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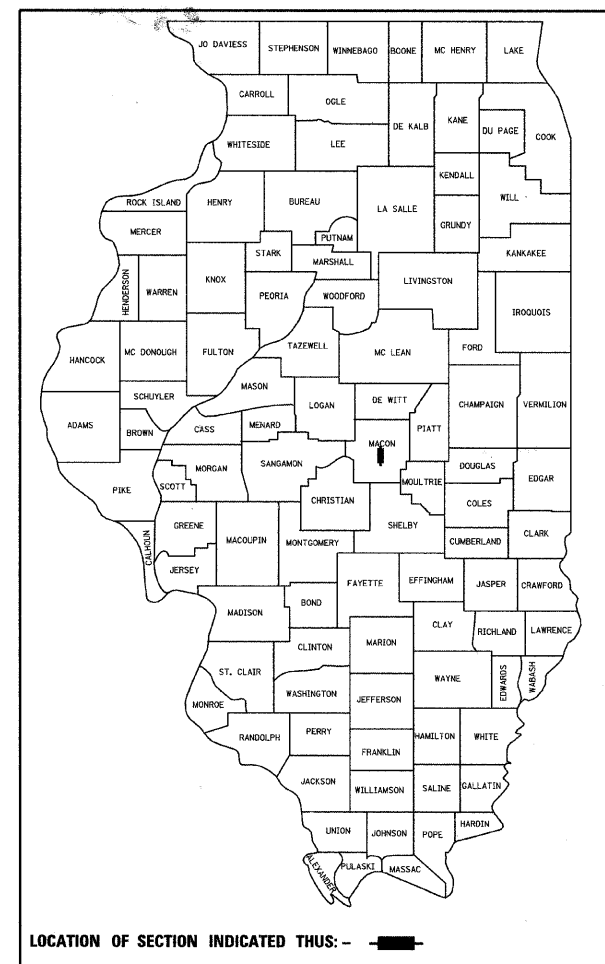
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**

F.A.P. ROUTE 710 (US 51 BUSINESS)
FRANKLIN-WATER CONNECTOR)
SECTION (50Z-VB) BR

MACON COUNTY
C-97-002-07

BRIDGE DECK REPLACEMENT, SUPERSTRUCTURE AND SUBSTRUCTURE IMPROVEMENT
US 51 BUSINESS OVER CERRO GORDO ST., NSRR, AND WABASH AVE.
IN DECATUR, ILLINOIS

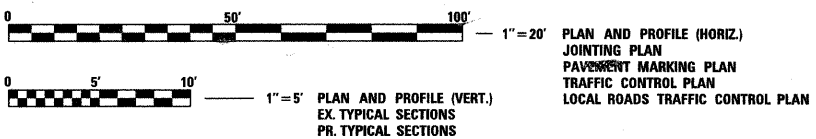
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	74215	
C-97-002-07			* 79 + 1 = 80	



Dirk A. Rannebarger
DIRK A. RANNEBARGER, P.E.
LICENSED PROFESSIONAL ENGINEER
ILLINOIS NO. 58019 EXPIRES 11-30-2011
SHEETS 20 - 26
DATE 3/12/20

Gregory A. Cook
GREGORY A. COOK, P.E.
LICENSED PROFESSIONAL ENGINEER
ILLINOIS NO. 53737 EXPIRES 11-30-2011
DATE 3/12/20

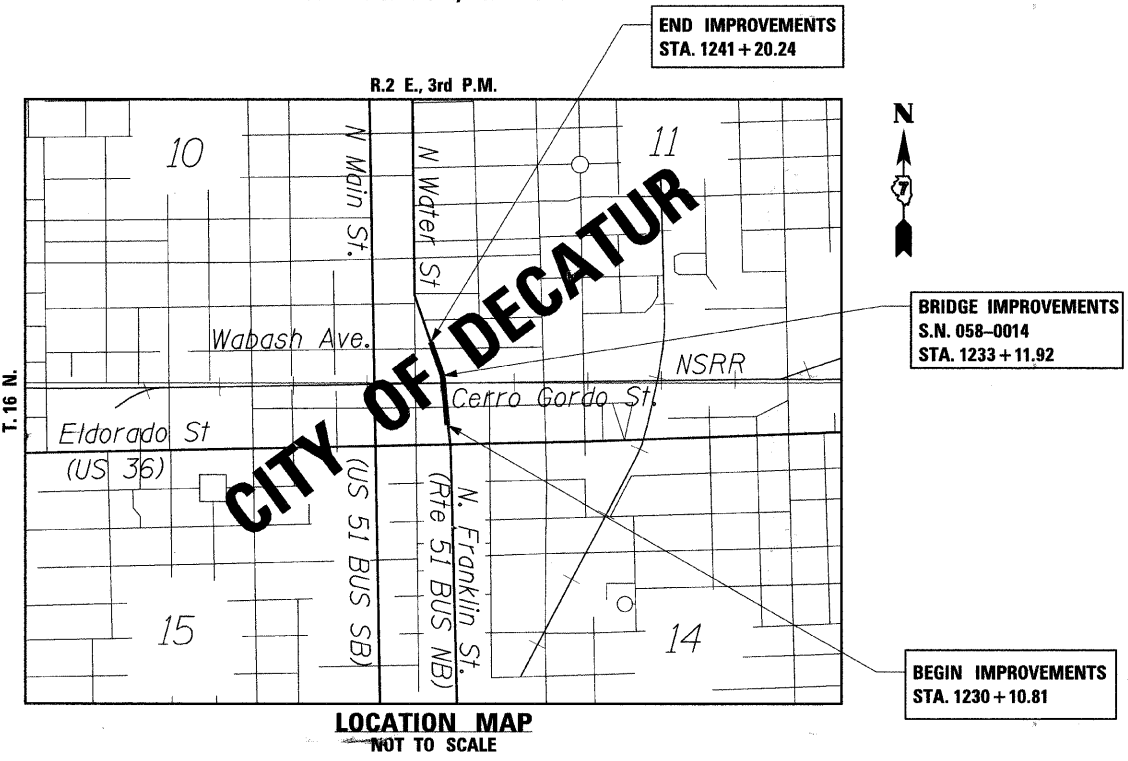
Michael J. Bryant
MICHAEL J. BRYANT, P.E.
LICENSED PROFESSIONAL ENGINEER
ILLINOIS NO. 44543 EXPIRES 11-30-2011
DATE 3/12/20



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER : MARK DAUGHERTY
SQUAD LEADER/UNIT CHIEF
CONTRACT NO. 74215



TOTAL LENGTH OF IMPROVEMENT = 1109.43 FEET = 0.210 MILES
NET LENGTH OF IMPROVEMENT = 1109.43 FEET = 0.210 MILES

DESIGN DESIGNATION - CLASS I ROADWAY, 13,400 (2003) ADT; 19,334 (2031) ADT
FUNCTIONAL CLASSIFICATION - OTHER PRINCIPAL ARTERIAL
DESIGN SPEED - 35 MPH



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 22 2020

Ryan Z. Drake
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 7 2010
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

May 7 2010
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

HIGHWAY STANDARDS LIST

280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420106-04	36' (10.8 m) JOINTED PCC PAVEMENT
420111-02	PCC PAVEMENT ROUNDOUTS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
602401-02	MANHOLE TYPE A
602601-02	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604006-04	FRAME AND GRATE TYPE 3
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
630001-08	STEEL PLATE BEAM GUARDRAIL
631011-06	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-05	TRAFFIC BARRIER TERMINAL, TYPE 5
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
664001-02	CHAIN LINK FENCE
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-03	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 m) FROM PAVEMENT EDGE
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701321-10	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701426-03	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS FOR SPEEDS GREATER THEN 45 MPH
701601-06	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701701-06	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-04	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-02	SIGN PANEL ERECTION DETAILS
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
814001-02	HANDHOLES
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
000001-05	STANDARDS SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENTS BARS
001006	DECIMAL OF AN INCH AND OF A FOOT

HOT-MIX ASPHALT MIXTURE REQUIREMENTS TABLE

LOCATION	US 51 BUSINESS	US 51 BUSINESS
MIXTURE USE:	HMA SURFACE COURSE	HMA BINDER COURSE
AC/PG	SBS-PG 70-22	SBS-PG 70-22
DESIGN AIR VOIDS	4.0% @ N _{DES} = 90	4.0% @ N _{DES} = 90
MIXTURE COMPOSITION (GRADATION)	IL 9.5	IL 19.0
FRICTION AGGREGATE	MIX D	N/A

RATES OF APPLICATION TABLE

AGGREGATE (SURFACE, BASE, SUBBASE OR BACKFILL)	2.05 TONS / CU YD
SUBBASE GRANULAR MATERIAL, TYPE B	2.05 TONS / CU YD
HOT-MIX ASPHALT	
BITUMINOUS MATERIAL (PRIME COAT) (ON PAVEMENT)	0.1 GAL / SQ YD
BITUMINOUS MATERIAL (PRIME COAT) (ON AGGREGATE)	0.3 GAL / SQ YD
HOT-MIX ASPHALT SURFACE/ BINDER (112 lbs.)	0.056 TONS / SQ YD • IN
SEEDING AREAS:	
NITROGEN FERTILIZER NUTRIENT	90 LBS / ACRE
PHOSPHOROUS FERTILIZER NUTRIENT	90 LBS / ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LBS / ACRE
MULCH	2 TONS / ACRE
AGRICULTURAL GROUND LIMESTONE	4 TONS / ACRE

GENERAL NOTES

- ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL.
- THE THICKNESS OF THE BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED AS DIRECTED BY THE ENGINEER WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
- EXISTING UTILITIES IN THE AREA:
GAS = AMEREN IP
TELEPHONE = AT&T
CABLE = COMCAST
SEWER = CITY OF DECATUR
WATER = CITY OF DECATUR
RAILROAD TELEPHONE CABLE = NSRR
- RELOCATION OF EXISTING SIGNS WILL NOT BE MEASURED FOR PAYMENT AND WILL BE INCLUDED IN THE COST OF PAVEMENT REMOVAL.
- THE CONTRACTOR, AT HIS/HER EXPENSE, SHALL DISPOSE OF ALL REMOVAL ITEMS OFF OF THE RIGHT-OF-WAY.
- THE VERTICAL CLEARANCE SHALL NOT BE REDUCED WHEN PROTECTING TRAFFIC FROM FALLING OBJECTS AND/OR MATERIALS.
- THE CONTRACTOR WILL PROVIDE INTERNET ACCESSIBILITY TO THE BITUMINOUS PLANT QUALITY CONTROL LAB SO THAT BITUMINOUS PLANT REPORTS CAN BE EMAILED TO THE DISTRICT HEADQUARTERS. THIS WORK SHALL ABE INCLUDED IN THE COST OF ALL BITUMINOUS ITEMS.
- FOR THE PAY ITEM BITUMINOUS MATERIALS (PRIME COAT), THE CONTRACTOR SHALL USE EITHER RC-70, SS-1H, OR SS-1HP APPLIED AT THE RATE DIRECTED BY THE ENGINEER.
- TEMPORARY PAVEMENT MARKINGS ON MILLED SURFACES SHALL BE PAINT.

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PLOT SCALE = 1.0000" / IN.	DRAWN - JDK	REVISED -
PLOT DATE = 3/12/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 09/24/2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGHWAY STANDARDS AND GENERAL NOTES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	2
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 74245	

SUMMARY OF QUANTITIES						
ITEM NO.	PAY ITEM NO.	DESCRIPTION	UNIT	URBAN 100% STATE CONSTRUCTION TYPE CODE		
				TOTAL QUANTITY	X571-2A	Y030-1E
1	20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	171	171	
2	20800150	TRENCH BACKFILL	CU YD	11	11	
3	25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2	0.2	
4	28000500	INLET AND PIPE PROTECTION	EACH	3	3	
5	31100500	SUB-BASE GRANULAR MATERIAL, TYPE A 6"	SQ YD	614	614	
6	35400500	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"	SQ YD	221	221	
7	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	199	199	
8	40603240	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	86	86	
9	40603545	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	TON	161	161	
10	42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	92	92	
11	42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	240	240	
12	44000100	PAVEMENT REMOVAL	SQ YD	503	503	
13	44000154	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/4"	SQ YD	1786	1786	
14	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	1035	1035	
15	44000600	SIDEWALK REMOVAL	SQ FT	240	240	
16	50102400	CONCRETE REMOVAL	CU YD	222.6	222.6	
17	50102500	CONCRETE REMOVAL (SPECIAL)	CU YD	11	11	
18	50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1	1	
19	50157300	PROTECTIVE SHIELD	SQ YD	1221	1221	
20	50200100	STRUCTURE EXCAVATION	CU YD	240	240	
21	50300225	CONCRETE STRUCTURES	CU YD	271.8	271.8	
22	50300255	CONCRETE SUPERSTRUCTURE	CU YD	1106.3	1106.3	
23	50300260	BRIDGE DECK GROOVING	SQ YD	3046	3046	
24	50300300	PROTECTIVE COAT	SQ YD	3675	3675	
25	50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	19734	19734	
26	50500505	STUD SHEAR CONNECTORS	EACH	11640	11640	
27	50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	16	16	
28	50501110	STRUCTURAL STEEL REMOVAL	POUND	16404	16404	
29	50600300	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1	1	
30	50606400	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	1	
31	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	201,910	201,910	
32	50800515	BAR SPLICERS	EACH	3840	3840	
33	51205200	TEMPORARY SHEET PILING	SQ FT	790	790	

* SPECIAL PROVISION REQUIRED

SUMMARY OF QUANTITIES						
ITEM NO.	PAY ITEM NO.	DESCRIPTION	UNIT	URBAN 100% STATE CONSTRUCTION TYPE CODE		
				TOTAL QUANTITY	X571-2A	Y030-1E
34	51500100	NAME PLATES	EACH	1	1	
35	52000110	PREFORMED JOINT STRIP SEAL	FOOT	243	243	
36	52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	40	40	
37	52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	8	8	
38	52100030	ELASTOMERIC BEARING ASSEMBLY, TYPE III	EACH	8	8	
39	52100520	ANCHOR BOLTS, 1"	EACH	160	160	
40	58700300	CONCRETE SEALER	SQ FT	5692	5692	
41	59000200	EPOXY CRACK INJECTION	FOOT	16	16	
42	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	85	85	
43	60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	130	130	
44	60218500	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	3	3	
45	60500060	REMOVING INLETS	EACH	3	3	
46	60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	920	920	
**	47	63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	443	443
**	48	63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2
**	49	63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	2	2
50	63200310	GUARDRAIL REMOVAL	FOOT	225	225	
51	66400525	CHAIN LINK FENCE, 4' ATTACHED TO STRUCTURE	FOOT	55	55	
52	66410400	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	FOOT	5	5	
53	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	24	24	
54	67100100	MOBILIZATION	L SUM	1	1	
55	70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
56	70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1	
57	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1	
58	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	430	430	
59	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2786	2786	
60	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1000	1000	
61	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1723	1723	
**	62	78008300	POLYUREA PAVEMENT MARKING TYPE II - LETTERS & SYMBOLS	SQ FT	83	83
**	63	78008310	POLYUREA PAVEMENT MARKING TYPE II - LINE 4"	FOOT	2298	2298
**	64	78008330	POLYUREA PAVEMENT MARKING TYPE II - LINE 6"	FOOT	766	766
**	65	78008370	POLYUREA PAVEMENT MARKING TYPE II - LINE 24"	FOOT	73	73
**	66	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	32	32

* SPECIAL PROVISION REQUIRED

** SPECIALTY ITEMS

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PLOT DATE = 3/12/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 09/24/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE. 710	SECTION (50Z-VB) BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 3
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	

ITEM NO.	PAY ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
					X571-2A	Y030-1E
				<i>URBAN 100% STATE</i>		
67	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	16	16	
68	78300100	PAVEMENT MARKING REMOVAL	SQ FT	191	191	
** 69	* 80400105	ELECTRIC SERVICE INSTALLATION, SPECIAL	EACH	1		1
** 70	81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	609		609
** 71	81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	137		137
** 72	81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA. PVC	FOOT	1157		1157
** 73	81300555	JUNCTION BOX, SS, ATTACHED TO STRUCTURE, 12" X 12" X 8"	EACH	1		1
** 74	81400100	HANDHOLE	EACH	1		1
** 75	81702120	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	5943		5943
** 76	81900200	TRENCH AND BACKFILL FOR ELECTRIC WORK	FOOT	585		585
** 77	* 82500505	LIGHTING CONTROLLER, SPECIAL	EACH	1		1
** 78	84200500	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	6		6
** 79	84400105	RELOCATE EXISTING LIGHTING UNIT	EACH	10		10
** 80	84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1		1
** 81	84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	1		1
82	* 80801000	MECHANICAL SPLICERS	EACH	30	30	
83	* X0323080	DRAINAGE SCUPPERS, DS-12	EACH	5	5	
84	* X0325303	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	8	8	
85	* X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	115	115	
86	* X0325702	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1	
87	X0326937	RELOCATE TEMPORARY IMPACT ATTENUATOR (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
88	* X0325775	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 4 INCH	FOOT	10,449	10,449	
89	* X0325837	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 6 INCH	FOOT	766	766	
90	* X0325841	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 24 INCH	FOOT	73	73	
91	* X0325842	WET REFLECTIVE TEMPORARY TAPE, TYPE III, LETTERS & SYMBOLS	SQ FT	83	83	
92	* Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1	1	
93	* XX006225	CONCRETE STRUCTURES SPECIAL	CU YD	11	11	
94	* Z0031200	JACKING AND CRIBBING	EACH	48	48	
95	* Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1	
96	* Z0073410	TEMPORARY SUPPORT SYSTEM, LOCATION 1	EACH	1	1	
97	* Z0073420	TEMPORARY SUPPORT SYSTEM, LOCATION 2	EACH	1	1	
98	* Z0073430	TEMPORARY SUPPORT SYSTEM, LOCATION 3	EACH	1	1	
99	* Z0018800	<i>DRAINAGE SYSTEM</i>	<i>L SUM</i>	<i>1</i>	<i>1</i>	

* SPECIAL PROVISION REQUIRED

** SPECIALTY ITEMS

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 DRAWN - JDK
 CHECKED - DAR/TLO
 DATE - 09/24/2009

REVISED -
 REVISED -
 REVISED -
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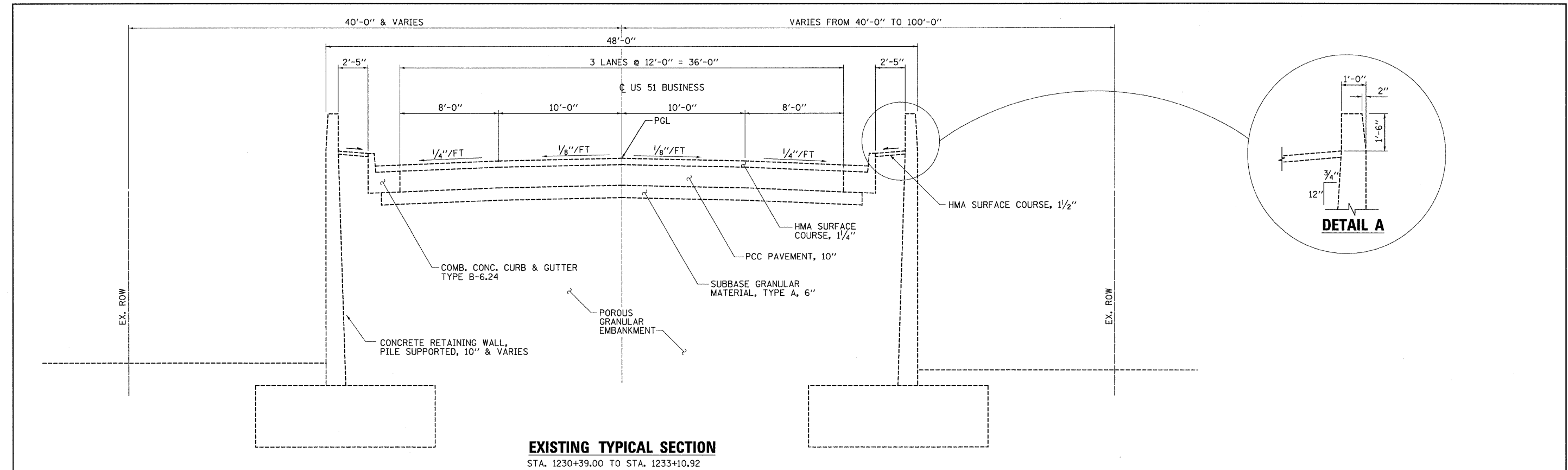
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
 SCALE: SHEET NO. OF SHEETS STA. TO STA.

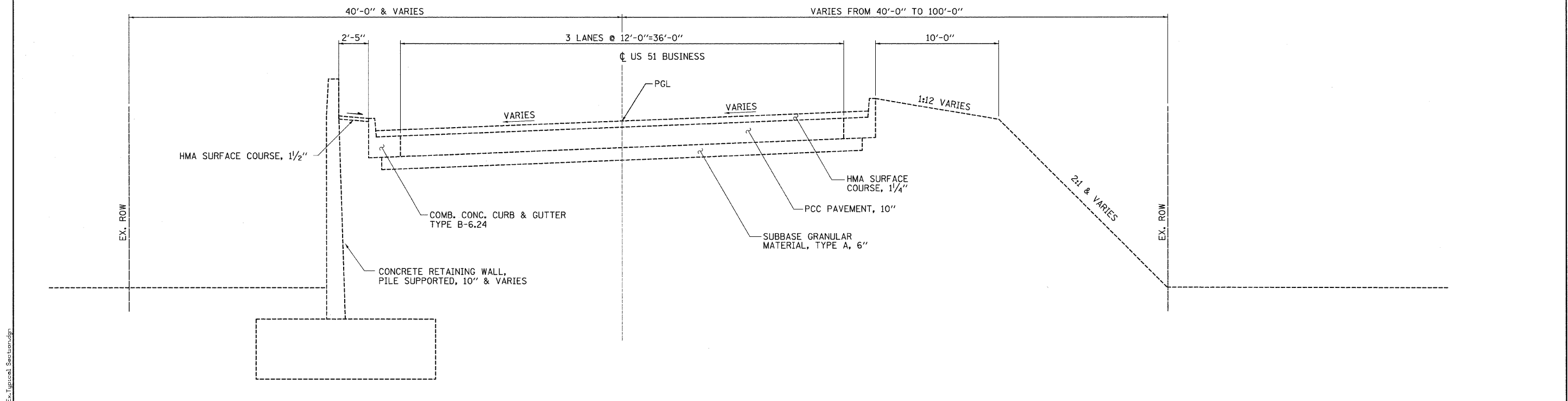
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(502-VB) BR	MACON	79	4

CONTRACT NO. 74215
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

Rev.



EXISTING TYPICAL SECTION
STA. 1230+39.00 TO STA. 1233+10.92



EXISTING TYPICAL SECTION
STA. 1238+90.83 TO STA. 1241+20.24

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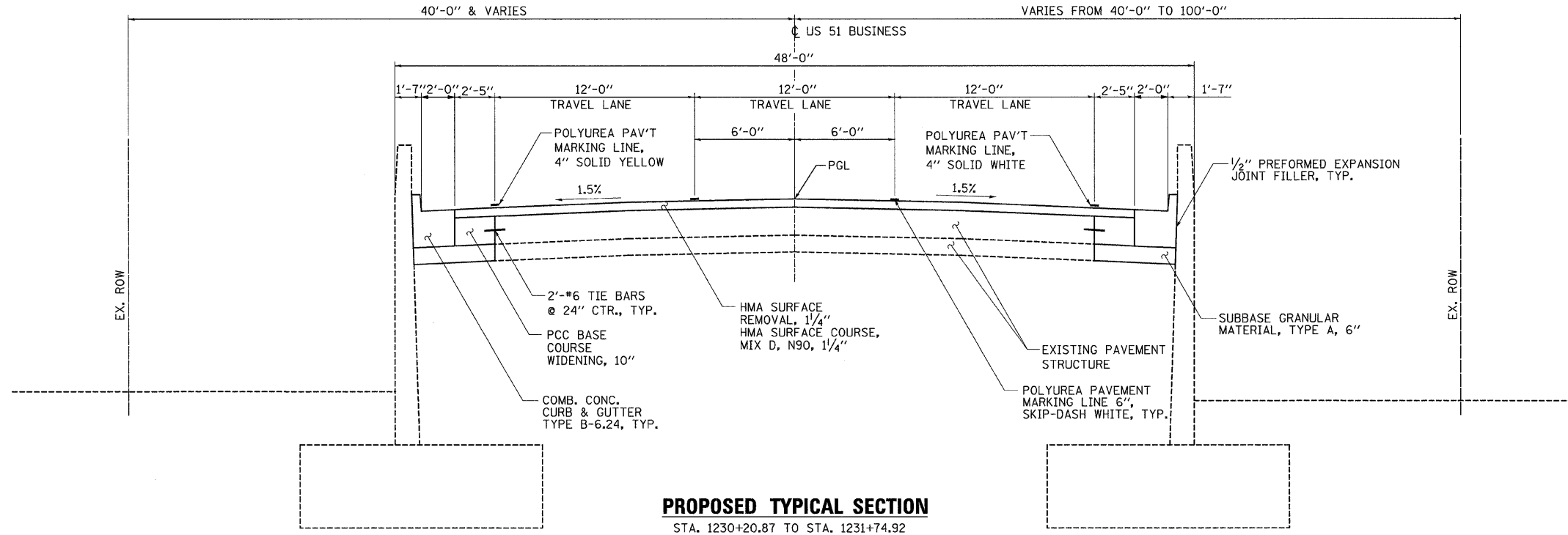


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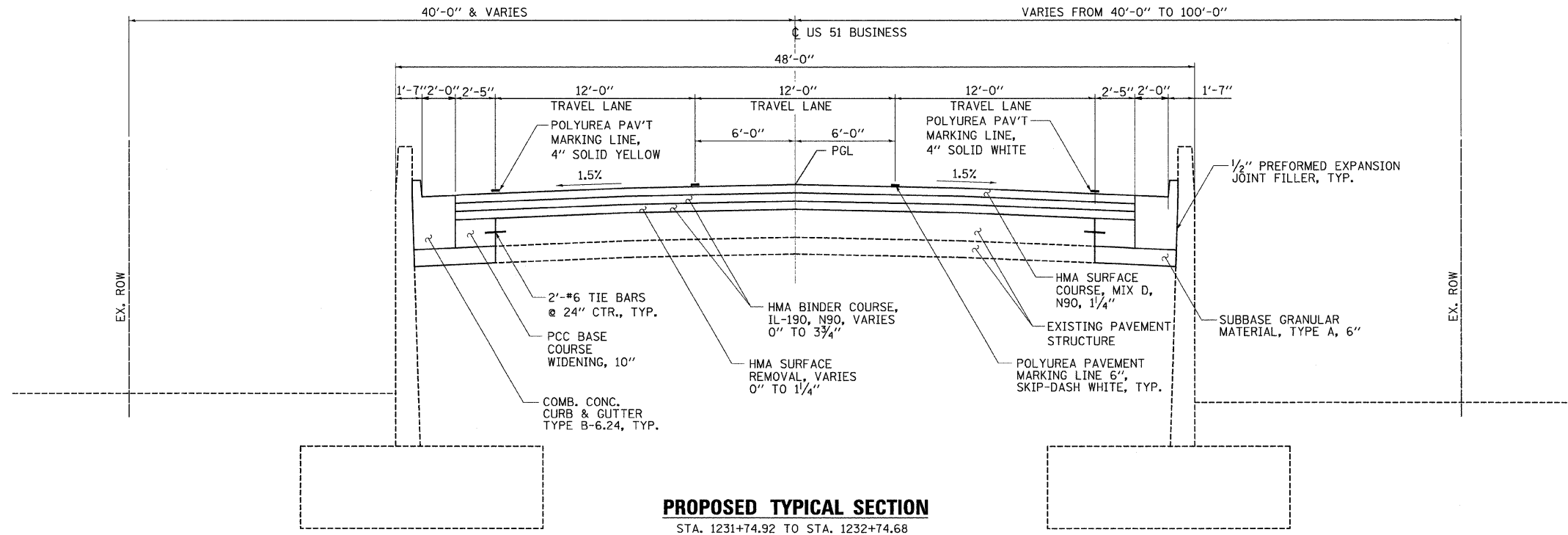
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING TYPICAL SECTIONS			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	5
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	



PROPOSED TYPICAL SECTION
STA. 1230+20.87 TO STA. 1231+74.92



PROPOSED TYPICAL SECTION
STA. 1231+74.92 TO STA. 1232+74.68

U.S. 51 BUSINESS
PAVEMENT DESIGN DATA
(RIGID PAVEMENT-MODIFIED AASHTO)
STRUCTURAL DESIGN TRAFFIC - 2031 ADT=19,334
PV = 17,903 SU = 1,044 MU = 387
ROAD/STREET CLASSIFICATION: CLASS I

DESIGN TRAFFIC IN DESIGN LANE:
P = 50% S = 50% M = 50%
T.F. = D.P. $\left[\frac{0.15(P)(PV)+143.81(S)(SU)+696.42(M)(MU)}{1,000,000} \right]$
T.F. = 4.22

PAVEMENT THICKNESS (FIG. 54-4J)
10" P.C.C. PAVEMENT

PAVEMENT THICKNESS PROVIDED
10" P.C.C. PAVEMENT (JOINTED)
4" GRANULAR SUBBASE

SUBBASE SUPPORT RATING
SSR = POOR (IBR=2)

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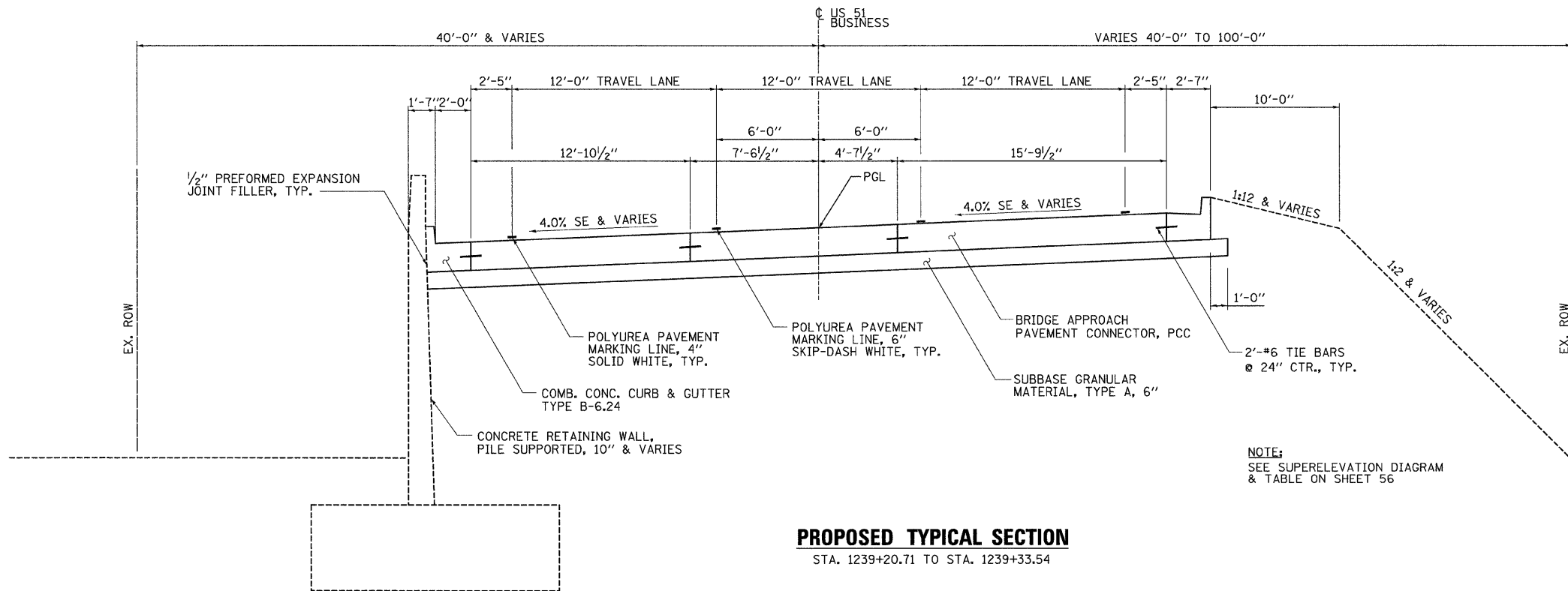
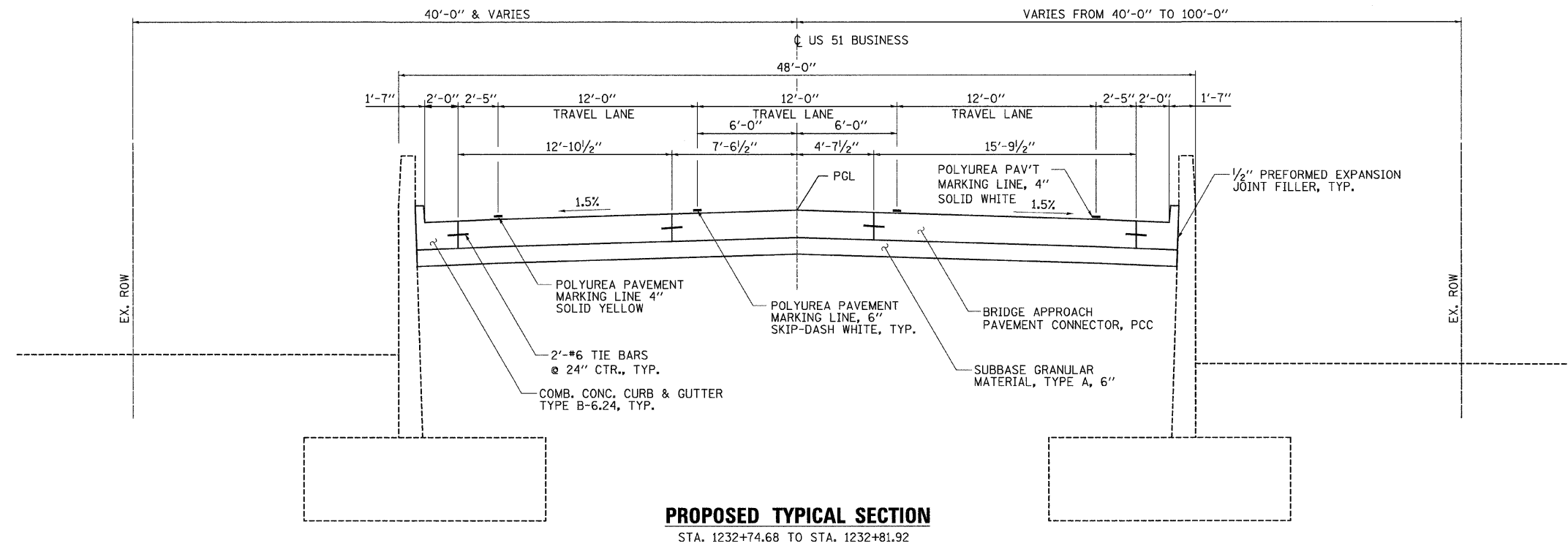


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DRAWN - JDK	REVISIONS -	
CHECKED - DAR/TLO	REVISIONS -	
DATE - 09/24/2009	REVISIONS -	
PLOT SCALE = 4,0000 1/ IN.		
PLOT DATE = 3/12/2010		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TYPICAL SECTIONS			
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	6
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	



FILE NAME = X:\CHARTER\2007\07\07\A\cases\plans\Prj\Typical Section-2.dgn



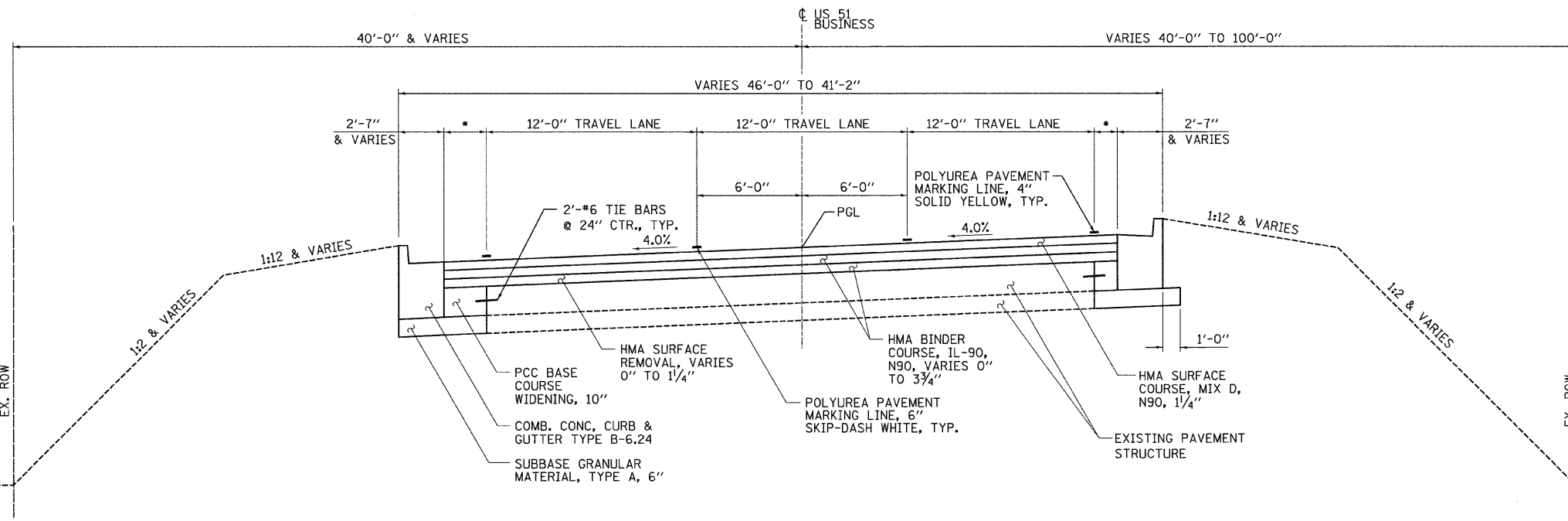
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PLOT DATE = 3/12/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 09/24/2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TYPICAL SECTIONS

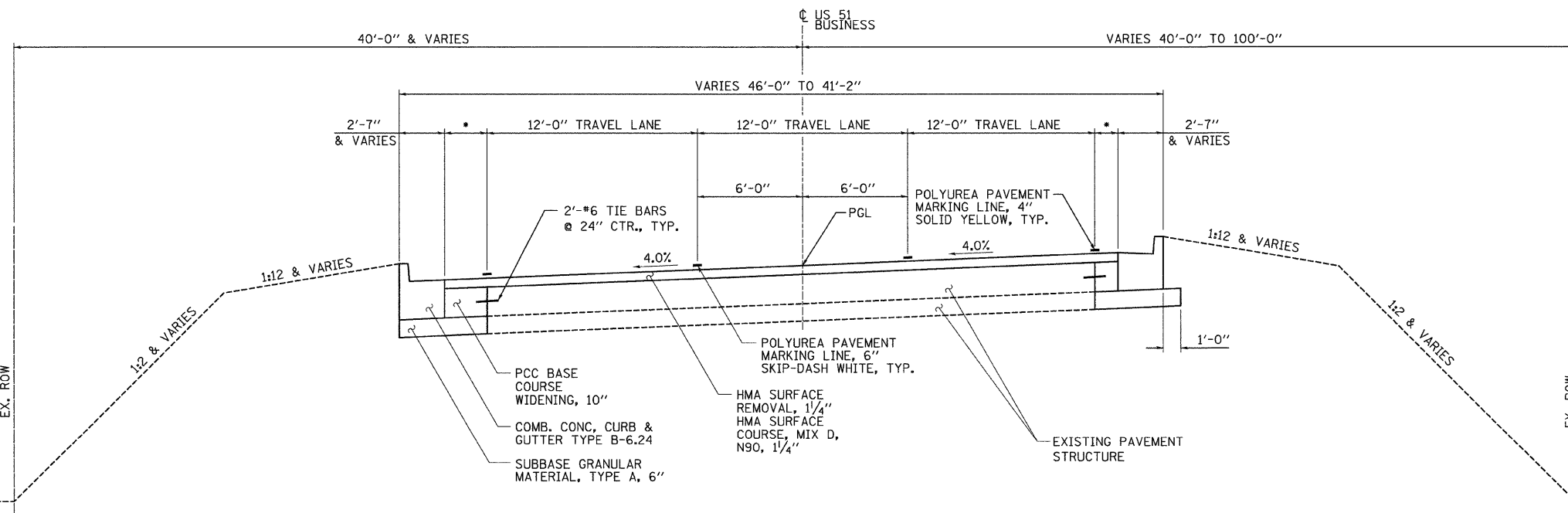
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	7
CONTRACT NO.			74215	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



PROPOSED TYPICAL SECTION

STA. 1239+33.54 TO STA. 1240+35.13



PROPOSED TYPICAL SECTION

STA. 1240+35.13 TO STA. 1241+20.24

* VARIES 2'-5" TO 1'-0" FROM STA. 1240+35.24 TO STA. 1241+20.24

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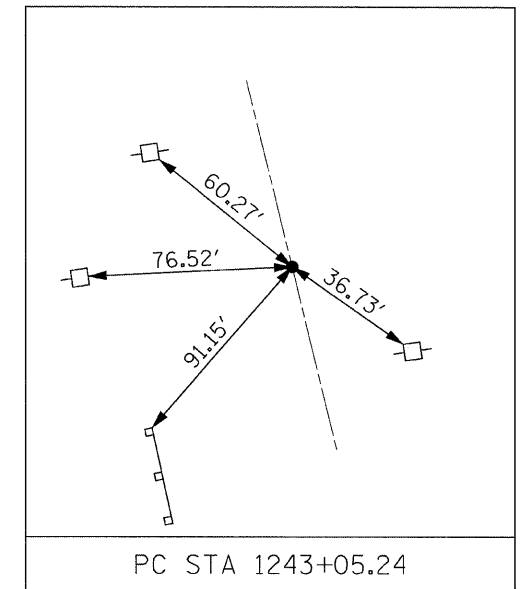
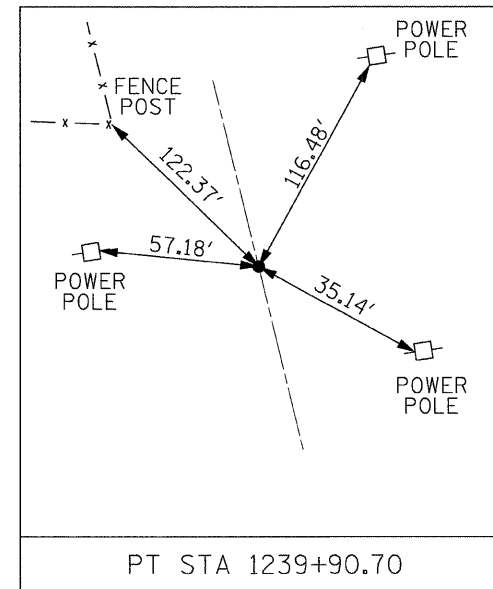
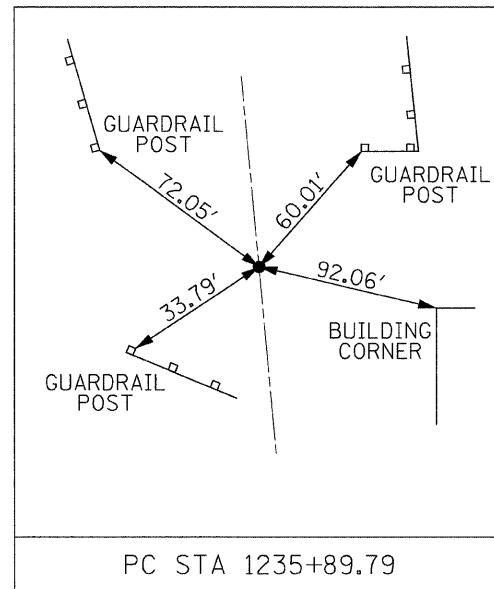
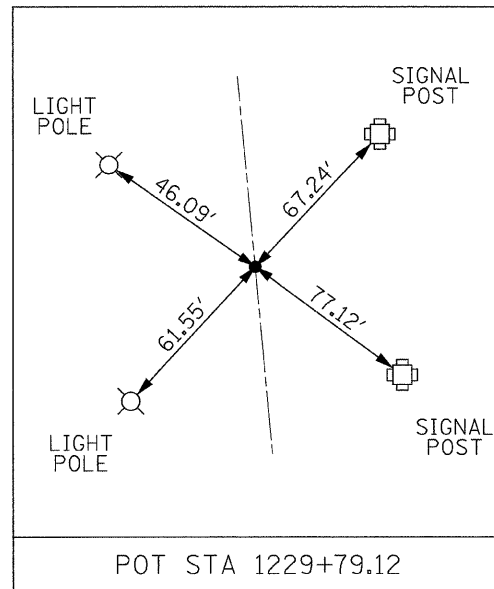


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	DATE - 09/24/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED TYPICAL SECTIONS			
SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	8
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	



BENCHMARK DATA				
B.M. NO.	STATION	OFFSET	DESCRIPTION	ELEVATION (M.S.L.)
BM 1	1230+50.71	23.88' RT	CHISELED SQUARE ON TOP OF SOUTHEAST WINGWALL ON OVERHEAD BRIDGE CARRYING US 51 BUS OVER NSRR APPORX. 70' NORTH OF US 36	685.00
BM 2	1234+69.93	11.30' RT	VERTICAL CONTROL STATION #1234	678.52
BM 3	1237+77.63	9.42' RT	VERTICAL CONTROL STATION #1477	678.54
BM 4	1240+35.37	23.45' LT	VERTICAL CONTROL STATION #2053	696.16
BM 5	1244+81.27	29.21' LT	VERTICAL CONTROL STATION #2276	676.76

FILE NAME = X:\CHINE\2007\07\07\cad\plans\ties and benchmarks.dgn



USER NAME = msj	DESIGNED - JLF	REVISED -
PLOT SCALE = 1.0000' / IN.	DRAWN - JJK	REVISED -
PLOT DATE = 3/12/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 09/24/2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

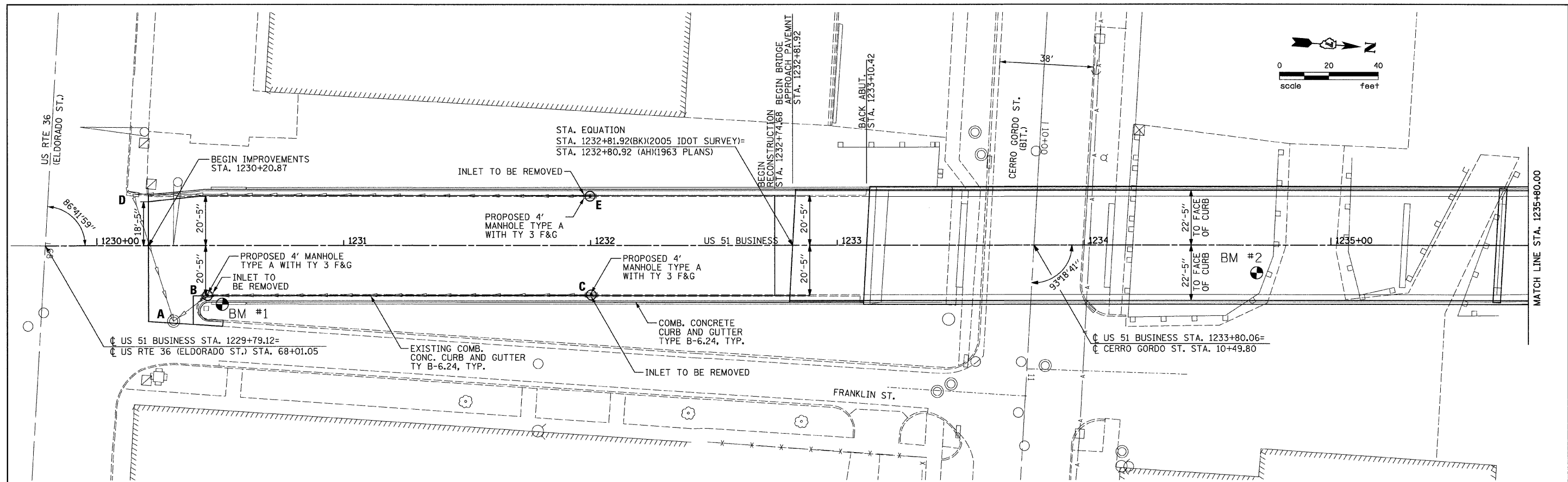
SURVEY TIES AND BENCHMARKS

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

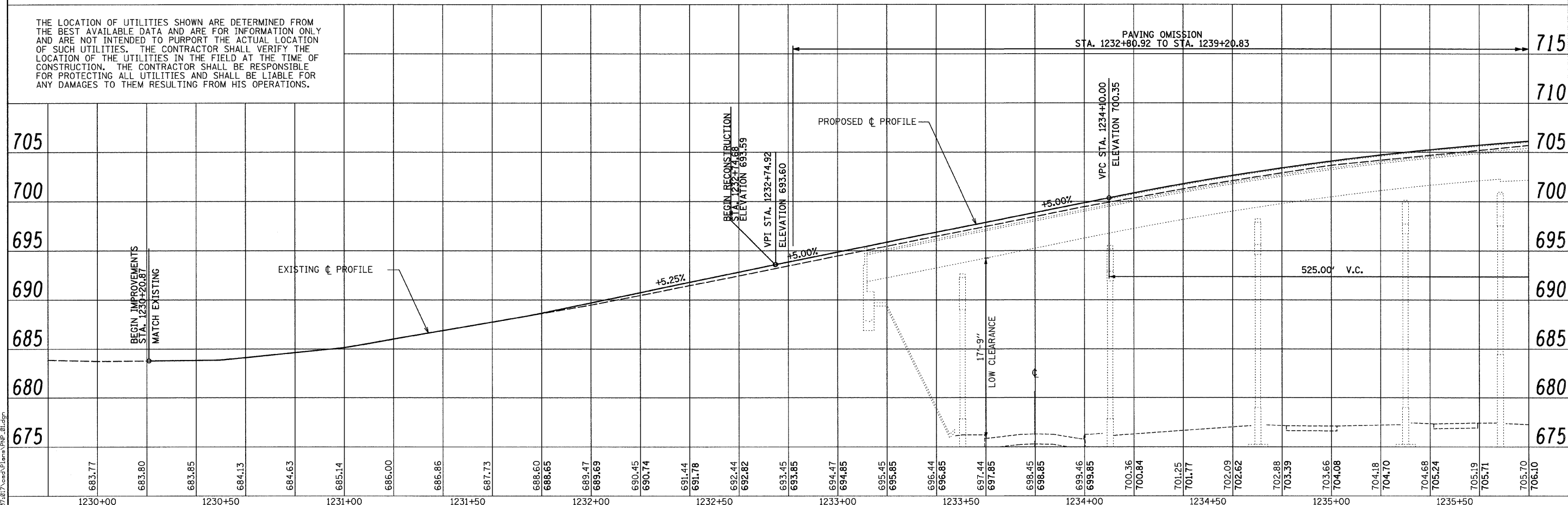
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	10
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	FILED		
NO. _____	NO. _____		
	DATE		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	FILED		
NO. _____	NO. _____		
	DATE		



THE LOCATION OF UTILITIES SHOWN ARE DETERMINED FROM THE BEST AVAILABLE DATA AND ARE FOR INFORMATION ONLY AND ARE NOT INTENDED TO PURPORT THE ACTUAL LOCATION OF SUCH UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE UTILITIES IN THE FIELD AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AND SHALL BE LIABLE FOR ANY DAMAGES TO THEM RESULTING FROM HIS OPERATIONS.



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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

US 51 BUSINESS - PLAN AND PROFILE

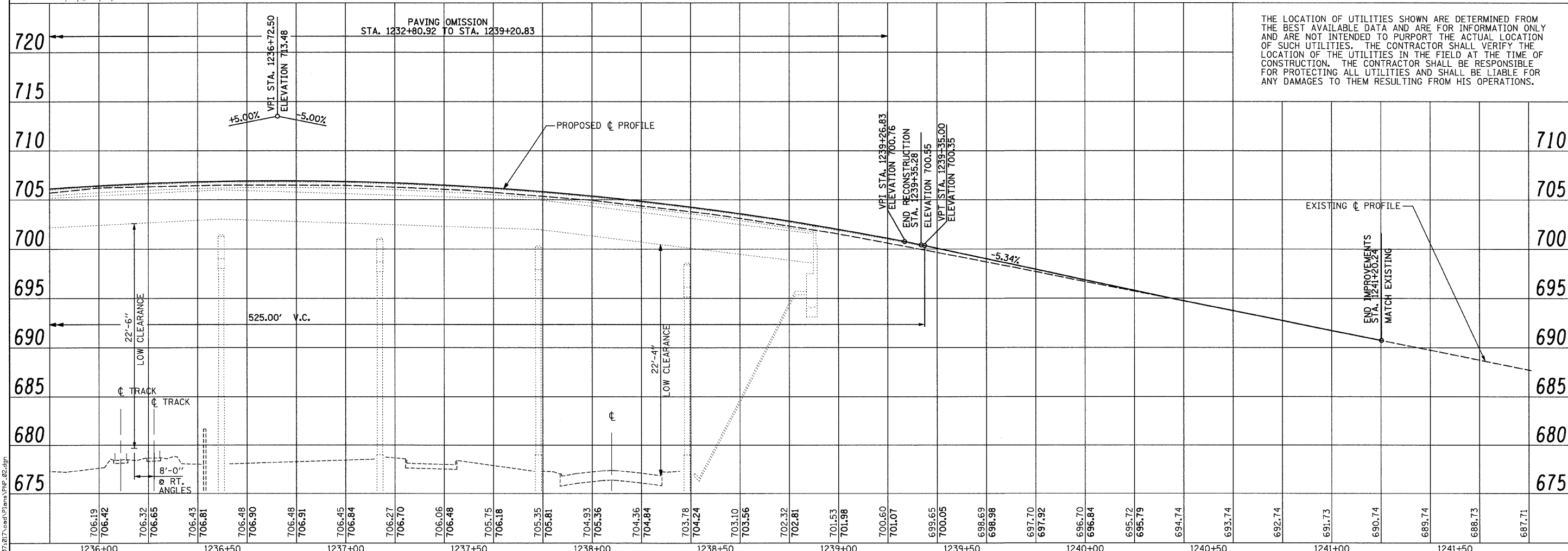
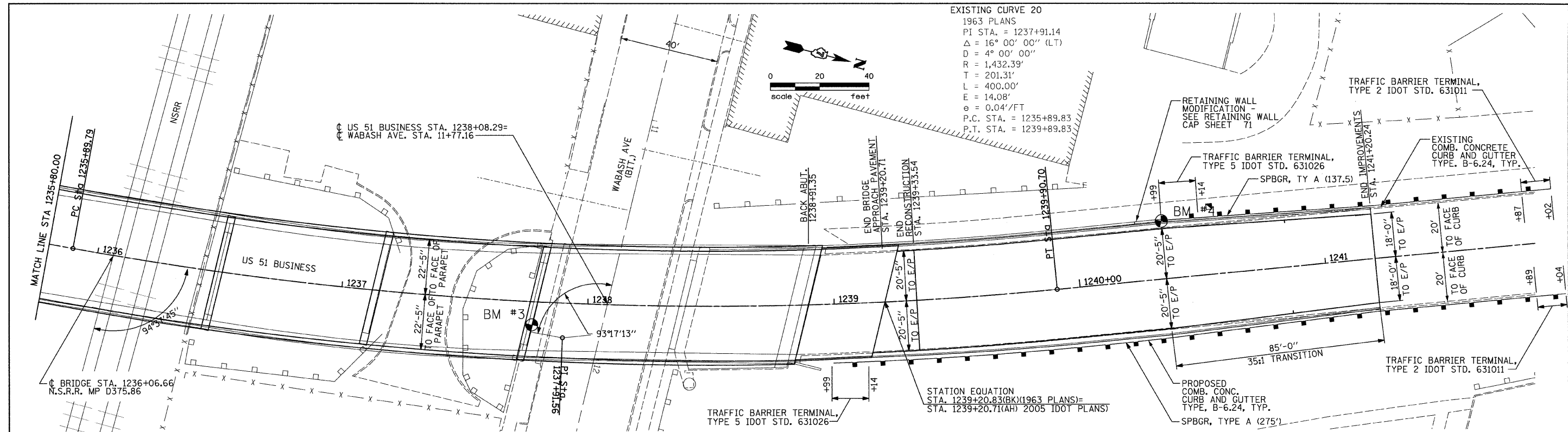
SCALE: SHEET NO. OF SHEETS STA. 1229+65 TO STA. 1235+80

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(502-VB) BR	MACON	79	11
CONTRACT NO. 74215				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	NOTE BOOK		
	NO.		
	NO.		
	NO.		
	NO.		

PROFILE	PLOTTED	BY	DATE
	NOTE BOOK		
	NO.		
	NO.		
	NO.		

FILE NAME = X:\ARCHIVE\2007\07\17\Road\Plans\FP-02.dgn



THE LOCATION OF UTILITIES SHOWN ARE DETERMINED FROM THE BEST AVAILABLE DATA AND ARE FOR INFORMATION ONLY AND ARE NOT INTENDED TO PURPORT THE ACTUAL LOCATION OF SUCH UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE UTILITIES IN THE FIELD AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AND SHALL BE LIABLE FOR ANY DAMAGES TO THEM RESULTING FROM HIS OPERATIONS.



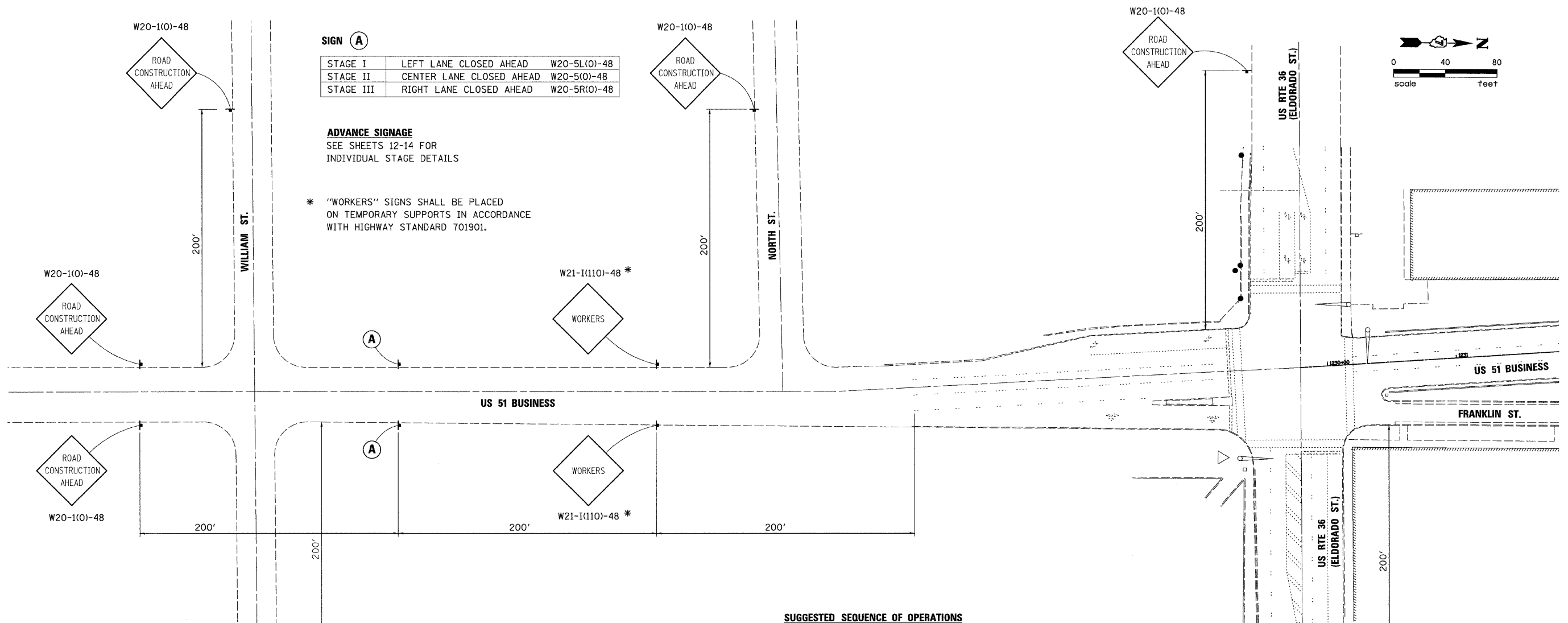
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PLOT DATE = 3/12/2010	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

US 51 BUSINESS - PLAN AND PROFILE

SCALE:	SHEET NO. OF SHEETS	STA. 1235+80 TO STA. 1241+98
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F.A.P. RTE 710	SECTION (502-VB) BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 12
CONTRACT NO. 74215			ILLINOIS FED. AID PROJECT	



SIGN A

STAGE I	LEFT LANE CLOSED AHEAD	W20-5L(O)-48
STAGE II	CENTER LANE CLOSED AHEAD	W20-5(O)-48
STAGE III	RIGHT LANE CLOSED AHEAD	W20-5R(O)-48

ADVANCE SIGNAGE
SEE SHEETS 12-14 FOR
INDIVIDUAL STAGE DETAILS

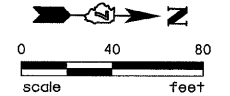
* "WORKERS" SIGNS SHALL BE PLACED
ON TEMPORARY SUPPORTS IN ACCORDANCE
WITH HIGHWAY STANDARD 701901.

SUGGESTED SEQUENCE OF OPERATIONS

For the purpose of sequencing this project, the work shall be divided into three general stages according to the Plans, Special Provisions and as directed by the Engineer. The following is a suggested construction sequence applicable to each stage of the work.

1. Set up/relocate traffic control and divert traffic for Stage I.
2. Begin Deck Removal
3. Pavement removal, roadway demolition, miscellaneous construction, and modifications to the existing retaining walls may be done at the convenience of the Contractor but must be completed prior to moving traffic onto the completed lane.
4. Install of Cribbing at Piers 5, 6 and 8 may be done at the Contractors convenience, but Jacking to transfer load to the cribbing may not begin until all of the deck from the adjoining Bridge Unit(s) is/are removed.
5. Once the deck is removed from each bridge unit, jacking and bearing removal for that Bridge Unit may begin. All deck from Bridge Unit 1 and 2 must be removed before demolition of Pier 5 can begin. Similarly, all deck from Bridge Units 2 and 3 must be removed before beginning demolition of Pier 6 and all deck from Bridge Units 3 and 4 must be removed before beginning demolition of Pier 8.
6. Abutment demolition and repairs, except construction of the top of the abutment backwall, may be completed at the convenience of the Contractor.

7. Construct the new piers 5, 6 and 8. The piers are not required to be constructed simultaneously, but no proposed deck shall be poured on any portion of an adjoining Bridge Unit until the pier to which the Bridge Unit bears is completed. The deck for Bridge Unit 1 shall be poured after Pier 5 is completed. Bridge Unit 2's deck shall be poured after Piers 5 and 6 are completed. Bridge Unit 3's deck shall be poured after Piers 6 and 8 are completed. And Bridge Unit 4's deck shall be poured after Pier 8 is completed. The decks for the Bridge Units may be poured in any sequence that the Contractor chooses.
8. Construction of the Parapets may be done at the convenience of the Contractor after each Bridge Unit's deck is completed.
9. Pour the remaining abutment backwall after the deck is completed.
10. Construct the Approach Slab and sleeper slab.
11. Construct the Connector Pavement.
12. Complete guardrail, LT during Stage I. (Complete guardrail, right during Stage III)
13. Construct Pavement Surfacing.
14. Complete Stage II and Stage III construction using steps 1-13 above.
15. Complete all remaining roadway and miscellaneous work.



