

PROJECT ENGINEER - REBECCA MARROFFO
 SQUAD LEADER - PAUL DREZEN (815) - 284 - 5915

INDEX

06-15-12 LETTING ITEM 207

STATE OF ILLINOIS

various

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D2 SAFETY 2012-2	**	151	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 64H77	
* 74, 80, 88 & 280				
** HENRY / ROCK ISLAND / WHITESIDE				

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- 119 - 151 CROSS SECTIONS

100%

06-24-2013

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

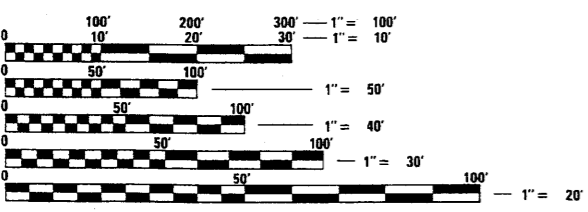
FAI ROUTE 74,80, 88 & 280 (VARIOUS LOCATIONS)
SECTION D2 SAFETY 2012-2
PROJECT: HSIP-000S(903)

HENRY, ROCK ISLAND AND WHITESIDE COUNTIES

C-92-134-12

STATE STANDARDS

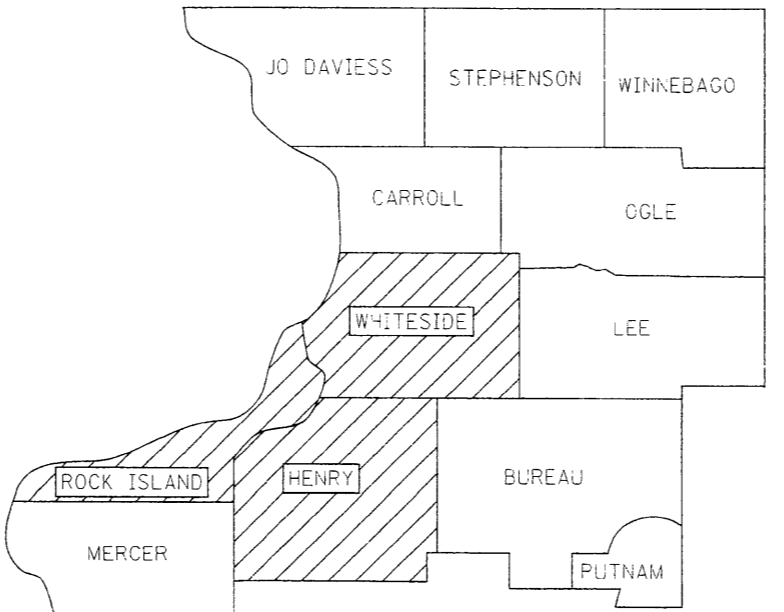
- 280001-06 TEMPORARY EROSIONS CONTROL SYSTEMS
- 542526-03 INLET BOX TYPE 24 (600) F
- 601001-04 SUBSURFACE DRAINS
- 601101-01 CONCRETE HEADWALL FOR PIPE DRAIN
- 602401-03 MANHOLE TYPE A
- 604036-02 GRATE TYPE 8
- 630001-10 STEEL PLATE BEAM GUARDRAIL
- 630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631011-08 TRAFFIC BARRIER TERMINAL, TYPE 2
- 635001-01 DELINEATORS
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-02 REFLECTOR MARKER AND MOUNTING DETAILS
- 643001 SAND MODULE IMPACT ATTENUATORS
- 701101-02 OFF-RD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 mm) FROM PAVEMENT EDGE
- 701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
- 701400-05 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701406-06 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
- 701411-08 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
- 701426-04 LANE CLOSURE, MULTILANE, INTERMITTANT OR MOVING OPER., SPEEDS ≥ 45 mph
- 701456-02 PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
- 701901-02 TRAFFIC CONTROL DEVICES
- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS, & PATTERNS
- 001001 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH & OF A FOOT



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

CONTRACT NO. 64H77 081-0131



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED May 1 20 12
Eric S. Thukitay
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 11 20 12
John D. Baranelli P.E. /a
 acting ENGINEER OF DESIGN AND ENVIRONMENT

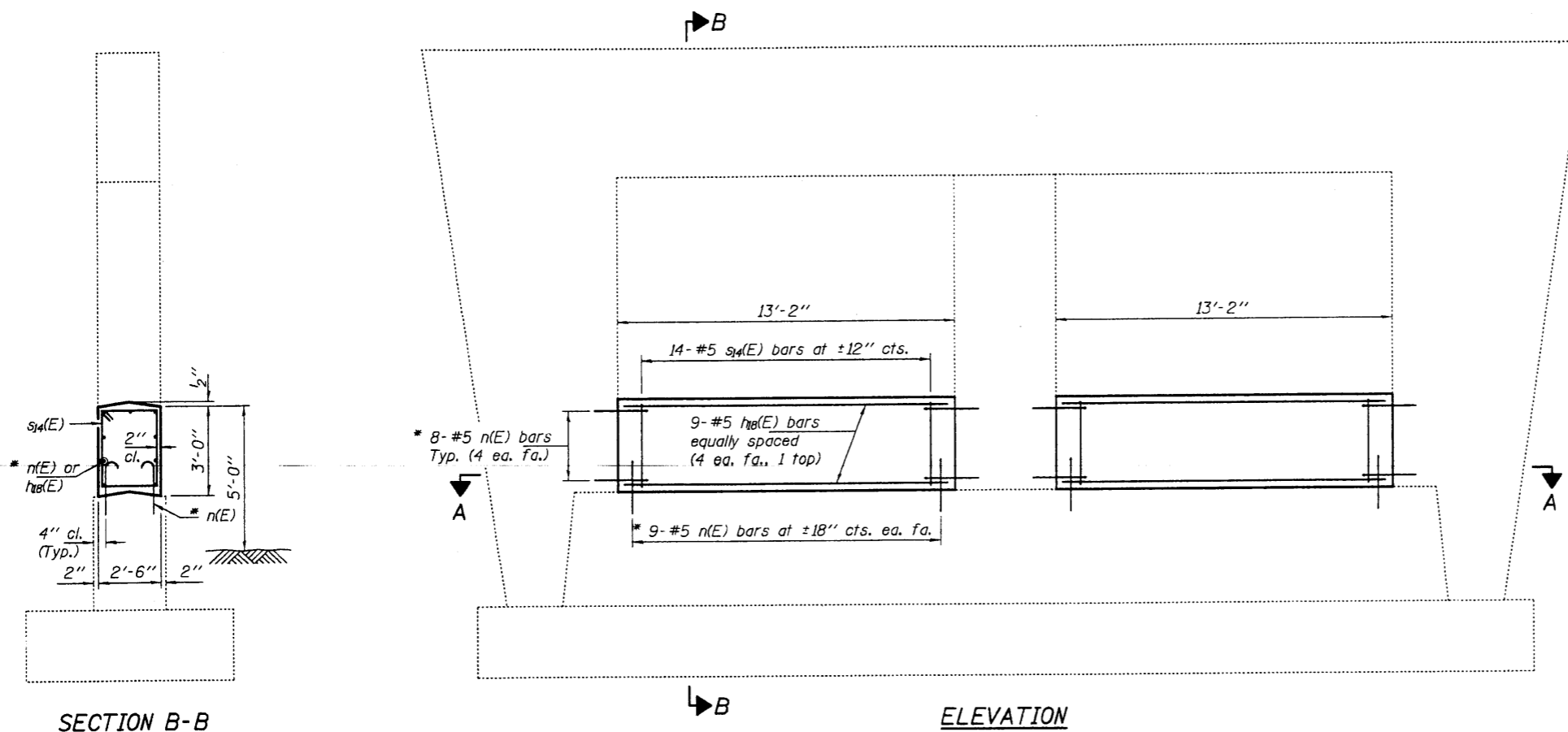
May 11 20 12
William R. Frey /a
 acting DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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GROSS LENGTH = 373,375 FT. = 70.72 MILE
 NET LENGTH = 12,418 FT. = 2.35 MILE

NOTES

The cost of epoxy grouting threaded rods shall be included with Reinforcement Bars, Epoxy Coated.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Reinforcement bars designated (E) shall be epoxy coated.

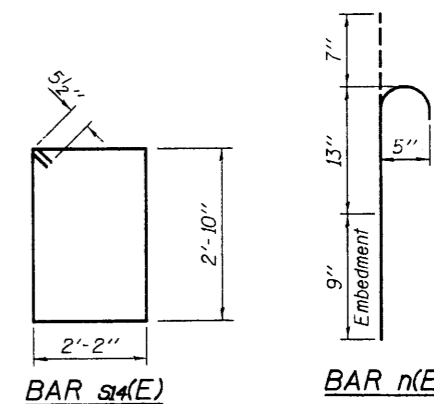


SECTION B-B

ELEVATION

SECTION A-A

* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.



BAR s4(E)

BAR n(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h8(E)	18	#5	12'-10"	—
n(E)	68	#5	2'-5"	U
s4(E)	28	#5	10'-11"	□
Concrete Structures			Cu. Yd.	7.3
Reinforcement Bars, Epoxy Coated			Pound	730



EXPIRES 11-30-2012

DESIGNED DAB	EXAMINED Jan F. [Signature]	DATE - APRIL 23, 2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 3 CRASHWALL EXTENSION 081-0131	F.A.I. RTE. 88	SECTION D2 SAFETY 202-2	COUNTY ROCK ISLAND	TOTAL SHEET NO. 151
CHECKED VP	PASSED [Signature]	REVISED Δ 06/04/2012			SHEET NO. OF SHEETS	CONTRACT NO. 64H77		
DRAWN baliva	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED			ILLINOIS FED. AID PROJECT			

64915 #157 6-13-03 FAS 202 Rock Island Sec 2003-2 TJR #157

100%
11-18-2003

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-88-		ROCK ISLAND	9	1

D-2 JOINT REPAIR 2003-2

INDEX OF SHEETS

1. COVER SHEET, INDEX OF SHEETS, TRAFFIC CONTROL STANDARDS
2. GENERAL NOTES, SUMMARY OF QUANTITIES
3. TRAFFIC CONTROL PLAN
4. ROADWAY PLAN
5. GENERAL PLAN & ELEVATION
6. DECK PLAN
7. JOINT DETAILS
8. BAR SPLICER ASSEMBLY DETAILS
9. TEMPORARY CONCRETE BARRIER

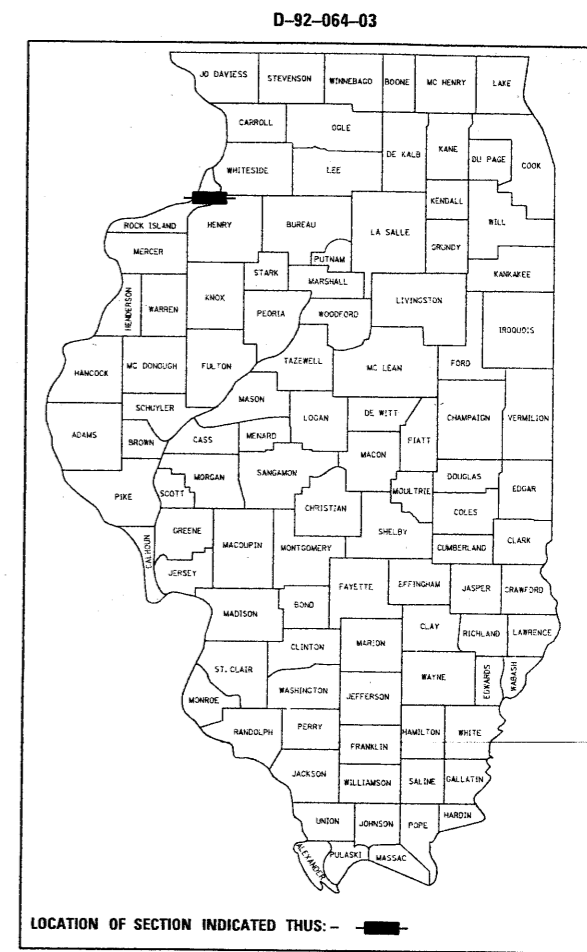
157

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

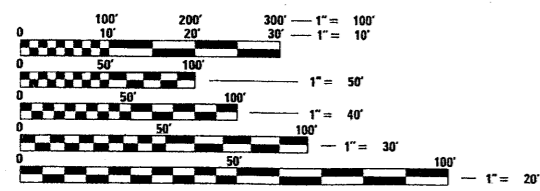
F.A.S. ROUTE 202 (PORT BYRON ROAD)
SECTION D2 JOINT REPAIR 2003-2

ROCK ISLAND COUNTY



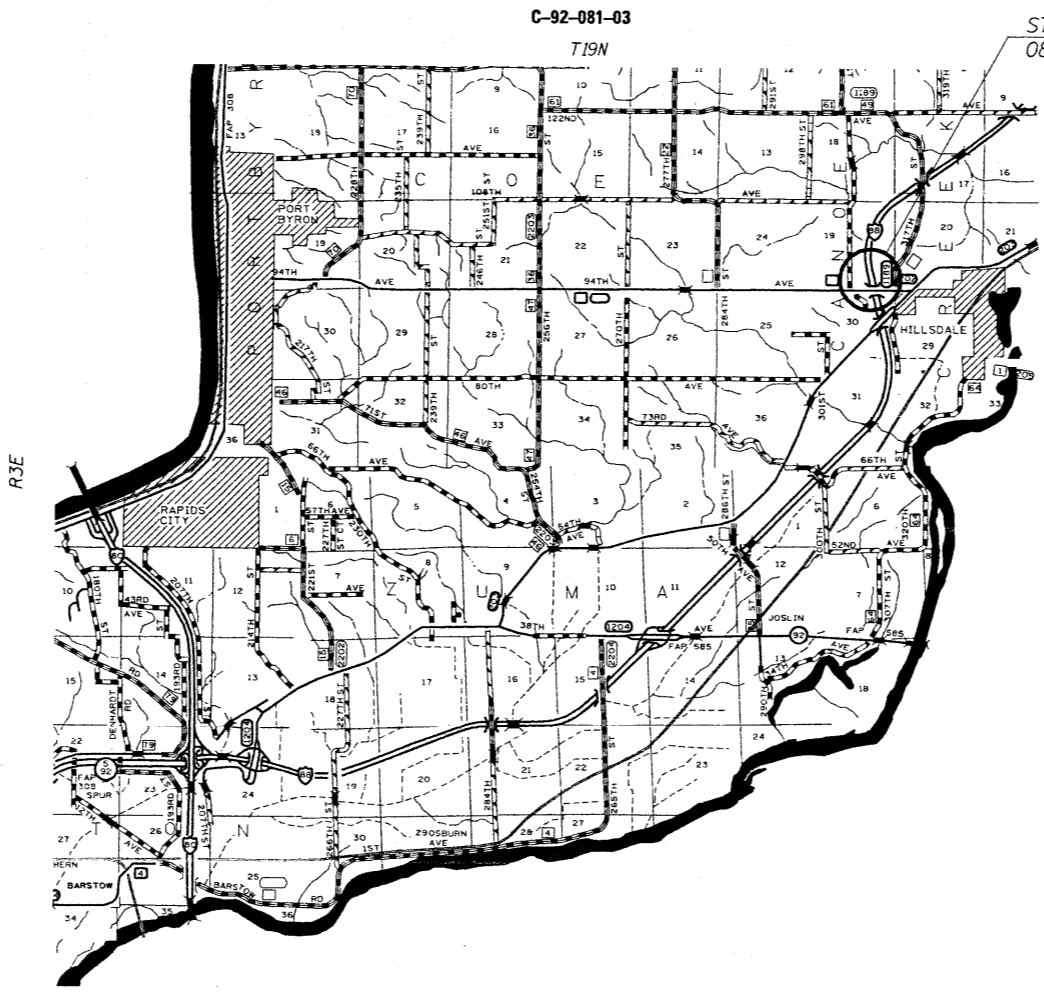
STANDARDS

- 701201-01
- 701206
- 701306
- 701321-06
- 701326-01
- 702001-03
- 704001-01
- 780001-01



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



TOWNSHIP - CANOE CREEK
SECTIONS - 19,30

NET LENGTH OF SECTION = 456 FEET = 0.09 MILES
GROSS LENGTH OF SECTION = 456 FEET = 0.09 MILES

CONTRACT NO. 64915 081-0131

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 3 2003
Gregory L. Mounts
DISTRICT ENGINEER

May 9, 2003
Michael Blin
ENGINEER OF DESIGN AND ENVIRONMENT

May 9, 2003
Victor J. Miller
DIRECTOR, DIVISION OF HIGHWAYS

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GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.

The following Mixture Requirements are applicable for this project:

Mixture Uses(s):	surface	lower lift shoulders	top lift shoulders
PG:	PG 64-22	PG 58-22	PG 58-22
RAP%: (Max)	15%	50%	15%
Design Air Voids	3% @ N50	2% @ N50	3% @ N50
Mixture Composition	IL 12.5 OR 9.5	BAM	IL 12.5 OR 9.5
(Gradation Mixture)			
Friction Aggregate	C	NA	C
20 Year ESAL			

Install a "TO ACTUATE SIGNAL" sign for the traffic signal detector loops. The detail of this sign is included in the plans. This work will be included in the cost of TRAFFIC CONTROL AND PROTECTION STANDARD 701316

This structure will retain the same number 081-0131.

The contractor shall submit four copies of the required shop drawings for review and approval to the Bureau of Bridges and Structures, 2300 South Dirksen Parkway, Springfield, IL 62764. After approval of initial submittal, the contractor shall submit one set of shop drawings to Eric Harm, Engineer of Materials, 126 East Ash Street, Springfield, IL 62706, and eight (8) sets of shop drawings to be distributed to:

District 2 District Engineer (1)
Fabricator (1)
Contractor (2)
Resident Engineer (2)
District 2 Bureau of Materials (2)

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

Mr. Jeff Thomas (Electric) 309/793-3763
MidAmerican Energy Company
2811 5th Ave
Rock Island IL 61201

Mr. Scott Bull (Gas) 309/793-3870
MidAmerican Energy Company
2811 5th Ave
Rock Island IL 61201

Mr. Tom Turley (Telephone/Fiber) 636/561-0339
Genuity Telecom Inc.
50 Centre on the Lake
Lake St. Louis MO 63367

Mr. Dennis Jarding (CATV) 309/743-4750
MediaCom
3900 26th Avenue
Moline IL, 61265

Mr. Mark Burks (Telephone) 217/854-4013
Citizen/Frontier
225 North Broad
Carlinville IL 62626

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
---	---	ROCK ISLAND	6	2
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		

* FAI 88
SEC D-2 JOINT REPAIR 2003-2

SUMMARY OF QUANTITIES

URBAN
SFTY-3A
100% STATE

CODE NUMBER	PAY ITEM	UNIT	QUANTITY
20200500	EARTH EXCAVATION (WIDENING)	CU YD	72
44000910	BITUMINOUS CONCRETE REMOVAL (DECK)	SQ YD	1192
48202840	BITUMINOUS SHOULDERS SUPERPAVE 12"	SQ YD	220
50102400	CONCRETE REMOVAL	CU YD	12.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	12.9
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3520
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1580
67100100	MOBILIZATION	L SUM	1
* 70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
* 70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
* 70100455	TRAFFIC CONTROL AND PROTECTION, STANDARD 701206	L SUM	1
* 70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
* 70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	380
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	380
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	2360
* 70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	457
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2092
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
X0301424	SILICONE JOINT SEALER	FOOT	184
X0320887	POLYMER CONCRETE	CU FT	6.5
X0321468	PLUG EXISTING DECK DRAINS	EACH	8
X0322121	SHEET WATERPROOFING MEMBRANE SYSTEM	SQ YD	1206
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	100
Z0002600	BAR SPLICERS	EACH	22
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	25
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	5
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	60
Z0047300	PROTECTIVE SHIELD	SQ YD	375
* Z0056200	SAND MODULE IMPACT ATTENUATOR (RELOCATE)	EACH	24
* Z0056400	SAND MODULE IMPACT ATTENUATOR (TEMPORARY)	EACH	24

