

MODEL: Default
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\UPRR Bridge\12-00192-04-BR_UPRR_Bridge_42_Boring_Logs ILdgn

Testing Service Corporation
STRUCTURE BORING LOG

Page 2 of 2
Date Started 9/5/15
Date Completed 9/5/15

STRUCTURE NO. 045-xxxx
ROUTE 360
SECTION 21-00192-04-BR
COUNTY Kane

Boring No.	Station	Offset	Elevation	DEPTH	BLOW	Qu	W
SB-2	Sta. 117+22	57.00ft LT	704.80			tsf	%
Very stiff gray CLAY, trace gravel, moist A-6							
701.80							
Very dense to dense gray SANDY LOAM, trace gravel, moist A-2-4							
25 43 50/3" 8.1							
19 23 20 11.3							
692.80							
Weathered/Fractured Bedrock or Possible Boulder Zone [Hard Drilling]							
690.80							
Auger Refusal at 64.0'							
CME 750 ATV Drill Rig (#275) CME Automatic Hammer							
736.90							
73							

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation
STRUCTURE BORING LOG

Page 1 of 2
Date Started 8/11/15
Date Completed 8/11/15

ROUTE 360 DESCRIPTION Kirk Road Bridge over Railroad Tracks
SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79.851B
COUNTY Kane LOCATION Northeast Corner S 1SW/12NW TWP. 39N , RNG. 8E

Boring No.	Station	Offset	Surface Elev.	DEPTH	BLOW	Qu	W	Surface Water Elev.	DEPTH	BLOW	Qu	W
SB-3	Sta. 118+60	41.00ft RT	759.90			tsf	%	Groundwater Elev.: when drilling 754.4 at Completion 756.9 after Hrs.			tsf	%
12" Uncrushed Stone								Very stiff gray CLAY LOAM, little gravel, occasional silt seams, moist A-6				
758.90								5 5 7 14.3				
Medium stiff to soft dark brown CLAY, trace gravel, trace organic, very moist A-7-6								7 7 9 12.1				
754.40								30				
Medium stiff brown and gray SILTY CLAY, very moist A-7-6 Sample 3: LL/PL/Pi = 59/13/41								727.90				
749.40								8 10 15 20.4				
Soft to medium stiff brown and gray CLAY, very moist A-7-6								35				
741.90								5 7 8 20.7				
Very stiff to hard gray CLAY, little gravel, occasional silt seams, moist A-4								40				
736.90								45				
Very stiff gray CLAY LOAM, little gravel, occasional silt seams, moist A-6								712.90				
								4 4 6 20.7				

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Testing Service Corporation
STRUCTURE BORING LOG

Page 2 of 2
Date Started 8/11/15
Date Completed 8/11/15

STRUCTURE NO. 045-xxxx
ROUTE 360
SECTION 21-00192-04-BR
COUNTY Kane

Boring No.	Station	Offset	Elevation	DEPTH	BLOW	Qu	W
SB-3	Sta. 118+60	41.00ft RT	709.90			tsf	%
Stiff gray CLAY, trace gravel, very moist A-6							
702.90							
Very stiff gray LOAM, little gravel, moist A-4							
697.90							
Stiff gray CLAY LOAM, little gravel, very moist A-4							
691.90							
Weathered/Fractured Bedrock or Boulder Zone [Hard Drilling]							
690.90							
Auger Refusal at 69.0'							
CME 750 ATV Drill Rig (#275) CME Automatic Hammer							
73							

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet



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PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS II
STRUCTURE NO. 045-3134

SHEET 42 OF 45 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	301
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

STRUCTURE BORING LOG

Date Completed 9/4/15

ROUTE 360 DESCRIPTION Kirk Road Bridge over Railroad Tracks Date Completed 9/4/15

SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79.851B

COUNTY Kane LOCATION Northwest Corner S. 1SW/12NW , TWP. 39N , RNG. 8E

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
 Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Date Completed 9/4/15

STRUCTURE NO. 045-xxxx

ROUTE 360

SECTION 21-00192-04-BR

COUNTY Kane

NOT BORING 79851-1 NOT GPI 1 NOT GDT 123115

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
 Stations, Depths, Offset, and Elevations are in Feet

Page 1 of 3

The logo for Wang Engineering, featuring a stylized 'W' made of two overlapping shapes, followed by the text 'Wang Engineering' in a serif font.

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

BORING LOG UPRR-01

WEI Job No.: 165-07-01

Client **Bollinger, Lach & Associates, Inc.**

Project **Kirk Road Viaduct Replacement**

Location **Kane County, IL**

Datum: NAVD 88
Elevation: 762.59 ft
North: 1899798.57 ft
East: 999240.54 ft
Station: 118+33.41
Offset: 35.88' Lt.

USER NAME	=	DESIGNED	-	KN	REVISED	-	
		CHECKED	-	PRD	REVISED	-	
PLOT SCALE	=	DRAWN	-	KN	REVISED	-	
PLOT DATE	=	CHECKED	-	PRD	REVISED	-	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS III
STRUCTURE NO. 045-3134

SHEET 43 OF 45 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	302
		CONTRACT NO. 61M13		
ILLINOIS		FED. AID PROJECT		

WANGENG INC 1650701.GPJ WANGENG.GDT 1/13/22

WANGENGINC 1650701.GPJ WANGENG.GDT 1/13/22

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		CHECKED	-	PRD	REVISED	-
PLOT SCALE	=	DRAWN	-	KN	REVISED	-
PLOT DATE	=	CHECKED	-	PRD	REVISED	-

DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 045-3134

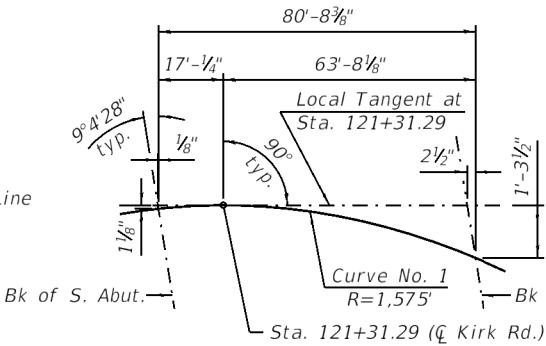
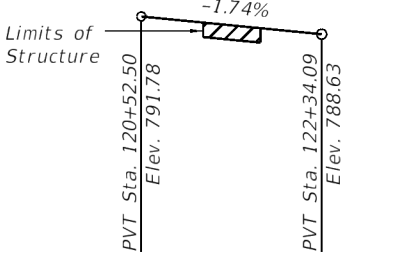
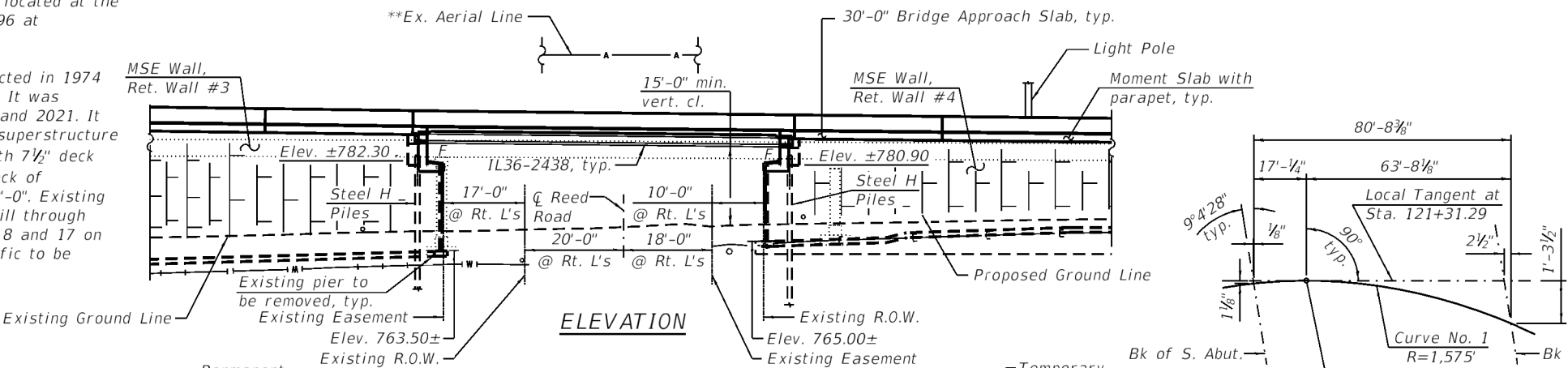
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	304
		CONTRACT NO. 61M13		
ILLINOIS		FED. AID PROJECT		

Bench Mark: Chiseled square in top of parapet wall located at the southwest corner of existing bridge, S.N. 045-3096 at Sta. 111+08.40 Offset 30.19' LT. Elev. 782.00.

Existing Structure: S.N. 045-3096 originally constructed in 1974 as FAS Route 1100, Section 192-3VB (Kirk Road). It was repaired in 1977, 1987, 1990, 1998, 2003, 2013, and 2021. It underwent a rehabilitation in 2001. The existing superstructure is 18 span continuous, separated into 4 units, with 7 1/2" deck and non-composite wide flange beams. Back to back of abutments is 1,376'-2" and Out-to-Out width is 62'-0". Existing substructure contains two concrete reinforced spill through abutments on piles and 17 piers; with piers 1 to 8 and 17 on spread footings, and piers 9 to 16 on piles. Traffic to be maintained using stage construction

Salvage: No Salvage.

* Measured along Local Tangent
** Contractor to verify elevation. (See roadway plans)
*** Measured perpendicular to Local Tangent at back of abutment



DESIGN SPECIFICATIONS
2024 AASHTO LRFD Bridge Design Specifications, 10th Edition

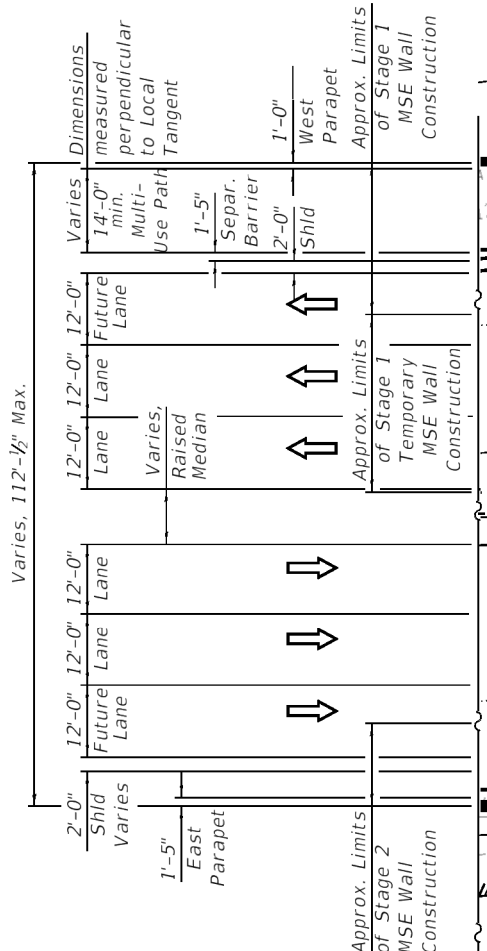
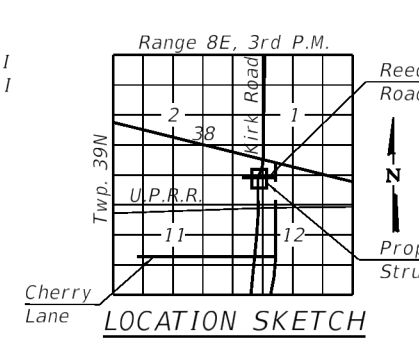
LOADING HL-93
75 psf pedestrian load
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi (Substructure Concrete)
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 8,500 psi
f'ci = 6,500 psi
fpu = 270,000 psi (0.6" low lax. strands)
fpbt = 202,300 psi (0.6" low lax. strands)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.088g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.159g
Soil Site Class = D

BRIDGE RATING
Inventory = HL-93 1.45 Strength I
Operating = HL-93 1.85 Strength I



*Reinforcement bars designated (E) shall be epoxy coated.
Slipforming of the parapets is not allowed.*

A protective coat shall be applied to the top and inside faces of the raised median, parapets, separation barrier, and multi-use path.

Utilities shall be relocated by others.

1. Contractor to coordinate any required improvements to or removals of existing utilities with utility owner(s).

3. Install Piles.

4. Construct MSE walls.

5. Construct abutments.

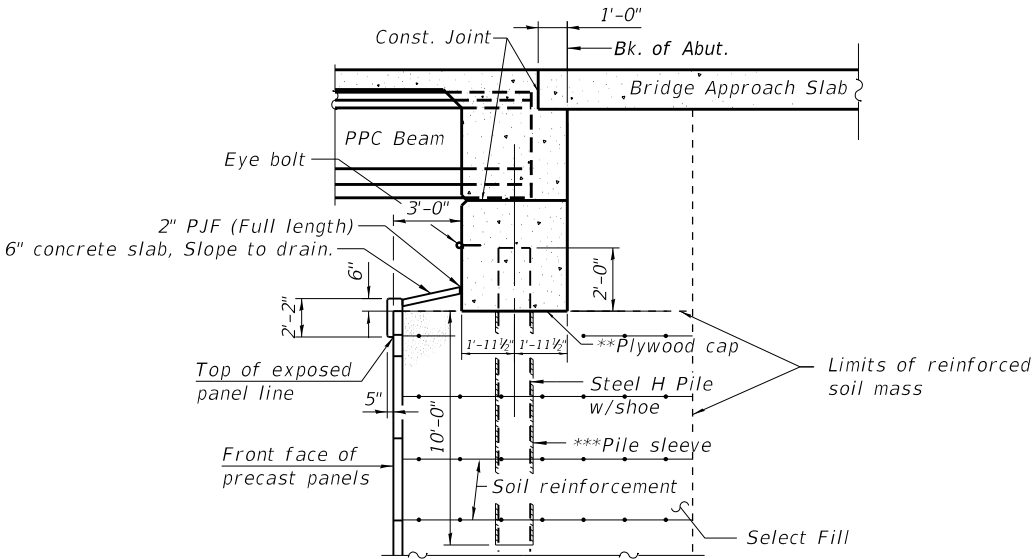
6. Place the Precast Prestressed Concrete Beams on the abutments.

7. Construct the bridge deck, parapets, and railings.

1. General Plan and Elevation
2. General Data
3. Stage Construction Details I
4. Stage Construction Details II
5. Stage Construction Details III
6. Temporary Concrete Barrier
7. Top of Slab Elevations Layout
8. Top of Slab Elevations I
9. Top of Slab Elevations II
10. Top of Slab Elevations III
11. Top of Slab Elevations IV
12. Top of South Approach Slab Elevations
13. Top of North Approach Slab Elevations
14. Superstructure Plan
15. Superstructure Cross Section
16. Parapet and Median Sections
17. Parapet Elevations
18. Diaphragm Details
19. Superstructure Details
20. South Approach Slab Plan
21. North Approach Slab Plan
22. Approach Slab - Parapet Elevations
23. Approach Slab Details
24. Railing Details
25. Drainage Scupper, DS-11
26. Closed Drainage System
27. Framing Plan
28. IL36-2438 Beam
29. IL36-2438 Beam Details
30. South Abutment
31. North Abutment
32. Abutment Details
33. Bar Splicer Assembly Details
34. HP Pile Details
35. Boring Logs I
36. Boring Logs II
37. Boring Logs III
38. Boring Logs IV
39. Boring Logs V

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A2	Sq Yd	---	1	1
Filter Fabric	Sq Yd	---	1	1
Protective Shield	Sq Yd	545	---	545
Concrete Structures	Cu Yd	---	201.7	201.7
Concrete Superstructure	Cu Yd	400.9	---	400.9
Protective Coat	Sq Yd	603	---	603
Concrete Superstructure (Approach Slab)	Cu Yd	311.7	---	311.7
Furnishing And Erecting Precast Prestressed Concrete Beams, IL36N	Foot	935	---	935
Reinforcement Bars, Epoxy Coated	Pound	206,360	36,600	242,960
Bar Splicers	Each	886	116	1,002
Furnishing Steel Piles HP14x89	Foot	---	2,024	2,024
Driving Piles	Foot	---	2,024	2,024
Test Pile Steel HP14x89	Each	---	2	2
Pile Shoes	Each	---	24	24
Name Plates	Each	1	---	1
Drainage System For Structures	L Sum	0.25	---	0.25
Bar Terminators	Each	224	1,062	1,286
Bicycle Railing, Special	Foot	139	---	139
Bridge Deck Thin Polymer Overlay 3/8"	Sq Yd	1,305	---	1,305
Drainage Scuppers, DS-11	Each	2	---	2

See SN 045-3186 for Removal of Existing Structures.



SECTION THRU INTEGRAL ABUTMENT
(Looking West, Horiz. dim. @ Rt. L's)

***Bottom of cap poured against top of plywood. Cut opening to match pile perimeter within $\frac{1}{8}$ ". Support with bars tack welded to webs rated for 500 lbs. Seal gaps to keep concrete out.*

***Sleeve to remain empty in hatched region.
Cost of pile sleeve is included with
Mechanically Stabilized Earth Retaining Wall.
See MSE Wall plans.

MODEL: General Data
FILE NAME: W:\894-04



BLA, Inc.

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PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL DATA				
STRUCTURE NO. 045-3133				
SHEET 2 OF 39 SHEETS				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	306
		CONTRACT NO. 61M13		
ILLINOIS		FED. AID PROJECT		

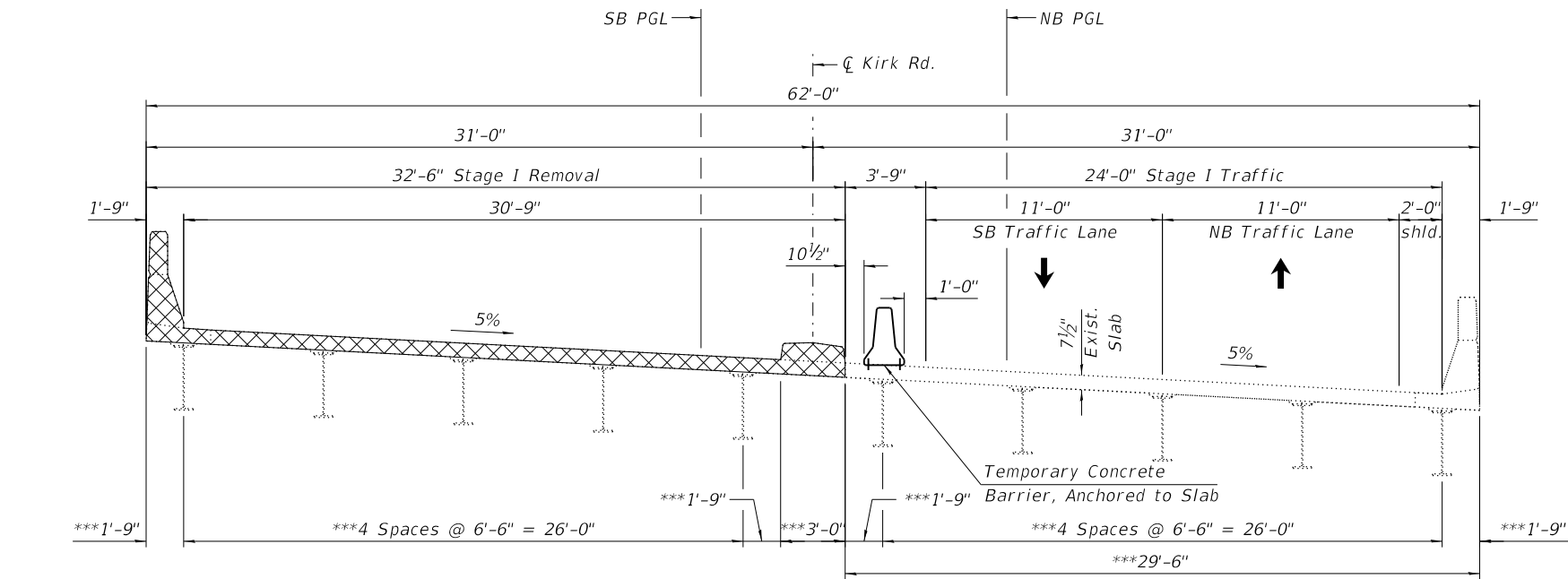
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FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_03_Stage Construction Details I.dgn

LEGEND

 Stage I Removal

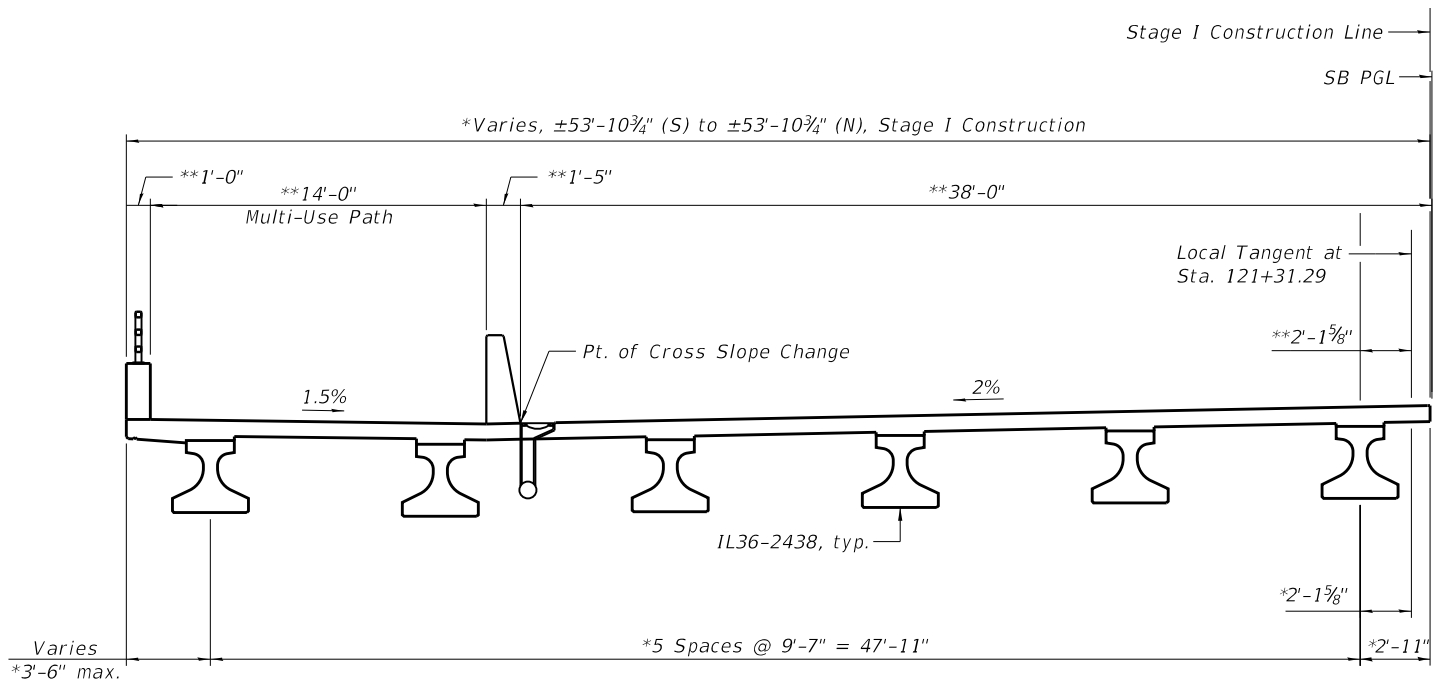
NOTES:

1. All dimensions are measured radially unless shown otherwise.
2. All dimensions for the removal of the existing superstructure are approximate based on the existing plans and shall be confirmed by the contractor prior to removal.



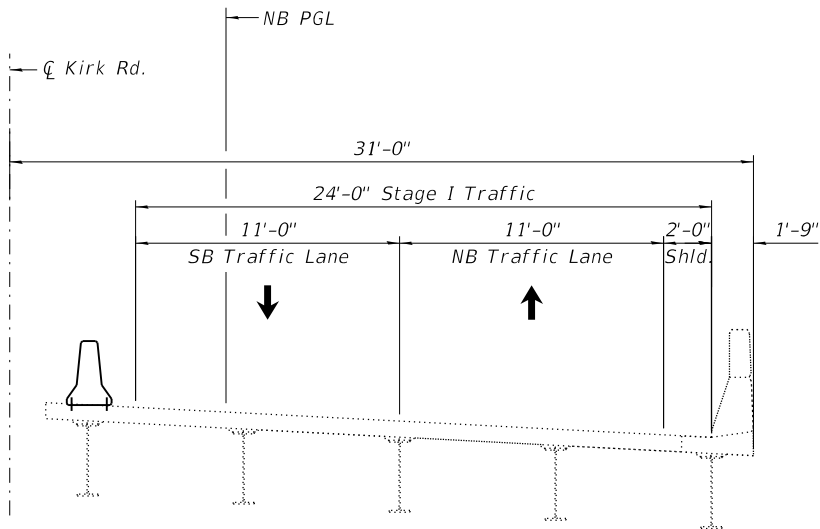
*** Measured perpendicular to beams.

STAGE I REMOVAL
(Looking North)



* Measured perpendicular to Local Tangent at back of abutment
** Measured perpendicular to SB PGL

STAGE I CONSTRUCTION
(Looking North)



USER NAME =	DESIGNED - KN	REVISED -
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PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - MJW	REVISED -

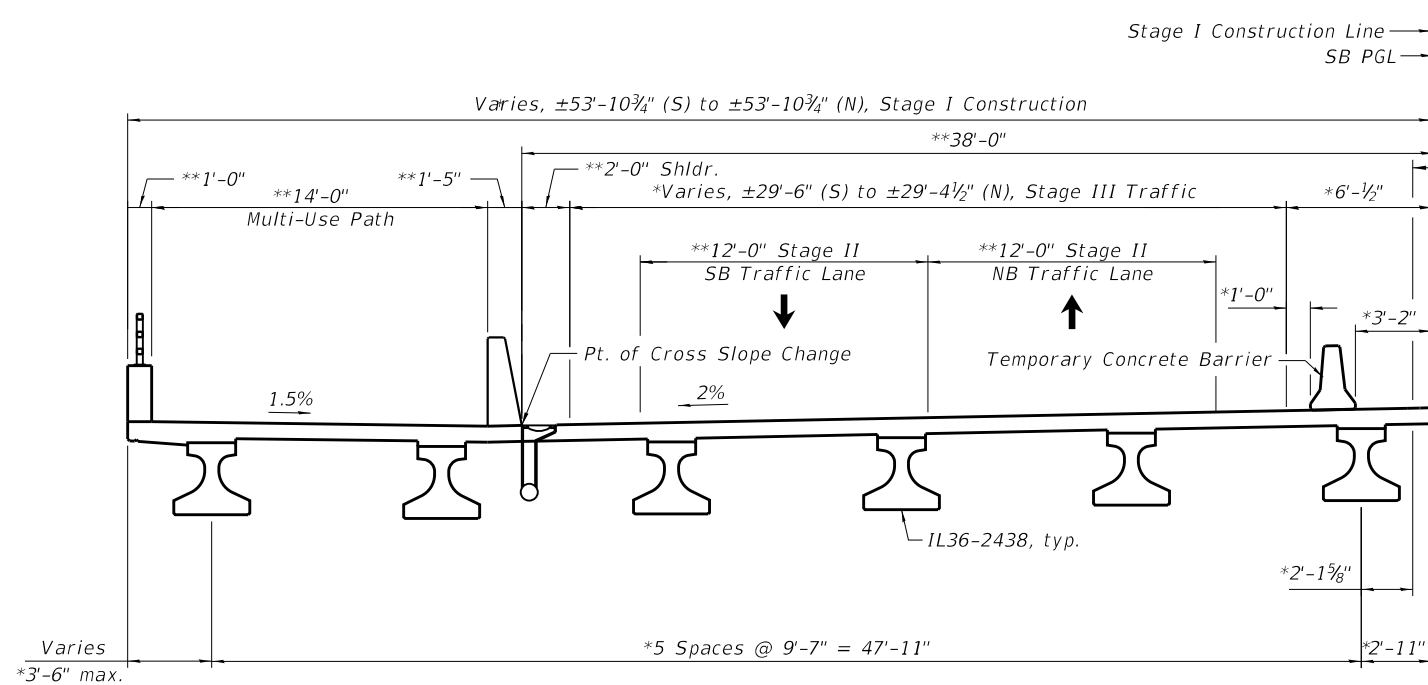
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS I
STRUCTURE NO. 045-3133

SHEET 3 OF 39 SHEETS

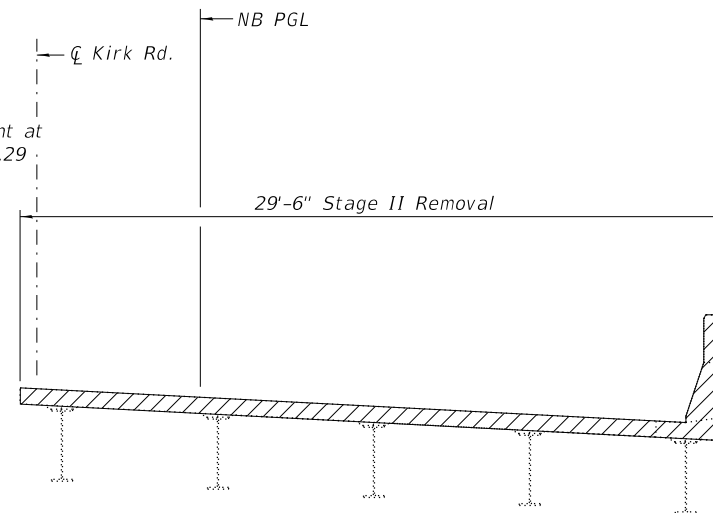
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360	12-00192-04-BR	KANE	518	307
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Stage Construction Details II
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets\Structural\FINAL PLANS)\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_04_Stage Construction Details II.dgn



* Measured perpendicular to Local Tangent at back of abutment
** Measured perpendicular to SB PGL

STAGE II REMOVAL (Looking North)

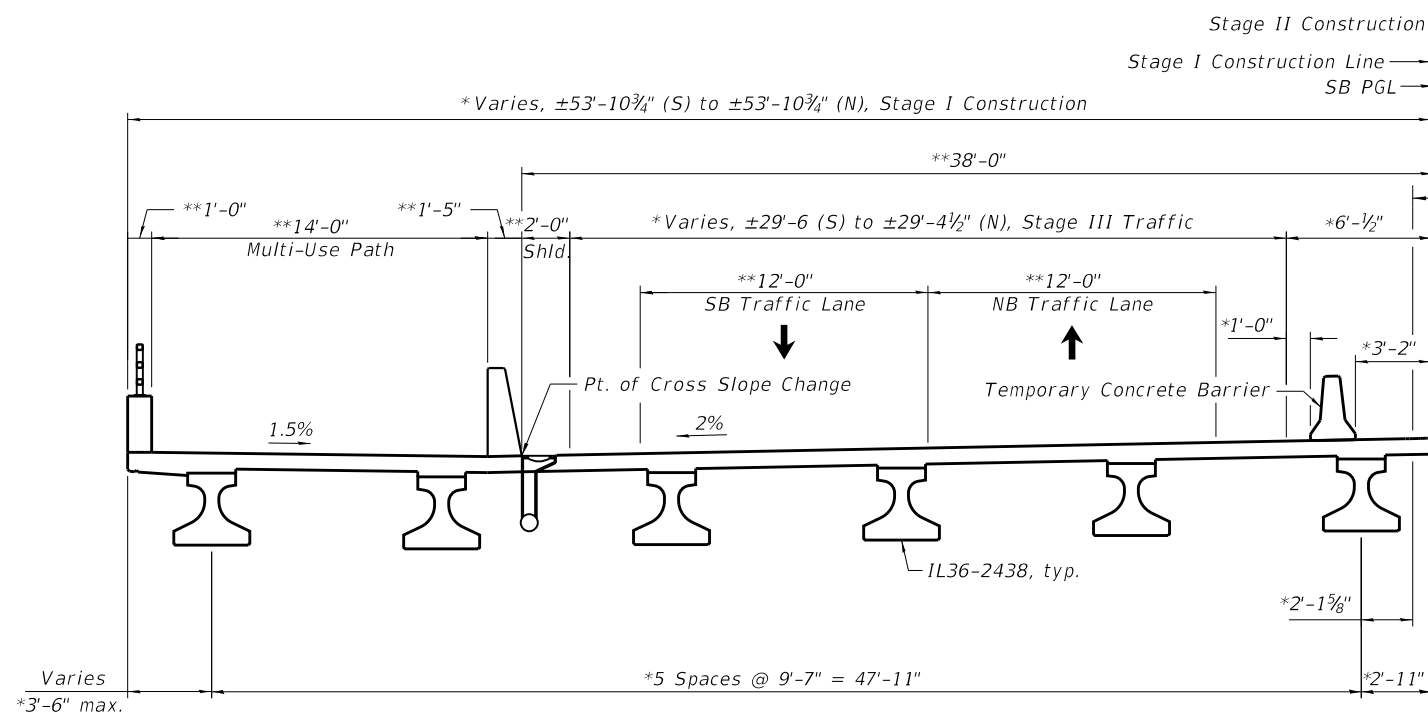


LEGEND

Stage II Removal

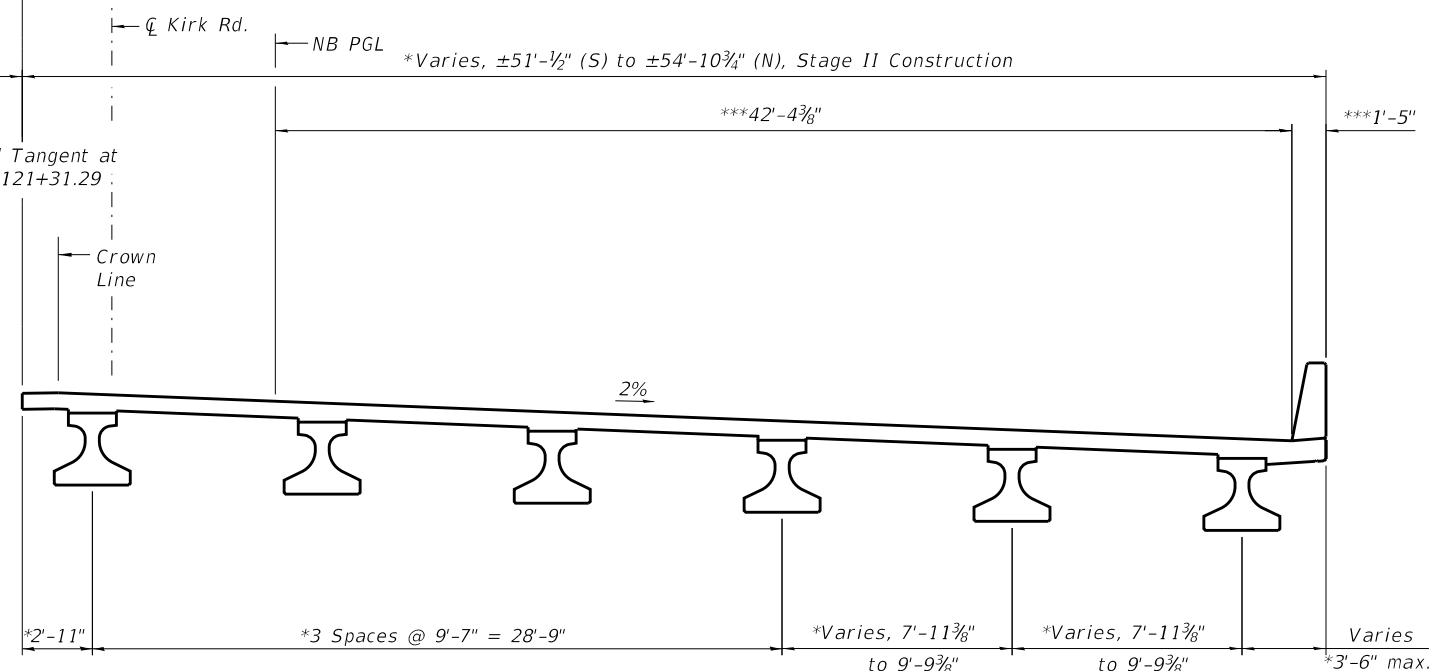
NOTES:

- All dimensions are measured radially unless shown otherwise.
- All dimensions for the removal of the existing superstructure are approximate based on the existing plans and shall be confirmed by the contractor prior to removal.



** Measured perpendicular to Local Tangent at back of abutment
*** Measured perpendicular to SB PGL

STAGE II CONSTRUCTION (Looking North)



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PLOT DATE =	CHECKED - MJW	REVISED -

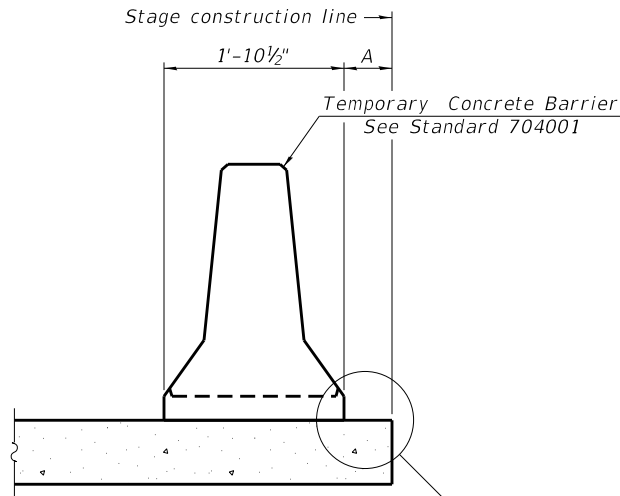
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS II
STRUCTURE NO. 045-3133

SHEET 4 OF 39 SHEETS

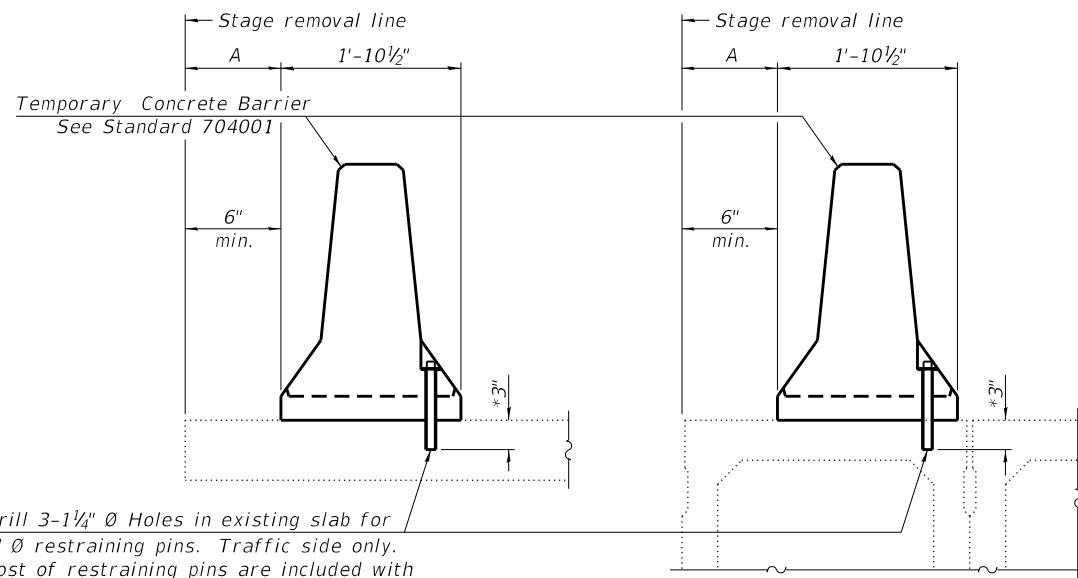
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360	12-00192-04-BR	KANE	518	308
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Temporary Barrier Details
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_06_Temporary Barrier Details.dgn



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

NEW SLAB OR NEW DECK BEAM

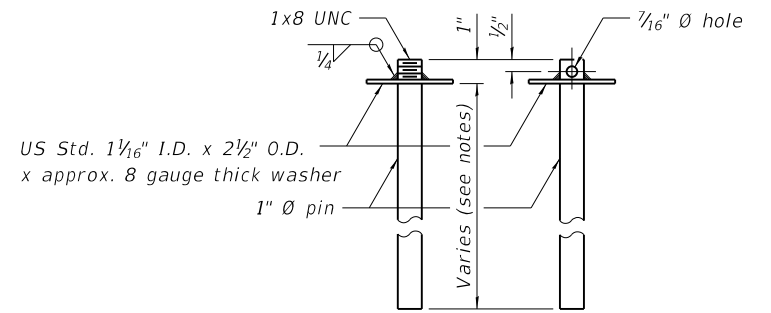


Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

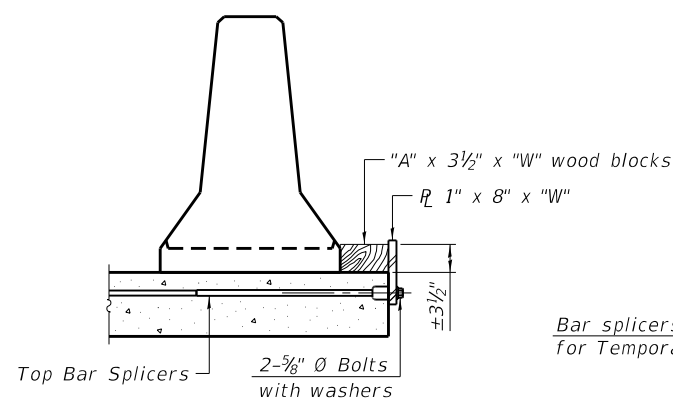
EXISTING SLAB

* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

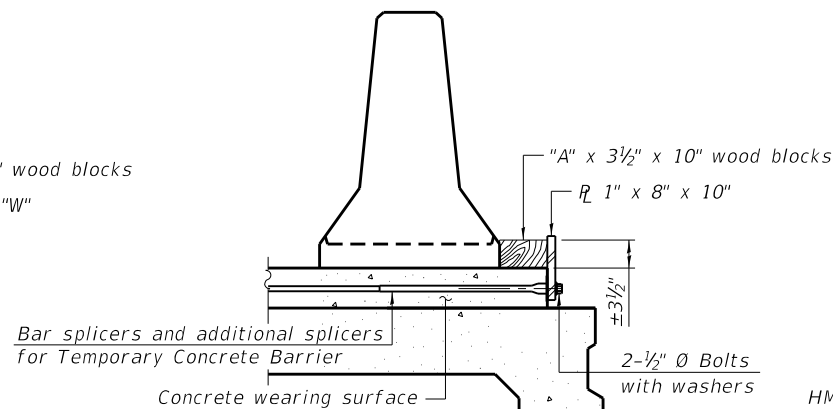
EXISTING DECK BEAM



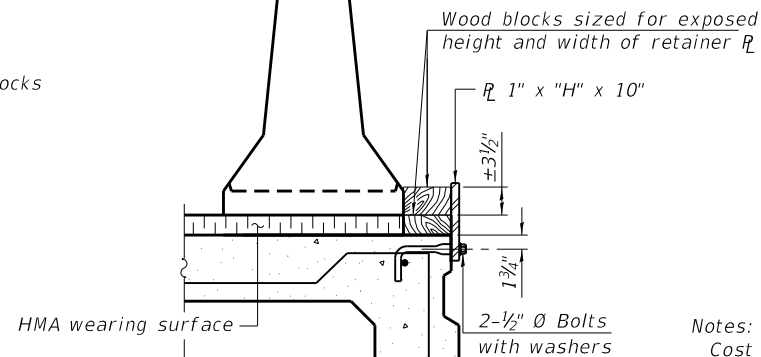
RESTRAINING PIN



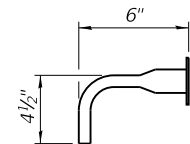
DETAIL I



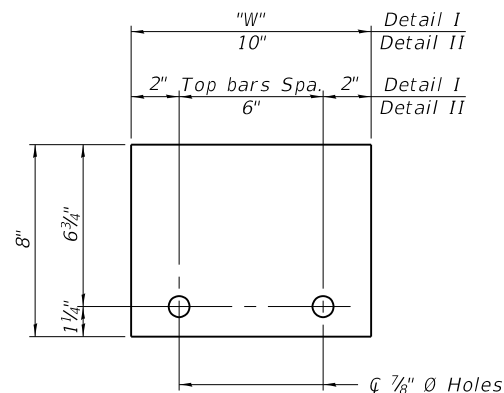
DETAIL II



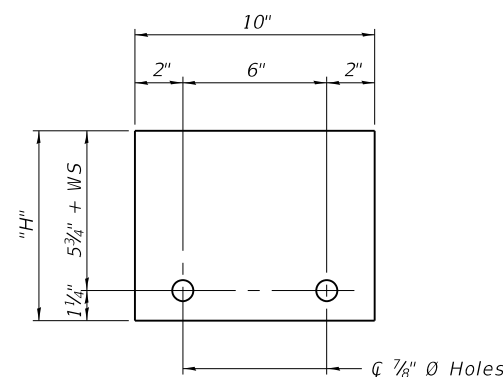
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"
(Detail III)

Notes:
Cost of retainer assembly is included with Temporary Concrete Barrier.
A retainer assembly shall be located at the approximate $\bar{C}$ of each temporary concrete barrier.
The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27

5-15-2023



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PLOT DATE =	DRAWN - KN	REVISED -
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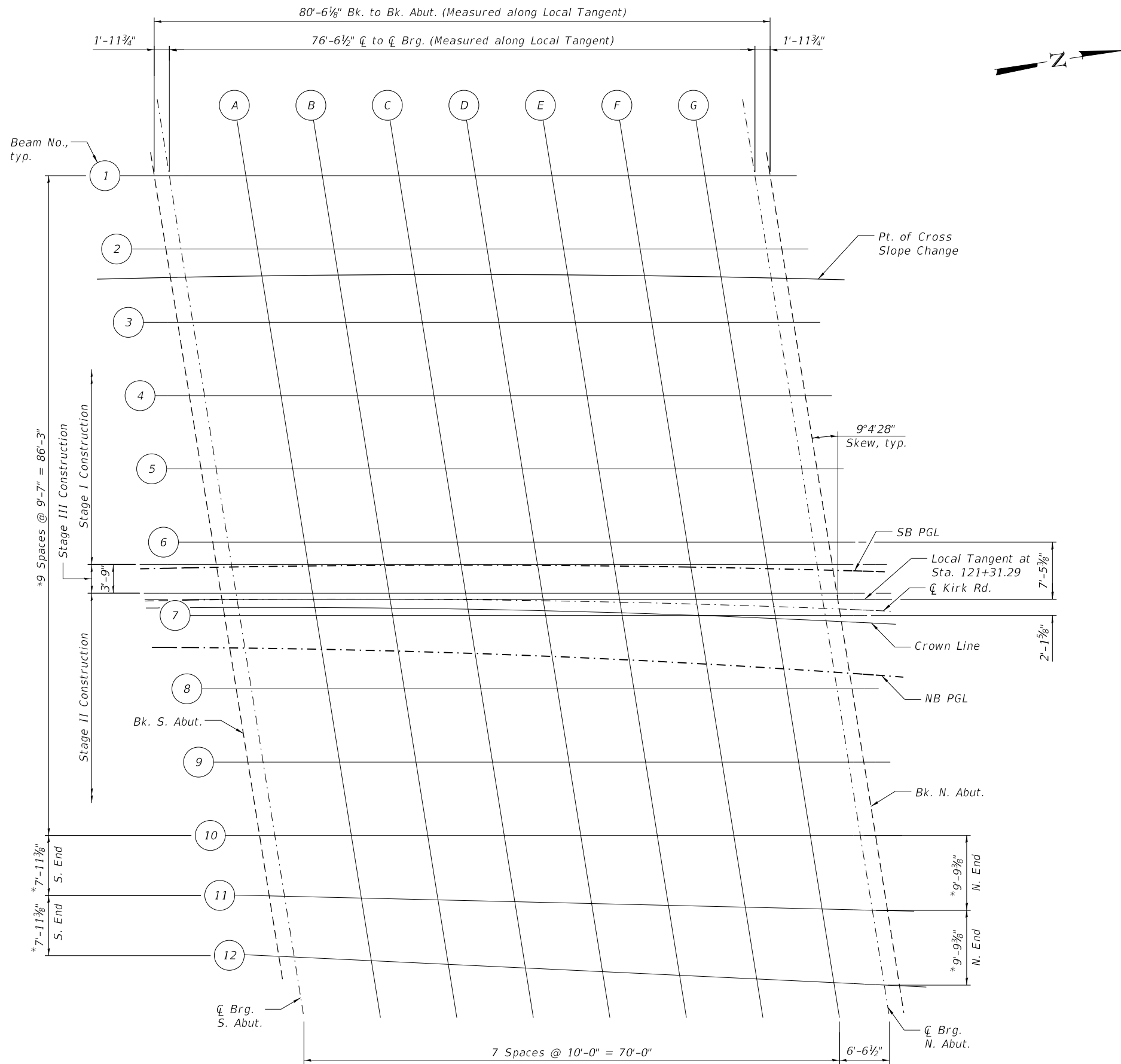
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 045-3133

SHEET 6 OF 39 SHEETS

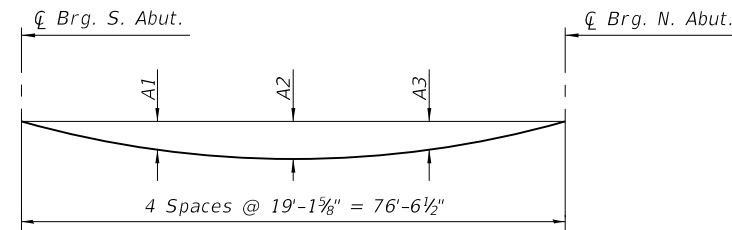
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	310
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Top of Slab Elevations Layout
FILE NAME: W:\894-048 KDOT Kirk Road over UPRRCAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_07_Top of Slab Elevations Layout.dgn



* Measured perpendicular to Local Tangent at C/L Brg.

PLAN



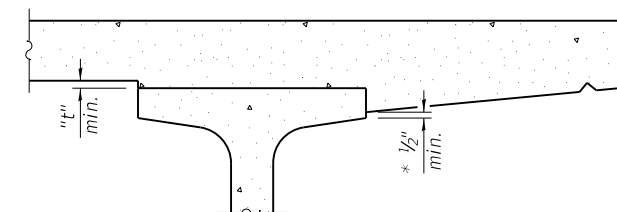
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

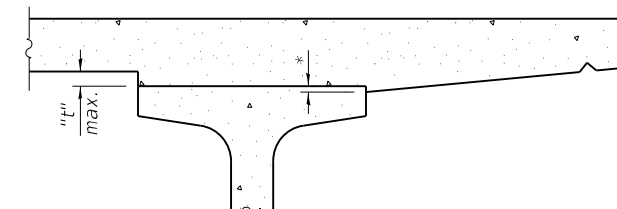
Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 8 thru 11 of 39.

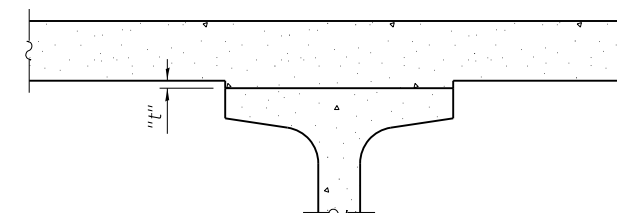
Beam No.	A1	A2	A3
1	2 1/4"	3 1/4"	2 1/4"
2-11	2 1/2"	3 3/8"	2 1/2"
12	2 1/4"	3 1/4"	2 1/4"



EXTERIOR BEAMS
AT MINIMUM FILLET



EXTERIOR BEAMS
AT MAXIMUM FILLET



INTERIOR BEAMS

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on sheets 8 thru 11 of 39, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

* Variable (not less than 1/2")

FILLET HEIGHTS



USER NAME =	DESIGNED - KN	REVISED -
CHECKED - MJW	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS LAYOUT
STRUCTURE NO. 045-3133

SHEET 7 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	311
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Top of Slab Elevations I
FILE NAME: W:\894-048 KDOT KfK Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_08_Top of Slab Elevations I.dgn

W. EDGE OF DECK

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+05.87	-58.64	790.33	790.33
℄ Brg. S. Abut.	121+07.78	-58.65	790.30	790.30
A	121+17.39	-58.71	790.13	790.23
B	121+27.01	-58.78	789.96	790.15
C	121+36.64	-58.85	789.79	790.04
D	121+46.28	-58.94	789.63	789.89
E	121+55.92	-59.03	789.46	789.69
F	121+65.58	-59.12	789.29	789.46
G	121+75.24	-59.23	789.12	789.19
℄ Brg. N. Abut.	121+81.56	-59.30	789.01	789.01
Bk. N. Abut.	121+83.48	-59.32	788.98	788.98

INSIDE FACE OF W. PARAPET

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+06.01	-57.64	790.33	790.33
℄ Brg. S. Abut.	121+07.92	-57.65	790.29	790.29
A	121+17.54	-57.71	790.13	790.23
B	121+27.16	-57.78	789.96	790.15
C	121+36.80	-57.86	789.79	790.04
D	121+46.44	-57.94	789.62	789.89
E	121+56.09	-58.03	789.46	789.69
F	121+65.75	-58.13	789.29	789.45
G	121+75.42	-58.23	789.12	789.19
℄ Brg. N. Abut.	121+81.75	-58.30	789.01	789.01
Bk. N. Abut.	121+83.66	-58.32	788.98	788.98

BEAM 1

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+06.30	-55.57	790.29	790.29
℄ Brg. S. Abut.	121+08.21	-55.54	790.26	790.26
A	121+17.87	-55.42	790.09	790.19
B	121+27.53	-55.37	789.92	790.11
C	121+37.19	-55.37	789.75	790.00
D	121+46.85	-55.44	789.58	789.84
E	121+56.51	-55.57	789.41	789.65
F	121+66.17	-55.76	789.25	789.41
G	121+75.82	-56.02	789.08	789.15
℄ Brg. N. Abut.	121+82.13	-56.21	788.97	788.97
Bk. N. Abut.	121+84.05	-56.28	788.94	788.94

BEAM 2

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+07.64	-45.96	790.12	790.12
℄ Brg. S. Abut.	121+09.56	-45.93	790.09	790.09
A	121+19.28	-45.83	789.92	790.03
B	121+29.00	-45.78	789.75	789.96
C	121+38.71	-45.80	789.58	789.86
D	121+48.43	-45.88	789.41	789.71
E	121+58.15	-46.02	789.24	789.50
F	121+67.86	-46.22	789.07	789.26
G	121+77.57	-46.48	788.91	788.98
℄ Brg. N. Abut.	121+83.92	-46.69	788.80	788.80
Bk. N. Abut.	121+85.85	-46.75	788.77	788.77

PT. OF CROSS SLOPE CHANGE &
INSIDE FACE OF SEPARATION BARRIER

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+08.16	-42.23	790.06	790.06
℄ Brg. S. Abut.	121+10.08	-42.25	790.02	790.02
A	121+19.80	-42.31	789.86	789.97
B	121+29.52	-42.38	789.69	789.90
C	121+39.25	-42.46	789.52	789.80
D	121+48.98	-42.54	789.35	789.65
E	121+58.73	-42.64	789.18	789.44
F	121+68.48	-42.74	789.01	789.20
G	121+78.24	-42.84	788.84	788.92
℄ Brg. N. Abut.	121+84.63	-42.92	788.73	788.73
Bk. N. Abut.	121+86.57	-42.94	788.70	788.70

BEAM 3

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+08.99	-36.36	790.16	790.16
℄ Brg. S. Abut.	121+10.93	-36.33	790.13	790.13
A	121+20.70	-36.23	789.96	790.08
B	121+30.48	-36.20	789.79	790.01
C	121+40.25	-36.22	789.63	789.91
D	121+50.03	-36.31	789.46	789.75
E	121+59.80	-36.46	789.28	789.55
F	121+69.57	-36.67	789.11	789.30
G	121+79.34	-36.95	788.94	789.02
℄ Brg. N. Abut.	121+85.73	-37.16	788.83	788.83
Bk. N. Abut.	121+87.66	-37.23	788.79	788.79

NOTE:

Theoretical grade elevations shown on this sheet do not include adjustments for the 3/8" polymer overlay.



USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - MJW	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS I
STRUCTURE NO. 045-3133

SHEET 8 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	312
CONTRACT NO. 61M13				
		ILLINOIS	FED. AID PROJECT	

MODEL: Top of Slab Elevations II
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_09_Top of Slab Elevations II.dgn

BEAM 4

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+10.36	-26.75	790.33	790.33
℄ Brg. S. Abut.	121+12.31	-26.73	790.30	790.30
A	121+22.14	-26.64	790.13	790.24
B	121+31.98	-26.61	789.96	790.18
C	121+41.81	-26.65	789.79	790.07
D	121+51.65	-26.75	789.62	789.92
E	121+61.48	-26.91	789.45	789.71
F	121+71.31	-27.13	789.27	789.46
G	121+81.13	-27.42	789.10	789.18
℄ Brg. N. Abut.	121+87.56	-27.64	788.99	788.99
Bk. N. Abut.	121+89.50	-27.71	788.95	788.95

BEAM 5

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+11.75	-17.15	790.50	790.50
℄ Brg. S. Abut.	121+13.71	-17.13	790.46	790.46
A	121+23.60	-17.05	790.30	790.41
B	121+33.50	-17.03	790.13	790.34
C	121+43.39	-17.08	789.95	790.24
D	121+53.28	-17.19	789.78	790.08
E	121+63.17	-17.36	789.61	789.87
F	121+73.06	-17.59	789.43	789.62
G	121+82.94	-17.89	789.26	789.34
℄ Brg. N. Abut.	121+89.41	-18.11	789.14	789.14
Bk. N. Abut.	121+91.37	-18.19	789.11	789.11

BEAM 6

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+13.15	-7.55	790.67	790.67
℄ Brg. S. Abut.	121+15.13	-7.53	790.63	790.63
A	121+25.08	-7.46	790.46	790.58
B	121+35.03	-7.45	790.29	790.51
C	121+44.99	-7.51	790.12	790.40
D	121+54.94	-7.63	789.94	790.24
E	121+64.89	-7.81	789.77	790.03
F	121+74.83	-8.05	789.59	789.78
G	121+84.78	-8.36	789.42	789.49
℄ Brg. N. Abut.	121+91.28	-8.60	789.30	789.30
Bk. N. Abut.	121+93.25	-8.67	789.27	789.27

STAGE I CONSTRUCTION LINE

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+13.59	-4.63	790.72	790.72
℄ Brg. S. Abut.	121+15.56	-4.61	790.68	790.68
A	121+25.53	-4.54	790.51	790.63
B	121+35.51	-4.54	790.34	790.56
C	121+45.48	-4.59	790.17	790.45
D	121+55.45	-4.72	789.99	790.29
E	121+65.41	-4.90	789.82	790.08
F	121+75.38	-5.15	789.64	789.83
G	121+85.34	-5.46	789.47	789.54
℄ Brg. N. Abut.	121+91.85	-5.70	789.35	789.35
Bk. N. Abut.	121+93.83	-5.78	789.31	789.31

SB PGL

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+13.64	-4.27	790.72	790.72
℄ Brg. S. Abut.	121+15.61	-4.28	790.69	790.69
A	121+25.56	-4.35	790.52	790.63
B	121+35.52	-4.43	790.34	790.56
C	121+45.49	-4.51	790.17	790.45
D	121+55.47	-4.60	790.00	790.29
E	121+65.45	-4.70	789.82	790.09
F	121+75.44	-4.81	789.65	789.84
G	121+85.44	-4.92	789.48	789.55
℄ Brg. N. Abut.	121+91.99	-5.00	789.36	789.36
Bk. N. Abut.	121+93.98	-5.03	789.33	789.33

STAGE II CONSTRUCTION LINE

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+14.14	-0.87	790.78	790.78
℄ Brg. S. Abut.	121+16.12	-0.85	790.75	790.75
A	121+26.12	-0.79	790.58	790.69
B	121+36.11	-0.79	790.41	790.62
C	121+46.11	-0.85	790.23	790.51
D	121+56.10	-0.98	790.06	790.35
E	121+66.09	-1.16	789.88	790.15
F	121+76.08	-1.42	789.71	789.89
G	121+86.07	-1.73	789.53	789.60
℄ Brg. N. Abut.	121+92.60	-1.97	789.41	789.41
Bk. N. Abut.	121+94.58	-2.05	789.38	789.38

NOTE:

Theoretical grade elevations shown on this sheet do not include adjustments for the 3/8" polymer overlay.



USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - MJW	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS II
STRUCTURE NO. 045-3133

SHEET 9 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	313
CONTRACT NO. 61M13				
		ILLINOIS	FED. AID PROJECT	

MODEL: Top of Slab Elevations III
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_10_Top of Slab Elevation III.dgn

☐ KIRK RD.

Location	Station	Offset From ☐ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+14.27	0.00	790.80	790.80
☐ Brg. S. Abut.	121+16.25	0.00	790.76	790.76
A	121+26.24	0.00	790.59	790.71
B	121+36.24	0.00	790.42	790.63
C	121+46.25	0.00	790.25	790.53
D	121+56.27	0.00	790.07	790.37
E	121+66.31	0.00	789.90	790.17
F	121+76.35	0.00	789.73	789.92
G	121+86.41	0.00	789.56	789.63
☐ Brg. N. Abut.	121+92.99	0.00	789.44	789.44
Bk. N. Abut.	121+94.99	0.00	789.41	789.41

CROWN LINE

Location	Station	Offset From ☐ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+14.42	1.00	790.81	790.81
☐ Brg. S. Abut.	121+16.40	1.02	790.78	790.78
A	121+26.41	1.09	790.61	790.72
B	121+36.43	1.16	790.44	790.65
C	121+46.46	1.24	790.27	790.55
D	121+56.51	1.32	790.10	790.39
E	121+66.56	1.39	789.93	790.19
F	121+76.63	1.47	789.75	789.94
G	121+86.71	1.55	789.58	789.66
☐ Brg. N. Abut.	121+93.31	1.61	789.47	789.47
Bk. N. Abut.	121+95.32	1.62	789.44	789.44

BEAM 7

Location	Station	Offset From ☐ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+14.58	2.05	790.79	790.79
☐ Brg. S. Abut.	121+16.56	2.07	790.76	790.76
A	121+26.58	2.13	790.59	790.70
B	121+36.59	2.13	790.42	790.63
C	121+46.60	2.06	790.25	790.53
D	121+56.61	1.93	790.08	790.38
E	121+66.62	1.74	789.92	790.18
F	121+76.63	1.48	789.75	789.94
G	121+86.63	1.17	789.58	789.65
☐ Brg. N. Abut.	121+93.18	0.92	789.46	789.46
Bk. N. Abut.	121+95.16	0.84	789.42	789.42

NB PGL

Location	Station	Offset From ☐ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+15.21	6.29	790.70	790.70
☐ Brg. S. Abut.	121+17.21	6.33	790.66	790.66
A	121+27.27	6.55	790.49	790.60
B	121+37.35	6.78	790.31	790.53
C	121+47.45	7.02	790.14	790.42
D	121+57.56	7.27	789.96	790.26
E	121+67.69	7.52	789.78	790.05
F	121+77.83	7.79	789.61	789.79
G	121+88.00	8.07	789.43	789.51
☐ Brg. N. Abut.	121+94.66	8.27	789.32	789.32
Bk. N. Abut.	121+96.68	8.33	789.28	789.28

BEAM 8

Location	Station	Offset From ☐ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+16.02	11.65	790.57	790.57
☐ Brg. S. Abut.	121+18.01	11.66	790.54	790.54
A	121+28.09	11.72	790.37	790.48
B	121+38.16	11.71	790.20	790.42
C	121+48.24	11.63	790.03	790.31
D	121+58.31	11.49	789.86	790.16
E	121+68.38	11.29	789.70	789.96
F	121+78.45	11.02	789.53	789.72
G	121+88.51	10.69	789.37	789.45
☐ Brg. N. Abut.	121+95.09	10.44	789.26	789.26
Bk. N. Abut.	121+97.09	10.35	789.23	789.23

BEAM 9

Location	Station	Offset From ☐ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+17.47	21.24	790.36	790.36
☐ Brg. S. Abut.	121+19.48	21.26	790.32	790.32
A	121+29.62	21.30	790.15	790.27
B	121+39.76	21.28	789.98	790.20
C	121+49.89	21.20	789.81	790.09
D	121+60.03	21.04	789.64	789.94
E	121+70.16	20.83	789.48	789.74
F	121+80.29	20.55	789.31	789.50
G	121+90.42	20.21	789.15	789.22
☐ Brg. N. Abut.	121+97.04	19.95	789.04	789.04
Bk. N. Abut.	121+99.04	19.86	789.01	789.01

NOTE:

Theoretical grade elevations shown on this sheet do not include adjustments for the 3/8" polymer overlay.



USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - MJW	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS III
STRUCTURE NO. 045-3133

SHEET 10 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	314
CONTRACT NO. 61M13				
		ILLINOIS	FED. AID PROJECT	

MODEL: Top of Slab Elevations III
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_11_Top of Slab Elevation IV.dgn

BEAM 10

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+18.95	30.84	790.14	790.14
℄ Brg. S. Abut.	121+20.97	30.85	790.11	790.11
A	121+31.17	30.89	789.93	790.05
B	121+41.37	30.86	789.76	789.97
C	121+51.57	30.76	789.59	789.87
D	121+61.77	30.60	789.42	789.71
E	121+71.96	30.37	789.26	789.51
F	121+82.15	30.08	789.09	789.27
G	121+92.34	29.73	788.93	789.00
℄ Brg. N. Abut.	121+99.00	29.46	788.82	788.82
Bk. N. Abut.	122+01.02	29.37	788.79	788.79

BEAM 11

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+20.18	38.75	789.96	789.96
℄ Brg. S. Abut.	121+22.22	38.81	789.93	789.93
A	121+32.51	39.08	789.75	789.86
B	121+42.81	39.27	789.57	789.78
C	121+53.10	39.41	789.39	789.66
D	121+63.40	39.47	789.22	789.50
E	121+73.70	39.48	789.04	789.30
F	121+84.00	39.42	788.87	789.05
G	121+94.30	39.29	788.70	788.77
℄ Brg. N. Abut.	122+01.03	39.16	788.59	788.59
Bk. N. Abut.	122+03.08	39.12	788.56	788.56

BEAM 12

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+21.42	46.66	789.78	789.78
℄ Brg. S. Abut.	121+23.48	46.77	789.75	789.75
A	121+33.87	47.26	789.56	789.66
B	121+44.26	47.69	789.38	789.57
C	121+54.66	48.05	789.19	789.44
D	121+65.06	48.34	789.01	789.28
E	121+75.46	48.57	788.83	789.07
F	121+85.87	48.74	788.65	788.82
G	121+96.28	48.84	788.48	788.54
℄ Brg. N. Abut.	122+03.09	48.87	788.36	788.36
Bk. N. Abut.	122+05.16	48.87	788.33	788.33

INSIDE FACE OF E. PARAPET

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+21.76	48.81	789.73	789.73
℄ Brg. S. Abut.	121+23.81	48.85	789.70	789.70
A	121+34.17	49.08	789.52	789.62
B	121+44.54	49.33	789.34	789.53
C	121+54.93	49.58	789.16	789.41
D	121+65.34	49.84	788.98	789.24
E	121+75.76	50.12	788.80	789.03
F	121+86.21	50.40	788.61	788.78
G	121+96.67	50.69	788.43	788.50
℄ Brg. N. Abut.	122+03.53	50.91	788.31	788.31
Bk. N. Abut.	122+05.61	50.97	788.28	788.28

E. EDGE OF DECK

Location	Station	Offset From ℄ Kirk Rd.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	121+21.99	50.23	789.86	789.86
℄ Brg. S. Abut.	121+24.04	50.27	789.82	789.82
A	121+34.41	50.51	789.64	789.74
B	121+44.79	50.75	789.46	789.65
C	121+55.19	51.00	789.28	789.53
D	121+65.61	51.27	789.10	789.36
E	121+76.04	51.54	788.92	789.15
F	121+86.50	51.82	788.73	788.90
G	121+96.97	52.12	788.55	788.62
℄ Brg. N. Abut.	122+03.83	52.34	788.43	788.43
Bk. N. Abut.	122+05.92	52.40	788.40	788.40

NOTE:

Theoretical grade elevations shown on this sheet do not include adjustments for the 3/8" polymer overlay.



USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - MJW	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

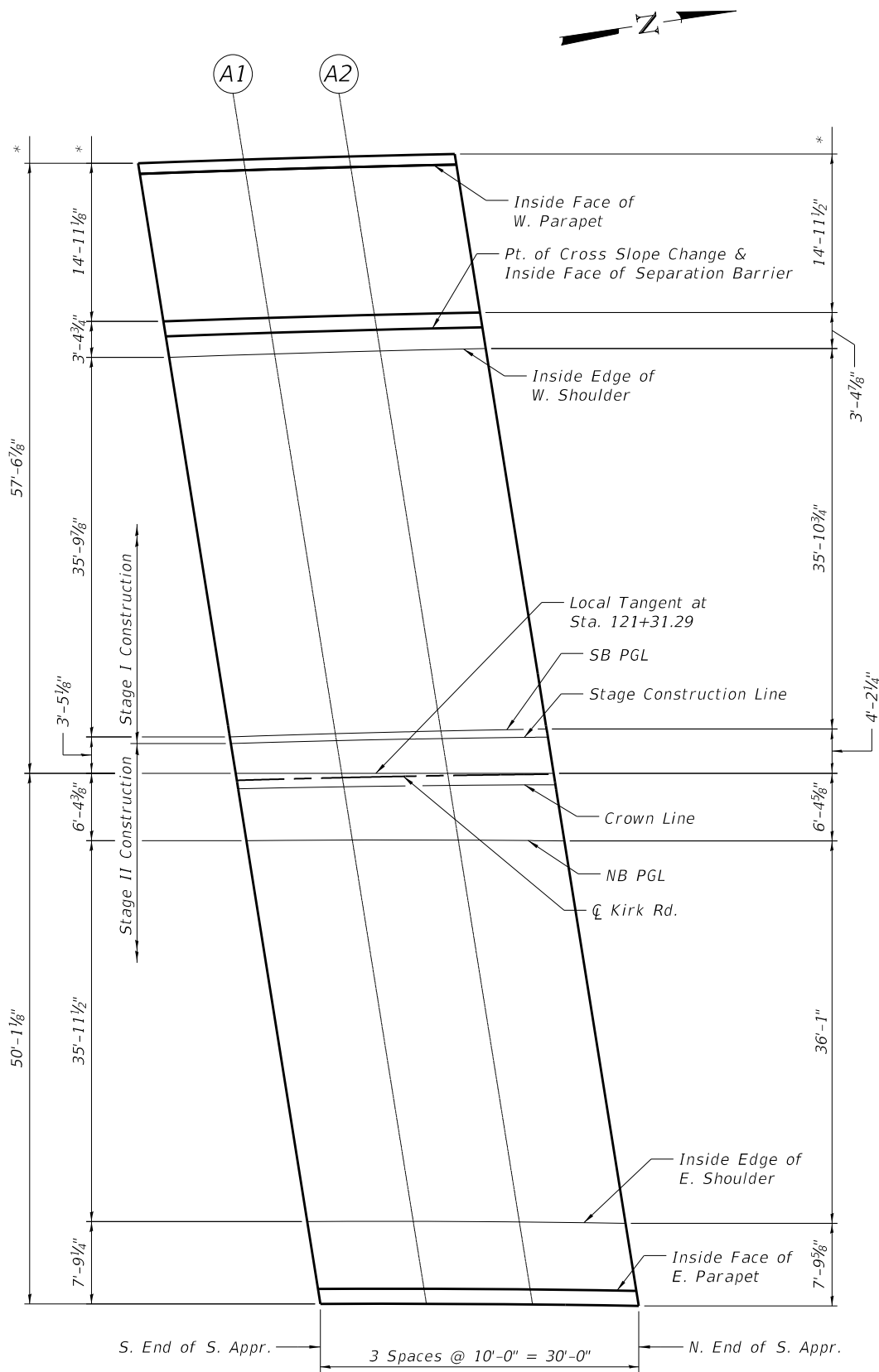
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS IV
STRUCTURE NO. 045-3133

SHEET 11 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	315
CONTRACT NO. 61M13				
		ILLINOIS	FED. AID PROJECT	

MODEL: Top of South Approach Slab Elevations
FILE NAME: W:\894-048_KDOT_Kirk.Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_12_Top of South Approach Slab Elevations.dgn



* Measured perpendicular to Local Tangent

NOTE:

Theoretical grade elevations shown on this sheet do not include adjustments for the 3/8" polymer overlay.

PLAN

INSIDE FACE OF W. PARAPET

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+78.16	-57.51	790.81
A1	120+87.76	-57.55	790.64
A2	120+97.37	-57.59	790.48
N. End of S. Apr.	121+06.98	-57.64	790.31

**PT. OF CROSS SLOPE CHANGE &
INSIDE FACE OF SEPARATION BARRIER**

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+80.04	-42.10	790.55
A1	120+89.74	-42.14	790.38
A2	120+99.44	-42.19	790.21
N. End of S. Apr.	121+09.14	-42.24	790.04

INSIDE EDGE OF W. SHOULDER

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+80.29	-40.10	790.58
A1	120+90.00	-40.14	790.41
A2	120+99.71	-40.19	790.24
N. End of S. Apr.	121+09.43	-40.24	790.08

SB PGL

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+84.84	-4.12	791.22
A1	120+94.77	-4.16	791.05
A2	121+04.70	-4.21	790.88
N. End of S. Apr.	121+14.65	-4.27	790.71

STAGE CONSTRUCTION LINE

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+84.92	-3.50	791.23
A1	120+94.86	-3.50	791.06
A2	121+04.80	-3.50	790.89
N. End of S. Apr.	121+14.76	-3.50	790.72

& KIRK RD.

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+85.37	0.00	791.30
A1	120+95.33	0.00	791.12
A2	121+05.30	0.00	790.95
N. End of S. Apr.	121+15.28	0.00	790.78

CROWN Line

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+85.47	0.79	791.31
A1	120+95.45	0.86	791.14
A2	121+05.44	0.94	790.97
N. End of S. Apr.	121+15.43	1.01	790.80

NB PGL

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+86.12	5.72	791.20
A1	120+96.14	5.91	791.03
A2	121+06.18	6.11	790.85
N. End of S. Apr.	121+16.23	6.31	790.68

INSIDE EDGE OF E. SHOULDER

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+90.95	41.82	790.40
A1	121+01.22	42.01	790.22
A2	121+11.50	42.22	790.04
N. End of S. Apr.	121+21.80	42.44	789.86

INSIDE FACE OF E. PARAPET

Location	Station	Offset From & Kirk Rd.	Theoretical Grade Elevations
S. End of S. Apr.	120+91.83	48.20	790.25
A1	121+02.14	48.40	790.08
A2	121+12.47	48.61	789.90
N. End of S. Apr.	121+22.81	48.83	789.72



USER NAME =	DESIGNED - KN	REVISED -
CHECKED - MJW	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

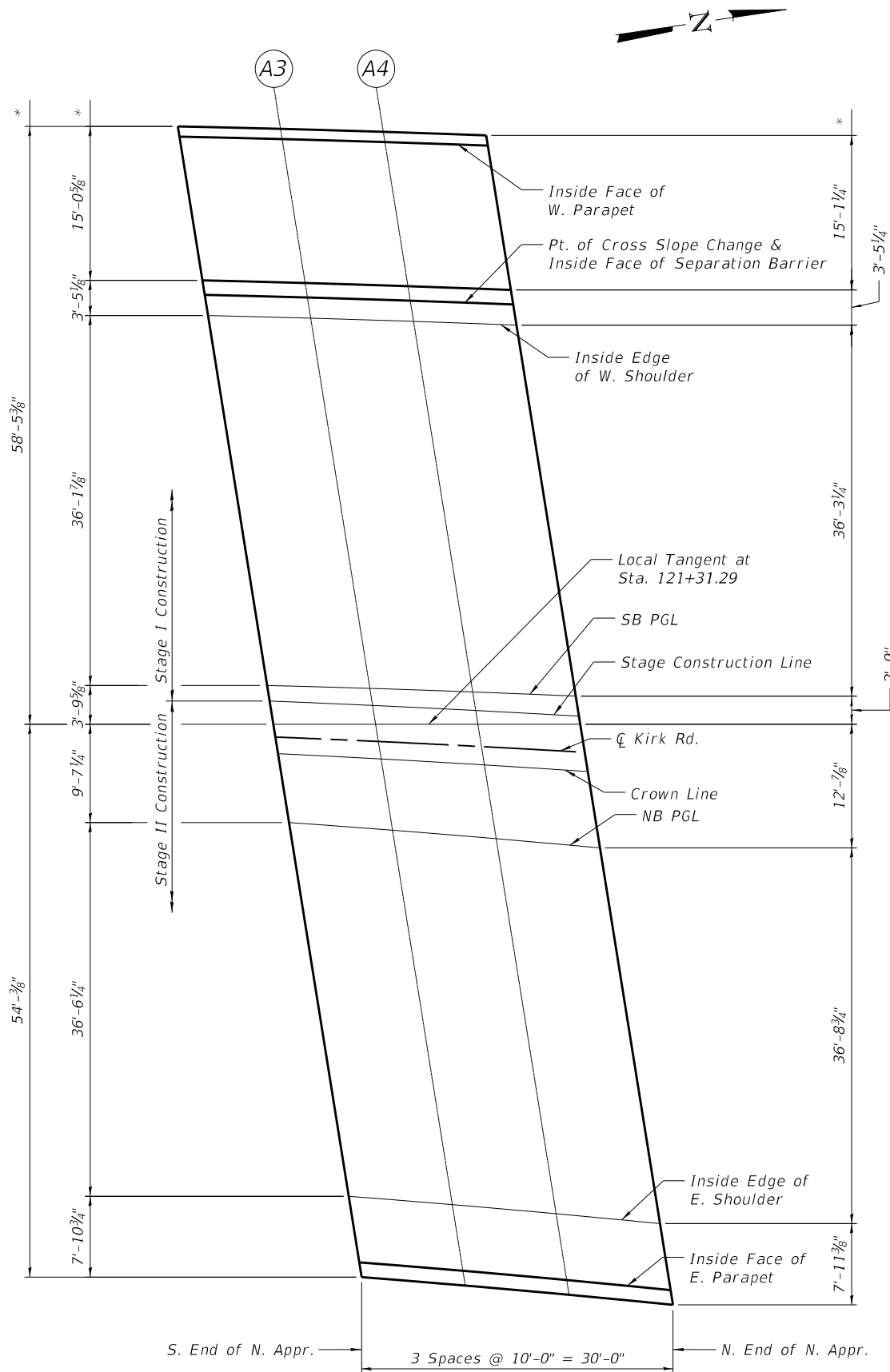
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 045-3133

SHEET 12 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	316
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Top of North Approach Slab Elevations
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_13_Top of North Approach Slab Elevations.dgn



NOTE: * Measured perpendicular to Local Tangent
Theoretical grade elevations shown on this sheet do not include adjustments for the 3/8" polymer overlay.

PLAN

INSIDE FACE OF W. PARAPET

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	121+82.68	-58.31	788.99
A3	121+92.37	-58.43	788.83
A4	122+02.06	-58.55	788.66
N. End of N. Apr.	122+11.76	-58.69	788.49

**PT. OF CROSS SLOPE CHANGE &
INSIDE FACE OF SEPARATION BARRIER**

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	121+85.58	-42.93	788.71
A3	121+95.36	-43.05	788.54
A4	122+05.14	-43.18	788.37
N. End of N. Apr.	122+14.94	-43.31	788.20

INSIDE EDGE OF W. SHOULDER

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	121+85.96	-40.93	788.75
A3	121+95.75	-41.05	788.58
A4	122+05.55	-41.18	788.41
N. End of N. Apr.	122+15.36	-41.32	788.24

SB PGL

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	121+92.96	-5.02	789.34
A3	122+02.98	-5.15	789.17
A4	122+13.01	-5.28	789.00
N. End of N. Apr.	122+23.05	-5.43	788.82

STAGE CONSTRUCTION LINE

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	121+93.27	-3.50	789.37
A3	122+03.32	-3.50	789.20
A4	122+13.39	-3.50	789.03
N. End of N. Apr.	122+23.47	-3.50	788.85

K KIRK RD.