FILE NAME = X:\CH\VE\2007\07\07\ad\Plans\Stage\Contr_Advance_Signage.dgn



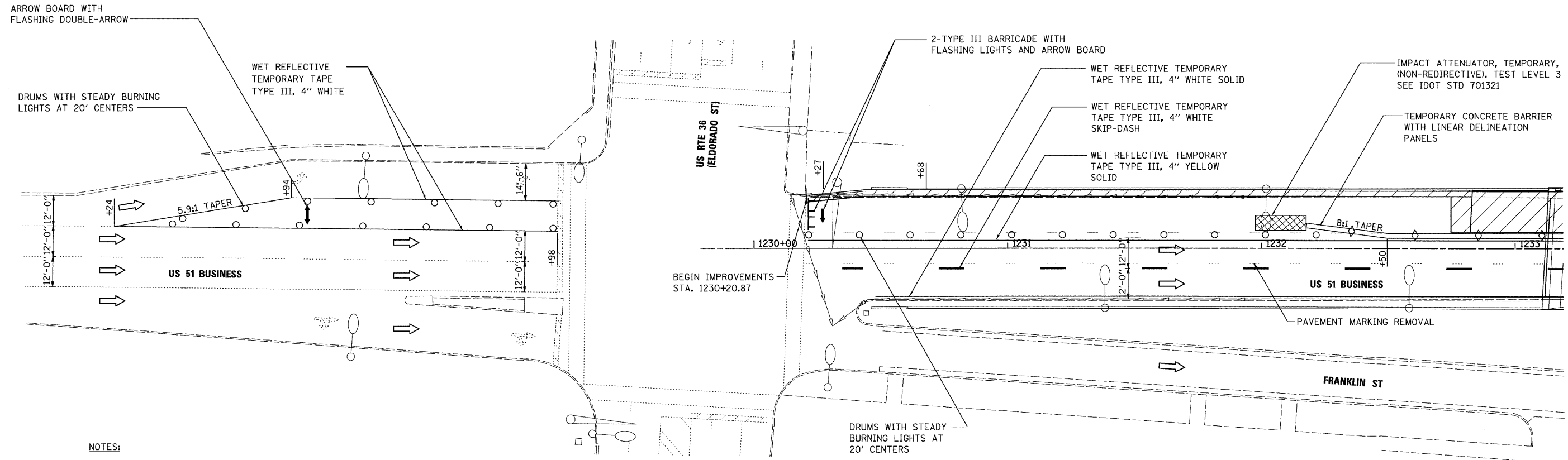
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	DATE - 09/24/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

US 51 BUSINESS TRAFFIC CONTROL PLANS

SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.
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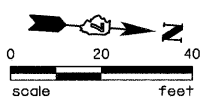
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710	(50Z-VB) BR	MACON	79	13
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 74215	



NOTES:

1. THE COST OF TYPE III BARRICADES, DRUMS WITH STEADY BURNING LIGHTS AND ARROW BOARDS, SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, SPECIAL.
2. THE TEMPORARY CONCRETE BARRIER SHALL BE SET PRIOR TO SAWING OF THE CONSTRUCTION JOINTS.
3. ONCE THE PROPOSED CONNECTOR PAVEMENT AND BRIDGE WORK IS COMPLETE, AND PRIOR TO THE INITIATION OF STAGE II CONSTRUCTION, THE PROPOSED HMA SURFACE/BINDER WORK IN THE LEFT LANE SHALL BE COMPLETED.
4. ADDITIONAL LANE ONLY ALLOWED TO BE CLOSED FROM 6:00 P.M. TO 6:00 A.M. SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

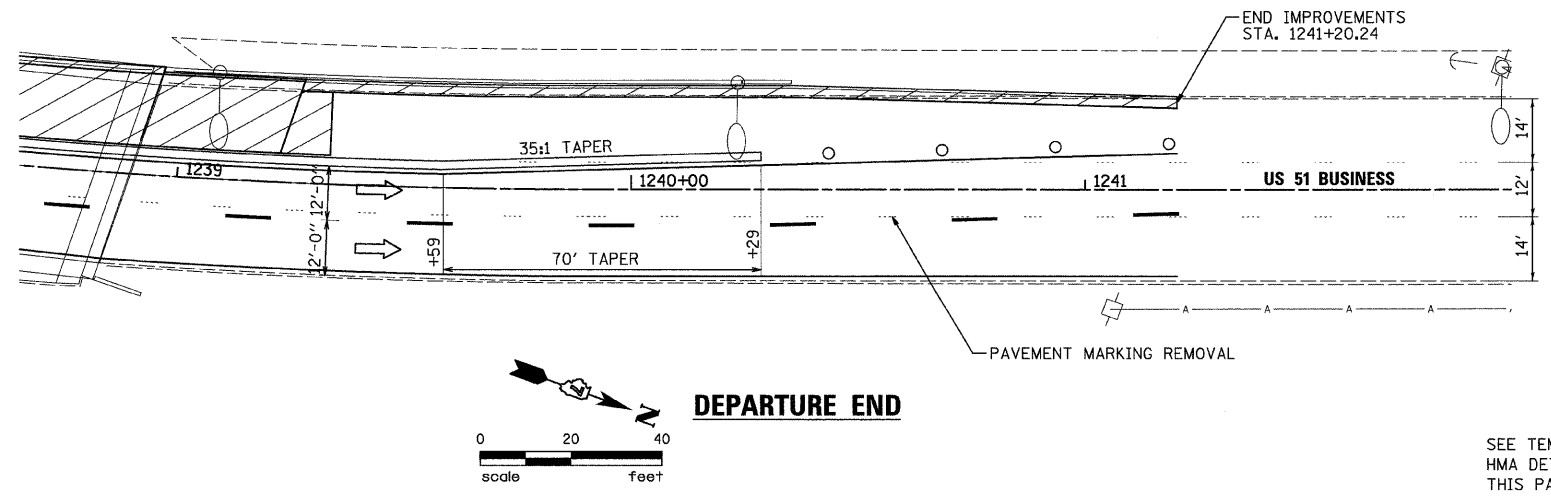
APPROACH END



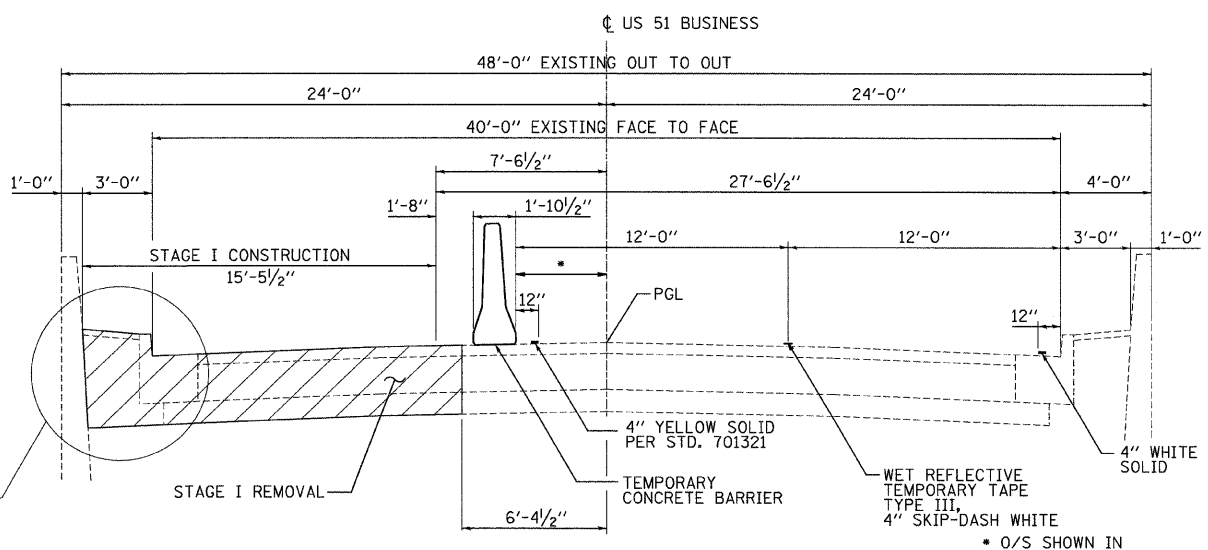
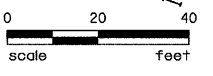
TEMP. CONCRETE BARRIER LOCATIONS	
STATION	OFFSET
1232+18.00	8.0' LT
1232+50.00	4.0' LT
1239+59.00	4.0' LT
1240+29.00	6.0' LT

LEGEND

- ➡ TRAFFIC FLOW ARROW
- ← SINGLE ARROW BOARD
- ↔ DOUBLE ARROW BOARD



DEPARTURE END



STAGE I PAVEMENT REMOVAL

FILE NAME = X:\ACH\IE\2007\07\07\ad\Pilona\PROPOSED-STAGE I.dwg

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PLOT DATE = 3/12/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 09/24/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

US 51 BUSINESS TRAFFIC CONTROL PLANS - STAGE I

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE. 710	SECTION (502-VB) BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 14
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	

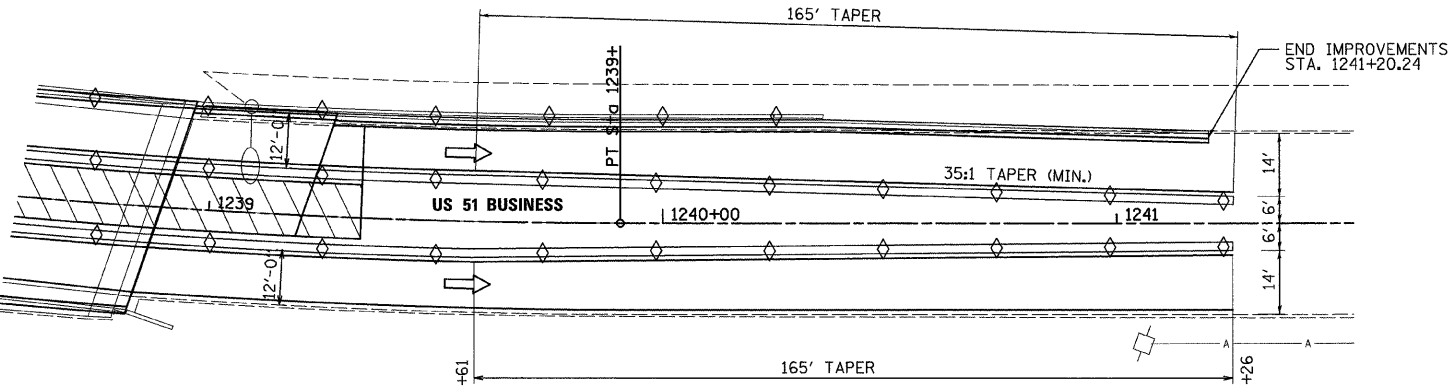
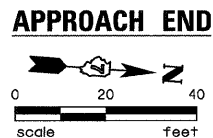
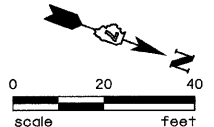
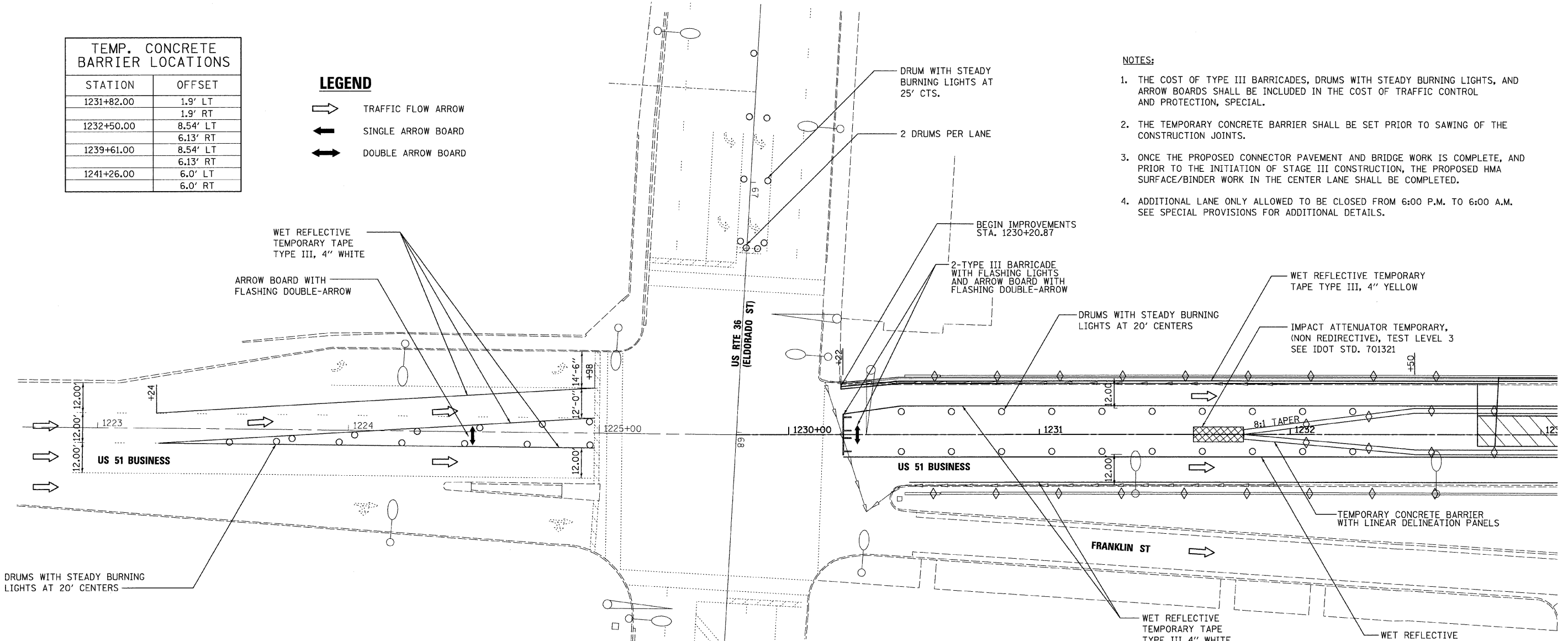
TEMP. CONCRETE BARRIER LOCATIONS	
STATION	OFFSET
1231+82.00	1.9' LT
	1.9' RT
1232+50.00	8.54' LT
	6.13' RT
1239+61.00	8.54' LT
	6.13' RT
1241+26.00	6.0' LT
	6.0' RT

LEGEND

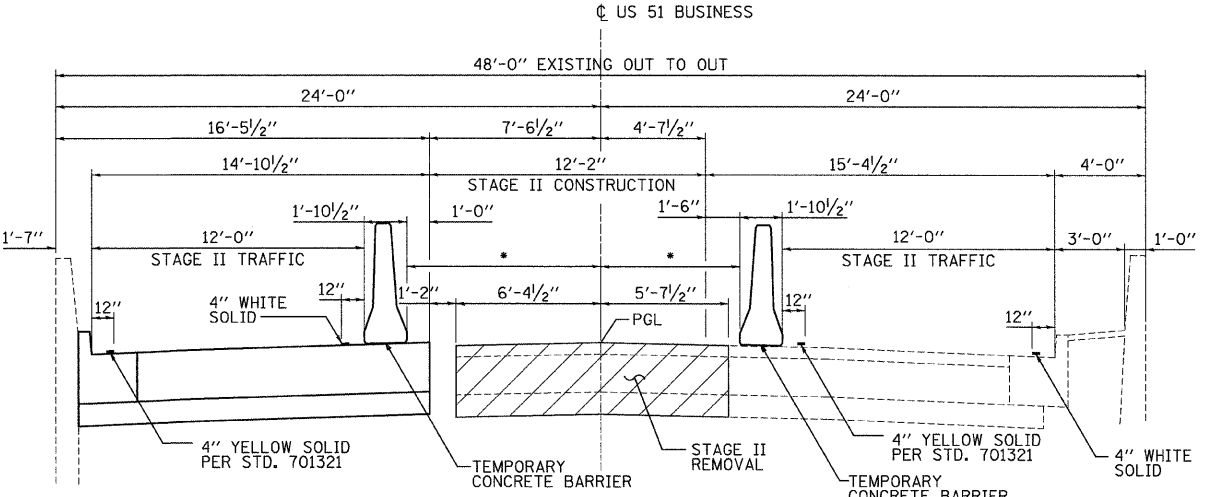
- TRAFFIC FLOW ARROW
- SINGLE ARROW BOARD
- DOUBLE ARROW BOARD

NOTES:

1. THE COST OF TYPE III BARRICADES, DRUMS WITH STEADY BURNING LIGHTS, AND ARROW BOARDS SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, SPECIAL.
2. THE TEMPORARY CONCRETE BARRIER SHALL BE SET PRIOR TO SAWING OF THE CONSTRUCTION JOINTS.
3. ONCE THE PROPOSED CONNECTOR PAVEMENT AND BRIDGE WORK IS COMPLETE, AND PRIOR TO THE INITIATION OF STAGE III CONSTRUCTION, THE PROPOSED HMA SURFACE/BINDER WORK IN THE CENTER LANE SHALL BE COMPLETED.
4. ADDITIONAL LANE ONLY ALLOWED TO BE CLOSED FROM 6:00 P.M. TO 6:00 A.M. SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.



DEPARTURE END



STAGE II PAVEMENT REMOVAL

• 0/S SHOWN IN BARRIER LOCATION TABLE

USER NAME = msj	DESIGNED - JLF	REVISED -
PLLOT SCALE = 20,0000' / IN.	DRAWN - JDK	REVISED -
PLLOT DATE = 3/12/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 09/24/2009	REVISED -

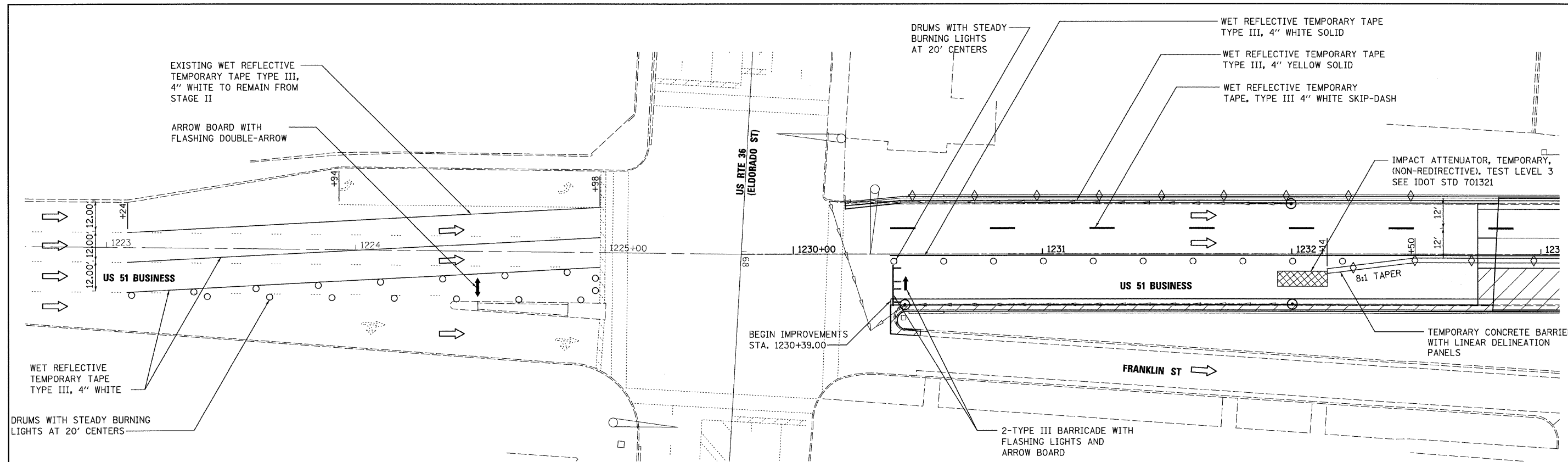
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

US 51 BUSINESS TRAFFIC CONTROL PLANS - STAGE II

SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.
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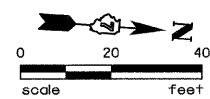
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	15
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	CONTRACT NO. 74215	

FILE NAME = X:\CH\VE\2007\07\0717\aed\PI\enn\Y\PRD\F5ED-STAGE2.dgn



- NOTES:**
1. THE COST OF TYPE III BARRICADES, DRUMS WITH STEADY BURNING LIGHTS AND ARROW BOARDS, SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, SPECIAL.
 2. THE TEMPORARY CONCRETE BARRIER SHALL BE SET PRIOR TO SAWING OF THE CONSTRUCTION JOINTS.
 3. ONCE THE PROPOSED CONNECTOR PAVEMENT AND BRIDGE WORK IS COMPLETE, AND PRIOR TO OPENING ALL LANES TO TRAFFIC, THE PROPOSED HMA SURFACE/BINDER WORK IN THE RIGHT LANE SHALL BE COMPLETED.
 4. ADDITIONAL LANE ONLY ALLOWED TO BE CLOSED FROM 6:00 P.M. TO 6:00 A.M. SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

APPROACH END

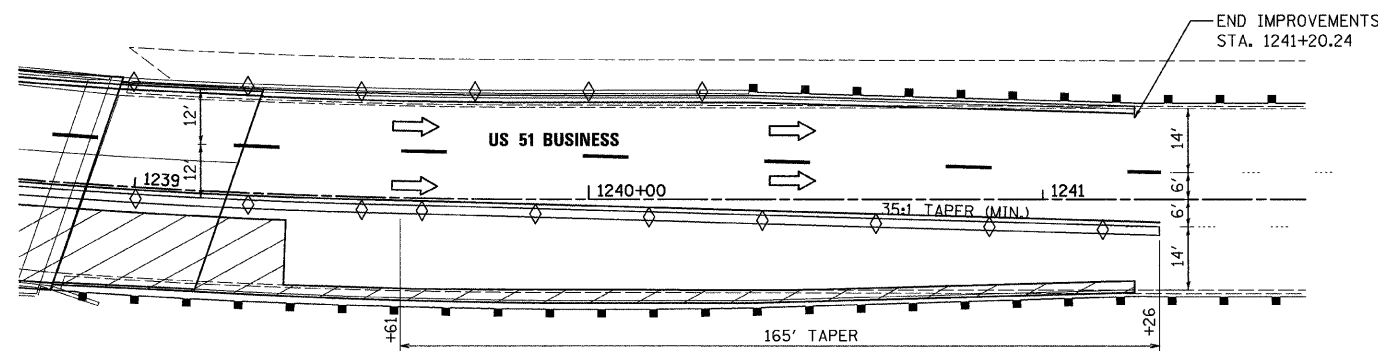


TEMP. CONCRETE BARRIER LOCATIONS

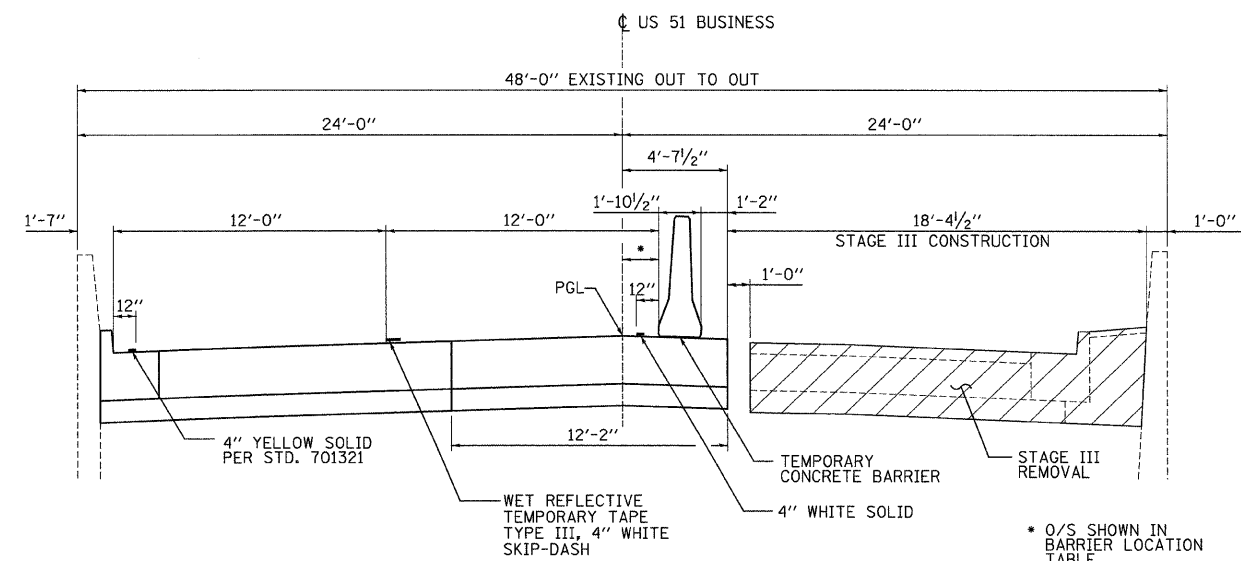
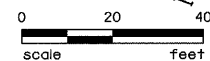
STATION	OFFSET
1232+14.00	6.0' RT
1232+50.00	1.6' RT
1239+61.00	1.6' RT
1241+26.00	6.0' RT

LEGEND

- TRAFFIC FLOW ARROW
- SINGLE ARROW BOARD
- DOUBLE ARROW BOARD



DEPARTURE END



STAGE III PAVEMENT REMOVAL

* O/S SHOWN IN BARRIER LOCATION TABLE

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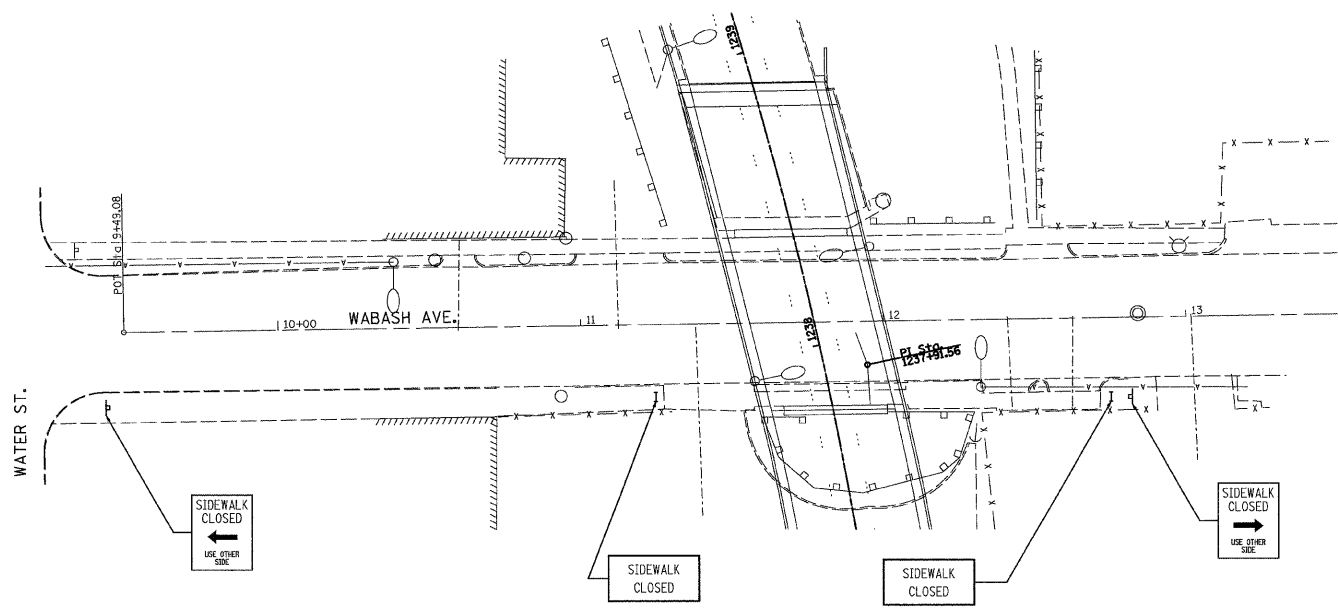
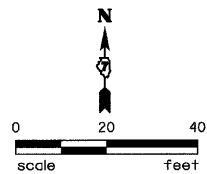
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	DATE - 09/24/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

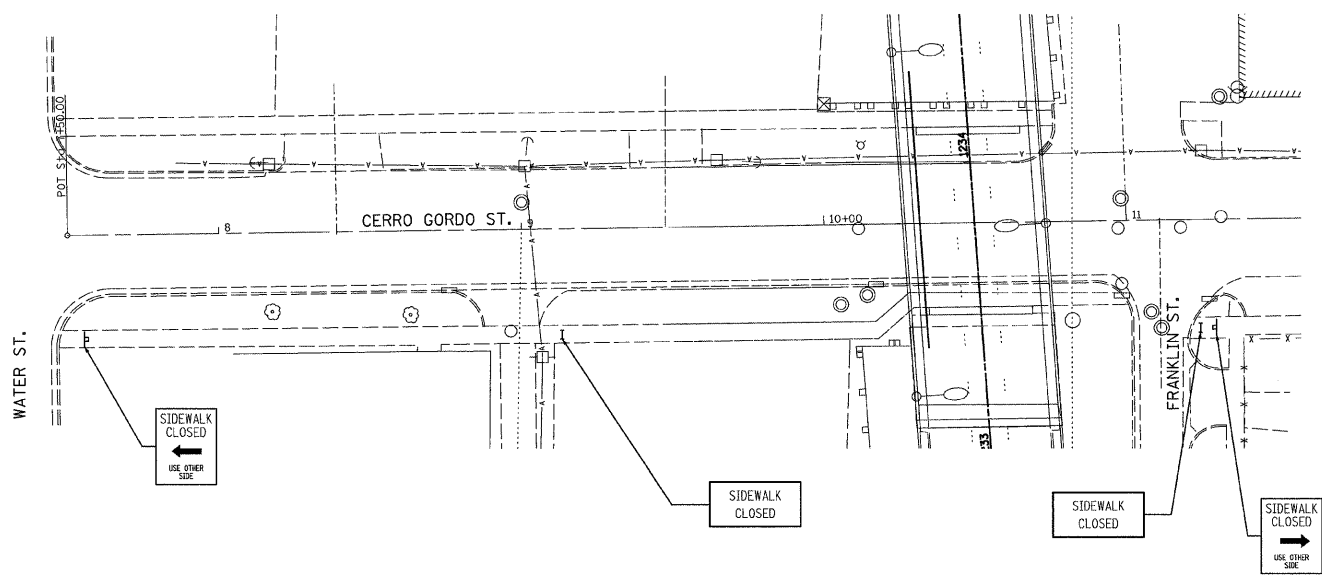
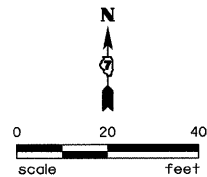
US 51 BUSINESS TRAFFIC CONTROL PLANS - STAGE III

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

F.A.P. RTE. 710	SECTION (502-VB) BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 16
CONTRACT NO. 74215			ILLINOIS FED. AID PROJECT	



**PLAN
WABASH AVE.**



**PLAN
CERRO GORDO ST.**

FILE NAME = X:\CHN\2007\0717\cadd\Plans\Traffic control\01.dgn



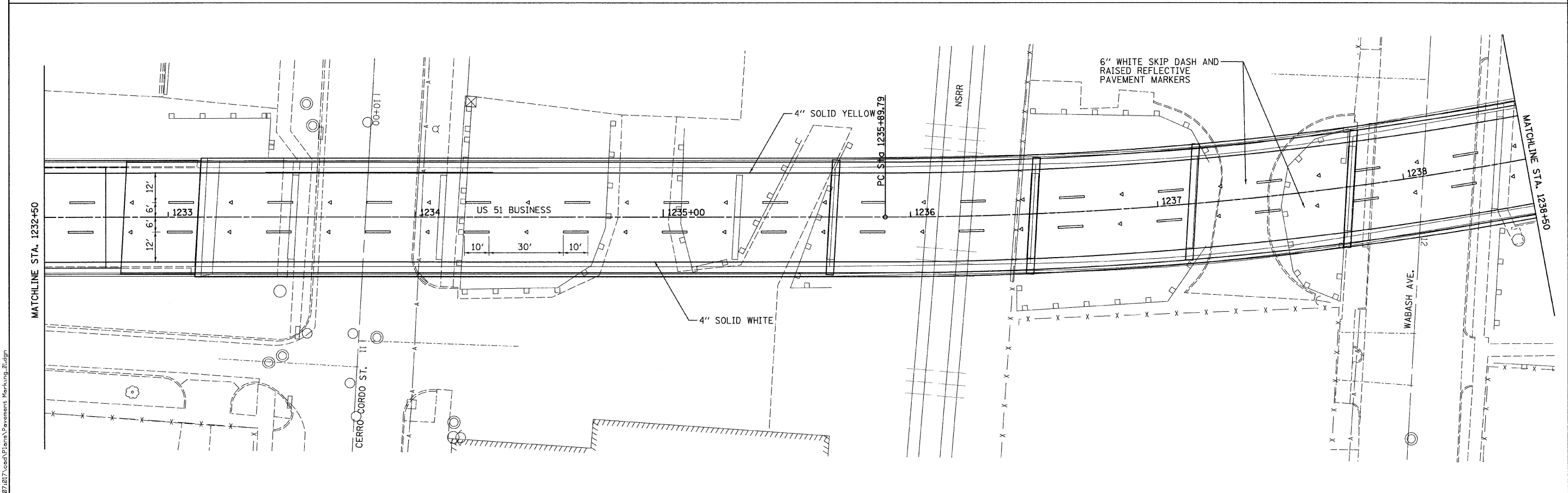
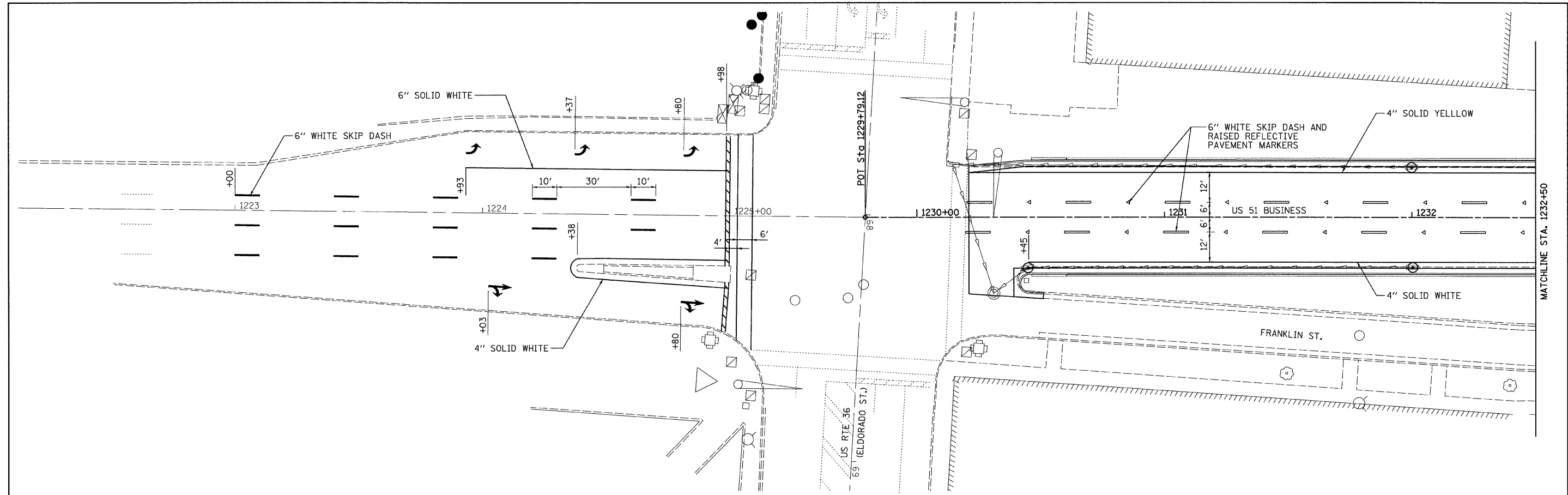
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DRAWN - JDK	CHECKED - DAR/TLO	REVISED -
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PLOT DATE = 3/12/2010		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LOCAL ROADS TRAFFIC CONTROL PLANS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	17
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 74215	



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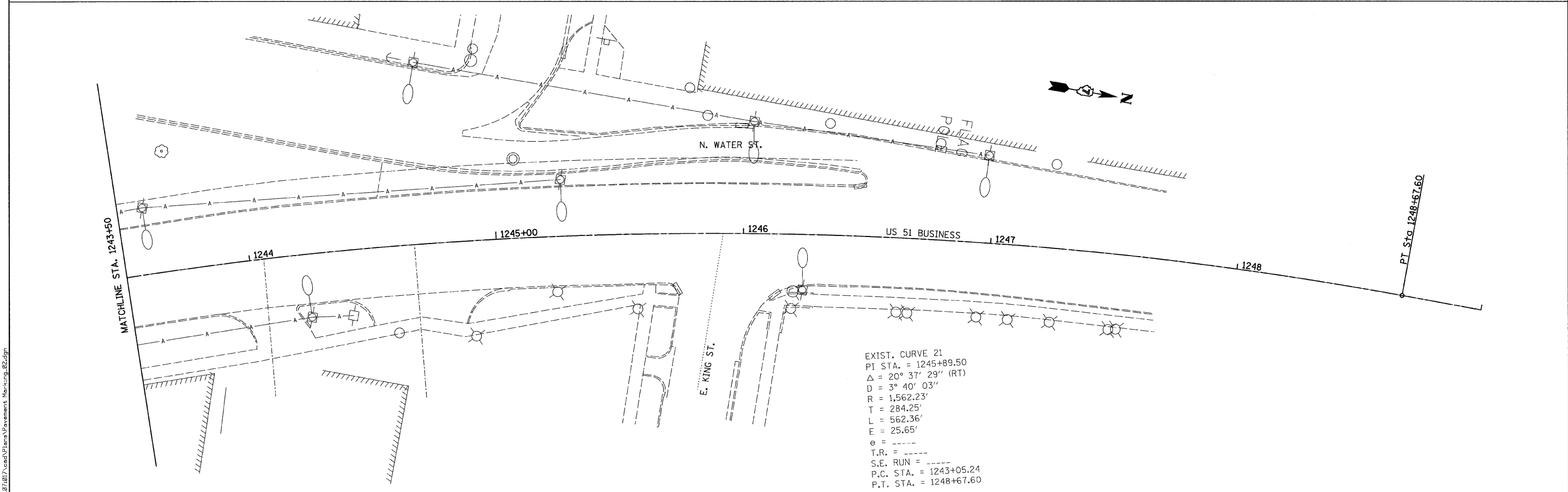
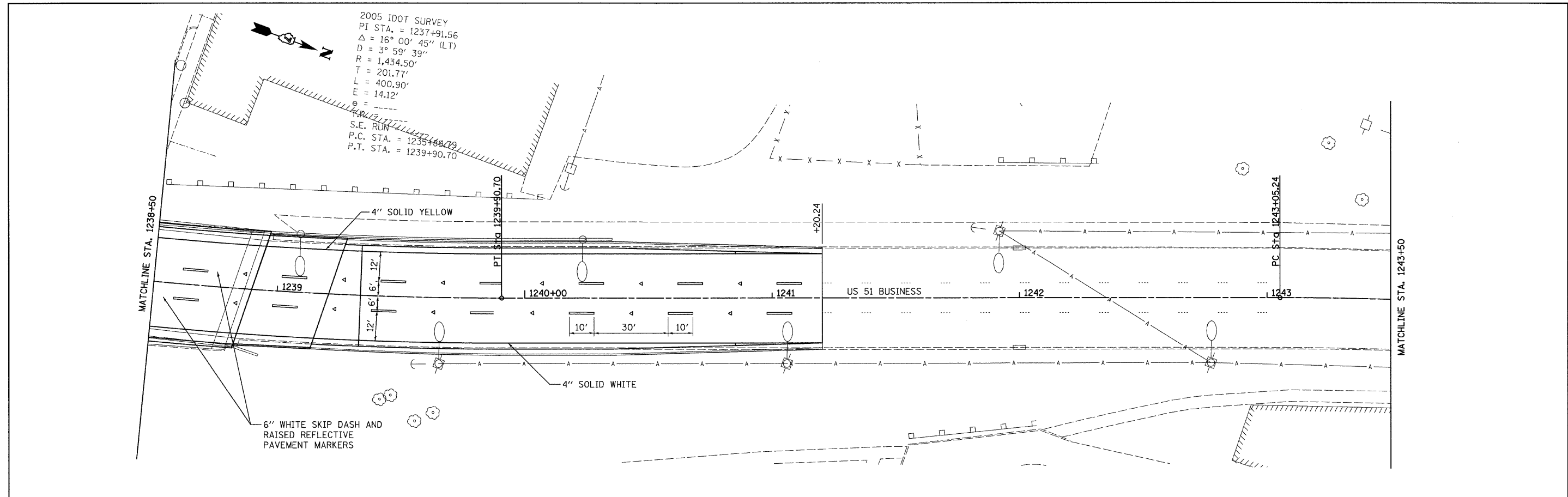
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	DATE - 09/24/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING PLANS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	18
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 74215				



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	DATE - 09/24/2009	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING PLANS			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	19
CONTRACT NO. 74215				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

PROJECT PHOTOMETRIC CRITERIA
(IDOT LUMINAIRE PERFORMANCE TABLE)

GIVEN CONDITIONS

ROADWAY DATA:	PAVEMENT WIDTH	36 FT
	NUMBER OF LANES	3
	MEDIAN WIDTH	N/A
	IES SURFACE CLASSIFICATION	R3
	Q-ZERO VALUE	0.07
LIGHT POLE DATA:	MOUNTING HEIGHT	33 FT
	MAST ARM LENGTH	6 FT
	POLE SET-BACK FROM EDGE OF PAVEMENT	4'-5"
LUMINAIRE DATA:	LAMP TYPE	HPS
	LAMP LUMENS	27,000
	IES VERTICAL DISTRIBUTION	M
	IES CONTROL OF DISTRIBUTION	FC
	IES LATERAL DISTRIBUTION	III
	TOTAL LIGHT LOSS FACTOR	0.684
LAYOUT DATA:	SPACING	218 FT
	CONFIGURATION	STAGRD
	LUMINAIRE OVERHANG OVER EDGE OF PAVEMENT LANE	1'-7"

NOTE: VARIATIONS FROM THE ABOVE SPECIFIED IES DISTRIBUTION PATTERN MAY BE REQUESTED AND ACCEPTANCE OF VARIATIONS WILL BE SUBJECT TO REVIEW BY THE ENGINEER BASED ON HOW WELL THE PERFORMANCE REQUIREMENTS ARE MET.

PERFORMANCE REQUIREMENTS

NOTE: THESE PERFORMANCE REQUIREMENTS SHALL BE THE MINIMUM ACCEPTABLE STANDARDS OF PHOTOMETRIC PERFORMANCE FOR THE LUMINAIRE, BASED ON THE GIVEN CONDITIONS LISTED ABOVE.

ROADWAY AREA		
IES ROADWAY CLASSIFICATION : MAJOR		
IES AREA CLASSIFICATION : LOW		
ILLUMINATION:	AVERAGE HORIZONTAL ILLUMINATION, (E _{AVE})	0.9 FC
	UNIFORMITY RATIO, (E _{AVE} /E _{MIN})	3.0
LUMINANCE:	AVERAGE LUMINANCE: (L _{AVE})	0.6 CD/M2
	UNIFORMITY RATIOS: (L _{AVE} /L _{MIN})	3.5
	(L _{MAX} /L _{MIN})	6.0
	MAXIMUM VEILING LUMINANCE RATIO: (L _V /L _{AVE})	0.3

BILL OF MATERIALS

ITEM NO.	PAY CODE	DESCRIPTION	UNIT	TOTAL QUANTITY
1	80400105	ELECTRIC SERVICE INSTALLATION, SPECIAL	EACH	1
2	81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	609
3	81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	137
4	81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	1,157
5	81300610	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 14" X 12" X 6"	EACH	1
6	81400100	HANDHOLE	EACH	1
7	81702120	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	5,943
8	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	585
9	82500505	LIGHTING CONTROLLER, SPECIAL	EACH	1
10	84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	6
11	84400105	RELOCATE EXISTING LIGHTING UNIT	EACH	10
12	84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1
13	84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	1

PREPARED BY: TJW - CHECKED BY: JLF

4/21/10

LIGHTING SCHEDULE

LOCATION			81012600	81100600	81200230	81702120	81900200
			CONDUIT IN TRENCH PVC NONMETALLIC 2" DIA. (FOOT)	CONDUIT ATTACHED TO STRUCT GALV STEEL 2" DIA. (FOOT)	CONDUIT EMBEDDED TO STRUCT NONMETALLIC 2" DIA. (FOOT)	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8 (FOOT)	TRENCH AND BACKFILL FOR ELEC WORK 2" DIA (FOOT)
STATION	TO	STATION					
US 51 BUSINESS - LEFT							
1231+53	TO	1233+12	165			510	161
1233+12	TO	1233+20		8		24	
1233+20	TO	1233+28			12	51	
1233+28	TO	1234+10			87	276	
1234+10	TO	1235+46			141	438	
1235+46	TO	1237+64			224	702	
1237+64	TO	1238+80			120	375	
1238+80	TO	1238+90		10		30	
1238+90	TO	1239+82	98			309	94
1239+82	TO	1240+55	81				77
US 51 BUSINESS - RIGHT							
1230+65	TO	1232+40	187			591	179
1232+40	TO	1233+12	78			249	74
1233+12	TO	1233+20		8		24	
1233+20	TO	1234+10			93	279	
1234+10	TO	1234+37			32	111	
1234+37	TO	1236+55			224	702	
1236+55	TO	1238+73			224	702	
PIER #2							
CONT	TO	JB1		7		198	
JB1	TO	LEFT DECK		11		48	
JB1	TO	LEFT DECK		11		48	
JB1	TO	RIGHT DECK		41		138	
JB1	TO	RIGHT DECK		41		138	
TOTALS			609	137	1,157	5,943	585

PREPARED BY: TJW - CHECKED BY: JLF

4/21/10

FILE NAME = X:\CHIEF\2007\07\07\end\Plans\Lighting_01.dgn



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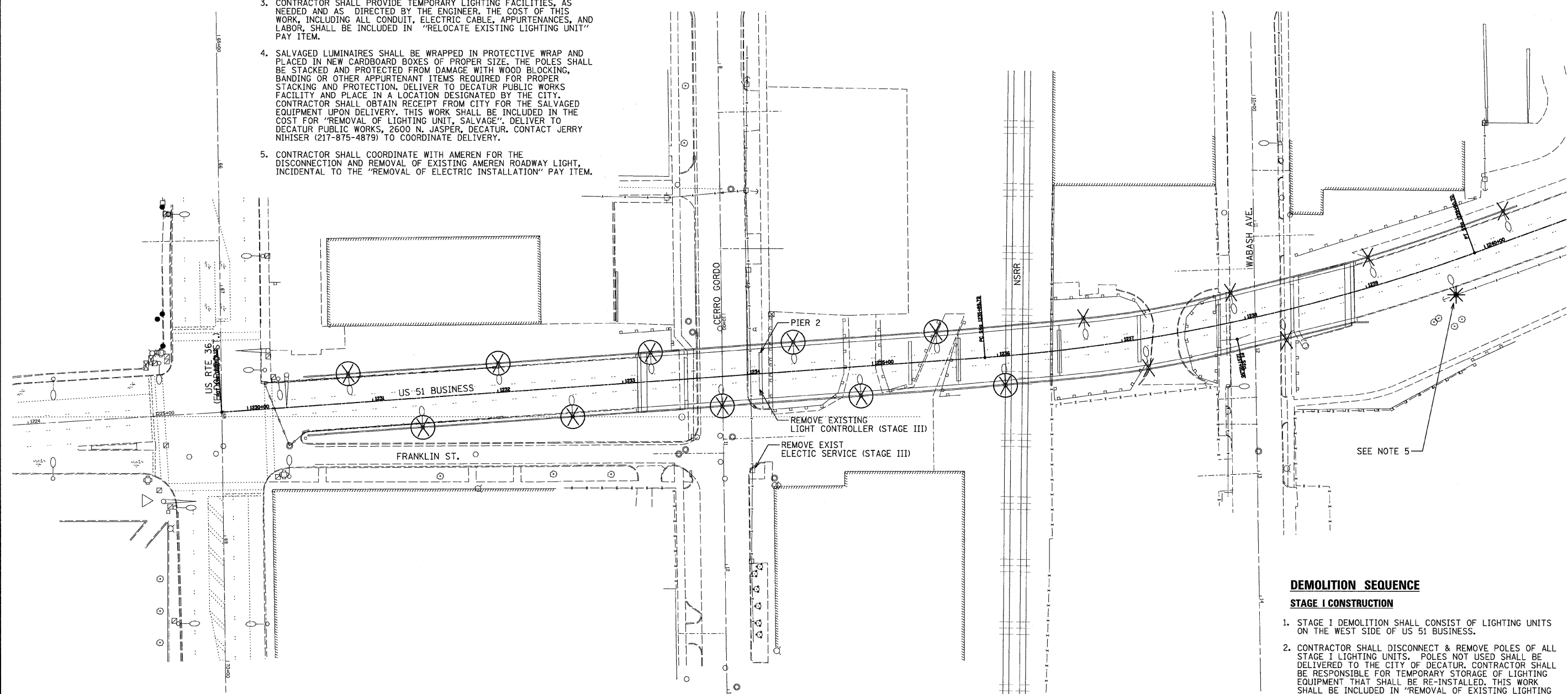
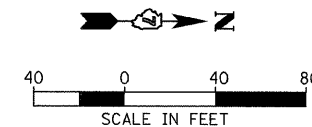
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LUMINAIRE PERFORMANCE TABLE AND BILL OF MATERIAL			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(502-VB) BR	MACON	79	20
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 74215	

NOTES

- EXISTING LIGHTING SHALL BE UTILIZED FOR TEMPORARY ROADWAY LIGHTING DURING CONSTRUCTION. REMOVAL OF EXISTING LIGHTING SHALL BE COORDINATED WITH CONSTRUCTION TO PROVIDE LIGHTING ON THE ACTIVE DRIVING LANES DURING CONSTRUCTION. ALL LIGHTING UNITS ON EAST SIDE OF BUS 51 SHALL REMAIN OPERATIONAL UNTIL STAGE III DEMOLITION.
- ALL RELOCATED LIGHTING UNITS ON WEST SIDE OF BRIDGE SHALL BE INSTALLED AND MADE FULLY OPERATIONAL BEFORE EXISTING POLES ON THE EAST SIDE ARE REMOVED.
- CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING FACILITIES, AS NEEDED AND AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK, INCLUDING ALL CONDUIT, ELECTRIC CABLE, APPURTENANCES, AND LABOR, SHALL BE INCLUDED IN "RELOCATE EXISTING LIGHTING UNIT" PAY ITEM.
- SALVAGED LUMINAIRES SHALL BE WRAPPED IN PROTECTIVE WRAP AND PLACED IN NEW CARDBOARD BOXES OF PROPER SIZE. THE POLES SHALL BE STACKED AND PROTECTED FROM DAMAGE WITH WOOD BLOCKING, BANDING OR OTHER APPURTENANT ITEMS REQUIRED FOR PROPER STACKING AND PROTECTION. DELIVER TO DECATUR PUBLIC WORKS FACILITY AND PLACE IN A LOCATION DESIGNATED BY THE CITY. CONTRACTOR SHALL OBTAIN RECEIPT FROM CITY FOR THE SALVAGED EQUIPMENT UPON DELIVERY. THIS WORK SHALL BE INCLUDED IN THE COST FOR "REMOVAL OF LIGHTING UNIT, SALVAGE", DELIVER TO DECATUR PUBLIC WORKS, 2600 N. JASPER, DECATUR. CONTACT JERRY NITISER (217-875-4879) TO COORDINATE DELIVERY.
- CONTRACTOR SHALL COORDINATE WITH AMEREN FOR THE DISCONNECTION AND REMOVAL OF EXISTING AMEREN ROADWAY LIGHT, INCIDENTAL TO THE "REMOVAL OF ELECTRIC INSTALLATION" PAY ITEM.



LEGEND

- REMOVE EXISTING LIGHTING UNIT, SALVAGE. (DELIVER TO CITY OF DECATUR)
- REMOVE AND RELOCATE EXISTING LIGHTING UNIT
- AMEREN POLE LIGHT TO BE REMOVED BY UTILITY COMPANY

DEMOLITION SEQUENCE

STAGE I CONSTRUCTION

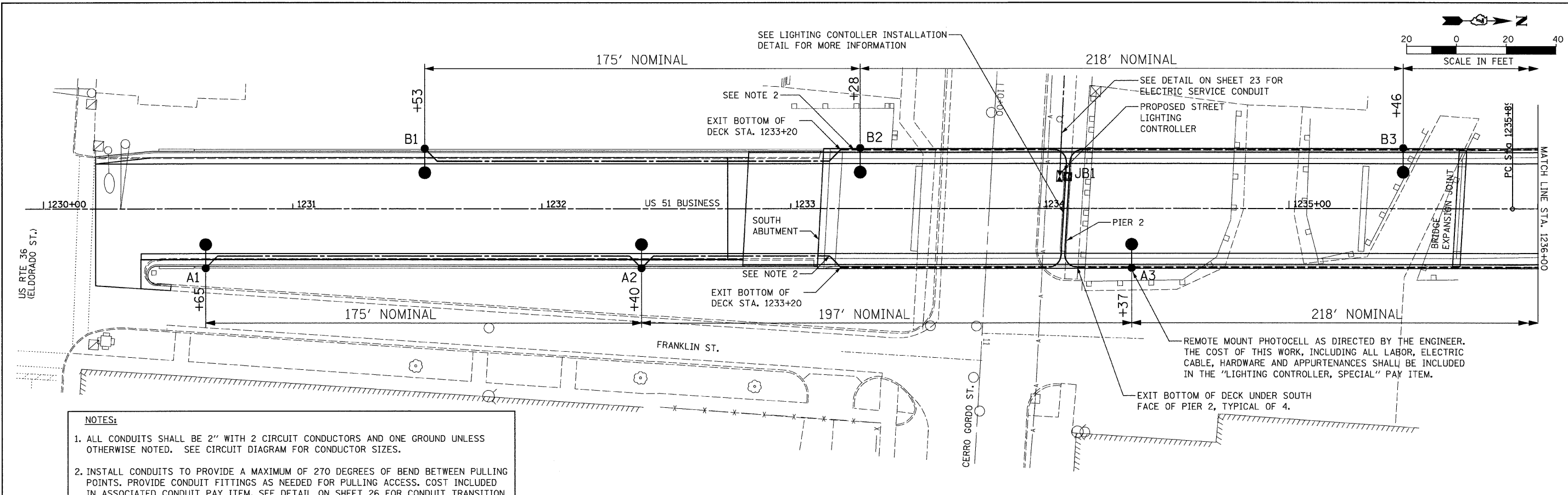
- STAGE I DEMOLITION SHALL CONSIST OF LIGHTING UNITS ON THE WEST SIDE OF US 51 BUSINESS.
- CONTRACTOR SHALL DISCONNECT & REMOVE POLES OF ALL STAGE I LIGHTING UNITS. POLES NOT USED SHALL BE DELIVERED TO THE CITY OF DECATUR. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY STORAGE OF LIGHTING EQUIPMENT THAT SHALL BE RE-INSTALLED. THIS WORK SHALL BE INCLUDED IN "REMOVAL OF EXISTING LIGHTING UNIT" OR "RELOCATE EXISTING LIGHTING UNIT", AS APPLICABLE.

STAGE III CONSTRUCTION

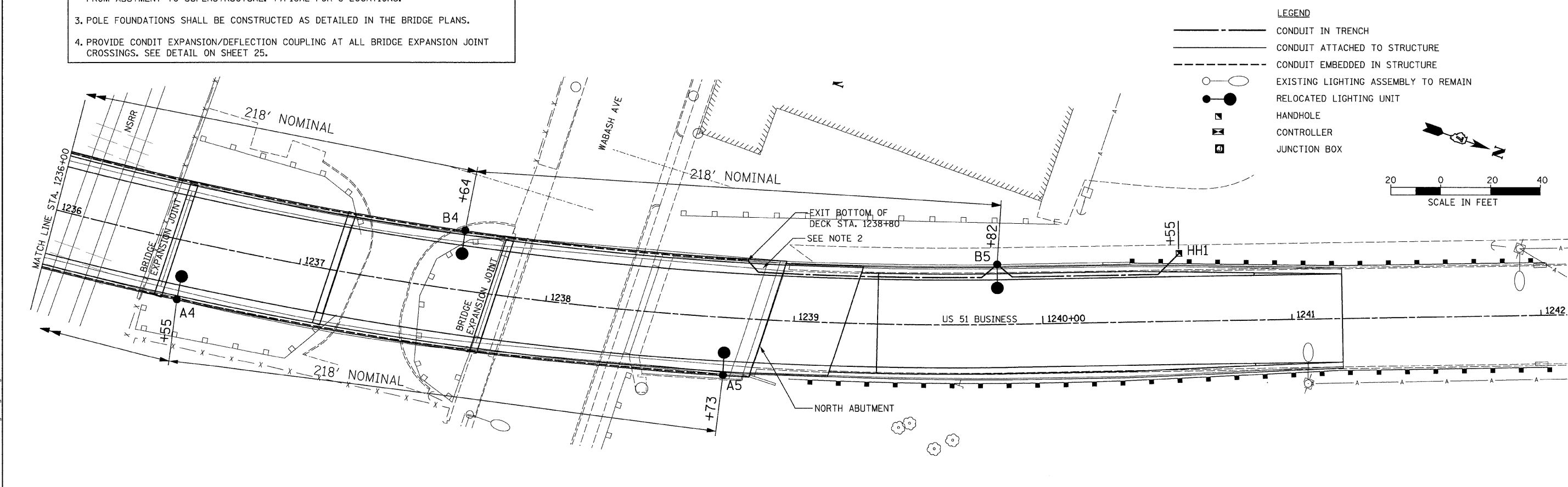
- STAGE III DEMOLITION SHALL CONSIST OF ALL THE LIGHTING UNITS ON THE EAST SIDE OF US 51 BUSINESS, LIGHTING CONTROLLER AND ELECTRIC SERVICE.
- CONTRACTOR SHALL DISCONNECT & REMOVE POLES OF ALL STAGE III LIGHTING UNITS. POLES NOT USED SHALL BE DELIVERED TO THE CITY OF DECATUR. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY STORAGE OF LIGHTING EQUIPMENT THAT SHALL BE RE-INSTALLED. THIS WORK SHALL BE INCLUDED IN "REMOVAL OF EXISTING LIGHTING UNIT" OR "RELOCATE EXISTING LIGHTING UNIT", AS APPLICABLE.

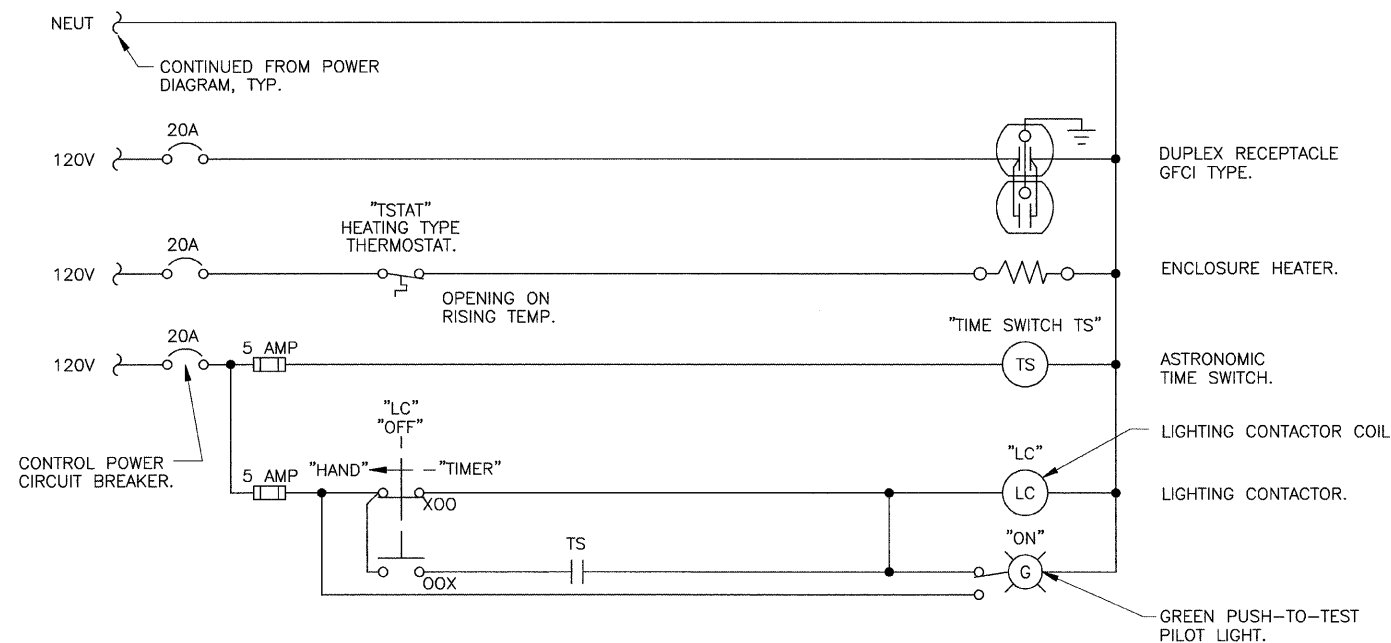
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<p>Foth Foth Infrastructure & Environment, LLC</p>	USER NAME = msj	DESIGNED - JLF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING DEMOLITION PLAN				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 4/23/2010	CHECKED - DAR/TLO	REVISED -	SCALE: SHEET NO. OF SHEETS STA. TO STA.					CONTRACT NO. 74215					
	DATE - 04/21/2010	REVISED -						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					



- NOTES:**
1. ALL CONDUITS SHALL BE 2" WITH 2 CIRCUIT CONDUCTORS AND ONE GROUND UNLESS OTHERWISE NOTED. SEE CIRCUIT DIAGRAM FOR CONDUCTOR SIZES.
 2. INSTALL CONDUITS TO PROVIDE A MAXIMUM OF 270 DEGREES OF BEND BETWEEN PULLING POINTS. PROVIDE CONDUIT FITTINGS AS NEEDED FOR PULLING ACCESS. COST INCLUDED IN ASSOCIATED CONDUIT PAY ITEM. SEE DETAIL ON SHEET 26 FOR CONDUIT TRANSITION FROM ABUTMENT TO SUPERSTRUCTURE. TYPICAL FOR 3 LOCATIONS.
 3. POLE FOUNDATIONS SHALL BE CONSTRUCTED AS DETAILED IN THE BRIDGE PLANS.
 4. PROVIDE CONDUIT EXPANSION/DEFLECTION COUPLING AT ALL BRIDGE EXPANSION JOINT CROSSINGS. SEE DETAIL ON SHEET 25.



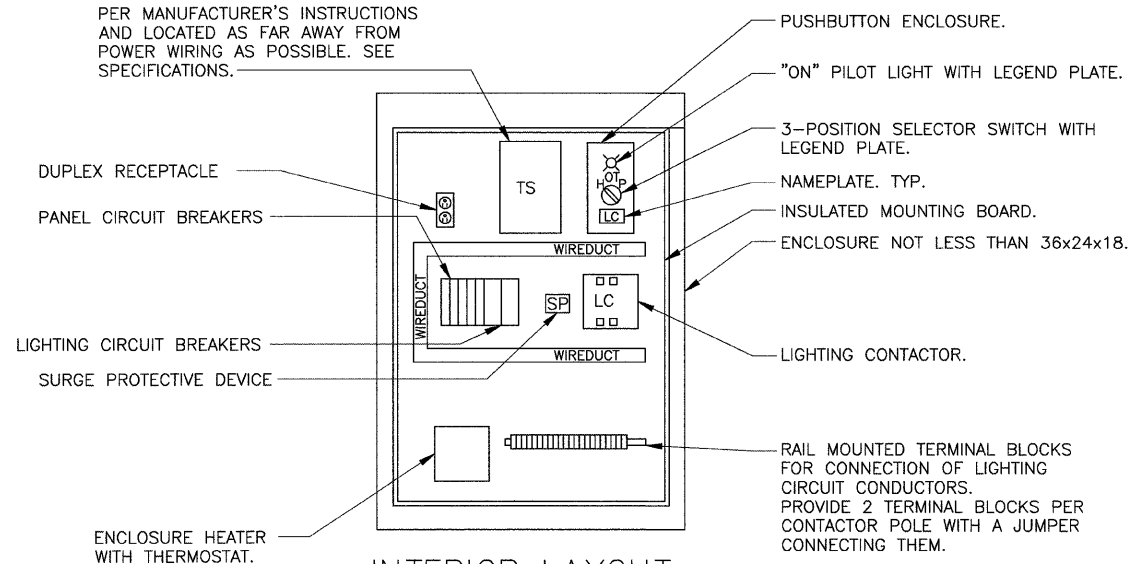


SCHEMATIC DIAGRAM
NO SCALE

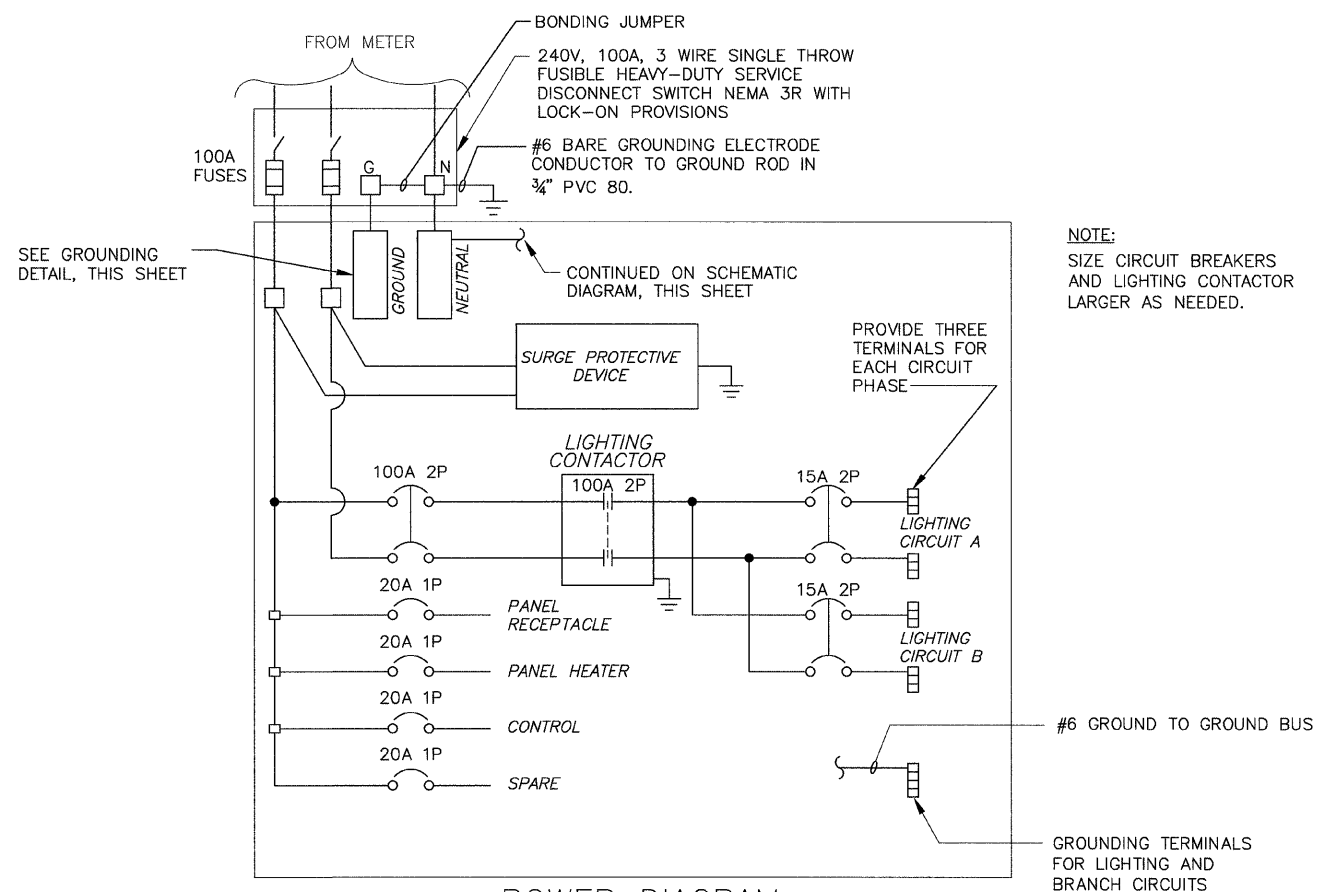
NOTES:

1. PROVIDE ENGRAVED LEGEND PLATES FOR DEVICES WITH WORDING AS INDICATED IN QUOTES.
2. CONTRACTOR SHALL PROGRAM TIMER TO TURN LIGHTS ON AT 15 MINUTES PRIOR TO SUNSET AND OFF AT 10 MINUTES PRIOR TO SUNRISE.
3. ASTRONOMICAL DATA FOR DECATUR, ILLINOIS:
LATITUDE: N 39° 51'
LONGITUDE: W 88° 57'
4. SIZE CIRCUIT BREAKERS AND FUSES LARGER AS NEEDED.
5. PROVIDE PHOTOCELL OVERRIDE INPUT TO TIME SWITCH ACCORDING TO MANUFACTURERS INSTRUCTIONS. PROVIDE WIRING FROM POLE A3 PHOTOCELL TO CONTROLLER. SEE SHEET 22.

TIME SWITCH SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND LOCATED AS FAR AWAY FROM POWER WIRING AS POSSIBLE. SEE SPECIFICATIONS.

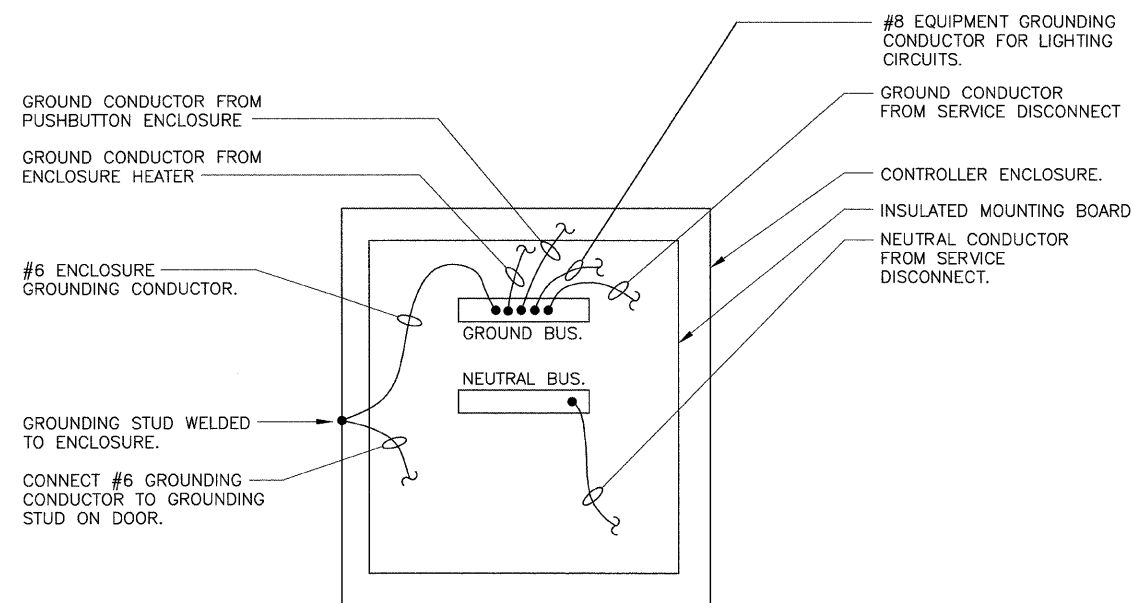


INTERIOR LAYOUT
NO SCALE



POWER DIAGRAM
NO SCALE

NOTE:
SIZE CIRCUIT BREAKERS AND LIGHTING CONTACTOR LARGER AS NEEDED.



GROUNDING DETAIL
NO SCALE

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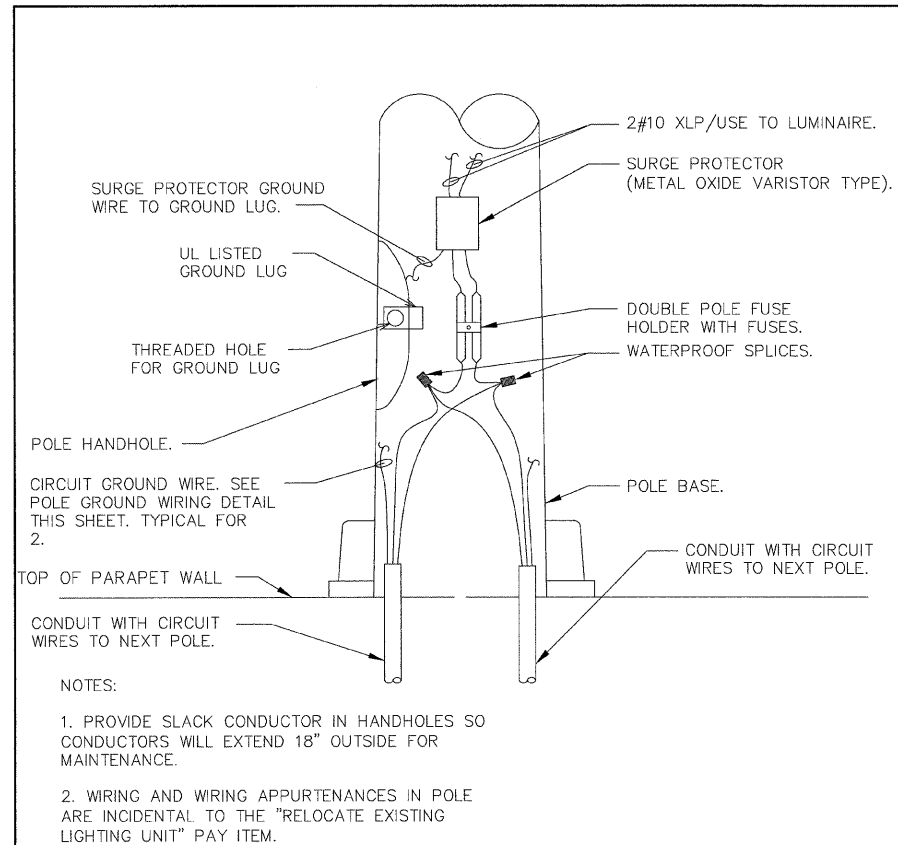
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PLOT DATE = 4/23/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 4/21/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER DETAILS

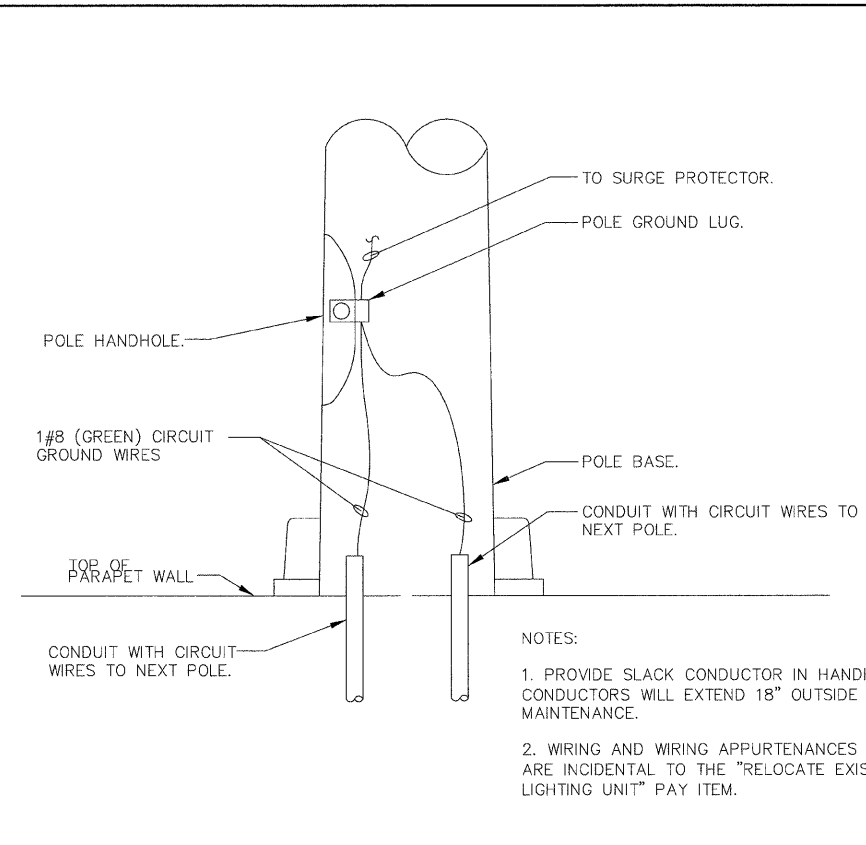
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 74215				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



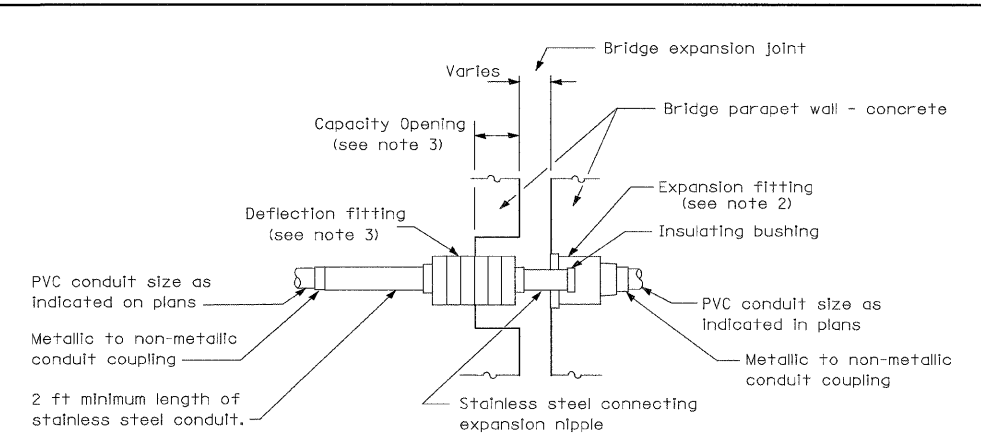
- NOTES:
1. PROVIDE SLACK CONDUCTOR IN HANDHOLES SO CONDUCTORS WILL EXTEND 18" OUTSIDE FOR MAINTENANCE.
 2. WIRING AND WIRING APPURTENANCES IN POLE ARE INCIDENTAL TO THE "RELOCATE EXISTING LIGHTING UNIT" PAY ITEM.

