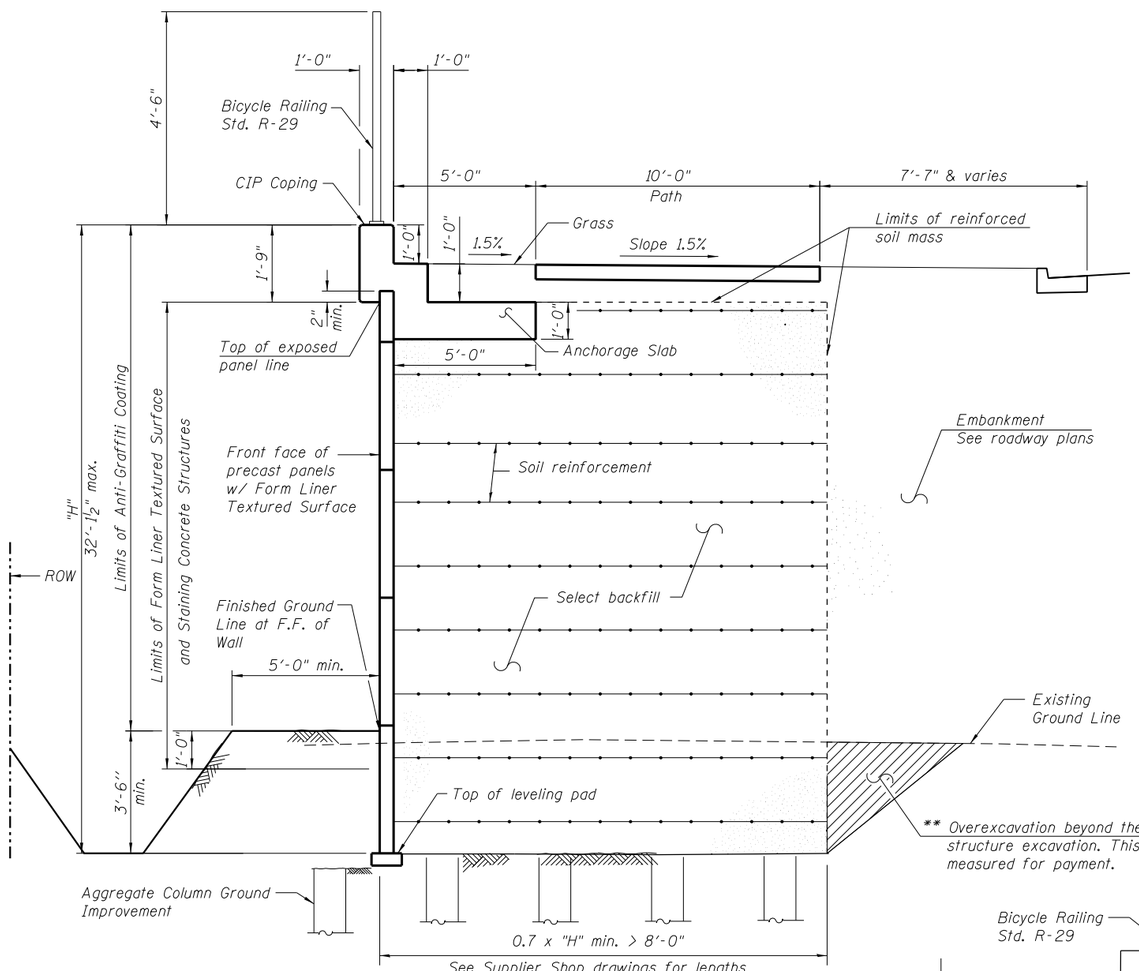
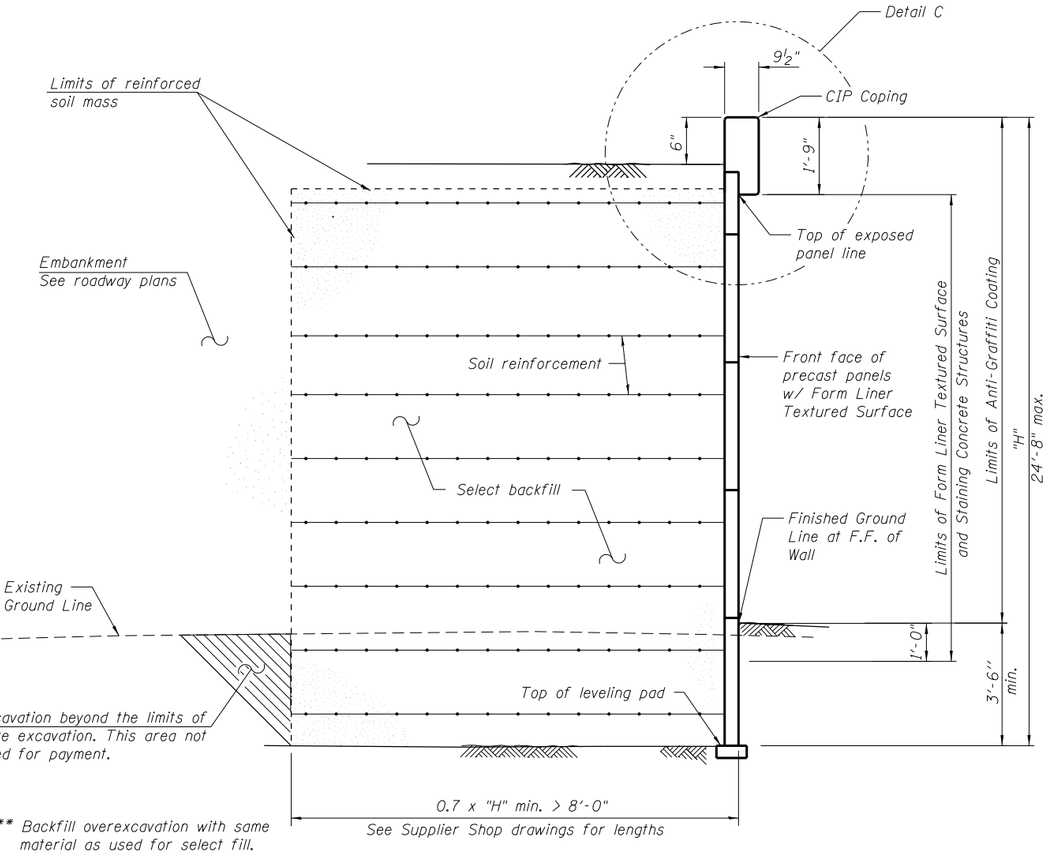
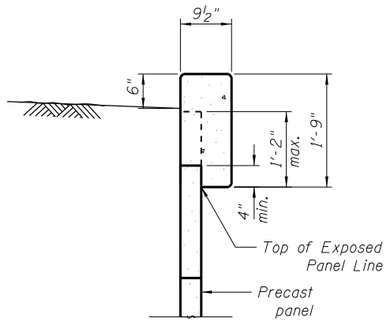


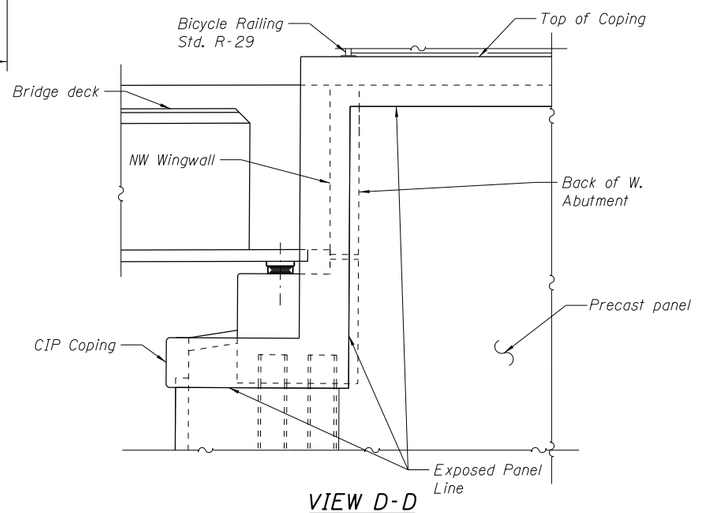
SECTION A-A
(Along North face)



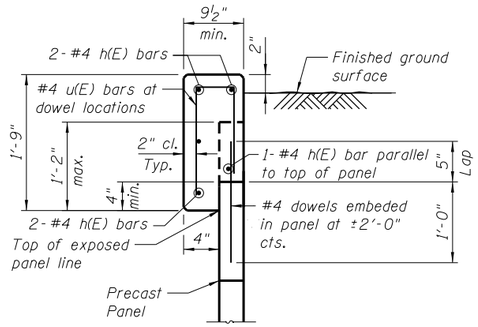
SECTION B-B
(Along Southeast face)



DETAIL C



VIEW D-D
(Northwest Abut.)



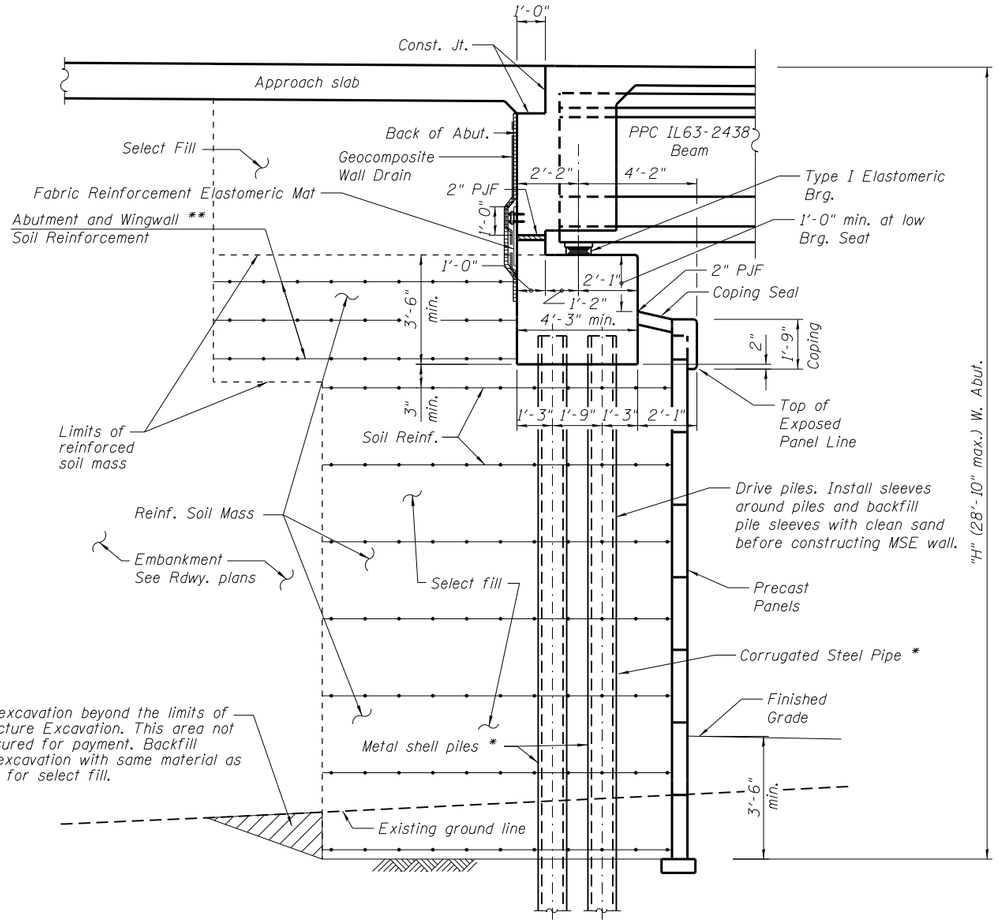
SECTION THRU C.I.P. COPING

Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - JJI	REVISED
		CHECKED - NS	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT MSE WALL DETAILS I
STRUCTURE NO. 045-3048
SHEET NO. 33 OF 49 SHEETS

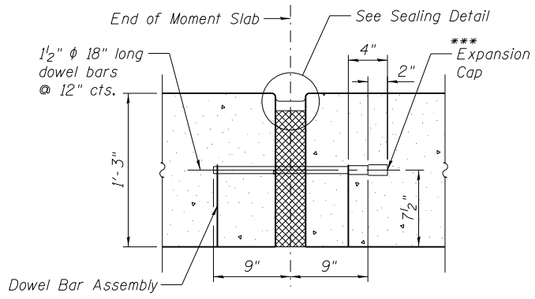
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	401
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



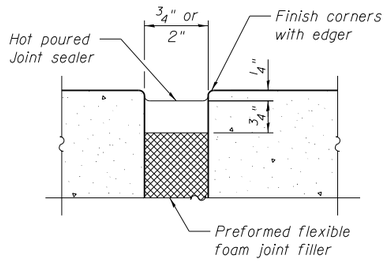
SECTION THRU SEMI-INTEGRAL ABUTMENT

* Piles shall be driven prior to placement of reinforced select fill. 21" ϕ corrugated galvanized steel pipe, 10 gage min. shall be provided from the bottom of the abutment footing to the bottom of the excavation level. The cost of corrugated steel pipe and backfill shall be included in the cost of the furnishing piles.

** The MSE wall supplier shall design the abutment and wingwall soil reinforcement to resist a horizontal force of 3.0 kips/ft of abutment. Contractor shall coordinate abutment construction with construction of MSE retaining wall.



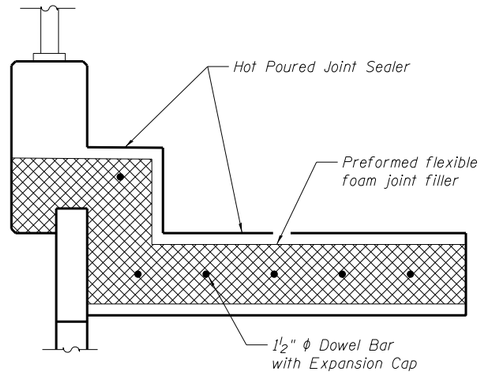
ANCHORAGE SLAB TO ANCHORAGE SLAB TRANSVERSE EXPANSION JOINT



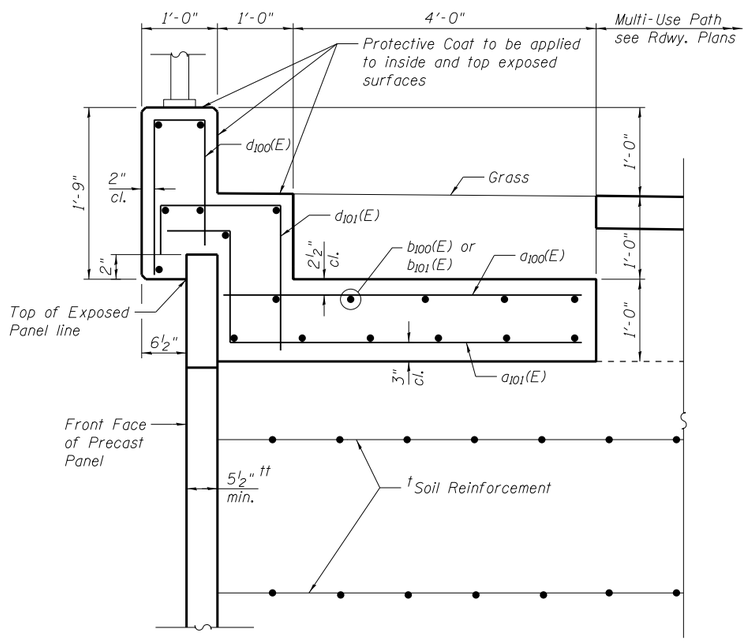
SEALING DETAIL

Expansion Joint and Dowel Bars included in the cost of Concrete Superstructure.

*** Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.



TRANSVERSE EXPANSION JOINT SECTION



SECTION E-E

† The MSE wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kip/ft of wall.

tt See suppliers shop drawings for thickness

FILE NAME = W:\894-018 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT_34 W Abut MSE Wall Det 11.dgn

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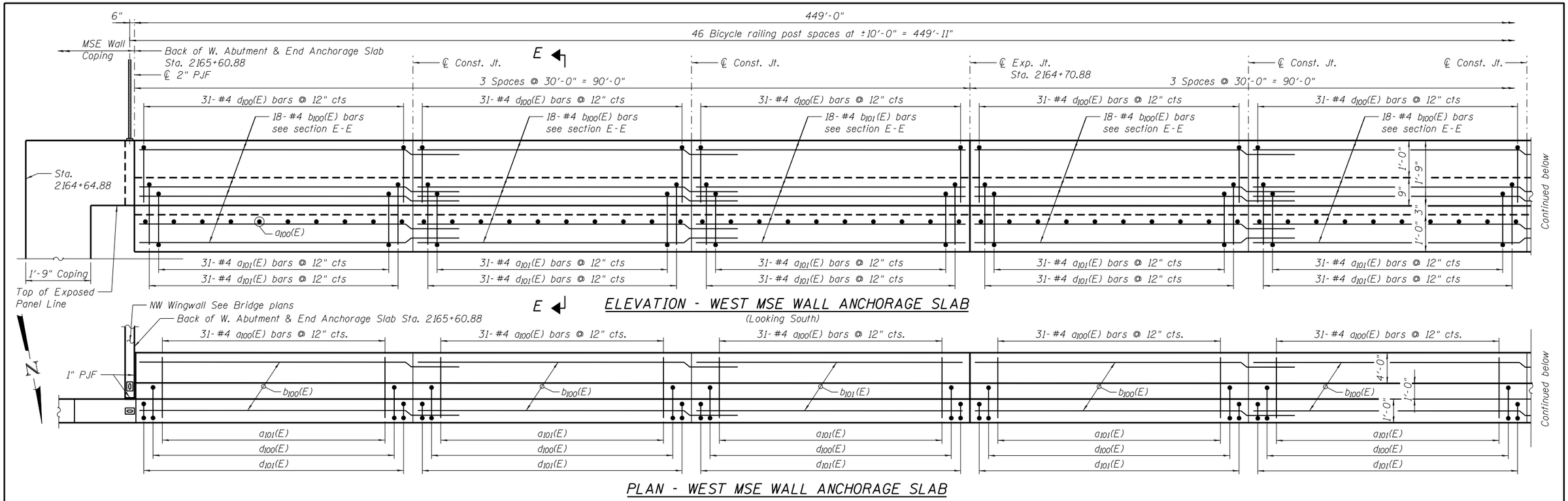
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT MSE WALL DETAILS II
STRUCTURE NO. 045-3048
SHEET NO. 34 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	402
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



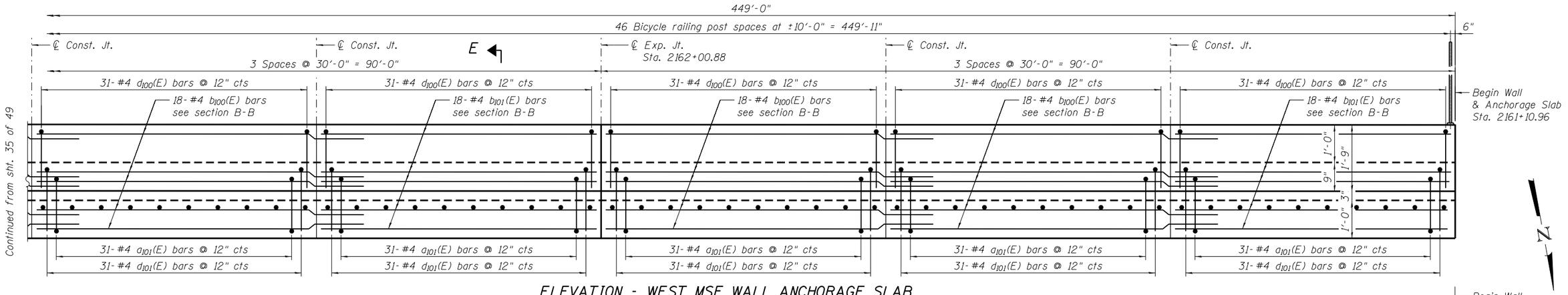
Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - JJI	REVISED
		CHECKED - NS	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT MSE WALL ANCHORAGE SLAB
STRUCTURE NO. 045-3048
SHEET NO. 35 OF 49 SHEETS

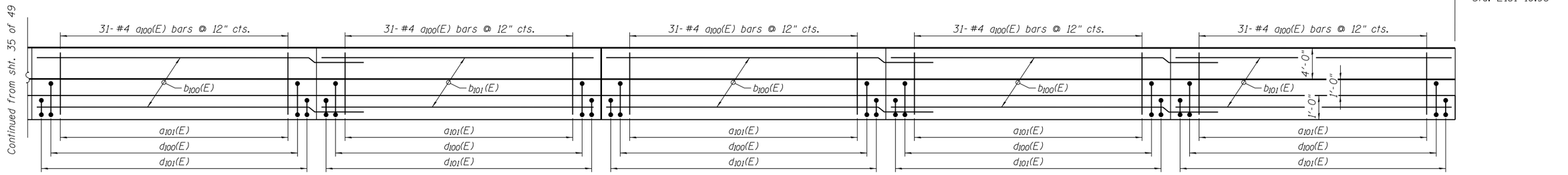
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	403
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT.35 W Abut MSE Wall MS I.dgn



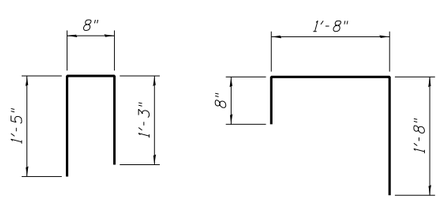
ELEVATION - WEST MSE WALL ANCHORAGE SLAB

(Looking South)



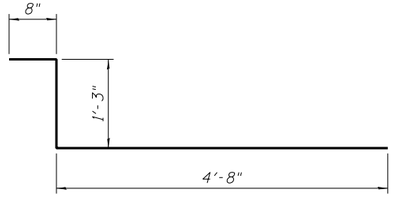
PLAN - WEST MSE WALL ANCHORAGE SLAB

Note:
For section E-E and Expansion Joint detail see sht. 34 of 49.



BAR $d_{100}(E)$

BAR $d_{101}(E)$



BAR $a_{101}(E)$

BAR LIST

Bar	No.	Size	Length	Shape
$a_{100}(E)$	465	#4	4'-8"	
$a_{101}(E)$	465	#4	6'-7"	
$b_{100}(E)$	324	#4	31'-7"	
$b_{101}(E)$	162	#4	29'-8"	
$d_{100}(E)$	465	#4	3'-4"	
$d_{101}(E)$	465	#4	4'-0"	

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT_36 W Abut MSE Wall MS 11.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

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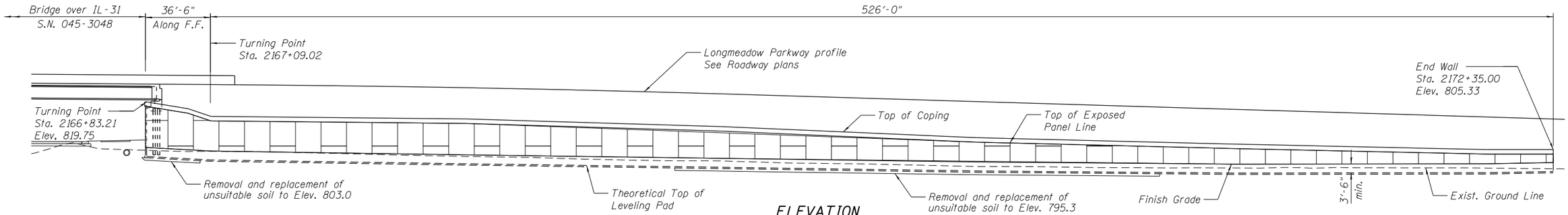
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT MSE WALL ANCHORAGE SLAB
STRUCTURE NO. 045-3048
SHEET NO. 36 OF 49 SHEETS

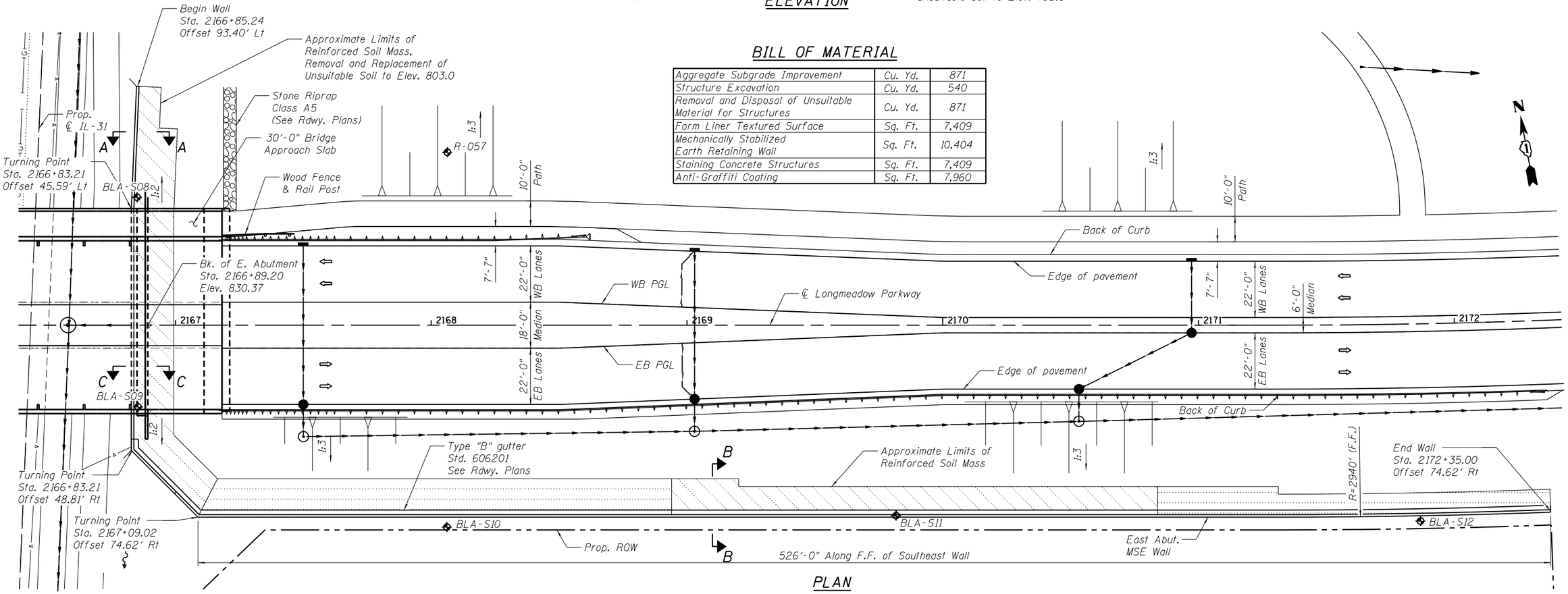
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	404
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



ELEVATION

BILL OF MATERIAL

Aggregate Subgrade Improvement	Cu. Yd.	871
Structure Excavation	Cu. Yd.	540
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	871
Form Liner Textured Surface	Sq. Ft.	7,409
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	10,404
Staining Concrete Structures	Sq. Ft.	7,409
Anti-Graffiti Coating	Sq. Ft.	7,960



PLAN

LEGEND

- Approximate Limits of Reinforced Soil Mass and Aggregate Column Ground Improvement.
- Approximate Limits of Removal & Replacement of Unsuitable Soil.
- Approximate Limits of Reinforced Soil Mass and Removal & Replacement of Unsuitable Soil.
- Approximate Limits of Reinforced Soil Mass

Note:

1. Wall Stations and Offsets are given to the Front Face (FF) of the wall and are measured from centerline of Longmeadow Pkwy.
2. Wall is built in conjunction with new bridge S.N. 045-3048.
3. Horizontal dimensions measured along front face of precast panels.
4. For Section A-A, B-B and C-C, see Sheet 39 of 49.
5. For additional details see Sheet 39 of 49.

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT.37 E Abut MSE Wall Plan.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

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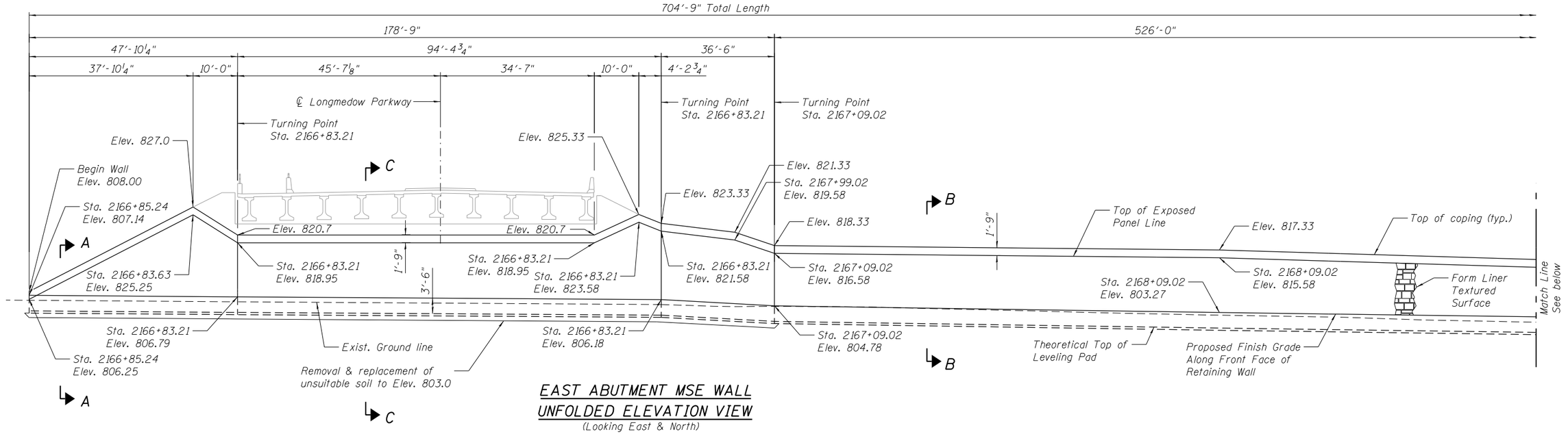
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

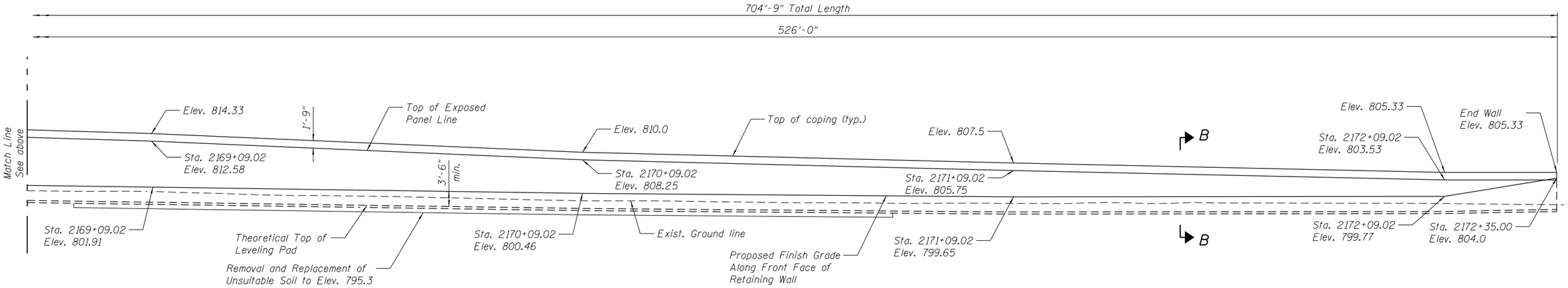
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT MSE WALL PLAN
STRUCTURE NO. 045-3048
SHEET NO. 37 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	405
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



EAST ABUTMENT MSE WALL
UNFOLDED ELEVATION VIEW
(Looking East & North)



EAST ABUTMENT MSE WALL
UNFOLDED ELEVATION VIEW
(Looking North)

Note:
1. Wall Stations and Offsets are given to the Front Face (FF) of the wall and are measured from centerline of Longmeadow Pkwy.
2. Wall is built in conjunction with new bridge S.N. 045-3048.
3. Horizontal dimensions measured along front face of precast panels.
4. For Sections A-A, B-B, and C-C see Sheet 39 of 49.

FILE NAME = W:\894-010 IDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT-38 E Abut MSE Wall Elev.dgn

Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - JJI	REVISED
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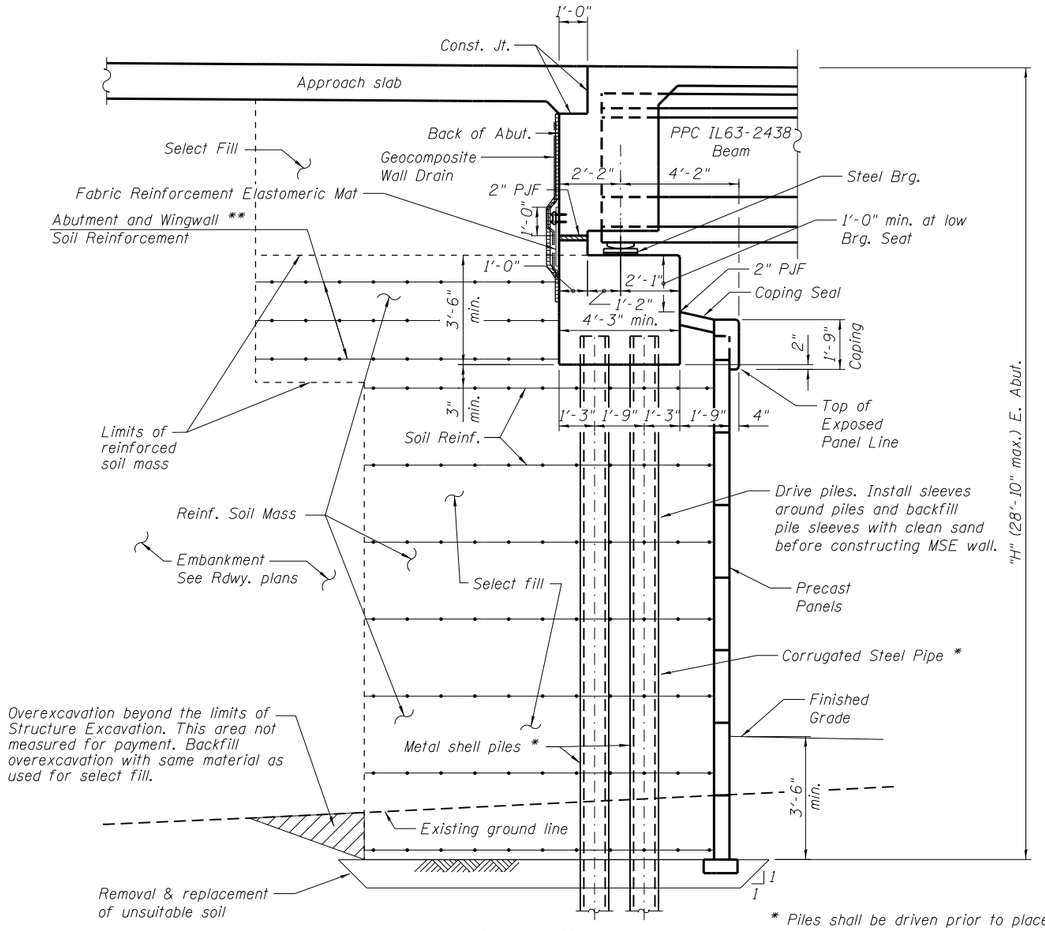
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT MSE WALL ELEVATION
STRUCTURE NO. 045-3048
SHEET NO. 38 OF 49 SHEETS

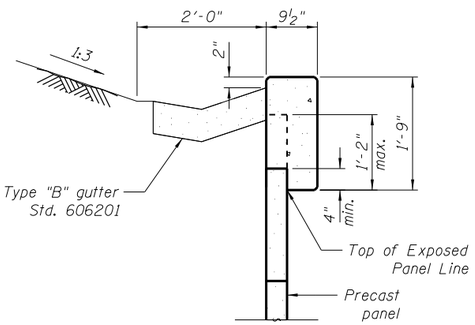
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	406
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



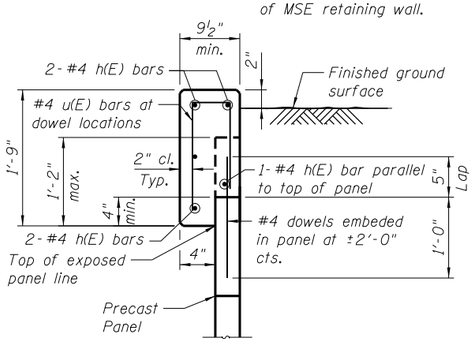
SECTION C-C

* Piles shall be driven prior to placement of reinforced select fill. 21" ϕ corrugated galvanized steel pipe, 10 gage min. shall be provided from the bottom of the abutment footing to the bottom of the excavation level. The cost of corrugated steel pipe and send backfill shall be included in the cost of the furnishing piles.

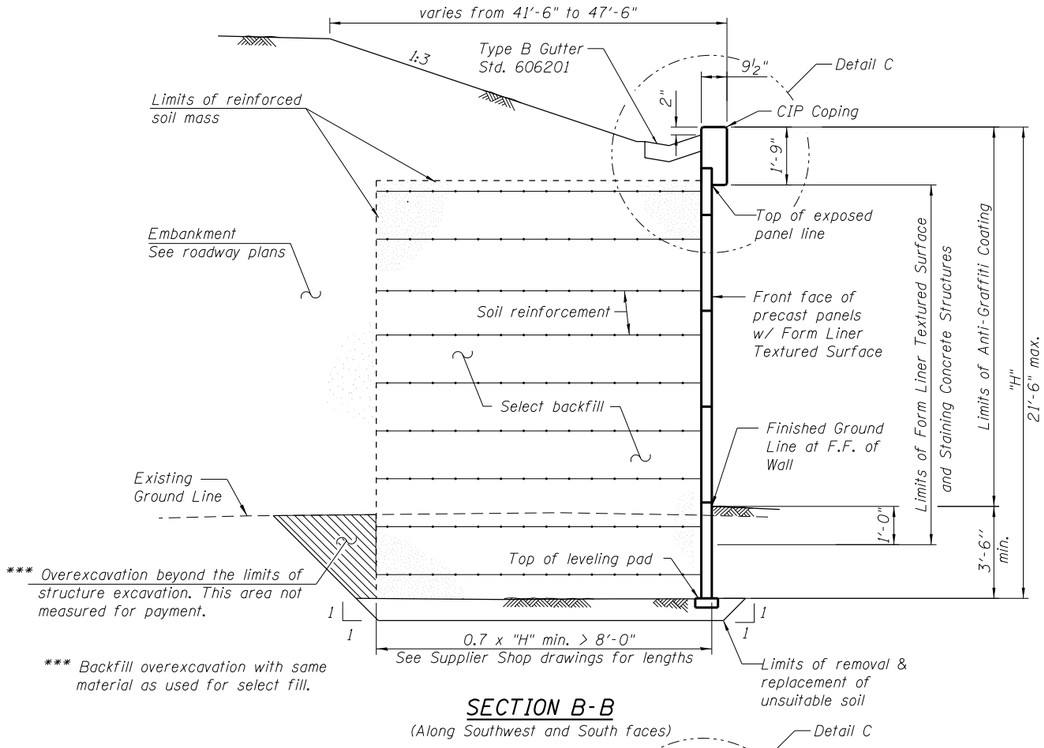
** The MSE wall supplier shall design the abutment and wingwall soil reinforcement to resist a horizontal force of 3.0 kips/ft of abutment. Contractor shall coordinate abutment construction with construction of MSE retaining wall.



DETAIL C



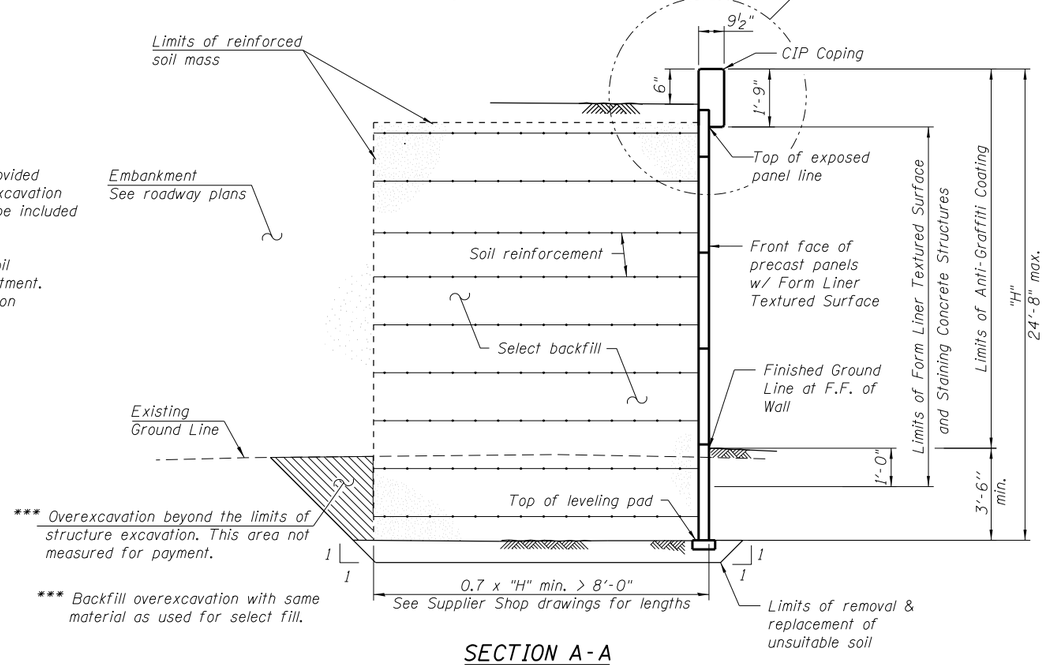
SECTION THRU C.I.P. COPING



*** Backfill overexcavation with same material as used for select fill.

SECTION B-B

(Along Southwest and South faces)



*** Backfill overexcavation with same material as used for select fill.

SECTION A-A

(Along Northwest face)

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

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	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT MSE WALL DETAILS
STRUCTURE NO. 045-3048

SHEET NO. 39 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	407

CONTRACT NO. 61E05

ILLINOIS FED. AID PROJECT

BORING LOG BLA-S07A

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

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 806.25 ft
North: 1993186.95 ft
East: 994358.36 ft
Station: 2165+87.96
Offset: 47.88 LT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
806.3	6-inch thick, dark brown SILTY LOAM --TOPSOIL--							
	Loose to medium dense, brown GRAVELLY SAND				1	3 3 5	NP	4
		5			2	7 8 11	NP	4
					3	7 11 11	NP	3
		10			4	8 7 7	NP	3
					5	6 7 8	NP	3
		15			6	6 6 8	NP	8
					7	5 7 7	NP	8
786.3		20			8	9 9 17	NP	10
	Boring terminated at 20.00 ft	25						

GENERAL NOTES

Begin Drilling: 09-19-2014 Complete Drilling: 09-19-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: P&P Logger: D. Kolpacki Checked by: B. Wilson
Drilling Method: 3.25" HSA, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 13.00 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 BLA-S10

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

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 803.26 ft
North: 1993022.97 ft
East: 994550.41 ft
Station: 2168+06.13
Offset: 78.95 RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
802.3	12-inch thick, black SILTY LOAM --TOPSOIL--							
	Stiff, brown SILTY CLAY LOAM, trace gravel				1	3 3 4	1.75 P	23
800.3	Medium dense, brown, medium to coarse SAND, trace gravel	5			2	5 8 10	NP	8
797.8	Dense, brown SANDY GRAVEL				3	13 15 16	NP	7
793.9	Very stiff (2.5P), brown and gray SILTY CLAY LOAM, trace gravel	10			4	19 8 6	NP	5
792.8	Very stiff, pinkish gray CLAY LOAM, trace gravel				5	6 6 9	3.44 B	12
		15			6	5 7 10	3.36 B	11
					7	5 6 9	2.54 B	12
		20			8	4 6 8	2.54 B	11
					9	5 6 8	2.71 B	12
		25			10	4 6 9	2.95 B	12
		30			11	4 6 8	2.71 B	12
					12	6 7 9	2.05 B	12
		35			13	6 8 12	3.44 B	11
		40			14	4 6 9	2.71 B	11
763.3	Boring terminated at 40.00 ft	45						
		50						

GENERAL NOTES

Begin Drilling: 10-31-2014 Complete Drilling: 10-31-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" 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 BLA-S11

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

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 800.80 ft
North: 1992995.93 ft
East: 994723.99 ft
Station: 2169+81.75
Offset: 74.50 RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
800.3	6-inch thick, black SILTY LOAM --TOPSOIL--							
	Medium stiff to stiff, black and brown CLAY LOAM, trace gravel				1	3 3 3	1.80 B	26
		5			2	2 3 3	0.90 B	16
					3	2 4 5	1.64 B	13
791.3					4	3 7 13	1.64 B	15
790.3	Brown, medium SAND and gravel	10						
	Stiff to hard, pinkish gray CLAY LOAM, trace gravel				5	4 5 7	3.03 B	13
		15			6	4 5 6	2.71 B	12
					7	3 6 8	1.48 B	12
		20			8	4 6 8	2.87 B	13
					9	5 5 9	3.03 B	10
		25			10	5 7 9	3.69 B	11
		30			11	5 7 8	2.46 B	12
					12	12 18 18	4.25 P	10
		35			13	7 9 11	3.03 B	11
		40			14	4 6 10	3.36 B	11
760.8	Boring terminated at 40.00 ft	45						
		50						

GENERAL NOTES

Begin Drilling: 10-31-2014 Complete Drilling: 10-31-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" 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.

WANGENGINC 3100601.GPJ WANGENG.GDT 11/25/14

FILE NAME = W:\894-010 KDOT LMP Section BX\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx SHT-40 SOIL BORING LOGS.ldgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (1 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 40 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	408
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

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

BORING LOG BLA-S12

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 799.75 ft
North: 1992957.16 ft
East: 994926.86 ft
Station: 2171+86.80
Offset: 76.92 RT

Elevation (ft)	Depth (ft)	SOIL AND ROCK DESCRIPTION	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
799.6		6-inch, black SILTY LOAM --TOPSOIL--						
		Stiff, black and brown CLAY LCAM, trace gravel			1	2 3 3	1.89 B	24
795.8	5	Brown, medium SAND			2	2 2 3	1.39 B	20
795.6		Stiff (1.5P), brown CLAY LOAM						
		Loose to medium dense, brown, fine to medium SAND, trace gravel			3	2 3 4	NP	5
	10				4	4 5 7	NP	4
					5	4 7 11	NP	4
	15				6	7 13 18	NP	4
					7	9 5 6	NP	5
	20				8	10 13 19	NP	5
779.3		Medium dense, gray SANDY GRAVEL --Saturated--			9	7 9 9	NP	16
	25				10	8 11 10	NP	17
773.4		Very stiff, pinkish gray CLAY LOAM, trace gravel			11	7 9 12	2.46 B	12
	30				12	7 10 12	3.13 B	12
	35				13	5 8 13	2.87 B	11
759.8	40	Boring terminated at 40.00 ft			14	5 9 15	3.36 B	11
	45							
	50							

GENERAL NOTES

Begin Drilling: 11-03-2014 Complete Drilling: 11-03-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 20.50 ft
At Completion of Drilling: 25.00 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.

WANGENGINC 3100601.GPJ WANGENG.GDT 11/25/14

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

BORING LOG S-065A

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 803.28 ft
North: 1993201.68 ft
East: 994277.84 ft
Station: 2165+05.99
Offset: 48.12 LT

Elevation (ft)	Depth (ft)	SOIL AND ROCK DESCRIPTION	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
802.3		12-inch thick, dark brown SILTY LOAM --TOPSOIL--						
		Loose, brown SILTY LOAM, trace gravel			1	3 3 3	NP	22
800.3		--Moist--						
	5	Medium stiff to stiff, brown and gray SILTY CLAY, trace roots			2	3 4 6	1.89 B	23
					3	3 3 3	0.66 B	21
795.3		Dense, brown SANDY LOAM, trace gravel --Moist--			4	2 12 26	NP	20
	10							
792.8		Medium dense to dense, brown SANDY GRAVEL --Saturated--			5	17 29 15	NP	15
	15				6	8 8 10	NP	7
786.3		Very stiff, pinkish gray CLAY LOAM, trace gravel			7	12 21 11	NP	14
	20				8	8 9 15	3.00 P	12
783.3		Boring terminated at 20.00 ft						
	25							

GENERAL NOTES

Begin Drilling: 10-24-2014 Complete Drilling: 10-24-2014
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR
Driller: R&J Logger: D. Kolpacki Checked by: B. Wilson
Drilling Method: 2.25" HSA, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 11.00 ft
At Completion of Drilling: 11.00 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.

WANGENGINC 3100601.GPJ WANGENG.GDT 11/25/14

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

BORING LOG BLA-S06

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NGVD
Elevation: 804.30 ft
North: 1993086.44 ft
East: 994300.47 ft
Station: 2165+48.86
Offset: 61.21 RT

Elevation (ft)	Depth (ft)	SOIL AND ROCK DESCRIPTION	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
803.3		12-inch thick, black SILTY LOAM --TOPSOIL--						
802.8		Very stiff, brown CLAY LOAM			1	4 3 4	2.00 P	20
		Medium dense to dense, brown GRAVELLY SANDY LOAM						
	5				2	4 6 9	NP	3
		--%Gravel=66.7-- --%Sand=26.2-- --%Silt=6.7-- --%Clay=0.4-- --A-1-a (0)--			3	14 14 17	NP	3
	10				4	7 10 11	NP	3
					5	4 5 5	NP	7
	15				6	4 3 10	NP	9
788.8		Very stiff to hard, pinkish gray CLAY LOAM, trace gravel			7	4 7 11	3.36 B	14
	20				8	4 7 11	3.20 B	16
					9	4 6 10	2.79 B	12
	25				10	4 6 11	3.69 B	12
		--L_L(%)=22, P_I(%)=11-- --%Gravel=9.3-- --%Sand=31.1-- --%Silt=41.1-- --%Clay=18.6-- --A-6 (3)--			11	4 7 9	3.28 B	12
	30				12	5 6 10	3.20 B	13
	35				13	7 8 11	3.36 B	12
764.3	40	Boring terminated at 40.00 ft			14	9 12 15	4.51 B	11
	45							
	50							

GENERAL NOTES

Begin Drilling: 06-16-2014 Complete Drilling: 06-16-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&P Logger: F. Bozga Checked by: B. Wilson
Drilling Method: 3.25" HSA; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 10.50 ft
At Completion of Drilling: 35.00 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.

WANGENGINC 3100601.GPJ WANGENG.GDT 8/20/14

FILE NAME = W:\094-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT-41 SOIL BORING LOGS 2.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (2 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 41 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	409
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

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

BORING LOG BLA-S07

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NGVD
Elevation: 805.31 ft
North: 1993157.78 ft
East: 994322.46 ft
Station: 2165+57.74
Offset: 12.92 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	804.5	10-inch thick, black SILTY CLAY LOAM --TOPSOIL--							
		Very stiff, brown CLAY LOAM				1	2 4 4	2.71 B	15
	802.3	Medium dense, brown GRAVELLY SANDY LOAM							
			5			2	4 8 12	NP	3
						3	13 12 11	NP	2
			10			4	4 6 7	NP	4
						5	9 10 10	NP	7
			15			6	5 7 7	NP	7
	789.3	Very stiff to hard, pinkish gray to gray CLAY LOAM, trace gravel				7	7 6 8	2.95 B	13
		--L_L(%)=23, P_I(%)=13-- --%Gravel=10.3-- --%Sand=29.8-- --%Silt=41.0-- --%Clay=18.9-- --A-4 (3)--	20			8	4 6 11	3.53 B	12
						9	7 9 12	3.77 B	13
			25			10	4 9 13	3.69 B	15
						11	9 11 13	3.69 B	14
			30			12	5 9 12	2.79 B	14
						13	7 9 12	2.50 P	12
			40			14	6 9 12	3.20 B	12
						15	10 15 15	5.17 B	10
			50			16	8 12 14	3.69 B	12

GENERAL NOTES

Begin Drilling: 06-17-2014 Complete Drilling: 06-17-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&P Logger: F. Bozga Checked by: B. Wilson
Drilling Method: 3.25" HSA to 25', mud rotary thereafter; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 10.50 ft
At Completion of Drilling: ▼ 15 ft drilling mud
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 3109001.GPJ WANGENG.GDT 8/20/14

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

BORING LOG BLA-S07

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NGVD
Elevation: 805.31 ft
North: 1993157.78 ft
East: 994322.46 ft
Station: 2165+57.74
Offset: 12.92 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
		--L_L(%)=22, P_I(%)=11-- --%Gravel=8.2-- --%Sand=24.2--55 --%Silt=44.3-- --%Clay=23.4-- --A-6 (4)--	50			17	9 13 17	3.94 B	13
						18	10 15 23	3.00 P	12
	740.8	Gray, coarse SAND	65			19	9 18 18	2.62 B	13
	738.8	Very stiff, gray CLAY LOAM, trace gravel							
			70			20	13 11 13	3.03 B	11
	733.3	Dense, gray, medium to coarse SAND							
	730.3	Boring terminated at 75.00 ft	75			21	22 25 19	NP	13

GENERAL NOTES

Begin Drilling: 06-17-2014 Complete Drilling: 06-17-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&P Logger: F. Bozga Checked by: B. Wilson
Drilling Method: 3.25" HSA to 25', mud rotary thereafter; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 10.50 ft
At Completion of Drilling: ▼ 15 ft drilling mud
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 3109001.GPJ WANGENG.GDT 8/20/14

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

BORING LOG BLA-S08

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NGVD
Elevation: 808.50 ft
North: 1993171.51 ft
East: 994454.30 ft
Station: 2166+85.00
Offset: 50.01 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	807.0	18-inch thick, dark brown SILTY LOAM --TOPSOIL--							
		Stiff to very stiff, brown CLAY LOAM				1	2 2 2	1.50 P	23
			5			2	3 3 3	2.00 P	25
	803.0	Medium dense, brown, coarse GRAVELLY SANDY LOAM							
						3	5 10 10	NP	9
			10			4	7 10 12	NP	12
		--%Gravel=61.0-- --%Sand=27.7-- --%Silt=10.6-- --%Clay=0.7-- --A-1-a (0)--				5	8 10 8	NP	4
			15			6	9 10 9	NP	5
	790.5	Stiff to very stiff, pinkish gray to gray CLAY LOAM, trace gravel				7	5 8 5	NP	8
			20			8	1 2 4	2.00 P	16
						9	5 7 9	3.20 B	14
		--L_L(%)=24, P_I(%)=12-- --%Gravel=6.7-- --%Sand=31.3--25				10	6 8 12	1.15 B	15
		--%Silt=41.3-- --%Clay=20.6-- --A-6 (4)--	30			11	4 5 6	2.62 B	13
						12	4 5 6	2.79 B	13
			35			13	5 7 8	2.30 B	13
	768.5	Boring terminated at 40.00 ft	40			14	6 9 11	3.77 B	9
			45						
			50						

GENERAL NOTES

Begin Drilling: 06-19-2014 Complete Drilling: 06-19-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: R&N Logger: D. Kolpacki Checked by: B. Wilson
Drilling Method: 3.25" HSA; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 15.50 ft
At Completion of Drilling: ▼ 20.00 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.

WANGENGINC 3109001.GPJ WANGENG.GDT 8/20/14

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT-42 SOIL BORING LOGS 3.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (3 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 42 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	410
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

Page 1 of 2

Wang Engineering

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

BORING LOG BLA-S09

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NGVD
Elevation: 810.81 ft
North: 1993090.80 ft
East: 994439.99 ft
Station: 2166+85.36
Offset: 31.96 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	810	5-inch thick, dark brown SILTY LOAM						
		--TOPSOIL--						
		Stiff to very stiff, brown CLAY LOAM, trace to little gravel and wood fragments			1	1 5 3	2.25 P	20
			5		2	12 2 2	1.50 P	14
	803.8				3	2 2 7	1.00 P	19
		Medium dense, brown GRAVELLY SANDY LOAM			4	12 11 18	NP	3
			10		5	8 17 10	NP	9
					6	8 9 10	NP	7
	795.3		15					
		Stiff to very stiff, pinkish gray to gray CLAY LOAM, trace gravel			7	4 4 6	1.89 B	13
			20		8	3 4 7	2.95 B	13
					9	3 5 8	3.03 B	13
			25		10	3 4 8	2.79 B	13

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
					11	5 6 8	2.54 B	13
			30		12	5 6 8	1.89 B	14
		--L_L(%)=23, P_L(%)=11-- --%Gravel=4.0-- --%Sand=32.2-35 --%Silt=43.5-- --%Clay=20.3-- --A-6 (4)--			13	6 8 10	1.50 P	14
			40		14	5 9 11	2.71 B	12
			45		15	8 12 12	2.46 B	13
			50		16	7 9 11	2.38 B	13

GENERAL NOTES

Begin Drilling: 06-19-2014 Complete Drilling: 06-19-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: R&N Logger: D. Kolpacki Checked by: B. Wilson
Drilling Method: 3.25" HSA to 25', mud rotary thereafter; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 13.00 ft
At Completion of Drilling: ▼ 58.00 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.

WANGENG.GPJ WANGENG.GDT 8/20/14 2160901

Page 2 of 2

Wang Engineering

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

BORING LOG BLA-S09

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NGVD
Elevation: 810.81 ft
North: 1993090.80 ft
East: 994439.99 ft
Station: 2166+85.36
Offset: 31.96 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
			55		17	5 6 7	2.87 B	12
	753.3	Dense, gray, coarse SAND						
			60		18	8 13 17	NP	11
			65		19	15 10 11	NR	
	744.8	Very stiff, gray CLAY LOAM, trace gravel						
			70		20	7 8 13	2.46 B	14
	735.8	Boring terminated at 75.00 ft	75		21	10 9 11	2.05 B	12

GENERAL NOTES

Begin Drilling: 06-19-2014 Complete Drilling: 06-19-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: R&N Logger: D. Kolpacki Checked by: B. Wilson
Drilling Method: 3.25" HSA to 25', mud rotary thereafter; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 13.00 ft
At Completion of Drilling: ▼ 58.00 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.

WANGENG.GPJ WANGENG.GDT 8/20/14 2160901

FILE NAME = W:\094-010 KDOT LMP Section BVCADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-ShT-43 SOIL BORING LOGS 4.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (4 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 43 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	411
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

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

BORING LOG R-055

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 816.45 ft
North: 1993209.16 ft
East: 993968.19 ft
Station: 2162+00.00
Offset: 0.10 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	815.5	12-inch thick, brown SILTY LOAM --TOPSOIL--			1	3 5 12 12	NP	9
		Medium stiff to stiff, brown CLAY LOAM			2	6 5 5 6	1.25 P	12
			5		3	3 3 4 4	0.75 P	21
	809.0	Loose, brown SANDY LOAM			4	1 2 3 4	NP	15
	808.0	Very soft, brown CLAY LOAM			5	1 2 2 4	0.00 P	25
			10		6	1 1 1 2	0.00 P	24
					7	1 1 1 2	0.00 P	21
	801.5	Very stiff, brown SILTY CLAY LOAM	15		8	1 2 1 2	0.20 P	21
	798.5	Boring terminated at 18.00 ft			9	2 5 8 12	2.75 P	14
			20					
			25					

GENERAL NOTES

Begin Drilling: 06-07-2005 Complete Drilling: 06-07-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K Logger: J. Kosloski Checked by: B. Fugiel
Drilling Method: 3.25-inch HSA

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.

WANGENG 2912351.GPJ WANGENG.GDT 9/30/14

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

BORING LOG R-056

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 802.48 ft
North: 1993155.43 ft
East: 994263.34 ft
Station: 2165+00.00
Offset: 0.03 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	801.5	12-inch thick, brown CLAY LOAM --TOPSOIL--			1	2 5 7 6	3.00 P	12
		Medium dense, black SILTY LOAM			2	7 8 6 7	NP	28
	796.0	Medium stiff to stiff, brown SILTY CLAY LOAM	5		3	3 4 5 5	1.50 P	27
					4	2 3 4 4	0.50 P	24
	794.0	Medium dense, brown SANDY LOAM			5	3 3 8 11	NP	15
			10		6	7 7 4 5	NP	11
	791.5	Medium dense to dense, brown GRAVELLY SAND			7	6 16 16 16	NP	9
	788.5	Boring terminated at 14.00 ft	15					
			20					
			25					

GENERAL NOTES

Begin Drilling: 06-07-2005 Complete Drilling: 06-07-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K Logger: J. Kosloski Checked by: B. Fugiel
Drilling Method: 3.25-inch HSA

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.

WANGENG 2912351.GPJ WANGENG.GDT 9/30/14

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL 31 Bridge\xxx-SHT.44 SOIL BORING LOGS 5.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (5 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 44 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	412
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

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

BORING LOG R-057

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 806.75 ft
North: 1993160.11 ft
East: 994576.81 ft
Station: 2168+06.32
Offset: 67.59 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	806.1	8-inch thick, dark brown SILTY CLAY --TOPSOIL--			1	1 2 3 4	1.25 P	23
		Stiff, brown and black SILTY CLAY			2	2 2 5 4	1.50 P	24
	803.3	Loose, brown SANDY LOAM	5		3	1 2 2 1	NP	18
	801.3	Medium dense, brown GRAVELLY SAND			4	5 9 10 10	NP	5
	796.8	Boring terminated at 10.00 ft	10		5	4 10 9 11	NP	4
			15					
			20					
			25					

GENERAL NOTES

Begin Drilling: 05-03-2005 Complete Drilling: 05-03-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&D Logger: W. Wang Checked by: B. Fugiel
Drilling Method: 3.25-inch HSA

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.

WANGENG 201230.GPJ WANGENG.GDT 9/30/14

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

BORING LOG R-119

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 805.45 ft
North: 1993127.27 ft
East: 994373.20 ft
Station: 420+23.22
Offset: 17.47 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	804.1	16-inch thick ASPHALT --PAVEMENT--						
	803.5	Medium stiff, brown SILTY CLAY LOAM			1	2 2 3	0.75 P	19
	802.7	--FILL-- Loose, brown SANDY LOAM			2	3 1 2 2	0.50 P	21
		Medium stiff, black and brown CLAY LOAM, with interbedded sand lenses	5					
	800.0	Dense, brown GRAVELLY SAND			3	5 14 25 21	NP	5
					4	8 13 16 21	NP	4
			10		5	13 8 11 13	NP	3
	794.5	Boring terminated at 11.00 ft						
			15					
			20					
			25					

GENERAL NOTES

Begin Drilling: 06-29-2005 Complete Drilling: 06-29-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&J Logger: J. Kasnick Checked by: B. Fugiel
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 8.00 ft
At Completion of Drilling: ▼
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENG 201230.GPJ WANGENG.GDT 9/30/14

FILE NAME = w:\894-010 KDOT LMP Section BX\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT-45 SOIL BORING LOGS 6.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (6 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 45 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	413
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

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

BORING LOG S-061

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 820.85 ft
North: 1993281.70 ft
East: 993940.33 ft
Station: 2161+59.61
Offset: 66.49L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	819.9	12-inch thick TOPSOIL						
		Medium stiff, brown SILTY CLAY LOAM			1	5 4 5	0.82 S	17
			5		2	3 4 4	0.82 S	20
					3	2 2 3	0.57 B	21
	812.8	Loose, brown SANDY LOAM			4	1 2 4	NP	19
	810.3	Stiff to hard, brown CLAY LOAM	10		5	5 8 10		12
			15		6	2 6 7	1.64 B	13
					7	6 8 14	2.46 B	11
			20		8	8 10 11	2.87 B	10
					9	3 10 10	2.05 B	12
			25		10	3 7 11	2.46 B	12
			30		11	4 7 17	2.05 B	13
					12	5 6 11	2.05 B	11
			35		13	2 7 10	1.48 B	12
			40		14	7 16 15	3.28 B	11
			45		15	6 10 11	3.28 B	12
			50		16	5 10 112	2.05 B	12

GENERAL NOTES

Begin Drilling: 06-09-2005 Complete Drilling: 06-09-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K&J Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

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.

WANGENG.GDT 9/30/14 WANGENG 2012301.GPJ

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

BORING LOG S-061

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 820.85 ft
North: 1993281.70 ft
East: 993940.33 ft
Station: 2161+59.61
Offset: 66.49L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			55		17	6 10 13	2.05 B	11
	760.9	Boring terminated at 60.00 ft	60		18	8 13 18	4.51 B	11
			65					
			70					
			75					

GENERAL NOTES

Begin Drilling: 06-09-2005 Complete Drilling: 06-09-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K&J Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

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

BORING LOG S-062

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 815.14 ft
North: 1993276.52 ft
East: 994003.21 ft
Station: 2162+22.40
Offset: 72.63L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Medium dense, brown SILTY LOAM			1	6 5 7	NP	19
	812.1							
		Medium stiff, brown SILTY CLAY LOAM	5		2	4 3 4	0.90 B	23
	809.6							
		Loose to medium dense, brown SANDY LOAM			3	4 3 5	NP	14
			10		4	5 5 6	NP	21
	804.6							
		Medium dense, brown GRAVELLY SAND			5	9 9 9	NP	3
			15		6	17 12 18	NP	4
	799.6							
		Stiff to very stiff, gray to red CLAY LOAM			7	3 4 3	1.23 B	12
			20		8	3 4 10	2.62 B	13
					9	5 8 9	2.46 B	12
			25		10	4 6 11	2.05 B	13

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
					11	5 11 13	1.80 B	11
			30		12	6 11 11	2.05 B	11
	783.6	Medium dense, brown LOAM						
			35		13	4 7 11	NP	6
			40		14	9 10 13	NP	10
	773.1	Stiff to very stiff, gray CLAY LOAM						
			45		15	7 14 17	1.15 B	14
			50		16	7 14 15	2.79 B	12

GENERAL NOTES

Begin Drilling: 06-08-2005 Complete Drilling: 06-09-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 35.00 ft
At Completion of Drilling: ▼ DRY
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENGINC 291201.GPJ WANGENG.GDT 9/29/14

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

BORING LOG S-062

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 815.14 ft
North: 1993276.52 ft
East: 994003.21 ft
Station: 2162+22.40
Offset: 72.63L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	760.1	Boring terminated at 55.00 ft	55		17	6 14 18	3.28 B	11
			60					
			65					
			70					
			75					

GENERAL NOTES

Begin Drilling: 06-08-2005 Complete Drilling: 06-09-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 35.00 ft
At Completion of Drilling: ▼ DRY
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENGINC 291201.GPJ WANGENG.GDT 9/29/14

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT.47 SOIL BORING LOGS B.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (8 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 47 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	415
		CONTRACT NO. 61E05		
	ILLINOIS	FED. AID PROJECT		

Page 1 of 1

Wang Engineering

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

BORING LOG S-063

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 808.16 ft
North: 1993265.30 ft
East: 994076.76 ft
Station: 2162+96.77
Offset: 74.75L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Very soft to stiff, brown SILTY CLAY LOAM			1	6 6 6	1.00 P	16
			5		2	3 5 5	1.23 B	24
					3	2 3 3	0.82 B	25
	797.7		10		4	1 1 1	0.33 B	31
		Very loose to loose, brown SILT			5	1 1 1	NP	30
			15		6	1 2 4	NP	25
	792.7	Dense to very dense, brown GRAVELLY SAND with cobbles			7	12 20 22	NP	11
			20		8	6 18 50/2"	NP	12
	787.7	Stiff to hard, brown to gray CLAY LOAM			9	3 7 9	1.64 B	13
			25		10	2 7 9	2.62 B	13
			30		11	4 8 11	2.46 B	12
					12	6 9 12	3.69 B	12
			35		13	3 7 11	2.46 B	12
			40		14	3 8 11	2.87 B	11
			45		15	8 12 18	3.69 B	10
	758.2	Boring terminated at 50.00 ft	50		16	12 14 20	6.56 B	10

GENERAL NOTES

Begin Drilling: 06-08-2005 Complete Drilling: 06-08-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 16.00 ft
At Completion of Drilling: ▼ 15.50 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.