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	121+93.97	0.00	789.43
A3	122+04.05	0.00	789.26
A4	122+14.14	0.00	789.08
N. End of N. Apr.	122+24.24	0.00	788.91

CROWN LINE

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	121+94.29	1.61	789.45
A3	122+04.40	1.70	789.28
A4	122+14.52	1.78	789.11
N. End of N. Apr.	122+24.66	1.86	788.94

NB PGL

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	121+95.64	8.30	789.30
A3	122+05.84	8.60	789.12
A4	122+16.06	8.91	788.94
N. End of N. Apr.	122+26.29	9.23	788.77

INSIDE EDGE OF E. SHOULDER

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	122+03.18	44.54	788.45
A3	122+13.63	44.85	788.27
A4	122+24.11	45.18	788.08
N. End of N. Apr.	122+34.60	45.51	787.90

INSIDE FACE OF E. PARAPET

Location	Station	Offset From Kirk Rd.	Theoretical Grade Elevations
S. End of N. Apr.	122+04.55	50.94	788.30
A3	122+15.05	51.26	788.11
A4	122+25.57	51.59	787.93
N. End of N. Apr.	122+36.12	51.93	787.75



USER NAME =	DESIGNED - KN	REVISED -
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PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

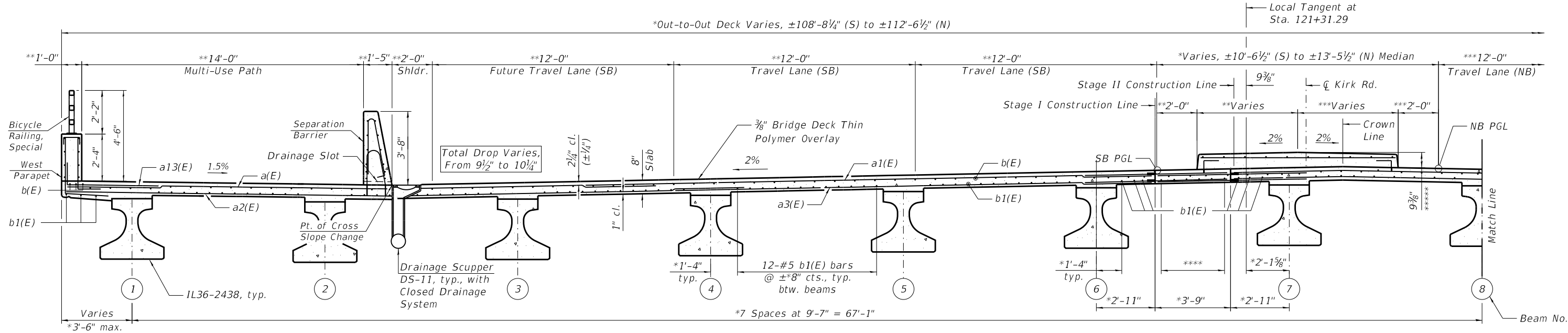
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 045-3133**

SHEET 13 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	272
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Superstructure Cross Section
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_15_Superstructure Cross Section.dgn

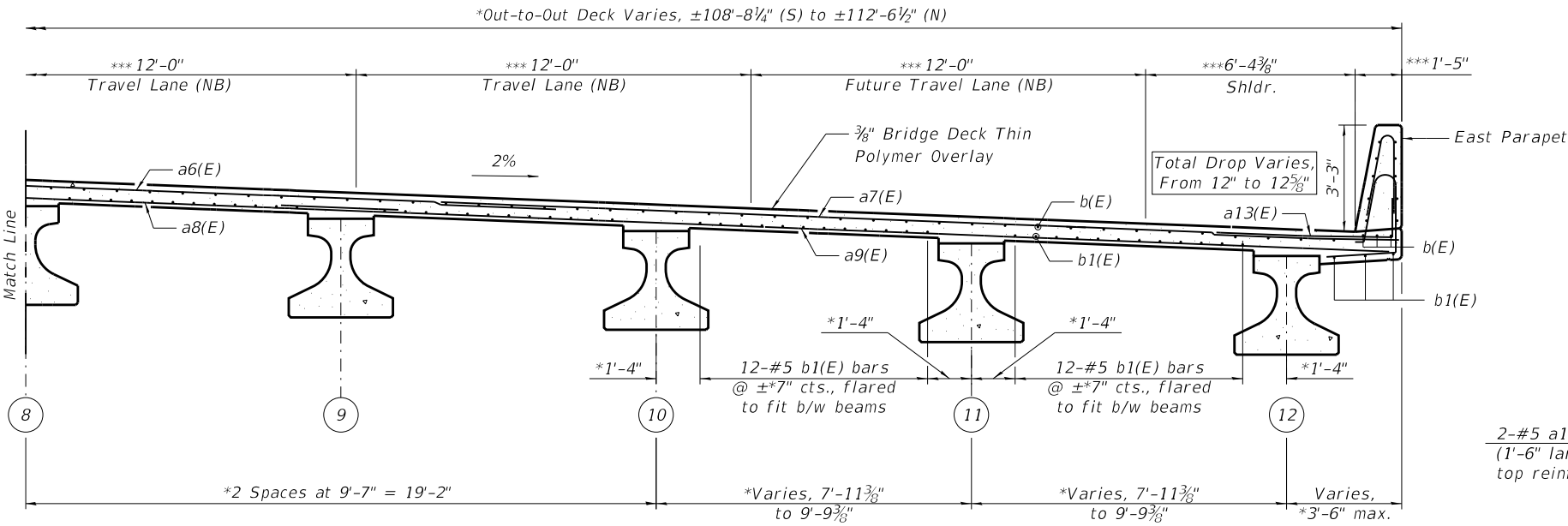


CROSS SECTION
(Looking North)

***** Prior to Polymer Overlay

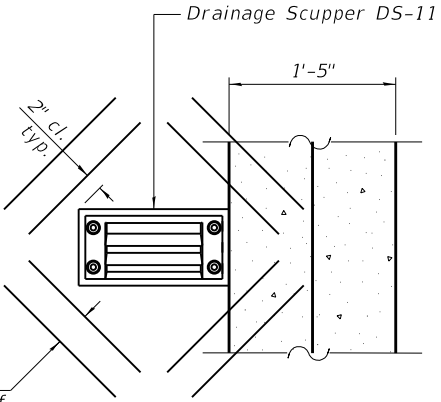
MINIMUM BAR LAP
#5 bar = 3'-10"

* Measured perpendicular to Local Tangent at back of abutment
** Measured perpendicular to SB PGL
*** Measured perpendicular to NB PGL
**** 6-#5 b1(E) bars @ $\pm 8"$ cts.



CROSS SECTION
(Looking North)

2-#5 a12(E) bars at 4" cts.
(1'-6" large) tied to bottom of
top reinforcement mat. typ.



PLAN

Notes:
Cut longitudinal and transverse reinforcement to clear drainage scuppers.
A protective coat shall be applied to the top and inside faces of the median, parapets, separation barrier, and multi-use path. This work shall be performed after the polymer overlay is applied.



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - MJW	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE CROSS SECTION
STRUCTURE NO. 045-3133

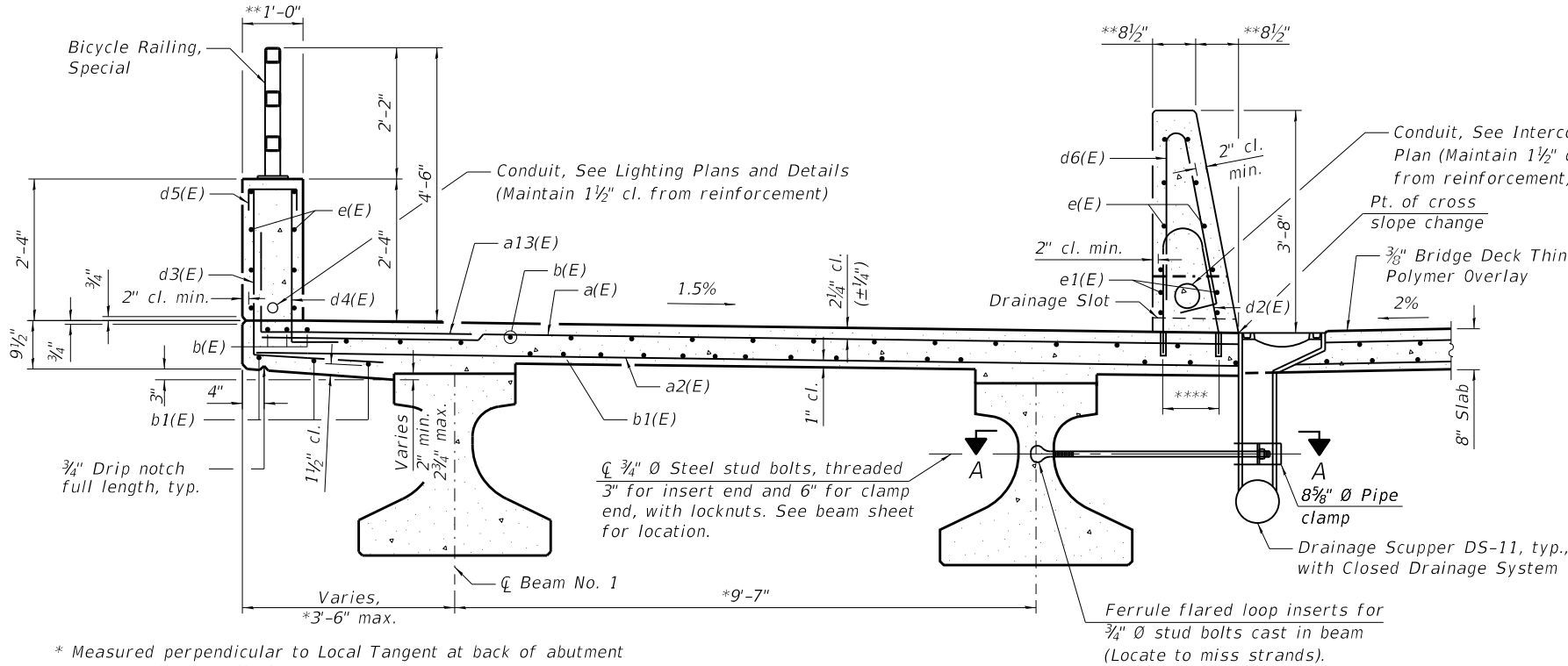
SHEET 15 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	319
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

**** Drill and set #5 d2(E) bar according to Article 509.06 of the Standard Specifications. Drilled holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6". The Contractor shall take all necessary precautions to prevent drilled hole interference with deck reinforcement bars. Locate longitudinal bars to miss drilled locations. Locate drilled holes to miss transverse bars in deck. Cost of drilling and setting is included with the cost of Reinforcement Bars, Epoxy Coated. Drill and set shall only be allowed at the Separation Barrier.

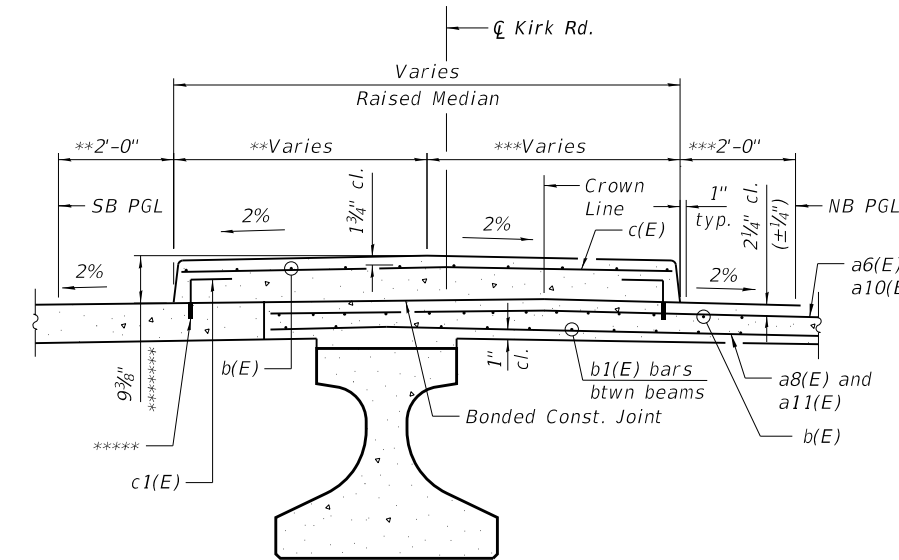
***** $\frac{3}{4}$ " $\varnothing$ Galvanized expansion anchor or Ferrule Loop Slab Insert (Proof Load 6600 lb). Cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.

Notes:
The clamping device and inserts shall be galvanized according to AASHTO M 232. Cost of clamping device included with Drainage Scuppers, DS-11.
The $\frac{3}{16}$ " min. aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated with 5 mils of either bitumen paint or epoxy paint to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
The polyurethane sealant shall be according to Article 1050.04 of the Standard Specifications and the color shall be gray.
See Sheet 17 of 39 for Drainage Slot Detail.

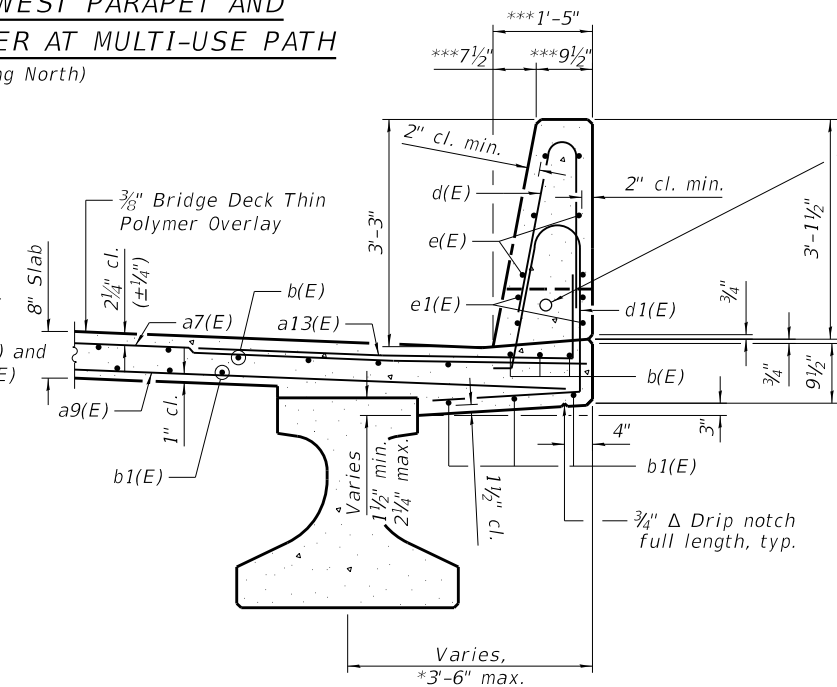


* Measured perpendicular to Local Tangent at back of abutment
** Measured perpendicular to SB PGL
*** Measured perpendicular to NB PGL

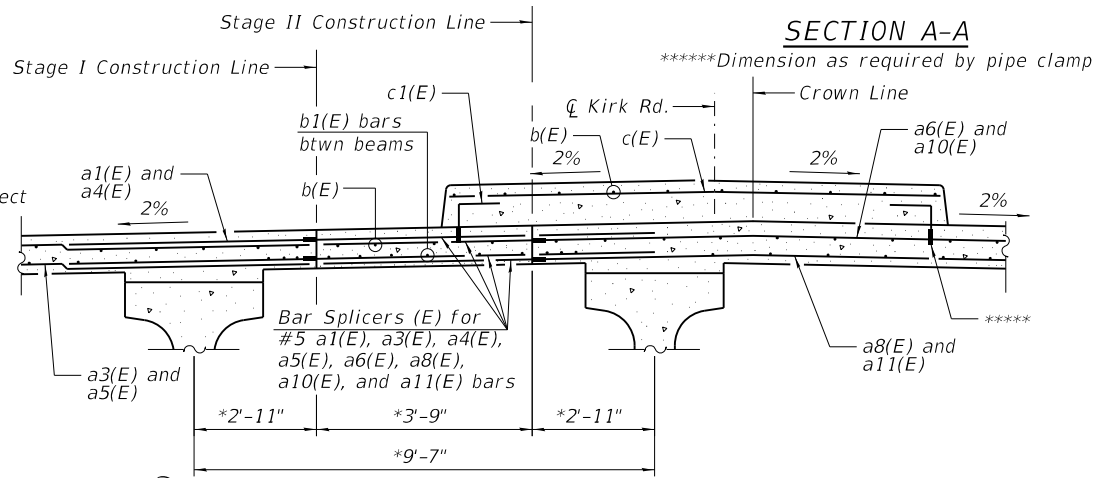
***** Prior to Polymer Overlay



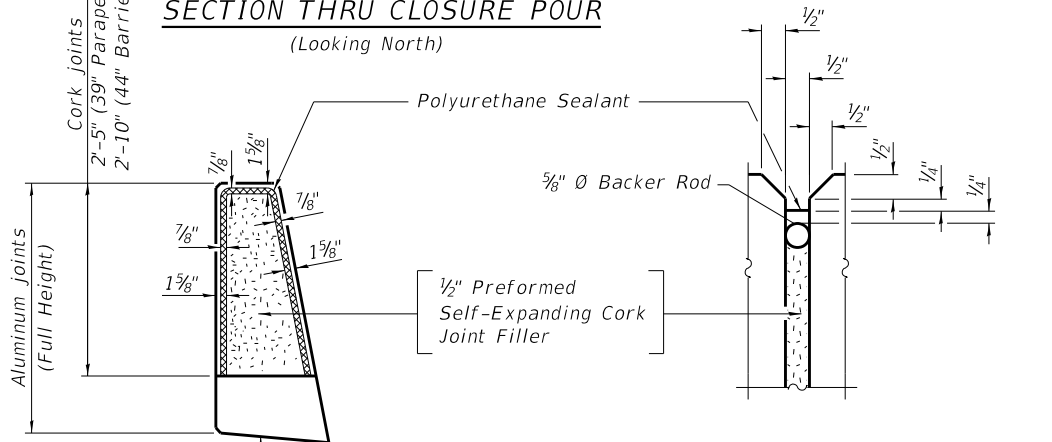
SECTION THRU MEDIAN
(Looking North)
(Omit closure pour reinforcement for clarity.)



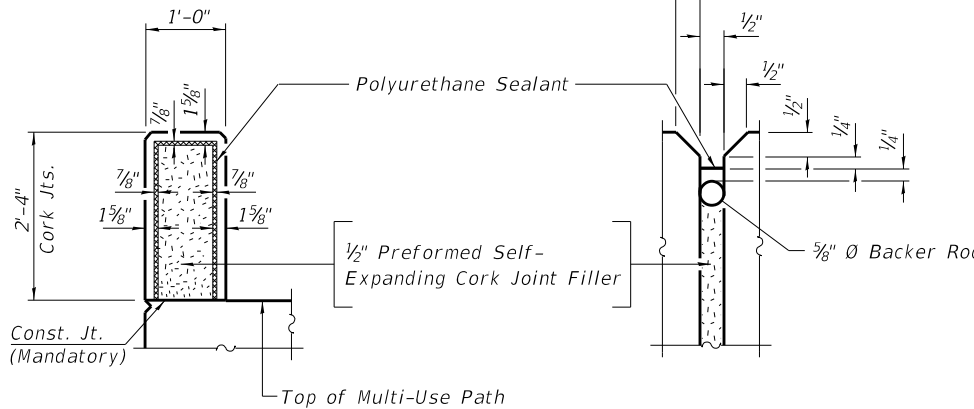
SECTION THRU EAST PARAPET
(Looking North)



SECTION THRU CLOSURE POUR
(Looking North)



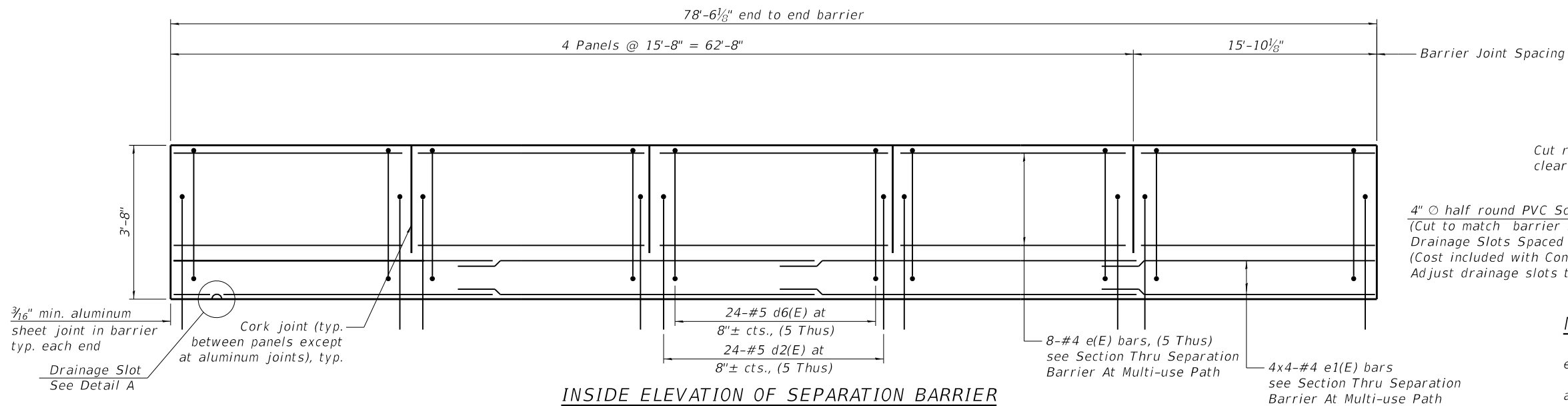
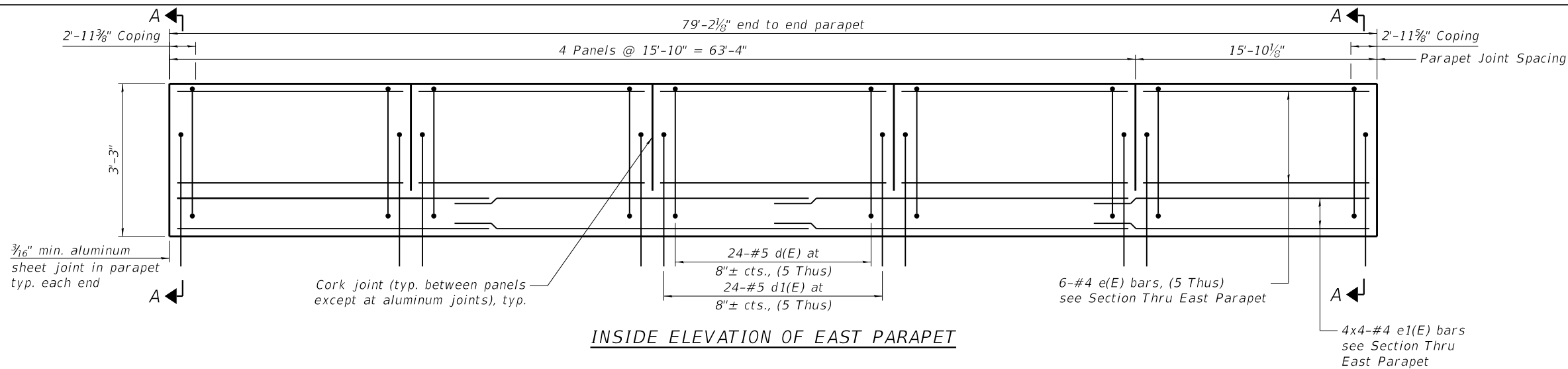
EAST PARAPET/SEPARATION BARRIER JOINT DETAILS



WEST PARAPET JOINT DETAILS AT MULTI-USE PATH

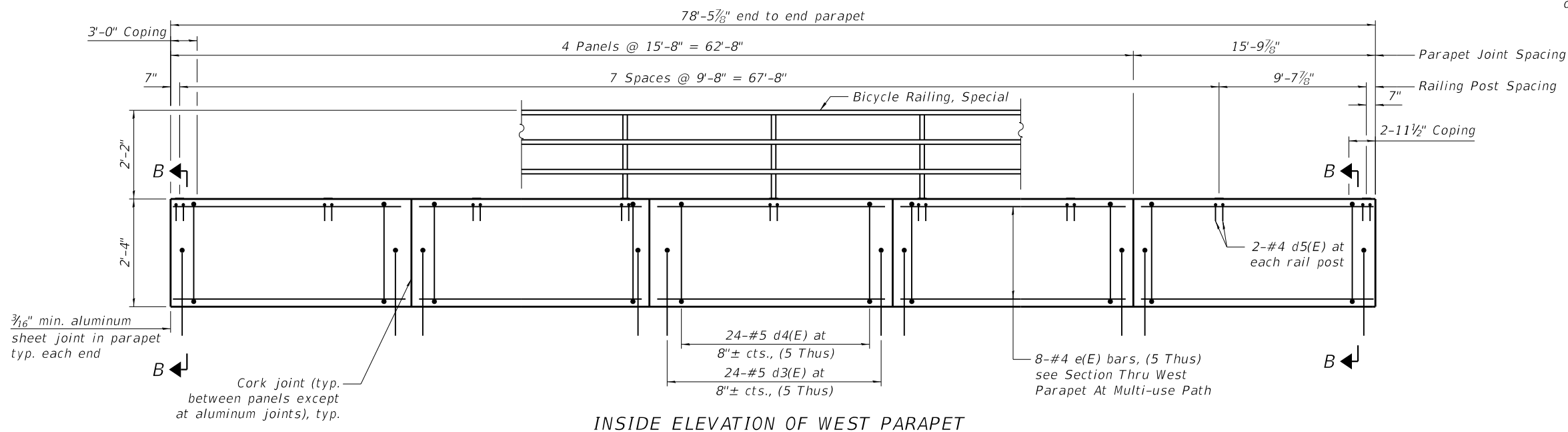
MODEL: Parapets and Median Sections
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_16_Parapets and Median sections.dgn

MODEL: Parapet Elevations
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_17_Parapet Elevations.dgn



Notes:

Inside elevation at parapet and barrier views is exaggerated vertically to show reinforcement.
Length of parapets and barrier are measured along the inside face.
Bars indicated thus 4x5-#4 etc. indicates 4 line of bars with 5 lengths per line.



**SECTION B-B
COPING DETAIL**
(Exclude Railing)
(See MSE wall plans for coping)



USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - MJW	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

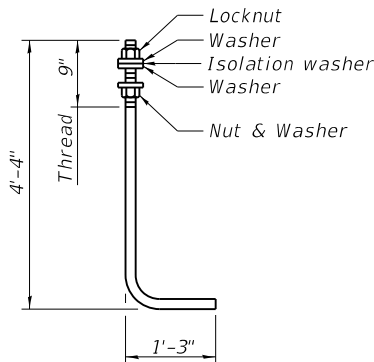
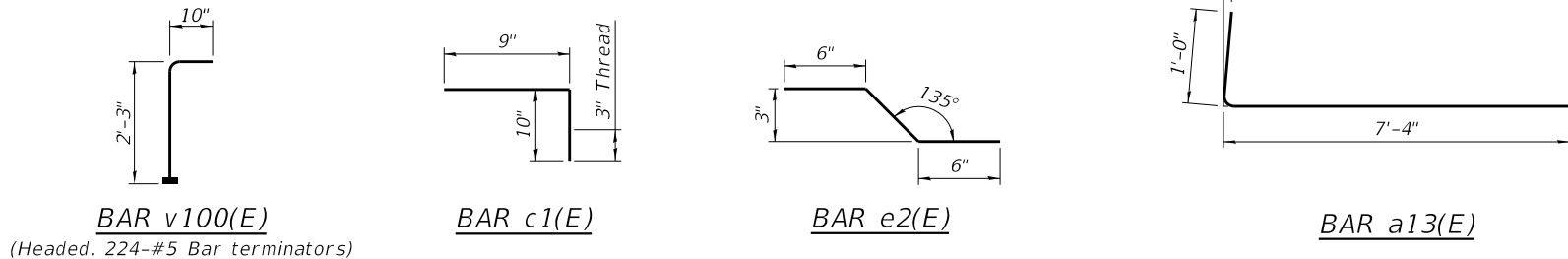
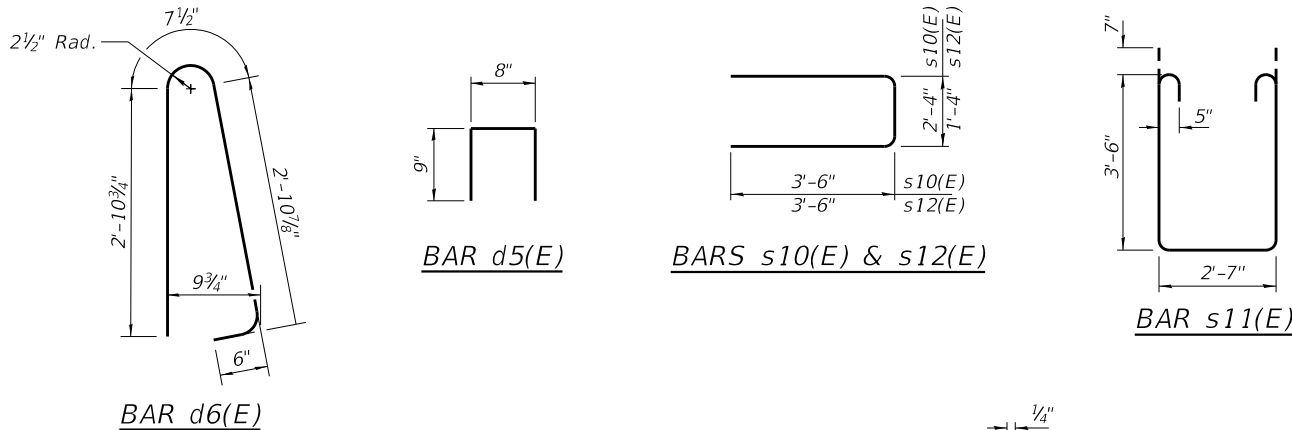
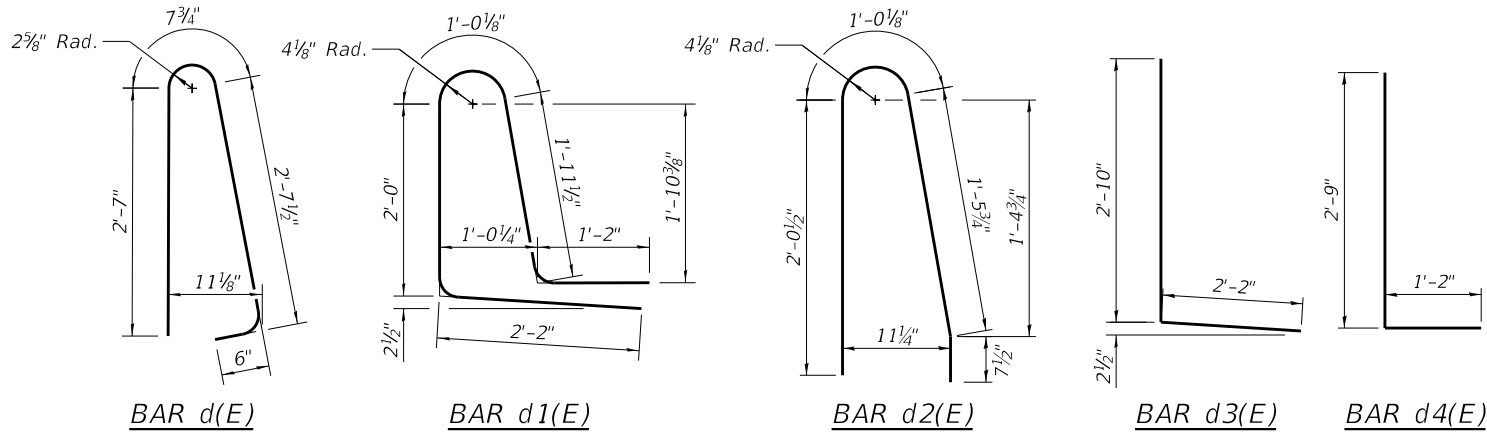
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET ELEVATIONS
STRUCTURE NO. 045-3133

SHEET 17 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	321
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_19_Superstructure Details.dgn



ANCHOR ROD
Diameter as specified for light poles.
(ASTM F 1554 Grade 105) Full length
hot dipped galvanized

Notes:
Cost of anchor rods is included with Concrete Superstructure.
Bar terminators, paid for separately. See Total Bill of Material.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	173	#5	29'-3"	=====
a1(E)	173	#5	28'-8"	=====
a2(E)	122	#5	34'-0"	=====
a3(E)	122	#5	23'-11"	=====
a4(E)	17	#5	47'-9"	=====
a5(E)	13	#5	49'-10"	=====
a6(E)	174	#5	28'-9"	=====
a7(E)	174	#5	29'-2"	=====
a8(E)	123	#5	24'-0"	=====
a9(E)	123	#5	33'-11"	=====
a10(E)	17	#5	47'-3"	=====
a11(E)	13	#5	49'-4"	=====
a12(E)	16	#6	1'-6"	=====
a13(E)	352	#5	8'-4"	=====
a14(E)	16	#5	29'-7"	=====
b(E)	387	#5	28'-11"	=====
b1(E)	552	#5	22'-8"	=====
c(E)	160	#5	6'-5"	=====
c1(E)	160	#5	1'-7"	=====
d(E)	120	#5	6'-5"	=====
d1(E)	120	#5	8'-4"	=====
d2(E)	120	#5	5'-2"	=====
d3(E)	120	#5	5'-0"	=====
d4(E)	120	#5	3'-11"	=====
d5(E)	18	#4	2'-2"	=====
d6(E)	120	#5	7'-0"	=====
e(E)	110	#4	15'-4"	=====
e1(E)	32	#4	21'-7"	=====
e2(E)	32	#4	1'-5"	=====
m1(E)	32	#6	30'-5"	=====
m2(E)	32	#6	8'-4"	=====
m3(E)	4	#6	2'-3"	=====
m4(E)	4	#6	3'-2"	=====
m5(E)	4	#6	3'-11"	=====
m6(E)	4	#6	6'-8"	=====
m7(E)	4	#6	8'-6"	=====
m8(E)	4	#6	2'-8"	=====
m9(E)	16	#6	6'-2"	=====
m10(E)	2	#6	1'-2"	=====
m11(E)	2	#6	2'-2"	=====
m12(E)	2	#6	2'-9"	=====
m13(E)	2	#6	4'-5"	=====
m14(E)	2	#6	6'-3"	=====
m15(E)	2	#6	1'-6"	=====
m16(E)	48	#5	4'-0"	=====
s10(E)	172	#5	9'-4"	=====
s11(E)	172	#5	10'-9"	=====
s12(E)	96	#5	8'-4"	=====
v100(E)	224	#5	3'-1"	=====
Reinforcement Bars, Epoxy Coated			Lbs.	82,160
Bar Splicers			Each	674
Concrete Superstructure			Cu. Yds.	364.3
Protective Coat			Sq. Yds.	341
Bridge Deck Thin Polymer Overlay 3/8"			Sq. Yds.	740

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.



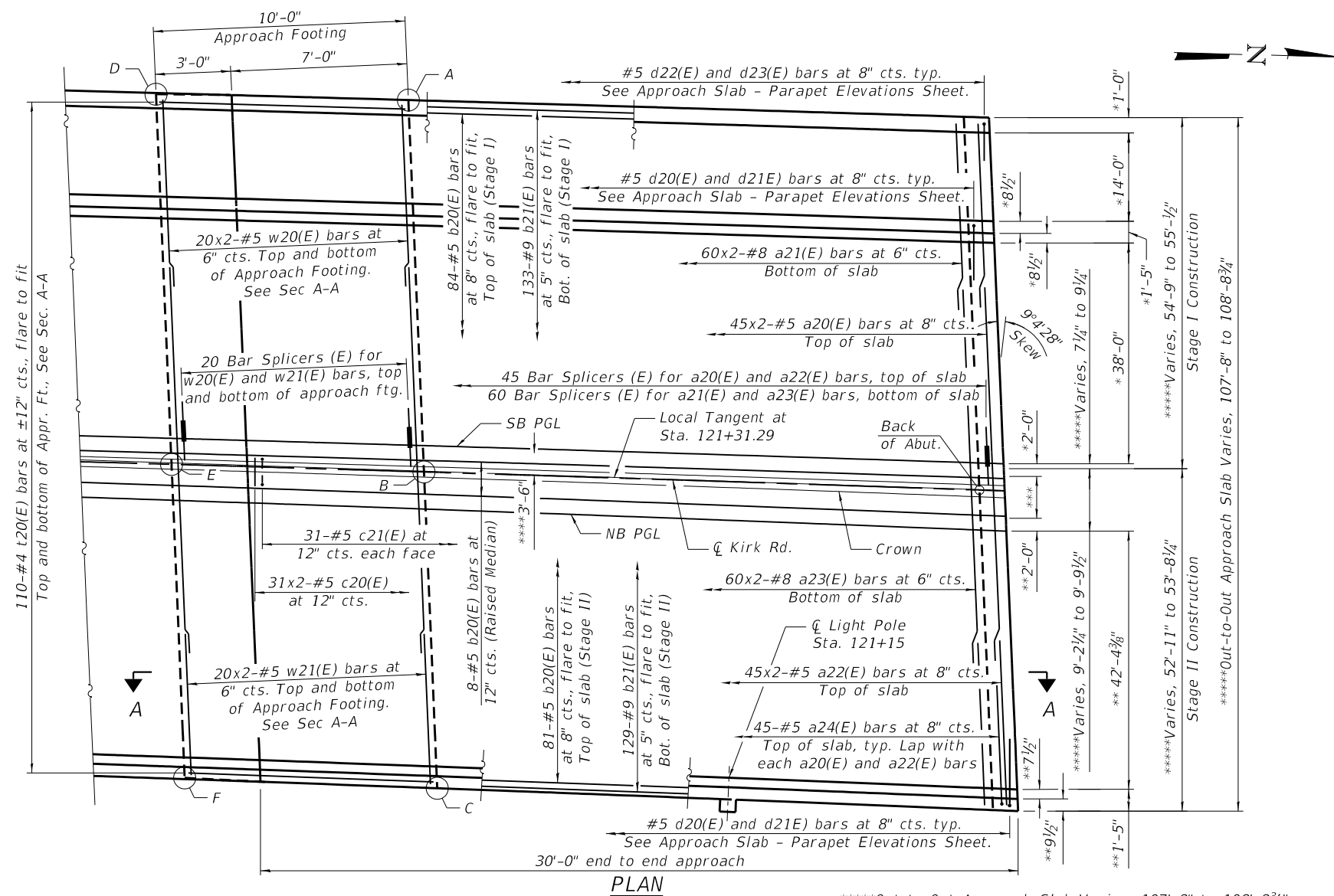
USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - MJW	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 045-3133

SHEET 19 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	323
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				



TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING

South Approach			
Point	Offset ($\angle$ Kirk Rd.)	Top	Bottom
A - NW	-58.53	789.47	788.63
B - N $\angle$	0.00	789.93	789.10
C - NE	49.75	788.85	788.02
D - SW	-58.30	789.63	788.80
E - S $\angle$	0.00	790.11	789.27
F - SE	49.36	789.04	788.20

MINIMUM BAR LAP

#5 bar = 2'-6"
#8 bar = 5'-2"

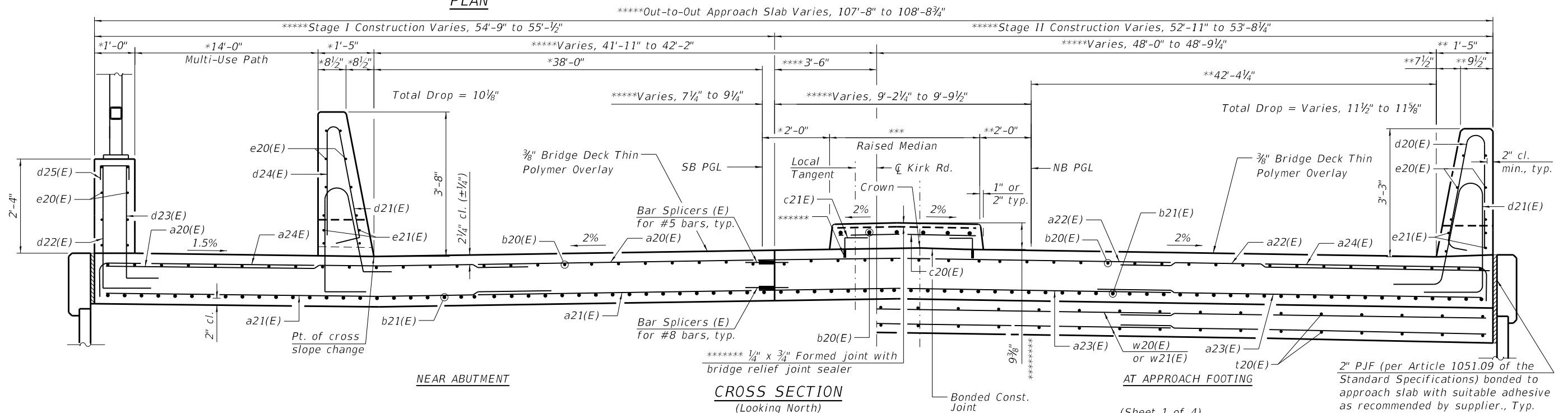
- * Measured perpendicular to SB PGL
 ** Measured perpendicular to NB PGL
 *** Raised Median Varies, 5'-9½" to 6'-6¾", measured perpendicular to Local Tangent
 **** Measured perpendicular to Ȑ Kirk Rd.
 ***** Measured perpendicular to Local Tangent

***** $\frac{3}{4}$ " Ø Galvanized expansion anchor or Ferrule Loop Slab Insert (Proof Load 6600 lb). The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.

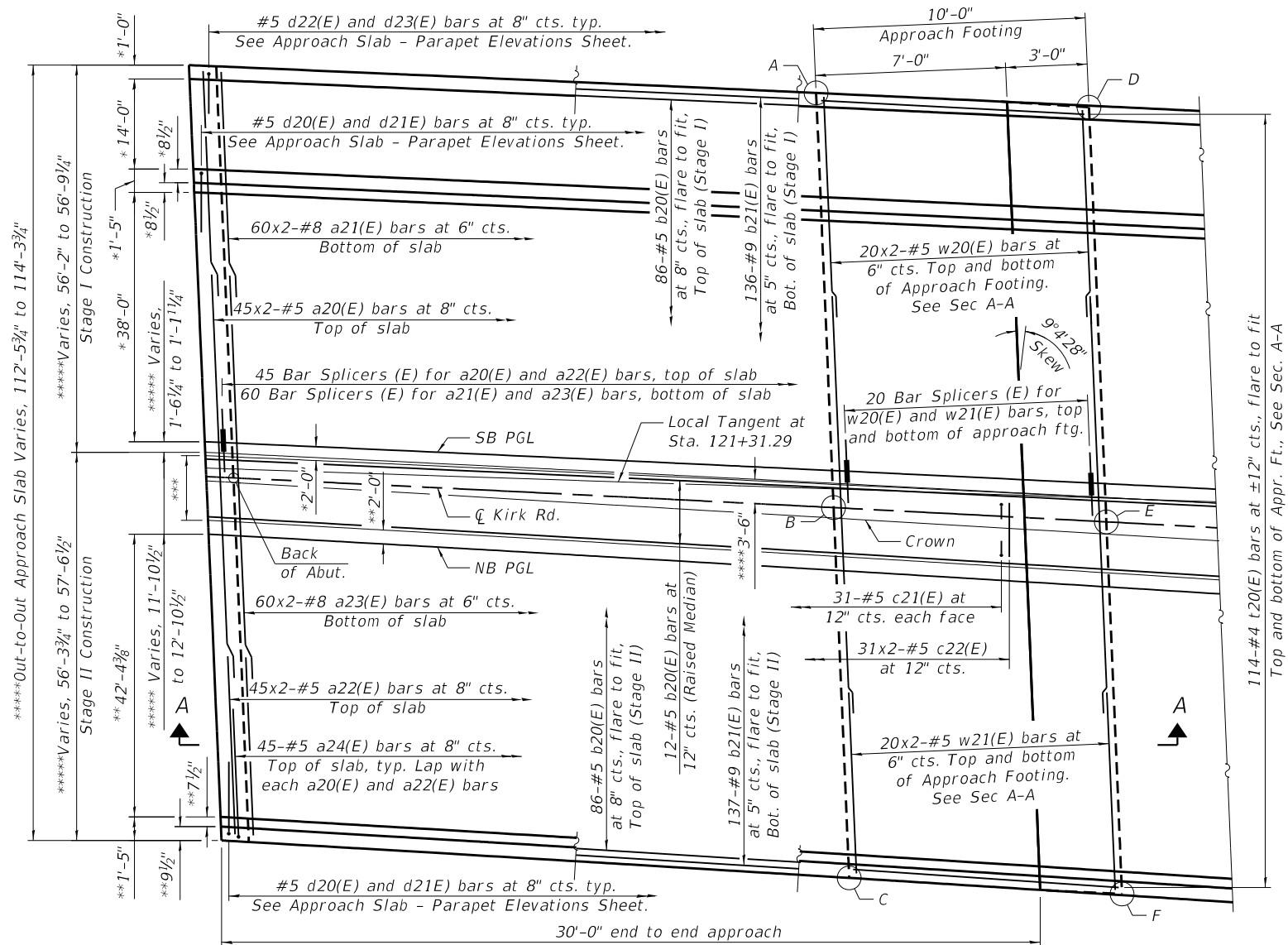
***** Full width along joint - backer rod not required.

***** Prior to Polymer Overlay

Note:
See sheet 23 of 39 for SECTION A-A.
See sheet 16 of 39 for conduit details.

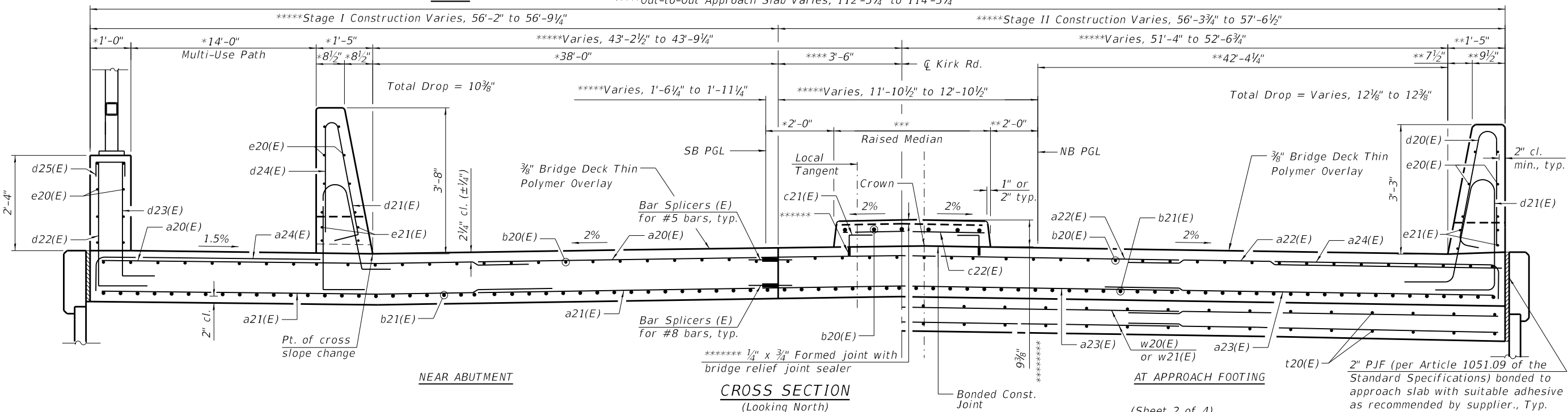


MODEL: North Approach Slab Plan
FILE NAME: W:\894-048 KDOT Kirk Road over UPRRCAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_21_North Approach Slab.dgn



PLAN

*****Out-to-Out Approach Slab Varies, 112'-5 $\frac{3}{4}$ " to 114'-3 $\frac{3}{4}$ "



CROSS SECTION
(Looking North)

(Sheet 2 of 4)

TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING

North Approach			
Point	Offset ($\angle$ Kirk Rd.)	Top	Bottom
A - SW	-59.59	787.37	786.54
B - S $\angle$	0.00	787.78	786.94
C - SE	53.13	786.59	785.75
D - NW	-59.51	787.20	786.36
E - N $\angle$	0.00	787.60	786.77
F - NE	53.31	786.41	785.57

MINIMUM BAR LAP

#5 bar = 2'-6"
#8 bar = 5'-2"

- * Measured perpendicular to SB PGL
- ** Measured perpendicular to NB PGL
- *** Raised Median Varies, 9'-5" to 10'-9 $\frac{3}{4}$ ", measured perpendicular to NB PGL
- **** Measured perpendicular to $\angle$ Kirk Rd.
- ***** Measured perpendicular to Local Tangent

***** $\frac{3}{4}$ " $\emptyset$ Galvanized expansion anchor or Ferrule Loop Slab Insert (Proof Load 6600 lb). The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.

***** Full width along joint - backer rod not required.

***** Prior to Polymer Overlay

Note:
See sheet 23 of 39 for SECTION A-A.
See sheet 16 of 39 for conduit details.



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - MJW	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - MJW	REVISED -

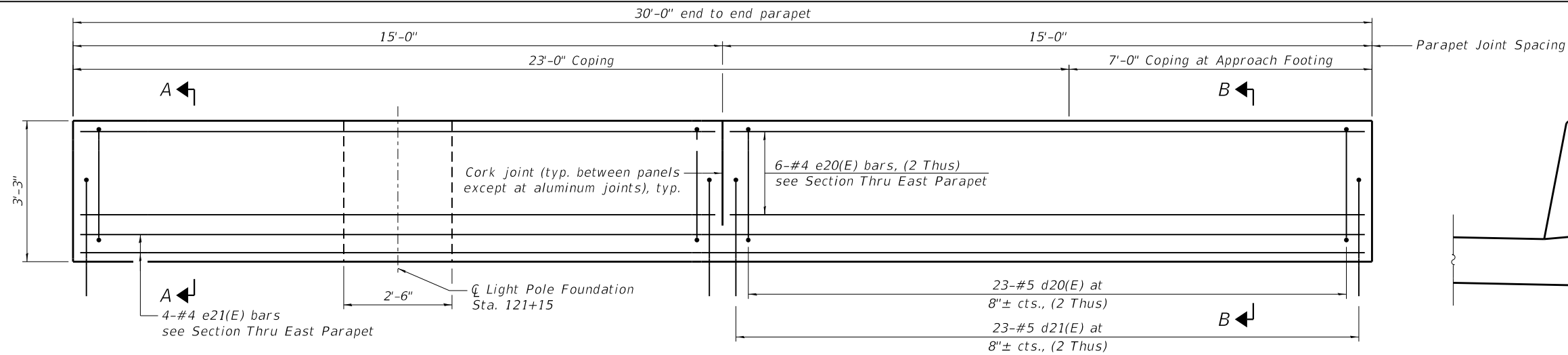
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH APPROACH SLAB PLAN
STRUCTURE NO. 045-3133

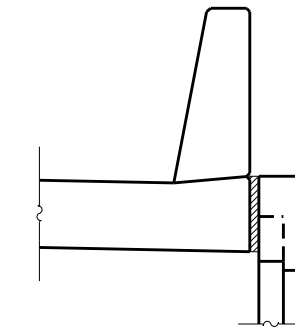
SHEET 21 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	325
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

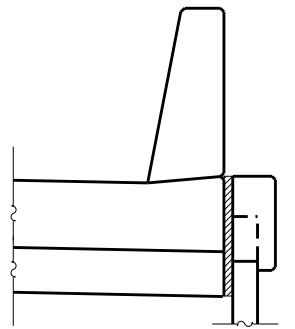
MODEL: Approach Slab - Parapet Elevations
FILE NAME: W:\894-048 KDOT Kfir Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_22_Approach Slab - Parapet Elevations.dgn



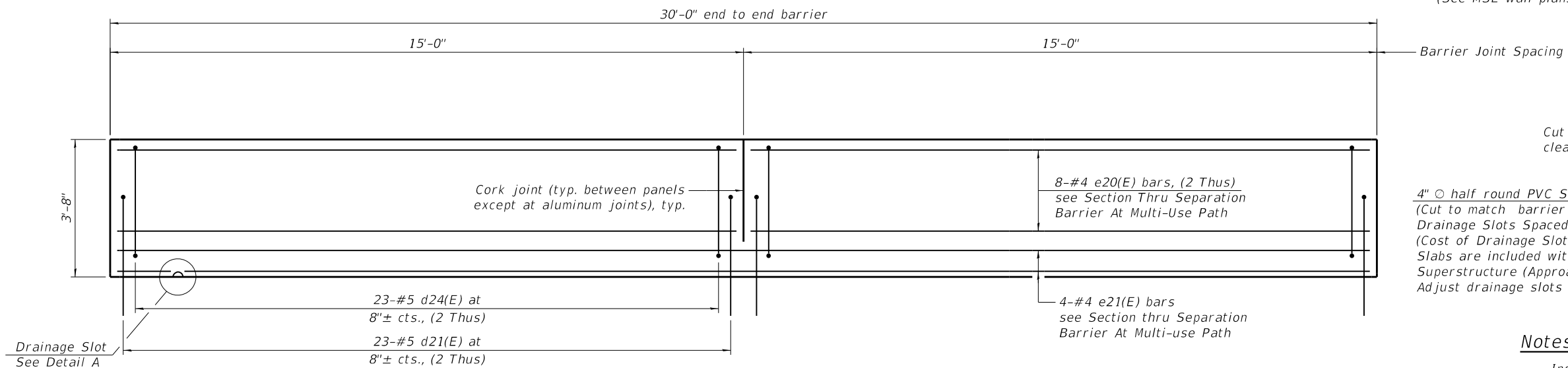
INSIDE ELEVATION OF EAST PARAPET
(South Approach Shown. North Approach Similar.)



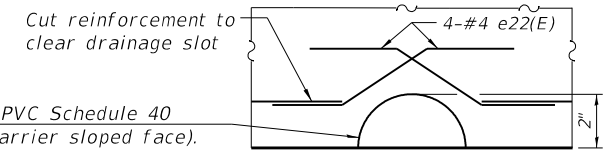
**SECTION A-A
COPING DETAIL**
(See MSE wall plans for coping)



**SECTION B-B
COPING DETAIL
AT APPROACH FOOTING**
(See MSE wall plans for coping)



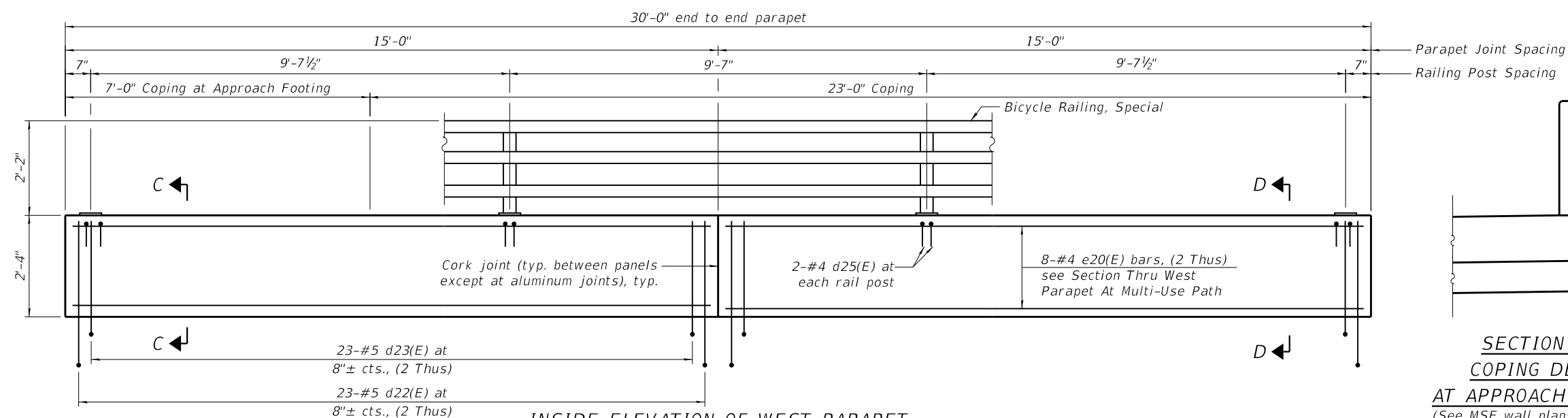
INSIDE ELEVATION OF SEPARATION BARRIER
(South Approach Shown. North Approach Similar.)



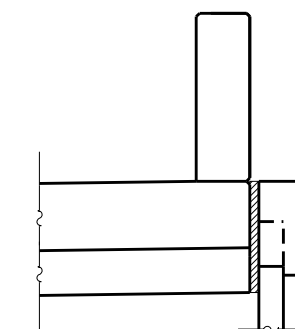
Detail A

Notes:

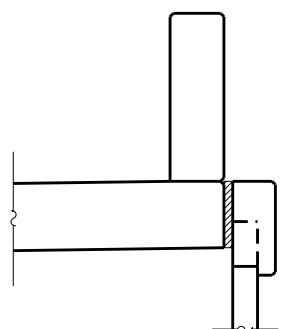
Inside elevation at parapets and barrier view is exaggerated vertically to show reinforcement.



INSIDE ELEVATION OF WEST PARAPET
(South Approach Shown. North Approach Similar.)



**SECTION C-C
COPING DETAIL
AT APPROACH FOOTING**
(See MSE wall plans for coping)



**SECTION D-D
COPING DETAIL**
(See MSE wall plans for coping)

(Sheet 3 of 4)



USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - MJW	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

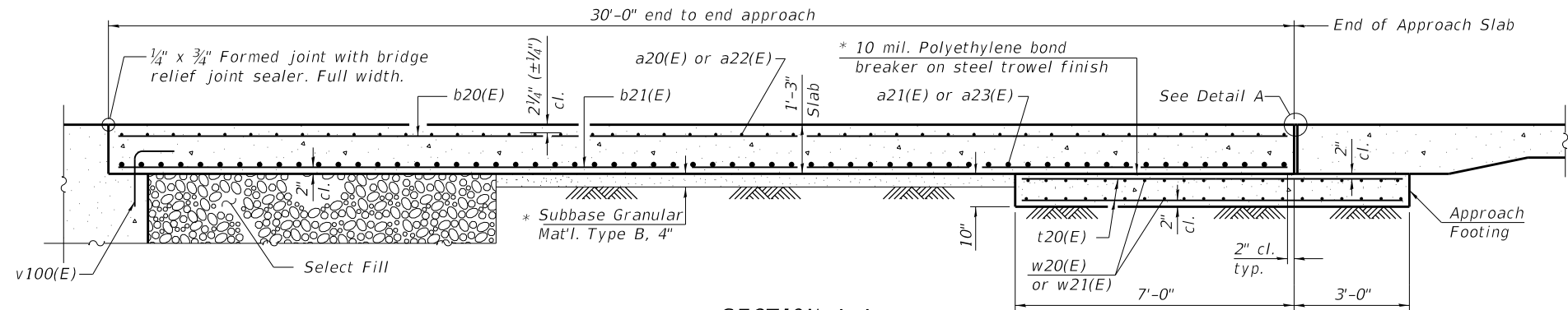
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**APPROACH SLAB - PARAPET ELEVATIONS
STRUCTURE NO. 045-3133**

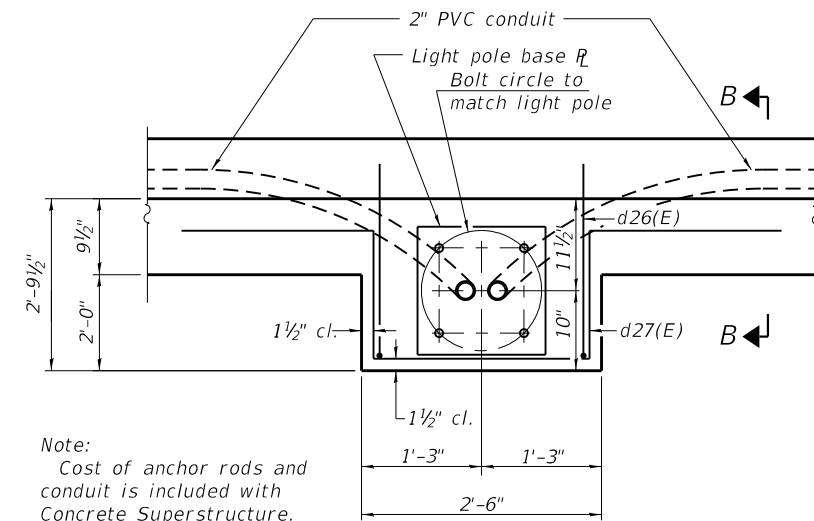
SHEET 22 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	326
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

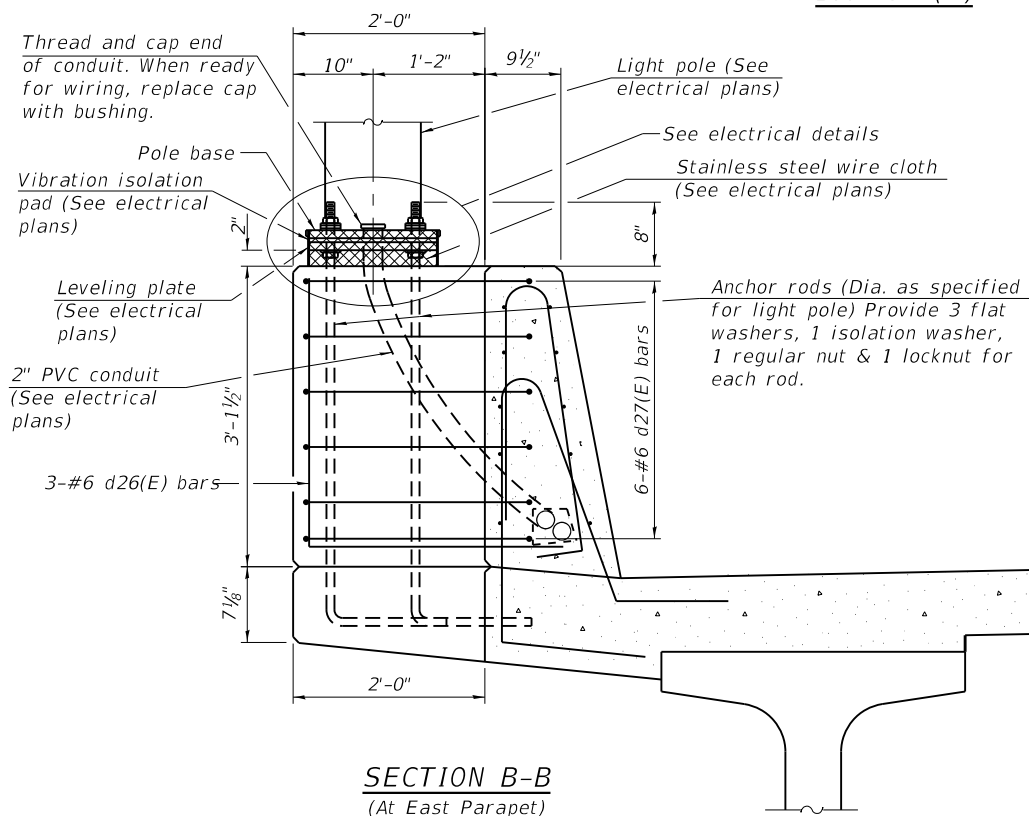
MODEL: Approach Slab Details
FILE NAME: W:\894-048 KDOT Kfr. Road over UPRRCAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_23_Approach Slab Details.dgn



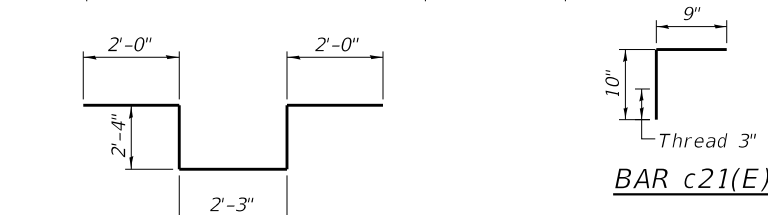
SECTION A-A



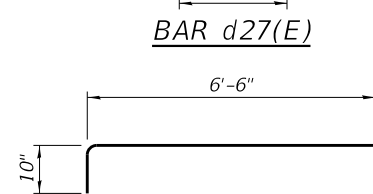
PLAN
(At East Parapet)



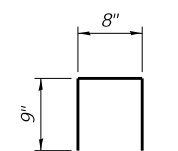
SECTION B-B
(At East Parapet)



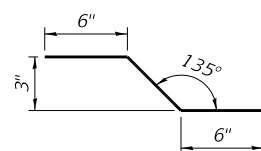
BAR c21(E)



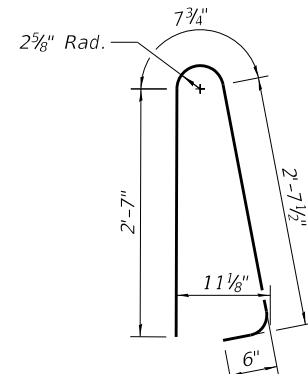
BAR a24(E)



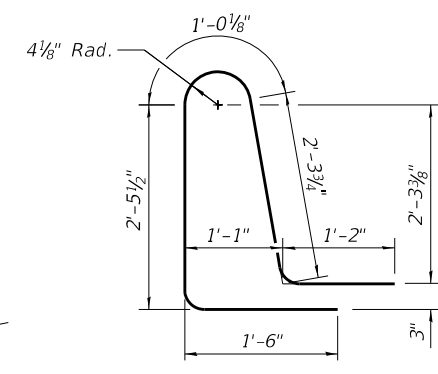
BAR d25(E)



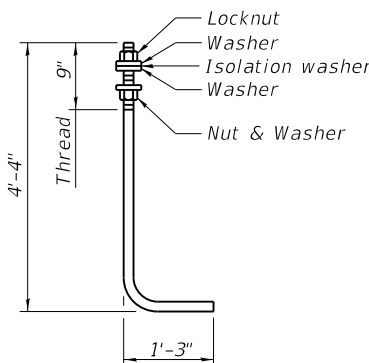
BAR e22(E)



BAR d20(E)

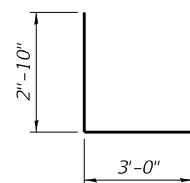


BAR d21(E)



ANCHOR ROD

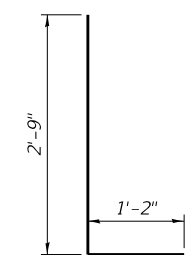
Diameter as specified for light poles.
(ASTM F 1554 Grade 105) Full length
hot dipped galvanized



BAR d26(E)



BAR d22(E)



BAR d23(E)

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapets, separation barrier, and median shall be paid for as Concrete Superstructure.

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.

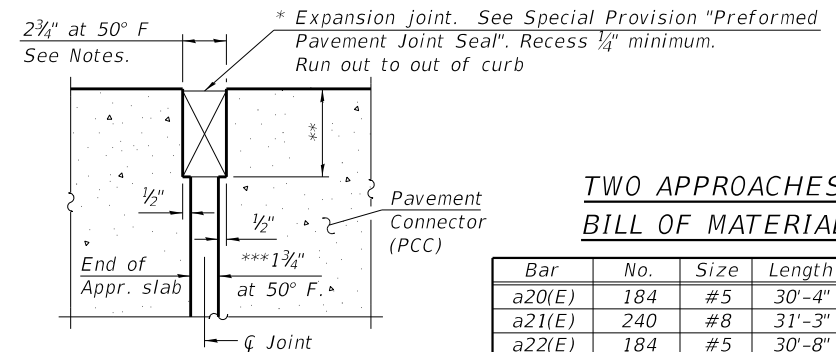
Cost of excavation for approach footing included with Concrete Structures.

For Select Fill and drainage treatment details, see sheet 2 of 39.

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations

*** The joint opening shall be extended full height of West Parapet, Separation Barrier, East Parapet and median.



DETAIL A

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20(E)	184	#5	30'-4"	
a21(E)	240	#8	31'-3"	
a22(E)	184	#5	30'-8"	
a23(E)	240	#8	31'-8"	
a24(E)	184	#5	7'-4"	
b20(E)	357	#5	29'-8"	
b21(E)	535	#9	29'-8"	
c20(E)	62	#5	4'-7"	
c21(E)	124	#5	1'-7"	
c22(E)	62	#5	6'-7"	
d20(E)	92	#5	6'-5"	
d21(E)	184	#5	8'-6"	
d22(E)	92	#5	4'-5"	
d23(E)	92	#5	3'-11"	
d24(E)	92	#4	7'-0"	
d25(E)	16	#4	2'-2"	
d26(E)	3	#6	5'-10"	
d27(E)	6	#6	10'-11"	
e20(E)	88	#4	14'-8"	
e21(E)	16	#4	29'-8"	
e22(E)	24	#4	1'-5"	
t20(E)	448	#4	9'-8"	
w20(E)	160	#5	30'-3"	
w21(E)	160	#5	30'-8"	
Reinforcement Bars, Epoxy Coated			Pound	137,260
Bar Splicers			Each	292
Concrete Superstructure (Approach Slab)			Cu. Yd.	311.7
Concrete Superstructure Concrete Structures			Cu. Yd.	36.6
Protective Coat			Sq. Yd.	69.3
Bridge Deck Thin Polymer Overlay 3/8"			Sq. Yd.	262
				565

(Sheet 4 of 4)



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - MJW	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - MJW	REVISED -

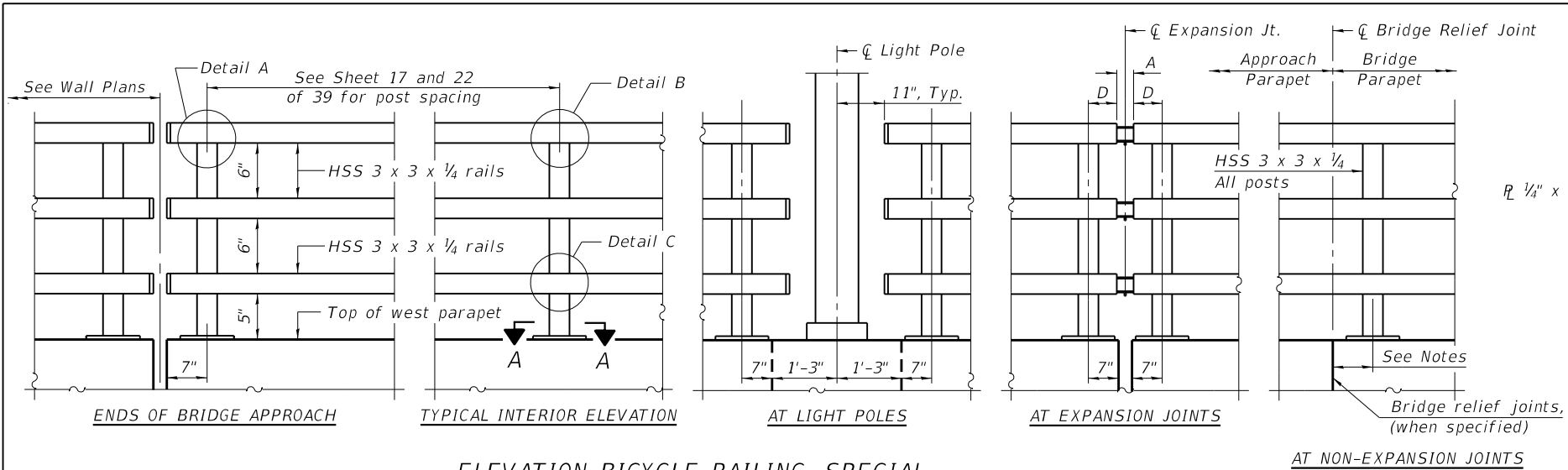
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROACH SLAB DETAILS
STRUCTURE NO. 045-3133

SHEET 23 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	327
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Parapet Railing Details
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_24_Railing Details.dgn



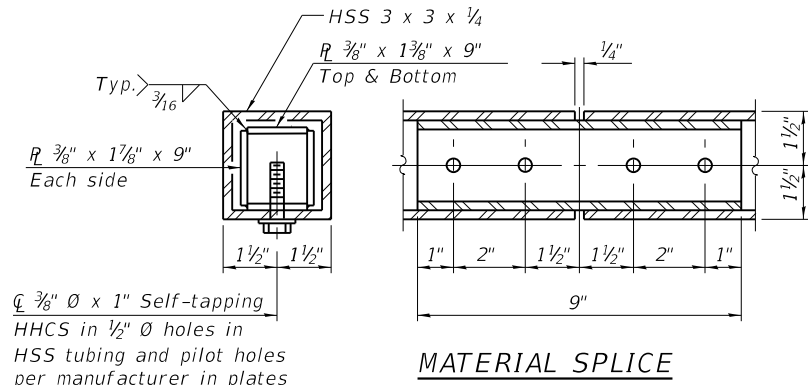
ELEVATION BICYCLE RAILING, SPECIAL
(Inside Face of Three Element Rail)

Notes:
Place reinforcement bars to miss anchor rod locations.
All HSS tubing used for the Bicycle Railing, Special shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
All HSS tubing used for the Bicycle Railing, Special shall be ASTM A500 grade C.
All base plates used for the Bicycle Railing, Special shall be AASHTO M270 grade 50.
All heavy hex nuts shall be according to ASTM A 563 grade DH.
All fully threaded anchor rods shall be ASTM F1554 grade 105.
The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.
Contractor shall offset posts to miss any aluminum sheet or cork joints for sufficient installation of the anchorage assembly.
Rail splice inserts may be built out of bent plates of the same thicknesses and outside geometry limits as the 4 plate rail splice inserts shown.
When the contract specifies a galvanized railing, all steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications. When the contract specifies a painted railing, all posts, rail, splices, anchor devices and plates of the railing shall be painted according to the paint system for railings as specified in the General Notes.