Δ SFTY-3N

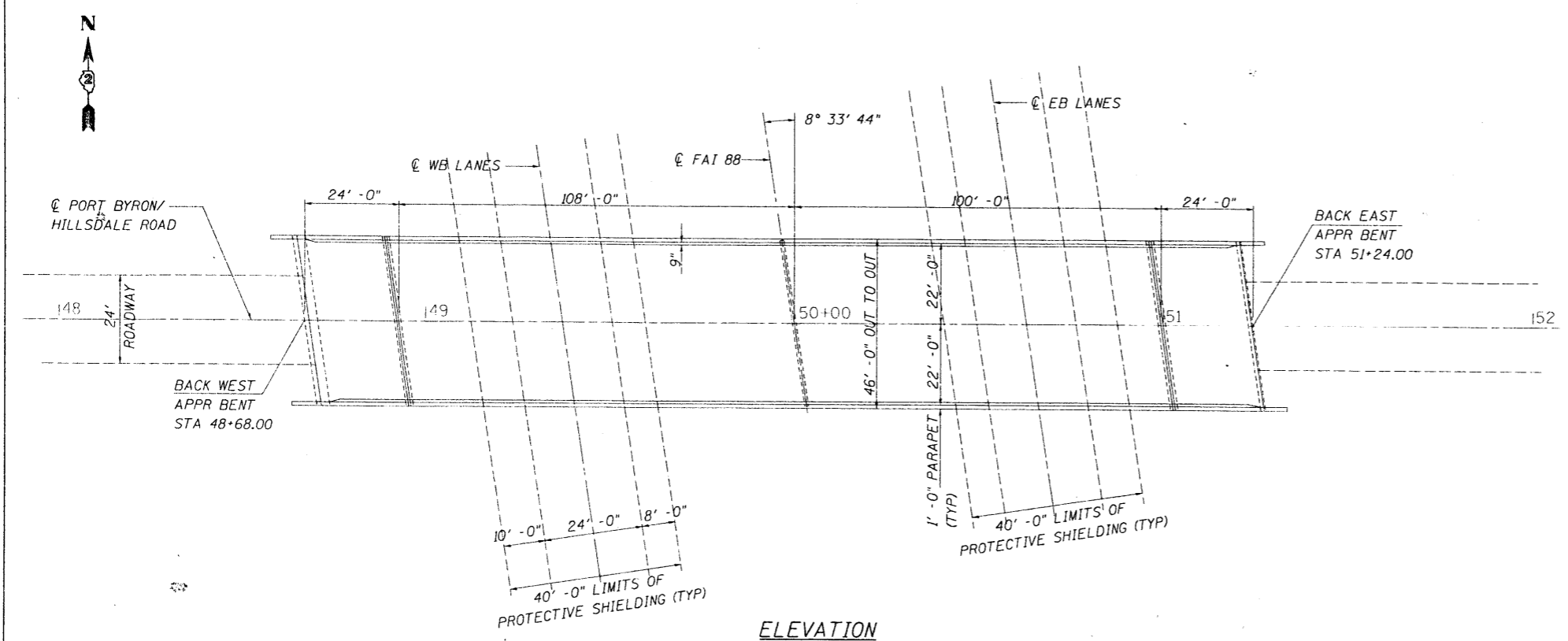
* SPECIALTY ITEMS

GENERAL NOTES & SUMMARY OF QUANTITIES
PORT BYRON/HILLSDALE ROAD OVER I-88
FAI ROUTE 88
SECTION D-2 JOINT REPAIR 2003-2
ROCK ISLAND COUNTY
STRUCTURE NUMBER 081-0131

SEC D-2 JOINT REPAIR 2003-2

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88		ROCK ISLAND	9	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SHEET 1 OF 5 SHEETS



ELEVATION

GENERAL NOTES

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

All structural steel shall conform to AASHTO M 270 Grade 36, unless otherwise noted.

Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

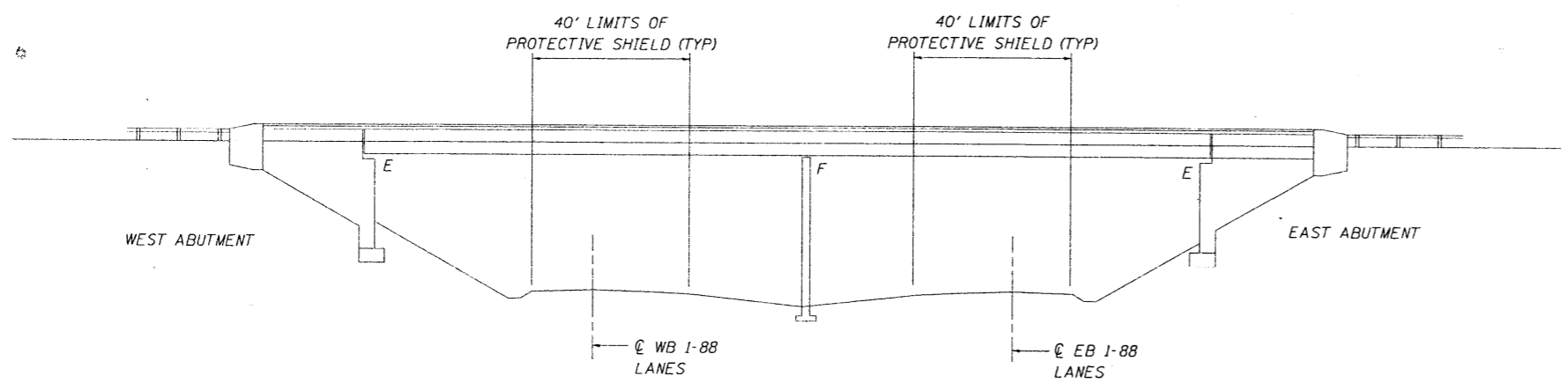
Prior to pouring the new concrete for the deck, all loose rust, loose mill scale, and all other loose, potentially detrimental foreign material shall be removed from the surfaces of beams or girders in contact with concrete. The cost of this work shall be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

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

All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
BITUMINOUS CONCRETE REMOVAL (DECK)	SO YD	1192
CONCRETE REMOVAL	CU YD	12.9
CONCRETE SUPERSTRUCTURE	CU YD	12.9
FURNISH & ERCT STRUCTURAL STEEL	POUND	3520
REINFORCEMENT BARS, EPOXY COATED	POUND	1580
PLUG EXISTING DECK DRAINS	EACH	8
BITUMINOUS CONCRETE SURFACE COURSE	TON	100
SHEET WATERPROOFING MEMBRANE SYSTEM	SO YD	1206
DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SO YD	25
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SO YD	5
DECK SLAB REPAIR (PARTIAL)	SO YD	60
DRAINAGE SCUPPERS (DS-12)	EACH	2
PROTECTIVE SHIELD	SO YD	375
POLYMER CONCRETE	CU FT	6.5
SILICONE JOINT SEALER	FOOT	184
BAR SPLICERS	EACH	22

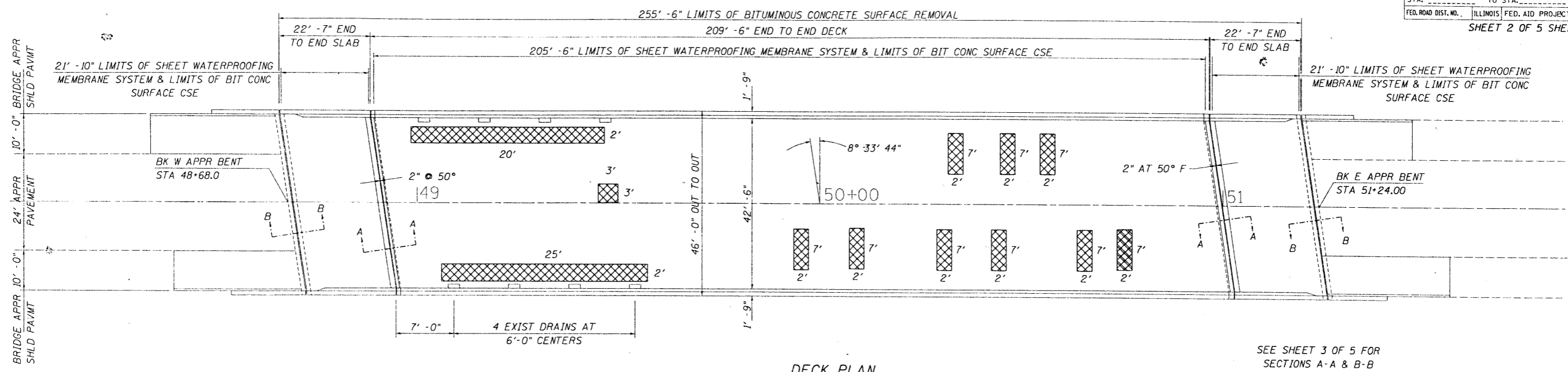


PLAN

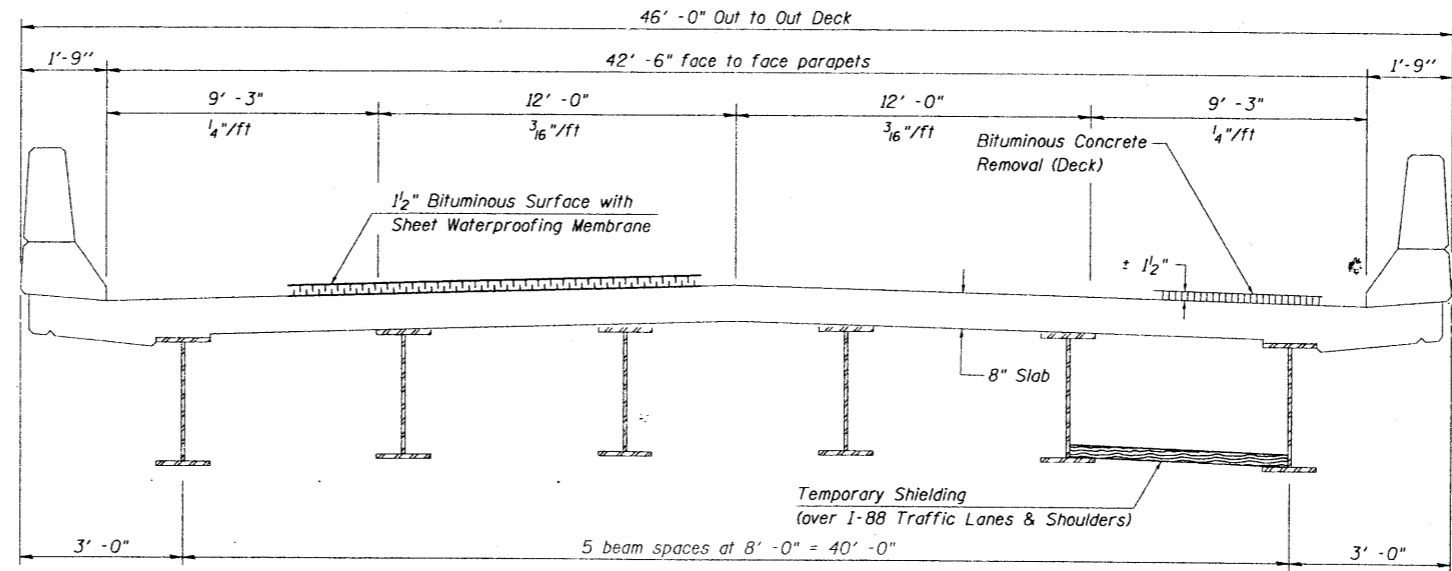
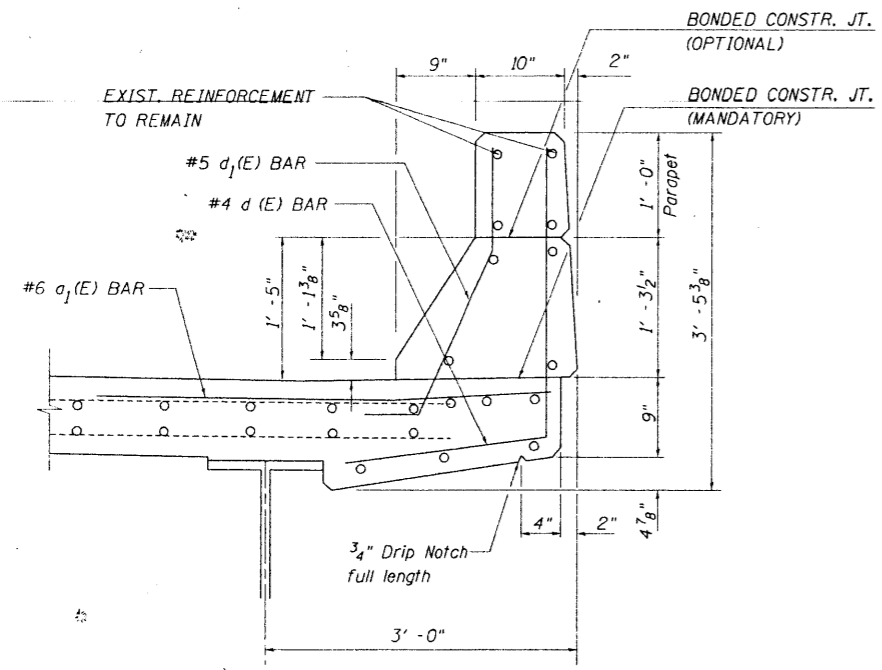
GENERAL PLAN & ELEVATION
 PORT BYRON/HILLSDALE ROAD OVER I-88
 FAI ROUTE 88
 SECTION D-2 JOINT REPAIR 2003-2
 ROCK ISLAND COUNTY
 STRUCTURE NUMBER 081-0131

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88		ROCK ISLAND	9	6
STA. TO STA.		FED. ROAD DIST. NO., ILLINOIS FED. AID PROJECT		

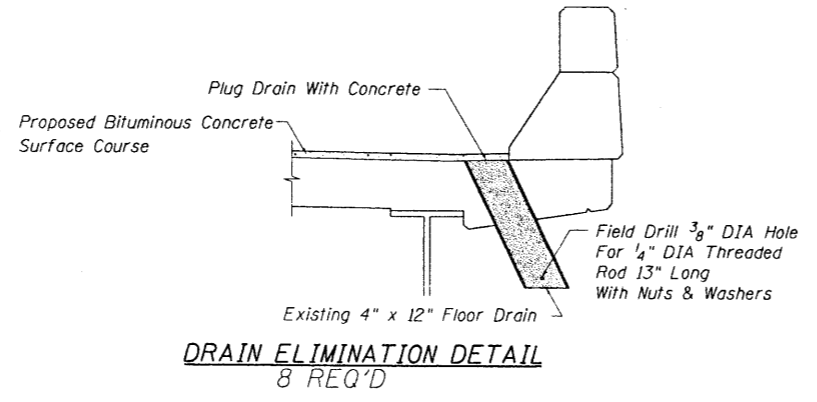
SHEET 2 OF 5 SHEETS



DECK PLAN



CROSS SECTION



DATE OF DECK SURVEY - 12/17/2002

ESTIMATED AREAS OF FULL DEPTH PATCHING TYPE I & II

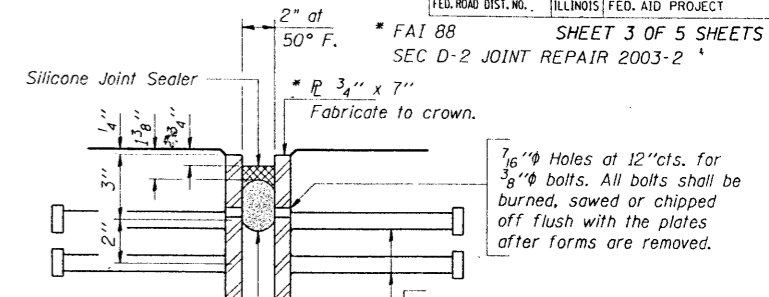
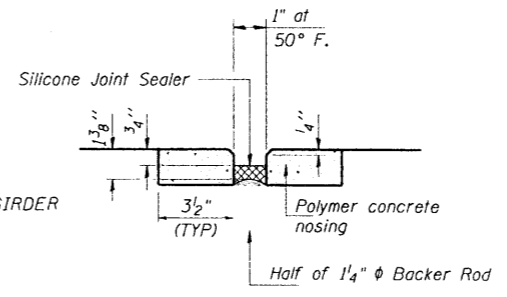
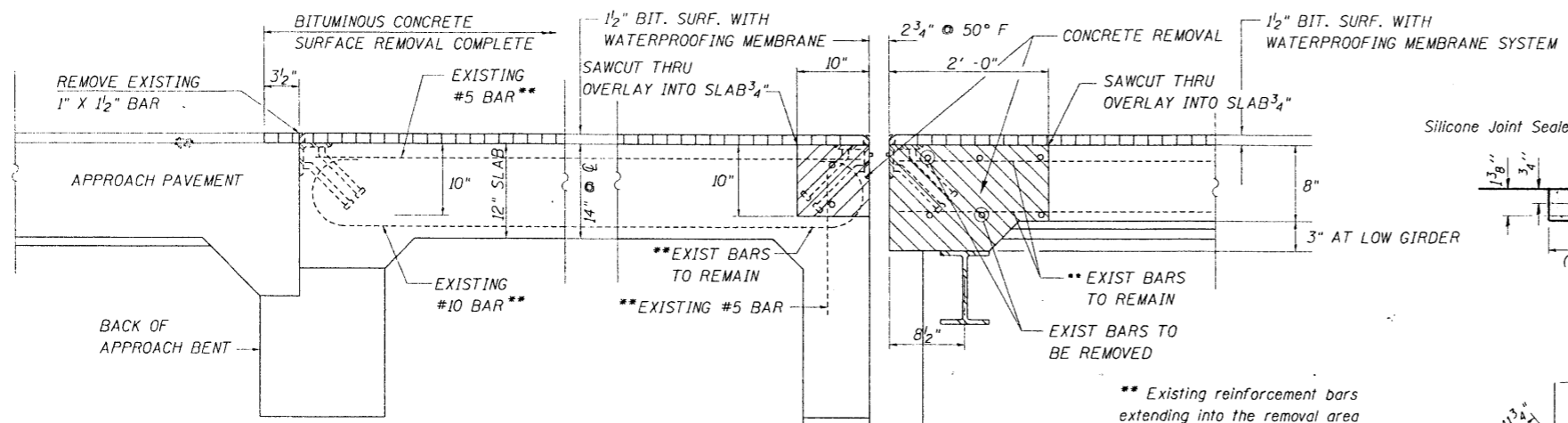
ACTUAL REPAIR LOCATIONS SHALL BE SHOWN IN THE AS-BUILT PLANS

NOTE: AREAS OF PARTIAL DEPTH & FULL DEPTH PATCHES WILL BE DETERMINED BY THE ENGINEER UPON REMOVAL OF THE WEARING SURFACE

DECK PLAN
PORT BYRON/HILLSDALE ROAD OVER I-88
FAI ROUTE 88
SECTION D-2 JOINT REPAIR 2003-2
ROCK ISLAND COUNTY
STRUCTURE NUMBER 081-0131

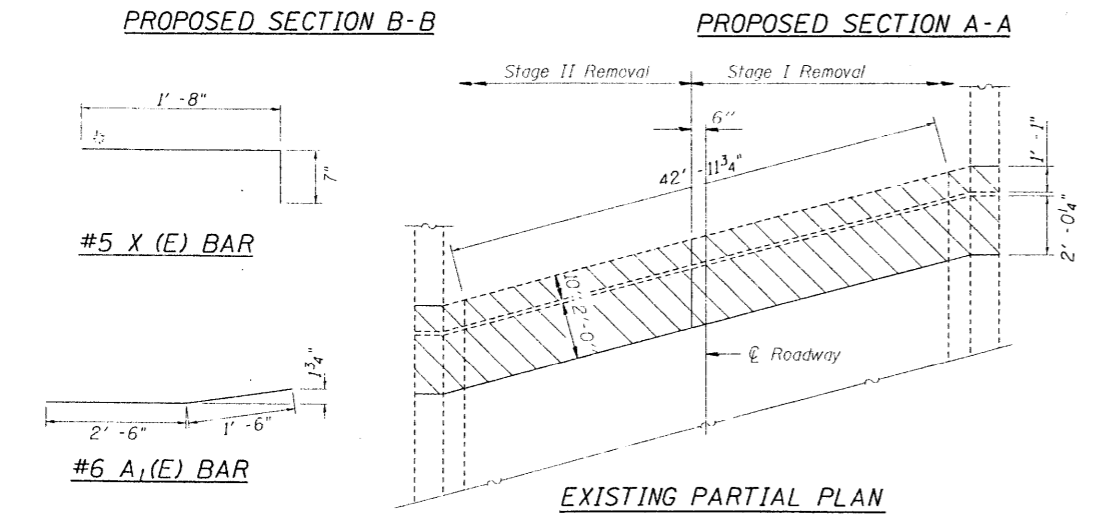
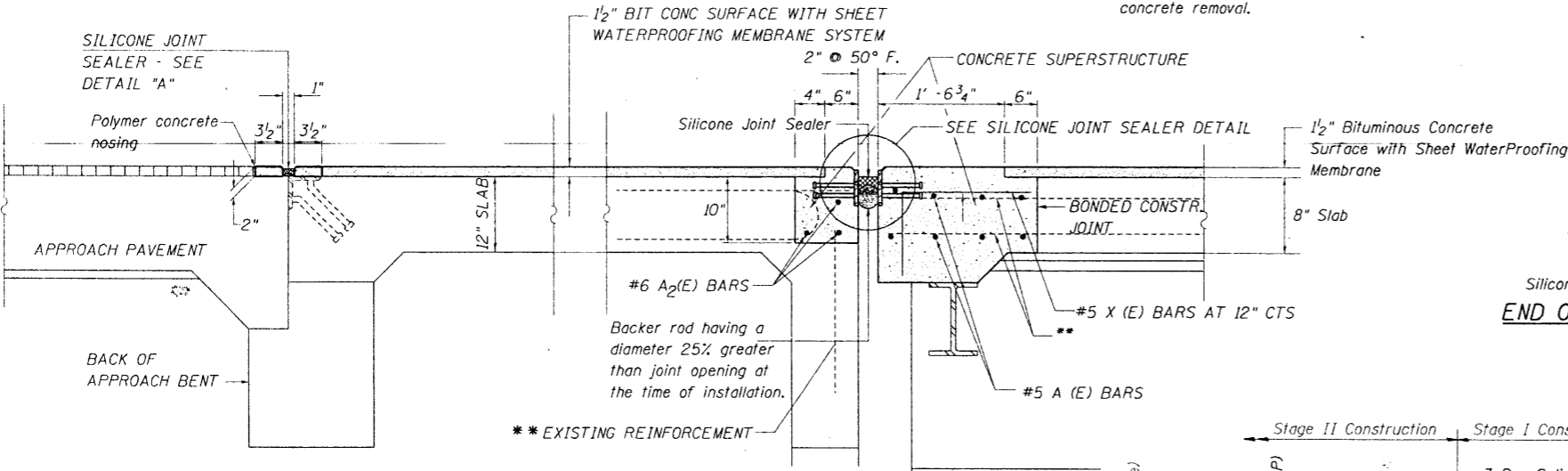
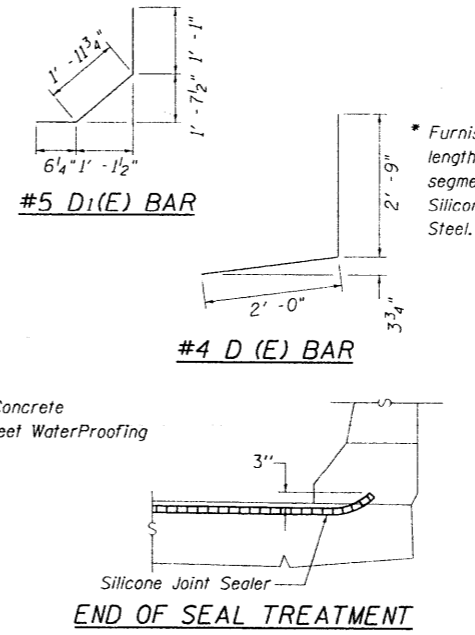
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
..BB.	..	ROCK ISLAND	..9.	..1.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FAI 88 SHEET 3 OF 5 SHEETS
SEC D-2 JOINT REPAIR 2003-2



** 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 operation shall be repaired or replaced using an approved bar splicer or anchor system. Cost included with concrete removal.



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

Note: After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
A (E)	32	5	21' - 3"	—
A1(E)	16	6	4' - 0"	—
A2(E)	12	6	21' - 3"	—
D (E)	12	4	4' - 9"	—
D1(E)	12	5	3' - 7"	—
X (E)	80	5	2' - 3"	—
U (E)	84	5	1' - 4"	—

ITEM	UNIT	QUANTITY
BITUMINOUS CONCRETE REMOVAL (DECK)	SQ YD	1192
CONCRETE REMOVAL	CU YD	12.9
CONCRETE SUPERSTRUCTURE	CU YD	12.9
FURNISH & ERECT STRUCTURAL STEEL	POUND	3520
REINFORCEMENT BARS, EPOXY COATED	POUND	1580
PLUG EXISTING DECK DRAINS	EACH	6
BITUMINOUS CONCRETE SURFACE COURSE	TON	100
SHEET WATERPROOFING MEMBRANE SYSTEM	SQ YD	1206
DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	25
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	5
DECK SLAB REPAIR (PARTIAL)	SQ YD	60
PROTECTIVE SHIELD	SQ YD	375
POLYMER CONCRETE	CU FT	6.5
SILICONE JOINT SEALER	FOOT	184
BAR SPLICERS	EACH	22

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED

JOINT DETAILS
PORT BYRON/HILLSDALE ROAD OVER I-88
FAI ROUTE 88
SECTION D-2 JOINT REPAIR 2003-2
ROCK ISLAND COUNTY
STRUCTURE NUMBER 081-0131

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	*	ROCK ISLAND	9	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

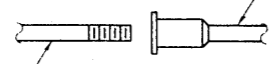
- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{s_{allow}} \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

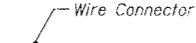
The diameter of this part is the same as the diameter of the bar spliced.



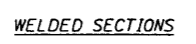
ROLLED THREAD DOWEL BAR



** ONE PIECE



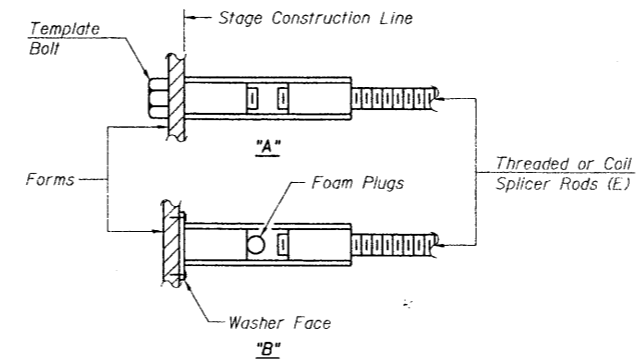
WIRE CONNECTOR



WELDED SECTIONS

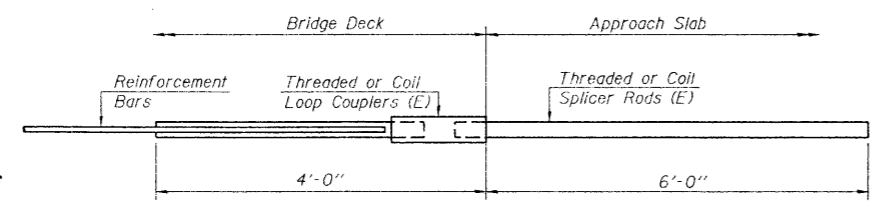
BAR SPLICER ASSEMBLY ALTERNATIVES

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



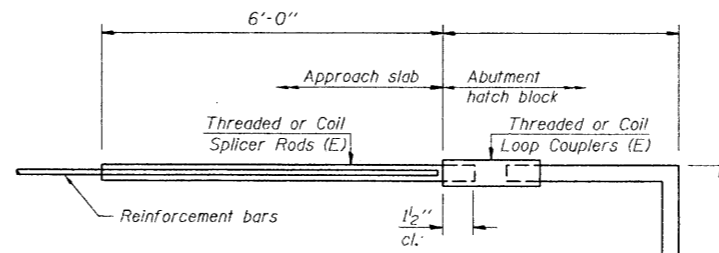
INSTALLATION AND SETTING METHODS

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



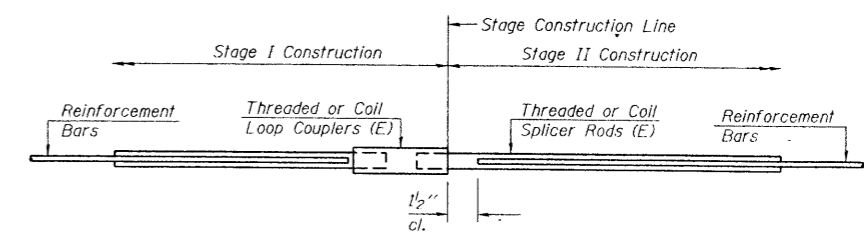
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar		
Min. Capacity =	23.0 kips - tension	
Min. Pull-out Strength =	9.2 kips - tension	
No. Required =		



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar		
Min. Capacity =	23.0 kips - tension	
Min. Pull-out Strength =	9.2 kips - tension	
No. Required =		



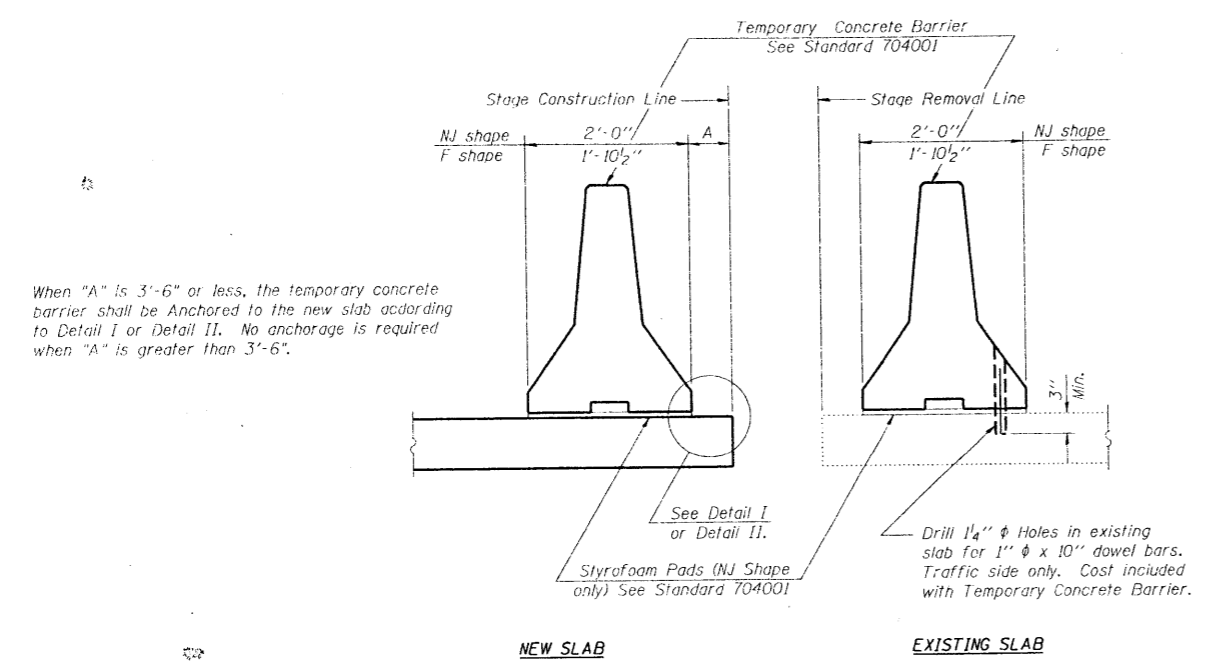
STANDARD

Bar Size	No. Assemblies Required	Location
#5	16	DECK
#6	6	APPR

BAR SPLICER ASSEMBLY DETAILS
 PORT BYRON/HILLSDALE ROAD OVER I-88
 FAI ROUTE 88
 SECTION D-2 JOINT REPAIR 2003-2
 ROCK ISLAND COUNTY
 STRUCTURE NUMBER 081-0131

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	*	ROCK ISLAND	9	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

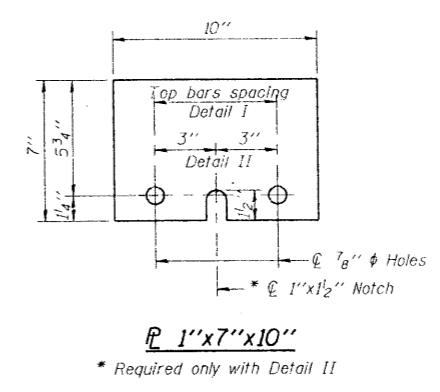
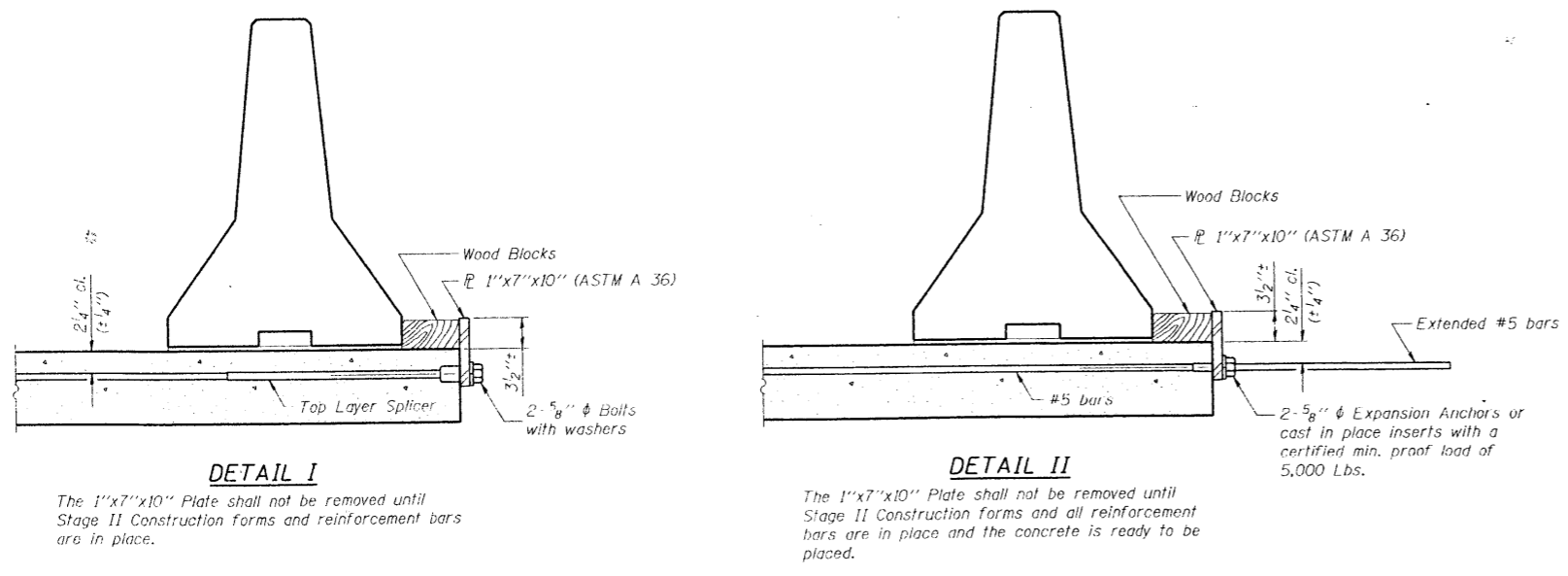
SHEET 5 OF 5 SHEETS



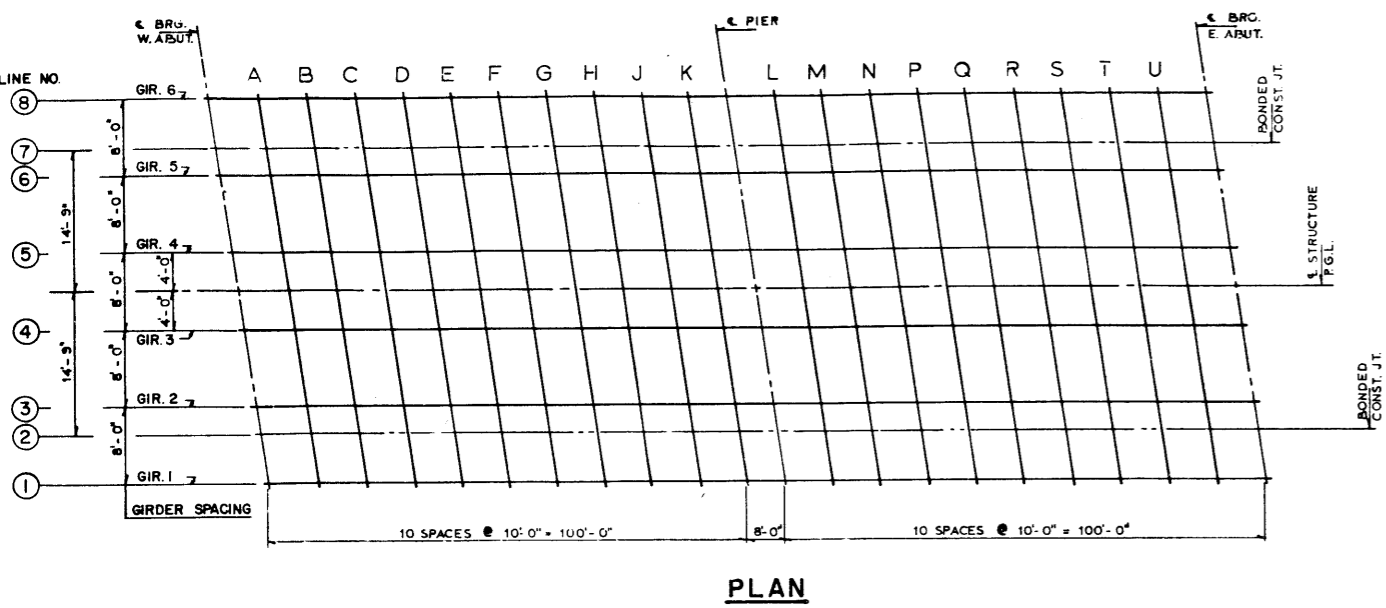
SECTIONS THRU SLAB

NOTES

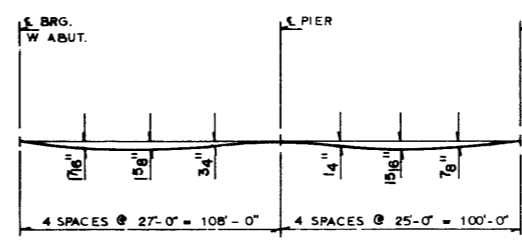
- Detail I - With Bar Splicer or Couplers: Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2- $\frac{5}{8}$ " ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
 - Detail II - With Extended Reinforcement Bars: Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab with 2- $\frac{5}{8}$ " ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier.



TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
PORT BYRON/HILLSDALE ROAD OVER I-88
FAI ROUTE 88
SECTION D-2 JOINT REPAIR 2003-2
ROCK ISLAND COUNTY
STRUCTURE NUMBER 081-0131

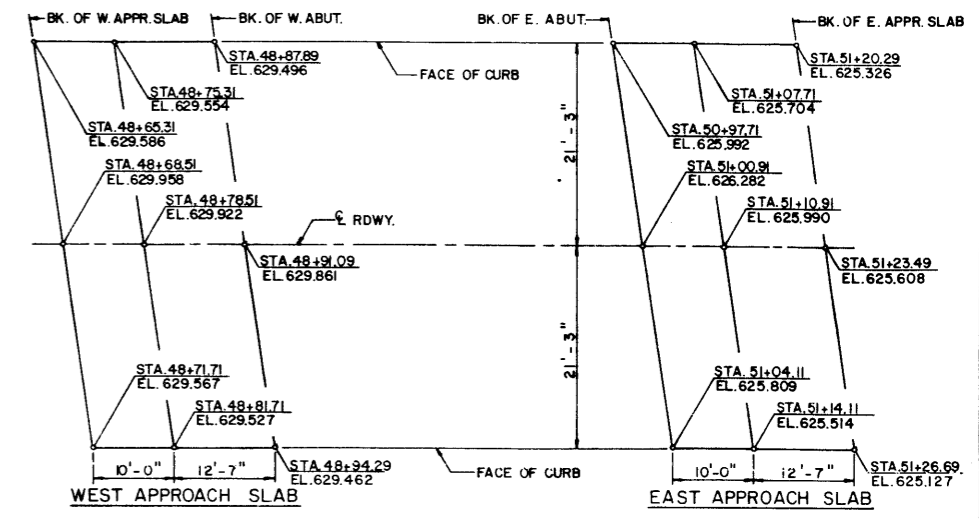


PLAN



Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

DEAD LOAD DEFLECTION DIAGRAM
(includes weight of concrete slab, parapet, curb and initial wearing surface.)



APPROACH SLABS ELEVATION

LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	DEFL CONC	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
C Brq. W. Abut.	1	48+95.011	-20.000	629.4893	629.489
	2	48+94.220	-14.750	629.6034	629.603
	3	48+93.806	-12.000	629.6631	629.663
	4	48+92.602	-4.000	629.7950	629.795
	5	48+91.397	4.000	629.8018	629.802
	6	48+90.193	12.000	629.6834	629.684
	7	48+89.779	14.750	629.6283	629.628
	8	48+88.988	20.000	629.5232	629.523
A	1	49+ 5.011	-20.000	629.4243	0.0470 629.472
	2	49+ 4.220	-14.750	629.5392	0.0509 629.590
	3	49+ 3.806	-12.000	629.5994	0.0529 629.652
	4	49+ 2.602	-4.000	629.7327	0.0529 629.786
	5	49+ 1.397	4.000	629.7408	0.0529 629.794
	6	49+ 0.193	12.000	629.6237	0.0529 629.677
	7	48+99.779	14.750	629.5691	0.0509 629.620
	8	48+98.988	20.000	629.4648	0.0470 629.512
B	1	49+15.011	-20.000	629.3483	0.0875 629.436
	2	49+14.220	-14.750	629.4641	0.0930 629.557
	3	49+13.806	-12.000	629.5247	0.0958 629.621
	4	49+12.602	-4.000	629.6593	0.0958 629.755
	5	49+11.397	4.000	629.6687	0.0958 629.765
	6	49+10.193	12.000	629.5530	0.0958 629.649
	7	49+ 9.779	14.750	629.4988	0.0930 629.592
	8	49+ 8.988	20.000	629.3954	0.0875 629.483
C	1	49+25.011	-20.000	629.2613	0.1179 629.379
	2	49+24.220	-14.750	629.3780	0.1234 629.501
	3	49+23.806	-12.000	629.4390	0.1262 629.565
	4	49+22.602	-4.000	629.5749	0.1262 629.701
	5	49+21.397	4.000	629.5857	0.1262 629.712
	6	49+20.193	12.000	629.4713	0.1262 629.598
	7	49+19.779	14.750	629.4176	0.1234 629.541
	8	49+18.988	20.000	629.3150	0.1179 629.433

LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	DEFL CONC	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
D	1	49+35.011	-20.000	629.1633	0.1333 629.297
	2	49+34.220	-14.750	629.2808	0.1385 629.419
	3	49+33.806	-12.000	629.3423	0.1412 629.484
	4	49+32.602	-4.000	629.4796	0.1412 629.621
	5	49+31.397	4.000	629.4916	0.1412 629.633
	6	49+30.193	12.000	629.3786	0.1412 629.520
	7	49+29.779	14.750	629.3253	0.1385 629.464
	8	49+28.988	20.000	629.2236	0.1333 629.357
E	1	49+45.011	-20.000	629.0543	0.1333 629.188
	2	49+44.220	-14.750	629.1727	0.1387 629.312
	3	49+43.806	-12.000	629.2347	0.1416 629.376
	4	49+42.602	-4.000	629.3732	0.1416 629.515
	5	49+41.397	4.000	629.3866	0.1416 629.528
	6	49+40.193	12.000	629.2748	0.1416 629.417
	7	49+39.779	14.750	629.2221	0.1387 629.361
	8	49+38.988	20.000	629.1212	0.1333 629.255
F	1	49+55.011	-20.000	628.9343	0.1187 629.053
	2	49+54.220	-14.750	629.0535	0.1232 629.177
	3	49+53.806	-12.000	629.1160	0.1258 629.242
	4	49+52.602	-4.000	629.2559	0.1258 629.382
	5	49+51.397	4.000	629.2706	0.1258 629.397
	6	49+50.193	12.000	629.1601	0.1258 629.286
	7	49+49.779	14.750	629.1078	0.1232 629.231
	8	49+48.988	20.000	629.0079	0.1187 629.127
G	1	49+65.011	-20.000	628.8033	0.0929 628.896
	2	49+64.220	-14.750	628.9234	0.0967 629.020
	3	49+63.806	-12.000	628.9863	0.0987 629.085
	4	49+62.602	-4.000	629.1275	0.0987 629.226
	5	49+61.397	4.000	629.1435	0.0987 629.242
	6	49+60.193	12.000	629.0344	0.0987 629.133
	7	49+59.779	14.750	628.9825	0.0967 629.079
	8	49+58.988	20.000	628.8835	0.0929 628.976

LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	DEFL CONC	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
H	1	49+75.011	-20.000	628.6612	0.0616 628.723
	2	49+74.220	-14.750	628.7822	0.0657 628.848
	3	49+73.806	-12.000	628.8456	0.0679 628.914
	4	49+72.602	-4.000	628.9881	0.0679 629.056
	5	49+71.397	4.000	629.0055	0.0679 629.074
	6	49+70.193	12.000	628.8977	0.0679 628.966
	7	49+69.779	14.750	628.8463	0.0657 628.912
	8	49+68.988	20.000	628.7481	0.0616 628.810
J	1	49+85.011	-20.000	628.5082	0.0320 628.540
	2	49+84.220	-14.750	628.6301	0.0348 628.665
	3	49+83.806	-12.000	628.6939	0.0362 628.730
	4	49+82.602	-4.000	628.8376	0.0362 628.874
	5	49+81.397	4.000	628.8565	0.0362 628.893
	6	49+80.193	12.000	628.7500	0.0362 628.786
	7	49+79.779	14.750	628.6990	0.0348 628.734
	8	49+78.988	20.000	628.6017	0.0320 628.634
K	1	49+95.011	-20.000	628.3442	0.0091 628.353
	2	49+94.220	-14.750	628.4670	0.0116 628.479
	3	49+93.806	-12.000	628.5312	0.0129 628.544
	4	49+92.602	-4.000	628.6764	0.0129 628.689
	5	49+91.397	4.000	628.6964	0.0129 628.709
	6	49+90.193	12.000	628.5913	0.0129 628.604
	7	49+89.779	14.750	628.5408	0.0116 628.553
	8	49+88.988	20.000	628.4443	0.0091 628.454

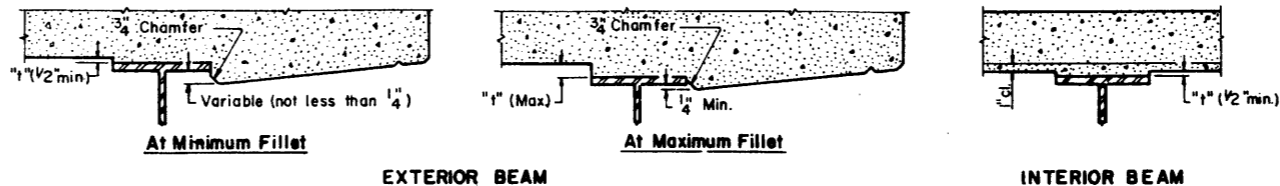
NOTE:
ELEVATIONS ARE GIVEN AT SURFACE OF 1/2" CLASS I BITUMINOUS CONCRETE.
OFFSETS ARE FROM C OF STRUCTURE.

WORK THIS SHEET WITH SHEET NO. 3

ELEVATIONS
FA 403 SECTION 161-1HB-7
FA 403 UNDER C.H. 2
ROCK ISLAND COUNTY
STATION 792+93.31

DESIGNED	PP
CHECKED	AZ
DRAWN	GG
CHECKED	DMP

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



FILLET HEIGHTS

LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	DEFL CONC	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE	DEFL	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD	LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	DEFL CONC	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION			
E Pier.	1	50+ 3.011	-20.000	628.2051		628.205	P	1	50+43.011	-20.000	627.4038	0.0535	627.457	T	1	50+83.011	-20.000	626.4266	0.0592	626.486
	2	50+ 2.220	-14.750	628.3285		628.329		2	50+42.220	-14.750	627.5308	0.0551	627.586		2	50+82.220	-14.750	626.5570	0.0611	626.618
	3	50+ 1.806	-12.000	628.3932		628.393		3	50+41.806	-12.000	627.5972	0.0560	627.653		3	50+81.806	-12.000	626.6253	0.0621	626.688
	4	50+ 0.602	-4.000	628.5394		628.539		4	50+40.602	-4.000	627.7487	0.0560	627.805		4	50+80.602	-4.000	626.7821	0.0621	626.844
	5	49+99.397	4.000	628.5605		628.561		5	50+39.397	4.000	627.7751	0.0560	627.831		5	50+79.397	4.000	626.8138	0.0621	626.876
	6	49+98.193	12.000	628.4564		628.456		6	50+38.193	12.000	627.6763	0.0560	627.733		6	50+78.193	12.000	626.7203	0.0621	626.783
	7	49+97.779	14.750	628.4063		628.406		7	50+37.779	14.750	627.6280	0.0551	627.683		7	50+77.779	14.750	626.6738	0.0611	626.735
	8	49+96.988	20.000	628.3105		628.311		8	50+36.988	20.000	627.5357	0.0535	627.589		8	50+76.988	20.000	626.5850	0.0592	626.644
L	1	50+13.011	-20.000	628.0213	-0.0003	628.021	Q	1	50+53.011	-20.000	627.1760	0.0709	627.247	U	1	50+93.011	-20.000	626.1548	0.0329	626.188
	2	50+12.220	-14.750	628.1456	-0.0003	628.145		2	50+52.220	-14.750	627.3038	0.0731	627.377		2	50+92.220	-14.750	626.2860	0.0340	626.320
	3	50+11.806	-12.000	628.2107	-0.0003	628.210		3	50+51.806	-12.000	627.3707	0.0743	627.445		3	50+91.806	-12.000	626.3548	0.0345	626.389
	4	50+10.602	-4.000	628.3582	-0.0003	628.358		4	50+50.602	-4.000	627.5236	0.0743	627.598		4	50+90.602	-4.000	626.5129	0.0345	626.548
	5	50+ 9.397	4.000	628.3806	-0.0003	628.380		5	50+49.397	4.000	627.5513	0.0743	627.626		5	50+89.397	4.000	626.5459	0.0345	626.581
	6	50+ 8.193	12.000	628.2779	-0.0003	628.278		6	50+48.193	12.000	627.4538	0.0743	627.528		6	50+88.193	12.000	626.4538	0.0345	626.488
	7	50+ 7.779	14.750	628.2282	-0.0003	628.228		7	50+47.779	14.750	627.4060	0.0731	627.479		7	50+87.779	14.750	626.4077	0.0340	626.442
	8	50+ 6.988	20.000	628.1333	-0.0003	628.133		8	50+46.988	20.000	627.3145	0.0709	627.386		8	50+86.988	20.000	626.3198	0.0329	626.353
M	1	50+23.011	-20.000	627.8265	0.0094	627.836	R	1	50+63.011	-20.000	626.9372	0.0788	627.016	E Brg. E.Abut.	1	51+ 3.011	-20.000	625.8720		625.872
	2	50+22.220	-14.750	627.9516	0.0107	627.962		2	50+62.220	-14.750	627.0659	0.0814	627.147		2	51+ 2.220	-14.750	626.0041		626.004
	3	50+21.806	-12.000	628.0172	0.0115	628.029		3	50+61.806	-12.000	627.1332	0.0827	627.216		3	51+ 1.806	-12.000	626.0733		626.073
	4	50+20.602	-4.000	628.1661	0.0115	628.178		4	50+60.602	-4.000	627.2874	0.0827	627.370		4	51+ 0.602	-4.000	626.2328		626.233
	5	50+19.397	4.000	628.1898	0.0115	628.201		5	50+59.397	4.000	627.3164	0.0827	627.399		5	50+99.397	4.000	626.2671		626.267
	6	50+18.193	12.000	628.0884	0.0115	628.100		6	50+58.193	12.000	627.2203	0.0827	627.303		6	50+98.193	12.000	626.1763		626.176
	7	50+17.779	14.750	628.0391	0.0107	628.050		7	50+57.779	14.750	627.1729	0.0814	627.254		7	50+97.779	14.750	626.1307		626.131
	8	50+16.988	20.000	627.9451	0.0094	627.955		8	50+56.988	20.000	627.0824	0.0788	627.161		8	50+96.988	20.000	626.0436		626.044
N	1	50+33.011	-20.000	627.6207	0.0313	627.652	S	1	50+73.011	-20.000	626.6874	0.0750	626.763							
	2	50+32.220	-14.750	627.7467	0.0322	627.779		2	50+72.220	-14.750	626.8169	0.0775	626.895							
	3	50+31.806	-12.000	627.8127	0.0327	627.846		3	50+71.806	-12.000	626.8847	0.0787	626.964							
	4	50+30.602	-4.000	627.9629	0.0327	627.996		4	50+70.602	-4.000	627.0403	0.0787	627.119							
	5	50+29.397	4.000	627.9880	0.0327	628.021		5	50+69.397	4.000	627.0706	0.0787	627.149							
	6	50+28.193	12.000	627.8879	0.0327	627.921		6	50+68.193	12.000	626.9758	0.0787	627.055							
	7	50+27.779	14.750	627.8391	0.0322	627.871		7	50+67.779	14.750	626.9289	0.0775	627.006							
	8	50+26.988	20.000	627.7459	0.0313	627.777		8	50+66.988	20.000	626.8392	0.0750	626.914							

NOTE:
ELEVATIONS ARE GIVEN AT SURFACE OF 1 1/2" CLASS I BITUMINOUS CONCRETE.
OFFSETS ARE FROM C. OF STRUCTURE.

WORK THIS SHEET WITH SHEET NO. 2

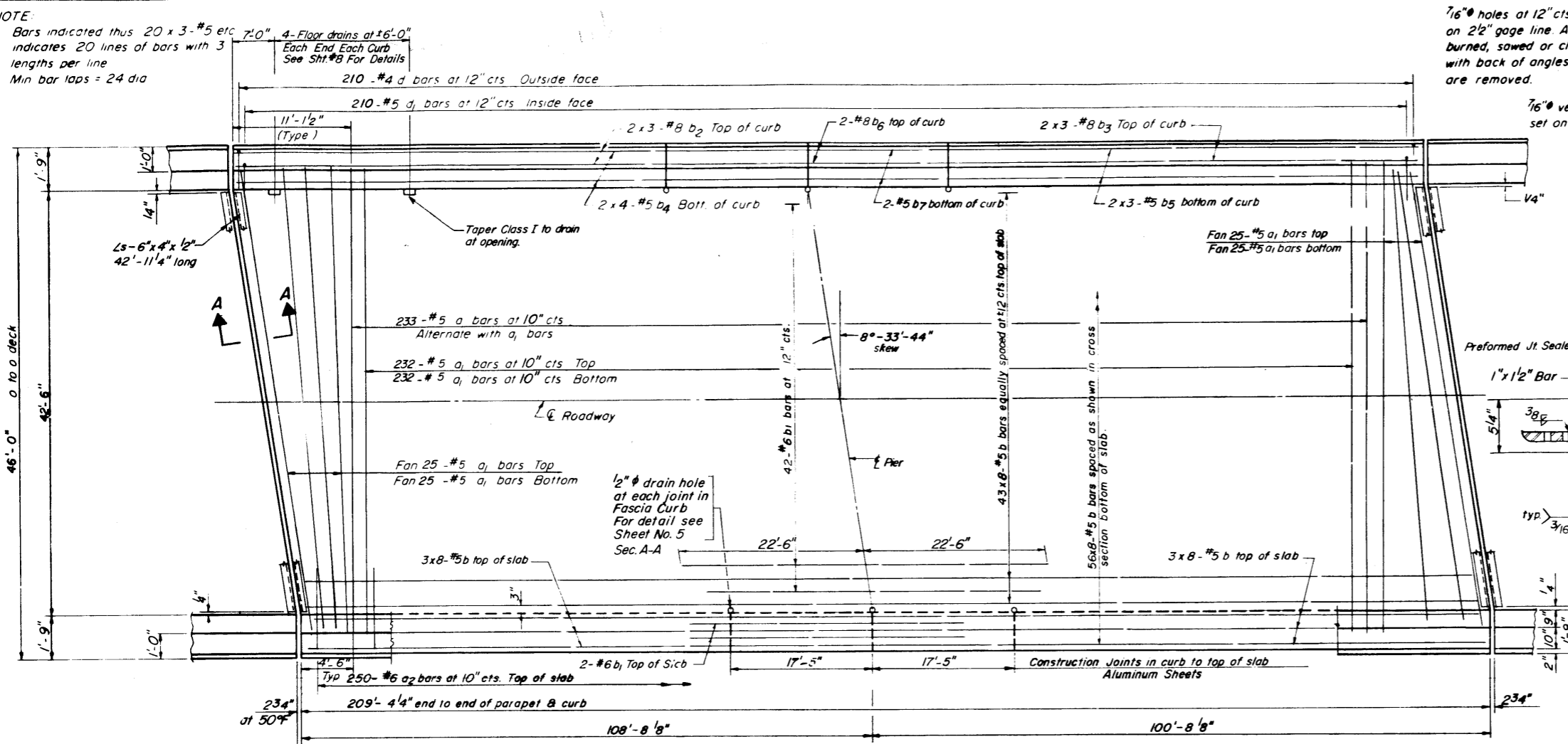
DESIGNED	PP
CHECKED	AZ
DRAWN	GG
CHECKED	DMP

ELEVATIONS
FA 403 SECTION 161-1HB-7
FA 403 UNDER C.H. 2
ROCK ISLAND COUNTY
STATION 792+93.31

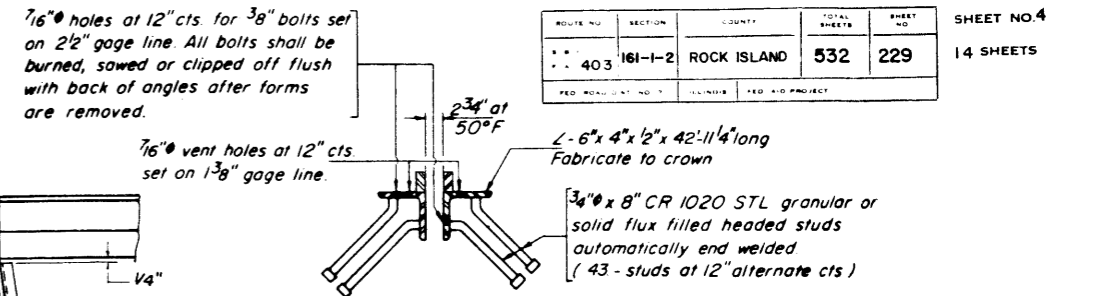
NOTE:

Bars indicated thus 20 x 3-#5 etc indicates 20 lines of bars with 3 lengths per line
Min bar laps = 24 dia

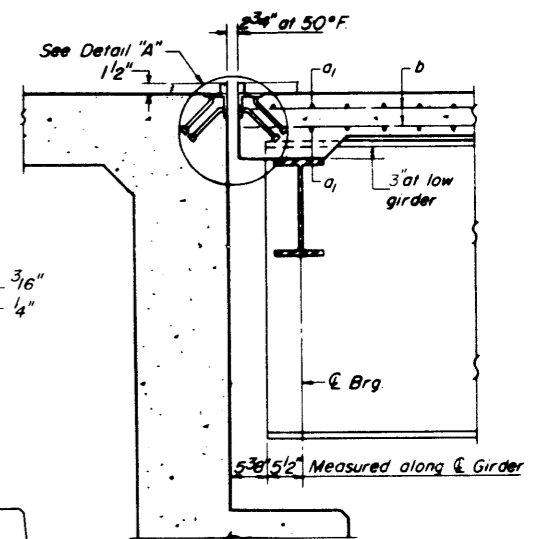
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
403	161-2	ROCK ISLAND	532	229
PROJECT			SHEET NO. 4	



PLAN



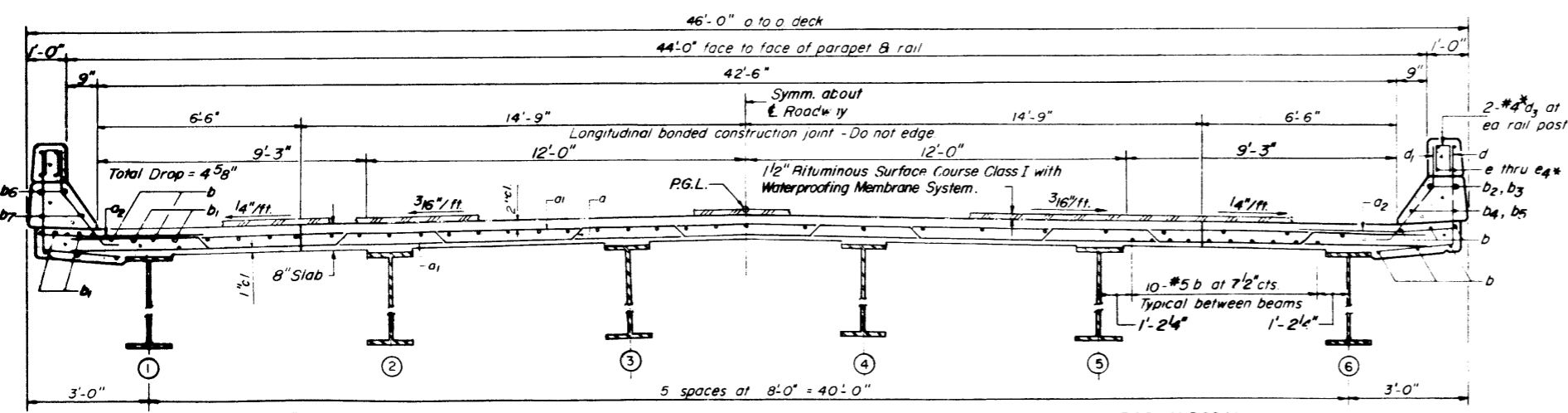
DETAIL A



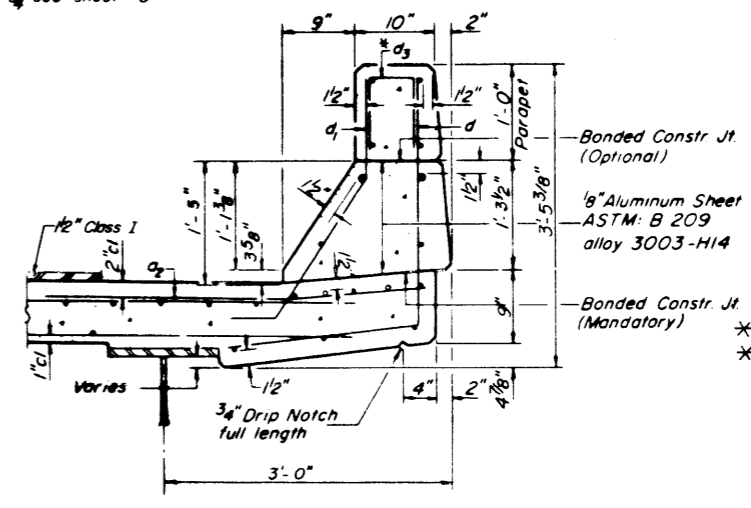
SECTION A-A

TYPICAL END OF SEALER TREATMENT

NOTE:
* For placement of bars d₃ and e thru e₄ see sheet #5



CROSS SECTION LOOKING WEST



CURB SECTION

Cost of Aluminum Sheets and Drains shall be incidental to Class X Concrete.

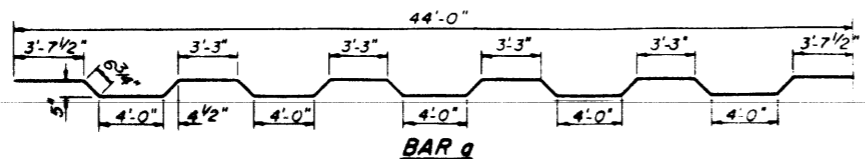
BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	233	#5	45'-10 1/2"	~
a ₁	564	#5	44'-0"	~
a ₂	500	#6	4'-0"	~
b	840	#5	27'-3"	~
b ₁	46	#6	48'-0"	~
b ₂	12	#8	31'-8"	~
b ₃	12	#8	29'-1"	~
b ₄	16	#5	23'-8"	~
b ₅	12	#5	28'-7"	~
b ₆	8	#8	17'-2"	~
b ₇	8	#5	17'-2"	~
d	420	#4	4'-9"	~
d ₁	420	#5	3'-7"	~

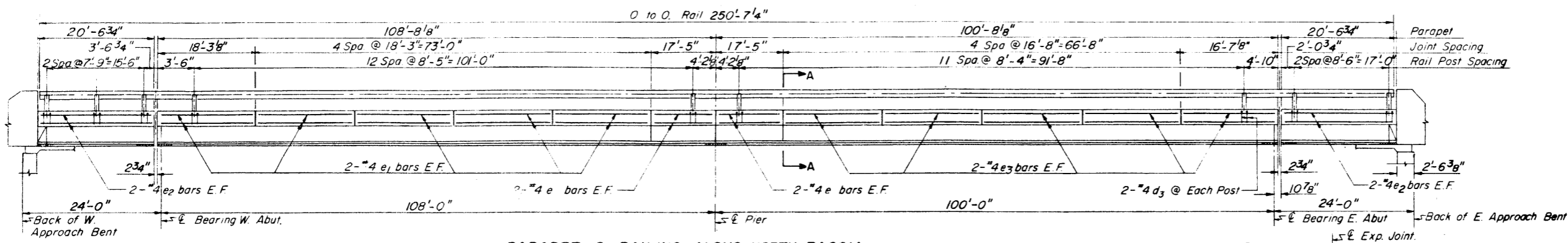
** Reinforcement Bars	Lbs	73,340
** Class X Concrete	Cu Yds	280.2
Structural Steel	Lbs.	322,400
Protective Coat	Sq. Yds.	152
Bituminous Concrete Surface Course Class I	Tons	45
Waterproofing Membrane System	Sq. Yds.	989
Preformed Joint Sealer	Lin. Ft.	90.0

** Parapet Reinforcement and Class X Concrete are billed on sheet #5

DESIGNED	P.B.
CHECKED	B.T.M.
DRAWN	A.M.
CHECKED	B.T.M.

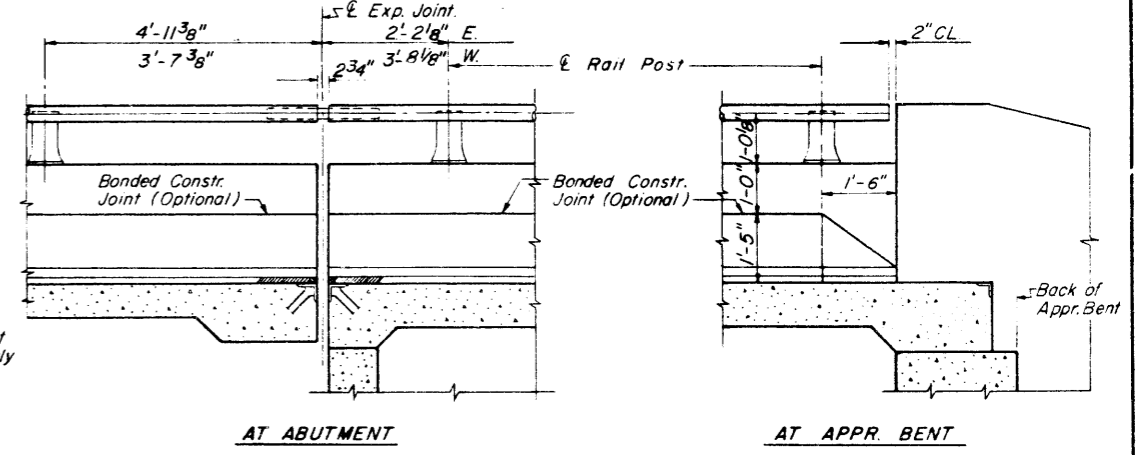
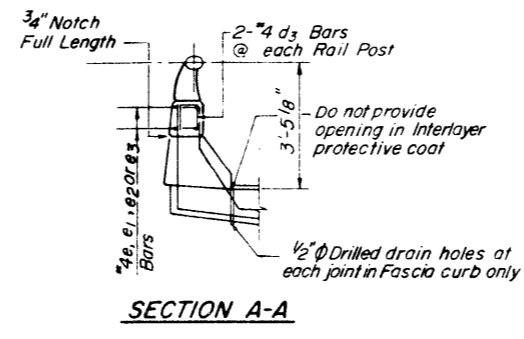
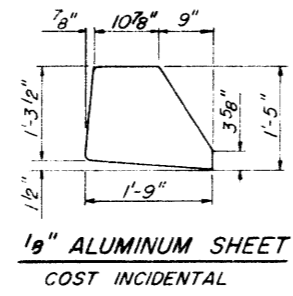


DECK DETAILS
FA 403 SECTION 161-1HB-7
FA 403 UNDER C. H. 2
ROCK ISLAND COUNTY
STATION 792 + 93.31

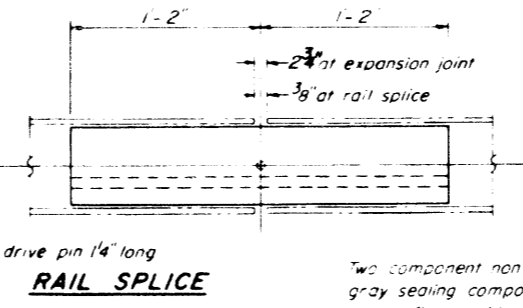


PARAPET & RAILING ALONG NORTH FASCIA
(SOUTH FASCIA SIMILAR)

NOTE:
E.F. Denotes Each Face

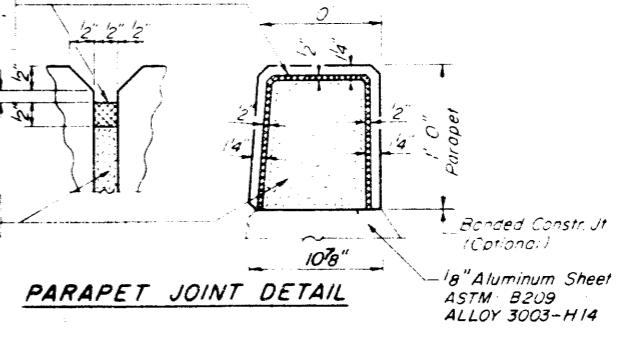


INSIDE VIEW OF PARAPET
(EAST END SHOWN, WEST END SIMILAR UNLESS NOTED)



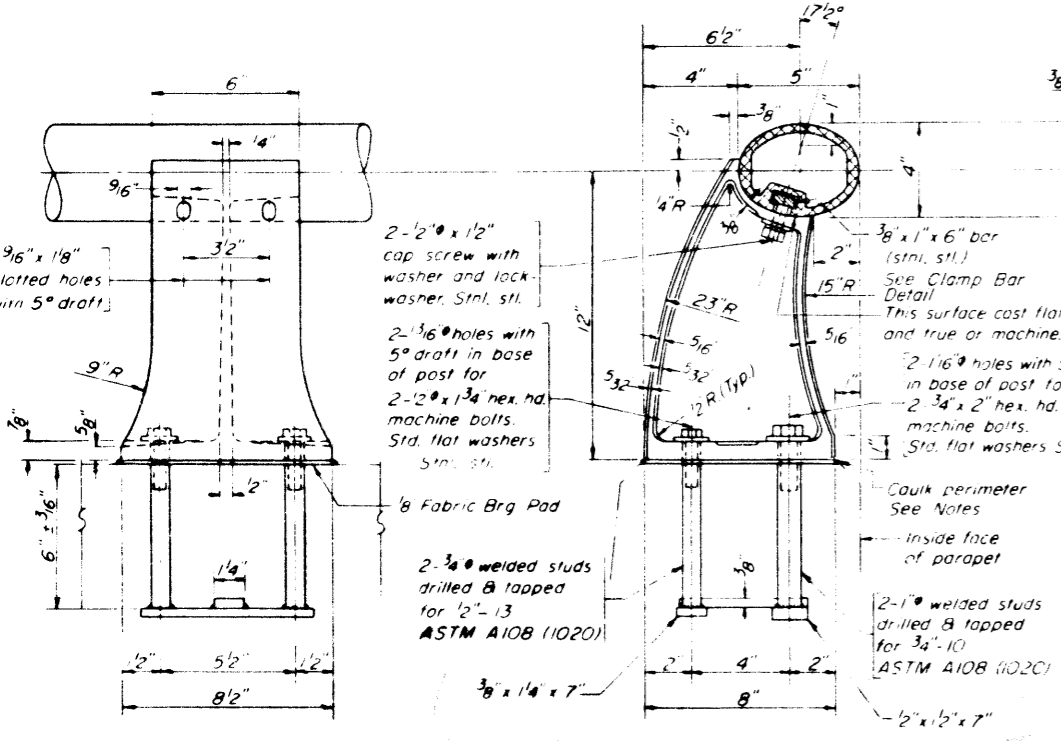
Two component non-staining gray sealing compound with polysulfide liquid polymers - gun grade with primer.

2 Preformed Cork Asphalt Joint Filler. Meets qualifications for ASTM Designation D 1751. Cost incidental.

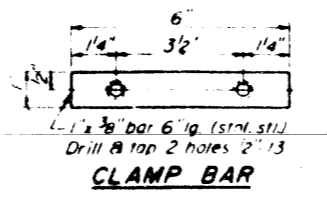
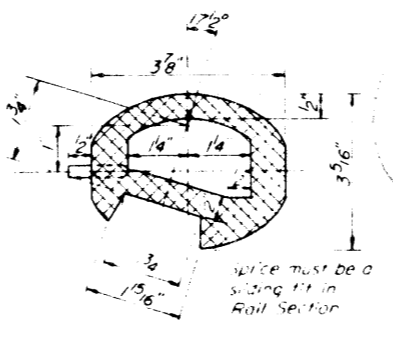
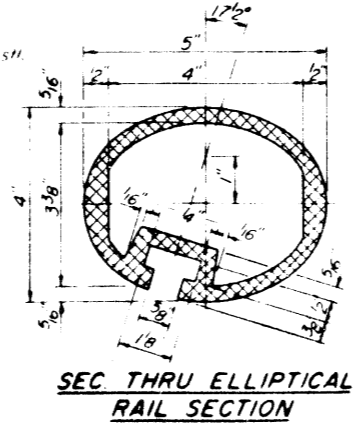


PARAPETS & RAILS BILL OF MATERIAL

Bar	No	Size	Length	Shape
d3	124	#4	2'-1"	□
e	16	#4	17'-0"	—
e1	40	#4	17'-11"	—
e2	16	#4	20'-3"	—
e3	40	#4	16'-4"	—
Reinforcement Bars			Lbs.	1490
Class X Concrete			Cu. Yds.	16.3
Aluminum Railing			Lin. Ft.	501



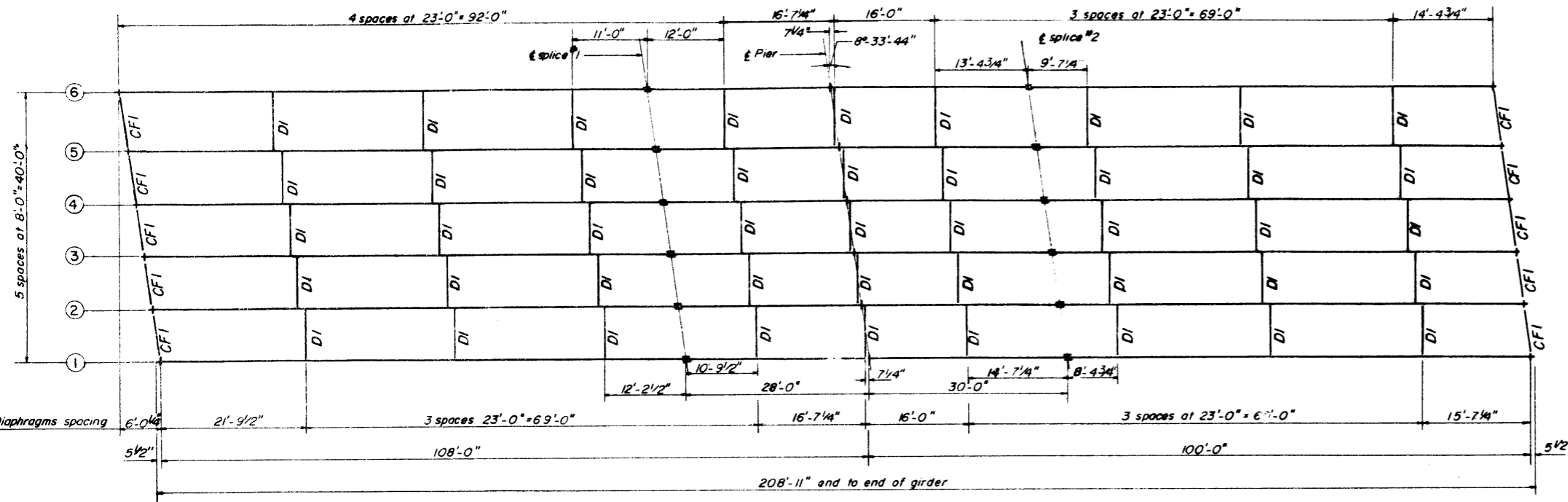
CAST END CAP
DRIVE FIT TYPE
4 Required



NOTES:
All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.
All joints in rail shall be spliced per detail.
Provide 1-#8 and 2-#16 Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.
Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.
Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min tensile 38 ksi, and elongation of 10% in 2 inches

DESIGNED	P.B.
CHECKED	H.S.
DRAWN	A.M.
CHECKED	H.S.

PARAPET AND RAILING
FA 403 SECTION 161-1HB-7
FA 403 UNDER C.H. 2
ROCK ISLAND COUNTY
STATION 792+93.31



FRAMING PLAN

Scale: $\frac{3}{32}'' = 1'-0''$

(Composite in Positive Moment Areas only)

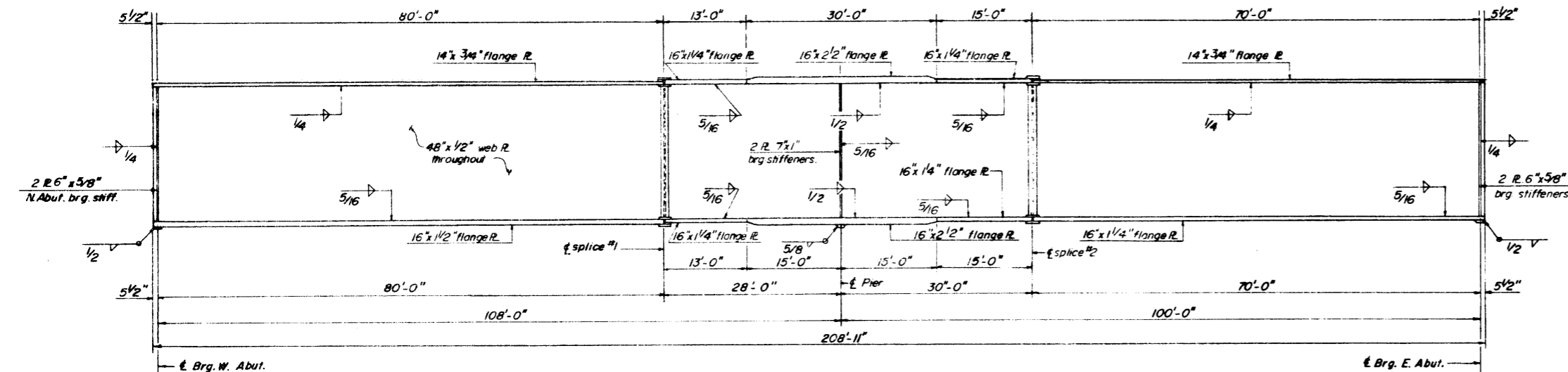
	0.4 Span 1	Pier	0.4 Span 2
I_s (in ⁴)	23,599.0	55,654	23,599
I_c (in ⁴)	63,598	—	63,598
S_s (in ³)	1196.6	2100.2	1196.6
S_c (in ³)	1617.4	—	1617.4
Q (k/ft)	1.057	1.23	1.057
M_Q (ik)	774.5	1785	553.1
$f_s Q$ (ksi)	7.77	10.20	5.55
$S Q$ (ik)	0.431	0.431	0.431
$M_s Q$ (ik)	380.0	558.0	294.0
$M_{\pm} + Imp$ (ik)	1192.1	1038.5	1130.8
Total (ik)	1572.1	1596.5	1424.8
$f_s \pm$ (ksi)	11.66	9.12	10.57
f_s Total (ksi)	19.43	19.32	16.12
VR (k)	59.6	—	61.1

	Abutment 1	Pier	Abutment 2
$R_Q + sQ$ (k)	58.8	204.8	50.6
$R_{\pm} + Imp$ (k)	62.5	100.9	62.5
R Total (k)	121.3	305.7	113.1

I_s and S_s are the moment of inertia and section modulus of the steel section.

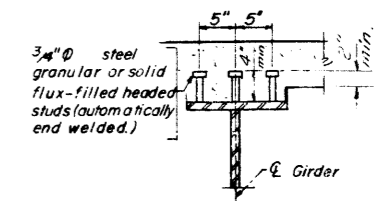
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s .

VR is the maximum \pm Impact shear range in span



GIRDER ELEVATION

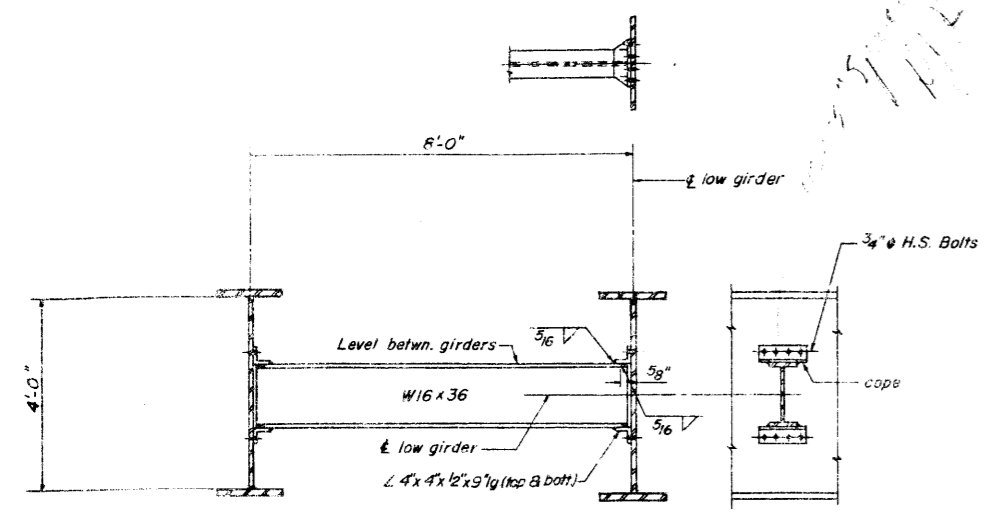
Scale: Horiz. $\frac{3}{32}'' = 1'-0''$
Vert. $\frac{1}{2}'' = 1'-0''$



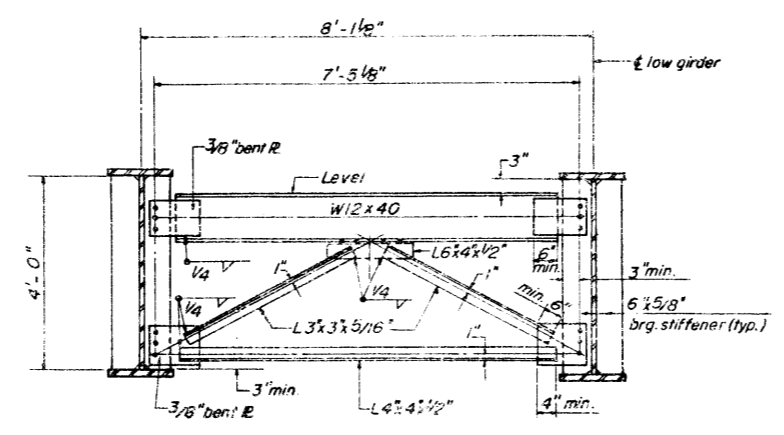
SECTION A-A
NO. REQ'D = 2088

DESIGNED	D.N.
CHECKED	P.B.
DRAWN	A.M.
CHECKED	P.B.

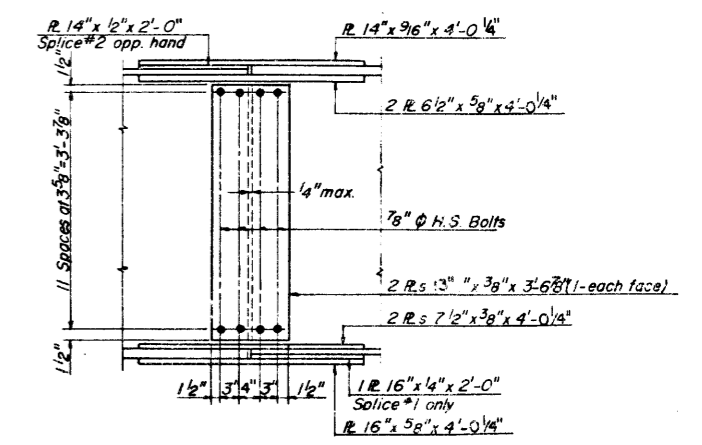
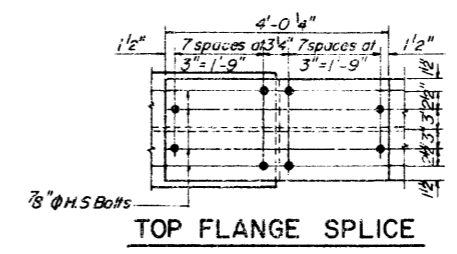
STRUCTURAL STEEL
FA 403 SECTION 161-1HB 7
FA 403 UNDER CH 2
ROCK ISLAND COUNTY
STATION 792+93.31



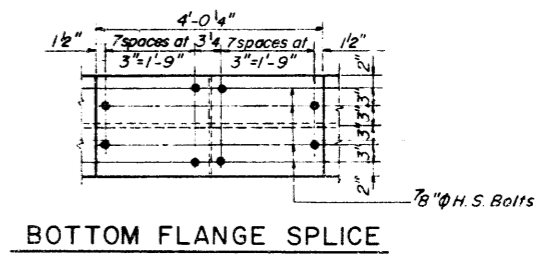
TYPICAL INTERIOR DIAPHRAGM-DI
No Req'd: 45



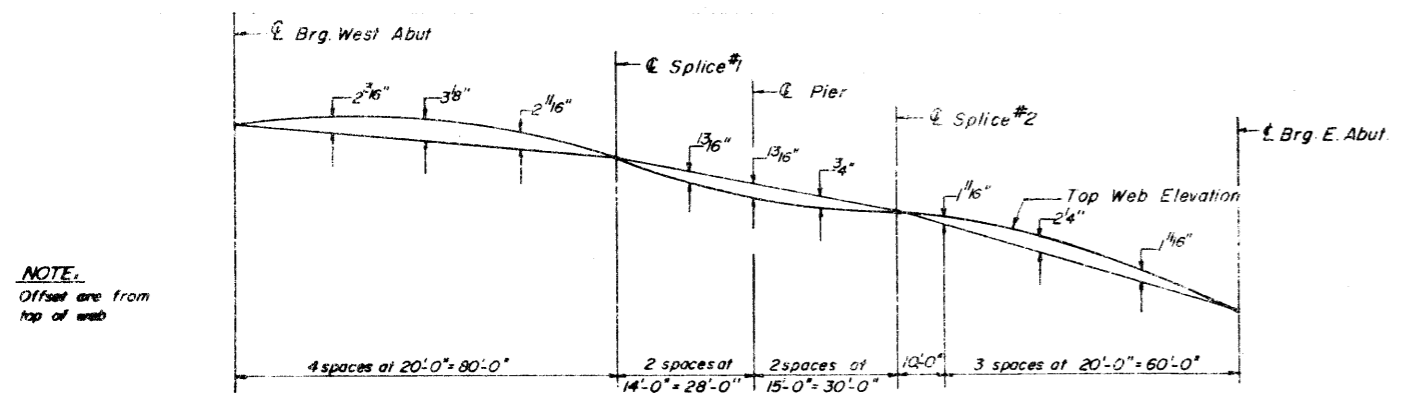
TYPICAL END CROSS FRAME - CF 1
No Req'd: 10



DETAIL OF SPICE
(SPICE #1 SHOWN, SPICE #2 SIMILAR EXCEPT AS NOTED.)



BOTTOM FLANGE SPICE



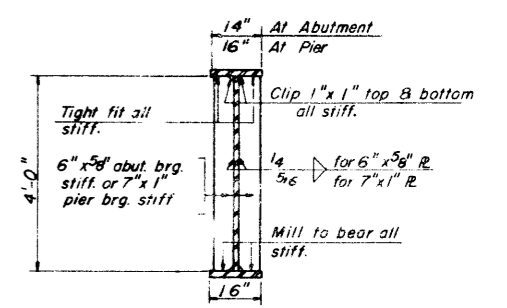
CAMBER DIAGRAM
Camber for Dead Loads and Curvature of Roadway.

NOTE:
Offset are from top of web

Note: Hardened washers shall be required over 1 1/2" holes.

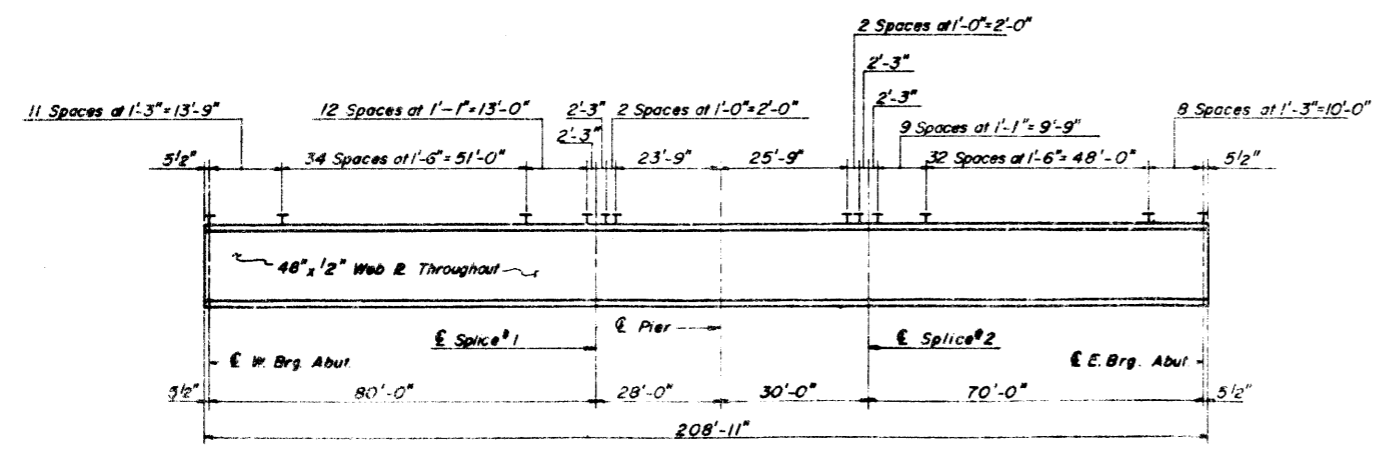
* TOP OF WEB ELEVATIONS				
LOCATION	BRG. W. ABUT.	Splice #1	Splice #2	BRG. E. ABUT.
Girder #1	628.594	627.752	626.679	624.976
Girder #2	628.767	627.935	626.873	625.178
Girder #3	628.899	628.078	627.023	625.337
Girder #4	628.906	628.095	627.048	625.371
Girder #5	628.788	627.988	626.948	625.281
Girder #6	628.627	627.839	626.804	625.140

* For Fabrication only



TYPICAL SECTION
BRG. STIFFENER

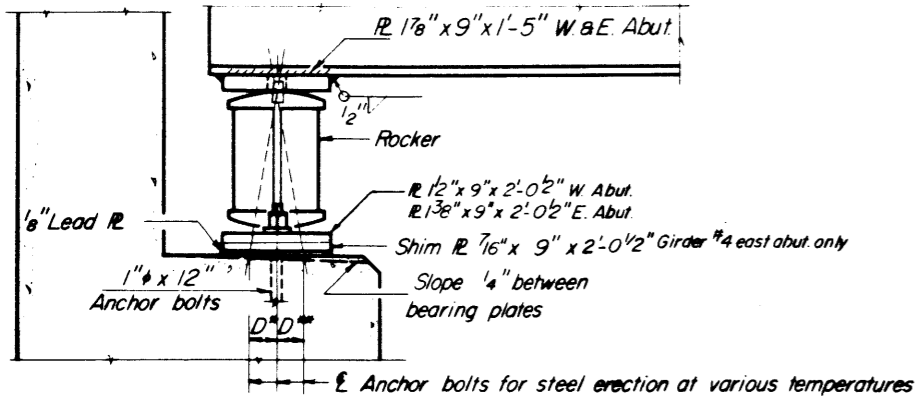
Work this Sheet with Sheet No 6



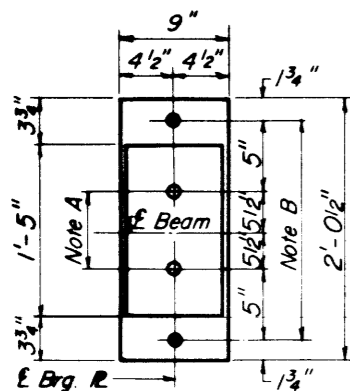
SHEAR CONNECTORS SPACING

DESIGNED	B.T.M.
CHECKED	P.B.
DRAWN	A.S.
CHECKED	D.M.P.

STRUCTURAL STEEL
FA 403 SECTION 161-IHB 7
FA 403 UNDER CH 2
ROCK ISLAND COUNTY
STATION 792+93.31



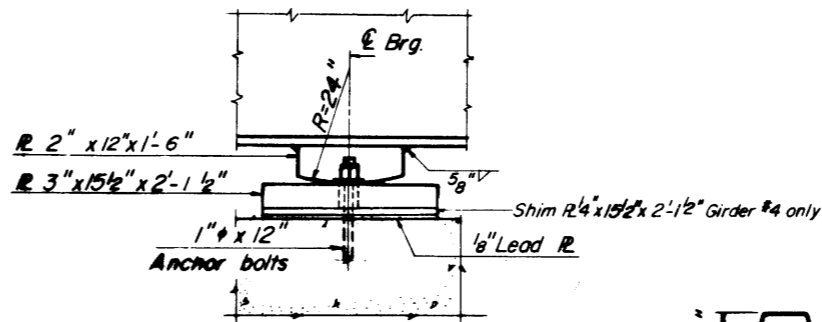
SECTION



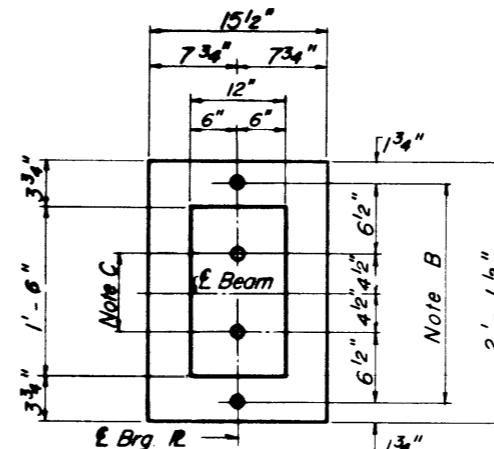
PLAN

AT ABUTMENT

NOTE A
 1 3/8" Holes - 1" deep in top R.
 for pintles. Thread or press fit
 pintles into bottom R.



ELEVATION

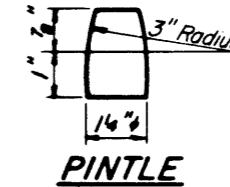


PLAN

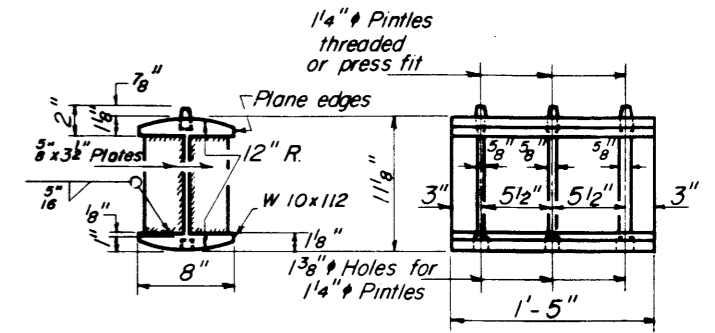
AT PIER

NOTE B
 1 1/2" Holes for 1" anchor bolts.
 1 1/2 x 2 1/2 x 2 1/2 R. Washers
 under nut.

NOTE C
 1 3/8" Holes 1" deep in top R.
 only for 1 1/4" pintles.



PINTLE



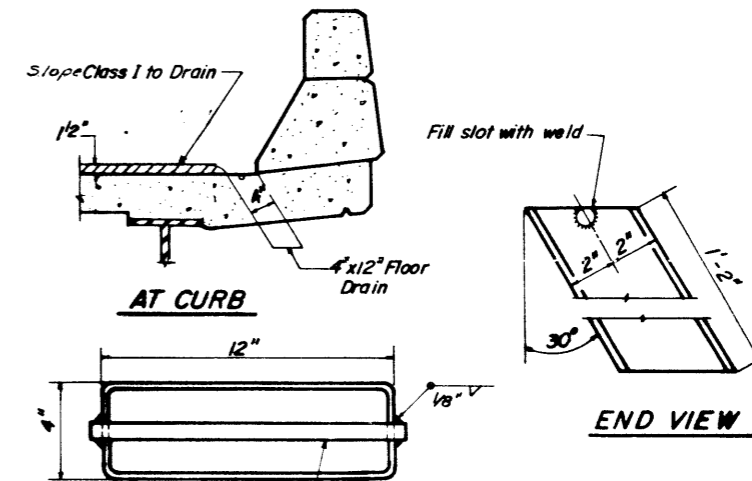
ROCKER

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\pm 1/8$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D^* (Side of brg. away from fixed brg.)
 $D^* = 1/8$ " per each 100' of expansion for every 15° fall below the normal temp. of 50°F
- D^{**} (Side of brg. toward fixed brg.)
 $D^{**} = 1/8$ " per each 100' of expansion for every 15° rise above the normal temp. of 50°F
- b) After beams have been erected and dimensions D^* or D^{**} determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

BEARING ASSEMBLY DETAILS



AT CURB

TOP VIEW

END VIEW

3/16" Aluminum Sheets Welded
 A.S.T.M. B 209 alloy 6061-T6
 or Aluminum Extrusions
 A.S.T.M.-B 221 alloy 6061-T6

