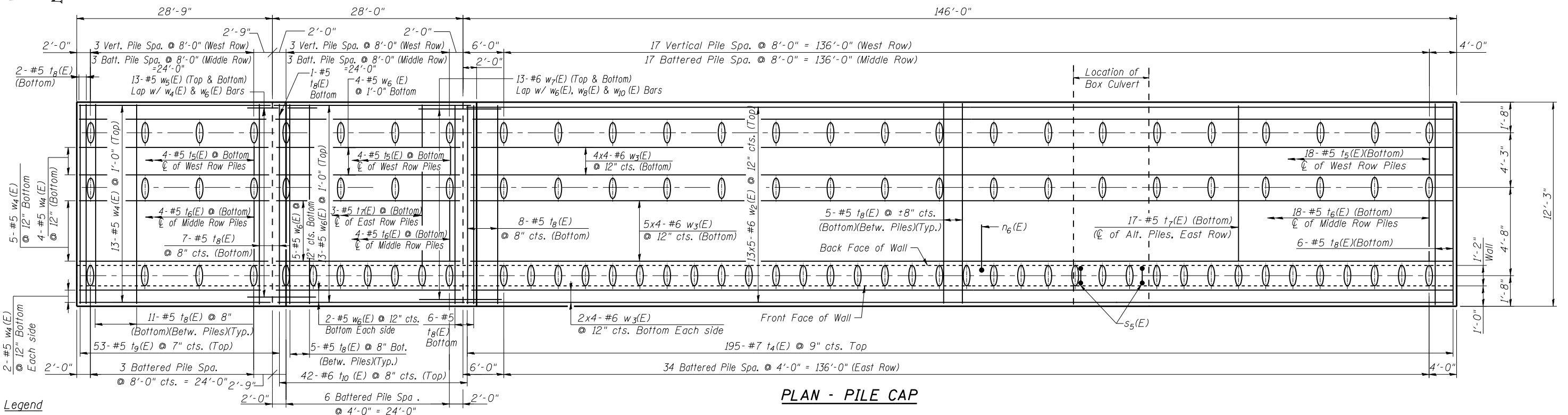
PILE DATA

Type : Metal Shell - 12"φ w/0.25" walls with Pile shoes
 Nominal Required Bearing : 180 K
 Allowable Resistance Available : 60 K
 Estimated Pile Length : 64 ft.
 No. Production Piles : 97
 No. Test Piles : 1

ELEVATION
 (Looking @ Front Face of Wall)

NOTES

1. See Sections and Details on Sheet 4.
2. See Sheet 5 for Parapet Railing Details.
3. Bars indicated thus 5 x 2-#4 etc. indicates 5 lines of bars with 2 lengths per line.



PLAN - PILE CAP

Legend
 F.F. = Front Face of wall
 B.F. = Back Face of wall
 E.F. = Each Face of wall



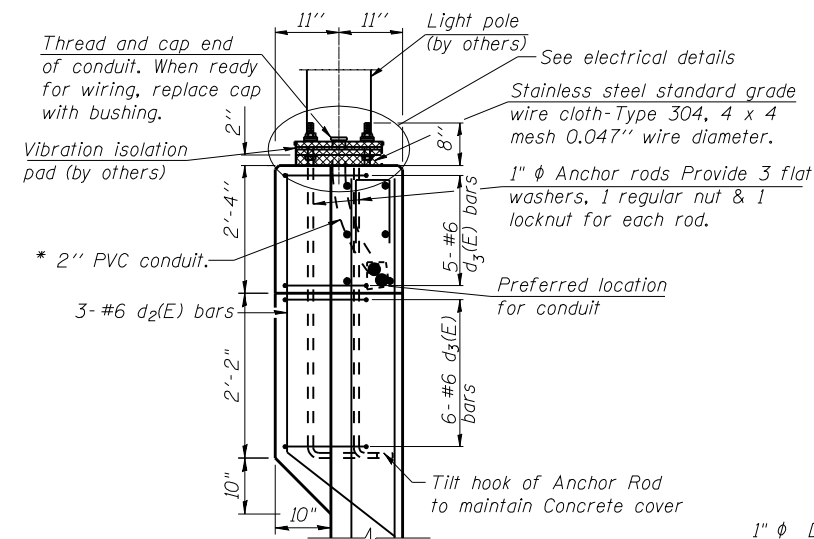
USER NAME =	DESIGNED - LRT/AG	REVISED -
PLOT SCALE =	CHECKED - OAO	REVISED -
PLOT DATE =	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

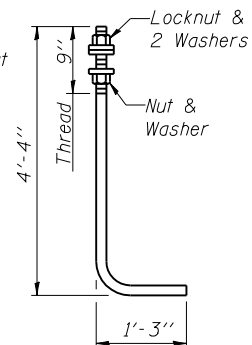
FOOTING LAYOUT
STRUCTURE NO. 016-W002

SHEET NO. 2 OF 9 SHEETS

F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 529
CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				

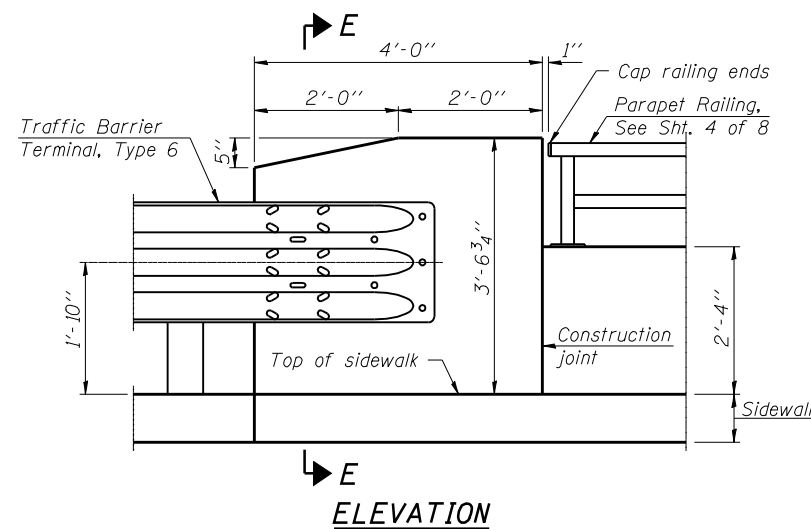


SECTION D-D

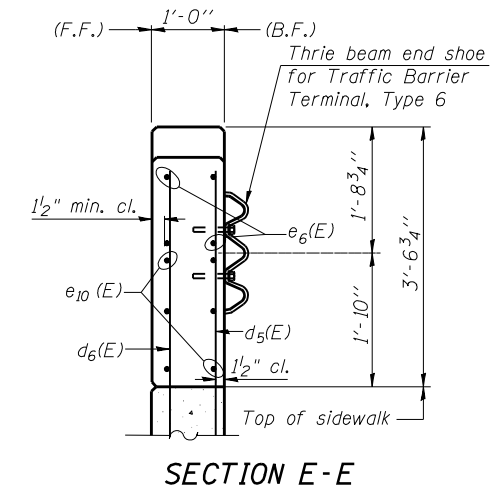


ANCHOR ROD

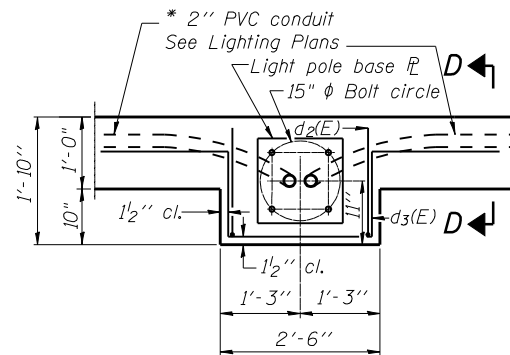
1" ϕ Diameter as specified for light poles.
(ASTM F 1554 Grade 105)



SECTION E-E ELEVATION



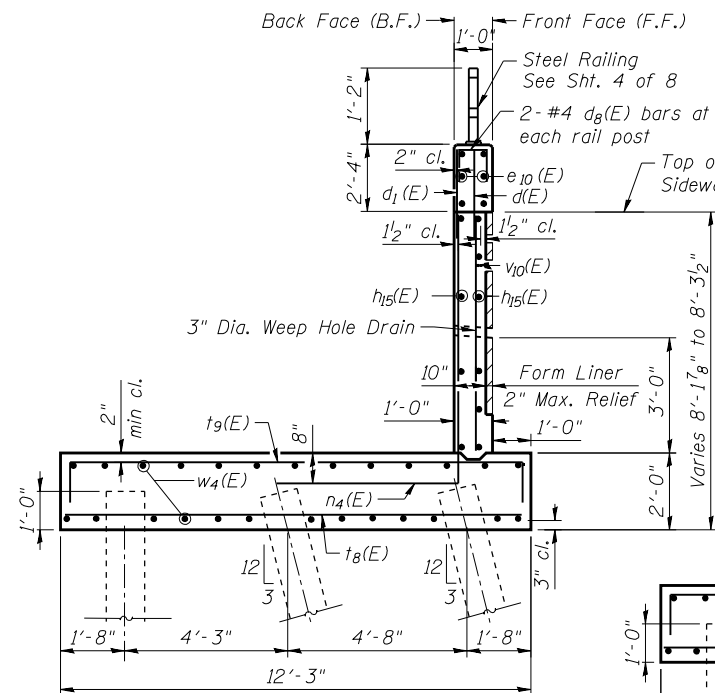
SECTION E-E



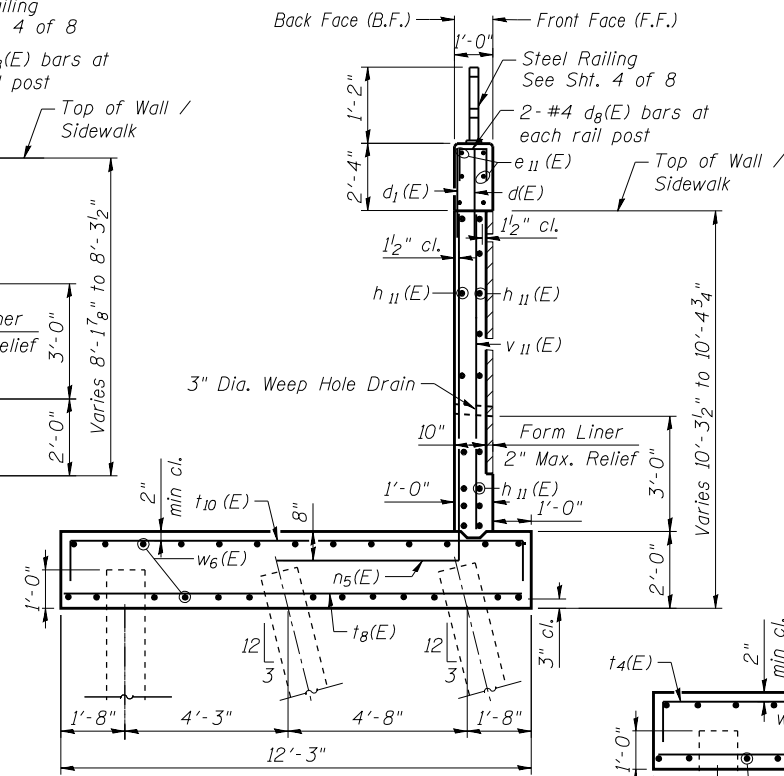
LIGHT POLE FOUNDATION PLAN

Note: Cost of anchor rods is included with Concrete Structures.

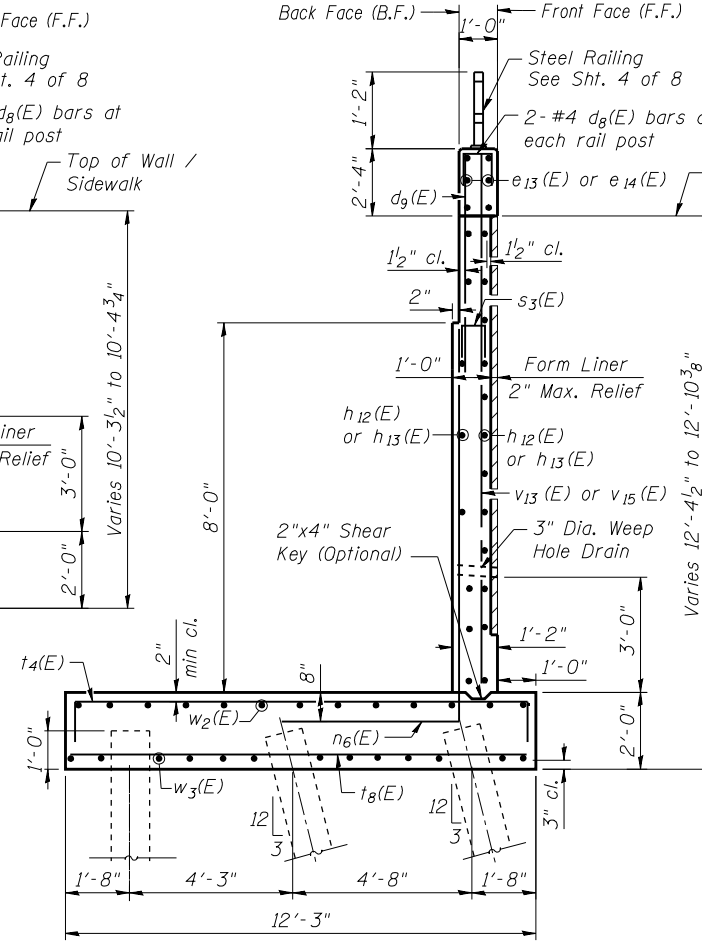
* Maintain 1/2" Clearance From Reinforcement



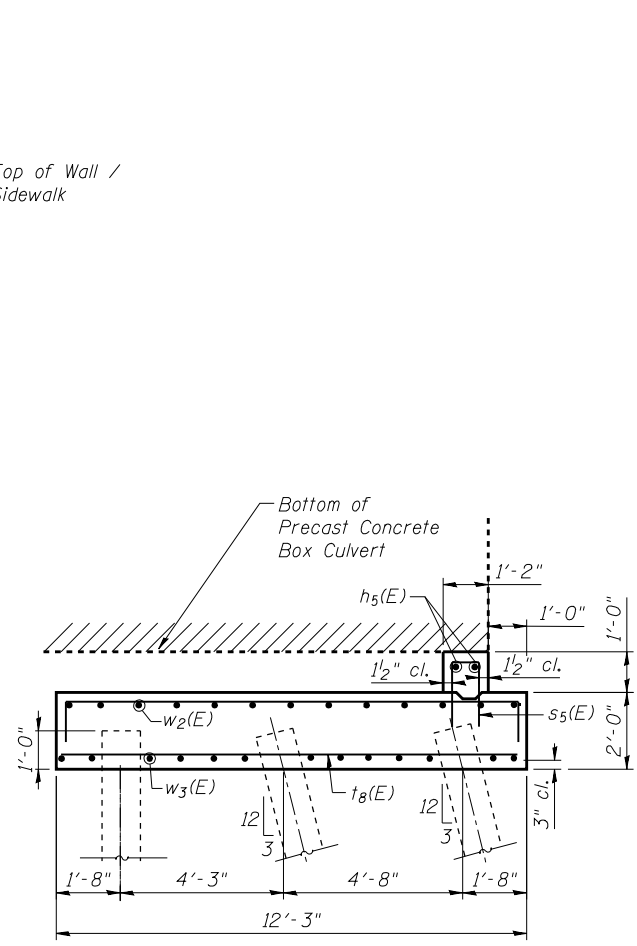
SECTION A-A



SECTION B-B



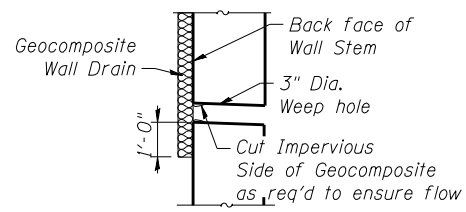
SECTION C-C



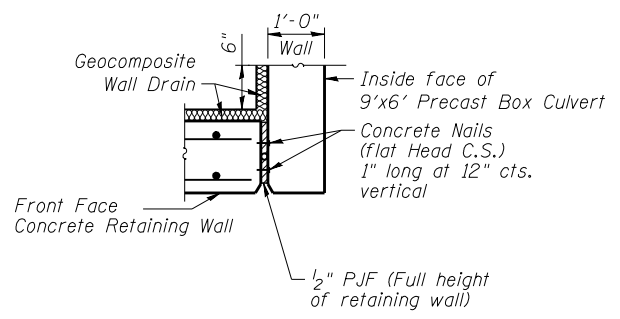
SECTION F-F

BILL OF MATERIAL

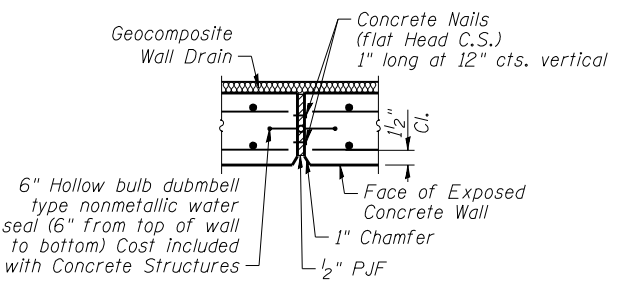
Bar	No.	Size	Length	Shape
d1(E)	190	#4	5'-3"	—
d2(E)	56	#6	6'-8"	—
d3(E)	3	#6	6'-3"	—
d4(E)	11	#6	8'-11"	—
d5(E)	6	#6	7'-11"	—
d6(E)	5	#4	6'-6"	—
d8(E)	44	#4	2'-2"	—
d9(E)	180	#6	10'-0"	—
e6(E)	4	#4	3'-8"	—
e10(E)	10	#4	33'-8"	—
e11(E)	10	#4	27'-10"	—
e12(E)	20	#4	32'-2"	—
e13(E)	10	#4	29'-1"	—
e14(E)	10	#4	45'-1"	—
h5(E)	2	#5	10'-8"	—
h11(E)	14	#4	27'-10"	—
h12(E)	36	#4	32'-2"	—
h13(E)	18	#4	29'-1"	—
h14(E)	18	#4	45'-1"	—
h15(E)	11	#4	33'-7"	—
n4(E)	53	#6	8'-9"	L
n5(E)	42	#7	11'-7"	L
n6(E)	180	#8	12'-0"	L
s3(E)	180	#6	4'-4"	□
s5(E)	15	#6	4'-6"	□
t4(E)	195	#7	14'-11"	—
t5(E)	26	#5	2'-11"	—
t6(E)	26	#5	3'-4"	—
t7(E)	20	#5	9'-9"	—
t8(E)	263	#5	11'-11"	—
t9(E)	53	#5	14'-11"	—
t10(E)	42	#6	14'-11"	—
v10(E)	9	#4	6'-1"	—
v11(E)	8	#4	8'-3"	—
v13(E)	23	#4	10'-4"	—
v15(E)	13	#4	10'-9"	—
w2(E)	65	#6	32'-9"	—
w3(E)	52	#6	39'-10"	—
w4(E)	26	#5	30'-5"	—
w5(E)	26	#5	9'-4"	—
w6(E)	26	#5	29'-8"	—
w7(E)	26	#6	10'-10"	—
Structure Excavation	Cu. Yd.		973	
Concrete Structures	Cu. Yd.		281.0	
Reinforcement Bars, Epoxy Coated	Pound		36,840	
Furnishing Metal Shell Piles 12" x 0.250"	Foot		6,208	
Driving Piles	Foot		6,208	
Test Pile Metal Shells	Each		1	



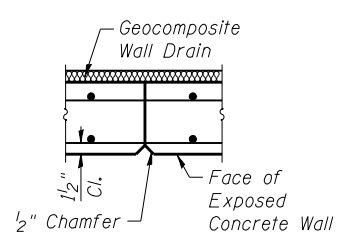
WEEP HOLE DRAIN DETAIL



EXPANSION JOINT AT RETAINING WALL & CULVERT



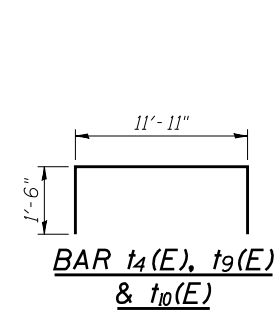
EXPANSION JOINT



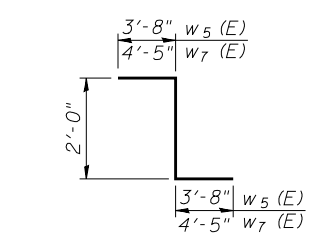
CONSTRUCTION JOINT

MINIMUM BAR LAPS

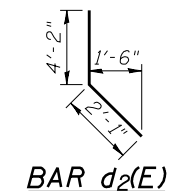
#4	2'-11"
#5	3'-8"
#6	4'-5"



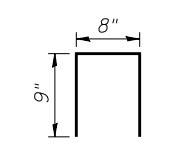
BAR t4(E), t9(E) & t10(E)



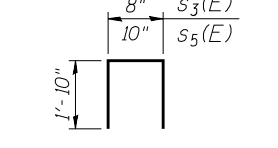
Bars w5(E) & w7(E)



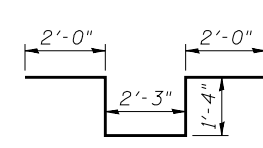
BAR d2(E)



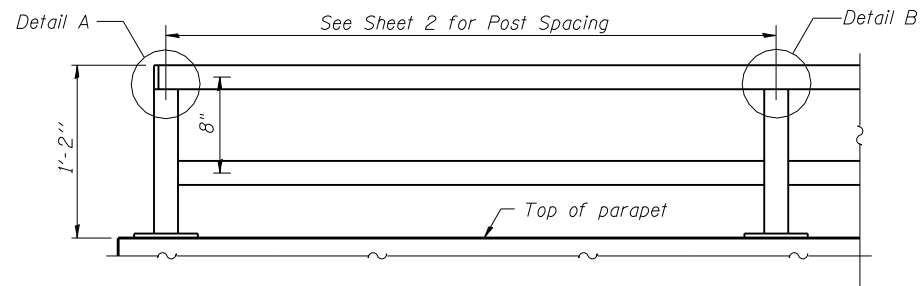
BAR d8(E)



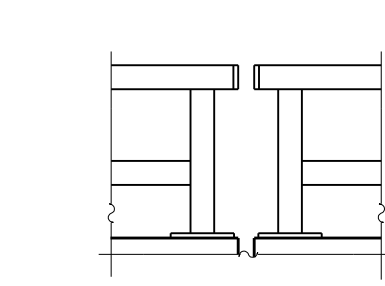
BARS s3(E) & s5(E)



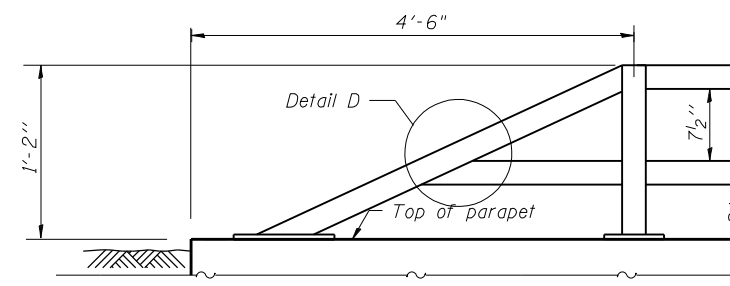
BARS d3(E)



PARAPET RAILING
ELEVATION
(Inside Face of Rail)

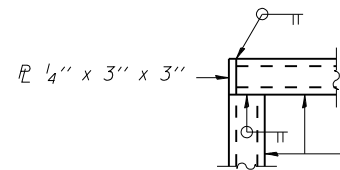


PARAPET RAILING
ELEVATION AT EXPANSION JOINT

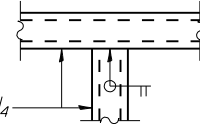


PARAPET RAILING
AT END SECTION

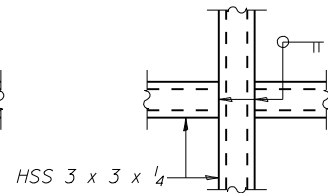
Note:
All post, railing, splices, anchor devices, and bent plates shall be painted using the inorganic zinc-rich/waterborne acrylic paint system as described in the special provision "Cleaning and Painting New Metal Structures." Color of painted railing to be black.



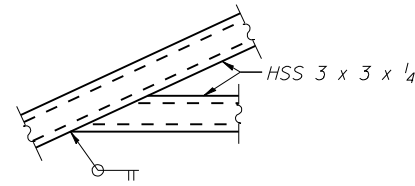
DETAIL A



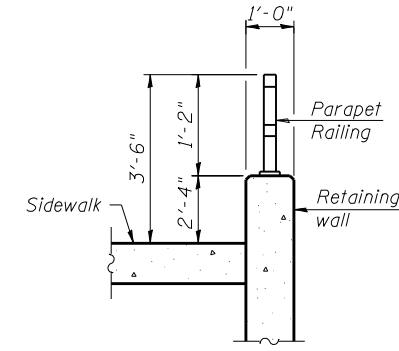
DETAIL B



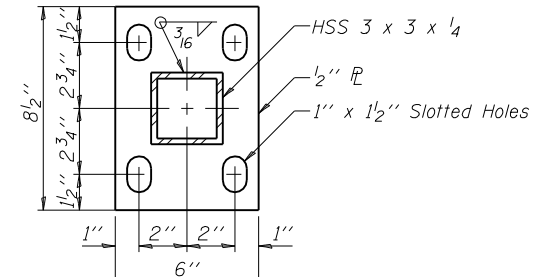
DETAIL C



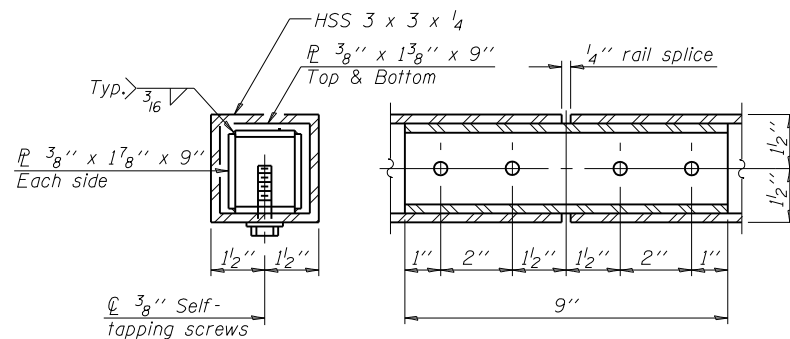
DETAIL D



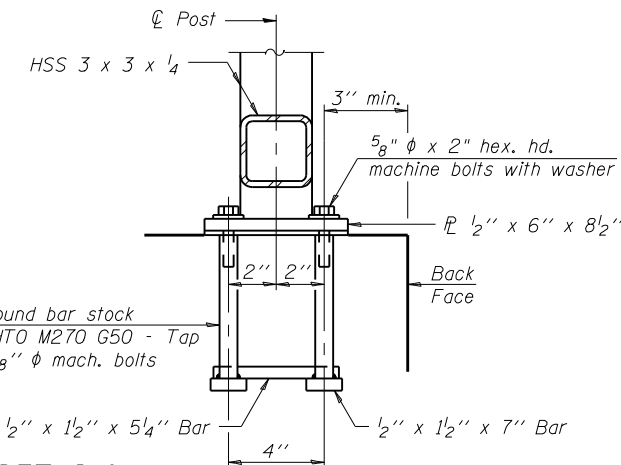
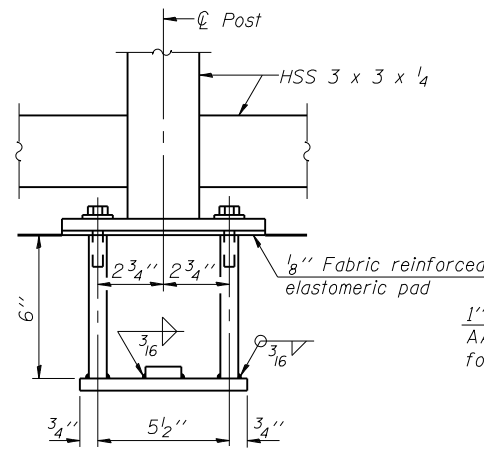
SECTION THRU RAILING



BASE PL



RAIL SPLICE

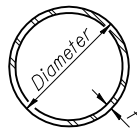


ANCHOR BOLT DETAILS

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.

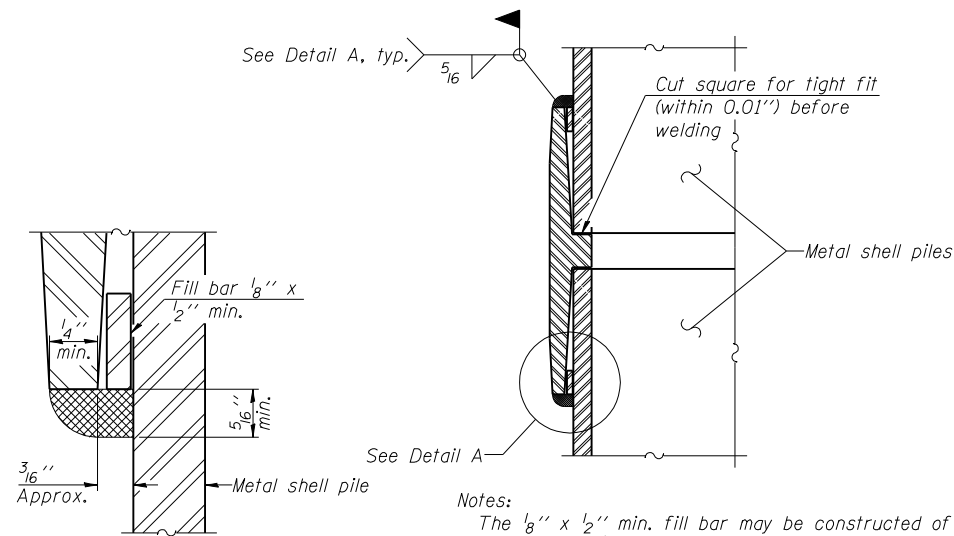
BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	196.0



METAL SHELL PILE TABLE

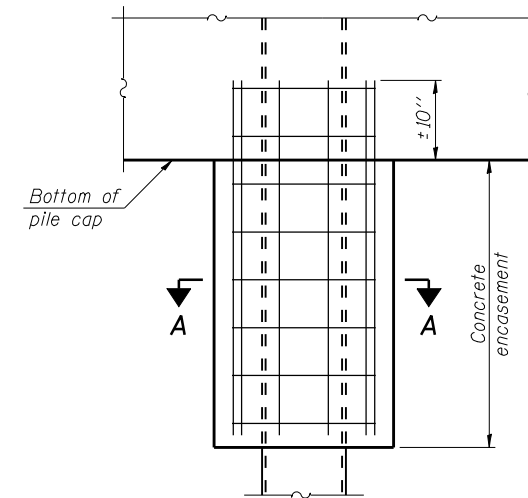
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



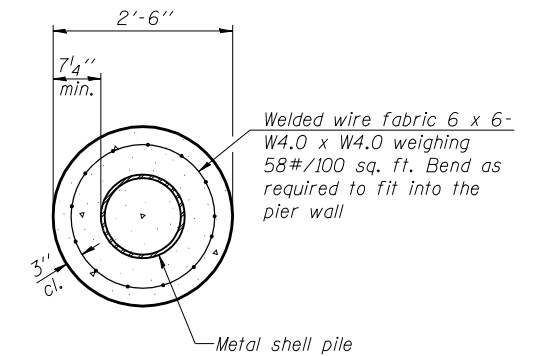
Notes:
 The $\frac{1}{8}$ " x $\frac{1}{2}$ " min. fill bar may be constructed of 2 bars with a $\frac{1}{8}$ " max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.

DETAIL A

WELDED COMMERCIAL SPLICE



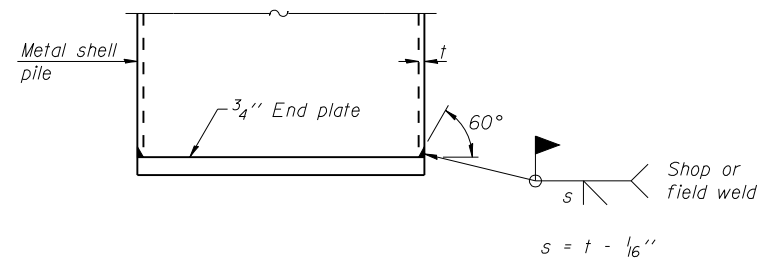
ELEVATION



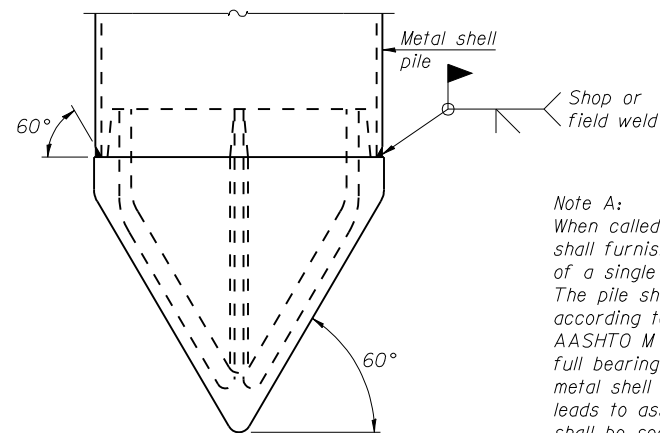
SECTION A-A

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

CONCRETE ENCASEMENT AT PIERS



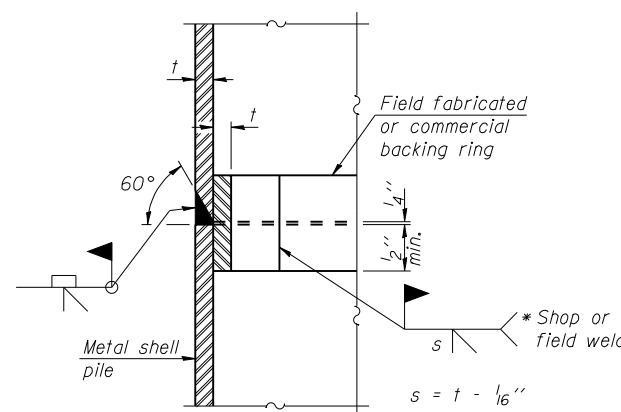
END PLATE ATTACHMENT



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.

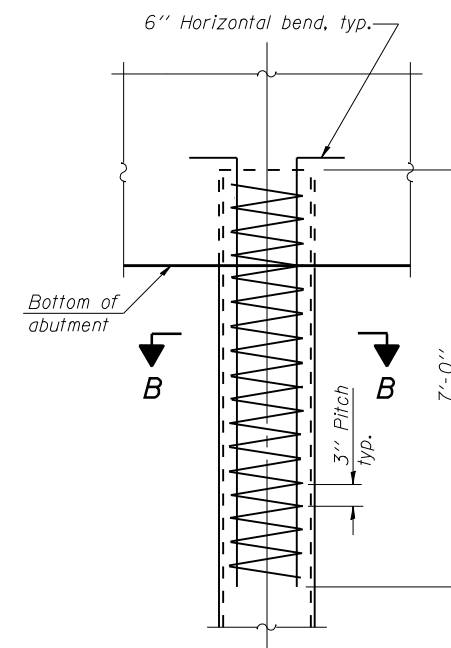
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

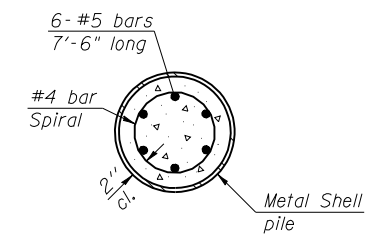


COMPLETE PENETRATION WELD SPLICE

* 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



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

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

F-MS 1-27-12



USER NAME =	DESIGNED - LRT/AG	REVISED -
	CHECKED - OAO	REVISED -
PLOT SCALE =	DRAWN - TCS/AG	REVISED -
PLOT DATE =	CHECKED - LRT	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS
 STRUCTURE NO. 016-W002**

SHEET NO. 6 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	533
CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
671.0	Soft to medium stiff, brown and gray SILTY CLAY LOAM, trace to little gravel --FILL--	1	PUSH	1	0.25	27	
		2	PUSH	2	0.25	27	
		3	PUSH	3	0.50	26	
		4	PUSH	4	0.25	28	
		5	PUSH	5	0.25	31	
671.0	Very soft to soft, brown and gray SILTY CLAY	6	PUSH	6	0.25	27	
		7	PUSH	7	0.25	39	
		8	PUSH	8	0.25	53	
		9	PUSH	9	0.25	50	
		10	PUSH	10	0.25	45	
661.5	Boring terminated at 20.00 ft						

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-07-2011	Complete Drilling	04-07-2011
Drilling Contractor	WEI	Drill Rig	Geoprobe
Driller	B&N	Logger	B. Wilson
Checked by	CLM	Depth to Water	NA
Drilling Method	Hand Auger		
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 Type	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
654.8	Medium stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM, with trace to little gravel --FILL--	1	PUSH	1	0.75	26	
		2	PUSH	2	0.90	24	
675.2	Loose, brown PEAT	3	PUSH	3	0.50	181	
674.8	No Recovery	4					
671.5	Very soft, black, green and gray ORGANIC SILTY CLAY	5	PUSH	5	0.25	90	
666.5	Very soft, black and gray SILTY CLAY	6	PUSH	6	0.25	64	
		7	PUSH	7	0.25	54	
		8	PUSH	8	0.25	66	
		9	PUSH	9	0.25	58	
		10	PUSH	10	0.25	56	
654.3	Very Loose to medium dense, gray, fine to coarse SAND	11	PUSH	11	0.25	51	
		12	PUSH	12	0.25	47	
		13	PUSH	13	0.25	38	
		14	PUSH	14	NP	23	
		15	PUSH	15	4.7	19	
		16	PUSH	16	4.7	16	
		17	PUSH	17	4.7	15	

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-04-2011	Complete Drilling	04-04-2011
Drilling Contractor	WTS	Drill Rig	D-50 ATV
Driller	K&R	Logger	B. Wilson
Checked by	CLM	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.			

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
638.3	Very stiff to hard, gray SILTY CLAY, trace gravel	18	PUSH	18	5.6	21	
622.8	Boring terminated at 60.00 ft						

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-04-2011	Complete Drilling	04-04-2011
Drilling Contractor	WTS	Drill Rig	D-50 ATV
Driller	K&R	Logger	B. Wilson
Checked by	CLM	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.			

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	u _c (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	u _c (tsf)	Moisture Content (%)
682.3	Medium dense, brown and gray SANDY LOAM, little gravel --FILL--	1	6 5 6	NP	10		682.3		11	3 4 5	NP	19	
		2	4 4 4	2.95 B	19				12	3 3 4	NP	25	
		3	2 2 3	1.15 B	23				13	8 8 2	NP	24	
		4	2 3 3	1.15 B	21				14	1 1 2	NP	20	
675.5	Loose, gray SANDY LOAM --WET--	5	1 1 2	NP	21				15	5 5 6	NP	18	
673.8	Medium stiff, gray SILTY CLAY, trace gravel	6	2 2 4	0.90 B	23				16	4 5 8	NP	14	
670.5	Loose, gray, fine SAND	7	3 3 4	NP	19				17	9 12 16	NP	13	
666.3	Stiff, gray SILTY CLAY, trace gravel	8	2 3 4	NP	19				18				
662.1	Very loose to medium dense, gray, fine to medium SAND	9	3 5 7	1.64 B	23				19				
		10	4 5 6	NP	15				20				

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-05-2011	Complete Drilling	04-05-2011
Drilling Contractor	WTS	Drill Rig	D-50 ATV
Driller	K&R	Logger	B. Wilson
Checked by	CLM	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/6 in)	u _c (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	u _c (tsf)	Moisture Content (%)
654.8	Medium dense to dense, gray SILT	17	5 6 7	NP	13		654.8		17	5 6 7	NP	13	
		18	6 7 10	NP	22				18	6 7 10	NP	22	
		19	4 9 12	NP	20				19	4 9 12	NP	20	
		20	9 12 16	NP	13				20	9 12 16	NP	13	

Boring terminated at 70.00 ft

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-05-2011	Complete Drilling	04-05-2011
Drilling Contractor	WTS	Drill Rig	D-50 ATV
Driller	K&R	Logger	B. Wilson
Checked by	CLM	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/6 in)	u _c (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	u _c (tsf)	Moisture Content (%)
680.3	Very stiff, brown SILTY CLAY LOAM, little gravel --FILL--	1	4 5 5	2.00 P	18		680.3		11	3 5 6	1.31 B	25	
		2	4 4 4	2.30 B	20				12	3 4 7	1.56 B	22	
678.8	Very soft to soft, gray SILTY CLAY, trace gravel	3	2 2 2	0.25 P	23				13	3 4 6	1.64 B	22	
		4	1 2 1	0.25 P	33				14	3 5 7	1.72 B	22	
673.0	Medium dense, gray, fine to coarse SAND, little gravel --WET--	5	4 4 6	NP	21				15	8 8 8	NP	19	
669.8	Stiff to very stiff, gray SILTY CLAY, trace gravel	6	2 2 4	1.23 B	22				16	6 7 8	NP	19	
		7	5 8 14	2.95 B	21				17				
		8	3 3 8	2.87 B	20				18				
		9	3 3 6	1.89 B	22				19				
		10	2 3 5	1.56 B	24				20				

Boring terminated at 50.00 ft

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-01-2011	Complete Drilling	04-01-2011
Drilling Contractor	WTS	Drill Rig	D-50 ATV
Driller	K&R	Logger	B. Wilson
Checked by	CLM	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/6 in)	U _u (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	U _u (tsf)	Moisture Content (%)
686.4	4-inch thick, brown SILTY CLAY --TOPSOIL--		1	5	NP	21	686.8	Medium dense, brown gravelly LOAM	11	14	15	17	NP
683.8	--FILL--						686.8	Very stiff, brown and gray SILTY CLAY, trace gravel	12	6	7	6	NP
			2	3	2.05	19							
			3	2	1.31	20							
678.8	Medium dense, brown and gray gravelly LOAM		4	4	NP	16							
676.3	Medium dense, gray CRUSHED STONE		5	8	NP								
			6	10	NP								
			7	9	NP	28							
			8	20	NP	18							
666.3	Medium dense to dense CRUSHED ASPHALT		9	9	NP	6							
			10	9	NP	15							

GENERAL NOTES
 Begin Drilling: 04-01-2011 Complete Drilling: 04-01-2011
 Drilling Contractor: WTS Drill Rig: D-50 ATV
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA
 While Drilling: 10.50 ft
 At Completion of Drilling: CAVE AT 11.0
 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/6 in)	U _u (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	U _u (tsf)	Moisture Content (%)
686.8	3-inch thick, black SILTY CLAY --TOPSOIL--		1	5	2.00	21	688.5	Very soft, gray SILTY CLAY	11	0	0	0.25	46
684.8	Very stiff, brown SILTY CLAY LOAM, little gravel		2	3	1.00	48			12	0	0	0.25	45
	Soft to stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM, little gravel		3	2	0.50	25			13	0	0	0.25	37
	--organic traces--		4	2	0.50	21			14	0	0	NP	25
	--FILL--		5	1	0.25	19	688.3	Very loose to medium dense, gray, fine to coarse SAND	15	6	8	10	NP
			6	3	0.49	24			16	4	6	10	NP
			7	6	NP	13			17	2	3	8	23
671.5	Very soft to soft, black and gray ORGANIC SILTY CLAY		8	2	0.25	56			18	9	10	14	23
			9	0	0.16	56			19	0	0	0	
			10	0	0.25	53			20	0	0	0	

GENERAL NOTES
 Begin Drilling: 04-04-2011 Complete Drilling: 04-04-2011
 Drilling Contractor: WTS Drill Rig: D-50 ATV
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA
 While Drilling: 38.75 ft
 At Completion of Drilling: WASHED
 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/6 in)	U _u (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	U _u (tsf)	Moisture Content (%)
675.8	Stiff to very stiff, gray SILTY CLAY, trace gravel		17	4	3.69	28							
			18	8	2.05	19							
			19	2	1.23	23							
			20	9	1.31	23							

GENERAL NOTES
 Begin Drilling: 04-04-2011 Complete Drilling: 04-04-2011
 Drilling Contractor: WTS Drill Rig: D-50 ATV
 Driller: K&R Logger: B. Wilson Checked by: CLM
 Drilling Method: 3.25" IDA HSA; Boring backfilled upon completion

WATER LEVEL DATA
 While Drilling: 38.75 ft
 At Completion of Drilling: WASHED
 Time After Drilling: NA
 Depth to Water: NA

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

Benchmark: TBM "G" #569; Southeast bottom of light pole
 #93-15 +/- 300' north of 153rd st. on the west side of LaGrange Rd.
 E1 699.946

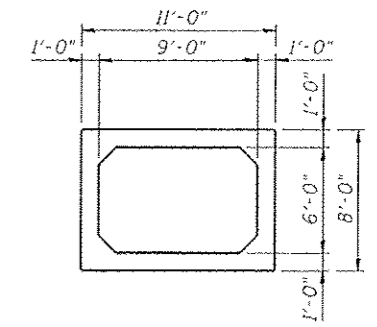
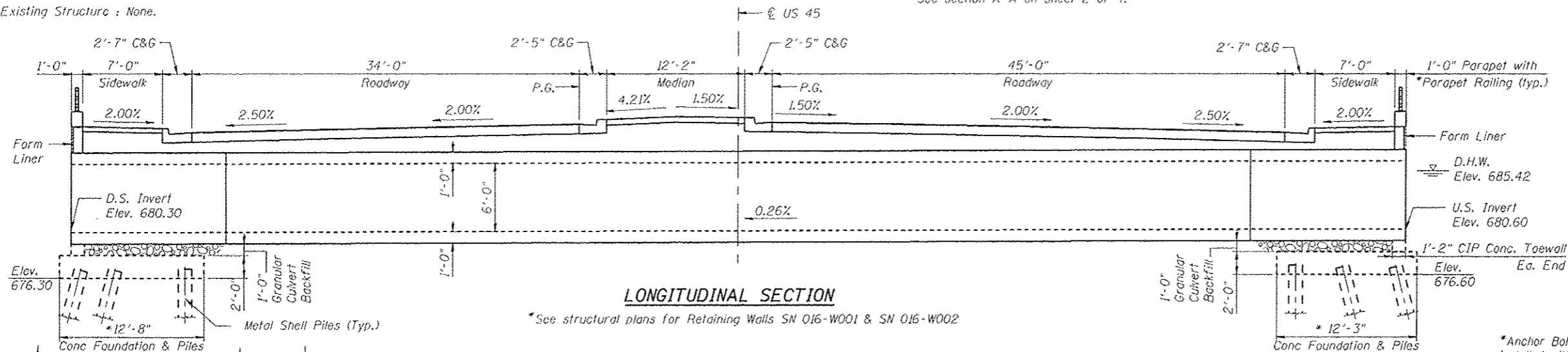
Traffic shall be maintained at all times utilizing Stage Construction.