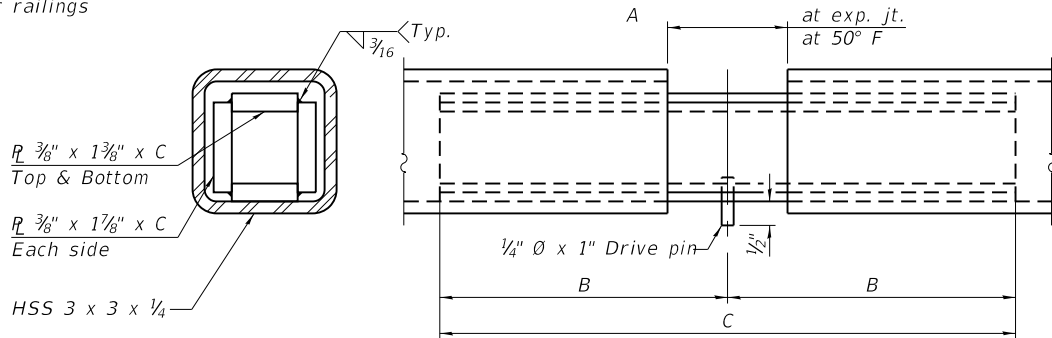
RAILING CRITERIA		
MASH 2016 Test Level	4	
Bicycle Railing, Special Weight (plf)	47	
Max Post Spacing	10'-0"	

TABLE OF DIMENSIONS					
Location	T	A	B	C	D
Over Strip Seal Jt.	≤4"	2½"	1'-2"	2'-4"	6½"
At Light Poles	8"	NA - Coordinate 8" Wide Access With Fabricator NA - Material Splices Per Fabricator			
At Bridge Relief Joints					

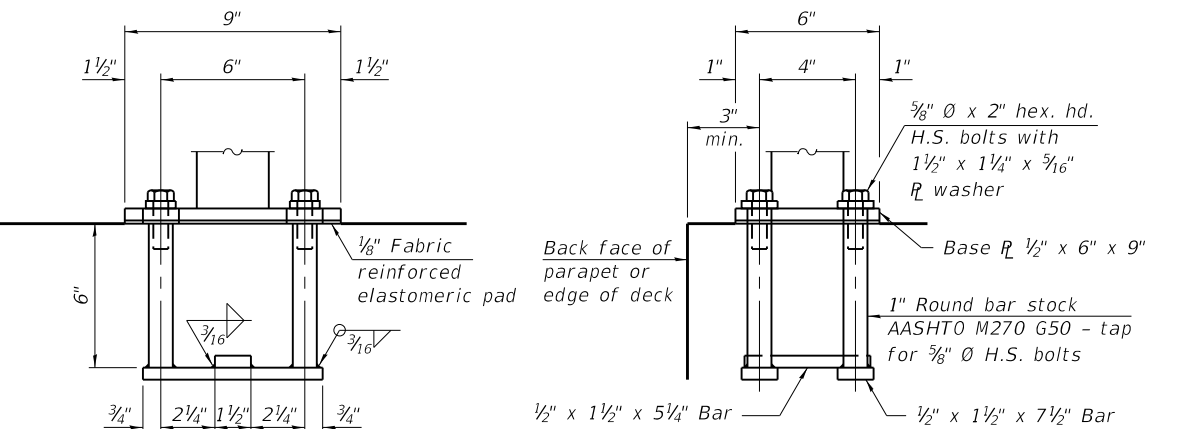
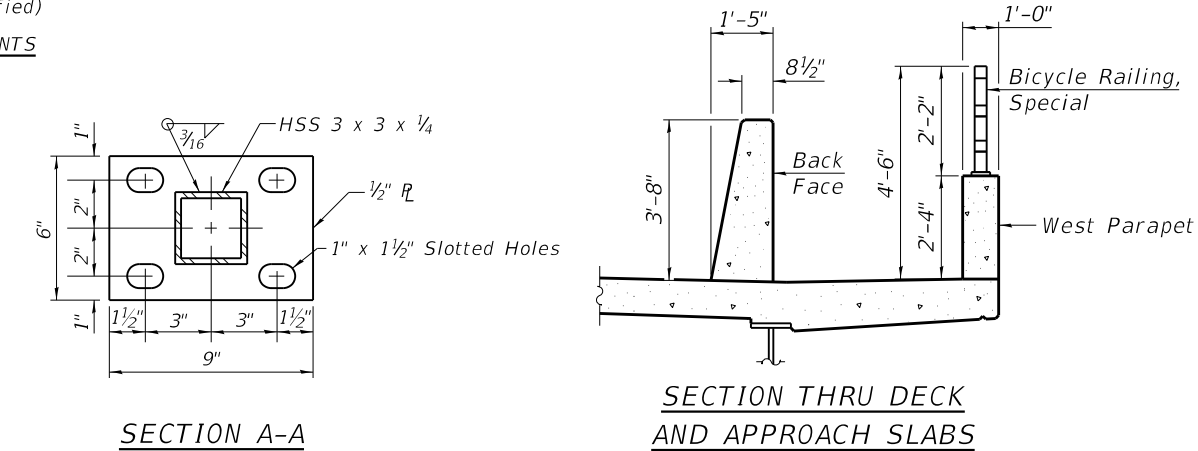
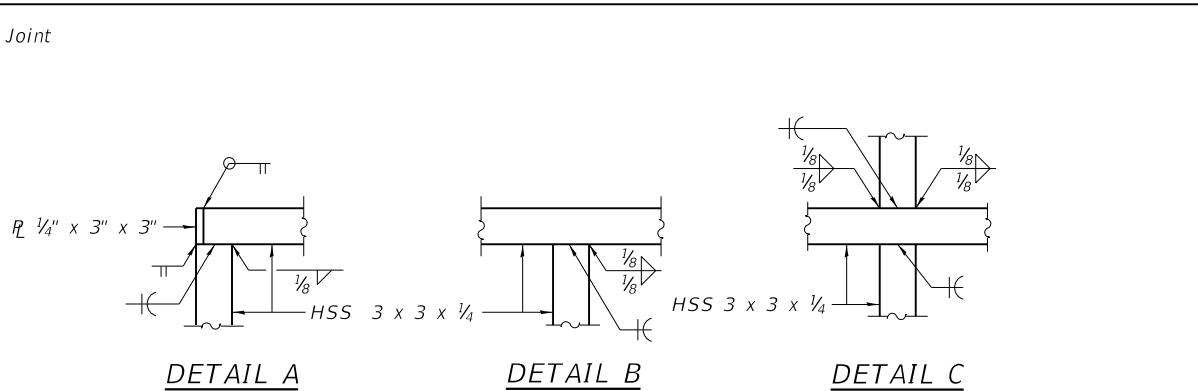
T= ; total movement based on total temperature range from -20°F to 120°F along centerline of roadway at expansion joint.
OR
8" hand-hold access for maintenance of light poles (when present; replace splice with 8" gap)



MATERIAL SPLICE



EXPANSION SPLICE



ANCHORAGE ASSEMBLY

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 3/8" Ø fully threaded anchor rods with the same plate washers as specified above and heavy hex lock nuts 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, Special	Foot	139



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - MJW	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - MJW	REVISED -

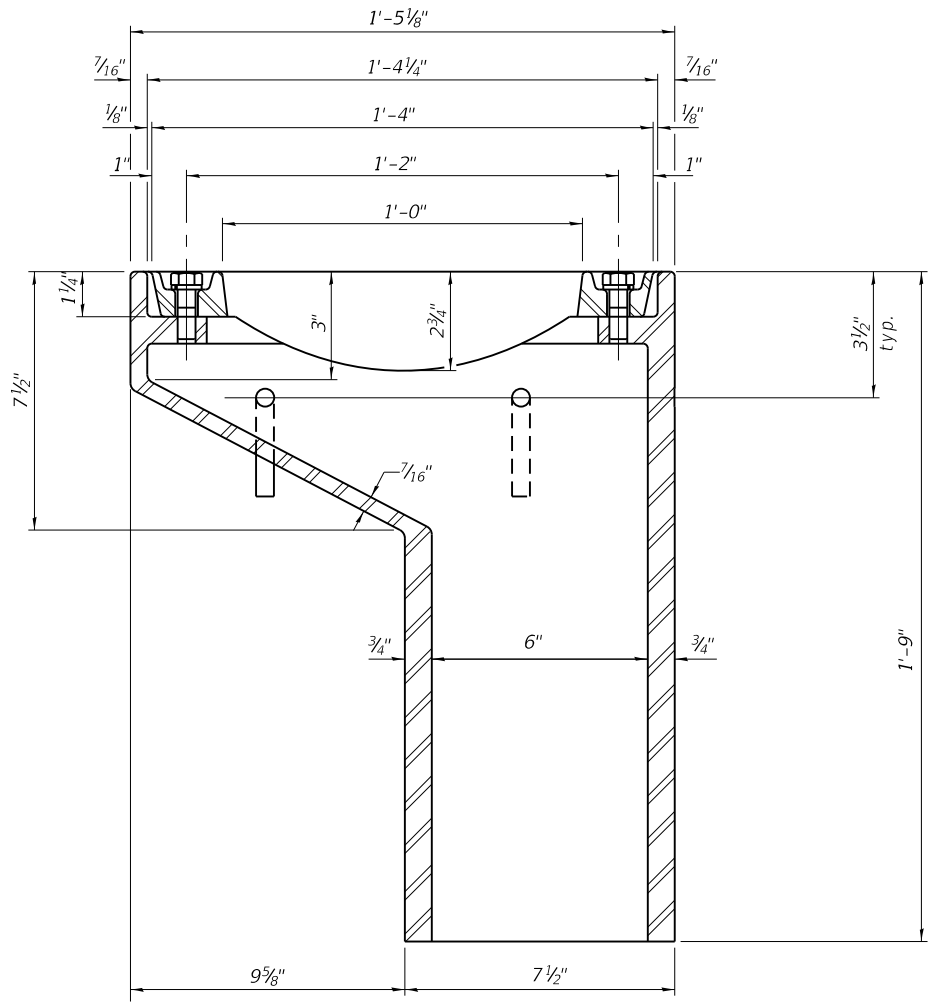
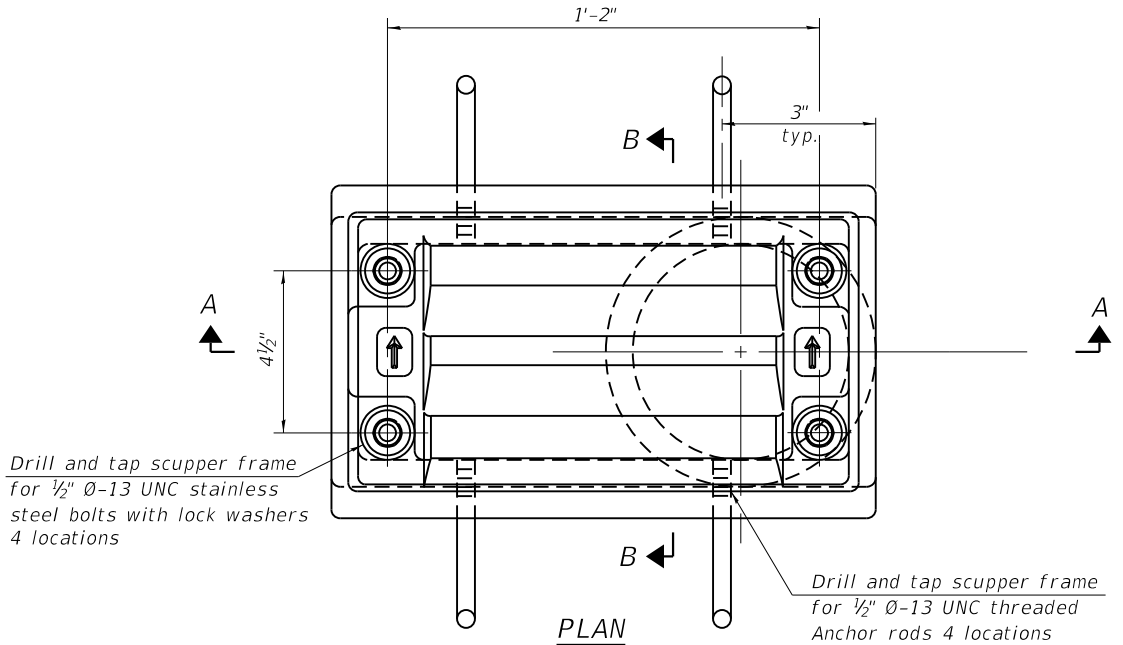
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RAILING DETAILS
STRUCTURE NO. 045-3133

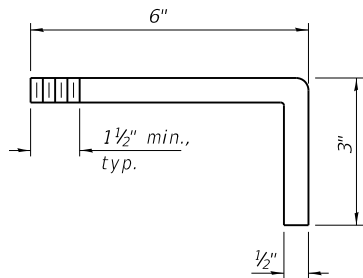
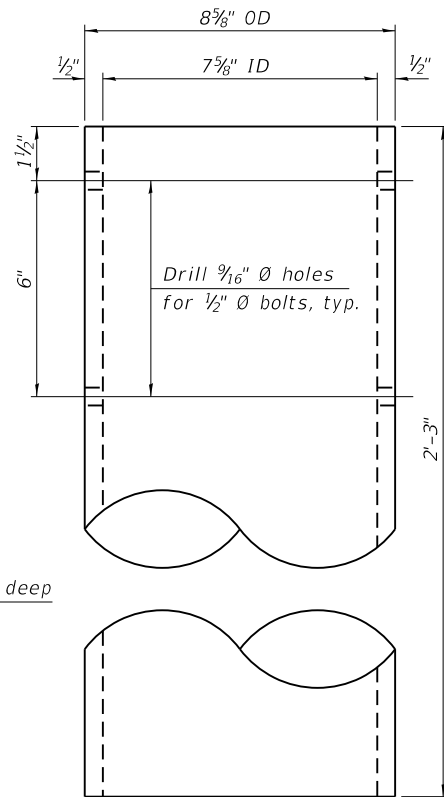
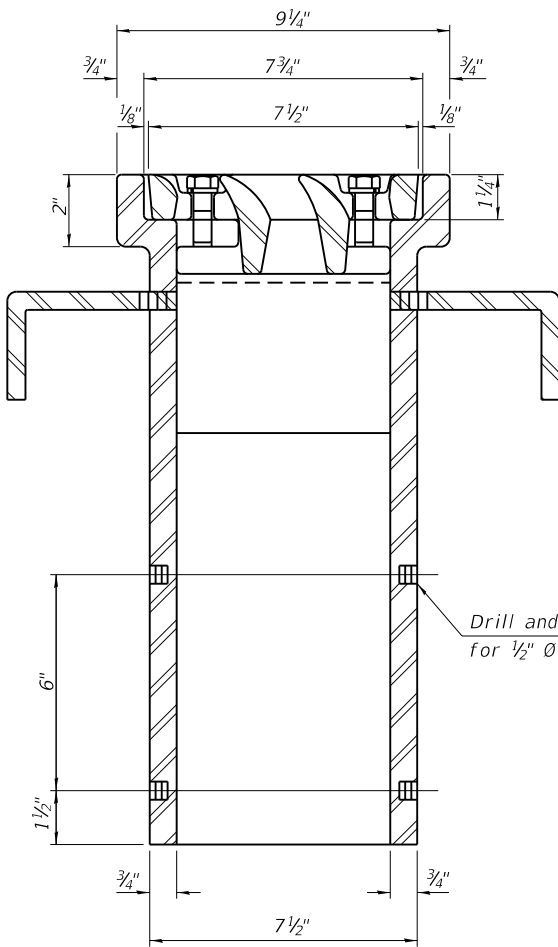
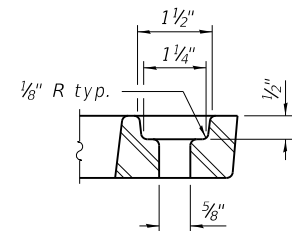
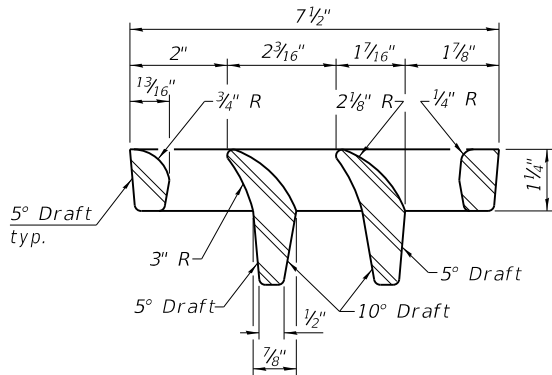
SHEET 24 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	328
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Drainage Scupper
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_25_Drainage Scupper.dgn



See sheet 16 of 39 for scupper location relative to separation barrier.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2



USER NAME =	DESIGNED - KN	REVISED -
CHECKED - MJW	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

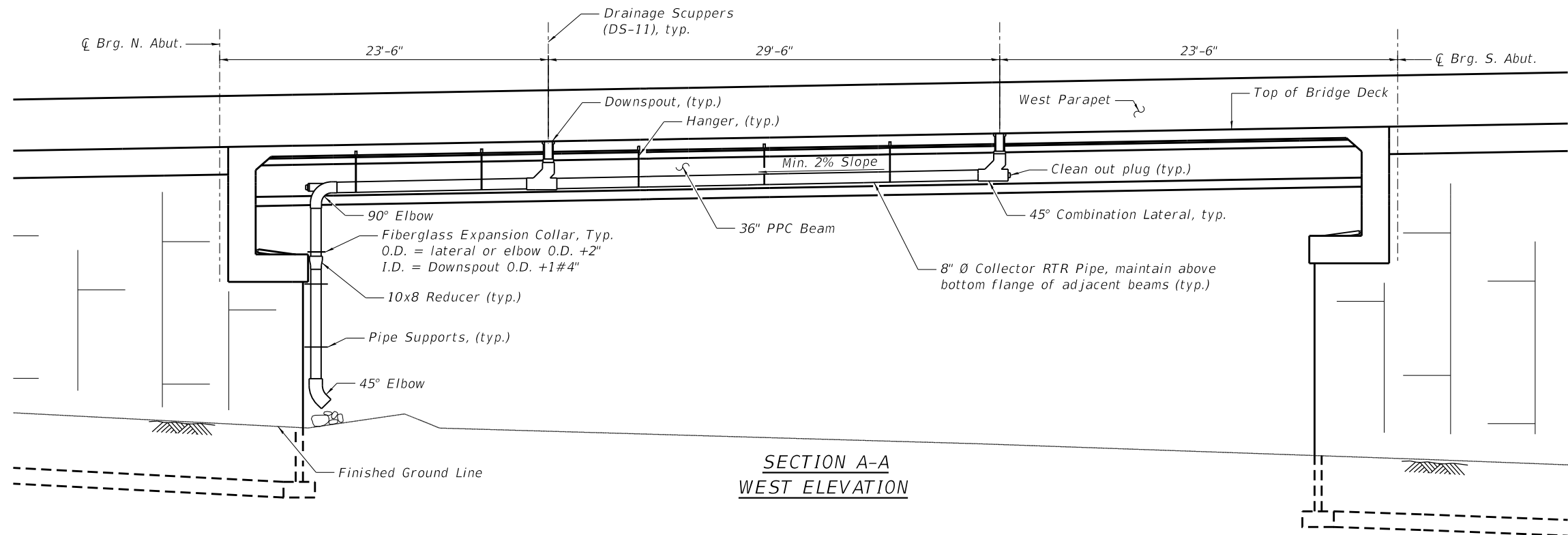
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11
STRUCTURE NO. 045-3133

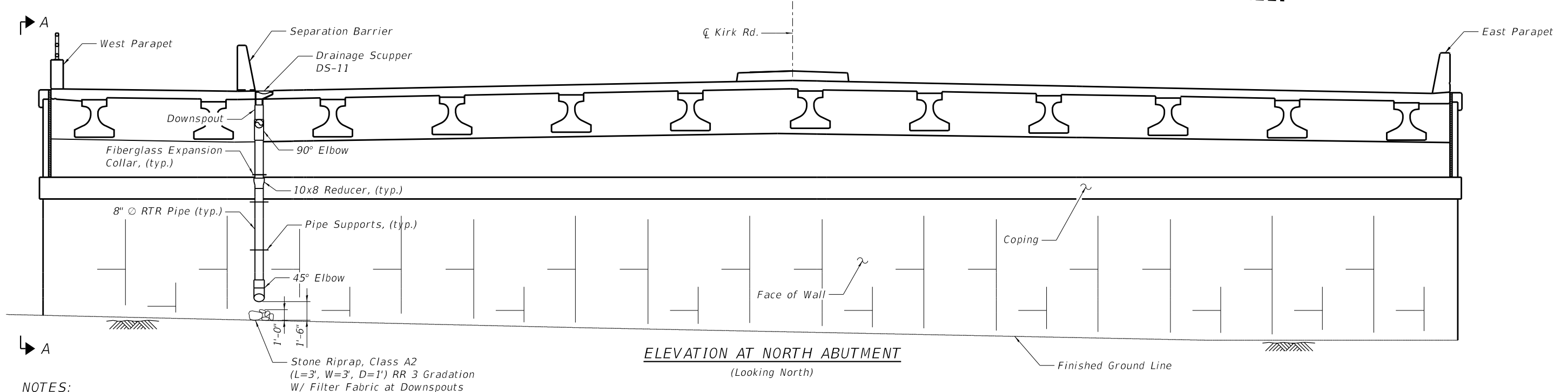
SHEET 25 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	329
CONTRACT NO. 61M13				
ILLINOIS		FED. AID PROJECT		

MODEL: Closed Drainage System
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_26_Closed Drainage System.dgn



SECTION A-A
WEST ELEVATION



ELEVATION AT NORTH ABUTMENT
(Looking North)

NOTES:

Contractor shall furnish and install a bridge drainage system as shown and noted on the plans and in accordance with Section 523 of the Standard Specifications. Work includes all piping, fittings, support brackets, hangers, inserts and bolts.

The Contractor shall submit shop drawings showing details of the drainage system to the Engineer for approval before any fabrication is begun. Cost included in Drainage System For Structures.

Downspouts shall extend a minimum of 1" into fittings.

Scuppers and Drainage System shall be located clear of all cross frames. The costs of custom fittings required or the collector pipes to clear cross frames are included in the Drainage System item.

Contractor shall design all pipe supports. Runs of pipe shall be supported at spacings not exceeding those recommended by the manufacturer of the pipe. Supports that have point contact or narrow supporting areas shall be avoided. Standard slings, clamps, clevis hangers and shoe supports designed for use with steel pipe may be used. Minimum strap width for hangers and brackets shall be 1 1/2 inches. Straps shall have 120 degrees of contact with the pipe. Pipes supported on less than 120 degrees of contact shall have a split fiberglass pipe protective sleeve bonded in place with adhesive.

All pipe supports and associated hardware shall be hot dip galvanized according to AASHTO M 232 or AASHTO M 111. All reinforced fiberglass pipe, and fittings shall be handled and installed according to guidelines and procedures recommended by the manufacturer or supplier of the material. Color of pipe and fittings shall be light grey to match concrete beams.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage System For Structures	L Sum	0.25



USER NAME	=	DESIGNED - KN	REVISED -
		CHECKED - MJW	REVISED -
PLOT SCALE	=	DRAWN - KN	REVISED -
PLOT DATE	=	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLOSED DRAINAGE SYSTEM
STRUCTURE NO. 045-3133

SHEET 26 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	330
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.

$M_L + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

OCF: Obtuse Correction Factor computed according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.

R_{DC1} : Un-factored reaction due to non-composite dead load (kip).

R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).

R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).

R_L : Un-factored live load reaction (kip).

R_{IM} : Un-factored dynamic load allowance (impact) (kip).

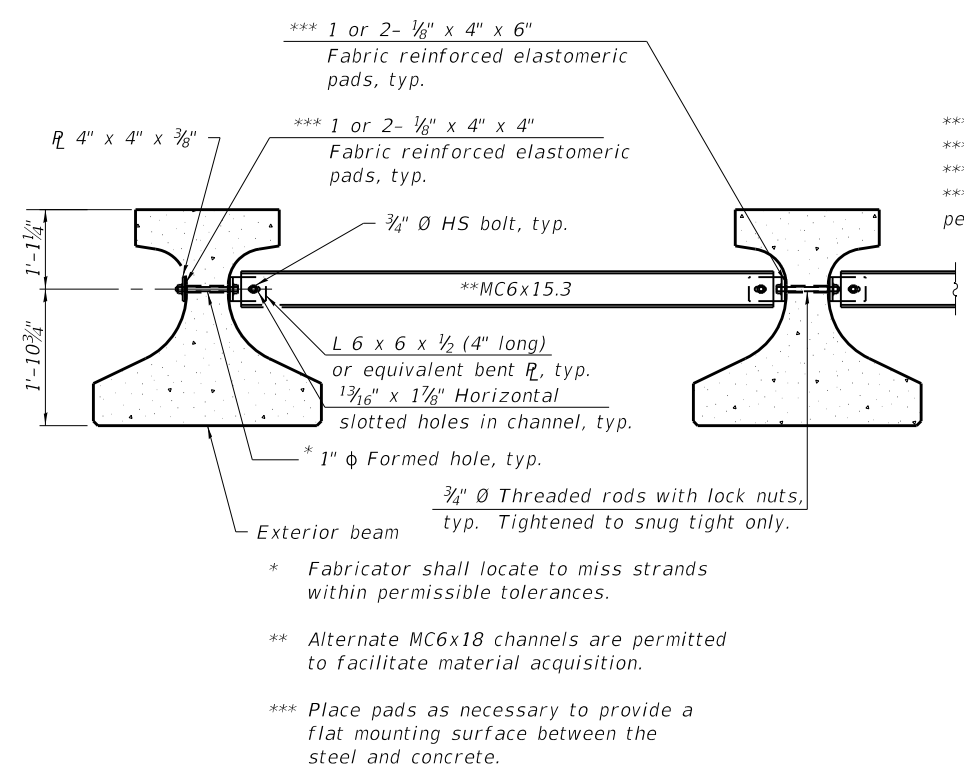
Impact): Total factored reaction including dynamic load allowance (impact) (kip).

Impact): Total factored reaction not including dynamic load allowance (impact) (kip).

BEAM MOMENT TABLE			
		0.5 Sp.	
		Interior IL36-2438	
I	(in ⁴)	100,433	
I'	(in ⁴)	329,002	
S_b	(in ³)	6,832	
S_b'	(in ³)	12,226	
S_t	(in ³)	4,715	
S_t'	(in ³)	36,194	
$DC1$	(k/')	1.77	
M_{DC1}	('k)	1,297	
$DC2$	(k/')	0.23	
M_{DC2}	('k)	170	
DW	(k/')	0.35	
M_{DW}	('k)	256	
$LLDF$		0.771	
**	$M_L + IM$	('k)	1,551

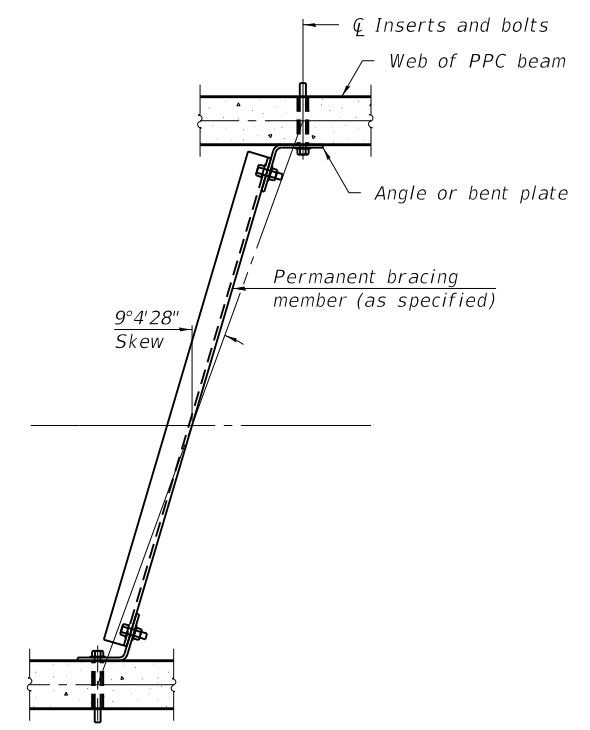
BEAM REACTION TABLE	
	Abutments
	Interior IL36-2438
LLDF	0.933
OCF	1.032
R_{DC1} (k)	67.8
R_{DC2} (k)	8.9
R_{DW} (k)	13.4
***** $R_L + IM$ (k)	107.9
***** R_{Total} (Strength I)(Impact) (k)	304.6
***** R_{Total} (Strength I)(No Impact) (k)	269.6

Load allowance accounts for HL-93 loading and
pedestrian loading distributed evenly to all beams.

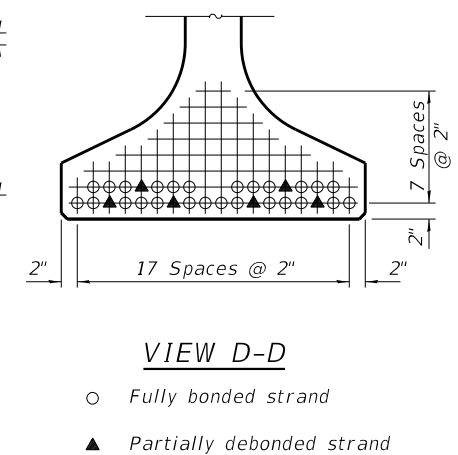
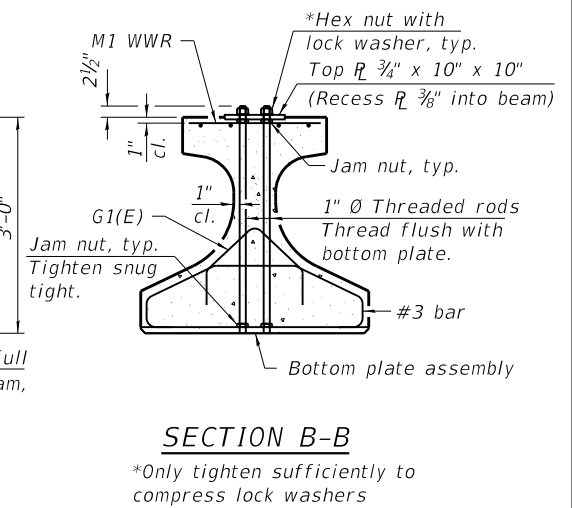


Notes:

- All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
- Two hardened washers are required for each set of oversized holes.
- All holes shall be $1\frac{1}{16}$ " Ø unless otherwise noted.
- $\frac{3}{16}$ " x 3" x 3" plate washers are required over all slotted holes.
- All bolts, threaded rods, and hardware shall be galvanized according to AASHTO M232.
- Threaded rods shall be ASTM F 1554 Grade 55.
- Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
- Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Beams.
- Bracing is not required between beams across the stage construction line.
- Beams 1-10 are parallel to the Local Tangent.



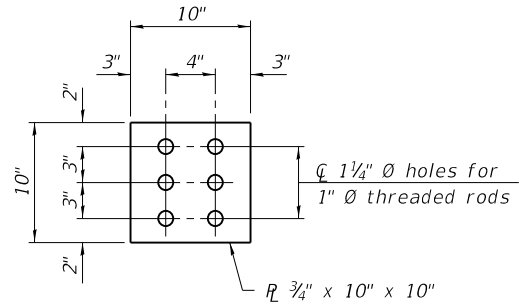
PLAN



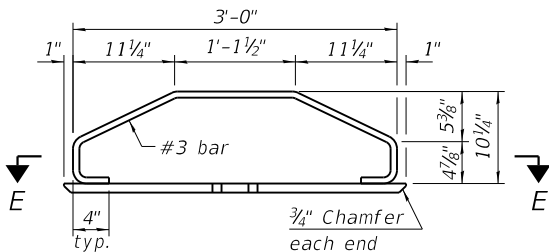
<i>Beam</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
<i>Beams 1-10</i>	<i>77'-9½"</i>	<i>2¾"</i>	<i>4¾"</i>	<i>31'-6"</i>	<i>7'-4¾"</i>
<i>Beam 11</i>	<i>78'-1¼"</i>	<i>4¾"</i>	<i>6¾"</i>	<i>31'-6"</i>	<i>7'-6¾"</i>
<i>Beam 12</i>	<i>78'-5⅝"</i>	<i>6⅞"</i>	<i>8⅞"</i>	<i>31'-6"</i>	<i>7'-8⅞"</i>

Note:
See sheet 29 of 39 for additional
details and Bill of Material.

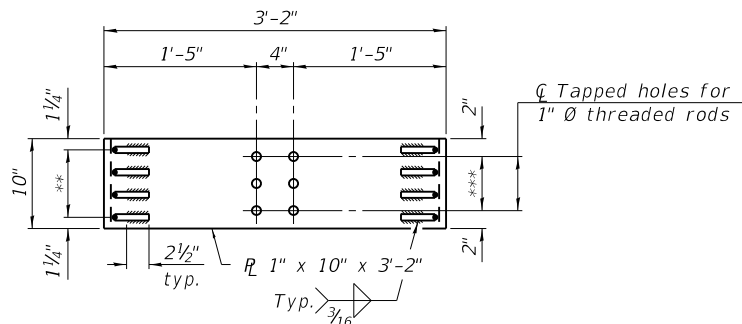
MODEL: IL36-2438 Beam Details
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_29_IL36-2438 Beam Details.dgn



PLAN - TOP PLATE



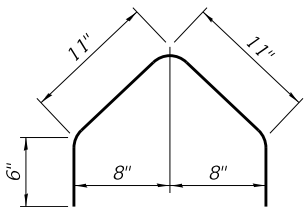
ELEVATION - BOTTOM
PLATE ASSEMBLY



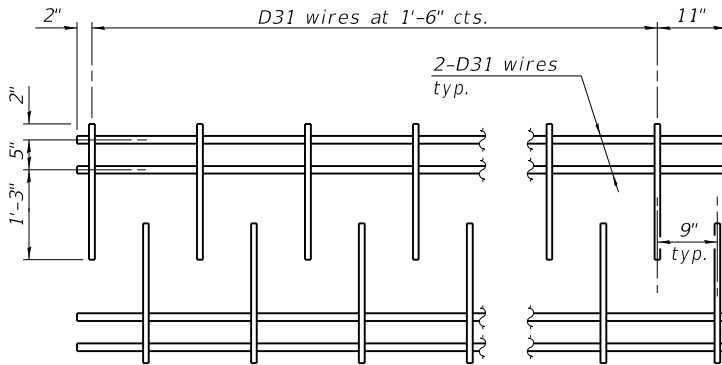
SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"

*** 2 Spaces at 3" = 6"



BAR G1(E)



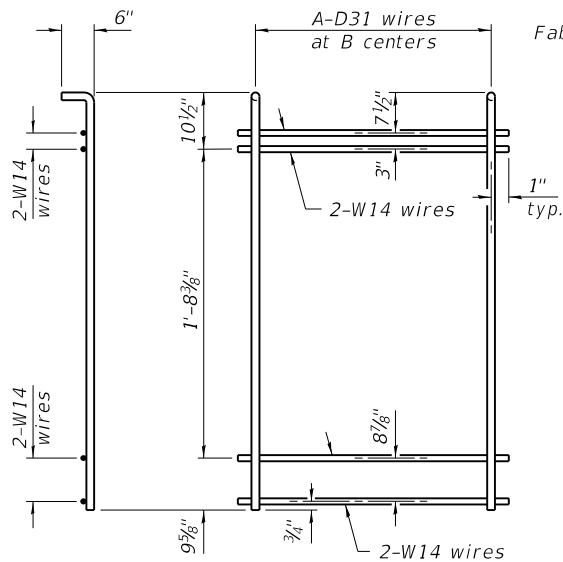
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

TABLE OF DIMENSIONS

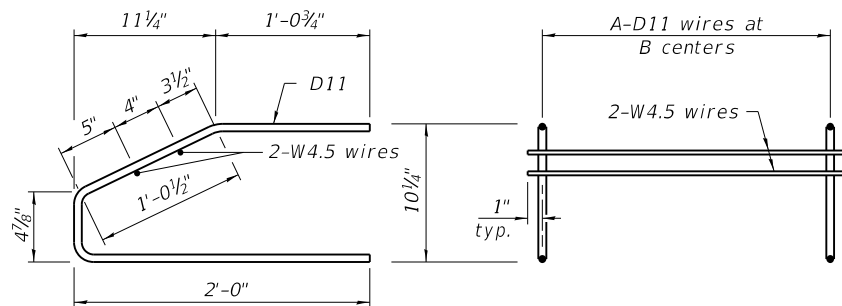
(The WWR designs assume grade 60. If necessary, this permits the fabricator to directly substitute grade 60 rebar as detailed in the Manual for Fabrication of Precast Prestressed Concrete Products.)

WWR	A	B
M2	9	3"
M3	7	6"
M4	22	1'-6"
M5	81	3"
M6	23	6"
M7	7	1'-0"



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

NOTES

Inserts for 3/4" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 6500 psi.

A minimum 2 1/2" Ø lifting pin shall be used to engage the lifting loops during handling.

Bend the extended strands inward on the fascia beams to maintain 1 1/2" clearance inside the pier diaphragm.

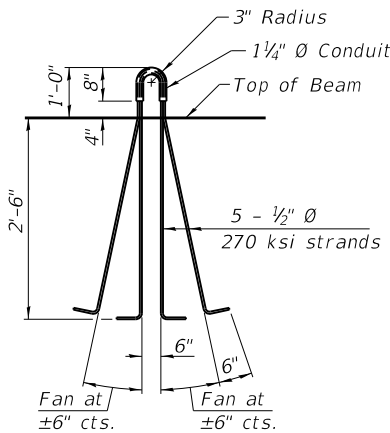
The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111.

The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating or ASTM A1060, Table 3 galvanized coating.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL36N	Ft.	935



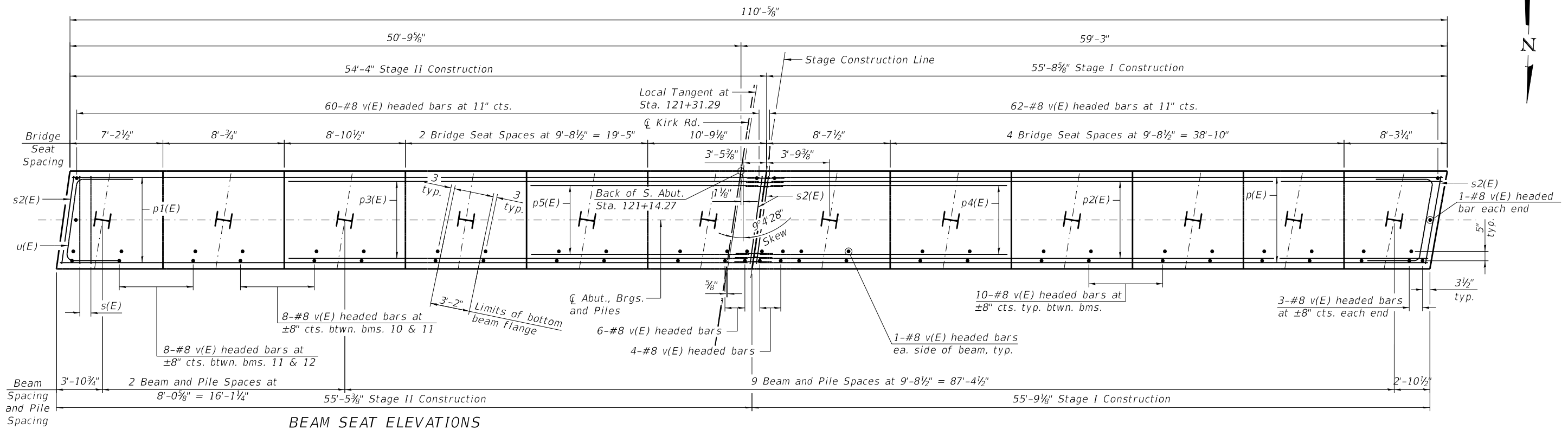
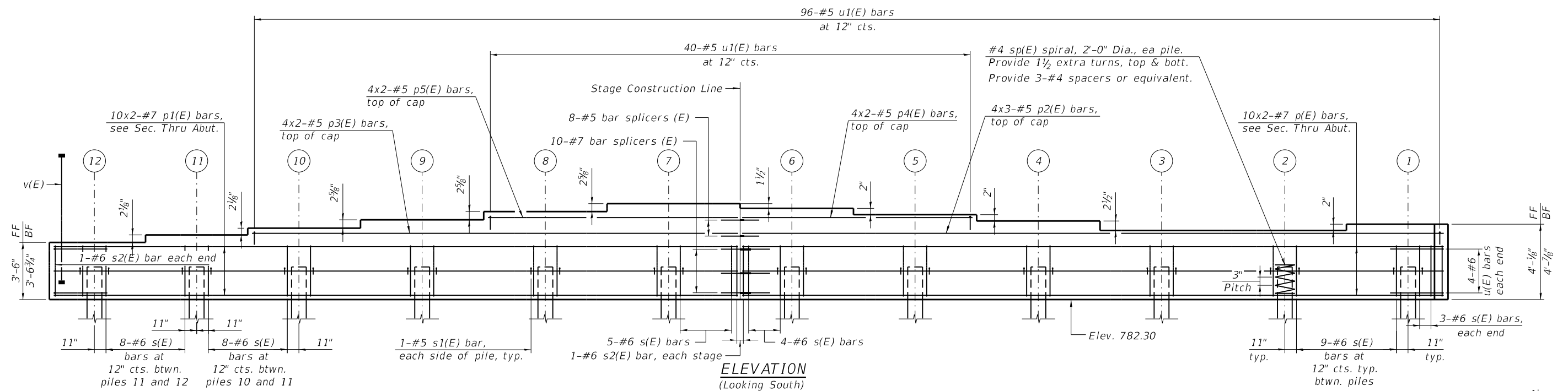
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CHECKED - MJW	REVIS	ED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL36-2438 BEAM DETAILS
STRUCTURE NO. 045-3133

SHEET 29 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	333
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				



S. ABUT. PILE DATA

Type: Steel HP14x89 w/ pile shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 388 kips
Est. Length: 92 ft
No. Production Piles: 11
No. Test Piles: 1

Beam	S. Abut. Elev.
1	786.34
2	786.21
3	786.21
4	786.38
5	786.55
6	786.72
7	786.84
8	786.62
9	786.41
10	786.19
11	786.01
12	785.83

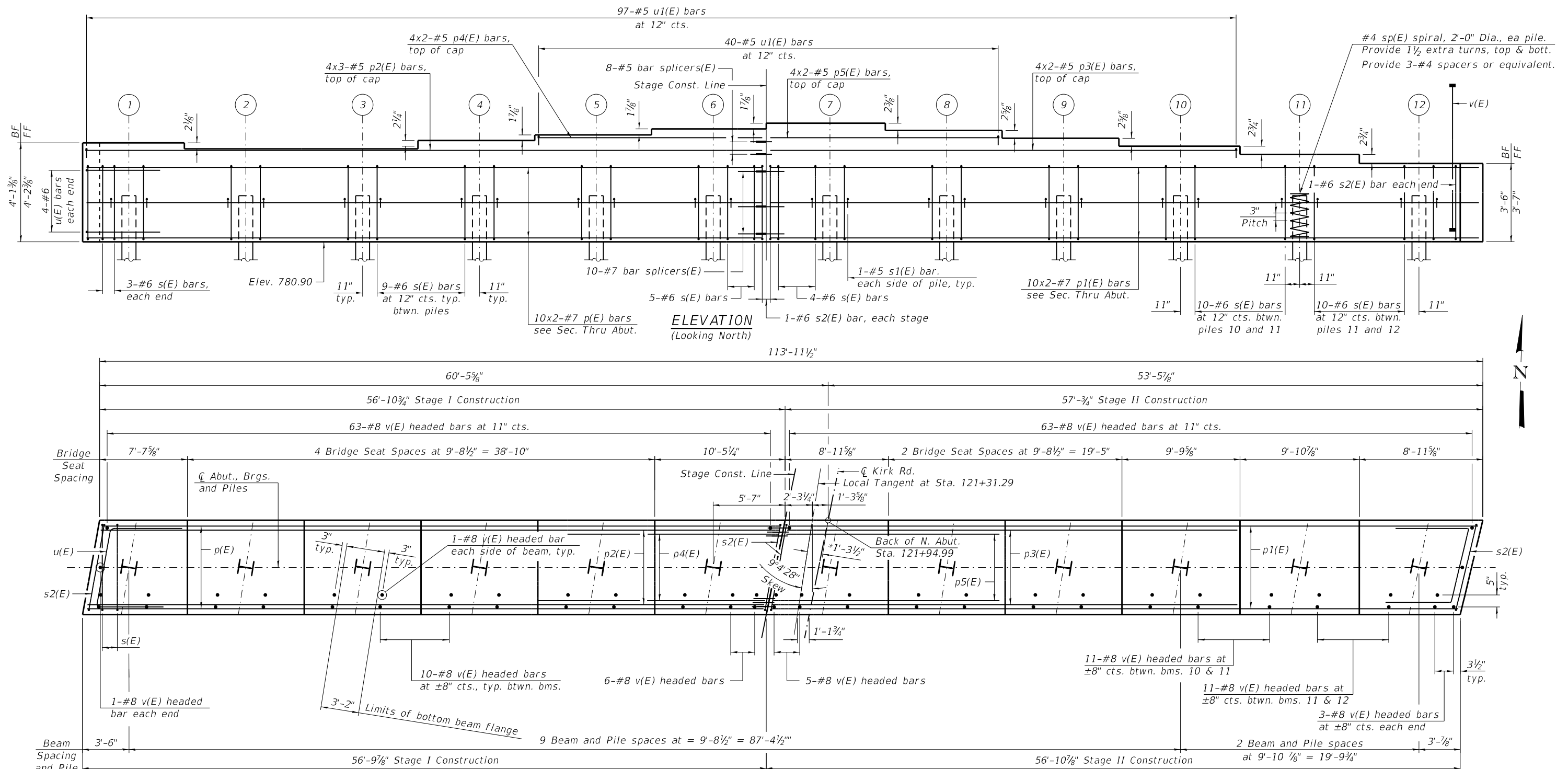
PLAN

MINIMUM BAR LAP

#5 bar = 2'-9"
#7 bar = 4'-11"

#7 bar = 4'-11"

MODEL: North Abutment
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_North Abutment.dgn



BEAM SEAT ELEVATIONS

Beam	N. Abut. Elev.
1	785.06
2	784.91
3	784.91
4	785.07
5	785.23
6	785.39
7	785.54
8	785.35
9	785.13
10	784.90
11	784.67
12	784.45

N. ABUT. PILE DATA

Type: Steel HP14x89 w/ pile shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 388 kips
Est. Length: 92 ft
No. Production Piles: 11
No. Test Piles: 1

PLAN

* Measured perpendicular to Local Tangent

MINIMUM BAR LAP

#5 bar = 2'-9"
#7 bar = 4'-11"

NOTE

Bridge seat elevations are given at intersection of ϕ bearing and ϕ beams.



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - MJW	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - MJW	REVISED -

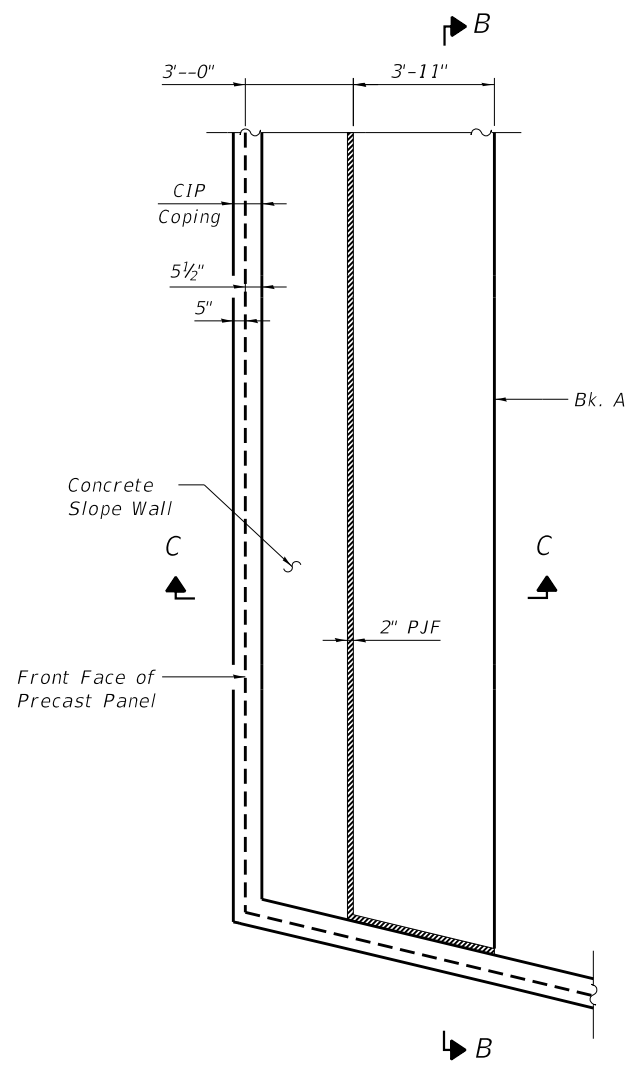
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 045-3133

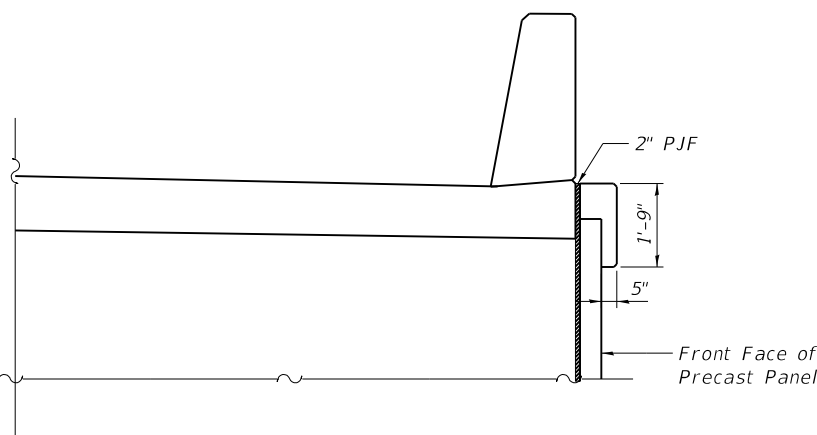
SHEET 31 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	335
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

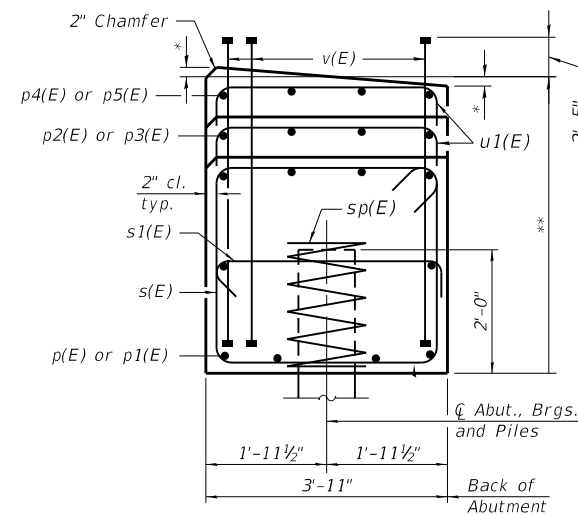
MODEL: Abutment Details
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRRCAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_32_Abutment Details.dgn



PLAN VIEW - ABUTMENT CORNER

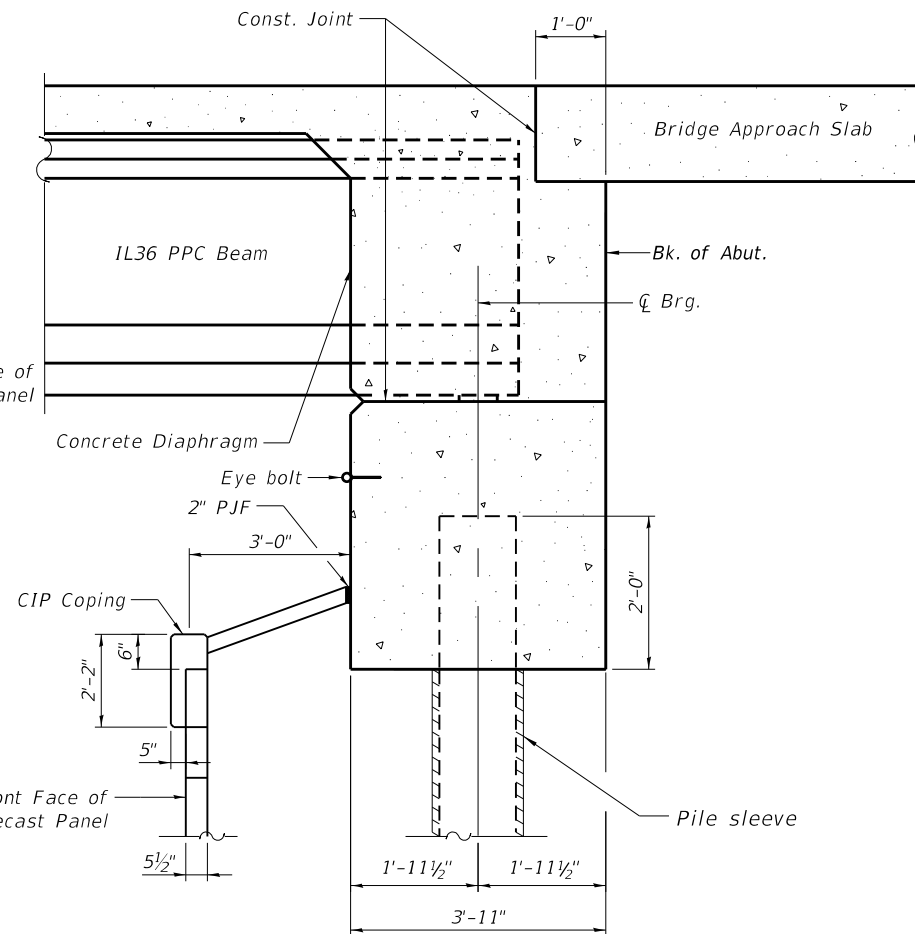


SECTION B-B
(See MSE wall plans for coping)



SEC. THRU ABUT.

* $\frac{3}{8}$ " at S. Abut.
 $\frac{1}{2}$ " at N. Abut.
** Varies from 3'-6 $\frac{3}{8}$ " to 4'-6 $\frac{1}{2}$ " at S. Abut.
Varies from 3'-6 $\frac{1}{2}$ " to 4'-7 $\frac{3}{8}$ " at N. Abut.



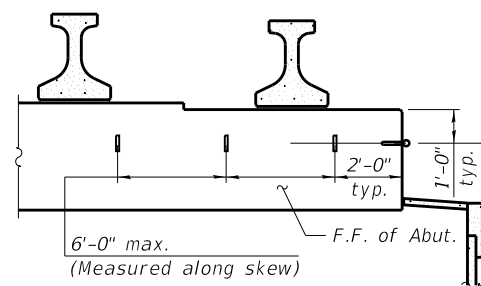
SECTION C-C

ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p(E)	40	#7	30'-10"	
p1(E)	40	#7	30'-11"	
p2(E)	24	#5	21'-4"	
p3(E)	16	#5	21'-3"	
p4(E)	16	#5	11'-9"	
p5(E)	16	#5	11'-11"	
s(E)	210	#6	14'-10"	
s1(E)	48	#5	4'-7"	
s2(E)	8	#6	15'-0"	
sp(E)	24	#4	2'-0"	WWM
u(E)	16	#6	12'-2"	
u1(E)	273	#5	9'-11"	
v(E)	531	#8	5'-7"	
Concrete Structures		Cu. Yd.	132.4	
Reinforcement Bars, Epoxy Coated		Pound	23,540	
Furnishing Steel Piles HP14x89		Foot	2,024	
Driving Piles		Foot	2,024	
Test Pile, Steel HP14x89		Each	2	
Bar Splicers		Each	36	
Pile Shoes		Each	24	

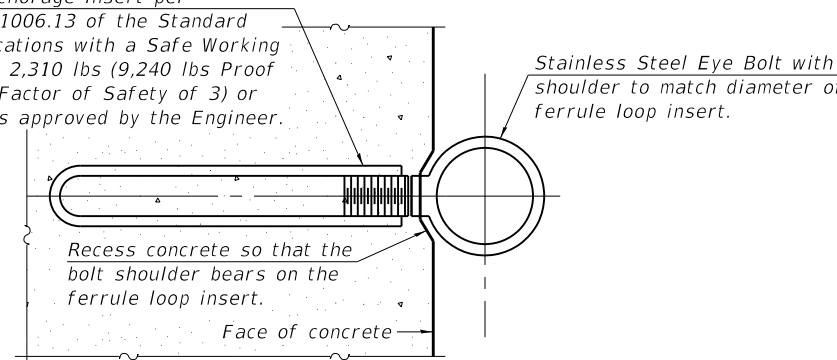
* Length is height of spiral.

Notes:
Pour steps monolithically with cap.
For details of piles see sheet 34 of 39.
Bar terminators, paid for separately.
See Total Bill of Material.

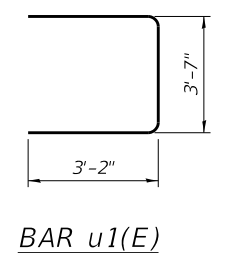
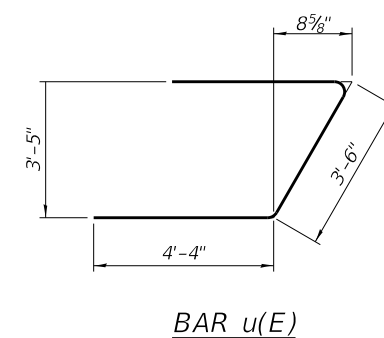
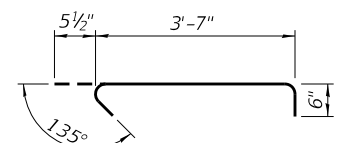
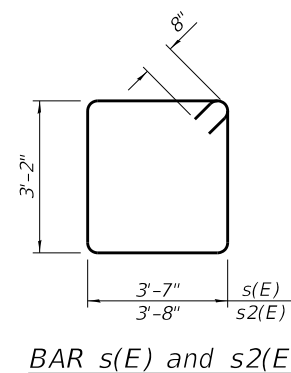
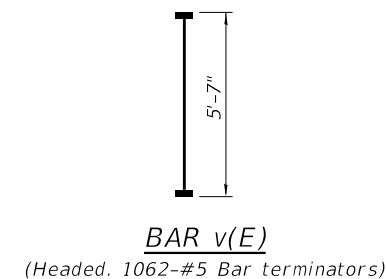


PARTIAL ELEVATION OF F.F. ABUTMENT
SHOWING EYE BOLT FALL PROTECTION OPTION

1" Ø anchorage insert per Article 1006.13 of the Standard Specifications with a Safe Working Load of 2,310 lbs (9,240 lbs Proof Load / Factor of Safety of 3) or other as approved by the Engineer.



EYE BOLT DETAIL
(Cost included with Concrete Structures)



USER NAME =	DESIGNED - KN	REVISED -
CHECKED - MJW	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

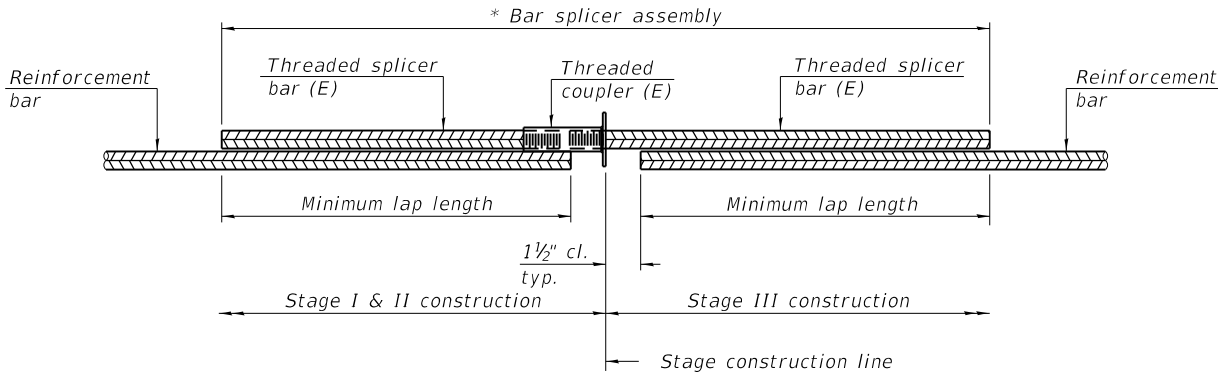
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT DETAILS
STRUCTURE NO. 045-3133

SHEET 32 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	336
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Bar Splicer Assembly Details
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\Reed Rd Bridge\12-00192-04-BR_Reed Rd Bridge_33_Bar Splicer Assembly Details.dgn



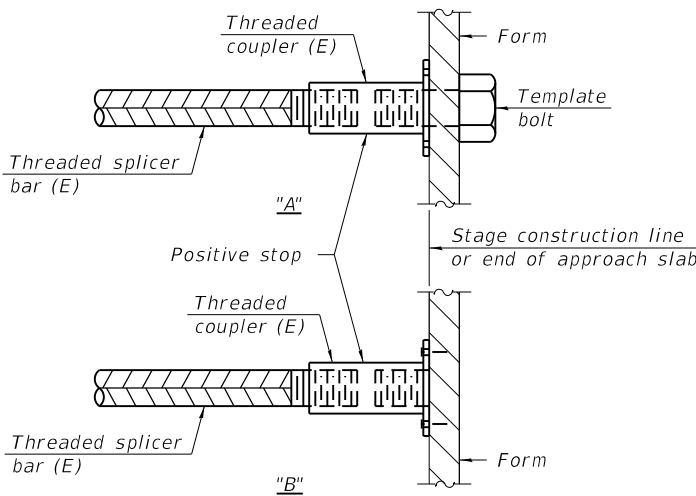
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

Threaded splicer bar length = min. lap length + 1 1/2" + 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
Deck Top	#5	385	3'-10"
Deck Bottom	#5	275	3'-10"
S. Diaphragm	#6	7	3'-6"
N. Diaphragm	#6	7	3'-6"
S. Appr. Top	#5	46	2'-6"
S. Appr. Bottom	#8	60	5'-2"
S. Appr. Footing	#5	40	2'-6"
N. Appr. Top	#5	46	2'-6"
N. Appr. Bottom	#8	60	5'-2"
N. Appr. Footing	#5	40	2'-6"
S. Abutment	#5	8	2'-9"
S. Abutment	#7	10	4'-11"
N. Abutment	#5	8	2'-9"
N. Abutment	#7	10	4'-11"



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.

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.



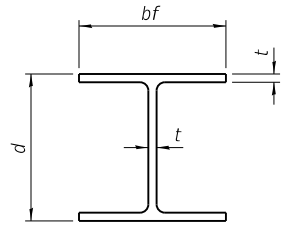
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	CHECKED - MJW	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 045-3133

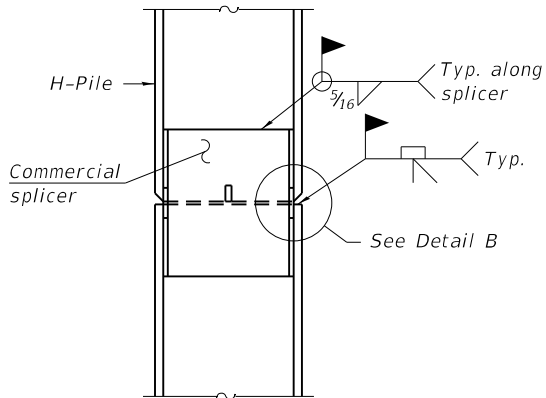
SHEET 33 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	337
CONTRACT NO. 61M13				
		ILLINOIS	FED. AID PROJECT	

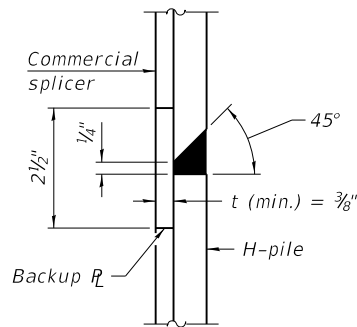


STEEL PILE TABLE

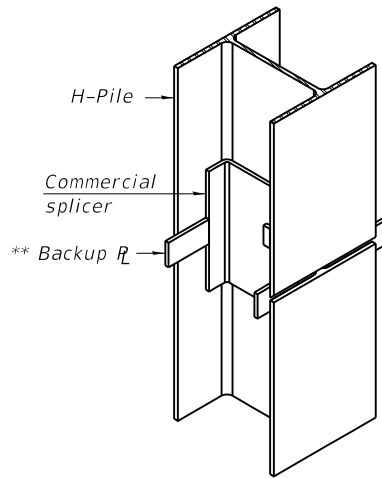
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 18x181	18	18	1	36"
x157	17¾"	17⅞"	⅞"	36"
x135	17½"	17¾"	¾"	36"
HP 16x183	16½"	16½"	1⅞"	36"
x162	16¼"	16⅞"	1"	36"
x141	16	16	⅞"	36"
x121	15¾"	15⅞"	¾"	36"
HP 14x117	14¼"	14⅞"	1⅜"	30"
x102	14"	14¾"	1⅞"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅞"	14⅞"	½"	30"
HP 12x84	12¼"	12¼"	1⅞"	24"
x74	12⅞"	12¼"	⅝"	24"
x63	12"	12⅞"	½"	24"
x53	11¾"	12"	⅞"	24"
HP 10x57	10"	10¼"	⅞"	24"
x42	9¾"	10⅞"	⅞"	24"
HP 8x36	8"	8⅞"	⅞"	18"



ELEVATION

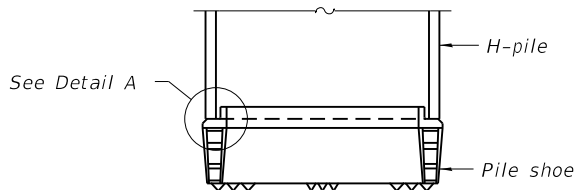


DETAIL B

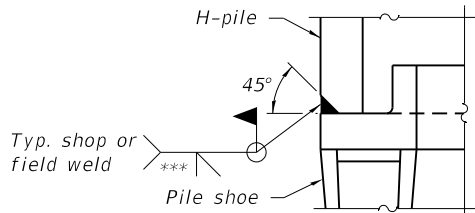


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



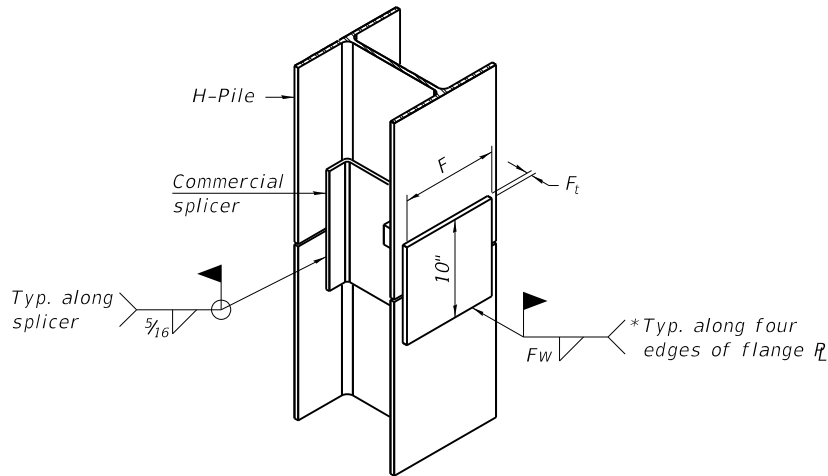
ELEVATION



DETAIL A

SHOE ATTACHMENT

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



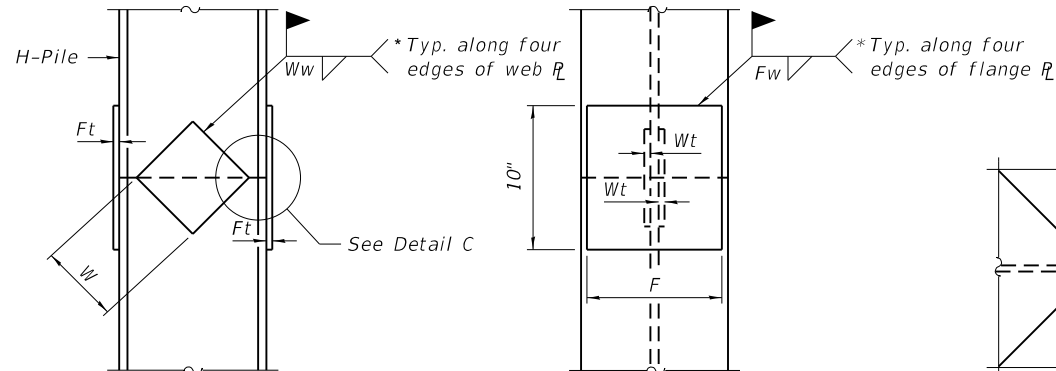
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds ¼" from end of web and/or each flange.

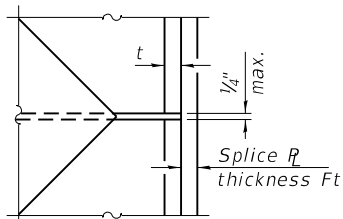
** Remove portions of backup plate's that extend outside the flanges.

*** Weld size per pile shoe manufacturer (⅝" min.).



ELEVATION

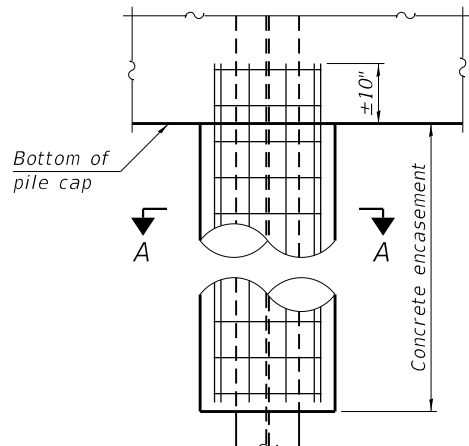
END VIEW



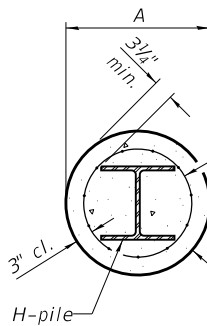
DETAIL C

Designation	F	Ft	Fw	W	Wt	Ww
HP 18x181	15½"	1½"	1"	9½"	⅞"	¾"
x157	15¼"	1¼"	1"	9½"	⅞"	¾"
x135	15¼"	1¼"	1"	9½"	⅞"	¾"
HP 16x183	13¾"	1½"	1"	8¼"	⅞"	¾"
x162	13½"	1½"	1"	8¼"	¾"	⅝"
x141	13½"	1¼"	⅞"	8¼"	¾"	⅝"
x121	13½"	1¼"	⅞"	8¼"	¾"	⅝"
HP 14x117	12½"	1¼"	⅞"	7¾"	⅝"	½"
x102	12½"	1"	¾"	7¾"	⅝"	½"
x89	12½"	⅞"	1⅞"	7¾"	⅝"	½"
x73	12½"	¾"	⅞"	7¾"	⅝"	½"
HP 12x84	10"	1"	1⅞"	6½"	⅝"	½"
x74	10"	⅞"	1⅞"	6½"	⅝"	½"
x63	10"	¾"	½"	6½"	½"	⅜"
x53	10"	¾"	½"	6½"	½"	⅜"
HP 10x57	8"	⅞"	⅞"	5¼"	½"	⅜"
x42	8"	¾"	⅞"	5¼"	½"	⅜"
HP 8x36	6¾"	⅝"	⅞"	4"	½"	⅜"

WELDED PLATE FIELD SPLICE



ELEVATION



SECTION A-A

INDIVIDUAL PILE
CONCRETE ENCASEMENT
(when specified)

Welded wire fabric 6 x 6- W4.0 x W4.0
weighing 58#/100 sq. ft. Bend as required
to fit into wall. Reinforcement for
encasements at abutments is included
with Concrete Encasement according to
Article 503.13 of the Standard Specifications.
Forms for encasement may be
omitted when soil conditions permit.

STRUCTURE BORING LOG

Date Completed 8/6/15

ROUTE 360 DESCRIPTION Kirk Road Bridge over Reed Road Date Completed 8/6/15

SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79,851D

COUNTY Kane LOCATION Southeast Corner S. 1SW/12NW TWP. 39N , RNG. 8E

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
 Stations, Depths, Offset, and Elevations are in Feet

ILDOT_BORING 79851-IDOT.GPJ IDOT.GDT 12/31/15

STRUCTURE BORING LOG

Date Completed 8/6/15

STRUCTURE NO 045-xxxx STRUCTURE NO 045-xxxx

STRUCTURE NO. _____ ROUTE 360 _____

SECTION 27-00102-04 BR SECTION 27-00102-04 BR
 COUNTY Kane COUNTY Kane

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

LDOT_BORING 79851-IDOT.GPJ IDOT.GDT 12/31/15

STRUCTURE BORING LOG

Date Completed 9/2/15

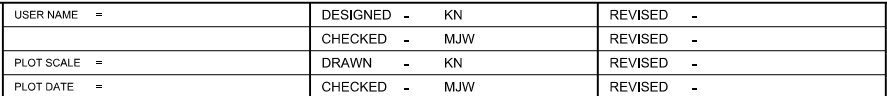
ROUTE 360 DESCRIPTION Kirk Road Bridge over Reed Road Date Completed 9/2/15

SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79,851D

COUNTY Kane LOCATION Southwest Corner S. 1SW/12NW TWP. 39N , RNG. 8E

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

ILDOT BORING 79851-IDOT.GPJ IDOT.GDT 12/31/15



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS I
STRUCTURE NO. 045-3133

SHEET 35 OF 39 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	339
		CONTRACT NO. 61M13		
ILLINOIS		FED. AID PROJECT		

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Testing Service Corporation

STRUCTURE BORING LOG

Page 2 of 2
Date Started 9/2/15
Date Completed 9/2/15

STRUCTURE NO. 045-xxxx
ROUTE 360
SECTION 21-00192-04-BR
COUNTY Kane

STRUCTURE NO. 045-xxxx
ROUTE 360
SECTION 21-00192-04-BR
COUNTY Kane

Boring No. <u>SB-6</u>	DEPTH	BL	OW	Qu	W	Elevation <u>693.30</u> ft	DEPTH	BL	OW	Qu	W
Station <u>Sta. 120+84</u>				tsf	%					tsf	%
Offset <u>44.00ft LT</u>											
Elevation <u>718.30</u> ft											
Stiff to very stiff gray CLAY, trace gravel A-6						CME-75 Truck Rig (#256) CME Automatic Hammer					

STRUCTURE BORING LOG

Date Completed 9/3/15

ROUTE 360 DESCRIPTION Kirk Road Bridge over Reed Road Date Completed 9/3/15

SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79.851D

COUNTY Kane LOCATION Northwest Corner S. 1SW/12NW , TWP. 39N , RNG. 8E

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

LDOT_BORING 79851-IDOT.GPJ IDOT.GDT 12/31/15

STRUCTURE BORING LOG

Date Completed 9/3/15

STRUCTURE NO. 045-xxxx STRUCTURE NO. 045-xxxx

ROUTE 200 SECTION 21-00192-04-BR ROUTE 200 SECTION 21-00192-04-BR

COUNTY _____					COUNTY _____				

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

LDOT_BORING 79851-IDOT.GPJ IDOT.GDT 12/31/15

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
	769.1	12 inch thick, black SILTY CLAY; damp								749.6	--RDR 2--						
		--TOPSOIL--									Stiff to very stiff, gray SILTY CLAY LOAM, little gravel; damp to moist						
		Stiff, black SILTY CLAY, trace gravel; damp			1	2 3 6	1.00 P	16			--RDR 2--			9	5 6 8	1.56 B	13
		--FILL--															
		--RDR 2--															
	766.4	Very stiff, brown SILTY CLAY, trace gravel; damp			2	6 6 8	2.87 B	15						10	5 9 11	1.72 B	14
		--FILL--															
		--RDR 2--															
		--silt seam--			3	4 5 6	2.46 B	16						11	6 9 11	2.13 B	12
	761.0	Stiff to very stiff, brown and gray SILTY CLAY to SILTY CLAY LOAM, little gravel			4	4 6 7	1.97 B	17						12	6 7 12	3.85 B	16
		--RDR 2--															
					5	10 12 15	3.12 B	15		738.4	Very stiff, gray SILTY CLAY, trace gravel; moist						
	757.1	Hard, gray SILTY CLAY LOAM, trace gravel; damp			6	6 7 12	4.26 B	15			--RDR 2--			13	5 7 11	3.44 B	27
		--RDR 2--															
					7	10 12 15	NR										
	751.1	Medium dense, gray SILT, trace gravel; saturated			8	7 8 11	4.02 B	13						14	5 8 9	3.36 B	23

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	10-05-2021	Complete Drilling	10-05-2021	While Drilling	▽ 19.00 ft
Drilling Contractor	Wang Testing Services			At Completion of Drilling	▼ MUD
Driller	KS&AP	Logger	A. Scifers	Time After Drilling	NA
Drilling Method	2.25" ID HSA; 2.5' Int to 30'; 5' thereafter; rotary after 10'; boring backfilled upon completion			Depth to Water	▼ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

5/20/2026 8:59:08 AM

 BLA, Inc.	USER NAME	=		DESIGNED	-	KN	REVISED
				CHECKED	-	MJW	REVISED
	PLOT SCALE	=		DRAWN	-	KN	REVISED
	PLOT DATE	=		CHECKED	-	MJW	REVISED

[illegible]

BORING LOGS IV STRUCTURE NO. 045-3133					F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	S
					360	12-00192-04-BR	KANE	518	
					CONTRACT NO. 61				
SHEET 38 OF 39 SHEETS			ILLINOIS	FED. AID PROJECT					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
											--RDR 3-- --rig chatter, 62 to 63 feet-- --possible cobbles--						
										707.4	Medium dense, gray SILT, trace gravel; saturated						
											--RDR 2 to 3--						
			45	X	15	5 7 9	2.30 B	25						19	5 8 7	NP	13
										702.4	Medium dense to very dense, gray SILTY LOAM; moist to wet						
											--RDR 2 to 3--						
			50	X	16	6 7 9	2.52 B	20						20	39 43 39	NP	8
											--rig chatter, 71 to 71.5 feet-- --possible cobbles--						
		--disturbed sample-- --wet--		X	17	10 11 14	NA	33						21	16 15 14	NP	11
			55	X							--rig chatter, 75 to 76 feet-- --possible cobbles--						
										692.1	Strong, light yellowish brown and gray, very poor quality DOLOSTONE; slightly weathered rock and slightly to moderately weathered joints, very closely spaced horizontal joints, with less than 0.05-inch opening, hard						
			60	X	18	5 7 16	1.56 B	21								CORE	
GENERAL NOTES										WATER LEVEL DATA							
Begin Drilling										While Drilling							
Drilling Contractor										At Completion of Drilling							
Driller										Time After Drilling							
Logging Method										Depth to Water							

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture
	686.6	joint wall, slicken to slightly rough joint wall surface, hard infill strength, and less than 0.2-inch infill thickness. -- Run 1: 77.5 to 82.5 feet-- --Recovery = 73%-- --RQD = 0%-- --water loss, 79 feet-- Boring terminated at 82.50 ft	82.5		1												
			85														
			90														
			95														
			100														
GENERAL NOTES										WATER LEVEL DATA							
Begin Drilling 10-04-2021 Complete Drilling 10-04-2021										While Drilling 51.75 ft							
Drilling Contractor Wang Testing Services Drill Rig										At Completion of Drilling MUD							
Driller KS&AP Logger A. Scifers Checked by EG										Time After Drilling NA							
Drilling Method 2.25" ID HSA; 2.5' int to 30'; 5' thereafter, rotary after 10'; boring backfilled upon completion										Depth to Water NA							
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.																	

USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - MJW	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - MJW	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS V STRUCTURE NO. 045-3133

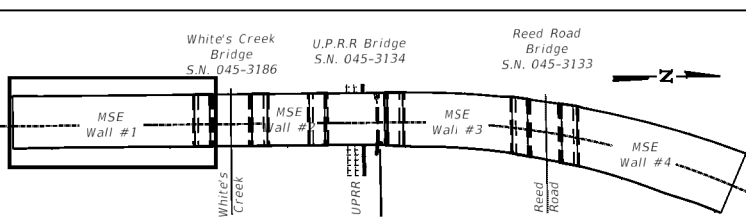
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	343
		CONTRACT NO. 61M13		
ILLINOIS		FED. AID PROJECT		

Existing Structure: S.N. 045-3096 originally constructed in 1974 as FAS Route 1100, Section 192-3VB (Kirk Road). It was repaired in 1977, 1987, 1990, 1998, 2003, 2013, and 2021. It underwent a rehabilitation in 2001. The existing superstructure is 18 span continuous, separated into 4 units, with 7½" deck and non-composite wide flange beams. Back to back of abutments is 1,376'-2" and Out-to-Out width is 62'-0". Existing substructure contains two concrete reinforced spill through abutments on piles and 17 piers; with piers 1 to 8 and 17 on spread footings, and piers 9 to 16 on piles. Traffic to be maintained using stage construction.

* Contractor to verify depth.
(See roadway plans)

**Ex. Underground Watermain
to be abandoned, West Wall only
(See Drainage and Utilities Plan)*

(Looking West at Front Face of East Wall,
West Wall similar)



*Approximate Limits of
Removal and Replacement
of Unsuitable Material*

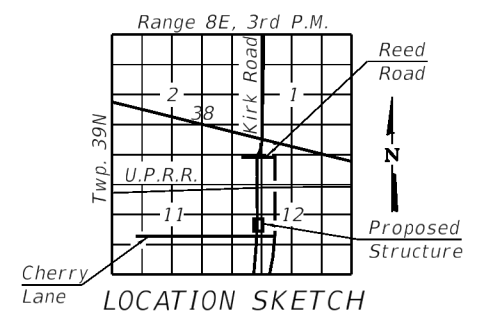


2024 AASHTO LRFD Bridge Design Specifications, 10th Edition

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

FIELD UNITS

PRECAST UNITS
f'c = 4,500 psi (Precast Panels)



KIRK ROAD

F.A.P. RTE. 360 SEC. 12-00192-04-BR

KANE COUNTY

STA. 111+19.37 to STA. 115+10.00

MSE WALL 01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
MSE WALL 01

[illegible]

GENERAL NOTES:

Reinforcement bars designated (E) shall be epoxy coated.
Slipforming of the parapets is not allowed.
A protective coat shall be applied to the top and inside faces of the parapets, separation barrier, multi-use path, and shoulders.
The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions in the field.
Wall Stations and Offsets are given to the Front Face (FF) of the wall and are measured from centerline of Kirk Road.
Wall is built in conjunction with new bridge S.N 045-3186 and S.N 045-3134.
Piles are installed prior to the construction of wall.
Horizontal dimensions measured along front face of precast panels.
Utilities shall be relocated by others.

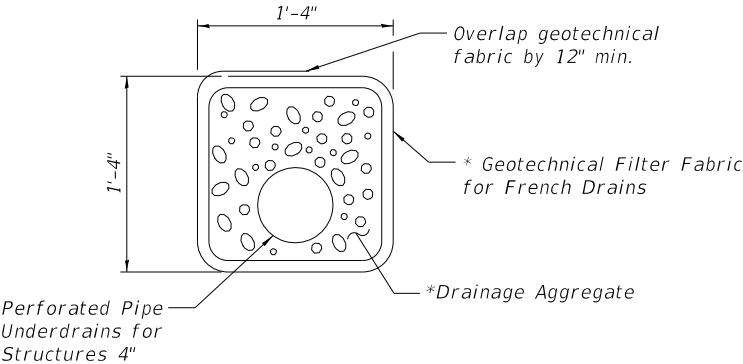
INDEX OF SHEETS

- 1. General Plan and Elevation
- 2. General Data
- 3. Typical Details
- 4. Stage I & II Construction
- 5. Wall Plan & Elevations
- 6. Temporary Wall Elevation
- 7. Typical Sections
- 8. Moment Slab Plan and Elevation I
- 9. Moment Slab Plan and Elevation II
- 10. Moment Slab Plan and Elevation III
- 11. Moment Slab Plan and Elevation IV
- 12. Moment Slab Plan and Elevation V
- 13. Moment Slab Sections and Details
- 14. Moment Slab and Light Pole Details
- 15. Drainage Details
- 16. Railing Details
- 17. Boring Logs I
- 18. Boring Logs II
- 19. Boring Logs III
- 20. Boring Logs IV

TOTAL BILL OF MATERIAL

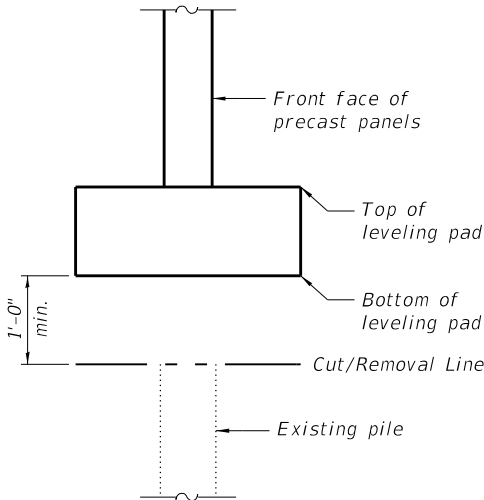
Item	Unit	Total
Geotechnical Fabric For Ground Stabilization	Sq Yd	2,139
Aggregate Subgrade Improvement	Cu Yd	4,236
Structure Excavation	Cu Yd	2,471
Removal And Disposal Of Unsuitable Material For Structures	Cu Yd	4,236
Concrete Structures	Cu Yd	513.8
Form Liner Textured Surface	Sq Ft	11,325
Protective Coat	Sq Yd	1,308
Reinforcement Bars, Epoxy Coated	Pound	72,910
Mechanically Stabilized Earth Retaining Wall	Sq Ft	13,415
Temporary Mechanically Stabilized Earth Retaining Wall	Sq Ft	6,116
Pipe Underdrains For Structures 4"	Foot	886
Staining Concrete Structures	Sq Ft	11,325
Bicycle Railing, Special	Foot	351

See SN 045-3186 for Removal of Existing Structures.