3/4" ϕ x 1-1" Aluminum Bar
 A.S.T.M.-B 211 alloy -T6

FLOOR DRAINS
 Cost incidental

BEARINGS
 FA 403 SECTION 161-1HB-7
 FA 403 UNDER C.H. 2
 ROCK ISLAND COUNTY
 STATION 792+93.31

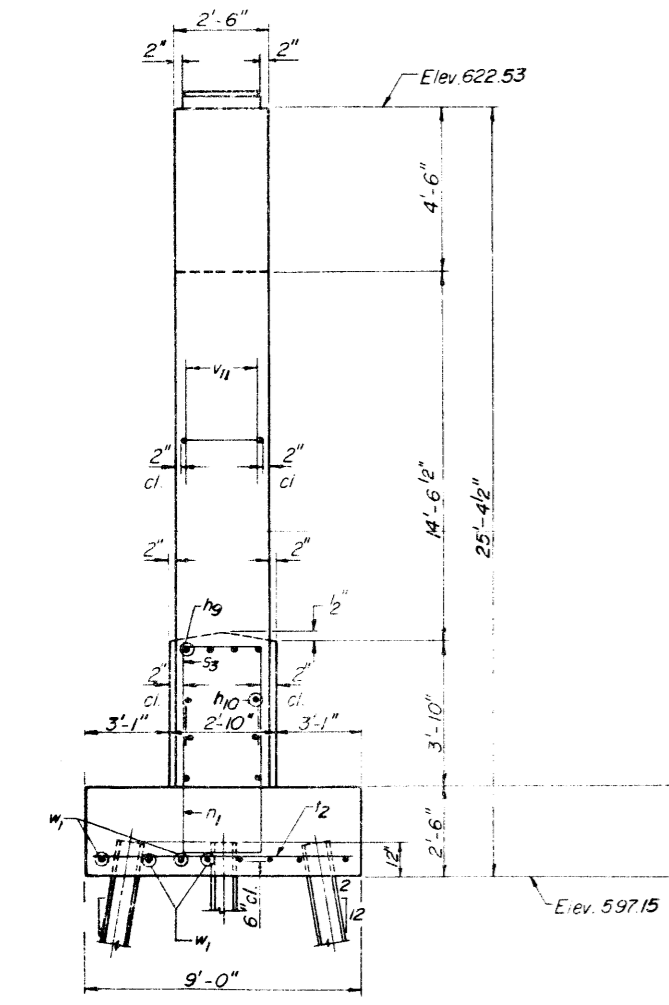
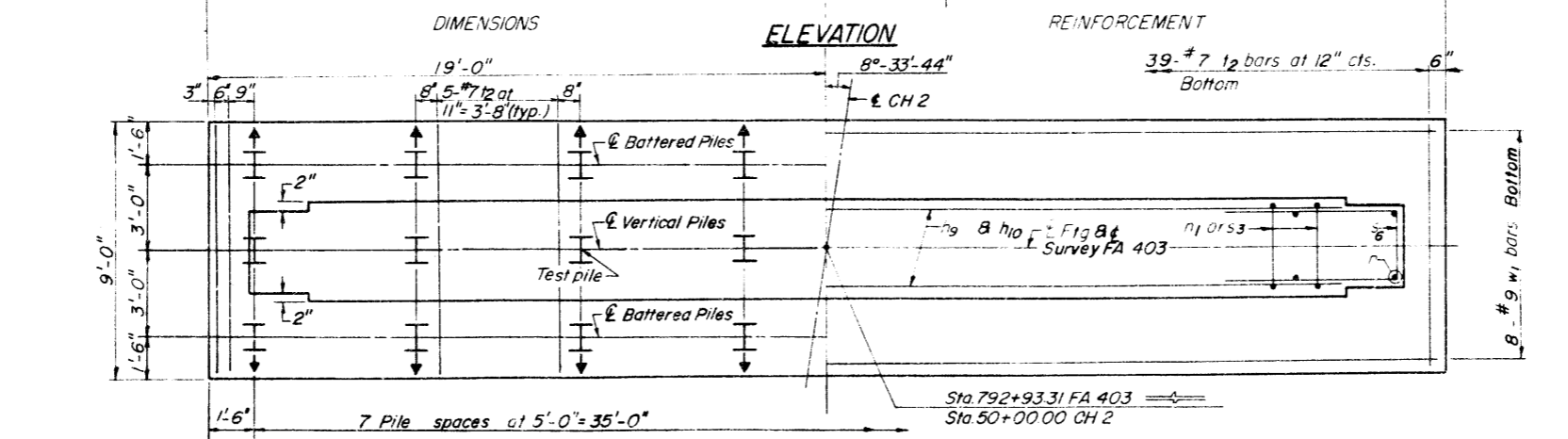
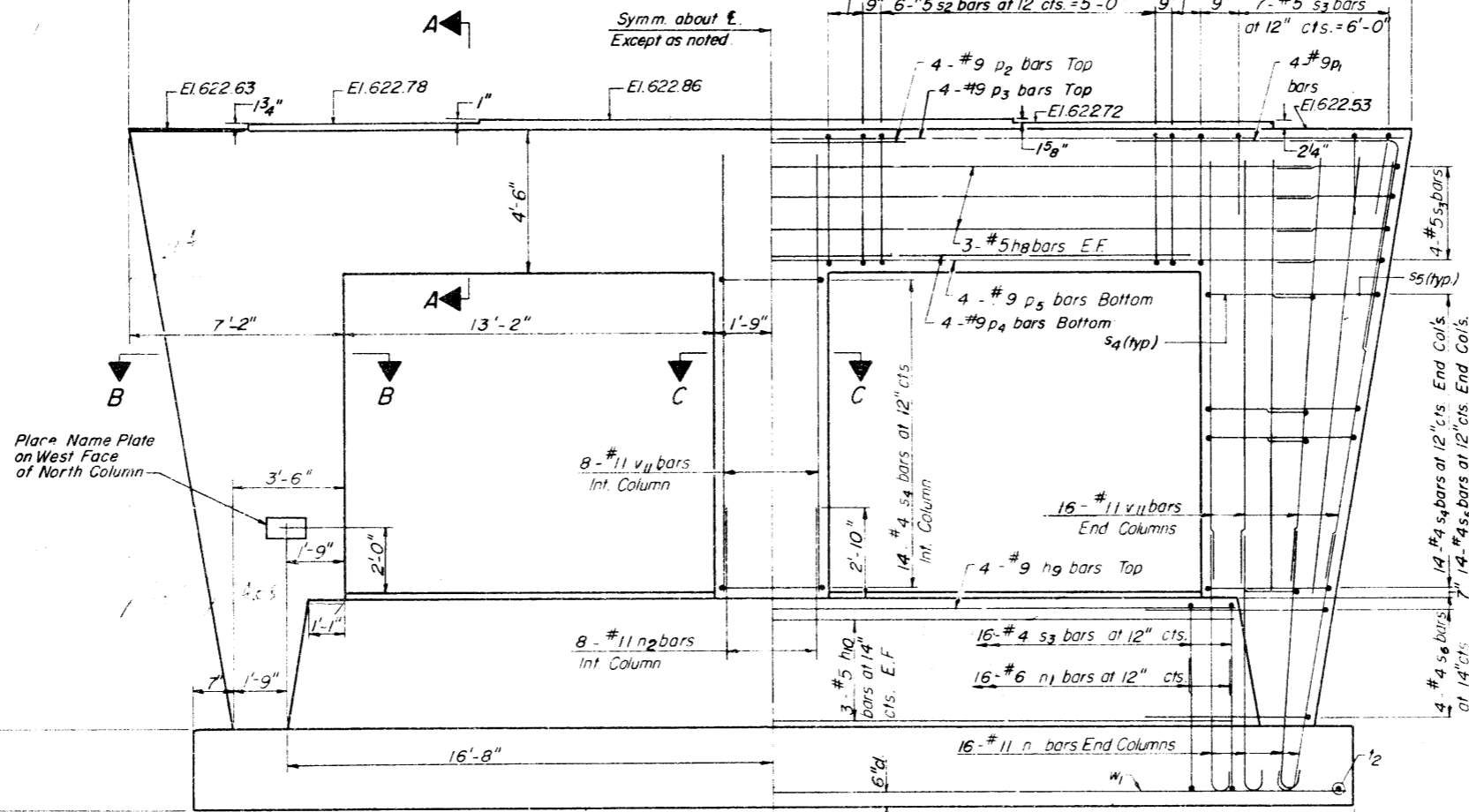
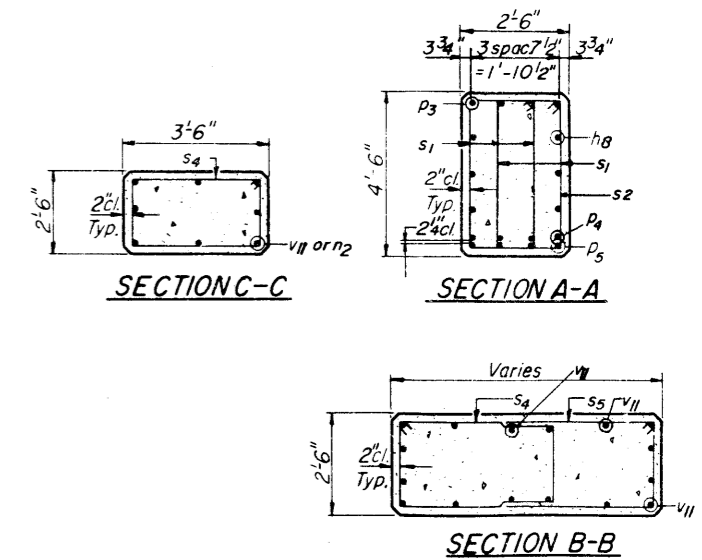
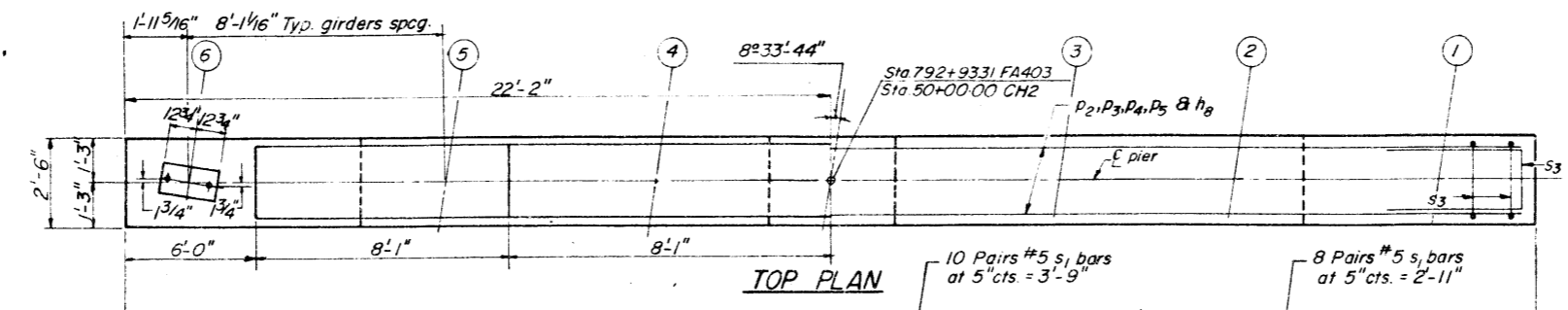
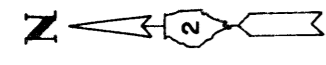
DESIGNED	B.T.M.
CHECKED	P.B.
DRAWN	A.M.
CHECKED	D.M.P.

NOTES

Space reinforcement in cap to miss anchor bolts.
 All edges shall have standard $\frac{3}{4}$ chamfers except as noted
 Pour steps monolithically with cap

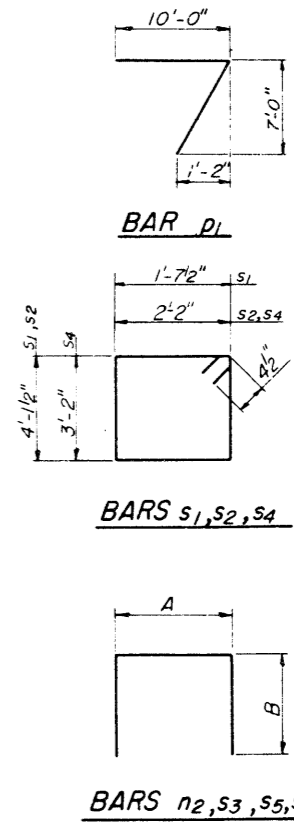
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
403	161-1-2	ROCK ISLAND	532	234
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
14 SHEETS



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h8	6	#5	39'-6"	—
h9	4	#9	31'-9"	—
h10	6	#5	31'-9"	—
n	32	#11	10'-5"	—
n1	16	#6	11'-2"	—
n2	8	#11	5'-10"	—
p1	8	#9	17'-2"	7
p2	4	#9	10'-0"	—
p3	4	#9	44'-0"	—
p4	4	#9	29'-40"	—
p5	4	#9	35'-0"	—
s1	72	#5	12'-3"	□
s2	12	#5	13'-4"	□
s3	38	#5	9'-2"	□
s4	42	#4	11'-5"	□
s5	28	#4	9'-10"	□
s6	8	#4	12'-2"	□
t2	39	#7	8'-9"	—
v11	40	#11	17'-6"	—
w1	8	#9	37'-8"	—
Class X Concrete		Cu. Yds	85.1	
Reinforcement Bars		Lbs.	12,710	
Structure Excavation		Cu. Yds	115.0	
Name Plate		Each	1	
Steel Piles HPI0 x 42		Lin. Ft.	1,081	
Test Pile (Steel)		Each	1	



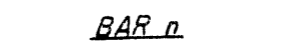
A&B DIMENSIONS

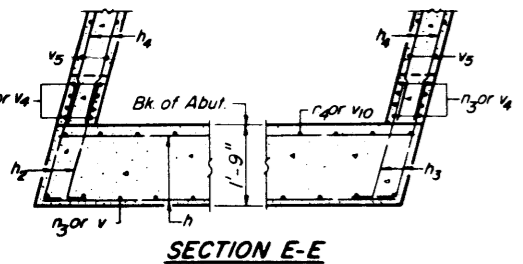
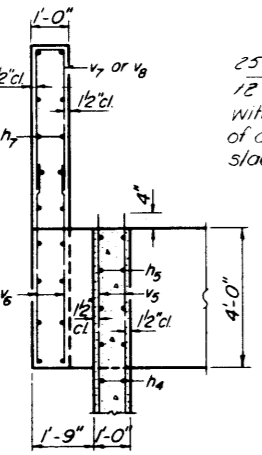
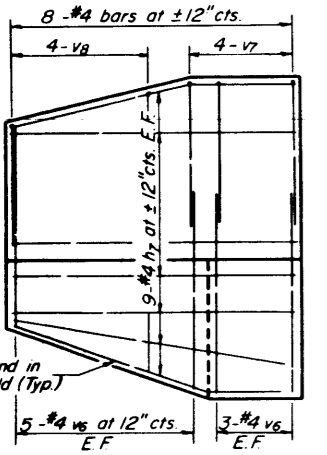
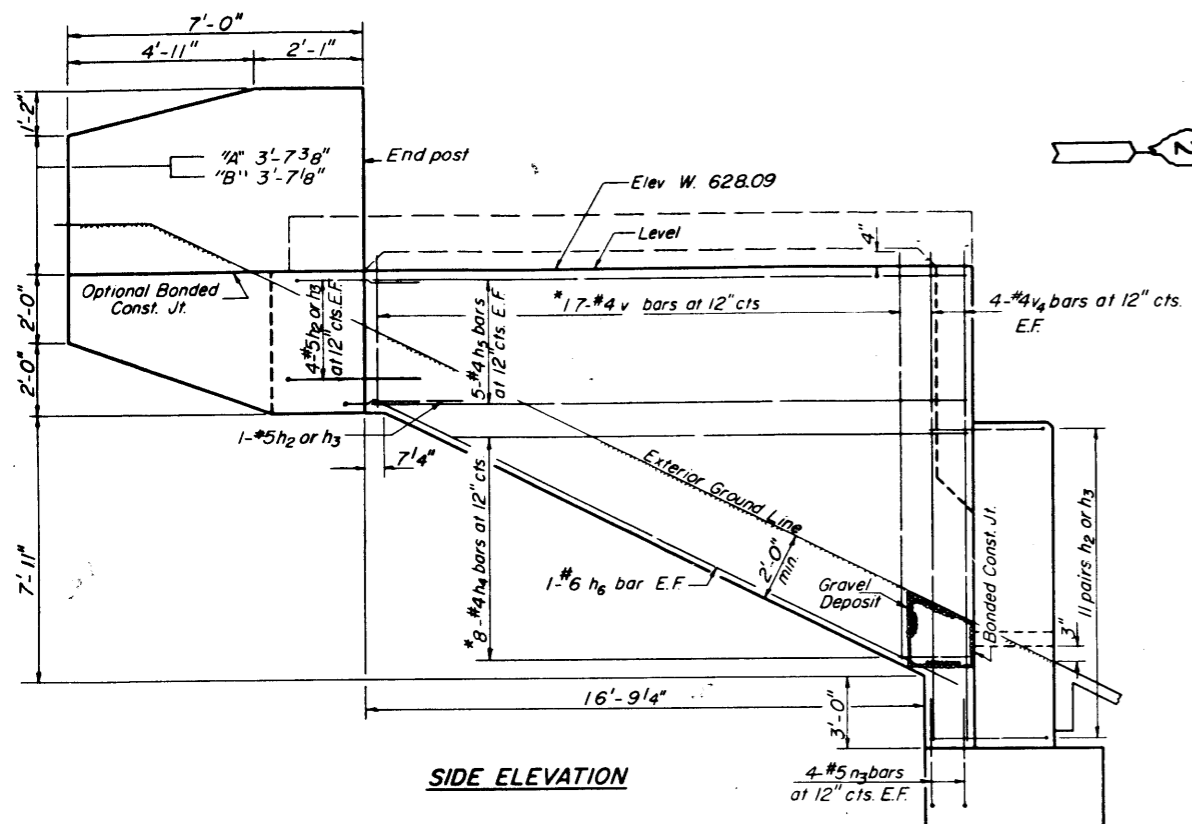
Bar	A	B
n1	2'-2"	4'-6"
s3	2'-2"	3'-6"
s5	2'-2"	3'-10"
s6	2'-2"	5'-0"

PIER
 FA 403 SECTION 161-1-HB-7
 FA 403 UNDER C. H. 2
 ROCK ISLAND COUNTY
 STATION 792+93.31

PILE DATA
 Type HP 10 x 42
 Capacity Refusal
 Est. Length 47.0 FT.
 No Required 24 (Including one test pile)

DESIGNED	V. H. P.
CHECKED	D. M. P.
DRAWN	A. S.
CHECKED	D. M. P.

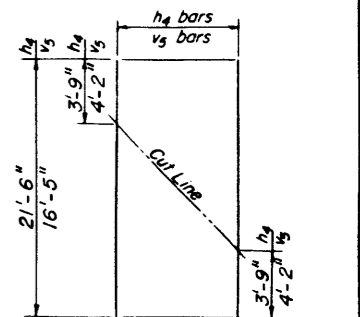
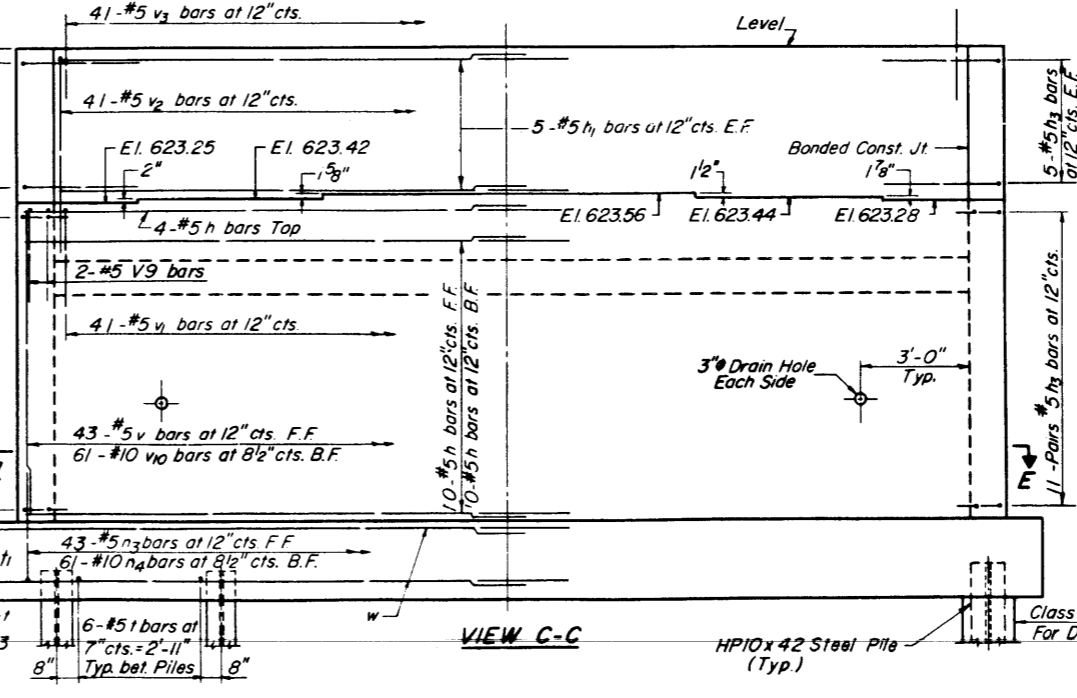
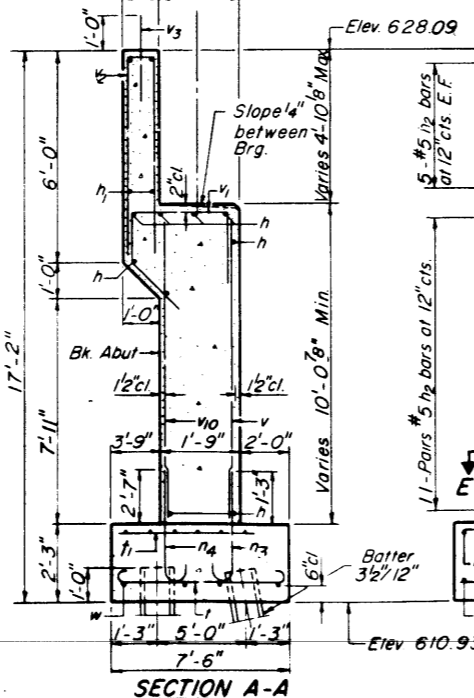
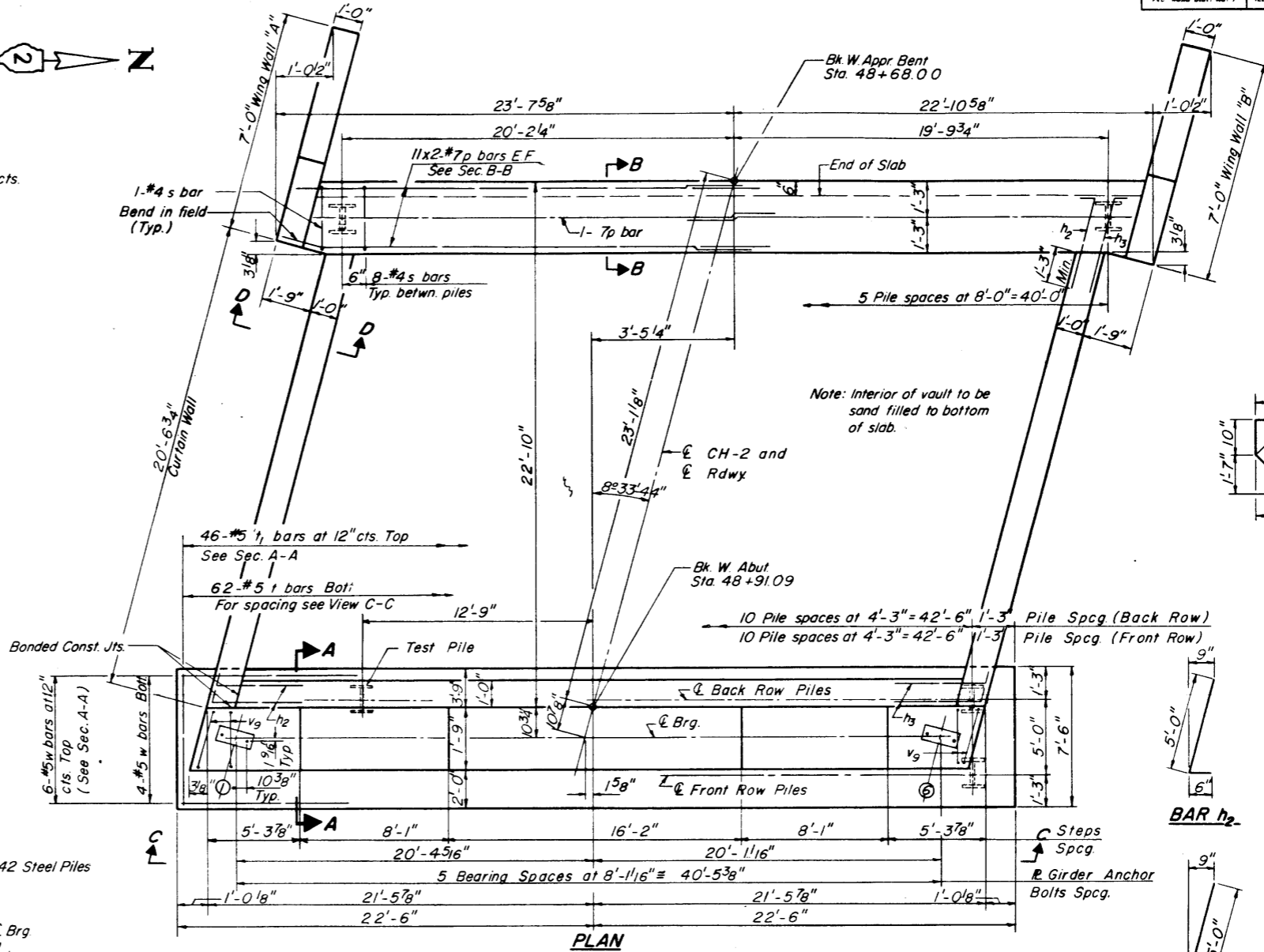
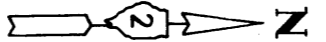




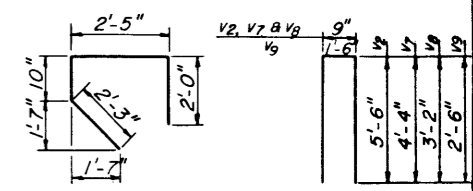
DESIGNED	H.S.
CHECKED	V.H.P.
DRAWN	A.S.
CHECKED	V.H.P.

ABUT. - PILE DATA
 Type HP 10x42
 Capacity Refusal
 Est. Length 58'-0"
 No. Req'd. 22 (Including 1 test pile)
 Test Pile 1

APPR. BENT PILE DATA
 Type HP 10x42
 Capacity Refusal
 Est. Length 72'-0"
 No. Req'd. 6



*Order h₄ & v₃ bars full length. Cut to fit as shown and use remainder of bars in other face.

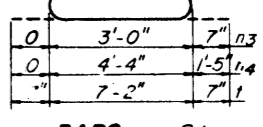
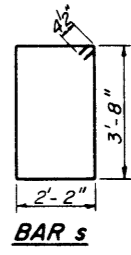
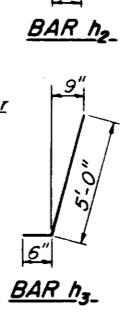


BAR v₁

BILL OF MATERIAL

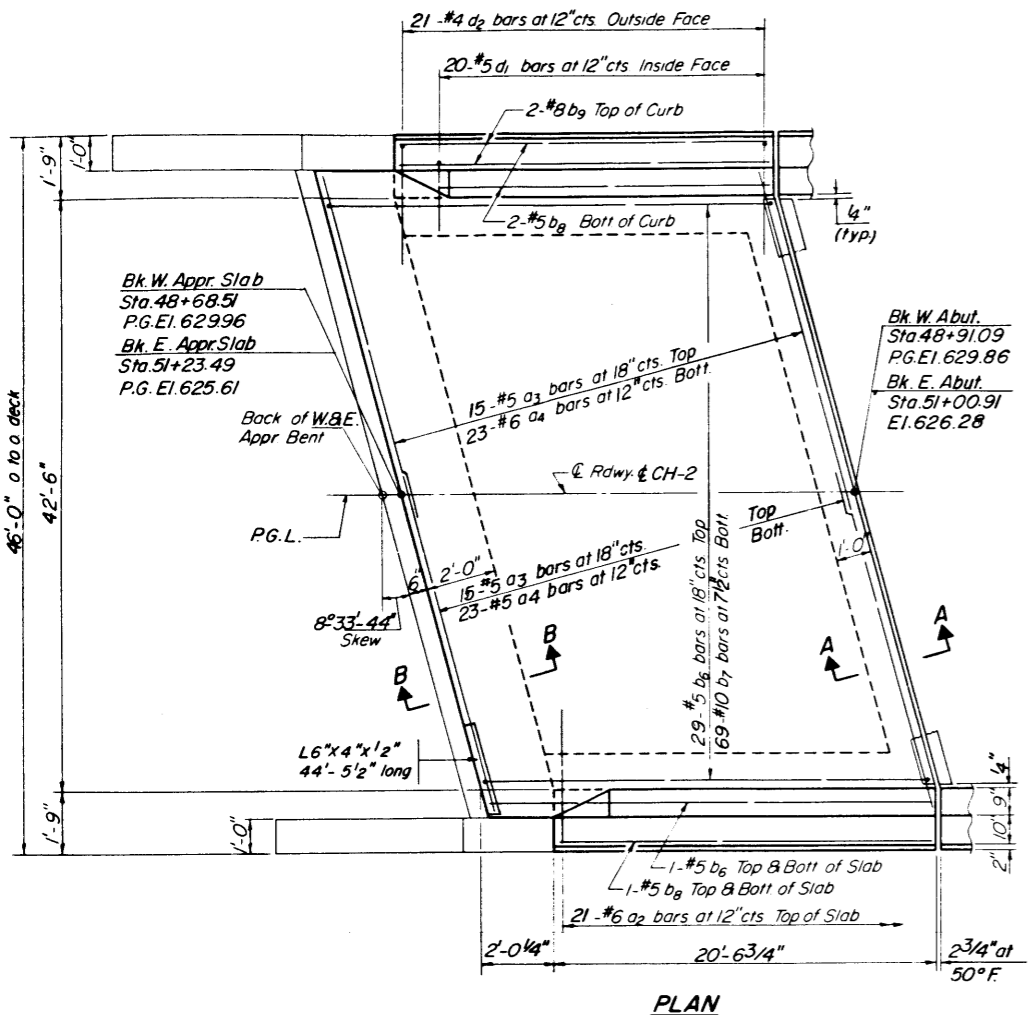
Bar	No	Size	Length	Shape
h	48	#5	22'-0"	—
h ₁	20	#5	21'-0"	—
h ₂	42	#5	5'-6"	L
h ₃	42	#5	5'-6"	J
h ₄	16	#4	21'-6"	—
h ₅	20	#4	20'-2"	—
h ₆	4	#6	20'-0"	—
h ₇	36	#4	6'-8"	—
n ₃	59	#5	3'-7"	—
n ₄	61	#10	5'-9"	—
p	22	#7	24'-0"	—
s ₇	42	#4	12'-5"	□
t	62	#5	8'-4"	—
h	46	#5	5'-6"	—
v	43	#5	9'-10"	—
v ₁	41	#5	7'-6"	—
v ₂	41	#5	11'-9"	—
v ₃	110	#5	2'-6"	—
v ₄	16	#4	15'-4"	—
v ₅	34	#4	16'-5"	—
v ₆	32	#4	5'-3"	—
v ₇	8	#4	9'-9"	—
v ₈	8	#4	7'-3"	—
s	4	#4	6'-6"	—
w	61	#10	9'-10"	—
w	20	#5	23'-6"	—

Reinforcement Bars Lbs. 12,140
 Class X Concrete Cu. Yds. 101.0
 Steel Piles HP 10x42 Lin Ft. 1,650
 Test Piles HP 10x42 Each 1
 Sand Backfill Cu. Yds. 204



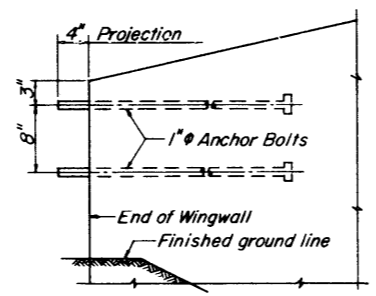
WEST ABUTMENT
 FA 403 SECTION 161-1HB-7
 FA 403 UNDER CH-2
 ROCK ISLAND COUNTY
 STATION 792 + 93.31

Rev. Reinf. bars from 12,070 to 12,140 8-6-74 D.D.

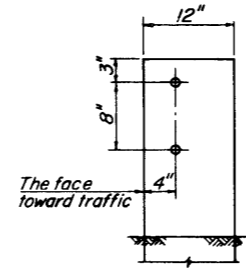


NOTES:

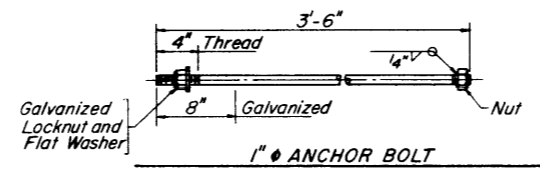
1. The steps shall be poured monolithically with abutment.
2. Space all reinforcements to miss anchor bolts.
3. All edges shall have standard 3/4" chamfer unless noted.
4. E.F. denotes each face.
5. B.F. denotes back face.
6. F.F. denotes front face.



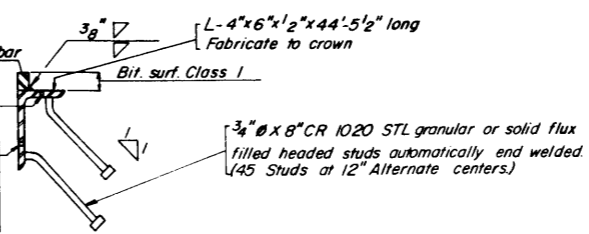
ELEVATION



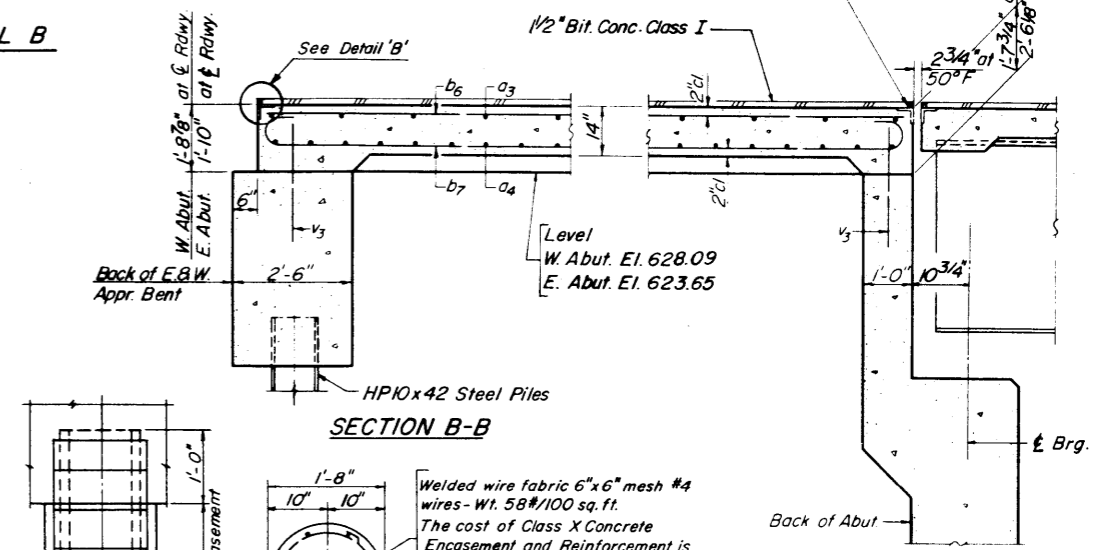
END VIEW



ANCHOR BOLTS DETAILS

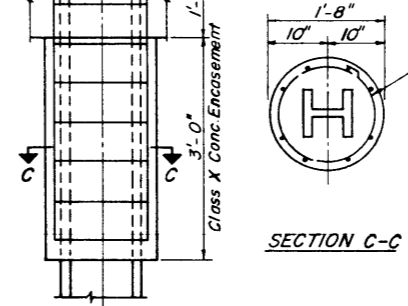


DETAIL B



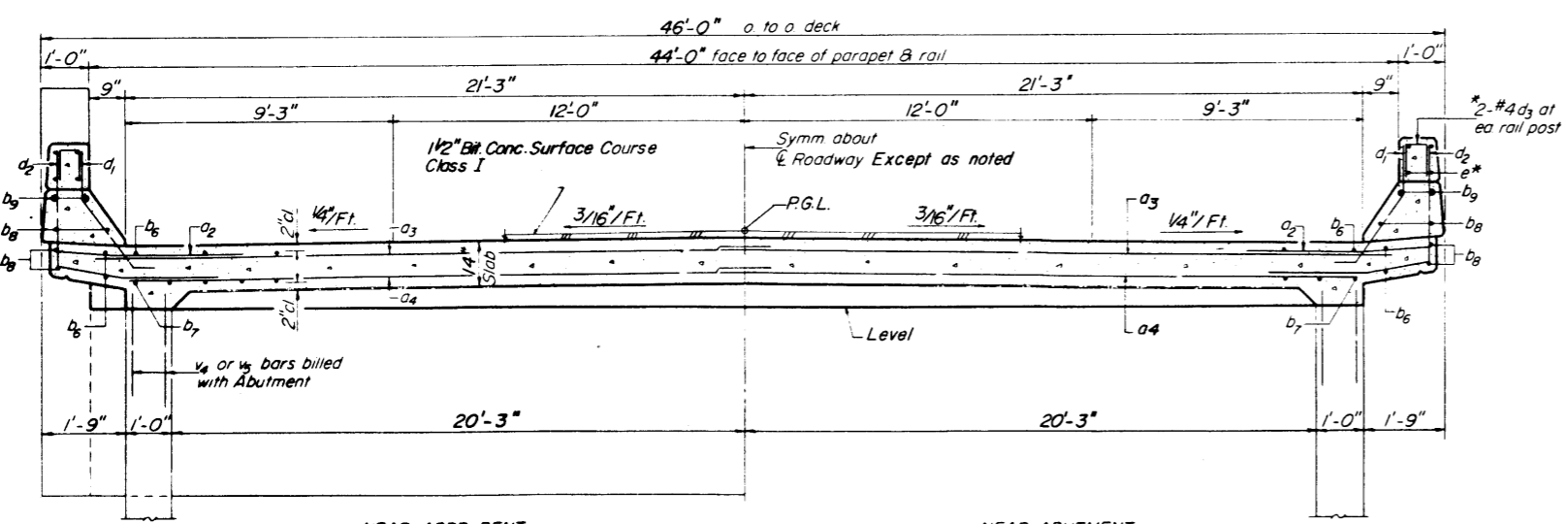
SECTION B-B

SECTION A-A

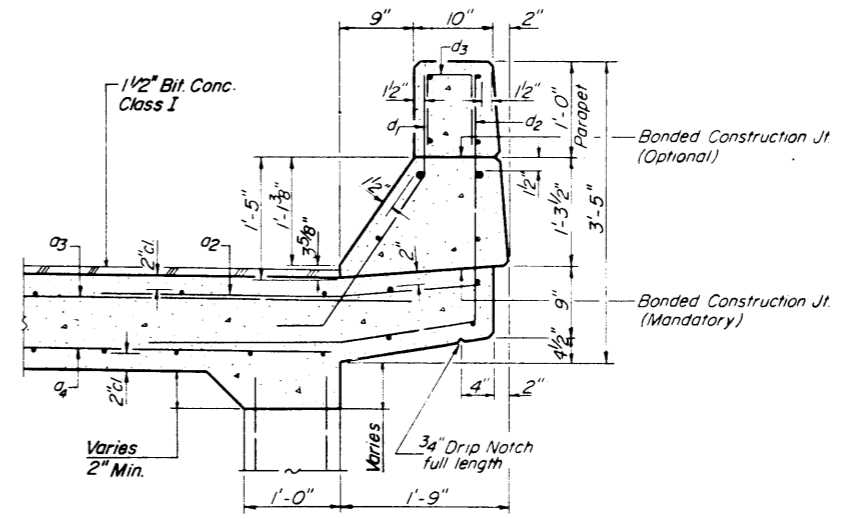


SECTION C-C

PILE ENCASEMENT DETAIL



CROSS SECTION



CURB SECTION

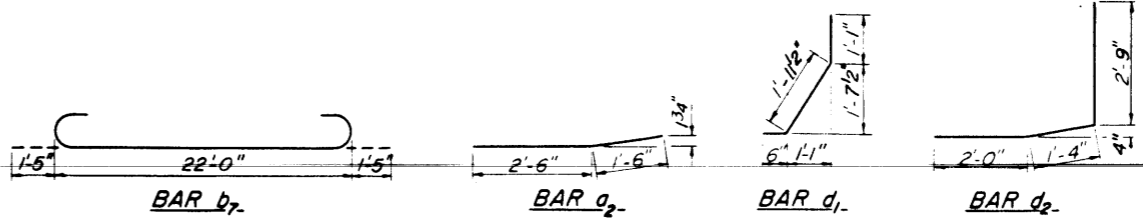
**TWO APPR. SLABS
BILL OF MATERIAL**

Bar	No	Size	Length	Shape
a2	84	#6	4'-0"	—
a3	60	#5	22'-8"	—
a4	92	#6	22'-0"	—
b6	66	#5	22'-0"	—
b7	138	#10	24'-10"	—
b8	16	#5	20'-2"	—
b9	8	#8	20'-2"	—
d1	80	#5	3'-7"	—
d2	84	#4	5'-11"	—
Reinforcement Bars		Lbs	22,620	
Class X Concrete		Cu Yds	98	
Protective Coat		Sq.Yds.	30	
Bit Conc. Course Class I		Tons	100	
Waterproof Membrane Sys		Sq.Yds.	214.0	
Structural Steel		Lbs.	1,990	

NOTE:
Work this sheet with sheet No. 10 & 11

DESIGNED	H.S.
CHECKED	V.H.P.
DRAWN	A.M.
CHECKED	D.M.P.

APPROACH SLAB
FA 403 SECTION 161-IHB-7
FA 403 UNDER CH-2
ROCK ISLAND COUNTY
STATION 792 + 93.31



BAR b7

BAR a2

BAR d1

BAR d2