WANGENG 201230.GPJ WANGENG.GDT 9/30/14

Page 1 of 2

Wang Engineering

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

BORING LOG S-064

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 803.78 ft
North: 1993251.91 ft
East: 994150.49 ft
Station: 2163+71.71
Offset: 74.77L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Loose, dark brown SILT			1	6 4 5	NP	10
	800.8							
		Soft to stiff, brown SILTY CLAY LOAM	5		2	5 4 4	1.23 B	28
					3	3 3 3	0.74 B	26
			10		4	2 2 5	0.33 B	31
					5	18 30 30	1.00 P	26
	790.8	Medium dense, brown GRAVELLY SAND			6	12 11 9	NP	15
			15		7	12 6 5	1.80 B	14
	786.8	Stiff to hard, brown CLAY LOAM			8	4 5 8	2.46 B	14
			20		9	4 12 11	1.07 B	13
			25		10	4 7 8	4.10 B	13
	772.3	Dense, brown GRAVELLY SAND	30		11	6 7 13	1.64 B	12
					12	5 12 12	4.10 B	11
			35		13	10 22 17	NP	8
	767.3	Very stiff, brown SILTY CLAY LOAM			14	6 8 13	2.46 B	12
			40					
			45		15	11 13 16	3.44 B	11
			50		16	11 14 19	3.44 B	12

GENERAL NOTES

Begin Drilling: 06-07-2005 Complete Drilling: 06-08-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 14.00 ft
At Completion of Drilling: ▼ 11.00 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.

WANGENG 201230.GPJ WANGENG.GDT 9/30/14

FILE NAME = W:\894-010 KDOT LMP Section BX\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT-48 SOIL BORING LOGS.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED
	CHECKED - NS	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (9 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 48 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	416
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

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

BORING LOG S-064

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 803.78 ft
North: 1993251.91 ft
East: 994150.49 ft
Station: 2163+71.71
Offset: 74.77L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	748.8		55		17	8 13 16	2.46 B	11
		Boring terminated at 55.00 ft						

60, 65, 70, 75

GENERAL NOTES

Begin Drilling: 06-07-2005 Complete Drilling: 06-08-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 14.00 ft
At Completion of Drilling: ▼ 11.00 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.

WANGENG.INC_2013-01.GPJ WANGENG.GDT 8/30/14

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

BORING LOG S-065

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 802.85 ft
North: 1993238.52 ft
East: 994224.33 ft
Station: 2164+46.75
Offset: 74.80L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Loose, black SILTY LOAM			1	4 3 4	NP	21
	799.8		5		2	3 4 6	1.64 B	24
		Medium stiff to stiff, brown SILTY CLAY LOAM			3	3 3 4	0.50 P	24
	792.3		10		4	1 2 3	0.50 P	34
		Medium dense, brown GRAVELLY SAND			5	6 10 18	NP	12
	787.3		15		6	13 11 13	NP	12
		Very stiff to hard, gray CLAY LOAM			7	6 9 13	3.28 B	12
			20		8	6 11 14	5.74 B	10
					9	6 10 15	4.10 B	11
			25		10	4 10 13	2.46 B	11
	771.3		30		11	5 8 10	3.28 B	11
		Medium dense to dense, gray LOAM			12	3 6 10	2.05 B	11
			35		13	8 10 16	NP	10
			40		14	7 13 17	NP	10
	760.8	Very stiff, gray CLAY LOAM			15	8 11 15	3.28 B	12
			45					
	752.8		50		16	7 12 17	3.94 B	11
		Boring terminated at 50.00 ft						

GENERAL NOTES

Begin Drilling: 06-07-2005 Complete Drilling: 06-07-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K&J Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 14.00 ft
At Completion of Drilling: ▼ DRY
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENG.INC_2013-01.GPJ WANGENG.GDT 8/30/14

FILE NAME = W:\094-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\LMP over IL31 Bridge\xxx-SHT.49 SOIL BORING LOGS 10.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - JJI	REVISED	
	CHECKED - NS	REVISED	
PLOT SCALE =	DRAWN - GM	REVISED	
PLOT DATE = 9/28/2017	CHECKED - NS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (10 OF 10)
STRUCTURE NO. 045-3048
SHEET NO. 49 OF 49 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	417
		CONTRACT NO. 61E05		
	ILLINOIS	FED. AID PROJECT		

Bench Mark: Found Chisled square Kane County BM 10-21 on concrete slab south west corner IL-31 and Lanthorp Lane, Sta. 2164+92.30, 506.7' Lt, Elev. 806.444

Existing Structure: None

WATERWAY INFORMATION

Drainage Area = 0.3039 sq.mi.
Existing Overtopping Elevation = N.A
Proposed Overtopping Elevation = 831.06 @ STA 2164+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	2	32	N/A	54.00	803.06	N/A	0.00	N/A	800.69
	10	93	N/A	54.00	803.29	N/A	0.00	N/A	801.47
Design	50	197	N/A	54.00	803.56	N/A	0.00	N/A	802.48
Base	100	266	N/A	54.00	803.70	N/A	0.00	N/A	803.14
	200	309	N/A	54.00	803.78	N/A	0.00	N/A	803.68
OVT (E)	---	---	---	---	---	---	---	---	---
OVT (P)	N/A	---	---	---	---	---	---	---	---
Max. Calc.		376	N/A	54.00	803.88	N/A	0.68	N/A	804.56

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims

DESIGN STRESSES

FIELD UNITS

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

PRECAST UNITS

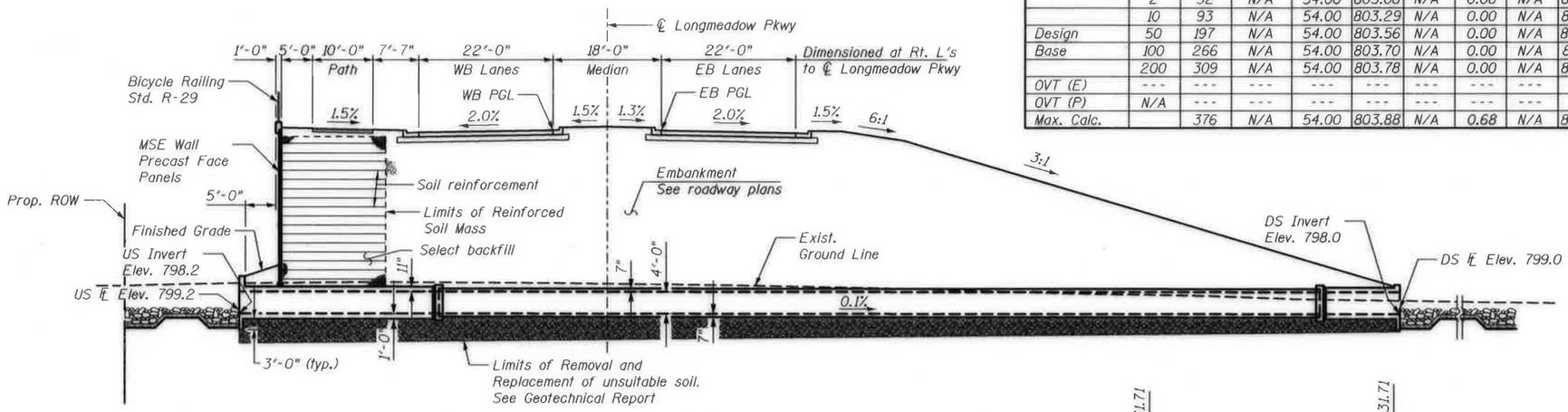
f'c = 5,000 psi
fy = 65,000 psi (Welded Wire Fabric)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

TOTAL BILL OF MATERIAL

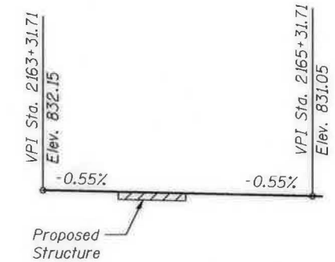
ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu Yd	201
Aggregate Subgrade Improvement	Cu Yd	729
Removal and Disposal of Unsuitable Material for structures	Cu Yd	729
Reinforcement Bars, Epoxy Coated	Pound	27,200
Name Plates	Each	1
Concrete Box Culverts	Cu Yd	146.1
Precast Concrete Box Culverts 6'x4'	Foot	480



LONGITUDINAL SECTION

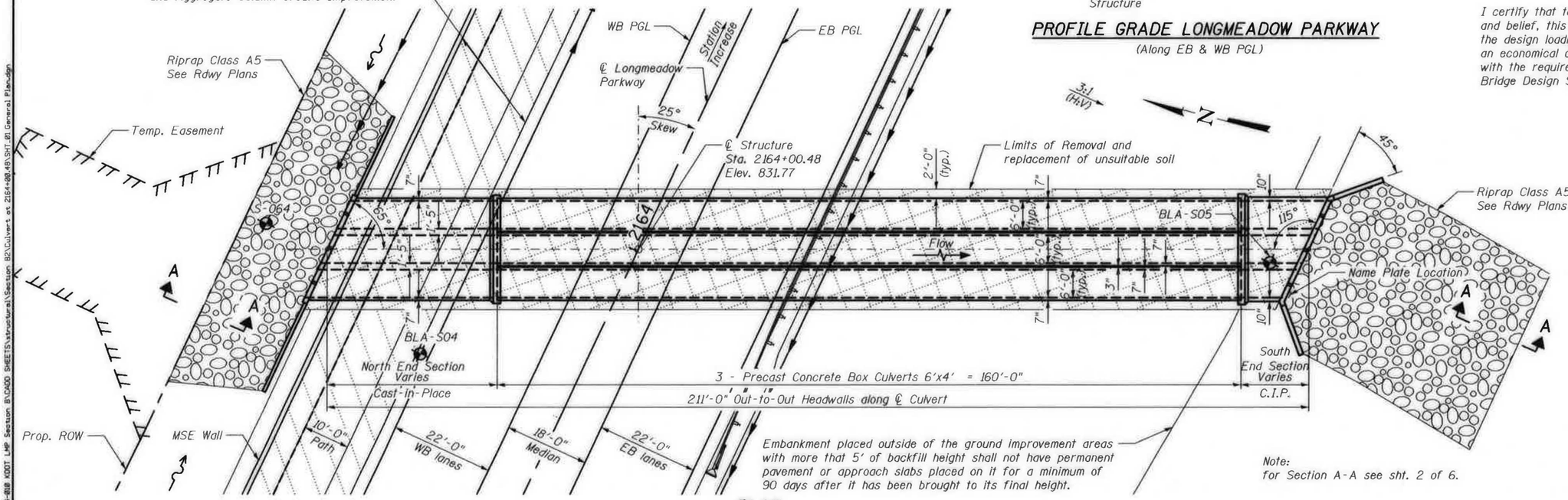
(Looking East)

General Notes:
For Precast Box Culvert fabrication and construction details see sht. 417 of 579.
Precast End sections are not allowed.



PROFILE GRADE LONGMEADOW PARKWAY

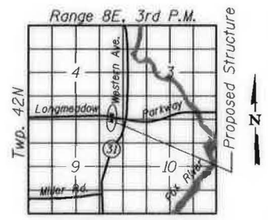
(Along EB & WB PGL)



Embankment placed outside of the ground improvement areas with more that 5' of backfill height shall not have permanent pavement or approach slabs placed on it for a minimum of 90 days after it has been brought to its final height.

Note:
for Section A-A see sht. 2 of 6.

PLAN



LOCATION SKETCH

STATE OF ILLINOIS JOEL LACH 5051 ITASCA STRUCTURAL ENGINEER

DATE SIGNED: 8-01-2017
EXP. DATE: 11-30-2018

I certify that to the best of my knowledge, information and belief, this wall design is structurally adequate for the design loading shown on the plans. The design is an economical one of the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.

GENERAL PLAN & ELEVATION
LONGMEADOW PARKWAY
OVER DRAINAGE DITCH
KANE COUNTY
SECTION 16-00215-11-PV
STA. 2164+00.48
S.N. 045-5574

Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - HB	REVISED
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

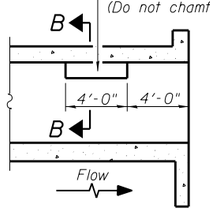
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 6 SHEETS

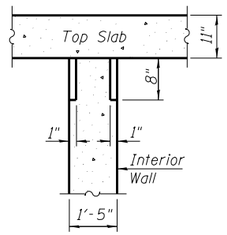
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	418
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

FILE NAME = W:\SP4-BUR KDOT LHP Section B\CADD SHEETS\structures\Section B2\Culvert at 2164+00.48\SHT-B1 General Plan.dgn

Notch formed by rough finished board attached to and removed with form work, each interior wall. (Do not chamfer).



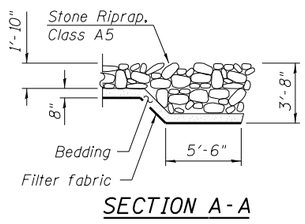
LONGITUDINAL SECTION



SECTION B-B

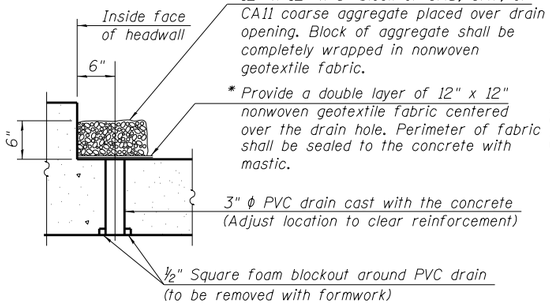
PHOEBE NESTING SITE DETAILS

(Downstream End Only)



SECTION A-A

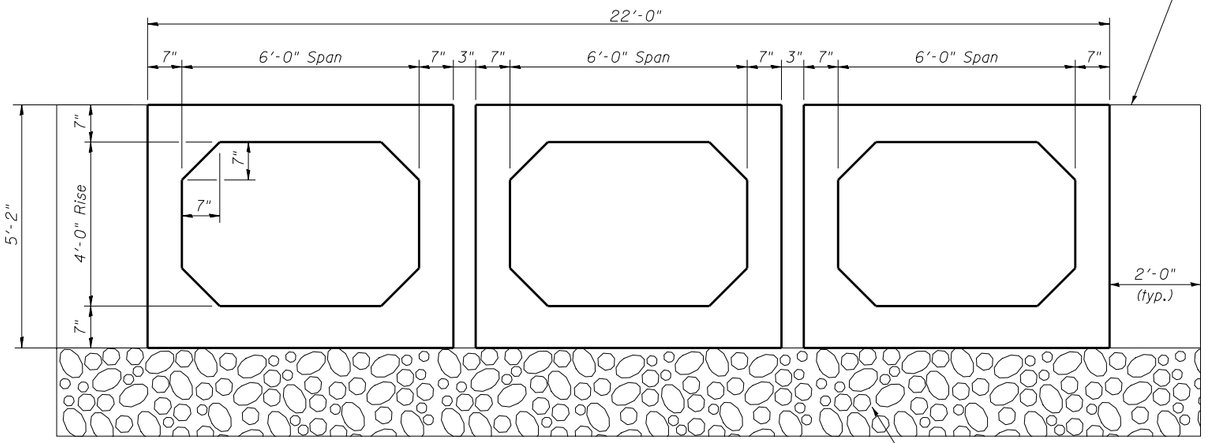
* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

Note:
The cost of excavation for wingwalls is included in Concrete Box Culverts.



SECTION THRU PRECAST BARREL

SECTION THRU HEADWALL

(North End Only)

(Dimensions are @ Rt L's to the ℄ of Longmeadow Pkwy)

** The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the Engineer for variable subsurface conditions encountered in the field.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	177	#7	23'-4"	
a1(E)	105	#6	21'-8"	
a2(E)	12	#4	23'-0"	
d(E)	44	#4	4'-6"	
h(E)	96	#6	40'-1"	
h1(E)	11	#5	24'-0"	
h2(E)	5	#4	40'-5"	
h3(E)	10	#4	38'-0"	
h4(E)	10	#4	35'-9"	
h5(E)	5	#4	31'-3"	
h6(E)	12	#4	18'-8"	
h7(E)	12	#4	20'-8"	
h8(E)	14	#4	3'-0"	
h9(E)	36	#6	28'-4"	
h10(E)	11	#5	24'-4"	
h11(E)	5	#4	18'-7"	
h12(E)	10	#4	16'-2"	
h13(E)	10	#4	12'-9"	
h14(E)	5	#4	9'-9"	
h15(E)	8	#8	8'-0"	
h16(E)	12	#8	15'-4"	
h17(E)	8	#8	8'-0"	
h18(E)	12	#8	15'-4"	
s(E)	26	#4	7'-1"	
s1(E)	26	#4	4'-5"	
v(E)	12	#4	9'-0"	
v1(E)	534	#4	5'-5"	
v2(E)	97	#4	9'-11"	
v3(E)	18	#4	9'-5"	
v4(E)	8	#4	8'-0"	
w(E)	4	#5	21'-10"	
w1(E)	4	#5	26'-10"	
x(E)	126	#4	4'-10"	
z(E)	100	#4	5'-8"	

Aggregate Subgrade Improvement	Cu. Yd.	729
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	729
Reinforcement Bars, Epoxy Coated	Pound	27,200
Concrete Box Culverts	Cu. Yd.	146.1

STATION 2164+00.48
BUILT 201_ BY
STATE OF ILLINOIS
F.A.P. Rt. 361
SEC. 16-00215-11-PV
LOADING HL-93
STRUCTURE NO. 045-5574

NAME PLATE

See Std. 515001

INDEX OF SHEETS

1. General Plan & Elevation
2. General Details
3. Culvert Details - North End Section
4. Culvert Details - North End Section
5. Culvert Details - South End Section
6. Culvert Details - South End Section

FILE NAME = w:\894-010 <DOT LMP Section B\CADD SHEETS\structural\Section B2\Culvert at 2164+00.48\SHT.02 General Details.dgn

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ITASCA, ILLINOIS

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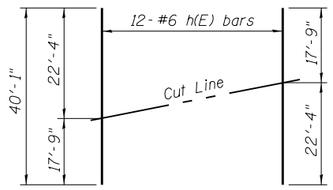
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

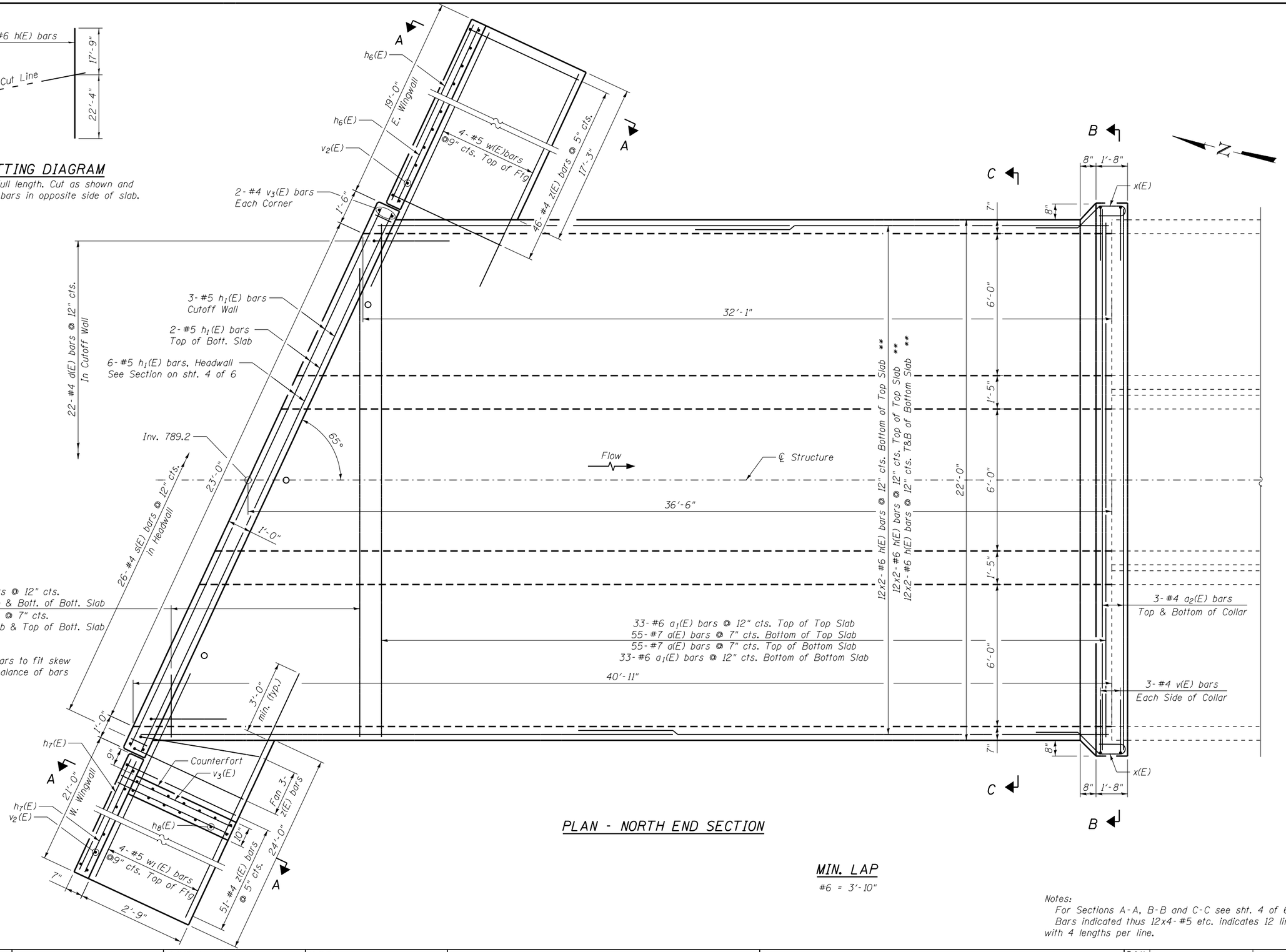
GENERAL DETAILS
STRUCTURE NO. 045-5574
SHEET NO. 2 OF 6 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	419
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		



FIELD CUTTING DIAGRAM

** Order h(E) bars full length. Cut as shown and use remainder of bars in opposite side of slab.



PLAN - NORTH END SECTION

MIN. LAP

#6 = 3'-10"

Notes:
For Sections A-A, B-B and C-C see sht. 4 of 6.
Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Culvert at 216+00.48\SHT_03 Upstream Details.dgn

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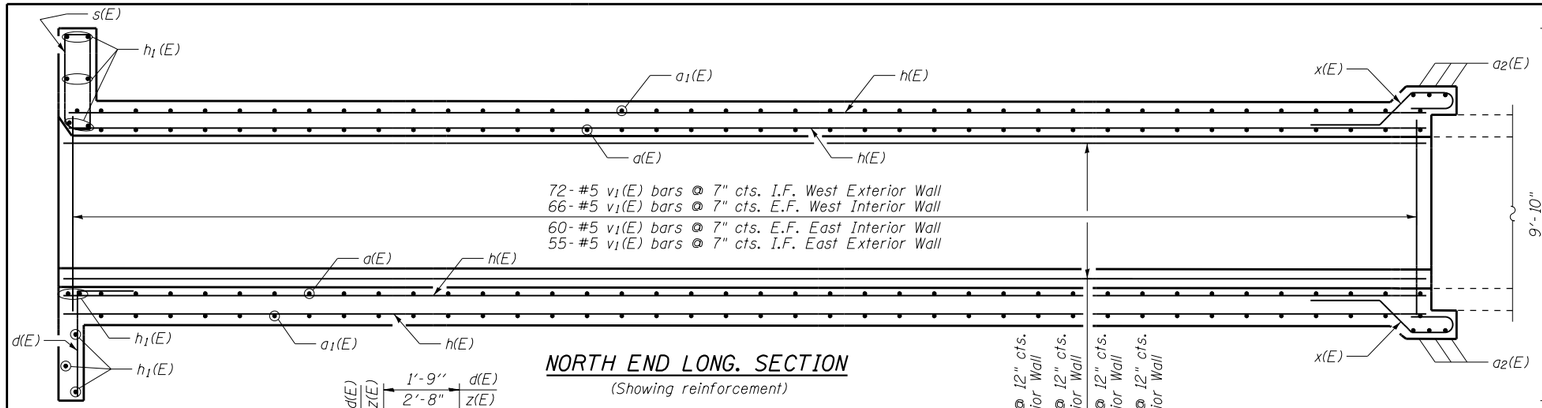
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

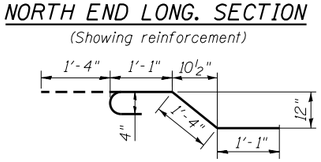
CULVERT DETAILS – NORTH END SECTION
STRUCTURE NO. 045–5574
SHEET NO. 3 OF 6 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	420
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

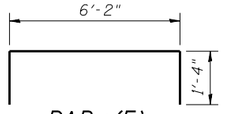


NORTH END LONG. SECTION

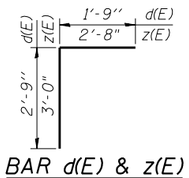
(Showing reinforcement)



5-#4 $h_2(E)$ bars @ 12" cts. I.F. West Exterior Wall
5-#4 $h_3(E)$ bars @ 12" cts. E.F. West Interior Wall
5-#4 $h_4(E)$ bars @ 12" cts. E.F. East Interior Wall
5-#4 $h_5(E)$ bars @ 12" cts. I.F. East Exterior Wall

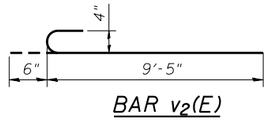


BAR v(E)

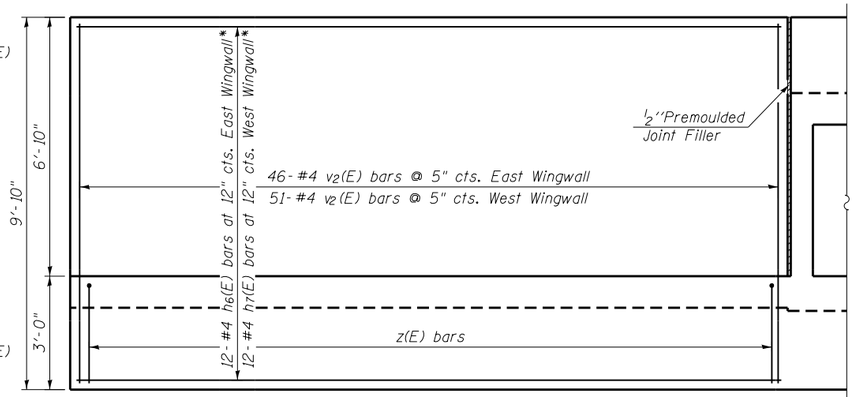


BAR d(E) & z(E)

BAR x(E)



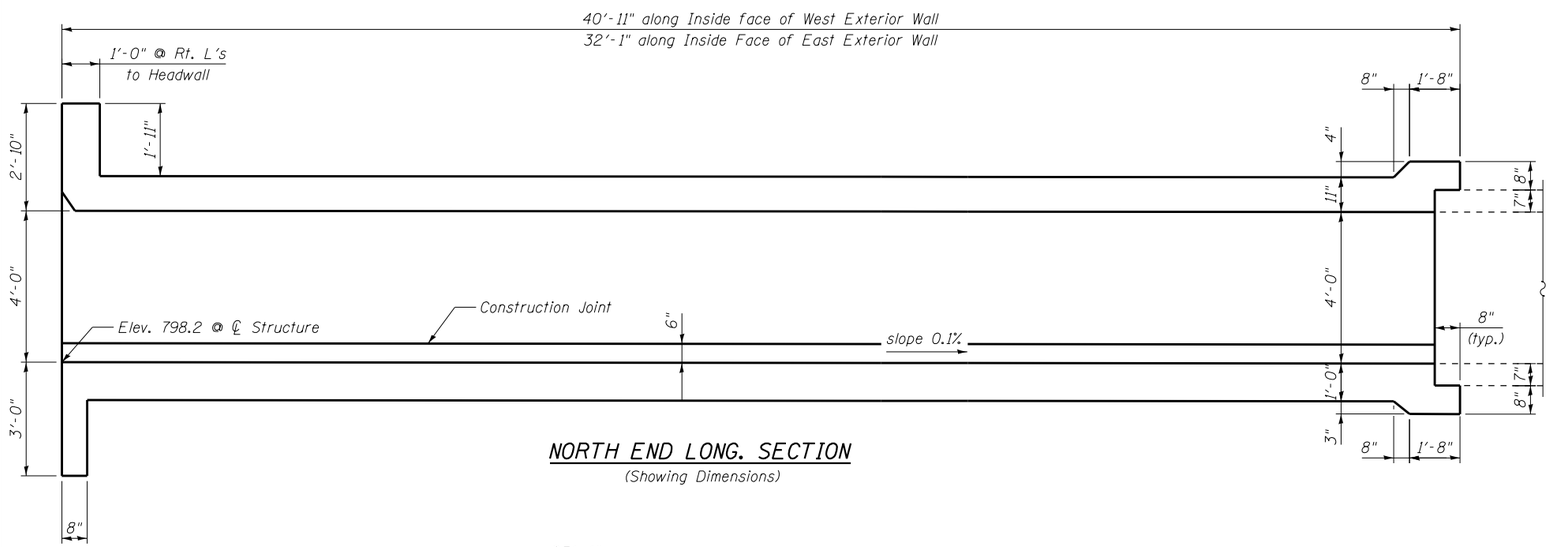
BAR $v_2(E)$



* 11 $h_6(E)$ or $h_7(E)$ bars back face.
1 front face. See Section A-A

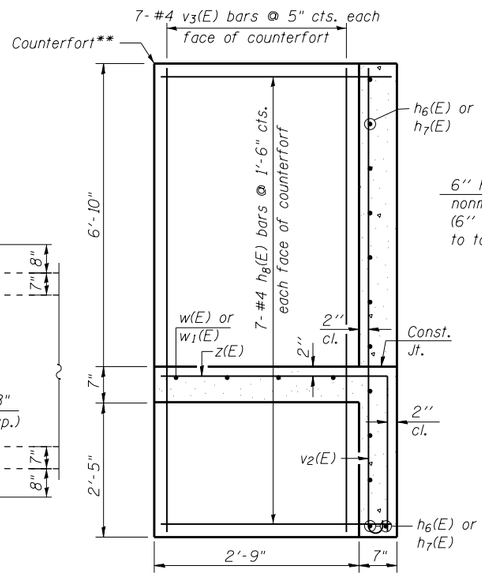
EAST WINGWALL ELEVATION

(West Wingwall similar)



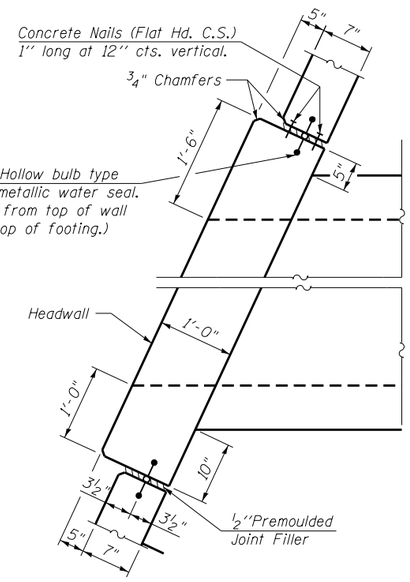
NORTH END LONG. SECTION

(Showing Dimensions)

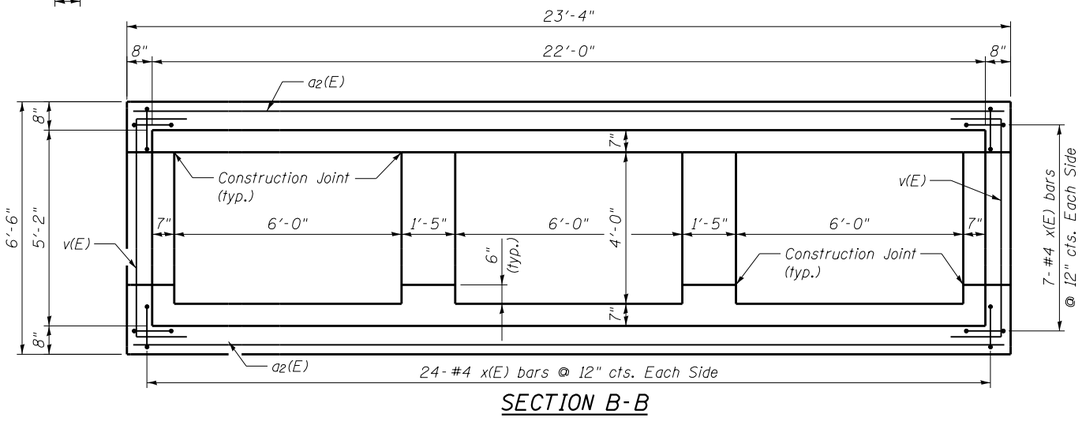


SECTION A-A

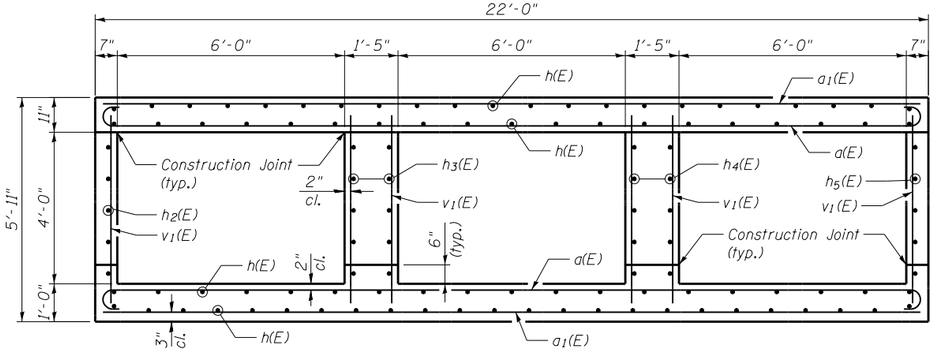
** West wingwall only



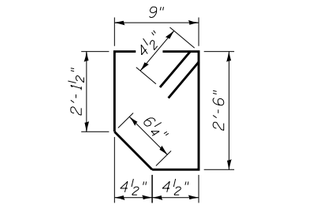
CORNER DETAIL



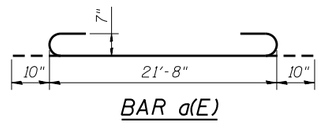
SECTION B-B



SECTION C-C



BAR s(E)



BAR a(E)

FILE NAME = w:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Culvert at 2164+00.48\SHT_04 Upstream Details.dgn

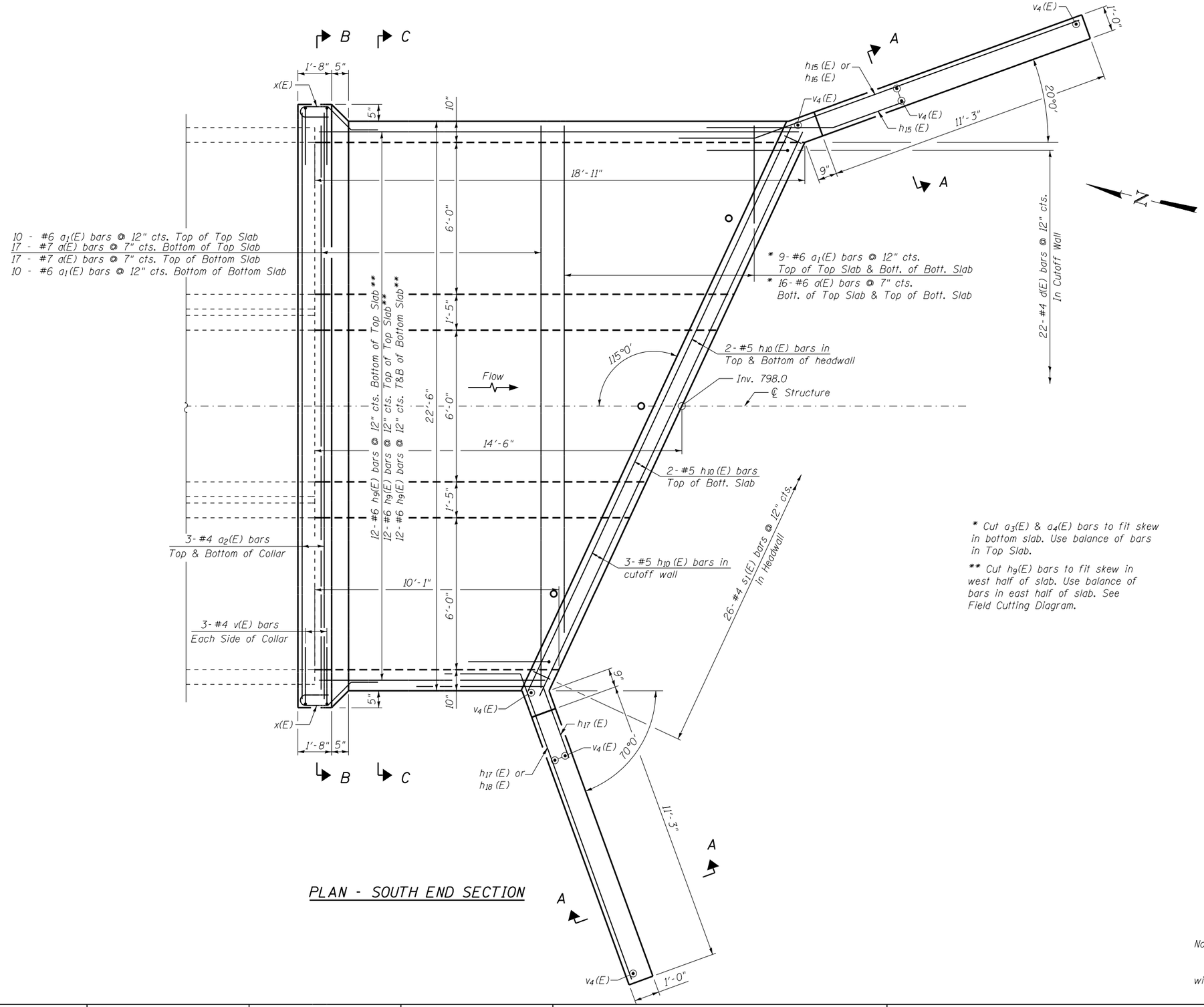
Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

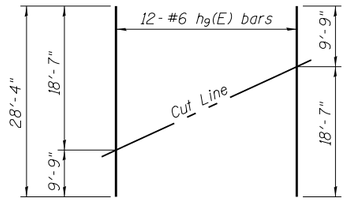
USER NAME =	DESIGNED - HB	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS – NORTH END SECTION
STRUCTURE NO. 045-5574
SHEET NO. 4 OF 6 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	421
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			





FIELD CUTTING DIAGRAM

Order $h_9(E)$ full length. Cut as shown and use remainder of bars in other half of slab.

PLAN - SOUTH END SECTION

* Cut $a_3(E)$ & $a_4(E)$ bars to fit skew in bottom slab. Use balance of bars in Top Slab.

** Cut $h_9(E)$ bars to fit skew in west half of slab. Use balance of bars in east half of slab. See Field Cutting Diagram.

Notes:
For Sections A-A, B-B and C-C see sht. 6 of 6.
Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Culvert at 2164+00.48\SHT_05 Downstream Details.dgn

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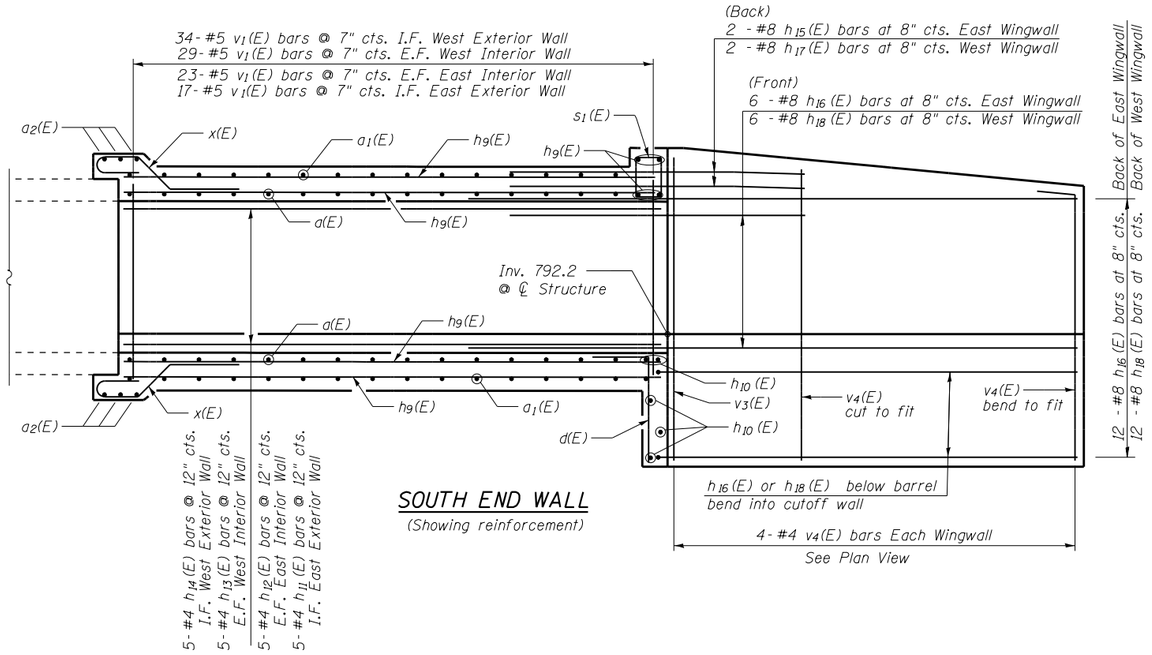
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

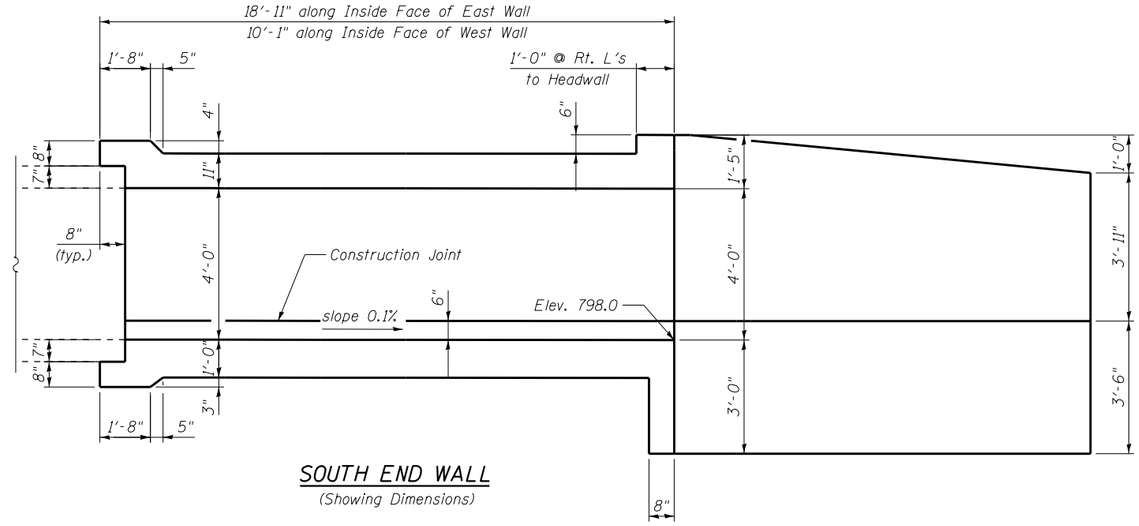
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS – SOUTH END SECTION
STRUCTURE NO. 045-5574
SHEET NO. 5 OF 6 SHEETS

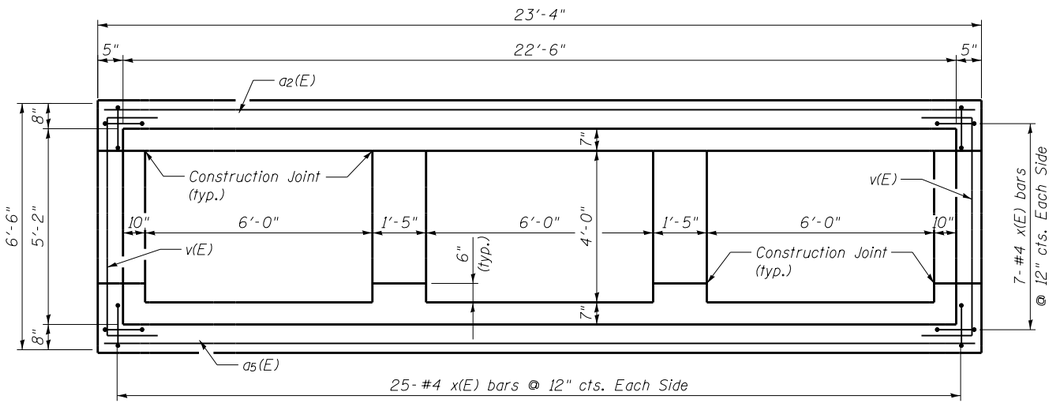
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	422
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		



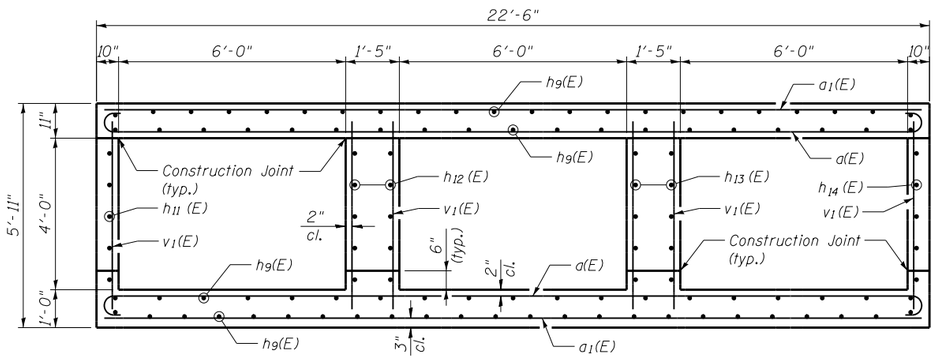
SOUTH END WALL
(Showing reinforcement)



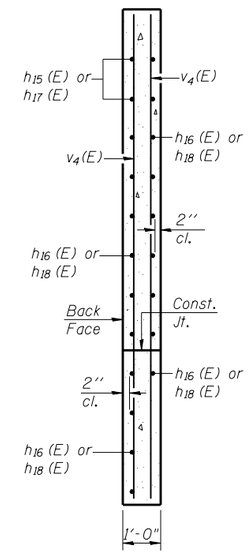
SOUTH END WALL
(Showing Dimensions)



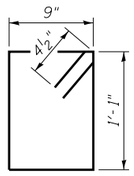
SECTION B-B



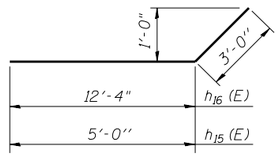
SECTION C-C



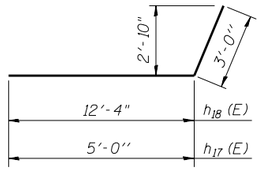
SECTION A-A



BAR s1(E)



BARS h15(E) & h16(E)



BARS h17(E) & h18(E)

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Culvert at 2164+00.40\SHT 06 Downstream Details.dgn

Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - HB	REVISED
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS – SOUTH END SECTION
STRUCTURE NO. 045-5574
SHEET NO. 6 OF 6 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	423
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Found rail Road spike in power pole on East side of IL Rte 31 at Old Forest Drive,
Sta. 2165+93.60, Offset 695.6' Rt Longmeadow
Sta. 413+43.93, Offset 36.4' RT IL-31
Elev. 801.695

Existing Structures: Structure No. 1 - Structure No. 045-0223: Constructed in 1986 as cast-in-place, reinforced concrete single-barrel 8'x6' culvert with CIP wingwalls and retaining walls on spread footings. Total length 104'-7". Traffic will be maintained using a temporary culvert extension and stage construction. The existing culvert will be removed utilizing stage construction after new culvert is complete.
Structure No. 2 - Existing 8' x 6.7' concrete arch culvert under service road.

No salvage.

Precast alternative is not allowed.

Notes:
The existing Structure No. 1 shall be removed according to Special Provision for "Removal of Existing Structures, Special". Paid for as "Removal of Existing Structures, Special".
The existing Structure No. 2 shall be removed, including existing metal railing. Paid for as "Removal of Existing Structures No. 2".
The limits and quantities of removal and replacement shown are based on the boaring data and may be modified by the Engineer for variable subsurface conditions encountered in the field.
The cost of excavation for horizontal cantilever wingwalls is included in Concrete Box Culverts.
For Section A-A see Sht. 2 of 11.
Precast alternative is not allowed.

DESIGN STRESSES

FIELD UNITS

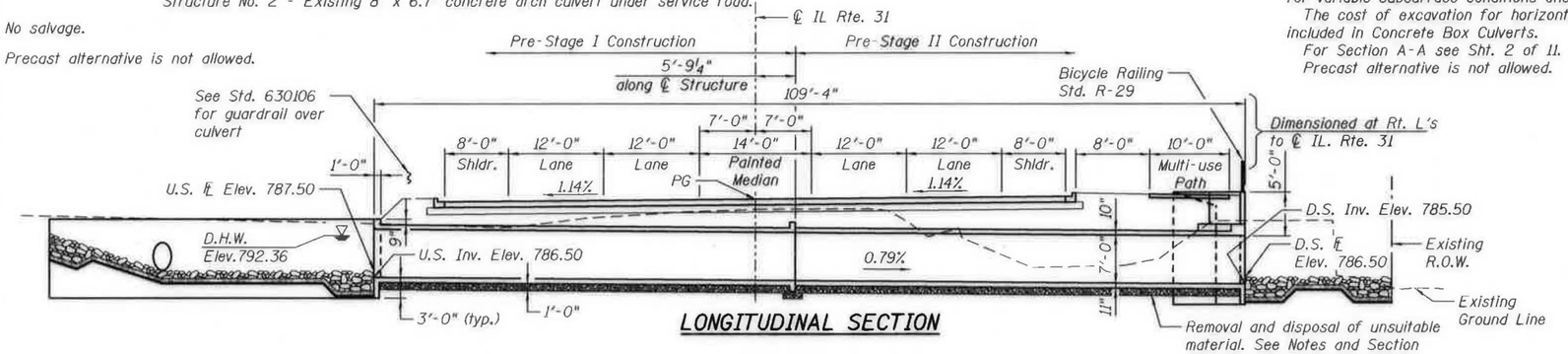
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

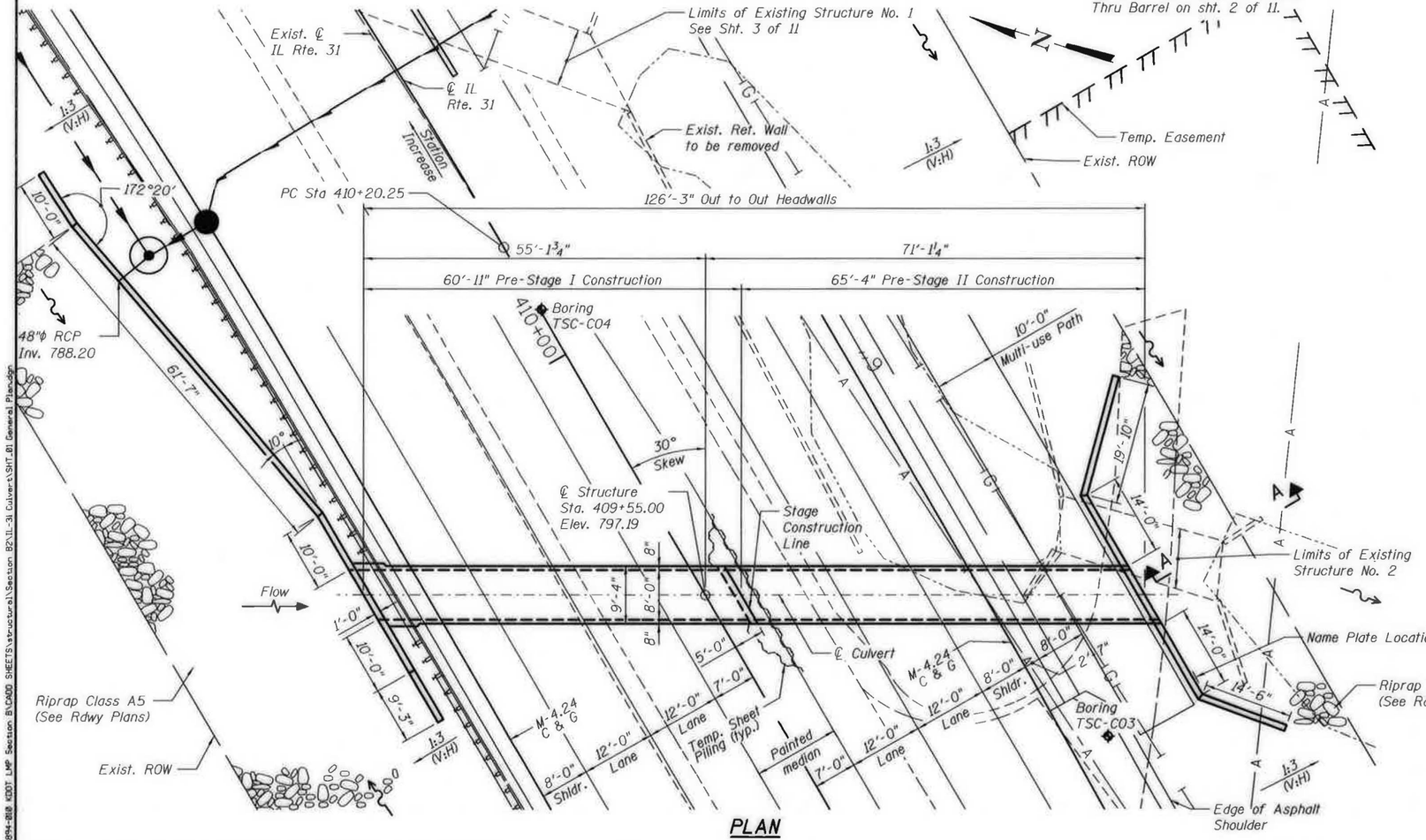
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims



LONGITUDINAL SECTION

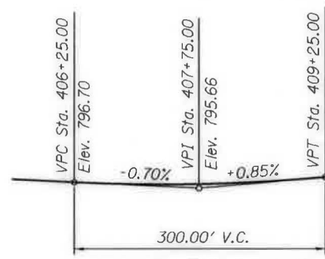


PLAN

WATERWAY INFORMATION

Drainage Area = 0.1791 sq.mi.
Existing Overtopping Elevation = 795.58 @ STA 408+00
Proposed Overtopping Elevation = 796.23 @ STA 407+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	2	38	9.84	13.84	789.23	0.07	0.0	789.30	788.88
	10	110	18.40	22.40	790.30	0.40	0.05	790.70	790.35
Design	50	239	26.96	30.96	791.37	1.22	0.99	792.59	792.36
Base	100	325	31.04	35.04	791.88	1.82	1.64	793.70	793.52
	200	379	33.52	37.52	792.19	2.29	2.01	794.48	794.20
OVT (E)	---	412	---	---	---	---	---	---	---
OVT (P)	N/A	---	---	---	---	---	---	---	---
Max. Calc.		462	36.56	40.56	792.57	3.40	3.33	795.97	795.90



PROFILE GRADE IL31
Along ℄ IL-31

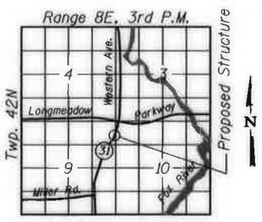
CURVE DATA

(℄ IL-31)
P.I. Sta. = 413+23.90
Δ = 29° 34' 56" (LT)
D = 4° 58' 56"
R = 1,150.00'
T = 303.65'
L = 593.75'
E = 39.41'
P.C. Sta. = 410+20.25
P.T. Sta. = 416+14.00

I certify that to the best of my knowledge, information and belief, this design is structurally adequate for the design loading shown on the plans. The design is an economical one of the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.

STATE OF ILLINOIS
JOEL T. TIMPE
5051
ITASCA
LICENSED STRUCTURAL ENGINEER

DATE SIGNED: 8-04-2017
EXP. DATE: 11-30-2018



LOCATION SKETCH

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 31 OVER DRAINAGE DITCH
KANE COUNTY
SECTION 16-00215-11-PV
STA. 409+55.00
STRUCTURE NO. 045-0112

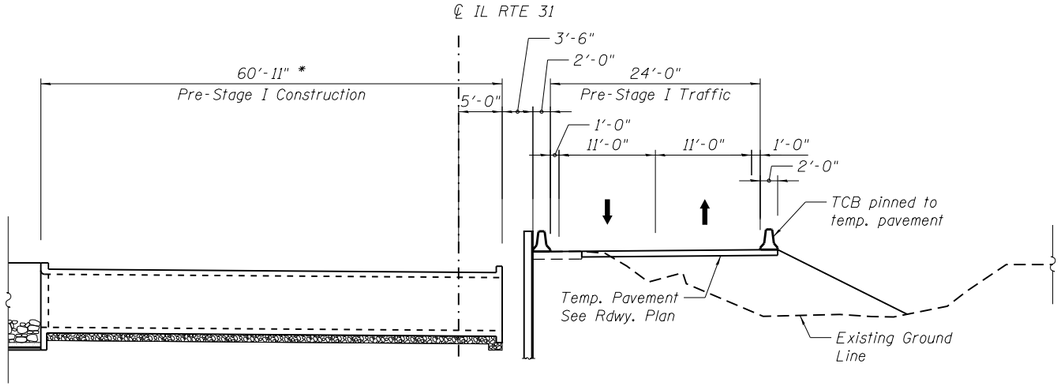
Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - NS	REVISED
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 11 SHEETS

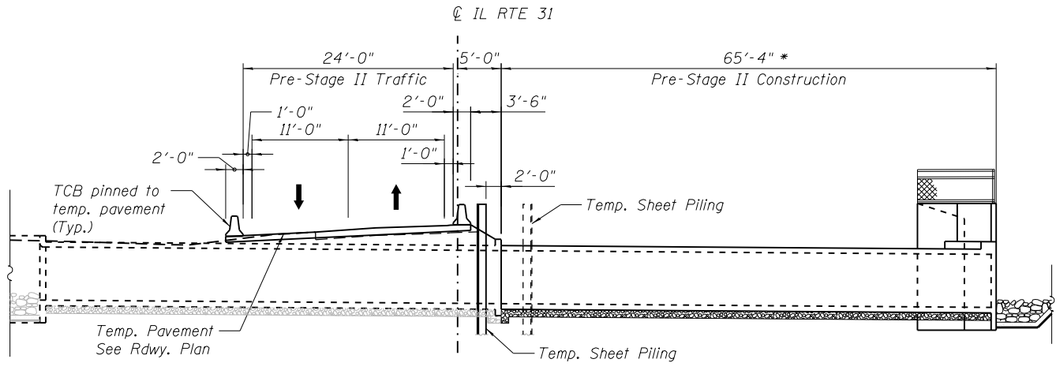
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	424
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

FILE NAME = W:\894-808 KDOT LAP Section 8\CADD SHEETS\structural\Section 82\IL-31 Culvert\SHT-01 General Plan.dgn



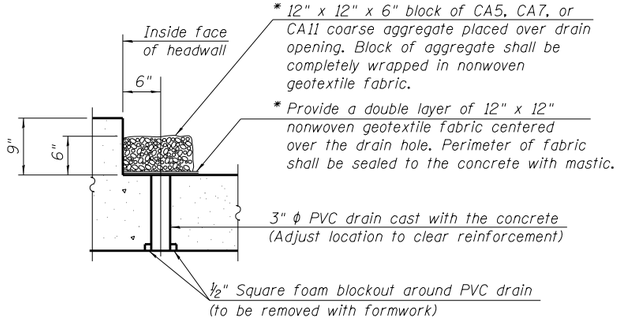
PRE-STAGE I CONSTRUCTION

* Measured along ℄ culvert. All other dimensions at Rt. L's to ℄ IL Rte. 31.



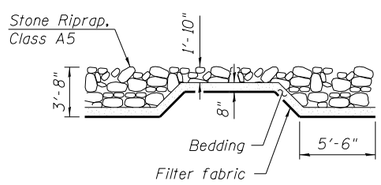
PRE-STAGE II CONSTRUCTION

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

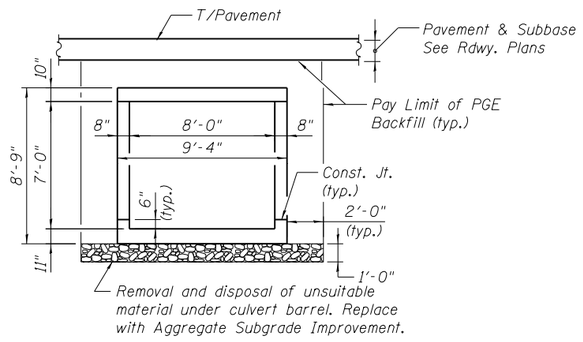


DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



SECTION A-A



SECTION THRU BARREL

INDEX OF SHEETS

1. General Plan
2. General Details
3. Temporary Culvert Extension Details
4. Culvert Details - Stage I
5. North End Wingwall Details
6. Culvert Details - Stage II
7. South End Wingwall Details
8. Bill of Material
9. Bar Splicer Assembly Details
10. Temporary Concrete Barrier for Stage Construction
11. Bicycle Railing

STATION 409+55.00
BUILT 201_ BY
STATE OF ILLINOIS
F.A.P. Rt. 3887
SEC. 16-00215-11-PV
LOADING HL-93
STRUCTURE NO. 045-0112

NAME PLATE

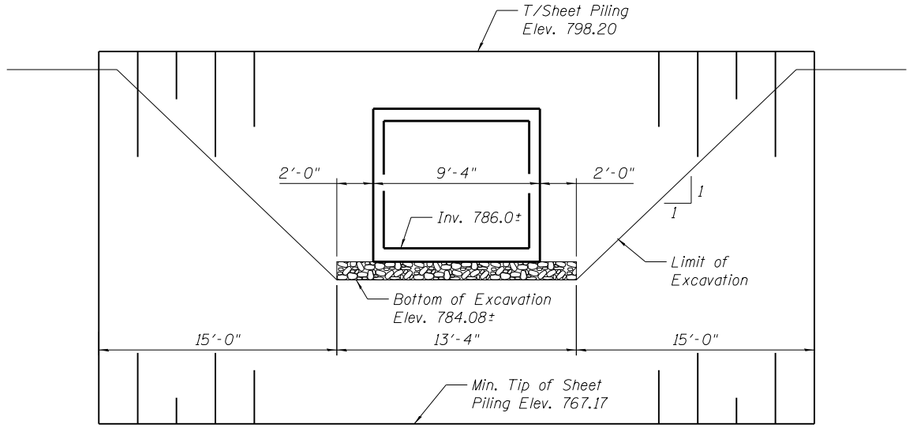
See Std. 515001

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated. Wingwalls shall be backfilled below the finished grade with Porous Granular Embankment extending to a vertical plane 2 feet from the back face of the wall, unless noted otherwise.

TOTAL BILL OF MATERIAL

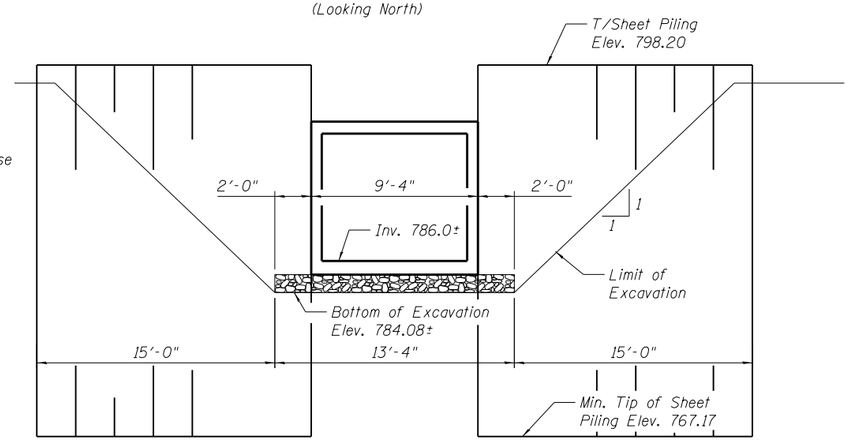
ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	341
Aggregate Subgrade Improvement	Cu. Yd.	89
Removal of Existing Structures No. 2	Each	1
Structure Excavation	Cu. Yd.	646
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	63
Reinforcement Bars, Epoxy Coated	Pound	35,750
Bar Splicers	Each	54
Bicycle Railing	Foot	37
Name Plates	Each	1
Temporary Sheet Piling	Sq. Ft.	2,400
Temporary Soil Retention System	Sq. Ft.	168
Concrete Box Culverts	Cu. Yd.	220.1
Geocomposite Wall Drain	Sq. Yd.	99
Membrane Waterproofing for Buried Structures	Sq. Yd.	180
Removal of Existing Structure, Special	Each	1
Corrugated Structural Plate Pipe Arches 17 Sq. Ft.	Foot	113



PRE-STAGE I - TEMPORARY SHEET PILING

(Looking North)

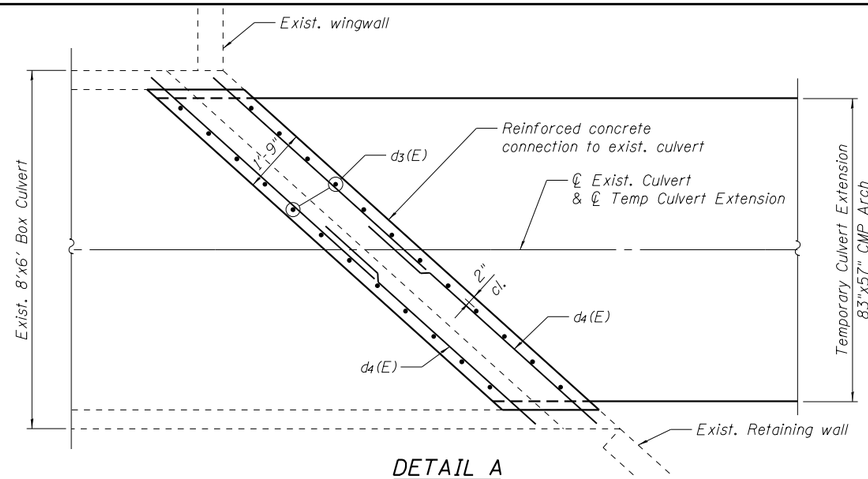
Minimum Section Modulus = 26.3 in^3/ft



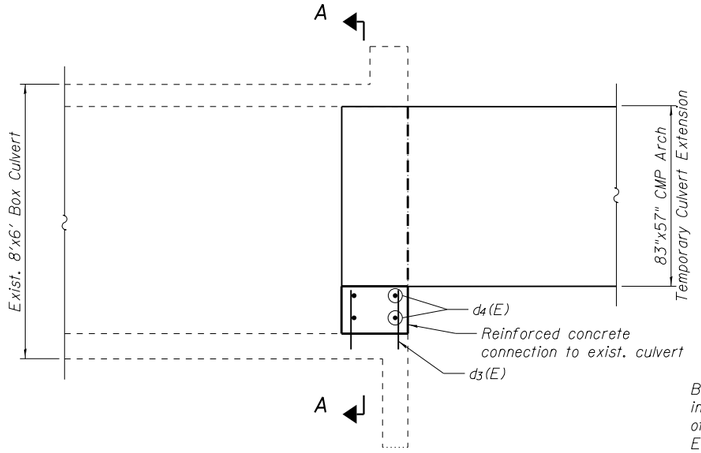
PRE-STAGE II - TEMPORARY SHEET PILING

(Looking North)

Minimum Section Modulus = 26.3 in^3/ft



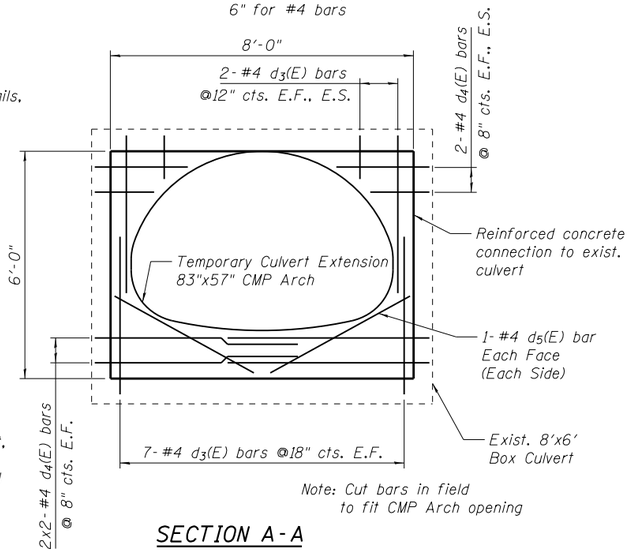
DETAIL A



SECTION B-B

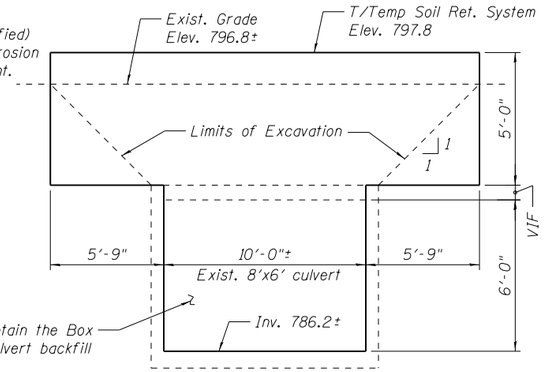
Note:
Concrete paid for as Concrete Box Culverts. For reinforcing details, see Bill of Material sht. 8 of 11.

Bars $d_3(E)$ and $d_4(E)$ shall be drilled and grouted into existing concrete in accordance to Article 584 of Standard Specifications.
Embedment lenght:
6" for #4 bars



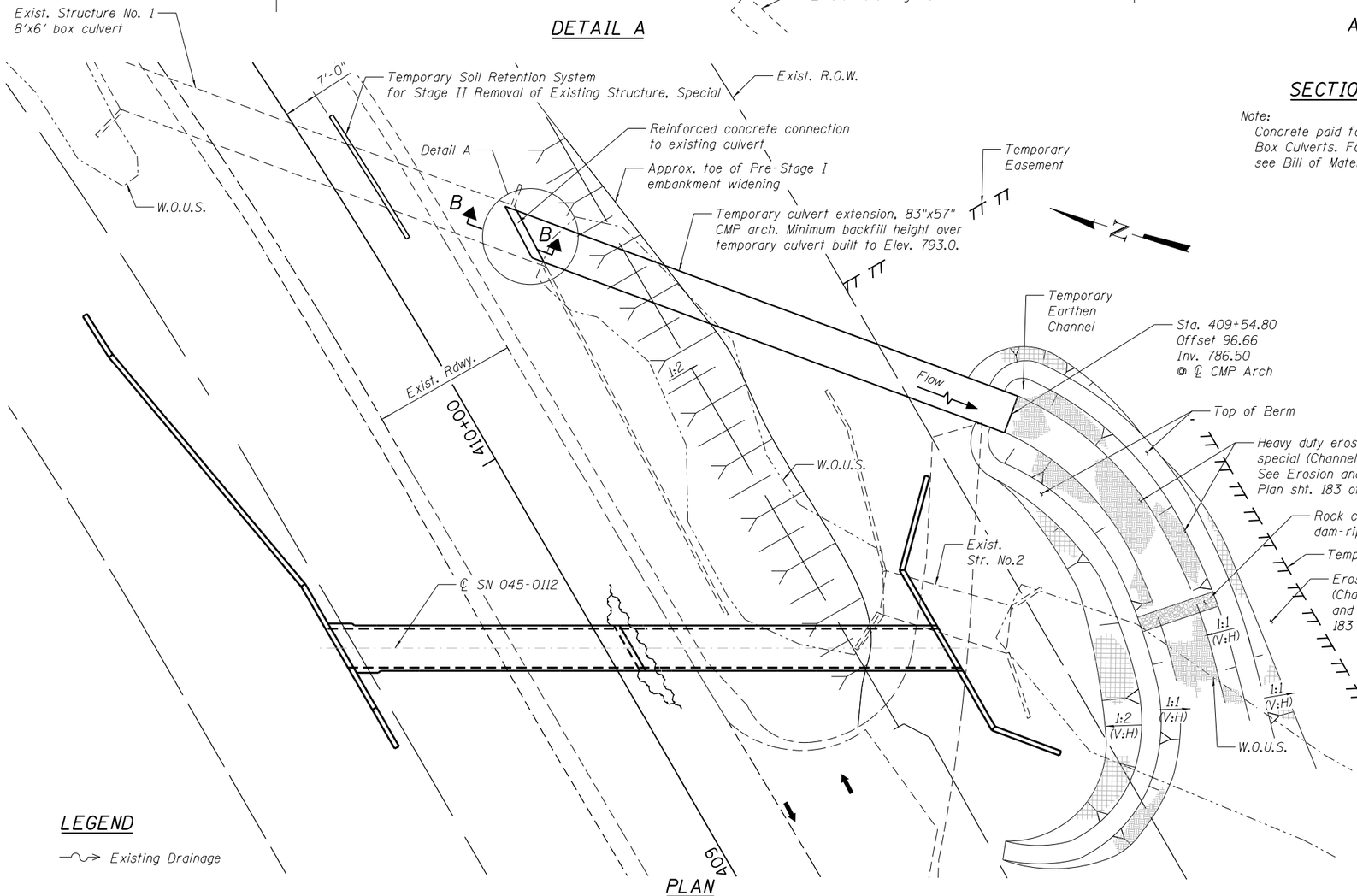
Note: Cut bars in field to fit CMP Arch opening

SECTION A-A



TEMP. SOIL RETENTION SYSTEM

(for Stage II Removal of Existing Structure, Special, installed after Stage I Removal of Existing Structure, Special)



LEGEND

Existing Drainage

PLAN

Pre-Stage I Traffic & Temp Culvert Extension

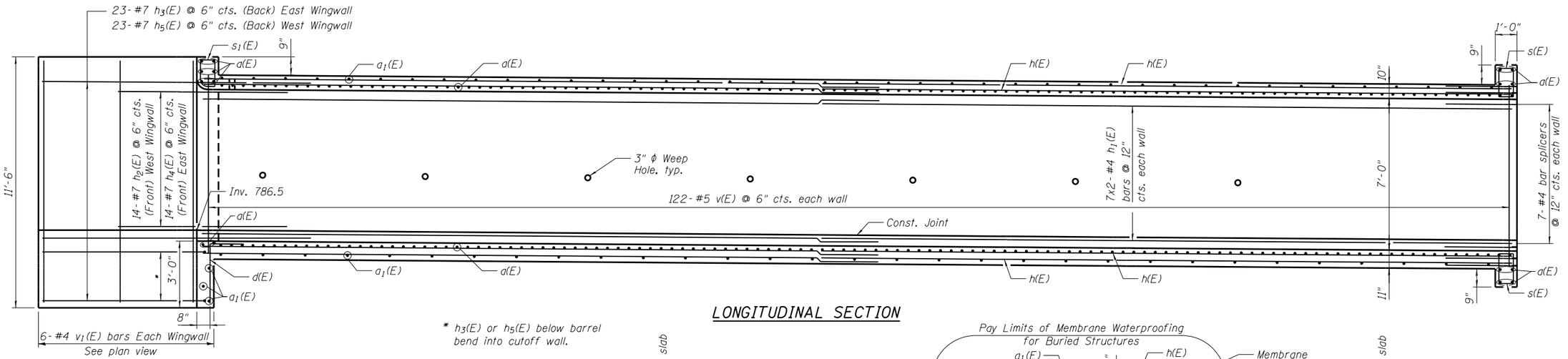
Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - NS	REVISED
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CULVERT EXTENSION DETAILS
STRUCTURE NO. 045-0112
SHEET NO. 3 OF 11 SHEETS

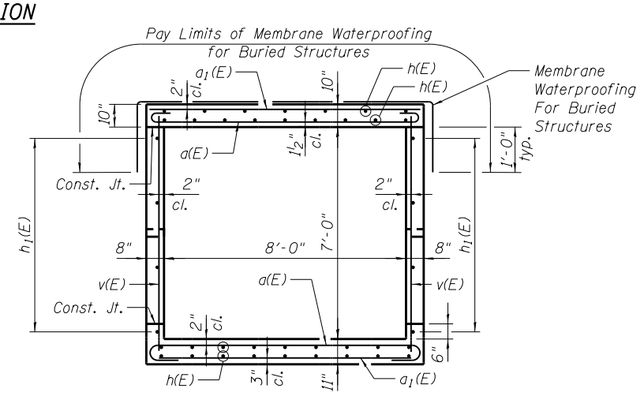
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	426
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT.03 Temp Culvert Extension.dgn



LONGITUDINAL SECTION

* h3(E) or h5(E) below barrel bend into cutoff wall.



SECTION THRU BARREL

PLAN

MIN. LAP

#4 = 2'-7"
#5 = 3'-2"

Notes:
Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

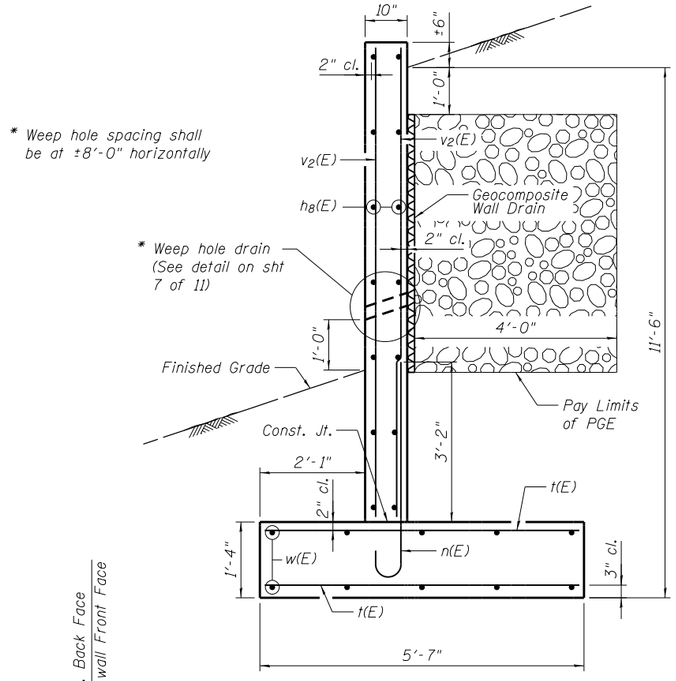
FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT_04 Culvert Details - Stage 1.dgn

Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - NS	REVISED
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

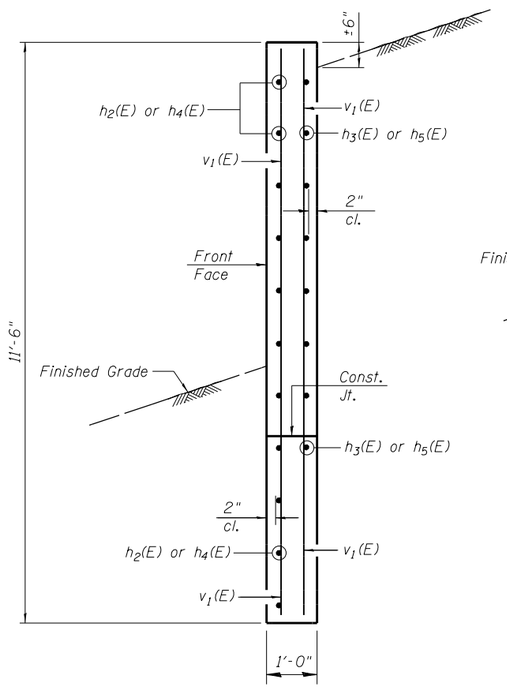
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS – STAGE I
STRUCTURE NO. 045-0112
SHEET NO. 4 OF 11 SHEETS

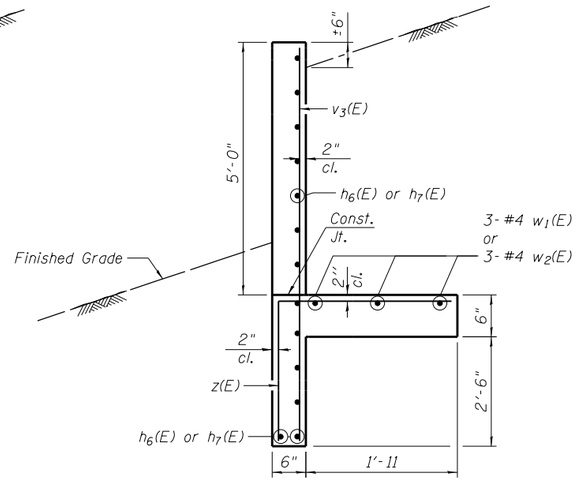
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	427
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



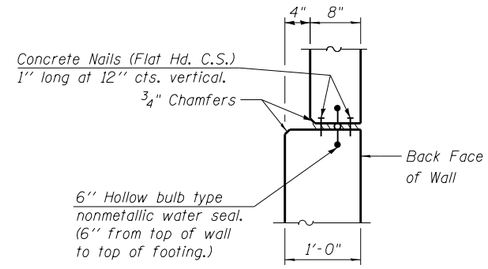
SECTION A-A



SECTION B-B

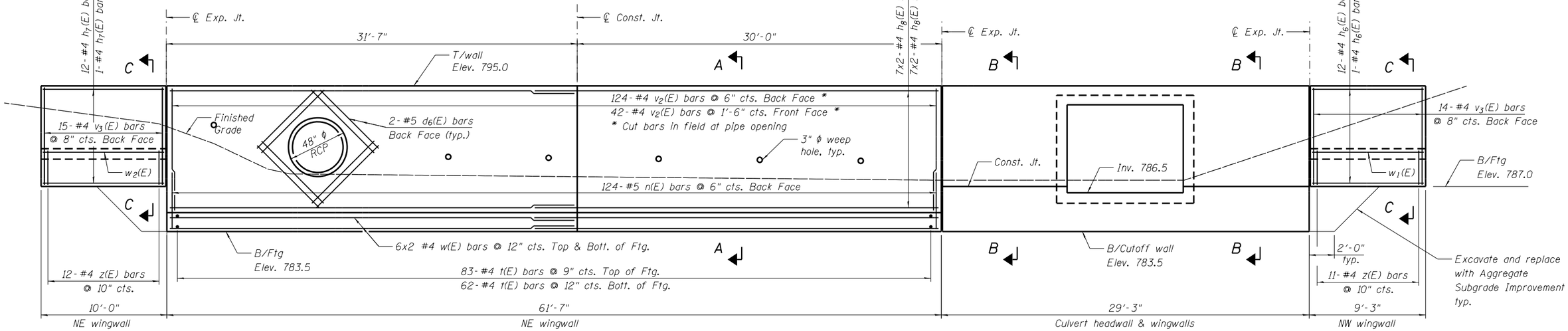


SECTION C-C



EXPANSION JOINT

(typ. detail, wall thickness varies)



UNFOLDED VIEW

(Looking South)

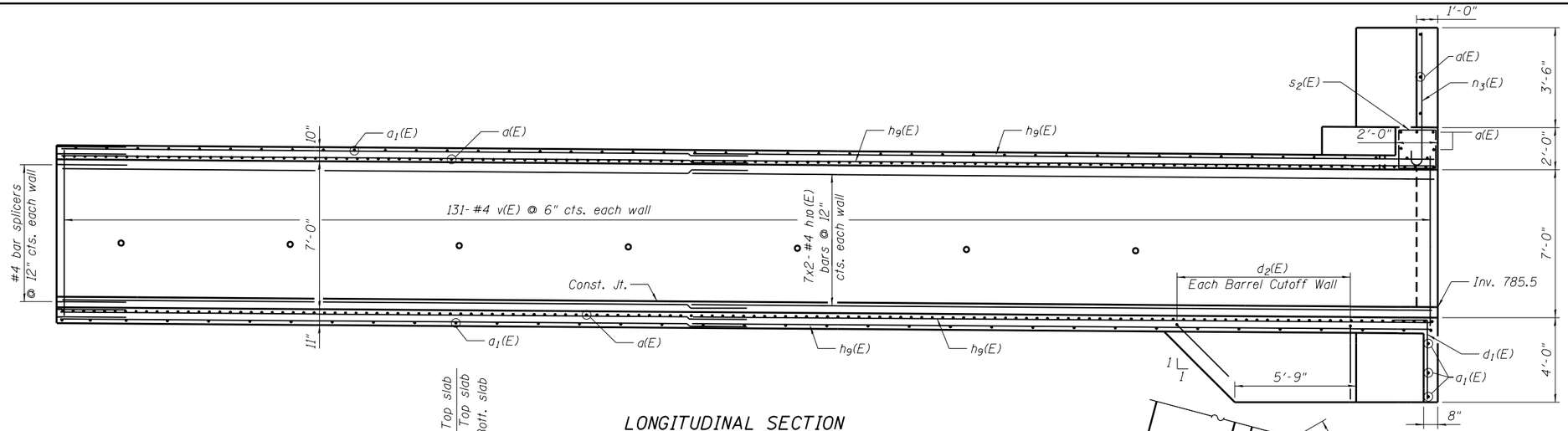
FILE NAME = W:\094-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT 09 Culvert wingwalls - Stage 1.dgn

Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - NS	REVISED
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

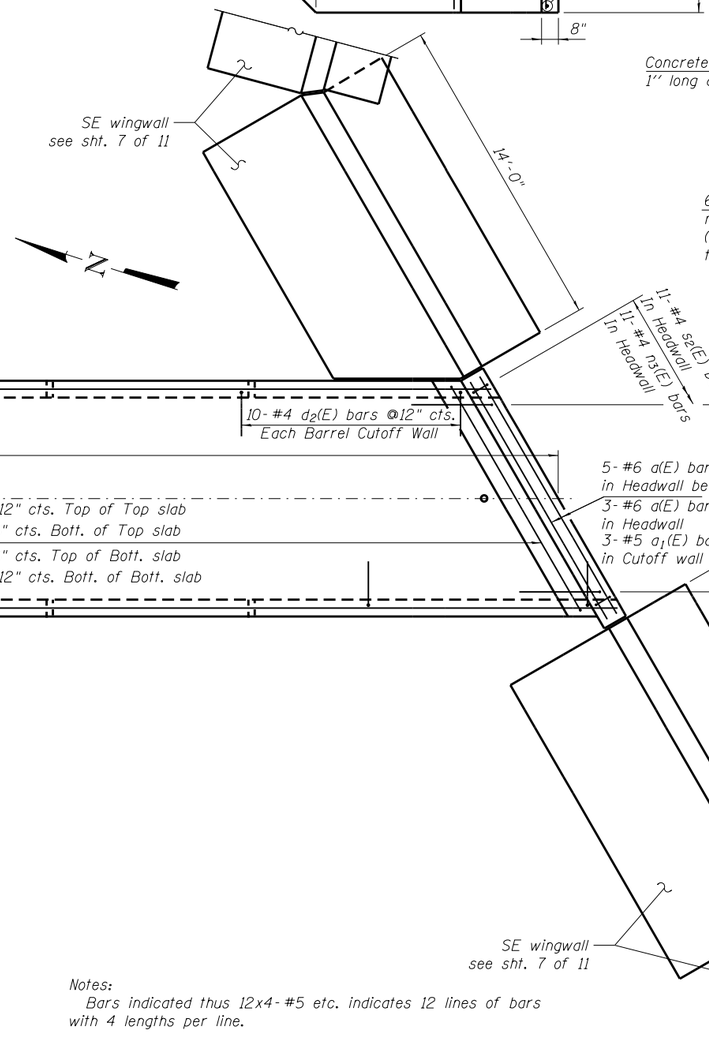
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH END WINGWALL DETAILS
STRUCTURE NO. 045-0112
SHEET NO. 5 OF 11 SHEETS

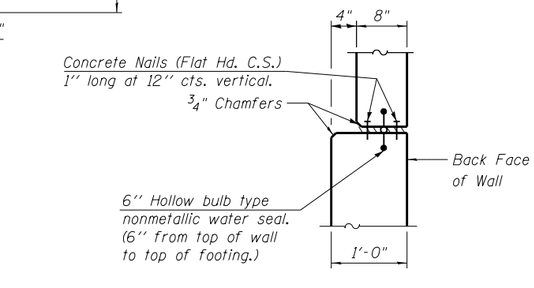
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	428
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		



LONGITUDINAL SECTION

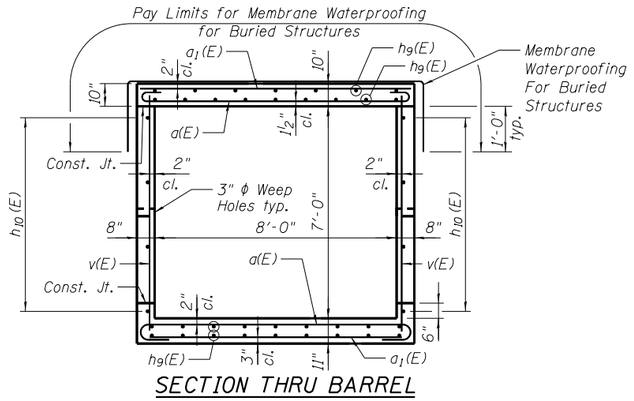


PLAN



EXPANSION JOINT

(typ. detail, wall thickness varies)



SECTION THRU BARREL

#5 bars @ 12" cts. Top. of Top Slab
#5 bars @ 12" cts. Bott. of Top slab
#5 bars @ 12" cts. Top & Bott. slab

10x2 #5 h_9(E) bars @ 12" cts. Top. of Top slab
10x2 #5 h_9(E) bars @ 12" cts. Bott. of Top slab
10x2 #5 h_9(E) bars @ 12" cts. Top & Bott. slab

MIN. LAP

#4 = 2'-7"
#5 = 3'-2"
#6 = 3'-10"

Notes:
Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

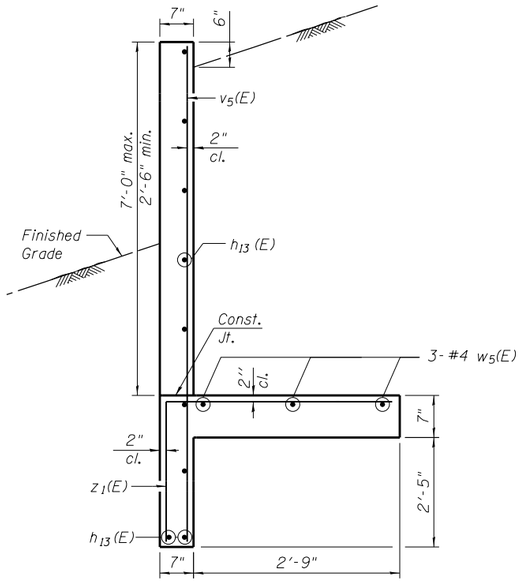
FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT_06 Culvert Details - Stage II.dgn

Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - NS	REVISED
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

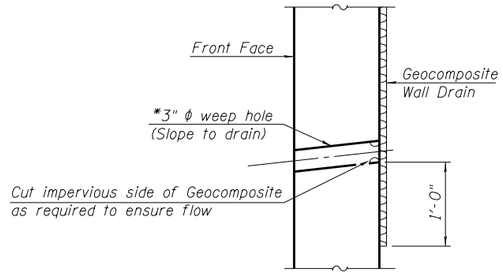
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS – STAGE II
STRUCTURE NO. 045-0112
SHEET NO. 6 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	429
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

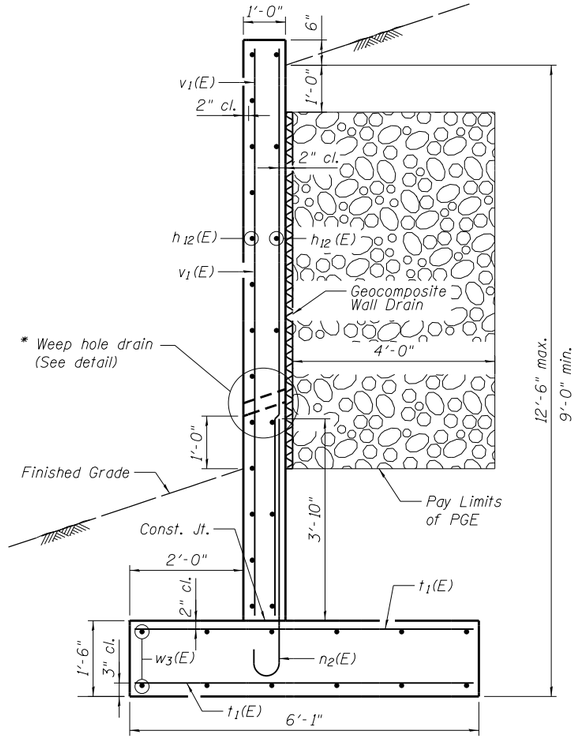


SECTION D-D

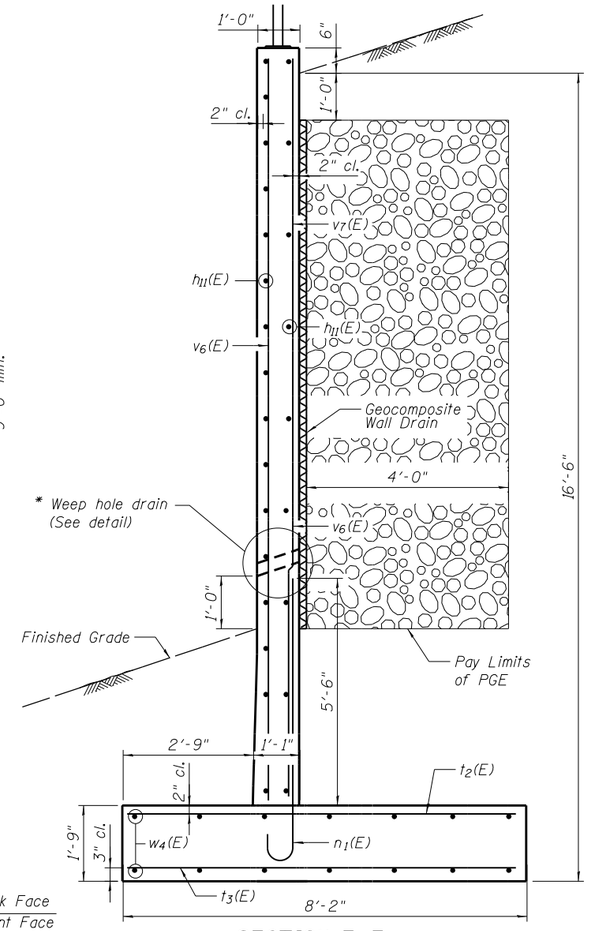


WEEP HOLE DRAIN DETAIL

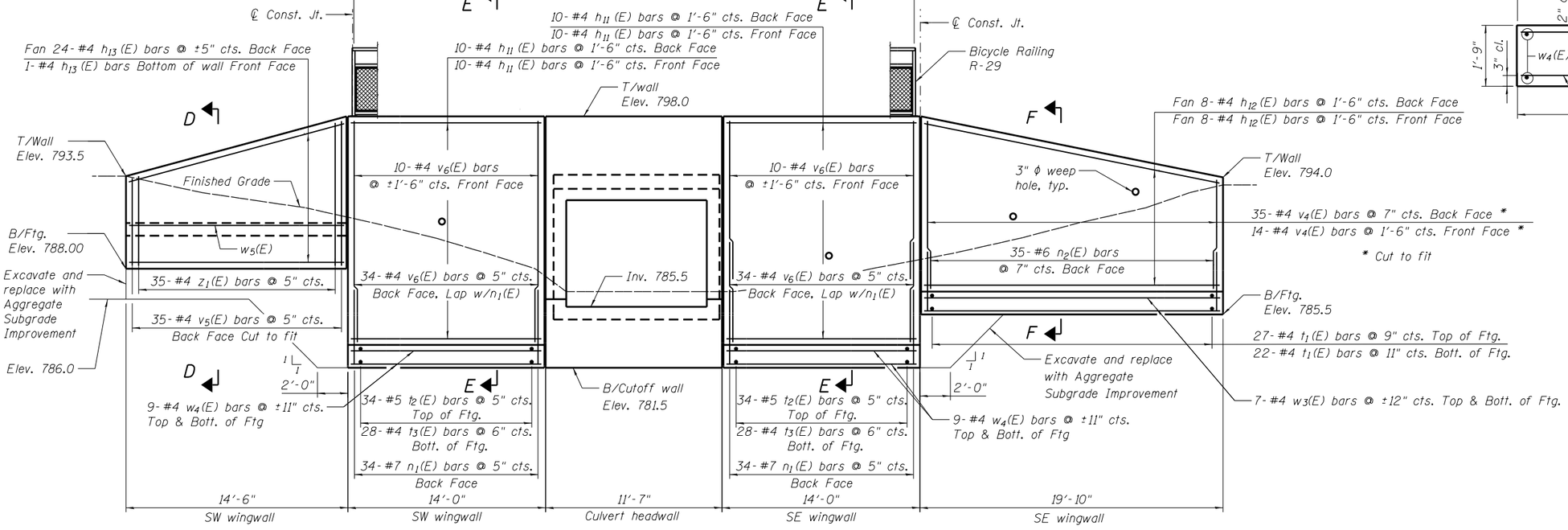
* Weep hole spacing shall be at ±8'-0" horizontally



SECTION F-F



SECTION E-E



UNFOLDED VIEW

(Looking South)

FILE NAME = w:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT-07 Culvert wingwalls - Stage II.dgn

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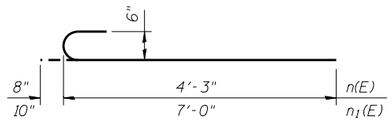
		CHECKED - JJI	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

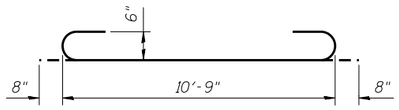
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH END WINGWALL DETAILS
STRUCTURE NO. 045-0112
SHEET NO. 7 OF 11 SHEETS

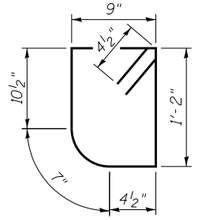
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	430
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



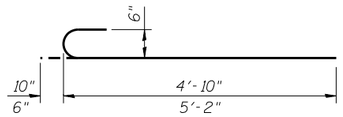
BAR n(E) & n1(E)



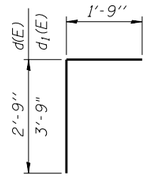
BAR a(E)



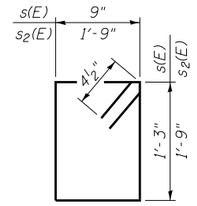
BAR s1(E)



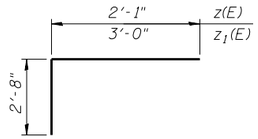
BARS n2(E) & n3(E)



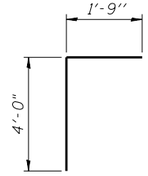
BAR d(E) & d1(E)



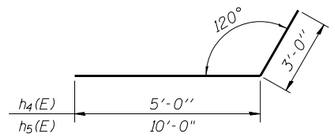
BAR s(E) & s2(E)



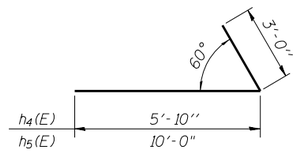
BAR z(E) & z1(E)



BAR d2(E)



BARS h2(E) & h3(E)



BARS h4(E) & h5(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	522	#6	12'-1"	
a_1(E)	260	#5	10'-3"	
d(E)	9	#5	4'-6''	
d_1(E)	20	#5	5'-6''	
d_2(E)	20	#4	5'-9"	
d_3(E)	22	#4	3'-3"	
d_4(E)	8	#4	5'-10"	
d_5(E)	4	#4	4'-3"	
d_6(E)	8	#5	6'-6"	
h(E)	80	#5	31'-11"	
h_1(E)	28	#4	31'-7"	
h_2(E)	14	#7	8'-10"	
h_3(E)	23	#7	13'-0"	
h_4(E)	14	#7	8'-10"	
h_5(E)	23	#7	13'-0"	
h_6(E)	13	#7	8'-11"	
h_7(E)	13	#7	9'-8"	
h_8(E)	28	#4	31'-5"	
h_9(E)	80	#5	34'-1"	
h_{10}(E)	28	#4	34'-1"	
h_{11}(E)	40	#4	13'-8"	
h_{12}(E)	16	#4	19'-5"	
h_{13}(E)	25	#4	14'-2"	
n(E)	124	#5	4'-10"	
n_1(E)	63	#6	7'-10"	
n_2(E)	35	#6	5'-8"	
n_3(E)	11	#4	5'-8"	
s(E)	22	#4	4'-11"	
s_1(E)	11	#4	4'-10"	
s_2(E)	11	#4	7'-9"	
t(E)	145	#4	5'-3"	
t_1(E)	49	#4	6'-7"	
t_2(E)	68	#5	8'-0"	
t_3(E)	56	#4	8'-0"	
v(E)	506	#4	8'-0"	
v_1(E)	12	#4	11'-2"	
v_2(E)	166	#4	10'-0"	
v_3(E)	29	#4	7'-8"	
v_4(E)	49	#4	10'-8"	
v_5(E)	35	#4	9'-8"	
v_6(E)	88	#4	10'-8"	
w(E)	24	#4	31'-5"	
w_1(E)	3	#4	8'-11"	
w_2(E)	3	#4	9'-8"	
w_3(E)	14	#4	19'-6"	
w_4(E)	36	#4	13'-8"	
w_5(E)	3	#4	14'-2"	
z(E)	23	#4	4'-9"	
z_1(E)	35	#4	5'-8"	
Concrete Box Culverts			Cu. Yd.	220.1
Reinforcement Bars, Epoxy Coated			Pound	35,750

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT-08 Bill of Materials.dgn

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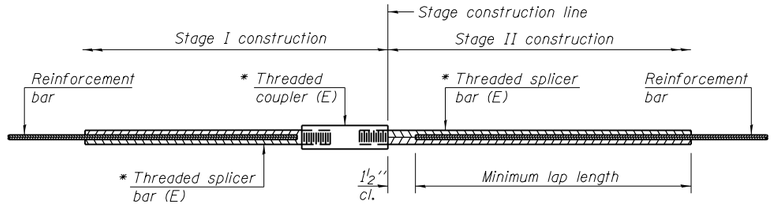
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL
STRUCTURE NO. 045-0112
SHEET NO. 8 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	431
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

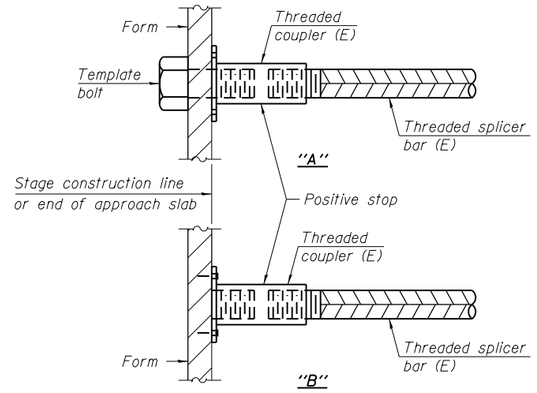


STANDARD BAR SPLICER ASSEMBLY

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

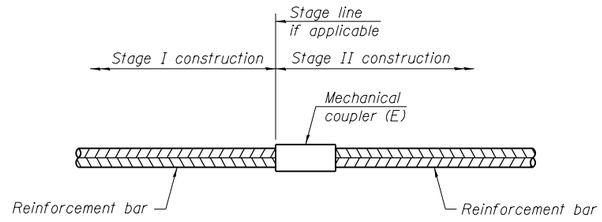
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
T&B of Top Slab	#5	20	2'-7"
T&B of Bott. Slab	#5	20	3'-10"
Walls	#6	14	3'-2"



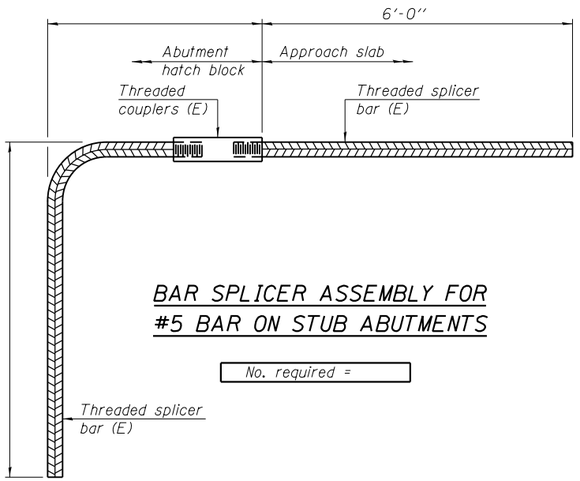
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



NOTES

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

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

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

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

BSD-1

6-8-15

FILE NAME = w:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT_09 Bar Splicer Assembly.dgn

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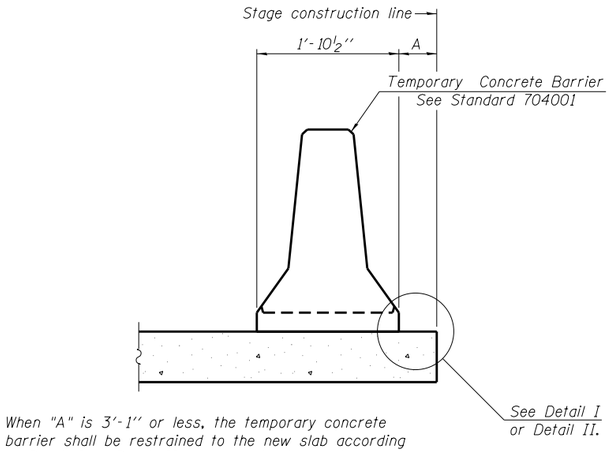
DEPARTMENT OF TRANSPORTATION

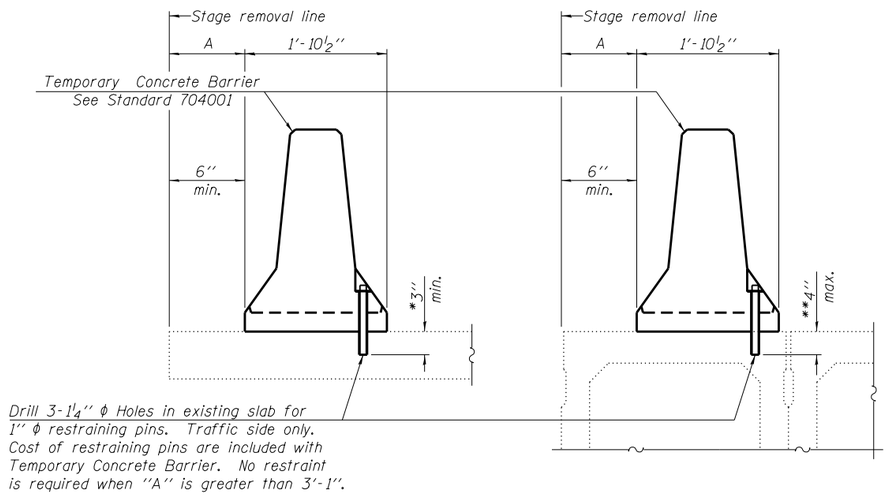
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 045-0112
SHEET NO. 9 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	432
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



When "A" is 3'-1'' or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I or Detail II. No restraint is required when "A" is greater than 3'-1''.

NEW SLAB



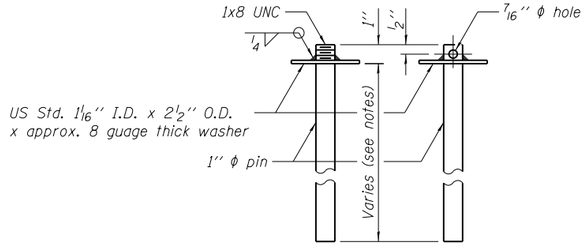
EXISTING SLAB

EXISTING DECK BEAM

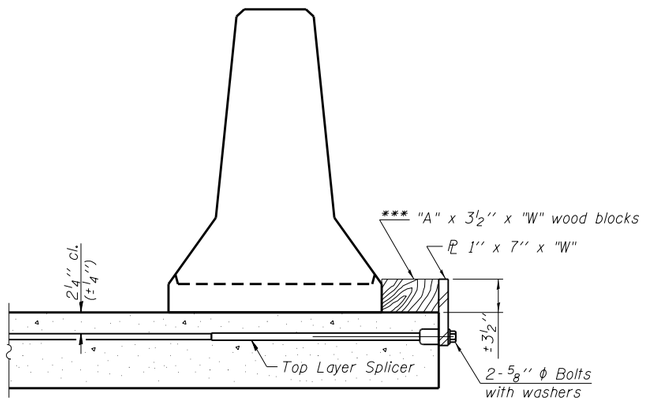
SECTIONS THRU SLAB OR DECK BEAM

* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

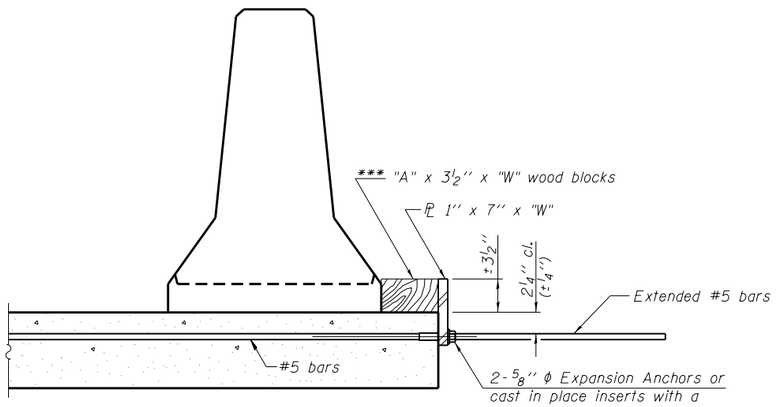
** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



RESTRAINING PIN



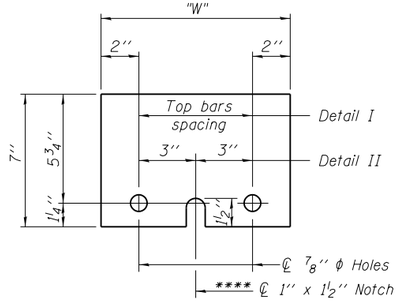
DETAIL I



DETAIL II

RETAINER ASSEMBLY

*** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



STEEL RETAINER ℄ 1'' x 7'' x ''W''

**** Required only with Detail II

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1'' x 7' 'x ''W'' steel ℄ to the top layer of couplers with 2-⅝'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1'' x 7'' x ''W'' steel ℄ to the concrete slab or concrete wearing surface with 2-⅝'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of retainer assembly is included with Temporary Concrete Barrier.

The 1'' x 7'' x ''W'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

R-27

2-19-16

FILE NAME = W:\094-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT-10 Temp Concr Barrier.dgn

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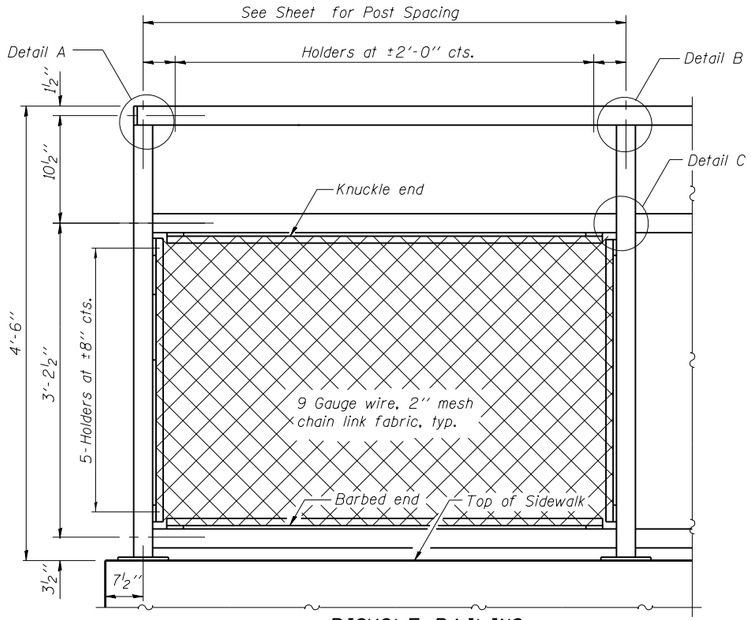
PLOT DATE =	CHECKED - JJI	REVISED

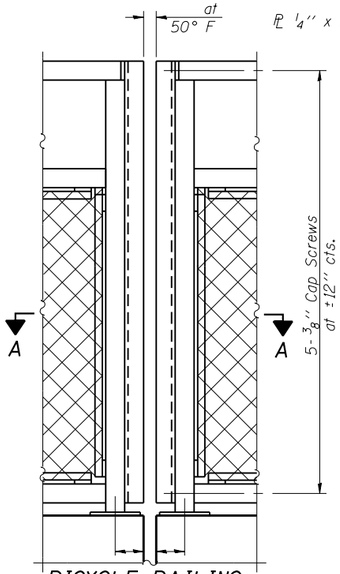
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 045-0112
SHEET NO. 10 OF 11 SHEETS

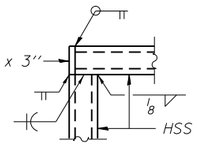
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	433
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



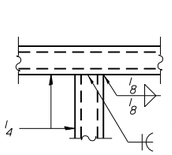
BICYCLE RAILING



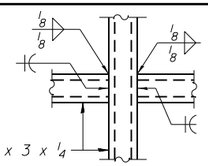
BICYCLE RAILING



DETAIL A

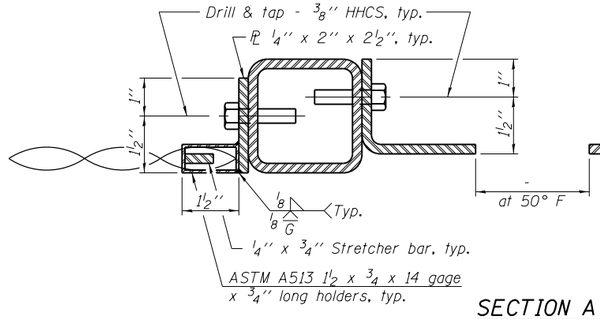


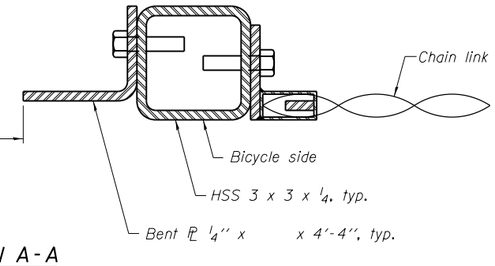
DETAIL B



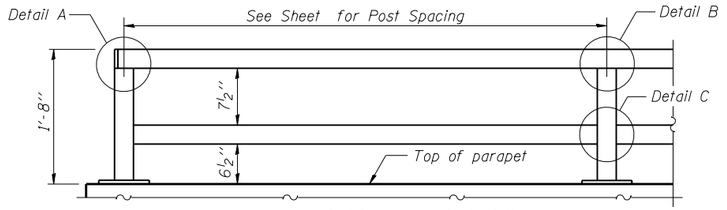
DETAIL C

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

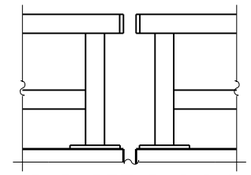




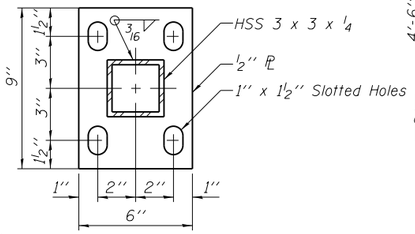
SECTION A-A



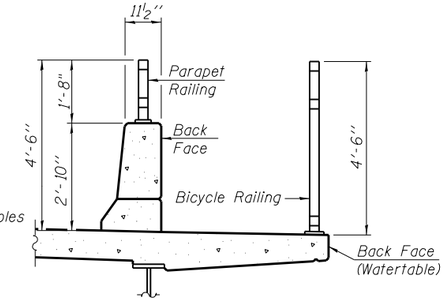
PARAPET RAILING ELEVATION
(Inside Face of Two Element Rail)



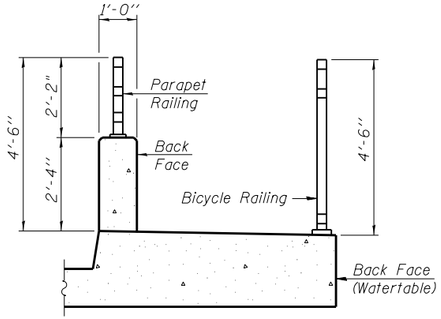
PARAPET RAILING ELEVATION AT EXPANSION JOINT
(Two Element Rail Shown - Three Element Rail Similar)



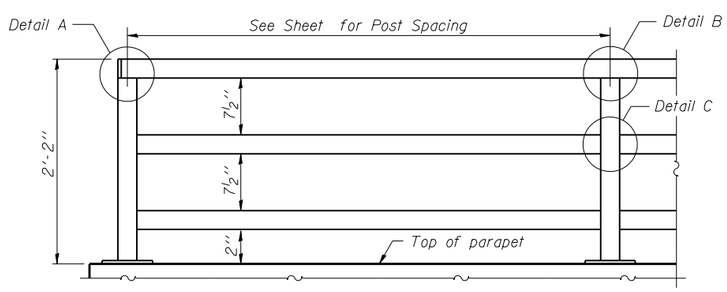
BASE PL



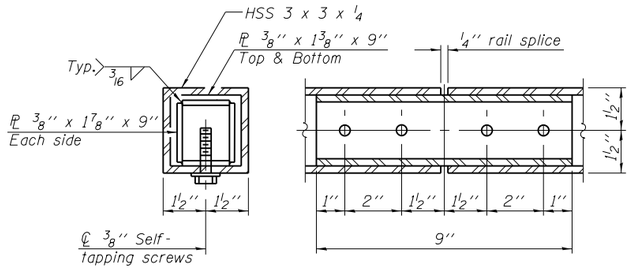
SECTION THRU DECK



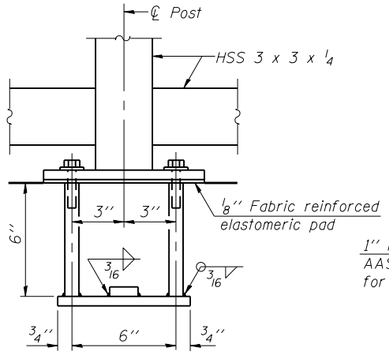
SECTION THRU SIDEWALK

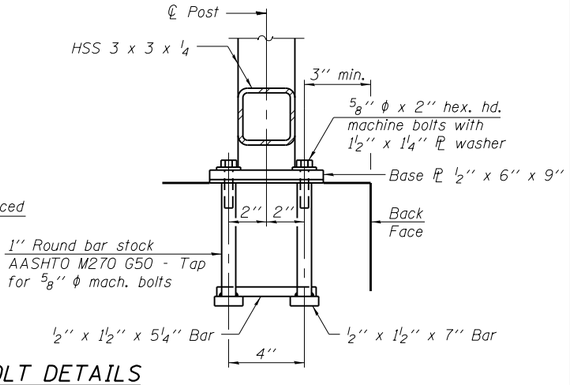


PARAPET RAILING ELEVATION
(Inside Face of Three Element Rail)



RAIL SPLICE





ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	37
Parapet Railing	Foot	

R-29

1-12-15 (10'-0" Maximum Post Spacing)

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
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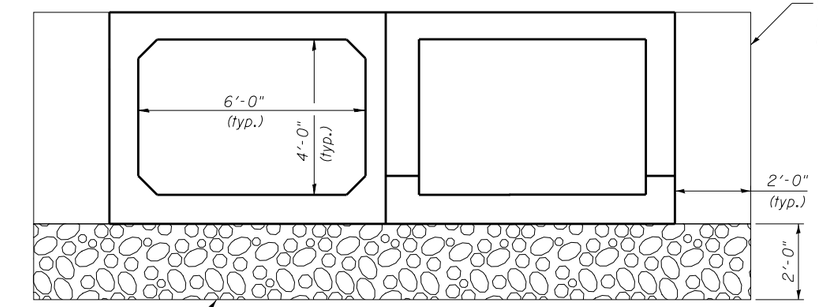
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BICYCLE RAILING
STRUCTURE NO. 045-0112
SHEET NO. 11 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	434
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

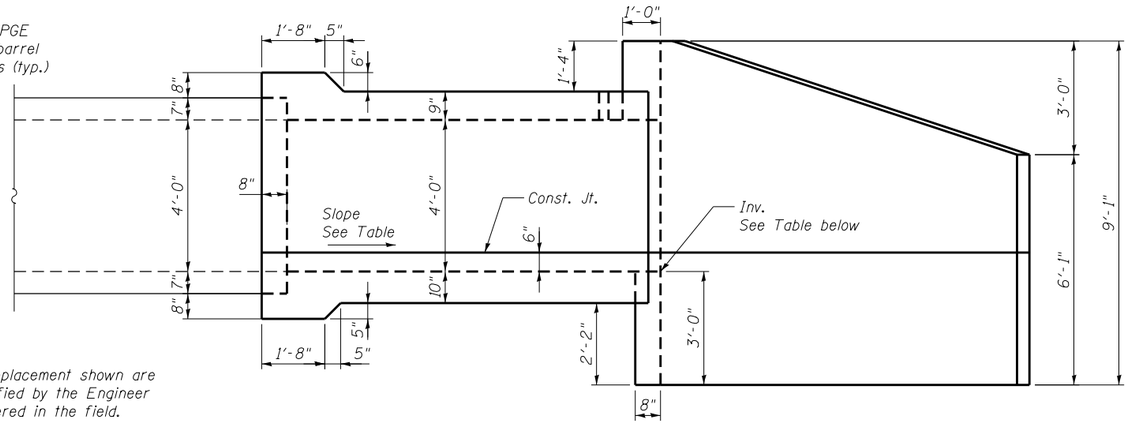
FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\IL-31 Culvert\SHT-11 Pedestrian Railing.dgn



* Removal and Disposal of Unsuitable Material for Structures under culvert barrel for length of culvert. Replace with Aggregate Subgrade Improvement.

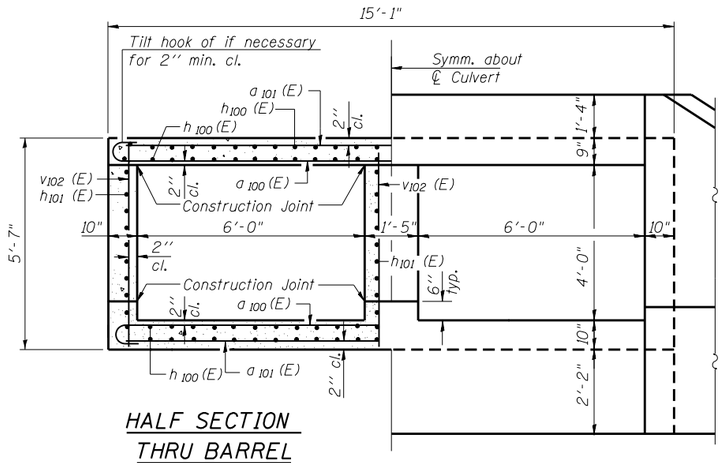
BACKFILL DETAIL

* The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the Engineer for variable subsurface conditions encountered in the field.



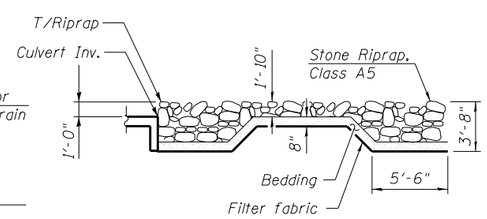
C.I.P. END SECTION ELEVATION

(Downstream section shown, upstream similar)



HALF SECTION THRU BARREL

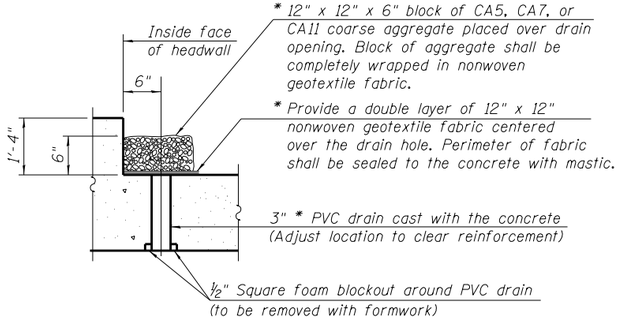
HALF END ELEVATION



SECTION A-A

See Drainage Plans for riprap layout.

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

GENERAL NOTES

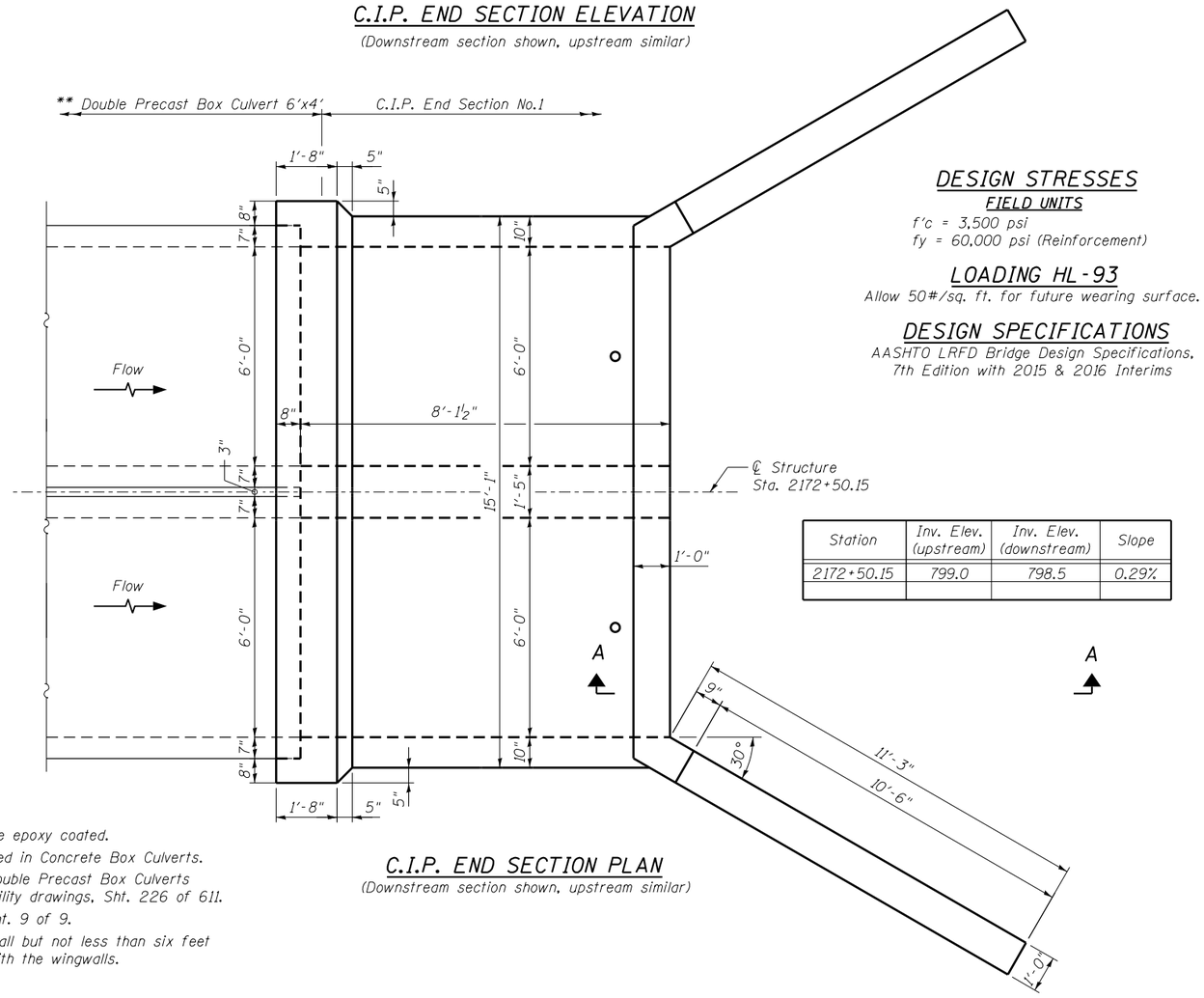
Reinforcement bars designated (E) shall be epoxy coated.

Cost of excavation for wingwalls is included in Concrete Box Culverts.

** For precast box details and location of Double Precast Box Culverts and End Sections No. 1 see Drainage and Utility drawings, Sht. 226 of 611.

For precast box fabrication details see Sht. 9 of 9.

A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls. Precast End Sections are not allowed.



C.I.P. END SECTION PLAN

(Downstream section shown, upstream similar)

Station	Inv. Elev. (upstream)	Inv. Elev. (downstream)	Slope
2172+50.15	799.0	798.5	0.29%

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi

fy = 60,000 psi (Reinforcement)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims

FILE NAME = w:\894-010 KDOT LMP Section B\CADD SHEETS\Structural\Section B2\Precast Culverts\Sht.01 End Section No1.dgn

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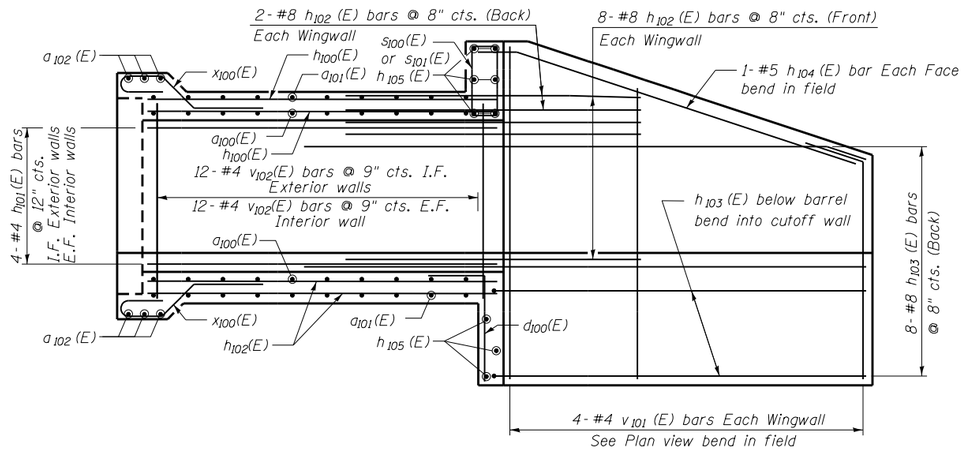
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

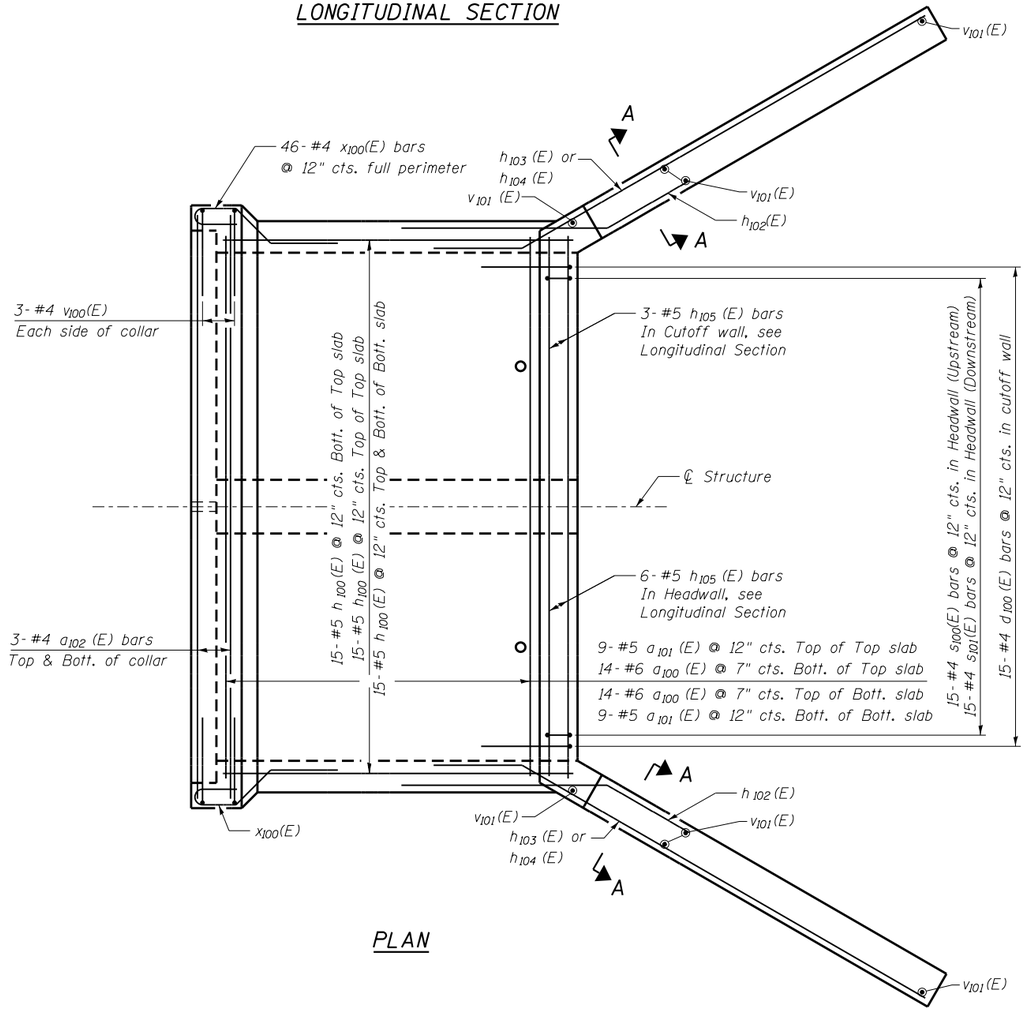
PRECAST BOX CULVERTS
END SECTION NO. 1

SHEET NO. 1 OF 9 SHEETS

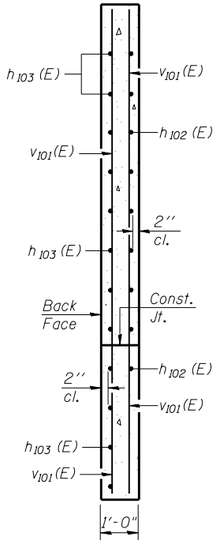
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	435
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



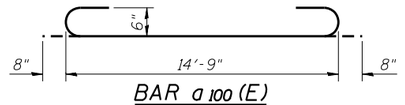
LONGITUDINAL SECTION



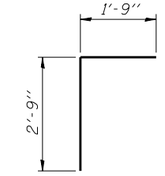
PLAN



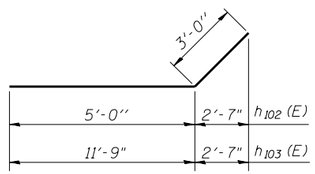
SECTION A-A



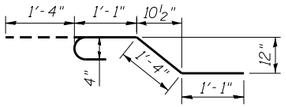
BAR a_{100} (E)



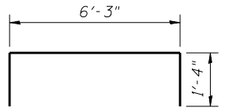
BAR d_{100} (E)



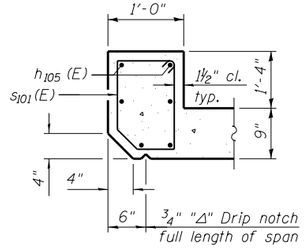
BARS h_{102} (E) & h_{103} (E)



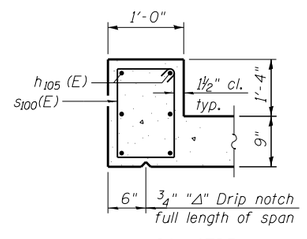
BAR x_{100} (E)



BAR v_{100} (E)

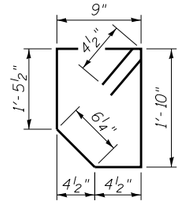


UPSTREAM

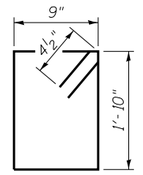


DOWNSTREAM

SECTION THRU HEADWALL



BAR s_{101}(E)
(upstream)



BAR s_{100}(E)
(downstream)

TWO END SECTION BILL OF MATERIAL
Culvert at Sta. 2172+50.15

Bar	No.	Size	Length	Shape
a_{100}(E)	56	#6	16'-1"	
a_{101}(E)	36	#6	14'-9"	
a_{102}(E)	12	#4	15'-7"	
d_{100}(E)	30	#4	4'-6"	
h_{100}(E)	120	#5	7'-10"	
h_{101}(E)	120	#4	7'-10"	
h_{102}(E)	40	#8	8'-0"	
h_{103}(E)	32	#8	14'-9"	
h_{104}(E)	8	#5	12'-8"	
h_{105}(E)	8	#5	14'-9"	
s_{100}(E)	15	#4	5'-11"	
s_{101}(E)	15	#4	5'-9"	
v_{100}(E)	12	#4	8'-11"	
v_{101}(E)	16	#4	8'-9"	
v_{102}(E)	96	#4	4'-11"	
x_{100}(E)	92	#4	4'-10"	
Porous Granular Embankment		Cu. Yd.		142
Aggregate Subgrade Improvement		Cu. Yd.		214
Removal and Disposal of Unsutible Material for Structures		Cu. Yd.		214
Precast Concrete Box Culvert 6'x4'		Foot		267
Concrete Box Culverts		Cu. Yd.		39.4
Reinforcement Bars, Epoxy Coated		Pound		7,220

FILE NAME = W:\894-018 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Precast Culverts\Sht.02 End Section No1 details.dgn

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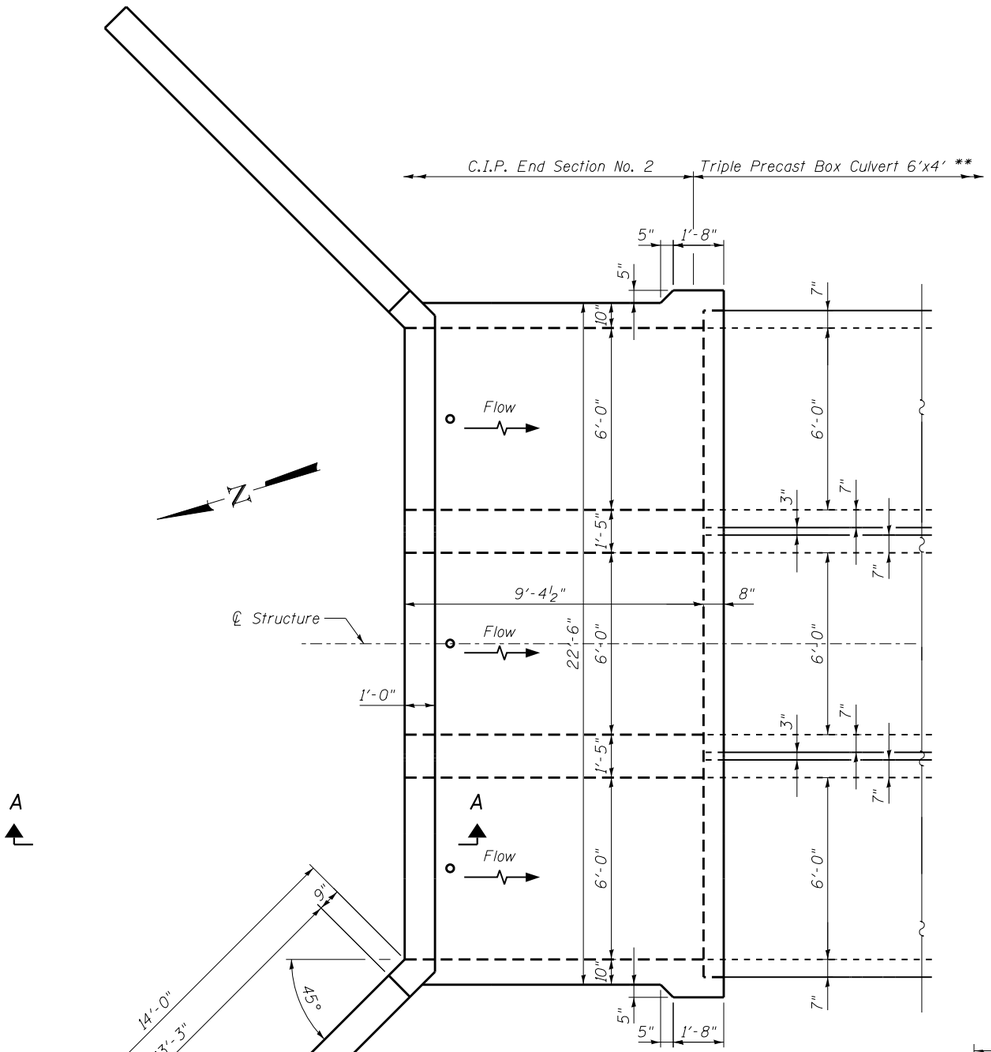
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

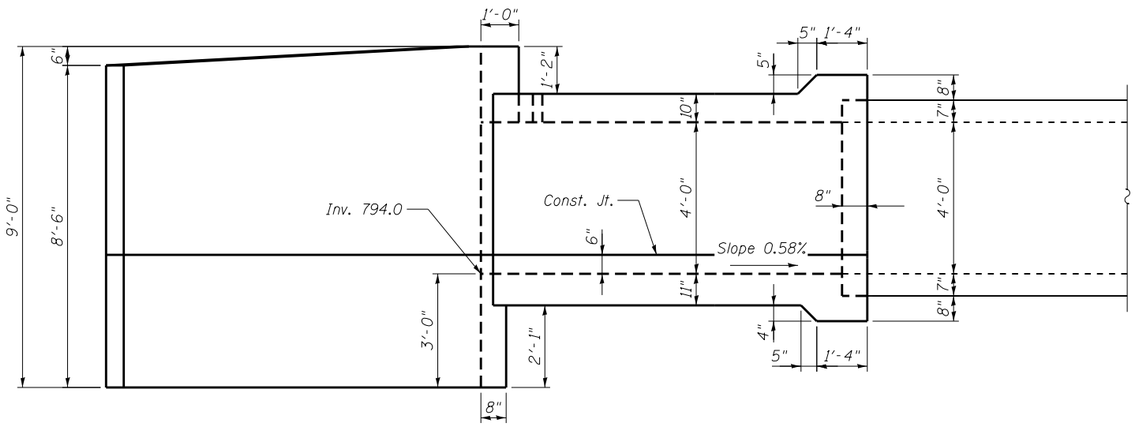
PRECAST BOX CULVERTS DETAILS
END SECTION NO. 1
SHEET NO. 2 OF 9 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	436
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



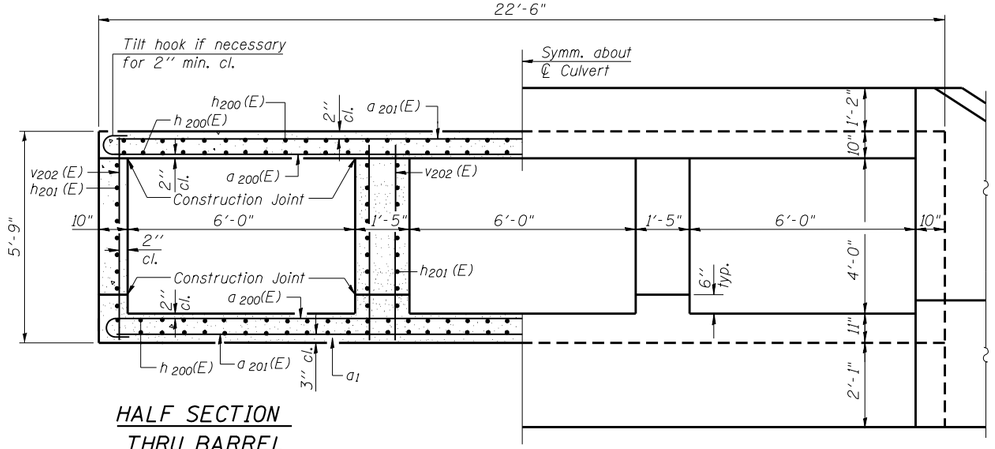
C.I.P. END SECTION PLAN

At Sta. 1509+13.75
(Upstream section)



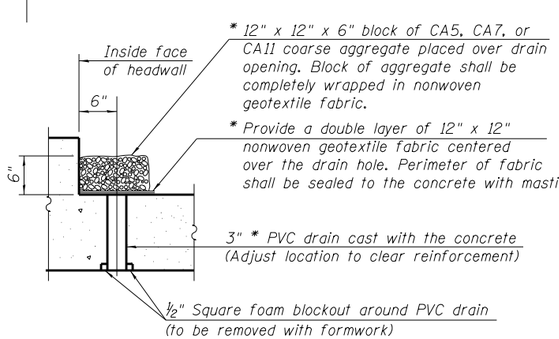
C.I.P. END SECTION ELEVATION

(Upstream section)



HALF SECTION THRU BARREL

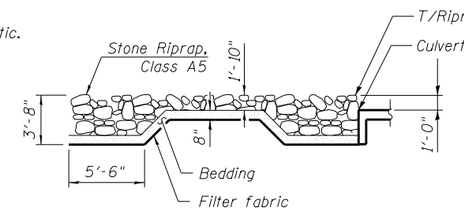
HALF END ELEVATION



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



SECTION A-A

See Drainage Plans for riprap layout.

DESIGN STRESSES

FIELD UNITS

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

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications,
7th Edition with 2015 & 2016 Interims

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
Cost of excavation for wingwalls is included in Concrete Box Culverts.
** For precast box details and location of Triple Precast Box Culvert and End Sections No. 2 & No. 3 see Drainage and Utility drawing. Sht. 235 of 611.
For precast box fabrication details see Sht. 9 of 9.
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
Precast End Sections are not allowed.
For Backfill Detail see Sht. 6 of 9.

FILE NAME = w:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Precast Culverts\Sht.03 End Section No2.dgn

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ITASCA, ILLINOIS

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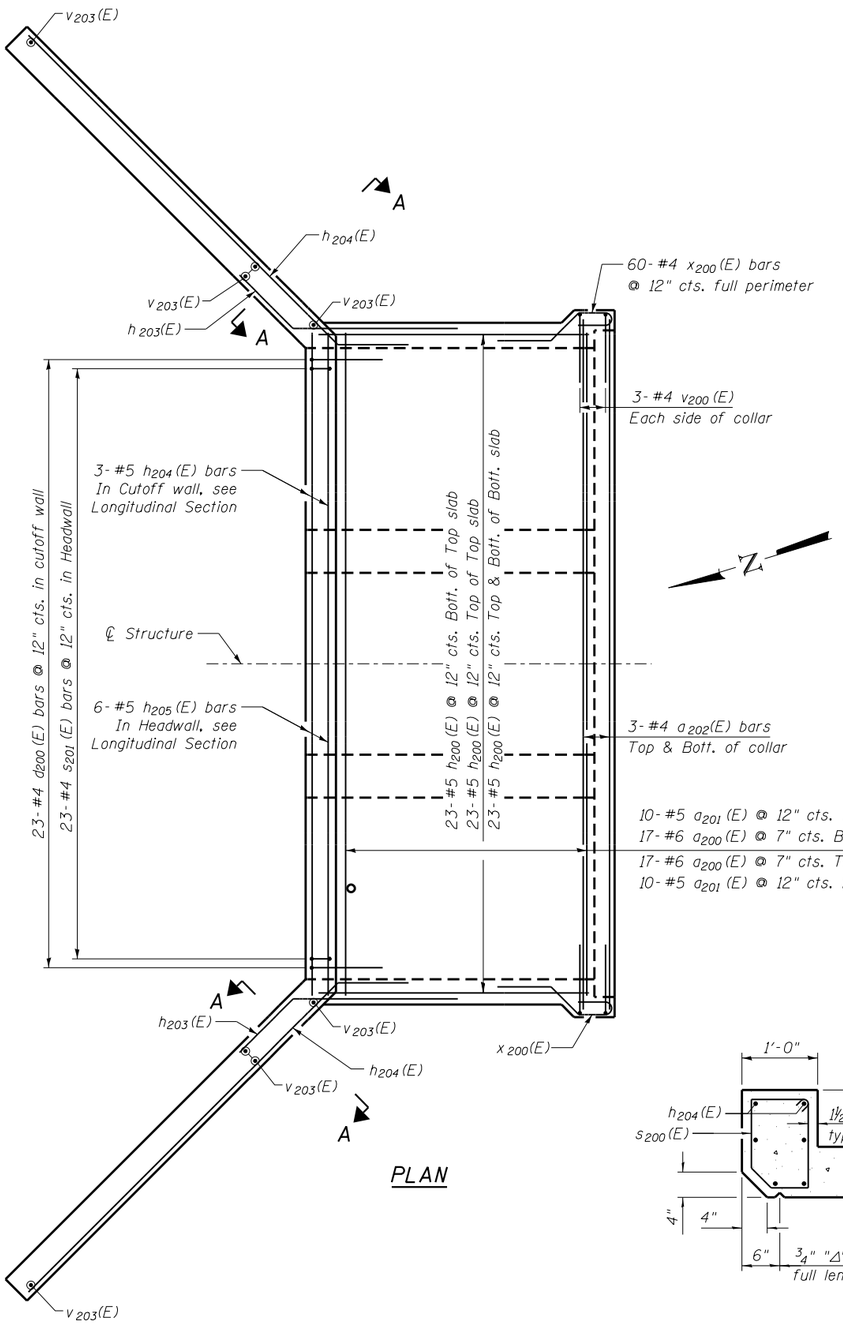
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

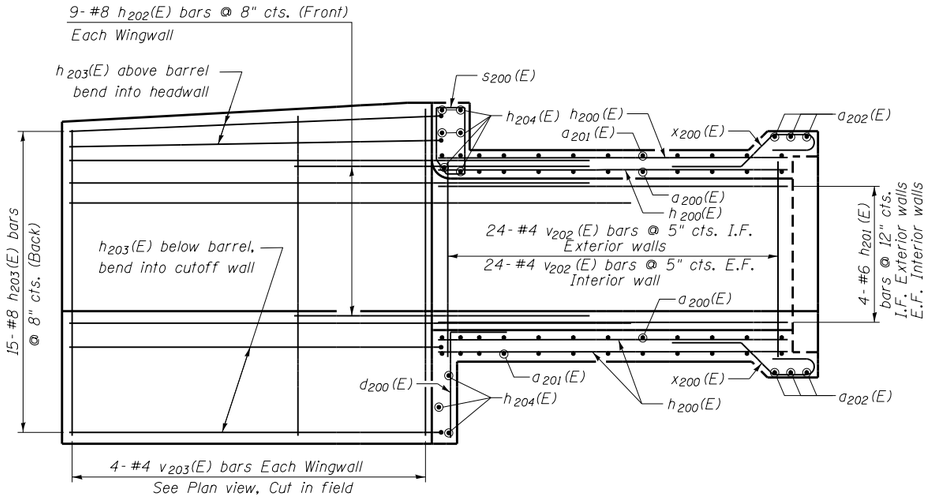
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BOX CULVERTS END SECTION NO. 2
STRUCTURE NO. 045-5573
SHEET NO. 3 OF 9 SHEETS

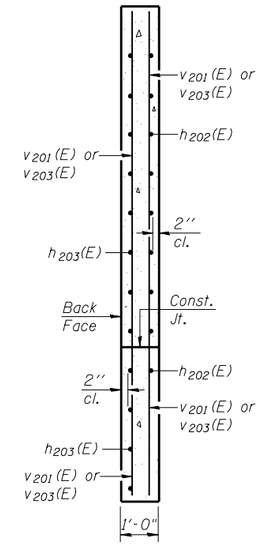
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	437
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		



PLAN

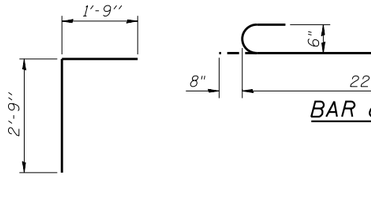


LONGITUDINAL SECTION

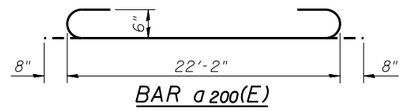


SECTION A-A

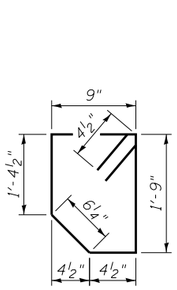
SECTION THRU HEADWALL



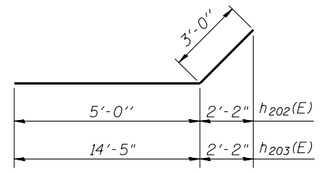
BAR d200(E)



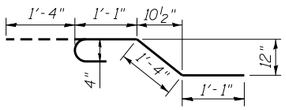
BAR a200(E)



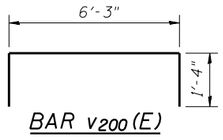
BAR s200(E)



BARS h202(E) & h203(E)



BAR x200(E)



BAR v200(E)

BILL OF MATERIAL
Culvert at Sta. 1509+13.75, Upstream End

Bar	No.	Size	Length	Shape
$a_{200}(E)$	34	#6	23'-5"	
$a_{201}(E)$	20	#5	22'-2"	
$a_{202}(E)$	6	#4	23'-0"	
$d_{200}(E)$	23	#4	4'-6"	
$h_{200}(E)$	92	#5	9'-1"	
$h_{201}(E)$	24	#4	9'-1"	
$h_{202}(E)$	18	#8	8'-0"	
$h_{203}(E)$	30	#8	17'-5"	
$h_{204}(E)$	9	#5	22'-2"	
$s_{200}(E)$	23	#4	5'-7"	
$v_{200}(E)$	6	#4	8'-11"	
$v_{202}(E)$	96	#4	4'-11"	
$v_{203}(E)$	8	#4	8'-9"	
$x_{200}(E)$	60	#4	4'-10"	
* Porous Granular Embankment			Cu. Yd.	108
* Aggregate Subgrade Improvement			Cu. Yd.	292
* Removal and Disposal of Unsuitable Material for Structures			Cu. Yd.	292
* Precast Concrete Box Culvert 6'x4'			Foot	192
Concrete Box Culverts			Cu. Yd.	32.6
Reinforcement Bars, Epoxy Coated			Pound	5,510
* Membrane Waterproofing for Buried Structures			Sq. Yd.	226

* Pay items apply to entire length of culvert.

FILE NAME = W:\894-018 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Precast Culverts\Sht.04 End Section No2 details.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

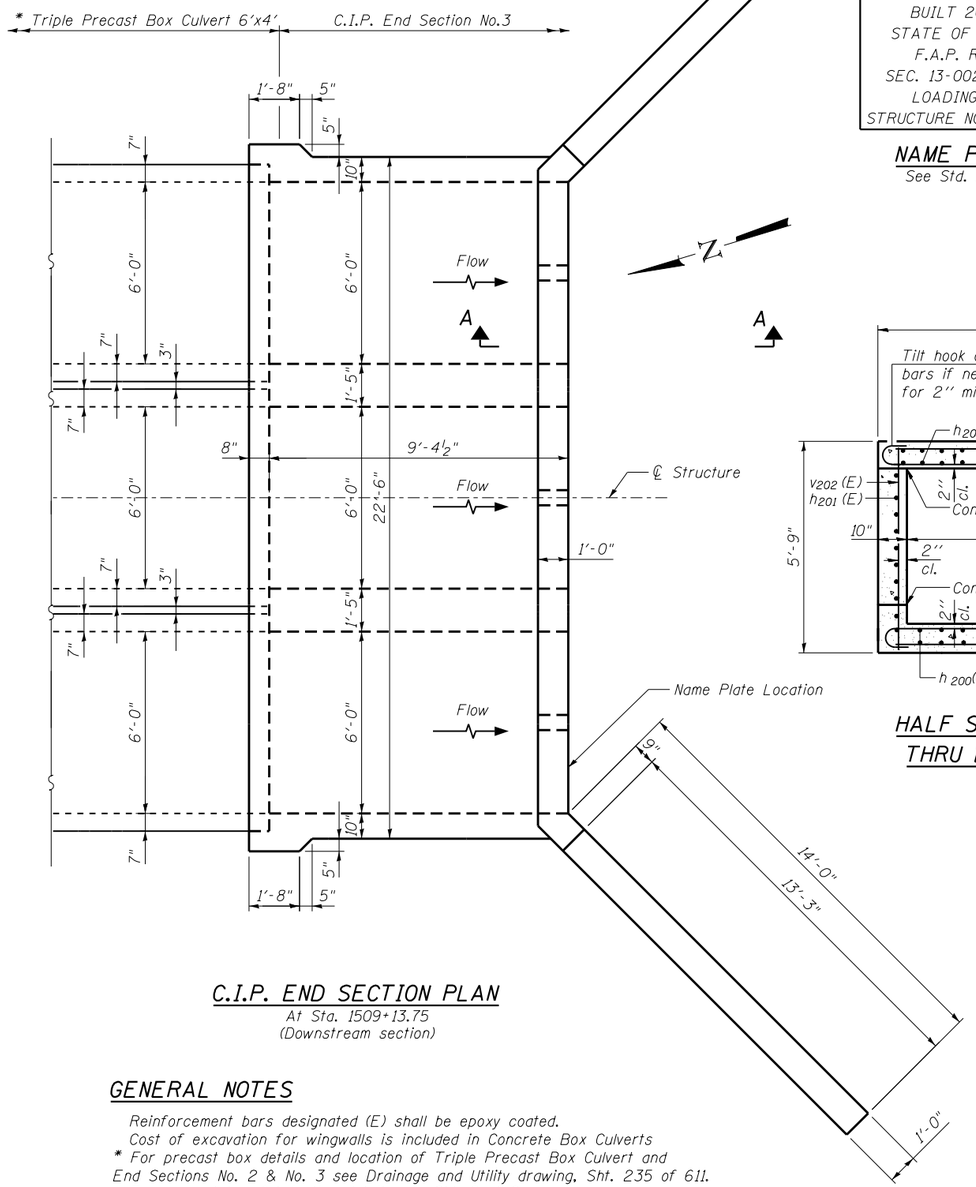
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BOX CULVERTS END SECTION NO. 2 DETAILS
STRUCTURE NO. 045-5573
SHEET NO. 4 OF 9 SHEETS

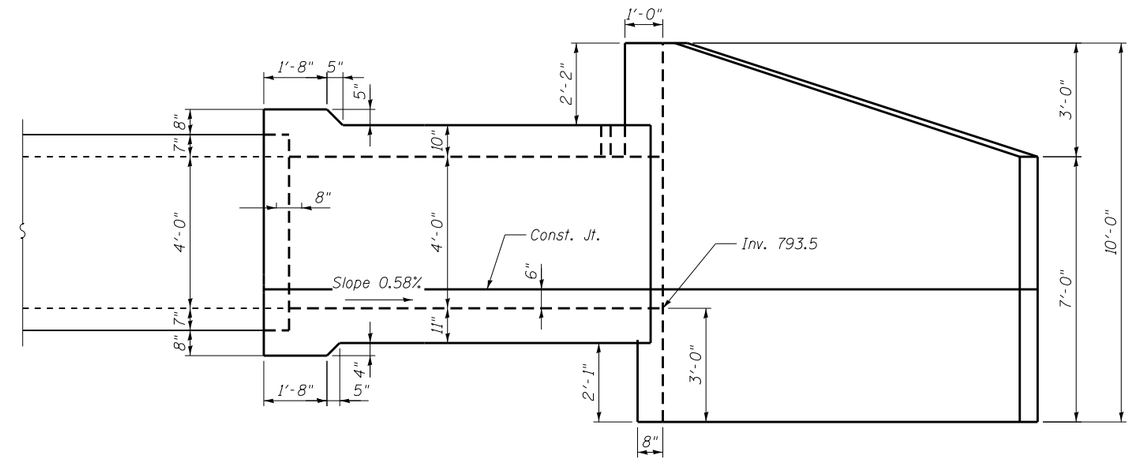
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	438
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

STATION 1509+13.75
BUILT 201_ BY
STATE OF ILLINOIS
F.A.P. Rt. 361
SEC. 13-00215-10-PV
LOADING HL-93
STRUCTURE NO. 045-5573

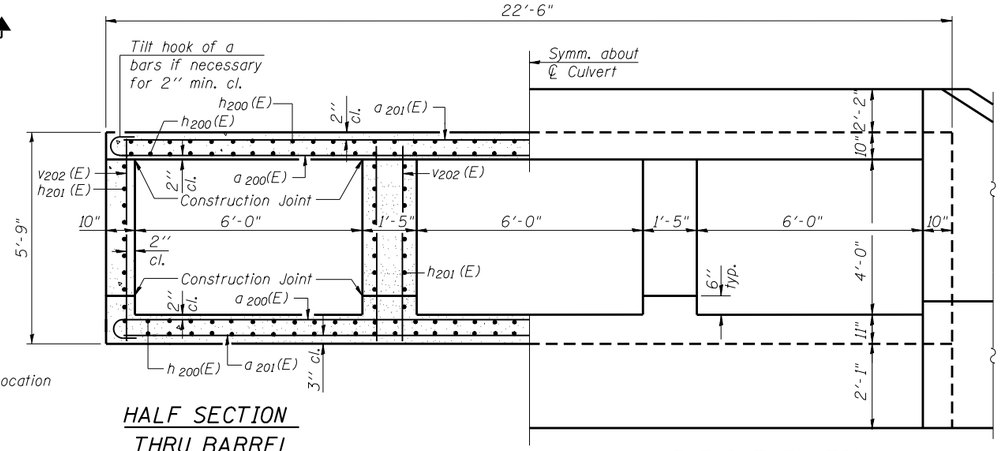
NAME PLATE
See Std. 515001



C.I.P. END SECTION PLAN
At Sta. 1509+13.75
(Downstream section)

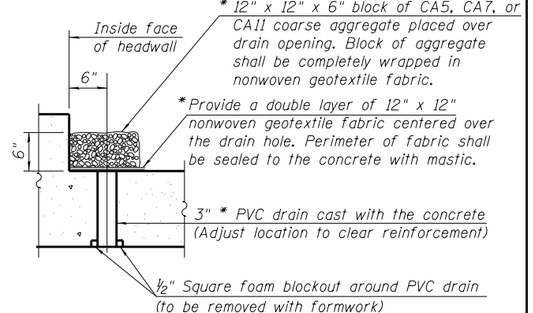


C.I.P. END SECTION ELEVATION
(Downstream section)



HALF SECTION THRU BARREL

HALF END ELEVATION



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

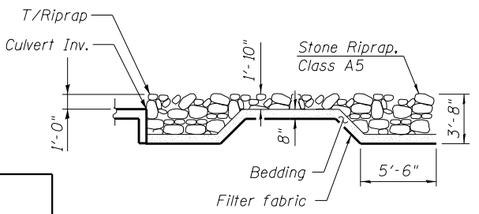
GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
Cost of excavation for wingwalls is included in Concrete Box Culverts
* For precast box details and location of Triple Precast Box Culvert and End Sections No. 2 & No. 3 see Drainage and Utility drawing, Sht. 235 of 611.
For precast box fabrication details see Sht. 9 of 9.
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
Precast End Sections are not allowed.
For Backfill Detail see Sht. 6 of 9.

WATERWAY INFORMATION

Drainage Area = 0.3406 sq.mi.
Existing Overtopping Elevation = N.A
Proposed Overtopping Elevation = 799.19 @ STA 1509+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	2	33	N/A	18.50	797.03	N/A	0.04	N/A	797.07
	10	95	N/A	22.70	797.26	N/A	0.40	N/A	797.66
Design	50	202	N/A	29.20	797.62	N/A	0.70	N/A	798.32
Base	100	272	N/A	32.00	797.78	N/A	0.87	N/A	798.65
	200	317	N/A	34.60	797.92	N/A	0.93	N/A	798.85
OVT (E)	---		---	---	---	---	---	---	---
OVT (P)	N/A	368	---	---	---	---	---	---	---
Max. Calc.		385	N/A	36.50	798.03	N/A	1.10	N/A	799.03



SECTION A-A
See Drainage Plans for riprap layout.

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

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

DESIGN SPECIFICATIONS
AASHTO LRFD Bridge Design Specifications, 7th Edition with 2016 Interims

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structure\Section B2\Precast Culverts\Sht.08 End Section No3.dgn

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	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BOX CULVERTS END SECTION NO. 3
STRUCTURE NO. 045-5573
SHEET NO. 5 OF 9 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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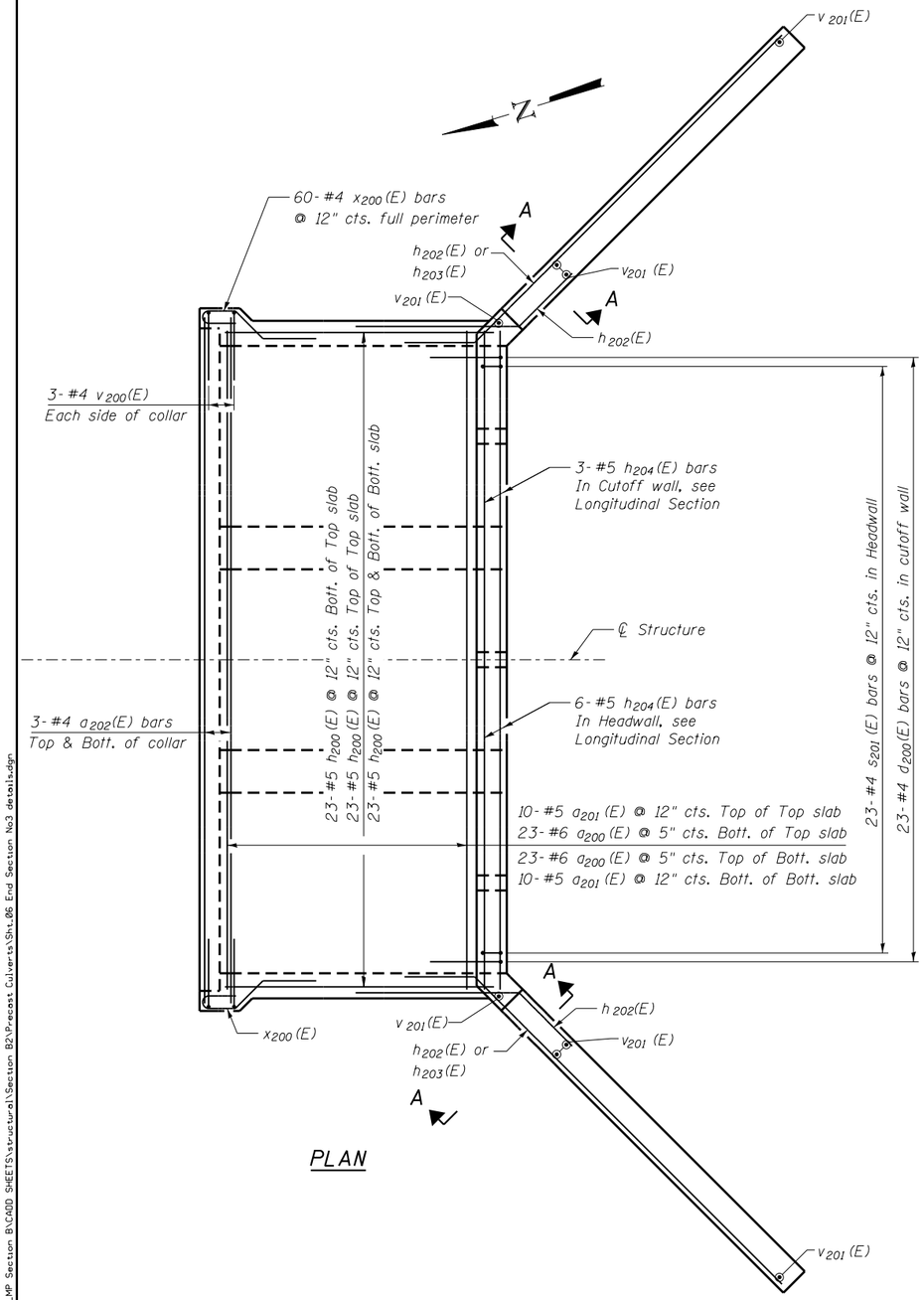
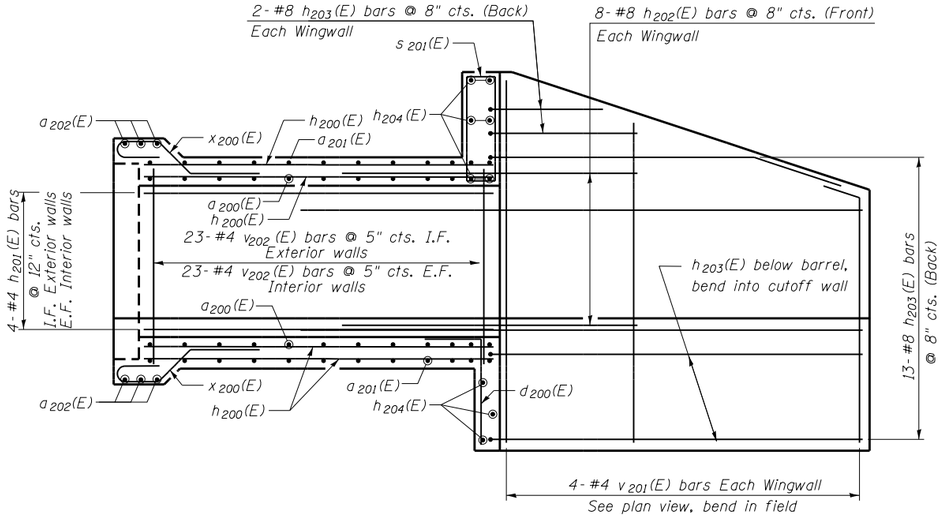
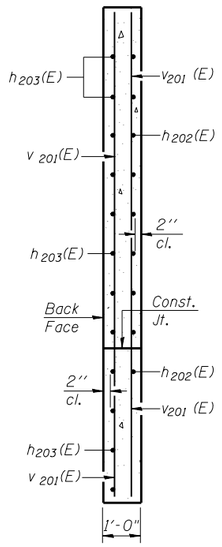
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

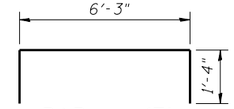


PLAN



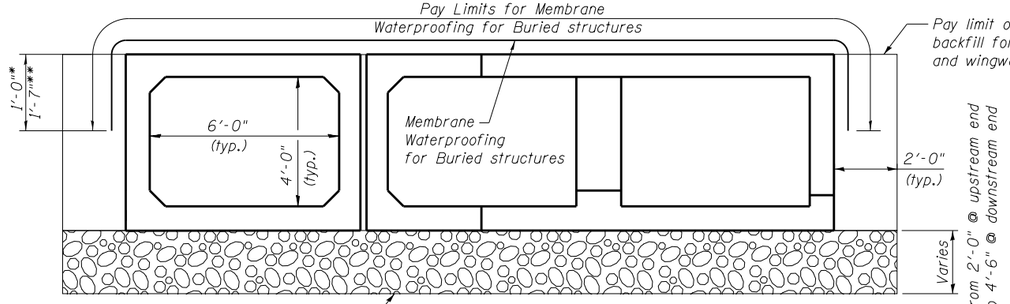


SECTION A-A



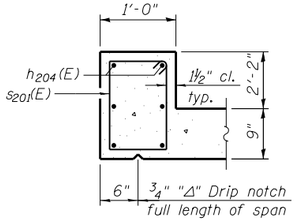
BAR v200(E)

LONGITUDINAL SECTION



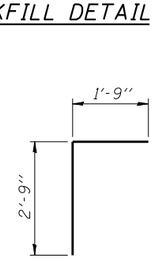
Removal and Disposal of Unsuitable Material for Structures under culvert barrel for length of culvert. Replace with Aggregate Subgrade Improvement.

* For Precast Sections
** For Cast-In-Place Sections

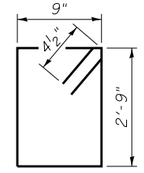


SECTION THRU HEADWALL

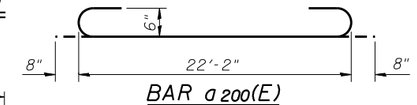
BACKFILL DETAIL



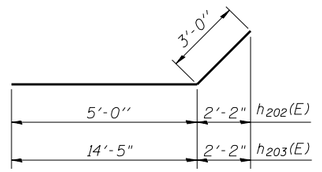
BAR d200(E)



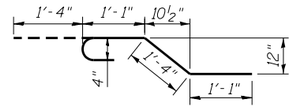
BAR s 201(E)



BAR a200(E)



BARS h202(E) & h203(E)



BAR x200(E)

BILL OF MATERIAL
Culvert @ Sta. 1509+13.75, Downstream End

Bar	No.	Size	Length	Shape
a200(E)	46	#6	23'-5"	
a201(E)	20	#5	22'-2"	
a202(E)	6	#4	23'-0"	
d200(E)	23	#4	4'-6"	
h200(E)	92	#5	9'-1"	
h201(E)	24	#6	9'-1"	
h202(E)	16	#8	8'-0"	
h203(E)	26	#8	17'-5"	
h204(E)	9	#5	22'-2"	
s201(E)	23	#4	6'-9"	
v200(E)	6	#4	8'-11"	
v201(E)	8	#4	9'-9"	
v202(E)	138	#4	4'-11"	
x200(E)	60	#4	4'-10"	
Concrete Box Culverts			Cu. Yd.	33.2
Reinforcement Bars, Epoxy Coated			Pound	5,860
Name Plates			Each	1

FILE NAME = w:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Precast Culverts\Sht. 06 End Section No3 details.dgn

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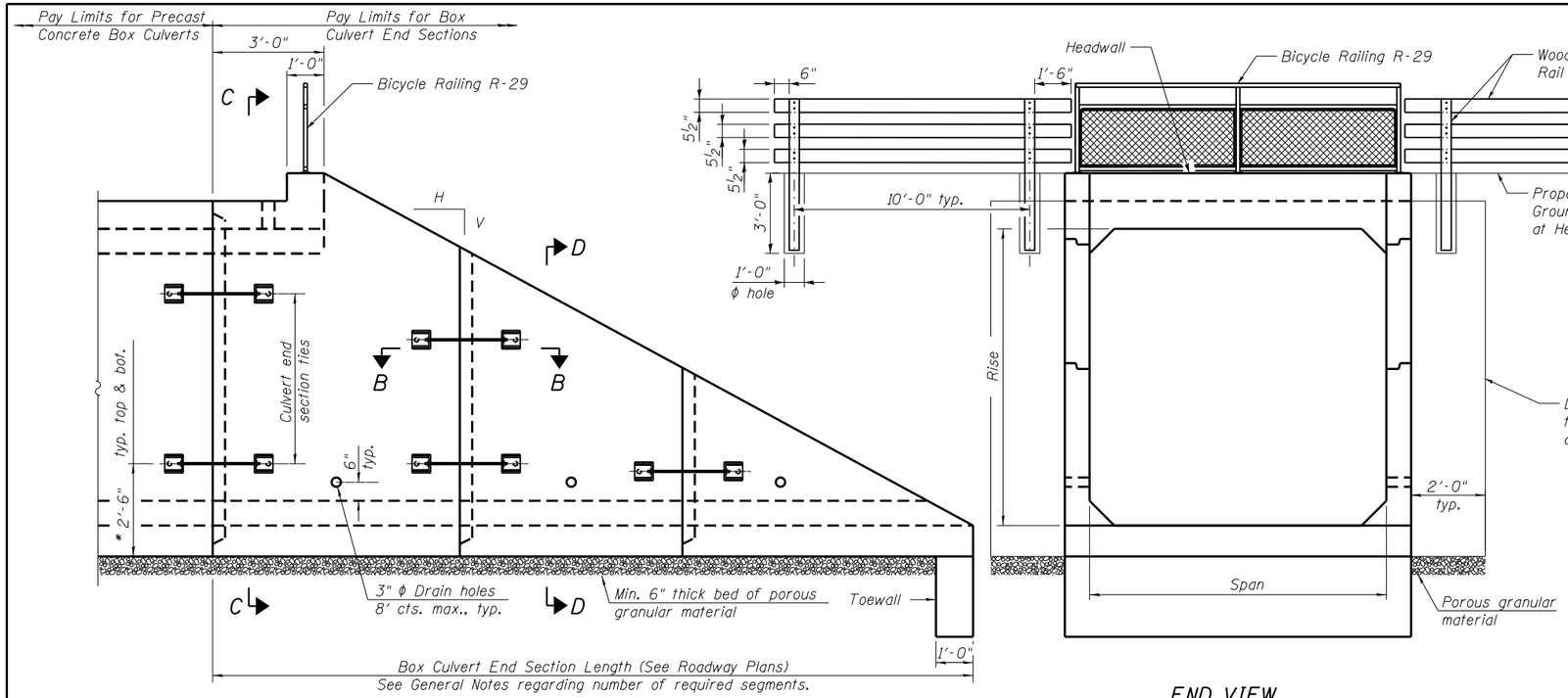
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BOX CULVERTS END SECTION NO. 3 DETAILS
STRUCTURE NO. 045-5573
SHEET NO. 6 OF 9 SHEETS

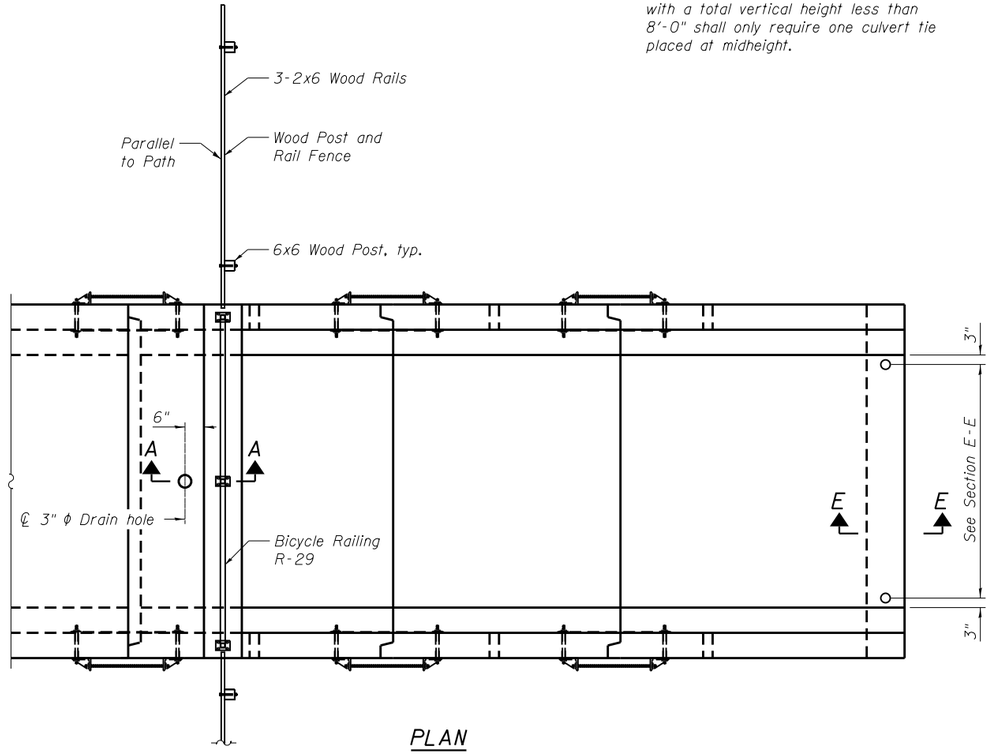
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	440
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



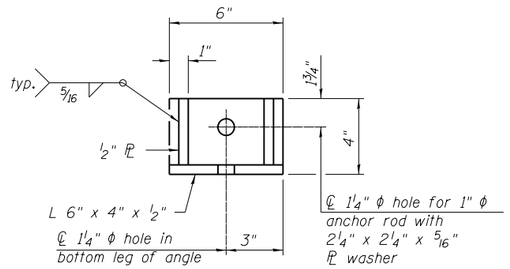
ELEVATION

* Precast box culvert end section joints with a total vertical height less than 8'-0" shall only require one culvert tie placed at midheight.

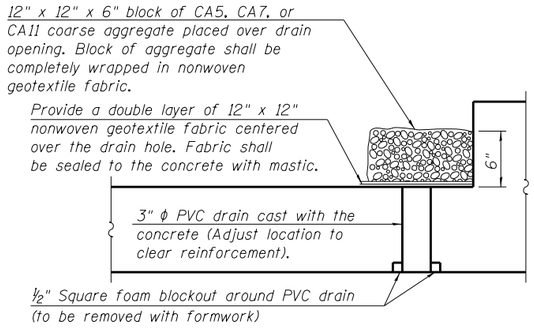
END VIEW



PLAN



RESTRAINT ANGLE DETAIL



SECTION A-A

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

See roadway plans for embankment slope (V:H).

1" ϕ anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2¼" x 2¼" x 5/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional ½ turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

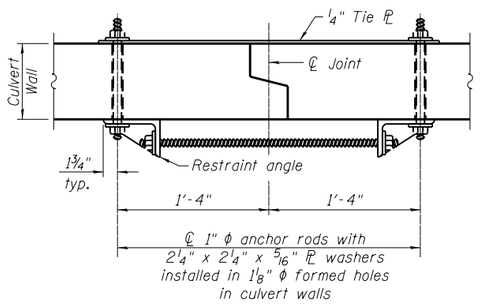
Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.

For precast box details and location of Single Precast Box Culvert and End Sections see Drainage and Utility drawing, Sht. 261 of 611.

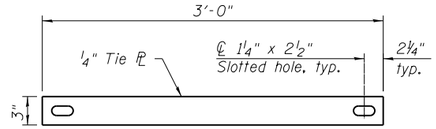
BILL OF MATERIAL

Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	12
Bicycle Railing	Foot	22
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culverts 10'x3'	Foot	20
Membrane Waterproofing for Buried Structures	Sq. Yd.	52
Wood Post and Rail Fence	Foot	40



SECTION B-B

(Showing end section tie details)



TIE PLATE DETAIL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS

SHEET NO. 7 OF 9 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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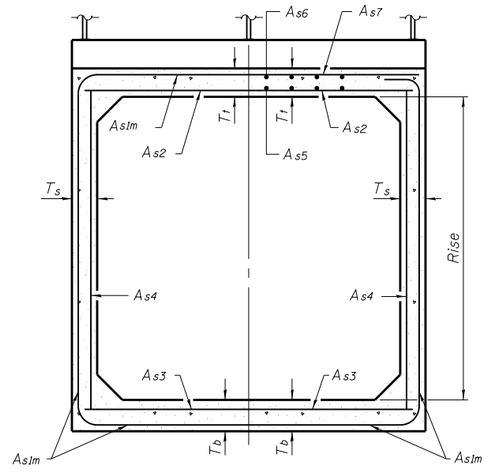
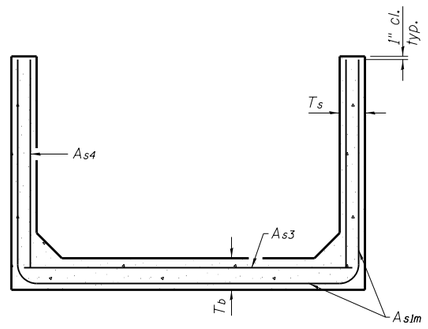
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

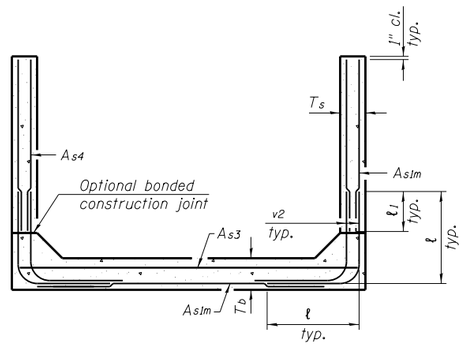


(Design Earth Cover = 2 ft) (Design Earth Cover < 2 ft)

SECTION C-C



SECTION D-D



ALTERNATE SECTION D-D

As1m REINFORCEMENT
(in.²/ ft)

Ts (in.) \ Rise (ft)	2	3	4	5	6	7	8	9	10	11	12
4	0.19	0.17									
5	0.26	0.21	0.18								
6	0.22	0.26	0.23	0.22							
7	0.25	0.33	0.59	0.27	0.28						
8	0.40	0.35	0.43	0.39	0.36	0.34	0.40				
9	0.44	0.39	0.35	0.43	0.40	0.37	0.36	0.48			
10	0.48	0.42	0.38	0.47	0.44	0.41	0.38	0.42	0.56		
11	0.52	0.45	0.54	0.50	0.46	0.44	0.41	0.46	0.50	0.65	
12	0.55	0.49	0.58	0.54	0.50	0.48	0.45	0.46	0.46	0.61	0.75

(As1m reinforcement based upon welded wire reinforcement conforming to AASHTO M 55 or M 221).

ℓ DIMENSION

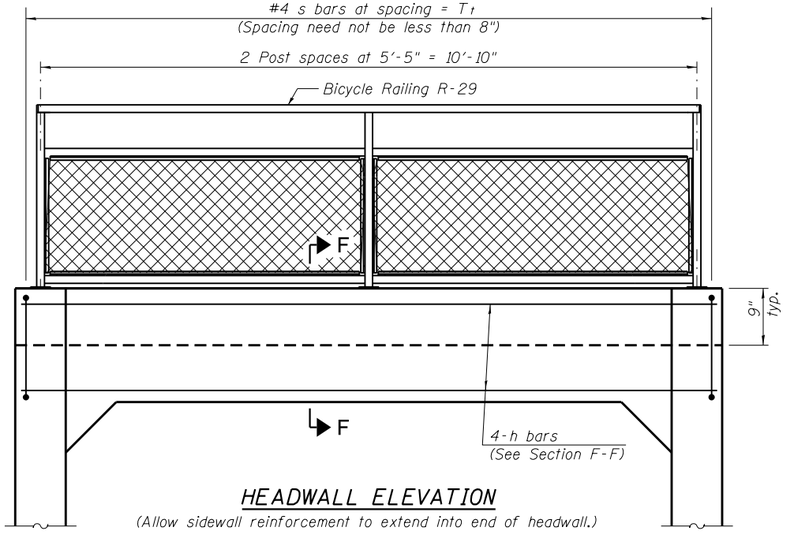
#3 bar = 2'-0"
#4 bar = 2'-8"
#5 bar = 3'-4"
#6 bar = 3'-11"

Notes:

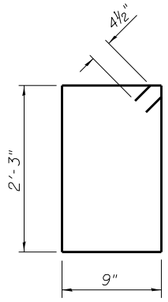
Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.

The size and spacing of the v_2 bars shall provide a minimum reinforcement area along each face of the walls (in.²/ft.) equal to 1.10*(As1m). v_2 bars may consist of #3 thru #6 size reinforcement bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.

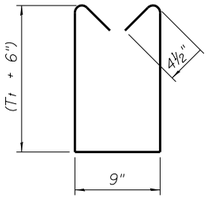
Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.



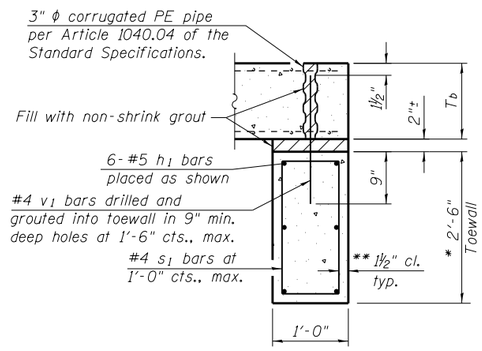
HEADWALL ELEVATION
(Allow sidewall reinforcement to extend into end of headwall.)



BAR s1



BAR s



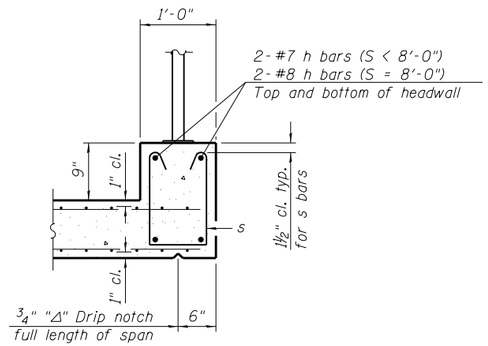
SECTION E-E

TOEWALL CONSTRUCTION SEQUENCE

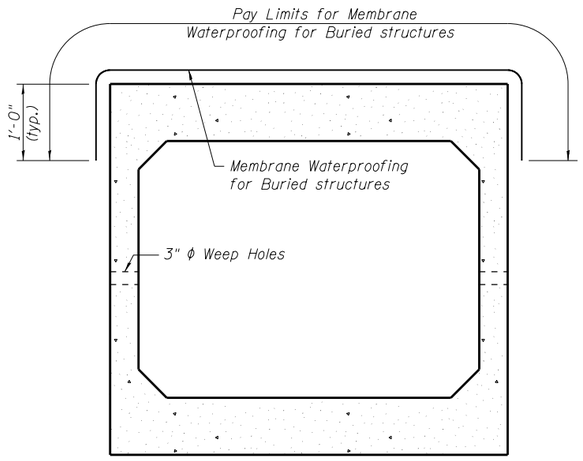
1. Perform excavation and construct toewall.
2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling the method.

** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



SECTION F-F



PRECAST BOX CULVERT WATERPROOFING

SCB-TES 2-17-2017

(Sheet 2 of 2)

Bollinger, Lach & Associates, Inc. ITASCA, ILLINOIS	USER NAME =	DESIGNED - NS	REVISED
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	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS
STRUCTURE NO.
SHEET NO. 8 OF 9 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	442
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

FILE NAME = W:\894-018 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Precast Culverts\Sht.08 End Section No4.dgn

Notes:
The Engineer will inspect the precast units before they are unloaded. Any pieces that are not within ASTM C-1577 and IDOT dimensional tolerances, or out of square by more than $\frac{1}{4}$" measured on the diagonal, will be rejected.

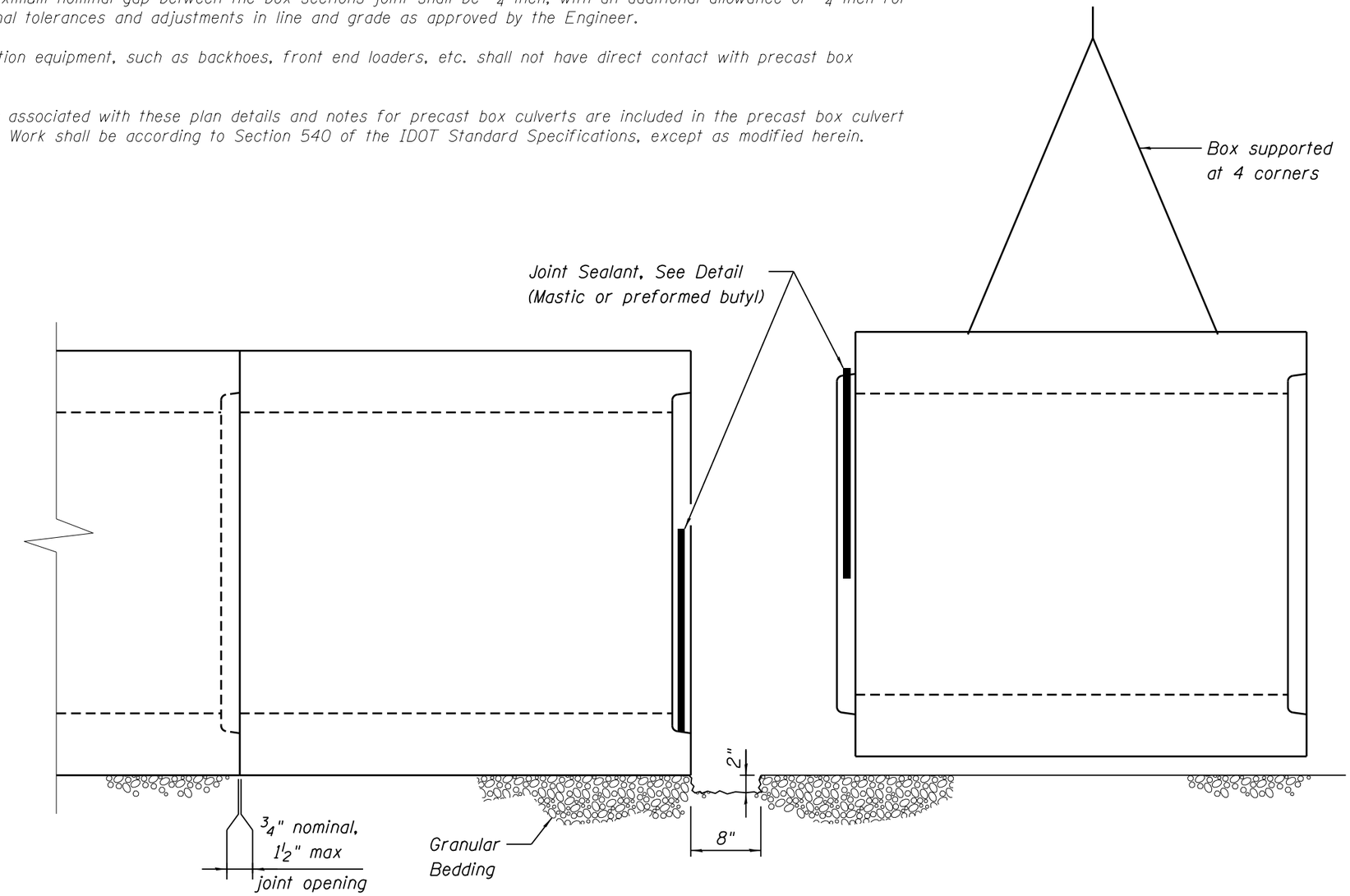
Remove the granular bedding material 8 inches in front of the bell of the previously set box to a depth of 2 inches.

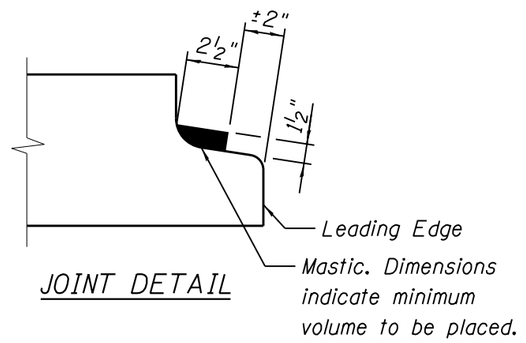
Mastic shall be placed approximately 2 inches from the leading edge of the bell (groove) and spigot (tongue) and into the joint corner. It shall be placed up the bell end and down the spigot end with a 6 inch overlap, as approved by the Engineer. If preformed butyl material is used place it 1 inch from the leading edge. See details.

The entire weight of the box section should be maintained by the crane until the box sections are brought together. Most of the weight should be on the crane hook after the tongue is in the groove and until the sections are brought home. Maximum nominal gap between the box sections joint shall be $\frac{3}{4}$ inch, with an additional allowance of $\frac{3}{4}$ inch for dimensional tolerances and adjustments in line and grade as approved by the Engineer.

Construction equipment, such as backhoes, front end loaders, etc. shall not have direct contact with precast box sections.

All costs associated with these plan details and notes for precast box culverts are included in the precast box culvert pay item. Work shall be according to Section 540 of the IDOT Standard Specifications, except as modified herein.





JOINT DETAIL

FILE NAME = W:\894-810 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Precast Culverts\Sht_04 PRECAST BOX CULVERT.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

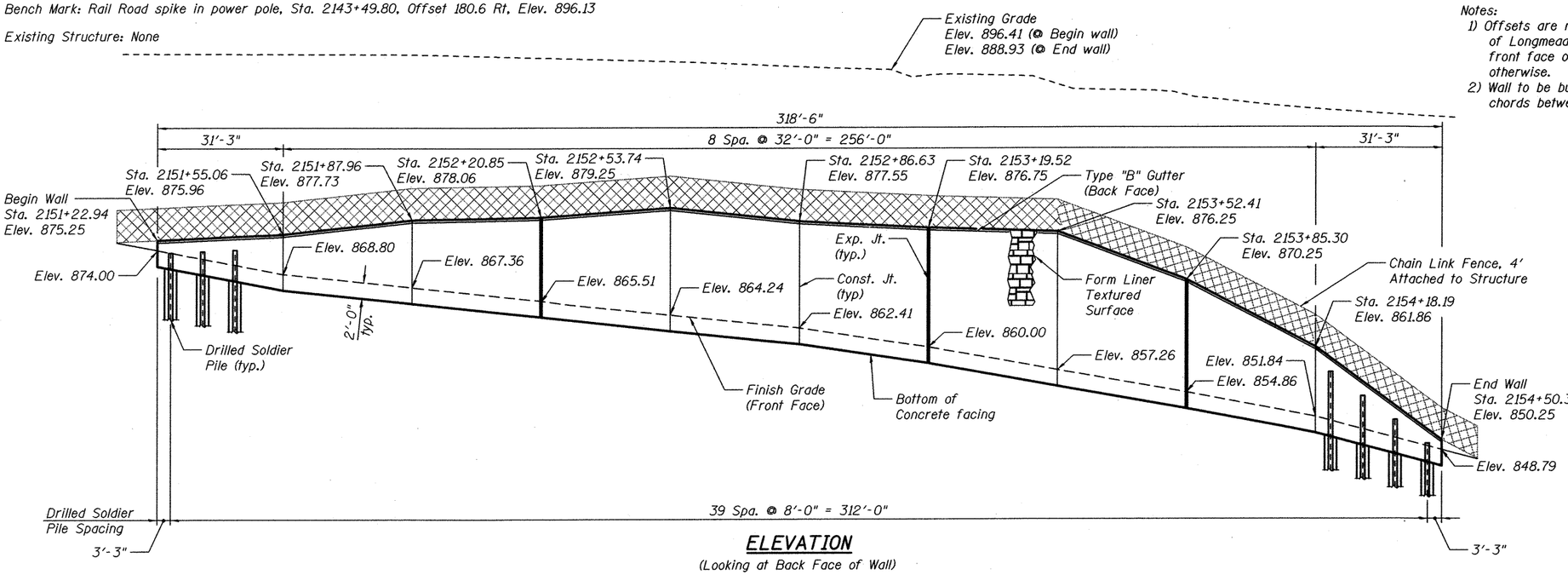
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BOX CULVERT
FABRICATION & CONSTRUCTION DETAILS
SHEET NO. 9 OF 9 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	443
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

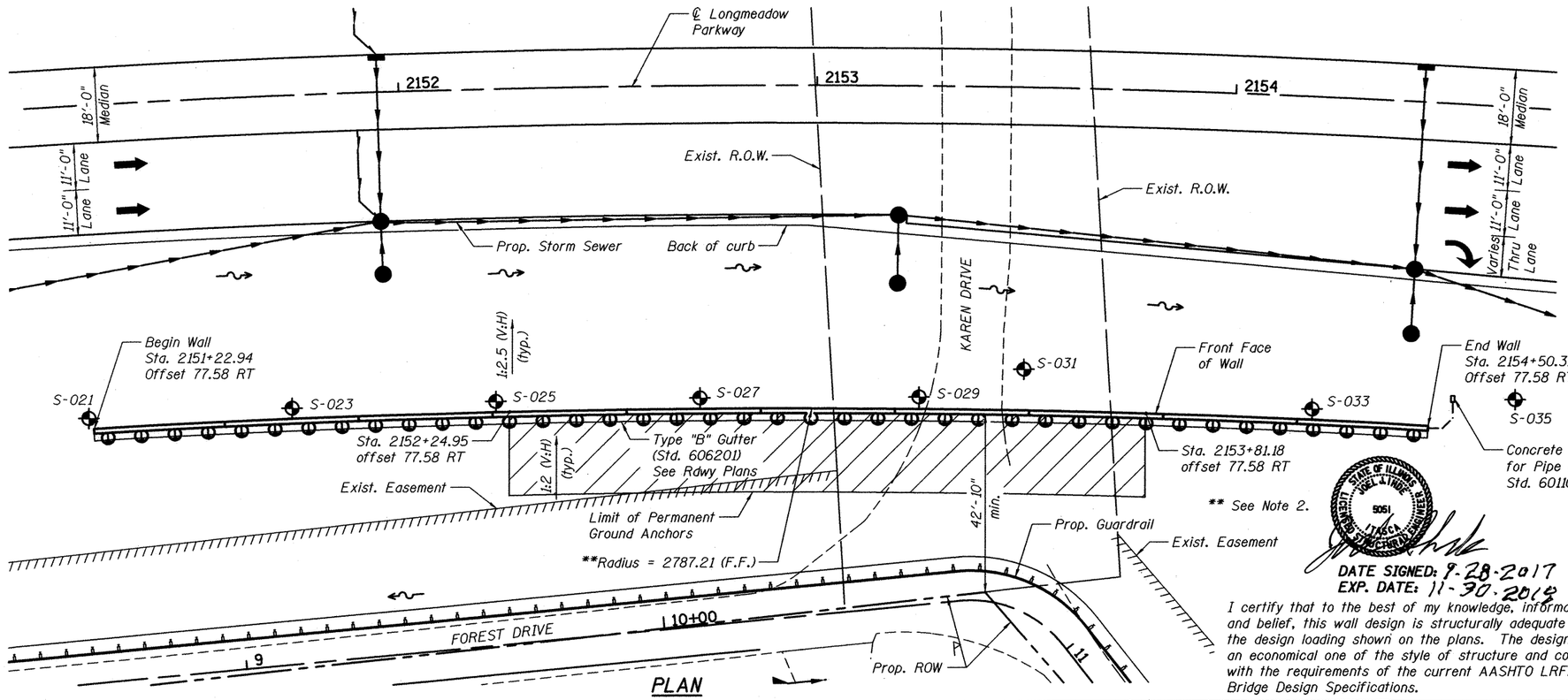
Bench Mark: Rail Road spike in power pole, Sta. 2143+49.80, Offset 180.6 Rt, Elev. 896.13

Existing Structure: None



ELEVATION

(Looking at Back Face of Wall)



PLAN

Notes:
1) Offsets are measured from the ℄ of Longmeadow Parkway to the front face of wall unless noted otherwise.
2) Wall to be built along straight chords between const./exp. joints.

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims

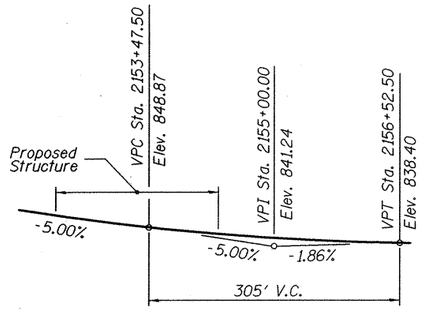
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Wall Facing)
f'c = 4,000 psi (Encasement)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

TOTAL BILL OF MATERIAL

ITEM	UNIT	Quantity
Structure Excavation	Cu. Yd.	535
Concrete Structures	Cu. Yd.	196.9
Form Liner Textured Surface	Sq. Ft.	4,556
Stud Shear Connectors	Each	525
Reinforcement Bars, Epoxy Coated	Pound	20,970
Furnishing Soldier Piles (W Section)	Foot	1,633
Drilling and Setting Soldier Piles (In Soil)	Cu. Ft.	11,565
Untreated Timber Lagging	Sq. Ft.	4,017
Geocomposite Wall Drain	Sq. Yd.	519
Permanent Ground Anchor	Each	20
Chain Link Fence, 4' Attached To Structure	Foot	352
Staining Concrete Structures	Sq. Ft.	4,556
Anti-Graffiti Coating	Sq. Ft.	3,919
Pipe Underdrains for Structures 4"	Foot	335

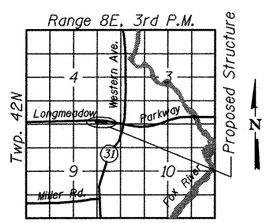


PROFILE GRADE

(along ℄ Longmeadow Parkway)

CURVE DATA

P.I. Sta. = 2153+16.75
Δ = 12° 09' 45" (LT)
D = 2° 00' 22"
R = 2,864.79'
T = 305.21'
L = 608.13'
E = 16.21'
P.C. Sta. = 2150+11.59
P.T. Sta. = 2156+19.67



LOCATION SKETCH

STATE OF ILLINOIS
JOEL J. THIELE
5051
LICENSED STRUCTURAL ENGINEER
ITASCA

DATE SIGNED: 9-28-2017
EXP. DATE: 11-30-2018

I certify that to the best of my knowledge, information and belief, this wall design is structurally adequate for the design loading shown on the plans. The design is an economical one of the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.

GENERAL PLAN AND ELEVATION
LONGMEADOW PARKWAY
RETAINING WALL RW-02
KANE COUNTY
SECTION 16-00215-11-PV
STA. 2151+22.94 TO STA. 2154+50.31

FILE NAME = W:\694-018 IDOT LMP Section B\CADD SHEETS\structural\Section 82\Res Wall RW-02\SHT-01 General Plan.dgn

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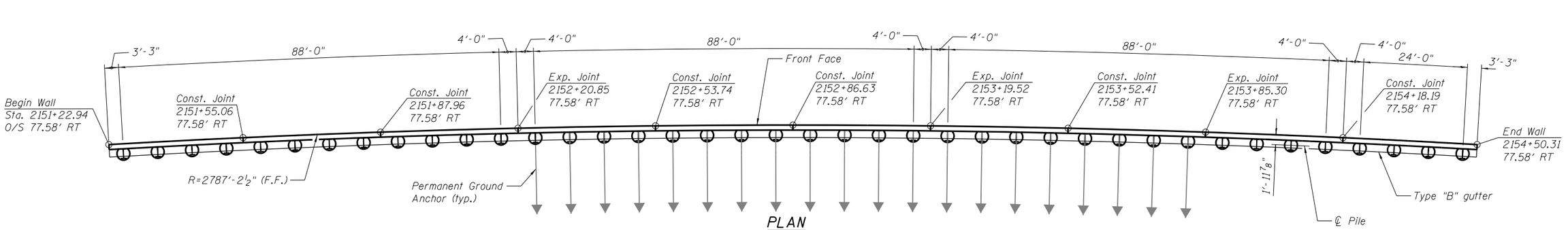
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JJI	REVISED

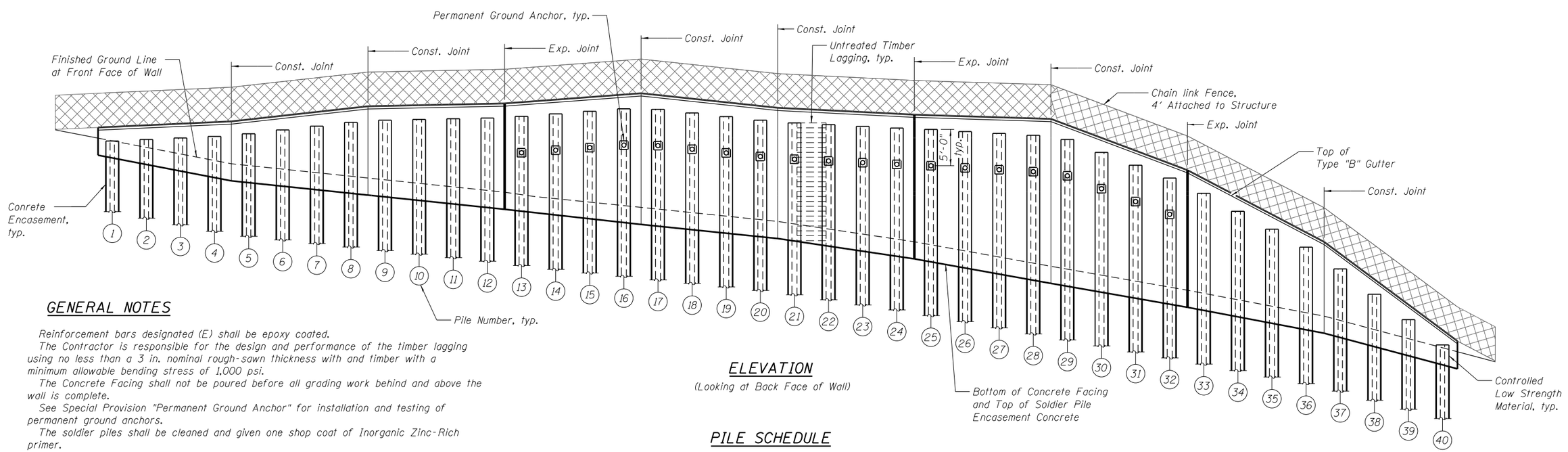
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	444
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



PLAN



ELEVATION

(Looking at Back Face of Wall)

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

The Contractor is responsible for the design and performance of the timber lagging using no less than a 3 in. nominal rough-sawn thickness with and timber with a minimum allowable bending stress of 1,000 psi.

The Concrete Facing shall not be poured before all grading work behind and above the wall is complete.

See Special Provision "Permanent Ground Anchor" for installation and testing of permanent ground anchors.

The soldier piles shall be cleaned and given one shop coat of Inorganic Zinc-Rich primer.

PILE SCHEDULE

Pile No.	Station	Offset to ℄ Pile (ft)	Pile Designation	Approx. Pile Length	Bottom of Pile Elevation	Top of Pile Elevation	Top of Concrete Encasement Elevation	Shear Studs		Encasement Diameter	Anchor Design Load (kip)
								No.	Spacing		
1	2151+26.28	79.76 Rt.	W24x131	31.00	842.65	873.65	871.46	3	12"	3'-0"	-
2	2151+34.51	79.76 Rt.	W24x131	31.00	842.84	873.84	870.13	4	12"	3'-0"	-
3	2151+42.73	79.76 Rt.	W24x131	32.00	842.02	874.02	868.80	6	12"	3'-0"	-
4	2151+50.95	79.76 Rt.	W24x131	32.00	842.20	874.20	867.47	7	12"	3'-0"	-
5	2151+59.17	79.76 Rt.	W24x131	32.00	842.51	874.51	866.62	8	12"	3'-0"	-
6	2151+67.40	79.76 Rt.	W24x131	32.00	842.95	874.95	866.26	9	12"	3'-0"	-
7	2151+75.62	79.76 Rt.	W24x131	38.00	837.40	875.40	865.90	10	12"	3'-0"	-
8	2151+83.84	79.76 Rt.	W24x131	38.00	837.84	875.84	865.54	11	12"	3'-0"	-
9	2151+92.06	79.76 Rt.	W24x131	39.00	837.10	876.10	865.13	11	12"	3'-0"	-
10	2152+00.29	79.76 Rt.	W24x131	39.00	837.18	876.18	864.67	12	12"	3'-0"	-
11	2152+08.51	79.76 Rt.	W24x131	39.00	837.27	876.27	864.20	13	12"	3'-0"	-
12	2152+16.73	79.76 Rt.	W24x131	39.00	837.35	876.35	863.74	13	12"	3'-0"	-
13	2152+24.95	79.57 Rt.	W21x101	39.00	837.54	876.54	863.35	14	12"	3'-0"	55
14	2152+33.18	79.57 Rt.	W21x101	39.00	837.84	876.84	863.03	14	12"	3'-0"	55
15	2152+41.40	79.57 Rt.	W21x101	40.00	837.13	877.13	862.72	15	12"	3'-0"	55
16	2152+49.62	79.57 Rt.	W21x101	40.00	837.43	877.43	862.40	16	12"	3'-0"	55
17	2152+57.84	79.57 Rt.	W21x101	50.00	827.37	877.37	862.01	16	12"	3'-0"	55
18	2152+66.07	79.57 Rt.	W21x101	49.00	827.94	876.94	861.55	16	12"	3'-0"	55
19	2152+74.29	79.57 Rt.	W21x101	49.00	827.52	876.52	861.10	16	12"	3'-0"	55
20	2152+82.51	79.57 Rt.	W21x101	49.00	827.09	876.09	860.64	16	12"	3'-0"	55

Pile No.	Station	Offset to ℄ Pile (ft)	Pile Designation	Approx. Pile Length	Bottom of Pile Elevation	Top of Pile Elevation	Top of Concrete Encasement Elevation	Shear Studs		Encasement Diameter	Anchor Design Load (kip)
								No.	Spacing		
21	2152+90.73	79.57 Rt.	W21x101	48.00	827.78	875.78	860.11	16	12"	3'-0"	60
22	2152+98.96	79.57 Rt.	W21x101	48.00	827.58	875.58	859.51	17	12"	3'-0"	60
23	2153+07.18	79.57 Rt.	W21x101	48.00	827.38	875.38	858.90	17	12"	3'-0"	60
24	2153+15.40	79.57 Rt.	W21x101	49.00	826.18	875.18	858.30	17	12"	3'-0"	60
25	2153+23.62	79.57 Rt.	W21x101	49.00	826.02	875.02	857.66	18	12"	3'-0"	60
26	2153+31.85	79.57 Rt.	W21x101	48.00	826.89	874.89	856.97	18	12"	3'-0"	60
27	2153+40.07	79.57 Rt.	W21x101	48.00	826.77	874.77	856.29	19	12"	3'-0"	60
28	2153+48.29	79.57 Rt.	W21x101	48.00	826.64	874.64	855.60	20	12"	3'-0"	60
29	2153+56.51	79.57 Rt.	W21x101	47.00	826.83	873.83	854.96	19	12"	3'-0"	60
30	2153+64.74	79.57 Rt.	W21x101	46.00	826.33	872.33	854.36	18	12"	3'-0"	60
31	2153+72.96	79.57 Rt.	W21x101	44.00	826.83	870.83	853.76	18	12"	3'-0"	60
32	2153+81.18	79.57 Rt.	W21x101	43.00	826.33	869.33	853.16	17	12"	3'-0"	60
33	2153+89.40	79.76 Rt.	W24x131	42.00	825.53	867.53	852.48	16	12"	3'-0"	-
34	2153+97.63	79.76 Rt.	W24x131	40.00	825.43	865.43	851.73	14	12"	3'-0"	-
35	2154+05.85	79.76 Rt.	W24x131	38.00	825.34	863.34	850.97	13	12"	3'-0"	-
36	2154+14.07	79.76 Rt.	W24x131	36.00	825.24	861.24	850.22	12	12"	3'-0"	-
37	2154+22.29	79.76 Rt.	W24x131	38.00	820.71	858.71	849.45	10	12"	3'-0"	-
38	2154+30.52	79.76 Rt.	W24x131	35.00	820.73	855.73	848.67	8	12"	3'-0"	-
39	2154+38.74	79.76 Rt.	W24x131	32.00	820.76	852.76	847.89	5	12"	3'-0"	-
40	2154+46.96	79.76 Rt.	W24x131	29.00	820.79	849.79	847.11	3	12"	3'-0"	-

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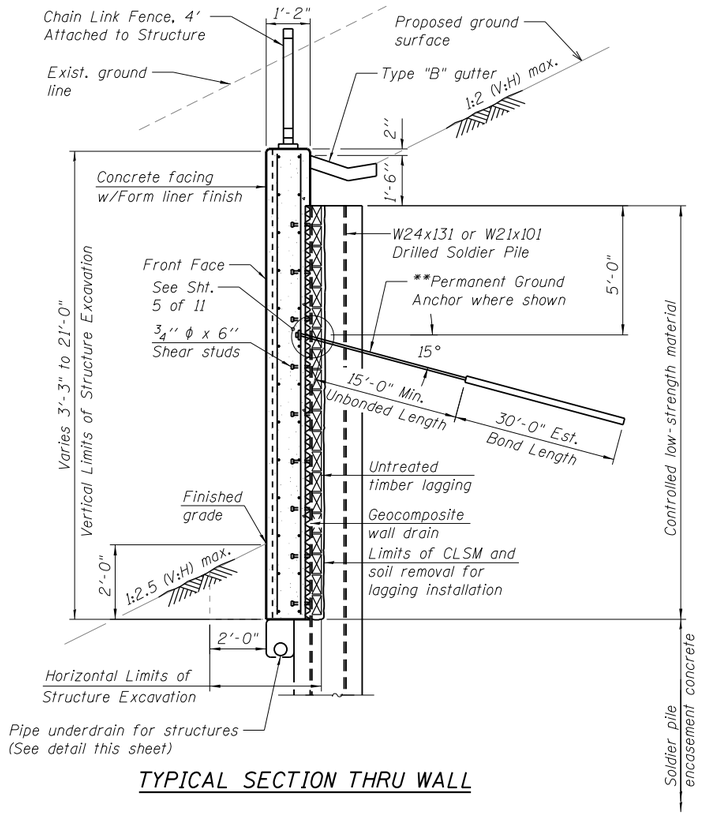
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

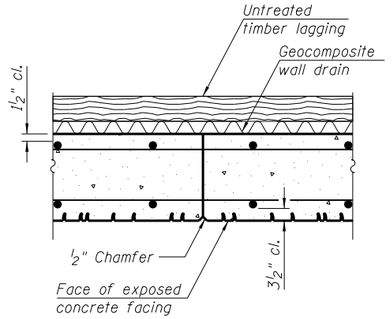
SOLDIER PILE LAYOUT
RETAINING WALL RW-02
SHEET NO. 2 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	445
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

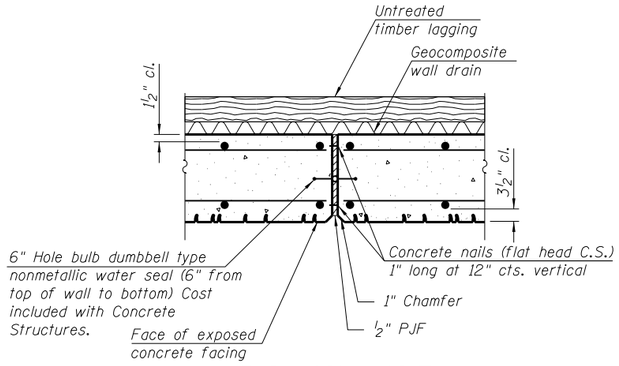


TYPICAL SECTION THRU WALL

Note:
The Contractor is responsible for the design and performance of the lagging using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

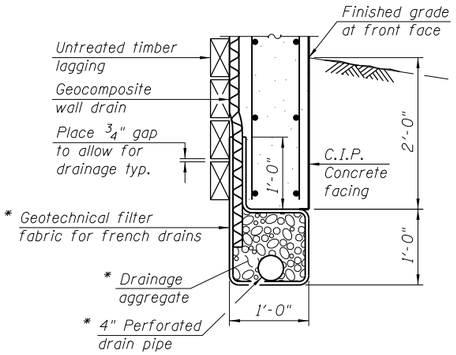


CONSTRUCTION JOINT

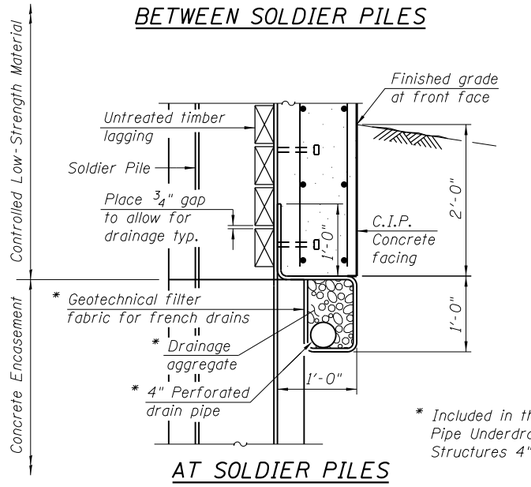


EXPANSION JOINT

JOINT DETAILS



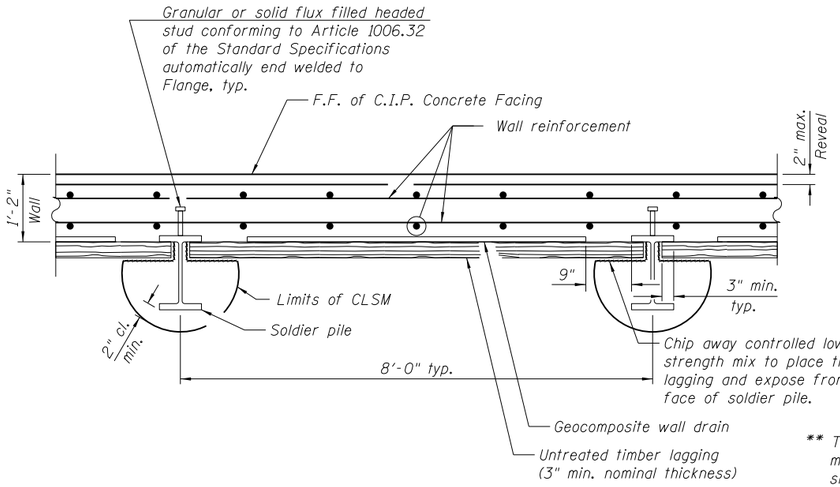
BETWEEN SOLDIER PILES



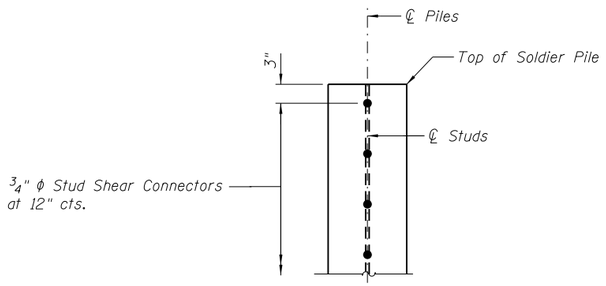
AT SOLDIER PILES

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

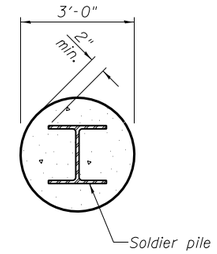
UNDERDRAIN DETAILS



SECTION THRU DRILLED SOLDIER PILE WALL



DETAIL OF SHEAR STUD PLACEMENT



SOLDIER PILE ENCASEMENT

Note:
The drain shall be placed behind the lagging with the pervious side toward the soil according to Section 591 of the Standard Specifications and shall be centered between the piles. The drain shall be installed in stages as the excavation proceeds downward making sure that drain splices as well as the top side edges are covered as required to protect the drain.

** The Contractor shall furnish and install Permanent Ground Anchors meeting the requirements for design load and unbonded length as shown on the plans, and fitting within the R.O.W. limits of the site. All elements (drilled hole, sheath bondbreaker, encapsulation, tendons, bonded length, etc.) shall be selected and designed by the Contractor. All materials and work shall be in compliance with the special provision.

Notes:
For Soldier Pile Layout, See Sheet 2 of 11.
For Concrete Facing Details see Sheet 4 of 11.
For Permanent Ground Anchor Connection Details see Sheet 5 of 11.
C.I.P. denotes Cast in Place.
F.F. denotes Front Face.

FILE NAME = W:\894-018 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Ret Wall RW-02\SHT-03 Soldier Pile Details.dgn

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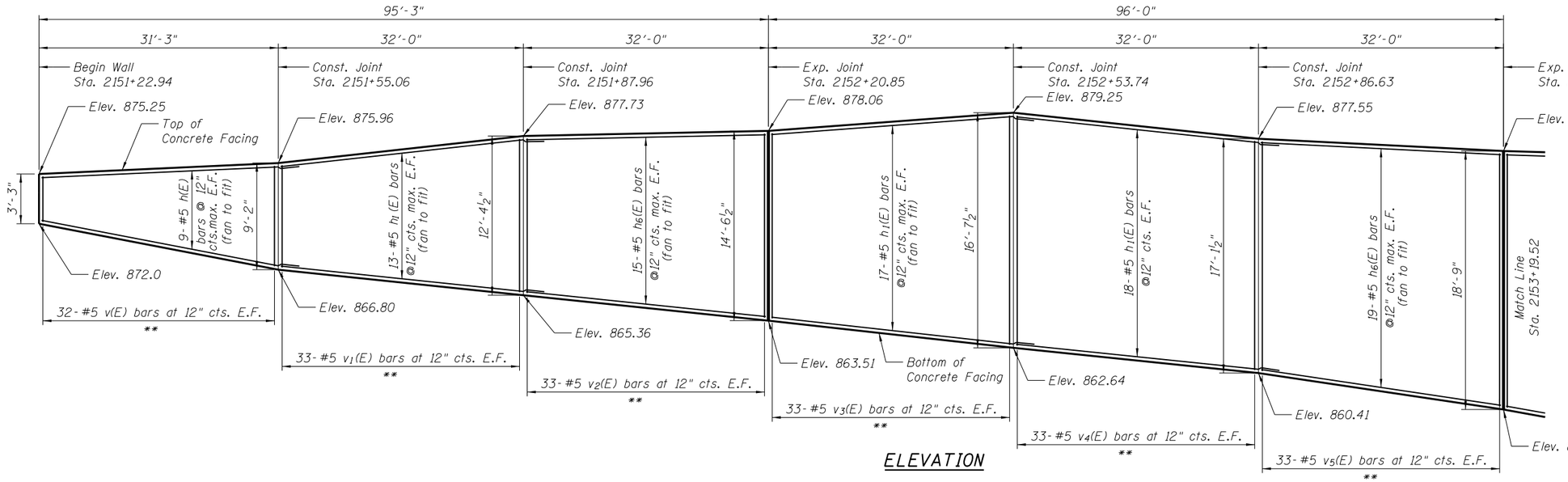
PLOT DATE =	CHECKED - JJI	REVISED

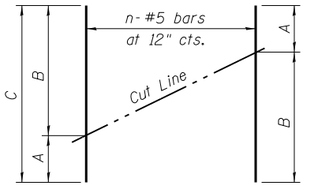
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOLDIER PILE DETAILS
RETAINING WALL RW-02
SHEET NO. 3 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	446
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



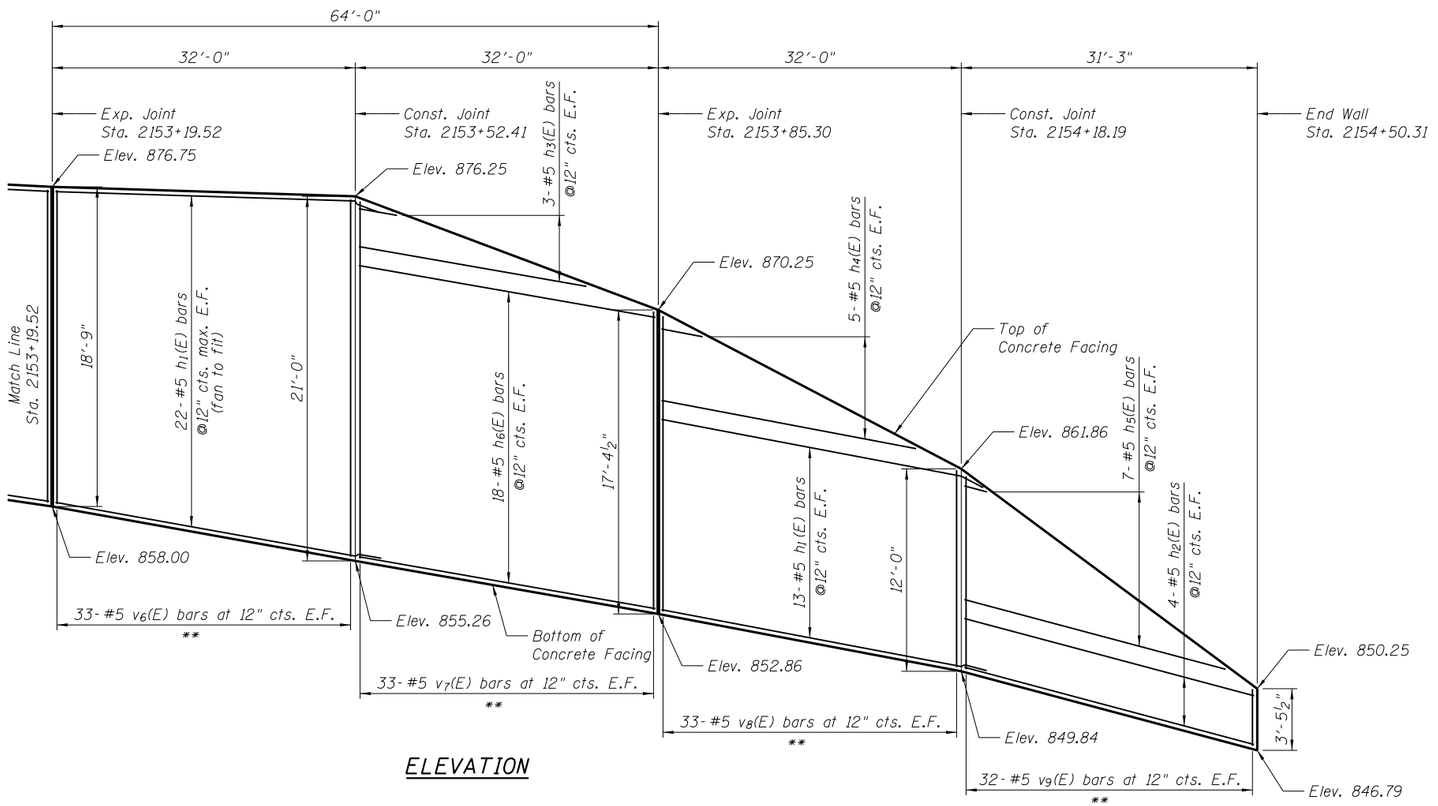
ELEVATION



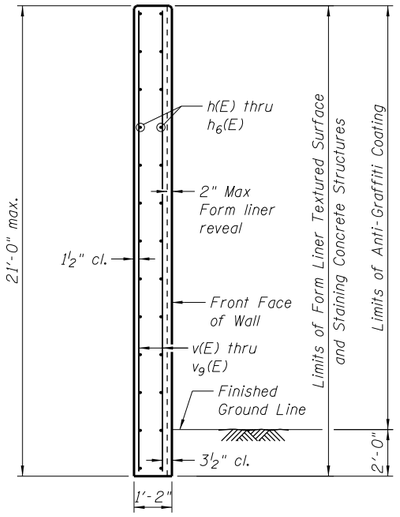
FIELD CUTTING DIAGRAM

bars	n	A	B	C
v(E)	32	3'-0"	8'-11"	11'-11"
v_1(E)	33	8'-11"	12'-1"	21'-0"
v_2(E)	33	12'-1"	14'-3"	26'-5"
v_3(E)	33	14'-3"	16'-4"	30'-7"
v_4(E)	33	16'-4"	16'-10"	33'-2"
v_5(E)	33	16'-10"	18'-6"	35'-4"
v_6(E)	33	18'-6"	20'-9"	39'-3"
v_7(E)	33	20'-9"	17'-1"	37'-10"
v_8(E)	33	17'-1"	11'-9"	28'-10"
v_9(E)	32	11'-9"	3'-2"	14'-11"
h_3(E)	3	4'-0"	24'-4"	28'-4"
h_4(E)	5	4'-5"	27'-4"	31'-9"
h_5(E)	7	2'-5"	28'-6"	30'-11"

** Order bars per length on Bill of Materials. Cut as shown in Field Cutting Diagram and use half of bars on each side.



ELEVATION



SECTION THRU CONCRETE FACING

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	18	#5	34'-8"	
h_1(E)	166	#5	35'-0"	
h_2(E)	8	#5	30'-11"	
h_3(E)	6	#5	28'-4"	
h_4(E)	10	#5	31'-9"	
h_5(E)	14	#5	30'-11"	
h_6(E)	104	#5	31'-8"	
v(E)	32	#5	11'-11"	
v_1(E)	33	#5	21'-0"	
v_2(E)	33	#5	26'-5"	
v_3(E)	33	#5	30'-7"	
v_4(E)	33	#5	33'-2"	
v_5(E)	33	#5	35'-4"	
v_6(E)	33	#5	39'-3"	
v_7(E)	33	#5	37'-10"	
v_8(E)	33	#5	28'-10"	
v_9(E)	32	#5	14'-11"	
Concrete Structures		Cu. Yd.	196.9	
Reinforcement Bars, Epoxy Coated		Pound	20,970	
Pipe Underdrains for Structures 4"		Foot	335	
Geocomposite Wall Drain		Sq. Yd.	519	
Form Liner Textured Surface		Sq. Ft.	4,556	
Staining Concrete Structures		Sq. Ft.	4,556	
Anti-Graffiti Coating		Sq. Ft.	3,919	

NOTES:

For Typical Sections and Soldier Pile Details, see Sheet 3 of 11.

Stations and dimensions are measured along front face of wall.

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Ret Wall Rw-02\SHT_04 Concrete Facing.dgn

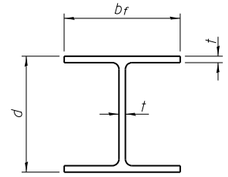
Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

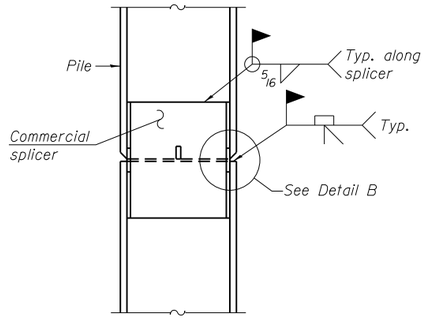
CONCRETE FACING DETAILS
RETAINING WALL RW-02
SHEET NO. 4 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	447
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

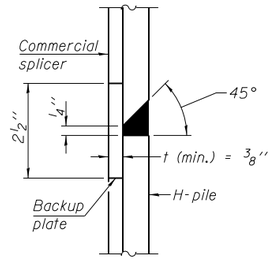


STEEL PILE TABLE

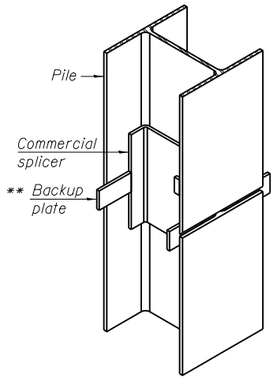
Designation	Depth d	Flange width b_f	Web thickness t	Flange thickness t	Encasement diameter A
W 24x131	$24\frac{1}{2}$"	$12\frac{7}{8}$"	$\frac{5}{8}$"	1"	36"
W 21x101	$21\frac{3}{8}$"	$12\frac{1}{4}$"	$\frac{1}{2}$"	$\frac{3}{4}$"	36"



ELEVATION

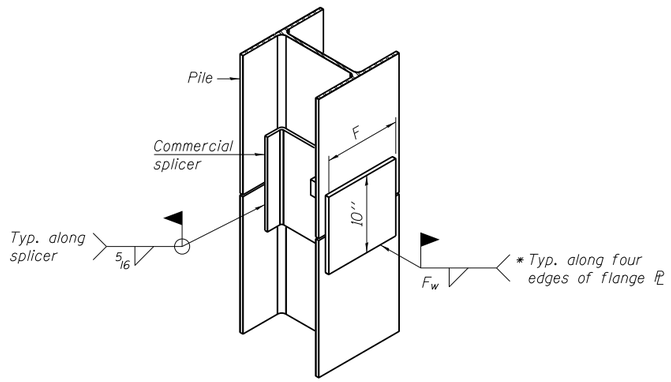


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



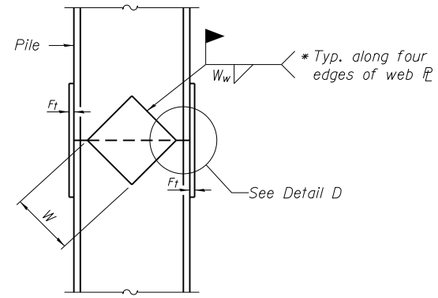
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

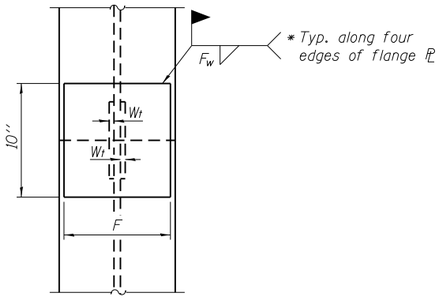
* Interrupt welds $\frac{1}{4}$" from end of web and/or each flange.

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

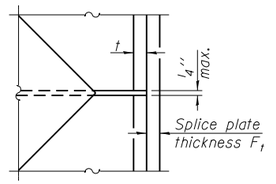
Note:
The steel W-piles shall be according to AASHTO M270 Grade 50.



ELEVATION



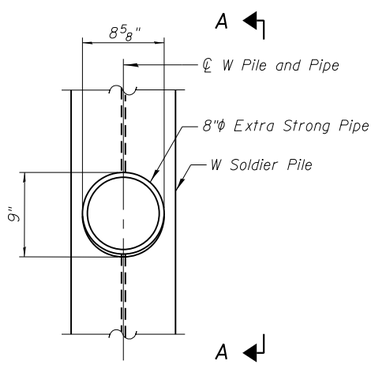
END VIEW



DETAIL D

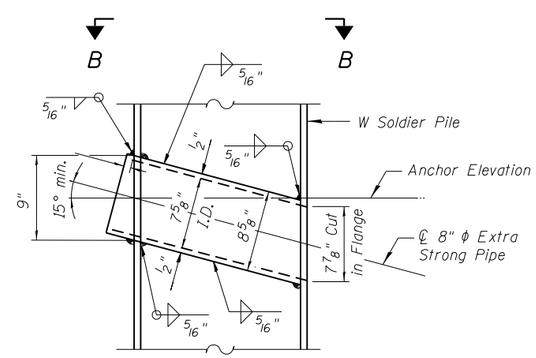
Designation	F	F_f	F_w	W	W_f	W_w
W 24x131	10"	$1\frac{1}{4}$"	$\frac{7}{8}$"	14"	$\frac{5}{8}$"	$\frac{1}{2}$"
W 21x101	10"	1"	$\frac{3}{4}$"	12"	$\frac{5}{8}$"	$\frac{1}{2}$"

WELDED PLATE FIELD SPLICE



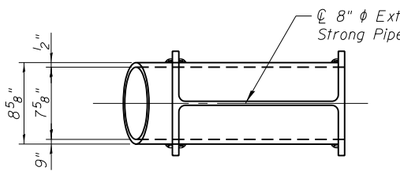
W SECTION ELEVATION AT ANCHOR

For Anchor Angle = 15°



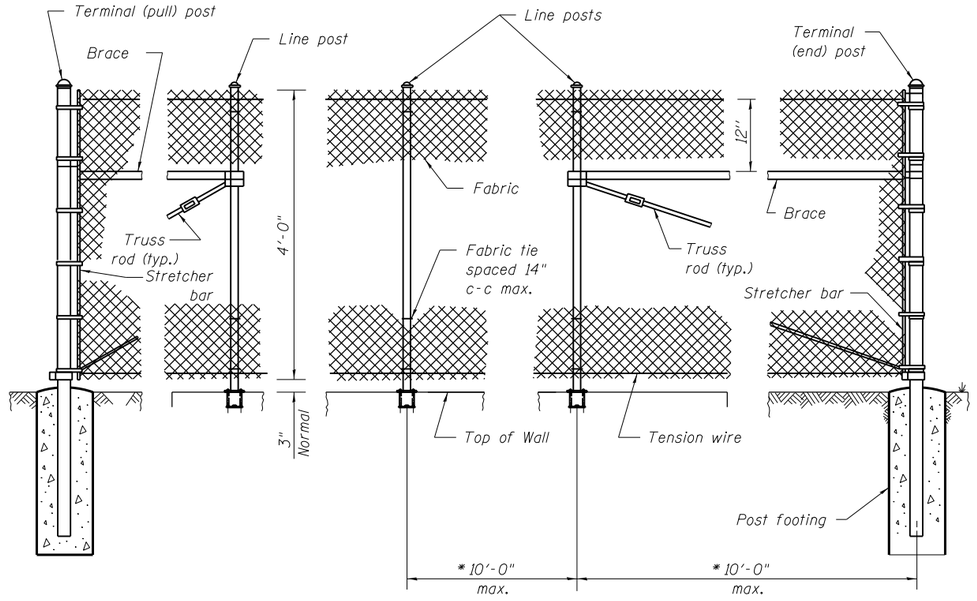
SECTION A-A

For Anchor Angle = 15"



SECTION B-B

ANCHOR CONNECTION DETAILS



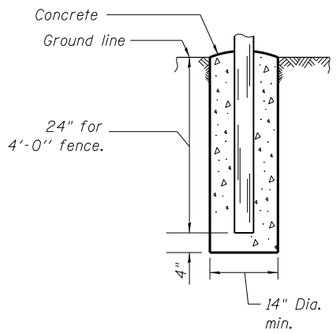
PULL POST ARRANGEMENT

LINE POST ARRANGEMENT

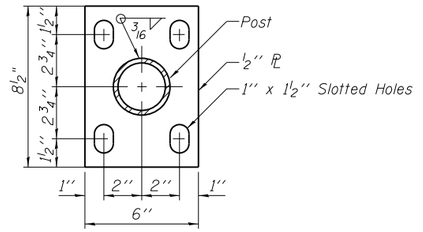
END POST ARRANGEMENT

* The Post Anchors Shall be At least 2'-0" From Wall Expansion Joints.

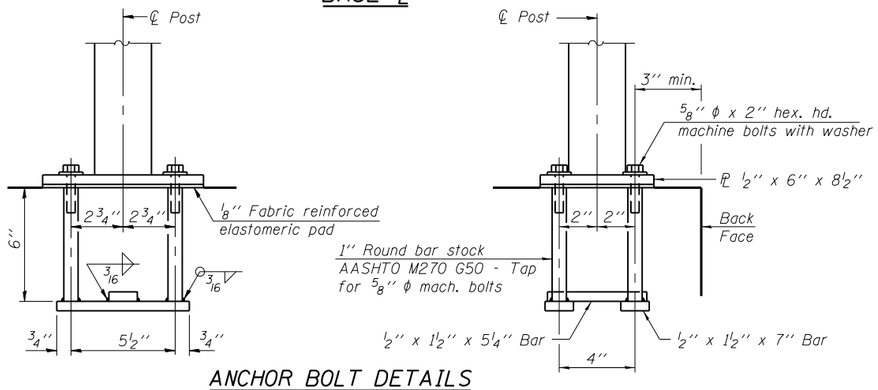
Pull Post Shall Be Placed Off of Wall.



FOOTING FOR TERMINAL POST

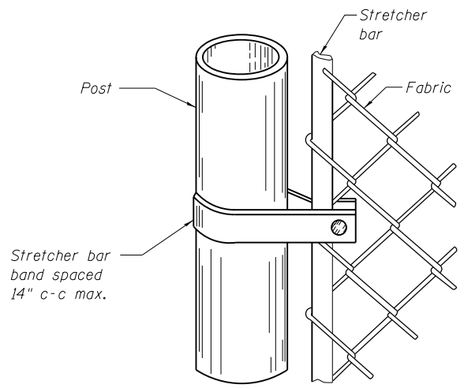


BASE PL

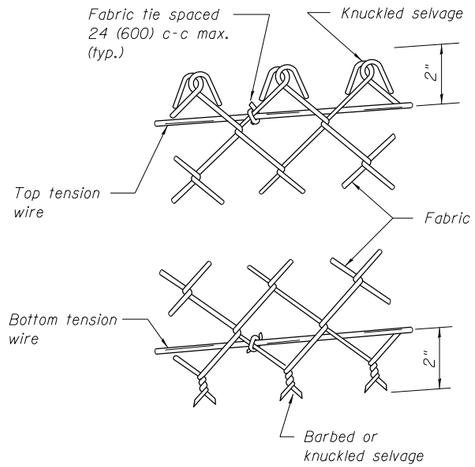


ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



METHOD OF FASTENING STRETCHER BAR TO POST



METHOD OF TYING FABRIC TO TENSION WIRES

BILL OF MATERIAL

Item	Unit	Quantity
Chain Link Fence, 4' Attached to Structure	Foot	352

LINE POST	
Section	lbs./ft.
Pipe Type A 1.90 O.D.	2.72
Pipe Type B 1.90 O.D.	2.28
Pipe Type C 1.90 O.D.	2.26
H 1.875x1.625	2.72

TERMINAL POST	
Section	lbs./ft.
Pipe Type A 2.375 O.D.	3.65
Pipe Type B 2.375 O.D.	3.11
Pipe Type C 2.375 O.D.	3.09
Roll Formed 3½x3½	See detail
Sq. Tubing 2½x2½	4.32

HORIZONTAL BRACES	
Section	lbs./ft.
Pipe Type A 1.66 O.D.	2.27
Pipe Type B 1.66 O.D.	1.83
Pipe Type C 1.66 O.D.	1.82
H 1.31x1.5	2.25
Roll Formed 1⅝x1¼	See detail

NOTES:

Cost of all the anchor bolts and accessories required for Chain Link Supports are included in Chain Link Fence, 4' Attached to Structure.

FILE NAME = W:\894-010 <DOT LMP Section BX(ADD SHEETS)\structural\Section B2\Ret Wall RW-02\SHT.06 Chain Link Fence Details.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE ATTACHED TO STRUCTURE
RETAINING WALL RW-02
SHEET NO. 6 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	449
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

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

BORING LOG S-021

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 896.46 ft
North: 1993283.98 ft
East: 992901.68 ft
Station: 2151+21.83
Offset: 75.03R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
		--BLIND DRILLING TO 31 FEET--						
	865.5	Dense, brown SANDY LOAM	30		1	18 14 26	NP	19
	863.5	Medium dense to dense, brown LOAM	35		2	11 13 18	NP	14
					3	11 12 17	NP	10
			40		4	14 15 19	NP	11
					5	8 12 18	NP	9
	853.5	Very dense. brown GRAVELLY SAND, with cobbles	45		6	48 28 26	NP	5
	851.0	Stiff, brown CLAY LOAM			7	21 21 29	1.97 B	12
	848.5	Medium dense, brown GRAVELLY SAND	50		8	9 7 5	NP	13

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

GENERAL NOTES

Begin Drilling: 05-27-2005 Complete Drilling: 05-27-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&J Logger: T. Rickey Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 31.00 ft
At Completion of Drilling: ▼ 48.00 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.

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

BORING LOG S-021

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 896.46 ft
North: 1993283.98 ft
East: 992901.68 ft
Station: 2151+21.83
Offset: 75.03R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	845.0	Medium stiff to hard, brown CLAY LOAM			9	3 3 5	0.82 B	15
			55		10	6 8 10	3.12 B	14
					11	9 9 14	0.66 B	13
			60		12	7 14 24	3.53 B	13
			65		13	7 10 14	2.95 B	12
			70		14	8 14 24	4.51 B	12
			75		15	10 12 20	4.00 P	12
	816.5	Boring terminated at 80.00 ft	80		16	6 10 17	3.77 B	12
			85					
			90					
			95					
			100					

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

GENERAL NOTES

Begin Drilling: 05-27-2005 Complete Drilling: 05-27-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&J Logger: T. Rickey Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 31.00 ft
At Completion of Drilling: ▼ 48.00 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.

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

BORING LOG S-023

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 896.37 ft
North: 1993283.24 ft
East: 992950.28 ft
Station: 2151+71.74
Offset: 75.04R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	895.7	8-inch thick TOPSOIL						
		Medium stiff to stiff, brown SILTY CLAY LOAM			1	3 3 6	1.89 B	14
			5		2	4 4 8	1.89 B	14
					3	3 5 7	1.97 B	16
			10		4	4 4 7	1.97 B	16
					5	8 8 13	1.97 B	14
			15		6	3 4 9	1.80 S	12
					7	3 5 7	0.82 B	11
	877.4	Medium dense to very dense, gray to brown GRAVELLY SAND	20		8	6 11 18	NP	3
					9	14 22 33	NP	4
	849.4	Very dense, brown GRAVELLY SAND	25		10	13 18 30	NP	3
	870.9	Very dense, brown SANDY LOAM			11	18 23 36	NP	20
			30		12	12 18 34	NP	18
	862.9	Dense to very dense, brown LOAM			13	10 22 33	NP	
			35		14	14 18 28	NP	18
					15	17 25 35	NP	
			40		16	19 24 30	NP	7
					17	23 29 36	NP	8
			45		18	30 43 51	NP	8
					19	20 19 23	NP	18
			50		20	18 22 30	NP	7

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

GENERAL NOTES

Begin Drilling: 05-17-2005 Complete Drilling: 05-17-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&D Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 25.50 ft
At Completion of Drilling: ▼ DRY
Time After Drilling: NA
Depth to Water: ▼ NA

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Structural\Section B2\Ret Wall Rw-02\SHT-07 SOIL BORING LOGS Ldgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (1 OF 5)

SHEET NO. 7 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	450
		CONTRACT NO. 61E05		
	ILLINOIS	FED. AID PROJECT		

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

BORING LOG S-023

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 896.37 ft
North: 1993283.24 ft
East: 992950.28 ft
Station: 2151+71.74
Offset: 75.04R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	845.9	Hard, gray CLAY LOAM							
	844.4	Very dense, brown, fine SAND				21	21 29 63	6.31 S	13
	841.9	Hard, gray CLAY LOAM	55			22	15 36 57	NP	14
	840.9	Very dense, gray, medium to coarse SAND							
	839.6	Hard, gray CLAY LOAM				23	10 31 26	NP	10
	837.4	Very dense, gray SANDY LOAM	60			24	9 31 50/5"	5.82 B	11
	835.9	Stiff to hard, gray CLAY LOAM				25	13 18 28	5.28 B	10
			65			26	12 18 30	6.15 B	10
			70			27	25 26 48	1.64 B	14
						28	15 22 38	5.66 B	11
	821.4	Boring terminated at 75.00 ft	75			29	12 25 45	3.44 B	11

GENERAL NOTES

Begin Drilling: 05-17-2005 Complete Drilling: 05-17-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&D Logger: J. Kosloski Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: 25.50 ft
At Completion of Drilling: DRY
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

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

BORING LOG S-025

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 895.95 ft
North: 1993281.71 ft
East: 992998.91 ft
Station: 2152+21.70
Offset: 75.00R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	894.9	12-inch black and brown SILTY CLAY LOAM							
		--TOPSOIL--							
		--BLIND DRILLING--							
			5						
			10						
			15						
			20						
			25						
			30						
	862.9	Dense, gray SILTY LOAM				1	8 18 29	NP	15
	860.4	Dense to very dense, gray LOAM	35			2	13 27 21	NP	9
			40			3	32 28 25	NP	12
						4	19 29 34	NP	6
			45			5	17 20 40	NP	10
	850.4	Very dense, brown SANDY LOAM				6	50/4"	NP	8
	848.4	--AUGER REFUSAL--							
		Boring terminated at 47.50 ft	50						

GENERAL NOTES

Begin Drilling: 06-09-2005 Complete Drilling: 06-09-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&B Logger: T. Rickey Checked by: N. Davis
Drilling Method: 3.25-inch HSA

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.

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

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

BORING LOG S-027

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 895.25 ft
North: 1993279.32 ft
East: 993047.58 ft
Station: 2152+71.77
Offset: 75.00R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	895.0	3-inch thick, brown SILTY CLAY LOAM							
		--TOPSOIL--							
		Very stiff to hard, brown SILTY CLAY LOAM				1	3 4 4	2.00 P	16
			5			2	6 7 8	4.50 P	13
						3	6 9 11	4.50 P	13
			10			4	5 7 9	4.00 P	14
						5	3 11 11	2.75 P	13
			15			6	6 9 10	4.50 P	10
						7	8 11 20	2.75 P	10
	877.2	Dense to very dense, brown GRAVELLY SAND	20			8	16 34 27	NP	4
						9	13 22 22	NP	4
			25			10	17 20 28	NP	5
	868.2	Dense, brown, SANDY LOAM				11	13 17 22	NP	20
	861.2	Very stiff, gray CLAY LOAM	35			12	16 13 19	2.62 B	18
	859.7	Very dense, gray LOAM				13	19 29 46	NP	9
			40			14	23 29 38	NP	9
						15	19 32 42	NP	7
	852.2	Very stiff to hard, brown CLAY LOAM	45			16	22 31 47	4.00 P	11
		--A-4 (2)-- --LL=20% PL=11%-- GRAVEL=8.8% SAND=30.4% SILT=39.2% CLAY=21.6%				17	14 17 26	2.21 S	10
			50			18	2 16 18	7.54 B	11

GENERAL NOTES

Begin Drilling: 04-13-2005 Complete Drilling: 04-13-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K&S Logger: Y. Shiu Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: 26.50 ft
At Completion of Drilling: DRY
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

FILE NAME = W:\094-010 KDOT LMP Section B\CADD SHEETS\Structural\Section B2\Res Wall Rw-02\SHT-08 SOIL BORING LOGS 2.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED	
	CHECKED - JJI	REVISED	
PLOT SCALE =	DRAWN - GM	REVISED	
PLOT DATE =	CHECKED - JJI	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (2 OF 5)

SHEET NO. 8 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	451
		CONTRACT NO. 61E05		
	ILLINOIS	FED. AID PROJECT		

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

BORING LOG S-027

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 895.25 ft
North: 1993279.32 ft
East: 993047.58 ft
Station: 2152+71.77
Offset: 75.00R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
						19	12 23 32	8.53 B	11
			55			20	12 18 25	6.97 S	10
	838.7	Very dense, brown SANDY LCAM				21	24 50/4"	> 4.50 P	13
			60			22	32 50/5"	NP	12
	834.7	Very dense, brown, medium to coarse SAND				23	11 32 27	NP	10
	833.0	Hard, brown CLAY LOAM				24	16 26 34	9.59 B	10
	830.2	Boring terminated at 65.00 ft	65						
			70						
			75						

GENERAL NOTES

Begin Drilling: 04-13-2005 Complete Drilling: 04-13-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K&S Logger: Y. Shiu Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: 26.50 ft
At Completion of Drilling: DRY
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

BORING LOG S-029

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 893.53 ft
North: 1993276.08 ft
East: 993099.74 ft
Station: 2153+25.41
Offset: 74.68R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
		--BLIND DRILLING TO 36 FEET--							
			5						
			10						
			15						
			20						
			25						
			30						
			35						
	857.5	Dense, gray SILT				1	12 23 21	NP	17
	855.5	Hard, brown CLAY LOAM	40			2	7 9 12	4.10 B	16
	853.0	Very dense, brown LOAM				3	12 22 32	NP	8
			45			4	50/5"	NP	7
						5	50/4"	NP	11
			50			6	31 50 50/4"	NP	5

GENERAL NOTES

Begin Drilling: 06-27-2005 Complete Drilling: 06-27-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K&J Logger: J. Kasnick Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: <36
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.

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

BORING LOG S-029

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 893.53 ft
North: 1993276.08 ft
East: 993099.74 ft
Station: 2153+25.41
Offset: 74.68R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
						7	52 50/4"	NP	7
	840.0	Hard, brown CLAY LOAM				8	50/1"		
			55			9	13 18 25	5.74 B	10
			60			10	16 26 29	5.82 B	10
						11	16 27 30	8.94 B	10
	830.5	Very dense, fine to coarse SAND							
	829.0	Hard, brown CLAY LOAM	65			12	26 46 24	NP	14
						13	11 22 43	5.90 B	10
	823.5	Boring terminated at 70.00 ft	70			14	15 28 50/5"	> 10.25 B	10
			75						

GENERAL NOTES

Begin Drilling: 06-27-2005 Complete Drilling: 06-27-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: K&J Logger: J. Kasnick Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: <36
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.

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Ret Wall Rw-02\SHT_09 SOIL BORING LOGS 3.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (3 OF 5)

SHEET NO. 9 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	452
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

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

BORING LOG S-031

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 892.54 ft
North: 1993281.02 ft
East: 993125.15 ft
Station: 2153+50.96
Offset: 67.68R

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
891.4	13-inch thick, black and brown SILTY CLAY LOAM --TOPSOIL--						
	Stiff to very stiff, brown SILTY CLAY LOAM			1	3 4 6	1.39 S	23
				2	3 4 7	1.56 B	14
				3	2 5 6	2.21 B	14
				4	3 8 10	2.87 B	12
				5	4 7 23	1.48 B	13
				6	12 11 8	1.07 B	15
				7	14 14 21	NP	9
874.5	Dense, brown GRAVELLY SAND			8	16 23 22	NP	4
				9	16 21 20	NP	4
				10	13 17 19	NP	3
864.5	Dense, brown fine SAND			11	16 19 20	NP	4
				12	12 17 18	NP	19
861.0	Medium dense to dense, brown to gray SILTY LOAM			13	15 21 23	NP	26
				14	8 12 19	NP	19
				15	15 13 14	NP	16
854.5	Very stiff, gray CLAY LOAM to LOAM			16	9 17 22	2.62 B	22
				17	14 22 27	2.05 B	10
849.5	Very dense, brown LOAM			18	12 26 31	NP	11
				19	29 33 50	NP	9
				20	18 29 50/5"	NP	9

GENERAL NOTES

Begin Drilling: 06-09-2005 Complete Drilling: 06-10-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&B Logger: T. Rickey Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 28.50 ft
At Completion of Drilling: ▼ DRY
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENG 2012301.GPJ WANGENG.GDT 9/30/14

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

BORING LOG S-031

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 892.54 ft
North: 1993281.02 ft
East: 993125.15 ft
Station: 2153+50.96
Offset: 67.68R

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
839.5				21	31 38 35	NP	11
	Dense, gray, medium to coarse SAND	55		22	8 20 16	NP	13
836.0	Hard, gray CLAY LOAM			23	11 25 32	10.25 B	13
834.5	Dense to very dense, gray, fine to coarse SAND	60		24	8 36 50/5"	NP	16
				25	9 46 50/5.5"	NP	16
829.5	Hard, gray CLAY LOAM	65		26	14 18 23	7.63 B	10
				27	14 31 31	7.71 B	10
822.5	Boring terminated at 70.00 ft	70		28	15 20 30	4.51 B	11
		75					

GENERAL NOTES

Begin Drilling: 06-09-2005 Complete Drilling: 06-10-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&B Logger: T. Rickey Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 28.50 ft
At Completion of Drilling: ▼ DRY
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENG 2012301.GPJ WANGENG.GDT 9/30/14

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

BORING LOG S-033

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 888.93 ft
North: 1993266.95 ft
East: 993193.10 ft
Station: 2154+21.74
Offset: 75.01R

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	--BLIND DRILLING TO 38.5 FEET--						
850.4	Dense to very dense, brown LOAM	40		1	41 50/4"	NP	9
				2	4 16 25	NP	8
845.9	Very dense, gray SANDY LOAM	45		3	25 35 53	NP	12
				4	18 27 50/5"	NP	14
840.9	Very stiff, brown CLAY LOAM	50		5	24 39 47	2.71 S	9

GENERAL NOTES

Begin Drilling: 06-27-2005 Complete Drilling: 06-27-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&J Logger: J. Kasnick Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: ▽ 50.50 ft
At Completion of Drilling: ▼ DRY
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENG 2012301.GPJ WANGENG.GDT 9/30/14

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Res Wall Rw-02\SHT_10 SOIL BORING LOGS 4.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (4 OF 5)

SHEET NO. 10 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	453
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

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

BORING LOG S-033

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 888.93 ft
North: 1993266.95 ft
East: 993193.10 ft
Station: 2154+21.74
Offset: 75.01R

Depth (ft)	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	838.4	Loose, gray, medium SAND						
	837.4	Very stiff to hard, brown CLAY LOAM			6	2 4 6	6.31 B	11
55					7	5 20 21	3.69 B	11
					8	10 22 30	9.10 B	10
	830.9	Very dense, brown, fine SAND			9	18 50/4"	NP	14
60					10	25 49 50/3"	NP	16
65					11	23 47 50/5"	NP	13
	823.4	Hard, brown CLAY LOAM			12	14 25 29	5.66 B	10
	818.9	Boring terminated at 70.00 ft			13	12 19 30	5.82 B	10
75								

GENERAL NOTES

Begin Drilling: 06-27-2005 Complete Drilling: 06-27-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&J Logger: J. Kasnick Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: 50.50 ft
At Completion of Drilling: DRY
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

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

BORING LOG S-035

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 887.63 ft
North: 1993266.09 ft
East: 993241.61 ft
Station: 2154+71.26
Offset: 70.08R

Depth (ft)	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
		Stiff, brown SILTY CLAY LOAM			1	2 4 6	1.48 B	17
5					2	3 8 9	1.72 B	11
					3	2 3 4	1.15 B	12
					4	10 50/3"		9
	877.9	Medium dense, brown LOAM			5	10 14 10	NP	7
15	874.6	Medium dense, brown SANDY LOAM			6	5 7 12	NP	11
	872.1	Medium dense to very dense, brown GRAVELLY SAND			7	4 10 14	NP	3
20					8	12 24 22	NP	3
					9	21 38 36	NP	3
25					10	8 18 19	NP	9
	857.6	Dense to very dense, gray LOAM			11	11 18 18	NP	7
30					12	2 25 30	NP	16
					13	24 28 32	NP	9
35					14	11 23 33	NP	8
					15	14 24 19	NP	12
40					16	6 15 28	NP	10
	847.1	Medium dense, gray SANDY LOAM			17	1 1 12	NP	13
	844.6	Medium stiff to hard, brown CLAY LOAM			18	3 5 6	1.48 B	13
45					19	4 6 7	1.10 B	14
50					20	4 4 6	0.90 B	14

GENERAL NOTES

Begin Drilling: 06-13-2005 Complete Drilling: 06-14-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&J Logger: W. Wang Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: 23.00 ft
At Completion of Drilling: 40.00 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.

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

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

BORING LOG S-035

WEI Job No.: 201-23-01

Client: McDonough Associates Inc.
Project: Longmeadow Parkway over Fox River
Location: Kane County, Illinois

Datum: NGVD
Elevation: 887.63 ft
North: 1993266.09 ft
East: 993241.61 ft
Station: 2154+71.26
Offset: 70.08R

Depth (ft)	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample Type	Recovery	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
55					21	3 5 6	1.07 B	13
					22	2 4 8	1.89 B	13
					23	4 4 8	1.07 B	13
60					24	4 6 9	1.80 B	10
					25	4 8 15	4.51 B	11
65					26	9 11 14	4.18 B	12
					27	5 7 13	5.00 B	12
70					28	9 13 14		
	802.6	Boring terminated at 85.00 ft			29	7 10 12	3.69 S	12
75								
80					30	10 14 10	3.00 P	13
85					31	7 12 16	3.61 B	12
90								
95								
100								

GENERAL NOTES

Begin Drilling: 06-13-2005 Complete Drilling: 06-14-2005
Drilling Contractor: PRECON DRILLING Drill Rig: CME-75 ATV
Driller: S&J Logger: W. Wang Checked by: N. Davis
Drilling Method: 3.25-inch HSA

WATER LEVEL DATA

While Drilling: 23.00 ft
At Completion of Drilling: 40.00 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.

WANGENGINC 2012301.GPJ WANGENG.GDT 9/30/14

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\structural\Section B2\Ret Wall Rw-02\SHT-11 SOIL BORING LOGS 5.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME =	DESIGNED - NS	REVISED
	CHECKED - JJI	REVISED
PLOT SCALE =	DRAWN - GM	REVISED
PLOT DATE =	CHECKED - JJI	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (5 OF 5)

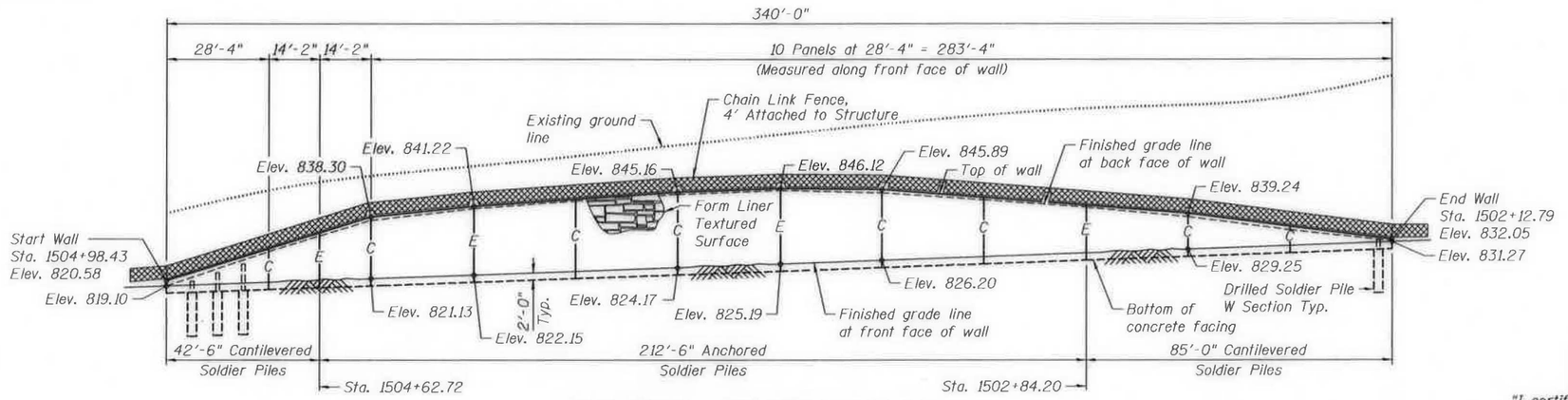
SHEET NO. 11 OF 11 SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	Kane	611	454
		CONTRACT NO. 61E05		
	ILLINOIS	FED. AID PROJECT		

Bench Mark: Control #29 Set Rebar, IL31 Sta. 413+77.78, El. 797.60, Off. 69.76 LT.

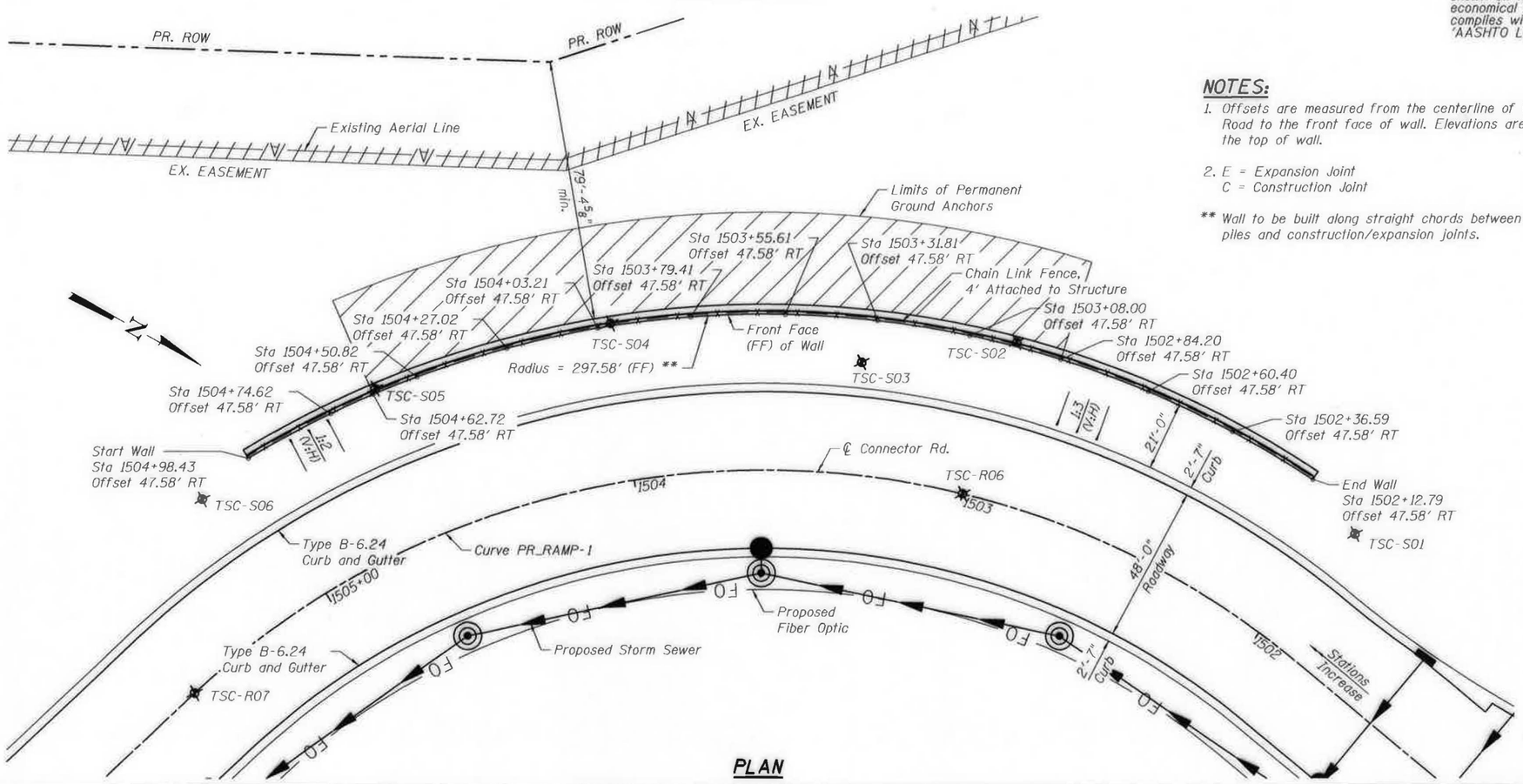
Traffic Control: Wall construction is located in new construction. Traffic control is not required.

Existing Structure: None.

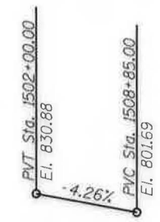


ELEVATION - SOLDIER PILE WALL

(Looking South-West)



PLAN



PROFILE GRADE

Along ℄ Connector Rd.

CURVE DATA PR_RAMP-1

P.I. Sta. = 1504+09.87
Δ = 83° 34' 09" (LT)
D = 22° 55' 06"
R = 250.00'
T = 223.40'
L = 364.64'
E = 85.28'
e = 2%
T.R. = 45'
S.E. Run = 45'
P.C. Sta. = 1501+86.46
P.T. Sta. = 1505+51.10

MATTHEW D. SANTEFORD 081-007244 LICENSED STRUCTURAL ENGINEER OF STATE OF ILLINOIS

8/3/2017

MATTHEW D. SANTEFORD, P.E., S.E.
NO. 081-007244
EXP. DATE 11/30/2018

"I certify that to the best of my knowledge, information and belief, this retaining wall design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current 'AASHTO LRFD Bridge Design Specifications'."

NOTES:

1. Offsets are measured from the centerline of Connector Road to the front face of wall. Elevations are shown at the top of wall.
2. E = Expansion Joint
   C = Construction Joint

** Wall to be built along straight chords between soldier piles and construction/expansion joints.

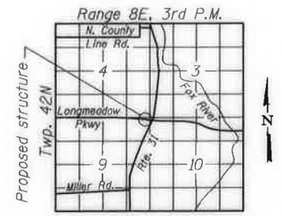
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Wall Facing)
f'c = 4,000 psi (Encasement)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition



LOCATION SKETCH

GENERAL PLAN AND ELEVATION CONNECTOR ROAD RETAINING WALL F.A.U. RT. 2298 SECTION 16-00215-11-PV KANE COUNTY STATION 1502+12.79 TO 1504+98.43

USER NAME = jnpilotte	DESIGNED - RVV	REVISED -	
	DRAWN - RVV	REVISED -	
PLOT SCALE = 40.0 '/ in.	CHECKED - MDS	REVISED -	
PLOT DATE = 8/3/2017	DATE - 8/7/2017	REVISED -	

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 1 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	455
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FILE NAME = G:\CH13\81BR\Road\Structural\Sheets\81_GPE.dgn

GENERAL NOTES

1. The soldier piles shall be cleaned and given one shop coat of Inorganic Zinc-Rich primer.

2. All exposed concrete edges shall have a standard $\frac{3}{4}$" chamfer unless otherwise noted.

3. The wall shall be backfilled (where applicable) prior to placing the concrete facing.

4. See special provision "Permanent Ground Anchor" for installation and testing of permanent ground anchors.

5. Reinforcement bars designated (E) shall be epoxy coated.

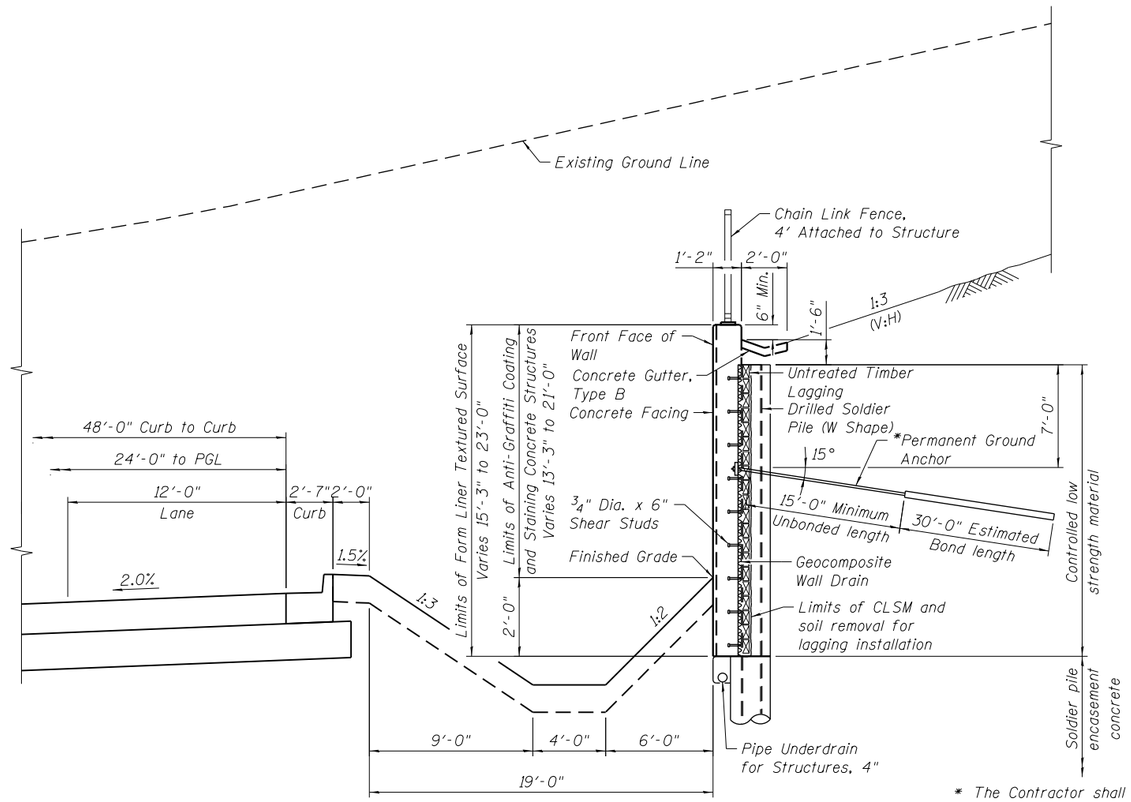
6. The Contractor is responsible for the design and performance of the lagging using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

INDEX OF SHEETS

1	General Plan and Elevation
2	General Data
3	Plan and Elevation 1
4	Plan and Elevation 2
5	Concrete Facing Elevation
6	Details
7	Chain Link Fence Attached To Structure
8-13	Boring Logs

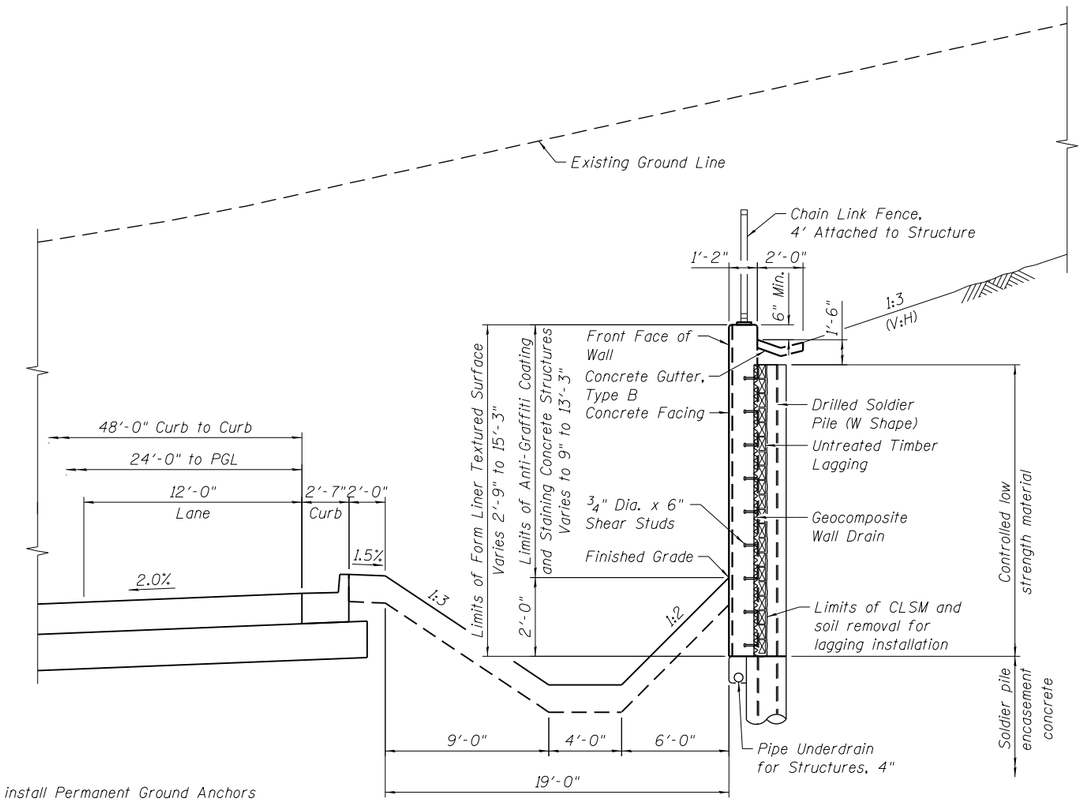
TOTAL BILL OF MATERIAL

Item	Unit	Total Quantity
Structure Excavation	Cu. Yd.	656
Concrete Structures	Cu. Yd.	241.4
Form Liner Textured Surface	Sq. Ft.	5,587
Stud Shear Connectors	Each	768
Reinforcement Bars, Epoxy Coated	Pound	25,910
Furnishing Soldier Piles (W Section)	Foot	2,426
Drilling And Setting Soldier Piles (In Soil)	Cu. Ft.	12,377
Untreated Timber Lagging	Sq. Ft.	4,907
Geocomposite Wall Drain	Sq. Yd.	546
Concrete Gutter, Type B	Foot	345
Permanent Ground Anchor	Each	30
Staining Concrete Structures	Sq. Ft.	4,907
Chain Link Fence, 4' Attached To Structure	Foot	360
Anti-Graffiti Coating	Sq. Ft.	4,907
Pipe Underdrains For Structures 4"	Foot	356



TYPICAL ANCHORED WALL SECTION

Stations 1502+84.20 to 1504+62.72



TYPICAL CANTILEVERED WALL SECTION

Stations 1502+12.79 to 1502+84.20
Stations 1504+62.72 to 1504+98.43

* The Contractor shall furnish and install Permanent Ground Anchors meeting the requirements for design load and unbonded length as shown on the plans, and fitting within the R.O.W. limits of the site. All elements (drilled hole, sheath bondbreaker, encapsulation, tendons, bonded length, etc.) shall be selected and designed by the Contractor. All materials and work shall be in compliance with the special provision.

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TranSystems

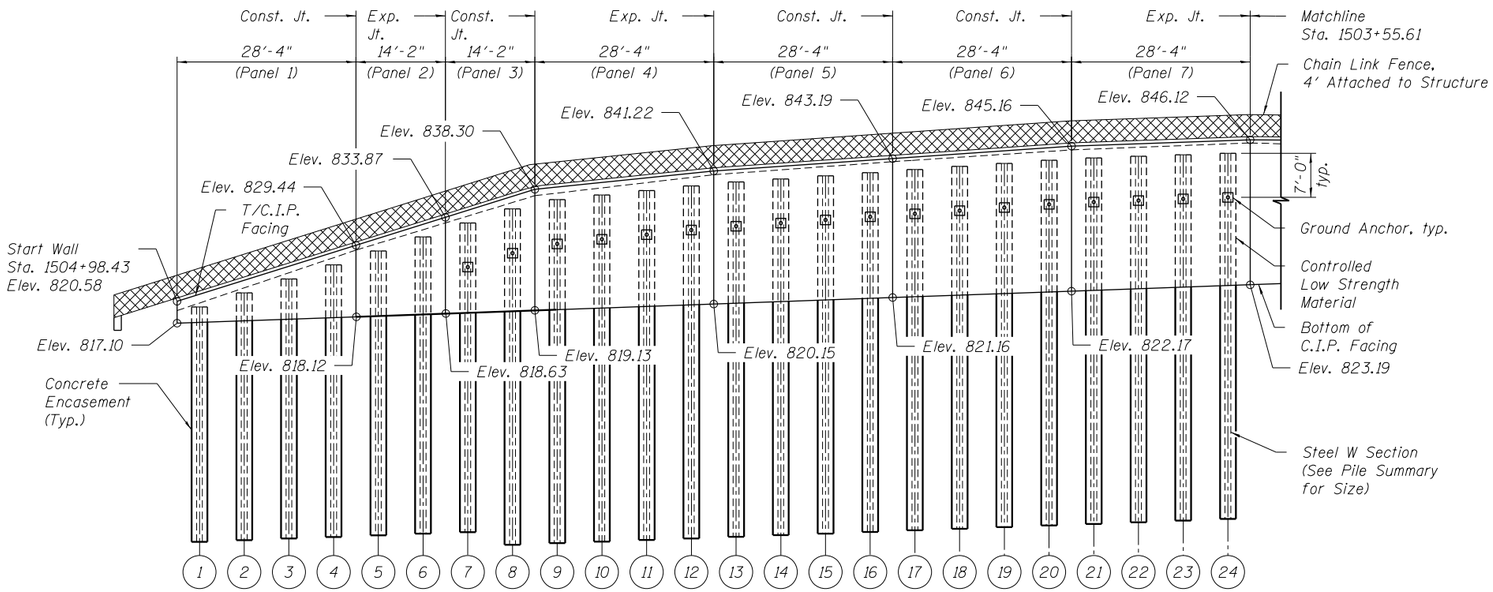
USER NAME = mbmcwhorter	DESIGNED - RVV	REVISED -
	DRAWN - JNP	REVISED -
PLOT SCALE = 24:0 '' / in.	CHECKED - MDS	REVISED -
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
CONNECTOR ROAD RETAINING WALL

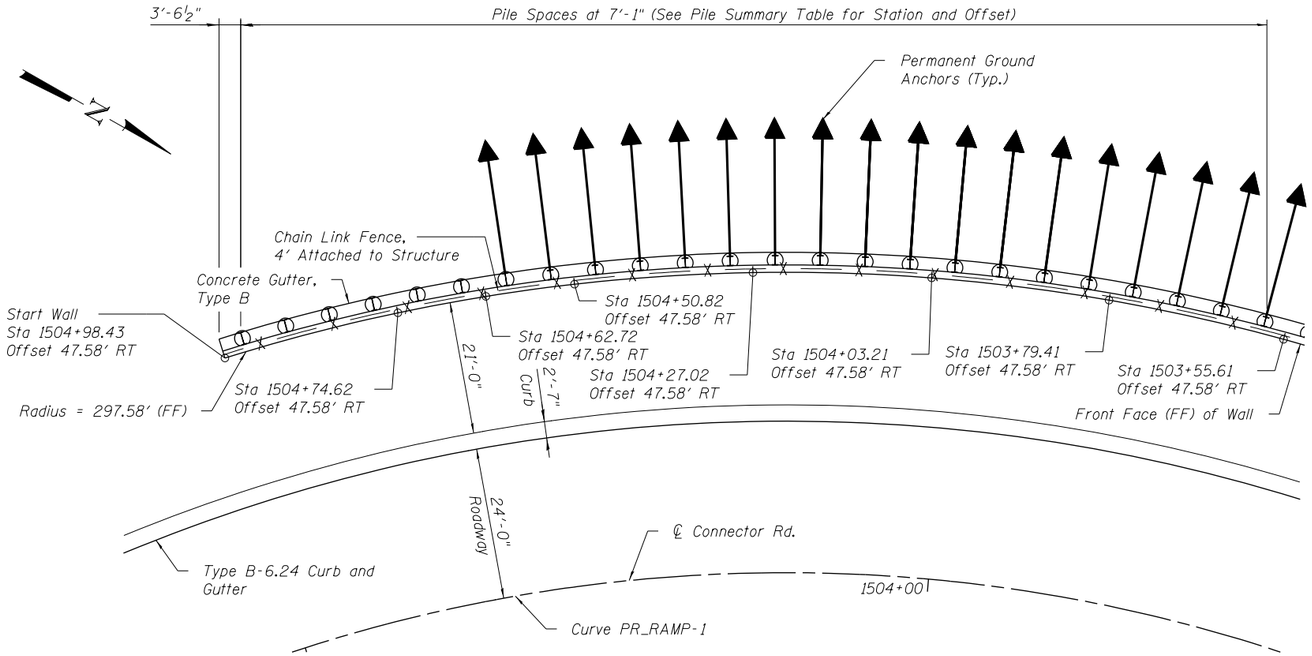
SCALE: | SHEET 2 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	456
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



ELEVATION - SOLDIER PILE WALL

(Looking South-West)



PLAN

NOTES:

1. Stations and offsets are along the front face of the Cast-in-Place facing.
2. Panel lengths and pile spacings are measured along the front face of the Cast-in-Place facing.
3. In the Pile Summary table, stations and offsets are given at the center of pile.
4. See Sheet 6 of 13 for Construction and Expansion Joint details and Pipe Underdrain details.
5. See sheet 5 of 13 for reinforcement details and Bill of Material.
6. See sheet 7 of 13 for Chain Link Fence, 4' Attached to Structure details.

PILE SUMMARY

Pile Number	Station	Offset (Ft. Rt.)	Pile Size	Bottom of Drilled Shaft	Top of Conc. Enc.	Top of Pile	Length (Ft.)	Encasement Diameter	Anchor Design Load (kips)	Anchor Elevation
1	1504+95.45	49.75	W24X84	782.48	817.23	819.69	37.21	2'-6"	-	-
2	1504+89.50	49.75	W24X84	782.73	817.48	821.90	39.17	2'-6"	-	-
3	1504+83.55	49.75	W24X84	782.99	817.74	824.12	41.13	2'-6"	-	-
4	1504+77.60	49.75	W24X84	783.24	817.99	826.33	43.09	2'-6"	-	-
5	1504+71.65	49.75	W24X84	783.49	818.24	828.55	45.06	2'-6"	-	-
6	1504+65.70	49.75	W24X84	783.75	818.50	830.76	47.01	2'-6"	-	-
7	1504+59.75	49.75	W24X84	784.00	818.75	832.98	48.98	2'-6"	35	825.98
8	1504+53.80	49.51	W18x76	782.00	819.00	835.19	53.19	2'-6"	40	828.19
9	1504+47.84	49.51	W18x76	782.26	819.26	836.67	54.41	2'-6"	50	829.67
10	1504+41.89	49.51	W18x76	782.51	819.51	837.40	54.89	2'-6"	50	830.40
11	1504+35.94	49.51	W18x76	782.77	819.77	838.13	55.36	2'-6"	50	831.13
12	1504+29.99	49.51	W18x76	783.02	820.02	838.86	55.84	2'-6"	50	831.86
13	1504+24.04	49.51	W18x76	783.27	820.27	839.47	56.20	2'-6"	55	832.47
14	1504+18.09	49.51	W18x76	783.53	820.53	839.96	56.43	2'-6"	55	832.96
15	1504+12.14	49.51	W18x76	783.78	820.78	840.45	56.67	2'-6"	55	833.45
16	1504+06.19	49.51	W18x76	784.03	821.03	840.94	56.91	2'-6"	55	833.94
17	1504+00.24	49.51	W18x76	784.29	821.29	841.44	57.15	2'-6"	60	834.44
18	1503+94.29	49.51	W18x76	784.54	821.54	841.93	57.39	2'-6"	60	834.93
19	1503+88.34	49.51	W18x76	784.79	821.79	842.42	57.63	2'-6"	60	835.42
20	1503+82.39	49.51	W18x76	785.05	822.05	842.91	57.86	2'-6"	60	835.91
21	1503+76.44	49.51	W18x76	785.30	822.30	843.28	57.98	2'-6"	60	836.28
22	1503+70.49	49.51	W18x76	785.55	822.55	843.52	57.97	2'-6"	60	836.52
23	1503+64.53	49.51	W18x76	785.81	822.81	843.76	57.95	2'-6"	60	836.76
24	1503+58.58	49.51	W18x76	786.06	823.06	844.00	57.94	2'-6"	60	837.00

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TranSystems

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	DRAWN - JNP	REVISED -	
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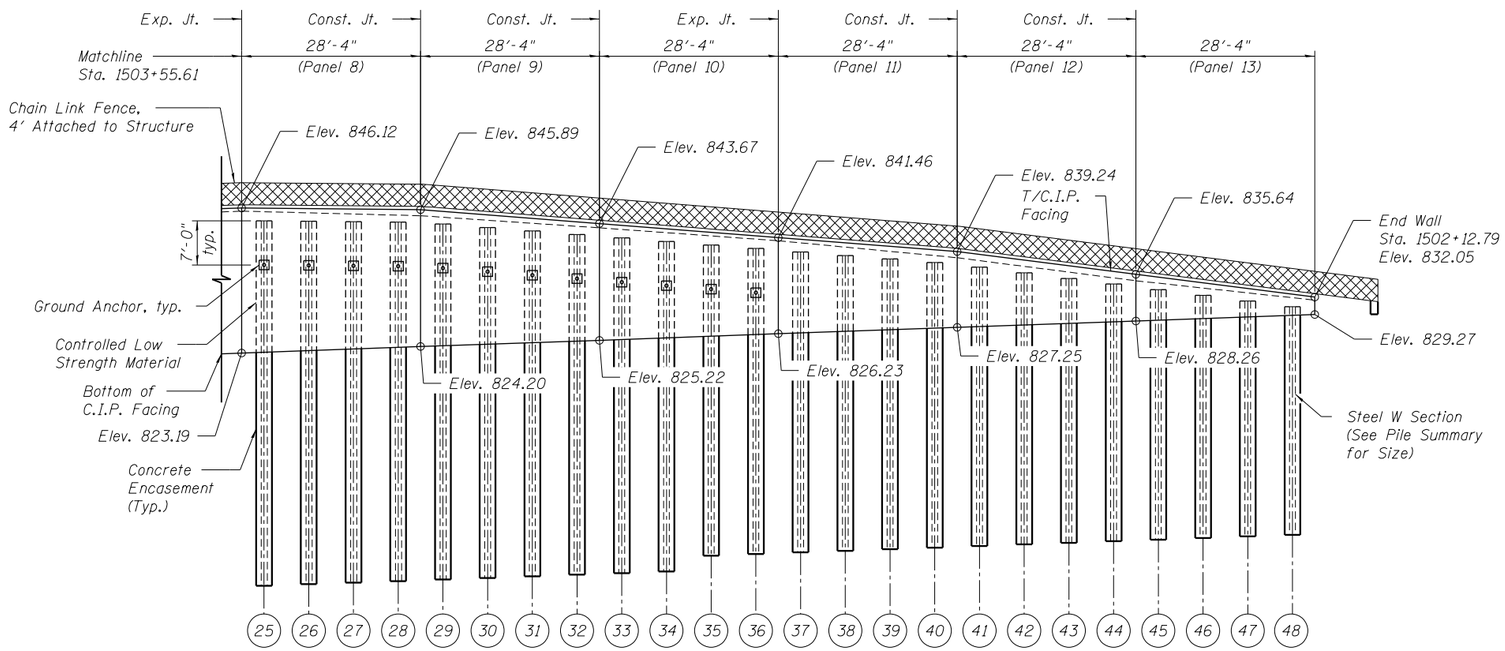
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION 1
CONNECTOR ROAD RETAINING WALL

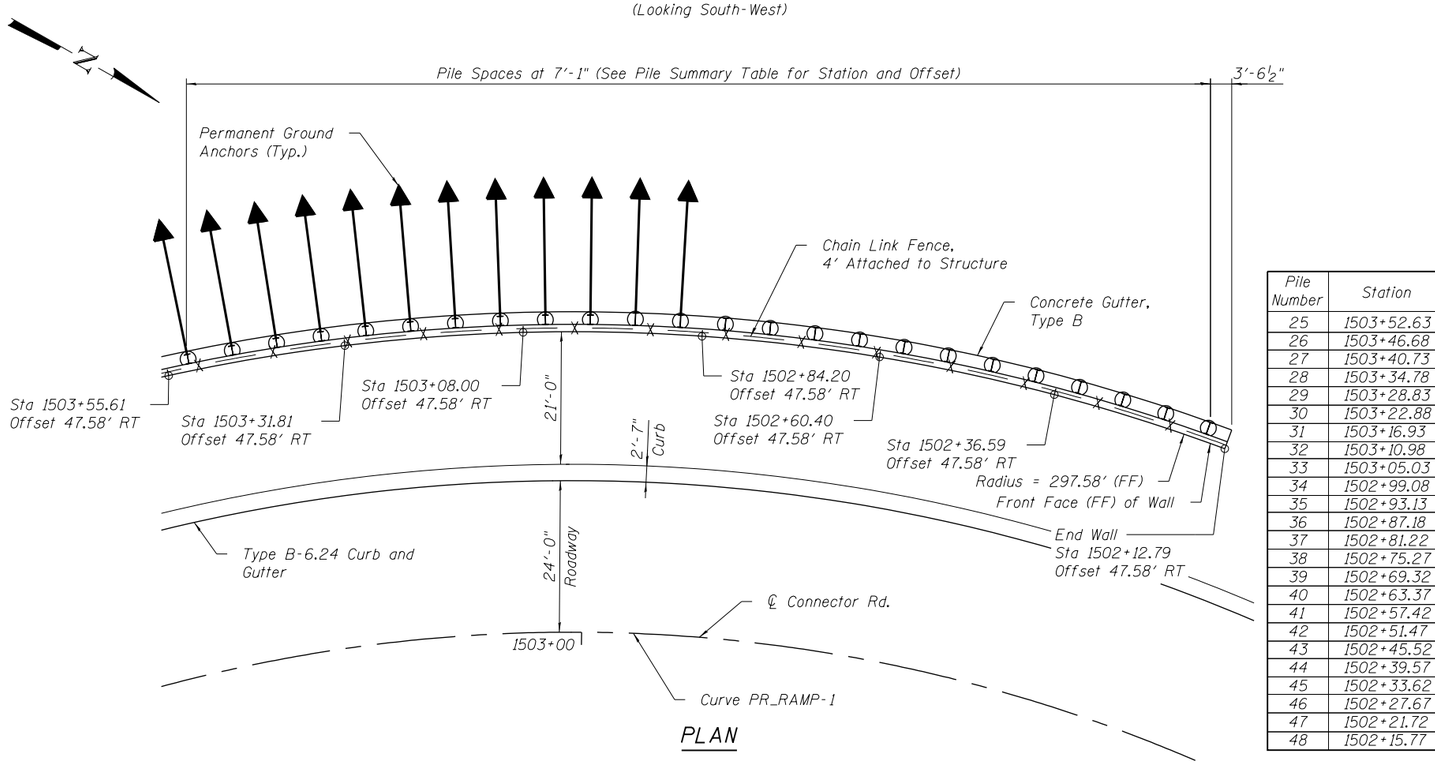
SCALE: | SHEET 3 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	457
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



ELEVATION - SOLDIER PILE WALL

(Looking South-West)



PLAN

NOTES:

1. Stations and offsets are along the front face of the Cast-in-Place facing.
2. Panel lengths and pile spacings are measured along the front face of the Cast-in-Place facing.
3. In the Pile Summary table, stations and offsets are given at the center of pile.
4. See Sheet 6 of 13 for Construction and Expansion Joint details and Pipe Underdrain details.
5. See Sheet 5 of 13 for reinforcement details and Bill of Material.
6. See Sheet 7 of 13 for Chain Link Fence, 4' Attached to Structure details.

PILE SUMMARY

Pile Number	Station	Offset (Ft. Rt.)	Pile Size	Bottom of Drilled Shaft	Top of Conc. Enc.	Top of Pile	Length (Ft.)	Encasement Diameter	Anchor Design Load (kips)	Anchor Elevation
25	1503+52.63	49.51	W18x76	786.32	823.32	844.09	57.77	2'-6"	60	837.09
26	1503+46.68	49.51	W18x76	786.57	823.57	844.03	57.46	2'-6"	60	837.03
27	1503+40.73	49.51	W18x76	786.82	823.82	843.98	57.16	2'-6"	60	836.98
28	1503+34.78	49.51	W18x76	787.08	824.08	843.92	56.84	2'-6"	55	836.92
29	1503+28.83	49.51	W18x76	787.33	824.33	843.61	48.28	2'-6"	55	836.61
30	1503+22.88	49.51	W18x76	787.58	824.58	843.06	55.48	2'-6"	50	836.06
31	1503+16.93	49.51	W18x76	787.84	824.84	842.50	54.66	2'-6"	50	835.50
32	1503+10.98	49.51	W18x76	788.09	825.09	841.95	53.86	2'-6"	45	834.95
33	1503+05.03	49.51	W18x76	788.34	825.34	841.40	53.06	2'-6"	40	834.40
34	1502+99.08	49.51	W18x76	788.60	825.60	840.84	52.24	2'-6"	40	833.84
35	1502+93.13	49.75	W24X84	791.10	825.85	840.29	49.19	2'-6"	35	833.29
36	1502+87.18	49.75	W24X84	791.35	826.10	839.73	48.38	2'-6"	30	832.73
37	1502+81.22	49.75	W24X84	791.61	826.36	839.18	47.57	2'-6"	-	-
38	1502+75.27	49.75	W24X84	791.86	826.61	838.63	46.77	2'-6"	-	-
39	1502+69.32	49.75	W24X84	792.12	826.87	838.07	45.95	2'-6"	-	-
40	1502+63.37	49.75	W24X84	792.37	827.12	837.52	45.15	2'-6"	-	-
41	1502+57.42	49.75	W24X84	792.62	827.37	836.79	44.17	2'-6"	-	-
42	1502+51.47	49.75	W24X84	792.88	827.63	835.89	43.01	2'-6"	-	-
43	1502+45.52	49.75	W24X84	793.13	827.88	834.99	41.86	2'-6"	-	-
44	1502+39.57	49.75	W24X84	793.38	828.13	834.09	40.71	2'-6"	-	-
45	1502+33.62	49.75	W24X84	793.64	828.39	833.20	39.56	2'-6"	-	-
46	1502+27.67	49.75	W24X84	793.89	828.64	832.30	38.41	2'-6"	-	-
47	1502+21.72	49.75	W24X84	794.14	828.89	831.40	37.26	2'-6"	-	-
48	1502+15.77	49.75	W24X84	794.40	829.15	830.50	36.10	2'-6"	-	-

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Tran Systems

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	DRAWN - JNP	REVISED -
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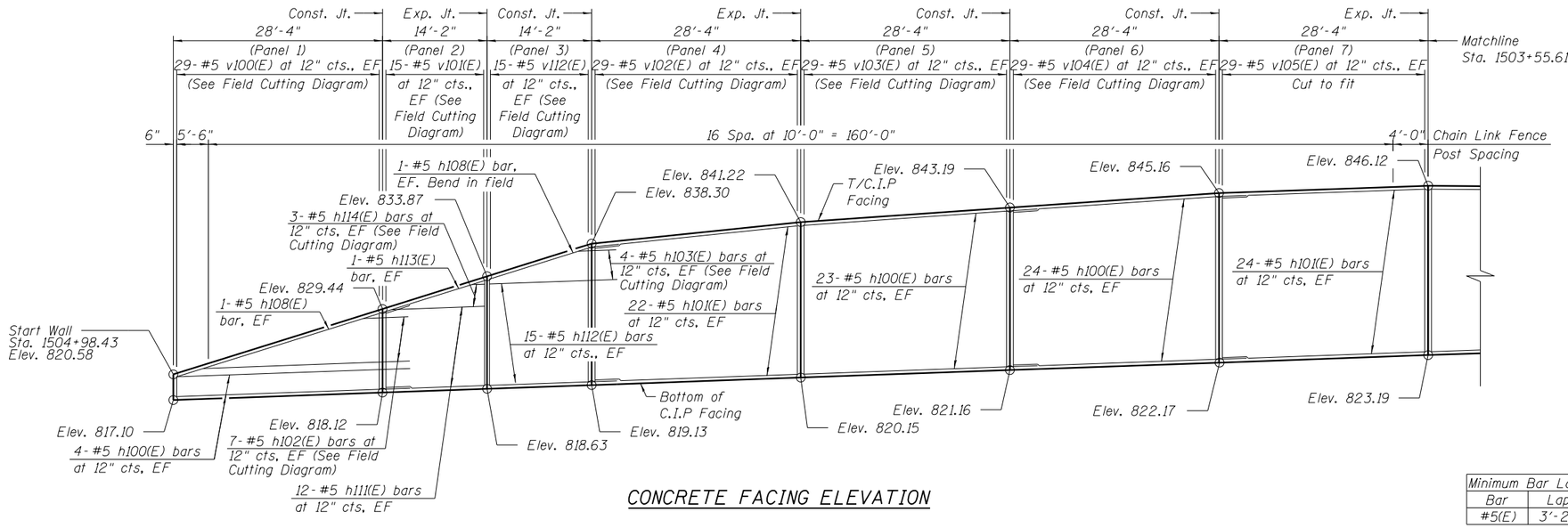
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION 2
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 4 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	458
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

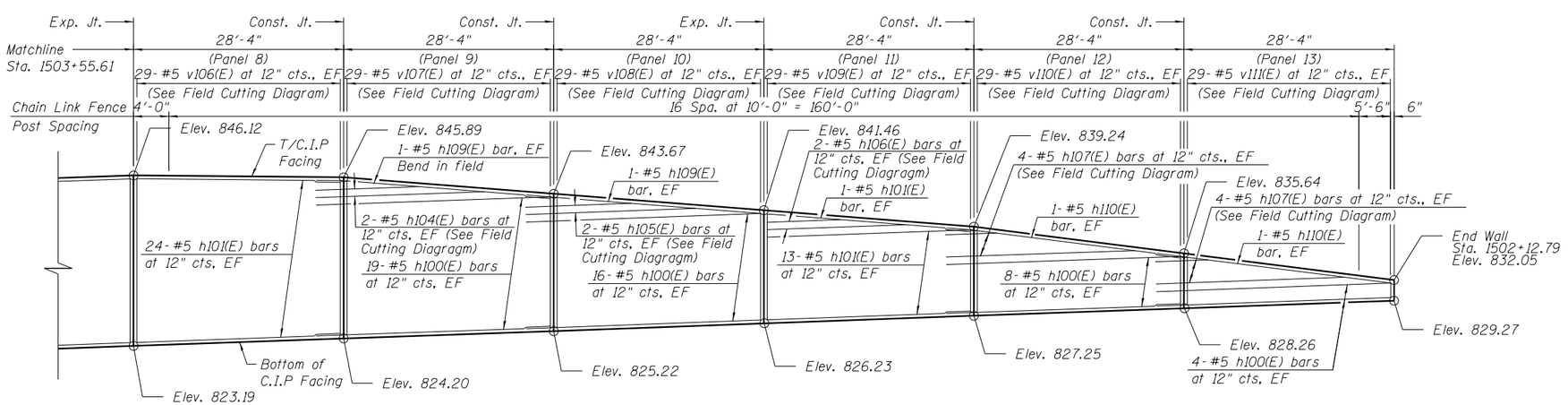


CONCRETE FACING ELEVATION

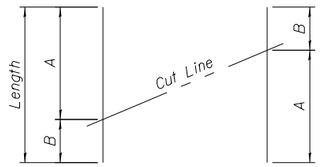
Minimum Bar Laps	
Bar	Lap
#5(E)	3'-2"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	220	#5	31'-7"	———
h101(E)	168	#5	28'-0"	———
h102(E)	7	#5	34'-11"	———
h103(E)	4	#5	23'-5"	———
h104(E)	2	#5	36'-8"	———
h105(E)	2	#5	37'-4"	———
h106(E)	2	#5	29'-11"	———
h107(E)	8	#5	32'-7"	———
h108(E)	4	#5	17'-10"	———
h109(E)	4	#5	31'-8"	———
h110(E)	4	#5	31'-10"	———
h111(E)	24	#5	13'-10"	———
h112(E)	24	#5	17'-4"	———
h113(E)	2	#5	14'-6"	———
h114(E)	3	#5	13'-3"	———
v100(E)	29	#5	14'-2"	———
v101(E)	15	#5	25'-11"	———
v102(E)	29	#5	39'-7"	———
v103(E)	29	#5	42'-5"	———
v104(E)	29	#5	44'-2"	———
v105(E)	58	#5	22'-6"	———
v106(E)	29	#5	43'-11"	———
v107(E)	29	#5	39'-6"	———
v108(E)	29	#5	33'-1"	———
v109(E)	29	#5	26'-7"	———
v110(E)	29	#5	18'-8"	———
v111(E)	29	#5	9'-5"	———
v112(E)	15	#5	33'-9"	———
Concrete Structures			Cu. Yd.	241.4
Form Liner Textured Surface			Sq. Ft.	5,587
Reinforcement Bars, Epoxy Coated			Pound	25,910
Staining Concrete Structures			Sq. Ft.	4,907
Anti-Graffiti Coating			Sq. Ft.	4,907



CONCRETE FACING ELEVATION



FIELD CUTTING DIAGRAM

Order bars full length. Cut as shown and use remainder of bars in opposite face.

Bar	A	B	Length
h102(E)	6'-0"	27'-11"	33'-11"
h103(E)	6'-3"	17'-2"	23'-5"
h104(E)	13'-11"	22'-9"	36'-8"
h105(E)	14'-4"	23'-0"	37'-4"
h106(E)	10'-7"	19'-4"	29'-11"
h107(E)	7'-1"	25'-6"	32'-7"
h114(E)	3'-0"	10'-3"	13'-3"
v100(E)	3'-2"	11'-0"	14'-2"
v101(E)	11'-0"	14'-11"	25'-11"
v102(E)	18'-10"	20'-9"	39'-7"
v103(E)	20'-9"	21'-8"	42'-5"
v104(E)	21'-8"	22'-6"	44'-2"
v106(E)	21'-4"	22'-7"	43'-11"
v107(E)	18'-2"	21'-4"	39'-6"
v108(E)	14'-11"	18'-2"	33'-1"
v109(E)	11'-8"	14'-11"	26'-7"
v110(E)	7'-0"	11'-8"	18'-8"
v111(E)	2'-5"	7'-0"	9'-5"
v112(E)	14'-11"	18'-10"	33'-9"

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Tran Systems

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	DRAWN - JNP	REVISED -	
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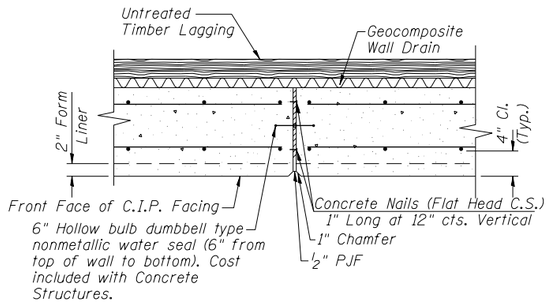
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

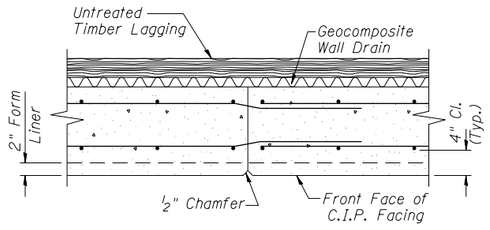
CONCRETE FACING ELEVATION
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 5 OF 13 SHEETS

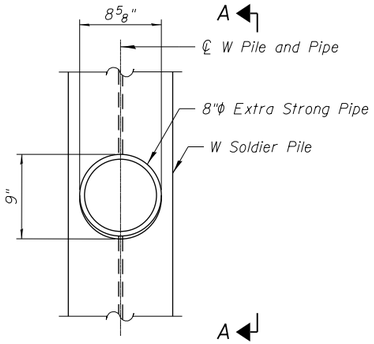
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	459
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



EXPANSION JOINT DETAIL

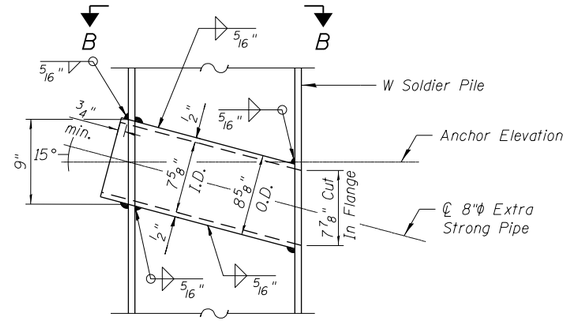


CONSTRUCTION JOINT DETAIL



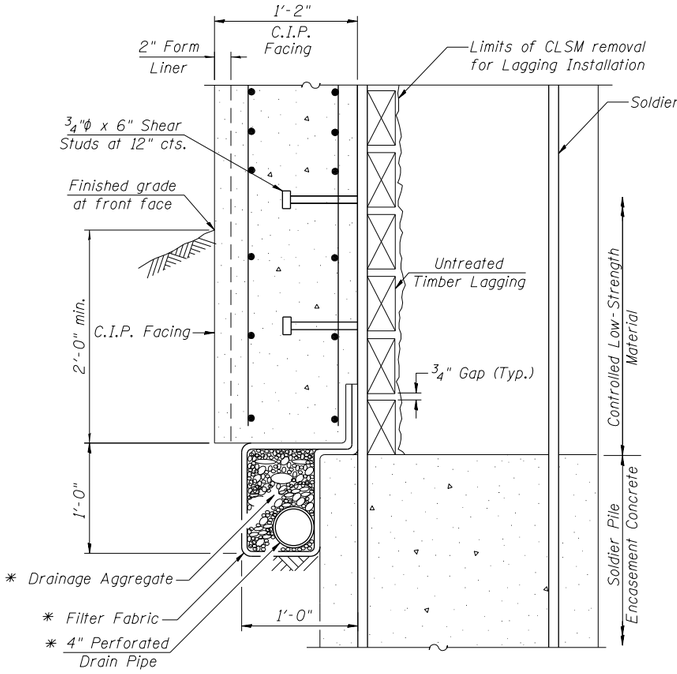
W SECTION ELEVATION AT ANCHOR

For Anchor Angle = 15°

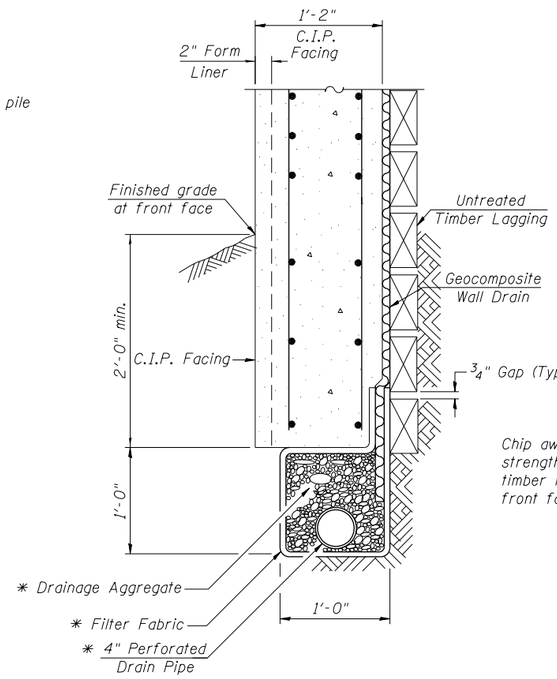


SECTION A-A

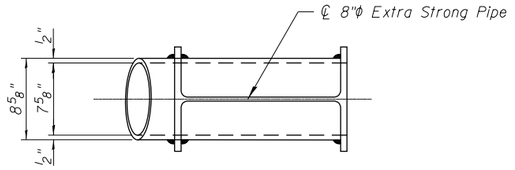
For Anchor Angle = 15°



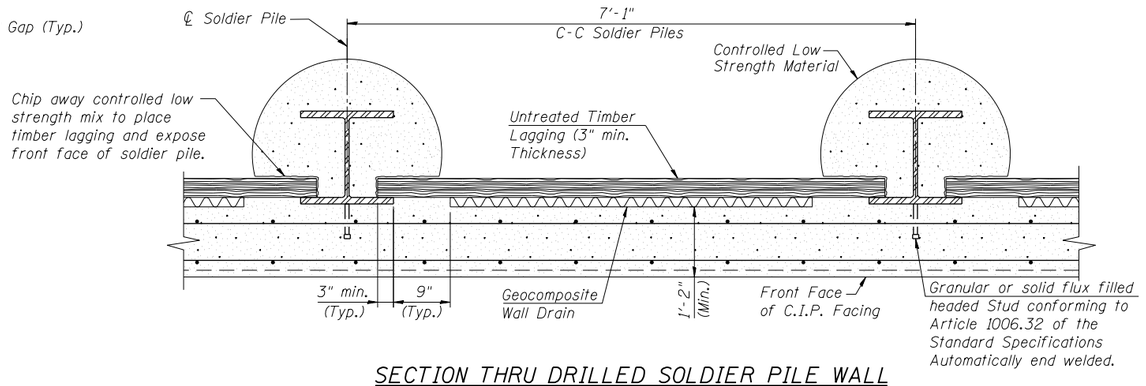
AT SOLDIER PILES



BETWEEN SOLDIER PILES



SECTION B-B



SECTION THRU DRILLED SOLDIER PILE WALL

* Cost included with Pipe Underdrains for Structures, 4".

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	DRAWN - JNP	REVISED -	
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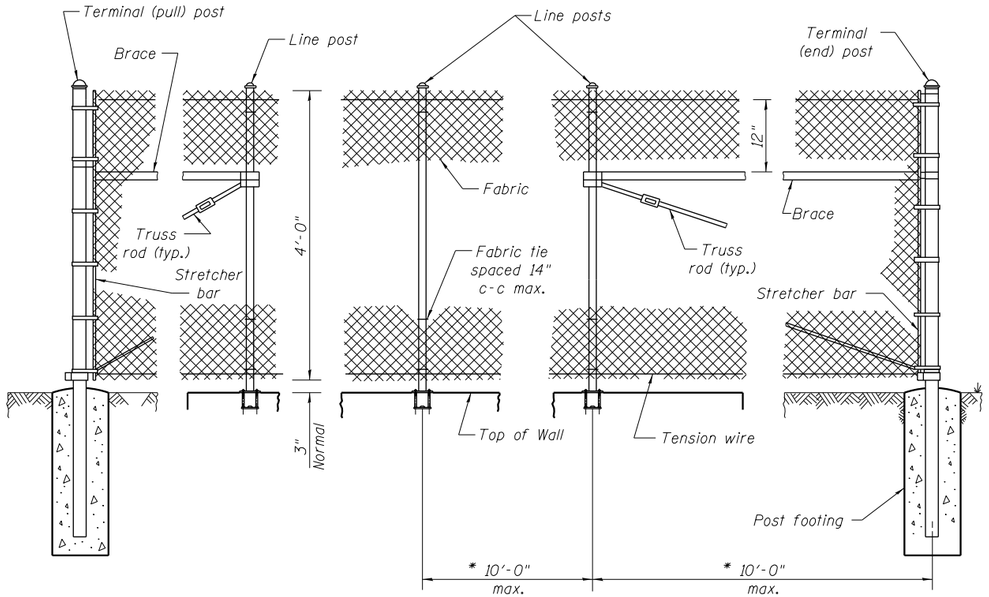
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 6 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	460
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



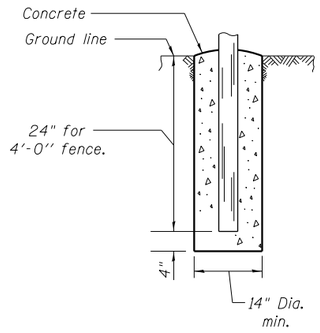
PULL POST ARRANGEMENT

LINE POST ARRANGEMENT

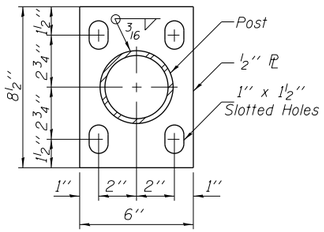
END POST ARRANGEMENT

* The Post Anchors Shall be At least 2'-0" From Wall Expansion Joints.

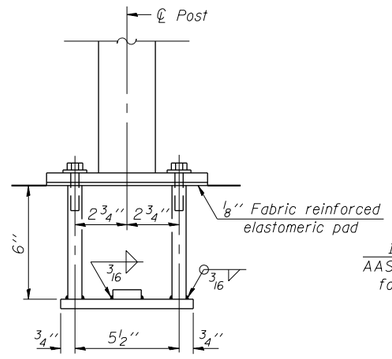
Pull Post Shall Be Placed Off of Wall.

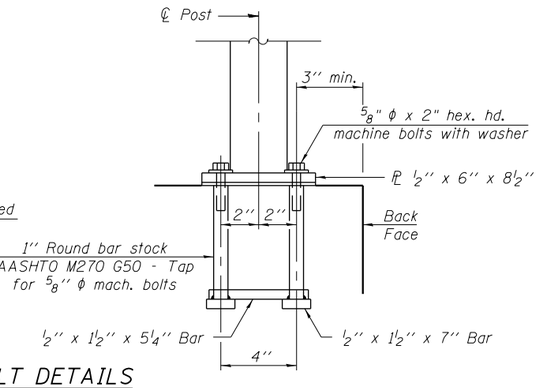


FOOTING FOR TERMINAL POST



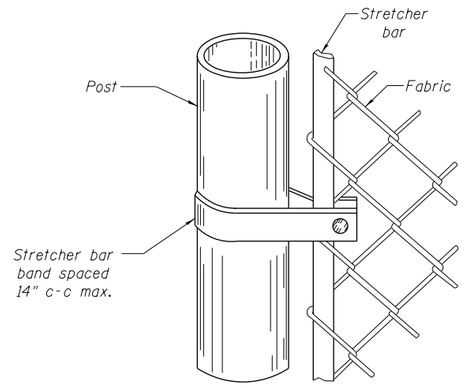
BASE PL



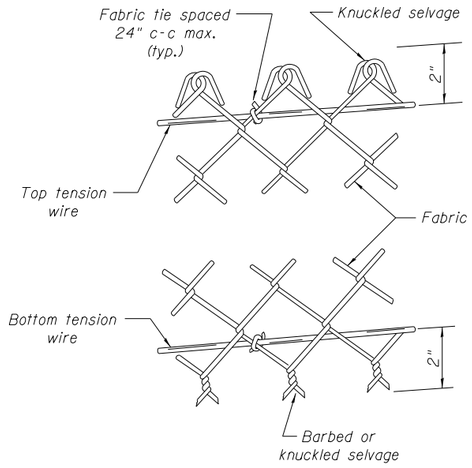


ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



METHOD OF FASTENING STRETCHER BAR TO POST



METHOD OF TYING FABRIC TO TENSION WIRES

BILL OF MATERIAL

Item	Unit	Quantity
Chain Link Fence, 4' Attached to Structure	Foot	360

NOTES:

Cost of all the anchor bolts and accessories required for Chain Link Supports are included in Chain Link Fence, 4' Attached to Structure.

LINE POST	
Section	lbs./ft.
Pipe Type A 1.90 (48.3) O.D.	2.72
Pipe Type B 1.90 (48.3) O.D.	2.28
Pipe Type C 1.90 (48.3) O.D.	2.26
H 1.875x1.625 (47.6x41.3)	2.72

TERMINAL POST	
Section	lbs./ft.
Pipe Type A 2.375 O.D.	3.65
Pipe Type B 2.375 O.D.	3.11
Pipe Type C 2.375 O.D.	3.09
Roll Formed 3½x3½	See detail
Sq. Tubing 2½x2½	4.32

HORIZONTAL BRACES	
Section	lbs./ft.
Pipe Type A 1.66 O.D.	2.27
Pipe Type B 1.66 O.D.	1.83
Pipe Type C 1.66 O.D.	1.82
H 1.31x1.5	2.25
Roll Formed 1⅝x1¼	See detail

FILE NAME = G:\CH13\0109\Road\Structural\Sheets\07_Chain Link Fence.dgn

Tran Systems

USER NAME = mbmcwhorter	DESIGNED - JNP	REVISED -
	DRAWN - JNP	REVISED -
PLOT SCALE = 24.0 '/ in.	CHECKED - MDS	REVISED -
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE ATTACHED TO STRUCTURE
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 7 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	461
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

BORING LOG TSC-S01

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 867.46 ft
North: 1993094.11 ft
East: 993498.71 ft
Station: 1501+95.56
Offset: 41.53 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	866.1	16-inch thick, black SILTY LOAM --TOPSOIL--						
		Medium dense, brown SANDY GRAVEL			1	3 7 11	NP	40
			5		2	14 11 8	NP	3
					3	8 12 11	NP	2
	859.5	Medium dense, brown, fine to medium SAND, trace gravel						
			10		4	9 9 8	NP	3
					5	7 8 10	NP	4
		--Moist--						
			15		6	6 8 10	NP	18
		--Saturated--			7	6 9 13	NP	20
			20		8	7 13 16	NP	19
	847.0	Very stiff to hard, gray CLAY LOAM, trace gravel						
					9	7 10 16	4.92 B	16
			25		10	11 26 28	6.15 S	9
	835.7	Very dense, gray SANDY GRAVEL						
			30		11	18 16 22	3.53 B	8
					12	11 16 21	2.71 S	9
			35		13	16 19 50	NP	12
	830.7	Very stiff to hard, pinkish gray CLAY LOAM to SILTY LOAM, trace gravel						
		--L_L(%)=38, P_L(%)=12-- --%Gravel=3.2-- --%Sand=28.1-- --%Silt=51.0-- --%Clay=17.7-- --A-4 (4)--	40		14	11 13 19	2.50 P	16
			45		15	11 19 39	8.61 B	11
			50		16	16 15 21	9.92 B	11

GENERAL NOTES

Begin Drilling: 10-20-2014 Complete Drilling: 10-20-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 30'; mud rotary thereafter; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 15.50 ft
At Completion of Drilling: ▼ NA
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 3100901.GPJ WANGENG.GDT 12/1/14

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

BORING LOG TSC-S01

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 867.46 ft
North: 1993094.11 ft
East: 993498.71 ft
Station: 1501+95.56
Offset: 41.53 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	812.8							
		Gray, medium to coarse SAND, some gravel	55		17	12 18 48	7.79 B	11
	810.7	Hard, pinkish gray CLAY LOAM, trace gravel						
			60		18	15 16 24	6.72 B	11
		--L_L(%)=23, P_L(%)=11-- --%Gravel=4.3-- --%Sand=31.2-- --%Silt=43.1-- --%Clay=21.3-- --A-6 (4)--	65		19	17 23 27	8.61 S	12
	797.5	Boring terminated at 70.00 ft	70		20	14 15 23	6.31 B	12
			75					

GENERAL NOTES

Begin Drilling: 10-20-2014 Complete Drilling: 10-20-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 30'; mud rotary thereafter; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 15.50 ft
At Completion of Drilling: ▼ NA
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 3100901.GPJ WANGENG.GDT 12/1/14

FILE NAME = G:\CH13\0107\Road\Structural\Sheets\08_SoilBoring1.dgn

TranSystems

USER NAME = mbmcwhorter	DESIGNED - JNP	REVISED -	
	DRAWN - JNP	REVISED -	
PLOT SCALE = 2@ ':' / in.	CHECKED - MDS	REVISED -	
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 8 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	462
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

BORING LOG TSC-S02

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 855.82 ft
North: 1992975.99 ft
East: 993498.33 ft
Station: 1502+96.08
Offset: 48.85 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
		24-inch thick, black to dark brown SILTY LOAM, trace roots --TOPSOIL--						
	853.8	Very stiff (2.5P), brown SILTY CLAY LOAM, trace gravel			1	3 5 6	NP	21
	852.2	Medium dense, brown and yellow LOAM, little gravel	5		2	5 5 7	NP	16
		--Hard drilling at 5'; possible cobble-- --Moist--			3	3 7 8	NP	18
	846.7	Very stiff, gray SILTY CLAY, trace gravel	10		4	5 5 6	2.46 B	16
	845.3	Stiff to very stiff, gray CLAY LOAM to LOAM, trace gravel			5	4 5 7	1.23 S	11
			15		6	6 8 13	2.87 S	8
		--L_L(%)=18, P_L(%)=12-- --%Gravel=9.1-- --%Sand=39.7-- --%Silt=40.8-- --%Clay=10.4-- --A-4 (1)--			7	12 10 12	1.72 S	8
	837.1	Medium dense, gray SANDY LOAM, trace gravel	20		8	10 12 13	NP	10
	835.3	Very stiff (3.0P), gray CLAY LOAM, trace gravel						
	834.3	Medium dense, gray, medium to coarse SAND, trace to little gravel --Saturated--			9	11 11 7	NP	23
			25		10	3 7 12	NP	13
	830.3	Hard, pinkish gray CLAY LOAM, trace gravel			11	8 13 17	4.92 S	10
			30		12	15 13 16	10.25 B	10
		--Hard drilling at 31'; possible cobble--			13	50/5"		18
			35					
		--Hard drilling at 38'; possible cobble--			14	50/1"	NR	
			40					
		--Hard drilling at 42'; possible cobble--						
			45		15	23 23 31	NR	
			50		16	16 25 26	7.46 B	13

WANGENG INC 3100601.GPJ WANGENG.GDT 12/1/14

GENERAL NOTES

Begin Drilling: 10-21-2014 Complete Drilling: 10-21-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 30'; mud rotary thereafter; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 21.50 ft
At Completion of Drilling: ▼ NA
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 N Main Street
Lombard, Illinois 60148
Telephone: 630-953-9928
Fax: 630-953-9938

BORING LOG TSC-S02

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 855.82 ft
North: 1992975.99 ft
East: 993498.33 ft
Station: 1502+96.08
Offset: 48.85 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
			55		17	14 15 22	6.89 B	12
			60		18	13 18 30	7.54 B	14
			65		19	12 12 18	4.18 B	13
	785.8	Boring terminated at 70.00 ft	70		20	7 10 13	4.10 B	14
			75					

WANGENG INC 3100601.GPJ WANGENG.GDT 12/1/14

GENERAL NOTES

Begin Drilling: 10-21-2014 Complete Drilling: 10-21-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 30'; mud rotary thereafter; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 21.50 ft
At Completion of Drilling: ▼ NA
Time After Drilling: NA
Depth to Water: ▼ NA

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

FILE NAME = G:\CH13\81091\Road\Structural\Sheets\81_SoilBoring2.dgn

Tran Systems

USER NAME = mbmcwhorter	DESIGNED - JNP	REVISED -	
	DRAWN - JNP	REVISED -	
PLOT SCALE = 2.0 ' / in.	CHECKED - MDS	REVISED -	
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 9 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	463
		CONTRACT NO. 61E05		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

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

BORING LOG TSC-S03

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 851.64 ft
North: 1992938.22 ft
East: 993526.80 ft
Station: 1503+34.74
Offset: 34.38 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	850.3	16-inch thick, black and brown SILTY LOAM --TOPSOIL--						
		Hard, brown CLAY LOAM, trace gravel			1	7 7 12	4.50 P	17
	848.0	Loose, brown, fine to medium SAND	5		2	3 2 4	NP	4
	845.4	Stiff to very stiff, brown to pinkish gray CLAY LOAM, trace gravel and sand seams			3	4 5 5	1.72 B	11
		--L_L(%)=19, P_I(%)=12-- --%Gravel=8.2-- --%Sand=39.9-- --%Silt=40.3-- --%Clay=11.6-- --A-4 (1)--	10		4	3 4 6	1.64 B	11
					5	8 10 8	3.25 B	13
	838.6	Medium dense, gray, medium to coarse SAND, little gravel --Moist--	15		6	10 11 13	NP	12
	836.1	Very stiff to hard, pinkish gray CLAY LOAM, trace gravel			7	8 7 9	3.69 B	13
			20		8	7 8 10	NR	
					9	5 8 9	4.92 B	13
			25		10	8 9 12	4.51 B	12
			30		11	10 9 13	7.38 B	11
					12	21 12 17	4.10 B	12
		--L_L(%)=24, P_I(%)=12-- --%Gravel=6.5-- --%Sand=32.4-- --%Silt=40.3-- --%Clay=20.8-- --A-6 (4)--	35		13	9 14 17	3.69 B	13
			40		14	13 20 38	7.79 B	11
			45		15	10 12 17	6.31 B	14
			50		16	11 14 19	8.20 B	11

GENERAL NOTES

Begin Drilling: 10-23-2014 Complete Drilling: 10-23-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 10'; mud rotary thereafter; 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.

WANGENG INC 3100601.GPJ WANGENG.GDT 12/1/14

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

BORING LOG TSC-S03

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 851.64 ft
North: 1992938.22 ft
East: 993526.80 ft
Station: 1503+34.74
Offset: 34.38 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	797.6	Very dense, pinkish gray, fine to coarse SAND, little gravel --Moist--	55		17	21 37 45	NP	14
	789.9	Very stiff to hard, pinkish gray CLAY LOAM, trace gravel	60		18	28 22 29	NP	18
			65		19	7 10 14	5.25 B	13
	781.6	Boring terminated at 70.00 ft	70		20	7 11 15	3.68 B	12
			75					

GENERAL NOTES

Begin Drilling: 10-23-2014 Complete Drilling: 10-23-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 10'; mud rotary thereafter; 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.

WANGENG INC 3100601.GPJ WANGENG.GDT 12/1/14

FILE NAME = G:\CH13\0109\Road\Structural\Sheets\10_SoilBoring3.dgn

Tran Systems

USER NAME = mbmcwhorter	DESIGNED - JNP	REVISED -	
	DRAWN - JNP	REVISED -	
PLOT SCALE = 2ø '-' / in.	CHECKED - MDS	REVISED -	
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 10 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	464
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

BORING LOG TSC-S04

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 847.89 ft
North: 1992866.36 ft
East: 993554.05 ft
Station: 1503+99.79
Offset: 48.33 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
		18-inch thick, black and brown SILTY LOAM						
	846.4	--TOPSOIL--						
		Dense, brown SANDY LOAM, trace gravel			1	10 15 19	NP	7
	844.1	--Moist--						
		Very stiff to hard, pinkish gray CLAY LOAM, trace gravel	5		2	4 10 13	4.50 P	10
					3	6 6 9	2.87 B	13
			10		4	12 10 10	4.50 P	13
					5	7 9 12	6.56 S	11
		--Hard drilling at 15'; possible cobble--	15		6	11 11 15	NR	
		--L_L(%)=25, P_L(%)=12-- --%Gravel=3.9-- --%Sand=31.8-- --%Silt=43.1-- --%Clay=21.3-- --A-6 (5)--			7	7 11 14	6.15 B	14
			20		8	9 11 14	5.49 B	13
					9	8 11 14	4.67 B	13
			25		10	8 11 15	4.26 B	12
		--L_L(%)=24, P_L(%)=12-- --%Gravel=4.1-- --%Sand=34.4-- --%Silt=41.9-- --%Clay=19.6-- --A-6 (4)--	30		12	7 15 22	4.50 P	12
		--Hard drilling at 32.5'; possible cobble--	35		13	12 17 16	NR	
			40		14	9 8 12	3.28 B	13
			45		15	10 11 16	NA	22
		--L_L(%)=23, P_L(%)=12-- --%Gravel=3.6-- --%Sand=31.7--	50		16	10 12 14	5.49 B	13

WANGENGINC 310901.GPJ WANGENG.GDT 12/1/14

GENERAL NOTES

Begin Drilling: 10-23-2014 Complete Drilling: 10-24-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 10'; mud rotary thereafter; 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.

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

BORING LOG TSC-S04

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 847.89 ft
North: 1992866.36 ft
East: 993554.05 ft
Station: 1503+99.79
Offset: 48.33 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
		--%Silt=43.4-- --%Clay=21.4-- --A-6 (4)--						
			55		17	9 13 16	4.92 B	12
			60		18	8 10 13	3.77 B	13
	782.9	Boring terminated at 65.00 ft	65		19	10 10 13	2.62 B	14
			70					
			75					

WANGENGINC 310901.GPJ WANGENG.GDT 12/1/14

GENERAL NOTES

Begin Drilling: 10-23-2014 Complete Drilling: 10-24-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 10'; mud rotary thereafter; 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.

FILE NAME = G:\CH13\0109\Road\Structural\Sheets\11_SoilBoring4.dgn

TranSystems

USER NAME = mbmcwhorter	DESIGNED - JNP	REVISED -
	DRAWN - JNP	REVISED -
PLOT SCALE = 2@ '-' / in.	CHECKED - MDS	REVISED -
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 11 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	465
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

BORING LOG TSC-S05

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 842.59 ft
North: 1992814.43 ft
East: 993606.43 ft
Station: 1504+61.70
Offset: 48.90 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	841.6	12-inch thick, black and brown SILTY LOAM --TOPSOIL--						
		Stiff, brown CLAY LOAM, trace gravel			1	2 3 4	1.39 S	21
	838.8	Medium dense, brown, fine to medium SAND, trace gravel	5		2	4 5 6	NP	14
	836.4	Very stiff to hard, pinkish gray CLAY LOAM, trace gravel			3	6 11 14	4.50 P	10
			10		4	7 12 11	4.51 B	11
					5	10 11 13	5.90 S	14
			15		6	7 9 11	7.87 B	12
		--L_L(%)=24, P_L(%)=12-- --%Gravel=6.0-- --%Sand=30.1-- --%Silt=42.9-- --%Clay=20.9-- --A-6 (4)--			7	7 10 10	2.38 S	13
			20		8	6 7 10	6.56 B	12
					9	6 7 10	5.82 B	12
			25		10	7 9 11	4.69 B	12
			30		12	8 9 14	5.00 B	11
			35		13	6 7 8	4.51 B	12
		--L_L(%)=23, P_L(%)=12-- --%Gravel=6.1-- --%Sand=32.0-- --%Silt=41.6-- --%Clay=20.3-- --A-6 (4)--			14	7 10 13	4.02 S	16
			45		15	11 14 17	NR	
			50		16	9 13 18	4.02 B	12
					11	8 10 15	5.58 B	13
			30		12	8 9 14	5.00 B	11
			35		13	6 7 8	4.51 B	12
					14	7 10 13	4.02 S	16
			45		15	11 14 17	NR	
			50		16	9 13 18	4.02 B	12

WANGENG\NC 310061.GPJ WANGENG.GDT 12/1/14

GENERAL NOTES

Begin Drilling: 10-24-2014 Complete Drilling: 10-24-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 10'; mud rotary thereafter; 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.

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

BORING LOG TSC-S05

WEI Job No.: 310-06-01

Client: Crawford, Murphy, & Tilly, Inc.
Project: Longmeadow Parkway Corridor
Location: Kane County, Illinois

Datum: NAVD 88
Elevation: 842.59 ft
North: 1992814.43 ft
East: 993606.43 ft
Station: 1504+61.70
Offset: 48.90 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			55		17	8 9 14	3.36 B	12
			60		18	6 10 13	2.79 B	13
	777.6	Boring terminated at 65.00 ft	65		19	14 16 23	3.03 B	13
			70					
			75					

WANGENG\NC 310061.GPJ WANGENG.GDT 12/1/14

GENERAL NOTES

Begin Drilling: 10-24-2014 Complete Drilling: 10-24-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 ATV
Driller: K&K Logger: A. Happel Checked by: B. Wilson
Drilling Method: 3.25" HSA to 10'; mud rotary thereafter; 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.

FILE NAME = G:\CH13\0107\Road\Structural\Sheets\12_SoilBoring5.dgn

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	DRAWN - JNP	REVISED -	
PLOT SCALE = 2ø ':' / in.	CHECKED - MDS	REVISED -	
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 12 OF 13 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	466
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

BORING LOG TSC-S06

WEI Job No.: 310-06-01

Client ..... Crawford, Murphy, & Tilly, Inc.
Project ..... Longmeadow Parkway Corridor
Location ..... Kane County, Illinois

Datum: NAVD 88
Elevation: 832.95 ft
North: 1992785.96 ft
East: 993661.62 ft
Station: 1505+13.99
Offset: 44.59 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (bw/6 in)	Qu (tsf)	Moisture Content (%)
	832.6	4-inch thick, black SILTY LOAM						
	832.0	--TOPSOIL--						
		Brown, medium SAND						
		Stiff to hard, pinkish gray CLAY LOAM, trace gravel			1	7 7 7	1.72 B	9
			5		2	5 10 14	4.50 P	8
					3	6 11 13	4.50 P	8
			10		4	8 12 16	9.84 S	8
	822.5	Brown, medium SAND						
	821.5	Very stiff to hard, pinkish gray CLAY LOAM, trace gravel			5	8 16 16	8.20 S	10
			15		6	7 10 17	7.30 B	11
					7	11 9 13	NA	10
			20		8	17 18 19	NR	
		--L_L(%)=24, P_L(%)=12-- --%Gravel=5.3-- --%Sand=31.6-- --%Silt=43.0-- --%Clay=20.2-- --A-6 (4)--			9	7 10 13	3.20 B	10
			25		10	6 9 14	5.00 B	10
		--Hard drilling at 33'; possible cobble--						
			30		11	9 11 17	7.38 B	10
					12	10 18 20	4.50 P	9
			35		13	8 12 15	4.18 B	10
		--L_L(%)=23, P_L(%)=12-- --%Gravel=5.6-- --%Sand=30.7-- --%Silt=43.5-- --%Clay=20.2-- --A-6 (4)--			14	7 7 15	4.67 B	12
			40		15	8 10 12	3.36 B	12
	783.0		50		16	7 8 14	2.87 B	11
		Boring terminated at 50.00 ft						

WINGENGINC 3100901.GPJ WINGENG.GDT 12/1/14

GENERAL NOTES

Begin Drilling 10-22-2014 Complete Drilling 10-22-2014
Drilling Contractor Wang Testing Services Drill Rig D-50 ATV
Driller K&K Logger A. Happel Checked by B. Wilson
Drilling Method 3.25" 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.

FILE NAME = G:\CH13\0109\Road\Structural\Sheets\13_SoilBoring6.dgn

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	DRAWN - JNP	REVISED -	
PLOT SCALE = 2ø '-' / in.	CHECKED - MDS	REVISED -	
PLOT DATE = 8/4/2017	DATE - 8/7/2017	REVISED -	

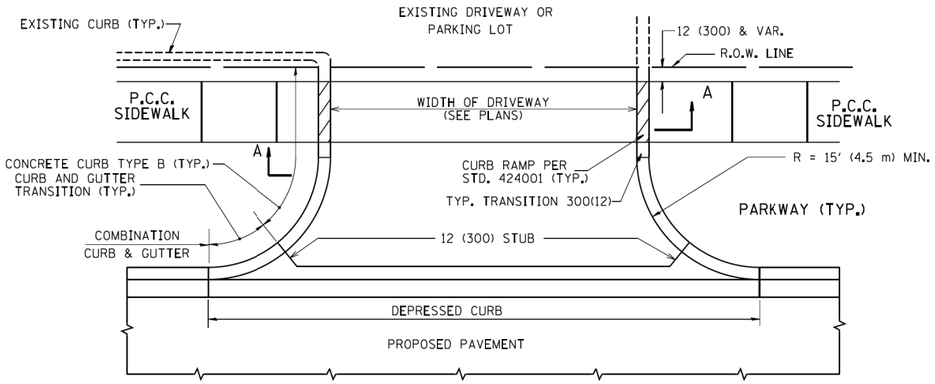
TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

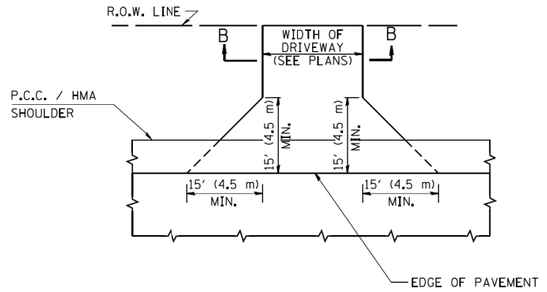
BORING LOGS
CONNECTOR ROAD RETAINING WALL

SCALE: | SHEET 13 OF 13 SHEETS

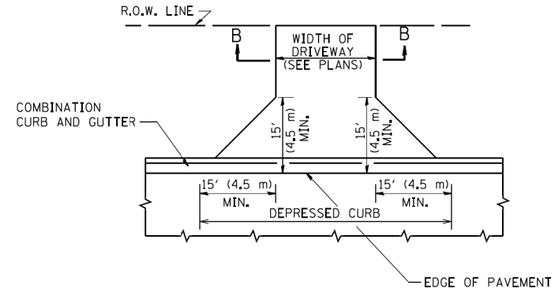
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	467
		CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



WITH CONCRETE CURB, TYPE B



ADJACENT TO P.C.C. / HMA SHOULDER



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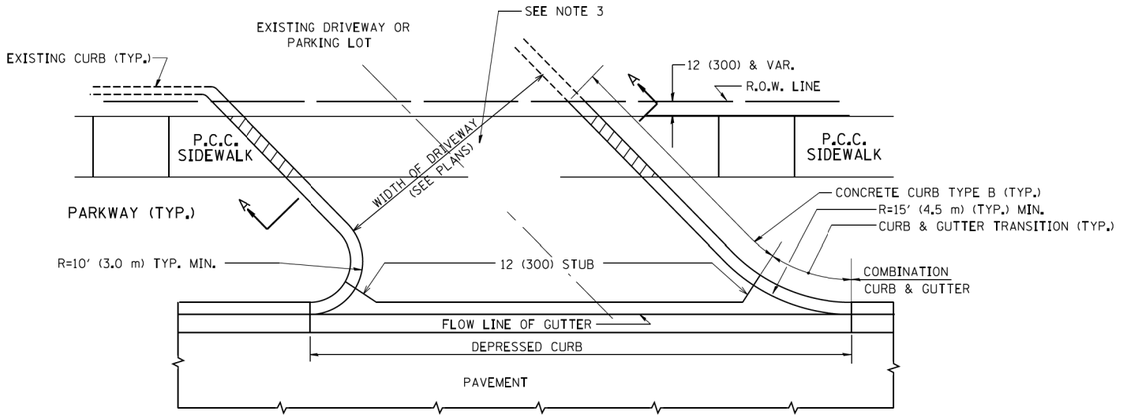

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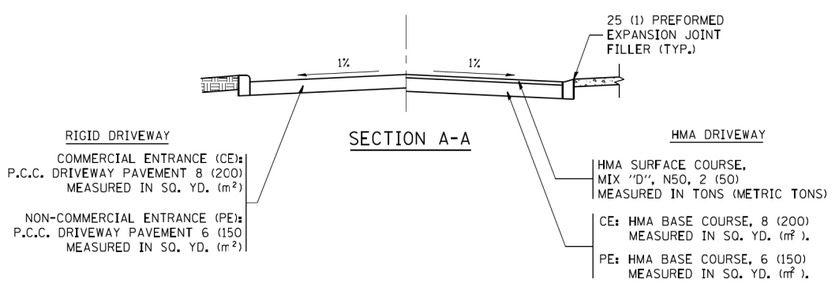

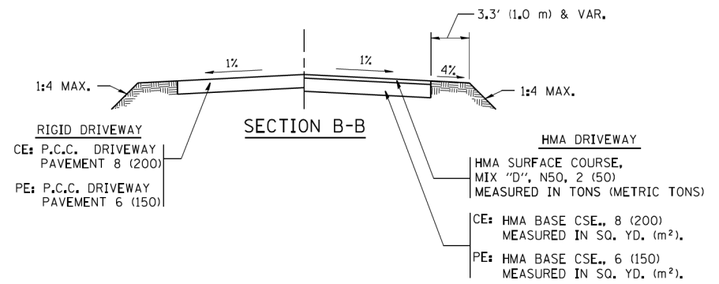

RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE, MIX "D", N50, 2 (50) MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200) MEASURED IN SQ. YD. (m^2).

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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		DRAWN -	REVISED - R. BORO 01-01-07
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 06-11-08
	PLOT DATE = 9/6/2011	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.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	468
	BD0156-07 (BD-01)	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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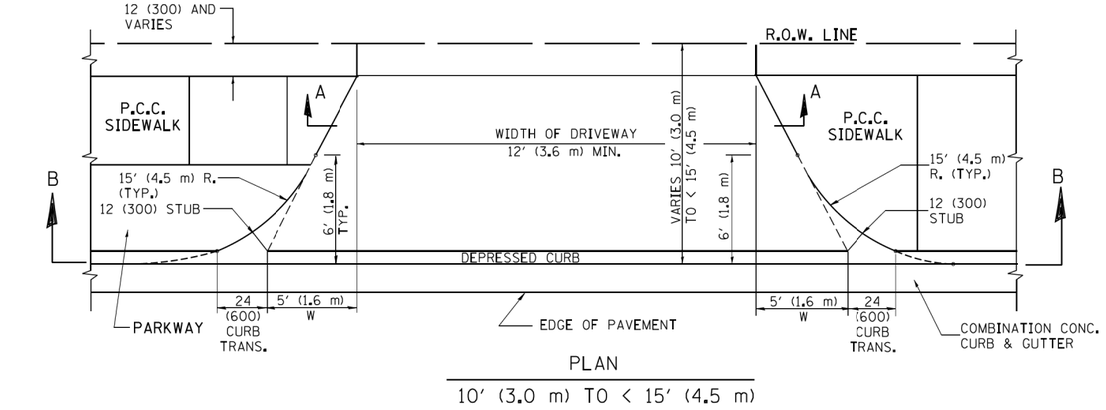
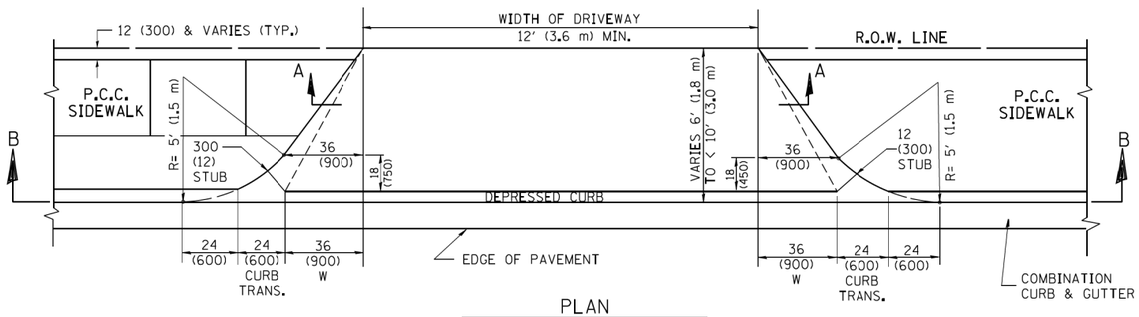


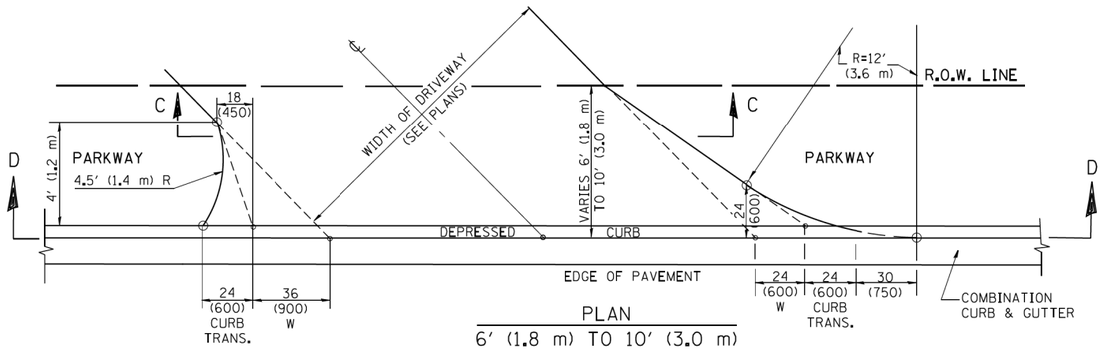
PLAN

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



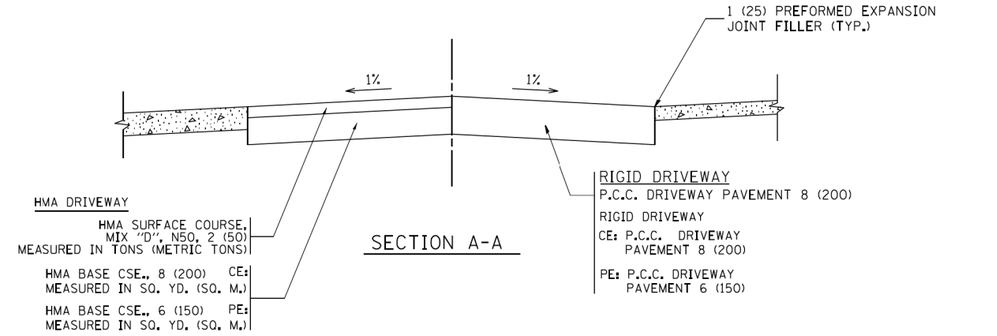
PLAN

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

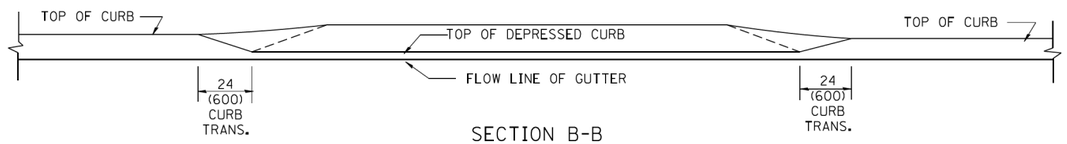


PLAN

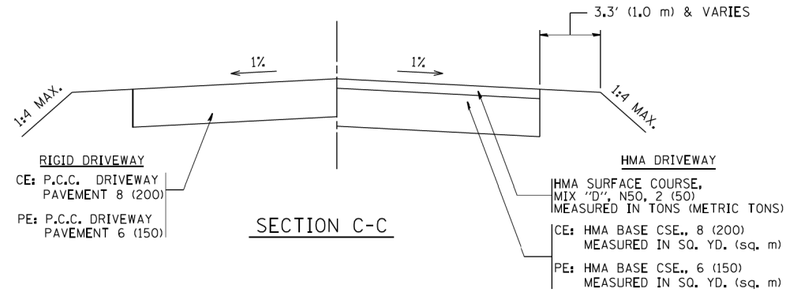
6' (1.8 m) TO 10' (3.0 m)



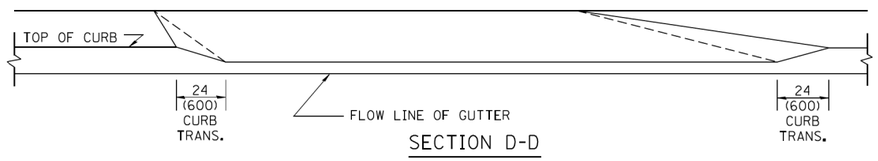
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

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

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

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

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

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

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

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

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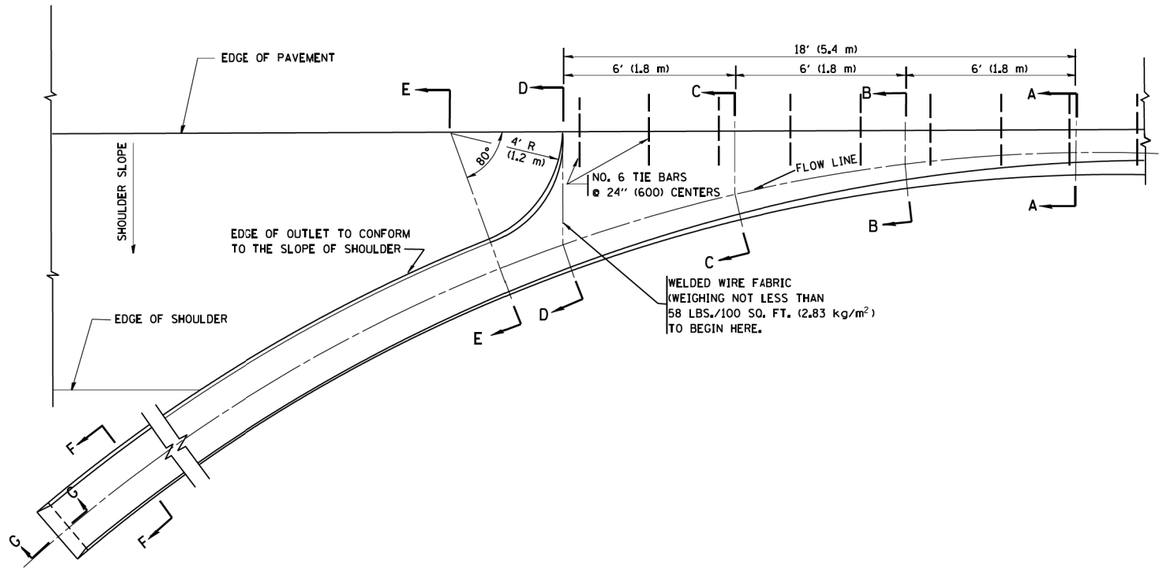
		DRAWN -	REVISED - P. LaFLEUR 04-15-03
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 01-01-07
	PLOT DATE = 10/28/2011	DATE - 11-06-95	REVISED - R. BORO 09-06-11

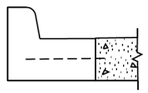
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)

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

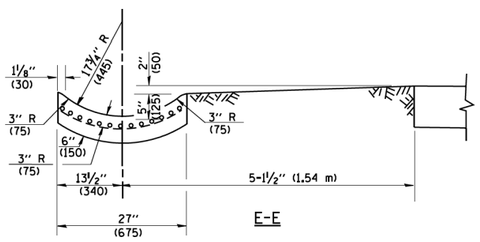
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	469
	BD400-02 (BD-02)	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



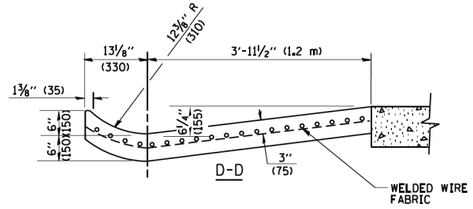


A-A *

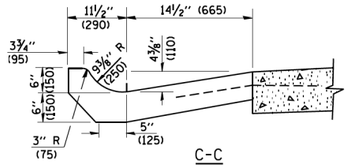
* DIMENSIONS OF THE CURB & GUTTER AT SECTION A-A ARE SHOWN ON STATE STANDARD 606001.
FOR DETAILS OF OUTLET FOR CONCRETE CURB & GUTTER, TYPE B-6.24 (B-15.60) SEE STATE STANDARD 606006.



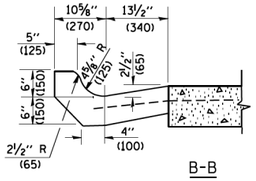
E-E



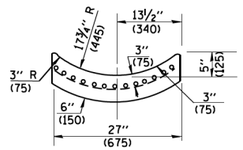
D-D



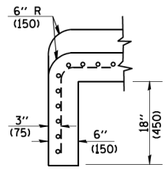
C-C



B-B



F-F



G-G

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.

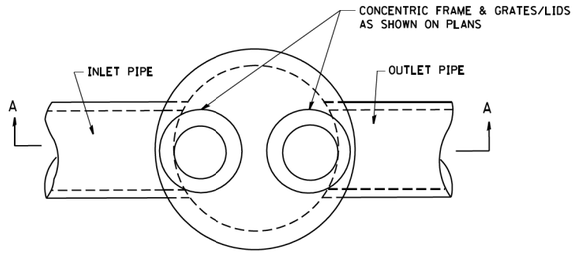
IF THE AVERAGE GRADE OF PAVEMENT FOR THE DISTANCE FROM SECTION A-A TO D-D EXCEEDS 2%, THIS DISTANCE SHALL BE INCREASED 6' (1.8 m) FOR EACH 1% INCREASE IN GRADE.

QUANTITIES

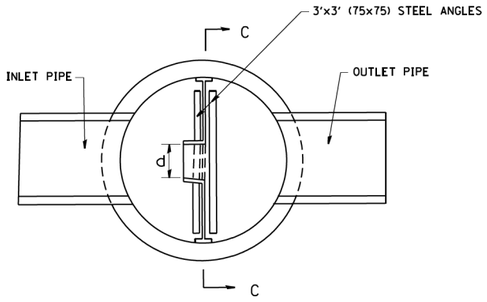
FOR SECTION A-A TO E-E AND CURTAIN WALL=
1.25 CU. YDS. (0.96 m^3) CLASS SI CONCRETE (OUTLET) FOR 9" (225) PAV'T.
1.27 CU. YDS. (0.96 m^3) CLASS SI CONCRETE (OUTLET) FOR 10" (250) PAV'T.
FOR SECTION F-F=
0.045 CU. YDS. (0.03 m^3) CLASS SI CONCRETE PER ft. (m).

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

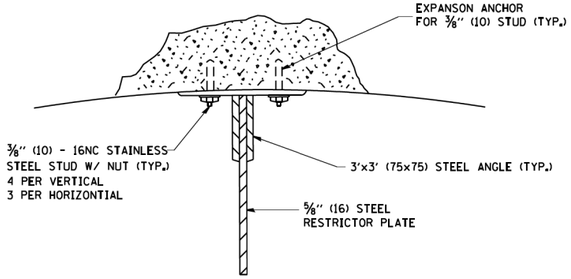
FILE NAME = W:\diststd\22x34\bd03.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 09-09-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OUTLET FOR CONCRETE CURB AND GUTER			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. SHAH 10-25-94					2298	16-00215-10-PV	KANE	611	470
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - E. GOMEZ 12-21-00					BD600-01 (BD-03)		CONTRACT NO. 61E05		
	PLOT DATE = 1/4/2008	DATE - 08-04-86	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



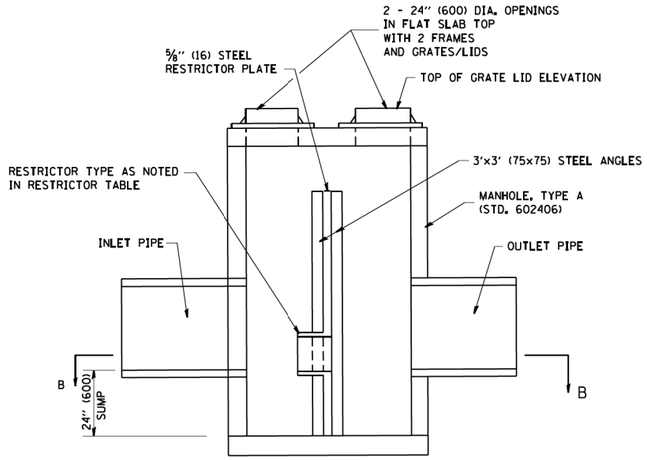
PLAN



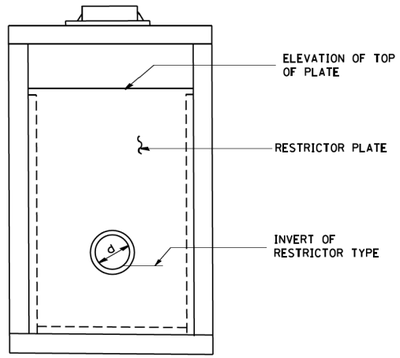
SECTION B-B



ANGLE FASTENER DETAIL



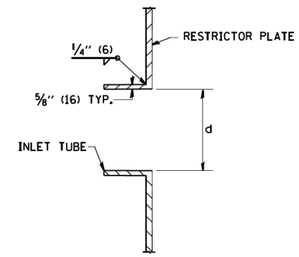
SECTION A-A



SECTION C-C

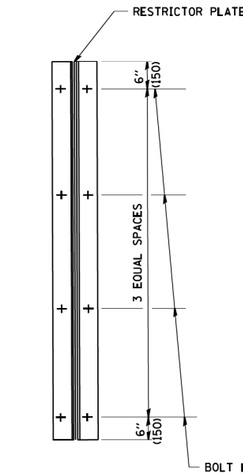
NOTES:

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

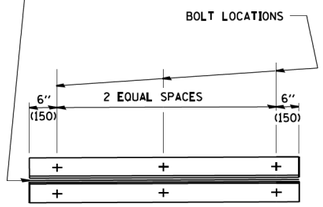


INLET TUBE DETAIL

STATION	MANHOLE DIAMETER	FRAME AND GRATE	RESTRICTOR TYPE	INSIDE RESTRICTOR TYPE DIAMETER in. (mm) (d)	INVERT OF RESTRICTOR TYPE	ELEVATION OF TOP OF PLATE OVERFLOW
2183+61, 130' RT	6'	TY 1, CLOSED LID	2	3.72"	795.70	800.00
1508+76, 83' LT	6'	TY 1, CLOSED LID	2	2.70"	796.39	801.00
413+20, 47' LT	8'	TY 1, CLOSED LID	2	21"	789.50	795.07
419+00, 58 LT	8'	TY 1, CLOSED LID	2	21"	795.14	801.11
58+90, 17' LT	6'	TY 1, CLOSED LID	2	6.00"	819.00	824.12



TYPICAL VERTICAL ANGLES LOOKING TOWARD MANHOLE WALL



TYPICAL HORIZONTIAL ANGLES LOOKING TOWARD BOTTOM OF MANHOLE

TOTAL BOLTS REQUIRED: 22

NOTE:

1. ANGLES SHOULD BE 3x3x⅜ (75x75x75)
2. VERTICAL ANGLES SHOULD EXTEND FROM THE BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
3. HORIZONTIAL ANGLES SHOULD EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENTRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENTRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: ½ TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-½ DIA.	LENGTH: 2-½ DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

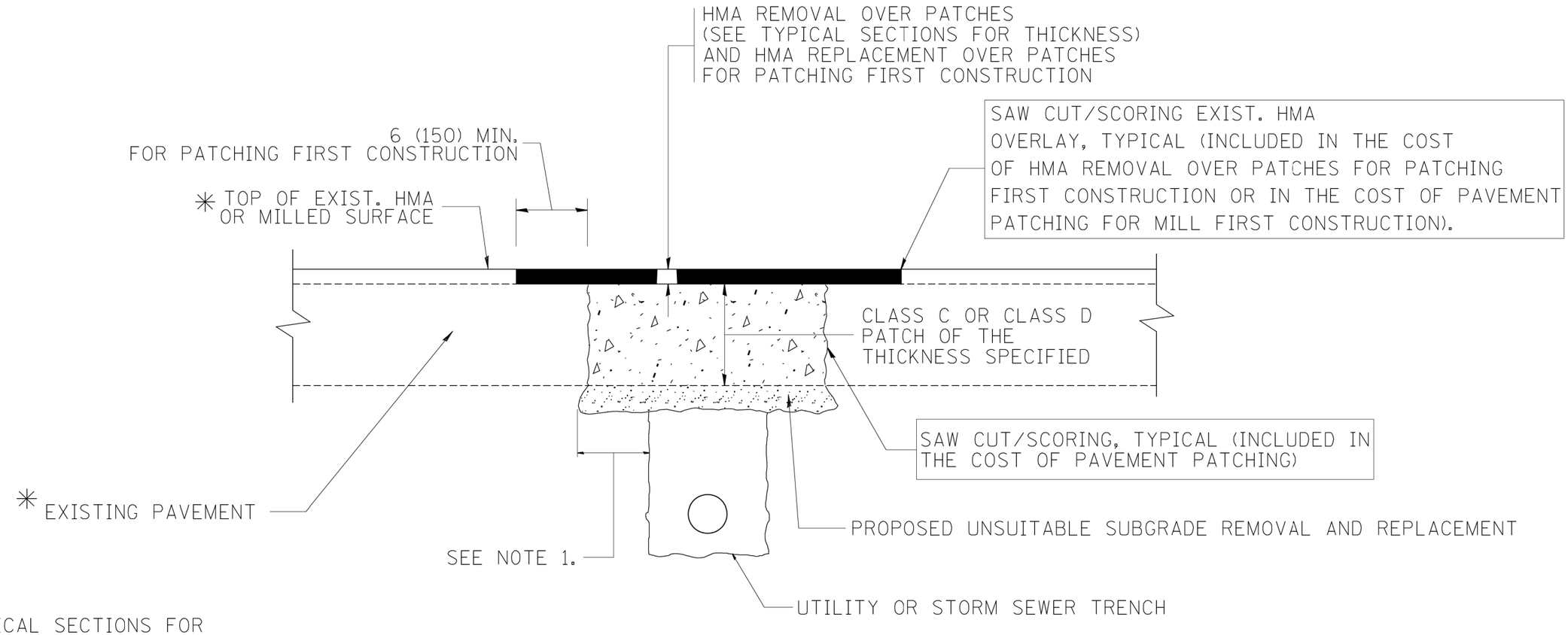
VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

STEEL ANGLE BOLTING DETAILS

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

FILE NAME = W:\diststd\22x34\bd12.dgn	USER NAME = gaglianobt	DESIGNED - R. SHAH	REVISED - R. SHAH 10-25-94	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**MANHOLE WITH RESTRICTOR PLATE**
		DRAWN -	REVISED - E. GOMEZ 08-28-00		
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 01-08-01		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.
	PLOT DATE = 1/4/2008	DATE - 09-09-94	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	471
	BD600-04 (BD-12)	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST $4\frac{1}{2}$ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

FILE NAME = c:\projects\diststd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98
		DRAWN -	REVISED - R. BORO 01-01-07
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. BORO 09-04-07
	PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - K. ENG 10-27-08

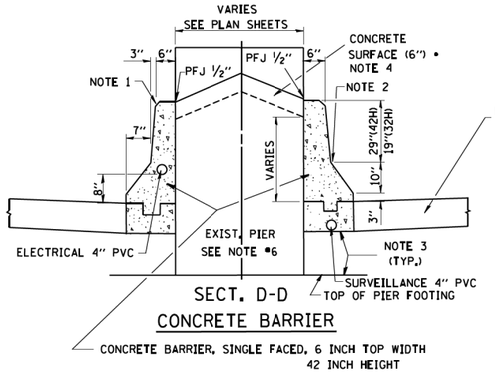
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

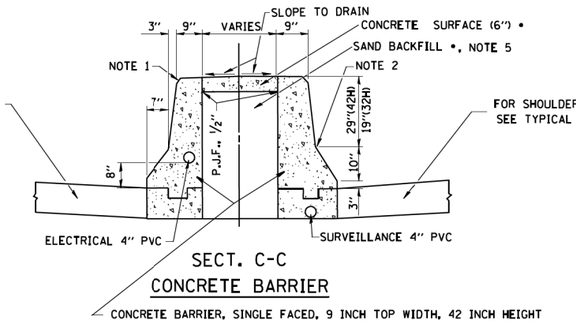
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	472
	BD400-04 (BD-22)	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TANGENT CONDITION

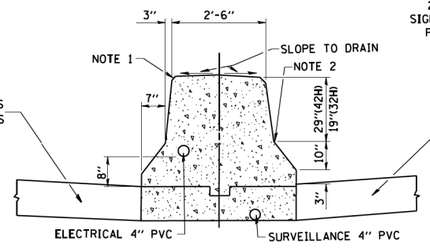


SECT. D-D
CONCRETE BARRIER



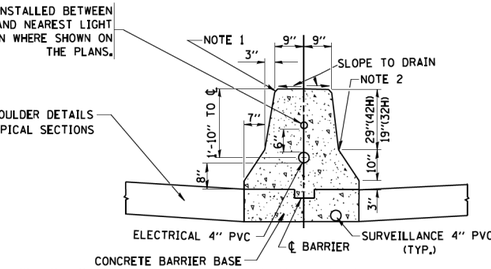
SECT. C-C
CONCRETE BARRIER

CONCRETE BARRIER, SINGLE FACED 9 INCH TOP WIDTH, 42 INCH HEIGHT



SECT. B-B
CONCRETE BARRIER

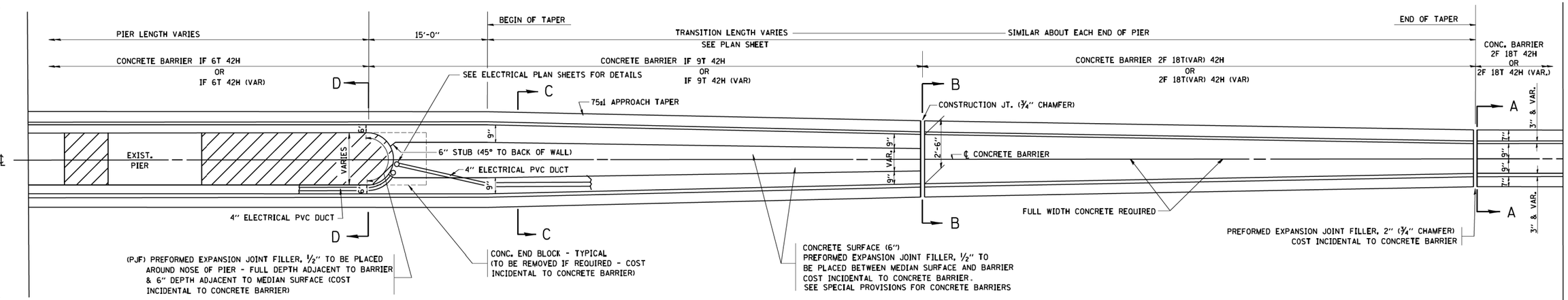
CONCRETE BARRIER, DOUBLE FACED
18 INCH VARIABLE TOP WIDTH
42 INCH HEIGHT



SECT. A-A
CONCRETE BARRIER

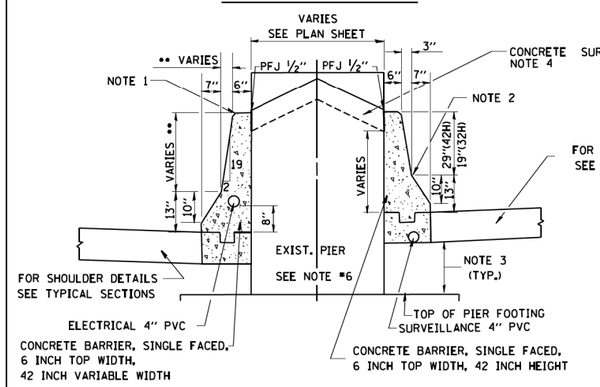
CONCRETE BARRIER, DOUBLE FACE,
18 INCH TOP WIDTH,
42 INCH HEIGHT

PLAN VIEW OF CONCRETE BARRIER TRANSITION

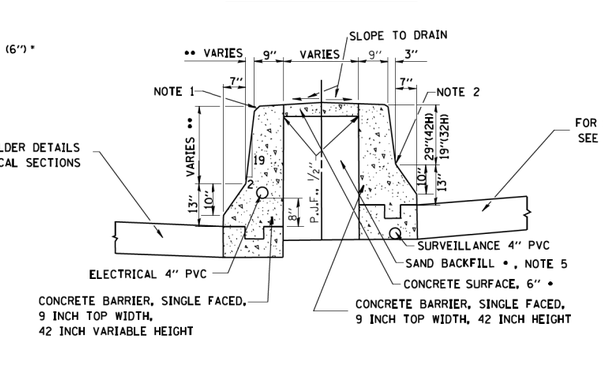


(SUPER ELEVATION CONDITION)

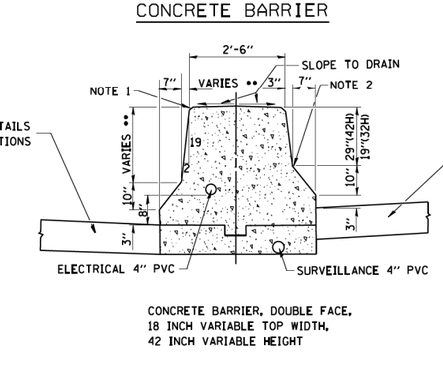
SECT. D-D
CONCRETE BARRIER



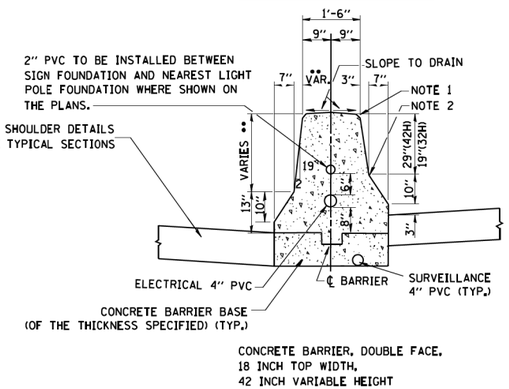
SECT.C-C
CONCRETE BARRIER



SECT. B-B
CONCRETE BARRIER



SECT. A-A
CONCRETE BARRIER



GENERAL NOTES - FOR UNDERDRAIN DETAILS SEE TYPICAL SECTIONS
- PREFORMED JOINT FILLER SHALL BE INCIDENTAL TO THE CONCRETE BARRIER OF THE TYPE INVOLVED.
- FOR KEYWAY (F) DIMENSIONS, SEE TYPICAL SECTIONS
- CONCRETE BARRIER BASE PAY ITEM IS TO BE INCLUDED IF THE BARRIER IS CONSTRUCTED MONOLITHIC OR JOINTED TO BASE. IF JOINTED CONTRACTORS WILL HAVE THE OPTION OF USING A KEYWAY OR *__ TIE BARS AT _____O.C.

NOTE 1 - ¾" CHAMFER OR 1" RADIUS (OPTIONAL)

NOTE 2 - 10" RADIUS (OPTIONAL)

NOTE 3 - EXTEND BOTTOM OF BARRIER TO FOOTING ONLY WHEN DEPTH IS 6" OR LESS, OTHERWISE MAINTAIN SAME DEPTH AS BOTTOM OF SHOULDER

NOTE 4 - PIER FILLER MATERIAL TO BE CONCRETE IF MINIMUM 6" THICKNESS WILL BE MAINTAINED. IF 6" THICKNESS CANNOT BE MAINTAINED USE ASPHALT FILLER MATERIAL AS DIRECTED BY THE ENGINEER.

NOTE 5 - SAND BACKFILL AND CONCRETE SURFACE WILL BE REQUIRED. FILLING WITH CONCRETE WILL NOT BE ALLOWED.

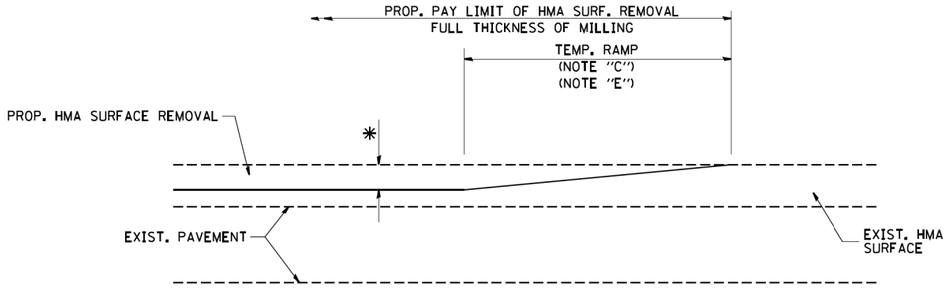
NOTE 6 - IF PIER IS NEW CONSTRUCTION BARRIER WALL MAY BE MONOLITHIC

•• MAINTAIN SLOPE OF FACE AS SHOWN ON DETAIL. HEIGHT AND WIDTH OF BARRIER INCREASE WHERE A DIFFERENCE IN MEDIAN EDGE-OF-PAVEMENT GRADE ELEVATION EXISTS.

• COST OF SAND BACKFILL, CONCRETE SURFACE (6"), AND PIER FILLER MATERIAL WILL NOT BE INCIDENTAL.

FILE NAME = W:\diststd\22x34\bd27.dgn	USER NAME = gaglianobt	DESIGNED - FORD	REVISED - FORD 12-06-88	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE BARRIER TRANSITION & GENERAL DETAILS, CONCRETE BARRIER BASE
		DRAWN -	REVISED -		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.
	PLOT DATE = 1/4/2008	DATE - 09-09-88	REVISED -		

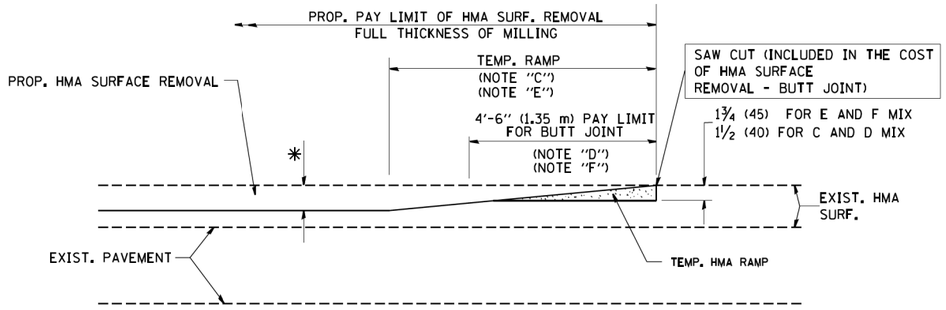
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	473
	BD-27	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

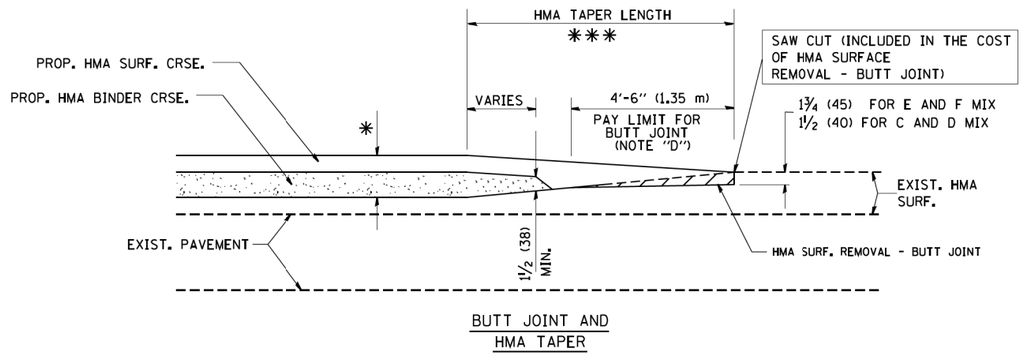


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

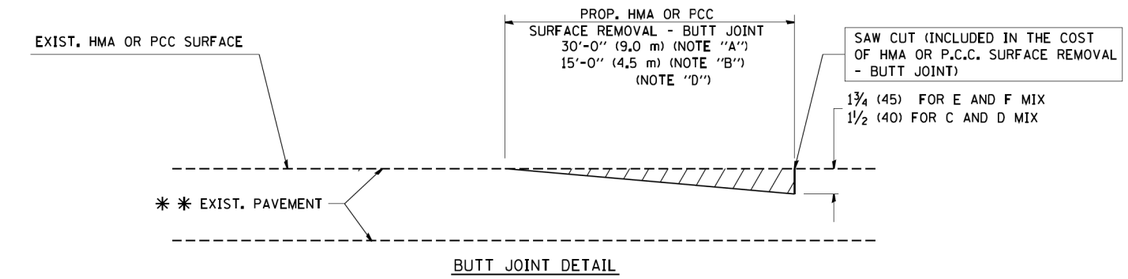
OPTION 2

TYPICAL TEMPORARY RAMP

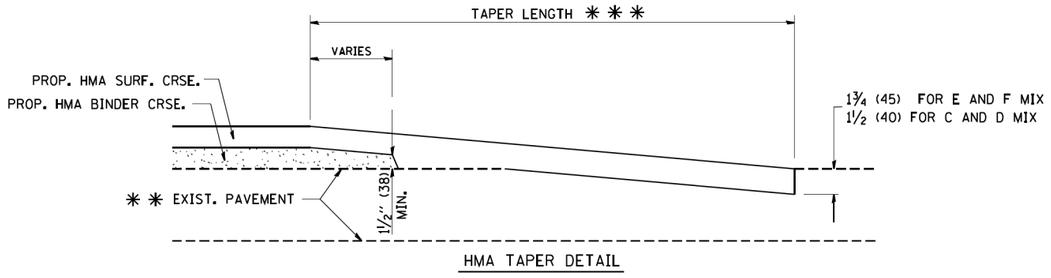


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

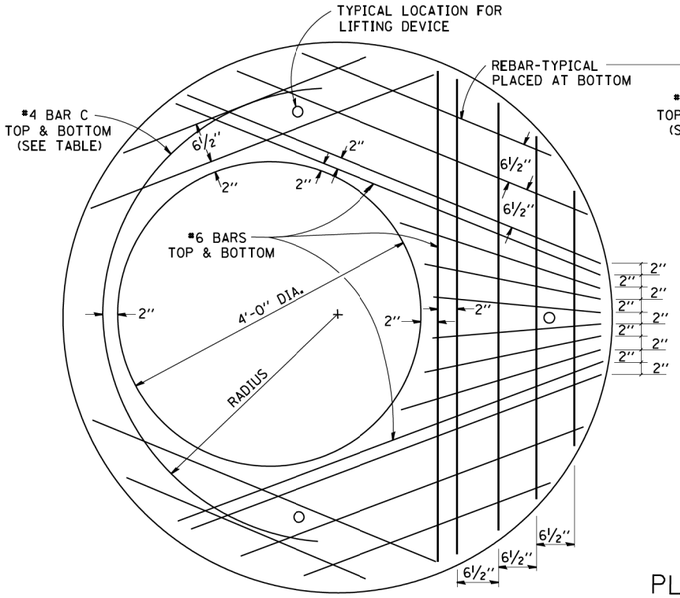
* * * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

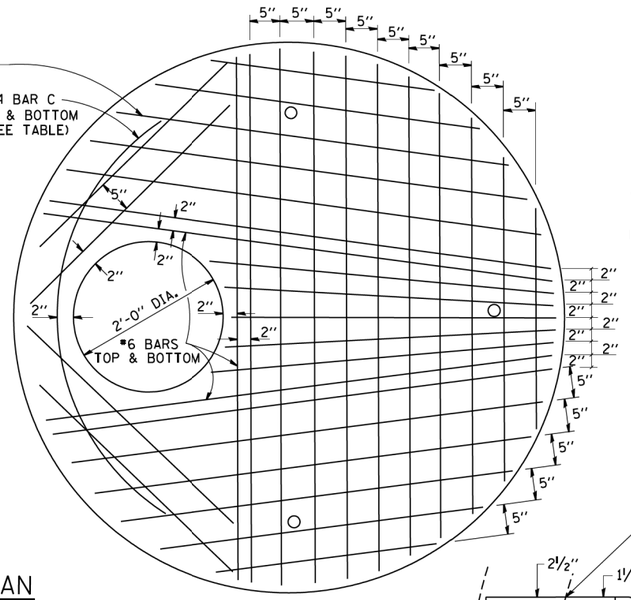
BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

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

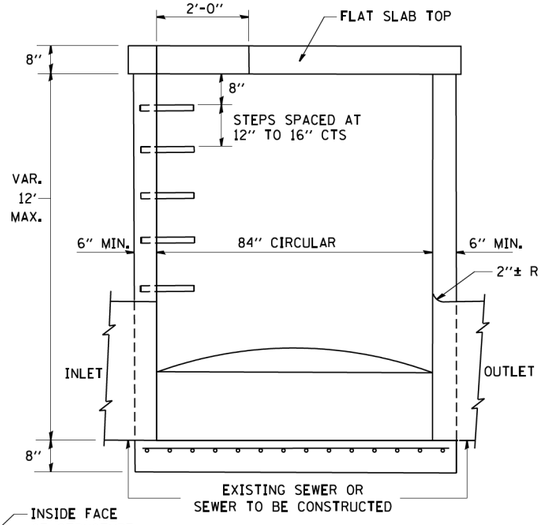
FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINT AND HMA TAPER DETAILS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - A. ABBAS 03-21-97			2298	16-00215-11-PV	KANE	611	474
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01				BD400-05 BD32	CONTRACT NO. 61E05		
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





PLAN

SHOWING REBAR REINFORCEMENT



ELEVATION

GENERAL NOTES

ALTERNATE MATERIAL FOR THE WALLS MAY BE CONCRETE MASONRY UNITS, PRECAST REINFORCED CONCRETE SECTIONS OR CAST-IN-PLACE CONCRETE. THE CAST IRON STEPS AS DETAILED HEREON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN MAY BE USED WHEN APPROVED BY THE ENGINEER.

CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 1006.14 OF THE STANDARD SPECIFICATIONS.

STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF THREE (3) INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.

STEPS SHALL BE OMITTED FOR WORK IN COOK COUNTY WHEN THE DEPTH OF THE MANHOLE IS TEN (10') OR LESS.

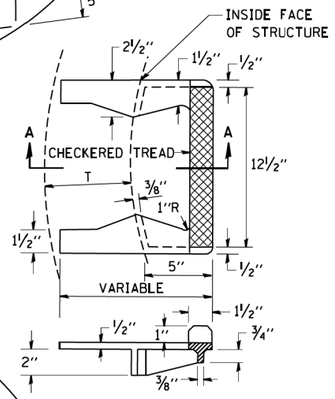
IN ADDITION TO THE REQUIREMENTS OF ARTICLE 612.13 OF THE STANDARD SPECIFICATIONS, THE CONTRACT UNIT PRICE FOR MANHOLES, TYPE A, 7'-DIAMETER SHALL INCLUDE THE SAND CUSHION WHEN REQUIRED, FURNISHING AND INSTALLING STEPS WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL, AND FURNISHING AND INSTALLING FLAT SLAB TOP.

PRECAST FLAT SLAB TOP SHALL CONFORM TO ARTICLES 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4,000 PSI AFTER 28 DAYS. REINFORCEMENT BARS AND WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 1006.10. ONLY GRADE 60 REINFORCEMENT BARS WILL BE PERMITTED.

BOTTOM SLAB SHALL BE REINFORCED BY EITHER REINFORCEMENT BARS OR WELDED WIRE FABRIC. THE MINIMUM REINFORCEMENT SHALL BE 0.46 SQUARE INCH PER LINEAR FOOT IN BOTH DIRECTIONS.

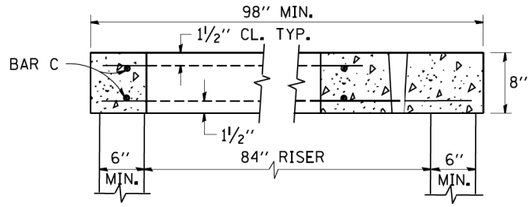
JOINT CONFIGURATION AND DIMENSIONS OF FLAT SLAB TOP SHALL MATCH AND FIT THE RISER JOINT DETAIL.

LIFTING DEVICES SHALL BE APPROVED BY THE ENGINEER.

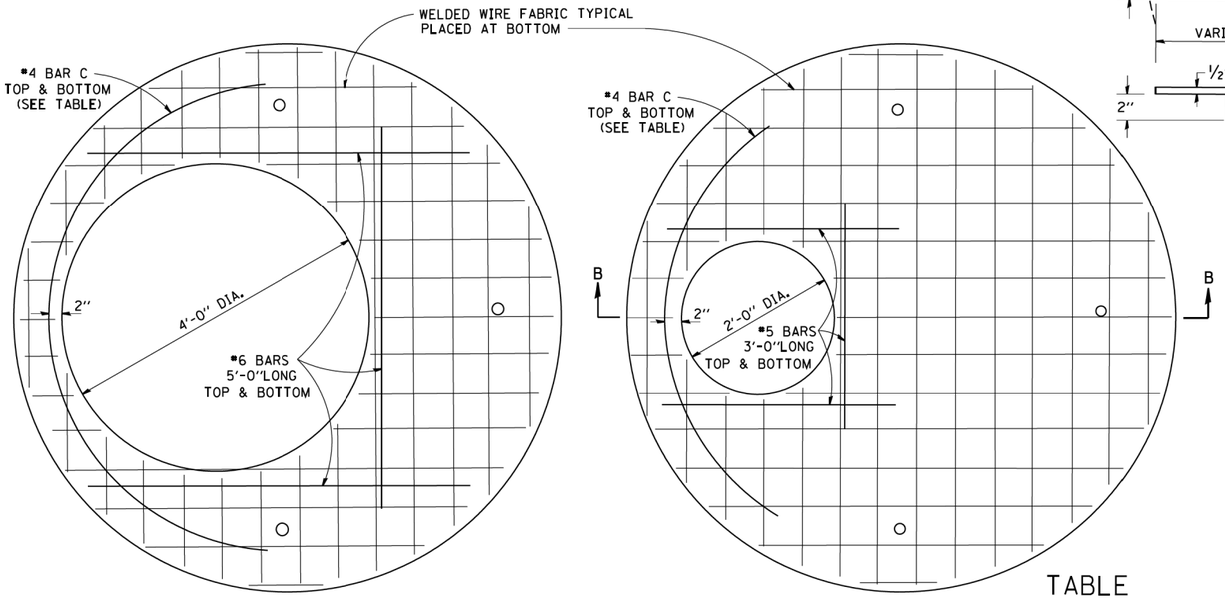


SEC. A-A

CAST IRON STEPS



SECTION B-B

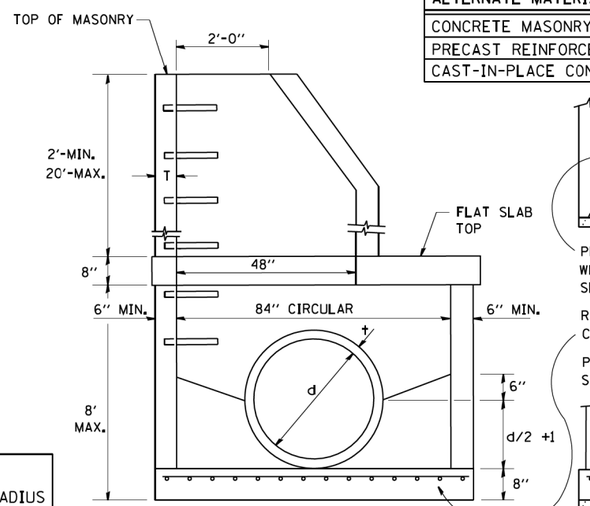


PLAN

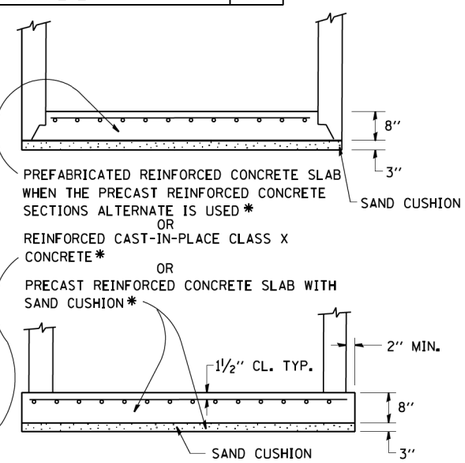
SHOWING WELDED WIRE FABRIC REINFORCEMENT

NOTE: THIS STRUCTURE SHOULD BE USED WITH PIPES SIZE 54" DIA. OR SMALLER.

ALTERNATE MATERIALS FOR RISERS	T (MIN.)
CONCRETE MASONRY UNITS	5"
PRECAST REINFORCED CONCRETE SECTIONS	4"
CAST-IN-PLACE CONCRETE	6"



ELEVATION



TABLE

DIAMETER OF OPENING	REINFORCEMENT "As" WWF OR EACH DIRECTION	BAR SIZE	BAR C SIZE	BAR C LENGTH	BAR C RADIUS
2'-0"	1.06 SQ.IN./LIN.FT.	#6	#4	6'-0"	38"
4'-0"	0.82 SQ.IN./LIN.FT.	#6	#4	9'-0"	38"

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		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE - 10-18-02	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MANHOLE TYPE A
7 FOOT DIAMETER

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

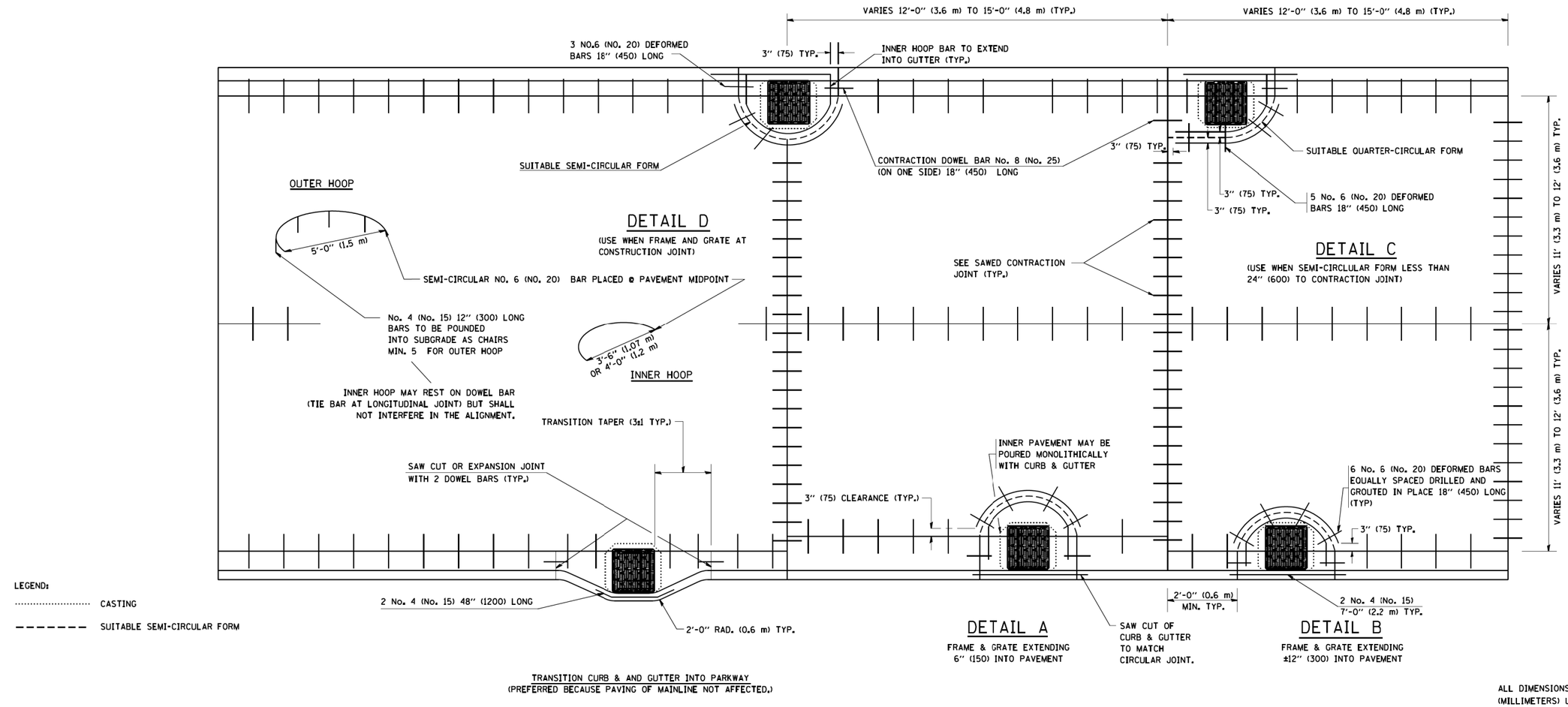
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	475
	BD600-11 (BD-37)	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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

NOTES :

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



TRANSITION CURB & AND GUTTER INTO PARKWAY
(PREFERRED BECAUSE PAVING OF MAINLINE NOT AFFECTED.)

ALL DIMENSIONS ARE IN INCHES
(MILLIMETERS) UNLESS OTHERWISE NOTED

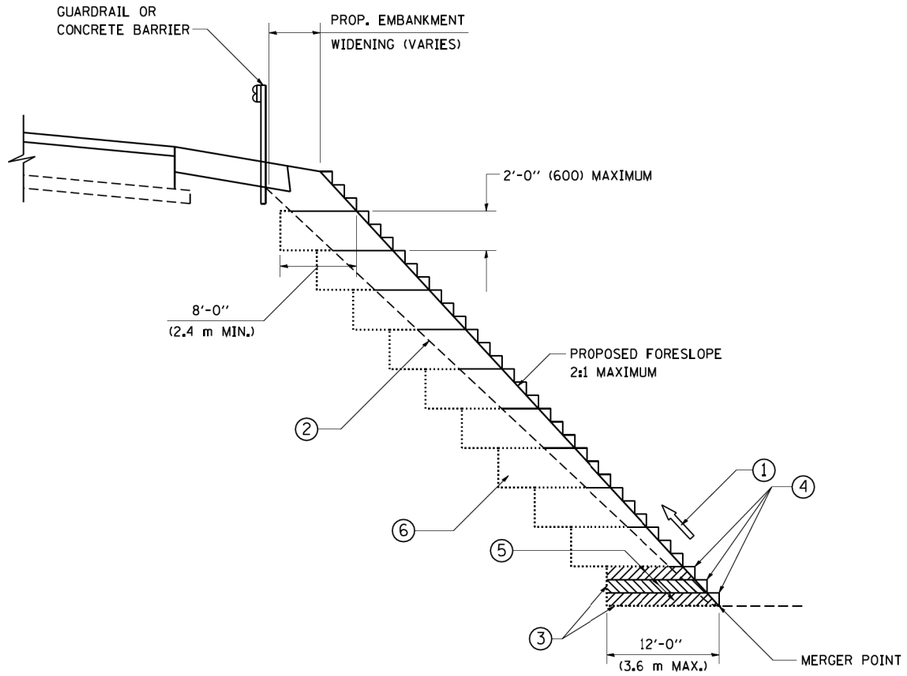
FILE NAME = W:\diststd\22x34\bd48.dgn	USER NAME = gaglianobt	DESIGNED - A. ABBAS	REVISED - T. MATOUSEK 08-28-00
		DRAWN - TOM MATOUSEK	REVISED - T. MATOUSEK 10-02-00
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - A. ABBAS	REVISED - T. MATOUSEK 04-25-02
	PLOT DATE = 1/4/2008	DATE - 01-04-99	REVISED - P. LAFLEUR 08-27-02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PCC PAVEMENT ROUNDOUTS AT CURB AND GUTTER

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	476
	BD-48	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

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

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

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

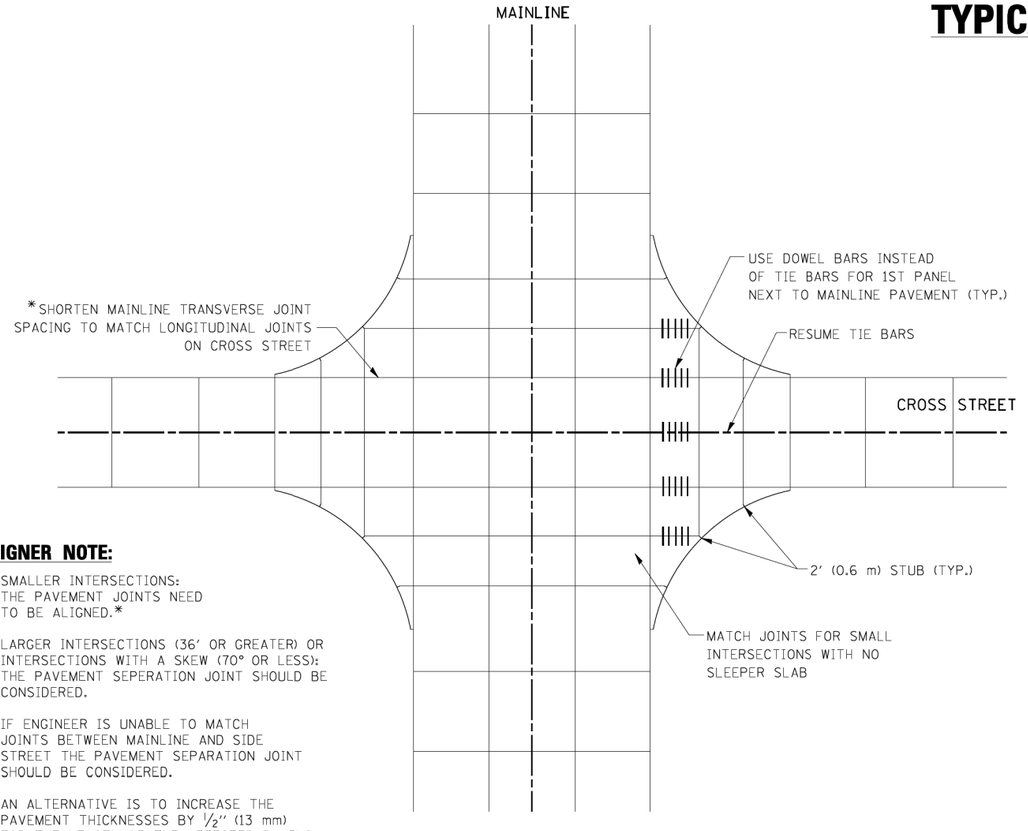
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT WIDENING

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	477
	BD-51	**CONTRACT NO.** 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TYPICAL APPLICATION

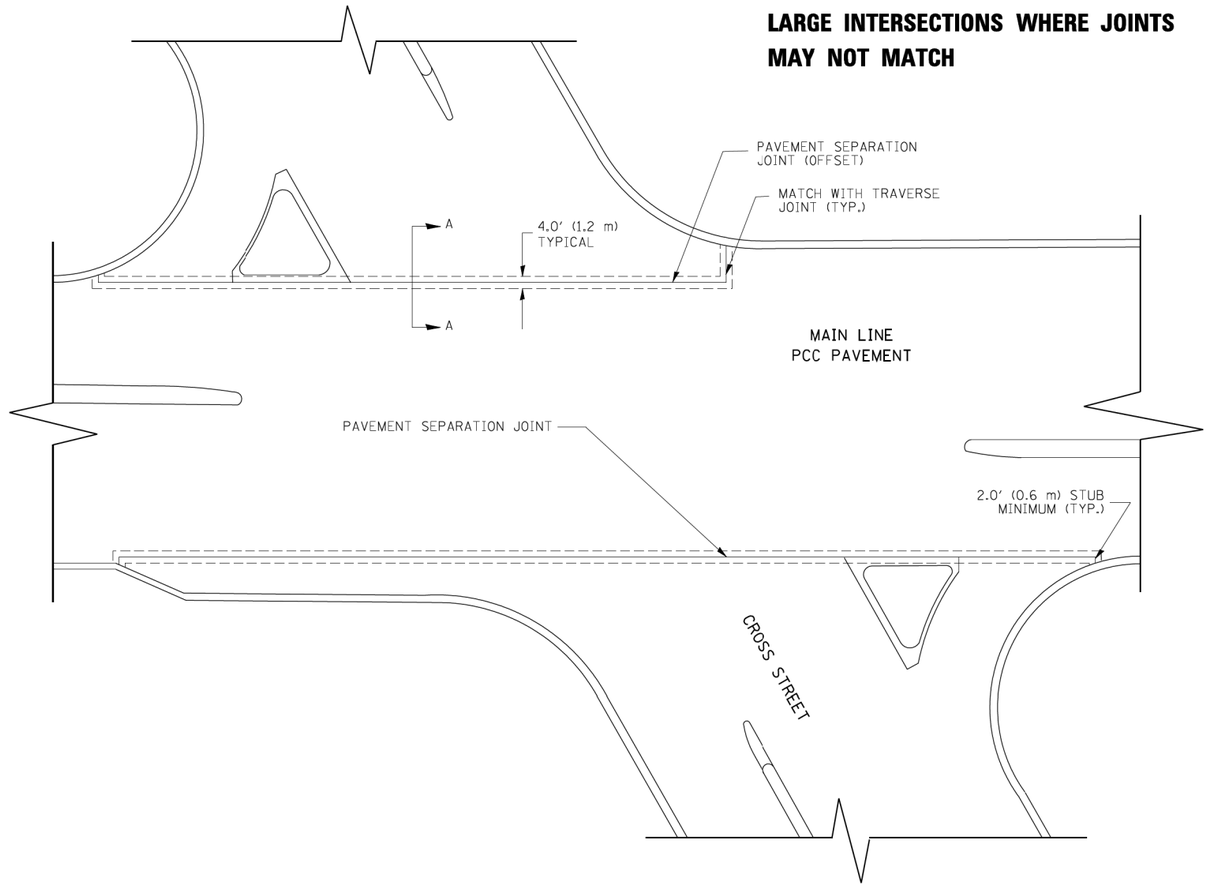


PLAN

DESIGNER NOTE:

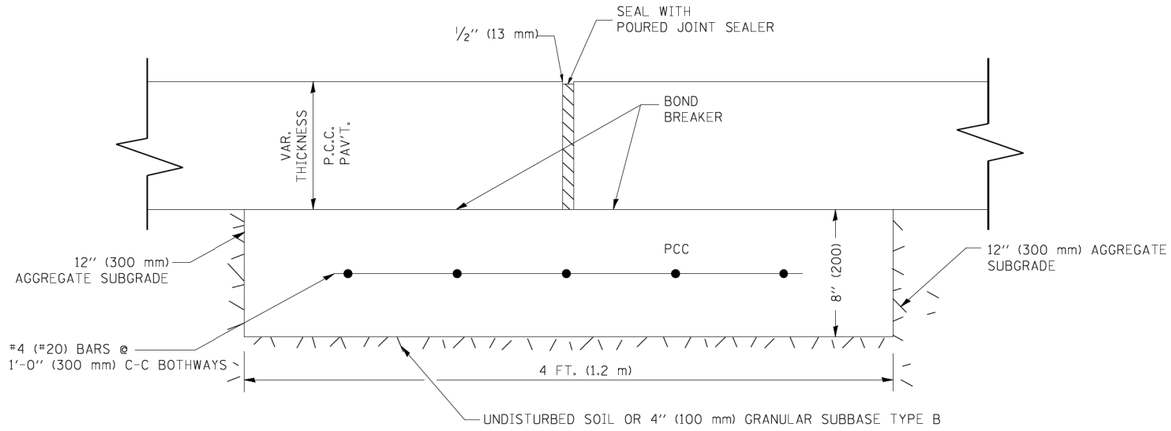
1. SMALLER INTERSECTIONS: THE PAVEMENT JOINTS NEED TO BE ALIGNED.*
2. LARGER INTERSECTIONS (36' OR GREATER) OR INTERSECTIONS WITH A SKEW (70° OR LESS): THE PAVEMENT SEPERATION JOINT SHOULD BE CONSIDERED.
3. IF ENGINEER IS UNABLE TO MATCH JOINTS BETWEEN MAINLINE AND SIDE STREET THE PAVEMENT SEPARATION 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
5. 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.

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



NOTE:

1. JOINT FILLER SHALL CONSIST OF A SHEET OF 1/2" (13 mm) BITUMINOUS PREFORMED FIBER JOINT FILLER CONFORMING TC 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

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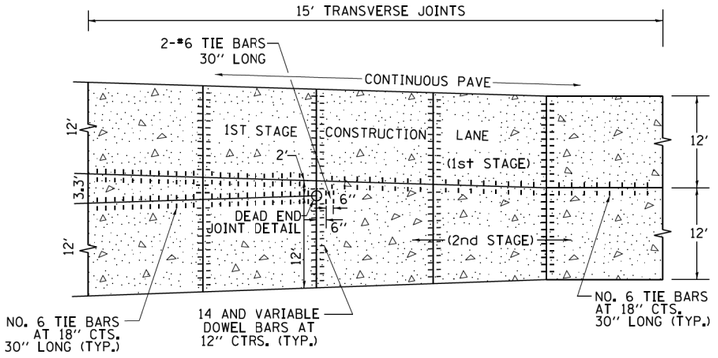
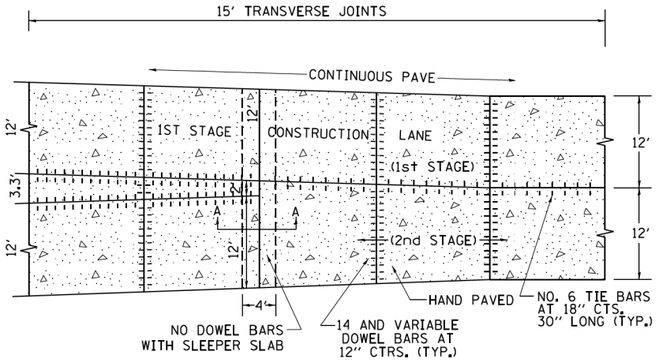
		DRAWN -	REVISED -			2298	16-00215-11-PV	KANE	611	478
	PLOT SCALE = 49.9999 ' / IN.	CHECKED -	REVISED -				BD52	CONTRACT NO. 61E05		
	PLOT DATE = 2/25/2011	DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

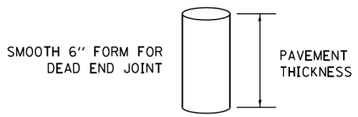
LANE REDUCTION WITH A CONTINUOUS PAVEMENT FOR 1ST STAGE WITH DEAD END JOINT OR SLEEPER SLAB



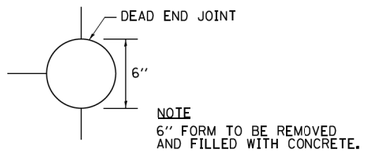
PLAN



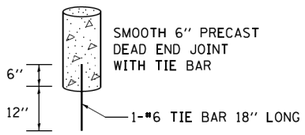
PLAN



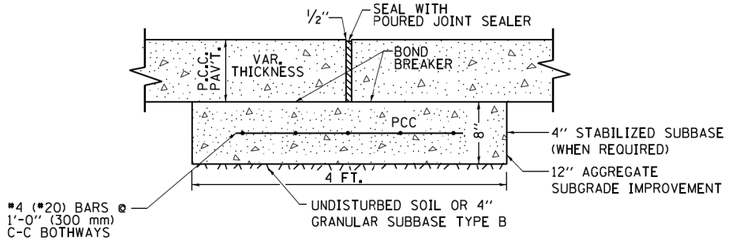
DEAD END JOINT DETAIL SIDE VIEW



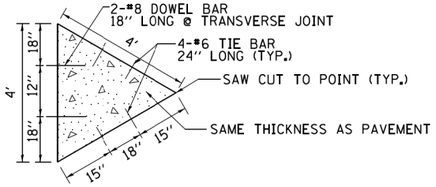
DEAD END JOINT DETAIL TOP VIEW



DEAD END JOINT PRECAST DETAIL

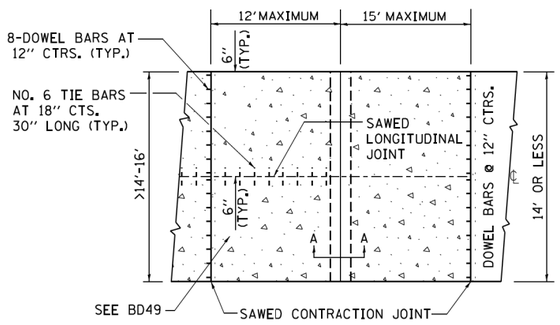


PROPOSED SECTION A–A OF SLEEPER SLAB

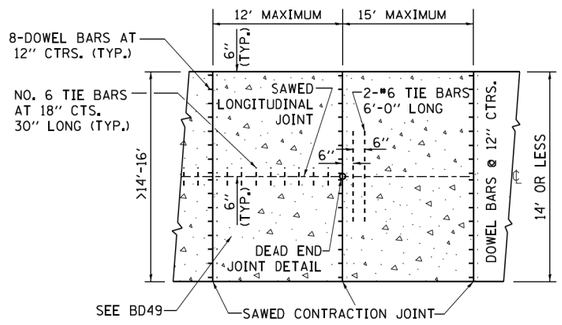


SAW–CUT MERGE DETAIL

TRANSITION DETAILS FOR CENTERLINE SAW CUT FOR DEAD END JOINT OR SLEEPER SLAB FOR VARIABLE JOINTED PCC PAVEMENT FOR LANES OVER 14'

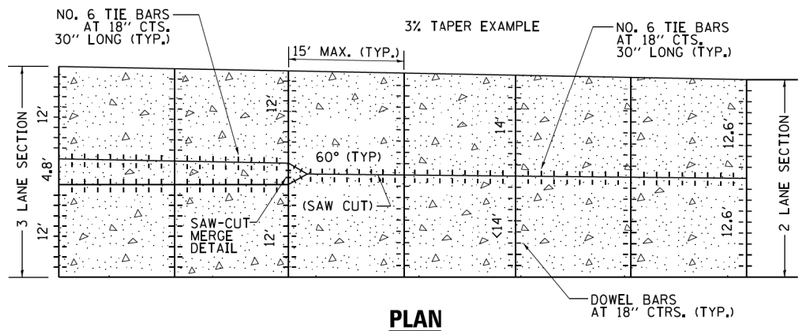


PLAN USING SLEEPER SLAB



PLAN USING DEAD END JOINT

INTERIOR LANE REDUCTION FOR THREE LANE SECTION IN PCC PAVEMENT



PLAN

NOTES:

1. SAW-CUT MERGE DETAIL: THE 4' TRIANGLE SECTION COULD BE PRECAST OR CAST INPLACE AND PROPERLY PLACED WITH TIE BARS AND PROPERLY ALIGNED DOWEL BARS.
2. TRANSVERSE JOINT SPACING MAY DECREASE DEPENDING ON PAVEMENT THICKNESS BELOW 9.5". USE FORMULA JOINT SPACING IN (FT) = 2 X PAVEMENT THICKNESS IN (IN)-4.
3. USE SAW-CUT MERGE DETAIL IN SITUATIONS WHERE THERE IS NO STAGING.
4. PRECAST DEAD END JOINT SET IN PLACE WITH DRILLED HOLE INTO SUBBASE/SUBGRADE FOR #6 TIE BAR.
5. DEAD END JOINTS WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PCC PAVEMENT.
6. SLEEPER SLAB WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR SLEEPER SLAB.

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\Standards\CADData\CAD sheets\bd53.dgn	USER NAME = drivakosgn	DESIGNED - TGM, EAJ	REVISED - CADD 05-02-12	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF VARIOUS TYPES OF LANE REDUCTION FOR PCC PAVEMENT
	PLOT SCALE = 50.0000 ' / in.	DRAWN	REVISED - CADD 11-02-15		
Default	PLOT DATE = 11/2/2015	CHECKED - JD	REVISED -		SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.
		DATE - 03/07/12	REVISED -		

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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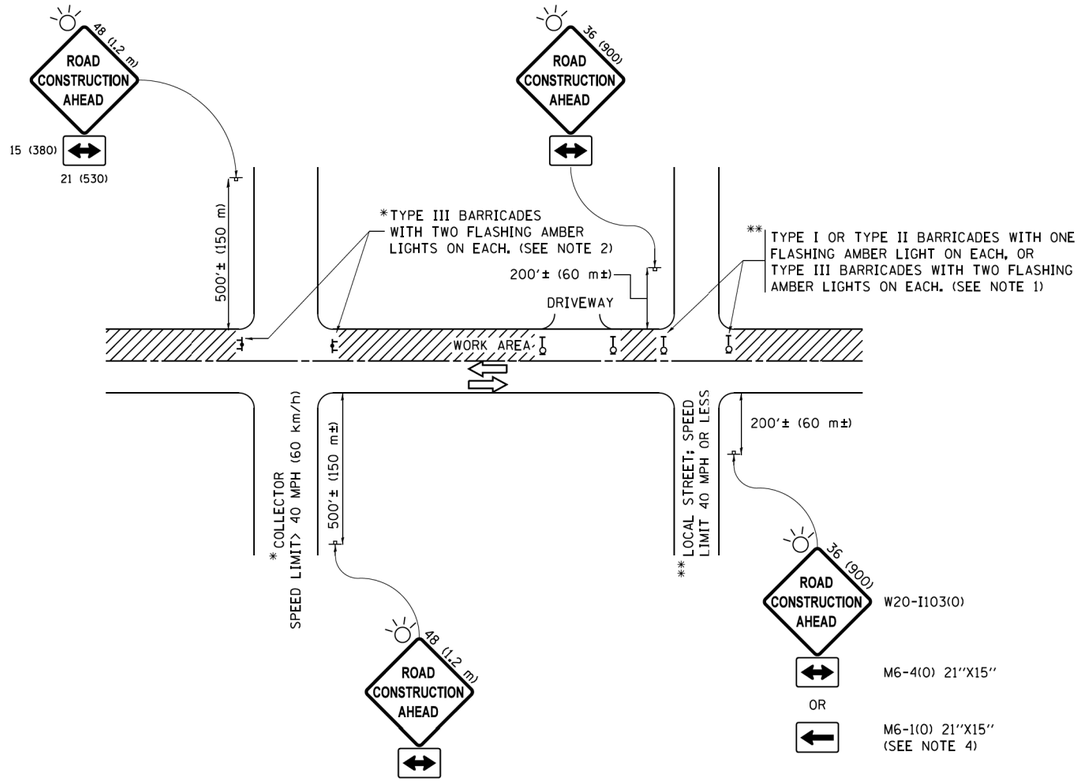
	BD53	CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



NOTES:

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 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. 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.
4. 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).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

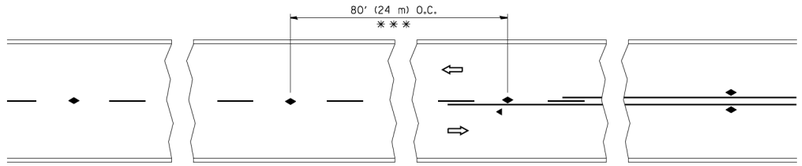
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\Default	USER NAME = footemj	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
		DRAWN	REVISED -T. RAMMACHER 01-06-00
	PLOT SCALE = 50.000 '/ in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
	PLOT DATE = 9/15/2016	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

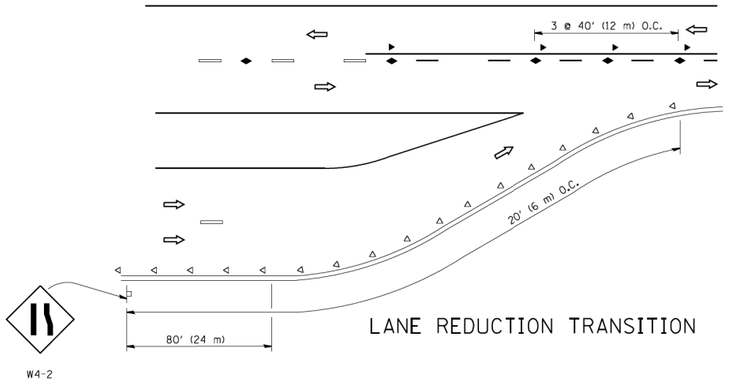
SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	480
	TC-10	CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

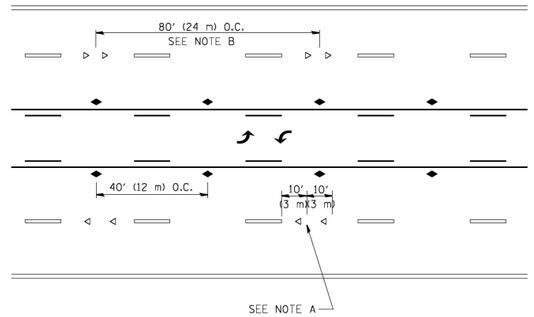


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

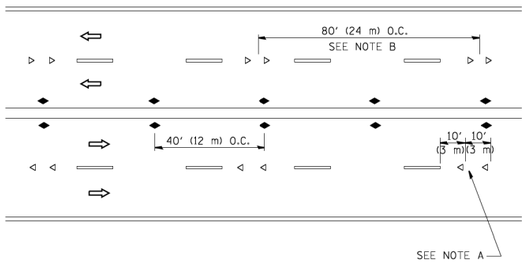
TWO-LANE/TWO-WAY



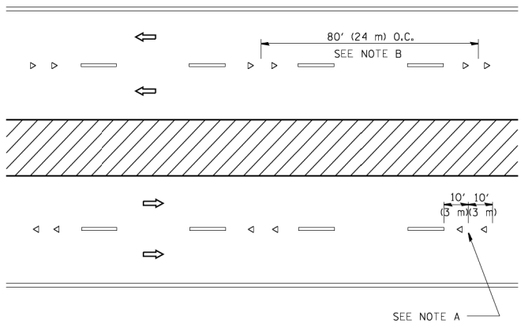
LANE REDUCTION TRANSITION



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

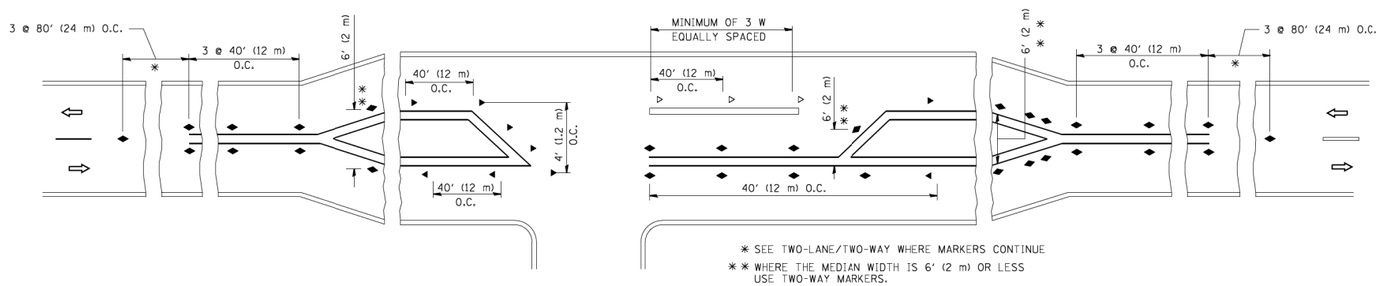
LANE MARKER NOTES

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

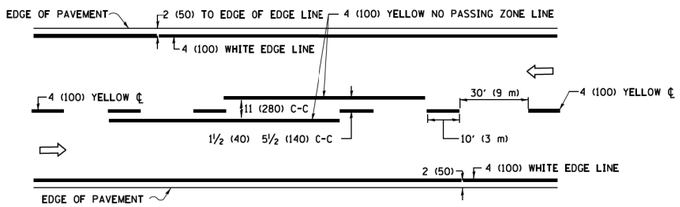
1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS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



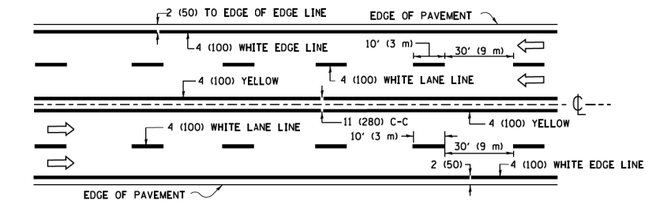
LEFT TURN

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

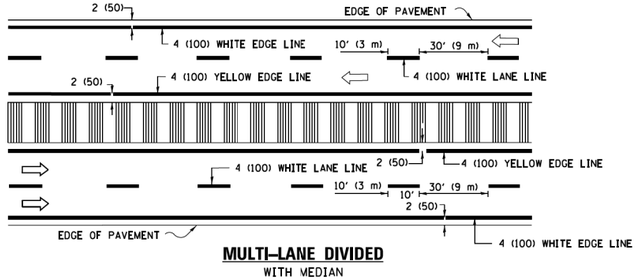
FILE NAME = c:\pw_work\pwidot\leysa\d0108315\tcll.dgn	USER NAME = leysa	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - T. RAMMACHER 03-12-99					2298	16-00215-11-PV	KANE	611	481
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00						TC-11	CONTRACT NO. 61E05		
	PLOT DATE = 3/2/2011	DATE -	REVISED - C. JUCIUS 09-09-09		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



2–LANE ROADWAY

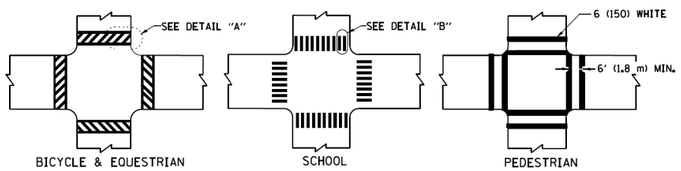


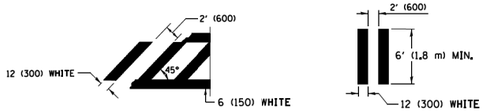
MULTI–LANE UNDIVIDED



MULTI–LANE DIVIDED
WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

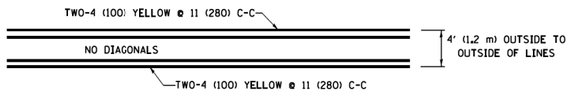




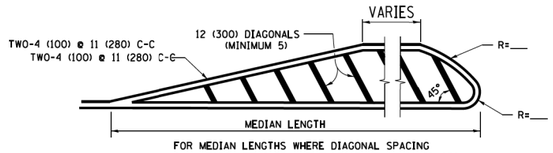
DETAIL "A" **DETAIL "B"**

TYPICAL CROSSWALK MARKING

✳ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



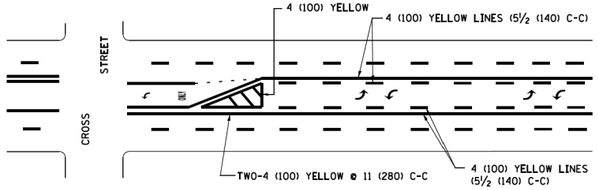
4' (1.2 m) WIDE MEDIANS ONLY



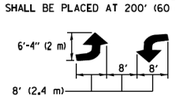
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

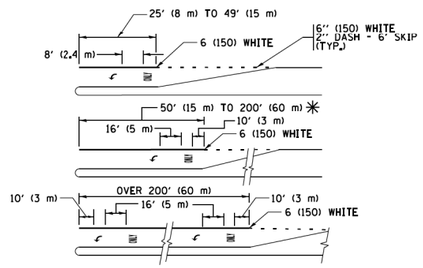


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO–WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

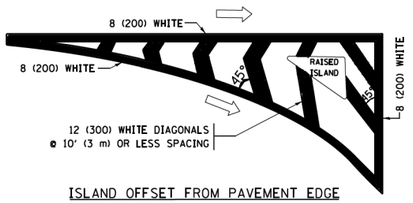


FULL SIZE LETTERS 8' (2,4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1,5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1,9 m^2)

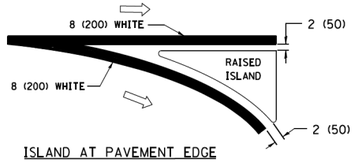
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

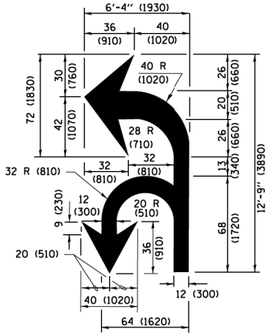


ISLAND OFFSET FROM PAVEMENT EDGE

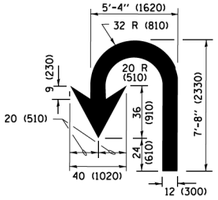


ISLAND AT PAVEMENT EDGE

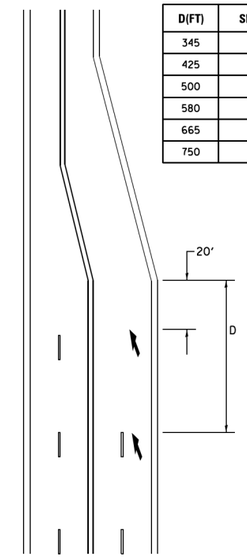
TYPICAL ISLAND MARKING



COMBINATION LEFT AND U–TURN



U–TURN



LANE REDUCTION TRANSITION

✳ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

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	5½ (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 MEDIANS IN YELLOW
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; 5½ (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 (REQUIRED FOR SHOULDERS ≥ 8')	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))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16,3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30,4 SF

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.

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\Standards\tc13.dgn	USER NAME = footemj	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - C. JUCIUS 07-01-13
Default	PLOT DATE = 4/13/2016	DRAWN - DATE - 03-19-90	REVISED - C. JUCIUS 12-21-15
			REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

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

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	482
	TC-13	CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

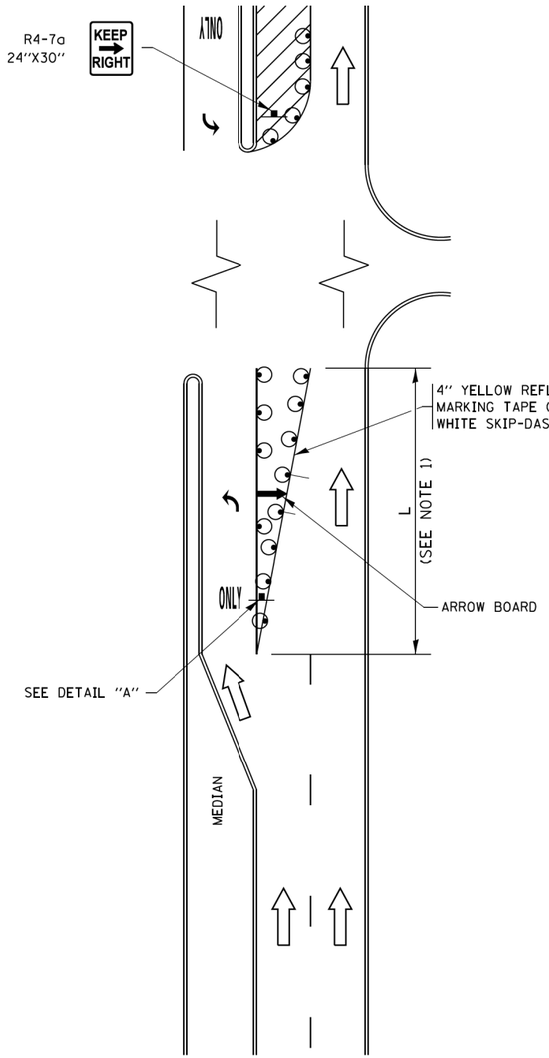


FIGURE 1

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

NOTES:

1. A) WHEN "L" IS ≤ THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.

   B) WHEN "L" IS > THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.

2. 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.

3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.

4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.

5. 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-I10OR 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.

6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.

7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PREQUIREMENTS.

8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

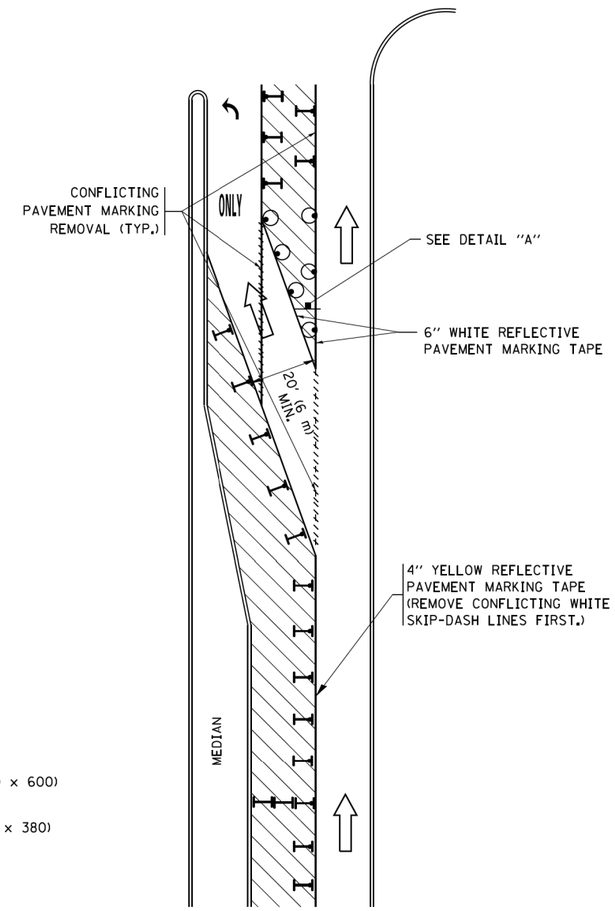
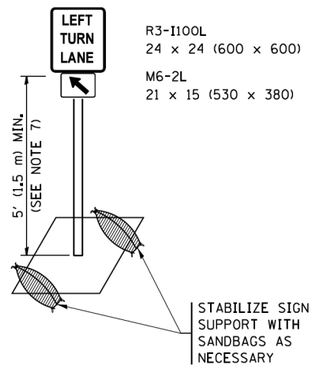


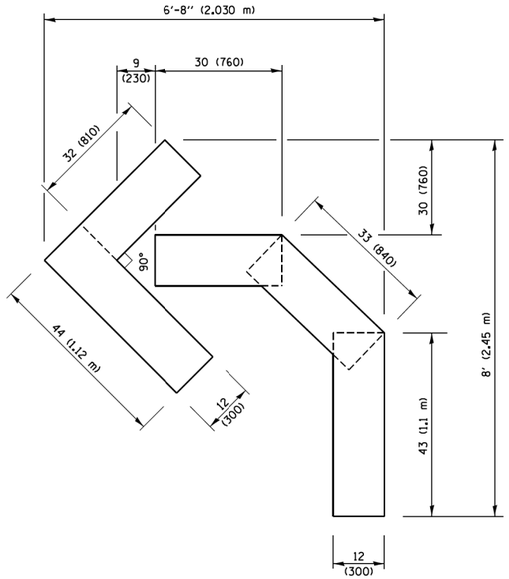
FIGURE 2



DETAIL A

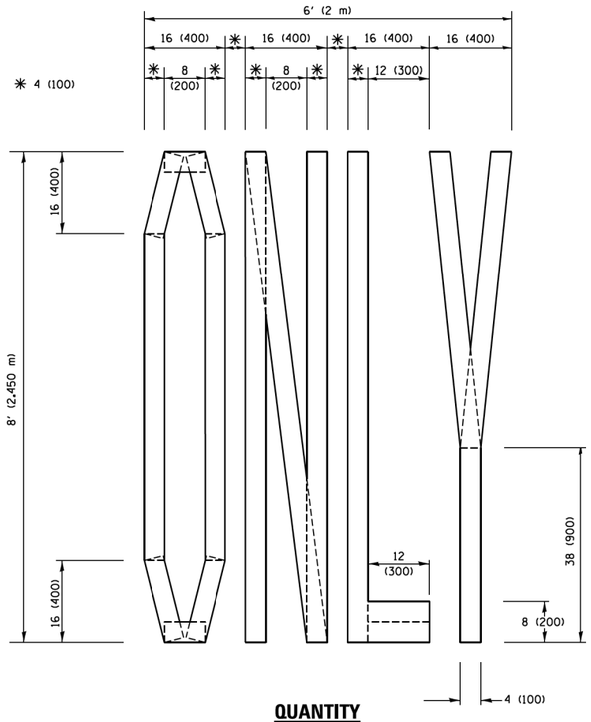
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist[illegible]\ADDeta\C[illegible]\D[illegible]\Default	USER NAME = footemj	REVISED -T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)	F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000 ' / in.	REVISED - A. HOUSEH 11-07-95	REVISED - A. SCHUETZE 07-01-13			2298	16-00215-11-PV	KANE	611	483
	PLOT DATE = 9/15/2016	REVISED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16		SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.		TC-14	CONTRACT NO. 61E05		
		REVISED -T. RAMMACHER 01-06-00	REVISED -				ILLINOIS FED. AID PROJECT			



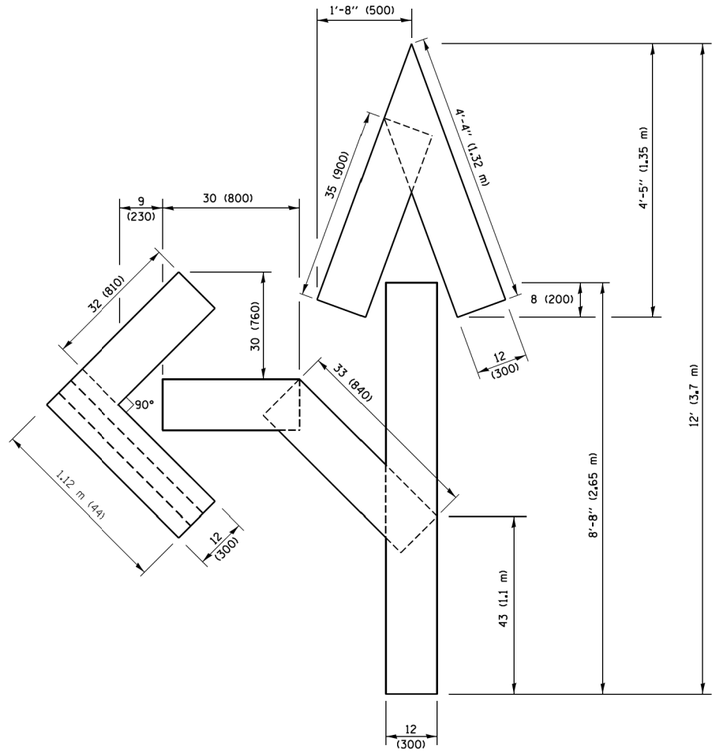
QUANTITY

4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.41 sq. m)



QUANTITY

4 (100) LINE = 64.1 ft. (19.5 m)
21.4 sq. ft. (1.99 sq. m)

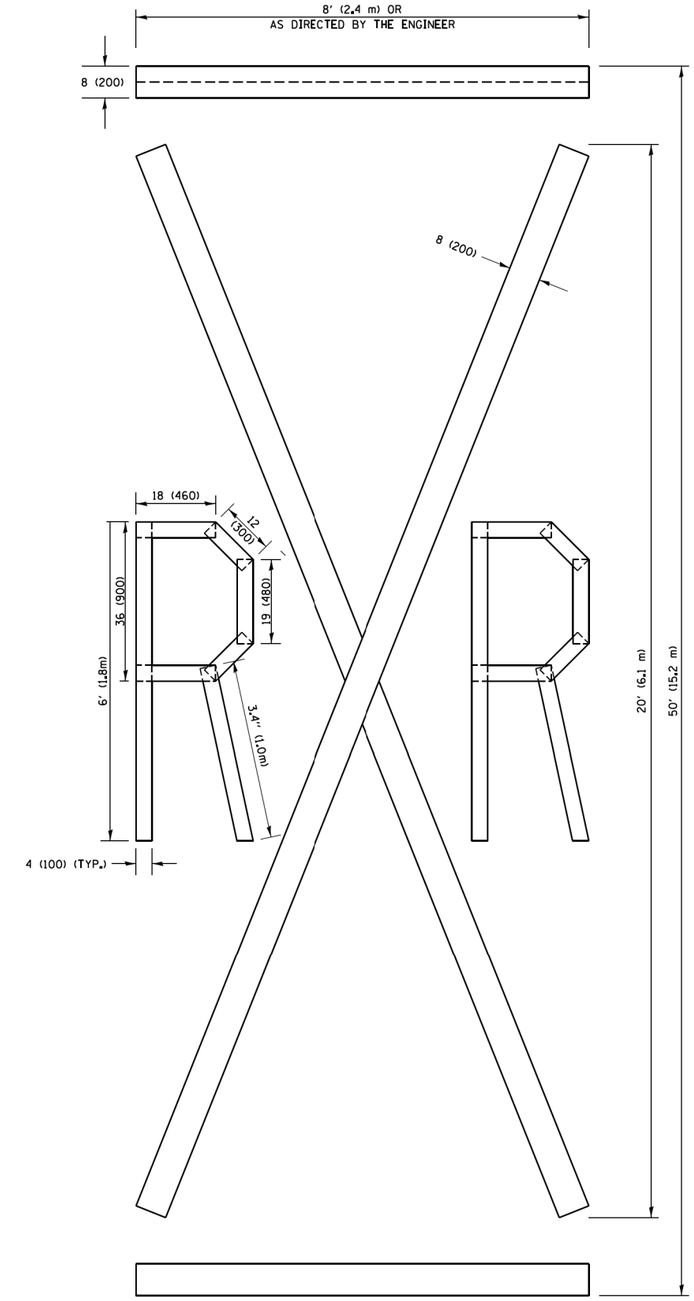


QUANTITY

4 (100) LINE = 82.5 ft. (25.1 m)
27.5 sq. ft. (2.53 sq. m)

NOTE:

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



QUANTITY

4 (100) LINE = 225.9 ft. (68.9 m)
75.3 sq. ft. (6.99 sq. m)

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

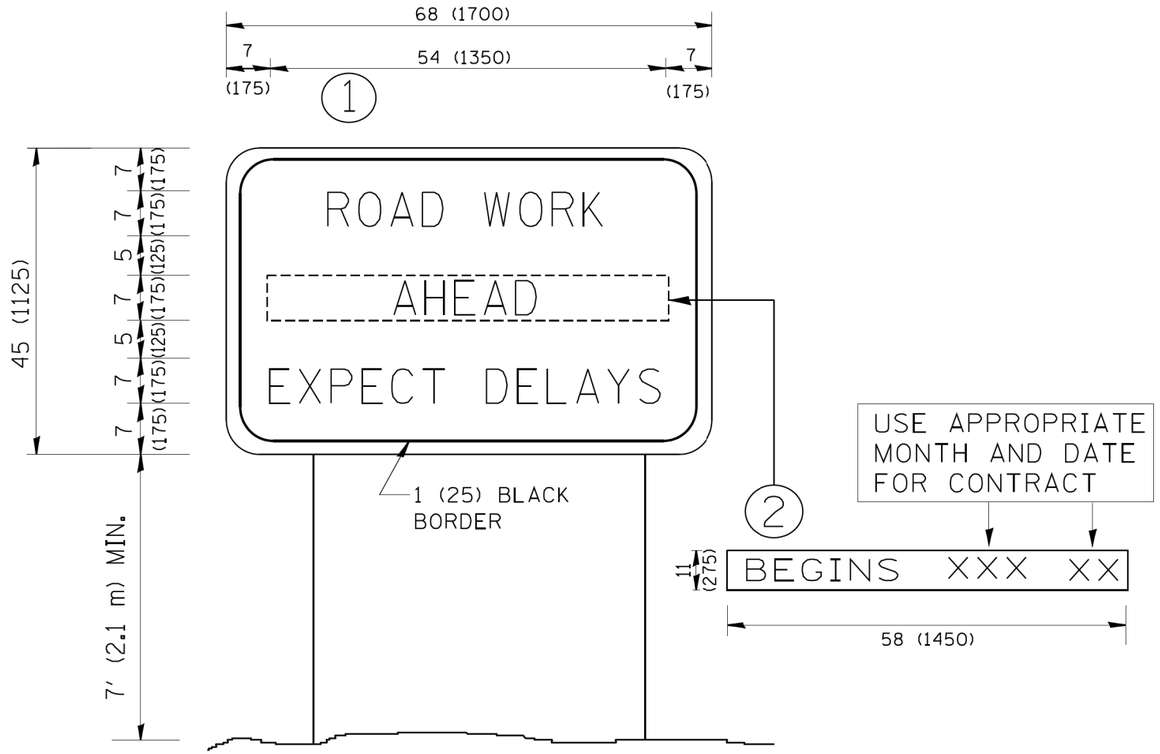
FILE NAME = pw\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\CADData\CADsheets\tc16.dgn	USER NAME = footemj	DESIGNED -	REVISED -T. RAMMACHER 03-02-98
		DRAWN	REVISED -E. GOMEZ 08-28-00
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -E. GOMEZ 08-28-00
	PLOT DATE = 9/15/2016	DATE - 09-18-94	REVISED -A. SCHUETZE 09-15-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	484
	TC-16	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

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

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

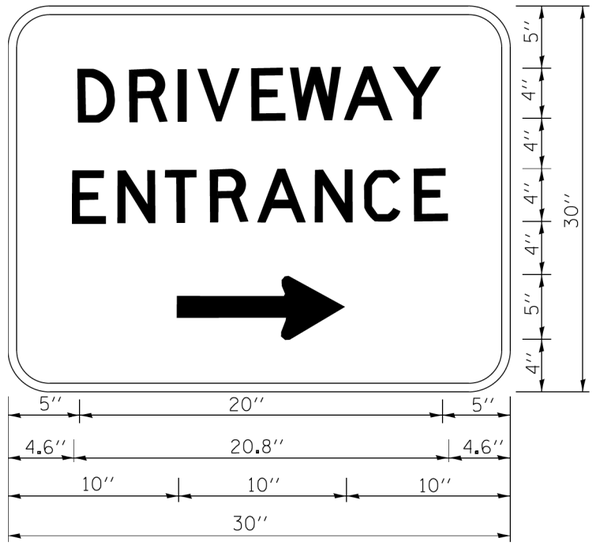
FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	485
	TC-22	CONTRACT NO. 61E05		
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 = c:\pw_work\pwidot\gaglianobt\d0108315\tc26.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - C. JUCIUS 02-15-07
		DRAWN -	REVISED -
	PLOT SCALE = 50.000 '/ in.	CHECKED -	REVISED -
	PLOT DATE = 12/13/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY ENTRANCE SIGNING

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	486
	TC-26	CONTRACT NO. 61E05		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

805
800

799.67 | 801.13 | 799.32 | 2.00 % | 2.00 % | PR ROW

CUT = 1.2 SQ FT
FILL = 7.6 SQ FT

607 + 00.00

805
800

798.94 | 799.86 | 798.83 | 2.00 % | 2.00 % | TEMP EASEMENT

CUT = 17.5 SQ FT
FILL = 1.4 SQ FT

606 + 00.00

800

798.90 | 798.60 | 798.56 | 2.00 % | 2.00 %

CUT = 52.1 SQ FT
FILL = 0.0 SQ FT

605 + 00.00

800

800.00 | 799.84 | 799.50 | 2.00 % | 2.00 %

CUT = 46.4 SQ FT
FILL = 0.0 SQ FT

604 + 00.00

800

800.44 | 801.09 | 799.78 | 2.00 % | 2.00 %

CUT = 19.5 SQ FT
FILL = 1.7 SQ FT

603 + 00.00

805

801.35 | 802.33 | 800.61 | 2.00 % | 2.00 %

CUT = 8.5 SQ FT
FILL = 3.6 SQ FT

602 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_RB_SHT_XSC_HAUL RD.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -
	DRAWN - GJE	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY HAUL ROAD – PRE-STAGE
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ
SHEET 487 OF 611 SHEETS | STA. 602+00.00 TO STA. 607+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	487
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

810
805

806.91 3:1 2.00 % 806.00 2.00 % 805.83 TEMP EASEMENT

613+00.00

CUT = 50.6 SQ FT
FILL = 0.0 SQ FT

805.47 3:1 2.00 % 807.34 2.00 % 3:1 804.86 TEMP EASEMENT

612+00.00

CUT = 0.0 SQ FT
FILL = 30.0 SQ FT

802.85 3:1 2.00 % 804.68 2.00 % 3:1 802.16 TEMP EASEMENT

611+00.00

CUT = 0.0 SQ FT
FILL = 28.5 SQ FT

PR ROW

801.27 3:1 2.00 % 804.01 2.00 % 3:1 801.39 TEMP EASEMENT

610+00.00

CUT = 0.0 SQ FT
FILL = 49.0 SQ FT

802.51 3:1 2.00 % 803.35 2.00 % 801.30

609+00.00

CUT = 36.5 SQ FT
FILL = 0.4 SQ FT

801.46 3:1 2.00 % 802.39 2.00 % 802.00

608+00.00

CUT = 34.0 SQ FT
FILL = 0.3 SQ FT

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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_RB_SHT_XSC_HAUL RD.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -	
	DRAWN - GJE	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -	
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY HAUL ROAD – PRE-STAGE
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ

SHEET 488 OF 611 SHEETS STA. 608+00.00 TO STA. 613+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	488
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

815
810

809.25 3:1 2.00 % 808.00 2.00 % 3:1 809.25
TEMP EASEMENT

617 + 00.00

CUT = 89.5 SQ FT
FILL = 0.0 SQ FT

815
810

809.91 3:1 2.00 % 807.50 2.00 % 3:1 809.29
TEMP EASEMENT

616 + 00.00

CUT = 129.5 SQ FT
FILL = 0.0 SQ FT

815
810

809.92 3:1 2.00 % 807.00 2.00 % 3:1 809.73
TEMP EASEMENT

615 + 00.00

CUT = 143.5 SQ FT
FILL = 0.0 SQ FT

815
810
805

810.00 3:1 2.00 % 806.50 2.00 % 3:1 807.95
TEMP EASEMENT

614 + 00.00

CUT = 124.9 SQ FT
FILL = 0.0 SQ FT

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_RB_SHT_XSC_HAUL RD.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -
	DRAWN - GJE	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY HAUL ROAD – PRE-STAGE CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ
SHEET 489 OF 611 SHEETS STA. 614+00.00 TO STA. 617+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	489
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

815
810

808.91 3:1 2.00 % 810.46 2.00 % 3:1 809.11
TEMP EASEMENT
622 + 00.00
CUT = 5.6 SQ FT
FILL = 4.1 SQ FT

815
810

809.92 2.00 % 809.99 2.00 % 809.84
TEMP EASEMENT
621 + 00.00
CUT = 46.3 SQ FT
FILL = 0.0 SQ FT

815
810

808.83 2.00 % 809.49 2.00 % 809.46
TEMP EASEMENT
620 + 00.00
CUT = 38.4 SQ FT
FILL = 0.2 SQ FT

815
810

809.19 3:1 2.00 % 808.99 2.00 % 3:1 809.86
TEMP EASEMENT
619 + 00.00
CUT = 67.1 SQ FT
FILL = 0.0 SQ FT

815
810

809.04 3:1 2.00 % 808.50 2.00 % 3:1 810.04
TEMP EASEMENT
618 + 00.00
CUT = 86.7 SQ FT
FILL = 0.0 SQ FT

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_RB_SHT_XSC_HAUL_RD.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -	
	DRAWN - GJE	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -	
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY HAUL ROAD – PRE-STAGE
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ

SHEET 490 OF 611 SHEETS STA. 618+00.00 TO STA. 622+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	490
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

820
815

EX ROW
813.67
813.93
814.22
2.00 %
2.00 %
TEMP EASEMENT

627+00.00

CUT = 50.0 SQ FT
FILL = 0.0 SQ FT

820
815

EX ROW
812.84
813.10
813.39
2.00 %
2.00 %
TEMP EASEMENT

626+00.00

CUT = 50.0 SQ FT
FILL = 0.0 SQ FT

820
815

EX ROW
812.01
812.27
812.57
2.00 %
2.00 %
TEMP EASEMENT

625+00.00

CUT = 50.0 SQ FT
FILL = 0.0 SQ FT

815
810

EX ROW
811.18
811.44
811.14
2.00 %
2.00 %
TEMP EASEMENT

624+00.00

CUT = 46.2 SQ FT
FILL = 0.0 SQ FT

815
810

EX ROW
810.10
810.94
809.76
2.00 %
2.00 %
TEMP EASEMENT

623+00.00

CUT = 18.6 SQ FT
FILL = 1.6 SQ FT

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894-RB_SHT_XSC_HAUL RD.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -	
	DRAWN - GJE	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -	
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

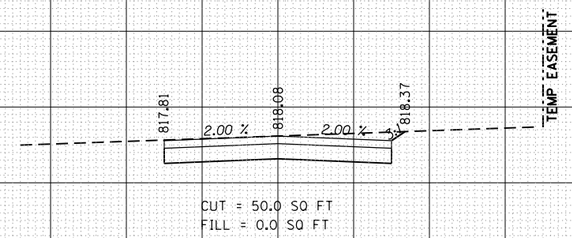
TEMPORARY HAUL ROAD – PRE-STAGE
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ
SHEET 491 OF 611 SHEETS STA. 623+00.00 TO STA. 627+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	491
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

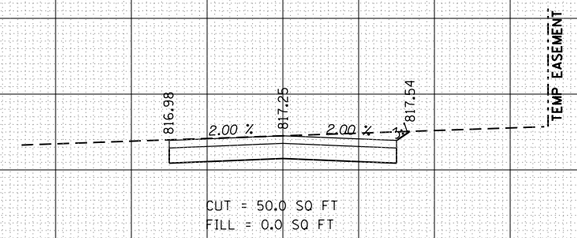
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

825
820
815



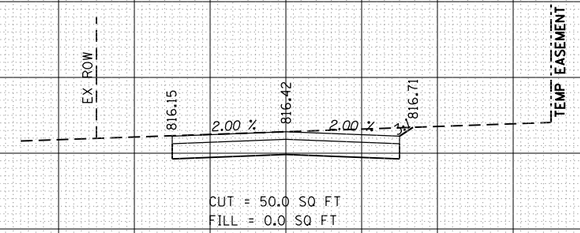
CUT = 50.0 SQ FT
FILL = 0.0 SQ FT

632+00.00



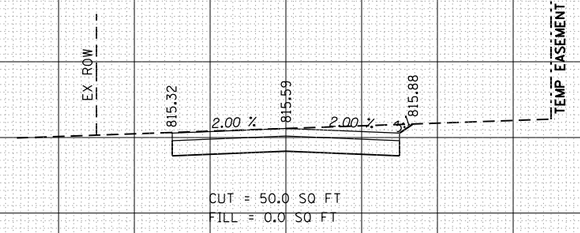
CUT = 50.0 SQ FT
FILL = 0.0 SQ FT

631+00.00



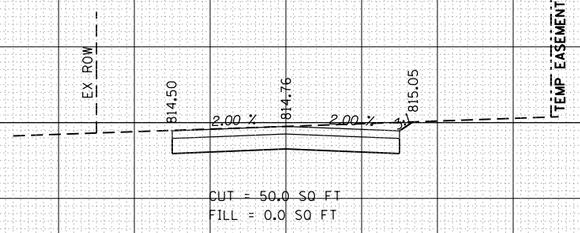
CUT = 50.0 SQ FT
FILL = 0.0 SQ FT

630+00.00



CUT = 50.0 SQ FT
FILL = 0.0 SQ FT

629+00.00



CUT = 50.0 SQ FT
FILL = 0.0 SQ FT

628+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

FILE NAME = W:\894-018 KDOT LMP Section B\CADD SHEETS\Section B2\2013894_RB_SHT_XSC_HAUL RD.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -
	DRAWN - GJE	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

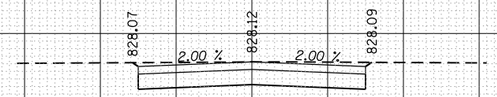
TEMPORARY HAUL ROAD – PRE-STAGE
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ
SHEET 492 OF 611 SHEETS
STA. 628+00.00 TO STA. 632+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	492
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

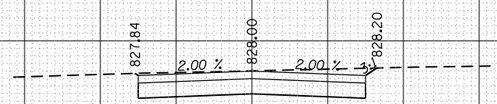
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

830 825



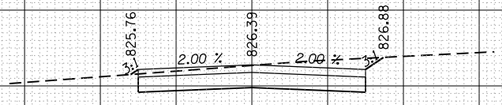
CUT = 49.4 SQ FT
FILL = 0.0 SQ FT

638+00.00



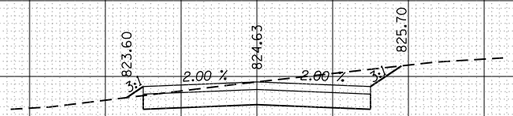
CUT = 50.4 SQ FT
FILL = 0.0 SQ FT

637+00.00



CUT = 49.0 SQ FT
FILL = 0.1 SQ FT

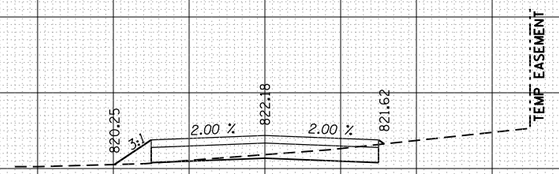
636+00.00



CUT = 51.4 SQ FT
FILL = 0.7 SQ FT

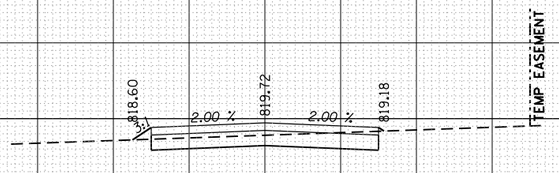
635+00.00

830 825 820



CUT = 12.0 SQ FT
FILL = 3.9 SQ FT

634+00.00



CUT = 25.0 SQ FT
FILL = 1.1 SQ FT

633+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_RB_SHT_XSC_HAUL RD.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -	
	DRAWN - GJE	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -	
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY HAUL ROAD – PRE-STAGE CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ
SHEET 493 OF 611 SHEETS STA. 633+00.00 TO STA. 638+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	493
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_SHT_XSC_LMP.dgn

℄ LONGMEADOW PARKWAY

905.22 2.40% 904.00 2.00% 904.44 1.00% 904.53 1.00% 904.44 2.00% 904.00 1.00% 903.74 1.00% 903.97

Ex. Tel.

Ex. Tel.

Ex. Electric

42" STORM

2123 + 30.76

EX ROW

904.05 2.4% 903.98 2.00% 904.42 1.00% 904.51 1.00% 904.42 2.00% 903.98 1.00% 903.92 903.50

EX ROW

4" GAS

2123 + 00.00

EX ROW

1.5% 904.15 2.00% 904.59 904.37 2.00% 904.59 2.00% 904.15 903.00

EX ROW

4" GAS

2122 + 50.00

USER NAME = gellwanger	DESIGNED - GJE	REVISED -	
	DRAWN - GJE	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -	
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -	

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

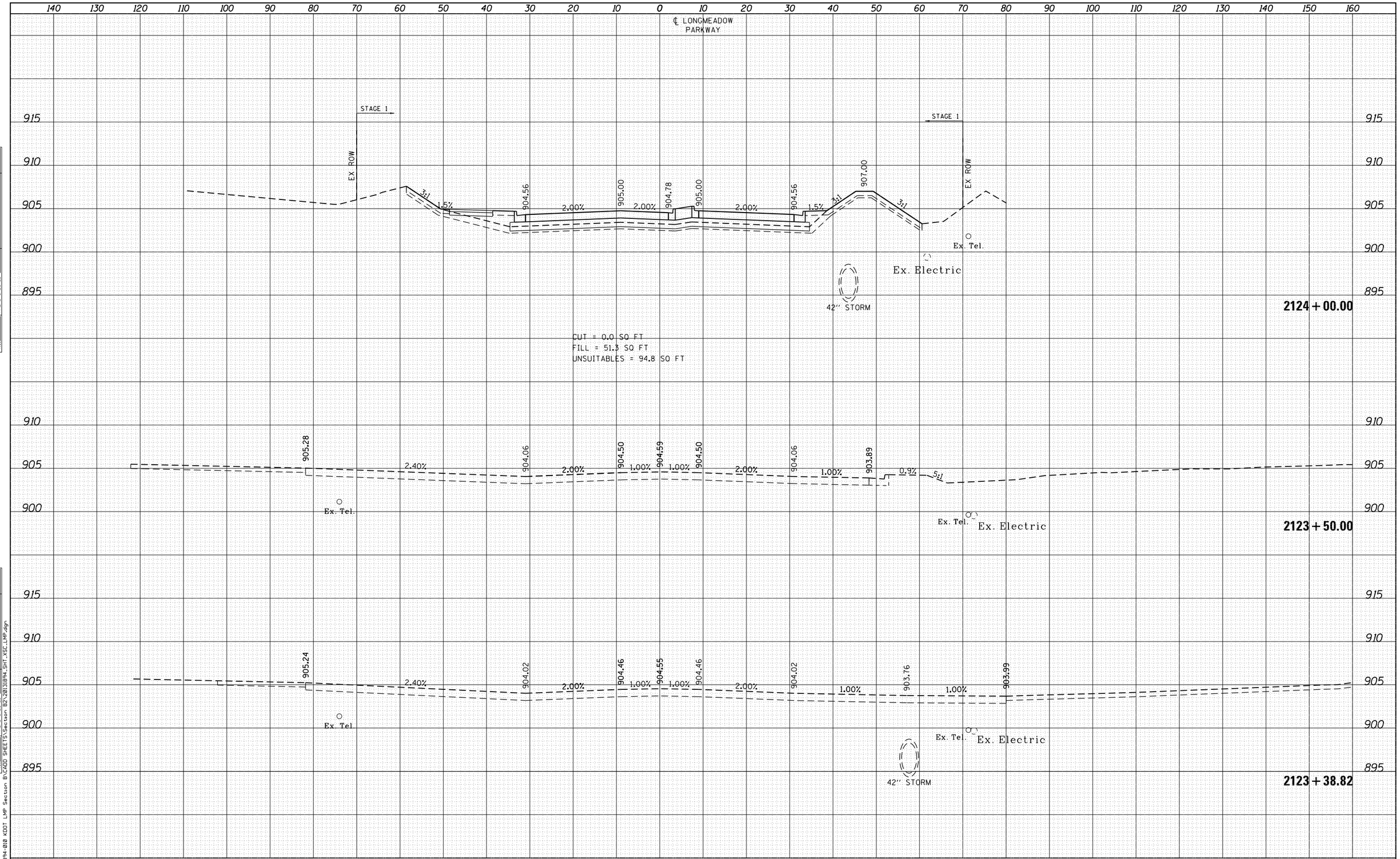
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LONGMEADOW PARKWAY
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ

SHEET 494 OF 611 SHEETS STA. 2122+50.00 TO STA. 2123+30.76

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	494
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		



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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_SHT_XSC_LMP.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -
	DRAWN - GJE	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -

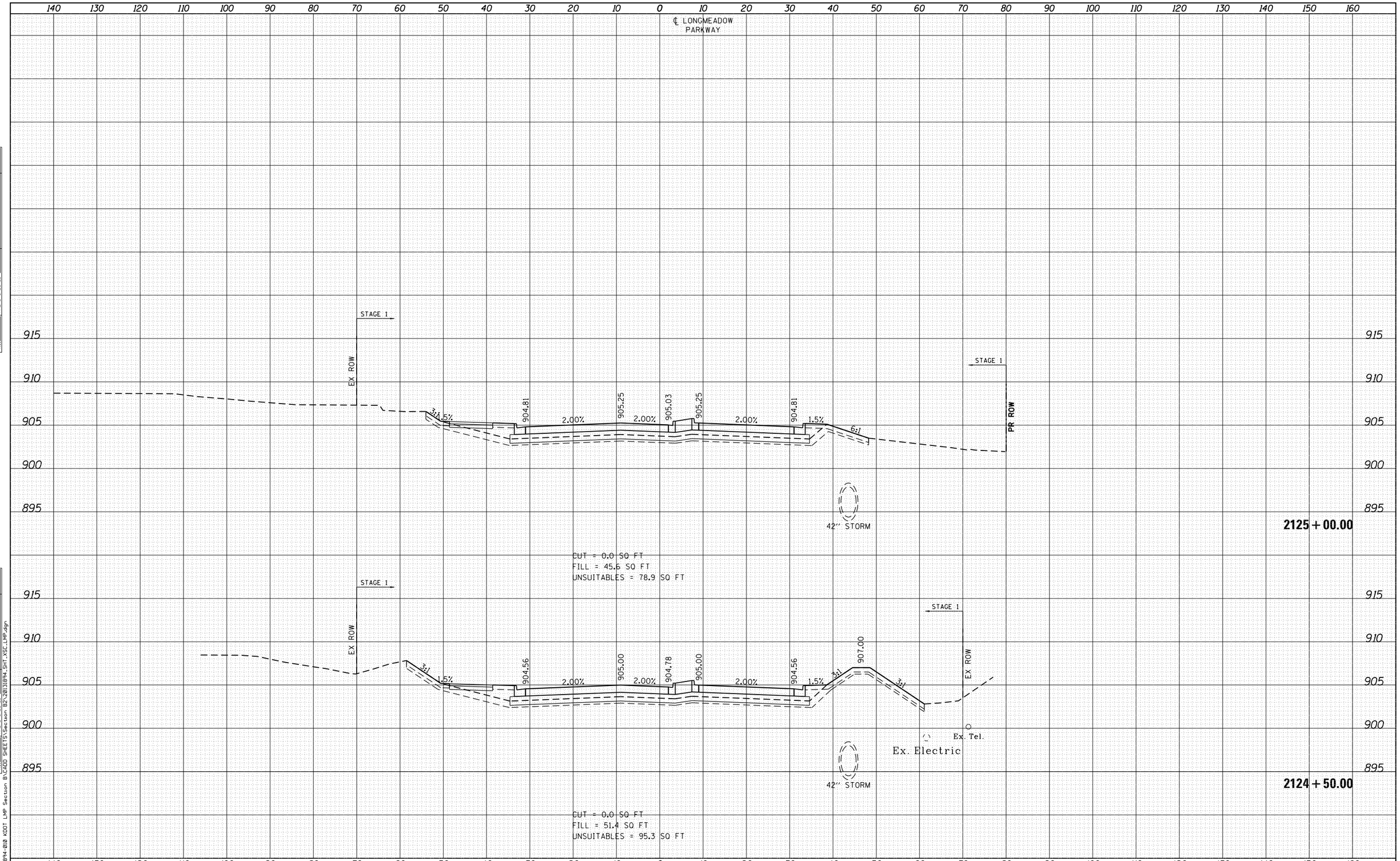
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LONGMEADOW PARKWAY
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ

SHEET 495 OF 611 SHEETS STA. 2123+38.82 TO STA. 2124+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	495
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			



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

BY	DATE

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

BY	DATE

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_SHT_XSC_LMP.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -	
	DRAWN - GJE	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -	
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -	

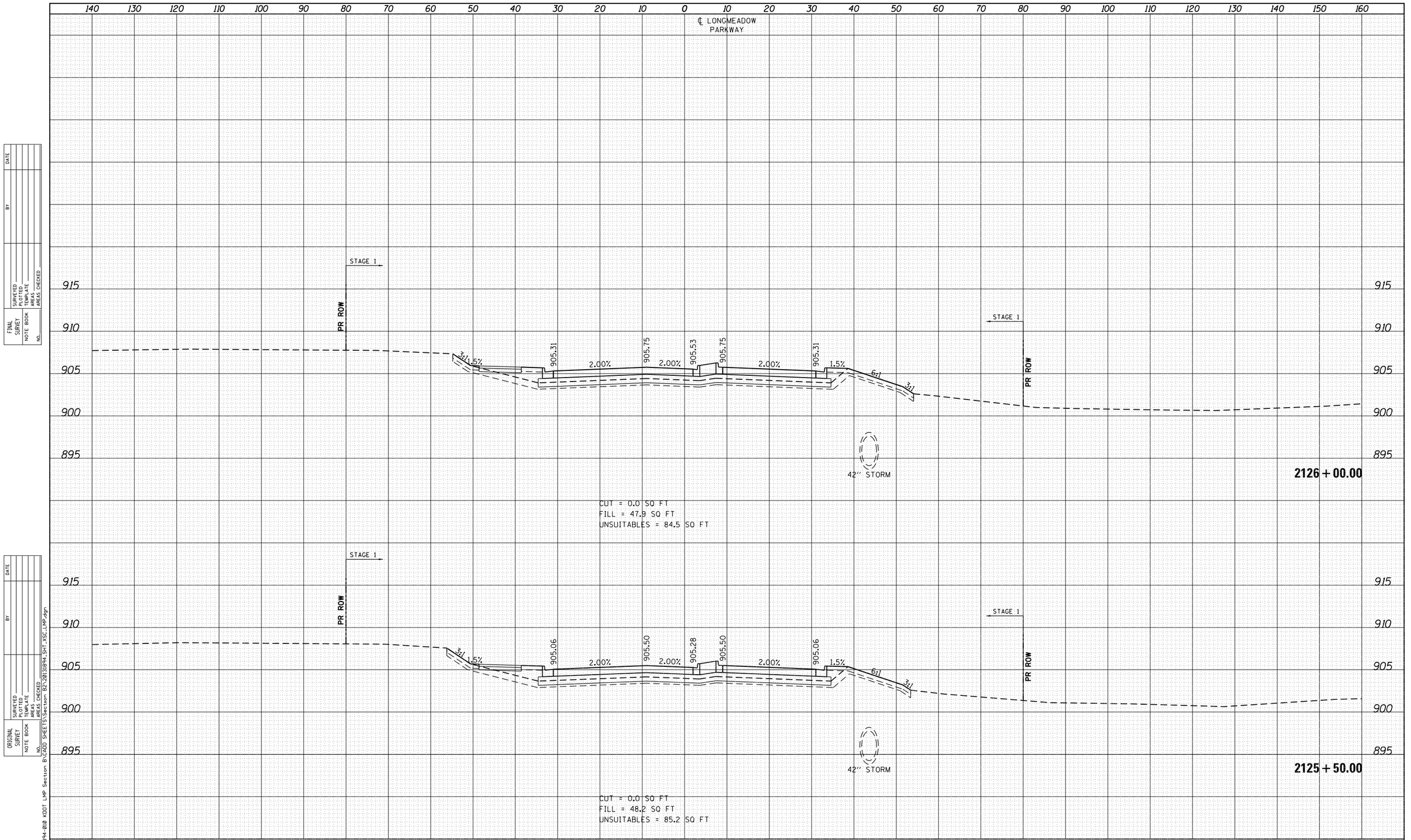
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LONGMEADOW PARKWAY
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ

SHEET 496 OF 611 SHEETS STA. 2124+50.00 TO STA.2125+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	496
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		



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

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

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Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -	
	DRAWN - GJE	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -	
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LONGMEADOW PARKWAY
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ

SHEET 497 OF 611 SHEETS STA. 2125+50.00 TO STA.2126+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	497
		CONTRACT NO. 61E05		
	ILLINOIS FED. AID PROJECT			

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

℄ LONGMEADOW PARKWAY

915
910
905
900
895

STAGE 1
PR ROW
3:1 1.5% 905.25 2.00% 905.69 1.03% 905.63 1.5% 1.7% 905.69 2.00% 905.25 1.5% 6:1
STAGE 1
PR ROW

42" STORM

2127+00.00

CUT = 0.0 SQ FT
FILL = 48.4 SQ FT
UNSUITABLES = 80.8 SQ FT

STAGE 1
PR ROW
3:1 1.5% 905.43 2.00% 905.87 1.53% 905.73 905.87 2.00% 905.43 1.5% 6:1 3:1
STAGE 1
PR ROW

42" STORM

2126+50.00

CUT = 0.0 SQ FT
FILL = 48.8 SQ FT
UNSUITABLES = 84.0 SQ FT

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

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

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

FILE NAME = W:\894-010 KDOT LMP Section B\CADD SHEETS\Section B2\20131894_SHT_XSC_LMP.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -	
	DRAWN - GJE	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -	
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

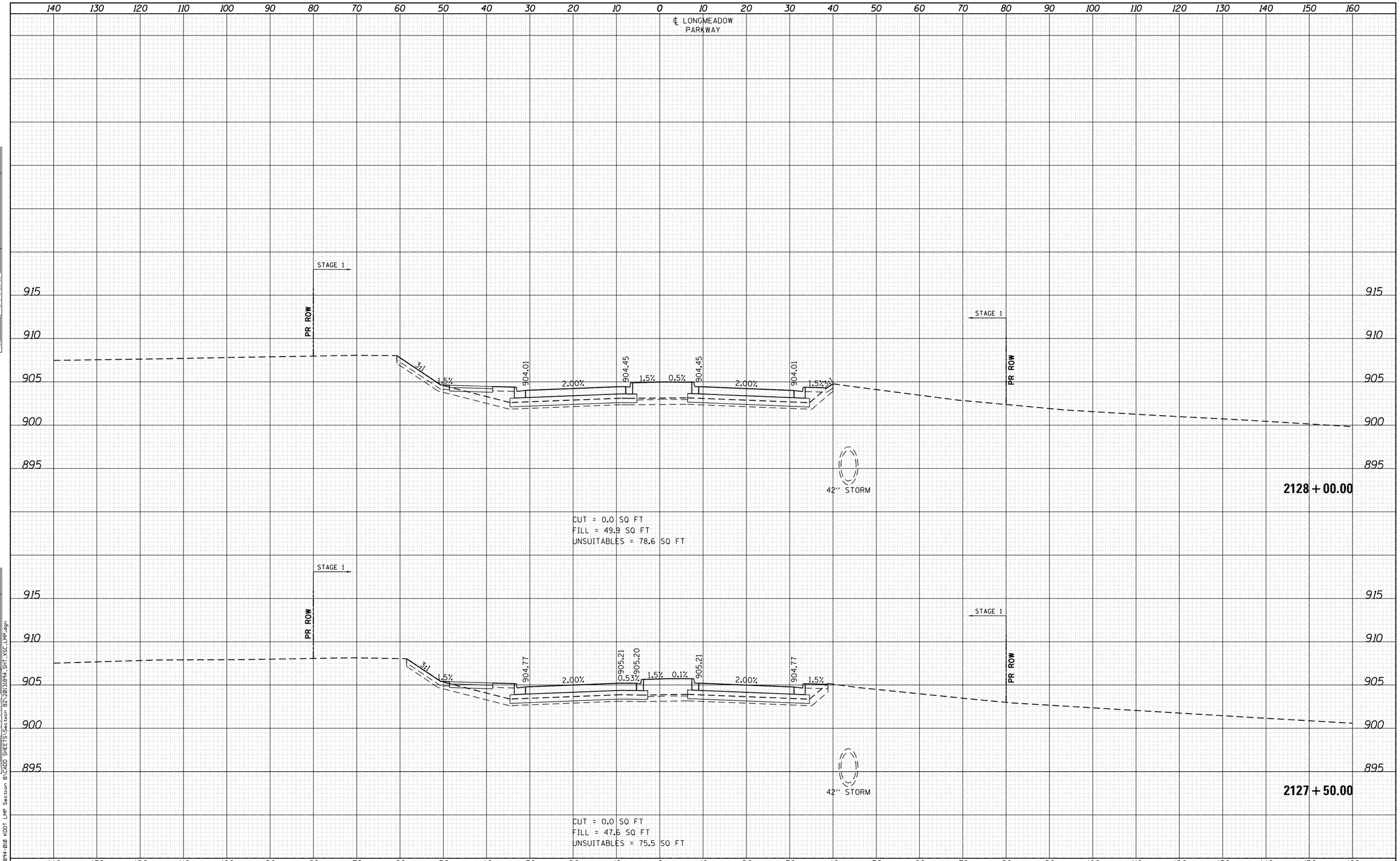
LONGMEADOW PARKWAY
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ

SHEET 498 OF 611 SHEETS STA. 2126+50.00 TO STA.2127+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	498
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		

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



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

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Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -
	DRAWN - GJE	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -

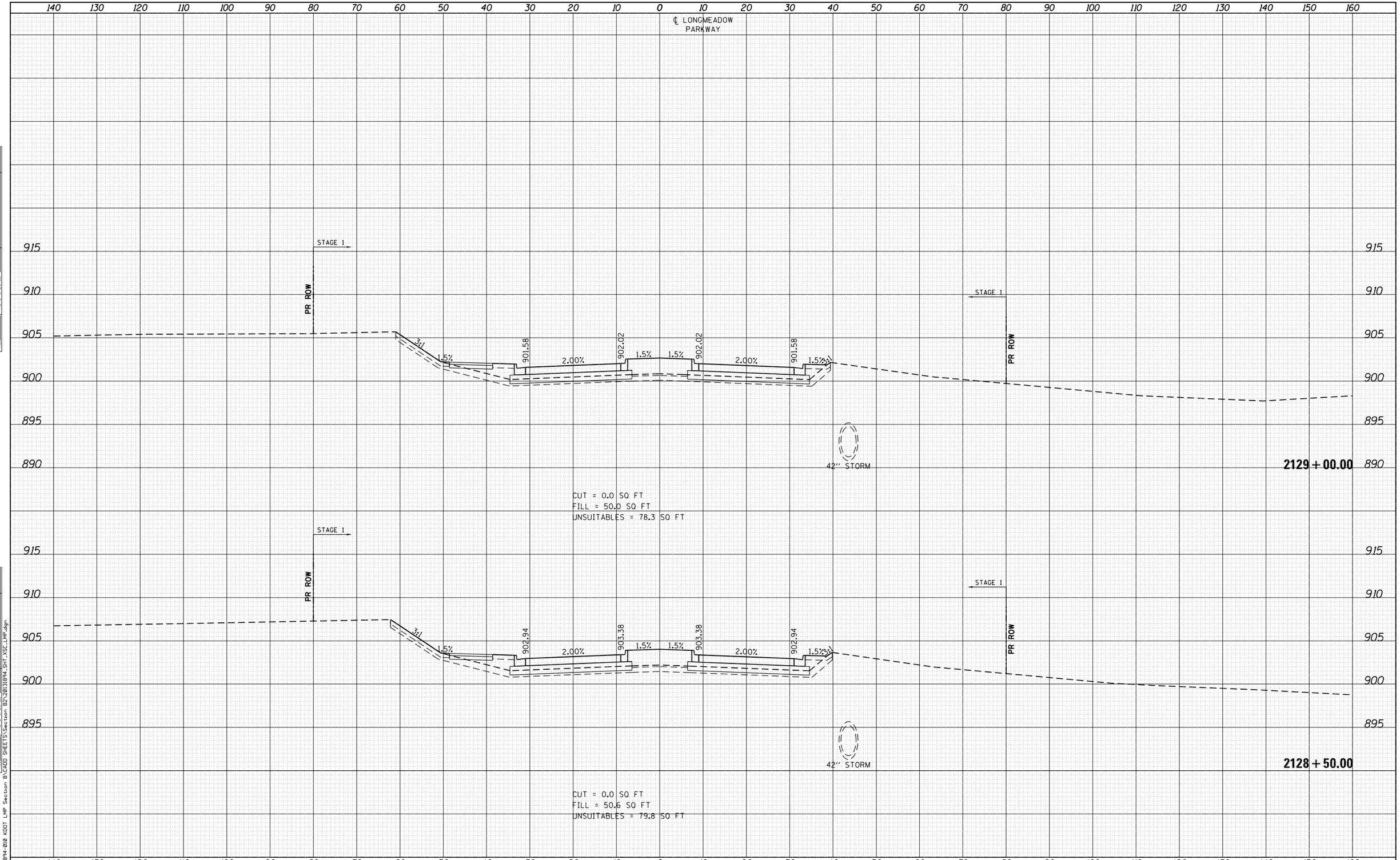
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LONGMEADOW PARKWAY
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ

SHEET 499 OF 611 SHEETS STA. 2127+50.00 TO STA.2128+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	499
		CONTRACT NO. 61E05		
	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

FILE NAME = W:\894-018 KDOT LMP Section B\CADD SHEETS\Section B2\2013894_SHT_XSC_LMP.dgn

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = gellwanger	DESIGNED - GJE	REVISED -
	DRAWN - GJE	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - DBB	REVISED -
PLOT DATE = 8/4/2017	DATE - 08/07/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LONGMEADOW PARKWAY
CROSS SECTIONS

SCALE: 1"=5' VT
SCALE: 1"=10' HZ
SHEET 500 OF 611 SHEETS
STA. 2128+50.00 TO STA. 2129+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2298	16-00215-11-PV	KANE	611	500
		CONTRACT NO. 61E05		
		ILLINOIS FED. AID PROJECT		