POLE WIRING DETAIL
NO SCALE



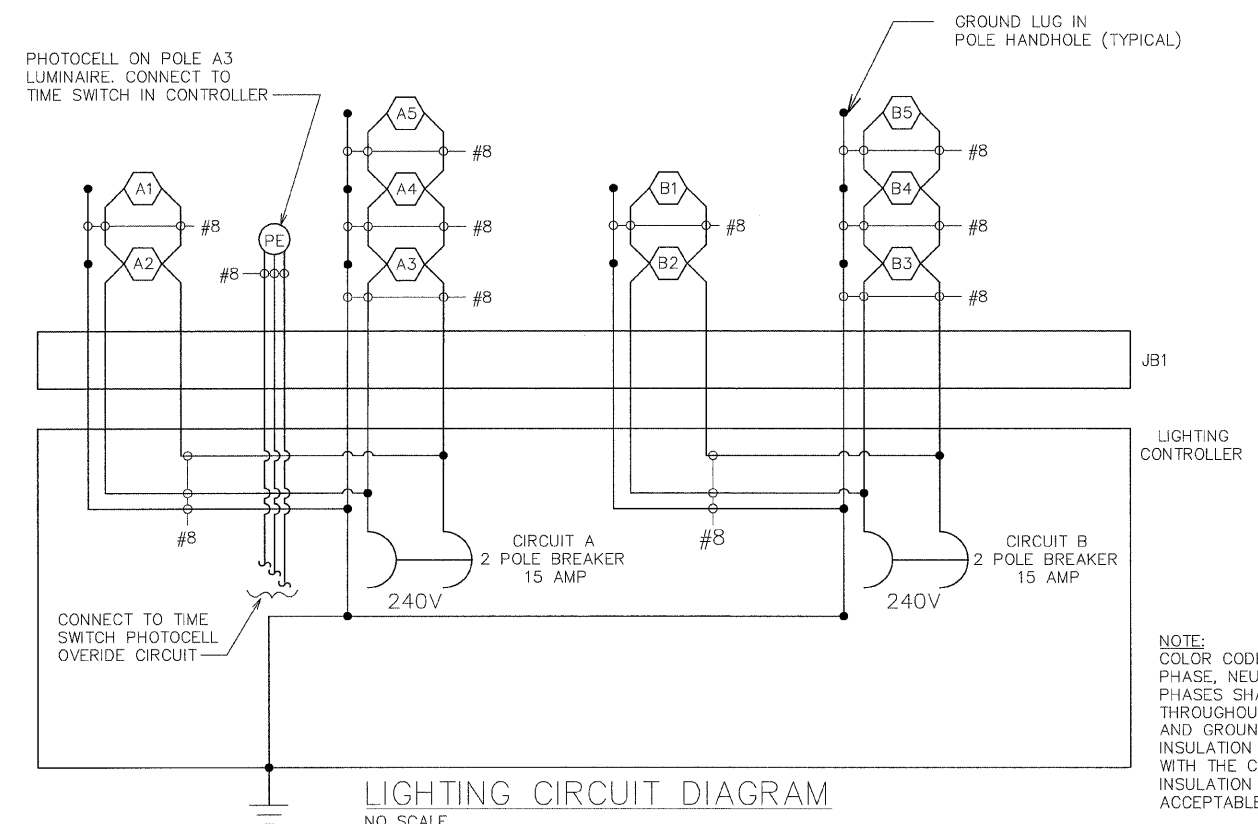
- NOTES:
1. PROVIDE SLACK CONDUCTOR IN HANDHOLES SO CONDUCTORS WILL EXTEND 18" OUTSIDE FOR MAINTENANCE.
 2. WIRING AND WIRING APPURTENANCES IN POLE ARE INCIDENTAL TO THE "RELOCATE EXISTING LIGHTING UNIT" PAY ITEM.

POLE GROUND WIRING DETAIL
NO SCALE



- GENERAL NOTES**
1. The Contractor shall install a conduit expansion/deflection coupling at the joints in the concrete parapet on the bridge capable of accepting the longitudinal movement. All metallic parts of the coupling shall be made of stainless steel or as approved by the Engineer. Any non-stainless metal shall be hot dip galvanized and coated to prevent reaction with the concrete. The cost of the coupling shall be part of and incidental to the conduit system.
 2. The barrel in the expansion fitting shall be fully embedded in the concrete on one side of the expansion joint. One half the length of the deflection fitting shall be embedded in the concrete on the other side of the coupling.
 3. A cavity opening 3" larger in diameter than the deflection fitting shall be provided in the concrete to ensure proper performance of the coupling.
 4. Careful attention to joint movement over a range of temperatures shall be coordinated with the selection and installation of the coupling to ensure the range of movement of the coupling is not exceeded at temperature extremes.
 5. All manufacturer's installation instructions shall be carefully followed to ensure optimum performance of the expansion/deflection coupling.
 6. The Contractor shall install couplings at all bridge expansion joints and shall be responsible to determine the proper number of couplings required.
 7. With the approval of the Engineer, the Contractor may substitute two (2) stainless steel junction boxes attached to the back of the wall and connected by a high grade of flexible non-metallic conduit for all expansion joints. This substitution shall be made at no cost to the Department.

CONDUIT EXPANSION/DEFLECTION COUPLING DETAIL



LIGHTING CIRCUIT DIAGRAM
NO SCALE

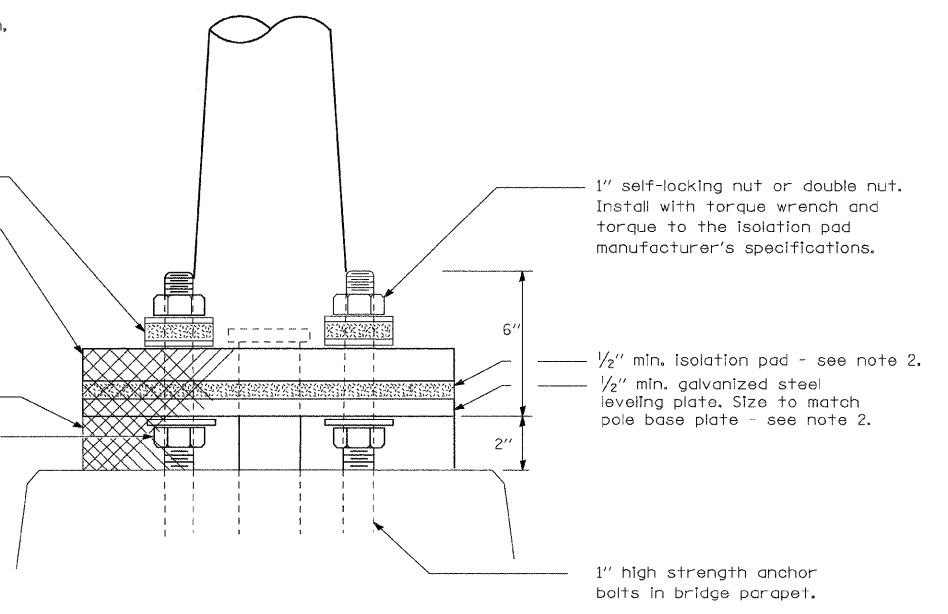
- GENERAL NOTES**
1. Locate poles over bridge piers where possible.
 2. The vibration isolation pad and leveling plate shall match the footprint of the pole base plate.
 3. Thickness of isolation pad and washers shall be according to the isolation pad manufacturer's recommendations based upon pole height and loading.
 4. Should the length of the exposed anchor bolts be too short on an existing bridge to mount the poles as shown, then the leveling plate shall be mounted directly on the concrete and leveled with stainless steel washers. Remove concrete as directed by the Engineer to fully thread the top nut.

2 1/2" O.D. x 1/4" galvanized steel flat washer either side of 2 1/2" O.D. x 1/2" isolation washer.

Stainless steel standard grade wire cloth, 6x6 (1/4") mesh or less with #16 gauge (0.062") diameter or heavier wire.

Attach with 1/2" stainless steel banding or tie back on itself with stainless steel wire ties. Finished installation must prevent rodent entry.

NOTE:
COLOR CODE ALL CONDUCTORS TO DESIGNATE PHASE, NEUTRAL AND GROUND CONDUCTORS. PHASES SHALL BE BLACK AND RED CONSISTENTLY THROUGHOUT PROJECT, NEUTRAL SHALL BE WHITE AND GROUND SHALL BE GREEN. CONDUCTOR INSULATION SHALL BE SOLID COLOR COMPLYING WITH THE CONDUCTOR COLOR CODE. BLACK INSULATION WITH COLORED TAPE IS NOT ACCEPTABLE AND WILL BE REJECTED.



POLE MOUNTED ON BRIDGE PARAPET DETAIL

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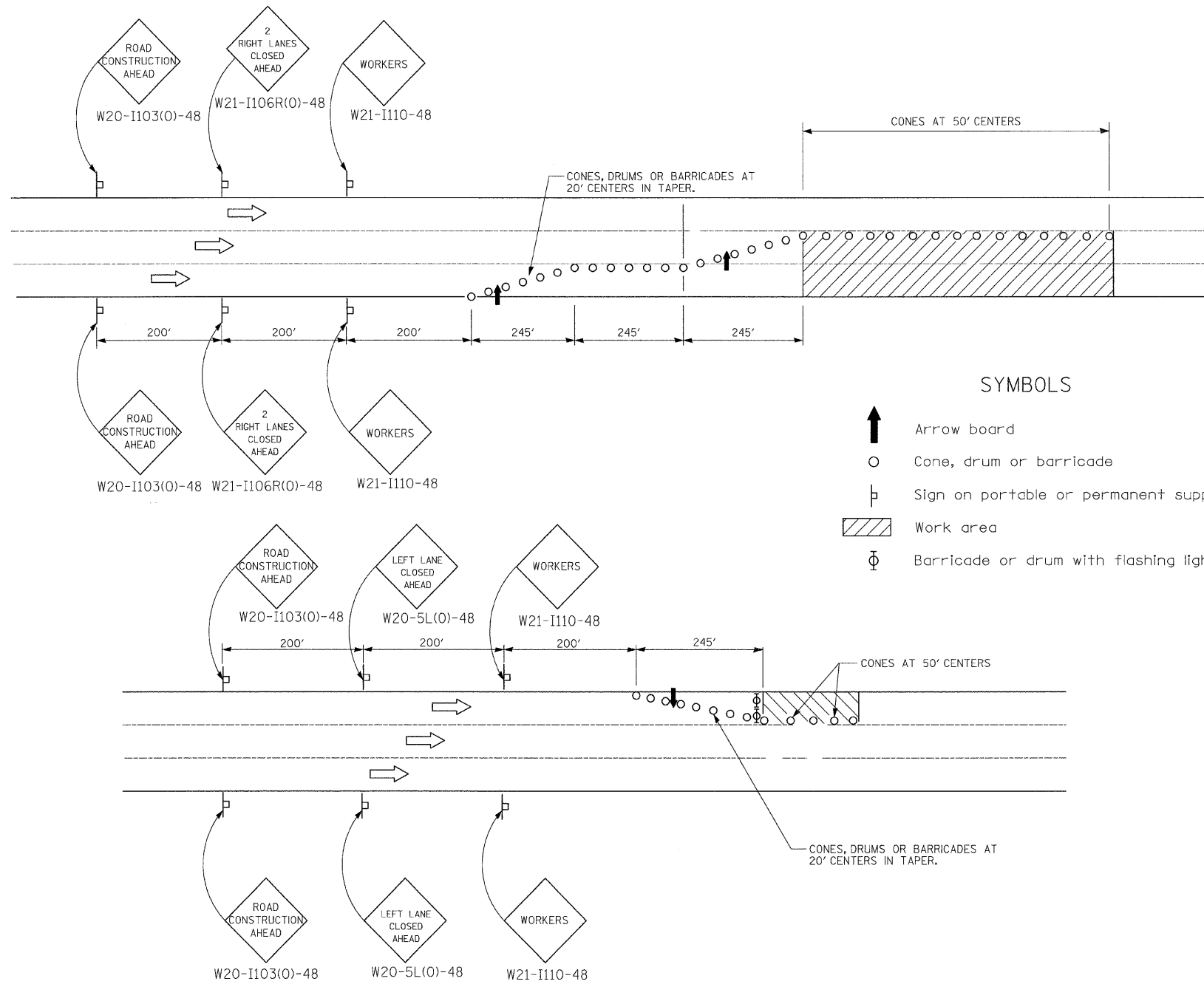
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PLOT DATE = 4/22/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 04/21/2010	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CIRCUIT DIAGRAM AND POLE WIRING DETAILS

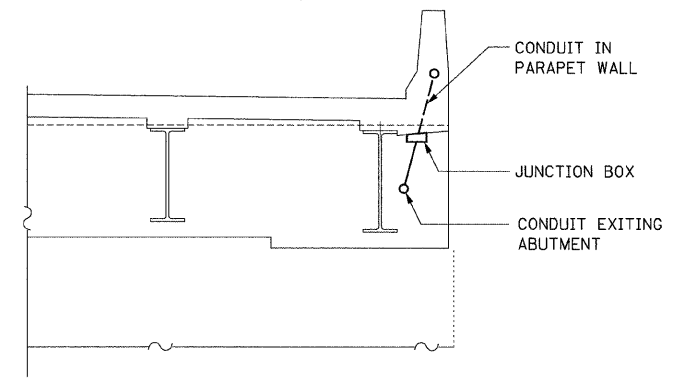
SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.
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F.A.P. RTE. 710	SECTION (50Z-VB) BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 25
CONTRACT NO. 74215				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

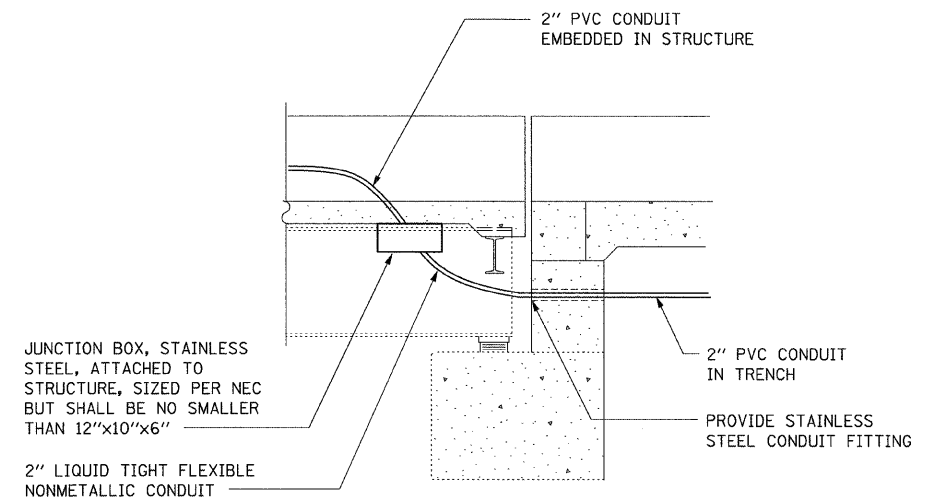


SYMBOLS

- Arrow board
- Cone, drum or barricade
- Sign on portable or permanent support
- Work area
- Barricade or drum with flashing light



ELEVATION VIEW AT ABUTMENT



SECTION VIEW AT ABUTMENT

CONDUIT TRANSITION DETAIL AT BRIDGE ABUTMENT

- NOTES:**
- PROVIDE TRAFFIC CONTROL FOR LIGHTING INSPECTION. WORK SHALL BE PAID FOR AS TRAFFIC CONTROL AND PROTECTION, STANDARD 70160L.
 - CONTRACTOR SHALL COORDINATE WITH ENGINEER TO PERFORM NIGHTTIME LIGHTING INSPECTION.

DETAIL FOR NIGHTTIME LIGHTING INSPECTION

FILE NAME = X:\CHIEF\2007\07\017\000\Plans\Lighting_07.dgn

<p>Foth Foth Infrastructure & Environment, LLC</p>	USER NAME = msj	DESIGNED - JLF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING INSPECTION AND DETAILS				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1:8000 1" = 80'	DRAWN - JDK	REVISED -						710	(50Z-VB) BR	MACON	79	26
	PLOT DATE = 4/23/2010	CHECKED - GAC/TLO	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 74215				
		DATE - 04/21/2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

Bench Mark: Chiseled Square on top of Southeast Wingwall on Overhead Bridge carrying US 51 BUS over NSRR approx. 70' North of US 36, Sta. 1230+50.71, 23.88' Rt. elev 685.00
Existing Structure: S.N. 058-0014 built 1966 as F.A. Route 2, Section 50Z-VB at Station 1236+06.66. Ten span, 508'-11 1/8" back to back of abutments, 48'-0" out to out. Superstructure consists of a partially curved R.C. deck on straight WF beams supported on three-column piers on timber piles, and pile bent abutments. Deck to be removed and replaced. Piers 5, 6, & 8 to be removed and replaced above the footings.

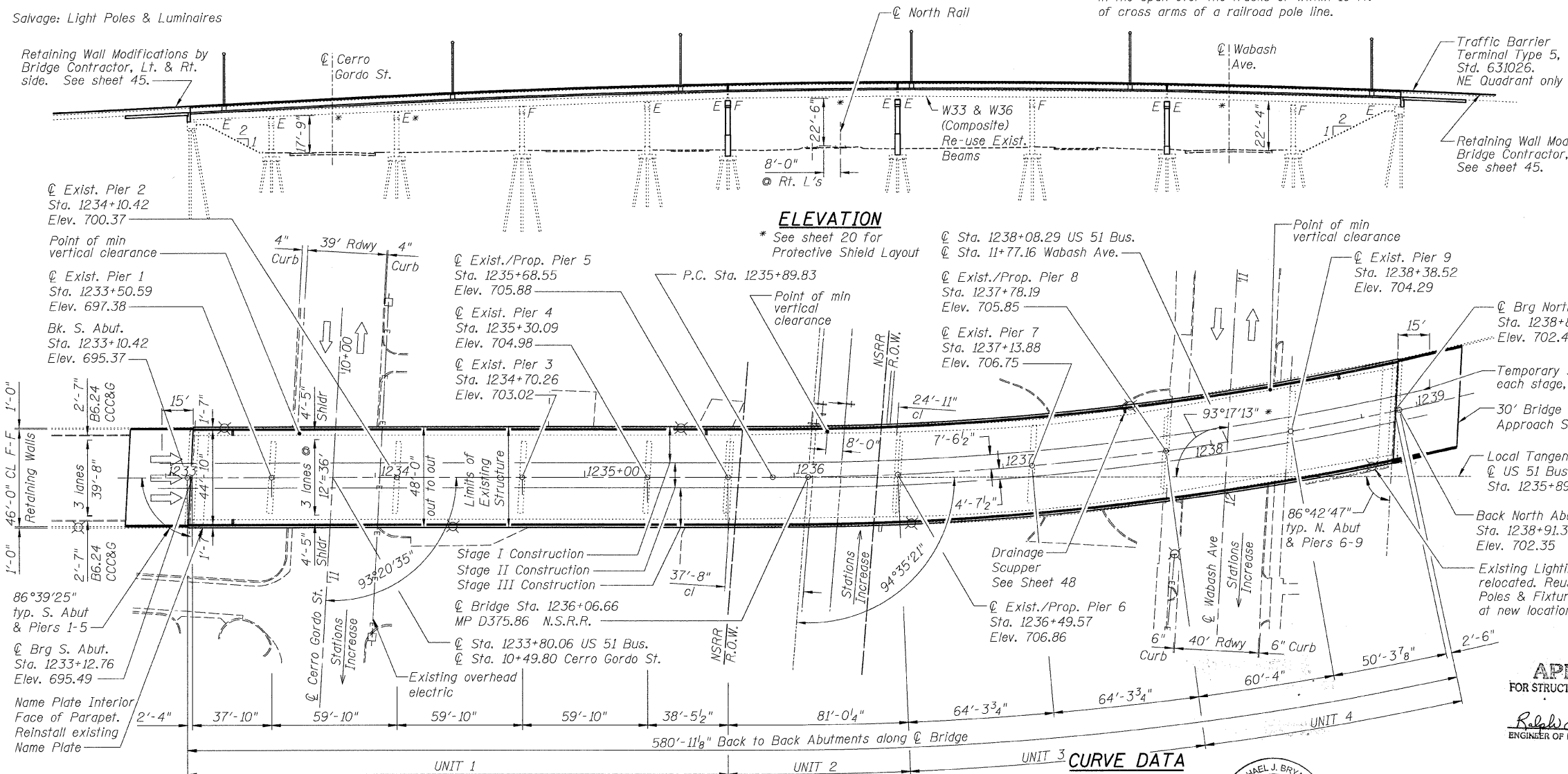
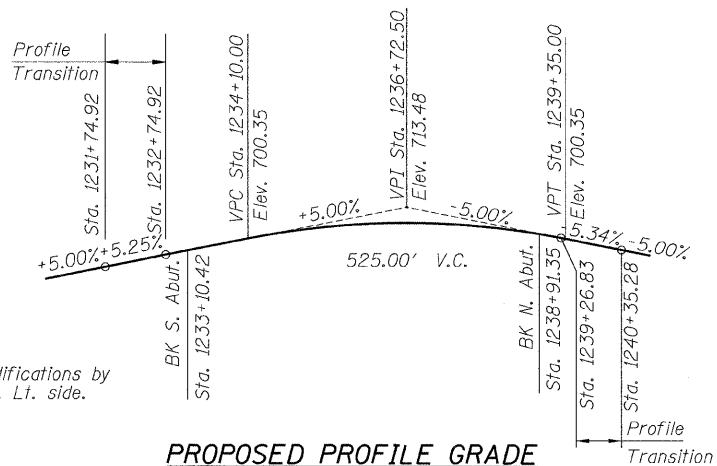
Staging: Traffic to be maintained during the rehabilitation by staged construction. 2 lanes to remain open, 3 stages.

Salvage: Light Poles & Luminaires

Note:
No freefall deck drains will be permitted in the span over the tracks or within 10 ft. of cross arms of a railroad pole line.

Retaining Wall Modifications by Bridge Contractor, Lt. & Rt. side. See sheet 45.

Traffic Barrier Terminal Type 5, Std. 631026, NE Quadrant only
Retaining Wall Modifications by Bridge Contractor, Lt. side. See sheet 45.



ELEVATION

* See sheet 20 for Protective Shield Layout

- © Sta. 1238+08.29 US 51 Bus. Elev. 705.88
- © Sta. 11+77.16 Wabash Ave. Elev. 705.85
- © Exist./Prop. Pier 8 Sta. 1237+78.19 Elev. 705.85
- © Exist. Pier 9 Sta. 1238+38.52 Elev. 704.29
- © Exist. Pier 7 Sta. 1237+13.88 Elev. 706.75
- © Exist./Prop. Pier 6 Sta. 1236+49.57 Elev. 706.86
- © Exist./Prop. Pier 5 Sta. 1235+68.55 Elev. 705.88
- © Exist. Pier 4 Sta. 1235+30.09 Elev. 704.98
- © Exist. Pier 3 Sta. 1234+70.26 Elev. 703.02
- © Exist. Pier 2 Sta. 1234+10.42 Elev. 700.37
- © Brg S. Abut. Sta. 1233+12.76 Elev. 695.49
- © Bk. S. Abut. Sta. 1233+10.42 Elev. 695.37
- © Brg North Abut. Sta. 1238+88.85 Elev. 702.45
- © Back North Abut. Sta. 1238+91.35 Elev. 702.35

**PROPOSED PROFILE GRADE
U.S. 51 BUSINESS**

Sta. Equations:
Sta. 1232+81.92 (BK) (2005 IDOT) = Sta. 1232+80.92 (AH) (1963 Plans)
Sta. 1239+20.83 (BK) (1963 Plans) = Sta. 1239+20.71 (AH) (2005 IDOT)

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

LOADING HS20-44

Allow 25#/#.sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.045
Site Coefficient (S) = 1.2

DESIGN STRESSES

FIELD UNITS

- f'c = 3,500 psi
- fy = 60,000 psi (Reinforcement)
- fy = 36,000 psi (M270 Grade 36)
- fc = 1,400 psi (Concrete w/o earth pressure)
- fs = 20,000 psi (Reinforcement)
- fs = 20,000 psi (Structural Steel A36)
- vc = 75 psi (Footings)
- n = 10

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson (T) D
ENGINEER OF BRIDGES AND STRUCTURES

Michael J. Bryant
MICHAEL J. BRYANT
081-005324
LICENSED STRUCTURAL ENGINEER
OF CHAMPAIGN
ILLINOIS NO. 5324 EXPIRES 11-30-10
SHEETS 1-27, 45-49
DATE 3/12/10

MARY COOMBE-BLOXDORF
081-005324
LICENSED STRUCTURAL ENGINEER
OF CHAMPAIGN
ILLINOIS NO. 4859 EXPIRES 11-30-10
SHEETS 28-44
DATE 3/12/10

LEGEND

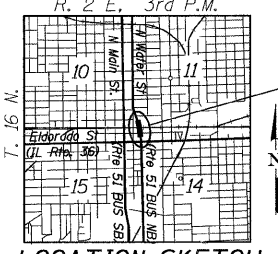
⊗ Luminar

PLAN

Horizontal Geometry from 1963 plans.

CURVE DATA

- Δ = 16° 00' 00"
- D = 4° 00' 00"
- T = 201.31'
- L = 400.00'
- E = 14.08'
- R = 1432.39'
- S.E. = 0.04'/FT
- P.C. = Sta. 1235+89.83
- Begin S.E. Transition = Sta. 1234+95.83
- End S.E. Transition = Sta. 1236+19.83
- P.T. = Sta. 1239+89.83
- P.I. = Sta. 1237+91.14



**EXISTING PROFILE GRADE
WABASH AVENUE**

- Sta. 10+00 Elev. 678.24
- Sta. 11+00 Elev. 677.86
- Sta. 12+00 Elev. 677.30
- Sta. 13+00 Elev. 676.91
- Sta. 11+77.16 Elev. 677.38

**TOP OF RAIL ELEVATIONS
SOUTH RAIL SOUTH TRACK N.S.R.R.**

- MP D375.84 Elev. 679.77
- MP D375.86 Elev. 679.49
- MP D375.87 Elev. 679.36
- MP D375.88 Elev. 679.22
- MP D375.84 Elev. 679.17
- MP D375.86 Elev. 679.44

**TOP OF RAIL ELEVATIONS
NORTH RAIL NORTH TRACK N.S.R.R.**

- MP D375.86 Elev. 679.44

**EXISTING PROFILE GRADE
CERRO GORDO ST.**

- Sta. 9+00 Elev. 676.75
- Sta. 10+00 Elev. 676.50
- Sta. 10+50 Elev. 676.28
- Sta. 11+00 Elev. 676.39
- Sta. 12+00 Elev. 675.91

DESIGNED	MJB/MAJ
CHECKED	JFS
DRAWN	MSJ/MLB
CHECKED	MJB

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0065
Illinois Registration Number 184.004913

SHEET NO. 1 49 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	27
SN 058-0014		CONTRACT NO. 74215			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

**GENERAL PLAN AND ELEVATION
U.S. 51 BUSINESS OVER CERRO
GORDO ST., N.S.R.R. & WABASH AVE.
F.A.P. ROUTE 710 SECTION (50Z-VB)BR
MACON COUNTY
STATION 1236+06.66
STRUCTURE NO. 058-0014**

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 3/4 in. ϕ , holes 7/8 in. ϕ , unless otherwise noted.

Calculated weight of Structural Steel = 19,734 pounds AASHTO M270, Grade 36.

No field welding is permitted except as specified in the contract documents.

The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, 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.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of 1/8 inch (0.01 ft.).

Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to the designated areas of the abutments and piers 5, 6, & 8. Designated areas are the exposed surfaces of the abutment backwall and all new concrete on the abutment bearing seat and cap. All exposed surfaces of piers 5, 6, & 8 shall be treated.

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

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 5 ft. (measured along the beam) of either side of deck joints shall be cleaned per Near White Blast Cleaning - SSPC-SP10. The exterior surfaces and bottom of the bottom flange of the fascia beams shall be cleaned per Power Tool Cleaning - Commercial Grade.

The designated areas cleaned per Near White Blast Cleaning - SSPC-SP10 and per Power Tool Cleaned - Commercial Grade shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all interior steel surface 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 Blue, Munsell No 10B 3/6.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".

A minimum of (4) air monitors(s) will be required to monitor abrasive blasting operations at this site, see special provision for "Containment and Disposal of Lead Paint Cleaning Residues".

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

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.

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

Slip forming of the parapets is not allowed.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCTURE	SUB STRUCTURE	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		171	171
Concrete Removal	Cu. Yd.		222.6	222.6
Removal of Existing Concrete Deck	Each	1		1
Protective Shield	Sq. Yd.	1221		1221
Structure Excavation	Cu. Yd.		240	240
Concrete Structures	Cu. Yd.		271.8	271.8
Concrete Superstructure	Cu. Yd.	1106.3		1106.3
Bridge Deck Grooving	Sq. Yd.	3046		3046
Protective Coat	Sq. Yd.	3675		3675
Furnishing and Erecting Structural Steel	Pound	19734		19734
Stud Shear Connectors	Each	11640		11640
Jack and Remove Existing Bearings	Each	16		16
Structural Steel Removal	Pound	16404		16404
Cleaning and Painting Steel Bridge	L. Sum	1		1
Containment and Disposal of Lead Paint Cleaning Residues	L. Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	241340	40570	281910
Bar Splicers	Each	3512	328	3840
Temporary Sheet Piling	Sq. Ft.	790		790
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	243		243
Elastomeric Bearing Assembly, Type I	Each	40		40
Elastomeric Bearing Assembly, Type II	Each	8		8
Elastomeric Bearing Assembly, Type III	Each	8		8
Anchor Bolts, 1"	Each	160		160
Concrete Sealer	Sq. Ft.		5692	5692
Epoxy Crack Injection	Foot		16	16
Geocomposite Wall Drain	Sq. Yd.		85	85
Pipe Underdrains for Structures 4"	Foot		130	130
Drainage Scuppers, DS-12	Each	5		5
Structural Repair of Concrete (Depth Greater than 5 inches)	Sq. Ft.		8	8
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq. Ft.		115	115
Jacking and Cribbing	Each	48		48
Temporary Support System, No. 1	Each		1	1
Temporary Support System, No. 2	Each		1	1
Temporary Support System, No. 3	Each		1	1
Mechanical Splicer	Each		30	30
Drainage System	L. Sum		1	1

Conduit in Parapets and at retaining wall light pole foundations is scheduled in the lighting plans.

INDEX OF SHEETS

1	General Plan and Elevation
2	General Notes, Bill of Materials, & Details
3	Stage Construction Details
4	Layout & Superelevation Transition Diagrams
5-11	Top of Slab Elevations
12	Top of Approach Slab Elevations
13-16	Superstructure
17-20	Superstructure Details
21-22	Bridge Approach Slab Details
23	Preformed Joint Strip Seal
24-25	Framing Plan & Structural Steel Details
26-27	Girder Elevation
28-32	Bearing Details
33-34	Abutment Concrete Removal Details
35-36	Abutment Details
37	Abutment Repair Details
38	Pier Repair Details
39-44	Pier 5, 6, & 8 Replacement Details
45-46	Retaining Wall Modifications
47	Temporary Concrete Barriers
48	Drainage Scuppers
49	Bar Splicer Assembly Details

STATION 1236+06.66
REBUILT 2010 BY
STATE OF ILLINOIS
LOADING HS-20
STRUCTURE NO. 058-0014

NAME PLATE
See Std. 515001

GENERAL NOTES, BILL OF
MATERIALS, AND DETAILS
U.S. 51 BUSINESS OVER CERRO
GORDO ST., N.S.R.R. & WABASH AVE.
F.A.P. ROUTE 710 SECTION (50Z-VB)BR
MACON COUNTY
STATION 1236+06.66
STRUCTURE NO. 058-0014

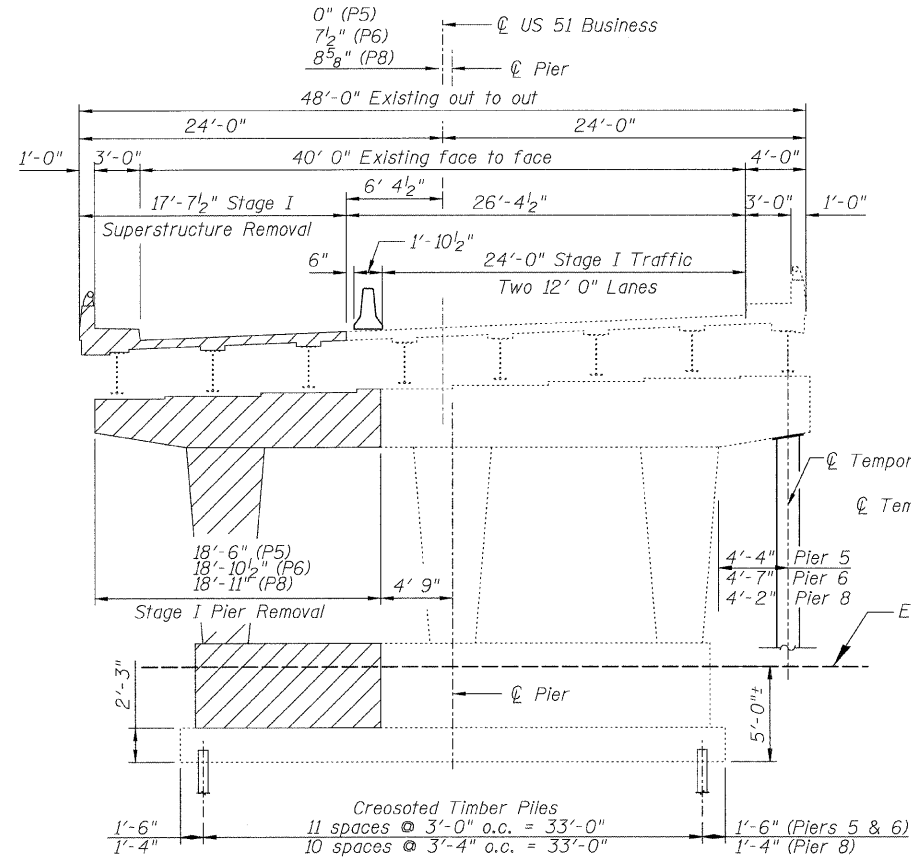
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CHECKED	JFS
DRAWN	MSJ/MLB
CHECKED	MJB



SHEET NO. 2 49 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	28
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 74215					

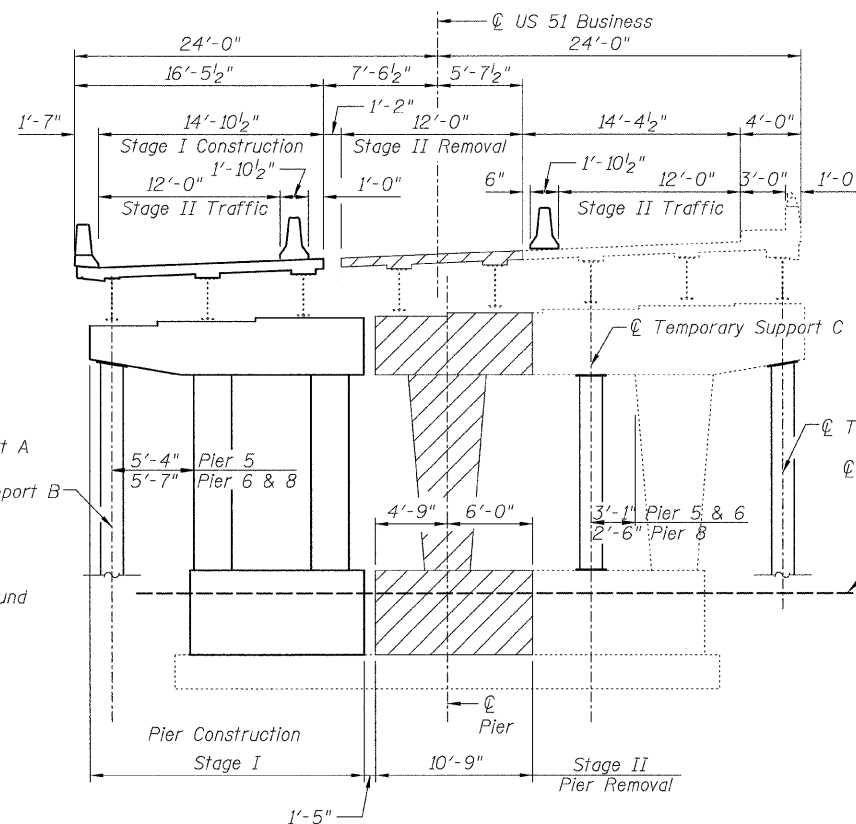
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Note:
Superstructure dimensions are at right angles.
Substructure dimensions are along skew.



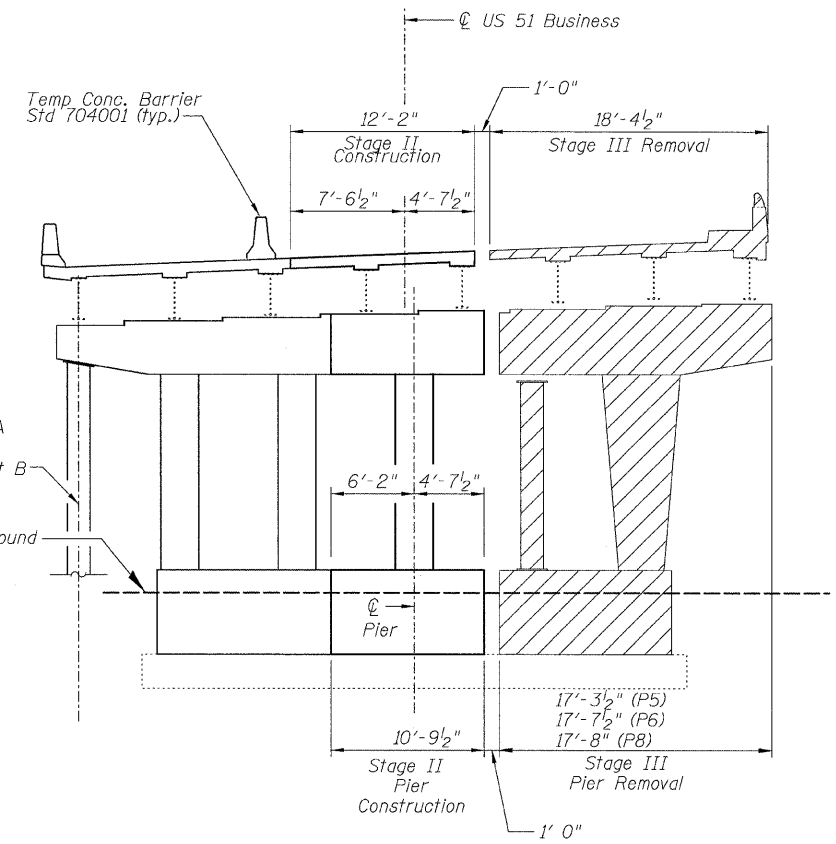
STAGE I REMOVAL/TRAFFIC

(Looking North)



STAGE I CONSTRUCTION, STAGE II REMOVAL/TRAFFIC

(Looking North)



STAGE II CONSTRUCTION, STAGE III REMOVAL

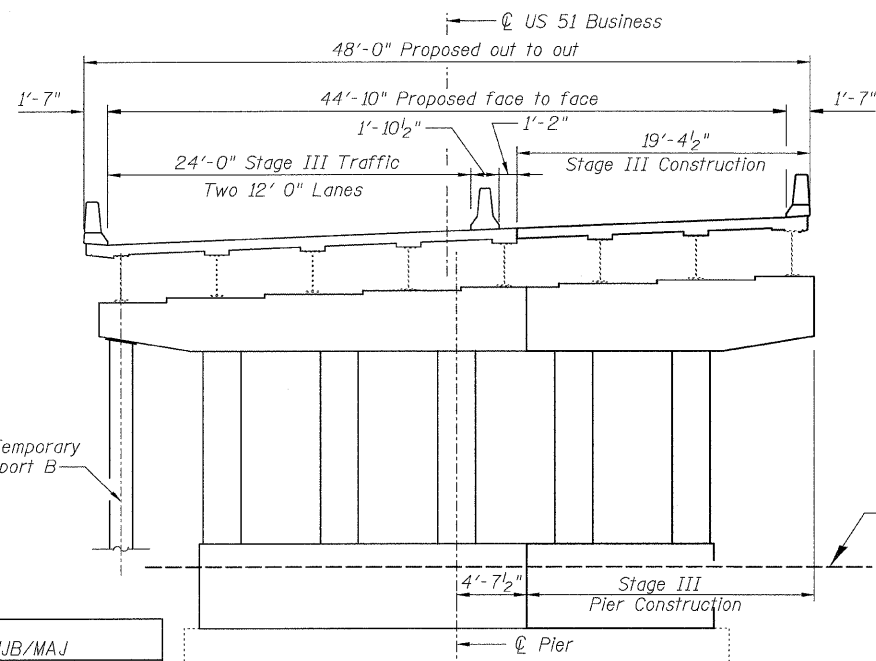
(Looking North)

Temporary Support System

The temporary support system at each location shall consist of three temporary supports. Each temporary support shall be capable of supporting a vertical load of 300 kips and a lateral load of 30 kips. The sequence of placement of the temporary supports at each location shall be as follows:

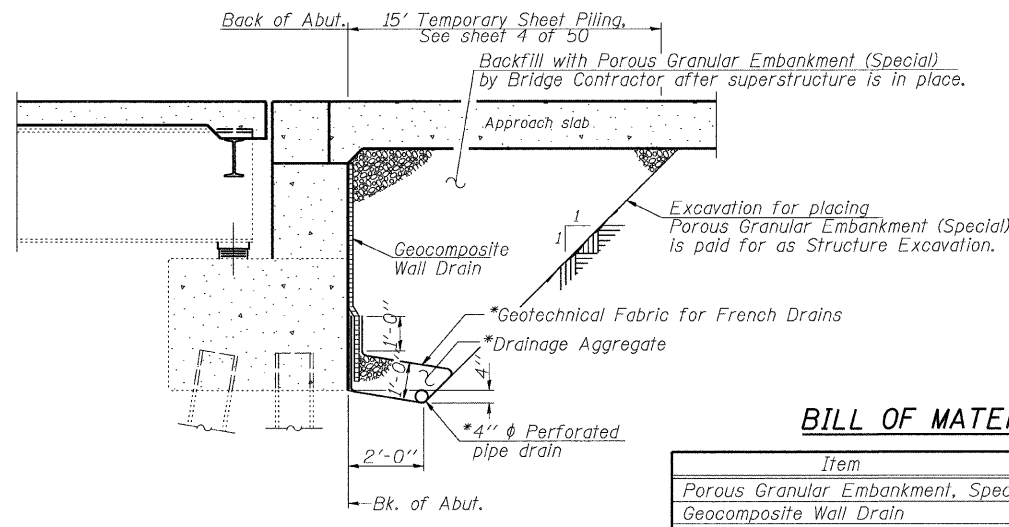
1. Temporary Support A shall be in place before Stage I pier removal and shall remain in place until Stage II construction is complete, the concrete has cured and the Stage II traffic has been removed.
2. Temporary Support B shall be in place before Stage II pier removal and shall remain in place until Stage III construction is complete and the concrete has cured.
3. Temporary Support C shall be in place before Stage II pier removal and shall remain in place until Stage II construction is complete, the concrete has cured and the Stage II traffic has been removed.

See Special Provisions for Temporary Support System.



STAGE III CONSTRUCTION/TRAFFIC

(Looking North)



SECTION THRU PILE SUPPORTED STUB ABUTMENT

(Horiz. dim. @ Rf. L's)

*Included in the cost of Pipe Underdrains for Structures.

Note:

All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 60110).

BILL OF MATERIALS

Item	Unit	Total
Porous Granular Embankment, Special	Cu. Yd.	171
Geocomposite Wall Drain	Sq. Yd.	85
Pipe Underdrain for Structures, 4"	Cu. Yd.	130

Note:

Pier 5, 6 & 8 typical stage lines shown North & South abutment stage lines similar to Superstructure. No staging on Piers 1, 2, 3, 4, 7 & 9

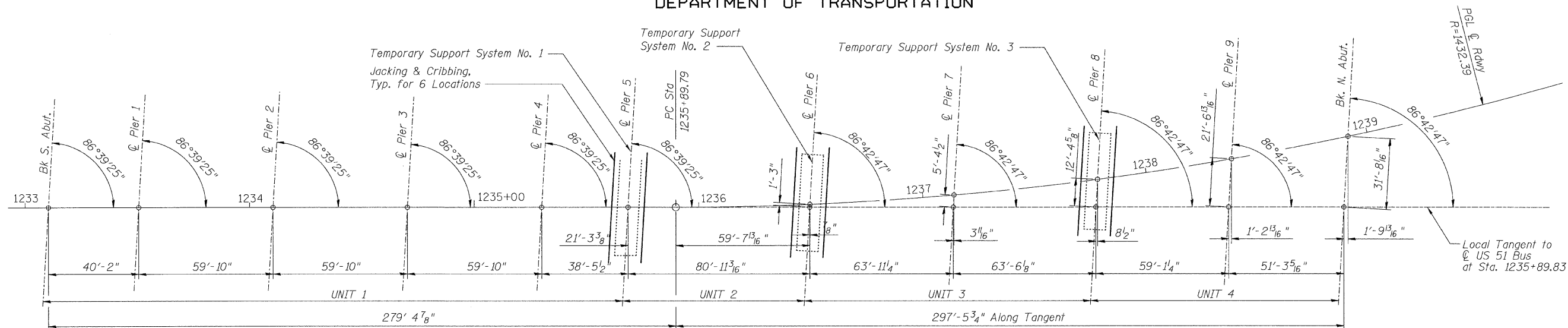
DESIGNED	MJB/MAJ
CHECKED	JFS
DRAWN	MSJ/MLB
CHECKED	MJB

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0085
Illinois Registration Number 184-004913

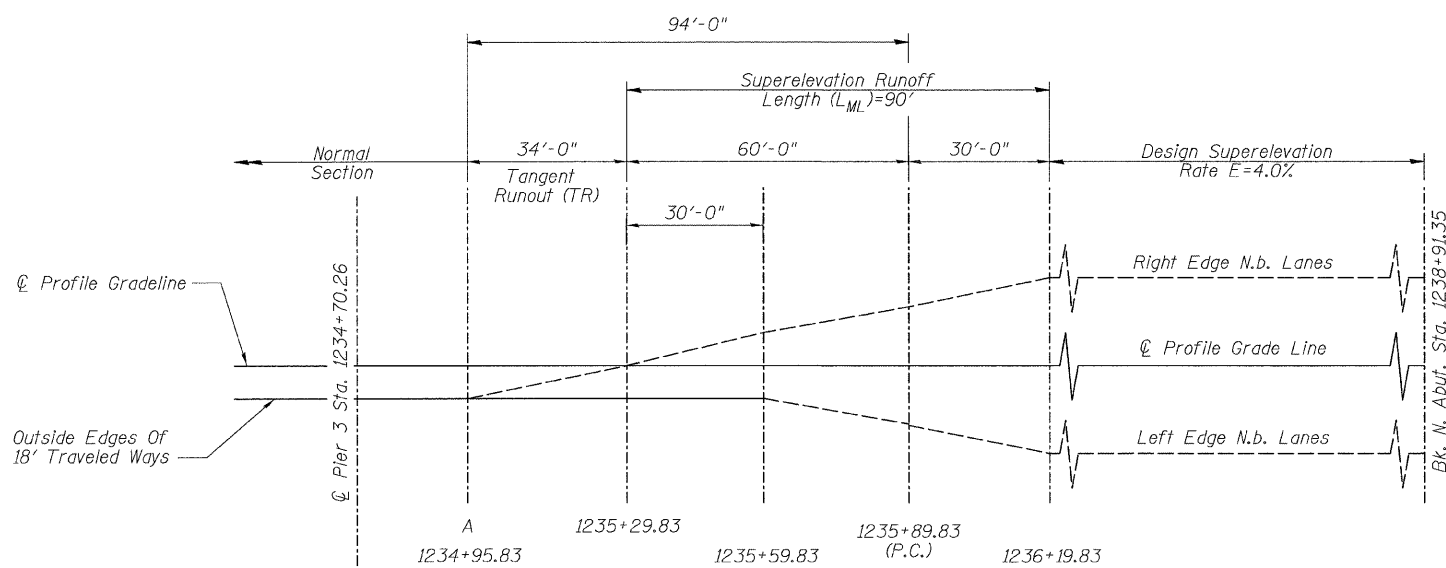
SHEET NO. 3	F.A.P. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 29
49 SHEETS	CONTRACT NO. 74215		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

STAGE CONSTRUCTION DETAILS
U.S. 51 BUSINESS OVER CERRO GORDO ST., N.S.R.R. & WABASH AVE.
F.A.P. ROUTE 710 SECTION (50Z-VB)BR
MACON COUNTY
STATION 1236+06.66
STRUCTURE NO. 058-0014

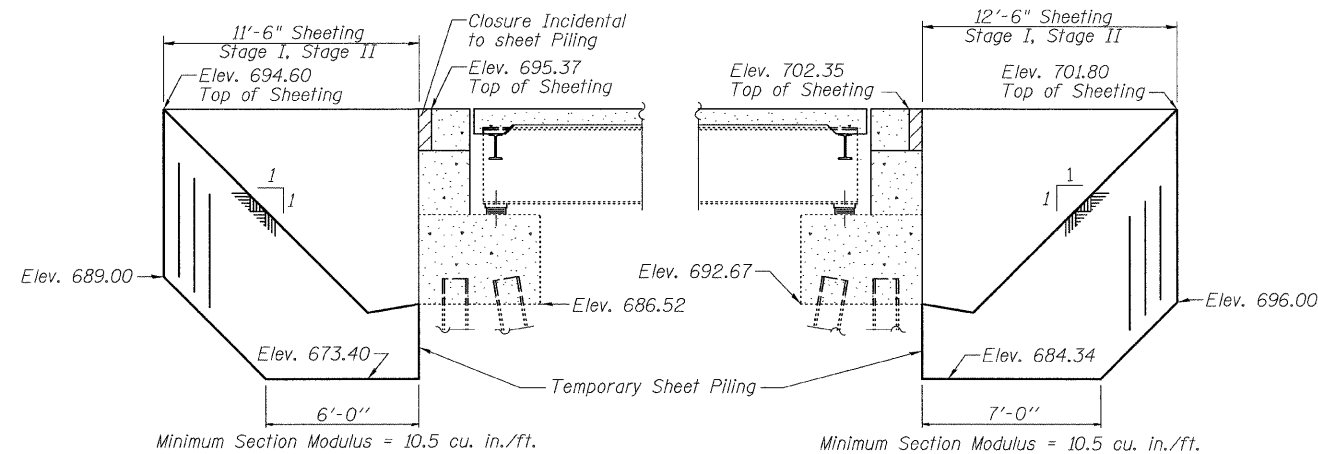
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



OFFSET SKETCH
Skew angles from 1963 plans



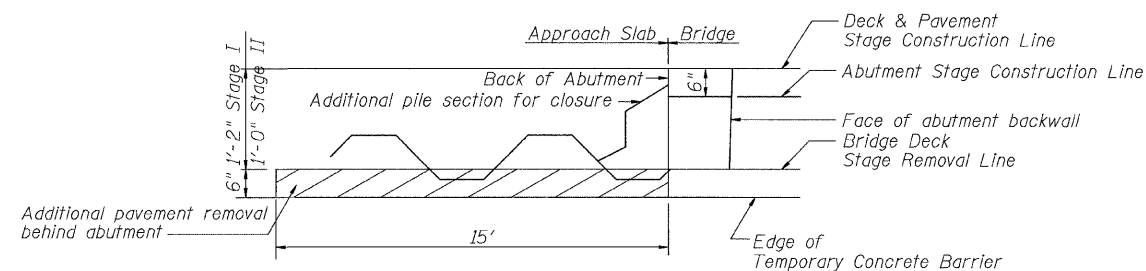
Curve to the Left			①	②	③
Station	Description	Dimensions	Left Edge N.B. Lanes	Centerline/PGL N.B. Lanes	Right Edge N.B. Lanes
1234+95.83	Normal Crown	TR=34	703.67	703.94	703.67
1235+29.83	Flat (Rt.)		704.71	704.98	704.98
1235+59.83	Reverse Crown (Rt.)		705.44	705.71	705.98
1235+89.83	2/3" S.E. (P.C.)		705.78	706.26	706.74
1236+19.83	Full S.E.	L=90	705.93	706.65	707.37



TEMPORARY SHEET PILING

BILL OF MATERIALS

Item	Unit	Total
Temporary Sheet Piling	Sq. Ft.	790



TEMPORARY SHEET PILING LAYOUT

**LAYOUT & SUPERELEVATION
TRANSITION DIAGRAMS
STRUCTURE NO. 058-0014**

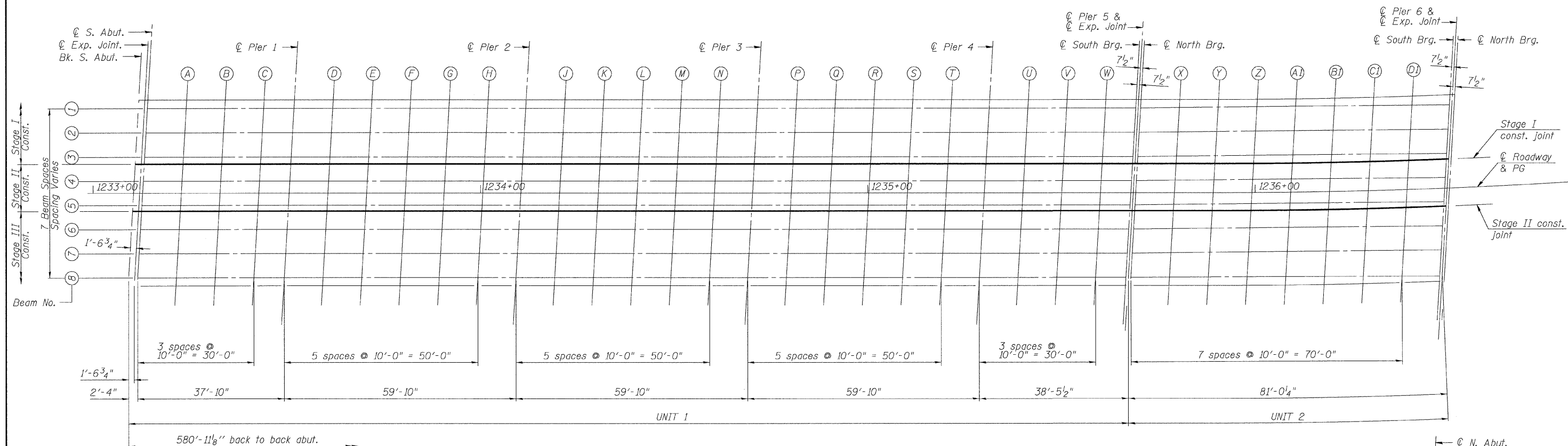
Note:
See sheets 33 thru 36 of 49
for abutment backwall staging.
See sheets 21 of 49 for approach
slab staging.

DESIGNED	MJB/MAJ
CHECKED	JFS
DRAWN	MSJ/MLB
CHECKED	MJB

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Foth Infrastructure & Environment, LLC
1610 Broadmead Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0085
Illinois Registration Number 164-004913

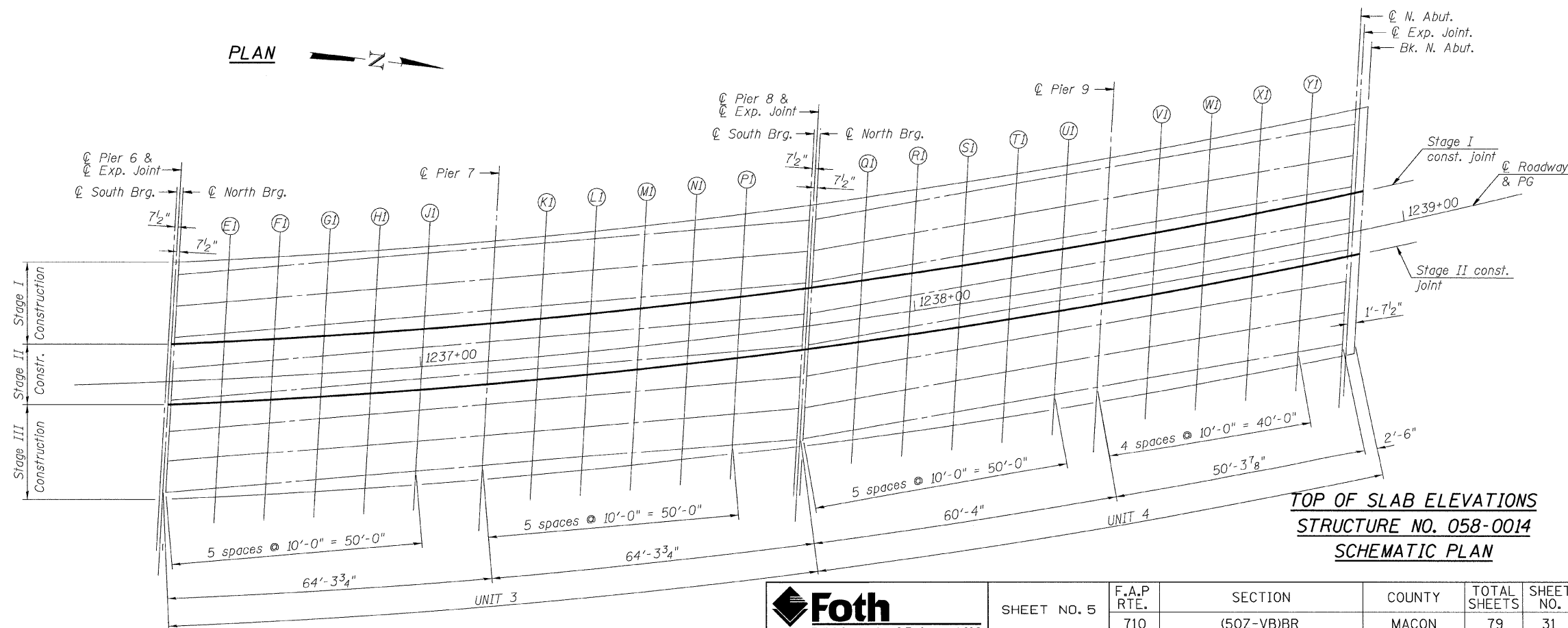
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49 SHEETS	CONTRACT NO. 74215		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Note:
All dimensions along ϕ of Roadway.
All 10' beam spaces along ϕ of Beams.

PLAN \rightarrow



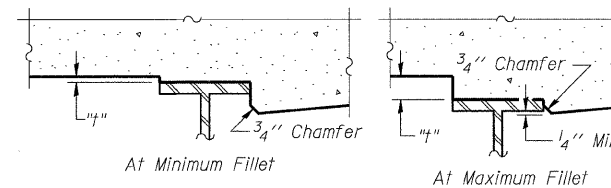
TOP OF SLAB ELEVATIONS
STRUCTURE NO. 058-0014
SCHEMATIC PLAN

DESIGNED	MJB/MAJ
CHECKED	JFS
DRAWN	MSJ/MLB
CHECKED	MJB

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Illinois Registration Number 184-094613

SHEET NO. 5 49 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	31
CONTRACT NO. 74215					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

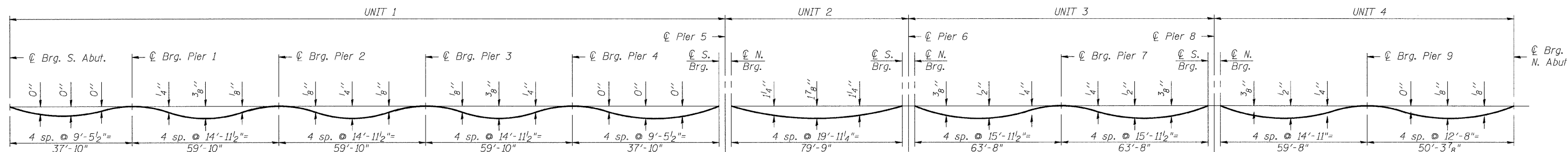
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Note: Calculated "t" varies from 1/2" min. to 8 1/4" max.

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



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 as shown below.

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	1233+11.70	21.88 L	695.08	695.08
Exp Joint	1233+13.26	21.88 L	695.15	695.15
S. Abut.	1233+14.04	21.88 L	695.19	695.19
A	1233+24.04	21.88 L	695.69	695.69
B	1233+34.04	21.88 L	696.19	696.19
C	1233+44.04	21.88 L	696.69	696.69
Q Pier 1	1233+51.87	21.88 L	697.08	697.08
D	1233+61.87	21.88 L	697.58	697.60
E	1233+71.87	21.88 L	698.08	698.11
F	1233+81.87	21.88 L	698.58	698.61
G	1233+91.87	21.88 L	699.08	699.10
H	1234+01.87	21.88 L	699.58	699.59
Q Pier 2	1234+11.70	21.88 L	700.07	700.07
J	1234+21.70	21.88 L	700.56	700.57
K	1234+31.70	21.88 L	701.03	701.05
L	1234+41.70	21.88 L	701.48	701.50
M	1234+51.70	21.88 L	701.91	701.92
N	1234+61.70	21.88 L	702.32	702.33
Q Pier 3	1234+71.54	21.88 L	702.71	702.71
P	1234+81.54	21.88 L	703.08	703.09
Q	1234+91.54	21.88 L	703.43	703.45
R	1235+01.54	21.88 L	703.77	703.80
S	1235+11.54	21.88 L	704.09	704.11
T	1235+21.54	21.88 L	704.38	704.40

BEAM 1 (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Q Pier 4	1235+31.37	21.88 L	704.66	704.66
U	1235+41.37	21.88 L	704.92	704.92
V	1235+51.37	21.88 L	705.16	705.16
W	1235+61.37	21.88 L	705.37	705.37
S. Brg. Pier 5	1235+69.20	21.88 L	705.47	705.47
Pier 5 & Exp. Joint	1235+69.83	21.88 L	705.48	705.48
N. Brg. Pier 5	1235+70.45	21.88 L	705.49	705.49
X	1235+80.46	21.99 L	705.60	705.65
Y	1235+89.83	22.10 L	705.68	705.78
Z	1236+00.65	22.17 L	705.73	705.86
A1	1236+10.80	22.17 L	705.76	705.91
B1	1236+20.96	22.10 L	705.78	705.91
C1	1236+31.12	21.95 L	705.87	705.98
D1	1236+41.27	21.74 L	705.95	706.01
S. Brg. Pier 6	1236+51.10	21.45 L	706.01	706.01
Pier 6 & Exp. Joint	1236+51.73	21.43 L	706.02	706.02
N. Brg. Pier 6	1236+52.37	21.46 L	706.02	706.02
E1	1236+62.52	21.85 L	706.03	706.06
F1	1236+72.67	22.16 L	706.03	706.06
G1	1236+82.83	22.41 L	706.01	706.05
H1	1236+92.98	22.58 L	705.97	706.00
J1	1237+03.14	22.69 L	705.92	705.94

BEAM 1 (CONTINUED)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Q Pier 7	1237+17.23	22.71 L	705.82	705.82
K1	1237+27.39	22.64 L	705.72	705.74
L1	1237+37.55	22.50 L	705.61	705.64
M1	1237+47.70	22.29 L	705.48	705.53
N1	1237+57.86	22.01 L	705.34	705.38
P1	1237+68.00	21.65 L	705.18	705.21
S. Brg. Pier 8	1237+81.64	21.09 L	704.94	704.94
Pier 8 & Exp. Joint	1237+81.28	21.06 L	704.93	704.93
N. Brg. Pier 8	1237+82.93	21.08 L	704.91	704.91
Q1	1237+93.07	21.45 L	704.67	704.70
R1	1238+03.22	21.74 L	704.42	704.43
S1	1238+13.37	21.96 L	704.15	704.19
T1	1238+23.53	22.10 L	703.86	703.89
U1	1238+33.68	22.17 L	703.55	703.57
S. Brg. Pier 9	1238+43.82	22.17 L	703.23	703.23
V1	1238+53.97	22.09 L	702.89	702.89
W1	1238+64.13	21.95 L	702.54	702.54
X1	1238+74.28	21.73 L	702.17	702.18
Y1	1238+84.43	21.44 L	701.78	701.79
N. Abut.	1238+94.69	21.11 L	701.37	701.37
Exp. Joint	1238+95.51	21.08 L	701.33	701.33
Bk. N. Abut.	1238+96.21	21.02 L	701.26	701.26

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 058-0014

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0025
Illinois Registration Number 184-004913

SHEET NO. 6 49 SHEETS	F.A.P RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 32
	CONTRACT NO. 74215				
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
South			
End S. Appr. Slab	1232+82.25	22.83 L	693.45
A	1232+92.25	22.83 L	693.95
B	1232+97.25	22.83 L	694.20
C	1233+02.23	22.83 L	694.45
D	1233+12.23	22.83 L	694.95
North			
E	1238+98.05	22.83 L	701.11
F	1239+08.24	22.83 L	700.66
G	1239+13.24	22.83 L	700.43
H	1239+18.46	22.83 L	700.19
End N. Appr. Slab	1239+27.96	22.83 L	699.70

WEST EDGE OF PAVEMENT

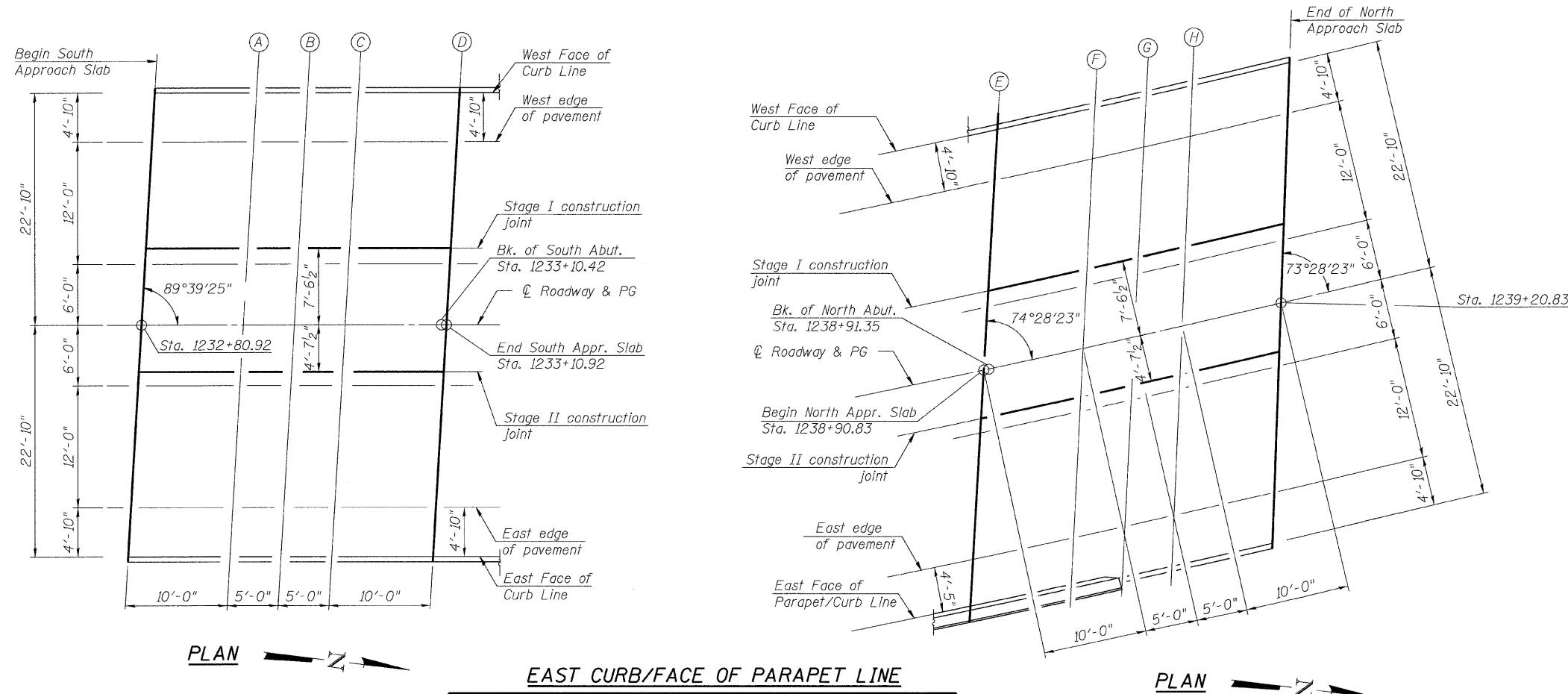
Location	Station	Offset	Theoretical Grade Elevations
South			
End S. Appr. Slab	1232+81.97	18.00 L	693.55
A	1232+91.97	18.00 L	694.05
B	1232+96.97	18.00 L	694.30
C	1233+01.97	18.00 L	694.55
D	1233+11.97	18.00 L	695.05
North			
E	1238+96.36	18.00 L	693.55
F	1239+06.49	18.00 L	694.05
G	1239+11.39	18.00 L	694.30
H	1239+16.65	18.00 L	694.55
End N. Appr. Slab	1239+26.12	18.00 L	695.05

STAGE I CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
South			
End S. Appr. Slab	1232+81.36	7.54 L	693.36
A	1232+91.36	7.54 L	694.86
B	1232+96.36	7.54 L	695.11
C	1233+01.36	7.54 L	695.36
D	1233+11.36	7.54 L	695.86
North			
E	1238+93.49	7.54 L	701.96
F	1239+03.49	7.54 L	701.53
G	1239+08.53	7.54 L	701.31
H	1239+13.57	7.54 L	701.08
End N. Appr. Slab	1239+22.96	7.54 L	700.64

☉ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
South			
End S. Appr. Slab	1232+80.92	0	693.22
A	1232+90.92	0	693.72
B	1232+95.92	0	693.97
C	1233+00.92	0	694.22
D	1233+10.92	0	694.72
North			
E	1238+90.83	0	702.35
F	1239+00.83	0	701.93
G	1239+05.83	0	701.70
H	1239+10.83	0	701.48
End N. Appr. Slab	1239+20.83	0	701.05



STAGE II CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
South			
End S. Appr. Slab	1232+80.65	4.63 R	693.13
A	1232+90.65	4.63 R	693.63
B	1232+95.65	4.63 R	693.88
C	1233+00.65	4.63 R	694.13
D	1233+10.65	4.63 R	694.63
North			
E	1238+90.08	4.63 R	702.59
F	1239+00.05	4.63 R	702.17
G	1239+05.04	4.63 R	701.90
H	1239+10.04	4.63 R	701.72
End N. Appr. Slab	1239+19.34	4.63 R	701.30

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
South			
End S. Appr. Slab	1232+79.87	18.00 R	692.89
A	1232+89.87	18.00 R	693.38
B	1232+94.87	18.00 R	693.63
C	1232+99.87	18.00 R	693.88
D	1233+09.87	18.00 R	694.38
North			
E	1238+86.47	18.00 R	703.27
F	1238+96.34	18.00 R	702.86
G	1239+01.29	18.00 R	702.65
H	1239+06.23	18.00 R	702.43
End N. Appr. Slab	1239+15.44	18.00 R	702.01

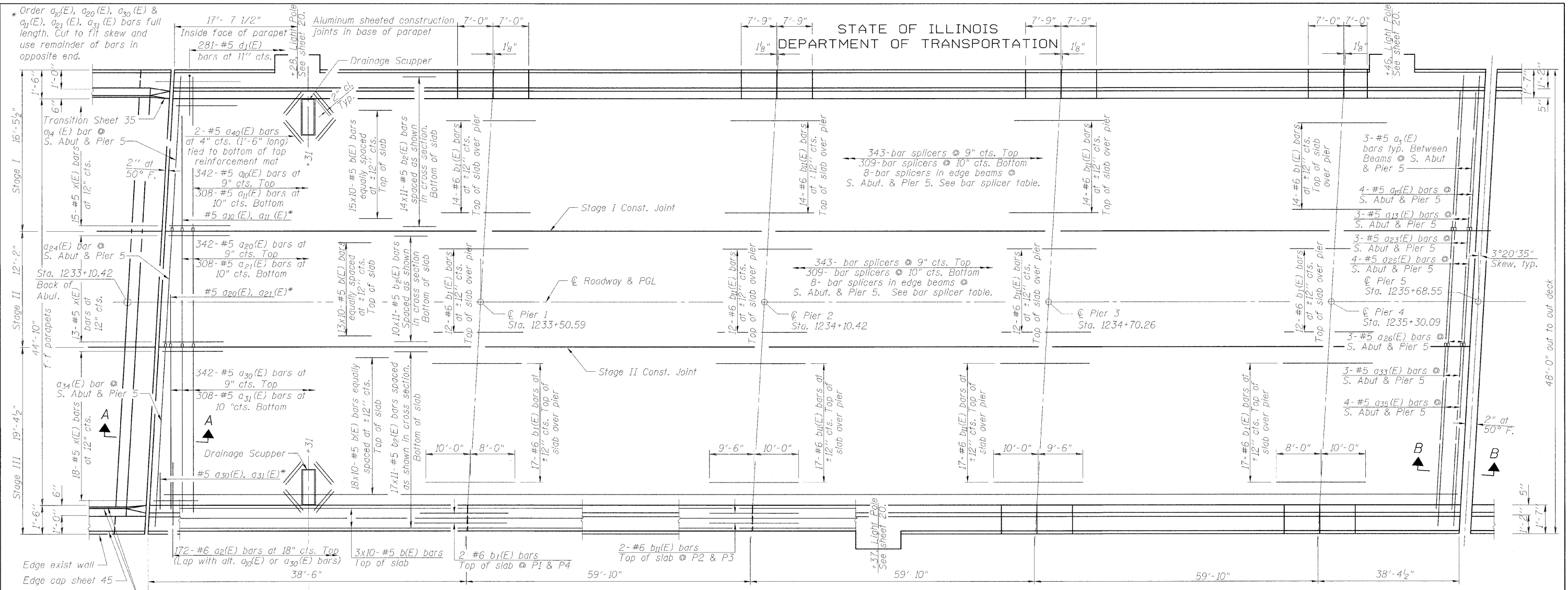
EAST CURB/FACE OF PARAPET LINE

Location	Station	Offset	Theoretical Grade Elevations
South			
End S. Appr. Slab	1232+79.59	22.83 R	692.74
A	1232+89.59	22.83 R	693.24
B	1232+94.59	22.83 R	693.49
C	1232+99.73	22.83 R	693.74
D	1234+09.73	22.83 R	694.24
North			
E	1238+84.88	22.42 R	703.58
F	1238+94.70	22.42 R	703.17
G	1238+99.62	22.83 R	702.96
H	1239+04.54	22.83 R	702.75
End N. Appr. Slab	1239+13.72	22.83 R	702.33

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

TOP OF - APPROACH
SLAB ELEVATIONS
STRUCTURE NO. 058-0014

SHEET NO. 12	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	38
49 SHEETS	CONTRACT NO. 74215				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		



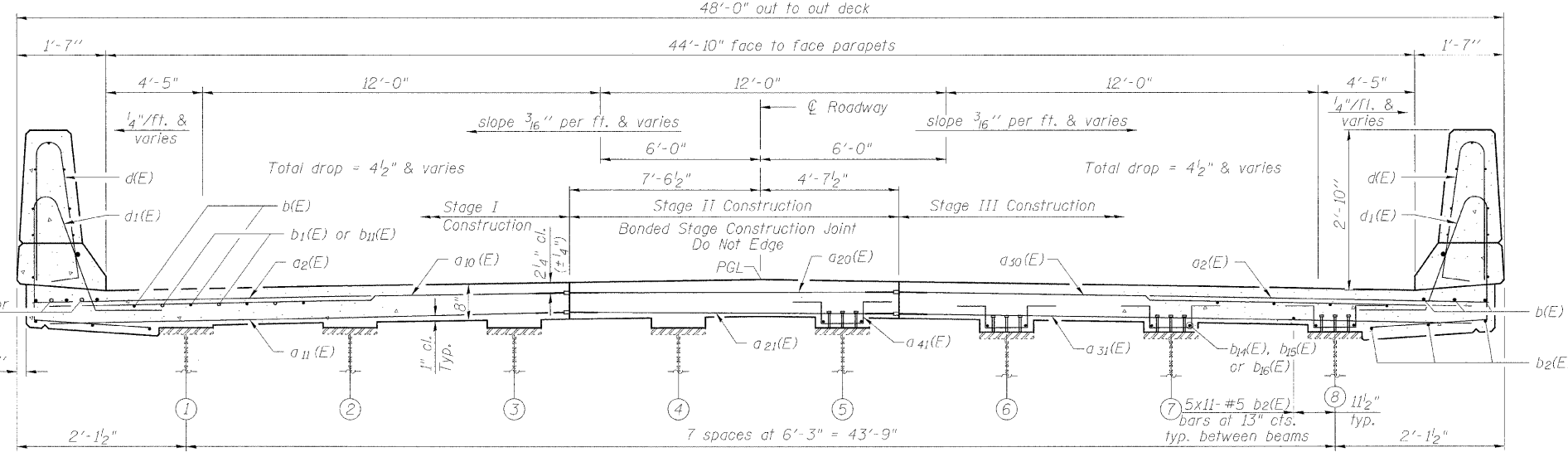
* Order $a_{10}(E)$, $a_{20}(E)$, $a_{30}(E)$ & $a_{11}(E)$, $a_{21}(E)$, $a_{31}(E)$ bars full length. Cut to fit skew and use remainder of bars in opposite end.

