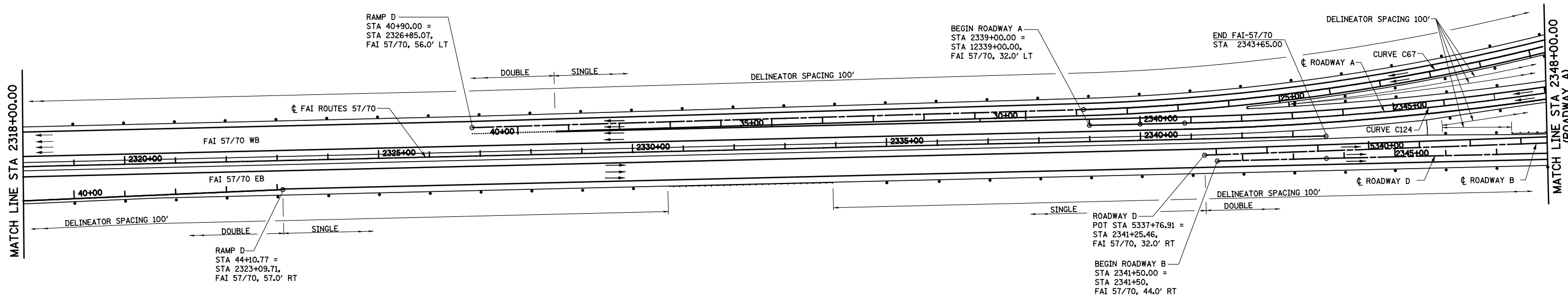


PROP. ROADWAY A
CURVE C124
 PI STA. = 2347+98.08
 $\Delta = 13^\circ 30' 18''$ (LT)
 $D = 0^\circ 57' 18''$
 $R = 6,000.00'$
 $T = 710.41'$
 $L = 1,414.23'$
 $E = 41.91'$
 $\theta = 3.22\%$
 $T.R. = 45.00'$
 $S.E. RUN = 96.60'$
 $P.C. STA. = 2340+87.67$
 $P.T. STA. = 2355+01.91$
 SE ATTAINED STA. 2339+63.27 TO
 STA 2341+19.87 (2.00% TO 3.22%)
 SE REMOVED STA. 2354+69.71 TO
 STA 2355+79.92 (3.22% TO 0.00%)

PROP. ROADWAY C
CURVE C67
 PI STA. = 19+58.36
 $\Delta = 25^\circ 09' 26''$ (RT)
 $D = 1^\circ 20' 02''$
 $R = 4,295.00'$
 $T = 958.36'$
 $L = 1,885.82'$
 $E = 105.62'$
 $\theta = 4.30\%$
 $T.R. = NA$
 $S.E. RUN = NA$
 $P.C. STA. = 10+00.00$
 $P.T. STA. = 28+85.82$
 SE REMOVED STA. 25+97.18
 TO STA 30+89.99 (4.30% TO 1.50%)



LEGEND

DELINEATOR •

NOTE: FOR EXISTING ALIGNMENTS AND
 CONTROLS PRESENTED ON THIS SHEET
 SEE HORIZONTAL CONTROL SHEET



FILE NAME = S:\Project\03\000725170.dgn\1\1\delin_deta.dgn	USER NAME = \$USER\$	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DELINEATOR DETAIL NORTH TRI LEVEL			F.A.I. RTE. 57/70	SECTION (25-4R)	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 501
	PLOT SCALE = \$SCALE\$	CHECKED - BRM	REVISED -		SCALE: 1=100'	SHEET NO. 3	OF 6	SHEETS	STA. 2318+00.00 TO STA. 2348+00.00	CONTRACT NO. 74295		
	PLOT DATE = \$DATE\$	DATE - 9-16-08	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



**PROP. ROADWAY C
CURVE C67**

PI STA. = 19+58.36
 $\Delta = 25^\circ 09' 26''$ (RT)
 $D = 1^\circ 20' 02''$
 $R = 4,295.00'$
 $T = 958.36'$
 $L = 1,885.82'$
 $E = 105.62'$
 $e = 4.30\%$
 $T.R. = NA$
 $S.E. RUN = NA$
 $P.C. STA. = 10+00.00$
 $P.T. STA. = 28+85.82$
 $SE ATTAINED STA. 25+97.18$
 $TO STA 30+89.99$ (4.30% TO 1.50%)

**PROP. ROADWAY A
CURVE C124**

PI STA. = 2347+98.08
 $\Delta = 13^\circ 30' 18''$ (LT)
 $D = 0^\circ 57' 18''$
 $R = 6,000.00'$
 $T = 710.41'$
 $L = 1,414.23'$
 $E = 41.91'$
 $e = 3.22\%$
 $T.R. = 45.00'$
 $S.E. RUN = 96.60'$
 $P.C. STA. = 2340+87.67$
 $P.T. STA. = 2355+01.91$
 $SE ATTAINED STA. 2339+63.27$
 $TO STA 2341+19.87$ (2.00% TO 3.22%)
 $SE REMOVED STA. 2354+69.71$
 $TO STA 2355+79.92$ (3.22% TO 0.00%)

**PROP. ROADWAY A
CURVE C125**

PI STA. = 2370+35.89
 $\Delta = 27^\circ 00' 00''$ (RT)
 $D = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,375.55'$
 $L = 2,700.00'$
 $E = 162.81'$
 $e = 3.34\%$
 $T.R. = 45.00'$
 $S.E. RUN = 100.20'$
 $P.C. STA. = 2356+60.34$
 $P.T. STA. = 2383+60.34$
 $SE ATTAINED STA. 2355+79.92$
 $TO STA 2356+93.74$ (0.00% TO 3.34%)
 $SE REMOVED STA. 2383+26.94$
 $TO STA 2384+30.52$ (3.34% TO 0.00%)

**PROP. RAMP G
CURVE C28**

PI STA. = 21+49.91
 $\Delta = 48^\circ 53' 14''$ (RT)
 $D = 7^\circ 25' 09''$
 $R = 772.27'$
 $T = 351.03'$
 $L = 658.93'$
 $E = 76.03'$
 $e = 8.00\%$
 $T.R. = NA$
 $S.E. RUN = NA$
 $P.C. STA. = 17+98.88$
 $P.T. STA. = 24+57.82$
 $SE ATTAINED STA. 16+58.48$
 $TO STA 18+68.88$ (3.34% TO 8.00%)

**PROP. ROADWAY D
CURVE C25**

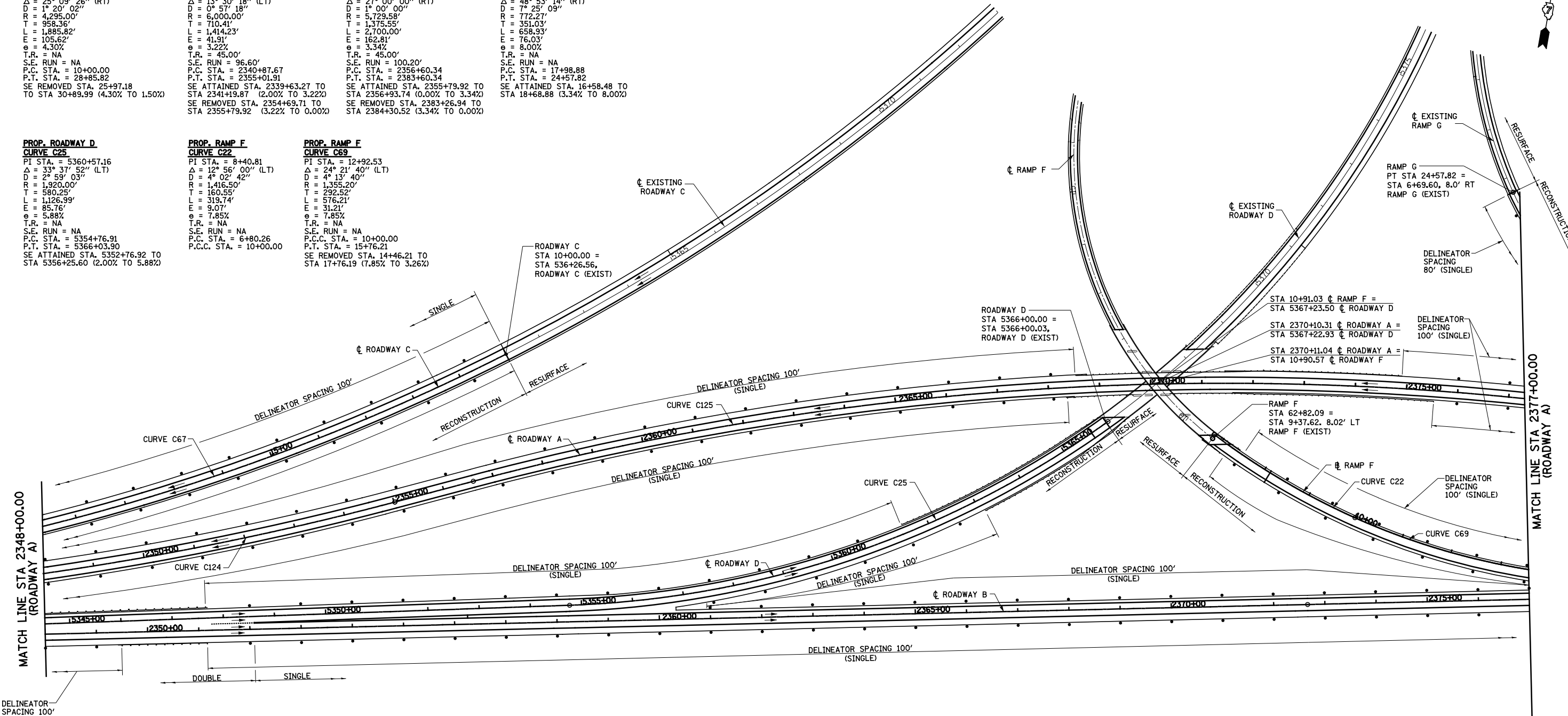
PI STA. = 5360+57.16
 $\Delta = 33^\circ 37' 52''$ (LT)
 $D = 2^\circ 59' 03''$
 $R = 1,920.00'$
 $T = 580.25'$
 $L = 1,126.99'$
 $E = 85.76'$
 $e = 5.88\%$
 $T.R. = NA$
 $S.E. RUN = NA$
 $P.C. STA. = 5354+76.91$
 $P.T. STA. = 5366+03.90$
 $SE ATTAINED STA. 5352+76.92$
 $TO STA 5356+25.60$ (2.00% TO 5.88%)

**PROP. RAMP F
CURVE C22**

PI STA. = 8+40.81
 $\Delta = 12^\circ 56' 00''$ (LT)
 $D = 4^\circ 02' 42''$
 $R = 1,416.50'$
 $T = 160.55'$
 $L = 319.74'$
 $E = 9.07'$
 $e = 7.85\%$
 $T.R. = NA$
 $S.E. RUN = NA$
 $P.C. STA. = 6+80.26$
 $P.T. STA. = 10+00.00$

**PROP. RAMP F
CURVE C69**

PI STA. = 12+92.53
 $\Delta = 24^\circ 21' 40''$ (LT)
 $D = 4^\circ 13' 40''$
 $R = 1,355.20'$
 $T = 292.52'$
 $L = 576.21'$
 $E = 31.21'$
 $e = 7.85\%$
 $T.R. = NA$
 $S.E. RUN = NA$
 $P.C. STA. = 10+00.00$
 $P.T. STA. = 15+76.21$
 $SE REMOVED STA. 14+46.21$
 $TO STA 17+76.19$ (7.85% TO 3.26%)



LEGEND

DELINATOR SPACING 100'

NOTE: FOR EXISTING ALIGNMENTS AND CONTROLS PRESENTED ON THIS SHEET SEE HORIZONTAL CONTROL SHEET



FILE NAME = S:\Project\03-000725170.dgn\1\delinator.dwg	USER NAME = \$USER\$	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DELINATOR DETAIL NORTH TRI LEVEL			F.A.I. RTE. = 57/70	SECTION = (25-4R)	COUNTY = EFFINGHAM	TOTAL SHEETS = 1760	SHEET NO. = 502
	PLOT SCALE = \$SCALE\$	CHECKED - BRM	REVISED -		SCALE: 1=100'	SHEET NO. 4 OF 6 SHEETS	STA. 2348+00.00 TO STA. 2377+00.00	CONTRACT NO. 74295				
	PLOT DATE = \$DATE\$	DATE - 9-16-08	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



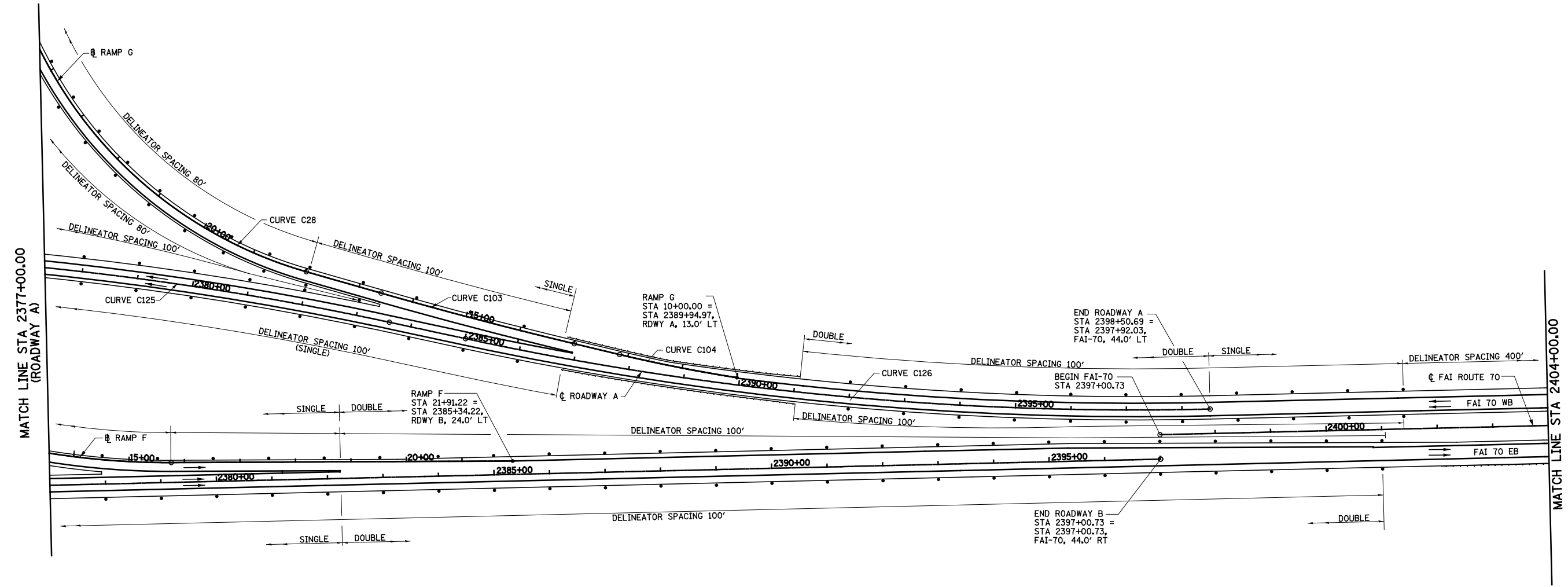
**PROP. RAMP G
CURVE C28**
 PI STA. = 21+49.91
 $\Delta = 48^\circ 53' 14''$ (RT)
 $D = 7^\circ 25' 09''$
 $R = 772.21'$
 $T = 351.03'$
 $L = 658.93'$
 $E = 76.03'$
 $e = 8.00\%$
 $T.R. = NA$
 $S.E. RUN = NA$
 $P.C. STA. = 17+98.88$
 $P.T. STA. = 24+57.82$
 SE ATTAINED STA. 16+58.48 TO
 STA 18+68.88 (3.34% TO 8.00%)

**PROP. RAMP G
CURVE C103**
 PI STA. = 14+79.04
 $\Delta = 2^\circ 31' 09''$ (RT)
 $D = 0^\circ 42' 01''$
 $R = 8,182.03'$
 $T = 179.90'$
 $L = 359.75'$
 $E = 1.98'$
 $P.C. STA. = 12+99.13$
 $P.T. STA. = 16+58.88$

**PROP. RAMP G
CURVE C104**
 PI STA. = 11+07.75
 $\Delta = 4^\circ 35' 25''$ (RT)
 $D = 2^\circ 07' 52''$
 $R = 2,688.39'$
 $T = 107.75'$
 $L = 215.39'$
 $E = 2.16'$
 $P.C. STA. = 10+00.00$
 $P.T. STA. = 12+15.39$

**PROP. ROADWAY A
CURVE C126**
 PI STA. = 2391+78.84
 $\Delta = 13^\circ 30' 00''$ (LT)
 $D = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 678.14'$
 $L = 1,350.00'$
 $E = 39.99'$
 $e = 3.34\%$
 $T.R. = 167.50'$
 $S.E. RUN = 1,150.30'$
 $P.C. STA. = 2385+00.69$
 $P.T. STA. = 2398+50.69$
 SE ATTAINED STA. 2384+30.52 TO
 STA 2385+34.09 (0.00% TO 3.34%)
 SE REMOVED STA. 2398+00.59 TO
 STA 2399+59.73 (I70E) (3.34% TO 1.50%)

**PROP. ROADWAY A
CURVE C125**
 PI STA. = 2370+35.89
 $\Delta = 27^\circ 00' 00''$ (RT)
 $D = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,375.55'$
 $L = 2,700.00'$
 $E = 162.81'$
 $e = 3.34\%$
 $T.R. = 45.00'$
 $S.E. RUN = 100.20'$
 $P.C. STA. = 2356+60.34$
 $P.T. STA. = 2383+60.34$
 SE ATTAINED STA. 2355+79.92 TO
 STA 2356+93.74 (0.00% TO 3.34%)
 SE REMOVED STA. 2383+26.94 TO
 STA 2384+30.52 (3.34% TO 0.00%)

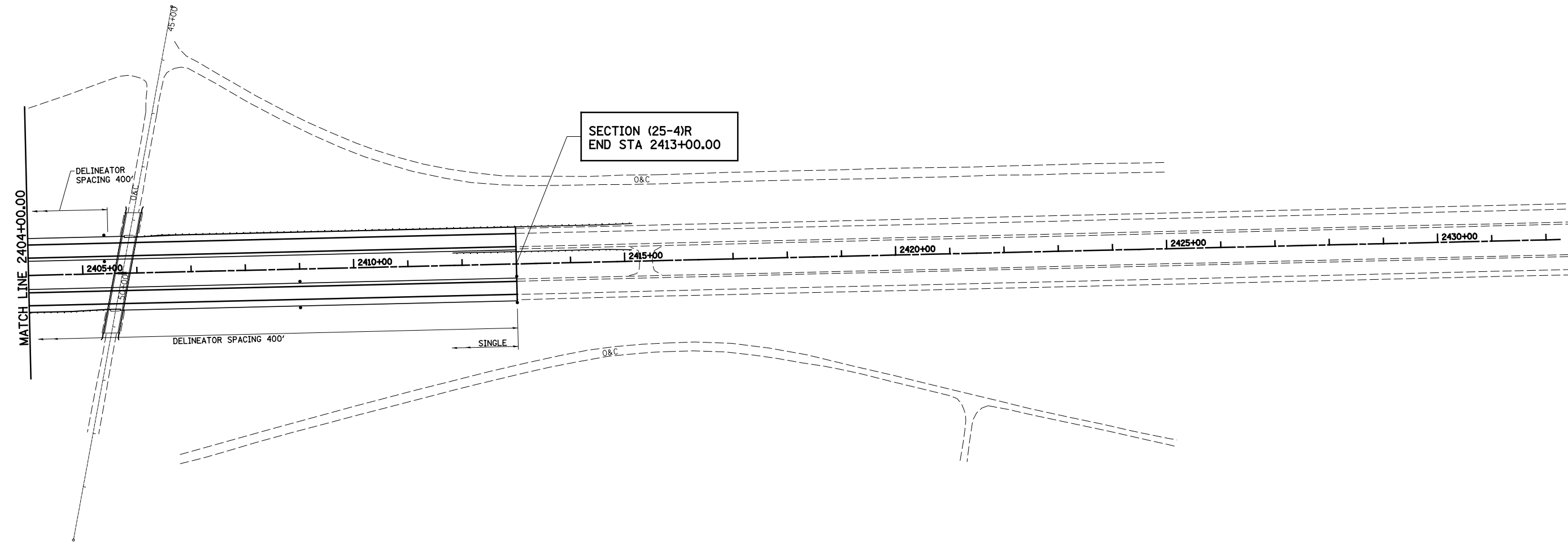


LEGEND
 DELINEATOR •

NOTE: FOR EXISTING ALIGNMENTS AND
 CONTROLS PRESENTED ON THIS SHEET
 SEE HORIZONTAL CONTROL SHEET



FILE NAME = S:\Project\03\000725170.dgn\11.dwg\delineator.dwg	USER NAME = *USER*	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DELINEATOR DETAIL NORTH TRI LEVEL			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	DRAWN - PDB	REVISED -		57/70	(25-4)R	EFFINGHAM	1760	503			
	PLOT DATE = *DATE*	CHECKED - BRM	REVISED -		SCALE: 1=100'			SHEET NO. 5 OF 6 SHEETS STA. 2377+00.00 TO STA. 2404+00.00			CONTRACT NO. 74295	
		DATE - 9-16-08	REVISED -		FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT				



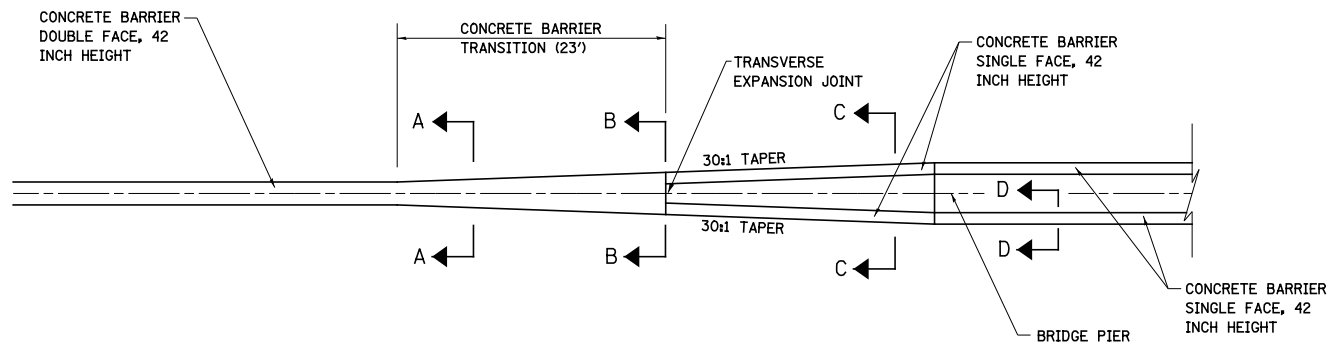
LEGEND

DELINEATOR •

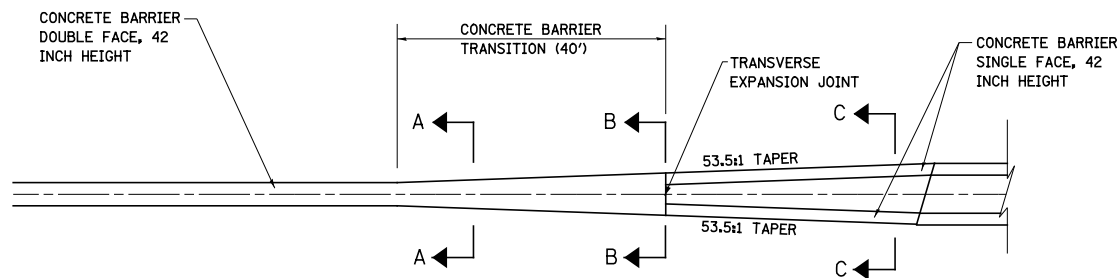
NOTE: FOR EXISTING ALIGNMENTS AND CONTROLS PRESENTED ON THIS SHEET SEE HORIZONTAL CONTROL SHEET



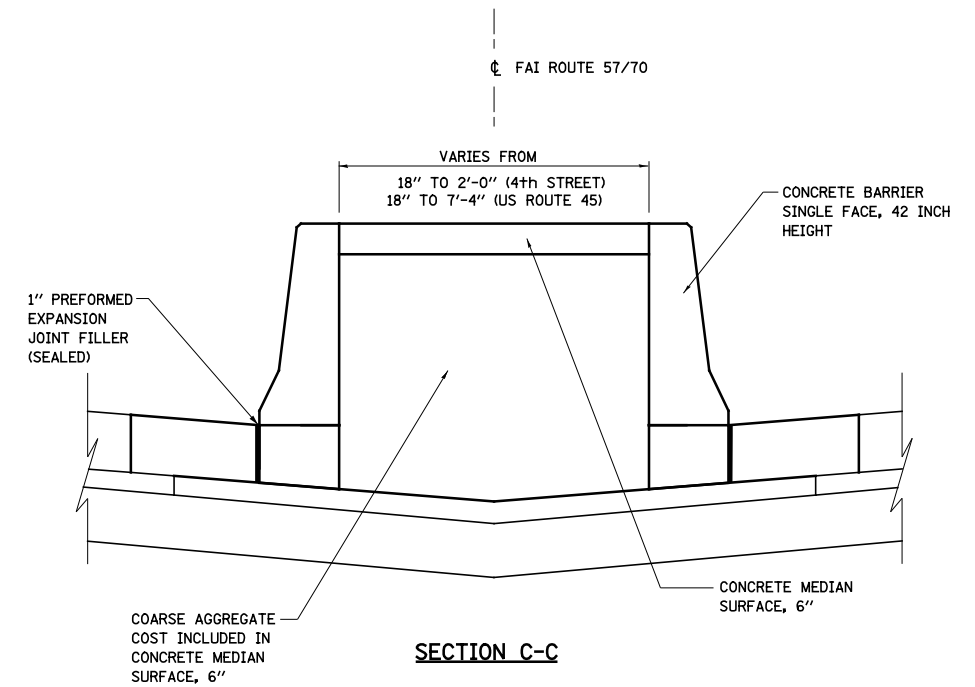
FILE NAME = S:\Project\03\000725170.dgn\1\1\delineator_detail.dgn	USER NAME = \$USER\$	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DELINEATOR DETAIL NORTH TRI LEVEL		F.A.I. RTE. 57/70	SECTION (25-4)R	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 504	
	PLOT SCALE = \$SCALE\$	CHECKED - BRM	REVISED -		SCALE: 1=100'	SHEET NO. 6 OF 6 SHEETS	STA. 2404+00.00 TO STA. 2413+00.00	CONTRACT NO. 74295				
	PLOT DATE = \$DATE\$	DATE - 9-16-08	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



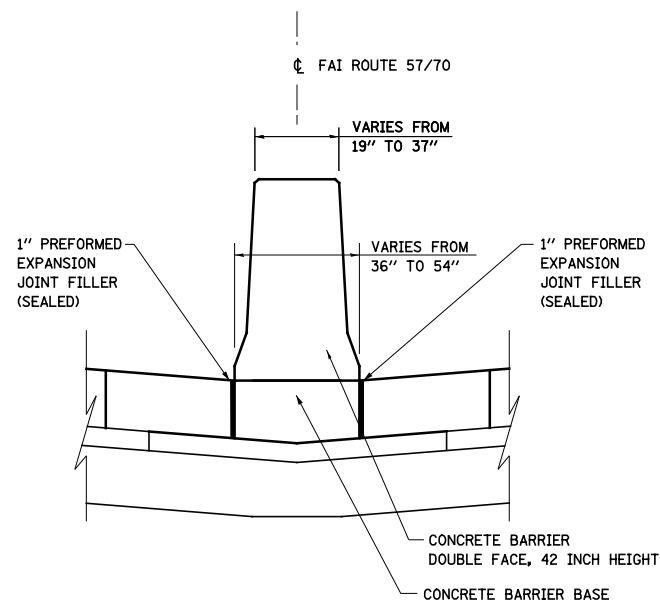
TYPICAL APPLICATION - CONCRETE BARRIER - 4th STREET



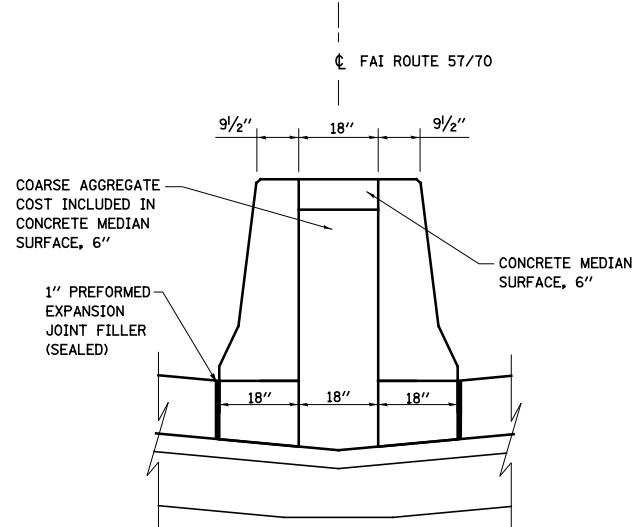
TYPICAL APPLICATION - CONCRETE BARRIER - US ROUTE 45



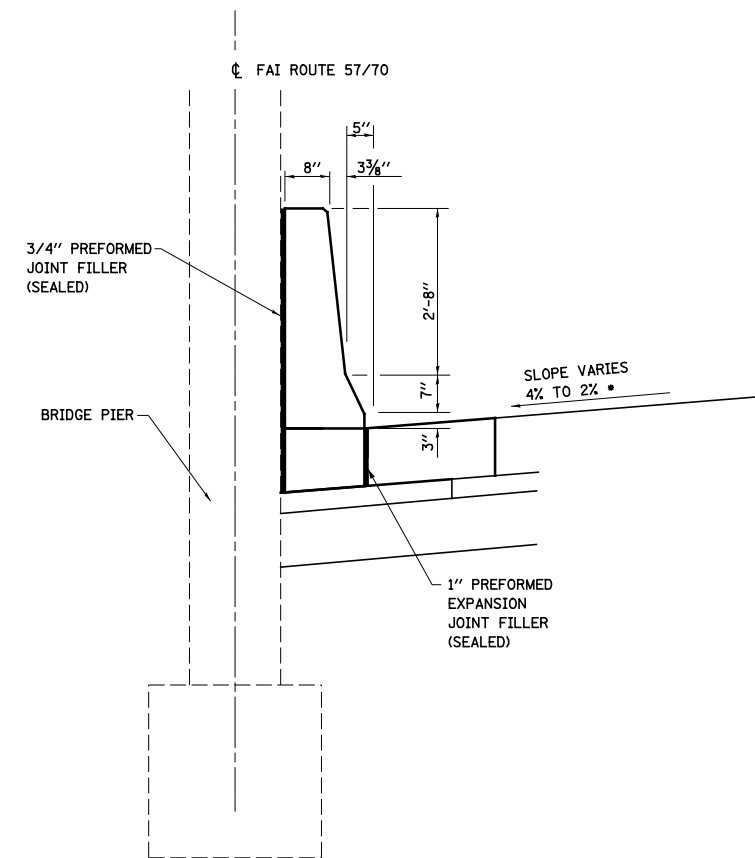
SECTION C-C



SECTION A-A



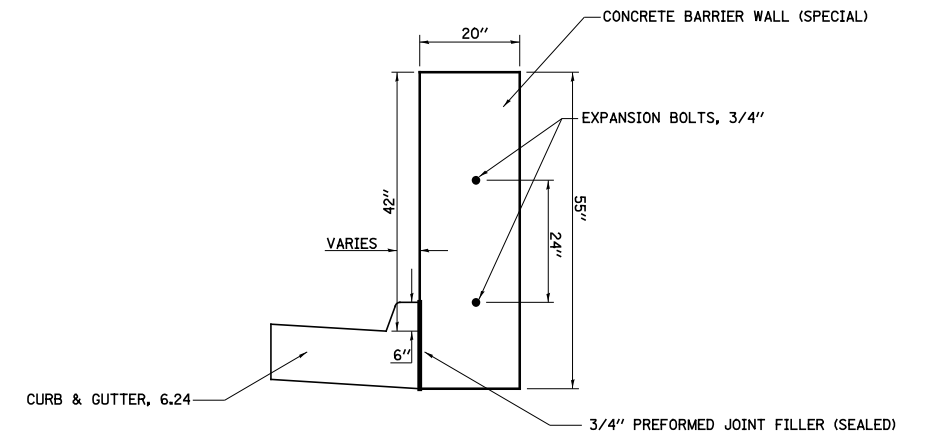
SECTION B-B



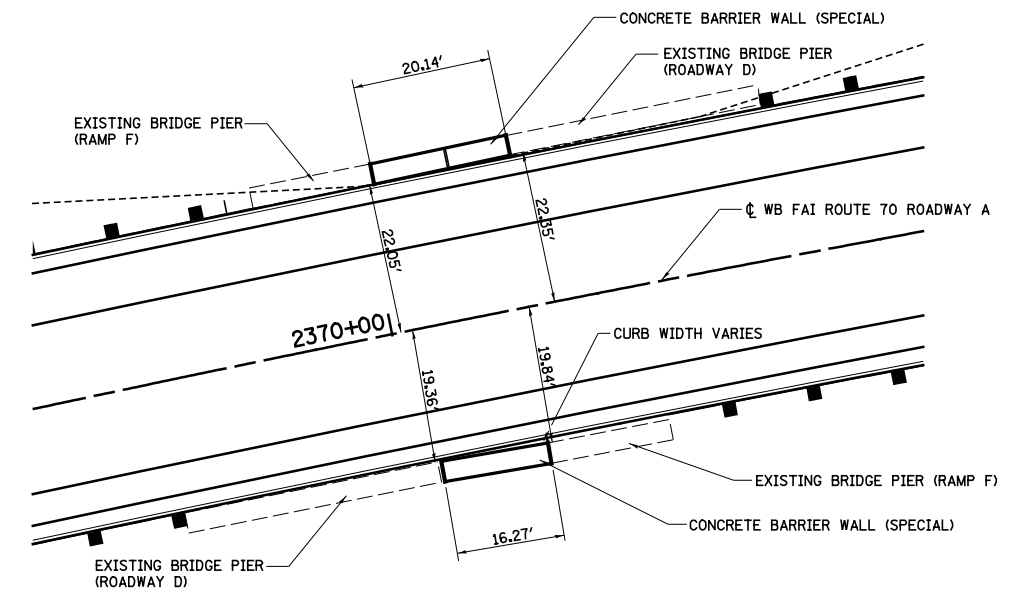
SECTION D-D

APPLICABLE AT 4th STREET BRIDGE PIERS ONLY

FILE NAME =	USER NAME = \$USER\$	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS DETAILS, FAI ROUTE 57/70			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S:\Projects\403-00072.57-70\dgn\W Tr\ILV\miscellaneous\stals.dgn	DRAWN - PDB	REVISIONS -	57/70					(25-4R)	EFFINGHAM	1760	505	
PLOT SCALE = \$SCALE\$	CHECKED - BRM	REVISIONS -	CONTRACT NO. 74295									
PLOT DATE = \$DATE\$	DATE - 4-16-09	REVISIONS -	SCALE: 1"=2.5'		SHEET NO. 1 OF 6 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT				



**CONCRETE BARRIER WALL
SECTION DETAIL**



**CONCRETE BARRIER WALL
PLAN DETAIL**

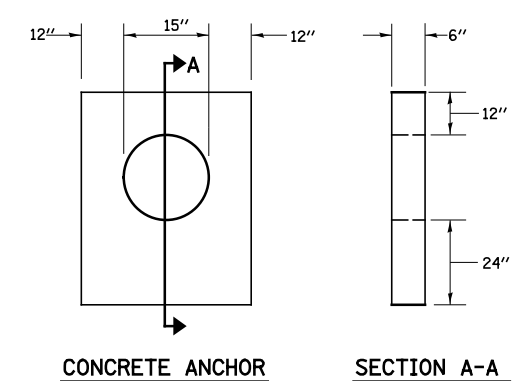
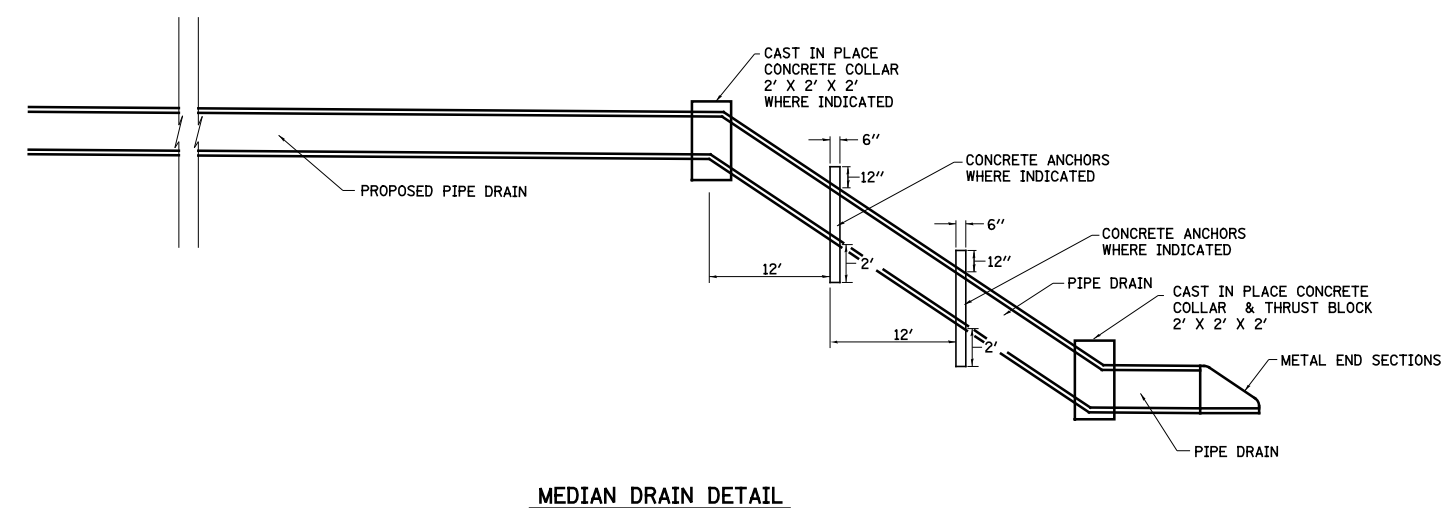
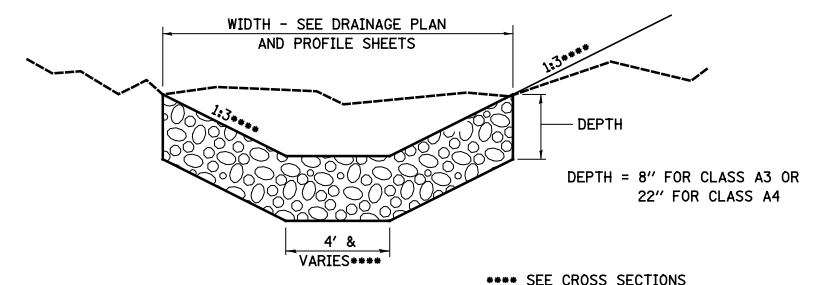
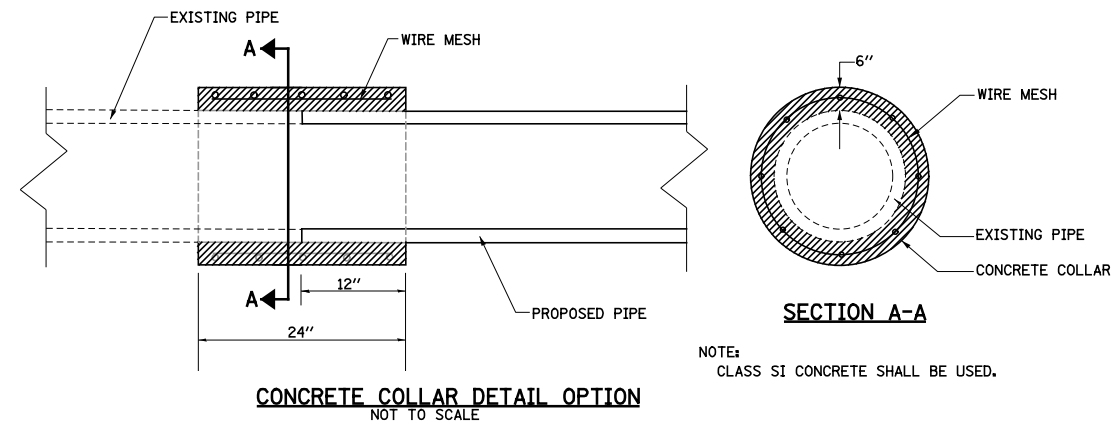
COSTS OF EXPANSION BOLTS AND
PREFORMED JOINT FILLER INCLUDED
IN CONCRETE BARRIER WALL (SPECIAL)

FILE NAME =	USER NAME = \$USER\$	DESIGNED - JWS	REVISED -
S:\Projects\403-00072.57-70\dgn\M Tr\IL\miscellaneous\details.dgn		DRAWN - PDB	REVISED -
	PLOT SCALE = \$SCALE\$	CHECKED - BRM	REVISED -
	PLOT DATE = \$DATE\$	DATE - 12-18-08	REVISED -

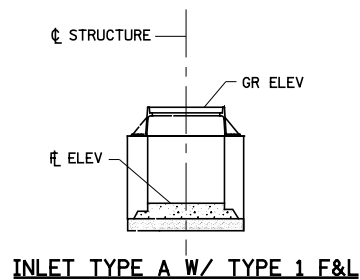
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

MISCELLANEOUS DETAILS	
SCALE: NONE	SHEET NO. 2 OF 6 SHEETS
STA.	TO STA.

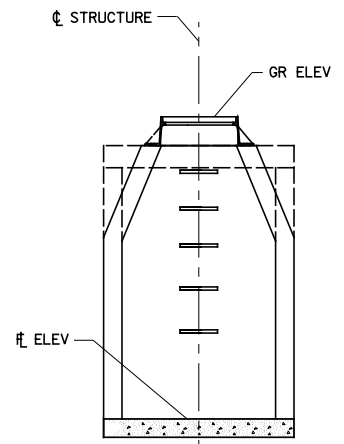
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4)R	EFFINGHAM	1760	506
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 74295	



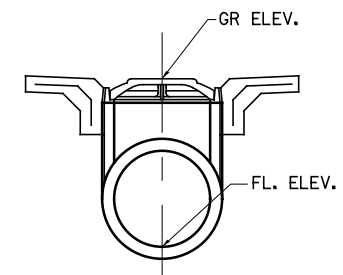
FILE NAME =	USER NAME = \$USER\$	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS DETAILS		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
S:\Projects\403-00072.57-70\pgn\N Tr\l\miscellaneouse\details.dgn		DRAWN - PDB	REVISED -		SCALE: NONE	SHEET NO. 3 OF 6 SHEETS	STA.	TO STA.	57/70	(25-4)R	EFFINGHAM	1760	507
	PLOT SCALE = \$SCALE\$	CHECKED - BRM	REVISED -										
	PLOT DATE = \$DATE\$	DATE - 12-18-08	REVISED -										
								CONTRACT NO. 74295		ILLINOIS FED. AID PROJECT			



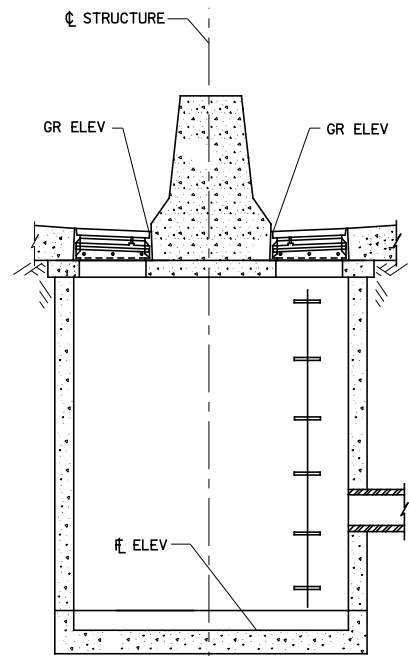
INLET TYPE A W/ TYPE 1 F&L



MANHOLES W/ TYPE 1 F&L

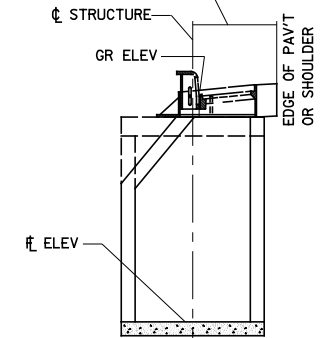


24" MEDIAN INLET WITH REINFORCED CONCRETE PIPE TEE, 24" WITH 24" RISER



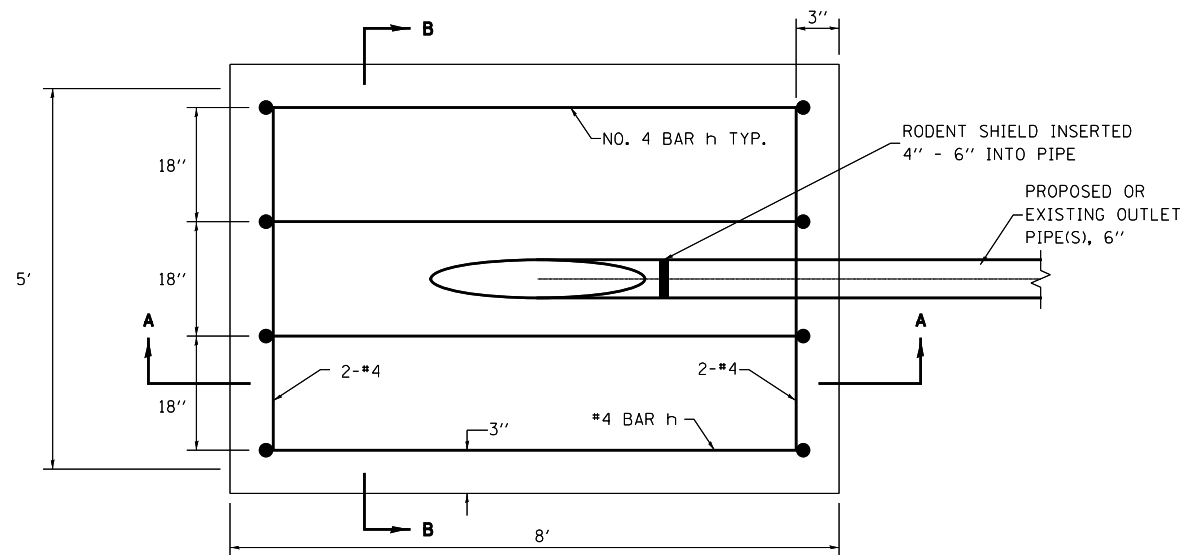
DRAINAGE STRUCTURE TYPE 5 W/ TWO TYPE 22 F&G

- 2.19' INLET TYPE B
- 2.69' MANHOLE, 4' DIA
- 3.19' MANHOLE, 5' DIA
- 3.69' MANHOLE, 6' DIA

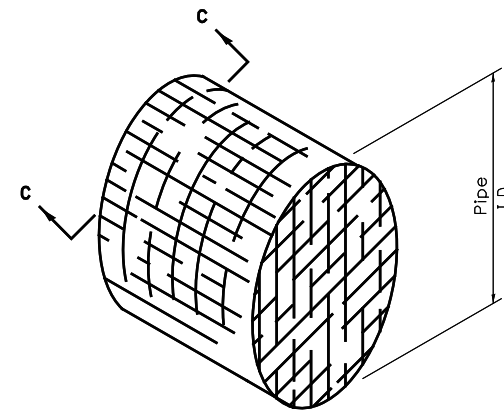


INLET TYPE B AND MANHOLES W/ TYPE 3 F&G

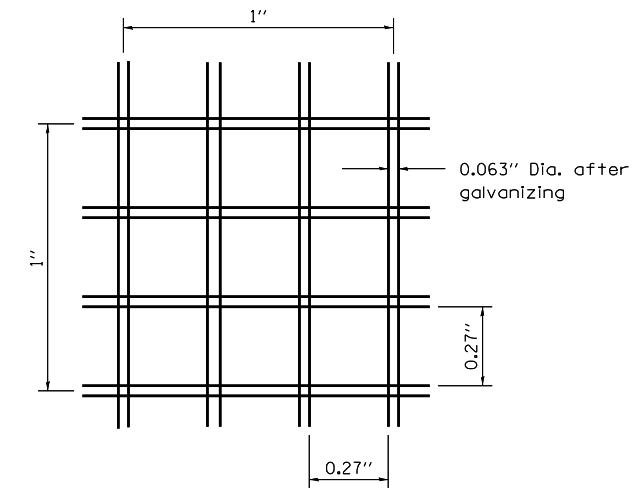
FILE NAME =	USER NAME = \$USER\$	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS DETAILS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
S:\Projects\403-00072.57-70\dgn\W Tr\ILV\miscellaneous\stals.dgn		DRAWN - PDB	REVISED -		SCALE: 1"=2.5'	SHEET NO. 4 OF 6 SHEETS	STA.	TO STA.	57/70	(25-4R)	EFFINGHAM	1760	508
		CHECKED - BRM	REVISED -						CONTRACT NO. 74295				
		DATE - 4-16-09	REVISED -						FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



PLAN VIEW



DETAIL OF RODENT SHIELD



SECTION C-C

NOTES

The outlet pipe or pipes shall be located as close as possible to the center of the outlet protector.

The last 10' of outlet pipe shall be schedule 40 PVC.

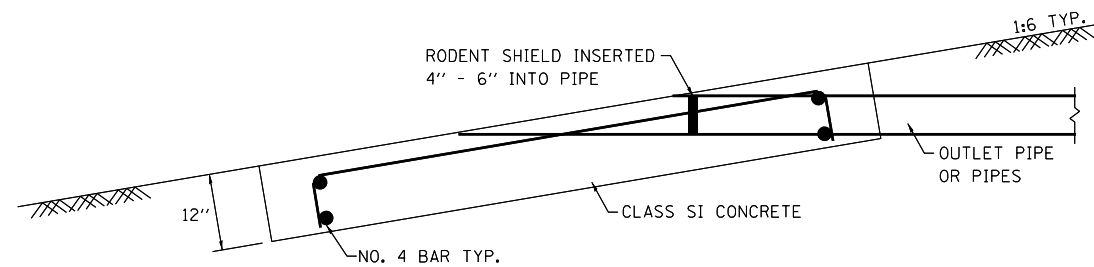
The rebars may be cut or relocated to accommodate pipe.

Cut outlet pipe on a bevel to match finished surface of surrounding PCC.

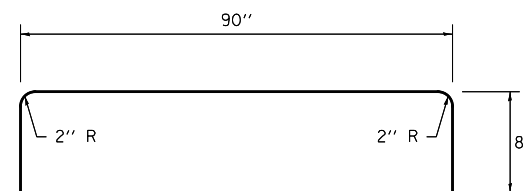
Seeding Class 2 shall be considered included in the cost of the pay items.

OUTLET PROTECTOR BILL OF MATERIALS

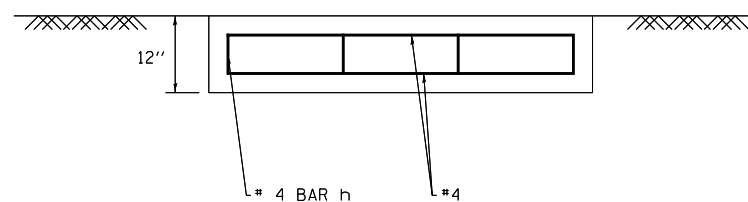
PAY ITEM	UNIT	QUANTITY (EACH OUTLET PROTECTOR)
CLASS SI CONCRETE (MISCELLANEOUS)	CU YD	1.5
REINFORCING BARS	LB	35.6
RODENT SHIELDS	EACH	1



SECTION A-A



#4 h BAR



SECTION B-B

FILE NAME =	USER NAME = \$USER*	DESIGNED -	REVISED -
\$FILEL\$		DRAWN -	REVISED -
	PLOT SCALE = \$SCALE*	CHECKED -	REVISED -
	PLOT DATE = \$DATE*	DATE -	REVISED -

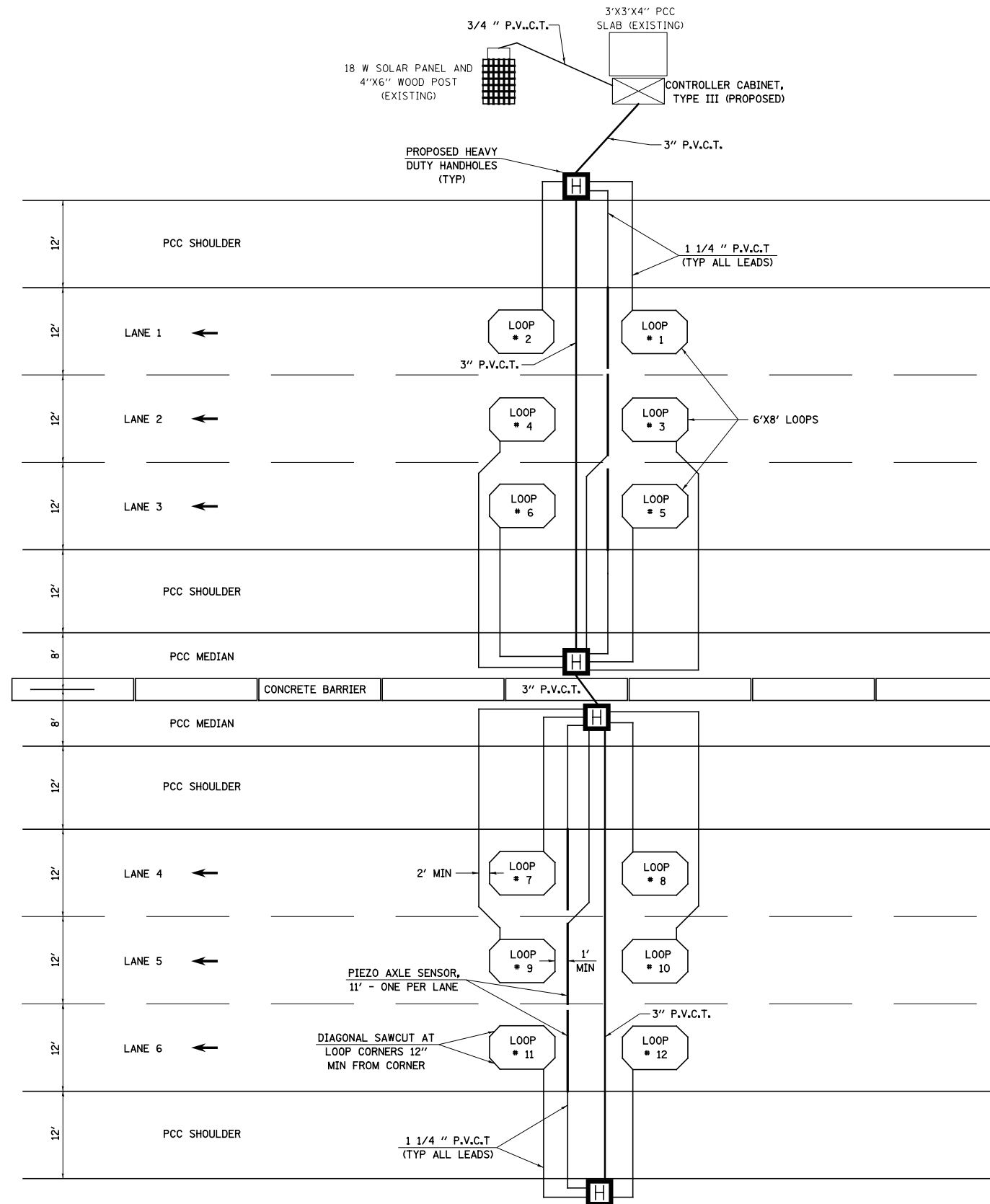
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OUTLET PROTECTOR

SCALE: SHEET NO. 5 OF 6 SHEETS STA. TO STA.

STANDARD 601101A

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4)R	EFFINGHAM	1760	509
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74295	



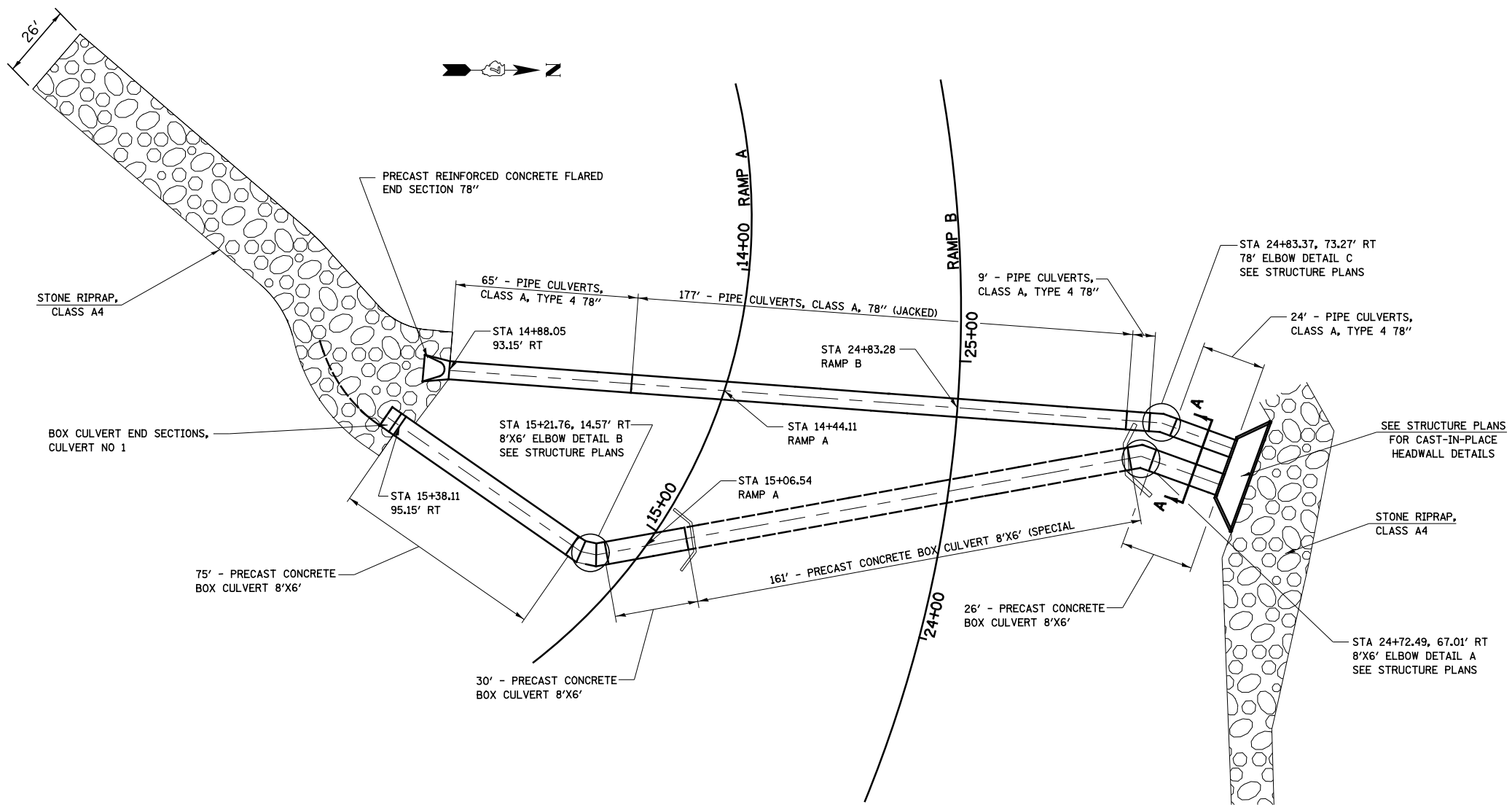
- NOTES
1. LOOPS ARE 6'X8' AND CENTERED IN THE TRAFFIC LANES
 2. NOT TO SCALE
 3. CLASSIFICATION
 4. COST OF REMOVAL OF EXISTING HANDHOLES SHALL BE INCLUDED IN OTHER ITEMS OF WORK

SCHEDULE OF QUANTITIES			
ITEM	UNIT	QUANTITY	
UNDERGROUND CONDUIT, PVC, 1 1/4" DIA	FOOT	160	
UNDERGROUND CONDUIT, PVC, 3" DIA	FOOT	212	
HEAVY-DUTY HANDHOLE	EACH	4	
CONTROLLER CABINET TYPE III	EACH	1	
CONCRETE FOUNDATION, TYPE D	EACH	1	
DETECTOR LOOP, TYPE I	FOOT	1045	
PIEZO AXLE SENSOR, CLASS II	FOOT	66	
ELECTRIC CABLE IN CONDUIT, CONOGA-30003	FOOT	1830	

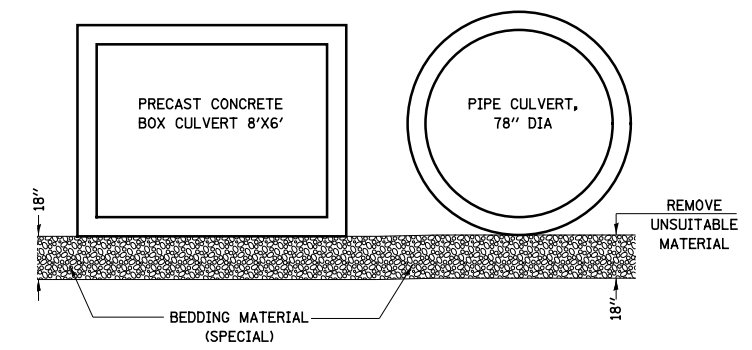
**PROPOSED AUTOMATED TRAFFIC COUNTER
STA 2269+28, I-57/70
NEAR 4TH STREET STRUCTURE**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS		
ITEM	UNIT	QUANTITY
REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL	CU YD	193
BEDDING MATERIAL, SPECIAL	CU YD	193
PRECAST CONCRETE BOX CULVERTS 8'X6'	FOOT	131
PRECAST CONCRETE BOX CULVERTS 8'X6' (SPECIAL)	FOOT	161
PRECAST REINFORCED CONCRETE FLARED END SECTIONS 78"	EACH	1
PIPE CULVERTS, CLASS A, TYPE 4 78"	FOOT	98
PIPE CULVERTS, CLASS A 78" (JACKED)	FOOT	177
BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	1



CULVERT LAYOUT DETAIL



SECTION A-A
SEE CULVERT PROFILES FOR LIMITS OF BEDDING MATERIAL (SPECIAL)

CULVERT LAYOUT
US ROUTE 45 - RAMPS A & B

SHEET NO. 1 OF 1 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57/70	(25-4)R	EFFINGHAM	1760	511
			CONTRACT NO. 74295		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

Bench Mark: Chiseled square on raised concrete median at center of US 45 approximately 140'-0" North of I-57/70 centerline. US Route 45 Sta. 60+10. Elev. 592.07.

Existing Structure: The existing single cell reinforced concrete box culvert was constructed in 1959.

INDEX OF SHEETS

1. Culvert Layout
- 2-4. Culvert End Section Details
5. Detail A Concrete Pipe Elbow Collar Details
6. Detail B Concrete Box Culvert Elbow Details
7. Detail C Concrete Box Culvert Elbow Details
8. Borings

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

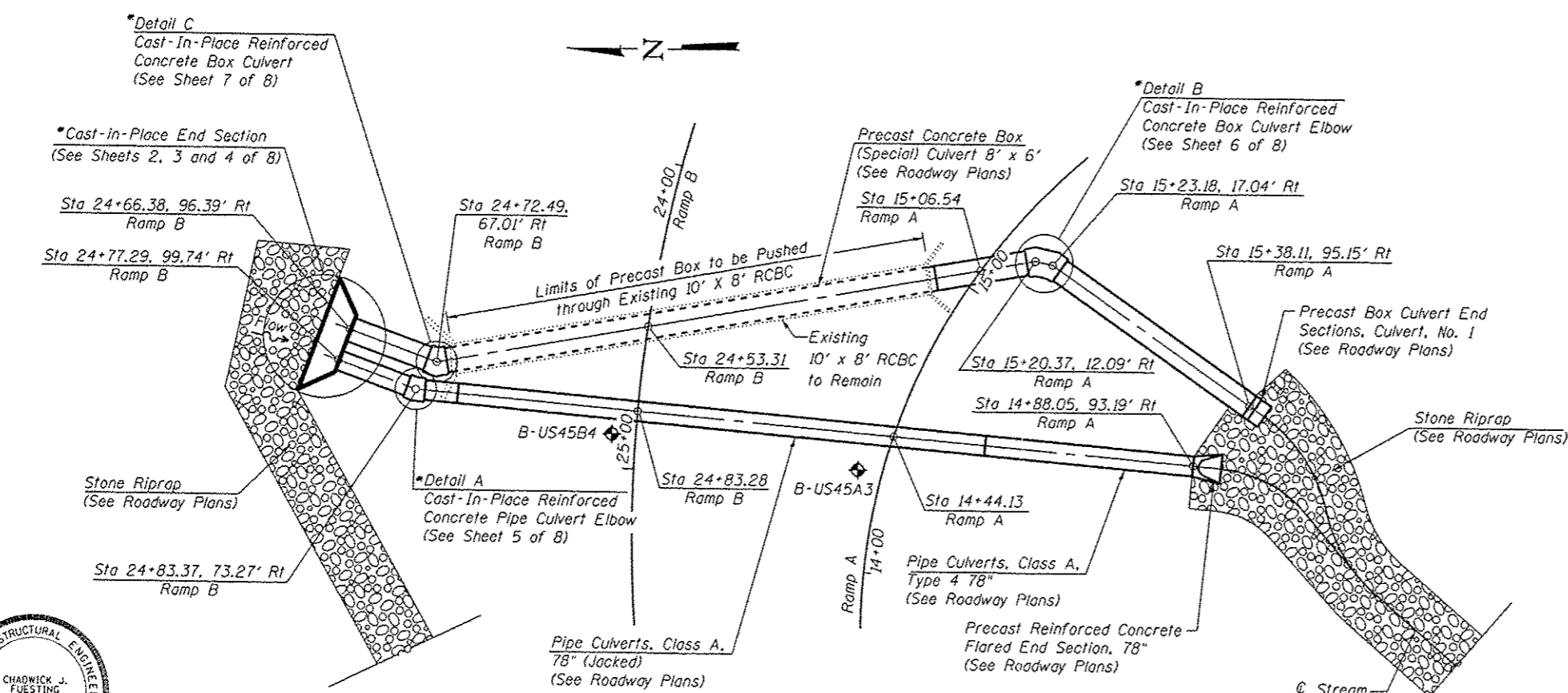
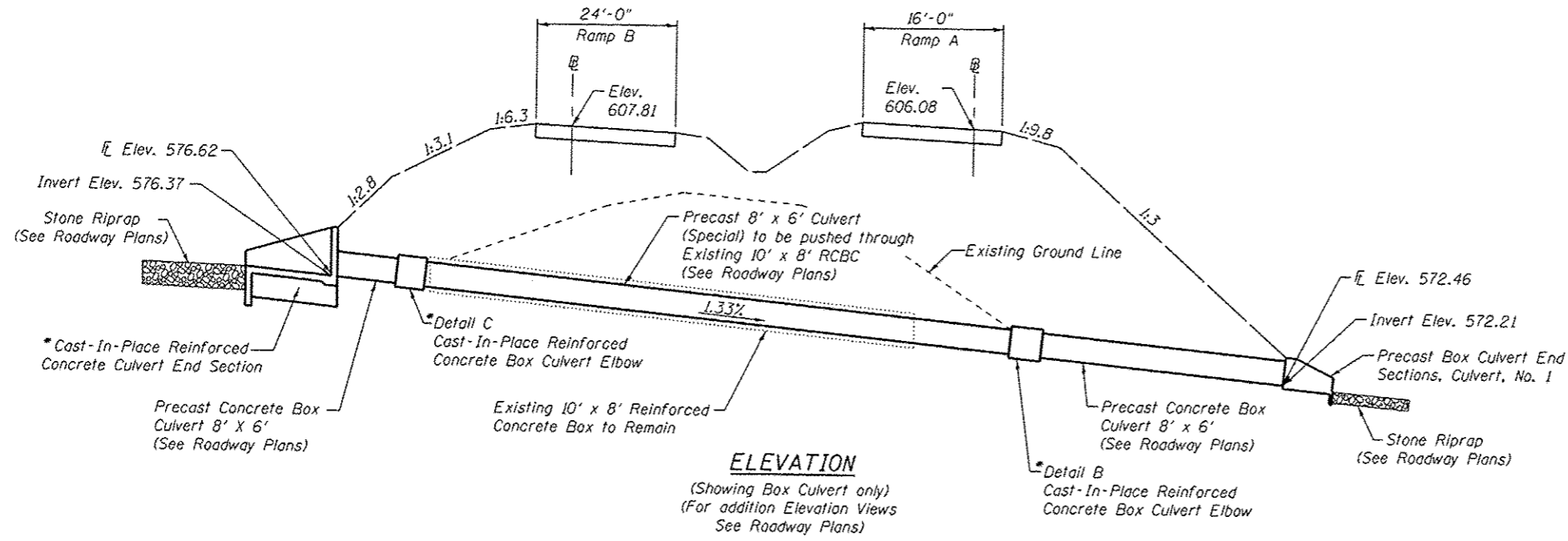
LOADING HL-93

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

TOTAL BILL OF MATERIAL

Item	Unit	Qty.
Concrete Removal	Cu. Yd.	6.3
Removal & Disposal of Unsuitable Material	Cu. Yd.	20.3
Reinforcement Bars	Pound	11270
Reinforcement Bars, Epoxy Coated	Pound	480
Concrete Box Culverts	Cu. Yd.	71.1
Bedding Material, Special	Cu. Yd.	20.3



GENERAL NOTES

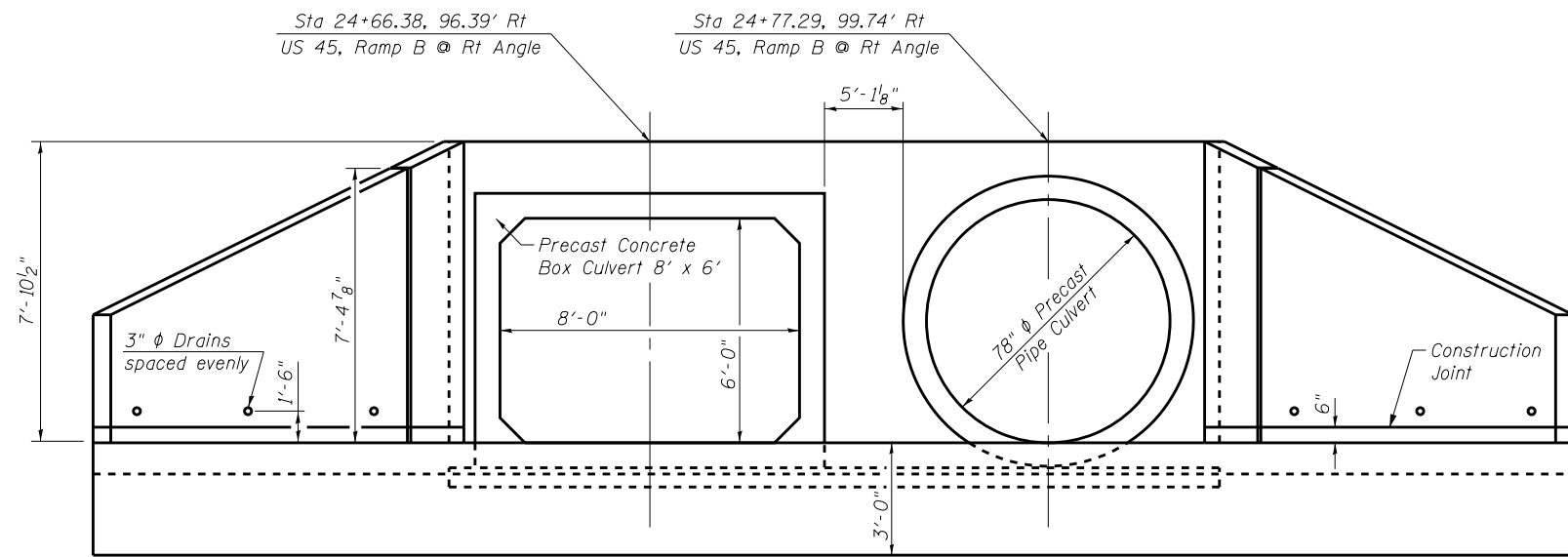
*** Indicates locations where Precast Alternates are not allowed. For Limits and Details of Riprap and quantity see Roadway Plans. Reinforcement bars designated (E) shall be epoxy coated. Precast Alternates for Details A, B, or C shall be according to the Standard Specifications for Road and Bridge Construction. The substitution of Details A, B, or C by means of developing bends out of individually sawing precast units which are joined by mortared joints shall not be allowed. For quantities and Details of Precast Pipes, Precast Culverts, Jacking & Pushing of Culverts See Roadway Plans. Plan Dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity furnished at the unit price for the work. Work related to cast-in-place elbows and end sections shall be according to Section 540. Box Culverts of the Standard Specifications. The Concrete for all cast-in-place elbows and end sections shall be paid for as Concrete Box Culverts per cubic yard.

CAST IN PLACE CULVERT DETAIL
U.S. ROUTE 45, RAMPS A & B
F.A.I. RTE. 57/70 - SEC. (25-4)R
EFFINGHAM COUNTY
STATION 24+70.29

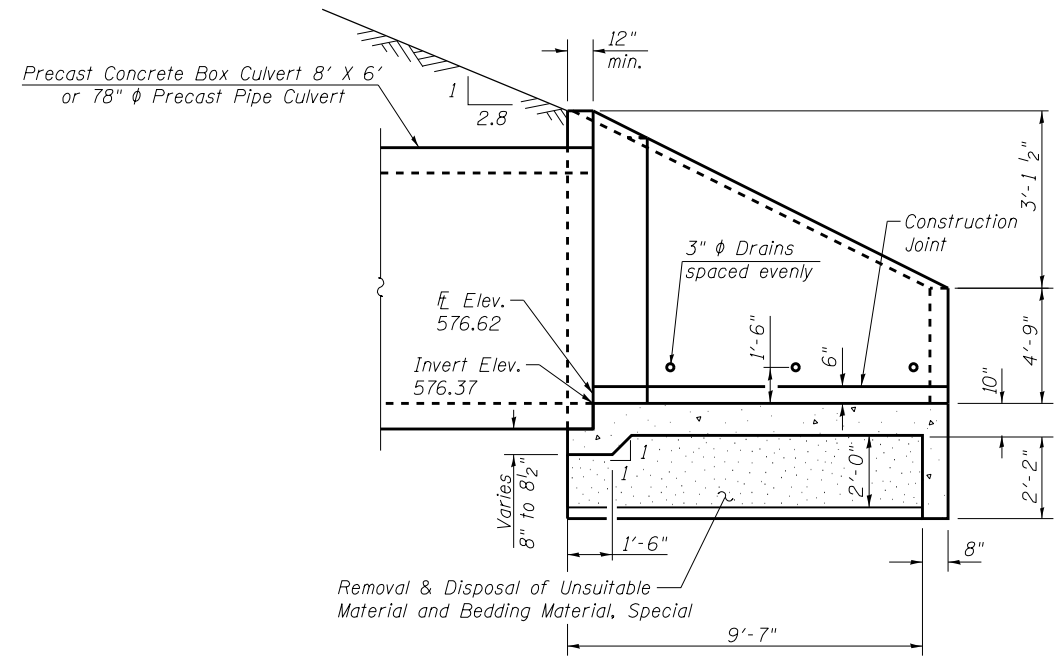


Chadwick J. Fuesting 5/13/13

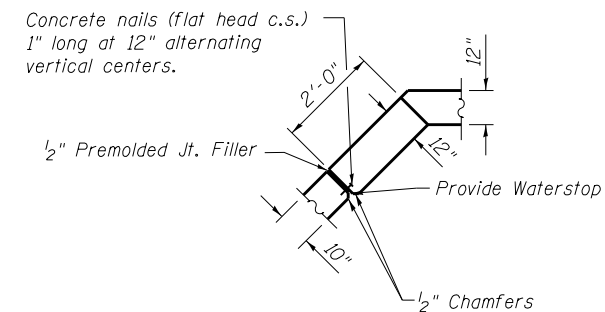
FILE NAME * US 45.dgn	USER NAME *	DESIGNED - ACS	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 1 OF 8 SHEETS
ILLINOIS DESIGN FIRM NUMBER 184.001670	DESIGNED - ACS	CHECKED - BB	REVISIONS -		
PLOT SCALE *	DESIGNED - ACS	DRAWN - WJS	REVISIONS -		
PLOT DATE * 11:42:40 AM 5/13/2013	DESIGNED - ACS	CHECKED - CJF	REVISIONS -		
				F.A.I. RTE. 57/70	SECTION 125-4R
				COUNTY EFFINGHAM	TOTAL SHEETS 512
				CONTRACT NO. 74295	ILLINOIS FED. AID PROJECT



END ELEVATION
 Calculated Max. Soil Pressure
 under Box Culvert End Section = 130 psf



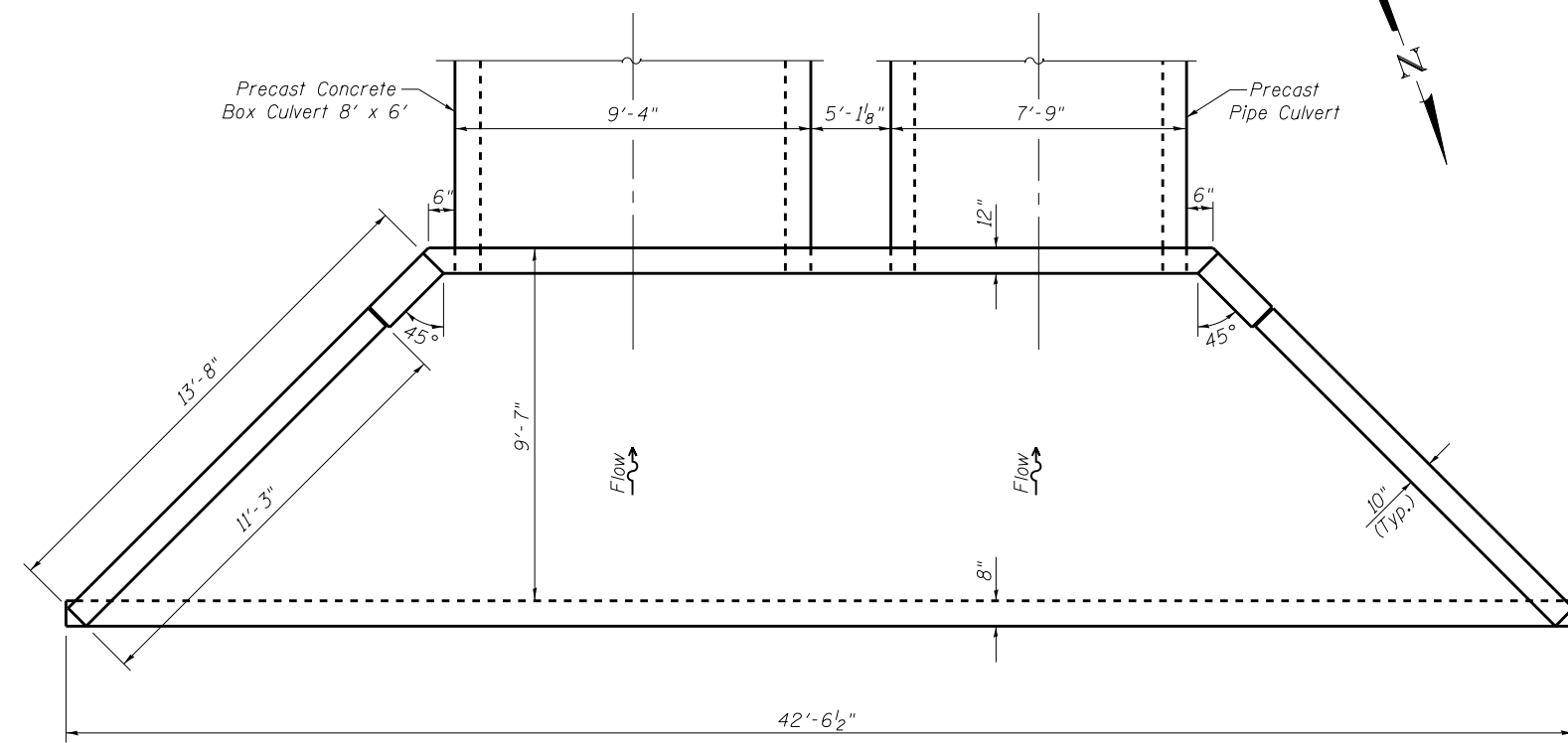
SECTION THRU END SECTION



CORNER DETAIL

GENERAL NOTES

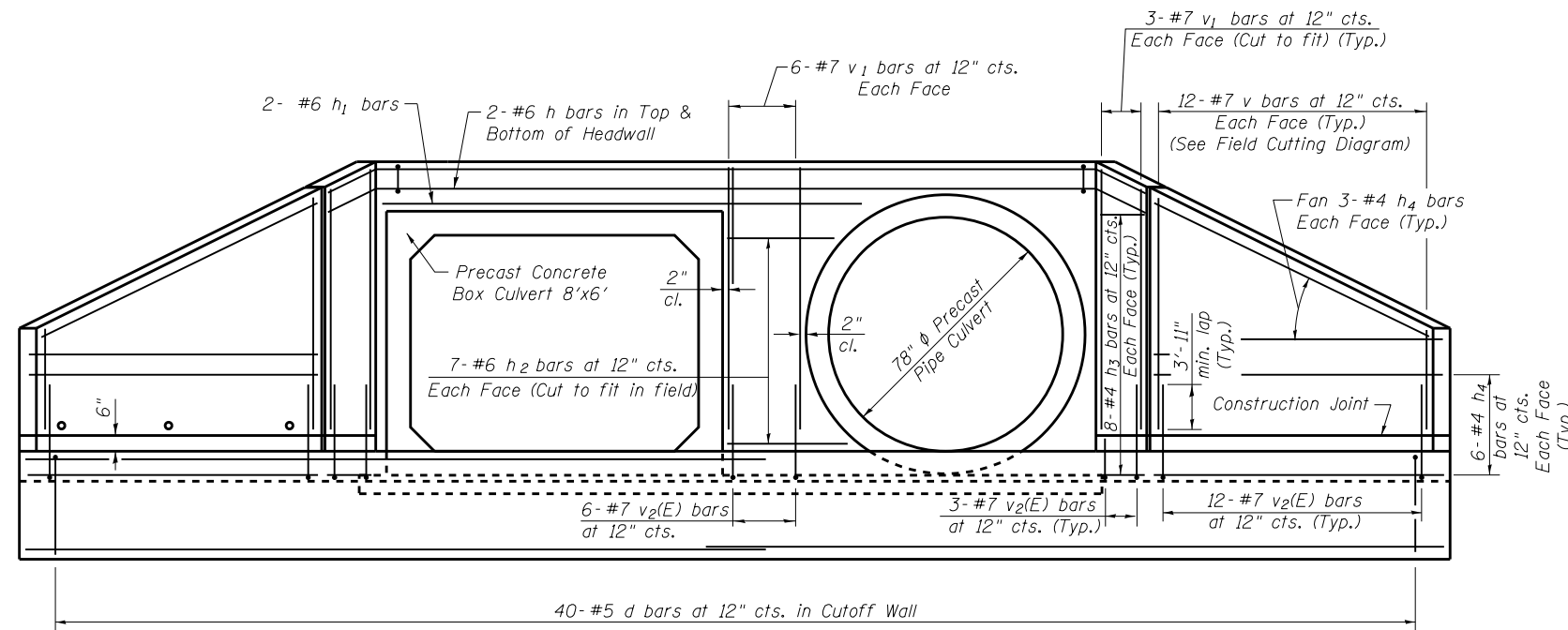
The depth of Removal and Replacement of Unsuitable Material and Bedding Material, Special as shown on the plans is estimated.
 The verification of allowable soil bearing pressure underlying the proposed Cast-In-Place Reinforced Concrete End Section shall be verified by a dynamic cone penetration (DCP) test or other acceptable measures as provided by the District Geotechnical and Field Engineers. The results of the test must exceed the calculated bearing pressures shown on the plans prior to placement of the End Section or Bedding Material, Special. Tests failing to exceed the calculated bearing pressures as shown on the plans will require subsurface modification that must be coordinated with the District Geotechnical and Field Engineers.



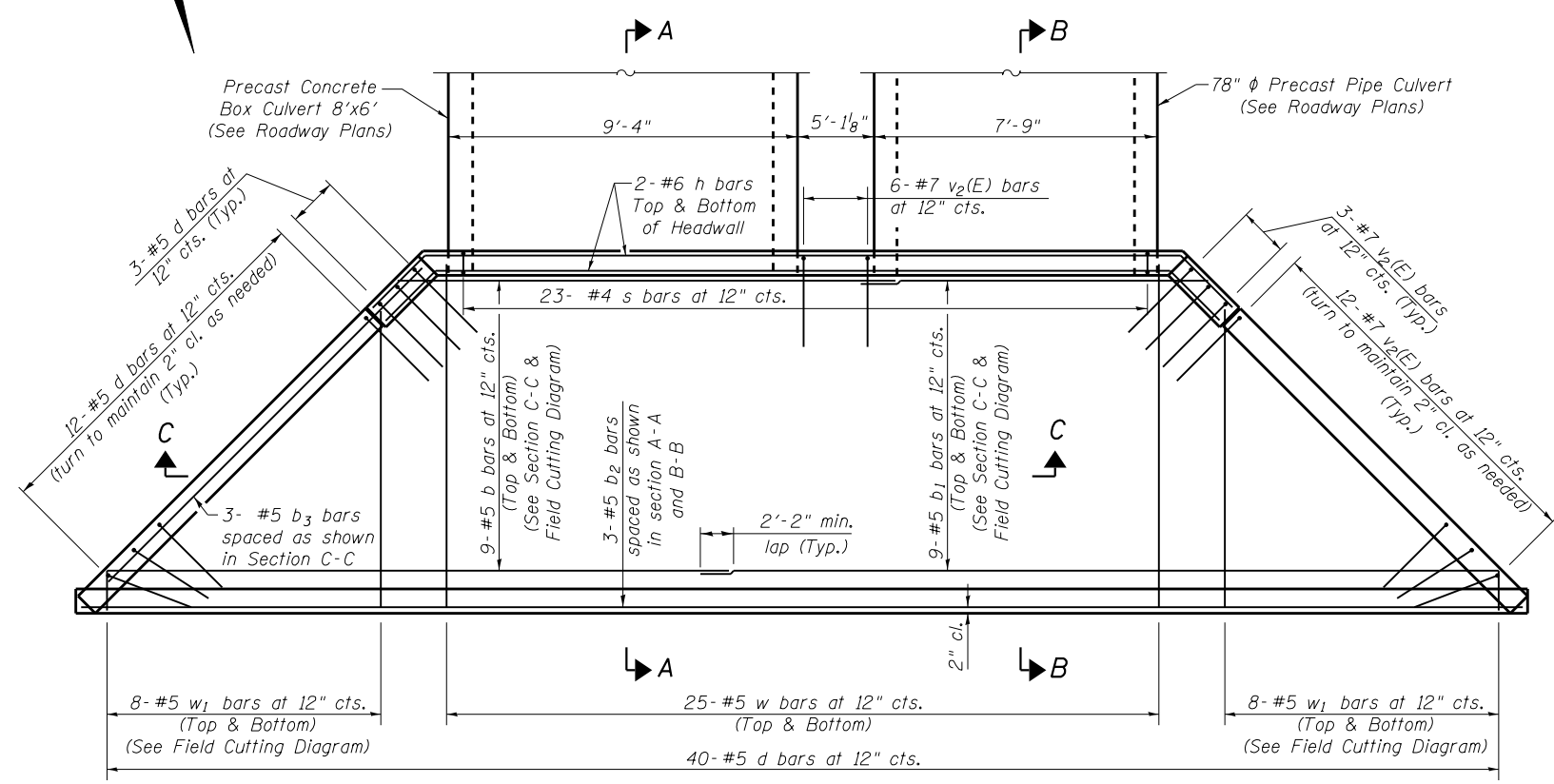
PLAN

S:\Projects\403-00072_57-70\Bridges\Culverts\US 45 Culverts under Ramps A & B\DWG\Final Plan Sheets\US 45.dgn

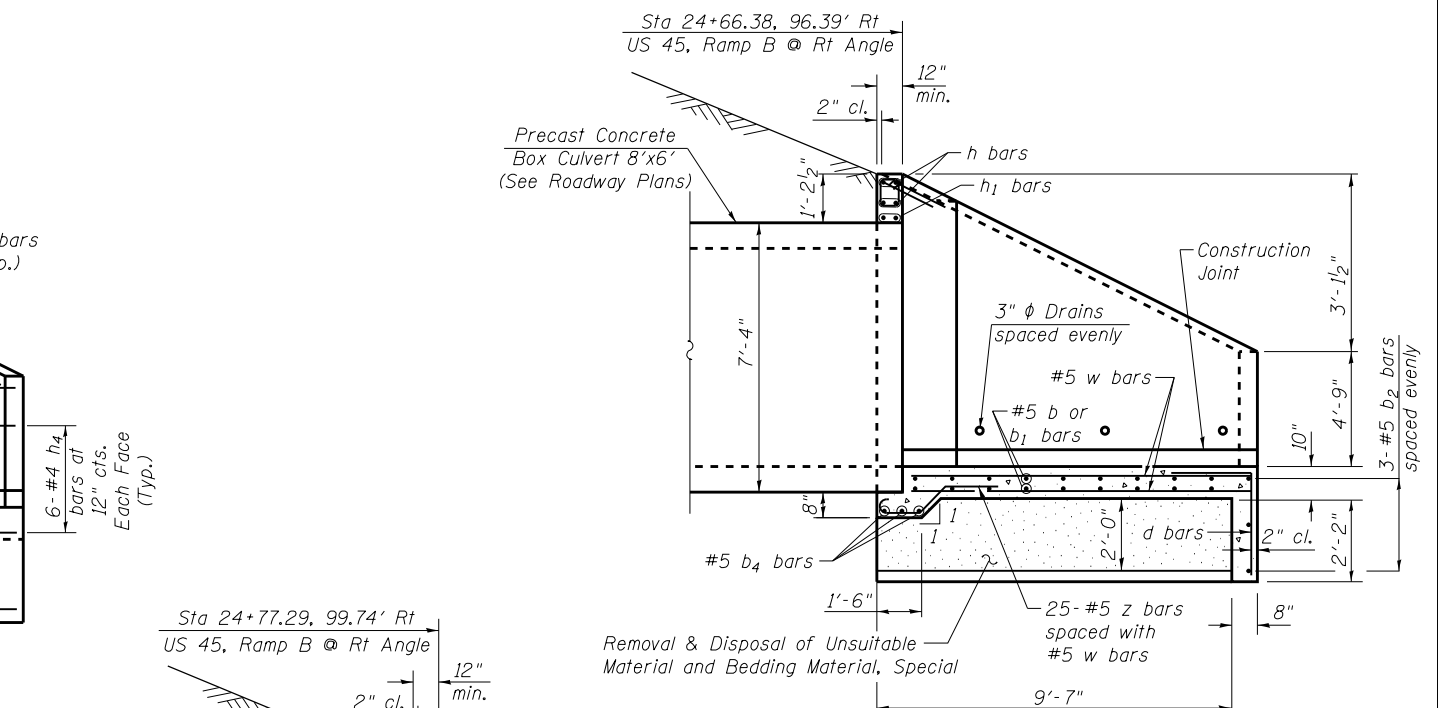
FILE NAME = US 45.dgn	USER NAME =	DESIGNED - ACS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT END SECTION, RT. STA. 24 + 70.29 US ROUTE 45 - RAMPS A & B	F.A.I. RTE. = 57/70	SECTION = (25-4)R	COUNTY = EFFINGHAM	TOTAL SHEETS = 1760	SHEET NO. = 513	
BERNHARDEN LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, IL 62442 PHONE (618) 281-4666 FAX (618) 288-4666	Illinois Design Firm Number 184.001670	CHECKED - BB	REVISED -			SHEET NO. 2 OF 8 SHEETS			CONTRACT NO. 74295		
	PLOT SCALE =	DRAWN - WJS	REVISED -			ILLINOIS FED. AID PROJECT					
	PLOT DATE = 3:54:16 PM 5/11/2013	CHECKED - CJF	REVISED -								



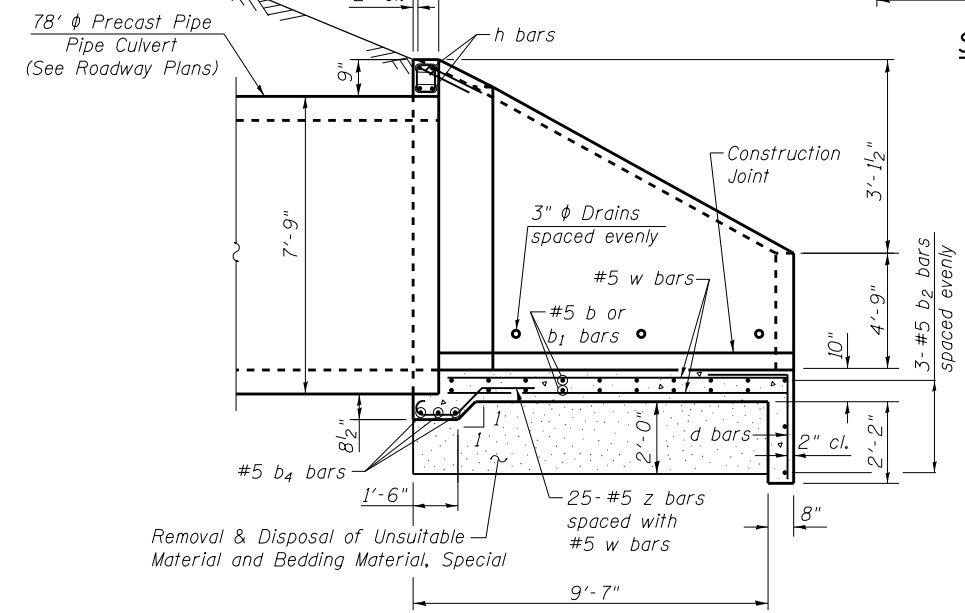
END ELEVATION



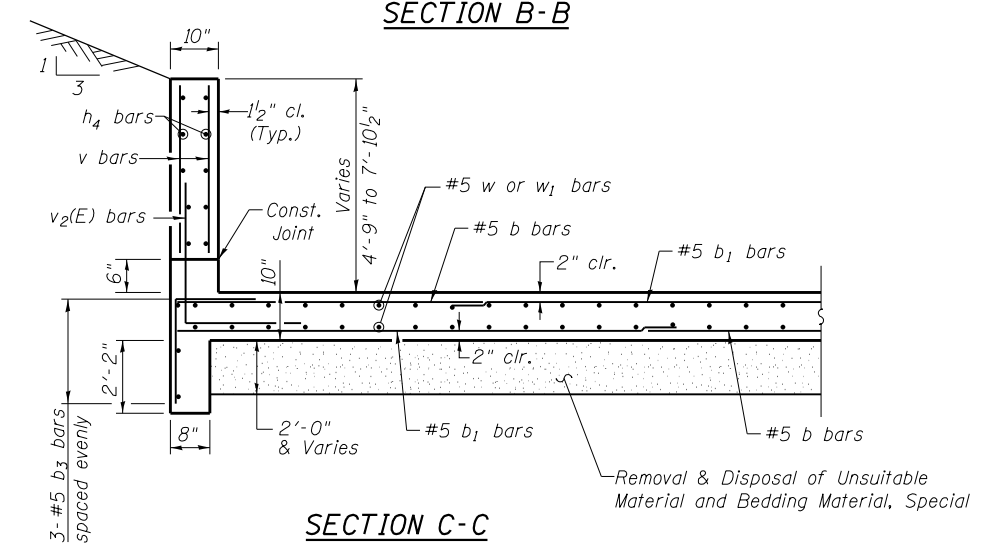
PLAN
(For z bars see Sections A-A, B-B & C-C)



SECTION A-A



SECTION B-B



SECTION C-C

S:\Projects\403\00072_57-70\Bridges\Culverts\US 45.dgn

FILE NAME = US 45.dgn
BERNARDINI LOCHMULLER & ASSOCIATES, INC.
3 OAK DRIVE
MARYVILLE, IL 62446
PHONE (618) 284-4666
FAX (618) 284-4666

USER NAME =
Illinois Design Firm Number 184,001670
PLOT SCALE =
PLOT DATE = 3:51:16 PM 5/11/2013

DESIGNED - ACS
CHECKED - BB
DRAWN - WJS
CHECKED - CJF

REVISED -
REVISED -
REVISED -
REVISED -

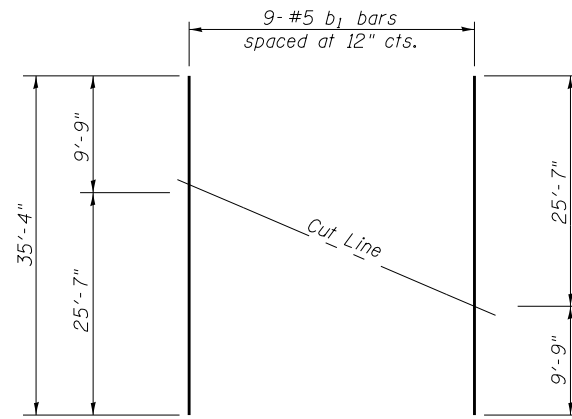
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT END SECTION, RT. STA. 24 + 70.29
US ROUTE 45 - RAMPS A & B**

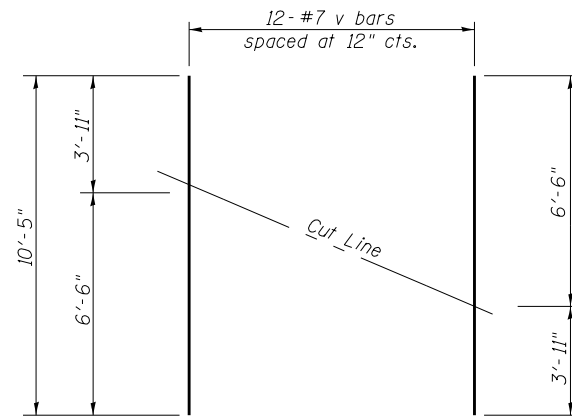
SHEET NO. 3 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4)R	EFFINGHAM	1760	514
CONTRACT NO. 74295				

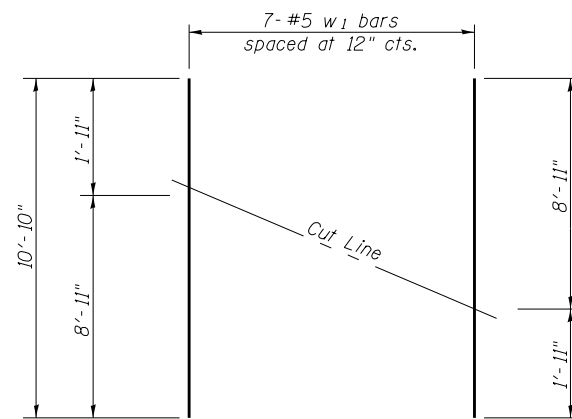
ILLINOIS FED. AID PROJECT



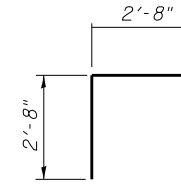
FIELD CUTTING DIAGRAM
(b_1 bars)



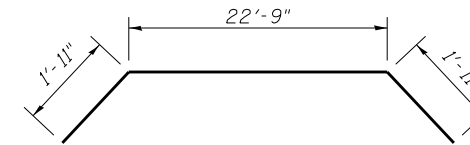
FIELD CUTTING DIAGRAM
(v bars)



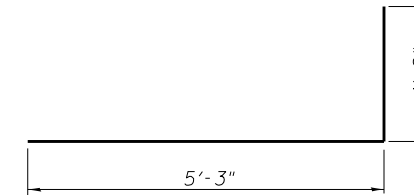
FIELD CUTTING DIAGRAM
(w_1 bars)



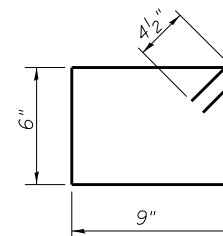
BAR d



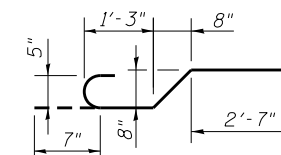
BAR h
(Bend in Field)



BAR $v_2(E)$



BAR s



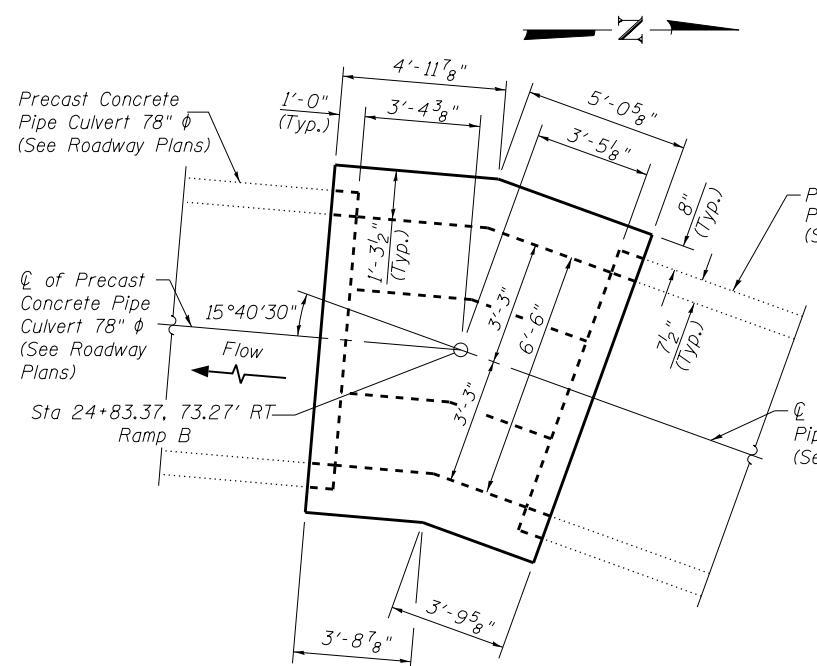
BAR z

**CAST-IN-PLACE REINFORCED
CONCRETE CULVERT END SECTION**

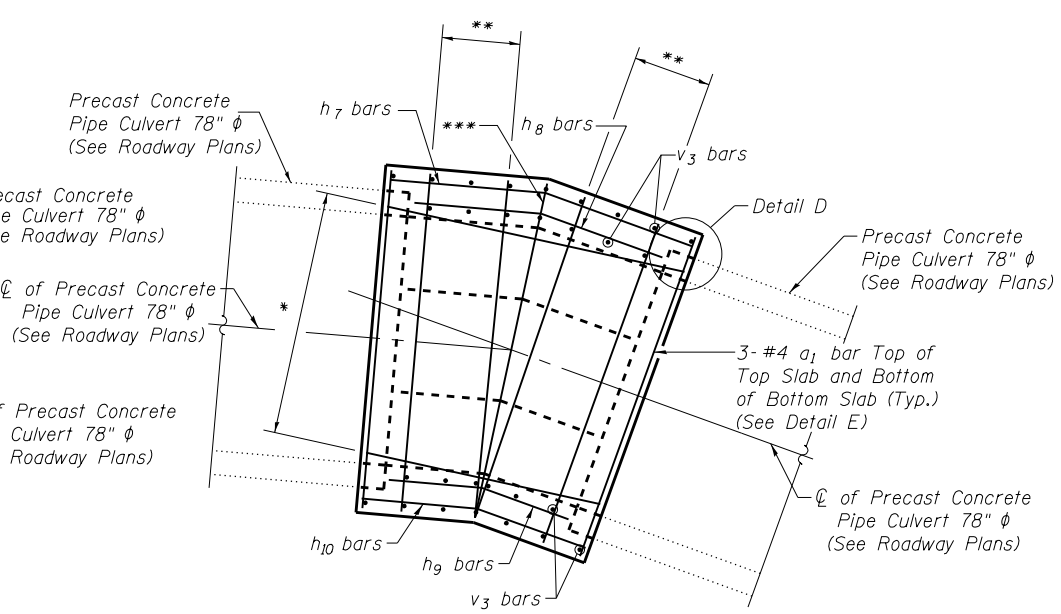
Bar	No.	Size	Length	Shape
b	18	#5	17'-6"	—
b_1	9	#5	35'-4"	—
b_2	3	#5	42'-2"	—
b_3	6	#5	13'-6"	—
b_4	3	#5	23'-0"	—
d	70	#5	5'-4"	└┘
h	4	#6	26'-7"	└┘
h_1	2	#6	16'-6"	—
h_2	14	#6	6'-2"	—
h_3	32	#4	1'-9"	—
h_4	36	#4	10'-11"	—
s	23	#4	3'-3"	□
v	24	#7	10'-5"	—
v_1	24	#7	7'-0"	—
$v_2(E)$	36	#7	6'-5"	└┘
w	50	#5	8'-11"	—
w_1	16	#5	10'-10"	—
z	25	#5	5'-5"	└┘
Reinforcement Bars, Epoxy Coated		Pound	480	
Concrete Box Culverts		Cu. Yd.	22.7	
Reinforcement Bars		Pound	3670	
Removal & Disposal of Unsuitable Material		Cu. Yd.	20.3	
Bedding Material, Special		Cu. Yd.	20.3	

Order b_1 , w_1 , and v bars full length. Cut as shown.
Use remainder of bar in opposite face.

S:\Projects\403-00072_57-70\Bridges\Culverts\US 45.dgn

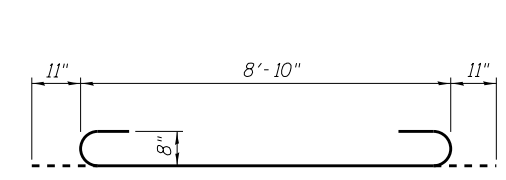


DETAIL A
SHOWING DIMENSIONS
PLAN

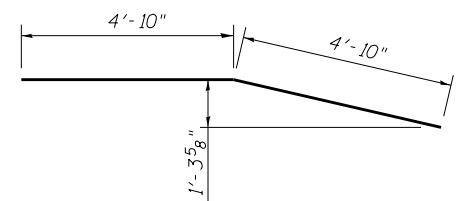


DETAIL A
SHOWING REINFORCEMENT
PLAN

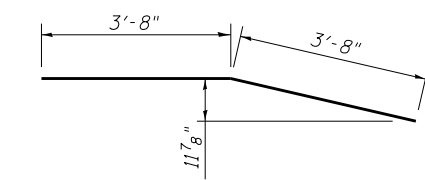
- * 10-#5 h5 bars at 9" cts. Bottom of Top Slab and Top of Bottom Slab (See Field Cutting Diagram)
- 10-#5 h6 bars at 9" cts. Top of Top Slab and Bottom of Bottom Slab (See Field Cutting Diagram)
- ** 5-#8 a bars at 9" cts. Bottom of Top Slab and Top of Bottom Slab
- 2-#4 a1 bars at 2'-0" cts. Top of Top Slab and Bottom of Bottom Slab
- *** 1-#8 a bar Bottom of Top Slab and Top of Bottom Slab
- 1-#4 a1 bar Top of Top Slab and Bottom of Bottom Slab



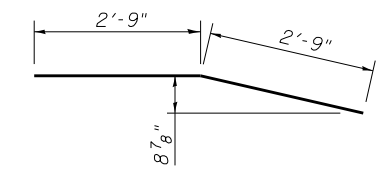
BAR a



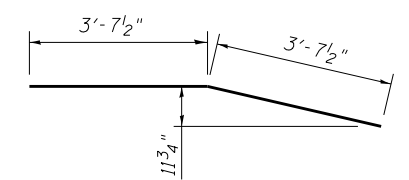
BAR h7



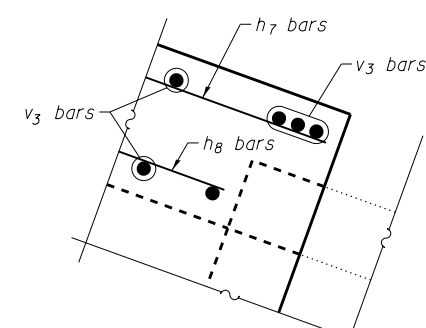
BAR h8



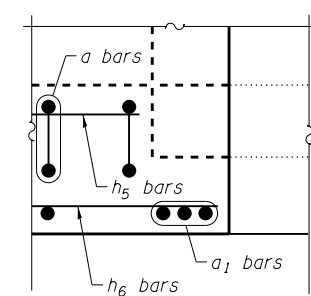
BAR h9



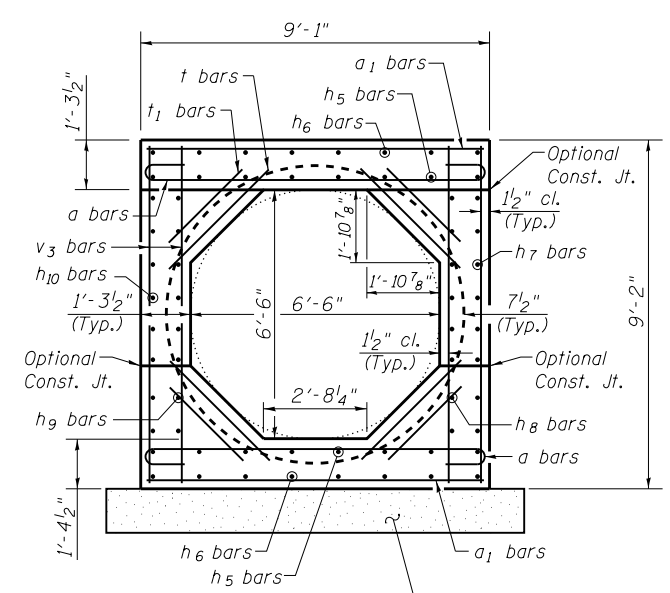
BAR h10



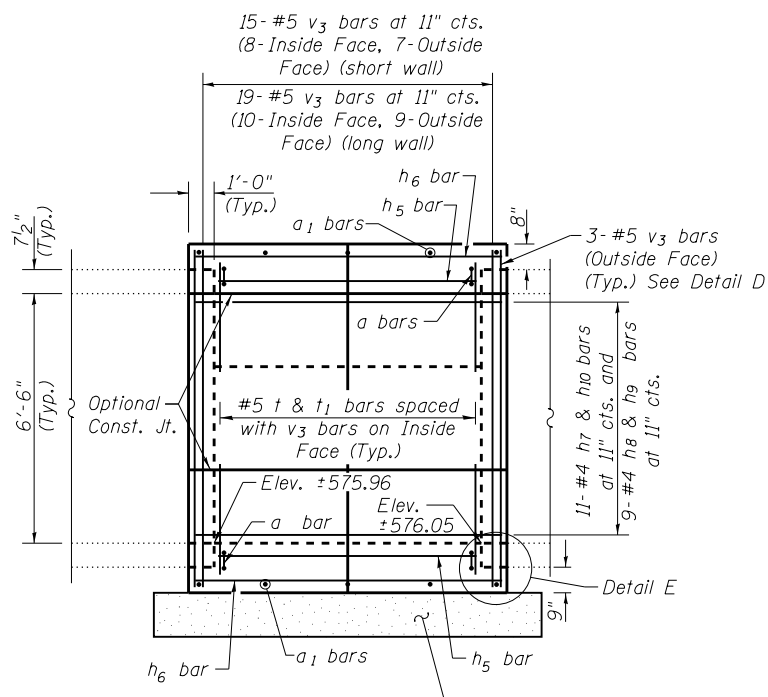
Detail D
(Opposite Wall Similar)



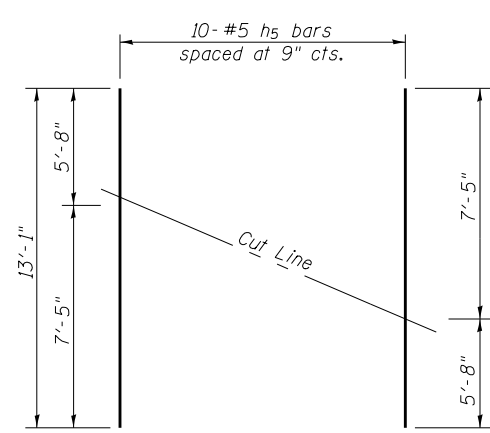
Detail E
(Opposite Slab Similar)



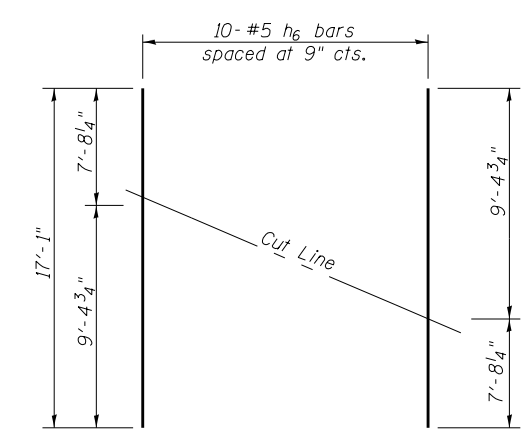
END VIEW
ELEVATION
(Looking Downstream)



SIDE VIEW
ELEVATION



FIELD CUTTING DIAGRAM
(h5 bars)



FIELD CUTTING DIAGRAM
(h6 bars)

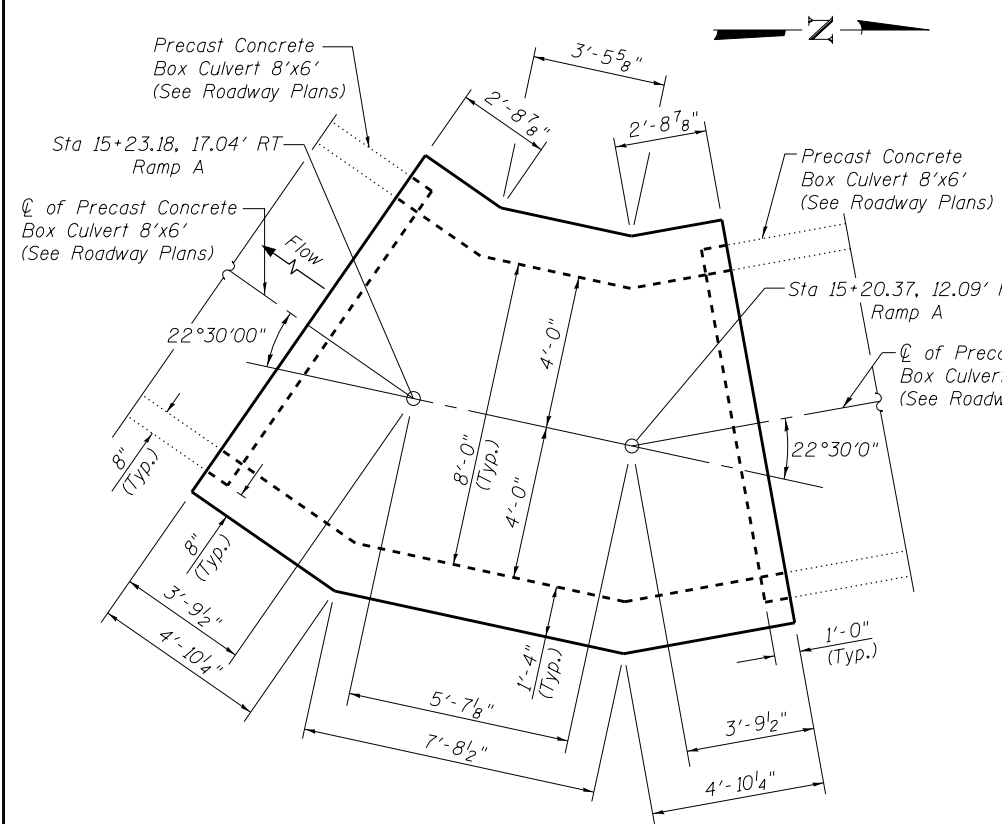
DETAIL A
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	22	#8	10'-8"	
a1	22	#4	8'-10"	
h5	10	#5	13'-1"	
h6	10	#5	17'-1"	
h7	11	#4	9'-8"	
h8	9	#4	7'-4"	
h9	9	#4	5'-6"	
h10	11	#4	7'-3"	
t	36	#5	3'-3"	
t1	36	#5	1'-10"	
v3	46	#5	8'-10"	
Concrete Box Culverts			Cu. Yd.	14.9
Reinforcement Bars			Pound	1890

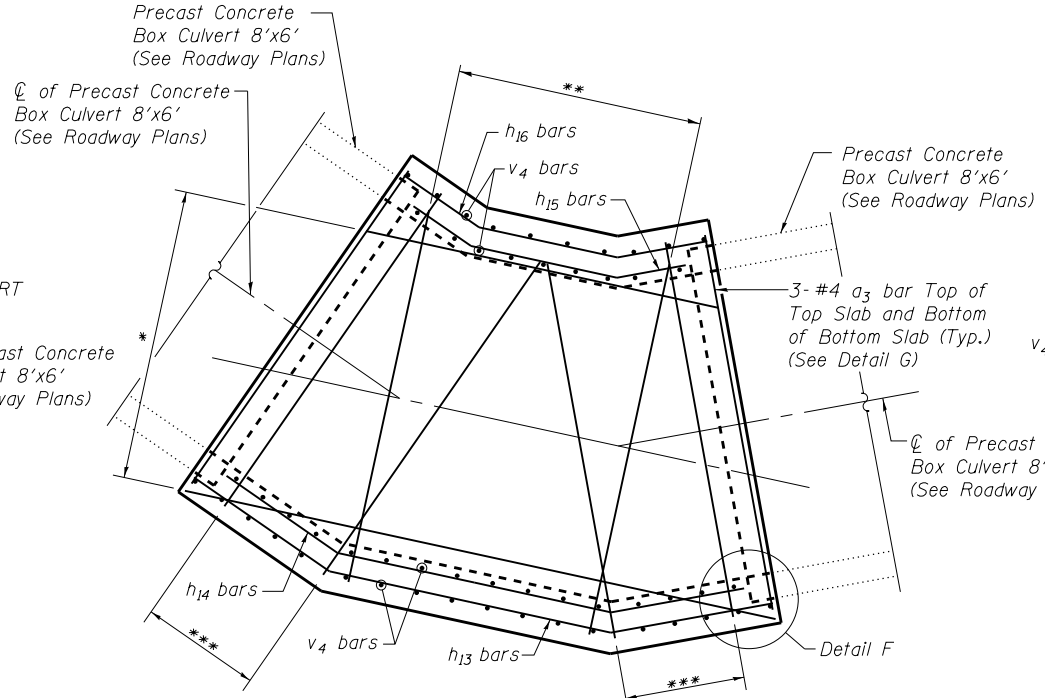
Order h5 and h6 bars full length. Cut as shown.
Use remainder of bar in opposite slab.

S:\Projects\403-00072_57-70\Bridges\Culverts\US 45.dgn

S:\Projects\403-0002_57-70\Bridges\Culverts\US 45.dgn

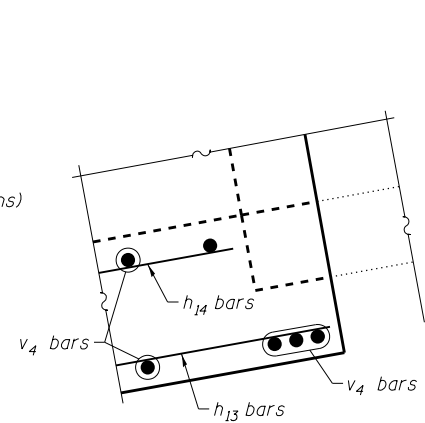


DETAIL B
SHOWING DIMENSIONS
PLAN

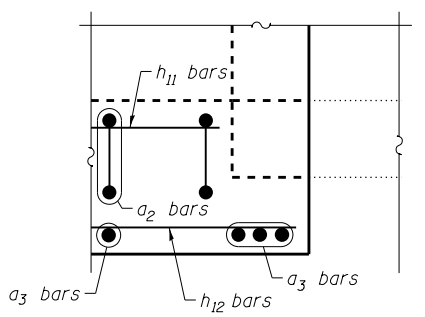


DETAIL B
SHOWING REINFORCEMENT
PLAN

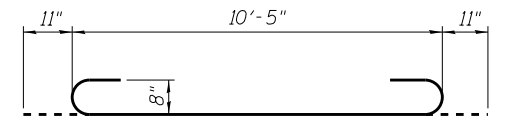
- * 8-#7 h11 bars at 13" cts. Bottom of Top Slab and Top of Bottom Slab (See Field Cutting Diagram)
- 8-#7 h12 bars at 13" cts. Top of Top Slab and Bottom of Bottom Slab (See Field Cutting Diagram)
- ** 12-#8 a2 bars at 7" cts. Bottom of Top Slab and Top of Bottom Slab
- 4-#4 a3 bars at 2'-0" cts. Top of Top Slab and Bottom of Bottom Slab
- *** 7-#8 a2 bars at 7" cts. Bottom of Top Slab and Top of Bottom Slab
- 2-#4 a3 bars at 2'-0" cts. Top of Top Slab and Bottom of Bottom Slab



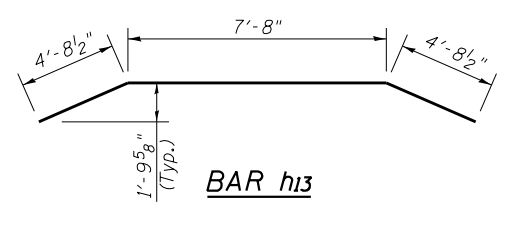
Detail F
(Opposite Wall Similar)



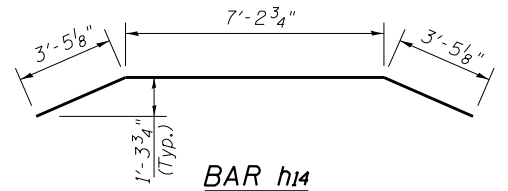
Detail G
(Opposite Slab Similar)



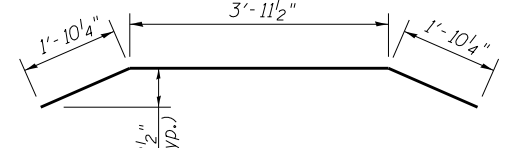
BAR a2



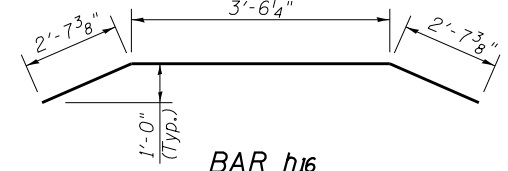
BAR h13



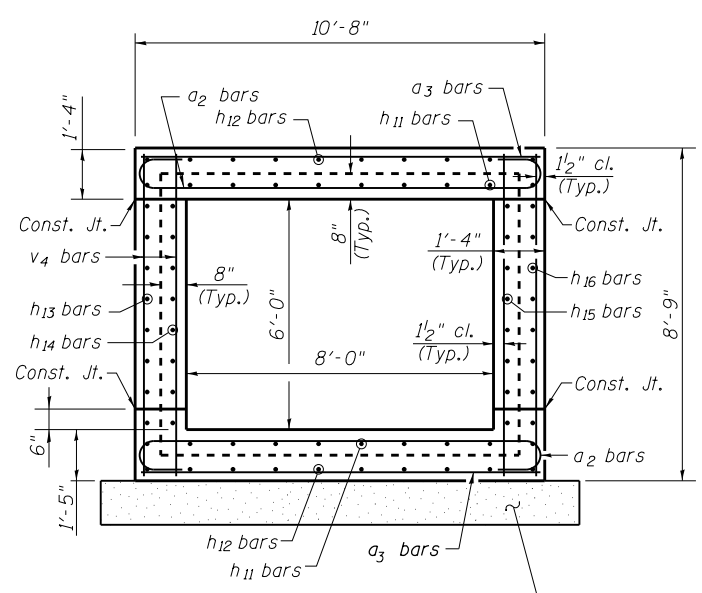
BAR h14



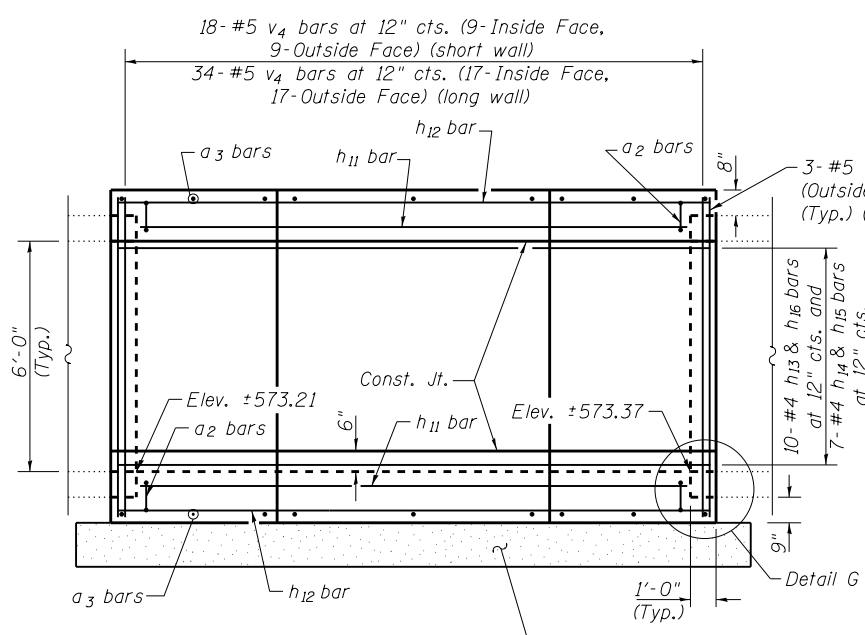
BAR h15



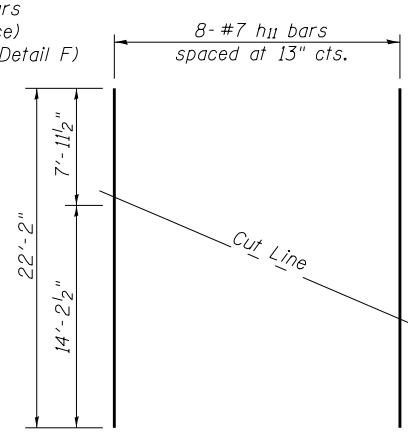
BAR h16



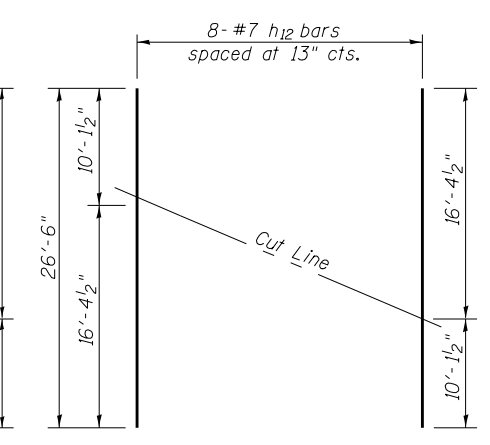
END VIEW
ELEVATION
(Looking Downstream)



SIDE VIEW
ELEVATION



FIELD CUTTING DIAGRAM
(h11 bars)



FIELD CUTTING DIAGRAM
(h12 bars)

DETAIL B
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2	52	#8	12'-3"	
a3	28	#4	10'-5"	
h11	8	#7	22'-2"	
h12	8	#7	26'-6"	
h13	10	#4	17'-1"	
h14	7	#4	14'-1"	
h15	7	#4	7'-8"	
h16	10	#4	8'-9"	
v4	64	#5	8'-5"	
Concrete Box Culverts				Cu. Yd. 20.7
Reinforcement Bars				Pound 3530

Order h11 and h12 bars full length. Cut as shown.
Use remainder of bar in opposite slab.

FILE NAME = US 45.dgn

USER NAME =
Illinois Design Firm Number 184.001670
PLOT SCALE =
PLOT DATE = 3:51:18 PM 5/11/2013

DESIGNED - ACS
CHECKED - BB
DRAWN - WJS
CHECKED - CJF

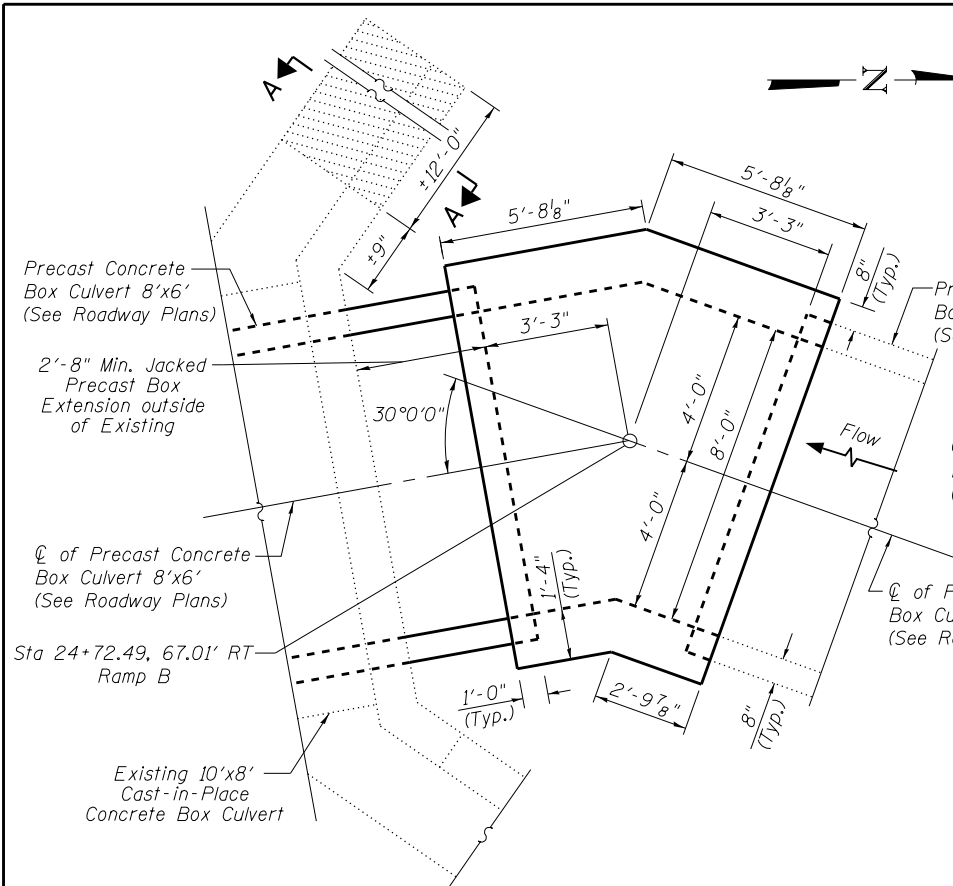
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL B CONCRETE BOX CULVERT DETAILS, RT. STA. 24 + 70.29
US ROUTE 45 - RAMPS A & B

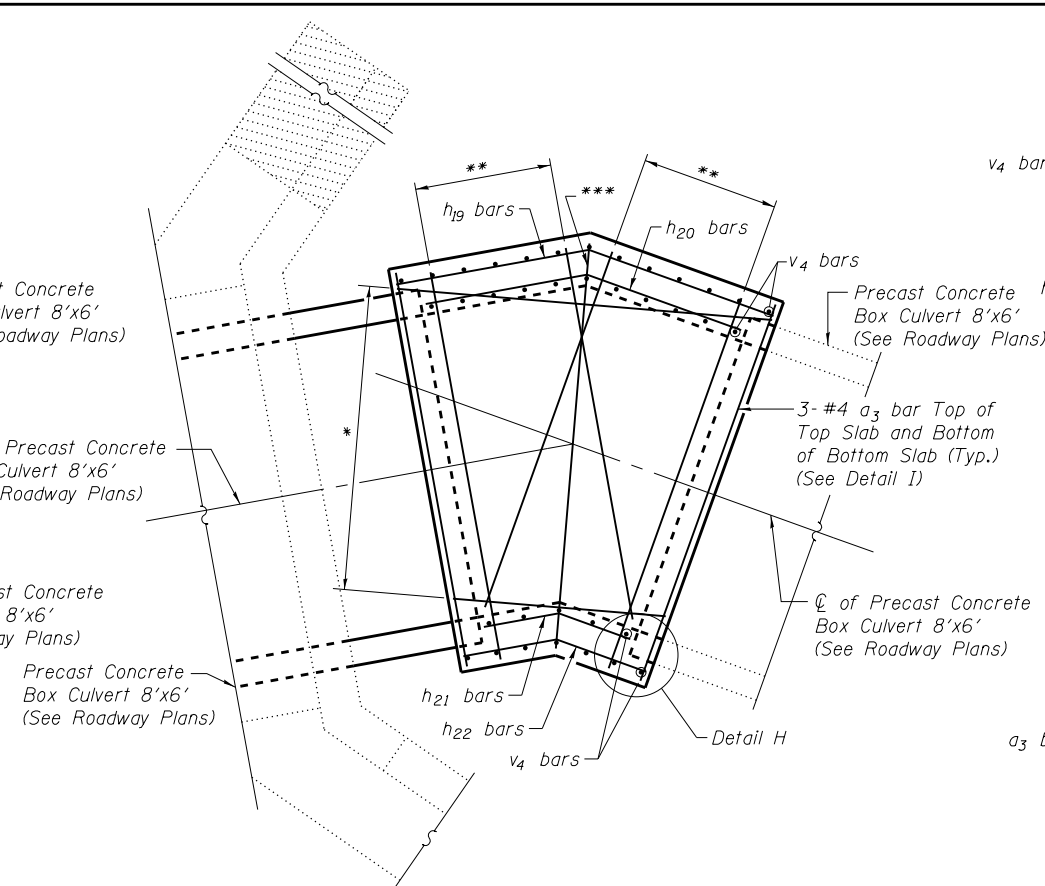
SHEET NO. 6 OF 8 SHEETS

F.A.I. RT. 57/70	SECTION (25-4)R	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 517
CONTRACT NO. 74295			ILLINOIS FED. AID PROJECT	



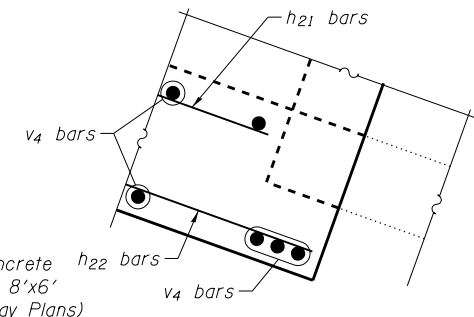
**DETAIL C
SHOWING DIMENSIONS
PLAN**

Indicates Concrete Removal

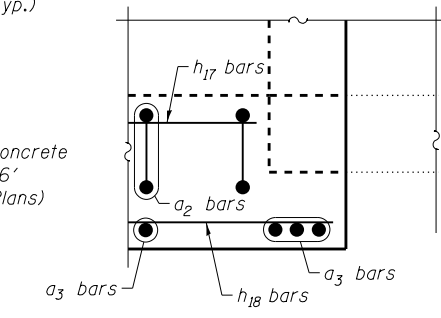


**DETAIL C
SHOWING REINFORCEMENT
PLAN**

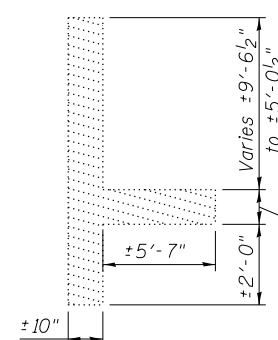
- * 8-#7 h₁₇ bars at 13" cts. Bottom of Top Slab and Top of Bottom Slab (See Field Cutting Diagram)
- 8-#7 h₁₈ bars at 13" cts. Top of Top Slab and Bottom of Bottom Slab (See Field Cutting Diagram)
- ** 7-#8 a₂ bars at 7" cts. Bottom of Top Slab and Top of Bottom Slab
- 2-#4 a₃ bars at 2'-0" cts. Top of Top Slab and Bottom of Bottom Slab
- *** 1-#8 a₂ bar. Bottom of Top Slab and Top of Bottom Slab
- 1-#4 a₃ bar. Top of Top Slab and Bottom of Bottom Slab



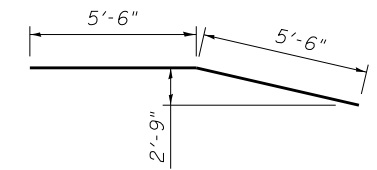
**Detail H
(Opposite Wall Similar)**



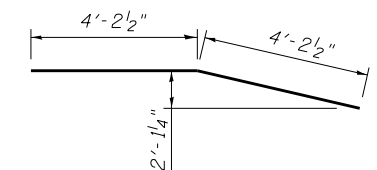
**Detail I
(Opposite Slab Similar)**



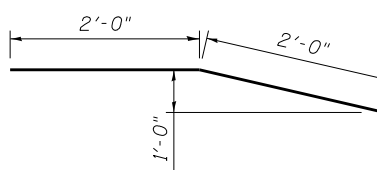
SECTION A-A



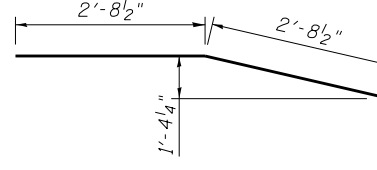
BAR h₁₉



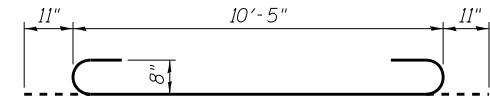
BAR h₂₀



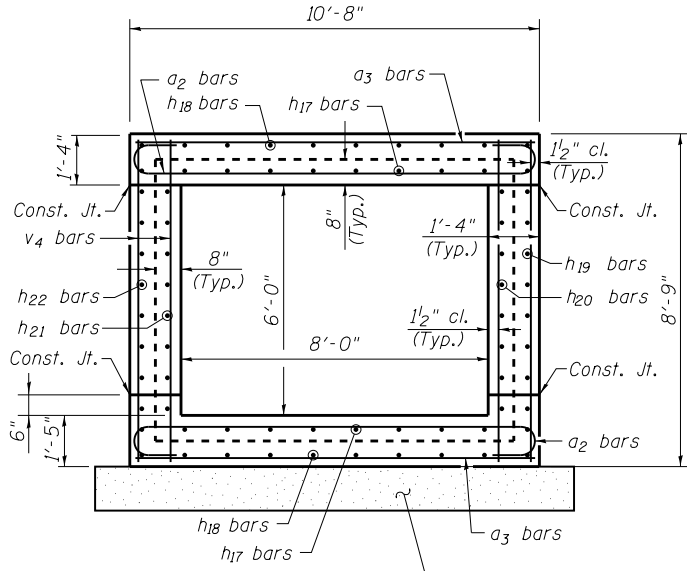
BAR h₂₁



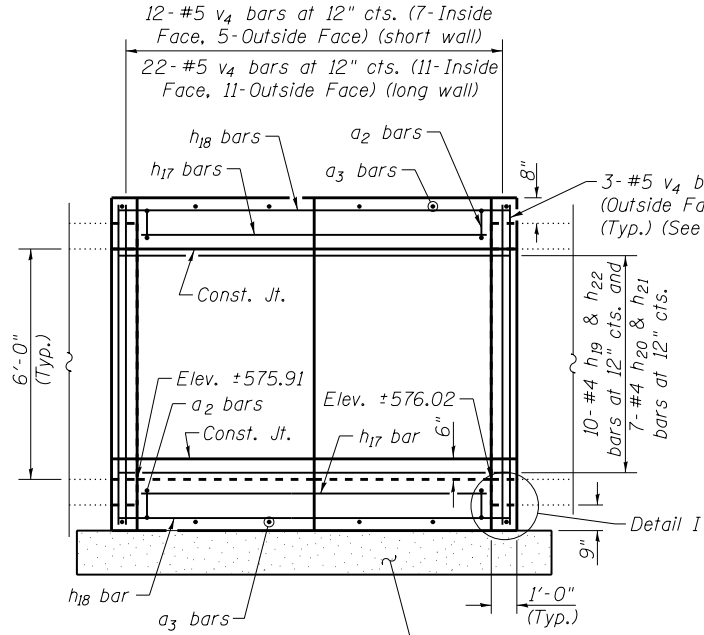
BAR h₂₂



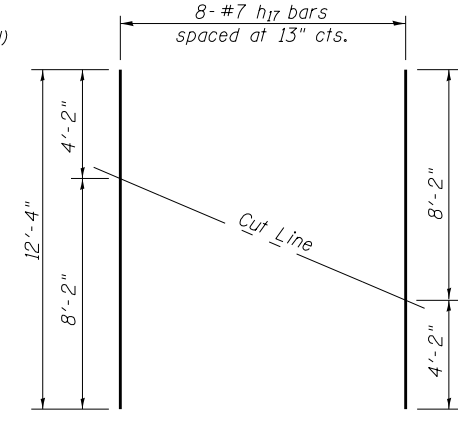
BAR a₂



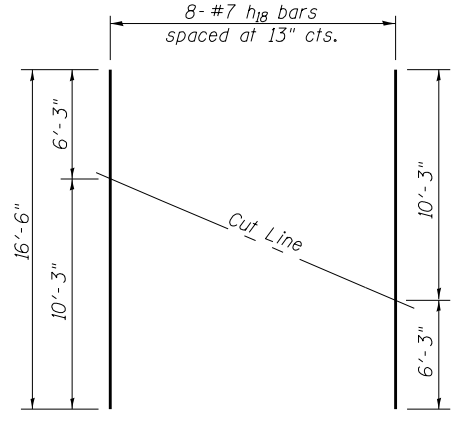
**END VIEW
ELEVATION
(Looking Downstream)**



**SIDE VIEW
ELEVATION**



**FIELD CUTTING DIAGRAM
(h₁₇ bars)**



**FIELD CUTTING DIAGRAM
(h₁₈ bars)**

**DETAIL C
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a ₂	30	#8	12'-3"	
a ₃	22	#4	10'-5"	
h ₁₇	8	#7	12'-4"	
h ₁₈	8	#7	16'-6"	
h ₁₉	10	#4	11'-0"	
h ₂₀	7	#4	8'-5"	
h ₂₁	7	#4	4'-0"	
h ₂₂	10	#4	5'-5"	
v ₄	46	#5	8'-5"	
Concrete Box Culverts		Cu. Yd.	12.8	
Reinforcement Bars		Pound	2180	
Concrete Removal		Cu. Yd.	6.3	

Order h₁₇ and h₁₈ bars full length. Cut as shown. Use remainder of bar in opposite slab.

S:\Projects\403-00072-57-70\Bridges\Culverts\US 45.dgn



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

ROUTE FAI 57/70 DESCRIPTION I-57/I-70 Three Lanes, US 45 Ramp A - Pipe Culvert LOGGED BY E. Sandschafer
DATE 3/5/10

SECTION (25-3.4)R LOCATION N 1/2, SEC. 16, TWP. 8 N, RNG. 6 E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. _____
Station 025-170_157 US 45 Ramp A

BORING NO. US45A3
Station 14+40
Offset 18.00ft Lt
Ground Surface Elev. 601.22 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)	Description	DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)
0				11 1/2" asphalt shoulder on 6" crushed stone subbase.				
599.72						5	1.4	26
				Stiff, damp, gray, SILTY CLAY. (continued)		6	B	
						7		
				Hard, very moist, brown, CLAY LOAM TILL.		12	5.0	14
						20	S	
						36		
				Very dense, very moist, red/brown, SANDY CLAY TILL. Unable to test for Qu, samples pokerchipped and powdered.		50/3"		9
						50/2"		
						30		
						50/5"		8
						50/2"		
						20		
				Very dense, damp, red, SANDY LOAM TILL.		35		10
						38		
				Extent of exploration.				
				Medium to stiff, damp, gray, SILTY CLAY.				
						2	1.0	30
						4	B	
						2		
				Stiff, damp, brown/gray layered, CLAY.		2	1.4	23
						4	B	
						2		
						4	1.4	21
						4	B	
						3		
				Stiff, damp, gray, SILTY CLAY.				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Latitude W 88 490 31.8891 min., Longitude N 38 489 08.814 min., Map Datum WGS 84



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

ROUTE FAI 57/70 DESCRIPTION I-57/I-70 Three Lanes, US 45 Ramp B - Pipe Culvert LOGGED BY E. Sandschafer
DATE 3/5/10

SECTION (25-3.4)R LOCATION N 1/2, SEC. 16, TWP. 8 N, RNG. 6 E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. _____
Station 025-170_157 US 45 Ramp B

BORING NO. US45B4
Station 24+80
Offset 8.00ft Rt
Ground Surface Elev. 601.28 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)	Description	DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)
0				7 1/2" asphalt shoulder on 10" crushed stone subbase.				
599.78						2	1.3	22
				Stiff, damp, red marbled gray, CLAY LOAM. (continued)		4	B	
						1		
				Very stiff, damp, dark gray, CLAY w/ Silt and Organics.		4	2.4	20
						4	B	
						26		
				Very dense, very moist, red, SANDY CLAY TILL. Unable to test for Qu, sample pokerchipped and broken.		50/5"		8
						50/3"		
						33		
				Very dense, very moist, red, SANDY CLAY LOAM TILL. Unable to test for Qu, samples pokerchipped and broken.		50/4"		9
						50/2"		
						32		
						50/4"		13
						50/2"		
				Extent of exploration.				
				Medium to stiff, damp, gray, SILTY CLAY.				
						3	1.0	20
						4	B	
						5		
						2		
				Stiff, damp, gray, layered, CLAY.		4	1.8	19
						5	B	
						1		
						3	1.0	21
						5	B	
						1		
				Stiff, damp, gray, SILTY CLAY.				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Latitude W 88 489 31.890 min., Longitude N 38 489 08.828 min., Map Datum WGS 84

S:\Projects\403-0002_57-70\Bridges\Culverts\US 45.dgn

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DESIGNED -
CHECKED -
DRAWN - WJS
CHECKED - CJF

Illinois Design Firm Number 184,001670
PLOT SCALE =
PLOT DATE = 3/5/20 PM 5/1/2013

REVISED
REVISED
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS

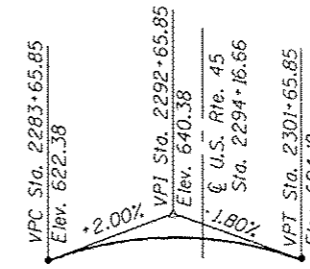
SHEET NO. 8 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4)R	EFFINGHAM	1760	519
CONTRACT NO. 74295				
ILLINOIS FED. AID PROJECT				

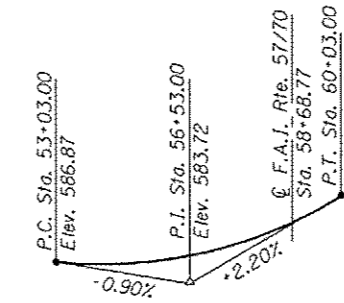
Bench Marks: Chiseled square on raised concrete median at center of U.S. 45 approximately 140'-0" North of F.A.I. 57/70 centerline. U.S. Route 45 Sta. 60+10.00 Elev. 592.07.

Existing Structure: SN 025-8648 is a Y-Shaped single cell box culvert. The West branch carries U.S. 45 over unnamed branch. The North & South branch carries F.A.I. 57/70 over unnamed branch. The original structures were constructed in 1959. The West and North branches consist of Cast-In-Place construction and the South branch consists of a voided bottom slab and T-Beams for the top slab. In 1992 the North and South branches were extended. The North branch extension consisted of Cast-In-Place construction and the South branch consisted of Cast-In-Place side walls and bottom slab with a top slab consisting of 17"x36" prestressed concrete deck beams. Traffic will be maintained at all times during construction.

No Salvage.



PROFILE GRADE
(F.A.I. Route 57/70 EB & WB)



EXISTING PROFILE GRADE
(U.S. Route 45)

INDEX OF SHEETS

SHEET NO.	TITLE
1.	General Plan
2.	General Elevation
3.	Temporary Soil Retention System
4.-5.	North Extension Details
6.-8.	South Extension Details
9.-12.	Boring Logs

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	240.5
Concrete Removal	Cu. Yd.	72.5
Reinforcement Bars	Pound	38470
Reinforcement Bars, Epoxy Coated	Pound	2680
Expansion Bolts 3/4 Inch	Each	52
Concrete Box Culverts	Cu. Yd.	176.9
Rock Fill-Replacement	Ton	169.7
Temporary Soil Retention System	Sq. Ft.	1383
Rock Fill-Foundation	Ton	154.7

DESIGN SPECIFICATIONS

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

LOADING HL-93

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

DESIGN STRESSES

Existing: 1992 Construction
 $f'_c = 3,500$ psi
 $f'_c = 4,000$ psi (Precast)
 $f_y = 60,000$ psi (Reinforcement)

New Construction (Field Units)
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

WATERWAY INFORMATION

Drainage Area = 1.21 miles
 Existing Low Grade Elev. 587.05 @ Sta. 57+00
 Proposed Low Grade Elev. 587.05 @ Sta. 57+00

Flood Year	Frequency	Discharge C.F.S.	Headwater El.	
			Exist.	Prop.
Ten-Year	10	344	578.32	578.35
Design	50	550	580.21	580.26
Base	100	642	581.06	581.09

10-Year Velocity through Existing Culvert = 4.90 fps
 10-Year Velocity through Proposed Culvert = 4.90 fps

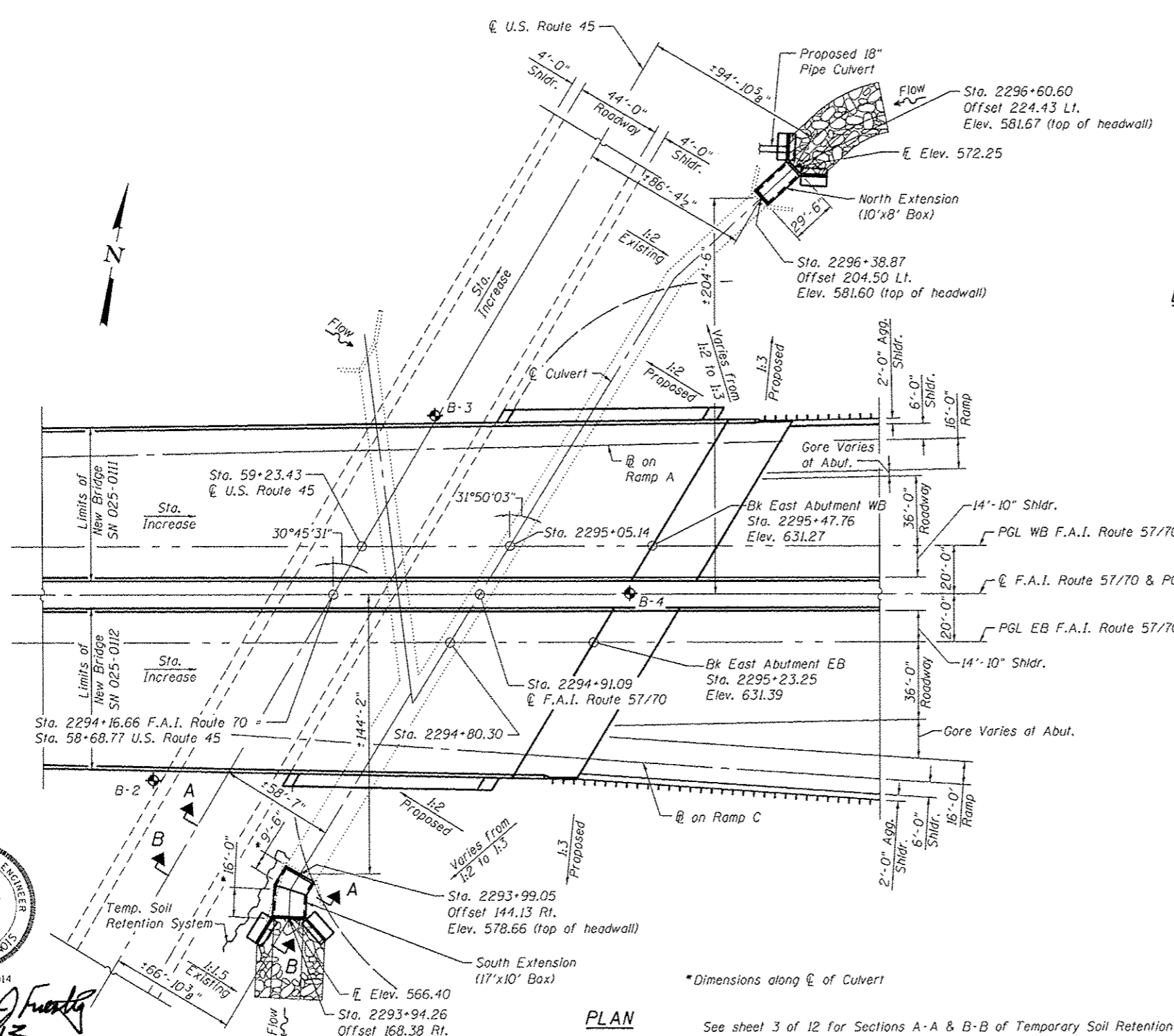
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Extension	S. Extension
	568.00	562.15

GENERAL PLAN
 F.A.I. ROUTE 57/70 & U.S. RTE. 45
 OVER EXISTING Y-SHAPED CULVERT
 SECTION (25-4HVB-1)BY
 EFFINGHAM COUNTY
 STATION 2294+91.09
 SN 025-8648

APPROVED
 For Structural Adequacy Only

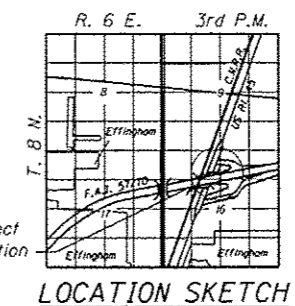
 Engineer of Bridges & Structures



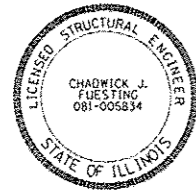
PLAN

*Dimensions along C of Culvert

See sheet 3 of 12 for Sections A-A & B-B of Temporary Soil Retention System.

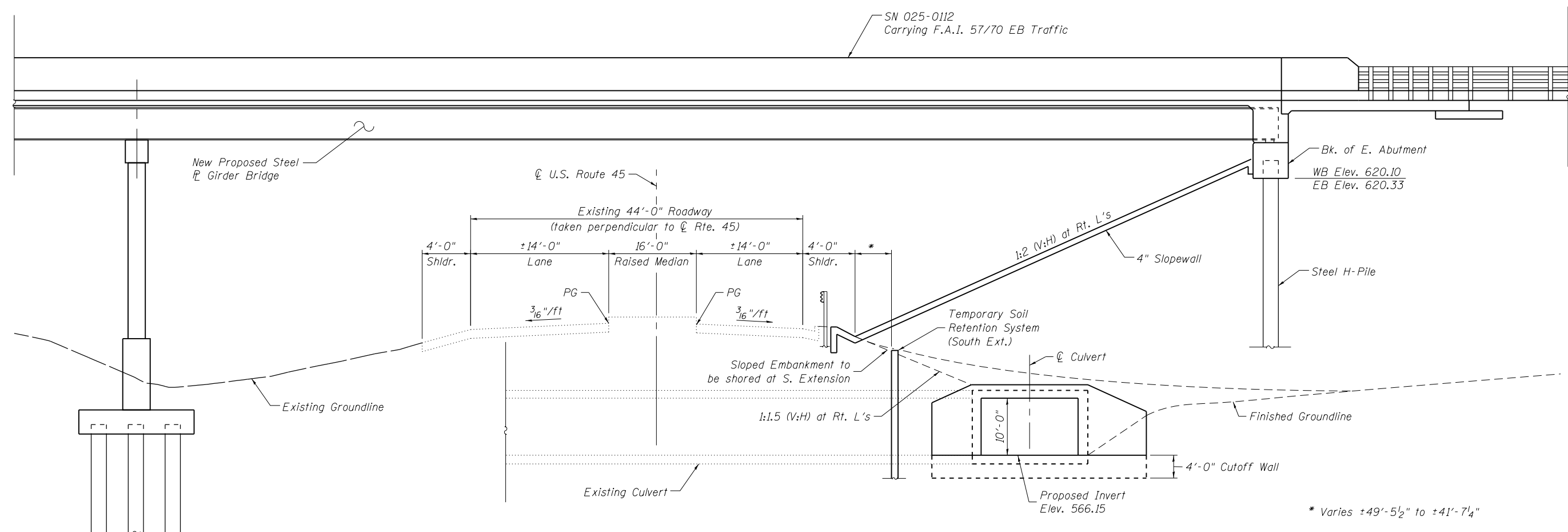


LOCATION SKETCH



Chadwick J. Fuesting
 6/14/13

FILE NAME: 0258648-74295-001-GPE.dgn	USER NAME: Illinois Design Firm Number 184.001670	DESIGNED: ACS	REVISIONS:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 1 OF 12 SHEETS	F.A.I. RTE. 57/70	SECTION 125-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1160	SHEET NO. 520
CONTRACTOR: CHADWICK J. FUESTING & ASSOCIATES, INC.	DATE: 8/14/2013	CHECKED: BB	REVISIONS:							CONTRACT NO. 74295
DESIGNED: ACS	DATE: 8/14/2013	CHECKED: C/JF	REVISIONS:							ILLINOIS FED. AID PROJECT



ELEVATION

(Looking North from S. End of Culvert Extension)

GENERAL NOTES

See Roadway Plans for Stone Riprap Details and Slope Protection Layout. Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Removal of existing wings during construction shall be completed according to Section 501.05 of the Standard Specifications.

Expansion bolts shall be according to Standard Specification Article 1006.09.

The depth of Removal and Replacement of Unsuitable Materials and Rock Fill-Replacement as shown on the plans is estimated. The verification of allowable soil bearing pressure underlying the proposed box culvert and wing wall footings shall be verified by a dynamic cone penetration (DCP) test or other acceptable measures as provided by the District Geotechnical and Field Engineers. The results of the test must exceed the calculated bearing pressures shown on the plans prior to placement of the Concrete Box Culvert or Rock Fill-Replacement. Test failing to exceed the calculated bearing pressures as shown on the plans will require subsurface modification that must be coordinated with the District Geotechnical and Field Engineers.

Precast concrete culvert alternative will not be allowed at this site.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with approved bar splices or an anchorage system. Reinforcement bars shall be cleaned according to Article 501.05 of the Standard Specifications and to the satisfaction of the Engineer. Cost included with Concrete Removal.

S:\Projects\403-00072_57-70\Bridges\Bridge_025-8648_X_shape\culvert under US_45\DWG\Final Design CAD Drawings\0258648\74295-002-General Elevation.dgn

FILE NAME = 0258648-74295-002-General Elevation.dwg
 DESIGNER NAME =
 BERNARDEN + LOCHMUELLER & ASSOCIATES, INC.
 3 OAK DRIVE
 MARYSBEL, ILLINOIS 62952
 PHONE (618) 285-4666
 FAX (618) 285-4666

DESIGNED - ACS
 CHECKED - BB
 DRAWN - WJS
 CHECKED - CJF

REVISED -
 REVISED -
 REVISED -
 REVISED -

ILLINOIS Design Firm Number 184.001670
 PLOT SCALE =
 PLOT DATE = 2:54:26 PM 5/1/2013

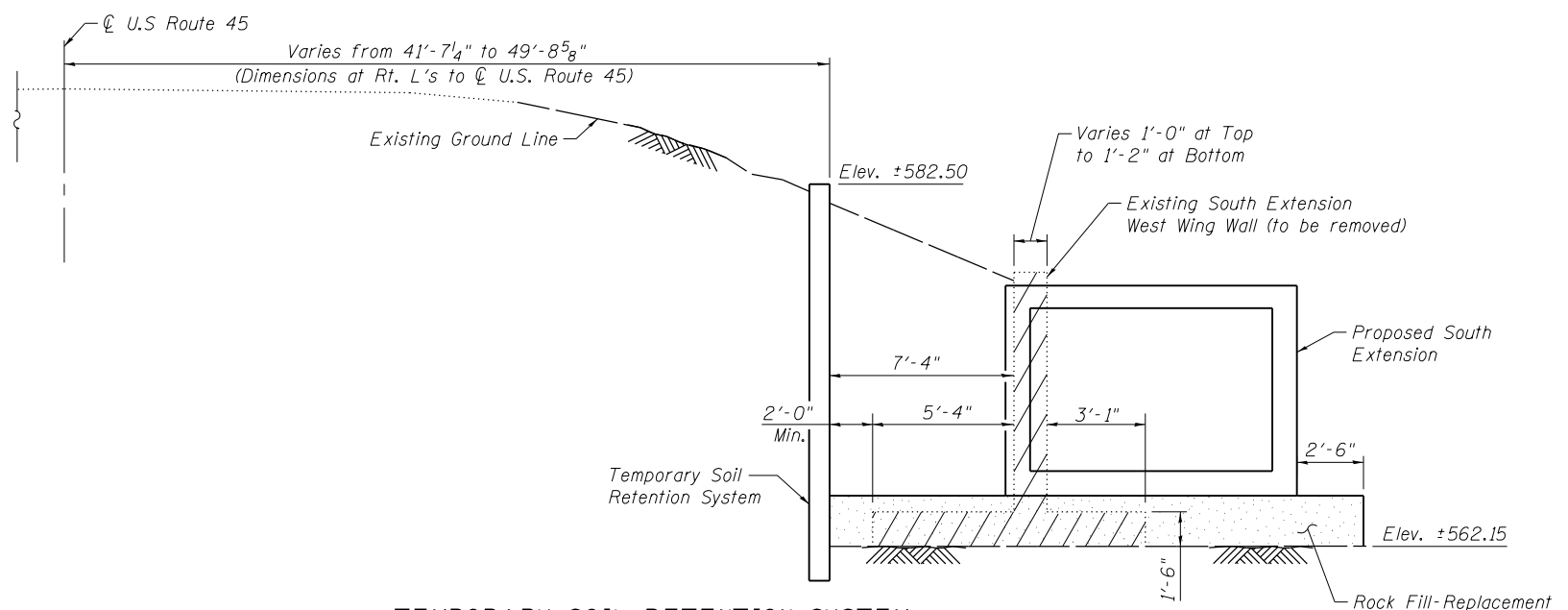
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL ELEVATION
 STRUCTURE NO. 025-8648**

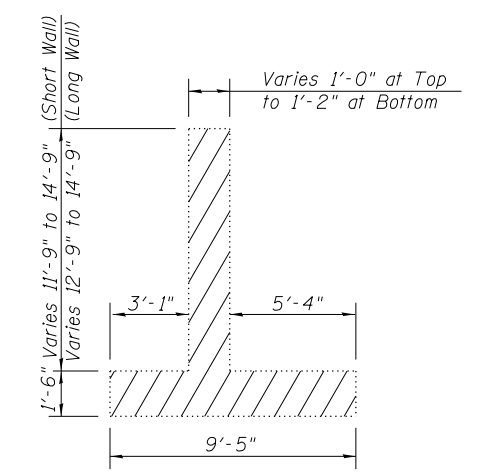
SHEET NO. 2 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4HVB-1)BY	EFFINGHAM	1760	521
CONTRACT NO. 74295				
ILLINOIS FED. AID PROJECT				

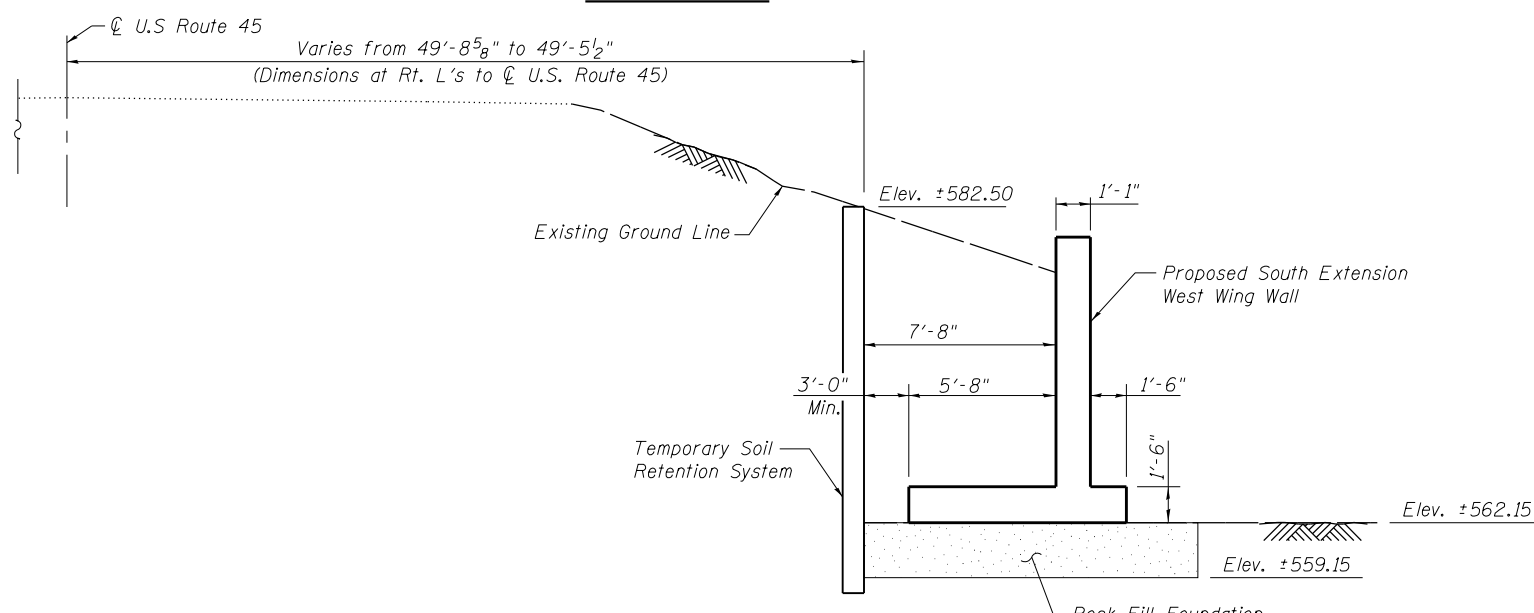
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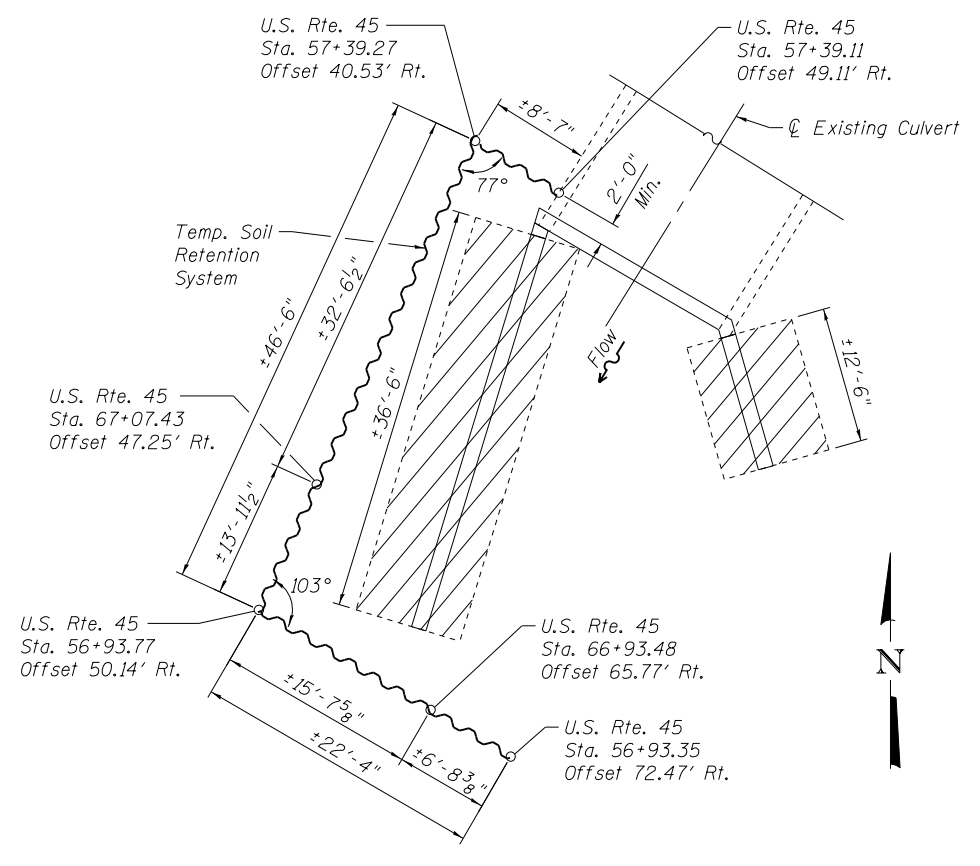
**TEMPORARY SOIL RETENTION SYSTEM
SECTION A-A**



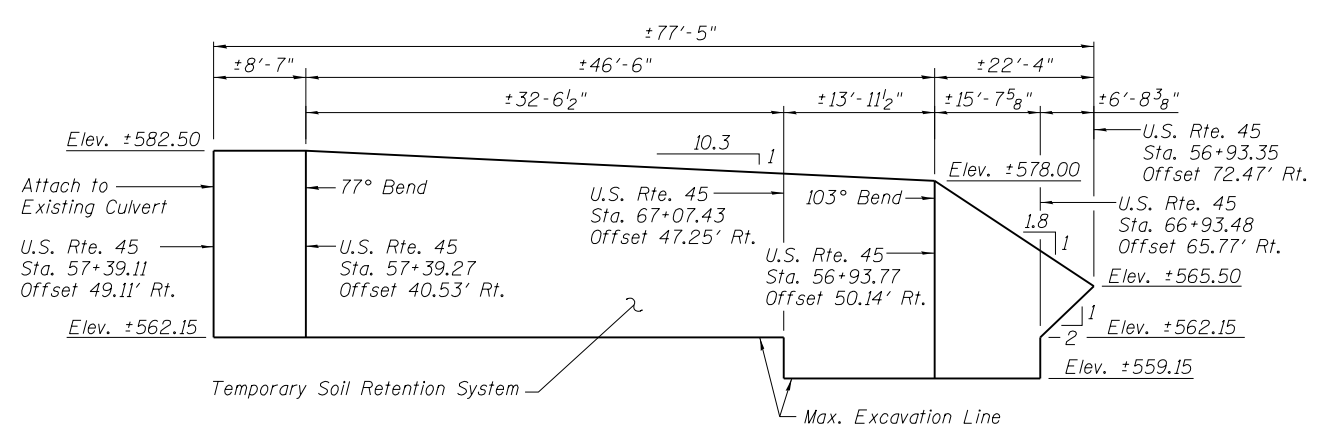
**SECTION THRU EXISTING SOUTH
EXTENSION WING WALLS**



**TEMPORARY SOIL RETENTION SYSTEM
SECTION B-B**



**PLAN VIEW
(Proposed Structure not Shown for Clarity)**



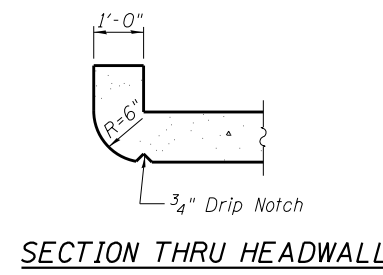
**TEMPORARY SOIL RETENTION SYSTEM ELEVATION
(Looking East)**

Indicates Concrete Removal

Notes:
See Sheet 6 of 12 for quantity of Concrete Removal.
A cantilevered sheet piling design does not appear 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.

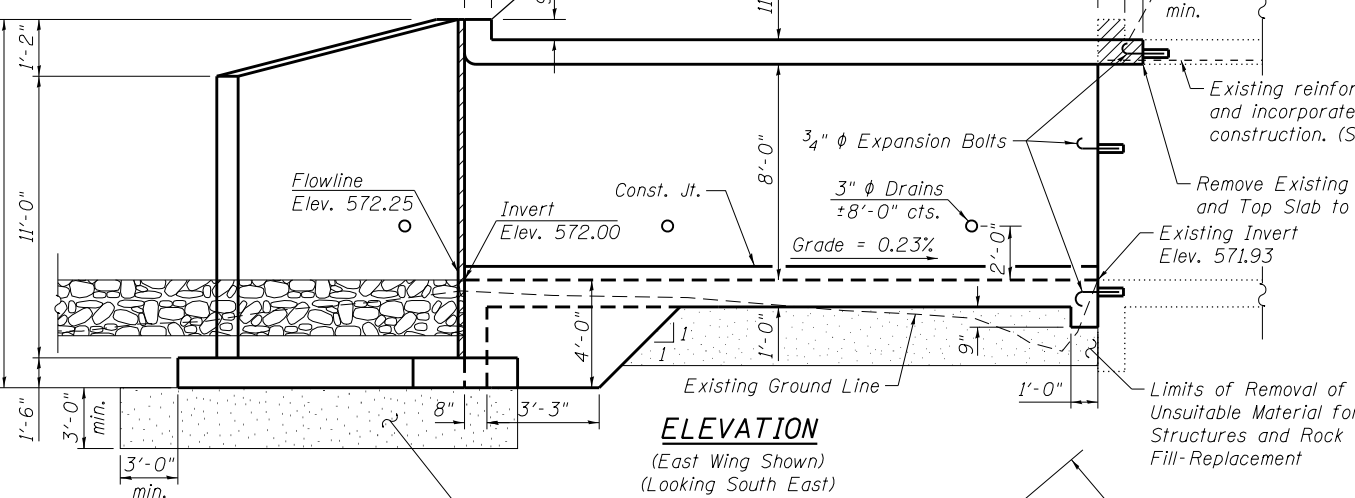
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Temporary Soil Retention System	Sq. Ft.	1306

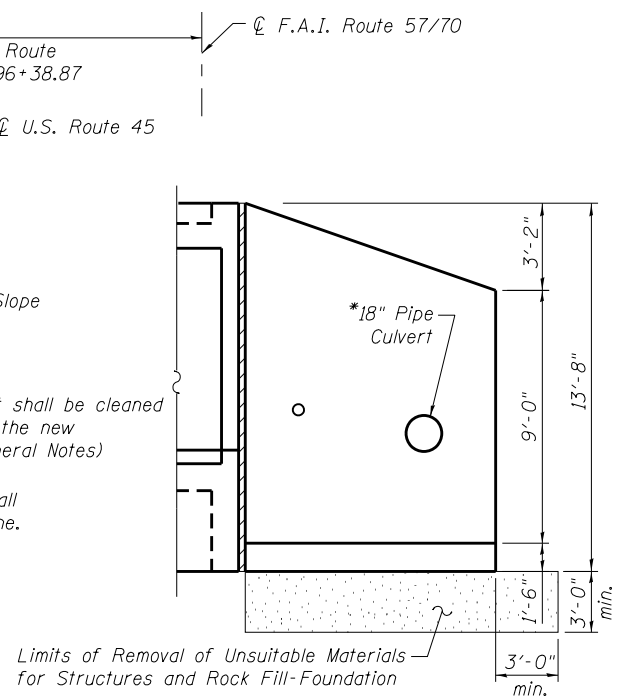


SECTION THRU HEADWALL

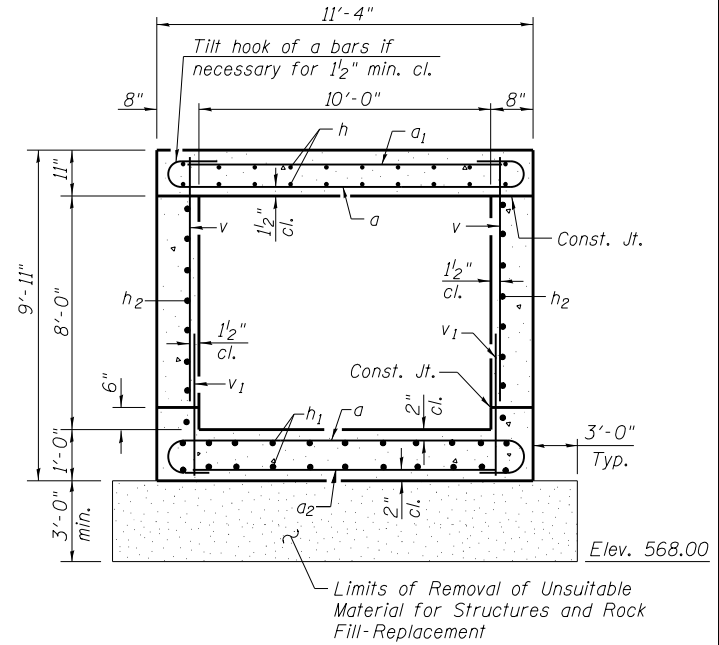
D.H.W. Elev. 580.12



ELEVATION
(East Wing Shown)
(Looking South East)



VIEW A-A
(West Wing)

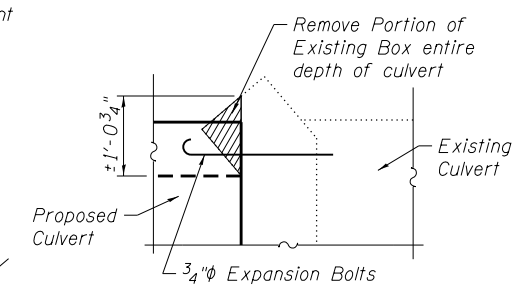


SECTION THRU BARREL

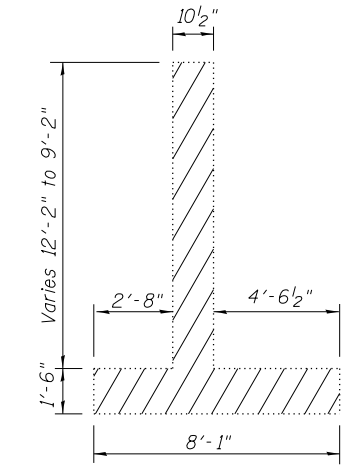
Max. Soil Pressure Under Barrel = 2620 psf

NORTH EXTENSION
BILL OF MATERIAL

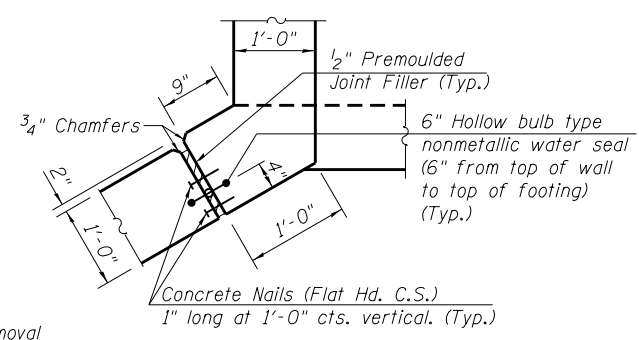
Bar	No.	Size	Length	Shape
a	123	#8	12'-10"	U
a1	22	#5	11'-0"	—
a2	17	#4	11'-0"	—
d	21	#4	5'-6"	L
h	26	#6	31'-0"	—
h1	26	#6	29'-3"	—
h2	18	#4	29'-3"	—
h3	11	#6	11'-0"	—
h4	22	#4	16'-5"	—
h5	17	#4	9'-11"	—
h6	5	#4	10'-4"	—
n(E)	46	#8	9'-1"	U
s	12	#4	4'-11"	□
s1	12	#4	5'-3"	□
t	8	#4	2'-2"	—
t1	54	#5	6'-8"	—
t2	26	#4	6'-8"	—
v	102	#5	8'-1"	—
v1	102	#5	3'-2"	—
v2	4	#5	8'-10"	—
v3	4	#5	6'-2"	—
v4	18	#4	22'-6"	—
v5	10	#4	20'-6"	—
w	12	#5	16'-5"	—
w1	12	#5	9'-11"	—
Removal and Disposal of Unsuitable Material for Structures			Cu. Yd.	102.9
Concrete Removal			Cu. Yd.	21.1
Rock Fill-Replacement			Ton	74.5
Reinforcement Bars			Pound	10530
Reinforcement Bars, Epoxy Coated			Pound	1120
Expansion Bolts 3/4 Inch			Each	22
Concrete Box Culverts			Cu. Yd.	60.4
Rock-Fill Foundation			Ton	64.4



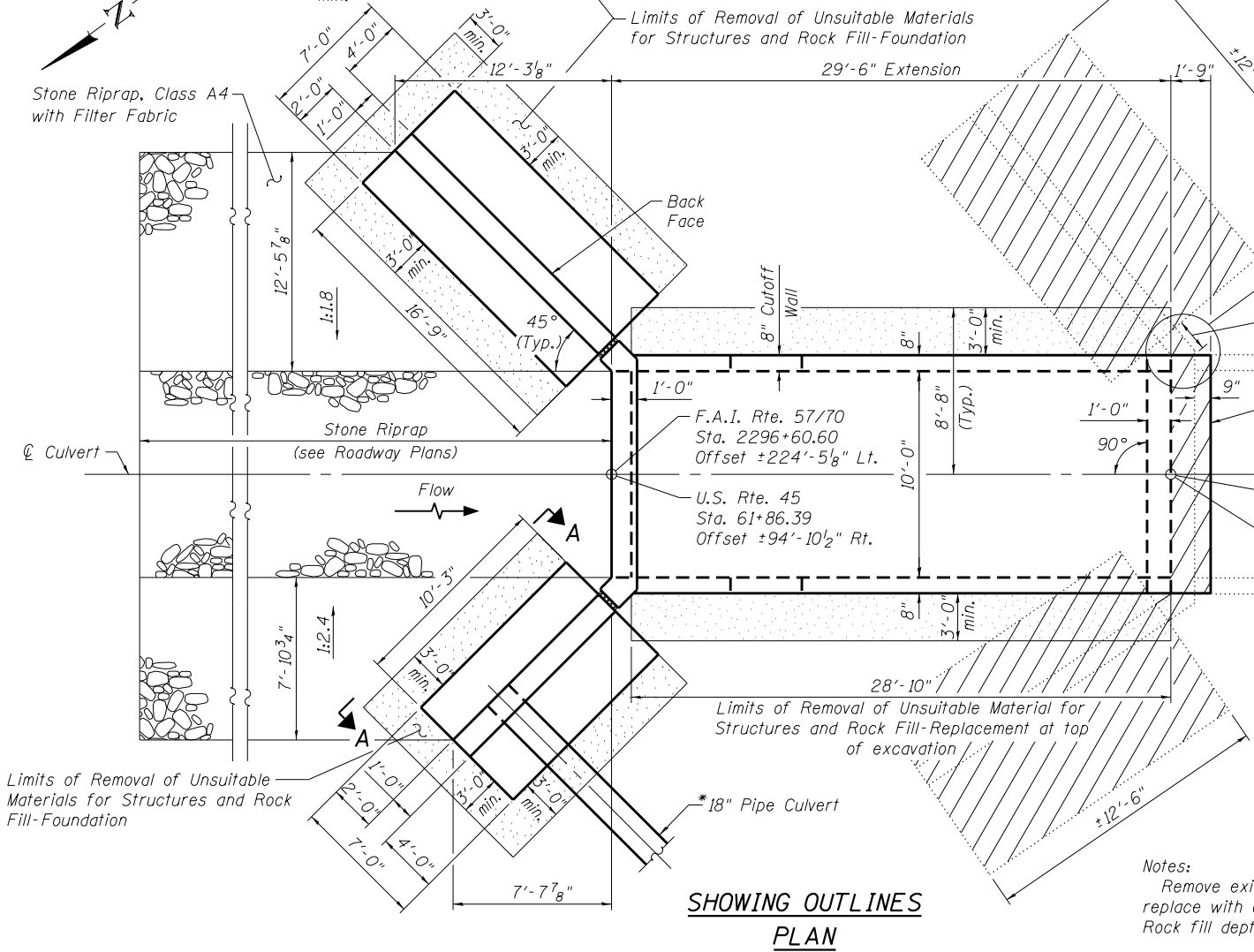
DETAIL A
(West Side Similar)



SECTION THRU EXISTING
WING WALLS



CORNER DETAILS



SHOWING OUTLINES
PLAN

Notes:
Remove existing unsuitable material under the culvert as shown and replace with one foot of crushed limestone above two feet of rock fill. Rock fill depth may increase during construction.

Indicates Concrete Removal

SV\Projects\403\0002_5770\Bridges\Bridg_025-8648_V_shaped_culvert_under_US_45\DWG\Final\Design_CAD_Drawings\0258648-74295-004-N_Ext_Dist_Oldg

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CHECKED - BB
DRAWN - WJS
CHECKED - CJF

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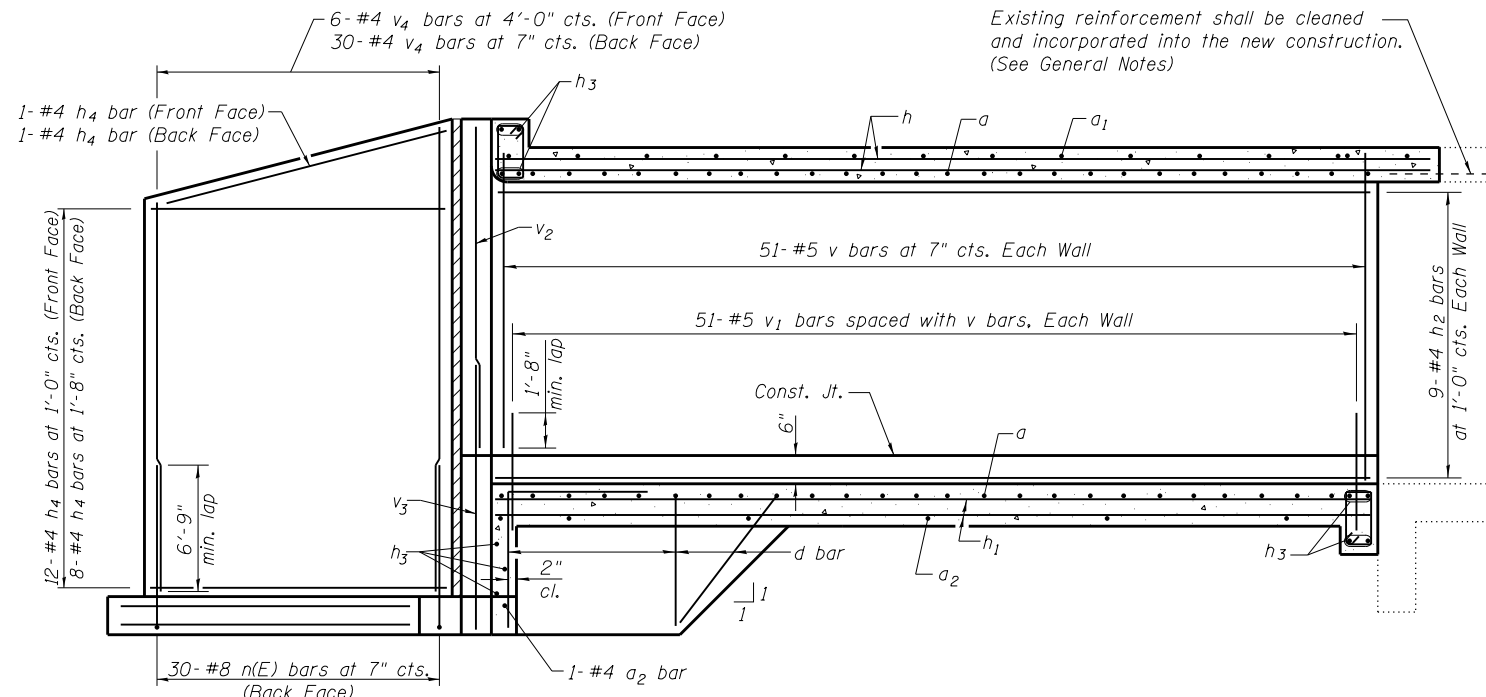
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

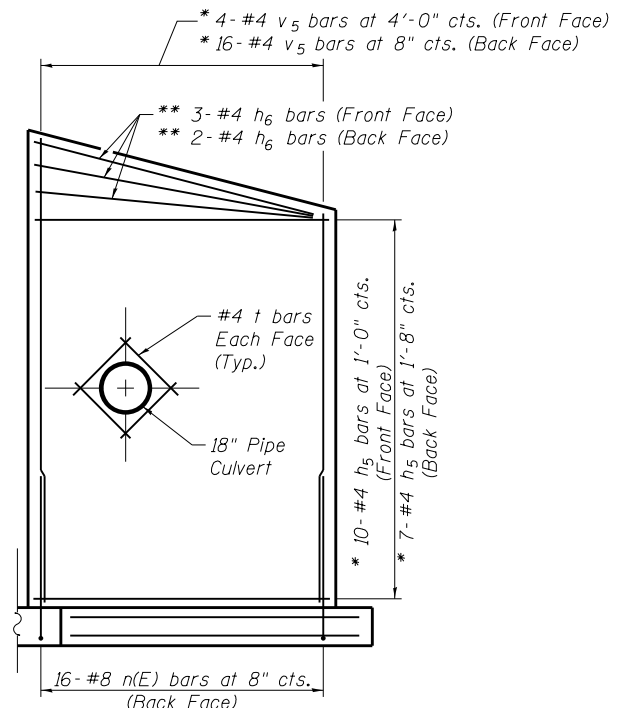
NORTH EXTENSION DETAILS
STRUCTURE NO. 025-8648
SHEET NO. 4 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4HV-B-1)BY	EFFINGHAM	1760	523
CONTRACT NO. 74295			ILLINOIS FED. AID PROJECT	

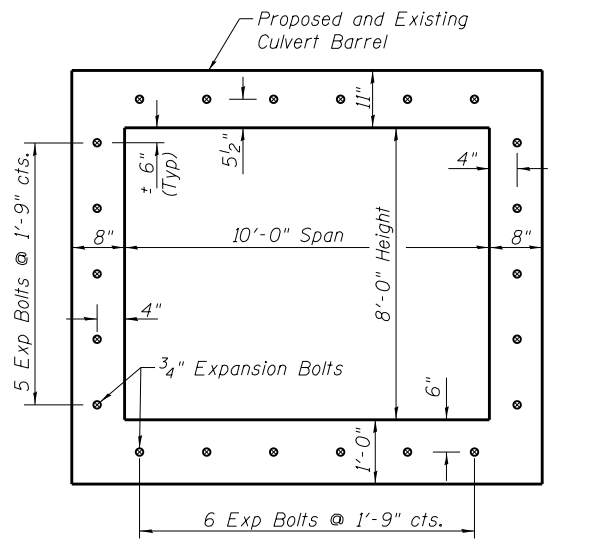


LONGITUDINAL SECTION
(East Wing Shown)

* Cut bars to avoid 18" Pipe Culvert
** Cut to Fit

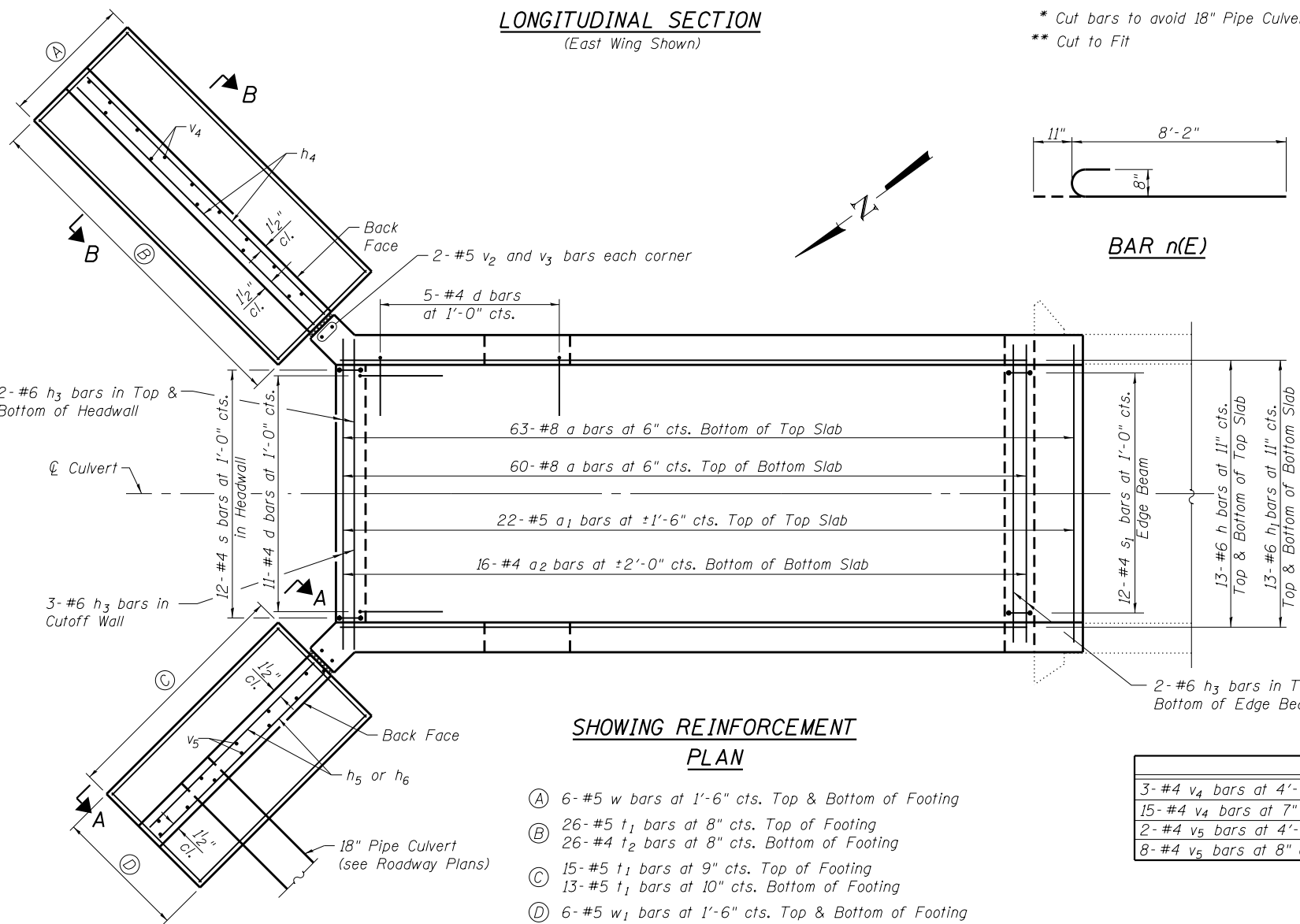


VIEW A-A
(West Wing)



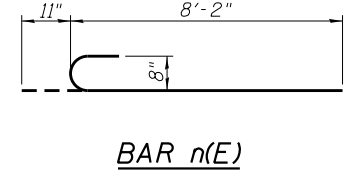
Note - Expansion Bolts shall be 3/4" hooked bolts. Hooked bolts shall extend a minimum of 9" into the new concrete

EXPANSION BOLT LAYOUT

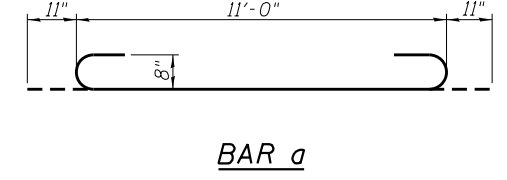


SHOWING REINFORCEMENT PLAN

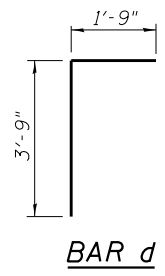
- (A) 6-#5 w bars at 1'-6" cts. Top & Bottom of Footing
- (B) 26-#5 t1 bars at 8" cts. Top of Footing
26-#4 t2 bars at 8" cts. Bottom of Footing
- (C) 15-#5 t1 bars at 9" cts. Top of Footing
13-#5 t1 bars at 10" cts. Bottom of Footing
- (D) 6-#5 w1 bars at 1'-6" cts. Top & Bottom of Footing



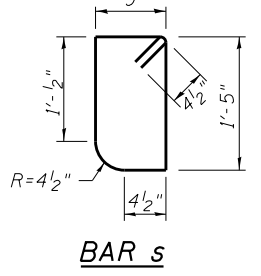
BAR n(E)



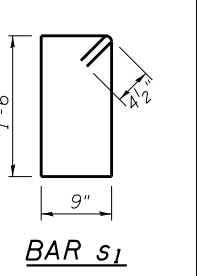
BAR a



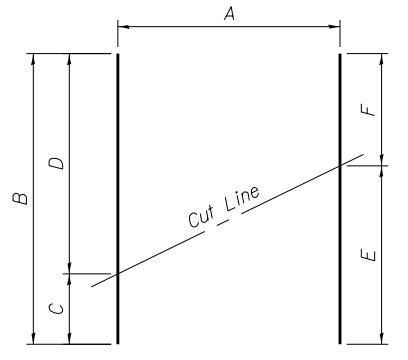
BAR d



BAR s



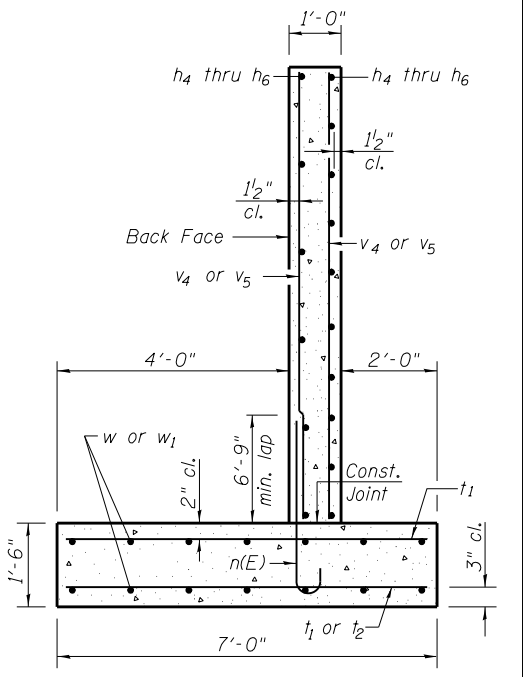
BAR s1



FIELD CUTTING DIAGRAM

	A	B	C	D	E	F
3-#4 v4 bars at 4'-0" cts. (East Wing Front Face)	22'-6"	11'-4 1/4"	11'-1 3/4"	11'-9 3/4"	10'-8 1/4"	
15-#4 v4 bars at 7" cts. (East Wing Back Face)	22'-6"	11'-3 1/4"	11'-2 3/4"	11'-9 3/4"	10'-8 1/4"	
2-#4 v5 bars at 4'-0" cts. (West Wing Front Face)	20'-6"	10'-9"	9'-9"	11'-9 1/2"	8'-8 1/2"	
8-#4 v5 bars at 8" cts. (West Wing Back Face)	20'-6"	10'-4 1/4"	10'-1 3/4"	11'-9 1/2"	8'-8 1/2"	

Order v4, v5, v6 & v7 bars full length. Cut as shown. Use remainder of bar in opposite side of wing wall.



SECTION B-B
Max. Soil Pressure Under Wing = 1970 psf

S:\Projects\403\00072_5770\Bridges\Bridg 025-8648 V shaped culvert under US 49\DWG\Final Design CAD Drawings\0258648-74295-005-N_Ext Dis 02.dwg

FILE NAME = 0258648-74295-005-N_Ext Dis
BERNARDEN LOCHMULLER & ASSOCIATES, INC.
3 OAK DRIVE
MARYVILLE, ILLINOIS 62952
PHONE (618) 285-4666
FAX (618) 285-4666

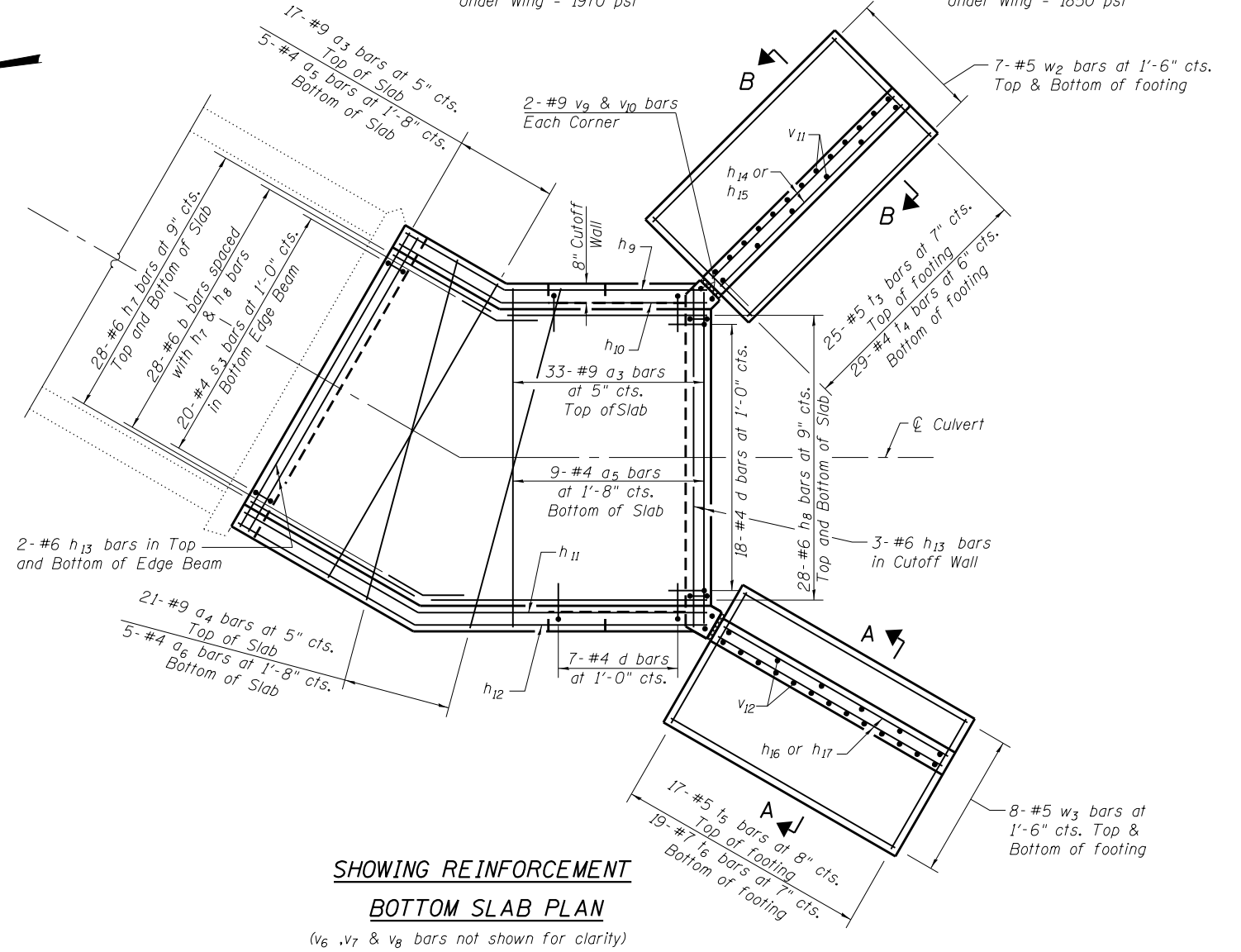
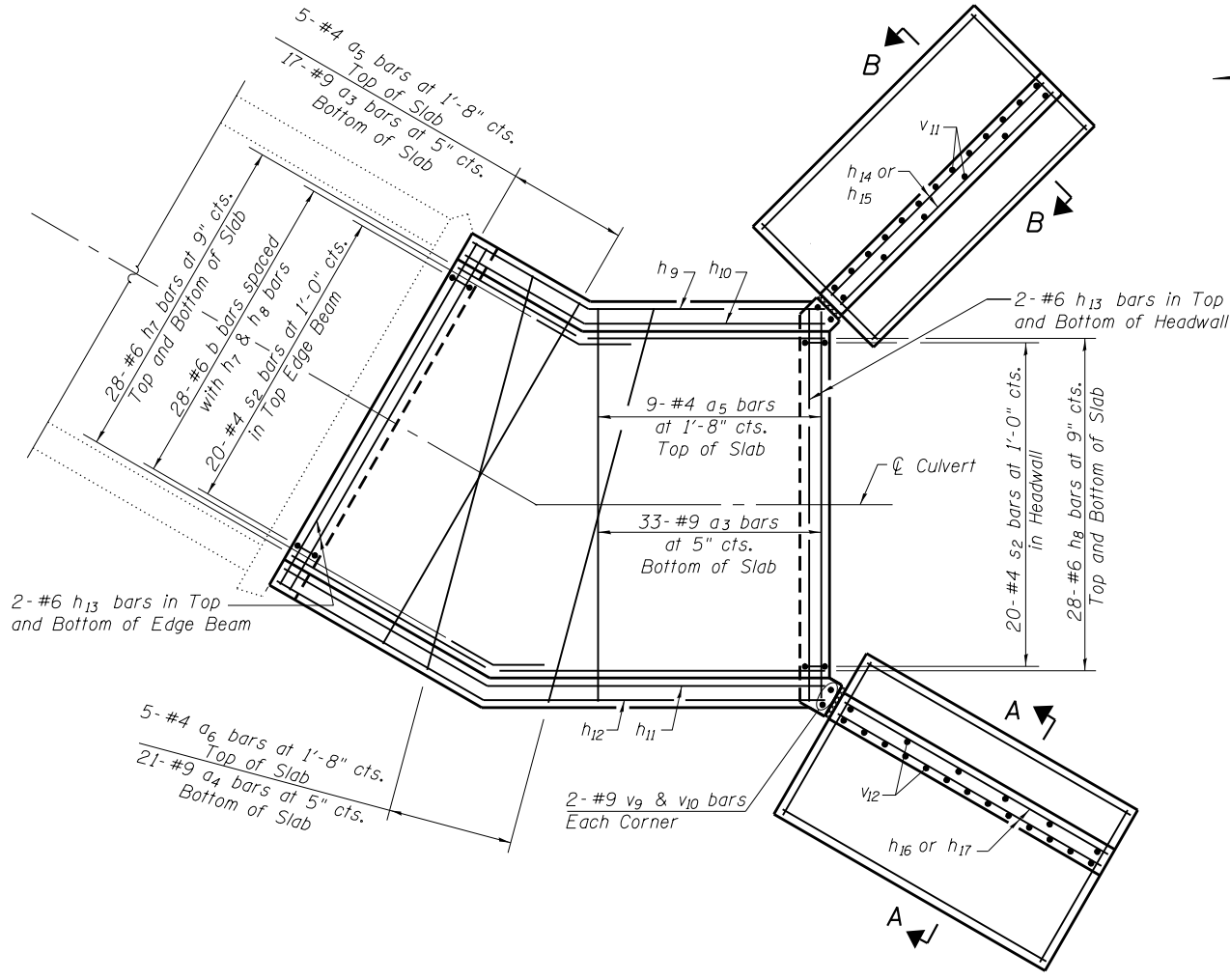
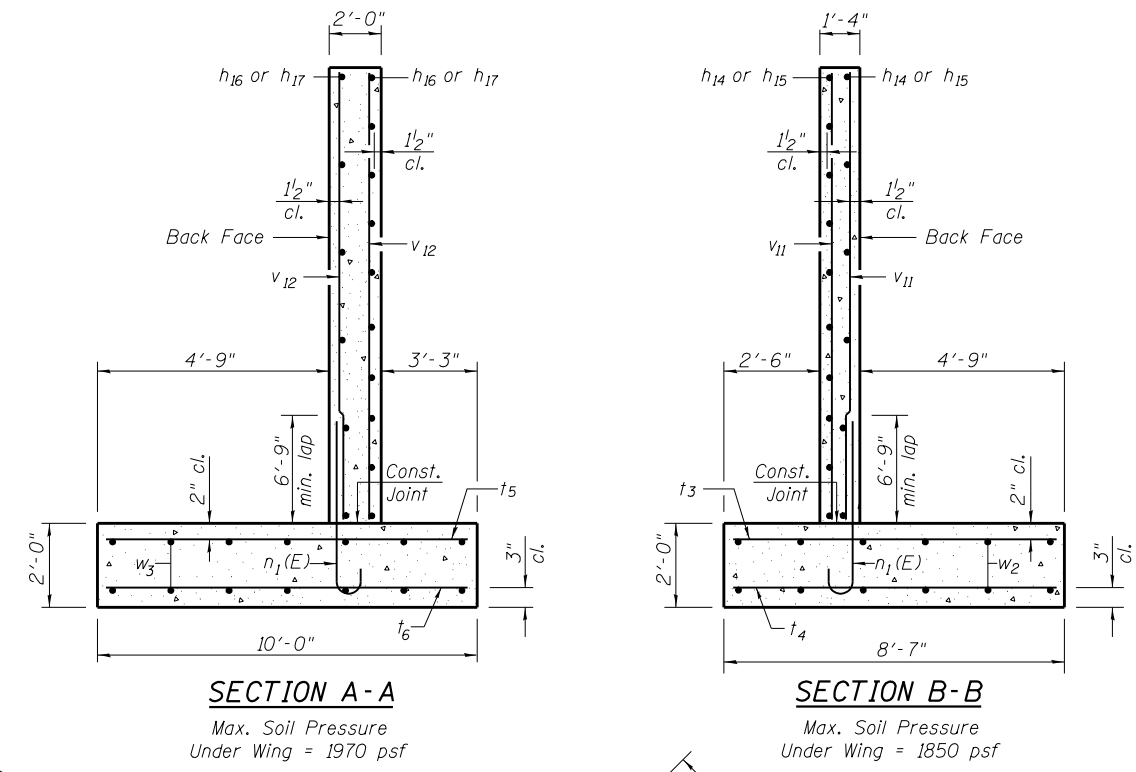
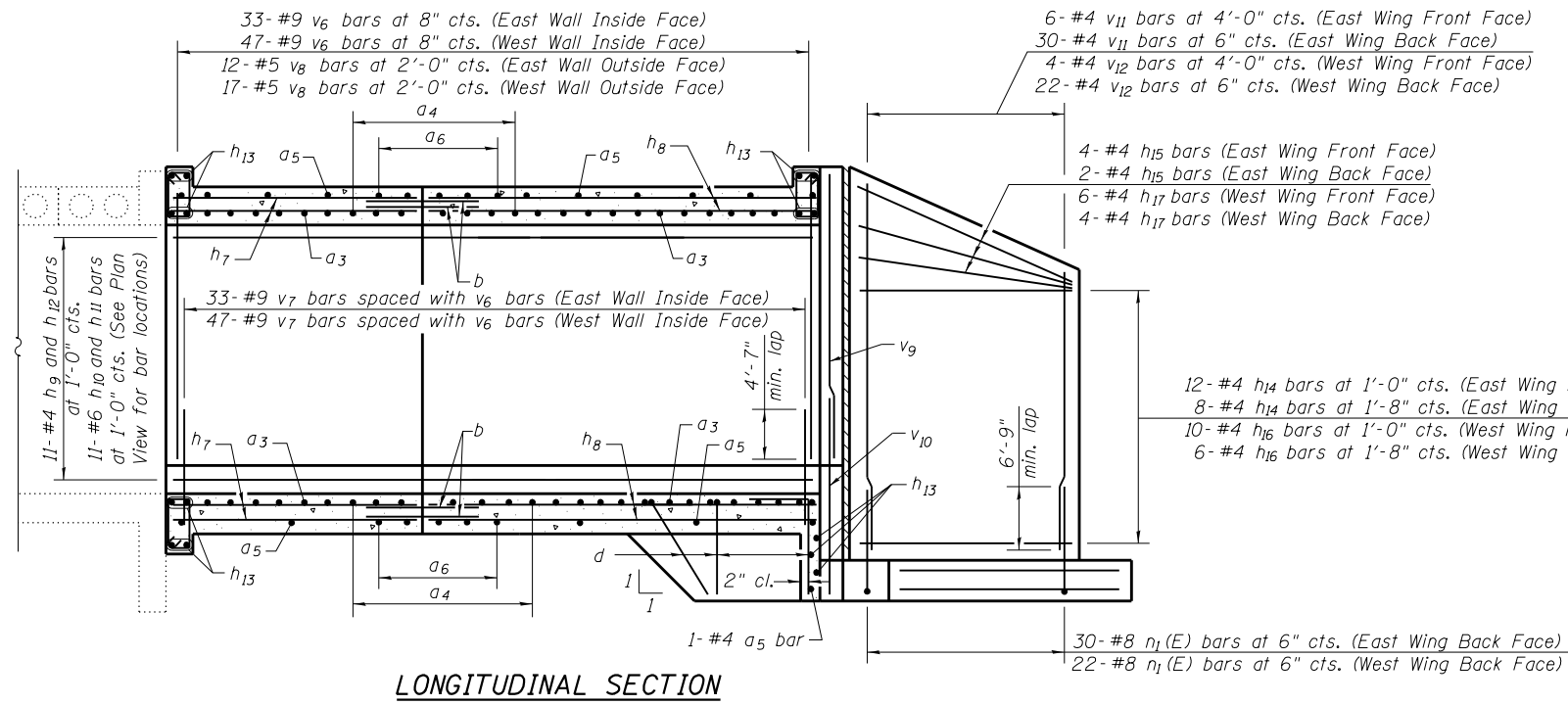
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DRAWN - WJS
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REVISIONS
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

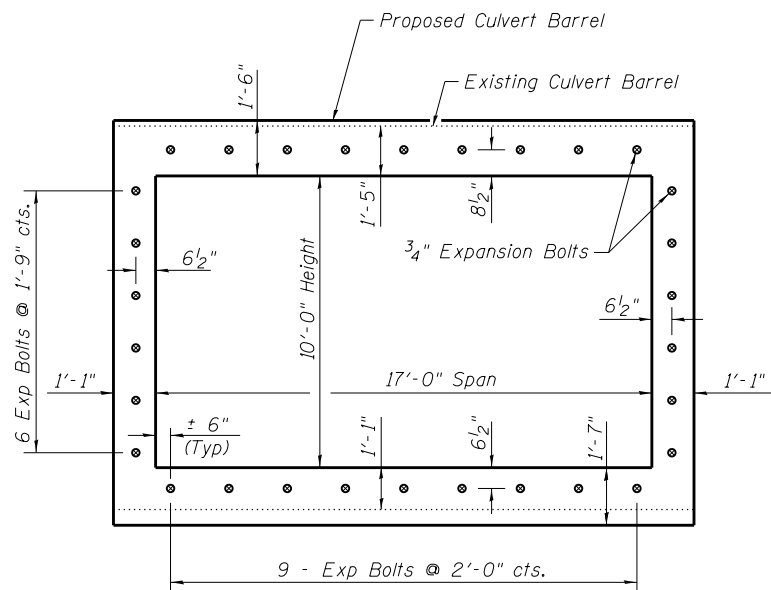
NORTH EXTENSION DETAILS
STRUCTURE NO. 025-8648
SHEET NO. 5 OF 12 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4HVB-1)BY	EFFINGHAM	1760	524
CONTRACT NO. 74295				
ILLINOIS FED. AID PROJECT				



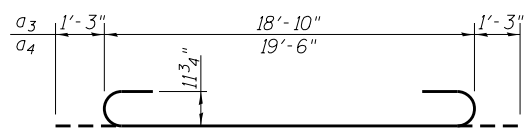
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 DRAWN BY = MARYWELLS
 DATE = 5/1/2013

FILE NAME = 0258648-74295-007-S_Ext_Dis_02.dwg DRAWN BY = MARYWELLS DATE = 5/1/2013	DESIGNER NAME = ACS CHECKED = BB DRAWN = WJS CHECKED = CJF	DESIGNED - ACS CHECKED - BB DRAWN - WJS CHECKED - CJF	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOUTH EXTENSION DETAILS STRUCTURE NO. 025-8648 SHEET NO. 7 OF 12 SHEETS	F.A.I. R.E. = 57/70 SECTION = (25-4HVb-1)BY COUNTY = EFFINGHAM TOTAL SHEETS = 1760 SHEET NO. = 526 CONTRACT NO. 74295	ILLINOIS FED. AID PROJECT
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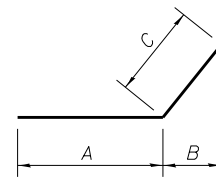


Note - Expansion Bolts shall be 3/4" hooked bolts. Hooked bolts shall extend a minimum of 9" into the new concrete

EXPANSION BOLT LAYOUT

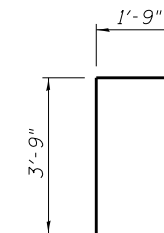


BARS a3 & a4

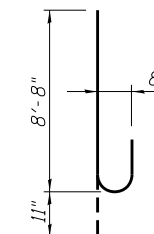


BARS b, h9, h10, h11 & h12

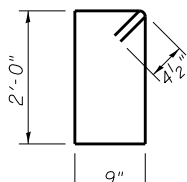
Bar	A	B	C
b	2'-0"	1'-8 3/4"	2'-0"
h9	6'-9 1/2"	11'-6 1/8"	13'-3 1/2"
h10	7'-0"	11'-8 1/4"	13'-6"
h11	11'-7 1/2"	15'-8 3/8"	18'-1 1/2"
h12	11'-10 1/2"	15'-11"	18'-4 1/2"



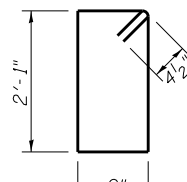
BAR d



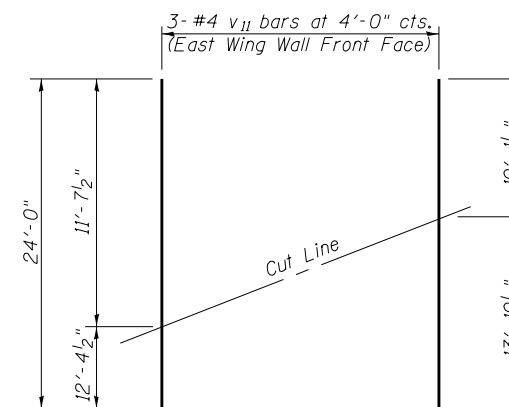
BAR n1(E)



BAR s2

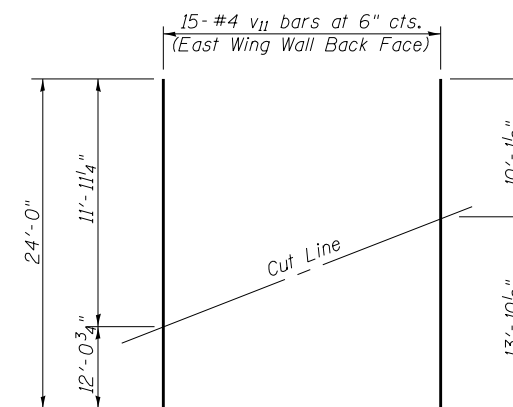


BAR s3



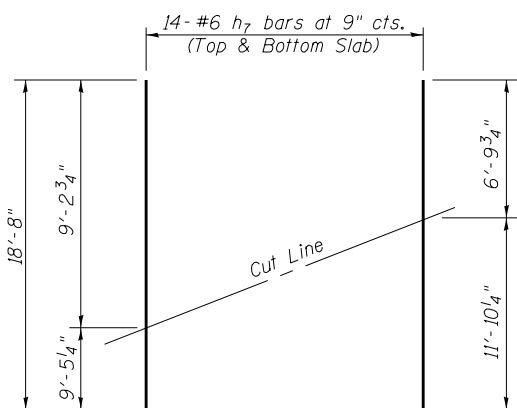
FIELD CUTTING DIAGRAM

(v11 bars)



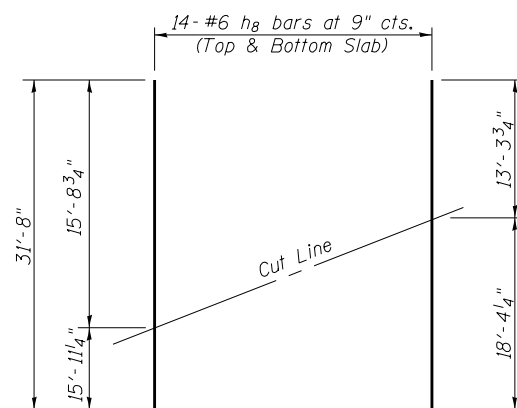
FIELD CUTTING DIAGRAM

(v11 bars)



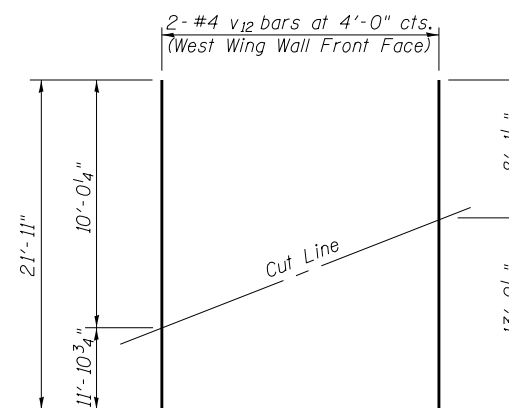
FIELD CUTTING DIAGRAM

(h7 bars)



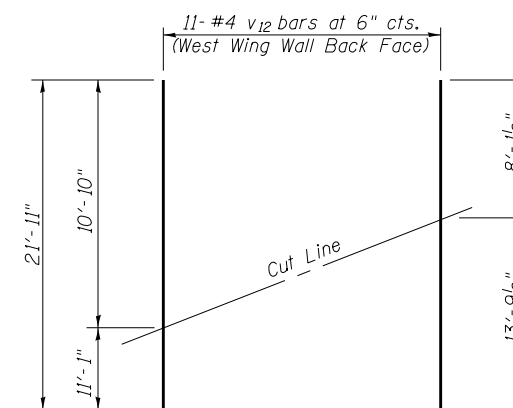
FIELD CUTTING DIAGRAM

(h8 bars)



FIELD CUTTING DIAGRAM

(v12 bars)



FIELD CUTTING DIAGRAM

(v12 bars)

Order h7 & h8 bars full length. Cut as shown. Use remainder of bar in opposite side of slab.

Order v11 and v12 bars full length. Cut as shown. Use remainder of bar in opposite side of wing wall.

S:\Projects\403\0002_5770\Bridges\Bridges_025-8648-74295-008-S_Ext Dis 03.dwg

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BERNARDINI LOCHMULLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62952 PHONE (618) 285-6666 FAX (618) 285-6666	ILLINOIS Design Firm Number 184.001670	CHECKED - BB	REVISOR -			SHEET NO. 8 OF 12 SHEETS			CONTRACT NO. 74295		
PLOT SCALE =	DRAWN - WJS	REVISOR -	REVISOR -			ILLINOIS FED. AID PROJECT					
PLOT DATE = 2:54:31 PM 5/1/2013	CHECKED - CJF	REVISOR -	REVISOR -								



SOIL BORING LOG

Page 3 of 5

Date 5/7/07

ROUTE FAI 57/70 DESCRIPTION I-57/70 over US 45 LOGGED BY E. Sandschafer

SECTION (25-4.3)R LOCATION N 1/2, SEC. 16, TWP. 8 N, RNG. 6 E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. (EX) 025-0013/0014
Station 2294+12.22

BORING NO. 4
Station 2295+49
Offset 0.00ft
Ground Surface Elev. 626.12 ft

DEPTH (ft) (6") (tsf) (%)
50/1"
50/1"

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft
Groundwater Elev.:
First Encounter 546.6 ft
Upon Completion Washed ft
After 24 Hrs. 610.4 ft

DEPTH (ft) (6") (tsf) (%)
6 1.9 16
9 B

Very dense, wet, brown, gravelly SAND.
No recovery this trip, possible rock ahead of sampler. (continued)

Stiff, damp, gray, CLAY LOAM TILL. (continued)
516.62
Very stiff, damp, gray, CLAY TILL.
506.62

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 4 of 5

Date 5/7/07

ROUTE FAI 57/70 DESCRIPTION I-57/70 over US 45 LOGGED BY E. Sandschafer

SECTION (25-4.3)R LOCATION N 1/2, SEC. 16, TWP. 8 N, RNG. 6 E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. (EX) 025-0013/0014
Station 2294+12.22

BORING NO. 4
Station 2295+49
Offset 0.00ft
Ground Surface Elev. 626.12 ft

DEPTH (ft) (6") (tsf) (%)
27 5.5 10
29 B

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft
Groundwater Elev.:
First Encounter 546.6 ft
Upon Completion Washed ft
After 24 Hrs. 610.4 ft

Hard, damp, gray, CLAY LOAM TILL. (continued)
496.62
Stiff, damp, blue, SANDY LOAM.
492.22
Very dense, moist, gray, estimated LIMESTONE. Low recovery.
492.02
Borehole continued with rock coring.

DEPTH (ft) (6") (tsf) (%)
23 6 2.3 18
15 S
50/1"
50/1"
50/1"

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



ROCK CORE LOG

Page 5 of 5

Date 5/7/07

ROUTE FAI 57/70 DESCRIPTION I-57/70 over US 45 LOGGED BY E. Sandschafer

SECTION (25-4.3)R LOCATION N 1/2, SEC. 16, TWP. 8 N, RNG. 6 E, 3 PM

COUNTY Effingham CORING METHOD Rotary, surface set diamond bit

STRUCT. NO. (EX) 025-0013/0014
Station 2294+12.22

BORING NO. 4
Station 2295+49
Offset 0.00ft
Ground Surface Elev. 626.12 ft

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Core Diameter 2.06 in
Top of Rock Elev. 492.22 ft
Begin Core Elev. 492.02 ft

DEPTH (ft) (#) (%) (%) (min/ft) (tsf)
100 84 1
100 100 0.8

Gray, SANDSTONE. Rock core B4A depth 134.10' to 134.50' Qu = 325 tsf
492.02
489.62
Gray, LIMESTONE.
488.52
Gray, SANDSTONE.
488.42
Gray, LIMESTONE.
487.52
Gray, SANDSTONE w/ Limestone pockets.
140
Rock core B4B depth 140.66' to 141.13' Qu = 343 tsf
483.62
Gray, moderately weathered, SANDY LOAM SHALE.
481.82
Extent of exploration.
145
Benchmarks:
BM 44 Brass disk on SW corner of existing SB/WB structure 025-00140, Station 2291+65, 7.2' Lt = 628.87' elevation.
BM 45 Brass Disk on NE corner of existing NB/EB structure 025-0013, Station 2295+26, 7.2' Lt = 628.57' elevation.
BM "LIN 14" Chiseled square in concrete median on US 45 Station 48+55, centerline = 592.07' elevation.
150

Color pictures of the cores Available on request
Cores will be stored for examination until 05/07/08
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

S:\Projects\403-0002\25-770-Bridges\Bridges 025-8648 Y shaped culvert under US 45\DWG\Final\Design CAD Drawings\0258648-74295-012 Borings 04.dwg

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DRAWN - WJS
CHECKED - CJF

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DESIGNED - ACS
CHECKED - BB
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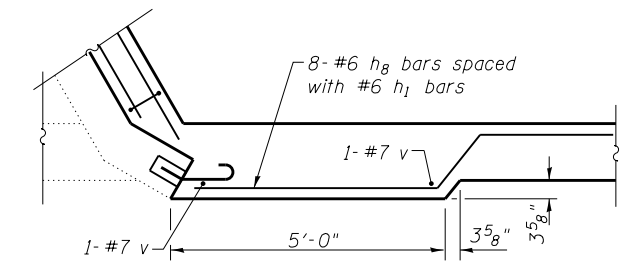
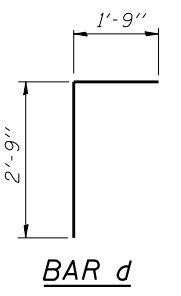
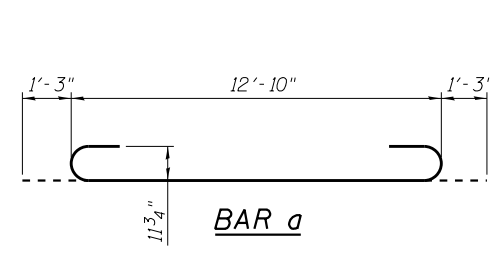
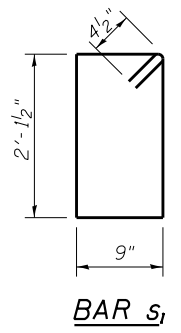
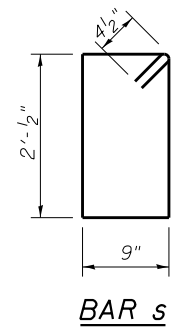
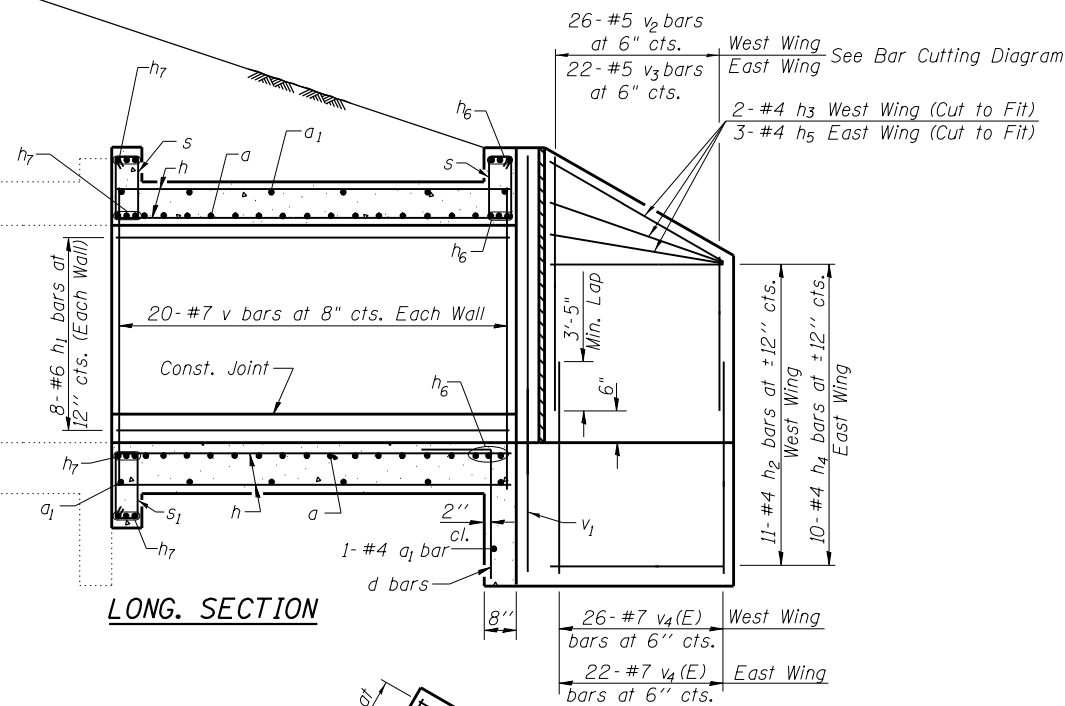
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

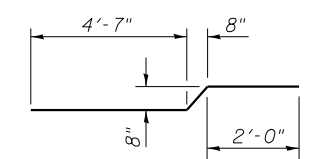
BORING LOGS
STRUCTURE NO. 025-8648
SHEET NO. 12 OF 12 SHEETS

F.A.I. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
57/70 (25-4HVB-1)BY EFFINGHAM 1760 531
CONTRACT NO. 74295
ILLINOIS FED. AID PROJECT

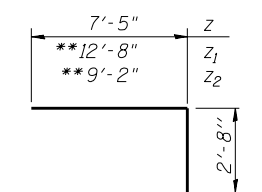
PG Elev. 612.53 PGL FAI RTE 70 EB



DETAIL A



BAR h8

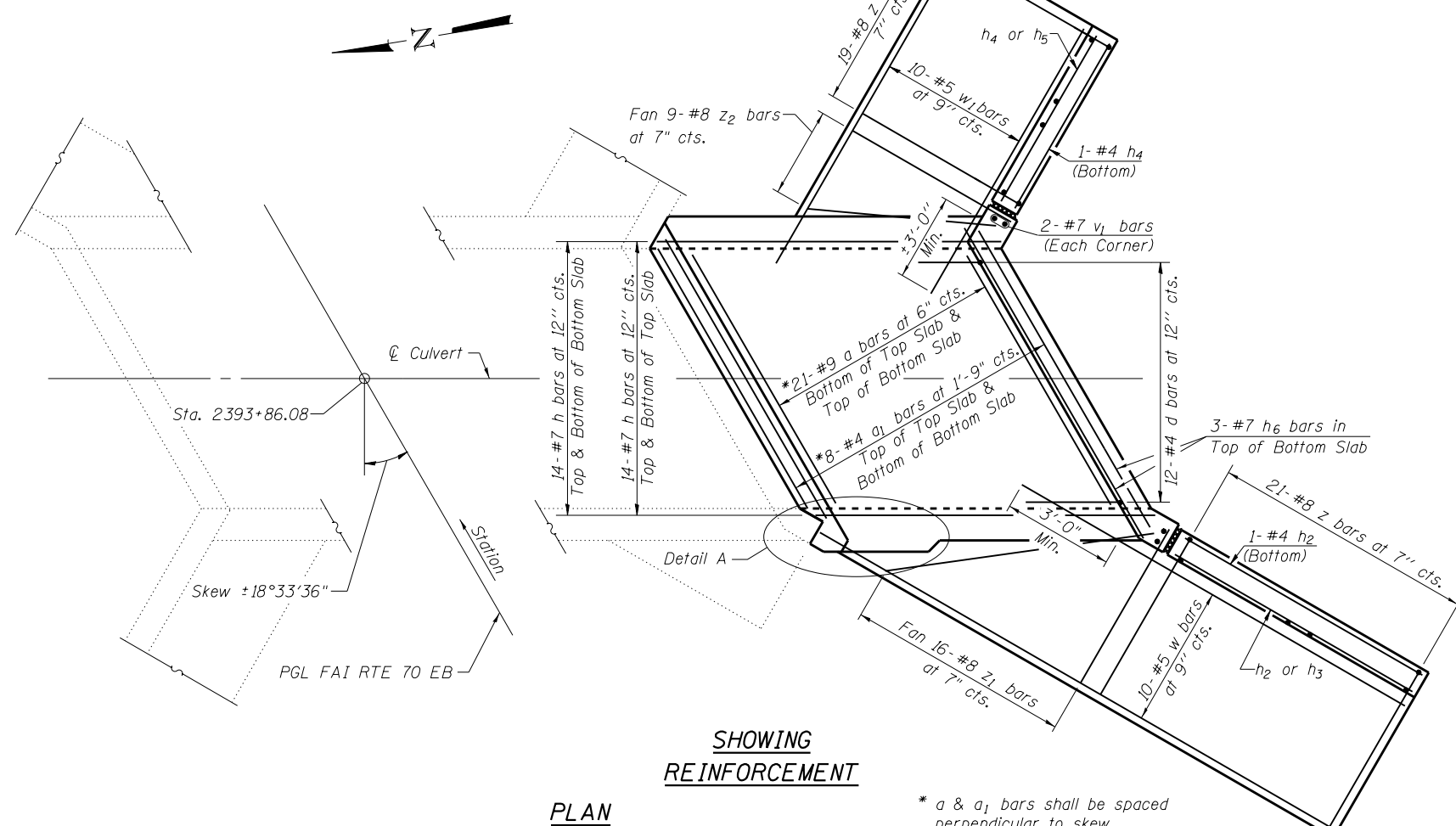


BAR z, z1 & z2

** Longest length required - z1 = 12'-8" and z2 = 9'-2". Field cut remaining z1 and z2 bars to fit.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	42	#9	15'-4"	
a1	17	#4	12'-10"	
d	12	#4	4'-6"	
h	56	#7	12'-2"	
h1	16	#6	12'-2"	
h2	12	#4	11'-8"	
h3	2	#4	11'-10"	
h4	11	#4	10'-5"	
h5	3	#4	10'-9"	
h6	9	#7	12'-10"	
h7	12	#7	13'-1"	
h8	8	#6	7'-6"	
s	24	#4	6'-4"	
s1	12	#4	6'-6"	
v	42	#7	9'-10"	
v1	4	#7	11'-11"	
v2	13	#5	14'-11"	
v3	11	#5	14'-4"	
v4(E)	48	#7	6'-9"	
w	10	#5	22'-8"	
w1	10	#5	19'-1"	
z	40	#8	10'-1"	
z1	16	#8	15'-4"	
z2	9	#8	11'-10"	
Concrete Box Culverts			Cu. Yd.	39.9
Reinforcement Bars, Epoxy Coated			Pound	670
Reinforcement Bars			Pound	8830
Expansion Bolts 3/4"			Each	26
Concrete Removal			Cu. Yd.	6.4
Removal & Disposal of Unsuitable Material			Cu. Yd.	30.2
Rock Fill-Replacement			Ton	63



Notes:
For Headwall and Edge Beam Reinforcement, see Sheet 1 of 3.
Order #5 w bars full length and cut to fit at Existing Culvert.

S:\Pro\brca\403-00072-57-70-Bridges\Culverts\Station_2393+86.08\DWG\Final Plan_Sheets\RT_2393+86.08.dwg

FILE NAME = \$FILES\$
BERNARDINI LOCHMUELLER & ASSOCIATES, INC.
3 OAK DRIVE
MARYVILLE, IL 62446
PHONE (618) 281-6666
FAX (618) 288-4886

USER NAME =	DESIGNED - A.C.S.	REVISED -
Illinois Design Firm Number 184,001670	CHECKED - B.B.	REVISED -
PLOT SCALE =	DRAWN - A.C.S.	REVISED -
PLOT DATE = 2:38:39 PM 5/1/2013	CHECKED - C.J.F.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BOX CULVERT DETAILS, RT. STA 2393 + 86.08
F.A.I. ROUTE 70 EB (RDWY B)
SHEET NO. 2 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-3,4R)	EFFINGHAM	1760	533
CONTRACT NO. 74295				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

Bench Mark: Chiseled square on raised concrete median at center of US 45 approximately 140'-0" North of I-57/70 centerline. US Route 45 Sta. 60+10. Elev. 592.07.

Existing Structure: S.N. 025-0013 (WB) & 025-0014 (EB), built in 1960 and widened in 1994, are each five spans consisting of one two span unit and one three span unit. Each superstructure is a reinforced concrete deck 63'-2" out to out and is supported on steel stringers. All of the spans are noncomposite except for the fourth spans. The back to back of abutment length of each structure is 355'-8". The superstructure is supported by spill through abutments and reinforced concrete hammer head piers. Existing Structure shall be removed and replaced. Construction shall be staged so that two lanes remain open at all times.

Weather Station to be Salvaged.

Traffic Barrier Terminal Type 6 Std. 631031 (For locations see Plan View)

* 73" Web R Girder (Composite, Full Length)

Bridge Parapet Mounted Lighting

±58'-2" Limits of Protective Shield

±91'-8" Limits of Protective Shield

60' Const. Berm (Ends Only)

Traffic Barrier Terminal Type 6 Std. 631031 (For locations see Plan View)

* The plate girder will utilize HPS 70W steel flanges over the pier.

W Abut. Elev. 620.66 (WB) Elev. 620.58 (EB)

** Existing attached electrical utility to be removed.

*** Indicates locations on existing structure where pre-stage I or stage I removal and replacement of existing neoprene expansion joints with Polymer Concrete is required as detailed on sheet 4 of 79.

**** The profile grades & bridge deck shown are the final elevations after grinding.

Concrete Headwall for Pipe Drains Std. 601101 (Typ.)

Sta. 2292+52.42 F.A.I. Route 57/70 = Sta. 18+62.40 CN

4'-0" Shldr. w/ B-6.24 curb

4'-0" Shldr. w/ B-6.24 curb

Location of Name Plate #1

APPROVED
For Structural Adequacy Only
Chadwick J. Fuesting
Engineer of Bridges & Structures

SEISMIC DATA
Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.150
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.350
Soil Site Class = C

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2012 Interim

LOADING HL-93

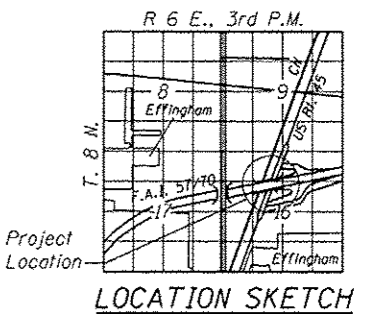
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M270 Grade 50W)
f_y = 70,000 psi (M270 Grade HPS 70W)

Notes:
Borings marked with A were drilled in 1989. For Section A-A see Sheet 2A of 79. A closed drainage system will be required (Not shown for clarity). Up to 1/4" will be ground off the bridge deck and the bridge approach slabs. For offset sketch of Ramps see sheet 2A of 79. See Sheet 2A of 79 for Section B-B.

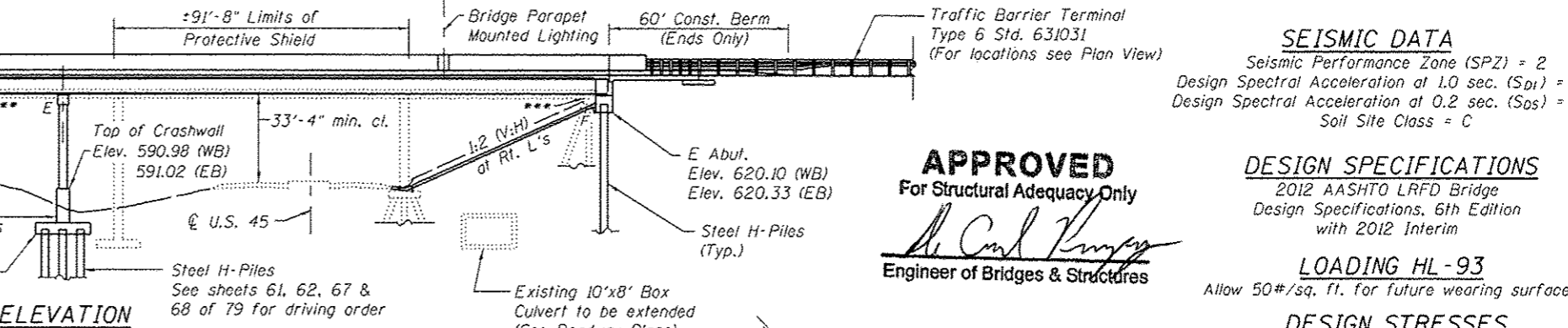


GENERAL PLAN & ELEVATION
F.A.I. ROUTE 57/70 E.B. AND W.B.
OVER CN & U.S. RTE. 45
SECTION (25-4HVB-1)BY
EFFINGHAM COUNTY
STATION 2294+16.66
SN 025-0111 (WB) & 025-0112 (EB)



EXP. 11-30-2014
Chadwick J. Fuesting
8/14/13

EXISTING PROFILE GRADE (U.S. Route 45) **PROFILE GRADE** (CN) **PROFILE GRADE** (F.A.I. Route 57/70 EB & WB) **PROFILE GRADE** (Ramp A) **PROFILE GRADE** (Ramp C)

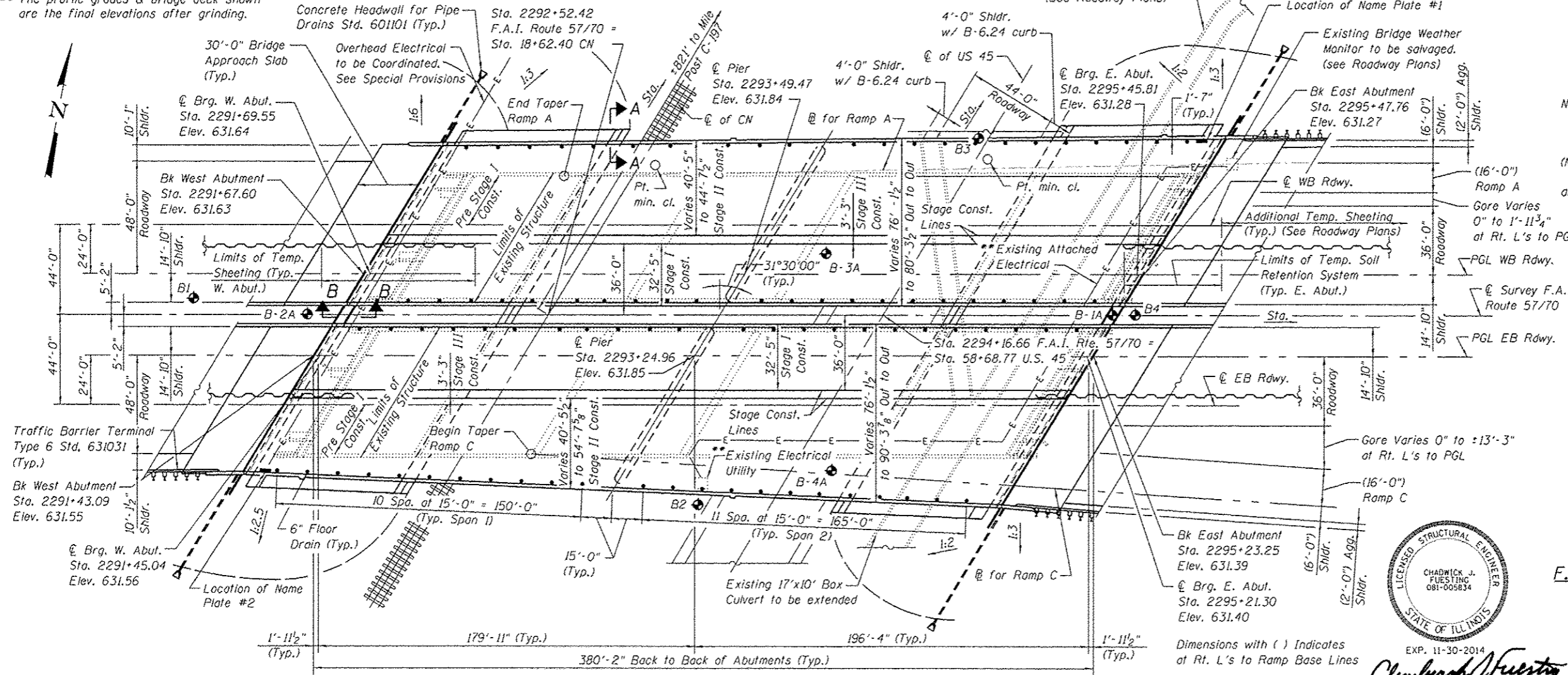


ELEVATION

Steel H-Piles See sheets 61, 62, 67 & 68 of 79 for driving order

Existing 10'x8' Box Culvert to be extended (See Roadway Plans)

Steel H-Piles (Typ.)



PLAN

FILE NAME = 025011174295-001-GPE.dgn	USER NAME = chad	DESIGNED - BB	REVISED
REVISIONS: 1. DATE: 8/14/2013	ILLINOIS Design Firm Number 184,001670	CHECKED - ACS	REVISED
PLOT SCALE =		DRAWN - WJS	REVISED
PLOT DATE = 5:00:59 PM 8/14/2013		CHECKED - CJF	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 79 SHEETS

F.A.I. RTE. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 535
			CONTRACT NO. 74295	
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.

Bolts 7/8" φ, holes 15/16" φ, unless otherwise noted.

Calculated weight of Structural Steel = 522,720 lbs. (Grade 70W)
2,415,990 lbs. (Grade 50W)

No field welding is permitted except as specified in the contract documents.
Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor elects to use cantilever forming brackets on the exterior girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception of the exterior surface and the bottom of the bottom flange of fascia beams, masked off connection surfaces, field installed fasteners and damaged area shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Gray, Munsell No. 5B 7/1.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Stage Removal of the existing piers shall be executed with the use of defined saw cuts. The use of drilling or other means of pier splitting shall not be allowed. The Contractor's Structural Assessment Report for Means and Methods shall define the removal line appropriately and provide a method that employs the use of saw cutting.

Pre-Stage I Construction and Partial Depth Deck Slab Repair that may occur during Pre-Stage I or Stage I Construction shall be conducted during Non-Peak hours of traffic according to the "Keeping Roads Open" Special Provision.

The existing piers shall remain in place during Stage I Construction. The Contractor may substitute a temporary support system to facilitate construction. The use of a temporary system shall be executed according to the General Bridge Specifications Standard Assessment Report for Contractors means and methods.

The Contractor is advised that the existing structure contains a pier that is in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the existing structure when developing construction procedures for the complete or partial removal, or replacement of the structure. An Existing Structure Information Package is available upon request as noted in the Special Provisions.

The Contractor shall retain the services of an Engineering Firm, prequalified in the IDOT consultant selection category of Highway Bridges (Advanced Typical), for preparation of the Structural Assessment Report. Contractor's pre-approval shall not be applicable for the project. See Special Provisions.

Current Ratings on File for Existing Structure

Inventory: HS 24.4

Operating: HS 27.4

Live Load Restrictions: No

Inventory and Operating Ratings are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. The Ratings are not necessarily representative of capacities to support the Contractor's equipment.

Concrete Sealer shall be applied to the designated areas of the pier.

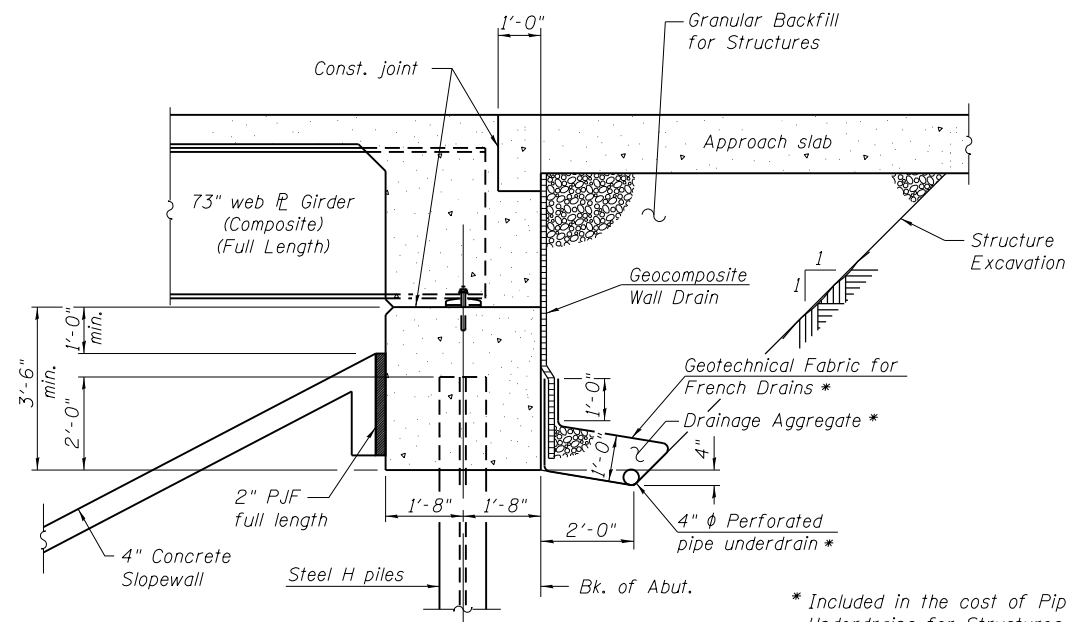
INDEX OF SHEETS

SHEET NO.	TITLE	SHEET NO.	TITLE
1.	General Plan and Elevation	44.-47.	West Precast Bridge Approach Slab Details (EB)
2.-2A.	General Data	48.-51.	East Precast Bridge Approach Slab Details (EB)
3.	Footing Layout	52.	Framing Plan (WB)
4.,4A.,4B.-5.	Stage Construction Details	53.	Framing Plan (EB)
6.	Modified Temporary Concrete Barrier for Stage Construction	53A.	Steel Dead Load Deflection
7.-11.	Top of Slab Elevations (WB)	54.-57.	Structural Steel Details
12.-17.	Top of Slab Elevations (EB)	58.	West Abutment (WB)
18.-19.	Westbound Approach Slab Elevations	59.	East Abutment (WB)
20.-21.	Eastbound Approach Slab Elevations	60.	Abutment Details (WB)
22.-23.	Superstructure (WB)	61.-62.	Pier (WB)
24.-25.	Superstructure Details (WB)	63.	West Abutment (EB)
26.	Drainage System (WB)	64.	East Abutment (EB)
27.-28.	Superstructure (EB)	65.	Abutment Details (EB)
29.-30.	Superstructure Details (EB)	66.-67.	Pier (EB)
31.	Drainage System (EB)	68.	Bar Splicer Details
32.-33.	Integral Abutment Diaphragm Details (WB)	69.	Slipforming Parapet
34.-35.	Integral Abutment Diaphragm Details (EB)	70.	HP Pile Details
36.-39.	West Precast Bridge Approach Slab Details (WB)	71.-79	Boring Logs
40.-43.	East Precast Bridge Approach Slab Details (WB)		

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Protective Coat	Sq. Yd.	8367	-	8367
Removal of Existing Structures	Each	2	-	2
Protective Shield	Sq. Yd.	2104	-	2104
Structure Excavation	Cu. Yd.	-	1801	1801
Floor Drains	Each	92	-	92
Concrete Structures	Cu. Yd.	-	1327.3	1327.3
Concrete Superstructures	Cu. Yd.	2165.1	-	2165.1
Bridge Deck Grooving	Sq. Yd.	7165	-	7165
Furnishing & Erecting Structural Steel	L Sum	1	-	1
Stud Shear Connectors	Each	20,908	-	20,908
Reinforcement Bars, Epoxy Coated	Pound	623,670	185,840	809,510
Bar Splicers	Each	5228	238	5466
Mechanical Splicers	Each	-	806	806
Slope Wall 4 inch	Sq. Yd.	-	3251	3251
Furnishing Steel Piles HP14x89	Foot	-	12,270	12,270
Driving Piles	Foot	-	12,270	12,270
Test Pile Steel HP14x89	Each	-	2	2
Name Plates	Each	2	-	2
Prefomed Joint Strip Seal	Foot	380	-	380
Anchor Bolts, 1"	Each	76	-	76
Anchor Bolts, 1/4"	Each	76	-	76
Concrete Sealer	Sq. Ft.	-	12,181	12,181
Geocomposite Wall Drain	Sq. Yd.	-	472	472
Granular Backfill for Structures	Cu. Yd.	-	1077	1077
Drainage System	L Sum	0.75	-	0.75
Temporary Sheet Piling	Sq. Ft.	-	3061	3061
Diamond Grinding (Bridge Section)	Sq. Yd.	7165	-	7165
Pipe Underdrains for Structures 4"	Foot	-	435	435
Temporary Soil Retention System	Sq. Ft.	-	1131	1131
High Load Multi-Rotation Bearings, Guided Expansion, 1150K	Each	19	-	19
Precast Bridge Approach Slab	Sq. Ft.	9680	-	9680
Concrete Wearing Surface, 5"	Sq. Yd.	1076	-	1076
* Polymer Concrete	Cu. Ft.	11	-	11
* Deck Slab Repair (Partial)	Sq. Yd.	10	-	10

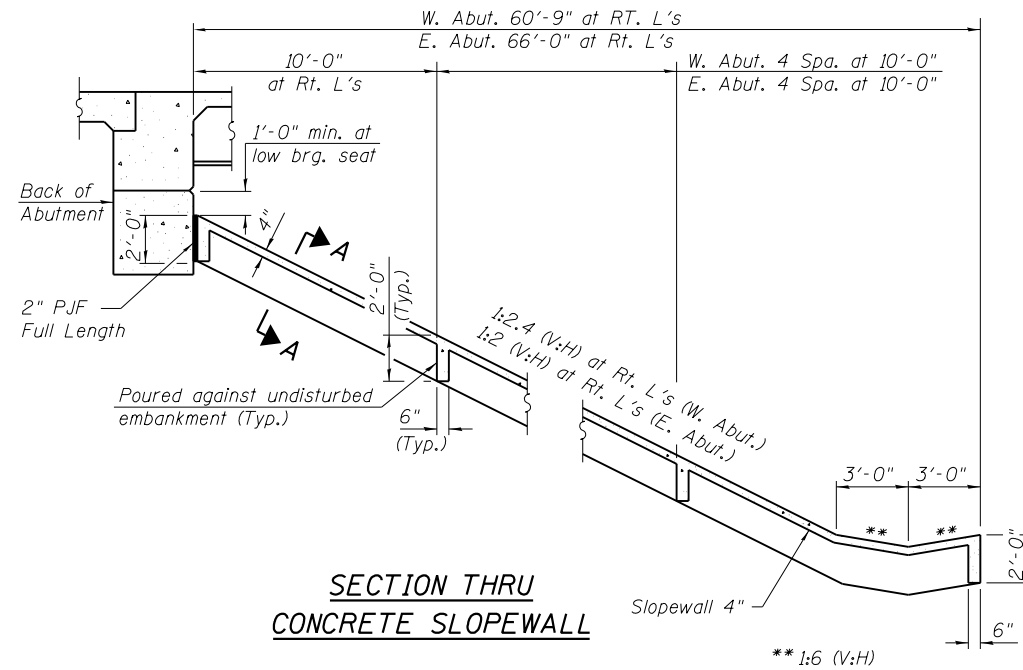
* See sheet 4 of 79 for Pre-Stage I Construction.



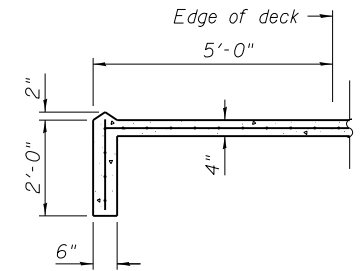
SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. at Rt. L's)

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

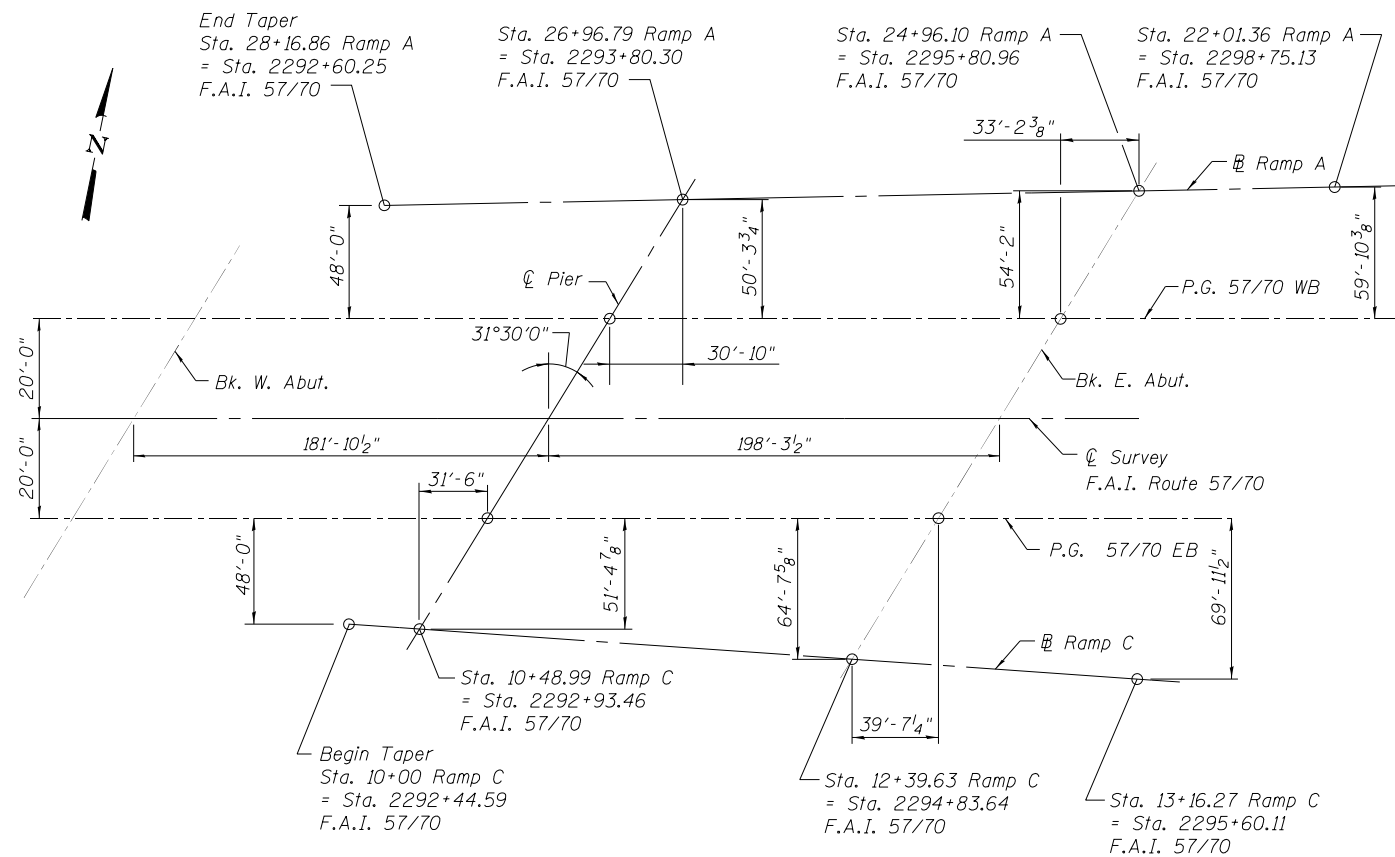
Note:
All drainage system components shall extend 2'-0" from the end of each wingwall. The outlet pipe shall extend until intersecting with the side slopes and terminate into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)
Slope Wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighting 58 lbs. per 100 sq. ft.



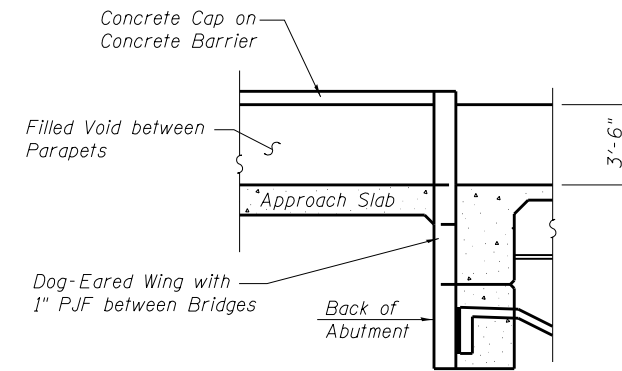
SECTION THRU CONCRETE SLOPEWALL



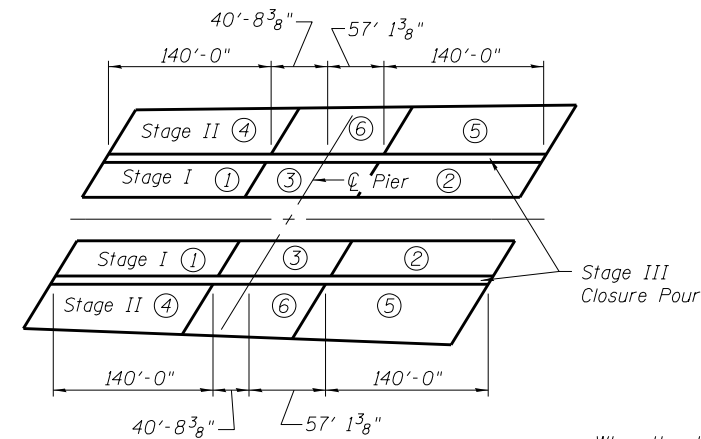
SECTION A-A



OFFSETS SKETCH



SECTION B-B



DECK POURING SEQUENCE

Dimensions for pouring sequence shown along edge of EB and WB Closure Pours.

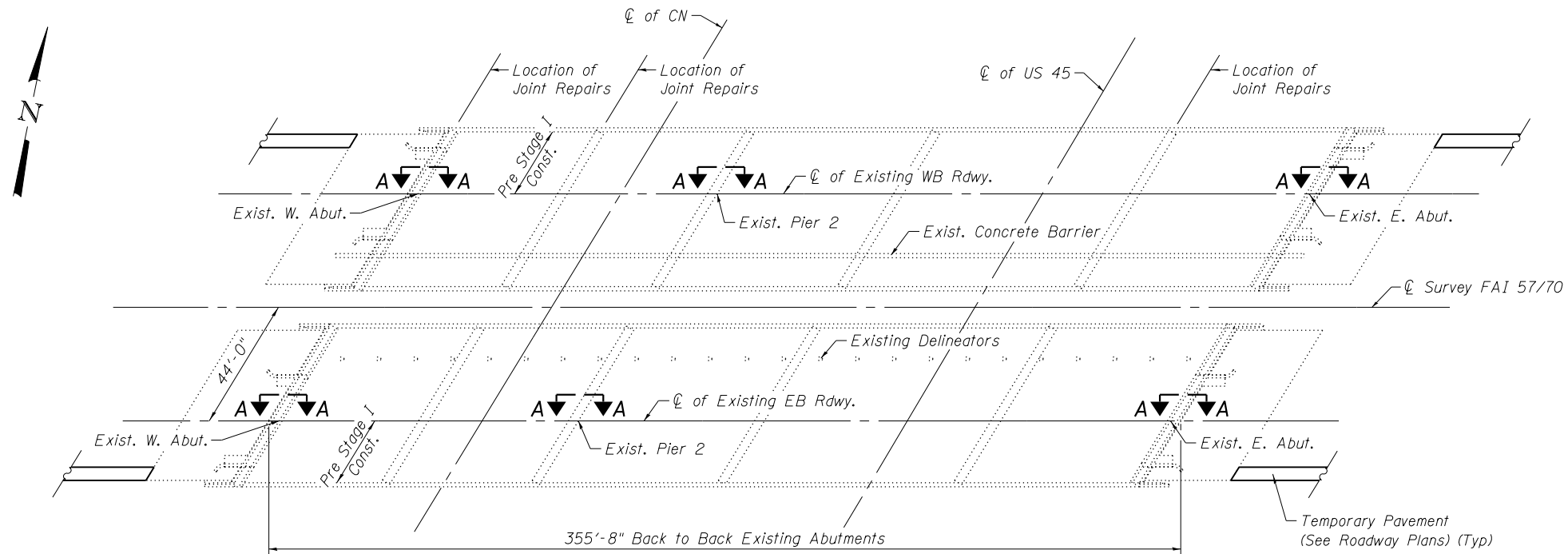
When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
1) At least 72 hours shall have elapsed from the end of the previous pour.
2) The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

STATION 2294+16.66
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT 57/70 SEC. (25-4HVB-1)BY
LOADING HL-93
STRUCTURE NO. 025-0111

NAME PLATE #1
See Std. 515001
(Locate Name Plate on N.E. corner of bridge)

STATION 2294+16.66
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT 57/70 SEC. (25-4HVB-1)BY
LOADING HL-93
STRUCTURE NO. 025-0112

NAME PLATE #2
See Std. 515001
(Locate Name Plate on S.W. corner of bridge)



EXISTING BRIDGE PLAN

Notes:

- * Indicates Limits of traffic during peak hours according to the "Keeping Roads Open" Special Provision.
- ** Indicates Limits of traffic during non-peak hours according to "Keeping Roads Open" Special Provision.

The actual traffic control as set up by the Contractor must be coordinated with the maintenance of traffic patterns according to ongoing & existing construction and the maintenance of traffic plans as defined in Contracts 74295 and 74299. The Contractor shall present a Maintenance of Traffic Plan for review and approval to the Engineer for all Pre-Stage I Construction Operations.

Pre-Stage Ia & Ib operations include:

- 1) Partial Deck Patching to the Existing Bridge Decks.
- 2) Expansion Joint Removal.
- 3) Placement of the Polymer Concrete Nosing.

The Installation and removal of Protective Shielding for Construction shall only be paid for once.

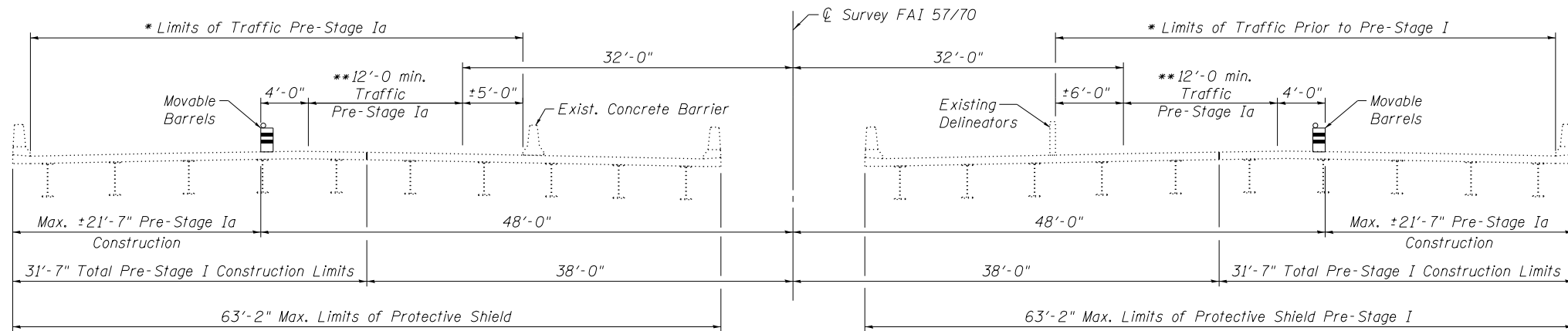
During Pre-Stage I Construction, the existing neoprene joint blocks and bladders shall be removed and replaced with a Polymer Concrete Nosing. The existing 5/8" φ anchor bolts shall be burned and ground flush with the existing concrete and sealed with epoxy. Cost included with Pay Item "Polymer Concrete".

There is an estimated 10 sq. yds. of Partial Depth Deck Slab Repair as defined by the Engineer at the time of construction. These repairs may occur during Pre-Stage I or Stage I Construction.

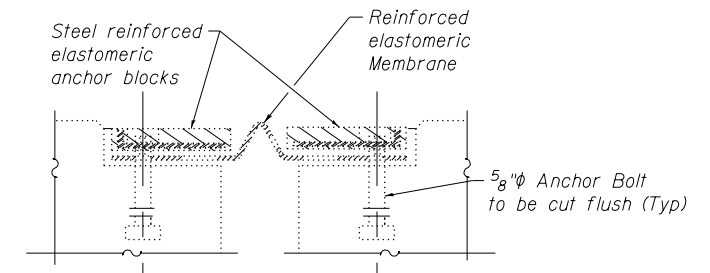
Pre-Stage I Construction Joint Replacement shall occur at the existing Abutments and Pier 2. See Elevation View sheet I of 79 for locations.

For additional Pre-Stage I Notes see sheet 4A of 79

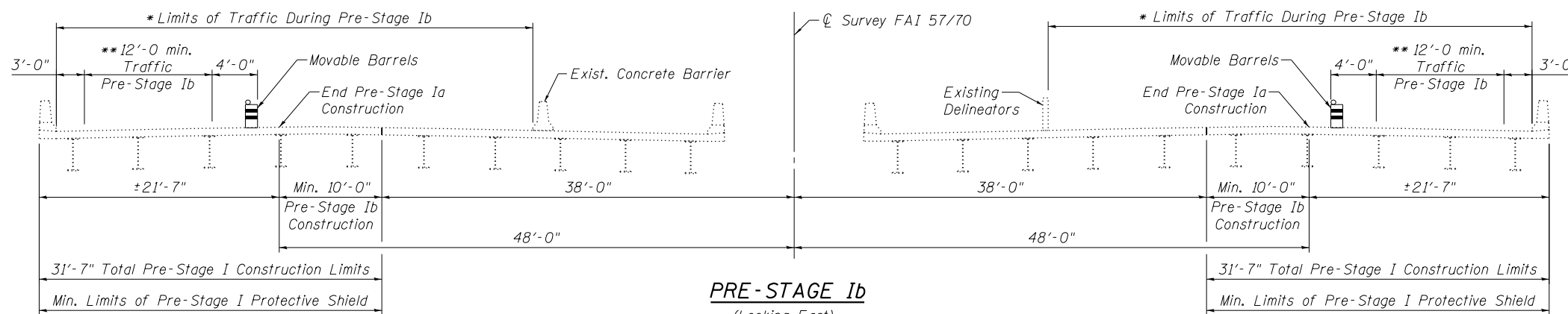
Indicates removal of existing structure.



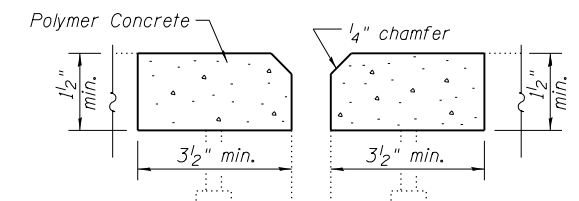
PRE-STAGE Ia
(Looking East)



SECTION A-A EXISTING JOINT
(37'-0" to be removed)
Cost included with Polymer Concrete



PRE-STAGE Ib
(Looking East)



**PRE-STAGE I CONSTRUCTION
POLYMER CONCRETE NOSING DETAIL**
Length of Joint = 37'-0"

FILE NAME = 025011-74295-004-Pre-Stage I Construction BERNARDINI - LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, IL 62955 PHONE (618) 288-4665 FAX (618) 288-4666	DESIGNED - BB	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION PRE-STAGE I CONSTRUCTION DETAILS STRUCTURE NO. 025-0111 (WB) & 025-0112 (EB) SHEET NO. 4 OF 79 SHEETS	F.A.I. R.E. = 57/70	SECTION = (25-4HVB-1)BY	COUNTY = EFFINGHAM	TOTAL SHEETS = 1760	SHEET NO. = 539	
	CHECKED - ACS	REVISED		CONTRACT NO. 74295	ILLINOIS FED. AID PROJECT				
	DRAWN - WJS	REVISED							
	CHECKED - CJF	REVISED							
ILLINOIS DESIGN FIRM NUMBER 184.001670 PLOT SCALE = PLOT DATE = 3:25:45 PM 8/14/2013									

PRE-STAGE I NOTES

Prior to pouring the Polymer Concrete for the Pre-Stage I or Stage I repairs to the existing bridge, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.


Plan dimensions and details relative to existing plans as needed for the Pre-Stage I or Stage I repairs to the existing bridge are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

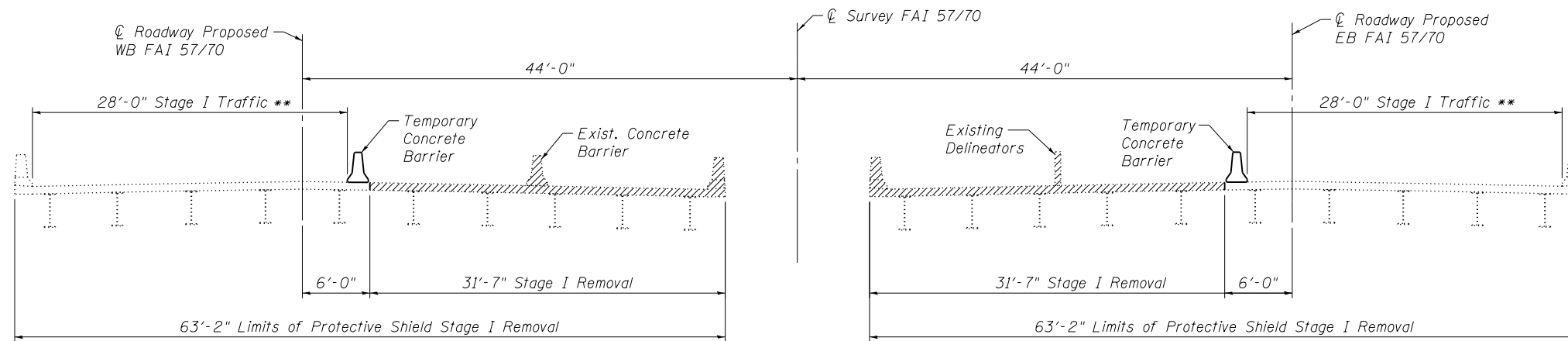
Existing reinforcement that is to be re-used during partial deck slab repairs during Pre-Stage I or Stage I existing bridge repairs shall be cleaned, straightened and incorporated into the new construction to the satisfaction of the Engineer. Any reinforcement bars that are damaged during the concrete removal shall be replaced with an approved bar splicer or anchorage system to the satisfaction of the Engineer. Costs included in "Deck Slab Repair (Partial)".

STAGE I NOTES

The Contractor Shall be reimbursed only one time for the Installation and Removal of Protective Shield.

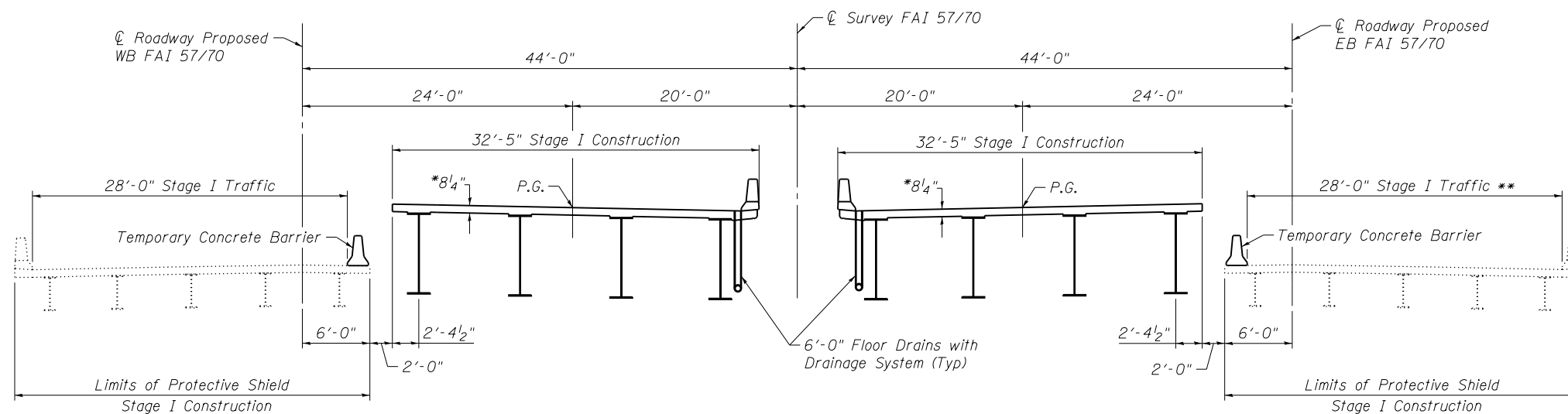
- * Indicates Slab Thickness before Grinding.
 - ** Additional Pre-Stage I construction Operations as defined on Sheet 4 of 79, shall be performed with a minimum traffic lane width of 14'-0"
- All additional Pre-Stage I maintenance of traffic requirements are located on Sheet 4 of 79.

 Indicates Removal of Existing Structures



STAGE I REMOVAL

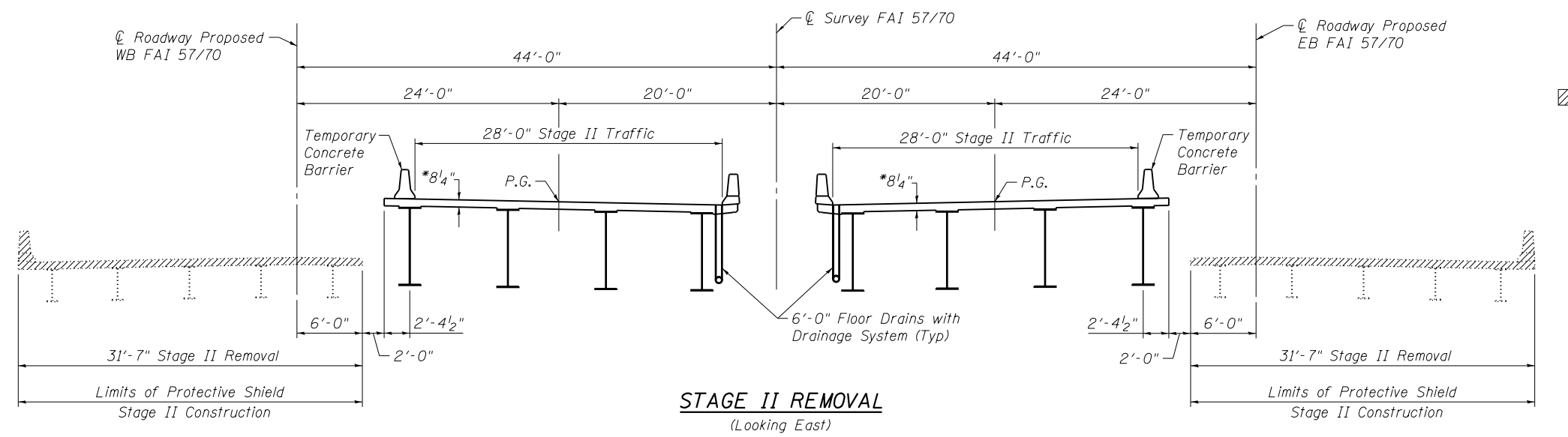
(Looking East)



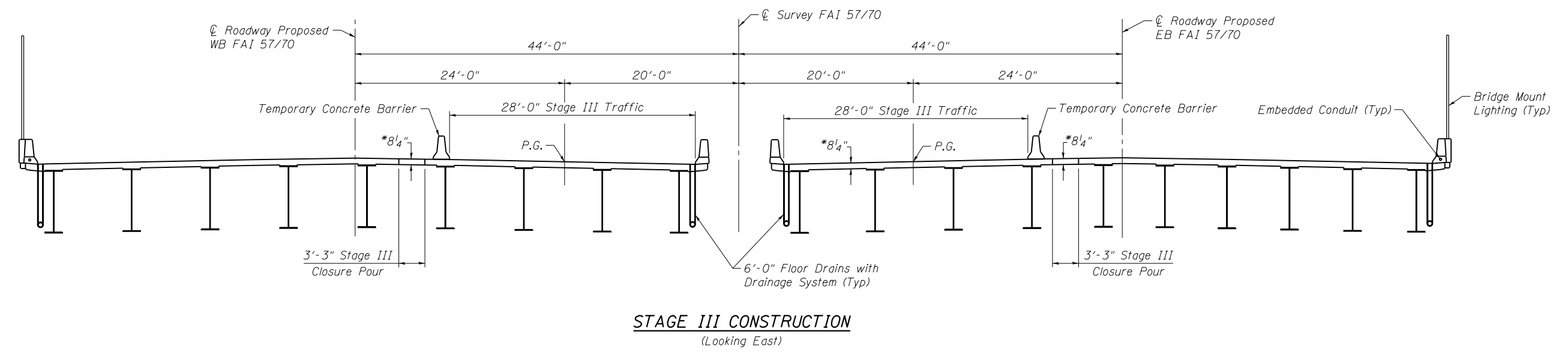
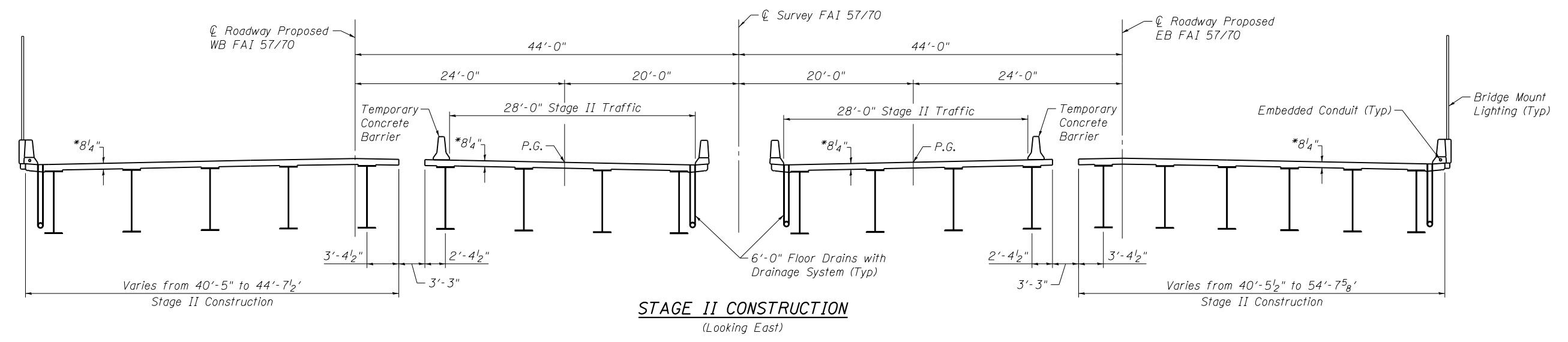
STAGE I CONSTRUCTION

(Looking East)

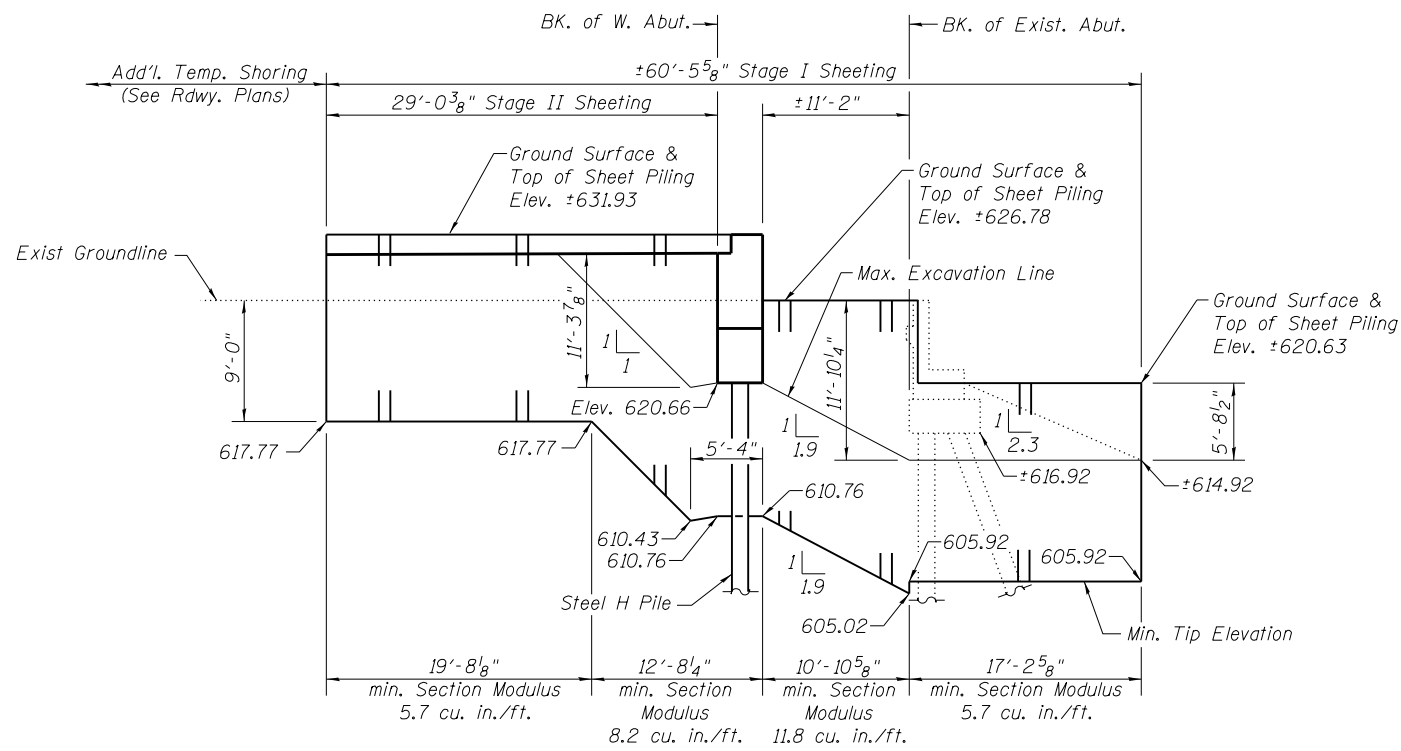
 BERNIER & LOCHMULLER ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 285-4665 FAX (618) 285-4666	FILE NAME = 025011-74295-004A-Stage I Const USER NAME = bbavee	DESIGNED - BB CHECKED - ACS DRAWN - WJS CHECKED - CJF	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE I CONSTRUCTION DETAILS STRUCTURE NO. 025-0111 (WB) & 025-0112 (EB)	F.A.I. RE. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 539A
	PLOT SCALE =	DRAWN - WJS	REVISED			SHEET NO. 4A OF 79 SHEETS	CONTRACT NO. 74295			
	PLOT DATE = 3:25:16 PM 8/14/2013	CHECKED - CJF	REVISED			ILLINOIS FED. AID PROJECT				



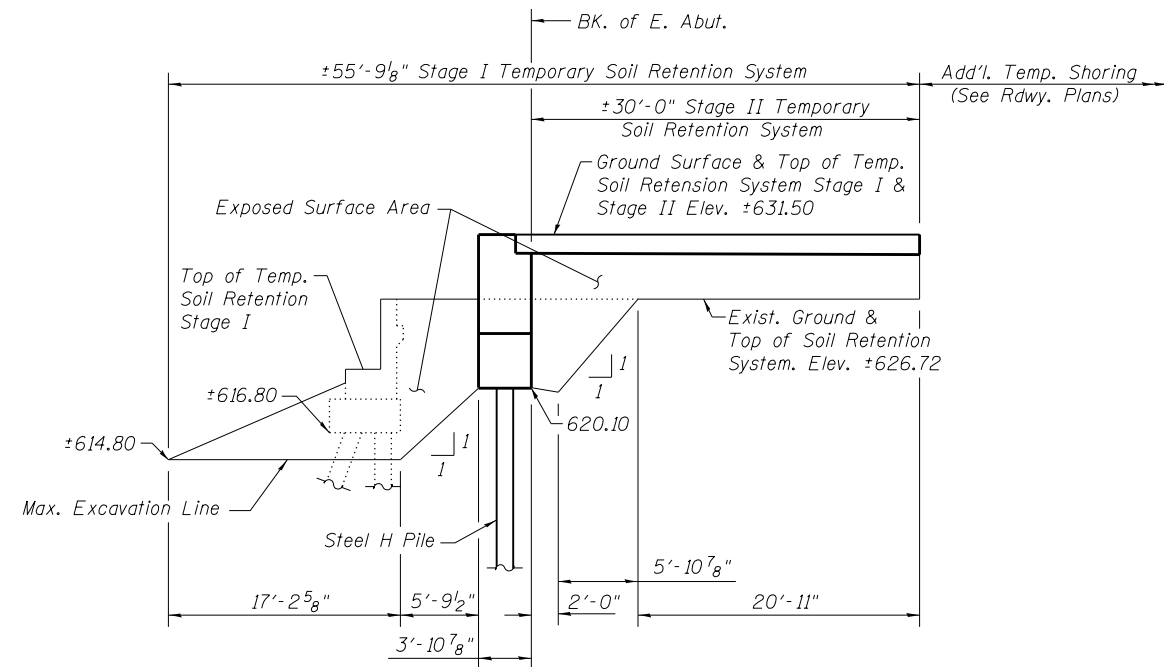
Notes:
 The Contractor Shall be reimbursed only one time for the Installation and Removal of Protective Shield.
 * Indicates Slab Thickness before Grinding.
 Indicates Removal of Existing Structures



FILE NAME = 025011-74295-004B-Stage II & III BERNARDSON • LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 288-4665 FAX (618) 288-4666	DESIGNED - BB CHECKED - ACS DRAWN - WJS CHECKED - CJF	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE II & III CONSTRUCTION DETAILS STRUCTURE NO. 025-0111 (WB) & 025-0112 (EB)	F.A.I. RTÉ. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 539B			
	PLOT SCALE =	PLOT DATE = 3:25:18 PM 8/14/2013			SHEET NO. 4B OF 79 SHEETS	CONTRACT NO. 74295	ILLINOIS FED. AID PROJECT					

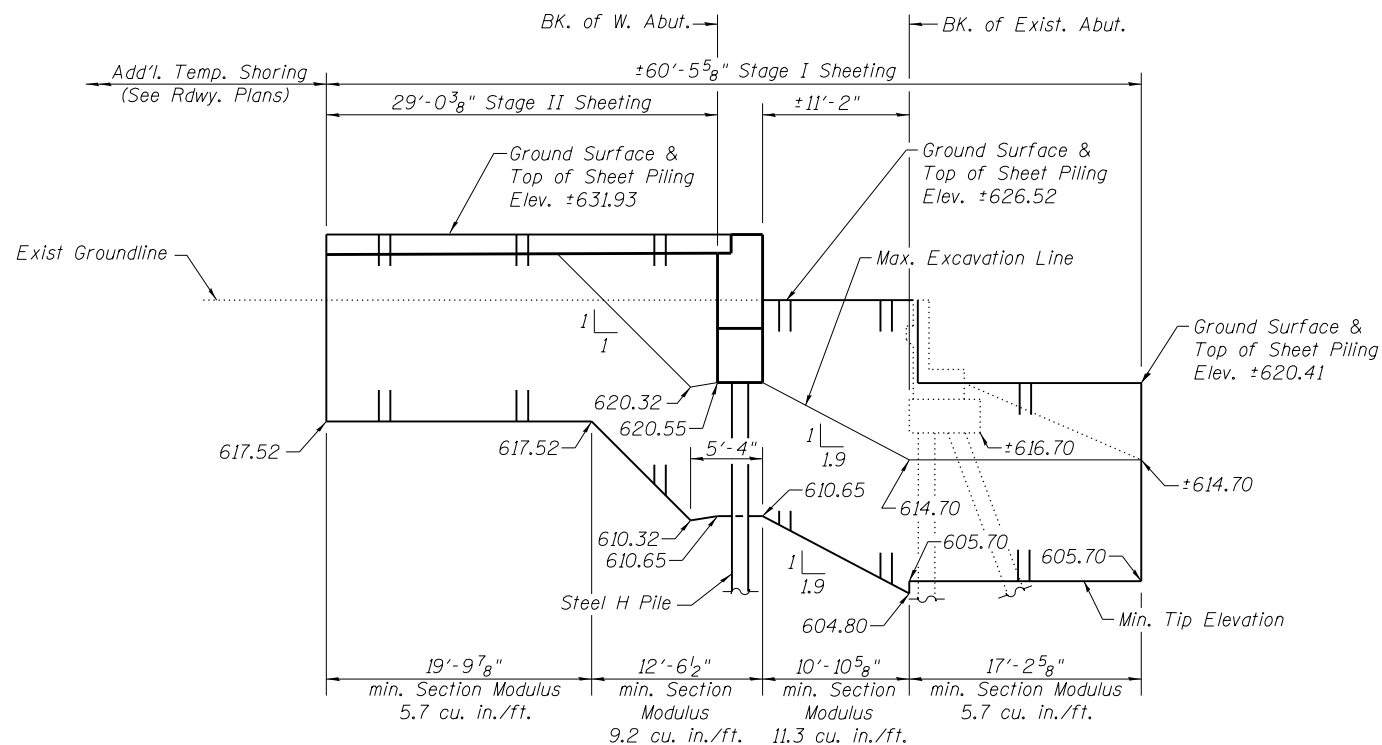


WB WEST ABUTMENT TEMPORARY SHEET PILING ELEVATION

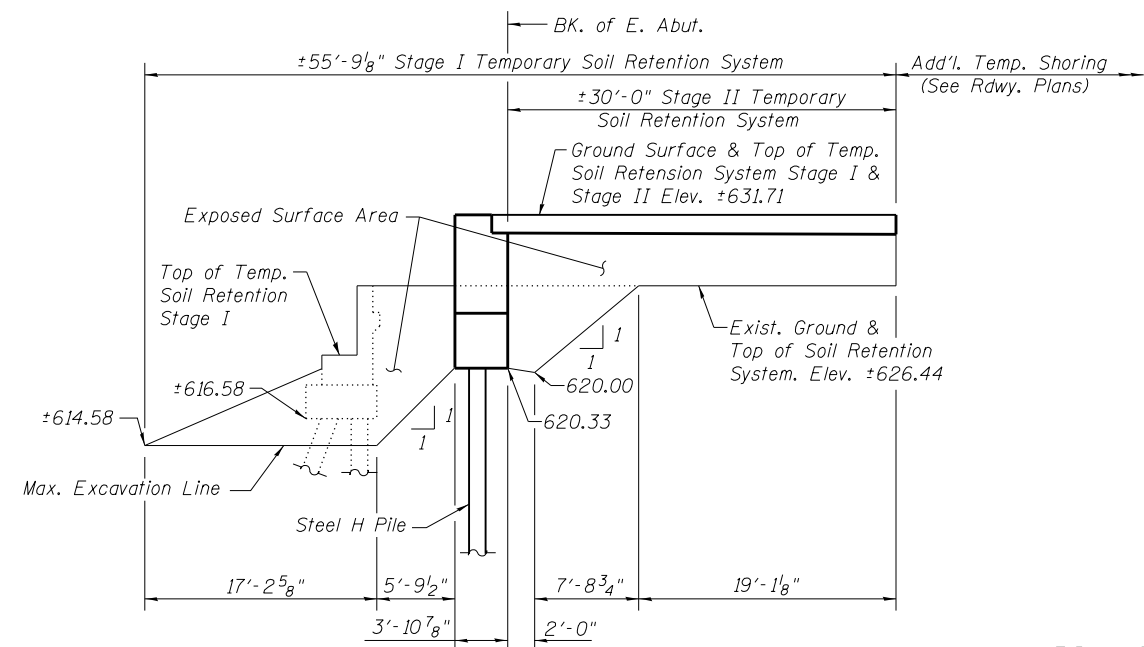


WB EAST ABUTMENT TEMPORARY SOIL RETENTION SYSTEM

Notes:
 Slopes are shown along face of sheeting or Temporary Soil Retention System.
 A cantilevered sheet piling design does not appear feasible at the East Abutments 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.
 If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown in the plans, a design submittal including plan details and calculations will be provided for review and acceptance by the Engineer.



EB WEST ABUTMENT TEMPORARY SHEET PILING ELEVATION

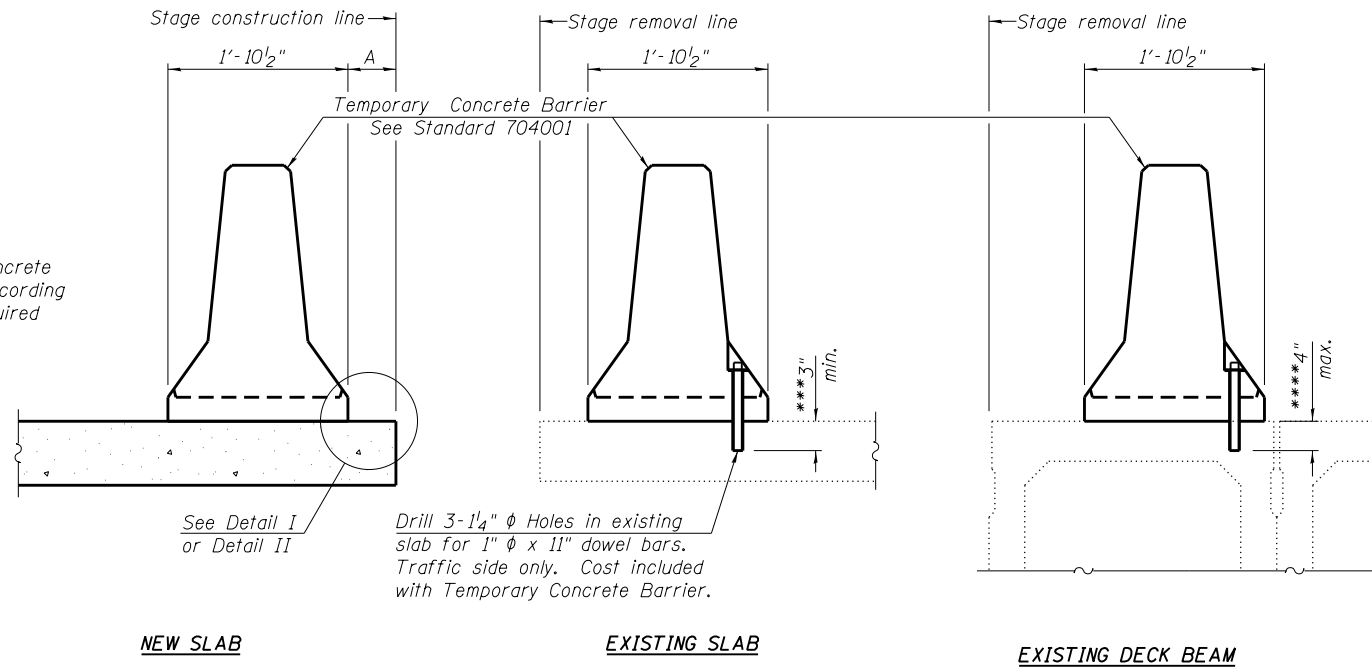


EB EAST ABUTMENT TEMPORARY SOIL RETENTION SYSTEM

BILL OF MATERIAL

Item	Unit	Total
Temporary Sheet Piling	Sq. Ft.	3061
Temporary Soil Retention System	Sq. Ft.	1131

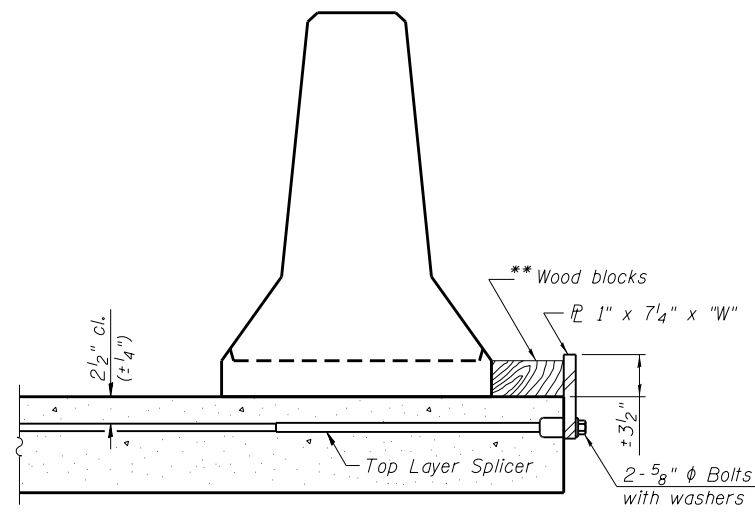
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



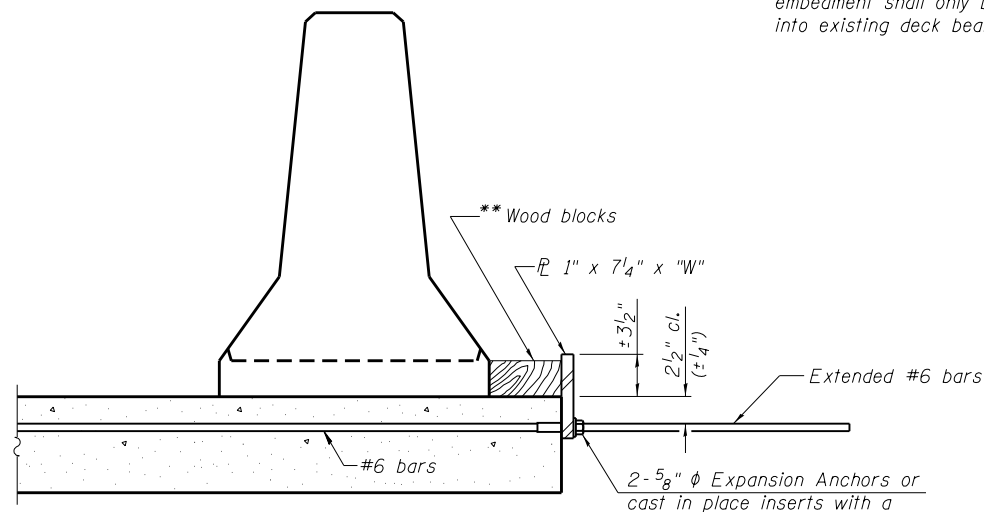
SECTIONS THRU SLAB OR DECK BEAM

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

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



DETAIL I



DETAIL II

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

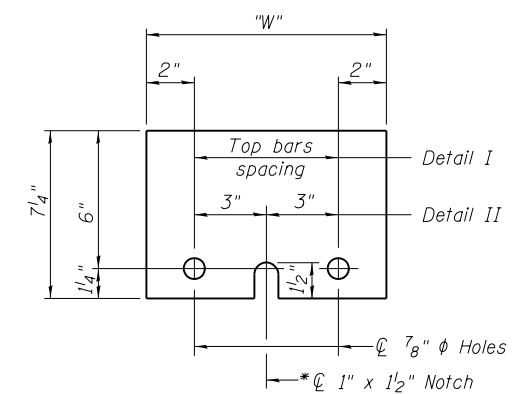
"W" = Top bars spacing + 4"

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7/4" x "W" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

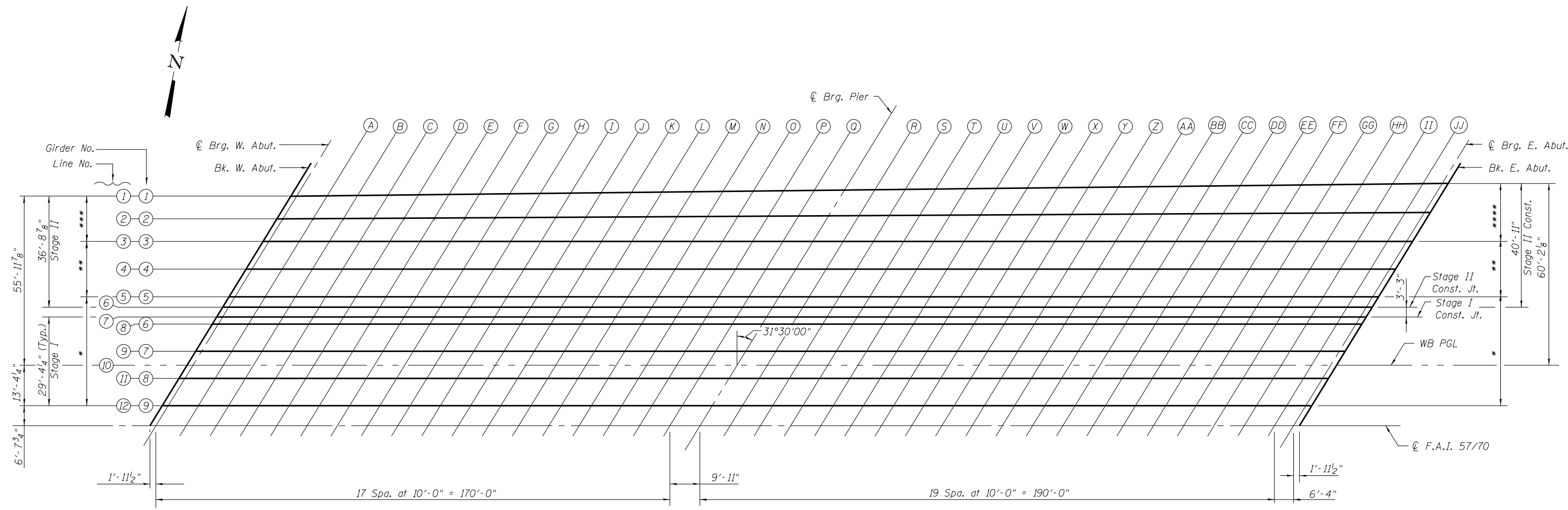
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7/4" x "W" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7/4" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



STEEL RETAINER PL 1" x 7/4" x "W"

* Required only with Detail II

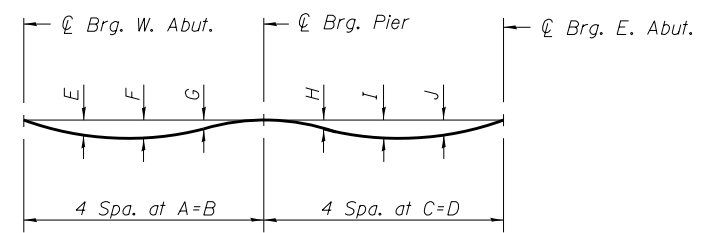


LAYOUT PLAN FOR DECK ELEVATIONS

Girder spaces taken at ϕ Bridge
 * 4 spaces at 9'-0" = 36'-0"
 ** 2 spaces at 9'-2" = 18'-4"
 *** 2 spaces at 7'-6" = 15'-0"
 **** 2 spaces at 9'-7 1/8" = 19'-2 1/4"

DEAD LOAD DEFLECTION TABLE

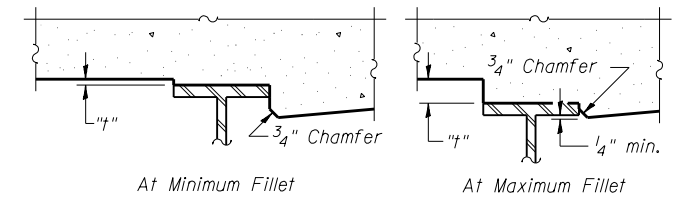
	A	B	C	D	E	F	G	H	I	J
Girder 1	45'-3 7/16"	181'-1 7/8"	49'-5 1/16"	197'-8 1/4"	2 3/8"	2 3/8"	0 5/8"	2 1/2"	5 3/8"	4 3/8"
Girder 2	45'-1 5/8"	180'-6 1/2"	49'-3"	197'-0"	2 3/8"	2 3/8"	0 5/8"	2 1/2"	5 3/8"	4 3/8"
Girder 3	44'-11 3/4"	179'-11"	49'-1"	196'-4"	2 5/8"	2 3/4"	0 3/4"	2 1/4"	5 1/8"	4 1/4"
Girder 4	44'-11 3/4"	179'-11"	49'-1"	196'-4"	2 7/8"	3"	1"	2 1/8"	5"	4 1/8"
Girder 5-9	44'-11 3/4"	179'-11"	49'-1"	196'-4"	2 7/8"	3"	1"	2 1/8"	4 7/8"	4 1/8"



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

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 and grinding as shown on sheets 8 thru 11 of 79.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding", shown on sheets 8 thru 11 of 79 minus slab thickness prior to grinding, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations". For grinding the deck, see Special Provisions.

FILLET HEIGHTS

Girder 1 (Line No. 1)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2292+01.89	-55.97	631.56	631.58
⊕ Bearing W. Abut.	2292+03.86	-55.99	631.56	631.58
A	2292+13.93	-56.10	631.58	631.64
B	2292+24.00	-56.21	631.60	631.71
C	2292+34.07	-56.32	631.61	631.78
D	2292+44.13	-56.43	631.63	631.83
E	2292+54.20	-56.54	631.64	631.87
F	2292+64.27	-56.66	631.65	631.90
G	2292+74.34	-56.77	631.66	631.91
H	2292+84.41	-56.88	631.66	631.90
I	2292+94.48	-56.99	631.67	631.88
J	2293+04.54	-57.10	631.67	631.86
K	2293+14.61	-57.21	631.67	631.82
L	2293+24.68	-57.32	631.66	631.78
M	2293+34.75	-57.44	631.66	631.75
N	2293+44.82	-57.55	631.65	631.71
O	2293+54.89	-57.66	631.64	631.68
P	2293+64.95	-57.77	631.63	631.65
Q	2293+75.02	-57.88	631.62	631.64
⊕ Bearing Pier	2293+85.01	-57.99	631.60	631.62
R	2293+95.08	-58.10	631.59	631.64
S	2294+05.15	-58.21	631.57	631.65
T	2294+15.22	-58.32	631.54	631.67
U	2294+25.28	-58.44	631.52	631.70
V	2294+35.35	-58.55	631.49	631.73
W	2294+45.42	-58.66	631.47	631.76
X	2294+55.49	-58.77	631.44	631.78
Y	2294+65.56	-58.88	631.40	631.80
Z	2294+75.62	-58.99	631.37	631.81
AA	2294+85.69	-59.10	631.33	631.80
BB	2294+95.76	-59.22	631.29	631.78
CC	2295+05.83	-59.33	631.25	631.74
DD	2295+15.90	-59.44	631.21	631.67
EE	2295+25.97	-59.55	631.16	631.58
FF	2295+36.03	-59.66	631.11	631.48
GG	2295+46.10	-59.77	631.06	631.35
HH	2295+56.17	-59.88	631.01	631.22
II	2295+66.24	-60.00	630.96	631.09
JJ	2295+76.31	-60.11	630.90	630.96
⊕ Bearing E. Abut.	2295+82.68	-60.18	630.87	630.89
Bk. of E. Abutment	2295+84.65	-60.20	630.85	630.87

Girder 2 (Line No. 2)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+97.30	-48.47	631.70	631.72
⊕ Bearing W. Abut.	2291+99.26	-48.48	631.71	631.73
A	2292+09.30	-48.54	631.73	631.79
B	2292+19.33	-48.60	631.75	631.86
C	2292+29.37	-48.65	631.77	631.93
D	2292+39.40	-48.71	631.78	631.98
E	2292+49.43	-48.76	631.79	632.03
F	2292+59.47	-48.82	631.81	632.05
G	2292+69.50	-48.87	631.82	632.07
H	2292+79.54	-48.93	631.82	632.06
I	2292+89.57	-48.98	631.83	632.05
J	2292+99.60	-49.04	631.83	632.02
K	2293+09.64	-49.10	631.84	631.99
L	2293+19.67	-49.15	631.84	631.96
M	2293+29.71	-49.21	631.83	631.92
N	2293+39.74	-49.26	631.83	631.88
O	2293+49.77	-49.32	631.82	631.85
P	2293+59.81	-49.37	631.81	631.83
Q	2293+69.84	-49.43	631.80	631.82
⊕ Bearing Pier	2293+79.80	-49.49	631.78	631.80
R	2293+89.83	-49.54	631.77	631.82
S	2293+99.87	-49.60	631.75	631.83
T	2294+09.90	-49.65	631.73	631.85
U	2294+19.93	-49.71	631.71	631.88
V	2294+29.97	-49.76	631.68	631.91
W	2294+44.00	-49.82	631.64	631.95
X	2294+50.04	-49.87	631.63	631.97
Y	2294+60.07	-49.93	631.60	631.99
Z	2294+70.11	-49.99	631.56	632.00
AA	2294+80.14	-50.04	631.53	632.00
BB	2294+90.17	-50.10	631.49	631.98
CC	2295+00.21	-50.15	631.45	631.94
DD	2295+10.24	-50.21	631.41	631.88
EE	2295+20.28	-50.26	631.37	631.79
FF	2295+30.31	-50.32	631.32	631.69
GG	2295+40.34	-50.38	631.27	631.57
HH	2295+50.38	-50.43	631.22	631.44
II	2295+60.41	-50.49	631.17	631.31
JJ	2295+70.45	-50.55	631.12	631.18
⊕ Bearing E. Abut.	2295+76.80	-50.58	631.08	631.10
Bk. of E. Abutment	2295+78.76	-50.59	631.07	631.09

Girder 3 (Line No. 3)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+92.71	-40.98	631.81	631.83
⊕ Bearing W. Abut.	2291+94.66	-40.98	631.82	631.84
A	2292+04.66	-40.98	631.84	631.91
B	2292+14.66	-40.98	631.86	631.98
C	2292+24.66	-40.98	631.88	632.06
D	2292+34.66	-40.98	631.90	632.12
E	2292+44.66	-40.98	631.91	632.17
F	2292+54.66	-40.98	631.93	632.20
G	2292+64.66	-40.98	631.94	632.21
H	2292+74.66	-40.98	631.95	632.21
I	2292+84.66	-40.98	631.95	632.20
J	2292+94.66	-40.98	631.96	632.17
K	2293+04.66	-40.98	631.96	632.14
L	2293+14.66	-40.98	631.96	632.10
M	2293+24.66	-40.98	631.96	632.07
N	2293+34.66	-40.98	631.96	632.03
O	2293+44.66	-40.98	631.95	632.00
P	2293+54.66	-40.98	631.95	631.98
Q	2293+64.66	-40.98	631.94	631.96
⊕ Bearing Pier	2293+74.59	-40.98	631.92	631.94
R	2293+84.59	-40.98	631.91	631.96
S	2293+94.59	-40.98	631.89	631.97
T	2294+04.59	-40.98	631.88	631.99
U	2294+14.59	-40.98	631.85	632.02
V	2294+24.59	-40.98	631.83	632.05
W	2294+34.59	-40.98	631.81	632.08
X	2294+44.59	-40.98	631.78	632.11
Y	2294+54.59	-40.98	631.75	632.13
Z	2294+64.59	-40.98	631.72	632.14
AA	2294+74.59	-40.98	631.69	632.14
BB	2294+84.59	-40.98	631.65	632.12
CC	2294+94.59	-40.98	631.62	632.09
DD	2295+04.59	-40.98	631.58	632.03
EE	2295+14.59	-40.98	631.54	631.95
FF	2295+24.59	-40.98	631.49	631.85
GG	2295+34.59	-40.98	631.45	631.73
HH	2295+44.59	-40.98	631.40	631.61
II	2295+54.59	-40.98	631.35	631.48
JJ	2295+64.59	-40.98	631.30	631.36
⊕ Bearing E. Abut.	2295+70.92	-40.98	631.26	631.28
Bk. of E. Abutment	2295+72.88	-40.98	631.25	631.27

Girder 4 (Line No. 4)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+87.09	-31.81	631.94	631.96
⊕ Bearing W. Abut.	2291+89.05	-31.81	631.94	631.96
A	2291+99.05	-31.81	631.97	632.04
B	2292+09.05	-31.81	631.99	632.13
C	2292+19.05	-31.81	632.01	632.21
D	2292+29.05	-31.81	632.03	632.28
E	2292+39.05	-31.81	632.05	632.33
F	2292+49.05	-31.81	632.06	632.36
G	2292+59.05	-31.81	632.08	632.38
H	2292+69.05	-31.81	632.09	632.38
I	2292+79.05	-31.81	632.09	632.37
J	2292+89.05	-31.81	632.10	632.34
K	2292+99.05	-31.81	632.10	632.31
L	2293+09.05	-31.81	632.11	632.27
M	2293+19.05	-31.81	632.11	632.23
N	2293+29.05	-31.81	632.10	632.19
O	2293+39.05	-31.81	632.10	632.16
P	2293+49.05	-31.81	632.09	632.13
Q	2293+59.05	-31.81	632.08	632.11
⊕ Bearing Pier	2293+68.97	-31.81	632.07	632.09
R	2293+78.97	-31.81	632.06	632.11
S	2293+88.97	-31.81	632.05	632.12
T	2293+98.97	-31.81	632.03	632.14
U	2294+08.97	-31.81	632.01	632.16
V	2294+18.97	-31.81	631.99	632.19
W	2294+28.97	-31.81	631.97	632.23
X	2294+38.97	-31.81	631.94	632.26
Y	2294+48.97	-31.81	631.91	632.28
Z	2294+58.97	-31.81	631.88	632.29
AA	2294+68.97	-31.81	631.85	632.29
BB	2294+78.97	-31.81	631.82	632.28
CC	2294+88.97	-31.81	631.78	632.24
DD	2294+98.97	-31.81	631.74	632.19
EE	2295+08.97	-31.81	631.70	632.11
FF	2295+18.97	-31.81	631.66	632.01
GG	2295+28.97	-31.81	631.62	631.90
HH	2295+38.97	-31.81	631.57	631.77
II	2295+48.97	-31.81	631.52	631.65
JJ	2295+58.97	-31.81	631.47	631.53
⊕ Bearing E. Abut.	2295+65.30	-31.81	631.44	631.46
Bk. of E. Abutment	2295+67.26	-31.81	631.43	631.45

Girder 5 (Line No. 5)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+81.48	-22.65	632.02	632.04
⊕ Bearing W. Abut.	2291+83.43	-22.65	632.03	632.05
A	2291+93.43	-22.65	632.06	632.13
B	2292+03.43	-22.65	632.08	632.21
C	2292+13.43	-22.65	632.10	632.29
D	2292+23.43	-22.65	632.12	632.36
E	2292+33.43	-22.65	632.14	632.42
F	2292+43.43	-22.65	632.16	632.45
G	2292+53.43	-22.65	632.17	632.47
H	2292+63.43	-22.65	632.18	632.47
I	2292+73.43	-22.65	632.19	632.46
J	2292+83.43	-22.65	632.20	632.44
K	2292+93.43	-22.65	632.20	632.41
L	2293+03.43	-22.65	632.21	632.37
M	2293+13.43	-22.65	632.21	632.33
N	2293+23.43	-22.65	632.21	632.29
O	2293+33.43	-22.65	632.20	632.26
P	2293+43.43	-22.65	632.20	632.24
Q	2293+53.43	-22.65	632.19	632.22
⊕ Bearing Pier	2293+63.35	-22.65	632.18	632.20
R	2293+73.35	-22.65	632.17	632.21
S	2293+83.35	-22.65	632.16	632.23
T	2293+93.35	-22.65	632.14	632.25
U	2294+03.35	-22.65	632.12	632.27
V	2294+13.35	-22.65	632.10	632.30
W	2294+23.35	-22.65	632.08	632.34
X	2294+33.35	-22.65	632.06	632.37
Y	2294+43.35	-22.65	632.03	632.39
Z	2294+53.35	-22.65	632.00	632.40
AA	2294+63.35	-22.65	631.97	632.41
BB	2294+73.35	-22.65	631.94	632.39
CC	2294+83.35	-22.65	631.90	632.36
DD	2294+93.35	-22.65	631.87	632.30
EE	2295+03.35	-22.65	631.83	632.23
FF	2295+13.35	-22.65	631.78	632.13
GG	2295+23.35	-22.65	631.74	632.02
HH	2295+33.35	-22.65	631.70	631.90
II	2295+43.35	-22.65	631.65	631.77
JJ	2295+53.35	-22.65	631.60	631.66
⊕ Bearing E. Abut.	2295+59.68	-22.65	631.57	631.59
Bk. of E. Abutment	2295+61.64	-22.65	631.56	631.58

Stage II Construction Joint (Line No. 6)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+79.39	-19.25	631.97	631.99
⊕ Bearing W. Abut.	2291+81.35	-19.25	631.97	631.99
A	2291+91.35	-19.25	632.00	632.07
B	2292+01.35	-19.25	632.02	632.16
C	2292+11.35	-19.25	632.04	632.24
D	2292+21.35	-19.25	632.07	632.31
E	2292+31.35	-19.25	632.08	632.36
F	2292+41.35	-19.25	632.10	632.40
G	2292+51.35	-19.25	632.11	632.42
H	2292+61.35	-19.25	632.13	632.42
I	2292+71.35	-19.25	632.14	632.41
J	2292+81.35	-19.25	632.14	632.38
K	2292+91.35	-19.25	632.15	632.35
L	2293+01.35	-19.25	632.15	632.32
M	2293+11.35	-19.25	632.15	632.28
N	2293+21.35	-19.25	632.15	632.24
O	2293+31.35	-19.25	632.15	632.21
P	2293+41.35	-19.25	632.15	632.18
Q	2293+51.35	-19.25	632.14	632.17
⊕ Bearing Pier	2293+61.27	-19.25	632.13	632.15
R	2293+71.27	-19.25	632.12	632.16
S	2293+81.27	-19.25	632.11	632.18
T	2293+91.27	-19.25	632.09	632.20
U	2294+01.27	-19.25	632.07	632.22
V	2294+11.27	-19.25	632.05	632.26
W	2294+21.27	-19.25	632.03	632.29
X	2294+31.27	-19.25	632.01	632.32
Y	2294+41.27	-19.25	631.98	632.34
Z	2294+51.27	-19.25	631.95	632.36
AA	2294+61.27	-19.25	631.92	632.36
BB	2294+71.27	-19.25	631.89	632.34
CC	2294+81.27	-19.25	631.86	632.31
DD	2294+91.27	-19.25	631.82	632.26
EE	2295+01.27	-19.25	631.78	632.18
FF	2295+11.27	-19.25	631.74	632.09
GG	2295+21.27	-19.25	631.70	631.98
HH	2295+31.27	-19.25	631.65	631.85
II	2295+41.27	-19.25	631.61	631.73
JJ	2295+51.27	-19.25	631.56	631.62
⊕ Bearing E. Abut.	2295+57.60	-19.25	631.52	631.54
Bk. of E. Abutment	2295+59.56	-19.25	631.51	631.53

Stage I Construction Joint (Line No. 7)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+77.40	-16.00	631.91	631.93
⊕ Bearing W. Abut.	2291+79.36	-16.00	631.91	631.93
A	2291+89.36	-16.00	631.94	632.02
B	2291+99.36	-16.00	631.97	632.10
C	2292+09.36	-16.00	631.99	632.18
D	2292+19.36	-16.00	632.01	632.25
E	2292+29.36	-16.00	632.03	632.31
F	2292+39.36	-16.00	632.05	632.34
G	2292+49.36	-16.00	632.06	632.36
H	2292+59.36	-16.00	632.07	632.37
I	2292+69.36	-16.00	632.08	632.35
J	2292+79.36	-16.00	632.09	632.33
K	2292+89.36	-16.00	632.10	632.30
L	2292+99.36	-16.00	632.10	632.26
M	2293+09.36	-16.00	632.10	632.23
N	2293+19.36	-16.00	632.10	632.19
O	2293+29.36	-16.00	632.10	632.16
P	2293+39.36	-16.00	632.10	632.13
Q	2293+49.36	-16.00	632.09	632.12
⊕ Bearing Pier	2293+59.28	-16.00	632.08	632.10
R	2293+69.28	-16.00	632.07	632.11
S	2293+79.28	-16.00	632.06	632.13
T	2293+89.28	-16.00	632.04	632.15
U	2293+99.28	-16.00	632.03	632.18
V	2294+09.28	-16.00	632.01	632.21
W	2294+19.28	-16.00	631.98	632.24
X	2294+29.28	-16.00	631.96	632.27
Y	2294+39.28	-16.00	631.94	632.30
Z	2294+49.28	-16.00	631.91	632.31
AA	2294+59.28	-16.00	631.88	632.31
BB	2294+69.28	-16.00	631.85	632.30
CC	2294+79.28	-16.00	631.81	632.27
DD	2294+89.28	-16.00	631.78	632.21
EE	2294+99.28	-16.00	631.74	632.14
FF	2295+09.28	-16.00	631.70	632.04
GG	2295+19.28	-16.00	631.66	631.93
HH	2295+29.28	-16.00	631.61	631.81
II	2295+39.28	-16.00	631.56	631.69
JJ	2295+49.28	-16.00	631.52	631.58
⊕ Bearing E. Abut.	2295+55.61	-16.00	631.48	631.50
Bk. of E. Abutment	2295+57.57	-16.00	631.47	631.49

Girder 6 (Line No. 8)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+75.96	-13.65	631.87	631.89
⊕ Bearing W. Abut.	2291+77.91	-13.65	631.87	631.89
A	2291+87.91	-13.65	631.90	631.97
B	2291+97.91	-13.65	631.93	632.06
C	2292+07.91	-13.65	631.95	632.14
D	2292+17.91	-13.65	631.97	632.21
E	2292+27.91	-13.65	631.99	632.27
F	2292+37.91	-13.65	632.01	632.30
G	2292+47.91	-13.65	632.02	632.32
H	2292+57.91	-13.65	632.03	632.33
I	2292+67.91	-13.65	632.05	632.32
J	2292+77.91	-13.65	632.05	632.29
K	2292+87.91	-13.65	632.06	632.26
L	2292+97.91	-13.65	632.06	632.23
M	2293+07.91	-13.65	632.07	632.19
N	2293+17.91	-13.65	632.07	632.15
O	2293+27.91	-13.65	632.06	632.12
P	2293+37.91	-13.65	632.06	632.10
Q	2293+47.91	-13.65	632.05	632.08
⊕ Bearing Pier	2293+57.84	-13.65	632.05	632.07
R	2293+67.84	-13.65	632.04	632.08
S	2293+77.84	-13.65	632.02	632.09
T	2293+87.84	-13.65	632.01	632.11
U	2293+97.84	-13.65	631.99	632.14
V	2294+07.84	-13.65	631.97	632.17
W	2294+17.84	-13.65	631.95	632.21
X	2294+27.84	-13.65	631.93	632.24
Y	2294+37.84	-13.65	631.90	632.26
Z	2294+47.84	-13.65	631.88	632.28
AA	2294+57.84	-13.65	631.85	632.28
BB	2294+67.84	-13.65	631.81	632.27
CC	2294+77.84	-13.65	631.78	632.24
DD	2294+87.84	-13.65	631.75	632.18
EE	2294+97.84	-13.65	631.71	632.11
FF	2295+07.84	-13.65	631.67	632.01
GG	2295+17.84	-13.65	631.62	631.90
HH	2295+27.84	-13.65	631.58	631.78
II	2295+37.84	-13.65	631.53	631.66
JJ	2295+47.84	-13.65	631.49	631.55
⊕ Bearing E. Abut.	2295+54.17	-13.65	631.45	631.47
Bk. of E. Abutment	2295+56.12	-13.65	631.44	631.46

Girder 7 (Line No. 9)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+70.44	-4.65	631.71	631.73
⊕ Bearing W. Abut.	2291+72.40	-4.65	631.72	631.74
A	2291+82.40	-4.65	631.75	631.82
B	2291+92.40	-4.65	631.77	631.91
C	2292+02.40	-4.65	631.80	631.99
D	2292+12.40	-4.65	631.82	632.06
E	2292+22.40	-4.65	631.84	632.11
F	2292+32.40	-4.65	631.86	632.15
G	2292+42.40	-4.65	631.87	632.17
H	2292+52.40	-4.65	631.89	632.18
I	2292+62.40	-4.65	631.90	632.17
J	2292+72.40	-4.65	631.91	632.15
K	2292+82.40	-4.65	631.92	632.12
L	2292+92.40	-4.65	631.92	632.08
M	2293+02.40	-4.65	631.93	632.05
N	2293+12.40	-4.65	631.93	632.01
O	2293+22.40	-4.65	631.93	631.98
P	2293+32.40	-4.65	631.92	631.96
Q	2293+42.40	-4.65	631.92	631.94
⊕ Bearing Pier	2293+52.32	-4.65	631.91	631.93
R	2293+62.32	-4.65	631.90	631.94
S	2293+72.32	-4.65	631.89	631.96
T	2293+82.32	-4.65	631.88	631.98
U	2293+92.32	-4.65	631.86	632.01
V	2294+02.32	-4.65	631.84	632.04
W	2294+12.32	-4.65	631.82	632.08
X	2294+22.32	-4.65	631.80	632.11
Y	2294+32.32	-4.65	631.78	632.14
Z	2294+42.32	-4.65	631.75	632.15
AA	2294+52.32	-4.65	631.72	632.16
BB	2294+62.32	-4.65	631.69	632.15
CC	2294+72.32	-4.65	631.66	632.11
DD	2294+82.32	-4.65	631.62	632.06
EE	2294+92.32	-4.65	631.59	631.99
FF	2295+02.32	-4.65	631.55	631.90
GG	2295+12.32	-4.65	631.51	631.79
HH	2295+22.32	-4.65	631.46	631.67
II	2295+32.32	-4.65	631.42	631.55
JJ	2295+42.32	-4.65	631.37	631.43
⊕ Bearing E. Abut.	2295+48.65	-4.65	631.34	631.36
Bk. of E. Abutment	2295+50.61	-4.65	631.33	631.35

WB PGL (Line No. 10)

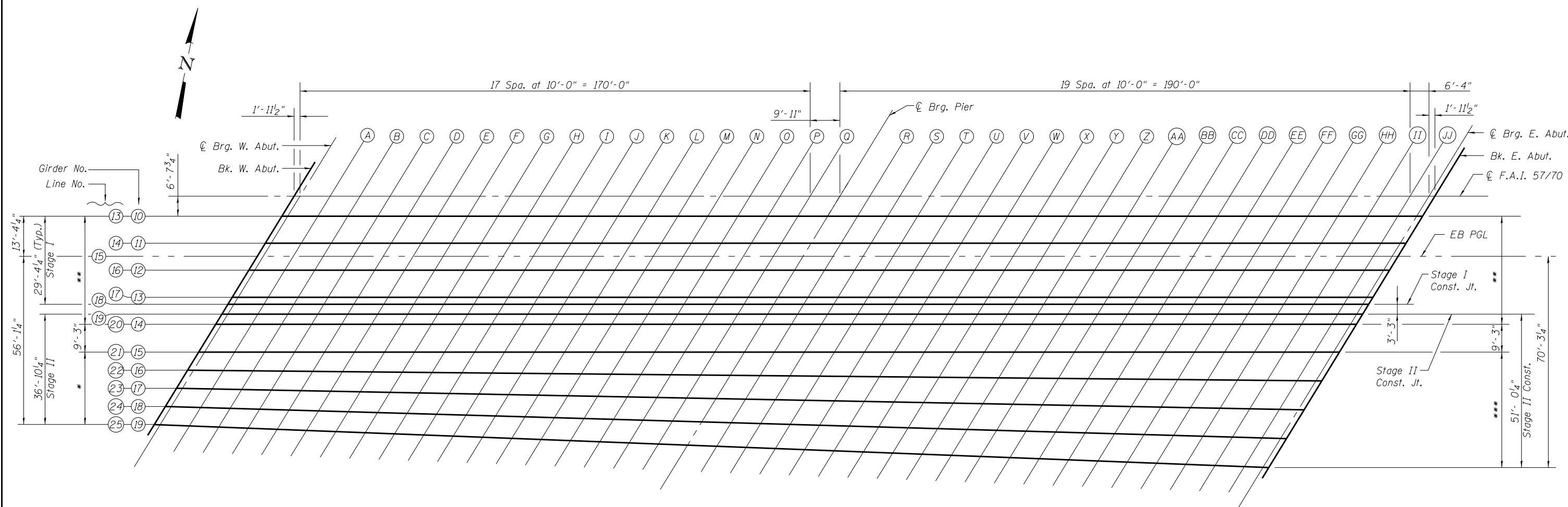
Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+67.60	0.00	631.63	631.65
⊕ Bearing W. Abut.	2291+69.55	0.00	631.64	631.66
A	2291+79.55	0.00	631.67	631.74
B	2291+89.55	0.00	631.69	631.83
C	2291+99.55	0.00	631.72	631.91
D	2292+09.55	0.00	631.74	631.98
E	2292+19.55	0.00	631.76	632.04
F	2292+29.55	0.00	631.78	632.08
G	2292+39.55	0.00	631.80	632.10
H	2292+49.55	0.00	631.81	632.10
I	2292+59.55	0.00	631.82	632.09
J	2292+69.55	0.00	631.83	632.07
K	2292+79.55	0.00	631.84	632.04
L	2292+89.55	0.00	631.85	632.01
M	2292+99.55	0.00	631.85	631.97
N	2293+09.55	0.00	631.85	631.94
O	2293+19.55	0.00	631.85	631.91
P	2293+29.55	0.00	631.85	631.89
Q	2293+39.55	0.00	631.85	631.87
⊕ Bearing Pier	2293+49.47	0.00	631.84	631.86
R	2293+59.47	0.00	631.83	631.88
S	2293+69.47	0.00	631.82	631.89
T	2293+79.47	0.00	631.81	631.91
U	2293+89.47	0.00	631.79	631.94
V	2293+99.47	0.00	631.78	631.98
W	2294+09.47	0.00	631.76	632.01
X	2294+19.47	0.00	631.73	632.05
Y	2294+29.47	0.00	631.71	632.07
Z	2294+39.47	0.00	631.69	632.09
AA	2294+49.47	0.00	631.66	632.09
BB	2294+59.47	0.00	631.63	632.08
CC	2294+69.47	0.00	631.60	632.05
DD	2294+79.47	0.00	631.56	632.00
EE	2294+89.47	0.00	631.53	631.93
FF	2294+99.47	0.00	631.49	631.83
GG	2295+09.47	0.00	631.45	631.73
HH	2295+19.47	0.00	631.40	631.61
II	2295+29.47	0.00	631.36	631.49
JJ	2295+39.47	0.00	631.31	631.38
⊕ Bearing E. Abut.	2295+45.81	0.00	631.28	631.30
Bk. of E. Abutment	2295+47.76	0.00	631.27	631.29

Girder 8 (Line No. 11)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+64.93	4.35	631.53	631.55
⊕ Bearing W. Abut.	2291+66.88	4.35	631.54	631.56
A	2291+76.88	4.35	631.57	631.64
B	2291+86.88	4.35	631.59	631.73
C	2291+96.88	4.35	631.62	631.81
D	2292+06.88	4.35	631.64	631.88
E	2292+16.88	4.35	631.67	631.94
F	2292+26.88	4.35	631.68	631.98
G	2292+36.88	4.35	631.70	632.00
H	2292+46.88	4.35	631.72	632.01
I	2292+56.88	4.35	631.73	632.00
J	2292+66.88	4.35	631.74	631.98
K	2292+76.88	4.35	631.75	631.95
L	2292+86.88	4.35	631.76	631.92
M	2292+96.88	4.35	631.76	631.88
N	2293+06.88	4.35	631.76	631.85
O	2293+16.88	4.35	631.76	631.82
P	2293+26.88	4.35	631.76	631.80
Q	2293+36.88	4.35	631.76	631.78
⊕ Bearing Pier	2293+46.81	4.35	631.75	631.77
R	2293+56.81	4.35	631.74	631.79
S	2293+66.81	4.35	631.73	631.80
T	2293+76.81	4.35	631.72	631.83
U	2293+86.81	4.35	631.71	631.86
V	2293+96.81	4.35	631.69	631.89
W	2294+06.81	4.35	631.67	631.93
X	2294+16.81	4.35	631.65	631.96
Y	2294+26.81	4.35	631.63	631.99
Z	2294+36.81	4.35	631.60	632.01
AA	2294+46.81	4.35	631.57	632.01
BB	2294+56.81	4.35	631.55	632.00
CC	2294+66.81	4.35	631.51	631.97
DD	2294+76.81	4.35	631.48	631.92
EE	2294+86.81	4.35	631.44	631.84
FF	2294+96.81	4.35	631.41	631.75
GG	2295+06.81	4.35	631.37	631.65
HH	2295+16.81	4.35	631.33	631.53
II	2295+26.81	4.35	631.28	631.41
JJ	2295+36.81	4.35	631.24	631.30
⊕ Bearing E. Abut.	2295+43.14	4.35	631.20	631.22
Bk. of E. Abutment	2295+45.09	4.35	631.20	631.22

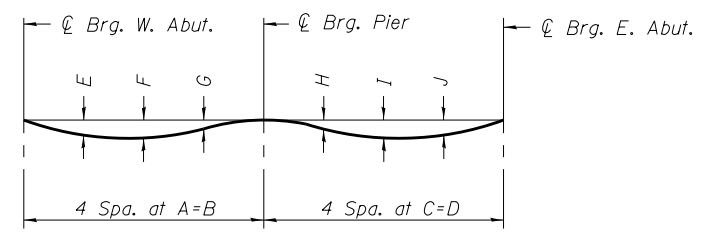
Girder 9 (Line No. 12)

Location	Station	Offset from WB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+59.41	13.35	631.33	631.35
⊕ Bearing W. Abut.	2291+61.37	13.35	631.33	631.35
A	2291+71.37	13.35	631.36	631.44
B	2291+81.37	13.35	631.39	631.53
C	2291+91.37	13.35	631.42	631.61
D	2292+01.37	13.35	631.44	631.68
E	2292+11.37	13.35	631.47	631.74
F	2292+21.37	13.35	631.49	631.78
G	2292+31.37	13.35	631.50	631.81
H	2292+41.37	13.35	631.52	631.81
I	2292+51.37	13.35	631.54	631.81
J	2292+61.37	13.35	631.55	631.79
K	2292+71.37	13.35	631.56	631.76
L	2292+81.37	13.35	631.56	631.73
M	2292+91.37	13.35	631.57	631.69
N	2293+01.37	13.35	631.57	631.66
O	2293+11.37	13.35	631.58	631.63
P	2293+21.37	13.35	631.57	631.61
Q	2293+31.37	13.35	631.57	631.60
⊕ Bearing Pier	2293+41.29	13.35	631.57	631.59
R	2293+51.29	13.35	631.56	631.60
S	2293+61.29	13.35	631.55	631.62
T	2293+71.29	13.35	631.54	631.65
U	2293+81.29	13.35	631.53	631.68
V	2293+91.29	13.35	631.51	631.71
W	2294+01.29	13.35	631.49	631.75
X	2294+11.29	13.35	631.47	631.78
Y	2294+21.29	13.35	631.45	631.81
Z	2294+31.29	13.35	631.43	631.83
AA	2294+41.29	13.35	631.40	631.84
BB	2294+51.29	13.35	631.37	631.83
CC	2294+61.29	13.35	631.34	631.80
DD	2294+71.29	13.35	631.31	631.75
EE	2294+81.29	13.35	631.28	631.68
FF	2294+91.29	13.35	631.24	631.59
GG	2295+01.29	13.35	631.20	631.48
HH	2295+11.29	13.35	631.16	631.36
II	2295+21.29	13.35	631.12	631.24
JJ	2295+31.29	13.35	631.07	631.14
⊕ Bearing E. Abut.	2295+37.62	13.35	631.04	631.06
Bk. of E. Abutment	2295+39.58	13.35	631.03	631.05



LAYOUT PLAN FOR DECK ELEVATIONS

Girder spaces taken at \bar{C} Bridge
 * 4 spaces at 6'-0 5/8" = 24'-2 1/2"
 ** 4 spaces at 9'-0" = 36'-0"
 *** 4 spaces at 9'-7 1/8" = 38'-4 1/2"



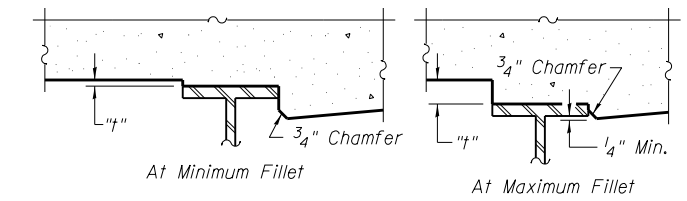
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
 The above deflections are not to be used in the field if the Engineer is working from the theoretical grade elevations adjusted for dead load deflections as shown on sheets 13 thru 17 of 79.

DEAD LOAD DEFLECTION TABLE

	A	B	C	D	E	F	G	H	I	J
Girder 10-13	44'-11 3/4"	179'-11"	49'-1"	196'-4"	2 7/8"	3"	1"	2 1/8"	4 7/8"	4"
Girder 14	44'-11 3/4"	179'-11"	49'-1"	196'-4"	2 7/8"	3"	1"	2 1/8"	4 7/8"	4 1/8"
Girder 15	44'-11 3/4"	179'-11"	49'-1"	196'-4"	2 3/8"	2 3/8"	0 5/8"	2 3/8"	5 1/8"	4 1/4"
Girder 16	44'-8 1/6"	178'-10 3/4"	48'-9 5/8"	195'-2 1/2"	1 3/4"	1 5/8"	0 1/4"	2 1/2"	5 1/4"	4 1/4"
Girder 17	44'-5 5/8"	177'-10 1/2"	48'-6 5/16"	194'-1 1/4"	1 3/4"	1 5/8"	0 1/4"	2 1/2"	5 1/8"	4 1/8"
Girder 18	44'-2 1/6"	176'-10 5/8"	48'-3 1/6"	193'-0 1/4"	1 3/4"	1 5/8"	0 1/4"	2 3/8"	5"	4 1/8"
Girder 19	43'-11 3/4"	175'-10 7/8"	47'-11 7/8"	191'-11 3/8"	1 3/4"	1 5/8"	0 1/4"	2 3/4"	5"	4 1/8"



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding", shown on sheets 13 thru 17 of 79 minus slab thickness prior to grinding, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations". For grinding the deck, see Special Provisions.

FILLET HEIGHTS

Girder 10 (Line No. 13)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+51.27	-13.35	631.30	631.32
⊕ Bearing W. Abut.	2291+53.22	-13.35	631.31	631.33
A	2291+63.22	-13.35	631.34	631.41
B	2291+73.22	-13.35	631.37	631.50
C	2291+83.22	-13.35	631.40	631.59
D	2291+93.22	-13.35	631.42	631.66
E	2292+03.22	-13.35	631.45	631.72
F	2292+13.22	-13.35	631.47	631.76
G	2292+23.22	-13.35	631.49	631.79
H	2292+33.22	-13.35	631.51	631.80
I	2292+43.22	-13.35	631.52	631.79
J	2292+53.22	-13.35	631.54	631.77
K	2292+63.22	-13.35	631.55	631.75
L	2292+73.22	-13.35	631.56	631.72
M	2292+83.22	-13.35	631.57	631.69
N	2292+93.22	-13.35	631.57	631.66
O	2293+03.22	-13.35	631.57	631.63
P	2293+13.22	-13.35	631.58	631.61
Q	2293+23.22	-13.35	631.57	631.60
⊕ Bearing Pier	2293+33.15	-13.35	631.57	631.59
R	2293+43.15	-13.35	631.57	631.61
S	2293+53.15	-13.35	631.56	631.63
T	2293+63.15	-13.35	631.55	631.65
U	2293+73.15	-13.35	631.54	631.69
V	2293+83.15	-13.35	631.52	631.72
W	2293+93.15	-13.35	631.51	631.76
X	2294+03.15	-13.35	631.49	631.80
Y	2294+13.15	-13.35	631.47	631.83
Z	2294+23.15	-13.35	631.45	631.85
AA	2294+33.15	-13.35	631.42	631.86
BB	2294+43.15	-13.35	631.40	631.85
CC	2294+53.15	-13.35	631.37	631.82
DD	2294+63.15	-13.35	631.34	631.77
EE	2294+73.15	-13.35	631.31	631.70
FF	2294+83.15	-13.35	631.27	631.61
GG	2294+93.15	-13.35	631.23	631.51
HH	2295+03.15	-13.35	631.19	631.39
II	2295+13.15	-13.35	631.15	631.28
JJ	2295+23.15	-13.35	631.11	631.17
⊕ Bearing E. Abut.	2295+29.48	-13.35	631.08	631.10
Bk. of E. Abutment	2295+31.43	-13.35	631.07	631.09

Girder 11 (Line No. 14)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+45.75	-4.35	631.47	631.49
⊕ Bearing W. Abut.	2291+47.71	-4.35	631.47	631.49
A	2291+57.71	-4.35	631.51	631.58
B	2291+67.71	-4.35	631.54	631.67
C	2291+77.71	-4.35	631.57	631.76
D	2291+87.71	-4.35	631.60	631.83
E	2291+97.71	-4.35	631.62	631.90
F	2292+07.71	-4.35	631.65	631.94
G	2292+17.71	-4.35	631.67	631.97
H	2292+27.71	-4.35	631.69	631.98
I	2292+37.71	-4.35	631.70	631.97
J	2292+47.71	-4.35	631.72	631.96
K	2292+57.71	-4.35	631.73	631.93
L	2292+67.71	-4.35	631.74	631.90
M	2292+77.71	-4.35	631.75	631.87
N	2292+87.71	-4.35	631.76	631.84
O	2292+97.71	-4.35	631.76	631.82
P	2293+07.71	-4.35	631.76	631.80
Q	2293+17.71	-4.35	631.76	631.79
⊕ Bearing Pier	2293+27.63	-4.35	631.76	631.78
R	2293+37.63	-4.35	631.76	631.80
S	2293+47.63	-4.35	631.75	631.82
T	2293+57.63	-4.35	631.74	631.85
U	2293+67.63	-4.35	631.73	631.88
V	2293+77.63	-4.35	631.72	631.92
W	2293+87.63	-4.35	631.70	631.96
X	2293+97.63	-4.35	631.69	632.00
Y	2294+07.63	-4.35	631.67	632.03
Z	2294+17.63	-4.35	631.65	632.05
AA	2294+27.63	-4.35	631.62	632.06
BB	2294+37.63	-4.35	631.60	632.05
CC	2294+47.63	-4.35	631.57	632.02
DD	2294+57.63	-4.35	631.54	631.98
EE	2294+67.63	-4.35	631.51	631.91
FF	2294+77.63	-4.35	631.48	631.82
GG	2294+87.63	-4.35	631.44	631.72
HH	2294+97.63	-4.35	631.40	631.60
II	2295+07.63	-4.35	631.36	631.49
JJ	2295+17.63	-4.35	631.32	631.38
⊕ Bearing E. Abut.	2295+23.96	-4.35	631.29	631.31
Bk. of E. Abutment	2295+25.92	-4.35	631.29	631.31

EB PGL (Line No. 15)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+43.09	0.00	631.55	631.57
⊕ Bearing W. Abut.	2291+45.04	0.00	631.56	631.58
A	2291+55.04	0.00	631.59	631.66
B	2291+65.04	0.00	631.62	631.75
C	2291+75.04	0.00	631.65	631.84
D	2291+85.04	0.00	631.68	631.92
E	2291+95.04	0.00	631.71	631.98
F	2292+05.04	0.00	631.73	632.02
G	2292+15.04	0.00	631.75	632.05
H	2292+25.04	0.00	631.77	632.06
I	2292+35.04	0.00	631.79	632.06
J	2292+45.04	0.00	631.80	632.04
K	2292+55.04	0.00	631.82	632.02
L	2292+65.04	0.00	631.83	631.99
M	2292+75.04	0.00	631.84	631.96
N	2292+85.04	0.00	631.85	631.93
O	2292+95.04	0.00	631.85	631.91
P	2293+05.04	0.00	631.85	631.89
Q	2293+15.04	0.00	631.85	631.88
⊕ Bearing Pier	2293+24.96	0.00	631.85	631.87
R	2293+34.96	0.00	631.85	631.89
S	2293+44.96	0.00	631.84	631.91
T	2293+54.96	0.00	631.84	631.94
U	2293+64.96	0.00	631.83	631.98
V	2293+74.96	0.00	631.81	632.01
W	2293+84.96	0.00	631.80	632.05
X	2293+94.96	0.00	631.78	632.09
Y	2294+04.96	0.00	631.76	632.12
Z	2294+14.96	0.00	631.74	632.14
AA	2294+24.96	0.00	631.72	632.15
BB	2294+34.96	0.00	631.70	632.15
CC	2294+44.96	0.00	631.67	632.12
DD	2294+54.96	0.00	631.64	632.07
EE	2294+64.96	0.00	631.61	632.01
FF	2294+74.96	0.00	631.58	631.92
GG	2294+84.96	0.00	631.54	631.82
HH	2294+94.96	0.00	631.51	631.71
II	2295+04.96	0.00	631.47	631.59
JJ	2295+14.96	0.00	631.42	631.49
⊕ Bearing E. Abut.	2295+21.30	0.00	631.40	631.42
Bk. of E. Abutment	2295+23.25	0.00	631.39	631.41

Girder 12 (Line No. 16)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+40.24	4.65	631.61	631.63
⊕ Bearing W. Abut.	2291+42.19	4.65	631.62	631.64
A	2291+52.19	4.65	631.65	631.73
B	2291+62.19	4.65	631.69	631.82
C	2291+72.19	4.65	631.72	631.91
D	2291+82.19	4.65	631.75	631.98
E	2291+92.19	4.65	631.77	632.04
F	2292+02.19	4.65	631.80	632.09
G	2292+12.19	4.65	631.82	632.12
H	2292+22.19	4.65	631.84	632.13
I	2292+32.19	4.65	631.86	632.13
J	2292+42.19	4.65	631.87	632.11
K	2292+52.19	4.65	631.89	632.09
L	2292+62.19	4.65	631.90	632.06
M	2292+72.19	4.65	631.91	632.03
N	2292+82.19	4.65	631.92	632.00
O	2292+92.19	4.65	631.92	631.98
P	2293+02.19	4.65	631.92	631.96
Q	2293+12.19	4.65	631.93	631.95
⊕ Bearing Pier	2293+22.11	4.65	631.93	631.95
R	2293+32.11	4.65	631.92	631.97
S	2293+42.11	4.65	631.92	631.99
T	2293+52.11	4.65	631.91	632.02
U	2293+62.11	4.65	631.90	632.05
V	2293+72.11	4.65	631.89	632.09
W	2293+82.11	4.65	631.88	632.13
X	2293+92.11	4.65	631.86	632.17
Y	2294+02.11	4.65	631.84	632.20
Z	2294+12.11	4.65	631.82	632.22
AA	2294+22.11	4.65	631.80	632.23
BB	2294+32.11	4.65	631.78	632.23
CC	2294+42.11	4.65	631.75	632.20
DD	2294+52.11	4.65	631.72	632.15
EE	2294+62.11	4.65	631.69	632.09
FF	2294+72.11	4.65	631.66	632.00
GG	2294+82.11	4.65	631.63	631.90
HH	2294+92.11	4.65	631.59	631.79
II	2295+02.11	4.65	631.55	631.67
JJ	2295+12.11	4.65	631.51	631.57
⊕ Bearing E. Abut.	2295+18.45	4.65	631.48	631.50
Bk. of E. Abutment	2295+20.40	4.65	631.47	631.49

Girder 13 (Line No. 17)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+34.27	13.65	631.73	631.75
⊕ Bearing W. Abut.	2291+36.68	13.65	631.74	631.76
A	2291+46.68	13.65	631.77	631.85
B	2291+56.68	13.65	631.81	631.94
C	2291+66.68	13.65	631.84	632.03
D	2291+76.68	13.65	631.87	632.11
E	2291+86.68	13.65	631.90	632.17
F	2291+96.68	13.65	631.92	632.22
G	2292+06.68	13.65	631.95	632.25
H	2292+16.68	13.65	631.97	632.26
I	2292+26.68	13.65	631.99	632.26
J	2292+36.68	13.65	632.01	632.24
K	2292+46.68	13.65	632.02	632.22
L	2292+56.68	13.65	632.03	632.19
M	2292+66.68	13.65	632.04	632.17
N	2292+76.68	13.65	632.05	632.14
O	2292+86.68	13.65	632.06	632.12
P	2292+96.68	13.65	632.06	632.10
Q	2293+06.68	13.65	632.07	632.09
⊕ Bearing Pier	2293+16.60	13.65	632.07	632.09
R	2293+26.60	13.65	632.07	632.11
S	2293+36.60	13.65	632.06	632.13
T	2293+46.60	13.65	632.06	632.16
U	2293+56.60	13.65	632.05	632.20
V	2293+66.60	13.65	632.04	632.24
W	2293+76.60	13.65	632.02	632.28
X	2293+86.60	13.65	632.01	632.32
Y	2293+96.60	13.65	631.99	632.35
Z	2294+06.60	13.65	631.97	632.38
AA	2294+16.60	13.65	631.95	632.39
BB	2294+26.60	13.65	631.93	632.38
CC	2294+36.60	13.65	631.91	632.36
DD	2294+46.60	13.65	631.88	632.31
EE	2294+56.60	13.65	631.85	632.25
FF	2294+66.60	13.65	631.82	632.16
GG	2294+76.60	13.65	631.79	632.06
HH	2294+86.60	13.65	631.75	631.95
II	2294+96.60	13.65	631.71	631.84
JJ	2295+06.60	13.65	631.67	631.73
⊕ Bearing E. Abut.	2295+12.93	13.65	631.65	631.67
Bk. of E. Abutment	2295+14.89	13.65	631.64	631.66

Stage I Construction Joint (Line No. 18)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+33.28	16.00	631.76	631.78
⊕ Bearing W. Abut.	2291+35.24	16.00	631.77	631.79
A	2291+45.24	16.00	631.81	631.88
B	2291+55.24	16.00	631.84	631.97
C	2291+65.24	16.00	631.87	632.06
D	2291+75.24	16.00	631.90	632.14
E	2291+85.24	16.00	631.93	632.20
F	2291+95.24	16.00	631.96	632.25
G	2292+05.24	16.00	631.98	632.28
H	2292+15.24	16.00	632.00	632.29
I	2292+25.24	16.00	632.02	632.29
J	2292+35.24	16.00	632.04	632.28
K	2292+45.24	16.00	632.05	632.26
L	2292+55.24	16.00	632.07	632.23
M	2292+65.24	16.00	632.08	632.20
N	2292+75.24	16.00	632.09	632.17
O	2292+85.24	16.00	632.10	632.15
P	2292+95.24	16.00	632.10	632.14
Q	2293+05.24	16.00	632.10	632.13
⊕ Bearing Pier	2293+15.16	16.00	632.10	632.12
R	2293+25.16	16.00	632.10	632.15
S	2293+35.16	16.00	632.10	632.17
T	2293+45.16	16.00	632.09	632.20
U	2293+55.16	16.00	632.09	632.23
V	2293+65.16	16.00	632.08	632.28
W	2293+75.16	16.00	632.06	632.32
X	2293+85.16	16.00	632.05	632.36
Y	2293+95.16	16.00	632.03	632.39
Z	2294+05.16	16.00	632.01	632.41
AA	2294+15.16	16.00	631.99	632.43
BB	2294+25.16	16.00	631.97	632.42
CC	2294+35.16	16.00	631.95	632.40
DD	2294+45.16	16.00	631.92	632.35
EE	2294+55.16	16.00	631.89	632.29
FF	2294+65.16	16.00	631.86	632.20
GG	2294+75.16	16.00	631.83	632.10
HH	2294+85.16	16.00	631.79	631.99
II	2294+95.16	16.00	631.75	631.88
JJ	2295+05.16	16.00	631.71	631.78
⊕ Bearing E. Abut.	2295+11.49	16.00	631.69	631.71
Bk. of E. Abutment	2295+13.44	16.00	631.68	631.70

Stage II Construction Joint (Line No. 19)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+31.29	19.25	631.81	631.83
⊕ Bearing W. Abut.	2291+33.24	19.25	631.81	631.83
A	2291+43.24	19.25	631.85	631.92
B	2291+53.24	19.25	631.88	632.02
C	2291+63.24	19.25	631.92	632.11
D	2291+73.24	19.25	631.95	632.19
E	2291+83.24	19.25	631.98	632.25
F	2291+93.24	19.25	632.00	632.30
G	2292+03.24	19.25	632.03	632.33
H	2292+13.24	19.25	632.05	632.34
I	2292+23.24	19.25	632.07	632.34
J	2292+33.24	19.25	632.09	632.32
K	2292+43.24	19.25	632.10	632.30
L	2292+53.24	19.25	632.12	632.28
M	2292+63.24	19.25	632.13	632.25
N	2292+73.24	19.25	632.14	632.22
O	2292+83.24	19.25	632.14	632.20
P	2292+93.24	19.25	632.15	632.19
Q	2293+03.24	19.25	632.15	632.18
⊕ Bearing Pier	2293+13.17	19.25	632.15	632.17
R	2293+23.17	19.25	632.15	632.20
S	2293+33.17	19.25	632.15	632.22
T	2293+43.17	19.25	632.14	632.25
U	2293+53.17	19.25	632.14	632.29
V	2293+63.17	19.25	632.13	632.33
W	2293+73.17	19.25	632.12	632.37
X	2293+83.17	19.25	632.10	632.41
Y	2293+93.17	19.25	632.09	632.44
Z	2294+03.17	19.25	632.07	632.47
AA	2294+13.17	19.25	632.05	632.48
BB	2294+23.17	19.25	632.03	632.48
CC	2294+33.17	19.25	632.00	632.45
DD	2294+43.17	19.25	631.98	632.41
EE	2294+53.17	19.25	631.95	632.34
FF	2294+63.17	19.25	631.92	632.26
GG	2294+73.17	19.25	631.88	632.16
HH	2294+83.17	19.25	631.85	632.05
II	2294+93.17	19.25	631.81	631.94
JJ	2295+03.17	19.25	631.77	631.84
⊕ Bearing E. Abut.	2295+09.50	19.25	631.75	631.77
Bk. of E. Abutment	2295+11.45	19.25	631.74	631.76

Girder 14 (Line No. 20)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+29.21	22.65	631.85	631.87
⊕ Bearing W. Abut.	2291+31.16	22.65	631.86	631.88
A	2291+41.16	22.65	631.90	631.97
B	2291+51.16	22.65	631.93	632.06
C	2291+61.16	22.65	631.96	632.16
D	2291+71.16	22.65	631.99	632.23
E	2291+81.16	22.65	632.02	632.30
F	2291+91.16	22.65	632.05	632.35
G	2292+01.16	22.65	632.07	632.38
H	2292+11.16	22.65	632.10	632.39
I	2292+21.16	22.65	632.12	632.39
J	2292+31.16	22.65	632.14	632.38
K	2292+41.16	22.65	632.15	632.36
L	2292+51.16	22.65	632.17	632.33
M	2292+61.16	22.65	632.18	632.30
N	2292+71.16	22.65	632.19	632.28
O	2292+81.16	22.65	632.20	632.25
P	2292+91.16	22.65	632.20	632.24
Q	2293+01.16	22.65	632.21	632.23
⊕ Bearing Pier	2293+11.08	22.65	632.21	632.23
R	2293+21.08	22.65	632.21	632.25
S	2293+31.08	22.65	632.20	632.27
T	2293+41.08	22.65	632.20	632.31
U	2293+51.08	22.65	632.19	632.34
V	2293+61.08	22.65	632.18	632.39
W	2293+71.08	22.65	632.17	632.43
X	2293+81.08	22.65	632.16	632.47
Y	2293+91.08	22.65	632.14	632.51
Z	2294+01.08	22.65	632.13	632.53
AA	2294+11.08	22.65	632.11	632.54
BB	2294+21.08	22.65	632.08	632.54
CC	2294+31.08	22.65	632.06	632.52
DD	2294+41.08	22.65	632.03	632.47
EE	2294+51.08	22.65	632.01	632.41
FF	2294+61.08	22.65	631.98	632.32
GG	2294+71.08	22.65	631.94	632.22
HH	2294+81.08	22.65	631.91	632.11
II	2294+91.08	22.65	631.87	632.00
JJ	2295+01.08	22.65	631.83	631.90
⊕ Bearing E. Abut.	2295+07.42	22.65	631.81	631.83
Bk. of E. Abutment	2295+09.37	22.65	631.80	631.82

Girder 15 (Line No. 21)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+23.54	31.90	631.73	631.75
⊕ Bearing W. Abut.	2291+25.49	31.90	631.73	631.75
A	2291+35.49	31.90	631.77	631.84
B	2291+45.49	31.90	631.81	631.92
C	2291+55.49	31.90	631.84	632.00
D	2291+65.49	31.90	631.87	632.08
E	2291+75.49	31.90	631.91	632.14
F	2291+85.49	31.90	631.93	632.18
G	2291+95.49	31.90	631.96	632.21
H	2292+05.49	31.90	631.98	632.22
I	2292+15.49	31.90	632.00	632.22
J	2292+25.49	31.90	632.02	632.22
K	2292+35.49	31.90	632.04	632.20
L	2292+45.49	31.90	632.06	632.18
M	2292+55.49	31.90	632.07	632.16
N	2292+65.49	31.90	632.08	632.14
O	2292+75.49	31.90	632.09	632.13
P	2292+85.49	31.90	632.10	632.12
Q	2292+95.49	31.90	632.10	632.12
⊕ Bearing Pier	2293+05.42	31.90	632.10	632.12
R	2293+15.42	31.90	632.11	632.15
S	2293+25.42	31.90	632.10	632.18
T	2293+35.42	31.90	632.10	632.22
U	2293+45.42	31.90	632.09	632.26
V	2293+55.42	31.90	632.09	632.31
W	2293+65.42	31.90	632.08	632.35
X	2293+75.42	31.90	632.06	632.40
Y	2293+85.42	31.90	632.05	632.43
Z	2293+95.42	31.90	632.03	632.46
AA	2294+05.42	31.90	632.02	632.47
BB	2294+15.42	31.90	632.00	632.47
CC	2294+25.42	31.90	631.97	632.44
DD	2294+35.42	31.90	631.95	632.40
EE	2294+45.42	31.90	631.92	632.33
FF	2294+55.42	31.90	631.89	632.25
GG	2294+65.42	31.90	631.86	632.15
HH	2294+75.42	31.90	631.83	632.04
II	2294+85.42	31.90	631.79	631.92
JJ	2294+95.42	31.90	631.75	631.82
⊕ Bearing E. Abut.	2295+01.75	31.90	631.73	631.75
Bk. of E. Abutment	2295+03.70	31.90	631.72	631.74

Girder 16 (Line No. 22)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+19.84	37.93	631.62	631.64
⊕ Bearing W. Abut.	2291+21.78	37.95	631.62	631.64
A	2291+31.73	38.04	631.66	631.71
B	2291+41.67	38.14	631.70	631.79
C	2291+51.61	38.23	631.73	631.86
D	2291+61.55	38.33	631.76	631.92
E	2291+71.50	38.42	631.79	631.97
F	2291+81.44	38.51	631.82	632.01
G	2291+91.38	38.61	631.84	632.03
H	2292+01.32	38.70	631.87	632.05
I	2292+11.27	38.80	631.89	632.05
J	2292+21.21	38.89	631.91	632.04
K	2292+31.15	38.98	631.92	632.03
L	2292+41.09	39.08	631.94	632.02
M	2292+51.04	39.17	631.95	632.00
N	2292+60.98	39.27	631.96	631.99
O	2292+70.92	39.36	631.97	631.99
P	2292+80.86	39.46	631.98	631.99
Q	2292+90.80	39.55	631.98	631.99
⊕ Bearing Pier	2293+00.67	39.64	631.98	632.00
R	2293+10.61	39.74	631.98	632.04
S	2293+20.55	39.83	631.98	632.07
T	2293+30.50	39.92	631.98	632.11
U	2293+40.44	40.02	631.97	632.15
V	2293+50.38	40.11	631.96	632.20
W	2293+60.32	40.21	631.95	632.24
X	2293+70.27	40.30	631.94	632.28
Y	2293+80.21	40.39	631.93	632.32
Z	2293+90.15	40.49	631.91	632.34
AA	2294+00.09	40.58	631.89	632.35
BB	2294+10.03	40.68	631.87	632.34
CC	2294+19.98	40.77	631.85	632.32
DD	2294+29.92	40.87	631.82	632.27
EE	2294+39.86	40.96	631.79	632.21
FF	2294+49.80	41.05	631.77	632.12
GG	2294+59.75	41.15	631.73	632.02
HH	2294+69.69	41.24	631.70	631.91
II	2294+79.63	41.34	631.67	631.80
JJ	2294+89.57	41.43	631.63	631.69
⊕ Bearing E. Abut.	2294+95.87	41.49	631.60	631.62
Bk. of E. Abutment	2294+97.81	41.51	631.60	631.62

Girder 17 (Line No. 23)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+16.14	43.97	631.51	631.53
⊕ Bearing W. Abut.	2291+18.07	44.00	631.51	631.53
A	2291+27.96	44.19	631.55	631.60
B	2291+37.84	44.38	631.59	631.68
C	2291+47.73	44.57	631.62	631.74
D	2291+57.61	44.76	631.65	631.81
E	2291+67.50	44.95	631.68	631.86
F	2291+77.38	45.13	631.70	631.89
G	2291+87.27	45.32	631.73	631.92
H	2291+97.15	45.51	631.75	631.93
I	2292+07.04	45.70	631.77	631.93
J	2292+16.92	45.89	631.79	631.92
K	2292+26.81	46.07	631.80	631.91
L	2292+36.69	46.26	631.82	631.90
M	2292+46.58	46.45	631.83	631.88
N	2292+56.46	46.64	631.84	631.87
O	2292+66.35	46.83	631.85	631.87
P	2292+76.23	47.01	631.85	631.87
Q	2292+86.11	47.20	631.86	631.87
⊕ Bearing Pier	2292+95.92	47.39	631.86	631.88
R	2293+05.81	47.58	631.86	631.91
S	2293+15.69	47.77	631.86	631.94
T	2293+25.58	47.95	631.85	631.98
U	2293+35.46	48.14	631.85	632.02
V	2293+45.35	48.33	631.84	632.07
W	2293+55.23	48.52	631.83	632.11
X	2293+65.11	48.71	631.81	632.15
Y	2293+75.00	48.89	631.80	632.18
Z	2293+84.88	49.08	631.78	632.21
AA	2293+94.77	49.27	631.76	632.22
BB	2294+04.65	49.46	631.74	632.21
CC	2294+14.54	49.65	631.72	632.18
DD	2294+24.42	49.83	631.69	632.14
EE	2294+34.31	50.02	631.67	632.07
FF	2294+44.19	50.21	631.64	631.99
GG	2294+54.08	50.40	631.61	631.89
HH	2294+63.96	50.59	631.57	631.78
II	2294+73.85	50.78	631.54	631.67
JJ	2294+83.73	50.96	631.50	631.57
⊕ Bearing E. Abut.	2294+89.99	51.08	631.48	631.50
Bk. of E. Abutment	2294+91.92	51.12	631.47	631.49

Girder 18 (Line No. 24)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+12.44	50.00	631.39	631.41
⊕ Bearing W. Abut.	2291+14.36	50.06	631.39	631.41
A	2291+24.19	50.34	631.43	631.48
B	2291+34.02	50.62	631.46	631.55
C	2291+43.85	50.91	631.49	631.62
D	2291+53.67	51.19	631.52	631.67
E	2291+63.50	51.47	631.54	631.72
F	2291+73.33	51.75	631.57	631.76
G	2291+83.15	52.03	631.59	631.78
H	2291+92.98	52.32	631.61	631.79
I	2292+02.81	52.60	631.63	631.79
J	2292+12.64	52.88	631.65	631.78
K	2292+22.46	53.16	631.66	631.76
L	2292+32.29	53.45	631.67	631.75
M	2292+42.12	43.73	631.68	631.73
N	2292+51.94	54.01	631.69	631.72
O	2292+61.77	54.29	631.70	631.72
P	2292+71.60	54.57	631.71	631.72
Q	2292+81.42	54.86	631.71	631.73
⊕ Bearing Pier	2292+91.17	55.14	631.72	631.74
R	2293+01.00	55.42	631.72	631.77
S	2293+10.83	55.70	631.72	631.80
T	2293+20.66	55.98	631.71	631.84
U	2293+30.48	56.26	631.71	631.88
V	2293+40.31	56.55	631.70	631.93
W	2293+50.14	56.83	631.69	631.97
X	2293+59.96	57.11	631.68	632.02
Y	2293+69.79	57.39	631.67	632.05
Z	2293+79.62	57.68	631.65	632.07
AA	2293+89.45	57.96	631.64	632.08
BB	2293+99.27	58.24	631.62	632.08
CC	2294+09.10	58.52	631.59	632.05
DD	2294+18.93	58.80	631.57	632.01
EE	2294+28.75	59.09	631.54	631.94
FF	2294+38.58	59.37	631.51	631.86
GG	2294+48.41	59.65	631.48	631.76
HH	2294+58.23	59.93	631.45	631.65
II	2294+68.06	60.21	631.41	631.54
JJ	2294+77.89	60.50	631.37	631.44
⊕ Bearing E. Abut.	2294+84.11	60.68	631.35	631.37
Bk. of E. Abutment	2294+86.03	60.73	631.34	631.36

Girder 19 (Line No. 25)

Location	Station	Offset from EB PGL F.A.I. 57/70	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection & Grinding
Bk. of W. Abutment	2291+08.74	56.04	631.24	631.26
⊙ Bearing W. Abut.	2291+10.65	56.11	631.25	631.27
A	2291+20.42	56.49	631.28	631.34
B	2291+30.19	56.87	631.32	631.40
C	2291+39.96	57.24	631.34	631.47
D	2291+49.73	57.62	631.37	631.53
E	2291+59.50	57.99	631.40	631.57
F	2291+69.27	58.37	631.42	631.61
G	2291+79.04	58.75	631.44	631.63
H	2291+88.81	59.12	631.46	631.63
I	2291+98.58	59.50	631.48	631.63
J	2292+08.35	59.88	631.49	631.62
K	2292+18.12	60.25	631.50	631.61
L	2292+27.89	60.63	631.51	631.59
M	2292+37.66	61.00	631.52	631.58
N	2292+47.43	61.38	631.53	631.56
O	2292+57.20	61.76	631.54	631.56
P	2292+66.97	62.13	631.54	631.56
Q	2292+76.73	62.51	631.55	631.56
⊙ Bearing Pier	2292+86.43	62.88	631.55	631.57
R	2292+96.20	63.26	631.55	631.60
S	2293+05.97	63.63	631.55	631.63
T	2293+15.74	64.01	631.55	631.67
U	2293+25.51	64.39	631.54	631.71
V	2293+35.27	64.76	631.53	631.75
W	2293+45.04	65.14	631.52	631.80
X	2293+54.81	65.52	631.51	631.84
Y	2293+64.58	65.89	631.50	631.87
Z	2293+74.35	66.27	631.48	631.89
AA	2293+84.12	66.64	631.46	631.91
BB	2293+93.89	67.02	631.44	631.90
CC	2294+03.66	67.40	631.42	631.88
DD	2294+13.43	67.77	631.40	631.84
EE	2294+23.20	68.15	631.37	631.78
FF	2294+32.97	68.53	631.34	631.70
GG	2294+42.74	68.90	631.31	631.61
HH	2294+52.51	69.28	631.28	631.50
II	2294+62.28	69.65	631.25	631.39
JJ	2294+72.05	70.03	631.21	631.29
⊙ Bearing E. Abut.	2294+78.23	70.27	631.19	631.21
Bk. of E. Abutment	2294+80.14	70.34	631.18	631.20

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+74.36	-58.08	631.44	631.46
WA	2291+84.36	-58.08	631.47	631.49
WB	2291+94.36	-58.08	631.49	631.52
E. End of West Approach	2292+04.36	-58.08	631.52	631.54

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+68.18	-48.00	631.63	631.65
WA	2291+78.18	-48.00	631.66	631.68
WB	2291+88.18	-48.00	631.69	631.71
E. End of West Approach	2291+98.18	-48.00	631.71	631.73

WB F.A.I. 57/70

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+53.48	-24.00	631.96	631.98
WA	2291+63.48	-24.00	631.99	632.01
WB	2291+73.48	-24.00	632.02	632.04
E. End of West Approach	2291+83.48	-24.00	632.05	632.07

STAGE CONSTRUCTION LINE

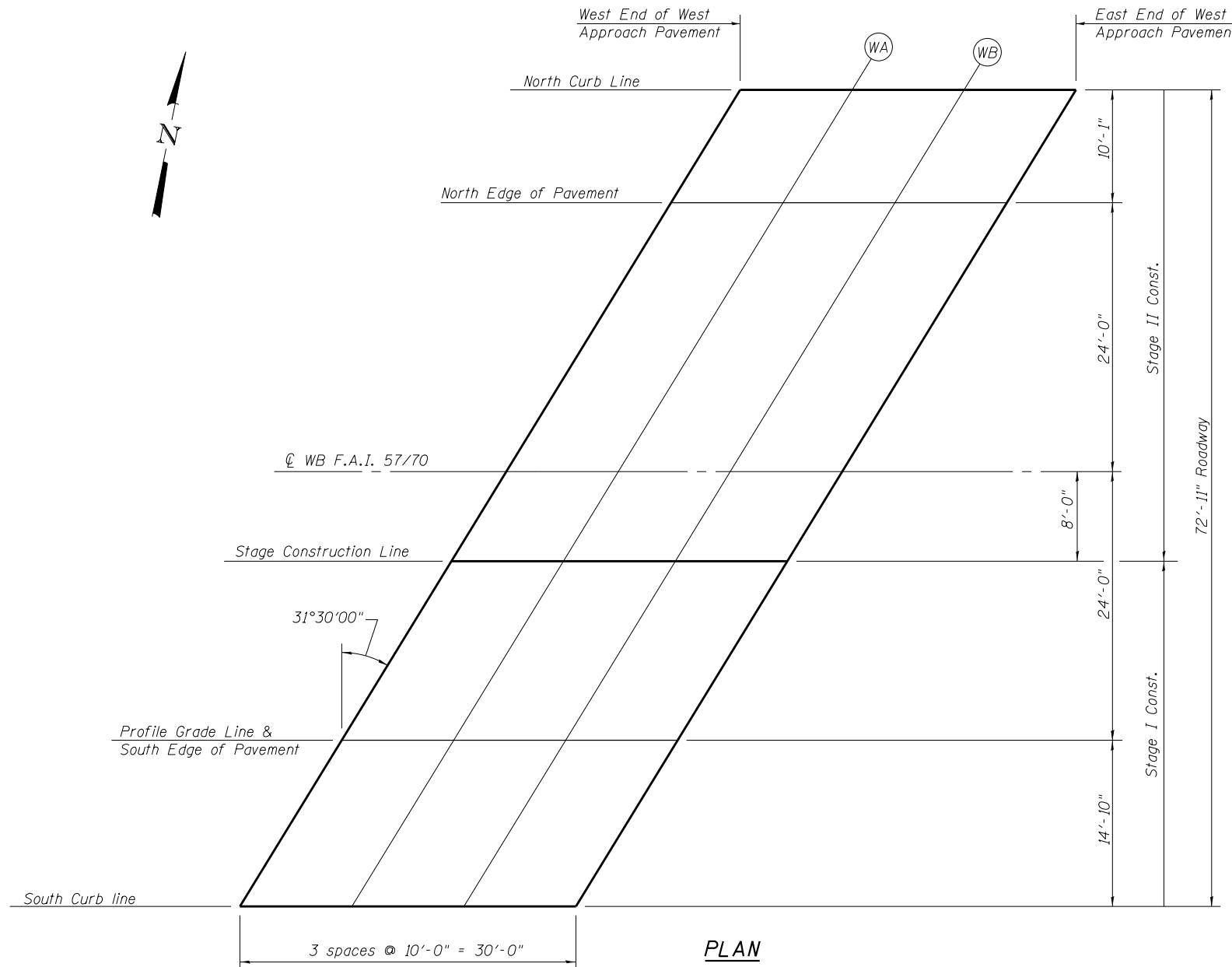
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+48.58	-16.00	631.82	631.84
WA	2291+58.58	-16.00	631.85	631.87
WB	2291+68.58	-16.00	631.88	631.90
E. End of West Approach	2291+78.58	-16.00	631.91	631.93

PROFILE GRADE LINE & SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+38.77	0.00	631.53	631.55
WA	2291+48.77	0.00	631.57	631.59
WB	2291+58.77	0.00	631.60	631.62
E. End of West Approach	2291+68.77	0.00	631.63	631.65

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+29.68	14.83	631.19	631.21
WA	2291+39.68	14.83	631.23	631.25
WB	2291+49.68	14.83	631.26	631.28
E. End of West Approach	2291+59.68	14.83	631.30	631.32



PLAN

FILE NAME = 025011-74295-018-West Appr Slab	DESIGNED - BB	REVISIONS
BERNARDSON * LOCHMUELLER & ASSOCIATES, INC.	CHECKED - ACS	REVISIONS
3 OAK DRIVE	DRAWN - WJS	REVISIONS
MARYVILLE, ILLINOIS 62962	CHECKED - CJF	REVISIONS
PHONE (618) 285-4665		
FAX (618) 285-4666		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF WEST APPROACH SLAB ELEVATIONS (WB)
STRUCTURE NO. 025-0111**

SHEET NO. 18 OF 79 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4HVB-1)BY	EFFINGHAM	1760	553
CONTRACT NO. 74295				
ILLINOIS FED. AID PROJECT				

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+84.75	-62.29	630.81	630.83
EA	2295+94.86	-62.47	630.75	630.77
EB	2296+04.97	-62.65	630.68	630.71
E. End of East Approach	2296+15.08	-62.84	630.62	630.64

NORTH EDGE OF PAVEMENT & C OF RAMP A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+79.76	-54.15	631.01	631.03
EA	2295+89.88	-54.35	630.95	630.97
EB	2295+99.45	-54.54	630.89	630.91
E. End of East Approach	2296+10.12	-54.74	630.82	630.84

SOUTH EDGE OF RAMP A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+69.85	-37.96	631.31	631.34
EA	2295+79.96	-38.15	631.26	631.28
EB	2295+90.08	-38.35	631.20	631.22
E. End of East Approach	2296+00.20	-38.54	631.13	631.15

C WB F.A.I. 57/70

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+61.29	-24.00	631.58	631.60
EA	2295+71.29	-24.00	631.53	631.55
EB	2295+81.29	-24.00	631.47	631.49
E. End of East Approach	2295+91.29	-24.00	631.41	631.43

STAGE CONSTRUCTION LINE

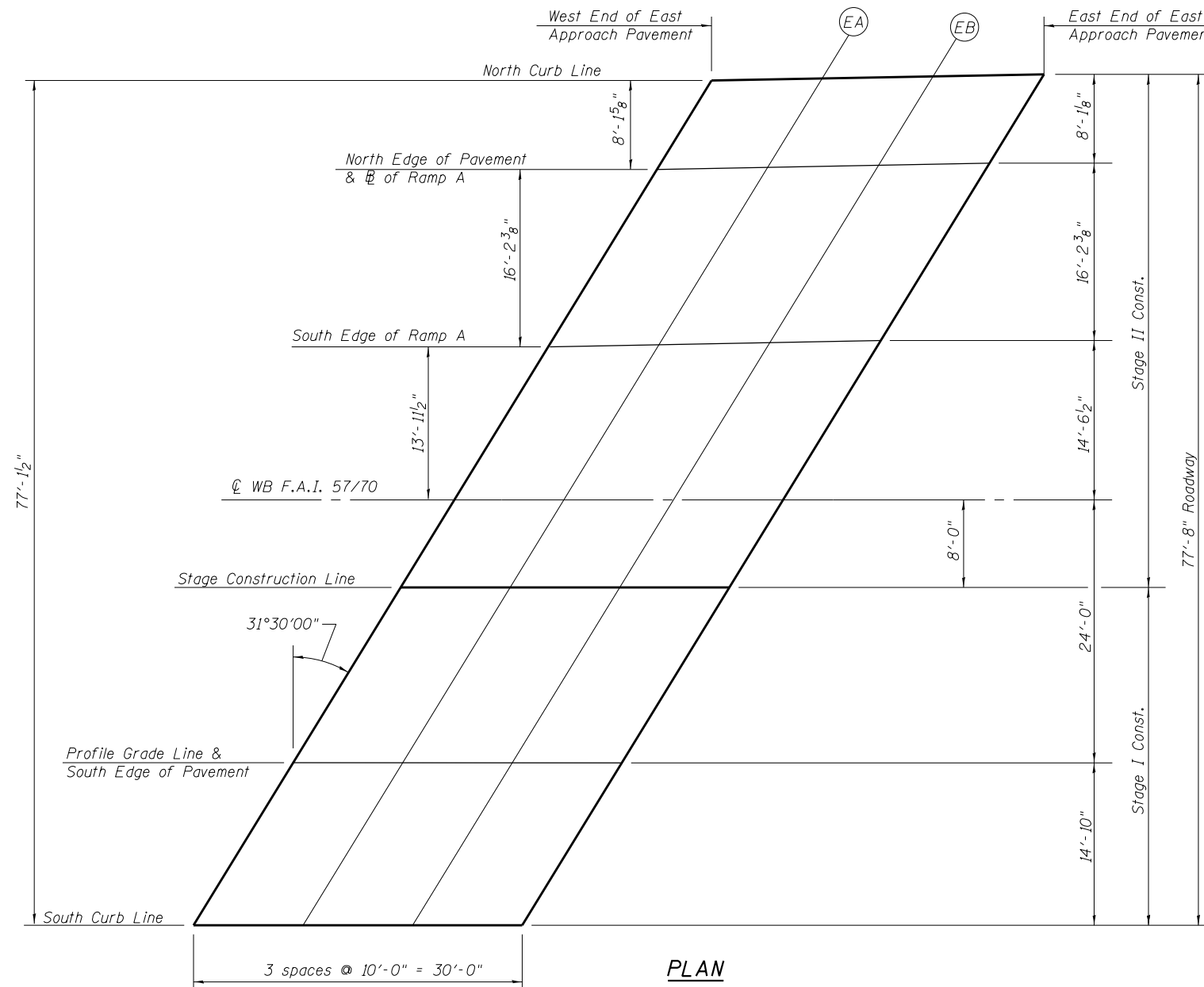
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+56.39	-16.00	631.48	631.50
EA	2295+66.39	-16.00	631.43	631.45
EB	2295+76.39	-16.00	631.37	631.39
E. End of East Approach	2295+86.39	-16.00	631.32	631.34

PROFILE GRADE LINE & SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+46.59	0.00	631.28	631.30
EA	2295+56.59	0.00	631.23	631.25
EB	2295+66.59	0.00	631.18	631.20
E. End of East Approach	2295+76.58	0.00	631.12	631.14

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+37.50	14.83	631.01	631.03
EA	2295+47.50	14.83	630.97	630.99
EB	2295+57.50	14.83	630.91	630.94
E. End of East Approach	2295+67.50	14.83	630.86	630.88



PLAN

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+23.35	-14.83	631.16	631.18
WA	2291+33.35	-14.83	631.20	631.22
WB	2291+43.35	-14.83	631.24	631.26
E. End of West Approach	2291+53.35	-14.83	631.27	631.30

PROFILE GRADE LINE & NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+14.26	0.00	631.44	631.46
WA	2291+24.26	0.00	631.48	631.50
WB	2291+34.26	0.00	631.52	631.54
E. End of West Approach	2291+44.26	0.00	631.55	631.57

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2291+04.46	16.00	631.64	631.66
WA	2291+14.46	16.00	631.69	631.71
WB	2291+24.46	16.00	631.73	631.75
E. End of West Approach	2291+34.46	16.00	631.77	631.79

EB F.A.I. 57/70

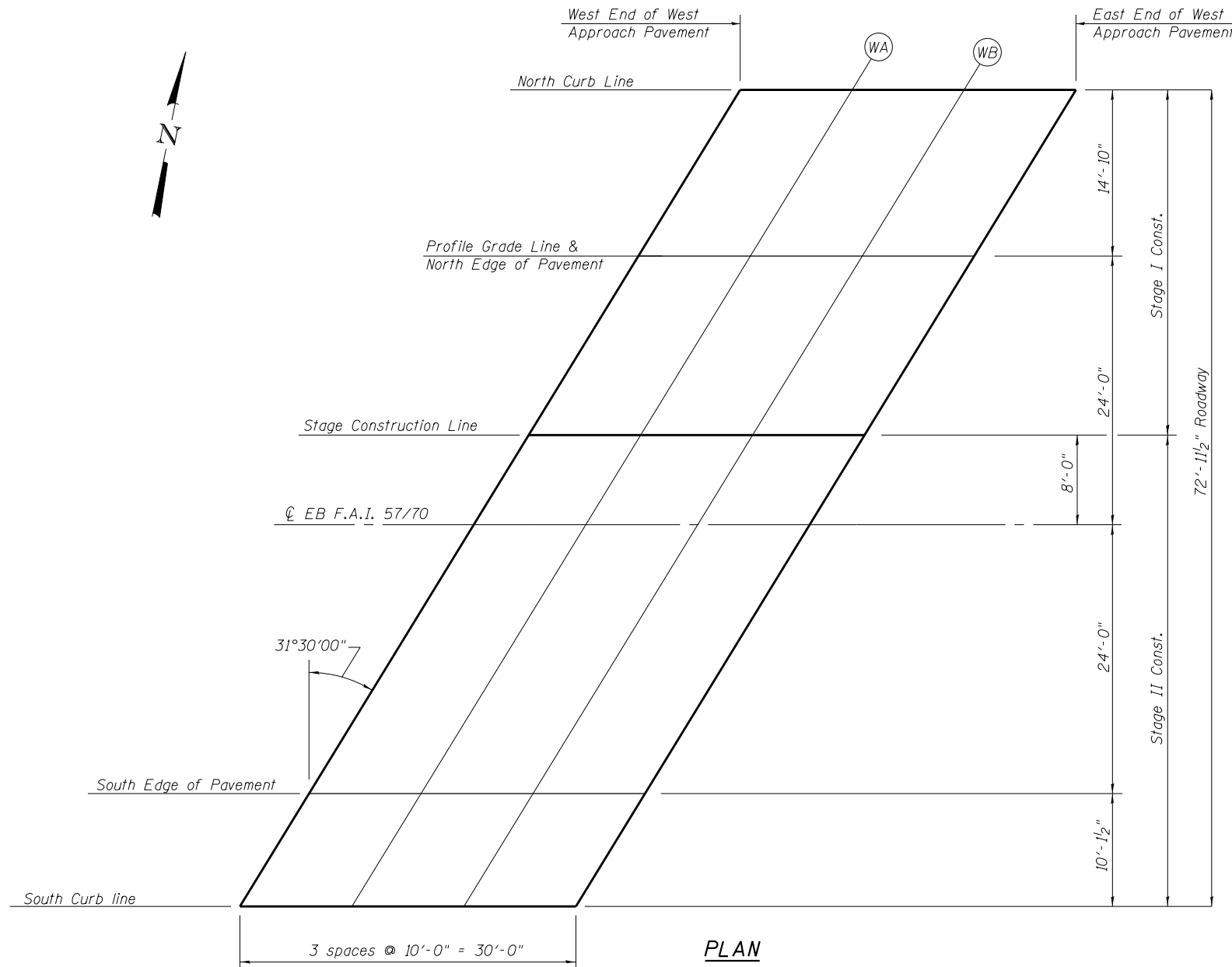
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2290+99.56	24.00	631.75	631.77
WA	2291+09.56	24.00	631.79	631.81
WB	2291+19.56	24.00	631.83	631.85
E. End of West Approach	2291+29.56	24.00	631.87	631.89

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2290+84.86	48.00	631.30	631.32
WA	2290+94.86	48.00	631.35	631.37
WB	2291+04.86	48.00	631.40	631.42
E. End of West Approach	2291+14.86	48.00	631.44	631.46

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of West Approach	2290+78.66	58.12	631.06	631.08
WA	2290+88.66	58.12	631.11	631.13
WB	2290+98.66	58.12	631.16	631.18
E. End of West Approach	2291+08.66	58.12	631.20	631.22



PLAN

FILE NAME = 025011-74295-020-West Appr Slab	DESIGNED - BB	REVISED
Illinois Design Firm Number 184.001670	CHECKED - ACS	REVISED
PLOT SCALE =	DRAWN - WJS	REVISED
PLOT DATE = 3:25:35 PM 8/14/2013	CHECKED - CJF	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF WEST APPROACH SLAB ELEVATIONS (EB)
STRUCTURE NO. 025-0112**

SHEET NO. 20 OF 79 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4HVB-1)BY	EFFINGHAM	1760	555
CONTRACT NO. 74295			ILLINOIS FED. AID PROJECT	

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+31.17	-14.83	631.04	631.06
EA	2295+41.17	-14.83	631.00	631.02
EB	2295+51.17	-14.83	630.95	630.97
E. End of East Approach	2295+61.17	-14.83	630.90	630.92

PROFILE GRADE LINE & NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+22.08	0.00	631.39	631.41
EA	2295+32.08	0.00	631.35	631.37
EB	2295+42.08	0.00	631.30	631.32
E. End of East Approach	2295+52.08	0.00	631.25	631.27

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+12.27	16.00	631.69	631.71
EA	2295+22.27	16.00	631.64	631.66
EB	2295+32.27	16.00	631.60	631.62
E. End of East Approach	2295+42.27	16.00	631.55	631.57

EB F.A.I. 57/70

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2295+07.37	24.00	631.83	631.85
EA	2295+17.37	24.00	631.79	631.81
EB	2295+27.37	24.00	631.74	631.77
E. End of East Approach	2295+37.37	24.00	631.70	631.72

NORTH EDGE OF RAMP C

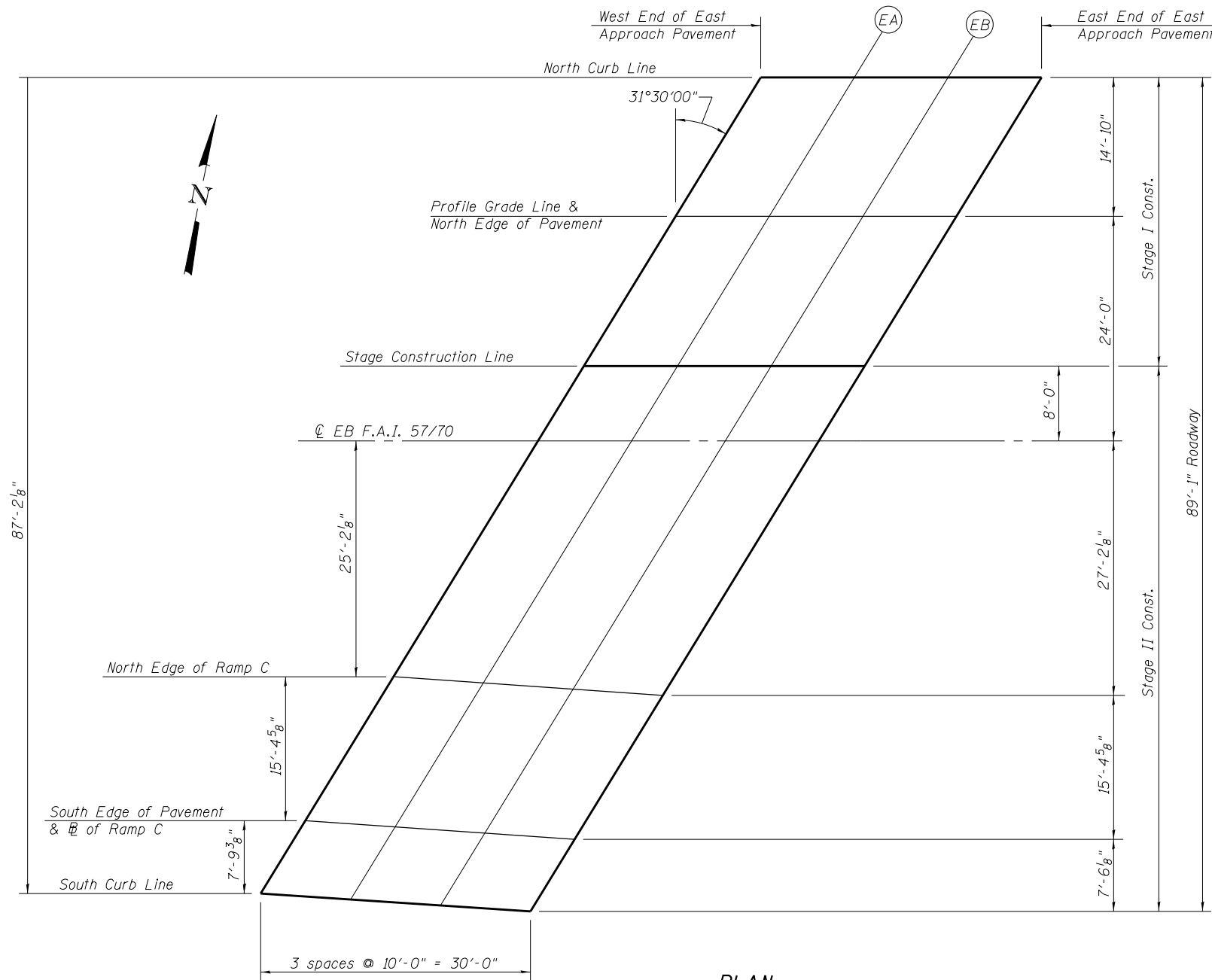
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2294+91.94	49.17	631.50	631.52
EA	2295+01.53	49.84	631.45	631.47
EB	2295+11.12	50.51	631.40	631.42
E. End of East Approach	2295+20.72	51.18	631.35	631.37

SOUTH EDGE OF PAVEMENT & EB OF RAMP C

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2294+82.52	64.56	631.29	631.31
EA	2294+92.11	65.23	631.25	631.27
EB	2295+01.70	65.89	631.20	631.22
E. End of East Approach	2295+11.29	66.56	631.15	631.17

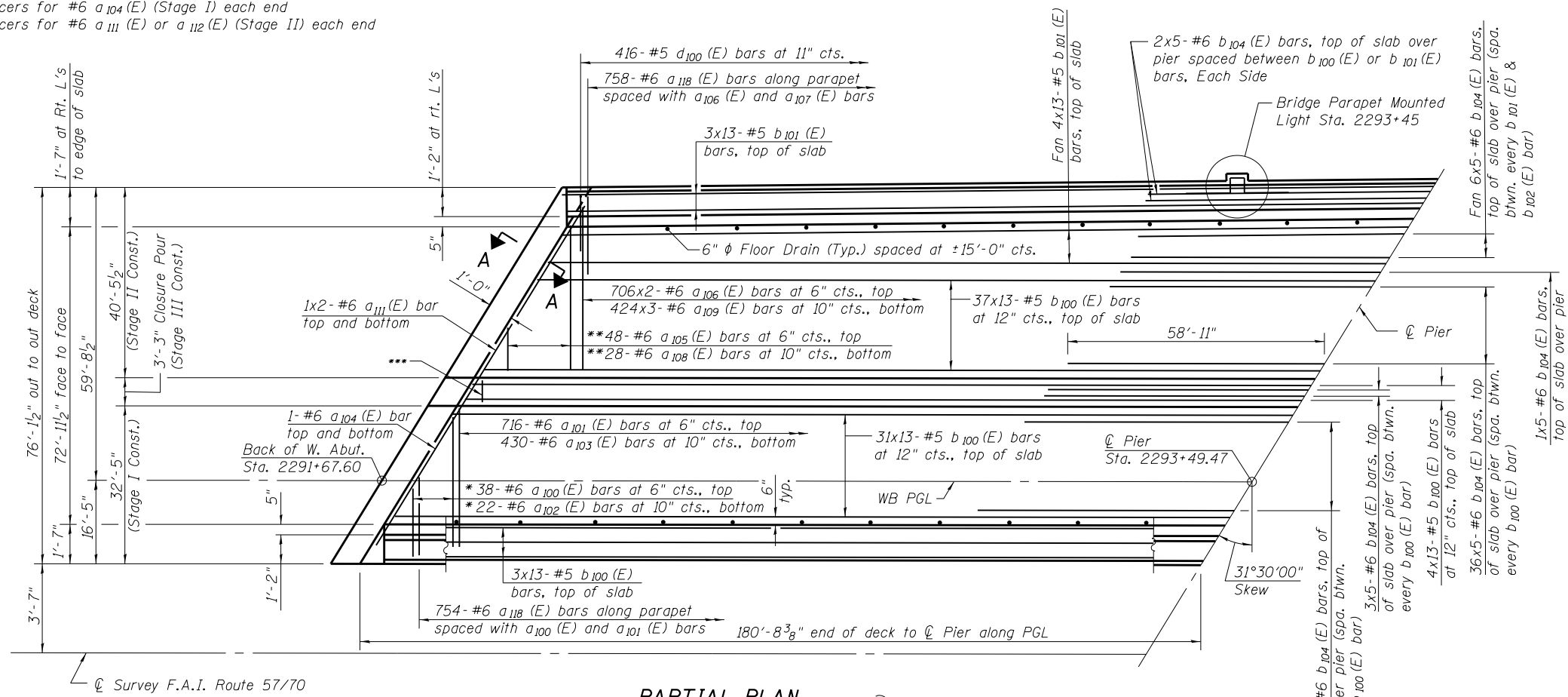
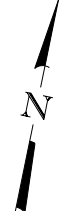
SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of East Approach	2294+77.75	72.34	631.15	631.17
EA	2294+87.36	72.97	631.10	631.12
EB	2294+96.97	73.61	631.05	631.08
E. End of East Approach	2295+06.58	74.25	631.01	631.03

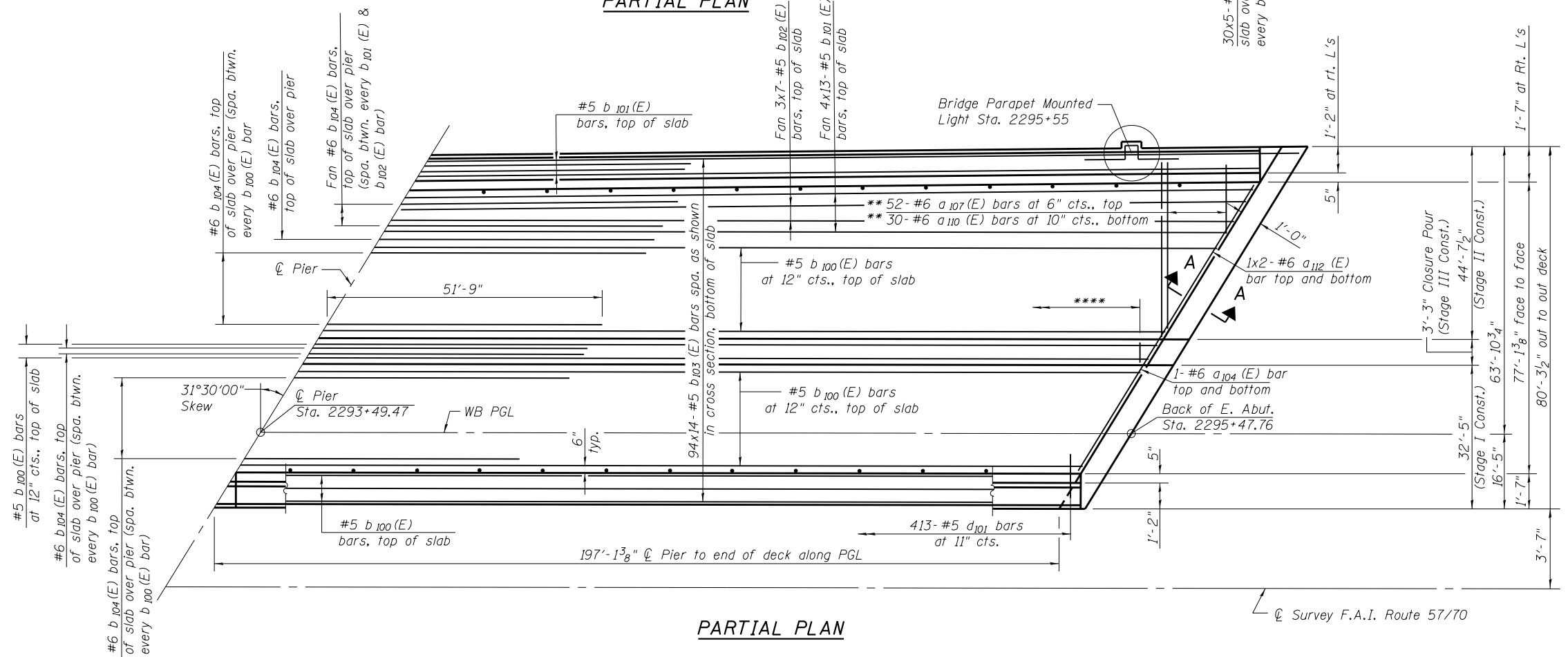


PLAN

*** 2 bar splicers for #6 a₁₀₄(E) (Stage I) each end
 2 bar splicers for #6 a₁₁₁(E) or a₁₁₂(E) (Stage II) each end



PARTIAL PLAN



PARTIAL PLAN

Notes:
 See sheets 23 thru 25 of 79 for Superstructure Details and Bill of Materials.
 Bars indicated thus 706x2-#6 etc. indicates 706 lines of bars with 2 lengths per line.
 See sheet 23 of 79 for Cross Sections.
 See sheet 24 of 79 for Light Base Details.
 See sheet 25 of 79 for Parapet Reinforcement.
 Floor Drains shall be spaced to miss crossframes.
 See sheet 2B of 79 for Deck Pouring Sequence and General Notes.
 See sheet 33 of 79 for Section A-A.

MINIMUM BAR LAP

#5 bar = 2'-7"
 #6 bar = 3'-1"

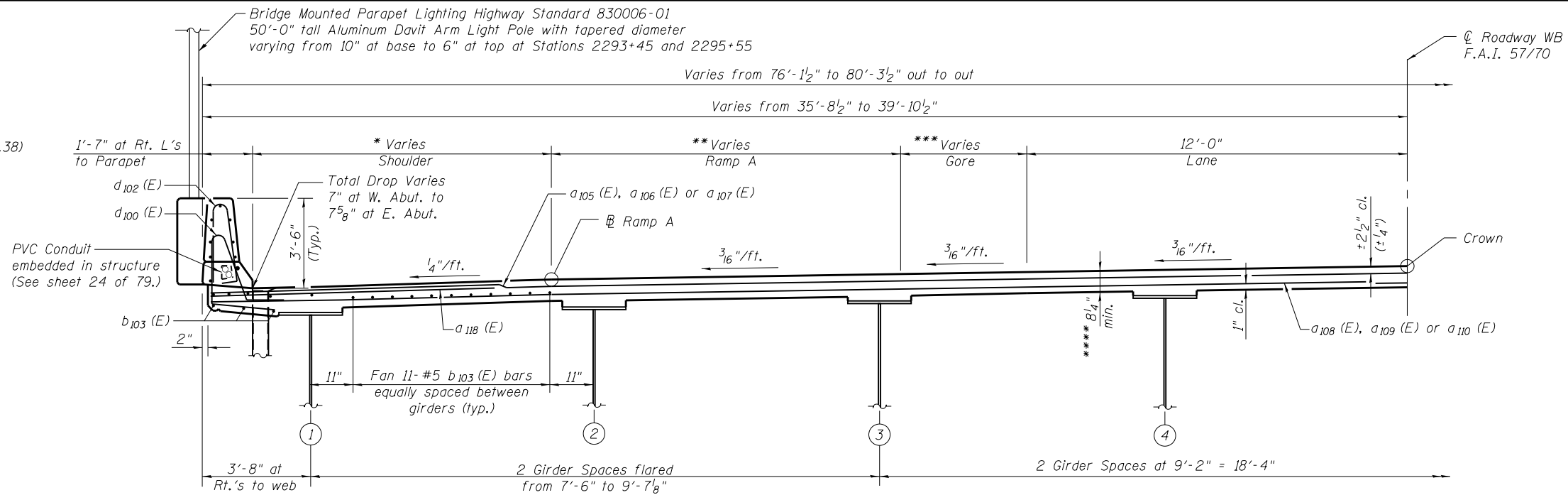
* Order a₁₀₀(E) and a₁₀₂(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
 ** See field cut diagram on sheet 33 of 79 for bars a₁₀₀(E), a₁₀₂(E), a₁₀₅(E), a₁₀₇(E) a₁₀₈(E) & a₁₁₀(E).

**** 1206 bar splicers for #6 a₁₀₀(E) thru a₁₀₃(E) bars, Stage I
 1206 bar splicers for #6 a₁₀₅(E), a₁₀₆(E), a₁₀₈(E) and a₁₀₉(E) bars, Stage II

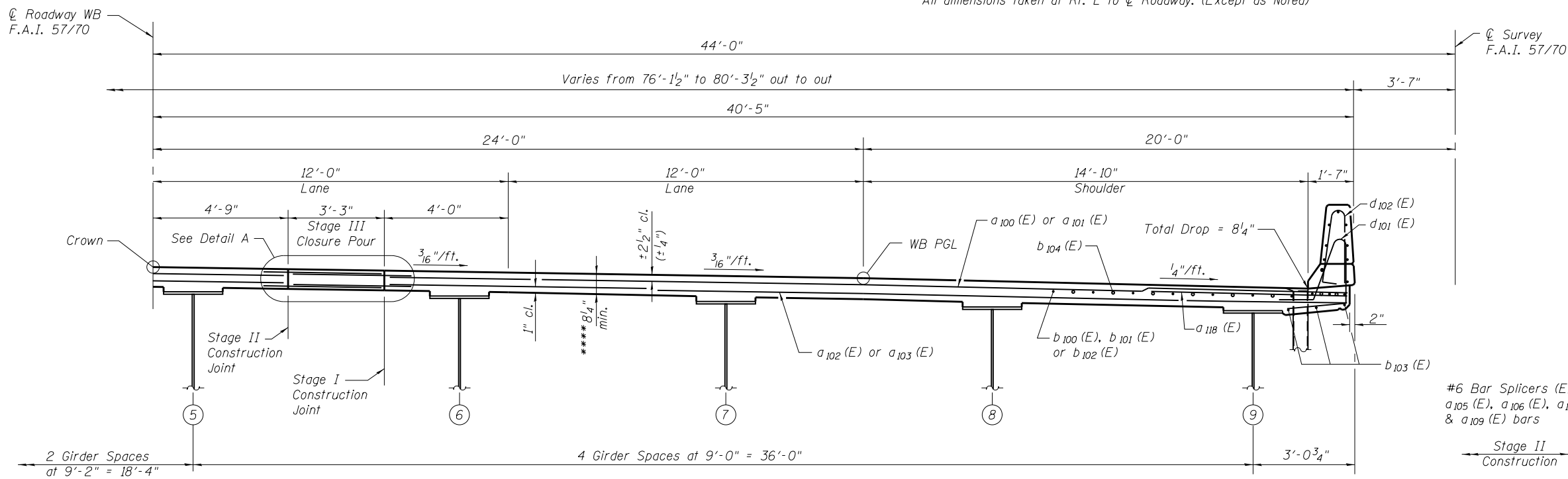
FILE NAME = 025011-74295-022-Superstructure BERNARDSON - LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 284-6665 FAX (618) 284-6666	DESIGNED - BB CHECKED - ACS DRAWN - WJS CHECKED - CJF	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE (WB) STRUCTURE NO. 025-0111 SHEET NO. 22 OF 79 SHEETS	F.A.I. RT. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 557
	PLOT SCALE = PLOT DATE = 3:25:37 PM 8/14/2013	ILLINOIS FED. AID PROJECT			CONTRACT NO. 74295				

- * Shoulder Varies
 10'-1 1/2" to 10'-8 3/8" (W. Abut. to Sta. 2292+60.25)
 10'-8 3/8" to 8'-3 3/4" (Sta. 2292+60.25 to E. Abut.)
- ** Ramp A Varies
 12'-0" (W. Abut. to Sta. 2292+60.25)
 12'-0" to 16'-0" (Sta. 2292+60.25 to Sta. 2294+68.38)
 16'-0" (Sta. 2294+68.38 to E. Abut.)
- *** Gore Varies
 0" (W. Abut. to Sta. 2294+68.38)
 0" to 1'-11 3/4" (Sta. 2294+68.38 to E. Abut.)
- **** Prior to grinding according to Bridge Smoothness Specification

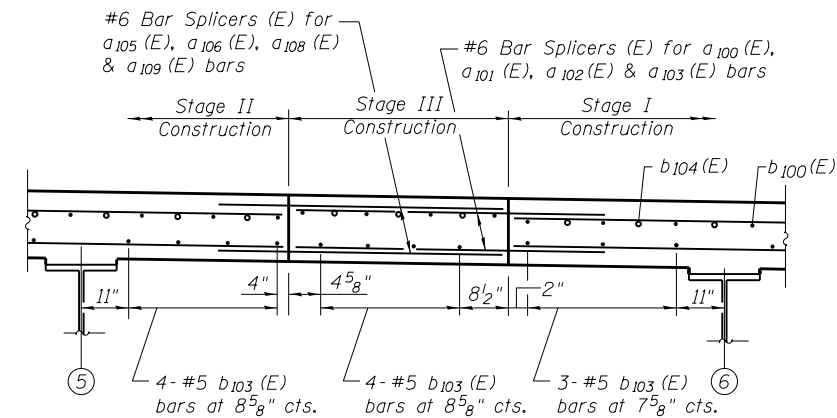
Notes:
 Ramp A dimension at E. Abut. taken at Rt. L's to Baseline Ramp A.
 See sheets 24 & 25 of 79 for additional Superstructure Details and Bill of Material.
 See sheet 25 of 79 for Parapet Reinforcement.



(Near Midspan)
 (Showing Reinforcement)
CROSS SECTION
 (Looking East)
 All dimensions taken at Rt. L to \bar{C} Roadway. (Except as Noted)

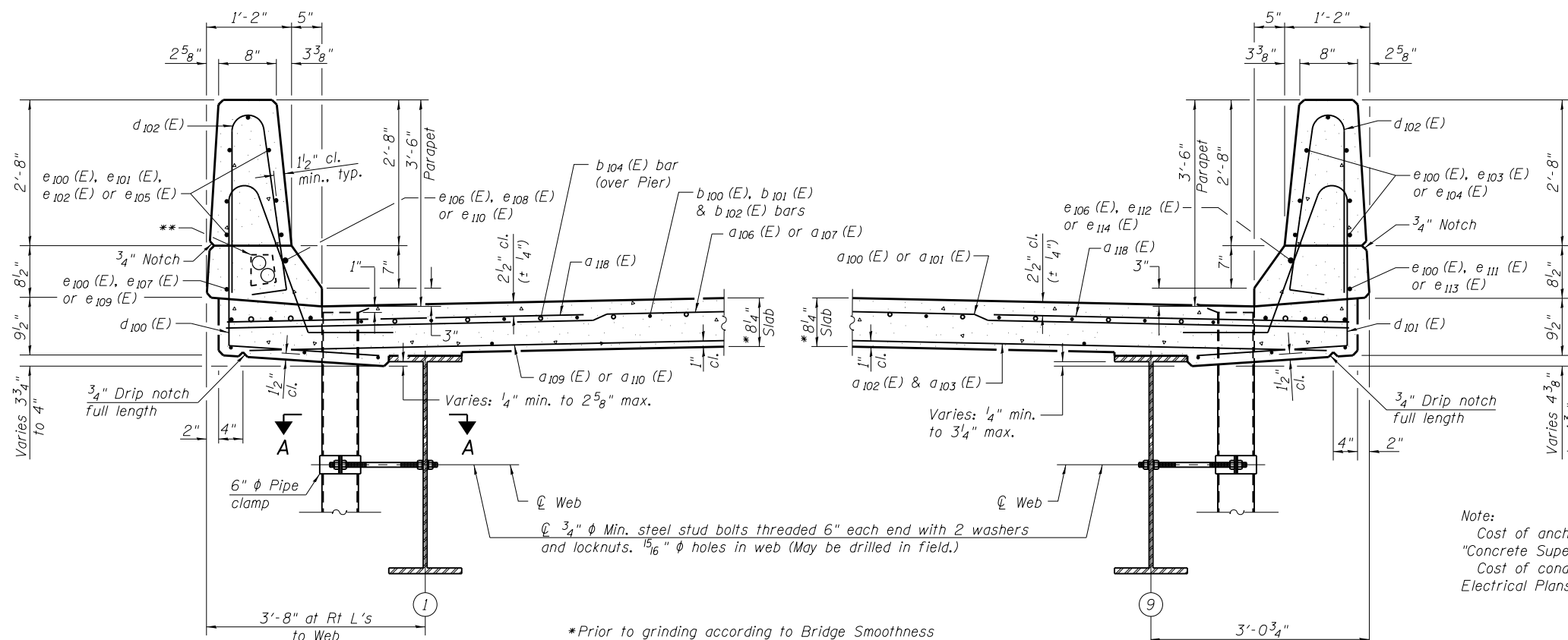


(Near Pier)
 (Showing Reinforcement)
CROSS SECTION
 (Looking East)
 All dimensions taken at Rt. L's to \bar{C} Roadway. (Except as Noted)



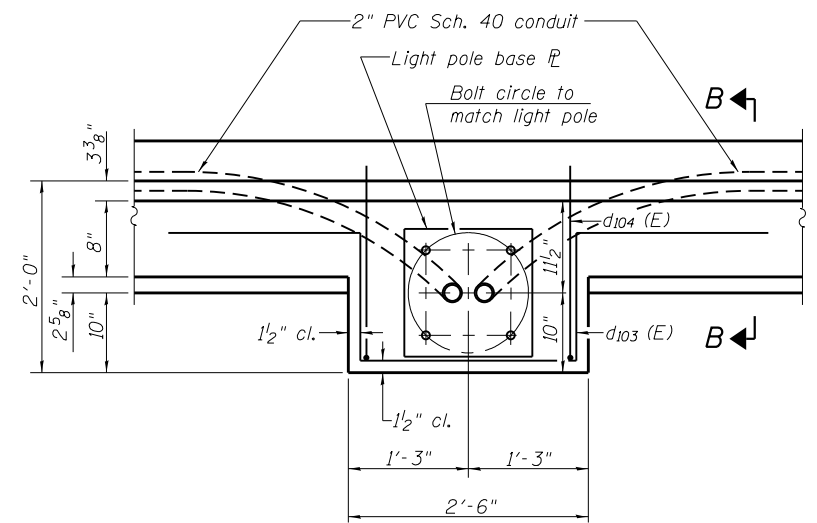
DETAIL A

FILE NAME = 025011-74295-023-Superstructure	DESIGNED - BB	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE (WB) STRUCTURE NO. 025-0111	F.A.I. R.T.E. = 57/70	SECTION = (25-4HVB-1)BY	COUNTY = EFFINGHAM	TOTAL SHEETS = 1760	SHEET NO. = 558
DESIGNED BY NAME = bbovee	CHECKED - ACS	REVISED			SHEET NO. = 558				
ILLINOIS DESIGN FIRM NUMBER 184.001670	DRAWN - WJS	REVISED			CONTRACT NO. 74295				
PLOT SCALE =	CHECKED - CJF	REVISED			ILLINOIS FED. AID PROJECT				
PLOT DATE = 3:25:38 PM 8/14/2013			SHEET NO. 23 OF 79 SHEETS						



SECTION THRU NORTH PARAPET

SECTION THRU SOUTH PARAPET

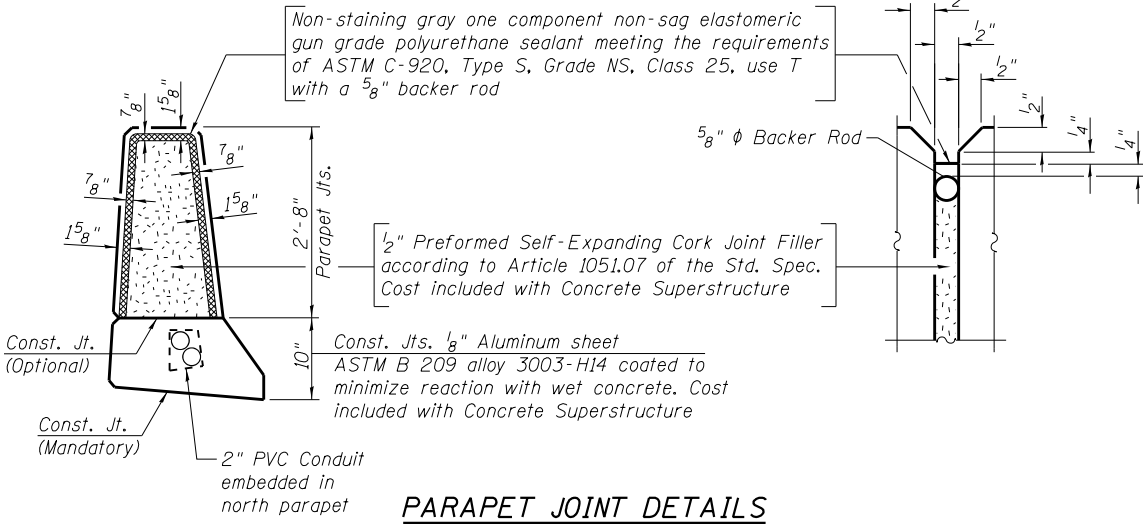


PLAN

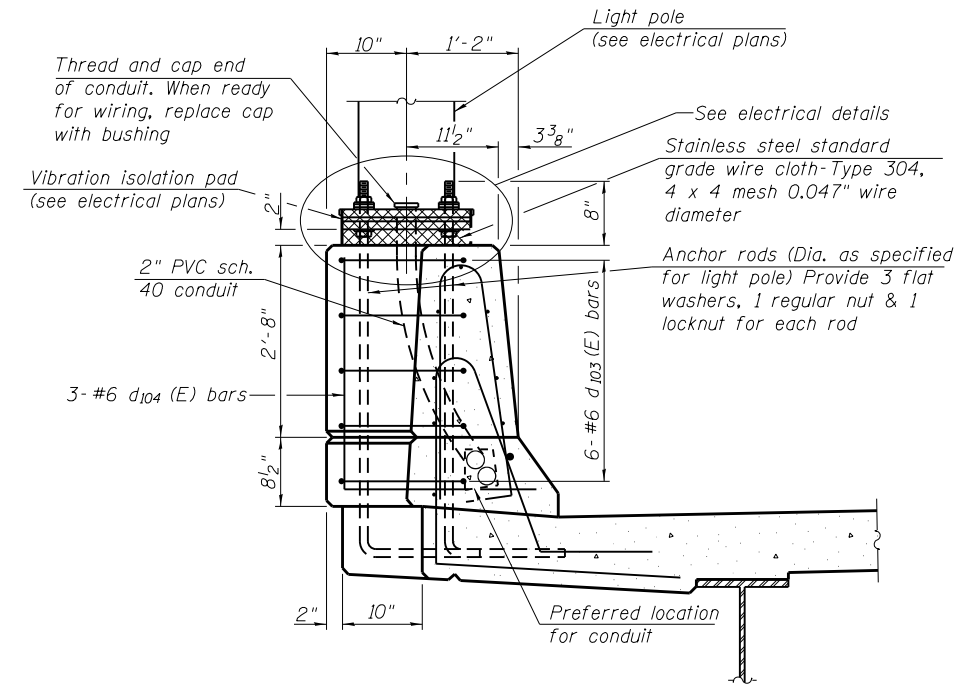
Note:
Cost of anchor rods are included with "Concrete Superstructure".
Cost of conduit is included in the Electrical Plans.

*Prior to grinding according to Bridge Smoothness Specification
** 2" PVC Conduit embedded in structure. Maintain 1/2" clear from reinforcement

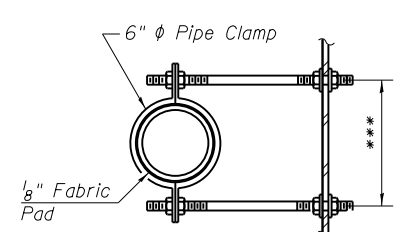
Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified according to Section 506 of the Standard Specification.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.
Set top of pipe drain 1/4" min. below top of finished deck prior to Diamond Grinding and Surface Testing Bridge Sections Special Provisions. The remaining 1/4" deck around the drains shall be sloped and formed to drain. See Top Plan View.
See sheet 26 of 79 for Drainage System Details.
Anchor Rod Diameter as specified for light poles (ASTM F 1554 Grade 105). Full length hot dipped galvanized.
Drains shall be located to clear all crossframes and splices.



PARAPET JOINT DETAILS

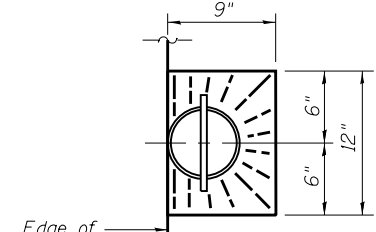


SECTION B-B



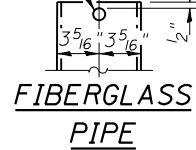
SECTION A-A

*** Dimension as required by Pipe Clamp

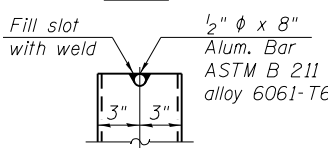


TOP PLAN

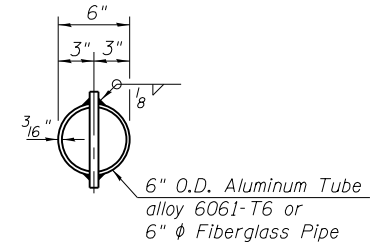
1/2" x 8" Fiberglass Reinf. Plastic Rebar



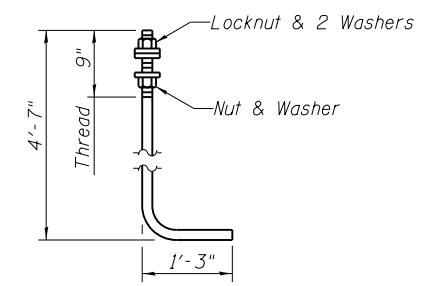
FIBERGLASS PIPE



ALUMINUM TUBE



TOP PLAN (Showing Aluminum Tube)



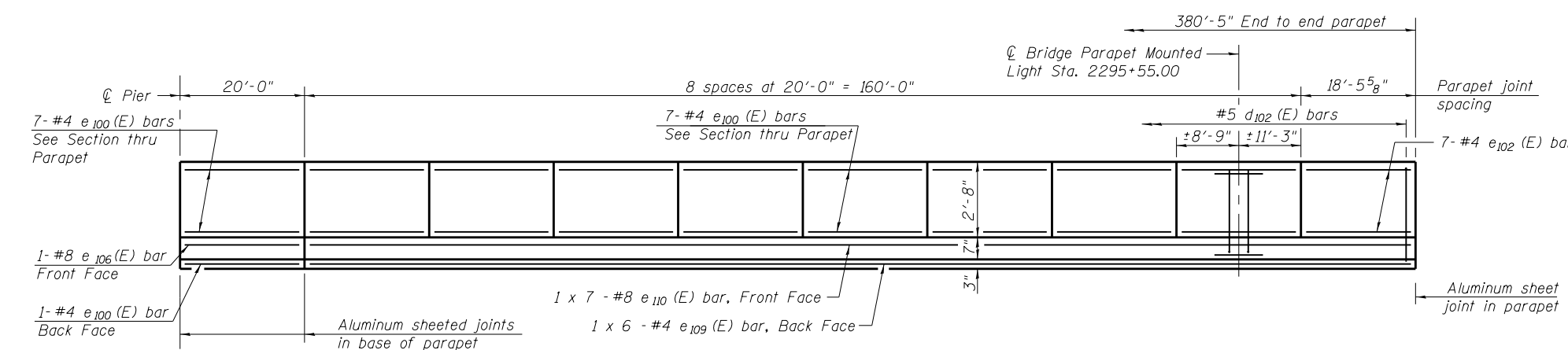
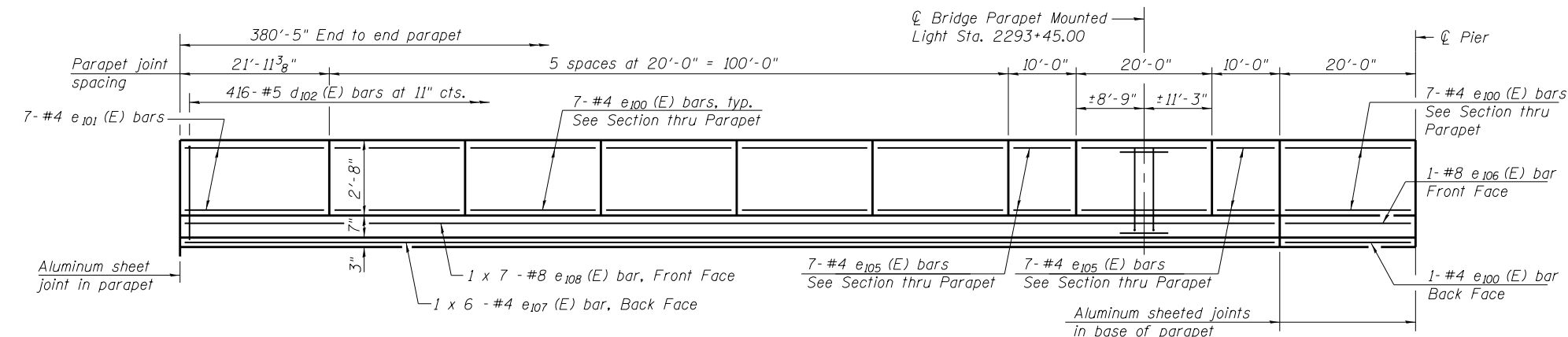
ANCHOR ROD

FILE NAME = 025011-74295-024-Superstruc Details	DESIGNED - BB	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE DETAILS (WB) STRUCTURE NO. 025-0111	F.A.I. R.T.E. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DESIGNED BY = bbove	CHECKED - ACS	REVISED			57/70	(25-4HV-1)BY	EFFINGHAM	1760	559
ILLINOIS DESIGN FIRM NUMBER 184.001670	DRAWN - WJS	REVISED			CONTRACT NO. 74295				
PLOT SCALE =	CHECKED - CJF	REVISED			ILLINOIS FED. AID PROJECT				
PLOT DATE = 3:25:39 PM 8/14/2013			SHEET NO. 24 OF 79 SHEETS						

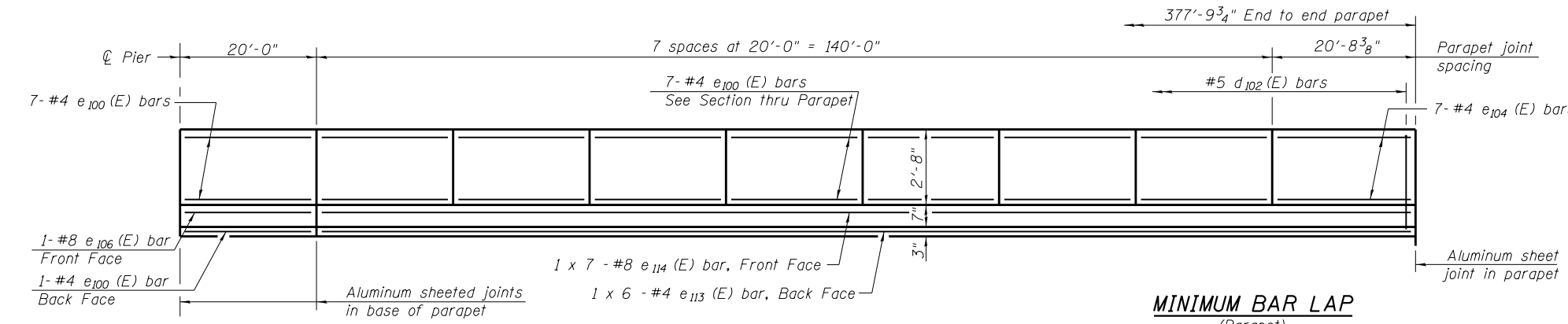
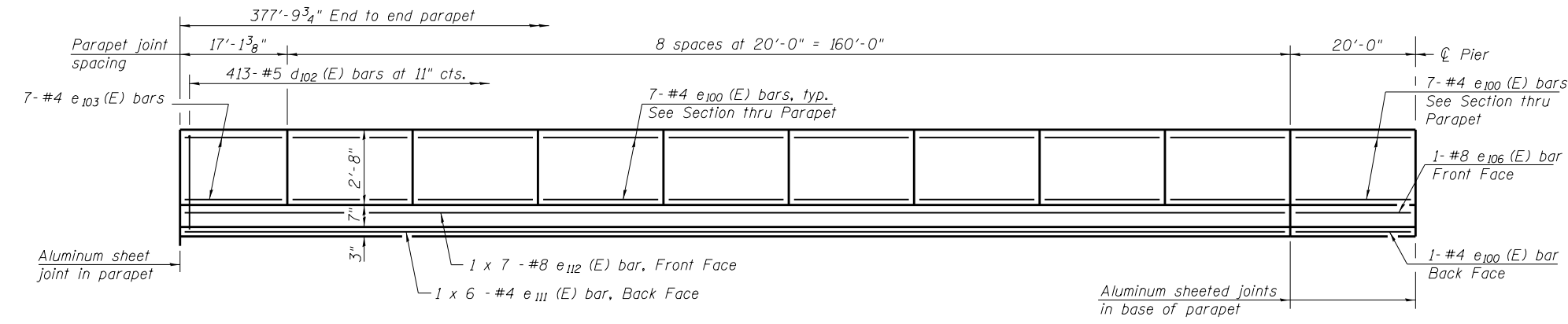
**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a ₁₀₀ (E)	38	#6	32'-2"	—
a ₁₀₁ (E)	716	#6	32'-0"	—
a ₁₀₂ (E)	22	#6	33'-9"	—
a ₁₀₃ (E)	430	#6	32'-0"	—
a ₁₀₄ (E)	4	#6	37'-6"	—
a ₁₀₅ (E)	24	#6	40'-0"	—
a ₁₀₆ (E)	1412	#6	23'-6"	—
a ₁₀₇ (E)	26	#6	46'-2"	—
a ₁₀₈ (E)	14	#6	40'-7"	—
a ₁₀₉ (E)	1272	#6	16'-9"	—
a ₁₁₀ (E)	15	#6	47'-5"	—
a ₁₁₁ (E)	4	#6	25'-0"	—
a ₁₁₂ (E)	4	#6	27'-6"	—
a ₁₁₈ (E)	1512	#6	6'-6"	—
b ₁₀₀ (E)	975	#5	31'-5"	—
b ₁₀₁ (E)	91	#5	31'-8"	—
b ₁₀₂ (E)	21	#5	30'-7"	—
b ₁₀₃ (E)	1316	#5	29'-7"	—
b ₁₀₄ (E)	400	#6	24'-8"	—
d ₁₀₀ (E)	416	#5	8'-0"	L
d ₁₀₁ (E)	413	#5	7'-5"	L
d ₁₀₂ (E)	829	#5	6'-10"	L
d ₁₀₃ (E)	12	#6	8'-11"	L
d ₁₀₄ (E)	6	#6	5'-1"	L
e ₁₀₀ (E)	235	#4	19'-9"	—
e ₁₀₁ (E)	7	#4	21'-8"	—
e ₁₀₂ (E)	7	#4	18'-2"	—
e ₁₀₃ (E)	7	#4	16'-10"	—
e ₁₀₄ (E)	7	#4	20'-5"	—
e ₁₀₅ (E)	14	#4	9'-9"	—
e ₁₀₆ (E)	4	#8	19'-9"	—
e ₁₀₇ (E)	6	#4	28'-8"	—
e ₁₀₈ (E)	7	#8	27'-7"	—
e ₁₀₉ (E)	6	#4	31'-5"	—
e ₁₁₀ (E)	7	#8	29'-11"	—
e ₁₁₁ (E)	6	#4	31'-3"	—
e ₁₁₂ (E)	7	#8	29'-9"	—
e ₁₁₃ (E)	6	#4	28'-6"	—
e ₁₁₄ (E)	7	#8	27'-5"	—
m ₁₀₀ (E)	12	#6	3'-1"	—
m ₁₀₁ (E)	36	#6	10'-0"	—
m ₁₀₂ (E)	6	#6	2'-3"	—
m ₁₀₃ (E)	6	#6	3'-6"	—
m ₁₀₄ (E)	24	#6	10'-3"	—
m ₁₀₅ (E)	12	#6	8'-3"	—
m ₁₀₆ (E)	12	#6	3'-10"	—
m ₁₀₇ (E)	7	#6	37'-7"	—
m ₁₀₈ (E)	14	#6	25'-2"	—
m ₁₀₉ (E)	108	#5	4'-0"	—
m ₁₁₀ (E)	6	#6	2'-3"	—
m ₁₁₁ (E)	6	#6	3'-6"	—
m ₁₁₂ (E)	12	#6	10'-9"	—
m ₁₁₃ (E)	7	#6	37'-7"	—
m ₁₁₄ (E)	14	#6	27'-5"	—
s ₁₀₀ (E)	131	#5	16'-6"	□
s ₁₀₁ (E)	165	#5	12'-5"	□
Reinforcement Bars, Epoxy Coated	Pound		278,780	
Concrete Superstructure	Cu. Yd.		1042.7	
Bridge Deck Grooving	Sq. Yd.		3459	
Protective Coat	Sq. Yd.		4065	
Diamond Grinding (Bridge Section)	Sq. Yd.		3459	

Bars indicated thus 1 x 6 - #4 etc. indicates 1 line of bars with 6 lengths per line.

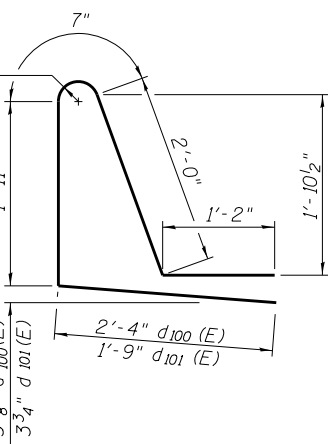
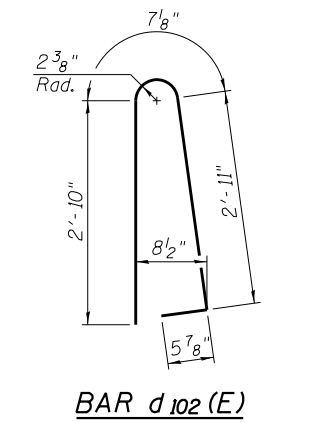


INSIDE ELEVATION OF PARAPET
(North Parapet)

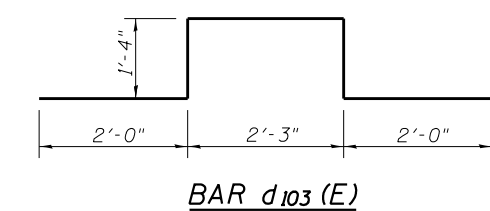


INSIDE ELEVATION OF PARAPET
(South Parapet)

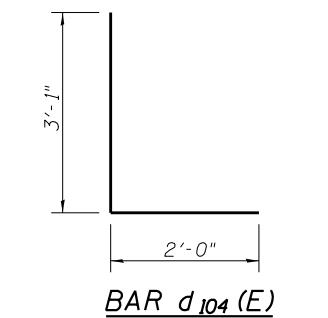
MINIMUM BAR LAP
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



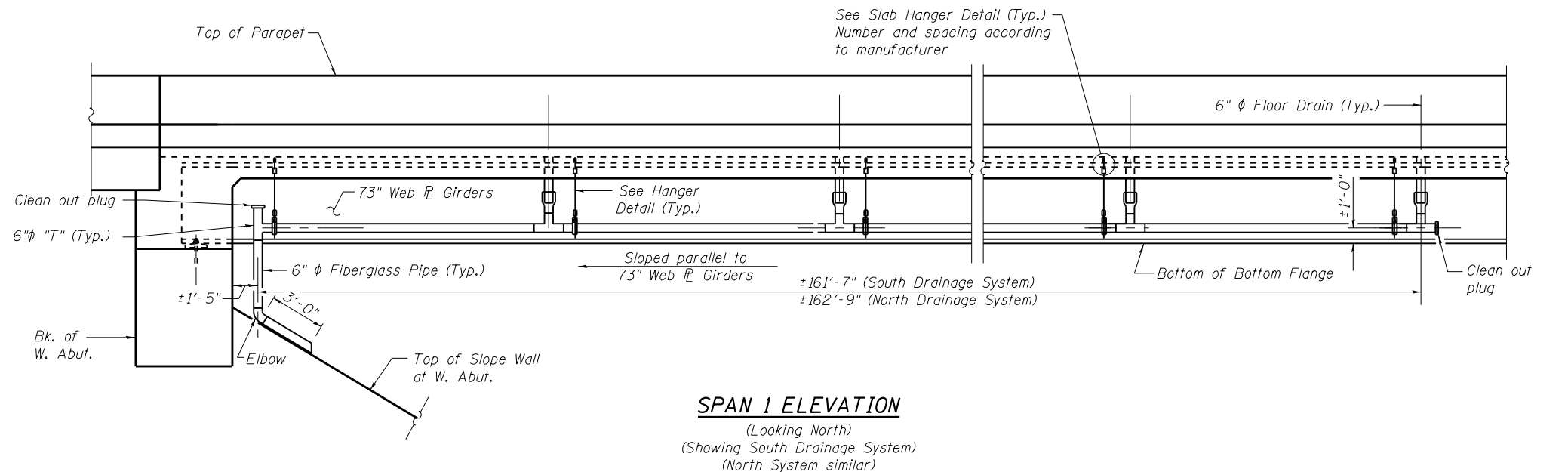
BAR d100 (E) & d101 (E)



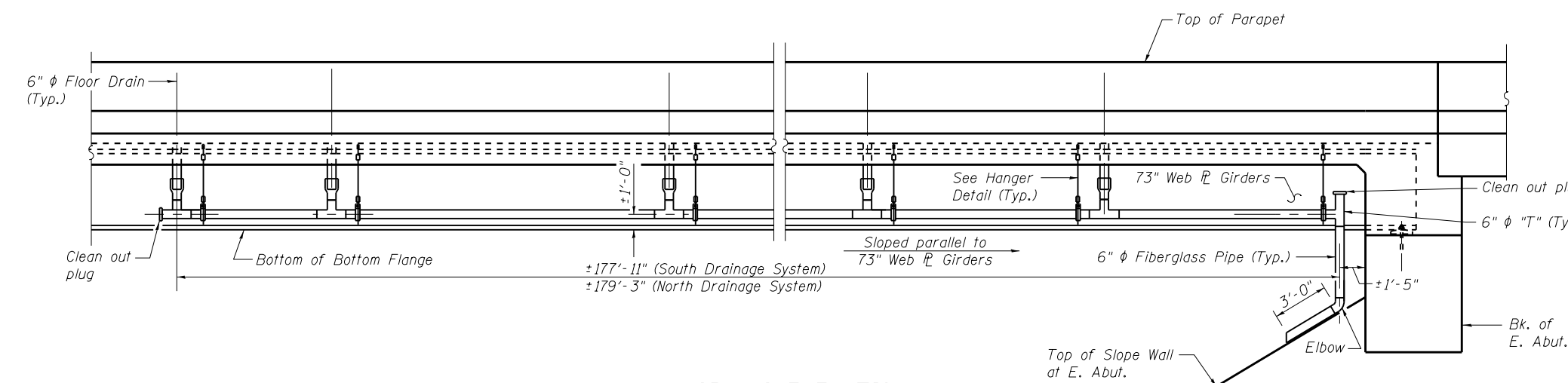
BAR d103 (E)



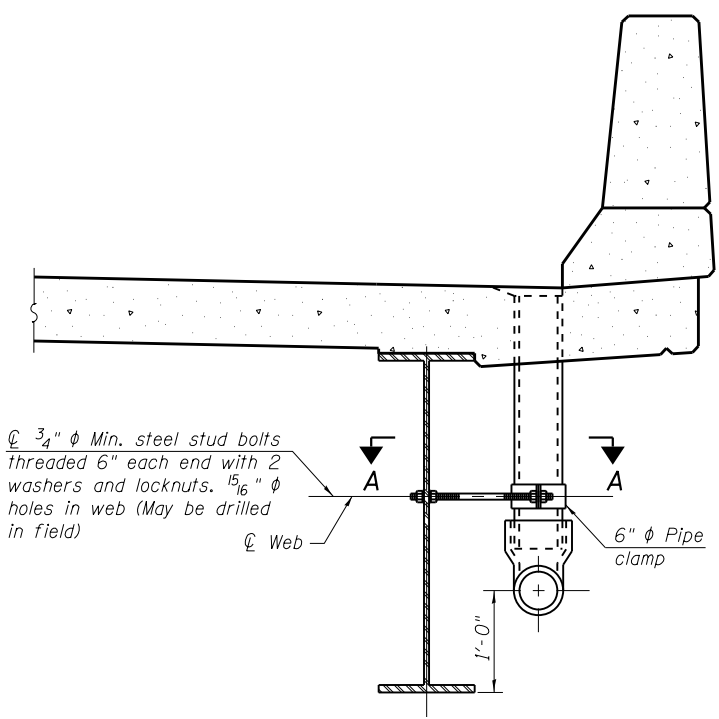
BAR d104 (E)



SPAN 1 ELEVATION
(Looking North)
(Showing South Drainage System)
(North System similar)

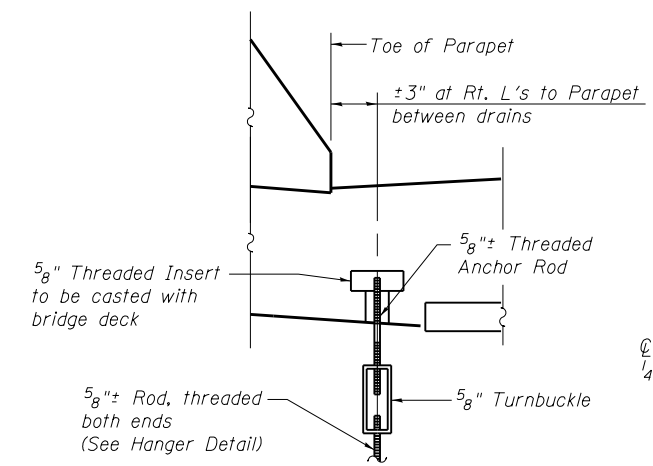


SPAN 2 ELEVATION
(Looking North)
(Showing South Drainage System)
(North System similar)

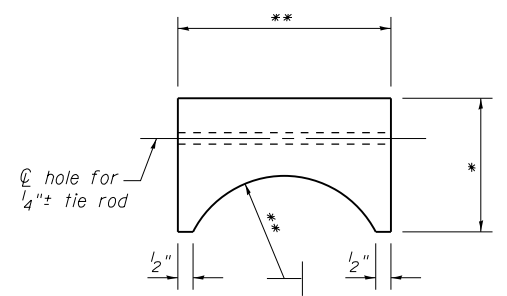


SECTION THRU SOUTH PARAPET
(Showing South Drainage System)
(North System similar)

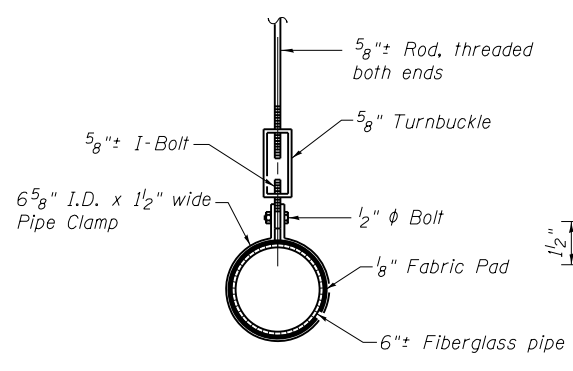
Notes:
See sheet 1 of 79 for floor drain spacing.
Drains & Bridge Drainage System shall be located clear of all diaphragms.
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings' Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.
See sheet 24 of 79 for additional Drain Details.
See sheet 24 of 79 for Section A-A.
The quantity for the "Drainage System" is representative of the portion of the Lump Sum total for Contract 74295.



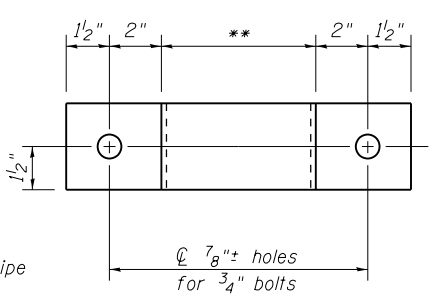
SLAB HANGER DETAIL



RUBBER SHIM DETAIL



HANGER DETAIL

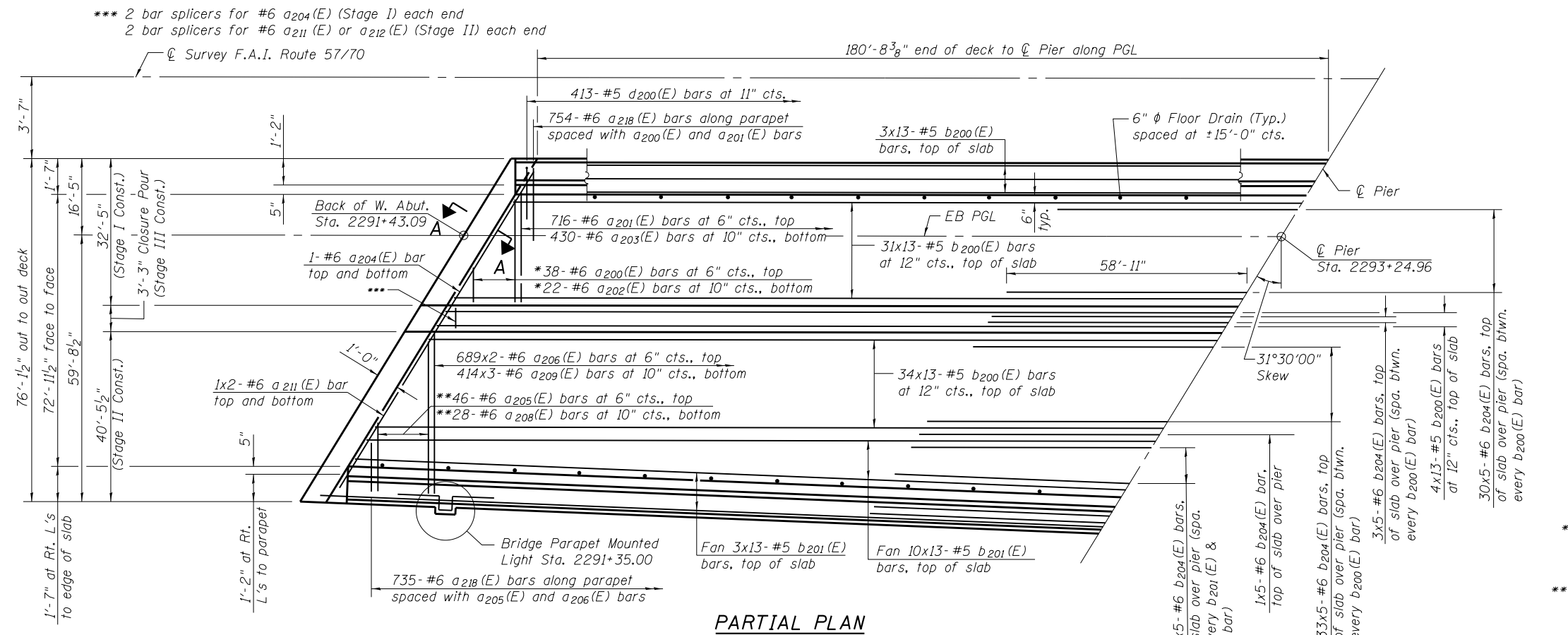
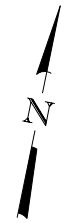


3/8" x 3" STRAP DETAIL

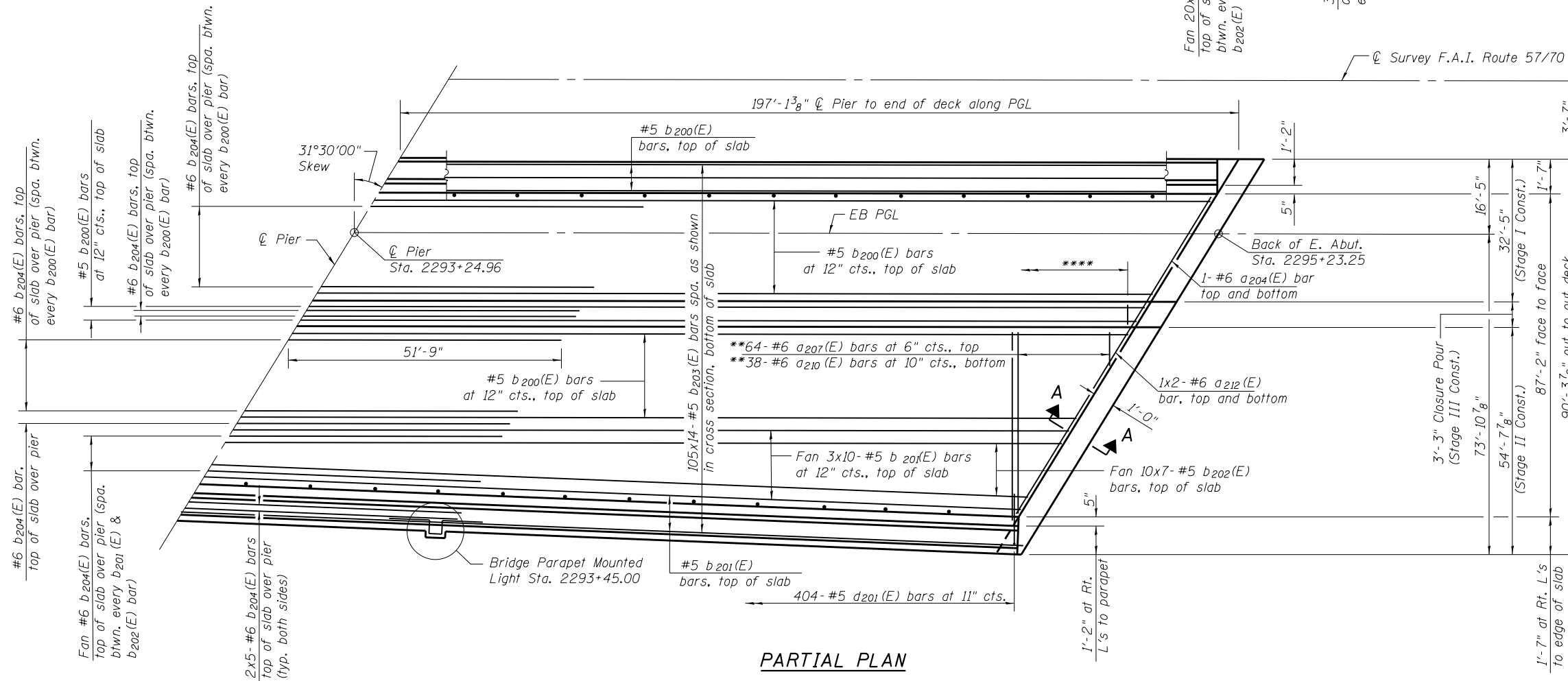
* Dimension as required by the pipe strap.
** Dimension as required by the pipe.

BILL OF MATERIAL

Item	Unit	Total
Drainage System	L. Sum	0.37
Floor Drains	Each	46



PARTIAL PLAN



PARTIAL PLAN

Notes:
 See sheets 28 thru 30 of 79 for Superstructure Details and Bill of Materials.
 Bars indicated thus 689x2-#6 etc. indicates 689 lines of bars with 2 lengths per line.
 See sheet 28 of 79 for Cross Sections.
 See sheet 30 of 79 for Parapet Reinforcement.
 See sheet 29 of 79 for Light Base Details.
 Floor Drains shall be spaced to miss crossframes.
 See sheet 2B of 79 for Deck Pouring Sequence and General Notes.
 See sheet 35 of 79 for Section A-A.
 See sheet 1 of 79 for Floor Drain spacing.

MINIMUM BAR LAP

#5 bar = 2'-7"
 #6 bar = 3'-1"

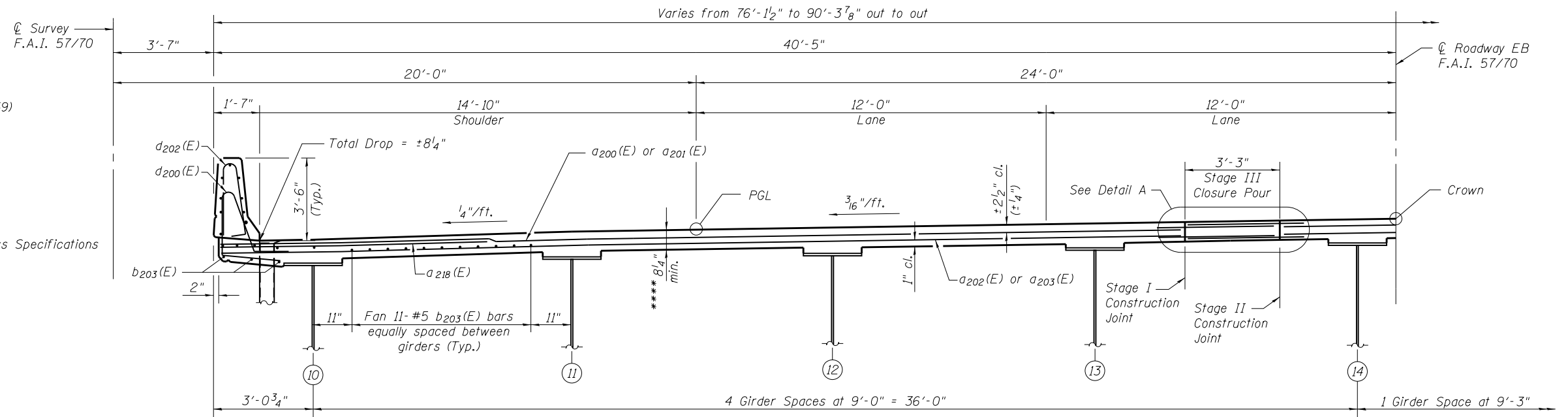
* Order a₂₀₀(E) and a₂₀₂(E) bars full length. Cut to fit skew and use remainder of bars in opposite end
 ** See field cut diagram on sheet 35 of 79 for bars a₂₀₀(E), a₂₀₂(E), a₂₀₅(E), a₂₀₇(E) a₂₀₈(E) and a₂₁₀(E)

**** 1206 bar splicers for #6 a₂₀₀(E) thru a₂₀₃(E) bars, Stage I
 1206 bar splicers for #6 a₂₀₆(E), a₂₀₇(E) a₂₀₉(E) and a₂₁₀(E) bars, Stage II

FILE NAME = 025011-74295-027-Superstructure BERNARDSON - LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, IL 62453 PHONE (618) 284-4665 FAX (618) 284-4666	DESIGNER = bbovee Illinois Design Firm Number 184.001670	DESIGNED - BB CHECKED - ACS	REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE (EB) STRUCTURE NO. 025-0112	F.A.I. R.T.E. = 57/70	SECTION = (25-4HVb-1)BY	COUNTY = EFFINGHAM	TOTAL SHEETS = 1760	SHEET NO. = 562
	PLOT SCALE =	DRAWN - WJS CHECKED - CJF	REVISED REVISED			SHEET NO. = 27 OF 79 SHEETS	CONTRACT NO. = 74295			
	PLOT DATE = 3:25:43 PM 8/14/2013	CHECKED - CJF	REVISED			ILLINOIS FED. AID PROJECT				

- * Shoulder Varies
10'-1 1/2" to 15'-4 1/4" (W. Abut. to Sta. 2292+44.59)
15'-4 1/4" to 8'-0" (Sta. 2292+44.59 to E. Abut.)
- ** Ramp C Varies
12'-0" (W. Abut. to Sta. 2292+44.59)
12'-0" to 16'-0" (Sta. 2292+44.59 to E. Abut.)
- *** Gore Varies
0" (W. Abut. to Sta. 2293+02.62)
0" to 13'-3" (Sta. 2293+02.62 to E. Abut.)
- **** Prior to grinding according to Bridge Smoothness Specifications

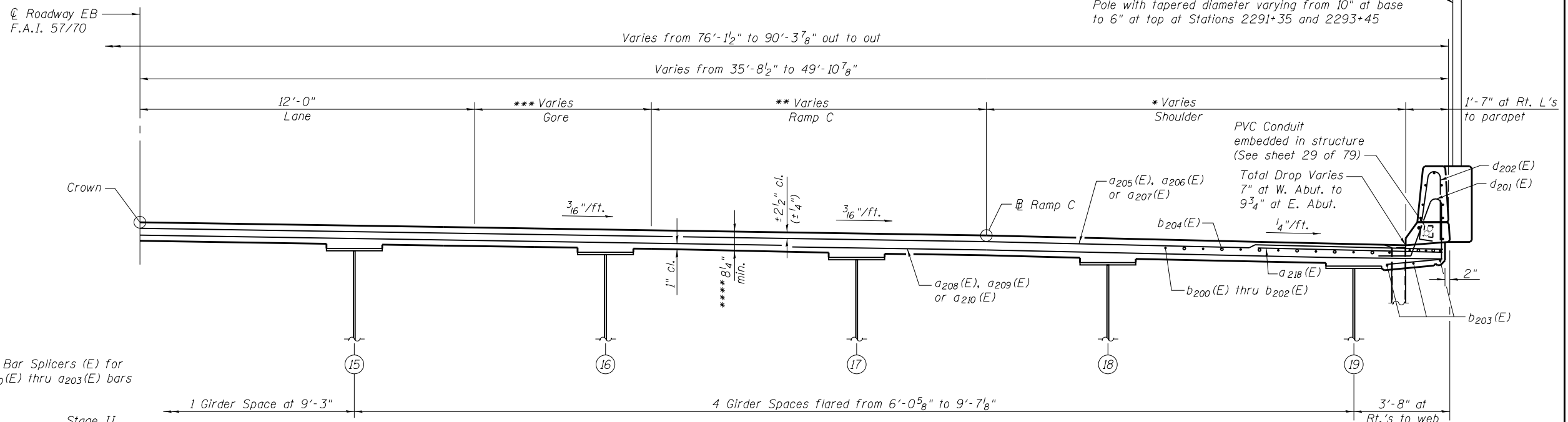
Notes:
Ramp C dimension at E. Abut. taken at Rt. L's to Baseline Ramp C.
See sheets 29 & 30 of 79 for Superstructure Details and Bill of Material.
See sheet 30 of 79 for Parapet Reinforcement.



(Near Midspan)
(Showing Reinforcement)
CROSS SECTION

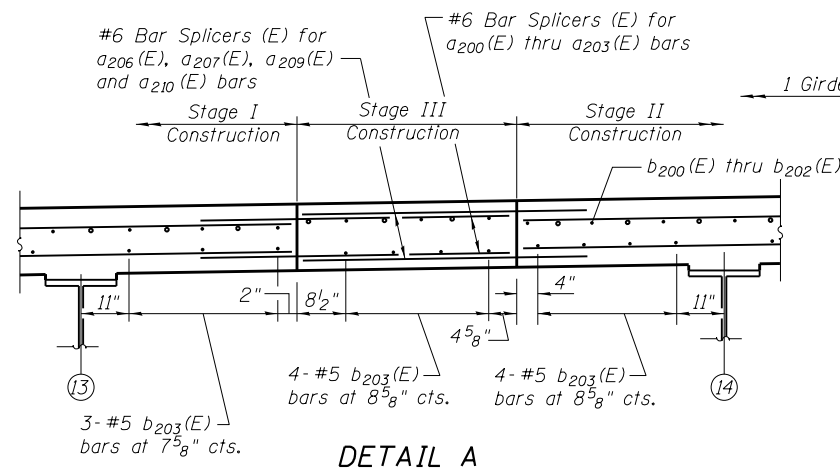
(Looking East)
All dimensions taken at Rt. L to CL Roadway. (Except as Noted)

Bridge Mounted Parapet Lighting Highway Standard
830006-01 50'-0" tall Aluminum Davit Arm Light
Pole with tapered diameter varying from 10" at base
to 6" at top at Stations 2291+35 and 2293+45



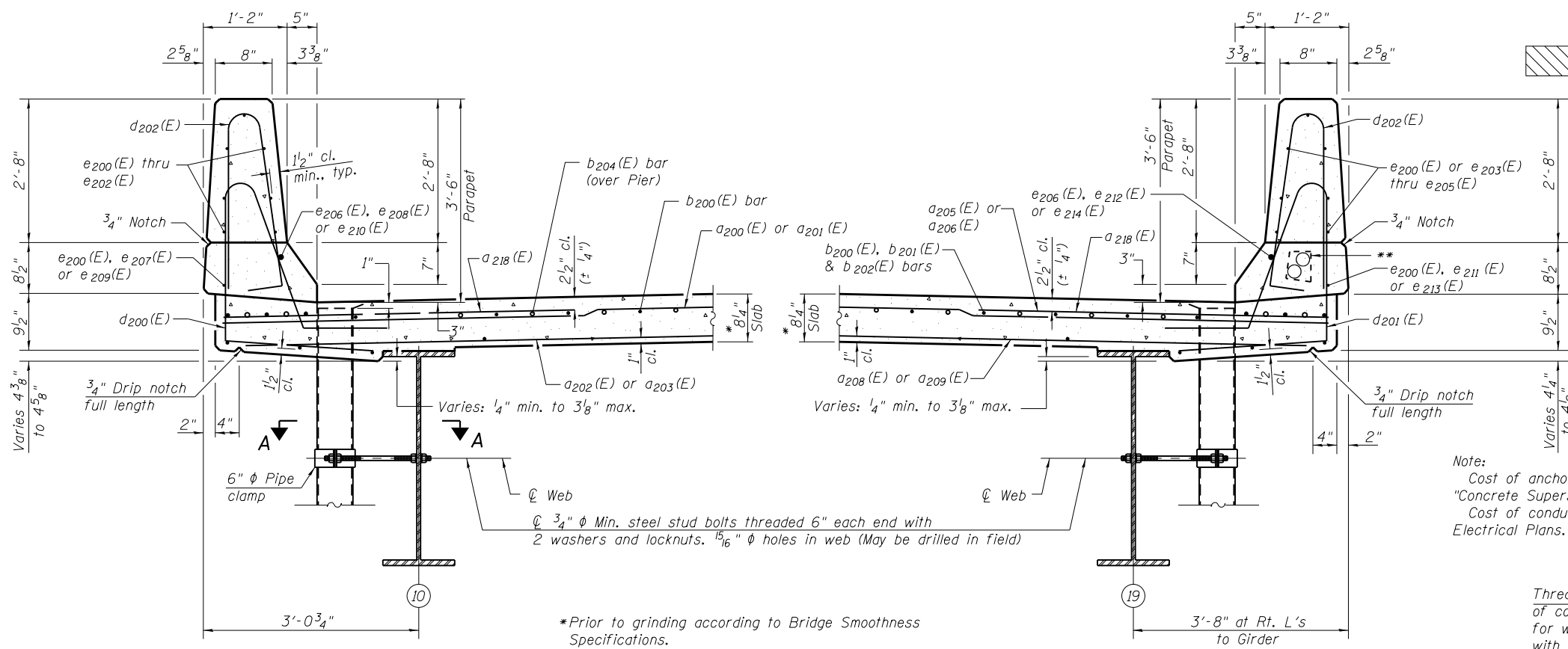
(Near Pier)
(Showing Reinforcement)
CROSS SECTION

(Looking East)
All dimensions taken at Rt. L'S to CL Roadway. (Except as Noted)



DETAIL A

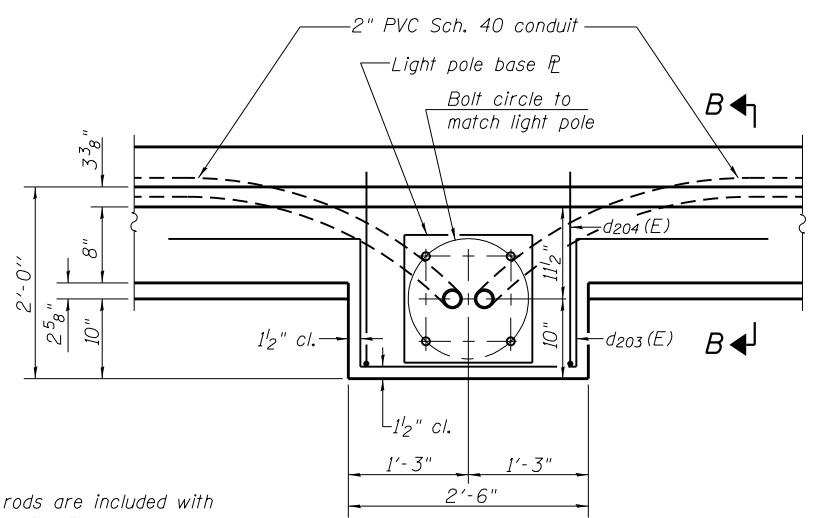
FILE NAME = 025011-74295-028-Superstructure DESIGNER = bbovee ILLINOIS DESIGN FIRM NUMBER 184.001670 PLOT DATE = 3:25:44 PM 8/14/2013	DESIGNED - BB	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE (EB) STRUCTURE NO. 025-0112 SHEET NO. 28 OF 79 SHEETS	F.A.I. RTE. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 563
	CHECKED - ACS	REVISED			CONTRACT NO. 74295	ILLINOIS FED. AID PROJECT			
BERNARDINI LOCHMULLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 288-4665 FAX (618) 288-4666	DRAWN - WJS	REVISED							
	CHECKED - CJF	REVISED							



SECTION THRU NORTH PARAPET

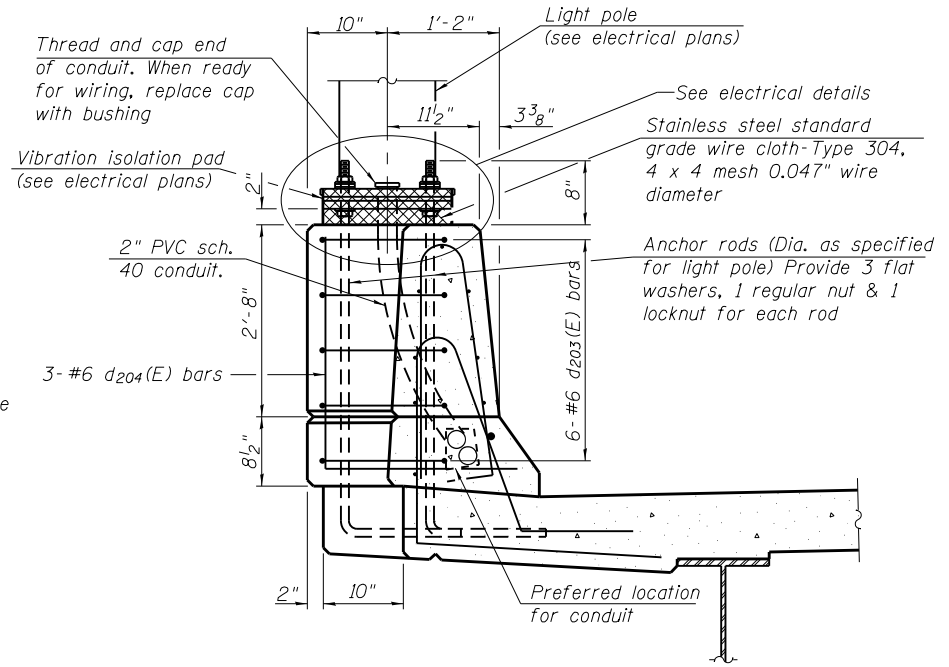
SECTION THRU SOUTH PARAPET

Indicates grinding of deck, See Diamond Grinding and Surface Testing Bridge Sections Special Provision.

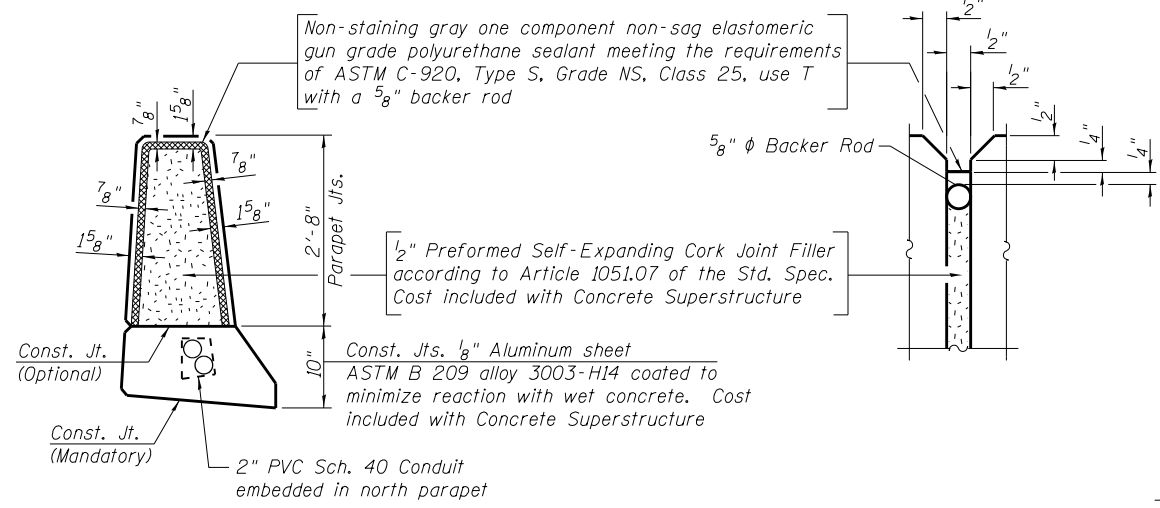


PLAN

Note:
Cost of anchor rods are included with "Concrete Superstructure".
Cost of conduit is included in the Electrical Plans.

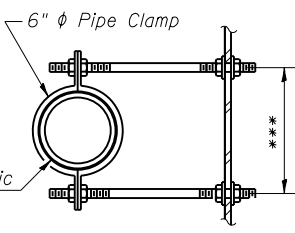


SECTION B-B

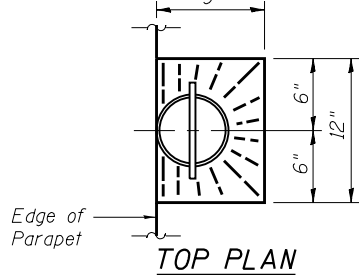


PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified according to Section 506 of the Standard Specification.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.
Set top of pipe drain 1/4" min. below top of finished deck prior to Diamond Grinding and Surface Testing Bridge Sections Special Provisions. The remaining 1/4" deck around the drains shall be sloped and formed to drain. See Top Plan View.
See sheet 31 of 79 for Drainage System Details.
Anchor Rod Diameter as specified for light poles (ASTM F 1554 Grade 105). Full length hot dipped galvanized.
Drains shall be located to clear all crossframes and splices.

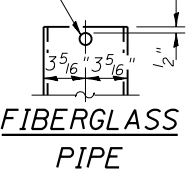


SECTION A-A
*** Dimension as required by Pipe Clamp



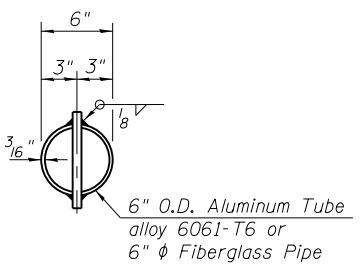
TOP PLAN

1/2" φ x 8" Fiberglass Reinf. Plastic Rebar

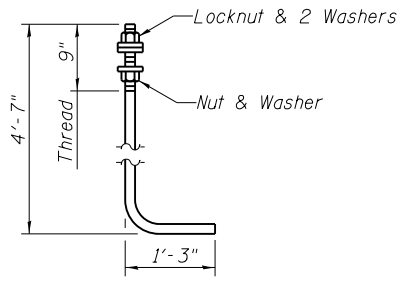


Fill slot with weld
1/2" φ x 8" Alum. Bar
ASTM B 211 alloy 6061-T6

ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)

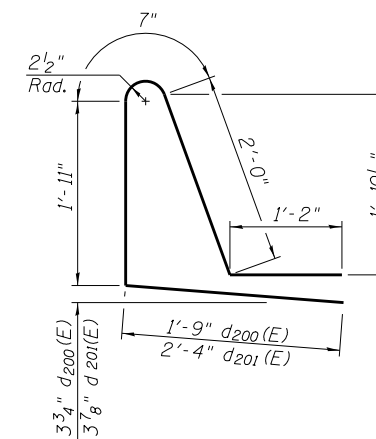


ANCHOR ROD

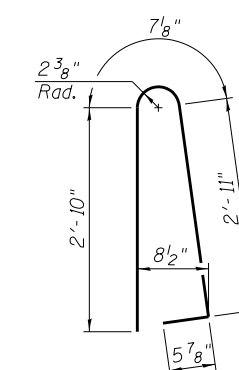
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DESIGNED BY = bbove	CHECKED - ACS	REVISED			57/70	(25-4HVb-1)BY	EFFINGHAM	1760	564	
ILLINOIS DESIGN FIRM NUMBER 184.001670	DRAWN - WJS	REVISED			CONTRACT NO. 74295					
PLOT SCALE =	CHECKED - CJF	REVISED			ILLINOIS FED. AID PROJECT					
PLOT DATE = 3:25:45 PM 8/14/2013			SHEET NO. 29 OF 79 SHEETS							

**SUPERSTRUCTURE
BILL OF MATERIAL**

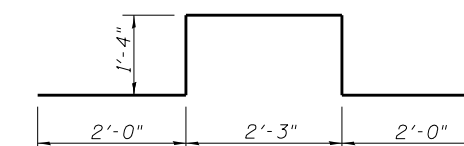
Bar	No.	Size	Length	Shape
a200(E)	38	#6	32'-2"	—
a201(E)	716	#6	32'-0"	—
a202(E)	22	#6	33'-9"	—
a203(E)	430	#6	32'-0"	—
a204(E)	4	#6	37'-6"	—
a205(E)	23	#6	42'-11"	—
a206(E)	1378	#6	28'-8"	—
a207(E)	32	#6	55'-9"	—
a208(E)	14	#6	41'-9"	—
a209(E)	1242	#6	20'-2"	—
a210(E)	19	#6	55'-2"	—
a211(E)	4	#6	25'-0"	—
a212(E)	4	#6	33'-4"	—
a218(E)	1489	#6	6'-6"	—
b200(E)	936	#5	31'-5"	—
b201(E)	169	#5	31'-5"	—
b202(E)	70	#5	30'-4"	—
b203(E)	1470	#5	29'-5"	—
b204(E)	455	#6	24'-8"	—
d200(E)	413	#5	7'-5"	—
d201(E)	404	#5	8'-0"	—
d202(E)	817	#5	6'-10"	—
d203(E)	12	#6	8'-11"	—
d204(E)	6	#6	5'-1"	—
e200(E)	235	#4	19'-9"	—
e201(E)	7	#4	20'-5"	—
e202(E)	7	#4	16'-10"	—
e203(E)	7	#4	12'-5"	—
e204(E)	7	#4	16'-5"	—
e205(E)	14	#4	9'-9"	—
e206(E)	4	#8	19'-9"	—
e207(E)	6	#4	28'-6"	—
e208(E)	7	#8	27'-5"	—
e209(E)	6	#4	31'-3"	—
e210(E)	7	#8	29'-9"	—
e211(E)	7	#8	30'-6"	—
e212(E)	7	#8	29'-2"	—
e213(E)	6	#4	27'-10"	—
e214(E)	7	#8	26'-10"	—
m200(E)	12	#6	3'-1"	—
m201(E)	36	#6	10'-0"	—
m202(E)	6	#6	2'-3"	—
m203(E)	6	#6	3'-6"	—
m204(E)	12	#6	10'-4"	—
m205(E)	24	#6	6'-7"	—
m206(E)	12	#6	3'-9"	—
m207(E)	6	#6	2'-3"	—
m208(E)	6	#6	3'-6"	—
m209(E)	24	#5	10'-8"	—
m210(E)	7	#6	37'-7"	—
m211(E)	14	#6	25'-2"	—
m212(E)	7	#6	37'-7"	—
m213(E)	14	#6	33'-3"	—
m214(E)	120	#5	4'-0"	—
s200(E)	138	#5	16'-6"	—
s201(E)	178	#5	12'-5"	—
Reinforcement Bars, Epoxy Coated	Pound	304,650		
Concrete Superstructure	Cu. Yd.	1099.2		
Bridge Deck Grooving	Sq. Yd.	3706		
Protective Coat	Sq. Yd.	4302		
Diamond Grinding (Bridge Section)	Sq. Yd.	3706		



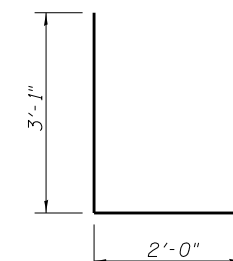
BAR d200(E) & d201(E)



BAR d202(E)



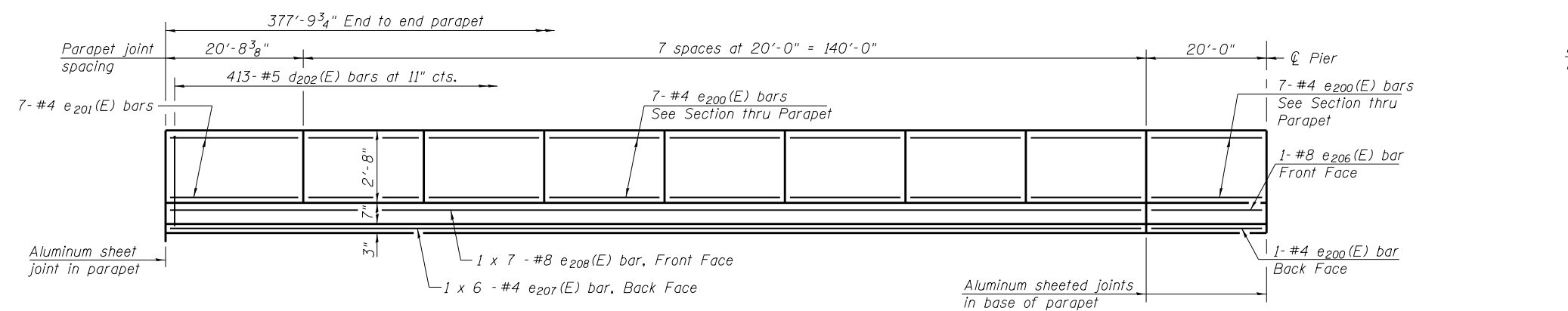
BAR d203(E)



BAR d204(E)

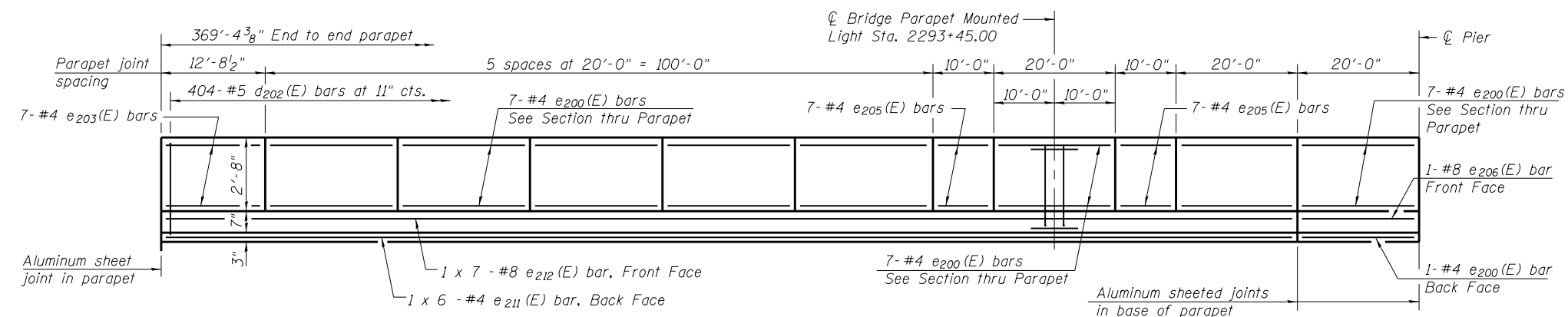
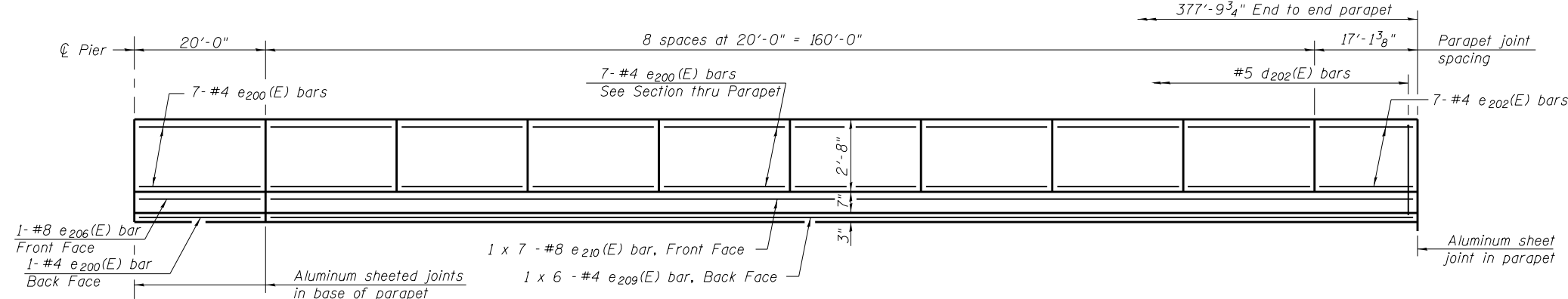
MINIMUM BAR LAP

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



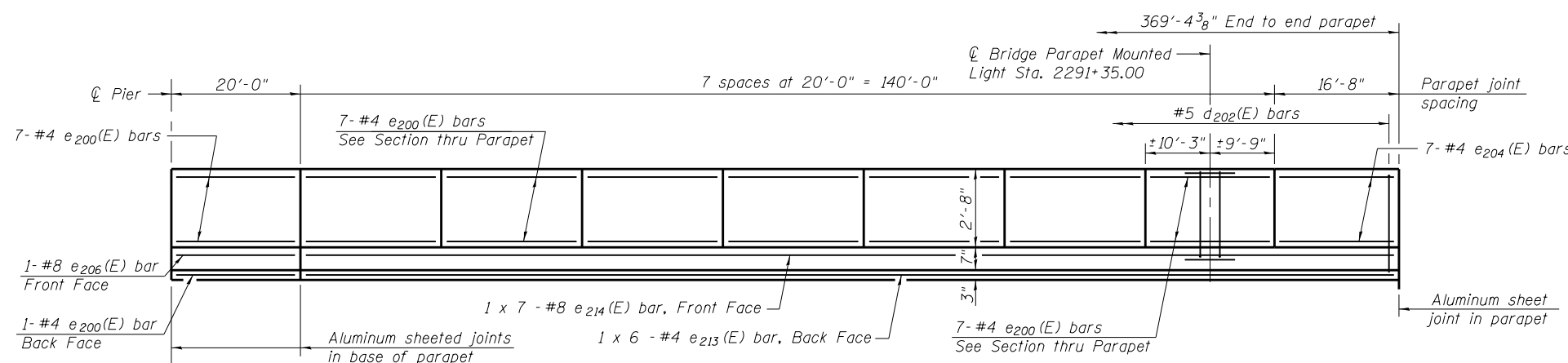
INSIDE ELEVATION OF PARAPET

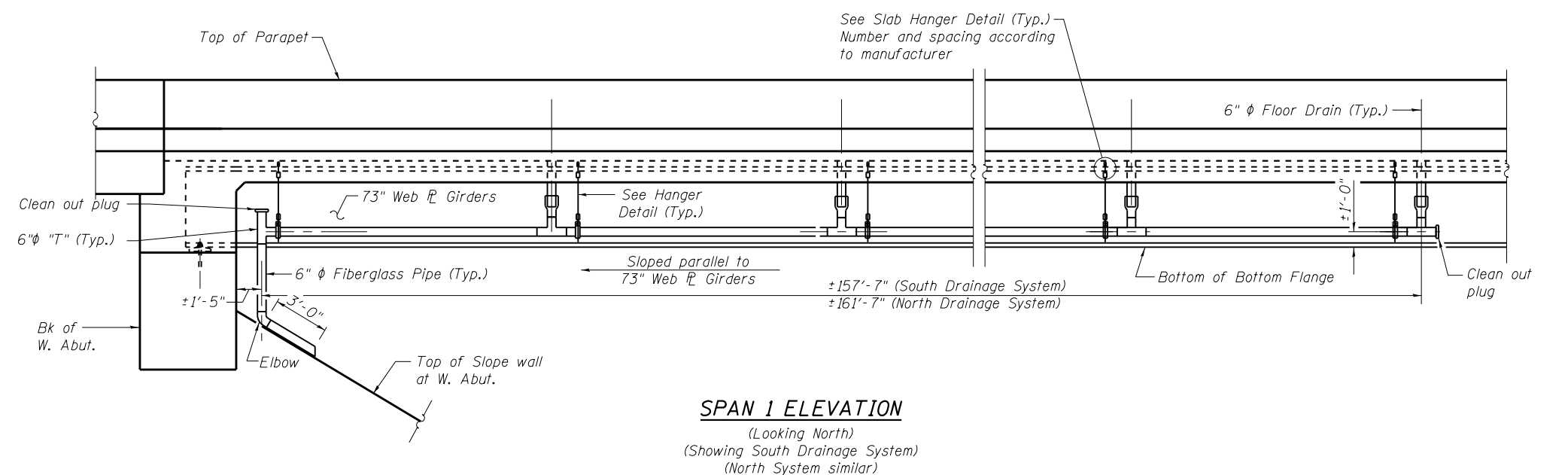
(North Parapet)



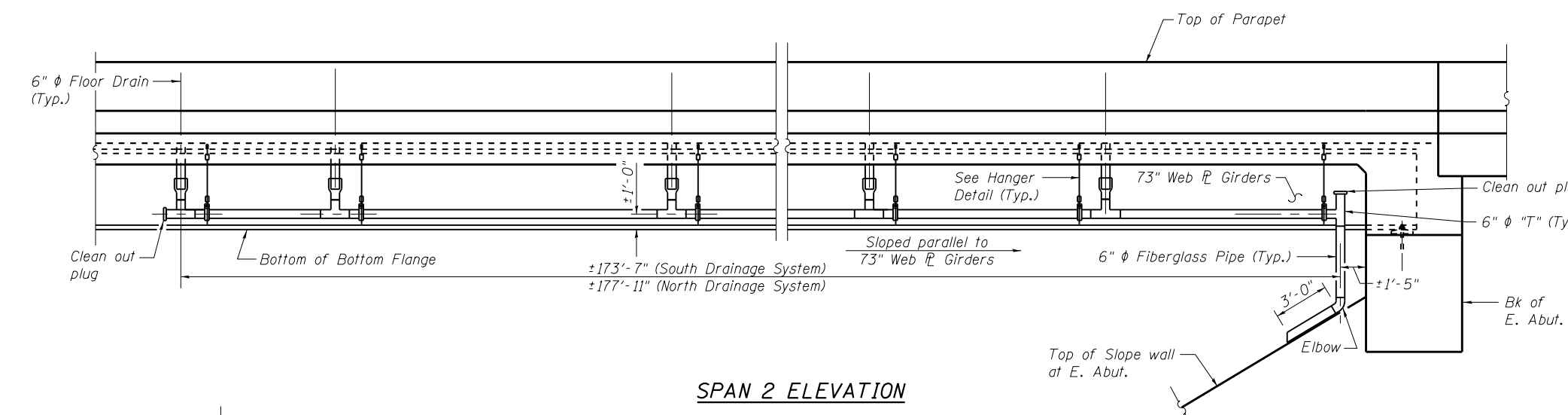
INSIDE ELEVATION OF PARAPET

(South Parapet)

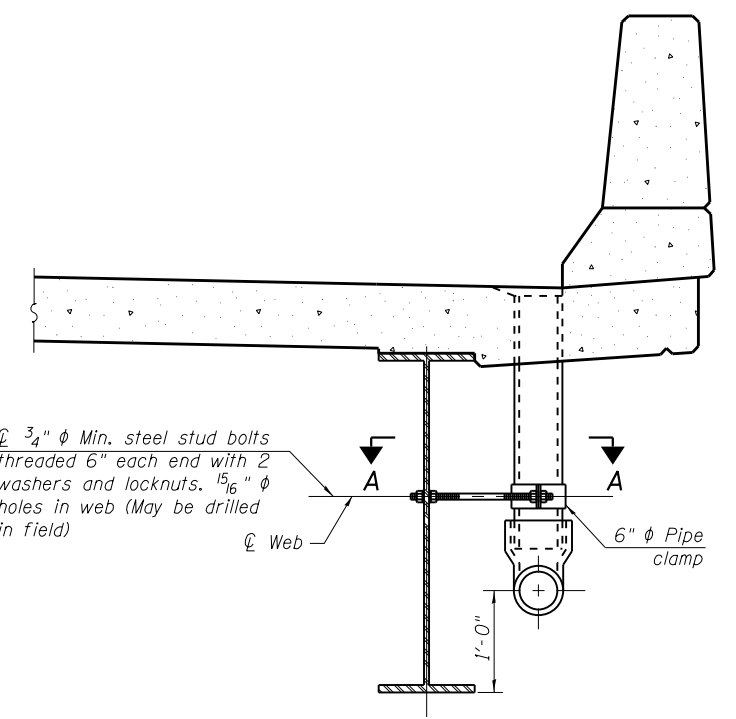




SPAN 1 ELEVATION
(Looking North)
(Showing South Drainage System)
(North System similar)

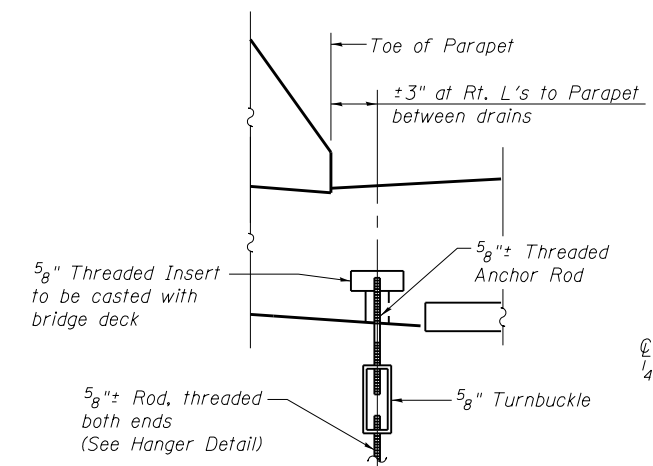


SPAN 2 ELEVATION
(Looking North)
(Showing South Drainage System)
(North System similar)

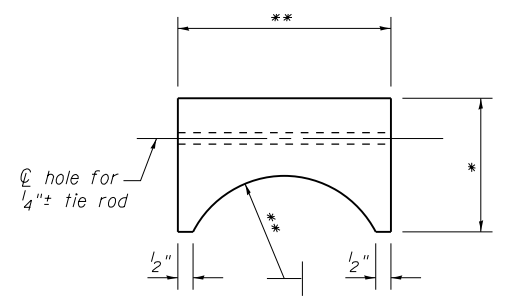


SECTION THRU SOUTH PARAPET
(Showing South Drainage System)
(North System similar)

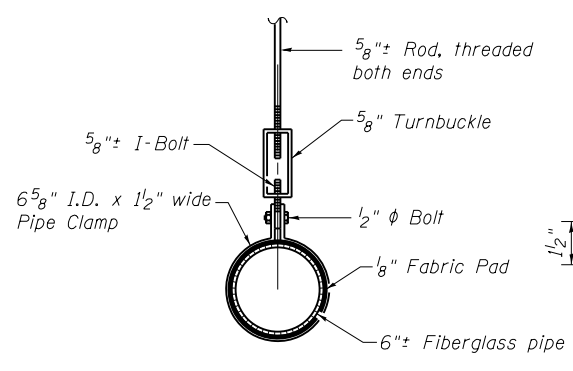
Notes:
See sheet 1 of 79 for Floor drain spacing.
Drains & Bridge Drainage System shall be located clear of all diaphragms.
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings' Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.
See sheet 29 of 79 for additional Drain Details.
See Sheet 29 of 79 for Section A-A.
The quantity for the "Drainage System" is representative of the portion of the Lump Sum total for Contract 74295.



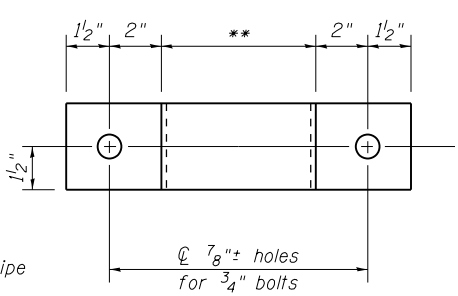
SLAB HANGER DETAIL



RUBBER SHIM DETAIL



HANGER DETAIL



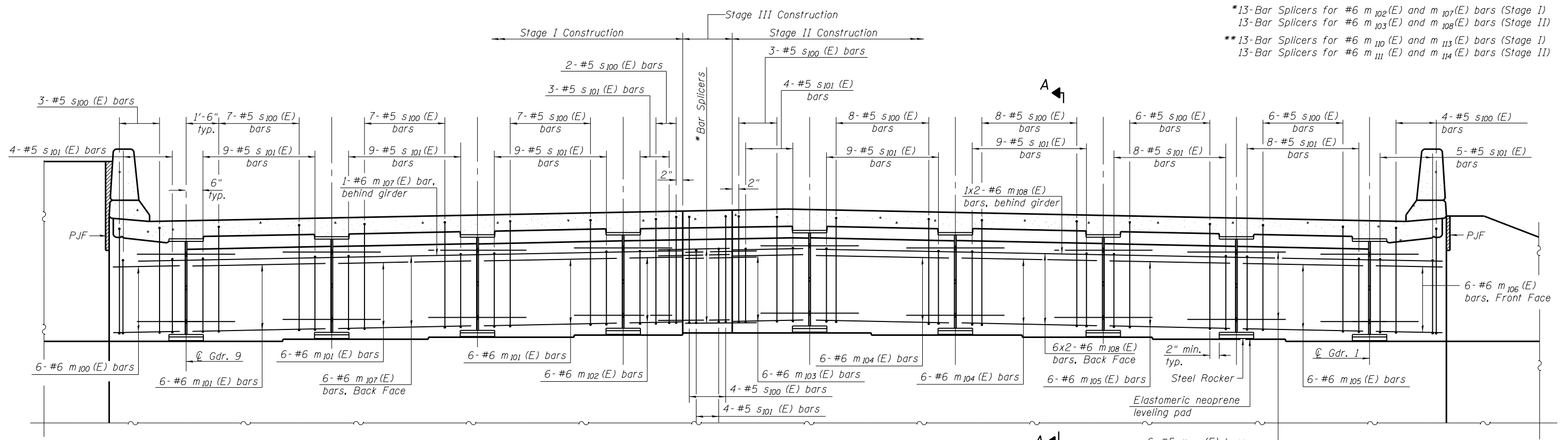
3/8" x 3" STRAP DETAIL

* Dimension as required by the pipe strap.
** Dimension as required by the pipe.

BILL OF MATERIAL

Item	Unit	Total
Drainage System	L. Sum	0.37
Floor Drains	Each	46

*13-Bar Splicers for #6 m₁₀₂(E) and m₁₀₇(E) bars (Stage I)
 13-Bar Splicers for #6 m₁₀₃(E) and m₁₀₈(E) bars (Stage II)
 **13-Bar Splicers for #6 m₁₁₀(E) and m₁₁₃(E) bars (Stage I)
 13-Bar Splicers for #6 m₁₁₁(E) and m₁₁₄(E) bars (Stage II)

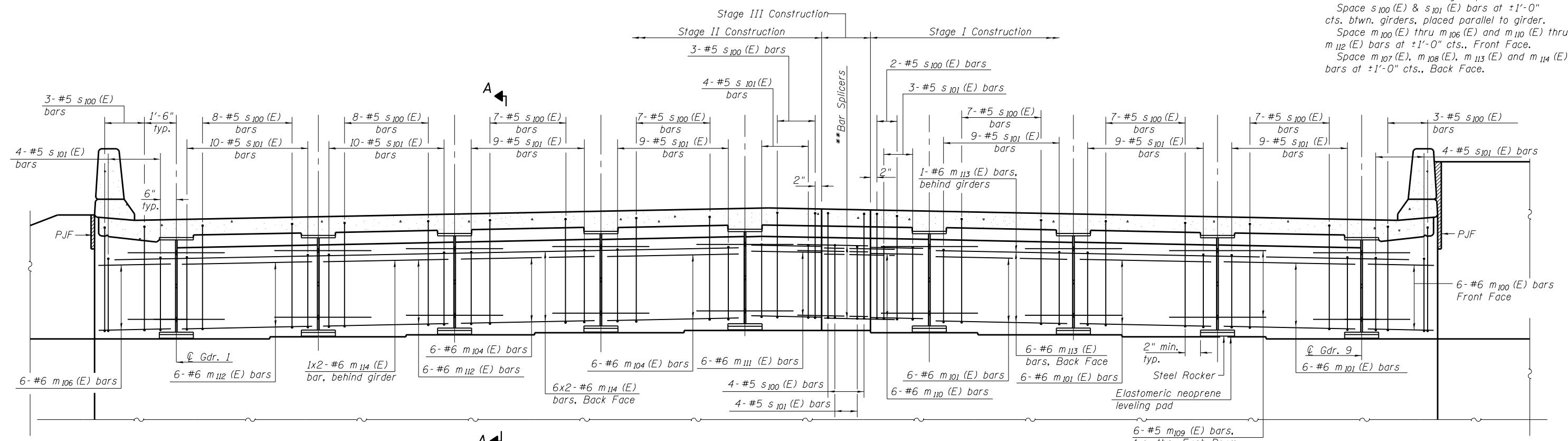


MINIMUM BAR LAP
 #6 bar = 3'-4"

DIAPHRAGM ELEVATION AT WEST ABUTMENT

6- #5 m₁₀₉(E) bars, typ. thru Each Beam. (Secure bars such that they remain centered and level during pouring of the concrete)

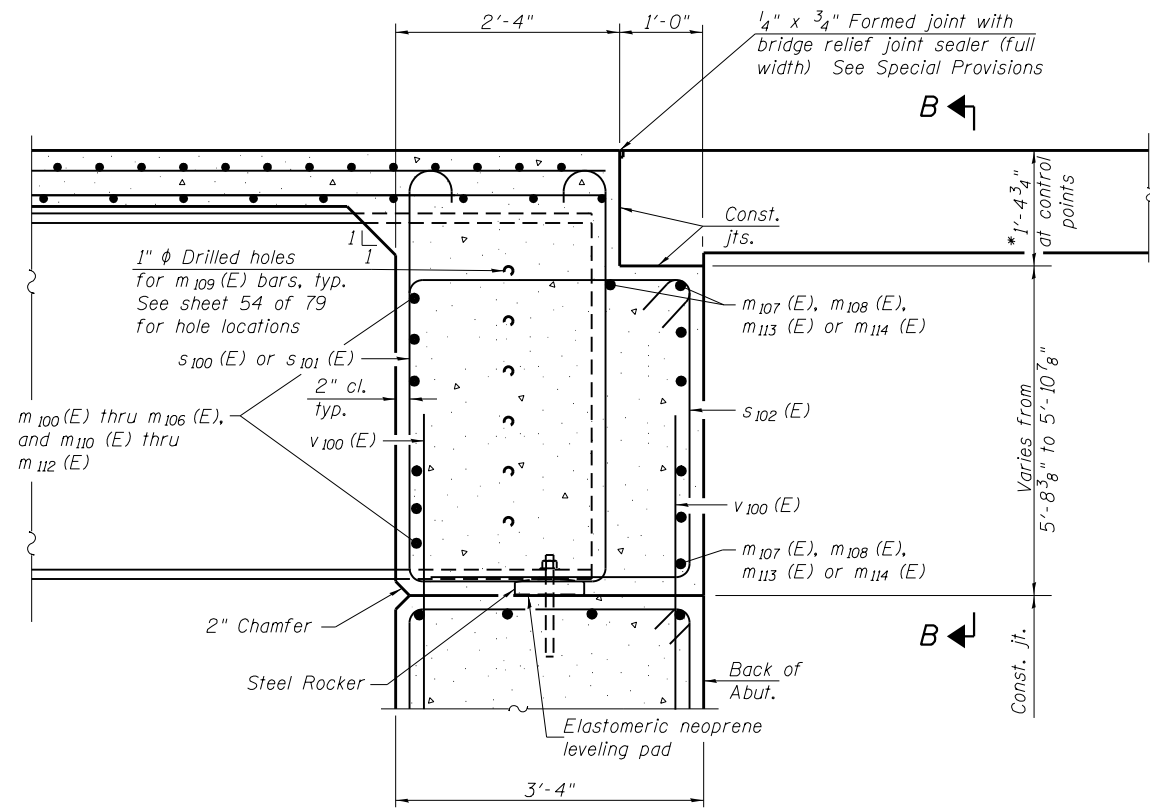
Notes:
 Dimensions taken perpendicular to Beams. For Section A-A see sheet 33 of 79. Bars indicated thus 1x2-#6 etc. indicates 1 line of bars with 2 lengths per line. Space s₁₀₀(E) & s₁₀₁(E) bars at ±1'-0" cts. btwn. girders, placed parallel to girder. Space m₁₀₀(E) thru m₁₀₆(E) and m₁₁₀(E) thru m₁₁₂(E) bars at ±1'-0" cts., Front Face. Space m₁₀₇(E), m₁₀₈(E), m₁₁₃(E) and m₁₁₄(E) bars at ±1'-0" cts., Back Face.



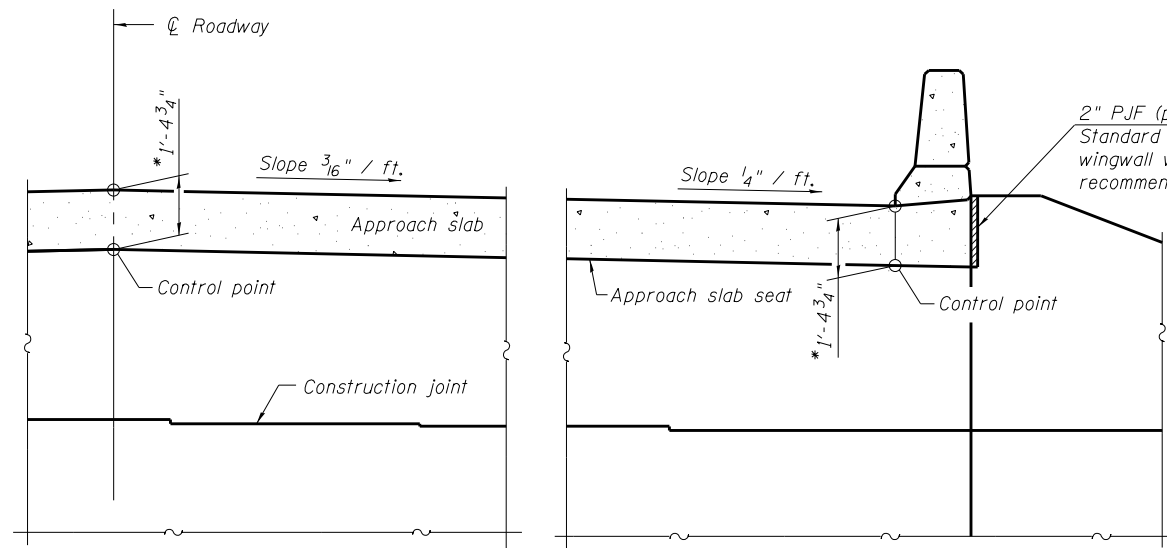
DIAPHRAGM ELEVATION AT EAST ABUTMENT

6- #5 m₁₀₉(E) bars, typ. thru Each Beam. (Secure bars such that they remain centered and level during pouring of the concrete)

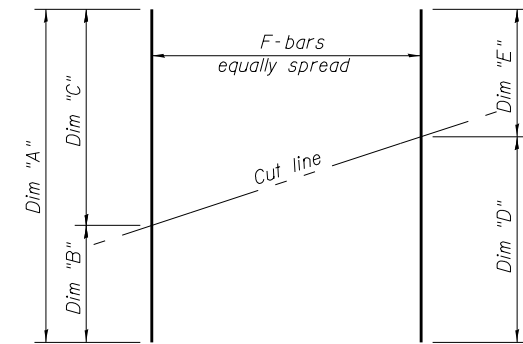
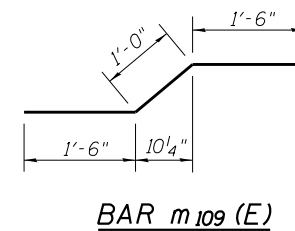
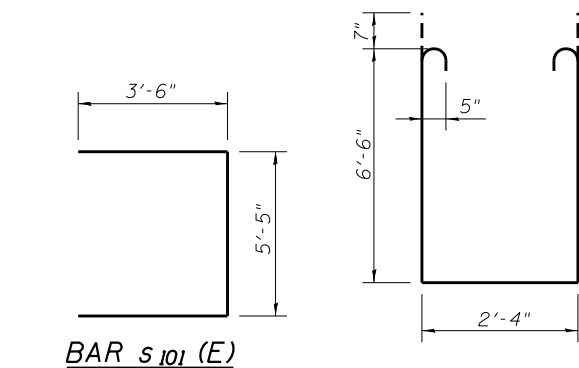
FILE NAME = 025011-74295-032-1st Abut Diaph BERNARDINI LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 288-4665 FAX (618) 288-4666	DESIGNED - BB CHECKED - ACS DRAWN - WJS CHECKED - CJF	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTEGRAL ABUTMENT DIAPHRAGM DETAILS (WB) STRUCTURE NO. 025-0111 SHEET NO. 32 OF 79 SHEETS	F.A.I. RT. 57/70	SECTION (25-4HBV-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 567
	ILLINOIS Design Firm Number 184.001670	PLOT SCALE =			PLOT DATE = 3:25:49 PM 8/14/2013	CONTRACT NO. 74295	ILLINOIS FED. AID PROJECT		



SECTION A-A
(at Rt. L's)



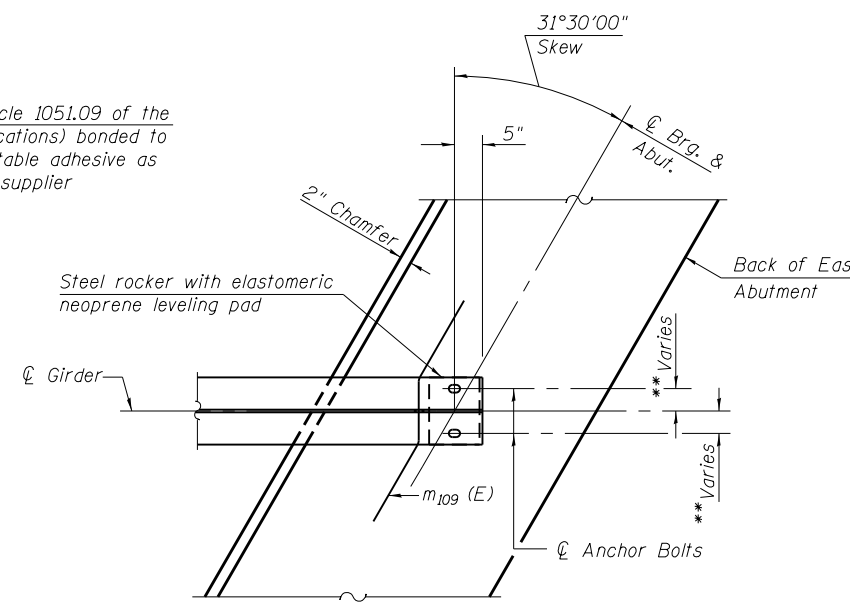
SECTION B-B



FIELD CUTTING DIAGRAM

Order bars full length, Cut as shown and use remainder of bar as specified.

BAR	A	B	C	D	E	F
#6-a100 (E)	32'-2"	1'-0"	31'-2"	31'-2"	1'-0"	38
#6-a102 (E)	33'-9"	2'-7"	31'-2"	31'-2"	2'-7"	22
#6-a105 (E)	40'-0"	20'-5"	19'-7"	39'-2"	10"	24
#6-a107 (E)	46'-2"	23'-6"	22'-8"	43'-9"	2'-5"	26
#6-a108 (E)	40'-7"	20'-8"	19'-11"	38'-8"	1'-11"	14
#6-a110 (E)	47'-5"	24'-4"	23'-1"	43'-4"	4'-1"	15

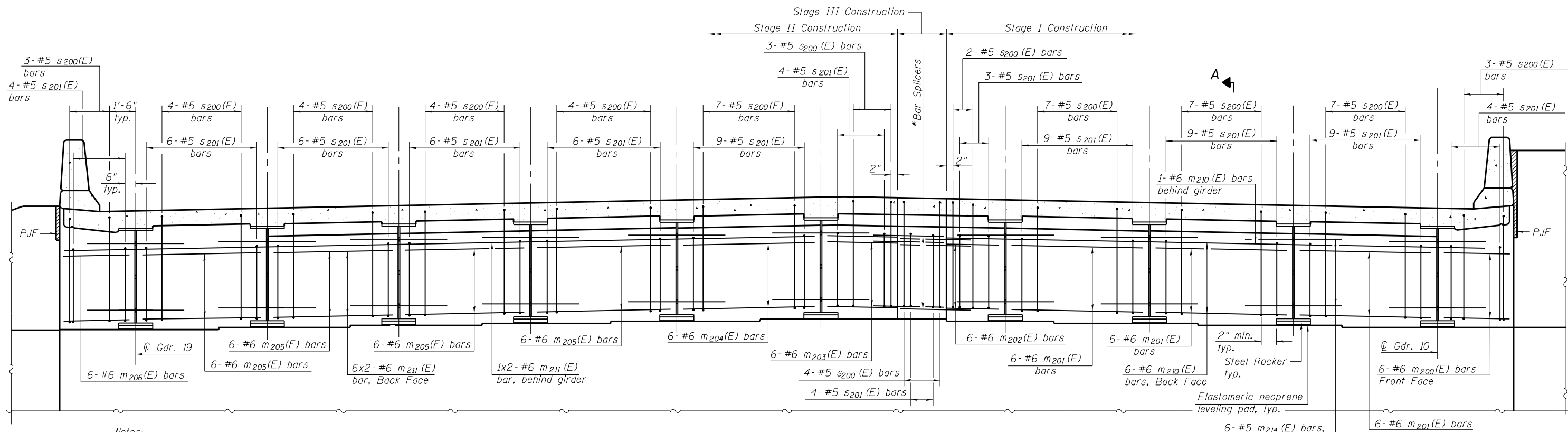


PARTIAL PLAN AT EAST ABUTMENT

(Showing bottom flange of girder)
(West Abutment Similar)

* Prior to Grinding
** See sheet 55 of 79 for dimension

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 25 of 79.
Concrete in diaphragm is included with Concrete Superstructure on sheet 25 of 79.
For details of bar m109 (E) see sheet 25 of 79.
The s100 (E) and s102 (E) bars shall be placed parallel to the girders. Spacing for these bars shall be at right angles to the girders.
The approach slab seat shall have a constant slope determined from the control points shown.
For bearing details see sheet 56 of 79.
For details of Precast Bridge Approach Slab connection to Abutment Diaphragm, see sheet 37 and 41 of 79.

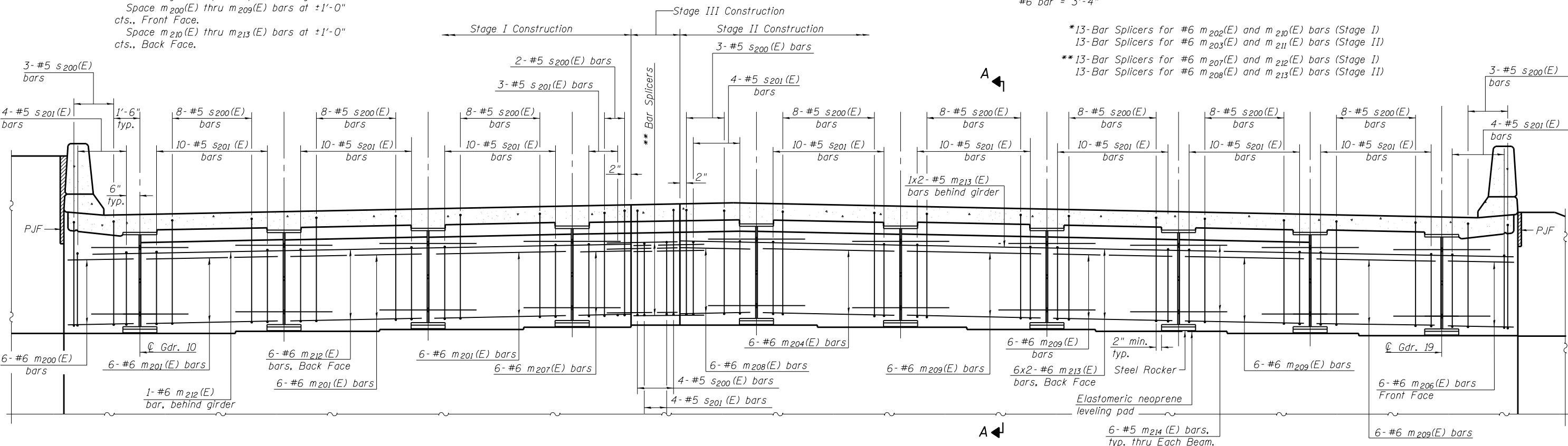


DIAPHRAGM ELEVATION AT WEST ABUTMENT

Notes:
 Dimensions taken perpendicular to Beams.
 For Section A-A see sheet 35 of 79.
 Bars indicated thus 1x2-#6 etc. indicates 1 line of bars with 2 lengths per line.
 Space s200(E) & s201(E) bars at ±1'-0" cts. btwn. girders, placed parallel to girder.
 Space m200(E) thru m209(E) bars at ±1'-0" cts., Front Face.
 Space m210(E) thru m213(E) bars at ±1'-0" cts., Back Face.

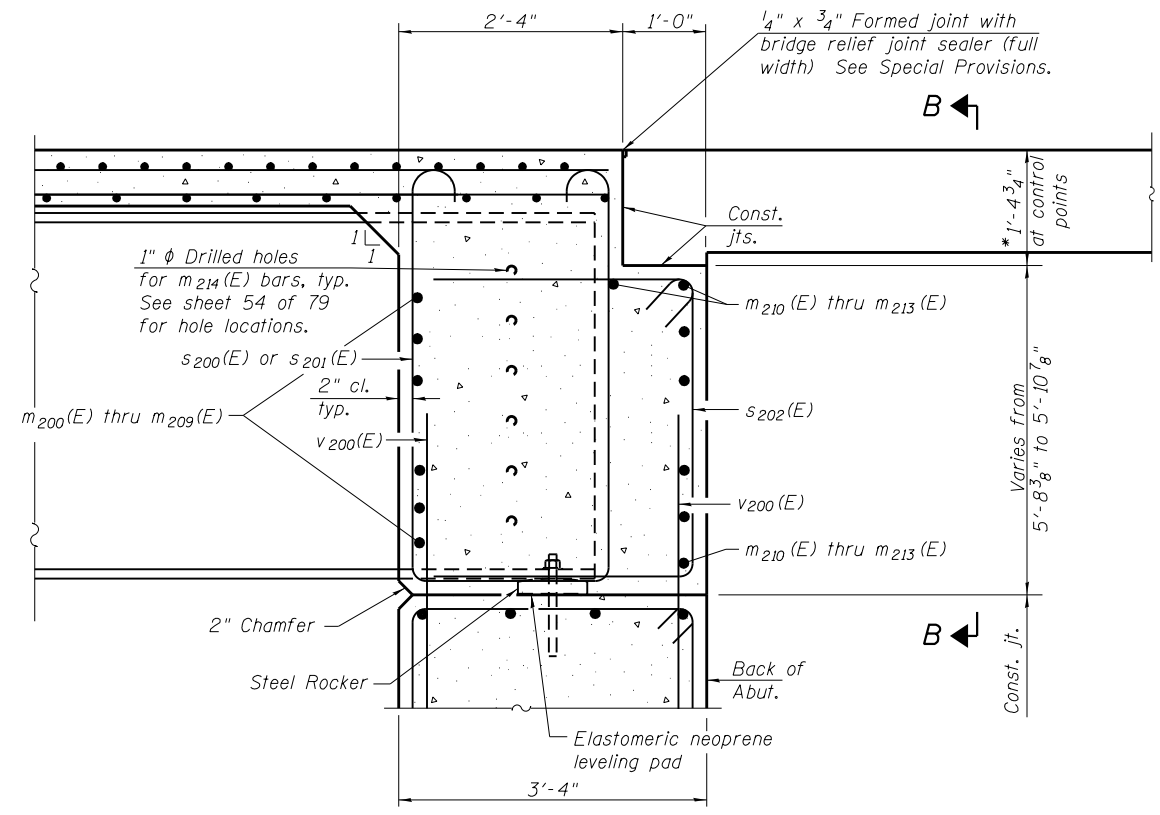
MINIMUM BAR LAP
 #6 bar = 3'-4"

*13-Bar Splicers for #6 m202(E) and m210(E) bars (Stage I)
 13-Bar Splicers for #6 m203(E) and m211(E) bars (Stage II)
 **13-Bar Splicers for #6 m207(E) and m212(E) bars (Stage I)
 13-Bar Splicers for #6 m208(E) and m213(E) bars (Stage II)

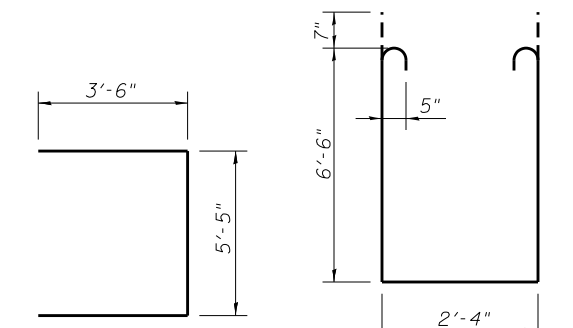


DIAPHRAGM ELEVATION AT EAST ABUTMENT

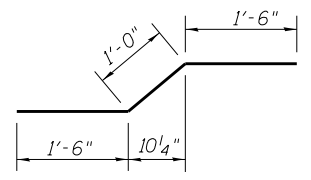
6-#5 m214(E) bars, typ. thru Each Beam.
 (Secure bars such that they remain centered and level during pouring of the concrete)



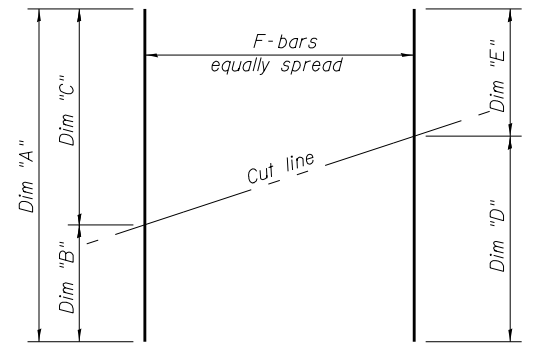
SECTION A-A
(at Rt. L's)



BAR S201 (E)
BAR S200 (E)



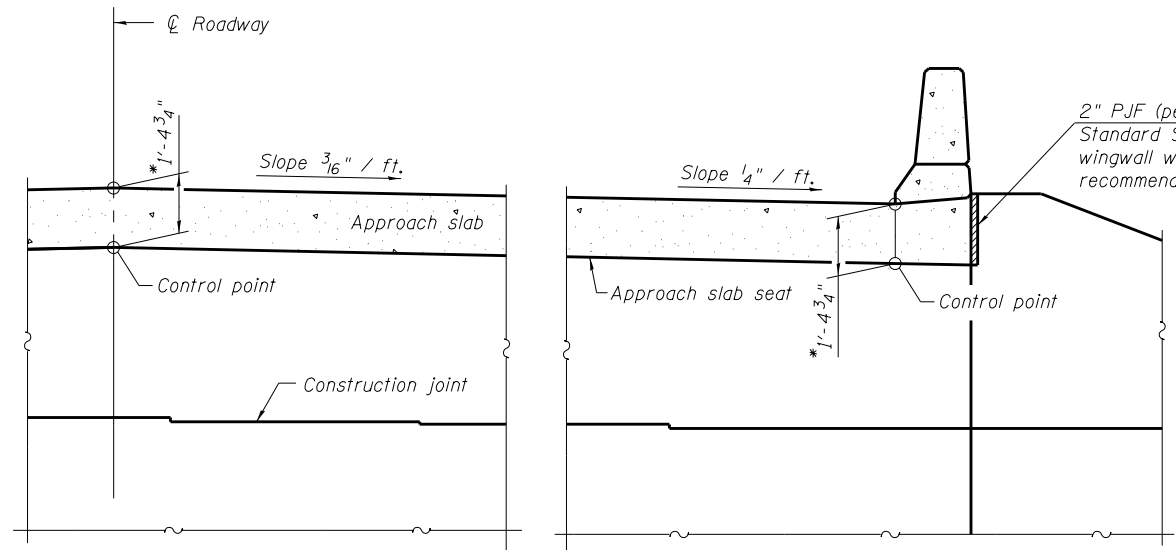
BAR m214 (E)



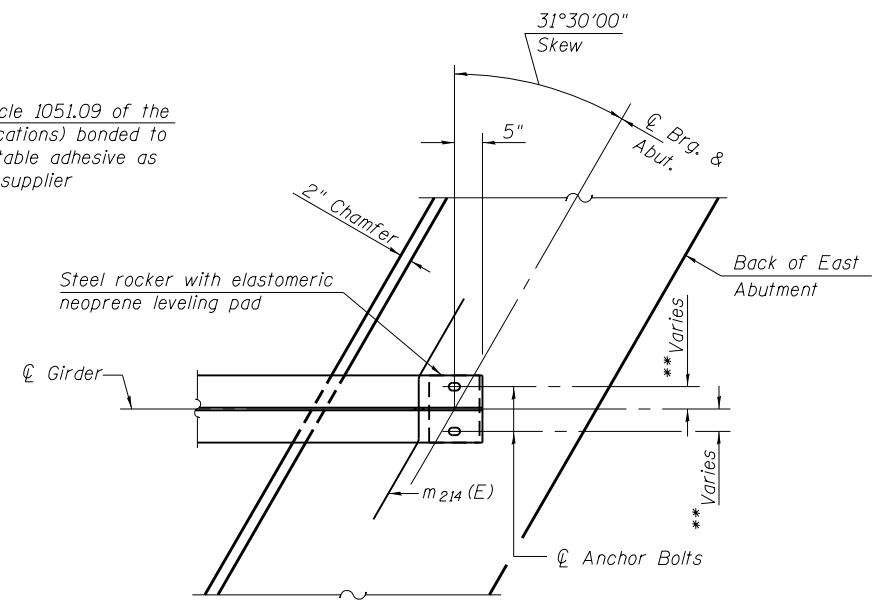
FIELD CUTTING DIAGRAM

Order bars full length, Cut as shown and use remainder of bar as specified.

BAR	A	B	C	D	E	F
#6-a200(E)	32'-2"	1'-0"	31'-2"	31'-2"	1'-0"	38
#6-a202(E)	33'-9"	2'-7"	31'-2"	31'-2"	2'-7"	22
#6-a205(E)	42'-11"	21'-10 1/2"	21'-0 1/2"	40'-3"	2'-8"	23
#6-a207(E)	55'-9"	28'-4"	27'-5"	53'-7"	2'-2"	32
#6-a208(E)	41'-9"	21'-7"	20'-2"	39'-8"	2'-1"	14
#6-a210 (E)	55'-2"	28'-4"	26'-10"	52'-9"	2'-5"	19



SECTION B-B

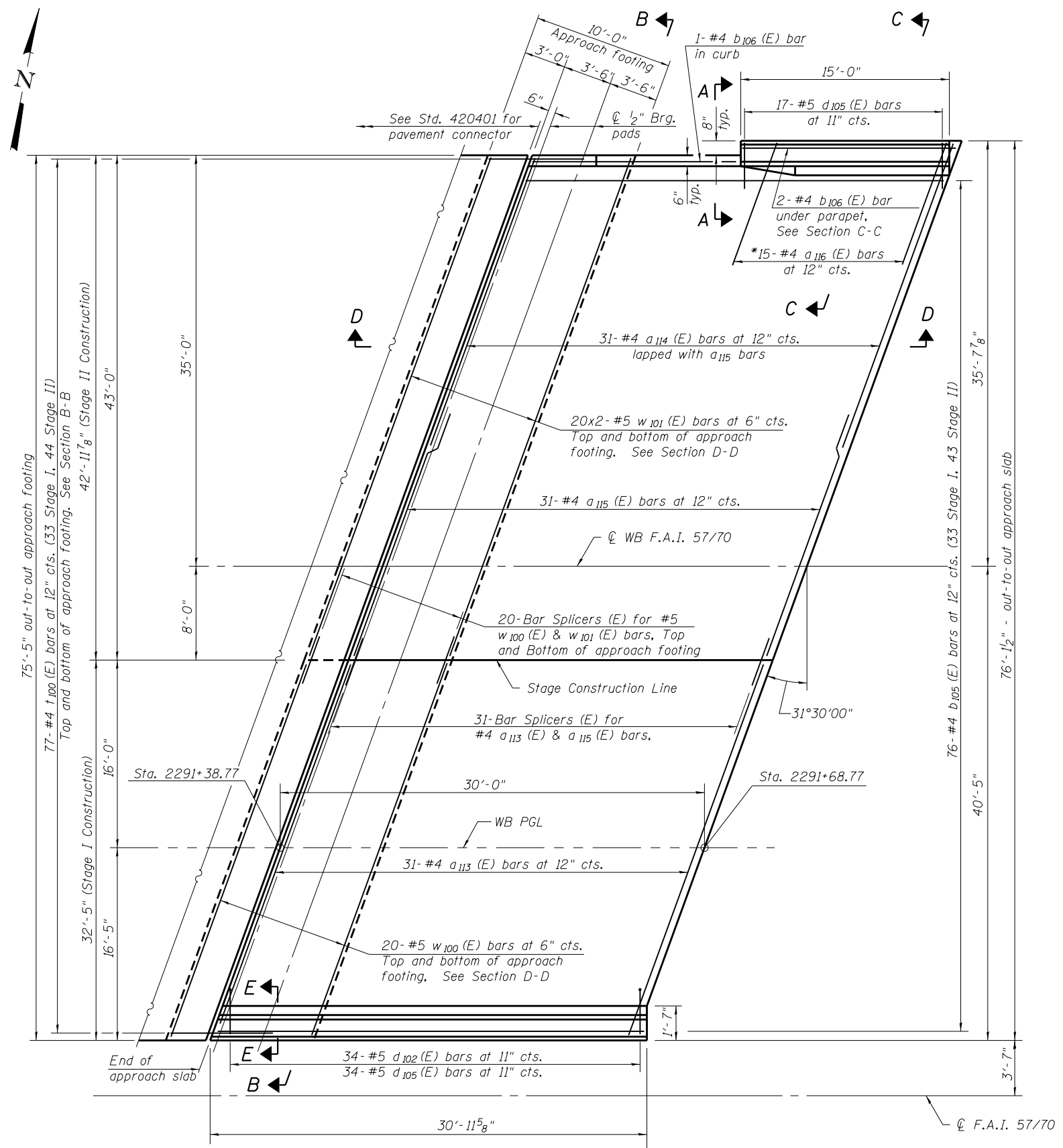


PARTIAL PLAN AT EAST ABUTMENT

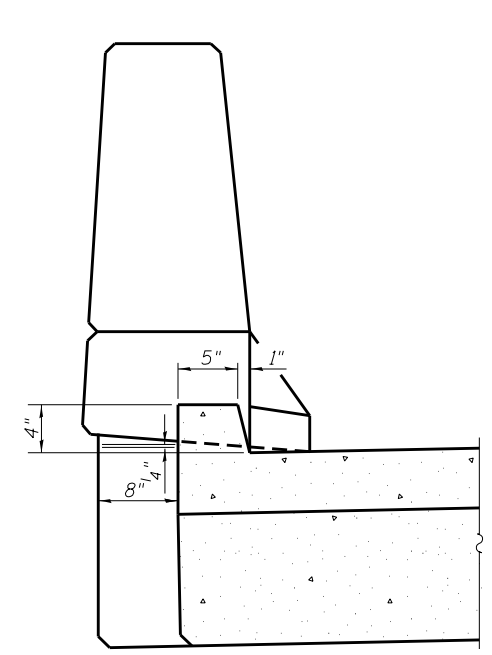
(Showing bottom flange of girder)
(West Abutment Similar)

* Prior to Grinding
** See sheet 55 of 79 for dimension.

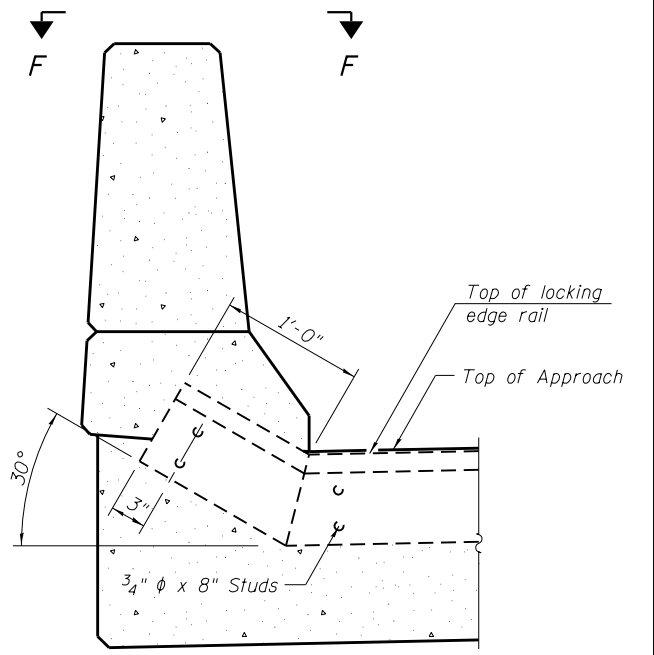
Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 30 of 79.
Concrete in diaphragm is included with Concrete Superstructure on sheet 30 of 79.
For details of bar m214 (E) see sheet 30 of 79.
The s200 (E) and s202 (E) bars shall be placed parallel to the girders. Spacing for these bars shall be at right angles to the girders.
The approach slab seat shall have a constant slope determined from the control points shown.
For bearing details see sheet 56 of 79.
For details of Precast Bridge Approach Slab connection to Abutment Diaphragm, see sheet 45 and 49 of 79.



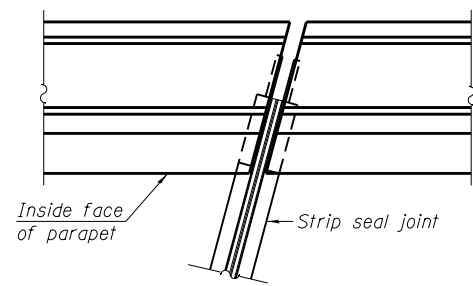
WEST APPROACH SLAB PLAN
(Showing wearing surface)



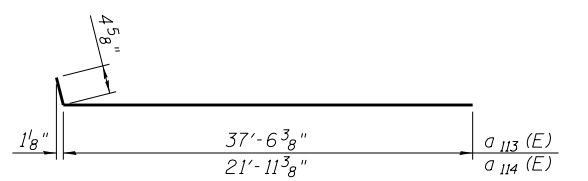
SECTION A-A



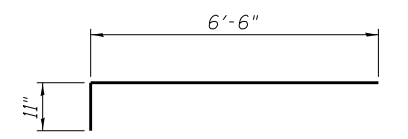
SECTION E-E



VIEW F-F



BAR a113 (E) & a114 (E)



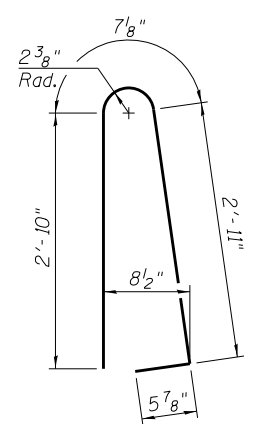
BAR a116 (E)

Notes:
See sheet 37 of 79 for Sections B-B, C-C and D-D.
Bars indicated thus 20 x 2-#5 etc. indicates 20 lines of bars with 2 lengths per line.

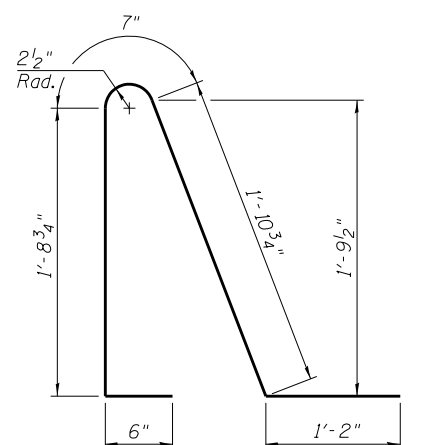
MINIMUM BAR LAP

- #4 bar = 2'-0"
- #5 bar = 2'-7"

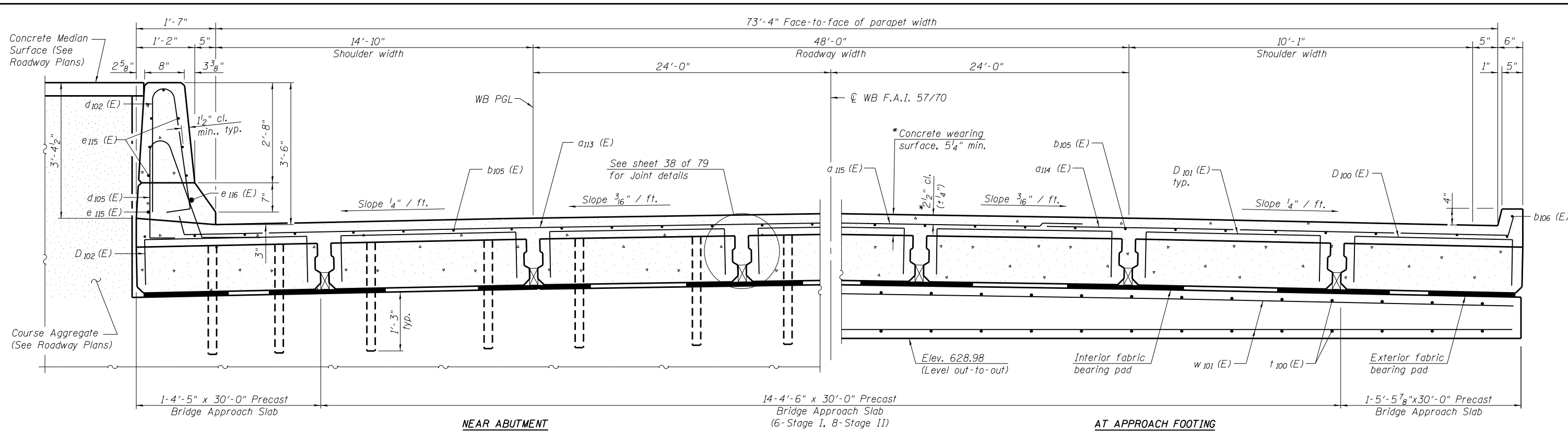
* Lap with each a114 (E) bar



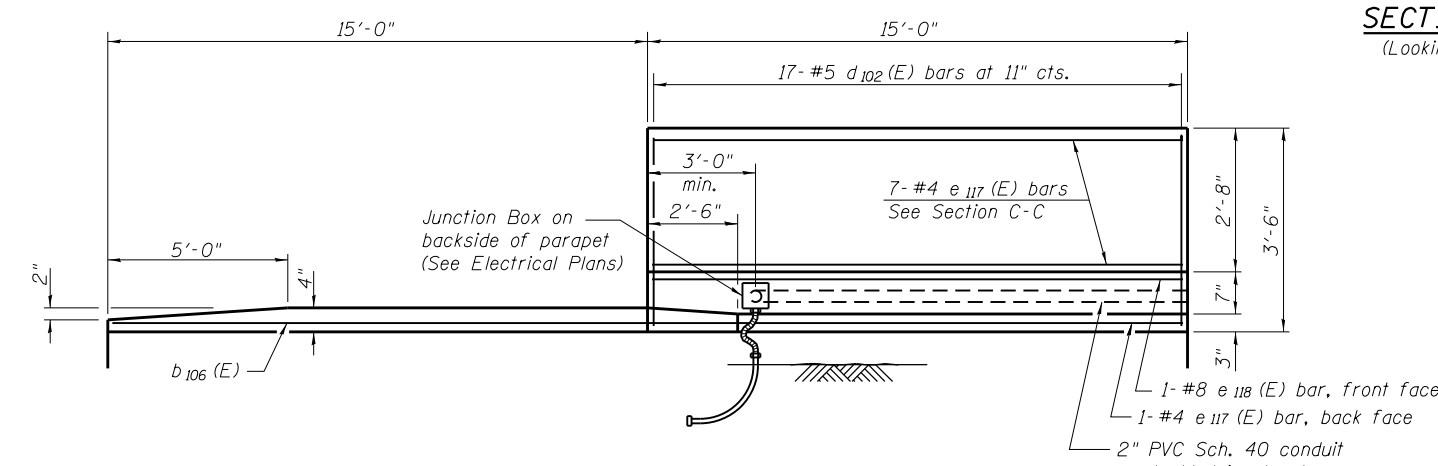
BAR d102 (E)



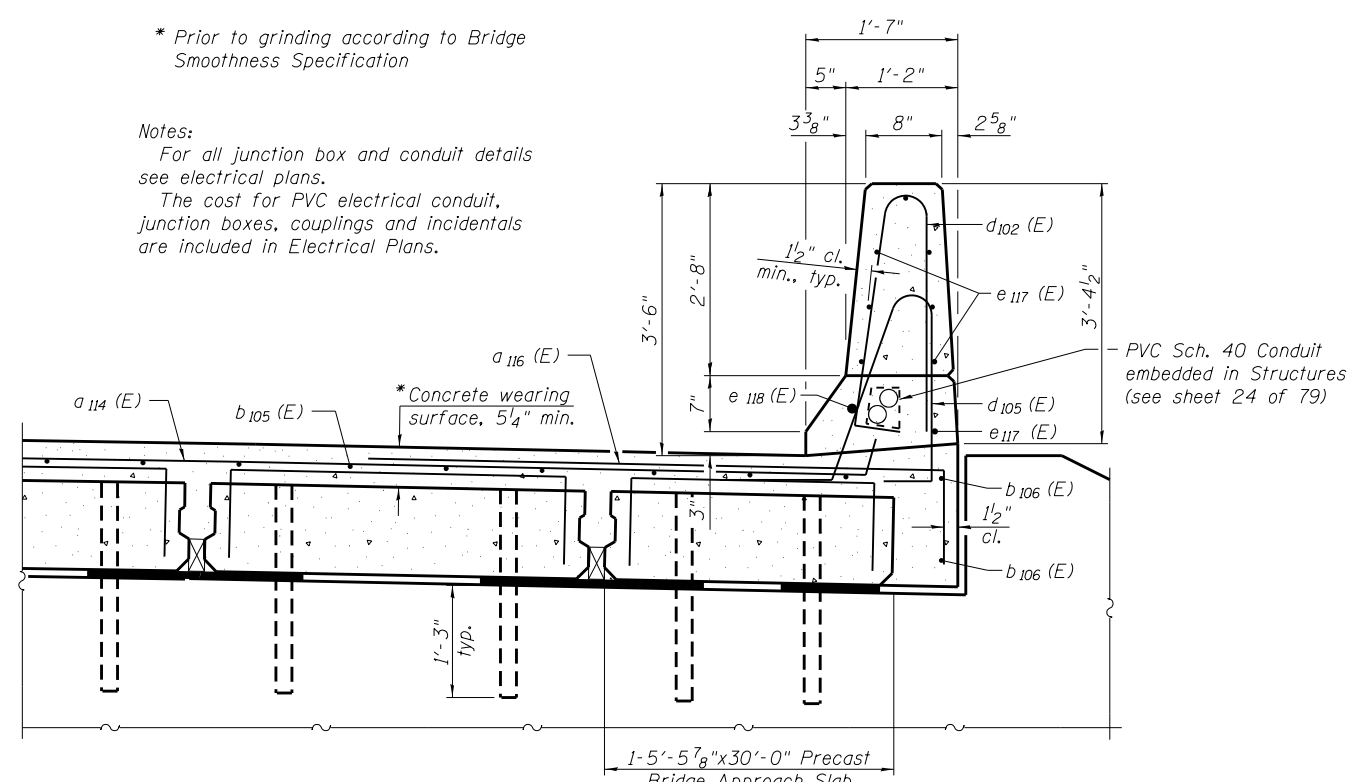
BAR d105 (E)



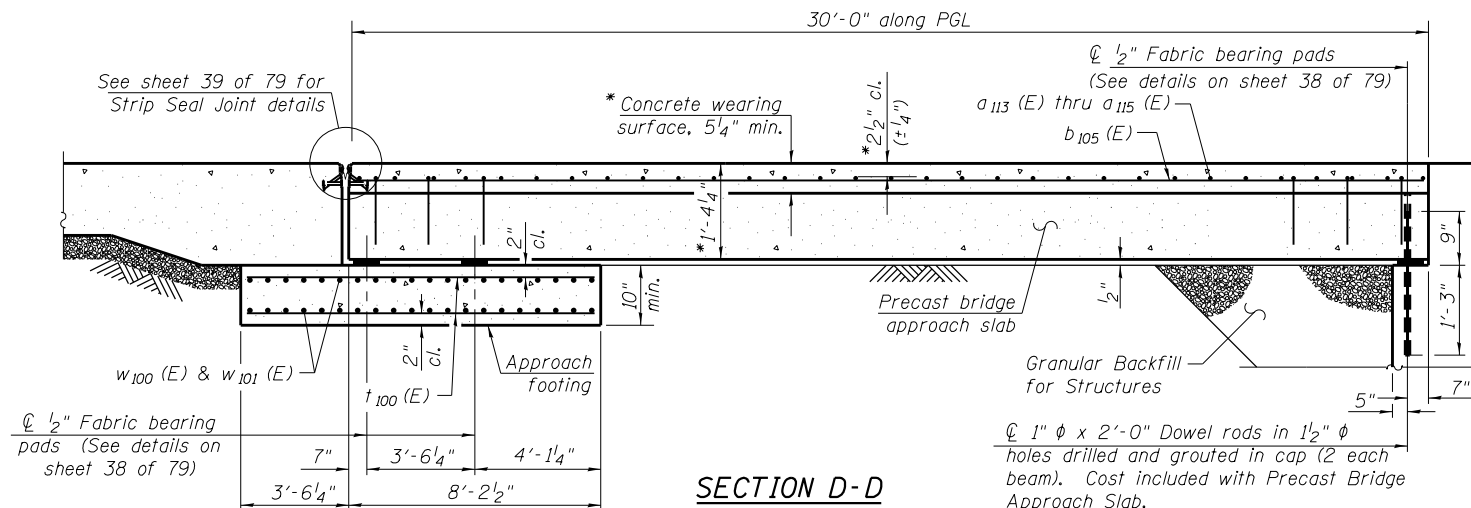
SECTION B-B
(Looking West)



INSIDE ELEVATION OF NORTH PARAPET AND CURB



NEAR ABUTMENT SECTION C-C

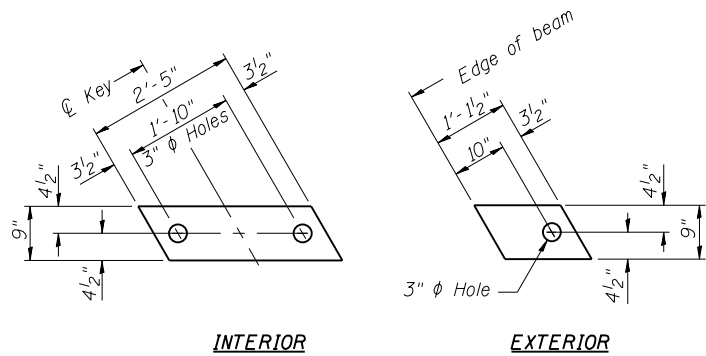


SECTION D-D

* Prior to grinding according to Bridge Smoothness Specification

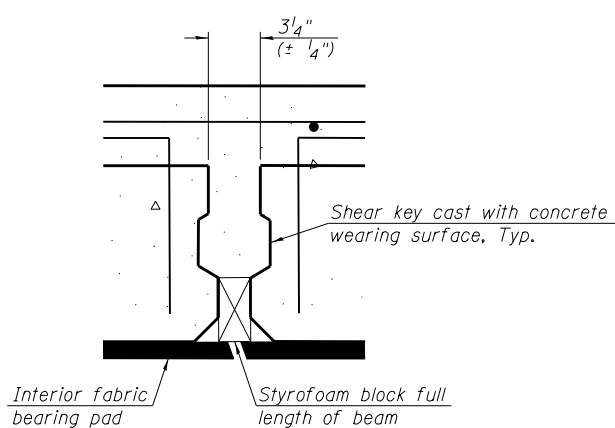
Notes:
For all junction box and conduit details see electrical plans.
The cost for PVC electrical conduit, junction boxes, couplings and incidentals are included in Electrical Plans.

FILE NAME = 025011-74295-037-W BERNARDINI - LOCHMULLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 288-4665 FAX (618) 288-4666	DESIGNED - BB CHECKED - ACS DRAWN - WJS CHECKED - CJF	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION WEST PRECAST BRIDGE APPROACH SLAB DETAILS (WB) STRUCTURE NO. 025-0111 SHEET NO. 37 OF 79 SHEETS	F.A.I. R.T.E. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 572	
	ILLINOIS DESIGN FIRM NUMBER 184.001670 PLOT SCALE = PLOT DATE = 3:25:55 PM 8/14/2013			CONTRACT NO. 74295	ILLINOIS FED. AID PROJECT				

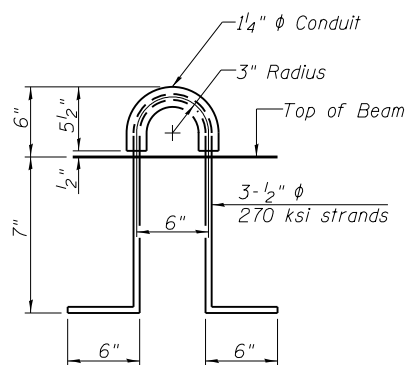


INTERIOR
EXTERIOR
FABRIC BEARING PAD

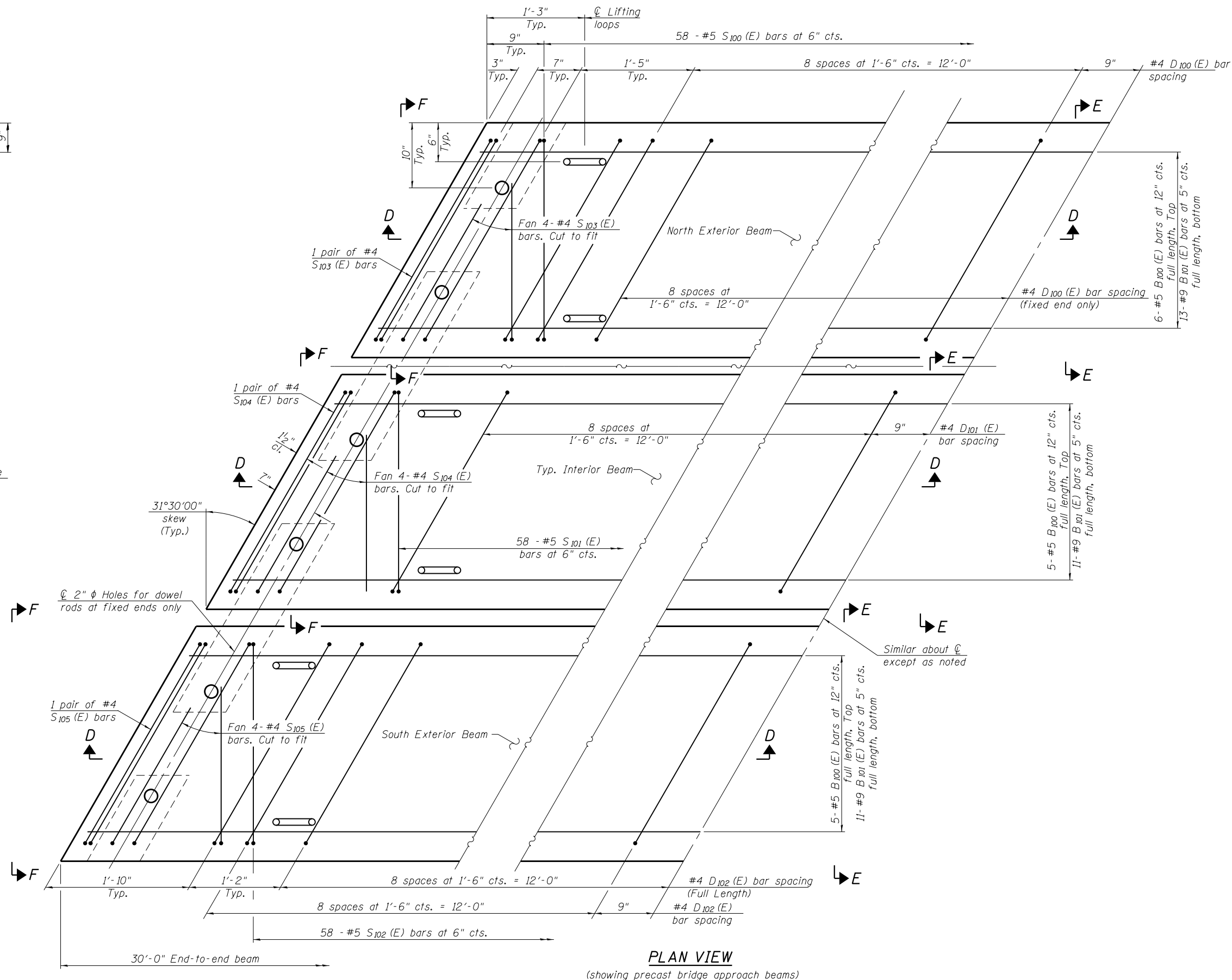
Notes:
All bearing pads shall be 1/2" thick.
Omit holes for fabric bearing pads at approach slab footing end of beams.
Expansion bearing pad shall be bonded to the approach slab footing.



SECTION THRU SHEAR KEY JOINT

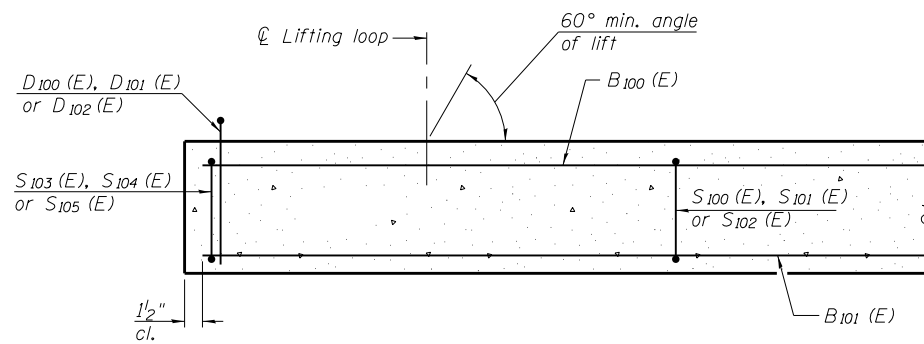


LIFTING LOOP DETAIL

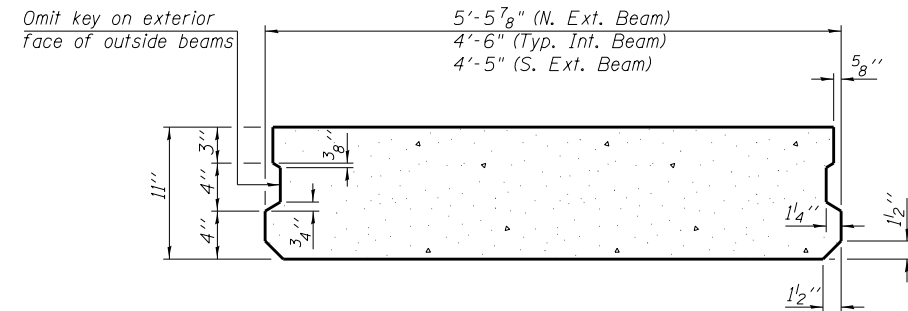


PLAN VIEW

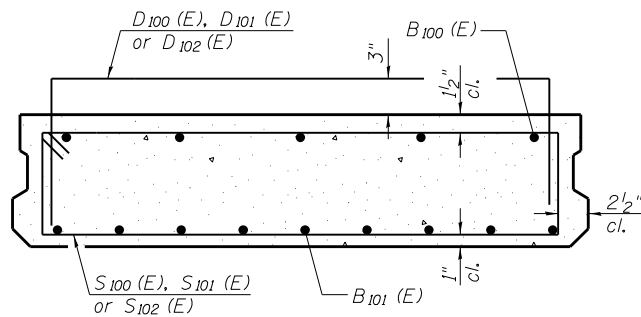
(showing precast bridge approach beams)



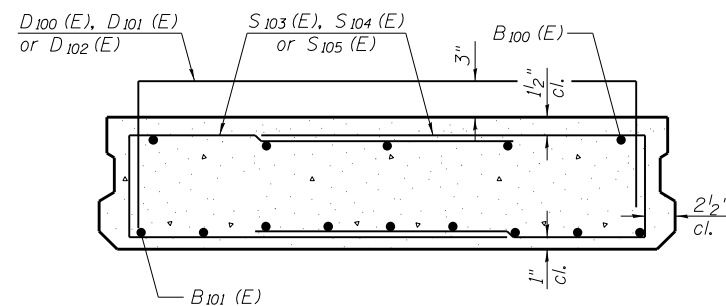
SECTION D-D



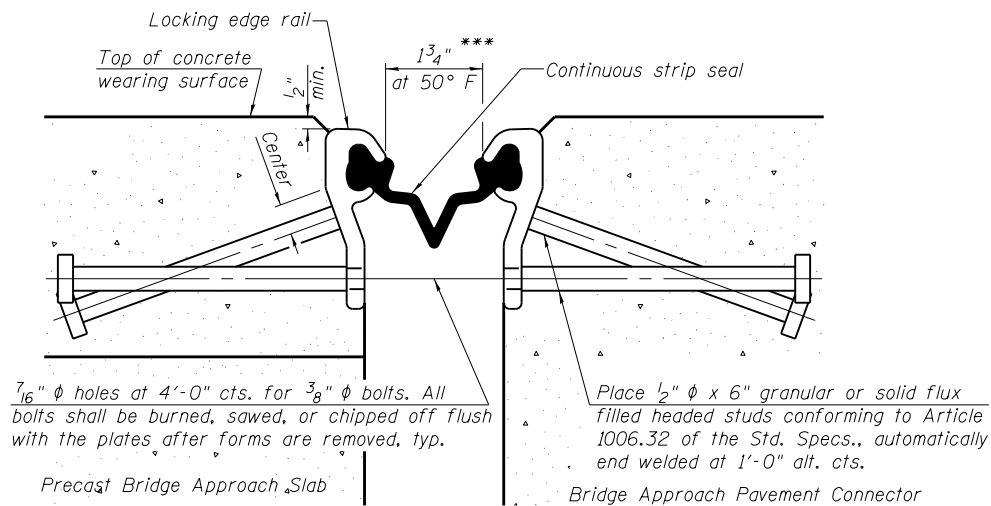
SECTION E-E
(Showing dimensions)



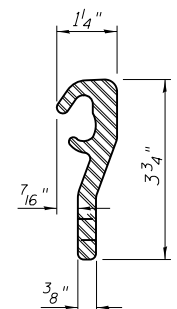
SECTION E-E
(Showing reinforcement)



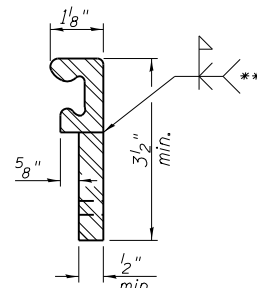
VIEW F-F
(Showing reinforcement)



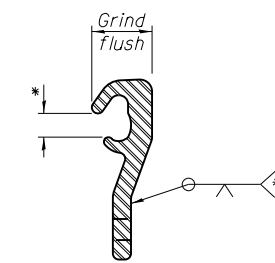
SECTION THRU STRIP SEAL JOINT
(at rt. angles)



ROLLED (EXTRUDED) RAIL



WELDED RAIL

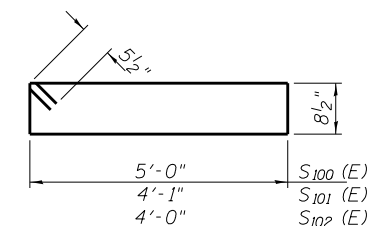


LOCKING EDGE RAIL SPLICE

Rolled rail shown, welded rail similar.

LOCKING EDGE RAIL

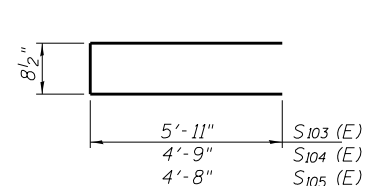
- * Omit weld at seal opening.
- ** Back gouge not required if complete joint penetration is verified by mock-up.
- *** The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1 1/2" for installation purposes.



BARS S100 (E), S101 (E) & S102 (E)

BAR LIST
NORTH EXTERIOR BEAM
(For information only)

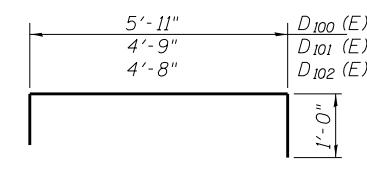
Bar	No.	Size	Length	Shape
B100 (E)	6	#5	29'-8"	—
B101 (E)	13	#9	29'-8"	—
D100 (E)	31	#4	7'-11"	□
S100 (E)	58	#5	12'-4"	▭
S103 (E)	12	#5	12'-7"	▭



BARS S103 (E), S104 (E) & S105 (E)

BAR LIST
EACH INTERIOR BEAM
(For information only)

Bar	No.	Size	Length	Shape
B100 (E)	5	#5	29'-8"	—
B101 (E)	11	#9	29'-8"	—
D101 (E)	22	#4	6'-9"	□
S101 (E)	58	#5	10'-6"	▭
S104 (E)	12	#5	10'-3"	▭



BARS D100 (E), D101 (E) & D102 (E)

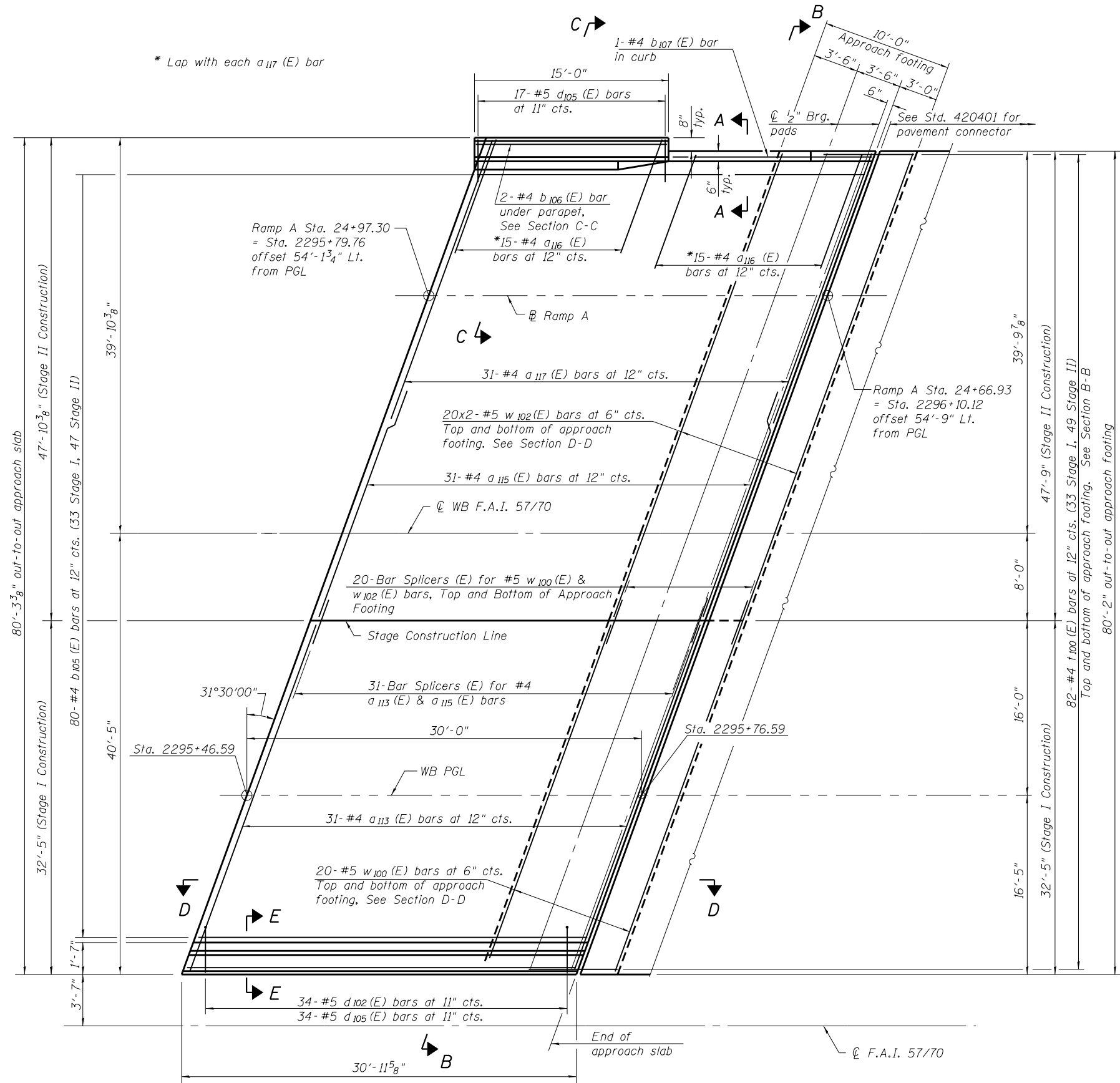
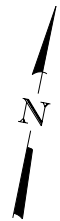
BAR LIST
SOUTH EXTERIOR BEAM
(For information only)

Bar	No.	Size	Length	Shape
B100 (E)	5	#5	29'-8"	—
B101 (E)	11	#9	29'-8"	—
D102 (E)	41	#4	6'-8"	□
S102 (E)	58	#5	10'-4"	▭
S105 (E)	12	#5	10'-1"	▭

Notes:
The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.
Cast-in-place substitution of Precast Bridge Approach Slab is not allowed. Parapet concrete shall be paid for as Concrete Superstructure.
Parapet and wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
Approach footing concrete shall be paid for as Concrete Structures.
The top surface of precast bridge approach slabs shall be roughened to a depth of 1/4" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."
After precast bridge approach slab has been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.
A minimum 2 1/2" phi lifting pins shall be used to engage the lifting loops during handling.
Compressive strength of precast concrete, f'c shall be 6,000 psi.
For additional parapet details, see sheet 37 of 79.
Any concrete poured monolithically with the wearing surface, such as curbs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5 1/4".
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.
Quantity for Diamond Grinding (Bridge Section) and Bridge Deck Grooving included in Bill of Materials on sheet 25 of 79.
Order e115 (E) bars full length and cut to fit skew.
See sheet 36 of 79 for joint termination details.
See sheet 36 of 79 for Bar Bends.

WEST APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a113 (E)	31	#4	37'-11"	□
a114 (E)	31	#4	22'-4"	□
a115 (E)	31	#4	30'-0"	□
a116 (E)	15	#4	7'-5"	□
b105 (E)	76	#4	29'-8"	—
b106 (E)	3	#4	14'-8"	—
d102 (E)	51	#5	6'-10"	▭
d105 (E)	51	#5	5'-11"	▭
e115 (E)	8	#4	30'-7"	—
e116 (E)	1	#8	30'-7"	—
e117 (E)	8	#4	14'-8"	—
e118 (E)	1	#8	14'-8"	—
t100 (E)	154	#4	11'-5"	—
w100 (E)	40	#5	37'-7"	—
w101 (E)	80	#5	26'-4"	—
Concrete Superstructure			Cu. Yd.	5.8
Concrete Structures			Cu. Yd.	40.0
Reinforcement Bars, Epoxy Coated			Pound	9460
Precast Bridge Approach Slab			Sq. Ft.	2273
Concrete Wearing Surface, 5"			Sq. Yd.	252.5
Preformed Joint Strip Seal			Foot	89

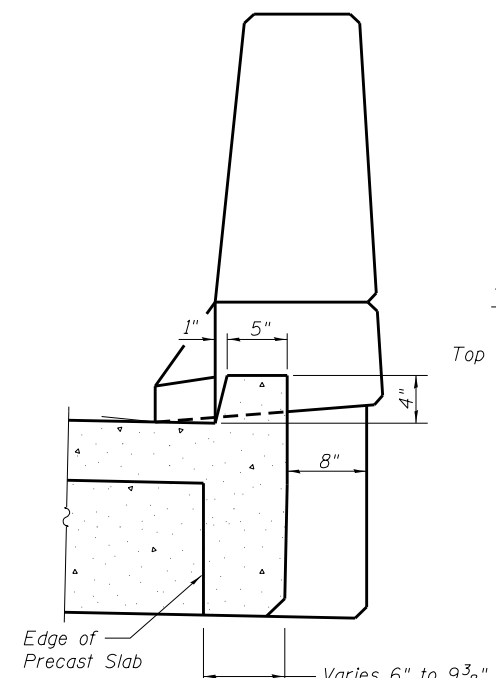


EAST APPROACH SLAB PLAN
(Showing wearing surface)

MINIMUM BAR LAP

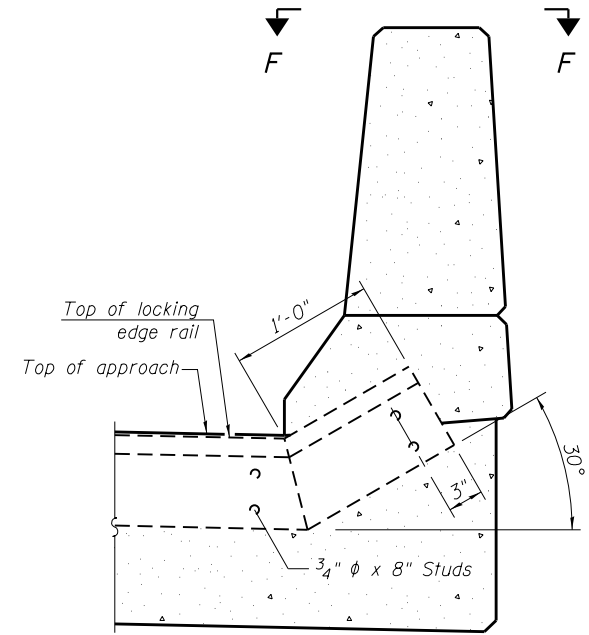
#4 bar = 2'-0"
#5 bar = 2'-7"

Notes:
Bars indicated thus 20x2 indicates 20 bars with 2 bars per line.
See sheet 41 of 79 for Sections B-B, C-C and D-D.
See sheet 36 of 79 for a113 (E) & a116 (E) bar details.

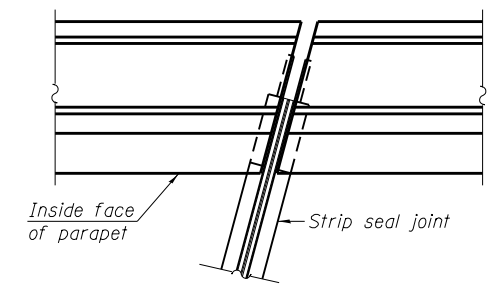


SECTION A-A

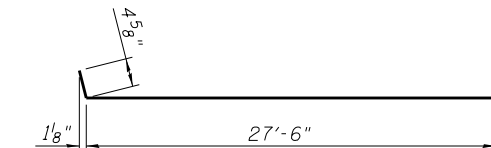
Varies 6" to 9 3/8" at Rt. L's to edge of PPC Beam



SECTION E-E

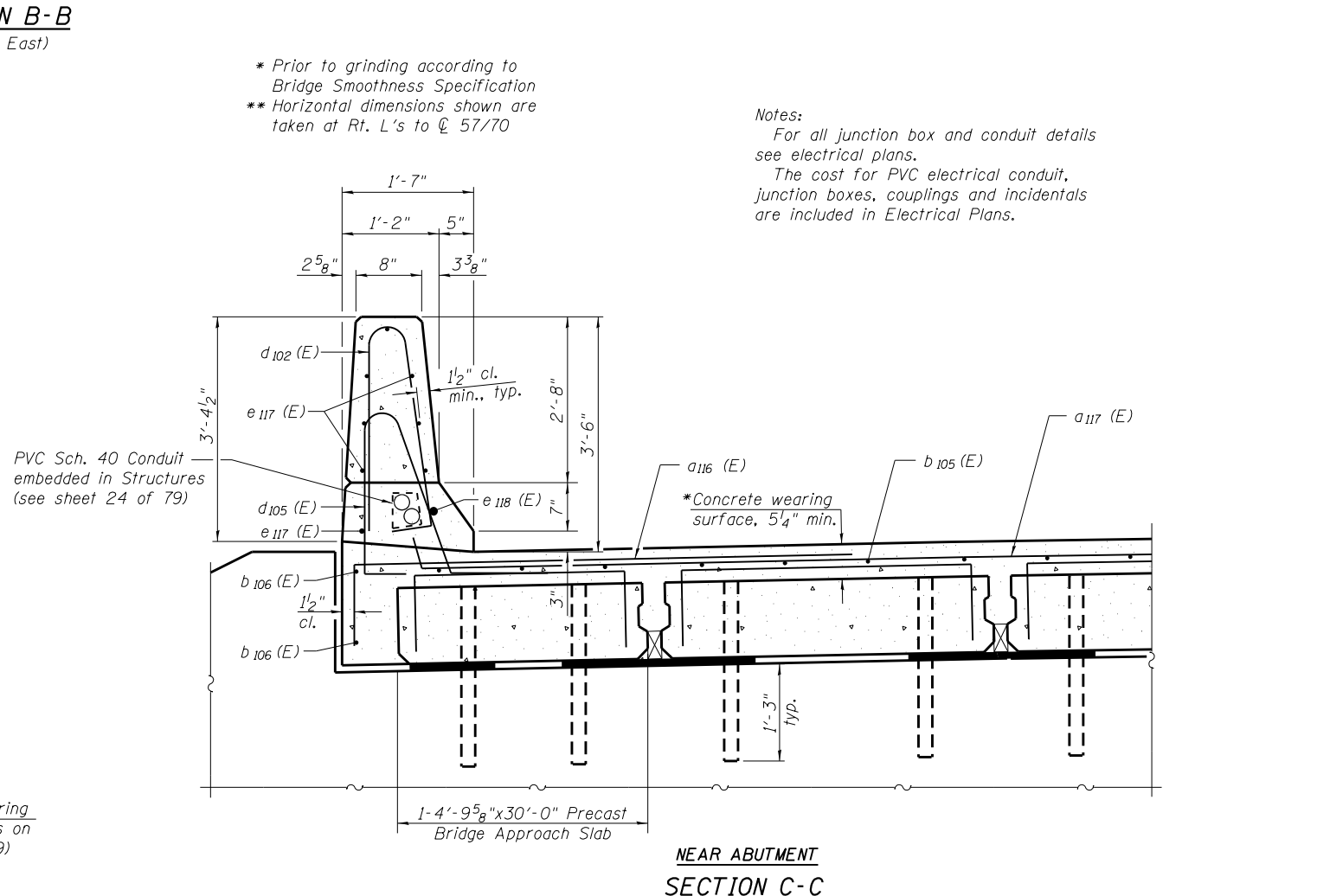
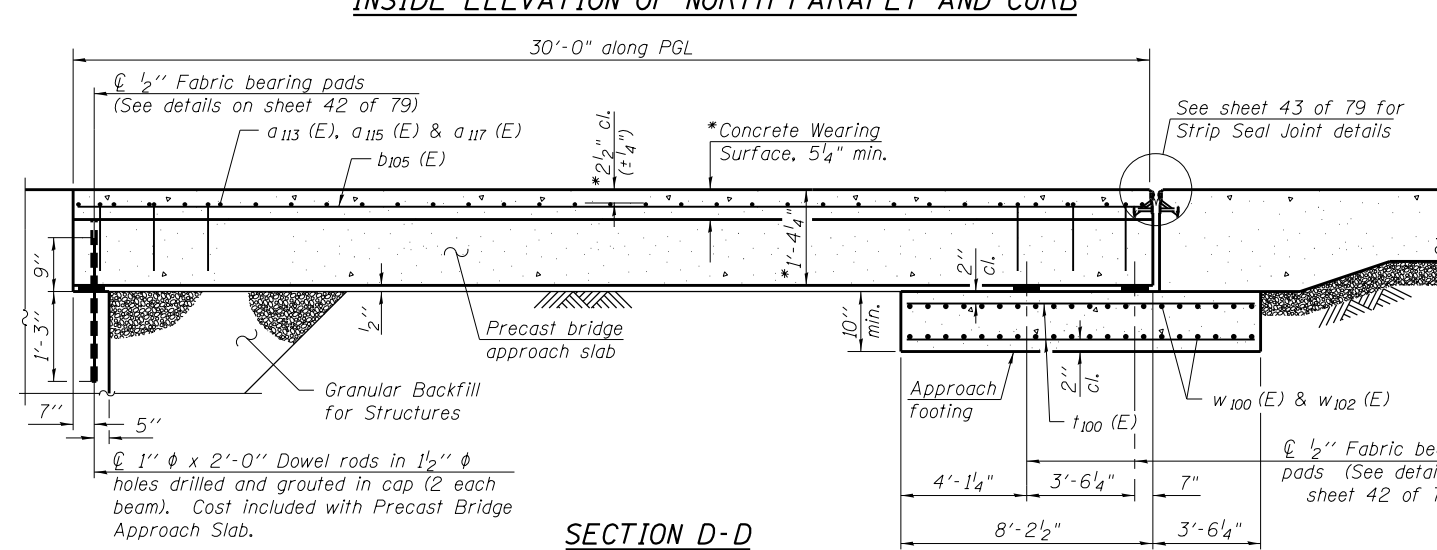
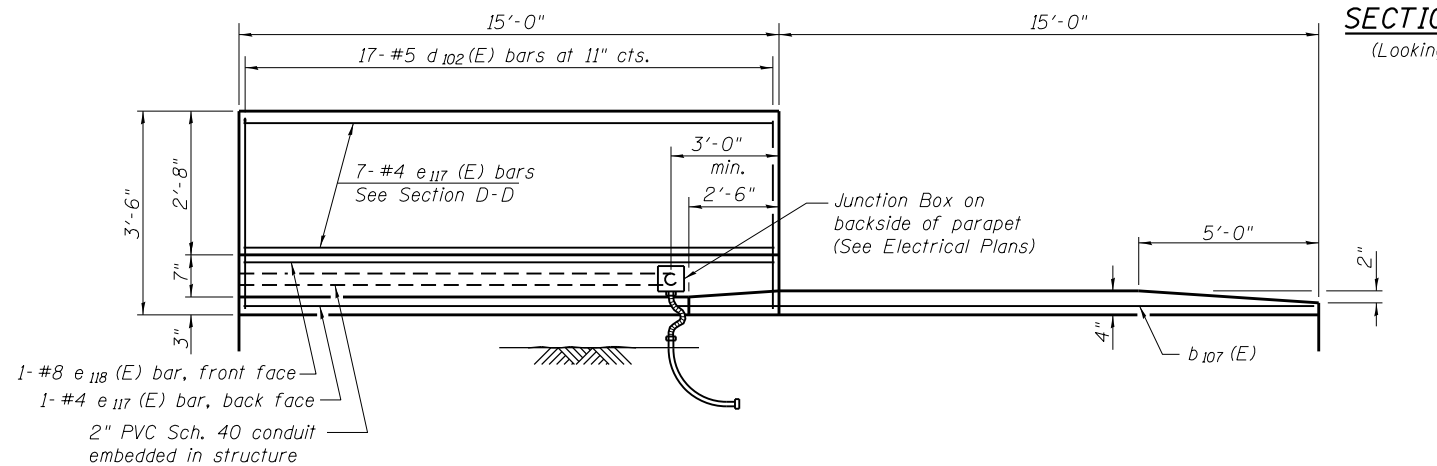
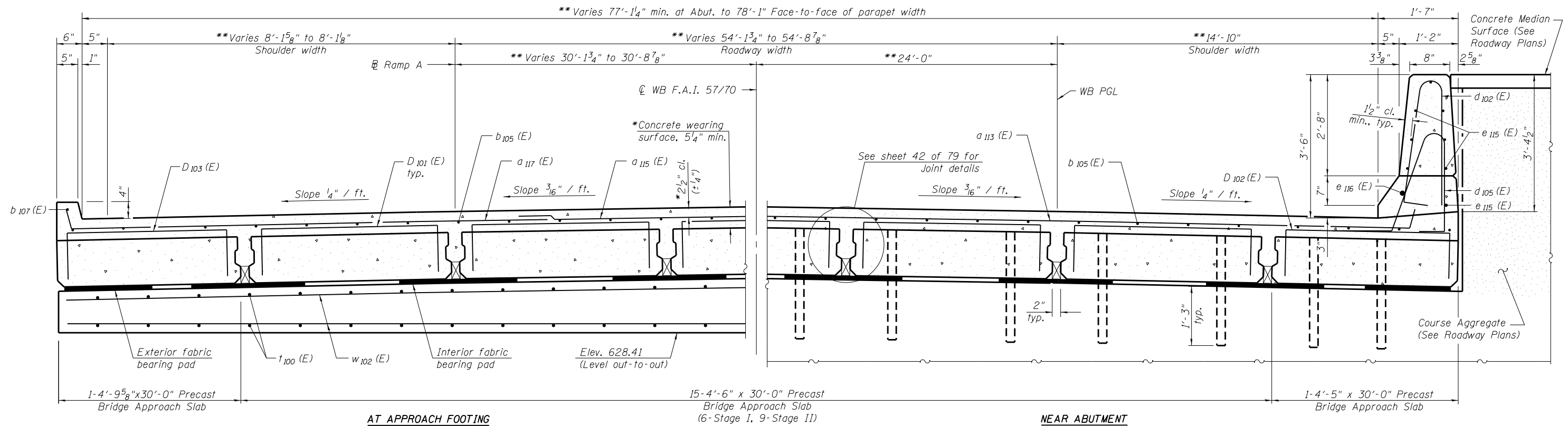


VIEW F-F



BAR a117 (E)

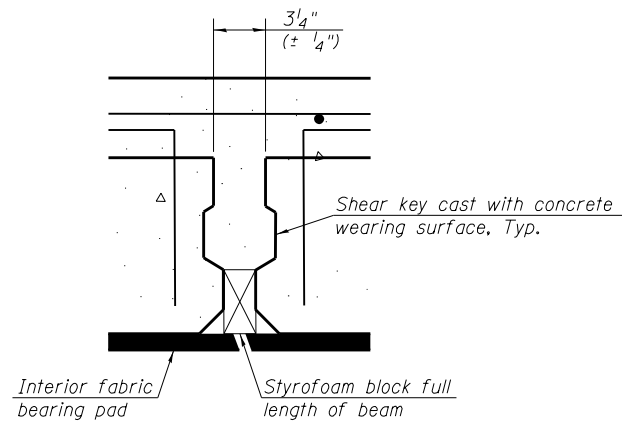
FILE NAME = 025011-74295-040-E Approach Slab BERNARDSON LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 284-6665 FAX (618) 284-6666	DESIGNED - BB	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION EAST PRECAST BRIDGE APPROACH SLAB DETAILS (WB) STRUCTURE NO. 025-0111 SHEET NO. 40 OF 79 SHEETS	F.A.I. RTE. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 575
	CHECKED - ACS	REVISIONS		CONTRACT NO. 74295				
	DRAWN - WJS	REVISIONS		ILLINOIS FED. AID PROJECT				
PLOT SCALE = PLOT DATE = 3:25:59 PM 8/14/2013	CHECKED - CJF	REVISIONS						



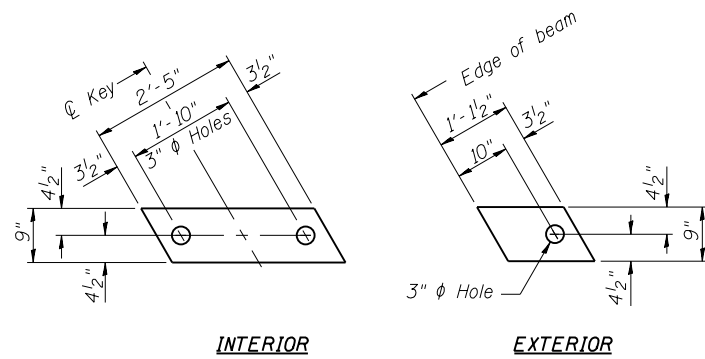
* Prior to grinding according to Bridge Smoothness Specification
 ** Horizontal dimensions shown are taken at Rt. L's to ϕ 57/70

Notes:
 For all junction box and conduit details see electrical plans.
 The cost for PVC electrical conduit, junction boxes, couplings and incidentals are included in Electrical Plans.

<p>BERNIER & LOCHMULLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 285-4665 FAX (618) 285-4666</p>	FILE NAME = 025011-74295-041-E Approach Slab	DESIGNED - BB	REVISED	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p align="center">EAST PRECAST BRIDGE APPROACH SLAB DETAILS (WB) STRUCTURE NO. 025-0111</p> <p align="center">SHEET NO. 41 OF 79 SHEETS</p>	F.A.I. RTE. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 576
	ILLINOIS Design Firm Number 184.001670	CHECKED - ACS	REVISED		CONTRACT NO. 74295				
	PLOT SCALE =	DRAWN - WJS	REVISED		ILLINOIS FED. AID PROJECT				
	PLOT DATE = 3:26:00 PM 8/14/2013	CHECKED - CJF	REVISED						

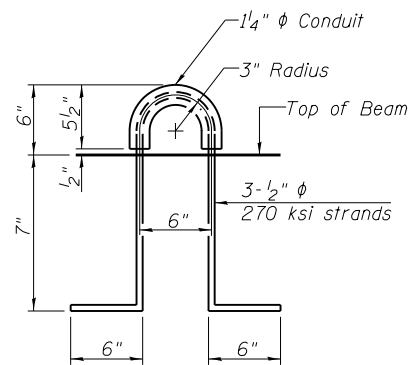


SECTION THRU TYPICAL SHEAR KEY JOINT

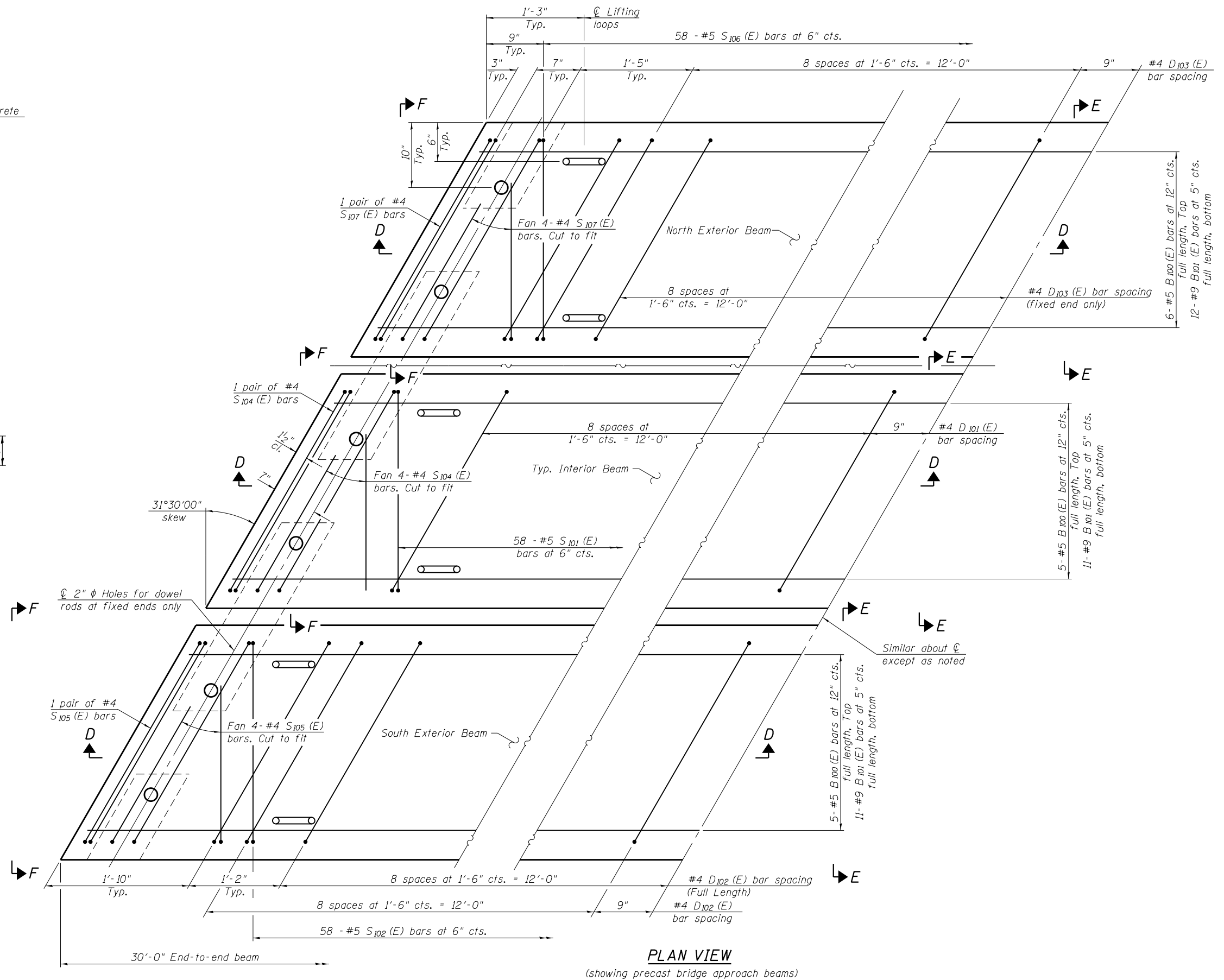


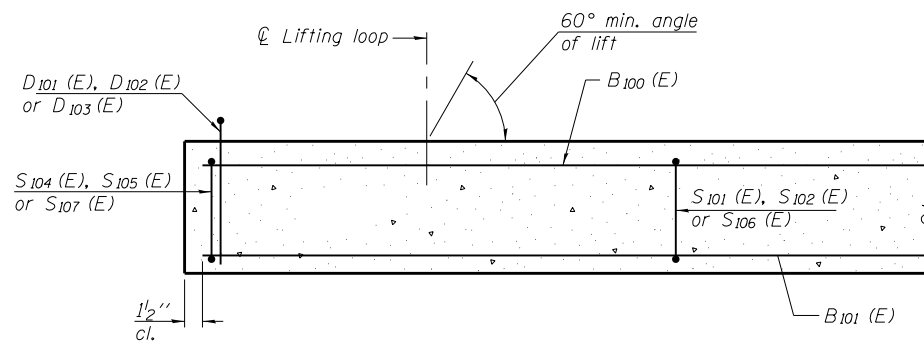
FABRIC BEARING PAD

Notes:
 All bearing pads shall be 1/2" thick.
 Omit holes for fabric bearing pads at approach slab footing end of beams.
 Expansion bearing pad shall be bonded to the approach slab footing.

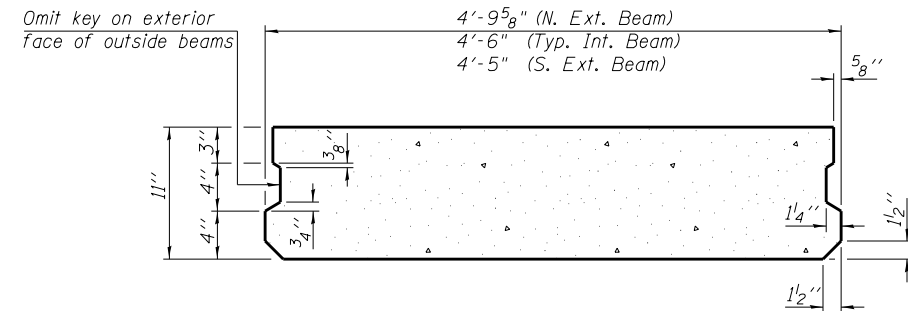


LIFTING LOOP DETAIL

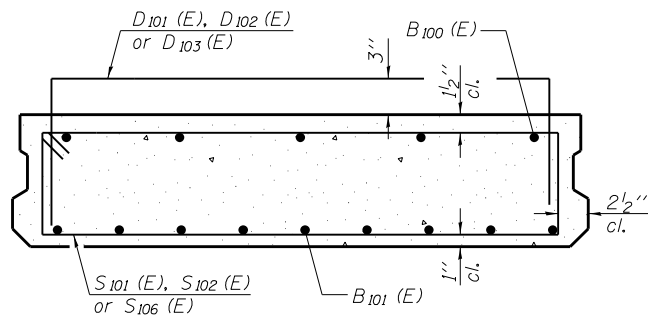




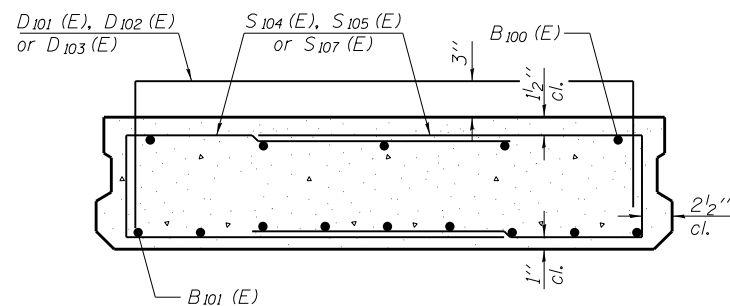
SECTION D-D



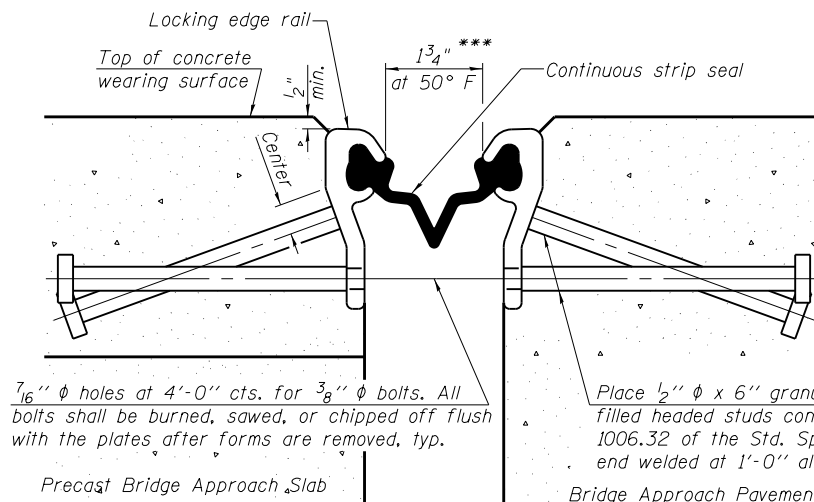
SECTION E-E
(Showing dimensions)



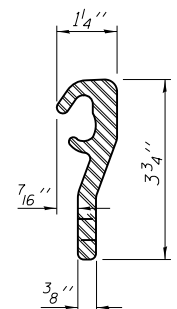
SECTION E-E
(Showing reinforcement)



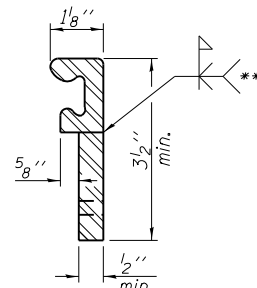
VIEW F-F
(Showing reinforcement)



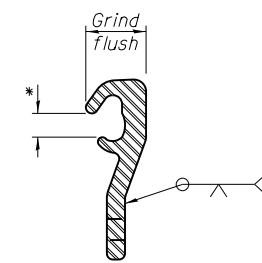
SECTION THRU STRIP SEAL JOINT
(at rt. angles)



ROLLED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

Rolled rail shown, welded rail similar.

7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

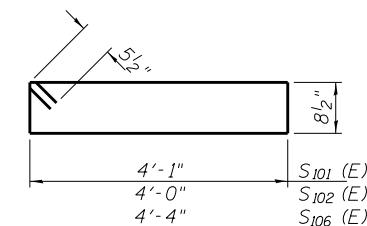
Place 1/2" ϕ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

Precast Bridge Approach Slab

Bridge Approach Pavement Connector

LOCKING EDGE RAIL

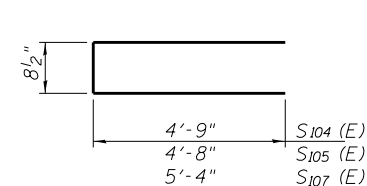
- * Omit weld at seal opening.
- ** Back gouge not required if complete joint penetration is verified by mock-up.
- *** The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1/2" for installation purposes.



BARS S101 (E), S102 (E) & S106 (E)

BAR LIST
NORTH EXTERIOR BEAM
(For information only)

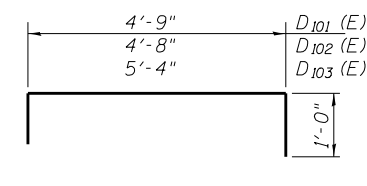
Bar	No.	Size	Length	Shape
B100 (E)	6	#5	29'-8"	—
B101 (E)	12	#9	29'-8"	—
D103 (E)	31	#4	7'-4"	□
S106 (E)	58	#5	11'-0"	▣
S107 (E)	12	#5	11'-5"	▣



BARS S104 (E), S105 (E) & S107 (E)

BAR LIST
EACH INTERIOR BEAM
(For information only)

Bar	No.	Size	Length	Shape
B100 (E)	5	#5	29'-8"	—
B101 (E)	11	#9	29'-8"	—
D101 (E)	22	#4	6'-9"	□
S101 (E)	58	#5	10'-6"	▣
S104 (E)	12	#5	10'-3"	▣



BARS D101 (E), D102 (E) & D103 (E)

BAR LIST
SOUTH EXTERIOR BEAM
(For information only)

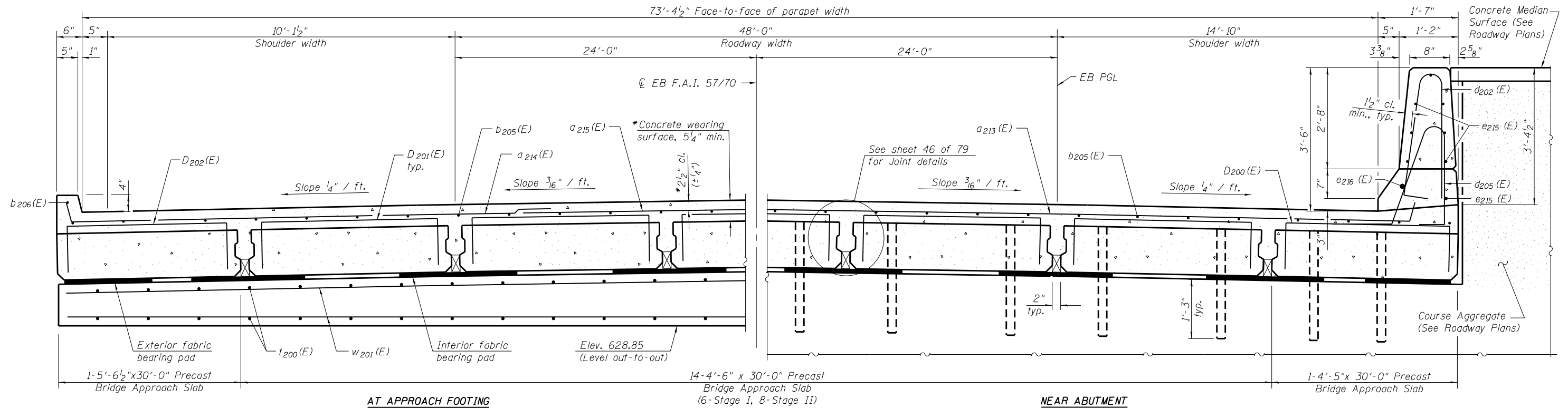
Bar	No.	Size	Length	Shape
B100 (E)	5	#5	29'-8"	—
B101 (E)	11	#9	29'-8"	—
D102 (E)	41	#4	6'-8"	□
S102 (E)	58	#5	10'-4"	▣
S105 (E)	12	#5	10'-1"	▣

Notes:

- The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.
- Cast-in-place substitution of Precast Bridge Approach Slab is not allowed.
- Parapet concrete shall be paid for as Concrete Superstructure.
- Parapet and wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- Approach footing concrete shall be paid for as Concrete Structures.
- The top surface of precast bridge approach slabs shall be roughened to a depth of 1/4" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."
- After precast bridge approach slab has been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.
- A minimum 2 1/2" ϕ lifting pins shall be used to engage the lifting loops during handling.
- Compressive strength of precast concrete, f'c shall be 6,000 psi.
- For additional parapet details, see sheet 41 of 79.
- Any concrete poured monolithically with the wearing surface, such as curbs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5 1/4".
- The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
- The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
- The inside of the Locking Edge Rail groove shall be free of weld residue.
- Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
- The manufacturer's recommended installation methods shall be followed.
- All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
- Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.
- Quantity for Diamond Grinding (Bridge Section) and Bridge Deck Grooving included in Bill of Materials on sheet 25 of 79.
- See sheet 40 of 79 for joint termination details.
- See sheets 36 and 40 of 79 for Bar Bends.

EAST APPROACH BILL OF MATERIAL

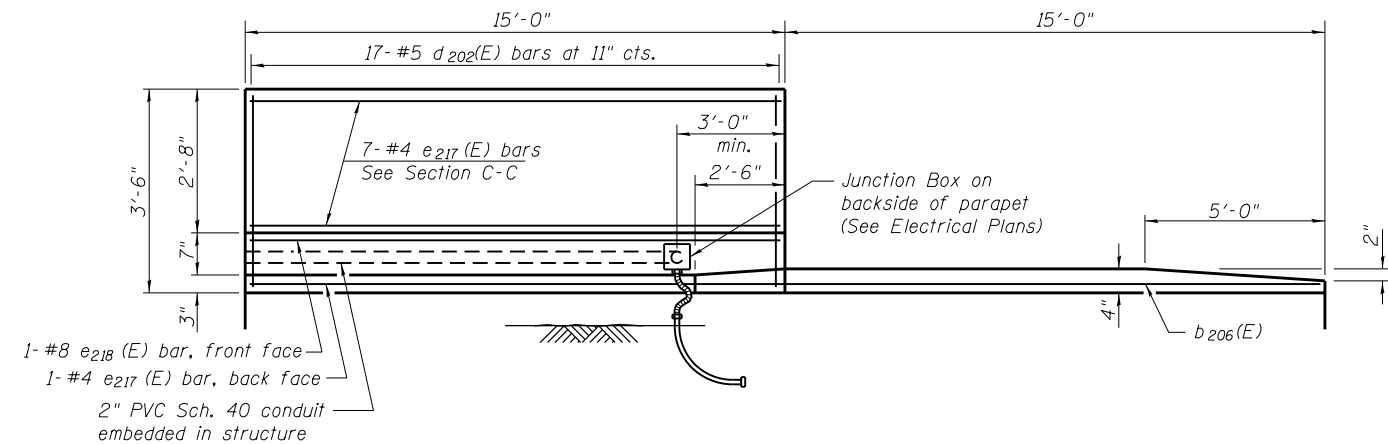
Bar	No.	Size	Length	Shape
a113 (E)	31	#4	37'-11"	□
a115 (E)	31	#4	30'-0"	□
a116 (E)	30	#4	7'-5"	□
a117 (E)	31	#4	27'-11"	□
b105 (E)	80	#4	29'-8"	—
b106 (E)	2	#4	14'-8"	—
b107 (E)	1	#4	15'-7"	—
d102 (E)	51	#5	6'-10"	□
d105 (E)	51	#5	5'-11"	□
e115 (E)	8	#4	30'-7"	—
e116 (E)	1	#8	30'-7"	—
e117 (E)	8	#4	14'-8"	—
e118 (E)	1	#8	14'-8"	—
t100 (E)	164	#4	11'-5"	—
w100 (E)	40	#5	37'-7"	—
w102 (E)	80	#5	29'-2"	—
Concrete Superstructure		Cu. Yd.	5.8	
Concrete Structures		Cu. Yd.	42.8	
Reinforcement Bars, Epoxy Coated		Pound	10,050	
Precast Bridge Approach Slab		Sq. Ft.	2406	
Concrete Wearing Surface, 5"		Sq. Yd.	267.4	
Preformed Joint Strip Seal		Foot	94	



AT APPROACH FOOTING

NEAR ABUTMENT

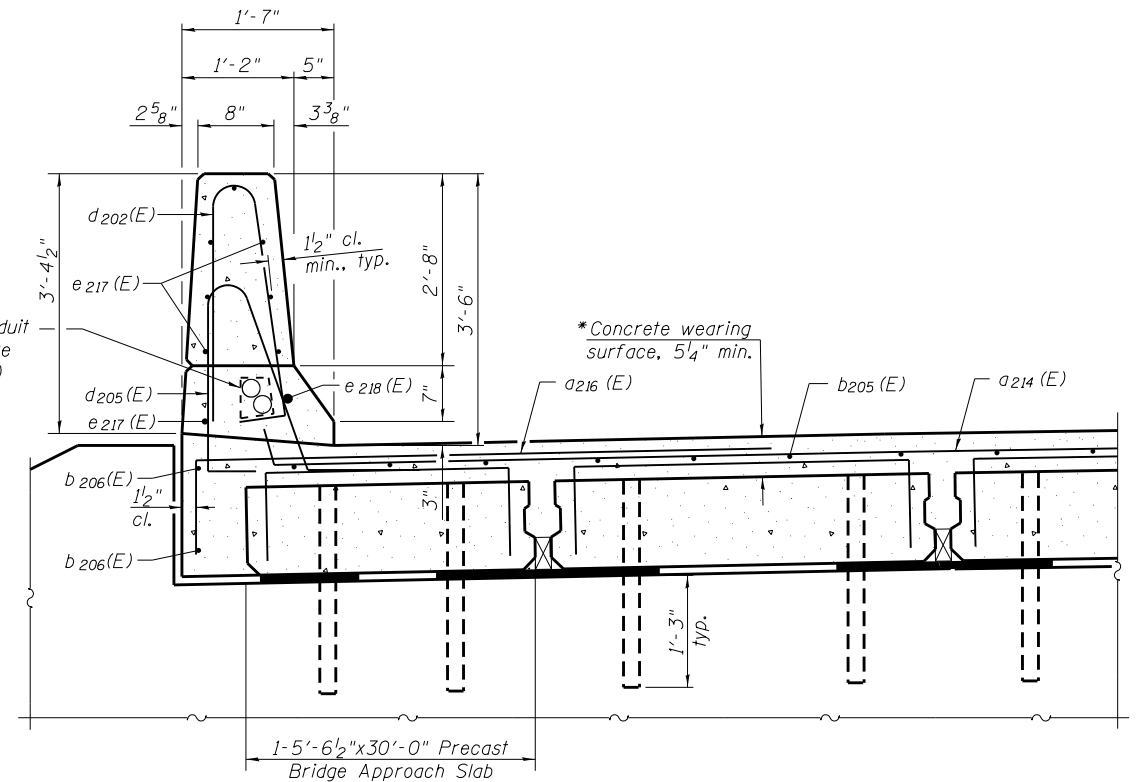
SECTION B-B
(Looking West)



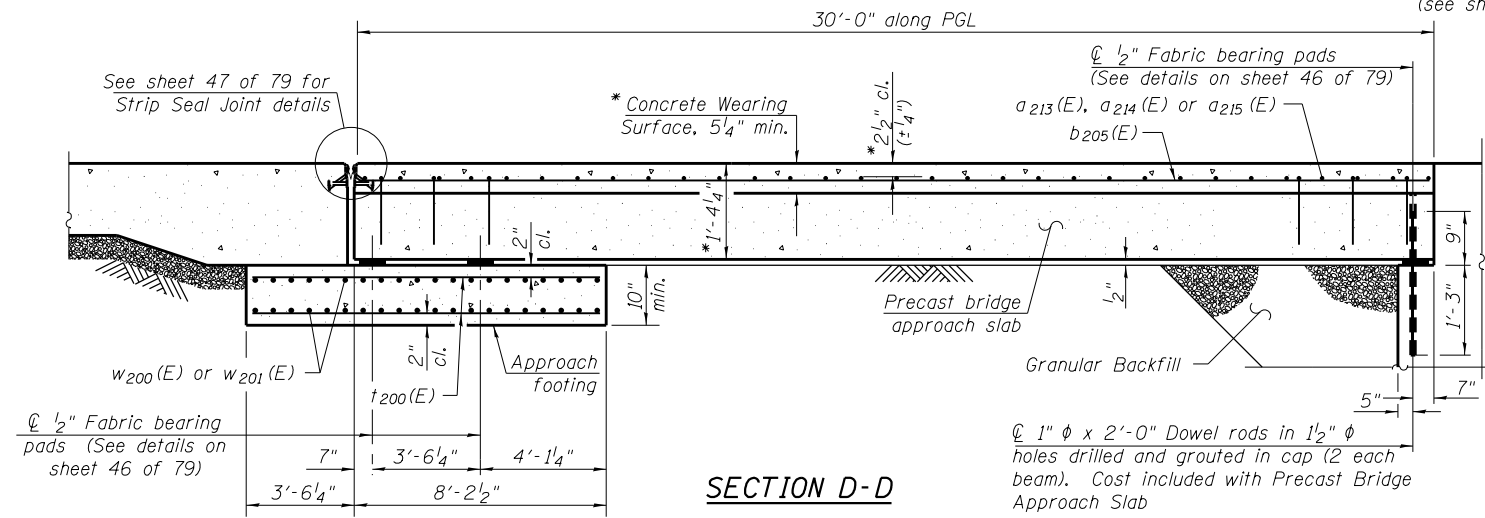
INSIDE ELEVATION OF SOUTH PARAPET AND CURB

* Prior to grinding according to Bridge Smoothness Specification

Notes:
For all junction box and conduit details see electrical plans.
The cost for PVC electrical conduit, junction boxes, couplings and incidentals are included in Electrical Plans.



NEAR ABUTMENT
SECTION C-C



SECTION D-D

FILE NAME = 025011-74295-045-W Approach Slab
BERNARDINI LOCHMULLER & ASSOCIATES, INC.
Illinois Design Firm Number 184.001670
PLOT SCALE =
PLOT DATE = 3:26:04 PM 8/14/2013

DESIGNED - BB
CHECKED - ACS
DRAWN - WJS
CHECKED - CJF

REVISED
REVISED
REVISED
REVISED

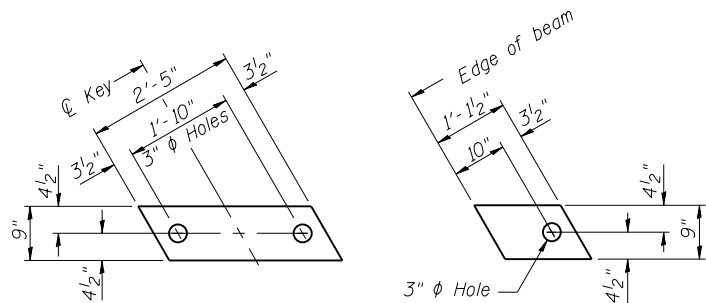
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST PRECAST BRIDGE APPROACH SLAB DETAILS (EB)
STRUCTURE NO. 025-0112

SHEET NO. 45 OF 79 SHEETS

F.A.I. RE. 57/70	SECTION (25-4HV-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 580
CONTRACT NO. 74295				

ILLINOIS FED. AID PROJECT

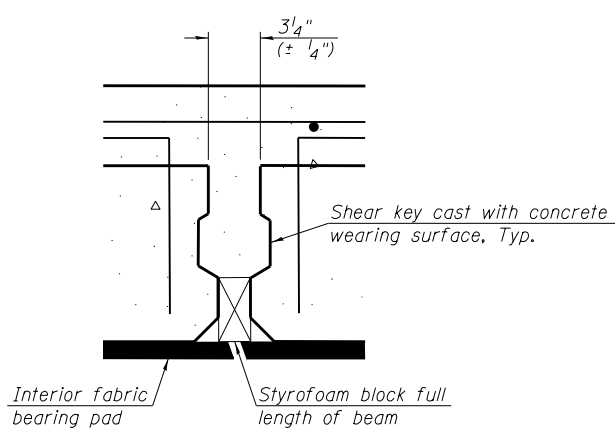


INTERIOR

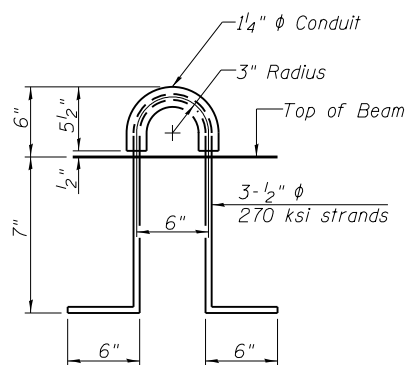
EXTERIOR

FABRIC BEARING PAD

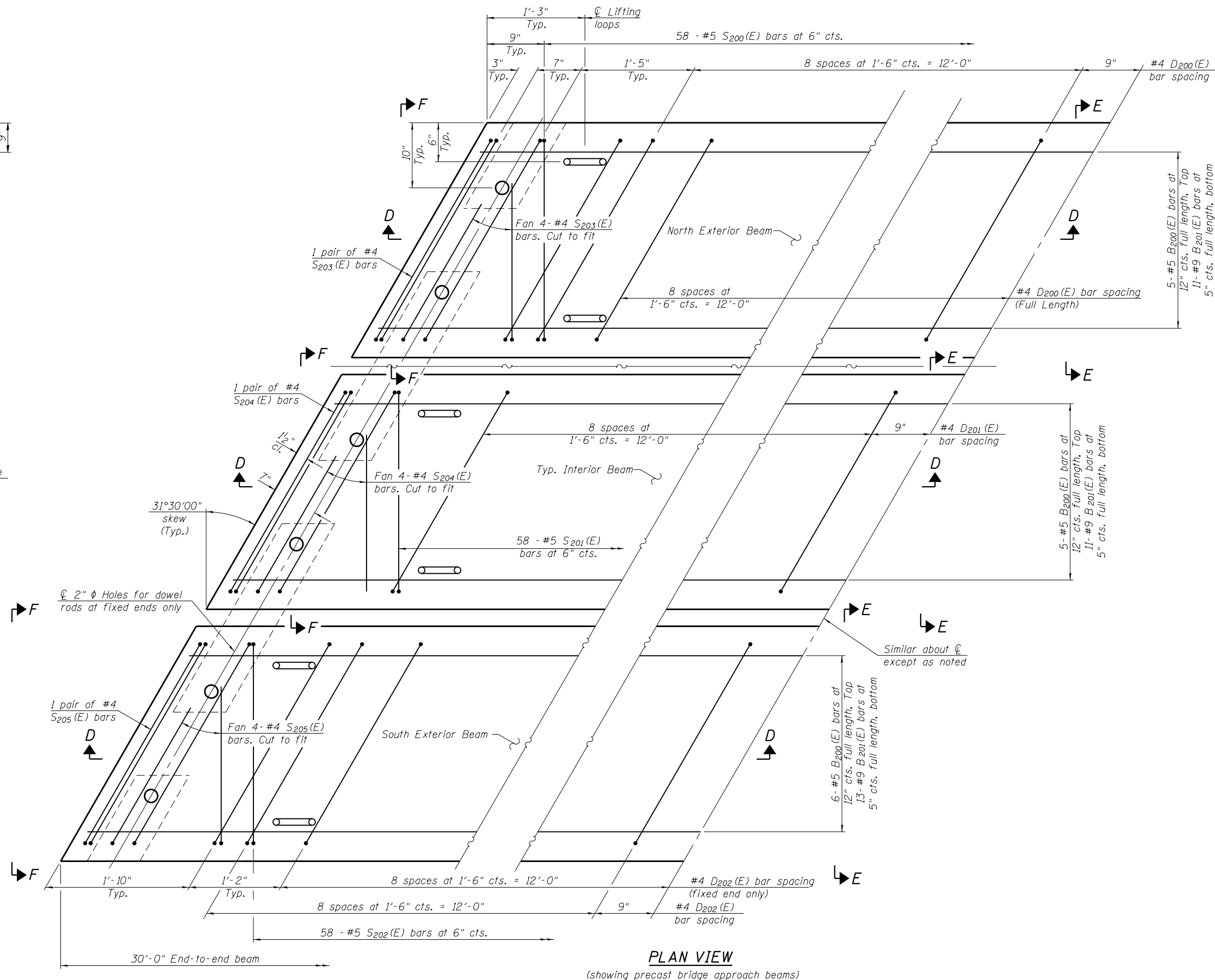
Notes:
 All bearing pads shall be 1/2" thick.
 Omit holes for fabric bearing pads at approach slab footing end of beams.
 Expansion bearing pad shall be bonded to the approach slab footing.



SECTION THRU SHEAR KEY JOINT



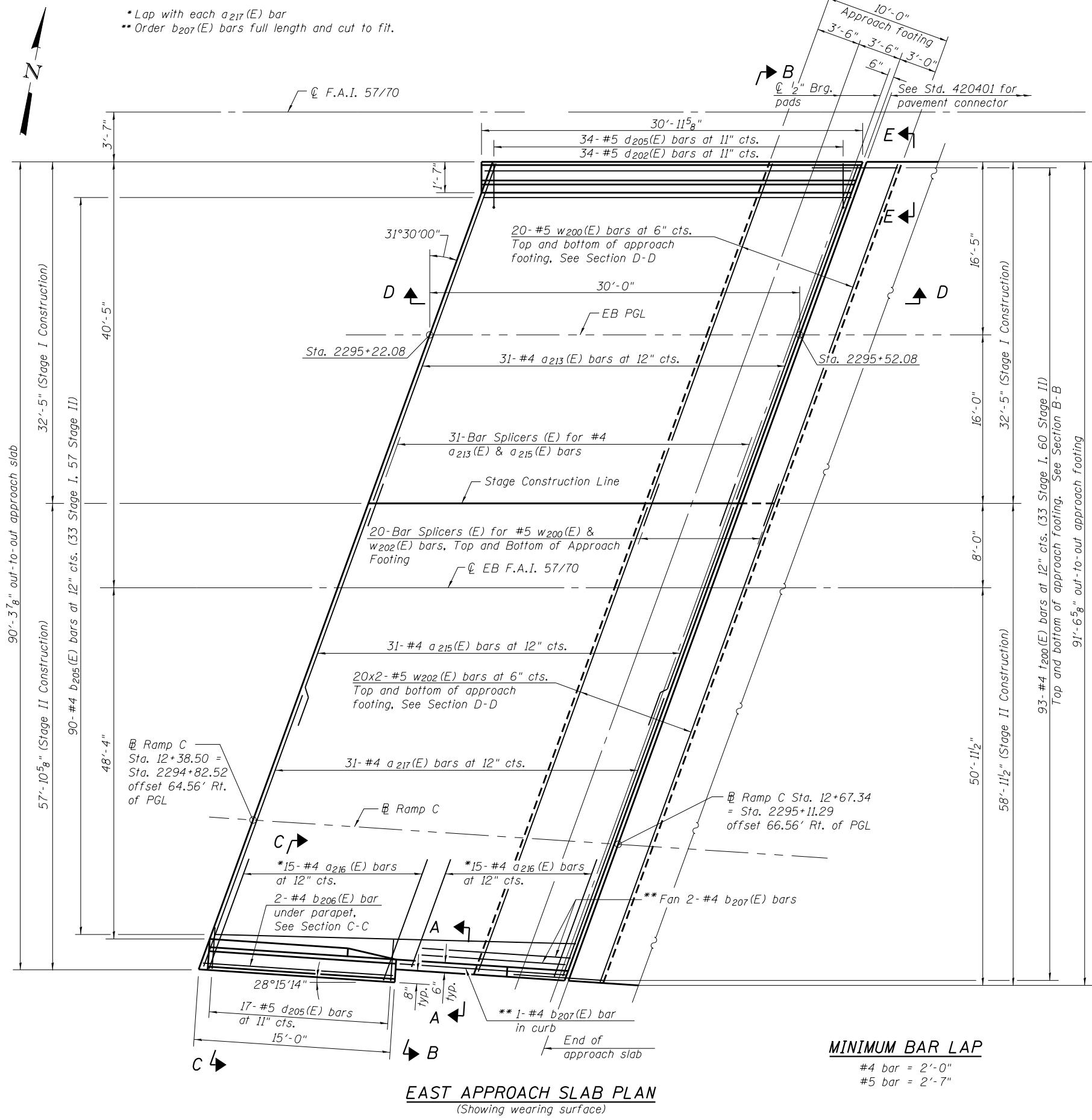
LIFTING LOOP DETAIL



PLAN VIEW

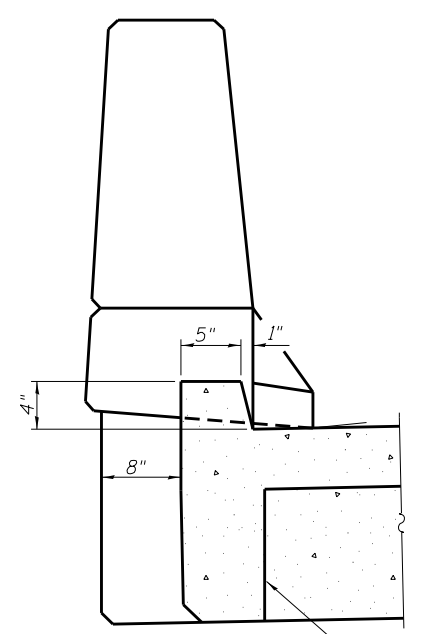
(showing precast bridge approach beams)

FILE NAME = 025011-74295-046-W Approach Slab Details (EB).dwg BERNARDSON - LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62062 PHONE (618) 284-4665 FAX (618) 284-4666	DESIGNED - BB	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST PRECAST BRIDGE APPROACH SLAB DETAILS (EB) STRUCTURE NO. 025-0112	F.A.I. RTÉ. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 581
	ILLINOIS Design Firm Number 184.001670 PLOT SCALE = PLOT DATE = 3:26:05 PM 8/14/2013	CHECKED - ACS			REVISED	CONTRACT NO. 74295			ILLINOIS FED. AID PROJECT

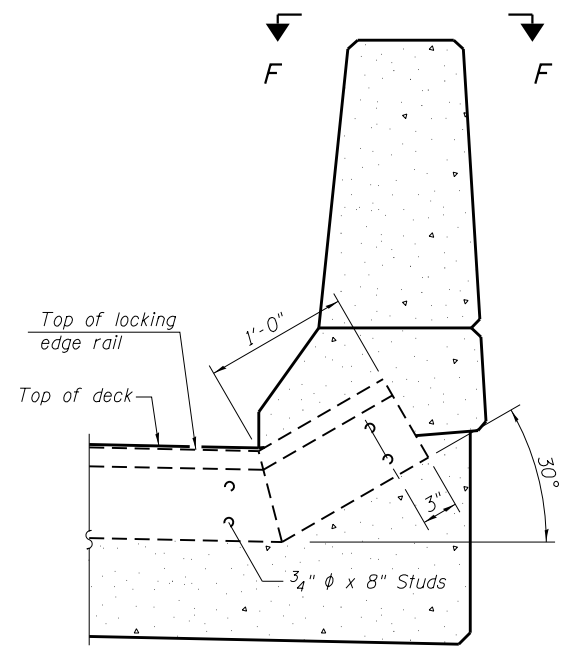


* Lap with each a₂₁₇(E) bar
 ** Order b₂₀₇(E) bars full length and cut to fit.

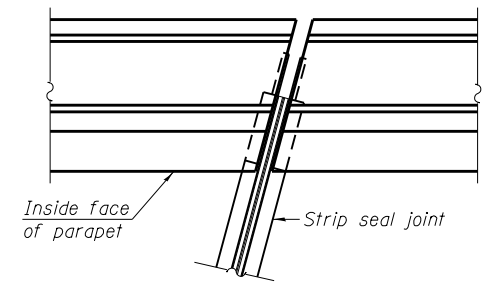
Notes:
 Bars indicated thus 20x2 indicates 20 bars with 2 bars per line.
 See sheet 49 of 79 for Sections B-B, C-C and D-D.



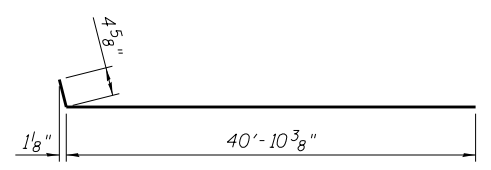
SECTION A-A



SECTION E-E



VIEW F-F

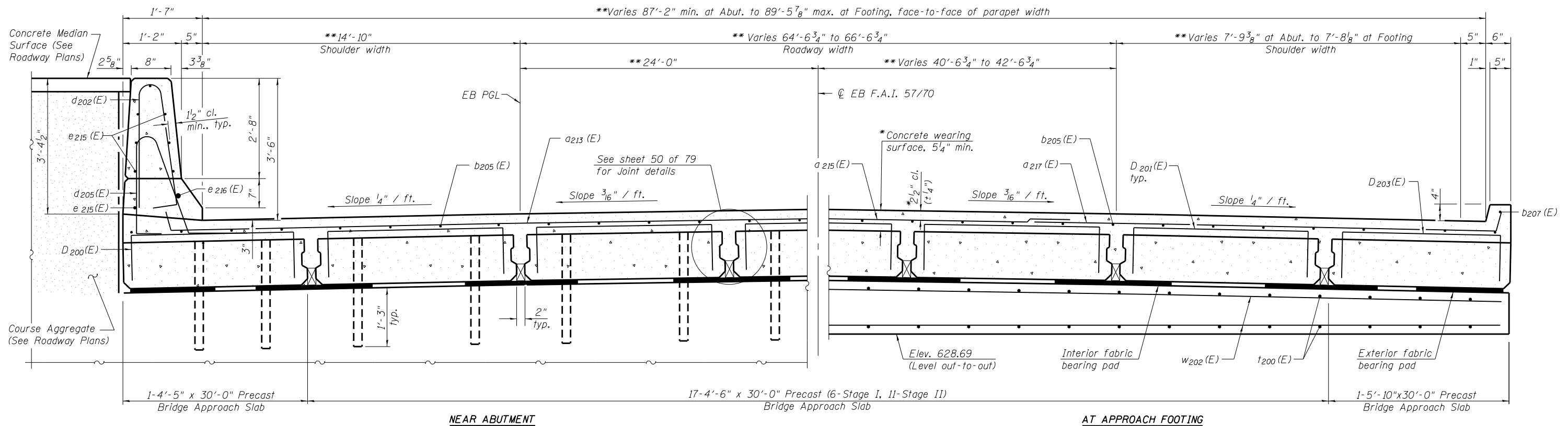


BAR a₂₁₇(E)

MINIMUM BAR LAP
 #4 bar = 2'-0"
 #5 bar = 2'-7"

EAST APPROACH SLAB PLAN
 (Showing wearing surface)

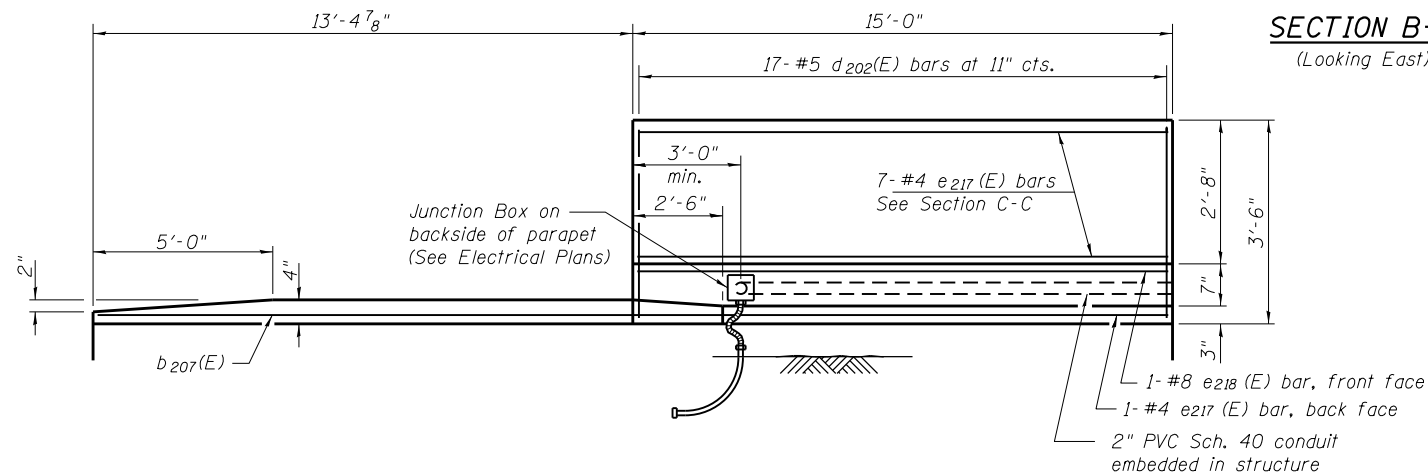
FILE NAME = 025011-74295-048-E Approach Slab BERNARDINI - LOCHMUELLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62452 PHONE (618) 284-4665 FAX (618) 284-4666	DESIGNED - BB	REVISED	EAST PRECAST BRIDGE APPROACH SLAB DETAILS (EB) STRUCTURE NO. 025-0112 SHEET NO. 48 OF 79 SHEETS	F.A.I. RTE. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 583
	CHECKED - ACS	REVISED		CONTRACT NO. 74295	ILLINOIS FED. AID PROJECT			
	DRAWN - WJS	REVISED						
PLOT SCALE = PLOT DATE = 3:26:08 PM 8/14/2013	CHECKED - CJF	REVISED						



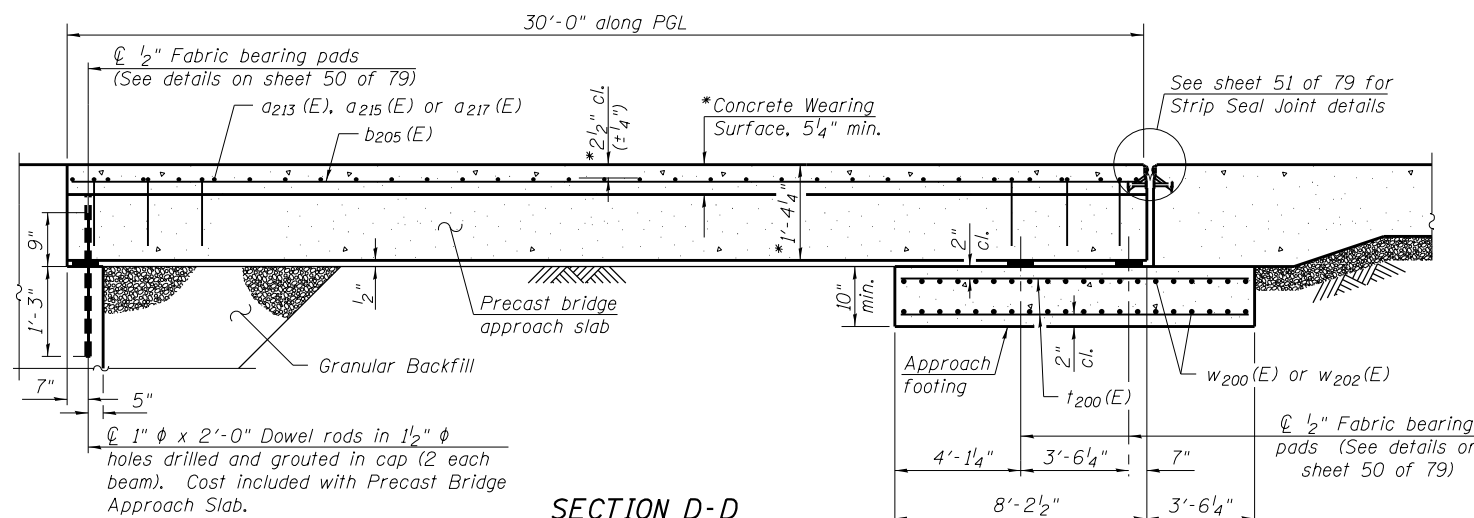
NEAR ABUTMENT

AT APPROACH FOOTING

SECTION B-B
(Looking East)



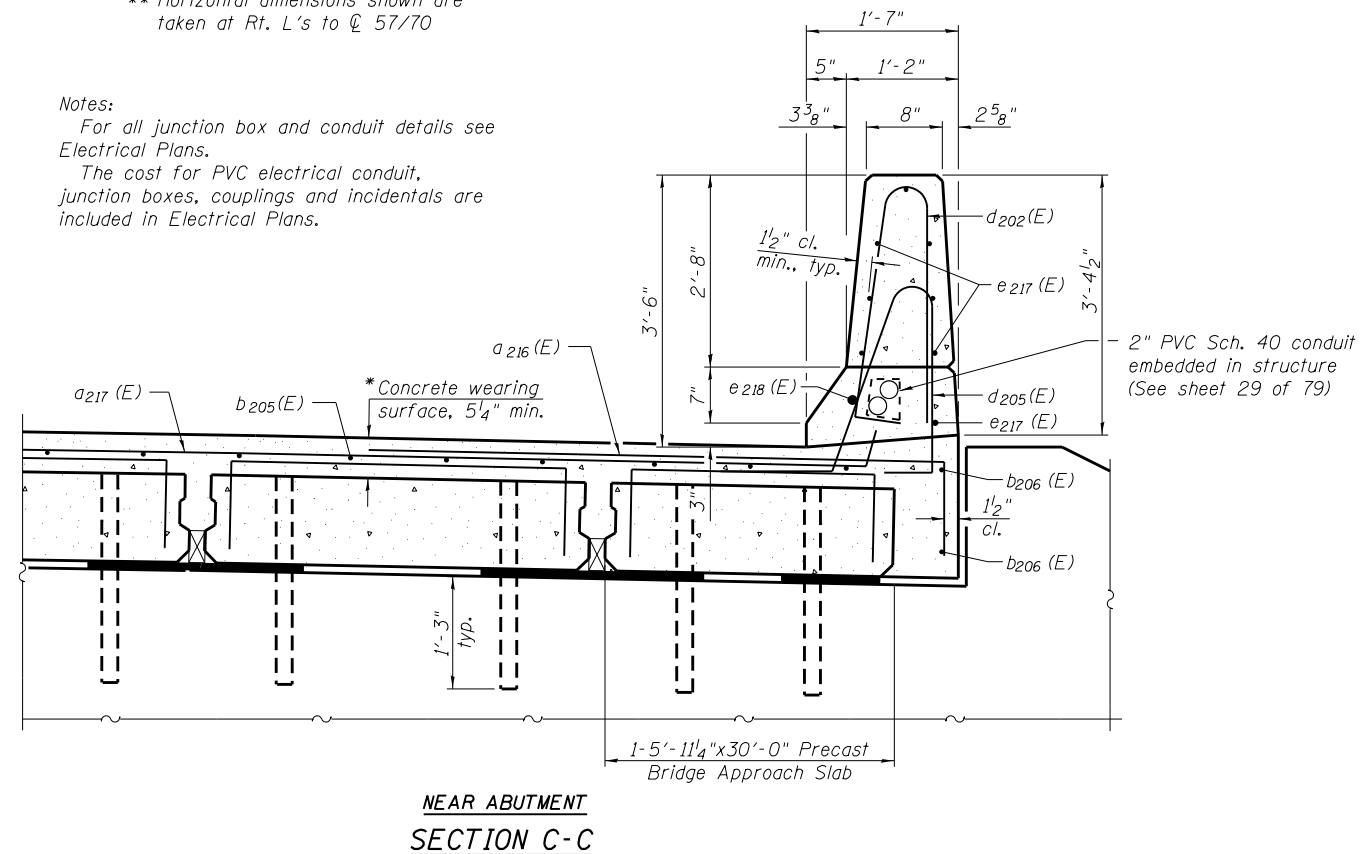
INSIDE ELEVATION OF SOUTH PARAPET AND CURB



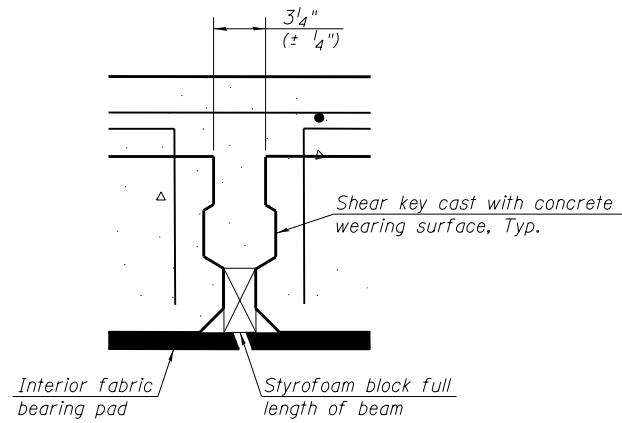
SECTION D-D

Notes:
 * Prior to grinding according to Bridge Smoothness Specification
 ** Horizontal dimensions shown are taken at Rt. L's to ϕ 57/70

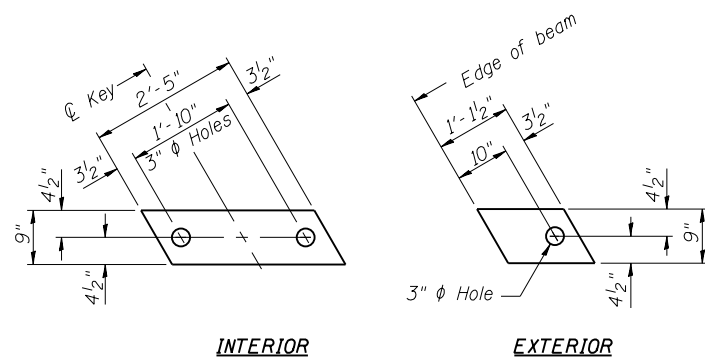
For all junction box and conduit details see Electrical Plans.
 The cost for PVC electrical conduit, junction boxes, couplings and incidentals are included in Electrical Plans.



NEAR ABUTMENT SECTION C-C

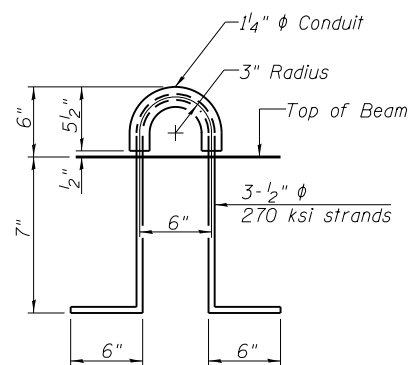


SECTION THRU TYPICAL SHEAR KEY JOINT

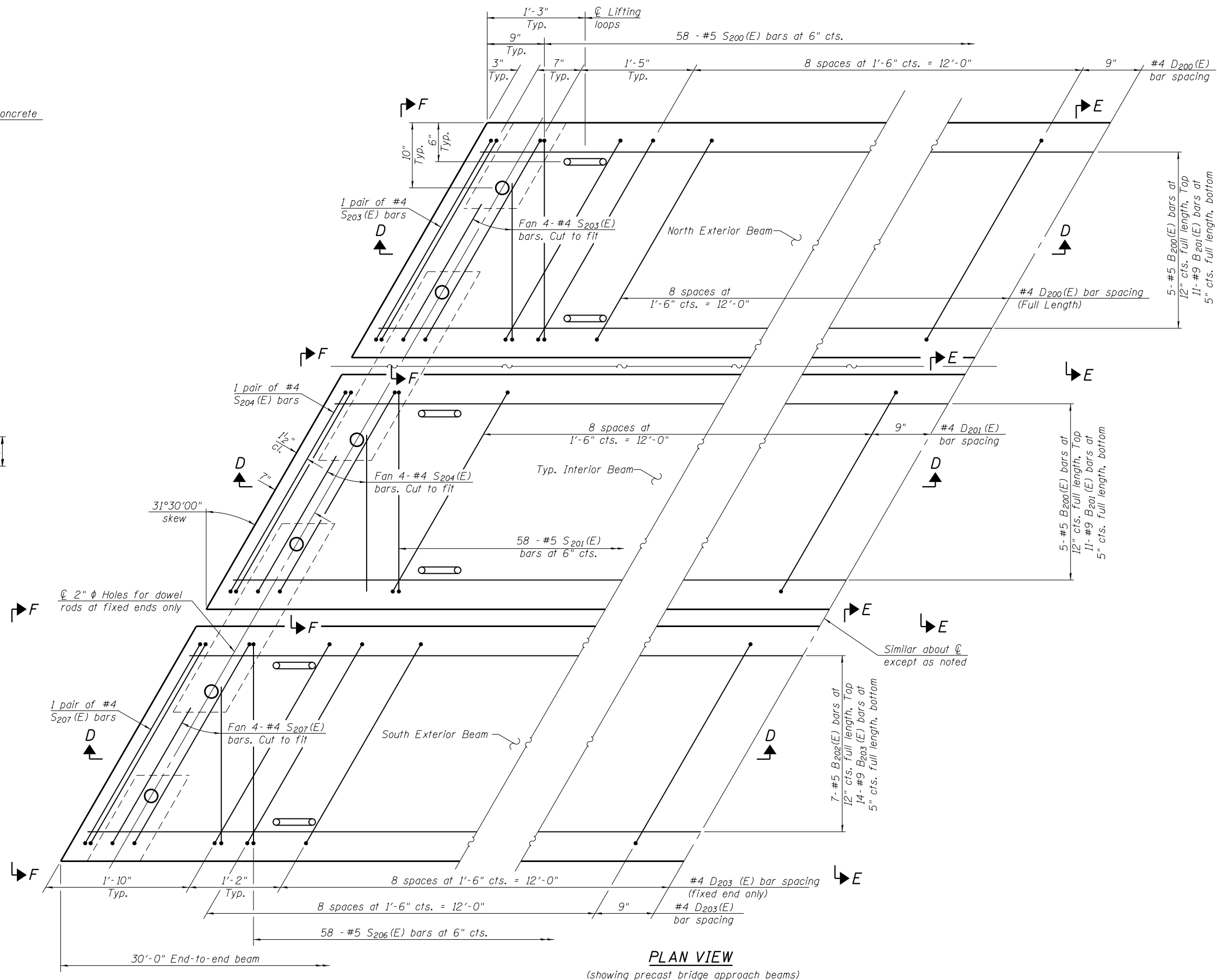


FABRIC BEARING PAD

Notes:
 All bearing pads shall be 1/2" thick.
 Omit holes for fabric bearing pads at approach slab footing end of beams.
 Expansion bearing pad shall be bonded to the approach slab footing.

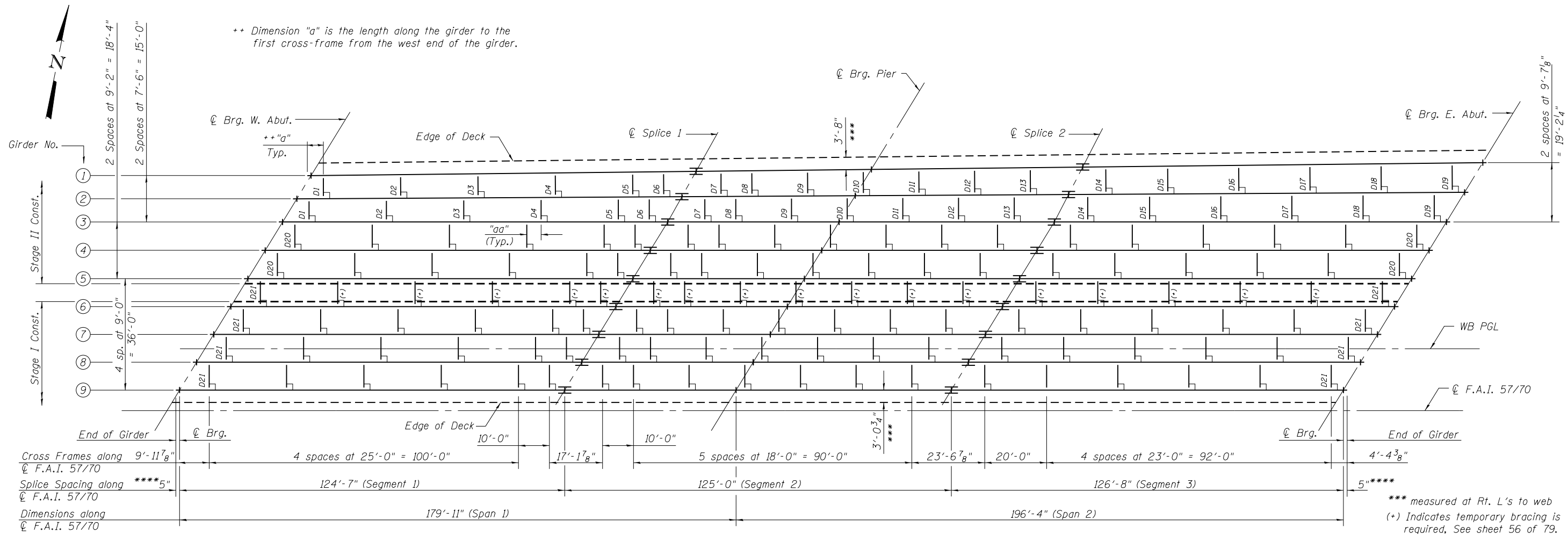


LIFTING LOOP DETAIL



PLAN VIEW

(showing precast bridge approach beams)



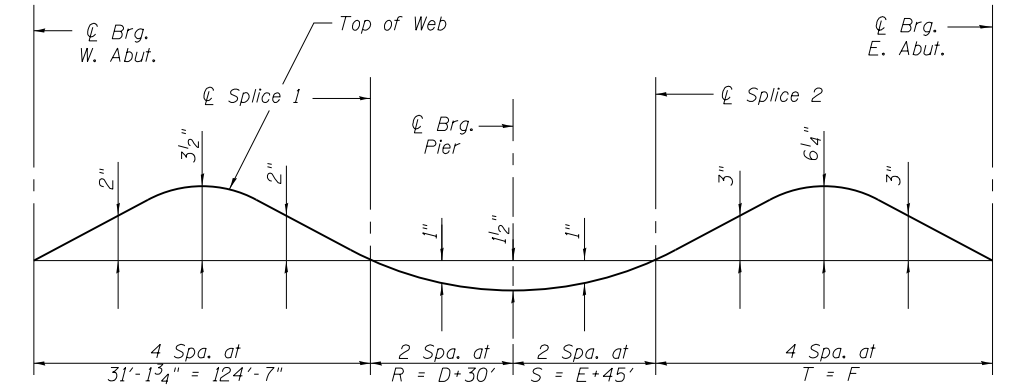
FRAMING PLAN

****TOP OF WEB ELEVATIONS**

Location	☐ Brg. W. Abut.	☐ Splice 1	☐ Brg. Pier	☐ Splice 2	☐ Brg. E. Abut.
Girder 1	630.74	630.81	630.68	630.79	630.01
Girder 2	630.88	630.98	630.86	630.99	630.23
Girder 3	630.99	631.10	630.99	631.13	630.41
Girder 4	631.16	631.28	631.16	631.27	630.58
Girder 5	631.21	631.38	631.26	631.38	630.71
Girder 6	631.05	631.24	631.12	631.25	630.60
Girder 7	630.90	631.11	630.99	631.11	630.49
Girder 8	630.72	630.94	630.83	630.96	630.35
Girder 9	630.51	630.76	630.64	630.77	630.19

** "For Fabrication Only"

Notes:
 All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
 For Girder Dimension Tables, see sheet 54 of 79.
 For cross frame details and dimensions, see sheet 55 of 79.



CAMBER DIAGRAM

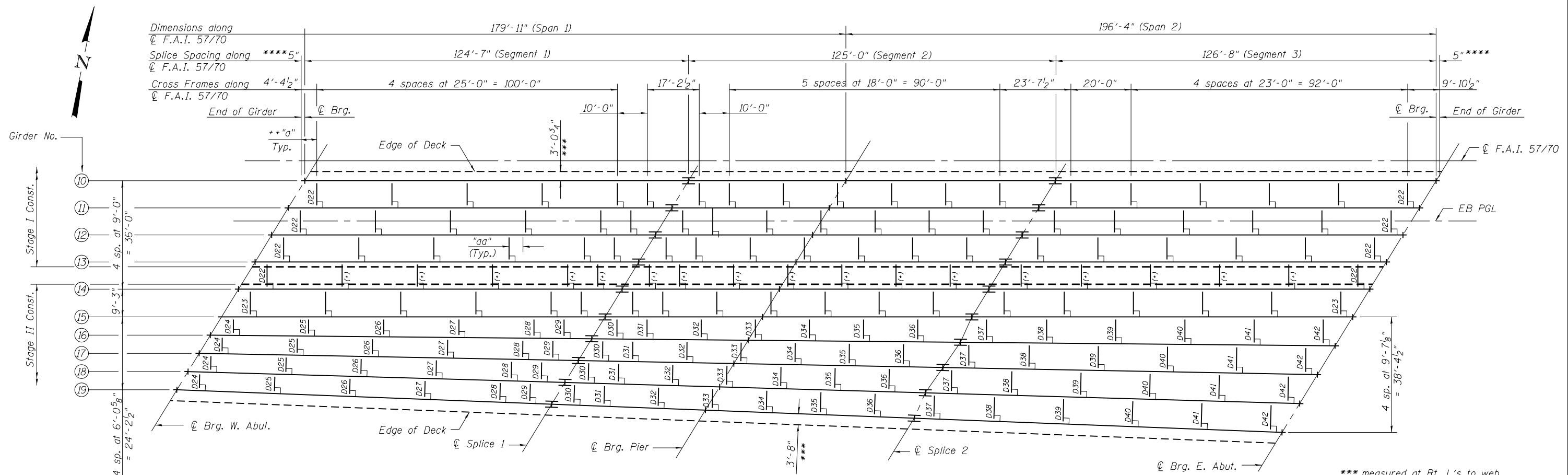
*** DIMENSION "aa"**

* measured along web.

Girder	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21
2	4'-7 3/4"	4'-7 3/4"	4'-7 3/4"	4'-7 3/4"	4'-7 3/4"	4'-7 3/4"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-2 7/8"	5'-10 1/2"	5'-10 1/2"	5'-10 1/2"	5'-10 1/2"	5'-10 1/2"	5'-10 1/2"		
3	4'-7 1/4"	4'-7 1/4"	4'-7 1/4"	4'-7 1/4"	4'-7 1/4"	4'-7 1/4"	5'-5"	5'-5"	5'-5"	5'-5"	5'-5"	5'-5"	5'-5"	5'-7 3/8"	5'-7 3/8"	5'-7 3/8"	5'-7 3/8"	5'-7 3/8"	5'-7 3/8"		
4																				5'-7 3/8"	
5																				5'-6 1/8"	
6																					5'-6 1/8"
7																					5'-6 1/8"
8																					5'-6 1/8"

DIMENSION "a"

Girder	Dimension "a"
1	4'-4 5/8"
2-4	4'-4 1/2"
5-8	4'-5 5/8"
9	9'-11 7/8"



** Dimension "a" is the length along the girder to the first cross-frame from the west end of the girder.

*** measured at Rt. L's to web
 (+) Indicates temporary bracing is required, See sheet 56 of 79.
 ***** See End Girder Detail, sheet 55 of 79.

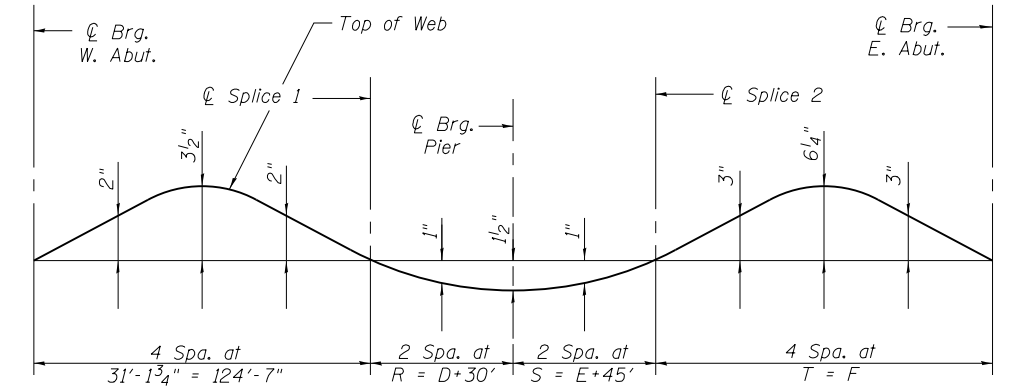
****TOP OF WEB ELEVATIONS**

Location	☐ Brg. W. Abut.	☐ Splice 1	☐ Brg. Pier	☐ Splice 2	☐ Brg. E. Abut.
Girder 10	630.48	630.74	630.65	630.81	630.23
Girder 11	630.65	630.92	630.84	631.01	630.44
Girder 12	630.80	631.08	631.00	631.18	630.63
Girder 13	630.92	631.19	631.15	631.38	630.75
Girder 14	631.04	631.36	631.29	631.47	630.96
Girder 15	630.91	631.21	631.19	631.43	630.87
Girder 16	630.80	631.06	631.05	631.32	630.71
Girder 17	630.69	630.94	630.93	631.20	630.57
Girder 18	630.57	630.79	630.79	631.06	630.44
Girder 19	630.43	630.65	630.60	630.82	630.36

** "For Fabrication Only"

FRAMING PLAN

Notes:
 All web and flanges of the girders, bearing stiffeners, web and flange splice plates, and bearing plates shall be AASHTO M270, Grade 50W, unless noted otherwise.
 All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
 For Girder Dimension Tables, see sheet 54 of 79.
 For cross frame details and dimensions, see sheet 55 of 79.



CAMBER DIAGRAM

*** DIMENSION "aa"**

* measured along web.

Girder	D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	D32	D33	D34	D35	D36	D37	D38	D39	D40	D41	D42	
11	5'-6 1/8"																					
12	5'-6 1/8"																					
13	5'-6 1/8"																					
14	*****																					
15		5'-8"	5'-8"	5'-8"	5'-8"	5'-8"	5'-8"	5'-8"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-2 1/2"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	5'-10 3/8"	
16			3'-8 5/8"	3'-8 5/8"	3'-8 5/8"	3'-8 3/4"	3'-8 3/4"	3'-8 3/4"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	4'-8 1/2"	5'-9 1/4"	5'-9 1/4"	5'-9 1/4"	5'-9 1/4"	5'-9 1/4"	5'-9 1/4"	5'-9 3/8"	
17			3'-8"	3'-8"	3'-8"	3'-8"	3'-8"	3'-8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	4'-7 5/8"	5'-8 1/8"	5'-8 1/8"	5'-8 1/8"	5'-8 1/8"	5'-8 1/4"	5'-8 1/4"	5'-8 1/4"	
18			3'-7 1/4"	3'-7 1/4"	3'-7 1/4"	3'-7 1/4"	3'-7 3/8"	3'-7 3/8"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	4'-6 3/4"	5'-7"	5'-7"	5'-7"	5'-7"	5'-7"	5'-7 1/8"	5'-7 1/8"	

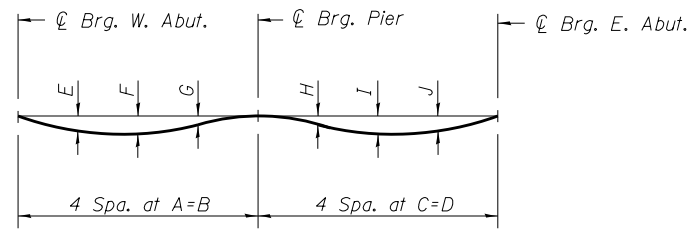
DIMENSION "a"

Girder	Dimension "a"
10-15	4'-4 1/2"
16	4'-4 3/8"
17	4'-4 1/4"
18	4'-4"
19	7'-10 1/2"

***** Along Girder 14, dimension "a-a" varies 5'-6 1/8" in Segment 1, 5'-7 1/8" in Segment 2 and 5'-8" in Segment 3

GENERAL NOTES

The calculated deflections of the primary girders under steel self-weight shall be used to detail the cross frame connections, and to erect the structural steel such that the girders will be plumb with in a tolerance of $\pm \frac{1}{8}$ in. per vertical ft. throughout when supporting their weight.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of steel only)

Note:

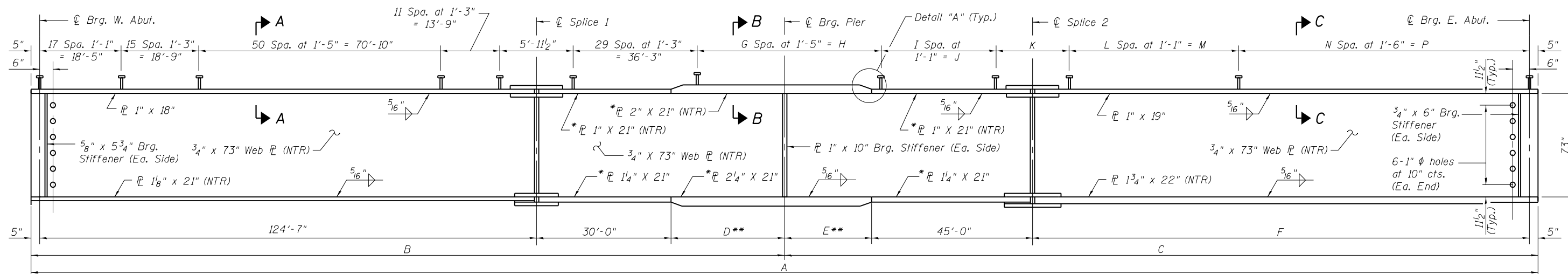
The calculated deflections assume a 10% increase in girder weight due to the additional weight of the cross frames, bearing stiffeners, shear studs, transverse stiffeners, splice plates and variances in the weight of steel.

STEEL DEAD LOAD DEFLECTION TABLE (WB)

	A	B	C	D	E	F	G	H	I	J
Girder 1	45'-3 $\frac{7}{16}$ "	181'-1 $\frac{7}{8}$ "	49'-5 $\frac{1}{16}$ "	197'-8 $\frac{1}{4}$ "	0 $\frac{7}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{1}{4}$ "	1"	2 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "
Girder 2	45'-1 $\frac{5}{8}$ "	180'-6 $\frac{1}{2}$ "	49'-3"	197'-0"	0 $\frac{7}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{1}{4}$ "	1"	2 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "
Girder 3-9	44'-11 $\frac{3}{4}$ "	179'-11"	49'-1"	196'-4"	0 $\frac{7}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{1}{4}$ "	1"	2 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "

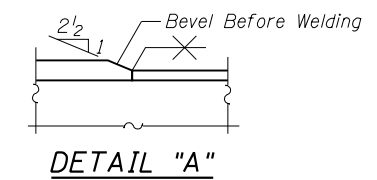
STEEL DEAD LOAD DEFLECTION TABLE (EB)

	A	B	C	D	E	F	G	H	I	J
Girder 10-15	44'-11 $\frac{3}{4}$ "	179'-11"	49'-1"	196'-4"	0 $\frac{7}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{1}{4}$ "	1"	2 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "
Girder 16	44'-8 $\frac{11}{16}$ "	178'-10 $\frac{3}{4}$ "	48'-9 $\frac{5}{8}$ "	195'-2 $\frac{1}{2}$ "	0 $\frac{7}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{1}{4}$ "	1"	2"	1 $\frac{5}{8}$ "
Girder 17	44'-5 $\frac{5}{8}$ "	177'-10 $\frac{1}{2}$ "	48'-6 $\frac{5}{16}$ "	194'-1 $\frac{1}{4}$ "	0 $\frac{7}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{1}{4}$ "	0 $\frac{7}{8}$ "	2"	1 $\frac{5}{8}$ "
Girder 18	44'-2 $\frac{11}{16}$ "	176'-10 $\frac{5}{8}$ "	48'-3 $\frac{3}{8}$ "	193'-0 $\frac{1}{4}$ "	0 $\frac{7}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{1}{4}$ "	0 $\frac{7}{8}$ "	2"	1 $\frac{5}{8}$ "
Girder 19	43'-11 $\frac{3}{4}$ "	175'-10 $\frac{7}{8}$ "	47'-11 $\frac{7}{8}$ "	191'-11 $\frac{3}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{7}{8}$ "	0 $\frac{1}{4}$ "	0 $\frac{7}{8}$ "	2"	1 $\frac{5}{8}$ "



Notes:
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2. For Framing Plan, see sheets 52 & 53 of 79.
 All webs and flanges of the girders, bearing stiffeners, web and flange splice plates, filler plates and bearing plates shall be AASHTO M270 Grade 50W unless noted otherwise.
 All splice plates except filler plate shall be designated as "NTR".

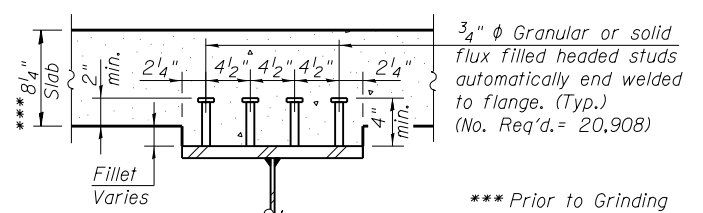
GIRDER ELEVATION



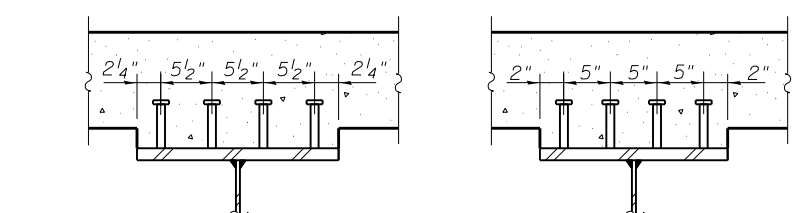
* Indicates plates are made of M270 HPS Grade 70W steel.
 ** Same for top and bottom flanges

GIRDER DIMENSION TABLE

Girder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S	T
1	379'-8 ⁷ / ₈ "	181'-6 ⁷ / ₈ "	198'-1 ¹ / ₄ "	26'-6 ⁷ / ₈ "	23'-5 ⁵ / ₈ "	129'-3 ³ / ₈ "	54	76'-6"	6	6'-6"	5'-1 ⁵ / ₈ "	27	29'-3"	65	97'-6"	28'-3 ⁷ / ₁₆ "	34'-2 ⁹ / ₁₆ "	32'-3 ³ / ₄ "
2	378'-4 ¹ / ₂ "	180'-11 ¹ / ₂ "	197'-5"	25'-11 ¹ / ₂ "	24'-0 ¹ / ₂ "	127'-11 ¹ / ₂ "	53	75'-1"	7	7'-7"	5'-3"	26	28'-2"	65	97'-6"	27'-11 ³ / ₄ "	34'-6 ¹ / ₄ "	31'-11 ⁷ / ₈ "
3	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
4	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
5	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
6	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
7	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
8	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
9	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
10	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
11	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
12	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
13	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
14	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
15	377'-1"	180'-4"	196'-9"	25'-4"	24'-8"	126'-8"	52	73'-8"	9	9'-9"	4'-3 ¹ / ₂ "	25	27'-1"	65	97'-6"	27'-8"	34'-10"	31'-8"
16	374'-11 ¹ / ₄ "	179'-3 ³ / ₄ "	195'-7 ¹ / ₂ "	24'-3 ³ / ₄ "	25'-7 ¹ / ₂ "	124'-7"	51	72'-3"	10	10'-10"	4'-7 ³ / ₄ "	23	24'-11"	65	97'-6"	27'-1 ⁷ / ₈ "	35'-3 ³ / ₄ "	31'-1 ³ / ₄ "
17	372'-9 ⁷ / ₈ "	178'-3 ⁵ / ₈ "	194'-6 ¹ / ₄ "	23'-3 ¹ / ₂ "	24'-6 ¹ / ₄ "	124'-7"	50	70'-10"	9	9'-9"	5'-5 ³ / ₈ "	24	26'-0"	64	96'-0"	26'-7 ³ / ₄ "	34'-9 ¹ / ₈ "	31'-1 ³ / ₄ "
18	370'-8 ³ / ₄ "	177'-3 ¹ / ₂ "	193'-5 ¹ / ₄ "	22'-3 ⁵ / ₈ "	23'-5 ¹ / ₄ "	124'-7"	49	69'-5"	9	9'-9"	4'-9 ¹ / ₄ "	24	26'-0"	64	96'-0"	26'-1 ¹⁵ / ₁₆ "	34'-2 ⁵ / ₈ "	31'-1 ³ / ₄ "
19	368'-8 ¹ / ₄ "	176'-3 ⁷ / ₈ "	192'-4 ³ / ₈ "	21'-3 ⁷ / ₈ "	22'-4 ³ / ₈ "	124'-7"	48	68'-0"	8	8'-8"	5'-7 ³ / ₄ "	25	27'-1"	63	94'-6"	25'-7 ¹⁵ / ₁₆ "	33'-8 ³ / ₁₆ "	31'-1 ³ / ₄ "

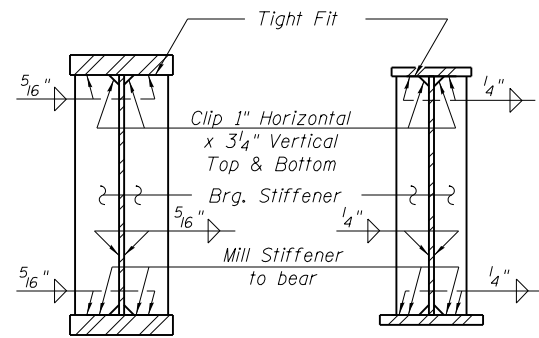


SECTION A-A



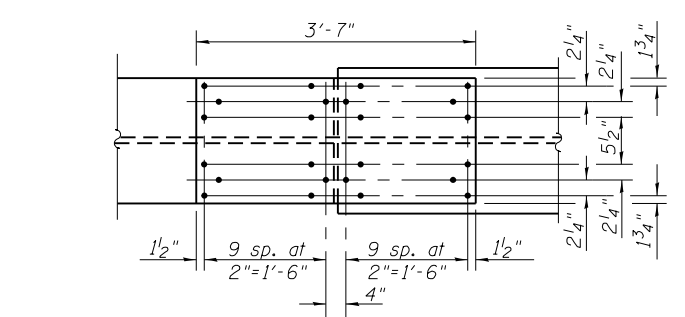
SECTION B-B

SECTION C-C

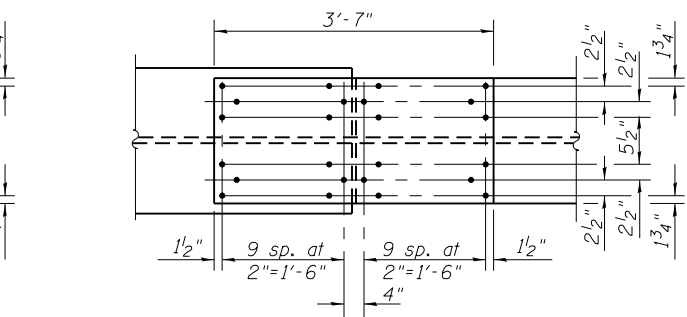


SECTION AT PIER

SECTION AT ABUTMENT



FIELD SPLICE No. 1 DETAIL



FIELD SPLICE No. 2 DETAIL

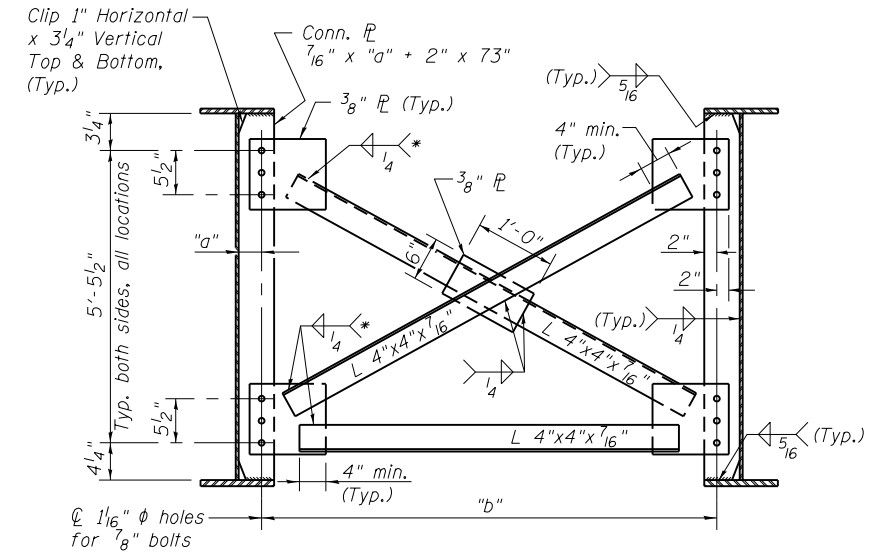
CROSS FRAME DIMENSIONS (a)

BAY	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21
Girder 1-2	6"	6"	6"	6"	6"	6"	6"	6 1/8"	6 1/8"	6"	6"	6 1/8"	6 1/8"	6"	6"	6 1/8"	6 1/8"	6 1/8"	6 1/8"		
Girder 2-3	6 3/16"	6 3/16"	6 3/16"	6 3/8"	6 3/16"	6 3/16"	6 3/16"	6 1/4"	6 1/4"	6 3/16"	6 3/16"	6 1/4"	6 1/4"	6 3/16"	6 3/16"	6 1/4"	6 1/4"	6 1/4"	6 1/4"		
Girder 3-4																				6"	
Girder 4-5																				6"	
Girder 5-6																					6"
Girder 6-7																					6"
Girder 7-8																					6"
Girder 8-9																					6"

BAY	D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	D32	D33	D34	D35	D36	D37	D38	D39	D40	D41	D42
Girder 10-11	6"																				
Girder 11-12	6"																				
Girder 12-13	6"																				
Girder 13-14	6"																				
Girder 14-15		6"																			
Girder 15-16			6"	6"	6"	6"	6"	6"	6"	6 1/8"	6 1/8"	6"	6"	6 1/8"	6 1/8"	6"	6"	6 1/8"	6"	6"	6 1/8"
Girder 16-17			6 1/4"	6 1/4"	6 1/4"	6 1/4"	6 1/4"	6 5/16"	6 1/4"	6 5/16"	6 3/8"	6 1/4"	6 5/16"	6 3/8"	6 1/4"	6 1/4"	6 5/16"	6 1/4"	6 3/8"	6 7/16"	
Girder 17-18			6 7/16"	6 7/16"	6 1/2"	6 1/2"	6 1/2"	6 9/16"	6 1/2"	6 9/16"	6 5/8"	6 1/2"	6 9/16"	6 5/8"	6 1/2"	6 1/2"	6 5/8"	6 9/16"	6 1/2"	6 3/4"	
Girder 18-19			6 5/8"	6 1/8"	6 1/8"	6 3/4"	6 13/16"	6 7/8"	6 1/8"	6 13/16"	6 7/8"	6 13/16"	6 7/8"	6 15/16"	6 3/4"	6 13/16"	6 7/8"	6 7/8"	6 15/16"	7 1/8"	

CROSS FRAME DIMENSIONS (b)

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21
6'-6"	6'-7 1/2"	6'-9"	6'-10 5/8"	7'-0 1/8"	7'-1 1/4"	7'-2 1/2"	7'-3"	7'-4 1/4"	7'-5 1/2"	7'-6 3/4"	7'-7 3/4"	7'-9"	7'-10 3/4"	8'-0"	8'-1 1/2"	8'-3"	8'-4 1/2"	8'-6"	8'-2"	8'-0"
D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	D32	D33	D34	D35	D36	D37	D38	D39	D40	D41	D42
8'-0"	8'-3"	5'-1 1/2"	5'-4 1/8"	5'-6 3/4"	5'-9 3/8"	6'-0"	6'-2"	6'-4"	6'-5"	6'-7"	6'-9 1/4"	6'-11 1/4"	7'-1 1/4"	7'-3 1/4"	7'-6"	7'-8 1/4"	7'-10 3/4"	8'-1 1/2"	8'-4"	8'-6 1/2"



TYPICAL INTERIOR CROSS FRAME

(2 ea. D1-D19, 38-D20, 76-D21 for SN 025-0111 (WB))
(76-D22, 19-D23, 4 ea. D24-D42 for SN 025-0112 (EB))

* Fillet weld angles along 3 sides of one face of gusset plate

Notes:

Two hardened washers required for each set of oversized holes.

All cross frames between girders shall be installed with erection pins and bolts according to the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.

All cross frames shall be Grade 50W.

	0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴) 80956	150013	99291
$I_c(n)$	(in ⁴) 17266	-	224293
$I_c(3n)$	(in ⁴) 129197	-	159632
$I_c(cr)$	(in ⁴) -	168588	-
S_s	(in ³) 2284	4017	3133
$S_c(n)$	(in ³) 3065	-	4122
$S_c(3n)$	(in ³) 2768	-	3740
$S_c(cr)$	(in ³) -	4191	-
DC1	(k/ft) 1.32	1.45	1.34
M _{DC1}	(k) 2506	6766	3672
DC2	(k/ft) 0.17	0.17	0.17
M _{DC2}	(k) 342	824	471
DW	(k/ft) 0.45	0.45	0.45
M _{DW}	(k) 891	2143	1224
$M_{\xi} \cdot IM$	(k) 3175	3714	3595
M_u (Strength I)	(k) 10453	19202	13306
$\phi_r M_n$	(k) 14966	-	19220
f_s DC1	(ksi) 13.17	20.21	14.06
f_s DC2	(ksi) 1.48	2.37	1.51
f_s DW	(ksi) 3.86	6.14	3.93
f_s ($\xi + IM$)	(ksi) 12.43	10.63	10.47
f_s (Service II)	(ksi) 34.67	42.54	33.11
0.95R _n F _{yf}	(ksi) 47.50	65.84	47.50
f_s (Total)(Strength I)	(ksi) -	56.04	-
$\phi_r F_n$	(ksi) -	62.39	-
V _f	(k) 81.6	70.4	81.4

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in⁴ and in³).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

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.).

$M_{\xi} \cdot IM$: Un-factored live load moment plus dynamic load allowance (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\xi} \cdot IM$

$\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).

M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).

$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).

$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s ($\xi + IM$): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).

$M_{\xi} \cdot IM / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).

$f_{SDC1} + f_{SDC2} + f_{SDW} + 1.3 f_s (\xi + IM)$

0.95R_nF_{yf}: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

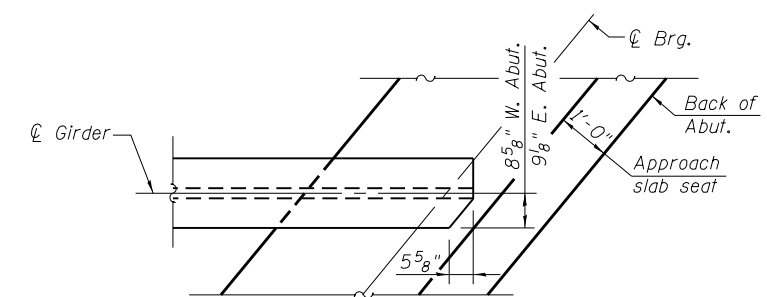
f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).

$1.25 (f_{SDC1} + f_{SDC2}) + 1.5 f_{SDW} + 1.75 f_s (\xi + IM)$

$\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

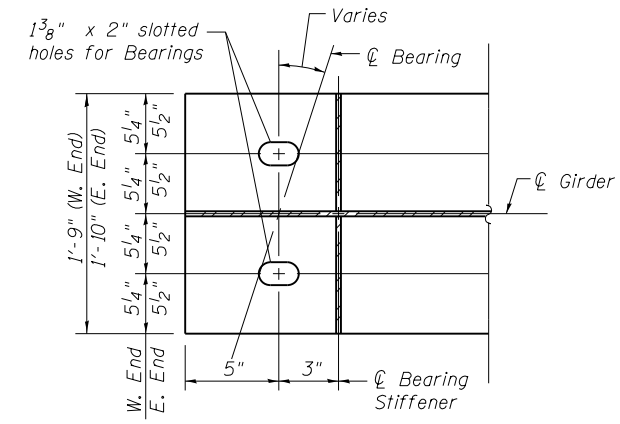
V_f: Maximum factored shear range in span computed according to Article 6.10.10.

	W. Abut.	Pier	E. Abut.
R _{DC1}	(k) 78.71	339.63	101.81
R _{DC2}	(k) 11.12	41.07	12.93
R _{DW}	(k) 28.91	106.83	35.18
R $\xi \cdot IM$	(k) 138.83	292.93	143.66
R _{Total}	(k) 257.57	780.46	293.58

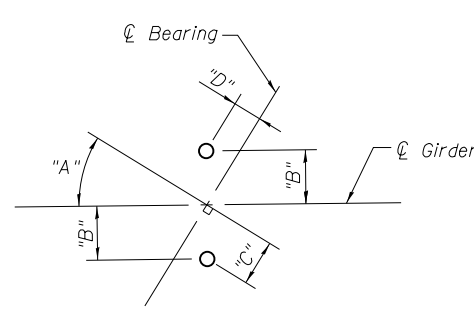


END GIRDER TOP FLANGE CLIP DETAIL

(Showing top flange of steel beam at integral abutment)



END GIRDER DETAIL



ABUTMENT ANCHOR BOLT LOCATION DETAIL

****SHIM PLATES REQUIRED**

W. Abut. Girder 4 - 0¹/₈" shim P

Notes:

Two 1¹/₈" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
 The horizontal dimension "E" between holes in the cross frame connection plate and L4"x4" angle shall be measured in the field. The holes in the L3"x3" angle shall be field drilled based on this dimension.
 Stop fillet weld from connection plate to flange 1⁴/₄" from end of connection plate.
 Bolts connecting temporary bracing shall be 7⁸/₈" φ bolts in 1¹/₆" φ holes. All other holes in connection plates shall be 1⁵/₁₆" φ for 3⁴/₄" φ bolts.
 Cost of Stage I and Stage II Temporary Interior Crossframes included with Furnishing and Erecting Structural Steel.
 All temporary bracing shall be Grade 50W.
 All steel plates shall be Grade 50W.

Rocker Plate
 2" x 9" x 1'-9" (W. Abut.)
 2" x 9" x 1'-10" (E. Abut.)

1⁸/₈" elastomeric neoprene leveling pad according to the material properties of Article 1052.02 of the Standard Specifications. Cost included with Structural Steel.

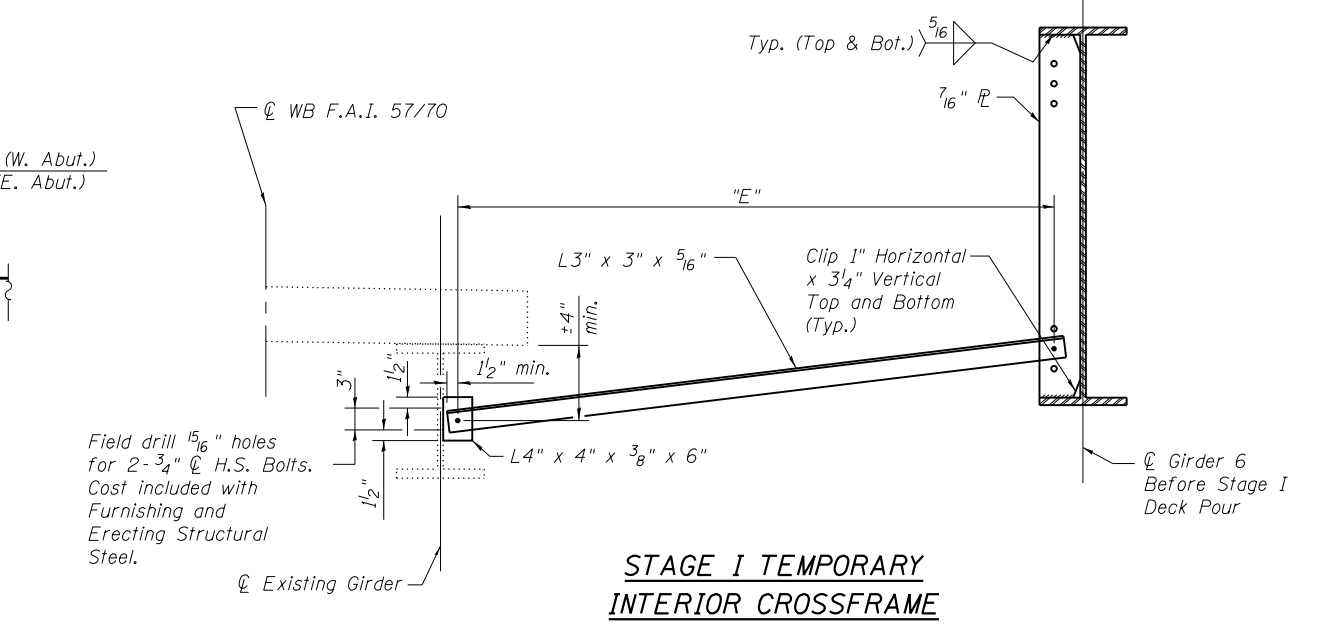
1" φ x 12" Anchor Bolts
 ASTM A307 Grade C with 2¹/₄" x 2¹/₄" x 5¹⁶/₁₆" P washer under nut. 1³/₈" x 2" slotted hole in flange. 1¹/₂" φ holes in bearing plate. See End Girder Details on sheet 55 of 79.

ELEVATION

SECTION A-A

FIXED BEARING AT ABUTMENTS

(19 Required at West Abutment)
 (19 Required at East Abutment)



STAGE I TEMPORARY INTERIOR CROSSFRAME

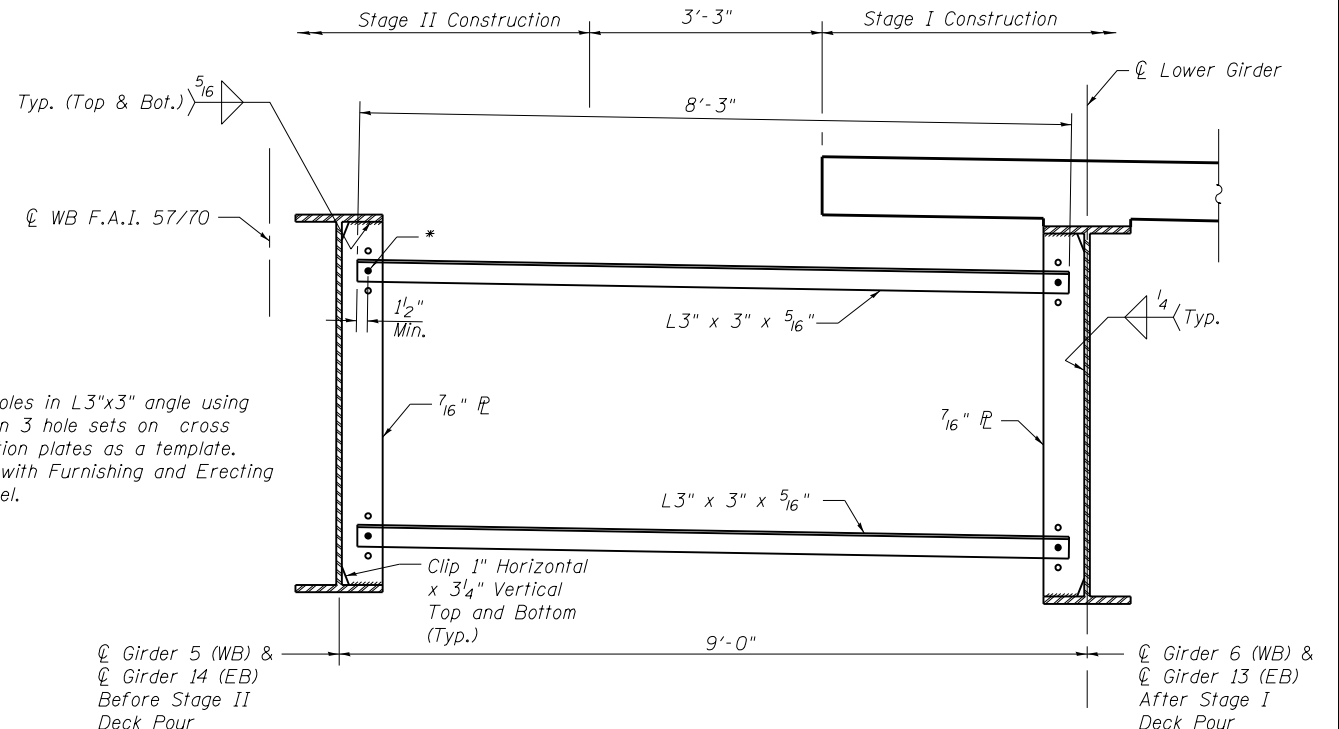
(38 Required)
 (SN 025-0111 shown)
 (SN 025-0112, Girder 13 similar)

WESTBOUND STRUCTURE 025-0111

Location	Girder	Angle "A"	"B" (in.)	"C" (in.)	"D" (in.)
West Abutment	1	32°08'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	2	31°49'04"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	3	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	4	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	5	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	6	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	7	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	8	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	9	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
East Abutment	1	32°08'00"	5 ¹ / ₂ "	4 ⁵ / ₈ "	2 ⁷ / ₈ "
East Abutment	2	31°49'04"	5 ¹ / ₂ "	4 ⁵ / ₈ "	2 ⁷ / ₈ "
East Abutment	3	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	4	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	5	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	6	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	7	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	8	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	9	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "

EASTBOUND STRUCTURE 025-0112

Location	Girder	Angle "A"	"B" (in.)	"C" (in.)	"D" (in.)
West Abutment	10	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	11	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	12	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	13	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	14	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	15	31°30'00"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	16	30°57'29"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ³ / ₄ "
West Abutment	17	30°24'35"	5 ¹ / ₄ "	4 ¹ / ₂ "	2 ⁵ / ₈ "
West Abutment	18	29°51'19"	5 ¹ / ₄ "	3 ¹ / ₄ "	1 ⁷ / ₈ "
West Abutment	19	29°17'41"	5 ¹ / ₄ "	2 ⁵ / ₈ "	4 ⁵ / ₈ "
East Abutment	10	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	11	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	12	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	13	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	14	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	15	31°30'00"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	16	30°57'29"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ⁷ / ₈ "
East Abutment	17	30°24'35"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ³ / ₄ "
East Abutment	18	29°51'19"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ³ / ₄ "
East Abutment	19	29°17'41"	5 ¹ / ₂ "	4 ³ / ₄ "	2 ³ / ₄ "



STAGE II TEMPORARY INTERIOR CROSSFRAME

(38 Required)
 (SN 025-0111 (WB) looking East)
 (SN 025-0112 (EB) looking West)

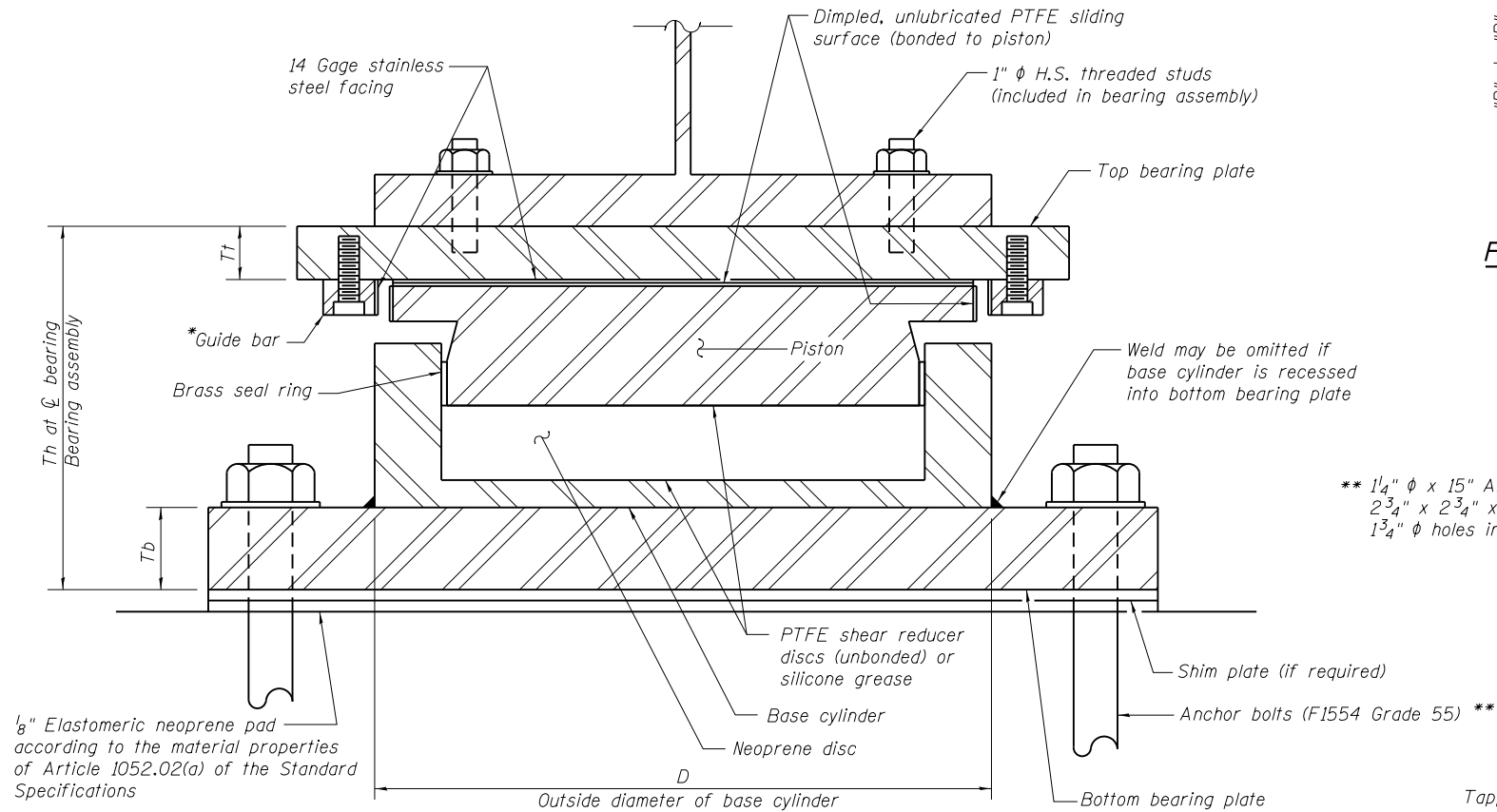
TEMPORARY INTERIOR CROSSFRAME INSTALLATION PROCEDURE

1. Install Stage I temporary Interior Crossframe before Stage I deck pour.
2. Remove Stage I temporary Interior Crossframe prior to Stage II removal.
3. Install Stage II temporary Interior Crossframe before Stage II deck pour.
4. Remove Stage II temporary Interior Crossframe prior to Stage III closure pour.
5. Install permanent Crossframes Prior to Stage III closure pour.

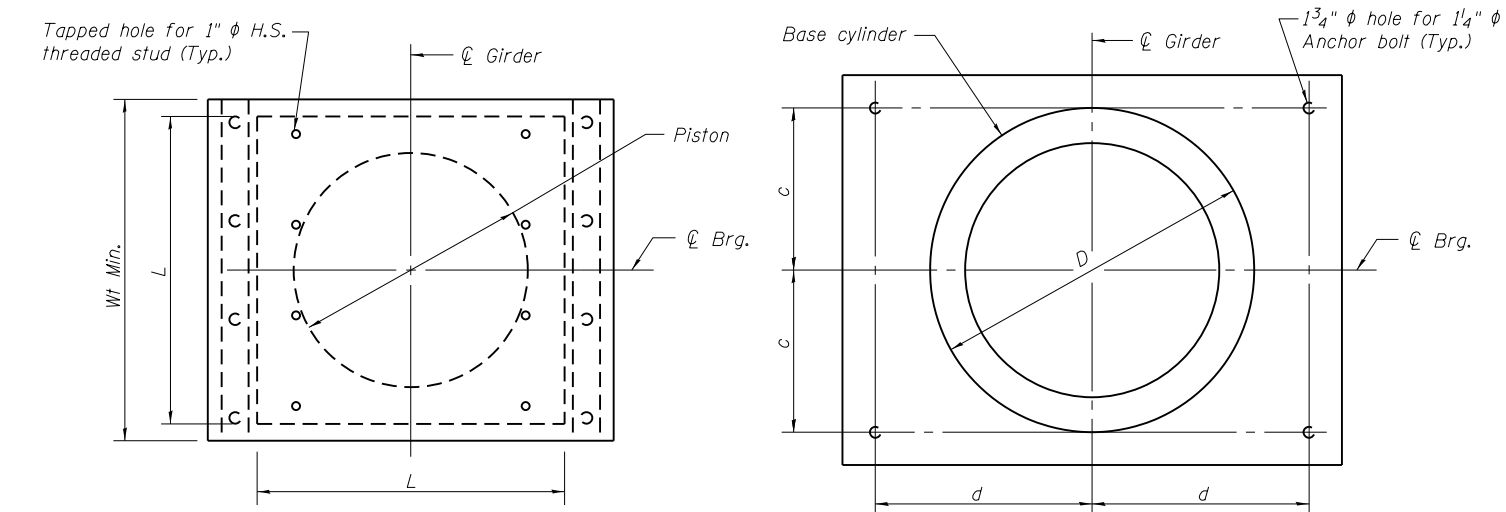
BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1" φ	Each	76

* As alternate to bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.

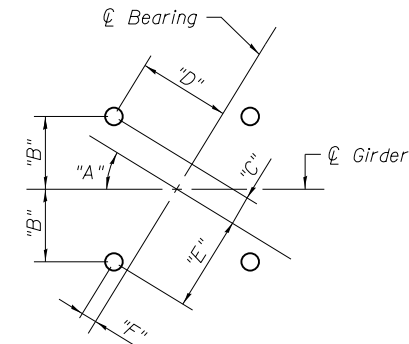


GUIDED EXPANSION POT BEARING
(Pier)



TOP BEARING PLATE AND PISTON PLAN

BOTTOM BEARING PLATE AND BASE CYLINDER PLAN



PIER ANCHOR BOLT LOCATION DETAIL

WESTBOUND STRUCTURE 025-0111

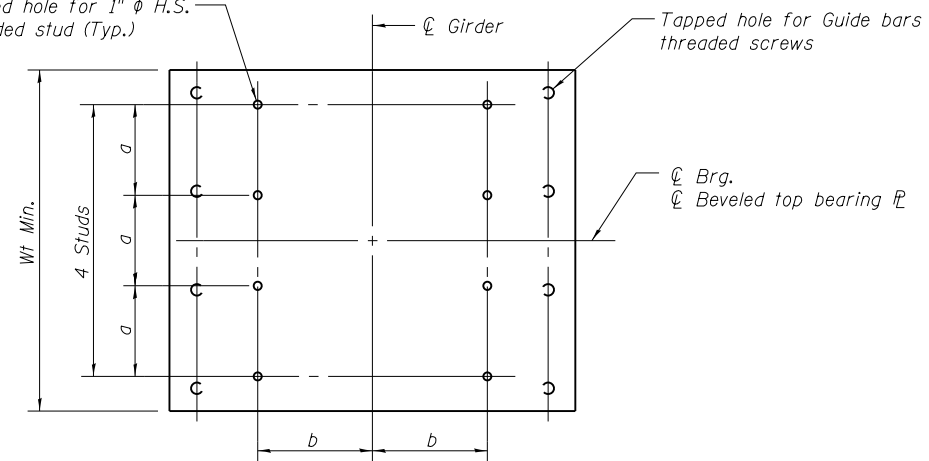
Location	Girder	Angle "A"	"B" (in.)	"C" (in.)	"D" (in.)	"E" (in.)	"F" (in.)
Pier 1	1	32°08'00"	12 7/8"	5 3/8"	1'-3 5/8"	1'-4 3/8"	2"
Pier 2	2	31°49'04"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2"
Pier 3	3	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 4	4	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 5	5	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 6	6	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 7	7	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 8	8	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 9	9	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"

EASTBOUND STRUCTURE 025-0112

Location	Girder	Angle "A"	"B" (in.)	"C" (in.)	"D" (in.)	"E" (in.)	"F" (in.)
Pier 10	10	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 11	11	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 12	12	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 13	13	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 14	14	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 15	15	31°30'00"	12 7/8"	5 1/2"	1'-3 5/8"	1'-4 3/8"	2 1/8"
Pier 16	16	30°57'29"	12 7/8"	5 3/4"	1'-3 5/8"	1'-4 3/8"	2 1/4"
Pier 17	17	30°24'35"	12 7/8"	5 7/8"	1'-3 1/2"	1'-4 3/8"	2 3/8"
Pier 18	18	29°51'19"	12 7/8"	6"	1'-3 3/8"	1'-4 3/8"	2 5/8"
Pier 19	19	29°17'41"	12 7/8"	6 1/8"	1'-3 3/8"	1'-4 1/4"	2 3/4"

** 1 1/4" φ x 15" Anchor bolts
2 3/4" x 2 3/4" x 5/16" PL Washer under nut
1 3/4" φ holes in bottom PL, typ.

Tapped hole for 1" φ H.S. threaded stud (Typ.)



TOP BEARING PLATE PLAN

DIMENSIONS (IN)

Dimension	Pier
D	1'-11 3/4"
L	1'-9"
Tb	2 1/4"
Th	11 3/4"
Tt	1 7/8"
Wt	2'-2"
a	6"
b	5 1/4"
c	10 3/8"
d	1'-0 7/8"

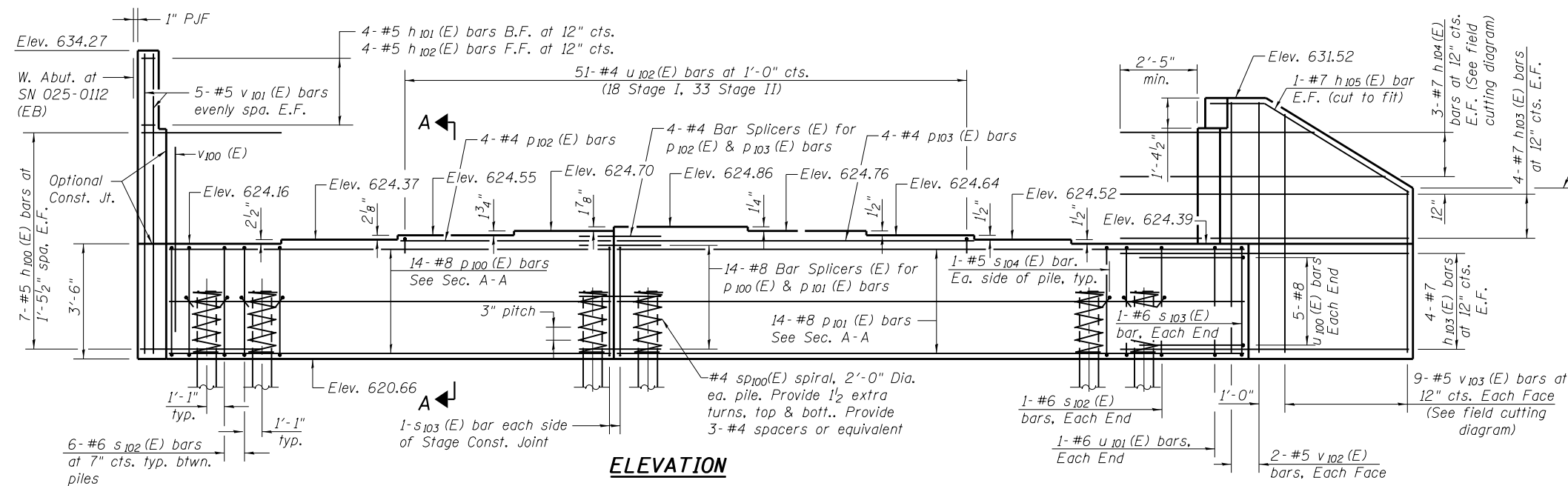
DESIGN DATA

Data	Pier
Vertical Design Load (kips) (strength)	1130
Vertical Design Load (kips) (service)	770
Horizontal Design Load (kips) (strength)	150
Total Required Movement (in)	4
Maximum Factored Ultimate Strength Design Rotation, θu (Radians)	0.0065

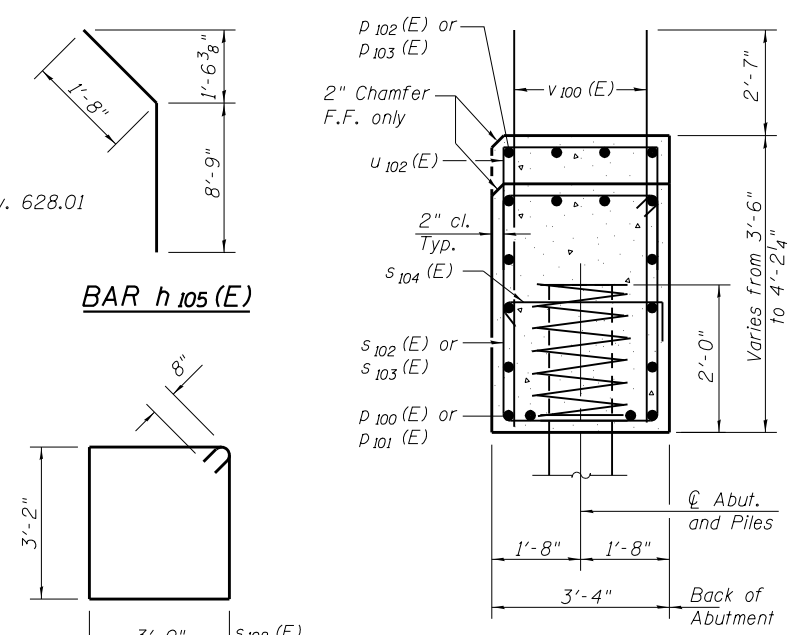
BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotation Bearings, Guided Expansion 1150K	Each	19
Anchor Bolts, 1 1/4" φ	Each	76

Notes:
The structural steel plates of the bearing assembly shall conform to the requirements of AASHTO M270 Grade 50.
Two 1/8" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
H.S. bolts in bearing assembly shall be galvanized according to AASHTO M298 Class 50.
The anchor bolt sizes and grades shown constitute a calculated seismic fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.
Bearing dimensions and details shown are for a pot type HLMR bearing. Disc type HLMR bearing dimensions and details will vary.
All structural steel and exposed surfaces of bearings shall be painted as specified in Section 506 of the Standard Specifications.



ELEVATION

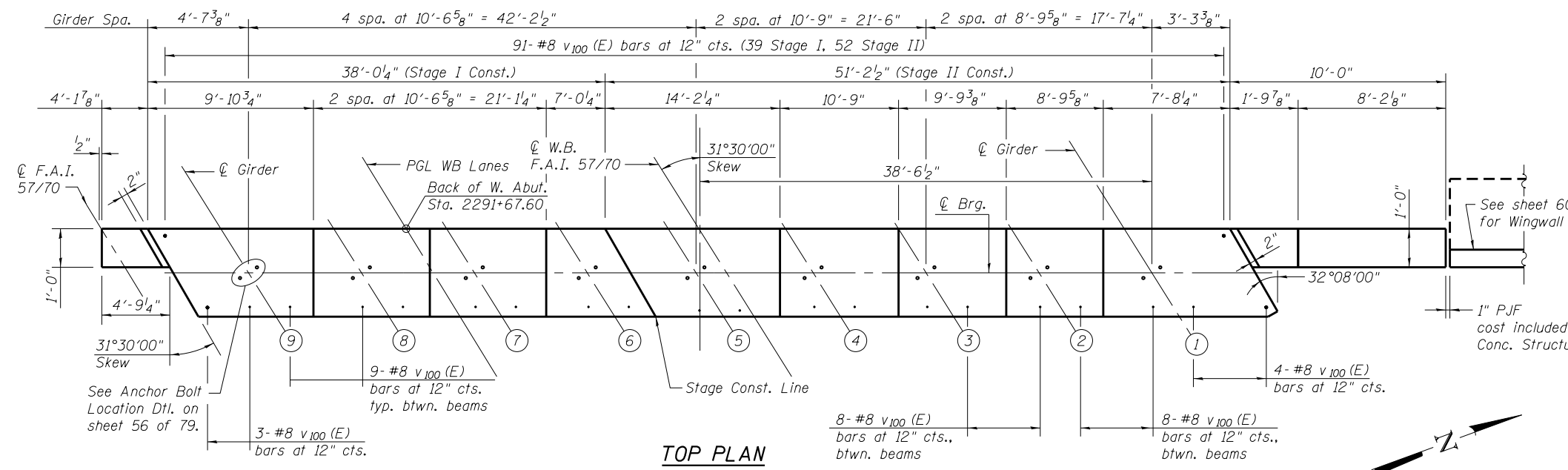


BAR h105(E)

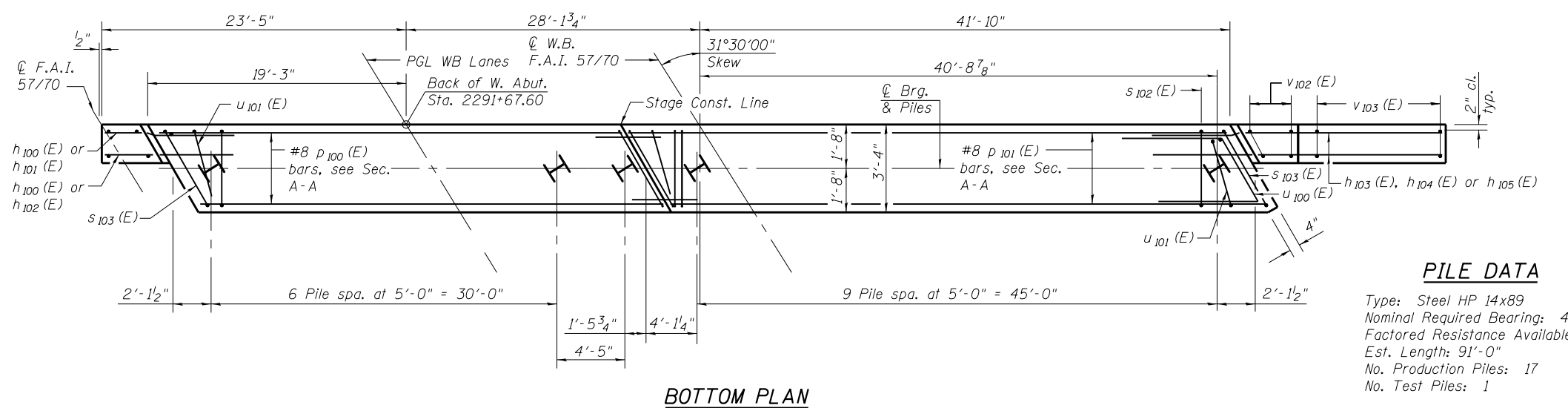
BAR s102(E) & s103(E)

SEC. A-A

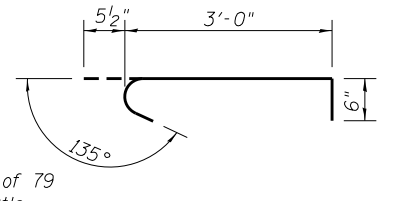
Dimensions at Rt. L's to Abutment



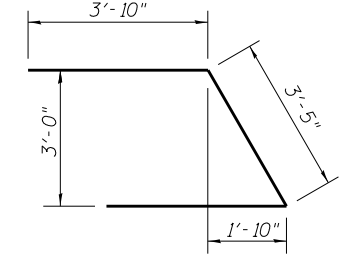
TOP PLAN



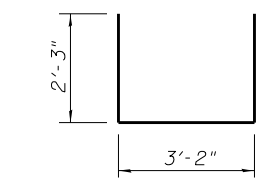
BOTTOM PLAN



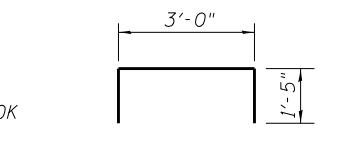
BAR s104(E)



BAR u100(E)



BAR u101(E)



BAR u102(E)

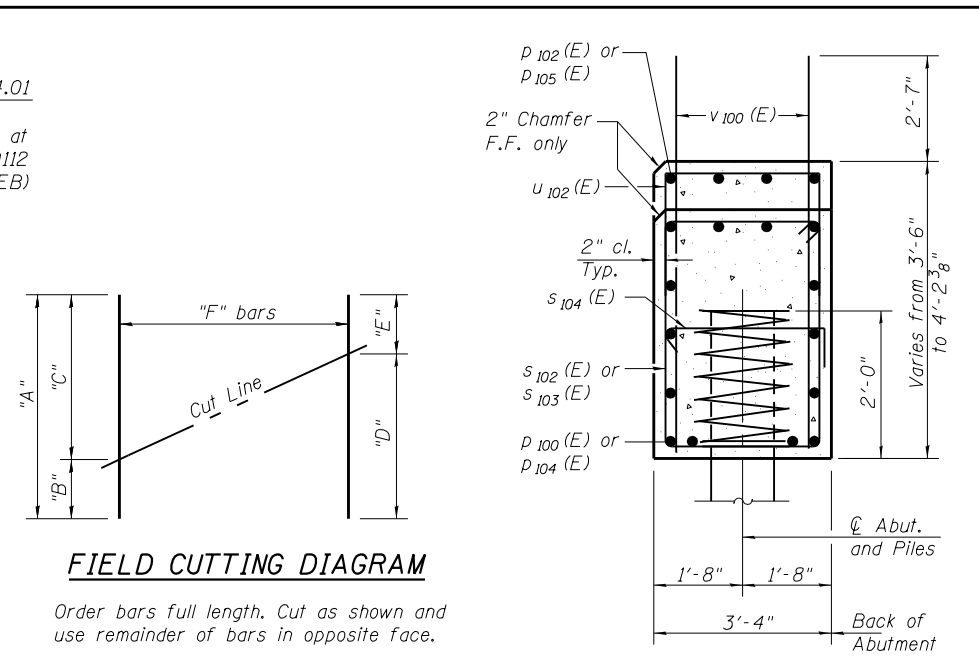
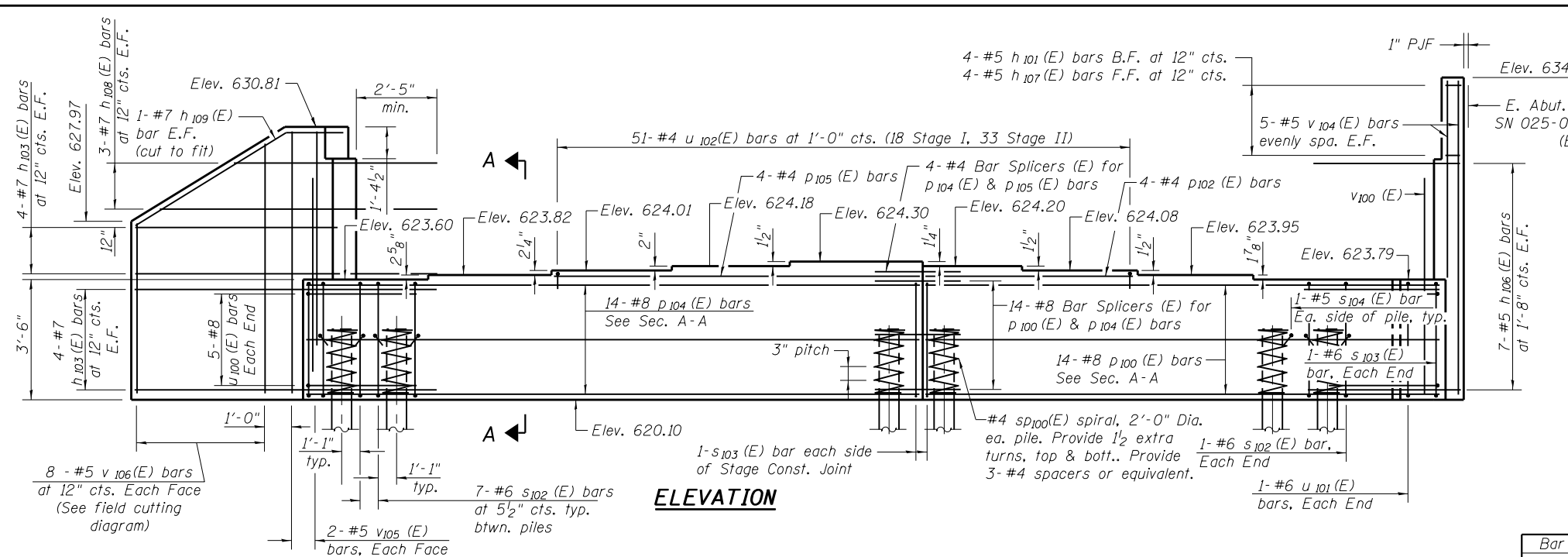
PILE DATA

Type: Steel HP 14x89
 Nominal Required Bearing: 436K
 Factored Resistance Available: 240K
 Est. Length: 91'-0"
 No. Production Piles: 17
 No. Test Piles: 1

BILL OF MATERIAL

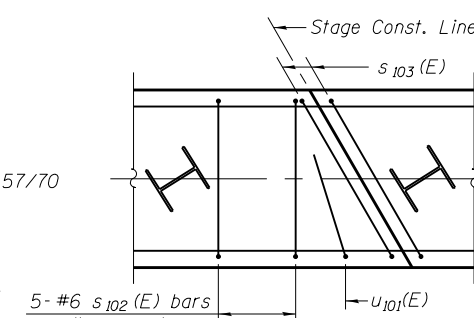
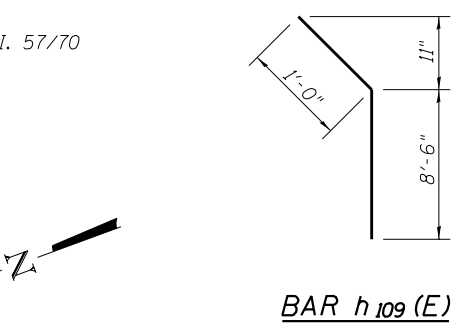
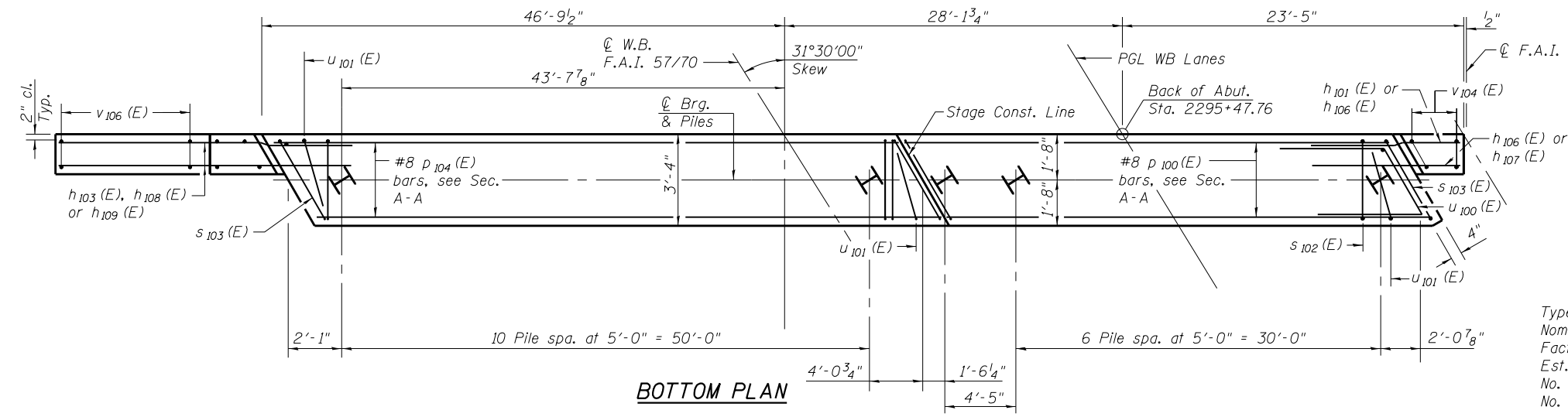
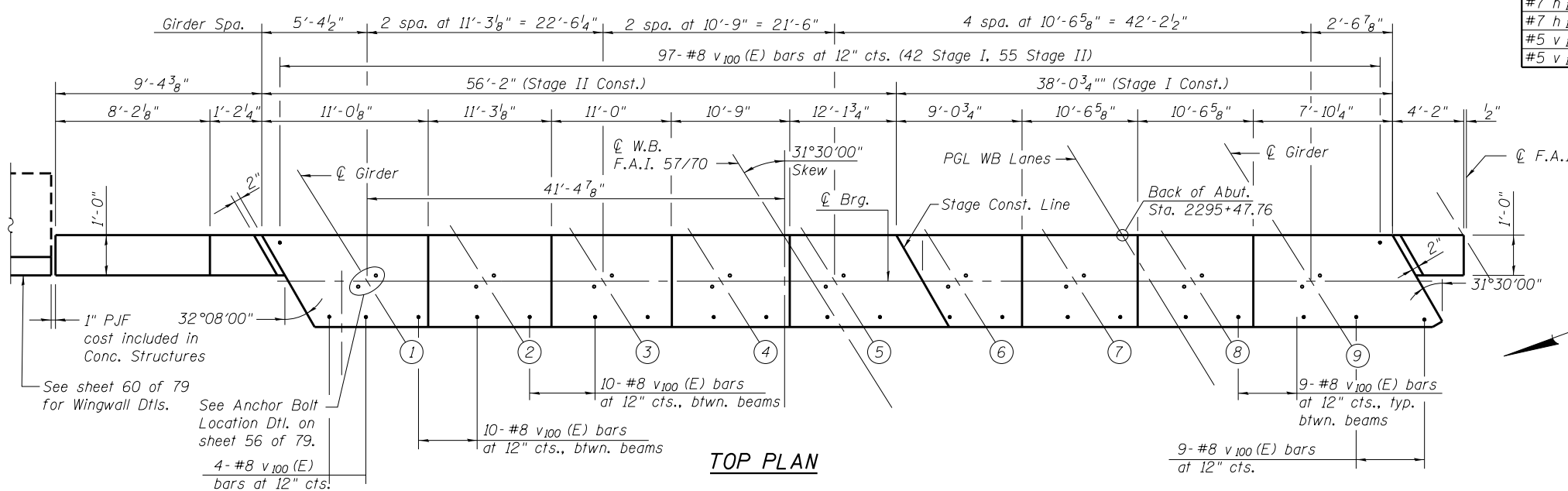
Bar	No.	Size	Length	Shape
h100(E)	14	#5	7'-0"	—
h101(E)	4	#5	3'-10"	—
h102(E)	4	#5	4'-6"	—
h103(E)	16	#7	12'-3"	—
h104(E)	3	#7	15'-8"	—
h105(E)	2	#7	10'-5"	—
p100(E)	14	#8	37'-8"	—
p101(E)	14	#8	50'-10"	—
p102(E)	4	#4	19'-2"	—
p103(E)	4	#4	34'-4"	—
s102(E)	103	#6	13'-8"	□
s103(E)	4	#6	14'-6"	□
s104(E)	36	#5	4'-0"	└┘
sp100(E)	18	#4	2'-0"	≡≡≡
u100(E)	10	#8	11'-1"	└┘
u101(E)	3	#6	7'-8"	└┘
u102(E)	51	#4	5'-10"	└┘
v100(E)	168	#8	6'-7"	—
v101(E)	10	#5	13'-4"	—
v102(E)	4	#5	10'-7"	—
v103(E)	9	#5	17'-6"	—
Structure Excavation			Cu. Yd.	234
Concrete Structures			Cu. Yd.	48.8
Reinforcement Bars, Epoxy Coated			Pound	11,220
Furnishing - Piles, HP14x89			Foot	1547
Driving Piles			Foot	1547
Test Pile, HP 14x89			Each	1

* Length is height of spiral.
 Notes:
 Pour steps monolithically with cap.
 For details of piles see sheet 70 of 79.
 See sheet 59 of 79 for Field Cut Diagrams.
 Order p102(E) and p103(E) bars full length and cut to fit.



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

Bar	A	B	C	D	E	F
#7 h104(E)	15'-8"	5'-6"	10'-2"	10'-2"	5'-6"	3
#7 h108(E)	16'-3"	5'-2"	11'-1"	11'-1"	5'-2"	3
#5 v103(E)	17'-6"	7'-1"	10'-5"	10'-5"	7'-1"	9
#5 v106(E)	17'-6"	7'-7"	9'-11"	9'-11"	7'-7"	8



PILE DATA

Type: Steel HP 14x89
Nominal Required Bearing: 452K
Factored Resistance Available: 249K
Est. Length: 75'-0"
No. Production Piles: 19
No. Test Piles: 0

Notes:
Pour steps monolithically with cap.
For details of piles see sheet 70 of 79.
See sheet 58 of 79 for additional Bar Bends.
Order P102(E) and P105(E) bars full length and cut to fit.
Space piles to miss existing cut-off piles as needed.

BILL OF MATERIAL

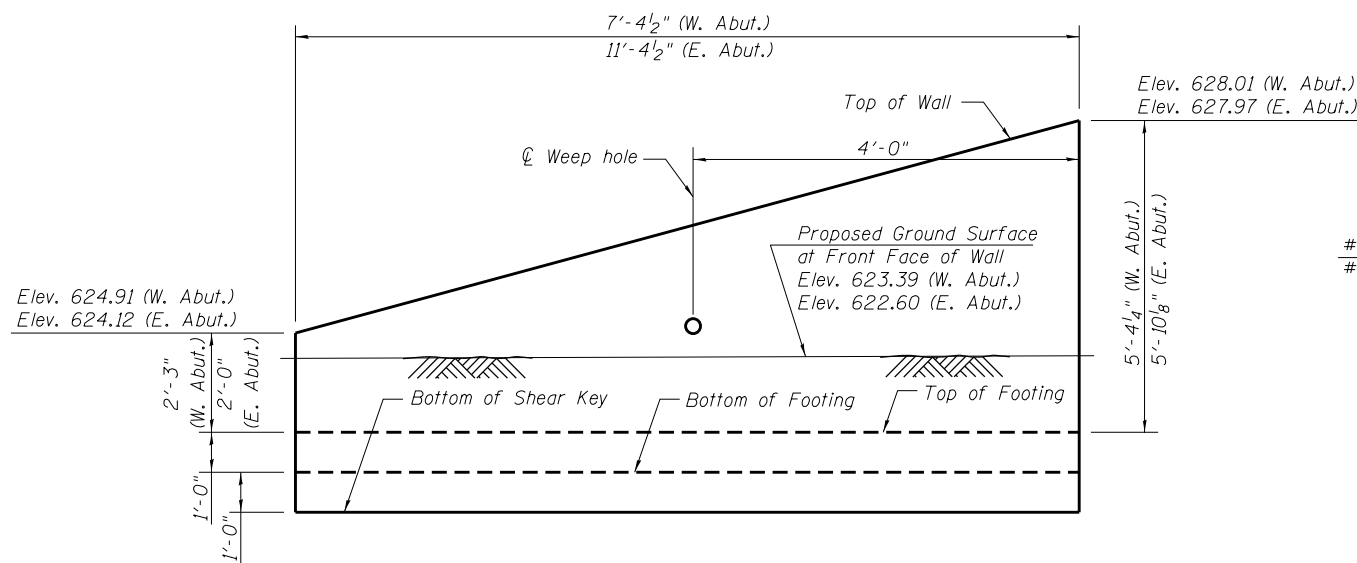
Bar	No.	Size	Length	Shape
h101(E)	4	#5	3'-10"	—
h103(E)	16	#7	12'-3"	—
h106(E)	14	#5	6'-5"	—
h107(E)	4	#5	3'-3"	—
h108(E)	3	#7	16'-3"	—
h109(E)	2	#7	9'-6"	—
P100(E)	14	#8	37'-8"	—
P102(E)	4	#4	19'-2"	—
P104(E)	14	#8	55'-10"	—
P105(E)	4	#4	35'-7"	—
S102(E)	126	#6	13'-8"	□
S103(E)	3	#6	14'-6"	□
S104(E)	38	#5	4'-0"	□
*SP100(E)	19	#4	2'-0"	≡≡≡
U100(E)	10	#8	11'-1"	┌
U101(E)	3	#6	7'-8"	┌
U102(E)	51	#4	5'-10"	┌
V100(E)	184	#8	6'-7"	—
V104(E)	10	#5	13'-8"	—
V105(E)	4	#5	10'-5"	—
V106(E)	8	#5	17'-6"	—
Structure Excavation			Cu. Yd.	262
Concrete Structures			Cu. Yd.	50.8
Reinforcement Bars, Epoxy Coated			Pound	12,190
Furnishing - Piles, HP14x89			Foot	1425
Driving Piles			Foot	1425

* Length is height of spiral.

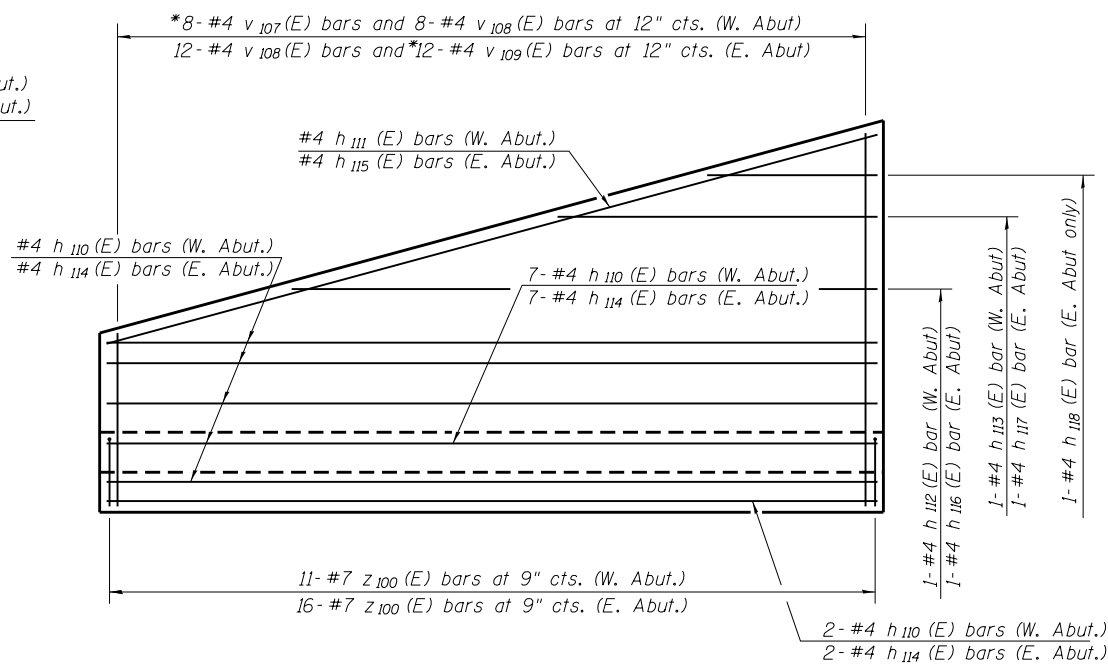
Notes:
 Maximum allowable soil pressure on prepare subgrade = 2000 psf.
 Structure excavation associated with Wingwalls is included in the abutment Bill of Materials on sheets 58 & 59 of 79.

**WINGWALLS (WB)
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h ₁₁₀ (E)	14	#4	7'-0"	
h ₁₁₁ (E)	1	#4	7'-8"	
h ₁₁₂ (E)	1	#4	4'-7"	
h ₁₁₃ (E)	1	#4	2'-2"	
h ₁₁₄ (E)	14	#4	11'-1"	
h ₁₁₅ (E)	1	#4	11'-9"	
h ₁₁₆ (E)	1	#4	8'-2"	
h ₁₁₇ (E)	1	#4	5'-2"	
h ₁₁₈ (E)	1	#4	2'-3"	
v ₁₀₇ (E)	4	#4	6'-10"	
v ₁₀₈ (E)	20	#4	3'-8"	
v ₁₀₉ (E)	6	#4	7'-1"	
Z ₁₀₀ (E)	27	#7	7'-7"	
Concrete Structures			Cu. Yd.	6.8
Reinforcement Bars, Epoxy Coated			Pound	720

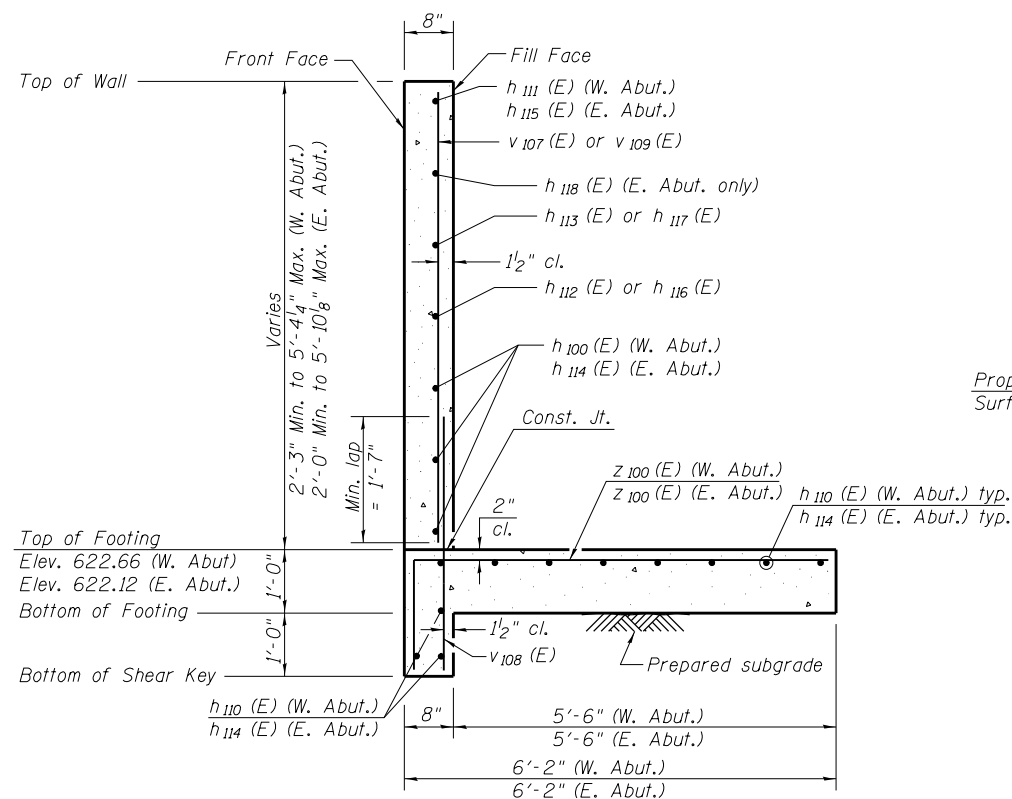


ELEVATION
 (Looking East)

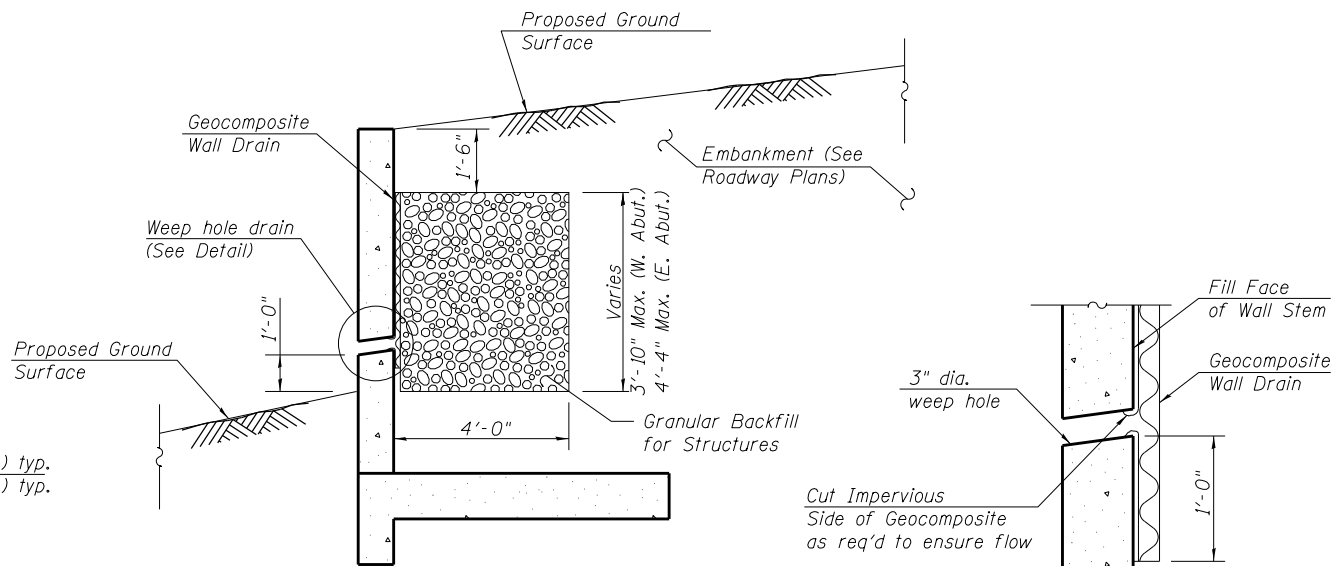


ELEVATION SHOWING REINFORCEMENT
 (Looking East)

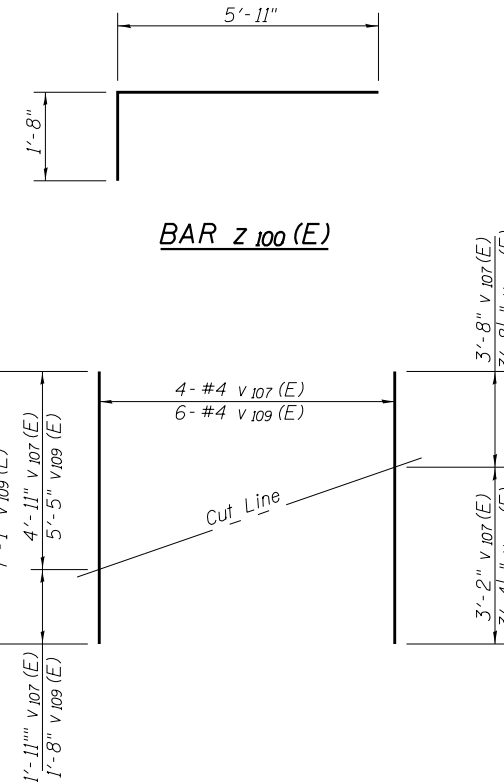
* See Field Cutting Diagram



SECTION THRU WALL



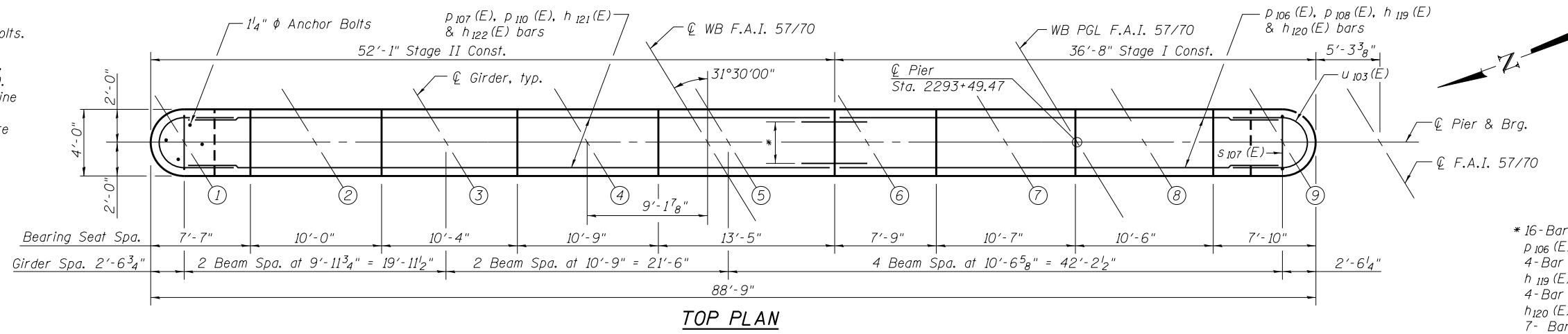
WEEP HOLE DRAIN DETAILS



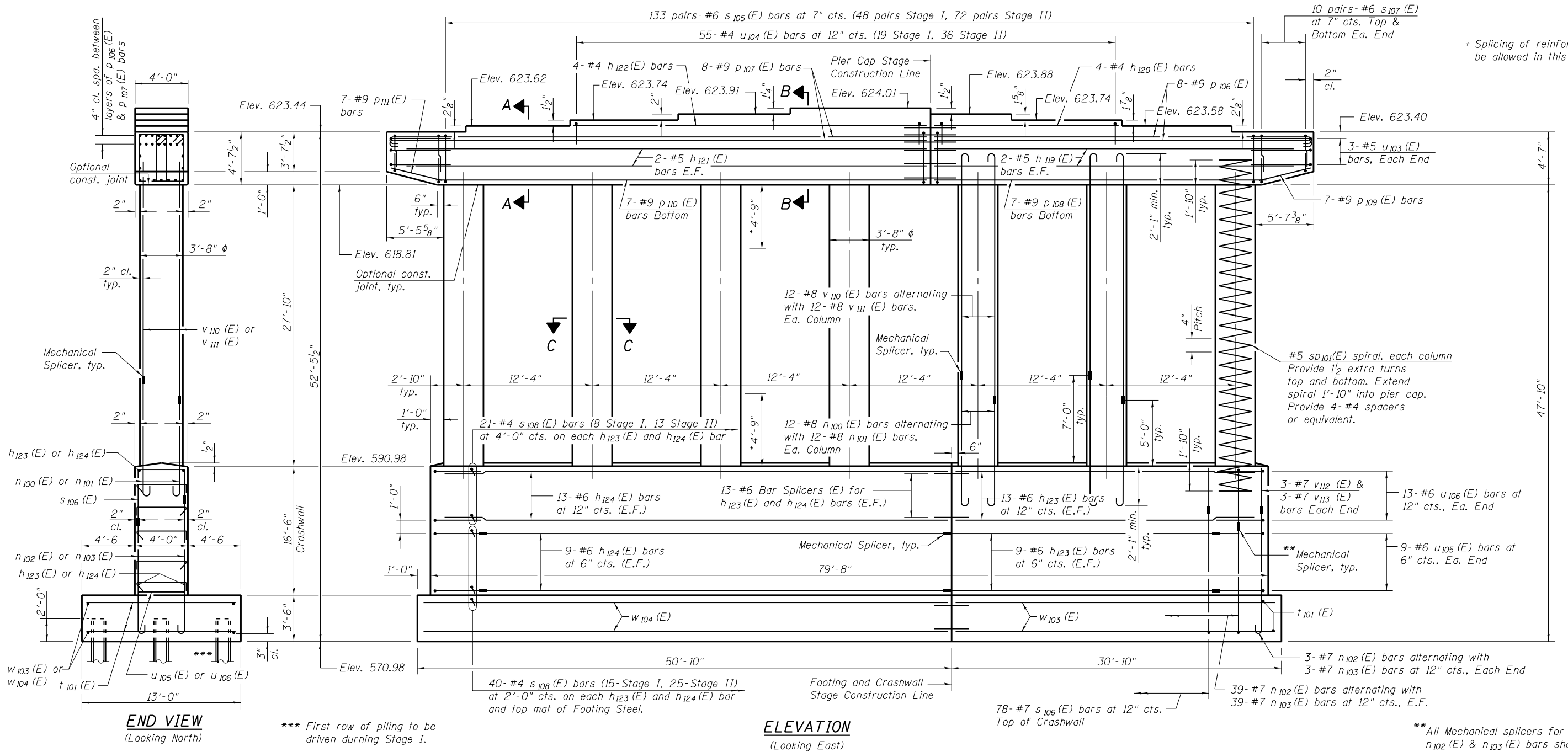
FIELD CUTTING DIAGRAM

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

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Four steps monolithically with cap.
 For Bar Details, Bill of Material, Footing Plan, Sections A-A, B-B & C-C, see sheet 62 of 79.
 All surfaces of Pier above proposed ground line shall be treated with Concrete Sealer.
 Clear cover noted to Mechanical Splicers where applicable.
 See sheet 57 of 79 for Anchor Bolt layout.
 Order p₁₀₆(E) & p₁₀₇(E) bars full length and cut to fit.
 Piling shall be driven starting with the row closest to the existing Pier foundation for Stage I Construction.
 When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.



*16-Bar Splicers (E) for #9 p₁₀₆(E) & p₁₀₇(E) bars
 4-Bar Splicers (E) for #5 h₁₁₉(E) & h₁₂₁(E) bars
 4-Bar Splicers (E) for #4 h₁₂₀(E) & h₁₂₂(E) bars
 7-Bar Splicers (E) for #9 p₁₀₈(E) & p₁₁₀(E) bars



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

END VIEW
 (Looking North)

ELEVATION
 (Looking East)

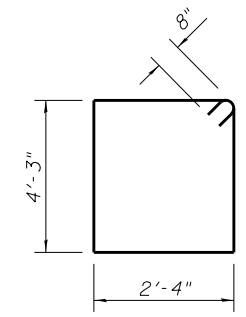
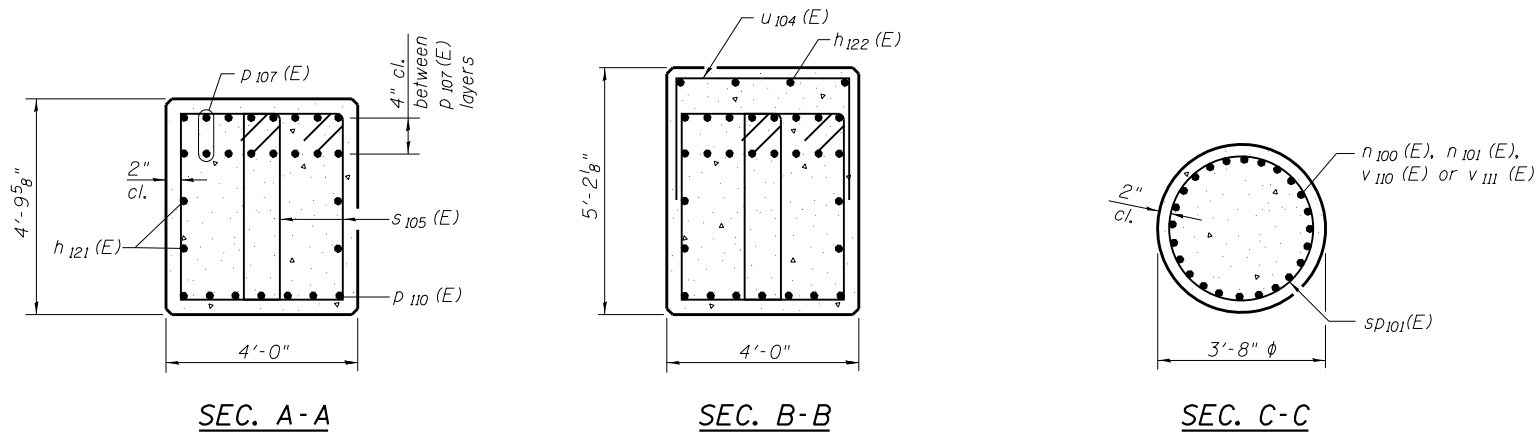
*** First row of piling to be driven during Stage I.

** All Mechanical splicers for s₁₀₇(E), n₁₀₂(E) & n₁₀₃(E) bars shall be staggered.

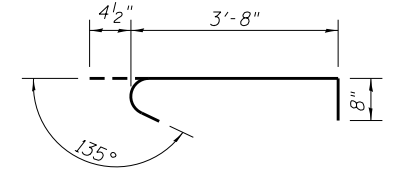
FILE NAME = 025011-74295-061-Pier (WB)1.dgn USER NAME = bbovee DESIGNED - BB CHECKED - ACS DRAWN - WJS CHECKED - CJF PLOT DATE = 3:26:27 PM 8/14/2013	USER NAME = bbovee Illinois Design Firm Number 184.001670	DESIGNED - BB CHECKED - ACS DRAWN - WJS CHECKED - CJF	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER (WB) STRUCTURE NO. 025-0111	F.A.I. RTE. 57/70	SECTION (25-4HVb-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 596			
	SHEET NO. 61 OF 79 SHEETS					CONTRACT NO. 74295							
	ILLINOIS FED. AID PROJECT												
	BERNARDINI LOCHMULLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62962 PHONE (618) 285-4665 FAX (618) 285-4666												

PILE DATA

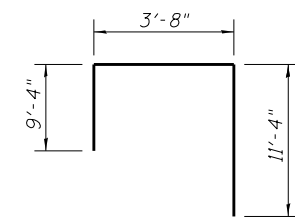
Type: HP 14x89
 Nominal Required Bearing: 461K
 Factored Resistance Available: 253K
 Est. Length: 62'-0"
 No. Production Piles: 47
 No. Test Piles: 1



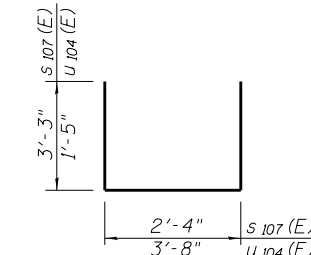
BAR s105 (E)



BAR s108 (E)



BAR s106 (E)

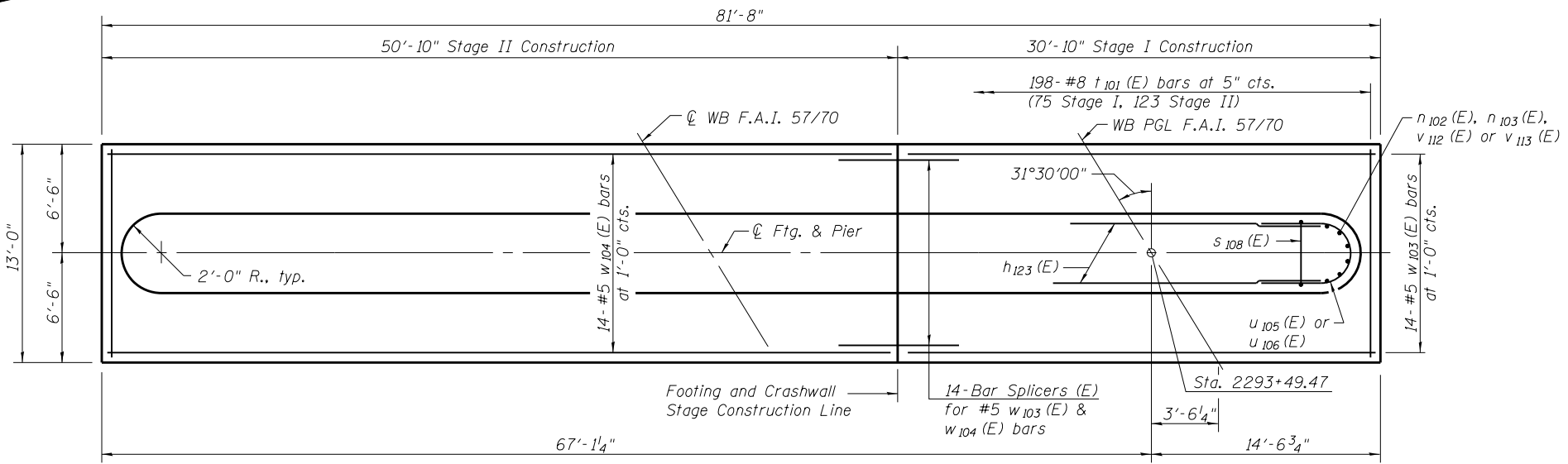


BARS s107 (E) & u104 (E)

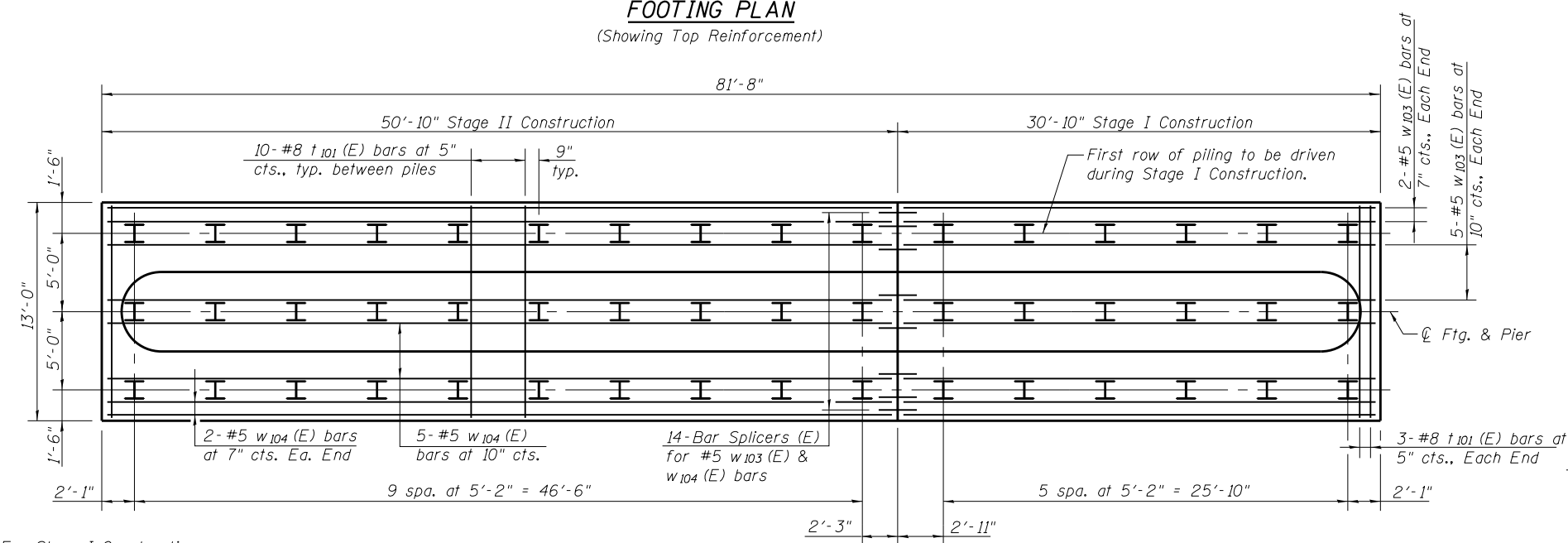
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h119 (E)	4	#5	34'-6"	—
h120 (E)	4	#4	18'-1"	—
h121 (E)	4	#5	49'-11"	—
h122 (E)	4	#4	34'-3"	—
h123 (E)	44	#6	26'-8"	—
h124 (E)	44	#6	46'-8"	—
n100 (E)	84	#8	8'-0"	—
n101 (E)	84	#8	10'-0"	—
n102 (E)	84	#7	9'-1"	—
n103 (E)	84	#7	11'-1"	—
p106 (E)	16	#9	37'-7"	—
p107 (E)	16	#9	53'-0"	—
p108 (E)	7	#9	31'-4"	—
p109 (E)	7	#9	5'-0"	—
p110 (E)	7	#9	46'-11"	—
p111 (E)	7	#9	4'-11"	—
s105 (E)	306	#6	14'-6"	—
s106 (E)	78	#7	24'-4"	—
s107 (E)	80	#6	8'-10"	—
s108 (E)	673	#4	4'-9"	—
sp101 (E)	7	#5	31'-6"	—
t101 (E)	354	#8	12'-8"	—
u103 (E)	6	#5	10'-9"	—
u104 (E)	55	#4	6'-6"	—
u105 (E)	18	#6	7'-9"	—
u106 (E)	26	#6	15'-9"	—
v110 (E)	84	#8	25'-10"	—
v111 (E)	84	#8	23'-10"	—
v112 (E)	6	#7	9'-4"	—
v113 (E)	6	#7	11'-4"	—
w103 (E)	28	#5	30'-6"	—
w104 (E)	28	#5	50'-6"	—
Structure Excavation		Cu. Yd.	407	
Concrete Structures		Cu. Yd.	471.3	
Reinforcement Bars, Epoxy Coated		Pound	68,040	
Furnishing - Piles, HP14x89		Foot	2914	
Driving Piles		Foot	2914	
Test Pile		Each	1	

* Length is height of spiral.



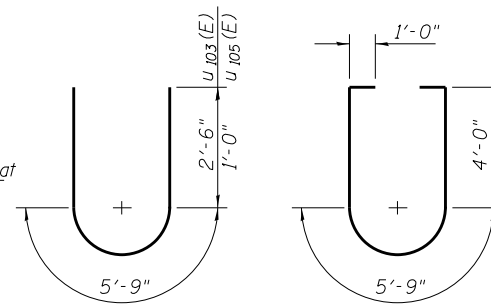
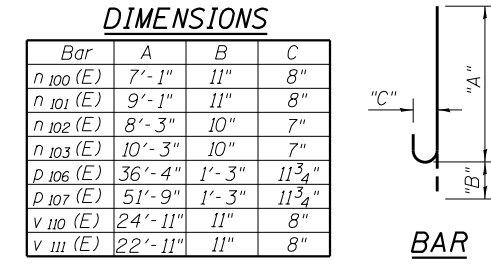
FOOTING PLAN
(Showing Top Reinforcement)



FOOTING PLAN
(Showing Bottom Reinforcement)

DIMENSIONS

Bar	A	B	C
n100 (E)	7'-1"	11"	8"
n101 (E)	9'-1"	11"	8"
n102 (E)	8'-3"	10"	7"
n103 (E)	10'-3"	10"	7"
p106 (E)	36'-4"	1'-3"	11 3/4"
p107 (E)	51'-9"	1'-3"	11 3/4"
v110 (E)	24'-11"	11"	8"
v111 (E)	22'-11"	11"	8"



BARS u103 (E) & u105 (E) BAR u106 (E)

FILE NAME = 025011-74295-062-Pier (WB)1.dgn
 USER NAME = bbovee
 BERNAARDIN & LOCHMULLER & ASSOCIATES, INC.
 3 OAK DRIVE
 MARYVILLE, ILLINOIS 62452
 PHONE (618) 288-4665
 FAX (618) 288-4666

DESIGNED - BB
 CHECKED - ACS
 DRAWN - WJS
 CHECKED - CJF
 Illinois Design Firm Number 184.001670
 PLOT SCALE =
 PLOT DATE = 3:26:28 PM 8/14/2013

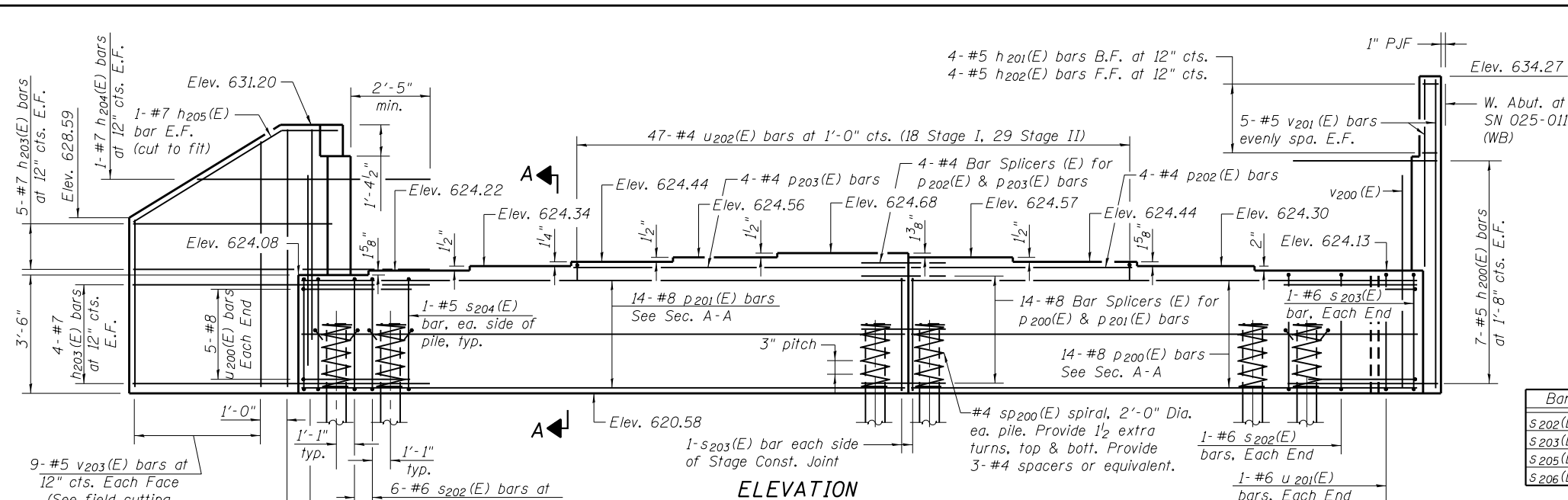
REVISED
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

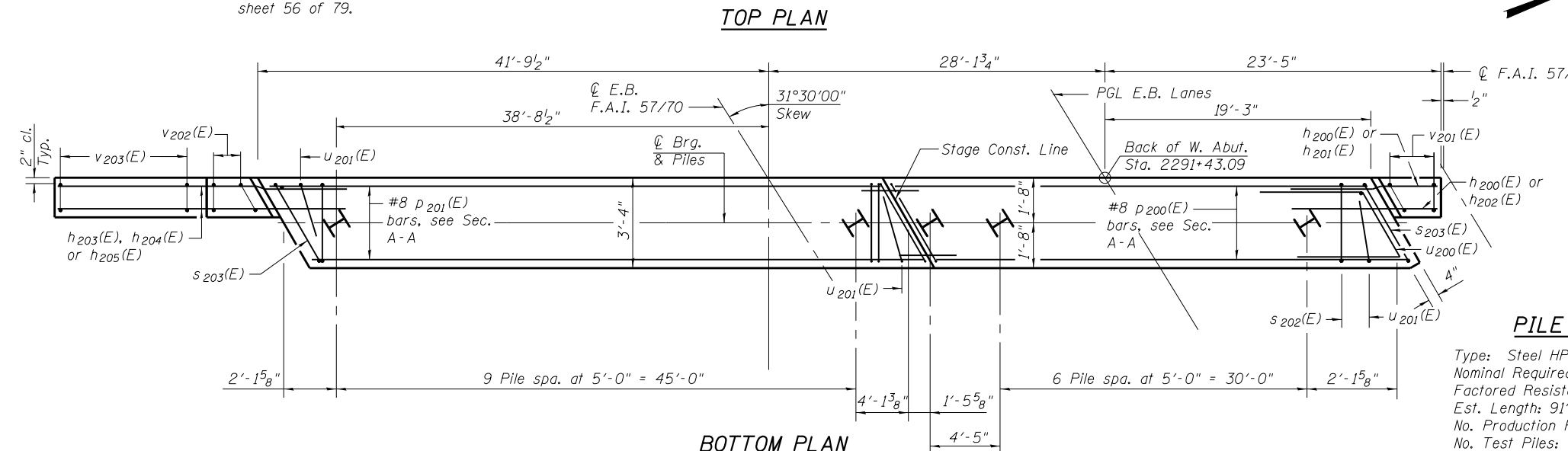
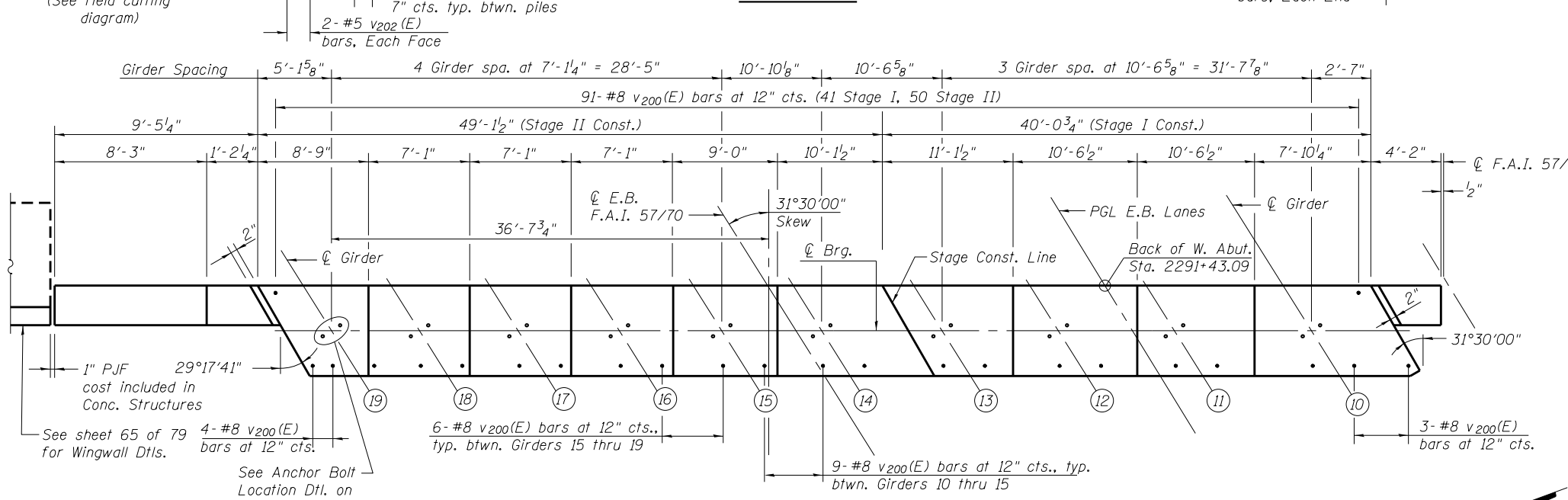
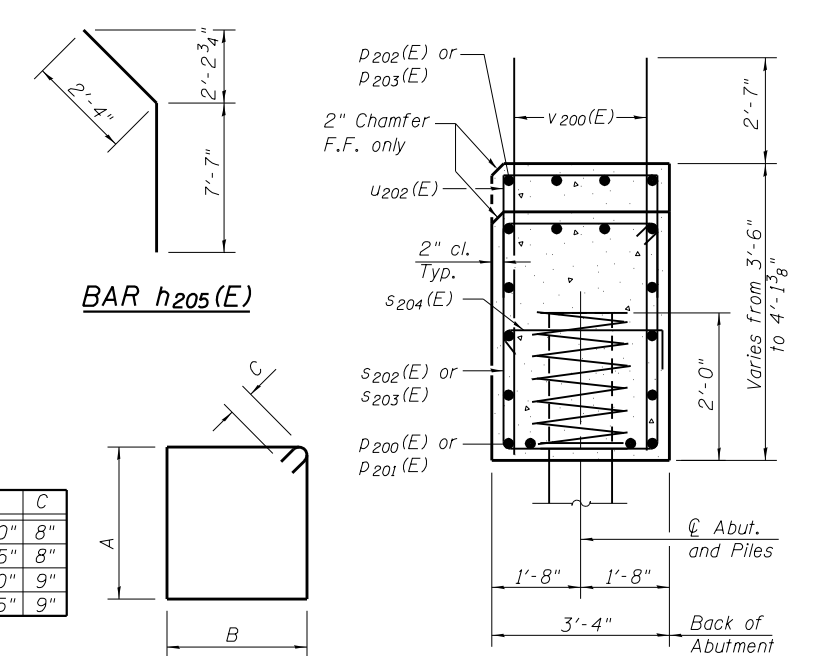
PIER (WB)
STRUCTURE NO. 025-0111
 SHEET NO. 62 OF 79 SHEETS

F.A.I. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/70	(25-4HVb-1)BY	EFFINGHAM	1760	597

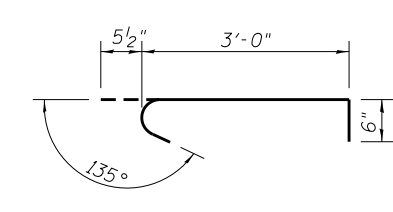
CONTRACT NO. 74295
 ILLINOIS FED. AID PROJECT



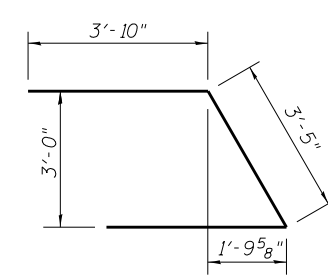
Bar	A	B	C
s202(E)	3'-2"	3'-0"	8"
s203(E)	3'-2"	3'-5"	8"
s205(E)	3'-2"	3'-0"	9"
s206(E)	3'-2"	3'-5"	9"



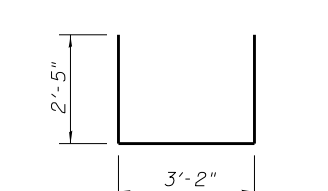
s(E) BAR s202(E) & s203(E)



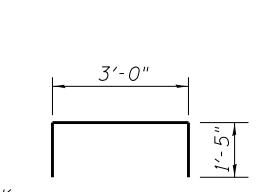
BAR s204(E)



BAR u200(E)



BAR u201(E)



BAR u202(E)

SEC. A-A
Dimensions at right angles to abutment.

BILL OF MATERIAL

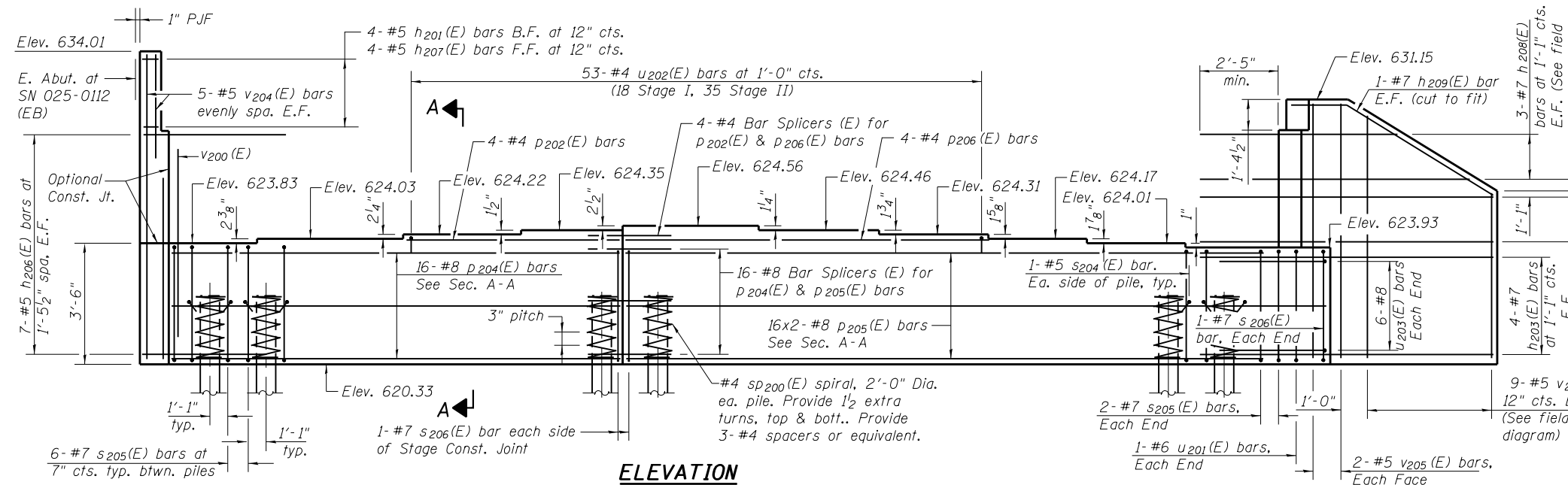
Bar	No.	Size	Length	Shape
h200(E)	14	#5	6'-5"	—
h201(E)	4	#5	3'-11"	—
h202(E)	4	#5	3'-3"	—
h203(E)	18	#7	12'-3"	—
h204(E)	2	#7	8'-2"	—
h205(E)	2	#7	9'-11"	—
P200(E)	14	#8	37'-8"	—
P201(E)	14	#8	50'-10"	—
P202(E)	4	#4	19'-3"	—
P203(E)	4	#4	29'-11"	—
s202(E)	103	#6	13'-8"	□
s203(E)	4	#6	14'-6"	□
s204(E)	36	#5	4'-0"	└
SP200(E)	18	#4	2'-0"	W
U200(E)	10	#8	11'-1"	U
U201(E)	3	#6	8'-0"	U
U202(E)	47	#4	5'-10"	U
V200(E)	167	#8	6'-6"	—
V201(E)	10	#5	13'-3"	—
V202(E)	4	#5	10'-2"	—
V203(E)	9	#5	17'-11"	—
Structure Excavation			Cu. Yd.	246
Concrete Structures			Cu. Yd.	47.5
Reinforcement Bars, Epoxy Coated			Pound	11,110
Furnishing - Piles, HP14x89			Foot	1638
Driving Piles			Foot	1638

* Length is height of spiral.

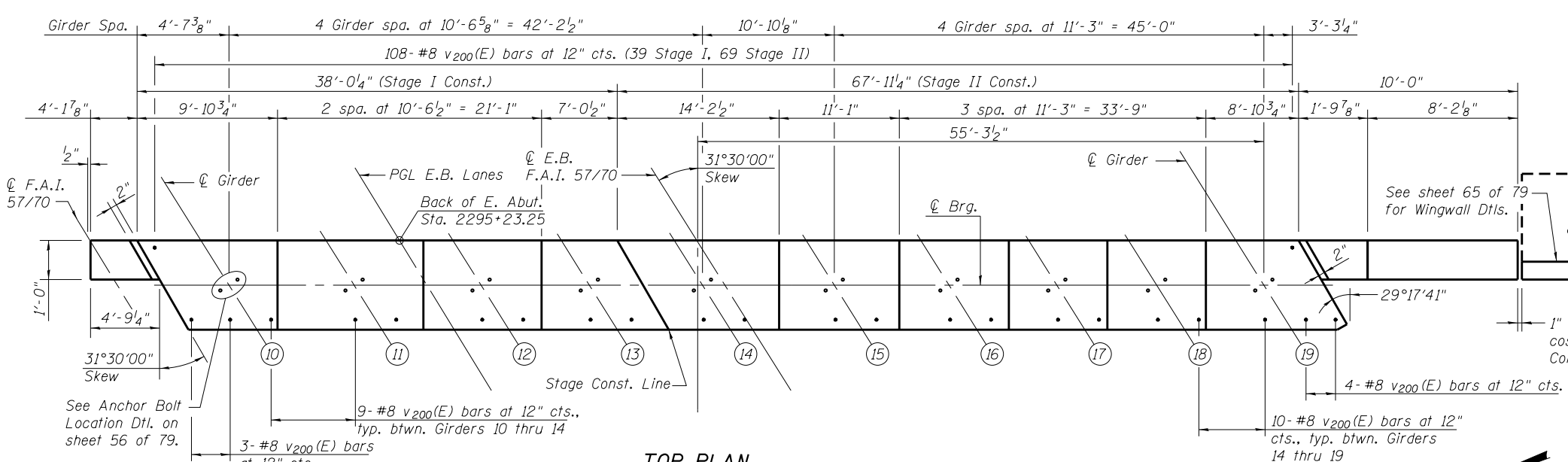
PILE DATA

Type: Steel HP 14x89
 Nominal Required Bearing: 436K
 Factored Resistance Available: 240K
 Est. Length: 91'-0"
 No. Production Piles: 18
 No. Test Piles: 0

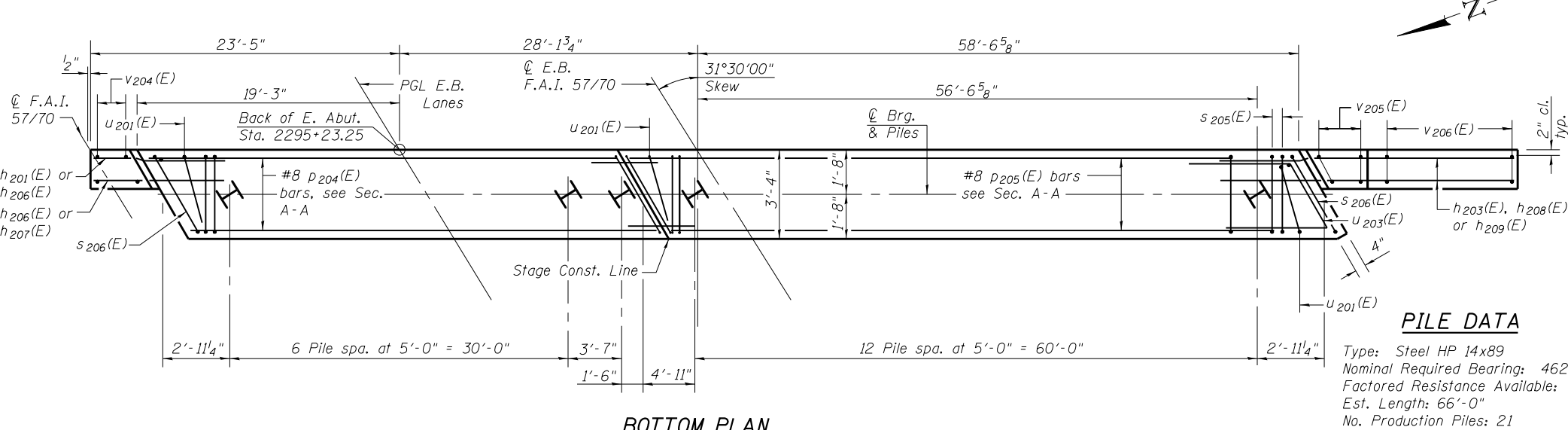
Notes:
 Pour steps monolithically with cap.
 For details of piles see sheet 70 of 79.
 See sheet 64 of 79 for Field Cutting Diagrams.
 Order P202(E) & P203(E) bars full length and cut to fit.



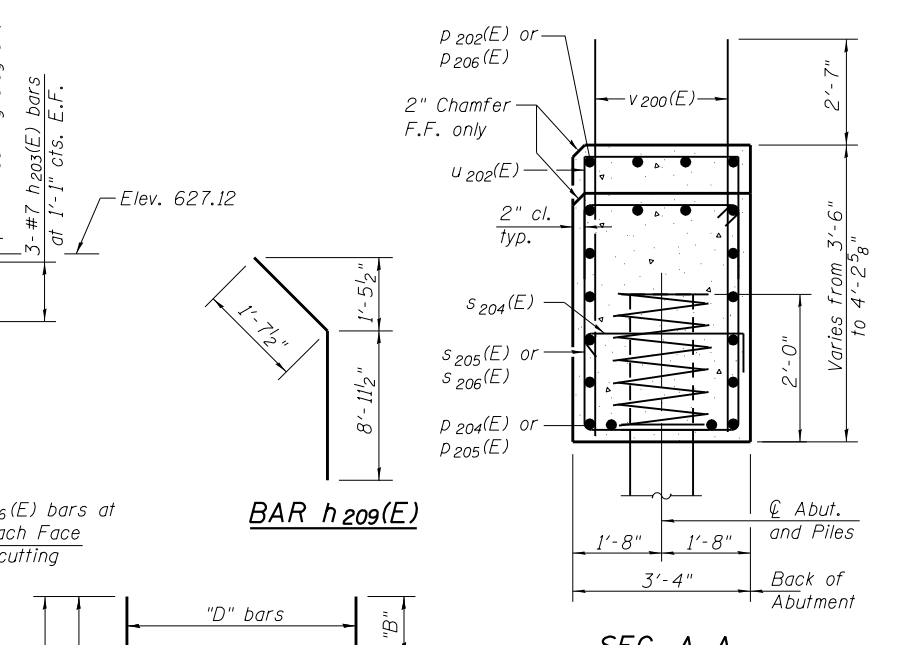
ELEVATION



TOP PLAN



BOTTOM PLAN



BAR h209(E)

SEC. A-A

Dimensions at right angles to abutment.

FIELD CUTTING DIAGRAM

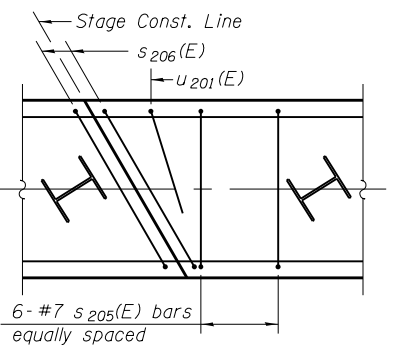
Order bars full length. Cut as shown and use remainder of bars in opposite face.

Bar	A	B	C	D
#7 h208(E)	15'-10"	5'-8"	10'-2"	3
#5 v203(E)	17'-11"	7'-9"	10'-2"	9
#5 v206(E)	16'-10"	6'-6"	10'-4"	9

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h201(E)	4	#5	3'-11"	—
h203(E)	14	#7	12'-3"	—
h206(E)	14	#5	7'-0"	—
h207(E)	4	#5	4'-3"	—
h208(E)	3	#7	15'-10"	—
h209(E)	2	#7	10'-7"	—
P202(E)	4	#4	19'-3"	—
P204(E)	16	#8	37'-8"	—
P205(E)	32	#8	36'-8"	—
P206(E)	4	#4	36'-2"	—
S204(E)	42	#5	4'-0"	□
S205(E)	124	#7	13'-10"	□
S206(E)	4	#7	14'-8"	□
SP200(E)	21	#4	2'-0"	⋄
U201(E)	3	#6	8'-0"	—
U202(E)	53	#4	5'-10"	—
U203(E)	12	#8	11'-0"	—
V200(E)	201	#8	6'-6"	—
V204(E)	10	#5	13'-5"	—
V205(E)	4	#5	10'-6"	—
V206(E)	9	#5	16'-10"	—
Structure Excavation		Cu. Yd.	277	
Concrete Structures		Cu. Yd.	56.2	
Reinforcement Bars, Epoxy Coated		Pound	14,810	
Furnishing - Piles, HP14x89		Foot	1386	
Driving Piles		Foot	1386	

* Length is height of spiral.



STAGE CONST. JT. DETAIL

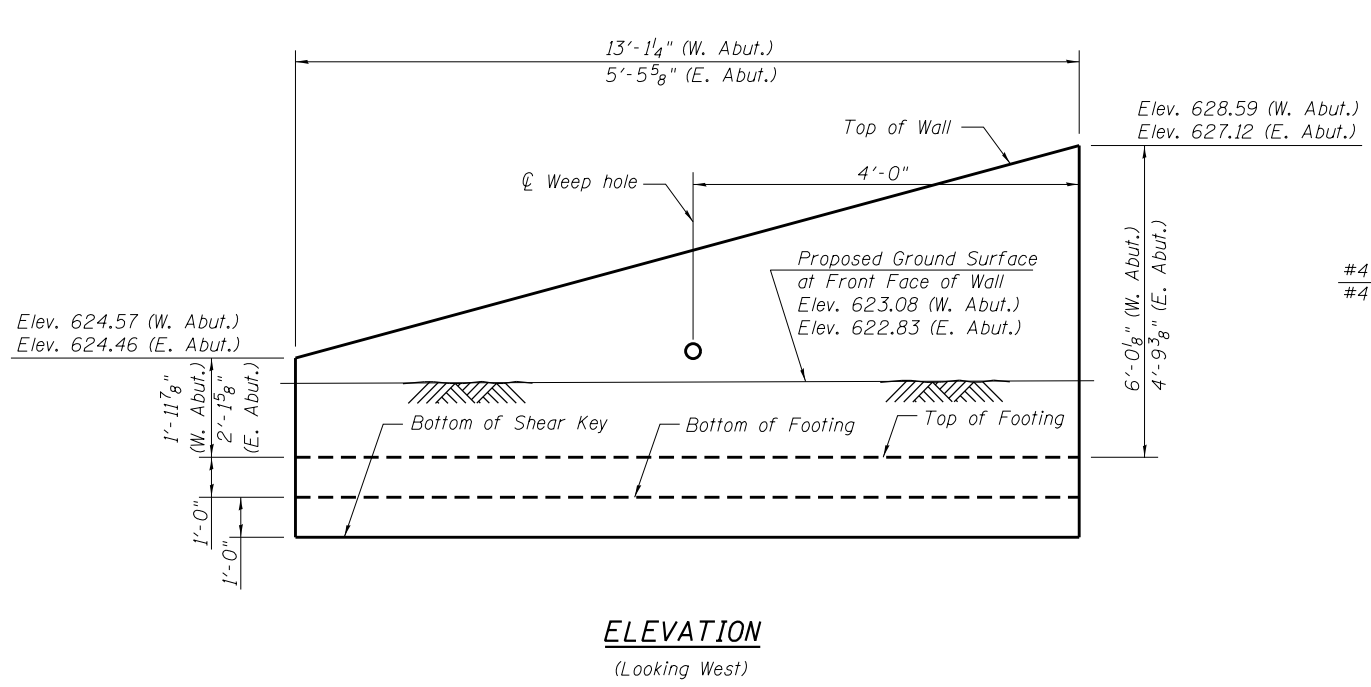
PILE DATA

Type: Steel HP 14x89
 Nominal Required Bearing: 462K
 Factored Resistance Available: 254K
 Est. Length: 66'-0"
 No. Production Piles: 21
 No. Test Piles: 0

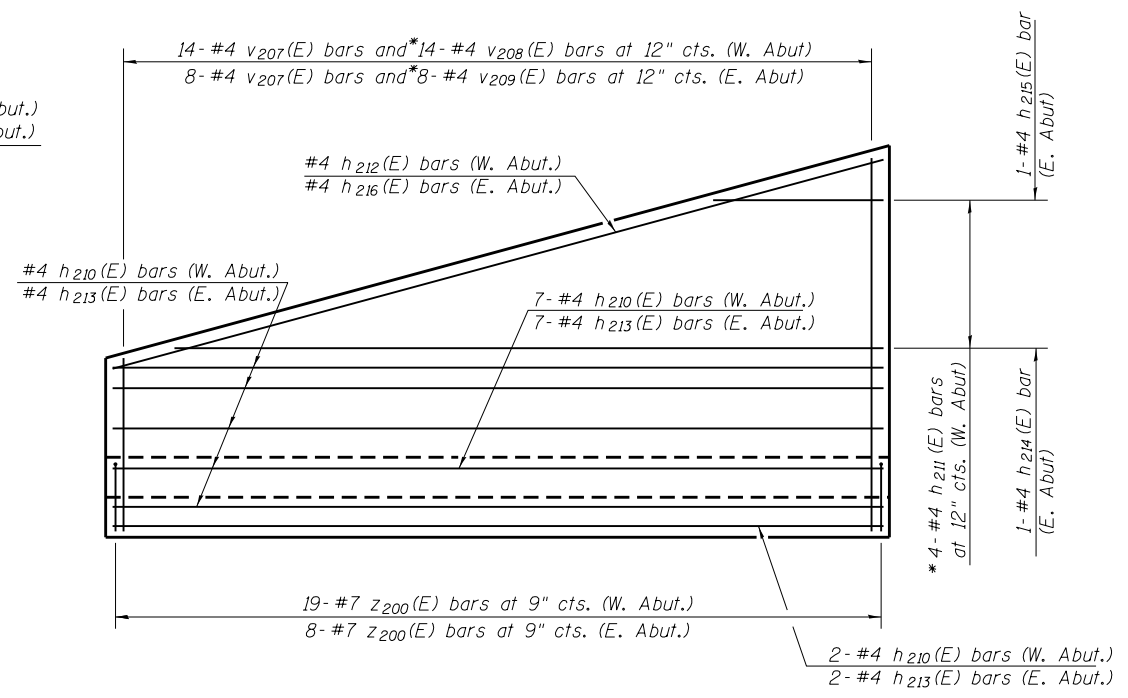
MINIMUM BAR LAP
 #8 bar = 5'-10"

Notes:
 Pour steps monolithically with cap.
 For details of piles see sheet 70 of 79.
 See sheet 63 of 79 for additional Bar Bends.
 Bars indicated thus 16x2-#8 etc. indicates 16 lines of bars with 2 bars per line.
 Order P202(E) & P206(E) bars full length and cut to fit.

Notes:
 Maximum applied service bearing pressure = 2000 psf.
 Structure excavation associated with Wingwalls is included in the abutment Bill of Materials on sheets 63 & 64 of 79.



ELEVATION
(Looking West)

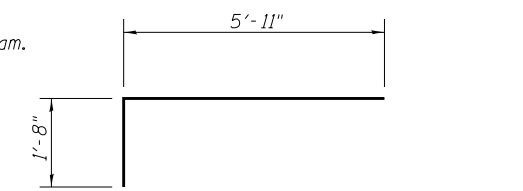


ELEVATION SHOWING REINFORCEMENT
(Looking West)

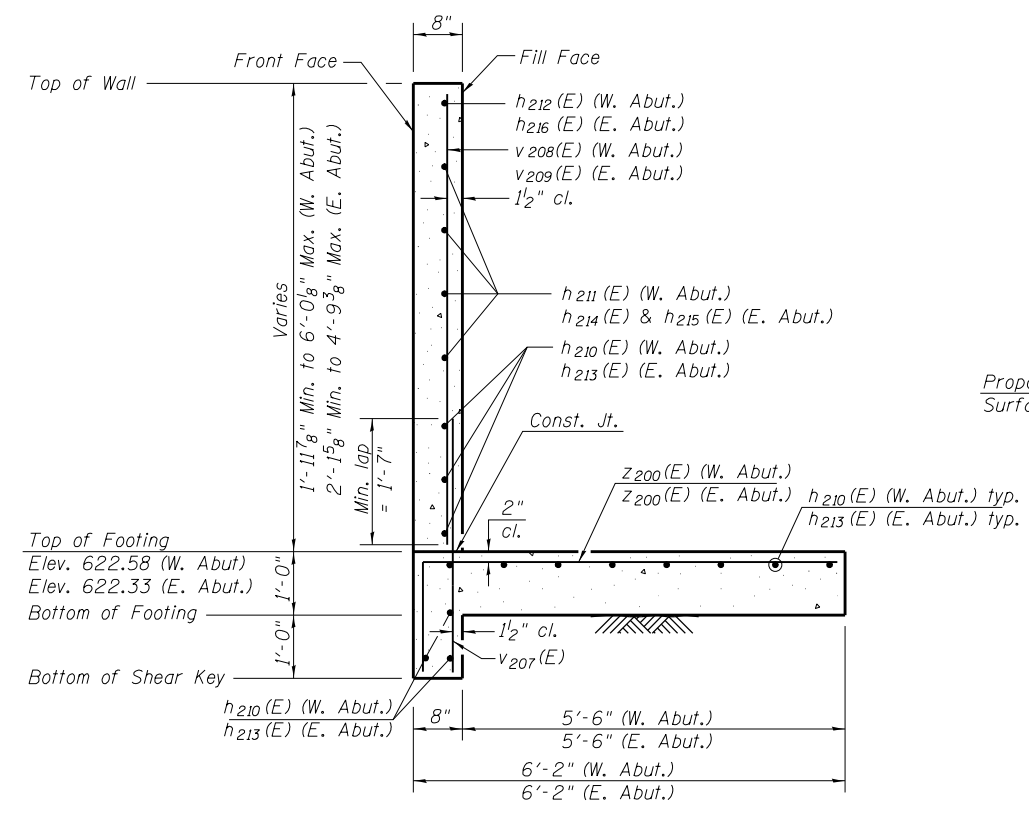
**WINGWALLS (EB)
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h210 (E)	14	#4	12'-9"	
h211 (E)	2	#4	13'-10"	
h212 (E)	1	#4	13'-4"	
h213 (E)	14	#4	5'-1"	
h214 (E)	1	#4	3'-1"	
h215 (E)	1	#4	1'-0"	
h216 (E)	1	#4	5'-8"	
v207(E)	22	#4	3'-8"	
v208(E)	7	#4	7'-4"	
v209(E)	4	#4	6'-2"	
z200(E)	27	#7	7'-7"	
Concrete Structures		Cu. Yd.	6.5	
Reinforcement Bars, Epoxy Coated		Pound	730	

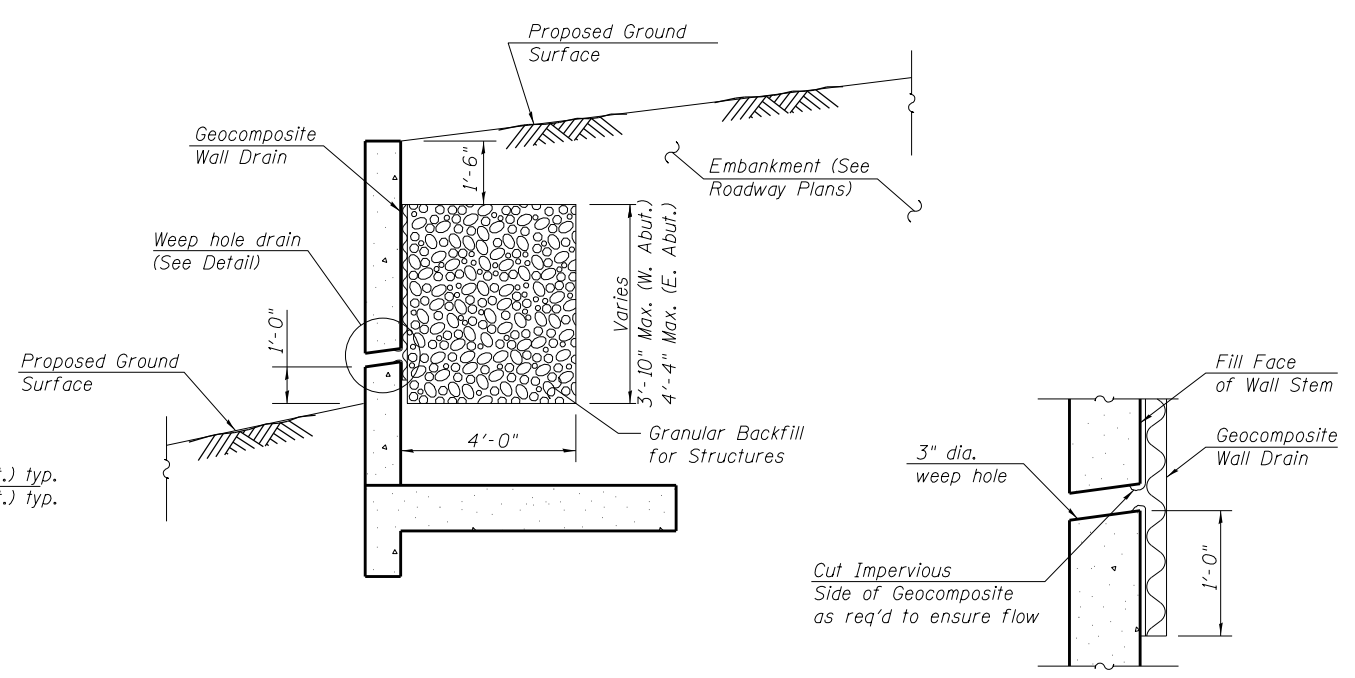
* See Field Cutting Diagram.



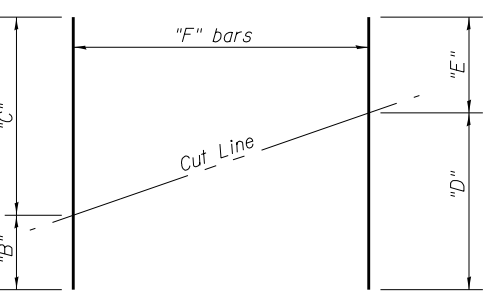
BAR z200(E)



SECTION THRU WALL



WEEP HOLE DRAIN DETAILS



FIELD CUTTING DIAGRAM

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

Bar	A	B	C	D	E	F
#4 h211 (E)	13'-10"	5'-3 1/2"	8'-6 1/2"	2'-0 1/4"	11'-9 3/4"	2
#4 v208 (E)	7'-4"	3'-6 1/4"	3'-9 3/4"	1'-8 1/2"	5'-7 1/2"	7
#4 v209 (E)	6'-2"	4'-4"	1'-10"	3'-3"	2'-11"	4