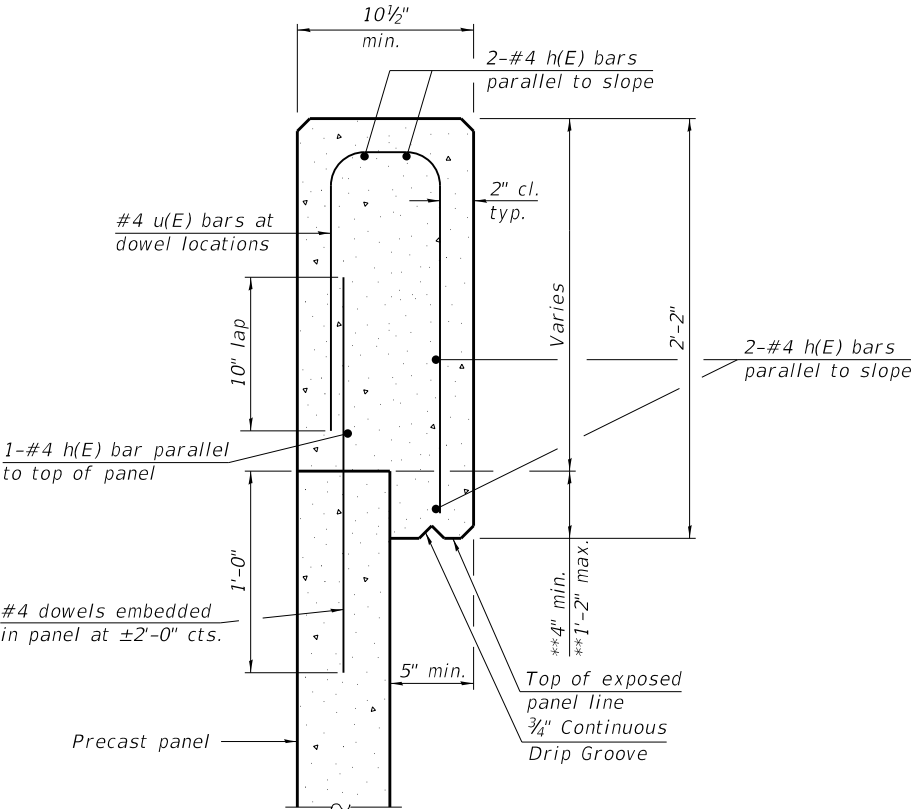


PIPE UNDERDRAIN DETAIL

* Included in cost for Pipe Underdrains for Structures 4"

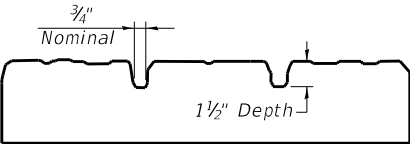
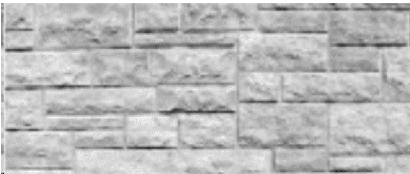


SECTION THRU REMOVAL OF STRUCTURE

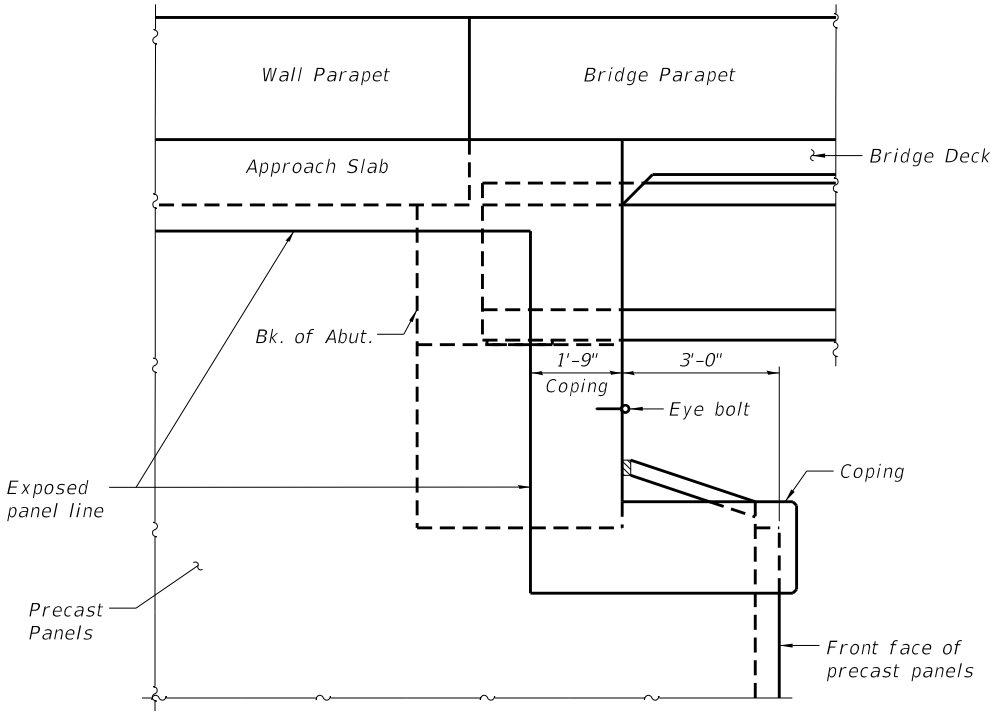


TYPICAL SECTION THRU COPING

** Limits of Bond breaker membrane between front of panel and overhang.



FORM LINER TEXTURED DETAIL



ABUTMENT END VIEW

MODEL: Main
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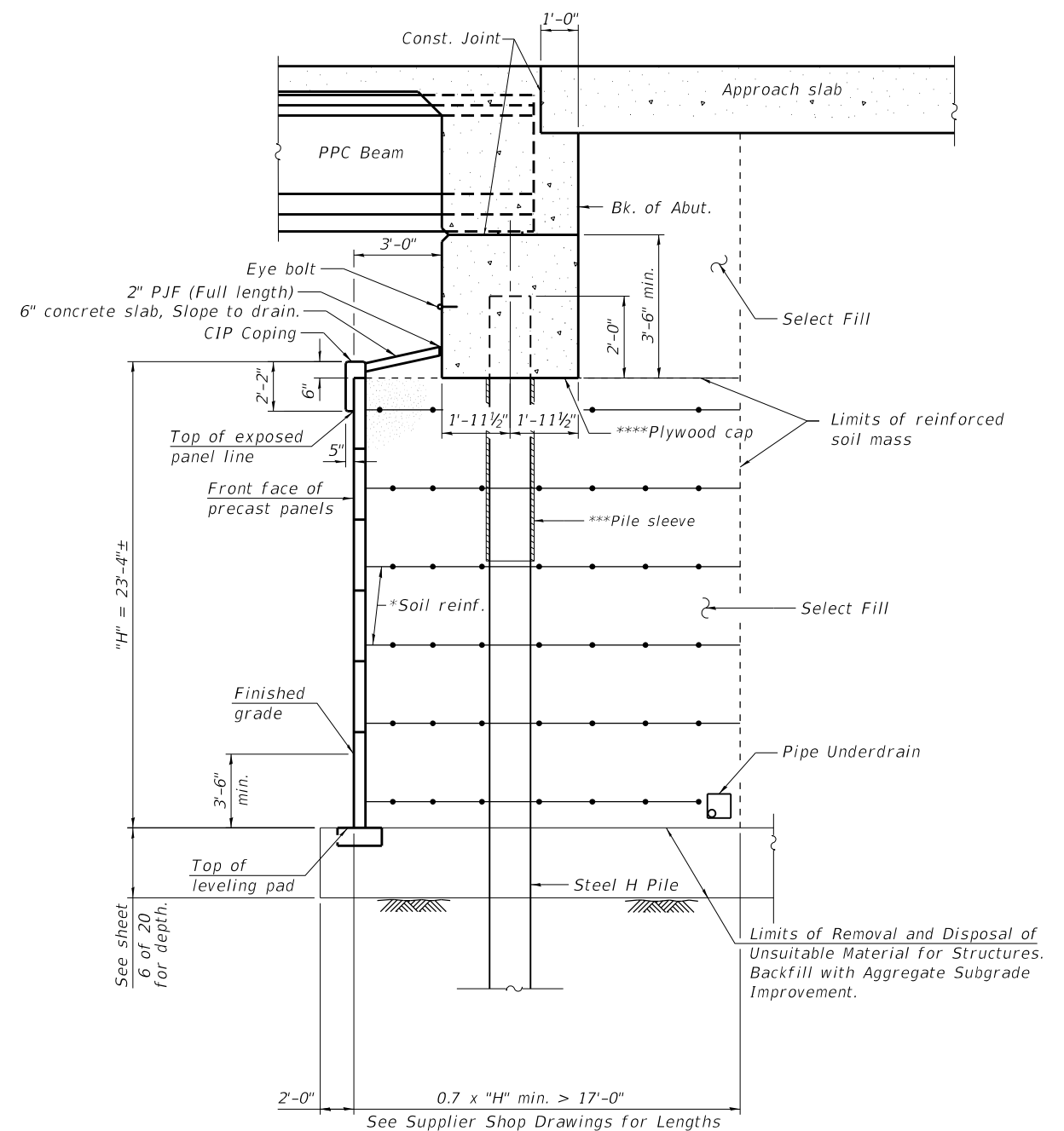
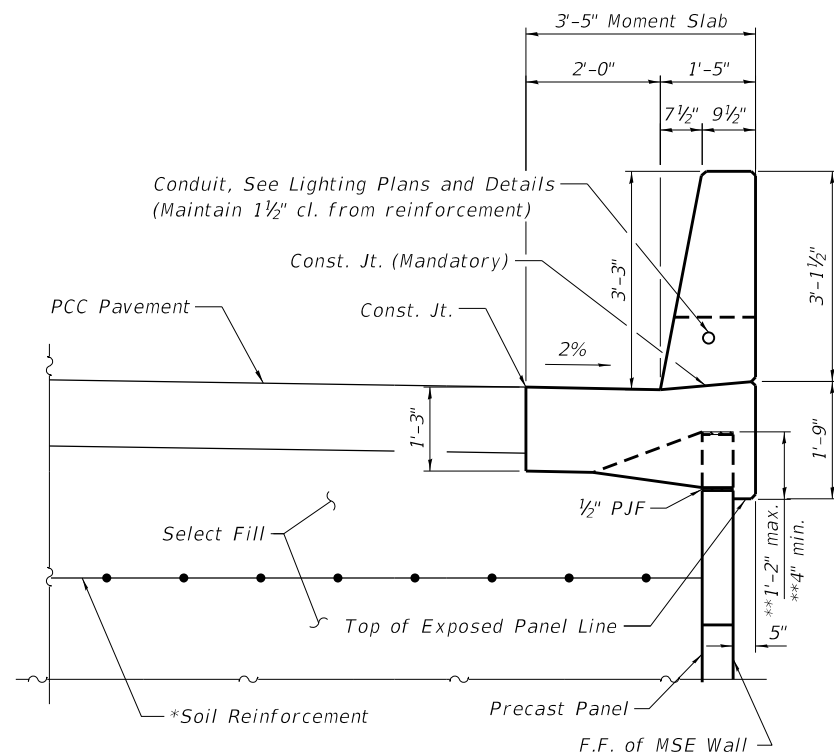
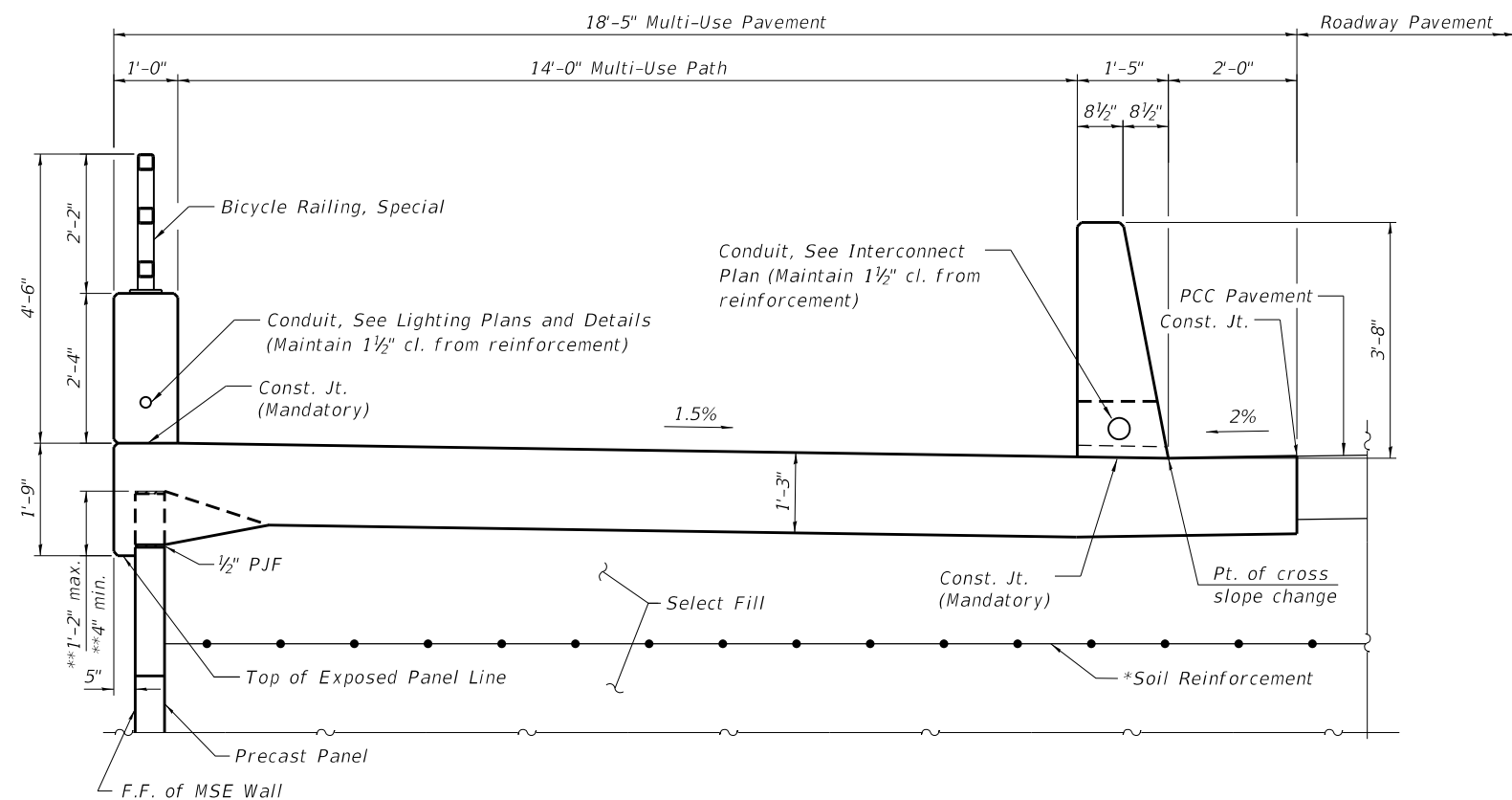
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CHECKED - PRD	REVISED -	
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
MSE WALL 01

SHEET 2 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	345
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				



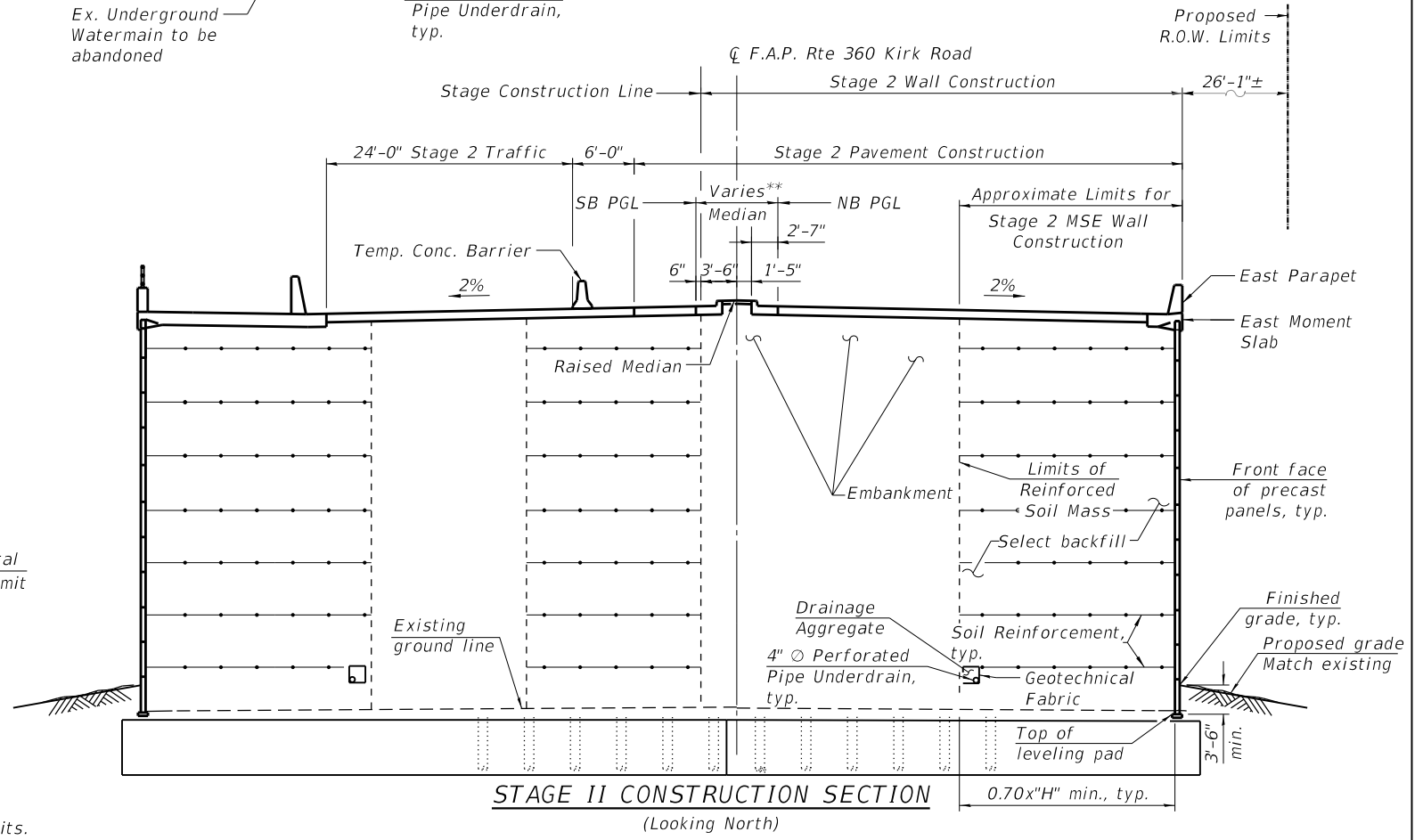
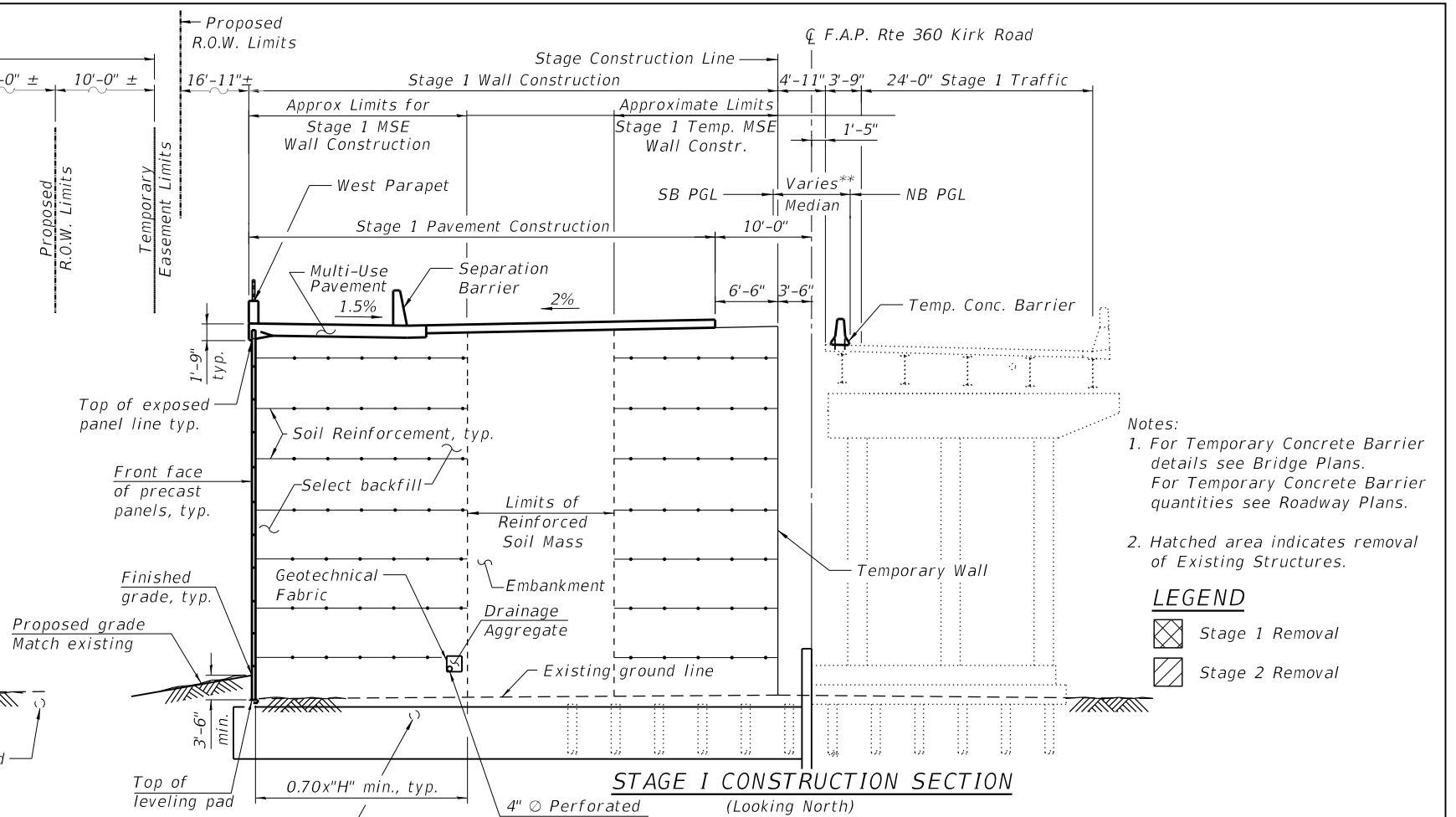
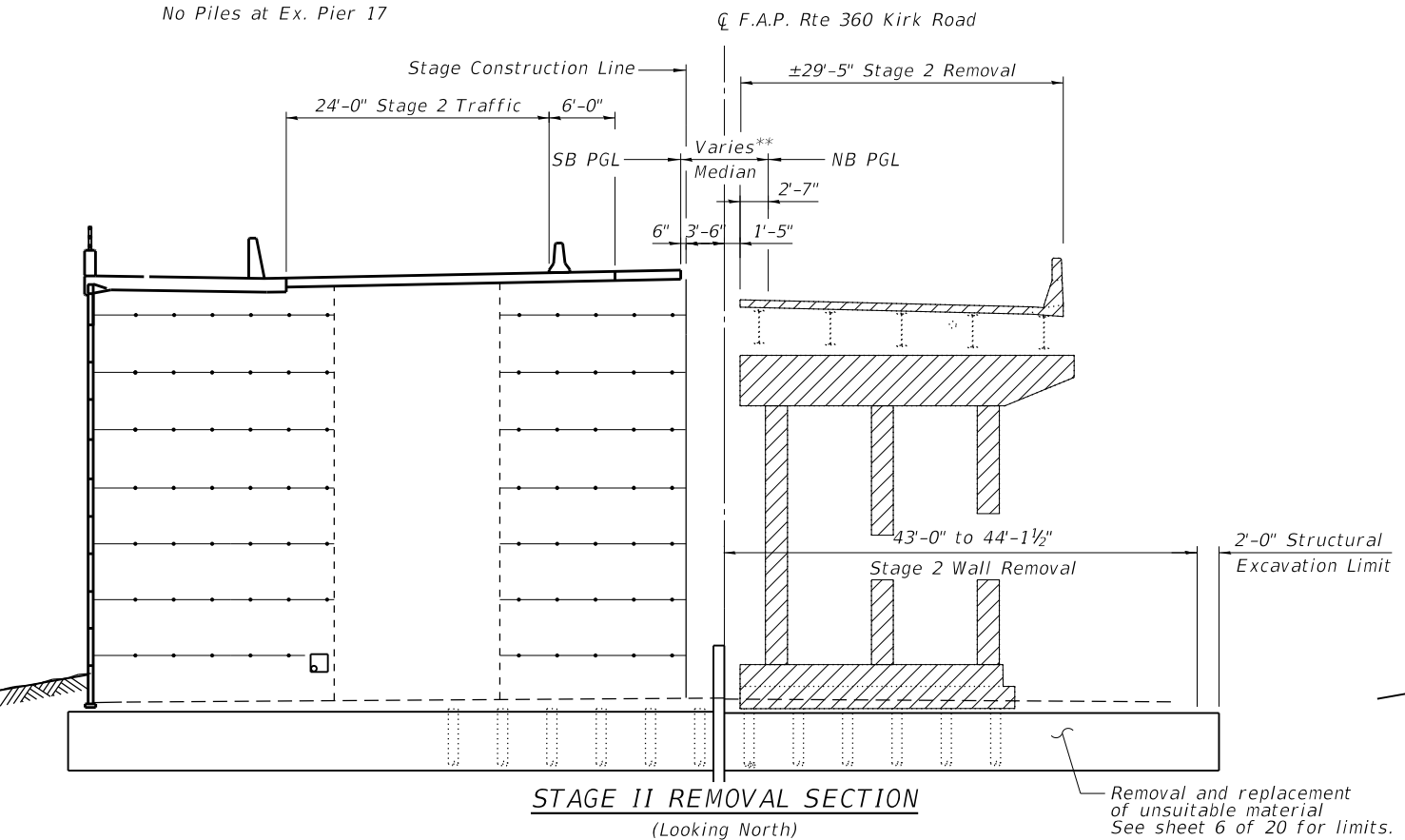
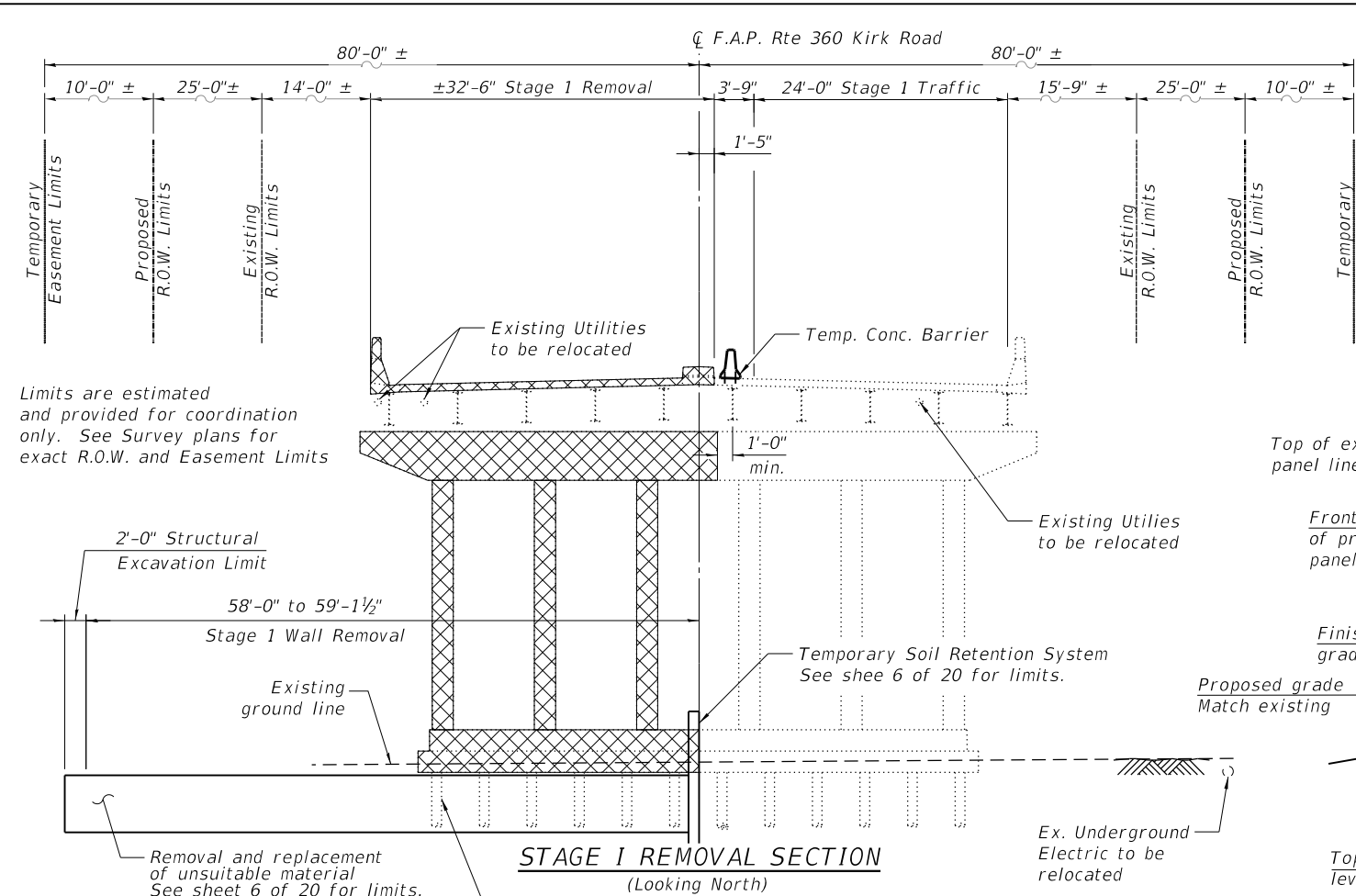
* The MSE wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0. The upper layer of soil reinforcement shall be designed with an additional impact rupture loading of 2,300 lb./ft. of wall and an additional impact pullout loading of 1,300 lb./ft. of wall. The second layer of soil reinforcement shall be designed with an additional impact rupture loading of 600 lb./ft. and an additional impact pullout loading of 600 lb./ft.

** Limits of Bond breaker membrane between front of panel and overhang.

*** Sleeve to remain empty in hatched region.

**** Bottom of cap poured against top of plywood. Cut opening to match pile perimeter within $\frac{1}{8}$ ".
Support with bars tack welded to webs rated for 500 lbs. Seal gaps to keep concrete out

MODEL: Default
FILE NAME: V:\894-048 KDOT Kirk Road over UPRRCAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 01_Sheet_04_Stage I & II Construction.dgn



- Notes:
1. For Temporary Concrete Barrier details see Bridge Plans. For Temporary Concrete Barrier quantities see Roadway Plans.
 2. Hatched area indicates removal of Existing Structures.

LEGEND

- Stage 1 Removal
- Stage 2 Removal



USER NAME =	DESIGNED - ES	REVISED -
CHECKED - PRD	REVISED -	
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

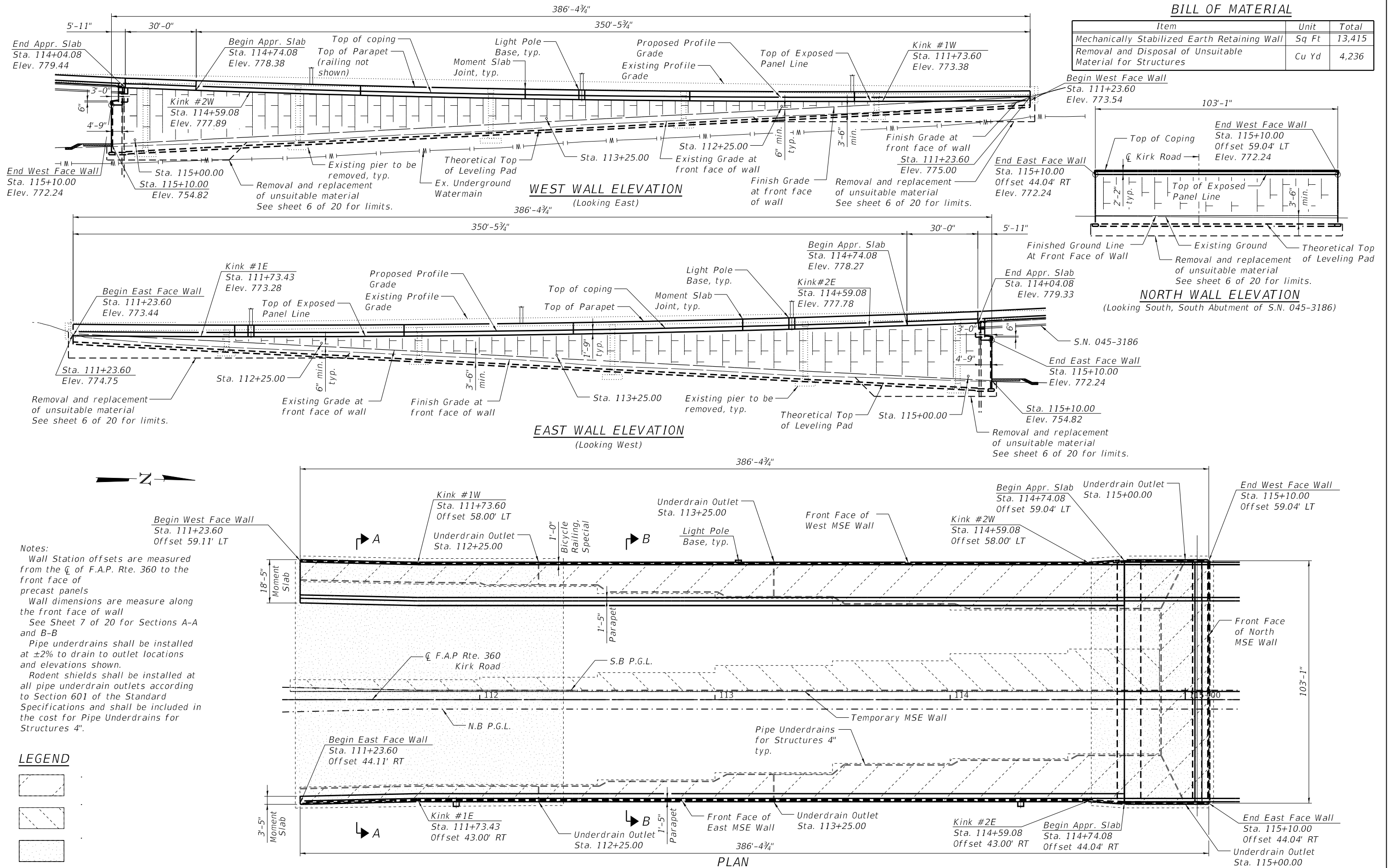
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I & II CONSTRUCTION
MSE WALL 01

SHEET 4 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	347
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main View
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USER NAME	=	DESIGNED	-	ES	REVISED	-
PLOT SCALE	=	CHECKED	-	PRD	REVISED	-
PLOT DATE	=	DRAWN	-	ES	REVISED	-
		CHECKED	-	PRD	REVISED	-

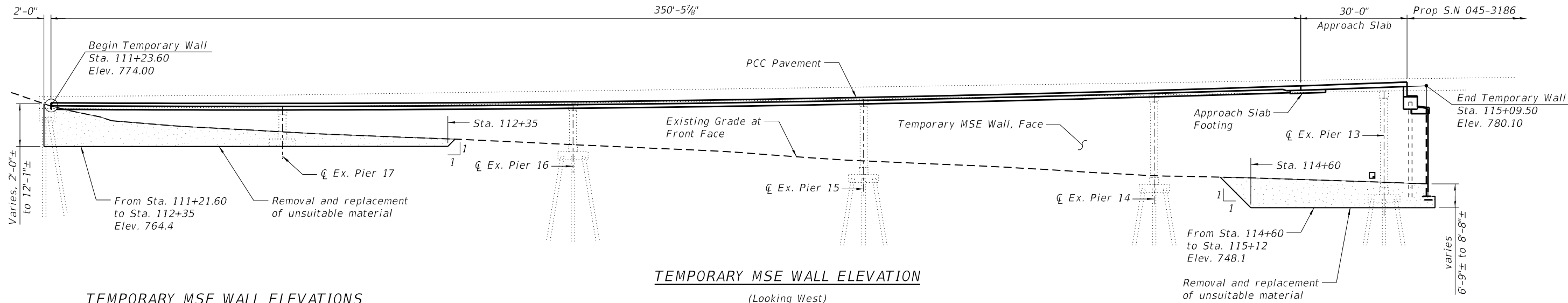
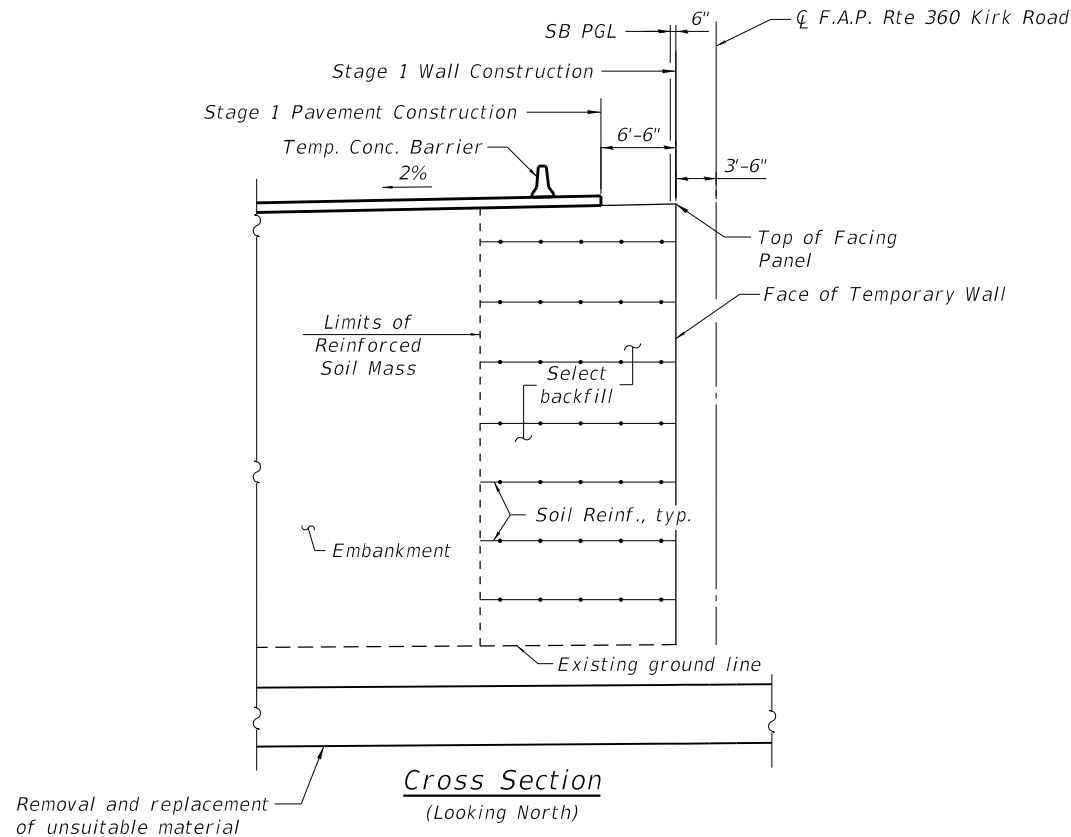
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL PLAN & ELEVATIONS
MSE WALL 01

SHEET 5 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	348
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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TEMPORARY MSE WALL ELEVATIONS

Station	Offset	T/Exposed Panel Elevation	Existing Grade Elevation	Exposed Wall Height
111+23.60	3.50 Lt.	774.00	774.12	0'
111+50.00	3.50 Lt.	773.88	771.56	2'-4"
112+00.00	3.50 Lt.	773.87	768.70	5'-2"
112+50.00	3.50 Lt.	774.15	766.67	7'-6"
113+00.00	3.50 Lt.	774.70	764.40	10'-4"
113+50.00	3.50 Lt.	775.54	761.24	14'-4"
114+00.00	3.50 Lt.	776.66	758.89	17'-9"
114+50.00	3.50 Lt.	778.06	756.69	21'-4"
115+00.00	3.50 Lt.	779.75	755.09	24'-8"
115+09.50	3.50 Lt.	780.10	754.75	25'-4"

WEST FACE WALL ELEVATIONS

Location	Station	Offset	T/Exposed Panel Elevation	Finish Grade Elevation	Exposed Wall Height
Begin West Face Wall	111+23.60	59.11 Lt.	773.54	775.00	0'
Kink #1W	111+73.60	58.00 Lt.	773.38	772.39	1'-0"
Kink #2W	114+59.08	58.00 Lt.	777.89	757.48	20'-5"
Begin Appr. Slab	114+74.08	59.04 Lt.	778.38	756.70	21'-8"
End Appr. Slab	115+04.08	59.04 Lt.	779.44	755.13	24'-4"
T/ Vertical Exposed Panel Line	115+05.25	59.04 Lt.	779.48	755.07	24'-5"
B/ Vertical Exposed Panel Line	115+05.25	59.04 Lt.	772.24	755.07	17'-2"
End West Face Wall	115+10.00	59.04 Lt.	772.24	754.82	17'-5"

EAST FACE WALL ELEVATIONS

Location	Station	Offset	T/Exposed Panel Elevation	Finish Grade Elevation	Exposed Wall Height
Begin East Face Wall	111+23.60	44.11 Rt.	773.44	774.75	0'
Kink #1E	111+73.43	43.00 Rt.	773.28	772.18	1'-1"
Kink #2E	114+59.08	43.00 Rt.	777.79	757.45	20'-4"
Begin Appr. Slab	114+74.08	44.04 Rt.	778.28	756.67	21'-7"
End Appr. Slab	115+04.08	44.04 Rt.	779.34	755.13	24'-3"
T/ Vertical Exposed Panel Line	115+05.25	44.04 Rt.	779.38	755.06	24'-4"
B/ Vertical Exposed Panel Line	115+05.25	44.04 Rt.	772.24	755.06	17'-2"
End East Face Wall	115+10.00	44.04 Rt.	772.24	754.82	17'-5"



USER NAME =	DESIGNED - ES	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

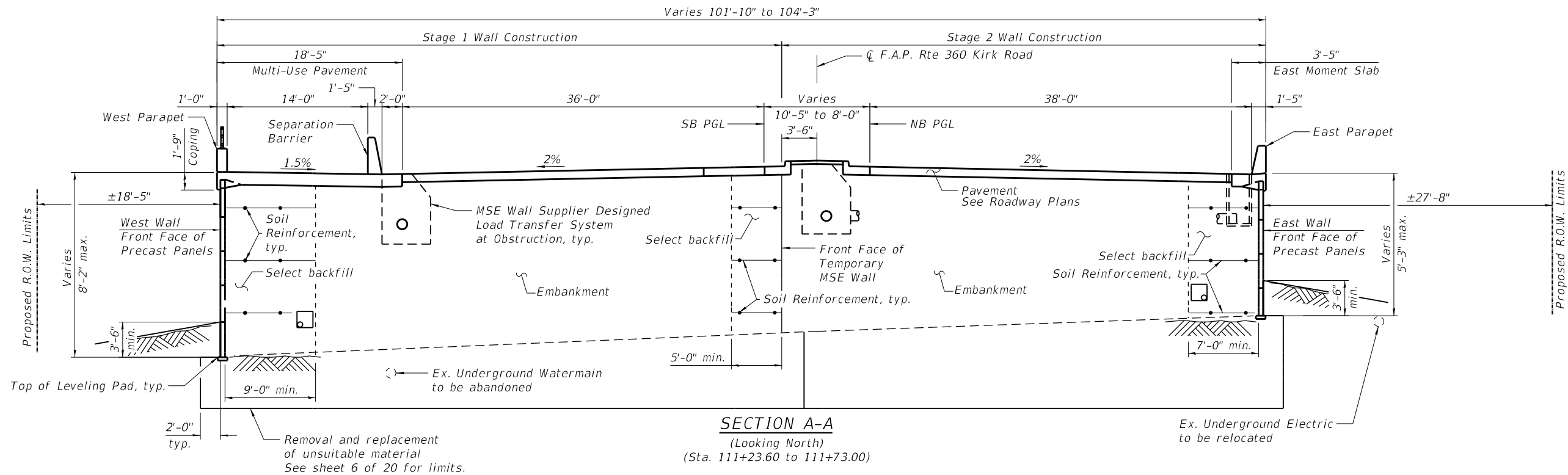
TEMPORARY WALL ELEVATION
MSE WALL 01

SHEET 6 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	349
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

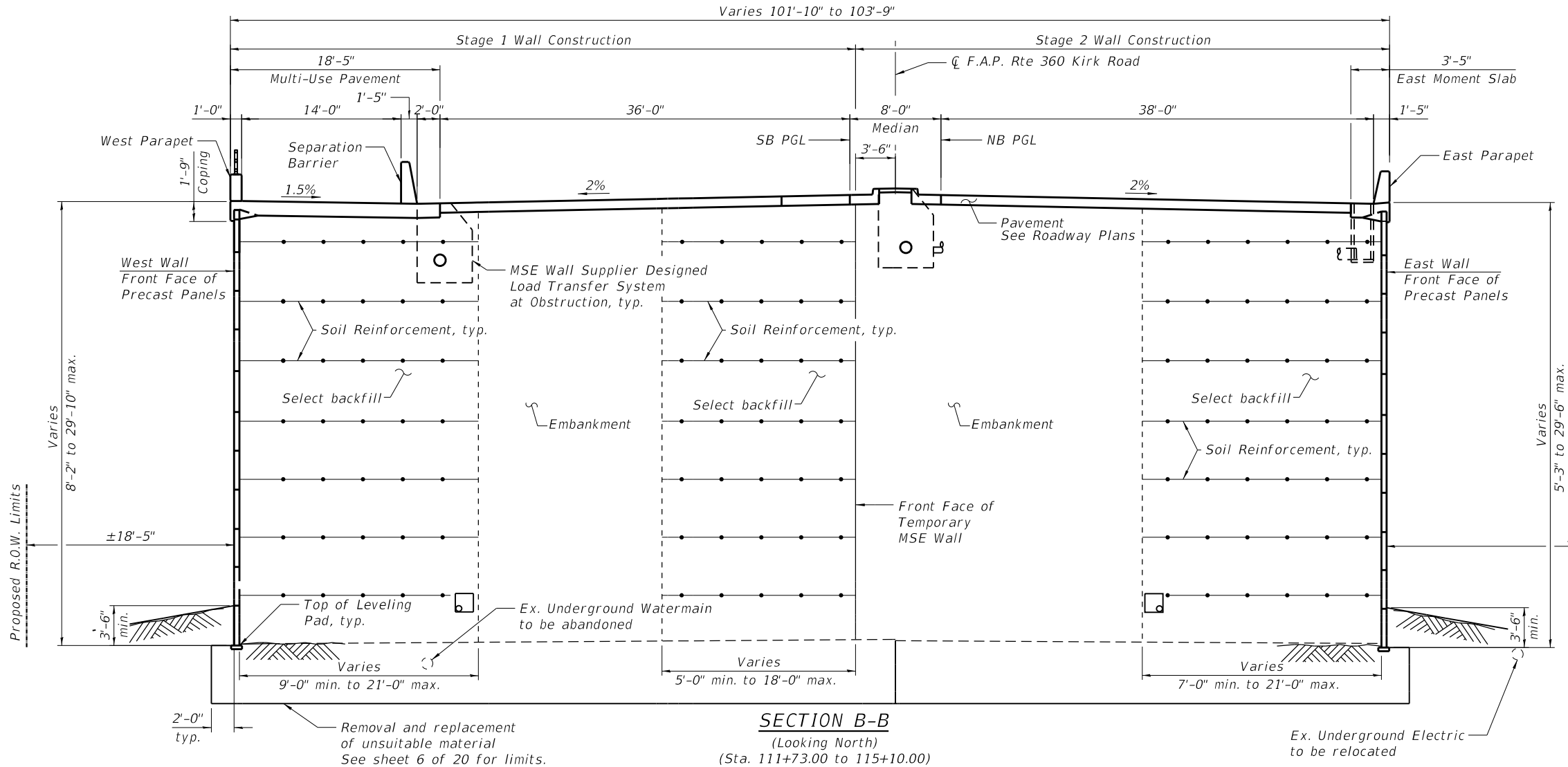
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Temporary Easement Limits



Temporary Easement Limits

Temporary Easement Limits



Temporary Easement Limits



USER NAME =	DESIGNED - ES	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

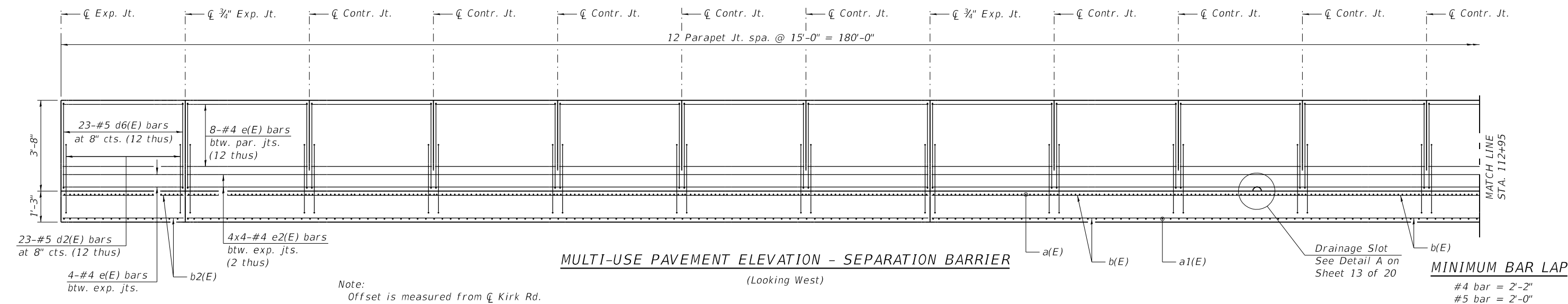
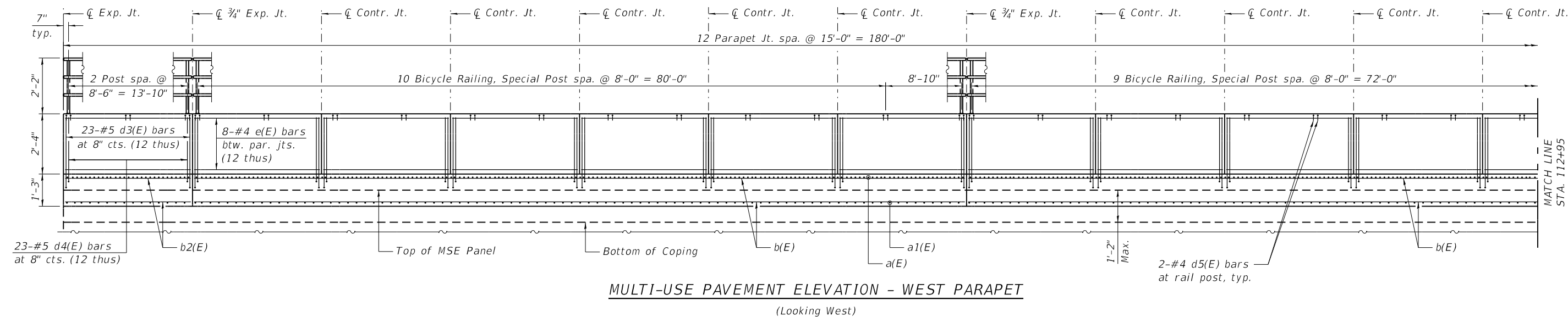
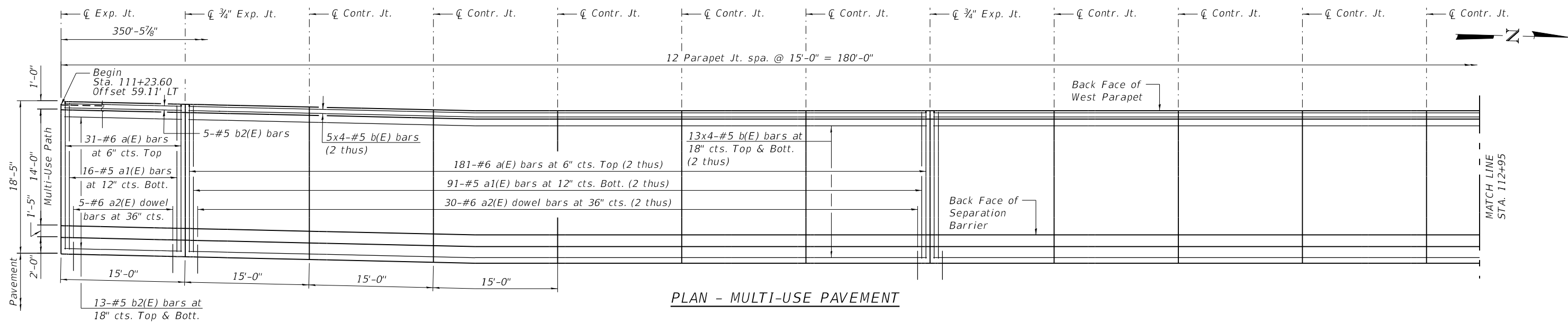
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
MSE WALL 01

SHEET 7 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	350
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
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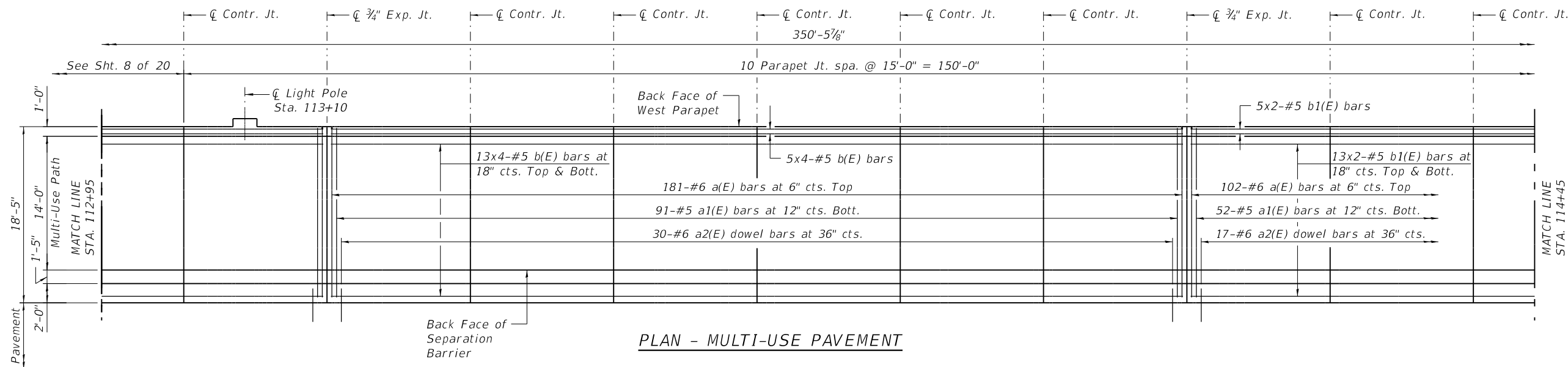
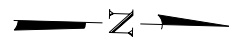
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	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

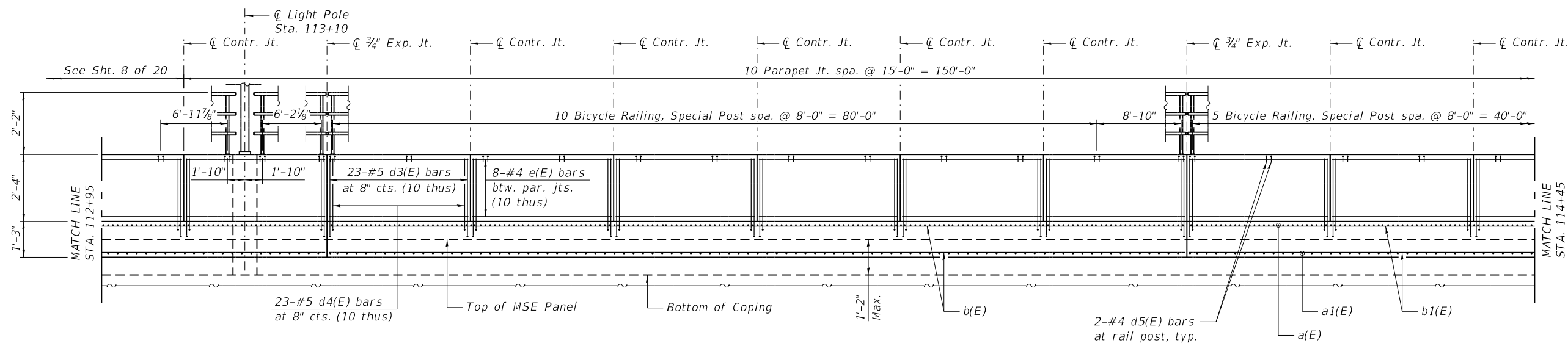
MOMENT SLAB PLAN AND ELEVATION I
MSE WALL 01

SHEET 8 OF 20 SHEETS

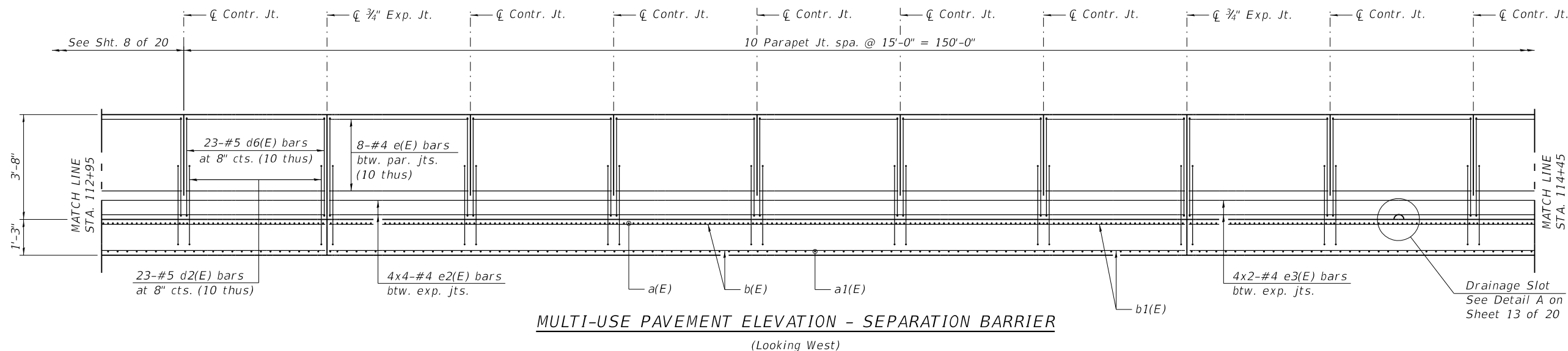
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360	12-00192-04-BR	KANE	518	351
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				



PLAN - MULTI-USE PAVEMENT



MULTI-USE PAVEMENT ELEVATION - WEST PARAPET
(Looking West)



MULTI-USE PAVEMENT ELEVATION - SEPARATION BARRIER
(Looking West)

MINIMUM BAR LAP
#4 bar = 2'-2"
#5 bar = 2'-0"

MODEL: Main
FILE NAME: W:\894-048 KDOT Kfk Road over UPRRCAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 01_Sheet_09_Moment Slab Plan and Elevation II.dgn
5/20/2026 8:59:26 AM



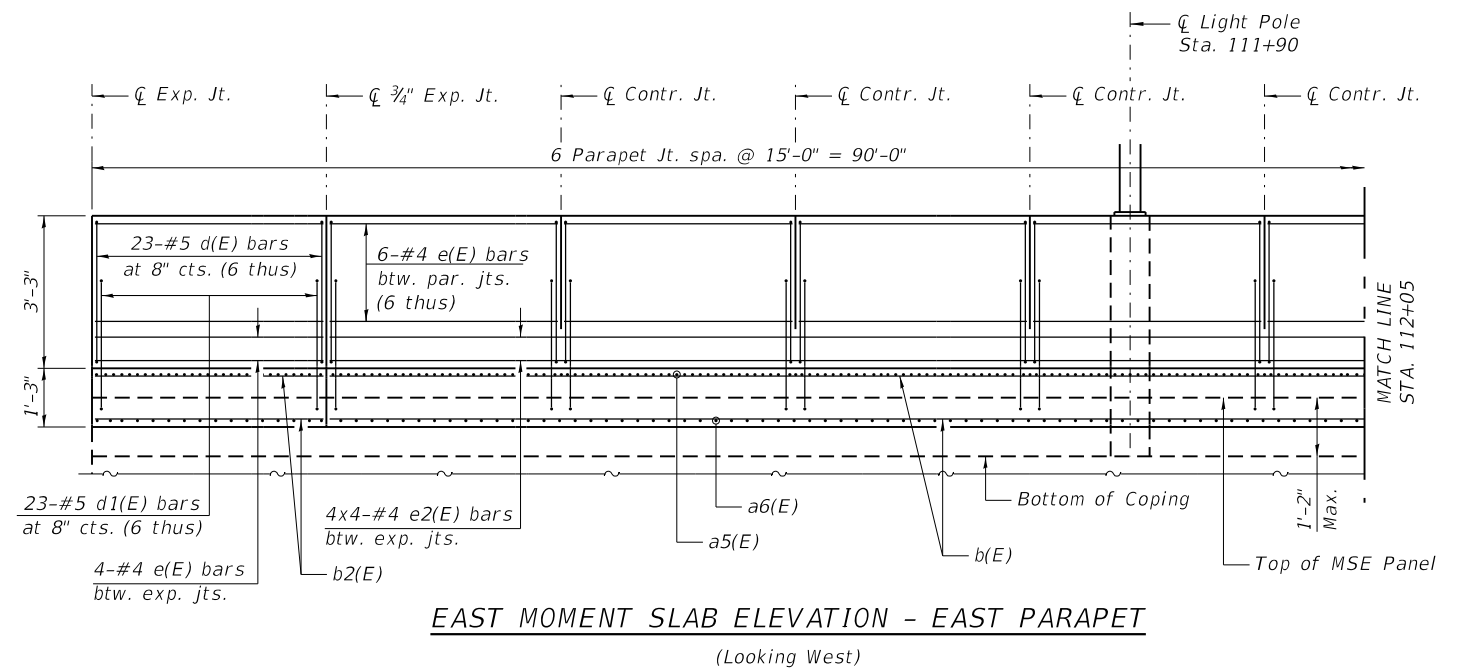
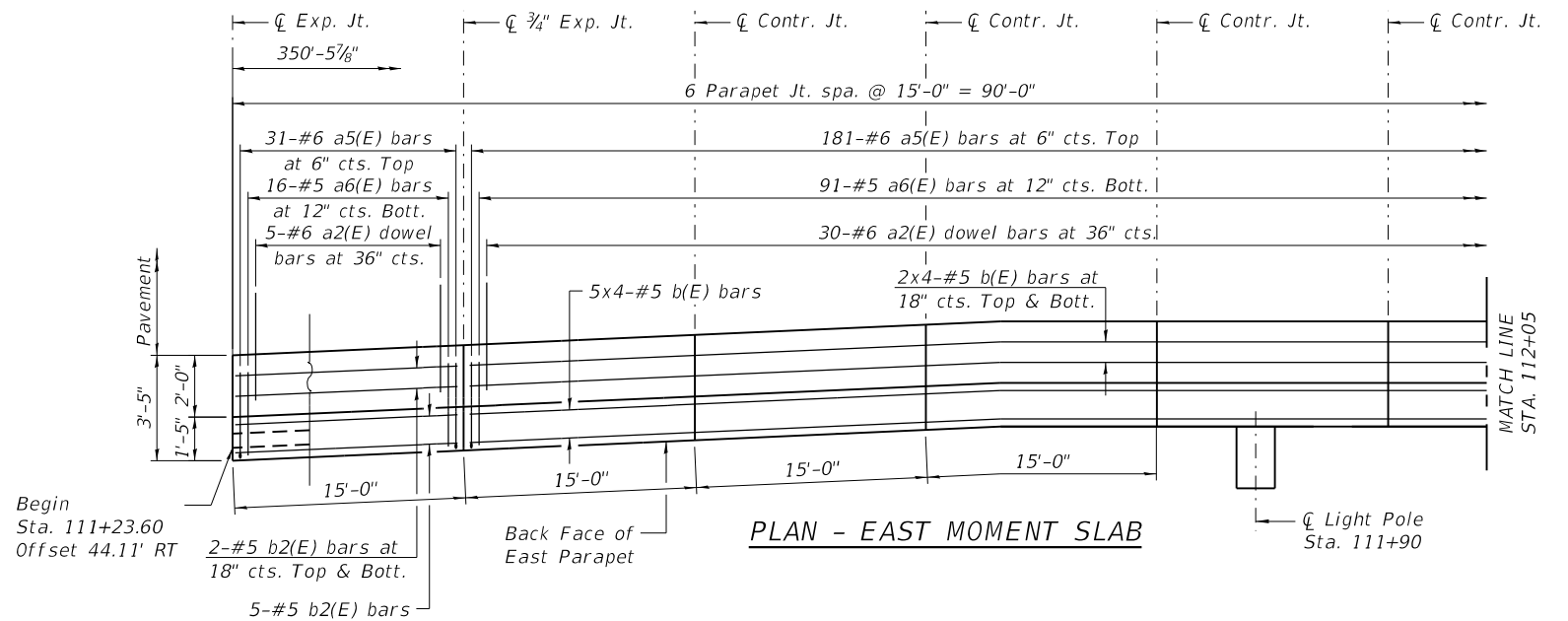
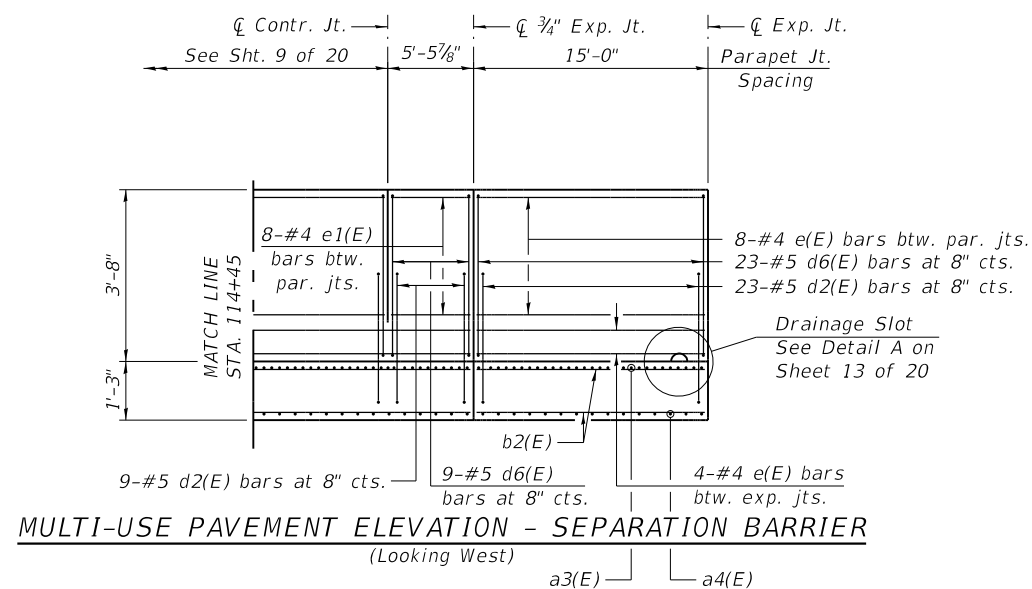
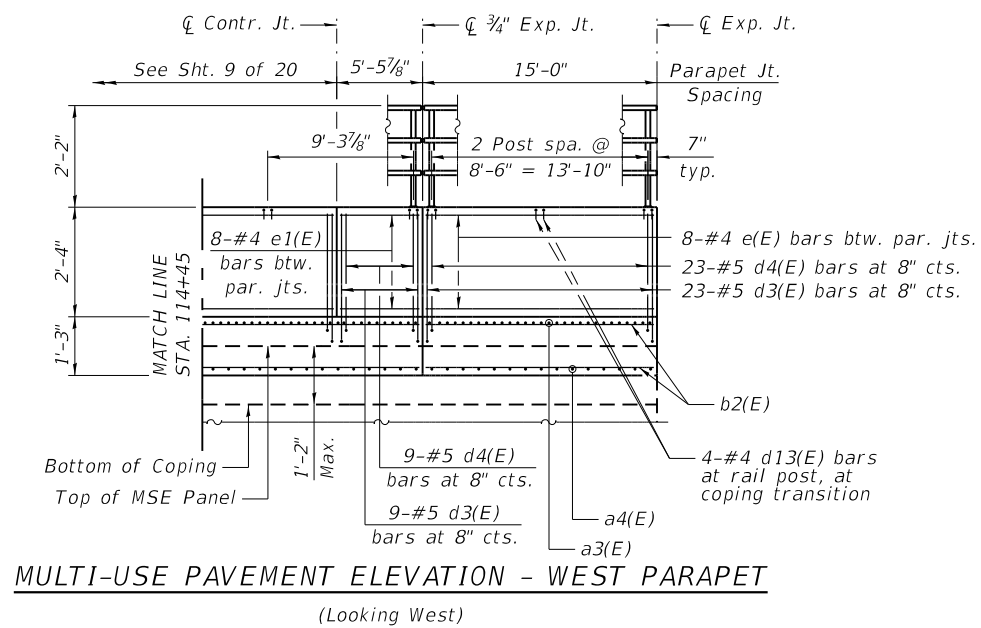
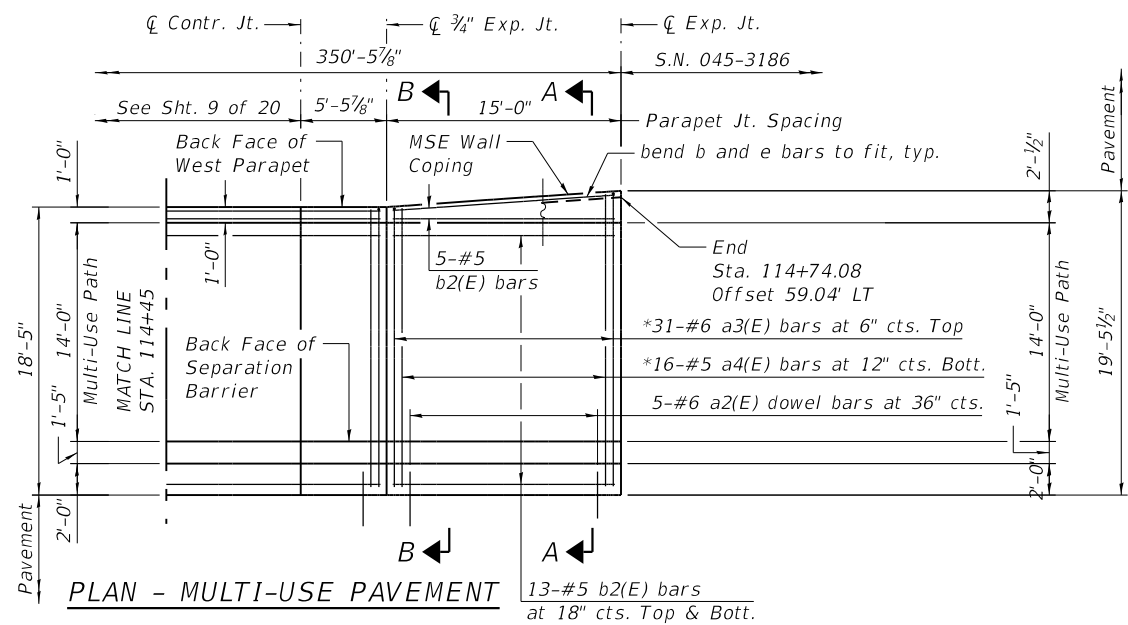
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PLOT SCALE =	CHECKED - PRD	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB PLAN AND ELEVATION II
MSE WALL 01

SHEET 9 OF 20 SHEETS

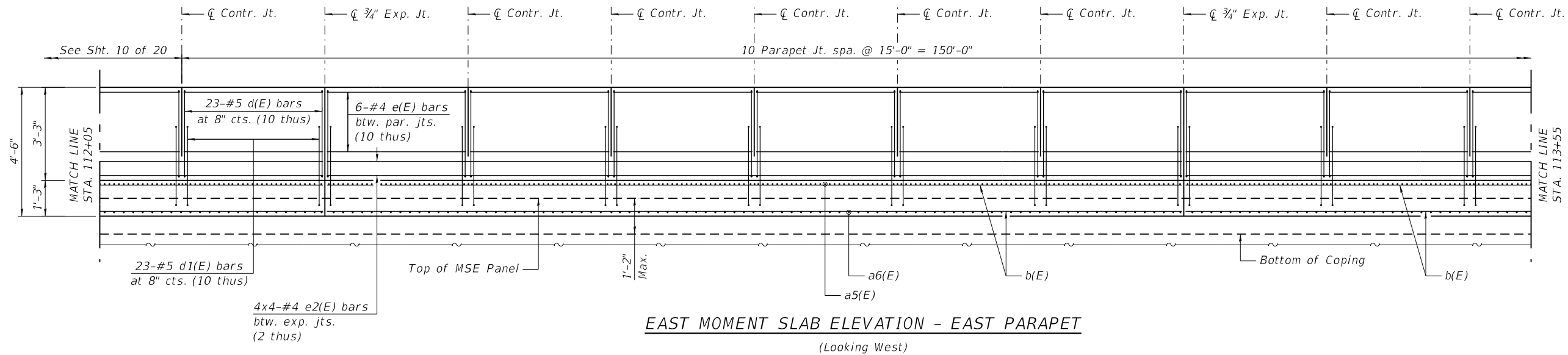
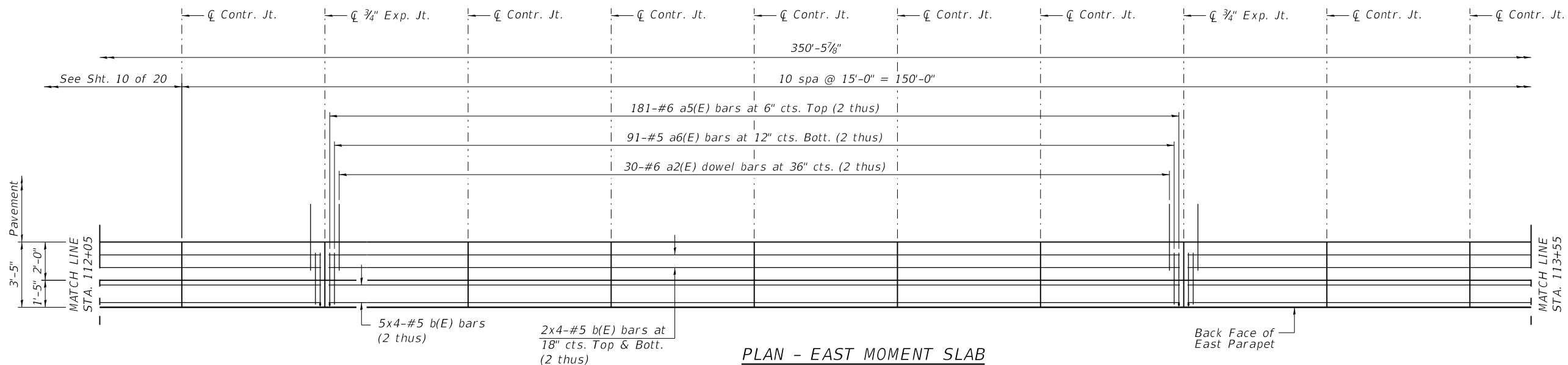
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	352
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				



* Cut a bars to fit.

Notes:
Offset is measured from ∇ Kirk Rd.
See Sht. 13 of 20 for SECTION A-A and B-B.

MINIMUM BAR LAP
#4 bar = 2'-2"
#5 bar = 2'-0"



MINIMUM BAR LAP

#4 bar = 2'-2"
#5 bar = 2'-0"

MODEL: Main
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 01_Sheet_11_Moment Slab Plan and Elevation IV.dgn



USER NAME =	DESIGNED - KN	REVISED -
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PLOT DATE =	CHECKED - PRD	REVISED -

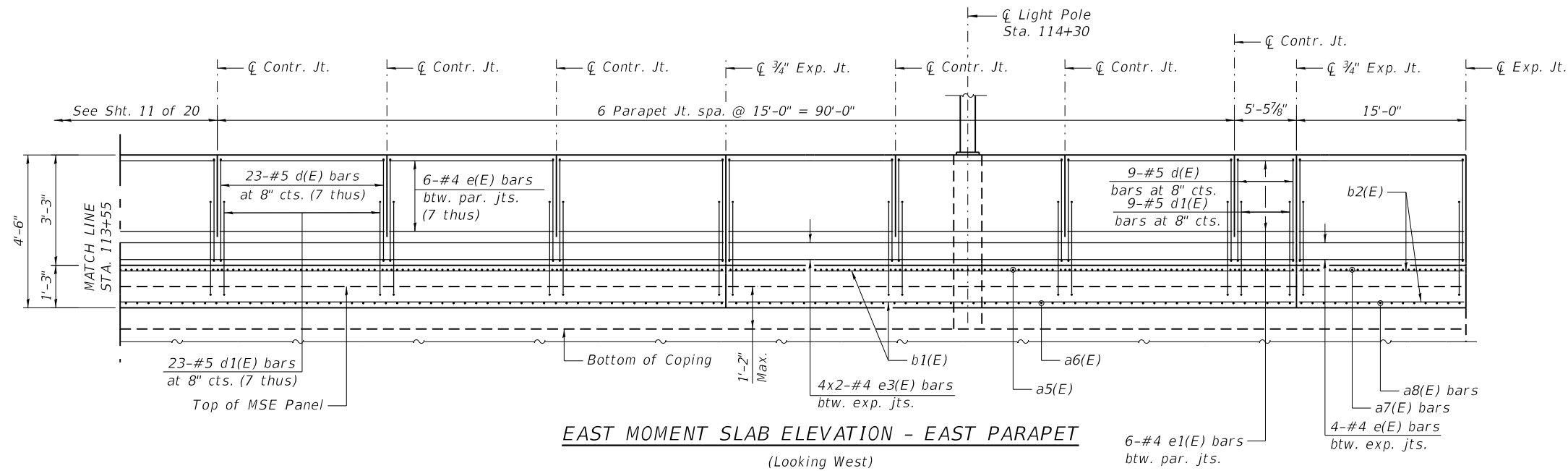
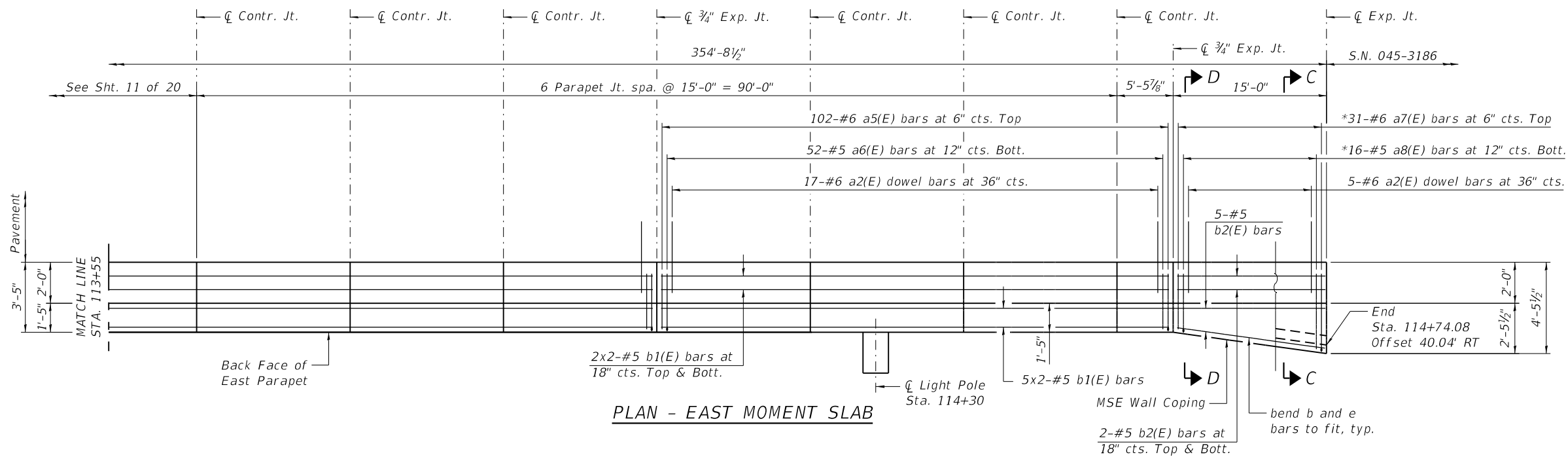
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB PLAN AND ELEVATION IV
MSE WALL 01

SHEET 11 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	354
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 01_Sheet_12_Moment Slab Plan and Elevation V.dgn



* Cut a bars to fit.

MINIMUM BAR LAP

#4 bar = 2'-2"
#5 bar = 2'-0"

Notes:
Offset is measured from ϕ Kirk Rd.
See Sht. 13 of 20 for SECTION C-C and D-D.