Notes:
 See Sheet 17 of 49 for superstructure details and Bill of Material.
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 See Sheets 17 thru 20 of 49 for parapet reinforcement.
 See Sheet 26 of 49 for schedule of $a_{41}(E)$ bars.
 See Sheet 26 of 49 for schedule of $b_{14}(E)$ bars.

Minimum reinforcement bar lap splice length
 #5 2'-2"

Deck dimensions are at right angles to the C.L. .
 Beam spaces and overhangs are at right angles to the beams.

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB
S-2-L(K30°)



CROSS SECTION NEAR PIER (Looking North) NEAR MIDSPAN

BAR SPLICER TABLE

At Stage I Const. Joint
 Connect $a_{10}(E)$ bars to $a_{20}(E)$ bars
 Connect $a_{11}(E)$ bars to $a_{21}(E)$ bars
 Connect $a_{14}(E)$ bar to $a_{24}(E)$ bar
 Connect $a_{13}(E)$ bars to $a_{23}(E)$ bars
 Connect $a_{15}(E)$ bars to $a_{25}(E)$ bars

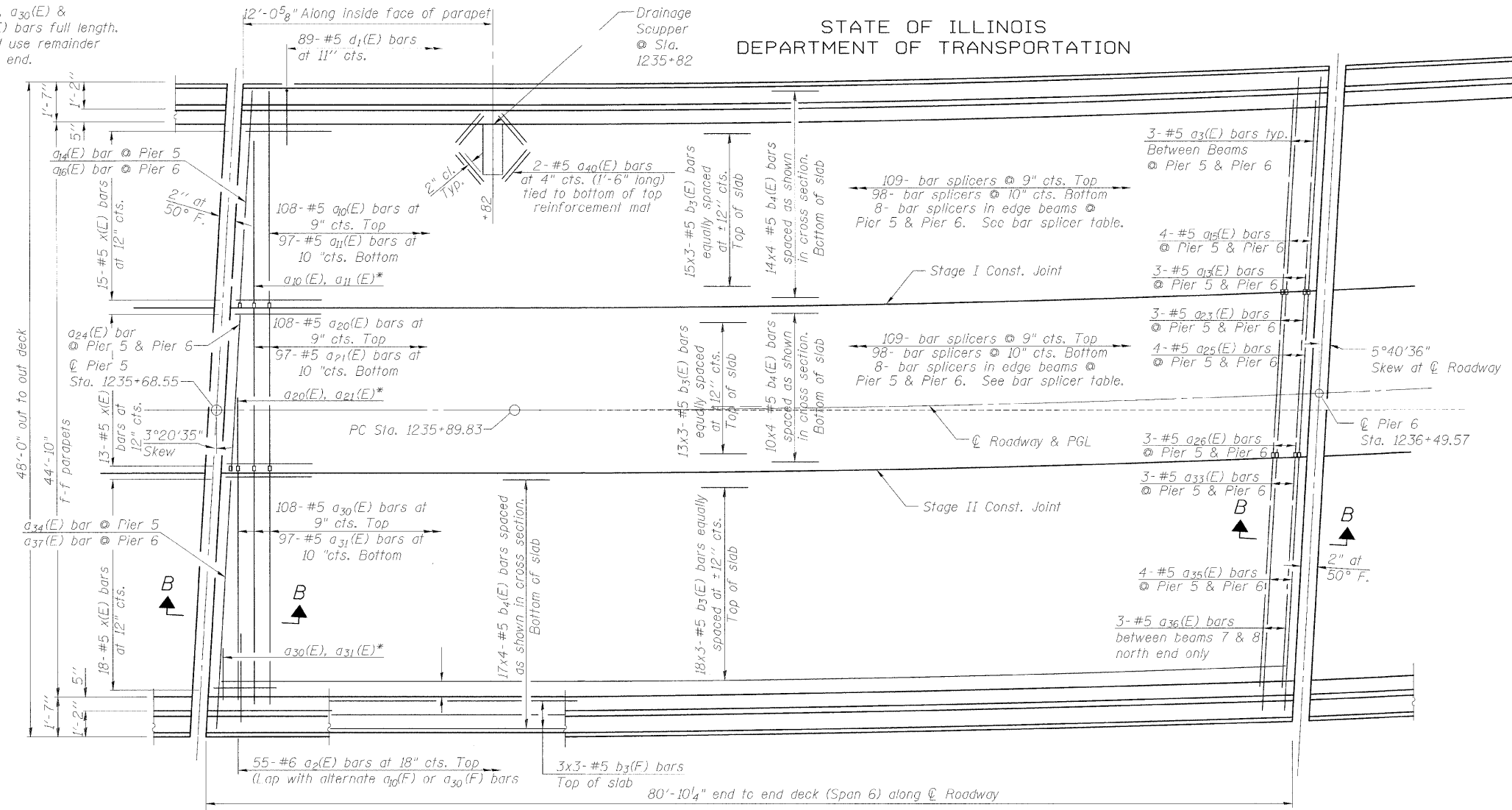
At Stage II Const. Joint
 Connect $a_{20}(E)$ bars to $a_{30}(E)$ bars
 Connect $a_{21}(E)$ bars to $a_{31}(E)$ bars
 Connect $a_{24}(E)$ bar to $a_{34}(E)$ bar
 Connect $a_{26}(E)$ bars to $a_{33}(E)$ bars
 Connect $a_{25}(E)$ bars to $a_{35}(E)$ bars

SUPERSTRUCTURE STRUCTURE NO. 058-0014

 Foth Foth Infrastructure & Environment, LLC 1610 Broadview Drive Champaign, IL 61821 Phone: 217-352-4100 Fax: 217-352-0085 Illinois Registration Number 184.004813	SHEET NO. 13	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	49 SHEETS	710	(50Z-VB)BR	MACON	79	39
		FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 74215				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order $a_{10}(E)$, $a_{20}(E)$, $a_{30}(E)$ & $a_{11}(E)$, $a_{21}(E)$, $a_{31}(E)$ bars full length. Cut to fit skew and use remainder of bars in opposite end.



PARTIAL PLAN - UNIT 2 (SPAN 6)

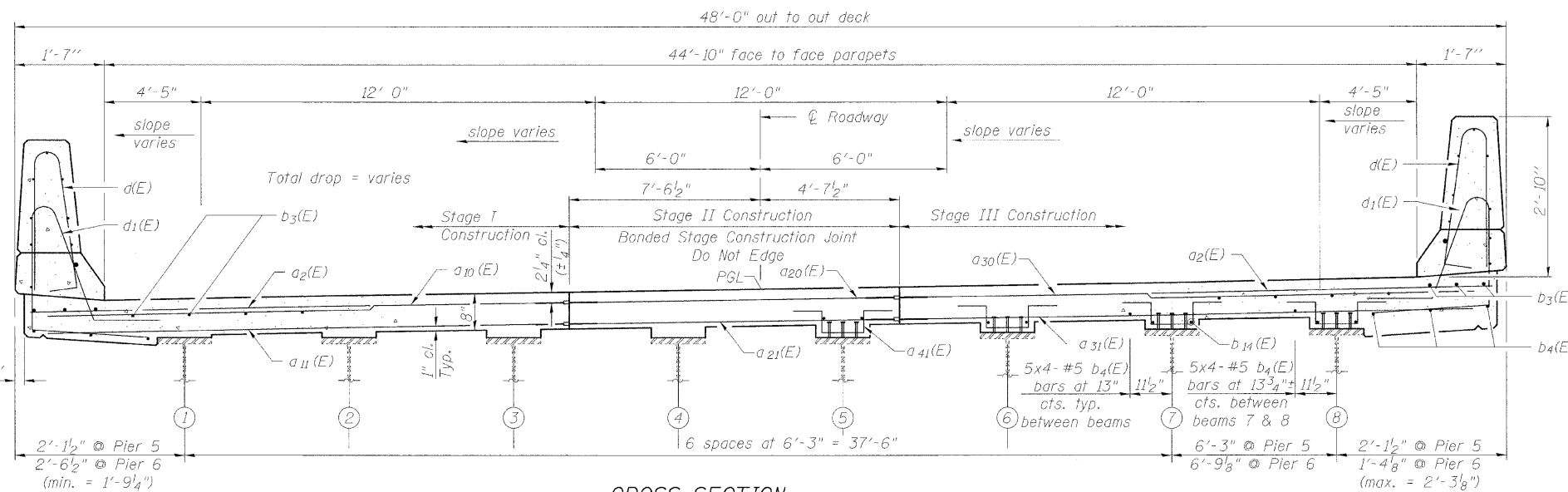
BAR SPLICER TABLE

At Stage I Const. Joint

Connect $a_{10}(E)$ bars to $a_{20}(E)$ bars
Connect $a_{11}(E)$ bars to $a_{21}(E)$ bars
Connect $a_{14}(E)$ bar to $a_{24}(E)$ bar (at Pier 5)
Connect $a_{16}(E)$ bar to $a_{26}(E)$ bar (at Pier 6)
Connect $a_{13}(E)$ bars to $a_{23}(E)$ bars
Connect $a_{15}(E)$ bars to $a_{25}(E)$ bars

At Stage II Const. Joint

Connect $a_{20}(E)$ bars to $a_{30}(E)$ bars
Connect $a_{21}(E)$ bars to $a_{31}(E)$ bars
Connect $a_{24}(E)$ bar to $a_{34}(E)$ bar (at Pier 5)
Connect $a_{26}(E)$ bar to $a_{36}(E)$ bar (at Pier 6)
Connect $a_{25}(E)$ bars to $a_{35}(E)$ bars



CROSS SECTION
(Looking North)

SUPERSTRUCTURE
STRUCTURE NO. 058-0014

Notes:
See Sheet 17 of 49 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheets 17 thru 20 of 49 for parapet reinforcement.
See Sheet 26 of 49 for schedule of $a_{41}(E)$ bars.
See Sheet 26 of 49 for schedule of $b_{14}(E)$ bars.

Minimum reinforcement bar lap splice length
#5 2'-2"

Deck dimensions are at right angles to the \varnothing .
Beam spaces and overhangs are at right angles to the beams.

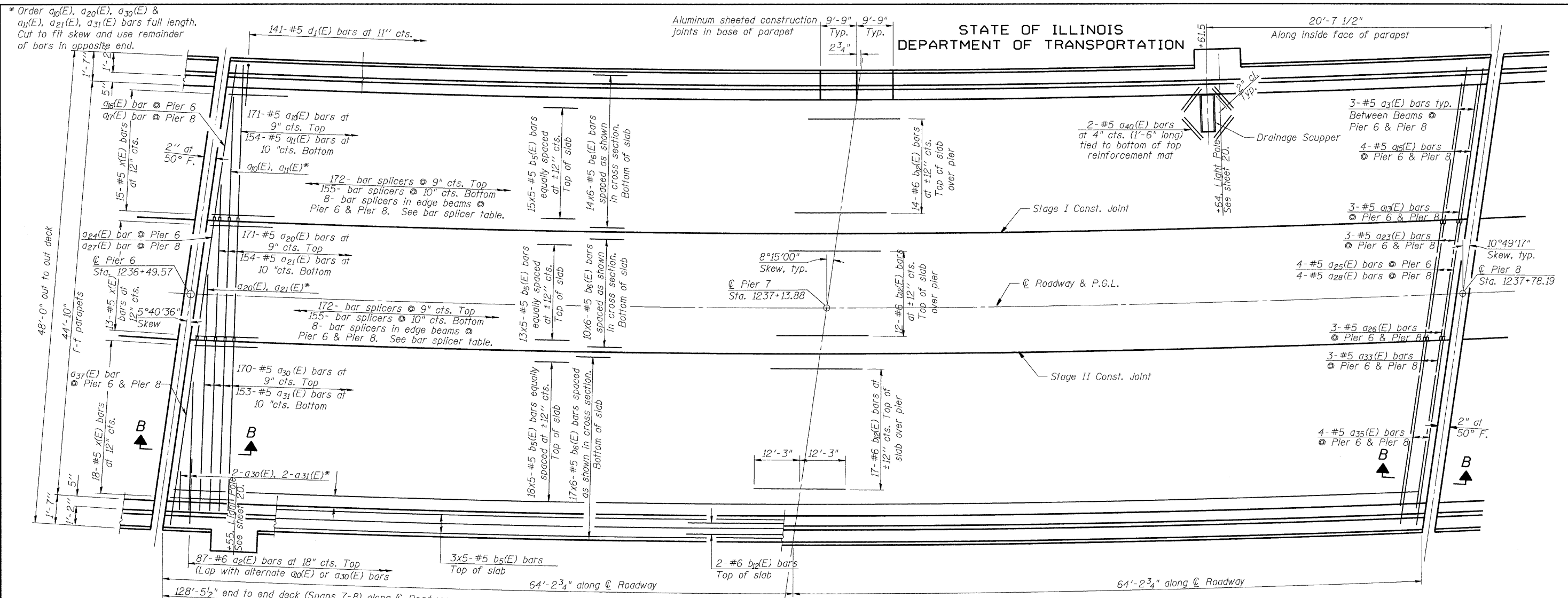
DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

S-2-L($\leq 30^\circ$)



SHEET NO. 14	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49 SHEETS	710	(50Z-VB)BR	MACON	79	40
CONTRACT NO. 74215					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

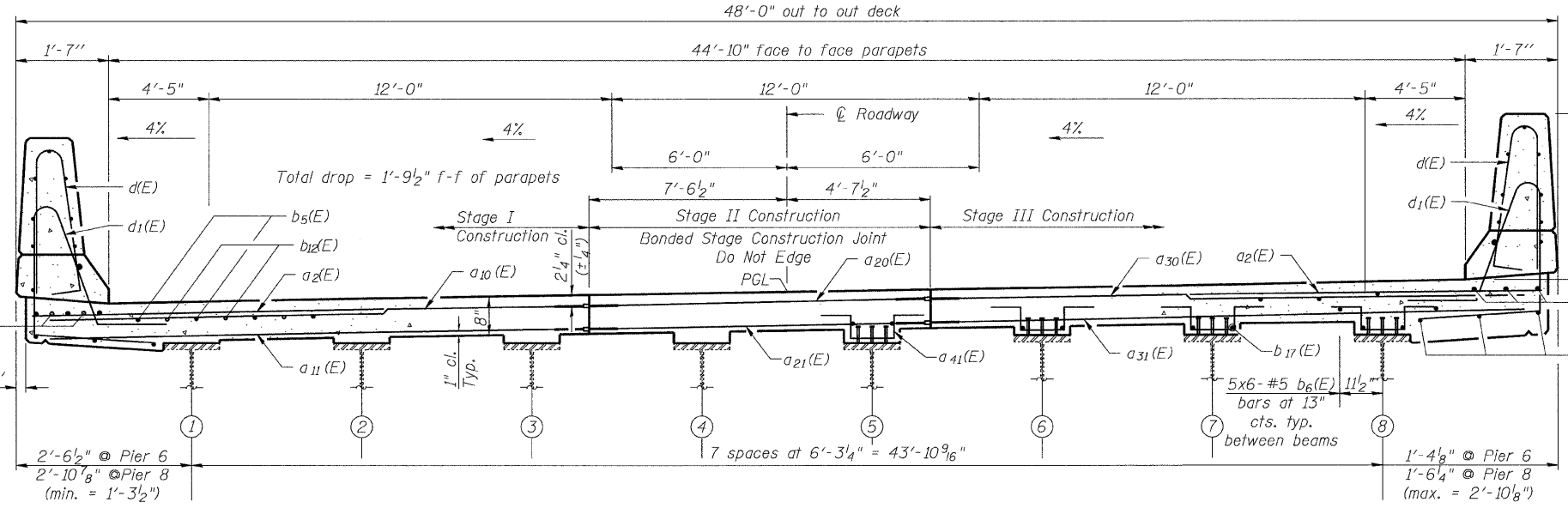


PARTIAL PLAN - UNIT 3 (SPANS 7-8)

Notes:
See Sheet 17 of 49 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheets 17 thru 20 of 49 for parapet reinforcement.
See Sheet 26 of 49 for schedule of a₄₁(E) bars.
See Sheet 26 of 49 for schedule of b₁₄(E) bars.

Minimum reinforcement bar lap splice length
#5 2'-2"

Deck dimensions are at right angles to the ϕ .
Beam spaces and overhangs are at right angles to the beams.



NEAR PIER CROSS SECTION NEAR MIDSPAN (Looking North)

BAR SPLICER TABLE

At Stage I Const. Joint
Connect a₁₀(E) bars to a₂₀(E) bars
Connect a₁₁(E) bars to a₂₁(E) bars
Connect a₁₆(E) bar to a₂₄(E) bar (at Pier 6)
Connect a₁₇(E) bar to a₂₇(E) bar (at Pier 8)
Connect a₁₃(E) bars to a₂₃(E) bars
Connect a₁₅(E) bars to a₂₅(E) bars (at Pier 6)
Connect a₁₅(E) bars to a₂₈(E) bars (at Pier 8)

At Stage II Const. Joint
Connect a₂₀(E) bars to a₃₀(E) bars
Connect a₂₁(E) bars to a₃₁(E) bars
Connect a₂₄(E) bar to a₃₇(E) bar (at Pier 6)
Connect a₂₇(E) bar to a₃₇(E) bar (at Pier 8)
Connect a₂₆(E) bars to a₃₃(E) bars
Connect a₂₅(E) bars to a₃₅(E) bars (at Pier 6)
Connect a₂₈(E) bars to a₃₅(E) bars (at Pier 8)

SUPERSTRUCTURE
STRUCTURE NO. 058-0014

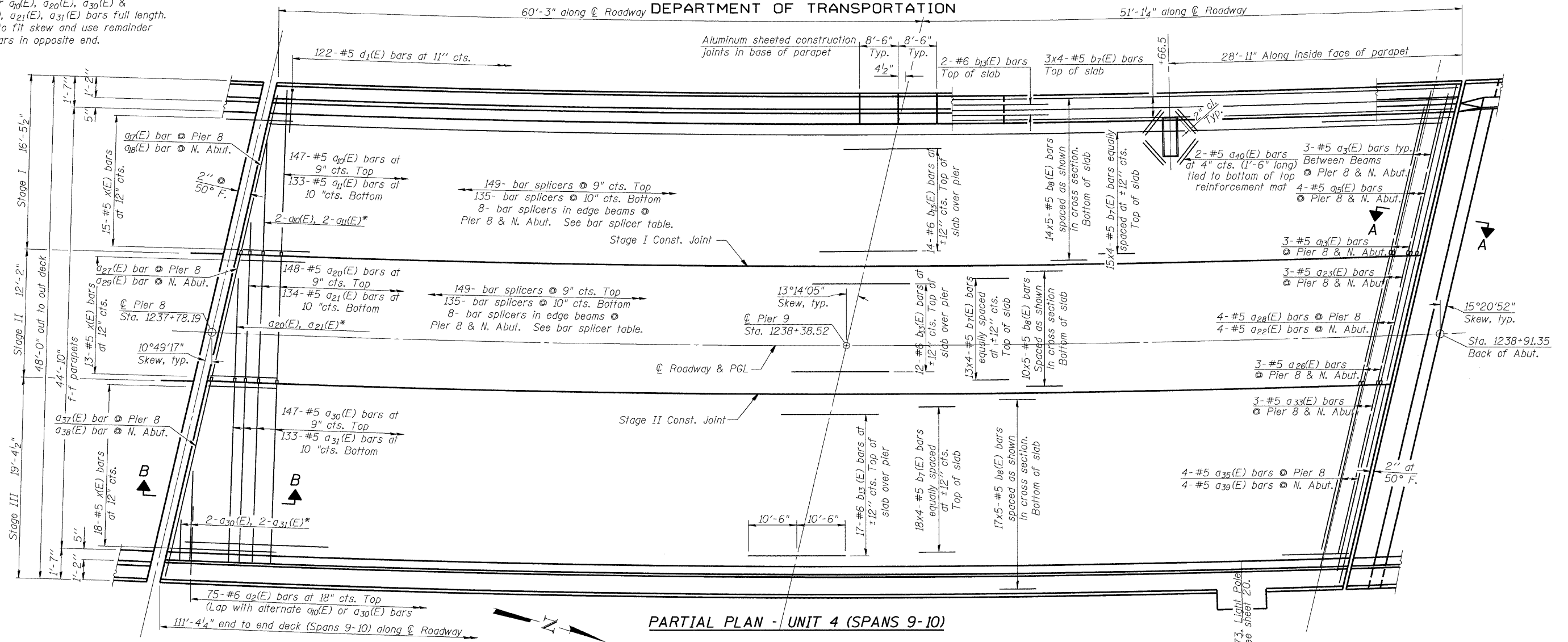
DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB
S-2-L(K30°)

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmead Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0085
Illinois Registration Number 184-004813

SHEET NO. 15	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49 SHEETS	710	(50Z-VB)BR	MACON	79	41
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 74215					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order $a_{10}(E)$, $a_{20}(E)$, $a_{30}(E)$ & $a_{11}(E)$, $a_{21}(E)$, $a_{31}(E)$ bars full length. Cut to fit skew and use remainder of bars in opposite end.

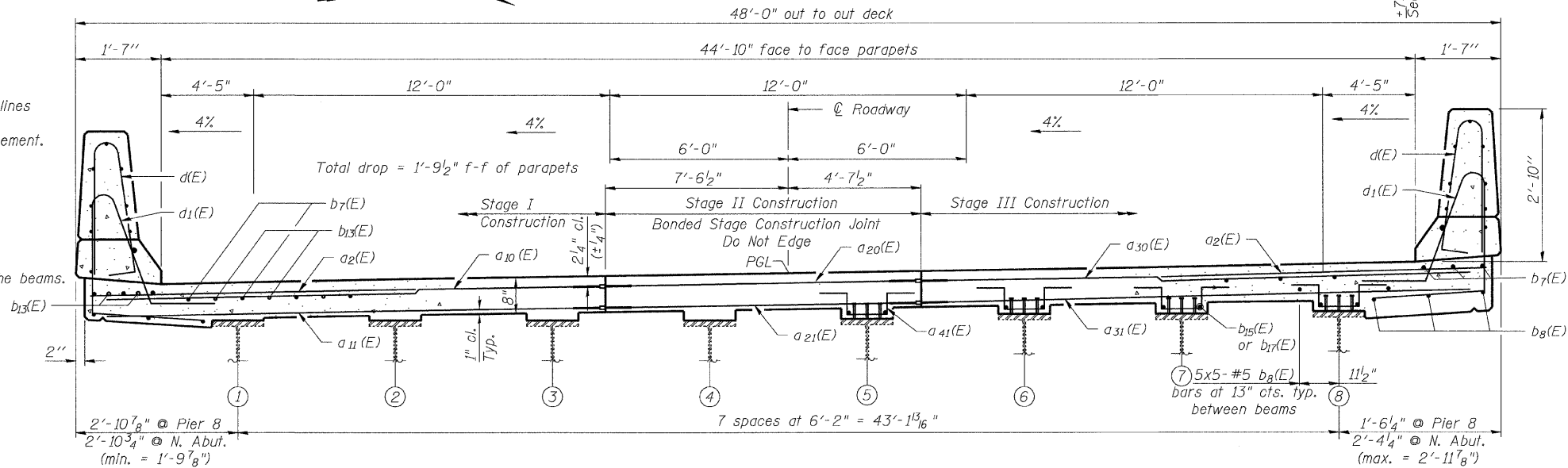


PARTIAL PLAN - UNIT 4 (SPANS 9-10)

Notes:
See Sheet 17 of 49 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheets 17 thru 20 of 49 for parapet reinforcement.
See Sheet 26 of 49 for schedule of $a_{41}(E)$ bars.
See Sheet 26 of 49 for schedule of $b_{14}(E)$ bars.

Minimum reinforcement bar lap splice length
#5 2'-2"

Deck dimensions are at right angles to the \perp .
Beam spaces and overhangs are at right angles to the beams.



CROSS SECTION
(Looking North)

BAR SPLICER TABLE

At Stage I Const. Joint
Connect $a_{10}(E)$ bars to $a_{20}(E)$ bars
Connect $a_{11}(E)$ bars to $a_{21}(E)$ bars
Connect $a_{17}(E)$ bar to $a_{27}(E)$ bar (at Pier 8)
Connect $a_{18}(E)$ bar to $a_{28}(E)$ bar (at N. Abut.)
Connect $a_{13}(E)$ bars to $a_{23}(E)$ bars
Connect $a_{15}(E)$ bars to $a_{25}(E)$ bars (at Pier 8)
Connect $a_{15}(E)$ bars to $a_{22}(E)$ bars (at N. Abut.)

At Stage II Const. Joint
Connect $a_{20}(E)$ bars to $a_{30}(E)$ bars
Connect $a_{21}(E)$ bars to $a_{31}(E)$ bars
Connect $a_{27}(E)$ bar to $a_{37}(E)$ bar (at Pier 8)
Connect $a_{29}(E)$ bar to $a_{39}(E)$ bar (at N. Abut.)
Connect $a_{26}(E)$ bars to $a_{33}(E)$ bars
Connect $a_{28}(E)$ bars to $a_{35}(E)$ bars (at Pier 8)
Connect $a_{22}(E)$ bars to $a_{39}(E)$ bars (at N. Abut.)

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

S-2-L(30°)

SUPERSTRUCTURE
STRUCTURE NO. 058-0014



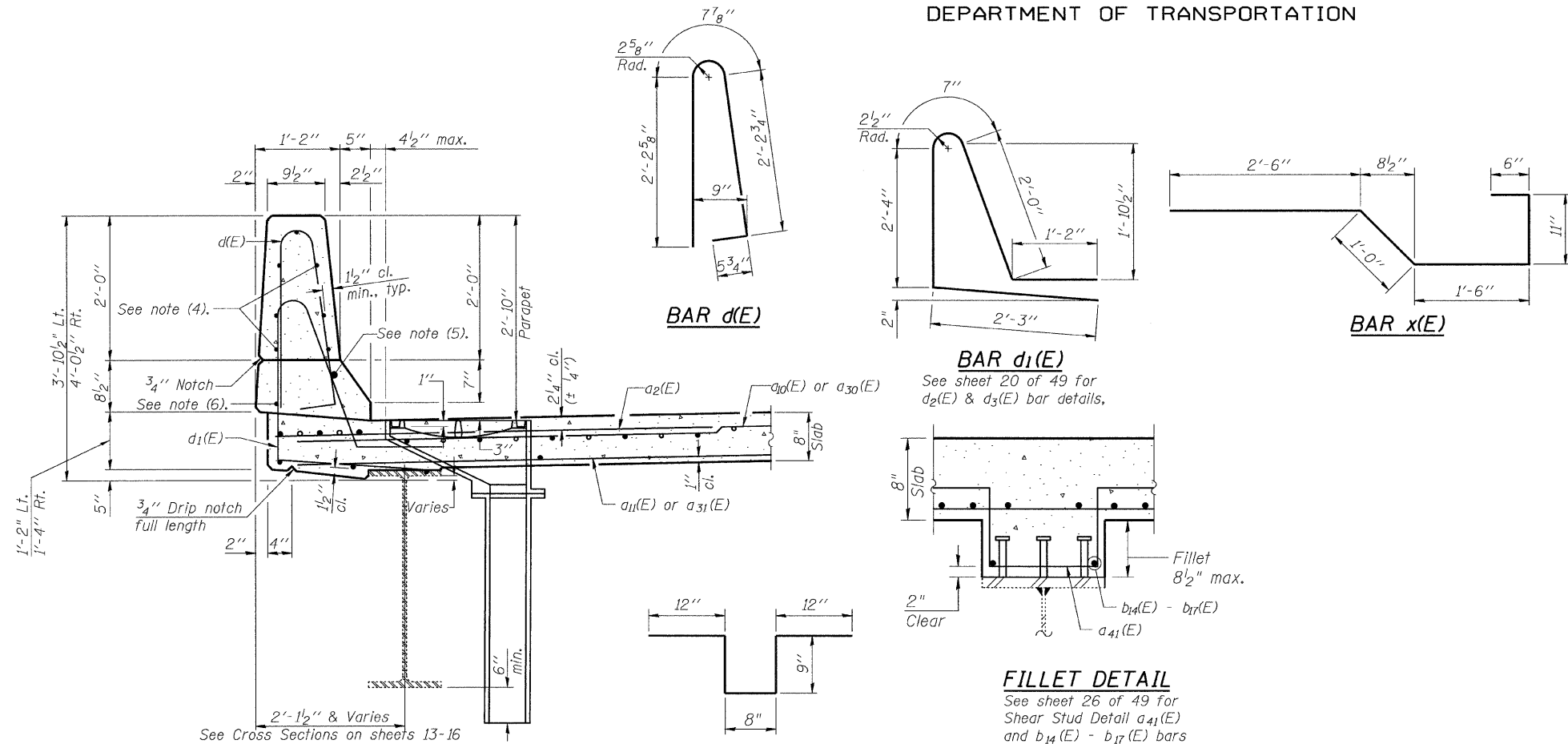
SHEET NO. 16	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49 SHEETS	710	(50Z-VB)BR	MACON	79	42
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 74215					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
BILL OF MATERIAL

SUPERSTRUCTURE
BILL OF MATERIAL (CON'T)

Bar	No.	Size	Length	Shape
a ₂ (E)	778	#6	5'-0"	—
a ₃ (E)	117	#5	7'-2"	—
a ₁₀ (E)	773	#5	15'-3"	—
a ₁₁ (E)	697	#5	15'-3"	—
a ₁₃ (E)	24	#5	1'-9"	—
a ₁₄ (E)	3	#5	13'-8"	—
a ₁₅ (E)	32	#5	15'-6"	—
a ₁₆ (E)	2	#5	13'-3"	—
a ₁₇ (E)	2	#5	13'-0"	—
a ₁₈ (E)	1	#5	13'-3"	—
a ₂₀ (E)	773	#5	11'-6"	—
a ₂₁ (E)	697	#5	11'-6"	—
a ₂₂ (E)	4	#5	12'-0"	—
a ₂₃ (E)	24	#5	4'-9"	—
a ₂₄ (E)	5	#5	11'-6"	—
a ₂₅ (E)	20	#5	11'-6"	—
a ₂₆ (E)	24	#5	1'-6"	—
a ₂₇ (E)	2	#5	11'-9"	—
a ₂₈ (E)	8	#5	11'-9"	—
a ₂₉ (E)	1	#5	12'-0"	—
a ₃₀ (E)	773	#5	18'-6"	—
a ₃₁ (E)	697	#5	18'-6"	—
a ₃₃ (E)	24	#5	5'-1"	—
a ₃₄ (E)	3	#5	17'-0"	—
a ₃₅ (E)	28	#5	18'-9"	—
a ₃₆ (E)	3	#5	7'-8"	—
a ₃₇ (E)	4	#5	17'-9"	—
a ₃₈ (E)	1	#5	17'-3"	—
a ₃₉ (E)	4	#5	19'-6"	—
a ₄₀ (E)	40	#5	1'-6"	—
a ₄₁ (E)	4113	#6	4'-2"	—
b(E)	520	#5	27'-7"	—
b ₁ (E)	94	#6	18'-0"	—
b ₂ (E)	451	#5	25'-4"	—
b ₃ (E)	156	#5	28'-6"	—
b ₄ (E)	164	#5	22'-0"	—
b ₅ (E)	260	#5	27'-6"	—
b ₆ (E)	246	#5	23'-3"	—
b ₇ (E)	208	#5	29'-6"	—
b ₈ (E)	205	#5	24'-0"	—
b ₁₁ (E)	94	#6	19'-6"	—
b ₁₂ (E)	47	#6	24'-6"	—
b ₁₃ (E)	47	#6	21'-0"	—
b ₁₄ (E)	26	#5	14'-6"	—
b ₁₅ (E)	32	#5	36'-0"	—
b ₁₆ (E)	16	#5	25'-6"	—
b ₁₇ (E)	92	#5	25'-9"	—
d(E)	1266	#4	5'-7"	—
d ₁ (E)	1266	#5	8'-4"	—
d ₂ (E)	18	#6	4'-5"	—
d ₃ (E)	30	#6	8'-11"	—
e(E)	14	#4	16'-0"	—
e ₁ (E)	154	#4	14'-8"	—
e ₂ (E)	4	#8	31'-0"	—
e ₃ (E)	4	#4	31'-0"	—
e ₄ (E)	64	#4	6'-8"	—
e ₅ (E)	8	#8	6'-8"	—
e ₆ (E)	8	#8	24'-1"	—
e ₇ (E)	8	#4	23'-0"	—
e ₈ (E)	64	#4	7'-5"	—
e ₉ (E)	8	#8	7'-5"	—
e ₁₀ (E)	49	#4	13'-8"	—
e ₁₁ (E)	4	#8	23'-9"	—
e ₁₂ (E)	4	#4	22'-9"	—
e ₁₄ (E)	28	#4	17'-8"	—
e ₁₅ (E)	6	#8	29'-2"	—
e ₁₆ (E)	6	#4	27'-9"	—
e ₁₇ (E)	70	#4	17'-9"	—
e ₁₈ (E)	8	#8	28'-10"	—
e ₁₉ (E)	8	#4	27'-9"	—
e ₂₀ (E)	32	#4	9'-5"	—
e ₂₁ (E)	4	#8	9'-5"	—
e ₂₂ (E)	14	#4	15'-5"	—
e ₂₃ (E)	7	#4	15'-0"	—
e ₂₄ (E)	14	#4	15'-0"	—
e ₂₅ (E)	4	#8	27'-6"	—
e ₂₆ (E)	4	#4	26'-6"	—
e ₂₇ (E)	32	#4	8'-2"	—
e ₂₈ (E)	4	#8	8'-2"	—
e ₂₉ (E)	4	#8	23'-0"	—
e ₃₀ (E)	7	#4	9'-6"	—
e ₃₁ (E)	28	#4	9'-2"	—
e ₃₂ (E)	7	#4	11'-9"	—
e ₃₃ (E)	7	#4	12'-0"	—
e ₃₄ (E)	7	#4	9'-0"	—
e ₃₅ (E)	7	#4	15'-0"	—
e ₃₆ (E)	7	#4	9'-6"	—
e ₃₇ (E)	4	#4	22'-0"	—
e ₃₈ (E)	7	#4	9'-6"	—
e ₃₉ (E)	7	#4	12'-11"	—
e ₄₀ (E)	7	#4	12'-0"	—
e ₄₁ (E)	14	#4	13'-2"	—
x(E)	368	#5	6'-5"	—
Bar Splicers		Each	3068	
Reinforcement Bars, Epoxy Coated		Pound	205310	
Concrete Superstructure		Cu. Yds.	970.7	
Bridge Deck Grooving		Sq. Yds.	2760	
Protective Coat		Sq. Yds.	3358	



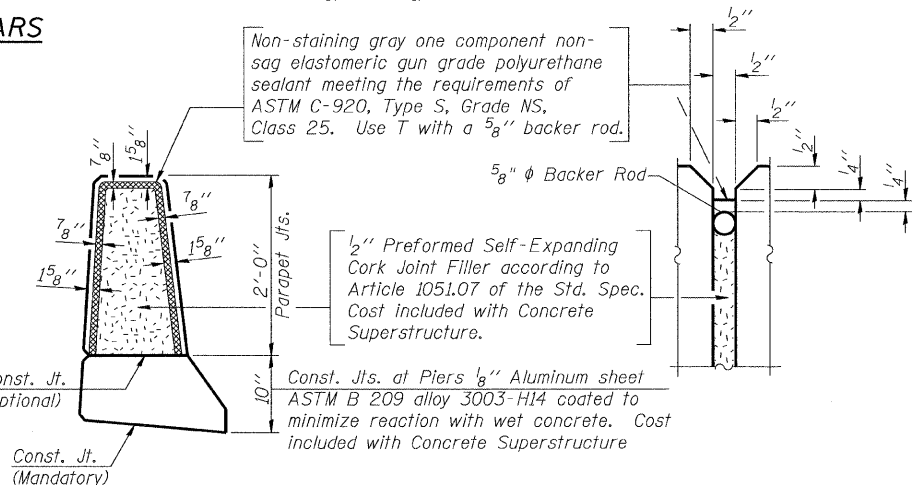
SECTION THRU PARAPET

a₄₁(E) BARS

FILLET DETAIL

See sheet 26 of 49 for Shear Stud Detail a₄₁(E) and b₁₄(E) - b₁₇(E) bars

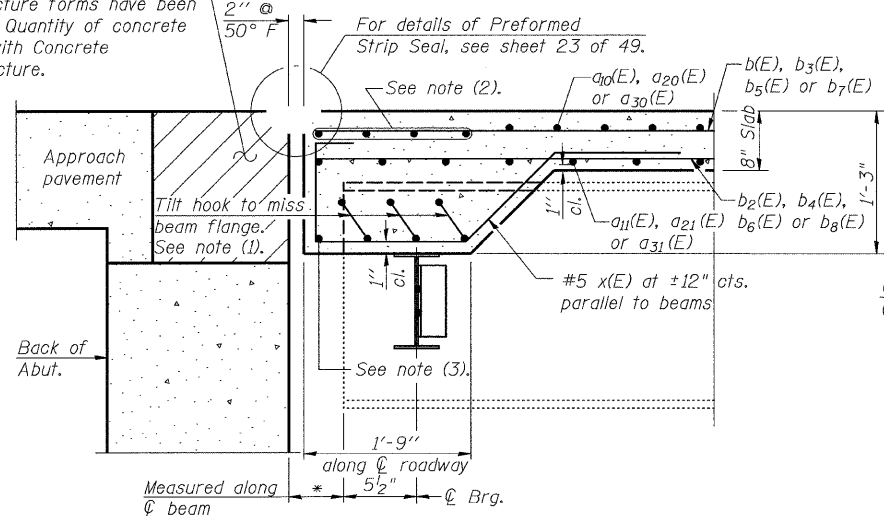
Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25. Use T with a 5/8" backer rod.



PARAPET JOINT DETAILS

Notes:
Scuppers shall be located clear of all diaphragms. The exterior surfaces of the scuppers shall be painted with the prime coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the scuppers shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SPI prior to painting.

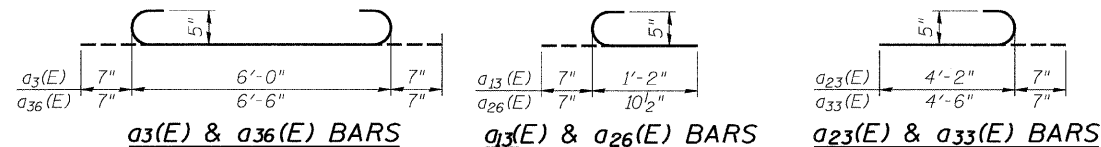
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



SECTION A-A

(Section B-B similar)
* 4 1/2" (S. Abut.)
5 5/8" (N. Abut.)

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

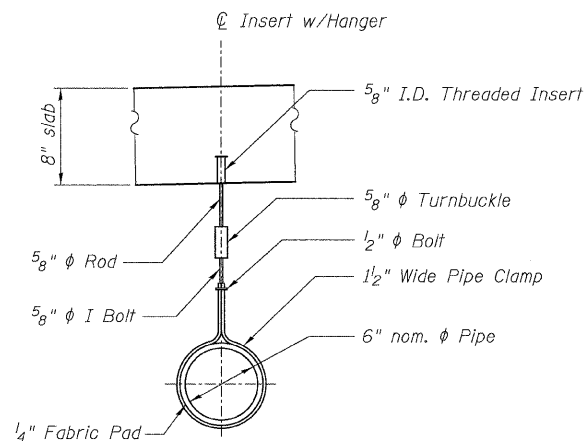
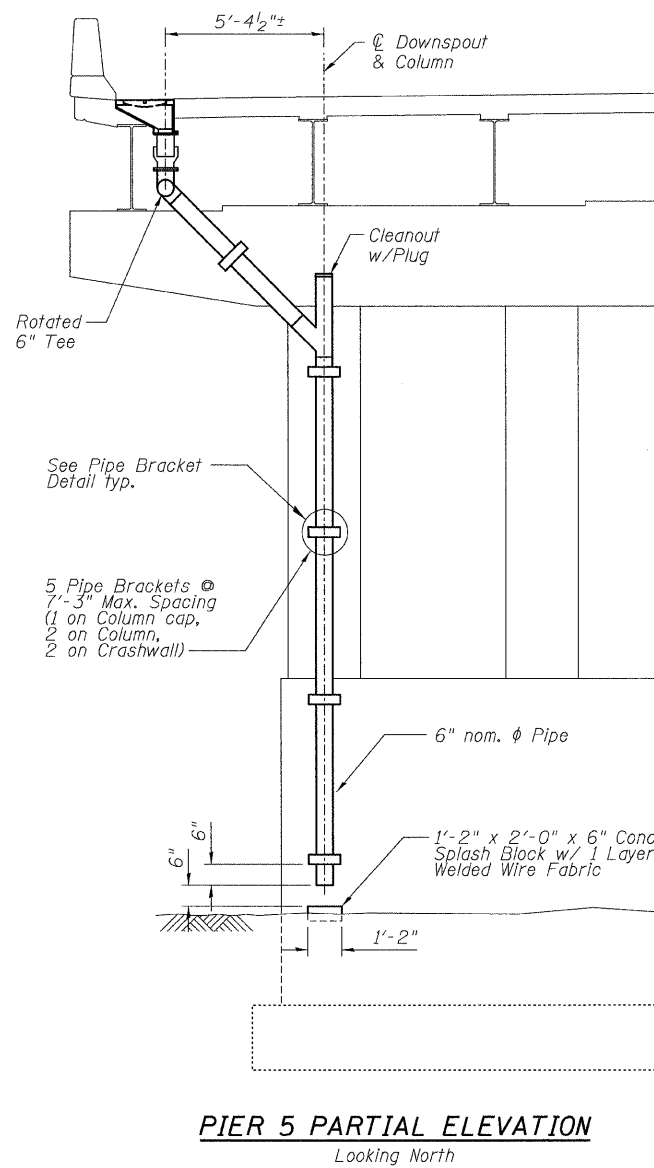
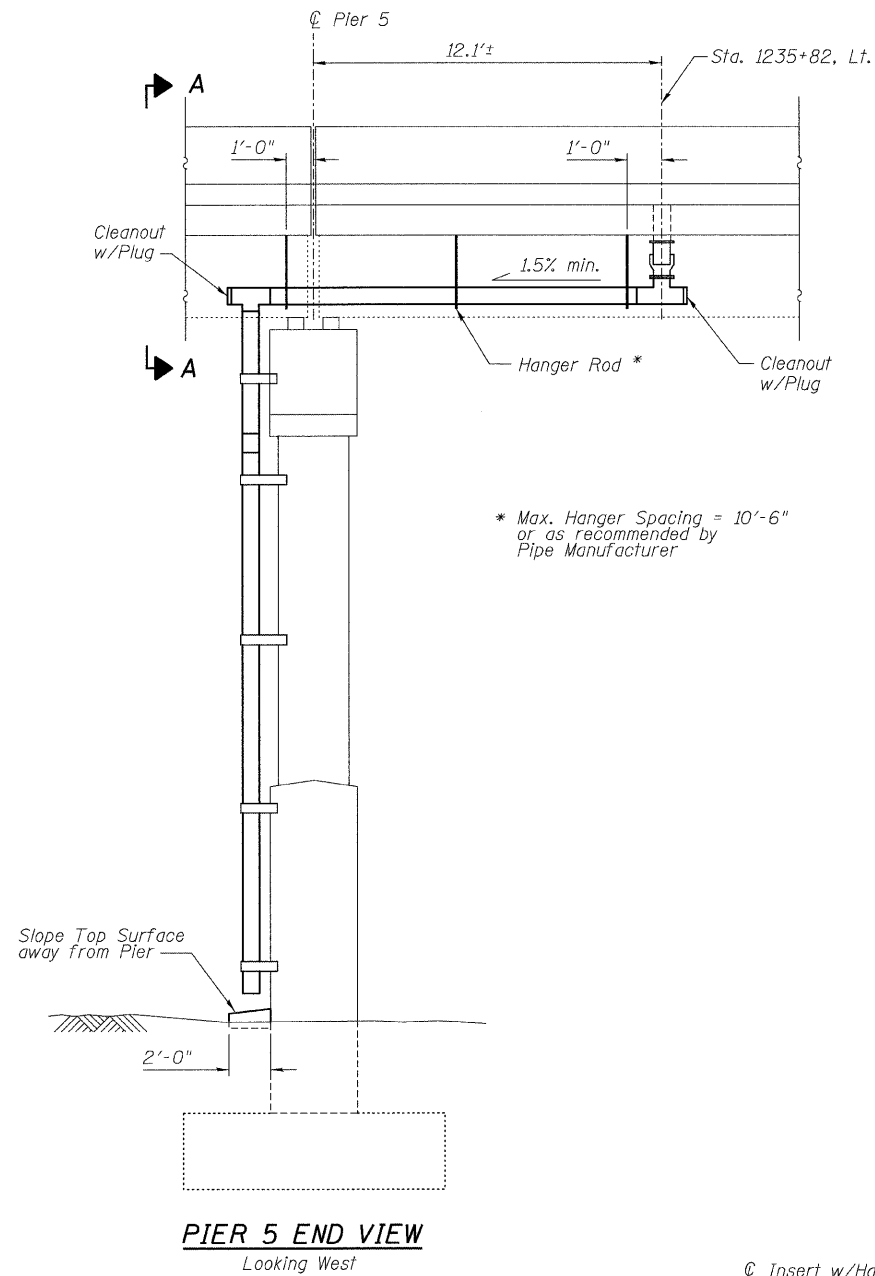


SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-0014

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0005
Illinois Registration Number 184.004913

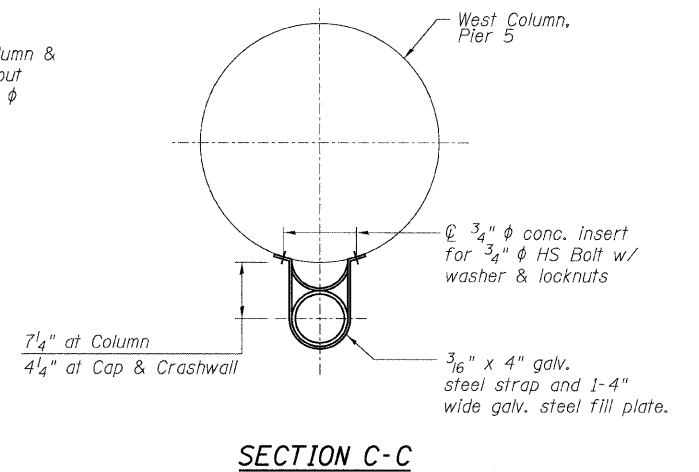
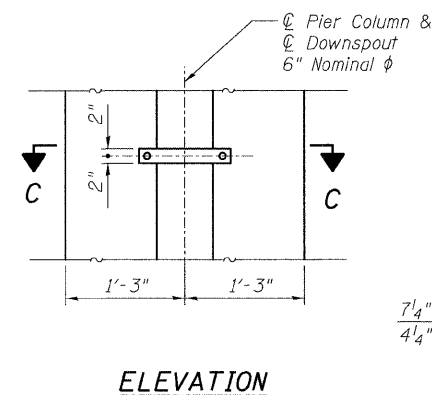
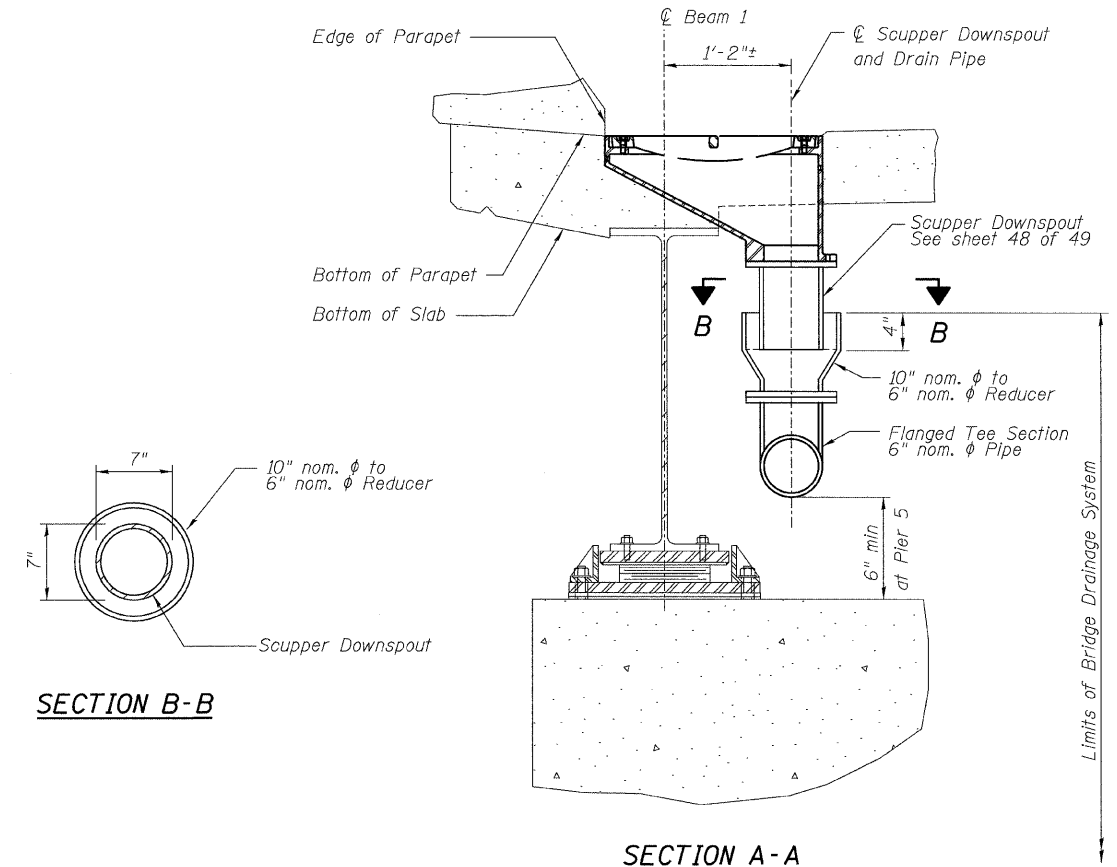
SHEET NO. 17 49 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	43
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 74215					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



HANGER DETAIL

Note:
Bottom of Pipe Clamp shall not extend below Bottom of Beam



PIPE BRACKET DETAIL

Note:
Water from drainage scupper shall be piped as shown to pier 5. See special provisions for "Bridge Drainage System" for material requirements, installation guidelines, paint system requirements, and basis of payment.

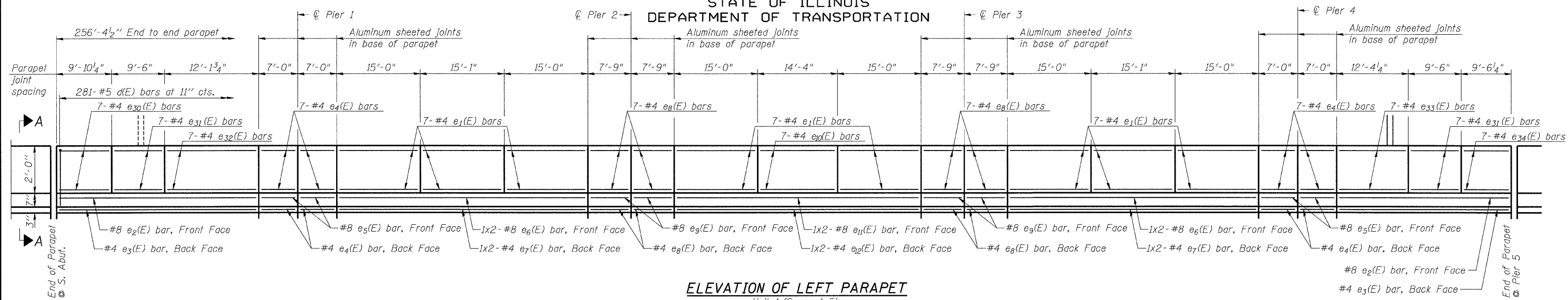
DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

**BRIDGE DRAINAGE SYSTEM
STRUCTURE NO. 058-0014**

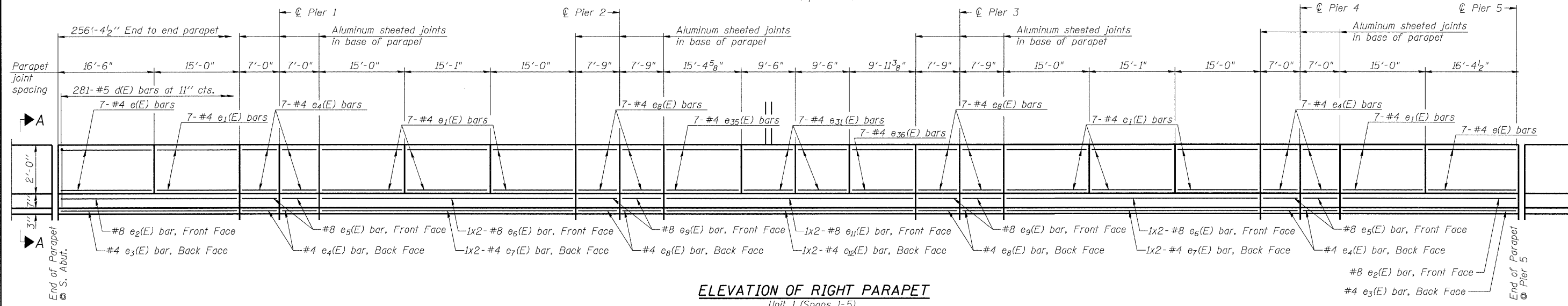
Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0085
Illinois Registration Number 184-004913

SHEET NO. 17a	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49 SHEETS	710	(50Z-VB)BR	MACON	79	43a
CONTRACT NO. 74215					
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

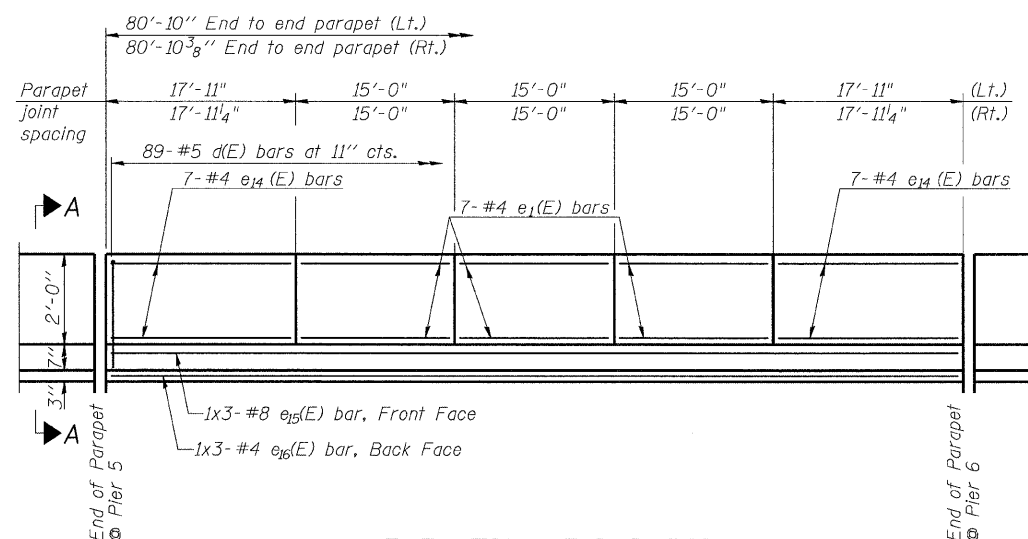
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION OF LEFT PARAPET
Unit 1 (Spans 1-5)



ELEVATION OF RIGHT PARAPET
Unit 1 (Spans 1-5)



ELEVATION OF PARAPET
Unit 2 (Span 6)

MINIMUM BAR LAP
(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"

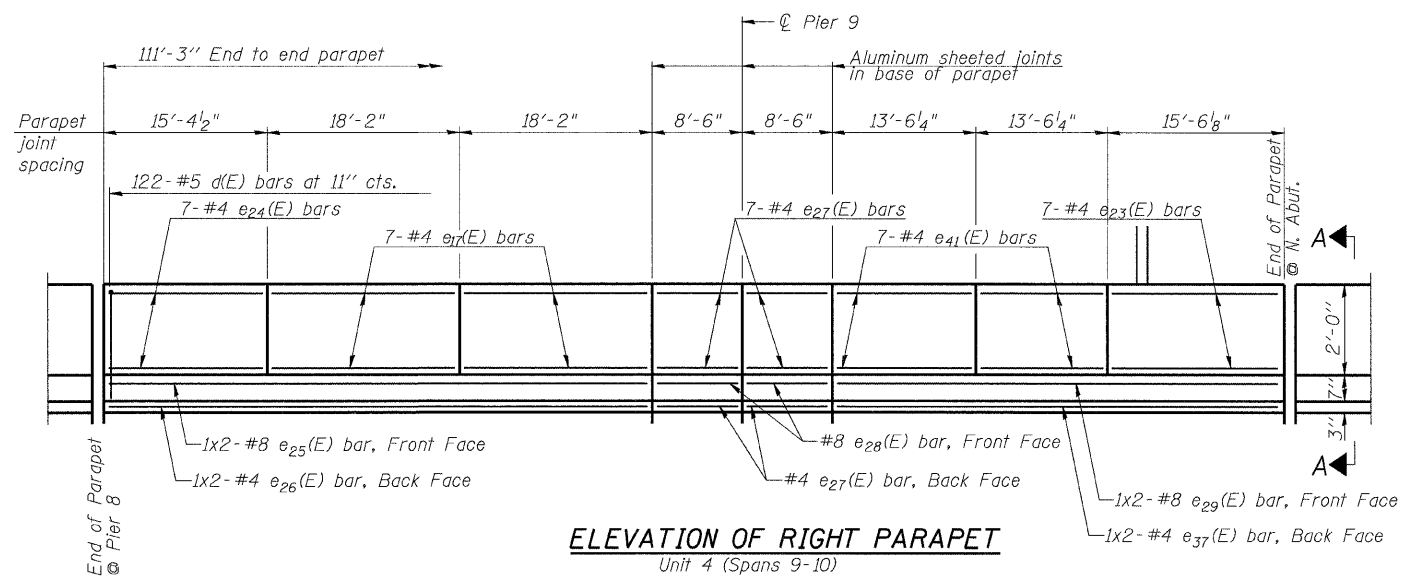
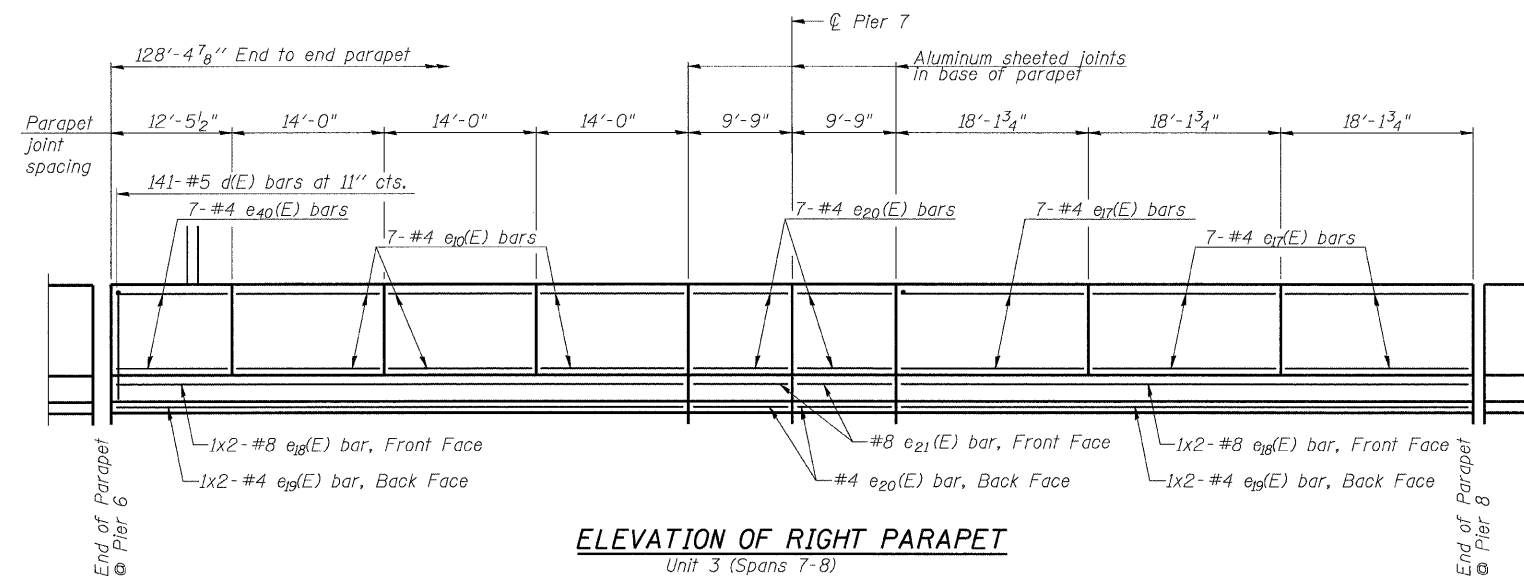
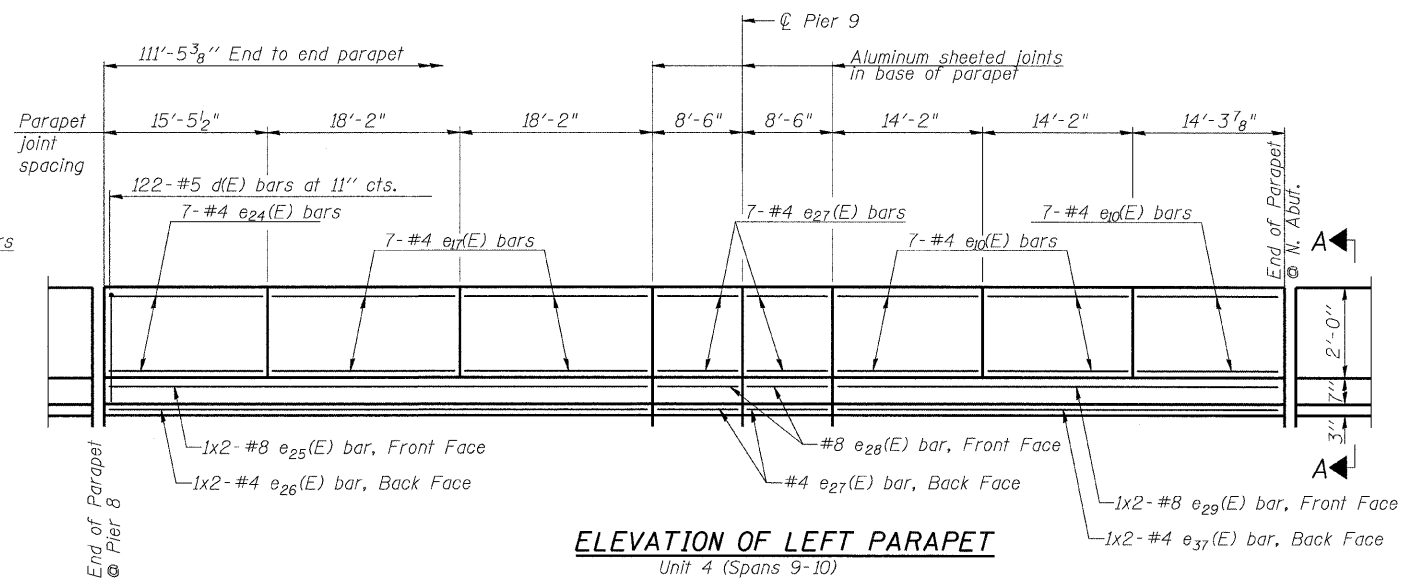
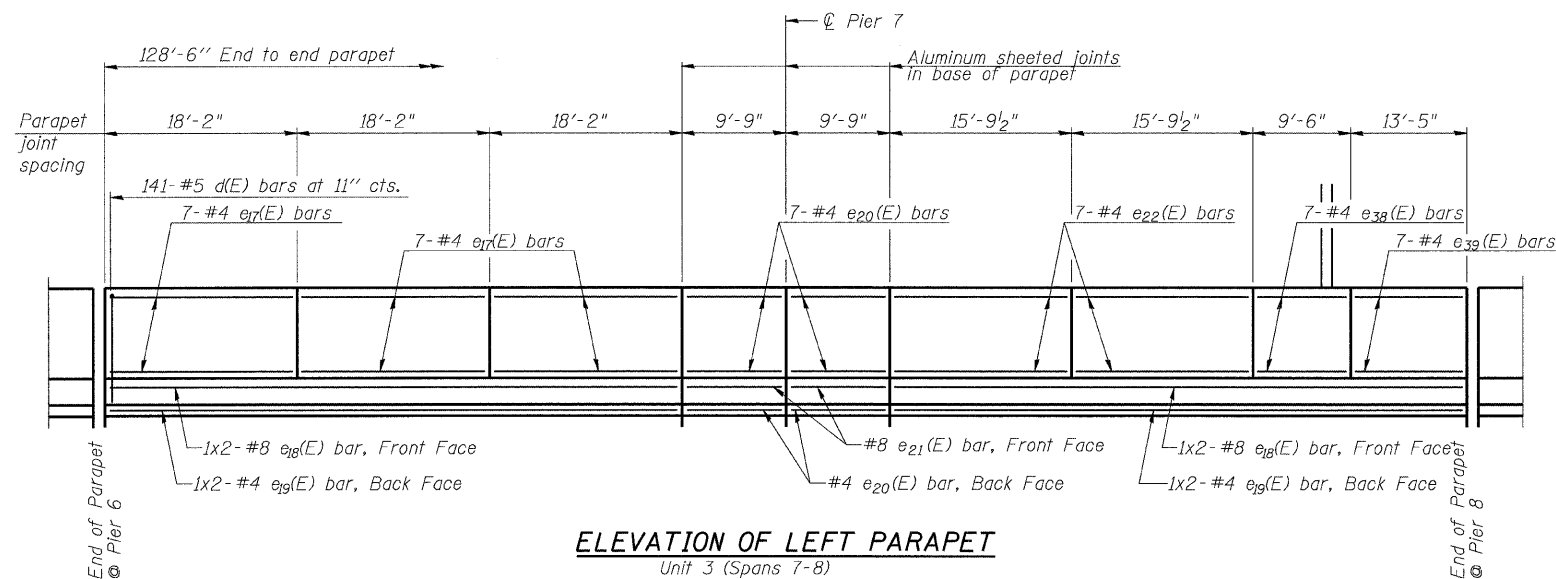
DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB



SHEET NO. 18 49 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	44
CONTRACT NO. 74215					
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-0014

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



MINIMUM BAR LAP

(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

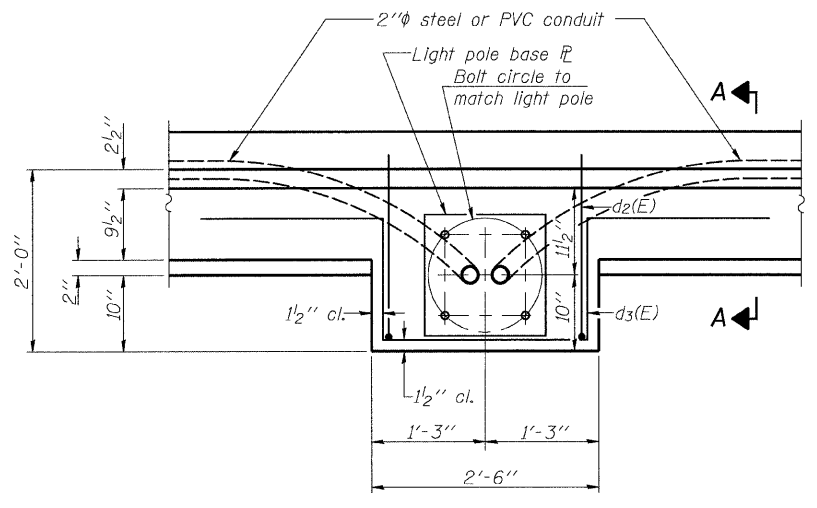
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-0014

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0085
Illinois Registration Number 184.004613

SHEET NO. 19 49 SHEETS	F.A. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 45
	CONTRACT NO. 74215				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

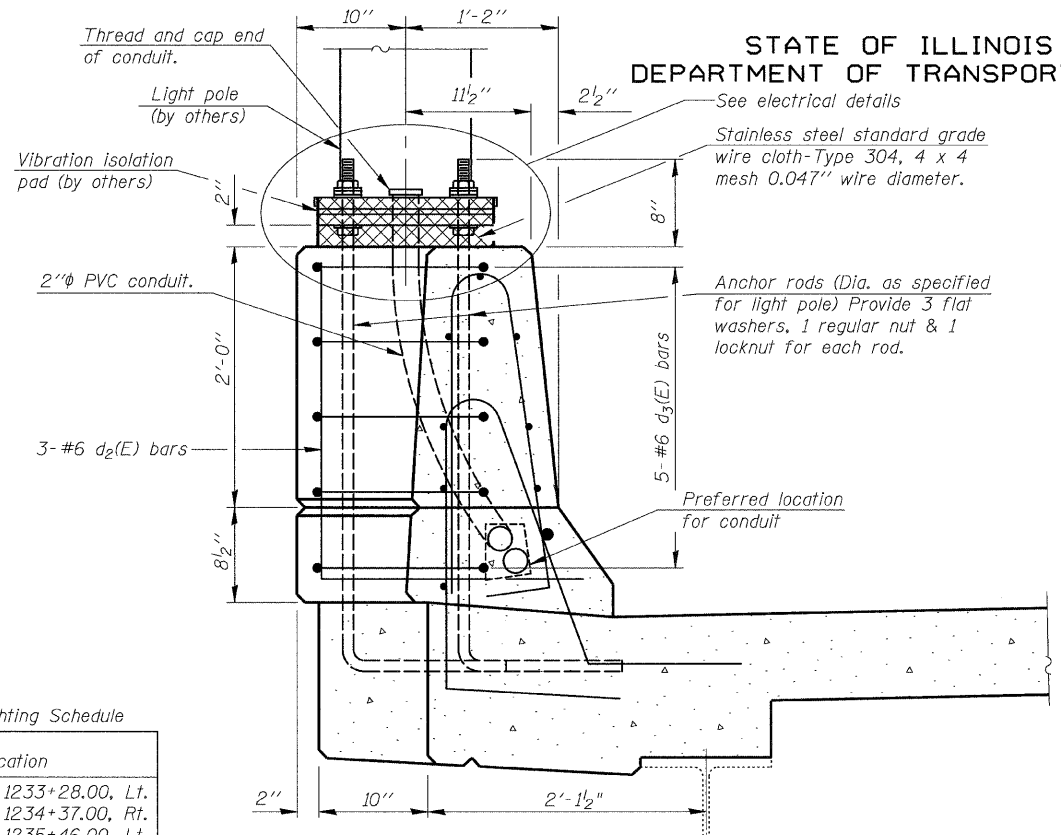
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Note:
The lighting conduit in the parapets shall exit the bottom of the deck at the abutments, except at the NE quadrant. It shall also exit the bottom of the deck at 4 locations near the south face of Pier 2. Contractor shall transition the PVC conduit to galvanized steel conduit prior to exiting the deck. The conduit shall protrude a minimum of 12" and shall be threaded and capped. Refer to the lighting plans.



PLAN

Note:
Cost of anchor rods, nuts, washers, and wire cloth are included with Concrete Superstructure.
Conduit shall be paid for separately and is included in the lighting plans.

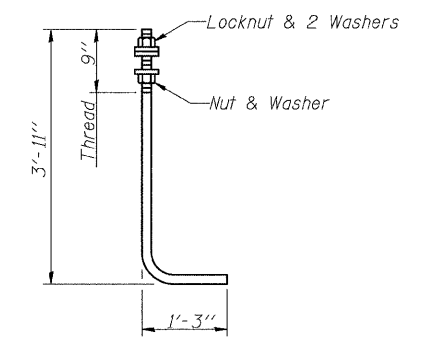


SECTION A-A
Parapets

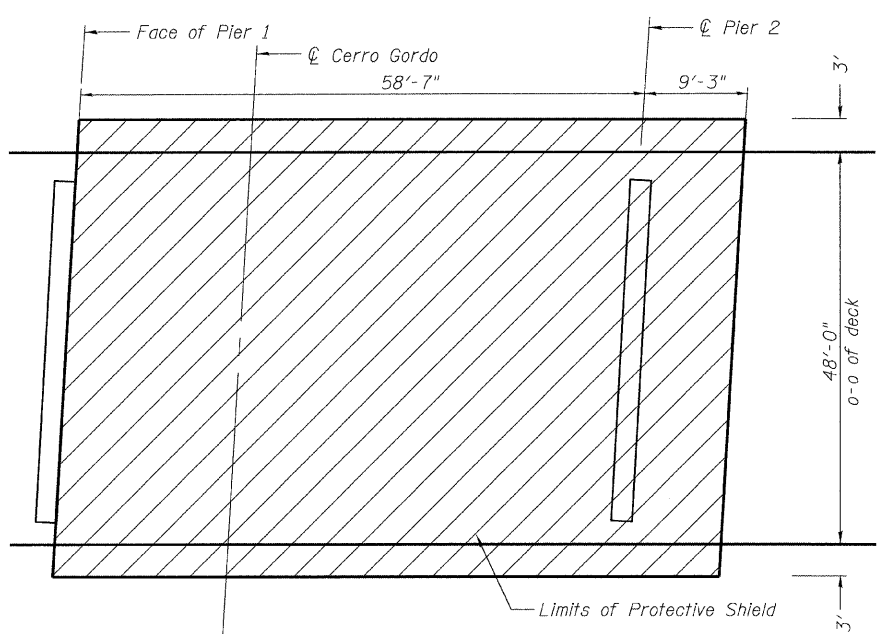
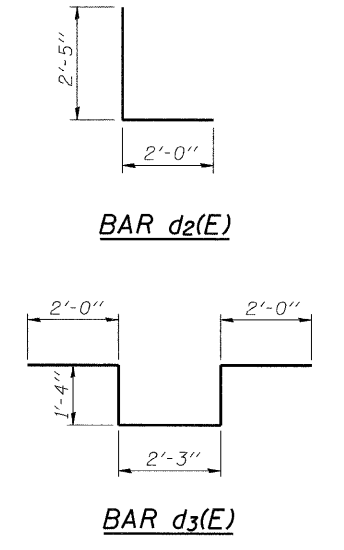
LIGHT POLE FOUNDATIONS

Lighting Schedule

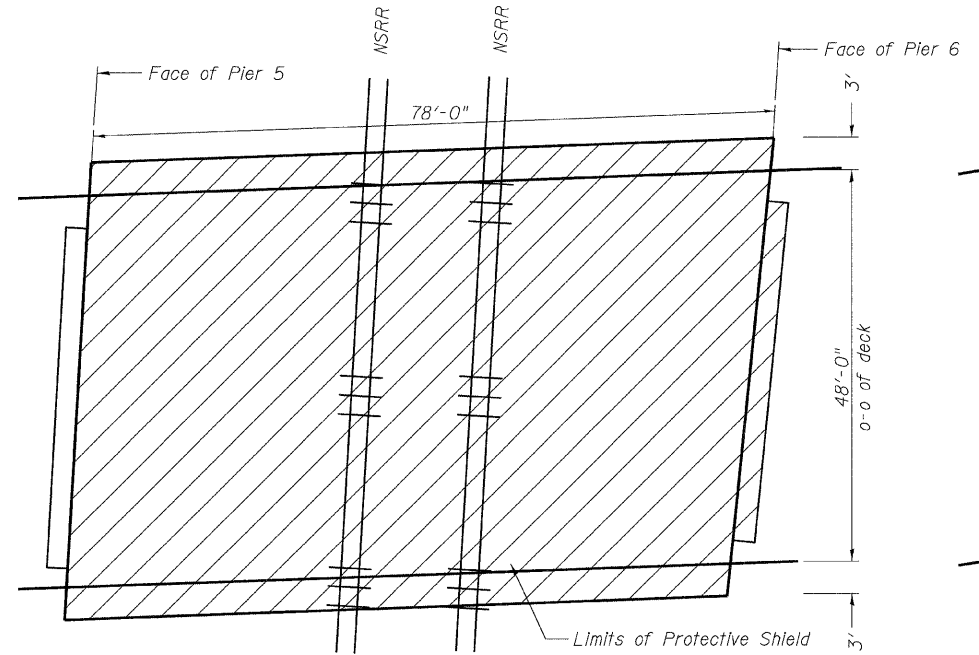
Location
Sta. 1233+28.00, Lt.
Sta. 1234+37.00, Rt.
Sta. 1235+46.00, Lt.
Sta. 1236+55.00, Rt.
Sta. 1237+64.00, Lt.
Sta. 1238+73.00, Rt.



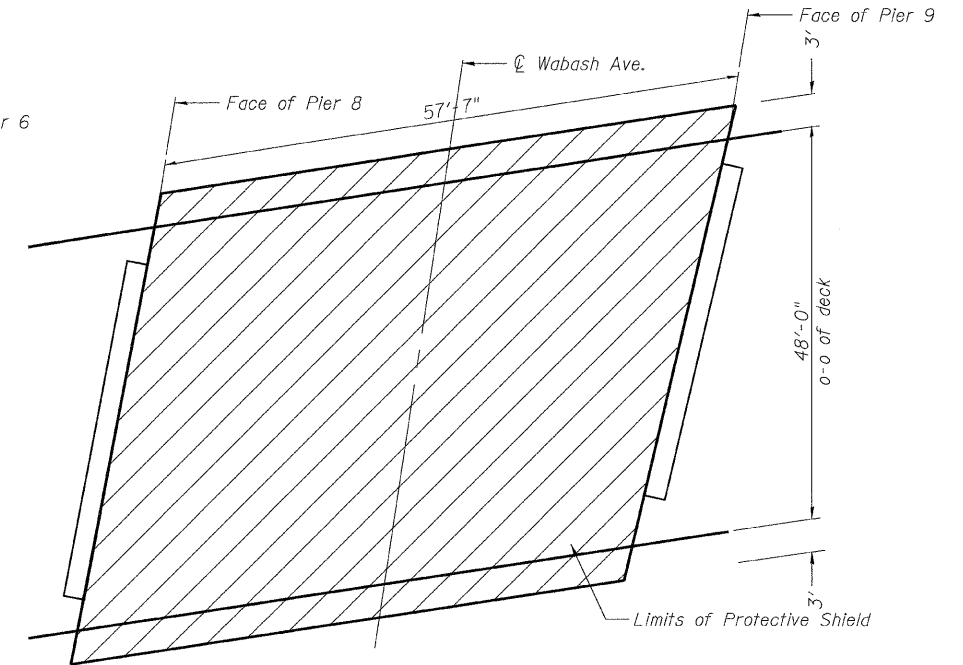
ANCHOR ROD
Diameter as specified for light poles.
(ASTM F 1554 Grade 105)



UNIT 1 (SPANS 2 & 3)



UNIT 2 (SPAN 6)



UNIT 4 (SPAN 9)

BILL OF MATERIALS

Item	Unit	Total
Protective Shield	Sq. Yd.	1221

PROTECTIVE SHIELD LAYOUT

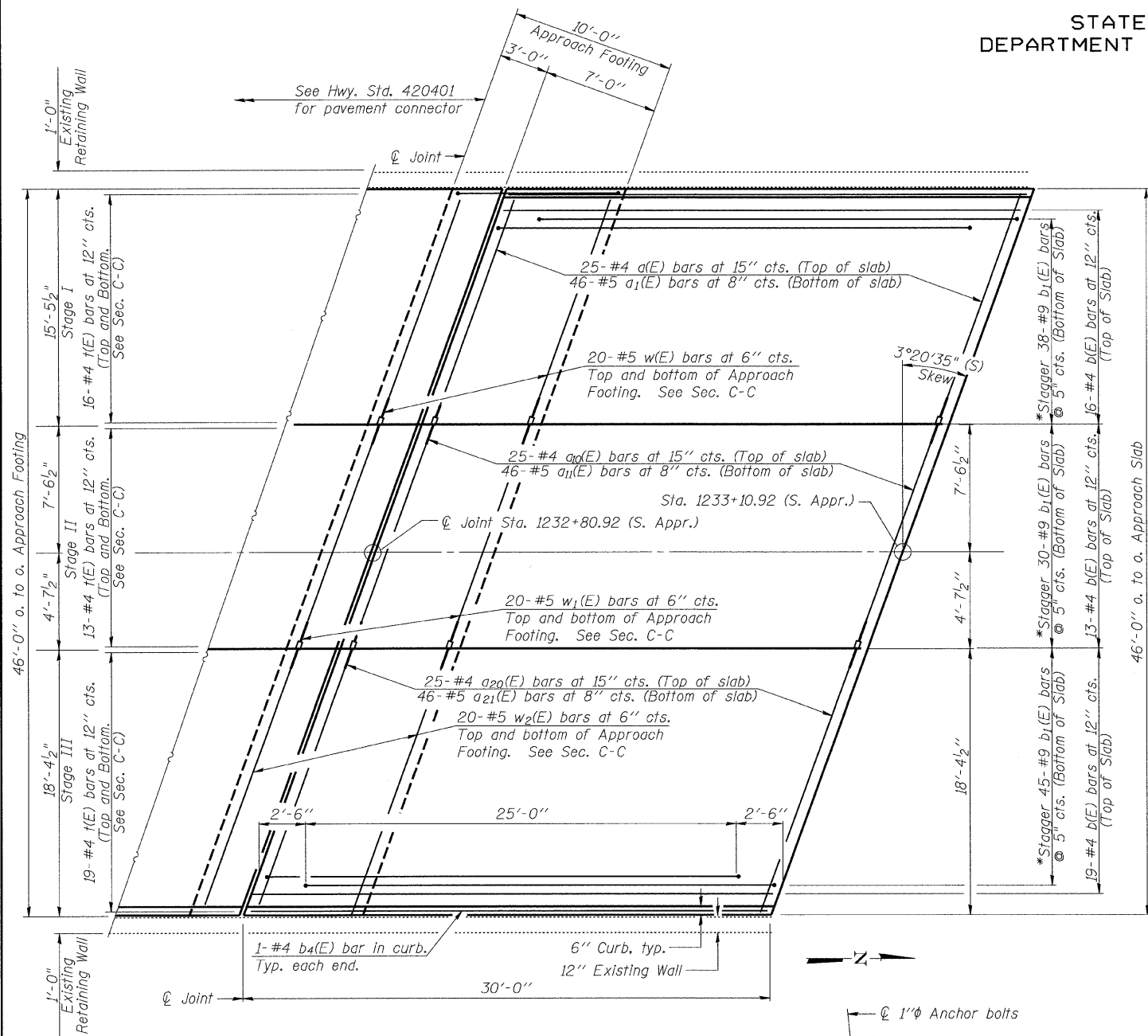
DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0095
Illinois Registration Number 184-094813

SHEET NO. 20	F.A. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 46
49 SHEETS	CONTRACT NO. 74215				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-0014

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

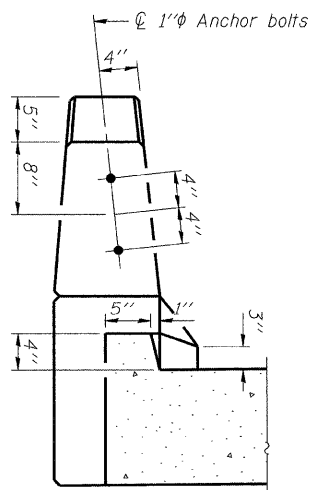


PLAN - SOUTH APPROACH SLAB

- * Tilt #9 b₁(E) bars as required to maintain clearance.
- ** Alternate with a(E) bars, typ. each parapet.

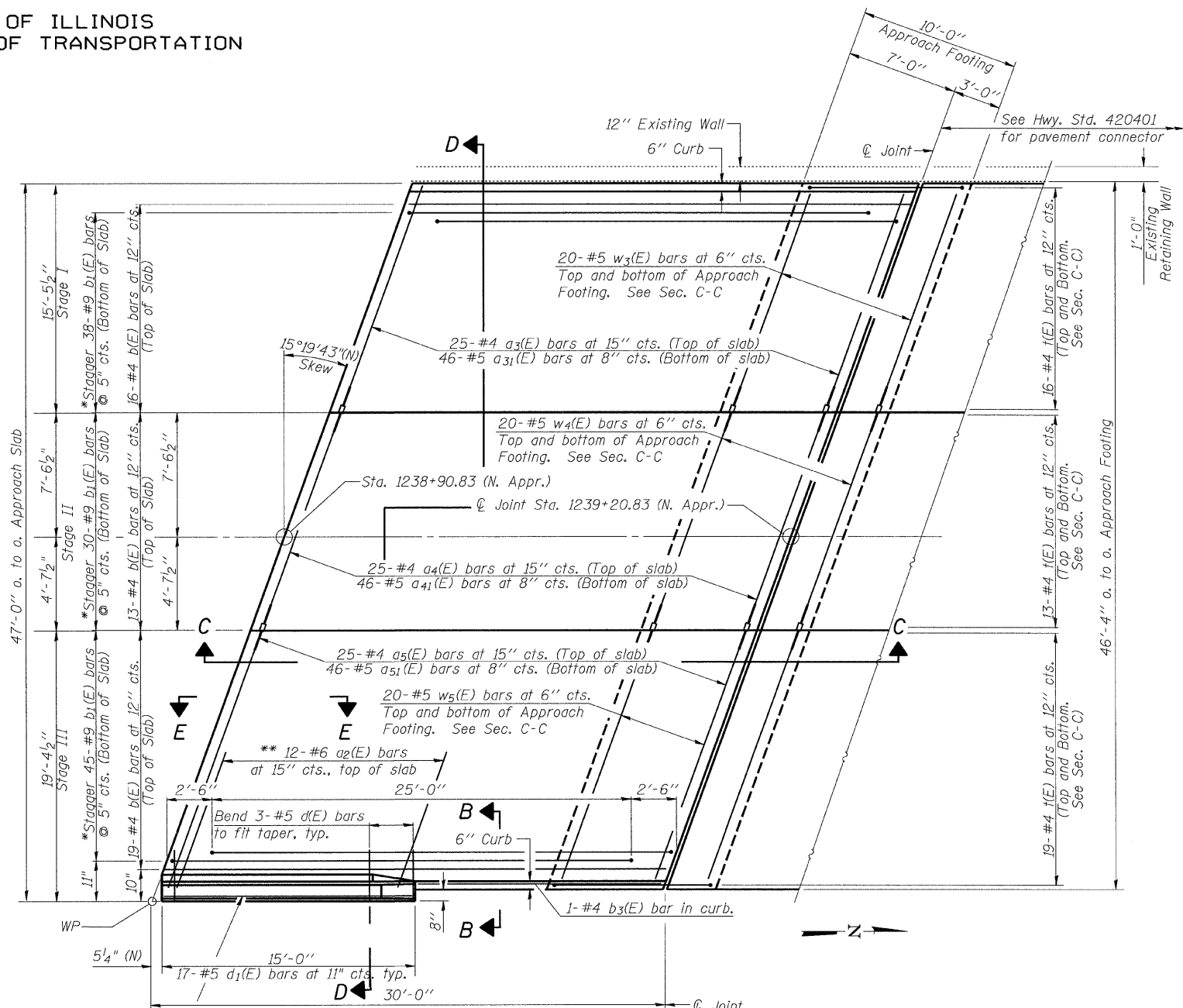
Bar Splicers (E)

25 bar splicers (E) at 15" cts. Top
46 bar splicers (E) at 8" cts. Bottom
20 bar splicers (E) at 6" cts. Top & Bottom
in approach footing
Required in Stage I & Stage II approach
slab in S. Abut. & N. Abut.



VIEW B-B

(Exit end right side only)



PLAN - NORTH APPROACH SLAB

- * Tilt #9 b₁(E) bars as required to maintain clearance.
- ** Alternate with a₅(E) bars, typ. each parapet.

Notes:
See sheet 22 of 49 for Sections C-C & D-D and View E-E.
a(E), a₁(E), and w(E) bar spacings measured perpendicular to ϕ Rdwy.

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

BA-L

10-31-08



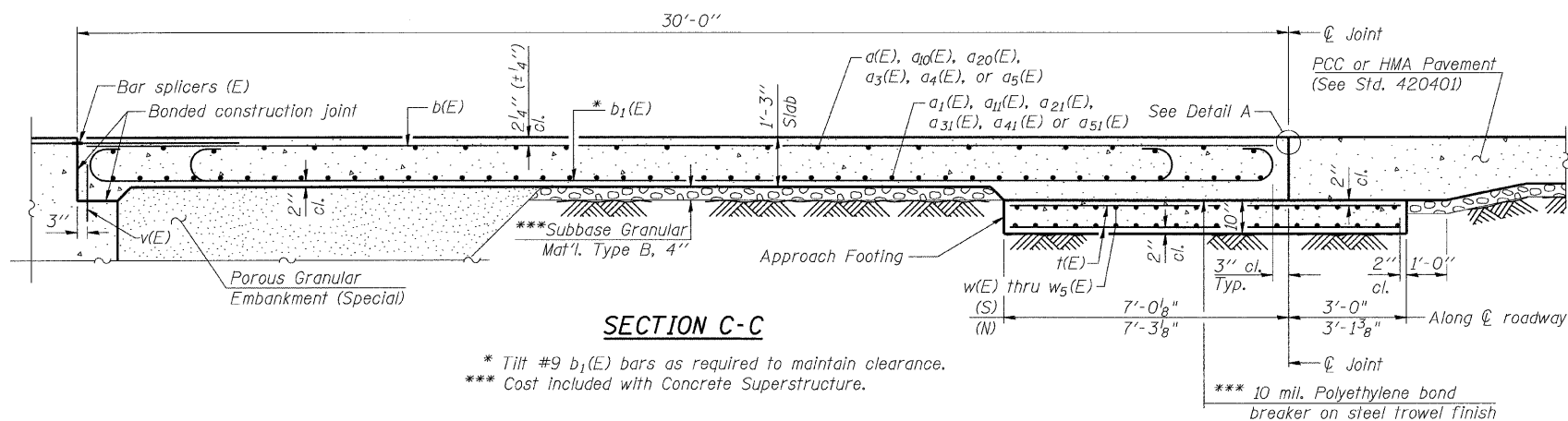
SHEET NO. 21
49 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB)BR	MACON	79	47
CONTRACT NO. 74215				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(Sheet 1 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 058-0014

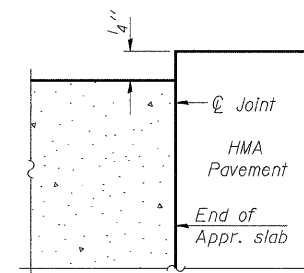
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheets 35 & 36 of 49.
The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
For bar splicer details, see sheet 49 of 49.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 4 of 49.



SECTION C-C

* Tilt #9 b₁(E) bars as required to maintain clearance.
*** Cost Included with Concrete Superstructure.



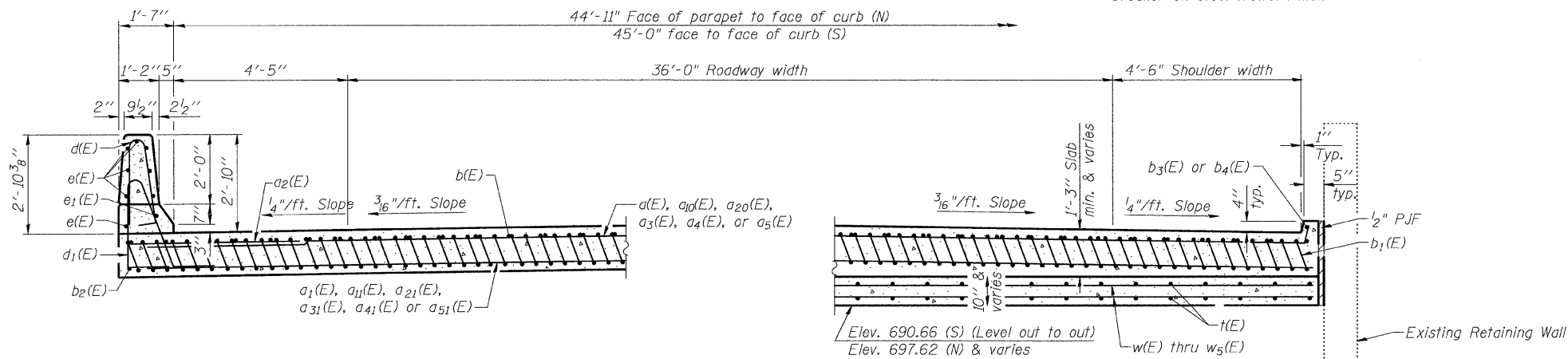
FLEXIBLE PAVEMENT

DETAIL A

*** Cost included with Concrete Superstructure.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	25	#4	15'-0"	—
a ₁ (E)	46	#5	14'-6"	—
a ₂ (E)	12	#6	6'-0"	—
a ₃ (E)	25	#4	16'-7"	—
a ₄ (E)	25	#4	11'-9"	—
a ₅ (E)	25	#4	18'-10"	—
a ₁₀ (E)	25	#4	11'-3"	—
a ₁₁ (E)	46	#5	11'-3"	—
a ₂₀ (E)	25	#4	17'-11"	—
a ₂₁ (E)	46	#5	17'-6"	—
a ₃₁ (E)	46	#5	15'-9"	—
a ₄₁ (E)	46	#5	11'-9"	—
a ₅₁ (E)	46	#5	18'-0"	—
b(E)	96	#4	29'-8"	—
b ₁ (E)	226	#9	29'-9"	—
b ₂ (E)	1	#4	14'-8"	—
b ₃ (E)	1	#4	14'-8"	—
b ₄ (E)	3	#4	29'-8"	—
d(E)	17	#5	5'-7"	—
d ₁ (E)	17	#5	7'-11"	—
e(E)	8	#4	14'-8"	—
e ₁ (E)	1	#8	14'-8"	—
f(E)	192	#4	9'-8"	—
w(E)	40	#5	14'-6"	—
w ₁ (E)	40	#5	11'-3"	—
w ₂ (E)	40	#5	17'-6"	—
w ₃ (E)	40	#5	15'-9"	—
w ₄ (E)	40	#5	11'-9"	—
w ₅ (E)	40	#5	18'-0"	—
Bar Splicers		Each	444	
Concrete Superstructure		Cu. Yd.	135.6	
Concrete Structures		Cu. Yd.	28.9	
Reinforcement Bars, Epoxy Coated		Pound	36030	
Bridge Deck Grooving		Sq. Yd.	286	
Protective Coat		Sq. Yd.	317	

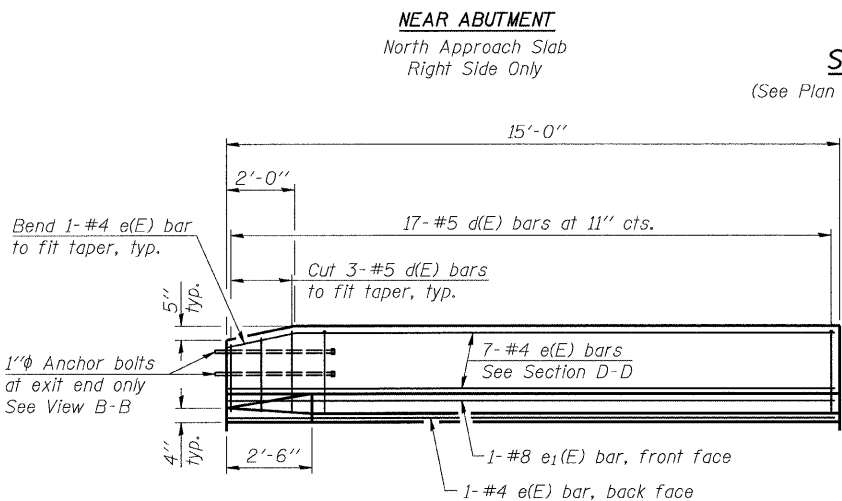


SECTION D-D

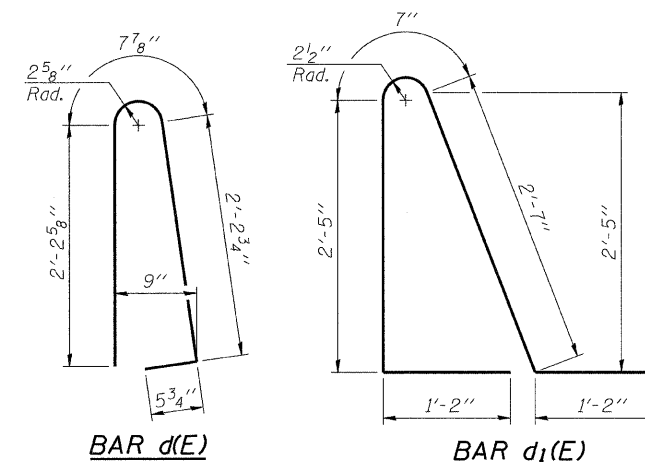
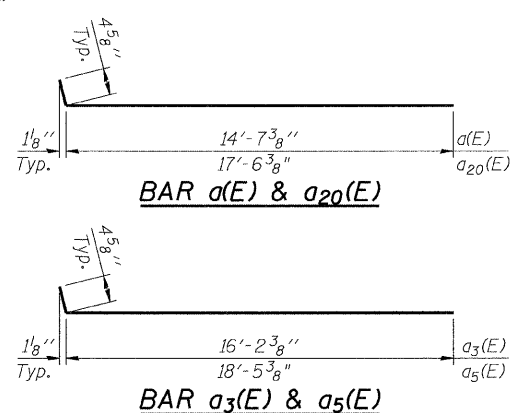
(See Plan for dimensions not shown)

AT APPROACH FOOTING

(Cross Slope shown is for South Approach Slab
North Approach Slab is 4% Superelevated)



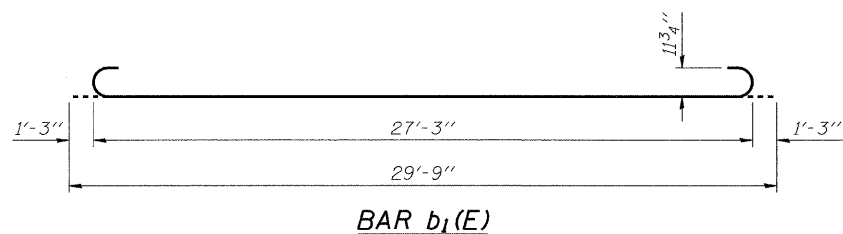
VIEW E-E



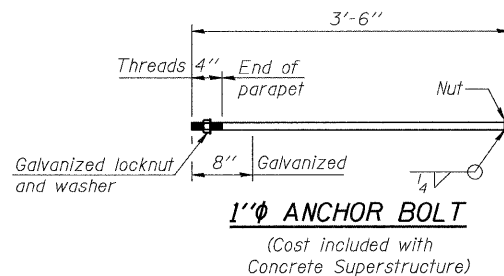
DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

BA-L

10-31-08



BAR b₁(E)



1" ANCHOR BOLT

(Cost included with Concrete Superstructure)

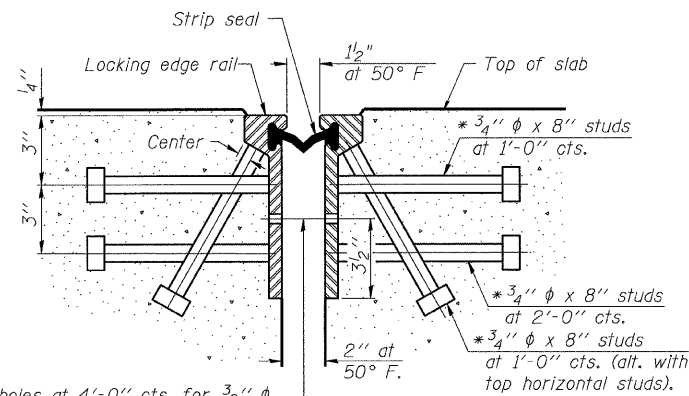


SHEET NO. 22 49 SHEETS	F.A. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 48
	CONTRACT NO. 74215				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 058-0014

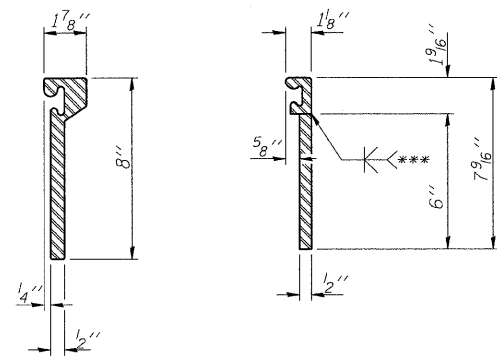
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

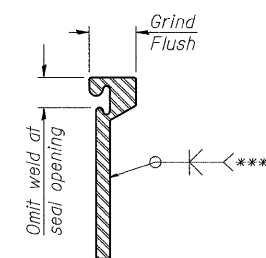


7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU
ROLLED RAIL JOINT



ROLLED
EXTRUDED RAIL WELDED RAIL

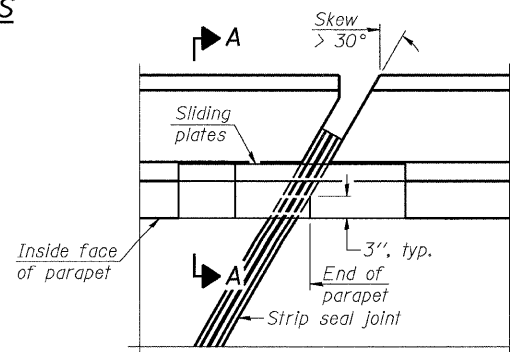


***Back gouge not required if complete joint penetration is verified by mock-up.

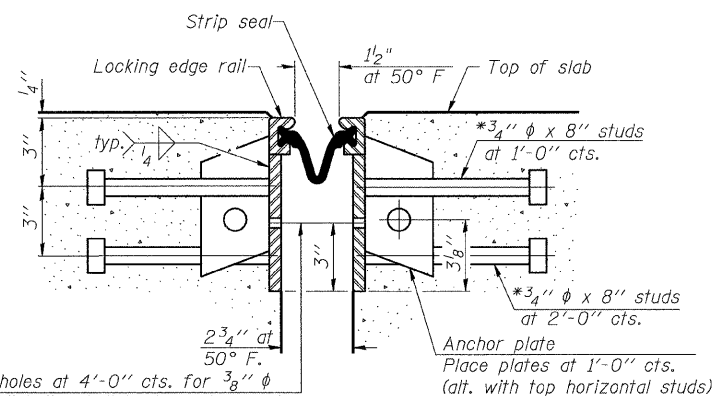
LOCKING EDGE
RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS

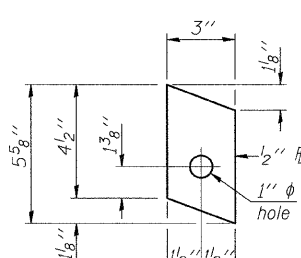


PLAN

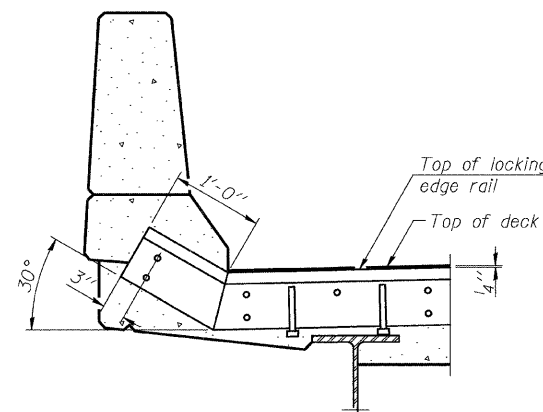


7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU
WELDED RAIL JOINT

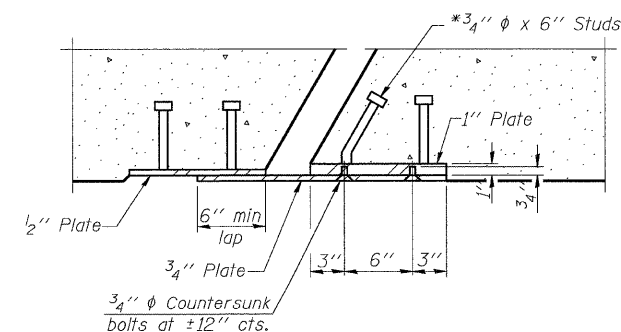


ANCHOR PLATE
(for welded rail)

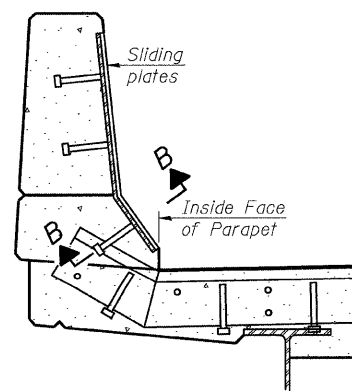


AT PARAPET

TYPICAL END TREATMENTS



SECTION B-B



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	243

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 058-0014

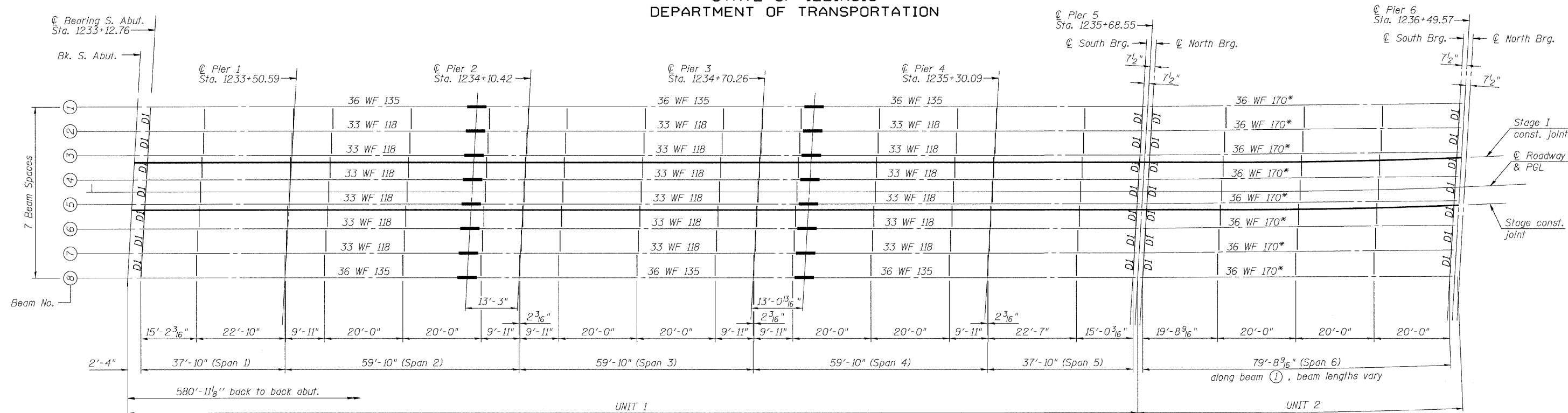
DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

EJ-SSJ 10-1-08

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0065
Illinois Registration Number 184-004913

SHEET NO. 23	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49 SHEETS	710	(50Z-VB)BR	MACON	79	49
CONTRACT NO. 74215					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



*Span 6 beams have cover plates on the bottom flange (1/2"x11" on interior beams, 1"x11" on exterior beams.)

PLAN

Replace Existing DI Diaphragms at the Abutments and at Piers 5, 6 & 8

UNIT 1 (SPANS 1-5)

INTERIOR GIRDER MOMENT TABLE					
	0.4 Span 1 or 0.6 Span 5	Pier 1 or Pier 4	0.5 Span 2 or Span 4	Pier 2 or Pier 3	0.5 Span 3
I_s	(in ⁴) 5900	5900	5900	5900	5900
$I_c(n)$	(in ⁴) 16754		16754		16754
$I_c(3n)$	(in ⁴) 12255		12255		12255
S_s	(in ³) 359	359	359	359	359
$S_c(n)$	(in ³) 548		548		548
$S_c(3n)$	(in ³) 494		494		494
Z	(in ³)	415		415	
R	(k/ft) 0.758	1.011	0.758	1.011	0.758
M_D	(k) 60.3	-241.5	132.2	-305.3	105.8
s_D	(k/ft) 0.253		0.253		0.253
M_{sD}	(k) 24.6		56.2		49.5
M_L	(k) 206.6	-166.4	313.8	-197.2	321.1
M_{IM}	(k) 62.0	-49.9	94.1	-59.2	96.3
$P_3 [M_L + i]$	(k) 447.7	-360.5	679.8	-427.3	695.7
M_a	(k) 692	-783	1129	-952	1106
M_u	(k) 2280	-1245	2280	-1245	2280
$f_s \phi$ non-comp	(ksi) 2.0	7.6	4.4	10.2	3.5
$f_s \phi$ (comp)	(ksi) 0.6		1.2		1.2
$f_s \phi_3 [M_L + M_I]$	(ksi) 9.8	7.9	14.9	14.3	15.2
f_s (Overload)	(ksi) 12.4	15.5	20.5	24.5	19.9
f_s (Total)	(ksi)				
VR	(k) 39.0		39.6		34.2

INTERIOR GIRDER REACTION TABLE						
	Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5
R_D	(k) 13.2	56.0	63.0	62.9	56.4	13.4
R_L	(k) 29.5	38.2	38.2	38.2	38.2	29.6
R_I	(k) 8.9	11.1	10.3	10.3	11.1	8.9
R_{Total}	(k) 51.6	105.3	111.5	111.4	105.7	51.9

* Compact section
** Braced non-compact and partially braced section

UNIT 2 (SPAN 6)

INTERIOR GIRDER MOMENT TABLE		
	0.5 Span 2	0.5 Span 6
I_s	(in ⁴) 13100	
$I_c(n)$	(in ⁴) 34471	
$I_c(3n)$	(in ⁴) 24064	
S_s	(in ³) 626	
$S_c(n)$	(in ³) 1155	
$S_c(3n)$	(in ³) 1038	
Z	(in ³)	
R	(k/ft) 0.84	
M_D	(k) 707.9	
s_D	(k/ft) 0.253	
M_{sD}	(k) 207.6	
M_L	(k) 662.3	
M_{IM}	(k) 158.9	
$P_3 [M_L + i]$	(k) 1369	
M_a	(k) 2970	
M_u	(k) 4154	
$f_s \phi$ non-comp	(ksi) 13.6	
$f_s \phi$ (comp)	(ksi) 2.4	
$f_s \phi_3 [M_L + M_I]$	(ksi) 14.2	
f_s (Overload)	(ksi) 30.2	
f_s (Total)	(ksi)	
VR	(k) 43.2	

INTERIOR GIRDER REACTION TABLE		
	Pier 5	Pier 6
R_D	(k) 45.0	45.0
R_L	(k) 35.7	35.7
R_I	(k) 8.6	8.6
R_{Total}	(k) 89.3	89.3

* Compact section
** Braced non-compact and partially braced section

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) 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 and Overload) 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 and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).
- Z : Plastic Section Modulus of the steel section in non-composite areas (in³).
- ϕ : Un-factored non-composite dead load (kips/ft.).
- M_D : Un-factored moment due to non-composite dead load (kip-ft.).
- s_D : Un-factored long-term composite (superimposed) dead load (kips/ft.).
- M_{sD} : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- M_L : Un-factored live load moment (kip-ft.).
- M_I : Un-factored moment due to impact (kip-ft.).
- M_a : Factored design moment (kip-ft.).
 $1.3 [M_D + M_{sD} + \frac{5}{8} (M_L + M_I)]$
- M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
- f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M_D + M_{sD} + \frac{5}{8} (M_L + M_I)$
- f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M_D + M_{sD} + \frac{5}{8} (M_L + M_I)]$
- VR: Maximum ϕ + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

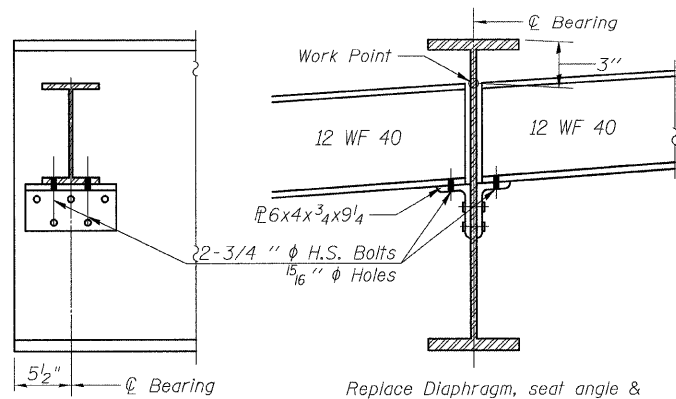
FRAMING PLAN &
STRUCTURAL STEEL DETAILS
STRUCTURE NO. 058-0014

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB



SHEET NO. 24	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	50
49 SHEETS	CONTRACT NO. 74215				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

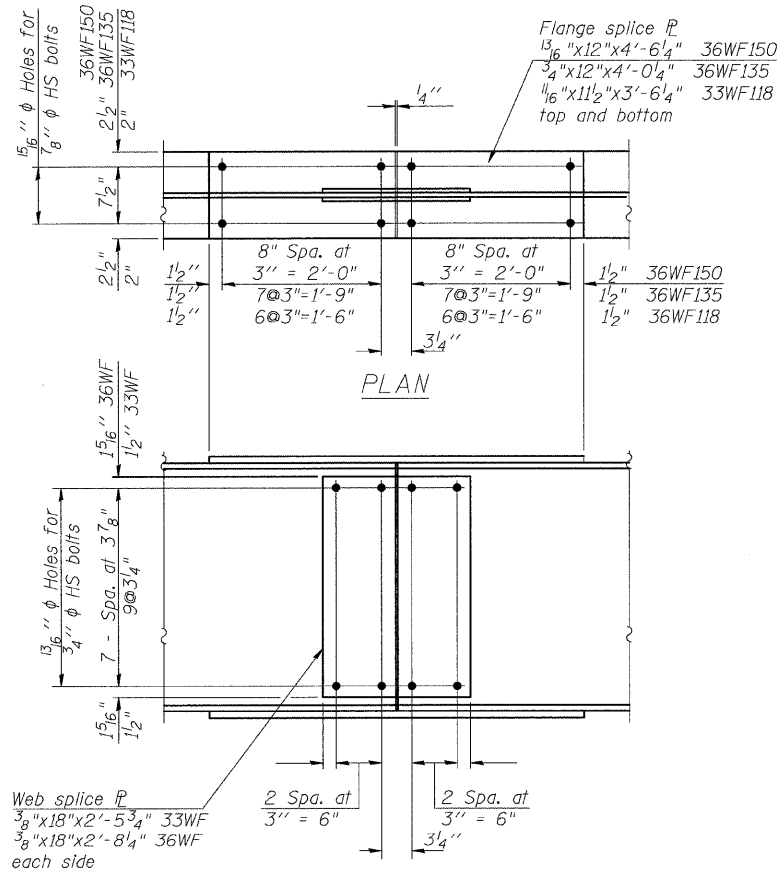
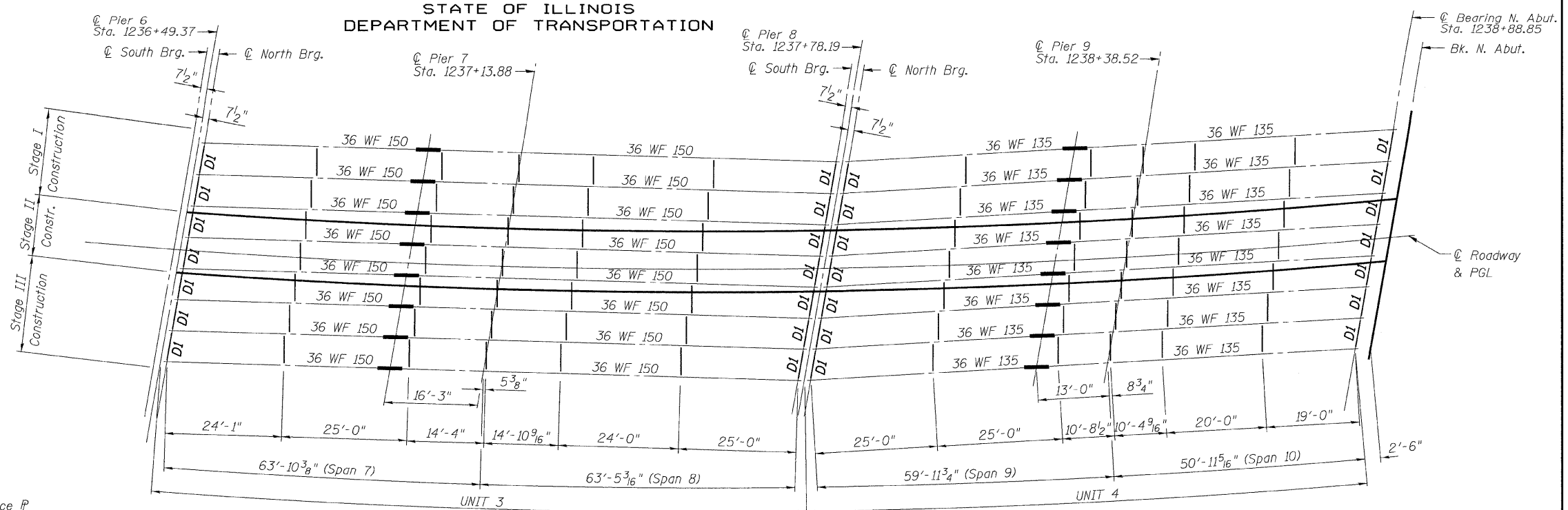


EXISTING END DIAPHRAGM "DI"

Replace with W12x40

Notes:

1. Loosen or remove bottom flange bolts of all existing interior diaphragms between beams 3 & 4 prior to Stage I deck removal and between beams 5 & 6 prior to Stage II deck removal.
2. Replace all bolts that are loosened or removed to facilitate staging.
3. Cost included in Concrete Superstructure.



ELEVATION

SPLICE DETAIL

(For Information Only)

DESIGNED -	MJB/MAJ
CHECKED -	JFS
DRAWN -	MSJ/MLB
CHECKED -	MJB

UNIT 3 (SPANS 7-8)

INTERIOR GIRDER MOMENT TABLE		
	0.4 Span 7 or 0.6 Span 8	Pier 7
I_s	(in ⁴) 9040	9040
$I_c(n)$	(in ⁴) 23392	
$I_c(3n)$	(in ⁴) 16951	
S_s	(in ³) 504	504
$S_c(n)$	(in ³) 737	
$S_c(3n)$	(in ³) 661	
Z	(in ³)	581
R	(k/')	0.79 1.043
$M \bar{P}$	('k)	235.9 -517.8
$s \bar{P}$	(k/')	0.253
$M_s \bar{P}$	('k)	86.9
$M \bar{t}$	('k)	424.2 -228.3
MIM	('k)	110.3 -59.4
$P_3 [M \bar{t} + j]$	('k)	890.8 -479.5
M_o	('k)	1578 -1296
M_u	('k)	2695 -1743
$f_s \bar{P}$ non-comp	(ksi)	5.6 12.3
$f_s \bar{P}$ (comp)	(ksi)	1.6
$f_s P_3 [M \bar{t} + M_I]$	(ksi)	14.5 11.4
f_s (Overload)	(ksi)	21.7 23.7
f_s (Total)	(ksi)	
VR	(k)	41.7

INTERIOR GIRDER REACTION TABLE			
	Pier 6	Pier 7	Pier 8
$R \bar{P}$	(k) 26.2	84.8	26.2
$R \bar{t}$	(k) 33.7	42.0	33.7
R_i	(k) 8.8	10.9	8.8
R_{Total}	(k) 68.7	137.7	68.7

* Compact section
** Braced non-compact and partially braced section

UNIT 4 (SPANS 9-10)

INTERIOR GIRDER MOMENT TABLE			
	0.4 Span 9	Pier 9	0.6 Span 10
I_s	(in ⁴) 7800	7800	7800
$I_c(n)$	(in ⁴) 21088		21088
$I_c(3n)$	(in ⁴) 15329		15329
S_s	(in ³) 439	439	439
$S_c(n)$	(in ³) 657		657
$S_c(3n)$	(in ³) 590		590
Z	(in ³)	509	
R	(k/')	0.775 1.028	0.775
$M \bar{P}$	('k)	224 -385.7	115.0
$s \bar{P}$	(k/')	0.253	0.253
$M_s \bar{P}$	('k)	81.6	48.0
$M \bar{t}$	('k)	385.3 -194.6	307.6
MIM	('k)	111.7 -56.4	92.3
$P_3 [M \bar{t} + j]$	('k)	828.3 -418.3	666.6
M_o	('k)	1474 -1045	1078
M_u	('k)	2707 -1527	2707
$f_s \bar{P}$ non-comp	(ksi)	6.1 10.5	3.1
$f_s \bar{P}$ (comp)	(ksi)	1.7	1.0
$f_s P_3 [M \bar{t} + M_I]$	(ksi)	15.1 11.4	12.2
f_s (Overload)	(ksi)	22.9 21.9	16.3
f_s (Total)	(ksi)		
VR	(k)	40.6	40.6

INTERIOR GIRDER REACTION TABLE			
	Pier 8	Pier 9	N Abut
$R \bar{P}$	(k) 25.4	72.3	18.9
$R \bar{t}$	(k) 33.2	38.5	32.0
R_i	(k) 9.0	10.8	9.3
R_{Total}	(k) 67.6	121.6	60.2

* Compact section
** Braced non-compact and partially braced section

JACKING LOADS

Dead Load Reaction of Steel Only (k)	Required Jack Capacity (k)
S. Abut.	2 4
Pier 5 (S)	2 4
Pier 5 (N)	9 18
Pier 6 (S)	9 18
Pier 6 (N)	4 8
Pier 8 (S)	4 8
Pier 8 (N)	4 8
N. Abut.	3 6

BILL OF MATERIAL

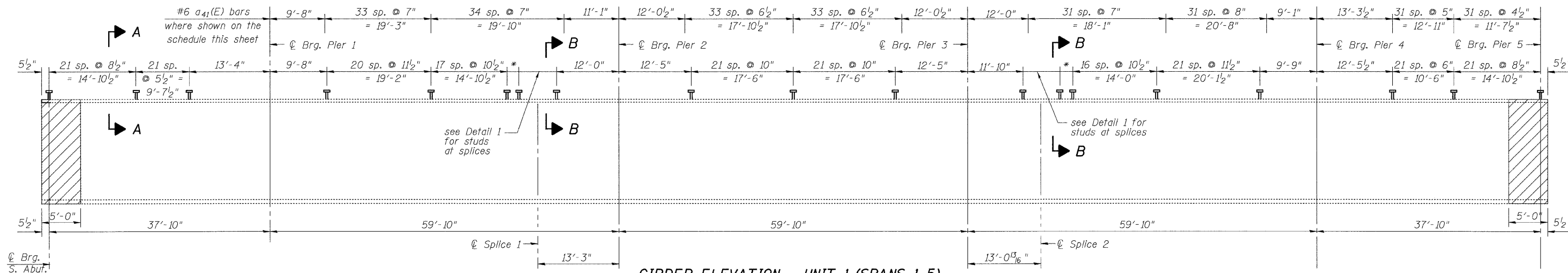
Item	Units	Total
Furnishing and Erecting Structural Steel	Pound	17668

**FRAMING PLAN & STRUCTURAL STEEL DETAILS
STRUCTURE NO. 058-0014**

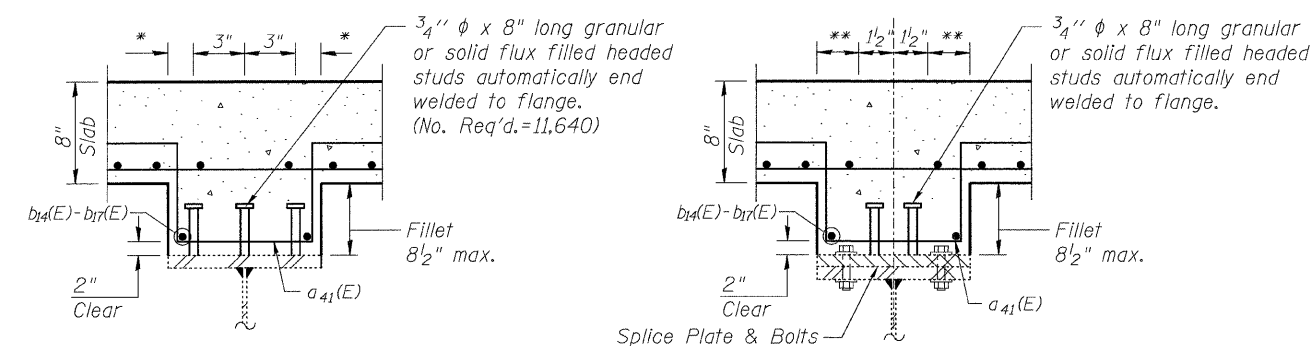


SHEET NO. 25 49 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	51
CONTRACT NO. 74215					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



GIRDER ELEVATION - UNIT 1 (SPANS 1-5)

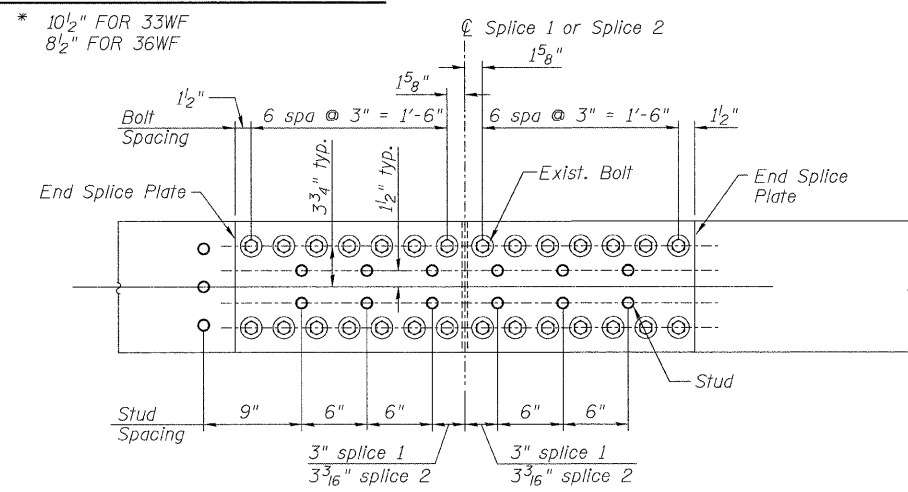


SECTION A-A

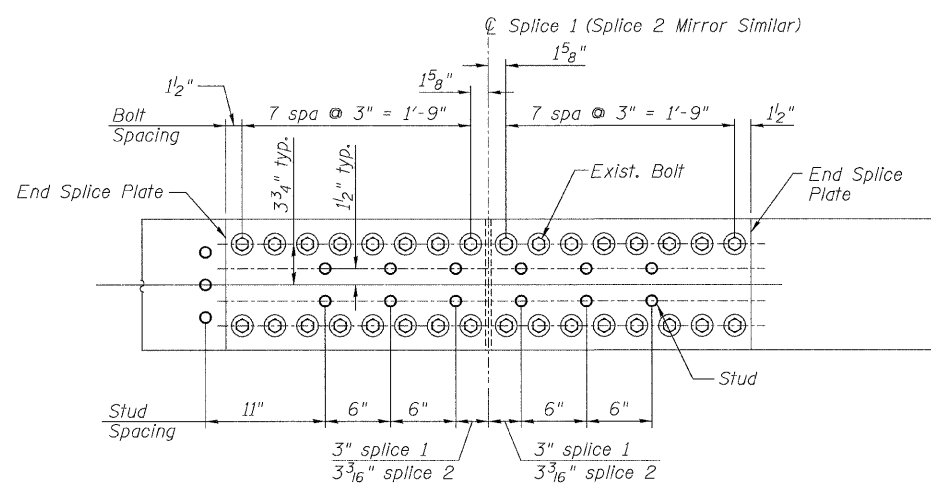
* 2 3/4" for 33WF
3" All others

SECTION B-B (AT SPLICES)

** 4 1/4" for 33WF
4 1/2" All others



PLAN - 33WF (BEAMS 2 - 7)



PLAN - 36WF (BEAMS 1 - 8)

DETAIL 1

Length at End of Girder to be Cleaned and Painted

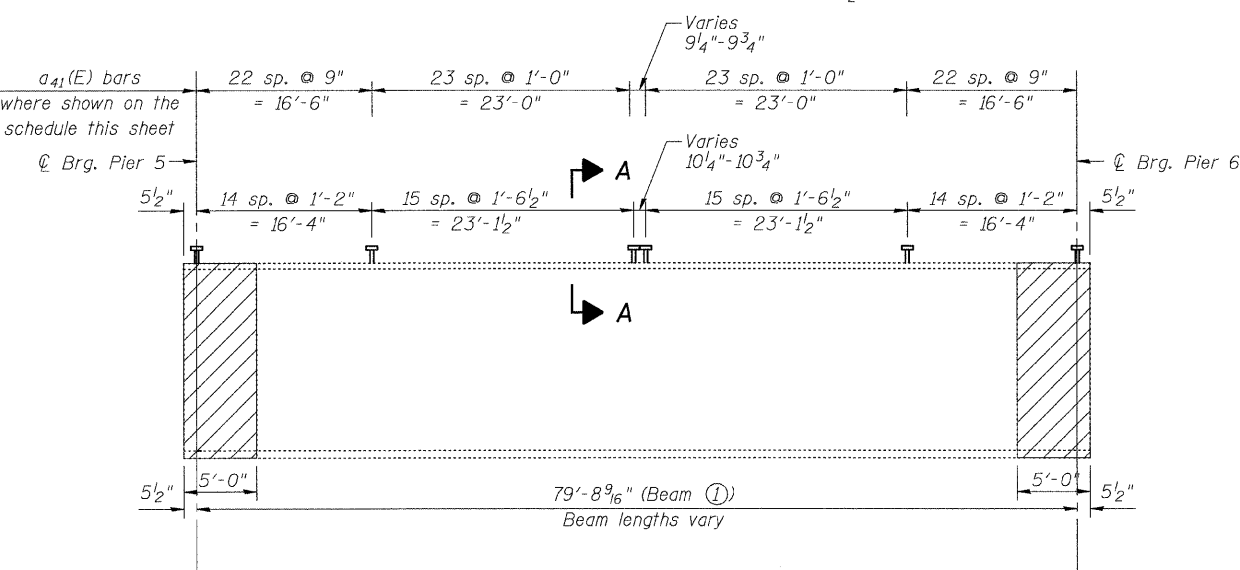
FILLET REINFORCEMENT

a₄₁(E) Bars used in spans shown by "X" spaced as shown in girder elevations.

