

034

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
HIGHWAY BRIDGE REPAIR PLANS

FAP ROUTE 317 (US 24 /IL 116 INTERCHANGE)
EXISTING SN: 090-0071 AND 090-0072
SECTION [(102-HB)I]BR
PROJECT NHPP-N2E5(161)
TAZEWELL COUNTY

C-94-086-17

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)I]BR	TAZEWELL	65	1
ILLINOIS CONTRACT NO. 68D85				

INDEX OF SHEETS

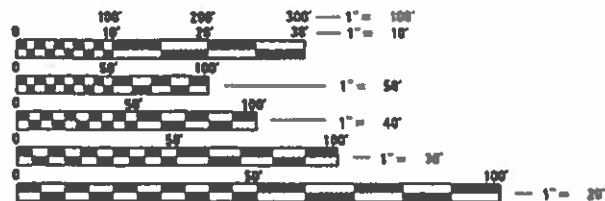
1	TITLE SHEET
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47-65	ABBREVIATED EXISTING BRIDGE PLANS

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

090001-08	701411-03
001001-02	701423-10
442001-03	701423-01
701306-04	701901-07
701311-03	704801-08
701400-09	

DESIGN DESIGNATION
OTHER PRINCIPAL ARTERIAL
CLASS II TRUCK ROUTE
TRAFFIC DATA
US 24
EXISTING ADT = 24,300 (2017)
%SU = 3.0%
%MU = 2.0%
POSTED SPEED LIMIT = 55 MPH

THE IMPROVEMENT IS LOCATED WITHIN
THE CITY OF EAST PEORIA



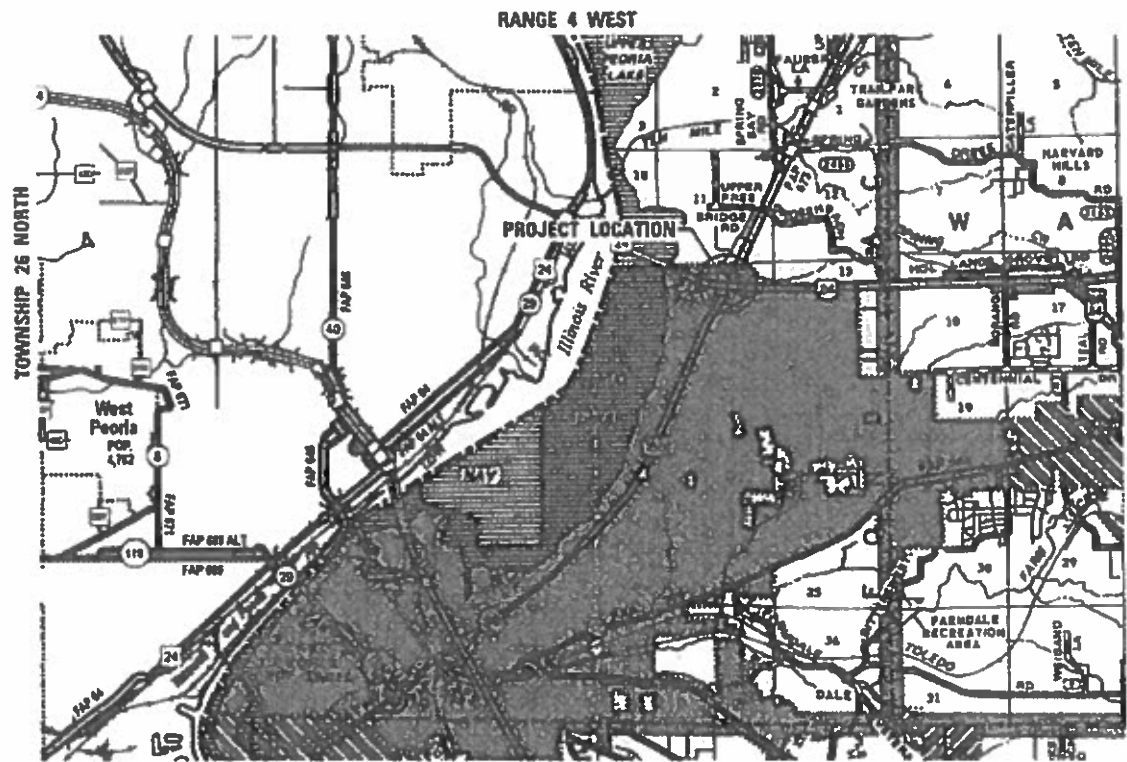
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: MIKE LEWIS 309-671-3454
PROJECT MANAGER: MIKE McLUCKIE 309-671-3468

CONTRACT NO. 68D85

CATALOG NO. 035509-00D



LOCATION MAP
NOT TO SCALE

US 24 EASTBOUND = 406.00 FT. = 0.077 MILE
US 24 WESTBOUND = 521.00 FT. = 0.099 MILE

PROJECT DESCRIPTION: PROJECT CONSISTS OF THE REMOVAL AND REPLACEMENT OF PIER 1 COLUMNS, CAPS AND BEARINGS FOR BOTH STRUCTURES. JOINT REPLACEMENT AT BOTH ABUTMENTS AND AT PIER 1. DECK SCARIFICATION AND INSTALLATION OF A MICROSILICA OVERLAY AT EACH STRUCTURE WITH ADDITIONAL HMA PATCHING AT SN 090-0072 AND SURFACE PLACEMENT AT BOTH STRUCTURES. STONE DUMPED RIPRAP PLACEMENT ON EAST SLOPE BETWEEN THE TWO STRUCTURES AND OTHER INCIDENTAL ITEMS OF WORK.



Christopher P. Kollman 8/16/18
EXPIRATION: 11/30/2019



LOCATION OF SECTION INDICATED THUS: [shaded area]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED Aug 16 2018
Kennel A Barnett (KSD)
REGION THREE ENGINEER
Oct 5 18
Paul P. [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT
Oct 5 2018
Paul P. [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

GENERAL NOTES

BRIDGE OVERLAY NOTIFICATION

AFTER PLACEMENT OF THE BRIDGE DECK OVERLAY, THE RESIDENT ENGINEER SHALL NOTIFY THE DISTRICT BRIDGE MAINTENANCE ENGINEER OF THE "AS CONSTRUCTED" MILLING DEPTH AND OVERLAY THICKNESS FOR UPDATING THE ILLINOIS HIGHWAY INFORMATION SYSTEM.

BUTT JOINT CUTTING TIME RESTRICTION

BUTT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE HMA SURFACE COURSE.

SIGNING

SIGN LOCATIONS MAY VARY FROM THE STATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH DIRECTIONS FROM THE ENGINEER AT THE TIME OF CONSTRUCTION. SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID ANY FOUND UTILITIES.

ALL WOOD POST LOCATIONS SHALL BE VERIFIED WITH THE BUREAU OF OPERATIONS, TRAFFIC SECTION, BEFORE INSTALLATION.

SECURING DRAINAGE STRUCTURE GRATES

PRIOR TO ROUTING TRAFFIC ONTO THE SHOULDERS AS SHOWN IN THE STAGING PLANS, THE CONTRACTOR SHALL SECURE GRATINGS ON SHOULDER INLETS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL PAY ITEM.

ADDITIONAL SUPPLEMENTAL TRAFFIC CONTROL

THE DEPARTMENT RESERVES THE RIGHT AT ANY TIME TO ADD ADDITIONAL TRAFFIC CONTROL SYSTEMS OR DEVICES WITHIN THE ACTIVE CONTRACT LIMITS, BY MEANS OF AN ADDITIONAL CONTRACT. ALL TERMS OF ARTICLE 105.08 OF THE STANDARD SPECIFICATIONS SHALL BE FOLLOWED BY EACH CONTRACTOR.

PAVING SURFACE COURSE

CONTINUOUS PAVING OPERATIONS ON THE MAIN ROADWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OF THE HOT-MIX ASPHALT SURFACE. NO INTERRUPTIONS FOR SIDE ROADS, ENTRANCES, TURN LANES, ETC. WILL BE ALLOWED.

ENVIRONMENTAL REVIEWS

PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

- BDE FORM 2289 (CULTURAL AND NATURAL RESOURCES REVIEW OF BORROW AREAS)
- BDE FORM 2290 (WASTE/USE AREA REVIEW)
- A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
- COLOR PHOTOGRAPHS DEPICTING THE USE AREA
- BOROW AREA ENTRY AGREEMENT FORM - D4 PI0101

PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS SHALL BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.

ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES.

PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED WASTE SITE ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.

COMMITMENTS

NONE

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE USE(S)	SURFACE COURSE (1.5")	BASE COURSE (CLASS D PATCHES)	SHOULDERS (LOWER LIFTS)	SHOULDERS (SURFACE LIFT)
AC /PC	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% AT N=50	4.0% AT N=50	4.0% AT N=50	4.0% AT N=50
MIXTURE COMPOSITION: (MIXTURE GRADATION)	IL 9.5	IL 19.0	IL 19.0	IL 9.5
FRICTION AGGREGATE	MIX C	NA	NA	MIX C
QUALITY MANAGEMENT PROGRAM	QCQA	QCQA	QCQA	QCQA

- NOTE: 1) INDIVIDUAL LIFT THICKNESS OF EACH MIX TYPE WILL BE NO LESS THAN 3 TIMES NOMINAL MAXIMUM AGGREGATE SIZE AND NO MORE THAN 6 TIMES NOMINAL MAXIMUM AGGREGATE SIZE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
 2) FOR DESIGN PURPOSES, MIXTURE WEIGHT FOR ALL MIXES IS DETERMINED TO BE 112.0 LB/S.Y./IN., UNLESS OTHERWISE NOTED.

PROJECT SPECIFIC NOTES

1. THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT-MIXED ASPHALT MIXTURES ARE PLACED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND COMMENCING CONSTRUCTION.

CALCULATION FACTORS

- AGGREGATE SHOULDERS AND BASES: 0.05833 TON /SQ YD /INCH
- HOT MIX ASPHALT: 0.056 TON /SQ YD /INCH
- TEMPORARY EROSION CONTROL SEEDING: 100 LBS /ACRE
- STONE DUMPED RIPRAP: 1.5 TON /CU YD
- GUARDRAIL AGGREGATE EROSION CONTROL: 1.5 TON /CU YD.
- POLYMERIZED TACK COAT - 0.08 LB /SQ. FT. (MILLED SURFACES)
 - 0.04 LB /SQ. FT. (FOG COAT)
- BITUMINOUS MATERIALS (TACK COAT) ON MILLED HMA: 0.05 LB./SQ. FT.
 ON HMA LIFTS: 0.025 LB./SQ. FT.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	BRIDGE	BRIDGE
				0005	0013	0013
				URBAN	090-0071	090-0072
28100707	STONE DUMPED RIPRAP, CLASS A4	SO YD	172		86	86
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	946	946		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	972	972		
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	179	179		
44004250	PAVED SHOULDER REMOVAL	SO YD	681	681		
44201827	CLASS D PATCHES, TYPE II, 15 INCH	SO YD	22	22		
44201831	CLASS D PATCHES, TYPE III, 15 INCH	SO YD	34	34		
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SO YD	681	681		
50102400	CONCRETE REMOVAL	CU YD	92.3		53.9	38.4
50300225	CONCRETE STRUCTURES	CU YD	57.8		32.0	25.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	44.6		25.6	19.0
50300260	BRIDGE DECK GROOVING	SO YD	2313		1333	980
50300300	PROTECTIVE COAT	SO YD	491		260	231
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1165		634	531



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

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET NO. 1 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAZEWELL	65	3
CONTRACT NO. 68085			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	BRIDGE	BRIDGE
				0005	0013	0013
				URBAN	090-0071	090-0072
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	14170		8240	5930
50800515	BAR SPLICERS	EACH	80		40	40
50800530	MECHANICAL SPLICERS	EACH	54		30	24
52000110	PREFORMED JOINT STRIP SEAL	FOOT	287		162	125
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	34		20	14
52100520	ANCHOR BOLTS 1"	EACH	68		40	28
63301215	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL, TYPE B	FOOT	136	136		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6		
67100100	MOBILIZATION	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	10		
70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	15745	15745		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1750	1750		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1812.5	1812.5		
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	3	3		

80% FED
20% STATE



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]BR	TAEWELL	65	4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68085	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	BRIDGE	BRIDGE
				0005	0013	0013
				URBAN	090-0071	090-0072
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	8599	8599		
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	1100	1100		
* 78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	144	144		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	2	2		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	2	2		
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	3248	3248		
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1		0.5	0.5
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	720	720		
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	5246	5246		
* X7830070	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	8599	8599		
* X7830074	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	1100	1100		
* X7830078	GROOVING FOR RECESSED PAVEMENT MARKING 13"	FOOT	144	144		
Z0000600	ADJUSTING FRAMES FOR INLETS	EACH	3		1	2

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE:	SHEET NO. 3 OF 4 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]BR	TAEWELL	65	5
CONTRACT NO. 68085				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	BRIDGE	BRIDGE
				0005	0013	0013
				URBAN	090-0071	090-0072
20003802	REMOVAL OF EXISTING BEARINGS	EACH	34		20	14
Z0010400	CLEANING BRIDGE SEATS	SQ FT	391		220	171
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	2340		1341	999
Z0012162	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/4"	SQ YD	2340		1341	999
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	410		288	122
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	16			16
Z0018051	DRAINAGE SCUPPERS TO BE ADJUSTED	EACH	6		3	3
Z0031200	JACKING AND CRIBBING	EACH	4		2	2
Z0065730	SLOPEWALL SLURRY PUMPING	CU YD	69		58	11
Z0076600	TRAINEES	HOUR	1,000	1,000		
Z0073200	TEMPORARY SHORING & CRIBBING	EACH	1		1	
Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1,000	1,000		



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]BR	TAEWELL	65	6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68085	

PAVEMENT MARKING												
LOCATION	70300904	X7030005	78009004 MODIFIED URETHANE PAVEMENT MARKING - LINE 4"			78009006		78009012	X7830070	X7830074	X7830078	X0327980
	PAVEMENT MARKING TAPE IV	TEMPORARY PAVEMENT MARKING REMOVAL	WHITE EDGE LINE	WHITE 10' LINE 30' SKIP DASH	YELLOW EDGE LINE	MODIFIED URETHANE PAVEMENT MARKING LINE 6"		MODIFIED URETHANE PAVEMENT MARKING LINE 12" WHITE DIAGONALS	GROOVING FOR RECESSED PAVEMENT MARKING 5"	GROOVING FOR RECESSED PAVEMENT MARKING 7"	GROOVING FOR RECESSED PAVEMENT MARKING 13"	PAVEMENT MARKING REMOVAL - WATER BLASTING
	FOOT	FOOT	FOOT	FOOT	FOOT	WHITE EDGE LINE	WHITE 2' DASH 6' SKIP	FOOT	FOOT	FOOT	FOOT	SO. FT.
SN 090-0071 STAGE II												
STA. 270+00 TO STA. 281+00 LT. AND CENTERLINE (FOR REMOVAL)	2200	733										459
STA. 270+00 TO STA. 279+78 RT.	985	328										
SN 090-0071 STAGE III												
STA. 260+74 TO STA. 282+92 LT.	2224	741										
STA. 265+14 TO STA. 278+79 RT.	1361	453										
STA. 278+79 TO STA. 282+05 RT.	130	44										
STA. 260+74 TO STA. 270+00 LT.												309
STA. 281+00 TO STA. 282+92 LT.												64
FINAL STRIPING												
STA. 260+70 TO STA. 282+92 LT.					2222				2222			
STA. 266+10 TO STA. 282+92 CENTERLINE LT.				420					420			140
STA. 273+70 TO STA. 278+30 CENTERLINE RT.				120					120			40
STA. 265+10 TO STA. 271+70 RT.			660						660			220
STA. 278+80 TO STA. 282+92 RT.			312						312			235
STA. 271+75 TO STA. 278+ 80 (RAMP) RT.			705						705			137
STA. 271+70 TO STA. 273+70 (INCLUDES RAMP)						400				400		200
STA. 278+30 TO STA. 279+80 (INCLUDES RAMP)						300				300		150
STA. 271+90 TO STA. 272+35 (4 LINES)								42			42	42
STA. 279+00 TO STA. 279+45 (4 LINES)								42			42	42
SN 090-0072 STAGE II												
STA. 271+04 TO STA. 293+25 LT.	2325	775										
STA. 271+00 TO STA. 288+00 RT.	1700	566										566
STA. 278+40 TO STA. 292+25 CENTERLINE												117
SN 090-0072 STAGE III												
STA. 268+70 TO STA. 288+00 LT.	1728	576										
STA. 268+70 TO STA. 293+25 RT.	2455	818										
STA. 269+70 TO STA. 273+00 CENTERLINE												27
STA. 269+70 TO STA. 273+10 LT.												113
STA. 271+00 (RAMP) TO STA. 273+00 LT.												67
STA. 278+40 TO STA. 288+00 LT.												320
FINAL STRIPING												
STA. 269+40 TO STA. 271+00 LT.			160						160			
STA. 271+00 (RAMP) TO STA. 288+00			1710						1710			
STA. 269+40 TO STA. 288+00				430	1860				2290			
STA. 271+00 TO STA. 272+50 (INCLUDES RAMP)						300				300		
STA. 272+50 TO Sta. 275+50							100			100		
STA. 271+30 TO STA. 272+05 (6 LINES)								60			60	
IL 116												
STA. 222+00 TO STA. 228+36	637	212										
SUB-TOTAL			3547	970	4082	1000	100					
TOTAL	15745	5246		8599			1100	144	8599	1100	144	3248



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DEPARTMENT OF TRANSPORTATION

QUANTITY SCHEDULES

SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JR	TAZEWELL	65	7
CONTRACT NO. 68085			ILLINOIS FED. AID PROJECT	

TEMPORARY CONCRETE BARRIER				
LOCATION	70400100 TEMPORARY CONCRETE BARRIER	70400200 RELOCATE TEMPORARY CONCRETE BARRIER	70600260 IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW) TEST LEVEL 3	70600332 IMPACT ATTENUATORS RELOCATE (FULLY REDIRECTIVE, NARROW) TEST LEVEL 3
	FOOT	FOOT	EACH	EACH
IL 116 STAGE I				
STA. 225+00 TO STA. 228+36	337.5			
SN 090-0071 STAGE II				
STA. 271+99.9 TO STA. 277+84.8	587.5			
SN 090-0072 STAGE II				
STA. 273+00 TO STA. 279+91.4	887.5			
IL 116 STAGE I				
STA. 225+00 TO STA. 228+36		337.5		
SN 090-0071 STAGE III				
STA. 269+73.3 TO STA. 281+84.9	275	537.5		
SN 090-0072 STAGE III				
STA. 273+00 TO STA. 281+85.1		937.5		
IL 116 STAGE I				
STA. 228+11 TO STA. 228+36			1	
SN 090-0071 STAGE II				
STA. 271+74.9 TO STA. 271+99.9			1	
SN 090-0072 STAGE II				
STA. 281+91.4 TO STA. 282+14.4			1	
SN 090-0071 STAGE III				
STA. 269+48.3 TO STA. 269+73.3				1
SN 090-0072 STAGE II				
STA. 281+60.1 TO STA. 281+85.1				1
TOTAL	1750	1812.5	3	2

63301215 REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE B	
LOCATION	REMOVE AND REERECT SPBGR, TYPE B
	FOOT
IL 116	
STA. 226+40 TO STA. 226+83 (IN MEDIAN BETWEEN 090-0071 & 090-0072) - 70' RT.	43
STA. 226+07 TO STA. 226+50 (IN MEDIAN BETWEEN 090-0071 & 090-0072) - 70' LT.	43
STA. 226+93 TO STA. 227+43 70' LT.	50
TOTAL	136

CLASS D PATCHES		
LOCATION	44201827 CLASS D PATCHES TYPE II, 15 INCH	44201831 CLASS D PATCHES TYPE III, 15 INCH
	SO. YD.	SO. YD.
STA. 274+44 TO STA. 274+50 RT. (STAGE III)	11	
STA. 277+00 TO STA. 277+06 RT. (STAGE III)	11	
STA. 274+44 TO STA. 274+50 LT. (STAGE II)		17
STA. 277+00 TO STA. 277+06 LT. (STAGE II)		17
TOTAL	22	34

TABULATION OF RESURFACING QUANTITIES			
LOCATION	40600290 BITUMINOUS MATERIALS (TACK COAT)	40600982 HMA SURFACE REMOVAL - BUTT JOINT	40603335 HOT MIX ASPHALT SURFACE COURSE IL-19.0, N50
	POUND	SO. YD.	TON
SN 090-0071			
STA. 273+58 TO STA. 274+13			
STAGE II	100	135	19
STAGE III	97	134	18
STA. 277+05 TO STA. 277+64			
STAGE II	101	145	19
STAGE III	105	144	20
SN 090-0072			
STA. 273+19 TO STA. 273+64 (STAGE II)		152	
STA. 273+19 TO STA. 273+64 (STAGE III)		68	
STA. 273+19 TO STA. 274+57.8 (STAGE II)	196		37
STA. 273+19 TO STA. 274+57.8 (STAGE III)	89		17
STA. 277+95 TO STA. 278+40 (STAGE II)		124	
STA. 277+95 TO STA. 278+40 (STAGE III)		70	
STA. 276+98.6 TO STA. 278+40 (STAGE II)	164		31
STA. 276+98.6 TO STA. 278+40 (STAGE III)	94		18
TOTAL	946	972	179

78100100 RAISED REFLECTIVE PAVEMENT MARKER & 78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL		
LOCATION	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
	EACH	EACH
090-0071		
STA. 273+80 CENTERLINE	1	1
090-0072		
STA. 278+00 CENTERLINE	1	1
TOTAL	2	2

44004250 PAVED SHOULDER REMOVAL	
LOCATION	SO YD
SN 090-0071	
STA. 271+00 TO STA. 273+34 (STAGE II)	104
STA. 277+87 TO STA. 280+00 (STAGE II)	95
SN 090-0072	
STA. 271+00 TO STA. 272+41 (STAGE II)	63
STA. 279+09 TO STA. 282+00 (STAGE II)	130
STA. 279+40 TO STA. 282+00 RT. (STAGE III)	289
TOTAL	681

Z0000600 ADJUSTING FRAMES FOR INLETS	
LOCATION	ADJUSTING FRAMES FOR INLETS
	EACH
STA. 274+41 14' LT.	1
STA. 274+55 20' LT.	1
STA. 277+30 20' LT.	1
TOTAL	3

48203037 HOT-MIX ASPHALT SHOULDERS, 10"	
LOCATION	SO YD
SN 090-0071	
STA. 271+00 TO STA. 273+34 (STAGE II)	104
STA. 277+87 TO STA. 280+00 (STAGE II)	95
SN 090-0072	
STA. 271+00 TO STA. 272+41 (STAGE II)	63
STA. 279+09 TO STA. 282+00 (STAGE II)	130
STA. 279+40 TO STA. 282+00 RT. (STAGE III)	289
TOTAL	681

28100707 STONE DUMPED RIPRAP, CLASS A4	
LOCATION	STONE DUMPED RIPRAP, CLASS A4
	SO. YD.
STA. 276+30 TO STA. 276+85 (IN MEDIAN BETWEEN 090-0071 & 090-0072)	172
TOTAL	172



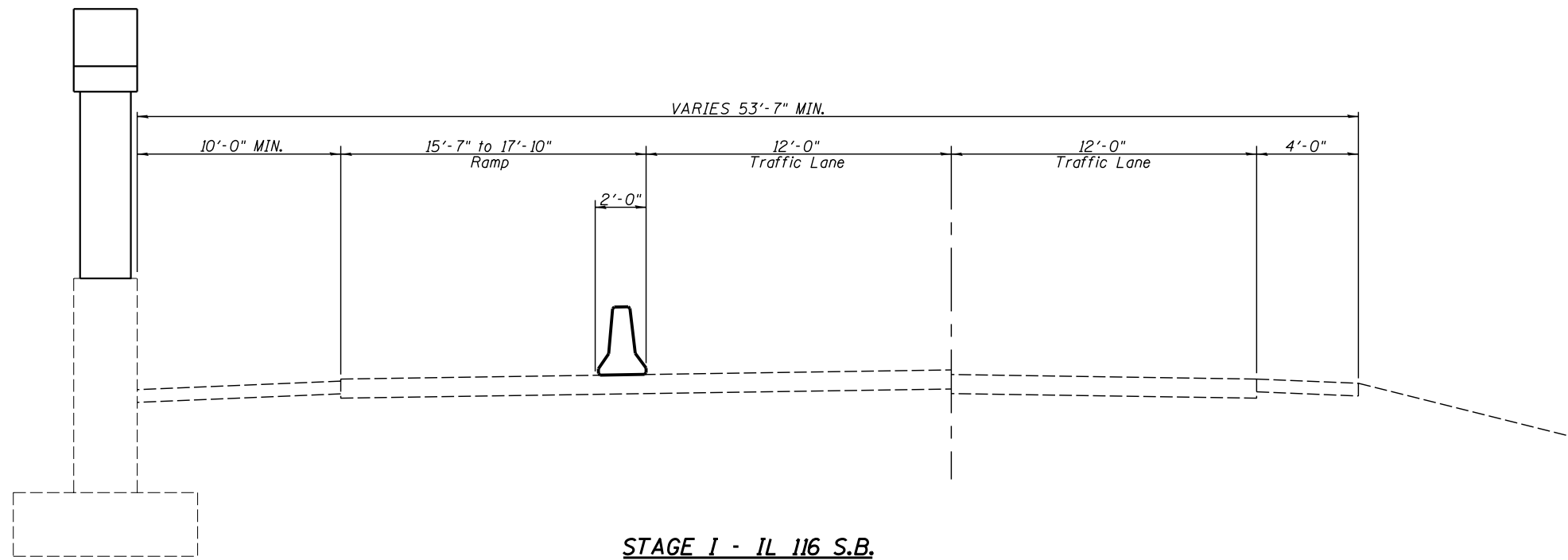
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	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

QUANTITY SCHEDULES

SCALE: SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	8
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68085	



STAGE 1 - IL 116 S.B.
(LOOKING NORTH)



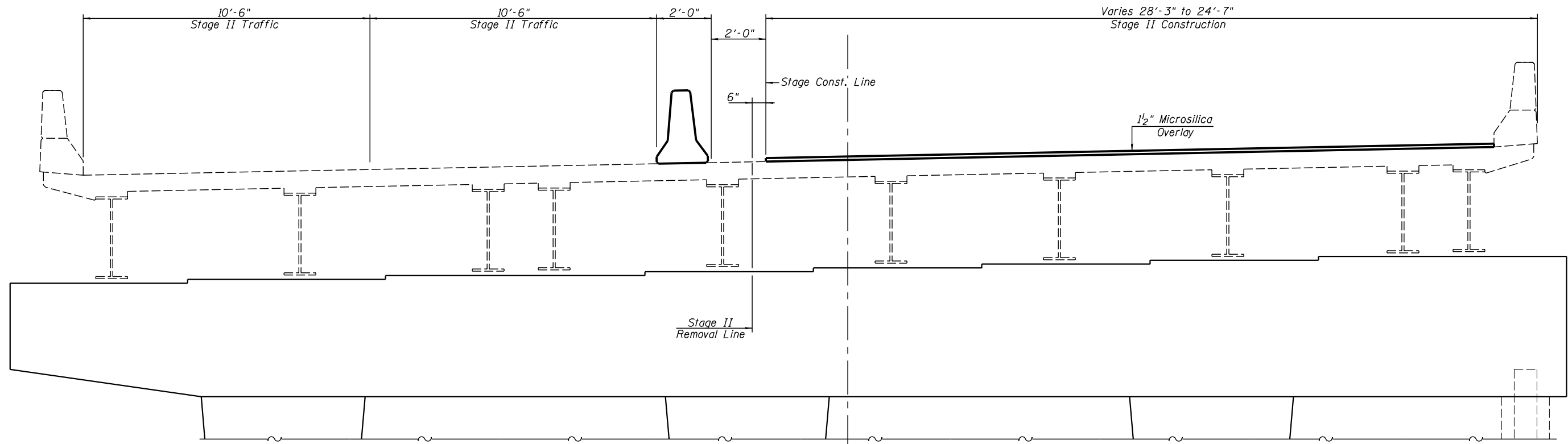
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PLOT DATE =	CHECKED - MAH	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

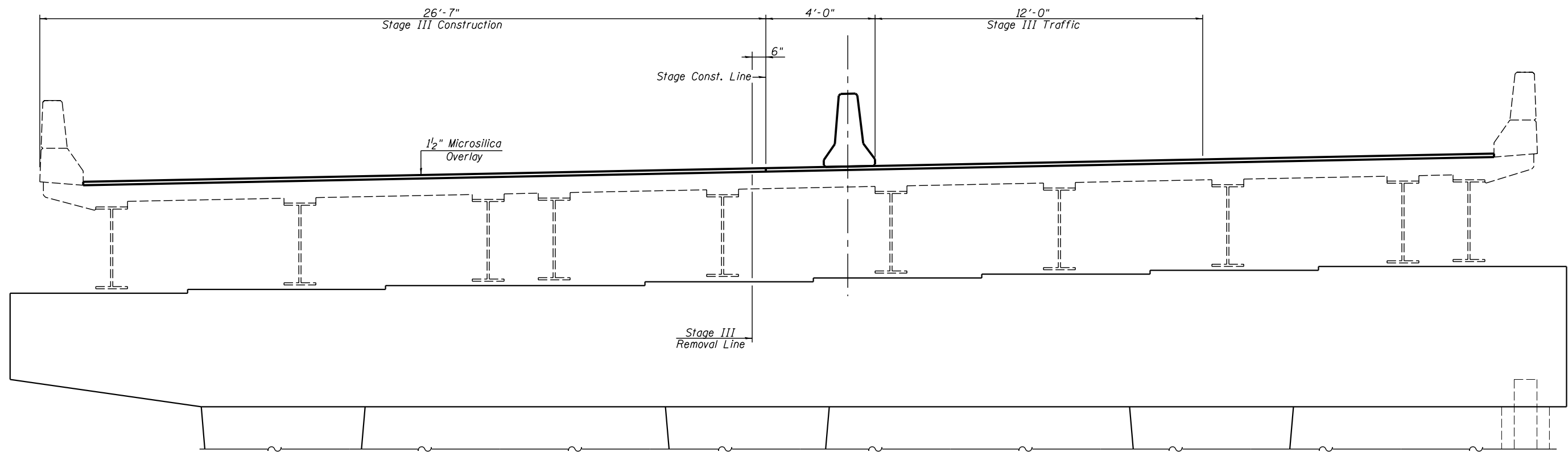
STAGING TYPICALS

SHEET NO. 3 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAZEWELL	65	9
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



STAGE II - US 24 E.B.
(E.B. Span 1 - Looking East)



STAGE III - US 24 E.B.
(E.B. Span 1 - Looking East)



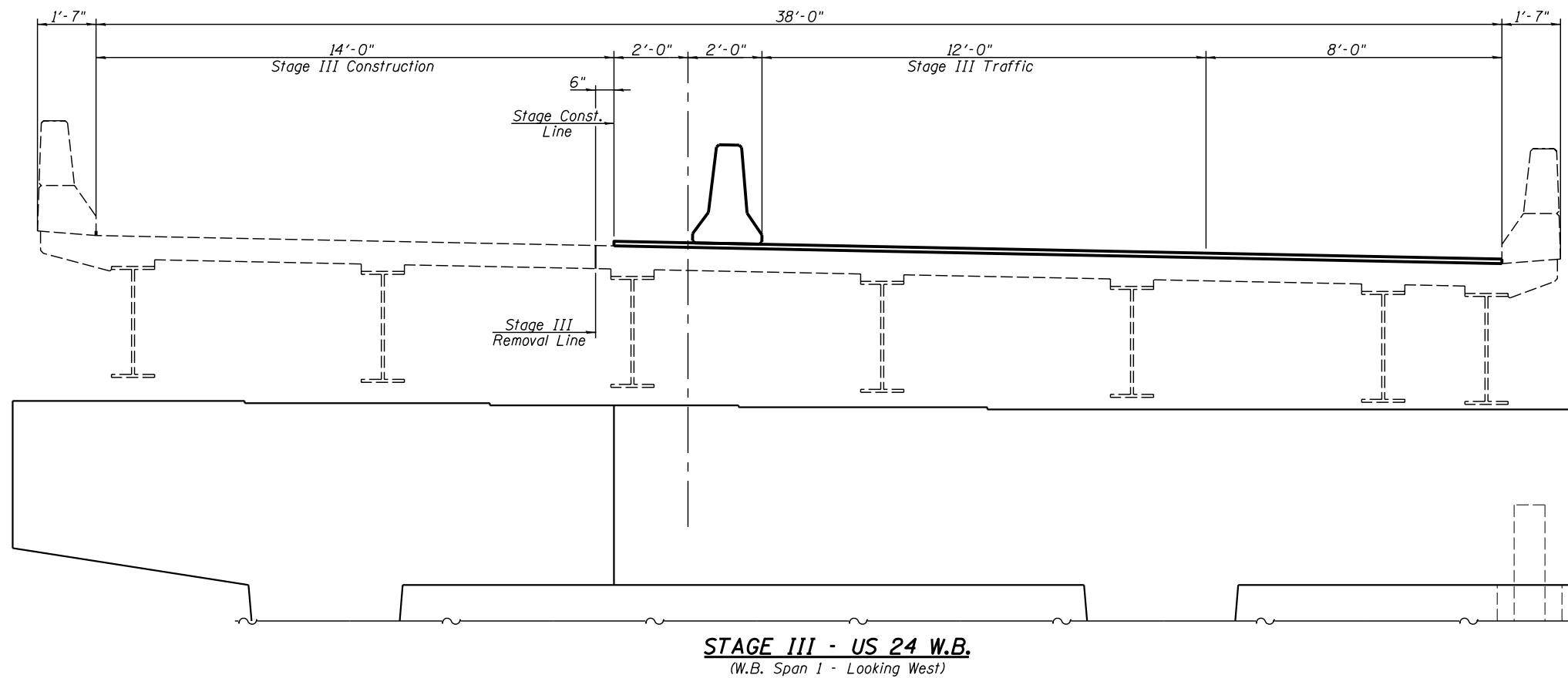
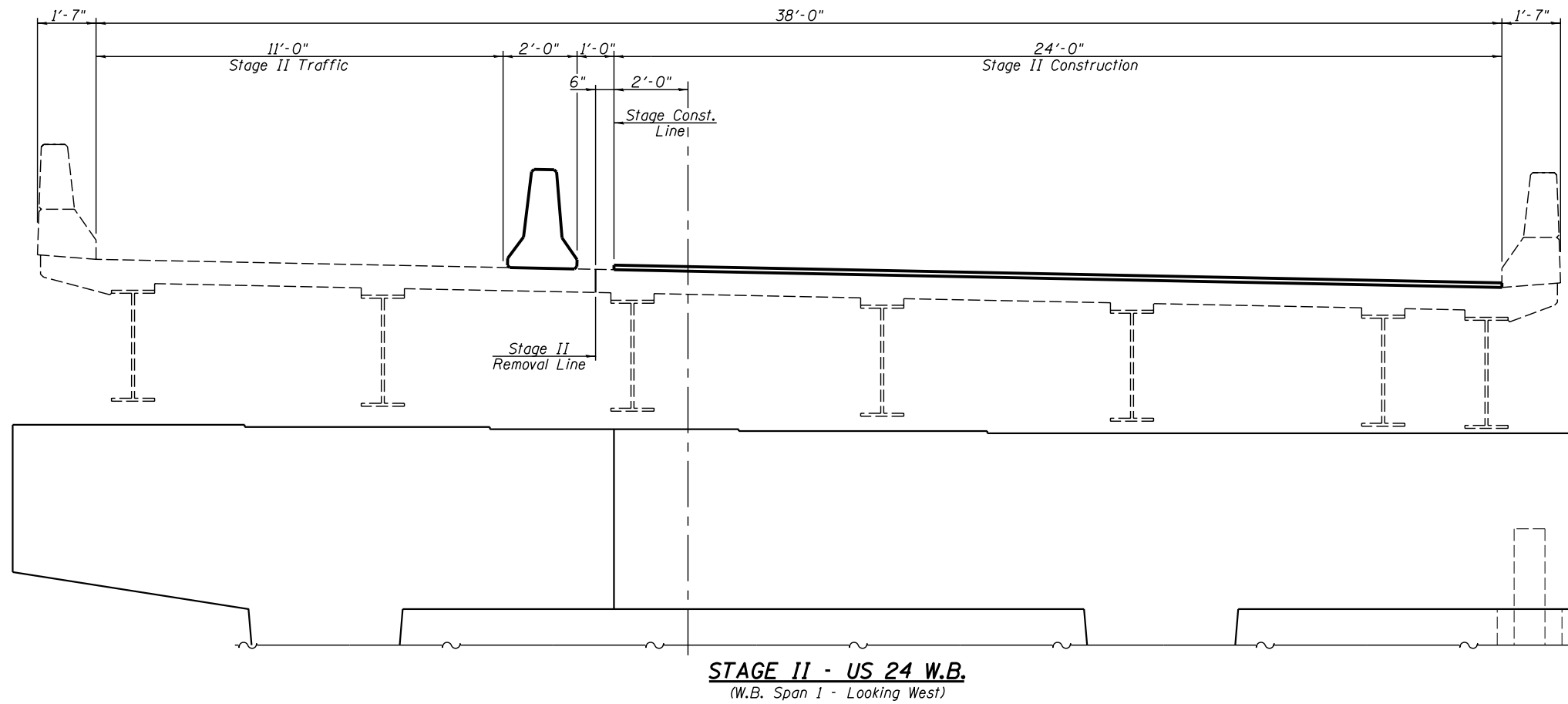
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PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING
STRUCTURE NO. 090-0071

SHEET NO. 1 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	10
CONTRACT NO. 68085				
ILLINOIS FED. AID PROJECT				



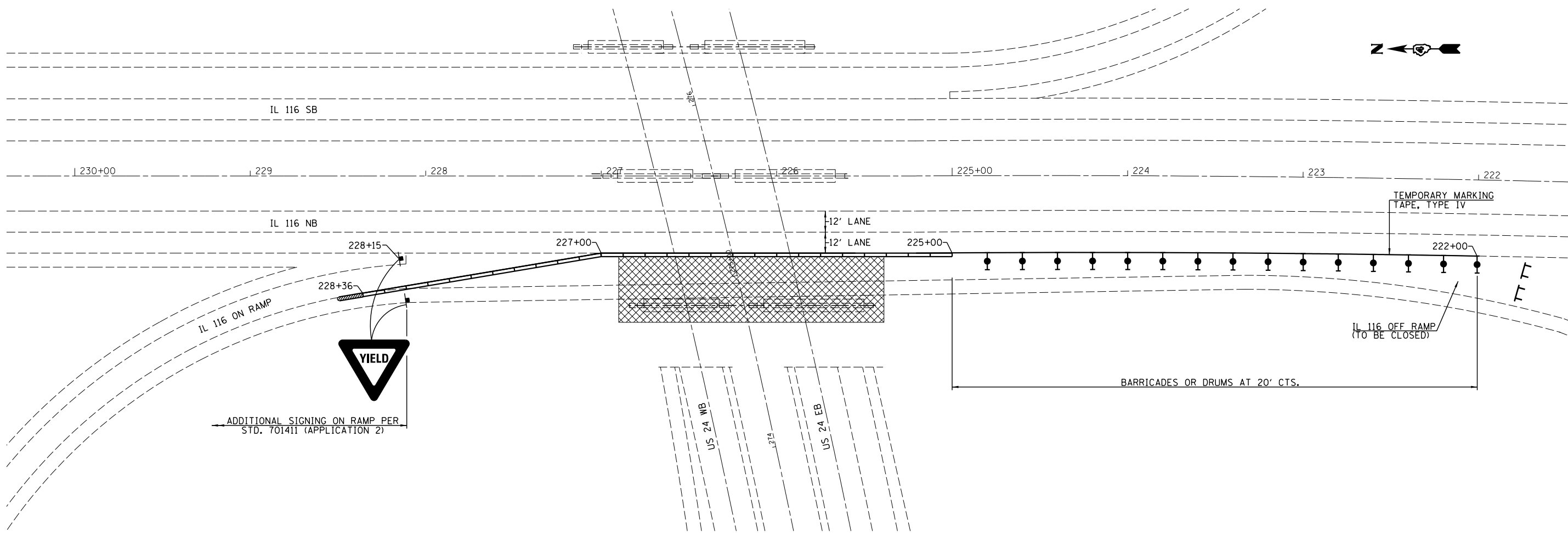
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PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - MAH	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGING
STRUCTURE NO. 090-0072**

SHEET NO. 2 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAZEWELL	65	11
CONTRACT NO. 68085				
<small>ILLINOIS FED. AID PROJECT</small>				



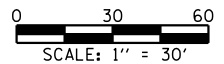
W20-1103(O)-48

THIS SIGN TO BE PLACED IN ADVANCE OF CONSTRUCTION AT STA. 237+00 OR AT THE DISCRETION OF THE ENGINEER

ADDITIONAL SIGNING ON RAMP PER STD. 701411 (APPLICATION 2)

STAGE I

- SYMBOLS**
- ARROW BOARD
 - WORK AREA
 - SIGN
 - DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
 - TYPE III BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
 - TEMPORARY CONCRETE BARRIER
 - MONODIRECTIONAL GUARDRAIL/BARRIER WALL REFLECTOR
 - IMPACT ATTENUATOR

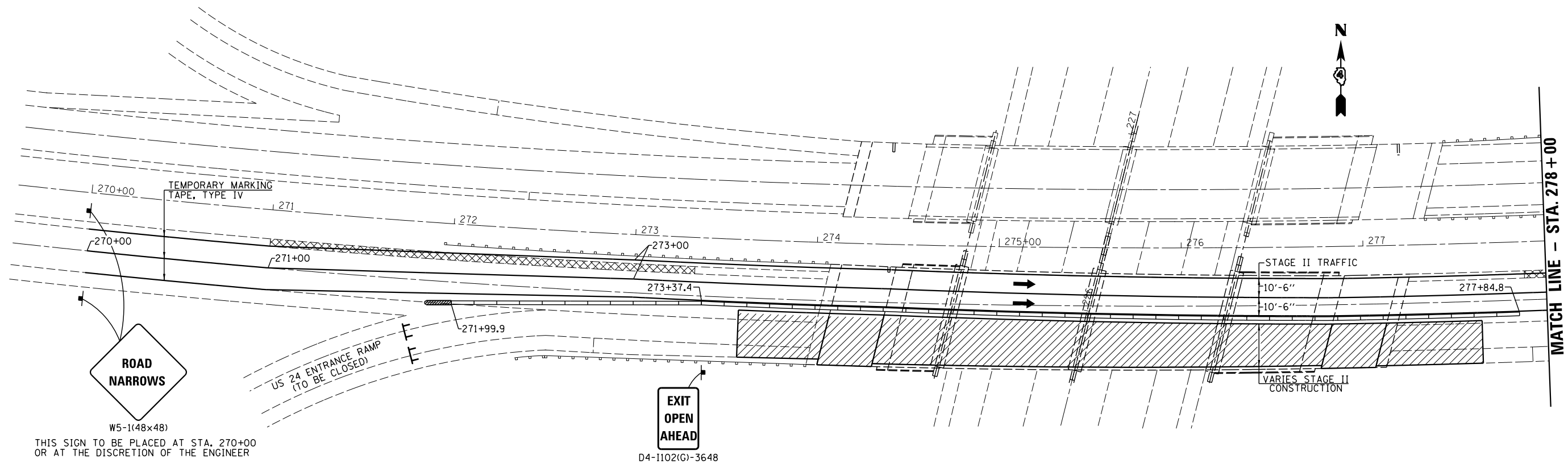


USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE I WB - IL 116	
SCALE: 1" = 30'	SHEET NO. 1 OF 5 SHEETS
STA.	TO STA.

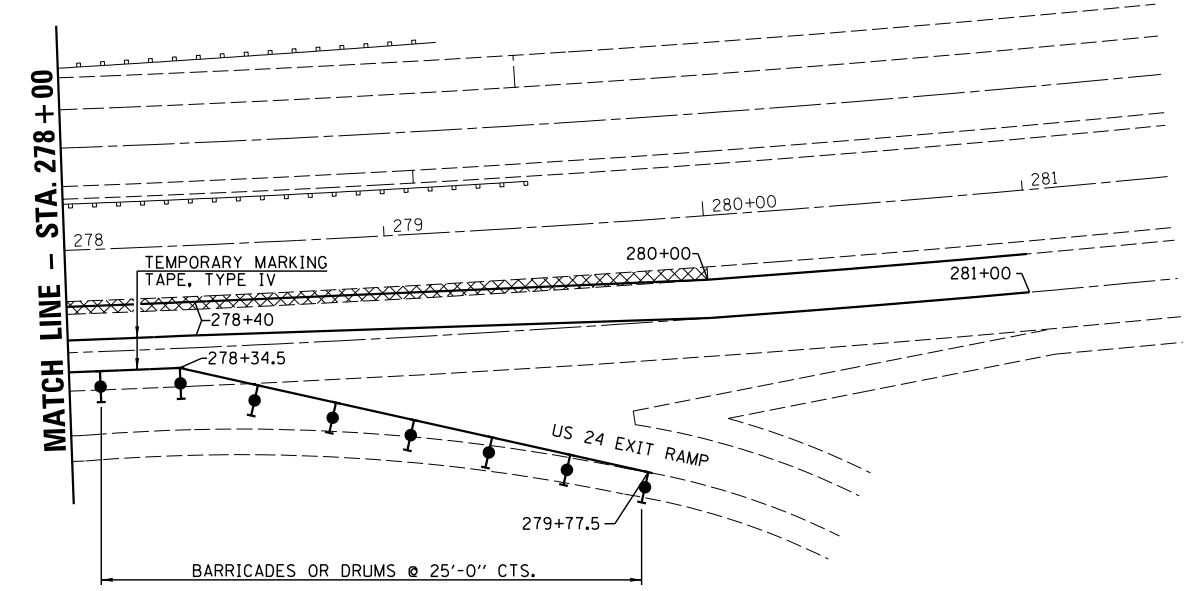
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAZEWELL	65	12
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



ROAD NARROWS
W5-1(48x48)
THIS SIGN TO BE PLACED AT STA. 270+00 OR AT THE DISCRETION OF THE ENGINEER

EXIT OPEN AHEAD
D4-1102(G)-3648

▨ - INDICATES HMA SHOULDER REMOVAL AND REPLACEMENT



THRU TRAFFIC MERGE LEFT
W4-1A(48x48)

THIS SIGN TO BE PLACED IN ADVANCE OF CONSTRUCTION AT STA. 254+00 OR AT THE DISCRETION OF THE ENGINEER

ROAD CONSTRUCTION AHEAD
W20-1103(O)-48

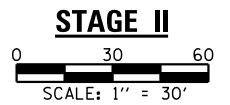
THIS SIGN TO BE PLACED IN ADVANCE OF CONSTRUCTION AT STA. 256+00 OR AT THE DISCRETION OF THE ENGINEER

WORK ZONE
SPEED LIMIT 45
PHOTO ENFORCED
SXXX FINE MINIMUM

THIS SIGN TO BE PLACED IN ADVANCE OF CONSTRUCTION AT STA. 260+00 OR AT THE DISCRETION OF THE ENGINEER.

W24L-1A(O)-48

THIS SIGN TO BE PLACED IN ADVANCE OF CONSTRUCTION AT STA. 261+00 OR AT THE DISCRETION OF THE ENGINEER



- SYMBOLS**
- ARROW BOARD
 - WORK AREA
 - SIGN
 - DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
 - TYPE III BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
 - TEMPORARY CONCRETE BARRIER
 - MONODIRECTIONAL GUARDRAIL/BARRIER WALL REFLECTOR
 - IMPACT ATTENUATOR

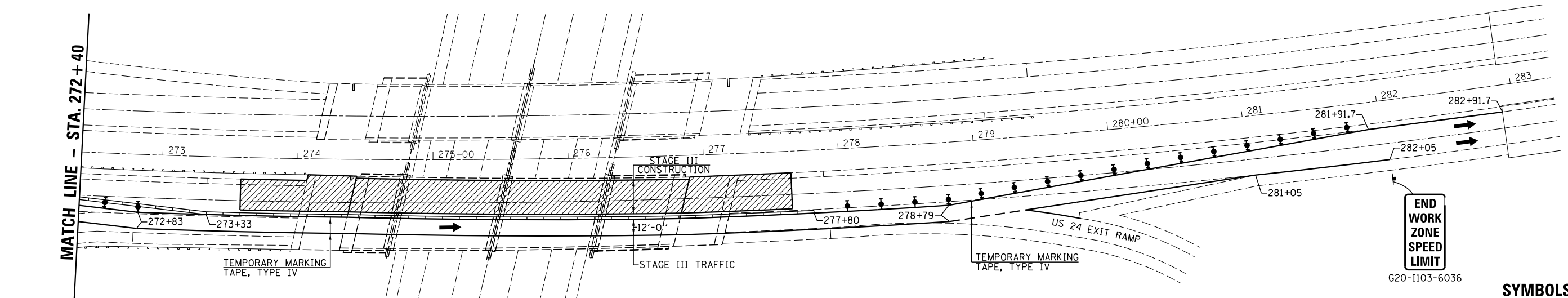
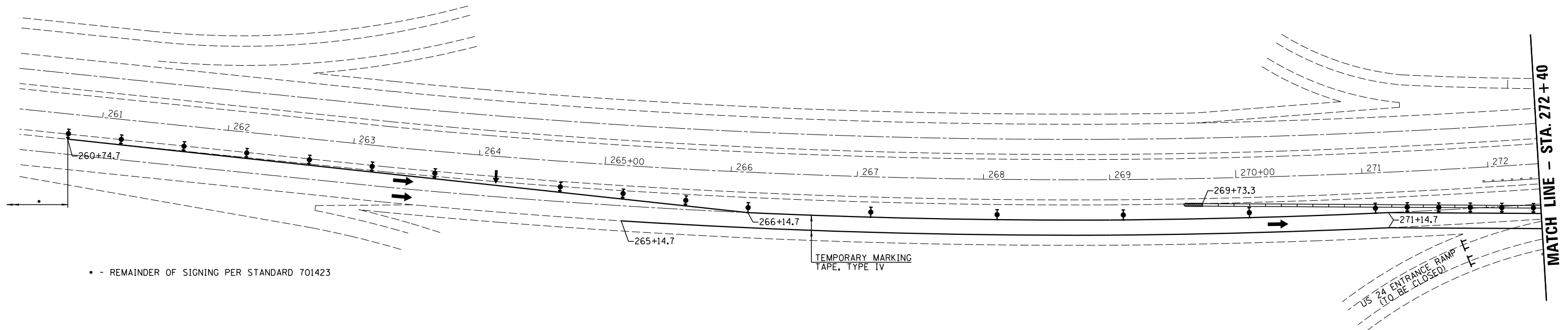


USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 090-0071 EB		317	[(102-HB)]JR	TAZEWELL	65	13
SCALE: 1" = 30'	SHEET NO. 2 OF 5 SHEETS	STA.	TO STA.		CONTRACT NO. 68D85	

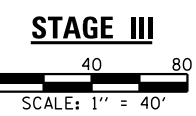
ILLINOIS FED. AID PROJECT	
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END WORK ZONE SPEED LIMIT
G20-1103-6036

SYMBOLS

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE III BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- MONODIRECTIONAL GUARDRAIL/BARRIER WALL REFLECTOR
- IMPACT ATTENUATOR

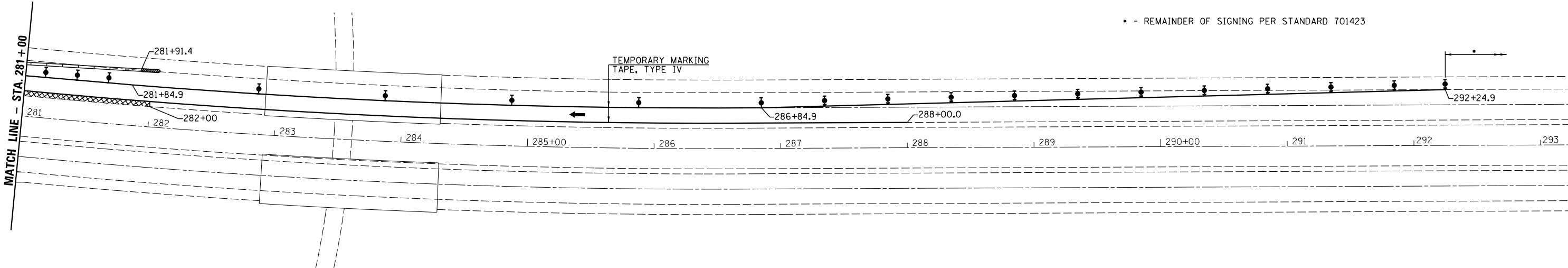
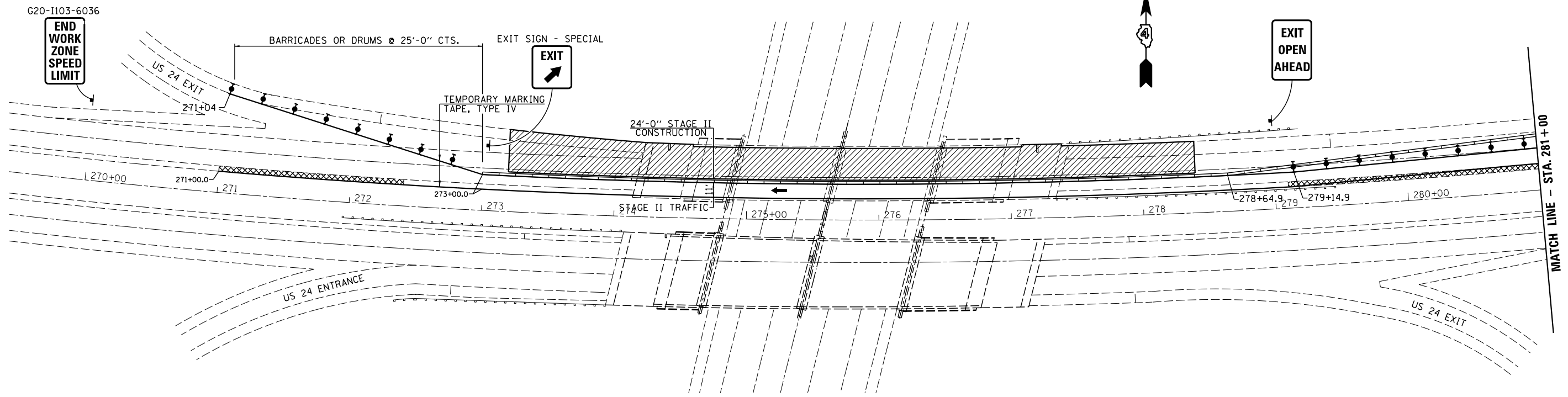


USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE III STRUCTURE NO. 090-0071 EB	
SCALE: 1" = 30'	SHEET NO. 3 OF 5 SHEETS
STA.	TO STA.









F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	14
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				

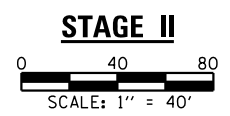


• - REMAINDER OF SIGNING PER STANDARD 701423

▨ - INDICATES HMA SHOULDER REMOVAL AND REPLACEMENT

SYMBOLS

-  ARROW BOARD
-  WORK AREA
-  SIGN
-  DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
-  TYPE III BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
-  TEMPORARY CONCRETE BARRIER
-  MONODIRECTIONAL GUARDRAIL/BARRIER WALL REFLECTOR
-  IMPACT ATTENUATOR



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

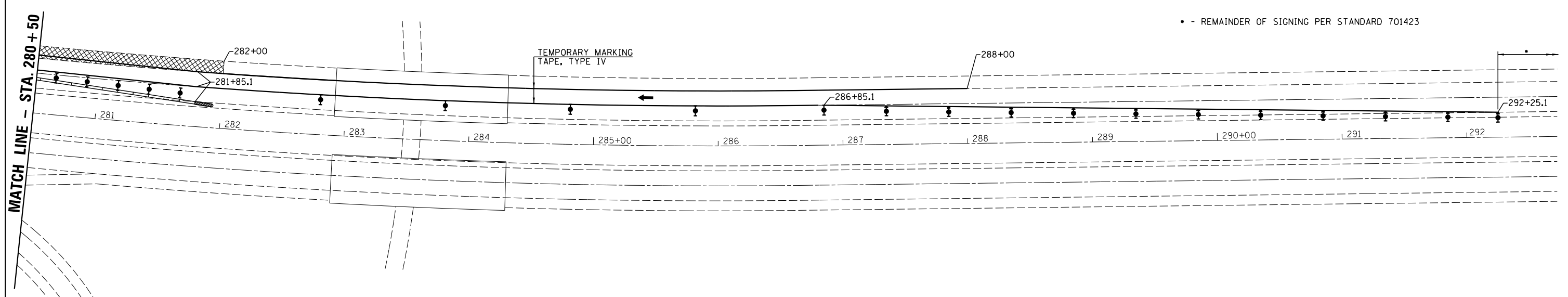
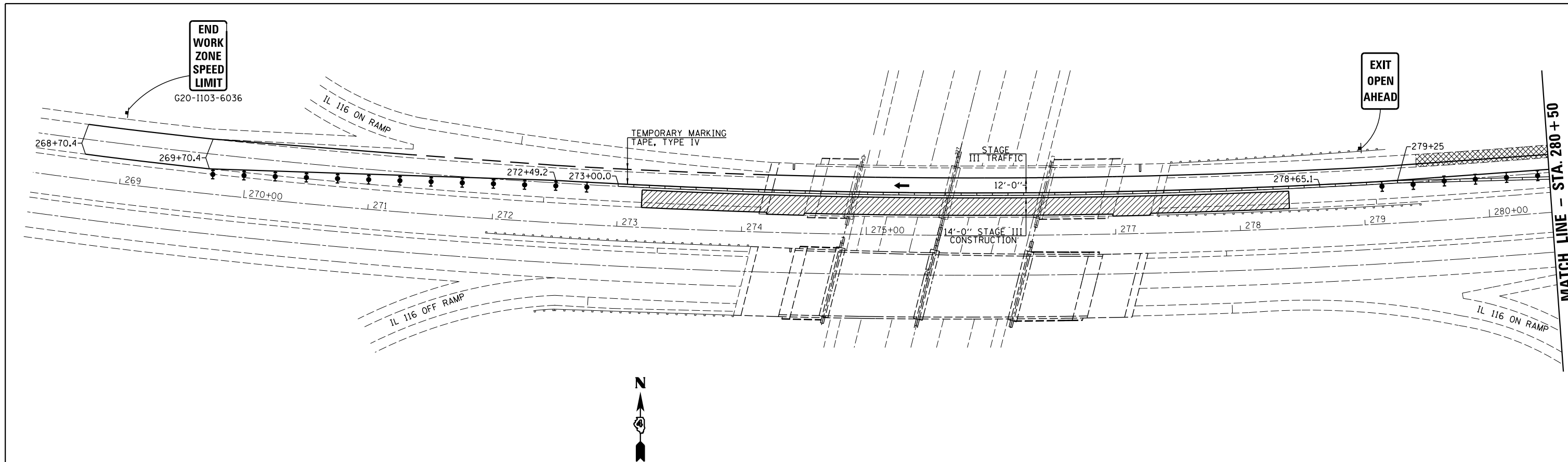
STAGE II
STRUCTURE NO. 090-0072 WB

SCALE: 1" = 40' SHEET NO. 4 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	15
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				











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PLOT DATE =	CHECKED -	REVISED -

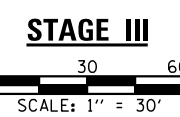


• - REMAINDER OF SIGNING PER STANDARD 701423

▨ - INDICATES HMA SHOULDER REMOVAL AND REPLACEMENT

SYMBOLS

-  ARROW BOARD
-  WORK AREA
-  SIGN
-  DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
-  TYPE III BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
-  TEMPORARY CONCRETE BARRIER
-  MONODIRECTIONAL GUARDRAIL/BARRIER WALL REFLECTOR
-  IMPACT ATTENUATOR



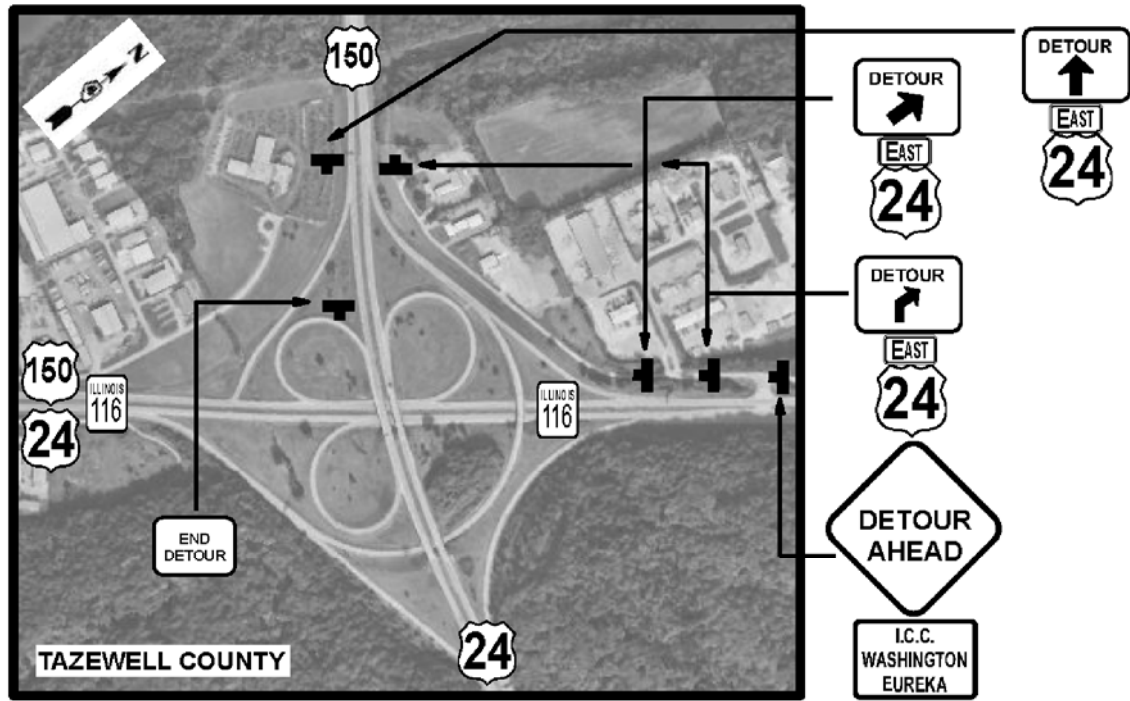
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PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE III
STRUCTURE NO. 090-0072 WB**

SCALE: 1" = 30' SHEET NO. 5 OF 5 SHEETS STA. TO STA.