USER NAME =	DESIGNED - KN	REVISED -
CHECKED - PRD	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

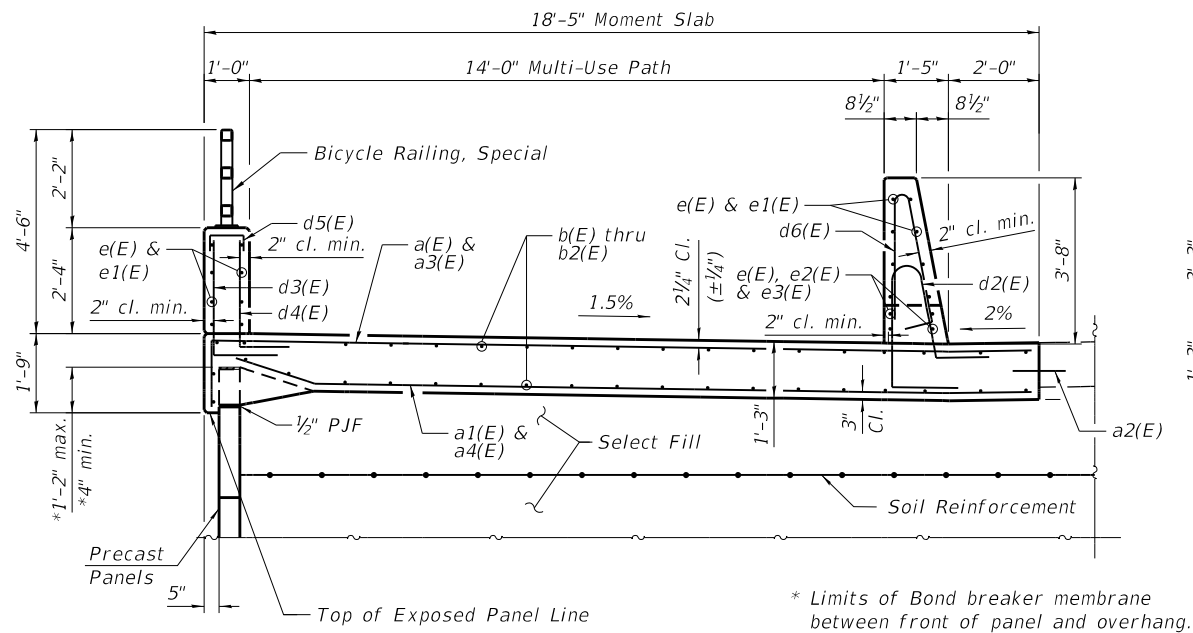
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB PLAN AND ELEVATION V
MSE WALL 01

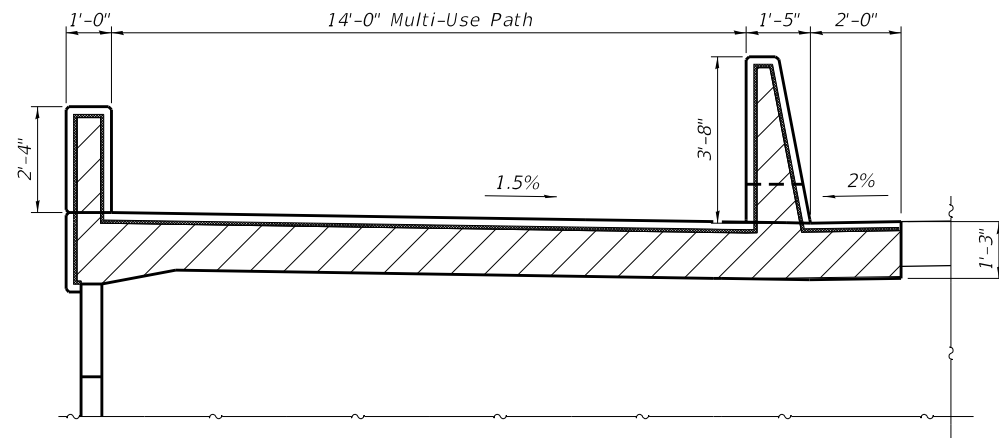
SHEET 12 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	355
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

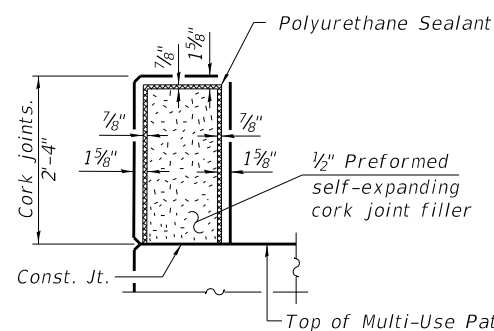
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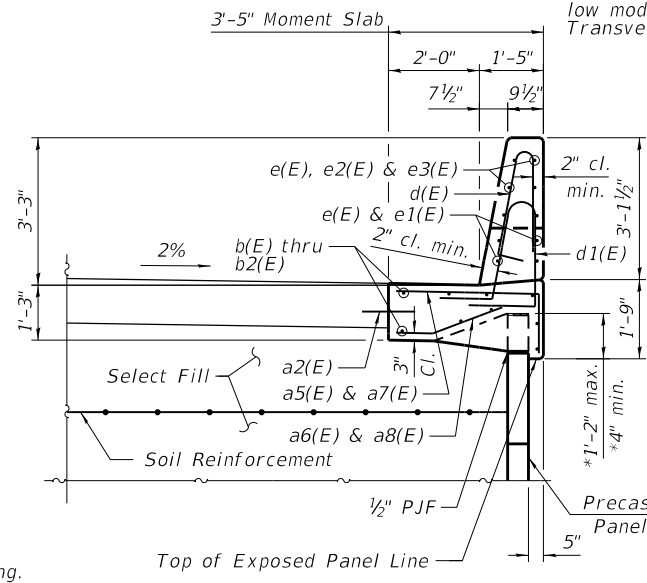
TYPICAL SECTION THROUGH
MULTI-USE PAVEMENT



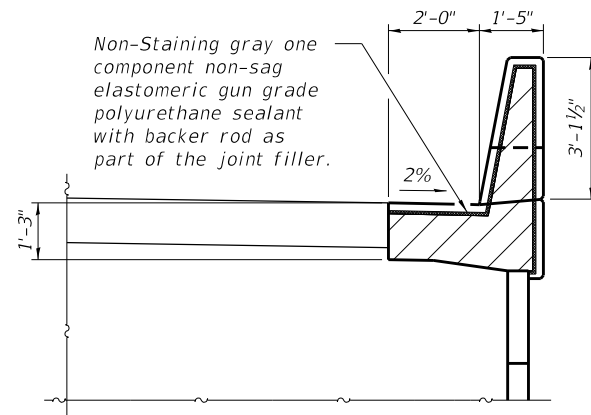
EXPANSION JOINT DETAIL FOR
MULTI-USE PAVEMENT



PARAPET/SEPARATION BARRIER JOINT DETAILS

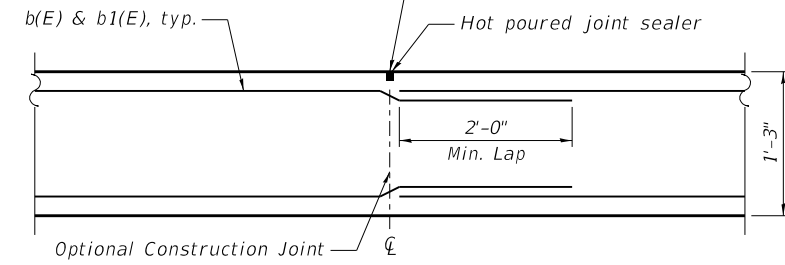


TYPICAL SECTION THROUGH
EAST MOMENT SLAB

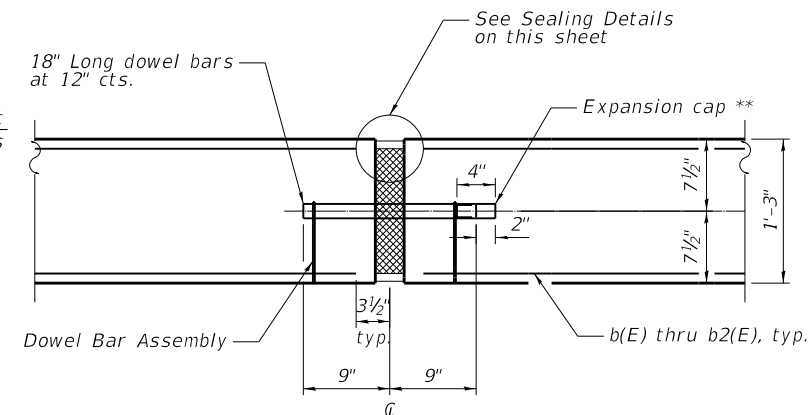


EXPANSION JOINT DETAIL FOR
EAST MOMENT SLAB

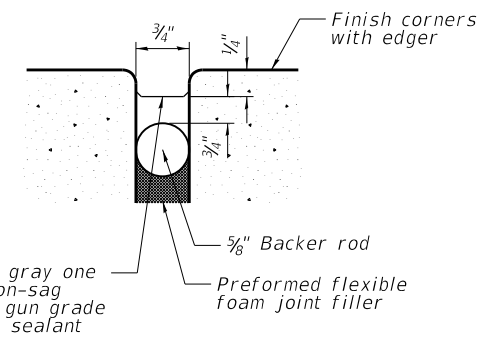
1/2" x 2" formed joint sealed with hot poured, low modulus, polymer sealant. (Sawcut Joint if Transverse Construction Joint is omitted)



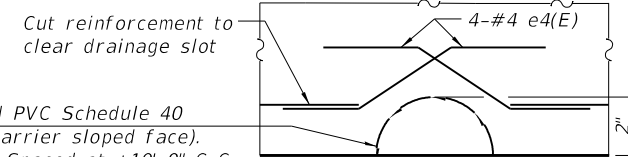
TRANSVERSE CONTRACTION JOINT



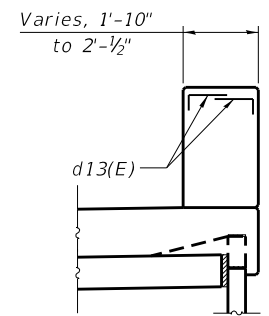
TRANSVERSE EXPANSION JOINT



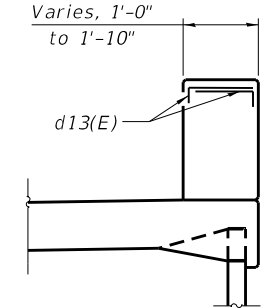
SEALING DETAIL



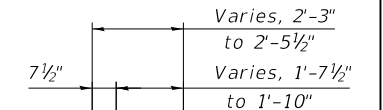
DETAIL A



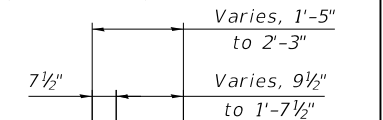
SECTION A-A
W. PAR. COPING DETAIL
AT APPROACH FOOTING
(At Transition)



SECTION B-B
W. PAR. COPING DETAIL
(At Transition)



SECTION C-C
E. PAR. COPING DETAIL
AT APPROACH FOOTING
(At Transition)



SECTION D-D
E. PAR. COPING DETAIL
(At Transition)



USER NAME =	DESIGNED - KN	REVISED -
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PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

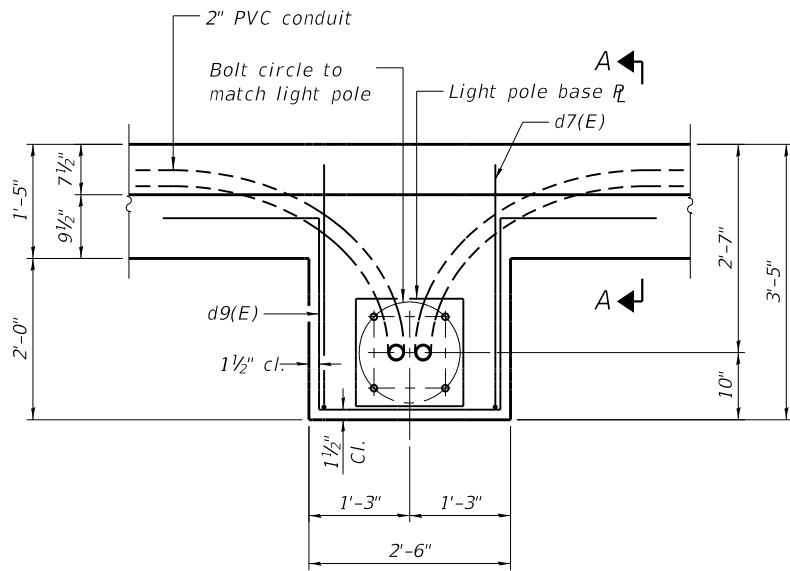
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB SECTIONS AND DETAILS
MSE WALL 01

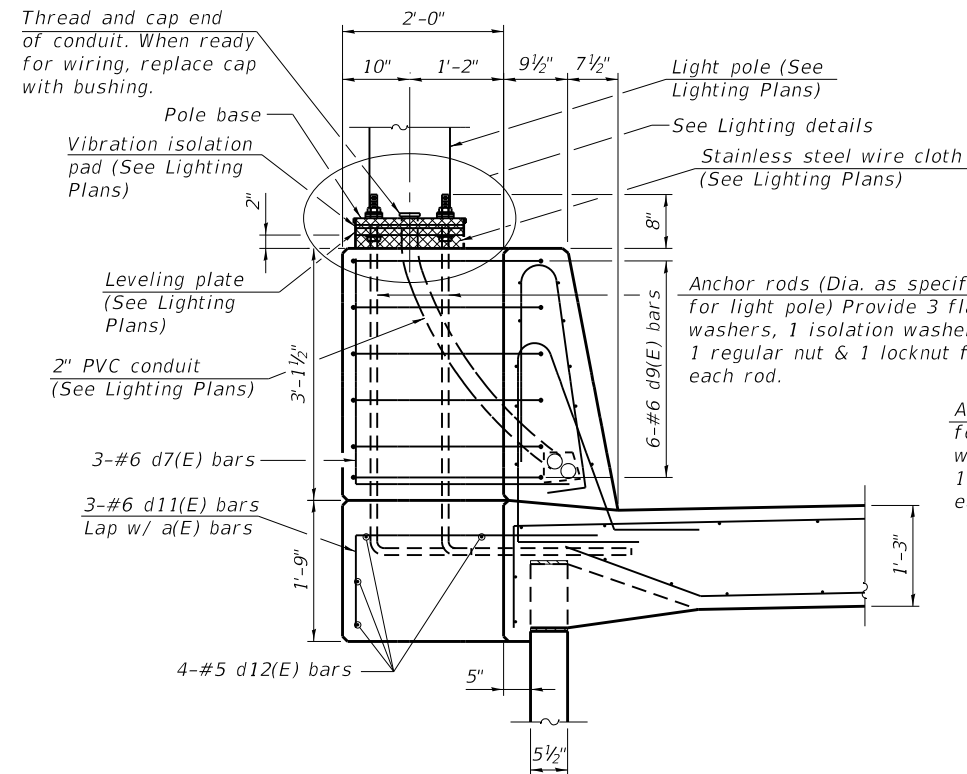
SHEET 13 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	356
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

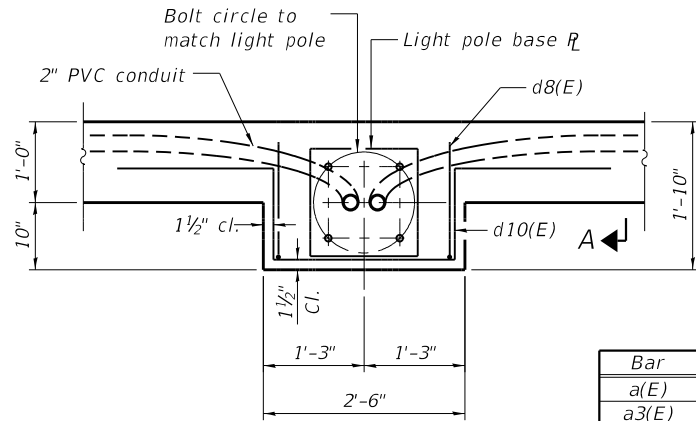
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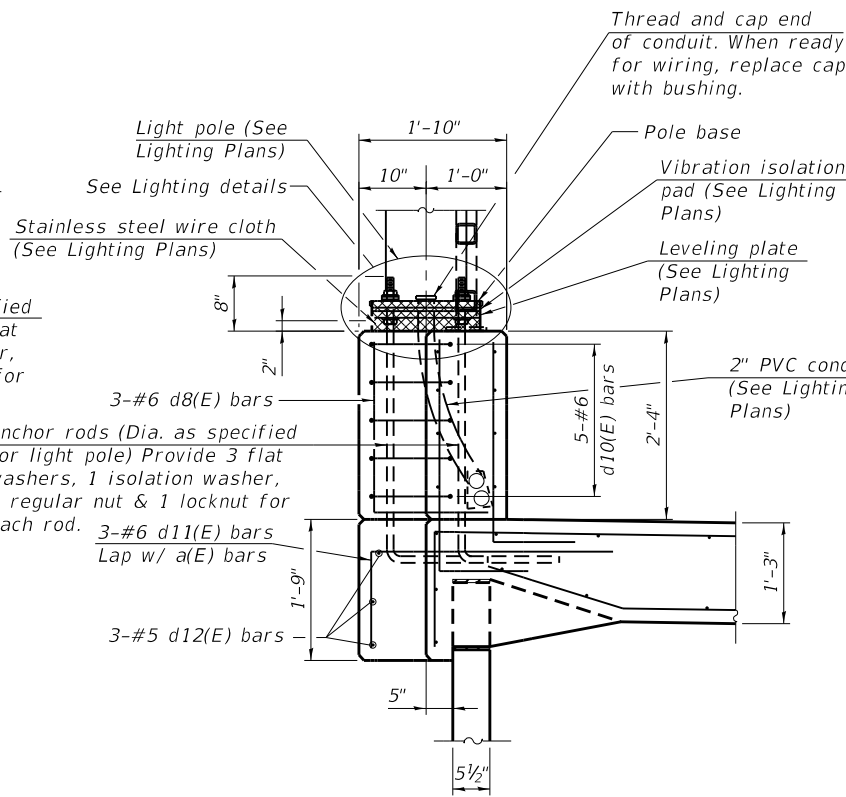
PLAN
(At East Parapet)



SECTION A-A
(At East Parapet)

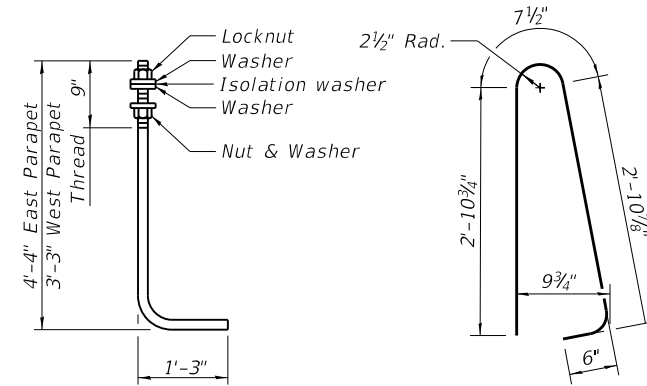


PLAN
(At West Parapet)



SECTION A-A
(At West Parapet)

Note:
Cost of anchor rods and conduit is included with Concrete Superstructure.

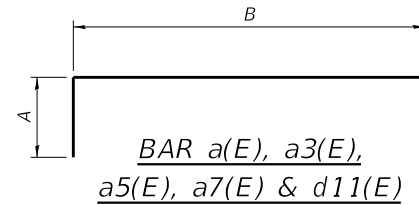


ANCHOR ROD

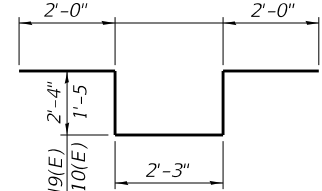
Diameter as specified for light poles.
(ASTM F 1554 Grade 105) Full length
hot dipped galvanized

BAR d6(E)

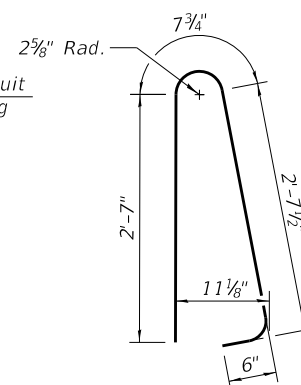
Bar	A	B
a(E)	1'-5"	18'-1"
a3(E)	1'-5"	19'-1"
a5(E)	1'-3"	3'-1"
a7(E)	1'-3"	4'-1"
d11(E)	1'-5"	3'-0"



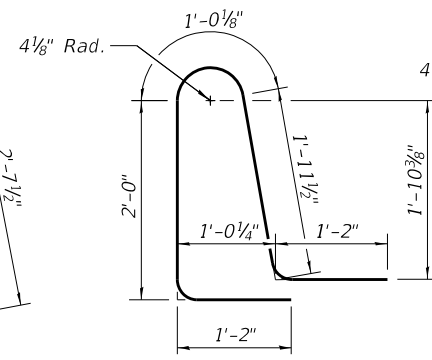
BAR a(E), a3(E),
a5(E), a7(E) & d11(E)



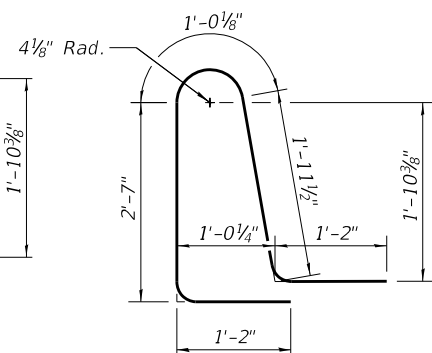
BAR d9(E) & d10(E)



BAR d(E)



BAR d1(E)



BAR d2(E)

Bar	A	B
d3(E)	2'-10"	1'-2"
d4(E)	2'-9"	1'-2"
d7(E)	2'-10"	3'-0"
d8(E)	2'-0"	1-5

STRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	676	#6	19'-6"	
a1(E)	341	#5	18'-1"	
a2(E)	234	#6	4'-0"	
a3(E)	31	#6	20'-6"	
a4(E)	16	#5	19'-1"	
a5(E)	676	#6	4'-4"	
a6(E)	341	#5	3'-1"	
a7(E)	31	#6	5'-4"	
a8(E)	16	#5	4'-1"	
b(E)	300	#5	23'-11"	
b1(E)	50	#5	26'-1"	
b2(E)	72	#5	14'-8"	
d(E)	538	#5	6'-5"	
d1(E)	538	#5	7'-4"	
d2(E)	538	#5	7'-11"	
d3(E)	538	#5	4'-0"	
d4(E)	538	#5	3'-11"	
d5(E)	94	#4	2'-2"	
d6(E)	538	#5	7'-0"	
d7(E)	6	#6	5'-10"	
d8(E)	3	#6	3'-5"	
d9(E)	12	#6	10'-11"	
d10(E)	5	#6	9'-1"	
d11(E)	9	#6	4'-5"	
d12(E)	11	#5	2'-2"	
d13(E)	12	#4	1'-5"	
e(E)	522	#4	14'-8"	
e1(E)	22	#4	5'-2"	
e2(E)	96	#4	24'-1"	
e3(E)	16	#4	26'-2"	
e4(E)	140	#4	1'-5"	
Reinforcement Bars, Epoxy Coated			Pound	72,910
Concrete Structures			Cu. Yd.	513.8
Protective Coat			Sq. Yd.	1,308

Bars indicated thus 1 x 2-#4 etc. indicates
1 line of bars with 2 lengths per line.



USER NAME =	DESIGNED - KN	REVISED -
CHECKED - PRD	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

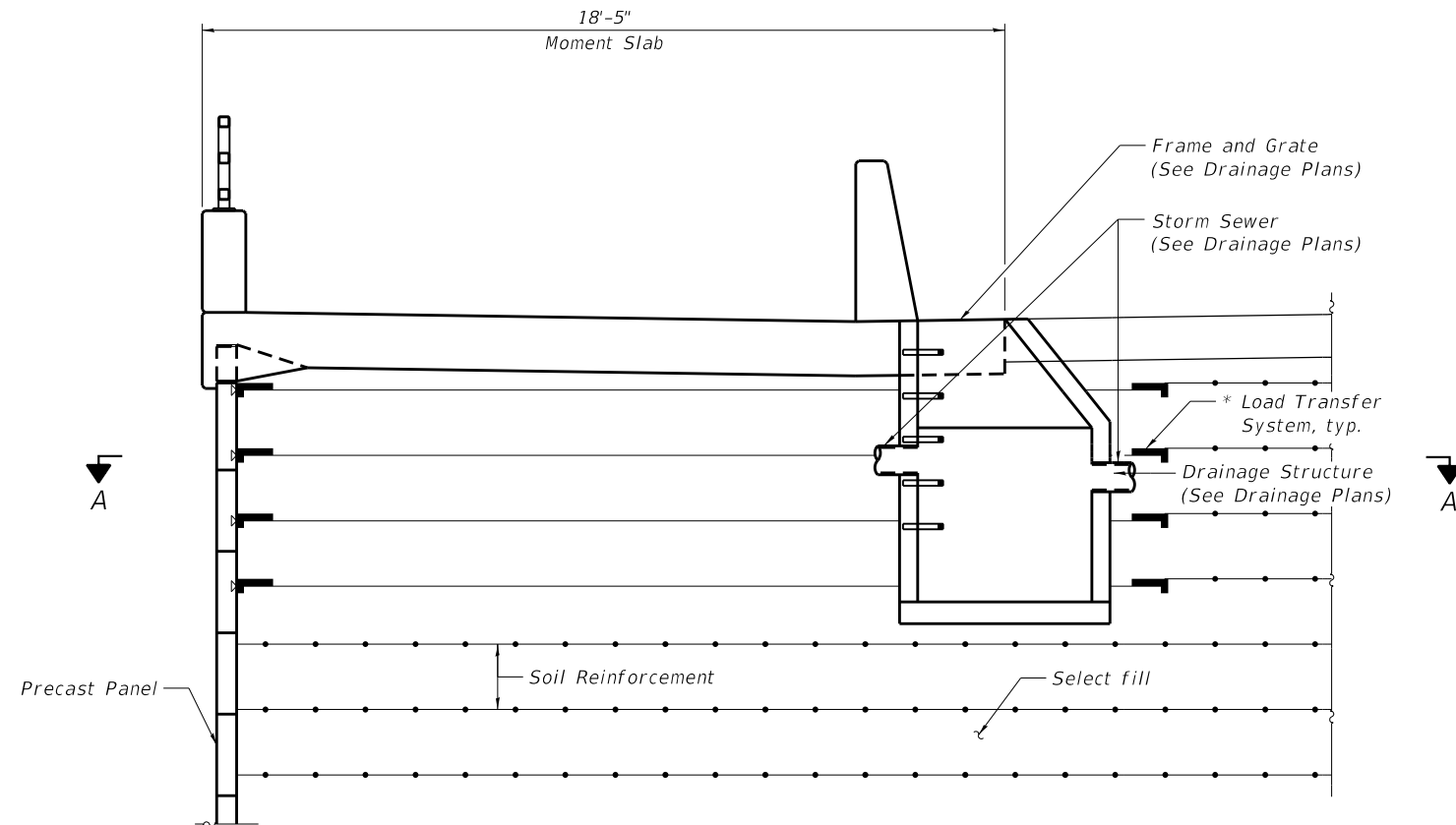
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB AND LIGHT POLE DETAILS
MSE WALL 01

SHEET 14 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	357
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

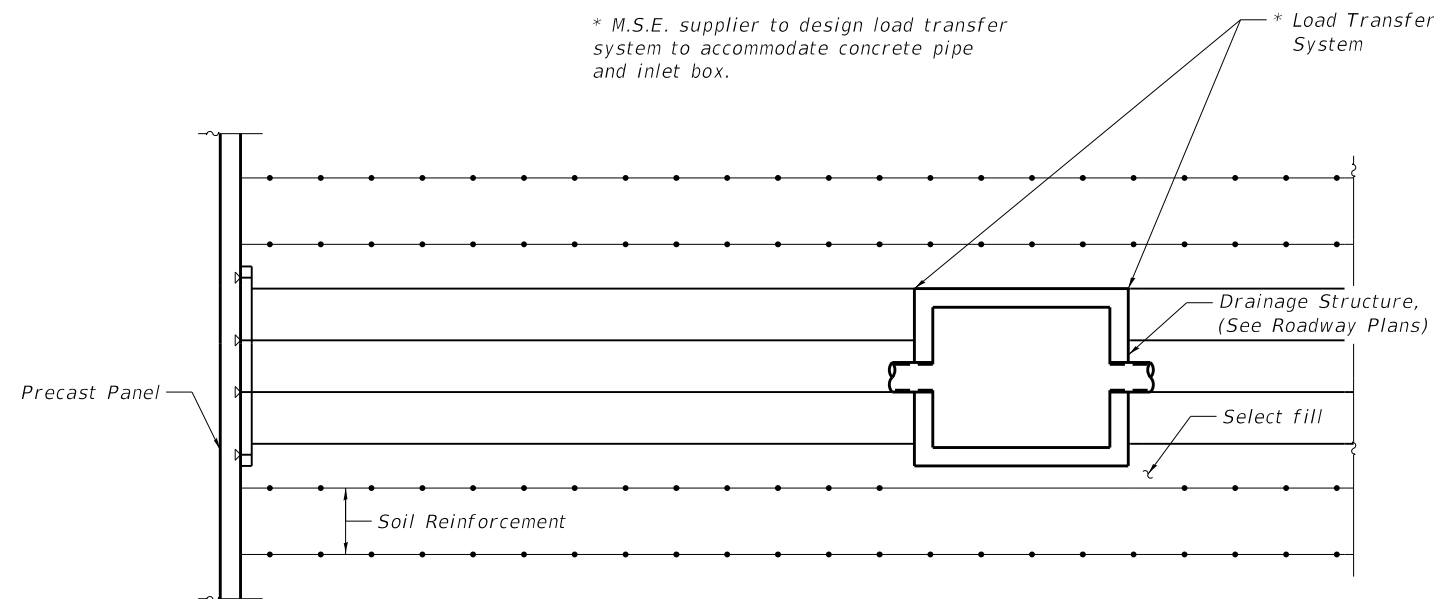
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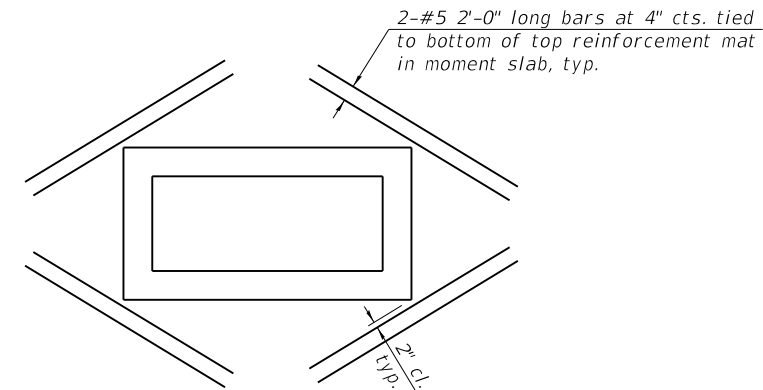
**LOAD TRANSFER SYSTEM
AROUND DRAINAGE DETAIL**
(West Wall shown, East Wall similar.)

Reinforcing in moment slab, parapet and drainage structure not shown for clarity.

* M.S.E. supplier to design load transfer system to accommodate concrete pipe and inlet box.



SECTION A-A



REINFORCEMENT AROUND FRAME AND GRATE

Shift transverse reinforcement and cut longitudinal reinforcement in moment slab to clear drainage structures. Coat exposed ends with epoxy paint. Cost shall be included for payment in the contract unit price for Reinforcement Bars, Epoxy Coated.



USER NAME =	DESIGNED - ES	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

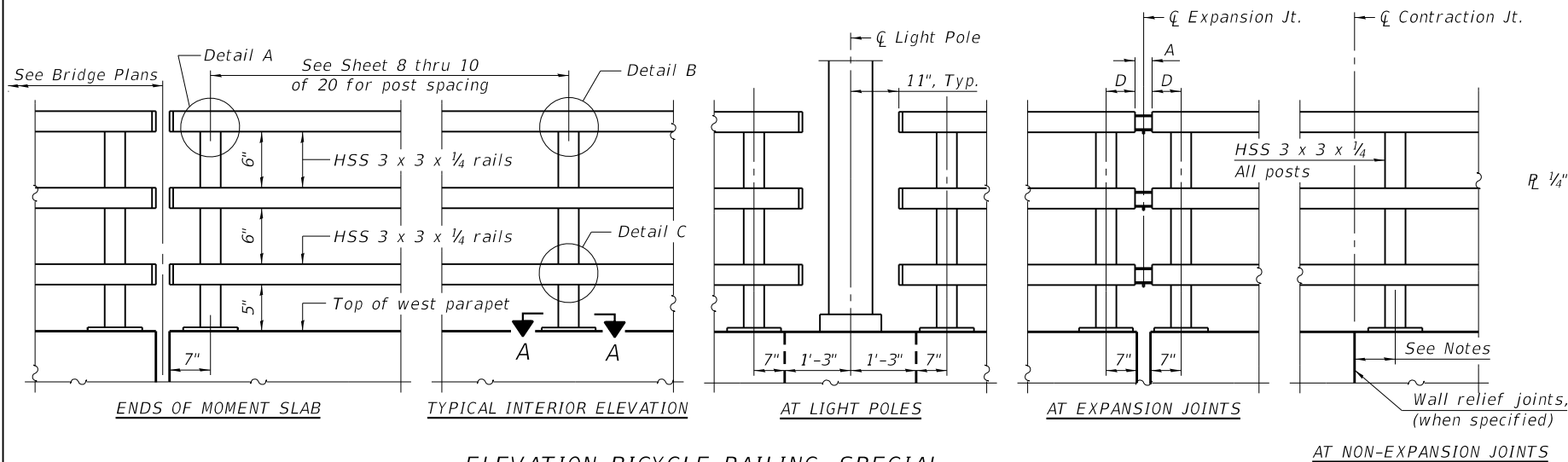
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE DETAILS
MSE WALL 01**

SHEET 15 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	358
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRRCAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 01_Sheet_16_Railing Details.dgn



ELEVATION BICYCLE RAILING, SPECIAL
(Inside Face of Three Element Rail)

Notes:
Place reinforcement bars to miss anchor rod locations.
All HSS tubing used for the Bicycle Railing, Special shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
All HSS tubing used for the Bicycle Railing, Special shall be ASTM A500 grade C.
All base plates used for the Bicycle Railing, Special shall be AASHTO M270 grade 50.
All heavy hex nuts shall be according to ASTM A 563 grade DH.
All fully threaded anchor rods shall be ASTM F1554 grade 105.
The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.
Contractor shall offset posts to miss any aluminum sheet or cork joints for sufficient installation of the anchorage assembly.
Rail splice inserts may be built out of bent plates of the same thicknesses and outside geometry limits as the 4 plate rail splice inserts shown.
When the contract specifies a galvanized railing, all steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications. When the contract specifies a painted railing, all posts, rail, splices, anchor devices and plates of the railing shall be painted according to the paint system for railings as specified in the General Notes.

See sheet 8 thru 12 of 20 for moment slab expansion joint locations and dimensions.

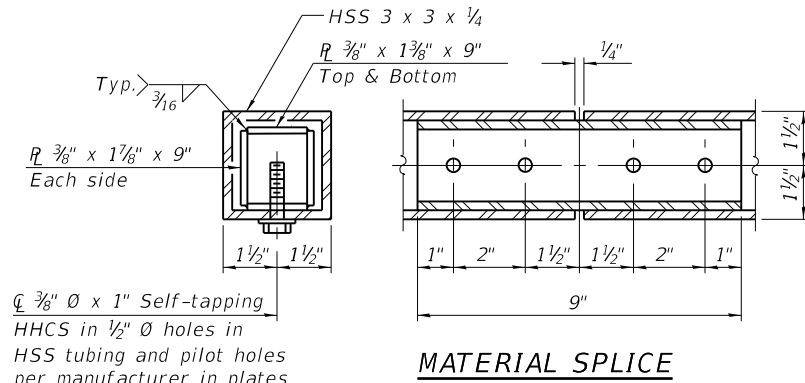
RAILING CRITERIA

MASH 2016 Test Level	4
Bicycle Railing, Special Weight (plf)	47
Max Post Spacing	10'-0"

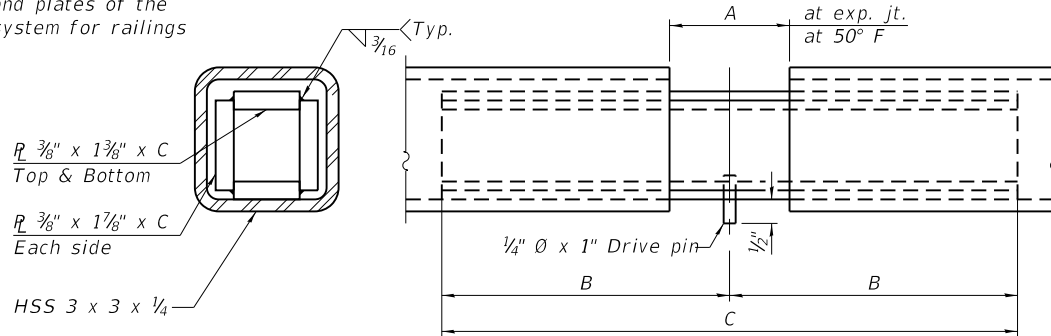
TABLE OF DIMENSIONS

Location	T	A	B	C	D
Over Strip Seal Jt.	≤4"	2½"	1'-2"	2'-4"	6½"
At Light Poles	8"	NA - Coordinate 8" Wide Access With Fabricator			
At Bridge Relief Joints	NA - Material Splices Per Fabricator				

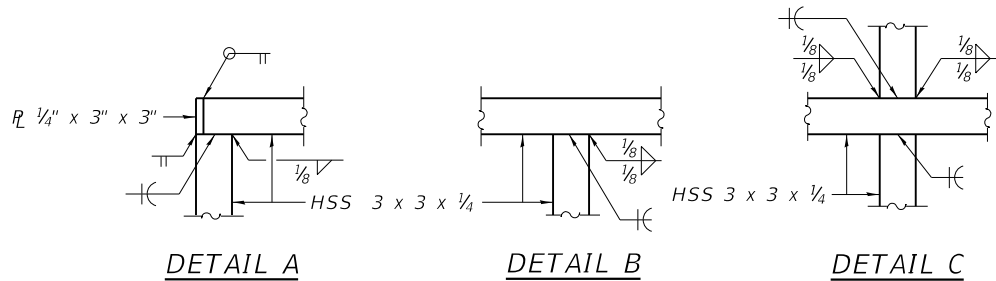
T = ; total movement based on total temperature range from -20°F to 120°F along centerline of roadway at expansion joint.
OR
8" hand-hold access for maintenance of light poles (when present; replace splice with 8" gap)



MATERIAL SPLICE



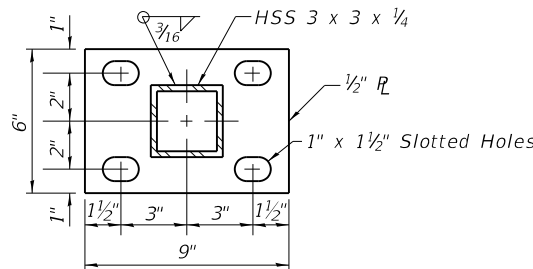
EXPANSION SPLICE



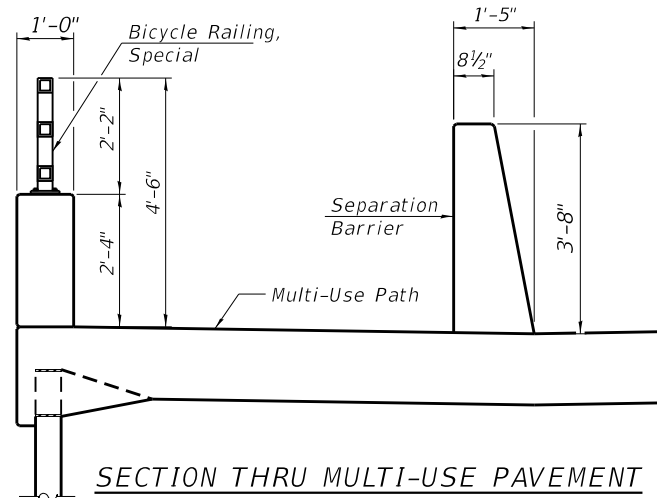
DETAIL A

DETAIL B

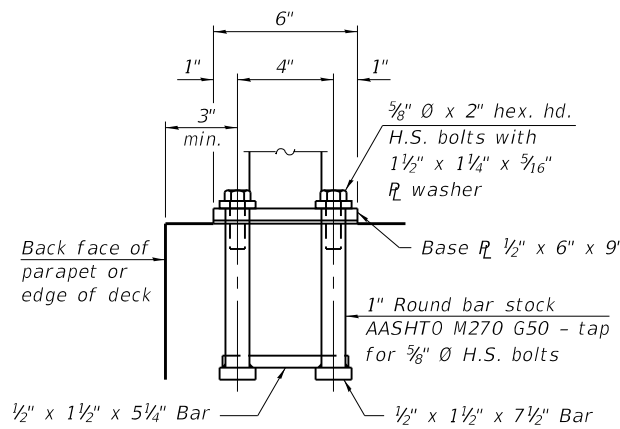
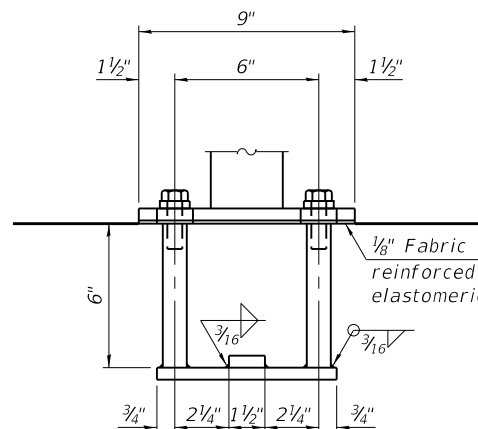
DETAIL C



SECTION A-A



SECTION THRU MULTI-USE PAVEMENT



ANCHORAGE ASSEMBLY

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 3/8" Ø fully threaded anchor rods with the same plate washers as specified above and heavy hex lock nuts 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, Special	Foot	351



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - PRD	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - PRD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RAILING DETAILS
MSE WALL 01**

SHEET 16 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	359
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

STRUCTURE BORING LOG

Page 1 of 1

Date Started 8/6/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 8/6/15

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION East Side S. 1SW/12NW , TWP. 39N , RNG. 8E

Boring No.	SB-101	D	B		Surface Water Elev.	
Station	Sta. 111+42	E	L		Groundwater Elev.:	
Offset	39.00ft RT	P	O		when drilling	762.2
		T	W	Qu	at Completion	759.7
Surface Elev.	772.70 ft	H	S	tsf	after	Hrs.
				W		
				%		

	771.70		P	19.0
13" Crushed Stone		3 6 7	4.5	
Hard to stiff brown and gray CLAY, little gravel, moist A-6		5 5 7	B 4.33 15%	18.3
	-5			
		5 7 9	B 1.89 15%	18.1
	764.70			
Stiff to very stiff brown and gray CLAY LOAM, little gravel, moist A-4		7 5 8	B 1.79 15%	11.6
	-10			
		8 10 12	B 3.93 15%	12.2
	759.70			
Very stiff gray CLAY LOAM, little gravel, moist A-4		4 6 8	B 3.08 15%	11.0
	757.70	-15		
End of Boring at 15.0'				
Diedrich D-120 Truck Rig (#315)				
CME Automatic Hammer				
	-20			
	-25			

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 1

Date Started 8/6/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 8/6/15

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION East Side S. 1SW/12NW , TWP. 39N , RNG. 8E

Boring No.	<u>SB-102</u>	D	B		Surface Water Elev.	<u> </u>
Station	<u>Sta 112+16</u>	E	L		Groundwater Elev.:	<u> </u>
Offset	<u>37.00ft RT</u>	P	O		when drilling	<u>Dry</u>
		T	W	Qu	at Completion	<u>Dry</u>
Surface Elev.	<u>770.10</u> ft	H	S	tsf	after	<u> </u> Hrs.
				W		
				%		

[illegible]

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 1

Date Started 8/6/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 8/6/13

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION East Side S. 1SW/12NW , TWP. 39N , RNG. 8E

Boring No.	SB-103	D	B		Surface Water Elev.	
Station	Sta. 112+91	E	L		Groundwater Elev.:	
Offset	42.00ft RT	P	O		when drilling	Dry
		T	W	Qu	at Completion	Dry
Surface Elev.	767.20 ft	H	S	tsf	after	Hrs.
				W		
				%		

[illegible]

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 1

Date Started 8/6/15

Date Completed 8/6/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 8/6/13

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION East Side S. 1SW/12NW , TWP. 39N , RNG. 8E

[illegible]

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 1

Date Started 8/6/15

Date Completed 8/6/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 8/8/13

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION East Side S. 1SW/12NW , TWP. 39N , RNG. 8E

[illegible]

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 1

Date Started 8/7/15

Date Completed 8/7/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 9/7/15

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION East Side S. 1SW/12NW , TWP. 39N , RNG. 8E

Boring No.	SB-106		D E P T H	B L O W S	Qu tsf	W %	Surface Water Elev. Groundwater Elev.: when drilling _____ at Completion _____ after _____ Hrs. _____	D E P T H	B L O W S	Qu tsf	W %
Station	Sta. 115+21										
Offset	ft RT										
Surface Elev.	755.30	ft									
FILL - Black clayey TOPSOIL							729.80				
FILL - Black and brown CLAY, trace gravel, trace organic, moist A-7-6 Wet Combustion = 5.5%	754.30			3 3 3	B 2.0	29.8	Hard gray CLAY, little gravel, moist A-6		6 9 9	B 3.07 15%	18.2
Med. dense brown SANDY LOAM, some gravel, moist to wet A-1-b	752.30			6 6 7					9 6 9	B 5.19 15%	15.1
				11 11 11							
	747.30										
Stiff brown LOAM, little gravel, very moist A-4				9 11 11	P 1.25	13.0			11 14 10	B 4.33 15%	17.8
	744.80						End of Boring at 35.0'				
Hard to very stiff gray CLAY LOAM, little gravel, moist A-4				9 11 12	B 4.5 15%	14.3	CME-75 Truck Rig (#256) CME Automatic Hammer				
				9 7 9	B 3.27 15%	14.4					
				7 9 11	B 3.32 15%	15.6					
				7 11 9	B 3.72 15%	14.5					
				6 9 9	B 2.47 15%	12.8					
				7 11 8	B 3.34 15%	14.0					

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 1

Date Started 9/2/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 9/2/15

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79.851A

COUNTY Kane LOCATION West Side S. 1SW/12NW , TWP. 39N , RNG. 8E

Boring No.	SB-112	D	B			Surface Water Elev.	
Station	Sta. 111+23	E	L			Groundwater Elev.:	
Offset	64.00ft LT	P	O			when drilling	Dry
		T	W	Qu	W	at Completion	Dry
		H	S	tsf	%	after	Hrs.
Surface Elev.	771.00 ft						

Soil Description	Depth (ft)	Moisture (%)	Gravel (%)
Black clayey TOPSOIL	770.00	5	B
Hard brown CLAY, little gravel, moist	7	4.59	16.3
A-7-6	9	15%	
Sample 1:			
LL/PL/PI = 44/16/28	4	B	15.0
	7	4.73	
	9	15%	
	-5		
	765.50		
Stiff to very stiff brown CLAY	4	B	13.5
LOAM, little gravel, moist	4	1.49	
A-6	6	15%	
	3	B	12.6
	6	2.81	
	8	15%	
	-10		
	760.50		
Very stiff to stiff brown and gray LOAM, moist	6	B	10.5
A-4	6	2.94	
	7	15%	
	3	B	12.0
	5	1.62	
	7	15%	
	-15		
End of Boring at 15.0'			
Diedrich D-120 Truck Rig (#315)			
CME Automatic Hammer			
	-20		
	-25		

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
 Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 1

Date Started 9/2/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 9/2/15

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION West Side S. 1SW/12NW , TWP. 39N , RNG. 8E

Boring No.	SB-113	D	B	Surface Water Elev.	
Station	Sta 111+97	E	L	Groundwater Elev.:	
Offset	62.00ft LT	P		when drilling	Dry
		T	W	at Completion	Dry
Surface Elev.	767.40 ft	H	S	after	Hrs.
			Qu tsf	W %	

2" Bituminous Concrete	767.20				
13" Crushed Stone Base	766.10	1	P	24.7	
Medium stiff dark brown CLAY, trace gravel, trace organic, very moist A-6	764.40	3 3	0.75		
Stiff to very stiff brown CLAY LOAM, trace gravel, moist A-6	-5	4 5 7	P 1.5	14.1	
		4 5 6	B 1.89 15%	13.4	
		3 3 5	B 2.42 15%	15.0	
	756.90	-10			
Stiff to very stiff gray LOAM, little gravel, moist A-4		5 7 7	B 15%	10.6	
		5 6 7	B 2.02 15%	10.9	
		-15			
		4 5 7	B 3.54 15%	11.0	
	749.40				
Very stiff gray CLAY LOAM, little gravel, moist A-4	747.40	5 7 9	B 3.27 15%	14.4	
End of Boring at 20.0'					
Diedrich D-120 Truck Rig (#315)					
CME Automatic Hammer					
	-25				

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 1

Date Started 9/9/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall Date Completed 9/9/13

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION West Side S. 1SW/12NW , TWP. 39N , RNG. 8E

Boring No. <u>SB-114</u>	D	B			Surface Water Elev. _____	D	B		
Station <u>Sta. 112+72</u>	E	L			Groundwater Elev.: _____	E	L		
Offset <u>59.00ft LT</u>	P	O			when drilling _____ <u>Dry</u>	P	O		
	T	W			at Completion _____ <u>Dry</u>	T	W		
	H	S	Qu	W	after _____ Hrs. _____	H	S	Qu	W
Surface Elev. <u>764.00</u> ft			tsf	%				tsf	%

[illegible]

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
 Stations, Depths, Offset, and Elevations are in Feet

MODEL: Main
FILE NAME: W:\894-048 KDOT Kirk Road over UPRRCAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 01\WSE Wall 01_Sheet_20_Boring IV.dgn

Testing Service Corporation

STRUCTURE BORING LOG

Page 1 of 1

Date Started 9/9/15

Date Completed 9/9/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79.851A

COUNTY Kane LOCATION West Side S. 1SW/12NW, TWP. 39N, RNG. 8E

Boring No. SB-115	D	B			Surface Water Elev.	D	B		
Station Sta. 113+47	E	L			Groundwater Elev.:	E	L		
Offset 58.00ft LT	P	O			when drilling 731.4	P	O		
	T	W	Qu	W	at Completion 731.4	T	W	Qu	W
Surface Elev. 759.40 ft	H	S	tsf	%	after Hrs.	H	S	tsf	%
Black clayey TOPSOIL									
758.10		2	B	23.6	Very stiff gray CLAY LOAM,				
		3	1.89		little gravel, moist		5	B	14.8
Stiff brown CLAY, trace		5	15%		A-4		7	2.88	
gravel, moist to very moist							9	15%	
A-6									
		4	P	23.4			3	B	15.4
		5	1.5				6	2.94	
								15%	
					729.40				
		4	B	19.7	End of Boring at 30.0'				
		4	1.49		Diedrich D-120 Truck Rig				
		5	15%		(#315)				
					CME Automatic Hammer				
751.40									
Very stiff brown CLAY LOAM,		4	B	13.4					
trace gravel, moist		6	3.75						
A-6		6	15%						
		5	B	16.0					
		6	2.02						
		7	15%						
746.40									
Hard gray LOAM, little gravel,		6	B	12.1					
occasional Cobbles and		8	4.59						
Boulders, moist		11	15%						
A-4									
		100/4"	B	12.6					
			4.00						
			15%						
		5	B	13.6					
		7	4.31						
		11	15%						
738.90									
Very stiff gray CLAY LOAM,		6	B	14.0					
little gravel, moist		8	3.93						
A-4		12	15%						
		5	B	14.0					
		6	3.89						
		8	15%						

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation

STRUCTURE BORING LOG

Page 1 of 1

Date Started 9/9/15

Date Completed 9/9/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79.851A

COUNTY Kane LOCATION West Side S. 1SW/12NW, TWP. 39N, RNG. 8E

Boring No. SB-116	D	B			Surface Water Elev.	D	B		
Station Sta. 114+22	E	L			Groundwater Elev.:	E	L		
Offset 59.00ft LT	P	O			when drilling 748.5	P	O		
	T	W	Qu	W	at Completion 746.5	T	W	Qu	W
Surface Elev. 756.50 ft	H	S	tsf	%	after Hrs.	H	S	tsf	%
FILL - Black clayey TOPSOIL,									
trace Asphalt pieces					755.50				
Stiff brown CLAY, trace		3	P	23.8	Very stiff gray CLAY, little				
gravel, moist		4	1.75		gravel, moist		4	B	15.7
A-6		5			A-6		6	2.02	
							7	15%	
753.50									
Stiff brown LOAM, little to		4	P	12.1			7	B	15.1
some gravel, moist A-6		6	1.5				10	3.41	
Sample 2:		7					11	15%	
LL/PL/PI = 19/12/7									
		6	P	11.6					
		7	1.5						
		9							
748.50									
Hard to very stiff brown and		6	B	13.6			7	B	15.7
gray CLAY LOAM, little gravel,		6	4.03				12	3.54	
occasional sand seams, moist		8	10%				14	15%	
A-4									
					721.50				
		8	B	12.3	End of Boring at 35.0'				
		10	3.87		Diedrich D-120 Truck Rig				
		11	15%		(#315)				
743.50					CME Automatic Hammer				
Medium dense to dense		10		9.1					
SANDY LOAM, some gravel,		13							
occasional Cobbles and		16							
Boulders, wet									
A-2-4									
		100/3"		10.5					
738.50									
Very stiff gray CLAY, little		4	B	16.0					
gravel, moist		6	2.22						
A-6		8	15%						
		6	B	15.5					
		7	2.35						
		11	15%						
		100/2"	B	15.3					
			3.96						
			15%						

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation

STRUCTURE BORING LOG

Page 1 of 1

Date Started 9/4/15

Date Completed 9/4/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall

SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79.851A

COUNTY Kane LOCATION West Side S. 1SW/12NW, TWP. 39N, RNG. 8E

Boring No. SB-117	D	B			Surface Water Elev.	D	B		
Station Sta. 114+97	E	L			Groundwater Elev.:	E	L		
Offset 57.00ft LT	P	O			when drilling 748.1	P	O		
	T	W	Qu	W	at Completion 745.6	T	W	Qu	W
Surface Elev. 753.60 ft	H	S	tsf	%	after Hrs.	H	S	tsf	%
FILL - Black clayey TOPSOIL									
752.80					Hard to very stiff gray CLAY				
		2	P	26.2	LOAM, little gravel, moist		8	B	13.7
FILL - Black and gray CLAY,		3	0.5		A-4		9	2.61	
trace gravel, trace organic,		3					9	15%	
very moist									
A-7-6									
750.60									
Medium Stiff dark brown and									
brown CLAY, trace gravel,		3	B	35.5			6	B	14.1
trace organic, very moist		3	0.70				7	2.48	
A-7-6		3	15%				8	15%	
748.10									
Med. dense brown SANDY									
LOAM, some gravel, wet		5		9.3					
A-2-4		7							
		9							
745.60									
Med. dense brown SANDY									
LOAM, trace gravel, wet		4		9.9			7	B	14.5
A-2-4		4					7	2.55	
		6					8	15%	
		8		9.8					
		9							
		12							
740.60									
Hard to very stiff gray CLAY		12	B	13.2			8	B	14.1
LOAM, little gravel, moist		8	4.13				9	2.84	
A-4		10	15%				10	15%	
					713.60				
		7	B	13.1	End of Boring at 40.0'				
		10	4.59		CME 750 ATV Drill Rig (#275)				
		12	15%		CME Automatic Hammer				
		12	B	13.1					
		13	5.06						
		11	15%						
		8	B	13.3					
		10	4.53						
		12	15%						
		7	B	14.4					
		9	3.21						
		11	15%						

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet



USER NAME =	DESIGNED - KN	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS IV
MSE WALL 01

SHEET 20 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	363
CONTRACT NO. 61M13				
ILLINOIS		FED. AID PROJECT		

Bench Mark: Chiseled square in top of parapet wall located at the southwest corner of existing bridge, S.N. 045-3096 at Sta. 111+08.40 Offset 30.19' LT. Elev. 782.00.

Existing Structure: S.N. 045-3096 originally constructed in 1974 as FAS Route 1100, Section 192-3VB (Kirk Road). It was repaired in 1977, 1987, 1990, 1998, 2003, 2013, and 2021. It underwent a rehabilitation in 2001. The existing superstructure is 18 span continuous, separated into 4 units, with 7½" deck and non-composite wide flange beams. Back to back of abutments is 1,376'-2" and Out-to-Out width is 62'-0". Existing substructure contains two concrete reinforced spill through abutments on piles and 17 piers; with piers 1 to 8 and 17 on spread footings, and piers 9 to 16 on piles. Traffic to be maintained using stage construction

Salvage: No Salvage.

* Contractor to verify depth.
(See roadway plans)

LEGEND

- Soil Boring
- Approximate Limits of Reinforced Soil Mass
- Approximate Limits of Reinforced Soil Mass for Temporary Wall
- Approximate Limits of Removal and Replacement of Unsuitable Material

Note:
Wall Station and offsets are measured from the ϕ of Kirk Rd. to the front face of precast panels.

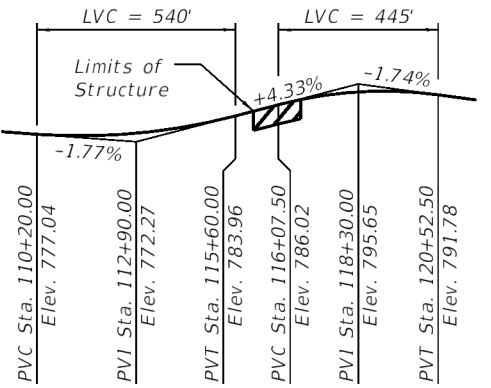
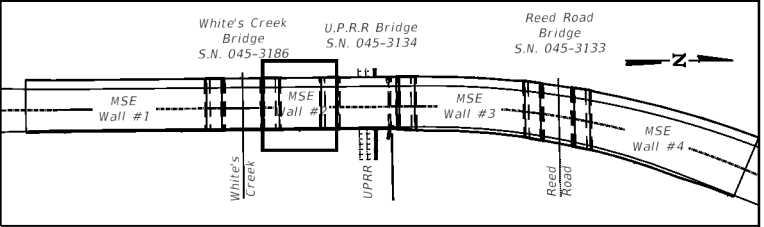
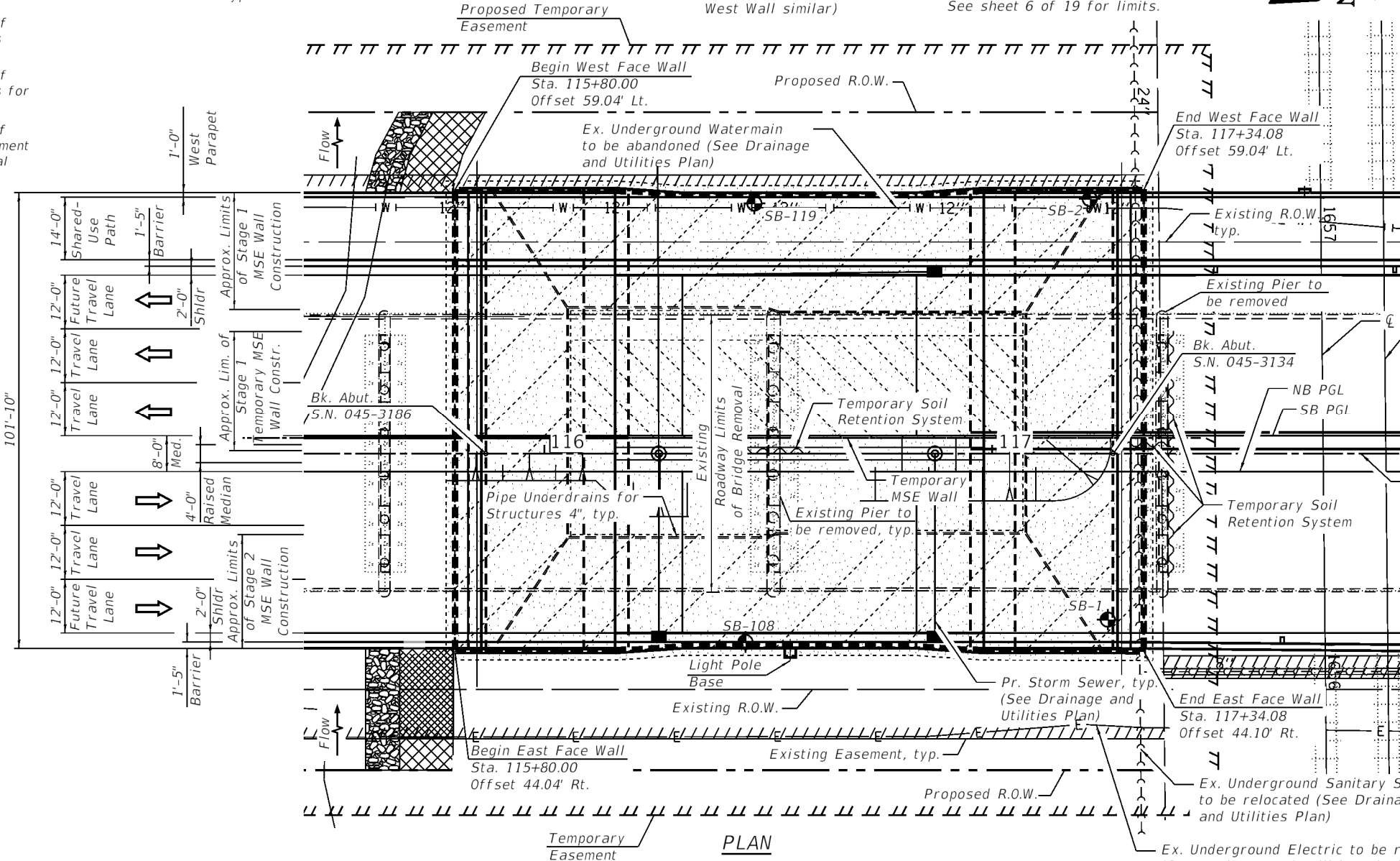
Begin Wall at Top Exposed Panel Line
Sta. 115+80.00, Elev. 775.36 (EW)
Sta. 115+80.00, Elev. 775.36 (WW)

*Ex. Underground Watermain to be abandoned, West Wall only
(See Drainage and Utilities Plan)

Pipe Underdrains for Structures (Special) 4", typ.

ELEVATION

(Looking West at Front Face of East Wall, West Wall similar)



PROFILE GRADE

(along N.B. & S.B. PGL)

DESIGN SPECIFICATIONS

2024 AASHTO LRFD Bridge Design Specifications, 10th Edition

LOADING HL-93

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

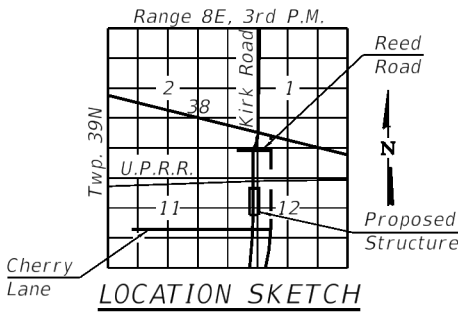
DESIGN STRESSES

FIELD UNITS

$f'_c = 4,000$ psi (Moment Slab & Parapets)
 $f'_c = 3,500$ psi (All Other Retaining Wall Concrete)
 $f_y = 60,000$ psi (Reinforcement)

PRECAST UNITS

$f'_c = 4,500$ psi (Precast Panels)



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

KIRK ROAD

F.A.P. RTE. 360 SEC. 12-00192-04-BR

KANE COUNTY

STA. 115+80.00 to STA. 117+34.08

MSE WALL 02



USER NAME	DESIGNED - ES	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE	DRAWN - ES	REVISED -
PLOT DATE	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
MSE WALL 02

SHEET 1 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	364
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES:

Reinforcement bars designated (E) shall be epoxy coated.
Slipforming of the parapets is not allowed.
A protective coat shall be applied to the top and inside faces of the parapets, separation barrier, multi-use path, and shoulders.
The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions in the field.
Wall Stations and Offsets are given to the Front Face (FF) of the wall and are measured from centerline of Kirk Road.
Wall is built in conjunction with new bridge S.N 045-3186 and S.N 045-3134.
Piles are installed prior to the construction of wall.
Horizontal dimensions measured along front face of precast panels.
Utilities shall be relocated by others.

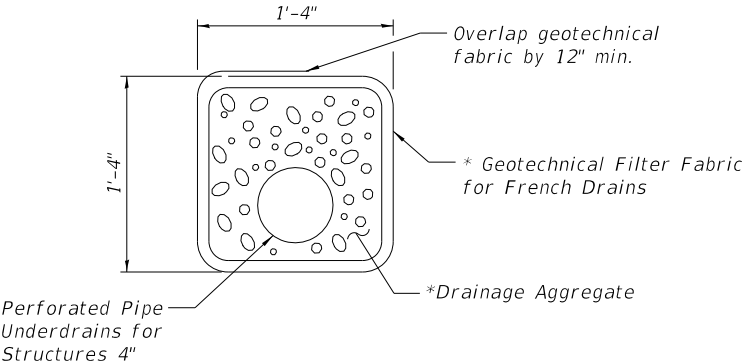
INDEX OF SHEETS

- 1. General Plan and Elevation
- 2. General Data
- 3. Typical Details
- 4. Stage I & II Construction
- 5. Wall Plan & Elevations
- 6. Temporary Wall Elevation
- 7. Typical Sections
- 8. Removal and Replacement of Unsuitable Material
- 9. Stage I Temporary Soil Retention System
- 10. Stage II Temporary Soil Retention System
- 11. Existing Structure Removal Details
- 12. Moment Slab Plan and Elevation
- 13. Moment Slab Sections and Details
- 14. Moment Slab and Light Pole Details
- 15. Drainage Details I
- 16. Drainage Details II
- 17. Railing Details
- 18. Boring Logs I
- 19. Boring Logs II

TOTAL BILL OF MATERIAL

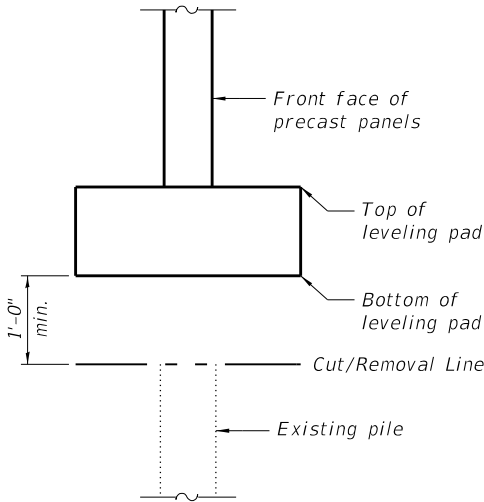
Item	Unit	Total
Geotechnical Fabric For Ground Stabilization	Sq Yd	1,968
Aggregate Subgrade Improvement	Cu Yd	4,951
Structure Excavation	Cu Yd	1,974
Removal And Disposal Of Unsuitable Material For Structures	Cu Yd	4,951
Concrete Structures	Cu Yd	125.7
Form Liner Textured Surface	Sq Ft	14,020
Protective Coat	Sq Yd	310
Reinforcement Bars, Epoxy Coated	Pound	17,320
Temporary Soil Retention System	Sq Ft	970
Mechanically Stabilized Earth Retaining Wall	Sq Ft	15,305
Temporary Mechanically Stabilized Earth Retaining Wall	Sq Ft	4,560
Drainage System For Structures	L Sum	0.25
Pipe Underdrains For Structures 4"	Foot	432
Staining Concrete Structures	Sq Ft	14,020
Bicycle Railing, Special	Foot	83

See SN 045-3186 for Removal of Existing Structures.

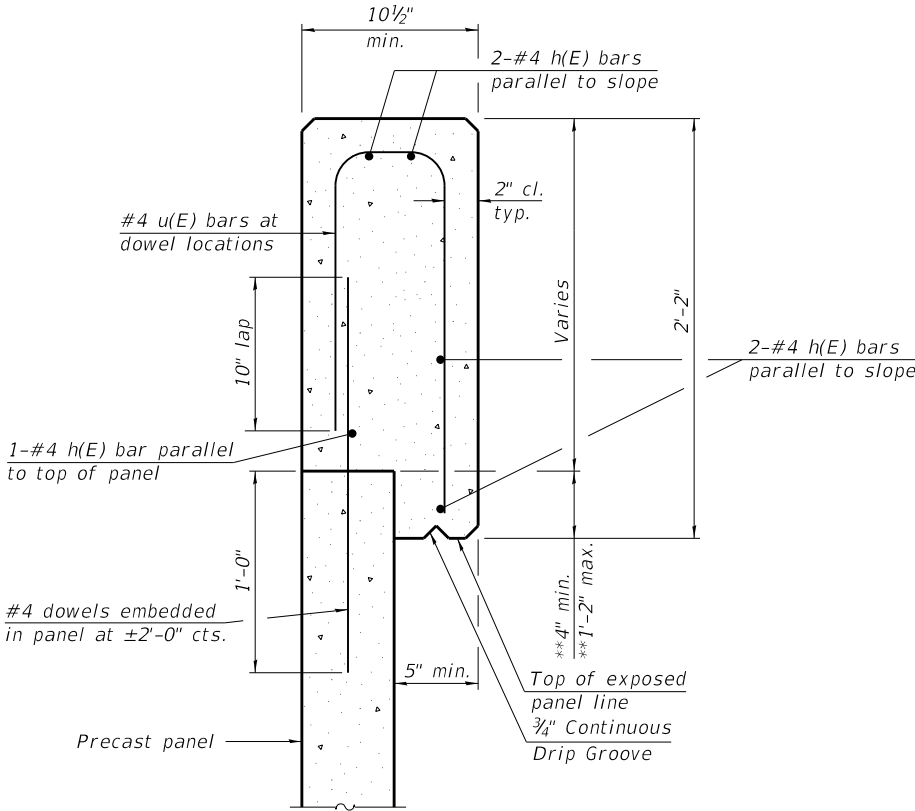


PIPE UNDERDRAIN DETAIL

* Included in cost for Pipe Underdrains for Structures 4"

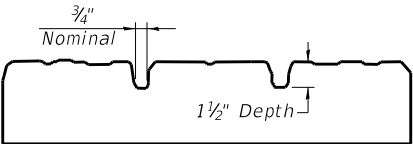
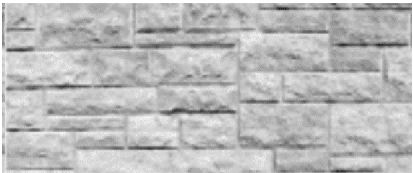


SECTION THRU REMOVAL OF STRUCTURE

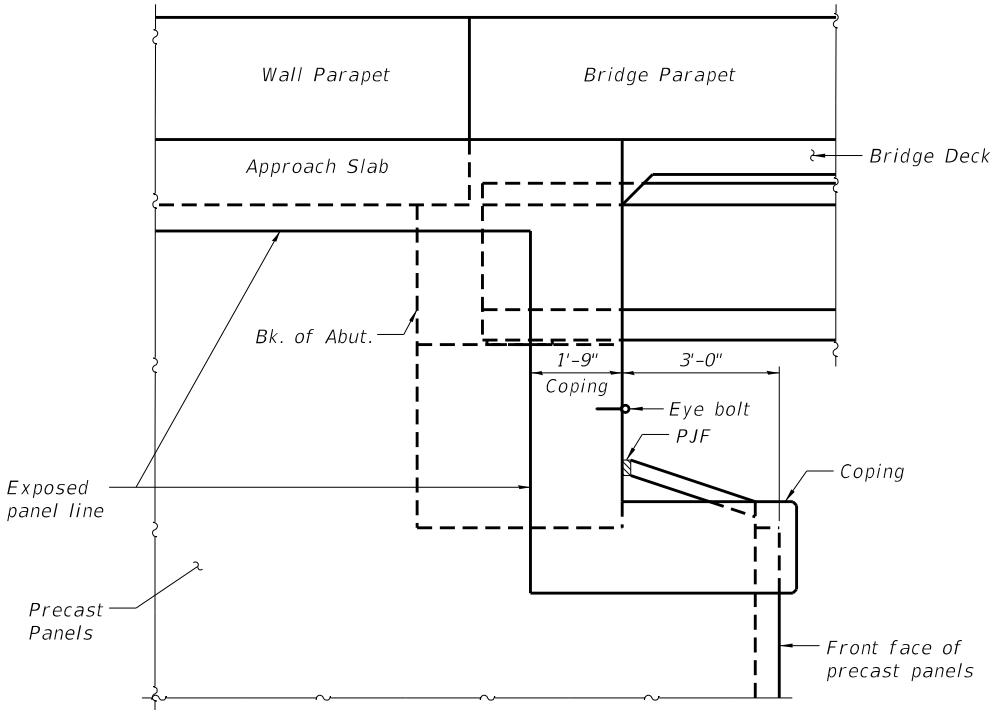


TYPICAL SECTION THRU COPING

** Limits of Bond breaker membrane between front of panel and overhang.



FORM LINER TEXTURED DETAIL



ABUTMENT END VIEW

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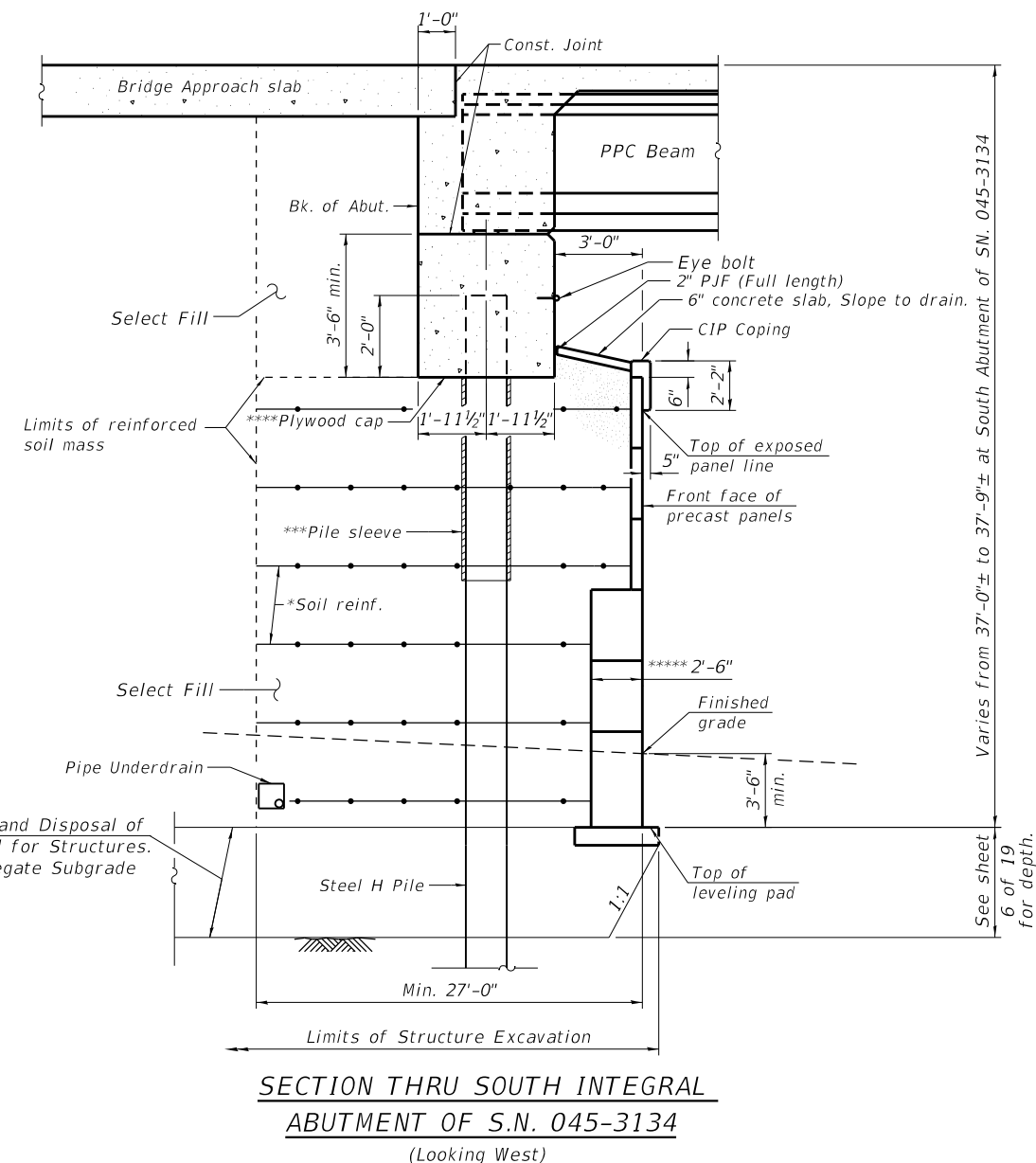
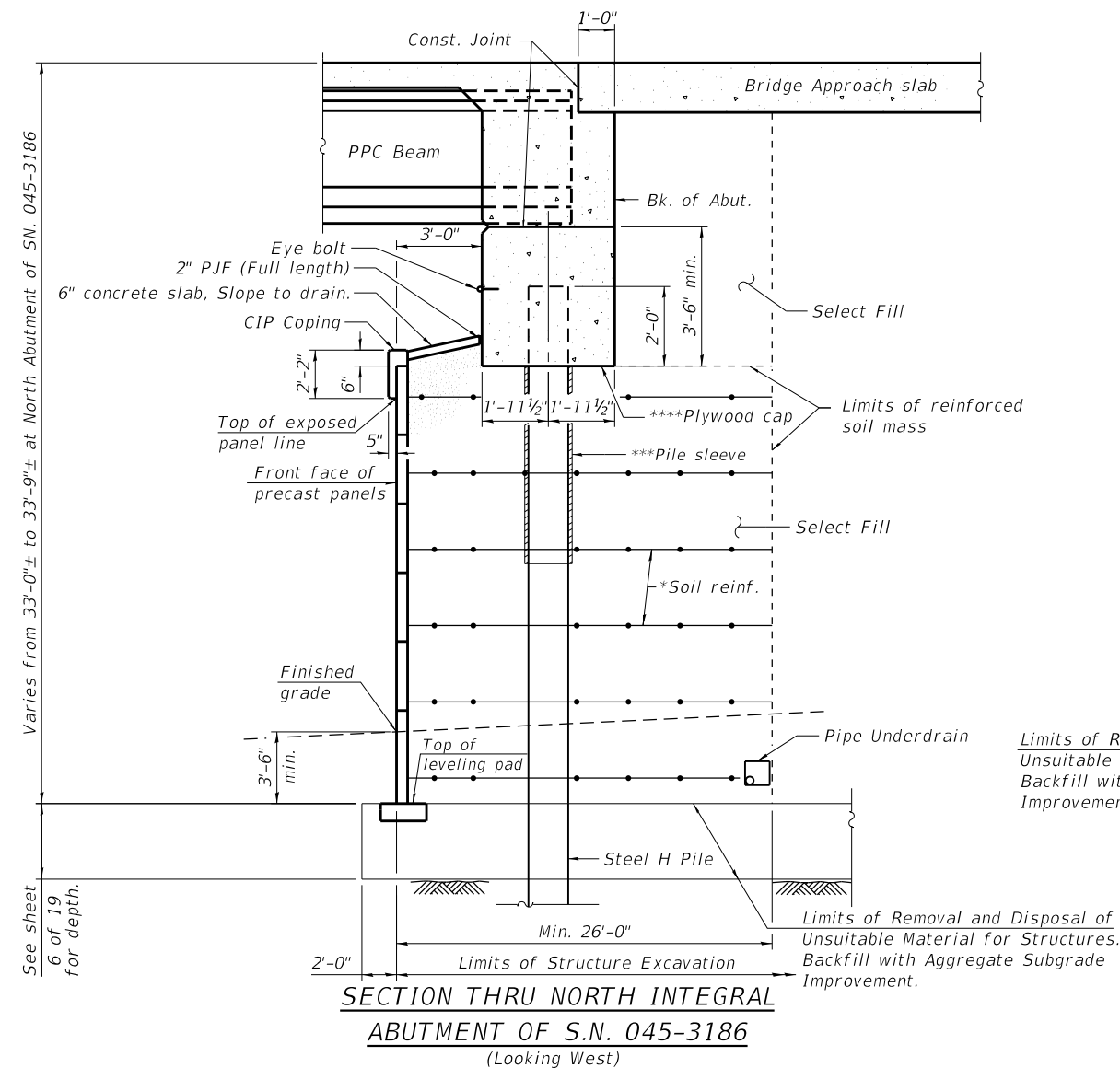
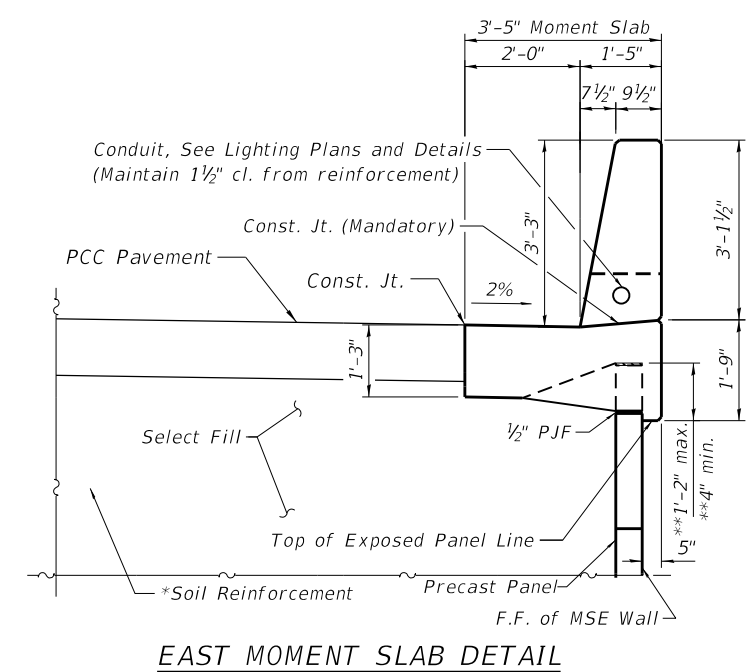
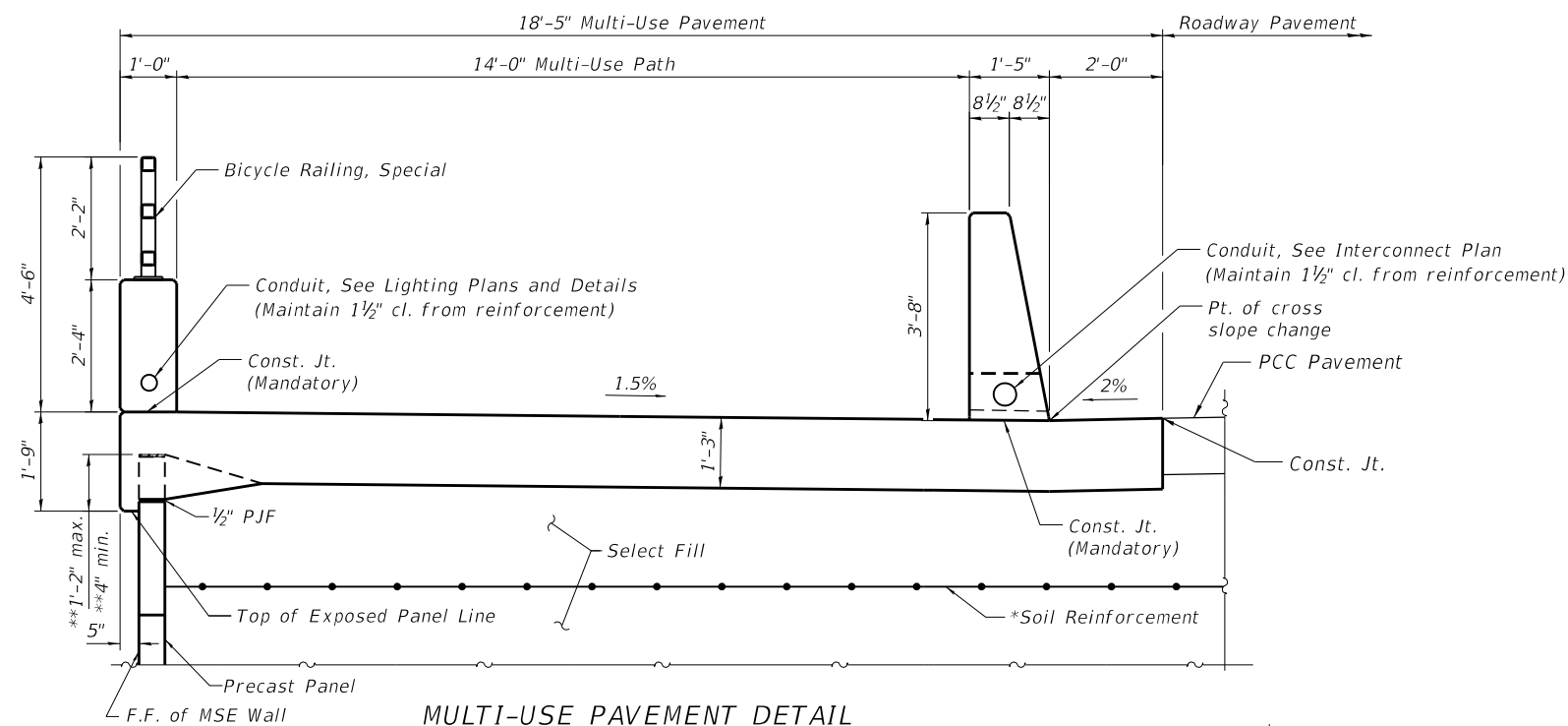
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PLOT DATE =	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
MSE WALL 02

SHEET 2 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	365
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				



* The MSE wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0. The upper layer of soil reinforcement shall be designed with an additional impact rupture loading of 2,300 lb./ft. of wall and an additional impact pullout loading of 1,300 lb./ft. of wall. The second layer of soil reinforcement shall be designed with an additional impact rupture loading of 600 lb./ft. and an additional impact pullout loading of 600 lb./ft.