Span	1	2	3	4	5	6	7	8	9	10
Beam 1			X	X	X			X	X	X
Beam 2			X	X	X			X	X	X
Beam 3			X	X	X			X	X	X
Beam 4		X	X	X	X			X	X	X
Beam 5			X	X	X			X	X	X
Beam 6			X	X	X			X	X	X
Beam 7			X	X	X	X	X	X	X	X
Beam 8			X	X	X	X	X	X	X	X
		2x1 #5 b ₁₄ (E)	2x1 #5 b ₁₅ (E)	2x1 #5 b ₁₄ (E)	2x1 #5 b ₁₆ (E)	2x2 #5 b ₁₄ (E)	2x2 #5 b ₁₇ (E)	2x2 #5 b ₁₇ (E)	2x2 #5 b ₁₇ (E)	2x1 #5 b ₁₅ (E)

b₁₄(E), b₁₅(E), b₁₆(E), & b₁₇(E) bars located in regions with shear studs only and as shown in this schedule. See sheet 17 for Bill of Materials

Minimum reinforcement bar lap splice length
#5 = 2'-2"



GIRDER ELEVATION - UNIT 2 (SPAN 6)

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

G-1 10-1-08

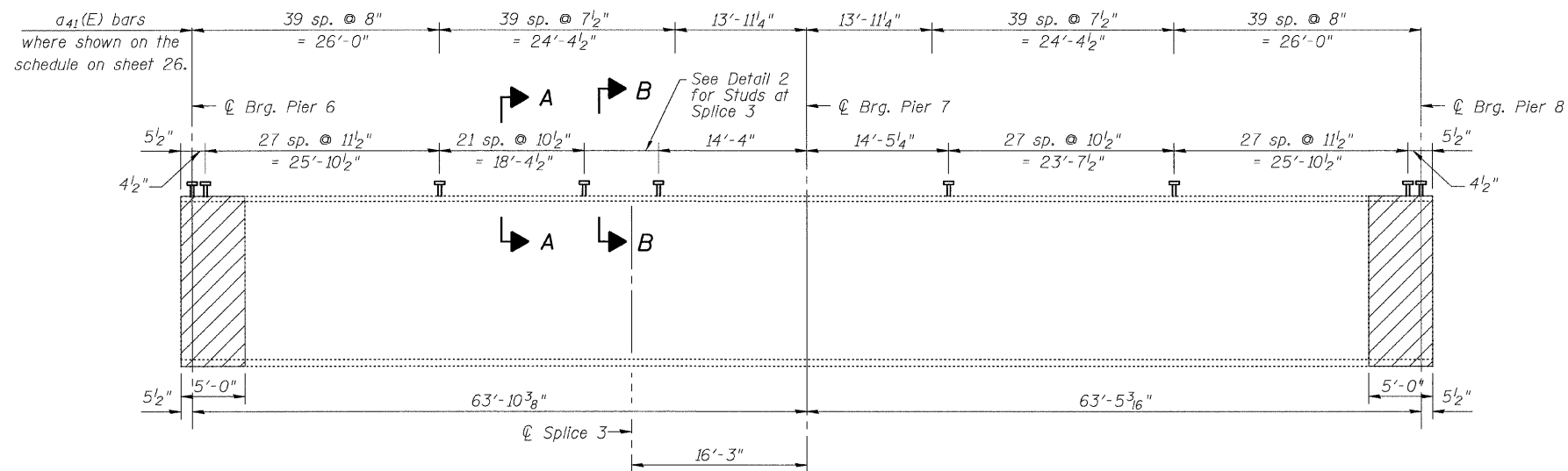
GIRDER ELEVATION
STRUCTURE NO. 058-0014



SHEET NO. 26
49 SHEETS

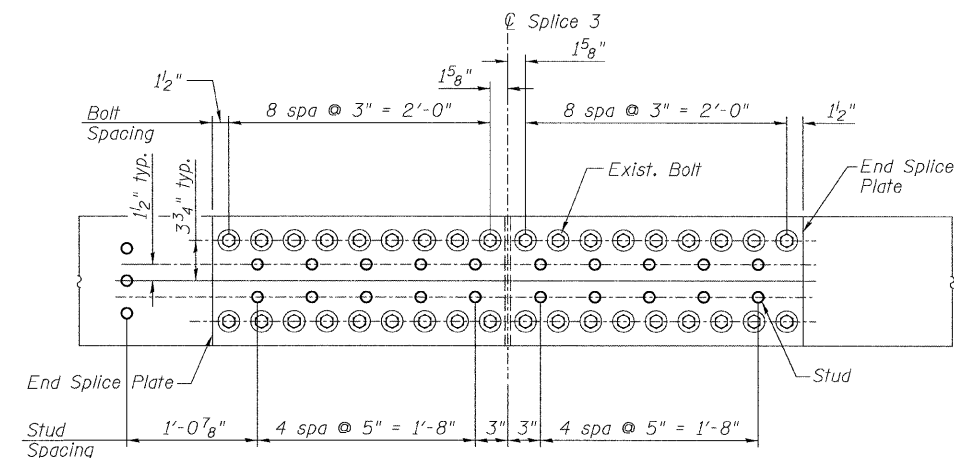
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB)BR	MACON	79	52
CONTRACT NO. 74215				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

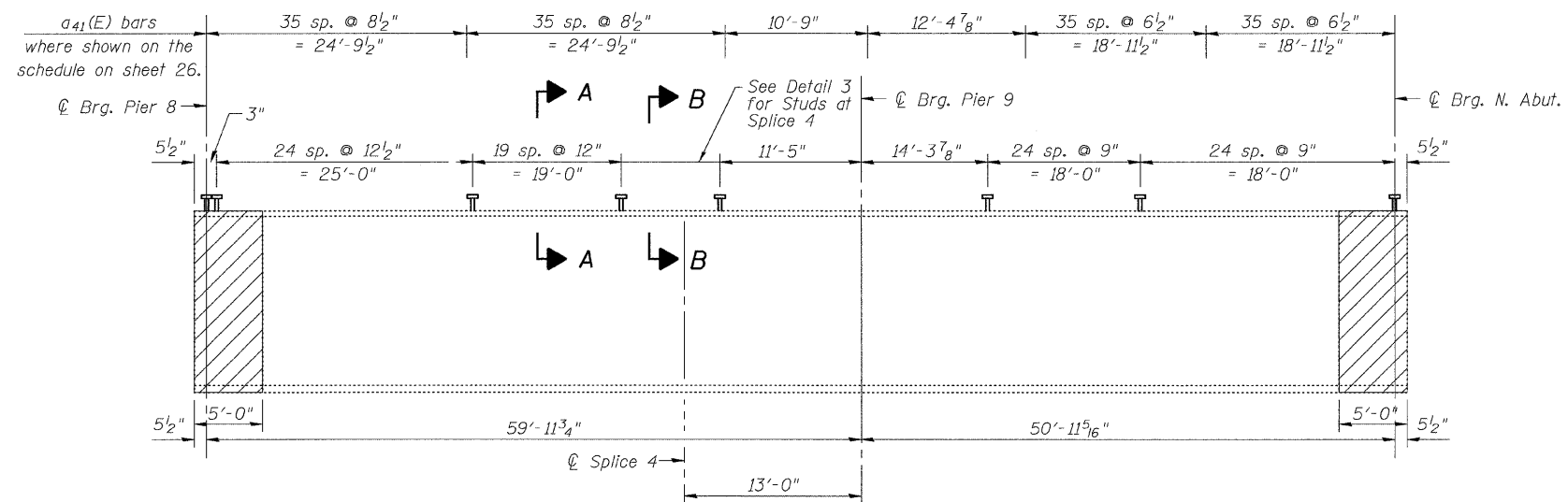


GIRDER ELEVATION - UNIT 3 (SPANS 7-8)

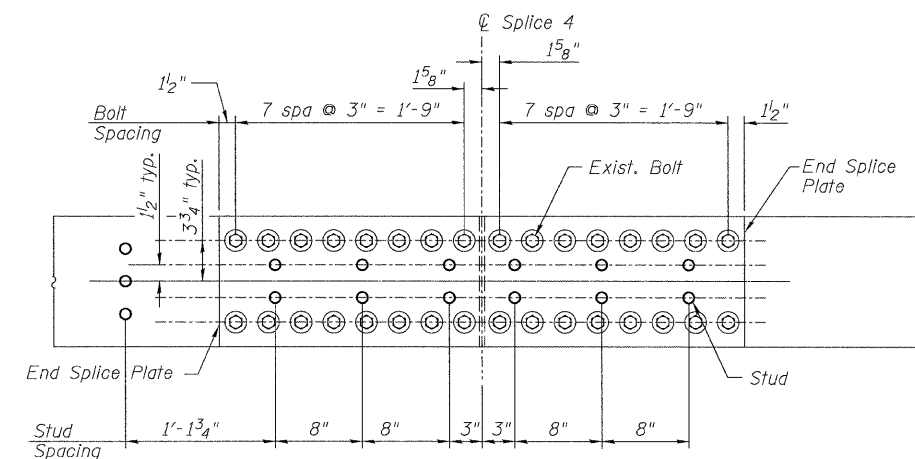
Length at End of Girder to be Cleaned and Painted



DETAIL 2



GIRDER ELEVATION - UNIT 4 (SPANS 9-10)



DETAIL 3

GIRDER ELEVATION
STRUCTURE NO. 058-0014

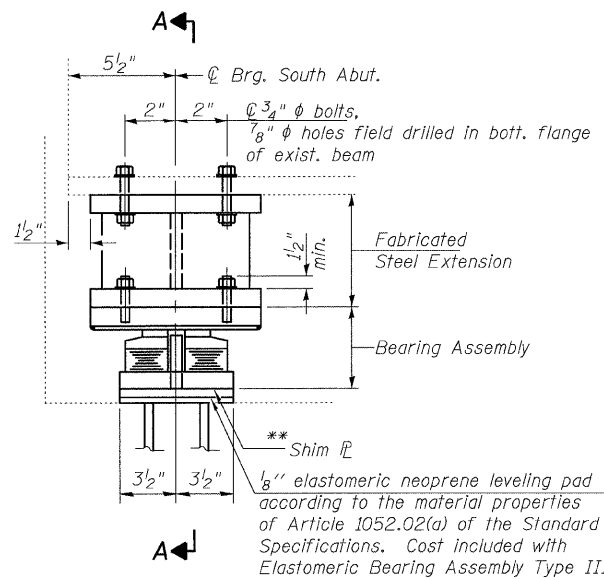
DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

G-1

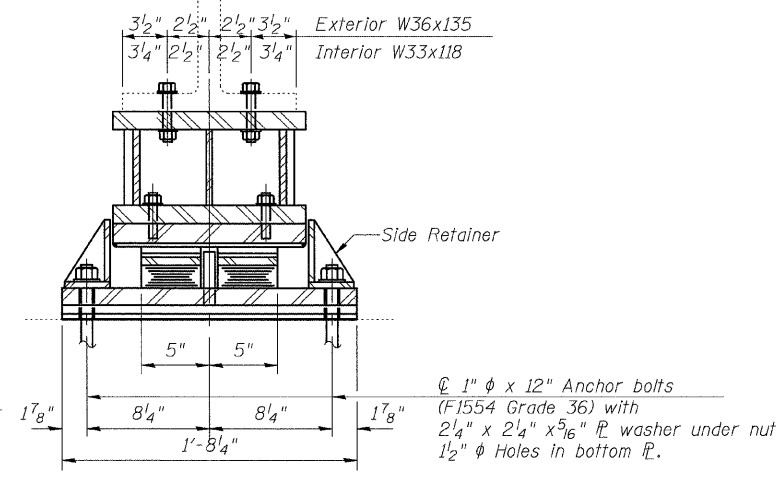
10-1-08

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmead Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0085
Illinois Registration Number 184-004813

SHEET NO. 27 49 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	53
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 74215					

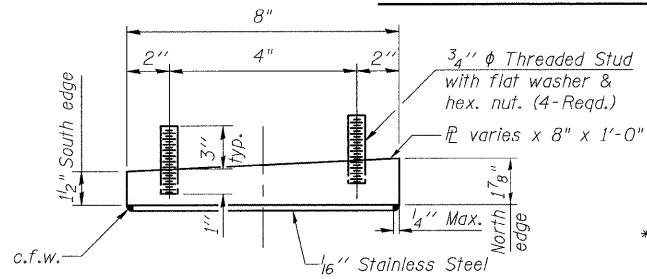


ELEVATION AT S. ABUT.



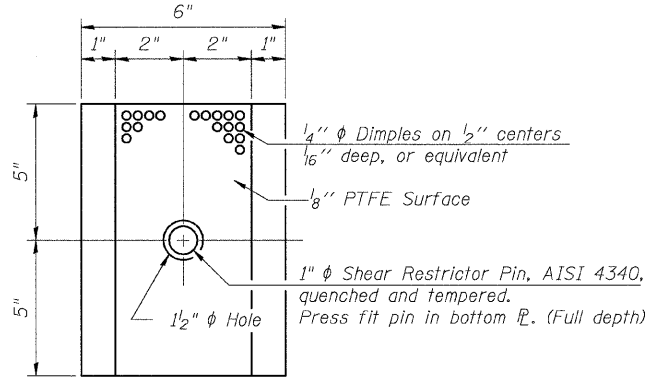
SECTION A-A

TYPE III ELASTOMERIC EXP. BRG.

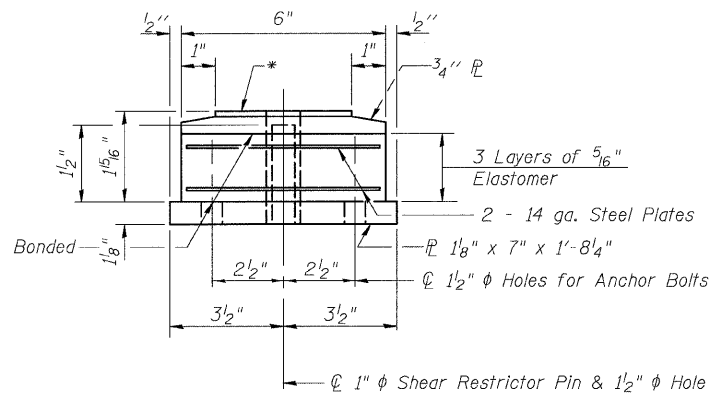


TOP BEARING ASSEMBLY

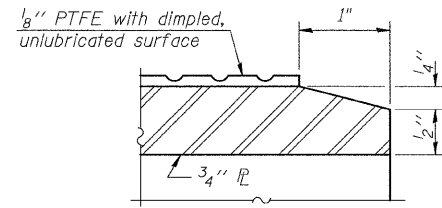
* 1/8" PTFE dimpled, unlubricated
 ** 7" x 1'-8 1/4" x t
 t = 3/8" at Beam #3
 t = 3/4" at Beam #4
 t = 1/2" at Beam #5
 t = 7/8" at Beam #6



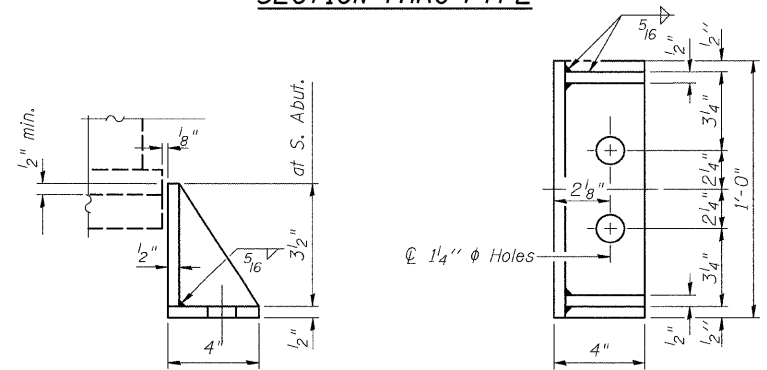
PLAN-PTFE ELASTOMERIC BRG.



BOTTOM BEARING ASSEMBLY

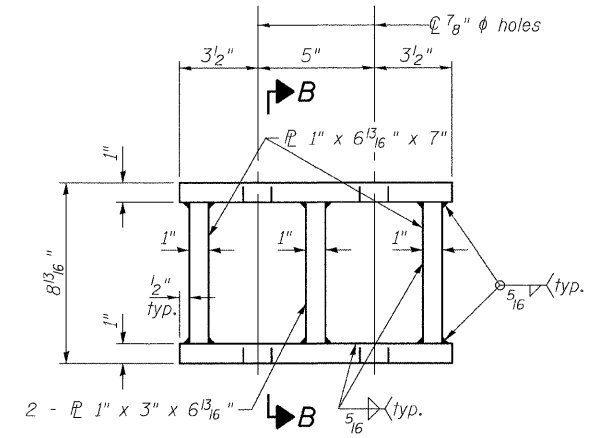


SECTION THRU PTFE

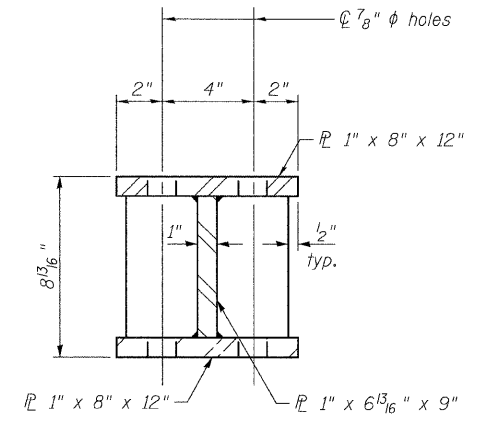


SIDE RETAINER

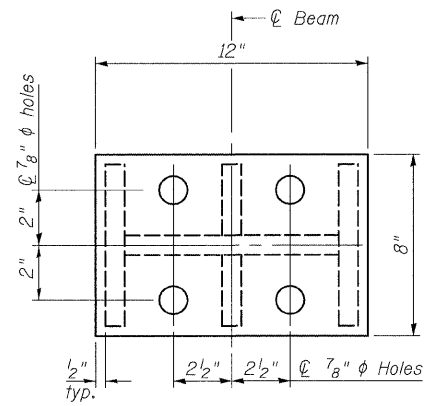
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



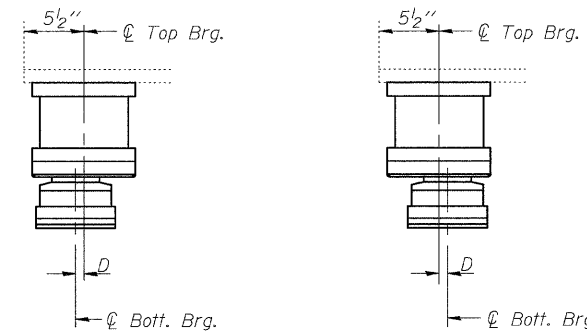
ELEVATION FABRICATED STEEL EXTENSION



SECTION B-B



PLAN FABRICATED STEEL EXTENSION



SETTING ANCHOR BOLTS AT EXP. BRG.
 D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

Notes:
 See Sheet 29 of 49 for Existing Bearing Removal Detail and Jack and Remove Existing Bearing Procedures.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type III bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate. Side retainers shall be placed after bolts are installed.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type III.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Prior to ordering any material the Contractor shall verify in the field all bearing height and shim thickness dimensions. Cost included in Elastomeric Bearing Assembly Type III.

The cost of field drilling holes in bottom flange of exist. beams is included in Elastomeric Bearing Assembly, Type III.

***Fabricated Steel Extensions

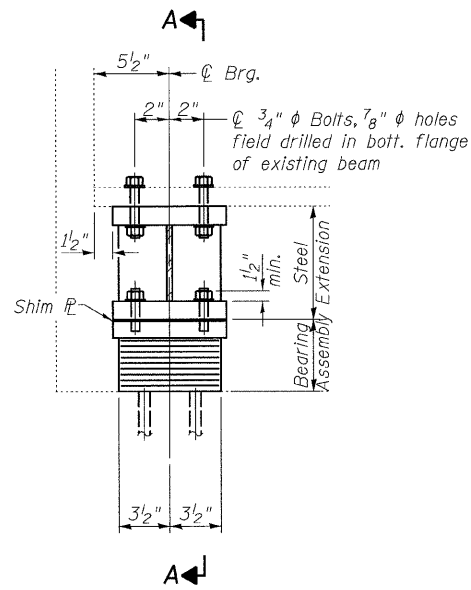
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type III	Each	8
Anchor Bolts, 1"	Each	32
***Furnishing and Erecting Structural Steel	Pound	924
Jack & Remove Existing Bearing	Each	8

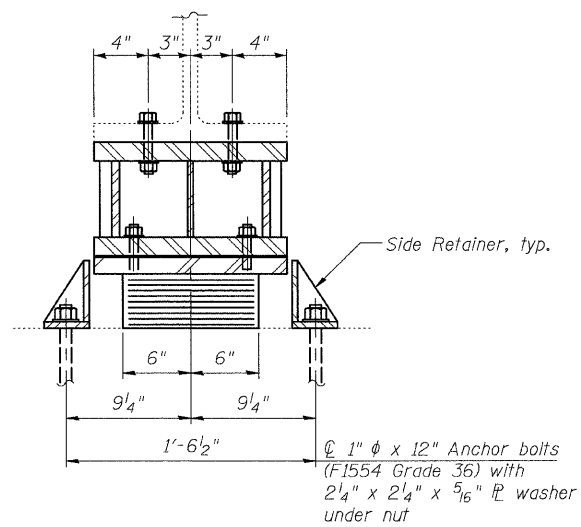
BEARING DETAILS-S. ABUTMENT
 STRUCTURE NO. 058-0014

SHEET NO. 28	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49 SHEETS	710	(50Z-VB)BR	MACON	79	54
CONTRACT NO. 74215					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

Coombe-Bloxdorf P.C.
 -CIVIL ENGINEERS-
 -STRUCTURAL ENGINEERS-
 -LAND SURVEYORS-
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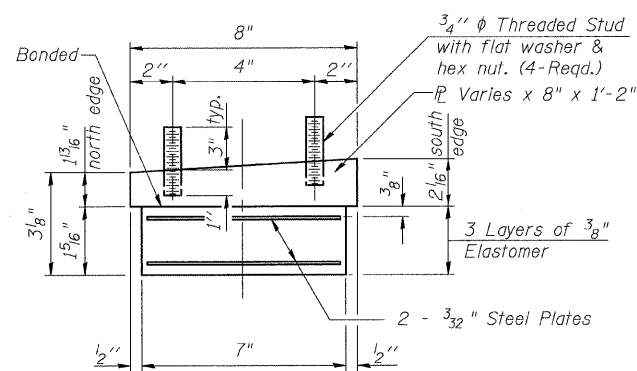


ELEVATION AT N. ABUT.



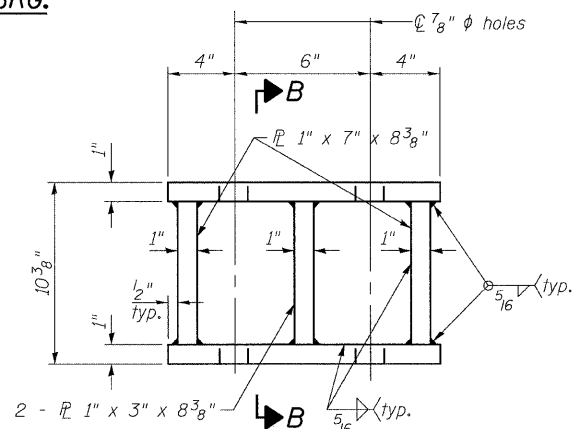
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

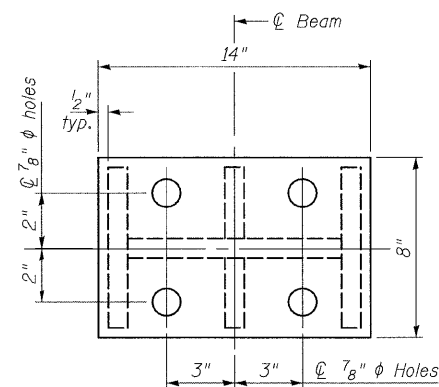


BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.



ELEVATION FABRICATED STEEL EXTENSION



PLAN FABRICATED STEEL EXTENSION

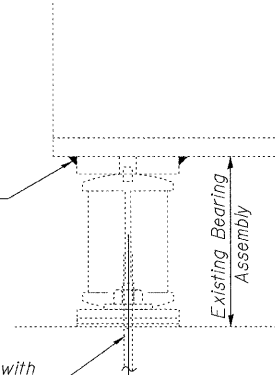
*at abutments only

Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange. Cost included in Concrete Removal.

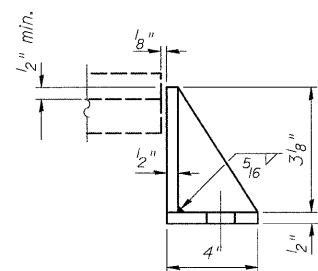
*Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost is included in Concrete Removal.

EXISTING BEARING REMOVAL DETAIL

At abutments, Pier 5, Pier 6 and Pier 8



SECTION B-B



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

PROCEDURE FOR JACKING AND REMOVING EXISTING BEARINGS

(At Abutments)

1. The Contractor shall submit, for approval by the Engineer, plans for jacking and removing the existing bearings at the abutments prior to commencing any work at the abutment bearings.
2. In each stage, jacking and removal of existing bearings shall be done after the existing deck is removed and before new deck is poured.
3. The jacking system at the existing abutments shall be placed on the existing slopewall and shall distribute the loads using steel beams, timber mats or other means approved by the Engineer.
4. The beam reactions after the deck has been removed at each bearing are shown in the table below.

Location	Dead Load Reaction
South Abutment	1 Ton
North Abutment	1.5 Tons

5. The new bearings and steel extensions shall be in place and the jacks lowered prior to pouring the new concrete deck in each stage. See Special Provision for Jack and Remove Existing Bearings.

PROCEDURE FOR JACKING AND CRIBBING

(At Piers 5, 6 and 8)

1. The Contractor shall submit, for approval by the Engineer, plans for jacking and cribbing the existing beams prior to commencing any concrete removal work at existing piers 5, 6 and 8.
2. In each stage, the jacking of the existing beams shall be done after existing deck is removed, the cribbing is in place and before new deck is poured.
3. The beam reactions after the deck has been removed at each bearing are shown in the table below.

Location	Dead Load Reaction (k)
Pier 5 North	4.5 Tons
Pier 5 South	4.5 Tons
Pier 6 North	2.0 Tons
Pier 6 South	2.0 Tons
Pier 8 North	2.0 Tons
Pier 8 South	1.5 Tons

4. The new pier cap shall be cured, the new bearings shall be in place and the jacks lowered prior to pouring the new concrete deck in each stage. See Special Provision for Jacking and Cribbing.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers shall be installed in holes drilled in the concrete.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Cost included in Elastomeric Bearing Assembly Type I.

The cost of field drilling holes in bottom flange of existing beams is included in Elastomeric Bearing Assembly Type I.

***Fabricated Steel Extensions

BILL OF MATERIAL

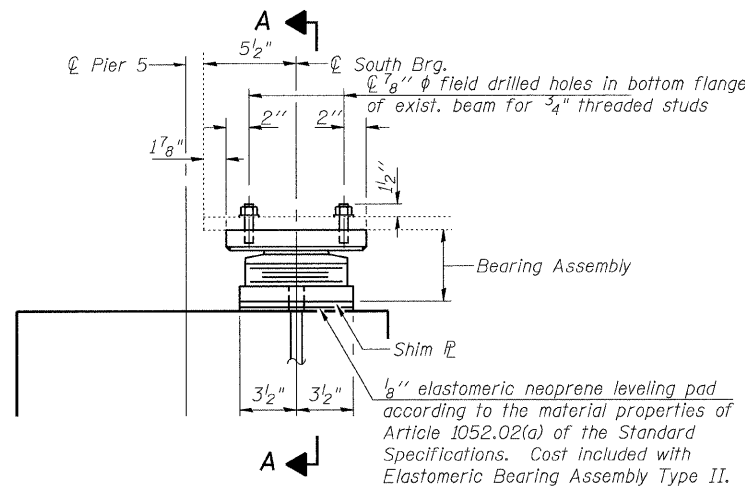
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	8
Anchor Bolts, 1"	Each	32
***Furnishing and Erecting Structural Steel Jack and Remove Existing Bearings	Pound	1142
	Each	8

BEARING DETAILS-N. ABUTMENT
STRUCTURE NO. 058-0014

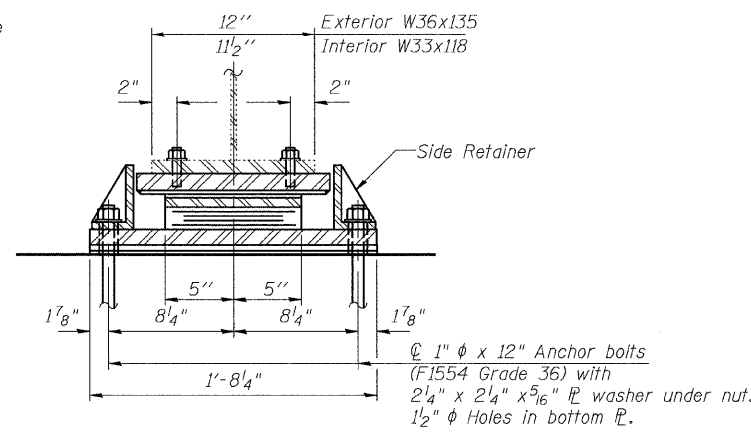
SHEET NO. 29	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	49 SHEETS	710	(50Z-VB)BR	MACON	79
			CONTRACT NO. 74215		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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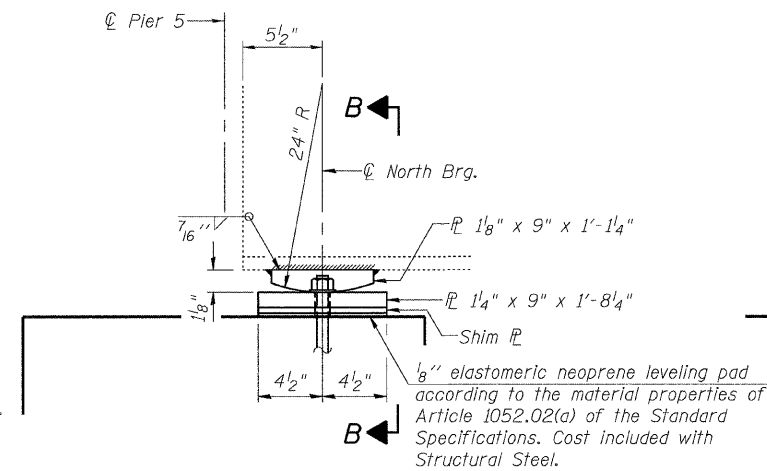
PROJECT NO. 07086
SCALE / / /
DATE / / /
DESIGN BY CME
DRAWN BY TFG/CFC
CHECKED BY CME/MCB



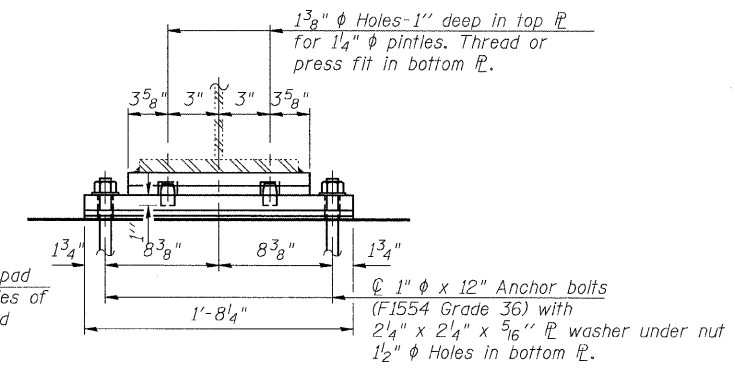
ELEVATION AT PIER 5
(Looking East-Showing South Bearing)



SECTION A-A



ELEVATION AT PIER 5
(Looking West-Showing North Bearing)

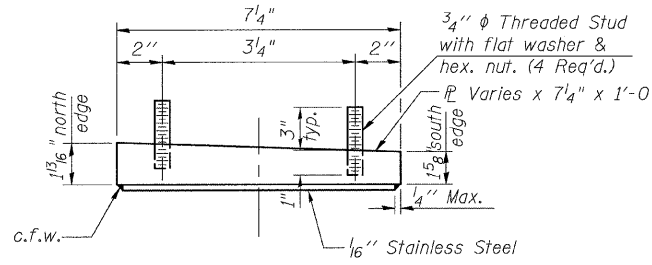


SECTION B-B

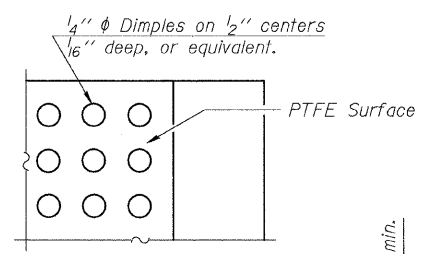
TYPE II ELASTOMERIC EXP. BRG.

FIXED BEARING

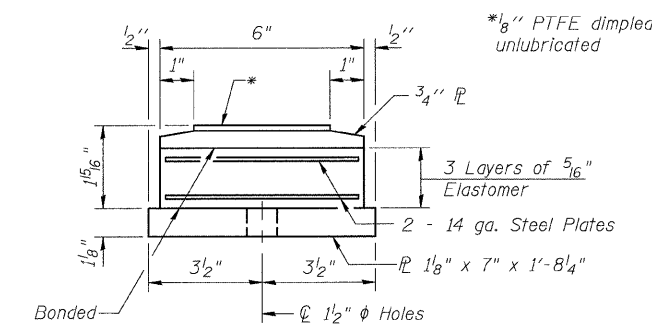
Notes:
See Sheet 29 of 49 for Existing Bearing Removal Detail and Jacking and Cribbing Procedure.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
The 1/8 inch PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8 inch PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
The cost of field drilling holes in bottom flange of existing beams is included in Elastomeric Bearing Assembly, Type II.



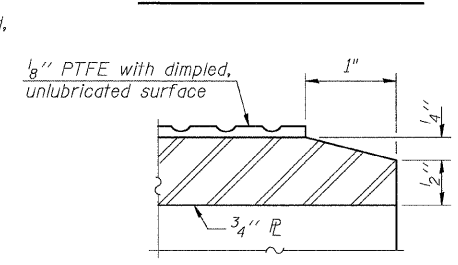
TOP BEARING ASSEMBLY



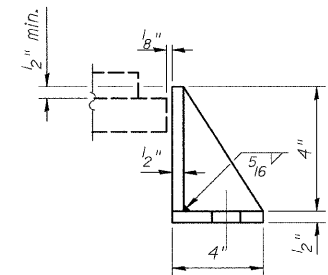
PLAN-PTFE SURFACE



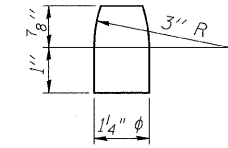
BOTTOM BEARING ASSEMBLY



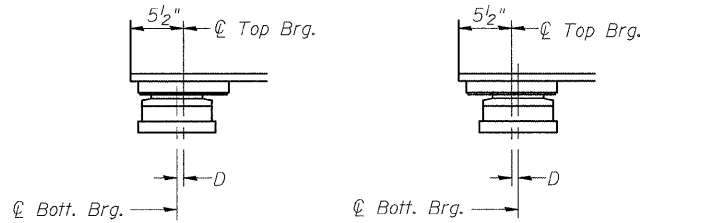
SECTION THRU PTFE



SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



PINTLE



SETTING ANCHOR BOLTS AT EXP. BRG.
D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

TABLE OF SHIM PLATES

Beam No.	Pier Location	Pier #5 (S) Inches	Pier #5 (N) Inches
#1		0	2
#2		1/16	0
#3		1/16	0
#4		1/16	0
#5		1/16	0
#6		1/16	0
#7		1/16	0
#8		0	2

BILL OF MATERIAL

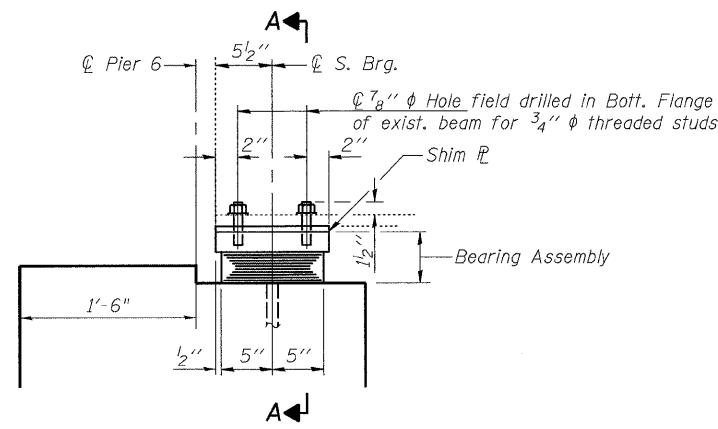
Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	8
Anchor Bolts, 1"	Each	32

BEARING DETAILS-PIER 5
STRUCTURE NO. 054-0014

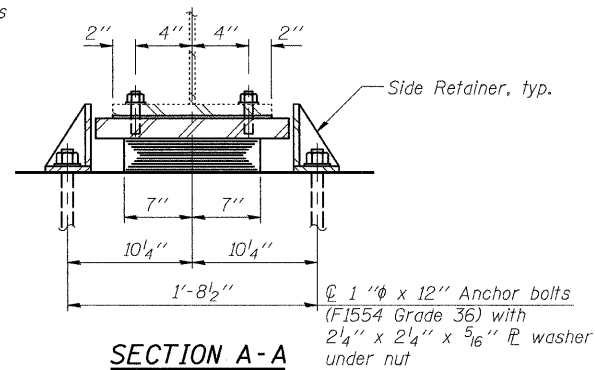
SHEET NO. 30	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49 SHEETS	710	(50Z-VB)BR	MACON	79	56
CONTRACT NO. 74215					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

Coombe-Bloxdorf P.C.
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-LAND SURVEYORS-
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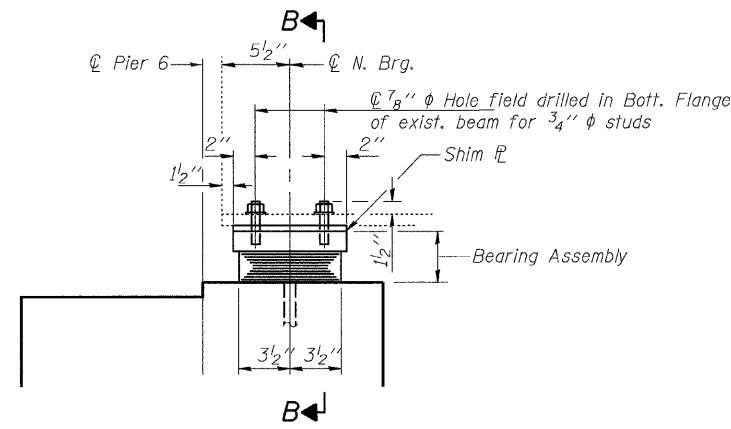
PROJECT NO. 07086
SCALE
DATE / /
DESIGN BY
DRAWN BY TFG/CFC
CHECKED BY GB/MCB



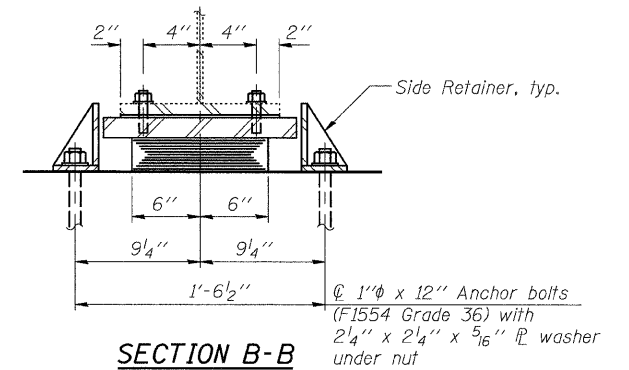
ELEVATION AT PIER 6
(Looking East-Showing South Bearing)



SECTION A-A



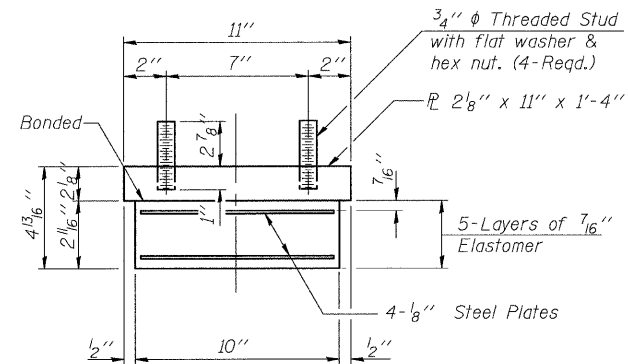
ELEVATION AT PIER 6
(Looking West-Showing North Bearing)



SECTION B-B

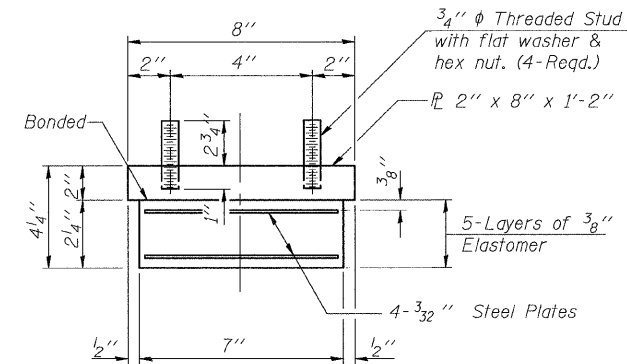
TYPE I ELASTOMERIC EXP. BRG.

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

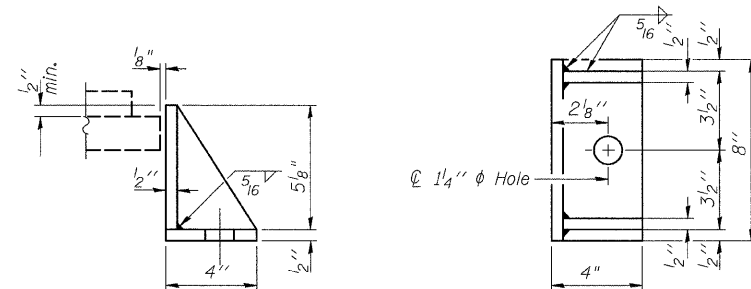
Note:
Shim plates shall not be placed under Bearing Assembly.



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.

Notes:
See Sheet 29 of 49 for Existing Bearing Removal Detail and Jacking and Cribbing Procedure.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
Cost of field drilling holes in bottom flange of exist. beam is included in the cost of Elastomeric Bearing Assembly, Type I.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

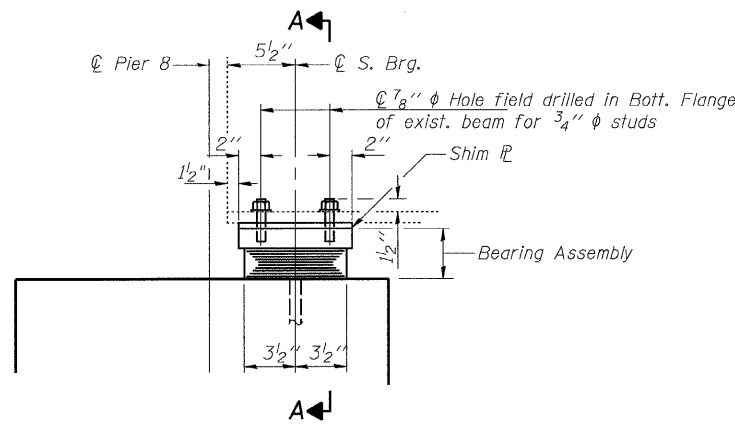
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	16
Anchor Bolts, 1"	Each	32

BEARING DETAILS-PIER 6
STRUCTURE NO. 058-0014

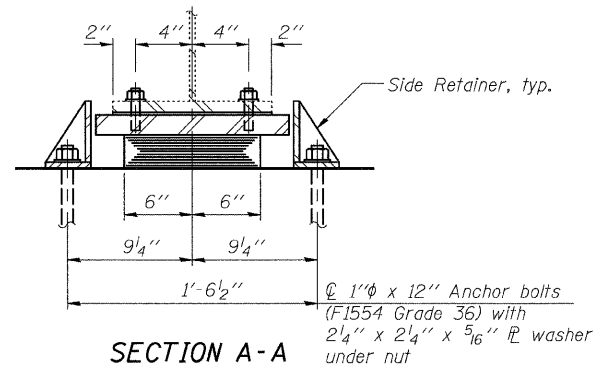
CB Coombe-Bloxdorf P.C.
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-LAND SURVEYORS-
Design Firm License No. 184-002703

PROJECT NO.	07086
SCALE	
DATE	/ /
DESIGN BY	CME
DRAWN BY	TFG
CHECKED BY	MCB

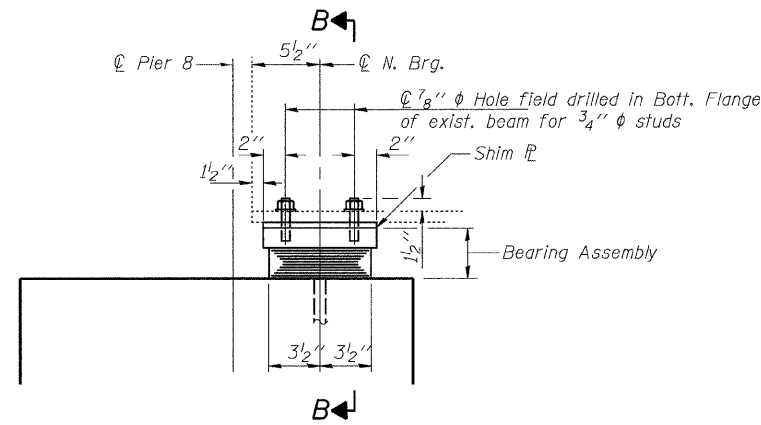
SHEET NO. 31 49 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 74215					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



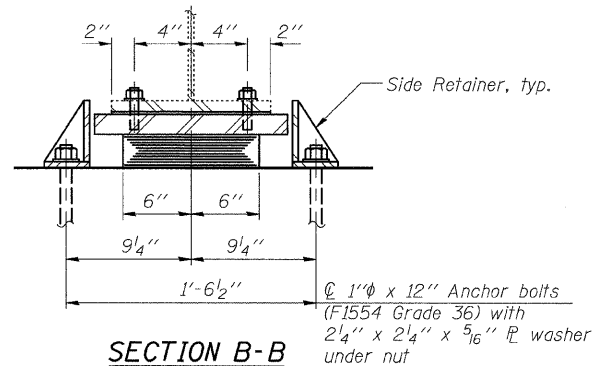
ELEVATION AT PIER 8
(Looking East-Showing South Bearing)



SECTION A-A



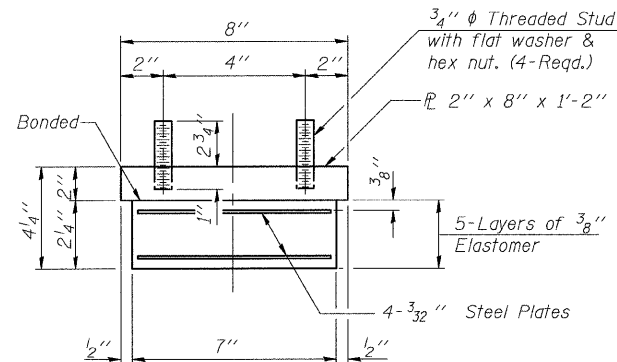
ELEVATION AT PIER 8
(Looking West-Showing North Bearing)



SECTION B-B

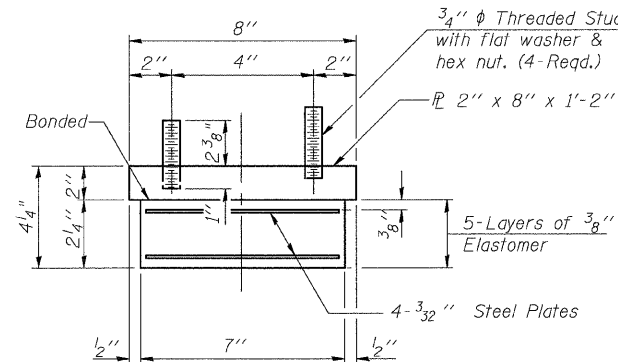
TYPE I ELASTOMERIC EXP. BRG.

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.



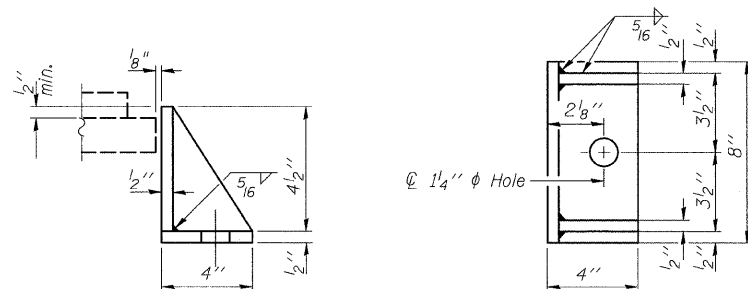
BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.

Notes:
See Sheet 29 of 49 for Existing Bearing Removal Detail and Jacking and Cribbing Procedure.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
Cost of field drilling holes in bottom flange of existing beam is included in the cost of Elastomeric Bearing Assembly, Type I.

TABLE OF SHIM PLATES

Beam No.	Pier Location	Pier #8 (S) Inches
#1		0
#2		0
#3		1/8
#4		0
#5		0
#6		0
#7		0
#8		0



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

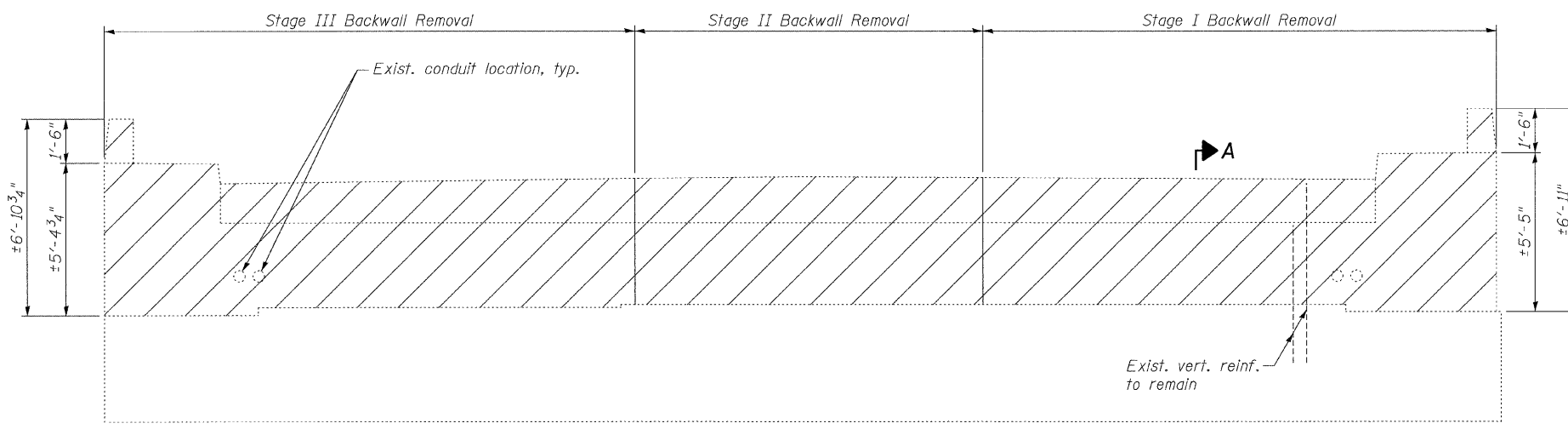
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	16
Anchor Bolts, 1"	Each	32

BEARING DETAILS-PIER 8
STRUCTURE NO. 058-0014

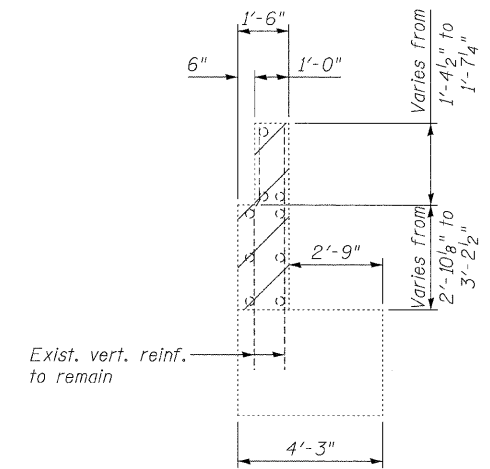
CB Coombe-Bloxdorf P.C.
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-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

PROJECT NO. 07086
SCALE / /
DATE / /
DESIGN BY CME
DRAWN BY TFC
CHECKED BY MCB

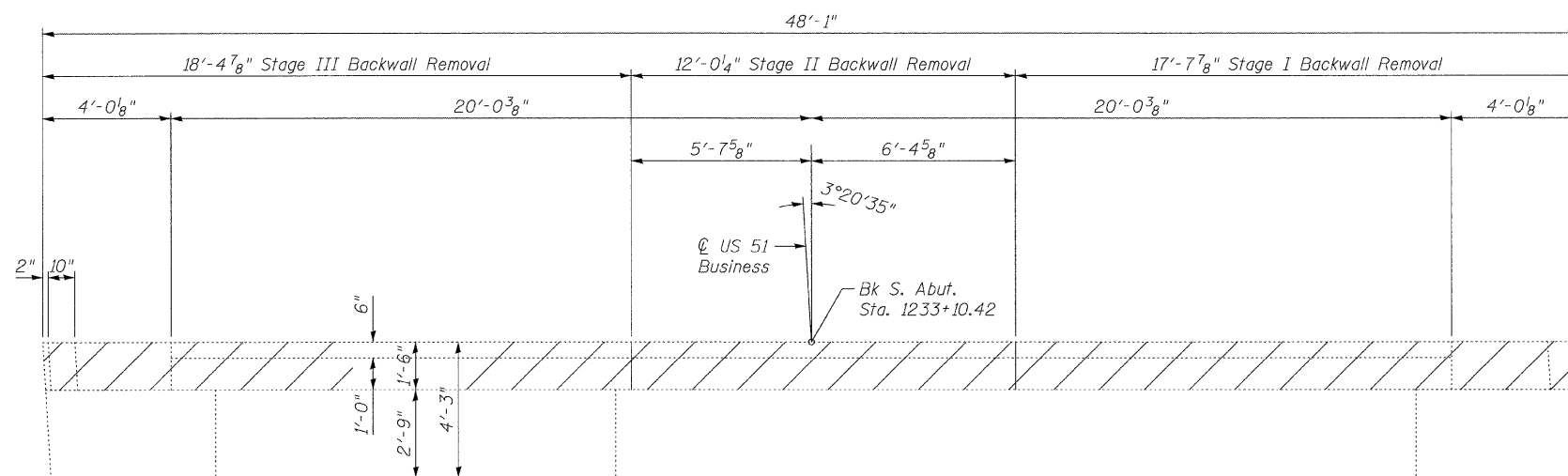
SHEET NO. 32	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 74215					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



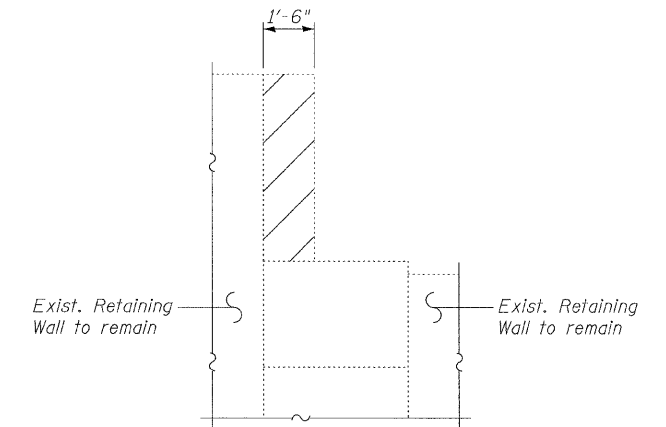
ELEVATION
(Looking South)



SECTION A-A



TOP VIEW



END VIEW

Notes:
 Hatched areas indicate Concrete Removal.
 Existing reinforcement not extending into the areas of new construction shall be cut at the removal line and removed. Exposed portion will be covered with a layer of epoxy. Cost included with Concrete Removal.
 Existing reinforcement extending into the areas of new construction are to be cleaned, straightened and incorporated into the new construction. All reinforcement bars being reused that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

SOUTH ABUTMENT CONCRETE REMOVAL DETAILS
STRUCTURE NO. 058-0014

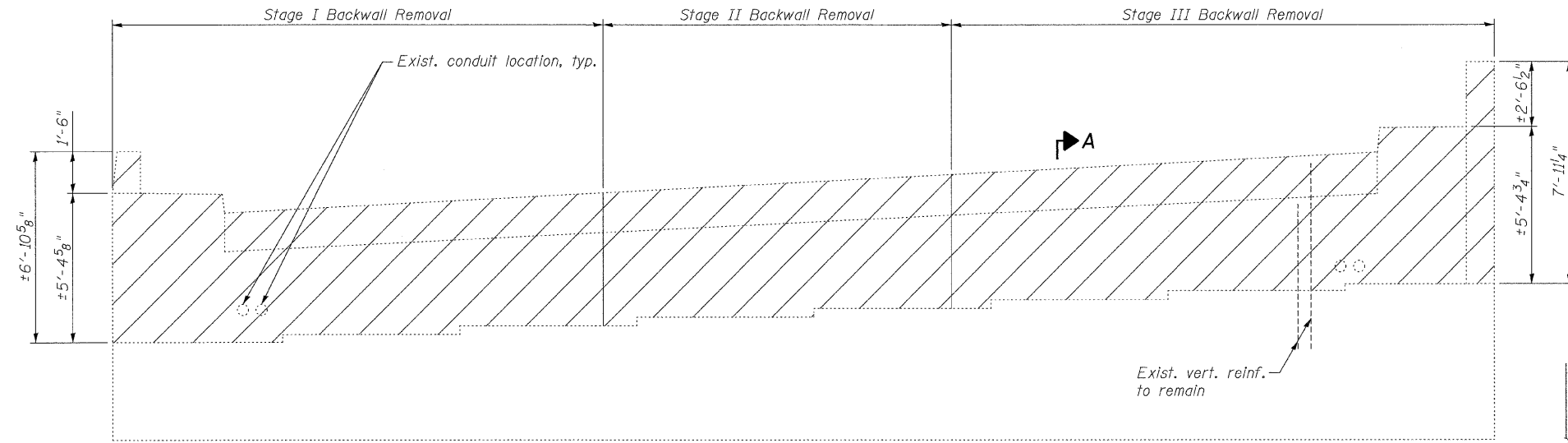
CB Coombe-Bloxdorf P.C.
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 -STRUCTURAL ENGINEERS-
 -LAND SURVEYORS-
 Design Firm License No. 184-002703

PROJECT NO.	07086
SCALE	
DATE	/ /
DESIGN BY	
DRAWN BY	CFC
CHECKED BY	GB/MCB

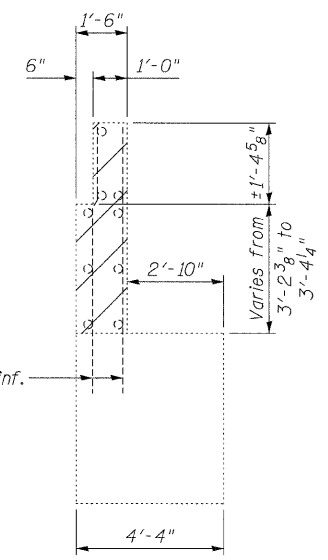
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	11.5

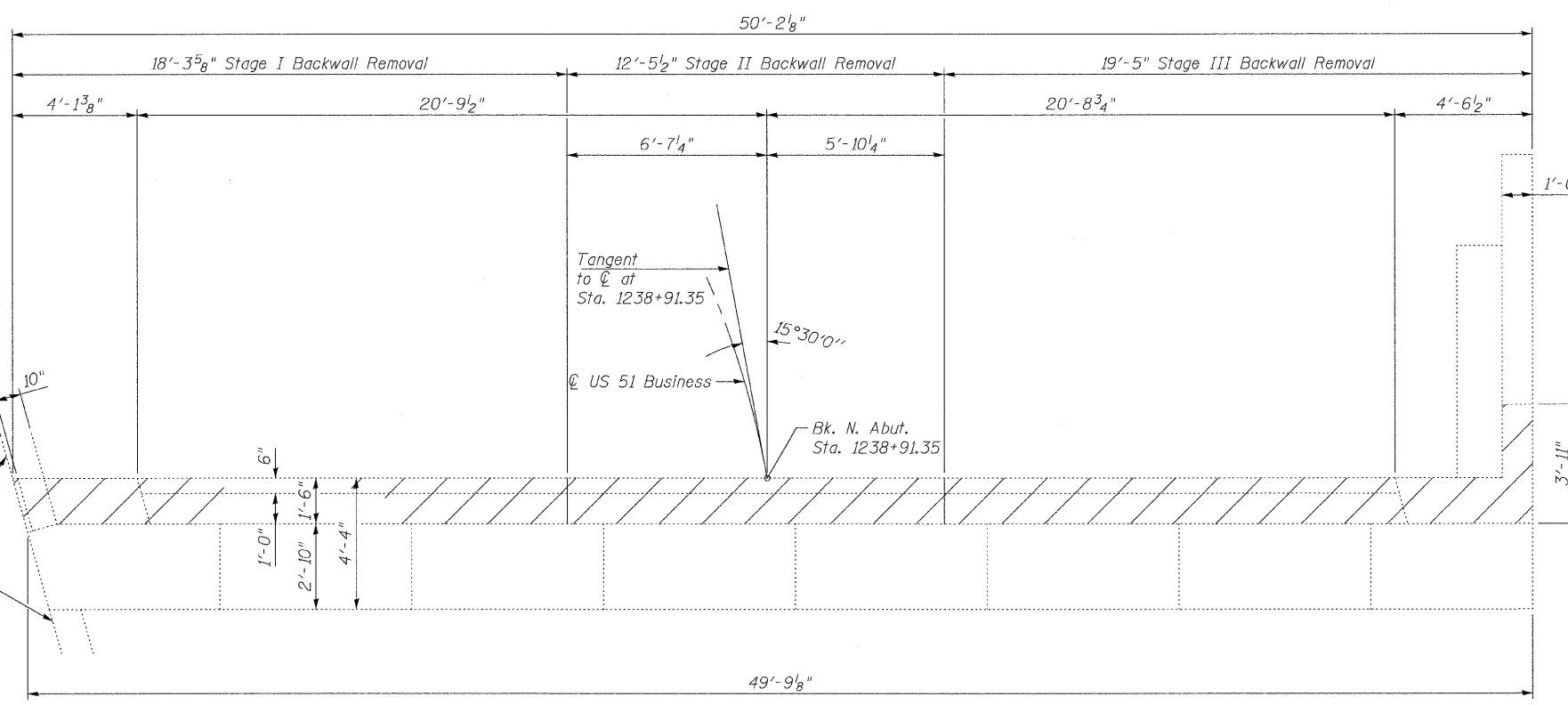
SHEET NO. 33 49 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	59
CONTRACT NO. 74215					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



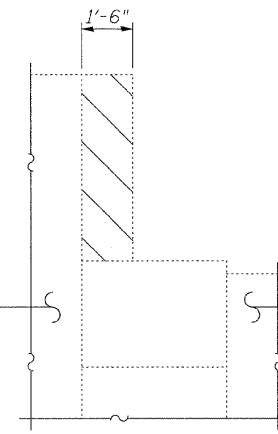
ELEVATION
(Looking North)



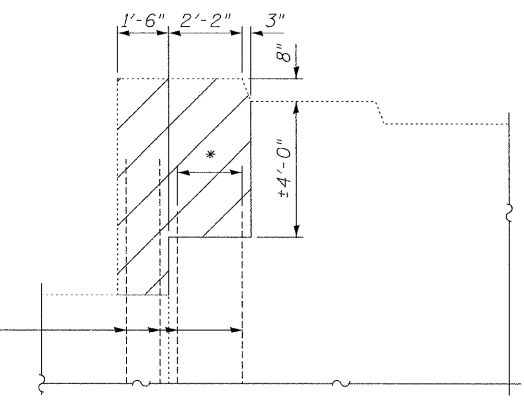
SECTION A-A



TOP VIEW



WEST END VIEW



NORTHEAST WINGWALL ELEVATION

* Cut existing vertical reinforcement in wingwall 9" above removal line

Notes:
Hatched areas indicate Concrete Removal.
Existing reinforcement not extending into the areas of new construction shall be cut at the removal line and removed. Exposed portion will be covered with a layer of epoxy. Cost included with Concrete Removal.
Existing reinforcement extending into the areas of new construction are to be cleaned, straightened and incorporated into the new construction. All reinforcement bars being reused that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

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Design Firm License No. 184-002703

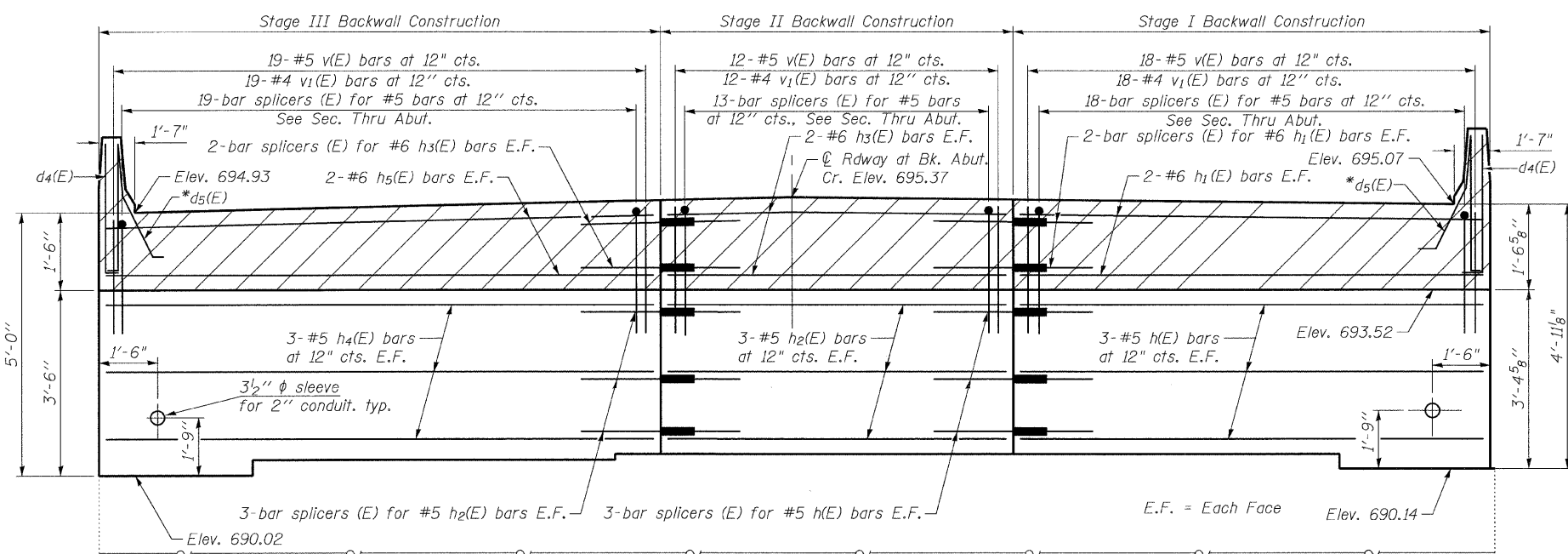
PROJECT NO.	07086
SCALE	
DATE	
DESIGN BY	
DRAWN BY	CFC
CHECKED BY	GB/MCB

BILL OF MATERIAL

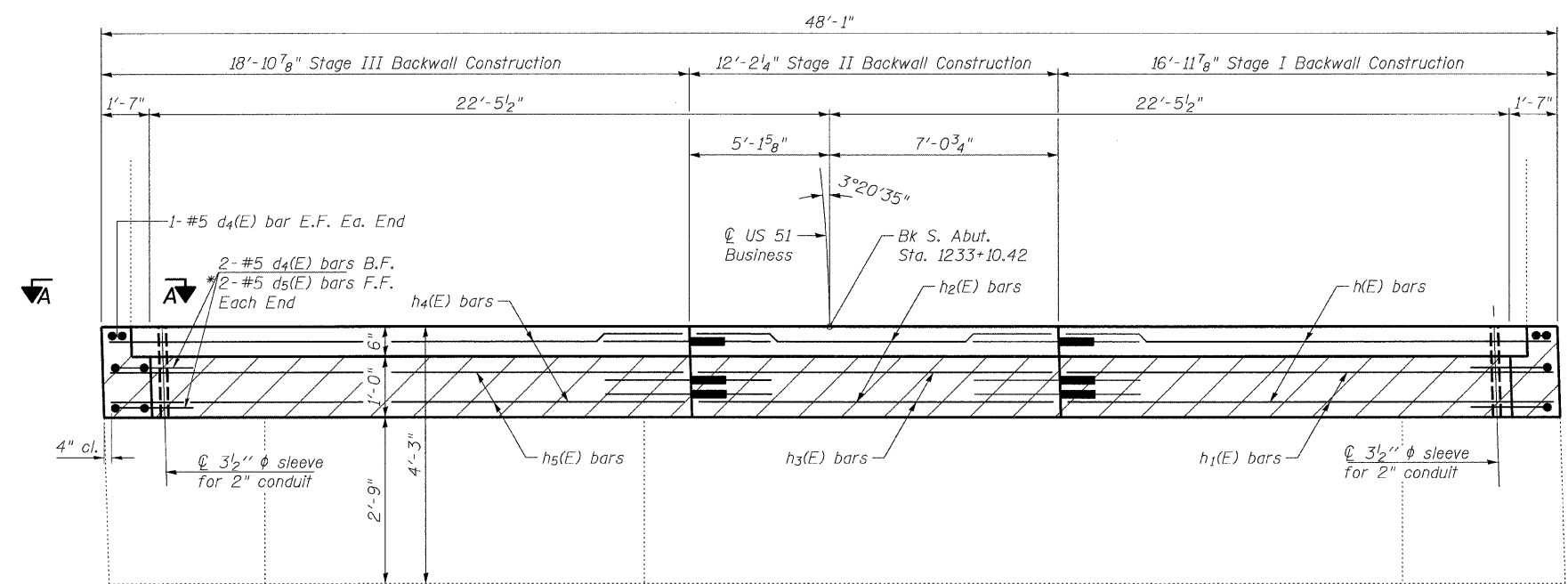
Item	Unit	Total
Concrete Removal	Cu. Yd.	13.1

**NORTH ABUTMENT CONCRETE REMOVAL DETAILS
STRUCTURE NO. 058-0014**

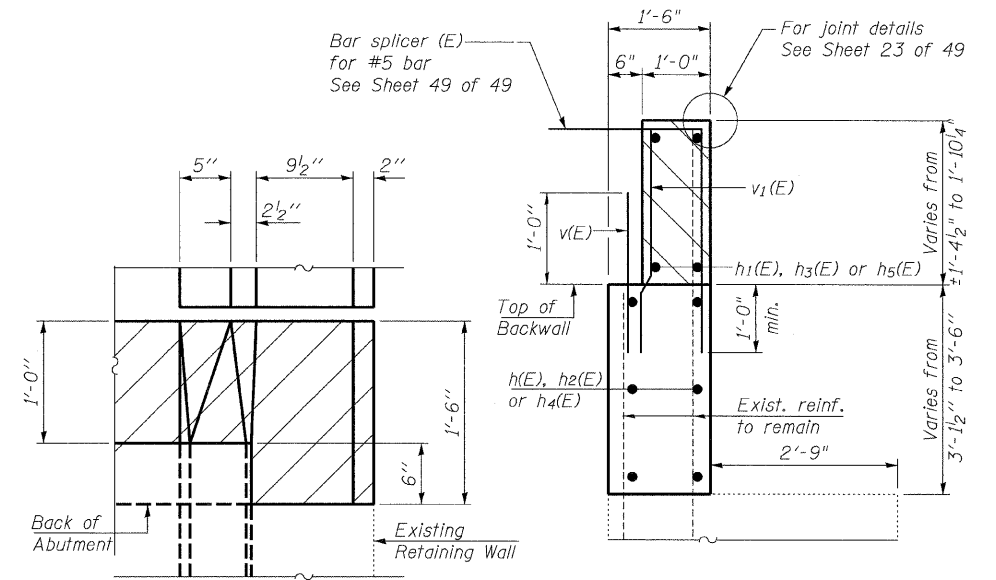
SHEET NO. 34 49 SHEETS	F.A.P RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 60
	CONTRACT NO. 74215				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



ELEVATION
(Looking South)

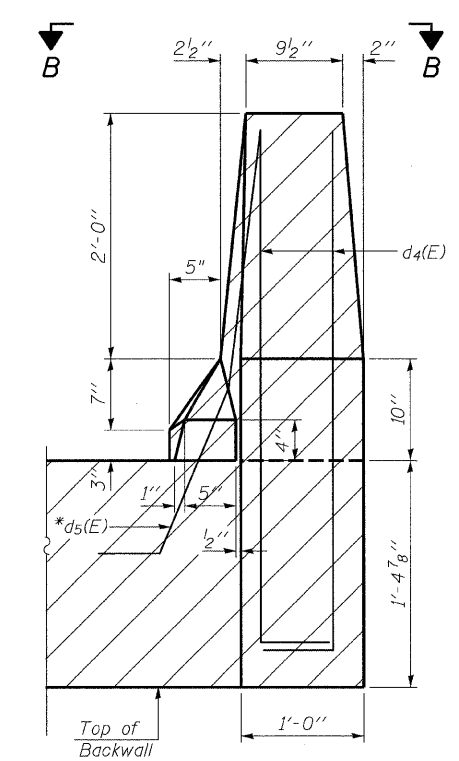


TOP VIEW



SECTION THRU ABUTMENT

VIEW B-B
West End Similar

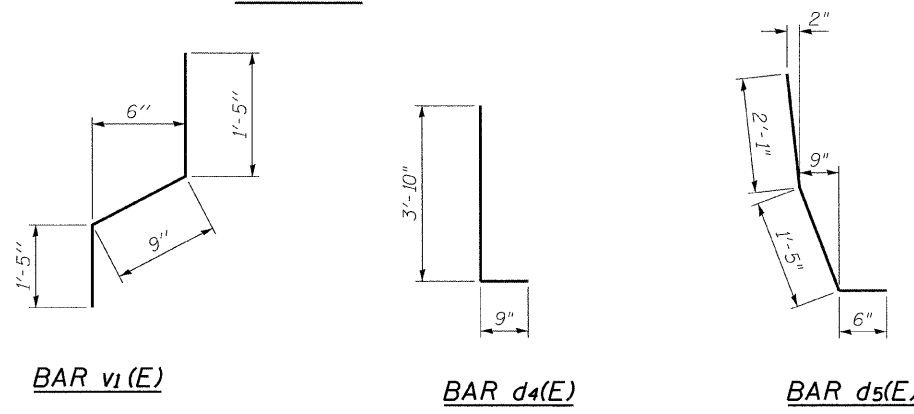


VIEW A-A

Note:
Hatched area to be poured after superstructure falsework has been removed. Quantity included with Concrete Superstructure. Concrete Sealer shall be applied to the exposed surfaces of the backwall and hatched area. Cost of sleeves in backwall is included in Concrete Structures.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d4(E)	8	#5	4'-7"	L
d5(E)	4	#5	4'-0"	L
h(E)	6	#5	16'-8"	—
h1(E)	4	#6	16'-8"	—
h2(E)	6	#5	11'-10"	—
h3(E)	4	#6	11'-10"	—
h4(E)	6	#5	18'-8"	—
h5(E)	4	#6	18'-8"	—
v(E)	49	#5	2'-0"	—
v1(E)	49	#4	3'-7"	—
Structure Excavation		Cu. Yd.	80	
Concrete Structures		Cu. Yd.	8.8	
Reinforcement Bars, Epoxy Coated		Pound	850	
Bar Splicers		Each	70	
Concrete Sealer		Sq. Ft.	255	

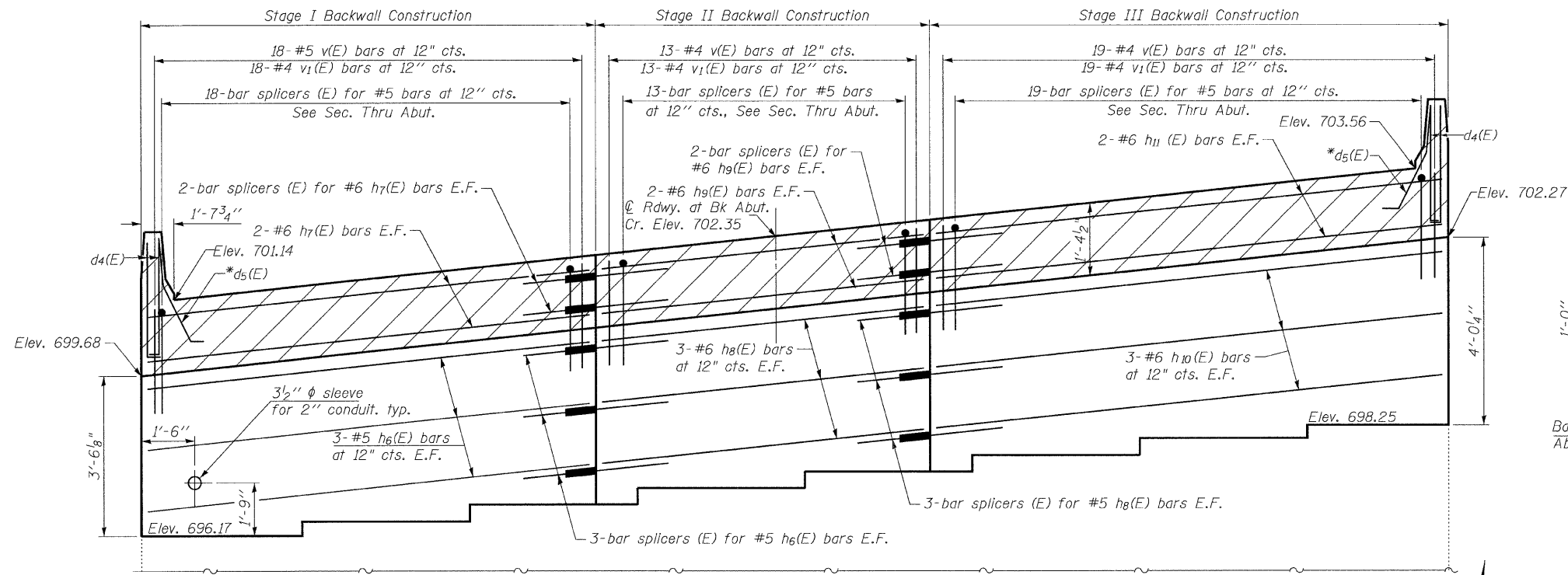


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PROJECT NO. 07086
 SCALE: / /
 DATE: / /
 DESIGN BY: / /
 DRAWN BY: CFC
 CHECKED BY: GB/CME/MCB

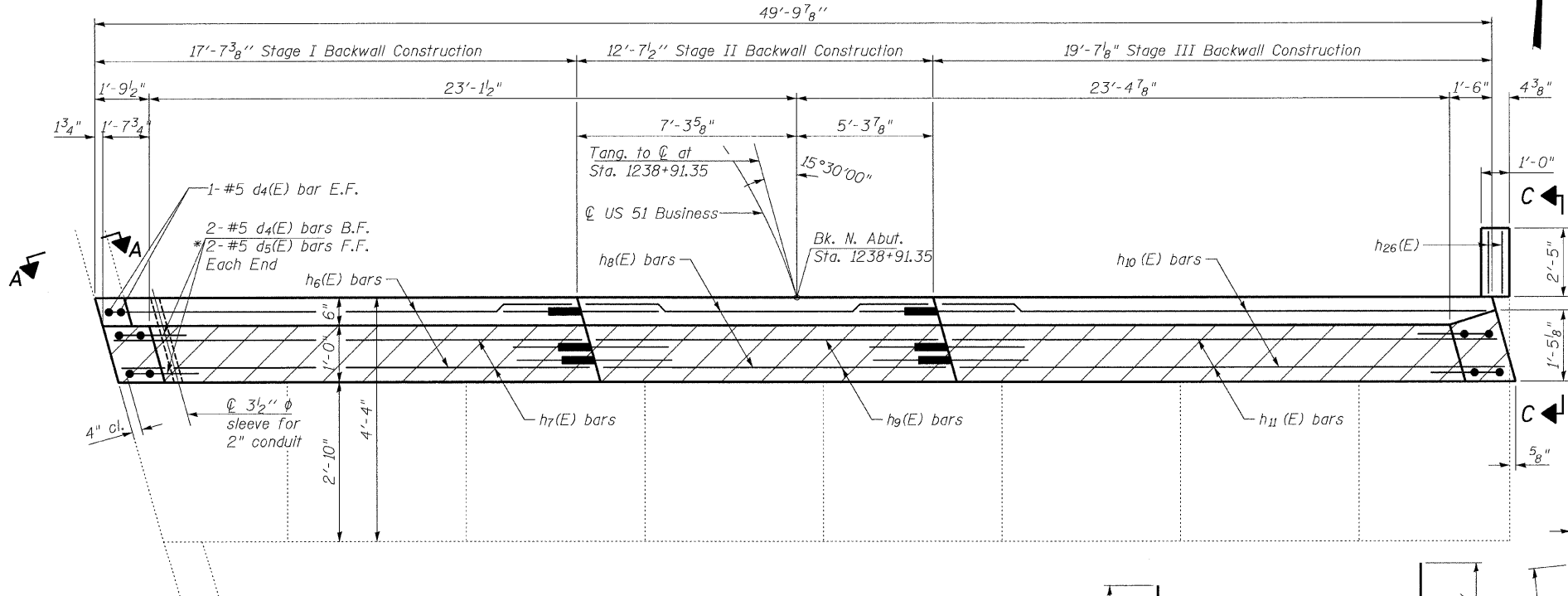
SOUTH ABUTMENT DETAILS
STRUCTURE NO. 058-0014

SHEET NO. 35	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	61
49 SHEETS	CONTRACT NO. 74215				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



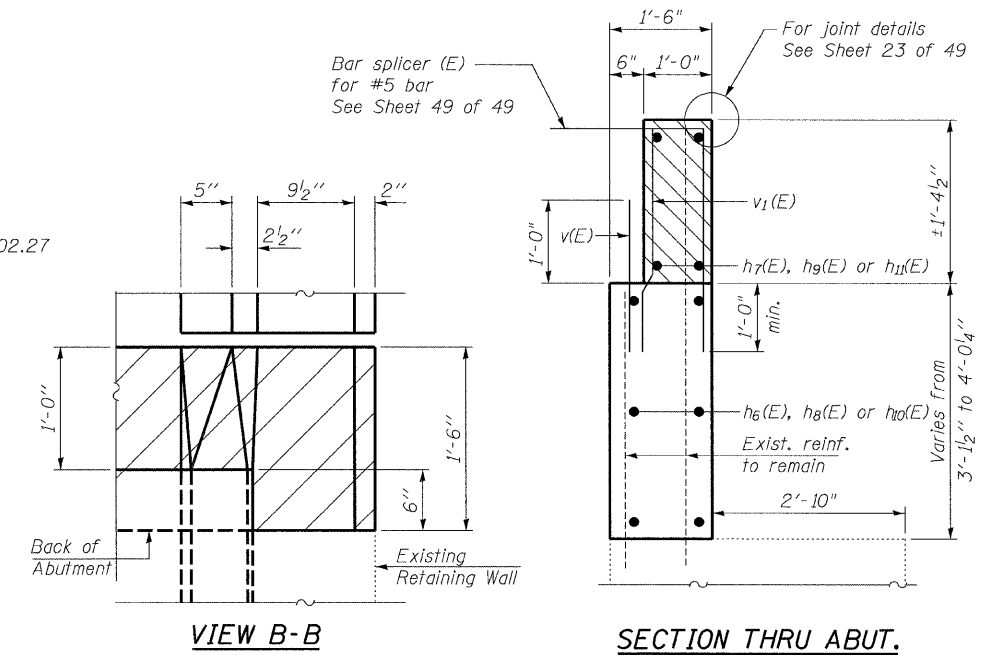
ELEVATION
(Looking North)

E.F. = Each Face



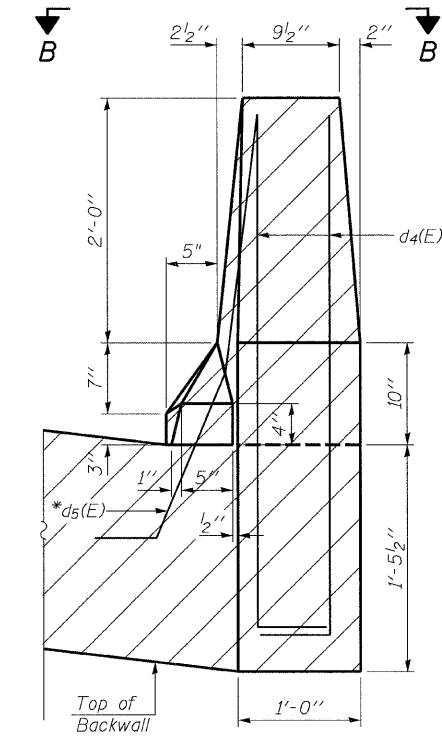
TOP VIEW

*Bend d5(E) bars to fit



VIEW B-B

SECTION THRU ABUT.



VIEW A-A

Note:
Hatched area to be poured after superstructure falsework has been removed. Quantity included with Concrete Superstructure. Concrete Sealer shall be applied to the exposed surfaces of the backwall, bridge seat, front face of pile cap and exposed ends of cap and cap support at west end. Cost of sleeves in backwall is included in Concrete Structures. See Sheet 37 of 49 for View C-C.

BILL OF MATERIAL

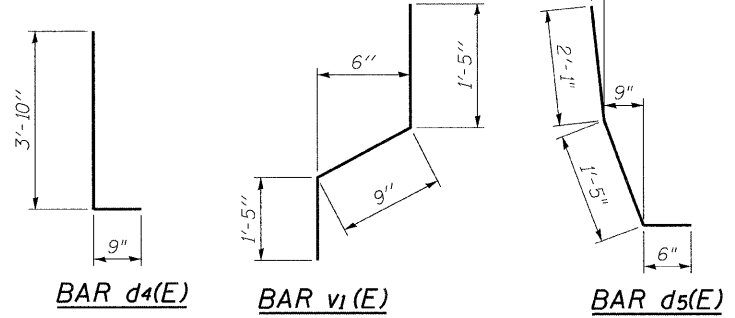
Bar	No.	Size	Length	Shape
d4(E)	6	#5	4'-7"	└
d5(E)	4	#5	4'-0"	└
h6(E)	6	#5	17'-2"	—
h7(E)	4	#6	17'-2"	—
h8(E)	6	#5	12'-3"	—
h9(E)	4	#6	12'-3"	—
h10(E)	6	#5	19'-3"	—
h11(E)	4	#6	19'-3"	—
h26(E)	2	#5	2'-1"	—
v(E)	50	#5	2'-0"	—
v1(E)	50	#4	3'-7"	—
Structure Excavation		Cu. Yd.		101
Concrete Structures		Cu. Yd.		10.4
Reinforcement Bars, Epoxy Coated		Pound		870
Bar Splicers		Each		70
Concrete Sealer		Sq. Ft.		275

NORTH ABUTMENT DETAILS
STRUCTURE NO. 058-0014

SHEET NO. 36 49 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	62
			CONTRACT NO. 74215		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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—STRUCTURAL ENGINEERS—
—LAND SURVEYORS—
Design Firm License No. 184-002703

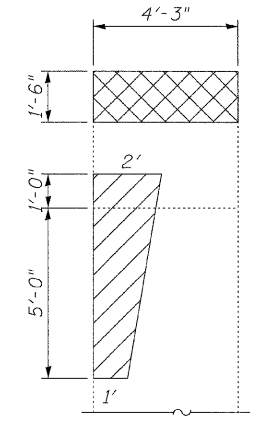
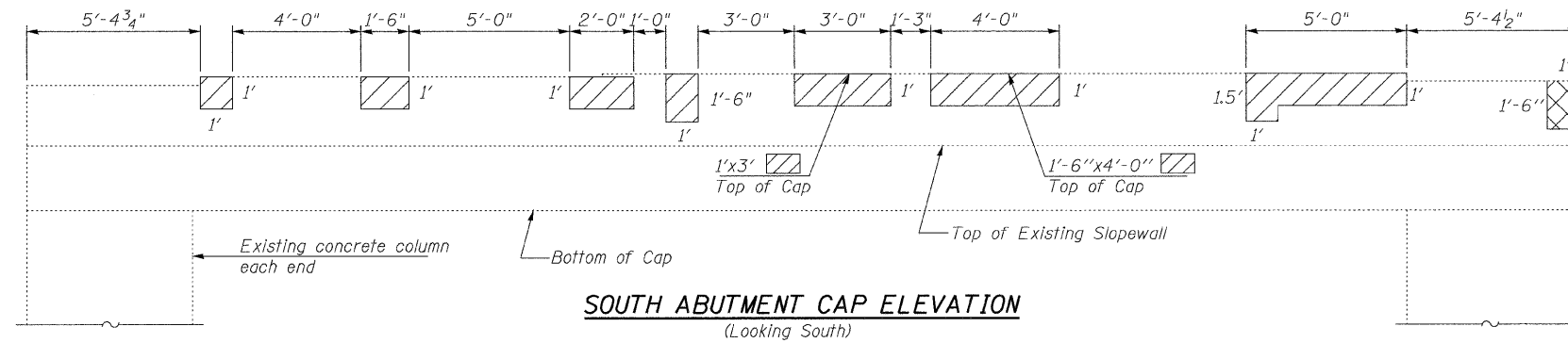
PROJECT NO. 07086
SCALE / / /
DATE / /
DESIGN BY / /
DRAWN BY CFC
CHECKED BY GB/CME/MCB



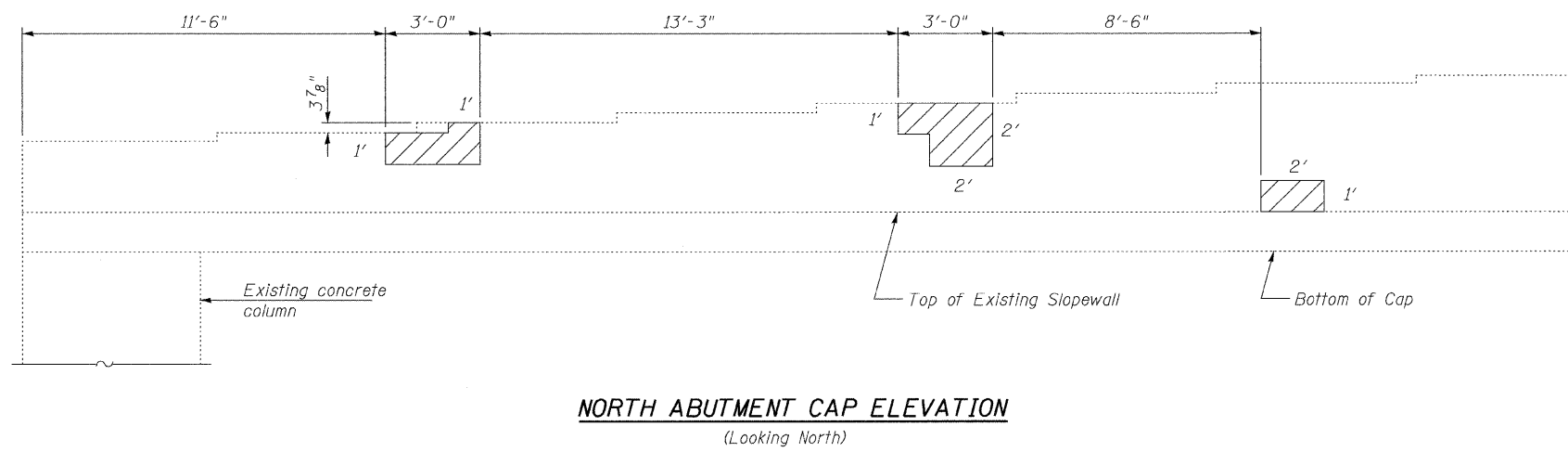
BAR d4(E)

BAR v1(E)

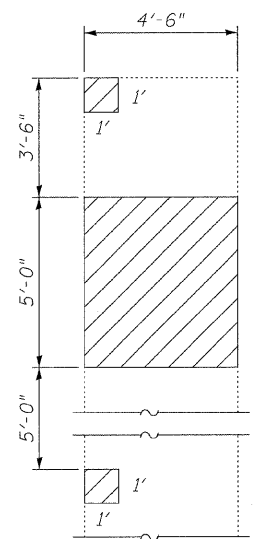
BAR d5(E)



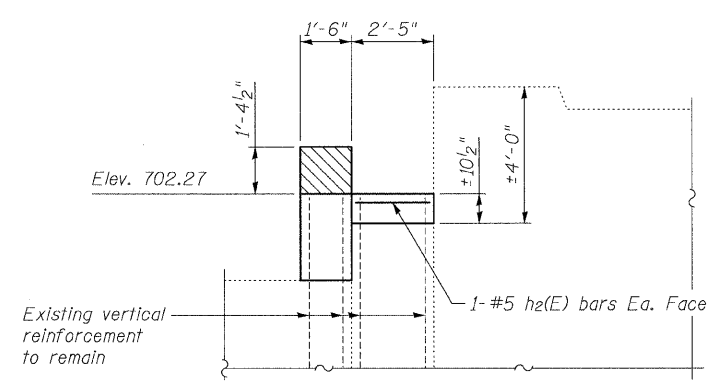
WEST END VIEW



NORTH ABUTMENT CAP ELEVATION
(Looking North)



WEST END VIEW



VIEW C-C

Note:
Dimensions shown are along front face of abutment.
See Sheet 36 of 49 for location of View C-C.

BILL OF MATERIAL

Structural Repair of Concrete (Depth Equal to or Less Than 5 In.)	Sq. Ft.	70
Structural Repair of Concrete (Depth Greater Than 5 In.)	Sq. Ft.	8

LEGEND

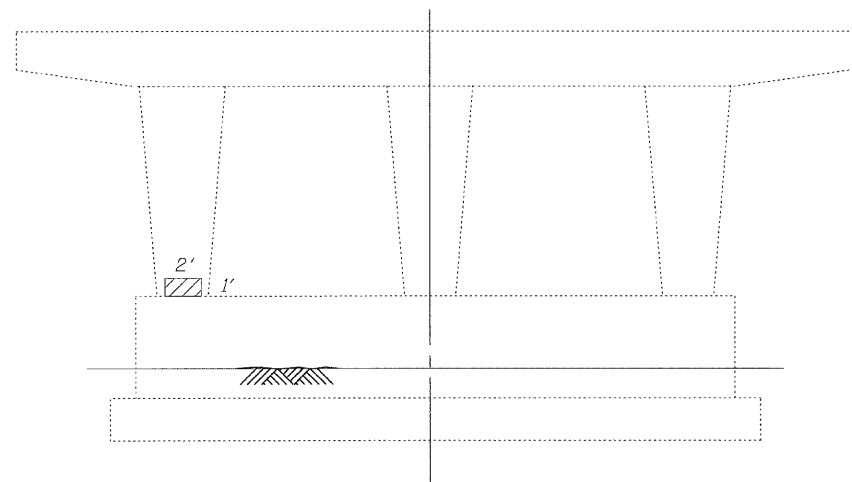
- Denotes Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Denotes Structural Repair of Concrete (Depth Greater Than 5")

ABUTMENT REPAIR DETAILS
STRUCTURE NO. 058-0014

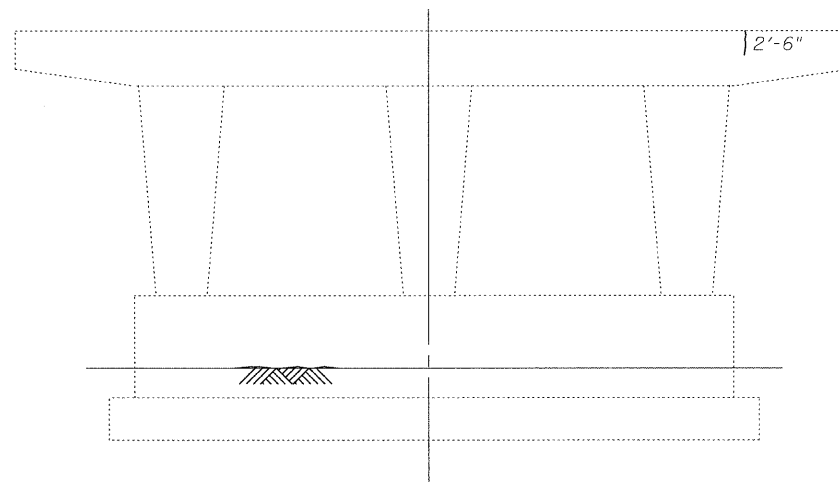
SHEET NO. 37 49 SHEETS	F.A.P. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 63
	CONTRACT NO. 74215				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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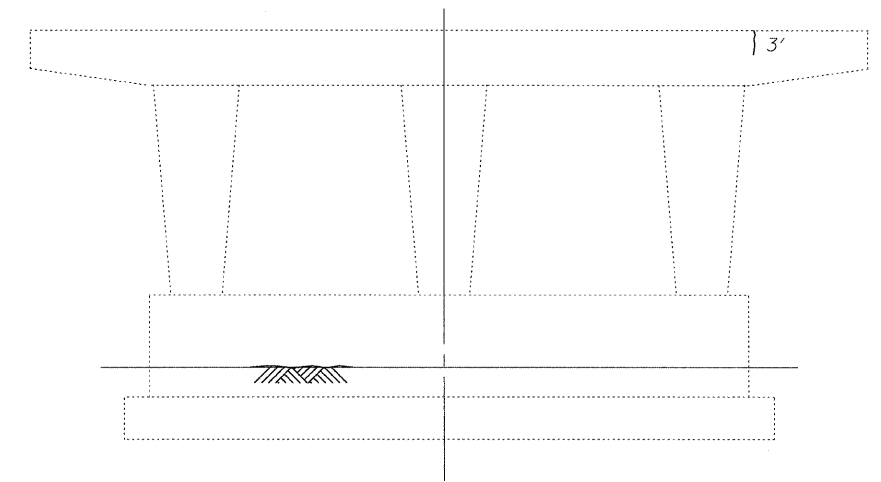
PROJECT NO.	07086
SCALE	
DATE	/ /
DESIGN BY	
DRAWN BY	TFG/CFC
CHECKED BY	GB/MCB



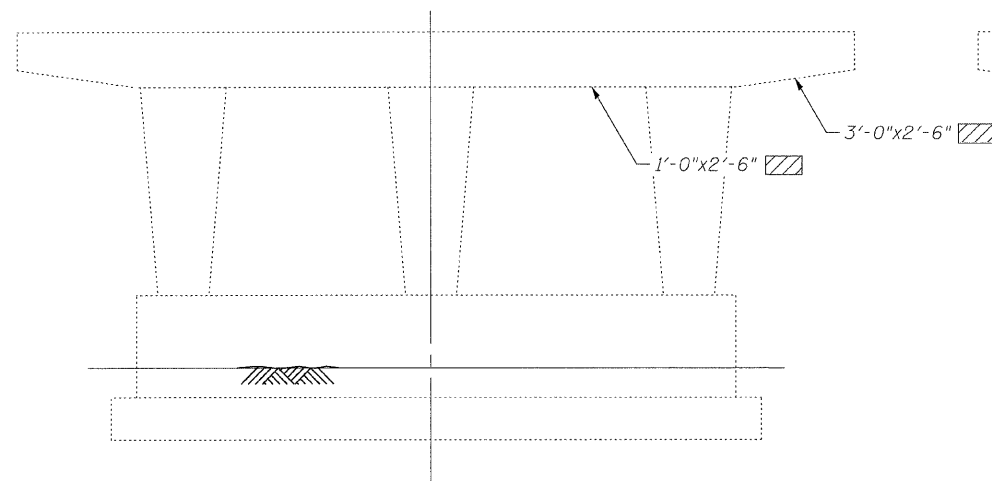
PIER 1-SOUTH FACE



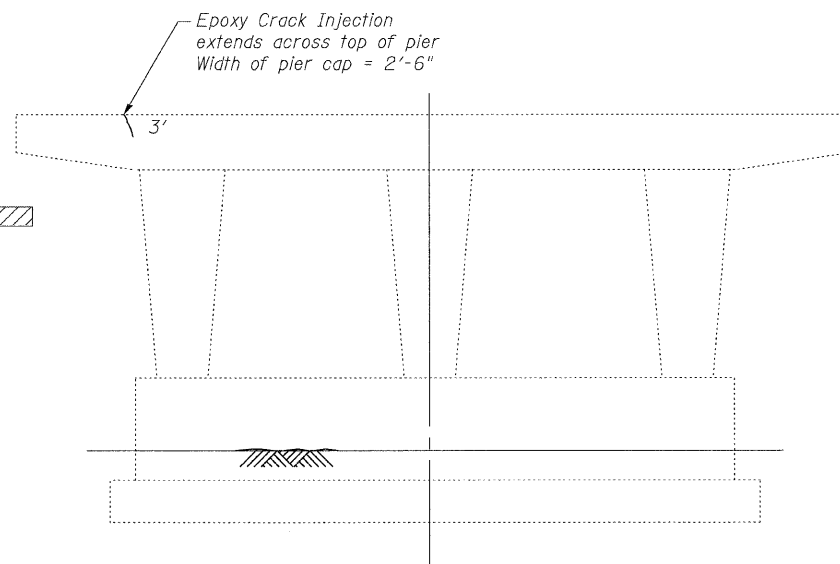
PIER 7-SOUTH FACE



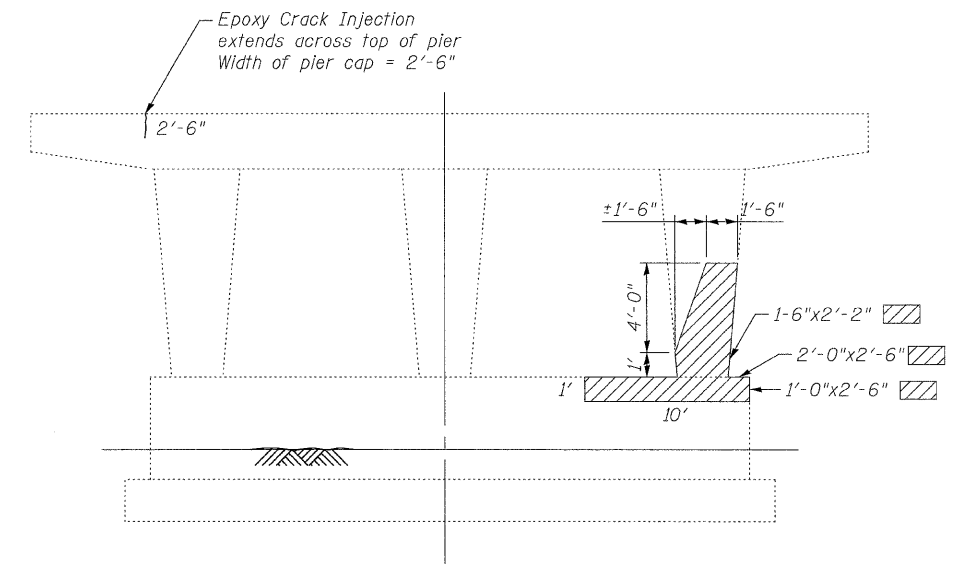
PIER 9-SOUTH FACE



PIER 4-NORTH FACE



PIER 7-NORTH FACE



PIER 9-NORTH FACE

**BILL OF MATERIAL
PIERS**

Structural Repair of Concrete (Depth Equal to or Less Than 5 In.)	Sq. Ft.	45
Epoxy Crack Injection	Ft.	16

LEGEND

- Denotes Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Denotes Epoxy Crack Injection

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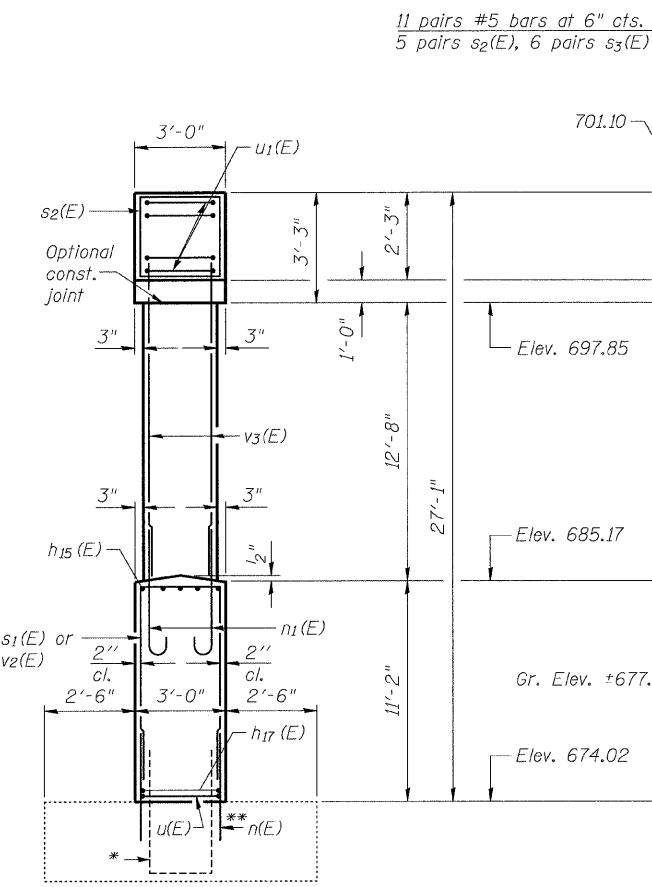
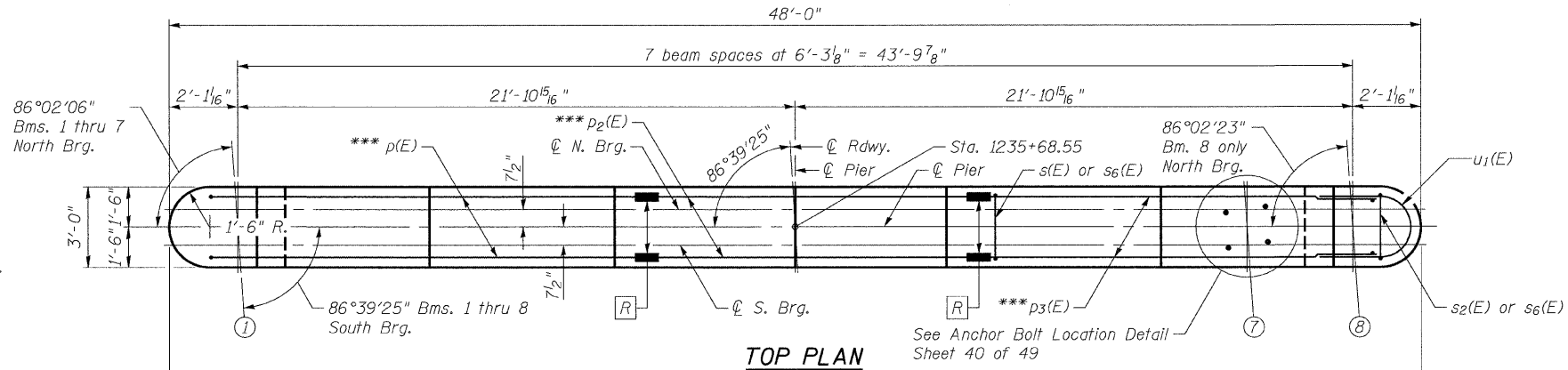
PROJECT NO.	07086
SCALE	
DATE	/ /
DESIGN BY	
DRAWN BY	CFC
CHECKED BY	GB/MCB

**PIER REPAIR DETAILS
STRUCTURE NO. 058-0014**

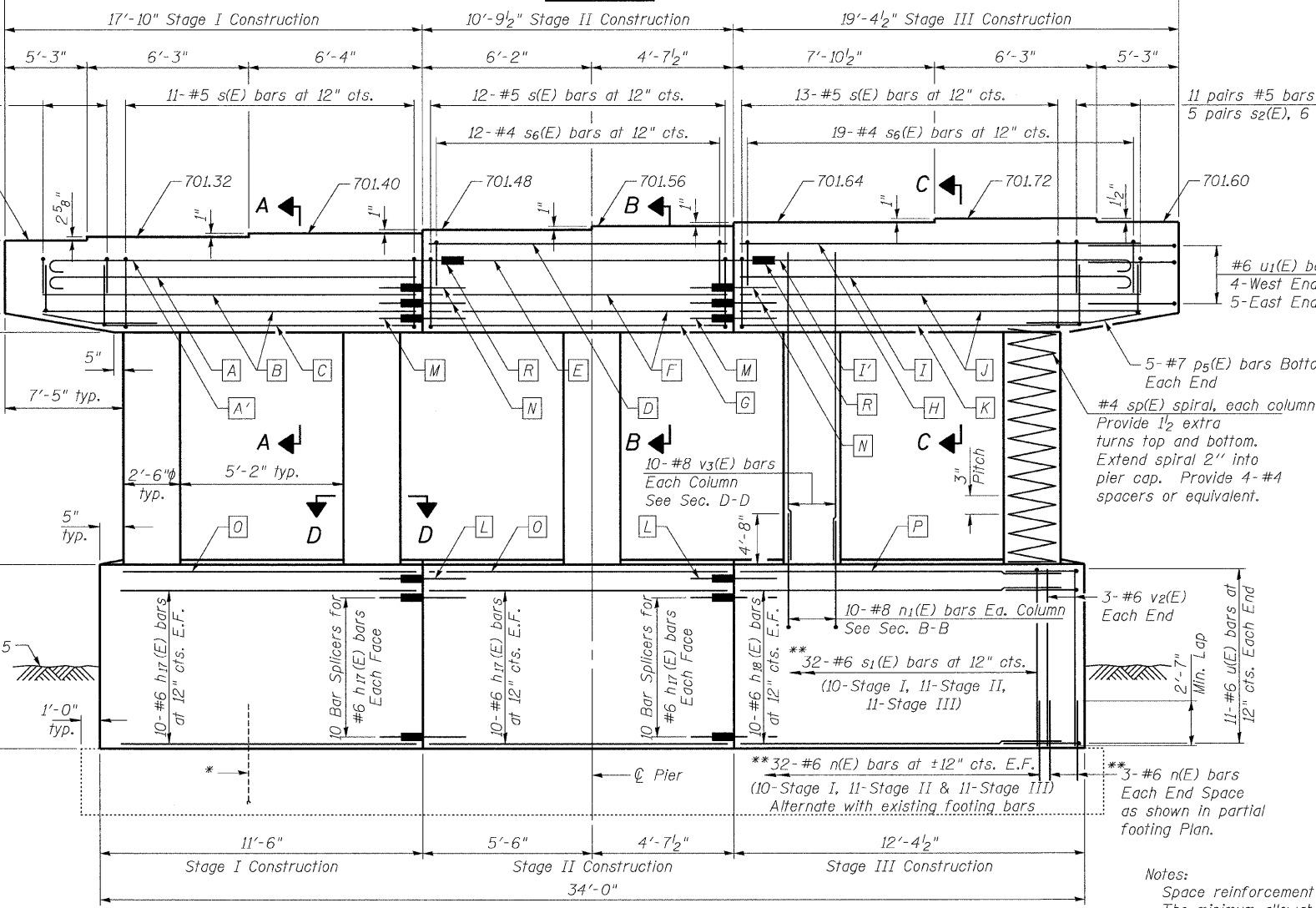
SHEET NO. 38 49 SHEETS	F.A.P. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 64
	CONTRACT NO. 74215				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

- A1 5-#10 p(E) bars top, Layer 1; See Sec. A-A
- A 5-#10 p1(E) bars top, Layer 2; See Sec. A-A
- B 2-#5 h12(E) bars E.F.
- C 5-#7 p6(E) bars bottom
- D 1-#5 h13(E) bar E.F.
- E 5-#10 p2(E) bars top; See Sec. B-B
- F 2-#5 h13(E) bars E.F.
- G 5-#7 p7(E) bars bottom
- H 1-#5 h14(E) bar E.F.
- I 5-#10 p3(E) bars top, Layer 1; See Sec C-C
- J 5-#10 p4(E) bars top, Layer 2; See Sec C-C
- K 2-#5 h14(E) bars E.F.
- L 5-#7 p8(E) bars bottom
- M 5 Bar Splicers for #8 h15(E) or h16(E) bars
- N 5 Bar Splicers for #7 p6(E) or p7(E) bars
- O 2 Bar Splicers for #5 h12(E) or h13(E) bars E.F.
- P 5-#8 h15(E) bars
- Q 5-#8 h16(E) bars
- R 5 Mechanical Splicers for #10 p(E) or p2(E) bars;

E.F. = Each Face

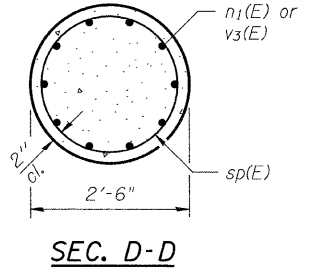


END VIEW

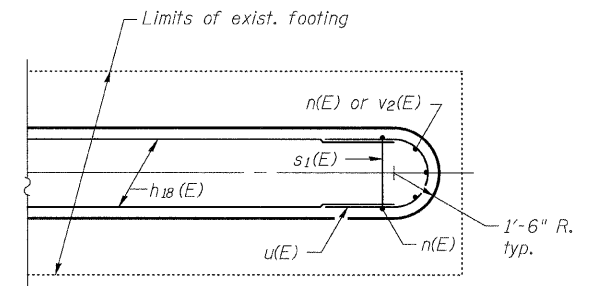


ELEVATION
(Looking North)

- * Existing footing bars to be cleaned, straightened and incorporated into new construction. Cost included with Concrete Removal.
- ** Drill & epoxy grout into exist. conc. footing embed 9" min. See Section 584 of the Standard Specifications. Cost included with Concrete Structures.
- *** Only top row of p bars are shown for clarity.



SEC. D-D



PARTIAL FOOTING PLAN
(Showing East end)

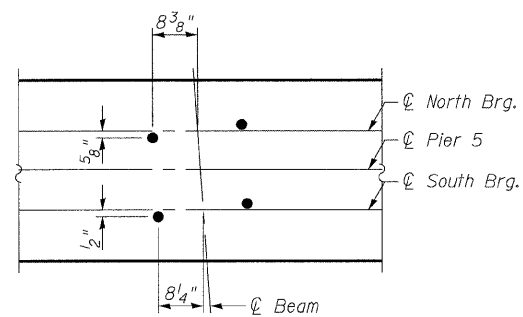
- Notes:
- Space reinforcement in cap to miss anchor bolts.
 - The minimum allowable spacing between the mechanical splicers is 2".
 - Pour steps monolithically with cap.
 - See sheet 40 of 49 for Sections A-A, B-B & C-C.
 - See sheet 40 of 49 for Bar Details and Bill of Material.
 - See sheet 3 of 49 for Concrete Removal Details.
 - All exposed surfaces of the pier cap, columns and crashwall shall be treated with concrete sealer.

PIER 5
STRUCTURE NO. 058-0014

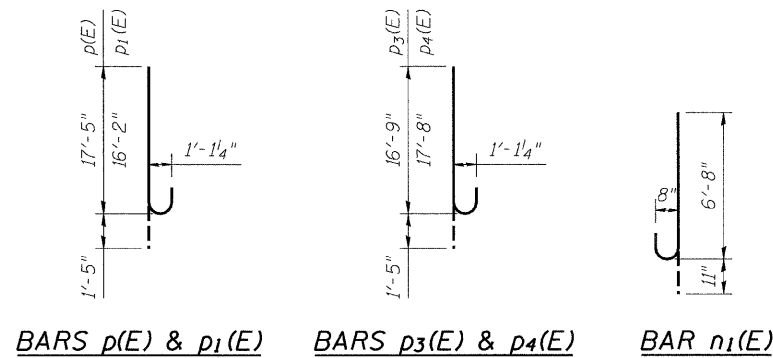
Coombe-Bloxdorf P.C.
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-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

PROJECT NO.	07086
SCALE	
DATE	/ /
DESIGN BY	CME
DRAWN BY	CFC
CHECKED BY	MCB

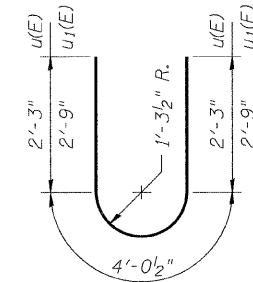
SHEET NO. 39 49 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	65
			CONTRACT NO. 74215		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



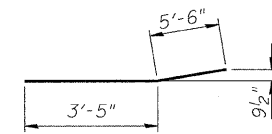
ANCHOR BOLT LOCATION DETAIL
Typical



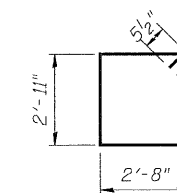
BARS $p(E)$ & $p_1(E)$ BARS $p_3(E)$ & $p_4(E)$ BAR $n_1(E)$



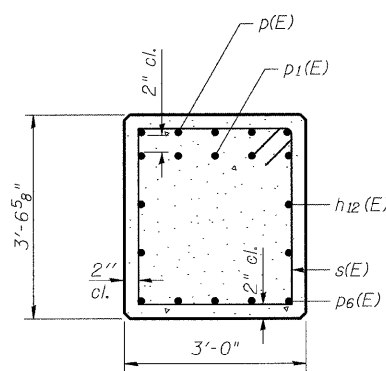
BARS $u(E)$ & $u_1(E)$



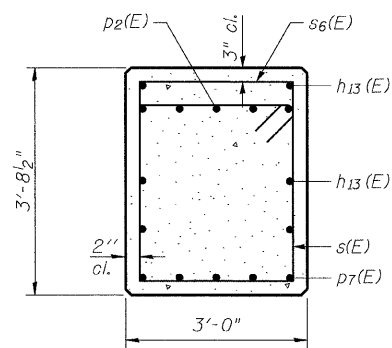
BAR $p_5(E)$



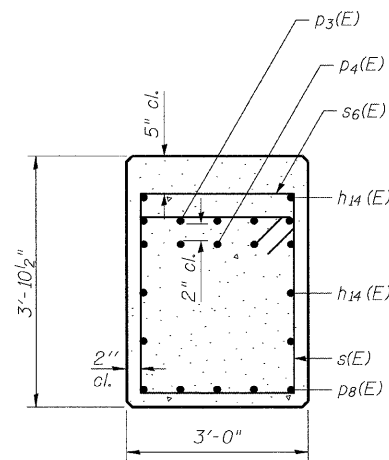
BAR $s(E)$



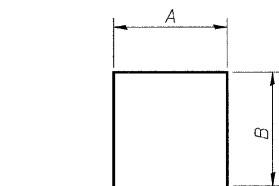
SEC. A-A



SEC. B-B



SEC. C-C



BARS $s_1(E)$ thru $s_3(E)$ & $s_6(E)$

A & B DIMENSIONS

Bar	A	B
$s_1(E)$	2'-8"	10'-8"
$s_2(E)$	2'-8"	2'-1"
$s_3(E)$	2'-8"	2'-4"
$s_6(E)$	2'-8"	1'-4"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{12}(E)$	4	#5	16'-2"	—
$h_{13}(E)$	6	#5	10'-5"	—
$h_{14}(E)$	6	#5	17'-8"	—
$h_{15}(E)$	10	#8	9'-9"	—
$h_{16}(E)$	5	#8	10'-8"	—
$h_{17}(E)$	40	#6	9'-9"	—
$h_{18}(E)$	20	#6	10'-8"	—
$n(E)$	70	#6	3'-11"	—
$n_1(E)$	50	#8	7'-7"	—
$p(E)$	5	#10	18'-10"	—
$p_1(E)$	5	#10	17'-7"	—
$p_2(E)$	5	#10	10'-9"	—
$p_3(E)$	5	#10	18'-2"	—
$p_4(E)$	5	#10	19'-1"	—
$p_5(E)$	10	#7	8'-11"	—
$p_6(E)$	5	#7	10'-8"	—
$p_7(E)$	5	#7	10'-5"	—
$p_8(E)$	5	#7	12'-2"	—
$s(E)$	36	#5	12'-1"	□
$s_1(E)$	32	#6	24'-0"	U
$s_2(E)$	20	#5	6'-10"	U
$s_3(E)$	24	#5	7'-4"	U
$s_6(E)$	31	#4	5'-4"	U
* $sp(E)$	5	#4	12'-10"	W
$u(E)$	22	#6	8'-7"	U
$u_1(E)$	9	#6	9'-7"	U
$v_2(E)$	6	#6	10'-8"	—
$v_3(E)$	50	#8	15'-6"	—
Concrete Structures	Cu. Yd.		71.4	
Reinforcement Bars, Epoxy Coated	Pound		11170	
Bar Splicers	Each		68	
Mechanical Splicers	Each		10	
Structure Excavation	Cu. Yd.		21	
Concrete Sealer	Sq. Ft.		1736	
Concrete Removal	Cu. Yd.		69.6	
Temporary Support System Location No. 1	Each		1	

* Length is height of spiral.

Note:
The Contractor shall verify the length of the $p(E)$, $p_2(E)$ and $p_3(E)$ bars to assure they are satisfactory with the type of mechanical splicers used.

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-LAND SURVEYORS-
Design Firm License No. 184-002703

PROJECT NO. 07086
SCALE / /
DATE / /
DESIGN BY CME
DRAWN BY CFC
CHECKED BY MCB

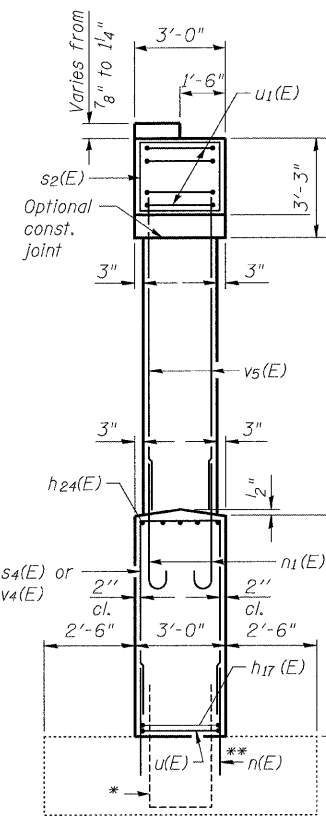
**PIER 5
STRUCTURE NO. 058-0014**

SHEET NO. 40 49 SHEETS	F.A.P. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 66
	CONTRACT NO. 74215			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT	

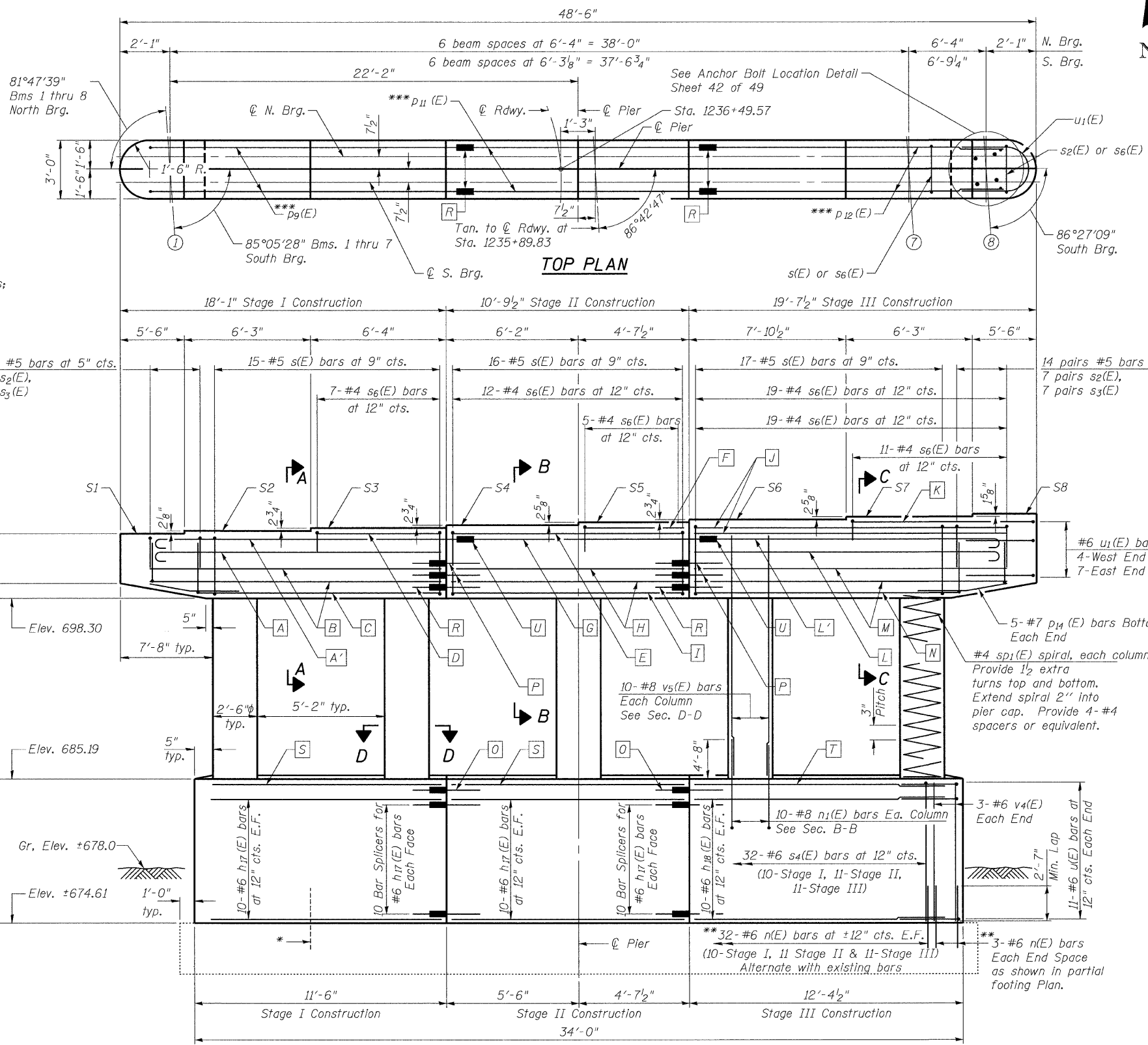
- A 5-#11 p₉(E) bars top, Layer 1; See Sec. A-A
- A 5-#11 p₁₀(E) bars top, Layer 2; See Sec. A-A
- B 2-#5 h₁₉(E) bars E.F.
- C 5-#7 p₁₅(E) bars bottom
- D 1-#5 h₂₀(E) bar E.F.
- E 1-#5 h₁₃(E) bar E.F.
- F 1-#5 h₂₁(E) bar E.F.
- G 5-#11 p₁₁(E) bars top; See Sec. B-B
- H 2-#5 h₁₃(E) bars E.F.
- I 5-#7 p₇(E) bars bottom
- J 2-#5 h₂₂(E) bars E.F.
- K 1-#5 h₂₃(E) bar E.F.
- L 5-#11 p₁₂(E) bars top, Layer 1; See Sec. C-C
- L 5-#11 p₁₃(E) bars top, Layer 2; See Sec. C-C
- M 2-#5 h₂₂(E) bars E.F.
- N 5-#7 p₁₆(E) bars bottom
- O 5 Bar Splicers for #9 h₂₄(E) or h₂₅(E) bars
- P 2 Bar Splicers for #5 h₁₉(E) or h₁₃(E) bars E.F.
- R 5 Bar Splicers for #7 p₇(E) or p₁₅(E) bars
- S 5-#9 h₂₄(E) bars
- T 5-#9 h₂₅(E) bars
- U 5 Mechanical Splicers for #11 p₉(E) or p₁₁(E) bars;

E.F. = Each Face

14 pairs #5 bars at 5" cts.
7 pairs s₂(E),
7 pairs s₃(E)

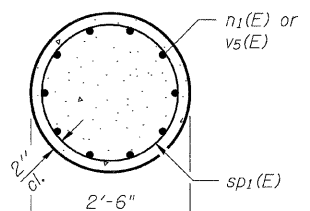


END VIEW

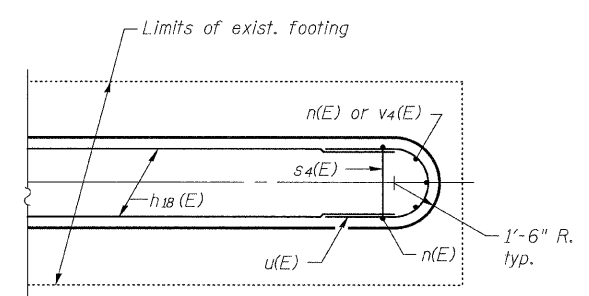


TOP PLAN

- * Existing footing bars to be cleaned, straightened and incorporated into new construction. Cost included with Concrete Removal.
- ** Drill & epoxy grout into exist. conc. footing embed 9" min. See Section 584 of the Standard Specifications. Cost included with Concrete Structures.
- *** Only top row of p bars are shown for clarity.



SEC. D-D



PARTIAL FOOTING PLAN
(Showing East end)

Notes:
Space reinforcement in cap to miss anchor bolts. The minimum allowable spacing between the mechanical splicers is 2". Pour steps monolithically with cap. See sheet 42 of 49 for Sections A-A, B-B & C-C. See sheet 42 of 49 for Bar Details and Bill of Material. See sheet 3 of 49 for Concrete Removal Details. All exposed surfaces of the pier cap, columns and crashwall shall be treated with concrete sealer.

PIER 6
STRUCTURE NO. 058-0014

ELEVATION
(Looking North)

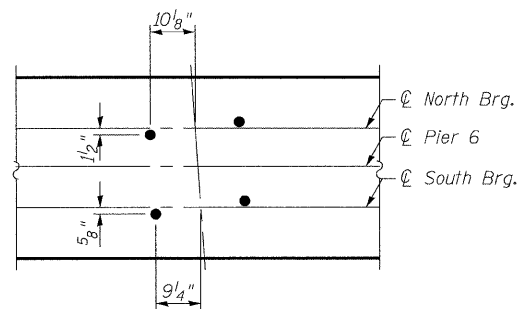
STEP ELEVATIONS

Location	S1	S2	S3	S4	S5	S6	S7	S8
South Brg.	701.55	701.73	701.96	702.19	702.41	702.64	702.86	703.00
North Brg.	701.62	701.80	702.04	702.27	702.51	702.74	702.96	703.09

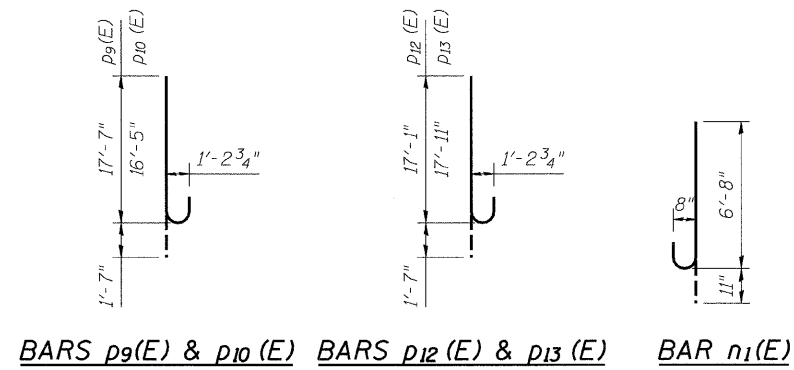
SHEET NO. 41 49 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	67
			CONTRACT NO. 74215		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

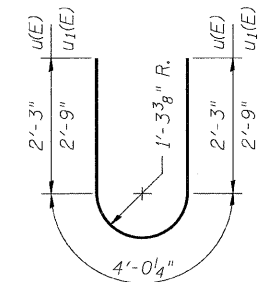
PROJECT NO. 07086
SCALE / / /
DATE / / /
DESIGN BY / / /
DRAWN BY CME
CHECKED BY CFC
M.C.B.



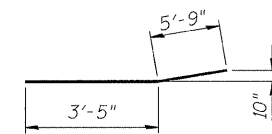
ANCHOR BOLT LOCATION DETAIL
Typ.



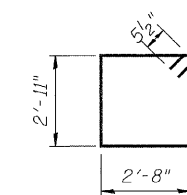
BARS p9(E) & p10(E) BARS p12(E) & p13(E) BAR n1(E)



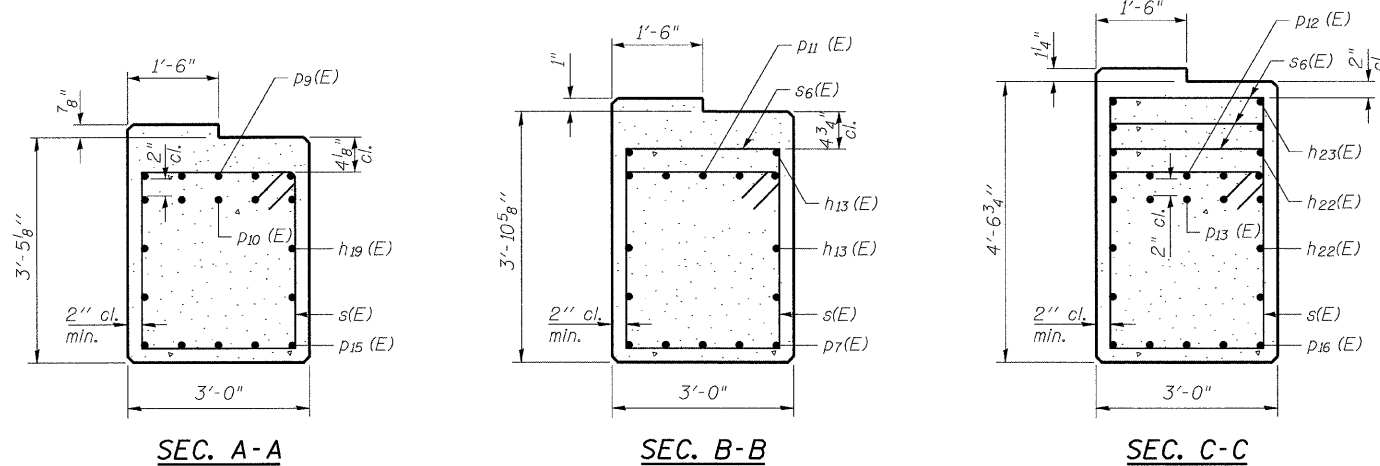
BAR u(E) & u1(E)



BAR p14(E)



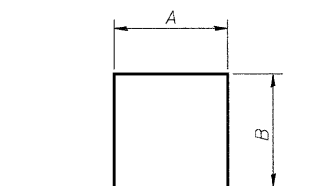
BAR s(E)



SEC. A-A

SEC. B-B

SEC. C-C



BARS s2(E) thru s4(E) & s6(E)

A & B DIMENSIONS

Bar	A	B
s2(E)	2'-8"	2'-1"
s3(E)	2'-8"	2'-4"
s4(E)	2'-8"	10'-3"
s6(E)	2'-8"	1'-4"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h13 (E)	6	#5	10'-5"	—
h17 (E)	40	#6	9'-9"	—
h18 (E)	20	#6	10'-8"	—
h19 (E)	4	#5	16'-5"	—
h20(E)	2	#5	6'-0"	—
h21 (E)	2	#5	4'-3"	—
h22(E)	8	#5	18'-0"	—
h23(E)	2	#5	10'-4"	—
h24(E)	10	#9	9'-9"	—
h25(E)	5	#9	10'-8"	—
n(E)	70	#6	3'-11"	—
n1(E)	50	#8	7'-7"	—
p7(E)	5	#7	10'-5"	—
p9(E)	5	#11	19'-2"	—
p10 (E)	5	#11	18'-0"	—
p11 (E)	5	#11	10'-9"	—
p12 (E)	5	#11	18'-8"	—
p13 (E)	5	#11	19'-6"	—
p14 (E)	10	#7	9'-2"	—
p15 (E)	5	#7	10'-8"	—
p16 (E)	5	#7	12'-2"	—
s(E)	48	#5	12'-1"	□
s2(E)	28	#5	6'-10"	□
s3(E)	28	#5	7'-4"	□
s4(E)	32	#6	23'-2"	□
s6(E)	73	#4	5'-4"	□
* sp1(E)	5	#4	13'-4"	⋈
u(E)	22	#6	8'-7"	—
u1(E)	11	#6	9'-7"	—
v4(E)	6	#6	10'-3"	—
v5(E)	50	#8	16'-0"	—
Concrete Structures		Cu. Yd.	71.9	
Reinforcement Bars, Epoxy Coated		Pound	12330	
Bar Splicers		Each	68	
Mechanical Splicers		Each	10	
Structure Excavation		Cu. Yd.	21	
Concrete Sealer		Sq. Ft.	1767	
Concrete Removal		Cu. Yd.	71.7	
Temporary Support System Location No. 2		Each	1	

* Length is height of spiral.

Note:
The Contractor shall verify the length of the p9(E), p11(E) and p12(E) bars to assure they are satisfactory with the type of mechanical splicers used.

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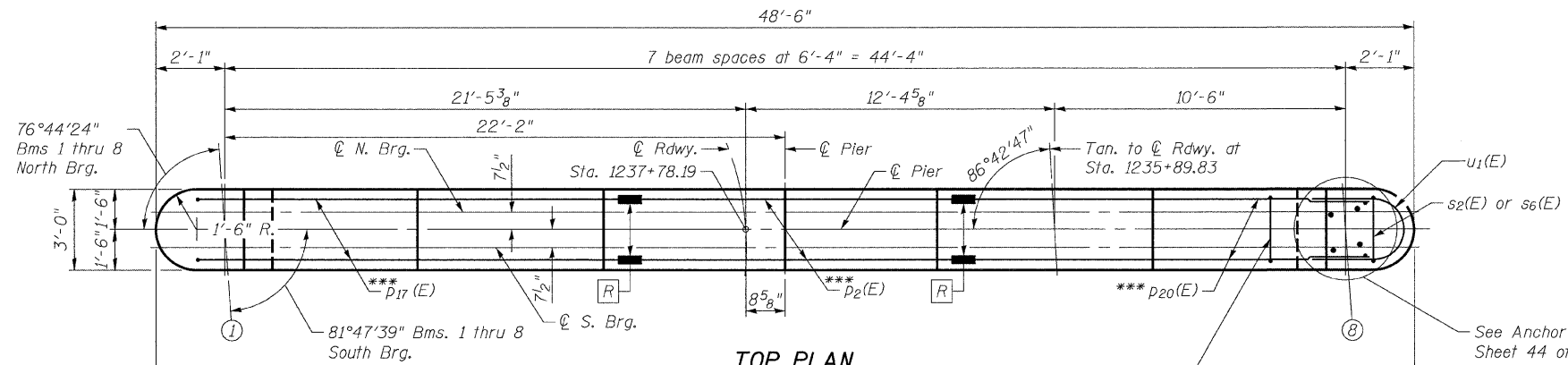
PROJECT NO. 07086
SCALE / / /
DATE / / /
DESIGN BY CME
DRAWN BY CFC
CHECKED BY MCB

**PIER 6
STRUCTURE NO. 058-0014**

SHEET NO. 42 49 SHEETS	F.A.P. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 68
	CONTRACT NO. 74215				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

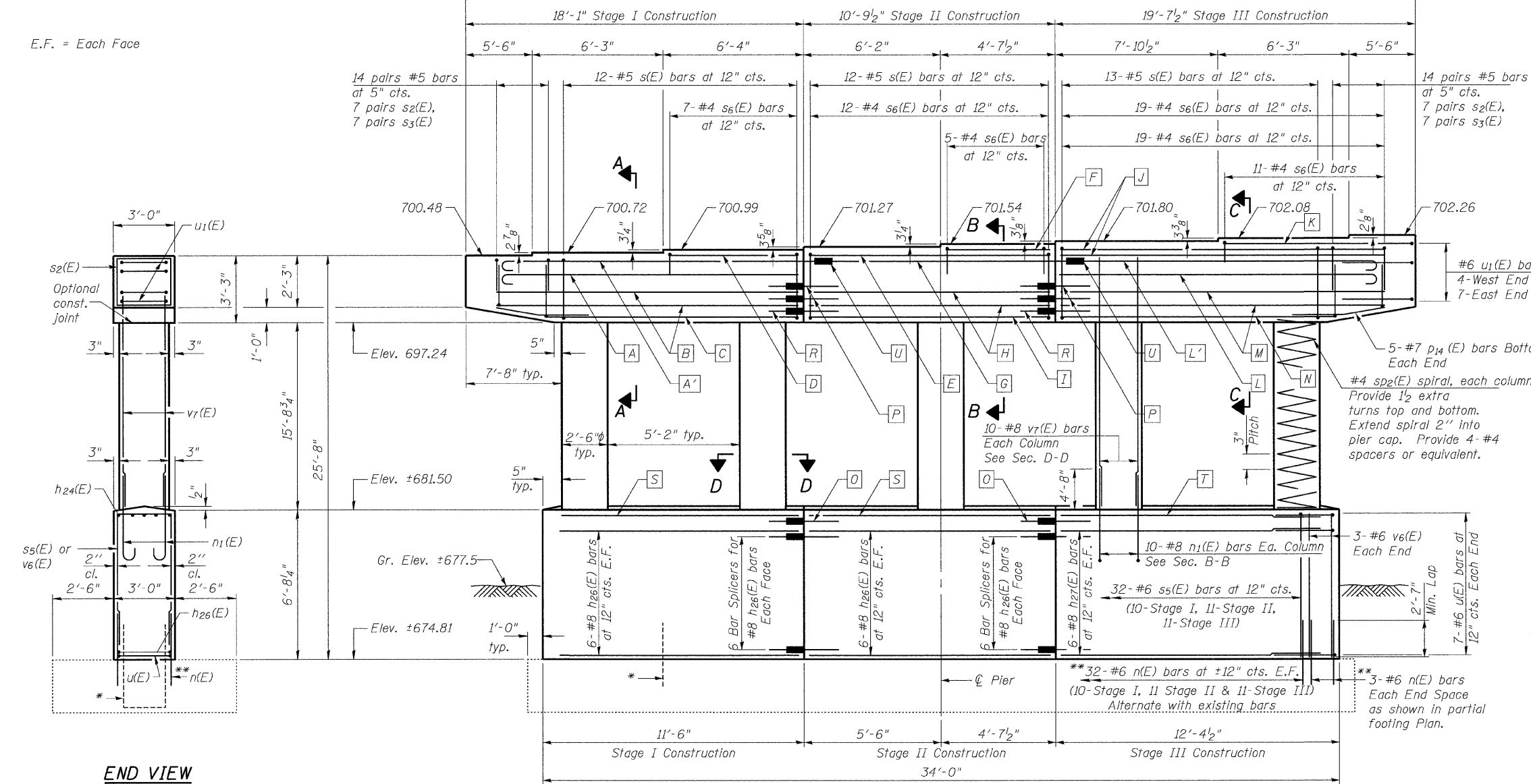
- A 5-#10 p₁₇(E) bars top, Layer 1; See Sec. A-A
- A 5-#10 p₁₈(E) bars top, Layer 2; See Sec. A-A
- B 2-#5 h₁₉(E) bars E.F.
- C 5-#7 p₁₅(E) bars bottom
- D 1-#5 h₂₀(E) bar E.F.
- E 1-#5 h₁₃(E) bar E.F.
- F 1-#5 h₂₁(E) bar E.F.
- G 5-#10 p₂(E) bars top; See Sec. B-B
- H 2-#5 h₁₃(E) bars E.F.
- I 5-#7 p₇(E) bars bottom
- J 2-#5 h₂₂(E) bars E.F.
- K 1-#5 h₂₃(E) bar E.F.
- L 5-#10 p₁₉(E) bars top, Layer 1; See Sec. C-C
- L 5-#10 p₂₀(E) bars top, Layer 2; See Sec. C-C
- M 2-#5 h₂₂(E) bars E.F.
- N 5-#7 p₁₅(E) bars bottom
- O 5 Bar Splicers for #9 h₂₄(E) or h₂₅(E) bars
- P 2 Bar Splicers for #5 h₁₉(E) or h₁₃(E) bars E.F.
- R 5 Bar Splicers for #7 p₇(E) or p₁₅(E) bars
- S 5-#9 h₂₄(E) bars
- T 5-#9 h₂₅(E) bars
- U 5 Mechanical Splicers for #10 p₁₇(E) or p₂₀(E) bars;

E.F. = Each Face

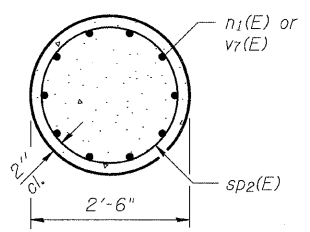


TOP PLAN

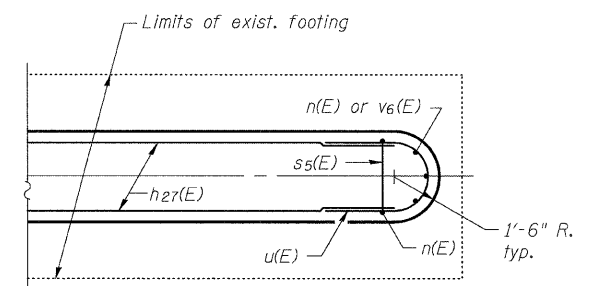
- * Existing footing bars to be cleaned, straightened and incorporated into new construction. Cost included with Concrete Removal.
- ** Drill & epoxy grout into exist. conc. footing embed 9" min. See Section 584 of the Standard Specifications. Cost included with Concrete Structures.
- *** Only top row of p bars are shown for clarity.



ELEVATION
(Looking North)



SEC. D-D



PARTIAL FOOTING PLAN
(Showing East end)

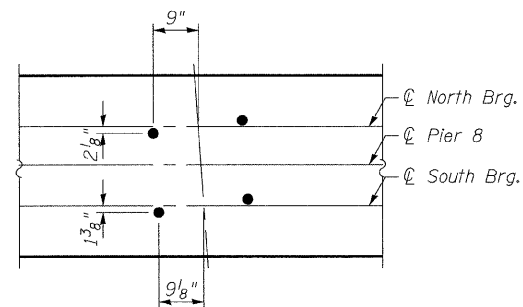
- Notes:
- Space reinforcement in cap to miss anchor bolts.
 - The minimum allowable spacing between the mechanical splicers is 2".
 - Pour steps monolithically with cap.
 - See sheet 44 of 49 for Sections A-A, B-B & C-C.
 - See sheet 44 of 49 for Bar Details and Bill of Material.
 - See sheet 3 of 49 for Concrete Removal Details.
 - All exposed surfaces of the pier cap, columns and crashwall shall be treated with concrete sealer.

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 -LAND SURVEYORS-
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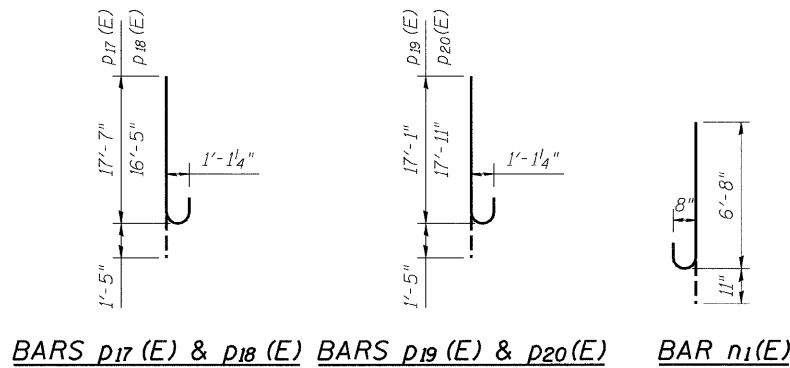
PROJECT NO. 07086
 SCALE / /
 DATE / /
 DESIGN BY CME
 DRAWN BY CFC
 CHECKED BY MCB

SHEET NO. 43 49 SHEETS	F.A.P. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 69
	CONTRACT NO. 74215				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

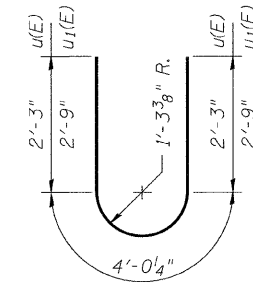
PIER 8
STRUCTURE NO. 058-0014



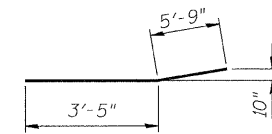
ANCHOR BOLT LOCATION DETAIL
Typ.



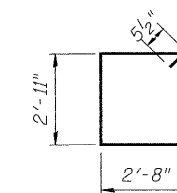
BARS p17(E) & p18(E) BARS p19(E) & p20(E) BAR n1(E)



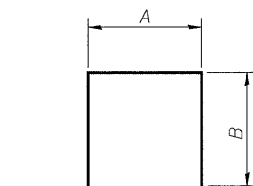
BAR u(E) & u1(E)



BAR p14(E)



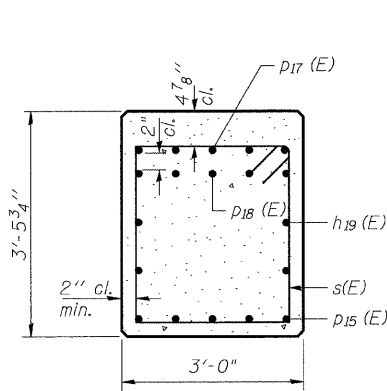
BAR s(E)



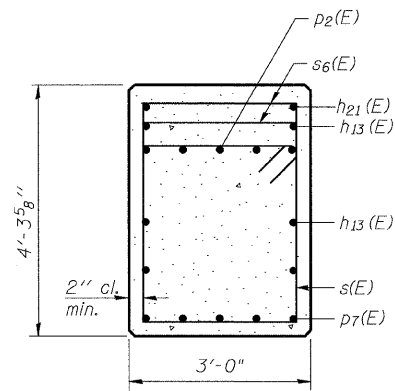
BARS s2(E), s3(E), s5(E) & s6(E)

A & B DIMENSIONS

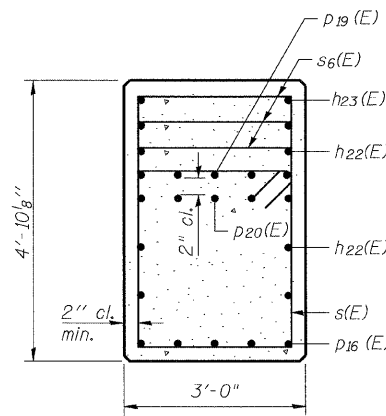
Bar	A	B
s2(E)	2'-8"	2'-1"
s3(E)	2'-8"	2'-4"
s5(E)	2'-8"	6'-4"
s6(E)	2'-8"	1'-4"



SEC. A-A



SEC. B-B



SEC. C-C

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h13(E)	6	#5	10'-5"	—
h19(E)	4	#5	16'-5"	—
h20(E)	2	#5	6'-0"	—
h21(E)	2	#5	4'-3"	—
h22(E)	8	#5	18'-0"	—
h23(E)	2	#5	10'-4"	—
h24(E)	10	#9	9'-9"	—
h25(E)	5	#9	10'-8"	—
h26(E)	24	#8	9'-9"	—
h27(E)	12	#8	10'-8"	—
n(E)	70	#6	3'-11"	—
n1(E)	50	#8	7'-7"	—
p2(E)	5	#10	10'-9"	—
p7(E)	5	#7	10'-5"	—
p14(E)	10	#7	9'-2"	—
p15(E)	5	#7	10'-8"	—
p16(E)	5	#7	12'-2"	—
p17(E)	5	#10	19'-0"	—
p18(E)	5	#10	17'-10"	—
p19(E)	5	#10	18'-6"	—
p20(E)	5	#10	19'-4"	—
s(E)	37	#5	12'-1"	□
s2(E)	28	#5	6'-10"	□
s3(E)	28	#5	7'-4"	□
s5(E)	32	#6	15'-4"	□
s6(E)	73	#4	5'-4"	□
* sp2(E)	5	#4	15'-11"	◊
u(E)	14	#6	8'-7"	—
u1(E)	11	#6	9'-7"	—
v6(E)	6	#6	6'-4"	—
v7(E)	50	#8	18'-7"	—
Concrete Structures	Cu. Yd.		60.5	
Reinforcement Bars, Epoxy Coated	Pound		11850	
Bar Splicers	Each		52	
Mechanical Splicers	Each		10	
Structure Excavation	Cu. Yd.		17	
Concrete Sealer	Sq. Ft.		1659	
Concrete Removal	Cu. Yd.		56.7	
Temporary Support System Location No. 3	Each		1	

*Length is height of spiral.

Note:
The Contractor shall verify the length of the p2(E), p17(E) and p19(E) bars to assure they are satisfactory with the type of mechanical splicers used.

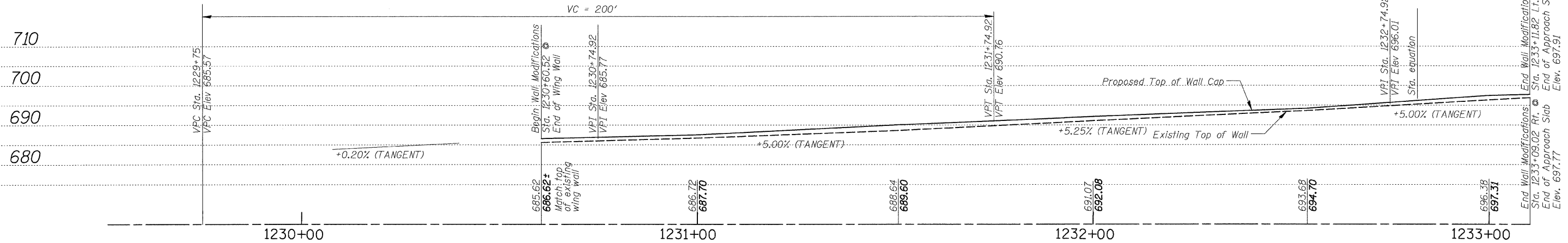
CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

PROJECT NO.	07086
SCALE	
DATE	/ /
DESIGN BY	CME
DRAWN BY	CFC
CHECKED BY	MCB

**PIER 8
STRUCTURE NO. 058-0014**

SHEET NO. 44 49 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	70
			CONTRACT NO. 74215		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



RETAINING WALL #1 (RT) & #2 (LT)

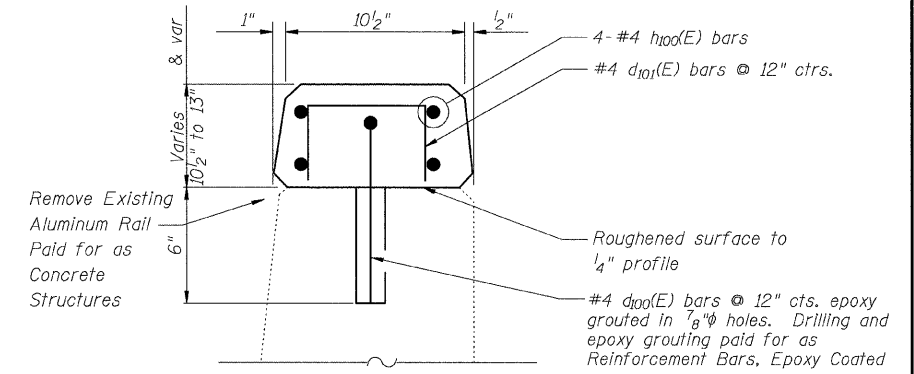
Sta. Equa: Sta. 1232+81.92 (BK) (2005 IDOT)
Sta. 1232+80.92 (AH) (1963 Plans)

Match locations of wall joints

Install Joints Detail similar to Parapet Joint Detail on Sheet 17.

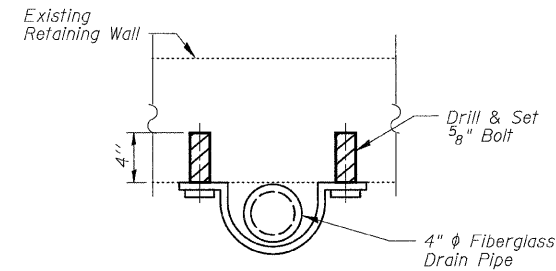
MINIMUM BAR LAP

#4 bar = 1'-8"

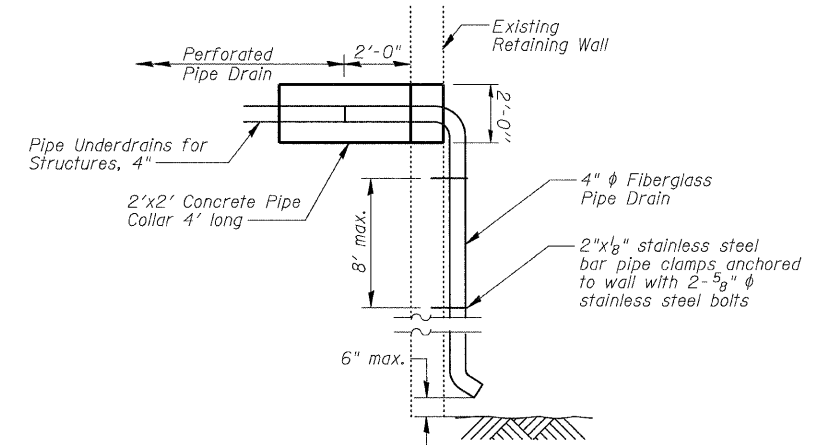


RETAINING WALL MODIFICATION DETAIL

(On Full Length of NW, SW, & SE Retaining Walls)
Sta. 1230+60.52 to Sta. 1233+11.82 LT.
Sta. 1230+60.52 to Sta. 1233+09.02 RT
Sta. 1238+97.94 to Sta. 1240+24.58 LT
Sta. 1240+28.67 to Sta. 1240+36.00 LT (Similar)

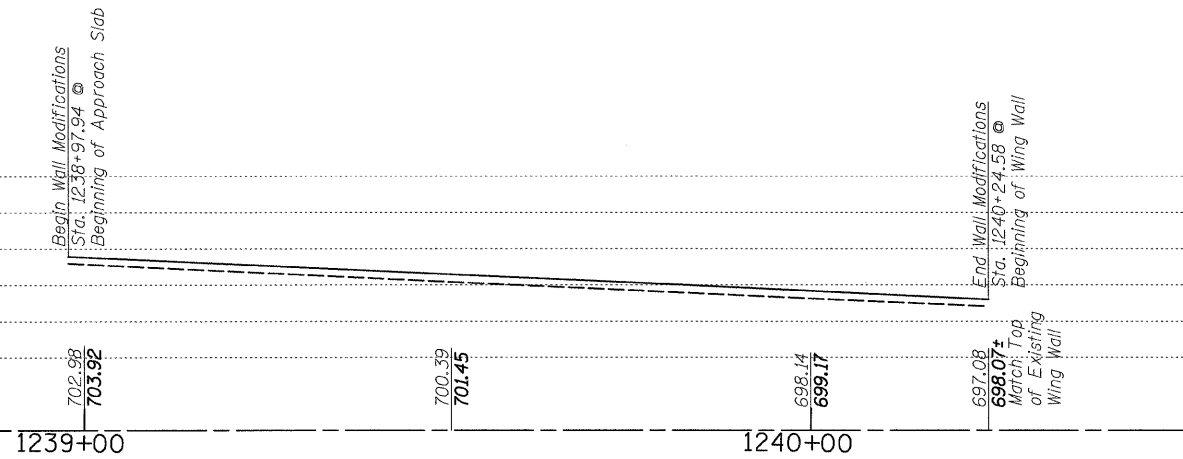


STAINLESS STEEL BAR PIPE CLAMP

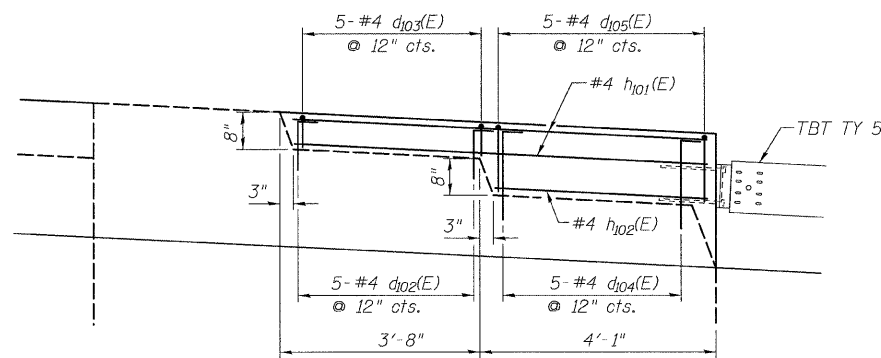


PIPE DRAIN DOWNSPOUT

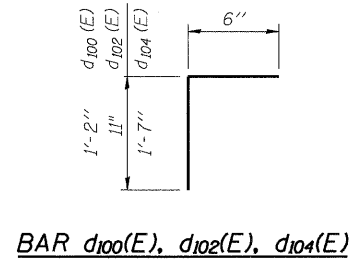
All work shown shall be paid for as Pipe Underdrains for Structures, 4"



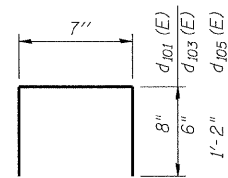
RETAINING WALL #3 (LT)



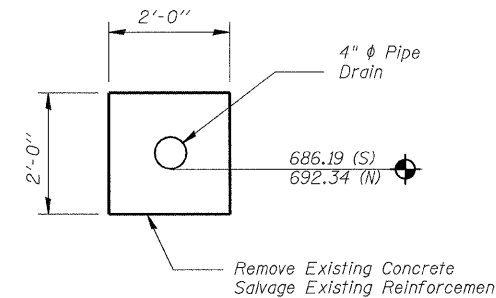
**RETAINING WALL MODIFICATION
STA. 1240+28.67 TO STA. 1240+36.00 LT**



BAR d100(E), d102(E), d104(E)



BAR d101(E), d103(E), d105(E)



ABUTMENT DRAIN OUTLET

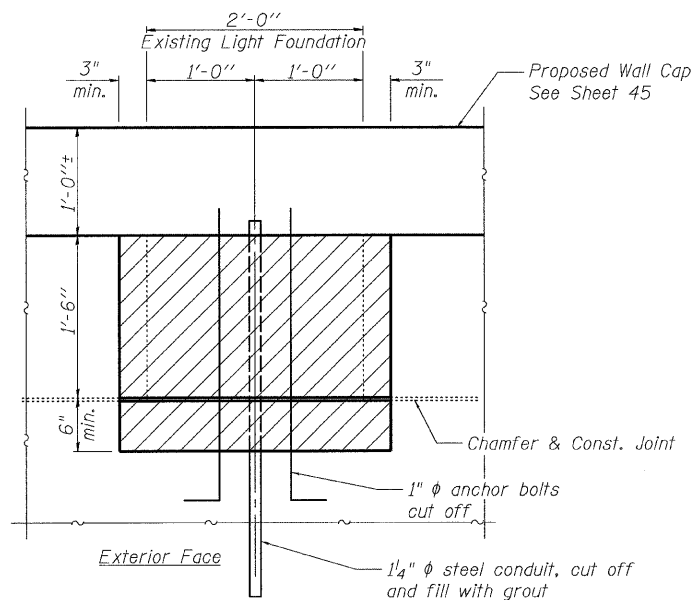
**RETAINING WALL CAP
ELEVATIONS & DETAILS
STRUCTURE NO. 058-0014**

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4169 Fax: 217-352-0085
Illinois Registration Number 184.004913

SHEET NO. 45 49 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	71
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 74215					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

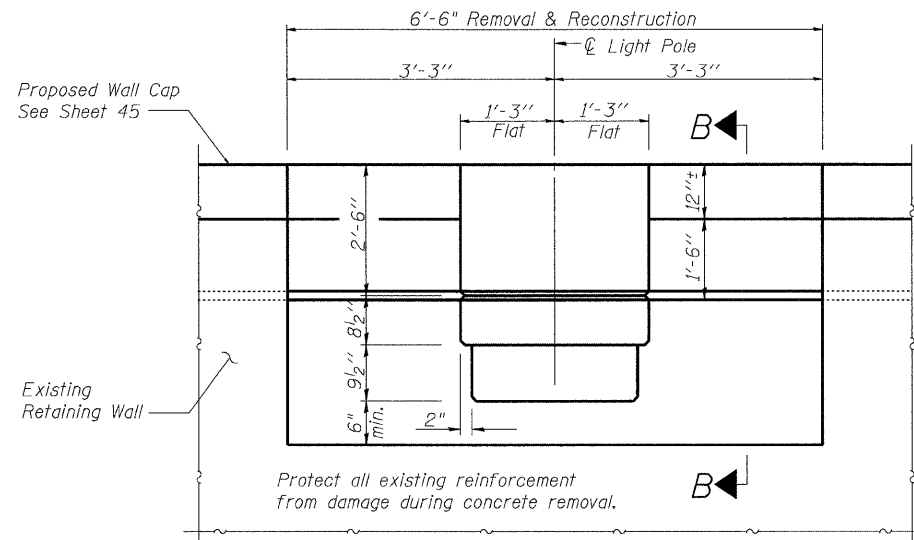


Minimum removal & replacement
Protect reinforcement from damage.
Match typical wall configuration
for patch.

**EXISTING LIGHT FOUNDATION
REMOVAL AND RETAINING WALL REPAIR**

Lighting Repair Schedule

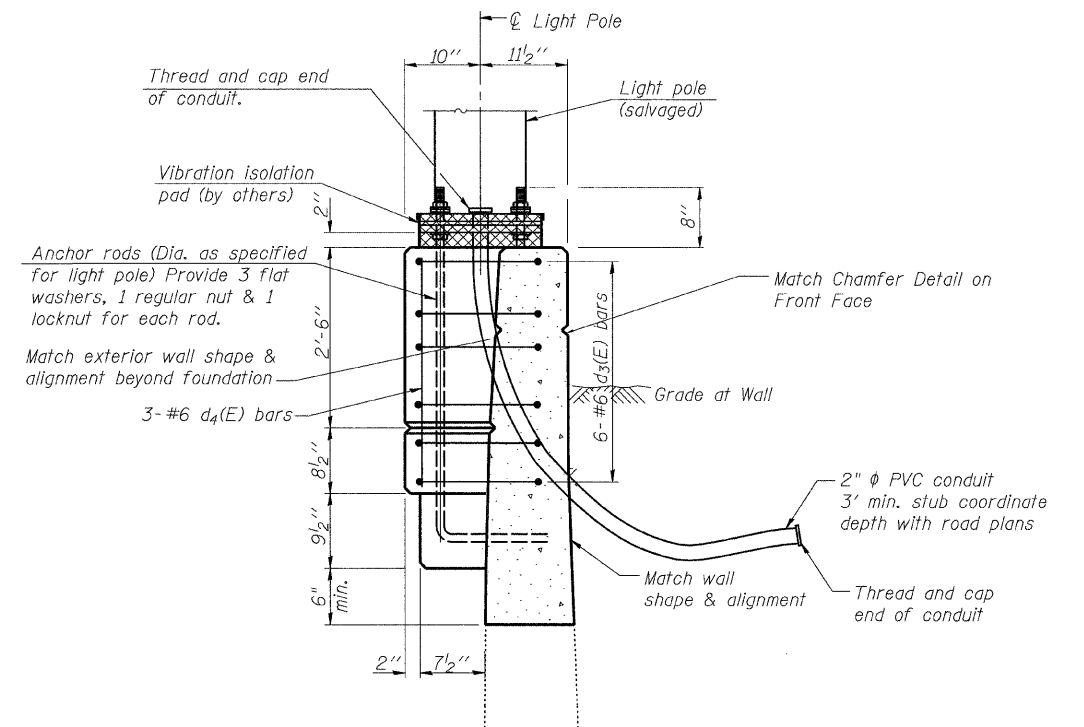
Location
1230+81.81 23.43, Lt.
1231+38.29 23.56, Rt.
1232+01.85 23.32, Lt.
1232+58.19 23.53, Rt.
1239+08.14 23.57, Lt.
1240+23.52 23.61, Lt.



**PROPOSED RETAINING WALL REMOVAL &
LIGHT FOUNDATION CONSTRUCTION**

Lighting Schedule

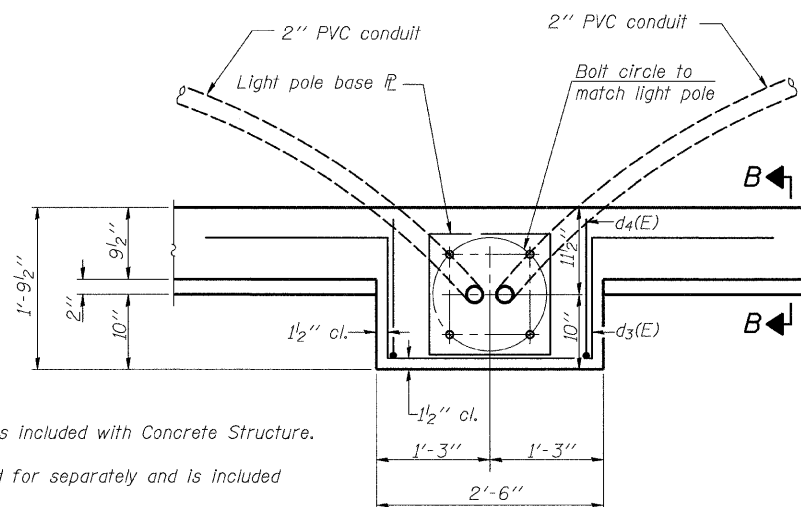
Location
Sta. 1231+10.00, Lt.
Sta. 1232+19.00, Rt.
Sta. 1239+82.00, Lt.



**SECTION B-B
Retaining Walls**

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
d ₃ (E)	18	#6	8'-11"	U
d ₄ (E)	9	#6	4'-4"	L
d ₁₀₀ (E)	625	#4	1'-8"	U
d ₁₀₁ (E)	625	#4	1'-11"	U
d ₁₀₂ (E)	5	#4	1'-5"	U
d ₁₀₃ (E)	5	#4	1'-7"	U
d ₁₀₄ (E)	5	#4	2'-1"	U
d ₁₀₅ (E)	5	#4	2'-11"	U
h ₁₀₀ (E)	100	#4	24'-9"	—
h ₁₀₁ (E)	4	#4	7'-0"	—
h ₁₀₂ (E)	2	#4	3'-0"	—
Concrete Structure			Cu. Yd.	19.9
Reinforcement Bars, Epoxy Coated			Pound	3500

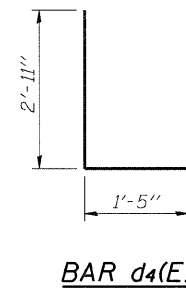
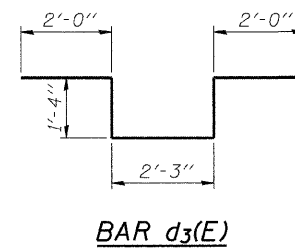


PLAN

Single conduit only @
1231+10, Lt. & 1232+19 Rt.

Note:
Cost of anchor rods included with Concrete Structure.
Conduit shall be paid for separately and is included
in the lighting plans.

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

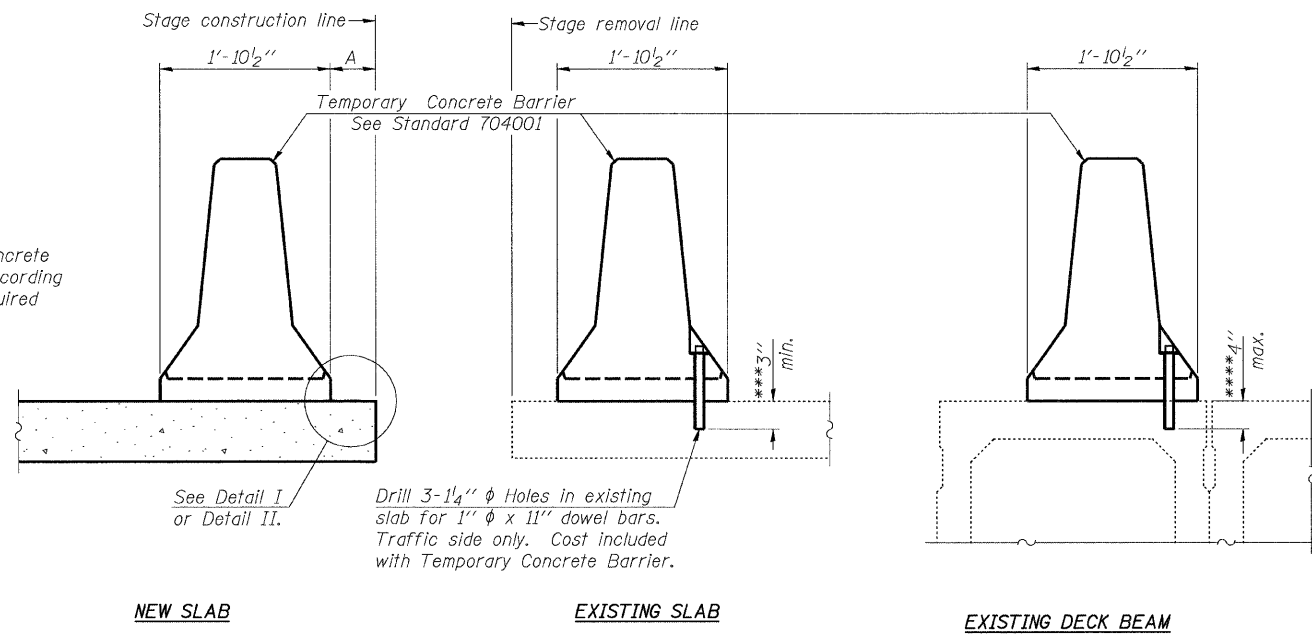


SHEET NO. 46	F.A. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 72
49 SHEETS	CONTRACT NO. 74215				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

**RETAINING WALL MODIFICATIONS
STRUCTURE NO. 058-0014**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

NOTES

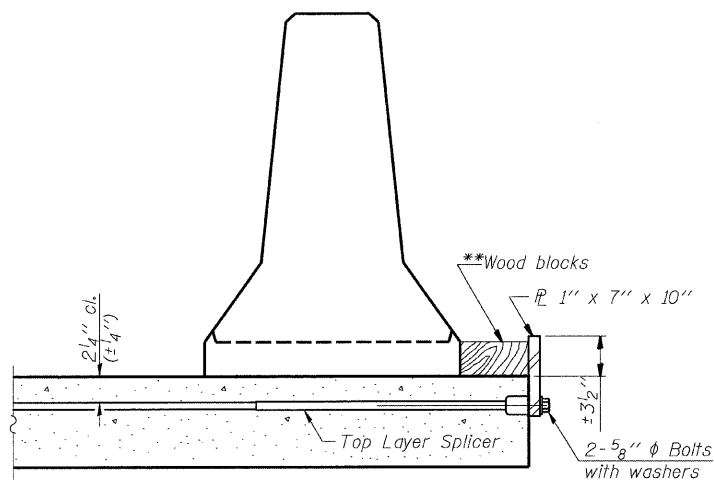
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" 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.

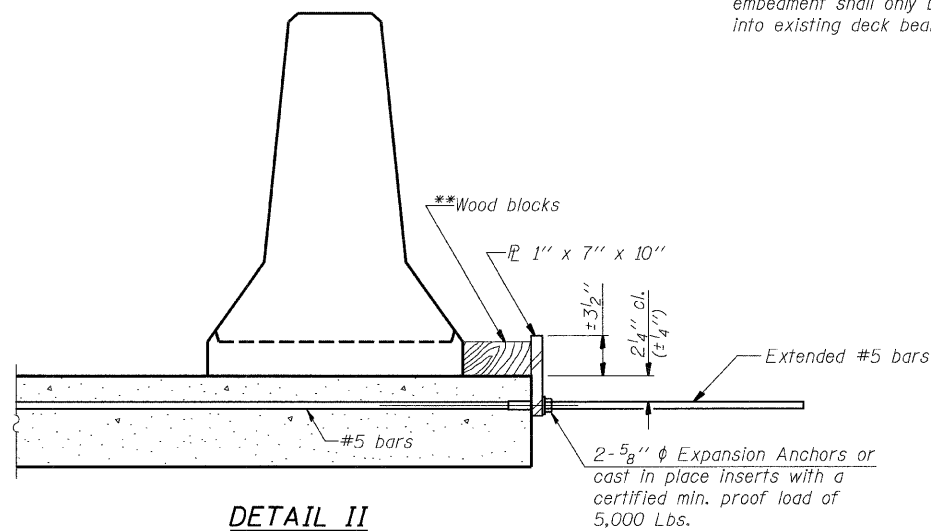
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** 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.

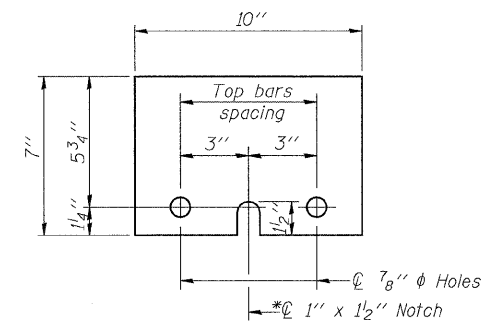
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7" x 10"

* Required only with 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.

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

R-27

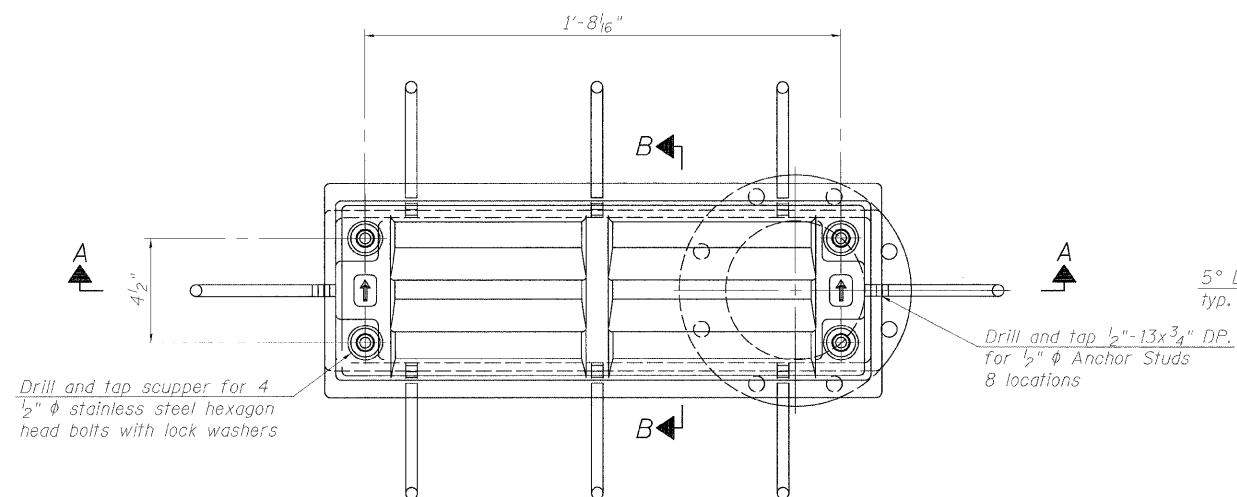
10-1-08

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4109 Fax: 217-352-0085
Illinois Registration Number 184.004913

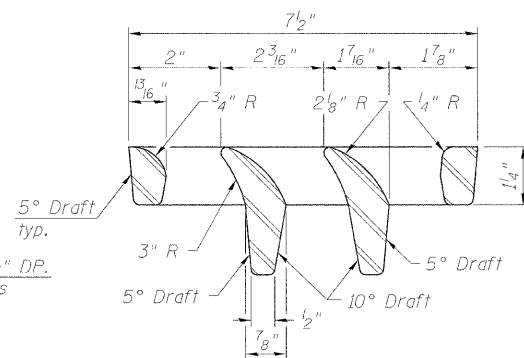
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	710	(50Z-VB)BR	MACON	79	73
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 74215					

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 058-0014

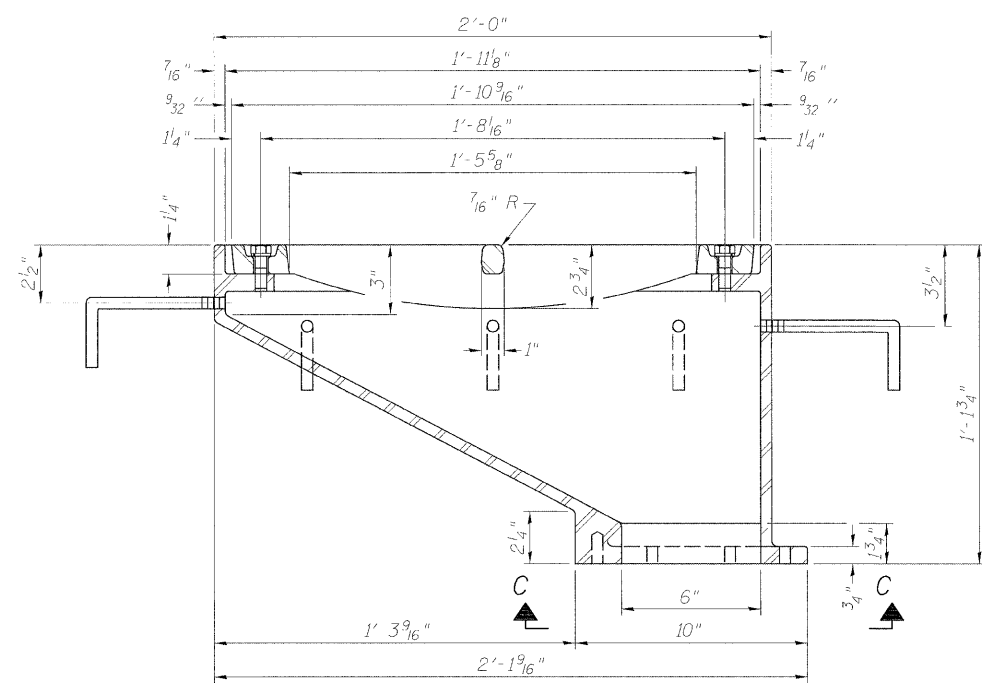
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

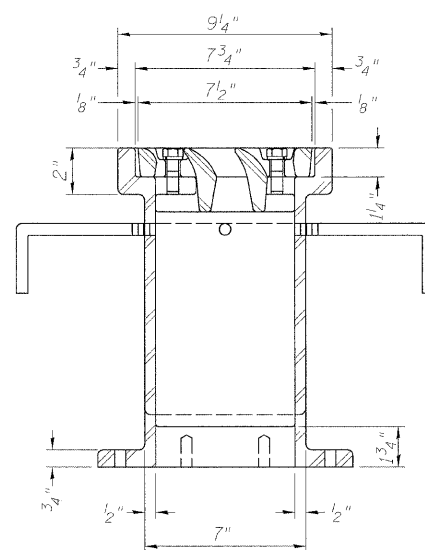


VANE GRATE DETAIL

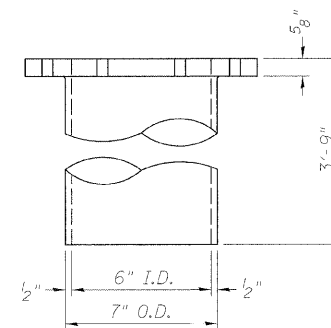


SECTION A-A

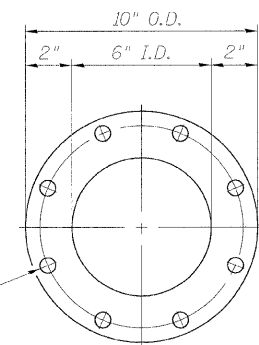
See sheet 17 of 49 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT

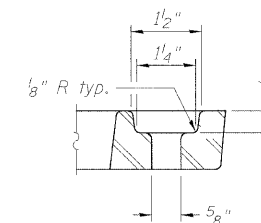


VIEW C-C

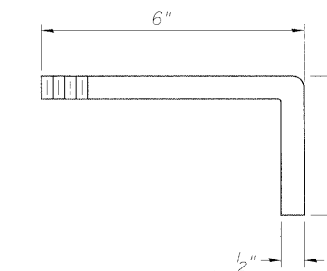
Drill and tap 8 holes for 1/2"-13 bolts on an 8 3/4" ϕ bolt circle. (2 blind holes are 1/4" deep, 6 thru holes)

Notes:

- All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
- Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
- Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
- As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
- Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
- The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
- Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12.
- Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



BOLT HOLE DETAIL



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	5

DRAINAGE SCUPPER, DS-12
STRUCTURE NO. 058-0014

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

Scupper Schedule

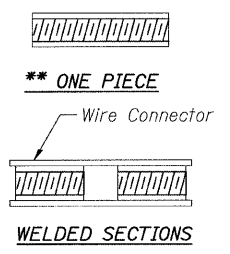
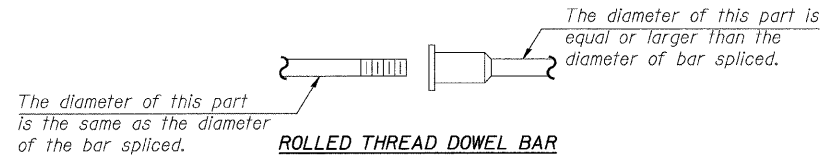
Location
Sta. 1233+31.00, Lt.
Sta. 1233+31.00, Rt.
Sta. 1235+82.00, Lt.
Sta. 1237+61.50, Lt.
Sta. 1238+66.50, Lt.

DS-12 10-1-08

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmead Drive
Champaign, IL 61821
Phone: 217-352-4160 Fax: 217-352-0085
Illinois Registration Number 184.004613

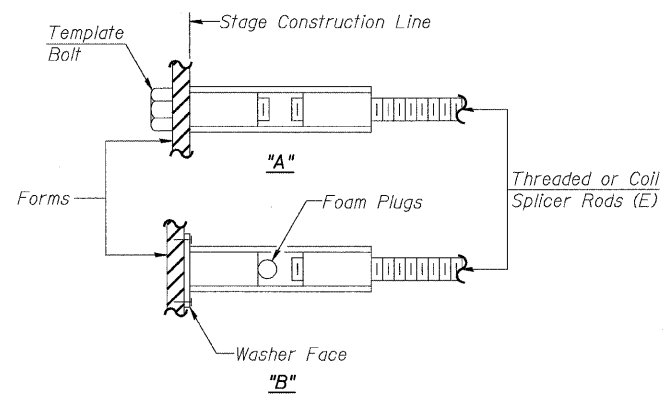
SHEET NO. 48	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49 SHEETS	710	(50Z-VB)BR	MACON	79	74
CONTRACT NO. 74215					
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



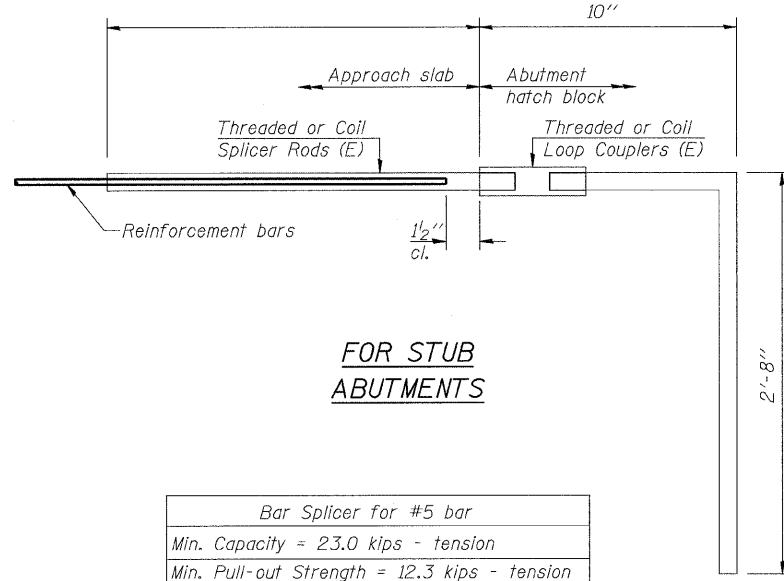
BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



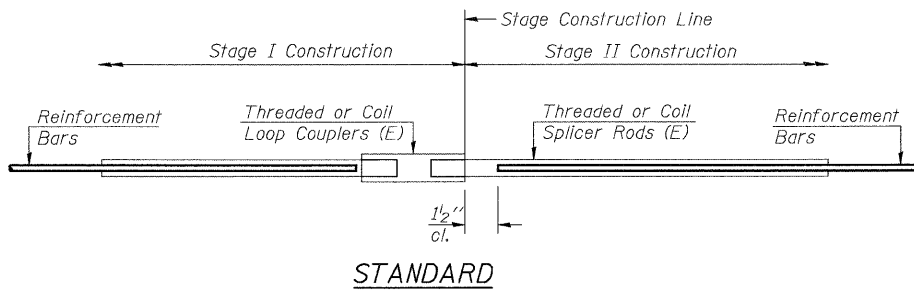
INSTALLATION AND SETTING METHODS

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



Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	100

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	3'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	6'-4"	58.9	31.3
#9	8'-0"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



SUPERSTRUCTURE

Bar Size	No. Assemblies Required	Location
#5	652	Spans 1-5, Stage I
#5	652	Spans 1-5, Stage II
#5	207	Spans 6, Stage I
#5	207	Spans 6, Stage II
#5	327	Spans 7-8, Stage I
#5	327	Spans 7-8, Stage II
#5	284	Spans 9-10, Stage I
#5	284	Spans 9-10, Stage II
#5	8	South Abut. Edge Beam, Stage I
#5	8	South Abut. Edge Beam, Stage II
#5	8	Span 5 Edge Beam, Stage I
#5	8	Span 5 Edge Beam, Stage II
#5	16	Span 6 Edge Beams, Stage I
#5	16	Span 6 Edge Beams, Stage II
#5	8	Span 7 Edge Beam, Stage I
#5	8	Span 7 Edge Beam, Stage II
#5	8	Span 8 Edge Beam, Stage I
#5	8	Span 8 Edge Beam, Stage II
#5	8	Span 9 Edge Beam, Stage I
#5	8	Span 9 Edge Beam, Stage II
#5	8	North Abut. Edge Beam, Stage I
#5	8	North Abut. Edge Beam, Stage II
#4	25	South Approach Slab, Stage I
#5	46	South Approach Slab, Stage I
#5	40	South Approach Footing, Stage I
#4	25	South Approach Slab, Stage II
#5	46	South Approach Slab, Stage II
#5	40	South Approach Footing, Stage II
#4	25	North Approach Slab, Stage I
#5	46	North Approach Slab, Stage I
#5	40	North Approach Footing, Stage I
#4	25	North Approach Slab, Stage II
#5	46	North Approach Slab, Stage II
#5	40	North Approach Footing, Stage II

SUBSTRUCTURE

Bar Size	No. Assemblies Required	Location
#5	12	South Abutment
#6	8	South Abutment
#5	12	North Abutment
#6	8	North Abutment
#5	8	Pier 5 Cap
#7	10	Pier 5 Cap
#8	10	Pier 5 Crashwall
#6	40	Pier 5 Crashwall
#5	8	Pier 6 Cap
#7	10	Pier 6 Cap
#9	10	Pier 6 Crashwall
#6	40	Pier 6 Crashwall
#5	8	Pier 8 Cap
#7	10	Pier 8 Cap
#9	10	Pier 8 Crashwall
#8	24	Pier 8 Crashwall

STUB ABUTMENTS

Bar Size	No. Assemblies Required	Location
#5	50	South Abutment
#5	50	North Abutment

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

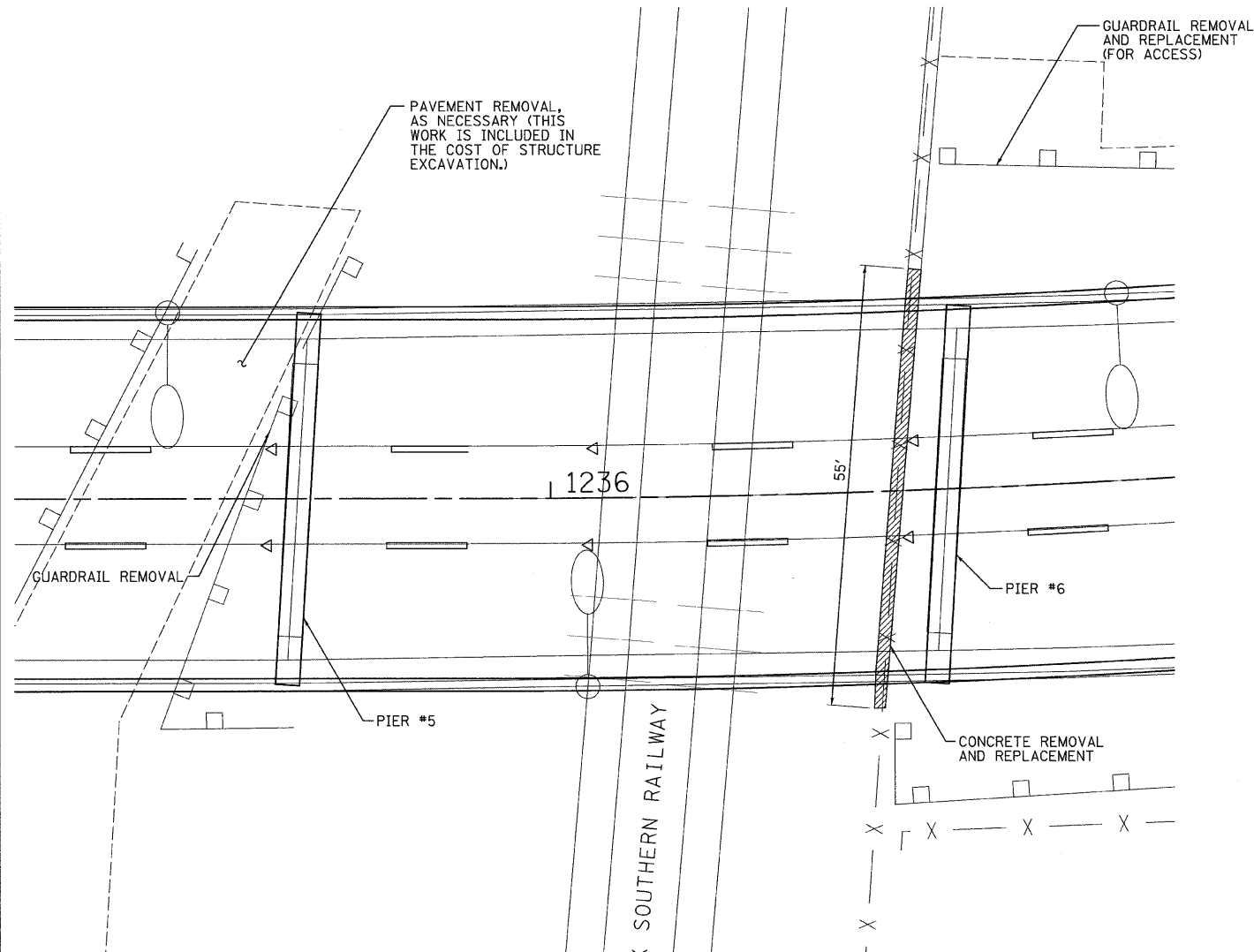
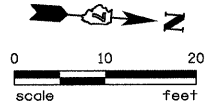
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

**BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 058-0014**

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB



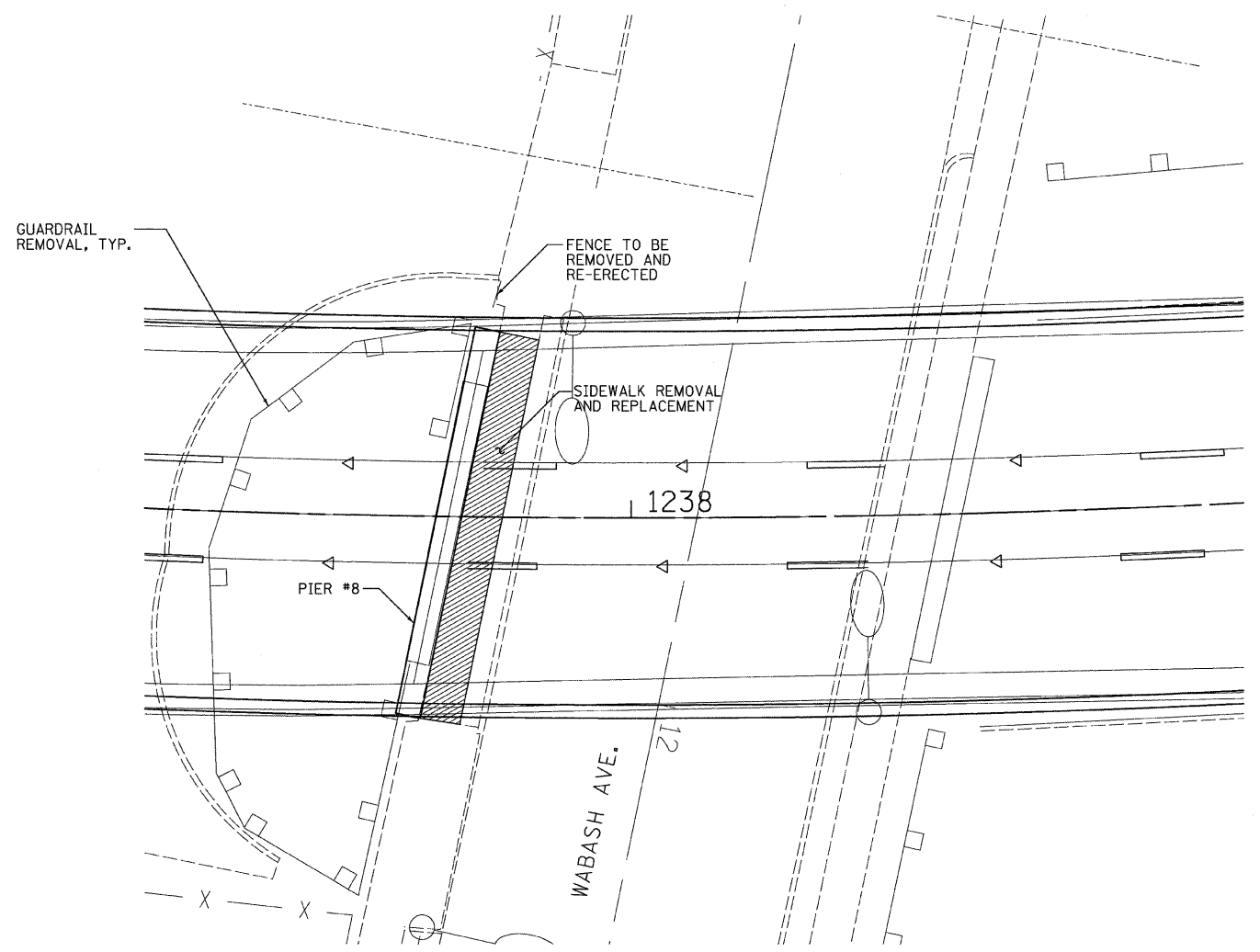
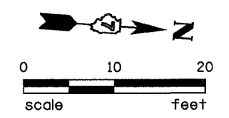
SHEET NO. 49 49 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	710	(50Z-VB)BR	MACON	79	75
CONTRACT NO. 74215					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					



PIER #5
 GUARDRAIL REMOVAL - 60 FEET

PIER #6
 CONCRETE REMOVAL (SPL) - 11 CU YD
 CONCRETE STRUCTURES (SPL) - 11 CU YD
 SPBGR, TY A, 6 FOOT POSTS - 30 FEET
 GUARDRAIL REMOVAL - 30 FEET
 CHAIN LINK FENCE, 4' ATTACHED TO STRUCTURE - 55 FEET

NORFOLK SOUTHERN RAILWAY



PIER #8
 PCC SIDEWALK, 4 INCH - 240 SQ FT
 SIDEWALK REMOVAL - 240 SQ FT
 GUARDRAIL REMOVAL - 135 FEET
 CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED - 5 FEET

WABASH AVE.

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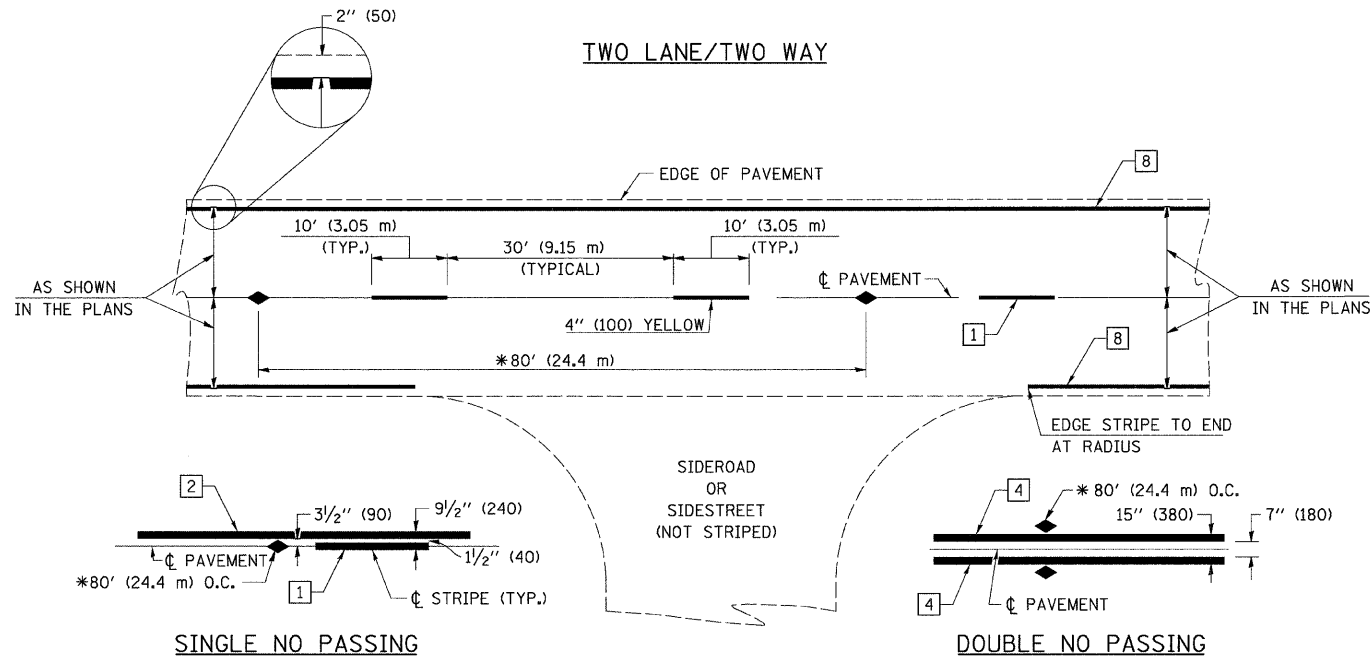
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DRAWN - JDK	REVISED -	
CHECKED - DAR/TLO	REVISED -	
DATE - 09/24/2009	REVISED -	
PLOT SCALE = 10.0000' / IN.		
PLOT DATE = 3/12/2010		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

MISCELLANEOUS DETAILS

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	76
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	



PAVEMENT MARKING LEGEND

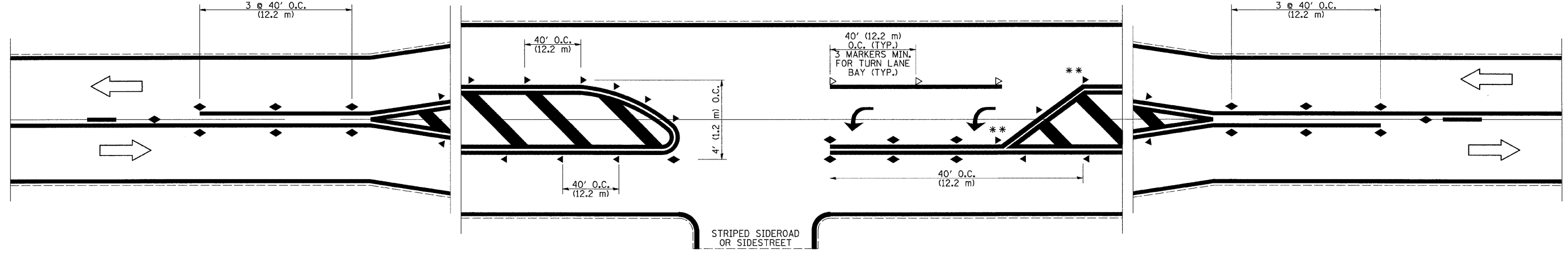
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 6" (100) LANE LINE EXTENSIONS (WHITE)
- 14 4" (100) PARKING WHITE

TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

RAISED REFLECTIVE PAVEMENT MARKERS



USER NAME = msj	DESIGNED - JLF	REVISED -
DRAWN - JDK	REVISED -	
CHECKED - DAR/TLO	REVISED -	
DATE - 09/24/2009	REVISED -	

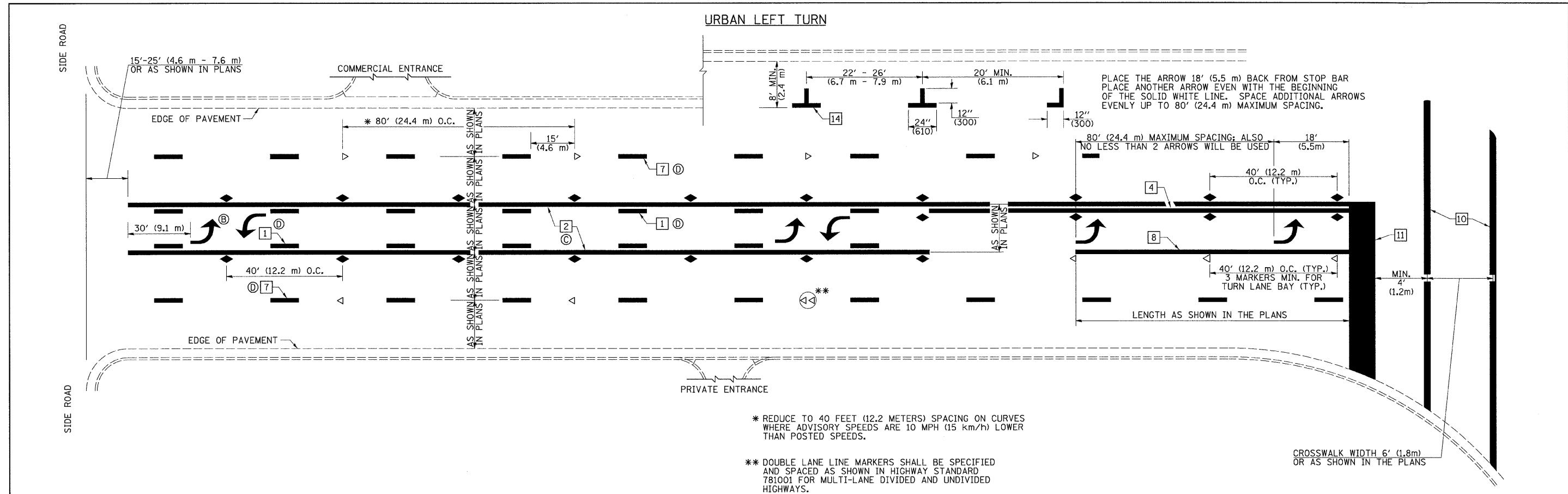
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

URBAN PAVEMENT MARKING DETAILS

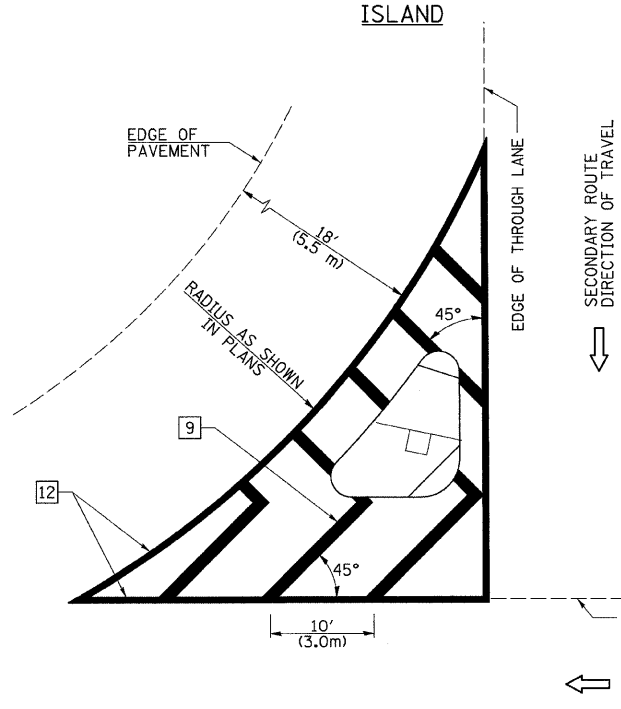
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	77
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	

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- * REDUCE TO 40 FEET (12.2 METERS) SPACING ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.
- ** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.



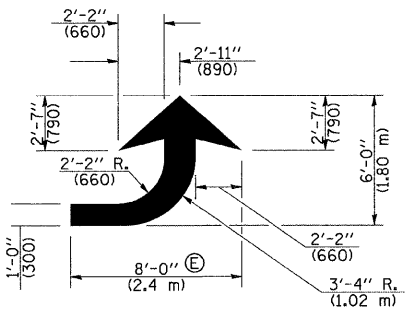
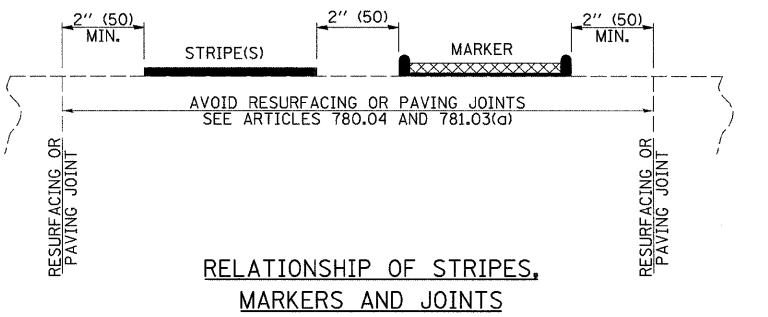
GENERAL NOTES

1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2] IF PRESENT.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:

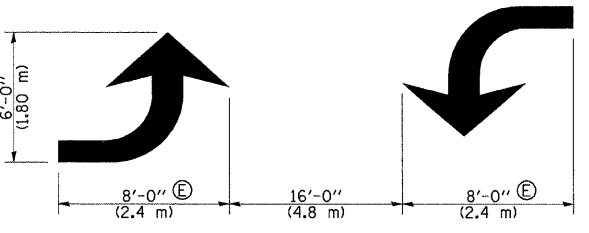
< 30 MPH (< 50 km/h)	15' (4.5 m)
30-45 MPH (50-75 km/h)	20' (6.0 m)
> 45 MPH (> 75 km/h)	30' (9.0 m)

GENERAL NOTES

- Ⓐ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE. USE A MINIMUM OF TWO PAIRS PER BLOCK.
- Ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
- Ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR 7 SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER.
- Ⓔ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)



LEFT ARROW
 REVERSE FOR RIGHT ARROW
 AREA = 15.6 SQ. FT. (1.47 m²)
 (WHITE)



TYPICAL DOUBLE TURN ARROWS (WHITE)

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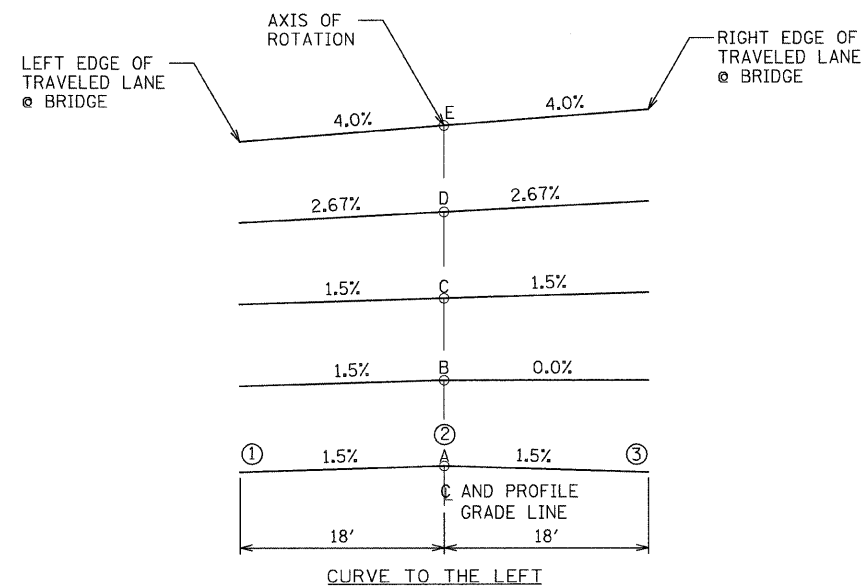
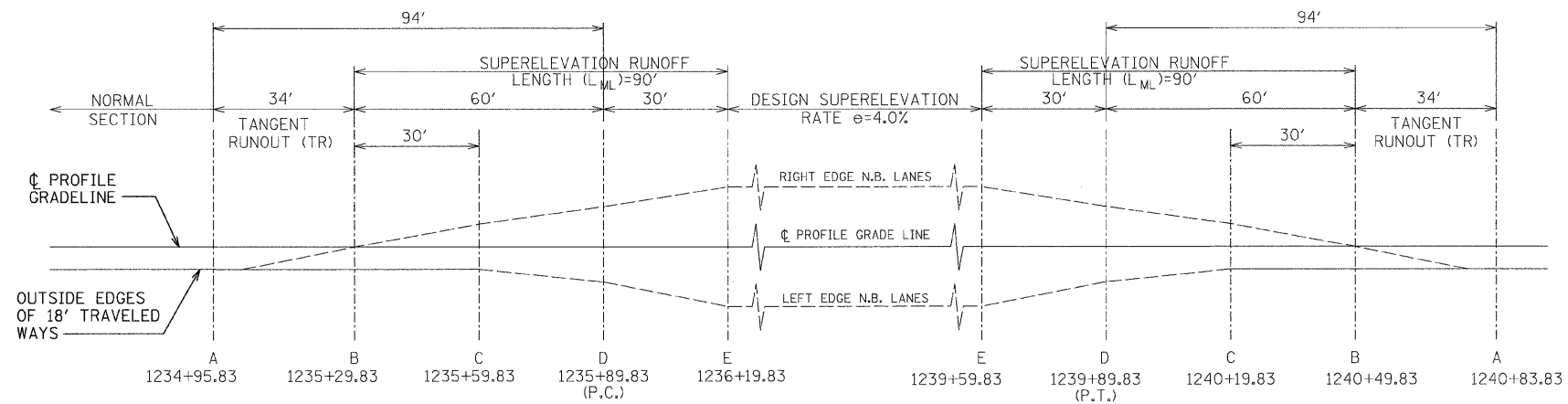
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DRAWN - JDK	REVISED -	
CHECKED - DAR/TLO	REVISED -	
DATE - 09/24/2009	REVISED -	
PLOT SCALE = 1:8000 1" = 100'		
PLOT DATE = 3/12/2010		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

URBAN PAVEMENT MARKING DETAILS

SCALE:	SHEET NO. OF SHEETS STA. TO STA.
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F.A.P. RTE. 710	SECTION (50Z-VB) BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 78
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 74215	



CURVE TO THE LEFT			①	②	③
STATION	DESCRIPTION	DIMENSIONS	LEFT EDGE N.B. LANES	CENTERLINE/PGL N.B. LANES	RIGHT EDGE N.B. LANES
1234+95.83	NORMAL CROWN	TR=34	703.67	703.94	703.67
1235+29.83	FLAT		704.71	704.98	704.98
1235+59.83	REVERSE CROWN		705.44	705.71	705.98
1235+89.83	2/3" S.E. (P.C.)		705.78	706.26	706.74
1236+19.83	FULL S.E.	L=90	705.93	706.65	707.37
1239+59.83	FULL S.E.	L=90	698.20	698.92	699.64
1239+89.83	2/3" S.E. (P.T.)		696.71	697.19	697.67
1240+19.83	REVERSE CROWN		695.18	695.45	695.72
1240+49.83	FLAT		693.97	694.24	694.24
1240+83.83	NORMAL CROWN	TR=34	692.27	692.54	692.27

FILE NAME = X:\CHIEF\2007\071017\cadd\Plans\Super-elevation.dtl.dgn



USER NAME = msj	DESIGNED - JLF	REVISED -
PLOT SCALE = 1.0000' / IN.	DRAWN - JDK	REVISED -
PLOT DATE = 3/12/2010	CHECKED - DAR/TLO	REVISED -
	DATE - 09/24/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUPERELEVATION TRANSITION DETAIL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(50Z-VB) BR	MACON	79	79
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74215	