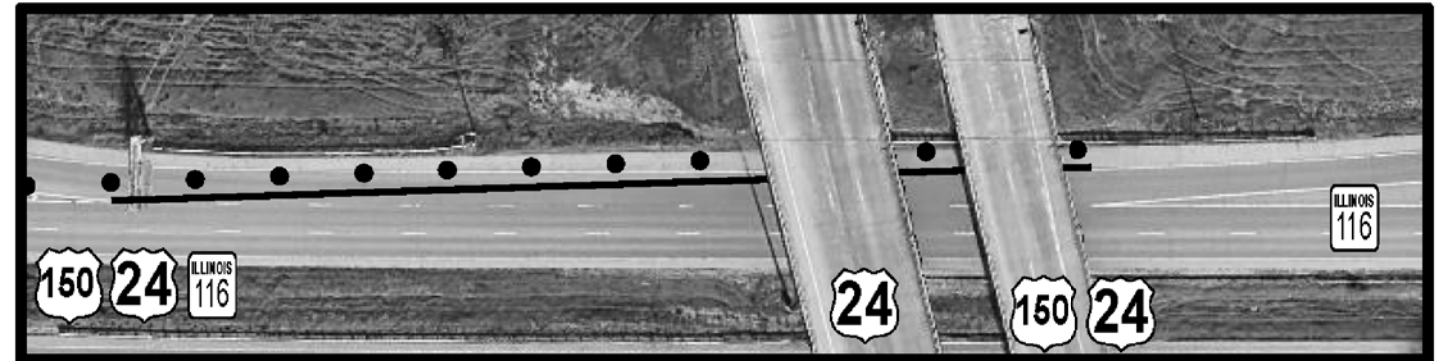
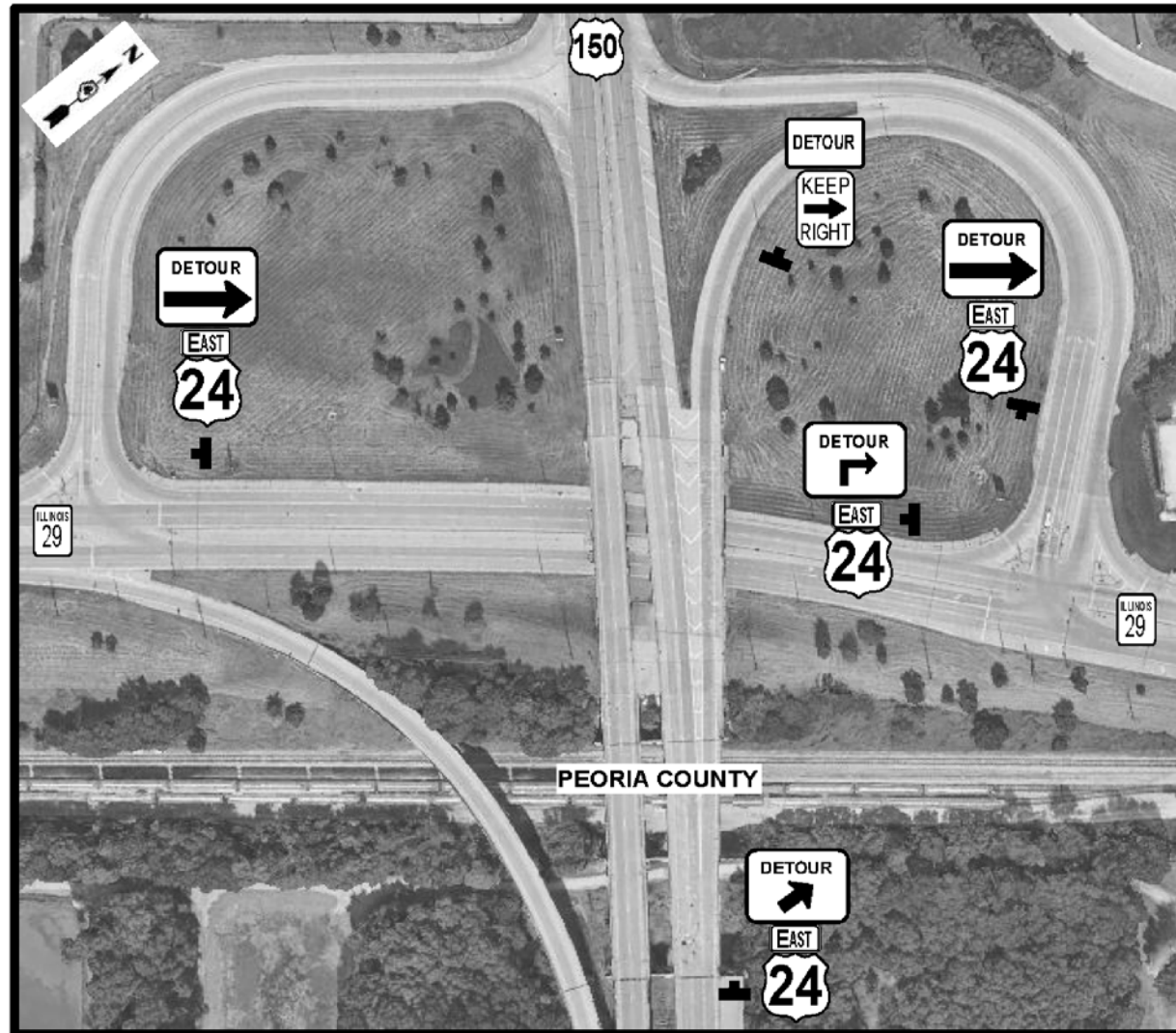
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	16
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



COVER EXISTING 1/4 MILE-ADD SIGN BLACK ON ORANGE.

SIGN TRUSSES

COVER TRUSS SIGN FACE

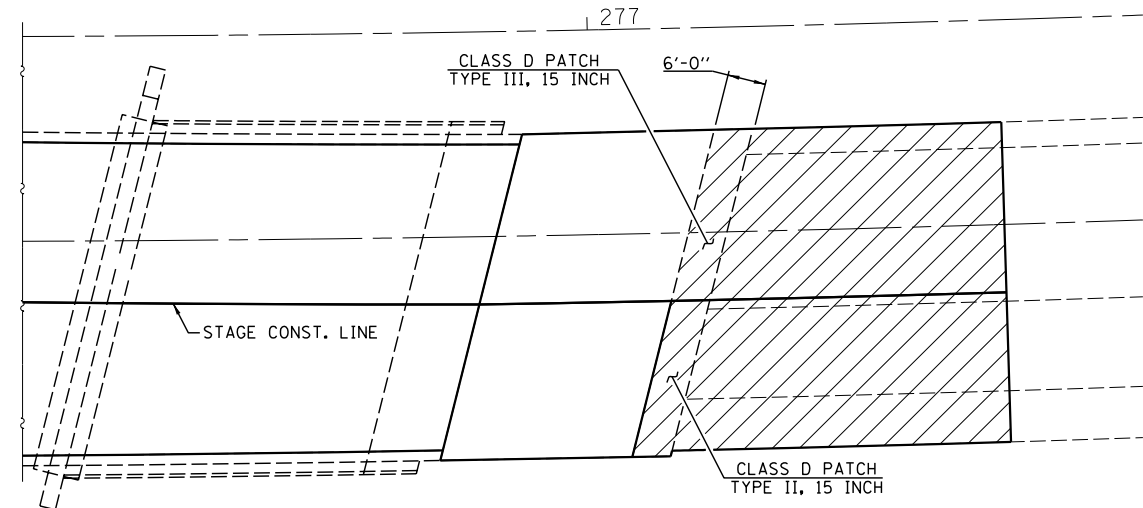
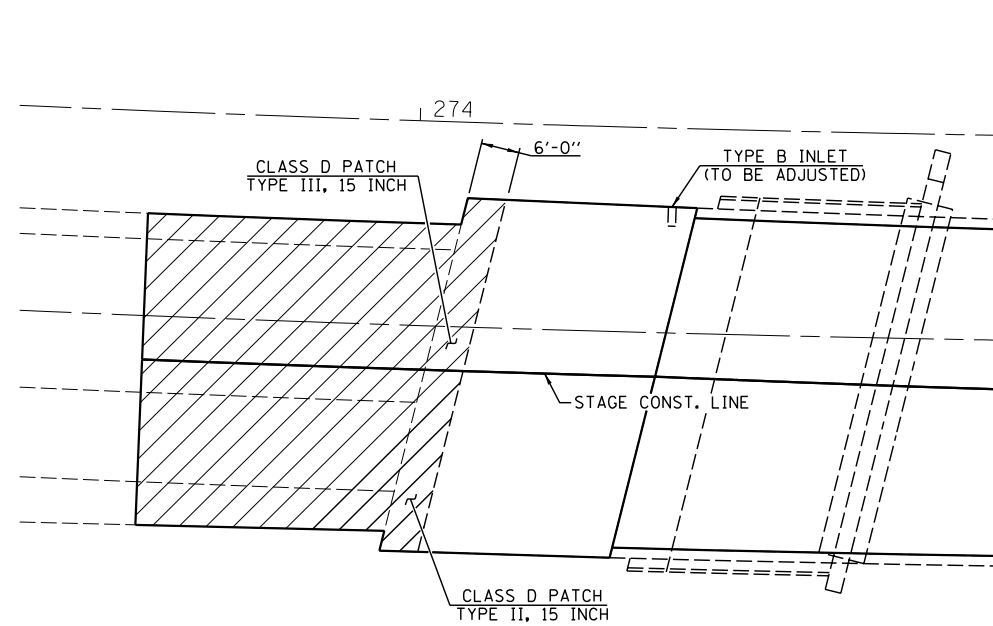


PLACE 4" WHITE-TYPE IV TAPE AS SHOWN AND LIT DEVICES AT 20' CTS. TWO (2) TYPE III'S WITH LIGHTS AND ONE "ROAD CLOSED" SIGN ACROSS CLOSED RAMP PAVEMENT.

ONE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE USED FOR SEVEN (7) DAYS PRIOR TO CLOSURE TO ADVANCE WARN AND BE UTILIZED THROUGHOUT THE DURATION OF THE RAMP CLOSURE.

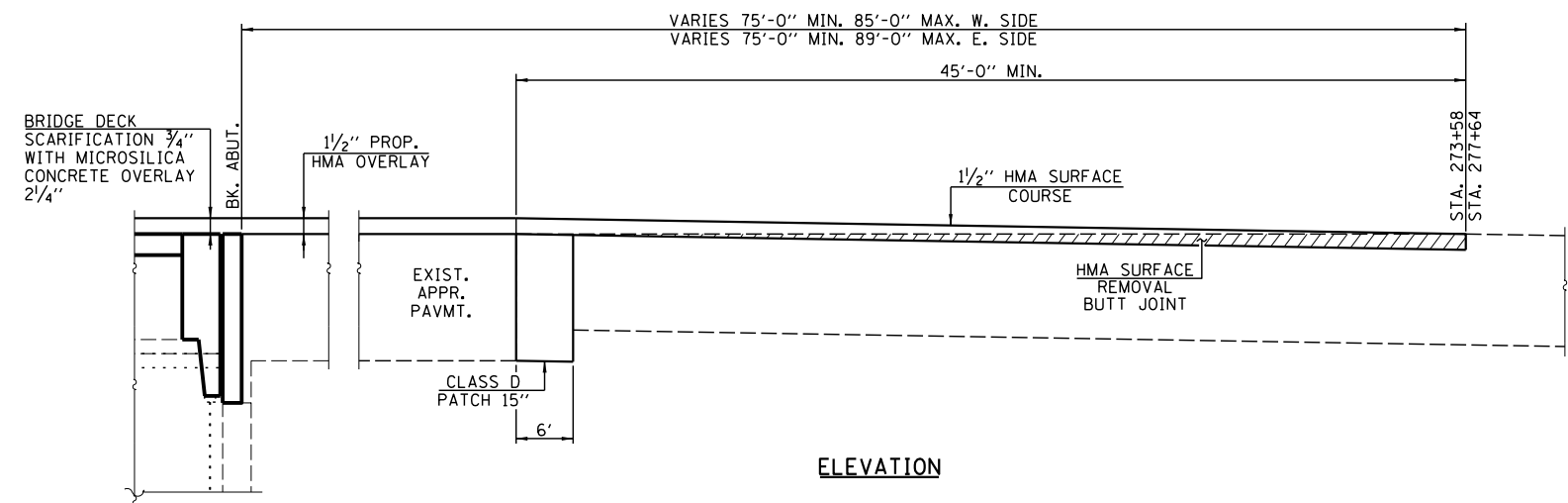
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PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	17
CONTRACT NO. 68085				
ILLINOIS FED. AID PROJECT				

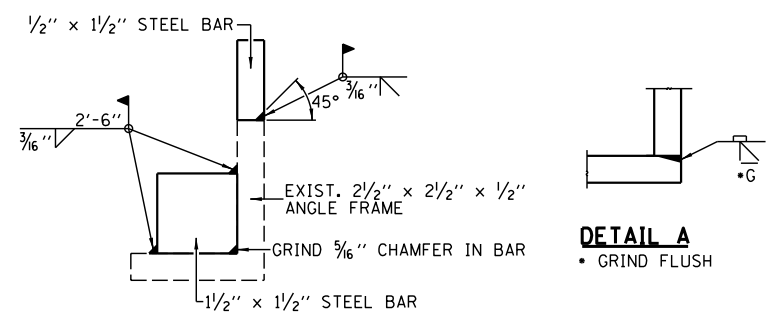


PLAN

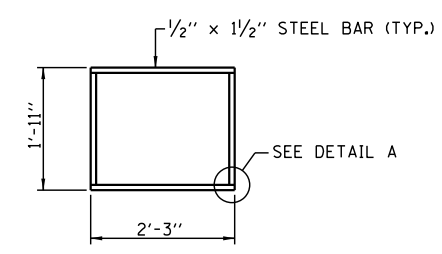
- INDICATES HMA BUTT JT. REMOVAL
 - HMA SURFACE REMOVAL LIMITS



ELEVATION



DETAIL A
 • GRIND FLUSH



TYPE B
 SHOULDER INLET WITH CURB ADJUSTMENT DETAIL

- NOTES:
1. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS OF THE EXISTING SHOULDER INLETS AND MAKE NECESSARY ADJUSTMENTS PRIOR TO CONSTRUCTION OF NEW ADJUSTING RECTANGLE OR ORDERING MATERIAL FOR ADJUSTING FRAMES FOR INLETS.
 2. ALL MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 610 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 3. COST OF ALL LABOR AND MATERIALS NECESSARY TO CLEAN ALL EXISTING INLETS, INSTALL ADJUSTMENT RINGS AND RE-INSTALL GRATES IS INCLUDED IN THE COST FOR ADJUSTING FRAMES FOR INLETS.



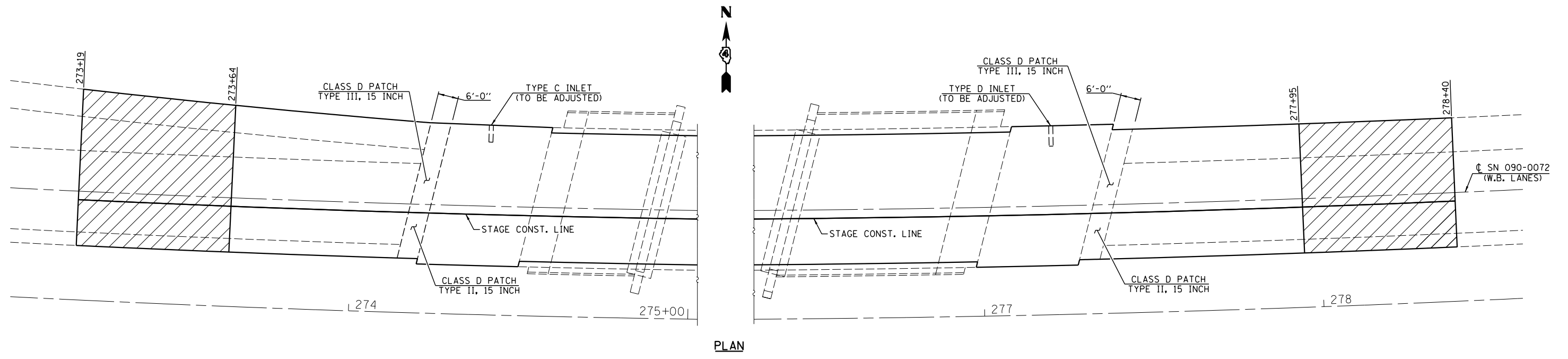
USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

RESURFACING & BUTT JOINT DETAILS
 STRUCTURE NO. 090-0071

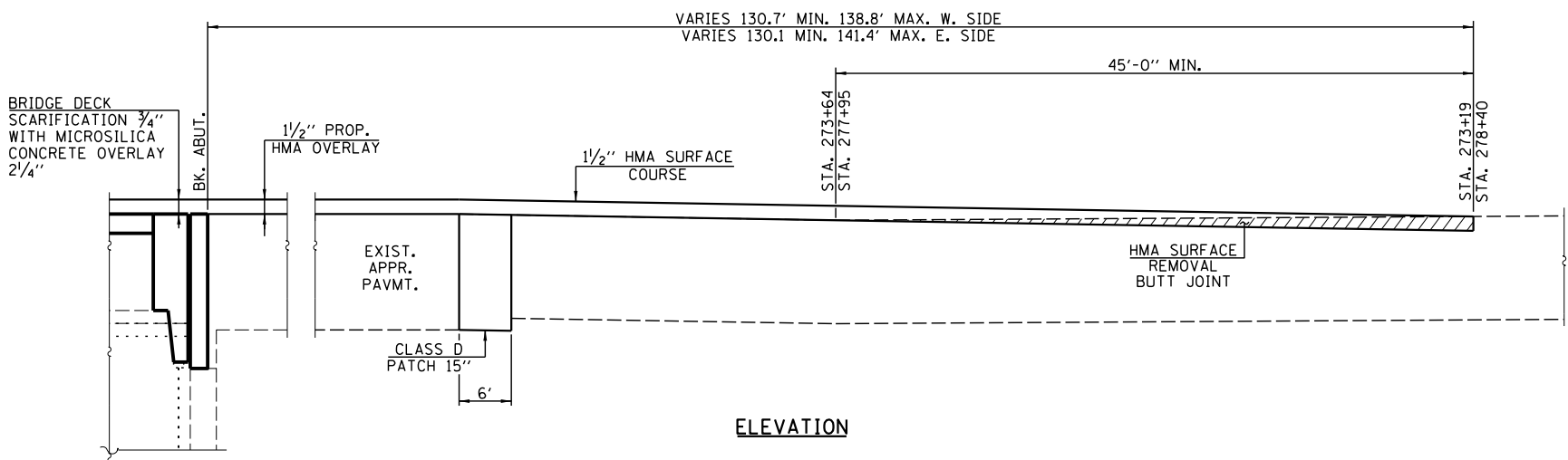
SCALE: VARIES SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAZEWELL	65	18
CONTRACT NO. 68085			ILLINOIS FED. AID PROJECT	

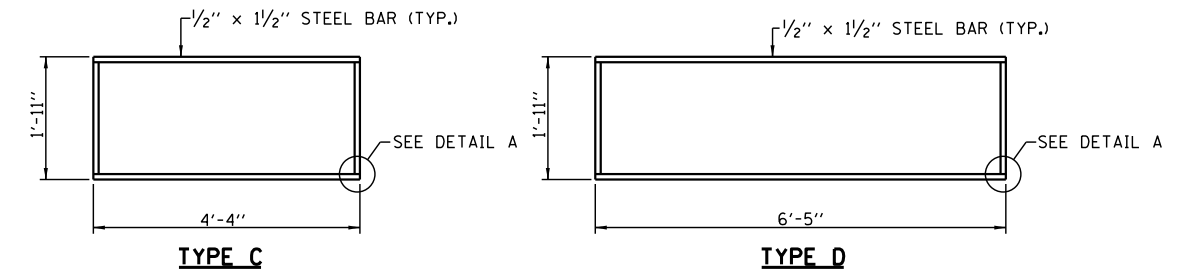
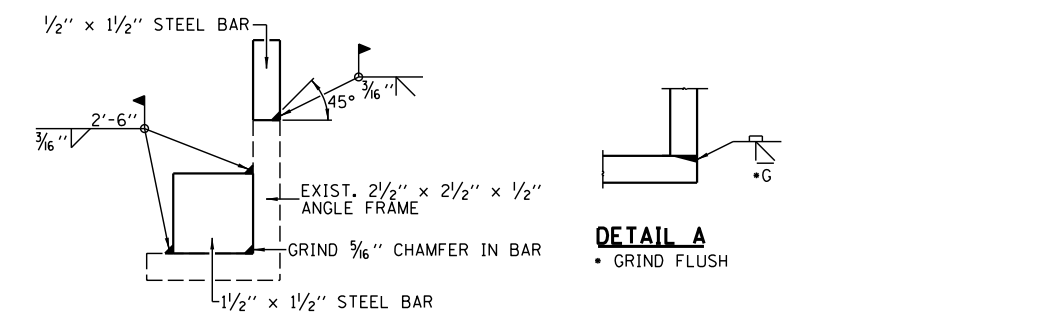


PLAN

- INDICATES HMA BUTT JT. REMOVAL
 - HMA SURFACE REMOVAL LIMITS



ELEVATION



SHOULDER INLET WITH CURB ADJUSTMENT DETAIL

- NOTES:
1. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS OF THE EXISTING SHOULDER INLETS AND MAKE NECESSARY ADJUSTMENTS PRIOR TO CONSTRUCTION OF NEW ADJUSTING RECTANGLE OR ORDERING MATERIAL FOR ADJUSTING FRAMES FOR INLETS.
 2. ALL MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 610 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 3. COST OF ALL LABOR AND MATERIALS NECESSARY TO CLEAN ALL EXISTING INLETS, INSTALL ADJUSTMENT RINGS AND RE-INSTALL GRATES IS INCLUDED IN THE COST FOR ADJUSTING FRAMES FOR INLETS.

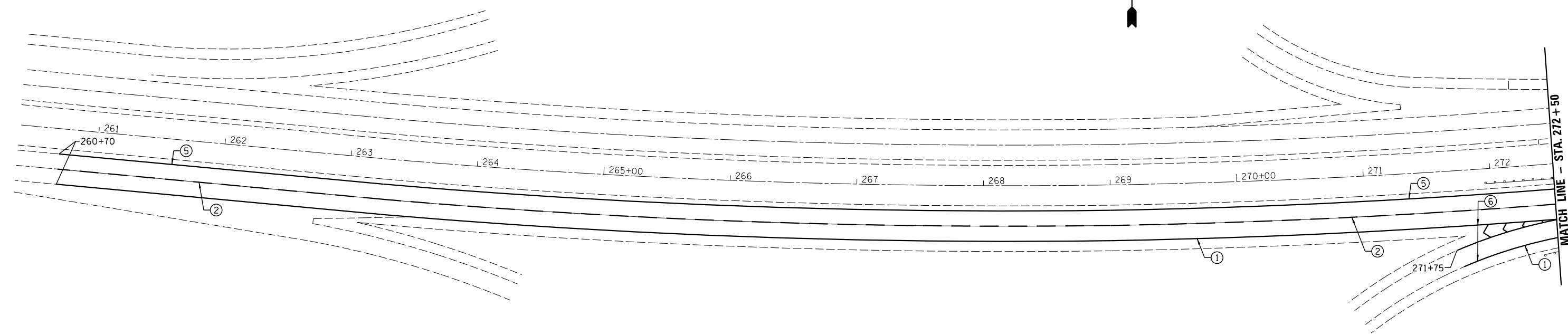


USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

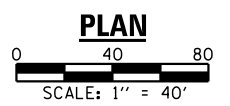
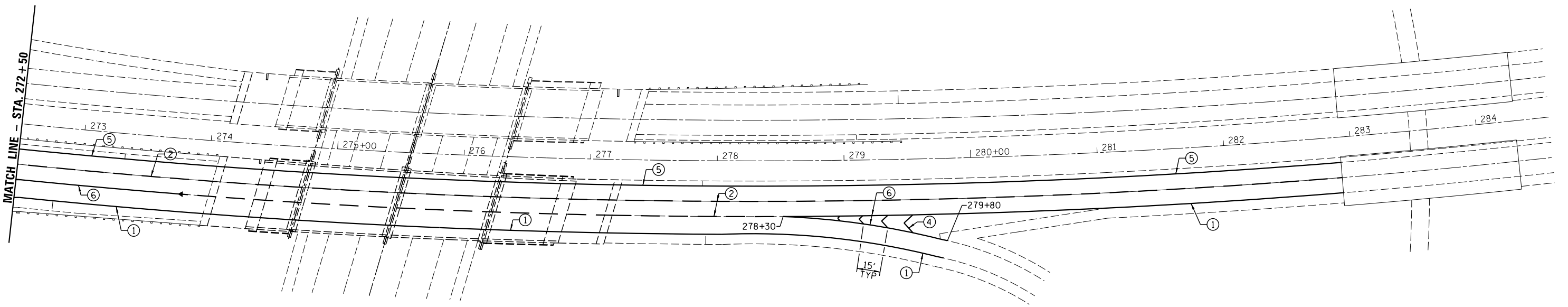
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RESURFACING & BUTT JOINT DETAILS
STRUCTURE NO. 090-0072

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAZEWELL	65	19
CONTRACT NO. 68085				
ILLINOIS FED. AID PROJECT				



LEGEND	
①	- MODIFIED URETHANE PAVEMENT MARKING LINE - 4" (WHITE)
②	- MODIFIED URETHANE PAVEMENT MARKING LINE - 4" (WHITE-SKIP DASH)
③	- MODIFIED URETHANE PAVEMENT MARKING LINE - 6" (WHITE SKIP DASH, 2' LINES 6' DASH)
④	- MODIFIED URETHANE PAVEMENT MARKING LINE - 12" (WHITE)
⑤	- MODIFIED URETHANE PAVEMENT MARKING LINE - 4" (YELLOW)
⑥	- MODIFIED URETHANE PAVEMENT MARKING LINE - 6" (WHITE)
◀	- RAISED REFLECTIVE PAVEMENT MARKER (1 WAY AMBER) - STA. 273+80 ☐ 090-0071 STA. 278+00 ☐ 090-0072



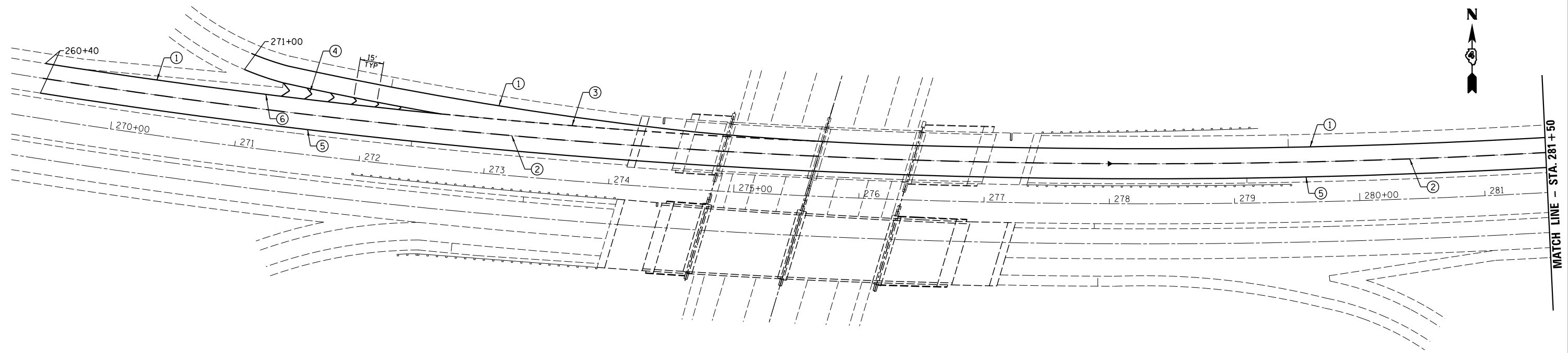
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	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

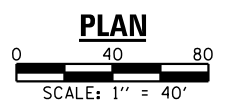
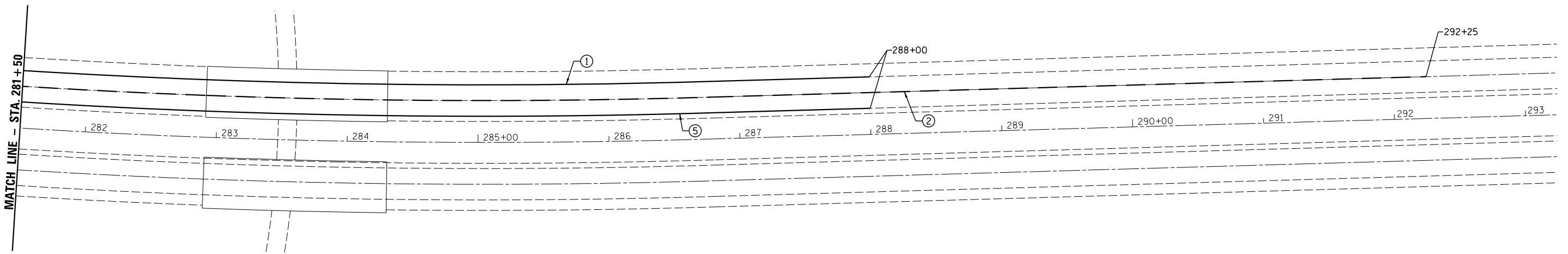
**PAVEMENT MARKING PLAN
STRUCTURE NO. 090-0071**

SCALE: 1" = 40' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JR	TAZEWELL	65	20
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



LEGEND	
①	- MODIFIED URETHANE PAVEMENT MARKING LINE - 4" (WHITE)
②	- MODIFIED URETHANE PAVEMENT MARKING LINE - 4" (WHITE-SKIP DASH)
③	- MODIFIED URETHANE PAVEMENT MARKING LINE - 6" (WHITE SKIP DASH, 2' LINES 6' DASH)
④	- MODIFIED URETHANE PAVEMENT MARKING LINE - 12" (WHITE)
⑤	- MODIFIED URETHANE PAVEMENT MARKING LINE - 4" (YELLOW)
⑥	- MODIFIED URETHANE PAVEMENT MARKING LINE - 6" (WHITE)
◀	- RAISED REFLECTIVE PAVEMENT MARKER (1 WAY AMBER) - STA. 273+80 @ 090-0071 STA. 278+00 @ 090-0072

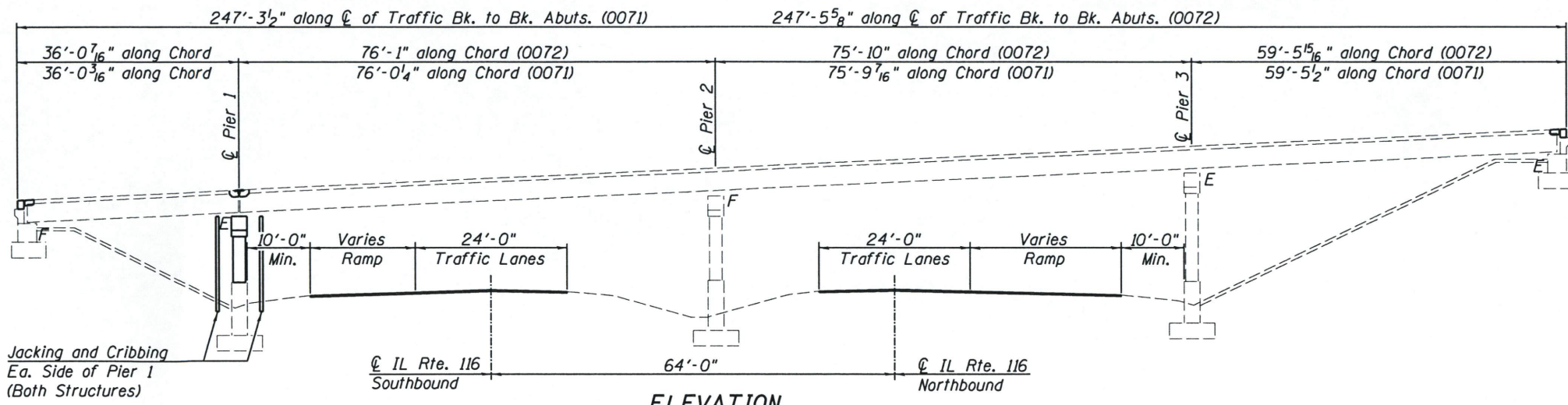


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PLOT DATE =	CHECKED -	REVISED -

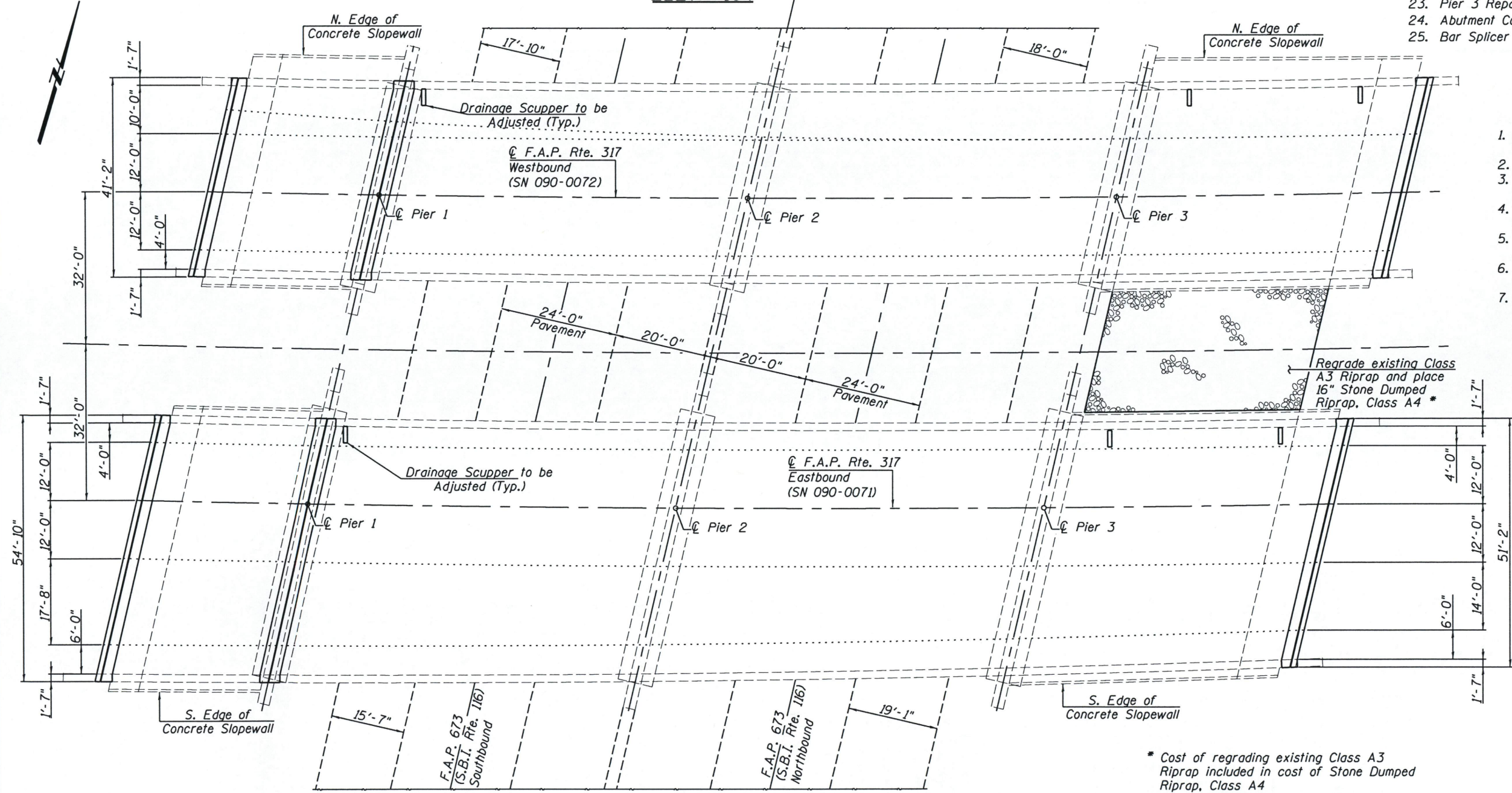
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING PLAN STRUCTURE NO. 090-0072		
SCALE: 1" = 40'	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	21
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



ELEVATION



PLAN

INDEX OF SHEETS

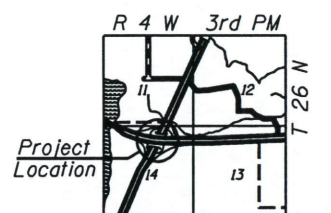
1. General Plan & Elevation
2. General Data
- 3-4. Stage Construction Details
5. Temporary Concrete Barrier for Stage Construction
- 6-7. Superstructure Concrete Removal - S.N. 090-0071
- 8-9. Superstructure Concrete Removal - S.N. 090-0072
- 10-11. Superstructure Details - S.N. 090-0071
- 12-13. Superstructure Details - S.N. 090-0072
14. Preformed Joint Strip Seal
- 15-16. Bearing Details
17. Concrete Removal and Repair Details Pier 1 - S.N. 090-0071
18. Concrete Removal and Repair Details Pier 1 - S.N. 090-0072
19. Pier 1 Details - S.N. 090-0071
20. Pier 1 Details - S.N. 090-0072
21. West Abutment Concrete Repair Details - S.N. 090-0071
22. East Abutment Concrete Repair Details - S.N. 090-0071
23. Pier 3 Repair Details - S.N. 090-0071
24. Abutment Concrete Repair Details - S.N. 090-0072
25. Bar Splicer Details

PROPOSED IMPROVEMENTS

1. Remove and replace Pier 1 columns and cap at each structure.
2. Replace bearings at Pier 1 at each structure.
3. Replace joints at both abutments and Pier 1 at each structure.
4. Scarify deck 3/4" and install 2 1/4" microsilica overlay at each structure.
5. Regrade existing ground and riprap at East slope and place riprap over regraded slope.
6. Grout below slopewall at East abutment on both structures.
7. Substructure concrete repairs.



Mark A. Henderson 8/16/18
Expiration Date: 11/30/2018



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.P. RTE. 317 (US 24)
OVER F.A.P. RTE. 673 (IL 116)
SECTION [(102-HB)I]BR
TAZEWELL COUNTY
STA. 275+67.17

* Cost of regrading existing Class A3 Riprap included in cost of Stone Dumped Riprap, Class A4



USER NAME *	DESIGNED - MAH	REVISIONS
PLOT SCALE *	CHECKED - KES	REVISIONS
PLOT DATE *	DRAWN - JRP	REVISIONS
	CHECKED - MAH	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

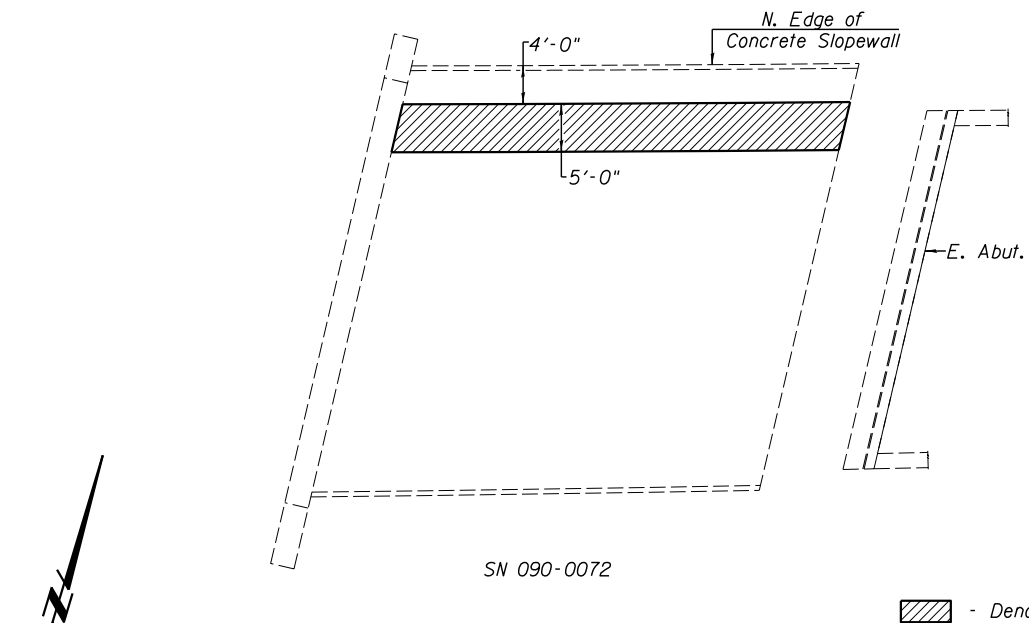
GENERAL PLAN & ELEVATION
STRUCTURE NO. 090-0071 & 090-0072

SHEET NO. 1 OF 25 SHEETS

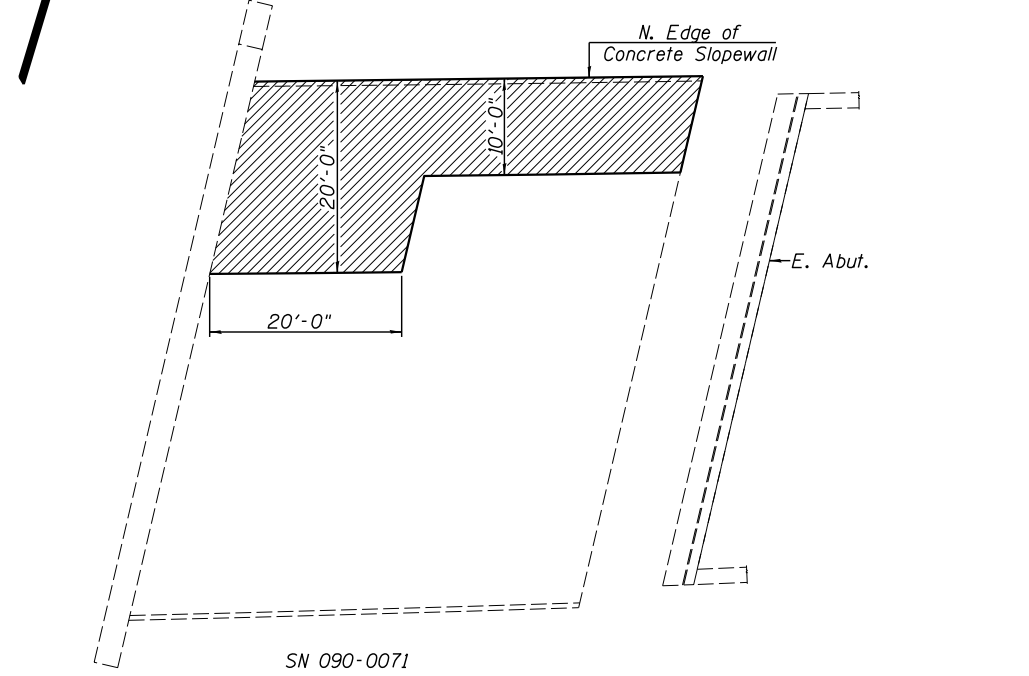
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317	[(102-HB)I]BR	TAZEWELL	65	22
CONTRACT NO. 68D85			ILLINOIS FED. AID PROJECT	

TOTAL BILL OF MATERIAL

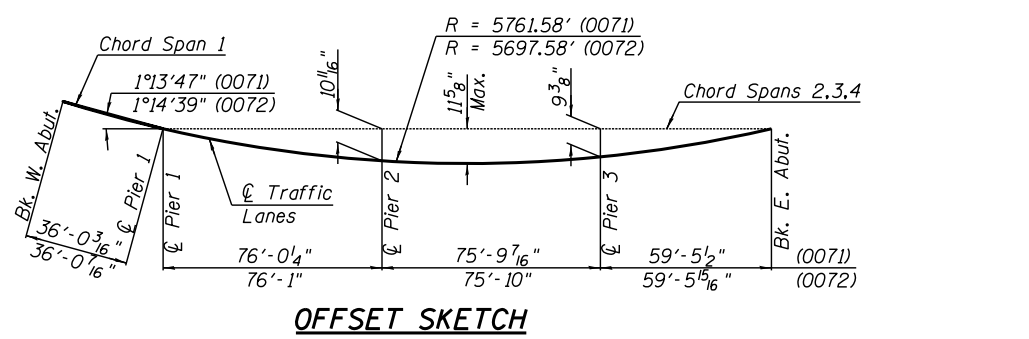
ITEM	UNIT	S.N. 090-0071		S.N. 090-0072		TOTAL
		SUPER	SUB	SUPER	SUB	
Stone Dumped Riprap, Class A4	Sq. Yd.		86		86	172
Concrete Removal	Cu. Yd.	23.3	30.6	17.2	21.2	92.3
Concrete Structures	Cu. Yd.		32.0		25.8	57.8
Concrete Superstructure	Cu. Yd.	25.6		19.0		44.6
Bridge Deck Grooving	Sq. Yd.	1333		980		2313
Reinforcement Bars, Epoxy Coated	Pound	3180	5060	2500	3430	14170
Bar Splicers	Each	40		40		80
Mechanical Splicers	Each		30		24	54
Preformed Joint Strip Seal	Foot	162		125		287
Elastomeric Bearing Assembly, Type I	Each	20		14		34
Anchor Bolts, 1"	Each	40		28		68
Drainage Scuppers To Be Adjusted	Each	3		3		6
Protective Coat	Sq. Yd.	260		231		491
Furnishing and Erecting Structural Steel	Pound	634		531		1165
Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq. Ft.		288		122	410
Structural Repair of Concrete (Depth Greater than 5")	Sq. Ft.				16	16
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	1341		999		2340
Bridge Deck Scarification, 3/4"	Sq. Yd.	1341		999		2340
Cleaning Bridge Seats	Sq. Ft.		220		171	391
Removal of Existing Bearings	Each	20		14		34
Slopewall Slurry Pumping	Cu. Yd.		58		11	69
Jacking and Cribbing	Each		2		2	4
Temporary Shoring and Cribbing	Each	1				1



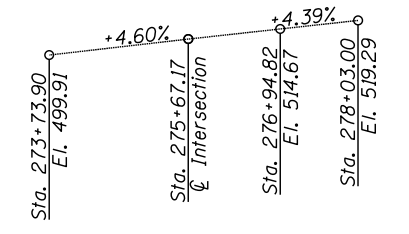
- Denotes areas of Slopewall Slurry Pumping



SLOPEWALL GROUTING DETAIL

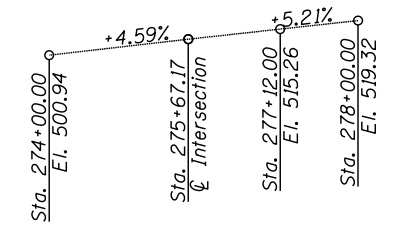


OFFSET SKETCH



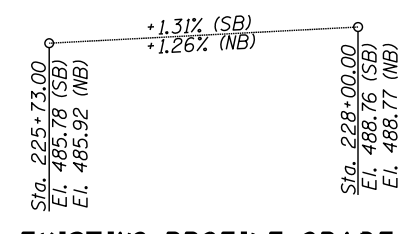
EXISTING PROFILE GRADE

F.A.P. 317 (US 24)
(Centerline of EB Lanes)



EXISTING PROFILE GRADE

F.A.P. 317 (US 24)
(Centerline of WB Lanes)



EXISTING PROFILE GRADE

F.A.P. 673 (Rte. 116)

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)
f'c = 3500 psi (Concrete)
fy = 60,000 psi (Reinforcement)

GENERAL NOTES

- All structural steel shall be AASHTO M270 Grade 50.
- Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60.
- Reinforcement bars designated (E) shall be epoxy coated.
- The layout of the riprap may be varied to suit ground conditions in the field as determined by the Engineer.
- Prior to pouring the new concrete, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
- Plan dimensions and details relative to existing plans 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.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- The existing abutment seats shall be cleaned according to the special provision for "Cleaning Bridge Seats".
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures."
- Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.
- Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- The Contractor shall be responsible for restoring to their original condition the drainage ditches, pavement, and slope walls disturbed by jacking and cribbing operations. Cost included with Jacking and Cribbing.



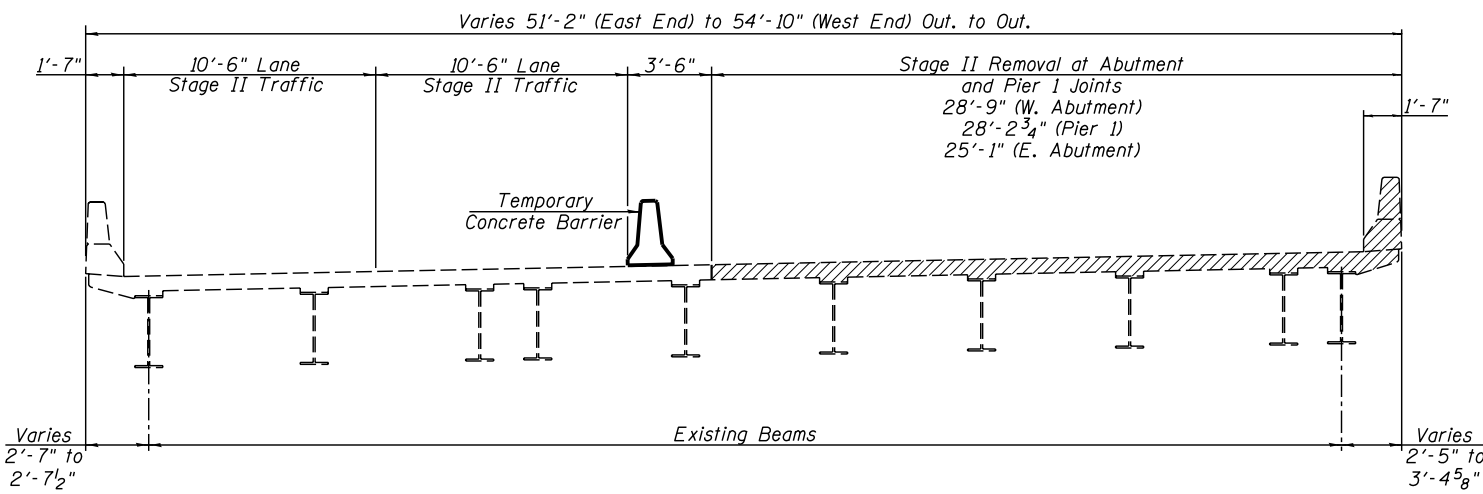
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PLOT SCALE =	CHECKED - KES	REVISED -
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	CHECKED - MAH	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

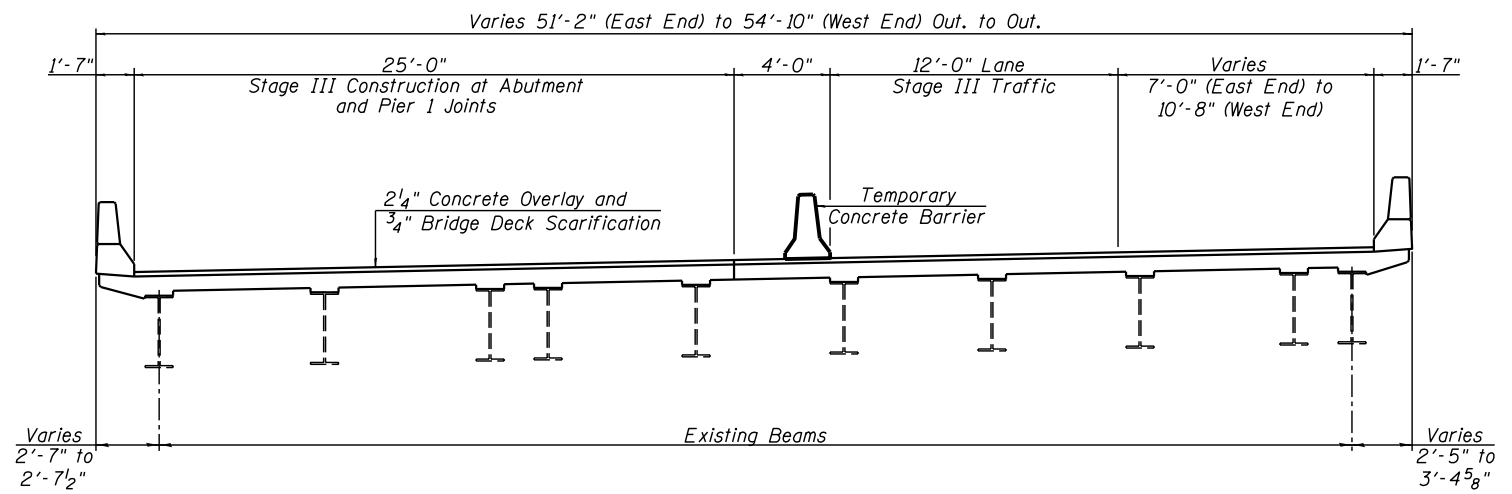
**GENERAL DATA
STRUCTURE NO. 090-0071 & 090-0072**

SHEET NO. 2 OF 25 SHEETS

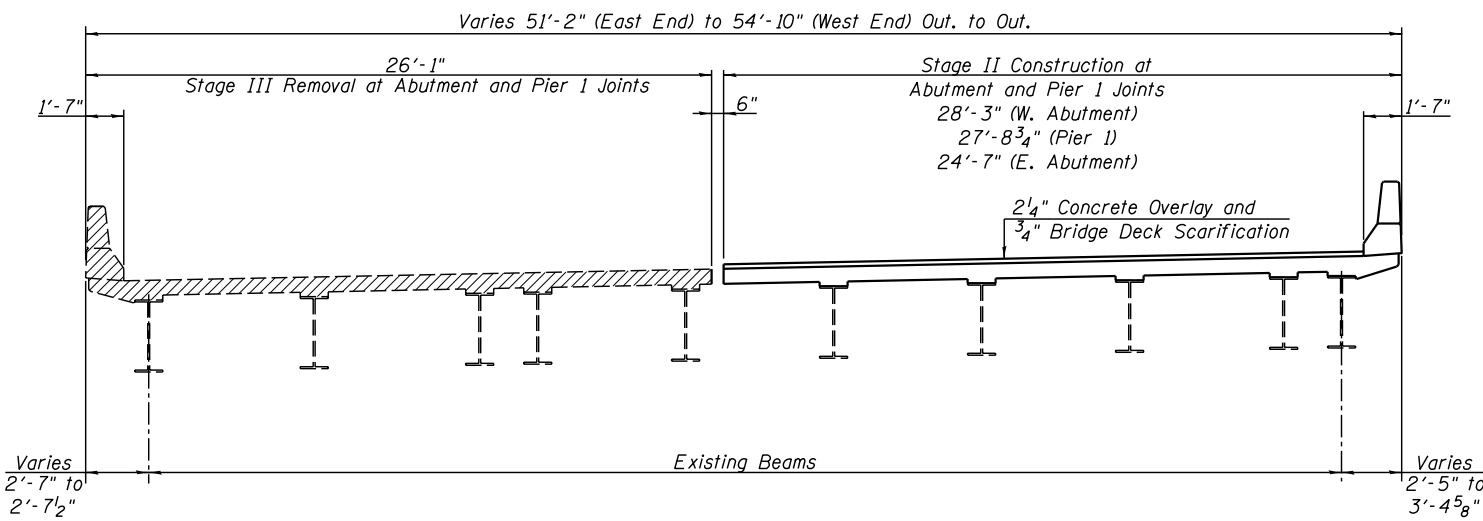
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]BR	TAZEWELL	65	23
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



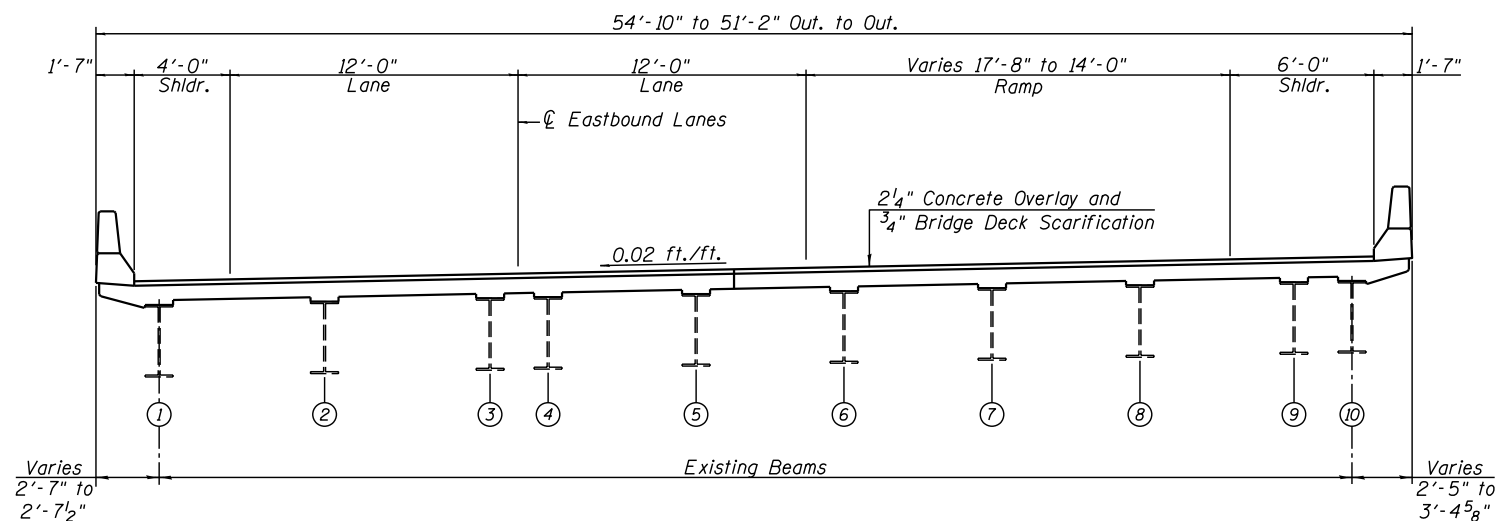
STAGE II REMOVAL & STAGE II TRAFFIC
(Eastbound - Looking East)



STAGE III CONSTRUCTION & STAGE III TRAFFIC
(Eastbound - Looking East)



STAGE II CONSTRUCTION & STAGE III REMOVAL
(Eastbound - Looking East)



PROPOSED CROSS SECTION
(Eastbound - Looking East)

- Concrete Removal at Abutment Joints and Pier 1 Joint



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PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - MAH	REVISED -

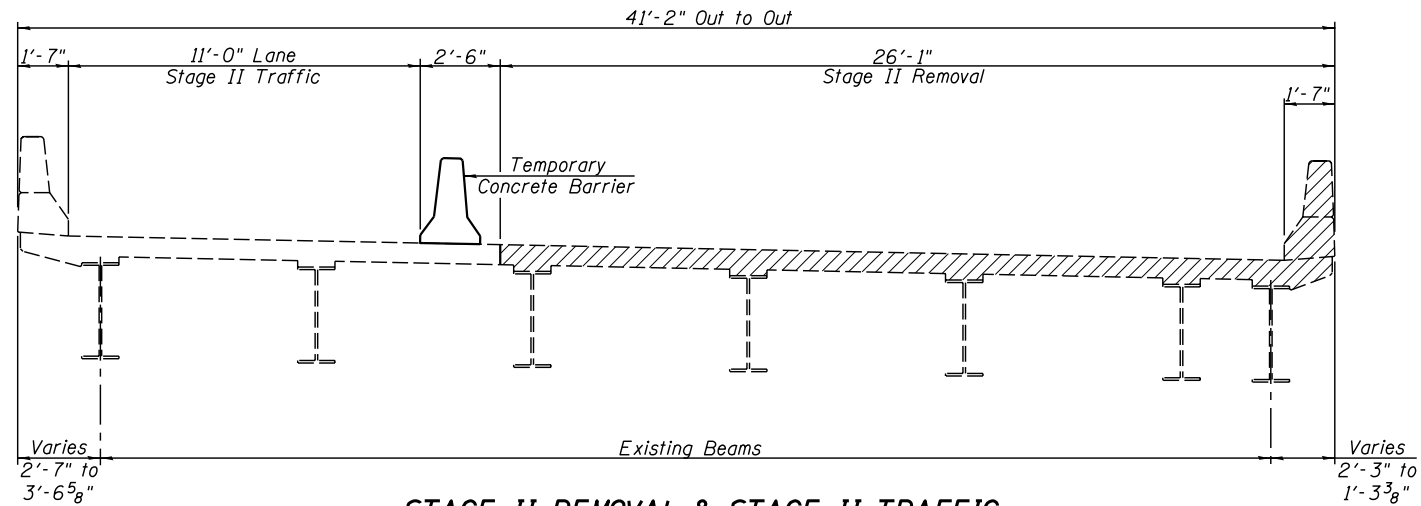
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING
STRUCTURE NO. 090-0071

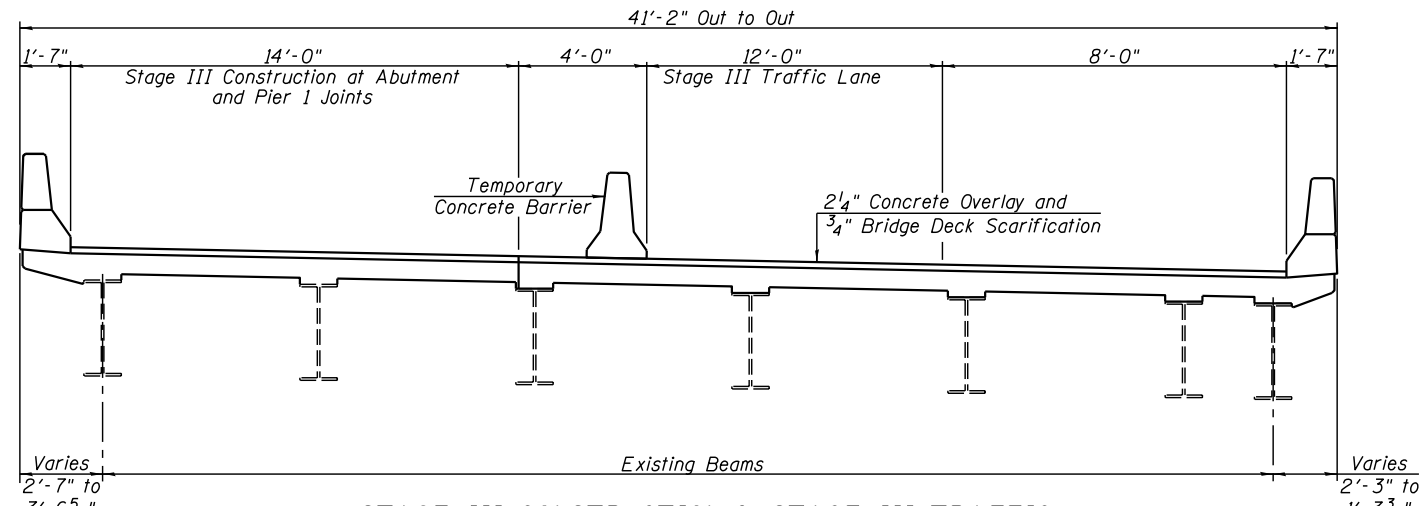
SHEET NO. 3 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	24
CONTRACT NO. 68D85				

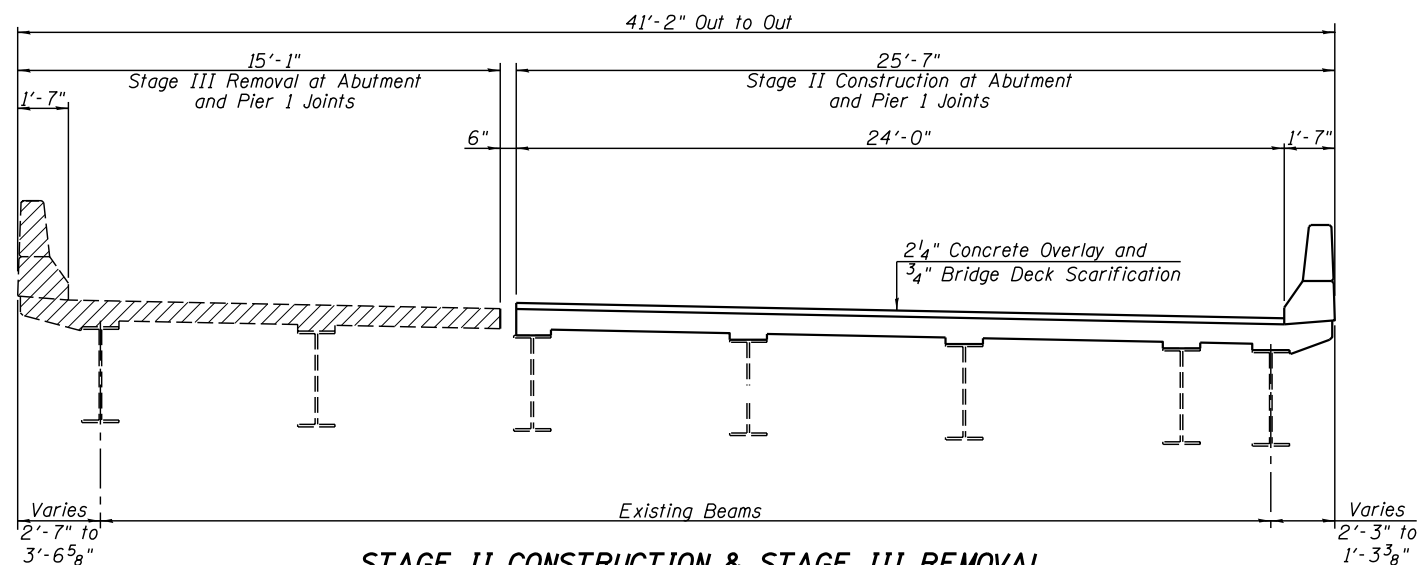
ILLINOIS FED. AID PROJECT



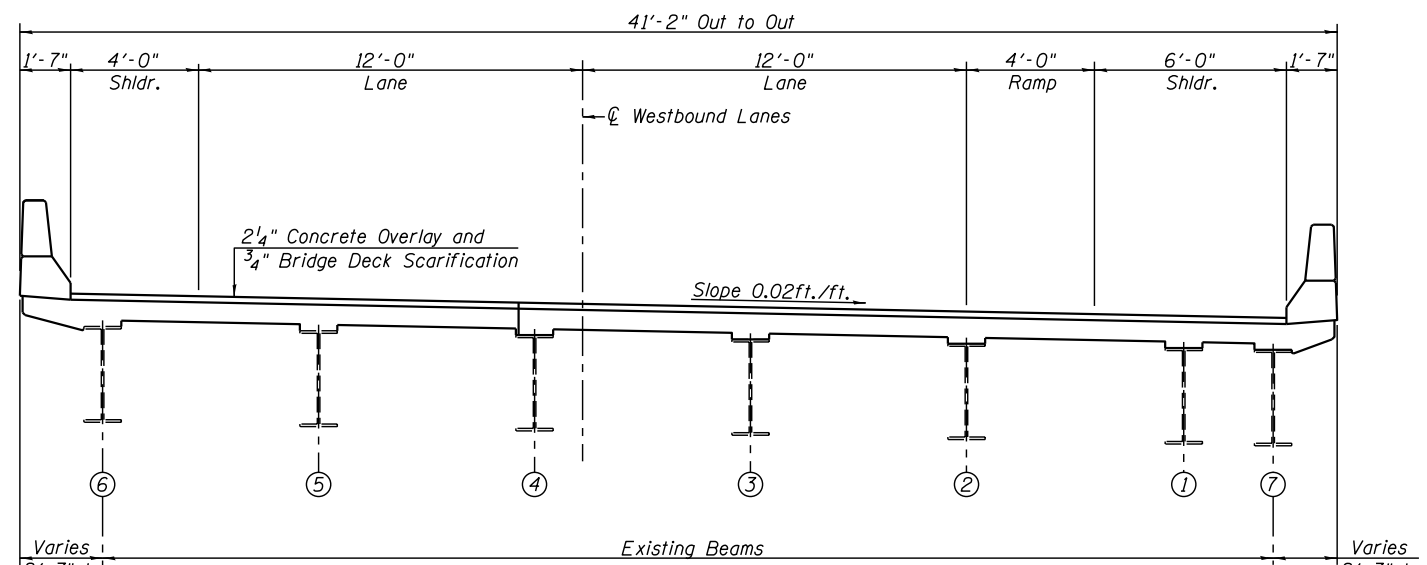
STAGE II REMOVAL & STAGE II TRAFFIC
(Westbound - Looking West)



STAGE III CONSTRUCTION & STAGE III TRAFFIC
(Westbound - Looking West)



STAGE II CONSTRUCTION & STAGE III REMOVAL
(Westbound - Looking West)



PROPOSED CROSS SECTION
(Westbound - Looking West)

- Concrete Removal at Abutment Joints and Pier 1 Joint



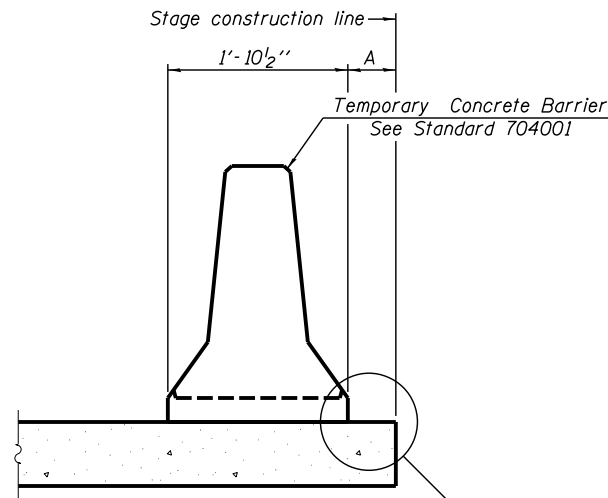
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING
STRUCTURE NO. 090-0072

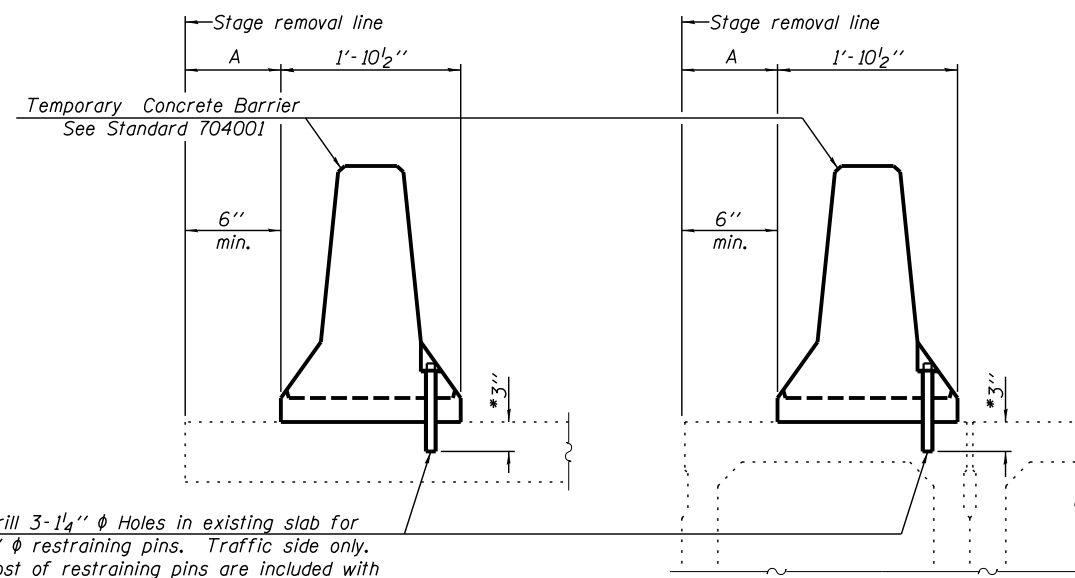
SHEET NO. 4 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAZEWELL	65	25
CONTRACT NO. 68085				
ILLINOIS FED. AID PROJECT				



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

NEW SLAB OR NEW DECK BEAM



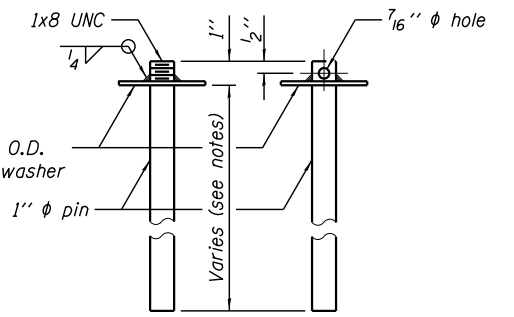
Drill 3-1/4" ϕ Holes in existing slab for 1" ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

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

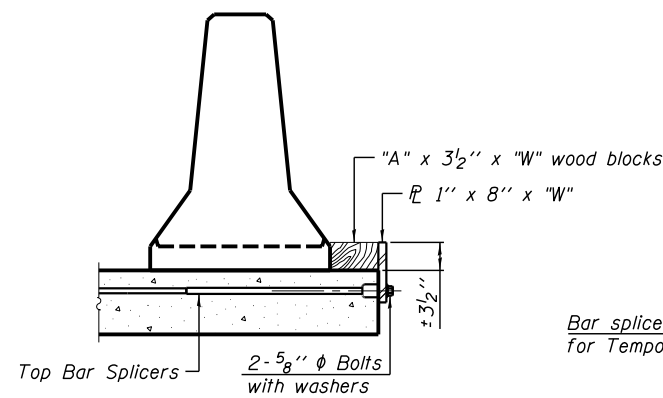
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

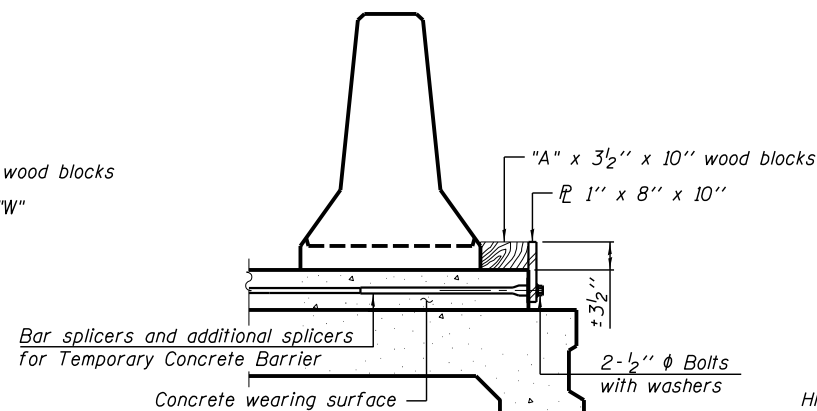


RESTRAINING PIN

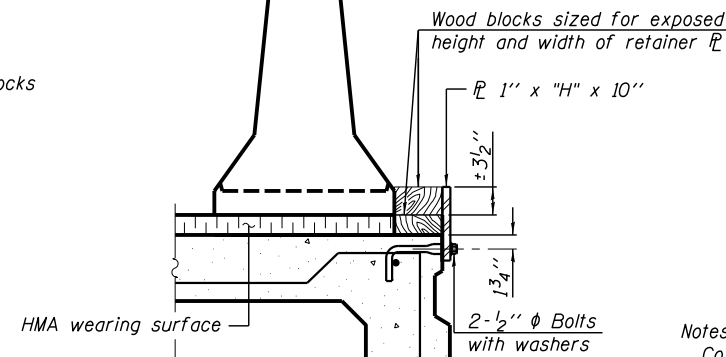
US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer



DETAIL I

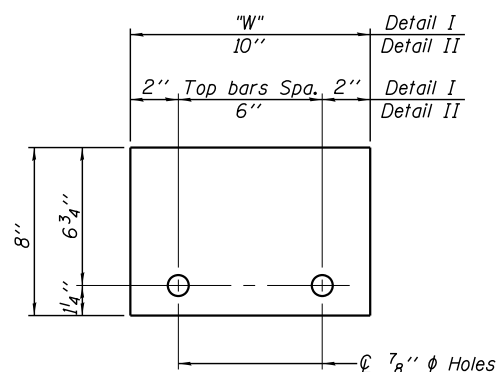
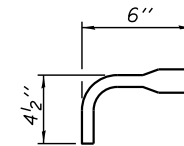


DETAIL II

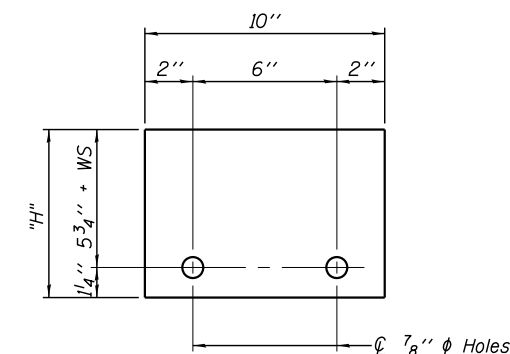


DETAIL III

BAR SPLICER FOR #4 BAR - DETAIL III



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



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

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

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

R-27 8-11-2017



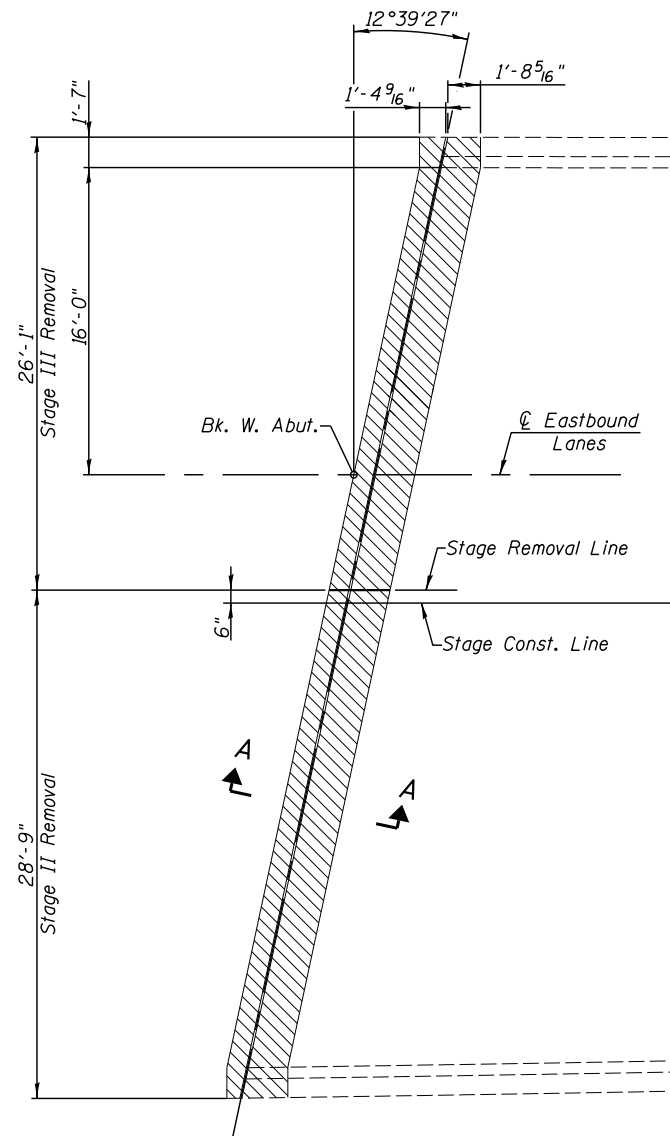
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STATE OF ILLINOIS
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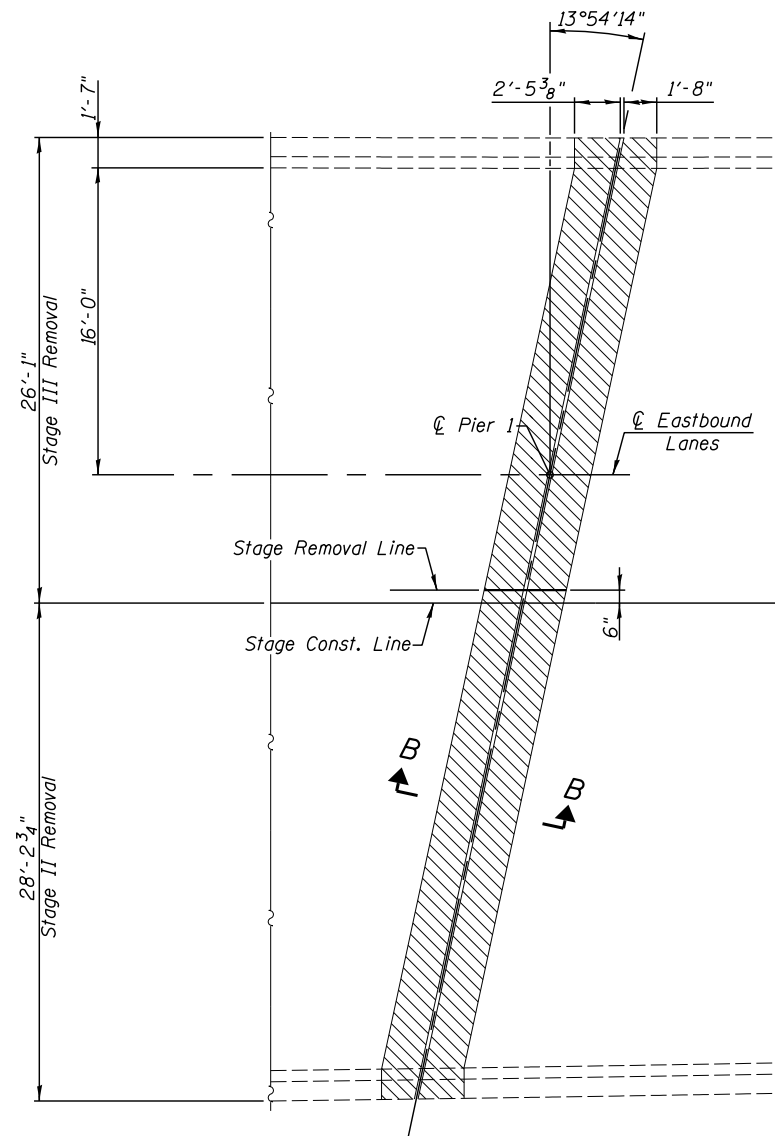
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 090-0071 & 090-0072

SHEET NO. 5 OF 25 SHEETS

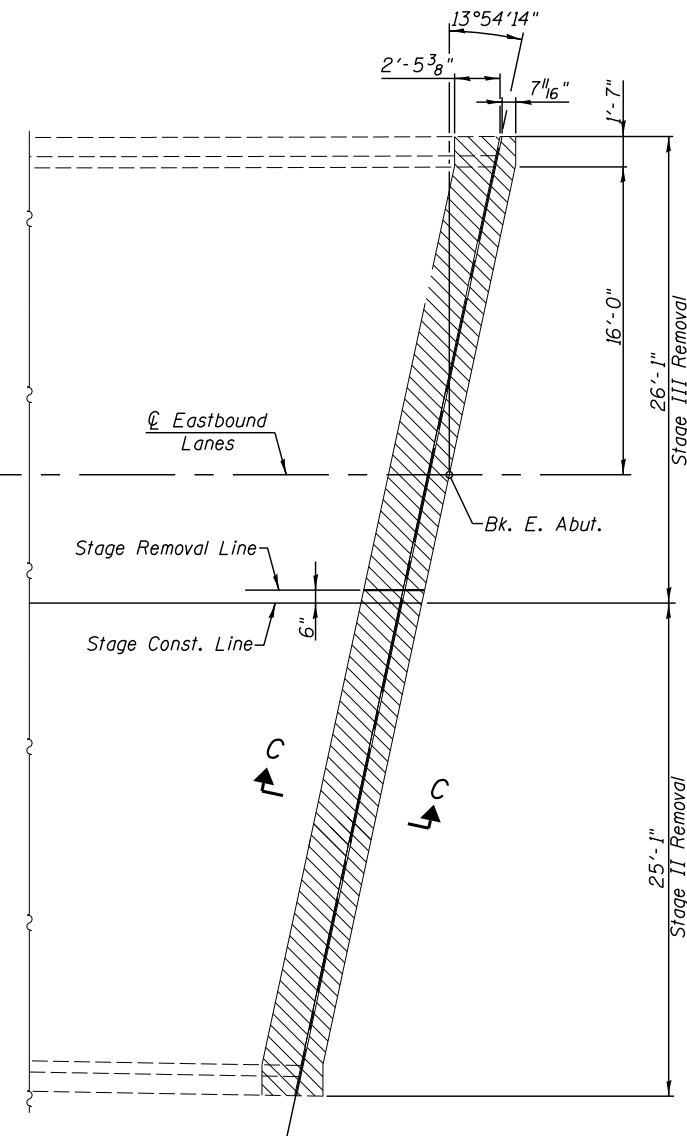
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	26
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



PLAN
(West Abutment - Showing Concrete Removal)



PLAN
(Pier 1 - Showing Concrete Removal)



PLAN
(East Abutment - Showing Concrete Removal)

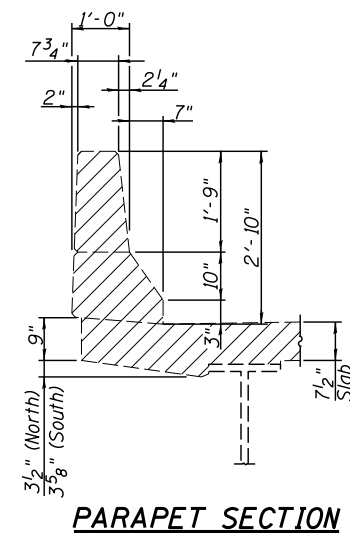
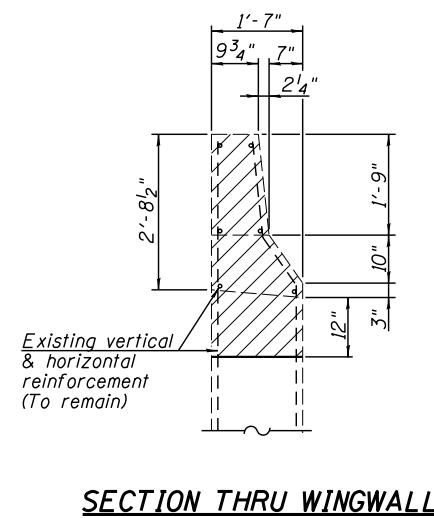
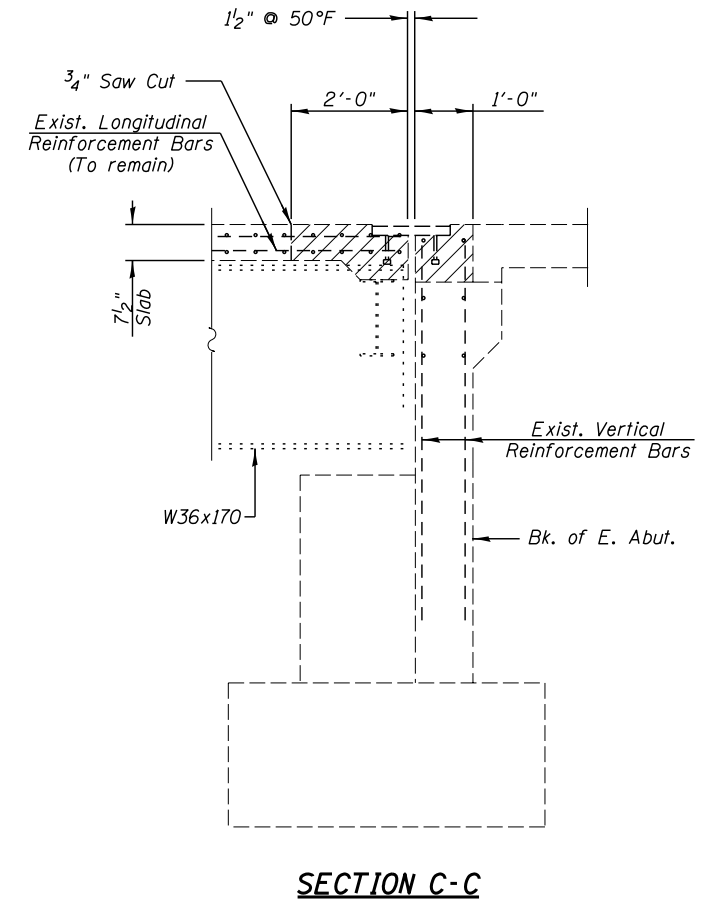
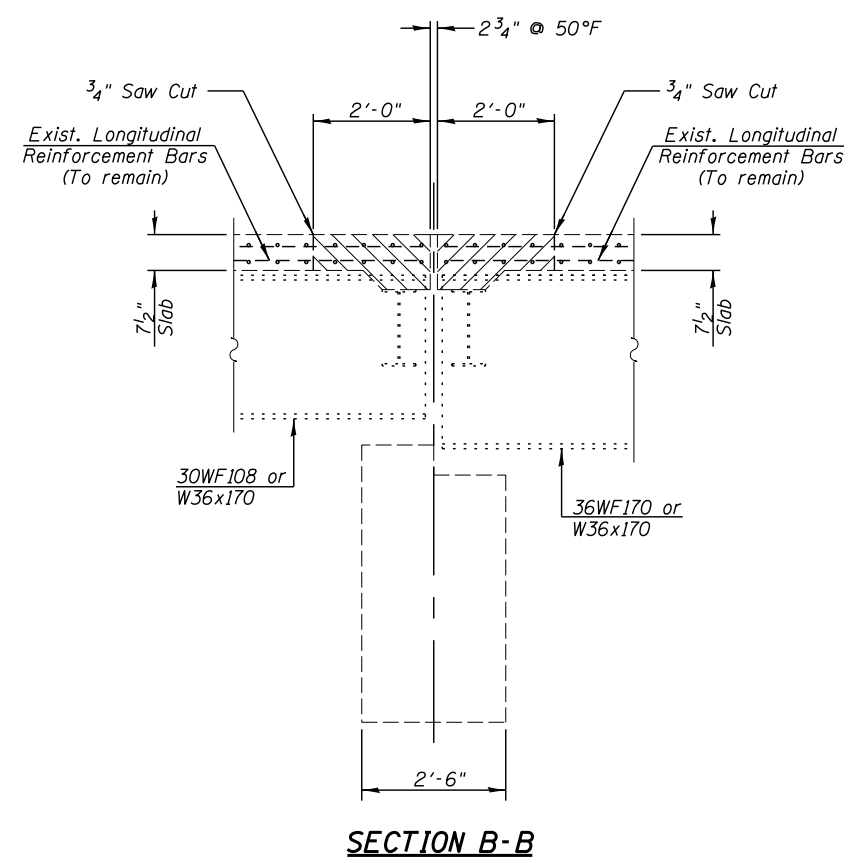
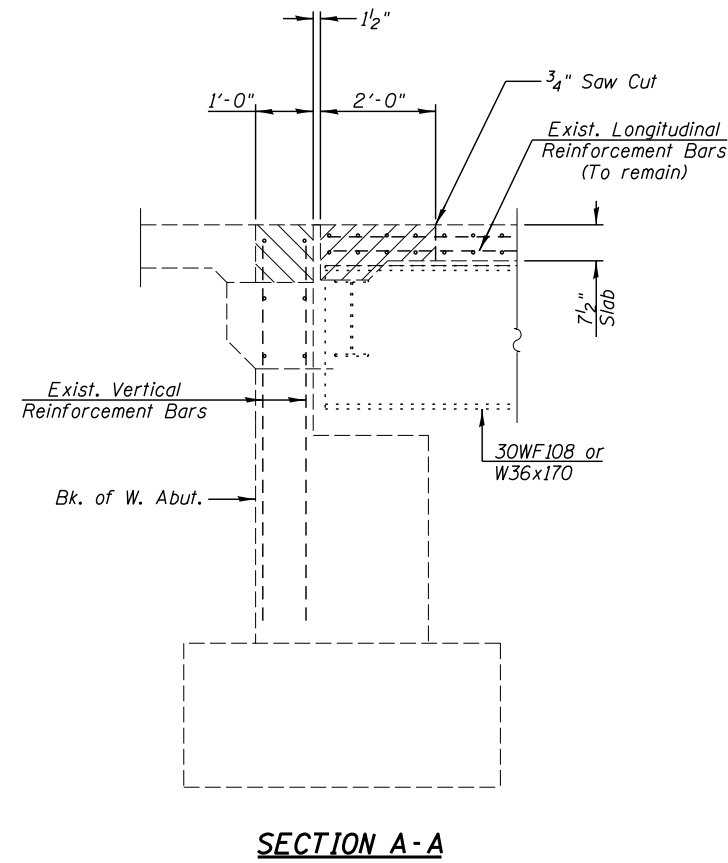
- Concrete Removal

NOTES

The Contractor shall use extreme care during concrete removal so as not to damage the existing steel beams.
 Removal of existing expansion joint and associated material shall not be paid for separately, but shall be included in the cost of Concrete Removal.
 Trim existing reinforcement to accommodate proposed expansion joint.
 Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included in Concrete Removal.
 Stud shear connectors damaged during concrete removal operations shall be removed and replaced per Section 505 of the Standard Specifications. Cost included with Concrete Removal.
 See Sheet 7 of 25 for Section A-A, Section B-B and Section C-C.

BILL OF MATERIAL

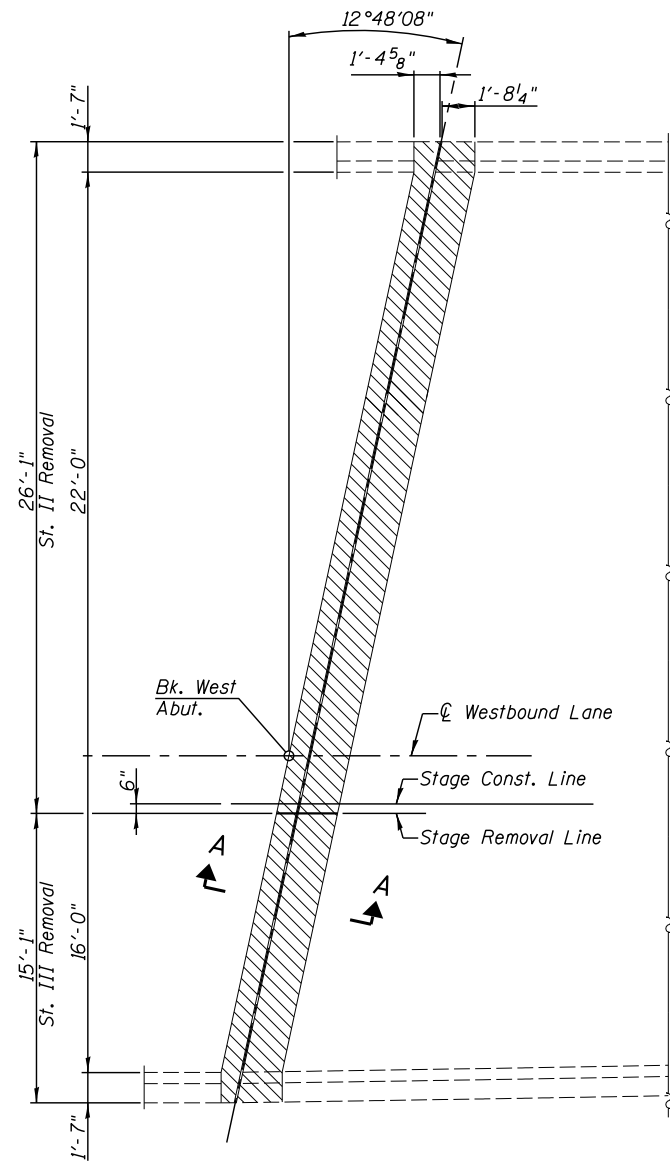
Item	Unit	Total
Concrete Removal	Cu. Yd.	23.3



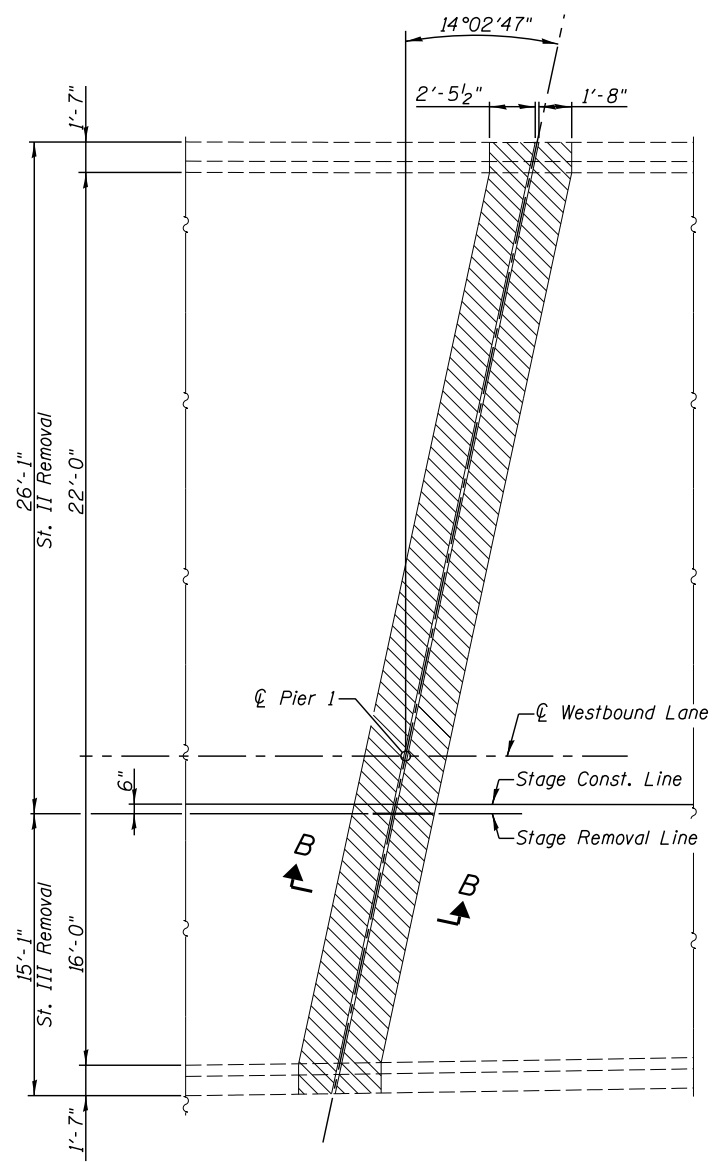
- Concrete Removal

USER NAME =	DESIGNED - MAH	REVISED -
	CHECKED - KES	REVISED -
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - MAH	REVISED -

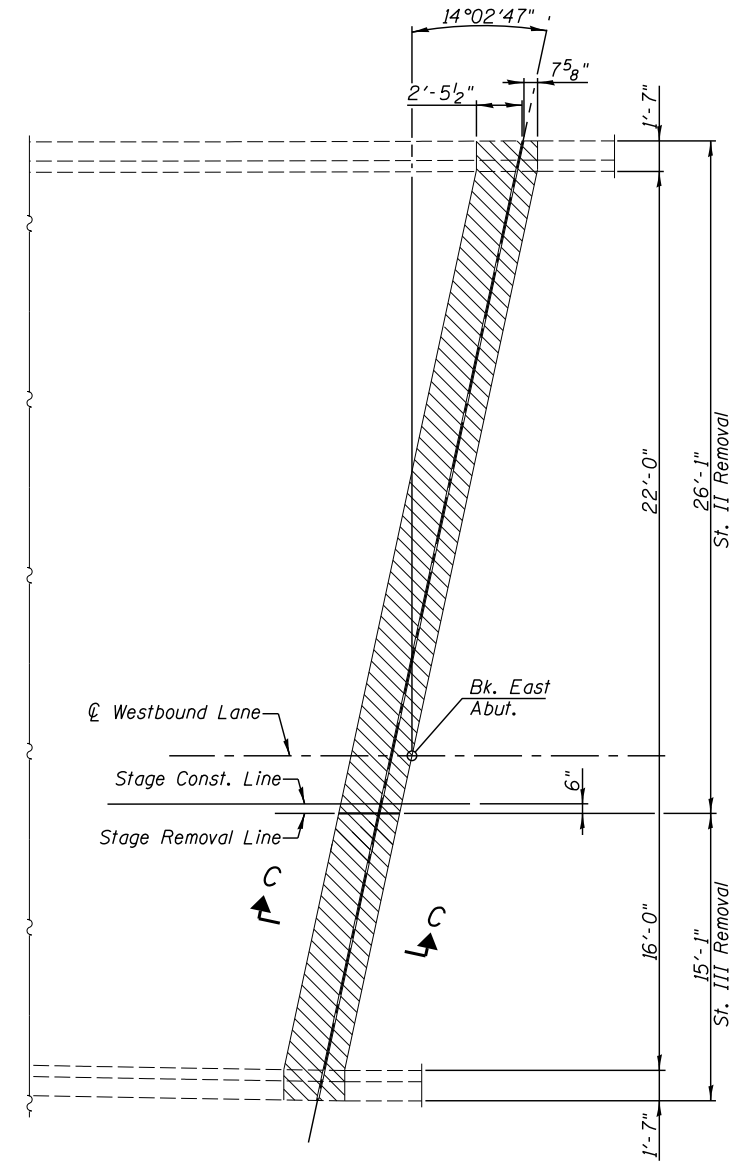
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	28
CONTRACT NO. 68D85				
<small>ILLINOIS FED. AID PROJECT</small>				



PLAN
(West Abutment - Showing Concrete Removal)



PLAN
(Pier 1 - Showing Concrete Removal)



PLAN
(East Abutment - Showing Concrete Removal)

- Concrete Removal

NOTES

The Contractor shall use extreme care during concrete removal so as not to damage the existing steel beams.
 Removal of existing expansion joint and associated material shall not be paid for separately, but shall be included in the cost of Concrete Removal.
 Trim existing reinforcement to accommodate proposed expansion joint.
 Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included in Concrete Removal.
 Stud shear connectors damaged during concrete removal operations shall be removed and replaced per Section 505 of the Standard Specifications. Cost included with Concrete Removal.
 See Sheet 9 of 25 for Section A-A, Section B-B and Section C-C.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	17.2



USER NAME =	DESIGNED - MAH	REVISED -
	CHECKED - KES	REVISED -
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - MAH	REVISED -

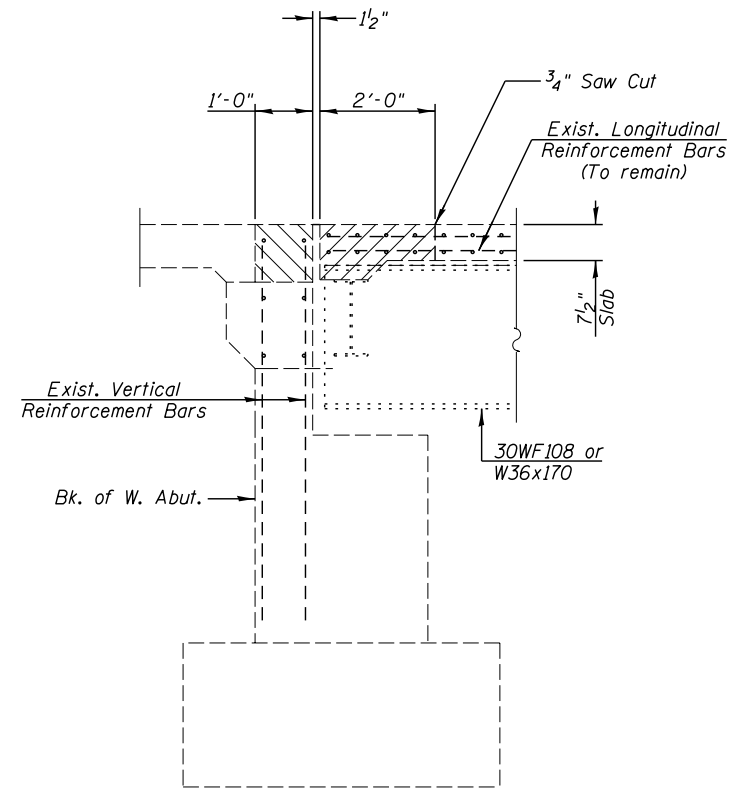
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE CONCRETE REMOVAL
STRUCTURE NO. 090-0072**

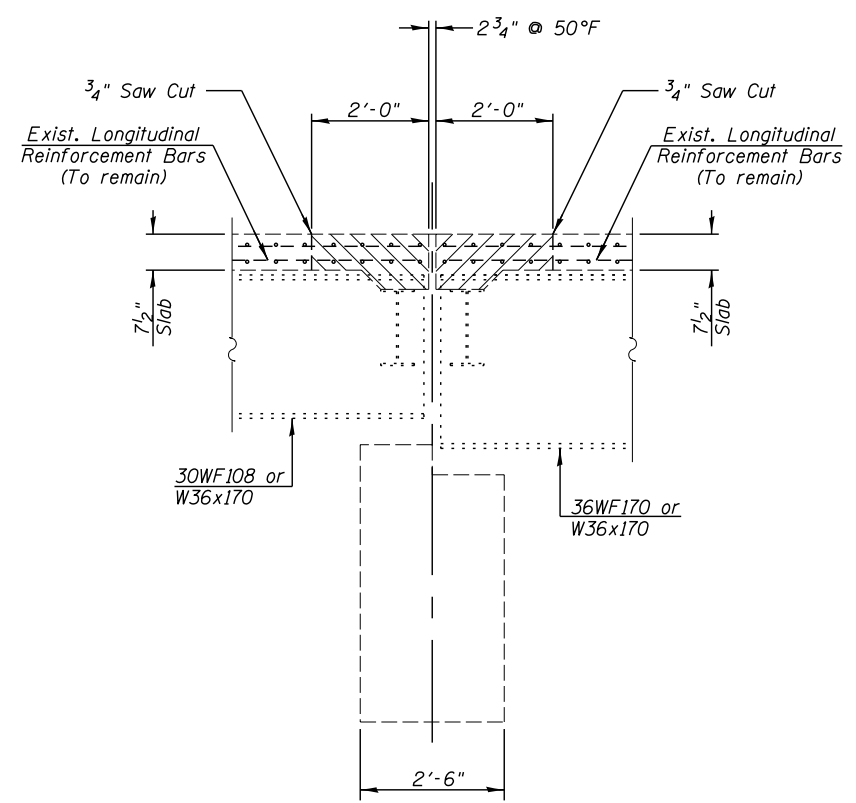
SHEET NO. 8 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAZEWELL	65	29
CONTRACT NO. 68D85				

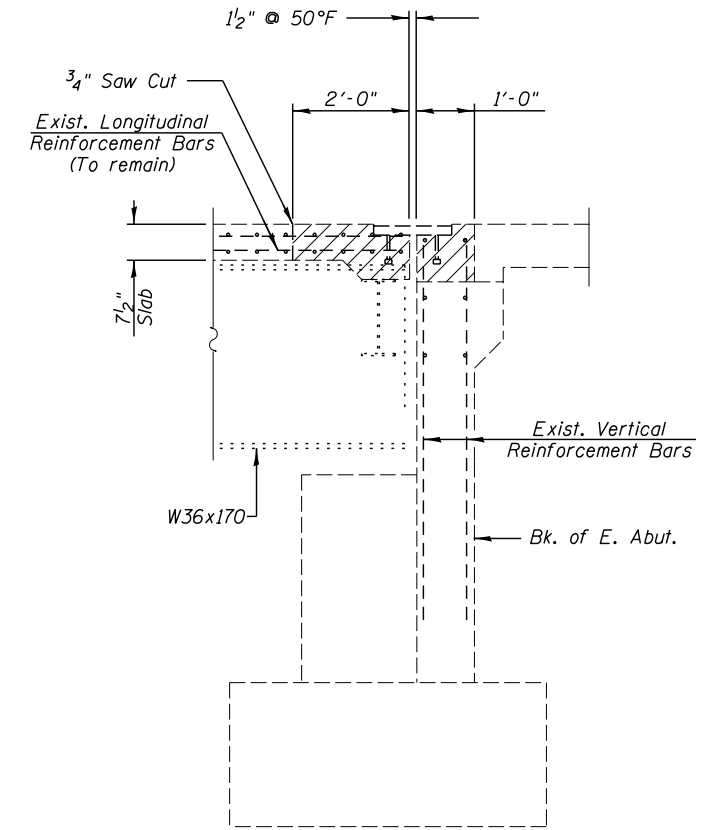
ILLINOIS FED. AID PROJECT



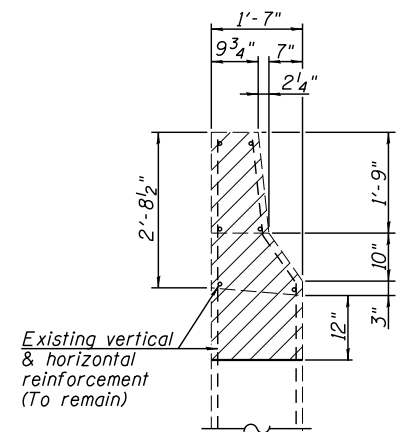
SECTION A-A



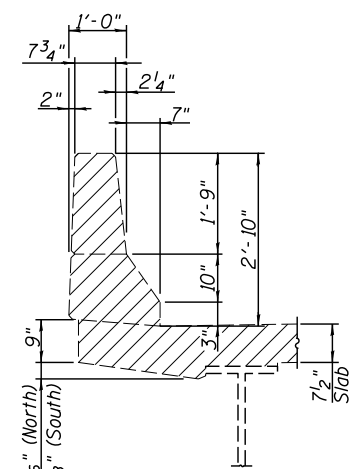
SECTION B-B



SECTION C-C



SECTION THRU WINGWALL



PARAPET SECTION

- Concrete Removal



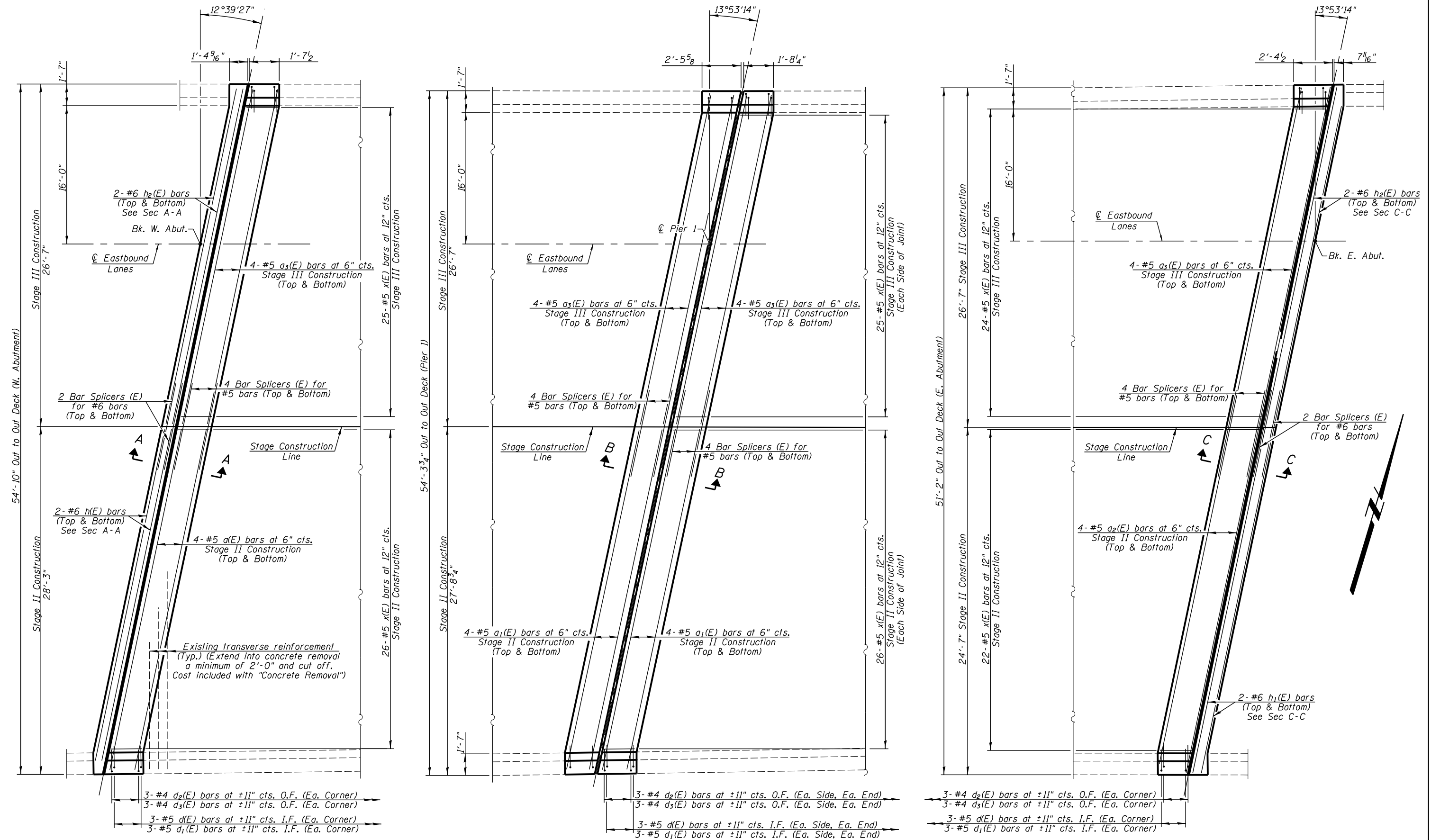
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE CONCRETE REMOVAL
STRUCTURE NO. 090-0072**

SHEET NO. 9 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	30
CONTRACT NO. 68D85				
<small>ILLINOIS FED. AID PROJECT</small>				



PLAN



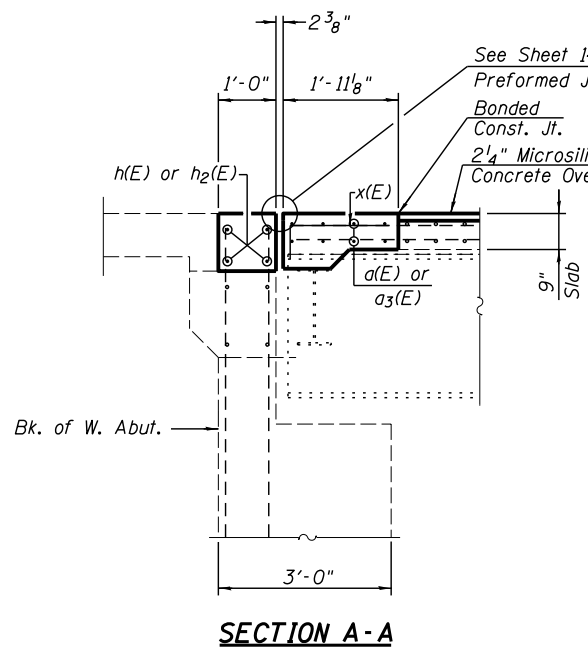
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

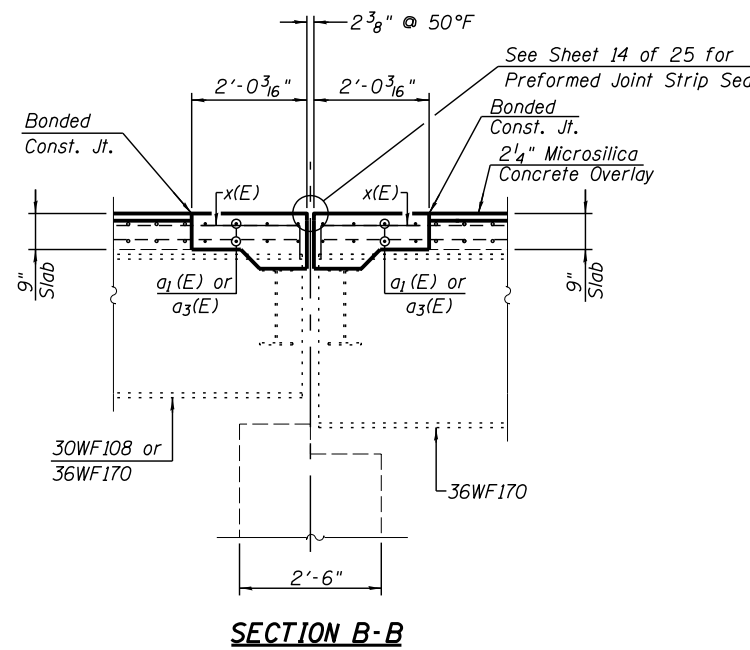
**SUPERSTRUCTURE DETAILS
STRUCTURE NO. 090-0071**

SHEET NO. 10 OF 25 SHEETS

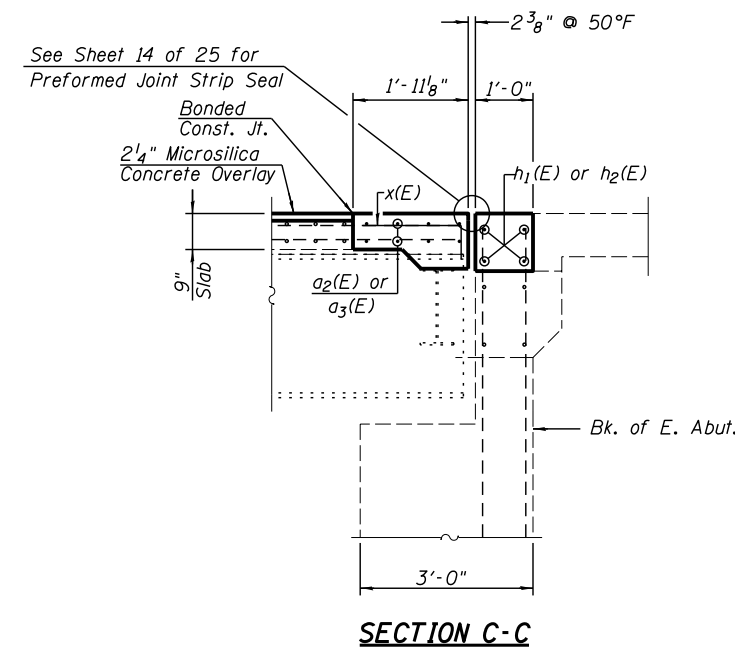
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	31
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



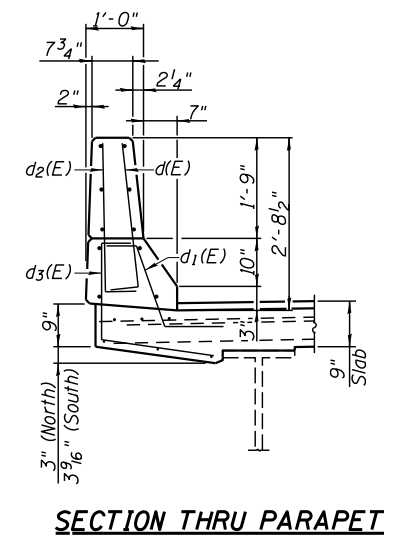
SECTION A-A



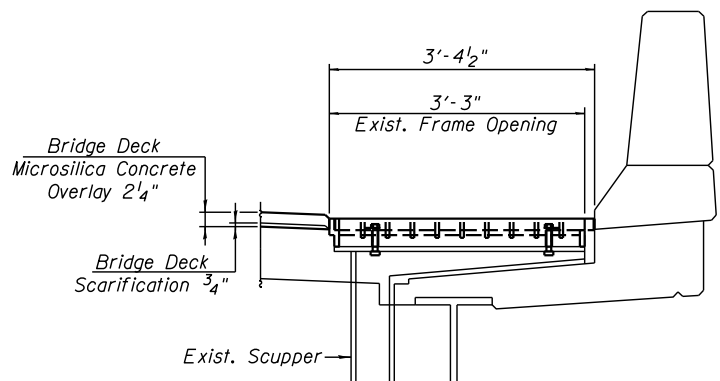
SECTION B-B



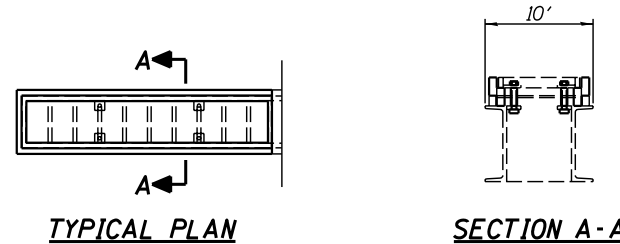
SECTION C-C



SECTION THRU PARAPET



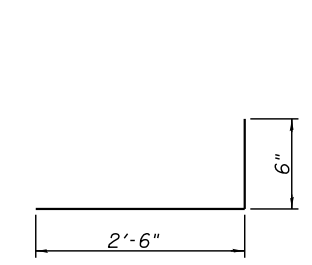
TYPICAL SCUPPER DETAIL



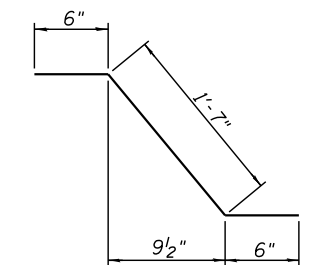
TYPICAL PLAN

SECTION A-A

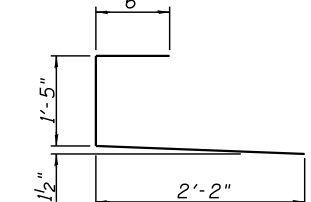
- Notes:
1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Ring or ordering of material for Adjusting Drainage Scuppers.
 2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
 3. Bolts, Anchor Studs, Washers and Nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to the requirements of AASHTO M 232.
 4. Cast Iron Parts shall be unfinished.
 5. Adjusting Ring shall be from Neenah and approved equal. Structural Steel weldments or equal sections and of the same configuration may be submitted for Cast Iron Fillet or Full Penetration Welds may be used for weldments. Details shall be submitted to the Engineer for approval.
 6. Provide a 1/8 inch Fillet Weld around perimeter of new Adjusting Ring to secure to Existing Scupper. Electrode shall be compatible with cast iron.
 7. Cost of all labor and materials necessary to clean all existing floor drains and scuppers. Install adjusting scupper rings, remove and re-install grates is included in the cost for Drainage Scupper to be adjusted.



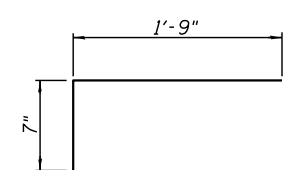
BARS d(E) & d2(E)



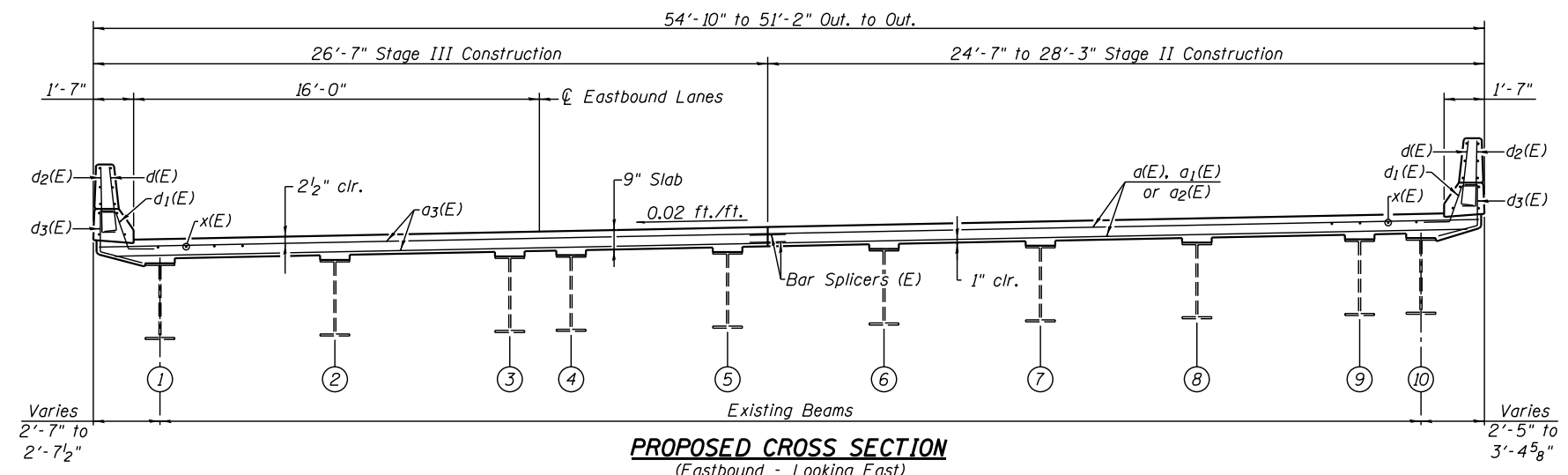
BAR d1(E)



BAR d3(E)



BAR x(E)



PROPOSED CROSS SECTION
(Eastbound - Looking East)

- Notes:
- Protective coat shall be applied to the concrete placed at the new joints as specified in Article 503.19 of the Standard Specifications, which includes the deck surface and top and inside faces of parapets.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	8	5	28'-7"	—
a1(E)	16	5	28'-2"	—
a2(E)	8	5	24'-11"	—
a3(E)	32	5	26'-10"	—
d(E)	24	5	3'-0"	┌
d1(E)	24	5	2'-7"	┌
d2(E)	24	4	3'-0"	┌
d3(E)	24	4	4'-1"	┌
h(E)	4	6	27'-9"	—
h1(E)	4	6	25'-0"	—
h2(E)	8	6	26'-0"	—
x(E)	199	5	2'-4"	┌
Reinforcement Bars, Epoxy Coated		Pound		3180
Concrete Superstructure		Cu. Yd.		25.6
Bar Splicers		Each		40
Protective Coat		Sq. Yd.		260
Drainage Scupper To Be Adjusted		Each		3

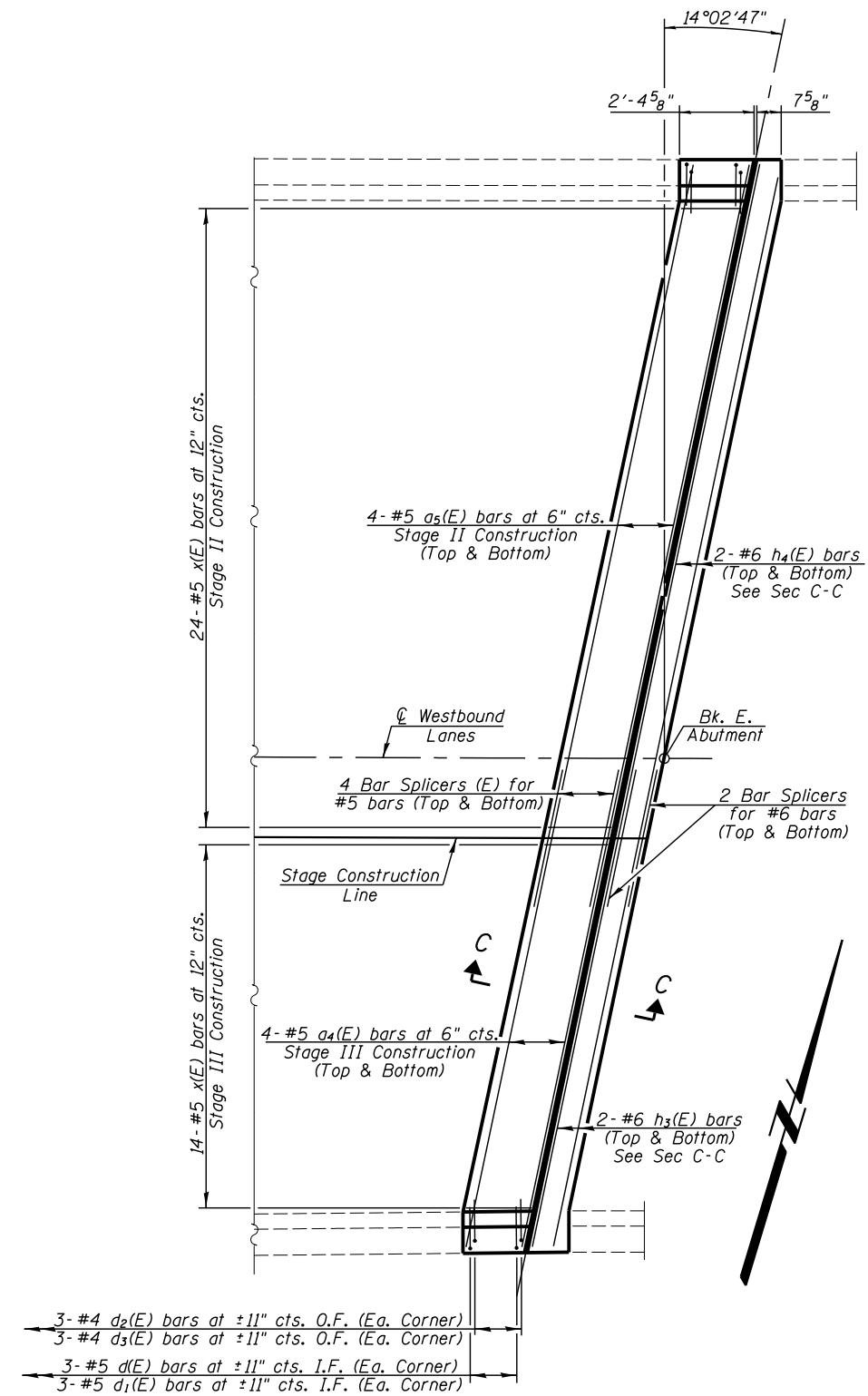
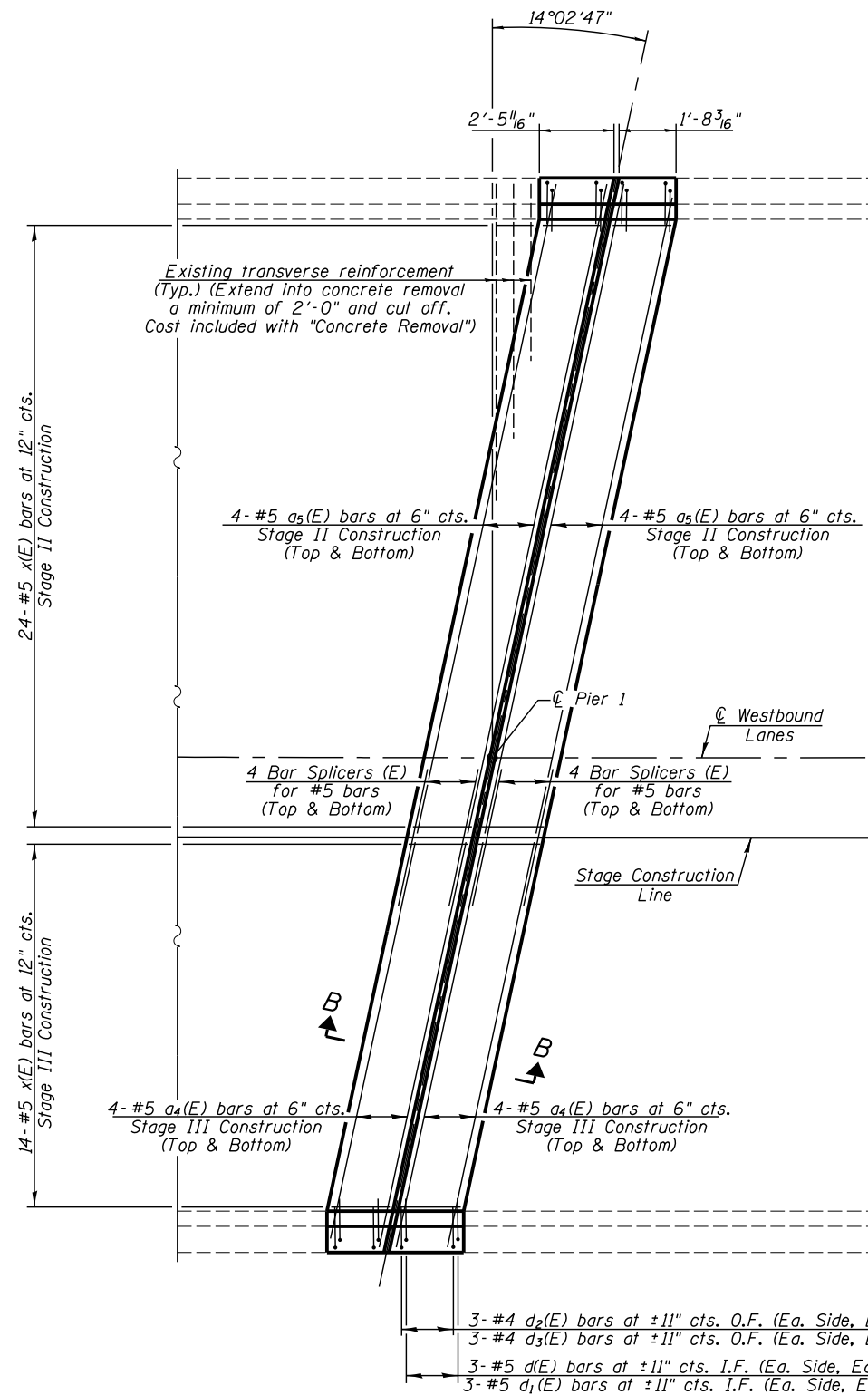
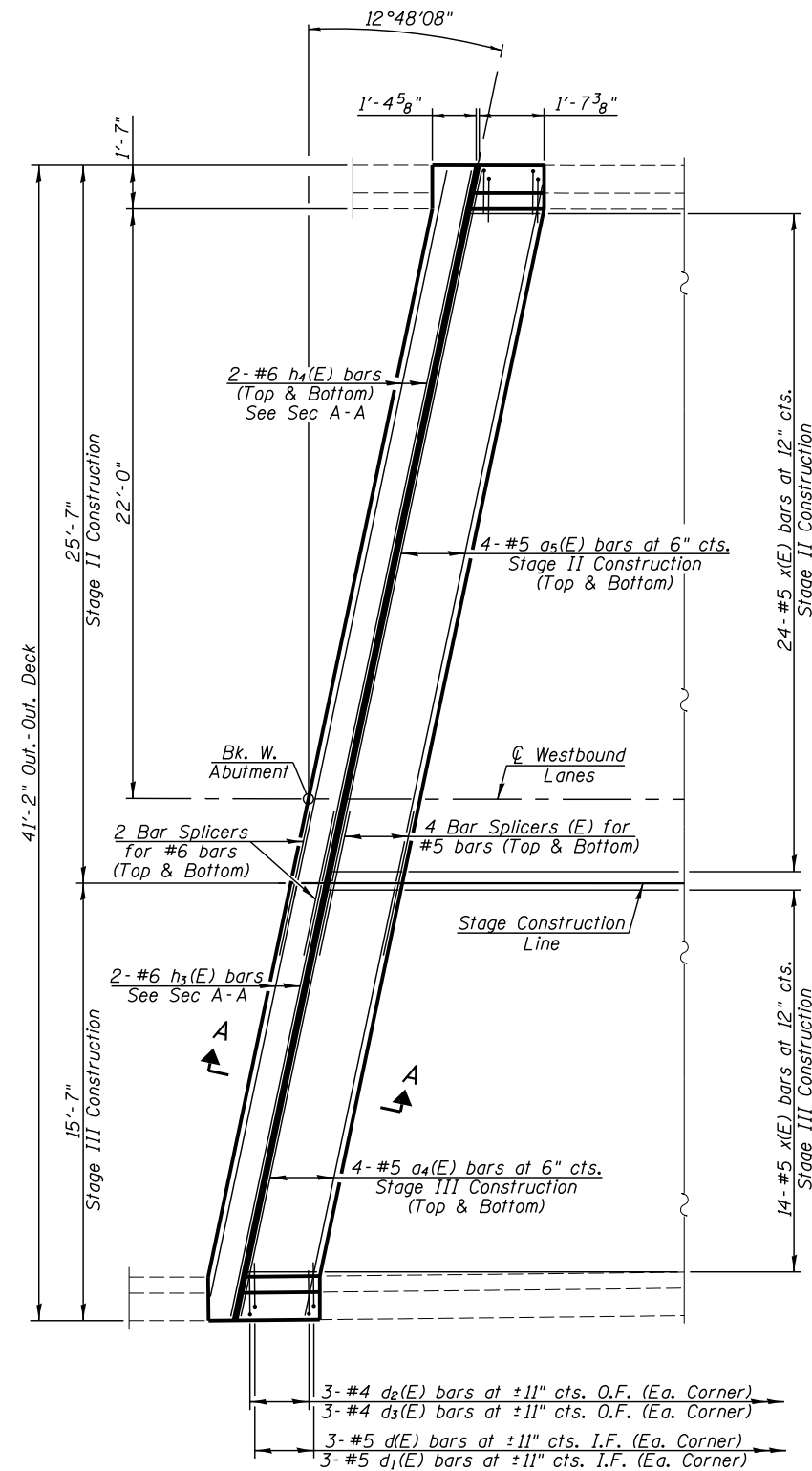


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PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 090-0071
SHEET NO. 11 OF 25 SHEETS

F.A.P. RTE. 317	SECTION [(102-HB)]JBR	COUNTY TAZEWELL	TOTAL SHEETS 65	SHEET NO. 32
			CONTRACT NO. 68D85	
ILLINOIS FED. AID PROJECT				



PLAN



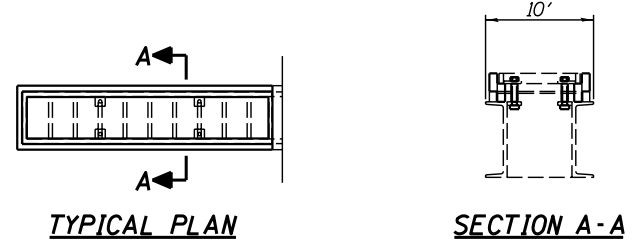
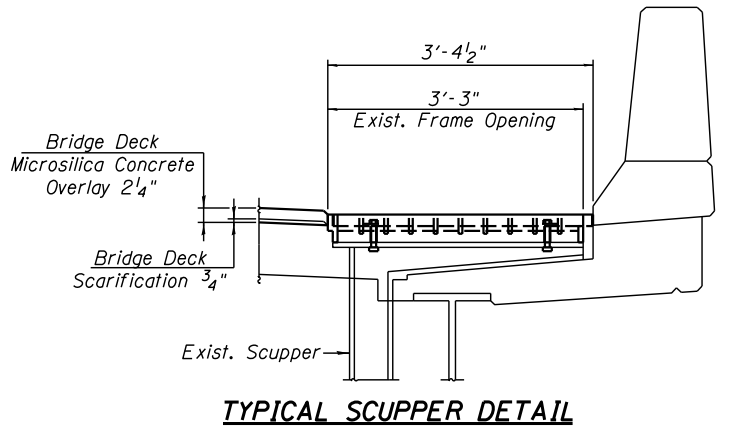
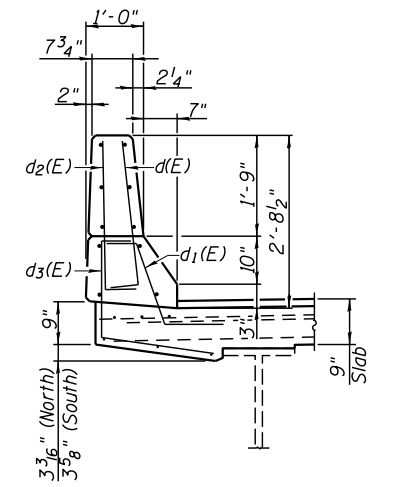
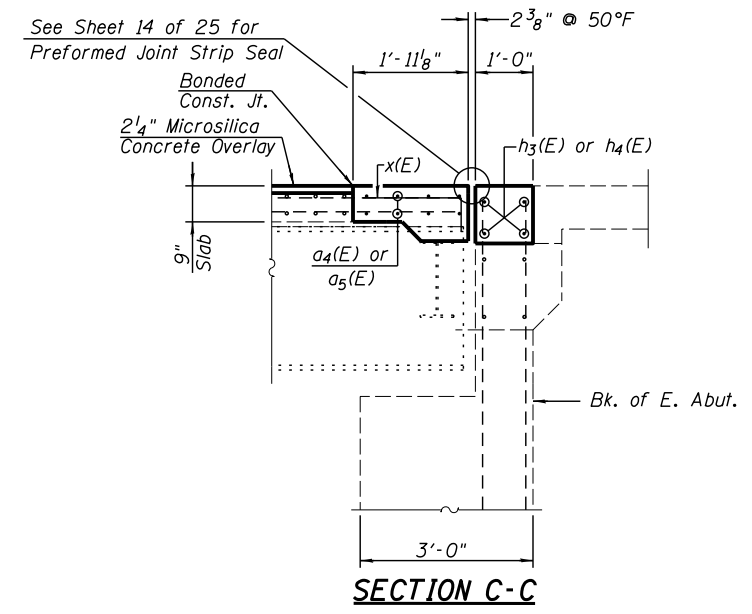
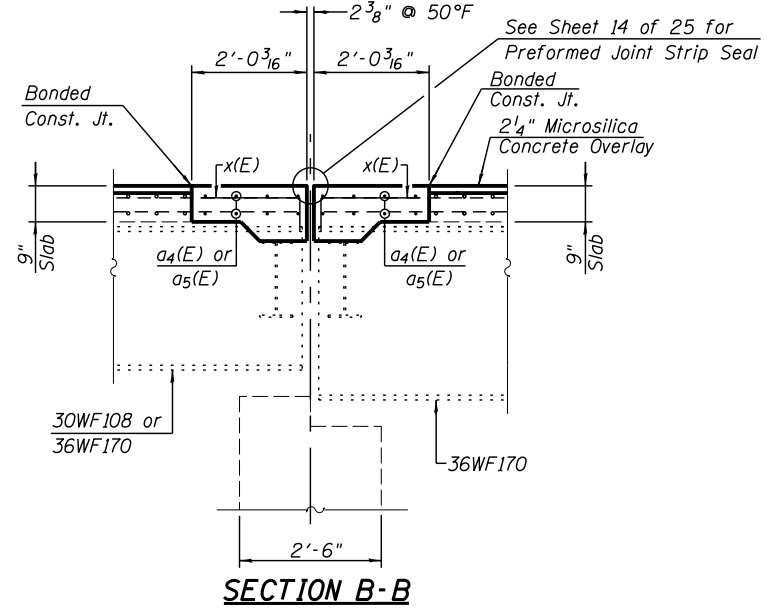
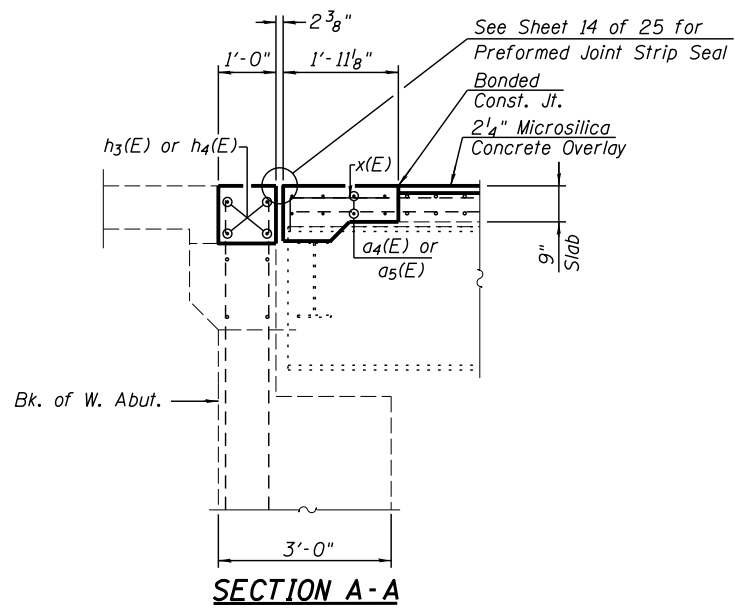
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

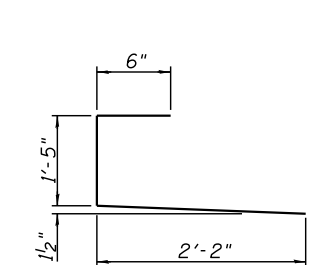
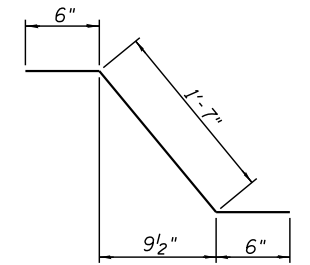
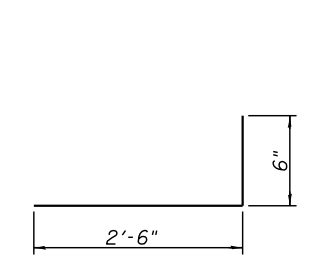
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 090-0072

SHEET NO. 12 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	33
CONTRACT NO. 68085				
ILLINOIS FED. AID PROJECT				



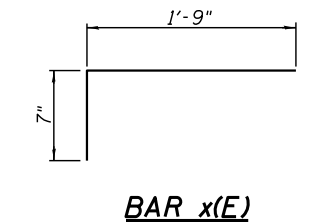
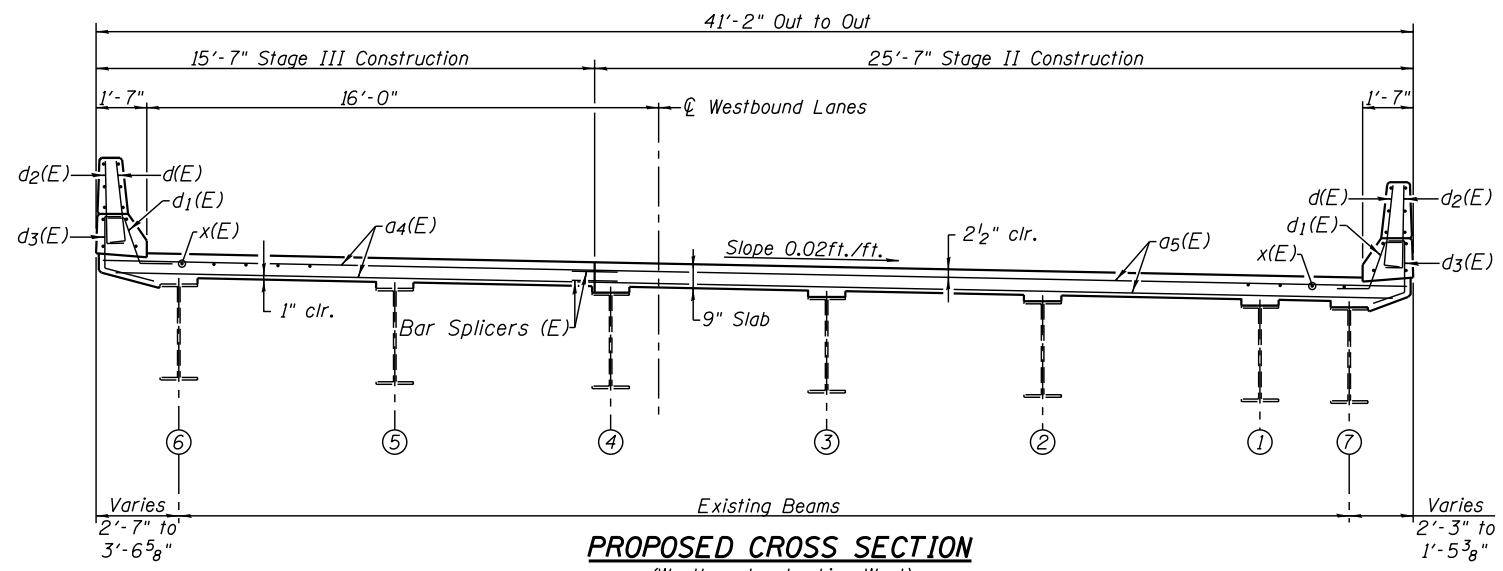
- Notes:
- The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Ring or ordering of material for Adjusting Drainage Scuppers.
 - All Cast Iron Parts shall be Grey Iron conforming to the requirements 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 the requirements of AASHTO M 232.
 - Cast Iron Parts shall be unfinished.
 - Adjusting Ring shall be from Neenah and approved equal. Structural Steel weldments or equal sections and of the same configuration may be submitted for Cast Iron Fillet or full Penetration Welds may be used for weldments. Details shall be submitted to the Engineer for approval.
 - Provide a 1/8 inch Fillet Weld around perimeter of new Adjusting Ring to secure to Existing Scupper. Electrode shall be compatible with cast iron.
 - Cost of all labor and materials necessary to clean all existing floor drains and scuppers. Install adjusting scupper rings, remove and re-install grates is included in the cost for Drainage Scupper to be adjusted.



BARS d(E) & d2(E)

BAR d1(E)

BAR d3(E)



BAR x(E)

- Notes:
- Protective coat shall be applied to the concrete placed at the new joints as specified in Article 503.19 of the Standard Specifications, which includes the deck surface and top and inside faces of parapets.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a4(E)	32	5	15'-7"	—	
a5(E)	32	5	25'-10"	—	
d(E)	24	5	3'-0"	┌	
d1(E)	24	5	2'-7"	┌	
d2(E)	24	4	3'-0"	┌	
d3(E)	24	4	4'-1"	┌	
h3(E)	8	6	15'-5"	—	
h4(E)	8	6	25'-10"	—	
x(E)	152	5	2'-4"	┌	
Reinforcement Bars, Epoxy Coated				Pound	2500
Concrete Superstructure				Cu. Yd.	19.0
Bar Splicers				Each	40
Protective Coat				Sq. Yd.	231
Drainage Scupper To Be Adjusted				Each	3

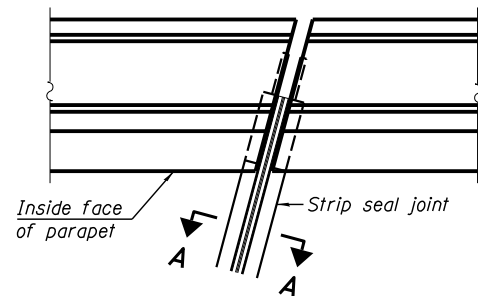


USER NAME =	DESIGNED - MAH	REVISED -
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DEPARTMENT OF TRANSPORTATION

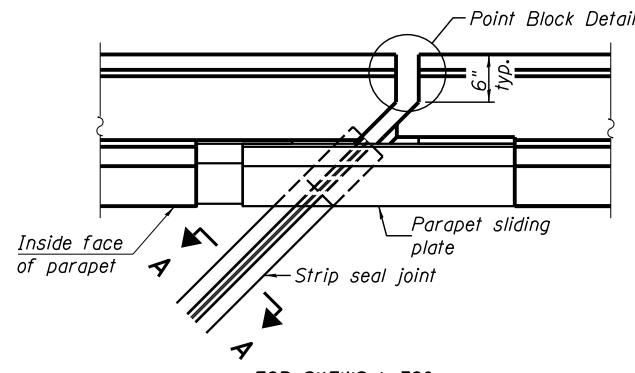
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 090-0072
SHEET NO. 13 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	34
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				

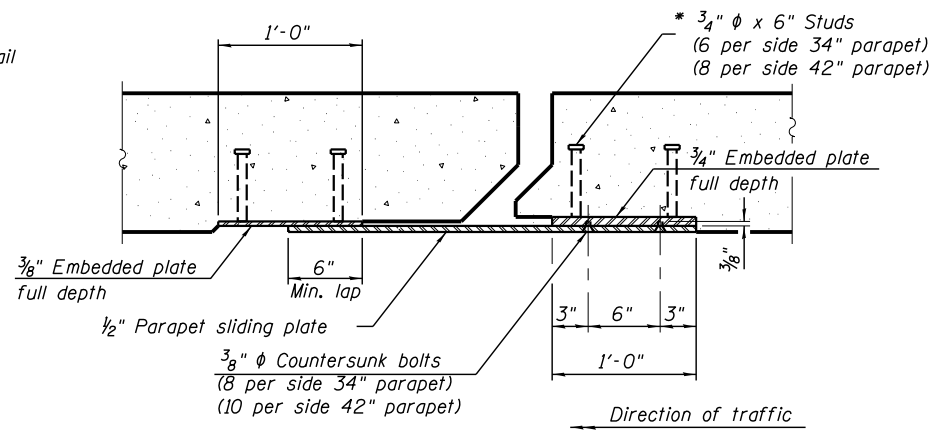


FOR SKEWS $\leq 30^\circ$

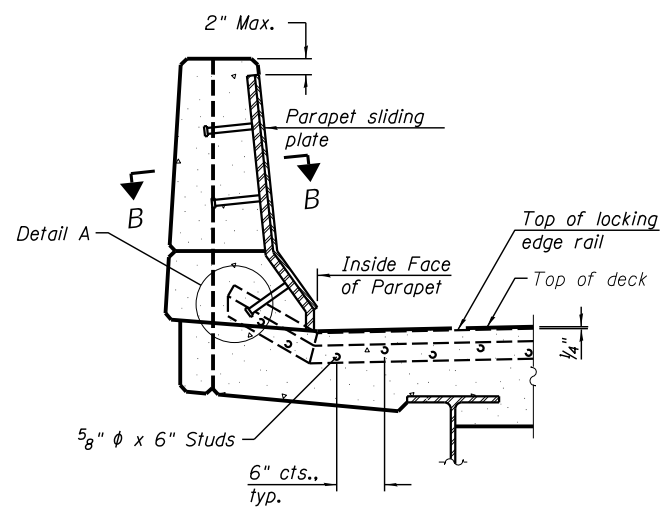
PLAN AT PARAPET



FOR SKEWS $> 30^\circ$

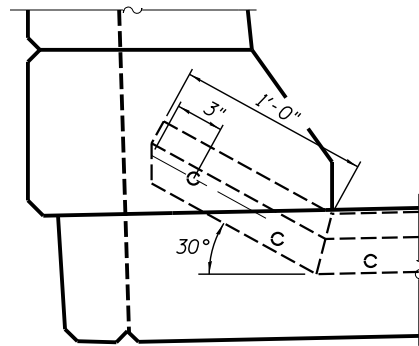


SECTION B-B

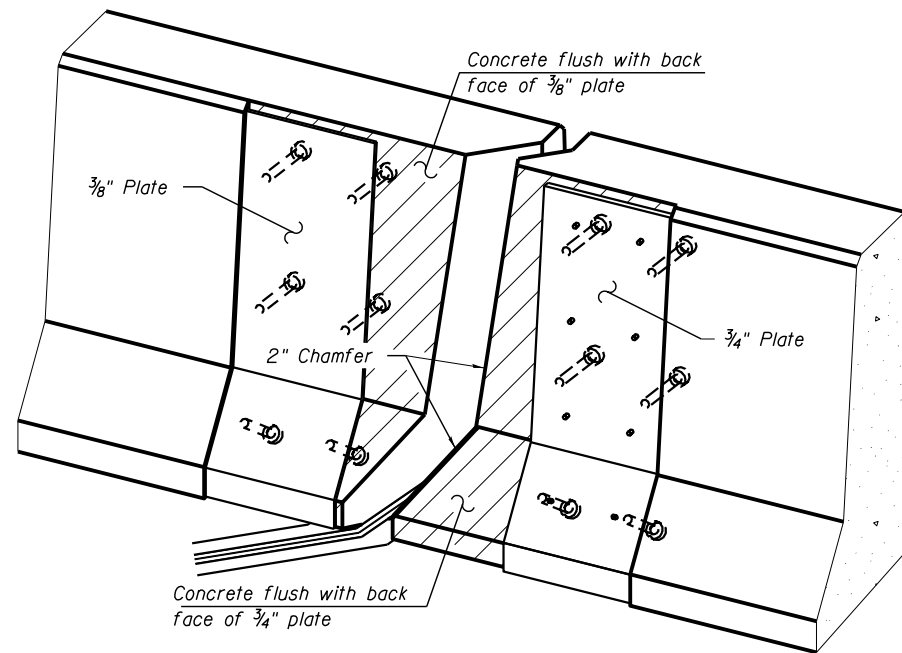


ELEVATION AT PARAPET

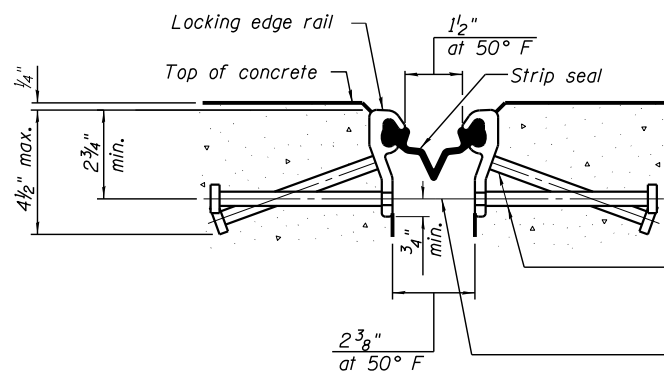
(Skews $> 30^\circ$ shown. Skews = 30° similar except as shown in plan view.)



DETAIL A



TRIMETRIC VIEW
(Showing embedded plates only)



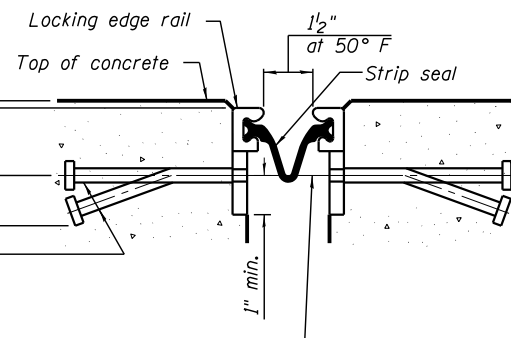
SHOWING ROLLED RAIL JOINT

* $5/8"$ ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

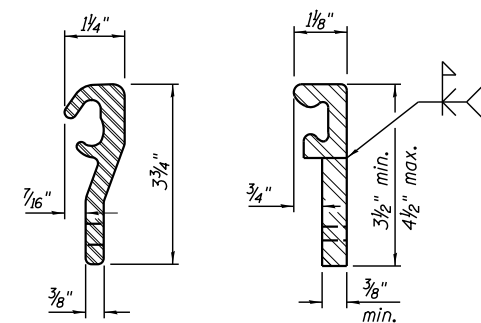
$3/8"$ ϕ threaded rods in $7/16"$ ϕ holes at $\pm 4'-0"$ cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

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

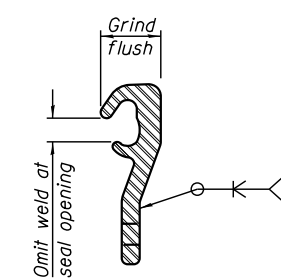


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

** 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. Rolled rail shown, welded rail similar.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of $1/4"$. The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the $4 1/2"$ maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be $3/16"$ and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

34" F-shape barrier shown, 42" F-shape similar as noted.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	287

EJ-SS

8-11-17



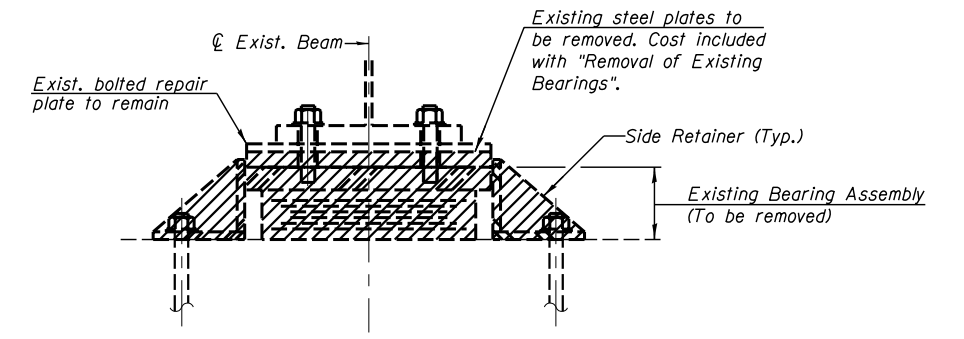
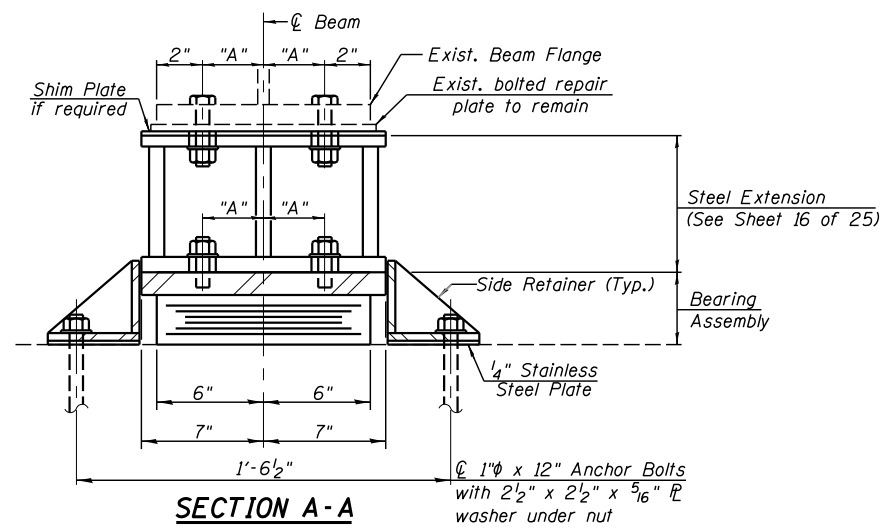
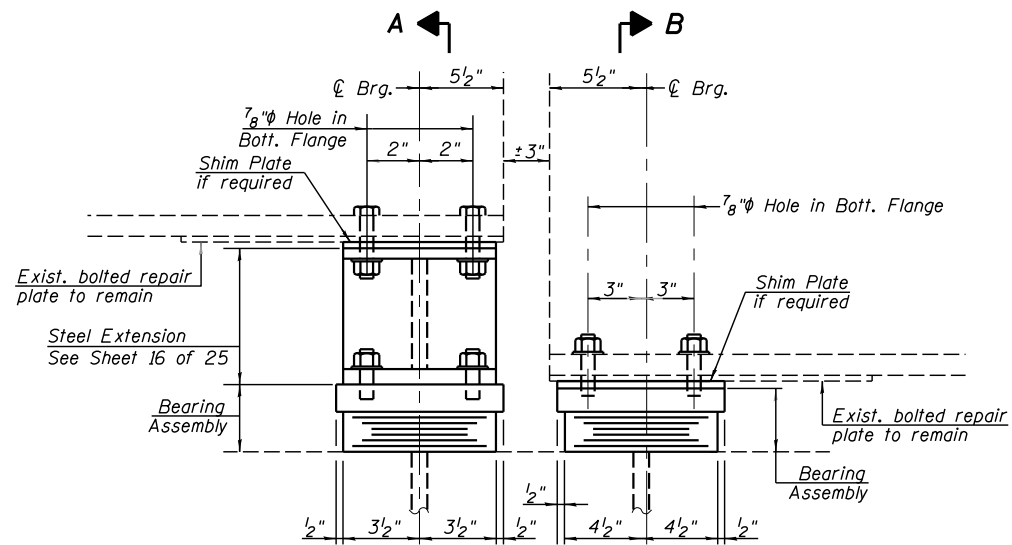
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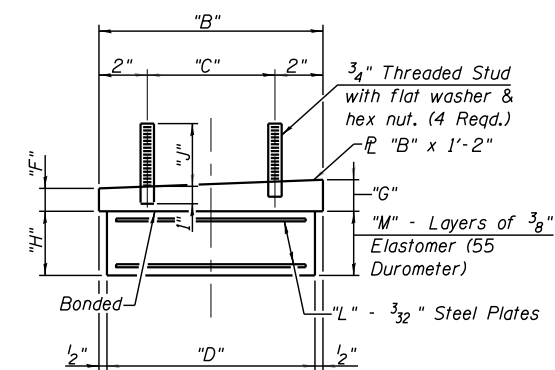
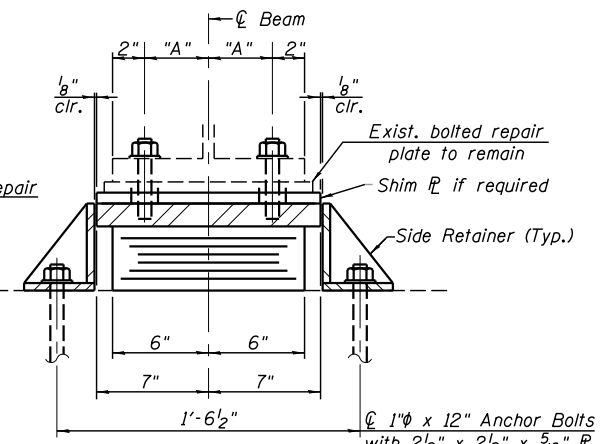
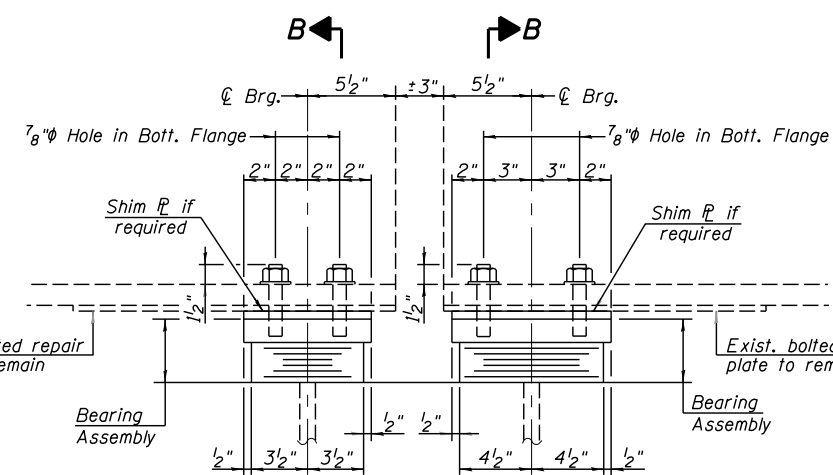
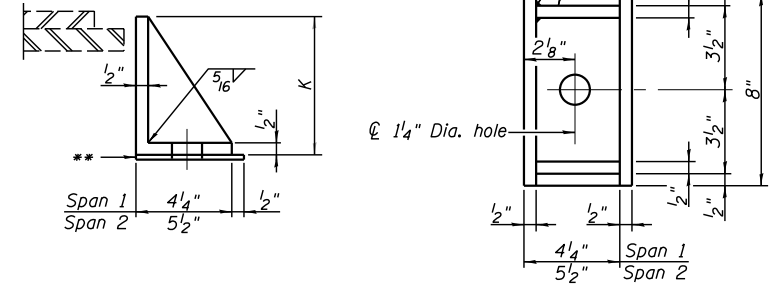
PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 090-0071 & 090-0072

SHEET NO. 14 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	35
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



SPAN 1 A ← → B SPAN 2



Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 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.
 Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included with Furnishing and Erecting Structural Steel.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, the Contractor shall verify in the field all bearing heights.
 The structural steel bearing plates for the bearings shall conform to the requirements of AASHTO M270 Grade 50.
 See Sheet 16 of 25 for steel extension details and abutment bearings.
 All steel for the bearings, steel extensions, side retainers, shim plates, anchor bolts, and connection bolts shall be hot dipped galvanized.

TYPE I ELASTOMERIC BEARING SCHEDULE

S.N.	Bearing Location	Beam No.	"A"	"B"	"C"	"D"	"F"	"G"	"H"	"J"	"K"	"L"	"M"
090-0071	Pier 1, Span 1	1 & 9	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
	Pier 1, Span 1	2-8	4	8	4	7	2 1/8	2 1/2	1 5/16	3 3/16	4 1/16	2	3
	Pier 1, Span 1	10	4	8	4	7	2 1/8	2 1/2	1 5/16	3 13/16	4 1/16	2	3
	Pier 1, Span 2	1-9	4	10	6	9	2 1/8	2 1/2	2 1/4	3 1/4	5	4	5
090-0072	Pier 1, Span 2	10	4	10	6	9	2 1/8	2 1/2	2 1/4	3 1/4	5	4	5
090-0072	Pier 1, Span 1	1	4	8	4	7	2 1/8	2 1/2	1 5/16	3 1/2	4 1/16	2	3
	Pier 1, Span 1	2-5	3 1/4	8	4	7	2 1/8	2 1/2	1 5/16	3 1/2	4 1/16	2	3
	Pier 1, Span 1	6-7	4	8	4	7	2 1/8	2 1/2	1 5/16	3 3/4	4 1/16	2	3
	Pier 1, Span 2	1-6	4	10	6	9	2 1/4	2 3/4	2 1/4	3 1/4	5 1/4	4	5
	Pier 1, Span 2	7	4	10	6	9	2 1/4	2 3/4	2 1/4	2 7/8	5 1/4	4	5

090-0071 INTERIOR GIRDER REACTION TABLE

	W. ABUT.	PIER 1 SPAN 1	PIER 1 SPAN 2
R _{DL} , kips	20.2	20.2	32.4
R _{LL} , kips	32.7	32.7	37.3
Imp., kips	9.8	9.8	9.4
R (Total), kips	62.7	62.7	79.1

090-0072 INTERIOR GIRDER REACTION TABLE

	W. ABUT.	PIER 1 SPAN 1	PIER 1 SPAN 2
R _{DL} , kips	20.4	20.4	31.8
R _{LL} , kips	32.0	32.0	35.4
Imp., kips	9.6	9.6	8.9
R (Total), kips	62.0	62.0	76.1



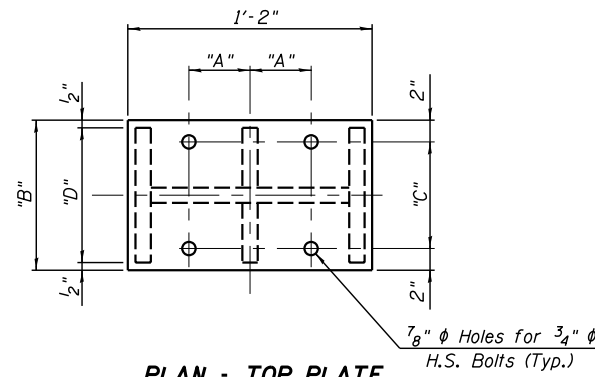
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PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
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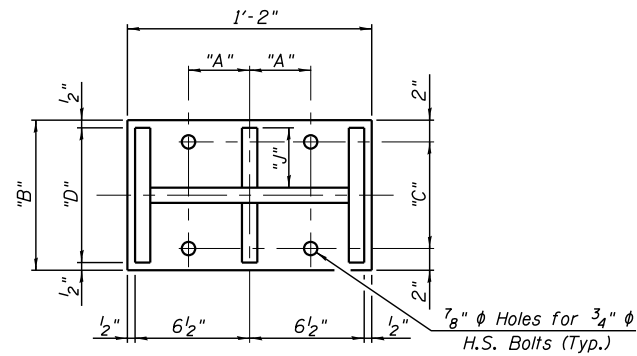
BEARING DETAILS
 STRUCTURE NO. 090-0071 & 090-0072

SHEET NO. 15 OF 25 SHEETS

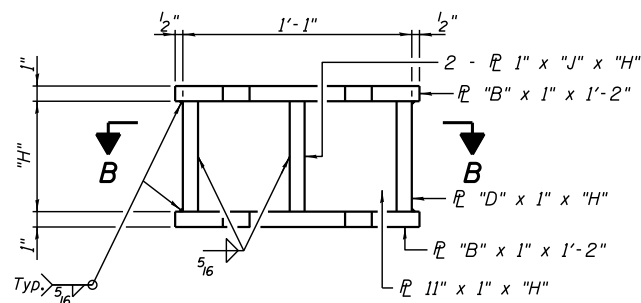
F.A.P. RTE. 317	SECTION [(102-HB)]JBR	COUNTY TAZEWELL	TOTAL SHEETS 65	SHEET NO. 36
CONTRACT NO. 68D85			ILLINOIS FED. AID PROJECT	



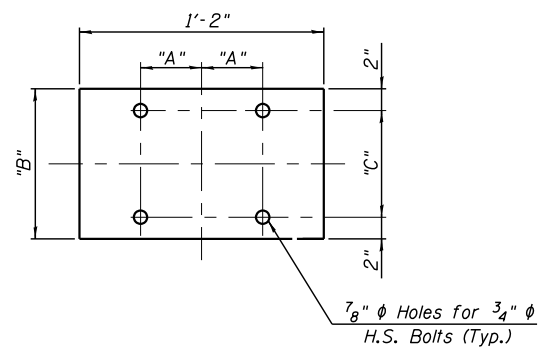
PLAN - TOP PLATE



SECTION B-B



ELEVATION STEEL EXTENSION



SHIM PLATE

BEARING EXTENSION SCHEDULE

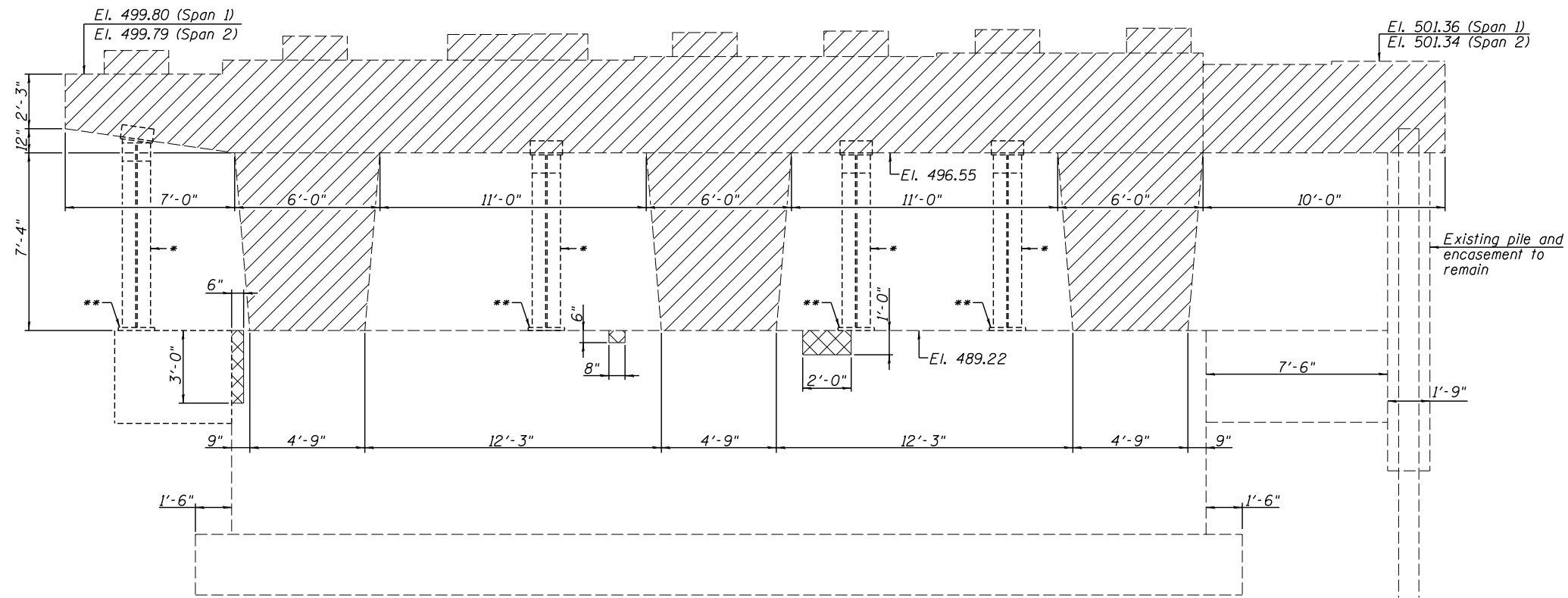
S.N.	Bearing Location	Beam No.	"A" (in.)	"B" (in.)	"C" (in.)	"D" (in.)	"H" (in.)	"J" (in.)
090-0071	Pier 1, Span 1	2-8	3 1/4	8	4	7	4 9/16	3
090-0072	Pier 1, Span 1	2-5	3 1/4	8	4	7	4 5/8	3

BEARING SHIM PLATE SCHEDULE

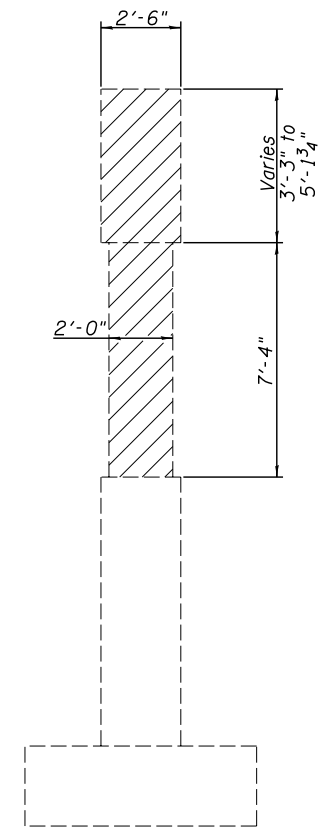
S.N.	Bridge Location	Beam No.	"A" (in.)	"B" (in.)	"C" (in.)	"T" (in.)
090-0071	Pier 1, Span 1	1	4	8	4	5/16
	Pier 1, Span 1	2	4	8	4	1/8
	Pier 1, Span 1	3	4	8	4	3/8
	Pier 1, Span 1	9	4	8	4	5/16
	Pier 1, Span 1	10	4	8	4	15/16
090-0072	Pier 1, Span 1	1	4	8	4	5/8
	Pier 1, Span 1	4	4	8	4	11/16
	Pier 1, Span 1	5	4	8	4	1/4
	Pier 1, Span 1	6,7	4	8	4	1/2

BILL OF MATERIAL

Item	Unit	090-0071	090-0072	Quantity
Elastomeric Bearing Assembly, Type I	Each	20	14	34
Furnishing and Erecting Structural Steel	Each	634	531	1165



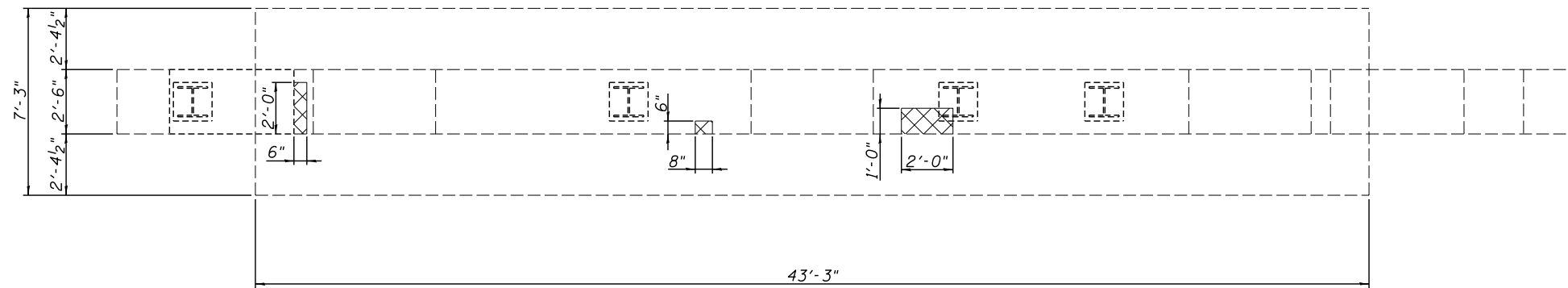
PIER 1 ELEVATION - REMOVAL & REPAIR
(Looking East)



PIER 1 END ELEVATION
(Looking South)

- Denotes concrete removal
- Structural Repair of Concrete (Depth Equal to or Less than 5")

- * Existing HP 14x17 temporary support to be removed and become the property of the Contractor.
- ** Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost included with "Concrete Removal".



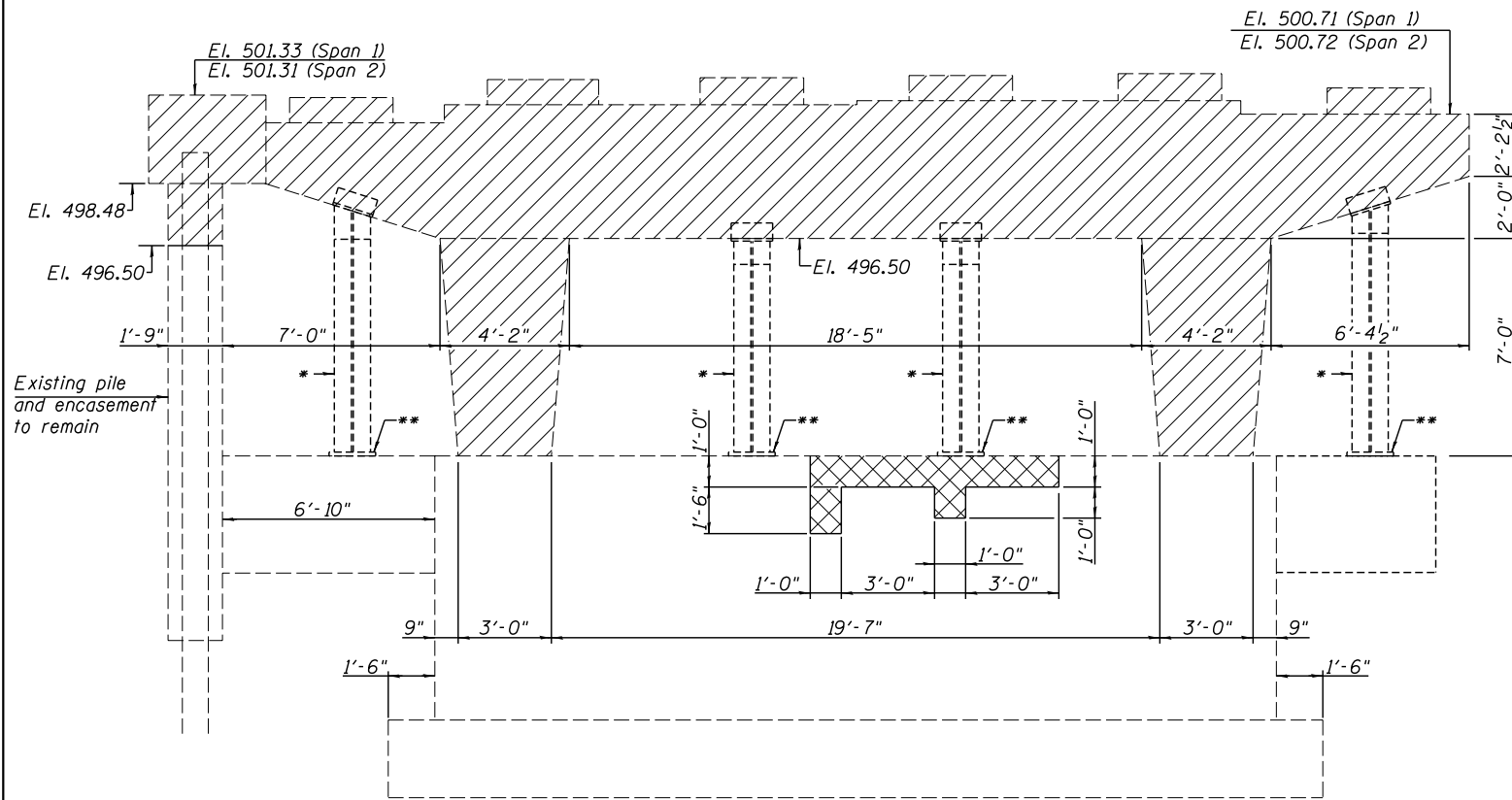
PIER 1 FOOTING PLAN



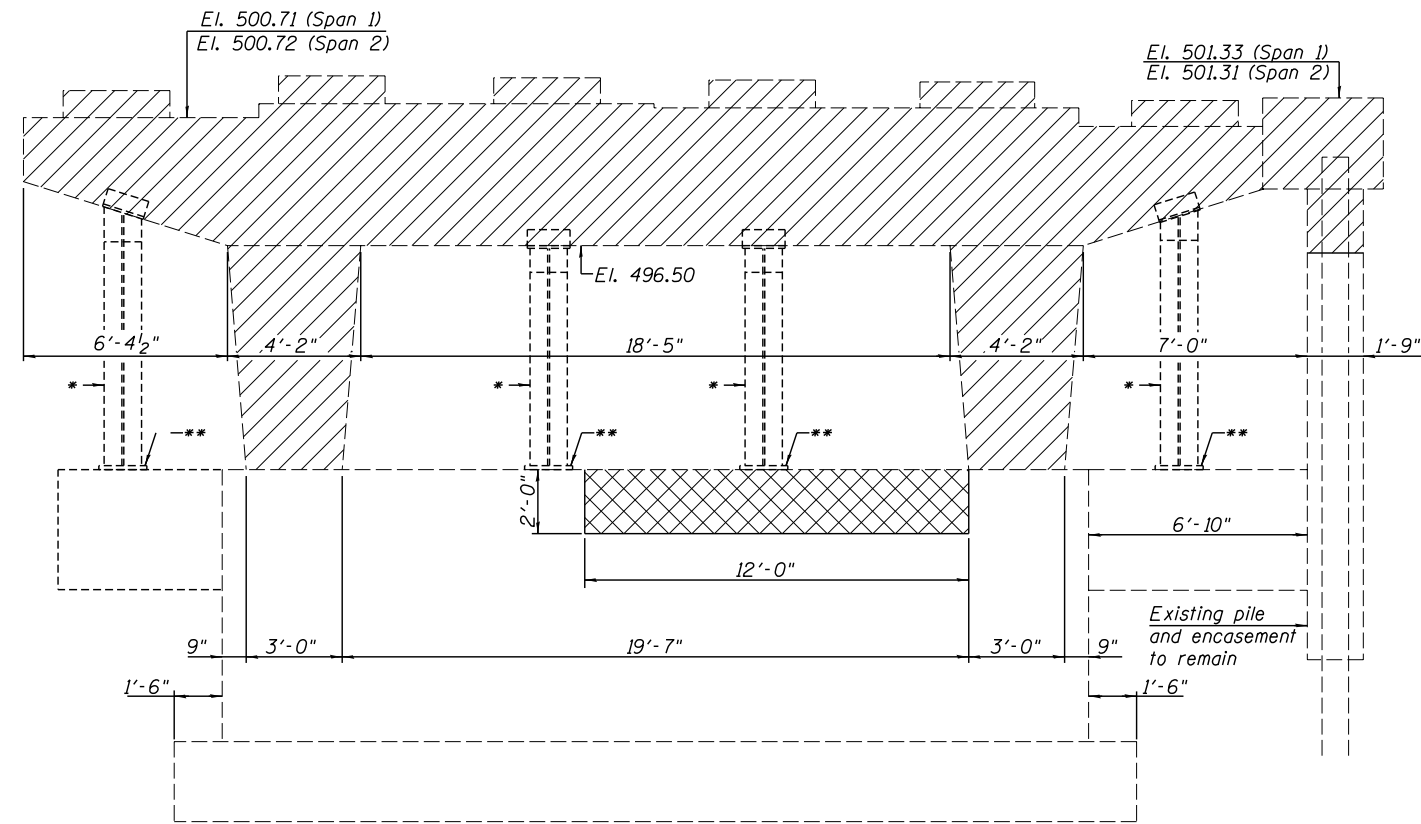
Notes:
Existing reinforcing extending from existing crash wall and pile encasement to be incorporated into new construction. Reinforcement shall be cleaned and straightened. Cost included with Concrete Removal.
Existing elevations shown are taken from the 1996 bridge rehabilitation plans. Contractor shall field verify all elevations and dimensions shown.

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	30.6
Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq. Ft.	8



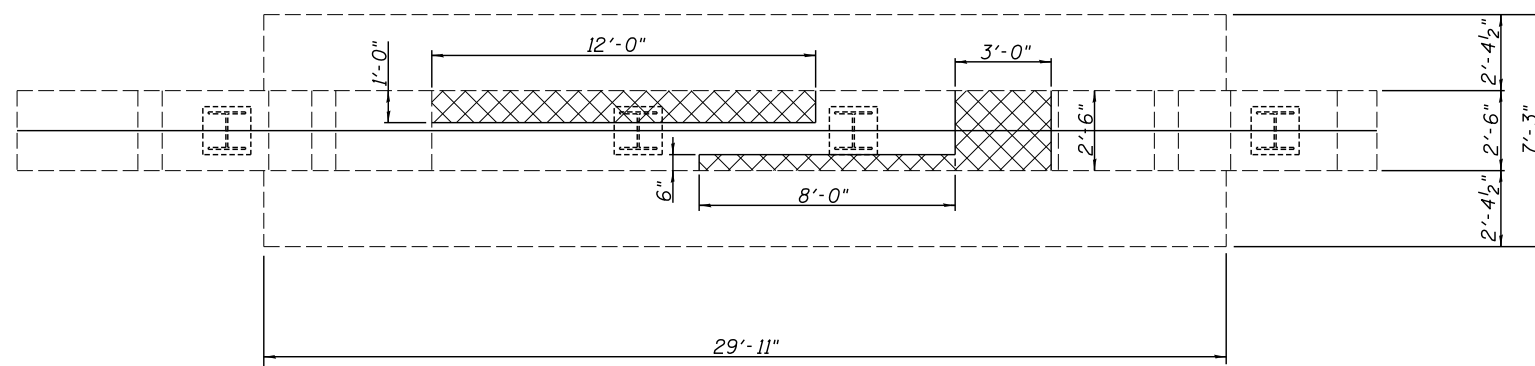
PIER 1 ELEVATION - REMOVAL & REPAIR
(Looking East)



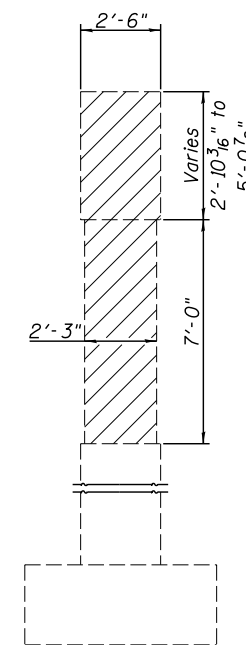
PIER 1 ELEVATION - REMOVAL & REPAIR
(Looking West)

- Denotes concrete removal
- Structural Repair of Concrete (Depth Equal to or Less than 5")

- * Existing HP 14x117 temporary support to be removed and become the property of the Contractor.
- ** Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost included with "Concrete Removal".



PIER 1 FOOTING PLAN

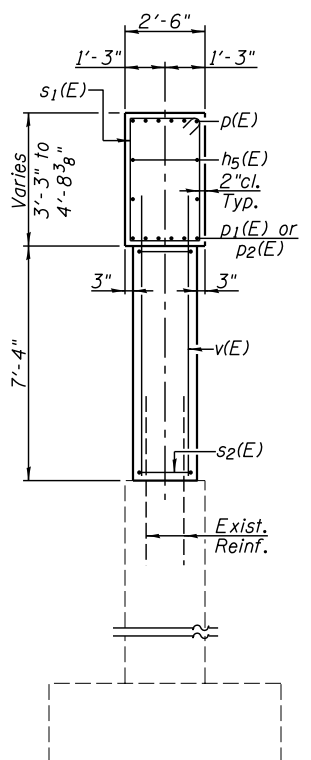
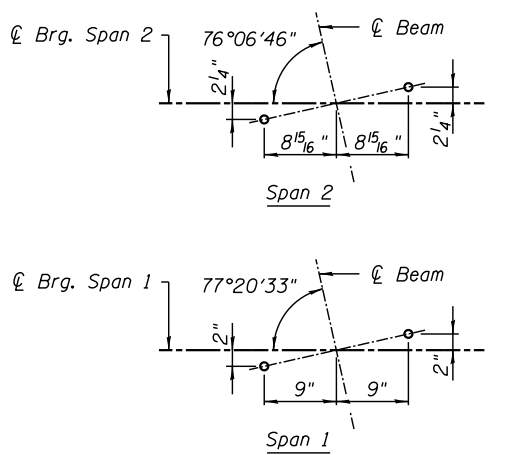
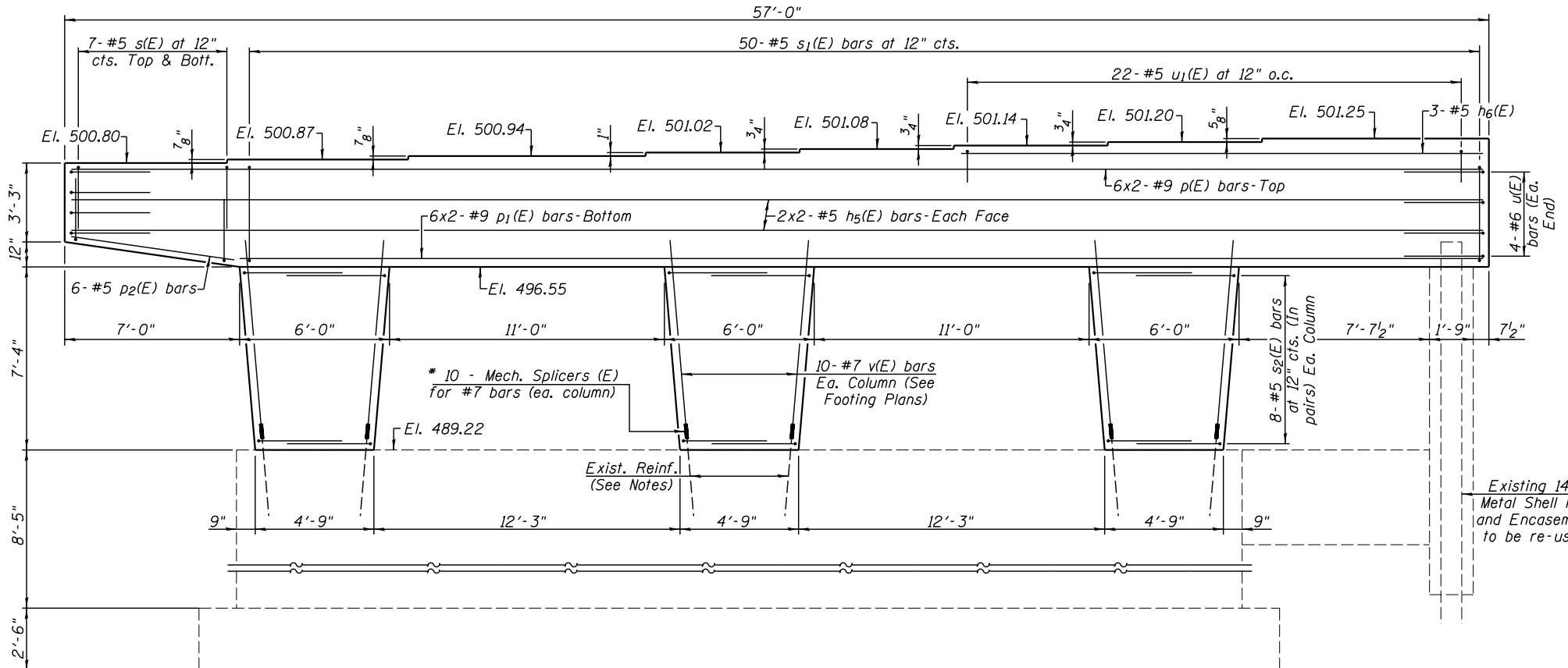
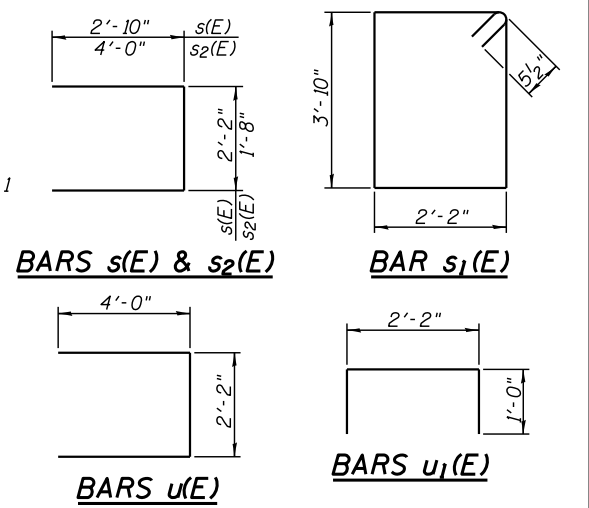
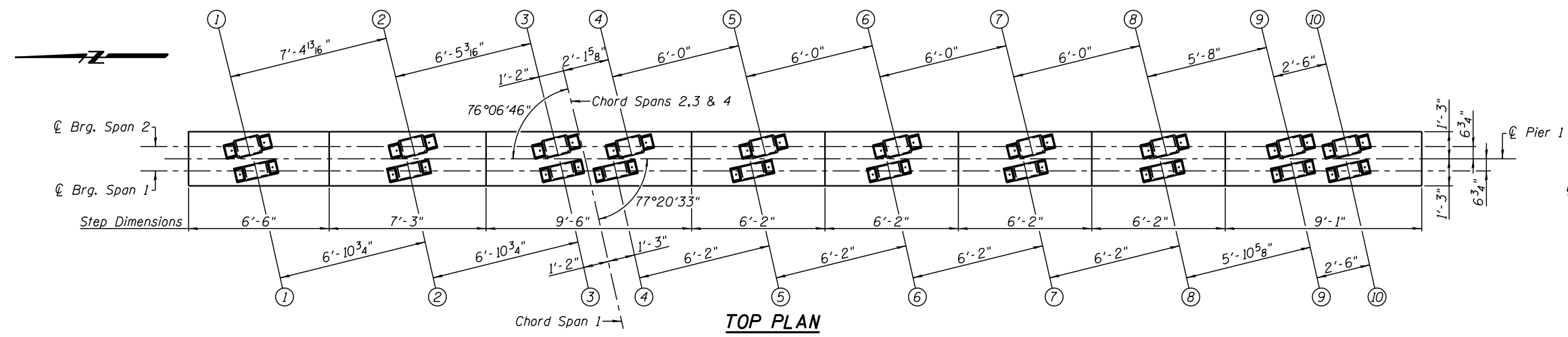


END ELEVATION
(Looking North)

Notes:
Existing reinforcing extending from existing crash wall and pile encasement to be incorporated into new construction. Reinforcement shall be cleaned and straightened. Cost included with Concrete Removal.
Existing elevations shown are taken from the 1996 bridge rehabilitation plans. Contractor shall field verify all elevations and dimensions shown.

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	21.2
Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq. Ft.	58



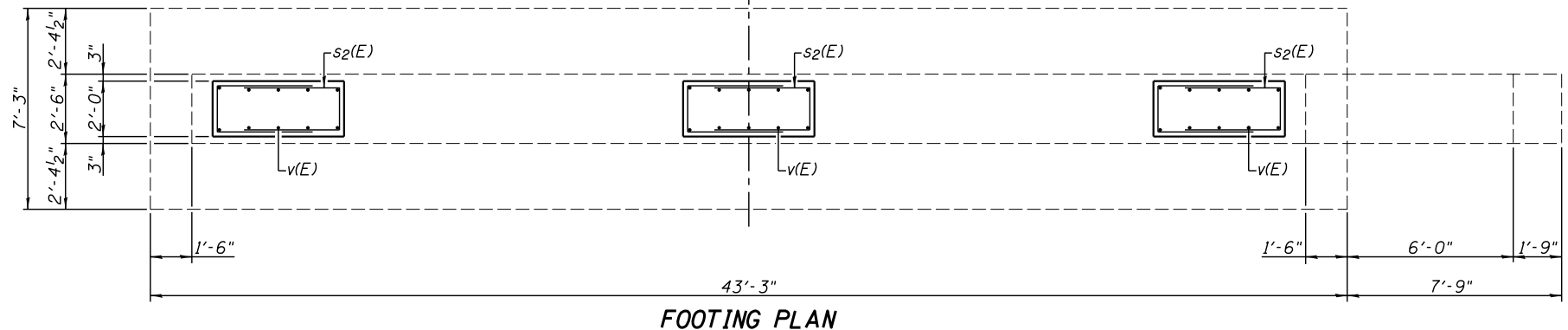
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₅ (E)	8	#5	29'-11"	—
h ₆ (E)	3	#5	21'-0"	—
p(E)	12	#9	33'-6"	—
p ₁ (E)	12	#9	30'-1"	—
p ₂ (E)	6	#5	7'-0"	—
s(E)	14	#5	7'-10"	⊏
s ₁ (E)	50	#5	12'-11"	⊏
s ₂ (E)	48	#5	9'-8"	⊏
u(E)	8	#6	10'-2"	⊏
u ₁ (E)	22	#5	4'-2"	⊏
v(E)	30	#7	10'-0"	—
Reinforcement Bars, Epoxy Coated			Lbs.	5060
Concrete Structures			Cu. Yd.	32.0
Mechanical Splicers			Each	30

ELEVATION
(Looking East)

* Cut existing reinforcement ±6" above crash wall to allow for mechanical splicers.

MIN. BAR LAP
#5 bar = 3'-2"
#9 bar = 10'-4"



FOOTING PLAN

Notes: All edges shall have a standard 3/4" chamfer except as noted.
Existing reinforcement extending into concrete removal shall be cleaned, straightened and incorporated into the new concrete. Cost included with Concrete Removal.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.



USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

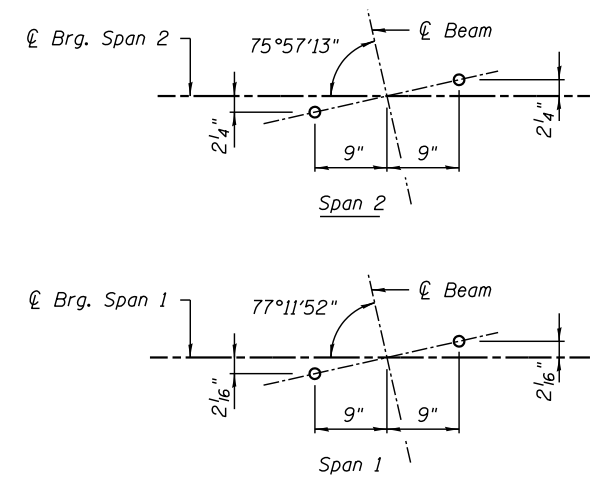
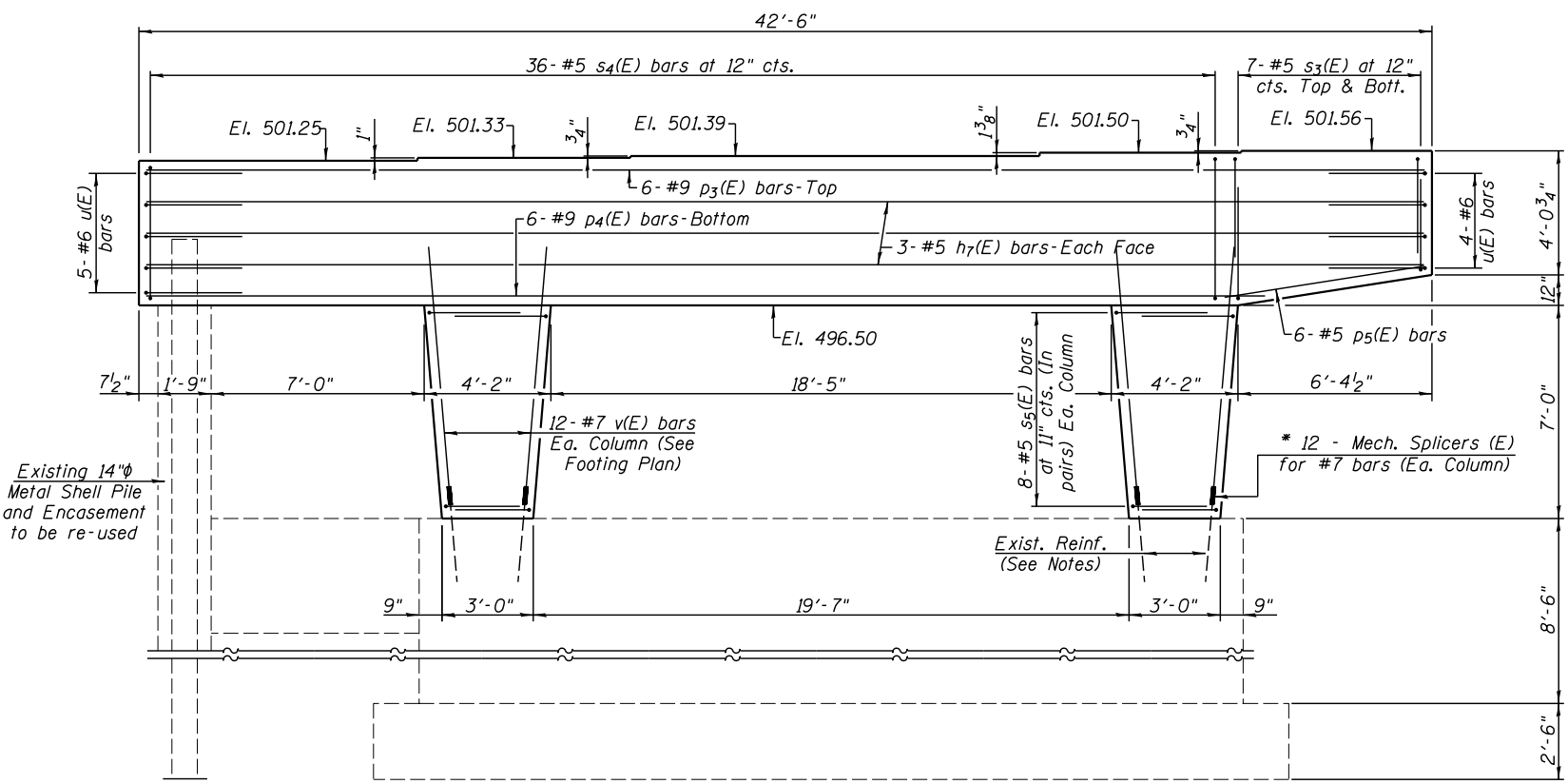
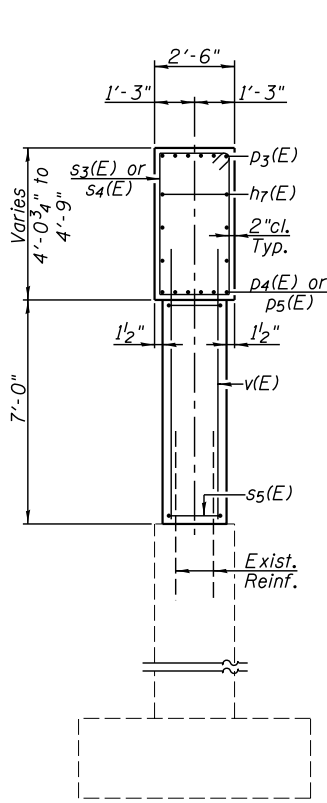
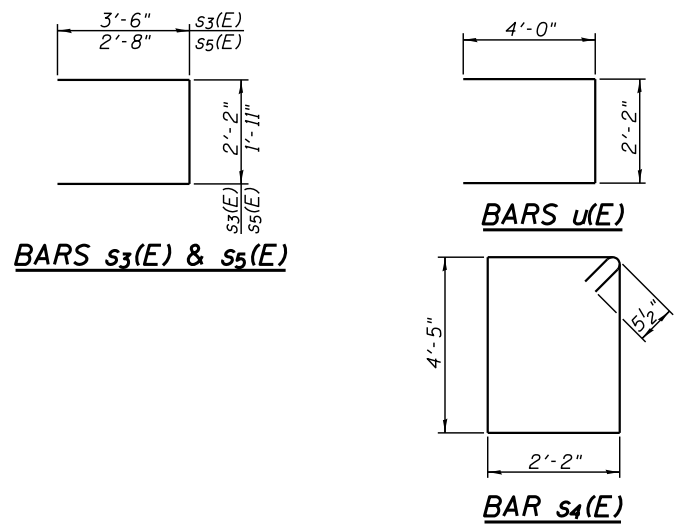
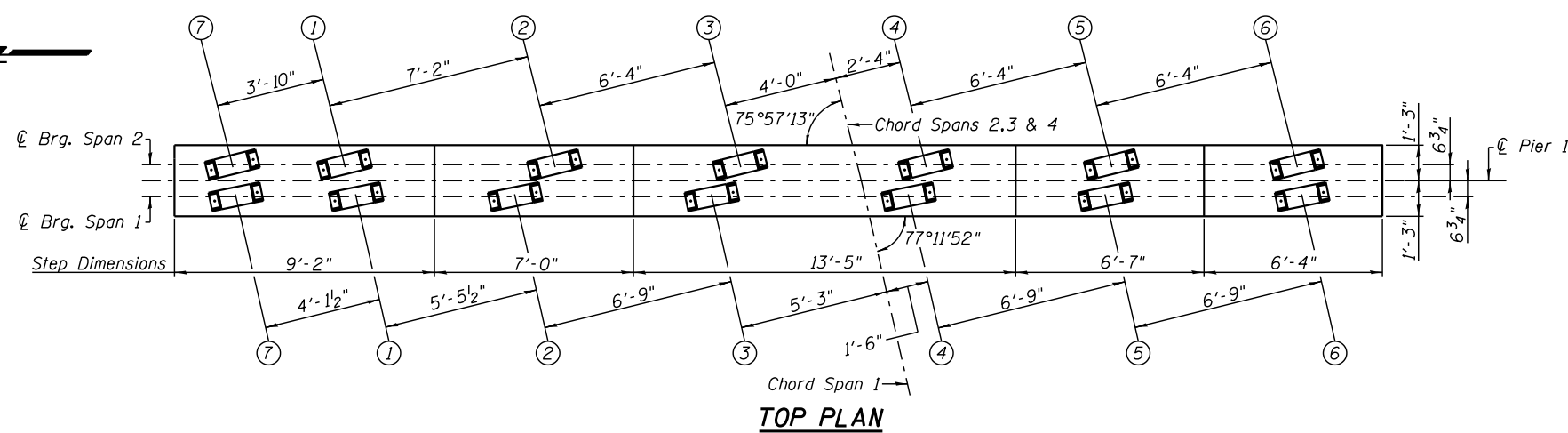
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 DETAILS
STRUCTURE NO. 090-0071

SHEET NO. 19 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	40
CONTRACT NO. 68D85				

ILLINOIS FED. AID PROJECT



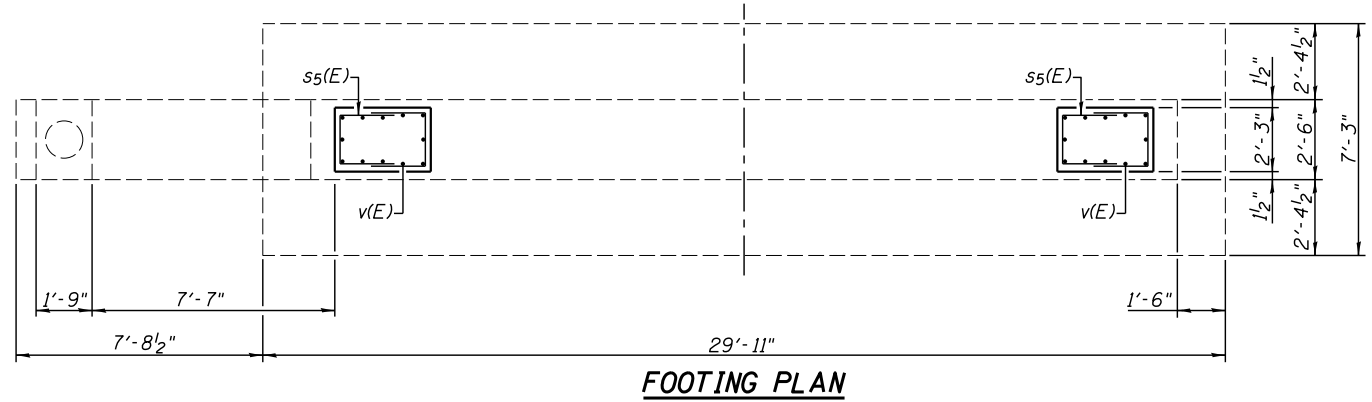
ANCHOR BOLT SETTING DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h7(E)	6	#5	42'-2"	—
p3(E)	6	#9	42'-2"	—
p4(E)	6	#9	36'-0"	—
p5(E)	6	#5	6'-4"	—
s3(E)	14	#5	9'-2"	□
s4(E)	36	#5	14'-1"	□
s5(E)	32	#5	7'-3"	□
u(E)	9	#6	10'-2"	□
v(E)	24	#7	10'-0"	—
Reinforcement Bars, Epoxy Coated			Lbs.	3430
Concrete Structures			Cu. Yd.	25.8
Mechanical Splicers			Each	24

MIN. BAR LAP
 #5 bar = 3'-2"
 #9 bar = 10'-4"

Notes: All edges shall have a standard 3/4" chamfer except as noted.
 Existing reinforcement extending into concrete removal shall be cleaned, straightened and incorporated into the new concrete. Cost included with Concrete Removal.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.



FOOTING PLAN



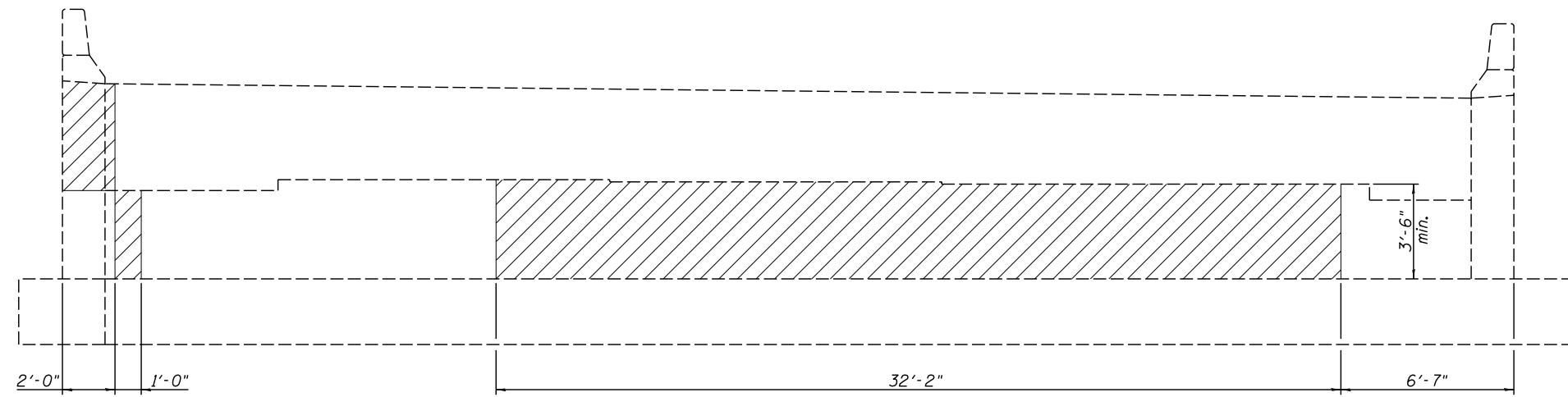
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PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PIER 1 DETAILS
 STRUCTURE NO. 090-0072**

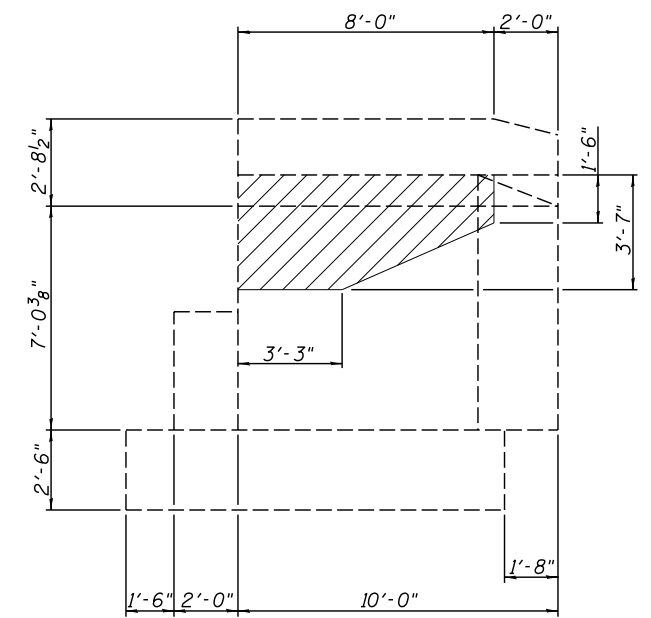
SHEET NO. 20 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[[102-HB]]JBR	TAZEWELL	65	41
CONTRACT NO. 68D85			ILLINOIS FED. AID PROJECT	

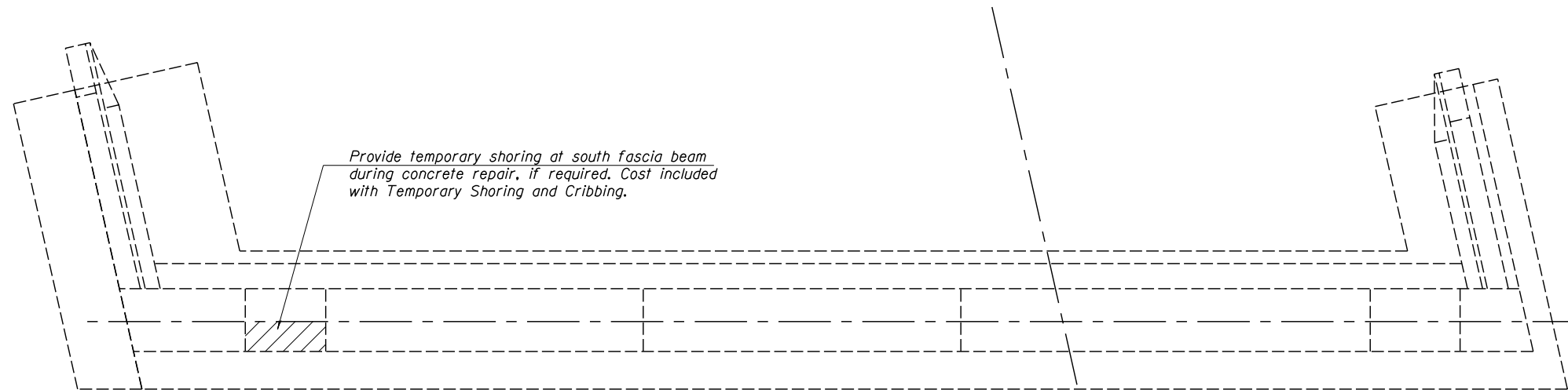


ELEVATION - REMOVAL

- Structural Repair of Concrete
(Depth equal to or less than 5 inches)



NORTH WINGWALL ELEVATION

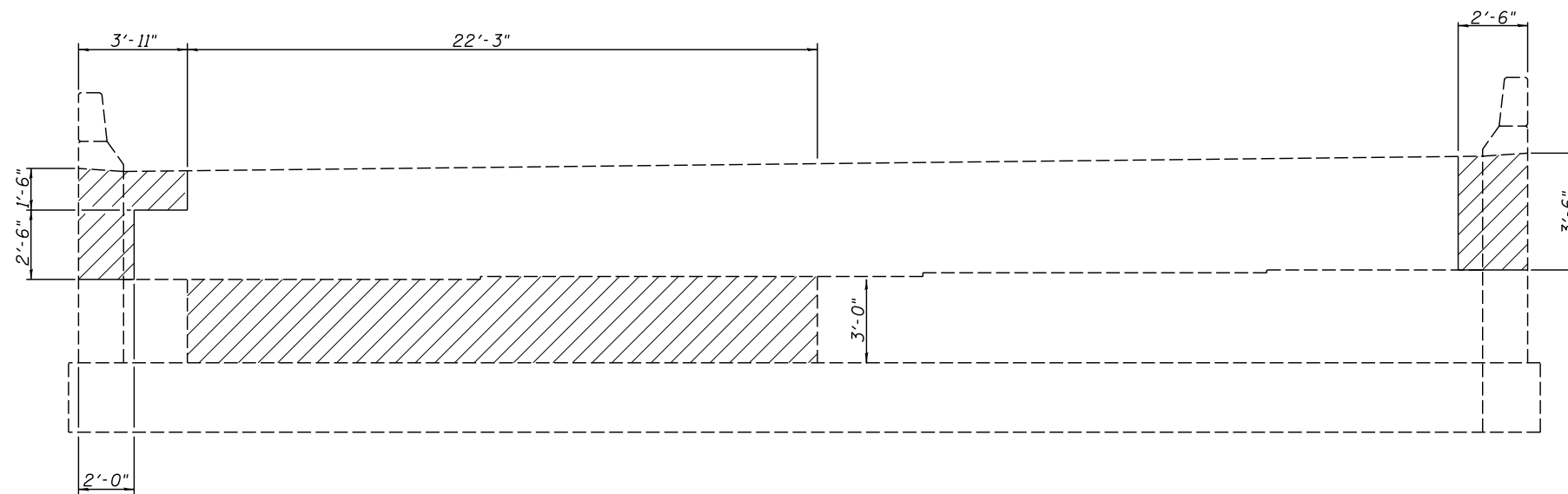


Provide temporary shoring at south fascia beam during concrete repair, if required. Cost included with Temporary Shoring and Cribbing.


PLAN - REMOVAL

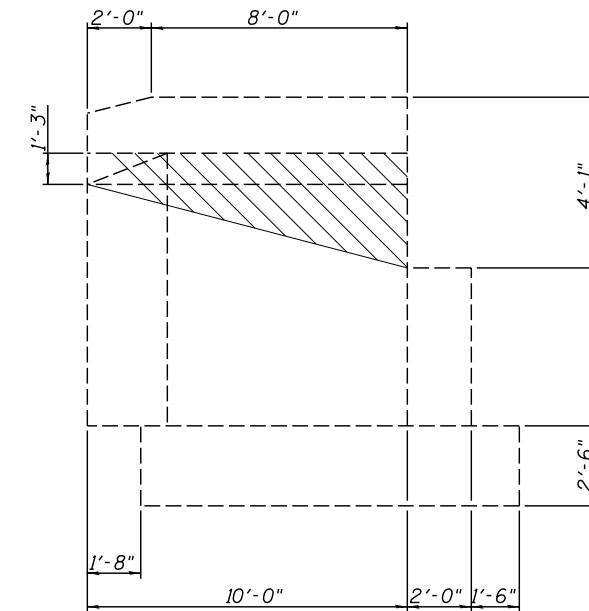
BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	153
Temporary Shoring and Cribbing	Each	1

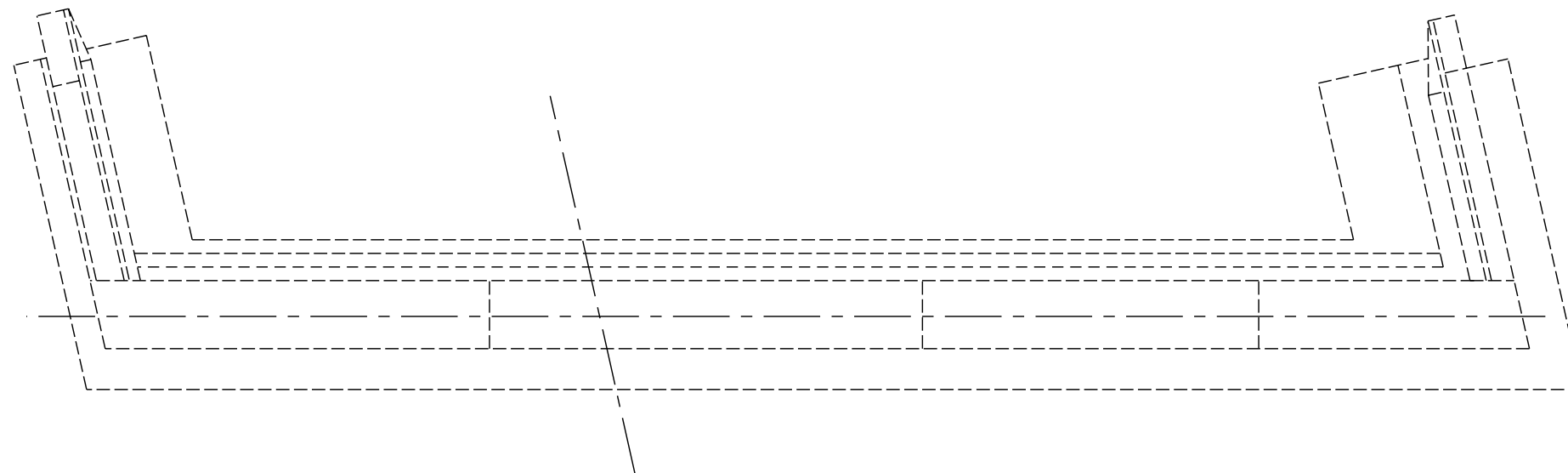


ELEVATION - REMOVAL

 - Structural Repair of Concrete
(Depth equal to or less than 5 inches)



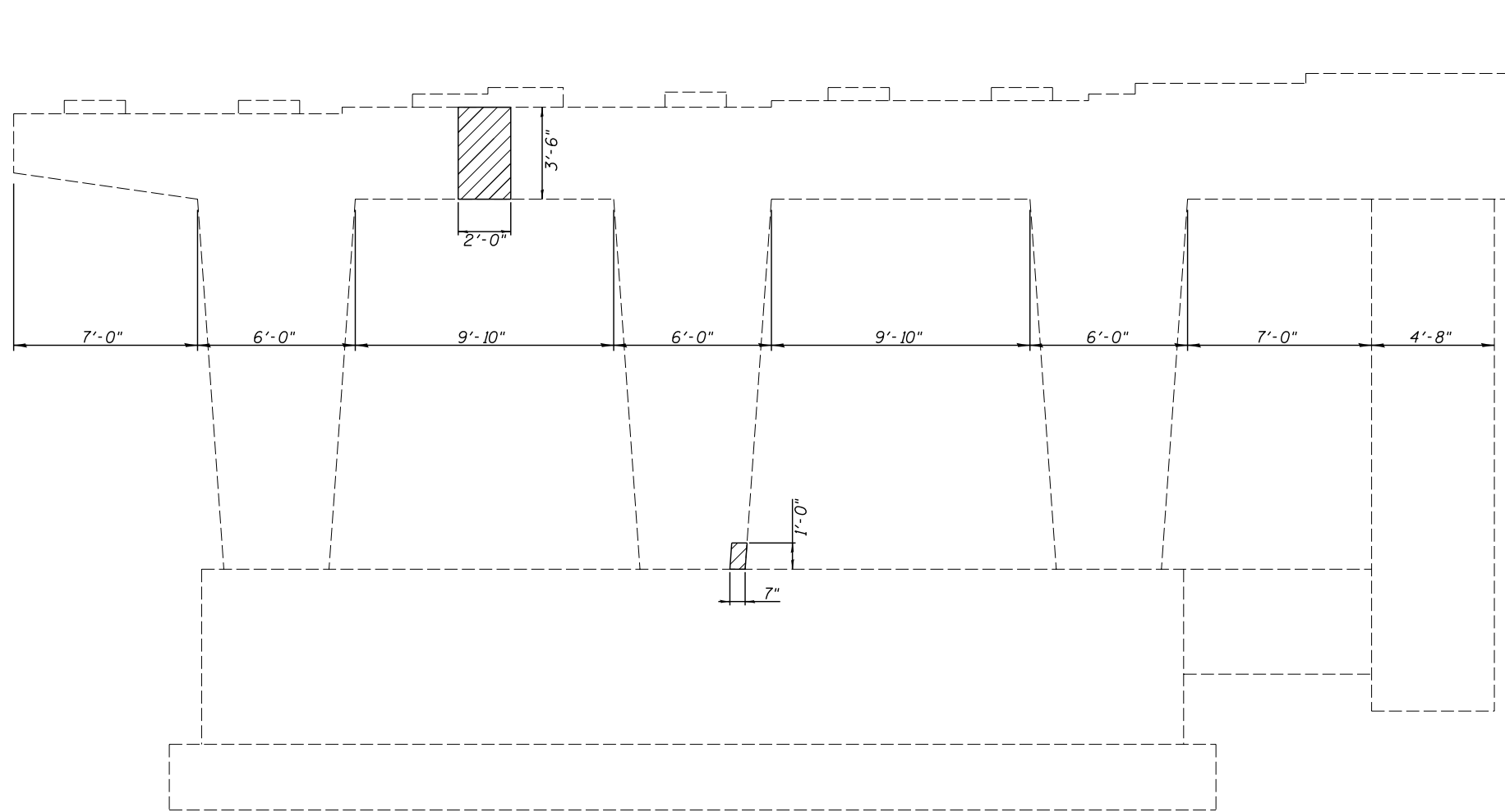
NORTH WINGWALL ELEVATION



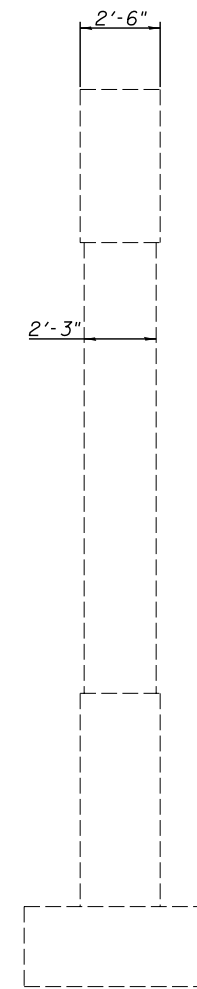
PLAN - REMOVAL

BILL OF MATERIAL


Item	Unit	Quantity
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	112

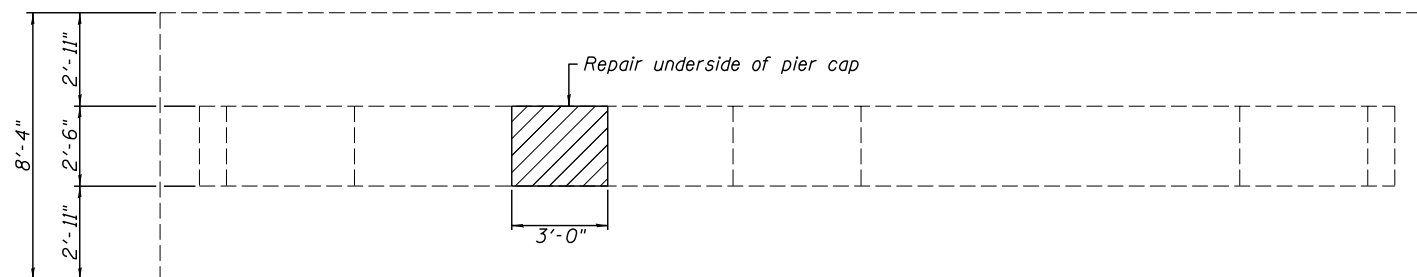


PIER 3 ELEVATION - REPAIR
(Looking East)



END ELEVATION
(Looking North)

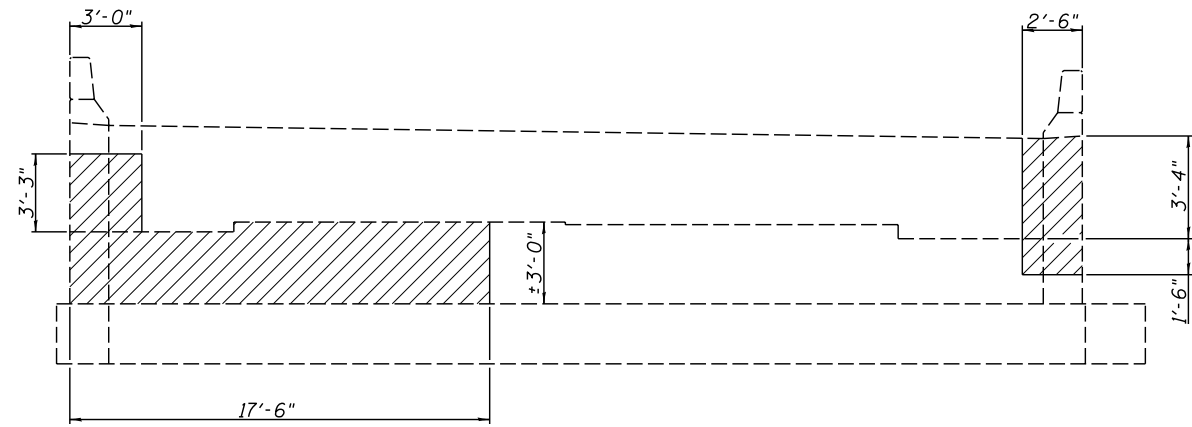
 - Denotes concrete repair




PIER 3 FOOTING PLAN

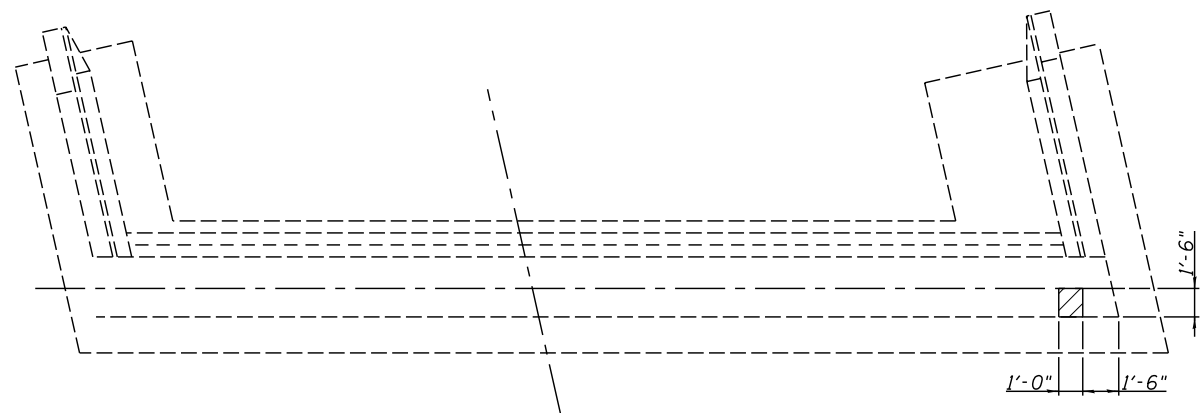
BILL OF MATERIAL

Item	Unit	
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	15

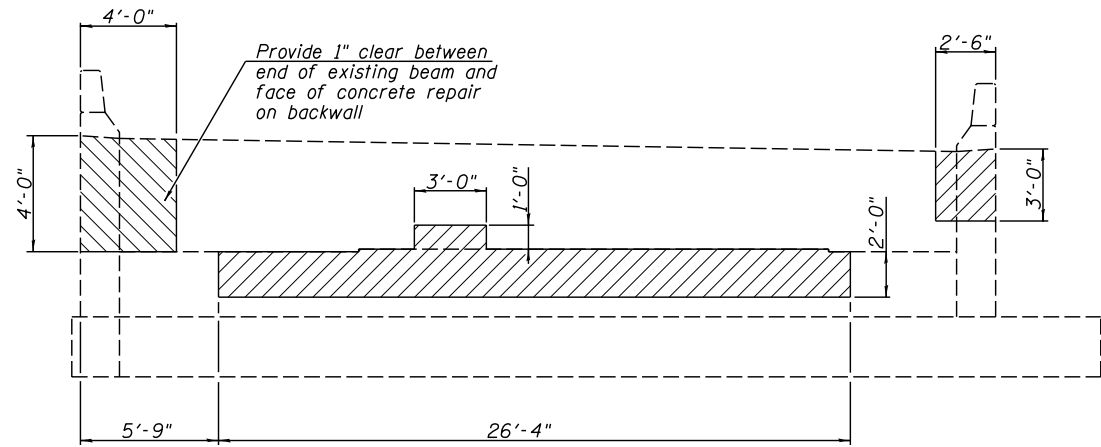


ELEVATION - REPAIR
(West Abutment)



 - Structural Repair of Concrete
(Depth equal to or less than 5 inches)

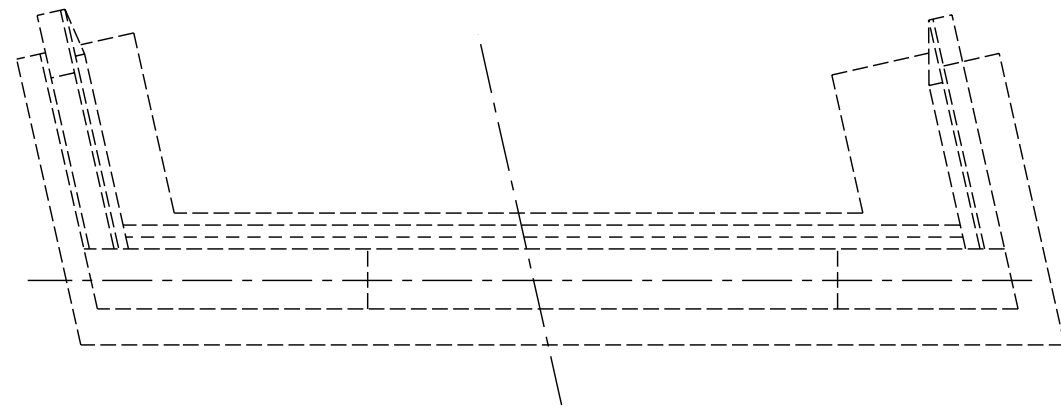


PLAN - REPAIR
(West Abutment)



ELEVATION - REPAIR
(East Abutment)

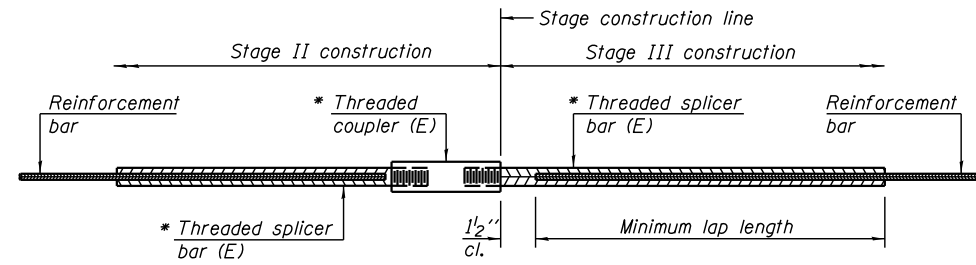
 - Structural Repair of Concrete
(Depth equal to or less than 5 inches)
 - Structural Repair of Concrete (Depth Greater Than 5")



PLAN - REPAIR
(East Abutment)

BILL OF MATERIAL

Item	Unit	W. Abut. Quantity	E. Abut. Quantity
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	76	64
Structural Repair of Concrete (Depth Greater Than 5")	Sq. Ft.		16

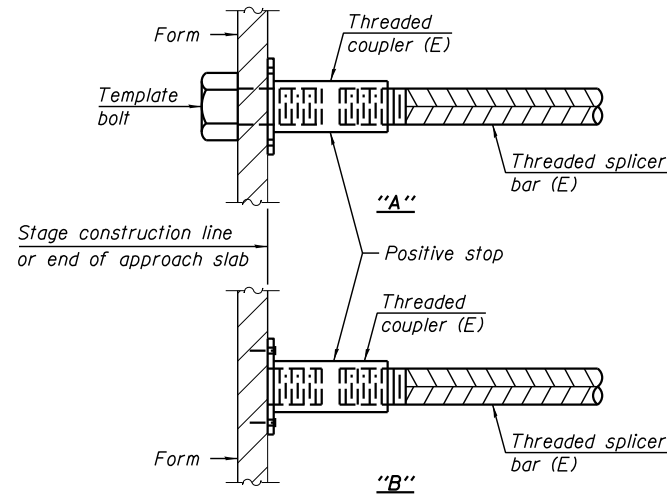


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

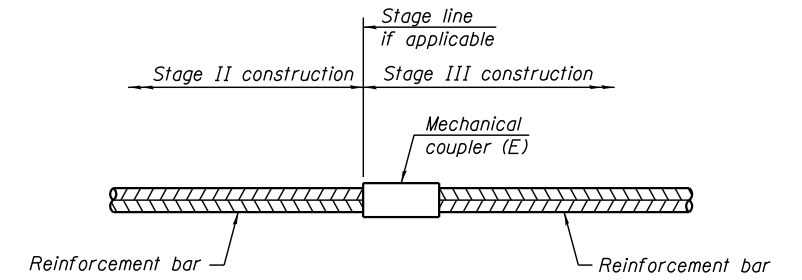
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

	Location	Bar size	No. assemblies required	Minimum lap length
SN 090-0071	Deck	#5	32	3'-2"
	Backwall	#6	8	3'-10"
SN 090-0072	Deck	#5	32	3'-2"
	Backwall	#6	8	3'-10"



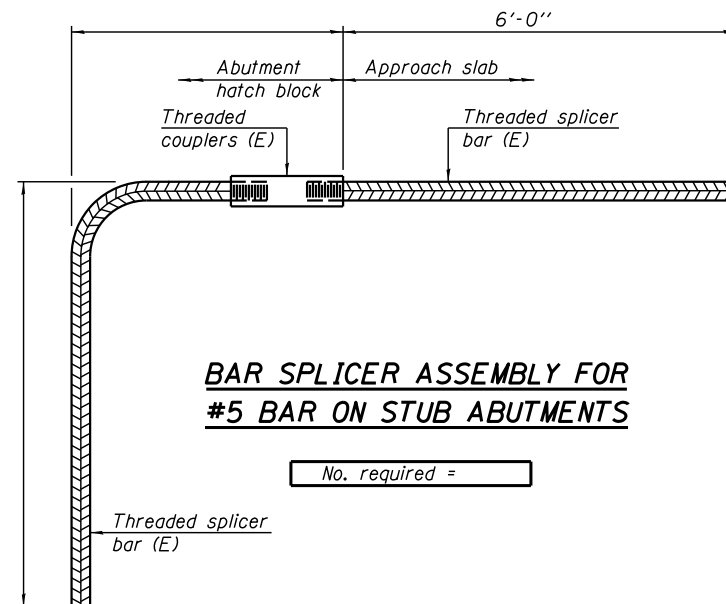
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

	Location	Bar size	No. assemblies required
SN 090-0071	Pier 1 Columns	#7	30
SN 090-0072	Pier 1 Columns	#7	24



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

2-17-2017



USER NAME =	DESIGNED - MAH	REVISED -
	CHECKED - KES	REVISED -
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 090-0071 & 090-0072

SHEET NO. 25 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	46
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				

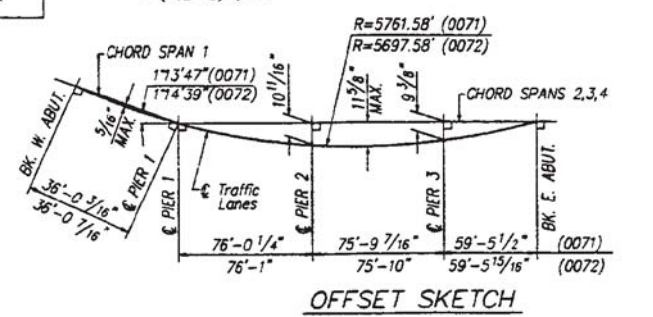
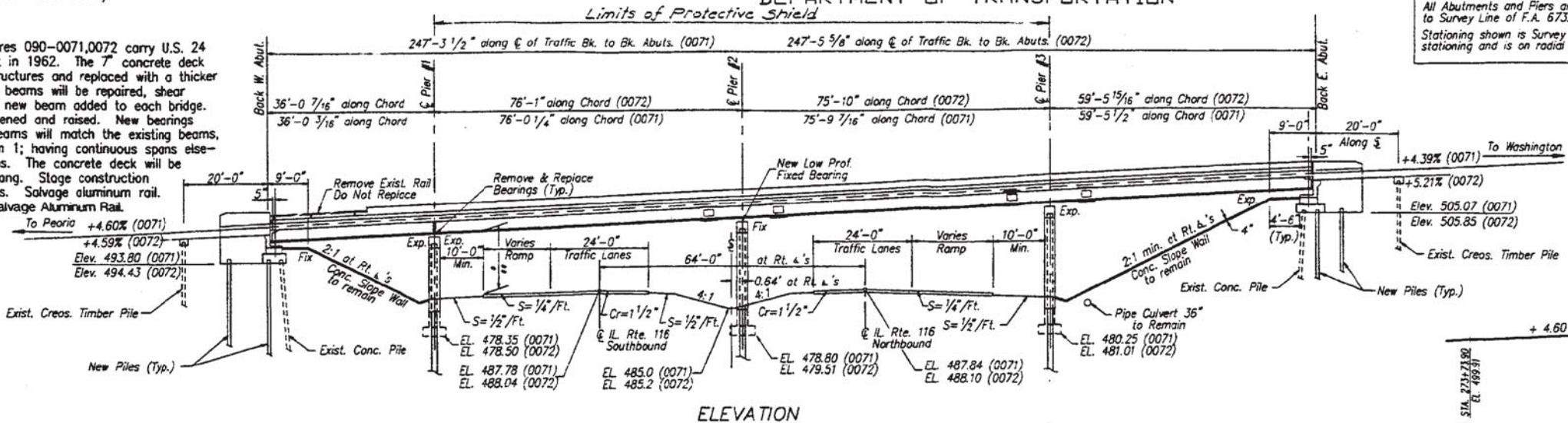
B.M. #104
 "a" S. End of W. Abut. (S.N. 090-0072)
 Sec. 102HB
 Elev. 504.63

The existing 4-span structures 090-0071, 0072 carry U.S. 24 over IL 116, and were built in 1962. The 7" concrete deck will be removed on both structures and replaced with a thicker 7 1/2" concrete deck. Steel beams will be repaired, shear connectors placed, and one new beam added to each bridge. The substructure will be widened and raised. New bearings will be installed. The new beams will match the existing beams, having simple spans in Span 1; having continuous spans elsewhere; having straight beams. The concrete deck will be curved with a varying overhang. Stage construction will be used on both bridges. Salvage aluminum rail will be used on both bridges. See Special Provisions for Salvage Aluminum Rail.

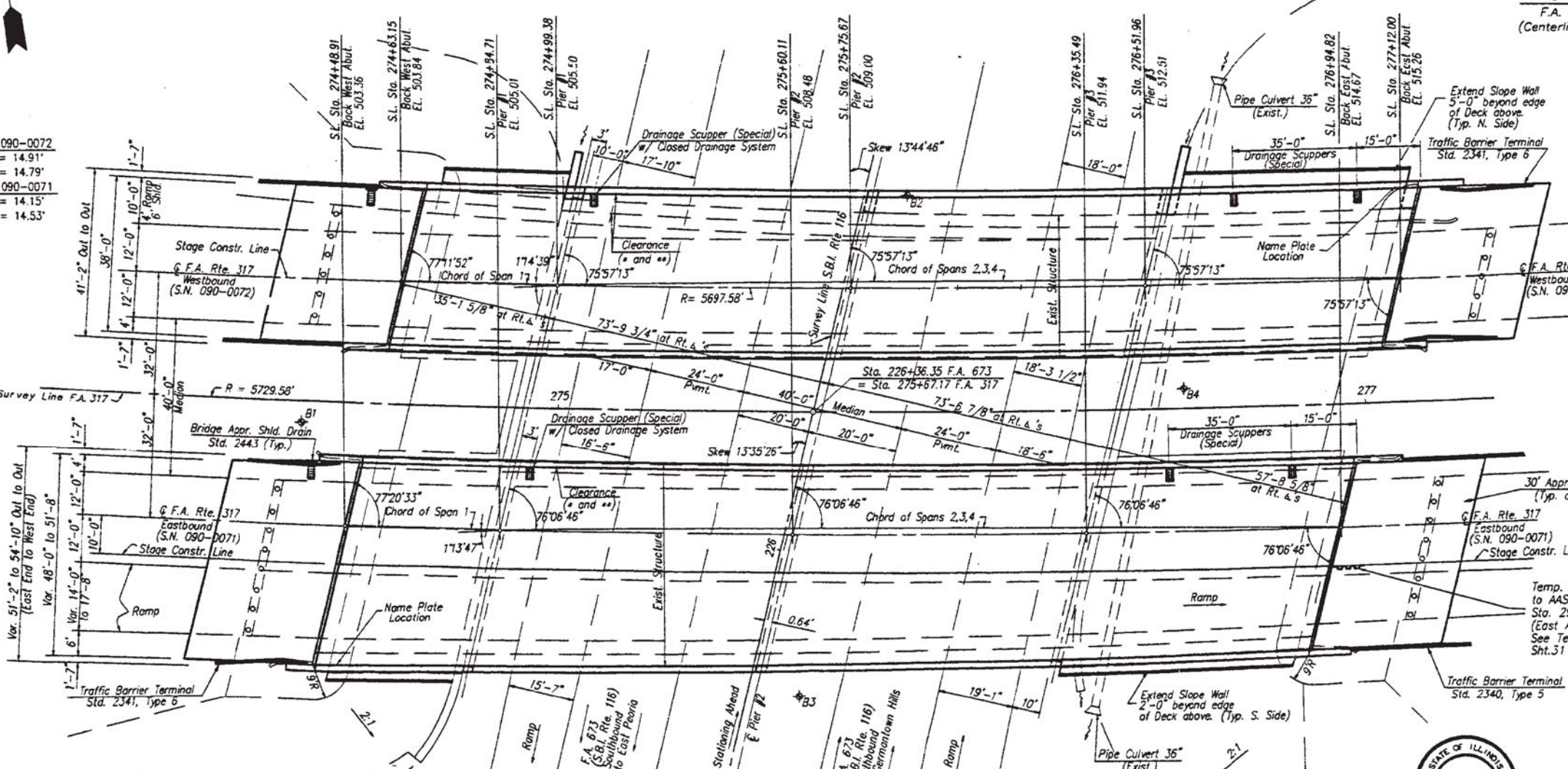
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

NOTES:
 All Abutments and Piers are parallel to Survey Line of F.A. 673.
 Stationing shown is Survey Line stationing and is on radial lines.

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 1
F.A. 317	#	TAZEWELL		51	44 SHEETS
FED. ROAD DIST. NO. 7					
ILLINOIS FED. AID PROJECT					
# (102 HB) I, I-1					



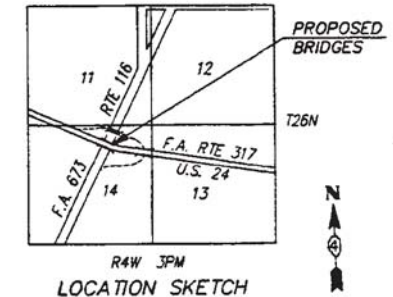
Clearances: 090-0072
 Existing: * = 14.91'
 Proposed: ** = 14.79'
 Clearances: 090-0071
 Existing: * = 14.15'
 Proposed: ** = 14.53'



DESIGN	K. Fields
CHECKED	D.L. Maurer
DRAWING	S. Ford
CHECKED	D.L. Maurer

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
 DAVID L. MAURER, S.E. NO. 3921
 ENGINEER OF BRIDGES AND STRUCTURES

STATION BUILT 19 BY STATE OF ILLINOIS F.A. RT. 317 SEC.(102 HB) I-1
 LOADING HS20 *STR. NO.
 STATION BUILT 19 BY STATE OF ILLINOIS F.A. RT. 317 SEC.(102 HB) I-1
 LOADING HS20 *STR. NO.
 NAME PLATE See Std. 2113



GENERAL PLAN & ELEVATION
 F.A. 317 (102 HB) I, I-1
 SECTION 102 HB
 TAZEWELL COUNTY

RAN CONSULTANTS, INC.
 Veenstra & Kimm, Inc.
 Springfield, IL. Phone: (217)544-8033

DESIGNED	MAH	REVISED	
CHECKED	KES	REVISED	
DRAWN	JRP	REVISED	
CHECKED	MAH	REVISED	

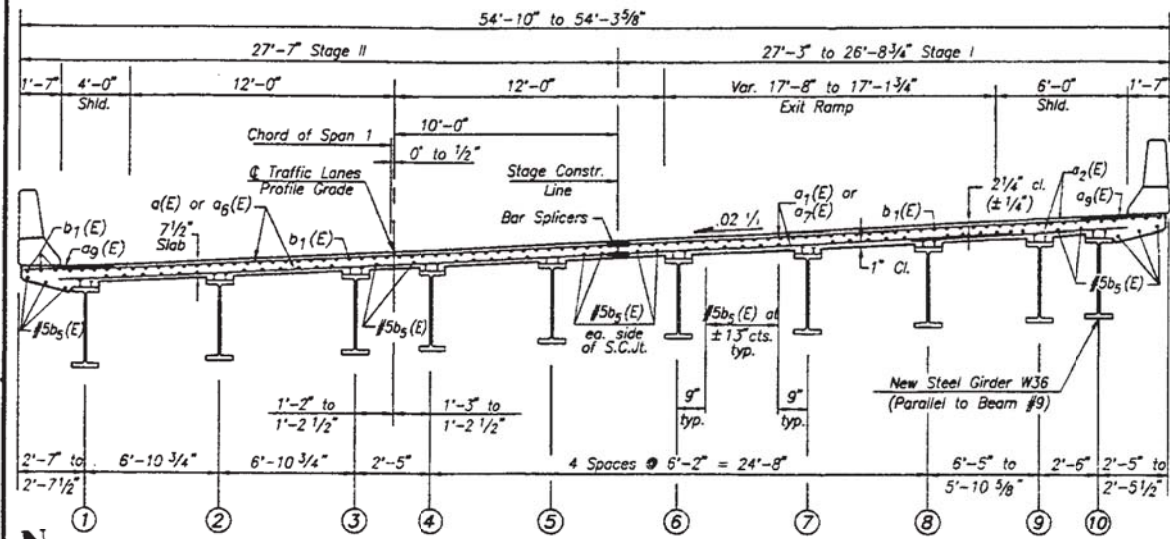
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
 STRUCTURE NO. 090-0071 & 090-0072

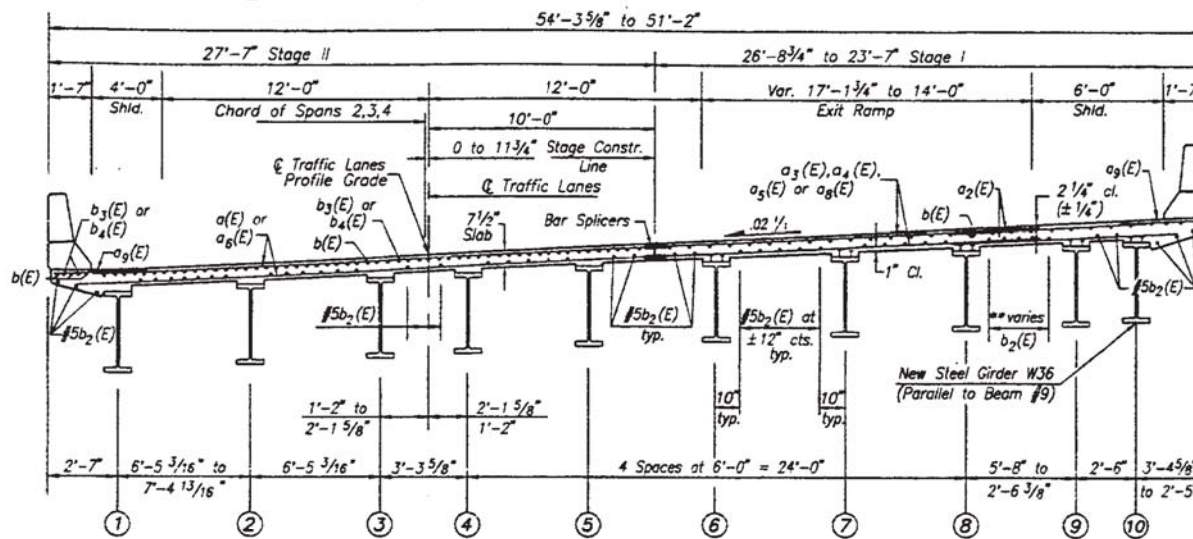
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)I]BR	TAZEWELL	65	47
CONTRACT NO. 68085				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A. 317		TAZEWELL	58	44 SHEETS
* (102 HB) I, 1-1				



DECK SECTION
Span 1 Looking East

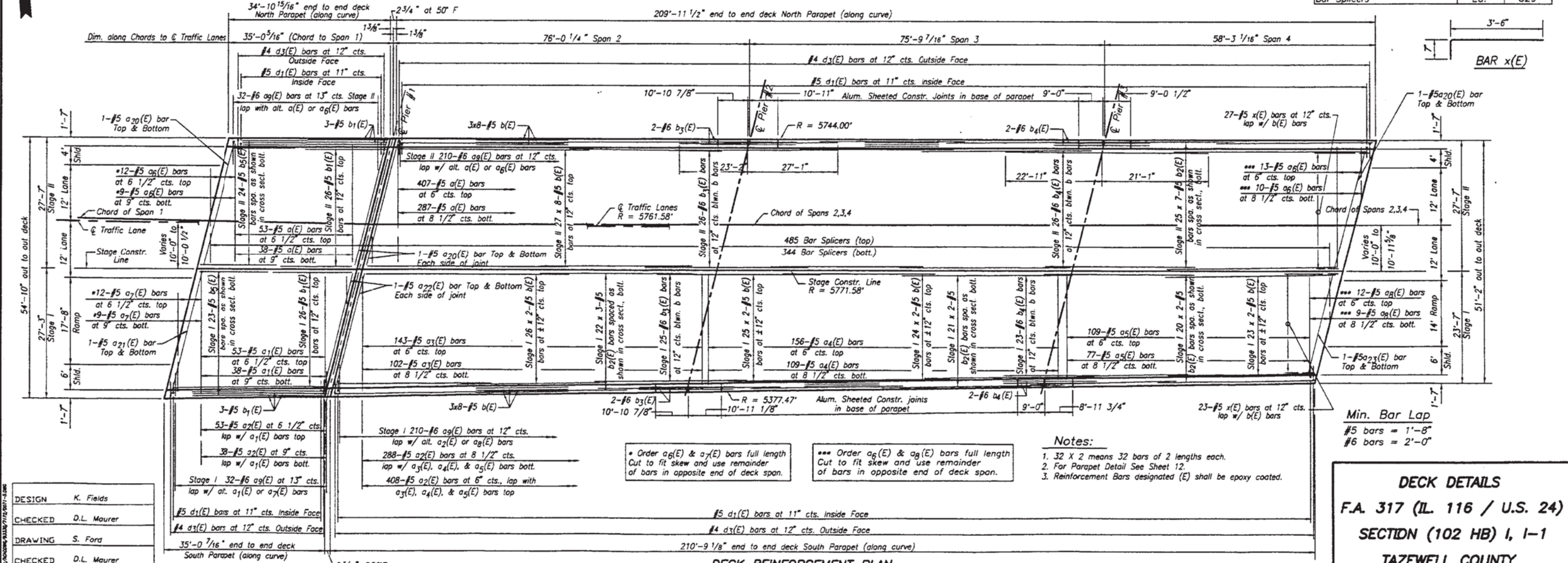


DECK SECTION
Spans 2,3,4 Looking East

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	785	#5	26'-6"	
a1(E)	91	#5	17'-8"	
a2(E)	787	#5	10'-0"	
a3(E)	245	#5	17'-8"	
a4(E)	265	#5	16'-9"	
a5(E)	186	#5	15'-10"	
a6(E)	44	#5	26'-4"	
a7(E)	21	#5	26'-0"	
a8(E)	21	#5	24'-6"	
a9(E)	484	#6	4'-0"	
a20(E)	8	#5	27'-8"	
a21(E)	2	#5	27'-4"	
a22(E)	4	#5	26'-9"	
a23(E)	2	#5	23'-9"	
b(E)	460	#5	27'-9"	
b1(E)	58	#5	34'-6"	
b2(E)	323	#5	31'-6"	
b3(E)	55	#6	50'-3"	
b4(E)	53	#6	44'-0"	
b5(E)	47	#5	34'-6"	
x(E)	50	#5	4'-1"	

Concrete Superstructures	Cu.Yd.	332.6
Reinforcement Bars, Epoxy Ct.	Lbs.	85,040
Bar Splicers	Ea.	829



DECK REINFORCEMENT PLAN

DESIGN	K. Fields
CHECKED	D.L. Maurer
DRAWING	S. Ford
CHECKED	D.L. Maurer

- Notes:**
- 32 X 2 means 32 bars of 2 lengths each.
 - For Parapet Detail See Sheet 12.
 - Reinforcement Bars designated (E) shall be epoxy coated.

DECK DETAILS
F.A. 317 (IL 116 / U.S. 24)
SECTION (102 HB) I, 1-1
TAZEWELL COUNTY

R.A.N. CONSULTANTS, INC.



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	CHECKED - MAH	REVISED -

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DEPARTMENT OF TRANSPORTATION

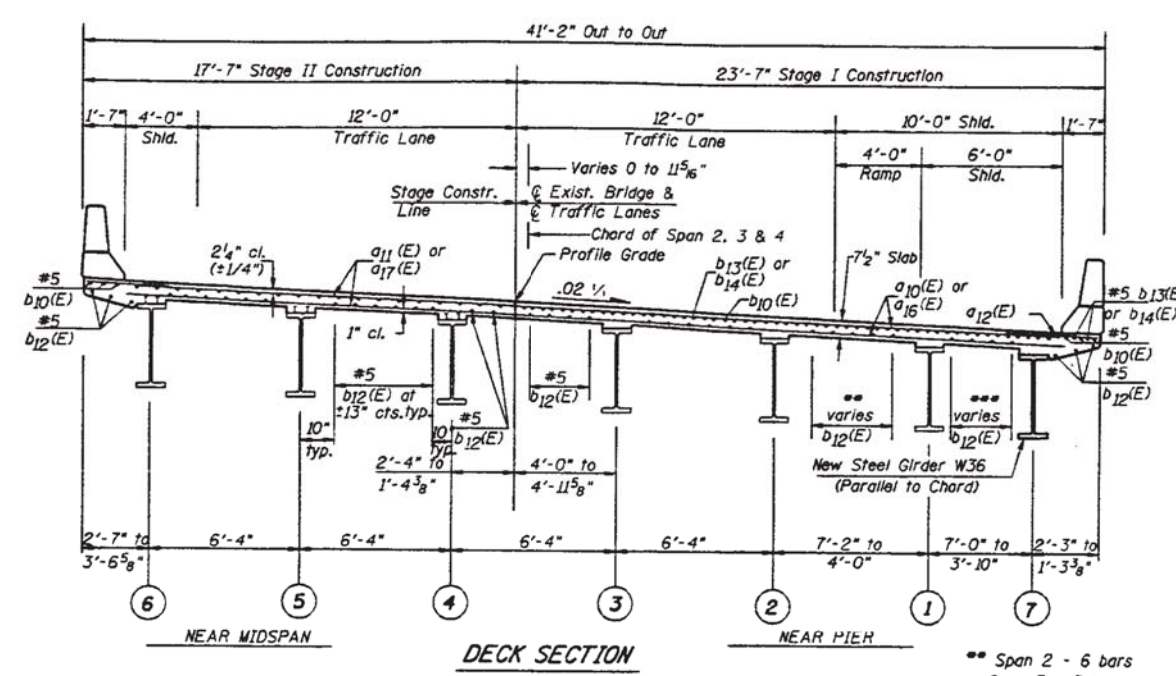
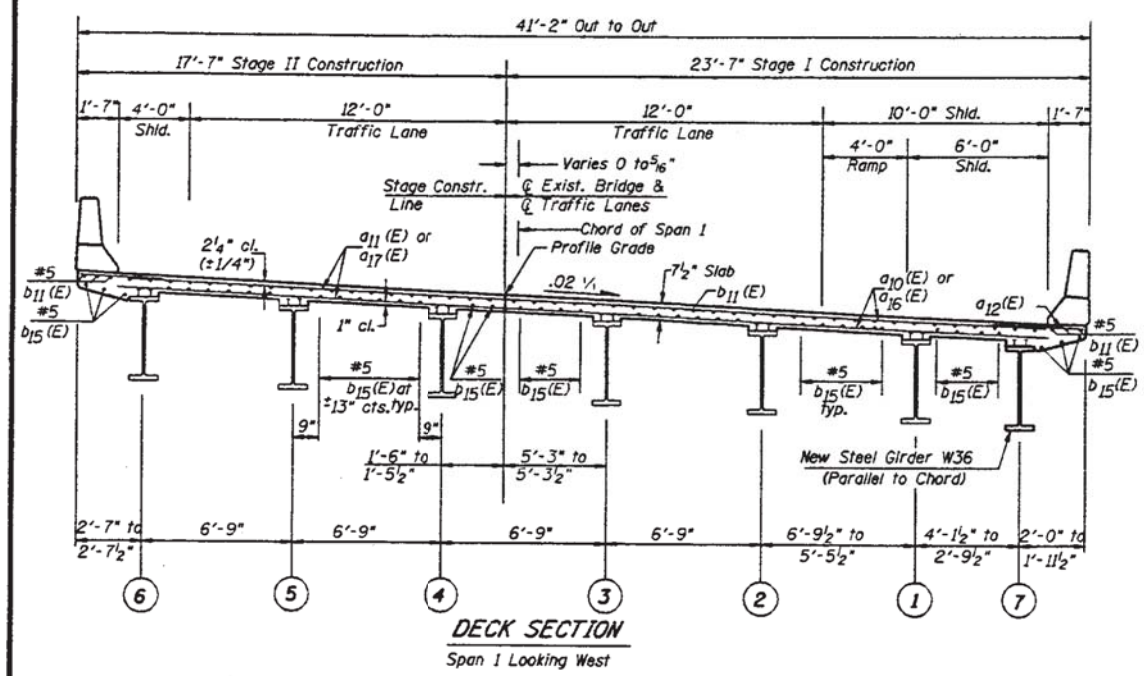
EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0071
SHEET NO. 2 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)I]BR	TAZEWELL	65	48
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	REVISION	BY	NO.	SHEET NO.
F.A. 317	*	TAZEWELL	59	44 SHEETS

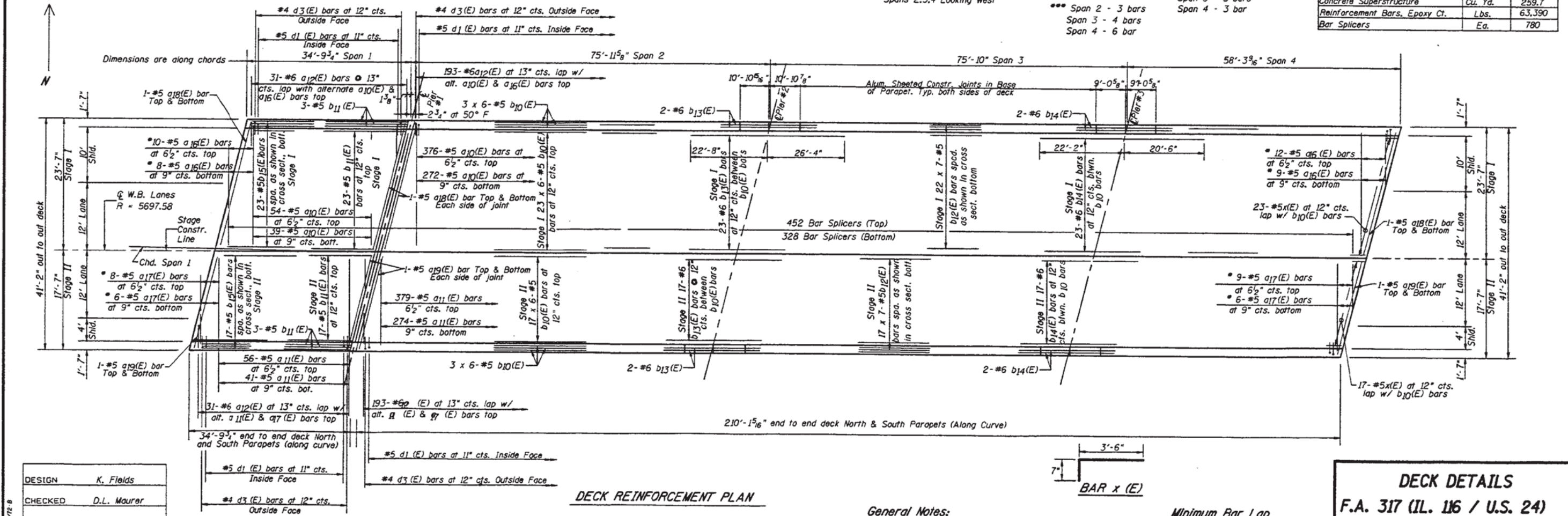
*(102 HB) I, 1-1



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁₀ (E)	741	#5	22'-5"	
a ₁₁ (E)	750	#5	16'-5"	
a ₁₂ (E)	448	#6	4'-0"	
a ₁₃ (E)	39	#5	21'-9"	
a ₁₇ (E)	29	#5	16'-5"	
a ₁₈ (E)	8	#5	23'-10"	
a ₁₉ (E)	8	#5	17'-8"	
b ₁₀ (E)	276	#5	36'-5"	
b ₁₁ (E)	46	#5	34'-6"	
b ₁₂ (E)	273	#5	31'-7"	
b ₁₃ (E)	44	#6	49'-0"	
b ₁₄ (E)	44	#6	42'-8"	
b ₁₅ (E)	40	#5	34'-6"	
x(E)	40	#5	4'-1"	

Concrete Superstructure	Cu. Yd.	259.7
Reinforcement Bars, Epoxy Ct.	Lbs.	63,390
Bar Splicers	Ea.	780



DESIGN	K. Fields
CHECKED	D.L. Maurer
DRAWING	C.D. Snedden
CHECKED	D.L. Maurer

* Order a₁₅(E) & a₁₇(E) bars full length Cut to fit skew and use remainder of bars in opposite face of deck span.

DECK REINFORCEMENT PLAN

General Notes:
 1. 32 X 2 means 32 bars of 2 lengths each.
 2. For Parapet Detail See Sheet 12
 3. Reinforcement bars designated "(E)" shall be epoxy coated

Minimum Bar Lap

#4 bars	= 1'-4"
#5 bars	= 1'-8"
#6 bars	= 2'-0"
#8 bars	= 3'-8"

DECK DETAILS
 F.A. 317 (IL. 116 / U.S. 24)
 SECTION (102 HB) I, 1-1
 TAZEWELL COUNTY

STRUCTURE NO. 090-0072

R.A.N. CONSULTANTS, INC.



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	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0072
SHEET NO. 3 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)I]BR	TAZEWELL	65	49
CONTRACT NO. 68D85			ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317			44	11
SHEET NO. 11				
44 SHEETS				

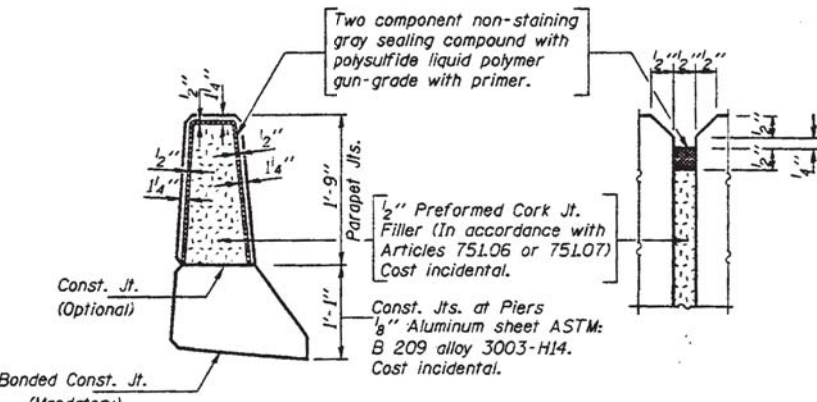
• (102 HB) I, I-1

Two component non-staining gray sealing compound with polysulfide liquid polymer gun-grade with primer.

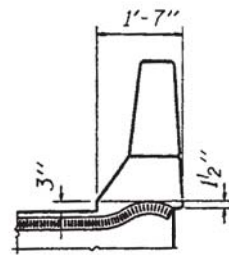
1/2" Preformed Cork Jt. Filler (In accordance with Articles 751.06 or 751.07) Cost incidental.

Const. Jts. at Piers 1/8" Aluminum sheet ASTM: B 209 alloy 3003-H14. Cost incidental.

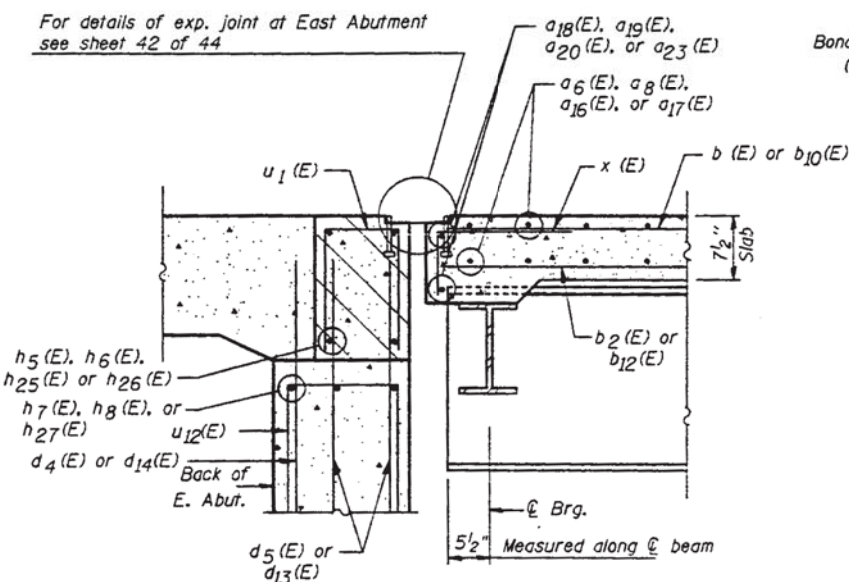
PARAPET JOINT DETAILS



TYPICAL END OF SEAL TREATMENT

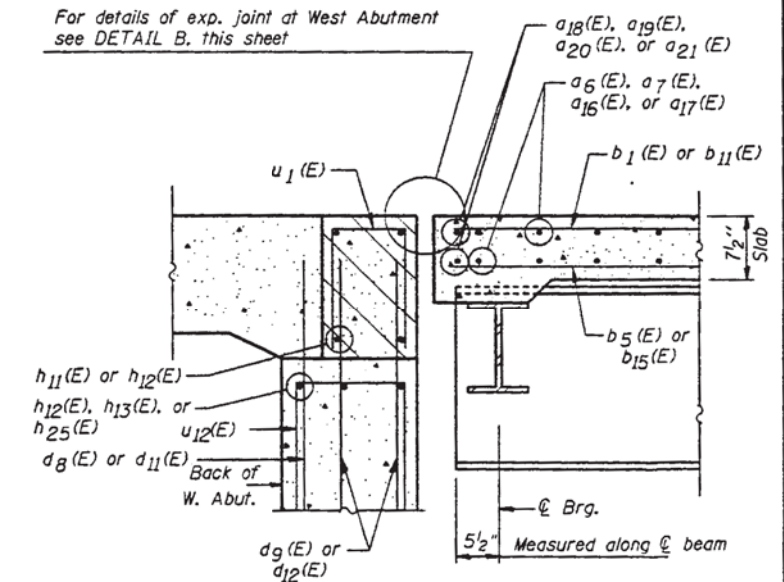


For details of exp. joint at East Abutment see sheet 42 of 44



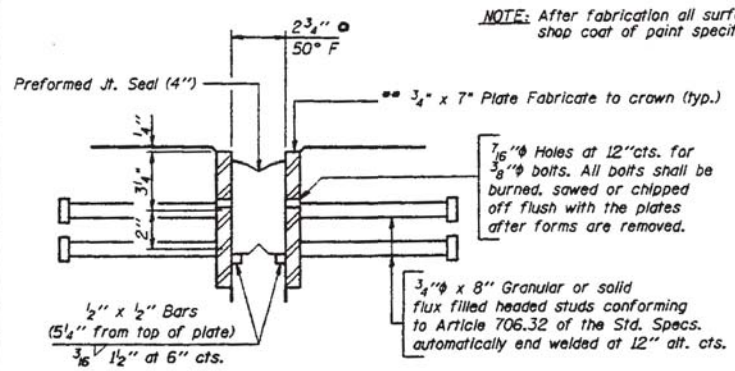
Note: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

For details of exp. joint at West Abutment see DETAIL B, this sheet



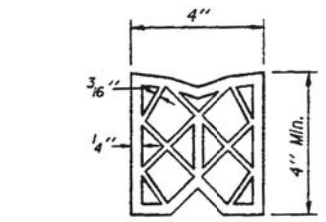
Note: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

NOTE: After fabrication all surfaces of steel plates shall be given one shop coat of paint specified for structural steel. No field painting required.



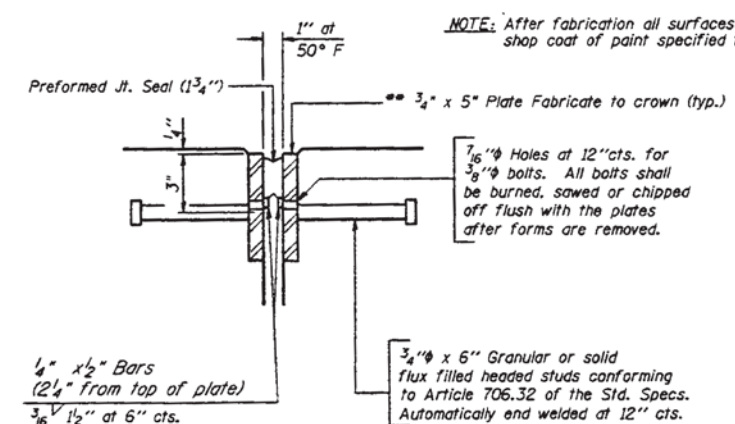
DETAIL A
PREFORMED JOINT SEAL (4") AT PIER 1

** Furnish in segments of 20 ft. max. length. Max. space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.



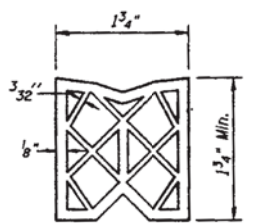
PREFORMED JOINT SEAL (4")

NOTE: After fabrication all surfaces of steel plates shall be given one shop coat of paint specified for structural steel. No field painting required.



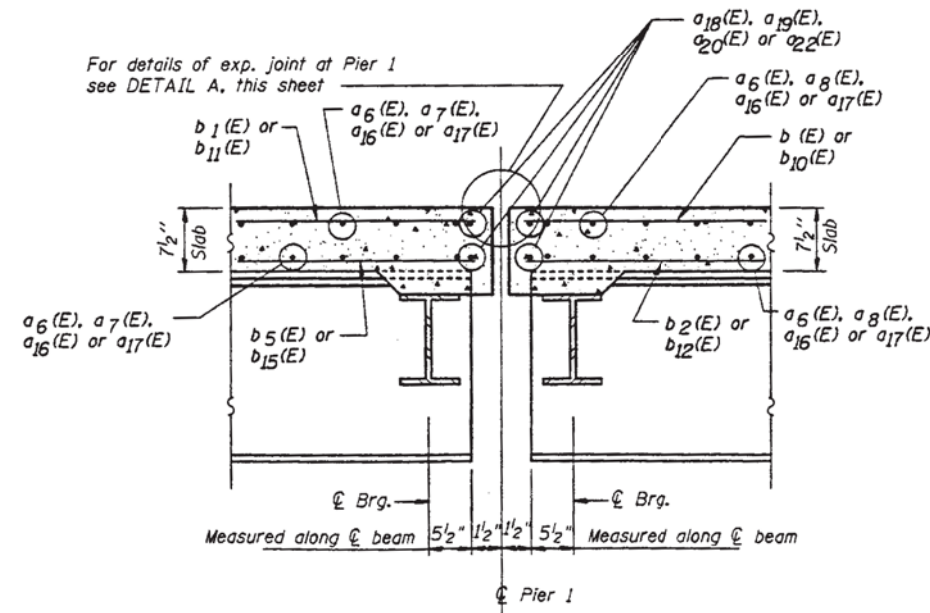
DETAIL B
PREFORMED JOINT SEAL (1 3/4") AT WEST ABUTMENT

** Furnish in segments of 20 ft. max. length. Max. space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.



PREFORMED JOINT SEAL (1 3/4")

For details of exp. joint at Pier 1 see DETAIL A, this sheet



DESIGNED	K. FIELDS
CHECKED	D.L. MAURER
DRAWN	C.D. SNEDDEN
CHECKED	D.L. MAURER

R.A.N. CONSULTANTS, INC.

SUPERSTRUCTURE DETAILS
F.A. 317 (IL. 116 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

STRUCTURE NO. 090-0071 & 090-0072



USER NAME =	DESIGNED - MAH	REVISED -
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PLOT DATE =	DRAWN - JRP	REVISED -
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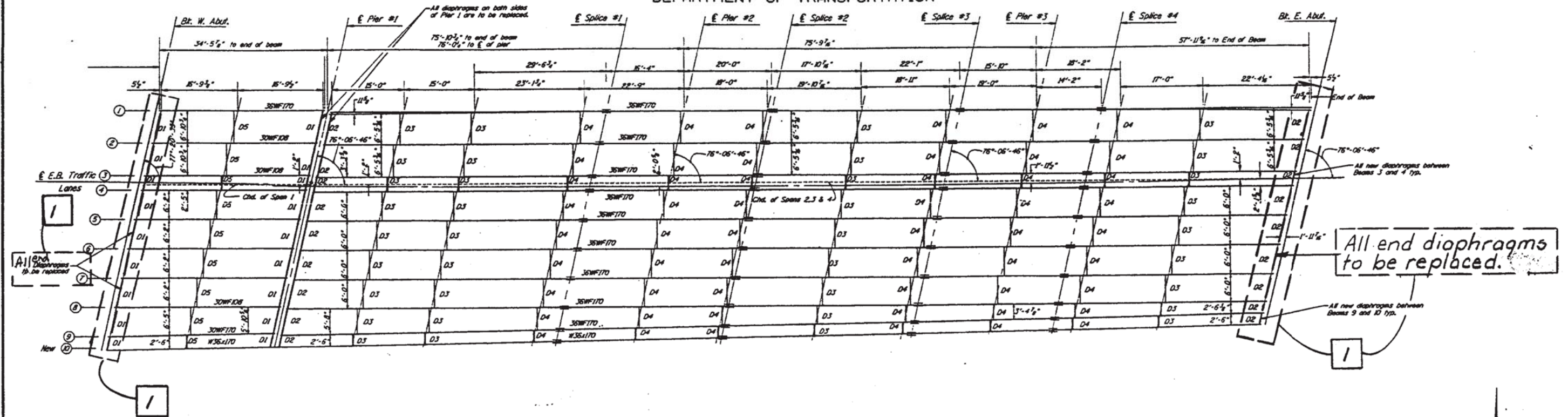
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0071 & 090-0072

SHEET NO. 4 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)I]BR	TAZEWELL	65	50
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BEAM #10 DIMENSIONS

LOCATION	DIMENSIONS
W. ABUT. TO PIER #1	34'-5 1/2"
PIER #1 TO SPLICE #1	59'-6 1/2"
SPLICE #1 TO SPLICE #2	36'-4"
SPLICE #2 TO SPLICE #3	39'-11 1/2"
SPLICE #3 TO SPLICE #4	30'-0"
SPLICE #4 TO E. ABUT.	43'-9 1/2"

GENERAL NOTES

- Existing Beams in Span #1 are parallel to the chord from Pier #1 to the West Abutment except Beam #9. Prop. Beam #10 is parallel to Beam #9.
- Remaining Beams in Span #2, 3, & 4 are parallel to the chord from Pier #1 to the East Abutment except Beams #1, #9 & #10. Prop. Beam #10 is parallel to Beam #9.
- The Superstructure will be built along a Curve.
- Provide new bolts for all new connections.
- See Table for Diaphragms to be replaced on sheet 1B.

DESIGNED	K. FIELDS
CHECKED	D.L. MAURER
DRAWN	C.D. SNEDDEN
CHECKED	D.L. MAURER

FRAMING PLAN
F.A. 317 (IL. 116 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

STRUCTURE NO. 090-0071

R.A.N. CONSULTANTS, INC.

1 Revised 9-4-97 Tmm



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

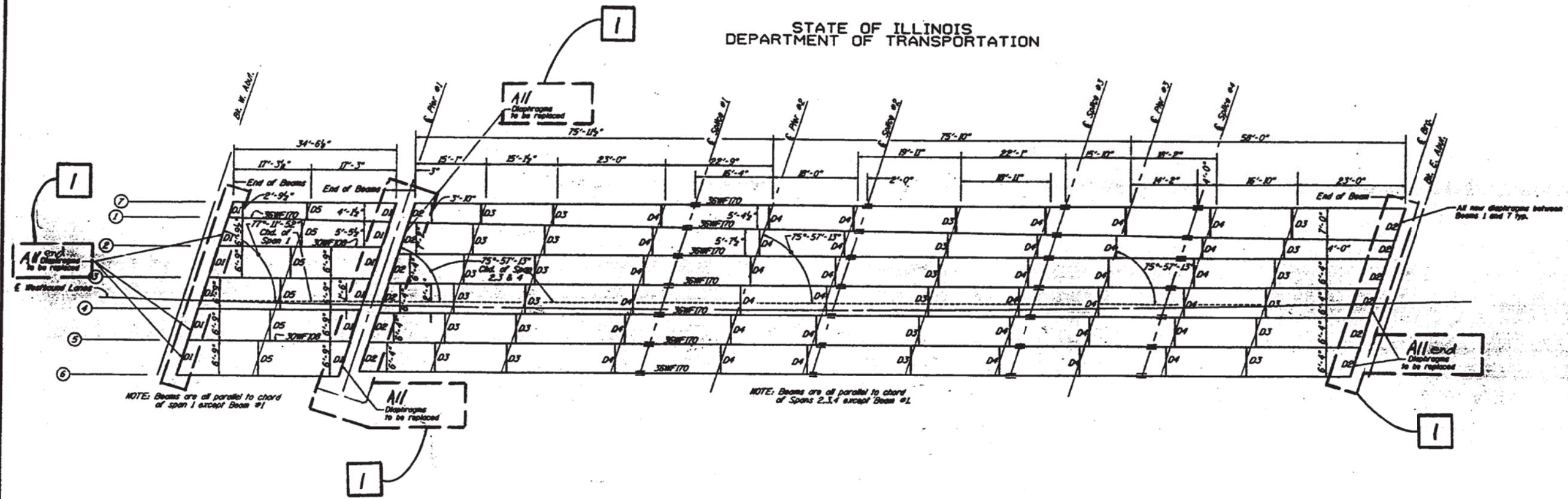
EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0071

SHEET NO. 5 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	((102-HB)I)BR	TAZEWELL	65	51
CONTRACT NO. 68D85				

ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTE: Beams are all parallel to chord of span 1 except Beam #1

NOTE: Beams are all parallel to chord of Spans 2, 3, 4 except Beam #1

General Notes:
1. The Superstructure will be built along a Curv.
2. Provide new bolts for all new connections.
3. See table for diaphragms to be replaced on sheet #2.

Beam # 7 Dimensions

Location	Dimensions
E. Abut to Pier #1	34'-6 1/2"
Pier #1 to Span #1	59'-7 1/2"
Span #1 to Span #2	36'-4"
Span #2 to Span #3	40'-0"
Span #3 to Span #4	32'-0"
Span #4 to E. Abut.	43'-10"

DESIGN	K. Fields
CHECKED	D.L. Maurer
DRAWING	C.D. Swadlow
CHECKED	D.L. Maurer

R.A.M. CONSULTANTS, INC.

FRAMING PLAN
F.A. 317 (IL. 116 / U.S. 24)
SECTION (002 HB) 1, I-1
TAEWELL COUNTY

STRUCTURE NO. 090-0072

1 Revised 9-4-97 Tmm



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PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0072

SHEET NO. 6 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)1]BR	TAEWELL	65	52
CONTRACT NO. 68D85				

ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	BY	CHKD	APP'D
3/17			

SHEET NO. 18
44 SHEETS

(102 HB) I, I-1

TOP OF BEAM ELEVATIONS (S.N. 090-0071)

BEAM NO.	E. BRG. W. ABUT.	E. BRG. PIER 1	E. BRG. PIER 2	E. BRG. PIER 3	E. BRG. E. ABUT.
1	506.63	504.47	504.22	505.98	507.64
2	506.70	504.54	504.29	506.98	507.70
3	506.77	504.30	504.36	507.05	507.76
4	506.79	504.33	504.38	507.07	507.79
5	506.88	504.38	504.44	507.15	507.84
6	506.91	504.44	504.50	507.18	507.90
7	506.97	504.50	504.56	507.24	507.95
8	503.05	504.56	504.62	507.29	508.00
9	503.10	504.62	504.67	507.33	508.04
10	503.12	504.64	504.69	507.36	508.01

FOR FABRICATION ONLY

NOTE:

The top of beam elevations for the splices are given to the top of the splice plate. The top of beam elevations for the piers are given for the top of the cover plate for the existing beams.

INTERIOR GIRDER MOMENT TABLE (090-0071)

	0.5 SPAN 1	0.4 SPAN 2	PIER 2	0.5 SPAN 3	PIER 3	0.6 SPAN 4
I_s (in ⁴)	4,470	10,500	14,309	10,500	14,309	10,500
$I_c(n)$ (in ⁴)	13,191	25,471	—	25,471	—	25,471
$I_c(3n)$ (in ⁴)	9,730	18,425	—	18,425	—	18,425
S_x (in ³)	299	580	784	580	784	580
$S_c(n)$ (in ³)	465	823	—	823	—	823
$S_c(3n)$ (in ³)	490	739	—	739	—	739
Z (in ³)	—	—	875	—	875	—
R (k/ft)	0.682	0.645	0.645	0.645	0.645	0.645
M_x (k-ft)	111	357	537	143	346	104
M_y (k-ft)	0.415	0.243	0.243	0.243	0.243	0.243
$M_x R$ (k-ft)	59	115	137	59	93	59
$M_y R$ (k-ft)	203	551	333	456	272	389
M (Imp) (k-ft)	61	138	84	114	69	97
$W/S(L) \cdot D$ (k-ft)	441	1148	635	951	568	811
M_x (k-ft)	794	2108	1780	1499	1309	1370
M_y (k-ft)	1852	3154	2406	3154	2406	3154
$I_s R$ (non-comp.) (k-ft)	4.5	7.4	10.3	3.0	6.7	3.8
$I_s R$ (comp.) (k-ft)	1.7	1.9	—	1.0	—	1.0
$I_s W/S(L) \cdot D$ (k-ft)	11.4	16.7	10.6	13.9	8.7	11.8
I_s (Overload) (k-ft)	17.6	26.0	20.9	17.9	15.4	15.6
VR (k)	42.4	39.7	—	39.4	—	36.0

INTERIOR GIRDER MOMENT TABLE (090-0072)

	0.5 SPAN 1	0.4 SPAN 2	PIER 2	0.5 SPAN 3	PIER 3	0.6 SPAN 4
I_s (in ⁴)	4,470	10,500	14,309	10,500	14,309	10,500
$I_c(n)$ (in ⁴)	13,128	25,366	—	25,366	—	25,366
$I_c(3n)$ (in ⁴)	9,664	18,399	—	18,399	—	18,399
S_x (in ³)	299	580	784	580	784	580
$S_c(n)$ (in ³)	464	822	—	822	—	822
$S_c(3n)$ (in ³)	419	738	—	738	—	738
Z (in ³)	—	—	875	—	875	—
R (k/ft)	0.665	0.635	0.635	0.635	0.635	0.635
M_x (k-ft)	109	341	523	144	345	101
M_y (k-ft)	0.444	0.276	0.276	0.276	0.276	0.276
$M_x R$ (k-ft)	63	116	154	67	106	66
$M_y R$ (k-ft)	159	523	317	432	259	370
M (Imp) (k-ft)	60	131	79	108	65	93
$W/S(L) \cdot D$ (k-ft)	432	1090	661	901	540	771
M_x (k-ft)	785	2024	1739	1446	1288	1323
M_y (k-ft)	1852	3154	2406	3154	2406	3154
$I_s R$ (non-comp.) (k-ft)	4.4	7.1	10.4	3.0	6.9	3.7
$I_s R$ (comp.) (k-ft)	1.8	2.0	—	1.1	—	1.1
$I_s W/S(L) \cdot D$ (k-ft)	11.2	15.9	10.1	13.2	8.3	11.3
I_s (Overload) (k-ft)	17.4	25.0	20.5	17.3	15.2	15.1
VR (k)	29.8	32.9	—	35.1	—	32.3

TOP OF BEAM ELEVATIONS (S.N. 090-0072)

BEAM NO.	E. BRG. W. ABUT.	E. BRG. PIER 1	E. BRG. PIER 2	E. BRG. PIER 3	E. BRG. E. ABUT.
1	503.08	504.65	504.70	507.44	508.15
2	503.14	504.70	504.77	507.49	508.21
3	503.21	504.76	504.83	507.54	508.26
4	503.27	504.82	504.89	507.60	508.32
5	503.34	504.88	504.94	507.66	508.38
6	503.40	504.95	505.00	507.71	508.43
7	503.05	504.61	504.66	507.39	508.06

FOR FABRICATION ONLY

NOTE:

The top of beam elevations for the splices are given to the top of the splice plate. The top of beam elevations for the piers are given for the top of the cover plate for the existing beams.

INTERIOR GIRDER REACTION TABLE (090-0071)

	W. ABUT.	PIER 1	PIER 2	PIER 3	E. ABUT.
R_{TL} (k)	20.2	20.2	32.4	33.3	22.8
R_{LL} (k)	32.7	32.7	37.3	31.9	32.5
$Imp.$ (k)	9.8	9.8	9.4	8.0	8.9
R (Total) (k)	62.7	62.7	79.1	73.2	64.2

NOTE: All reactions are unfactored.

INTERIOR GIRDER REACTION TABLE (090-0072)

	W. ABUT.	PIER 1	PIER 2	PIER 3	E. ABUT.
R_{TL} (k)	20.4	20.4	31.8	34.3	23.3
R_{LL} (k)	32.0	32.0	35.4	47.2	33.7
$Imp.$ (k)	9.6	9.6	8.9	11.8	8.4
R (Total) (k)	62.0	62.0	76.1	93.3	65.4

NOTE: All reactions are unfactored.

STRUCTURAL STEEL (DIAPHRAGMS) (090-0071)

LOCATION	ITEM	LENGTH	QUANTITY
D1 - BEAMS 5-6 & 7-8 (W. ABUT.)	W8 x 36	8'-2 1/2"	2
D1 - BEAMS 5-6 & 7-8 (E. ABUT.)	L6 x 4 x 1/2	10'	4
D1 - BEAMS 1-3 (PIER 1)	W8 x 36	7'-0 1/2"	2
D1 - BEAMS 4-8 (PIER 2)	W8 x 36	6'-9 1/2"	1
D1 - BEAMS 8-9 (PIER 3)	W8 x 36	5'-11 1/2"	1
D1 - BEAMS 1-3 & 4-9 (PIER 4)	L6 x 4 x 1/2	10'	4
D2 - BEAMS 1-3 (PIER 1)	W8 x 36	6'-6 1/2"	2
D2 - BEAMS 4-8 (PIER 2)	W8 x 36	6'-11 1/2"	4
D2 - BEAMS 8-9 (PIER 3)	W8 x 36	5'-9 1/2"	1
D2 - BEAMS 1-3 & 4-9 (PIER 4)	L6 x 4 x 1/2	10'	4
D1 - BEAMS 3 & 4	W8 x 36	2'-4 1/2"	2
D5 - BEAMS 3 & 4	W8 x 36	2'-4 1/2"	1
D3 & D4 - BEAMS 3 & 4	W8 x 36	3'-8 1/2"	10
D2 - BEAMS 3 & 4	W8 x 36	3'-8 1/2"	2
D1 & D2 - BEAMS 3 & 4	L6 x 4 x 1/2	10'	8
D3, D4 & D5 - BEAMS 3 & 4	L6 x 4 x 1/2	10'	44
D1 & D2 - BEAMS 9 & 10	W8 x 36	2'-5 1/2"	4
D5 - BEAMS 9 & 10	W8 x 36	2'-5 1/2"	1
D1 & D2 - BEAMS 9 & 10	L6 x 4 x 1/2	10'	8
D3, D4 & D5 - BEAMS 9 & 10	L6 x 4 x 1/2	10'	44
D3 & D4 - BEAMS 9 & 10	W8 x 36	2'-5 1/2"	10

STRUCTURAL STEEL (DIAPHRAGMS) (090-0072)

LOCATION	ITEM	LENGTH	QUANTITY
D1 - BEAMS 1 & 7 (W. ABUT.)	W8 x 36	8'-9 1/2"	1
D1 - BEAMS 1 & 7 (PIER 1)	W8 x 36	4'-11 1/2"	1
D1 - BEAMS 5 & 6 (PIER 2)	W8 x 36	6'-10 1/2"	1
D1 - BEAMS 1 & 2 (W. ABUT.)	W8 x 36	6'-10 1/2"	1
D6 - BEAMS 1 & 7 (SPAN 1)	W8 x 36	3'-4 1/2"	1
D1 - BEAMS 4-6 (W. ABUT.)	W8 x 36	6'-10 1/2"	2
D1 - SPAN 1	L6 x 4 x 1/2	10'	2
D5 - SPAN 1	L6 x 4 x 1/2	10'	4
D2 - BEAMS 1 & 7 (PIER 1)	W8 x 36	3'-10 1/2"	1
D2 - BEAMS 1 & 7 (PIER 2)	W8 x 36	7'-3 1/2"	1
D2 - BEAMS 1 & 7 (E. ABUT.)	W8 x 36	7'-11 1/2"	1
D2 - BEAMS 3/4, 5 & 6 (E. ABUT.)	W8 x 36	6'-5 1/2"	2
D2 - SPANS 2 - 4	L6 x 4 x 1/2	10'	10
D3 - BEAMS 1 & 7 (SPAN 2)	W8 x 36	3'-11 1/2"	1
D3 - BEAMS 1 & 7 (SPAN 2)	W8 x 36	4'-2 1/2"	1
D4 - BEAMS 1 & 7 (SPAN 2)	W8 x 36	4'-6 1/2"	1
D4 - BEAMS 1 & 7 (PIER 2)	W8 x 36	5'-3 1/2"	1
D4 - BEAMS 1 & 7 (SPAN 3)	W8 x 36	5'-6 1/2"	1
D3 - BEAMS 1 & 7 (SPAN 3)	W8 x 36	5'-10 1/2"	1
D4 - BEAMS 1 & 7 (SPAN 3)	W8 x 36	6'-11 1/2"	1
D4 - BEAMS 1 & 7 (PIER 3)	W8 x 36	6'-2 1/2"	1
D4 - BEAMS 1 & 7 (SPAN 4)	W8 x 36	6'-6 1/2"	1
D3 - BEAMS 1 & 7 (SPAN 4)	W8 x 36	6'-9 1/2"	1
D3 & D4 - (SPANS 2 - 4)	L6 x 4 x 1/2	10'	40

STEEL DETAIL
(CHARTS)
F.A. 317 (IL 115 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

REV. 9/4/97 TMM

REV. 1/21/98 DLM

STRUCTURE NO. 090-0071 & 090-0072

DESIGNED - K. FIELDS
CHECKED - D.L. MAURER
DRAWN - C.D. SNEDDEN
CHECKED - D.L. MAURER

R.A.J. CONSULTANTS, INC.

USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0071 & 090-0072

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)I]BR	TAZEWELL	65	53
			CONTRACT NO. 68D85	

SHEET NO. 7 OF 19 SHEETS

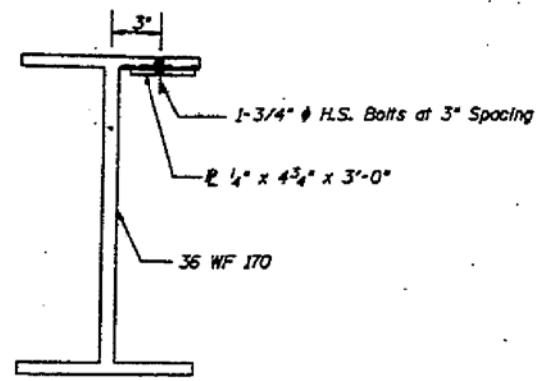
ILLINOIS FED. AID PROJECT



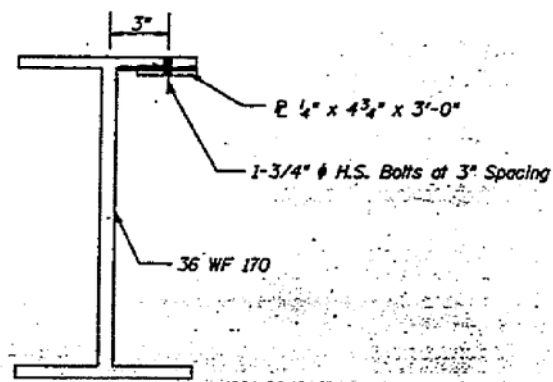
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	317	DESIGNER	TAZEWELL	DATE	6/9
PROJECT TITLE	STRUCTURE NO. 090-0071 & 090-0072				

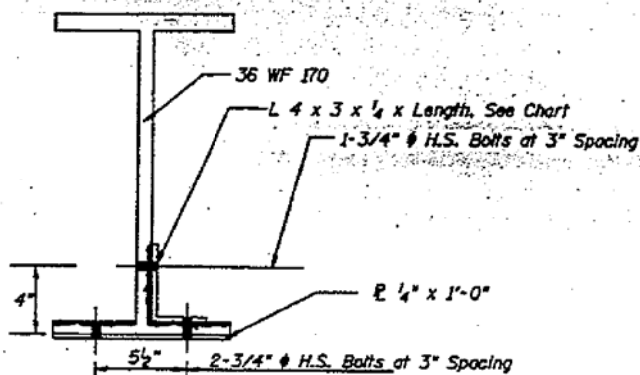
SHEET NO. 19
44 SHEETS



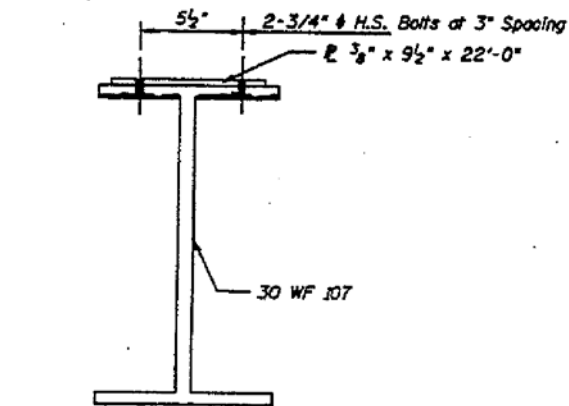
SN 0072 Beam #1 at Scupper Locations
BEAM REPAIR DETAIL 2



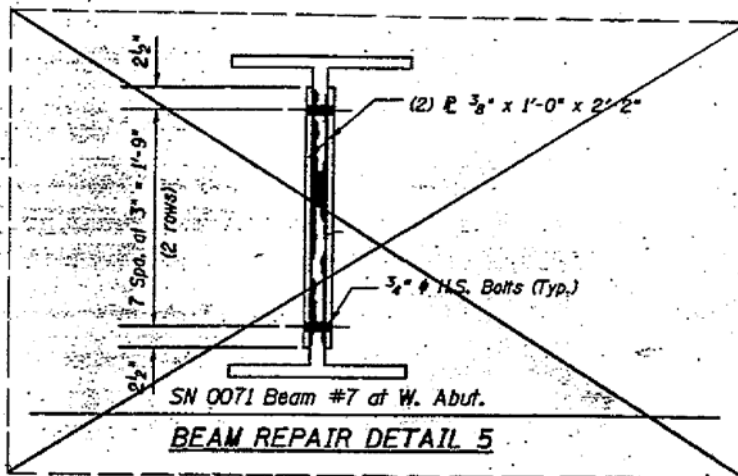
SN 0072 Beam #1 at Scupper Locations
in No-Weld Areas
BEAM REPAIR DETAIL 3



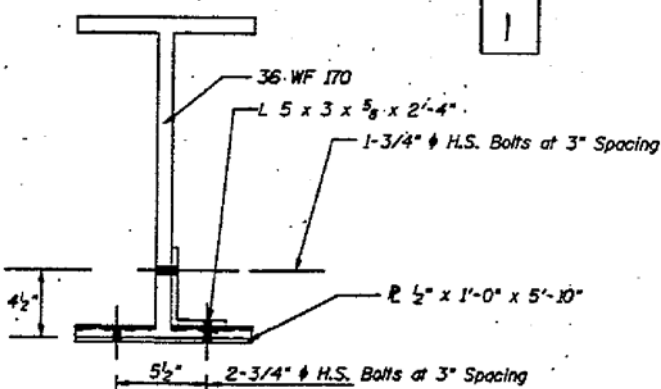
SN 0072 Beam #6 9' and 4' from center of bridge wing abutment
Looking East
BEAM REPAIR DETAIL 6



SN 0071 Beam #4 at center of bridge pier 1
toward west abutment
BEAM REPAIR DETAIL 4

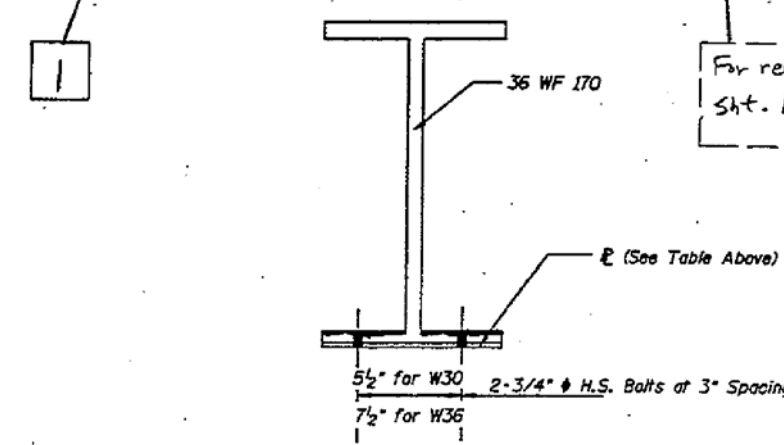


SN 0071 Beam #7 at west abutment
BEAM REPAIR DETAIL 5



SN 0072 Beam #3 17' from center of bridge pier E abutment
Looking West
BEAM REPAIR DETAIL 7

S.N.	Approx. Location of center of Repair	Repair Detail	Item	Length	Quantity
0071	Beam #1, 9' from center of bridge pier 1 toward west abutment.	1	R 2" x 4" x 1'-0"	5'-0"	1
0071	Beam #5, at center of bridge pier 1 toward west abutment.	1	R 2" x 4" x 10 1/2"	5'-0"	1
0071	Beam #8, at center of bridge pier 1 toward west abutment.	1	R 3" x 9" x 22'-0"	5'-0"	1
0071	Beam #4, 32' from center of bridge pier 2 toward pier 3.	1	R 3" x 9" x 1'-0"	12'-0"	1
0071	Beam #4, at splice 2 (replace splice plate).	1	R 1" x 1'-0"	(12'-0")	1
0071	Beam #4, 2' from center of bridge pier 1 to edge of splice 3.	1	R 3" x 9" x 1'-0"	13'-0"	1
0071	Beam #7, at center of bridge wing abutment.	5	R 3" x 9" x 1'-0"	2'-2"	2
0071	Beam #2, 14.5' from center of bridge wing abutment, S. Side.	6 (sim.)	L 4" x 3" x 1/4"	1'-0"	1
0071	Beam #4, at center of bridge pier 1 toward west abutment.	1	R 3" x 9" x 22'-0"	22'-0"	1
0072	Beam #2, at center of bridge wing abutment.	1	R 2" x 4" x 10 1/2"	3'-0"	1
0072	Beam #1, at center of bridge pier 1 toward west abutment.	1	R 2" x 4" x 1'-0"	3'-0"	1
0072	Beam #2, at center of bridge pier 1 toward west abutment.	1	R 2" x 4" x 10 1/2"	4'-0"	1
0072	Beam #3, 4' from center of bridge pier 1 toward west abutment.	1	R 2" x 4" x 10 1/2"	3'-0"	2
0072	Beam #2, 14.5' from center of bridge wing abutment toward pier 1.	1	R 2" x 4" x 10 1/2"	3'-0"	1
0072	Beam #3, 7' from center of bridge pier 1 toward west abutment.	1	R 2" x 4" x 10 1/2"	3'-0"	1
0072	Beam #6, 3' from center of bridge pier 1 toward west abutment.	1	R 2" x 4" x 1'-0"	3'-0"	1
0072	Beam #1, 25' from center of bridge wing abutment.	1	R 3" x 9" x 1'-0"	8'-0"	1
0072	Beam #1, 48' from center of bridge pier E abutment.	1	R 2" x 4" x 1'-0"	5'-6"	1
0072	Beam #5, 34' from center of bridge pier E abutment, 18' from center of bridge pier E abutment.	1	R 2" x 4" x 1'-0"	2'-4"	2
0072	Beam #1, S. Side, at all scuppers	23	R 2" x 4" x 4"	3'-0"	6
0072	Beam #3, N. Side, 17' from center of bridge pier E abutment.	7	L 5" x 3" x 5/8"	2'-4"	1
0072	Beam #3, 17' from center of bridge pier E abutment.	7	R 2" x 4" x 1'-0"	5'-0"	1
0072	Beam #6, S. Side, 4' and 9' from center of bridge wing abutment.	6	L 4" x 3" x 1/4"	1'-6"	2
0072	Beam #6, 4' and 9' from center of bridge wing abutment.	6	R 2" x 4" x 1'-0"	1'-6"	2



BEAM REPAIR DETAIL 1

For revised table, see
Sht. 19a of 44

DESIGNED	K. FIELDS
CHECKED	D.L. MAURER
DRAWN	D.J. RADA
CHECKED	D.L. MAURER

R.A.N. CONSULTANTS, INC.

Revised 9-4-97 Tmm

BEAM REPAIRS
F.A. 317 (IL 116 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

STRUCTURE NO. 090-0071, 0072



USER NAME =	DESIGNED - MAH	REVISIONS -
PLOT SCALE =	CHECKED - KES	REVISIONS -
PLOT DATE =	DRAWN - JRP	REVISIONS -
	CHECKED - MAH	REVISIONS -

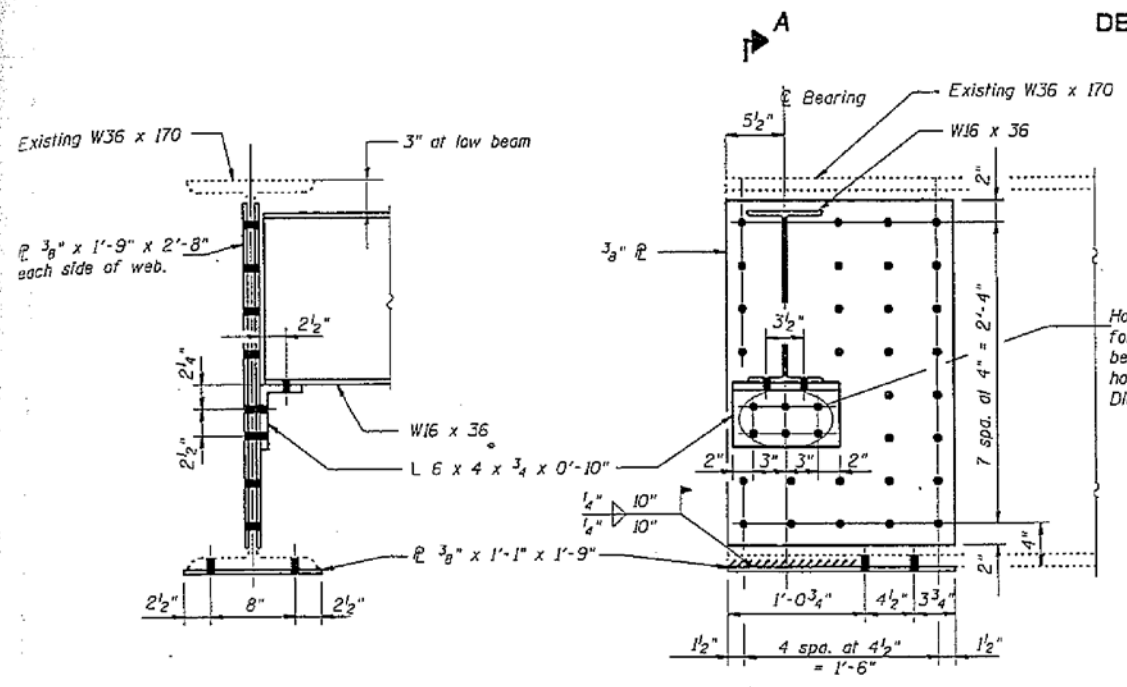
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0071 & 090-0072
SHEET NO. 8 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)I]BR	TAZEWELL	65	54
CONTRACT NO. 68085			ILLINOIS FED. AID PROJECT	

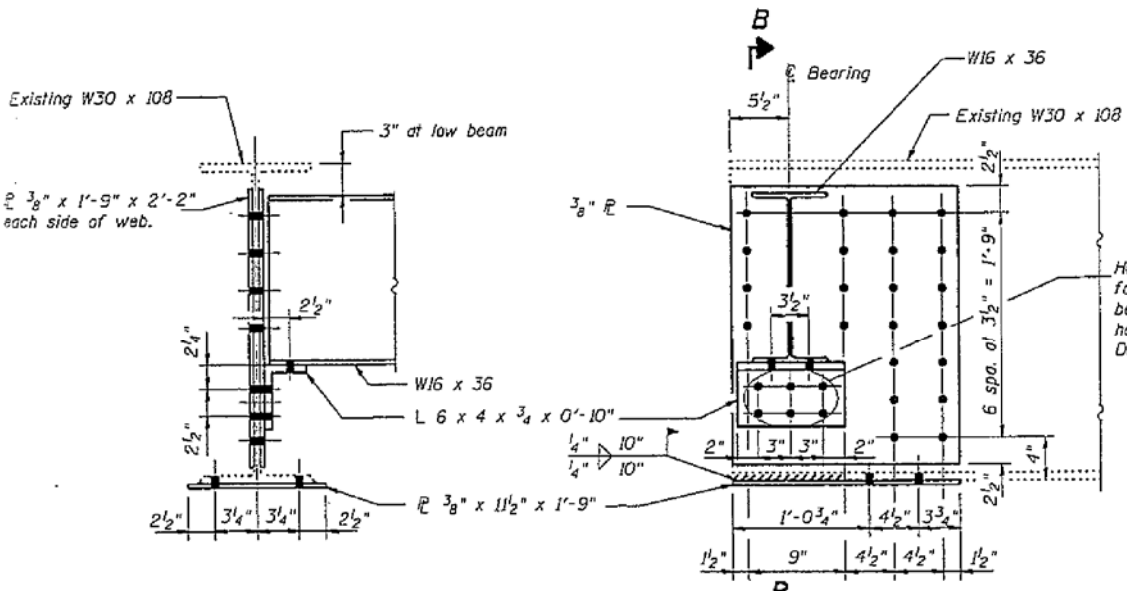
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	JOB NO.	SHEET	SHEET NO. 192
FA 317		TAZEWELL		69a	44 SHEETS
PROJECT TITLE: (102HB) I, I-1					



Holes in angle and new web plate for diaphragm connection at existing beams shall be field drilled using existing holes in beam web as a template. Dimensions shown are for information only.