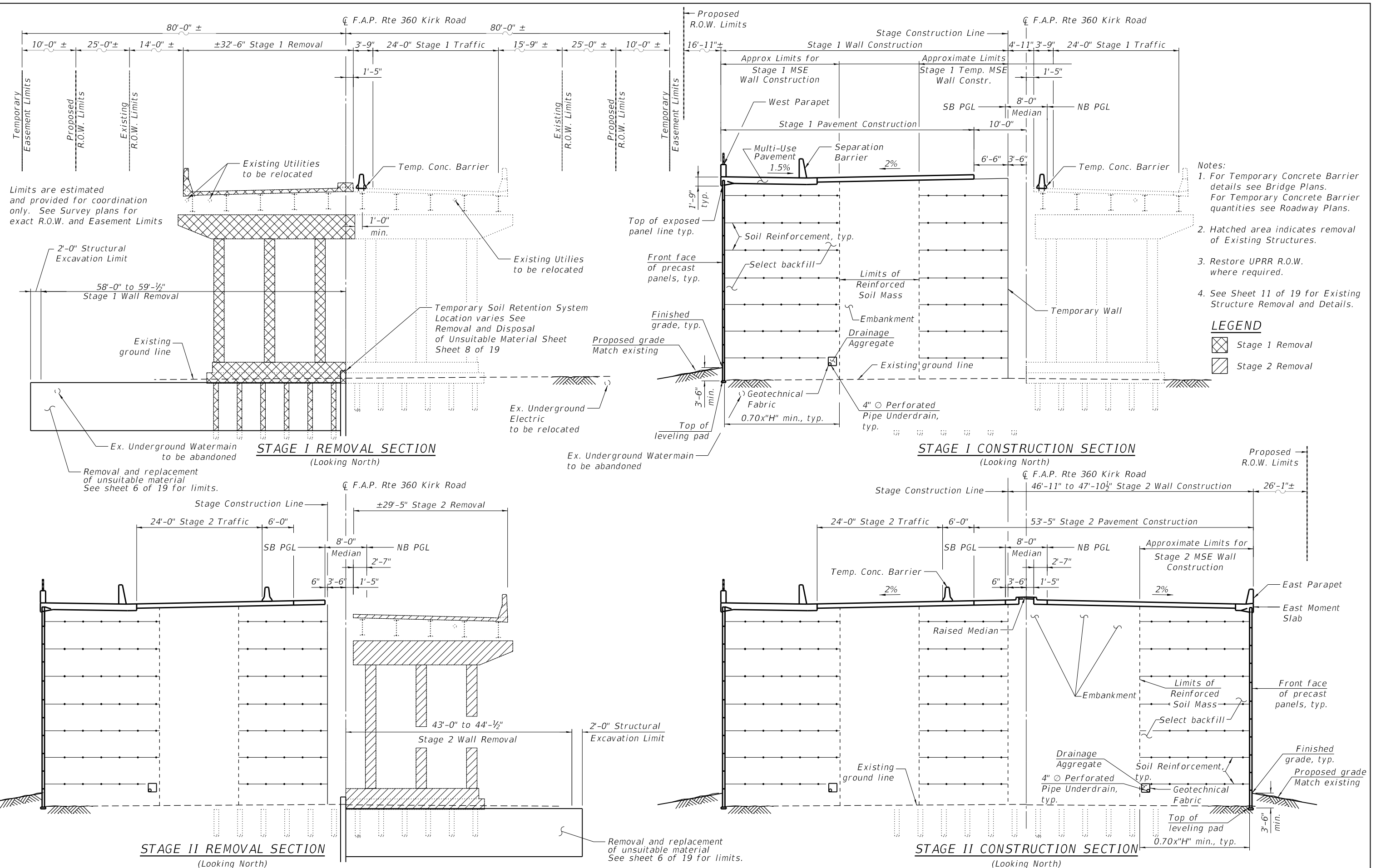
**** Limits of Bond breaker membrane between front of panel and overhang..**

*** Sleeve to remain empty in hatched region.

***** Bottom of cap poured against top of plywood. Cut opening to match pile perimeter within $\frac{1}{8}$ ". Support with bars tack welded to webs rated for 500 lbs. Seal gaps to keep concrete out.

***** MSE Panels within 50'-0" of Railroad
main track lines 1, 2 & 3 shall be 2'-6"
thick for a height of at least 12'-0" above
top of rail. Applies only to Wall at South
Abutment of S.N. 045-3134.

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PLOT DATE =	CHECKED - PRD	REVISED -

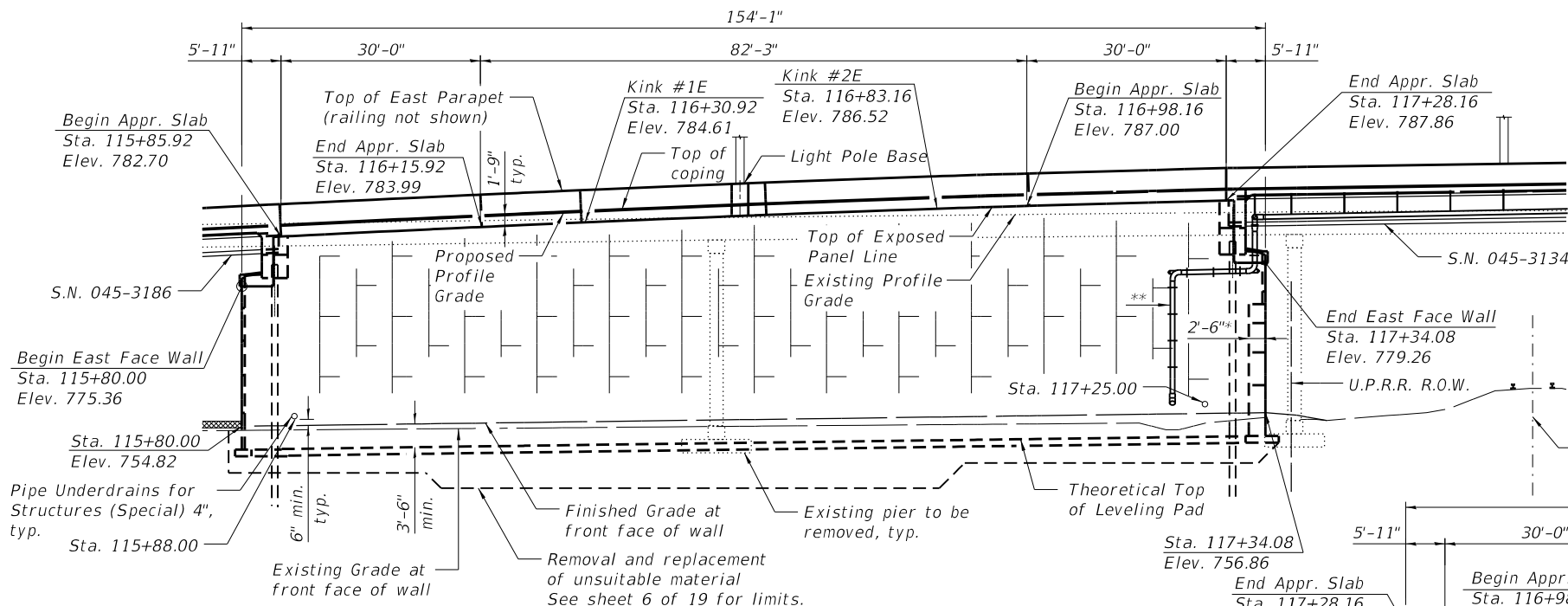
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I & II CONSTRUCTION
MSE WALL 02

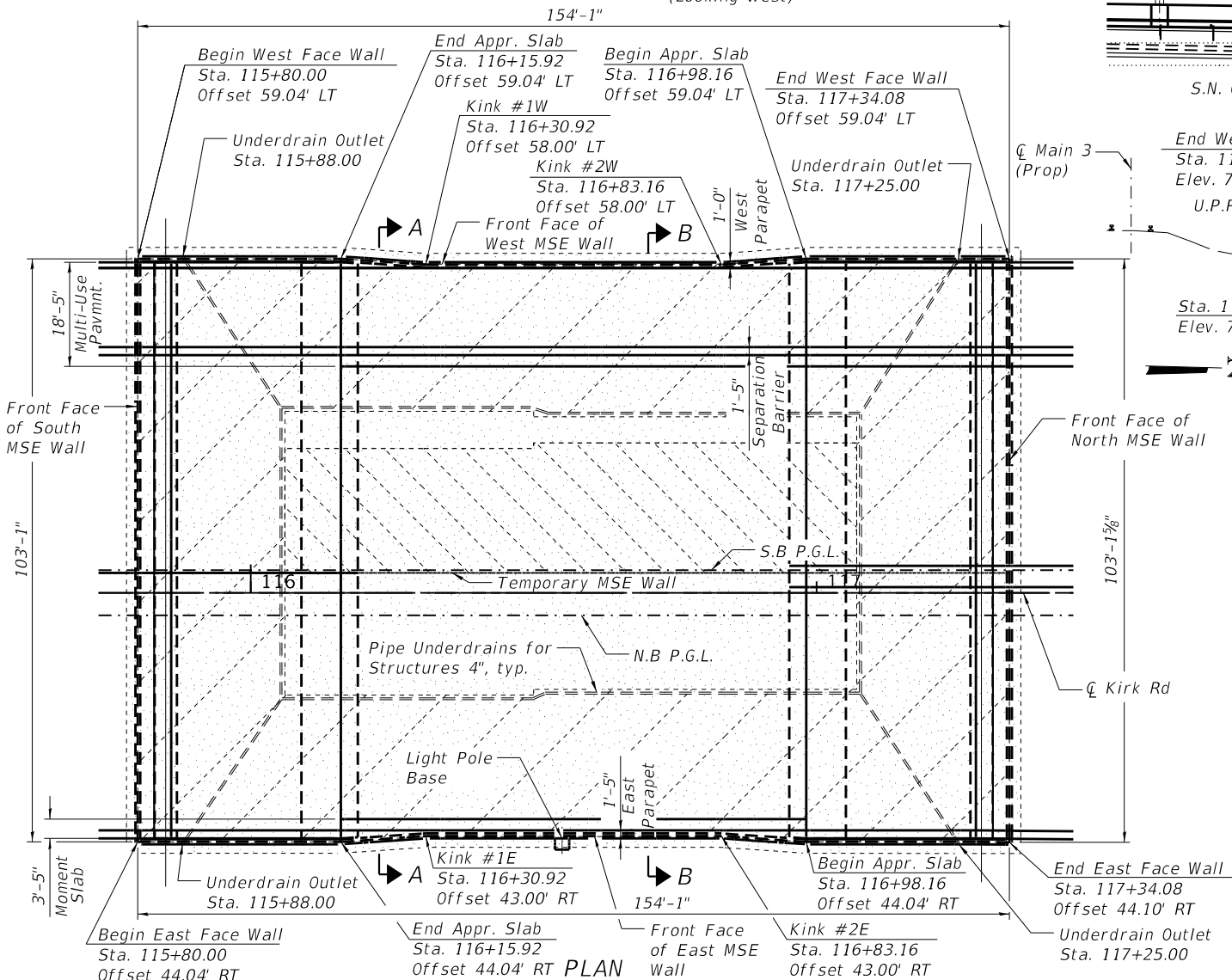
SHEET 4 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	367
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main View
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EAST WALL ELEVATION
(Looking West)



PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Wall Station and offsets are measured from the CL Kirk Rd. to the front face of precast panels.
Wall dimensions are measure along the front face of wall.
See Sheet 7 of 19 for Sections A-A and B-B.
Pipe underdrains shall be installed at $\pm 2\%$ to drain to outlet locations and elevations shown.
Rodent shields shall be installed at all pipe underdrain outlets according to Section 601 of the Standard Specifications and shall be included in the cost for Pipe Underdrains for Structures 4".

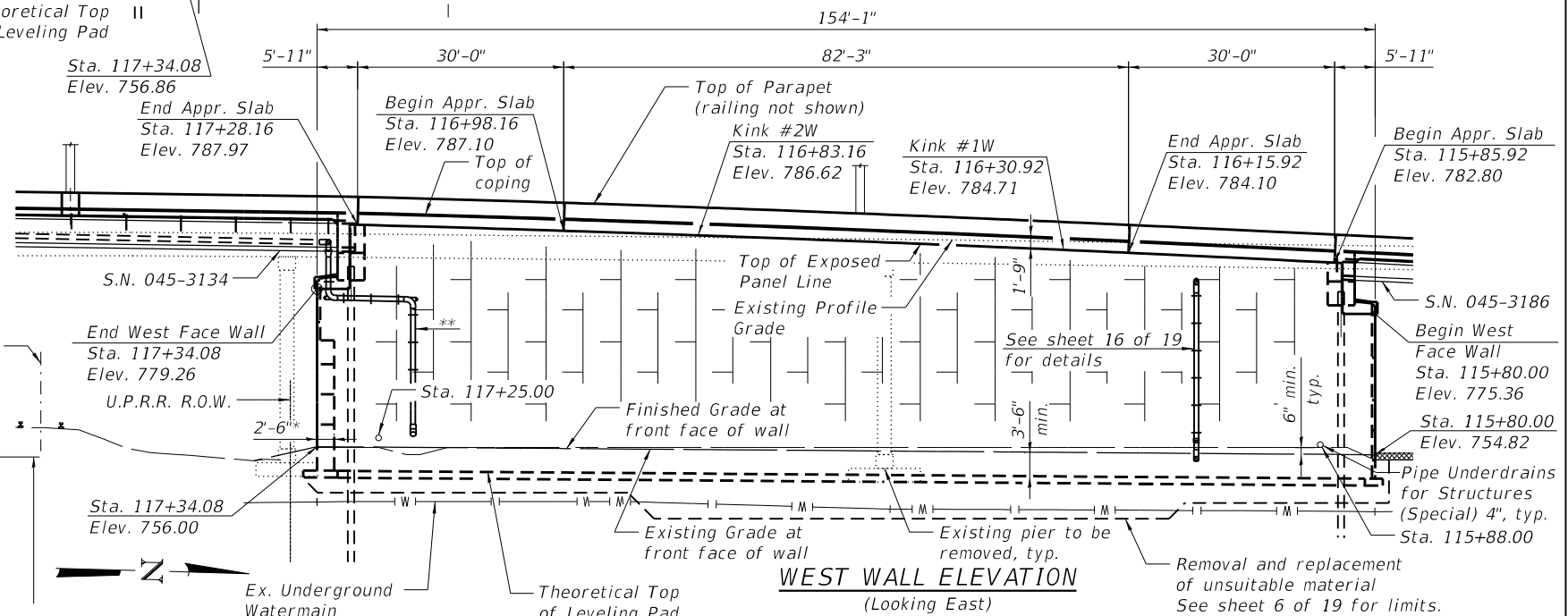
* MSE Panels within 50'-0" of Rail Road main track lines 1, 2 & 3 shall be 2'-6" thick up to a height 12'-0" above top of rail.
** See UPRR bridge plans for drainage details.

BILL OF MATERIAL

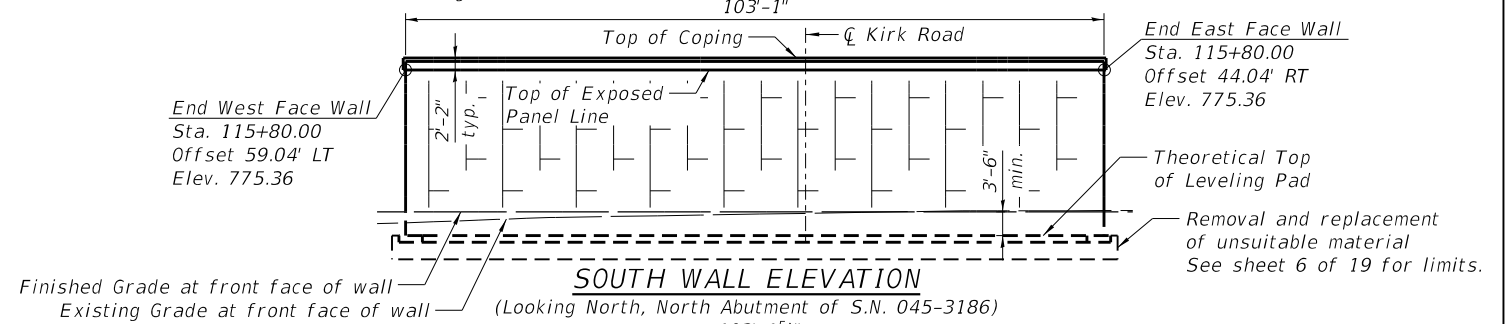
Item	Unit	Total
Mechanically Stabilized Earth Retaining Wall	Sq Ft	15,305
Removal and Disposal of Unsuitable Material for Structures	Cu Yd	4,951

LEGEND

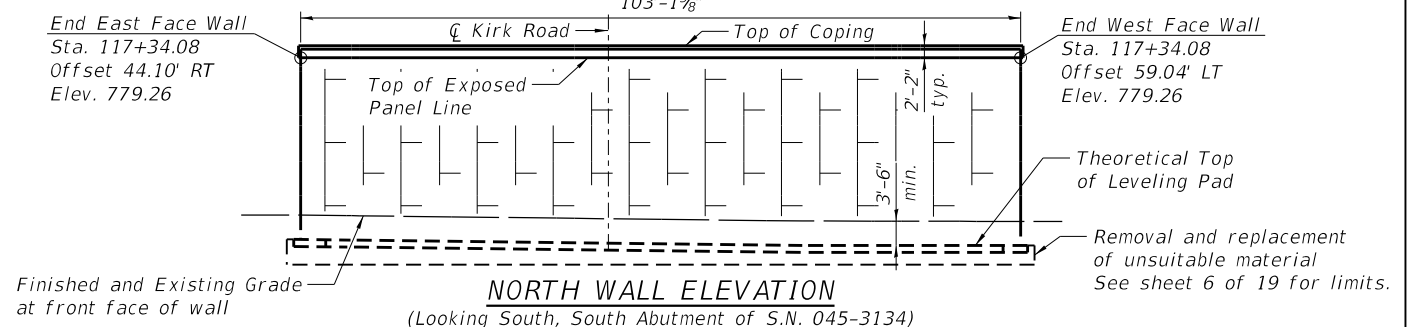
	Approximate Limits of Reinforced Soil Mass
	Approximate Limits of Reinforced Soil Mass for Temporary Wall
	Approximate Limits of Removal and Replacement of Unsuitable Material



WEST WALL ELEVATION
(Looking East)



SOUTH WALL ELEVATION
(Looking North, North Abutment of S.N. 045-3186)



NORTH WALL ELEVATION
(Looking South, South Abutment of S.N. 045-3134)



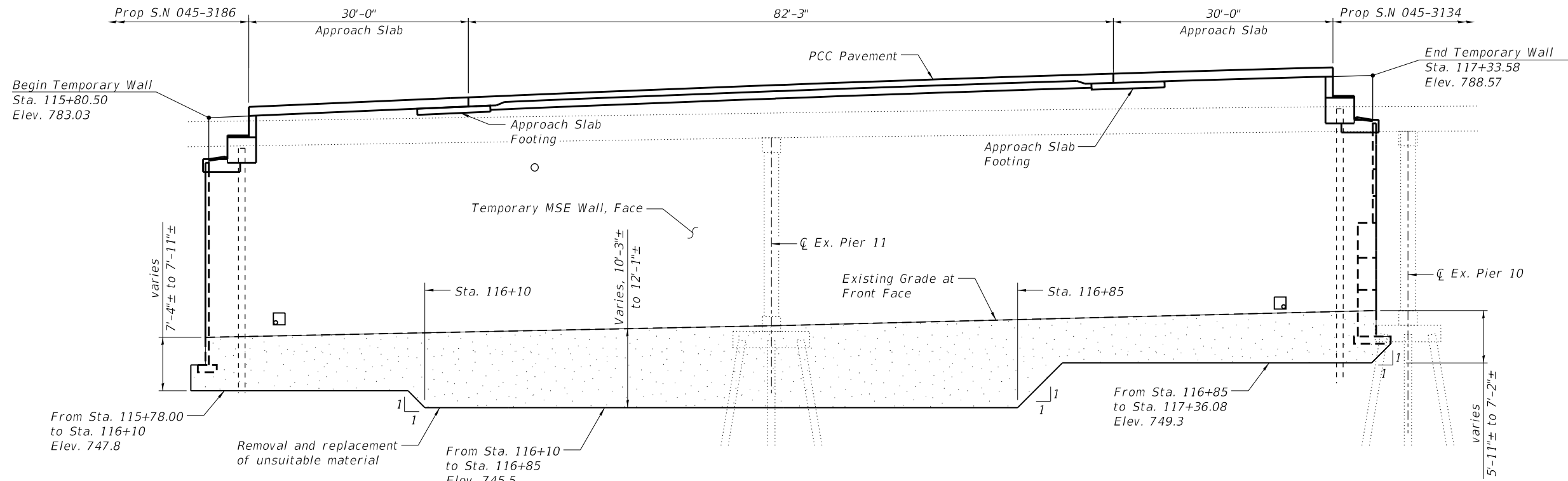
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WALL PLAN & ELEVATIONS
MSE WALL 02

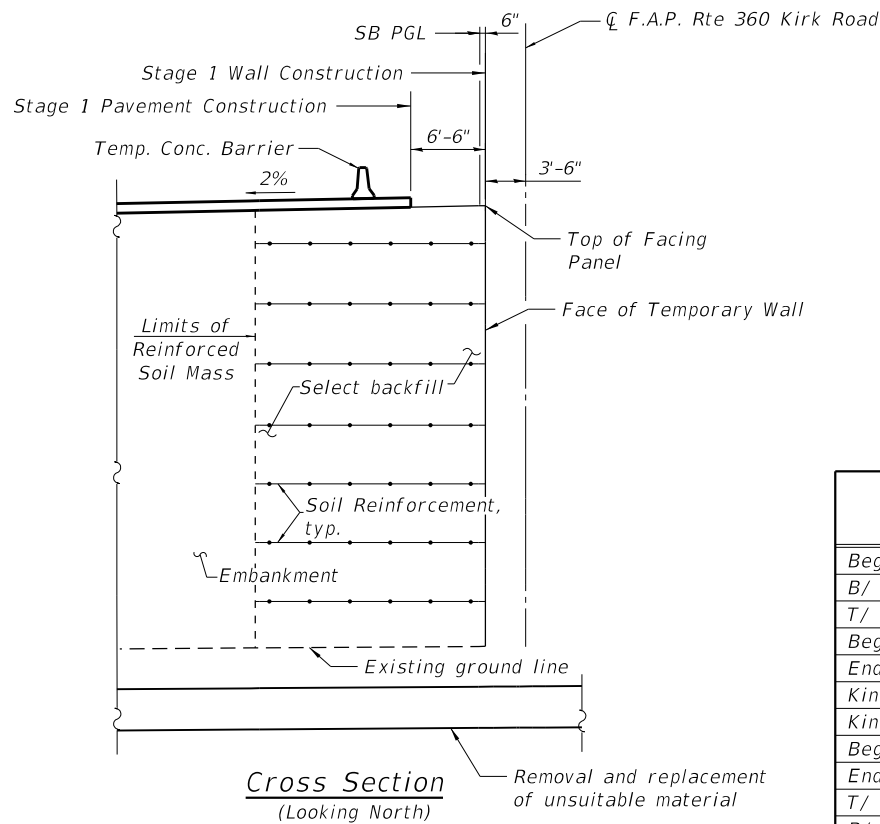
SHEET 5 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	368
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

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TEMPORARY MSE WALL ELEVATION
(Looking West)



Cross Section
(Looking North)

Removal and Replacement
of Unsuitable Material

TEMPORARY MSE WALL ELEVATIONS

Station	Offset	T/Exposed Panel Elevation	Existing Grade Elevation	Exposed Wall Height
115+80.50	3.50 Lt.	783.03	754.65	28'-5"
116+00.00	3.50 Lt.	783.87	754.86	29'-0"
116+50.00	3.50 Lt.	785.91	755.17	30'-9"
117+00.00	3.50 Lt.	787.62	756.24	31'-5"
117+33.58	3.50 Lt.	788.57	756.57	32'-0"

WEST FACE WALL ELEVATIONS

Location	Station	Offset	T/Exposed Panel Elevation	Finish Grade Elevation	Exposed Wall Height
Begin West Face Wall	115+80.00	59.04 Lt.	775.54	754.82	20'-9"
B/ Vertical Exposed Panel Line	115+84.75	59.04 Lt.	775.54	754.86	20'-8"
T/ Vertical Exposed Panel Line	115+84.75	59.04 Lt.	782.75	754.86	27'-11"
Begin Appr. Slab	115+85.92	59.04 Lt.	782.80	754.87	27'-11"
End Appr. Slab	116+15.92	59.04 Lt.	784.10	755.10	29'-0"
Kink #1W	116+30.92	58.00 Lt.	784.71	755.21	29'-6"
Kink #2W	116+83.16	58.00 Lt.	786.62	755.61	31'-0"
Begin Appr. Slab	116+98.16	59.04 Lt.	787.10	755.72	31'-5"
End Appr. Slab	117+28.16	59.04 Lt.	787.97	755.95	32'-0"
T/ Vertical Exposed Panel Line	117+29.33	59.04 Lt.	788.00	755.96	32'-0"
B/ Vertical Exposed Panel Line	117+29.33	59.04 Lt.	779.47	755.96	23'-6"
End West Face Wall	117+34.08	59.04 Lt.	779.47	756.00	23'-6"

EAST FACE WALL ELEVATIONS

Location	Station	Offset	T/Exposed Panel Elevation	Finish Grade Elevation	Exposed Wall Height
Begin East Face Wall	115+80.00	44.04 Rt.	775.54	754.82	20'-9"
B/ Vertical Exposed Panel Line	115+84.75	44.04 Rt.	775.54	754.88	20'-8"
T/ Vertical Exposed Panel Line	115+84.75	44.04 Rt.	782.65	754.88	27'-9"
Begin Appr. Slab	115+85.92	44.04 Rt.	782.70	754.90	27'-10"
End Appr. Slab	116+15.92	44.04 Rt.	784.00	755.30	28'-8"
Kink #1E	116+30.92	43.00 Rt.	784.61	755.49	29'-1"
Kink #2E	116+83.16	43.00 Rt.	786.52	756.19	30'-4"
Begin Appr. Slab	116+98.16	44.04 Rt.	787.00	756.38	30'-7"
End Appr. Slab	117+28.16	44.04 Rt.	787.87	756.78	31'-1"
T/ Vertical Exposed Panel Line	117+29.33	44.04 Rt.	787.90	756.80	31'-1"
B/ Vertical Exposed Panel Line	117+29.33	44.04 Rt.	779.47	756.80	22'-8"
End East Face Wall	117+34.08	44.04 Rt.	779.47	756.86	22'-7"



USER NAME =	DESIGNED - ES	REVISED -
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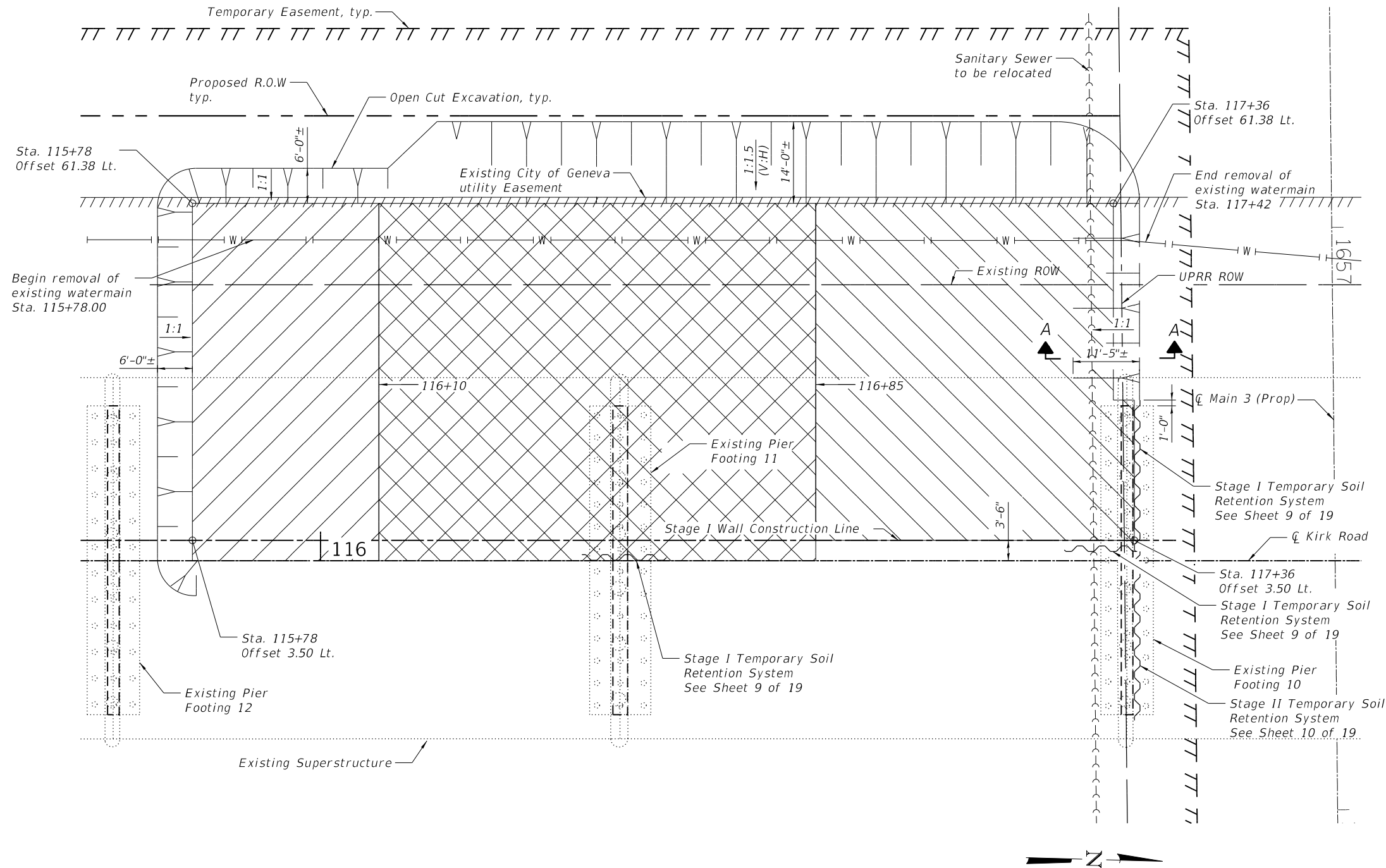
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY WALL ELEVATION
MSE WALL 02

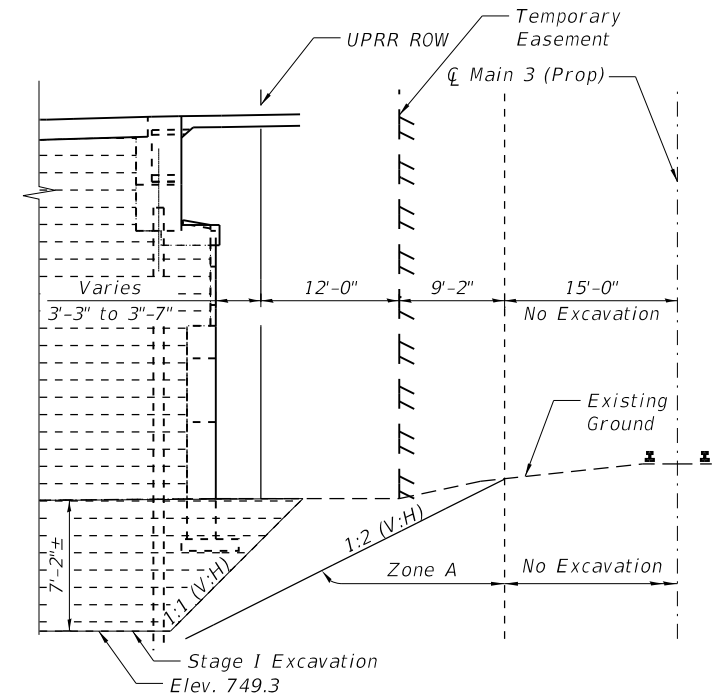
SHEET 6 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	369
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main View
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PLAN



SECTION THROUGH MSE WALL 02
UPRR SOUTH ABUTMENT
& UPRR GUIDELINES
SECTION A-A

Not For Construction - Reference Only

Notes:
A cantilevered sheet piling design does not appear to be feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
Remove 12" Water Pipe and 24" Sanitary Sewer Pipe and close ends of Pipes.
See Sheet 11 of 19 for pier 11 and 12 removal and details.

LEGEND

- Removal and Disposal of Unsuitable Material down to elevation 747.8
- Removal and Disposal of Unsuitable Material down to elevation 745.5
- Removal and Disposal of Unsuitable Material down to elevation 749.3



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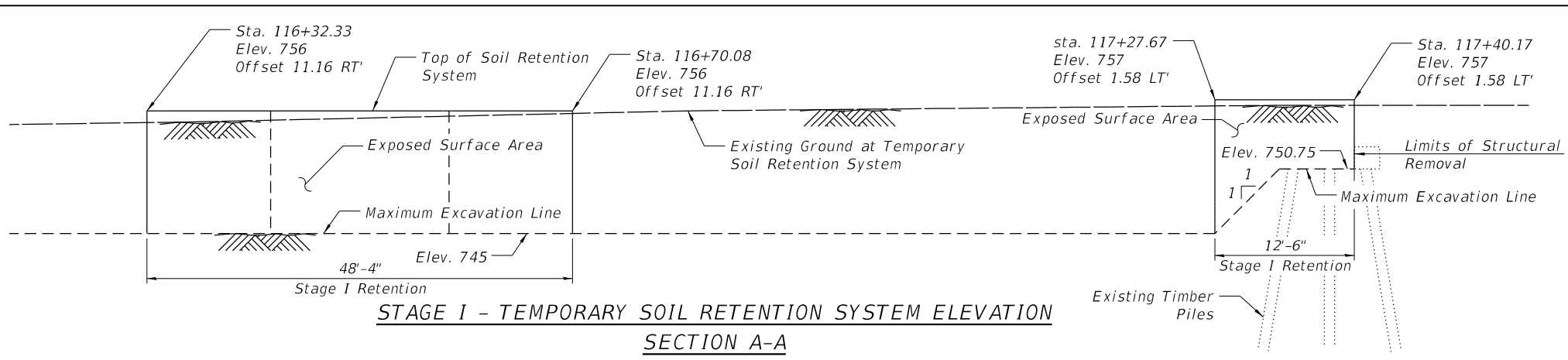
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL
MSE WALL 02

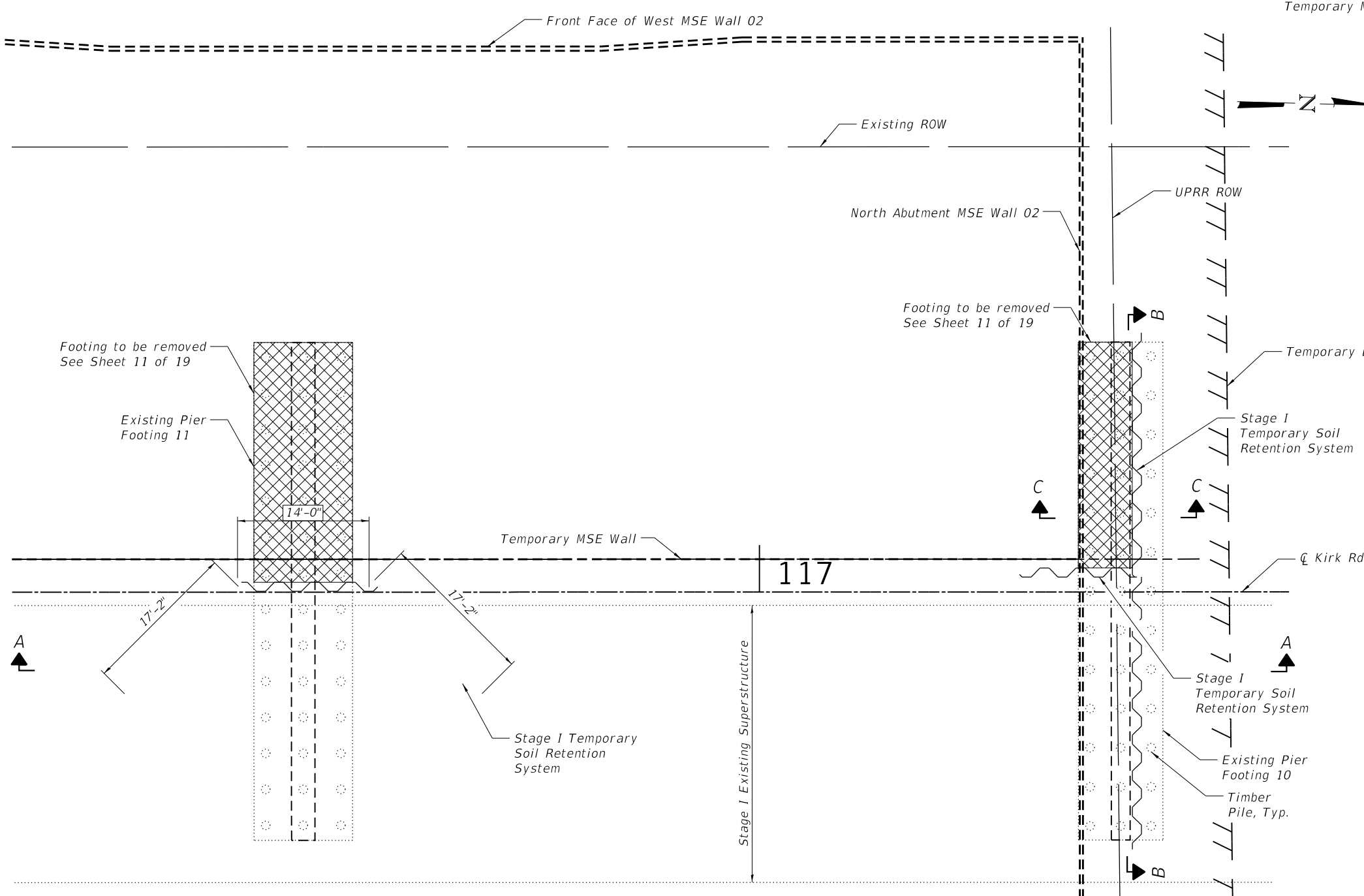
SHEET 8 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

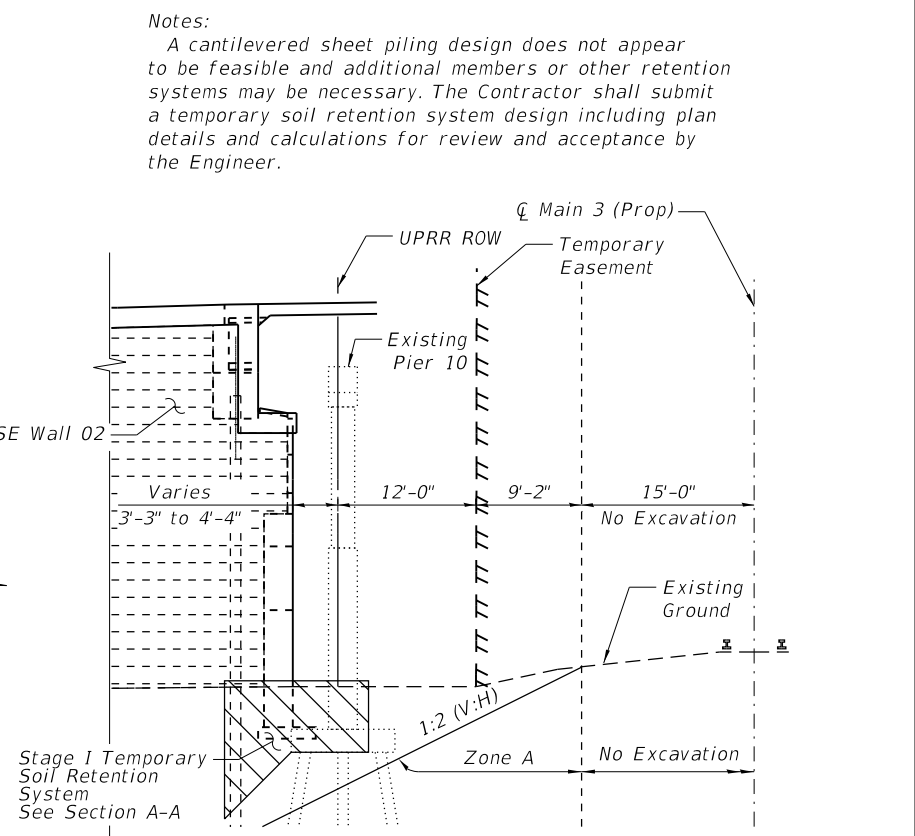
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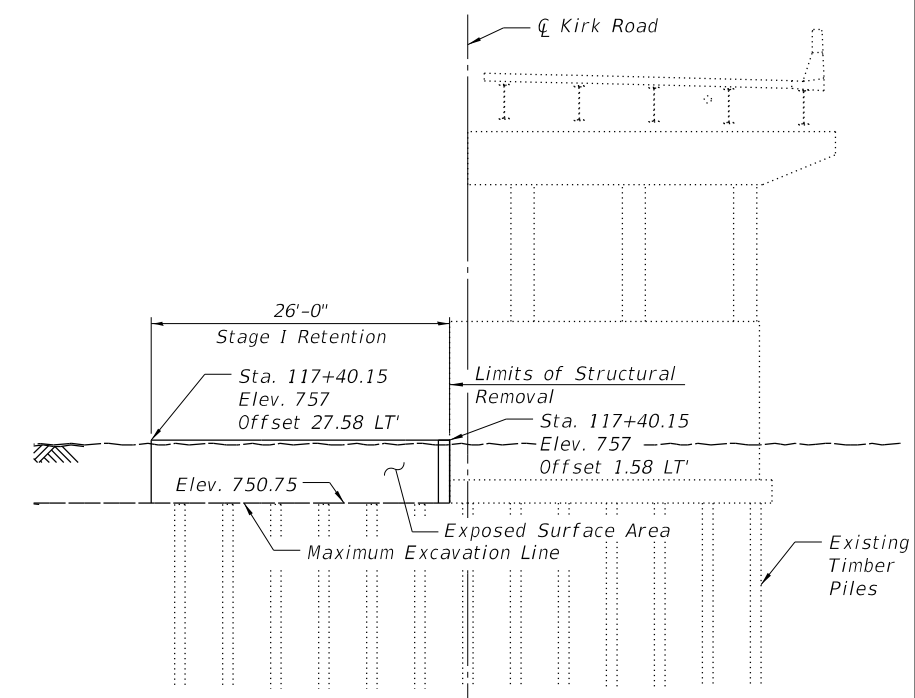
STAGE I - TEMPORARY SOIL RETENTION SYSTEM ELEVATION
SECTION A-A



STAGE I TEMPORARY SOIL RETENTION SYSTEM PLAN

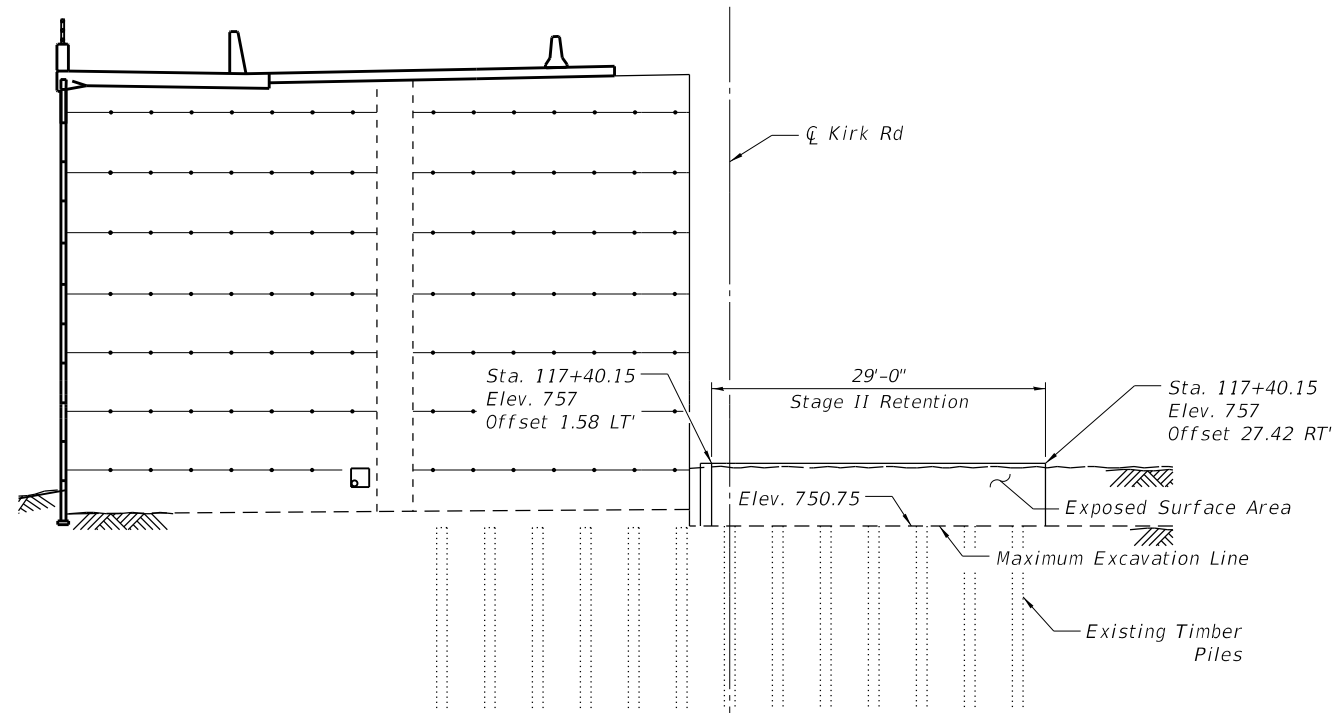


SECTION THROUGH MSE WALL 02 NORTH ABUTMENT & UPRR GUIDELINES
SECTION C-C
Not For Construction - Reference Only

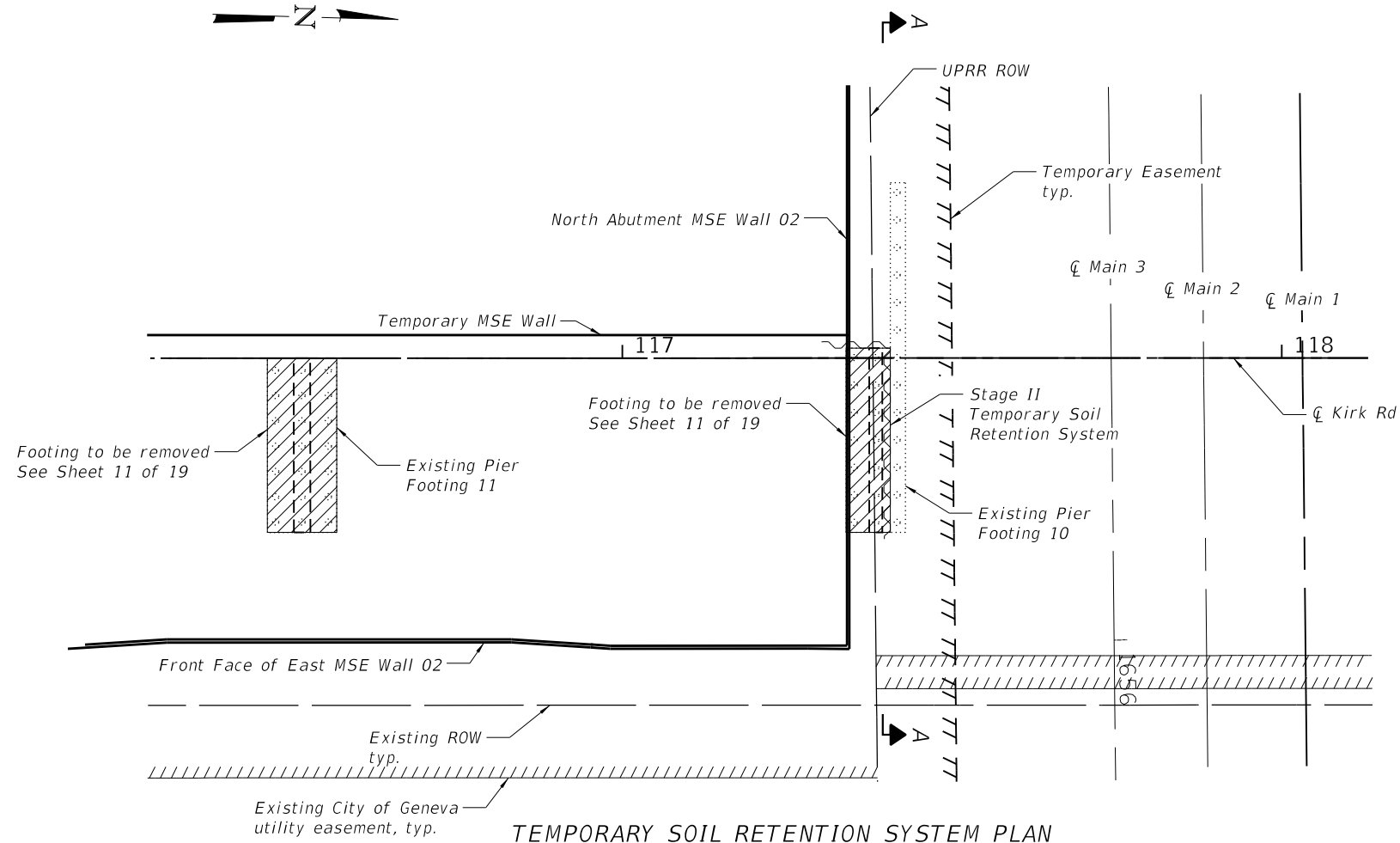


STAGE I - TEMPORARY SOIL RETENTION SYSTEM ELEVATION
SECTION B-B
(Looking North)

MODEL: Main View
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STAGE II - TEMPORARY SOIL RETENTION SYSTEM ELEVATION
SECTION A-A
(Looking North)



TEMPORARY SOIL RETENTION SYSTEM PLAN

Notes:
A cantilevered sheet piling design does not appear to be feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.



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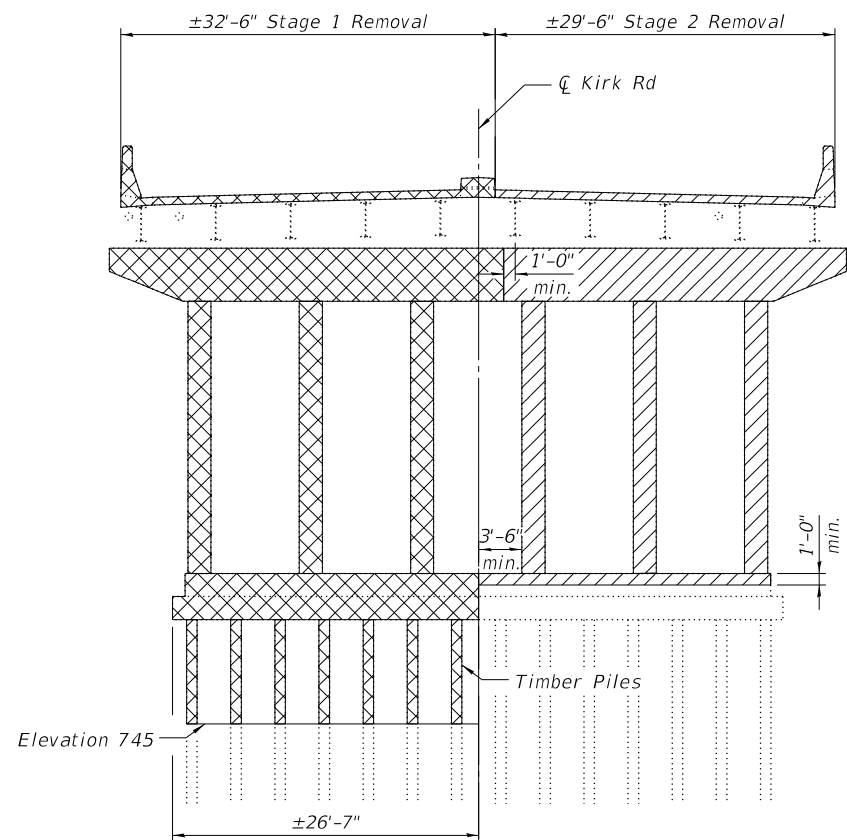
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TEMPORARY SOIL RETENTION SYSTEM
MSE WALL 02

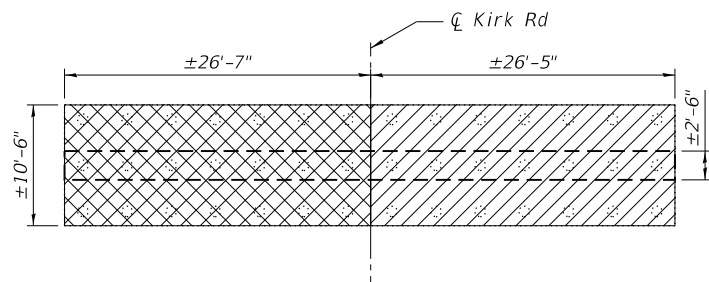
SHEET 10 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	373
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

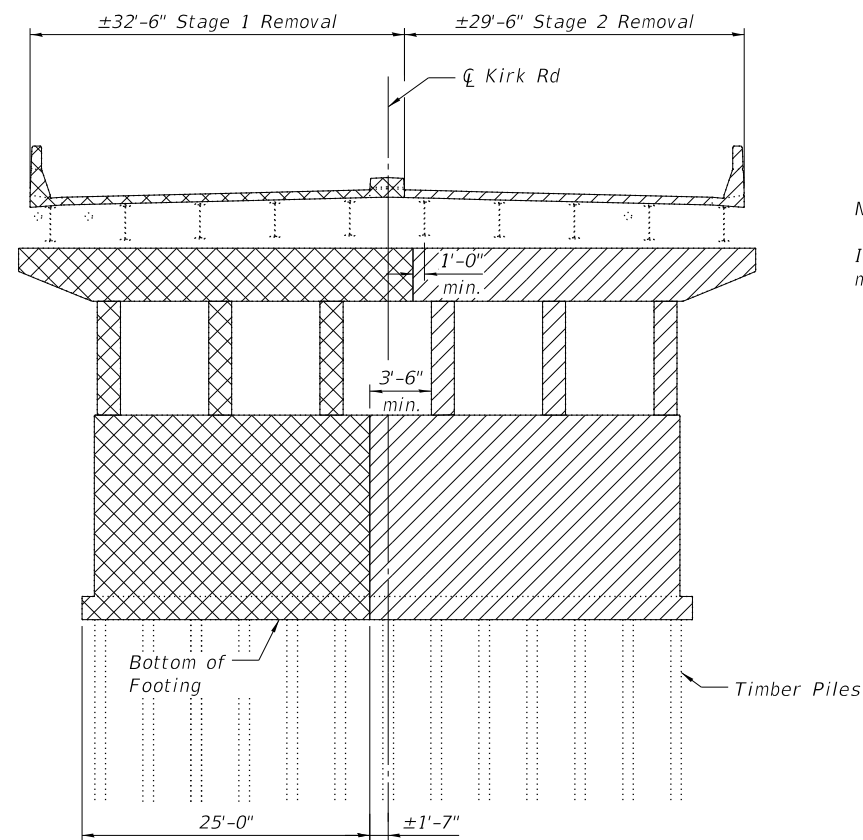
MODEL: Main View
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 02_Sheet_11_Existing Structure Removal Details.dgn



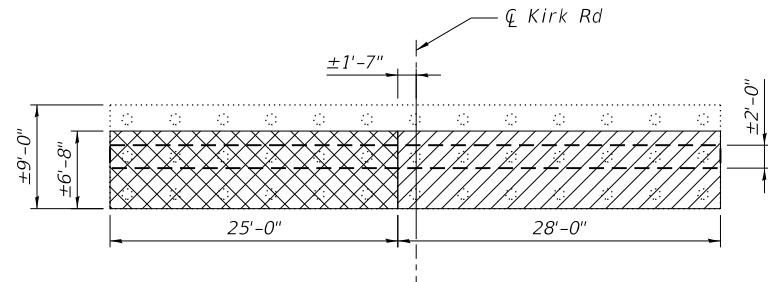
SECTION - EXISTING PIER 11



PLAN - EXISTING PIER 11



SECTION - EXISTING PIER 10



PLAN - EXISTING PIER 10

Notes:
Removal cut lines are based on existing plans.
If cut lines come in contact with a pile during Stage I,
move cut line 6 inches minimum west from edge of pile.



LEGEND

- Stage 1 Removal
- Stage 2 Removal



USER NAME =	DESIGNED - ES	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

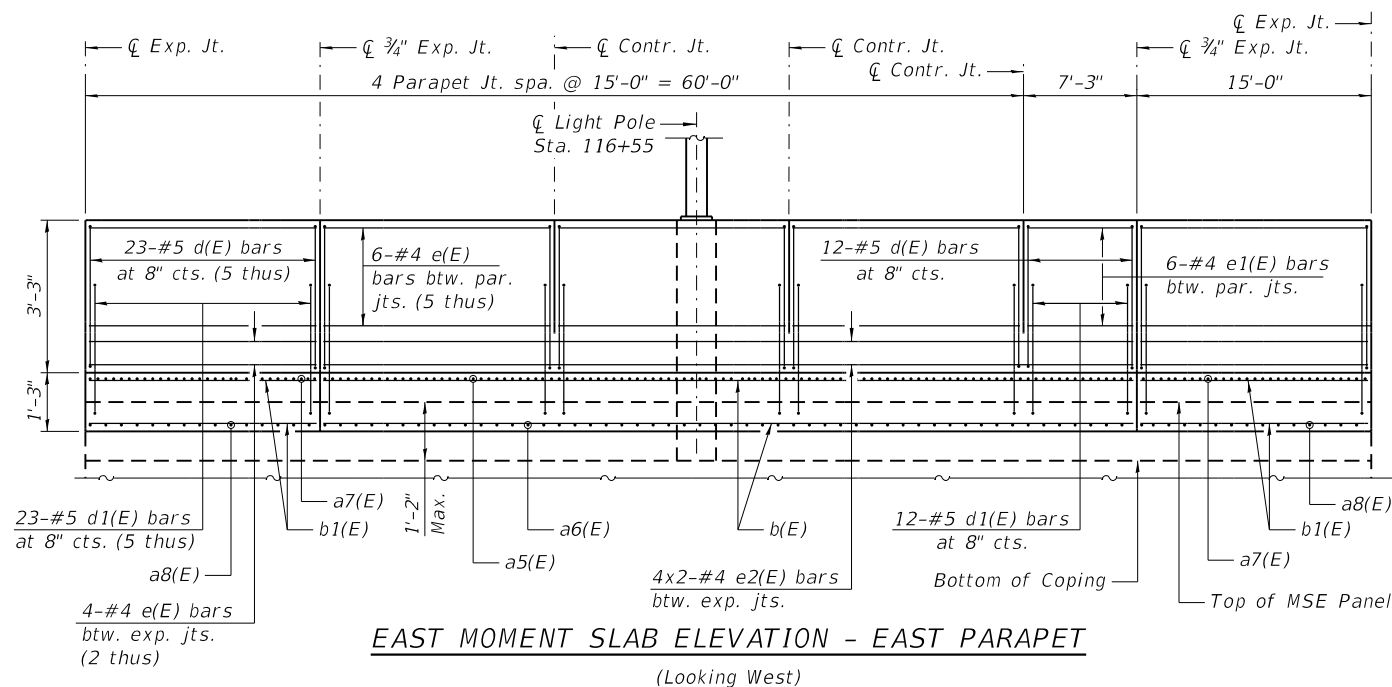
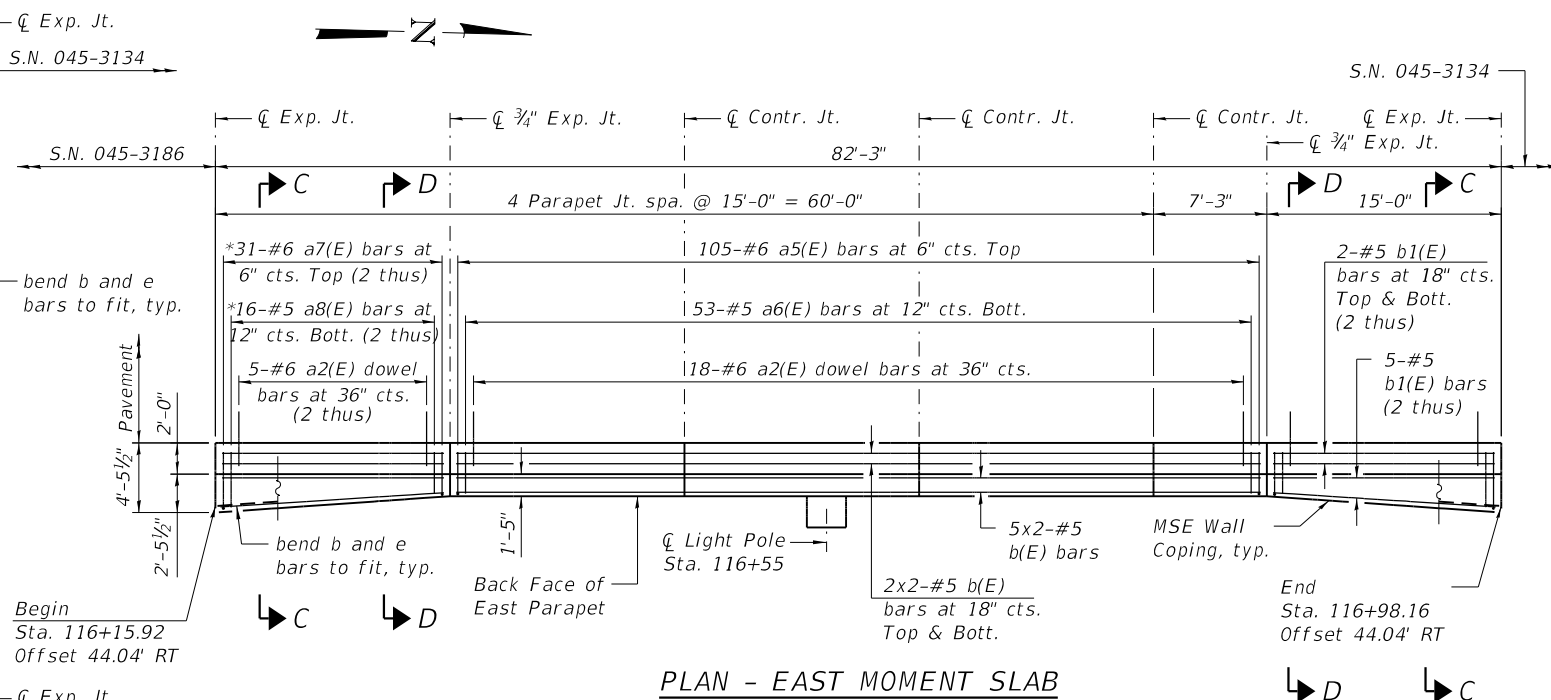
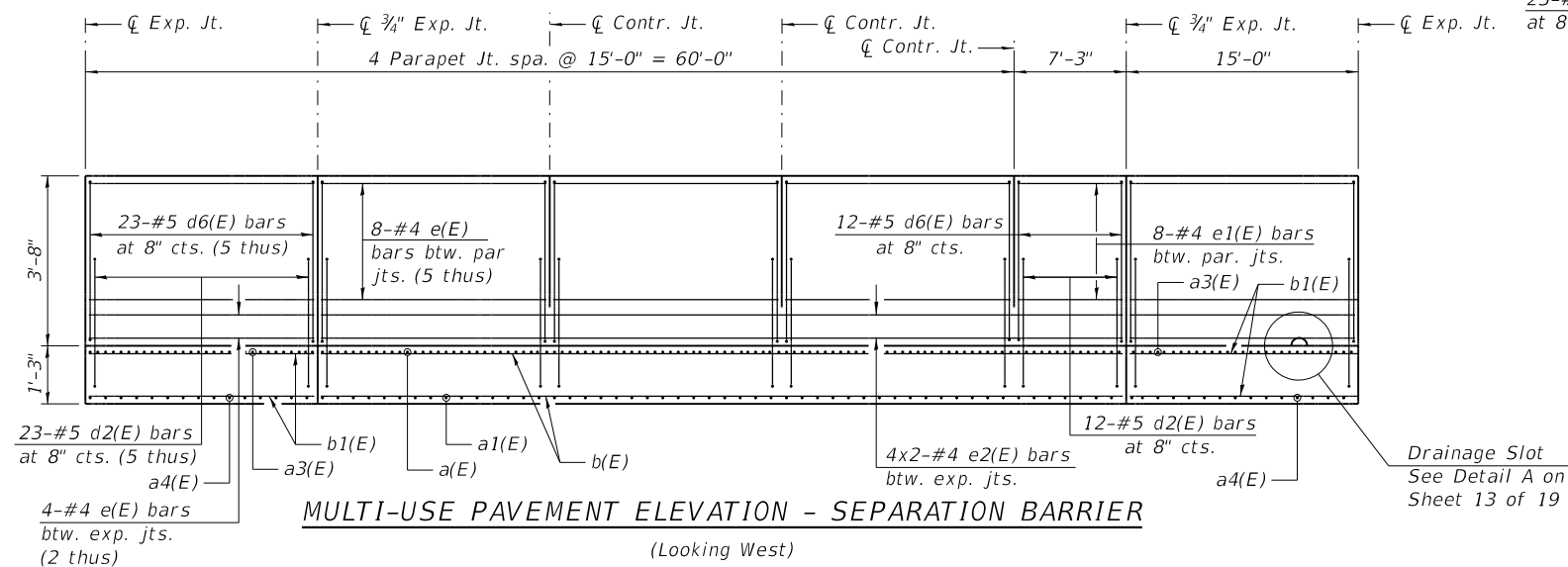
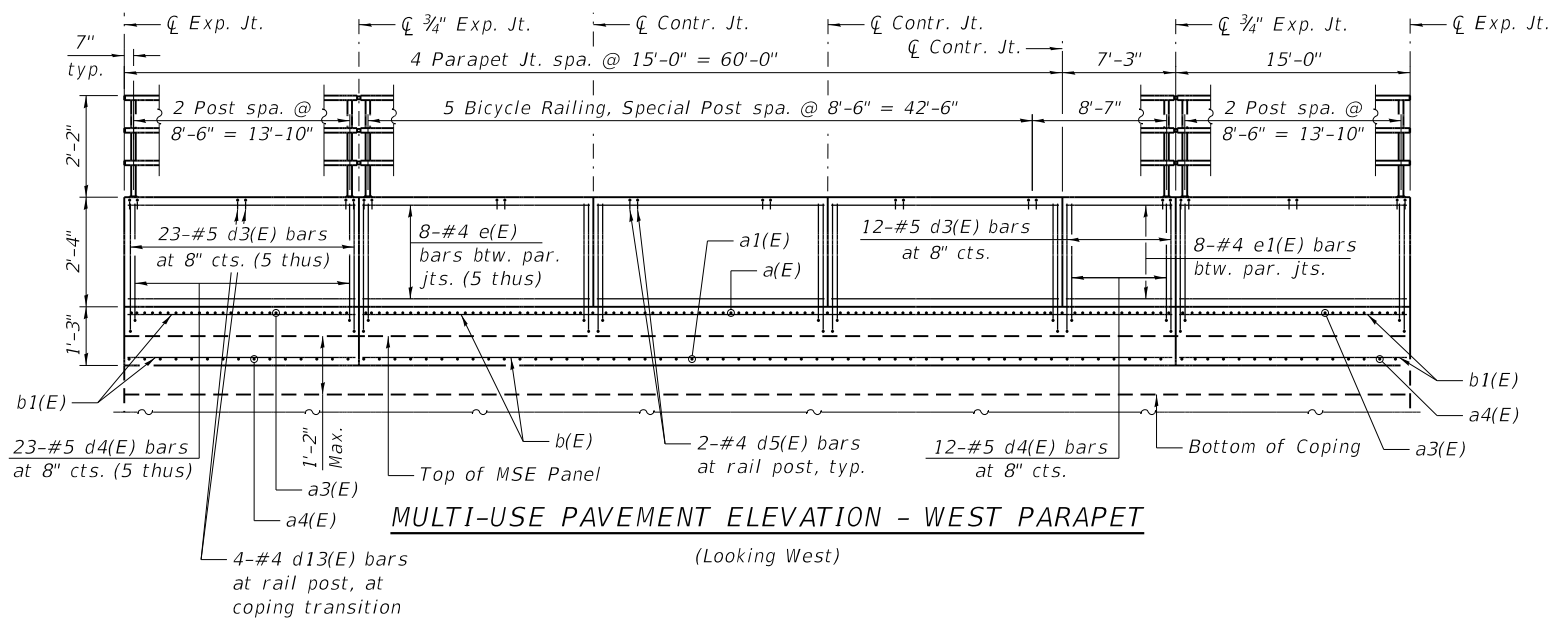
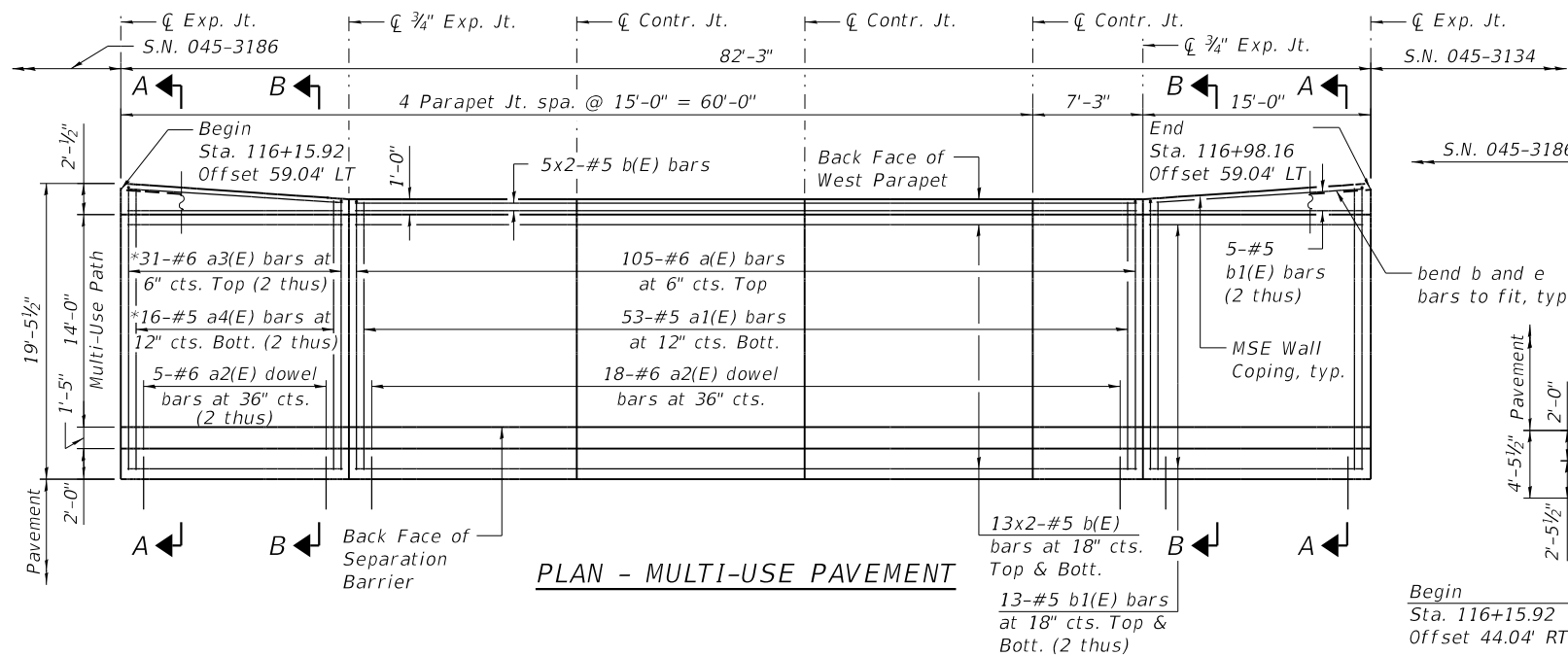
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE REMOVAL DETAILS
MSE WALL 02

SHEET 11 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	374
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
FILE NAME: W:\894-048 KDOT Kirk Road over UPRRCAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 02_Sheet_12_Moment Slab Plan and Elevation.dgn



Notes:
Offset is measured from ∇ Kirk Rd.
See Sht. 13 of 19 for SECTION A-A, B-B, C-C and D-D.

* Cut a bars to fit.