Existing Structure : None.

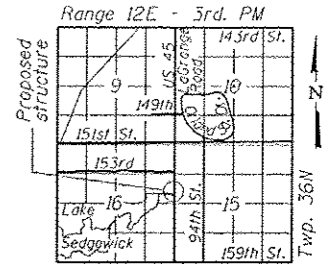
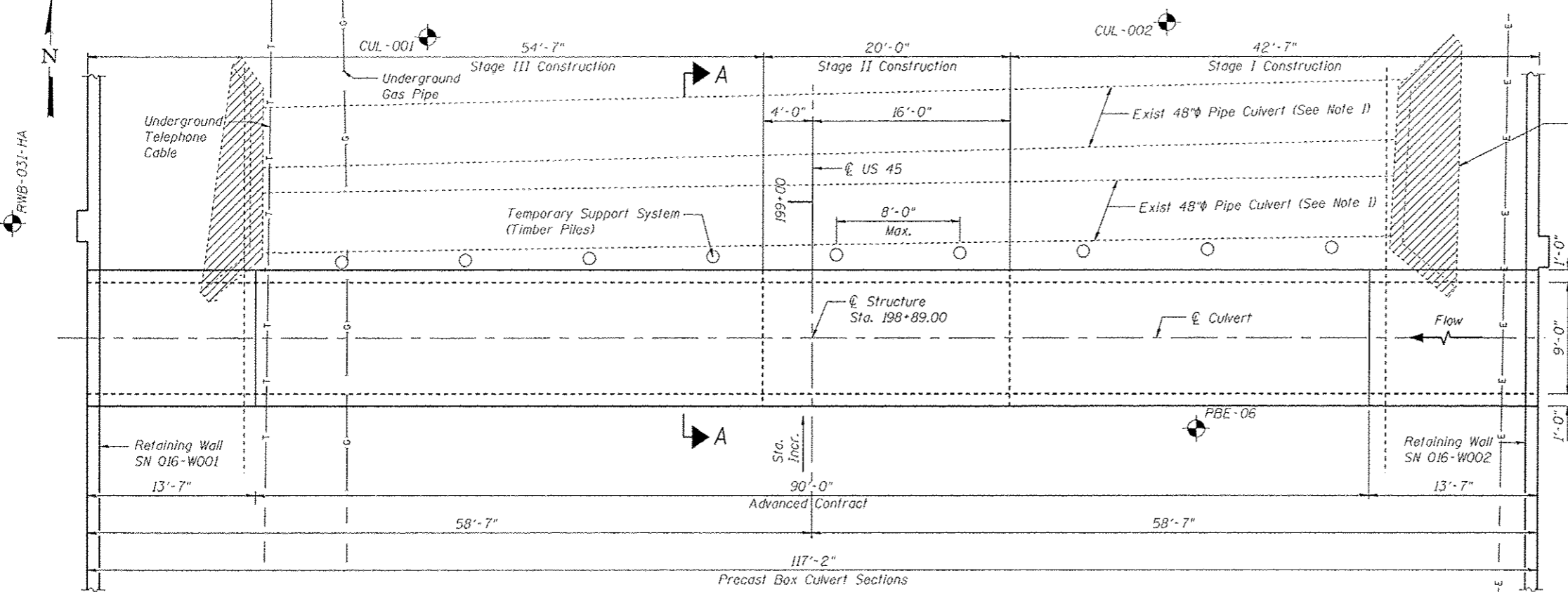
Note 1: Flow to be maintained through existing pipe culverts during construction of proposed box culvert.
 Note 2: Timber piles of the Temporary Support System need to be driven before excavation.
 Existing pipes may become exposed during excavation.
 See section A-A on sheet 2 of 4.

INDEX OF SHEETS

1. General Plan and Elevation
2. General Data & Details
3. Parapet Railing
4. Boring Logs



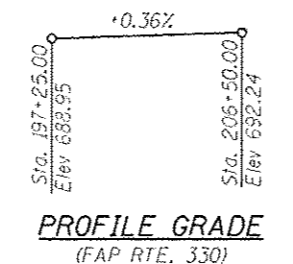
*Anchor Bolts of four Railing Posts to be installed with Box Culvert Concrete Railing Construction. See Sheets 2 & 3 of 4 for Post locations and details. Cost of Anchor Bolts included with Concrete Box Culvert. Quantity of Railing included with the adjacent retaining wall structures.



WATERWAY INFORMATION

Drainage Area = 87 acres Low Grade Elev. 688.82 @ Sta. 198+64

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater E.I.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	190	50.85	34.92	684.48	0.15	0	684.63	684.47	
Base	50	190	53.4	43.38	685.12	0.38	0.00	685.80	685.42	
Overtopping	100	235	53.6	47.34	685.86	0.57	0.00	686.43	685.86	
Max. Calc.	>500	399.5	53.6	54	687.22	1.21	1.43	685.03	688.65	



LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS
 2010 AASHTO LRFD Specifications with 2012 Interim

DESIGN STRESSES

FIELD UNITS
 f'c = 3,500 psi
 fy = 60,000 psi (Reinforcement)

PRECAST UNITS
 f'c = 5,000 psi
 fy = 65,000 psi (Welded Wire Fabric)
 Max. Soil Pressure under footing = 1300 psf

Signed: *Olufemi A. Oladinde* 02/05/2013
 OLUFEMI A. OLADINDE, P.E., S.E.
 LICENSE EXPIRES 11-30-2014 Date

GENERAL PLAN & ELEVATION
US 45 (LaGRANGE ROAD)
FAP RTE. 330 - SEC 103R-4
COOK COUNTY
STATION 198+89.00

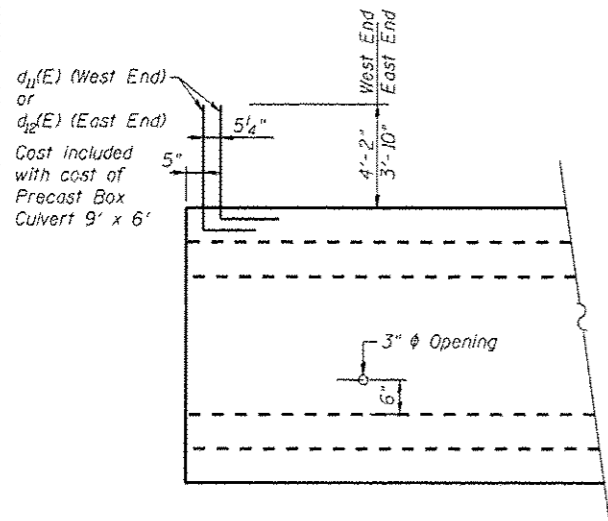


USER NAME	DESIGNED - LRT/AG	REVISED -
PLOT SCALE	CHECKED - OAO	REVISED -
PLOT DATE	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

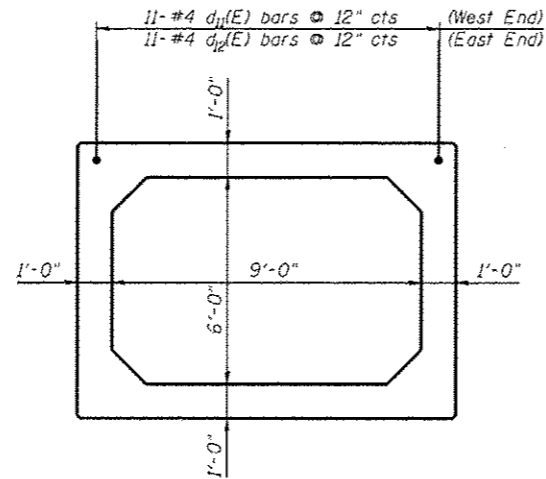
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 MARLEY CREEK BOX CULVERT

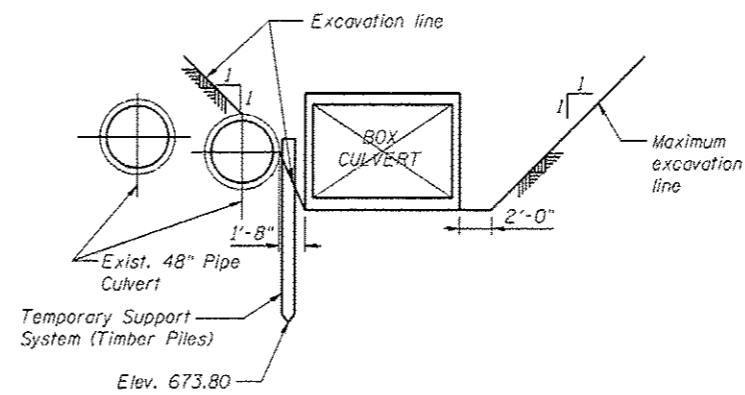
F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET 536A
CONTRACT NO. 60M61			[ILLINOIS] FED. AID PROJECT	



SIDE ELEVATION OF END SECTION



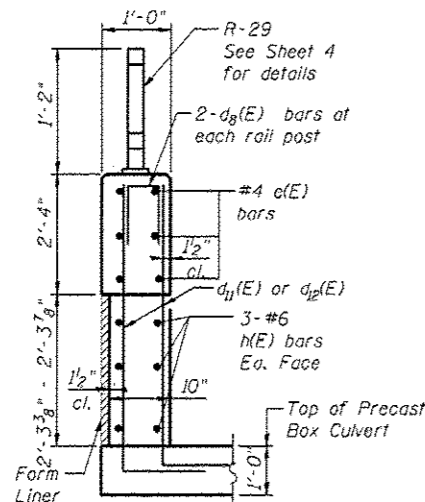
END ELEVATION



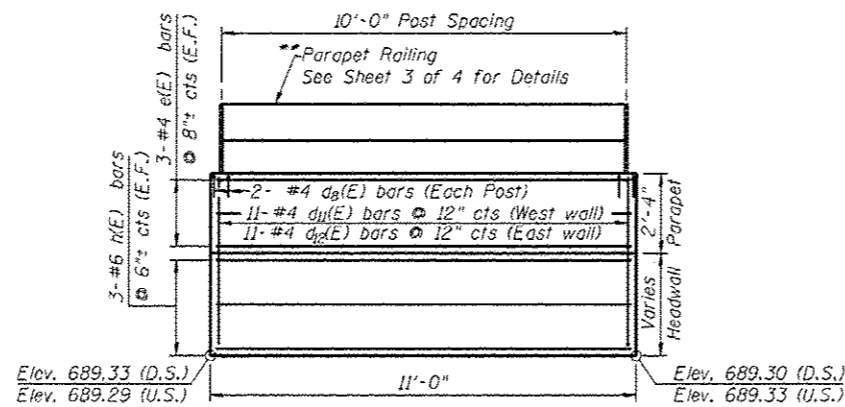
SECTION A-A

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Precast Concrete Box Culverts 9' x 6'	Ft.	27
Granular Culvert Backfill	Cu. Yd.	42
Soil Excavation	Cu. Yd.	596
Concrete Structures	Cu. Yd.	3.8
Temporary Support System	L. Sys.	1
Reinforcement Bars, Epoxy Coated	Pound	500

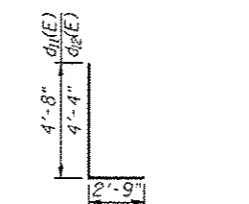
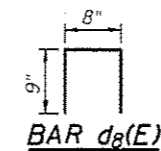


DETAIL C (Down Stream End)

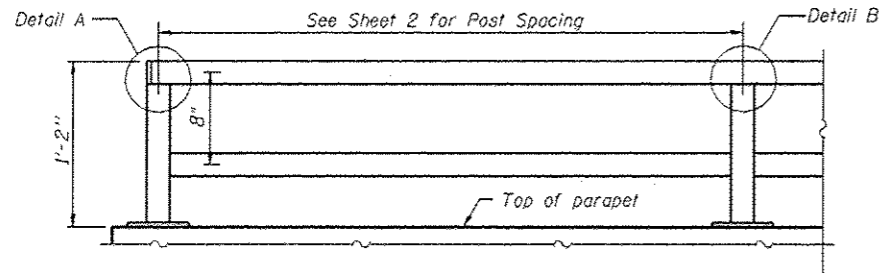


HEADWALL & PARAPET ELEVATION

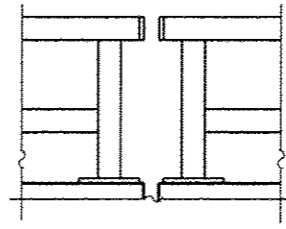
**Quantity included in the adjacent Retaining wall structures



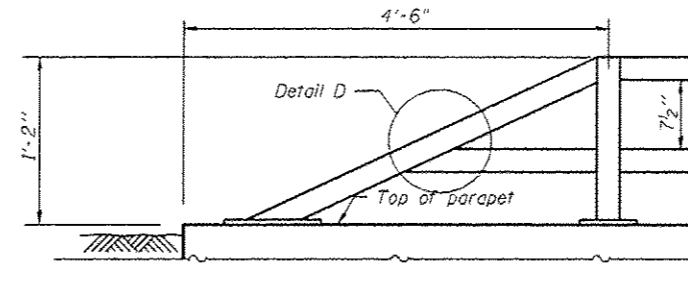
Bar	No.	Size	Length	Shape
$d_g(E)$	8	#4	2'-2"	□
$d_{11}(E)$	22	#4	7'-5"	L
$d_{12}(E)$	22	#4	7'-1"	L
$e(E)$	12	#4	10'-9"	—
$h(E)$	12	#6	10'-9"	—



PARAPET RAILING
ELEVATION
(Inside Face of Rail)

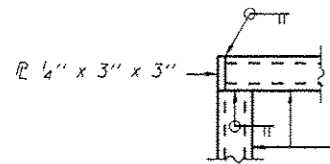


PARAPET RAILING
ELEVATION AT EXPANSION JOINT

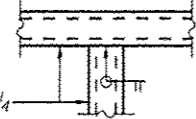


PARAPET RAILING
AT END SECTION

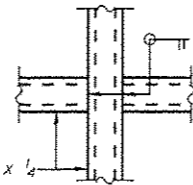
Note:
All post, railing, splices, anchor devices, and bent plates shall be painted using the inorganic zinc-rich/waterborne acrylic paint system as described in the special provision "Cleaning and Painting New Metal Structures." Color of painted railing to be black.



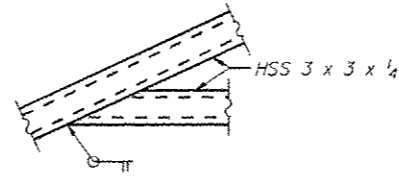
DETAIL A



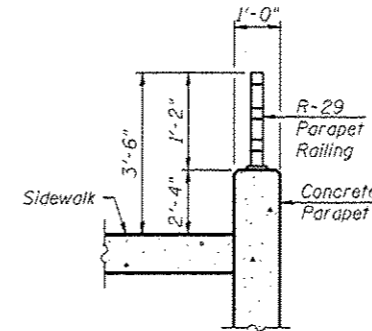
DETAIL B



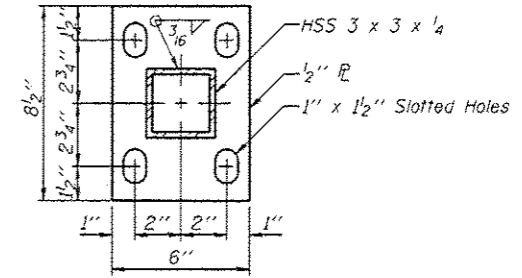
DETAIL C



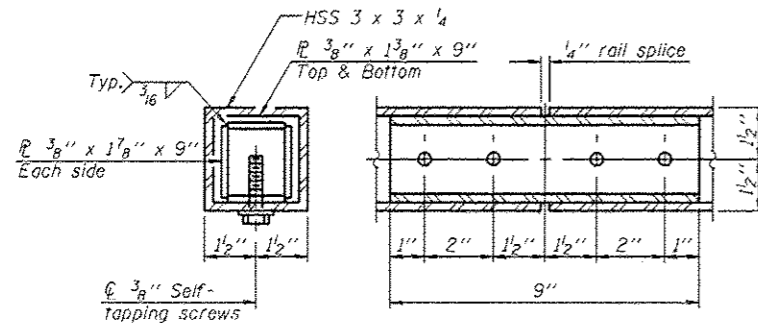
DETAIL D



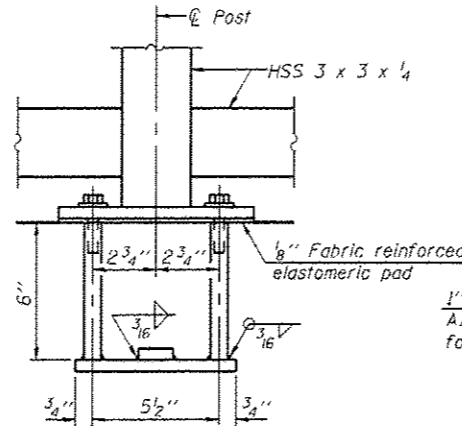
SECTION THRU RAILING



BASE PLATE

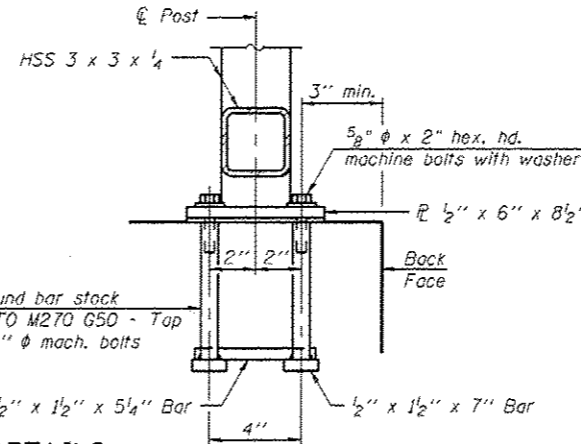


RAIL SPLICE



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.



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

BORING LOG CUL-001
 WEI Job No.: 201-40-01

Client: McDonough Associates Inc.
 Project: US 46 Segment
 Location: Co. T38N, R12E

Datum: NGVD
 Elevation: 663.98 ft
 North: 1500718.69 ft
 East: 1115628.40 ft
 Station: 199+13.28
 Offset: 31.17 LF

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Q _u (tsf)	Moisture Content (%)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Q _u (tsf)	Moisture Content (%)
684.0	12-inch thick CONCRETE --PAVEMENT--													
684.0	6-inch thick CRUSHED STONE --BASE COURSE--	1		5 7 7	4.50	17								
	Stiff to hard, brown and gray SILTY CLAY, with trace to little gravel													
	--FILL--	2		4 6 4	1.50	15								
		3		3 4 5	2.00	21								
		4		3 4 7	2.25	23								
677.5	Loose to medium dense, gray CRUSHED STONE, with SAND													
	--FILL-- --WET--	5		5 12 10	NP	17								
		6		11 7 4	NP	12								
		7		2 2 3	NP	19								
		8		7 9 5	NP	40								
		9		2 2 8	NP	59								
		10		12 14 7	NP	27								
664.0	Boring terminated at 25.00 ft													

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-12-2011	Complete Drilling	04-12-2011	While Drilling	10.50 ft		
Drilling Contractor	WTS	Drill Rig	D-50 ATV	At Completion of Drilling	CAVE AT 10.5		
Driller	K&R	Logger	B. Wilson	Checked by	A. Kurnia		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion			Time After Drilling	NA		
				Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

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

BORING LOG CUL-002
 WEI Job No.: 201-40-01

Client: McDonough Associates Inc.
 Project: US 46
 Location: ORLAND PARK, IL

Datum: NGVD
 Elevation: 697.96 ft
 North: 1800721.90 ft
 East: 1115688.10 ft
 Station: 199+14.48
 Offset: 28.62 RT

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Q _u (tsf)	Moisture Content (%)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Q _u (tsf)	Moisture Content (%)
697.0	12-inch thick CONCRETE --PAVEMENT--													
697.0	6-inch thick CRUSHED STONE --BASE COURSE--	1		4 6 6	3.00	18								
	Stiff to very stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel													
	--FILL--	2		4 4 4	1.00	15								
		3		3 3 4	1.25	24								
		4		2 3 4	1.75	18								
677.5	Loose to medium dense, gray CRUSHED STONE (stone size up to 5-inch)													
	--FILL--	5		9 7 6	NP	16								
		6		7 5 5	NP	7								
		7		2 12 3	NP	6								
		8		7 9 3	NP	18								
		9		3 4 4	NP	10								
		10		3 6 5	NP	26								
668.0	Boring terminated at 25.00 ft													

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-12-2011	Complete Drilling	04-12-2011	While Drilling	10.50 ft		
Drilling Contractor	WTS	Drill Rig	D-50 ATV	At Completion of Drilling	CAVE AT 10		
Driller	K&R	Logger	B. Wilson	Checked by	A. Kurnia		
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion			Time After Drilling	NA		
				Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							



USER NAME *	DESIGNED - LRT/AG	REVISED -
PLOT SCALE *	CHECKED - OAO	REVISED -
PLOT DATE *	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BORING LOGS
 MARLEY CREEK BOX CULVERT**

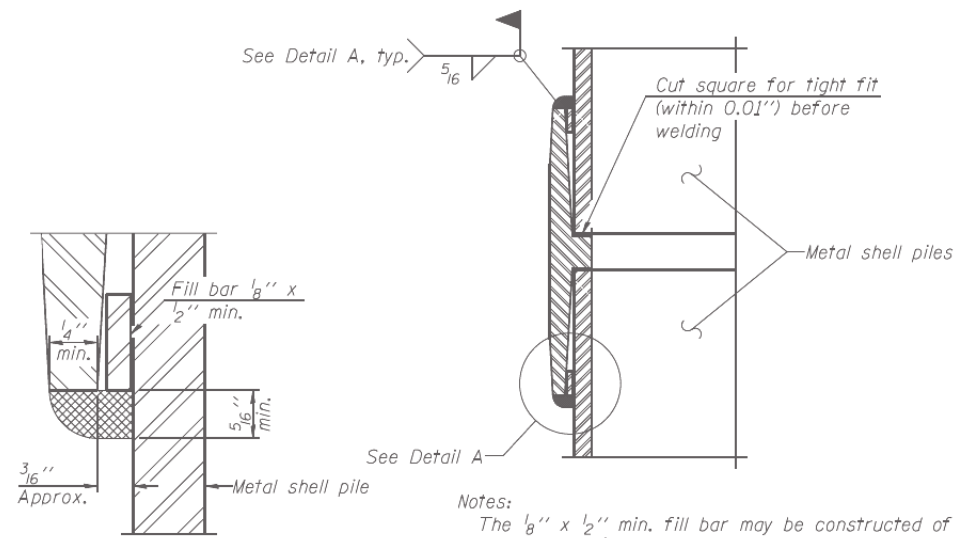
SHEET NO. 4 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	152	139
			CONTRACT NO. 60M61	
ILLINOIS/FED. AID PROJECT				



METAL SHELL PILE TABLE

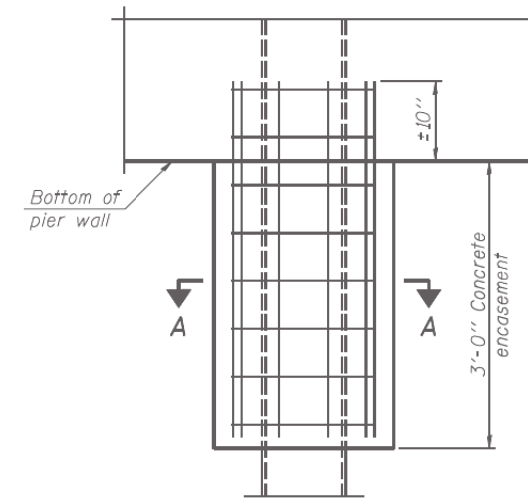
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



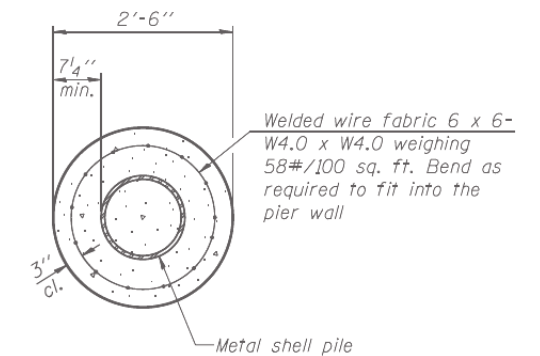
DETAIL A

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



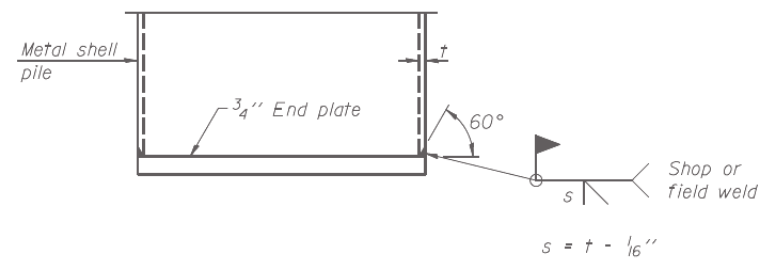
ELEVATION



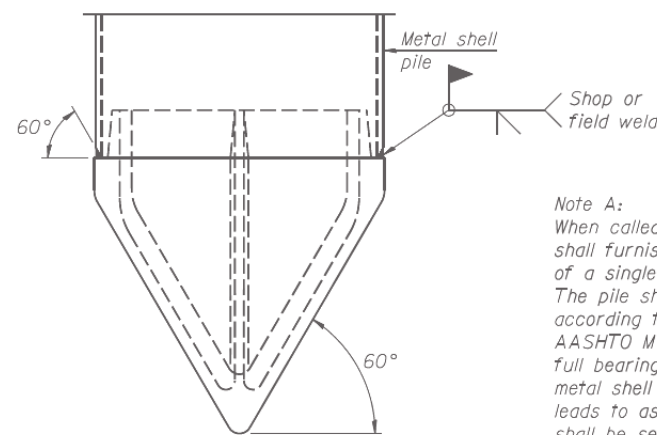
SECTION A-A

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

CONCRETE ENCASEMENT AT PIERS



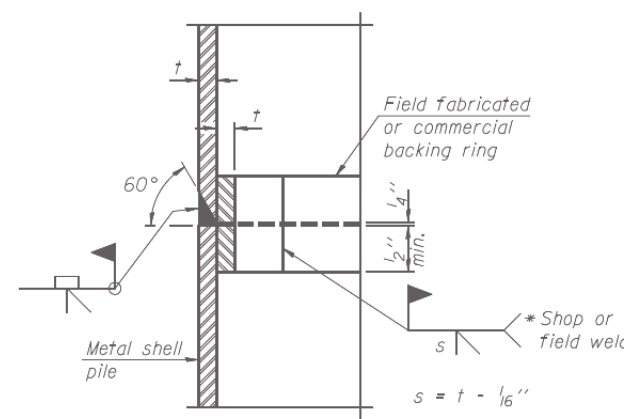
END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

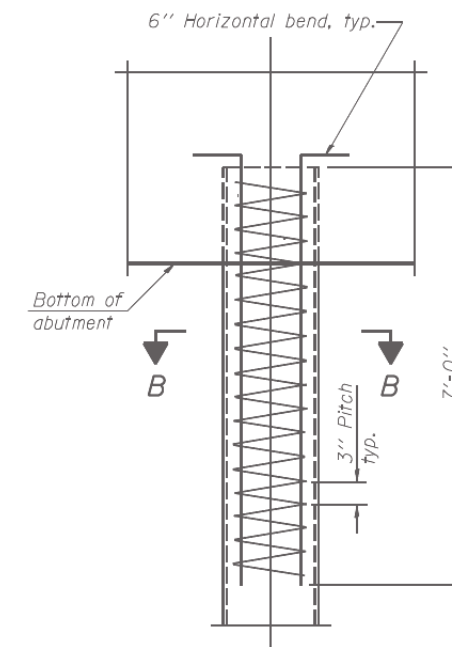
(See Note A)

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.



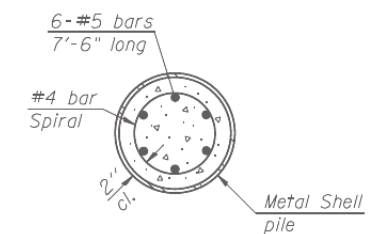
COMPLETE PENETRATION WELD SPLICE

* 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.

F-MS 7-1-10



USER NAME =	DESIGNED - LRT/AG	REVISED -
PLOT SCALE =	CHECKED - OAC	REVISED -
PLOT DATE =	DRAWN - TCS/AG	REVISED -
	CHECKED - LRT	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE DETAILS

SHEET NO. 5 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	540
				CONTRACT NO. 60M61

ILLINOIS FED. AID PROJECT

BORING LOG CUL-001

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45 Segment
 Location: Co., T36N, R12E

Date: NGVD
 Elevation: 688.56 ft
 North: 11800728.00 ft
 East: 1115536.40 ft
 Station: 199+13.28
 Offset: 81.17 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _u (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _u (tsf)	Moisture Content (%)
687.4	12-inch thick CONCRETE --PAVEMENT--												
686.8	5-inch thick CRUSHED STONE --BASE COURSE--	1	5	7	4.50	17							
	Stiff to hard, brown and gray SILTY CLAY, with trace to little gravel	7											
	--FILL--	3	4	5	1.50	18							
		4	5	4									
		3	3	4	2.00	21							
		4	3	4	2.55	23							
677.9	Loose to medium dense, gray CRUSHED STONE, with SAND	5	5	13	NP	17							
	--FILL--	6	11	7	NP	18							
	--WET--	7	2	3	NP	19							
		8	7	3	NP	40							
		9	2	3	NP	59							
		10	13	14	NP	57							
		7											

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-12-2011	Complete Drilling	04-12-2011	Water Drilling	10.50 ft		
Drilling Contractor	WTS	Drill Rig	D-50 ATV	At Completion of Drilling	CAVE AT 10.5		
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	A. Kurnio	Depth to Water	NA				
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion						

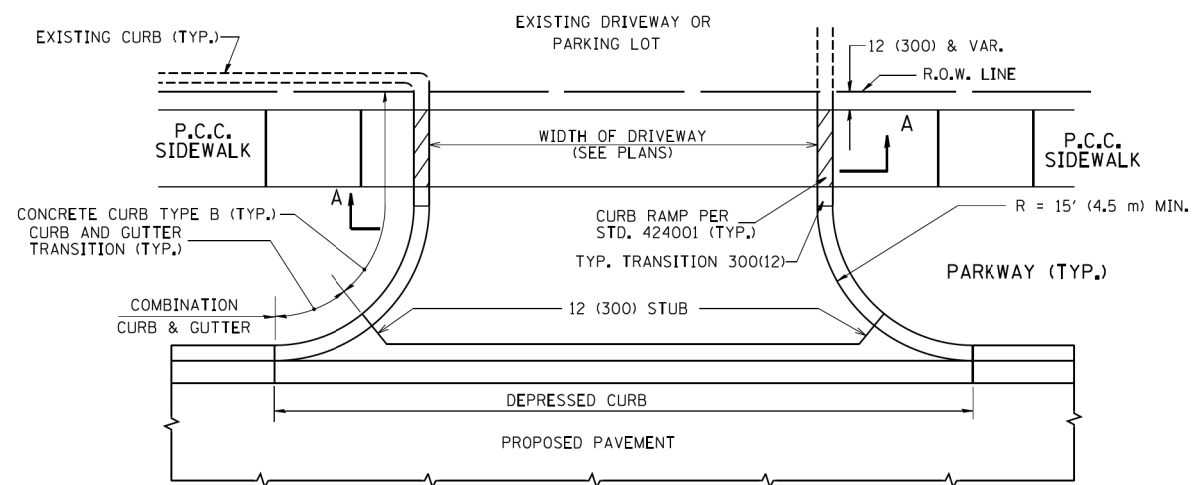
BORING LOG CUL-002

WEI Job No.: 201-40-01
 Client: McDonough Associates Inc.
 Project: US 45
 Location: ORLAND PARK, T. 36N, R. 12E

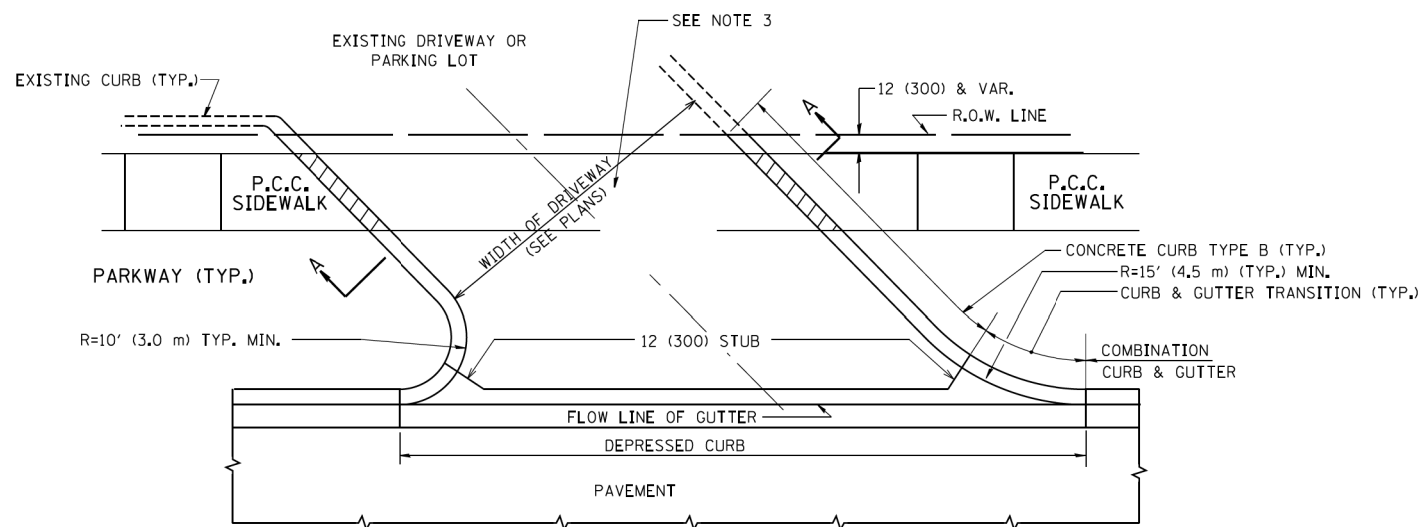
Date: NGVD
 Elevation: 688.56 ft
 North: 11800728.00 ft
 East: 1115536.40 ft
 Station: 199+13.28
 Offset: 28.52 LRT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _u (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Q _u (tsf)	Moisture Content (%)
687.4	12-inch thick CONCRETE --PAVEMENT--												
686.8	5-inch thick CRUSHED STONE --BASE COURSE--	1	8	8	8.00	18							
	Stiff to hard, brown and gray SILTY CLAY, with trace to little gravel	2	4	4	1.50	16							
	--FILL--	3	3	4	2.00	21							
		4	2	3	2.25	23							
677.9	Loose to medium dense, gray CRUSHED STONE, with SAND	5	9	12	NP	16							
	--FILL--	6	11	8	NP	12							
	--WET--	7	2	3	NP	19							
		8	2	3	NP	58							
		9	2	3	NP	58							
		10	12	13	NP	26							

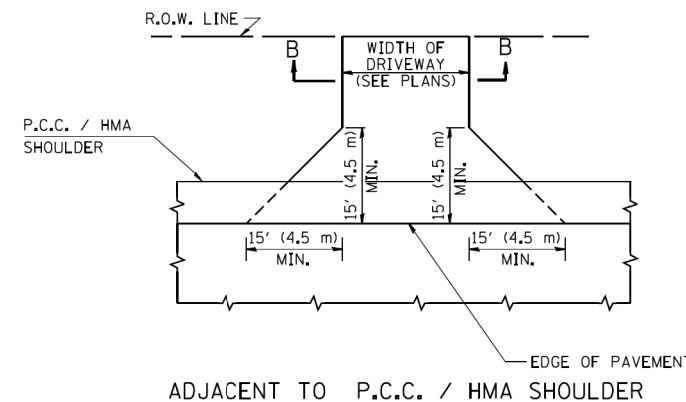
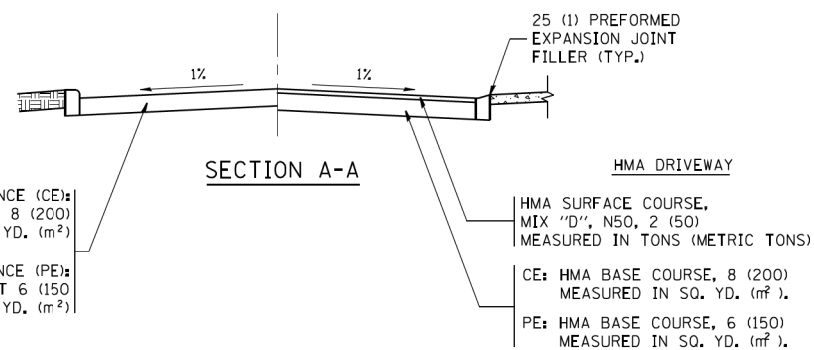
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-12-2011	Complete Drilling	04-12-2011	Water Drilling	10.50 ft		
Drilling Contractor	WTS	Drill Rig	D-50 ATV	At Completion of Drilling	CAVE AT 10.5		
Driller	K&R	Logger	B. Wilson	Time After Drilling	NA		
Checked by	A. Kurnio	Depth to Water	NA				
Drilling Method	3.25" IDA HSA; Boring backfilled upon completion						



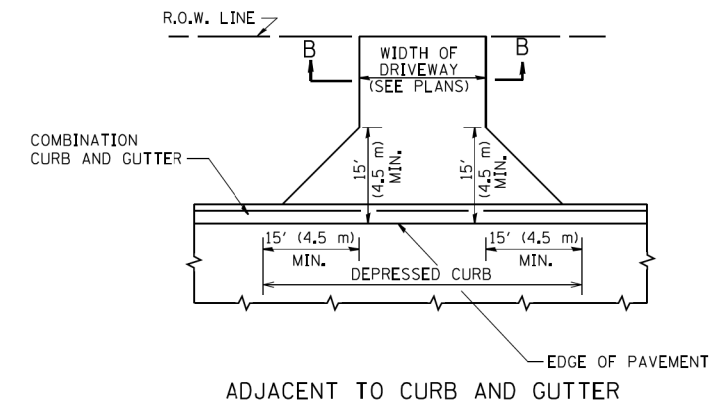
WITH CONCRETE CURB, TYPE B



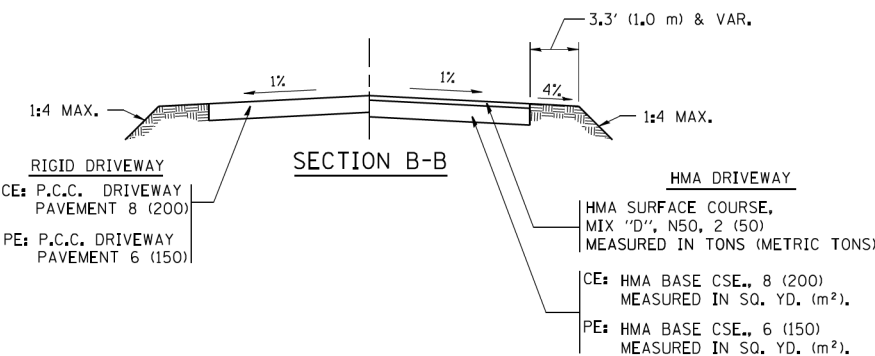
WITH CONCRETE CURB, TYPE B



ADJACENT TO P.C.C. / HMA SHOULDER



ADJACENT TO CURB AND GUTTER



RURAL FIELD ENTRANCE (FE)

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.

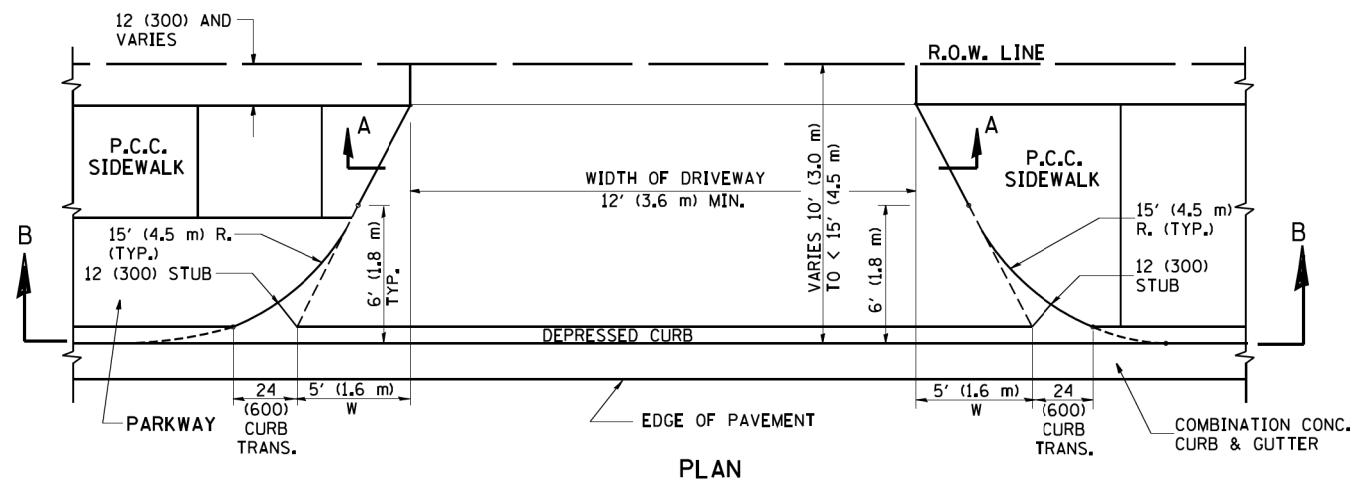
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ca:\pwork\pwork\lleyse\0108315\bd01.dgn		DRAWN -	REVISED - R. BORO 01-01-07
		CHECKED -	REVISED - R. BORO 06-11-08
		DATE - 11-04-95	REVISED - R. BORO 09-06-11

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

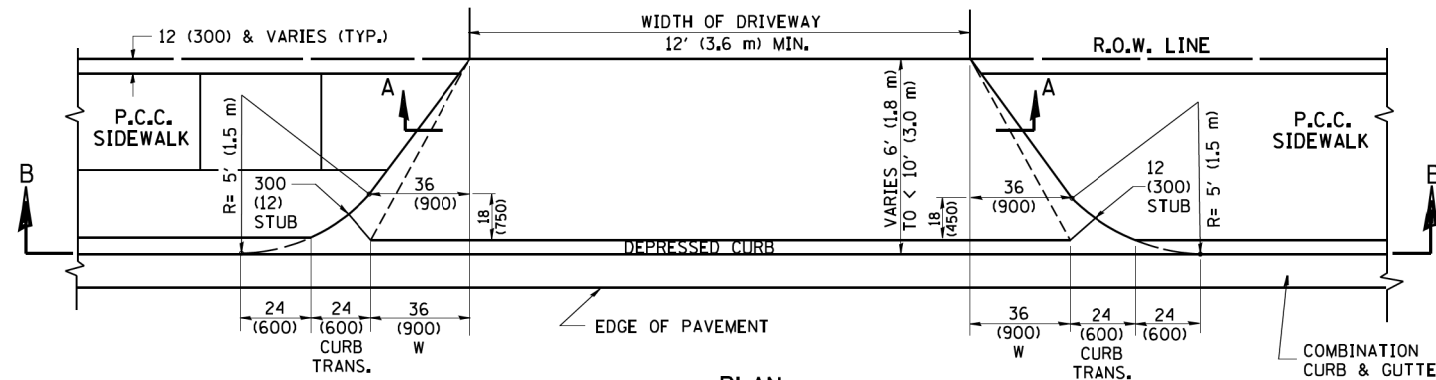
**DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W.
AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)**

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

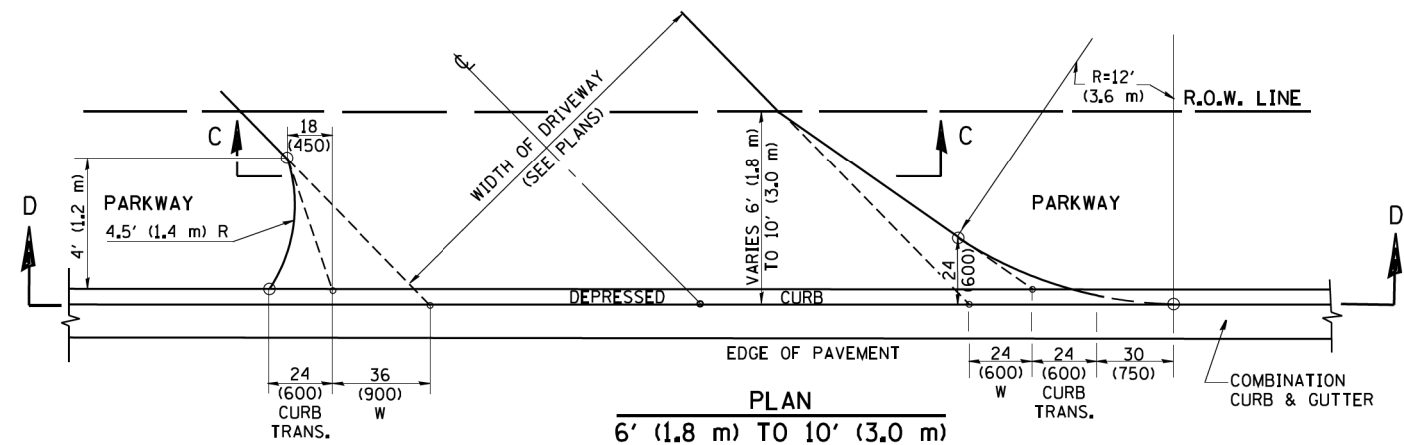
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	542
BD0156-07 (BD-01)			CONTRACT NO. 60M61	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



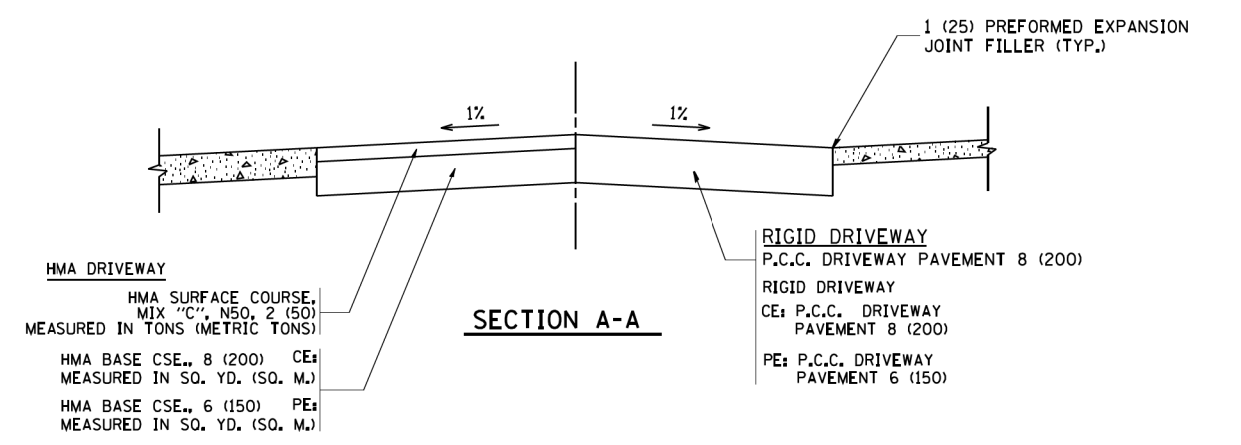
PLAN
10' (3.0 m) TO < 15' (4.5 m)



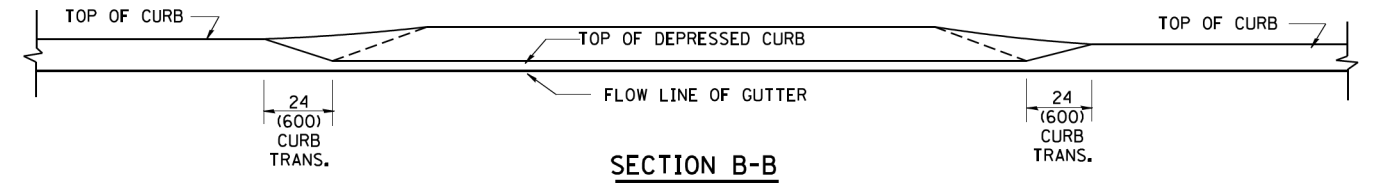
PLAN
6' (1.8 m) TO < 10' (3.0 m)



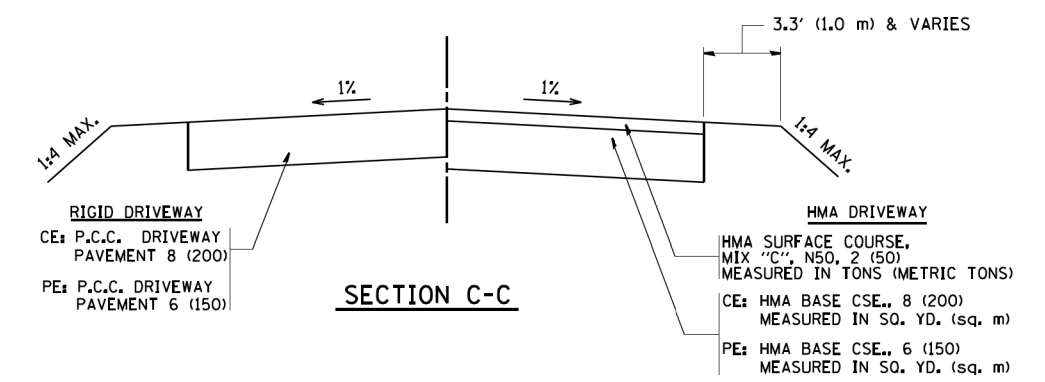
PLAN
6' (1.8 m) TO 10' (3.0 m)



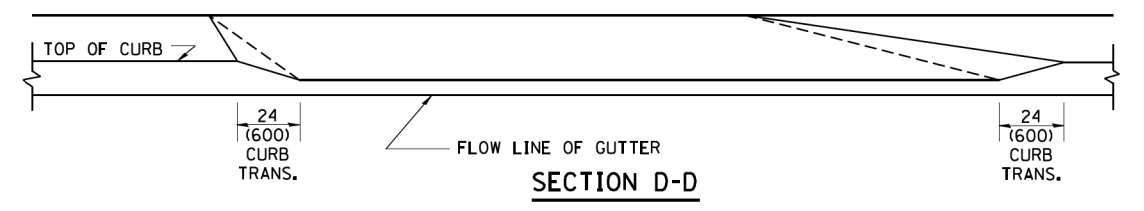
SECTION A-A



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.

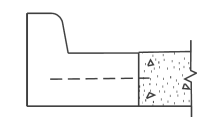
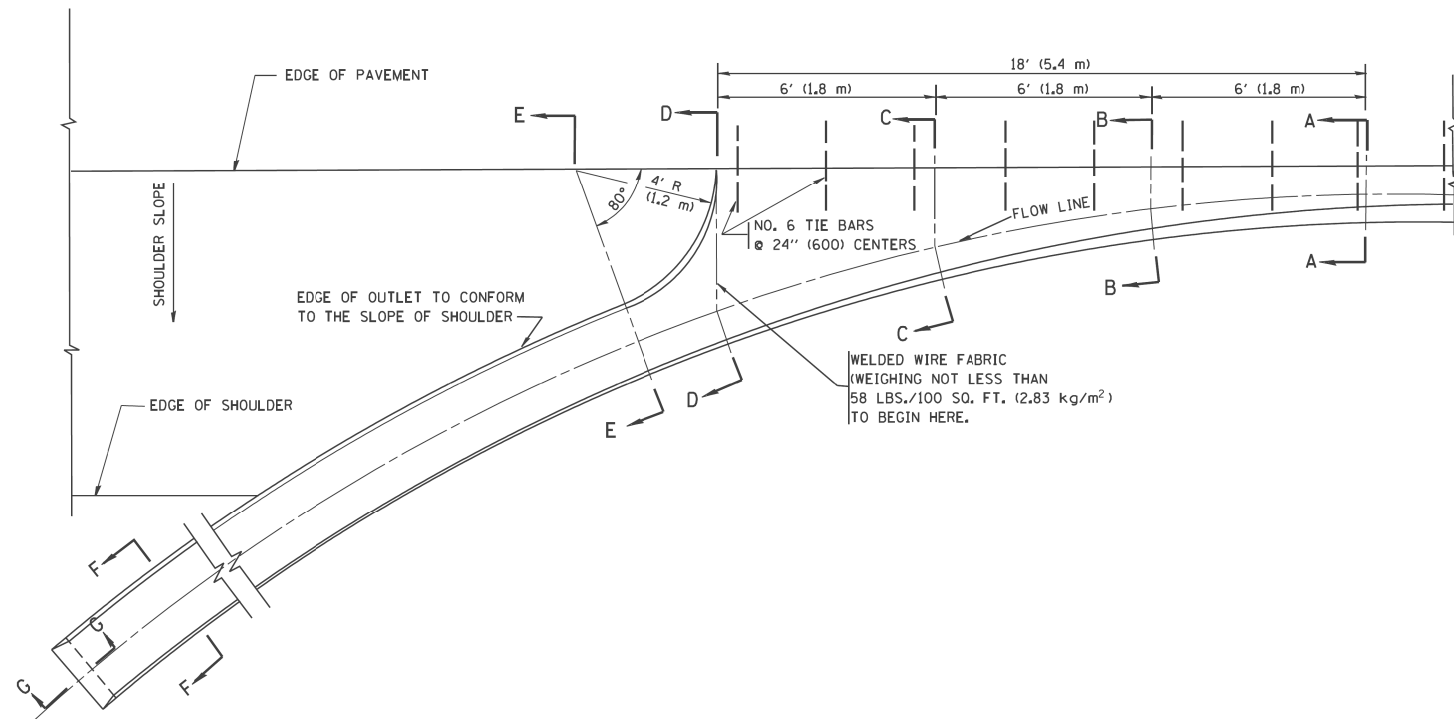
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PLOT SCALE = 50.0000' / IN.	
PLOT DATE = 1/4/2008	

DESIGNED - R. SHAH	REVISOR - T. HOLTZ 04-08-97
DRAWN -	REVISOR - M. GOMEZ 04-05-01
CHECKED -	REVISOR - P. LaFLEUR 04-15-03
DATE - 11-06-95	REVISOR - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

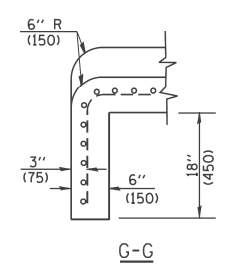
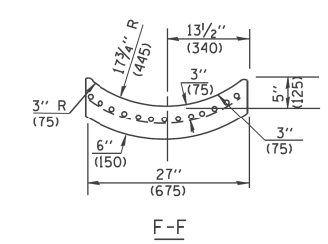
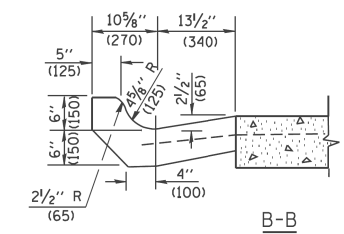
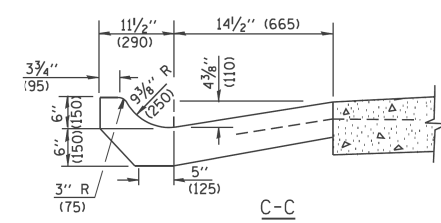
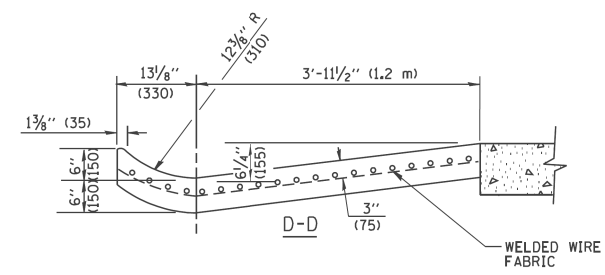
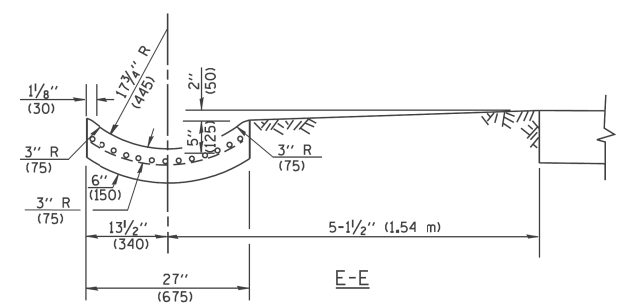
DRIVEWAY DETAILS	
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	543
BD400-02 (BD-02)			CONTRACT NO. 60M61	
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\" (600) CENTERS UNLESS OTHERWISE SHOWN.

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\" (225) PAV'T.
 1.27 CU. YDS. (0.96 m³) CLASS SI CONCRETE (OUTLET) FOR 10\" (250) PAV'T.
 FOR SECTION F-F =
 0.045 CU. YDS. (0.03 m³) CLASS SI CONCRETE PER FT. (M).

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

FILE NAME = W:\diststd\22x34\bd03.dgn	USER NAME = geglanoet	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-4	COOK	877	544
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. 60M61			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT												

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

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

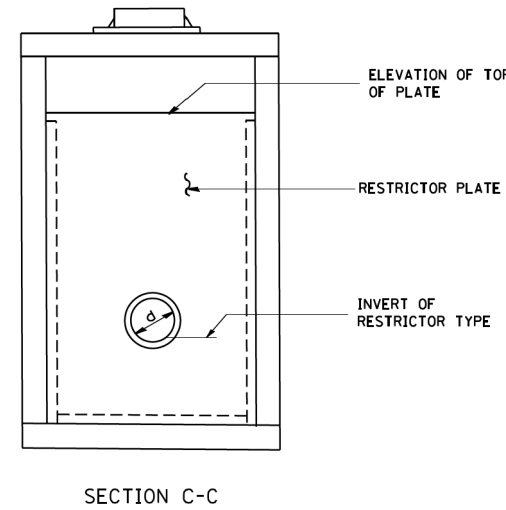
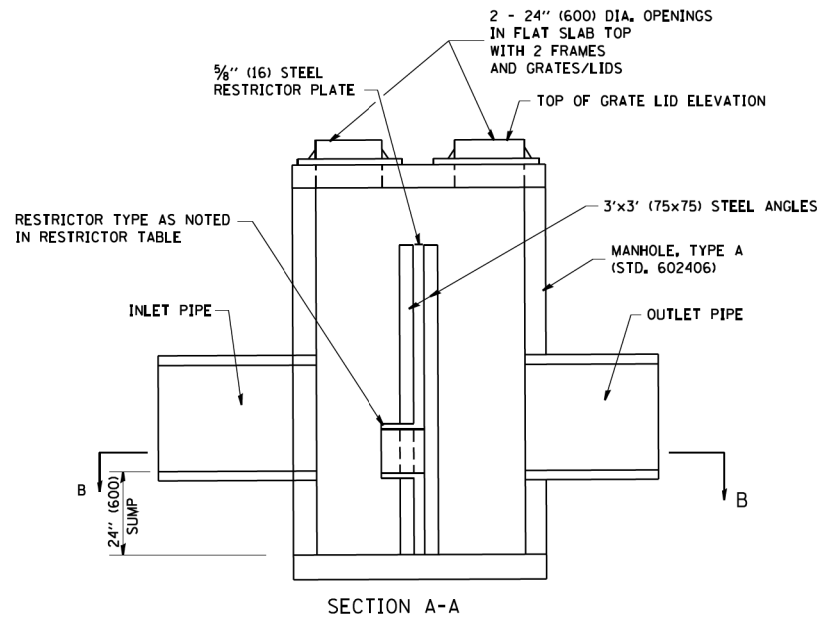
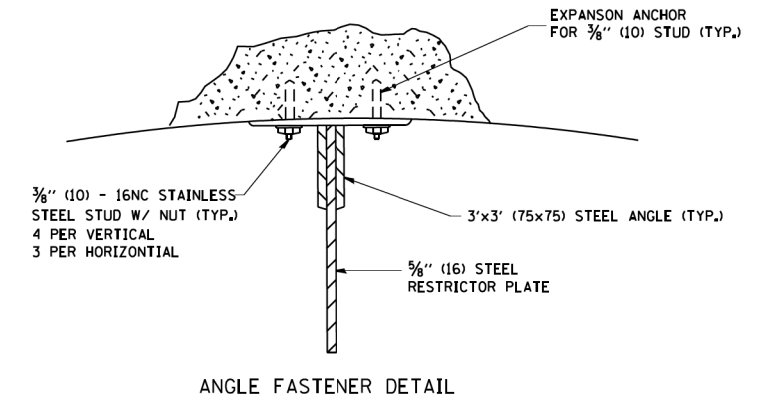
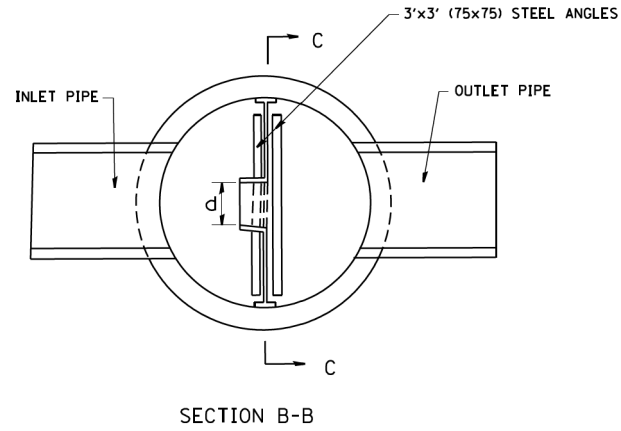
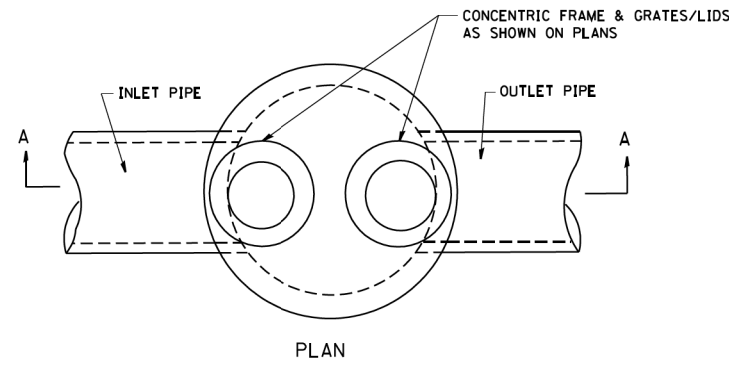
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		DRAWN -	REVISED -
	PLOT SCALE = 40.000000' / in.	CHECKED -	REVISED -
SHT.PLAN	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

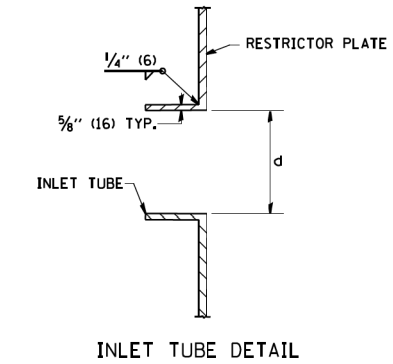
**DETAIL OF STORM SEWER
CONNECTION TO EXISTING SEWER**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

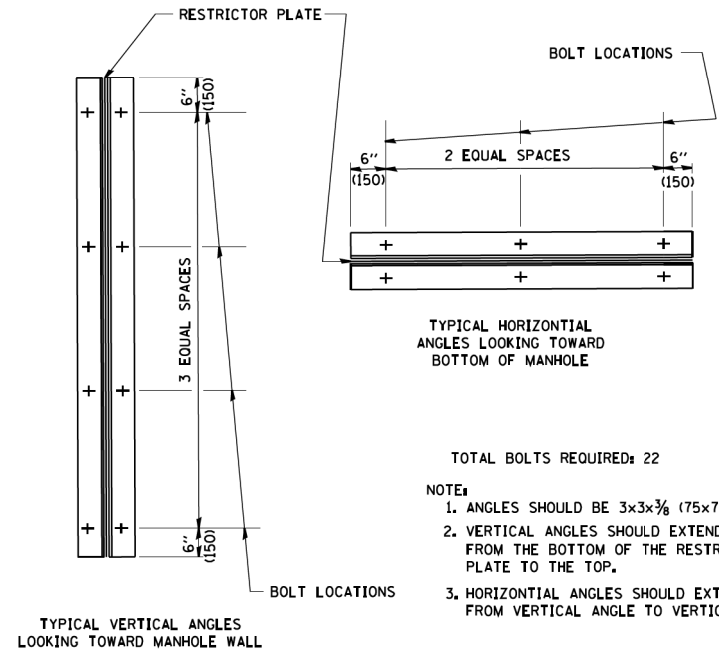
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	545
CONTRACT NO. 60M61				
ILLINOIS FED. AID PROJECT				



- 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
56E STA. 233+35.5 R	5	718.16	716.00	711.46	9.8	3
78E STA. 180+85.3 R	4	712.28	708.20	704.88	6.0	3



- TOTAL BOLTS REQUIRED: 22
- NOTE:
1. ANGLES SHOULD BE 3x3x3/8 (75x75x75)
 2. VERTICAL ANGLES SHOULD EXTEND FROM THE BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
 3. HORIZONTAL ANGLES SHOULD EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

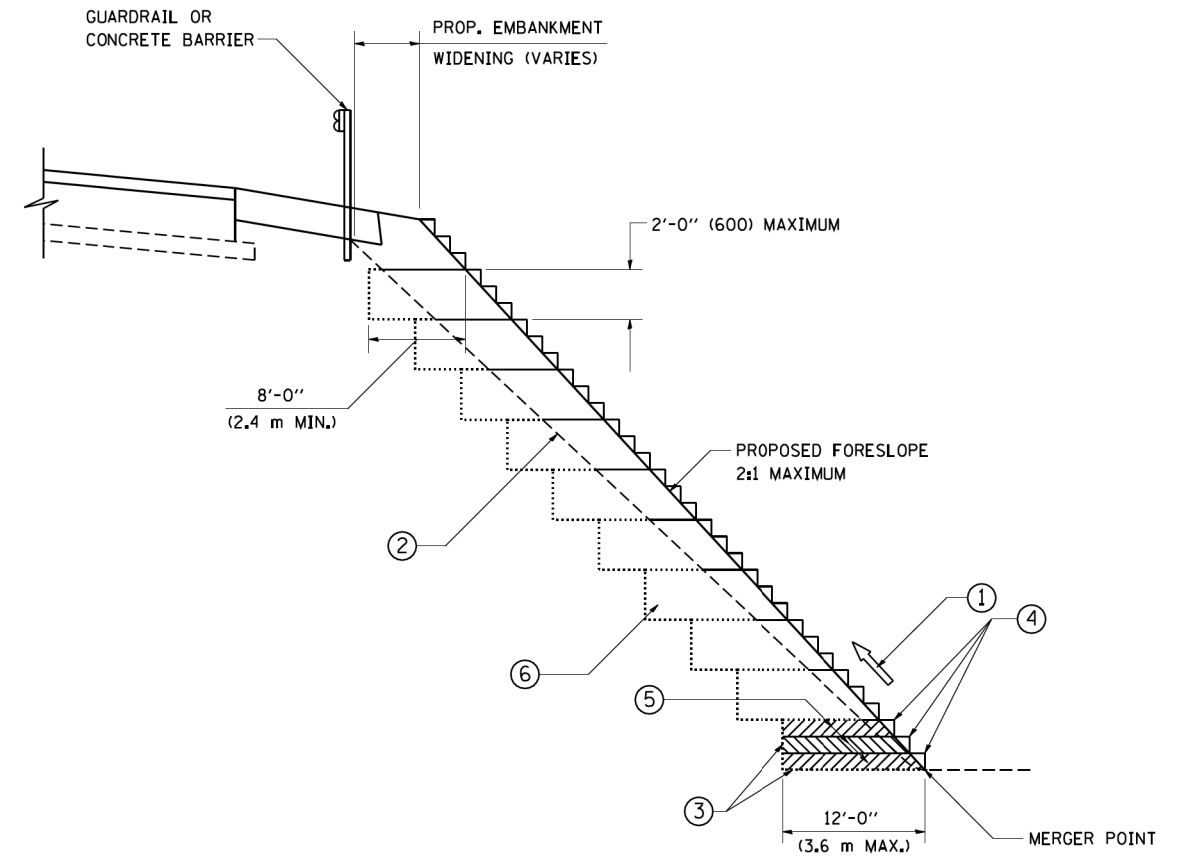
RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENFRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENFRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: 1/2 TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA.	LENGTH: 2-1/2 DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHOLE WITH RESTRICTOR PLATE

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



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

NOTES:

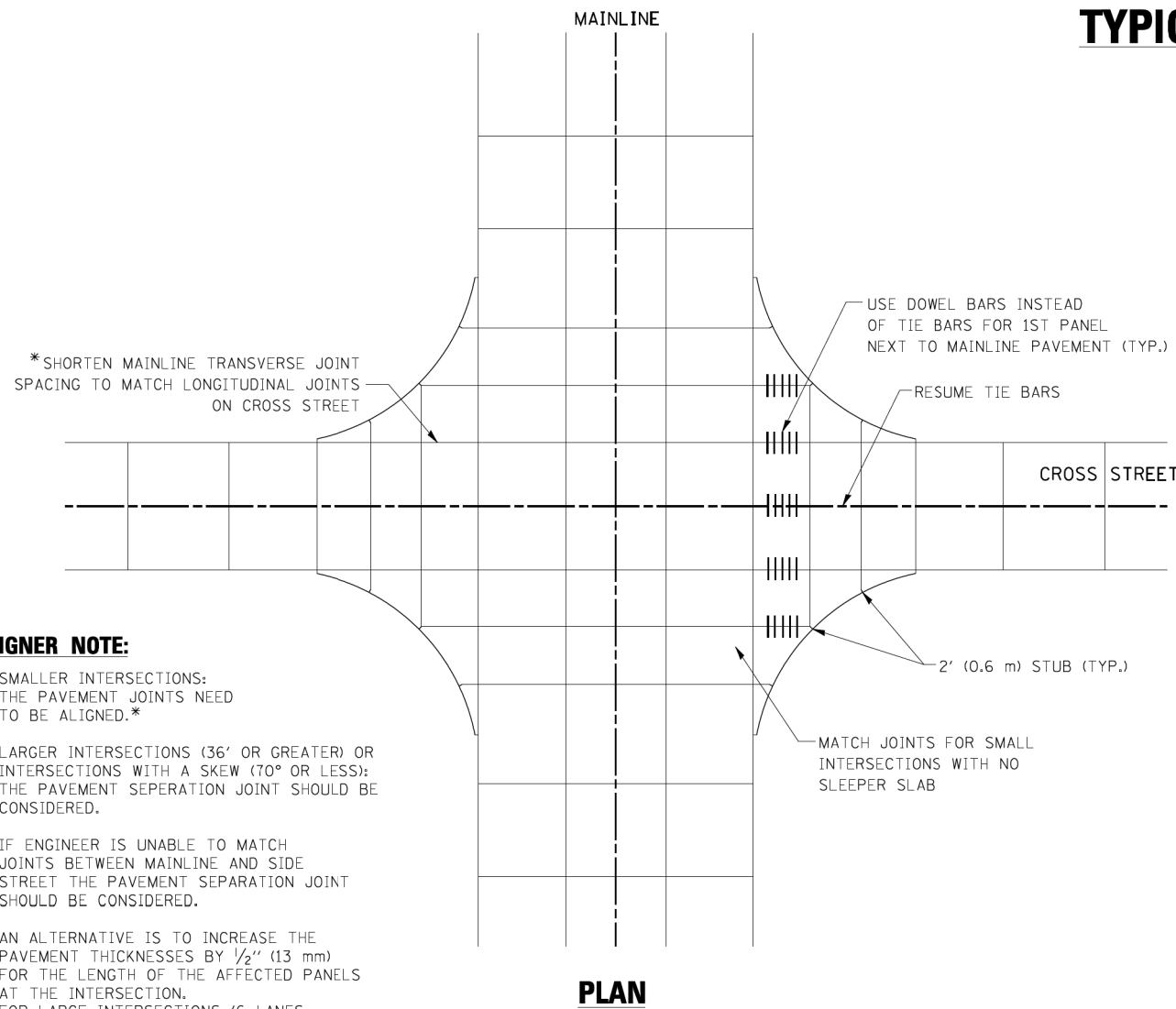
- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 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 -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BENCHING DETAIL FOR EMBANKMENT WIDENING			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	CHECKED - S.E.B.	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	330	103R-4	COOK	877
PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -						BD-51		CONTRACT NO. 60M61		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT												

TYPICAL APPLICATION

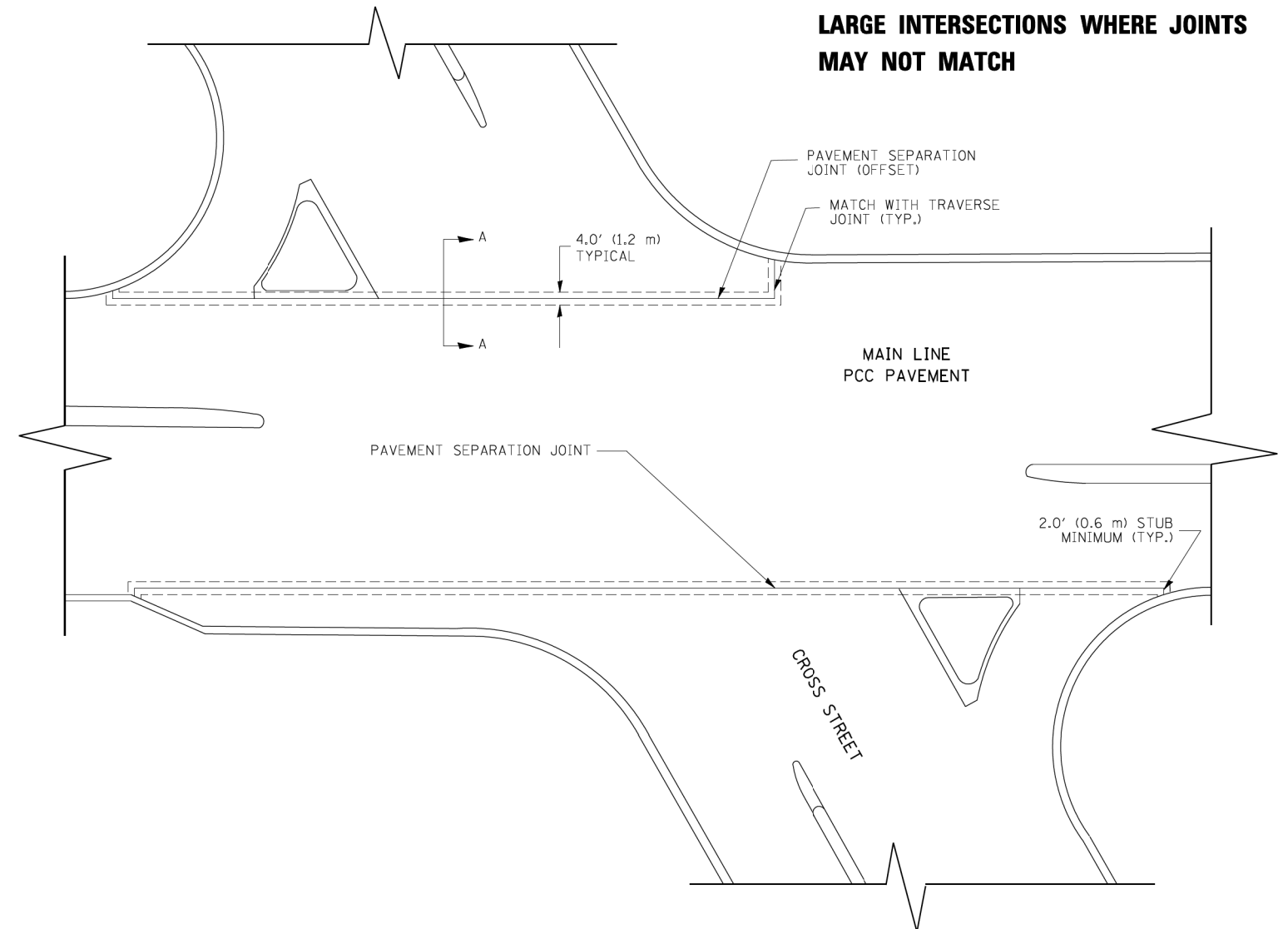
THE USE OF CROSS STREET PAVEMENT SEPARATION JOINTS FOR SKEWED OR LARGE INTERSECTIONS WHERE JOINTS MAY NOT MATCH



PLAN

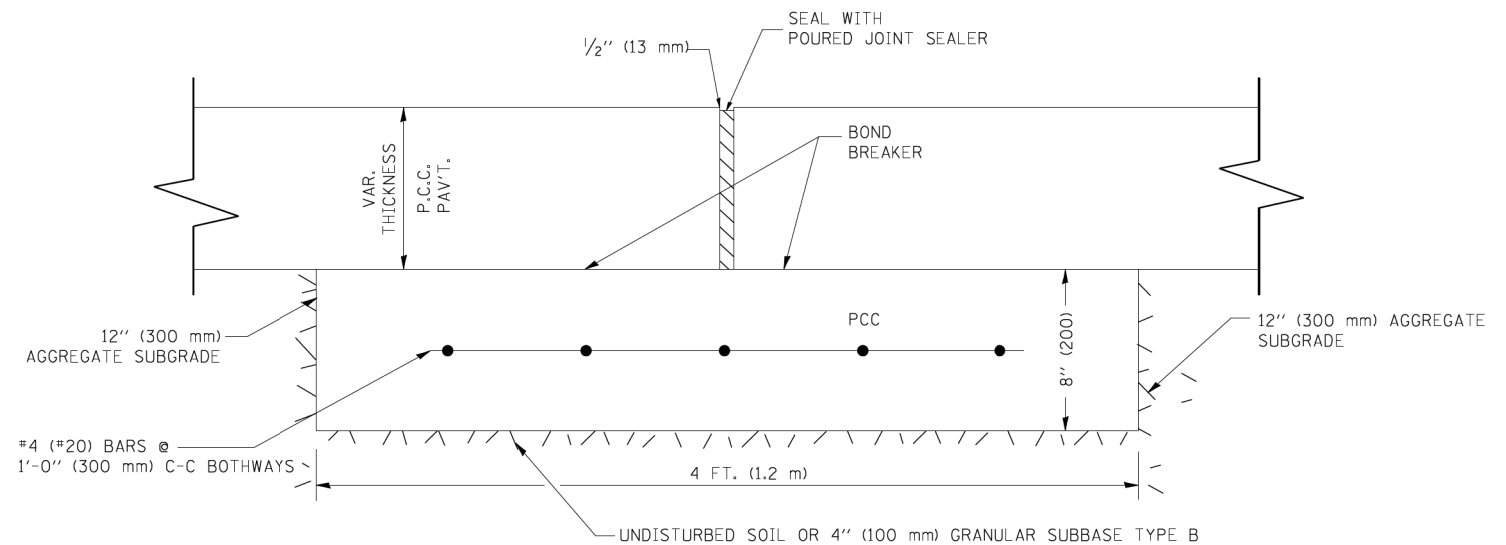
DESIGNER NOTE:

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".



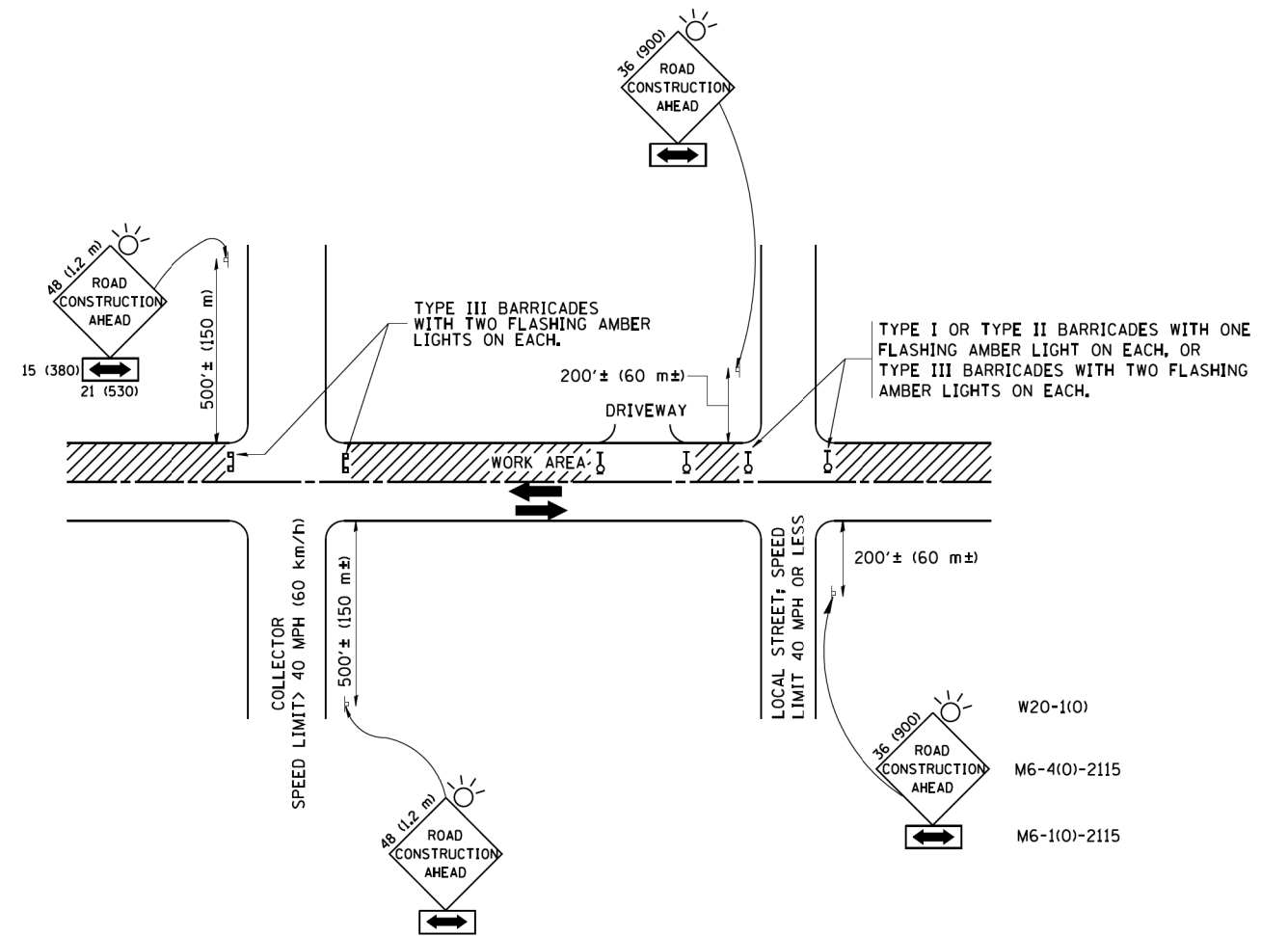
PROPOSED SECTION A-A

FILE NAME = bd92.dgn	USER NAME = luyaa	DESIGNED - DRAWN -	REVISED - CADD 06-18-10 REVISED - REVISED - REVISED -
PLOT SCALE = 49.9999 / IN.	CHECKED -	DATE -	
PLOT DATE = 2/25/2011			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAIL OF PAVEMENT SEPARATION JOINT FOR JOINTED PCC PAVEMENTS AT INTERSECTIONS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 548
BD52		CONTRACT NO. 60M61		
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

1. 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:

a) 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.

b) 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.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) 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.

b) 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.

3. 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.