SECTION A - A
BEAM REPAIR DETAIL 8



Holes in angle and new web plate for diaphragm connection at existing beams shall be field drilled using existing holes in beam web as a template. Dimensions shown are for information only.

SECTION B - B
BEAM REPAIR DETAIL 9

S. N.	Approximate location of C of repair	Repair Detail	Item	Length	Quantity
0071	Beam #1, 9' from C Brq. Pier 1 toward W. Abut.	1	P 1/4" x 1'-0"	5'-0"	1
0071	Beam #5, at C Brq. Pier 1 toward W. Abut.	1	P 1/4" x 10 1/2"	5'-0"	1
0071	Beam #8, at C Brq. Pier 1 toward W. Abut.	1	P 3/8" x 10 1/2"	6'-0"	1
0071	Beam #4, 32' from C Brq. Pier 2 toward Pier 3	1	P 3/8" x 1'-0"	12'-0"	1
0071	Beam #4, at Splice 2 (replace splice plate)	1	P 1" x 1'-0"	12'-0"	1
0071	Beam #4, 2' from C Brq. Pier 1 to edge of Splice 3	1	P 3/8" x 1'-0"	13'-0"	1
0071	Beam #2, 14.5' from C Brq. W. Abut. S. side	6 Similar	L 4 x 3 x 1/4	1'-0"	1
0071	Beam #4, at C Brq. Pier 1 toward W. Abut.	4	P 3/8" x 9 1/2"	22'-0"	1
0071	Beams #1 & #9, W. Abut. & W. Brq. Pier 1	8	See Detail	N/A	4
0071	Beams #2-8, W. Abut. & W. Brq. Pier 1	9	See Detail	N/A	14
0071	Beams #2-6 & #9, E. Brq. Pier 1	8	See Detail	N/A	6
0071	Beams #1-9, E. Abut.	8	See Detail	N/A	9
0072	Beam #2, at C Brq. W. Abut.	1	P 1/4" x 10 1/2"	3'-0"	1
0072	Beam #1, at C Brq. Pier 1 toward W. Abut.	1	P 1/4" x 1'-0"	3'-0"	1
0072	Beam #2, at C Brq. Pier 1 toward W. Abut.	1	P 1/4" x 10 1/2"	4'-0"	1
0072	Beam #3, 4' at C Brq. Pier 1 toward W. Abut.	1	P 1/4" x 10 1/2"	3'-0"	2
0072	Beam #2, 14.5' from C Brq. W. Abut. toward Pier 1	1	P 1/4" x 10 1/2"	3'-0"	1
0072	Beam #3, 7' from C Brq. Pier 1 toward W. Abut.	1	P 1/4" x 10 1/2"	3'-0"	1
0072	Beam #6, 3' from C Brq. Pier 1 toward W. Abut.	1	P 1/4" x 1'-0"	3'-0"	1
0072	Beam #1, 25' from C Brq. W. Abut.	1	P 3/8" x 1'-0"	8'-0"	1
0072	Beam #1, 48' from C Brq. E. Abut.	1	P 1/2" x 1'-0"	5'-6"	1
0072	Beam #5, 18' & 34' from C Brq. E. Abut.	1	P 1/4" x 1'-0"	2'-4"	2
0072	Beam #1, South side of all scoopers	2,3	P 1/4" x 4 1/2"	3'-0"	6
0072	Beam #3, North side 17' from C Brq. E. Abut.	7	L 5 x 3 x 3/8	2'-4"	1
0072	Beam #3, 17' from C Brq. E. Abut.	7	P 1/2" x 1'-0"	5'-10"	1
0072	Beam #6, South side 4' & 9' from C Brq. W. Abut.	6	L 4 x 3 x 1/4	1'-6"	2
0072	Beam #6, 4' & 9' from C Brq. W. Abut.	6	P 1/4" x 1'-0"	1'-8"	2
0072	Beams #1 & #6, W. Abut. & W. Brq. Pier 1	8	See Detail	N/A	4
0072	Beams #2-5, W. Abut. & W. Brq. Pier 1	9	See Detail	N/A	8
0072	Beams #1 & #3-6, E. Brq. Pier 1	8	See Detail	N/A	5
0072	Beams #1-6, E. Abut.	8	See Detail	N/A	6

Notes:
All bolts to be 3/4" H.S. Bolts with 11/16" open holes unless otherwise noted.
All diaphragm connections shall be made with 3/4" H.S. bolts in 1 1/2" holes with two hardened washers per bolt.
Work this sheet with Sheets 14, 15 & 19 of 44.
All structural steel plates shall conform to the requirements of AASHTO M270 Grade 36.
All contact surfaces of plates shall be free of paint or laquer.

DESIGNED	Tmm
CHECKED	DJS
DRAWN	KG
CHECKED	Tmm

BEAM REPAIRS
F.A. 317 (IL. 116 / U.S. 24)
SECTION (102HB) I, I-1
TAZEWELL COUNTY



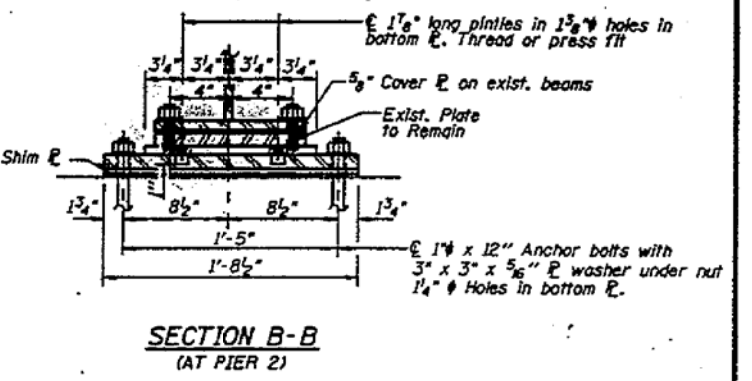
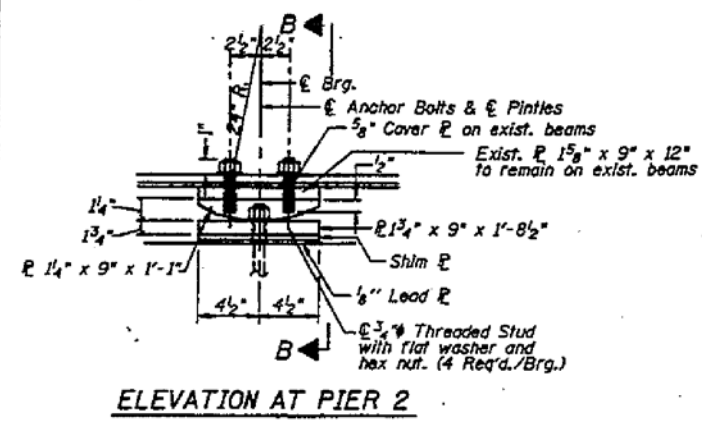
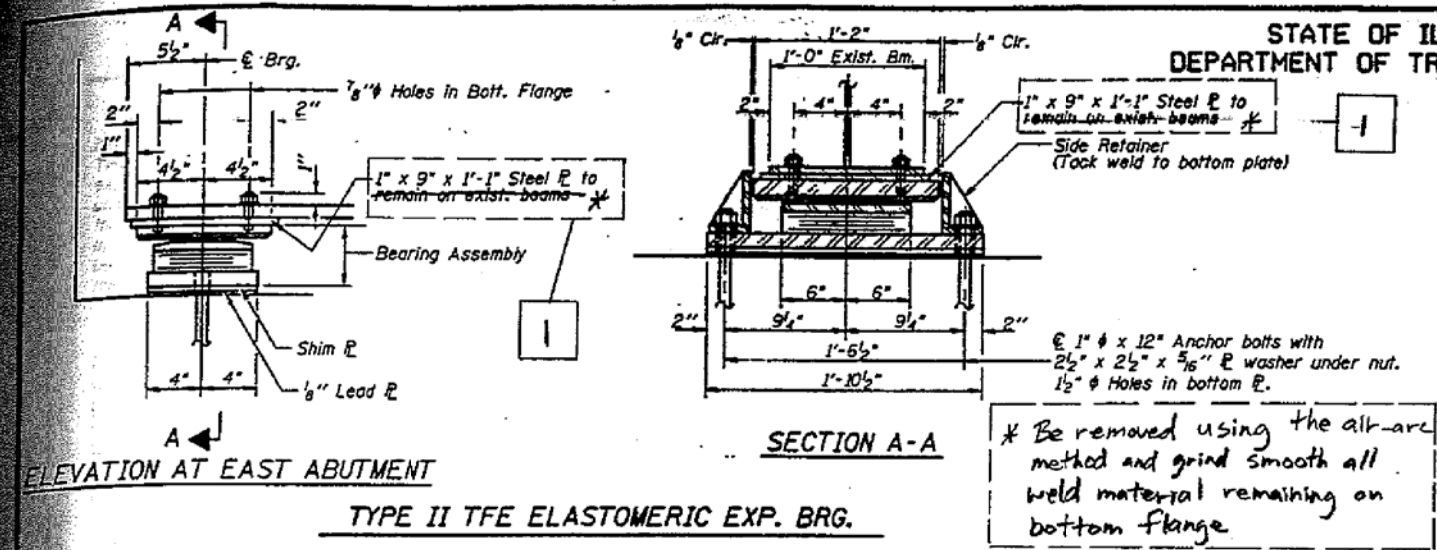
USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

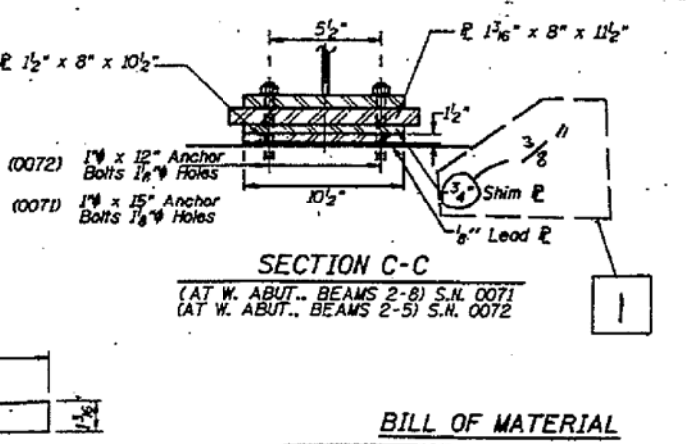
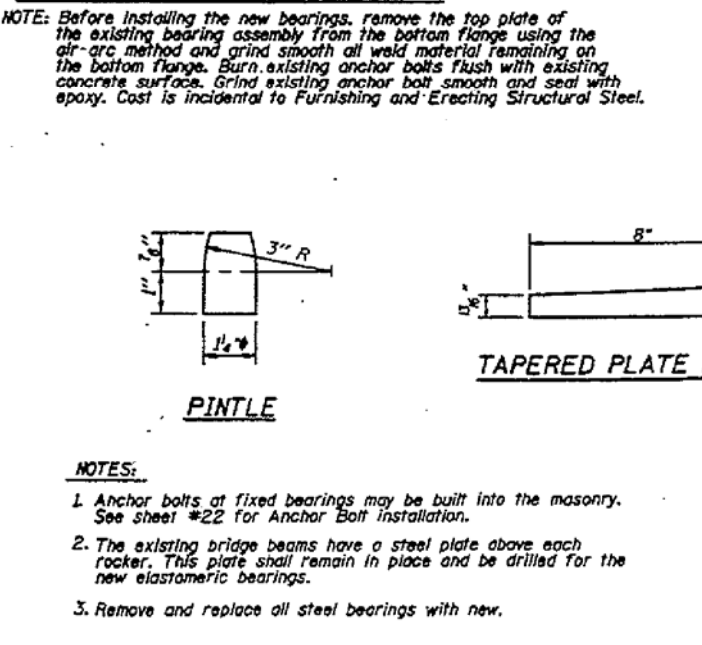
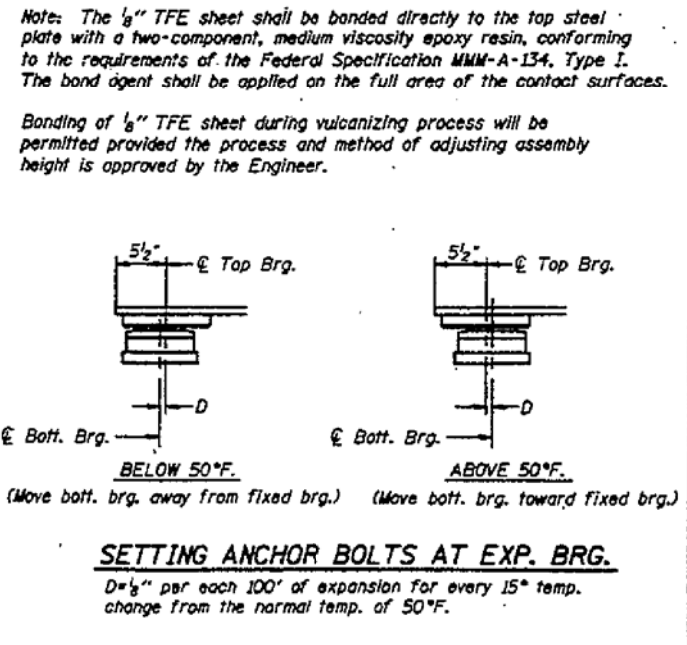
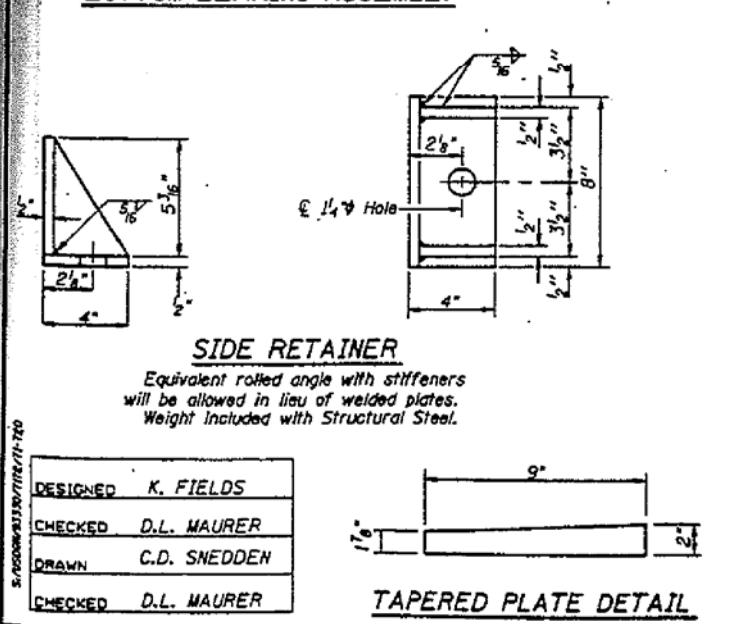
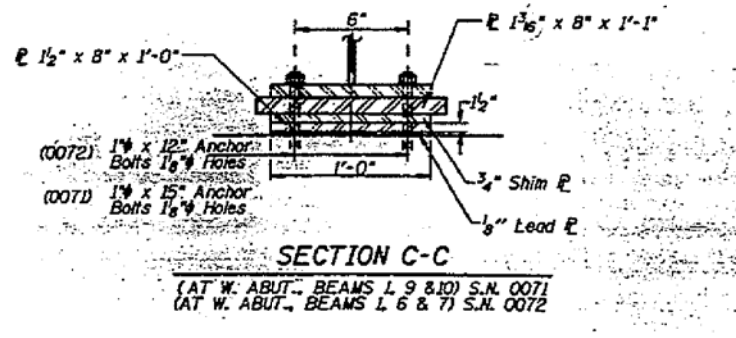
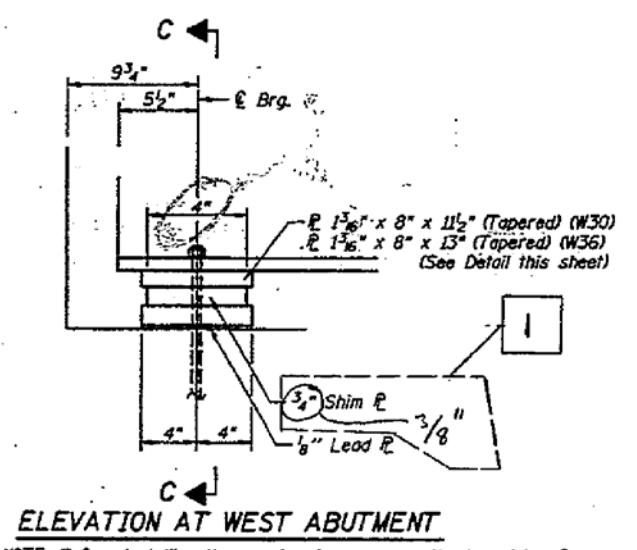
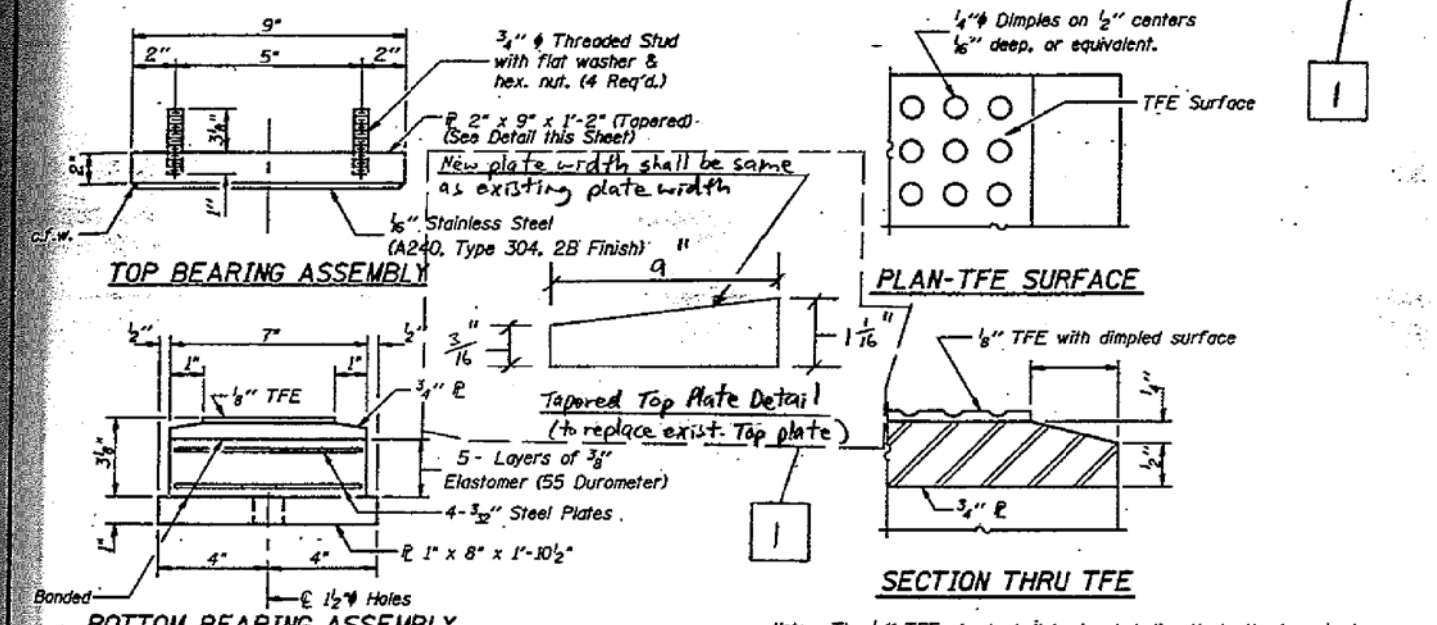
EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0071 & 090-0072

SHEET NO. 9 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	(102-HB) IJR	TAZEWELL	65	55
CONTRACT NO. 68D85				
ILLINOIS FED. AID PROJECT				



FIXED BEARING
(Weight included in Structural Steel)



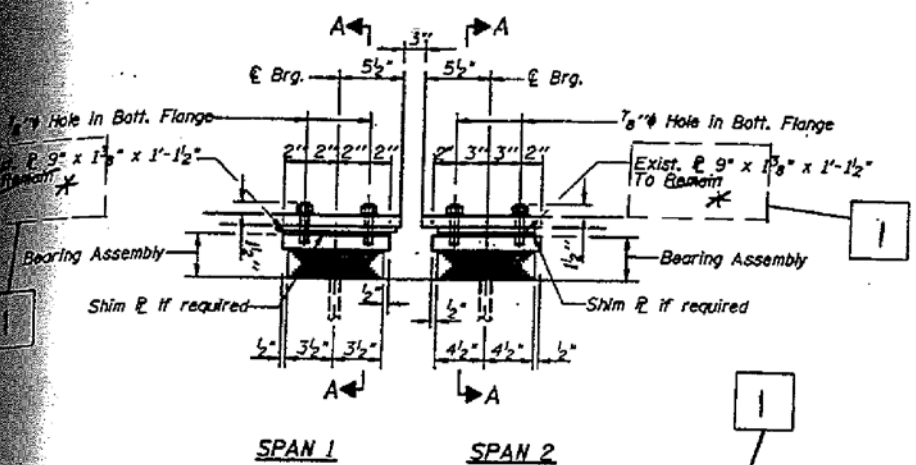
NOTE: Quantities above reflect total for both structures

STRUCTURE NO. 090-0071 & 090-0072

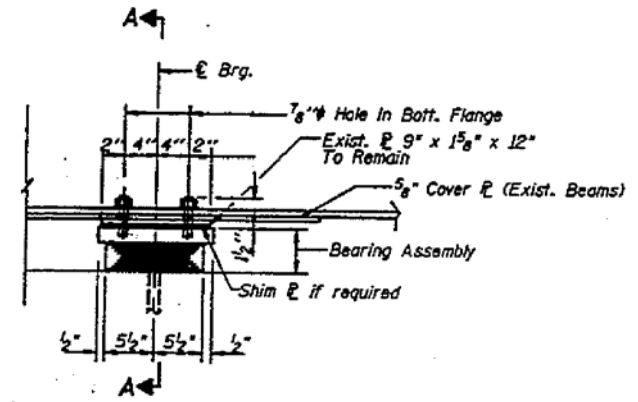
1 Revised 9-4-97 Tmm

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	317	DESIGNER	TAZEWELL	DATE	70
SHEET NO.	44 SHEETS				

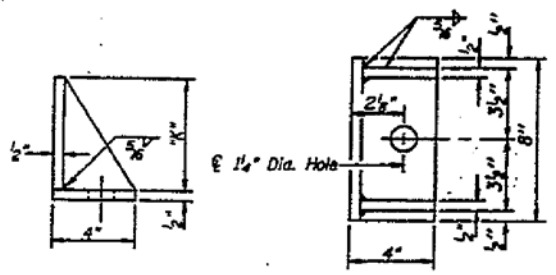


ELEVATION AT PIER 1
(Beams 1, 9 & 10 S.N. 0071)
(Beams 1, 6 & 7 S.N. 0072)

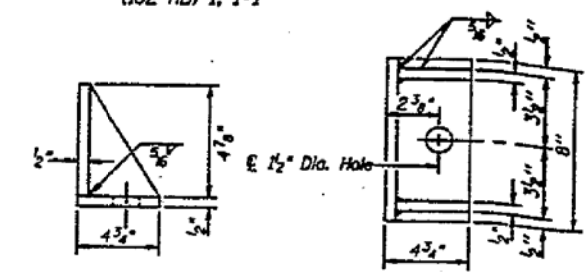


ELEVATION AT PIER 3

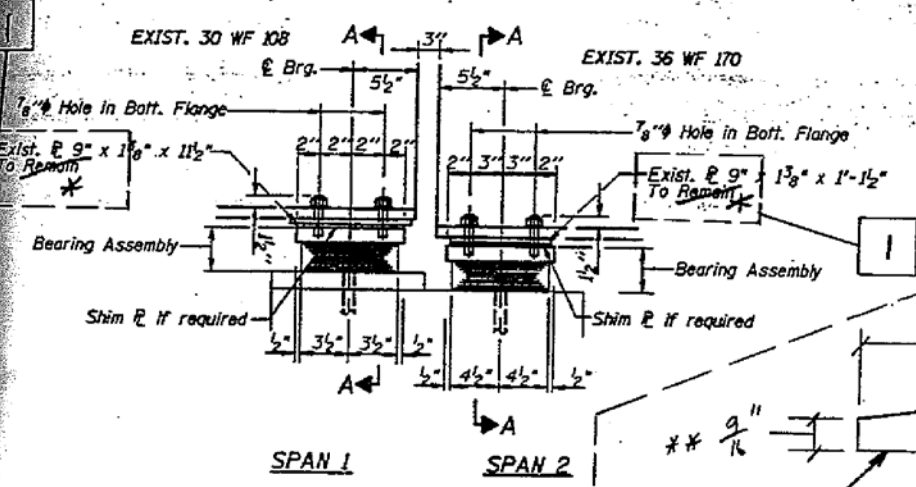
* Be removed using the air-arc method and grind smooth all weld material remaining on bottom flange



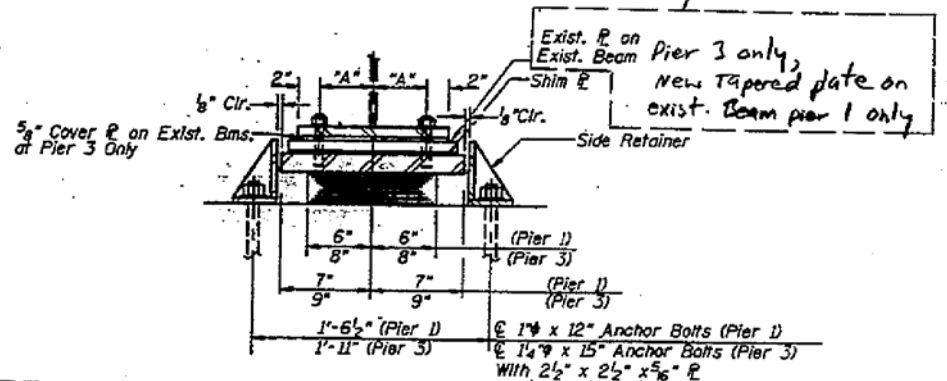
SIDE RETAINER - PIER 1
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



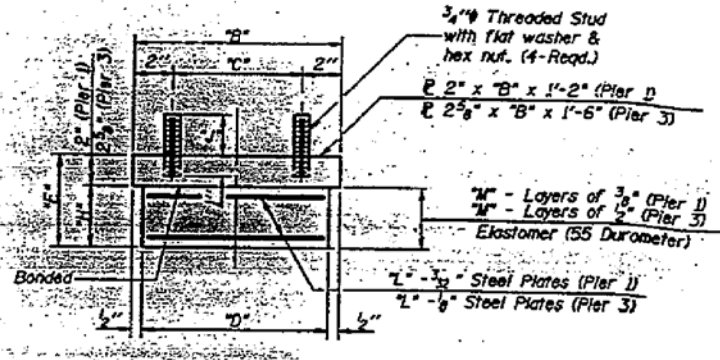
SIDE RETAINER - PIER 3
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



ELEVATION AT PIER 1
(Beams 2-8 S.N. 0071)
(Beams 2-5 S.N. 0072)

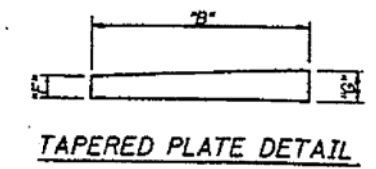
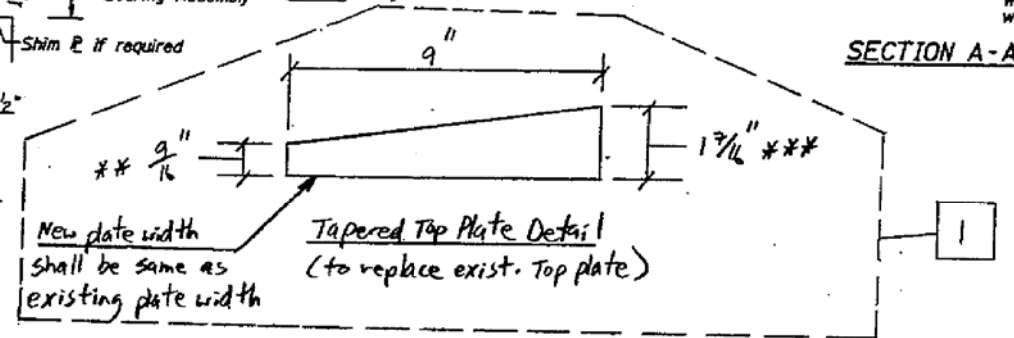


SECTION A-A



BEARING ASSEMBLY

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



TAPERED PLATE DETAIL

** $\frac{15}{16}$ " at beams 1, 7 + 8 @ Pier 1 east brg. S.N. 090-0071 and at beam 2 @ Pier 1 east brg. S.N. 090-0072
*** $\frac{13}{16}$ " at beams 1, 7 + 8 @ Pier 1 east brg. S.N. 090-0071 and at beam 2 @ Pier 1 east brg. S.N. 090-0072

TYPE I ELASTOMERIC EXP. BRG.

TYPE I ELASTOMERIC BEARING SCHEDULE

S.N.	BRG. LOCATION	BEAM NO.	A"	B"	C"	D"	E"	F"	G"	H"	I"	J"	K"	L"	M"
090-0071	PIER 1 SPAN 1	1 & 9	4"	8"	4"	7"	3 1/2"	---	---	1 1/2"	4"	3 1/2"	2	3	
	PIER 1 SPAN 1	2-8	3 1/2"	8"	4"	7"	3 1/2"	---	---	1 1/2"	3 1/2"	3 1/2"	2	3	
	PIER 1 SPAN 1	10	4"	8"	4"	7"	3 1/2"	1 1/2"	1 1/2"	1 1/2"	2 1/2"	3 1/2"	2	3	
	PIER 1 SPAN 2	1-9	4"	10"	6"	9"	4 1/2"	---	---	2 1/2"	4"	4 1/2"	4	5	
090-0072	PIER 1 SPAN 2	10	4"	10"	6"	9"	4 1/2"	1 1/2"	2"	2 1/2"	2 1/2"	4 1/2"	4	5	
	PIER 3	1-9	4"	1'-0"	8"	11"	4 1/2"	---	---	2 1/2"	4 1/2"	---	3	4	
090-0071	PIER 1 SPAN 1	1 & 6	4"	8"	4"	7"	3 1/2"	---	---	1 1/2"	4"	3 1/2"	2	3	
	PIER 1 SPAN 1	2-5	3 1/2"	8"	4"	7"	3 1/2"	---	---	1 1/2"	3 1/2"	3 1/2"	2	3	
	PIER 1 SPAN 1	7	4"	8"	4"	7"	3 1/2"	1 1/2"	1 1/2"	1 1/2"	2 1/2"	3 1/2"	2	3	
	PIER 1 SPAN 2	1-6	4"	10"	6"	9"	4 1/2"	---	---	2 1/2"	4"	4 1/2"	4	5	
090-0072	PIER 1 SPAN 2	7	4"	10"	6"	9"	4 1/2"	1 1/2"	2"	2 1/2"	2 1/2"	4 1/2"	4	5	
	PIER 3	1-6	4"	1'-0"	8"	11"	4 1/2"	---	---	2 1/2"	4 1/2"	---	3	4	
090-0072	PIER 3	7	4"	1'-0"	8"	11"	4 1/2"	---	---	2 1/2"	4 1/2"	---	3	4	

- NOTES:**
- The existing bridge beams have a steel plate above each rocker. This plate shall remain in place and be drilled for the new elastomeric bearings.
 - Remove and replace all steel bearings with new.

DESIGNED K. FIELDS
CHECKED D.L. MAURER
DRAWN C.D. SHEDDEN
CHECKED D.L. MAURER

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	51

NOTE: Quantities above reflect total for both structures

BEARING DETAILS
F.A. 317 (IL. 116 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

STRUCTURE NO. 090-0071 & 090-0072

Revised 9-4-97 Tmm



USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0071 & 090-0072

SHEET NO. 11 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)IBR]	TAZEWELL	65	57
			CONTRACT NO. 68D85	
ILLINOIS FED. AID PROJECT				

(102HB)I, I-1

Location	Exist. Elev.	Prop. Elev.	Shim Height
10		499.91	
9	499.70	499.80	1 1/8"
8	500.04	500.27	2 3/8"
7	500.04	500.21	2 1/8"
6	499.95	500.15	2 2/8"
5	499.95	500.08	1 1/8"
4	499.85	500.02	2 1/8"
3	499.85	500.00	1 1/8"
2	499.85	499.93	5/8"
1	499.21	499.34	1 3/8"

Note: Elevations shown are as surveyed in the field. Elevations differ from those shown on existing plans.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d6(E)	2	#6	2'-11"	—
d8(E)	8	#4	3'-6"	—
d9(E)	16	#4	3'-9"	—
d10(E)	18	#6	3'-1"	—
d11(E)	6	#5	4'-6"	—
d12(E)	6	#5	4'-6"	—
d13(E)	26	#5	9'-9"	—
d14(E)	18	#5	9'-9"	—
d15(E)	4	#6	26'-7"	—
d16(E)	4	#6	25'-8"	—
d17(E)	7	#5	4'-5"	—
d18(E)	7	#5	2'-7"	—
d19(E)	24	#6	2'-11"	—
d20(E)	22	#6	12'-10"	—
d21(E)	10	#7	2'-6"	—
d22(E)	12	#7	3'-1"	—
d23(E)	3	#4	15'-5"	□
d24(E)	3	#4	12'-7"	□
d25(E)	54	#5	3'-0"	—
d26(E)	8	#5	2'-11"	—
d27(E)	8	#6	4'-4"	—
d28(E)	11	#6	5'-7"	—
d29(E)	8	#6	5'-10"	—
d30(E)	3	#6	5'-8"	—
d31(E)	11	#6	6'-4"	—
d32(E)	8	#6	6'-6"	—
d33(E)	3	#6	6'-5"	—
d34(E)	46	#5	1'-9"	—
d35(E)	5	#7	8'-0"	—

Structure Excavation	Cu. Yd.	45.6
Concrete Removal	Cu. Yd.	3.5
Concrete Structures	Cu. Yd.	13.3
Reinforcement Bars, Epoxy Ct.	Lbs.	2540
Bar Splicers	Ea.	4
Furnishing Concrete Piles	Lin. Ft.	52
Driving Concrete Piles	Lin. Ft.	52
Test Pile Concrete	Ea.	1

LEGEND

Concrete Removal

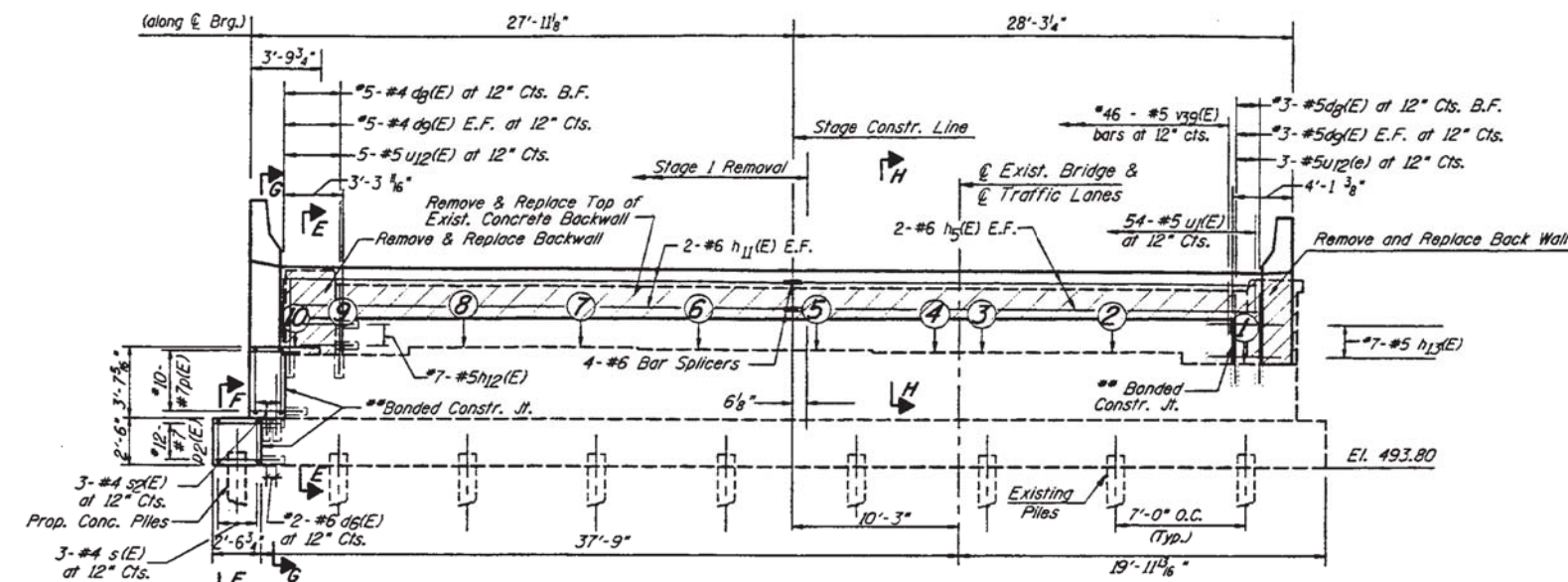
WEST ABUTMENT

F.A. 317 (IL. 116 / U.S. 24)

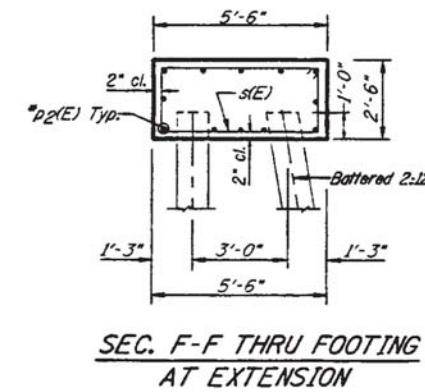
SECTION (102 HB)I, I-1

TAZEWELL COUNTY

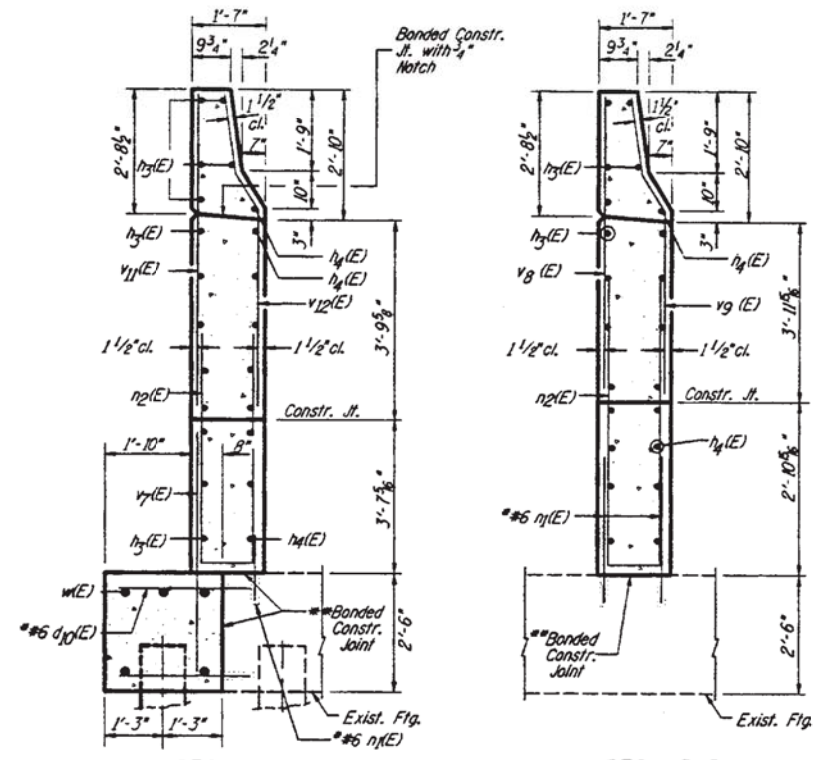
STRUCTURE NO. 090-0071



ELEVATION - WEST ABUTMENT
(LOOKING WEST)



SEC. F-F THRU FOOTING
AT EXTENSION



SEC. A-A
SOUTH WINGWALL

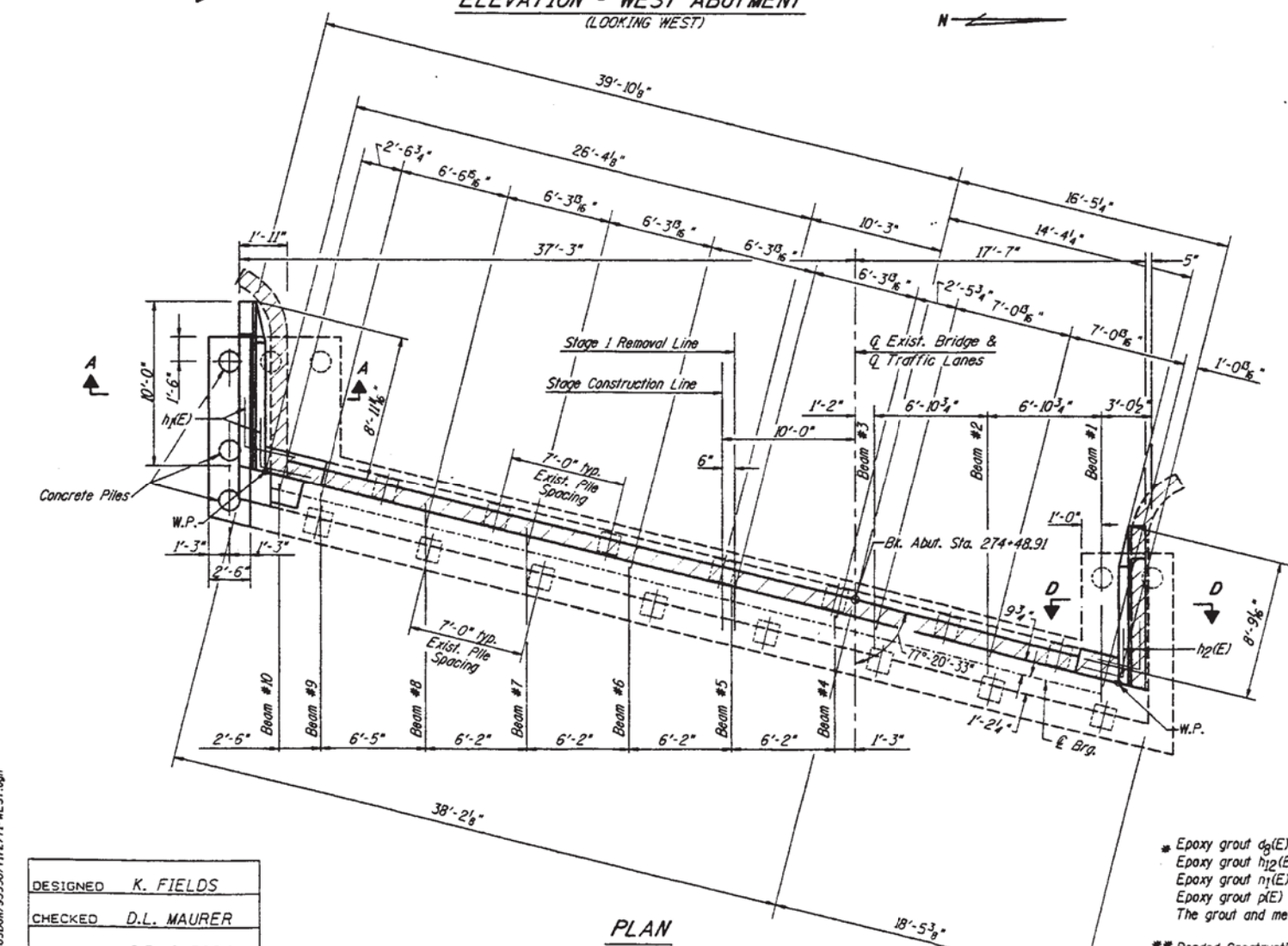
SEC. D-D
NORTH WINGWALL

PILE DATA

TYPE	CONCRETE CAPACITY
	25 TON
	26 FEET
	2
	1

MIN. BAR LAP

#4 Bar	1'-4"
#6 Bar	2'-0"
#7 Bar	2'-9"



PLAN

* Epoxy grout dg(E), dg(E) in 3/4" x 9" min. drilled holes.
* Epoxy grout h12(E), h13(E) and v9(E) in 3/8" x 9" min. drilled holes.
* Epoxy grout h1(E), dg(E) and d10(E) in 1" x 9" min. drilled holes.
* Epoxy grout p(E) and p2(E) in 1 1/8" x 9" min. drilled holes.
The grout and method of application shall be approved by the Department.

** Bonded Construction Joint in accordance with Article 503.09 (aX2) of the Standard Specifications.

Notes:
Space reinforcement in cap to miss anchor bolts.
Reinforcement bars designated (E) shall be epoxy coated.
Concrete Removal for wingwalls & endposts is included in Concrete Removal Quantity on sheet 31.
Work this sheet with sheet 24 of 44.
Clean & straighten existing reinforcement and incorporate into new construction.

DESIGNED	K. FIELDS
CHECKED	D.L. MAURER
DRAWN	C.D. SNEDDEN
CHECKED	D.L. MAURER

R.A.N. CONSULTANTS, INC.



USER NAME	DESIGNED	MAH	REVISED	
	CHECKED	KES	REVISED	
	DRAWN	JRP	REVISED	
	CHECKED	MAH	REVISED	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)I]BR	TAZEWELL	65	58
CONTRACT NO. 68D85				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	DATE	SHEET NO.
F.A. 317	#	TAZEWELL	77
SHEET NO. 27			44 SHEETS

REVISION	DATE	BY
002 HB11 I-1		

Location	Exist. Elev.	Prop. Elev.	Shim Hight
6	500.14	500.18	1/2"
5	500.55	500.57	1/4"
4	500.55	500.51	
3	500.45	500.44	
2	500.45	500.38	
1	499.89	499.78	
7		499.84	

Note: Elevations shown as surveyed in the field. Elevations differ from those shown on existing plans.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d6 (E)	4	#6	2'-11"	
d10 (E)	18	#6	3'-0"	
d11 (E)	7	#4	4'-3"	
d12 (E)	14	#4	3'-9"	
d23 (E)	64	#4	3'-6"	
n1 (E)	6	#5	4'-6"	
n2 (E)	6	#5	4'-6"	
n3 (E)	26	#5	9'-9"	
n4 (E)	18	#5	9'-9"	
n12 (E)	4	#6	22'-3"	
n13 (E)	4	#6	16'-1"	
n25 (E)	9	#5	4'-0"	
n1 (E)	22	#6	11'-4"	
n1 (E)	24	#6	2'-11"	
p2 (E)	12	#7	3'-2"	
p3 (E)	10	#7	2'-4"	
p5 (E)	2	#7	6'-6"	
p6 (E)	6	#7	6'-10"	
s (E)	3	#4	15'-5"	
s3 (E)	3	#4	11'-3"	
u1 (E)	40	#5	3'-0"	
u2 (E)	7	#5	2'-11"	
v7 (E)	8	#6	4'-4"	
v15 (E)	11	#6	6'-5"	
v16 (E)	8	#6	6'-7"	
v17 (E)	3	#6	6'-6"	
v18 (E)	11	#6	6'-1"	
v19 (E)	8	#6	6'-4"	
v20 (E)	3	#6	6'-3"	
v39 (E)	35	#5	1'-9"	
w (E)	5	#7	8'-0"	

Notes: Space reinforcement in cap to miss anchor bolts.
Reinforcement bars designated (E) shall be epoxy coated.
Concrete removal for wingwalls and endposts is included in Concrete Removal Quantity on Sheet 31 of 44.
Work this sheet with Sheet 28 of 44.
Clean and straighten existing reinforcement and incorporate into new construction.

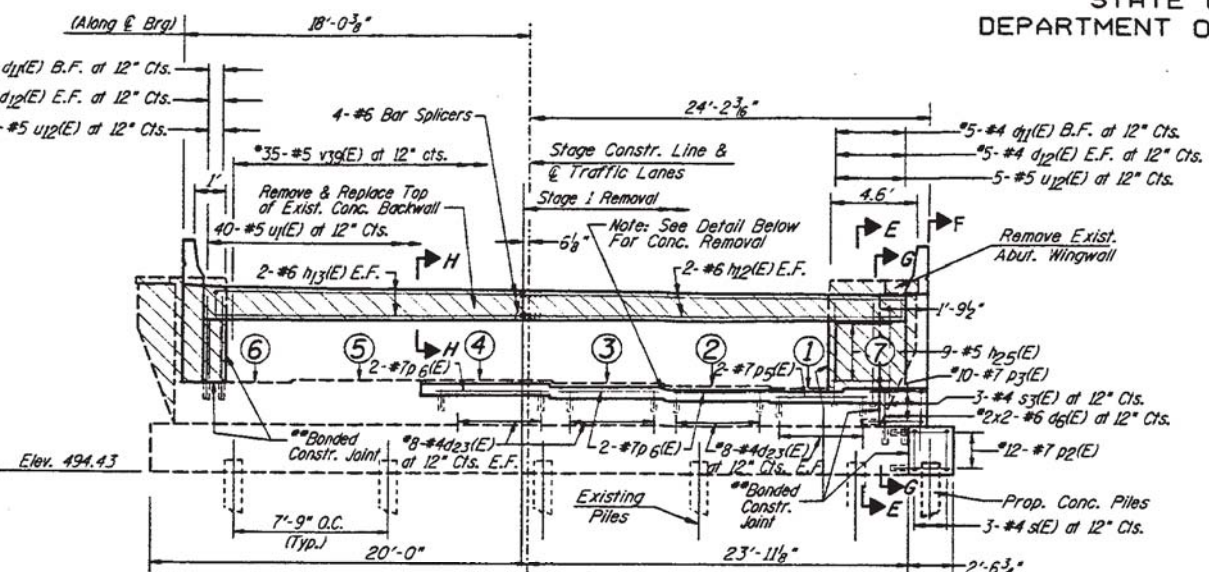
	Concrete Removal
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WEST ABUTMENT
F.A. 317 (IL. 116 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

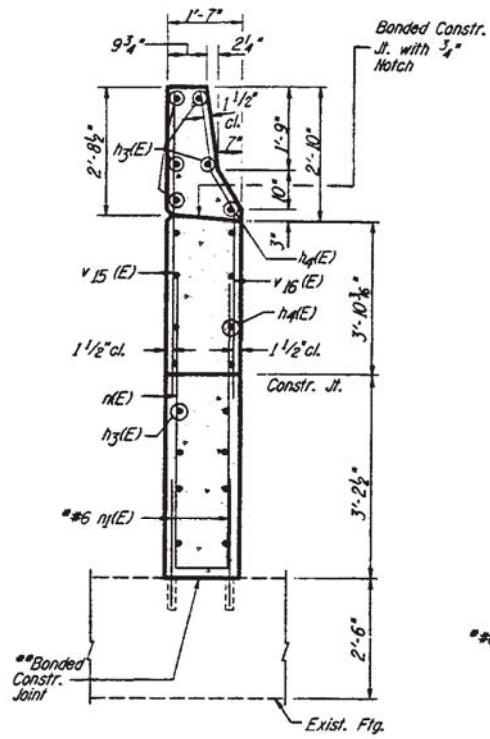
STRUCTURE NO. 090-0072

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB) I] BR	TAZEWELL	65	60
CONTRACT NO. 68D85				

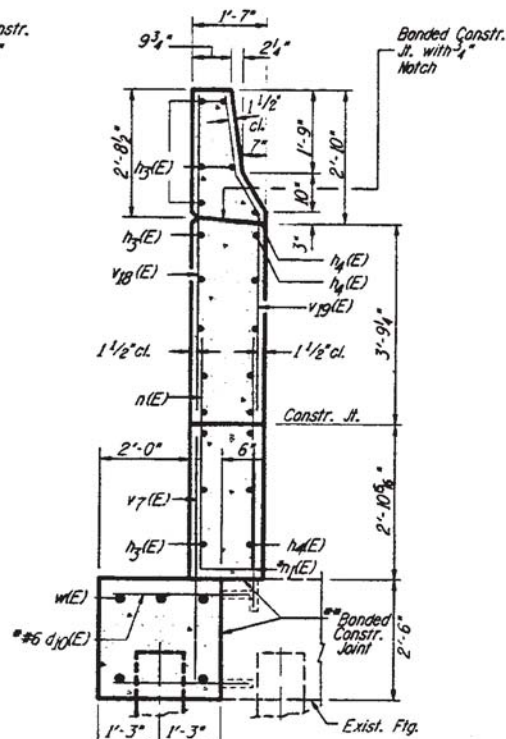
ILLINOIS FED. AID PROJECT



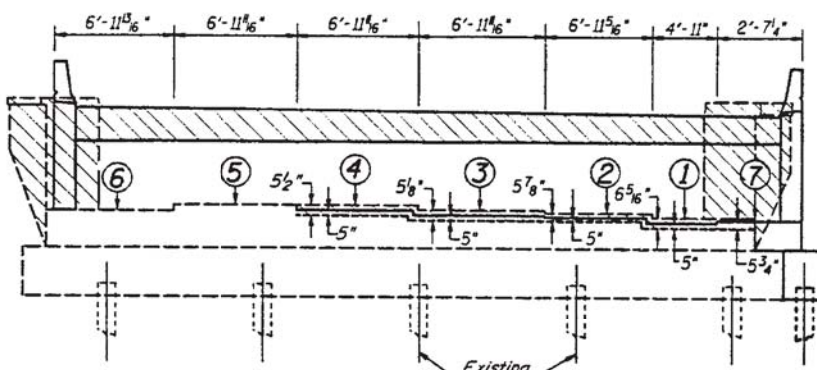
ELEVATION - WEST ABUTMENT
(LOOKING WEST)



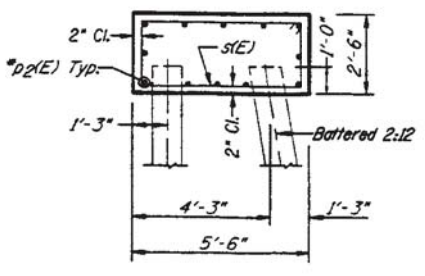
SEC. D-D
SOUTH WINGWALL



SEC. A-A
NORTH WINGWALL



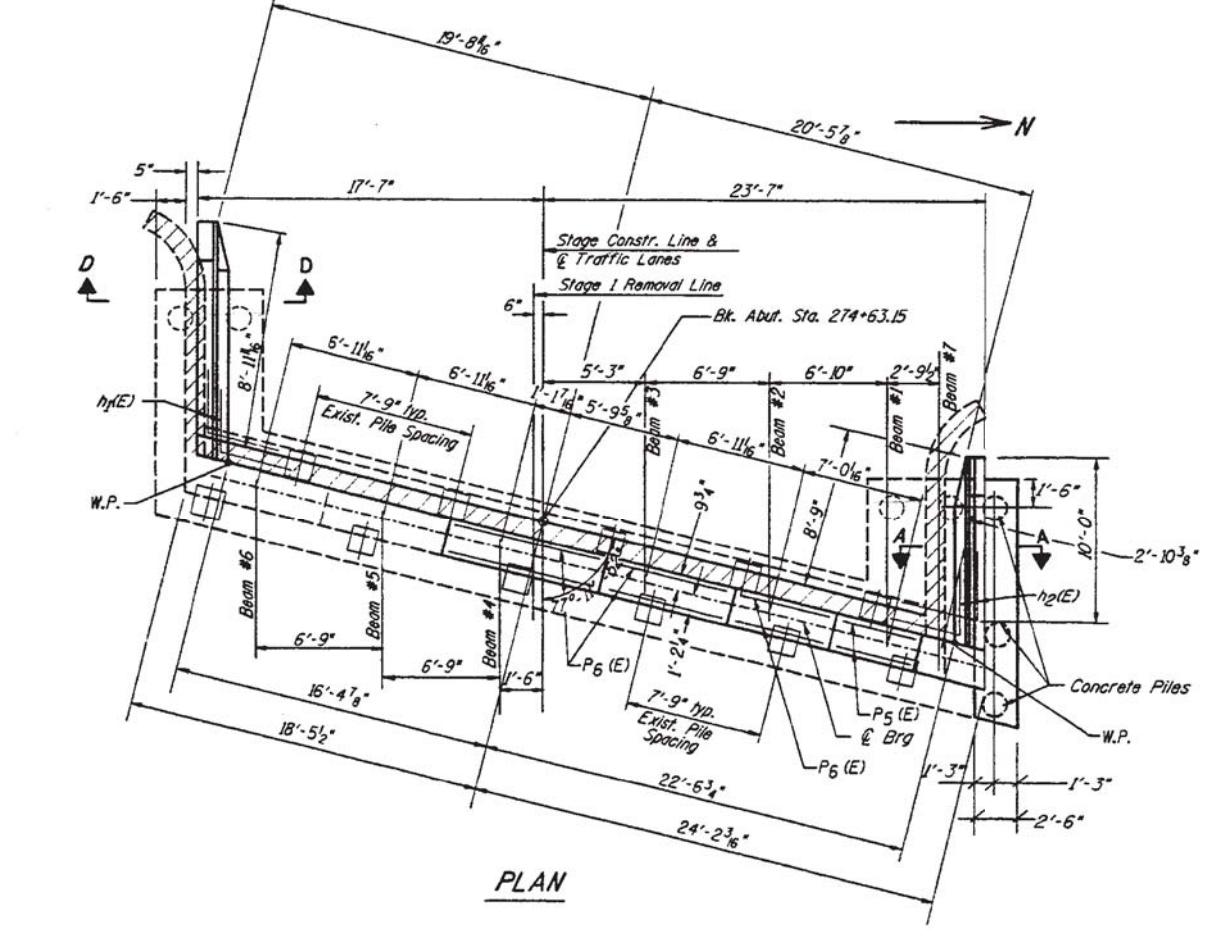
ELEVATION - WEST ABUTMENT
CONCRETE REMOVAL



SEC. F-F THRU FOOTING
AT EXTENSION

TYPE	CONCRETE
CAPACITY	25 TON
EST. LENGTH	26 FT.
NO. REQUIRED	3

#4 Bar	1'-4"
#5 Bar	1'-8"
#6 Bar	2'-0"
#7 Bar	2'-9"



* Epoxy Grout d1(XE), d2(XE) and u3(XE) in 3/4" x 9" min. drilled holes.
Epoxy Grout v39(XE) in 1/2" x 9" min. drilled holes.
Epoxy Grout n(XE), d6(XE) and d10(XE) in 1" x 9" min. drilled holes.
Epoxy Grout p2(XE) and p3(XE) in 1 1/2" x 9" min. drilled holes.
The grout and method of application shall be approved by the Department.
** Bonded Construction Joint in accordance with Article 503.09(a)(2) of the Standard Specifications.

DESIGN	K. Fields
CHECKED	D.L. Maurer
DRAWING	G.D. Snedden
CHECKED	D.L. Maurer

R.A.N. CONSULTANTS, INC.



USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

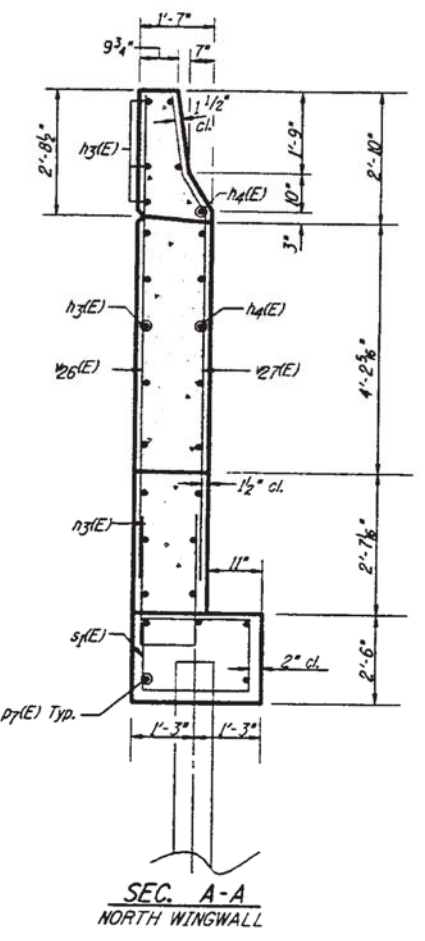
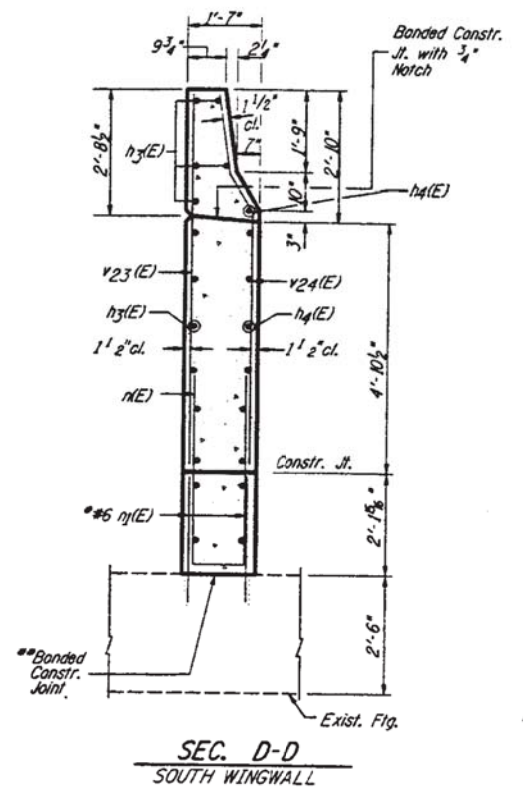
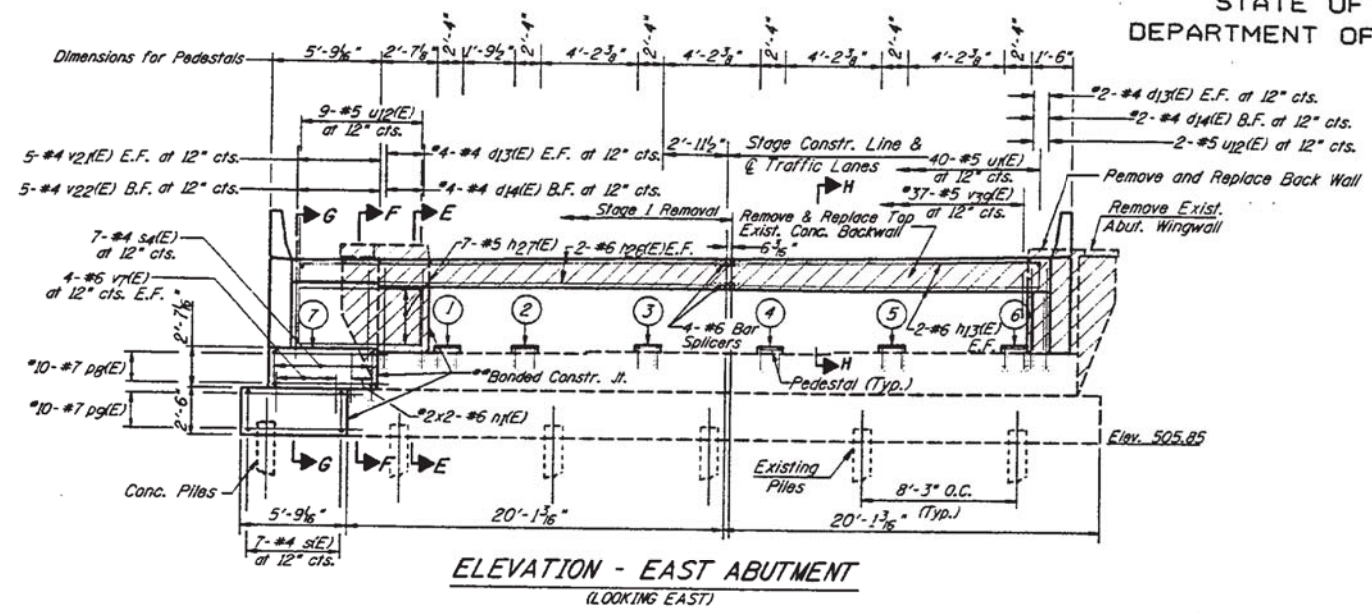
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0072

SHEET NO. 14 OF 19 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A. 317	#	TAZEWELL	79	44 SHEETS
SHEET NO. 29				



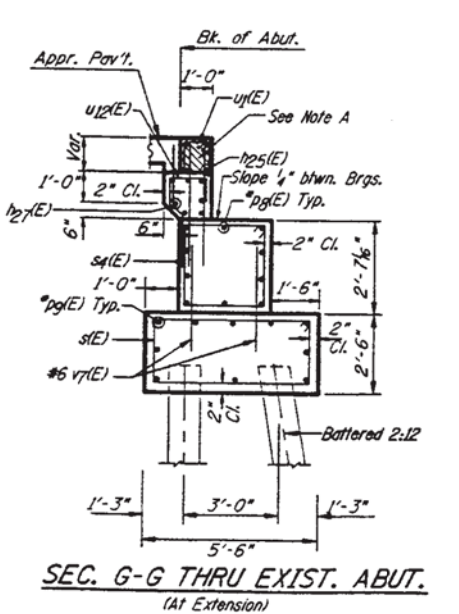
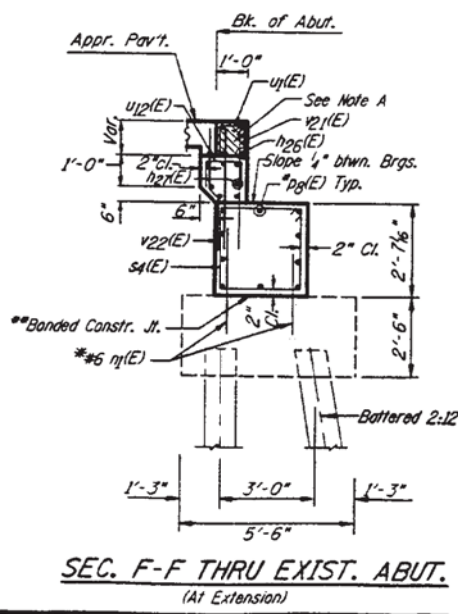
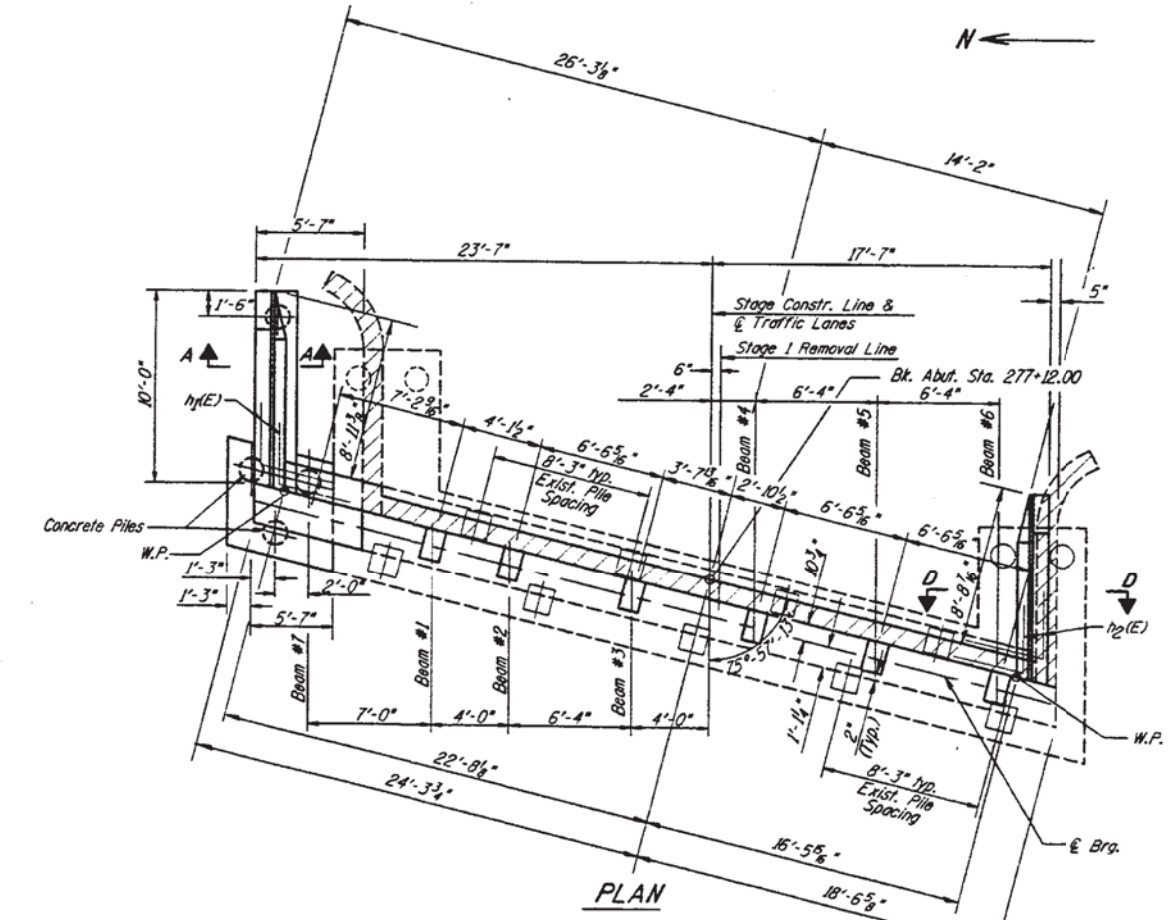
Location	Exist. Elev.	Prop. Elev.	Pad. Height
1	510.26	510.79	6 1/2"
2	510.26	510.82	6 3/4"
3	510.36	510.86	6"
4	510.36	510.91	6 3/4"
5	510.50	510.96	5 1/2"
6	510.51	511.01	6"
7		510.94	

Note: Elevations shown are as surveyed in the field. Elevations differ from those shown on existing plans.

Bar	No.	Size	Length	Shape
d13(E)	12	#4	3'-3"	—
d14(E)	6	#4	3'-1"	—
d16(E)	36	#5	2'-7"	—
n1(E)	6	#5	4'-5"	—
n2(E)	6	#5	4'-6"	—
h3(E)	26	#5	9'-9"	—
h4(E)	18	#5	9'-9"	—
h10(E)	18	#5	2'-0"	—
h12(E)	4	#6	16'-1"	—
h26(E)	4	#6	22'-5"	—
h27(E)	7	#5	8'-6"	—
n(E)	11	#6	11'-4"	—
n1(E)	20	#6	2'-11"	—
n3(E)	11	#6	9'-0"	—
p7(E)	5	#7	9'-9"	—
p8(E)	10	#7	6'-4"	—
p9(E)	10	#7	6'-4"	—
s(E)	7	#4	15'-5"	—
s1(E)	10	#4	9'-5"	—
s4(E)	7	#4	10'-7"	—
u1(E)	40	#5	3'-0"	—
u12(E)	11	#5	2'-11"	—
v7(E)	8	#6	4'-4"	—
v21(E)	10	#4	4'-0"	—
v22(E)	5	#4	4'-3"	—
v23(E)	11	#6	6'-7"	—
v24(E)	8	#6	6'-9"	—
v25(E)	3	#6	6'-8"	—
v26(E)	11	#6	9'-2"	—
v27(E)	8	#6	9'-5"	—
v28(E)	3	#6	9'-4"	—
v39(E)	37	#5	1'-9"	—
Structure Excavation			Cu. Yd.	51.2
Concrete Removal			Cu. Yd.	2.6
Concrete Structures			Cu. Yd.	16.2
Reinforcement Bars, Epoxy Ct.			Lbs.	2780
Bar Splicers			Ea.	4
Furnishing Concrete Piles			Lin. Ft.	138
Driving Concrete Piles			Lin. Ft.	138
Test Pile Concrete			Ea.	1

TYPE	CONCRETE
CAPACITY	25 TON
EST. LENGTH	46 FT.
NO. REQUIRED	3
TEST PILE	1

#4 Bar	1'-4"
#5 Bar	1'-8"
#6 Bar	2'-0"
#7 Bar	2'-9"



NOTE: A
The hatched portion to be poured after superstructure forms have been removed. Quantity of concrete included with "Concrete Superstructures" on Sheet 9 of 44.

LEGEND
Concrete Removal

EAST ABUTMENT
F.A. 317 (IL. 116 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

DESIGN	K. Fields
CHECKED	D.L. Maurer
DRAWING	C.D. Snedden
CHECKED	D.L. Maurer

NOTES: Space reinforcement in cap to miss anchor bolts.
Reinforcement bars designated (E) shall be epoxy coated.
Concrete Removal for wingwalls & endposts is included in Concrete Removal Quantity on Sht. 31.
Work this sheet with Sheet 30 of 44.
Clean & straighten existing reinforcement & incorporate into new construction.

* Epoxy grout d13(E) and d14(E) in 3/4" x 9" min. drilled holes. Epoxy grout d15(E) and v39(E) in 1/2" x 9" min. drilled holes. Epoxy grout n1(E) in 1" x 9" min. drilled holes. Epoxy grout p8(E) and p9(E) in 1/2" x 9" min. drilled holes. The grout and the method of application shall be approved by the Department.
** Banded Construction Joint in accordance with Article 503.09(a)(2) of the Standard Specifications.

R.A.N. CONSULTANTS, INC.



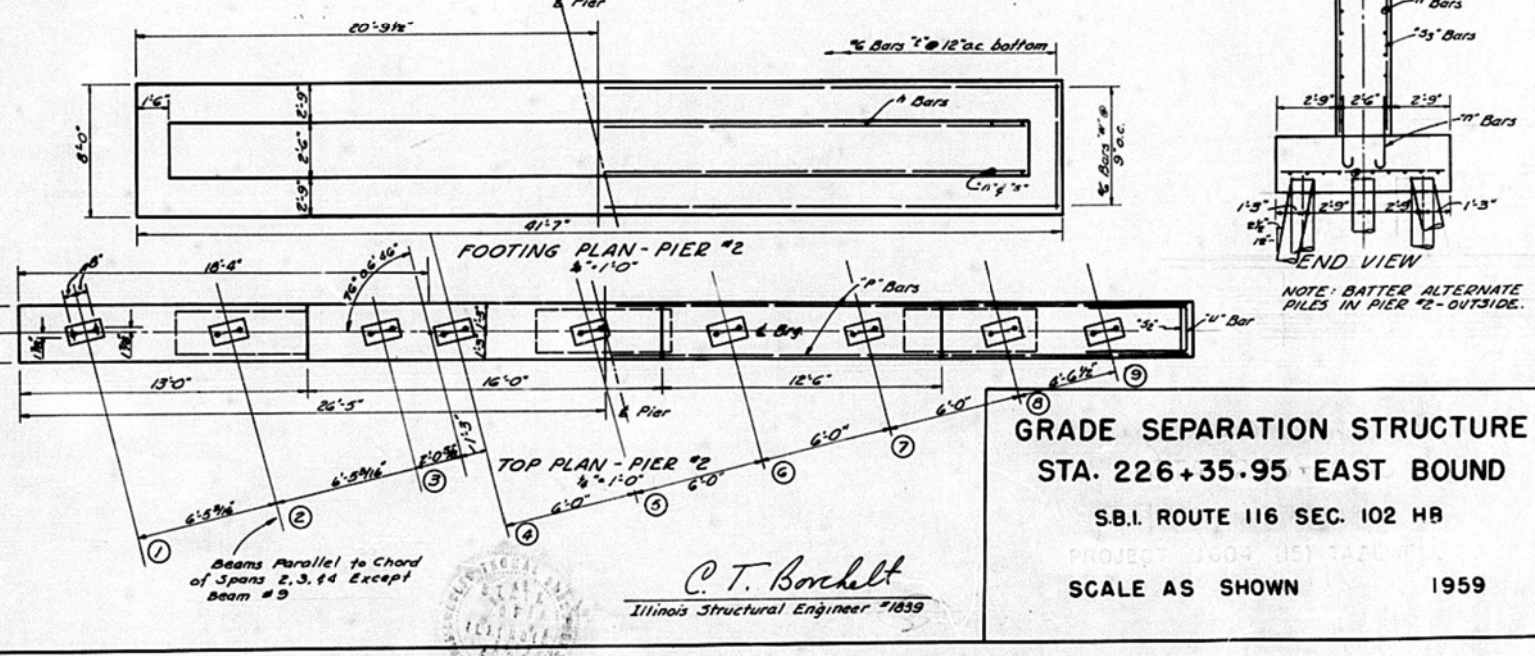
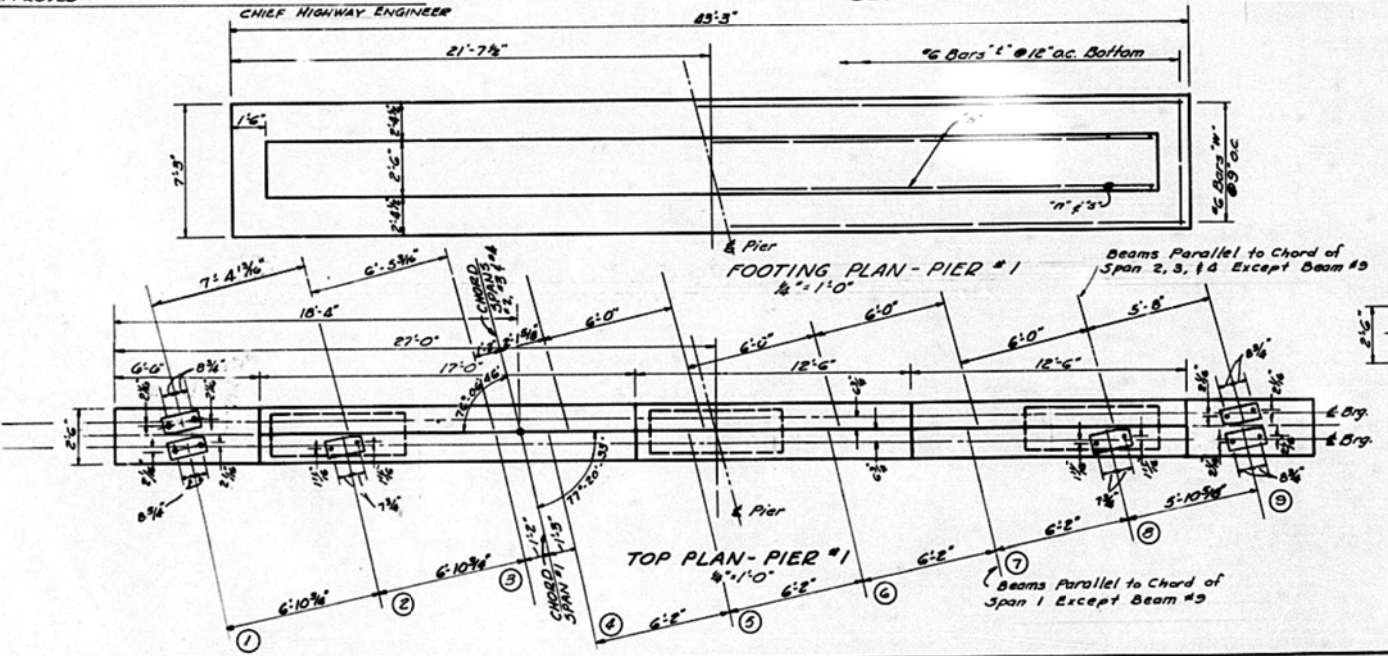
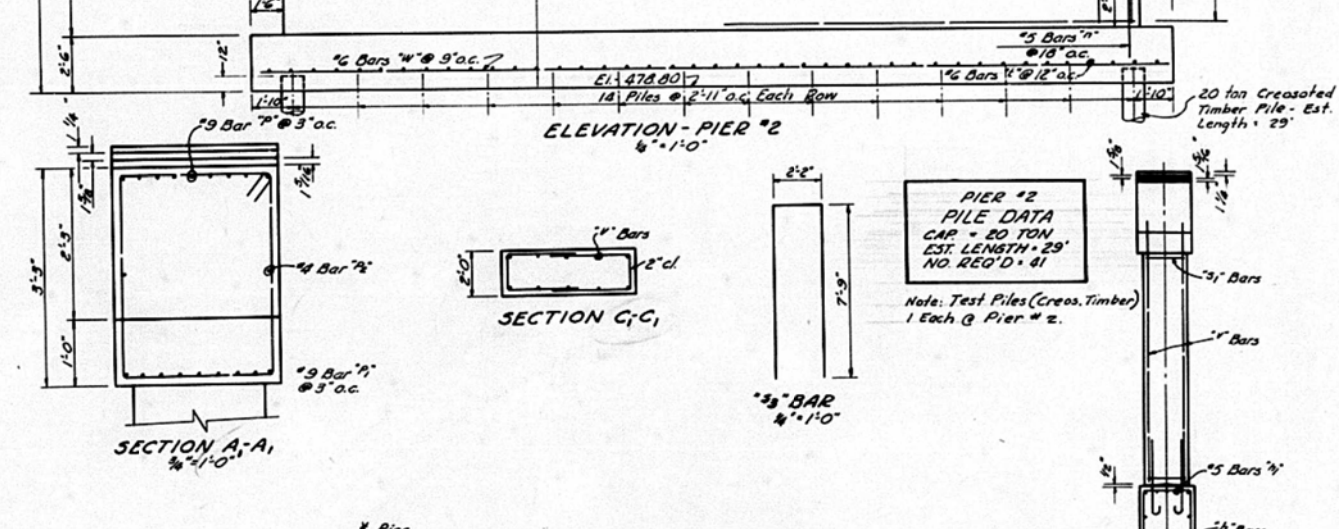
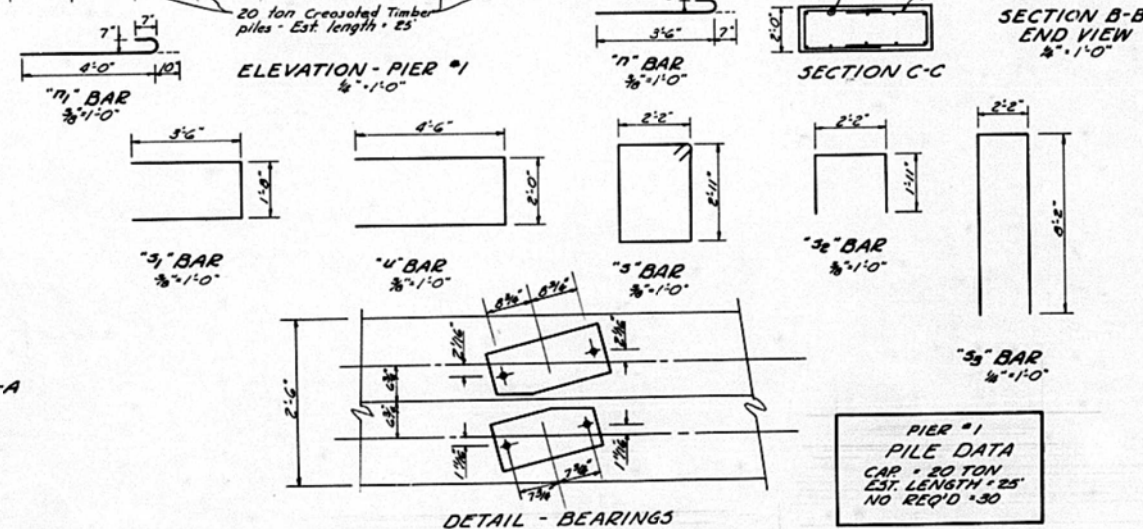
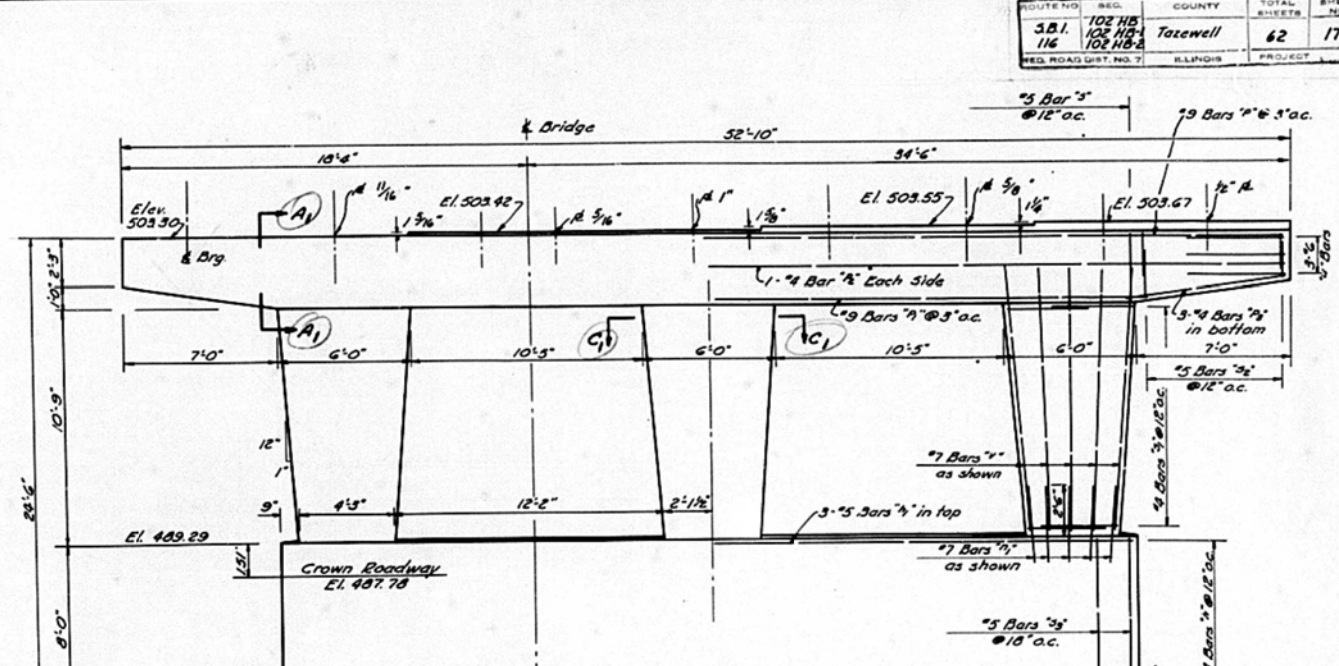
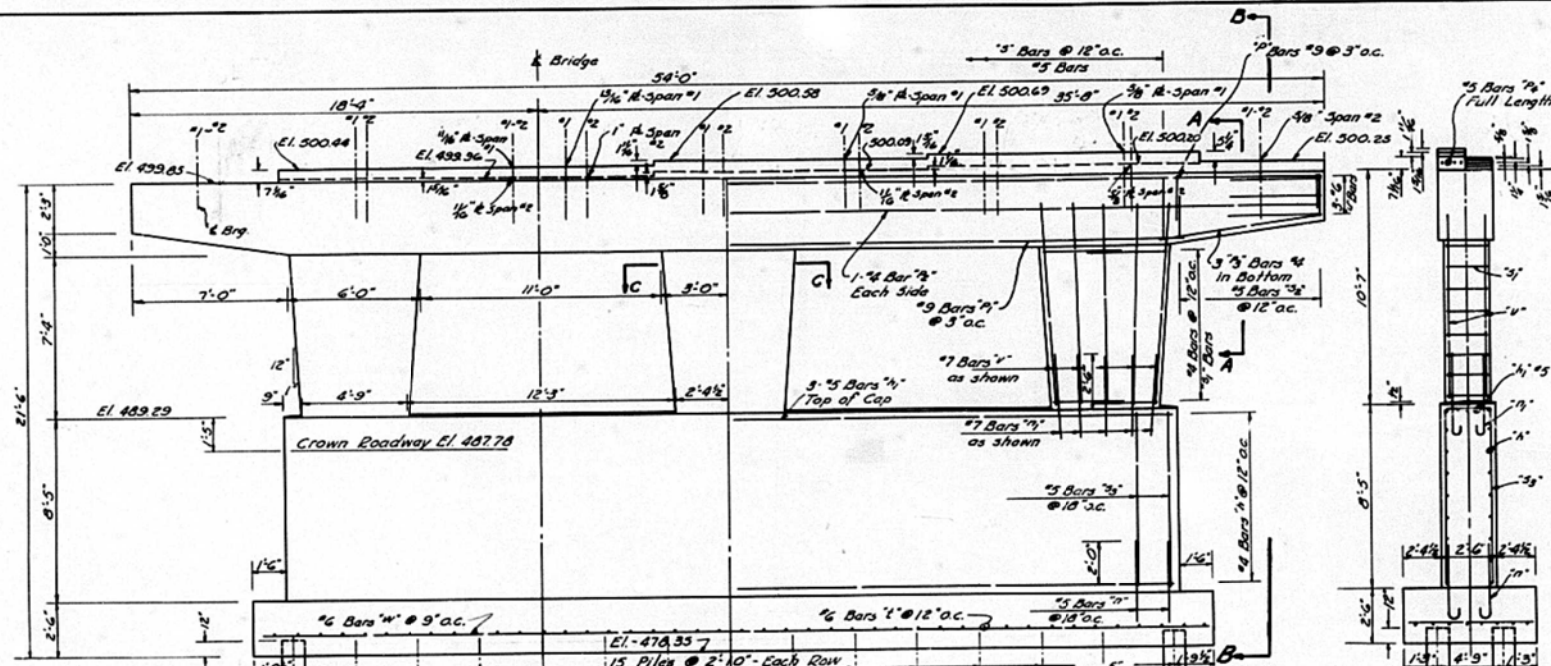
USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0072

SHEET NO. 15 OF 19 SHEETS

STRUCTURE NO. 090-0072			
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
317	[(102-HB)I]BR	TAZEWELL	65
			SHEET NO. 61
			CONTRACT NO. 68D85
ILLINOIS FED. AID PROJECT			



GRADE SEPARATION STRUCTURE
 STA. 226+35.95 EAST BOUND
 S.B.I. ROUTE 116 SEC. 102 HB
 SCALE AS SHOWN 1959

C. T. Borchelt
 Illinois Structural Engineer #1839



USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
 STRUCTURE NO. 090-0071

SHEET NO. 16 OF 19 SHEETS

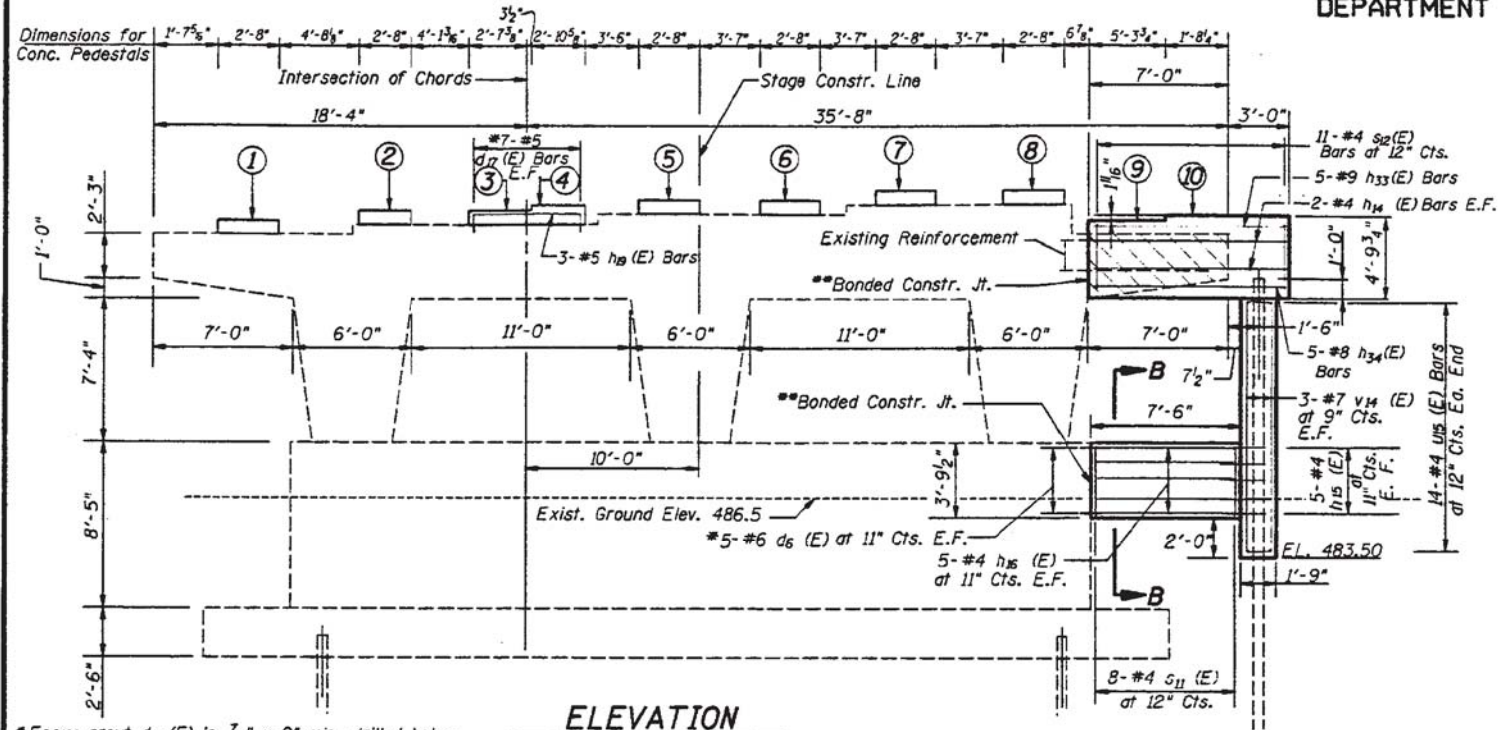
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	62
CONTRACT NO. 68D85			ILLINOIS FED. AID PROJECT	

PROPOSED PILE DATA

Type	14" ϕ Metal Shells
Capacity	48 Ton
Est. Length	62 Ft.
No. Required	1

NOTE: The thickness of the 14" ϕ Metal Shell shall be $\frac{1}{4}$ ".

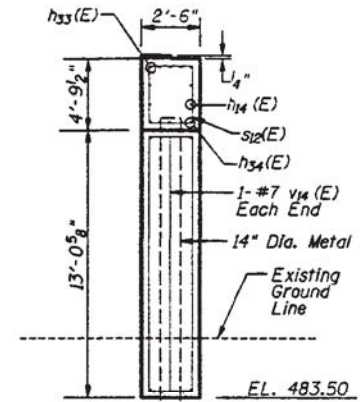
PROJECT NO.	SECTION	DATE	SHEET NO.
317	TAZEWELL	8Z	44 SHEETS



ELEVATION
(Looking East)

*Epoxy grout $d_{17}(E)$ in $\frac{7}{8}$ " x 9" min. drilled holes. Epoxy grout $d_6(E)$ in 1" x 9" min. drilled holes. The grout and the method of application shall be approved by the Department.

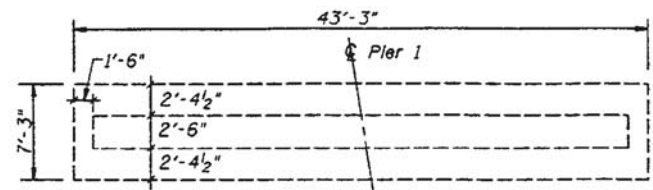
** Bonded construction joints in accordance with Art. 503.09 (aX2) of the Standard Specifications.



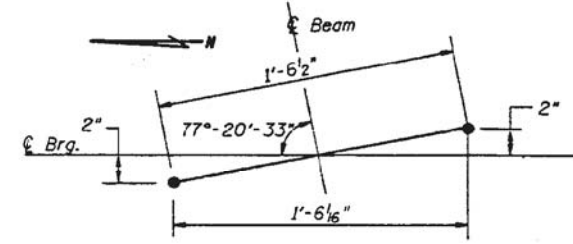
END VIEW OF PIER

MINIMUM BAR LAP

- #4 Bar 1'-4"
- #5 Bar 1'-8"
- #6 Bar 2'-0"
- #7 Bar 2'-9"
- #8 Bar 3'-5"
- #9 Bar 4'-5"



EXISTING FOOTING PLAN
(For Information Only)



ANCHOR BOLT SETTING PLAN
(Pier 1, Span 1)

BILL OF MATERIAL
PIER 1

BAR	NO.	SIZE	LENGTH	SHAPE
$d_6(E)$	10	#6	2'-11"	—
$d_{17}(E)$	50	#5	3'-8"	—
$h_{14}(E)$	4	#4	9'-6"	—
$h_{15}(E)$	10	#4	4'-0"	—
$h_{16}(E)$	10	#4	7'-2"	—
$h_{17}(E)$	18	#5	2'-5"	—
$h_{18}(E)$	3	#5	5'-5"	—
$h_{33}(E)$	5	#9	9'-6"	—
$h_{35}(E)$	5	#8	9'-6"	—
$s_{11}(E)$	8	#4	11'-9"	—
$s_{12}(E)$	28	#4	13'-11"	—
$u_{15}(E)$	11	#4	4'-4"	—
$v_{14}(E)$	8	#7	12'-8"	—

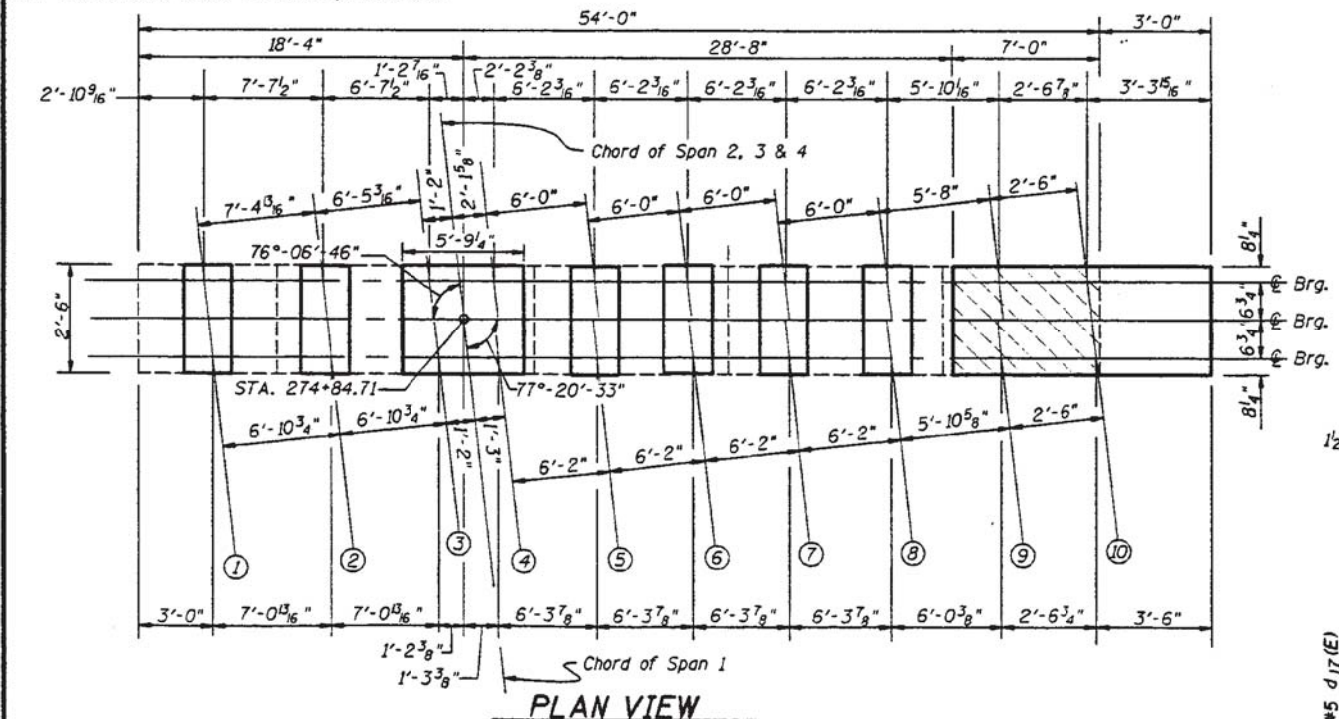
Concrete Removal	Cu. Yds.	2.0
Structure Excavation	Cu. Yds.	5.5
Furnishing Metal Shells 14"	Lin. Ft.	62
Driving & Filling Shells	Lin. Ft.	62
Reinf. Bars, Epoxy Coated	Lbs.	1140
Concrete Structures	Cu. Yds.	11.1
Shoring of Beam No. 9	Each	1

GENERAL NOTES

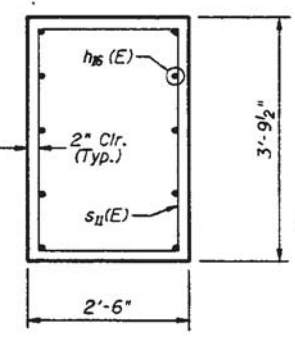
- All edges shall have standard $\frac{3}{4}$ " chamfer except as noted.
- Existing bridge seat elevations shown are as surveyed in field. These elevations differ from those shown on existing plans.
- Existing reinforcement extending into removal area shall be cleaned, straightened, and incorporated into new construction. Cost incidental to "Concrete Removal."
- Temporary shoring shall be provided for Beam No. 9 during construction of pier extensions. See Special Provision for Shoring of Beam No. 8 and 9.

PIER 1
F.A. 317 (IL. 116 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

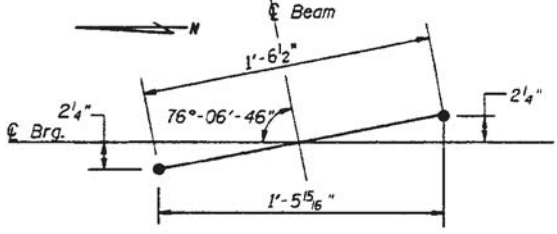
STRUCTURE NO. 090-0071



PLAN VIEW



SECTION B-B



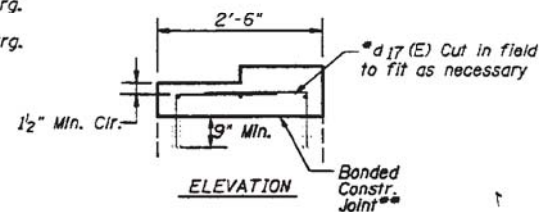
ANCHOR BOLT SETTING PLAN
(Pier 1, Span 2)

BRIDGE BEARING SEAT
ELEVATIONS (SPAN 1)

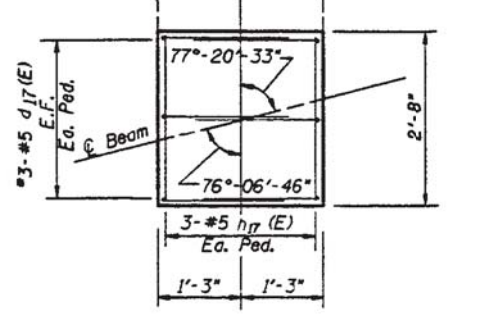
LOCATION	EXISTING ELEVATION	PROPOSED ELEVATION	PEDESTAL HEIGHT
1	499.80	500.78	11 $\frac{3}{4}$ "
2	500.39	501.37	11 $\frac{3}{4}$ "
3	500.39	501.44	1'-0 $\frac{5}{8}$ "
4	500.39	501.46	1'-0 $\frac{5}{8}$ "
5	500.52	501.52	1'-0"
6	500.52	501.58	1'-0 $\frac{3}{4}$ "
7	500.64	501.64	1'-0"
8	500.64	501.70	1'-0 $\frac{3}{4}$ "
9	500.17	501.23	—
10	—	501.36	—

BRIDGE BEARING SEAT
ELEVATIONS (SPAN 2)

LOCATION	EXISTING ELEVATION	PROPOSED ELEVATION	PEDESTAL HEIGHT
1	499.79	500.75	11 $\frac{1}{2}$ "
2	499.91	500.82	10 $\frac{5}{8}$ "
3	499.91	500.88	11 $\frac{3}{8}$ "
4	499.91	500.91	1'-0"
5	500.05	500.97	11 $\frac{1}{8}$ "
6	500.05	501.03	11 $\frac{3}{8}$ "
7	500.15	501.09	11 $\frac{1}{4}$ "
8	500.15	501.14	11 $\frac{1}{8}$ "
9	500.19	501.20	—
10	—	501.34	—



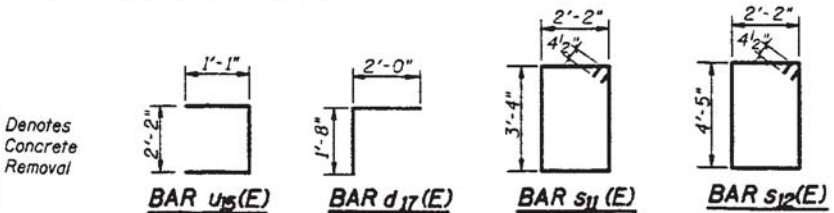
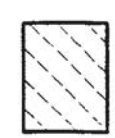
ELEVATION



CONCRETE PEDESTAL DETAIL

DESIGNED	K. FIELDS
CHECKED	D.L. MAURER
DRAWN	C.D. SNEDDEN
CHECKED	D.L. MAURER

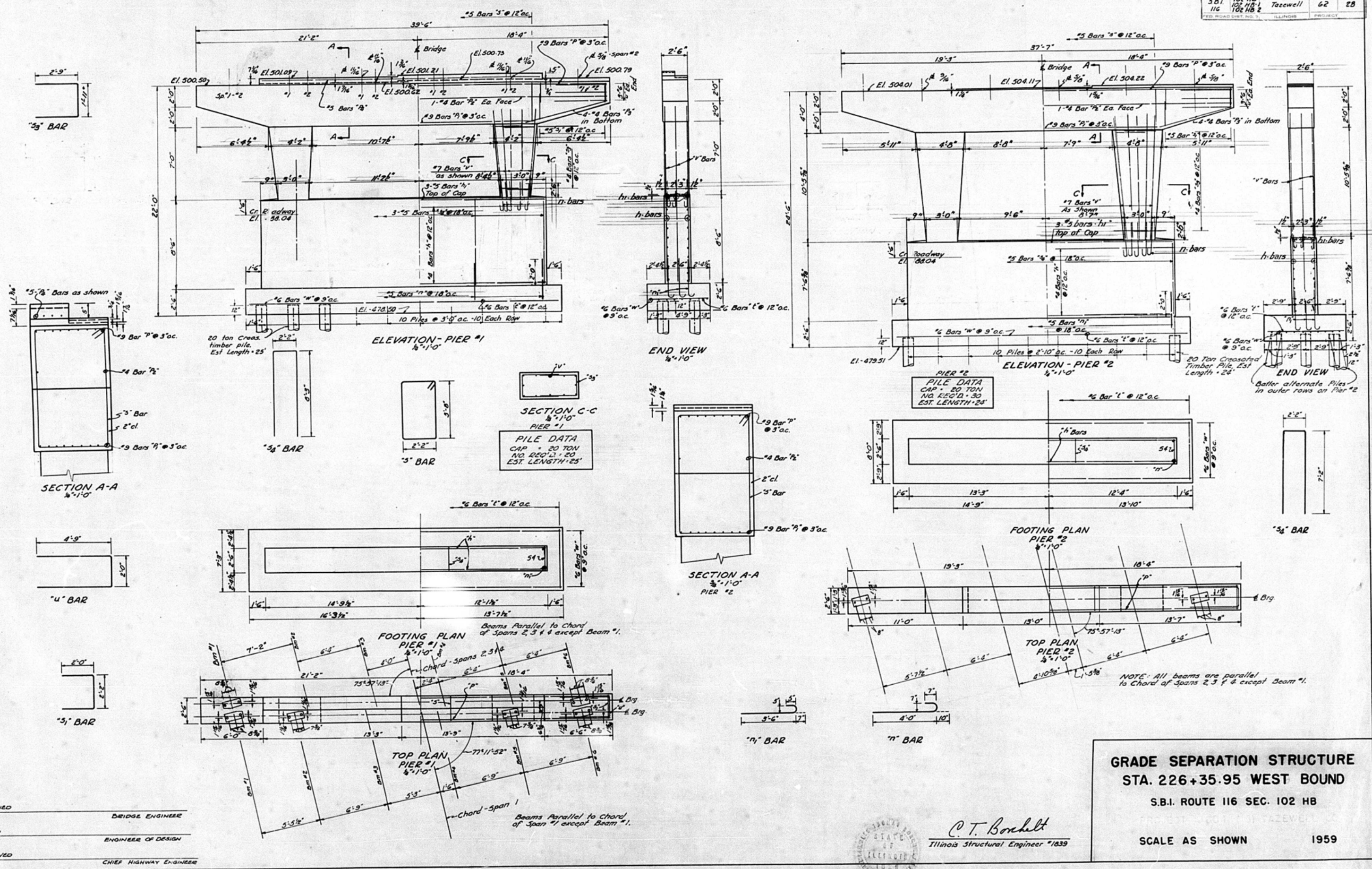
LEGEND



R.A.H. CONSULTANTS, INC.

USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]BR	TAZEWELL	65	63
				CONTRACT NO. 68D85



C. T. Borchelt
Illinois Structural Engineer #1839

GRADE SEPARATION STRUCTURE
STA. 226+35.95 WEST BOUND
S.B.I. ROUTE 116 SEC. 102 HB
 SCALE AS SHOWN 1959

EXAMINED _____ BRIDGE ENGINEER
 PASSED _____ ENGINEER OF DESIGN
 APPROVED _____ CHIEF HIGHWAY ENGINEER



USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0072

SHEET NO. 18 OF 19 SHEETS

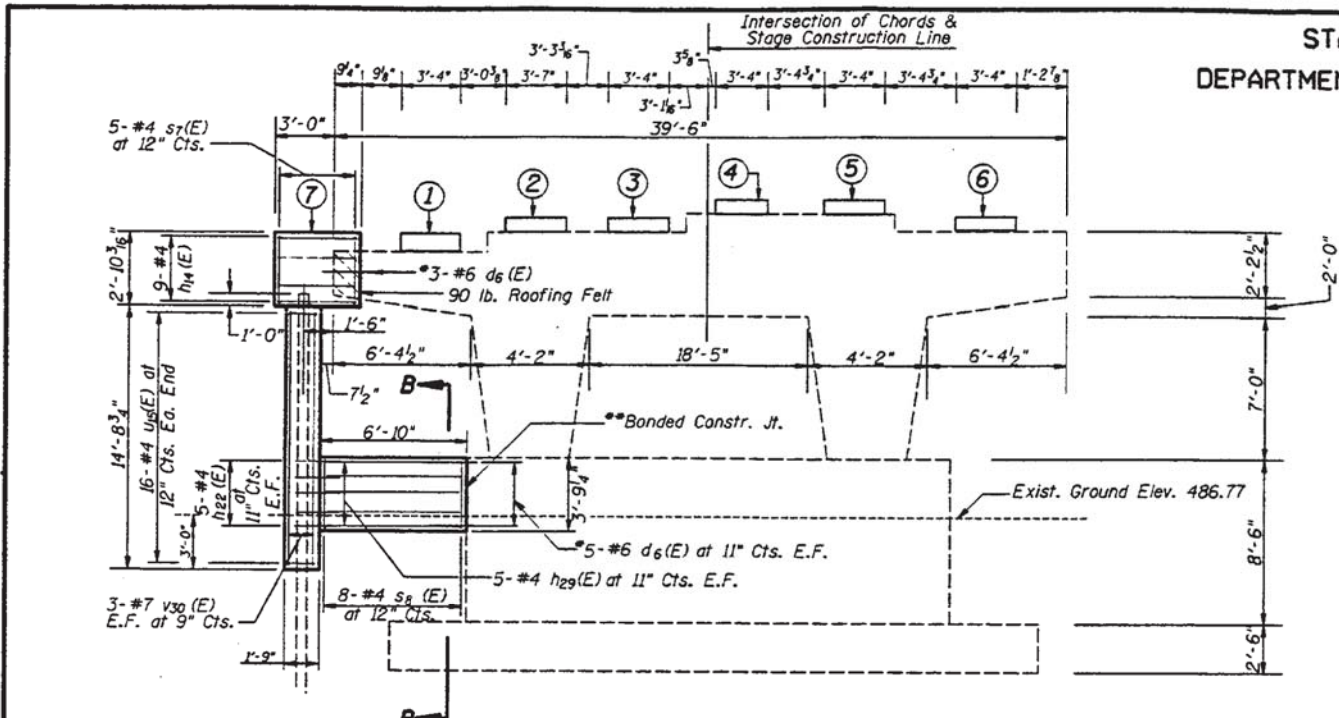
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]JBR	TAZEWELL	65	64
CONTRACT NO. 68D85			ILLINOIS FED. AID PROJECT	

PROPOSED PILE DATA

Type	14" Metal Shells
Capacity	50 Ton
Est. Length	63 Ft.
No. Required	1

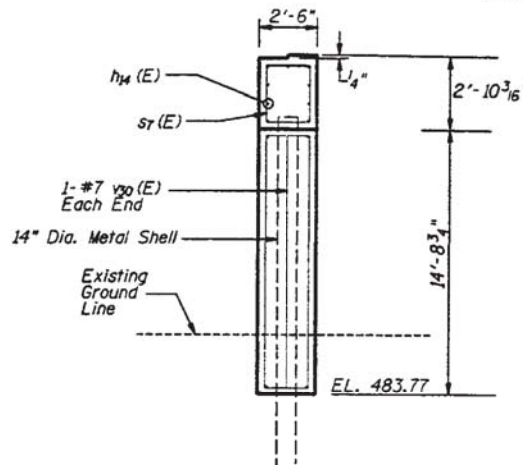
NOTE: The thickness of the 14" Metal Shell shall be 1/4".

PROJECT NO.	SECTION	COUNTY	DATE	SHEET NO.
F.A. 317	I-1	TAZEWELL	83	44 SHEETS

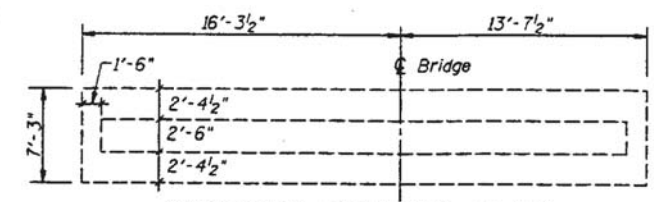


ELEVATION
(Looking East)

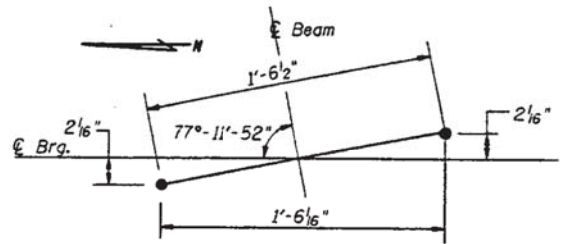
* Epoxy grout d6(E) in 7/8" x 9" min. drilled holes.
Epoxy grout d6(E) in 1" x 9" min. drilled holes.
The grout and method of application shall be approved by the Department.
** Bonded construction joints in accordance with Art. 503.09 (a)(2) of the Standard Specifications.



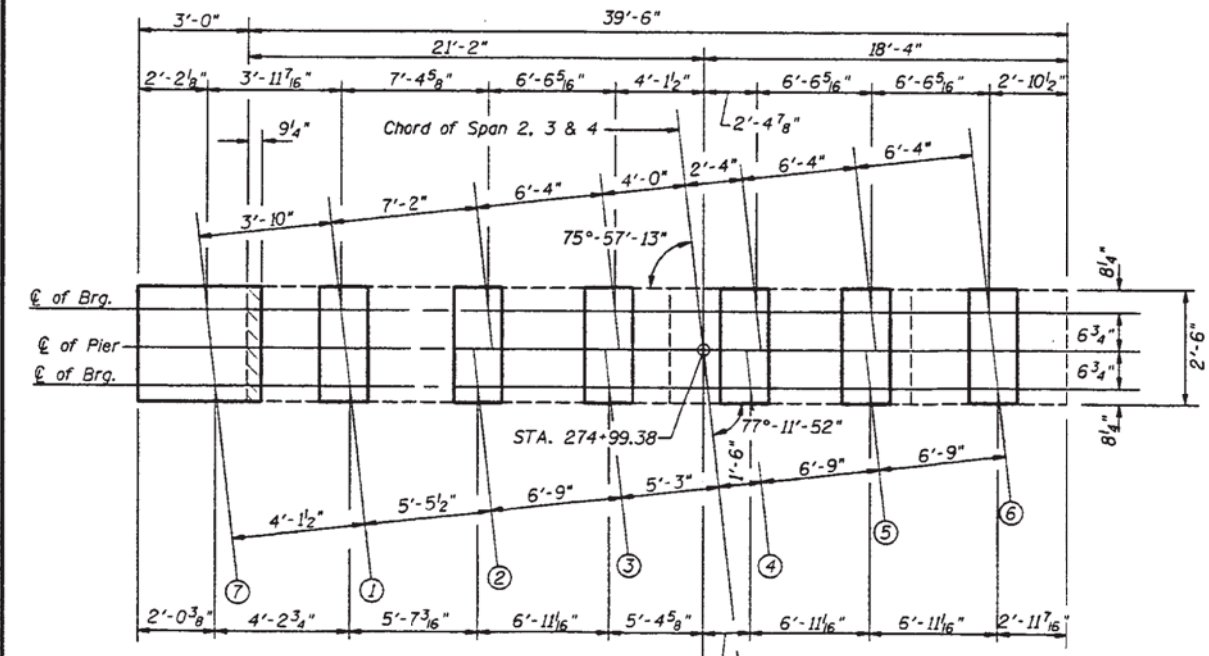
END VIEW OF PIER



EXISTING FOOTING PLAN
(For Information Only)



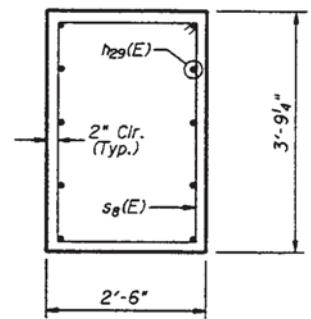
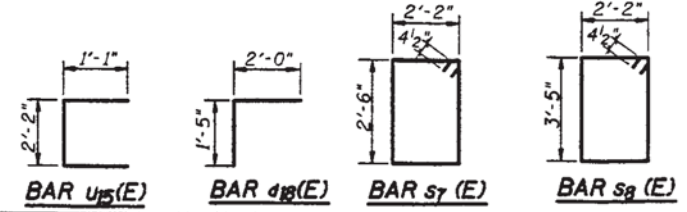
ANCHOR BOLT SETTING PLAN
(Pier 1, Span 1)



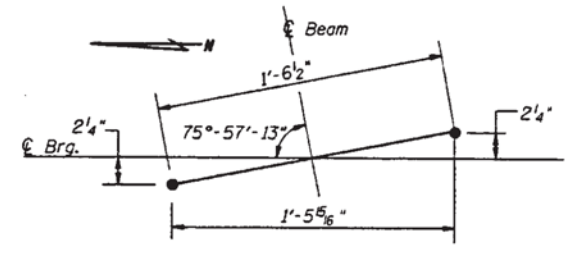
PLAN VIEW

LEGEND
Denotes Concrete Removal

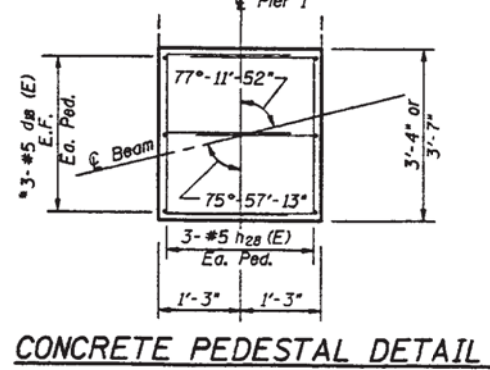
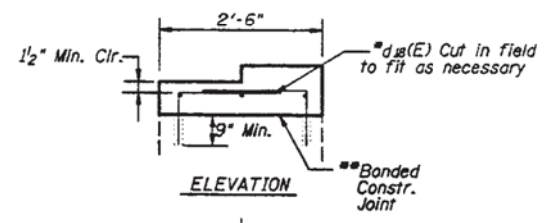
DESIGNED	K. FIELDS
CHECKED	D.L. MAURER
DRAWN	C.D. SNEDDEN
CHECKED	D.L. MAURER



SECTION B-B



ANCHOR BOLT SETTING PLAN
(Pier 1, Span 2)



CONCRETE PEDESTAL DETAIL

BRIDGE BEARING SEAT ELEVATIONS (SPAN 1)

LOCATION	EXISTING ELEVATION	PROPOSED ELEVATION	PEDESTAL HEIGHT
1	500.44	501.25	9 3/4"
2	501.02	501.83	9 3/8"
3	501.02	501.89	10 1/8"
4	501.15	501.96	9 3/4"
5	501.15	502.02	10 1/8"
6	500.71	501.56	10 3/8"
7		501.33	

BRIDGE BEARING SEAT ELEVATIONS (SPAN 2)

LOCATION	EXISTING ELEVATION	PROPOSED ELEVATION	PEDESTAL HEIGHT
1	500.46	501.23	9 1/4"
2	500.57	501.29	8 5/8"
3	500.57	501.35	9 3/8"
4	500.65	501.41	9 3/8"
5	500.65	501.47	9 3/8"
6	500.72	501.53	9 3/4"
7		501.31	

BILL OF MATERIAL PIER 1

BAR	NO.	SIZE	LENGTH	SHAPE
d6(E)	13	#6	2'-11"	—
d6(E)	36	#5	3'-5"	┌
h14(E)	9	#4	3'-6"	—
h22(E)	10	#4	4'-0"	—
h28(E)	18	#5	3'-0"	—
h29(E)	10	#4	6'-6"	—
s7(E)	5	#4	10'-1"	□
s8(E)	8	#4	11'-11"	□
u15(E)	32	#4	4'-4"	┌
v30(E)	8	#7	14'-5"	—
Structure Excavation			Cu. Yds.	5.3
Furnishing Metal Shells 14"			Lin. Ft.	63
Driving & Filling Shells			Lin. Ft.	63
Reinf. Bars, Epoxy Coated			Lbs.	760
Concrete Structures			Cu. Yds.	7.3
Concrete Removal			Cu. Yds.	0.2

GENERAL NOTES

- All edges shall have standard 3/4" chamfer except as noted.
- Existing bridge seat elevations shown are as surveyed in field. These elevations differ from those shown on existing plans.
- The cost of the 90 pound Roofing Felt shall be incidental to Concrete Structures.

PIER 1
F.A. 317 (IL. 116 / U.S. 24)
SECTION (102 HB) I, I-1
TAZEWELL COUNTY

STRUCTURE NO. 090-0072



USER NAME =	DESIGNED - MAH	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - MAH	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	[(102-HB)]IBR	TAZEWELL	65	65
CONTRACT NO. 68D85			ILLINOIS FED. AID PROJECT	