MINIMUM BAR LAP

#4 bar = 2'-2"
#5 bar = 2'-0"



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - PRD	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - PRD	REVISED -

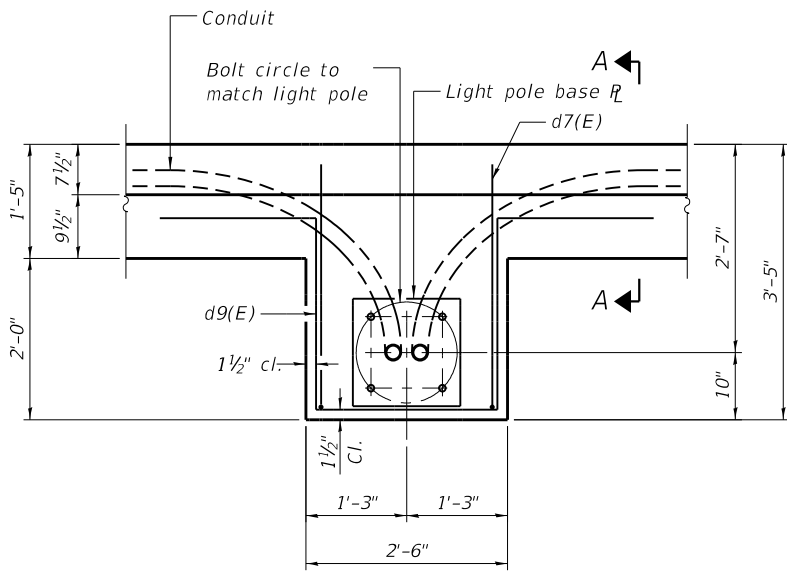
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB PLAN AND ELEVATION MSE WALL 02

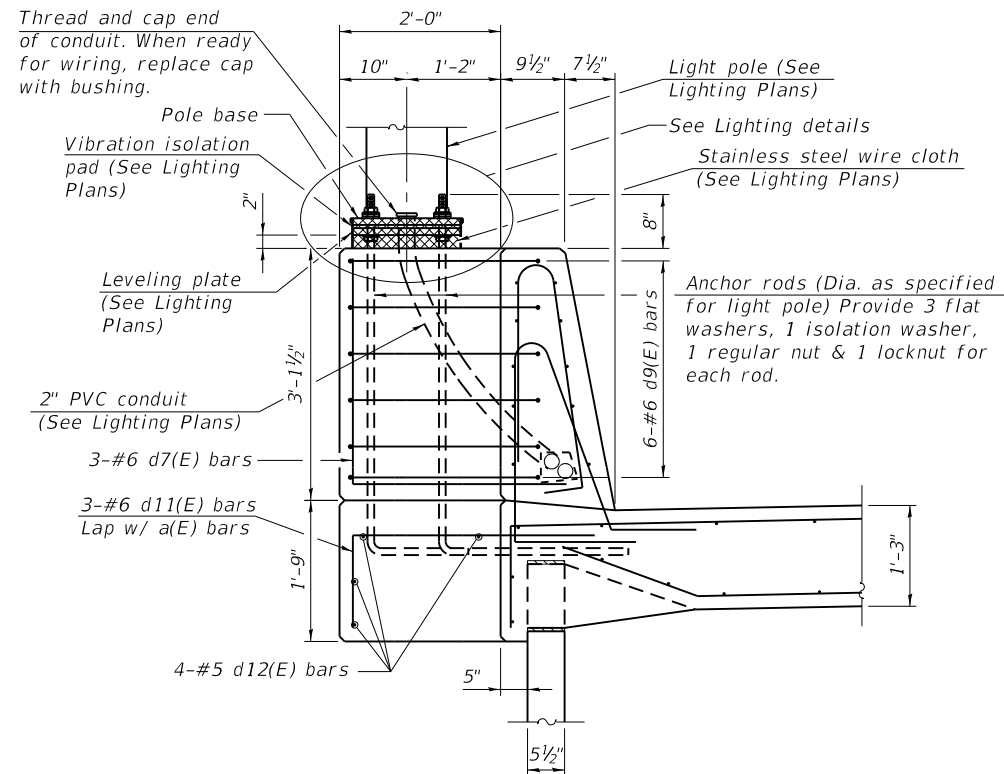
SHEET 12 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	375
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
FILE NAME: W:\894-048 KDOT Kfir Road over UPRRCAD Sheets\Structural\FINAL\PLANS\MSE Walls & Moment Slabs\MSE Wall_02_Sheet_14_Moment Slab and Light Pole Details.dgn

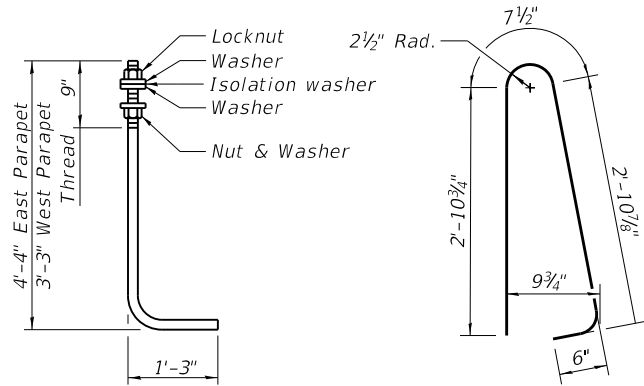


PLAN
(At East Parapet)



SECTION A-A
(At East Parapet)

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

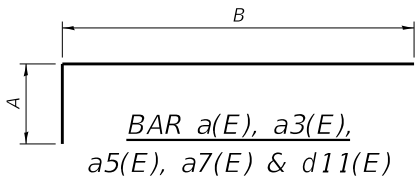


ANCHOR ROD

Diameter as specified for light poles.
(ASTM F 1554 Grade 105) Full length
hot dipped galvanized

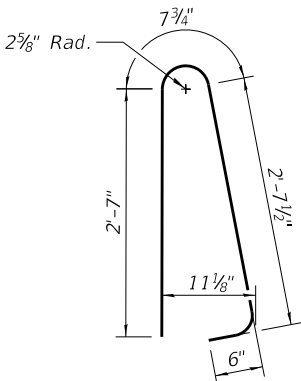
BAR d6(E)

Bar	A	B
a(E)	1'-5"	18'-1"
a3(E)	1'-5"	19'-1"
a5(E)	1'-3"	3'-1"
a7(E)	1'-3"	4'-1"
d11(E)	1'-5"	3'-0"

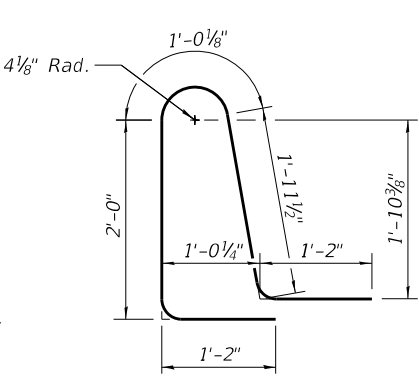


BAR e3(E)

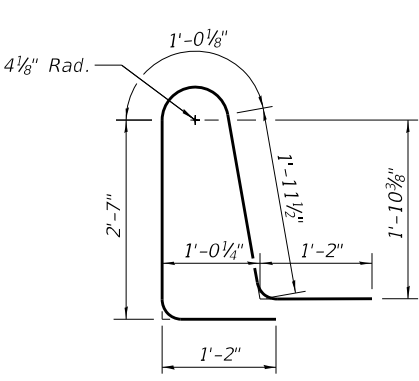
BAR d9(E)



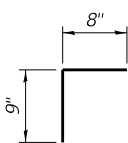
BAR d(E)



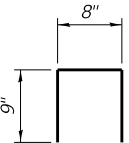
BAR d1(E)



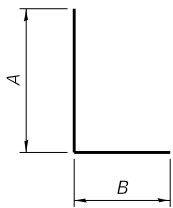
BAR d2(E)



BAR d13(E)



BAR d5(E)



BAR d3(E),
d4(E) & d7(E)

Bar	A	B
d3(E)	2'-10"	1'-2"
d4(E)	2'-9"	1'-2"
d7(E)	2'-10"	3'-0"

STRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	105	#6	19'-6"	
a1(E)	53	#5	18'-1"	
a2(E)	56	#6	4'-0"	
a3(E)	62	#6	20'-6"	
a4(E)	32	#5	19'-1"	
a5(E)	105	#6	4'-4"	
a6(E)	53	#5	3'-1"	
a7(E)	62	#6	5'-4"	
a8(E)	32	#5	4'-1"	
b(E)	50	#5	27'-0"	
b1(E)	50	#5	14'-8"	
d(E)	127	#5	6'-5"	
d1(E)	127	#5	7'-4"	
d2(E)	127	#5	7'-11"	
d3(E)	127	#5	4'-0"	
d4(E)	127	#5	3'-11"	
d5(E)	14	#4	2'-2"	
d6(E)	127	#5	7'-0"	
d7(E)	3	#6	5'-10"	
d9(E)	6	#6	10'-11"	
d11(E)	3	#6	4'-5"	
d12(E)	4	#5	2'-2"	
d13(E)	24	#4	1'-5"	
e(E)	126	#4	14'-8"	
e1(E)	22	#4	6'-11"	
e2(E)	16	#4	27'-1"	
e3(E)	32	#4	1'-5"	
Reinforcement Bars, Epoxy Coated			Pound	17,320
Concrete Structures			Cu. Yd.	125.7
Protective Coat			Sq. Yd.	310

Bars indicated thus 1 x 2-#4 etc. indicates
1 line of bars with 2 lengths per line.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB AND LIGHT POLE DETAILS
MSE WALL 02

SHEET 14 OF 19 SHEETS

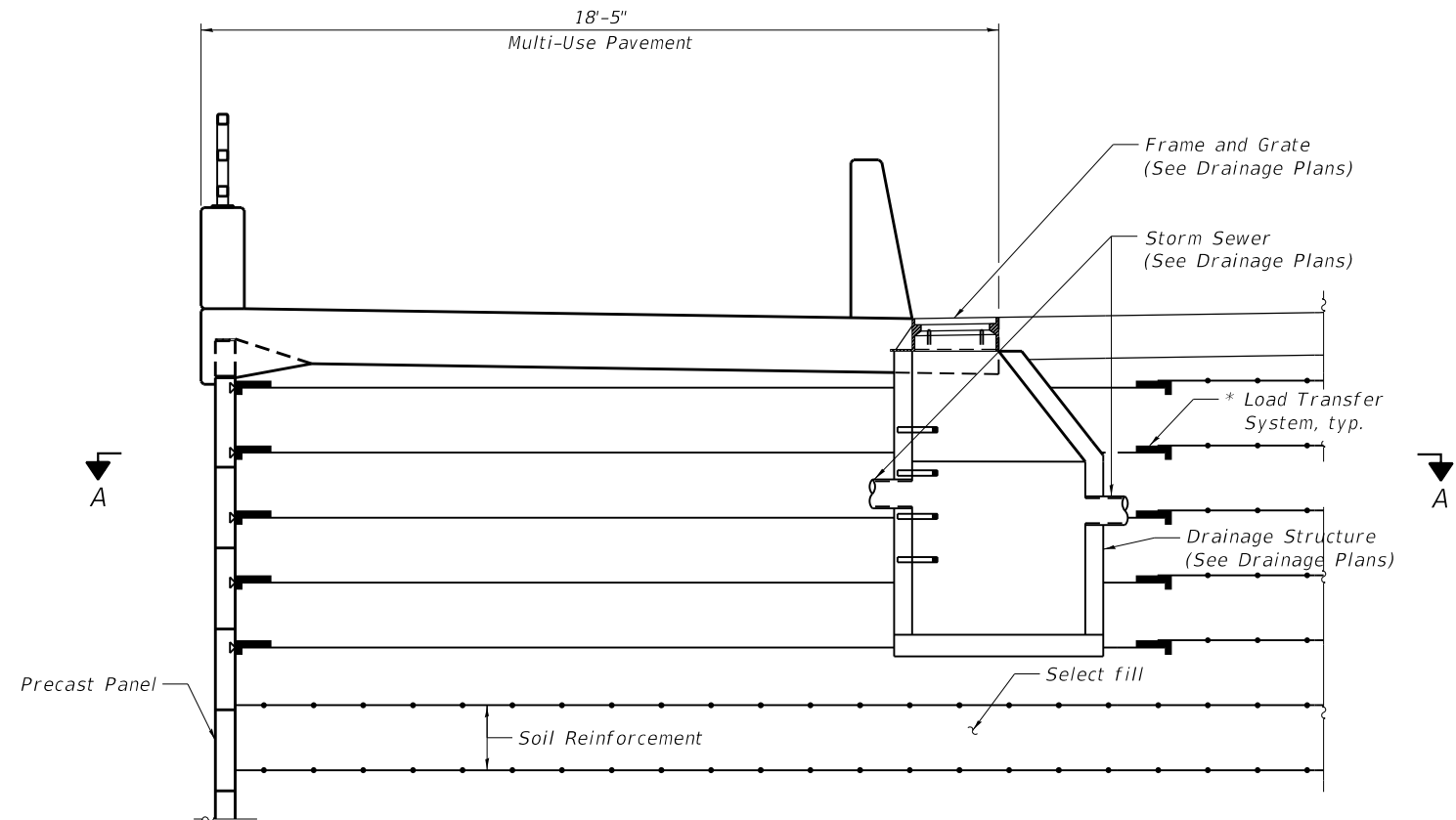
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	377
CONTRACT NO. 61M13				

ILLINOIS FED. AID PROJECT



5/20/2026 9:00:05 AM

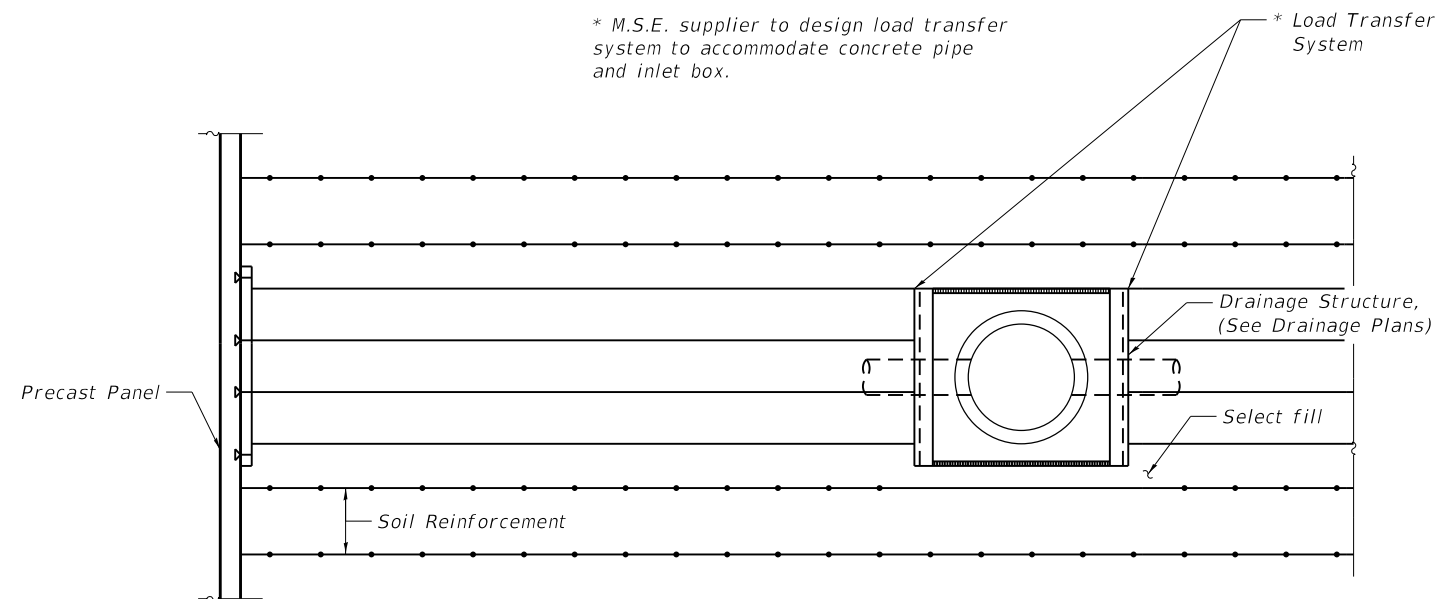
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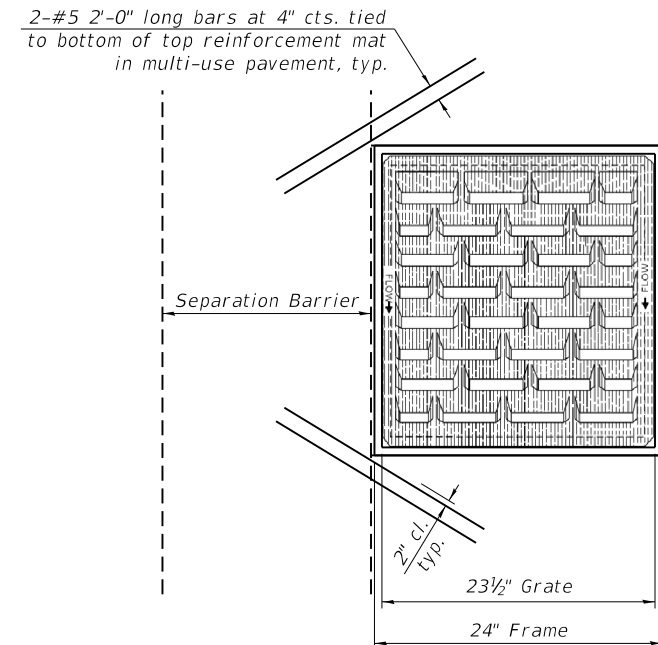
**LOAD TRANSFER SYSTEM
AROUND DRAINAGE DETAIL**
(West Wall shown, East Wall similar.)

Reinforcement in multi-use pavement, parapet, and drainage structure not shown for clarity.

* M.S.E. supplier to design load transfer system to accommodate concrete pipe and inlet box.



SECTION A-A



REINFORCEMENT AROUND FRAME AND GRATE

Shift transverse reinforcement and cut longitudinal reinforcement in multi-use pavement to clear drainage structures. Coat exposed ends with epoxy paint. Cost shall be included for payment in the contract unit price for Reinforcement Bars, Epoxy Coated.



USER NAME =	DESIGNED - ES	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

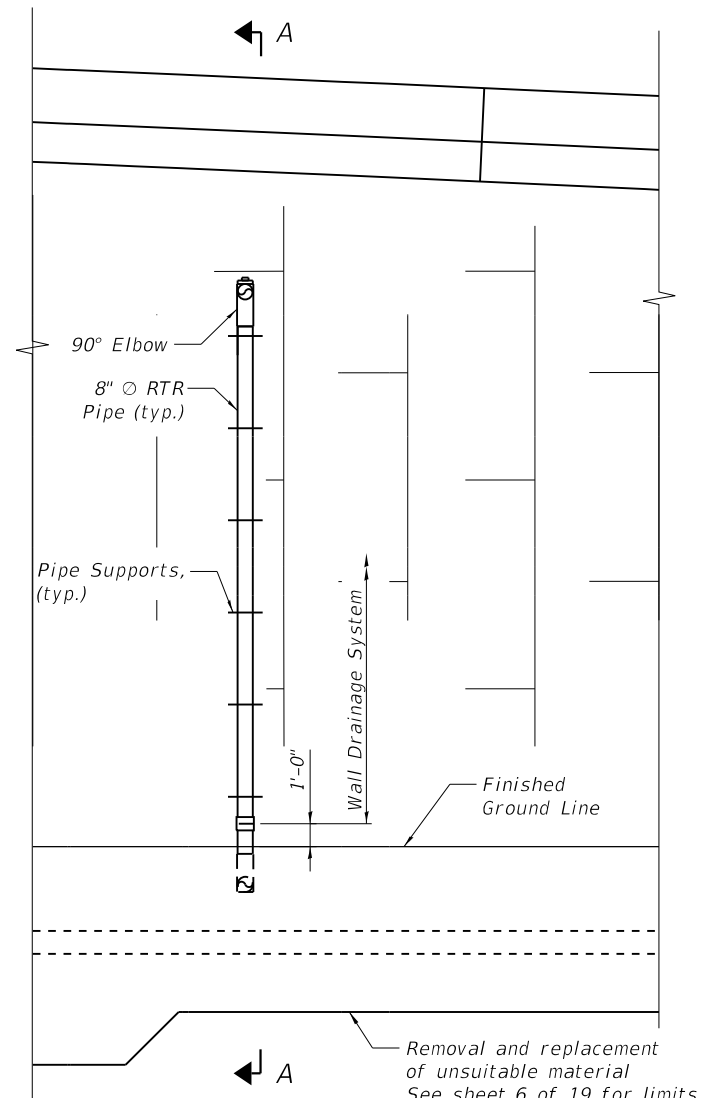
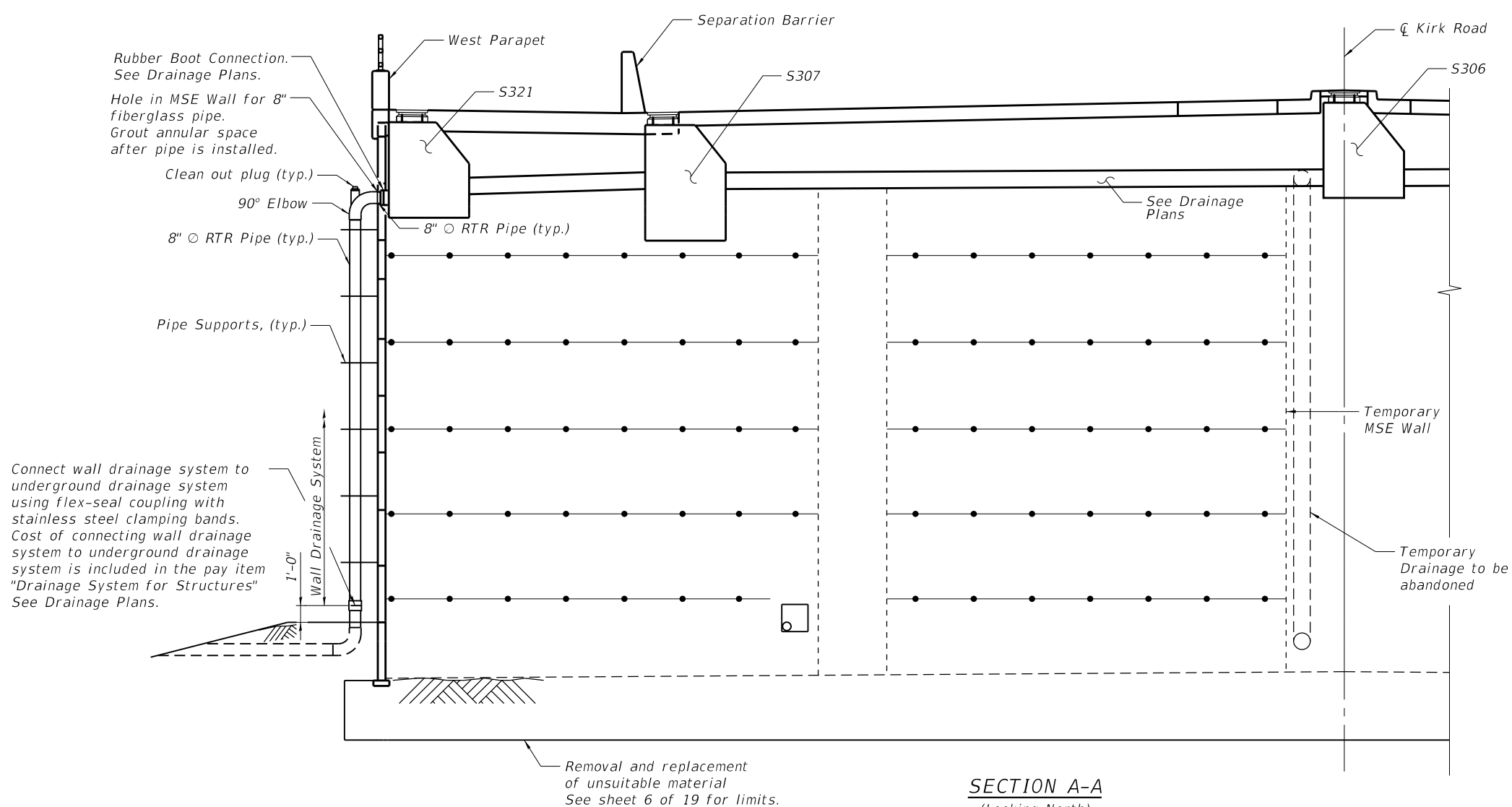
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**DRAINAGE DETAILS I
MSE WALL 02**

SHEET 15 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	378
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 02_Sheet_16_Drainage Details II.dgn



NOTES:

- Contractor shall furnish and install a wall drainage system as shown and noted on the plans and in accordance with Section 523 of the Standard Specifications. Work includes all piping, fittings, support brackets, hangers, inserts and bolts.
- The Contractor shall submit shop drawings showing details of the drainage system to the Engineer for approval before any fabrication has begun. Cost included in Drainage System For Structures.
- Downspouts shall extend a minimum of 1" into fittings.
- Contractor shall design all pipe supports. Runs of pipe shall be supported at spacings not exceeding those recommended by the manufacturer of the pipe. Supports that have point contact or narrow supporting areas shall be avoided. Standard slings, clamps, clevis hangers and shoe supports designed for use with steel pipe may be used. Minimum strap width for brackets shall be 1 1/2 inches. Straps shall have 120 degrees of contact with the pipe. Pipes supported on less than 120 degrees of contact shall have a split fiberglass pipe protective sleeve bonded in place with adhesive.
- All pipe supports and associated hardware shall be hot dip galvanized according to AASHTO M 232 or AASHTO M 111.
- All reinforced fiberglass pipe and fittings shall be handled and installed according to guidelines and procedures recommended by the manufacturer or supplier of the material. Color of pipe and fittings shall be light grey to match concrete beams.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage System For Structures	L Sum	0.25



USER NAME	=	DESIGNED	-	ES	REVISED	-
		CHECKED	-	PRD	REVISED	-
PLOT SCALE	=	DRAWN	-	ES	REVISED	-
PLOT DATE	=	CHECKED	-	PRD	REVISED	-

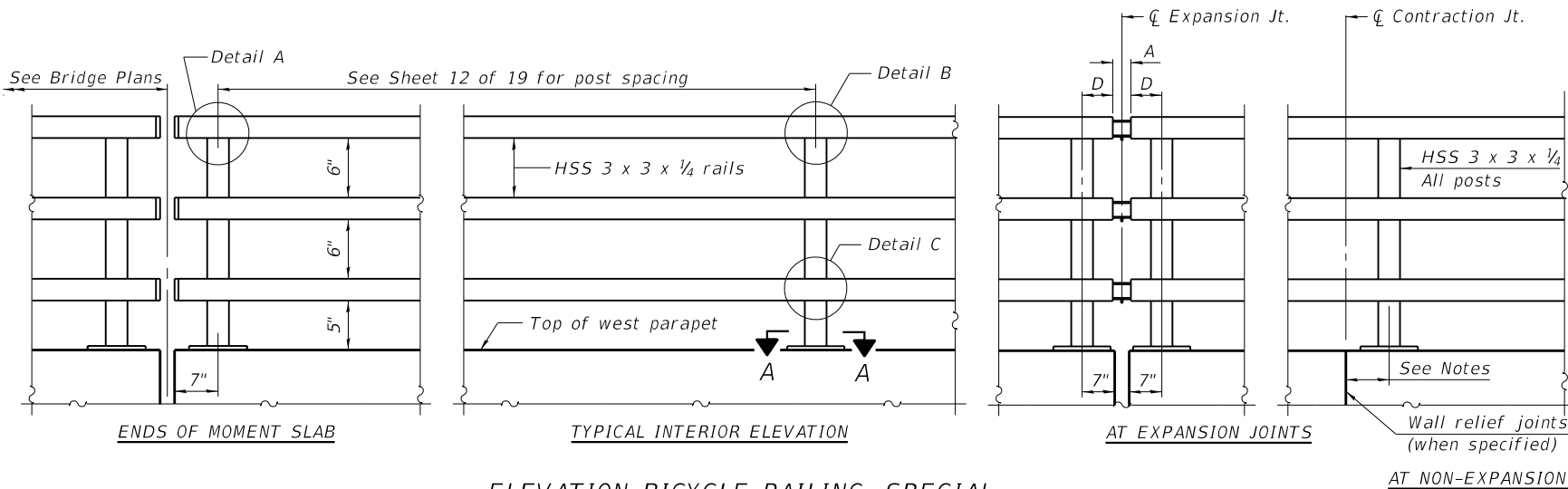
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS II
MSE WALL 02

SHEET 16 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	379
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRRCAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 02_Sheet_17_Railing Details.dgn



ELEVATION BICYCLE RAILING, SPECIAL
(Inside Face of Three Element Rail)

Notes:
Place reinforcement bars to miss anchor rod locations.
All HSS tubing used for the Bicycle Railing, Special shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
All HSS tubing used for the Bicycle Railing, Special shall be ASTM A500 grade C.
All base plates used for the Bicycle Railing, Special shall be AASHTO M270 grade 50.
All heavy hex nuts shall be according to ASTM A 563 grade DH.
All fully threaded anchor rods shall be ASTM F1554 grade 105.
The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.
Contractor shall offset posts to miss any aluminum sheet or cork joints for sufficient installation of the anchorage assembly.
Rail splice inserts may be built out of bent plates of the same thicknesses and outside geometry limits as the 4 plate rail splice inserts shown.
When the contract specifies a galvanized railing, all steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications. When the contract specifies a painted railing, all posts, rail, splices, anchor devices and plates of the railing shall be painted according to the paint system for railings as specified in the General Notes.

See sheet 12 of 19 for moment slab expansion joint locations and dimensions.

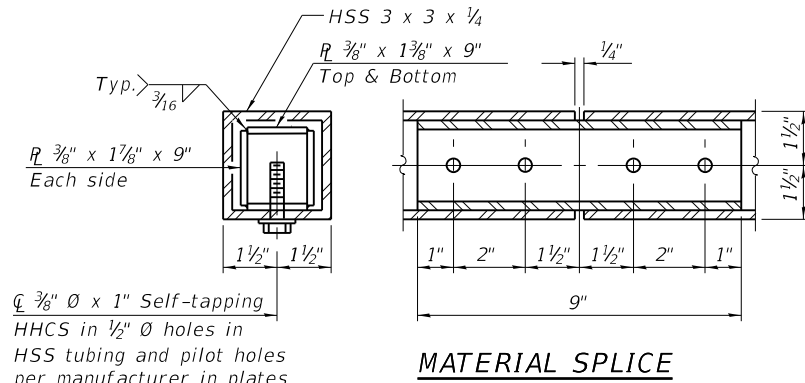
RAILING CRITERIA

MASH 2016 Test Level	4
Bicycle Railing, Special Weight (plf)	47
Max Post Spacing	10'-0"

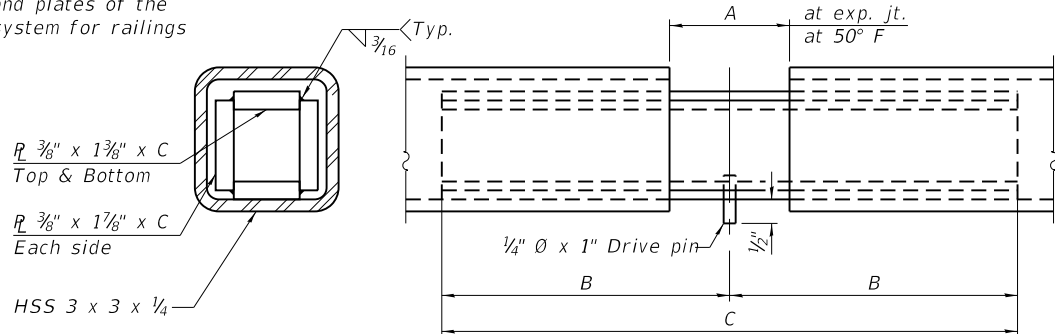
TABLE OF DIMENSIONS

Location	T	A	B	C	D
¾" Exp. Jt.	≤4"	1¾"	1'-2"	2'-4"	6½"
At Light Poles	8"	NA – Coordinate 8" Wide Access With Fabricator			
At Bridge Relief Joints					
		NA – Material Splices Per Fabricator			

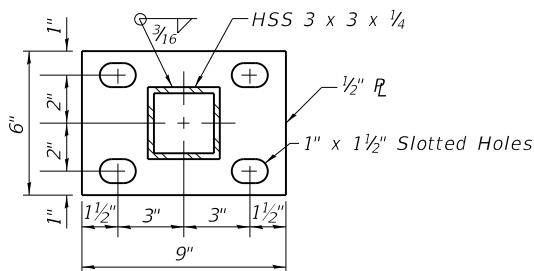
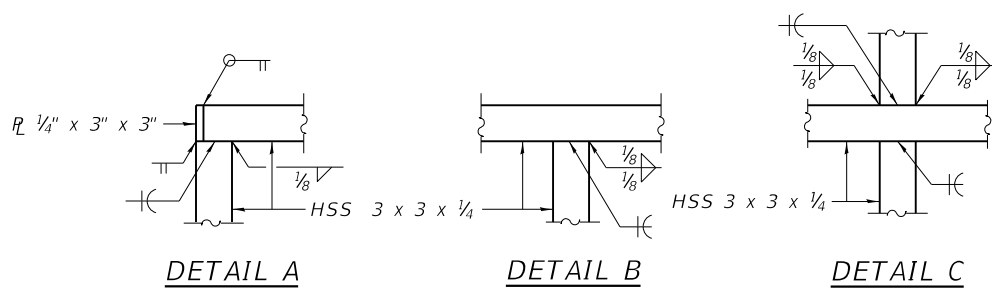
T= ; total movement based on total temperature range from -20°F to 120°F along centerline of roadway at expansion joint.
OR
8" hand-hold access for maintenance of light poles (when present; replace splice with 8" gap)



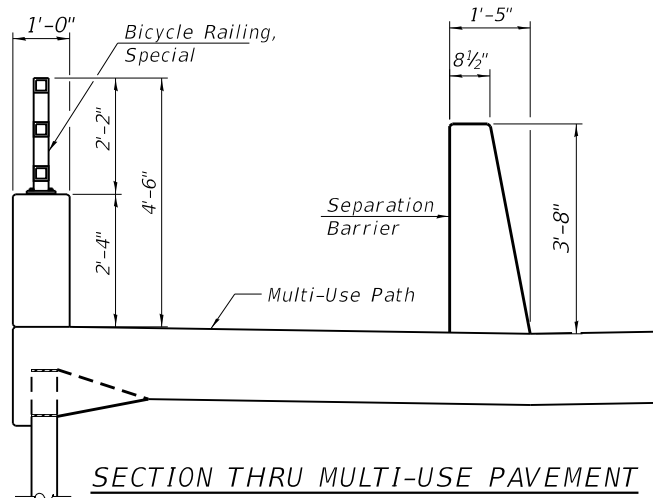
MATERIAL SPLICE



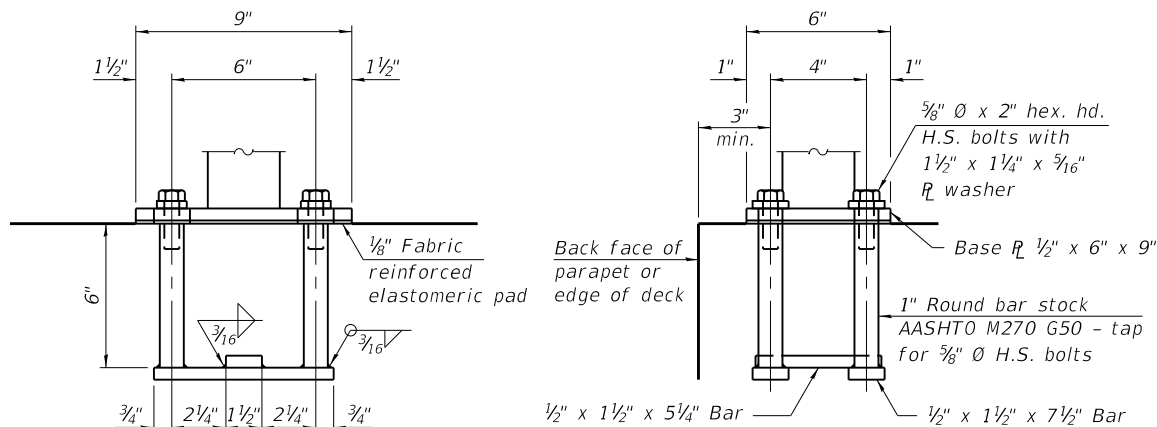
EXPANSION SPLICE



SECTION A-A



SECTION THRU MULTI-USE PAVEMENT



ANCHORAGE ASSEMBLY

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 3/8" Ø fully threaded anchor rods with the same plate washers as specified above and heavy hex lock nuts 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, Special	Foot	83



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - PRD	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RAILING DETAILS
MSE WALL 02

SHEET 17 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	380
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

STRUCTURE BORING LOG

Page 1 of 2

Date Started 8/6/15

Date Completed 8/6/15

ROUTE 360 DESCRIPTION Kirk Road Bridge over Railroad Tracks Date Completed 8/6/15

SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION Southeast Corner S. 1SW/12NW , TWP. 39N , RNG. 8E

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
 Stations, Depths, Offset, and Elevations are in Feet

LDOT_BORING 79851-IDOT.GPJ IDOT.GDT 12/3/15

STRUCTURE BORING LOG

Page 2 of 2

Date Started 8/6/15Date Completed 8/6/15

STRUCTURE NO. 045-xxxx

ROUTE 360SECTION 21-00192-04-BR

COUNTY Kane

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

LDOT_BORING 79851-DOT.GPJ IDOT.GDT 12/3/15

STRUCTURE BORING LOG

Page 1 of 2

Date Started 9/5/15Date Completed 9/5/15

ROUTE 360 DESCRIPTION Kirk Road Bridge over Railroad Tracks Date Completed 9/9/15

SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79,851A

COUNTY Kane LOCATION Southwest Corner S. 1SW/12NW , TWP. 39N , RNG. 8E

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

LDOT_BORING 79851-IDOT.GPJ IDOT.GDT 12/3/15



USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS I
MSE WALL 02

SHEET 18 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	381
		CONTRACT NO. 61M13		
ILLINOIS		FED. AID PROJECT		

MODEL: Main
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR(CAD Sheets)Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 02_Sheet_19_Boring IL.dgn
I:\DOT BORING 78651-4DOT.GPJ I\DOT.GDT 12/3/15

Testing Service Corporation

STRUCTURE BORING LOG

Page 2 of 2
Date Started 9/5/15
Date Completed 9/5/15

STRUCTURE NO. 045-xxxx
ROUTE 360
SECTION 21-00192-04-BR
COUNTY Kane

Boring No.	Station	Offset	Elevation	DEPTH	BLOWS	Qu	W
SB-2	Sta. 117+22	57.00ft LT	704.80				
Very stiff gray CLAY, trace gravel, moist A-6							
701.80							
Very dense to dense gray SANDY LOAM, trace gravel, moist A-2-4							
25 43 50/3"							
8.1							
19 23 20							
11.3							
692.80							
Weathered/Fractured Bedrock or Possible Boulder Zone [Hard Drilling]							
690.80							
100/0"							
Auger Refusal at 64.0'							
CME 750 ATV Drill Rig (#275) CME Automatic Hammer							
737.00							
Hard to very stiff gray CLAY, trace gravel, moist A-6							
6 7 10							
B 5.06 15%							
19.9							
5 6 8							
B 4.26 15%							
19.9							
3 6 8							
B 4.07 15%							
21.5							

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation

STRUCTURE BORING LOG

Page 1 of 1
Date Started 8/7/15
Date Completed 8/7/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall
SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79.851A
COUNTY Kane LOCATION East Side S. 1SW/12NW TWP. 39N , RNG. 8E

Boring No.	Station	Offset	Surface Elev.	DEPTH	BLOWS	Qu	W
SB-108	Sta. 116+45	ft RT	755.00				
Black clayey TOPSOIL							
753.90							
3 5 6							
B 1.23 15%							
24.7							
Stiff brown and gray CLAY, trace gravel, very moist A-6							
752.00							
Med. dense brown SAND, some gravel, very moist to saturated A-1-b							
5 5 6							
B 4.20 15%							
22.7							
5 7 7							
B 2.55 15%							
24.4							
744.50							
Med. dense to dense gray SAND, some gravel, occasional Cobbles and Boulders, saturated A-1-b							
5 7 7							
B 3.34 15%							
20.9							
739.50							
Medium dense gray SANDY LOAM, little gravel, wet A-2-4							
9 13 13							
B 5.06 15%							
19.9							
Hard to very stiff gray CLAY, trace gravel, moist A-6							
6 7 10							
B 4.07 15%							
21.5							

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation

STRUCTURE BORING LOG

Page 1 of 1
Date Started 9/4/15
Date Completed 9/4/15

ROUTE 360 DESCRIPTION Kirk Road South Retining Wall
SECT. 21-00192-04-BR STRUCT. NO. DRILLED BY TSC/L-79.851A
COUNTY Kane LOCATION West Side S. 1SW/12NW TWP. 39N , RNG. 8E

Boring No.	Station	Offset	Surface Elev.	DEPTH	BLOWS	Qu	W
SB-119	Sta. 116+47	56.00ft LT	753.50				
Black clayey TOPSOIL							
752.50							
3 3 4							
P 0.5							
29.5							
Soft dark brown and gray CLAY, trace gravel, very moist A-7-6							
750.50							
Soft to medium stiff brown and gray CLAY, occasional silt seams, very moist A-7-6							
2 2 2							
B 0.43 15%							
36.5							
745.50							
Med. dense brown and gray SANDY LOAM, some gravel, very moist to wet A-2-4							
6 6 7							
B 2.28 15%							
22.1							
743.00							
Very stiff gray CLAY LOAM, little gravel, moist A-4							
8 11 14							
B 2.28 15%							
12.7							
740.50							
Medium dense gray SANDY LOAM, some gravel occasional Cobbles, wet A-2-4							
14 14 15							
B 8.7							
20.9							
738.00							
Very stiff to hard gray LOAM, little gravel, numerous silt seams, moist A-4							
17 21 24							
B 2.63 15%							
10.3							
19 23 25							
B 4.66 15%							
10.1							
733.00							
Very dense to dense gray SANDY LOAM, some gravel occasional Cobbles, wet A-2-4							
24 31 45							
B 11.2							
9.5							

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet



USER NAME =	DESIGNED - KN	REVISED -
CHECKED - PRD	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS II
MSE WALL 02

SHEET 19 OF 19 SHEETS

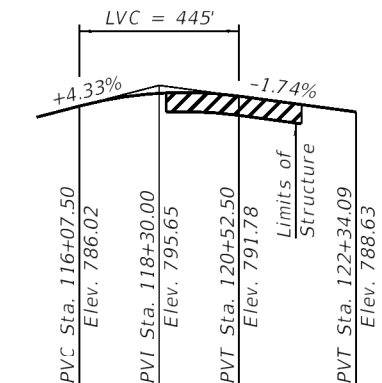
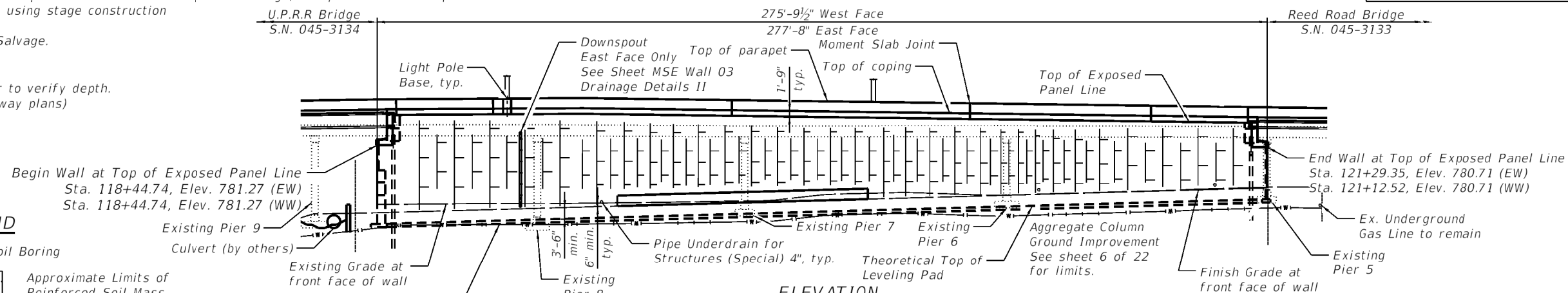
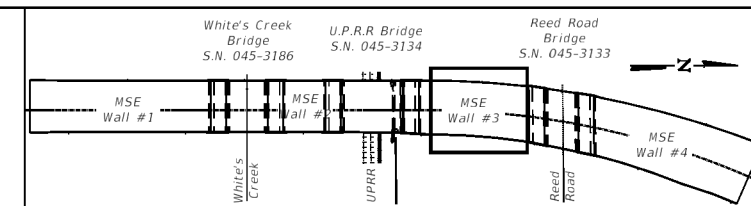
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	382
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

Existing Structure: S.N. 045-3096 originally constructed in 1974 as FAS Route 1100, Section 192-3VB (Kirk Road). It was repaired in 1977, 1987, 1990, 1998, 2003, 2013, and 2021. It underwent a rehabilitation in 2001. The existing superstructure is 18 span continuous, separated into 4 units, with 7½' deck and non-composite wide flange beams. Back to back of abutments is 1,376'-2" and Out-to-Out width is 62'-0". Existing substructure contains two concrete reinforced spill through abutments on piles and 17 piers; with piers 1 to 8 and 17 on spread footings, and piers 9 to 16 on piles. Traffic to be maintained using stage construction

U.P.R.R Bridge

27

* Contractor to verify depth.
(See roadway plans)



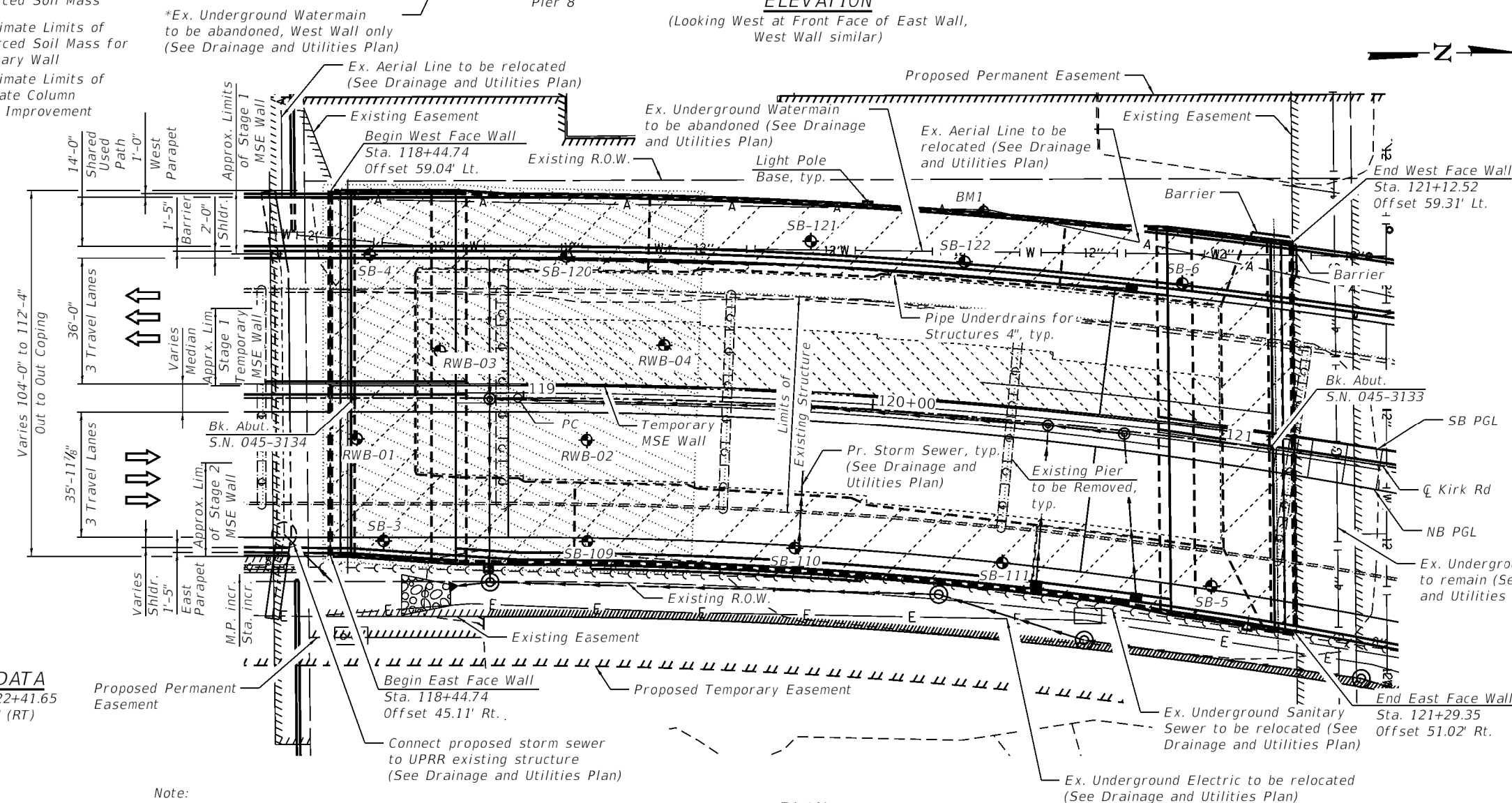
PROFILE GRADE
(along N.B. & S.B. PGL)

2024 AASHTO LRFD Bridge Design Specifications, 10th Edition

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

$f'c = 4,000$ psi (Moment Slab & Parapets)
 $f'c = 3,500$ psi (All Other Retaining Wall Concrete)
 $f_y = 60,000$ psi (Reinforcement)

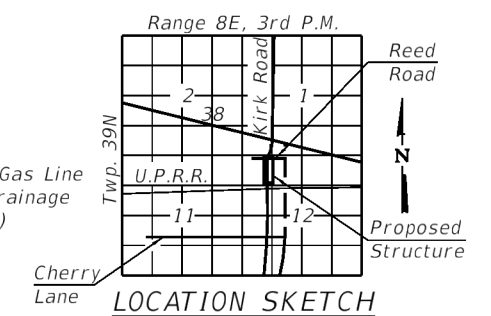
PRECAST UNITS
 $f'_c = 4,500 \text{ psi (Precast Panels)}$



$P.I. Sta. = 122+41.65$
 $\Delta = 24^{\circ}35'23''$ (RT)
 $D = 3^{\circ}38'16''$
 $R = 1,575.00'$
 $T = 343.26'$
 $L = 675.95'$
 $E = 36.97'$
 $P.C. Sta. = 118+98.39$
 $P.T. Sta. = 125+74.34$

Note:
Wall Station and offsets are measured from the C of Kirk Rd. to the front face of precast panels.

PLAN



MSE WALL 03



USER NAME	=	DESIGNED	-	ES	REVISED	-
		CHECKED	-	PRD	REVISED	-
PLOT SCALE	=	DRAWN	-	ES	REVISED	-
PLOT DATE	=	CHECKED	-	PRD	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
MSE WALL 03

SHEET 1 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	383
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES:

Reinforcement bars designated (E) shall be epoxy coated.
Slipforming of the parapets is not allowed.
A protective coat shall be applied to the top and inside faces of the parapets, separation barrier, multi-use path, and shoulders.
The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions in the field.
Wall Stations and Offsets are given to the Front Face (FF) of the wall and are measured from centerline of Kirk Road.
Wall is built in conjunction with new bridges S.N. 045-3134 and S.N. 045-3133. Piles are installed prior to the construction of wall.
Horizontal dimensions measured along front face of precast panels.
Utilities shall be relocated by others.

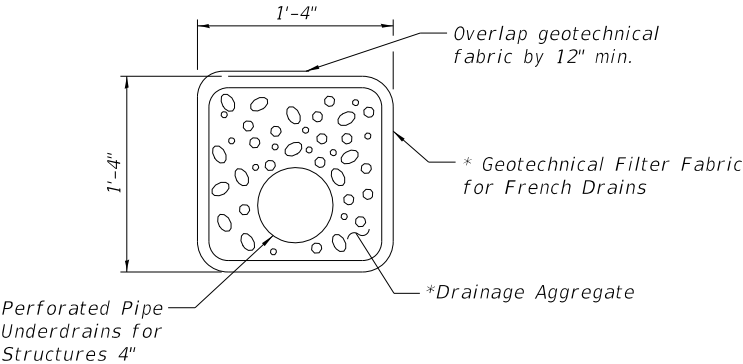
INDEX OF SHEETS

- 1. General Plan and Elevation
- 2. General Data
- 3. Typical Details
- 4. Stage I & II Construction
- 5. Wall Plan & Elevations
- 6. Temporary Wall Elevation
- 7. Typical Sections
- 8. Excavation Plan and Details at UPRR
- 9. Moment Slab Plan and Elevation I
- 10. Moment Slab Plan and Elevation II
- 11. Moment Slab Plan and Elevation III
- 12. Moment Slab Sections and Details
- 13. Moment Slab and Light Pole Details
- 14. Drainage Details I
- 15. Drainage Details II
- 16. Railing Details
- 17. Boring Logs I
- 18. Boring Logs II
- 19. Boring Logs III
- 20. Boring Logs IV
- 21. Boring Logs V
- 22. Boring Logs VI

TOTAL BILL OF MATERIAL

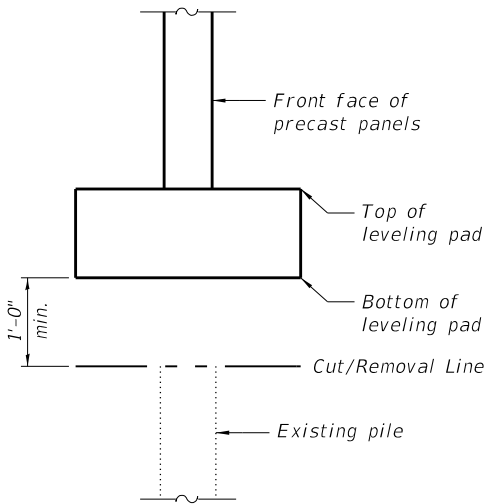
Item	Unit	Total
Structure Excavation	Cu Yd	2,977
Concrete Structures	Cu Yd	304.4
Form Liner Textured Surface	Sq Ft	17,277
Protective Coat	Sq Yd	765
Reinforcement Bars, Epoxy Coated	Pound	43,310
Mechanically Stabilized Earth Retaining Wall	Sq Ft	19,196
Temporary Mechanically Stabilized Earth Retaining Wall	Sq Ft	6,374
Drainage System For Structures	L Sum	0.25
Pipe Underdrains For Structures 4"	Foot	634
Aggregate Column Ground Improvement	L Sum	1
Staining Concrete Structures	Sq Ft	17,277
Bicycle Railing, Special	Foot	205

See SN 045-3186 for Removal of Existing Structures.

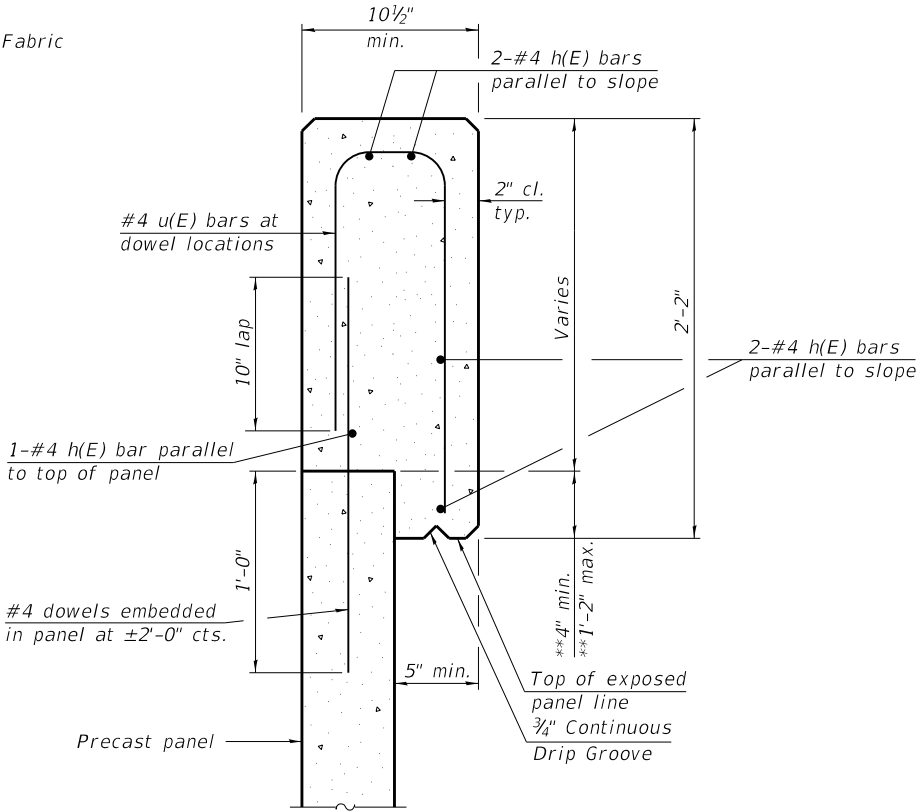


PIPE UNDERDRAIN DETAIL

* Included in cost for Pipe Underdrains for Structures 4"

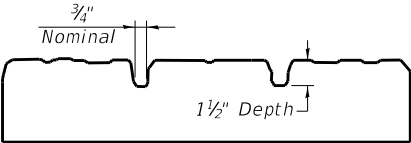
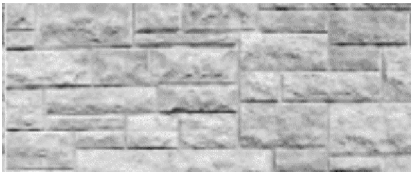


SECTION THRU REMOVAL OF STRUCTURE

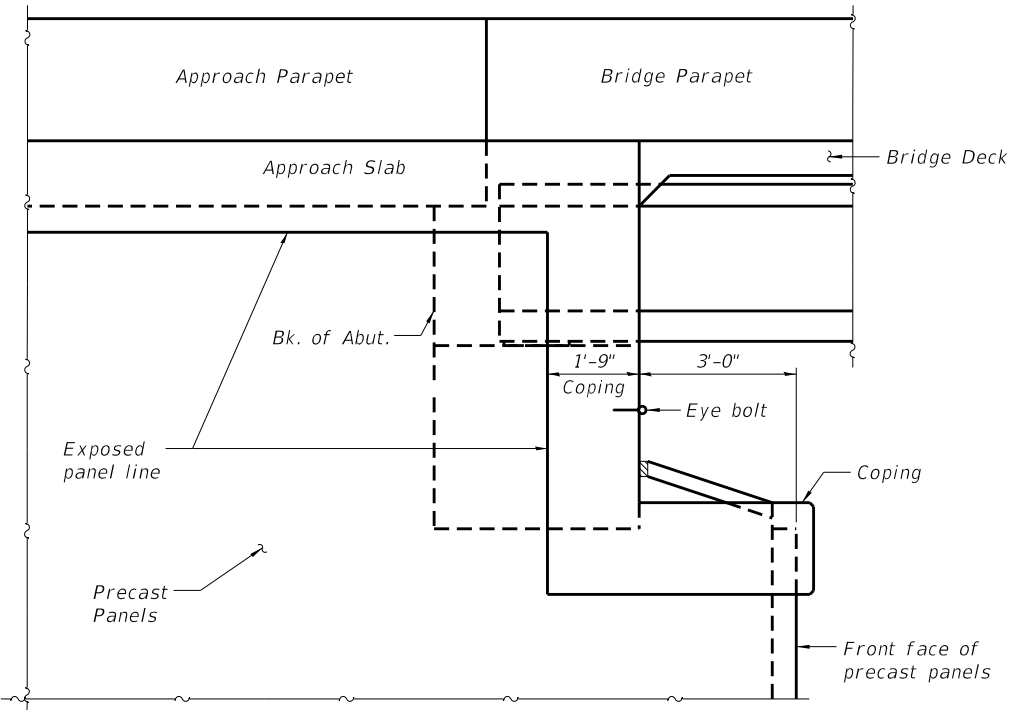


TYPICAL SECTION THRU COPING

** Limits of Bond breaker membrane between front of panel and overhang.



FORM LINER TEXTURED DETAIL



ABUTMENT END VIEW

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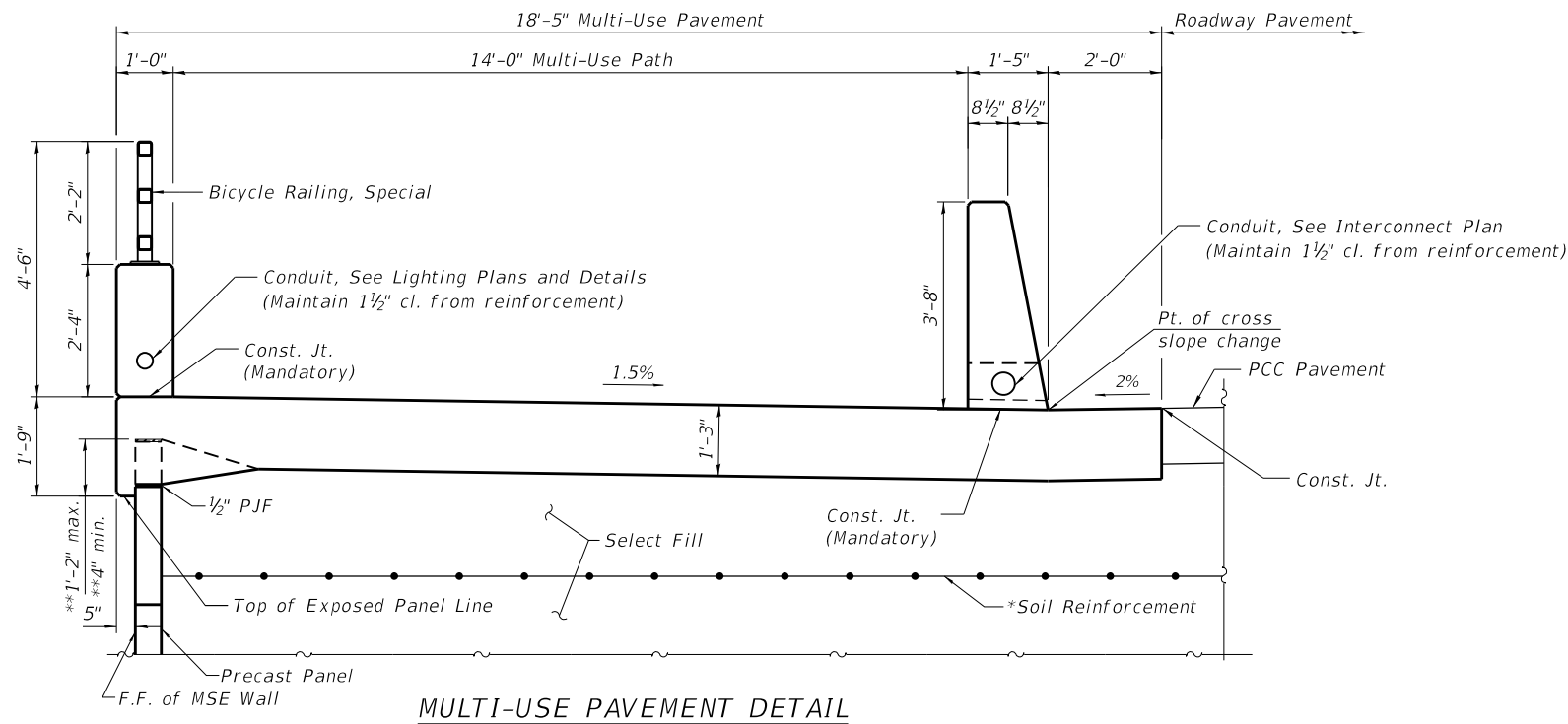
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
MSE WALL 03

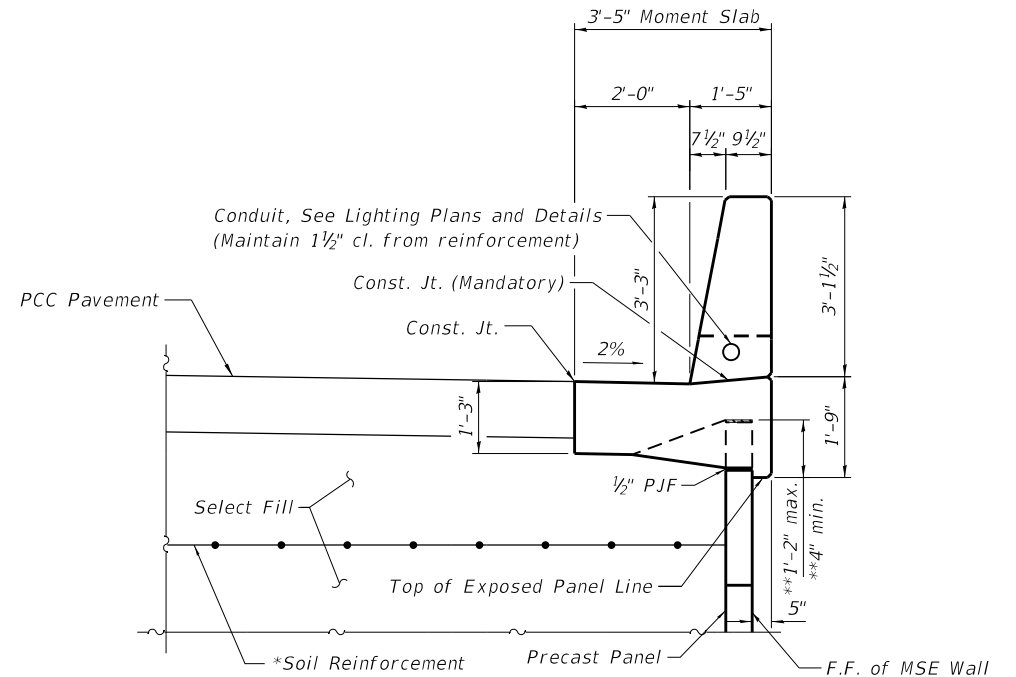
SHEET 2 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

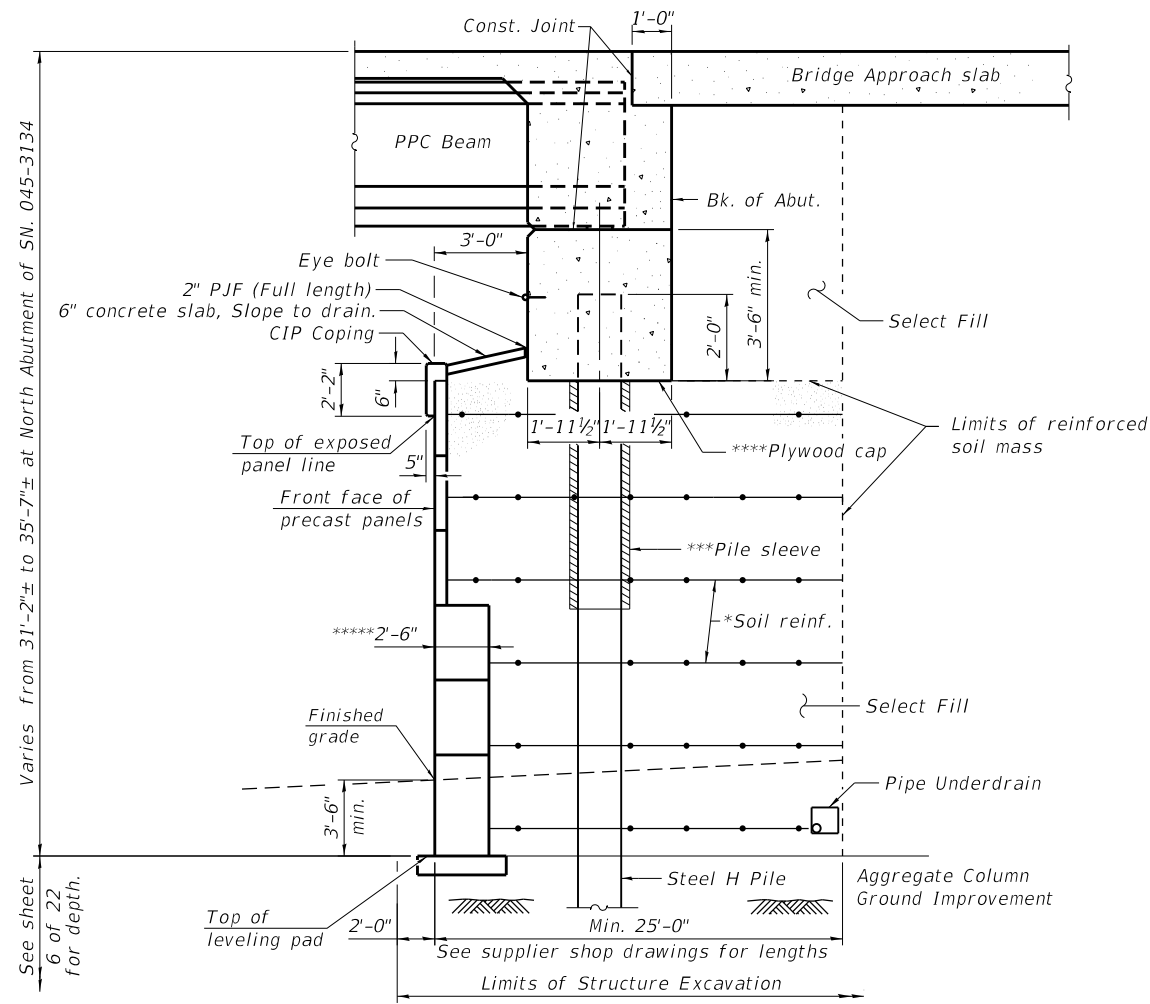
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MULTI-USE PAVEMENT DETAIL

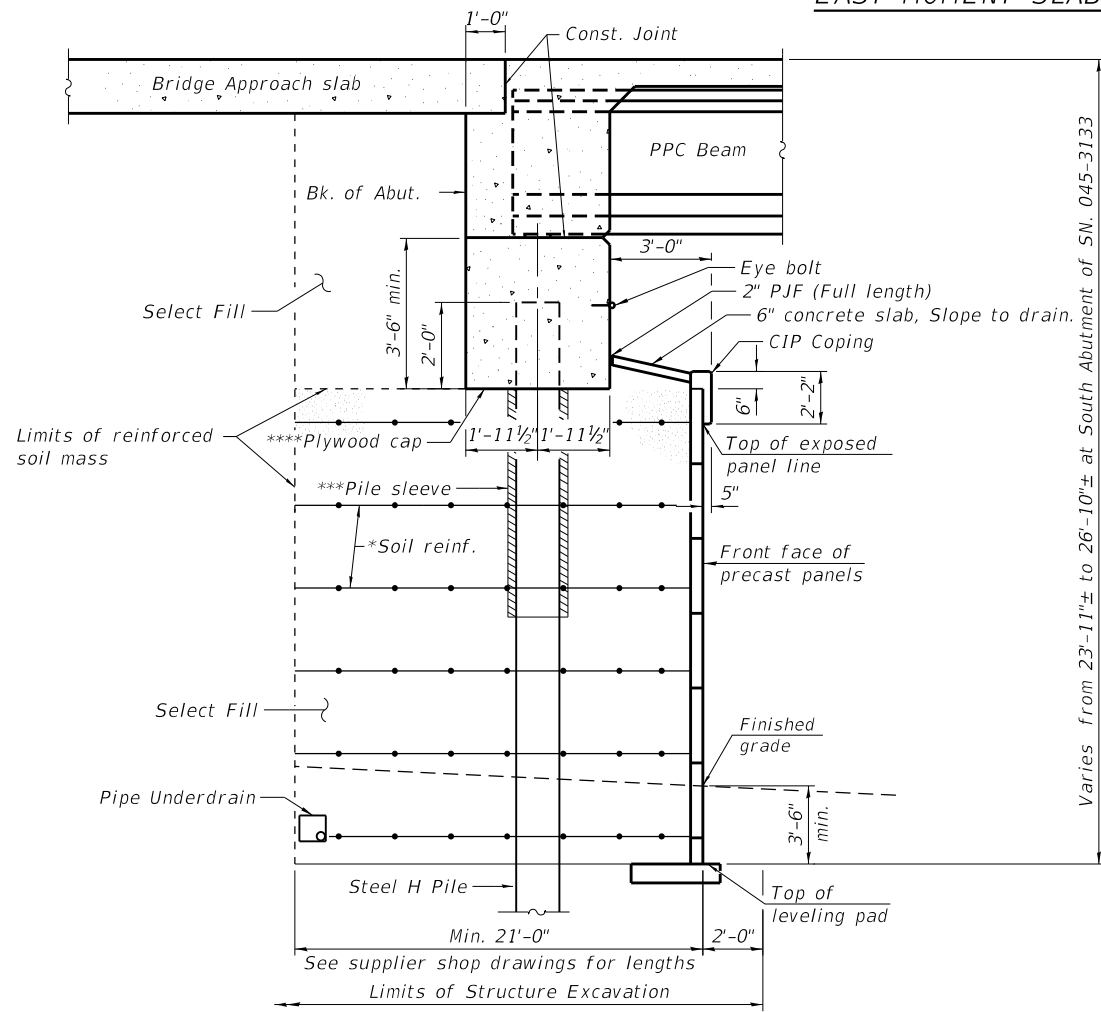


EAST MOMENT SLAB DETAIL



SECTION THRU NORTH INTEGRAL ABUTMENT OF S.N. 045-3134

(Looking West)



SECTION THRU SOUTH INTEGRAL ABUTMENT OF S.N. 045-3133

(Looking West)

* The MSE wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0. The upper layer of soil reinforcement shall be designed with an additional impact rupture loading of 2,300 lb./ft. of wall and an additional impact pullout loading of 1,300 lb./ft. of wall. The second layer of soil reinforcement shall be designed with an additional impact rupture loading of 600 lb./ft. and an additional impact pullout loading of 600 lb./ft.

** Limits of Bond breaker membrane between front of panel and overhang..

*** Sleeve to remain empty in hatched region.

**** Bottom of cap poured against top of plywood. Cut opening to match pile perimeter within ⅛". Support with bars tack welded to webs rated for 500 lbs. Seal gaps to keep concrete out.

***** MSE Panels within 50'-0" of Railroad main track lines 1, 2 & 3 shall be 2'-6" thick for a height of at least 12'-0" above top of rail. Applies only to Wall at North Abutment of S.N. 045-3134.



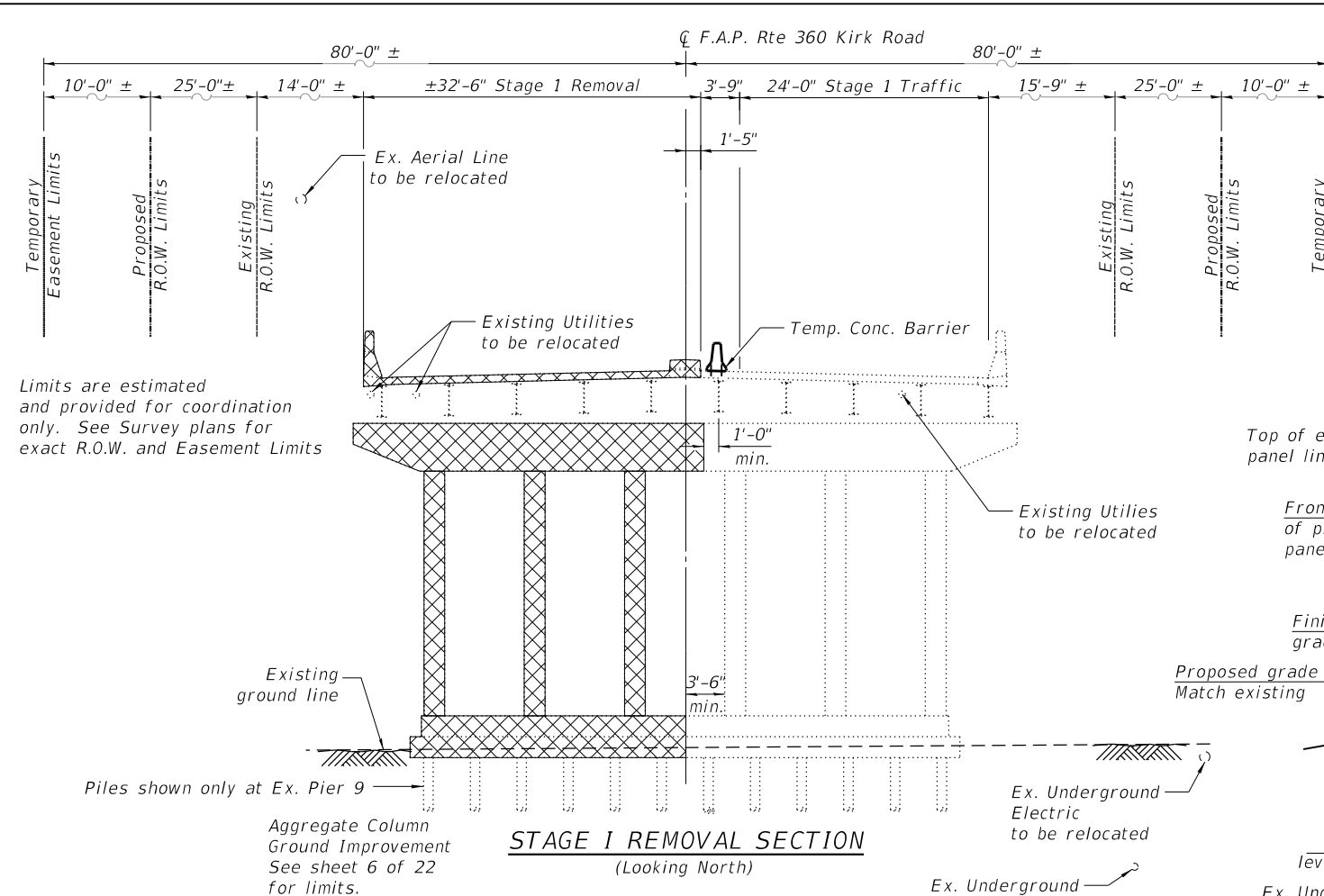
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

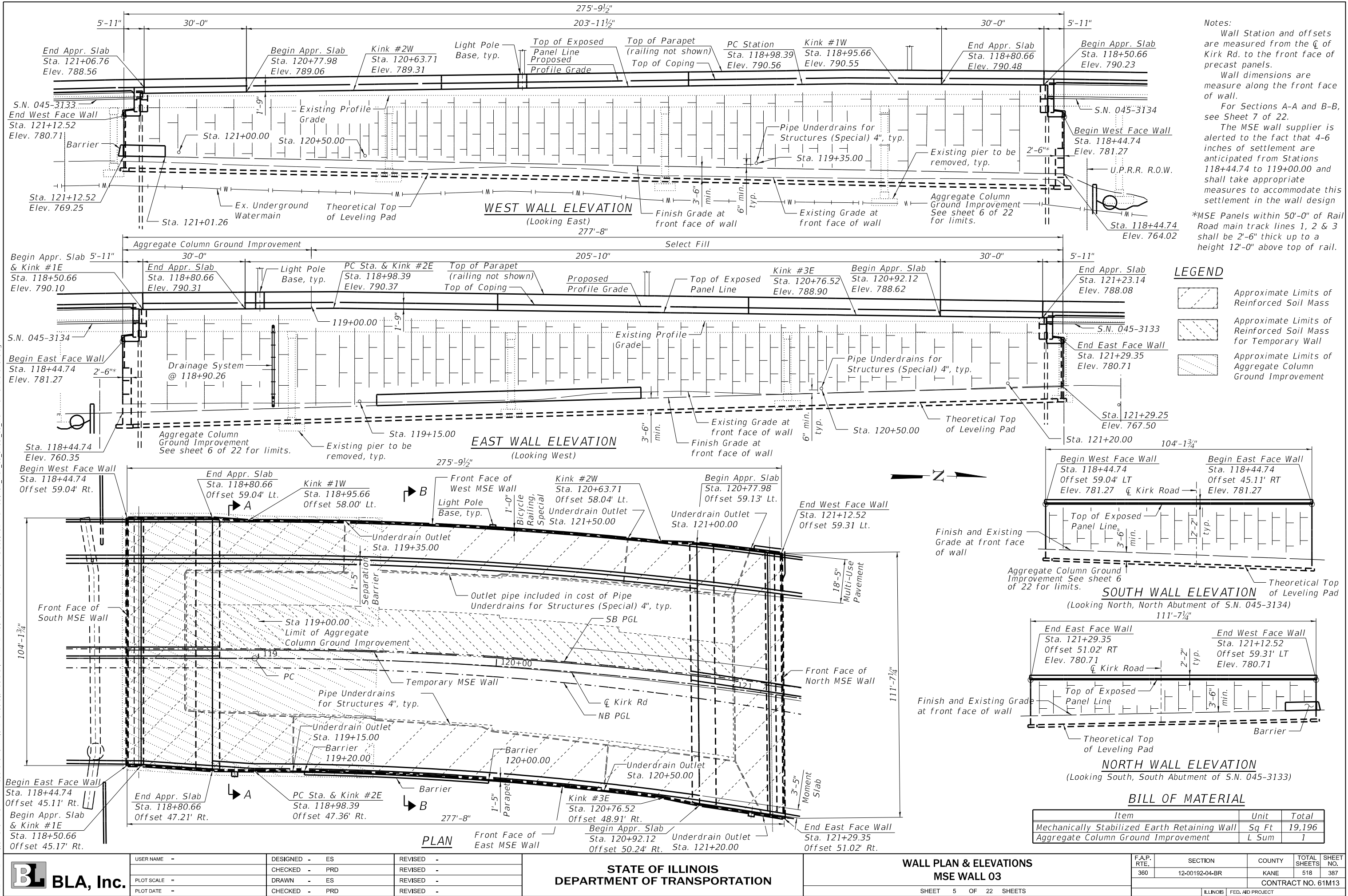
TYPICAL DETAILS
MSE WALL 03

SHEET 3 OF 22 SHEETS

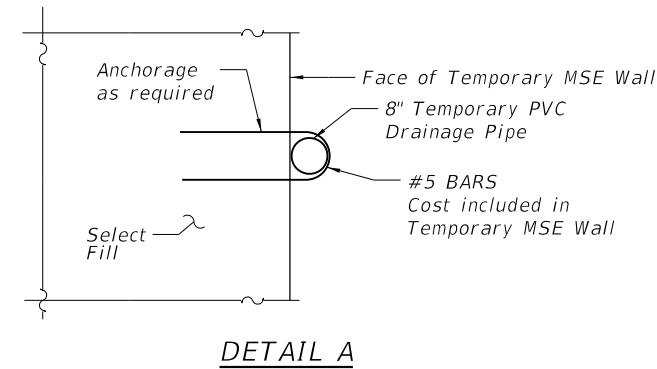
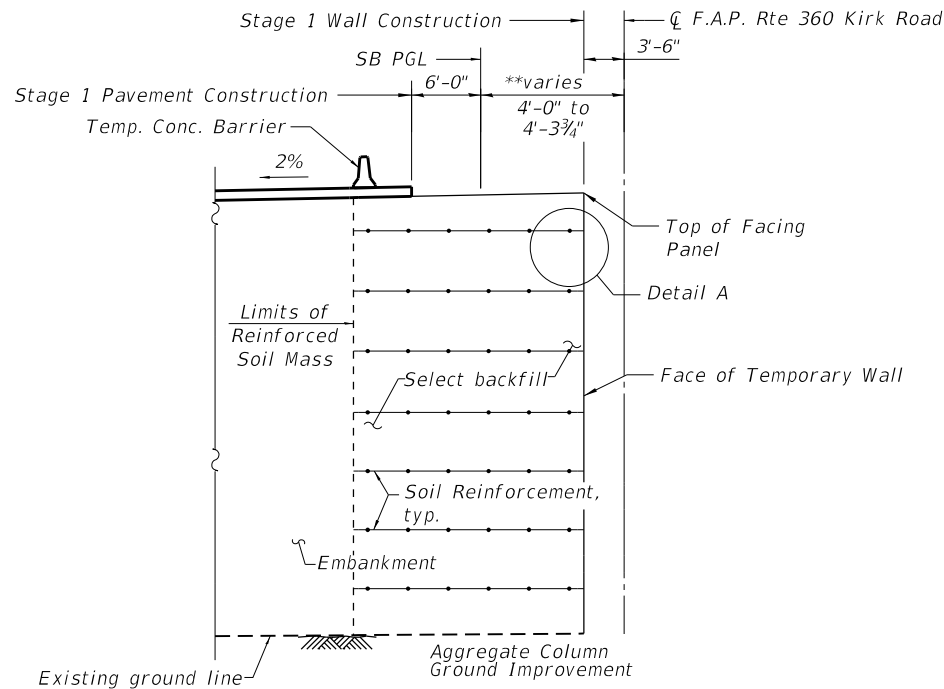
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	385
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				



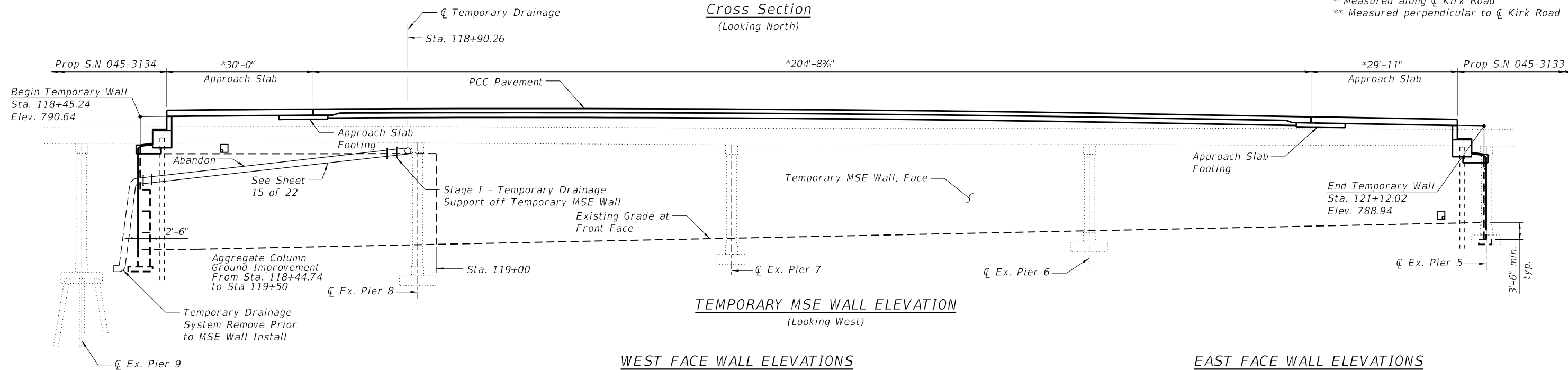
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* Measured along $\bar{C}$ Kirk Road
** Measured perpendicular to $\bar{C}$ Kirk Road



TEMPORARY MSE WALL ELEVATIONS

Station	Offset	T/Exposed Panel Elevation	Existing Grade Elevation	Exposed Wall Height
118+45.24	3.50 Lt.	790.64	763.39	27'-3"
119+00.00	3.50 Lt.	791.03	764.09	26'-11"
119+50.00	3.50 Lt.	791.03	764.81	26'-3"
120+00.00	3.50 Lt.	790.68	766.44	24'-3"
120+50.00	3.50 Lt.	790.00	767.05	22'-11"
121+00.00	3.50 Lt.	789.15	768.54	20'-7"
121+12.02	3.50 Lt.	788.94	768.93	20'-0"