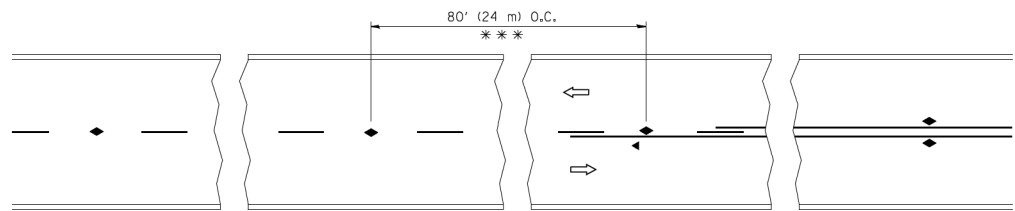
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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

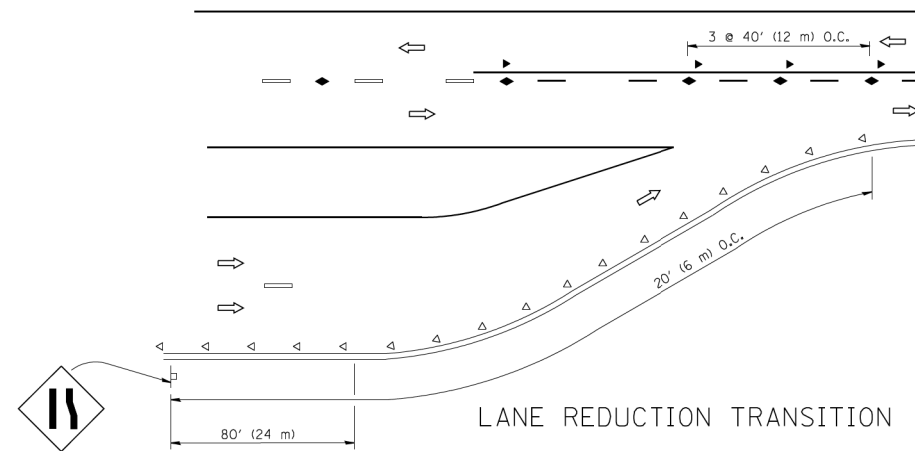
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-10			CONTRACT NO. 60M61	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

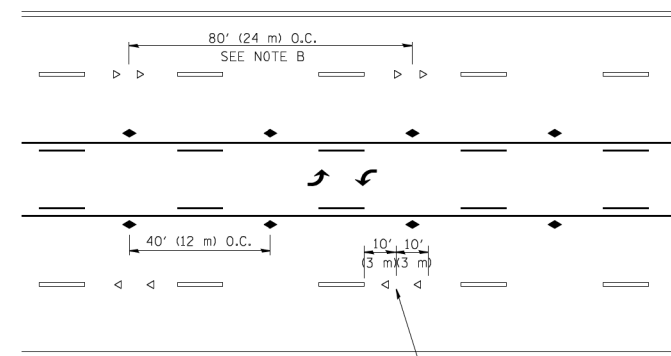


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

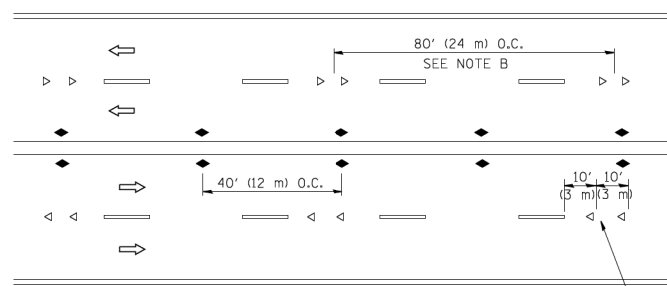
TWO-LANE/TWO-WAY



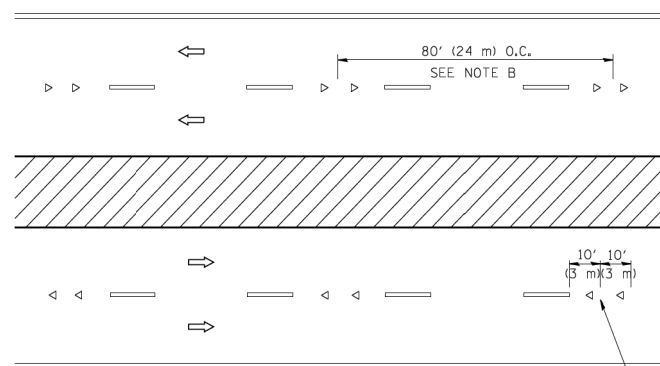
LANE REDUCTION TRANSITION



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

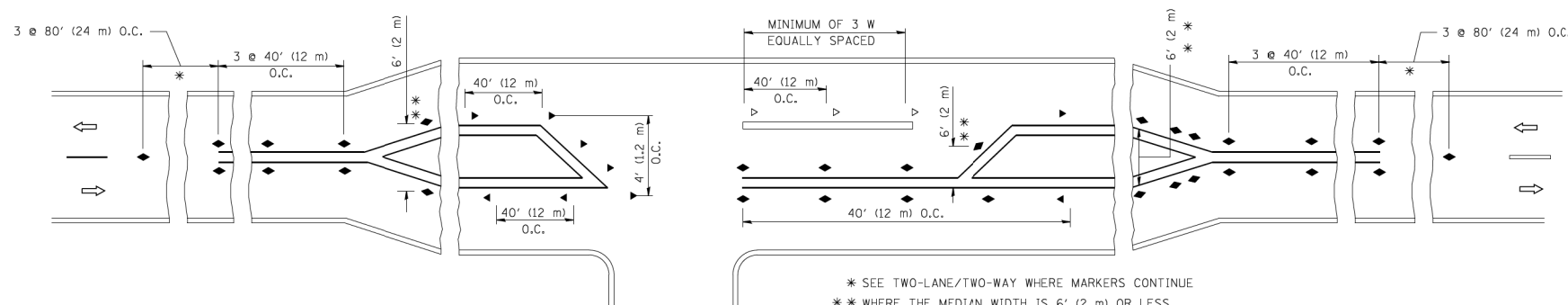
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- < ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

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.



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

LEFT TURN

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

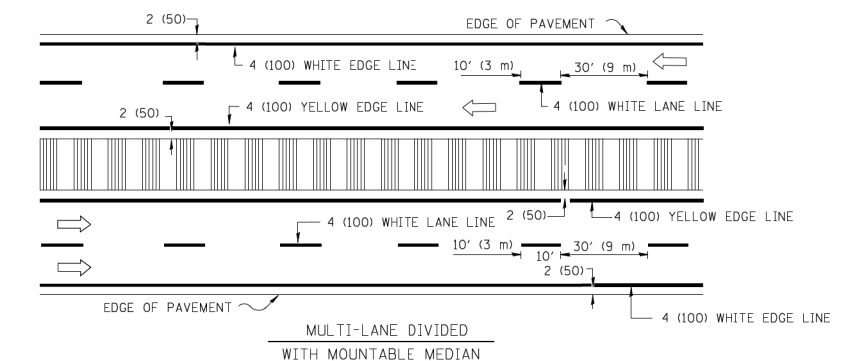
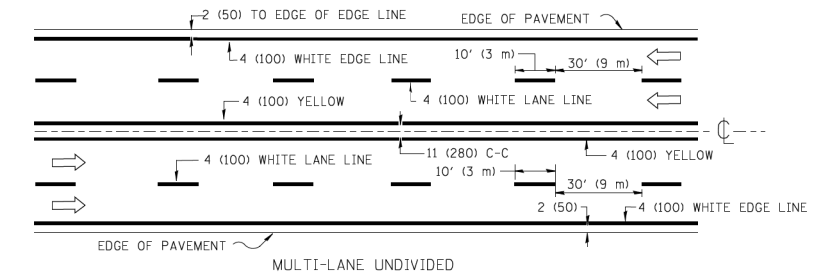
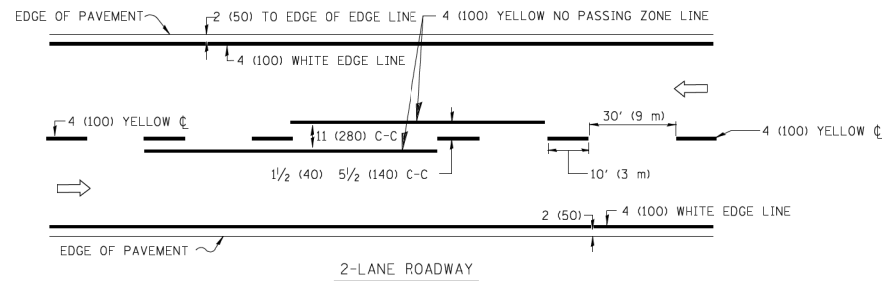
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	PLOT DATE = 9/9/2009	DATE -	REVISED - C. JUCIUS 09-09-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

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

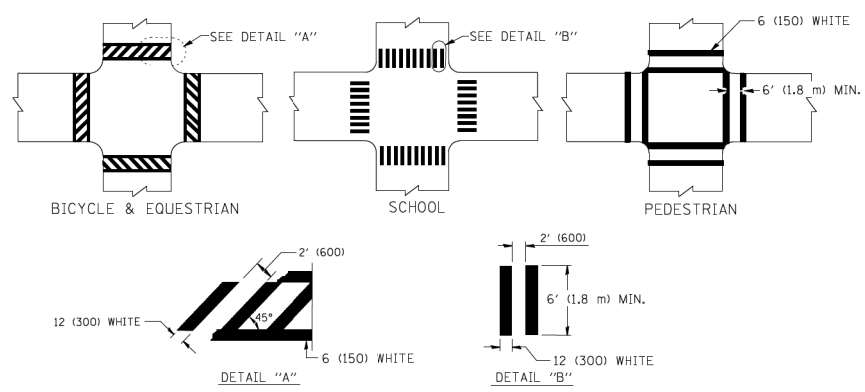
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-11		CONTRACT NO. 60M61		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

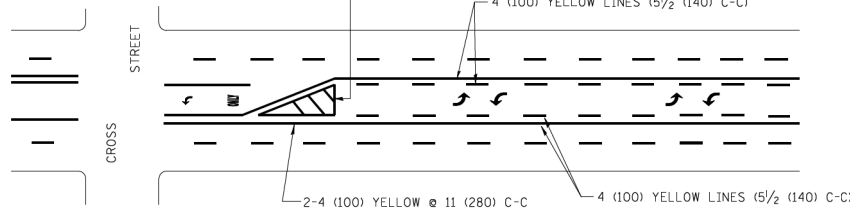
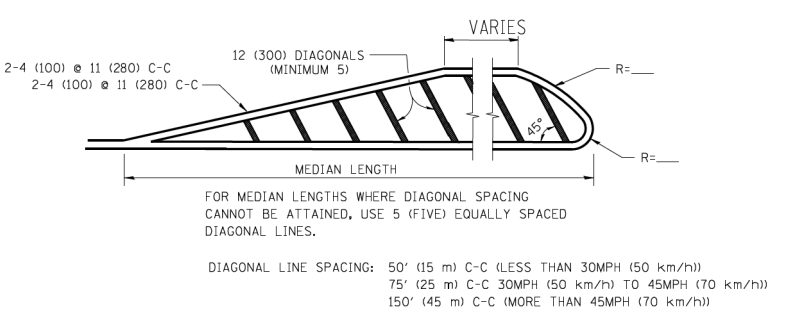
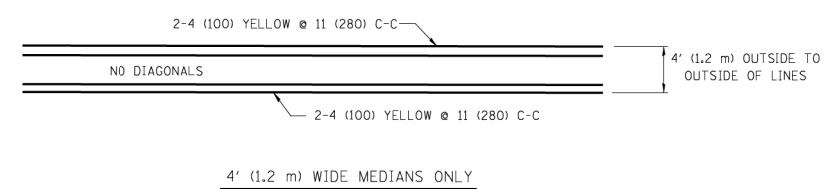


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

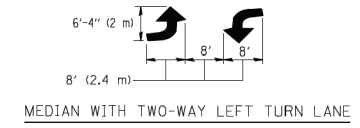
TYPICAL LANE AND EDGE LINE MARKING



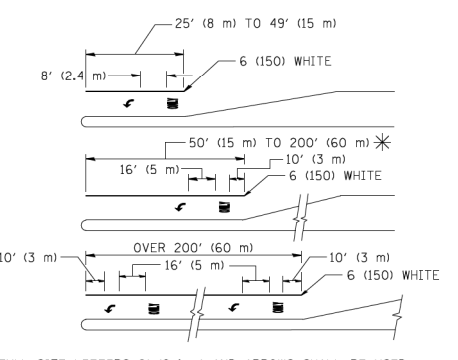
TYPICAL CROSSWALK MARKING



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.



TYPICAL PAINTED MEDIAN MARKING

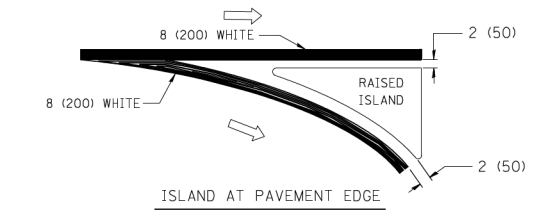
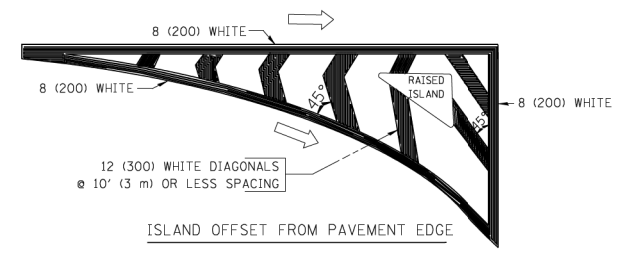


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* 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

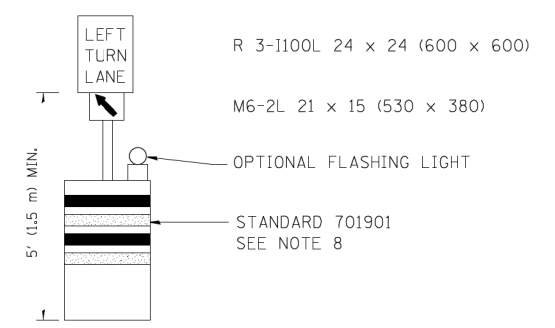
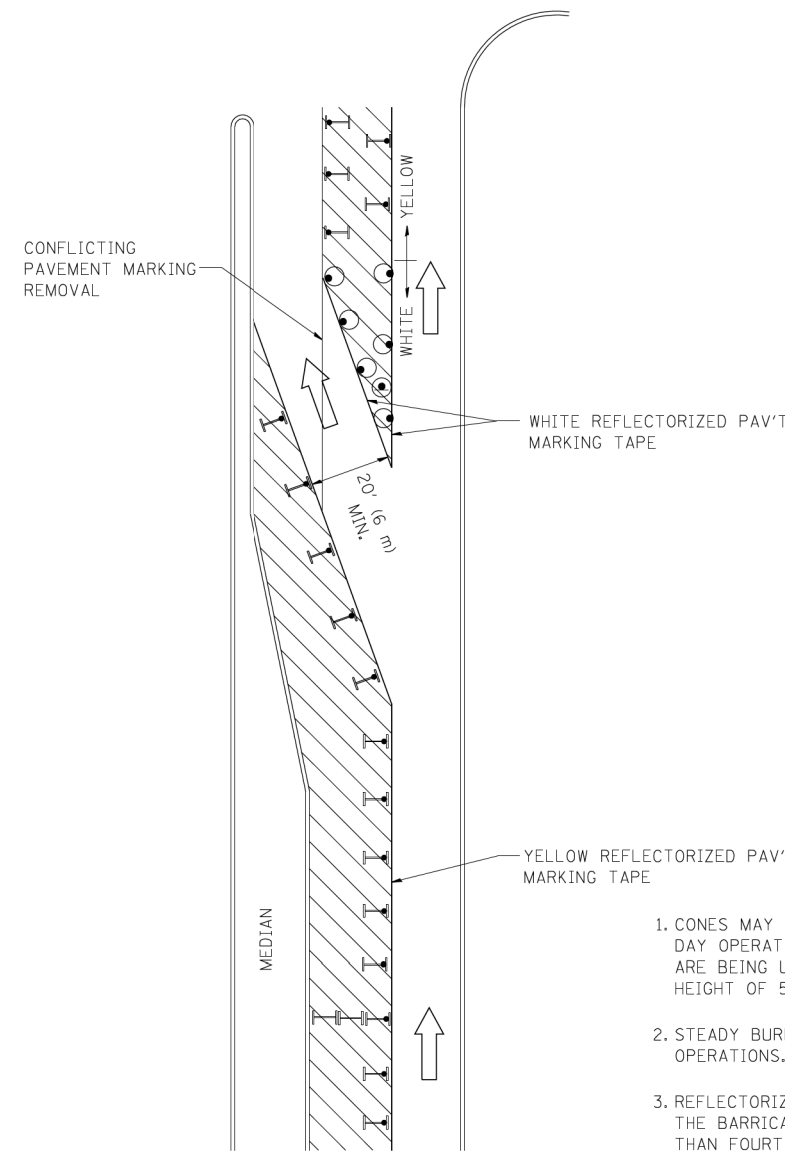


TYPICAL ISLAND MARKING

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 FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 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 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE 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° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	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" IS 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.









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

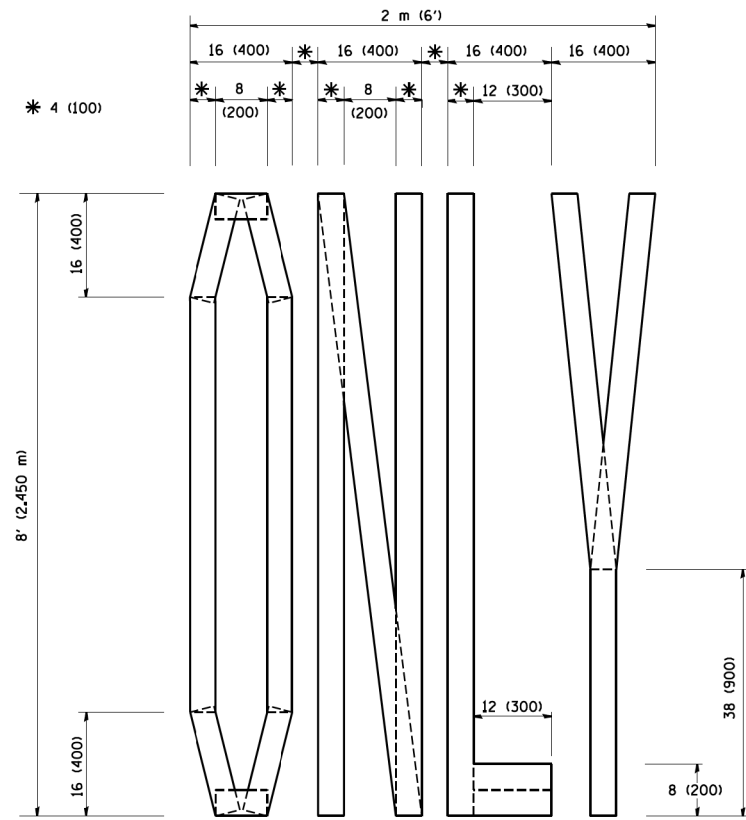
-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

FILE NAME =	USER NAME = drivakosgn	REVISED -T, RAMMACHER 09-08-94	REVISED - R, BORO 09-14-09
ca:\p\work\PWIDOT\DRIVAKOSGN\d0108315\td14.dgn		REVISED - A, HOUSEH 11-07-95	REVISED -
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PLOT DATE = 9/14/2009			

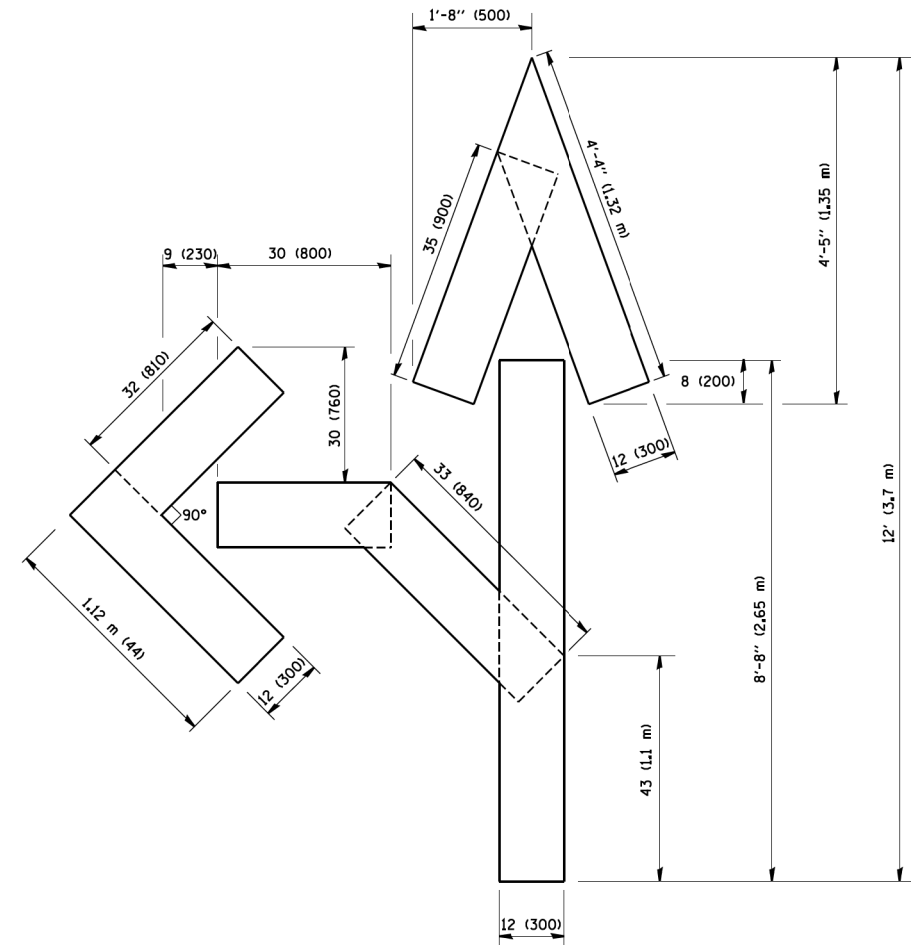
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

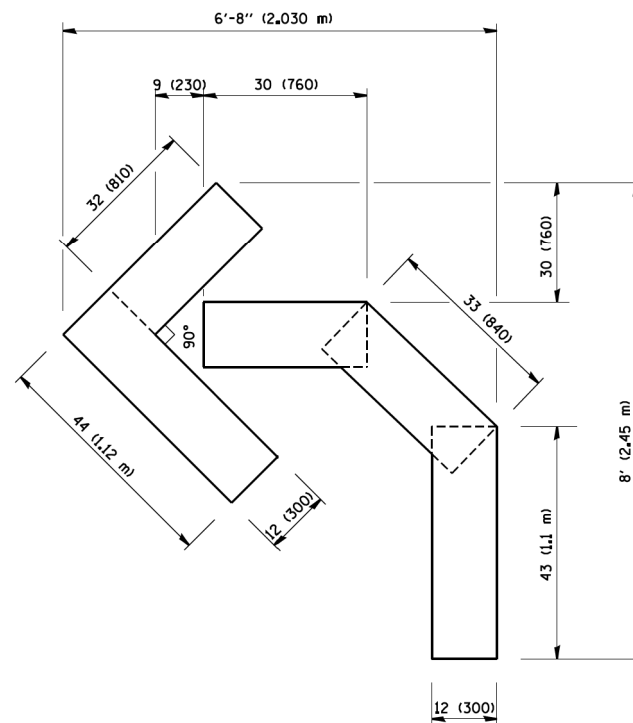
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	552
TC-14		CONTRACT NO. 60M61		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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.

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		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

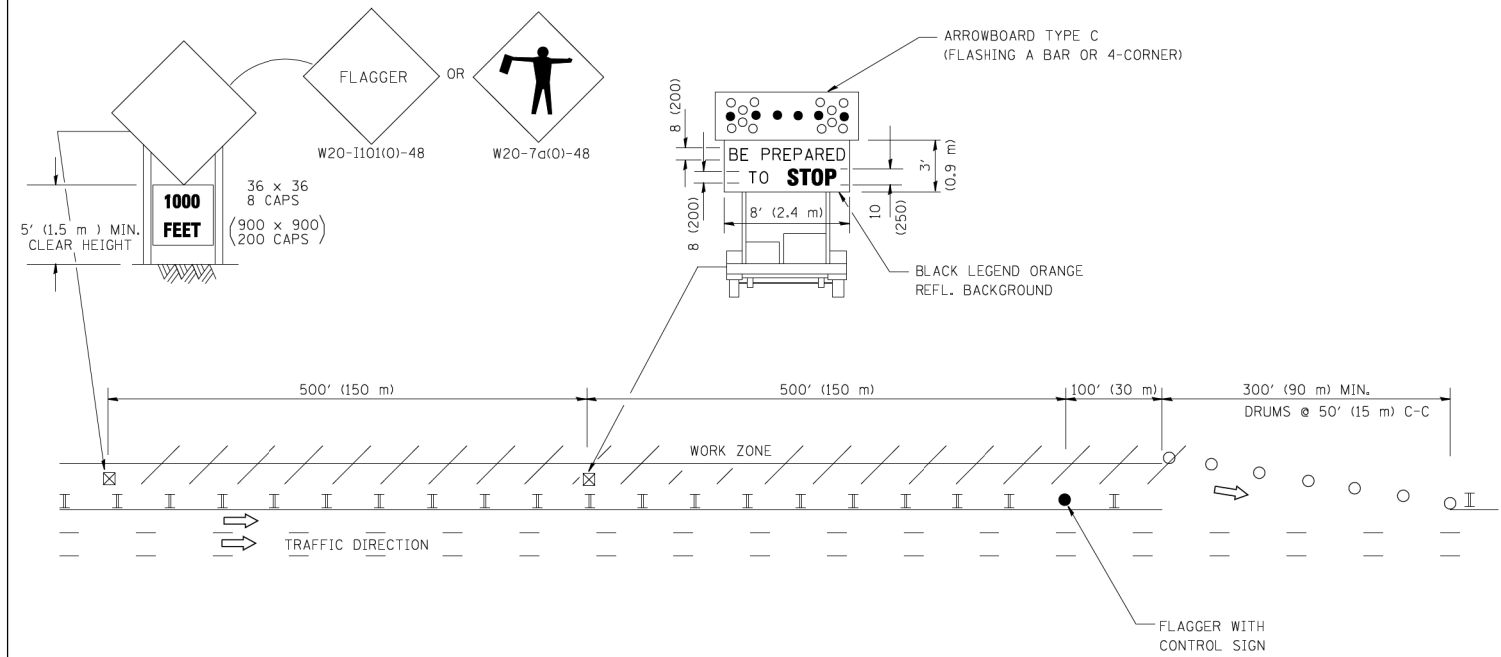
PAVEMENT MARKING LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING

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

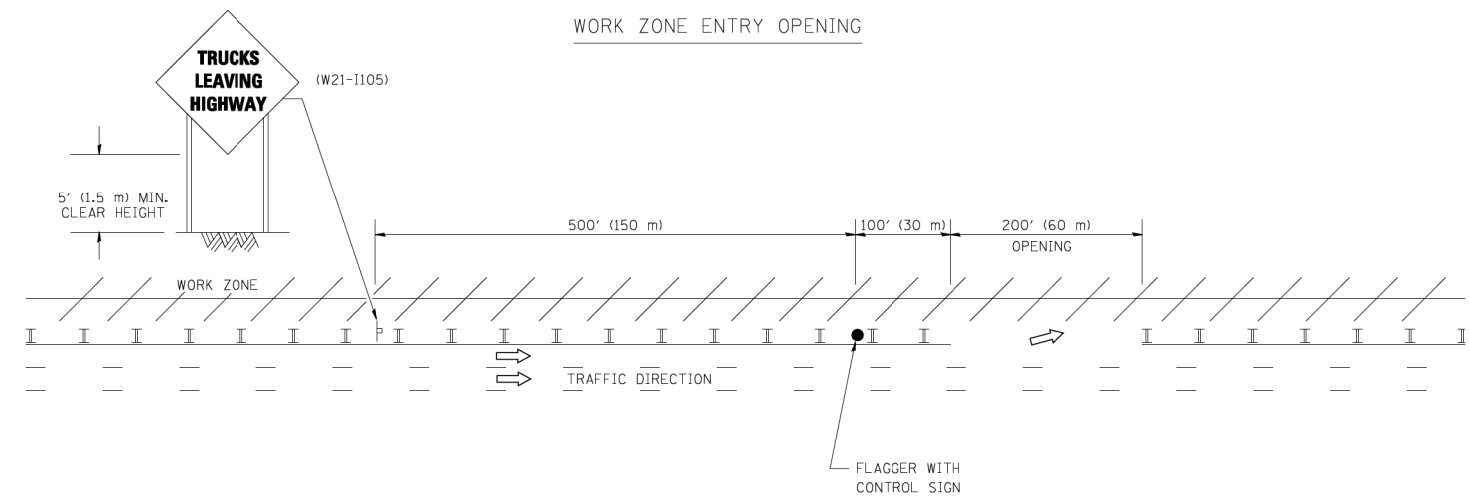
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	553
TC-16			CONTRACT NO. 60M61	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

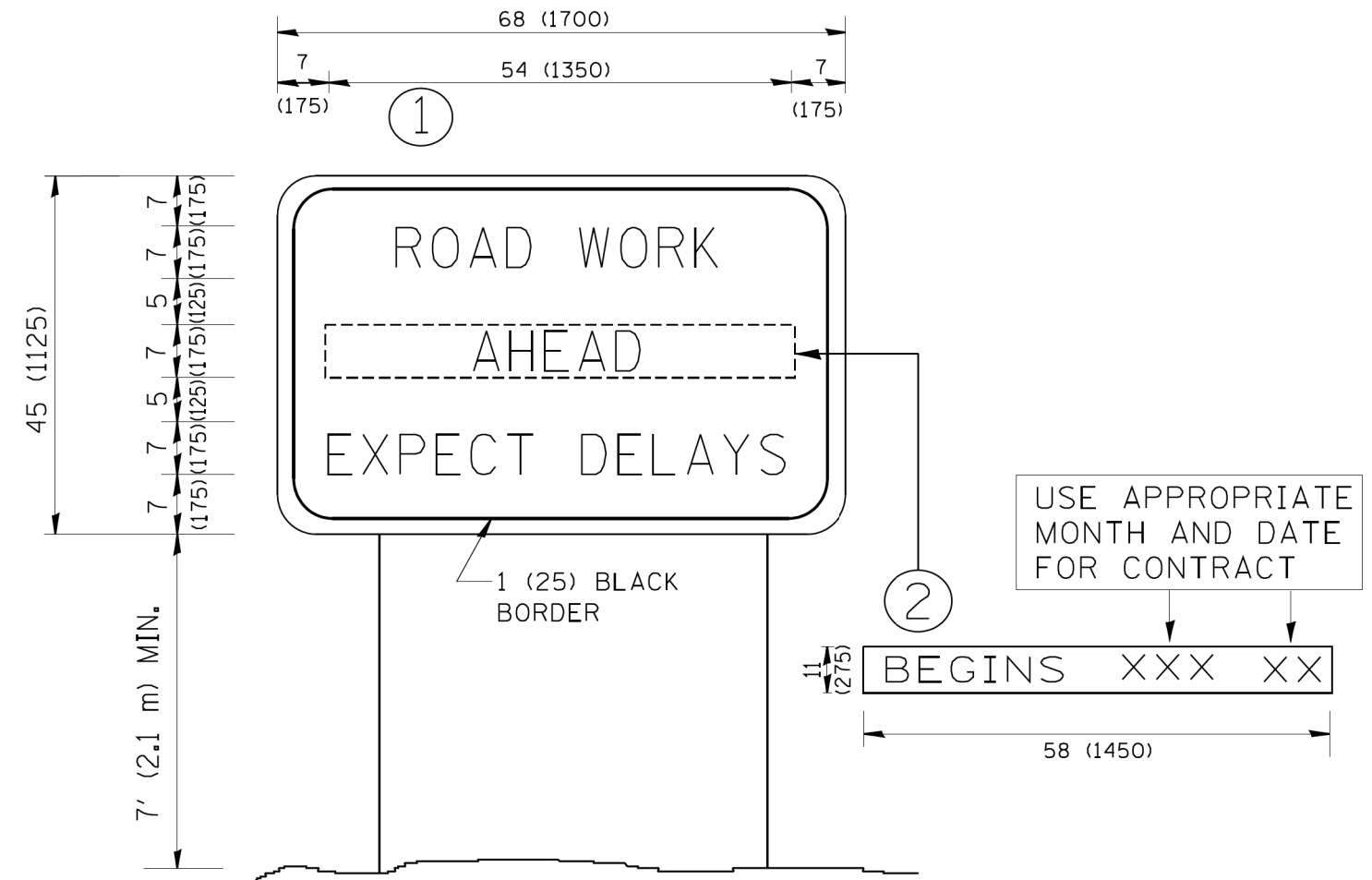
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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - S.P.B. 01-07
	PLOT DATE = 1/26/2010	DATE -	REVISED - S.P.B. 12-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS
AT WORK ZONE OPENINGS

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

F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 554
TC-18			CONTRACT NO. 60M61	
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.

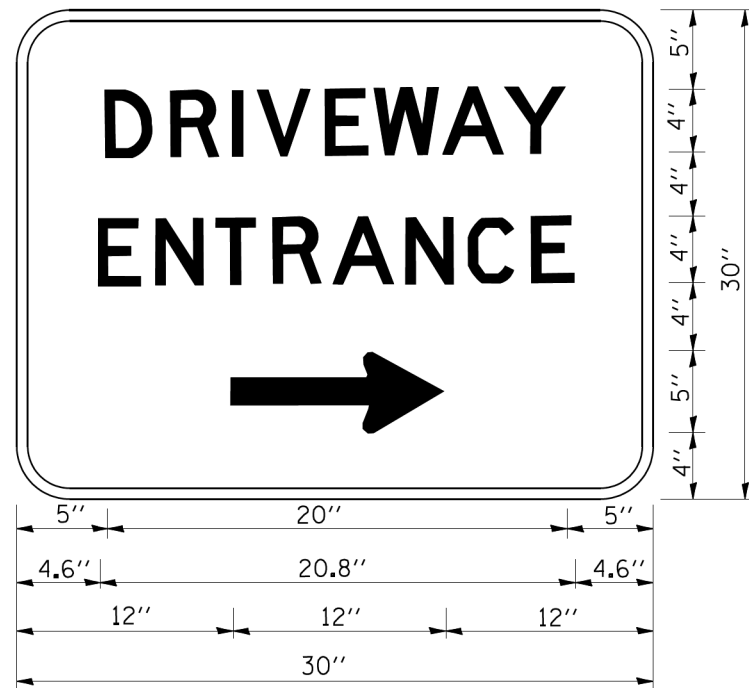
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		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

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

F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 555
TC-22		CONTRACT NO. 60M61		
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\te26.dgn	USER NAME = geglanoht	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

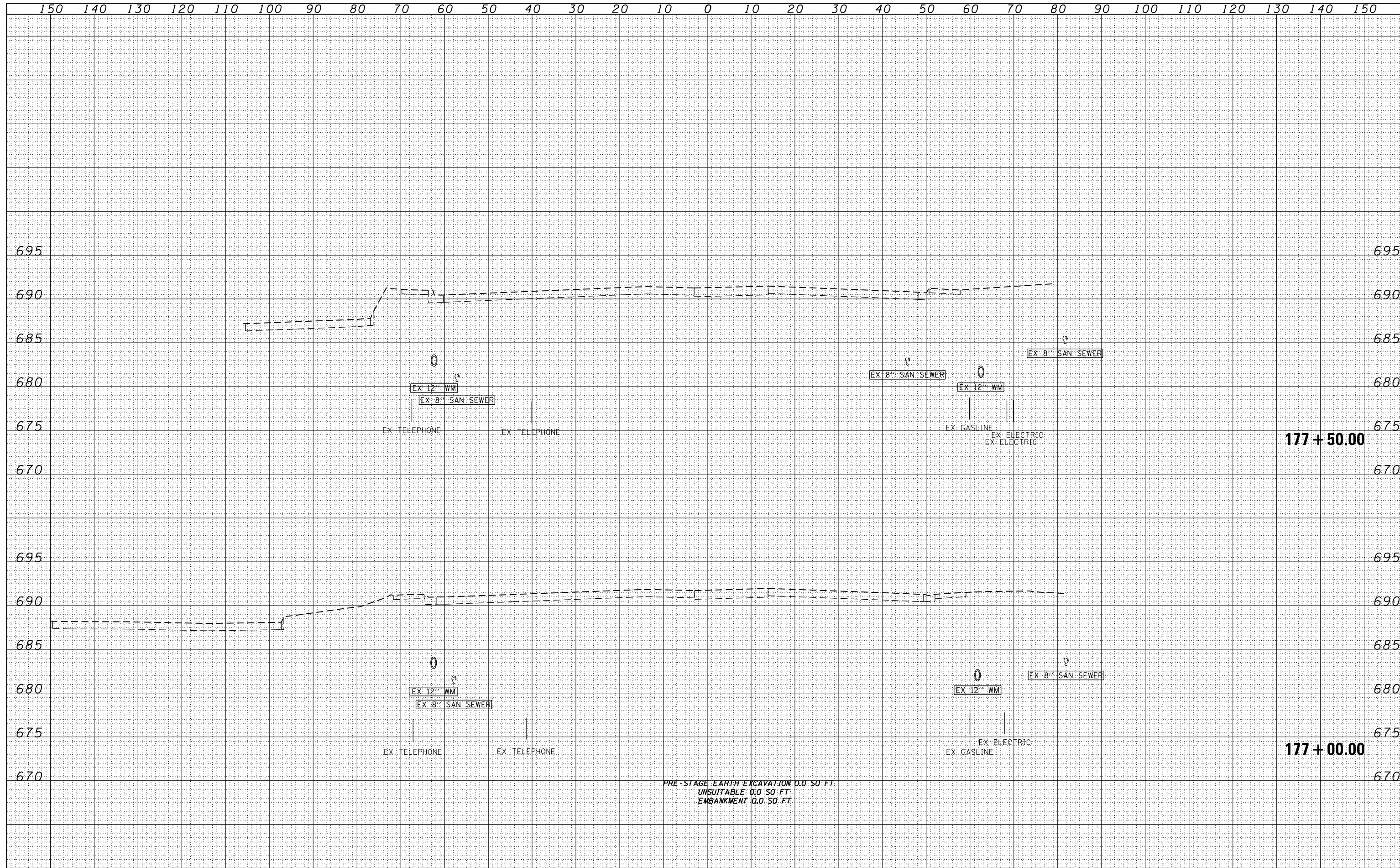
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	556
TC-26			CONTRACT NO. 60M61	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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NOTE BOOK	
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100 S. WACKER DR.
 CHICAGO, IL 60606
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 FAX 312/939-4198



FILE NAME =	USER NAME = Anthony.Plutz
D160M61-SHT-XSSH11.dgn	DESIGNED - JCL
	DRAWN - JCL
	CHECKED - MJT
	DATE - 03/13/2013
	REVISIONS
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SCALE = 20.0003' / in.	DESIGNED - JCL	REVISED -
PLOT DATE = 3/13/2013	DRAWN - JCL	REVISED -
	CHECKED - MJT	REVISED -
	DATE - 03/13/2013	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

US 45 TEMPORARY PAVEMENT CROSS SECTIONS

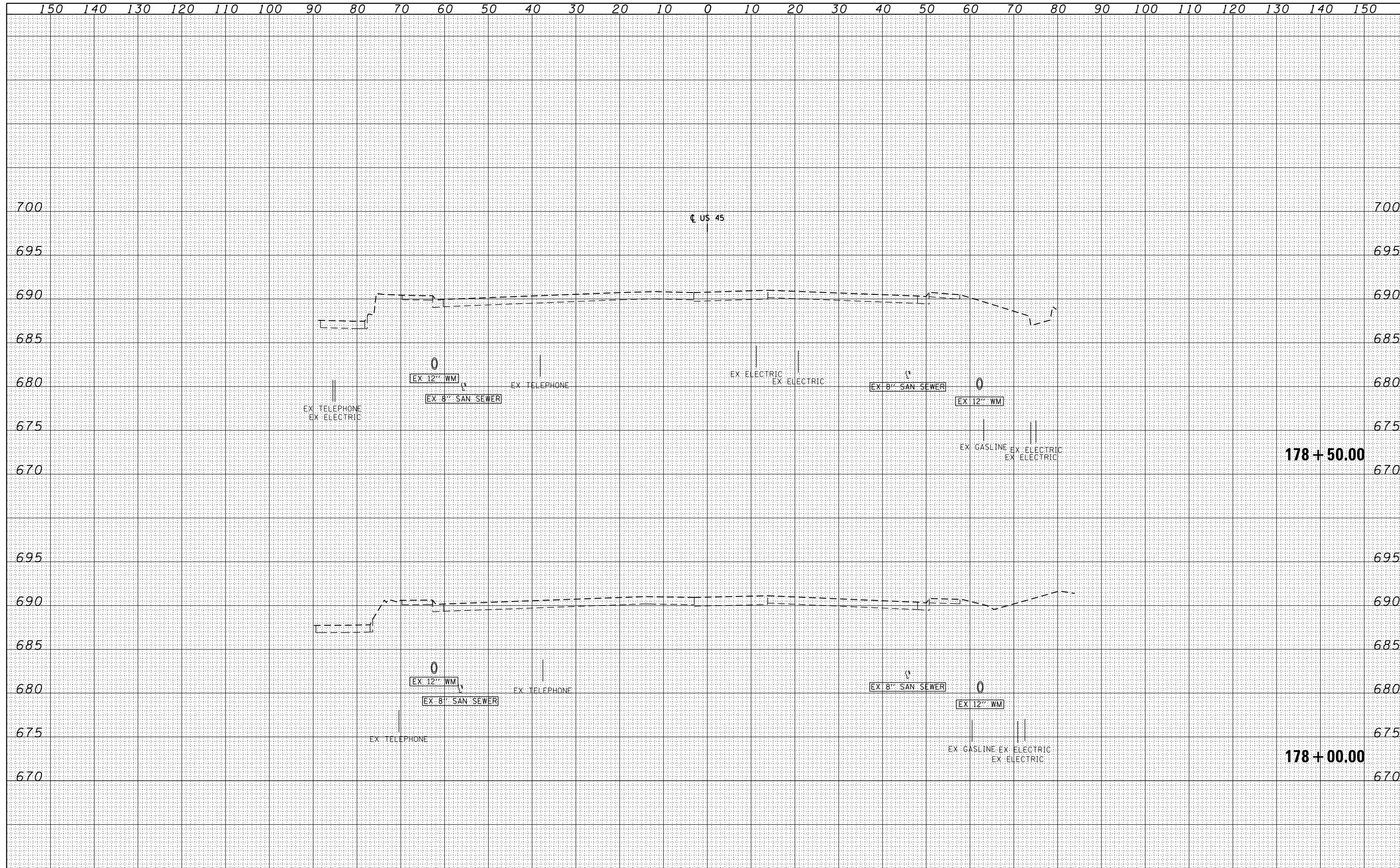
SCALE: 1"=10'H; 1"=5'V SHEET NO. 1 OF 109 SHEETS STA. 177+00.00 TO STA. 177+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	557
XS-TUS45-01			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

DATE	
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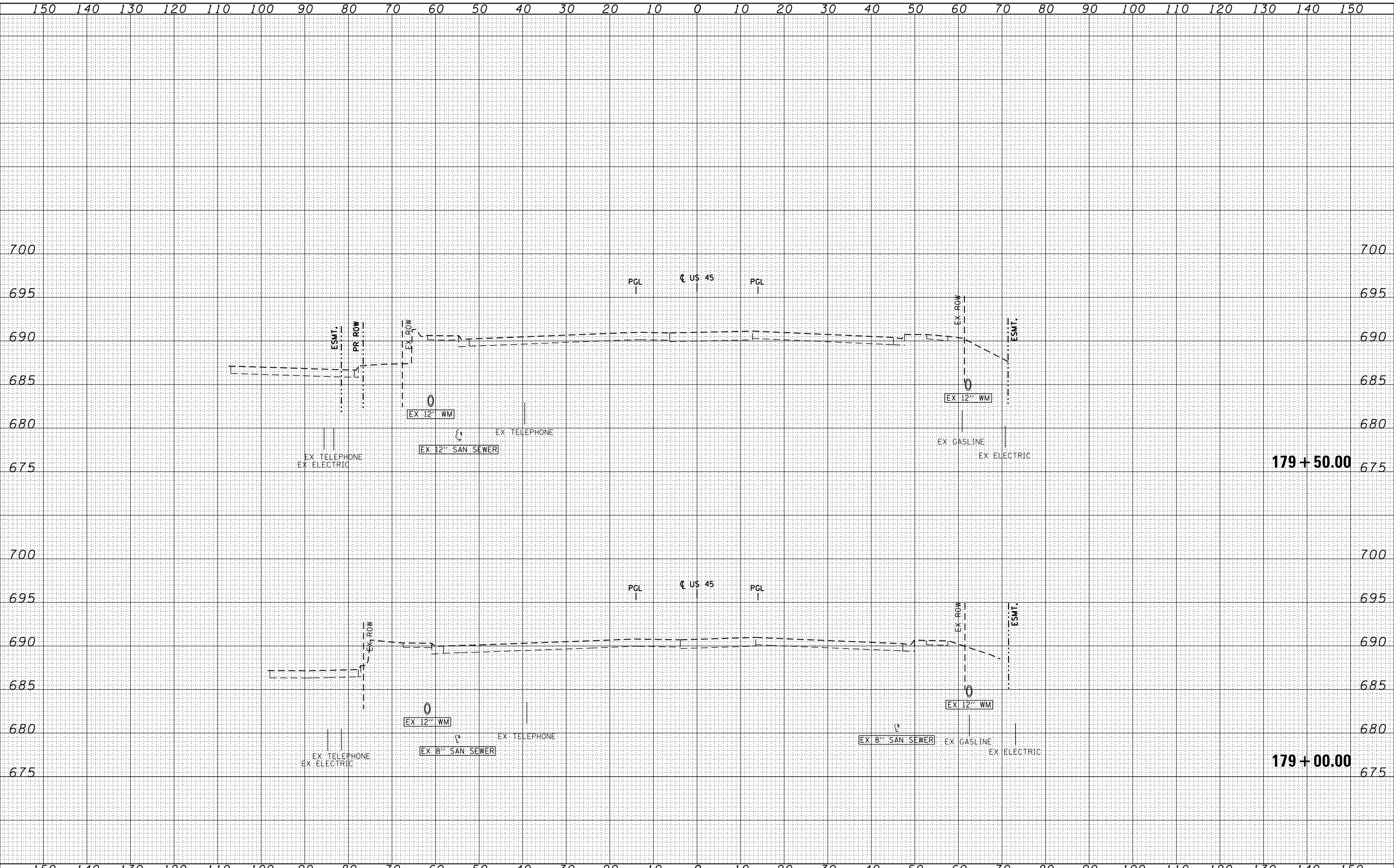
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FILE NAME = D:\60M61-SHT-XSSH11.dgn	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 45 TEMPORARY PAVEMENT CROSS SECTIONS SCALE: 1"=10'H; 1"=5' V SHEET NO. 2 OF 109 SHEETS STA. 178+00.00 TO STA. 178+50.00	F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 558	
		DRAWN - JCL	REVISIED -		XS-TUS45-02		CONTRACT NO. 60M61			
		CHECKED - MJT	REVISIED -		ILLINOIS FED. AID PROJECT					
		DATE - 03/13/2013	REVISIED -							

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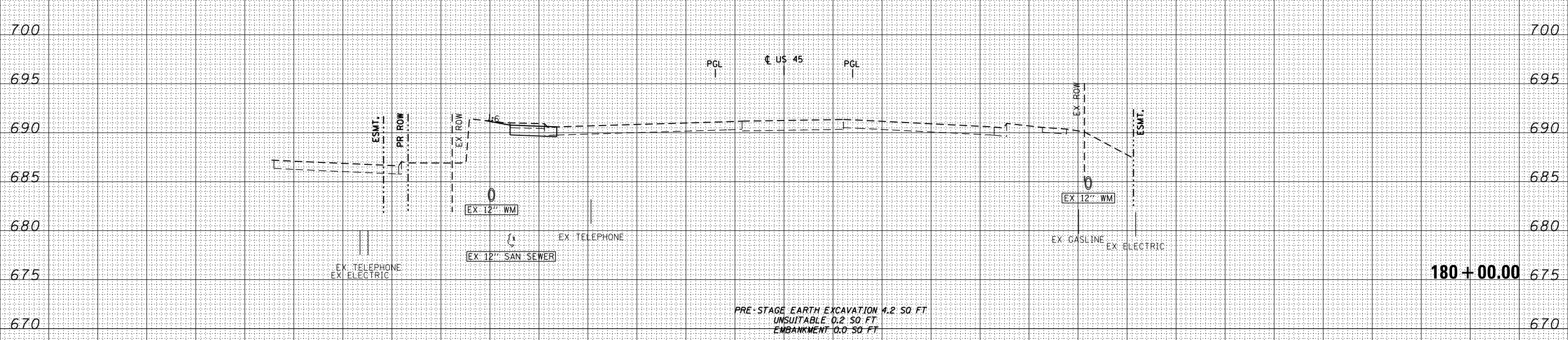
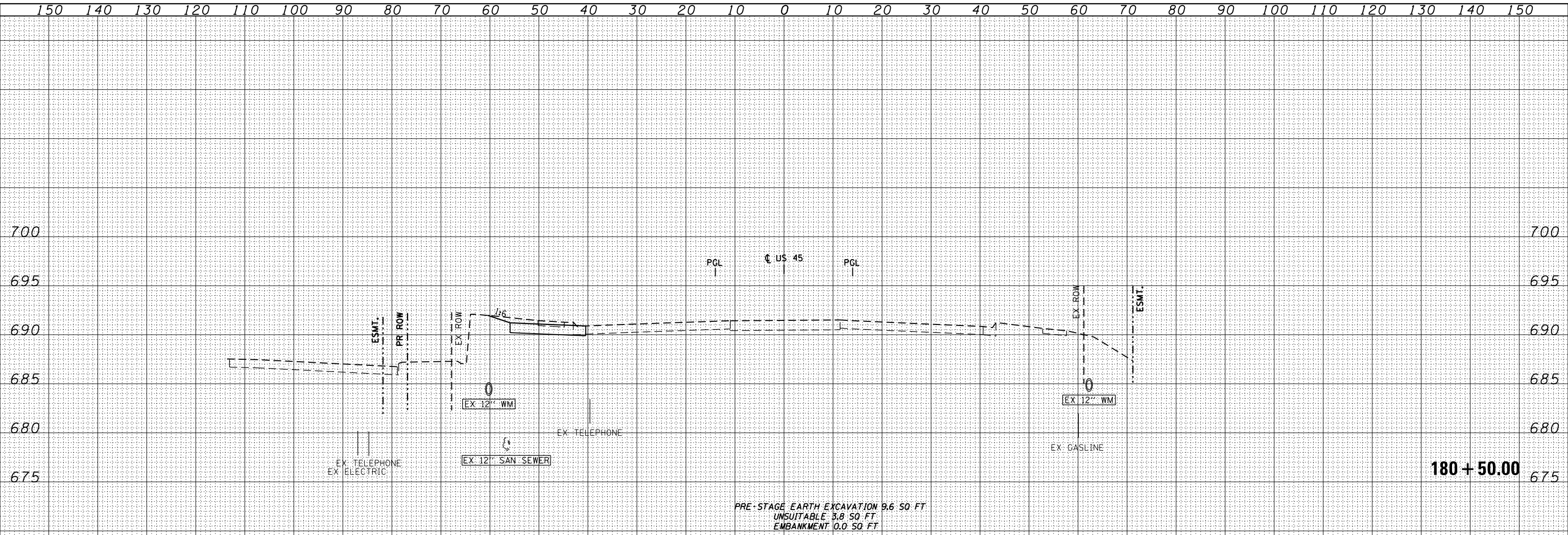


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FILE NAME = DI60M61-SHT-XSSHT11.dgn	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 45 TEMPORARY PAVEMENT CROSS SECTIONS SCALE: 1"=10'H; 1"=5'V SHEET NO. 3 OF 109 SHEETS STA. 179+00.00 TO STA. 179+50.00	F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 559
	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -		XS-TUS45-03		CONTRACT NO. 60M61		
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -		ILLINOIS FED. AID PROJECT				

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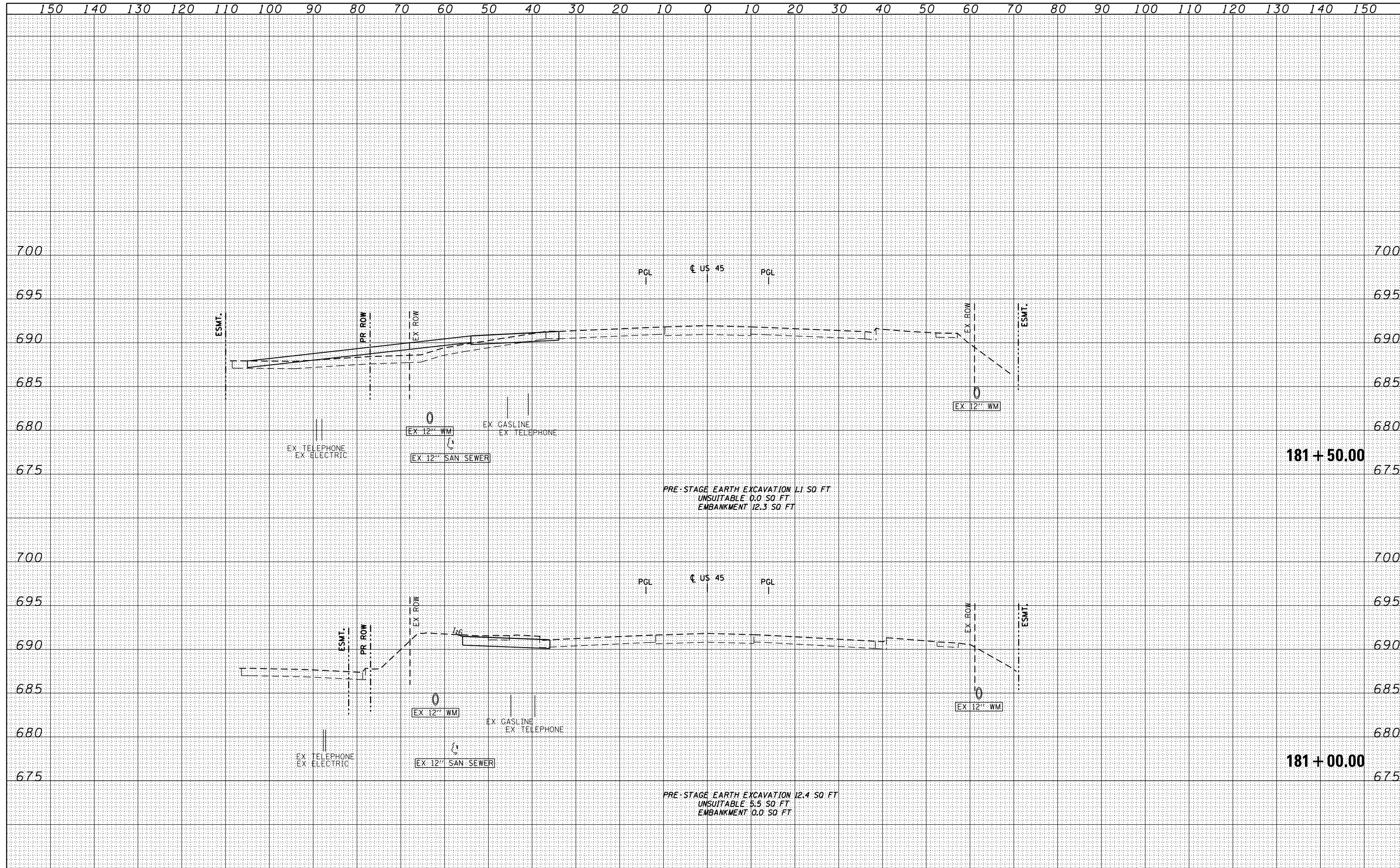


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		PLOT SCALE = 20.0003' / in.	REVISIED -		ILLINOIS FED. AID PROJECT							
		PLOT DATE = 3/13/2013	REVISIED -									

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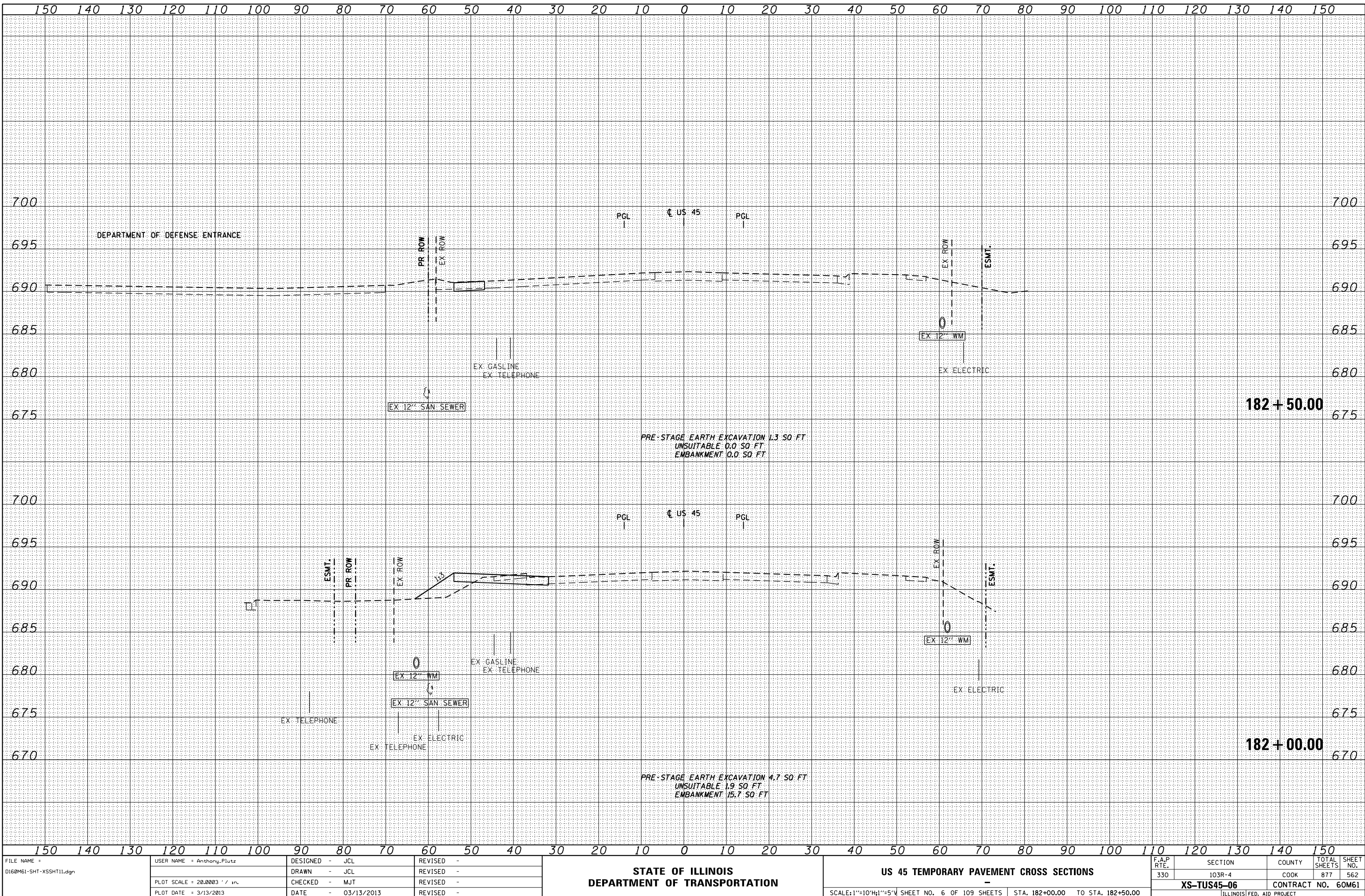


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	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -		XS-TUS45-05		CONTRACT NO. 60M61		
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -		ILLINOIS FED. AID PROJECT				

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FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -
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		CHECKED - MJT	REVISED -
		DATE - 03/13/2013	REVISED -

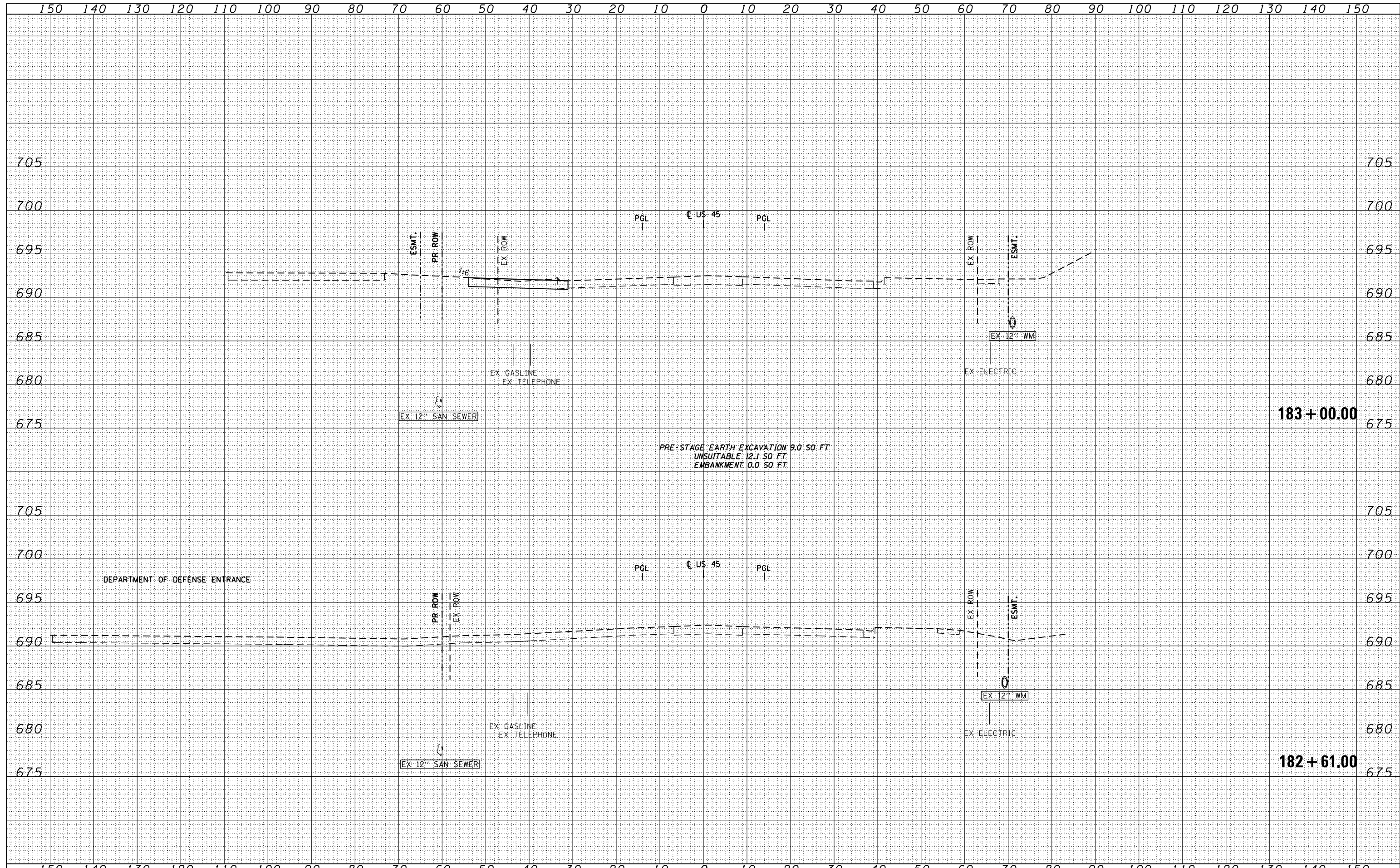
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION			
US 45 TEMPORARY PAVEMENT CROSS SECTIONS			
SCALE: 1"=10'H; 1"=5' V			
SHEET NO. 6 OF 109 SHEETS			
STA. 182+00.00 TO STA. 182+50.00			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	562
XS-TUS45-06		CONTRACT NO. 60M61		
ILLINOIS FED. AID PROJECT				

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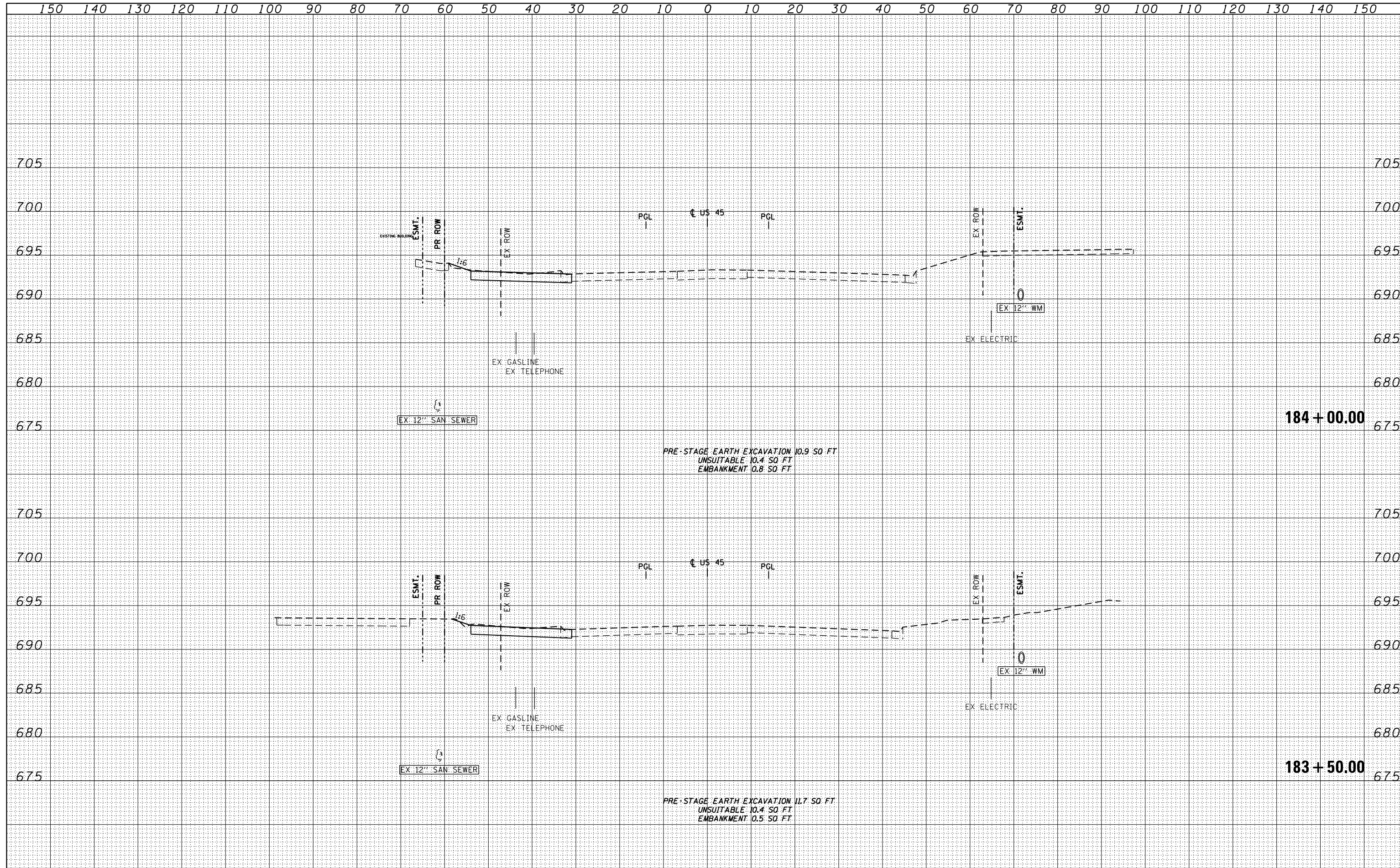


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	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -		XS-TUS45-07		CONTRACT NO. 60M61			
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -		ILLINOIS FED. AID PROJECT					

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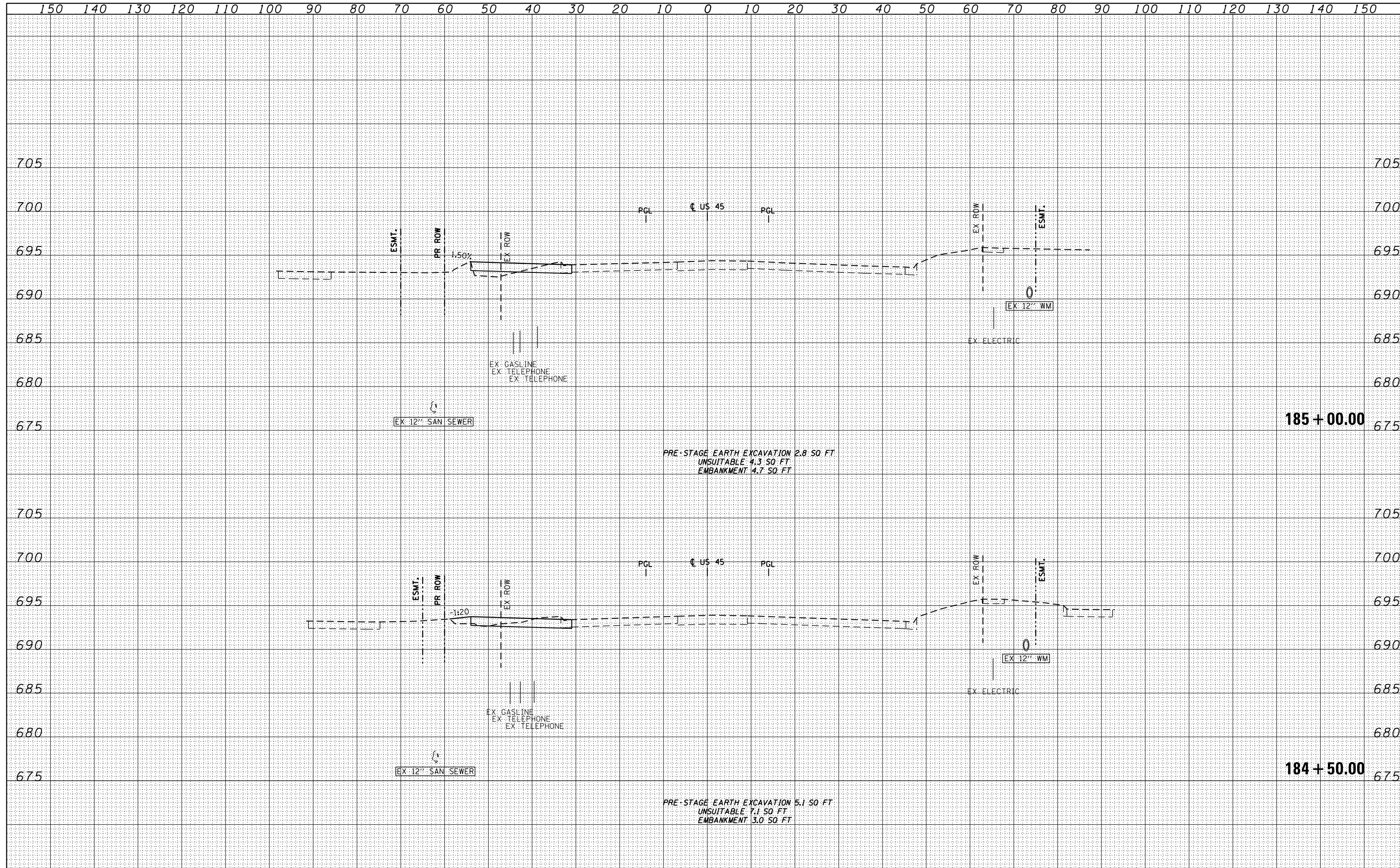


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	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -		SCALE: 1"=10'H; 1"=5'			XS-TUS45-08		CONTRACT NO. 60M61		
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -		SHEET NO. 8 OF 109 SHEETS			STA. 183+50.00 TO STA. 184+00.00		ILLINOIS FED. AID PROJECT		
					STA. 183+50.00 TO STA. 184+00.00							

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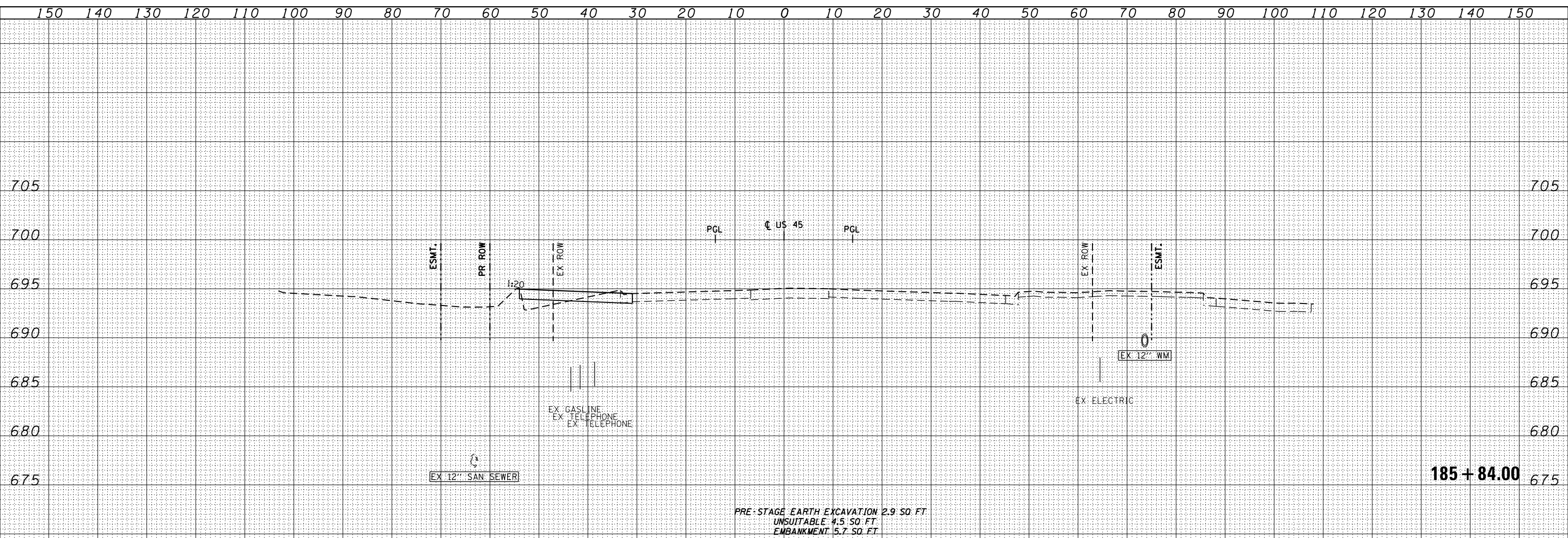
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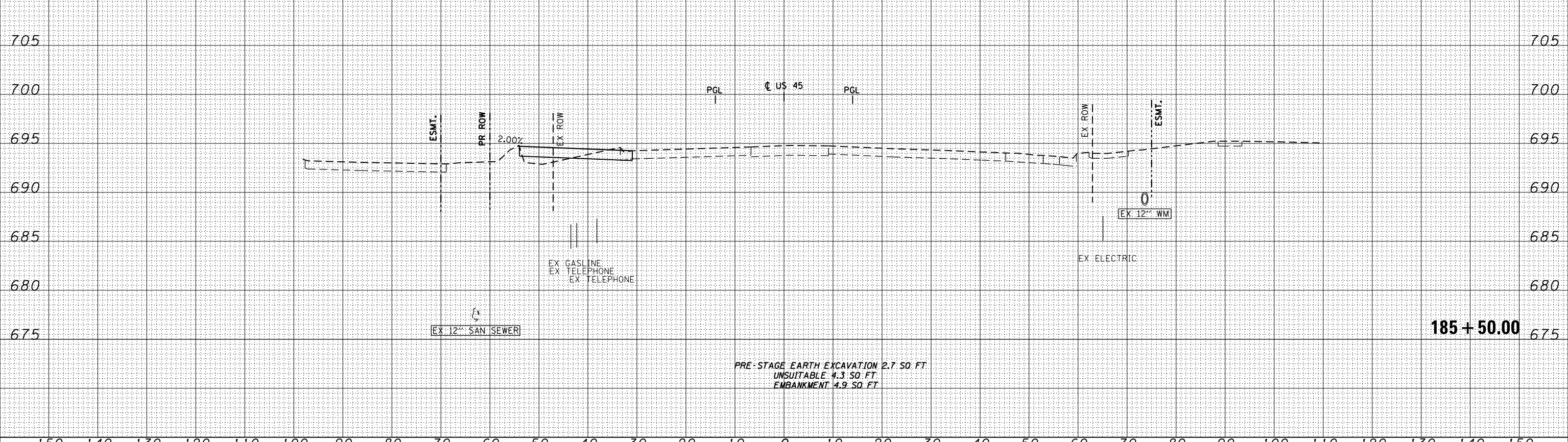


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	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -		XS-TUS45-09		CONTRACT NO. 60M61			
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -		ILLINOIS FED. AID PROJECT					

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FINISHED SURVEY	
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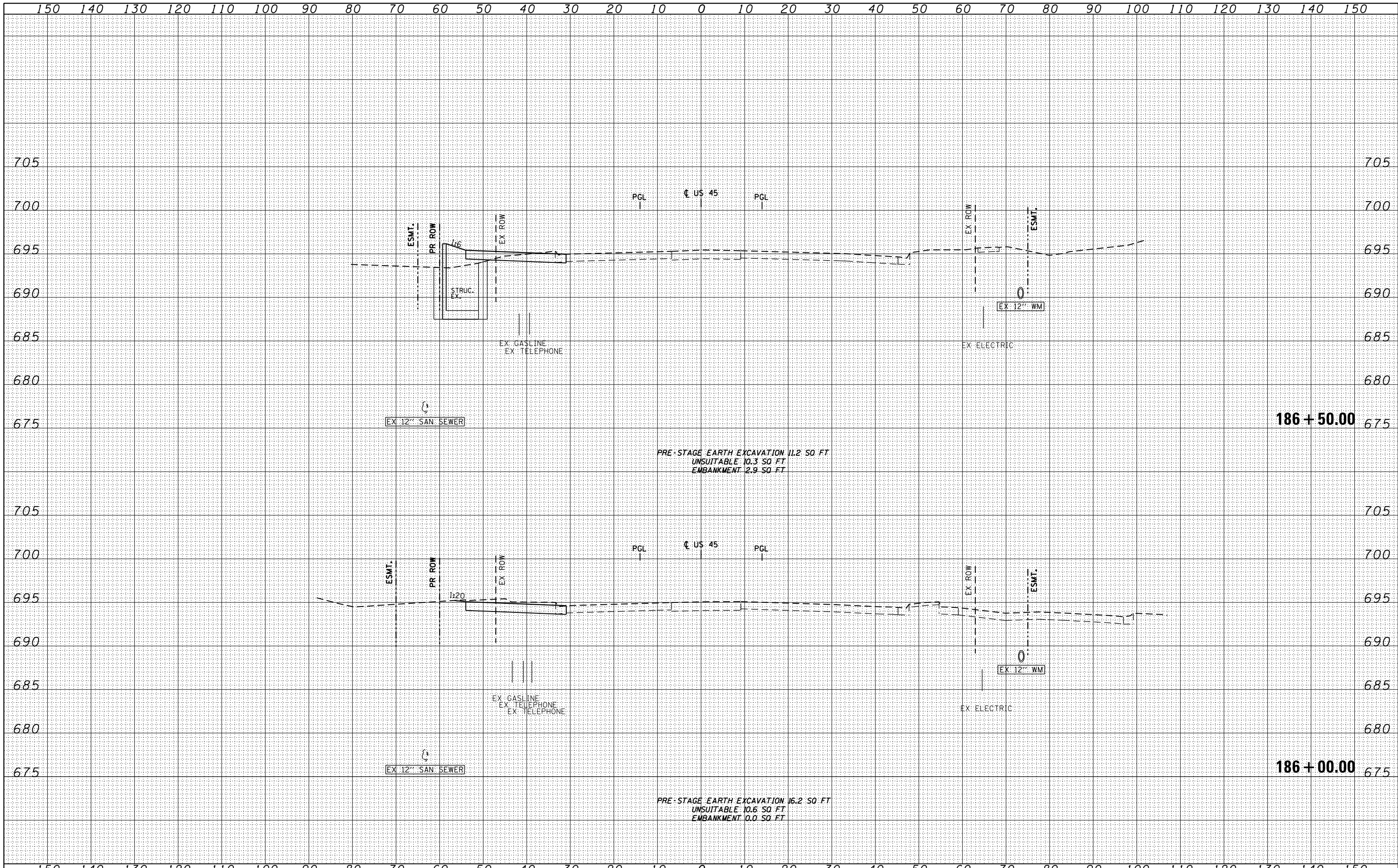


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PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISSED -	REVISSED -		SCALE: 1"=10'H; 1"=5' V	SHEET NO. 10 OF 109 SHEETS	STA. 185+50.00	TO STA. 185+84.00	XS-TUS45-10		CONTRACT NO. 60M61	
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISSED -	REVISSED -		ILLINOIS FED. AID PROJECT							

DATE	
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 CHICAGO, IL 60606
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FILE NAME =	D:\60M61-SHT-XSSH11.dgn
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USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -
	DRAWN - JCL	REVISED -
PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

US 45 TEMPORARY PAVEMENT CROSS SECTIONS

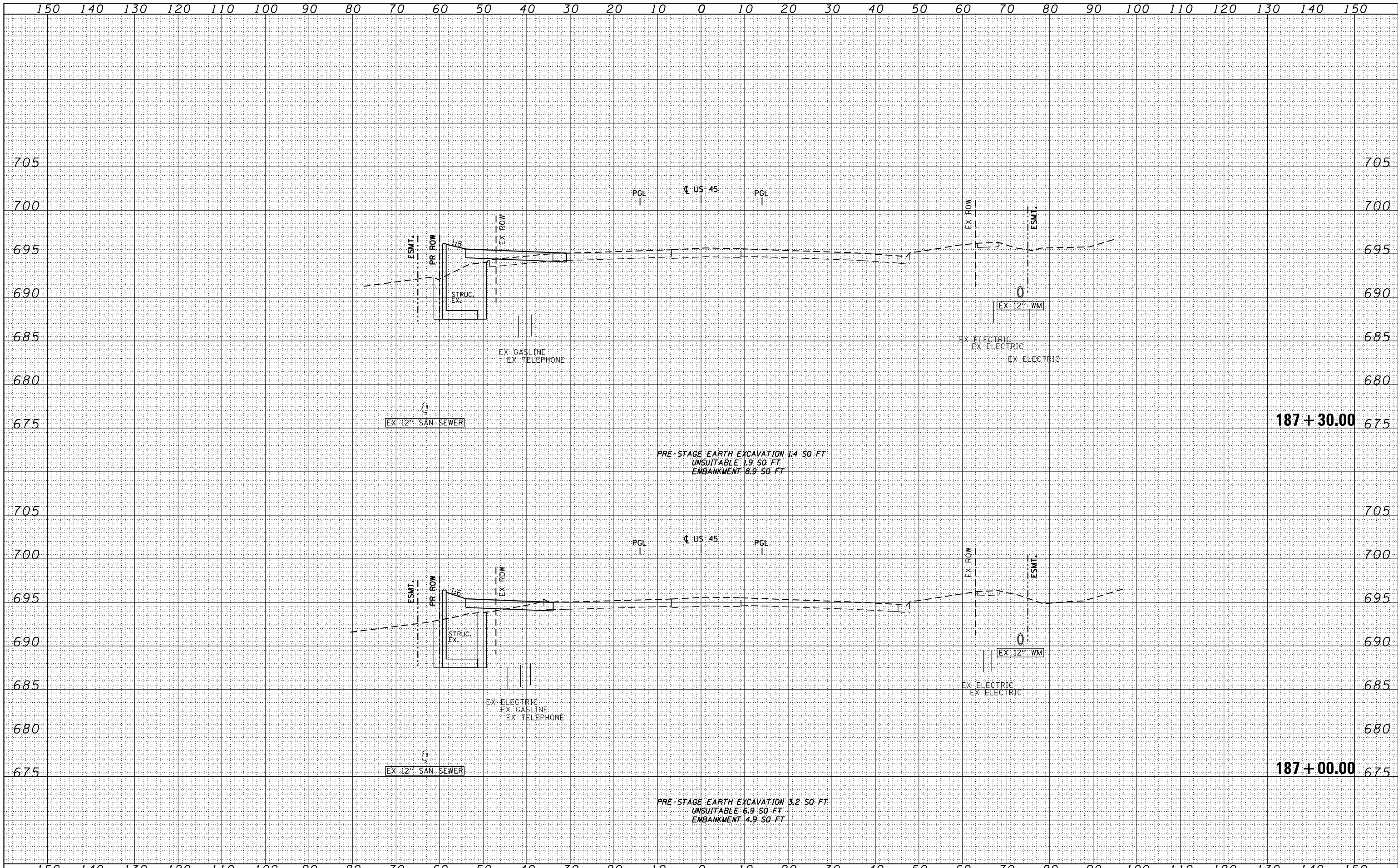
SCALE: 1"=10'H; 1"=5' V SHEET NO. 11 OF 109 SHEETS STA. 186+00.00 TO STA. 186+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	567
XS-TUS45-11			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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FILE NAME =	USER NAME = Anthony.Plutz
D160M61-SHT-XSHT11.dgn	DESIGNED - JCL
	DRAWN - JCL
	CHECKED - MJT
	DATE - 03/13/2013

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

US 45 TEMPORARY PAVEMENT CROSS SECTIONS

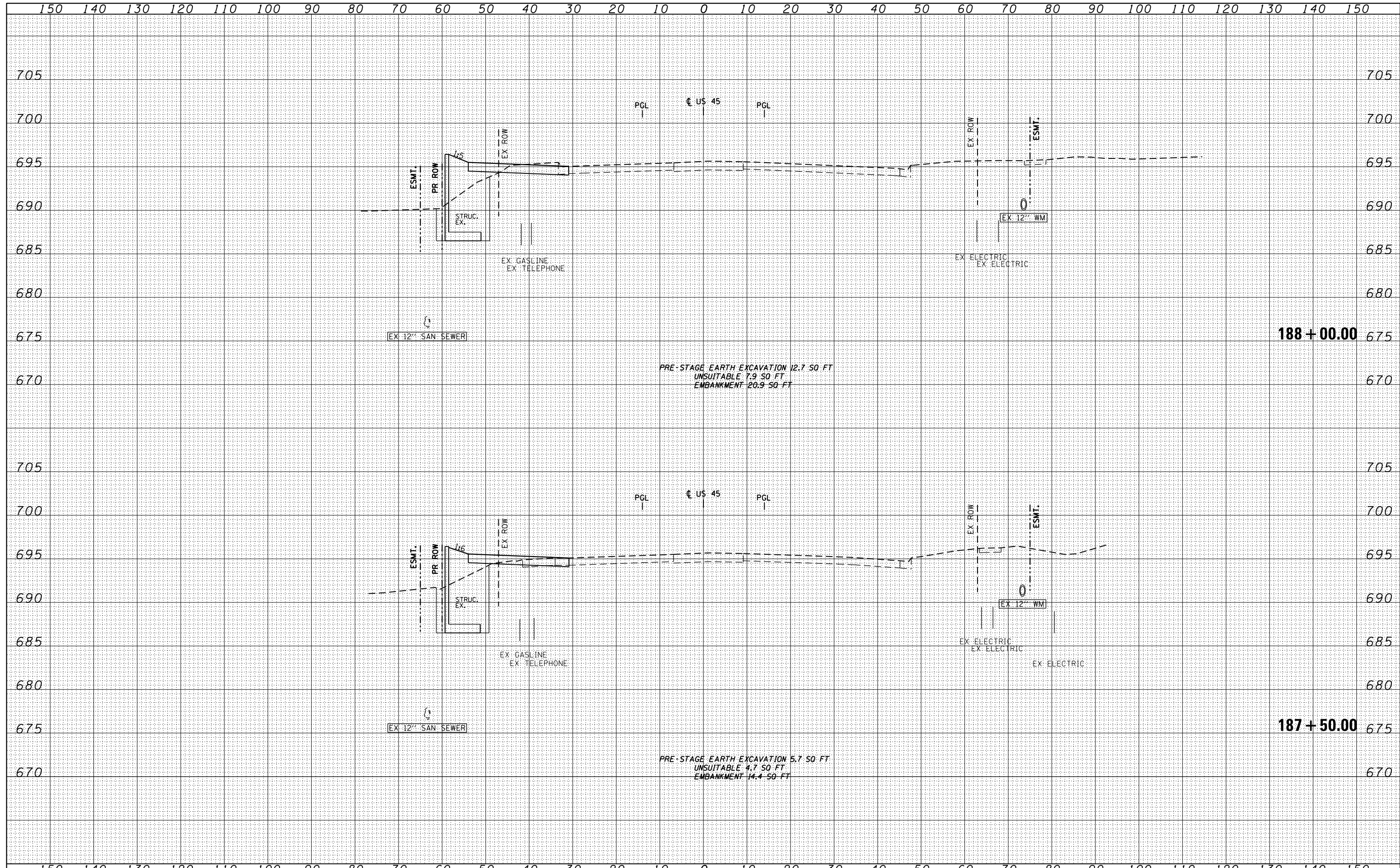
SCALE: 1"=10'H; 1"=5' V SHEET NO. 12 OF 109 SHEETS STA. 187+00.00 TO STA. 187+30.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	568
XS-TUS45-12			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

DATE	
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FILE NAME = D160M61-SHT-XSHT11.dgn

USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -
	DRAWN - JCL	REVISED -
PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

US 45 TEMPORARY PAVEMENT CROSS SECTIONS

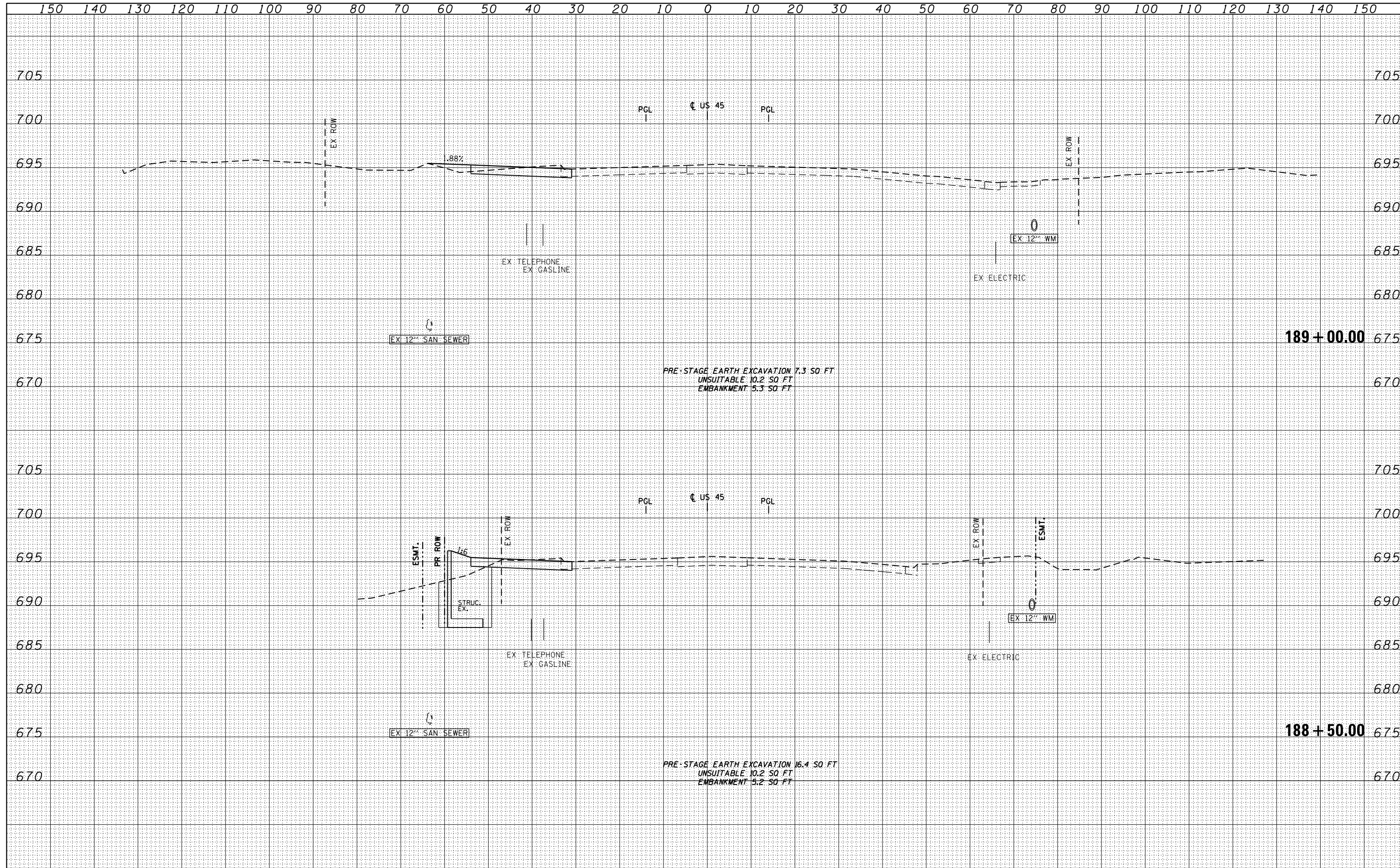
SCALE: 1"=10'H; 1"=5' V SHEET NO. 13 OF 109 SHEETS STA. 187+50.00 TO STA. 188+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	569
XS-TUS45-13			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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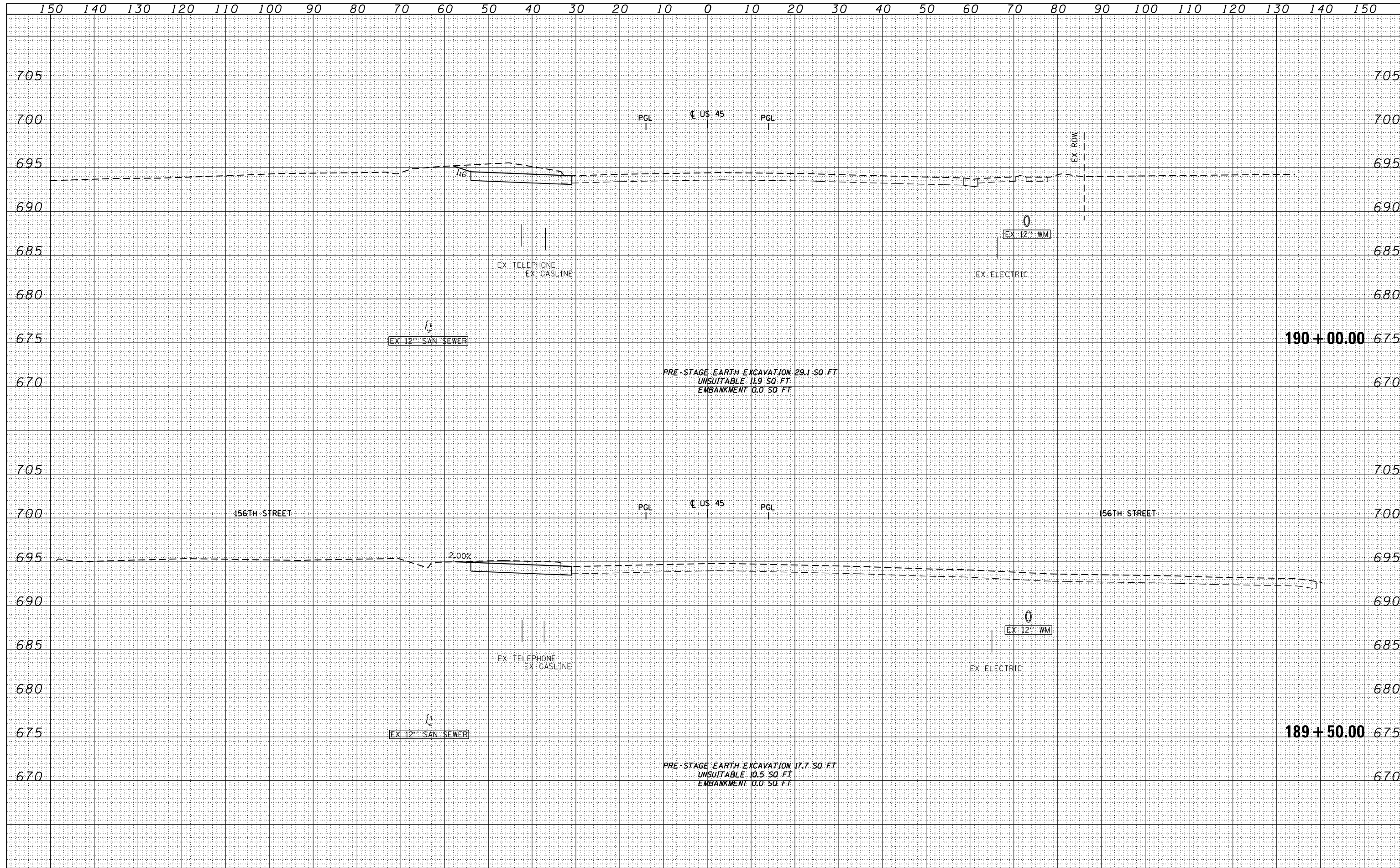


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	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -		XS-TUS45-14		CONTRACT NO. 60M61			
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -		ILLINOIS FED. AID PROJECT					

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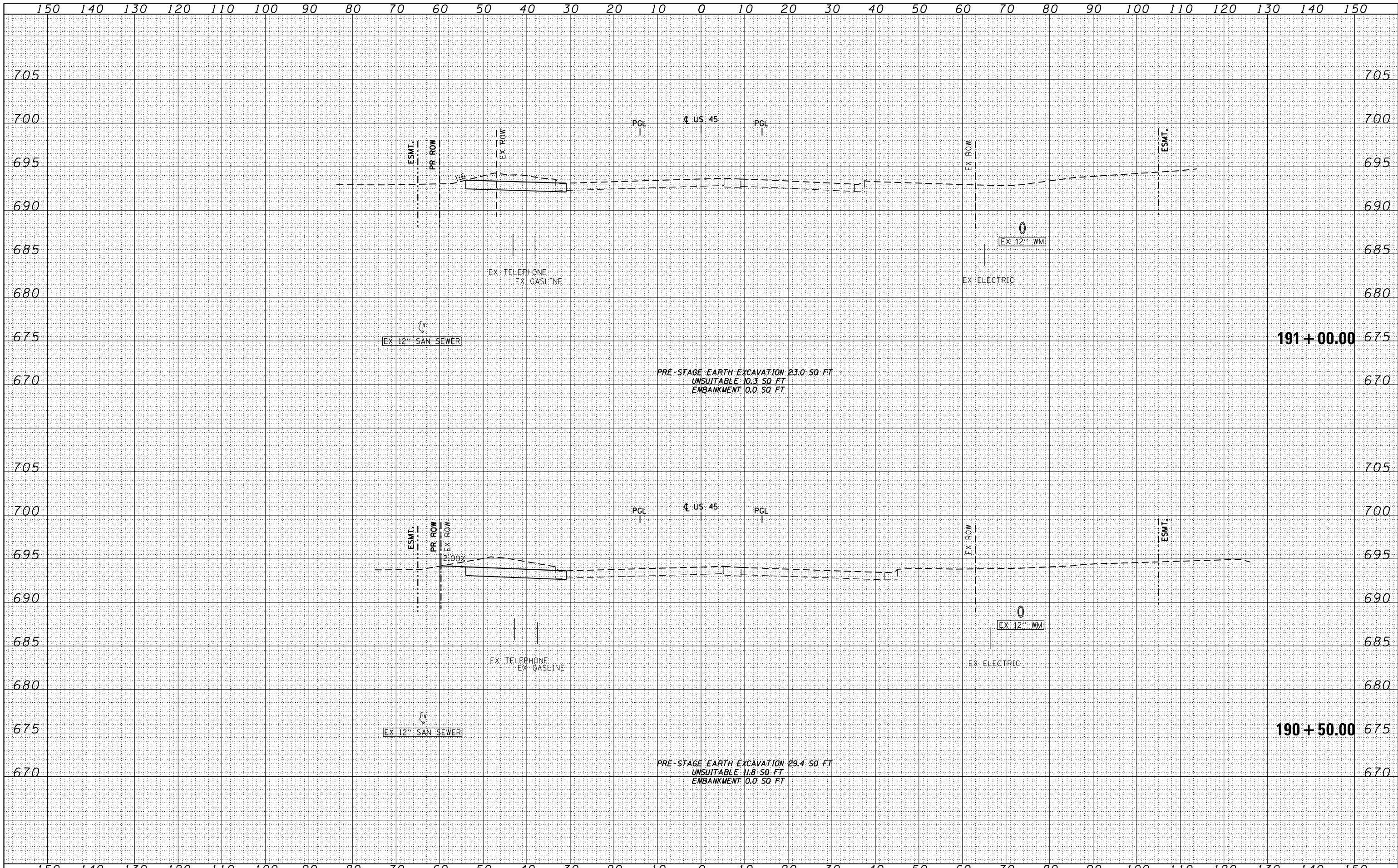


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	PLOT SCALE = 20.0003' / in.	DRAWN - JCL	REVISIED -		XS-TUS45-15		CONTRACT NO. 60M61			
	PLOT DATE = 3/13/2013	CHECKED - MJT	REVISIED -		ILLINOIS FED. AID PROJECT					
		DATE - 03/13/2013	REVISIED -							

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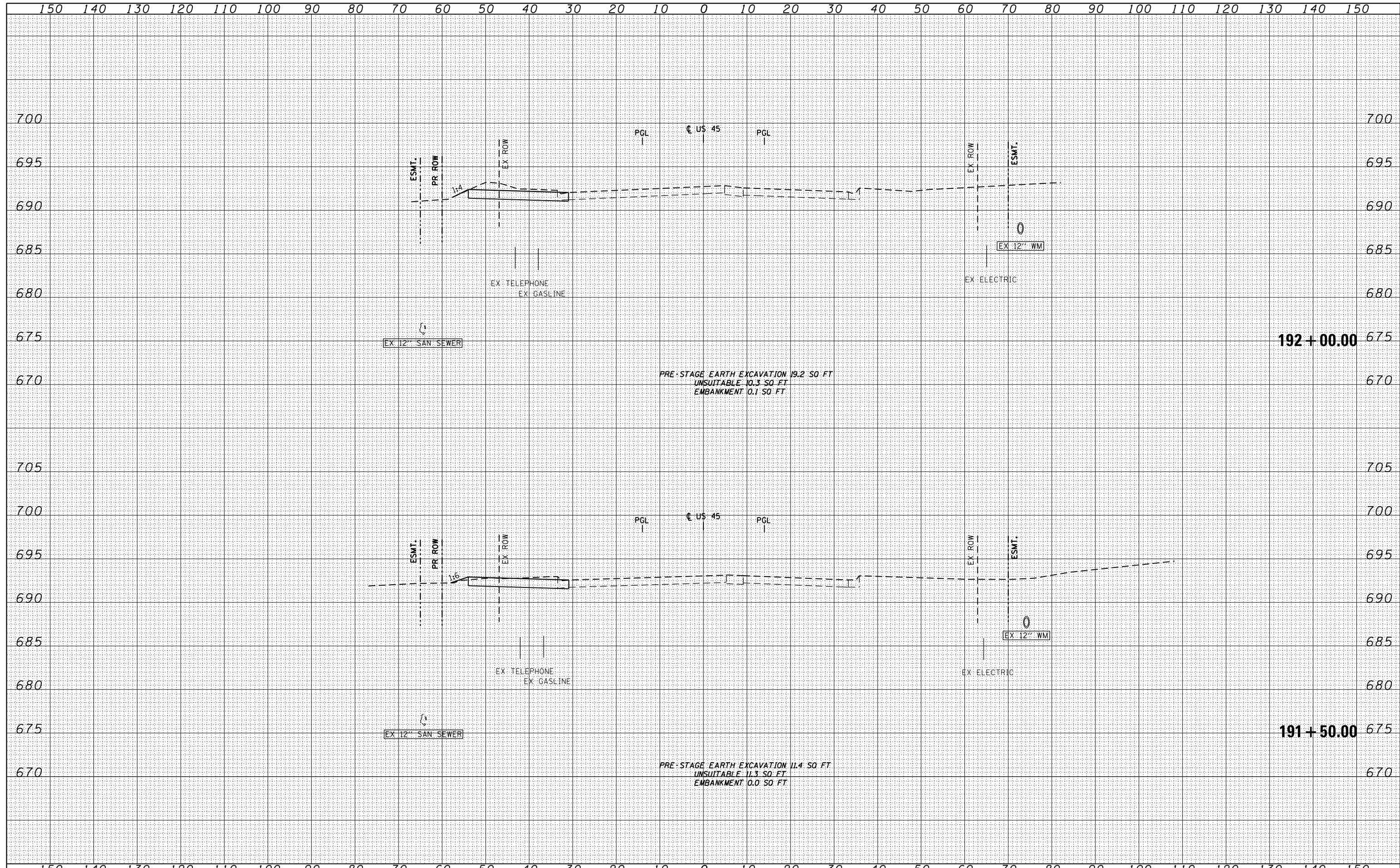


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		DRAWN - JCL	REVISIED -		XS-TUS45-16		CONTRACT NO. 60M61			
		CHECKED - MJT	REVISIED -		ILLINOIS FED. AID PROJECT					
		DATE - 03/13/2013	REVISIED -							

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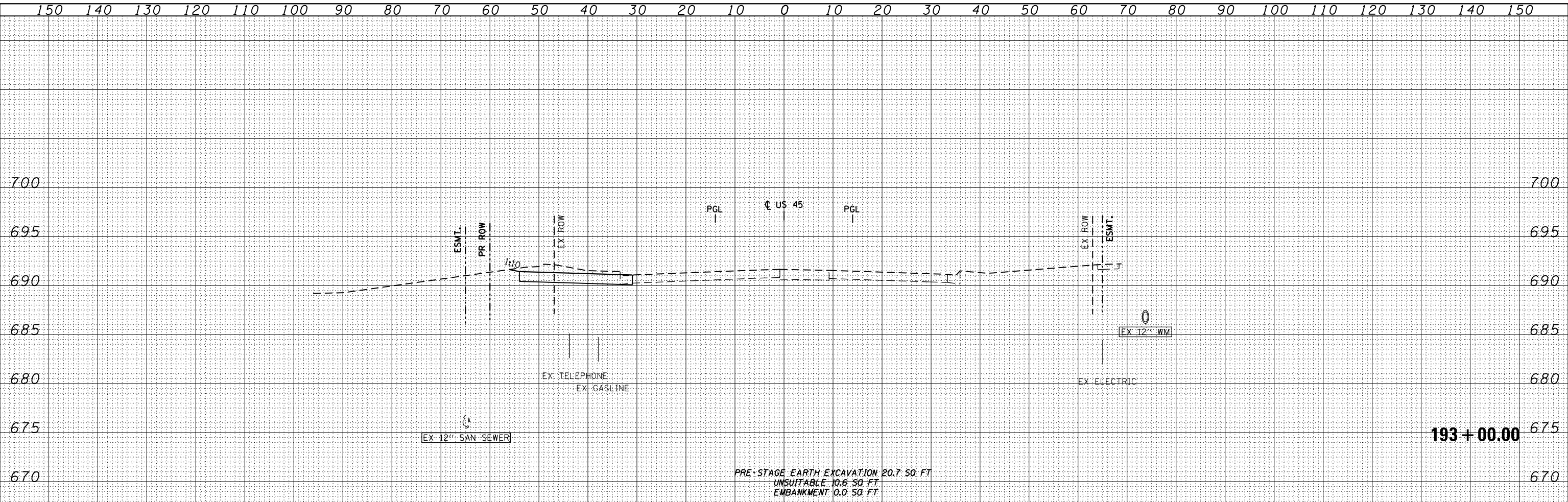
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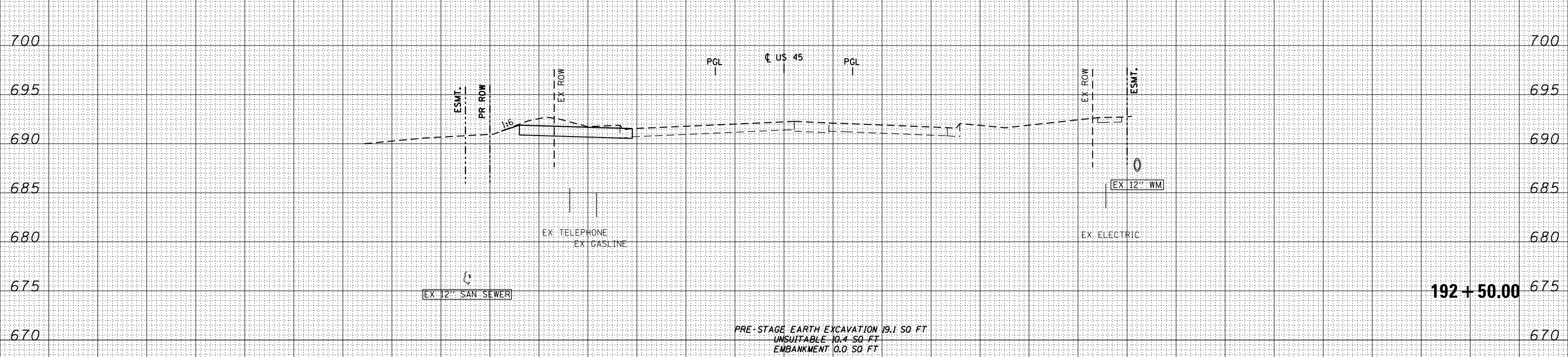


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		DRAWN - JCL	REVISED -		XS-TUS45-17		CONTRACT NO. 60M61			
		CHECKED - MJT	REVISED -		ILLINOIS FED. AID PROJECT					
		DATE - 03/13/2013	REVISED -							

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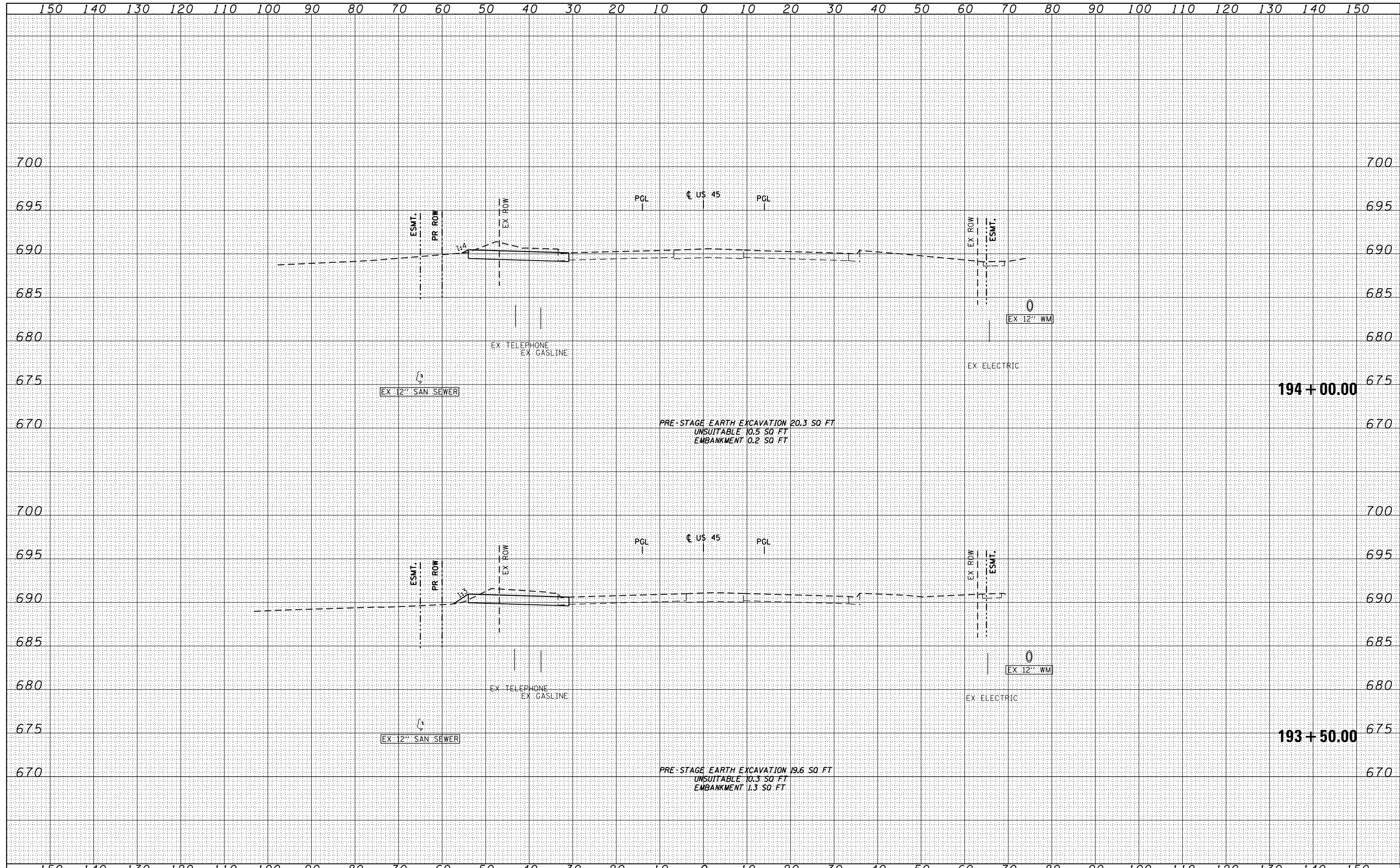


FILE NAME = D:\60M61-SHT-XSHT11.dgn	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US 45 TEMPORARY PAVEMENT CROSS SECTIONS SCALE: 1"=10'H; 1"=5'	F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 574	
	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -			XS-TUS45-18		CONTRACT NO. 60M61		ILLINOIS FED. AID PROJECT	
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -			SHEET NO. 18 OF 109 SHEETS		STA. 192+50.00 TO STA. 193+00.00			
STA. 192+50.00 TO STA. 193+00.00											

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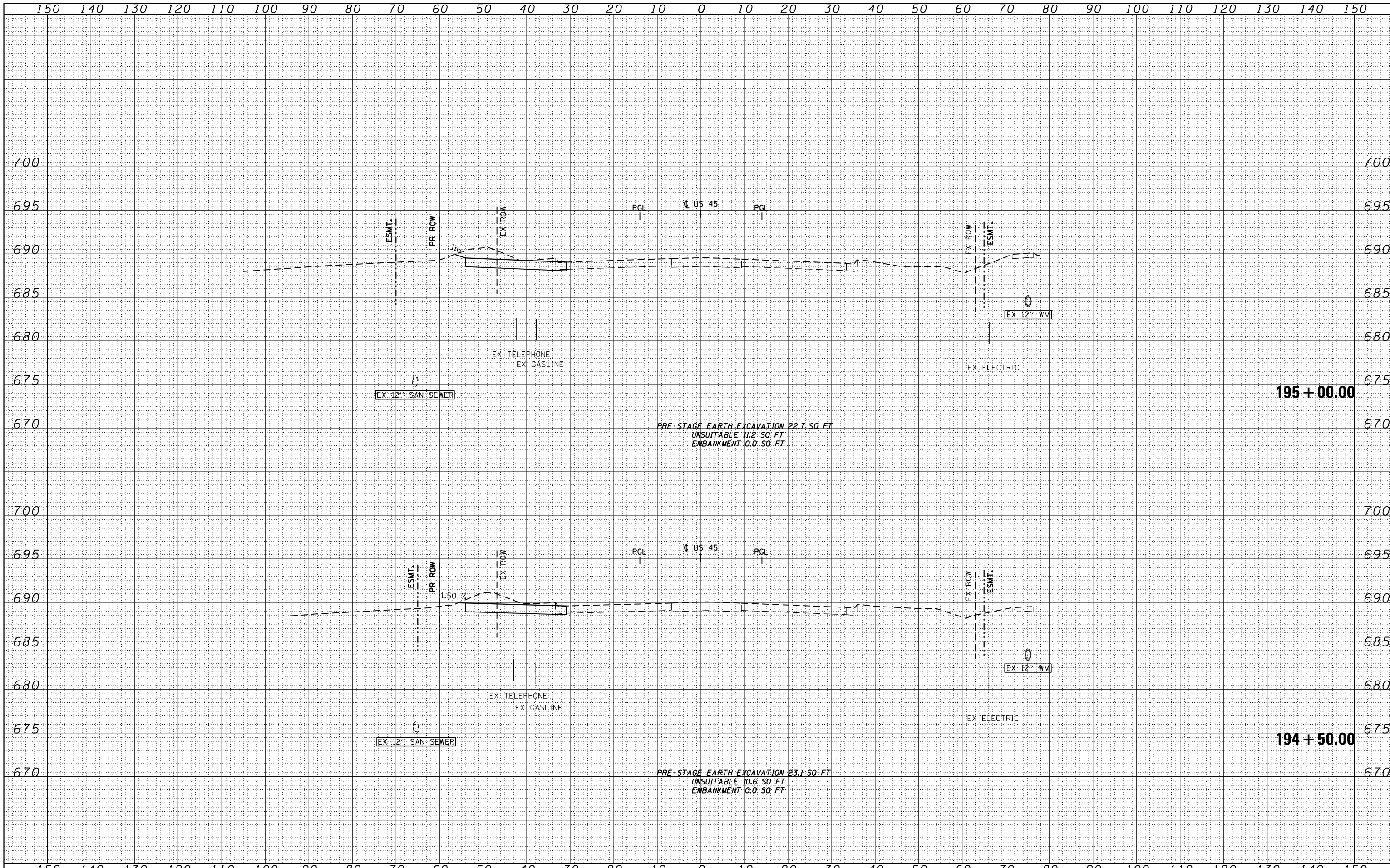


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	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -		XS-TUS45-19		CONTRACT NO. 60M61			
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -		ILLINOIS FED. AID PROJECT					

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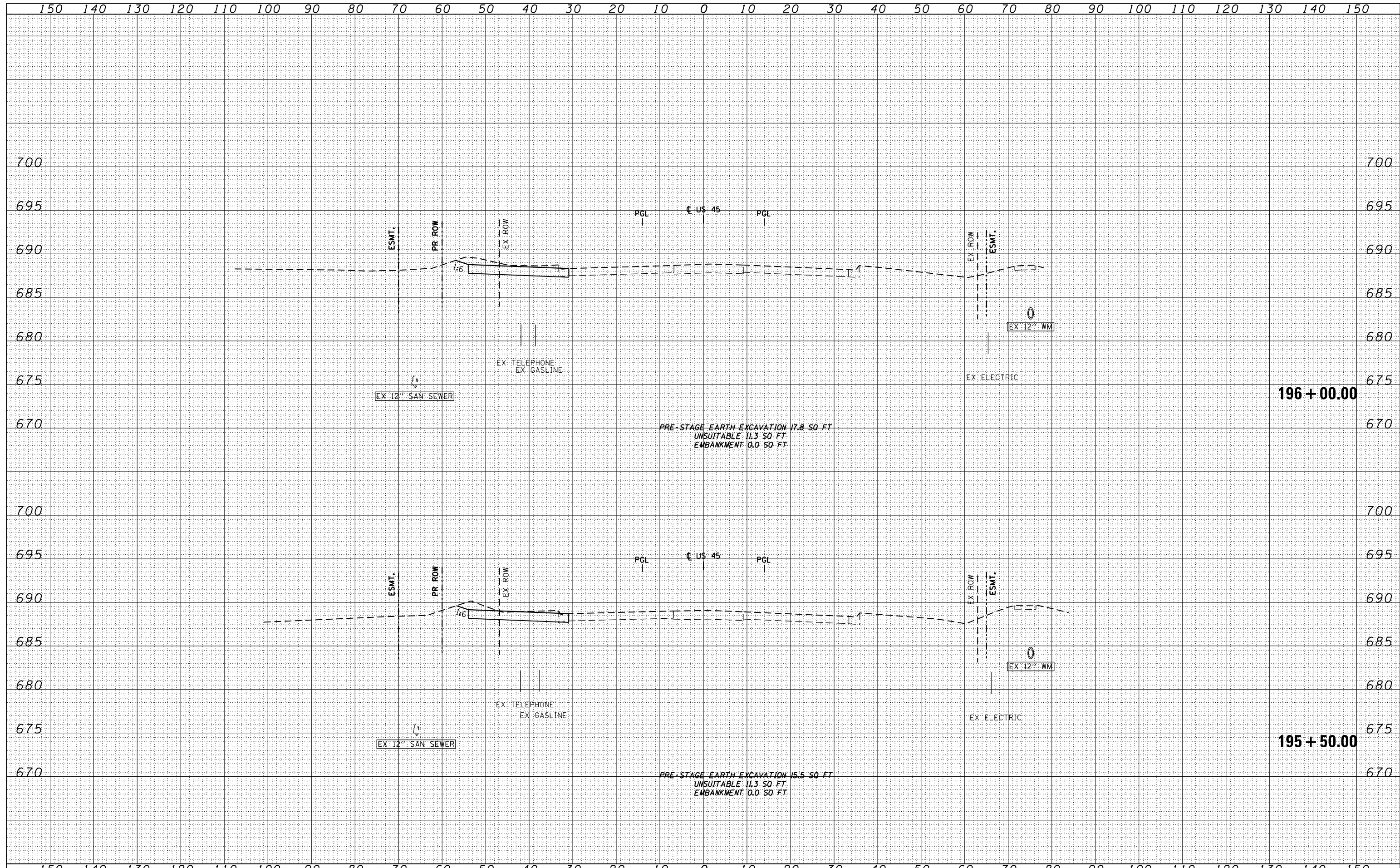


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		DRAWN - JCL	REVISIED -		XS-TUS45-20		CONTRACT NO. 60M61			
		CHECKED - MJT	REVISIED -		ILLINOIS FED. AID PROJECT					
		DATE - 03/13/2013	REVISIED -							

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FILE NAME = D:\60M61-SHT-XSSH11.dgn

USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -
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PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -
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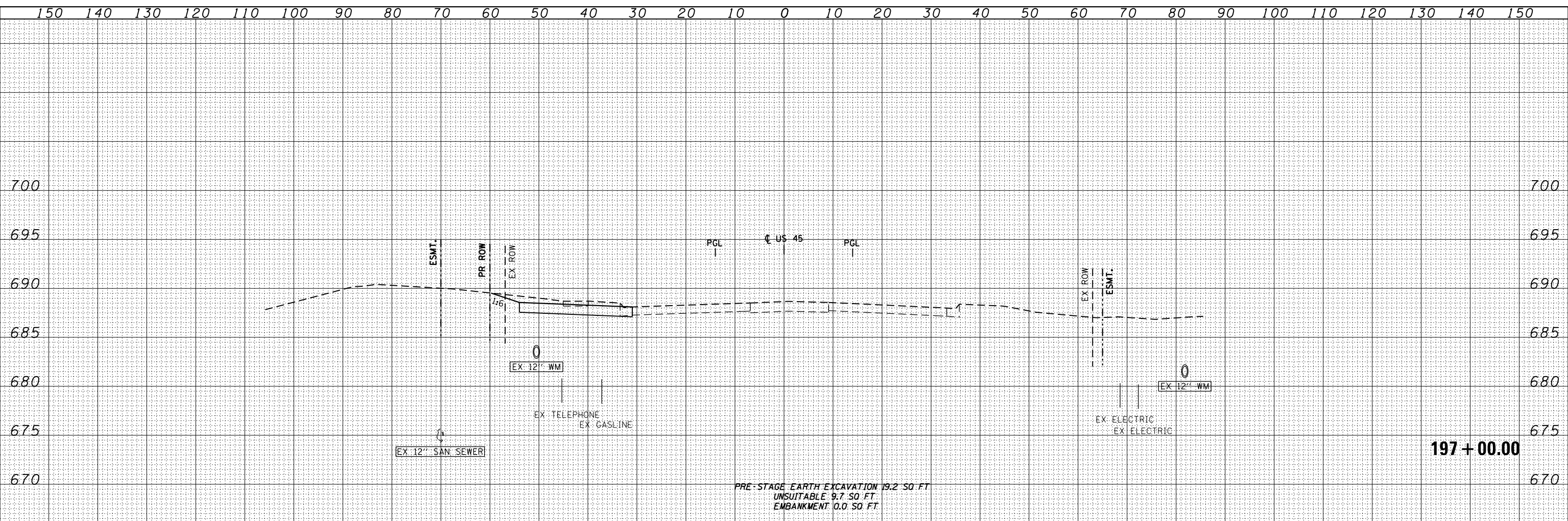
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

US 45 TEMPORARY PAVEMENT CROSS SECTIONS

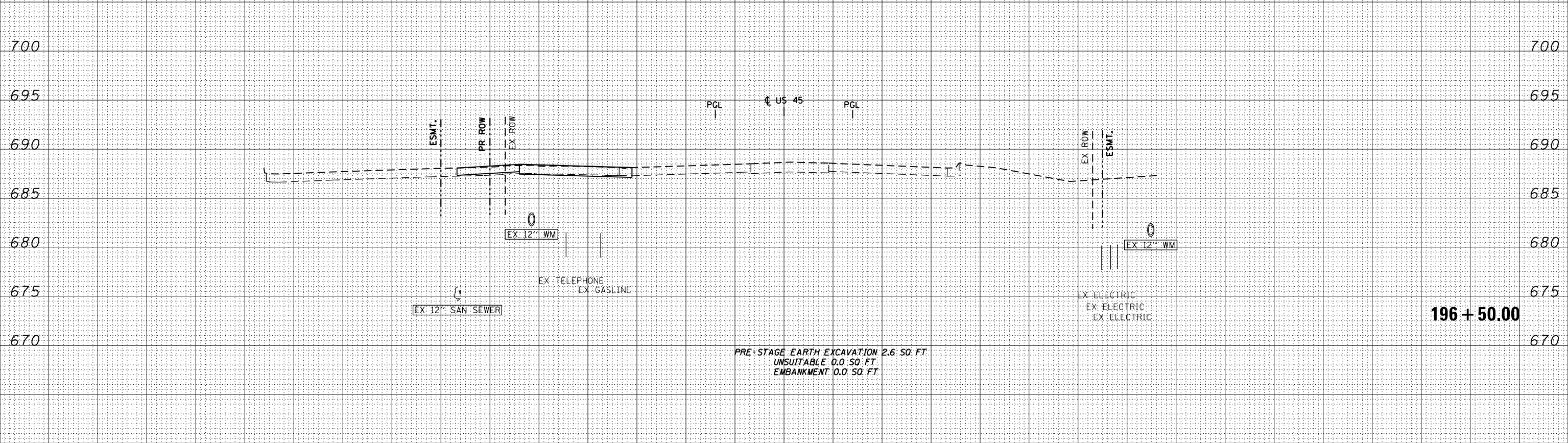
SCALE: 1"=10'H; 1"=5' V SHEET NO. 21 OF 109 SHEETS STA. 195+50.00 TO STA. 196+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	577
XS-TUS45-21			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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D160M61-SHT-XSHT11.dgn		DRAWN - JCL	REVISED -
		CHECKED - MJT	REVISED -
		DATE - 03/13/2013	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

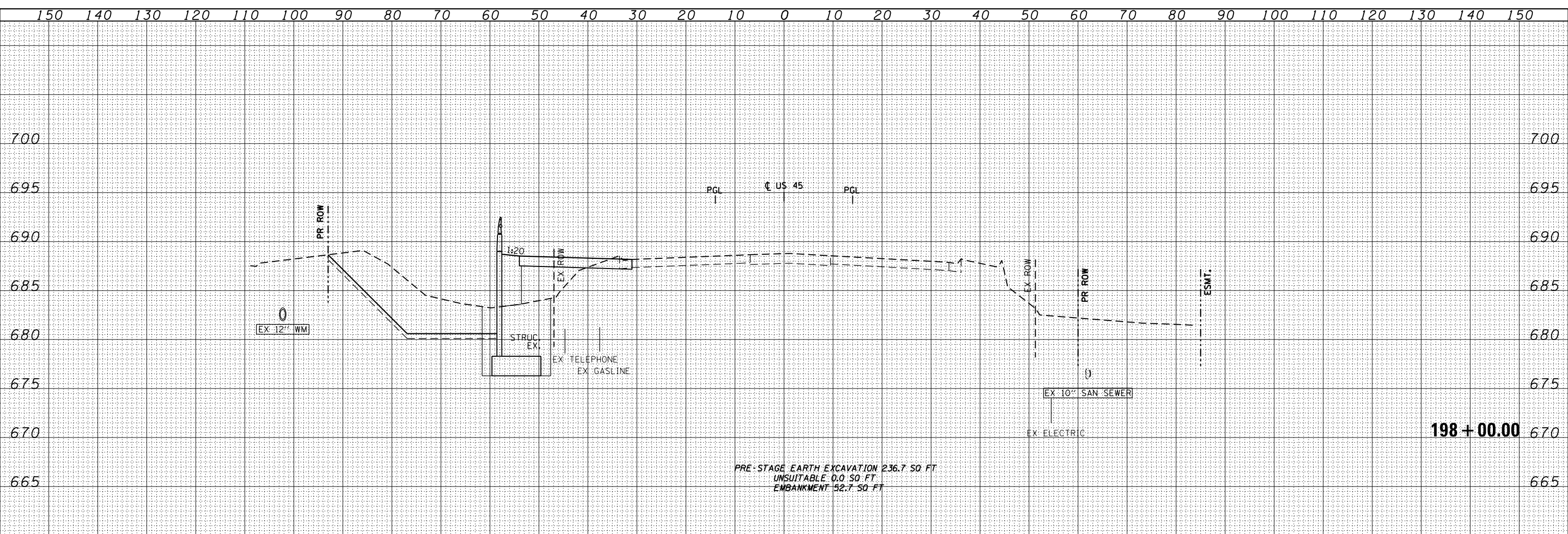
US 45 TEMPORARY PAVEMENT CROSS SECTIONS

SCALE: 1"=10'H; 1"=5' V SHEET NO. 22 OF 109 SHEETS STA. 196+50.00 TO STA. 197+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	578
XS-TUS45-22			CONTRACT NO. 60M61	

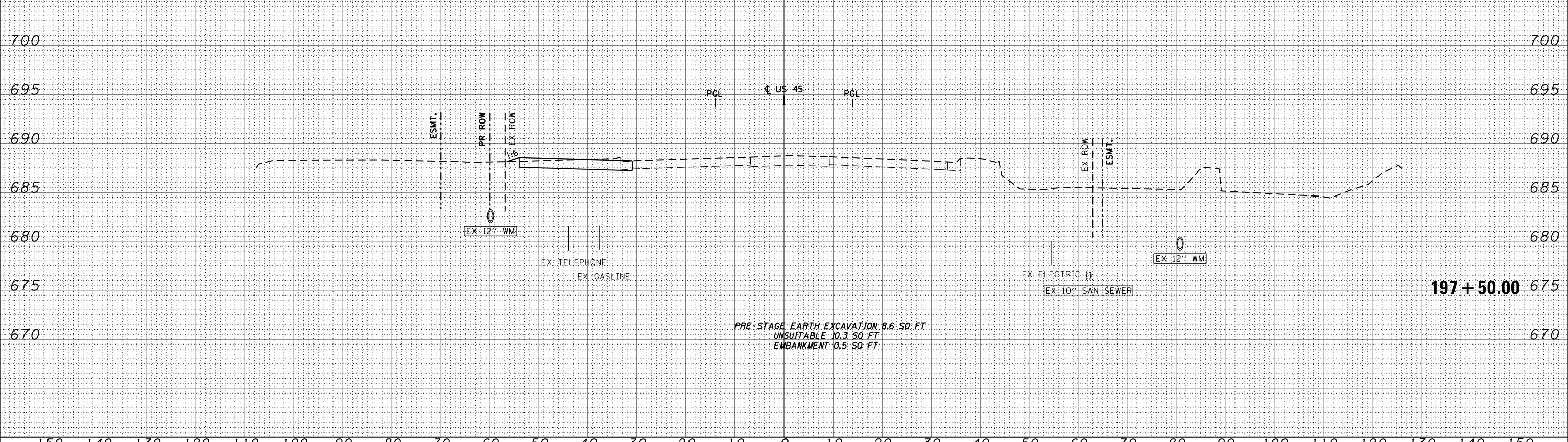
ILLINOIS FED. AID PROJECT

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FINISHED SURVEY	
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PRE-STAGE EARTH EXCAVATION 236.7 SQ FT
 UNSUITABLE 0.0 SQ FT
 EMBANKMENT 52.7 SQ FT

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NOTE BOOK	
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PRE-STAGE EARTH EXCAVATION 8.6 SQ FT
 UNSUITABLE 10.3 SQ FT
 EMBANKMENT 0.5 SQ FT

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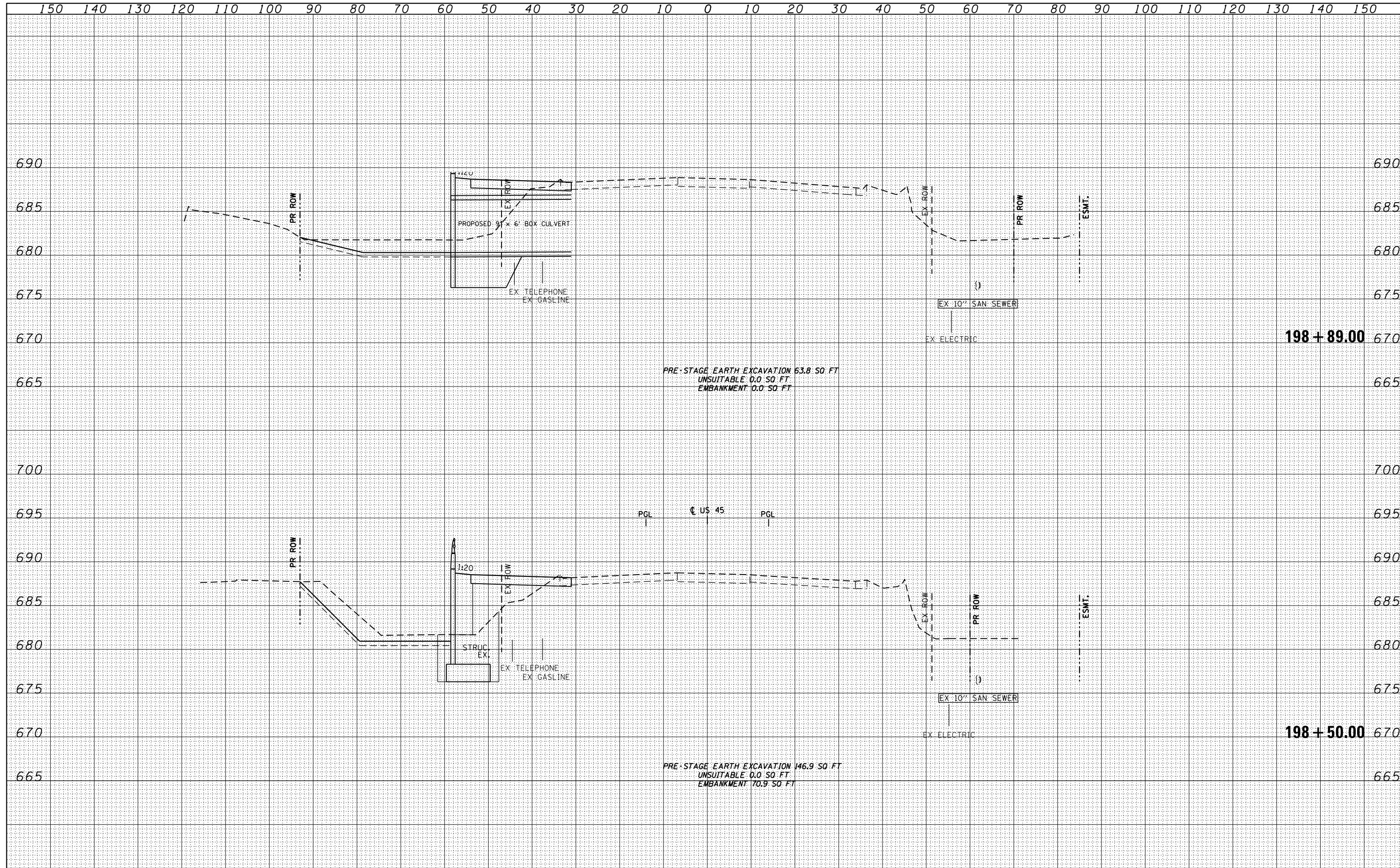


FILE NAME = D:\60M61-SHT-XSHT11.dgn	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US 45 TEMPORARY PAVEMENT CROSS SECTIONS			F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 579
		DRAWN - JCL	REVISIED -		SCALE: 1"=10'H; 1"=5'V	SHEET NO. 23 OF 109 SHEETS	STA. 197+50.00	TO STA. 198+00.00	XS-TUS45-23		CONTRACT NO. 60M61	
		CHECKED - MJT	REVISIED -		ILLINOIS FED. AID PROJECT							
		DATE - 03/13/2013	REVISIED -									

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FILE NAME =	USER NAME = Anthony.Plutz
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**STATE OF ILLINOIS
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US 45 TEMPORARY PAVEMENT CROSS SECTIONS

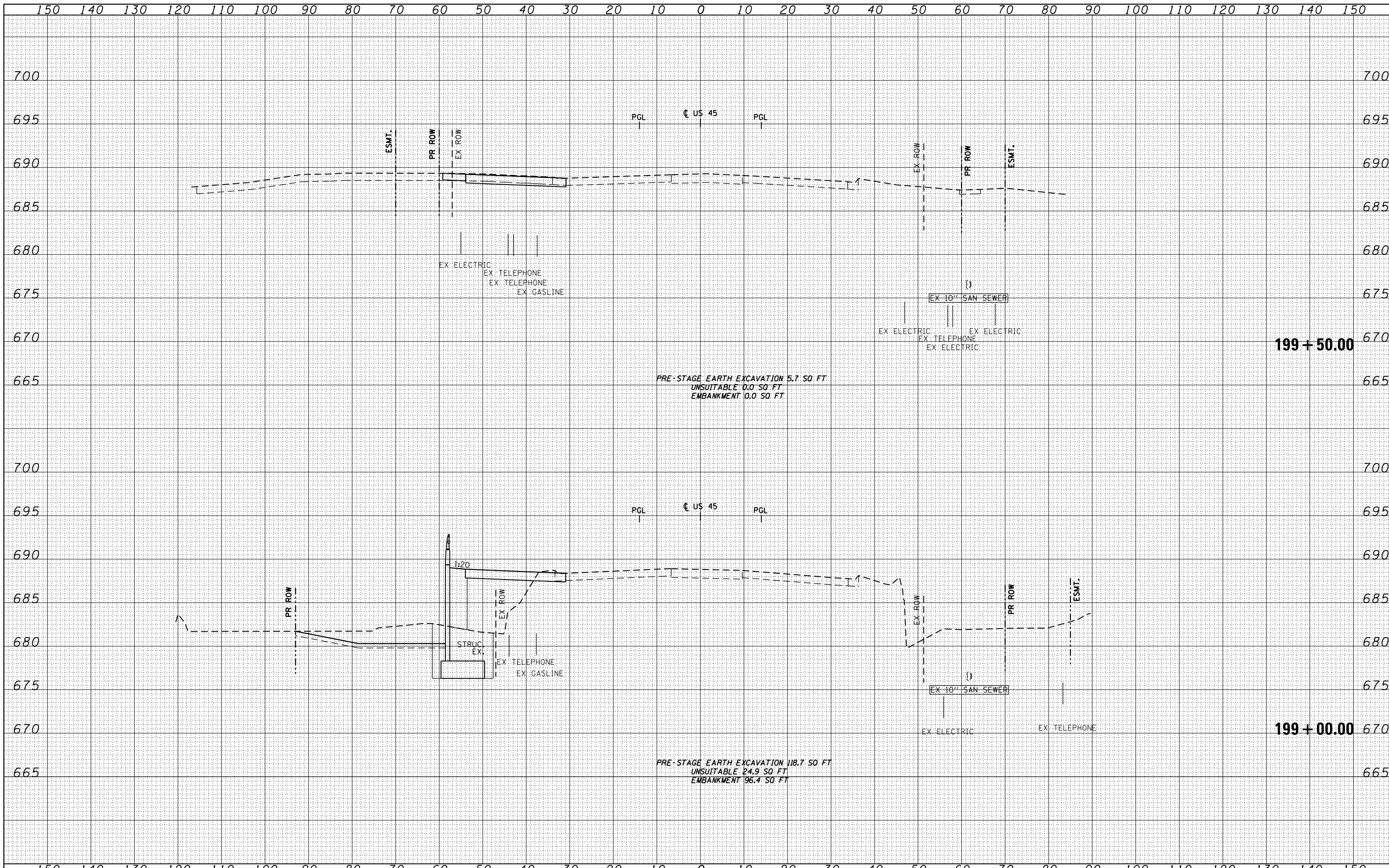
SCALE: 1"=10'H; 1"=5'V SHEET NO. 24 OF 109 SHEETS STA. 198+50.00 TO STA. 198+89.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	580
XS-TUS45-24			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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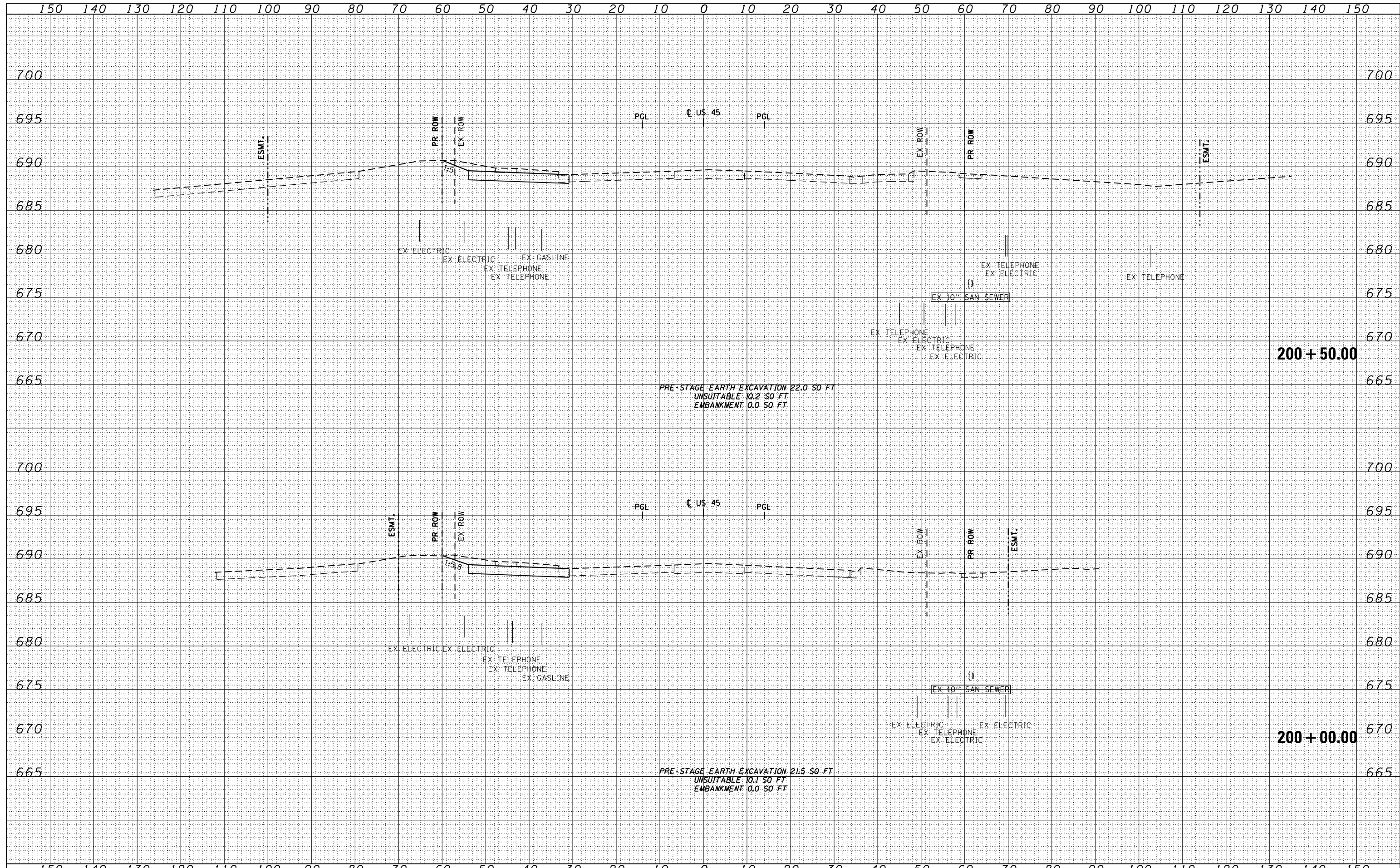


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		DRAWN - JCL	REVISÉD -		XS-TUS45-25		CONTRACT NO. 60M61			
		CHECKED - MJT	REVISÉD -		ILLINOIS FED. AID PROJECT					
		DATE - 03/13/2013	REVISÉD -							

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FILE NAME =	USER NAME = Anthony.Plutz
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US 45 TEMPORARY PAVEMENT CROSS SECTIONS

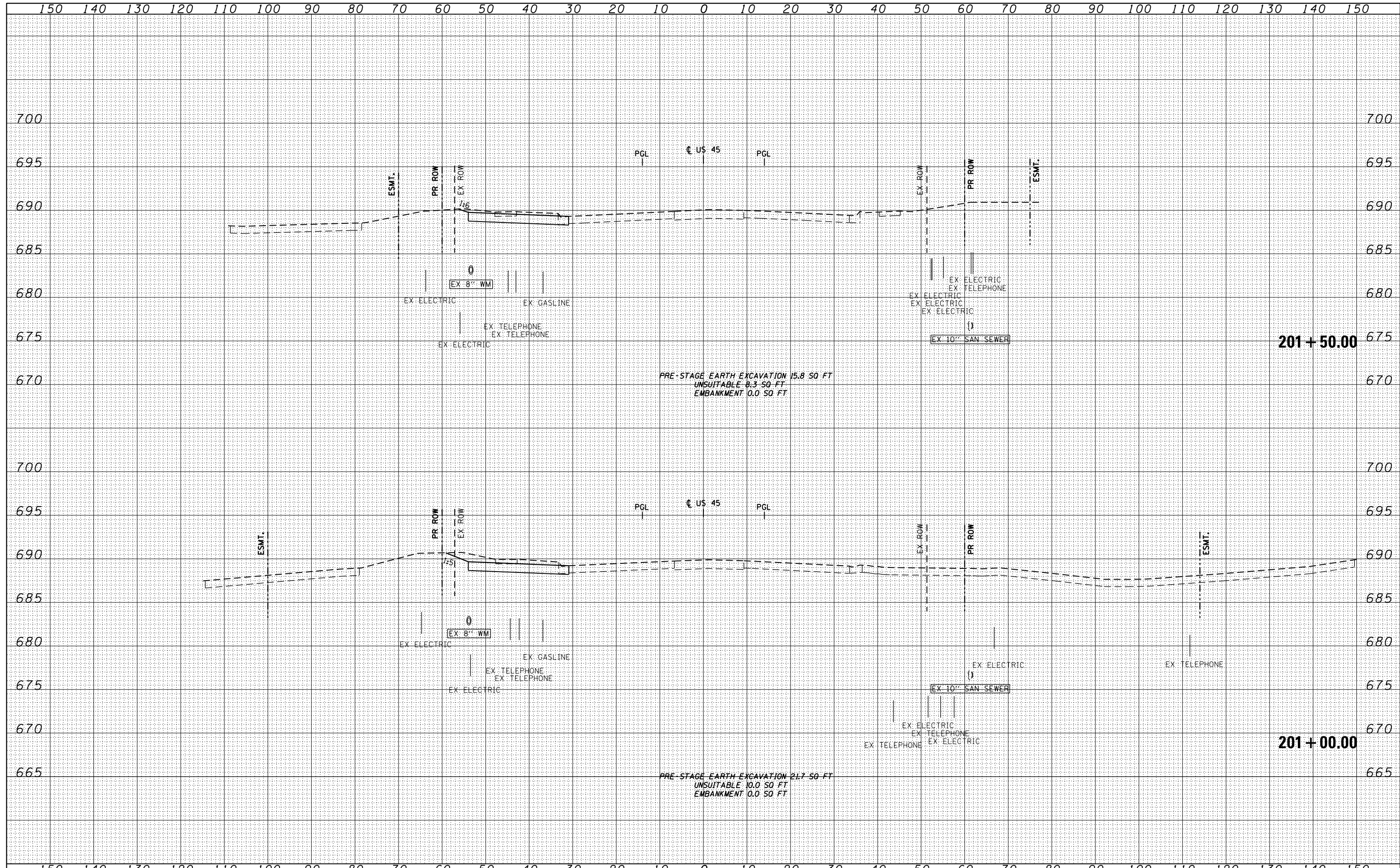
SCALE: 1"=10'H; 1"=5' V SHEET NO. 26 OF 109 SHEETS STA. 200+00.00 TO STA. 200+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	582
XS-TUS45-26			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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	DATE - 03/13/2013

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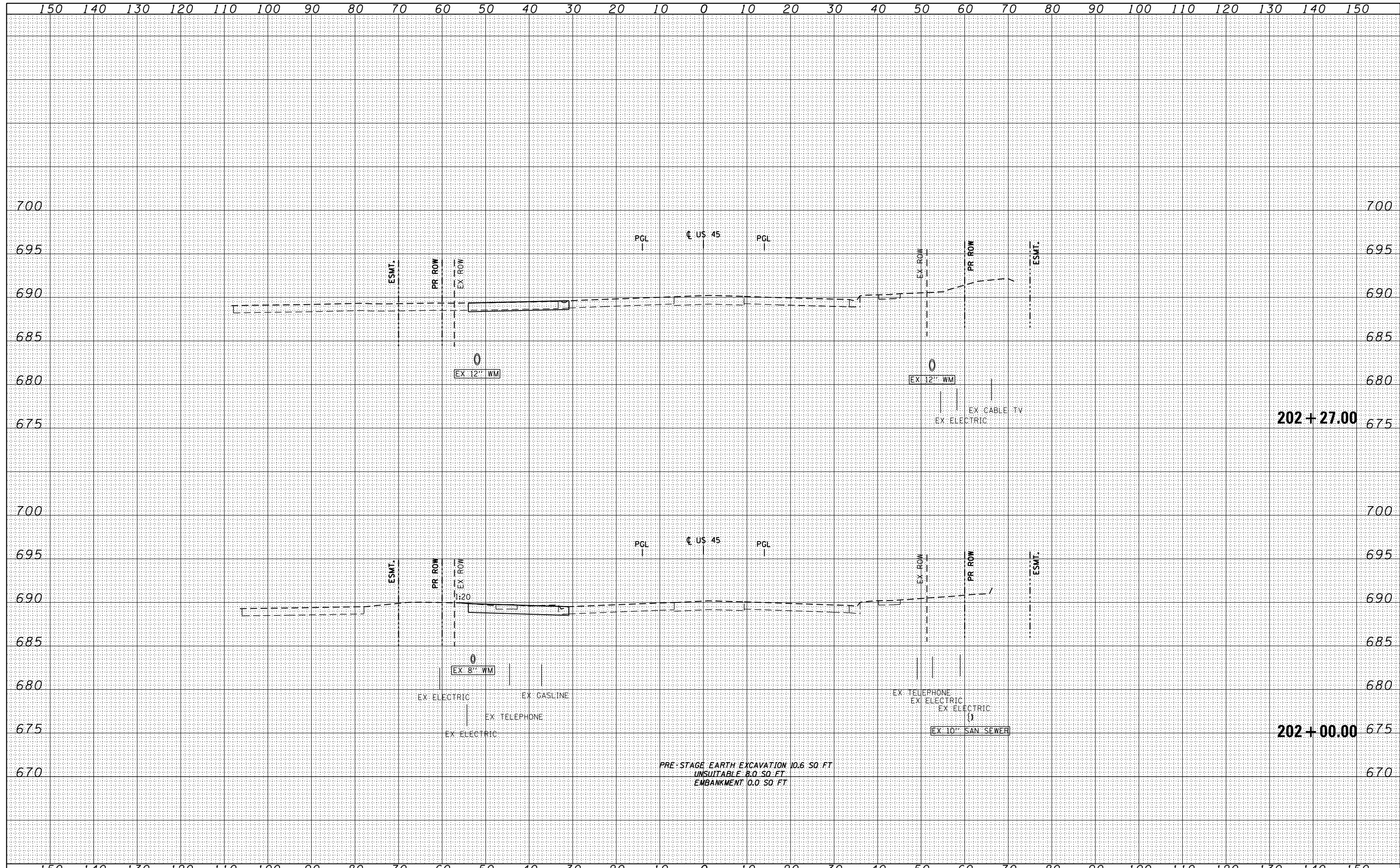
US 45 TEMPORARY PAVEMENT CROSS SECTIONS
 SCALE: 1"=10'H; 1"=5'V SHEET NO. 27 OF 109 SHEETS STA. 201+00.00 TO STA. 201+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	583
XS-TUS45-27			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

BY	DATE

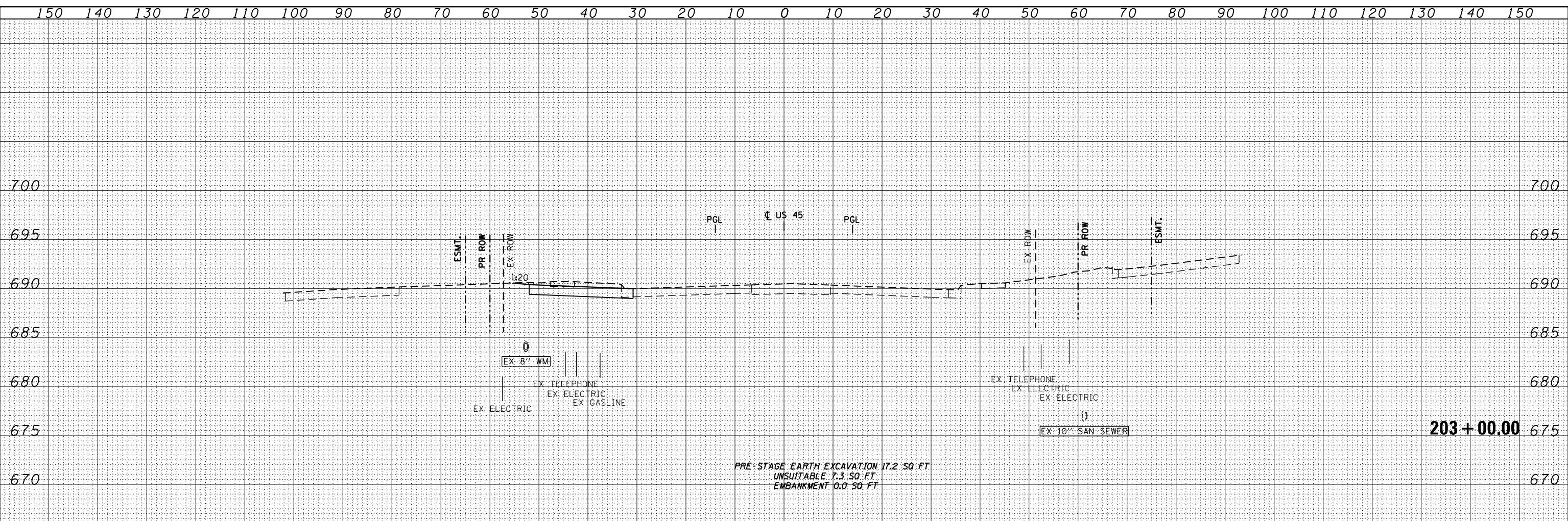
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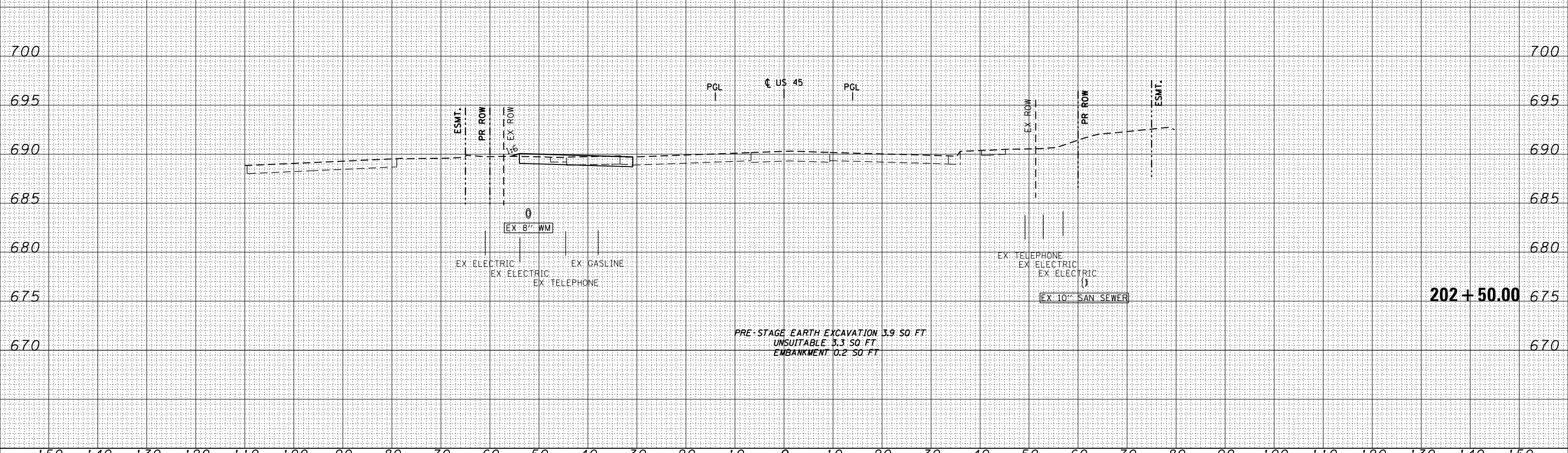


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PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -	XS-TUS45-28			CONTRACT NO. 60M61				
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -	ILLINOIS FED. AID PROJECT							
SHEET NO. 28 OF 109 SHEETS						STA. 202+00.00	TO STA. 202+27.00			

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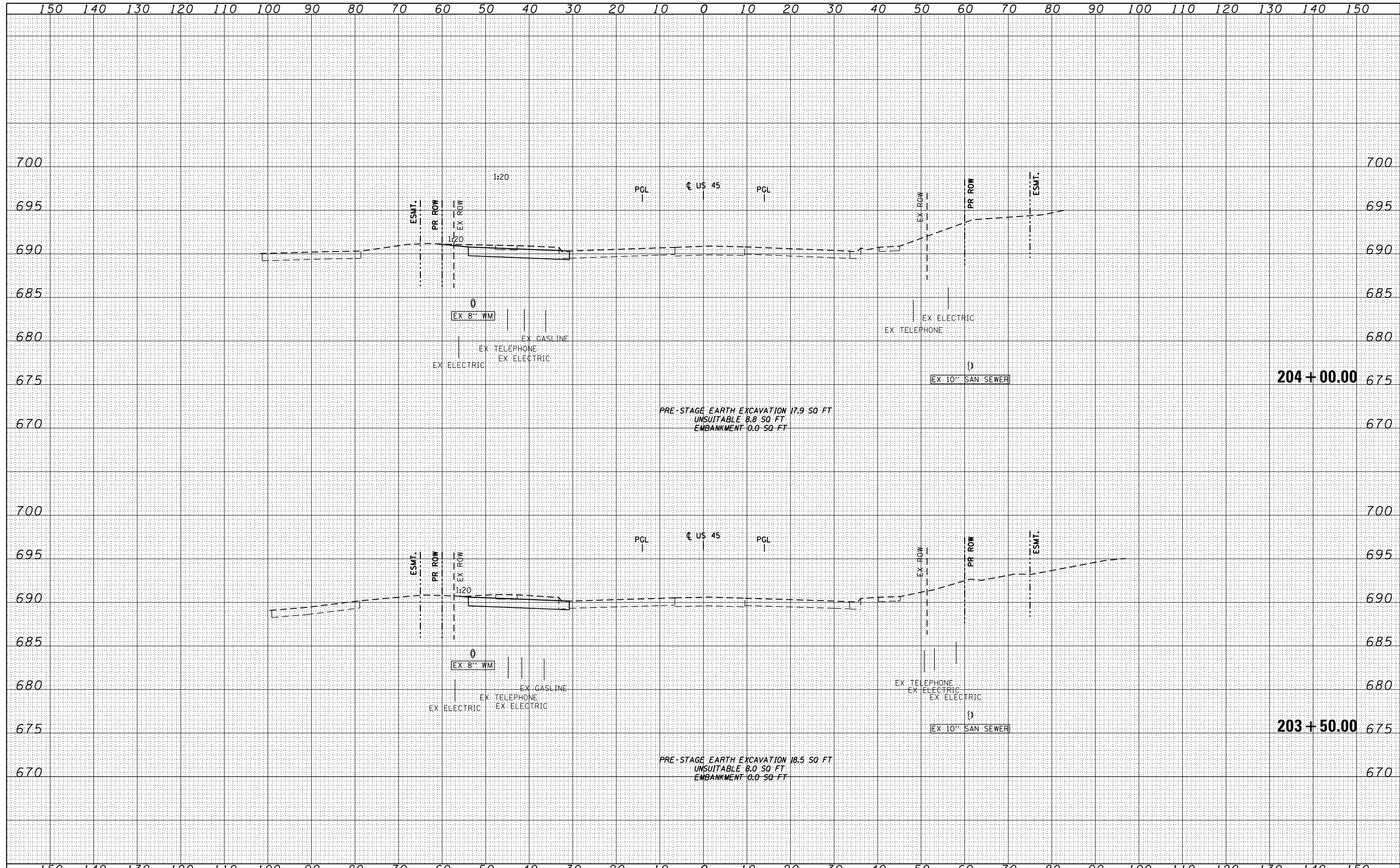


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		DRAWN - JCL	REVISIED -		XS-TUS45-29		CONTRACT NO. 60M61			
		CHECKED - MJT	REVISIED -		ILLINOIS FED. AID PROJECT					
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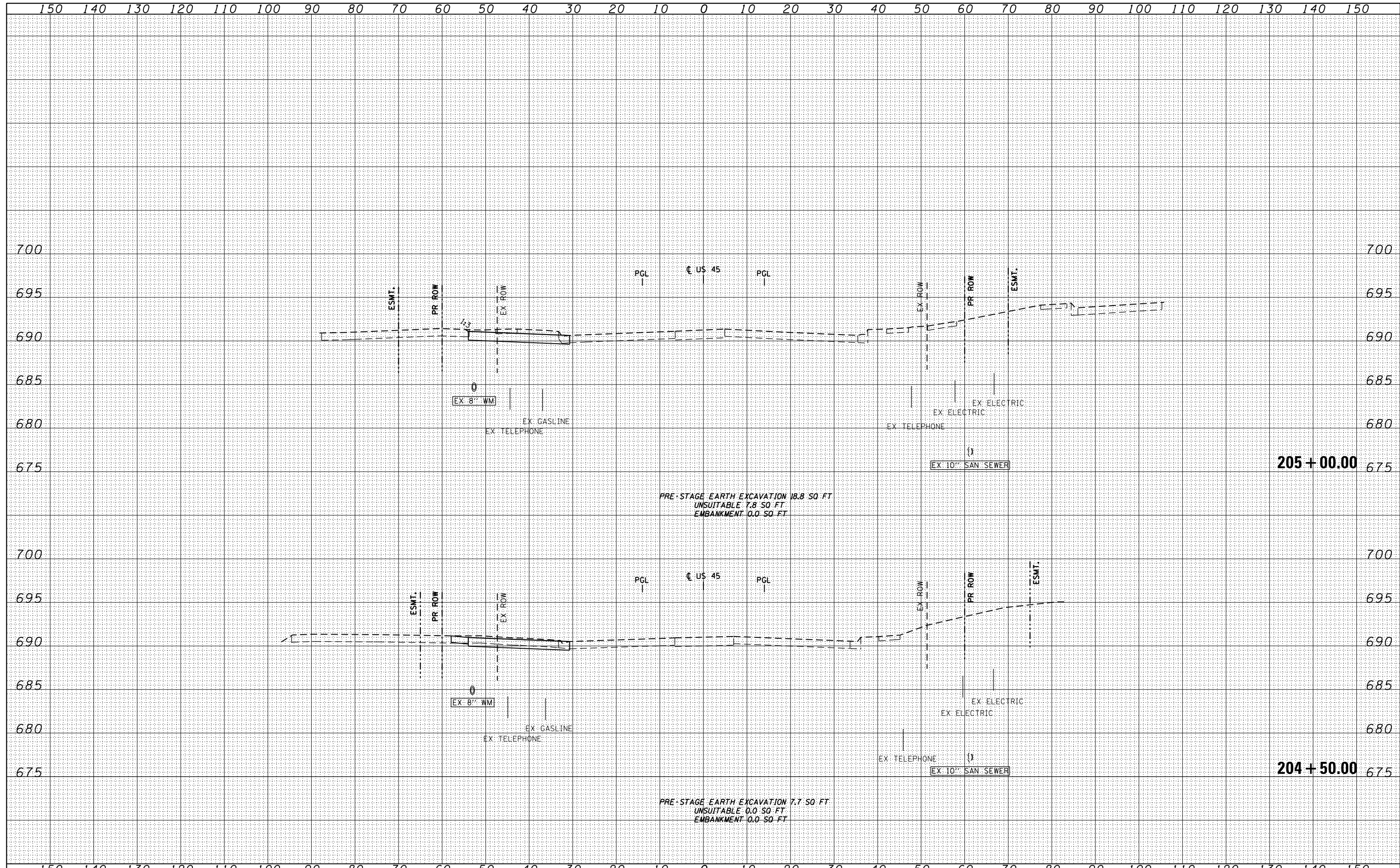


FILE NAME = D:\60M61-SHT-XSHT11.dgn	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 45 TEMPORARY PAVEMENT CROSS SECTIONS SCALE: 1"=10'H; 1"=5' SHEET NO. 30 OF 109 SHEETS STA. 203+50.00 TO STA. 204+00.00	F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 586	
	PLOT SCALE = 20.0003' / in.	DRAWN - JCL	REVISIED -		XS-TUS45-30		CONTRACT NO. 60M61			
	PLOT DATE = 3/13/2013	CHECKED - MJT	REVISIED -		ILLINOIS FED. AID PROJECT					
		DATE - 03/13/2013	REVISIED -							

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FILE NAME = D160M61-SHT-XSSH11.dgn

USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -
	DRAWN - JCL	REVISED -
PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -

STATE OF ILLINOIS
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US 45 TEMPORARY PAVEMENT CROSS SECTIONS

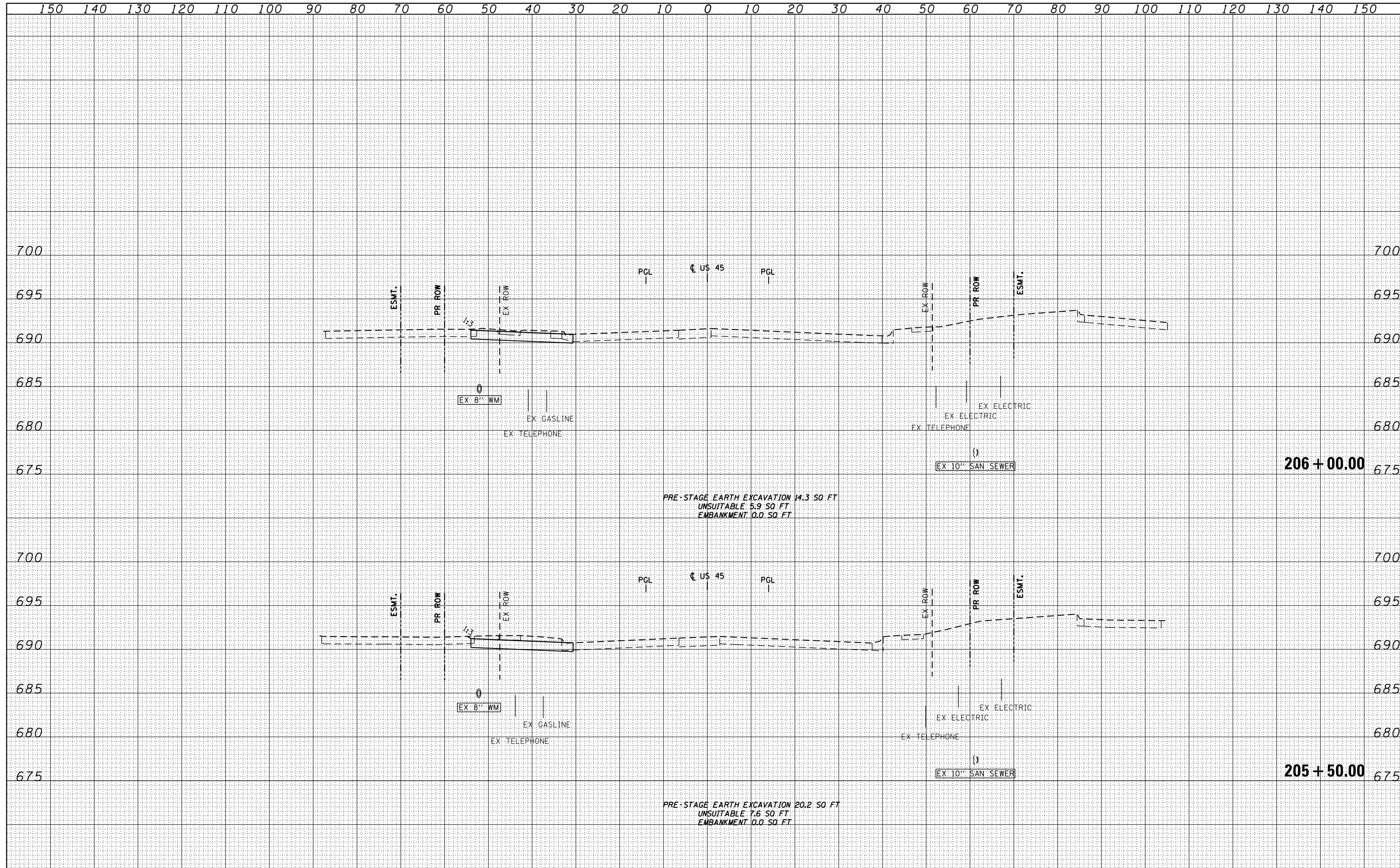
SCALE: 1"=10'H; 1"=5' V SHEET NO. 31 OF 109 SHEETS STA. 204+50.00 TO STA. 205+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	587
XS-TUS45-31			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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FILE NAME = D160M61-SHT-XSHT11.dgn

USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -
	DRAWN - JCL	REVISED -
PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

US 45 TEMPORARY PAVEMENT CROSS SECTIONS

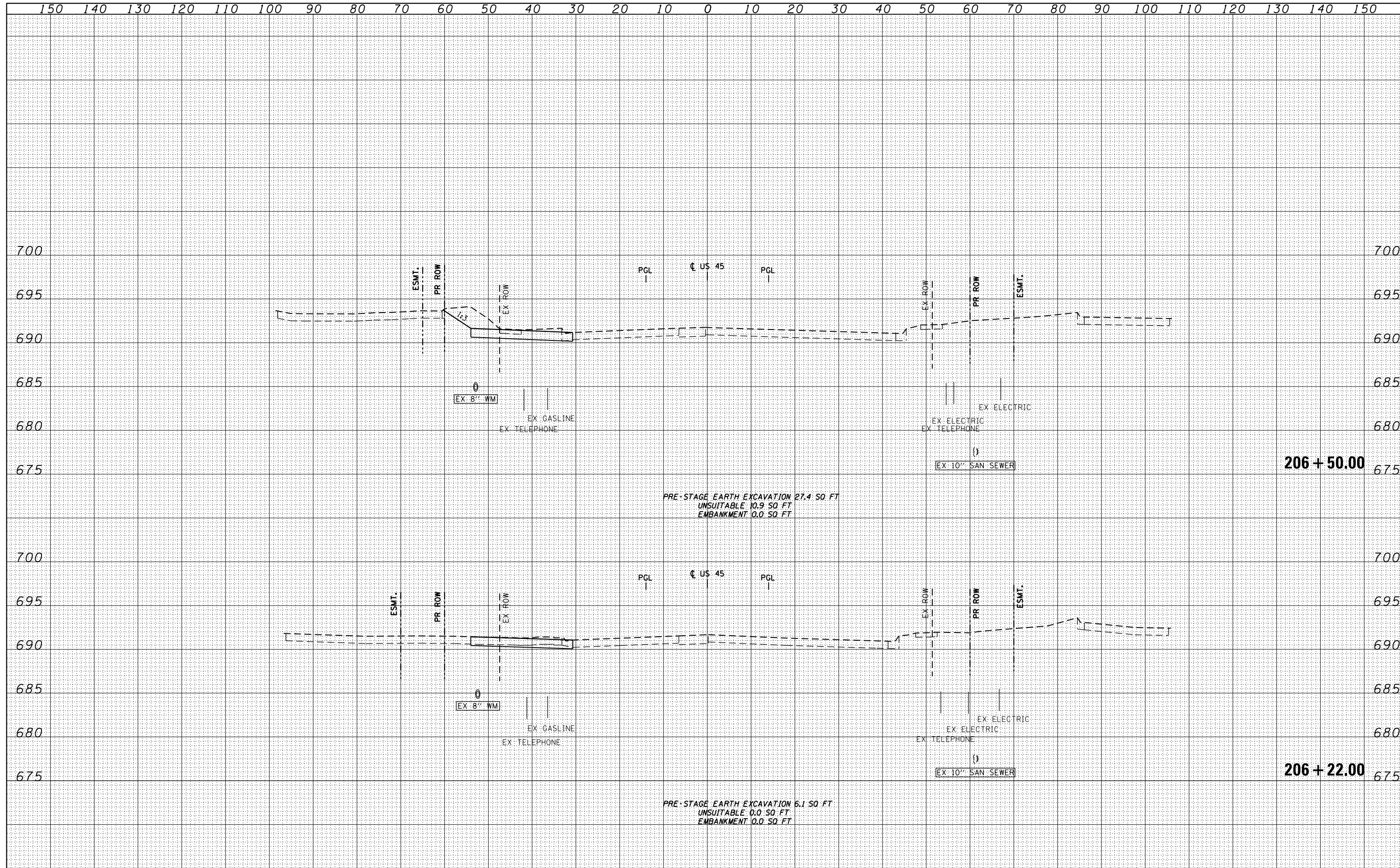
SCALE: 1"=10'H; 1"=5' V SHEET NO. 32 OF 109 SHEETS STA. 205+50.00 TO STA. 206+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	588
XS-TUS45-32			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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FILE NAME =	USER NAME = Anthony.Plutz
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

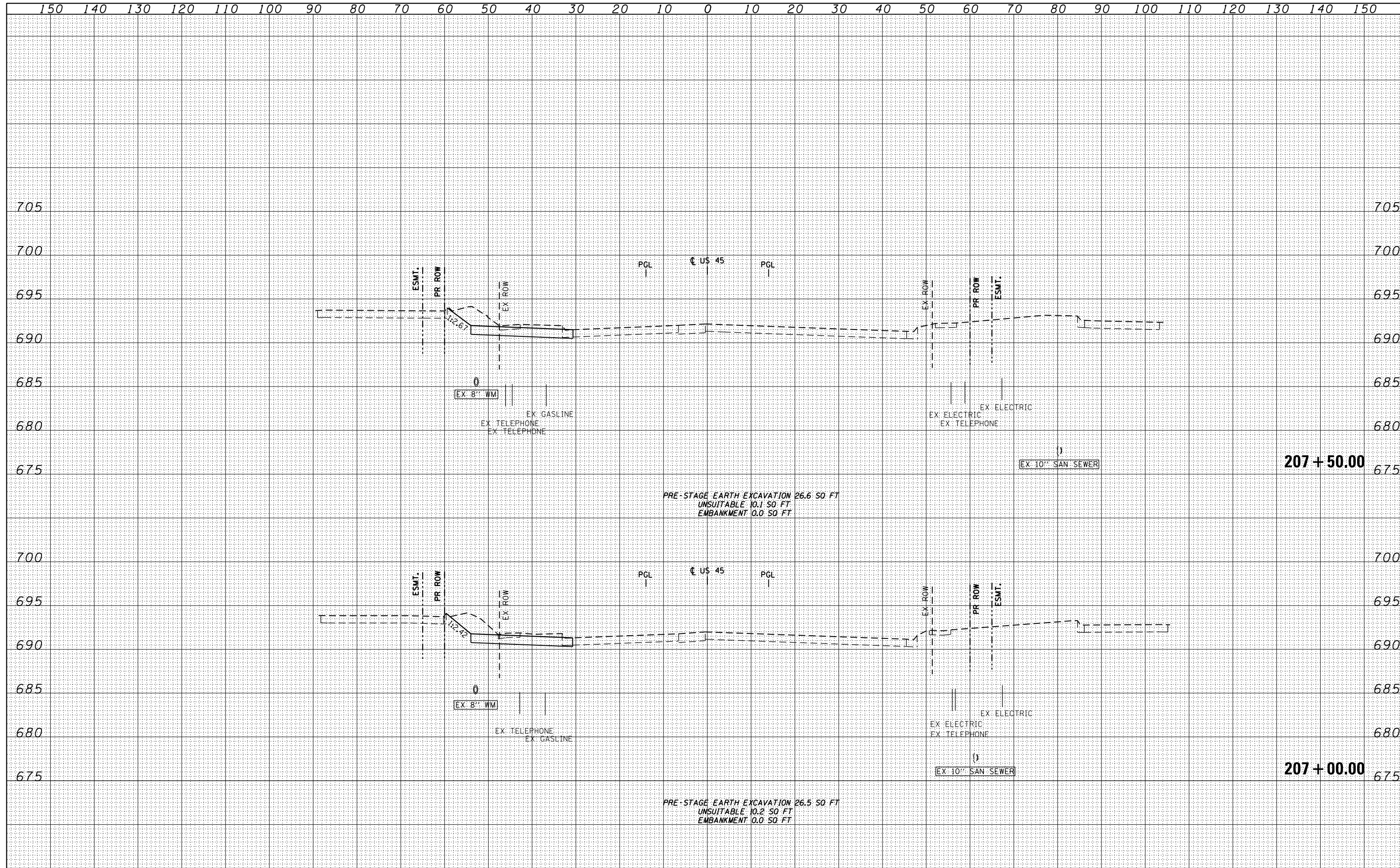
US 45 TEMPORARY PAVEMENT CROSS SECTIONS
 SCALE: 1"=10'H; 1"=5'V
 SHEET NO. 33 OF 109 SHEETS
 STA. 206+22.00 TO STA. 206+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	589
XS-TUS45-33			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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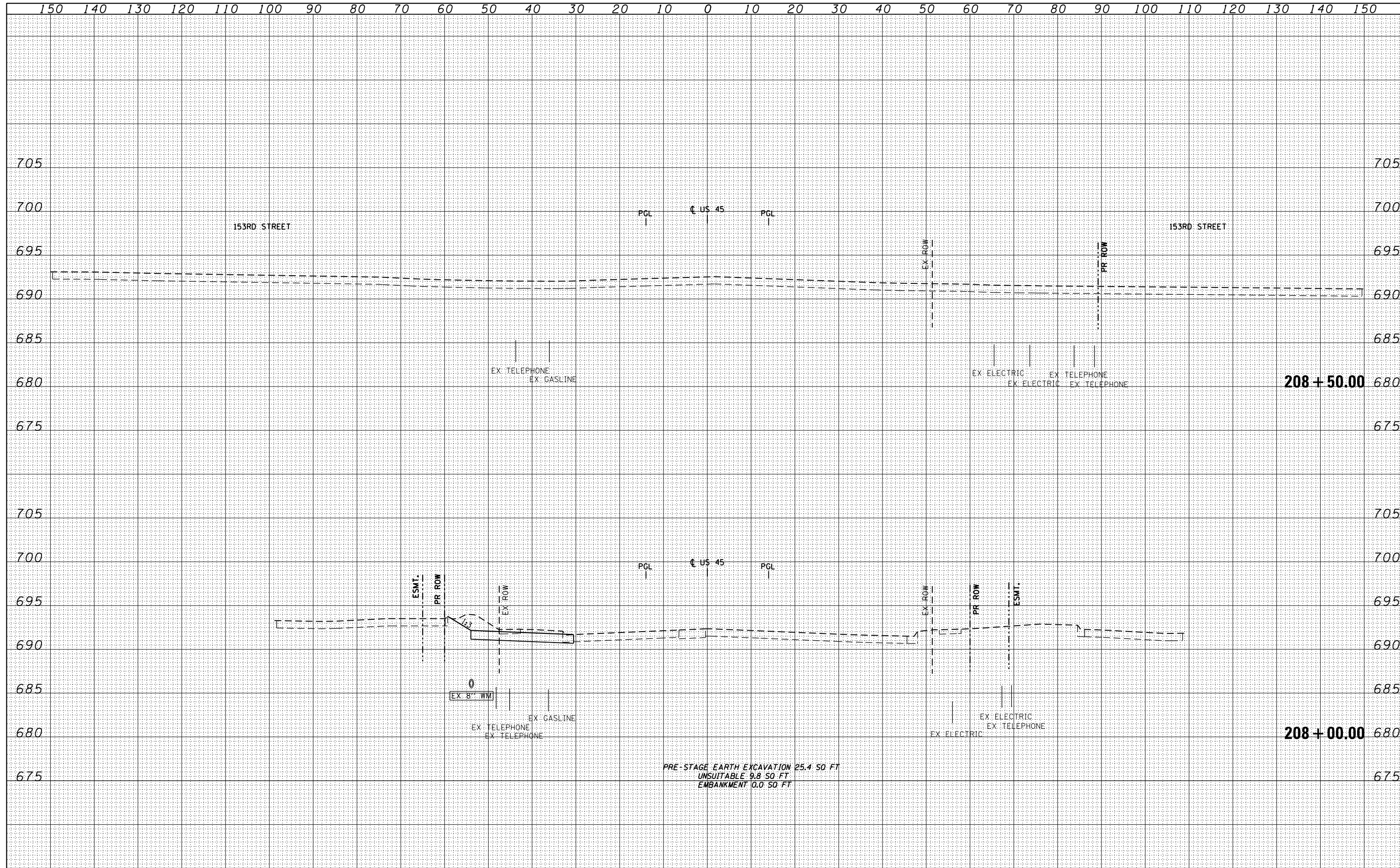


FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US 45 TEMPORARY PAVEMENT CROSS SECTIONS - SCALE: 1"=10'H; 1"=5'	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D160M61-SHT-XSSH11.dgn		DRAWN - JCL	REVISIED -			330	103R-4	COOK	877	590
		PLOT SCALE = 20.0003' / in.	REVISIED -			XS-TUS45-34		CONTRACT NO. 60M61		
		PLOT DATE = 3/13/2013	REVISIED -			SHEET NO. 34 OF 109 SHEETS		STA. 207+00.00 TO STA. 207+50.00		ILLINOIS FED. AID PROJECT

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FILE NAME = D160M61-SHT-XSST11.dgn

USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -
	DRAWN - JCL	REVISED -
PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -

STATE OF ILLINOIS
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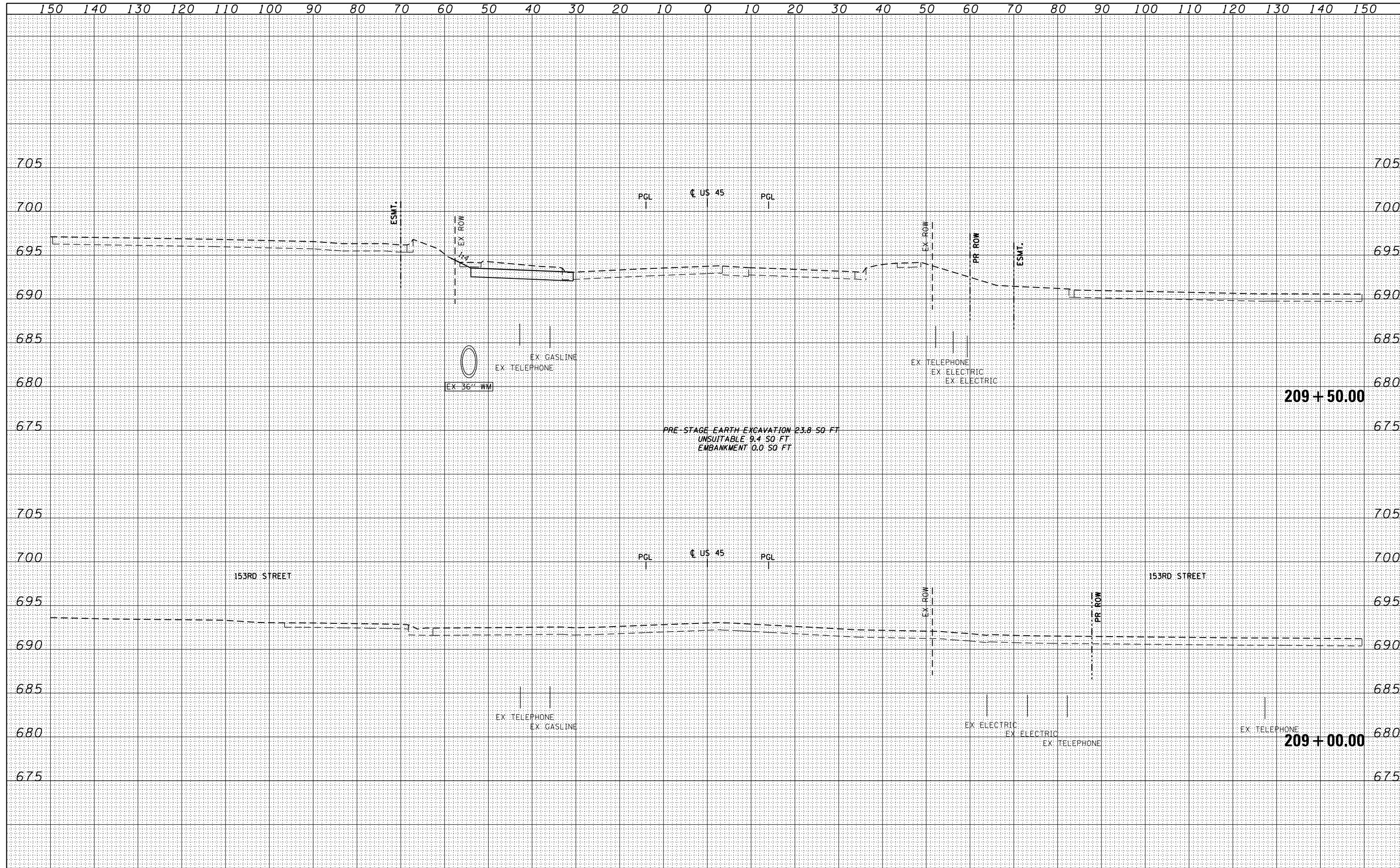
US 45 TEMPORARY PAVEMENT CROSS SECTIONS
 SCALE: 1"=10'H; 1"=5'
 SHEET NO. 35 OF 109 SHEETS STA. 208+00.00 TO STA. 208+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	591
XS-TUS45-35			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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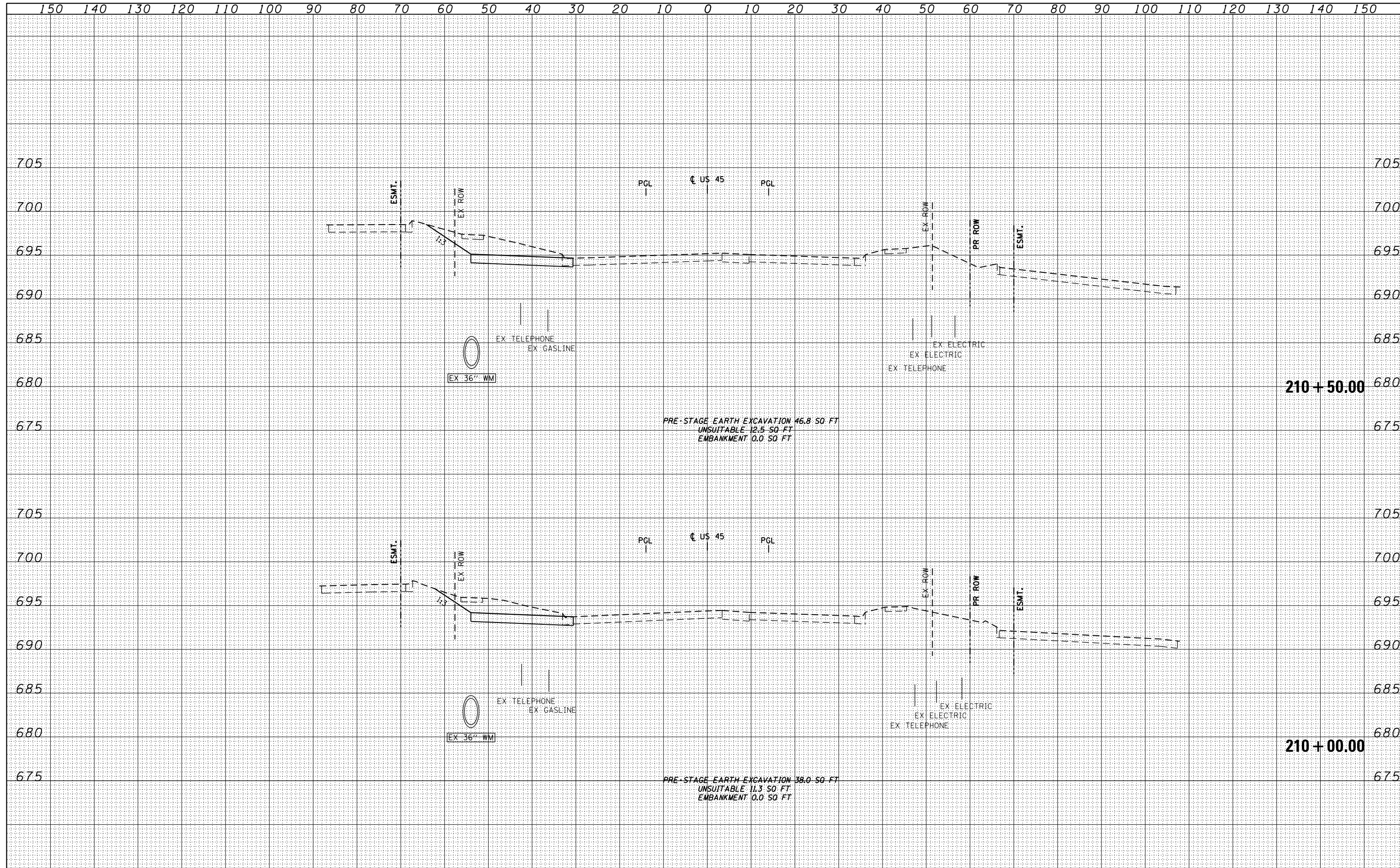


FILE NAME = D160M61-SHT-XSSH11.dgn	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US 45 TEMPORARY PAVEMENT CROSS SECTIONS			F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 592	
PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -			SCALE: 1"=10'H; 1"=5'			XS-TUS45-36		CONTRACT NO. 60M61			
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -			SHEET NO. 36 OF 109 SHEETS			STA. 209+00.00 TO STA. 209+50.00			ILLINOIS FED. AID PROJECT		
					STA. 209+00.00 TO STA. 209+50.00			ILLINOIS FED. AID PROJECT					

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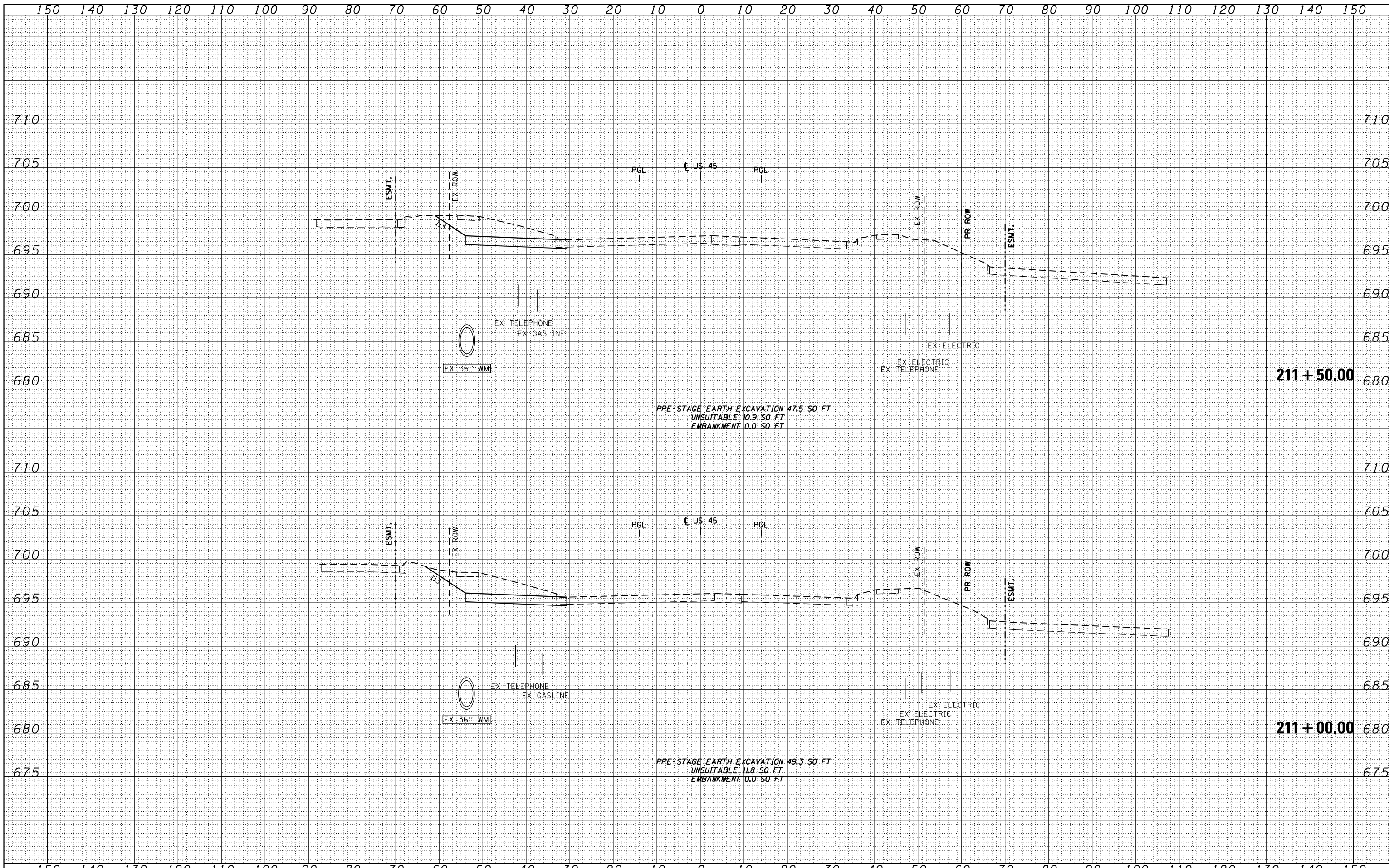


FILE NAME = D160M61-SHT-XSHT11.dgn	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 45 TEMPORARY PAVEMENT CROSS SECTIONS SCALE: 1"=10'H; 1"=5'V SHEET NO. 37 OF 109 SHEETS STA. 210+00.00 TO STA. 210+50.00	F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 593	
	PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISIED -		XS-TUS45-37		CONTRACT NO. 60M61			
	PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISIED -		ILLINOIS FED. AID PROJECT					

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FILE NAME =	USER NAME = Anthony.Plutz
D160M61-SHT-XSST11.dgn	DESIGNED - JCL
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PLOT DATE = 3/13/2013	DRAWN - JCL	REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

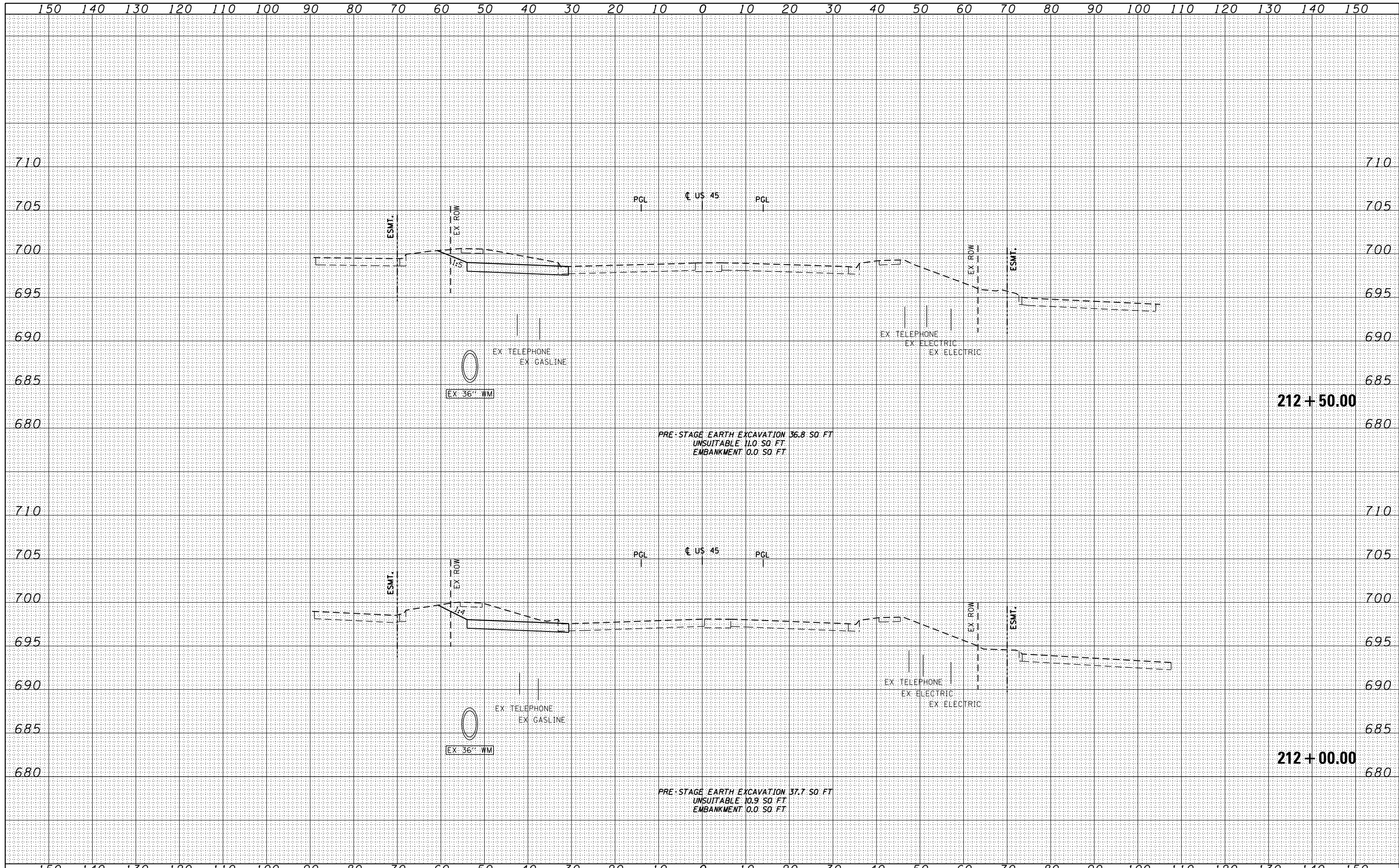
US 45 TEMPORARY PAVEMENT CROSS SECTIONS
 SCALE: 1"=10'H; 1"=5' V SHEET NO. 38 OF 109 SHEETS STA. 211+00.00 TO STA. 211+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	594
XS-TUS45-38			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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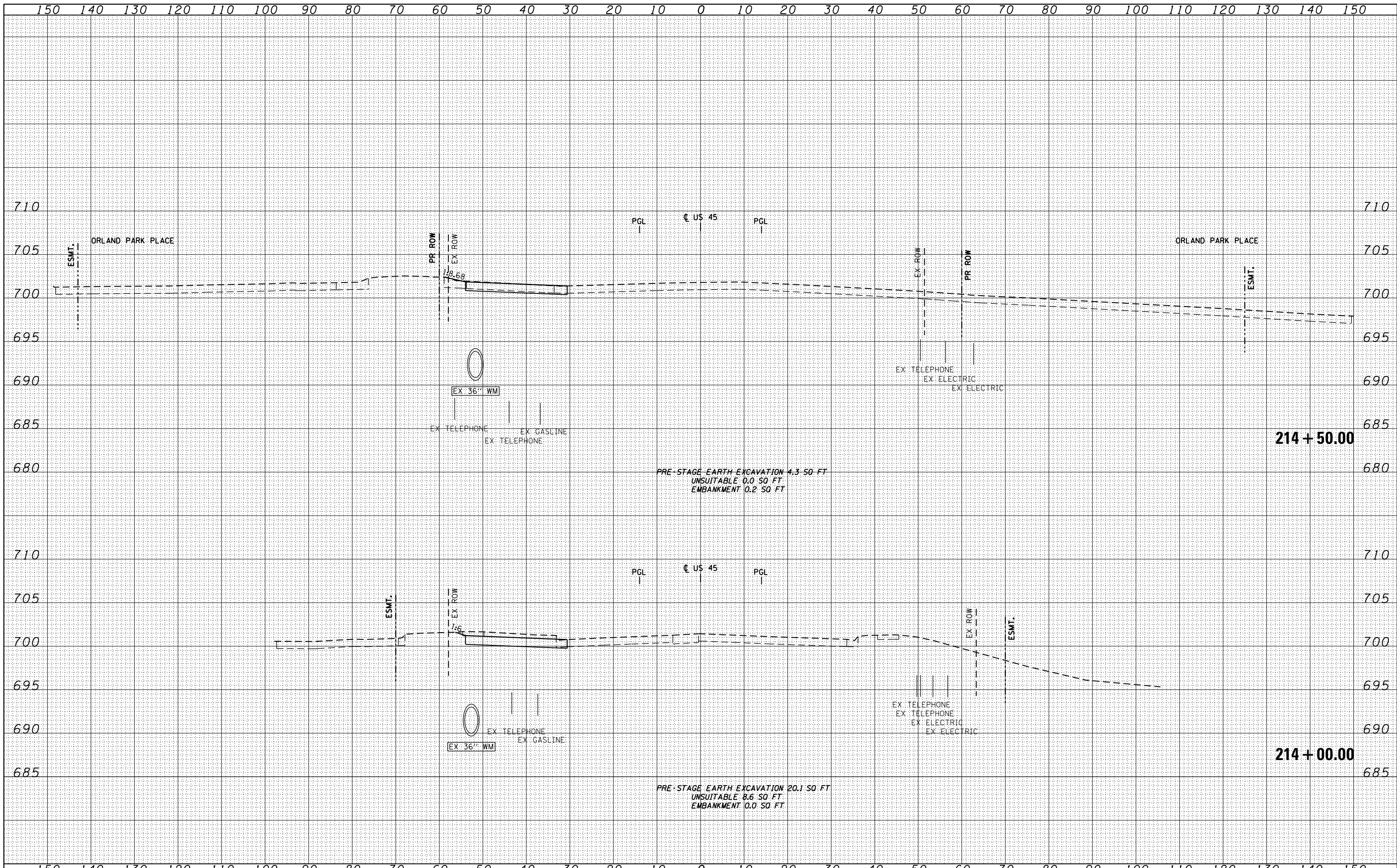


FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 45 TEMPORARY PAVEMENT CROSS SECTIONS SCALE: 1"=10'H; 1"=5'V SHEET NO. 39 OF 109 SHEETS STA. 212+00.00 TO STA. 212+50.00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D160M61-SHT-XSSH11.dgn		DRAWN - JCL	REVISED -		330	103R-4	COOK	877	595
PLOT SCALE = 20.0003' / in.		CHECKED - MJT	REVISED -		XS-TUS45-39		CONTRACT NO. 60M61		
PLOT DATE = 3/13/2013		DATE - 03/13/2013	REVISED -		ILLINOIS FED. AID PROJECT				

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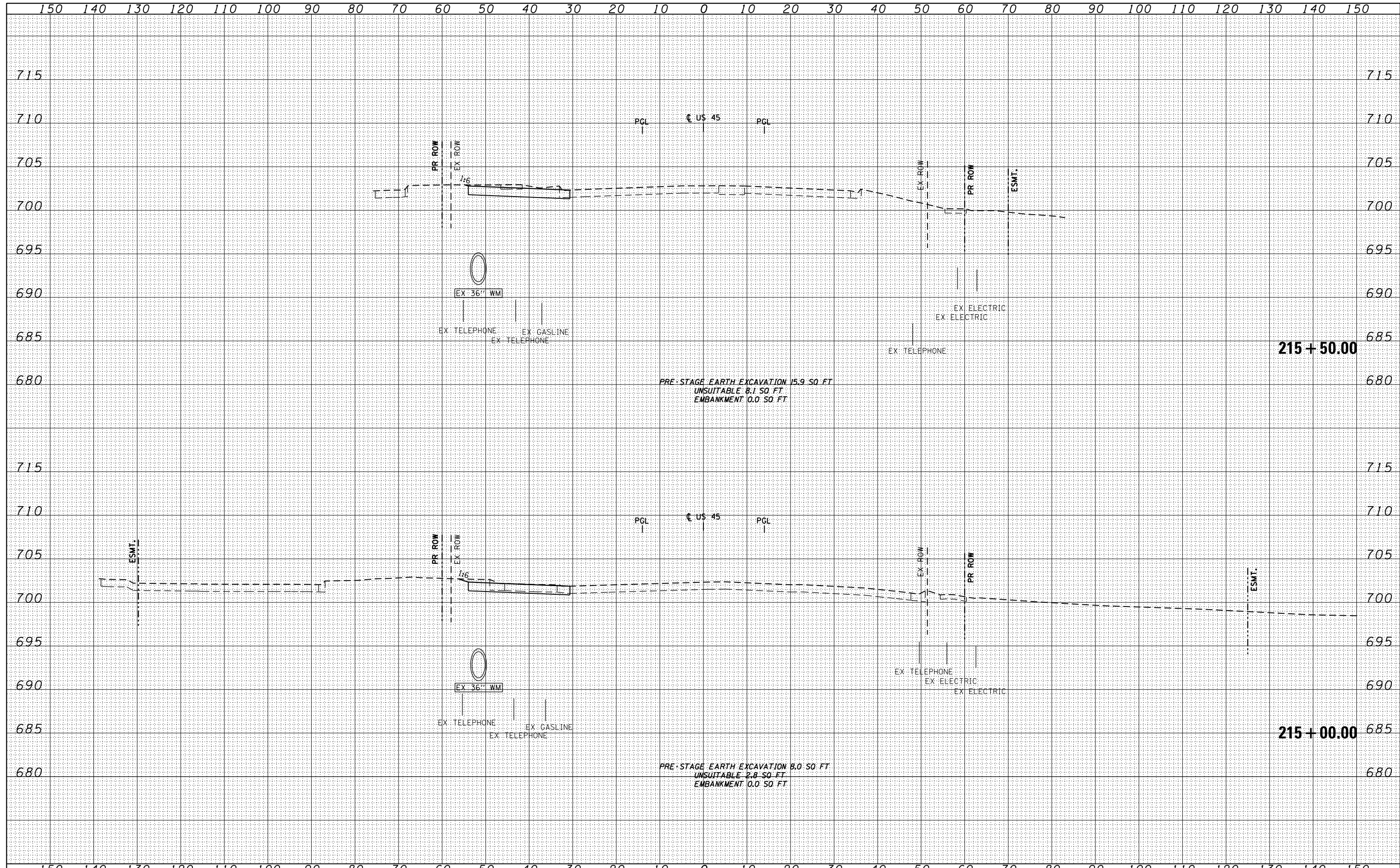


FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 45 TEMPORARY PAVEMENT CROSS SECTIONS SCALE: 1"=10'H, 1"=5'V SHEET NO. 41 OF 109 SHEETS STA. 214+00.00 TO STA. 214+50.00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D160M61-SHT-XSSH11.dgn		DRAWN - JCL	REVISED -		330	103R-4	COOK	877	597
		PLOT SCALE = 20.0003' / in.	REVISED -		XS-TUS45-41		CONTRACT NO. 60M61		
		PLOT DATE = 3/13/2013	REVISED -		ILLINOIS FED. AID PROJECT				

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FILE NAME = D160M61-SHT-XSHT11.dgn

USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -
	DRAWN - JCL	REVISED -
PLOT SCALE = 20.0003' / in.	CHECKED - MJT	REVISED -
PLOT DATE = 3/13/2013	DATE - 03/13/2013	REVISED -

STATE OF ILLINOIS
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US 45 TEMPORARY PAVEMENT CROSS SECTIONS

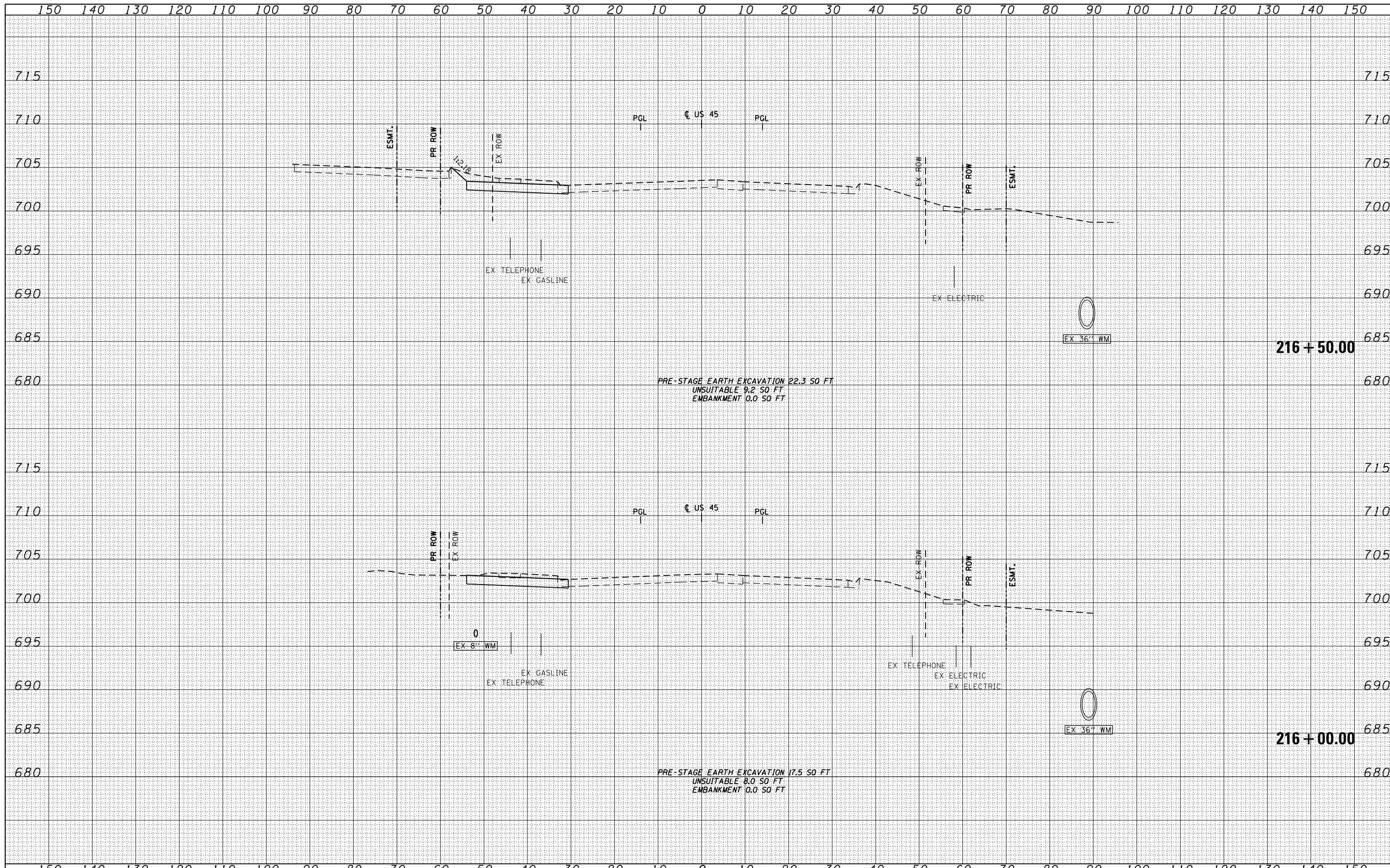
SCALE: 1"=10'H; 1"=5' V SHEET NO. 42 OF 109 SHEETS STA. 215+00.00 TO STA. 215+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	598
XS-TUS45-42			CONTRACT NO. 60M61	
ILLINOIS FED. AID PROJECT				

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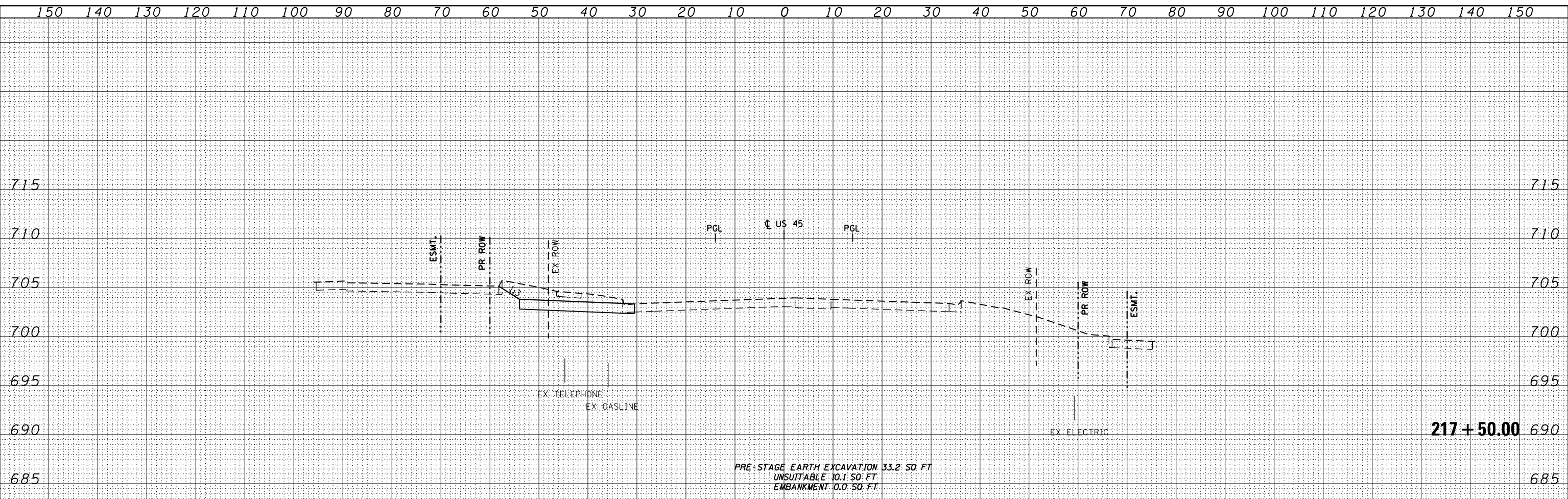
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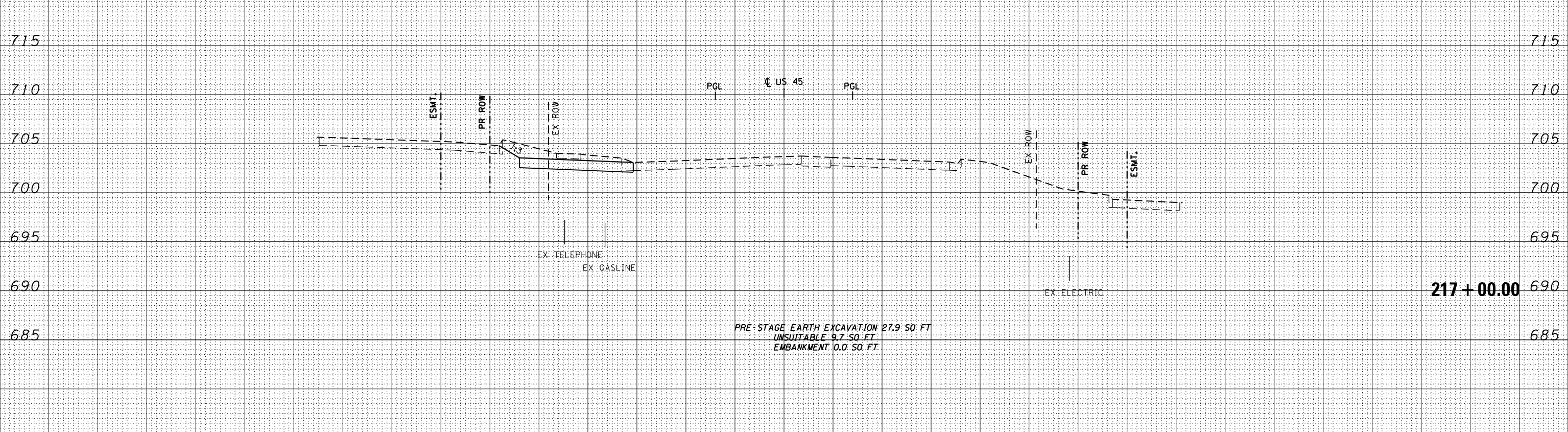


FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - JCL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US 45 TEMPORARY PAVEMENT CROSS SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D160M61-SHT-XSST11.dgn		DRAWN - JCL	REVISED -		330	103R-4	COOK	877	599			
PLOT SCALE = 20.0003' / in.		CHECKED - MJT	REVISED -		XS-TUS45-43			CONTRACT NO. 60M61				
PLOT DATE = 3/13/2013		DATE - 03/13/2013	REVISED -		SCALE: 1"=10'H; 1"=5'			SHEET NO. 43 OF 109 SHEETS STA. 216+00.00 TO STA. 216+50.00				

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FILE NAME =	USER NAME = Anthony.Plutz	DESIGNED - JCL	REvised -	STATE OF ILLINOIS	US 45 TEMPORARY PAVEMENT CROSS SECTIONS	F.A.P. RTE. 330	SECTION 103R-4	COUNTY COOK	TOTAL SHEETS 877	SHEET NO. 600
D160M61-SHT-XSHT11.dgn		DRAWN - JCL	REvised -	DEPARTMENT OF TRANSPORTATION	SCALE: 1"=10'H; 1"=5'	XS-TUS45-44		CONTRACT NO. 60M61		
		PLOT SCALE = 20.0003' / in.	REvised -		SHEET NO. 44 OF 109 SHEETS		STA. 217+00.00 TO STA. 217+50.00		ILLINOIS FED. AID PROJECT	
		PLOT DATE = 3/13/2013	REvised -							