WEST FACE WALL ELEVATIONS

Location	Station	Offset	T/Exposed Panel Elevation	Finish Grade Elevation	Exposed Wall Height
Begin West Face Wall	118+44.74	59.04 Lt.	781.69	764.02	17'-8"
B/ Vertical Exposed Panel Line	118+49.49	59.04 Lt.	781.69	764.11	17'-7"
T/ Vertical Exposed Panel Line	118+49.49	59.04 Lt.	790.22	764.11	26'-1"
Begin Appr. Slab	118+50.66	59.04 Lt.	790.23	764.14	26'-1"
End Appr. Slab	118+80.66	59.04 Lt.	790.47	764.72	25'-9"
Kink #1W	118+95.66	58.00 Lt.	790.55	765.01	25'-6"
PC Station	118+98.39	58.00 Lt.	790.56	765.07	25'-6"
Kink #2W	120+63.71	58.04 Lt.	789.32	768.30	21'-0"
Begin Appr. Slab	120+77.97	59.13 Lt.	789.07	768.58	20'-6"
End Appr. Slab	121+06.76	59.27 Lt.	788.57	769.14	19'-5"
T/ Vertical Exposed Panel Line	121+07.77	59.31 Lt.	788.56	769.16	19'-5"
B/ Vertical Exposed Panel Line	121+07.77	59.31 Lt.	781.05	769.16	11'-11"
End West Face Wall	121+12.52	59.31 Lt.	781.05	769.25	11'-10"

EAST FACE WALL ELEVATIONS

Location	Station	Offset	T/Exposed Panel Elevation	Finish Grade Elevation	Exposed Wall Height
Begin East Face Wall	118+44.74	45.11 Rt.	781.69	760.35	21'-4"
B/ Vertical Exposed Panel Line	118+49.49	45.11 Rt.	781.69	760.47	21'-3"
T/ Vertical Exposed Panel Line	118+49.49	45.11 Rt.	790.09	760.47	29'-7"
Begin Appr. Slab & Kink #1E	118+50.66	45.17 Rt.	790.10	760.50	29'-7"
End Appr. Slab	118+80.66	47.21 Rt.	790.30	761.25	29'-1"
PC Station & Kink #2E	118+98.39	47.36 Rt.	790.37	761.70	28'-8"
Kink #3E	120+76.52	48.91 Rt.	788.91	766.17	22'-9"
Begin Appr. Slab	120+92.12	50.24 Rt.	788.64	766.56	22'-1"
End Appr. Slab	121+23.14	50.88 Rt.	788.10	767.34	20'-9"
T/ Vertical Exposed Panel Line	121+24.60	51.02 Rt.	788.07	767.38	20'-8"
B/ Vertical Exposed Panel Line	121+24.60	51.02 Rt.	781.05	767.38	13'-8"
End East Face Wall	121+29.35	51.02 Rt.	781.05	767.50	13'-7"



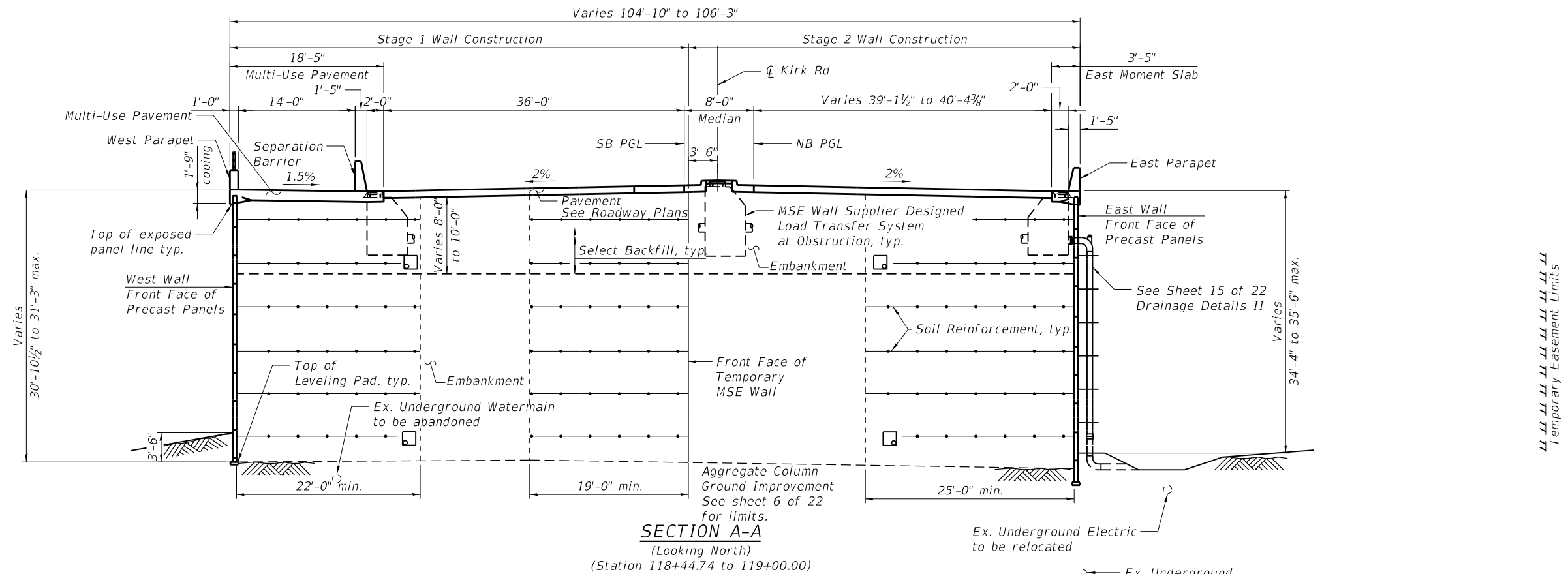
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

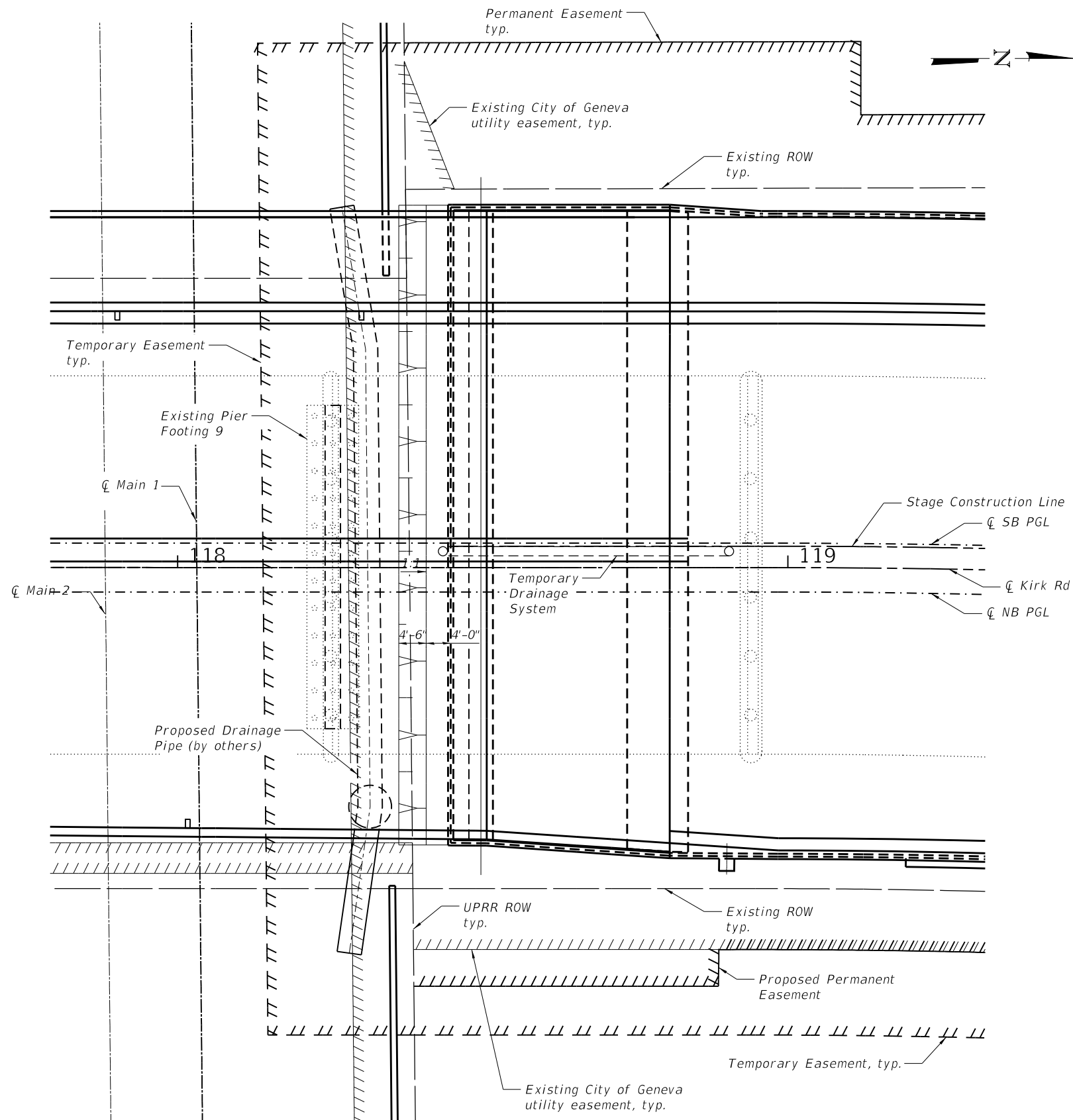
TEMPORARY WALL ELEVATION
MSE WALL 03

SHEET 6 OF 22 SHEETS

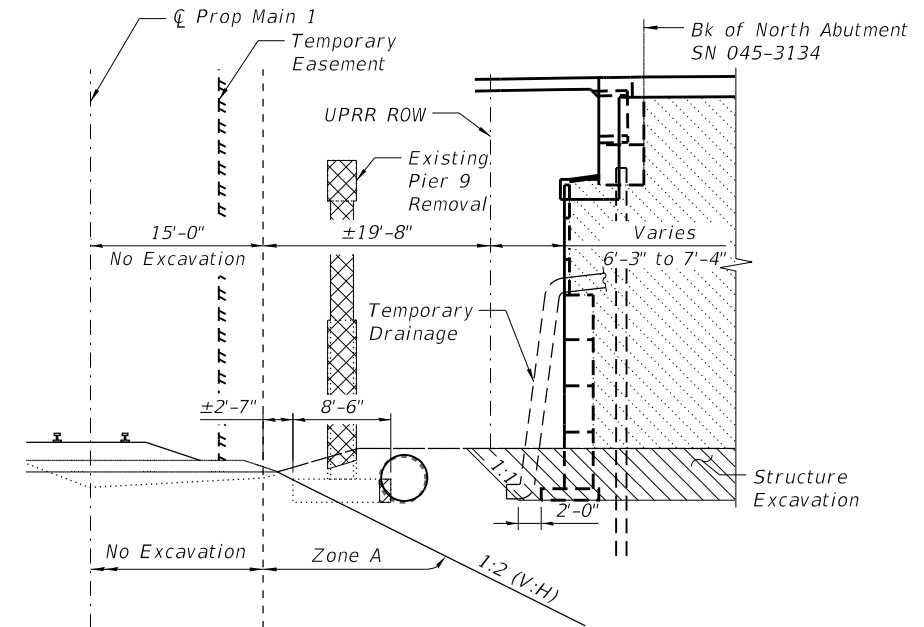
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	388
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				



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PLAN VIEW OF MSE WALL 03 SOUTH ABUTMENT &
UPRR GUIDELINES



SECTION THROUGH MSE WALL 03 SOUTH ABUTMENT WITH
UPRR GUIDELINES

Not For Construction - Reference Only



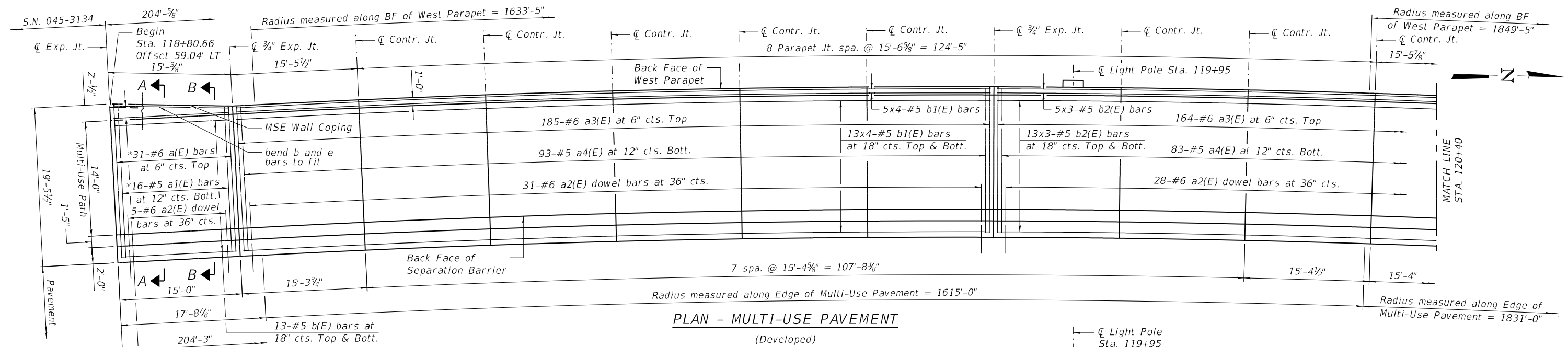
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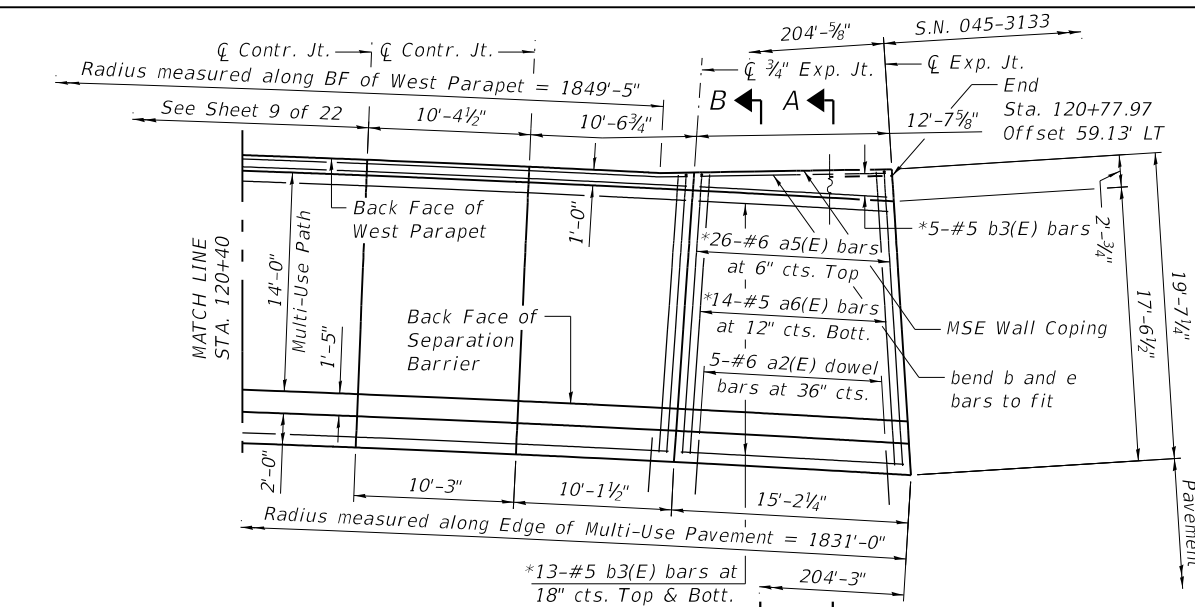
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXCAVATION PLAN AND DETAILS AT UPRR
MSE WALL 03

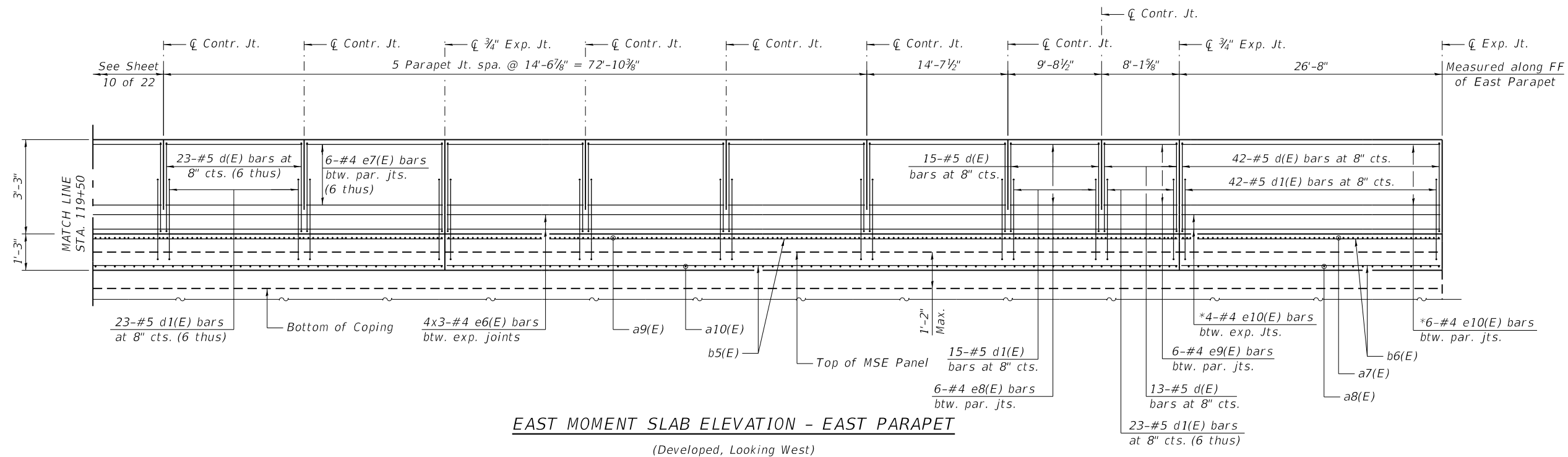
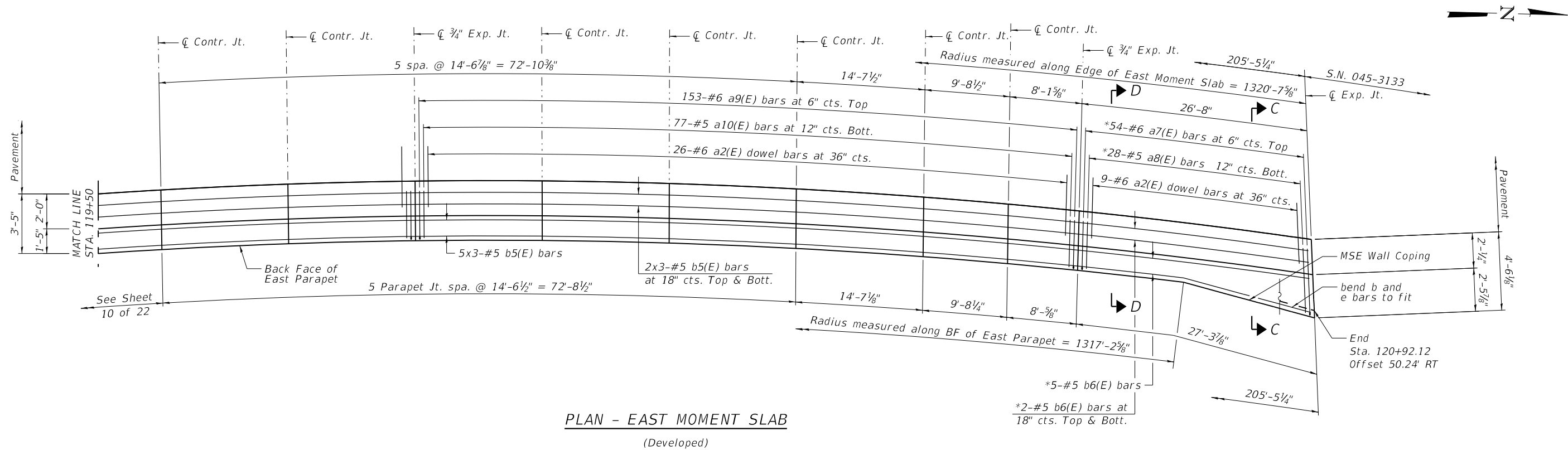
SHEET 8 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	390
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				





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5/20/2026 9:00:28 AM



* Cut a bars to fit.

Notes:
Offset is measured from ϕ Kirk Rd.
See Sht. 12 of 22 for Section C-C and D-D.

MINIMUM BAR LAP
#4 bar = 2'-2
#5 bar = 2-0



USER NAME =	DESIGNED - KN	REVISED -
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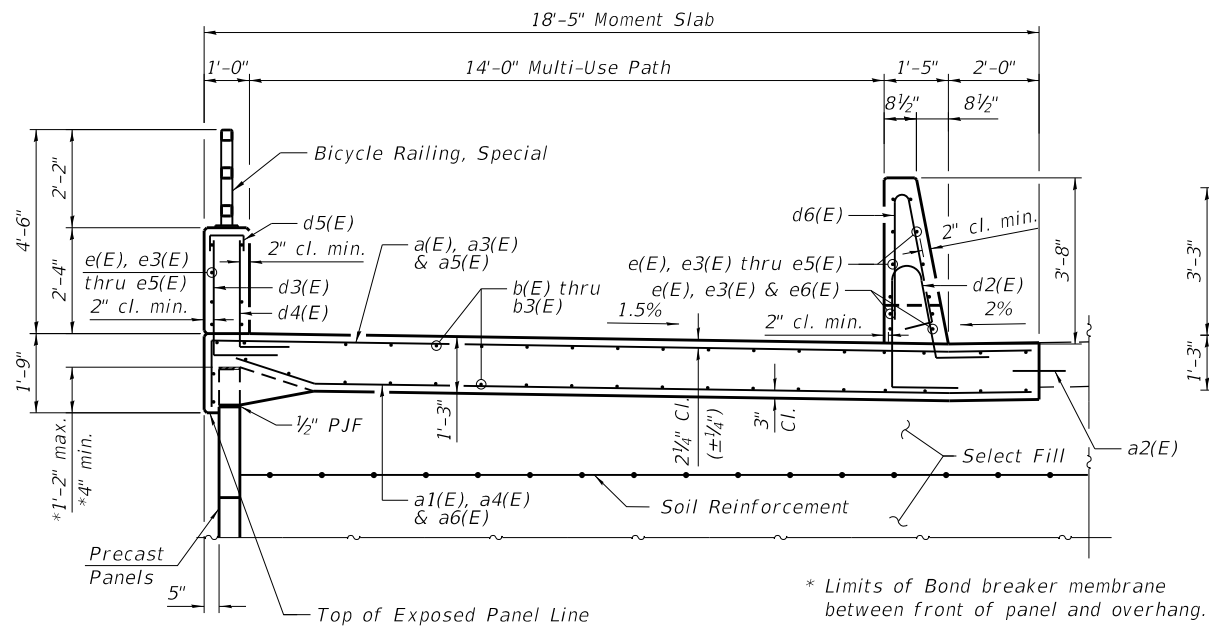
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB PLAN AND ELEVATION III
MSE WALL 03

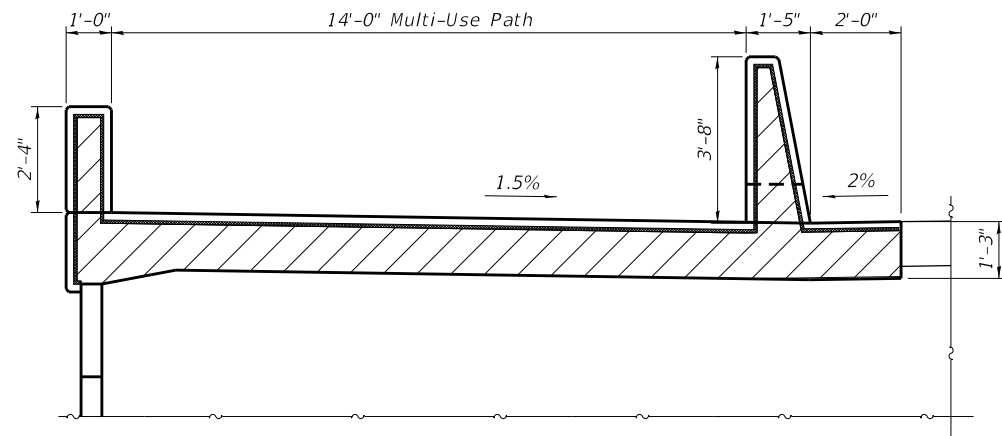
SHEET 11 OF 22 SHEETS

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ILLINOIS FED. AID PROJECT				

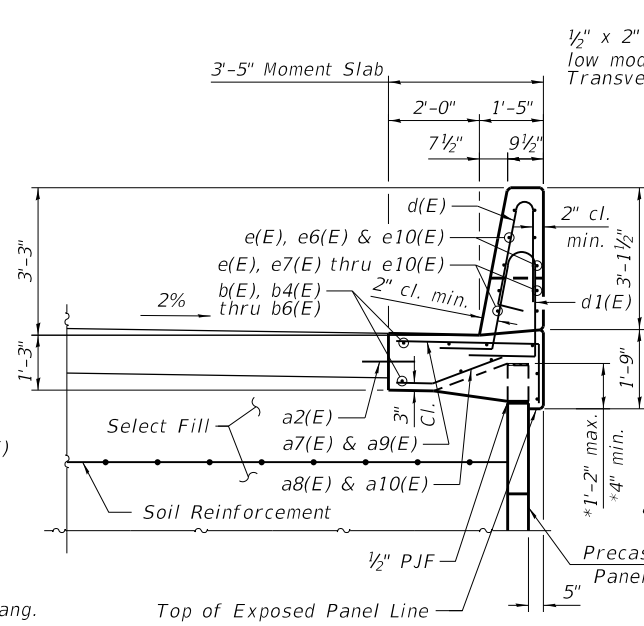
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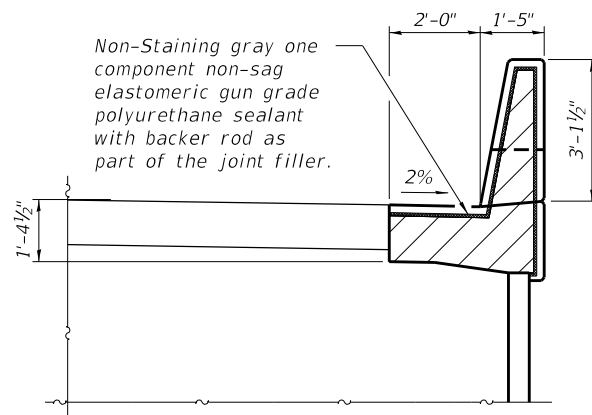
TYPICAL SECTION THROUGH
MULTI-USE PAVEMENT



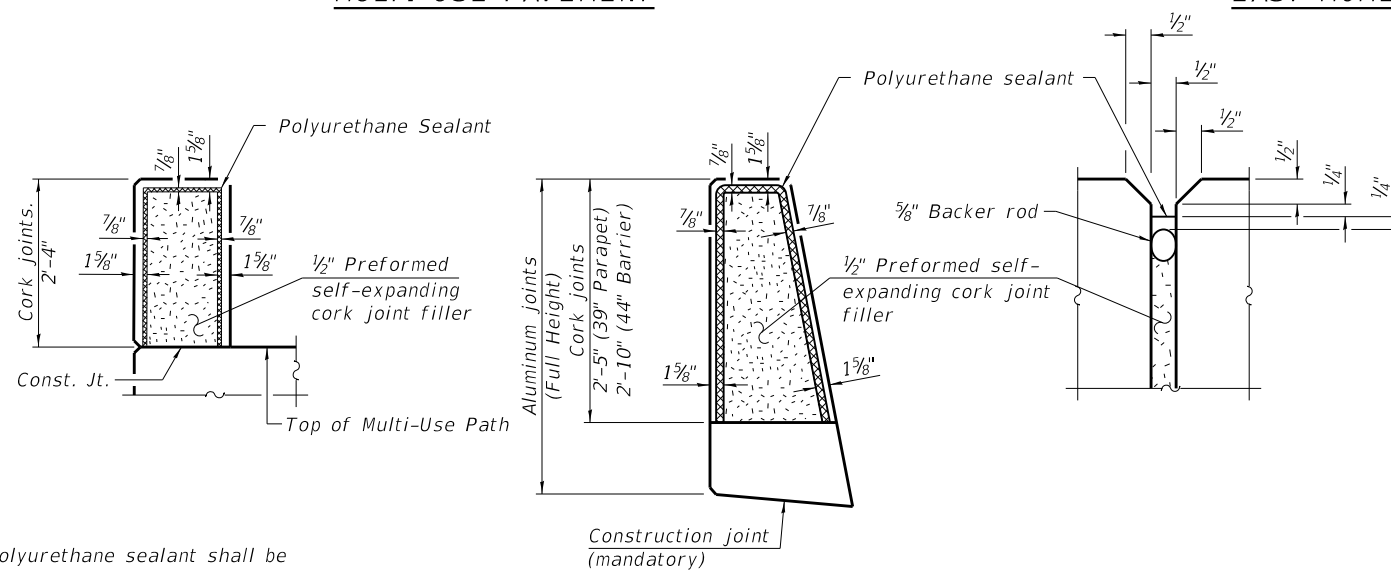
EXPANSION JOINT DETAIL FOR
MULTI-USE PAVEMENT



TYPICAL SECTION THROUGH
EAST MOMENT SLAB

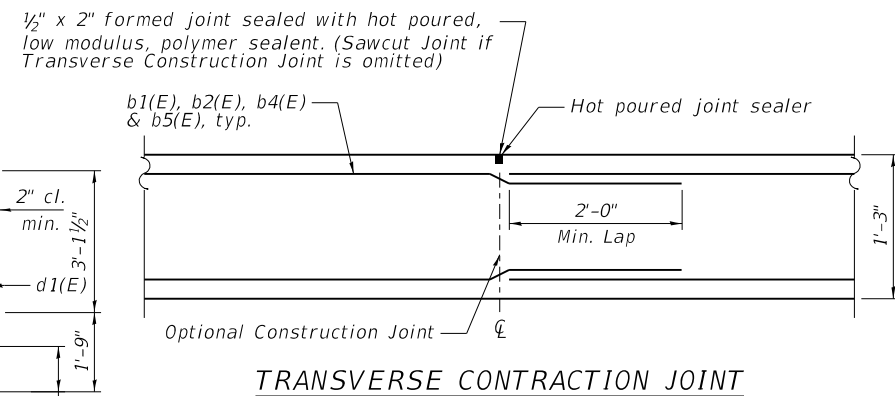


EXPANSION JOINT DETAIL FOR
EAST MOMENT SLAB

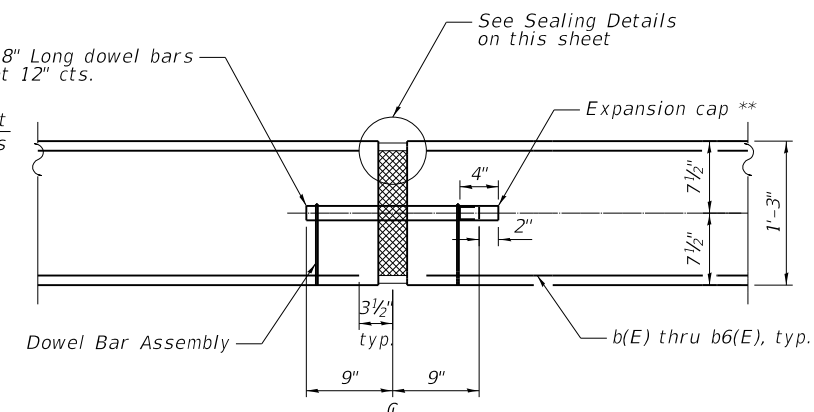


Notes:
The polyurethane sealant shall be according to Article 1050.04 of the Standard Specifications and the color shall be gray.

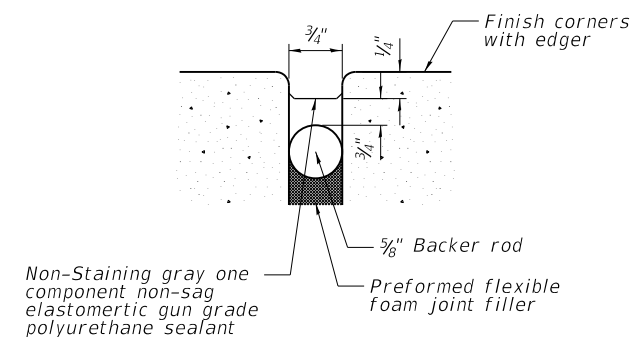
PARAPET/SEPARATION BARRIER JOINT DETAILS



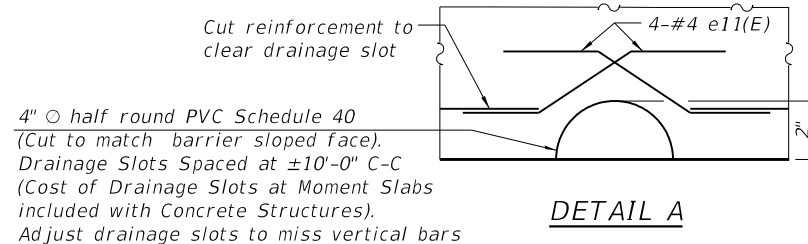
TRANSVERSE CONTRACTION JOINT



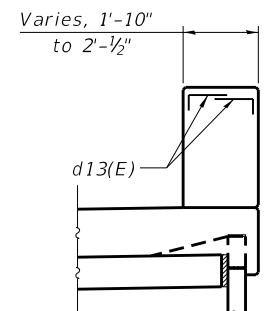
TRANSVERSE EXPANSION JOINT



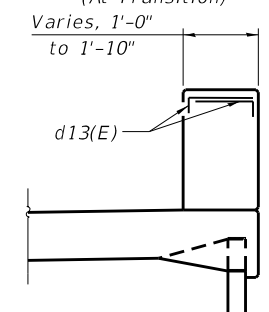
SEALING DETAIL



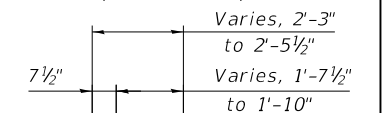
DETAIL A



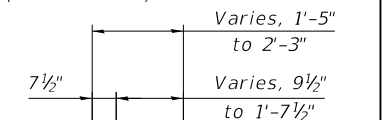
SECTION A-A
W. PAR. COPING DETAIL
AT APPROACH FOOTING
(At Transition)



SECTION B-B
W. PAR. COPING DETAIL
(At Transition)



SECTION C-C
E. PAR. COPING DETAIL
AT APPROACH FOOTING
(At Transition)



SECTION D-D
E. PAR. COPING DETAIL
(At Transition)



USER NAME =	DESIGNED - KN	REVISED -
CHECKED - PRD	REVIS	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

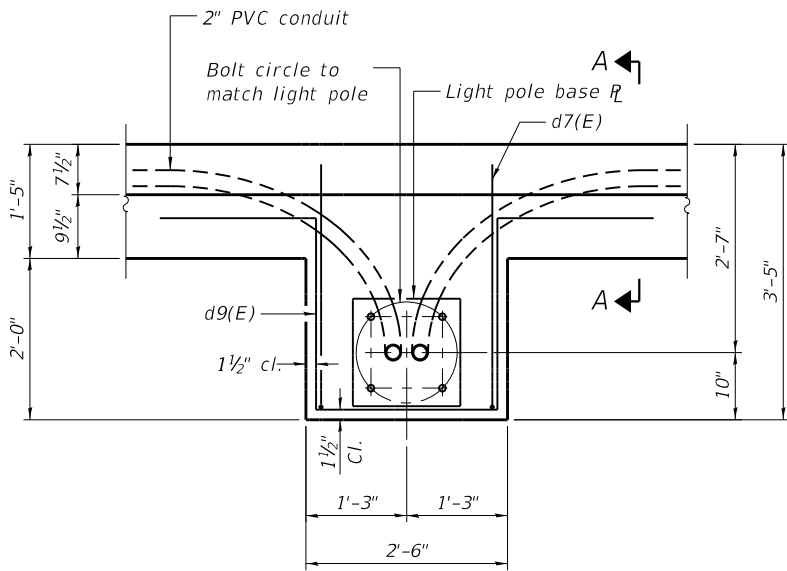
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB SECTIONS AND DETAILS
MSE WALL 03

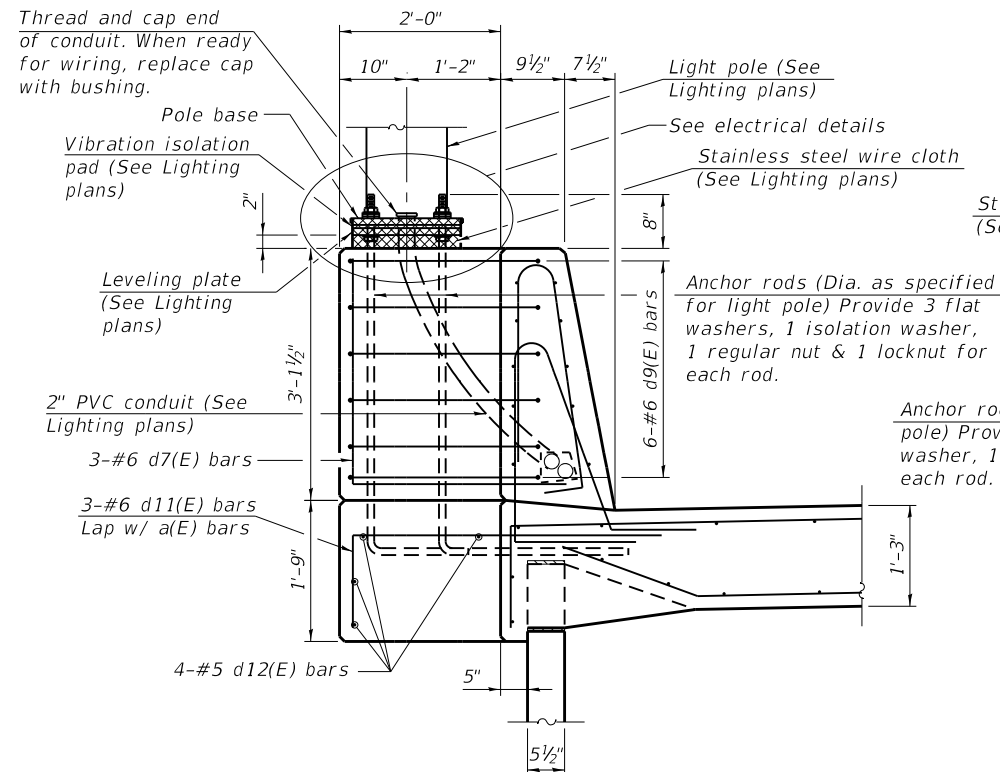
SHEET 12 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	394
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

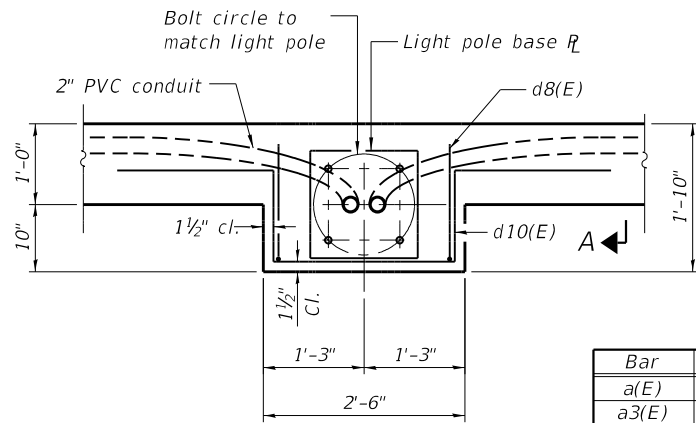
MODEL: Main
FILE NAME: W:\894-048 KDOT KfK Road over UPRRCAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 03_Sheet_13_Moment Slab and Light Pole Details.dgn



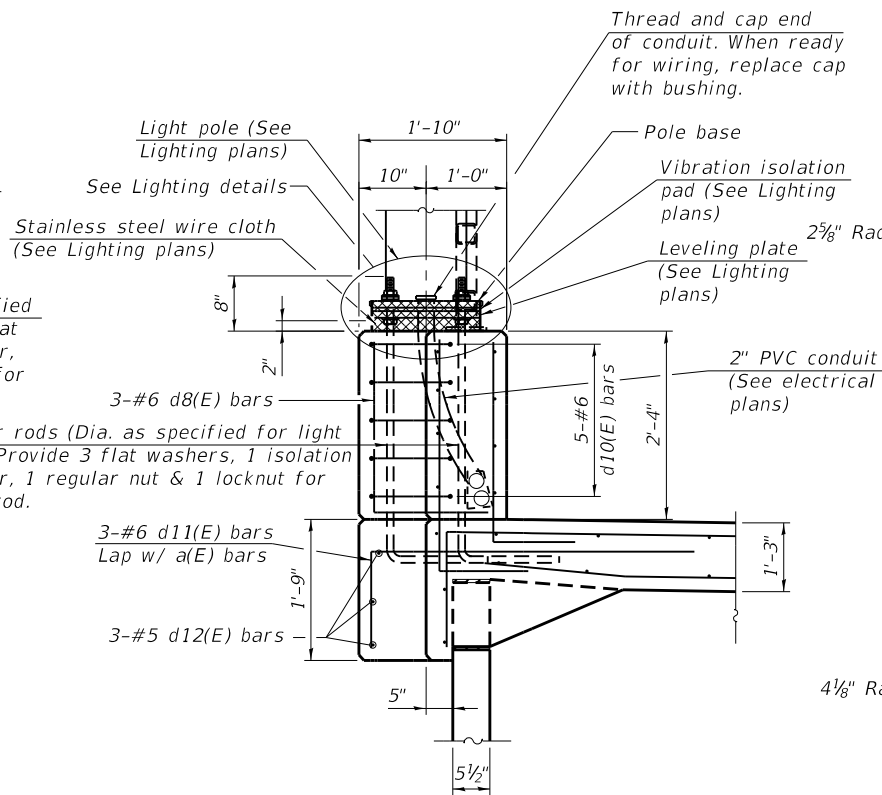
PLAN
(At East Parapet)



SECTION A-A
(At East Parapet)

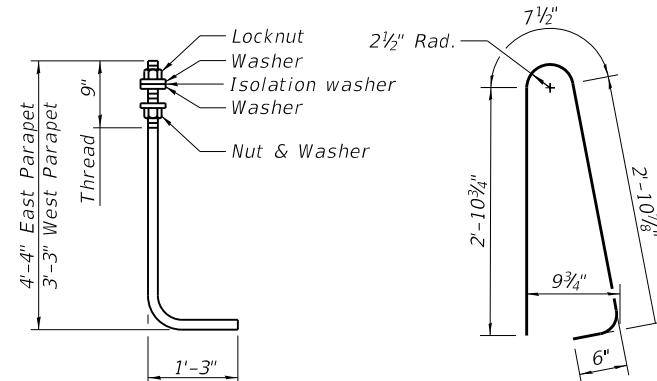


PLAN
(At West Parapet)



SECTION A-A
(At West Parapet)

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



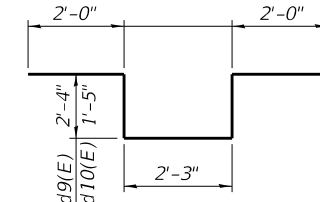
ANCHOR ROD

Diameter as specified for light poles.
(ASTM F 1554 Grade 105) Full length
hot dipped galvanized

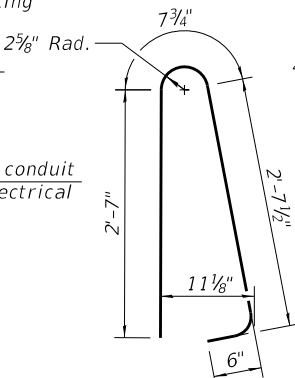
BAR d6(E)

Bar	A	B
a(E)	1'-5"	19'-1"
a3(E)	1'-5"	18'-1"
a5(E)	1'-3"	19'-3"
a7(E)	1'-3"	4'-1"
a9(E)	1'-3"	4'-2"
d11(E)	1'-5"	3'-0"

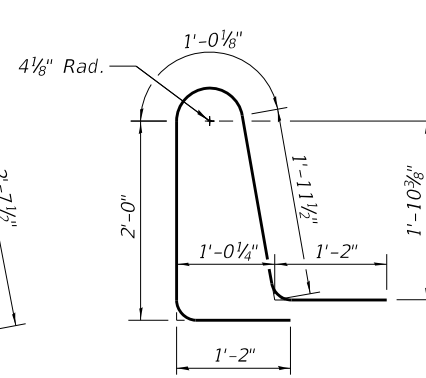
BAR a(E), a3(E), a5(E),
a7(E), a9(E) & d11(E)



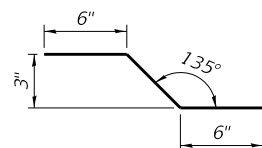
BAR d9(E) & d10(E)



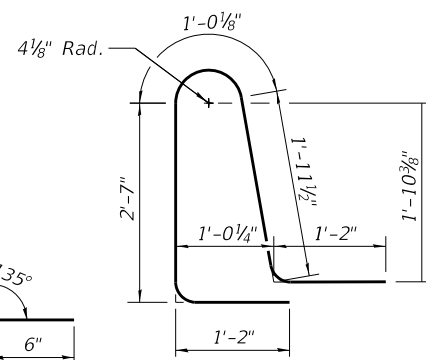
BAR d(E)



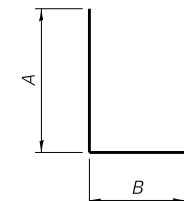
BAR d1(E)



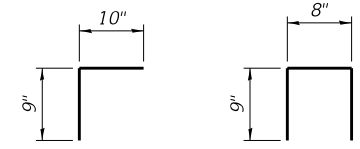
BAR e11(E)



BAR d2(E)



BAR d3(E), d4(E),
d7(E) & d8(E)



BAR d13(E)

BAR d5(E)

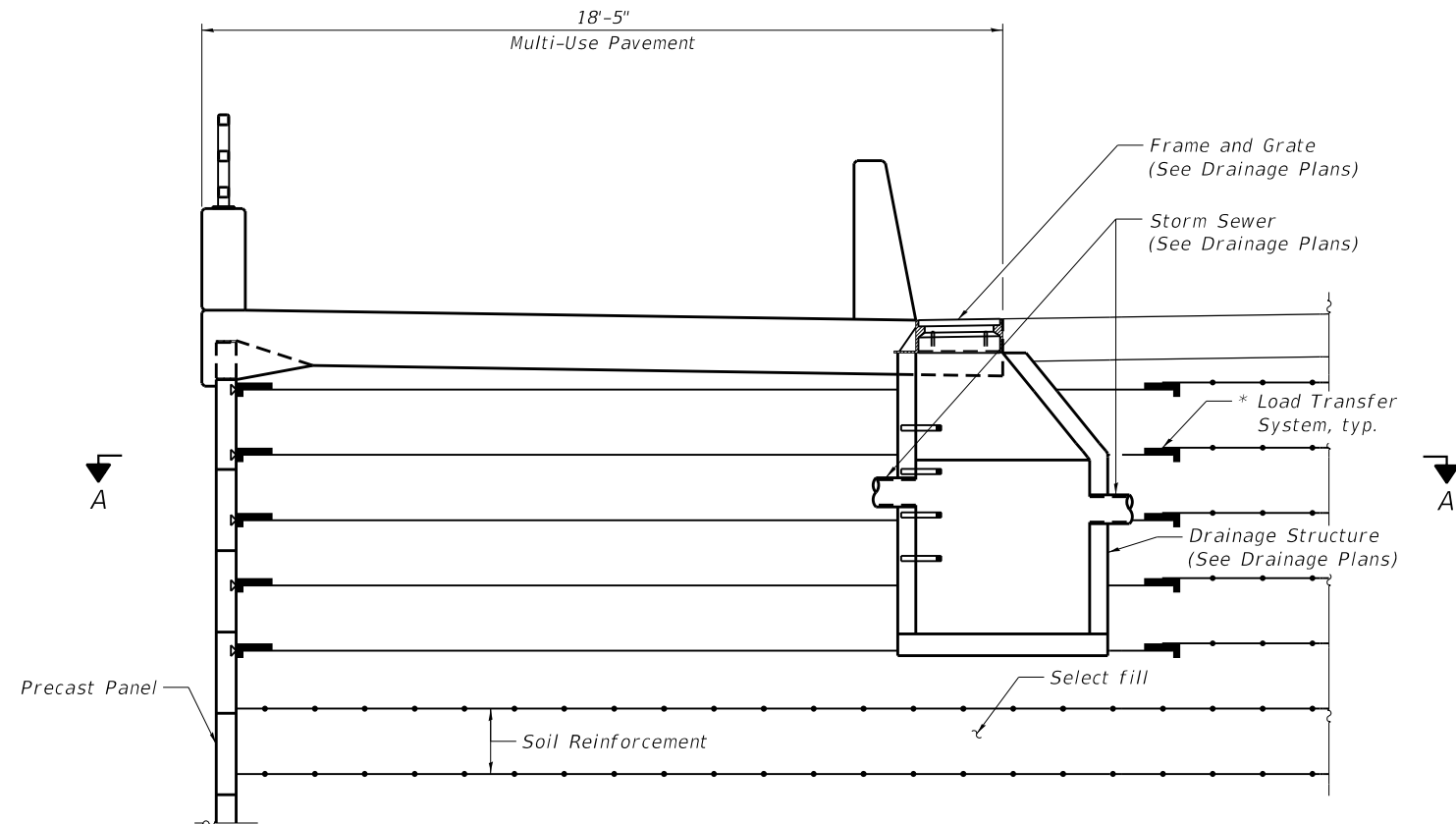
Bar	A	B
d3(E)	2'-10"	1'-2"
d4(E)	2'-9"	1'-2"
d7(E)	2'-10"	3'-0"
d8(E)	2'-0"	1'-5"

STRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	31	#6	20'-6"	
a1(E)	16	#5	19'-1"	
a2(E)	138	#6	4'-0"	
a3(E)	349	#6	19'-6"	
a4(E)	176	#5	18'-1"	
a5(E)	26	#6	20'-6"	
a6(E)	14	#5	19'-3"	
a7(E)	85	#6	5'-4"	
a8(E)	44	#5	4'-1"	
a9(E)	328	#6	5'-5"	
a10(E)	165	#5	4'-2"	
b(E)	25	#5	14'-8"	
b1(E)	72	#5	24'-9"	
b2(E)	54	#5	28'-11"	
b3(E)	18	#5	14'-10"	
b4(E)	28	#5	23'-4"	
b5(E)	21	#5	26'-8"	
b6(E)	7	#5	27'-4"	
d(E)	323	#5	6'-5"	
d1(E)	323	#5	7'-4"	
d2(E)	318	#5	7'-11"	
d3(E)	321	#5	4'-0"	
d4(E)	321	#5	3'-11"	
d5(E)	46	#4	2'-2"	
d6(E)	318	#5	7'-0"	
d7(E)	3	#6	5'-10"	
d8(E)	3	#6	3'-5"	
d9(E)	6	#6	10'-11"	
d10(E)	5	#6	9'-1"	
d11(E)	6	#6	4'-5"	
d12(E)	7	#5	2'-2"	
d13(E)	24	#4	1'-5"	
e(E)	30	#4	14'-8"	
e1(E)	80	#4	15'-1"	
e2(E)	16	#4	10'-0"	
e3(E)	20	#4	14'-7"	
e4(E)	80	#4	15'-0"	
e5(E)	16	#4	9'-10"	
e6(E)	56	#4	24'-11"	
e7(E)	60	#4	14'-2"	
e8(E)	6	#4	9'-4"	
e9(E)	6	#4	7'-10"	
e10(E)	10	#4	26'-11"	
e11(E)	80	#4	1'-5"	
Reinforcement Bars, Epoxy Coated	Pound	43,310		
Concrete Structures	Cu. Yd.	304.4		
Protective Coat	Sq. Yd.	765		

Bars indicated thus 1 x 2-#4 etc. indicates
1 line of bars with 2 lengths per line.

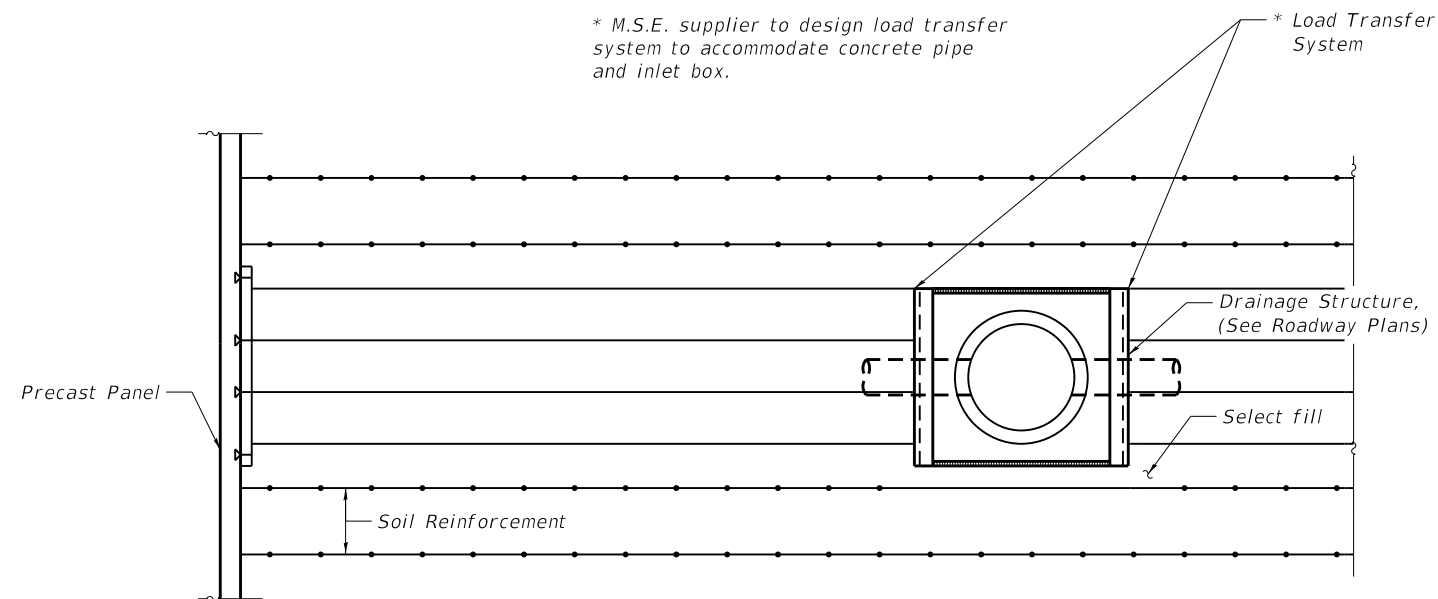
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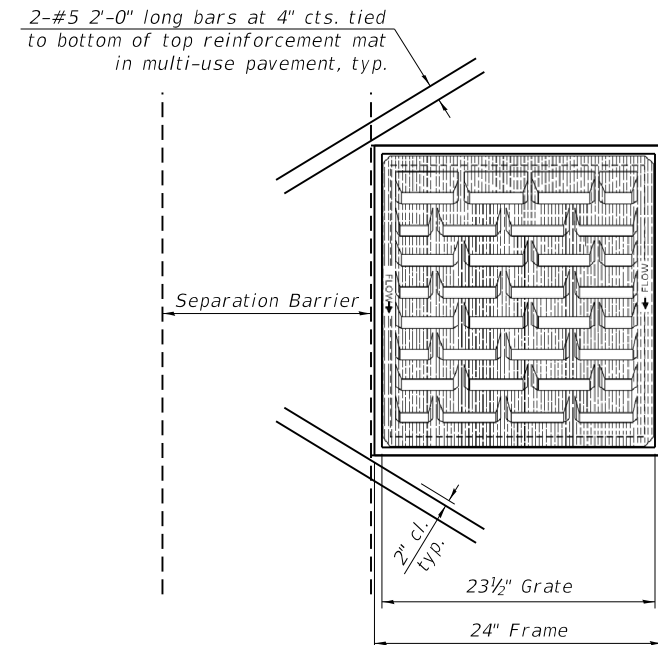
**LOAD TRANSFER SYSTEM
AROUND DRAINAGE DETAIL**
(West Wall shown, East Wall similar.)

Reinforcing in multi-use pavement, parapet and drainage structure not shown for clarity.

* M.S.E. supplier to design load transfer system to accommodate concrete pipe and inlet box.



SECTION A-A



REINFORCEMENT AROUND FRAME AND GRATE

Shift transverse reinforcement and cut longitudinal reinforcement in multi-use pavement to clear drainage structures. Coat exposed ends with epoxy paint. Cost shall be included for payment in the contract unit price for Reinforcement Bars, Epoxy Coated.



USER NAME =	DESIGNED - ES	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

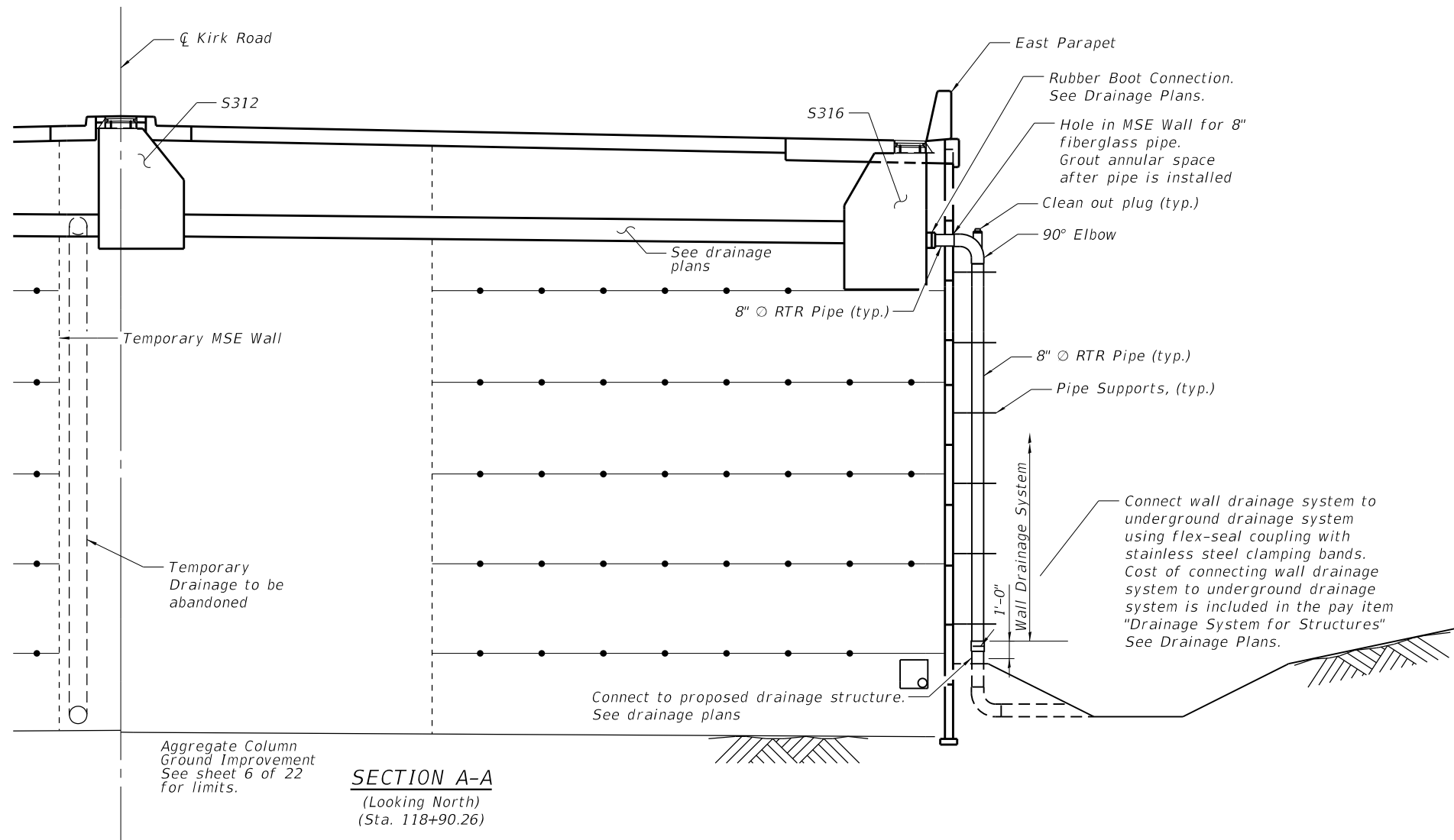
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE DETAILS I
MSE WALL 03**

SHEET 14 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	396
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
FILE NAME: W:\894-048 KDOT Kirk Road over UPRR\CAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall 03\MSE Wall 03_Sheet_15_Drainage Details II.dgn



NOTES:

Contractor shall furnish and install a wall drainage system as shown and noted on the plans and in accordance with Section 523 of the Standard Specifications. Work includes all piping, fittings, support brackets, hangers, inserts and bolts.

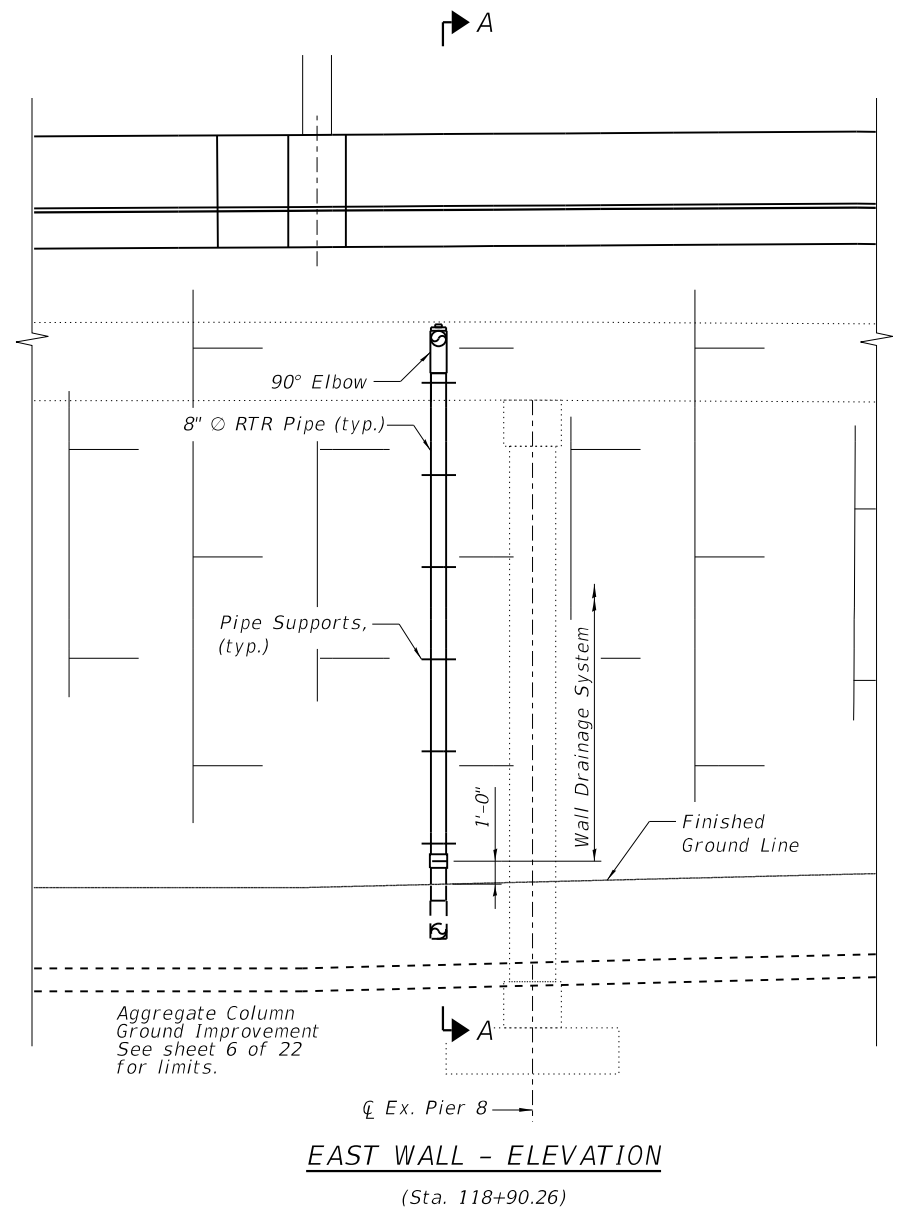
The Contractor shall submit shop drawings showing details of the drainage system to the Engineer for approval before any fabrication is begun. Cost included in Drainage System For Structures.

Downspouts shall extend a minimum of 1" into fittings.

Contractor shall design all pipe supports. Runs of pipe shall be supported at spacings not exceeding those recommended by the manufacturer of the pipe. Supports that have point contact or narrow supporting areas shall be avoided. Standard slings, clamps, clevis hangers and shoe supports designed for use with steel pipe may be used. Minimum strap width for brackets shall be 1½ inches. Straps shall have 120 degrees of contact with the pipe. Pipes supported on less than 120 degrees of contact shall have a split fiberglass pipe protective sleeve bonded in place with adhesive.

All pipe supports and associated hardware shall be hot dip galvanized according to AASHTO M 232 or AASHTO M 111.

All reinforced fiberglass pipe, and fittings shall be handled and installed according to guidelines and procedures recommended by the manufacturer or supplier of the material. Color of pipe and fittings shall be light grey to match concrete beams.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage System For Structures	L Sum	0.25



USER NAME	=	DESIGNED	-	ES	REVISED	-
		CHECKED	-	PRD	REVISED	-
PLOT SCALE	=	DRAWN	-	ES	REVISED	-
PLOT DATE	=	CHECKED	-	PRD	REVISED	-

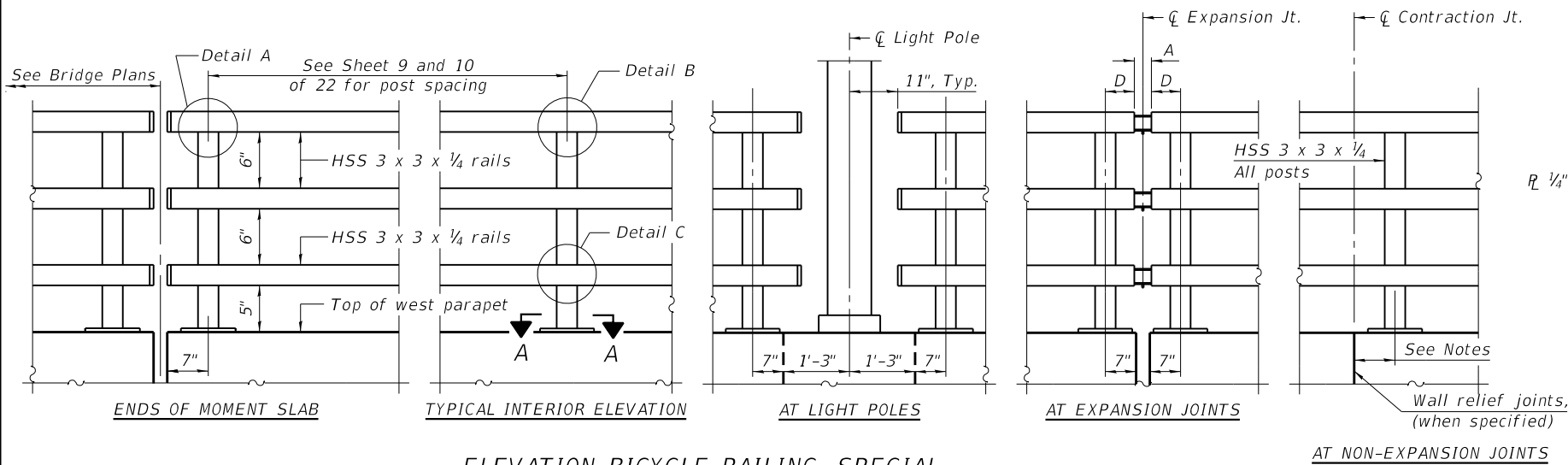
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS II
MSE WALL 03

SHEET 15 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	397
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

MODEL: Main
FILE NAME: W:\894-048 KDOT Kfrk Road over UPRRCAD Sheets\Structural\FINAL PLANS\MSE Walls & Moment Slabs\MSE Wall_03_Sheet_16_Railing Details.dgn



ELEVATION BICYCLE RAILING, SPECIAL

(Inside Face of Three Element Rail)

Notes:

Place reinforcement bars to miss anchor rod locations.

All HSS tubing used for the Bicycle Railing, Special shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.

All HSS tubing used for the Bicycle Railing, Special shall be ASTM A500 grade C.

All base plates used for the Bicycle Railing, Special shall be AASHTO M270 grade 50.

All heavy hex nuts shall be according to ASTM A 563 grade DH.

All fully threaded anchor rods shall be ASTM F1554 grade 105.

The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.

Contractor shall offset posts to miss any aluminum sheet or cork joints for sufficient installation of the anchorage assembly.

Rail splice inserts may be built out of bent plates of the same thicknesses and outside geometry limits as the 4 plate rail splice inserts shown.

When the contract specifies a galvanized railing, all steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications. When the contract specifies a painted railing, all posts, rail, splices, anchor devices and plates of the railing shall be painted according to the paint system for railings as specified in the General Notes.

See sheet 9 thru 11 of 22 for moment slab expansion joint locations and dimensions.

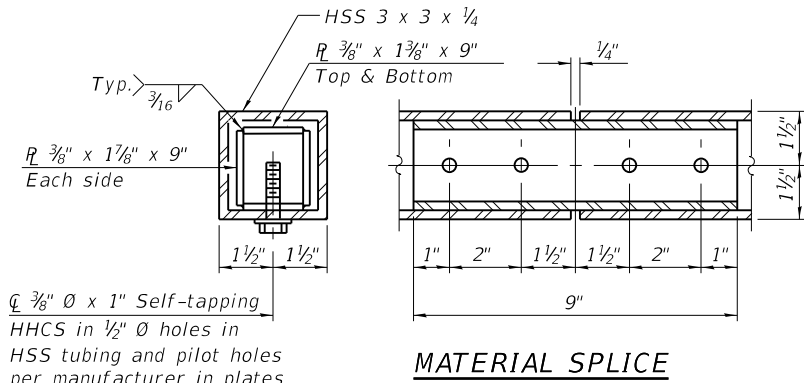
RAILING CRITERIA

MASH 2016 Test Level	4
Bicycle Railing, Special Weight (plf)	47
Max Post Spacing	10'-0"

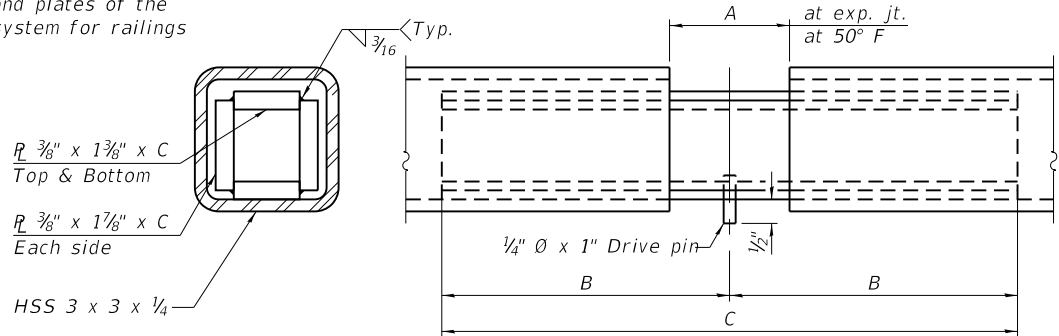
TABLE OF DIMENSIONS

Location	T	A	B	C	D
Over Strip Seal Jt.	≤4"	2 1/2"	1'-2"	2'-4"	6 1/2"
At Light Poles	8"	NA - Coordinate 8" Wide Access With Fabricator			
At Bridge Relief Joints		NA - Material Splices Per Fabricator			

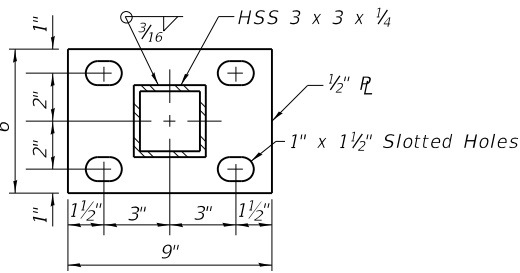
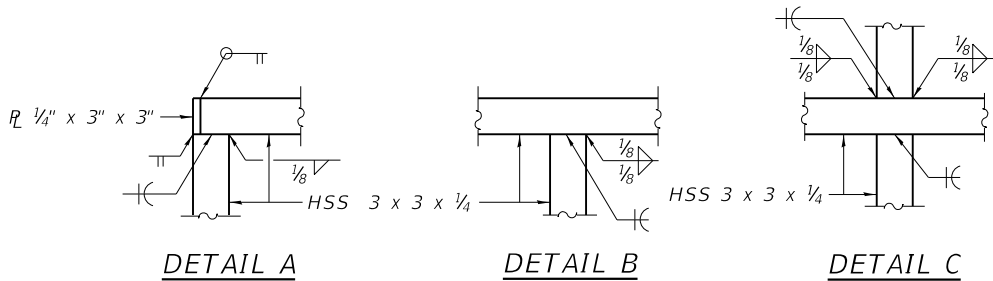
T = ; total movement based on total temperature range from -20°F to 120°F along centerline of roadway at expansion joint.
OR
8" hand-hold access for maintenance of light poles (when present; replace splice with 8" gap)



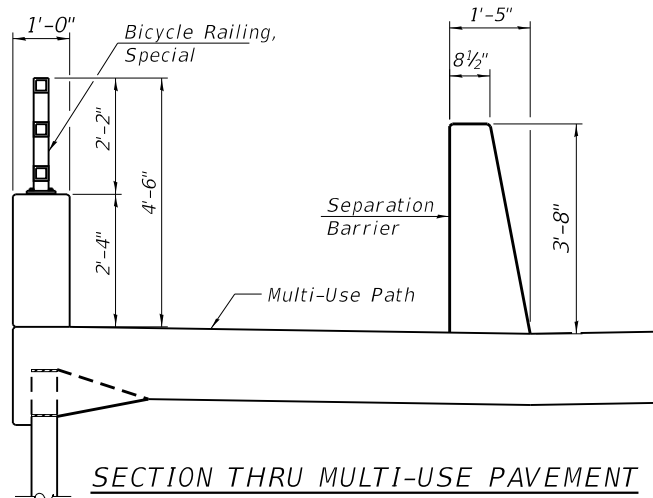
MATERIAL SPLICE



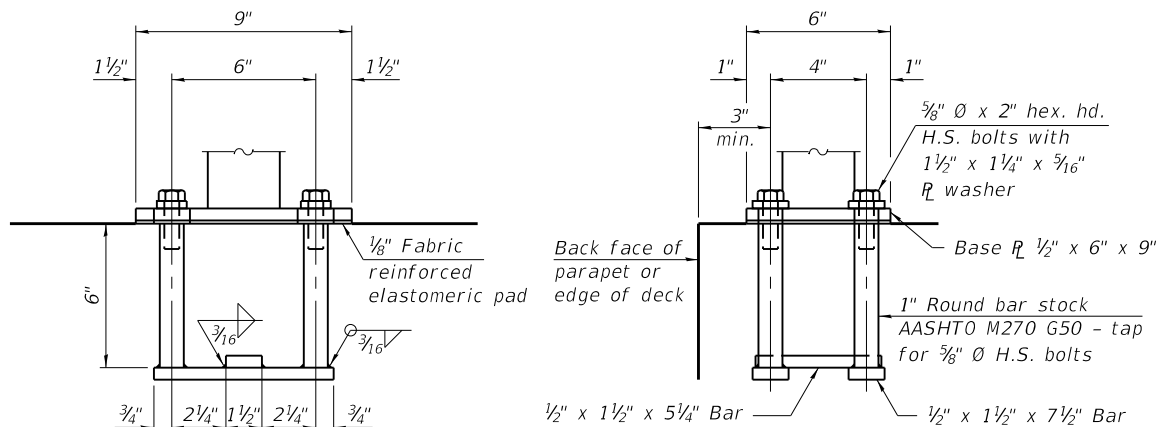
EXPANSION SPLICE



SECTION A-A



SECTION THRU MULTI-USE PAVEMENT



ANCHORAGE ASSEMBLY

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" Ø fully threaded anchor rods with the same plate washers as specified above and heavy hex lock nuts 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, Special	Foot	205



USER NAME =	DESIGNED - KN	REVISED -
PLOT SCALE =	CHECKED - PRD	REVISED -
PLOT DATE =	DRAWN - KN	REVISED -
	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RAILING DETAILS
MSE WALL 03

SHEET 16 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	398
CONTRACT NO. 61M13				
ILLINOIS FED. AID PROJECT				

STRUCTURE BORING LOG

Page 1 of 2

Date Started 8/11/15

Date Completed 8/11/15

ROUTE 360 DESCRIPTION Kirk Road Bridge over Railroad Tracks Date Completed 8/11/15

SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79,851B

COUNTY Kane LOCATION Northeast Corner S. 1SW/12NW , TWP. 39N , RNG. 8E

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
 Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 2 of 2

Date Started 8/11/15

Date Completed 8/11/15

STRUCTURE NO. 045-xxxx

ROUTE 360SECTION 21-00192-04-BR

COUNTY Kane

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Page 1 of 2

Date Started 9/4/15

Date Completed 9/4/15

ROUTE 360 DESCRIPTION Kirk Road Bridge over Railroad Tracks Date Completed 9/4/15

SECT. 21-00192-04-BR STRUCT. NO. 045-xxxx DRILLED BY TSC/L-79,851B

COUNTY Kane LOCATION Northwest Corner S. 1SW/12NW , TWP. 39N , RNG. 8E

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet



USER NAME =	DESIGNED - KN	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE =	CHECKED - PRD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS I
MSE WALL 03

SHEET 17 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	12-00192-04-BR	KANE	518	399
		CONTRACT NO. 61M13		
ILLINOIS		FED. AID PROJECT		

STRUCTURE BORING LOG

Date Started 9/4/15

STRUCTURE NO. 045-xxxx
ROUTE 360
SECTION 21-00192-04-BR
COUNTY Kane

[illegible]

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Date Started 8/6/15

ROUTE	<u>360</u>	DESCRIPTION	<u>Kirk Road Bridge over Reed Road</u>	Date Completed	<u>8/6/15</u>
SECT.	<u>21-00192-04-BR</u>	STRUCT. NO.	<u>045-xxxx</u>	DRILLED BY	<u>TSC/L-79.851C</u>
COUNTY	<u>Kane</u>	LOCATION	<u>Southeast Corner</u>	S.	<u>1SW/12NW</u> , TWP. <u>39N</u> , RNG. <u>8E</u>

Boring No.	SB-5		D E P T H	B L O W S	Qu tsf	W %	Surface Water Elev. Groundwater Elev.: when drilling at Completion after _____ Hrs.		D E P T H	B L O W S	Qu tsf	W %
Station	Sta. 121+03						752.2					
Offset	42.00ft RT						Dry					
Surface Elev.	767.20 ft											
Black clayey TOPSOIL	766.70											
Very stiff brown SILTY CLAY, trace gravel, moist A-7-6				3	P	23.5						
				4	2.5					5	B	15.4
				4						7	1.89	
	764.20									10	15%	
Hard to very stiff brown CLAY LOAM, little gravel, moist A-6				4	B	15.0				3	B	13.6
				6	4.79					6	3.21	
				7	15%					7	15%	
	-5									-30		
				4	B	15.1						
				4	3.47							
				5	15%							
	759.20							735.20				
Very stiff brown and gray CLAY, trace gravel, moist A-6				3	B	20.7				7	B	20.6
				6	3.17					6	2.94	
				7	15%					8	15%	
	-10									-35		
Hard to very stiff gray CLAY LOAM, little gravel, moist A-6	756.70											
				9	B	14.8						
				11	4.40							
				12	15%							
				4	B	14.9				5	B	20.7
				7	3.11					6	2.40	
				12	15%					7	15%	
	-15									-40		
	751.70											
Very stiff to hard gray CLAY LOAM, little gravel, occasional silt seams, moist A-4				4	B	13.2						
				6	2.02							
				9	15%							
				6	B	11.6						
				12	3.69					4	B	19.5
				12	15%					6	2.61	
	-20									7	15%	
										-45		
				8	B	12.7						
				8	3.21							
				9	15%							
				7	B	12.5				5	B	20.8
				7	4.48					6	2.69	
	-25			10	15%					8	15%	

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test.
Stations, Depths, Offset, and Elevations are in Feet

STRUCTURE BORING LOG

Date Started 8/6/15

STRUCTURE NO. <u>045-xxxx</u>	STRUCTURE NO. <u>045-xxxx</u>
ROUTE <u>360</u>	ROUTE <u>360</u>
SECTION <u>21-00192-04-BR</u>	SECTION <u>21-00192-04-BR</u>
COUNTY <u>Kane</u>	COUNTY <u>Kane</u>

[illegible]

SPT. (N) = Sum of last two blow values in sample. (Qu) S=Shear, B=Bulge at 15% Strain, P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet