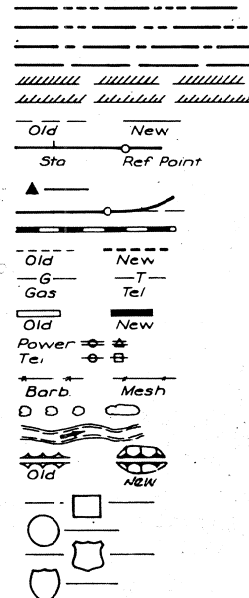


BRIDGES  
FFD-561-1(2)--2N-82

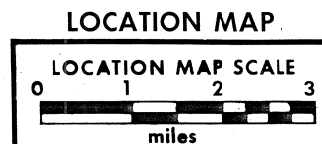
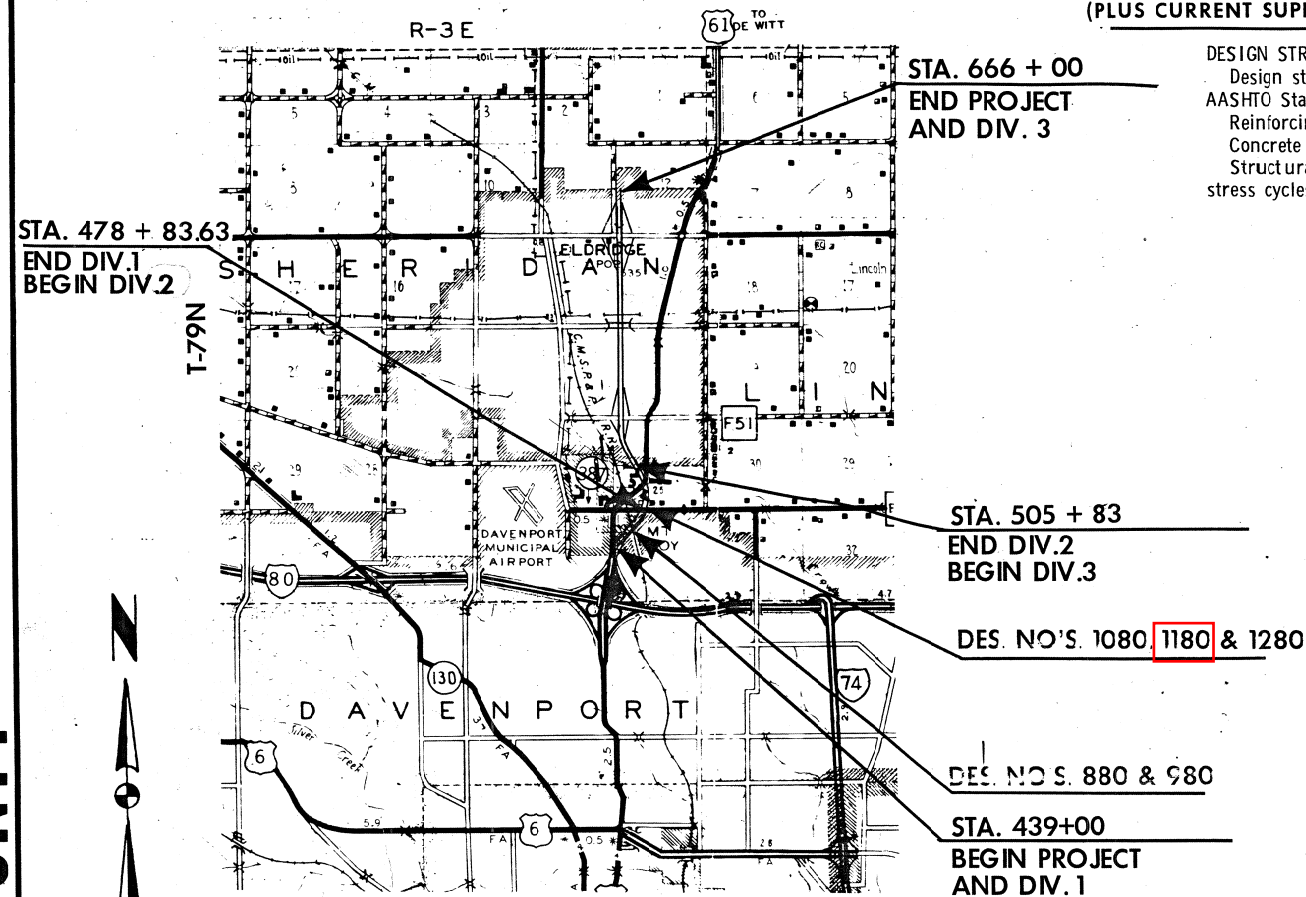
SCOTT COUNTY

## CONVENTIONAL SIGNS

State Line  
Co. Line  
Twp. Line  
Sec. Line  
Corp. Line  
Urban Bdry.  
R.O.W. Lines  
Survey LineSec. Corner  
Profile Grade  
Railroad  
Field Tile  
Underground Lines  
Culverts  
Utility Poles  
Fences  
Trees Or Brush  
Stream  
DikeCounty Road No.  
Primary Road No.  
U. S. Road No.  
Interstate Road No.IOWA  
DEPARTMENT OF TRANSPORTATION  
Highway Division  
PLANS OF PROPOSED IMPROVEMENT ON THE  
PRIMARY ROAD SYSTEM  
SCOTT COUNTY  
BRIDGESU.S. 561 FROM I-80 N. 4.5 MILES  
SCALES: AS NOTEDTHE STANDARD SPECIFICATIONS, SERIES OF 1977  
OF THE IOWA DEPARTMENT OF TRANSPORTATION, DID  
SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT

(PLUS CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS)

## DESIGN STRESSES:

Design stresses for the following materials are in accordance with the  
AASHTO Standard Specifications for Highway Bridges, Series of 1977.  
Reinforcing Steel in accordance with Section I.5, Grade 40 and Grade 60.  
Concrete in accordance with Section I.5, f'c = 3,500 psi.  
Structural Steel in accordance with Section I.7. ASTM A-36. Fatigue  
stress cycles based on Case II.

DESIGN DATA					
RURAL			URBAN		
1979 AADT	14,250	V.P.D.	1979 AADT	14,250	V.P.D.
1999 AADT	29,910	V.P.D.	1999 AADT	29,910	V.P.D.
1999 DHV	3,424	V.P.H.	1999 DHV	3,424	V.P.H.
DIRECTIONAL		%	DIRECTIONAL		%
TRUCKS	11	%	TRUCKS	11	%
DESIGN V		M.P.H.	DESIGN V		M.P.H.
CLASS 1	ACCESS CONTROL		CLASS 1	ACCESS CONTROL	

MILEAGE SUMMARY			
DIV.	LOCATION	LIN. FT.	MILES
1	URBAN: (City of Davenport) Sta. 439+00.00 to Sta. 478+83.63 Bridges at Sta. 462+20.68 Bridges at Sta. 478+83.54 (South Half) Total Length of Roadway - Div. 1 Total Length of Bridges - Div. 1 Total Length of Div. 1	3,983.63 345.20 132.30 3,506.13 477.50 3,983.63	0.664 0.090 0.754
2	RURAL: (Scott Co.) Sta. 478+83.63 to Sta. 505+83.00 Bridges at Sta. 478+83.54 (North Half) Bridges at Sta. 505+96.00 (South Half) Total Length of Roadway - Div. 2 Total Length of Bridges - Div. 2 Total Length of Div. 2	2,699.37 132.30 61.60 2,505.47 193.90 2,699.37	0.474 0.097 0.511
3	URBAN: (City of Eldridge) Sta. 505+83.00 to Sta. 666+00.00 Bridges at Sta. 505+96.00 (North Half) Bridge at Sta. 545+86.00 (R.C.B.) Equation: Sta. 547+32.19 = Sta. 547+20.63 (Lengthens Line) Bridges at Sta. 640+66.91 Total Length of Roadway - Div. 3 Total Length of Bridges - Div. 3 Total Length of Div. 3	16,017.00 61.60 26.51 11.56 171.00 15,769.45 259.11 16,028.56	2.987 0.049 3.036
Total Length of Roadway in Project		21,781.05	4.125
Total Length of Bridges in Project		930.51	0.176
Total Length of Project		22,711.56	4.301

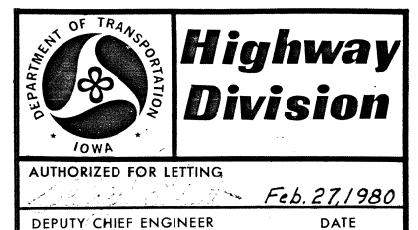
REV  
\* 45 \*REVISED  
SEE FOLLOWING SHEET 1AI HEREBY CERTIFY THAT THIS PLAN WAS PREPARED  
UNDER MY SUPERVISION AND THAT ENGINEERING  
DECISIONS WITH REGARD TO THE DESIGN WERE  
MADE BY ME OR BY OTHER DULY REGISTERED  
PROFESSIONAL ENGINEERS UNDER THE LAWS OF  
THE STATE OF IOWA.  
See Design Sheet 1 of each  
Design  
IOWA REGISTRATION NUMBER DATE

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	1		1	125
PROJECT NUMBER				
FFD-561-1(2)--2N-82				
R.O.W. PROJECT NUMBER				
F-561-1(3)--20-82				
PRELIMINARY ENGINEER NUMBER				
F-561-1(900)--20-82				

INDEX OF SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
1A	REVISION SHEET
2-3	ESTIMATE SHEET
4-32	BRIDGE DESIGN NO. 880
33-61	BRIDGE DESIGN NO. 980
62-84	BRIDGE DESIGN NO. 1080
85-108	BRIDGE DESIGN NO. 1180
109-125	BRIDGE DESIGN NO. 1280
CONSTRUCTION PLANS SHOWING PROJECT AS BUILT	
Plan Preparation Supervised By:	Bruce Kuehl Resident Construction Engineer
Date:	1-16-86 Iowa Reg. No. 8371
REVIEWED AND FORWARDED TO AMES	
District Construction Engineer	
One 50% Reduced and Four Full-Size Prints To Be Made and Returned To	
R. C. Henely District Engineer	

AFTER MICROFILMING RETURN ORIGINAL  
TO DISTRICT NO. 6DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION  
STANDARDS REQUIRED (Available at Bridge Design Services)

STANDARD ISSUED REVISED			
YEAR	WORK	CONTRACTOR	PROJ. INSPECTOR
1981	Bridge 880	Lunda	F. Springer
1981	Bridge 980	Lunda	F. Springer
1981	Bridge 1080	Lunda	M. Jackson
1981	Bridge 1180	Lunda	M. Jackson
1981	Bridge 1280	Lunda	M. Jackson

U.S. DEPT. TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
APPROVED  
DIVISION ENGINEER DATE

LETTING DATE APRIL 22, 1980

STATE CONTROL SECTION NUMBER 82-2500

FILE NO. 25588

SCOTT COUNTY

PROJECT NO. FFD-561-1(2)--2N-82

SHEET NO. 1 OF 125

LISTING OF PROJECT REVISIONS

DATE	SHEET NUMBER	DESCRIPTION OF REVISIONS	DATE	SHEET NUMBER	DESCRIPTION OF REVISIONS															
3-6-81		Designs 880, 980, 1080 & 1180																		
	1A of <del>125</del> 130	This sheet added to project (Revision Sheet).																		
		Design 880																		
	5 of <del>125</del> 130	Reinforcing Steel and Epoxy Coated Reinforcing Steel quantities changed and/or corrected.																		
	9 of <del>125</del> 130	Pier Column Reinforcing changed.																		
	10 of <del>125</del> 130	Re-bar number and weight changed for Pier No. 1 and Pier No. 2																		
	13 of <del>125</del> 130	"Tabulation of Epoxy Coated Re-bars" corrected.																		
	16 of <del>125</del> 130	"Reinforcing Steel" list and "Total Estimated Quantities" list correcte.																		
	24 of <del>125</del> 130	Epoxy Coated re-bar list and Estimated Qtynty list corrected.																		
		Design 980																		
	<del>34</del> 35 of <del>125</del> 130	Reinforcing Steel and Epoxy Coated Reinforcing Steel quantittes changed and/or corrected.																		
	<del>38</del> 39 of <del>125</del> 130	Pier Column reinforcing changed.																		
	<del>39</del> 40 of <del>125</del> 130	Reinforcing Bar list--Pier No. 2 changed. Total Estimated Quantities changed.																		
	<del>42</del> 43 of <del>125</del> 130	Weight corrected in tabulation of Epoxy Coated Re-bars.																		
	<del>45</del> 46 of <del>125</del> 130	Reinforcing Steel list and Total Estimated Quantities list corrected.																		
		Design 1080																		
	<del>63</del> 64 of <del>125</del> 130	Superstructure quantity for Epoxy Coated Reinforcing Steel corrected.																		
	<del>75</del> 76 of <del>125</del> 130	Number and Weight of 5d1 reinforcing bars corrected.																		
		Design 1180																		
	<del>86</del> 87 of <del>125</del> 130	Pier quantity for Reinforcing Steel corrected.																		
	<del>93</del> 94 of <del>125</del> 130	Number and weight of 5c2 & 5c3 cap hoops corrected.																		
	<del>97</del> 98 of <del>125</del> 130	Number and weight of 4e1 column hoops corrected.																		
	2 of <del>125</del> 130	Designs 880 & 980---Reinforcing Steel weights changed and/or corrected.																		
	3 of <del>125</del> 130	Design 1080--Epoxy Coated Reinforcing Steel weight corrected.																		
		Design 1180--Reinforcing Steel weight corrected.																		
	1 of <del>125</del> 130	Sheet 1A added to "Index of Sheets."																		
		REASON: On Designs 880 & 980 there was a design omission concerning the effects of cap shrinkage in designing the Piers. The redesign shows a need for additional reinforcing in the exterior columns of Piers No. 2 in both designs. All other corrections were due to plan errors.																		
		<table><tr><td></td><td>Reinforcing Steel</td><td>Epoxy Coated Reinforcing Steel</td></tr><tr><td>Design 880</td><td>+217</td><td>-57</td></tr><tr><td>Design 980</td><td>+1060</td><td>+4</td></tr><tr><td>Design 1080</td><td></td><td>+57</td></tr><tr><td>Design 1180</td><td>-64</td><td></td></tr></table>		Reinforcing Steel	Epoxy Coated Reinforcing Steel	Design 880	+217	-57	Design 980	+1060	+4	Design 1080		+57	Design 1180	-64				
	Reinforcing Steel	Epoxy Coated Reinforcing Steel																		
Design 880	+217	-57																		
Design 980	+1060	+4																		
Design 1080		+57																		
Design 1180	-64																			

REVISION SHEET



DESIGN NO. 1080  
SCOTT COUNTY

OVER MT. JOY ROAD

STA. 478+93.08 (C. N. B. LANE U. S. 561)

SECTION 25 & 36

T-79N R-3E

SHERIDAN TWP.

DESIGN FOR 12° 04' 33.30" SKEW

260' X 40' WELDED PLATE GIRDER BRIDGE

ESTIMATE OF QUANTITIES

NO.	ITEM	UNIT	TOTAL
1	Structural Concrete	Cu. Yds.	585.6
2	Structural Steel	Lbs.	322,361
3	Reinforcing Steel	Lbs.	79,619
4	Reinforcing Steel-Epoxy Coated	Lbs.	61,821
5	HP10 x 42 Steel	Furnish	1,870
6	Bearing Piling	Drive	1,870
7	Cresotated Piling	Lin. Ft.	2,400
8	Subdrain	Lin. Ft.	168
9	Concrete Slope Protection	Sq. Yds.	976
10	Granular Backfill	Cu. Yds.	176
11	Class 20 Excavation	Cu. Yds.	473
12	2" Rigid Steel Conduit	Lin. Ft.	306
13	1" Rigid Steel Conduit	Lin. Ft.	262
14	Pre-Bored Holes, as per plan	Lin. Ft.	288
15	Bridge Seat Sealer	Sq. Ft.	365
16	Concrete Barrier Rail	Lin. Ft.	609.9
800	Field Splices	Each	12
800	Retarder	Cu. Yds.	22.4

ESTIMATE REFERENCE INFORMATION		100.4
Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.		
ITEM NO.	DESCRIPTION	
31.	Includes 301.2 Cu. Yds. of Structural Concrete, Class "C" and 395.2 Cu. Yds. of Structural Concrete, Class "D".	
32.	Includes 147 Lbs. for Lubricated Bronze Plates and 385 Lbs. for Lead Plates.	

IN LETTING OF April 1, 1980

DESIGN NO. 1180		OVER MT. JOY ROAD		STA. 478+73.99 (C. S. B. LANE U. S. NO. 561)	
SCOTT COUNTY					
SECTION 25 & 36		T-79N R-3E		SHERIDAN TWP.	
SCOTT COUNTY		DESIGN FOR 12° 18' 42.77" SKEW		C. S. B. LANE	
SECTION 25 & 36		260' X VARI. WELDED PLATE GIRDER BRIDGE		SHERIDAN TWP.	
FINAL		ESTIMATE OF QUANTITIES			
NO.	ITEM			UNIT	TOTAL
1 46	Structural Concrete			Cu. Yds.	768.1
2 49	Structural Steel			Lbs.	447,932
3 50	Reinforcing Steel			Lbs.	110,826
4 51	Reinforcing Steel-Epoxy Coated			Lbs.	84,291
5 54	HP10X42 Steel	Furnish	Lin. Ft.	2,525	
6 55	Bearing Piling	Drive	Lin. Ft.	2,525	
7 53	Cresotated Piling		Lin. Ft.	3,200	
8 56	Subdrain		Lin. Ft.	208	
9 52	Concrete Slope Protection		Sq. Yds.	388	
10 57	Granular Backfill		Cu. Yds.	242	
11 58	Class 20 Excavation		Cu. Yds.	557	
12 59	2" Rigid Steel Conduit		Lin. Ft.	306	
13 60	1" Rigid Steel Conduit		Lin. Ft.	269	
14 61	Pre-Bored Holes, as per plan		Lin. Ft.	425	
15 62	Bridge Seat Sealer		Sq. Ft.	486	
16 63	Concrete Barrier Rail		Lin. Ft.	608.7	
800	Field Splices		Each	22	
800	Retarder		Cu. Yds.	22.4	

ESTIMATE REFERENCE INFORMATION		100.4
Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.		
ITEM NO.	DESCRIPTION	
2 48	Includes 387.7 Cu. Yds. of Structural Concrete, Class "C" and 380.4 Cu. Yds. of Structural Concrete, Class "D".	
2 49	Includes 206 Lbs. for Lubricated Bronze Plates and 535 Lbs. for Lead Plates.	

IN LETTING OF April 6, 1980

DESIGN NO. 1280		OVER LOCAL ROAD		STA: 8579+29.76	
SCOTT COUNTY		T-79N R-3E		1/2 LOOP H	
SECTION 36				SHERIDAN TWP.	
DESIGN FOR 17°26'14.1" SKEW					
266'-0" X 28' CONTINUOUS WELDED					
PLATE GIRDER BRIDGE					
FINAL <del>ESTIMATE OF QUANTITIES</del>					
NO.	ITEM	UNIT	TOTAL		
1 65	Structural Concrete	Cu. Yds.	445.4		
2 66	Structural Steel	Lbs.	261,260		
3 67	Reinforcing Steel	Lbs.	60,641		
4 68	Reinforcing Steel - Epoxy Coated	Lbs.	48,317		
5 69	Cresotated Piling	Lin. Ft.	3310		
6 70	Prebored Holes	Lin. Ft.	319		
7 71	Subdrain	Lin. Ft.	156		
8 72	Concrete Slope Protection	Sq. Yds.	425		
9 73	Bridge Seat Sealer	Sq. Ft.	270		
10 74	Granular Backfill	Cu. Yds.	114		
11 75	Class 20 Excavation	Cu. Yds.	341		
12 76	2" Rigid Steel Conduit	Lin. Ft.	312		
13 77	1" Rigid Steel Conduit	Lin. Ft.	310		
14 78	Concrete Barrier Rail	Lin. Ft.	621.5		
800	Retarder	Cu. Yds.	22.4		

ESTIMATE REFERENCE INFORMATION		100.4
Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.		
ITEM NO.	DESCRIPTION	
2 65	Includes 217.4 Cu. Yds. of Structural Concrete, Class "C" and 228.0 Cu. Yds. of Structural Concrete Class "D".	
2 66	Includes 118 Lbs. for Lubridated Bronze Plates and 206 Lbs. for Lead Plates.	

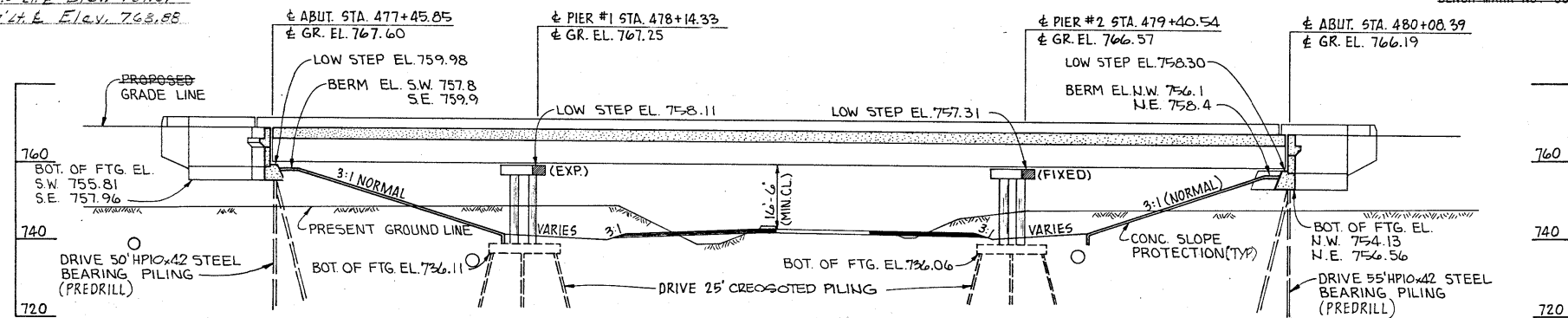
Revision 03-06-91: Design 1080-Epoxy Coated Reinforcing Steel weight corrected.  
Design 1180-Reinforcing Steel weight corrected.

QUANTITY  
ESTIMATE SHEET

CORRECTED PLANS

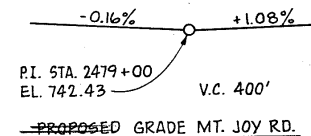
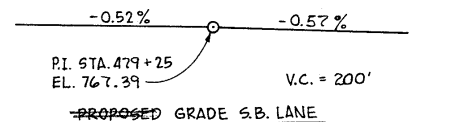
Sta. 450+13 IHCBM Top Barrier Rail N.E. Cor. 24.5' 44.2' Elev. 769.61  
Sta. 477+57 IHCBM Top Barrier Rail S.W. Cor. 77.4' 44.2' Elev. 763.88

BENCH-MARK NO. 55 STA. 479+57.90 RT. R.R. SPK. N.W. SIDE PC. POLE EL. 748.26



YEAR	WORK	CONTRACTOR	PROJ. INSPECTOR
1981	Bridge	Lunda	M. Jackson

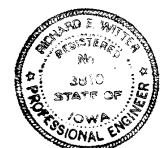
### LONGITUDINAL SECTION ALONG S.B. LANE



TRAFFIC COUNT  
A.D.T. = 13,840 V.P.D. (1979)

LOCATION  
T-79N R-3E  
SHERIDAN TWP.  
SEC. 25 & 36  
SCOTT COUNTY

MAIN LINE CURVE DATA			
$\Delta = 44^\circ 29' 24''$	$\Delta = 42^\circ 56' 20''$		
$OS = 0^\circ 46' 32''$	$D = 1^\circ 14' 27''$		
$LS = 125.0'$	$T = 1816.05'$		
$TS = 1951.17'$	$L = 3460.49'$		
$ES = 371.50'$	$E = 344.78'$		
$P = 14'$	$S = 0.045$		
$K = 62.50'$	$S = 215'$		
$Xc = 125.00'$			
$Yc = 0.58'$			
$Lt = 83.33'$			
$St = 41.67'$			
$Lc = 125.00'$			



I HEREBY CERTIFY THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA

*Richard E. Witter*

DATE NOV. 21, 1978 REGIST. NO. 3810

DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
SITUATION PLAN  
STATION: 478+73.99 (S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+3P.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 1 OF 24 FILE NO. 25588 DESIGN NO. 1180

### SITUATION PLAN

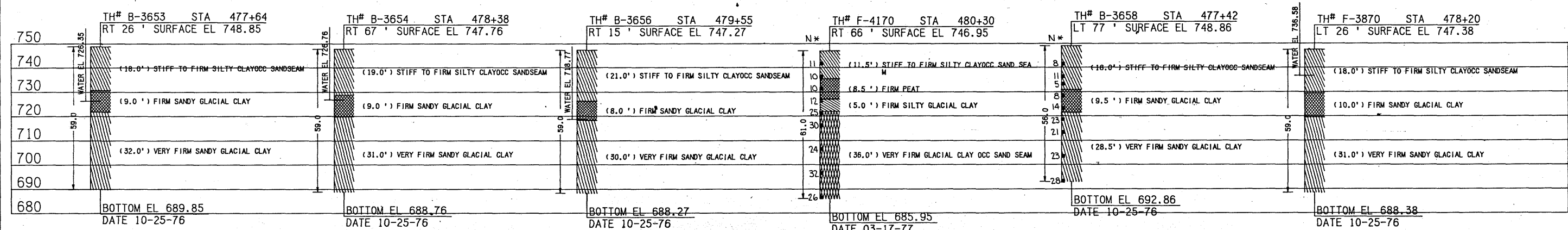
24" RF-1 (BY OTHERS)  
STA. 2481+25.74 LT. (INLET)  
E.L. WEST: 736.3  
EAST: 738.6

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5	75	130	130

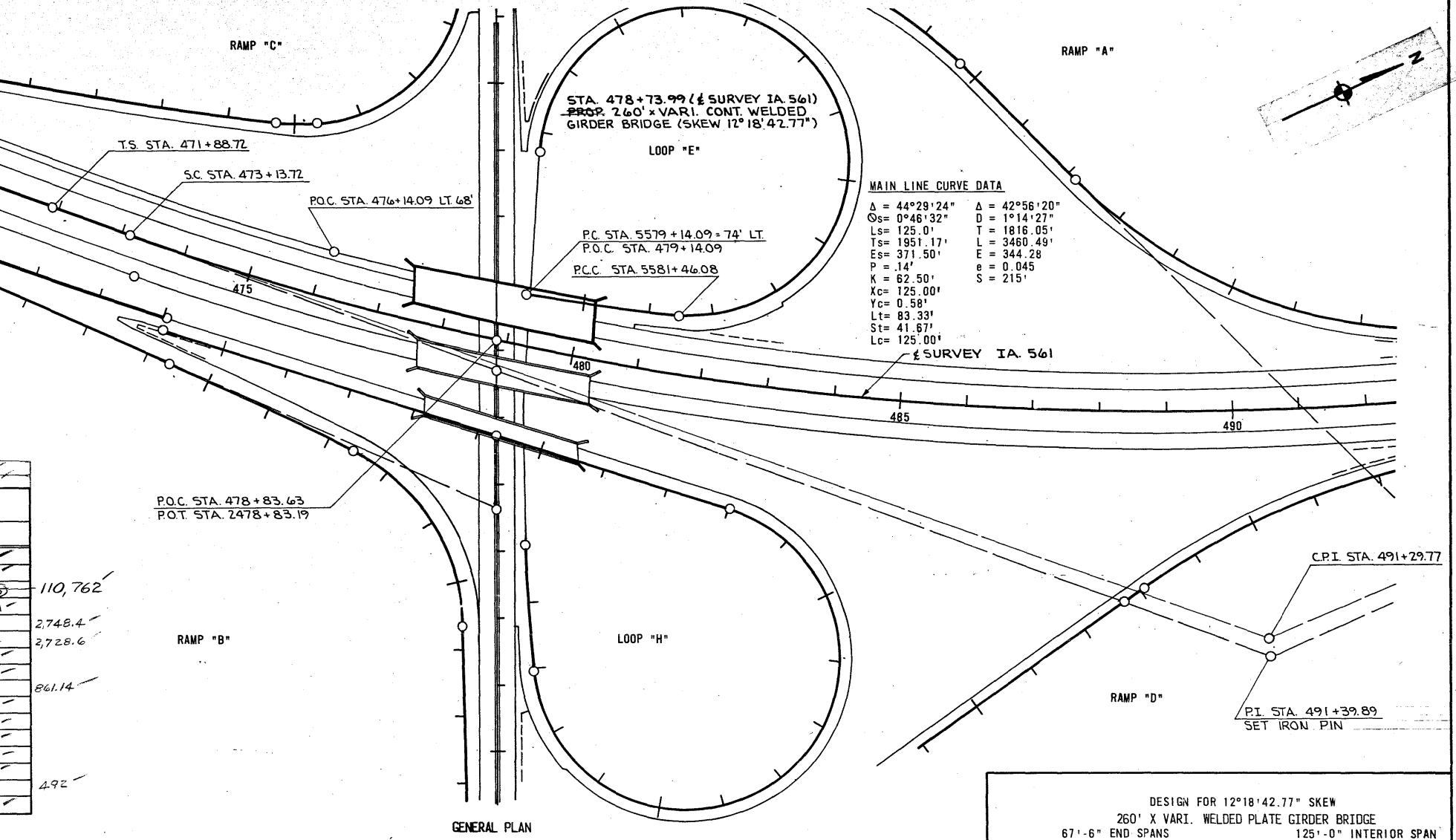
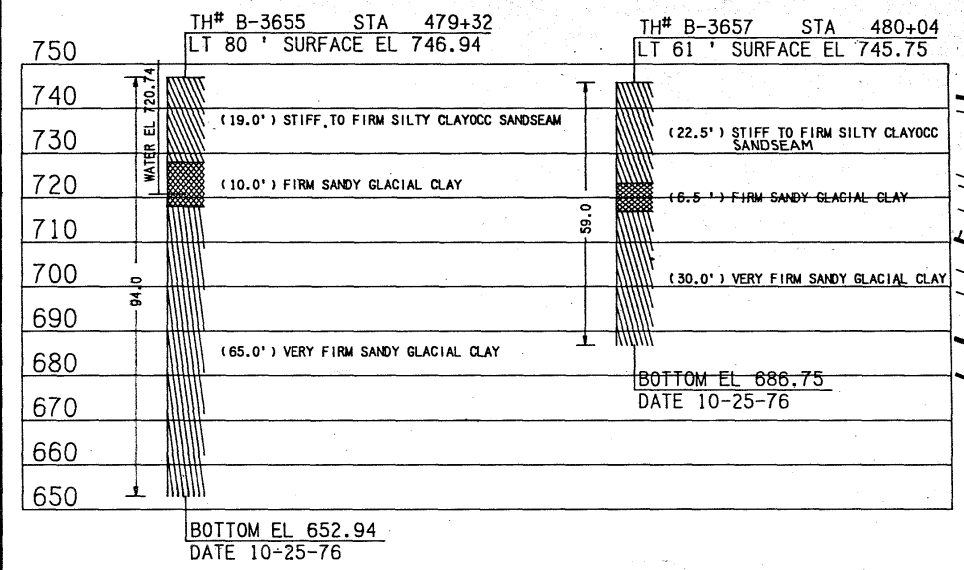
SCOTT COUNTY PROJECT NUMBER

W. Eren

1087-125



SOUNDING DATA  
N\* = NUMBER OF BLOWS PER FOOT OF PENETRATION



8001	Field Splices	Est.	23
8002	Estarder	CU. Yds.	380.4

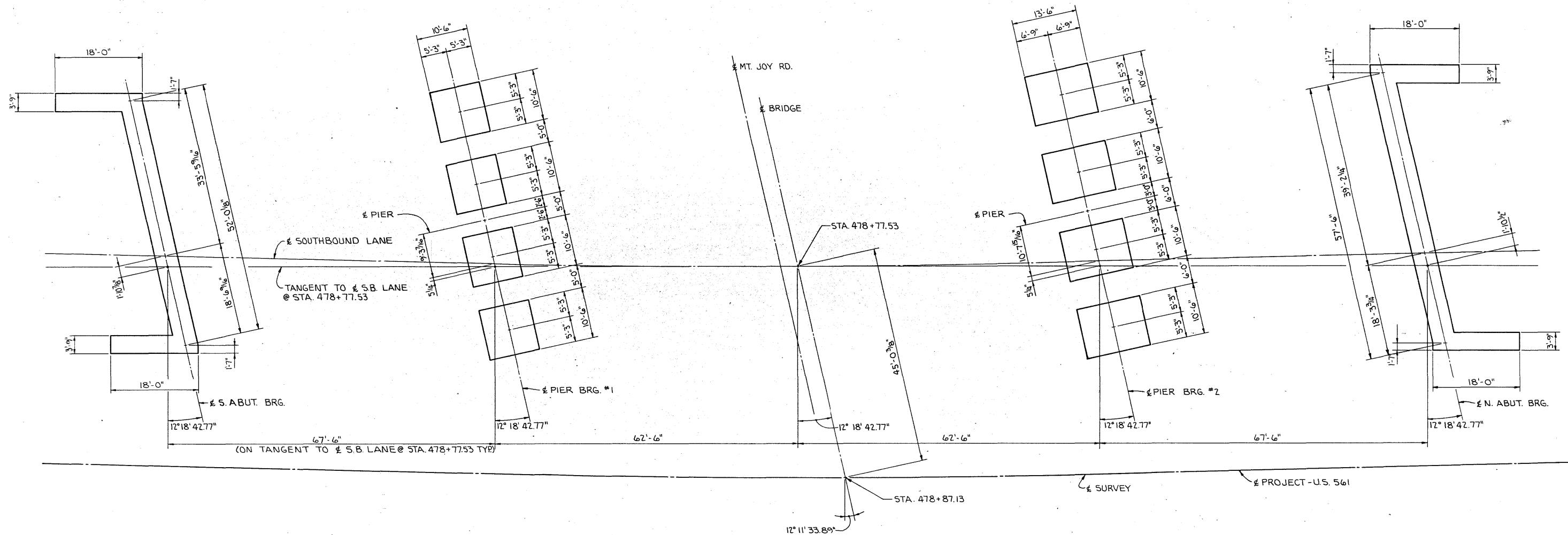
  

TOTAL ESTIMATED BRIDGE QUANTITIES						
ITEM NO.	ITEM	UNITS	2 PIERS	2 ABUTS.	1 SUPERSTR.	TOTAL
1	STRUCTURAL CONCRETE	CU. YDS.	215.8	171.9	380.4	768.1
2	STRUCTURAL STEEL	LBS.	-	-	447,932	447,932
3	REINFORCING STEEL	LBS.	35,164	11,212	64,386	110,762
4	REINFORCING STEEL-EPOXY COATED	LBS.	-	6305	77,986	84,291
5	HP10 X 42 STEEL BEARING PILING	LINEAL FT.	-	2525	-	2525
6	CREOSOTED PILING	LINEAL FT.	3200	-	-	3200
7	SUBDRAIN	LINEAL FT.	-	-	-	208
8	CONCRETE SLOPE PROTECTION	SQ. YDS.	-	788	-	788
9	GRANULAR BACKFILL	CU. YDS.	-	242	-	242
10	CLASS 20 EXCAVATION	CU. YDS.	337	220	-	557
11	2" RIGID STEEL CONDUIT	LINEAL FT.	-	-	-	306
12	1" RIGID STEEL CONDUIT	LINEAL FT.	-	-	-	269
13	PRE-BORED HOLES, AS PER PLAN	LINEAL FT.	-	425	-	425
14	BRIDGE SEAT SEALER	SQ. FT.	-	-	486	486
15	CONCRETE BARRIER RAIL	LINEAL FT.	-	-	608.7	608.7

ESTIMATE REFERENCE INFORMATION:  
ITEM NO. 1: INCLUDES 387.7 CU. YDS. OF STRUCTURAL CONCRETE, CLASS "C" AND 380.4 CU. YDS. OF STRUCTURAL CONCRETE, CLASS "D"  
ITEM NO. 2: INCLUDES 206 LBS. FOR LUBRICATED BRONZE PLATES AND 535 LBS. FOR LEAD PLATES.

Revision 03-06-81: Pier quantity for Reinforcing Steel corrected.

DESIGN FOR 12° 18' 42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
SOUNDING DATA  
STATION: 478+73.99 (1/2 S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 2 OF 24 FILE NO. 25588 DESIGN NO. 1180



## STAKING DIAGRAM

### GENERAL NOTES:

THESE BRIDGES ARE DESIGNED FOR HS20-44 LOADING, PLUS 20 LBS. PER SQUARE FOOT OF ROADWAY FOR FUTURE WEARING SURFACE.

THE BRIDGE CONTRACTOR ~~IS TO~~ <sup>D.D.</sup> ~~INSTALL SUBDRAIN BEHIND EACH ABUTMENT AS DETAIL.~~ THE SUBDRAIN ~~MAY BE EITHER WAS DRAIN TILE OR PERFORATED PLASTIC PIPE WITH A MINIMUM NOMINAL DIAMETER OF 4" AND A MAXIMUM NOMINAL DIAMETER OF 6".~~ THE PRICE BID FOR "SUBDRAIN" ~~IS TO~~ <sup>WAS</sup> ~~INCLUDED THE EXCAVATION NECESSARY FOR THE INSTALLATION.~~

THE APPROACH FILLS AS SHOWN ~~ARE~~ <sup>WAS</sup> ~~NOT A PART OF THIS CONTRACT BUT ARE TO BE IN PLACE BEFORE ABUTMENT PILES ARE DRIVEN.~~ THE BRIDGE CONTRACTOR ~~IS TO~~ <sup>WAS</sup> ~~LEVEL OFF AND SHAPE THE BERMS TO THE ELEVATIONS AND DIMENSIONS SHOWN BESSING OF SLOPES OUTSIDE THE BRIDGE AREA NOT DISTURBED BY THE BRIDGE CONTRACTOR SHALL BE PAID FOR AS EXTRA WORK.~~

ABUTMENT PILES ~~ARE TO BE~~ <sup>WAS</sup> ~~DRIVEN IN OVERSIZE HOLES DRILLED THROUGH THE FILL TO EL. 748.86 SOUTH ABUT. AND EL. 745.75 NORTH ABUT. THE MINIMUM DIAMETER OF THE DRILLED HOLES IS TO BE 18 INCHES. THE DRILLED HOLES ARE TO BE MAINTAINED OPEN DURING DRIVING OF THE PILES TO THE EXTENT THAT CASING OR DRILLING MUD MAY BE REQUIRED FOR COLLAPSING SOILS. IMMEDIATELY AFTER DRIVING A PILE, THE VOID AROUND THE PILE IS TO BE FILLED WITH LOOSE DRY SAND. ANY DRILLING MUD USED SHALL BE REMOVED FROM THE HOLE PRIOR TO PLACING THE SAND.~~

PIER EXCAVATION ~~IS BASED ON THE ASSUMPTION THAT THE APPROACH FILLS WILL HAVE BEEN COMPLETED PRIOR TO STARTING CONSTRUCTION OF THE PIERS.~~

BRIDGE SEAT SEALER ~~IS TO BE~~ <sup>WAS</sup> ~~APPLIED TO ALL EXPOSED BRIDGE SEAT SURFACE AT THE ABUTMENTS. THE BRIDGE SEAT SURFACE IS TO INCLUDE ALL SURFACES OF THE BRIDGE SEAT STEPS, THE WASH BETWEEN STEPS AND THE EDGE FILLETS. THE SEALER IS TO EXTEND SIX INCHES UP THE FRONT FACE OF THE BACKWALL. THE BRIDGE SEAT PROTECTIVE COATING SHALL BE AN APPROVED SEALER PER MATERIALS I.M. 491.12 AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.~~

GUARD RAIL ~~WILL BE~~ <sup>WAS</sup> ~~PLACED BY OTHERS.~~

### SPECIFICATIONS:

DESIGN: A.A.S.H.T.O., SERIES OF 1977

CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SERIES OF 1977, WITH CURRENT SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS.

### DESIGN STRESSES:

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SERIES OF 1977.

CONCRETE IN ACCORDANCE WITH SECTION 1.5,  $f'_c = 3,500$  P.S.I.

REINFORCING STEEL IN ACCORDANCE WITH SECTION 1.5, Grade 40 and Grade 60.

STRUCTURAL STEEL IN ACCORDANCE WITH SECTION 1.7, A.S.T.M. A-36, Fatigue stresses cycles based on Case II.

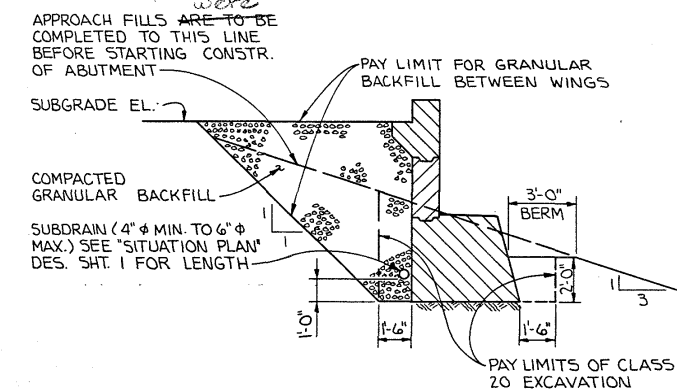
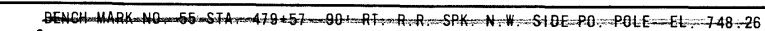
DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
STAKING DIAGRAM  
STATION: 478+73.99 (S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 3 OF 24 FILE NO. 25588 DESIGN NO. 1180

SCOTT COUNTY

PROJECT NUMBER

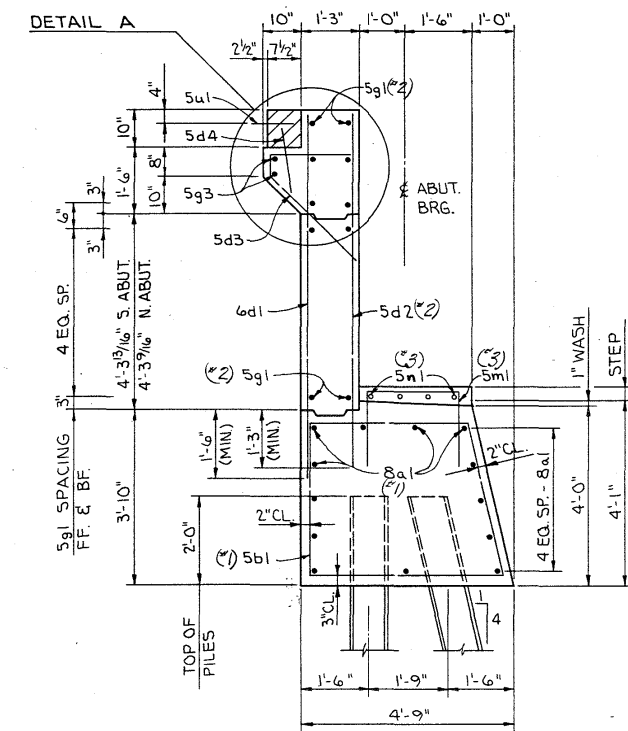
STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5		87	130



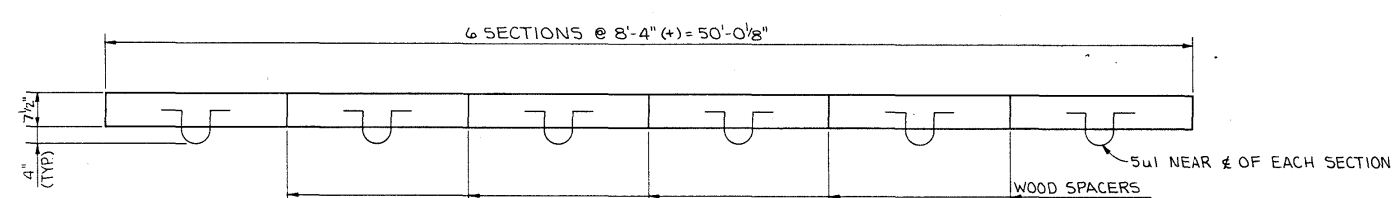


### BACKFILL DETAIL

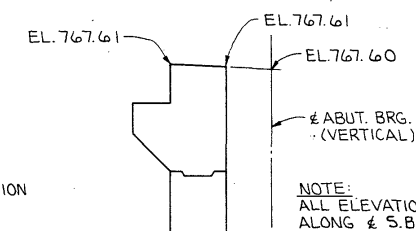
EPOXY COATING NOTE:  
 Certain reinforcing bars are to be epoxy coated. Parenthetical numbers associated with re-bar designations are reference keys to notes on Design Sheet 8.



SECTION THRU ABUTMENT



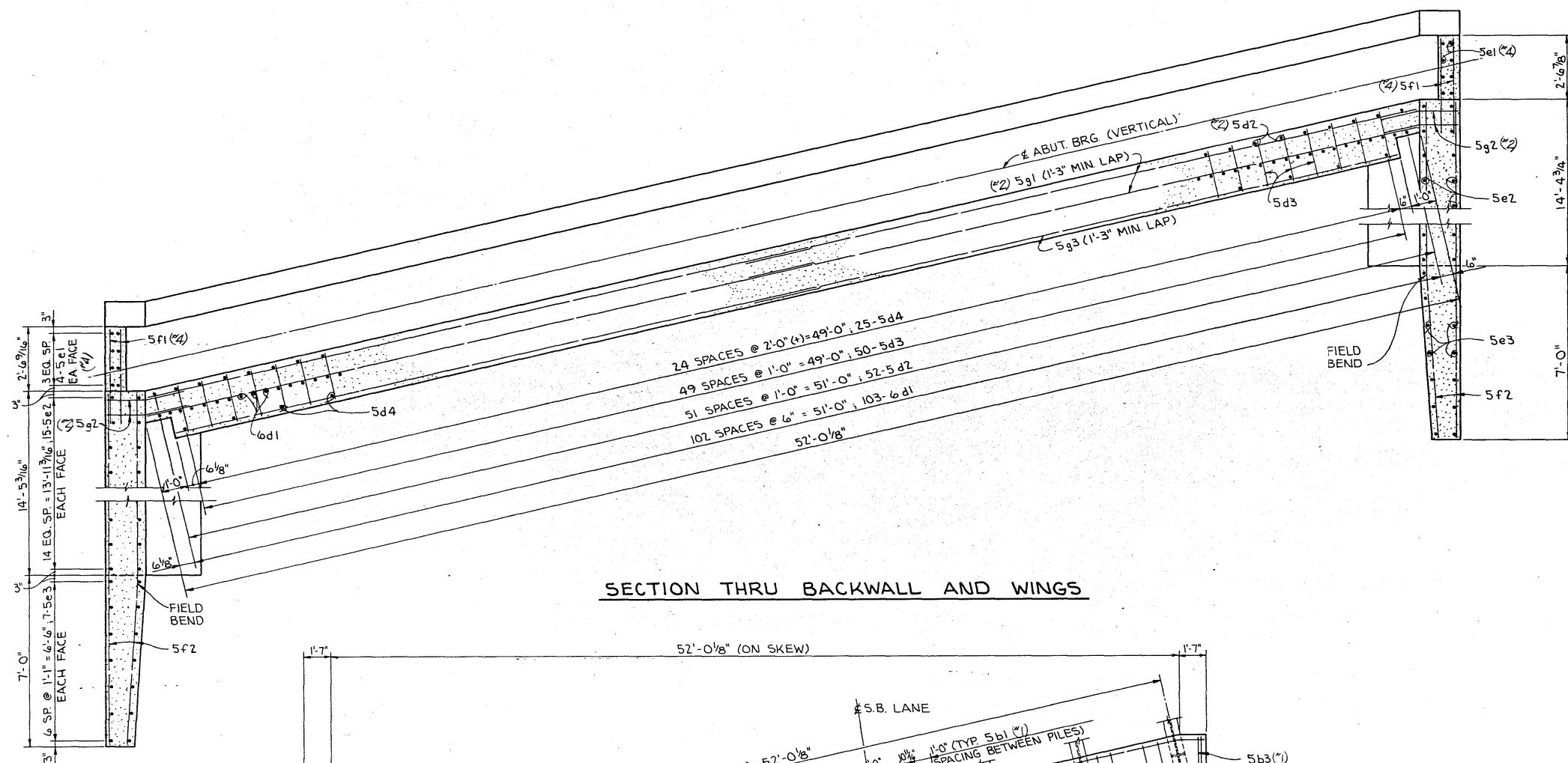
TEMPORARY PAVING BLOCK DETAIL



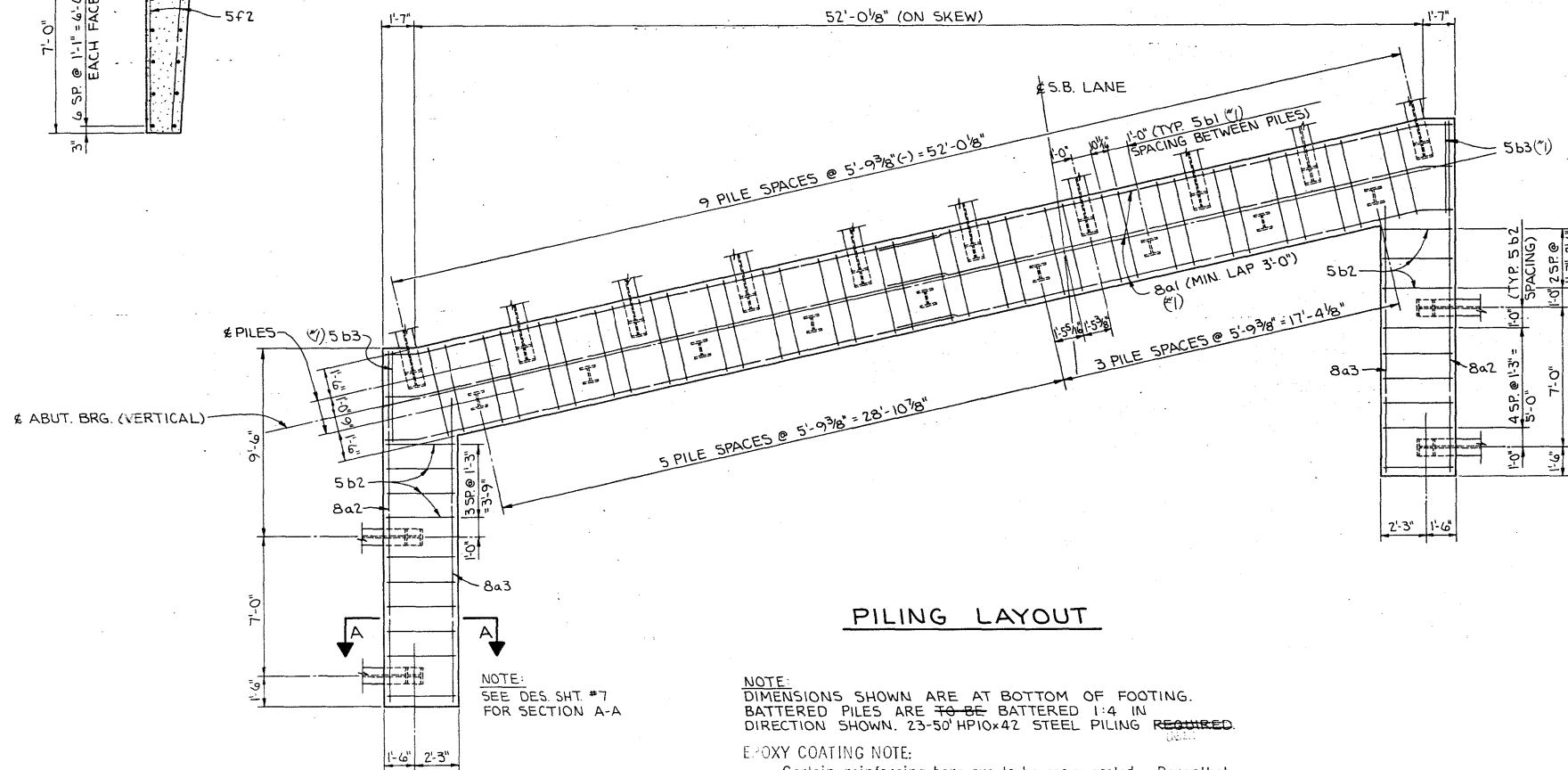
DETAIL A  
SOUTH ABUTMENT

DESIGN FOR 12°18'42.77" SKEW  
260' X VAR. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
SOUTH ABUTMENT  
STATION: 478+73.99(± S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16(MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 4 OF 24 FILE NO. 25588 DESIGN NO. 1180

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5		88	125



SECTION THRU BACKWALL AND WINGS



PILING LAYOUT

NOTE:  
SEE DES. SHT. #7  
FOR SECTION A-A

NOTE:  
DIMENSIONS SHOWN ARE AT BOTTOM OF FOOTING.  
BATTERED PILES ARE TO BE BATTERED 1:4 IN  
DIRECTION SHOWN. 23-50' HP10x42 STEEL PILING REQUIRED.  
EPOXY COATING NOTE:  
Certain reinforcing bars are to be epoxy coated. Parenthet-  
ical numbers associated with re-bar designations are reference  
keys to notes on Design Sheet 8.

ABUTMENT NOTES:  
ALL EXPOSED CORNERS OF 90° OR SHARPER <sup>WERE</sup> ARE TO BE FILLETED  
WITH A 3/4" DRESSED AND BEVELED STRIP.  
REINFORCING STEEL IS TO BE SECURELY WIRED IN PLACE BEFORE  
CONCRETE IS POURED.  
MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR  
REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED.  
OR SHOWN.  
ALL BACKFILL BEHIND ABUTMENTS BETWEEN WINGS IS TO BE  
GRANULAR BACKFILL. THE REMAINDER OF ABUTMENT EXCAVATION  
IS TO BE BACKFILLED WITH SOIL.  
THE MASKWALL IS TO BE POURED BEFORE SUPERSTRUCTURE SLAB <sup>WAS</sup>  
POURED.  
CONSTRUCTION JOINT KEYWAYS ARE TO BE FORMED WITH BEVELED  
2 X 6'S.  
BEAMS AND MASONRY PLATES ARE TO BE SET BEFORE BACKWALL <sup>WAS</sup>  
POURED.  
THE PORTION OF BACKWALL CONTAINING ABUTMENT ANCHORAGE  
OF THE EXPANSION DEVICE IS TO BE POURED AFTER BRIDGE  
FLOOR IS PLACED.  
BEFORE PAVING BLOCK IS POURED, <sup>WERE</sup> BEND DOWN DOWELS (5d4) Bent Down  
(STRUCTURAL GRADE) AND LINE PAVING NOTCH WITH TARPAPER  
TO PREVENT BOND. PAVING BLOCK IS TO BE REMOVED AND  
BARS STRAIGHTENED BEFORE PAVEMENT IS PLACED (By others).  
PILES ARE TO BE DRIVEN TO FULL PENETRATION IF PRACTICABLE,  
BUT TO NOT LESS THAN 30 TONS BEARING VALUE. THE NUMBER  
OF PILES IS BASED ON 30 TONS BEARING PER PILE.

CONCRETE PLACEMENT QUANTITIES		
LOCATION	S. ABUT.	N. ABUT.
FOOTING & STEPS	48.9	52.4
BACKWALL BELOW CONSTRUCTION JOINT	10.4	11.4
BACKWALL ABOVE CONSTRUCTION JOINT	7.3	8.1
EAST WING & WINGWALL	7.5	7.3
WEST WING & WINGWALL	7.4	7.3
* PAVING BLOCK	1.0	1.1
MASKWALL	.9	.9
TOTAL (CU YDS)	83.4	88.5

\* MAY BE CLASS "C" OR CLASS "B"

TOTAL ESTIMATED QUANTITIES				
ITEM	UNITS	S. ABUT.	N. ABUT.	TOTAL
STRUCTURAL CONCRETE, CLASS "C"	CU. YDS.	83.4	88.5	171.9
REINFORCING STEEL	LBS.	5,452	5,760	11,212
HP 10x42 STEEL	LIN. FT.	1,376.6	1,372.4	2,749.0
BEARING PILING	LIN. FT.	1,376.6	1,372.4	2,749.0
BRIDGE SEAT SEALER	SQ. FT.	234	255	489
SUBDRAIN	LIN. FT.	101	107	208
CLASS 20 EXCAVATION	CU. YDS.	107	113	220
GRANULAR BACKFILL	CU. YDS.	115	127	242
PREBORED HOLES	LIN. FT.	185	240	425
REINFORCING STEEL, EPOXY COATED	LBS.	3,022	3,283	6,305

\*\* 23 @ 50' (SOUTH ABUTMENT)  
25 @ 55' (NORTH ABUTMENT)

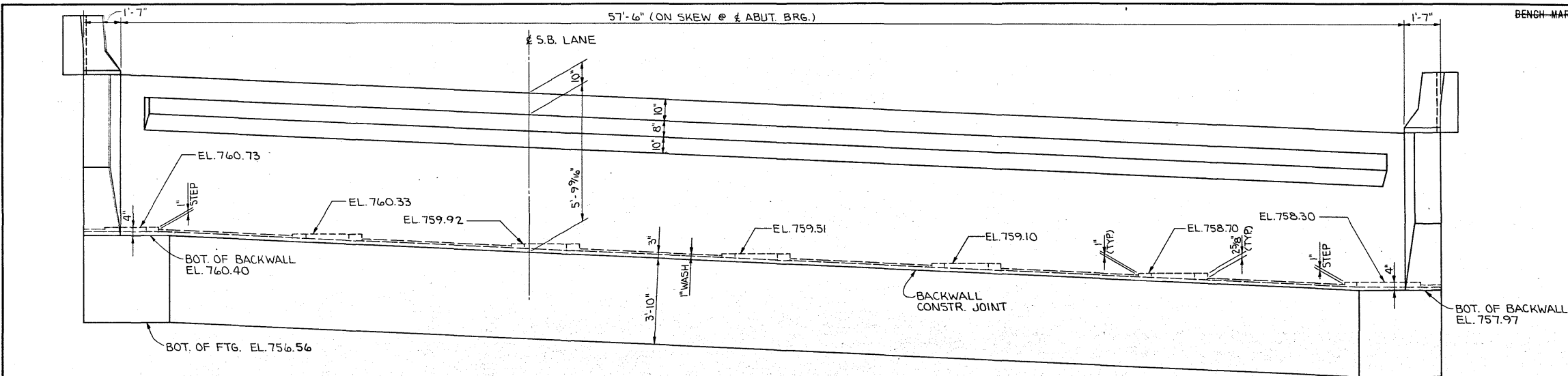
DESIGN FOR 12°18'42.77" SKEW  
260' X VAR. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
SOUTH ABUTMENT  
STATION: 478+73.99 (S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 5 OF 24 FILE NO. 25588 DESIGN NO. 1180

SCOTT COUNTY

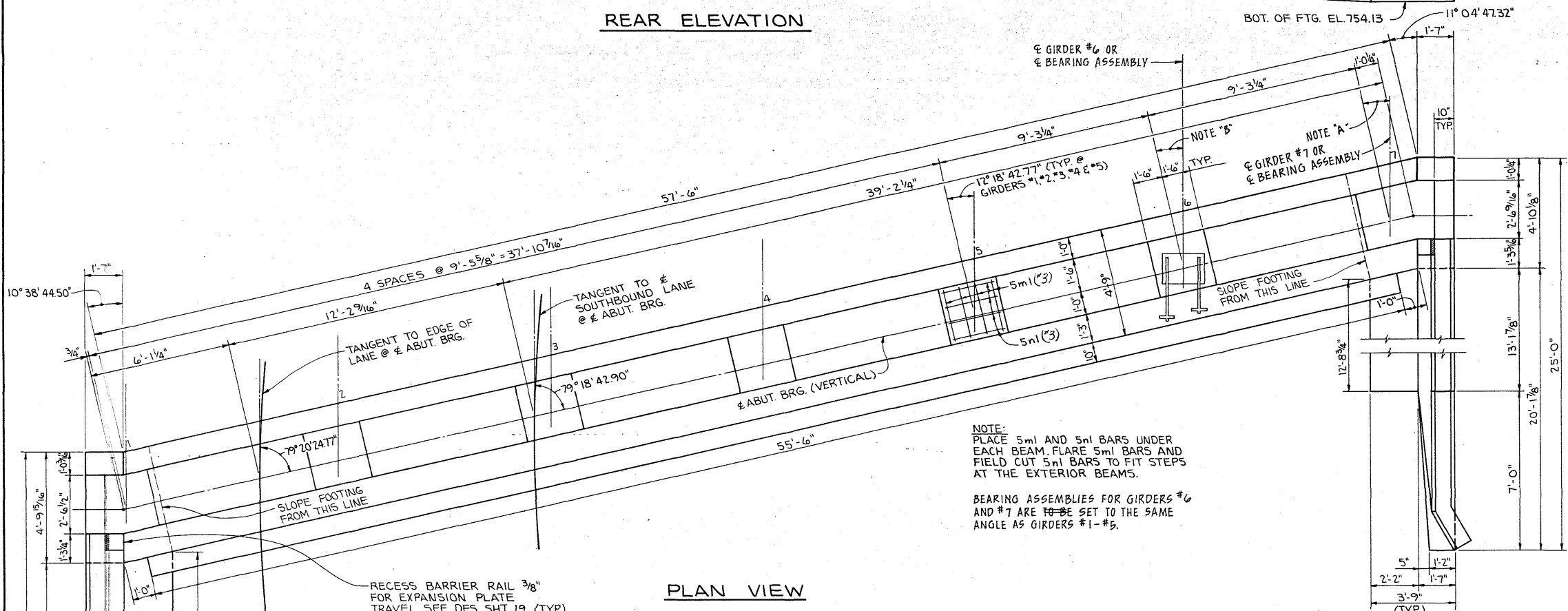
PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5		89	125

7087-129

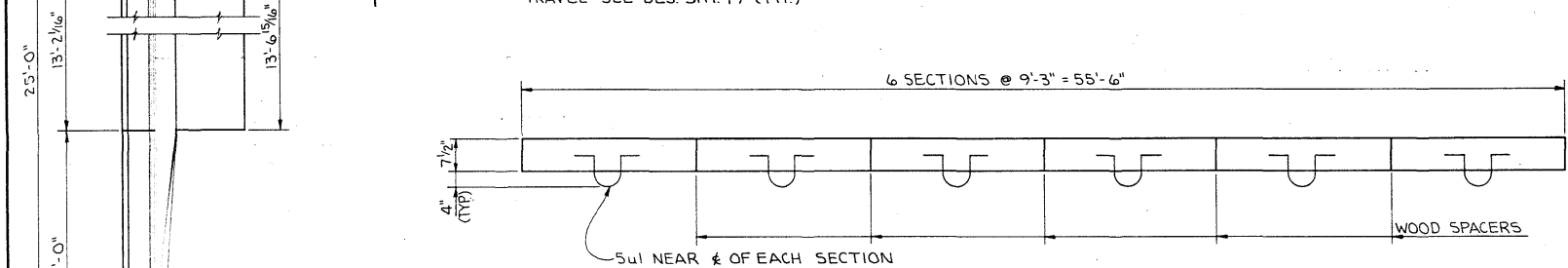




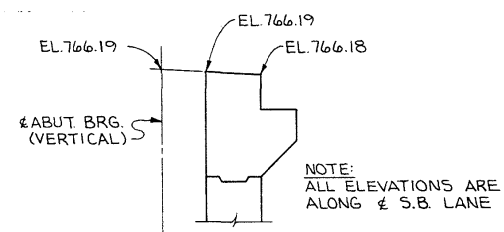
REAR ELEVATION



PLAN VIEW



TEMPORARY PAVING BLOCK DETAIL



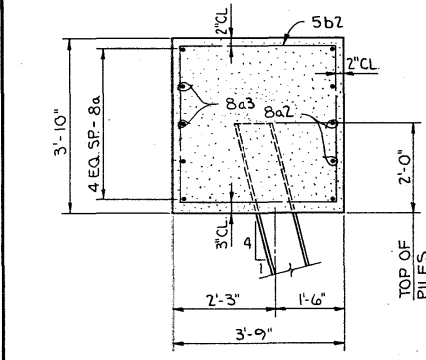
DETAIL A NORTH ABUTMENT

NOTE "A"  
12° 18' 42.77" TO 1/4 BEARING ASSEMBLY  
11° 04' 47.32" TO 1/4 GIRDER #7  
NOTE "B"  
12° 18' 42.77" TO 1/4 BEARING ASSEMBLY  
11° 41' 49.74" TO 1/4 GIRDER #6

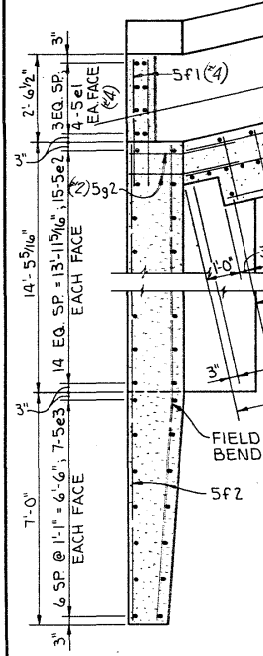
EPOXY COATING NOTE:  
Certain reinforcing bars are to be epoxy coated. Parenthetical numbers associated with re-bar designations are reference keys to notes on Design Sheet 8.

DESIGN FOR 12° 18' 42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
NORTH ABUTMENT  
STATION: 478+73.99 (@ S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 6 OF 24 FILE NO. 25588 DESIGN NO. 1180

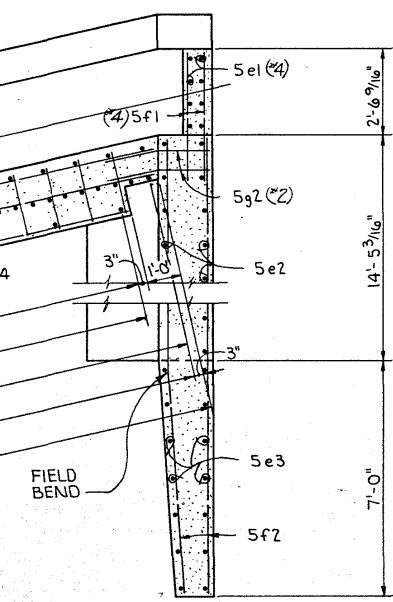
SCOTT COUNTY		PROJECT NUMBER		STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
				IOWA	5		90	155



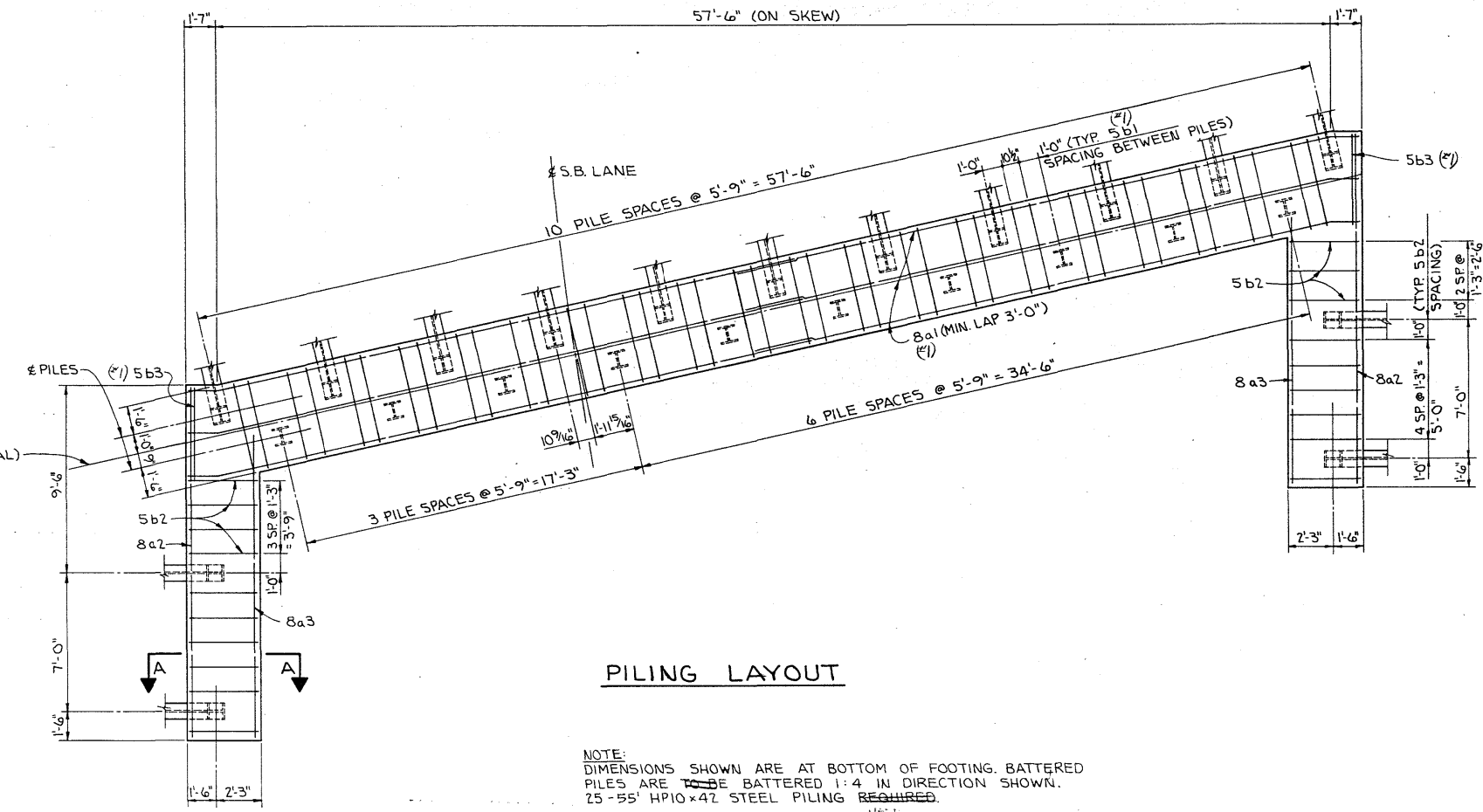
SECTION A-A



SECTION THRU BACKWALL AND WINGS



EPOXY COATING NOTE:  
Certain reinforcing bars are to be epoxy coated. Parenthetical numbers associated with re-bar designations are reference keys to notes on Design Sheet 8.



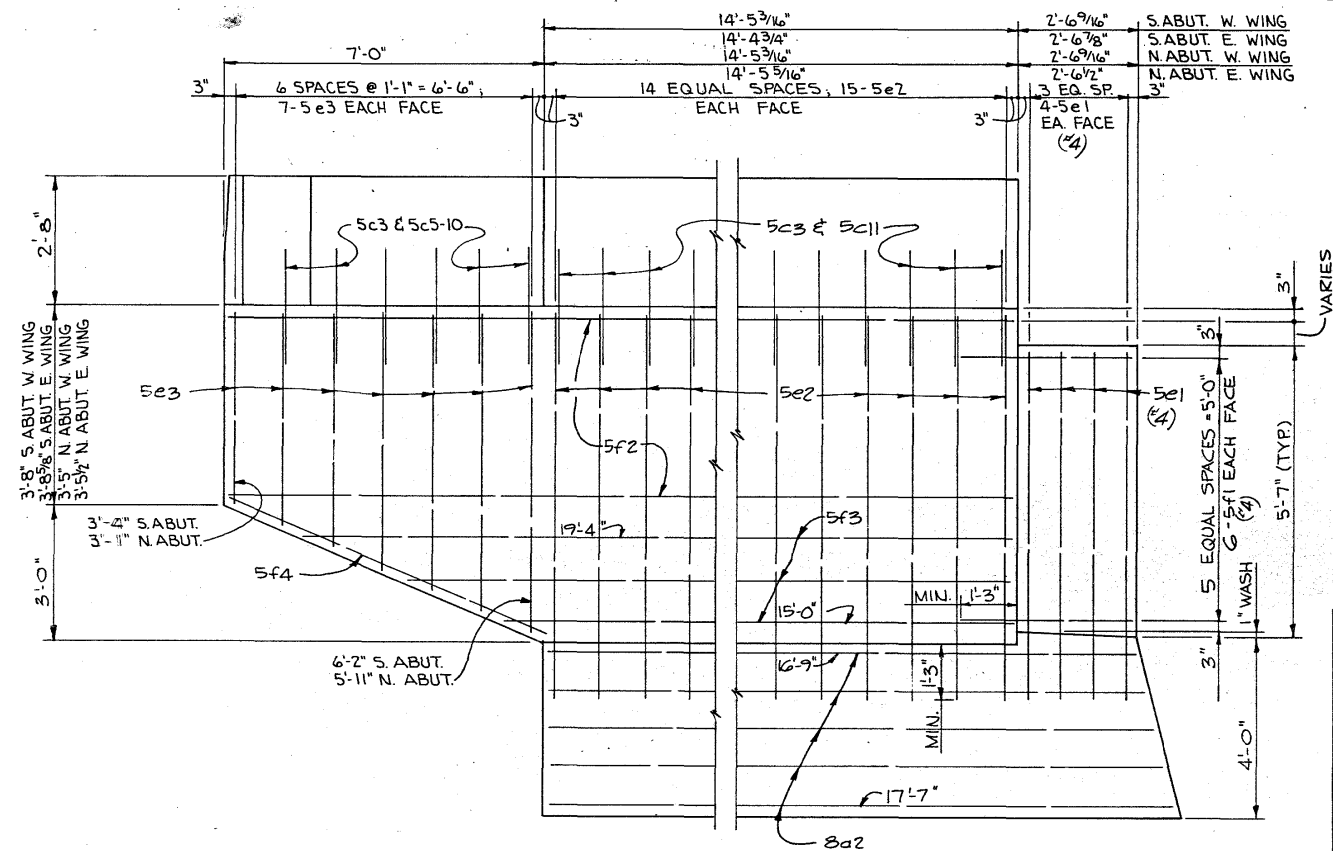
PILING LAYOUT

NOTE:  
DIMENSIONS SHOWN ARE AT BOTTOM OF FOOTING. BATTERED PILES ARE TO BE BATTERED 1:4 IN DIRECTION SHOWN.  
25-55' HPI0x42 STEEL PILING REQUIRED

DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
NORTH ABUTMENT  
STATION: 478+73.99(± S.B. LANE U.S. NO.561) JUNE, 1978  
STATION: 2478+38.16(MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 7 OF 24 FILE NO. 25588 DESIGN NO. 1180

SCOTT COUNTY		PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
			IOWA	5		41	125

7087-131



WING ELEVATIONS				
ELEV.	SOUTH ABUTMENT		NORTH ABUTMENT	
	W. WING	E. WING	W. WING	E. WING
A	766.19	768.39	764.50	766.98
B	766.27	768.47	764.41	766.89
C	766.30	768.51	764.37	766.85

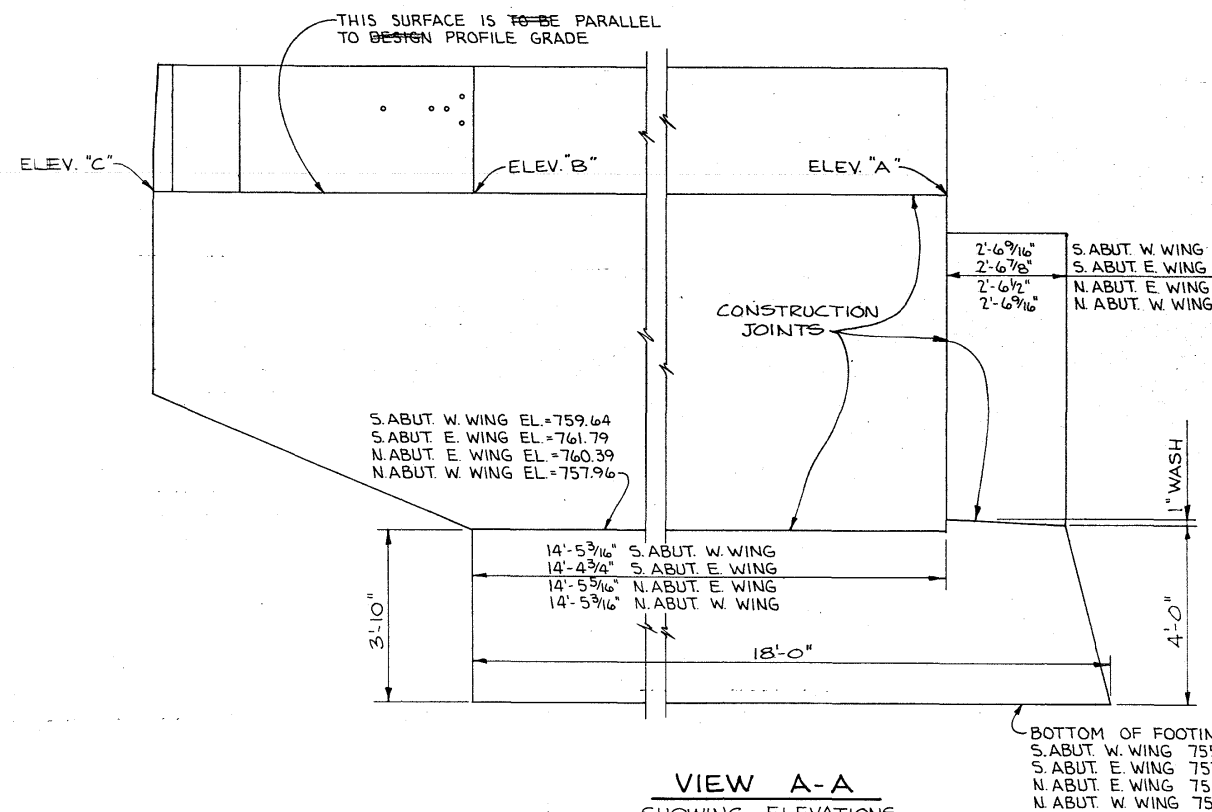
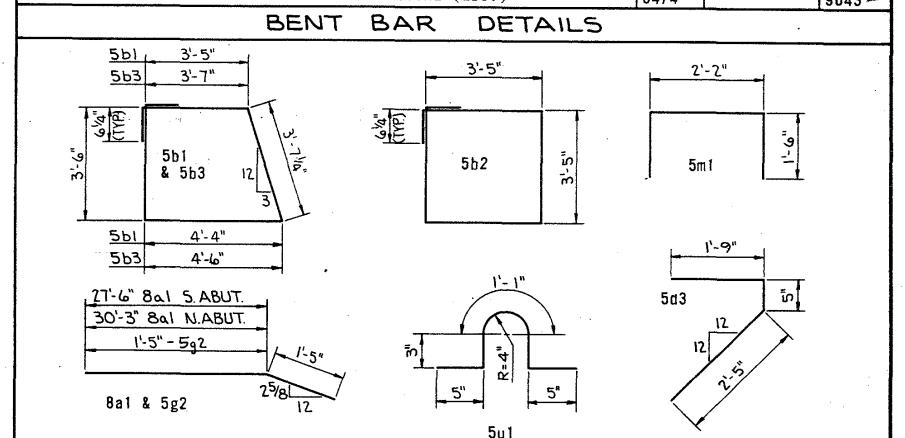
### EPOXY COATING NOTE

The following portions of each abutment shall have epoxy coated reinforcing steel:

- \* 1. Top surface under bridge seat and batter face of main footing.
- \* 2. Front face of backwall.
- \* 3. Steps under masonry plates.
- \* 4. Maskwalls.

Parentetical numbers associated with reinforcing bar designations are reference keys to notes above. See this Sheet for tabulation of bars to be epoxy coated.

Bar	Location	South	Abut	North	Abut
		N <sup>2</sup>	Weight	N <sup>2</sup>	Weight
8a1 (#1)	Boating, Longitudinal	14	1081	14	1184
5b1 (#1)	Boating, Hoops	36	573	40	636
5b3 (#1)	Boating, Hoops	2	32	2	32
5c12 (#2)	Backwall, FFV	52	420	57	461
5c14 (#4)	Maskwall, Vertical	16	115	16	115
5H (#4)	Maskwall, Horizontal	24	92	24	92
5g1 (#2)	Backwall, Horizontal	16	438	16	492
5g2 (#2)	Backwall, Dowels	16	47	16	47
5m1 (#3)	Beam Steps, Transverse	28	146	28	146
5m1 (#3)	Beam Steps, Longitudinal	28	78	28	78
	Total (Lbs)		3022		3283

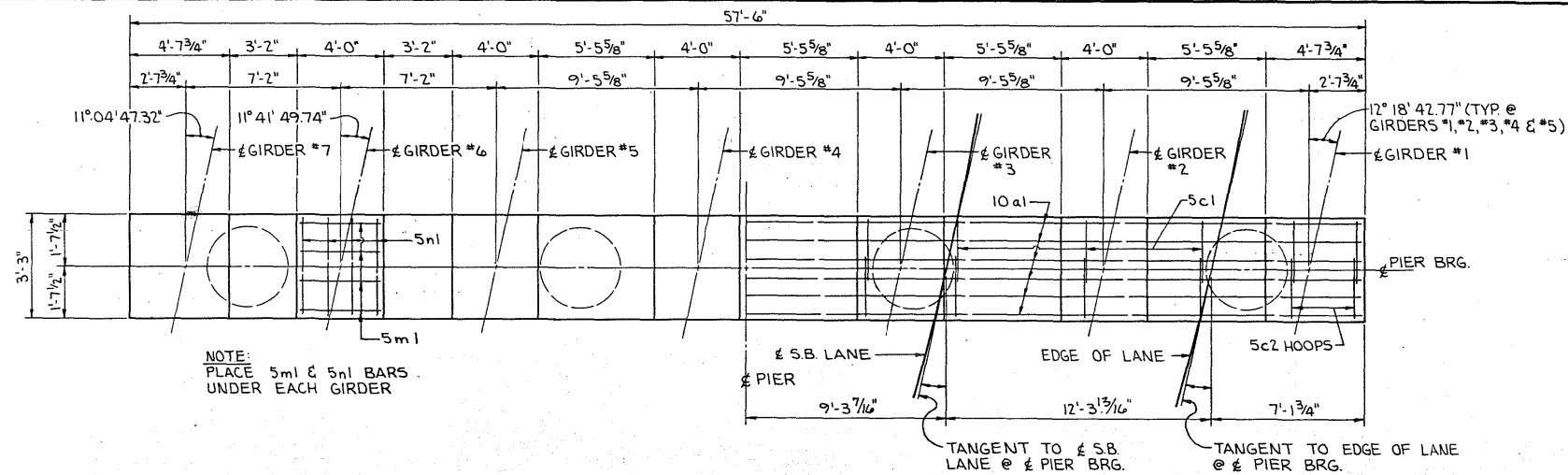
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NOTE: ALL DIMENSIONS ARE OUT TO OUT. RADIUS IS TO  $\phi$  BAR

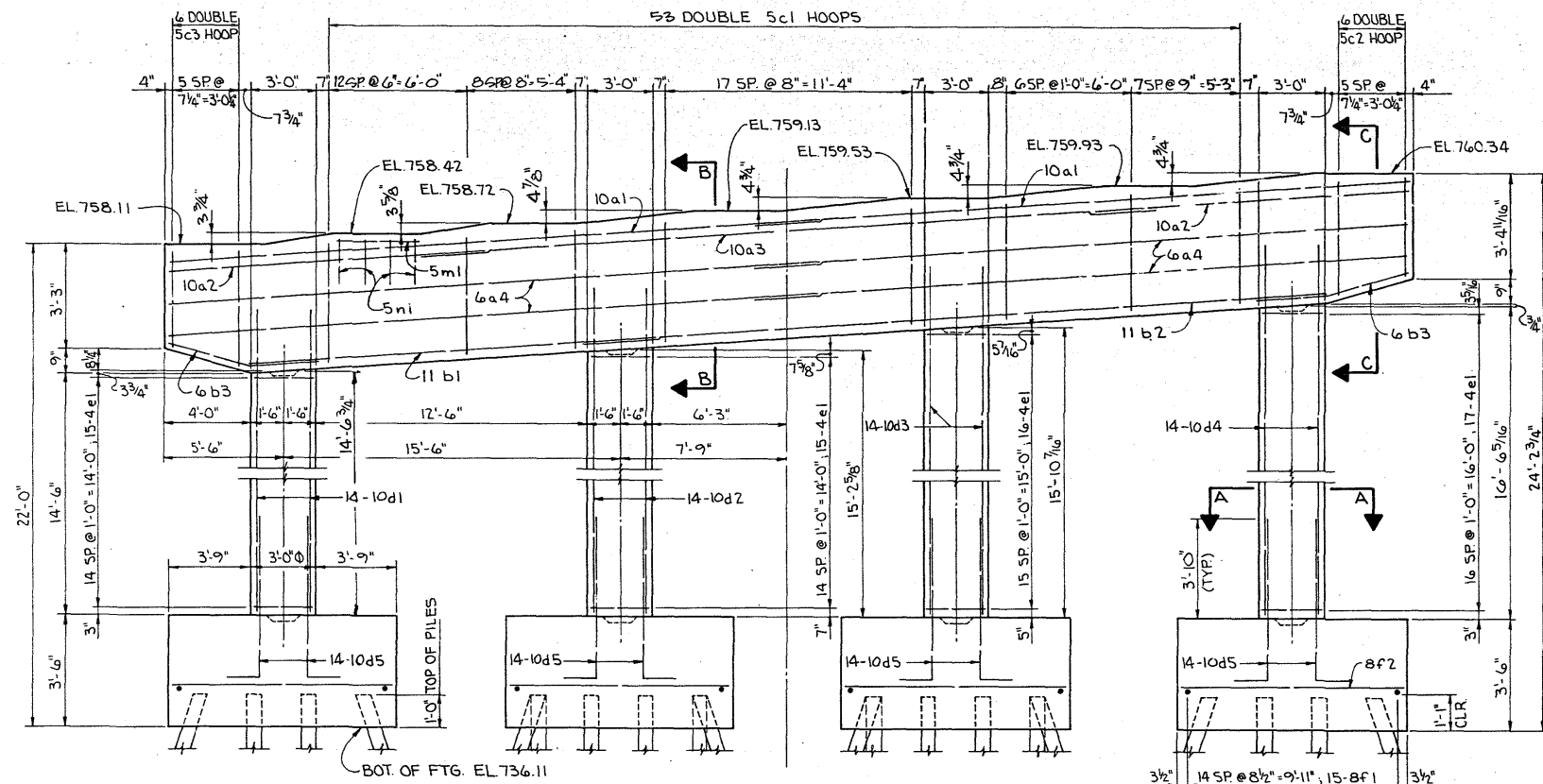
\* SEE "ABUTMENT NOTES" ON DES. SHT. #7

\*\*\* Includes both regular re-bars and epoxy coated re-bars. See tabulation of epoxy coated re-bars on this Sheet.

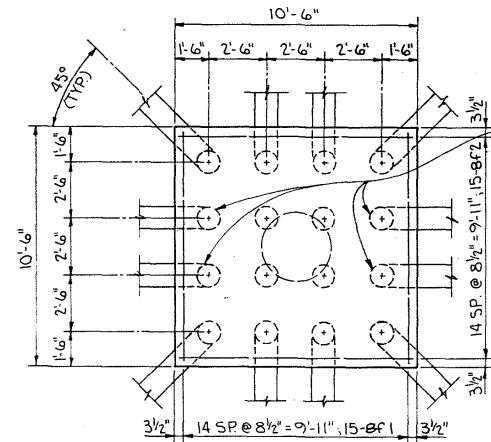
DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
ABUTMENT DETAILS  
STATION: 478+73.99(± S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16(MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 8 OF 24 FILE NO. 25588 DESIGN NO. 1180



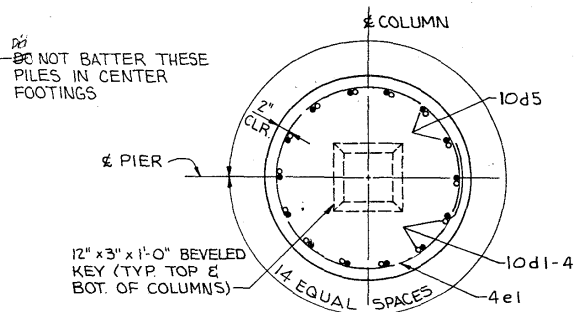
PIER CAP PLAN



PIER ELEVATION

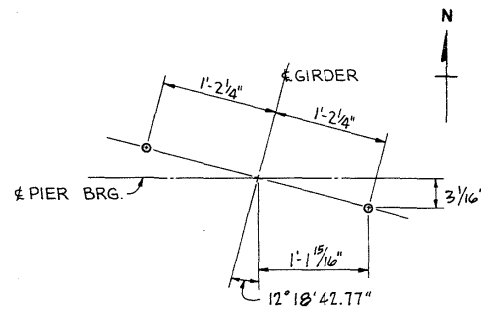


FOOTING PLAN



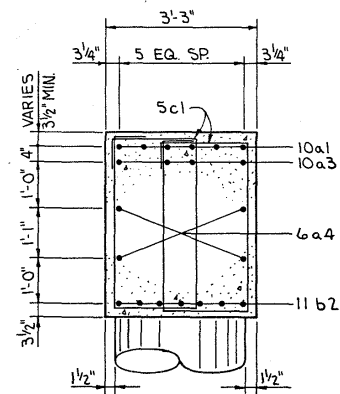
SECTION A-A

NOTE:  
ALL DIMENSIONS ARE AT BOTTOM OF FOOTING.  
BATTER PILES 1:4 IN DIRECTION INDICATED EXCEPT  
AS NOTED OR SHOWN. 16 CREOSOTED PILING  
REQUIRED FOR EACH FOOTING.

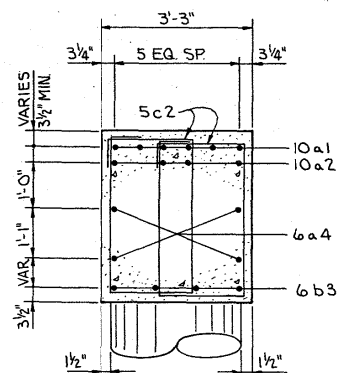


ANCHOR BOLT LOCATION

(EXPANSION)  
1 1/2" Ø x 2'-0" SWEDGE ANCHOR BOLTS  
PROJECTION = 5/2"



SECTION B-B



SECTION C-C

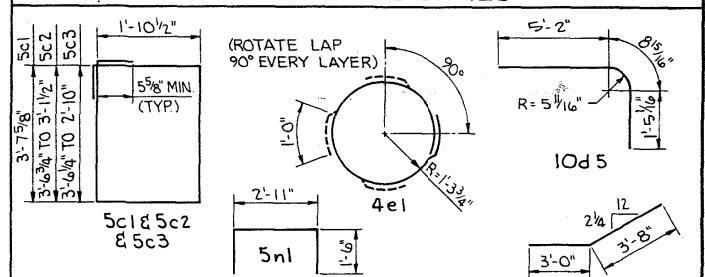
## PIER NOTES:

ALL EXPOSED CORNERS OF 90° OR SHARPER ~~ARE TO BE~~ <sup>were</sup> FILLETED WITH A 3/4" DRESSED AND BEVELED STRIP.  
MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS ~~10-16~~ 2" UNLESS OTHERWISE NOTED OR SHOWN.  
REINFORCING STEEL ~~IS TO BE~~ <sup>WAS</sup> SECURELY WIRED IN PLACE BEFORE CONCRETE ~~IS~~ PLACED.  
PILES ARE ~~TO BE~~ DRIVEN TO FULL PENETRATION IF PRACTICABLE, BUT TO NOT LESS THAN 20 TONS NOR MORE THAN 40 TONS BEARING VALUE.  
ANCHOR BOLTS ~~ARE TO BE~~ PRESET IN PIER CAP IN ACCORDANCE WITH STANDARD SPECIFICATIONS. WEIGHT OF ANCHOR BOLTS ~~IS~~ INCLUDED IN STRUCTURAL STEEL QUANTITY. REINFORCING ~~MAY BE~~ SHIFTED SLIGHTLY TO CLEAR ANCHOR BOLTS.  
BEARING ASSEMBLIES FOR GIRDERS #6 AND #7 ARE ~~TO BE~~ SET TO THE SAME ANGLE AS GIRDERS #1 — #5.

## REINFORCING BAR LIST - PIER #1

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
10a1	CAP LONGITUDINAL-TOP		12	30'-8"	1584
10a2	CAP LONGITUDINAL-TOP		8	14'-5"	496
10a3	CAP LONGITUDINAL-TOP		4	33'-7"	578
6a4	CAP LONGITUDINAL-SIDES		8	29'-4"	352
11b1	CAP LONGITUDINAL-BOTTOM		7	18'-6"	688
11b2	CAP LONGITUDINAL-BOTTOM		7	34'-0"	1264
6b3	CAP LONGITUDINAL-BOTTOM-CANTILEVER		8	6'-8"	80
5c1	CAP HOOPS		106	11'-5"	1262
5c2	CAP HOOPS-CANTILEVER		44	VARIES	135 (44)
5c3	CAP HOOPS-CANTILEVER		44	VARIES	131 (44)
10d1	COLUMN #1-VERTICAL		14	18'-0"	1084
10d2	COLUMN #2-VERTICAL		14	18'-8"	1125
10d3	COLUMN #3-VERTICAL		14	19'-5"	1170
10d4	COLUMN #4-VERTICAL		14	20'-1"	1210
10d5	COLUMN TO FOOTINGS-DOWELS		56	7'-4"	1767
4e1	COLUMN HOOPS		63	9'-3"	389
8f1	FOOTING-LONGITUDINAL		60	10'-2"	1629
8f1	FOOTING-TRANSVERSE		60	10'-2"	1629
5m1	STEPS-LONGITUDINAL		28	3'-8"	107
5n1	STEPS-TRANSVERSE		28	5'-9"	168
TOTAL (LBS)					16,848

## BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. RADII TO 1/2".

## CONCRETE PLACEMENT QUANTITIES - PIER #1

LOCATION	UNIT	QUANTITY
CAP	CU. YD.	27.8
COLUMN #1	CU. YD.	3.8
COLUMN #2	CU. YD.	4.0
COLUMN #3	CU. YD.	4.2
COLUMN #4	CU. YD.	4.3
FOOTINGS	CU. YD.	55.2
TOTAL (CU. YD.)		99.3

## TOTAL ESTIMATED QUANTITIES - PIER #1

ITEM	UNIT	QUANTITY
STRUCTURAL CONCRETE CLASS "C"	CU. YD.	99.3
REINFORCING STEEL	LBS.	16,848
CREOSOTED PILING	L.F.	1600
CLASS 20 EXCAVATION	CU. YD.	154

Revision 03-06-81:

Number and weight of 5c2 cap hoops corrected  
Number and weight of 5c3 cap hoops corrected

DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
PIER NO. 1  
STATION: 478+73.99 (S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 9 OF 24 FILE NO. 25588 DESIGN NO. 1180

SCOTT

COUNTY

PROJECT NUMBER

STATE

FED. ROAD

DIST. NO.

FISCAL

YEAR

SHEET

NO.

TOTAL

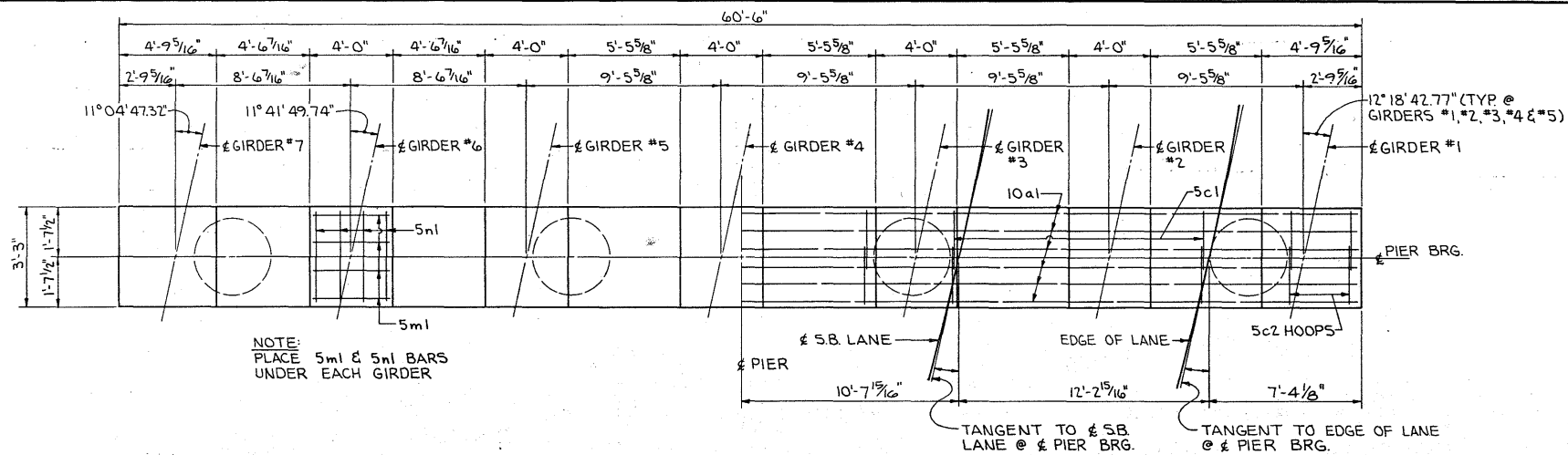
SHEETS

43

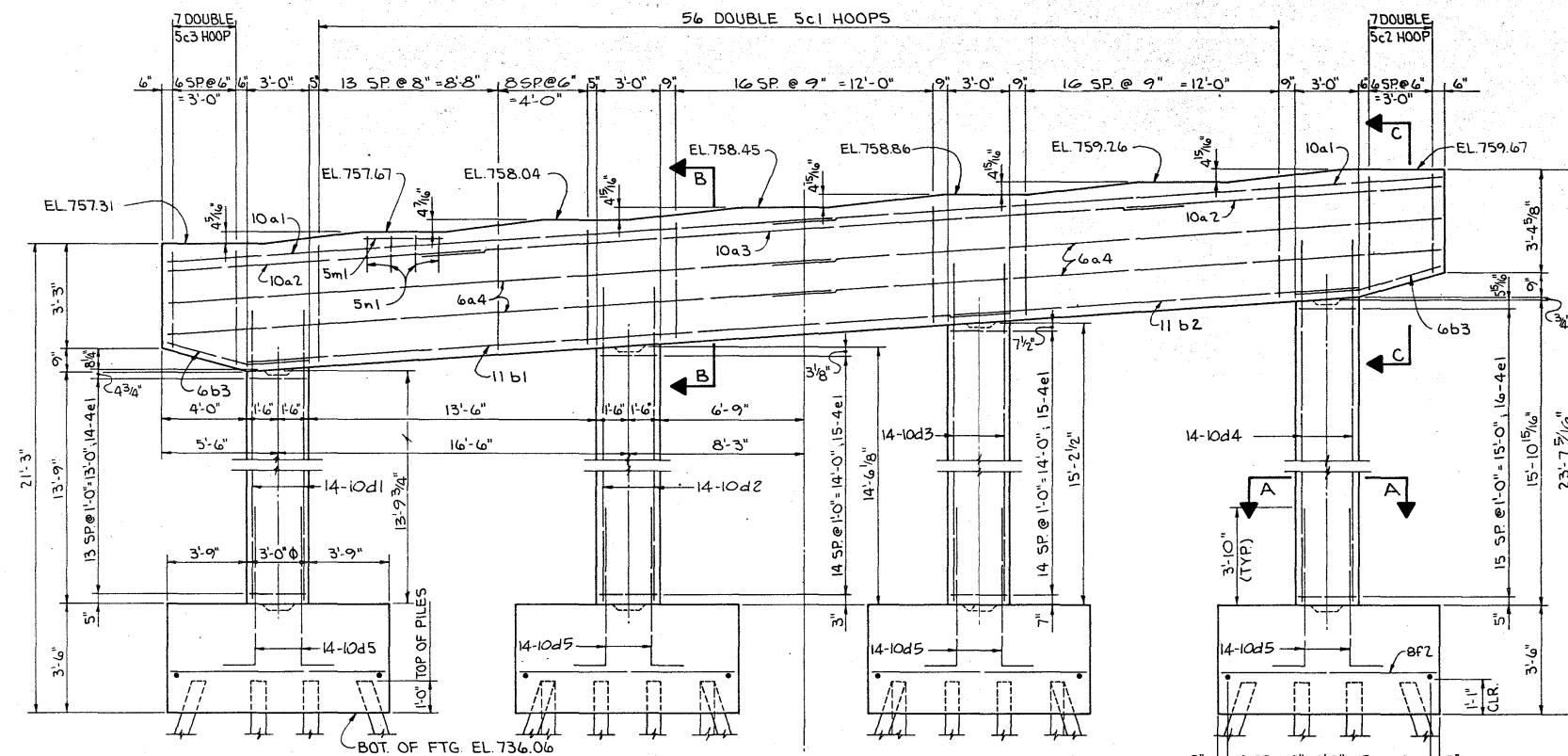
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7087-133

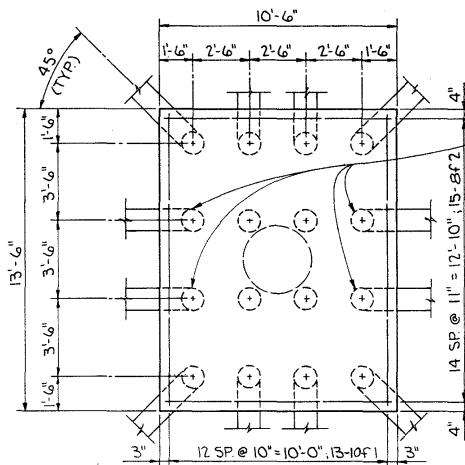




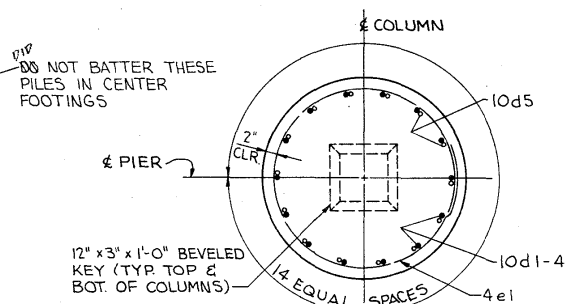
PIER CAP PLAN



PIER ELEVATION

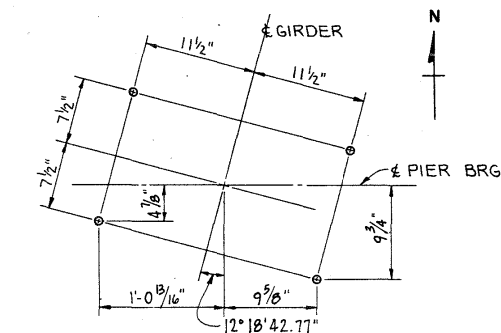


FOOTING PLAN



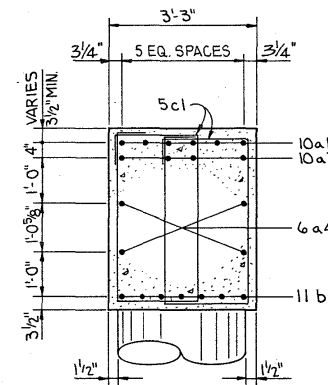
NOTE: ALL DIMENSIONS ARE AT BOTTOM OF FOOTING. BATTER PILES 1/4 IN DIRECTION INDICATED EXCEPT AS NOTED OR SHOWN. 16 CREOSOTED PILING REQUIRED FOR EACH FOOTING.

SECTION A-A

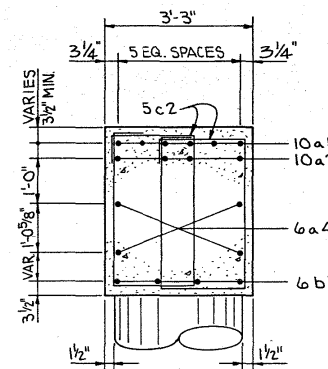


ANCHOR BOLT LOCATION

(FIXED)  
1 1/2" Ø x 2'-0" SWEDGE ANCHOR BOLTS  
PROJECTION = 5"



SECTION B-B



SECTION C-C

## PIER NOTES:

ALL EXPOSED CORNERS OF 90° OR SHARPER ARE TO BE FILLETED WITH A 3/4" DRESSED AND BEVELED STRIP. MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

REINFORCING STEEL IS TO BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED.

PILES ARE TO BE DRIVEN TO FULL PENETRATION IF PRACTICABLE, BUT TO NOT LESS THAN 20 TONS NOR MORE THAN 40 TONS BEARING VALUE.

ANCHOR BOLTS ARE TO BE PRESET IN PIER CAP IN ACCORDANCE WITH STANDARD SPECIFICATIONS. WEIGHT OF ANCHOR BOLTS IS INCLUDED IN STRUCTURAL STEEL QUANTITY. REINFORCING MAY BE SHIFTED SLIGHTLY TO CLEAR ANCHOR BOLTS.

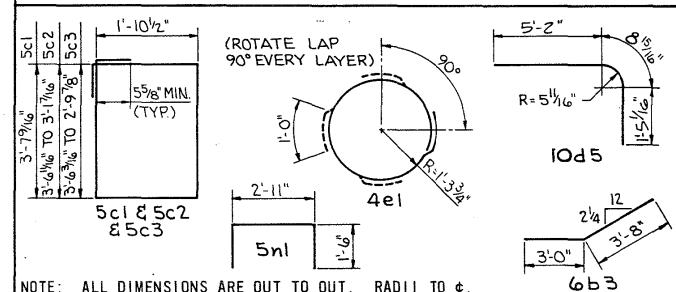
BEARING ASSEMBLIES FOR GIRDERS #6 AND #7 ARE TO BE SET TO THE SAME ANGLE AS GIRDERS #1 - #5.

## REINFORCING BAR LIST - PIER #2

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
10a1	CAP LONGITUDINAL-TOP		12	31'-5"	1622
10a2	CAP LONGITUDINAL-TOP		8	14'-11"	513
10a3	CAP LONGITUDINAL-TOP		4	35'-7"	612
6a4	CAP LONGITUDINAL-SIDES		8	30'-10"	370
11b1	CAP LONGITUDINAL-BOTTOM		7	36'-0"	1339
11b2	CAP LONGITUDINAL-BOTTOM		7	19'-6"	725
6b3	CAP LONGITUDINAL-BOTTOM-CANTILEVER		8	6'-8"	80
5c1	CAP HOOPS		112	11'-5"	1334
5c2	CAP HOOPS-CANTILEVER		14	VARIES	158
5c3	CAP HOOPS-CANTILEVER		14	VARIES	153
10d1	COLUMN #1-VERTICAL		14	17'-3"	1039
10d2	COLUMN #2-VERTICAL		14	18'-0"	1084
10d3	COLUMN #3-VERTICAL		14	18'-9"	1130
10d4	COLUMN #4-VERTICAL		14	19'-5"	1170
10d5	COLUMN TO FOOTINGS-DOWELS		56	7'-4"	1767
4e1	COLUMN HOOPS		60	9'-3"	365
10f1	FOOTING-LONGITUDINAL		52	13'-2"	2946
8f2	FOOTING-TRANSVERSE		60	10'-2"	1629
5m1	STEPS-LONGITUDINAL		28	3'-8"	107
5n1	STEPS-TRANSVERSE		28	5'-9"	168

TOTAL (LBS.) 18,316

## BENT BAR DETAILS



## CONCRETE PLACEMENT QUANTITIES - PIER #2

LOCATION	UNIT	QUANTITY
CAP	CU. YD.	29.3
COLUMN #1	CU. YD.	3.6
COLUMN #2	CU. YD.	3.8
COLUMN #3	CU. YD.	4.0
COLUMN #4	CU. YD.	4.2
FOOTINGS	CU. YD.	71.6
4 @ 17.9 =		
TOTAL (CU. YD.)		116.5

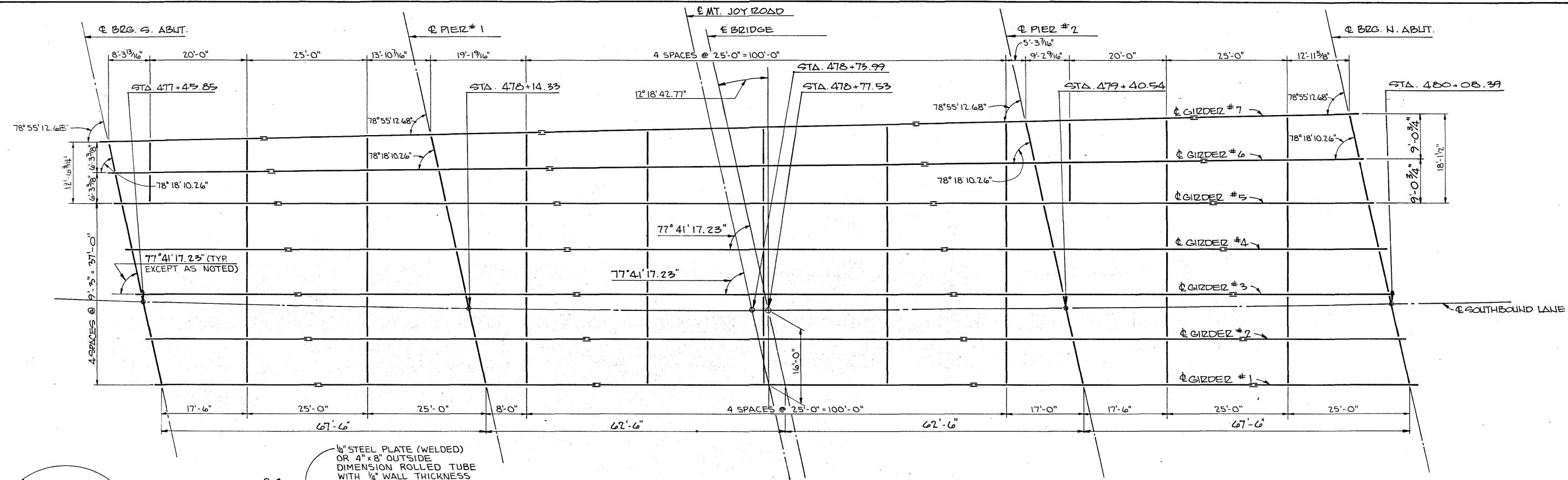
## TOTAL ESTIMATED QUANTITIES - PIER #2

ITEM	UNIT	QUANTITY
STRUCTURAL CONCRETE CLASS "C"	CU. YD.	116.5
REINFORCING STEEL	LBS.	18,316
CREOSOTED PILING	L.F.	1600
CLASS 20 EXCAVATION	CU. YD.	183

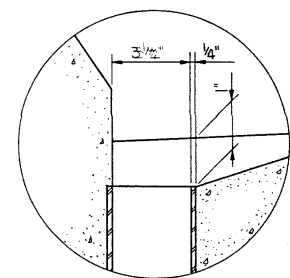
DESIGN FOR 12'18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
PIER NO. 2  
STATION: 478+73.99 (S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 10 OF 24 FILE NO. 25588 DESIGN NO. 1180

SCOTT COUNTY

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5		44	185



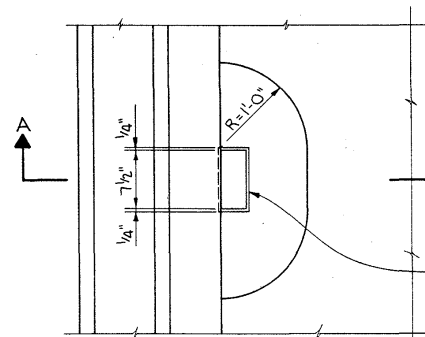
STRUCTURAL STEEL LAYOUT



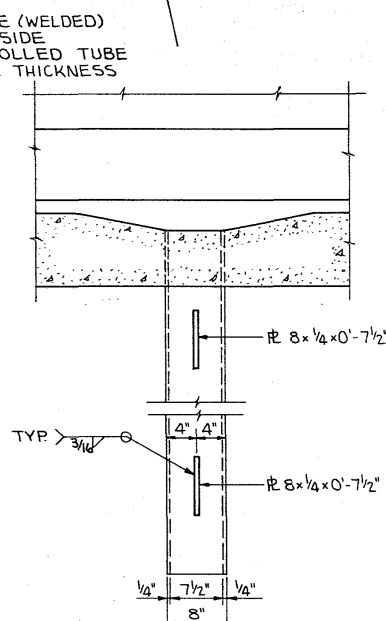
2 1/2" x 1 1/2" SLOTTED HOLES  
VERTICAL ON 5" LEG OF L  
AND HORIZONTAL ON 1/4" R  
1 1/2" HOLES IN OTHER LEG ON  
L FOR 3/8" BOLTS

L 5 x 3/4 x 0'-8"  
(BOLTED TO GIRDER)

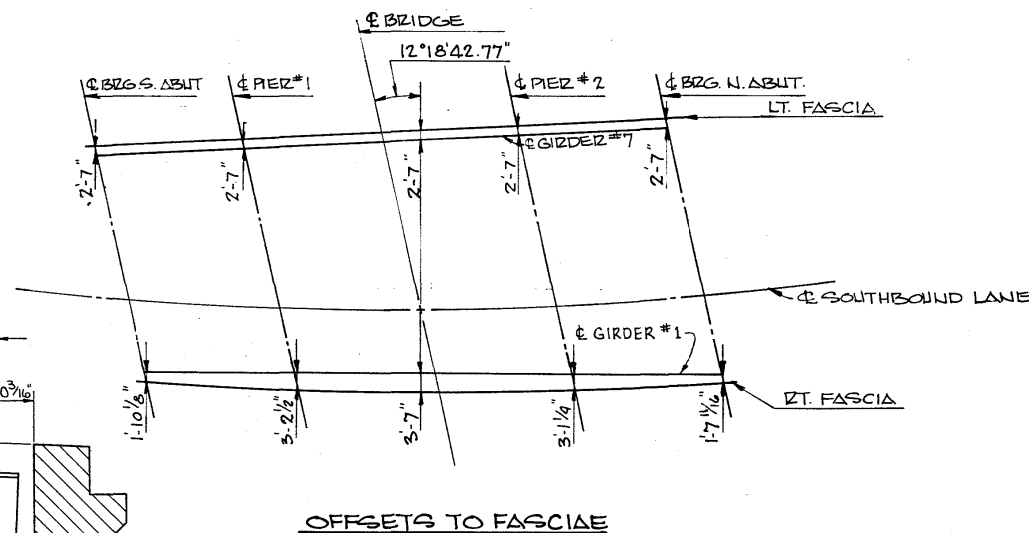
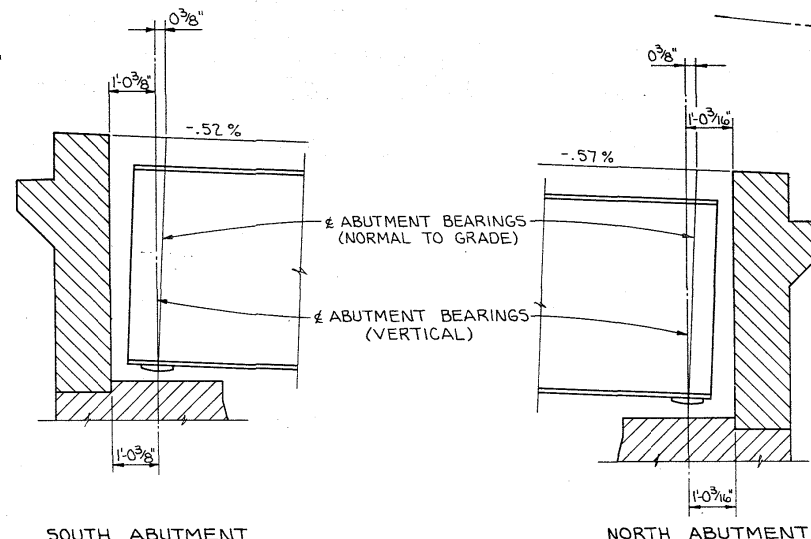
SECTION A-A



DRAIN DETAILS



NOTE:  
DRAINS ARE TO BE PAINTED.  
4 DRAINS REQUIRED, SEE DES.  
SHT. #1 FOR LOCATION. WEIGHT =  
135 LBS. PER DRAIN. COST OF  
DRAINS TO BE INCLUDED IN PRICE  
BID FOR STRUCTURAL STEEL.



OFFSETS TO FASCIAE

DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS      125'-0" INTERIOR SPAN  
SUPERSTRUCTURE DETAILS  
STATION: 478+73.99 (CL S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 11 OF 24 FILE NO. 25588 DESIGN NO. 1180

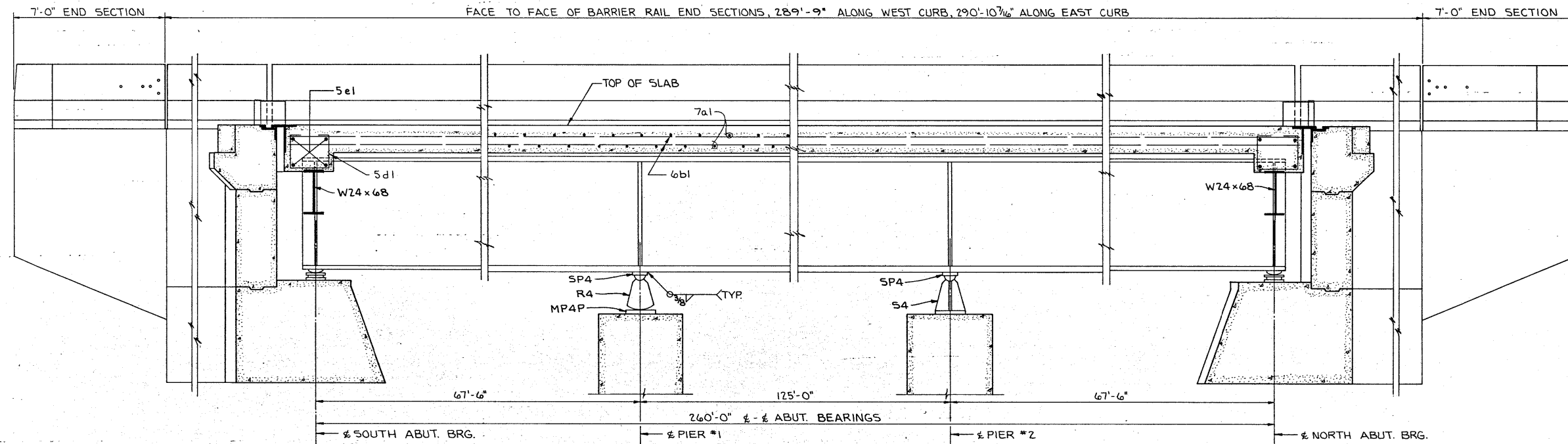
SCOTT COUNTY

PROJECT NUMBER

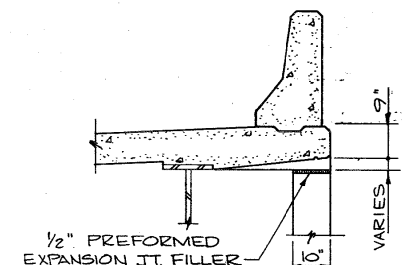
STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5		45	725

7067-135

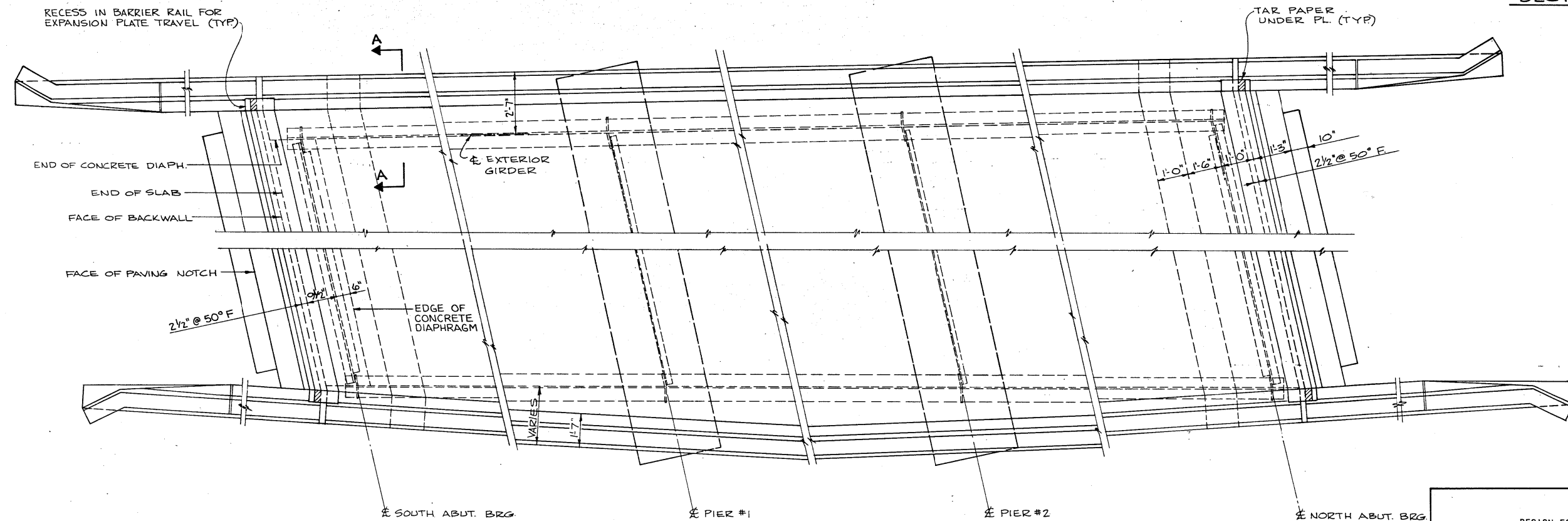




PART LONGITUDINAL SECTION NEAR EXTERIOR GIRDER



SECTION A-A



PART PLAN

DESIGN FOR 12° 18' 42.77" SKEW  
 260' X VARI. WELDED PLATE GIRDER BRIDGE  
 67'-6" END SPANS 125'-0" INTERIOR SPAN  
 SUPERSTRUCTURE DETAILS JUNE, 1978  
 STATION: 478+73.99 (± S.B. LANE US NO. 561)  
 STATION: 2478+38.16 (± MT. JOY ROAD & S.B. LANE)  
 SCOTT COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
 DESIGN SHEET NO. 13 OF 24 FILE NO. 25588 DESIGN NO. 1180

SCOTT COUNTY

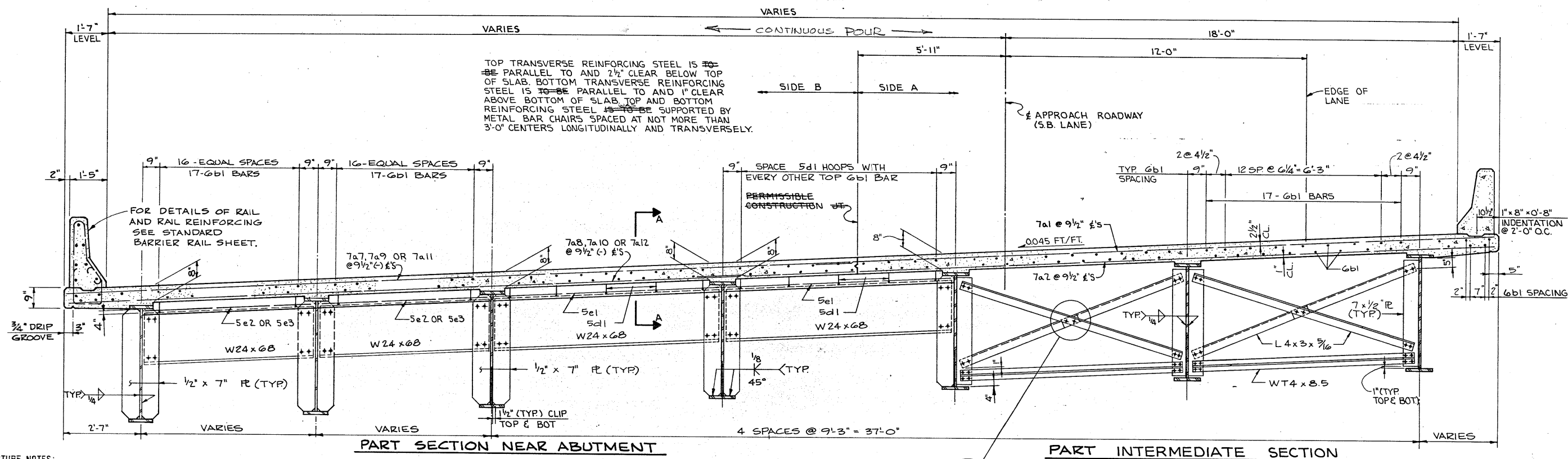
PROJECT NUMBER

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5		44	125

130

7087-137





SUPERSTRUCTURE NOTES:

THIS BRIDGE IS DESIGNED FOR HS20-44 LOADING, PLUS 20 LB. PER SQUARE FOOT OF ROADWAY FOR FUTURE WEARING SURFACE.

MINIMUM CLEAR DISTANCE FROM EDGE OF BAR TO FACE OF CONCRETE IS ~~10~~  
~~BE~~ 2" UNLESS OTHERWISE NOTED OR SHOWN.

THE FLOOR SLAB AS SHOWN INCLUDES 1/2" OF WEARING SURFACE.

ALL FIELD CONNECTIONS ~~ARE TO BE~~ BOLTED USING "HIGH TENSILE STRENGTH BOLTS" UNLESS OTHERWISE NOTED, ALL OPEN HOLES ARE ~~TO BE~~ 15/16"  $\phi$  AND ALL BOLTS ARE TO BE 7/8"  $\phi$ .

BOTTOM FLANGES ARE ~~TO BE~~ PERPENDICULAR TO WEBS AT THE REACTION JOINTS.

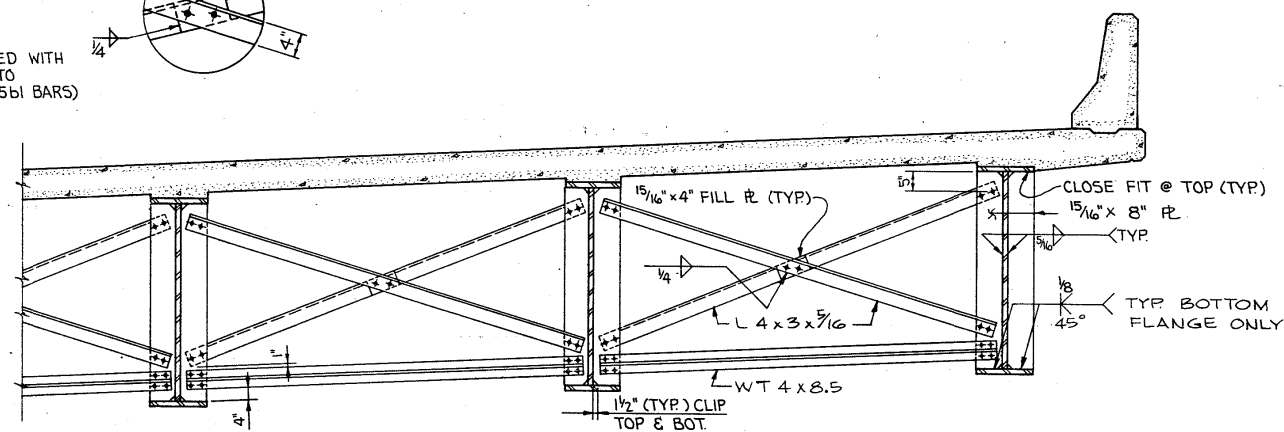
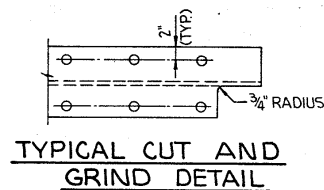
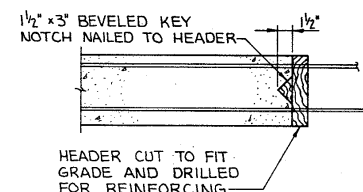
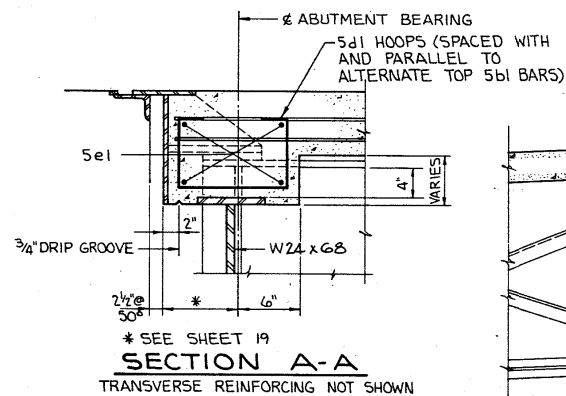
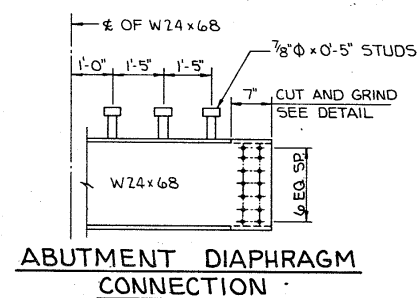
ALL PAINT ~~IS TO BE~~ OMITTED ON TOPS OF TOP FLANGES AND ON OTHER STEEL SURFACES IN CONTACT WITH CONCRETE. PARTS INACCESSIBLE AFTER ERECTION ~~ARE TO BE~~ GIVEN THE FULL PAINT SYSTEM IN THE SHOP.

FORMS FOR THE SLAB AND BARRIER RAIL ~~ARE TO BE~~ SUPPORTED BY THE GIRDERS.

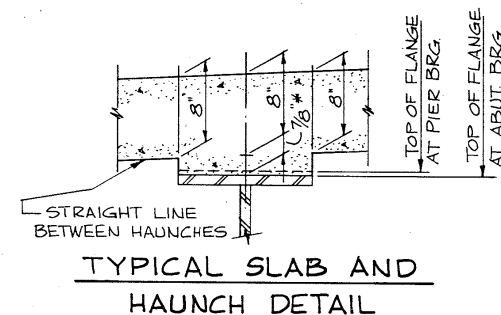
FILL THICKNESS SHOWN ON PLANS ARE BASED ON NOMINAL BEAM OR GIRDER DIMENSIONS. THESE THICKNESSES ARE TO BE VERIFIED OR ADJUSTED DURING FABRICATION TO SECURE A CLOSE FIT. EACH FILL PLATE SHALL FIT TO THE NEAREST 1/16" IN THICKNESS AND SINGLE PLATES ARE REQUIRED AT ANY FILL LOCATION. BEAMS OR GIRDERS ARE TO BE TRULY SQUARE AT SPLICE POINTS WITH FLANGES PERPENDICULAR TO WEBS.

THE DESIGN DRAWINGS INDICATE AWS PREQUALIFIED WELDED JOINTS, AND UNLESS OTHERWISE NOTED THE DESIGN JOINT DETAILS ARE FOR MANUAL SHIELDED METAL-ARC WELDING ALTERNATE JOINT DETAILS MAY BE SUBMITTED FOR APPROVAL. MAGNETIC PARTICLE INSPECTION OF WELDS, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, ~~WILL BE~~ REQUIRED FOR THE WEB TO FLANGE WELDS AND THE BEARING STIFFENER WELDS OF THE GIRDERS.

STUD SHEAR CONNECTORS ~~ARE TO BE WELDED IN THE SHOP OR~~ IN THE FIELD AT THE LOCATIONS SHOWN ON THE DESIGN PLANS OR THE APPROVED SHOP DRAWINGS.



\* THE HAUNCH DIMENSION SHOWN IS THE NOMINAL HAUNCH DIMENSION NEAR THE ABUTMENT BEARINGS. FOR THE SLAB THICKNESS OVER THE BEAM AT ANY LOCATION THE NOMINAL HAUNCH DIMENSION IS TO BE DECREASED BY THE ADDITIONAL FLANGE THICKNESS AT THAT POINT AND INCREASED BY THE AMOUNT INDICATED ON THE "HAUNCH THICKENING DIAGRAM" SHOWN ON SHEET 15, AND MAY BE INCREASED OR DECREASED TO COMPENSATE FOR CONSTRUCTION INACCURACIES. THE MAXIMUM HAUNCH ALLOWED IS 2 INCHES AND THE MINIMUM HAUNCH ALLOWED IS 0 INCHES.



FAYING SURFACES AT DIAPHRAGM CONNECTIONS ~~ARE TO BE~~ GIVEN THE SHOP COAT OF PAINT.

THE SLAB TRANSVERSE AND LONGITUDINAL REINFORCING, 7a AND 6b BARS, ARE TO BE GRADE 60 REINFORCING. ALL OTHER REINFORCING MAY BE GRADE 40.

THE TOP LAYER OF SLAB TRANSVERSE AND LONGITUDINAL REINFORCING, 7a AND 6b BARS ARE TO BE EPOXY COATED. THE EPOXY COATING ~~SHALL BE~~ IN ACCORDANCE WITH STANDARD SPECIFICATIONS OF THE IOWA D.O.T., SERIES OF 1977.

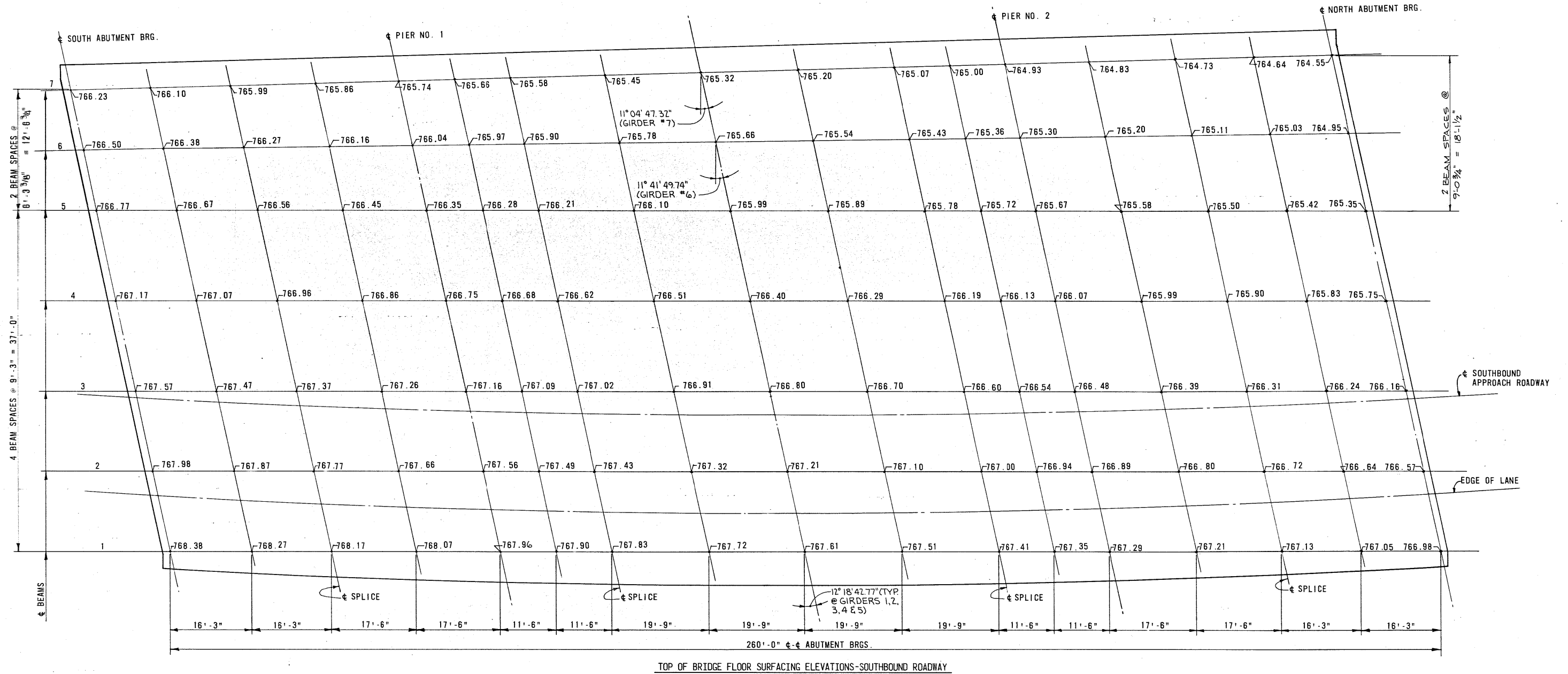
TRANSVERSE SLAB REINFORCING MAY BE SPLICED WITH ONE LAP LOCATED AS FOLLOWS:

TOP BARS - LAP MIDWAY BETWEEN GIRDERS  
BOTTOM BARS - LAP OVER GIRDERS

PAYMENT FOR REINFORCING BARS SHALL BE BASED ON NO SPLICES, AND NO ALLOWANCE SHALL BE MADE FOR THE ADDITIONAL LENGTH OF BAR REQUIRED FOR THE USE OF SPLICES.

DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS      125'-0" INTERIOR SPAN  
SUPERSTRUCTURE DETAILS  
STATION: 478+73.99(← S.B. LANE US NO. 561) JUNE, 1978  
STATION: 2478+38.16(MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 14 OF 24 FILE NO. 25588 DESIGN NO. 1180

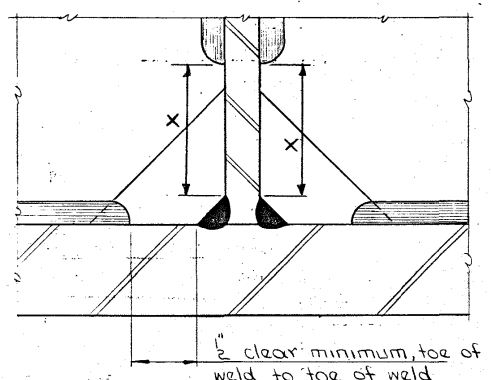
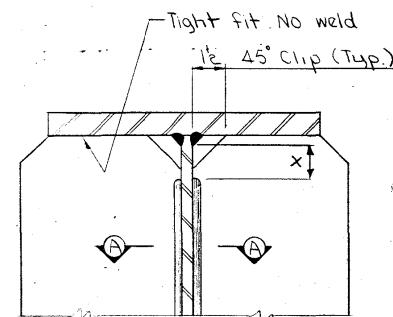




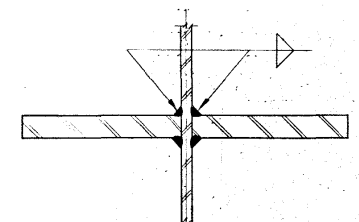
DESIGN FOR 12°18'42.77" SKEW  
 260' X VARI. WELDED PLATE GIRDER BRIDGE  
 67'-6" END SPAN 125'-0" INTERIOR SPAN  
 SUPERSTRUCTURE DETAILS  
 STATION: 478+73.99(± S.B. LANE U.S. NO.561) JUNE, 1978  
 STATION: 2478+38.16(MT. JOY ROAD & S.B. LANE)  
 SCOTT COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
 DESIGN SHEET NO. 16 OF 24 FILE NO. 25588 DESIGN NO. 1180



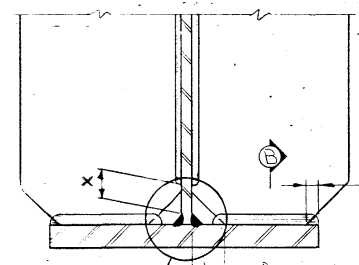




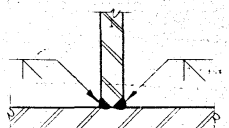
DETAIL A



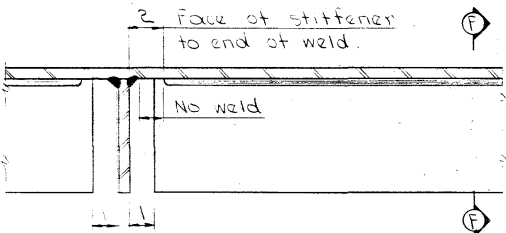
SECTION A-A



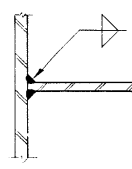
BEARING STIFFENER



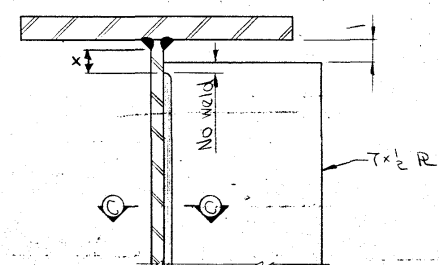
SECTION B-B



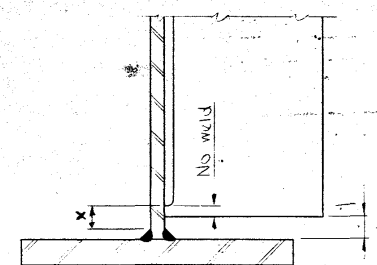
LONGITUDINAL STIFFENER



SECTION F-F

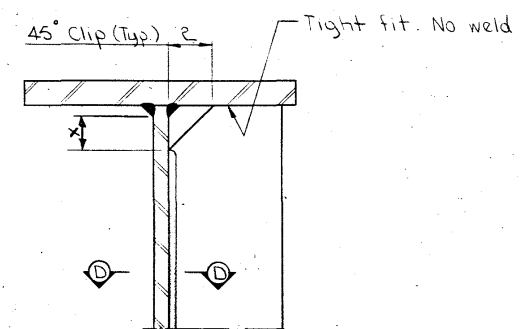


SECTION C-C

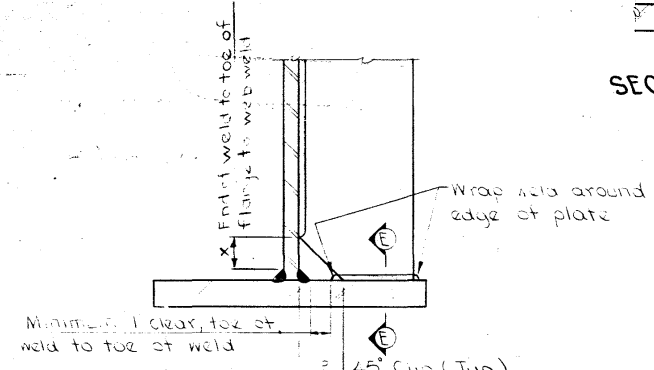


DIAPHRAGM STIFFENER

Note: If no intermediate stiffeners are required, the diaphragm stiffener is to be welded the same as the intermediate stiffeners.

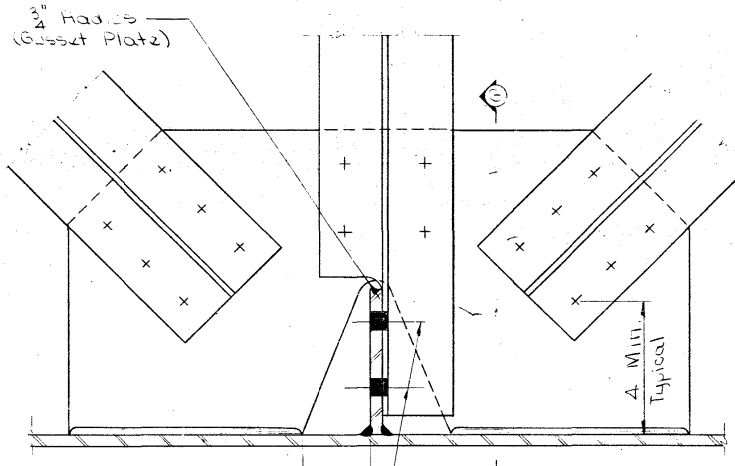


SECTION D-D



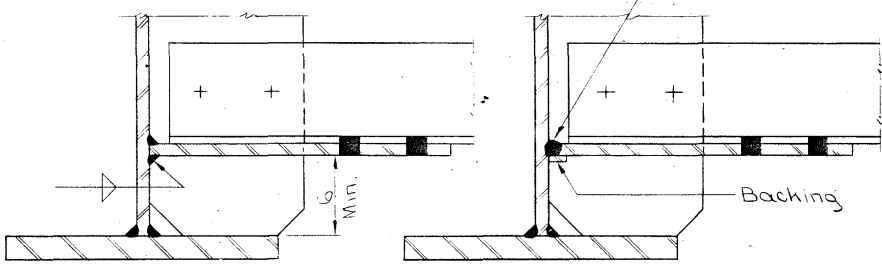
INTERMEDIATE STIFFENER

NOTE  
This sheet is primarily for the use of fabricator's workmen and Iowa Department of Transportation inspectors in interpreting plan details. It covers the locations of weld termini that are not specified by typical weld symbols.  
The acceptability and use of the weld treatment shown on this sheet for any specific project is the responsibility of the designing engineer.



GUSSET PLATE TO WEB DETAIL

Web Thickness	X = St
3/8	1 1/2
1/2	2 1/2
5/8	3 1/2
3/4	4 1/2
7/8	5 1/2
1	6 1/2



ALTERNATE SECTIONS G-G

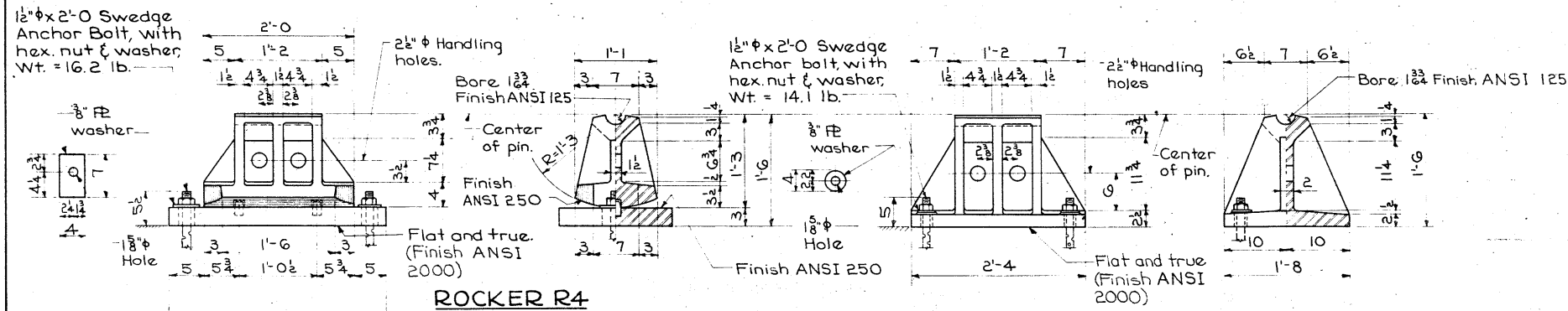
DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
WELDING DETAILS  
STATION: 478+73.99 (S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
Design Sheet No.: 18 Ot 24 File No.: 25588 Design No.: 1180

Revised 8-1-77: Stiffener web gap changed.  
Revised 5-2-77: Gusset plate to Web Details changed.  
J. J. J.



Revision (9-2-77) Clamping holes added to masonry plates.

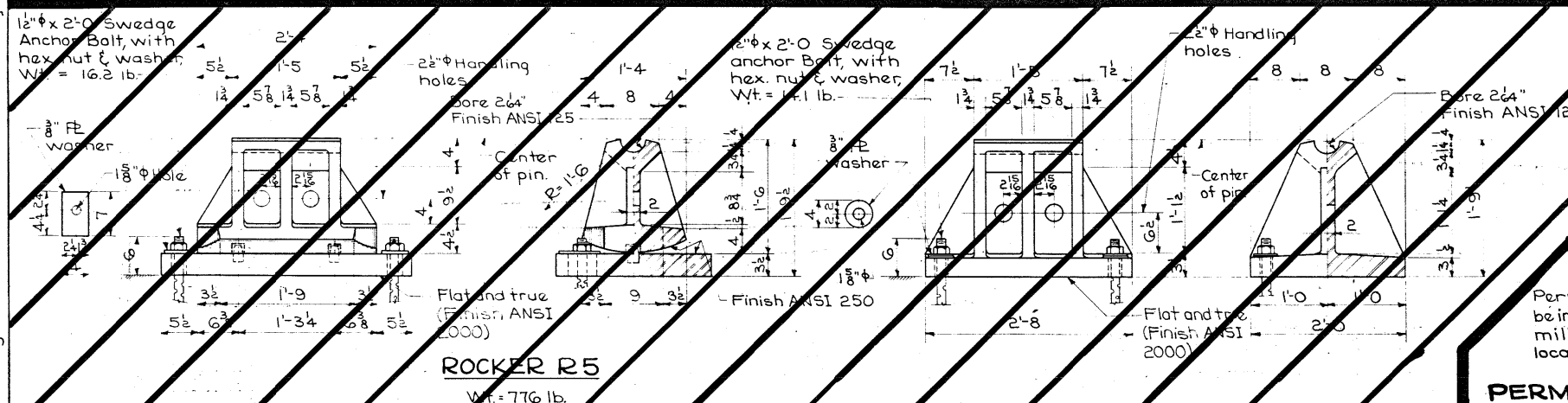
Revision (12-12-62) Pintle size changed.  
Revision (1-1-64) Finish changed to mill finish with concrete fitted.  
Revision (5-21-65) Weights for MP4P, MP5Pa and MP5Pb changed.  
Revision (6-20-66) Modular Iron Casting ASTM number and grade changed.  
Revision (3-28-72) ASA changed to ANSI.  
Revision (11-22-72) Note concerning finishing changed.  
Revision (7-11-73) Material for Rockers, Shoes and Masonry Plates changed.  
Revision (8-24-77) Notes concerning material to fill slots and seating of bearings changed.



ROCKER R4  
Wt. = 464 lb.

FIXED SHOE S4  
Wt. = 735 lb.

PIER MASONRY PLATE MP4P  
Wt. = 462 lb.



ROCKER R5  
Wt. = 776 lb.

FIXED SHOE S5  
Wt. = 1274 lb.

PIER MASONRY PLATE MP5Pa FOR  
SPAN LENGTH GREATER THAN 150'  
Wt. = 808 lb.

PIER MASONRY PLATE MP5Pb  
FOR SPAN LENGTH 101' TO 150'  
Wt. = 825 lb.

SOLE PLATES SP5 FOR R5 & S5  
Wt. = 159 lb.

### BEARING NOTES :

Castings R4, S4, R5, S5 shall be Nodular Iron Castings complying with Article 4153.04 of the Standard Specifications. Masonry plates MP4P, MP5Pa, MP5Pb shall be either Nodular Iron Castings complying with Article 4153.04 or structural steel complying with ASTM A-588, except that the supplementary requirement S, (Impact Properties) of AASHTO M222 shall not apply.

All plates and bars shall comply with ASTM A-36. Pins shall comply with Article 4153.02 of the Standard Specifications and with ASTM A-108.

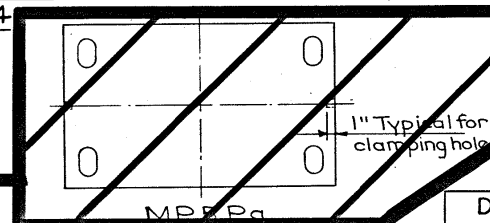
Anchor bolts shall be set in accordance with Article 2408.47 of the Standard Specifications. All bearings are to be set on a 1/8" lead sheet in accordance with Article 2408.38 of the Specifications.

The weight of bearings shown does not include the weight of paint.

As soon as the surfacing process is done, the surfaces finished with an ANSI 125 finish shall be shop coated with an application of waterproof National Lubricating Grease Institute No 3 multipurpose grease. Just before the erection of the structural steel in the field, the shop coated surfaces are to be wiped clean and a field coat of N.L.G.I. No 3 grease is to be applied.

After masonry plates, rockers and shoes are in correct location, fill slotted holes around anchor bolts with a sulphur-based compound or epoxy resin adhesive in accordance with Article 2408.47 of the Standard Specifications.

SOLE PLATES SP4  
FOR R4 & S4  
Wt. = 85 lb.



DISTANCE FROM TOP OF SOLE PLATE TO BRIDGE SEAT	
Rockers & Fixed Shoes	
R4 & S4	1'-8 5/8"
R5 & S5	2'-0 7/8"

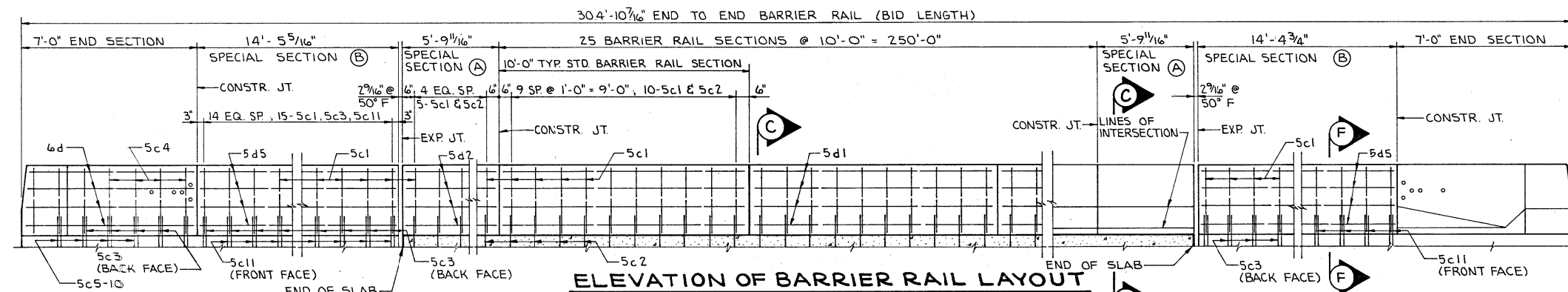
\* Including 1/8" lead sheet.

### PERMISSIBLE CLAMPING HOLES

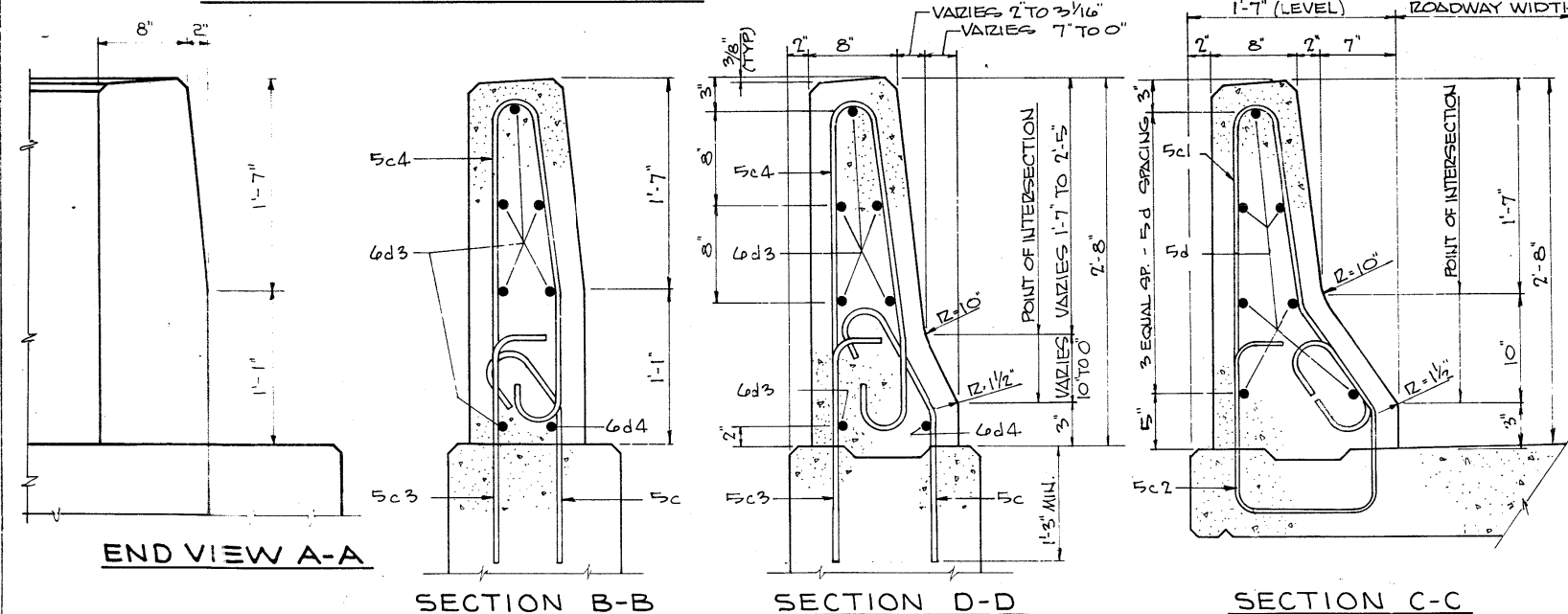
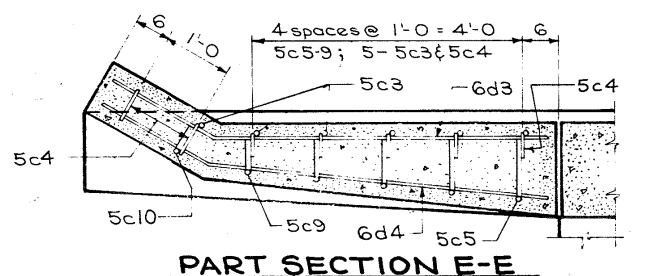
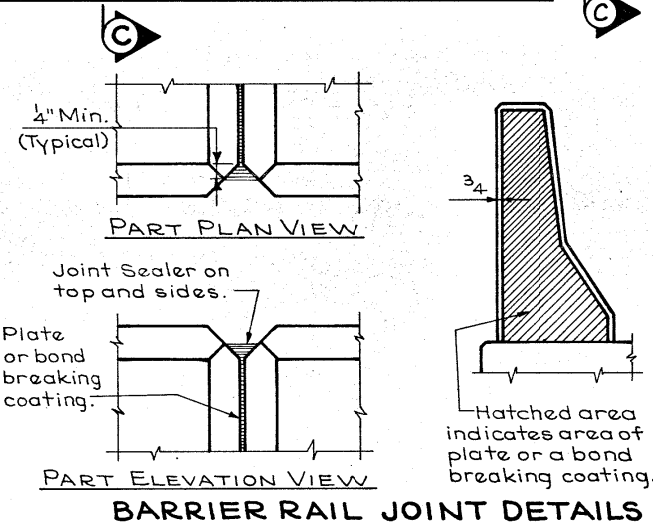
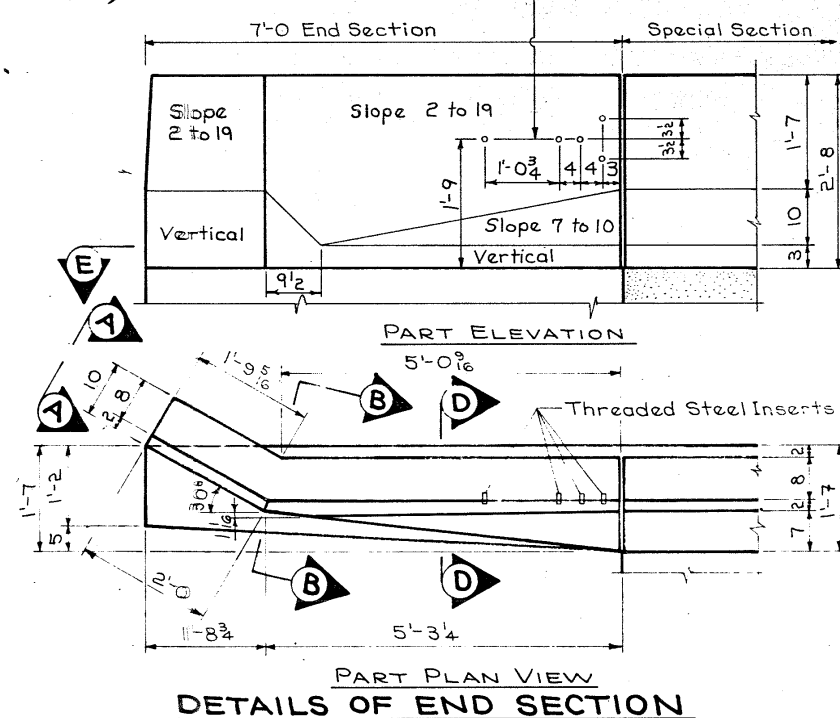
Permissible cored hole (1 1/4" x 1" deep) may be introduced to facilitate clamping to the milling table. The cored hole should be located at mid depth of plate.

MAXIMUM REACTION (In Kips)	
R4 S4	
475	

DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
.671'-6" END SPANS 125'-0" INTERIOR SPAN  
PIER BEARING DETAILS  
STATION: 478+73.99 (± S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
Design Sheet No 20 Of 24 File No 25588 Design No 1180



Provide five threaded steel inserts with solid bottom to fit 1 1/2 x 2 galvanized cap screws with galvanized round washers. Cost of inserts to be included in price bid for "Structural Concrete". Screws and washers are not a part of this contract.



BARRIER RAIL NOTES:

Minimum clear distance from face of concrete to near reinforcing bar is ~~to be~~ 2" unless otherwise noted or shown.

All exposed corners 90° or sharper ~~are to be~~ <sup>were</sup> filleted with a 3/4" dressed and beveled strip.

Top of the barrier rail is ~~to be~~ parallel to the theoretical  $\pm$  grade.

The barrier rail ~~may~~<sup>will</sup> be placed in sections ~~or~~ continuously. When it is placed continuously a 1/8 inch sheet of either aluminum, galvanized steel, high density styrene, or plexiglass shall be placed at the joints to separate the sections. When the barrier rail ~~is~~<sup>will</sup> be placed in sections the end of the section to be poured against ~~is~~<sup>will</sup> be coated with paraffin or other bond breaker approved by the Engineer and the plate separators ~~shall~~<sup>will</sup> be omitted.

The joint sealer shall conform to Fed. Spec. TT-S00230 or TT-S00227 for Type II, Class A or B.

Cost of the joint sealer and bond breaker ~~shall be~~ <sup>were</sup> considered incidental to other construction.

The concrete barrier rail is ~~to be~~<sup>was</sup> bid on a lineal foot basis measured from end to end of rail. The number of lineal feet of barrier rail installed ~~will be~~<sup>was</sup> paid for at the contract price per lineal foot based on plan quantities. Price bid for Concrete Barrier Rail ~~shall be~~<sup>was</sup> full compensation for furnishing all material, excluding reinforcing steel, and all of the equipment and labor required to erect the rail in accordance with these plans and current specifications. All barrier rail reinforcing steel is ~~to be~~<sup>was</sup> included with the superstructure reinforcing steel.

All barrier rail concrete is to be Class D.

All barrier rail reinforcing steel is ~~to be~~ epoxy-coated.

NOTE:

Cross Sectional Area of the Special Section  
and Standard Section of the Barrier Rail = 2.47  
square feet.

REINFORCING STEEL - ONE SECTION						
Section	Bar	Location	Shape	No	Length	Weight
10' STANDARD SECTION	5c1	VERTICAL	B	10	5'-5"	56
	5c2	VERTICAL	B	10	4'-10"	50
	5d1	LONGITUDINAL	—	7	9'-8"	71
	TOTAL FOR ONE SECTION					TOTAL (LB.)
7'-0" END SECTION	5c3	VERTICAL	B	6	2'-6"	16
	5c4	VERTICAL	B	7	5'-5"	40
	5c5-10	VERTICAL	9	6	VARIES	18
	6d3	LONGITUDINAL	—	6	6'-7"	59
	6d4	LONGITUDINAL	—	1	6'-10"	10
TOTAL FOR ONE SECTION					TOTAL (LB.)	143
SPECIAL SECTIONS (ALL REINFORCING REQUIRED)	5c1	VERTICAL	B	40	5'-5"	226
	5c2	VERTICAL	B	10	4'-10"	50
	5c3	VERTICAL	—	30	2'-6"	78
	5c11	VERTICAL	9	30	2'-11"	91
	5d2	LONGIT-SPECIAL SECTIONS (A)	—	14	5'-5"	79
	5d5	LONGIT-SPECIAL SECTIONS (B)	—	14	14'-0"	204
TOTAL LBS. FOR ALL SPECIAL SECTIONS					TOTAL (LB.)	728

### BENT BAR DETAILS

5c1

5c2

5c3

5c4

5c5-11

BAR	"X"
5c5	14
5c6	12
5c7	9
5c8	7
5c9	5
5c10	5
5c11	8

All dimensions are out to out. Radii to  $\frac{1}{8}$  bar.

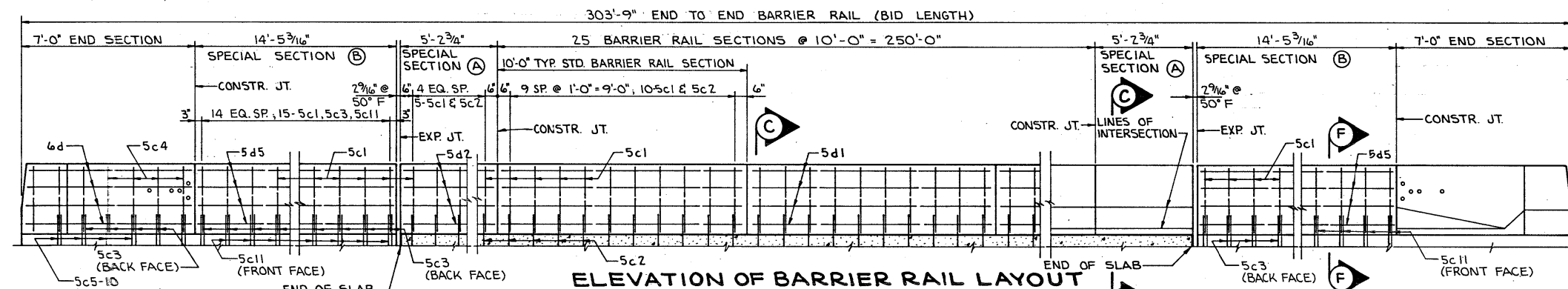
EPOXY REINFORCING SUMMARY			
Section	Number of Sections	Reinforcing Per Section	Total
Standard	25	177	4425
End	2	143	286
Special	4	-	728

(Include with Superstructure Reinforcing)		Total (lb.)	5439 —
<b>CONCRETE PLACEMENT SUMMARY</b>			
Section	Number of Sections	Concrete Per Section	Total
Standard	25	.91	22.6
End	2	.58	1.2
Special (A)	2	.53	1.1
Special (B)	2	1.32	2.6
Total (c.y.)			27.7

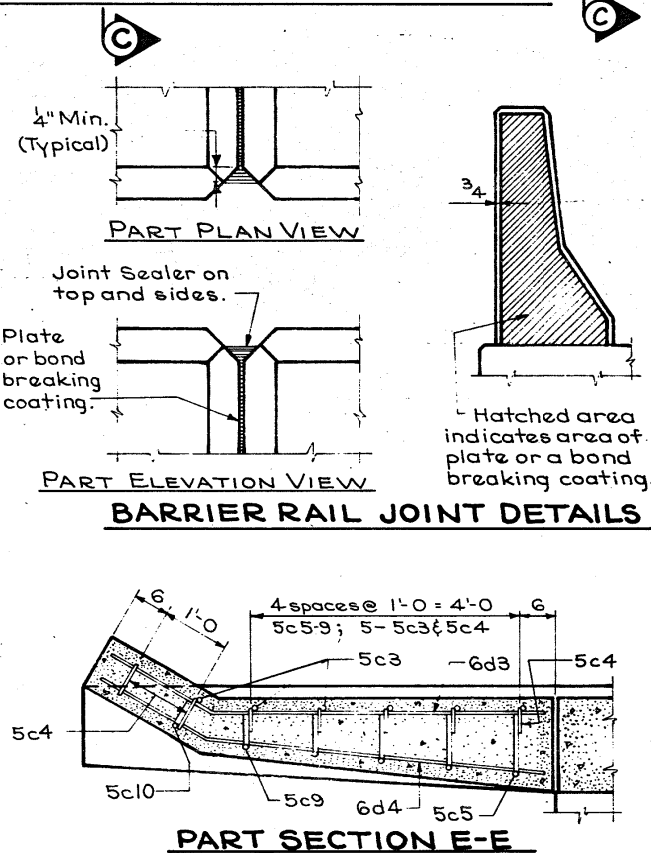
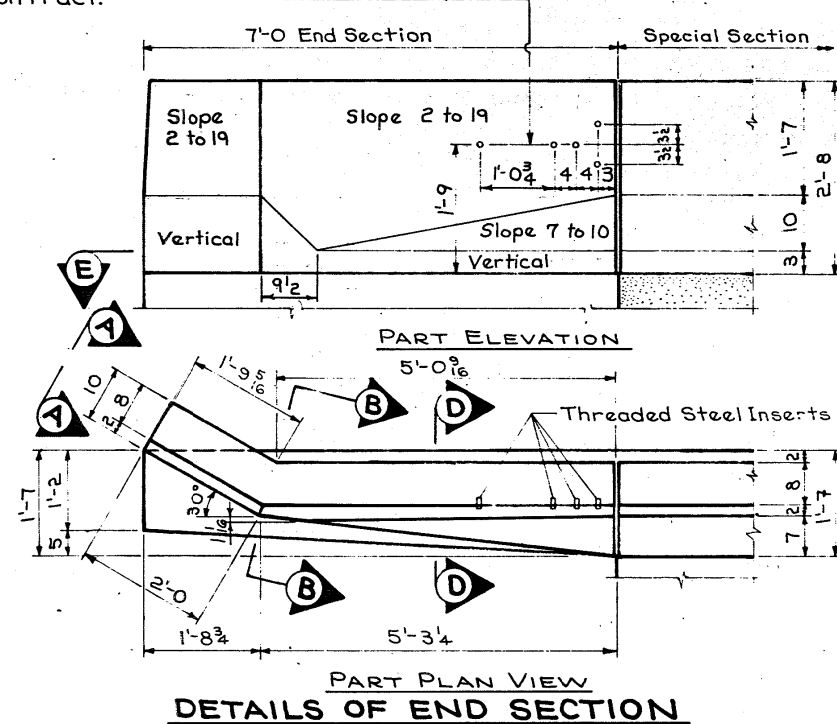
CONCRETE BARRIER RAIL QUANTITIES		
Item	Unit	Quantity
EAST CONCRETE BARRIER RAIL	L.F.	304.9 ✓

DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS      125'-0" INTERIOR SPAN  
EAST CURB BARRIER RAIL DETAILS  
STATION: 478+73.99(± S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16(MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 21 OF 24 FILE NO. 25588 DESIGN NO. 1180





Provide five threaded steel inserts with solid bottom to fit 1/2 x 2 galvanized cap screws with galvanized round washers. Cost of inserts to be included in price bid for "Structural Concrete". Screws and washers are not a part of this contract.



**BARRIER RAIL NOTES:**

Minimum clear distance from face of concrete to near reinforcing bar is ~~to be~~ 2" unless otherwise noted or shown.

All exposed corners 90° or sharper ~~are to be~~  
filleted with a  $\frac{3}{4}$ " dressed and beveled strip.

Top of the barrier rail is ~~to be~~ parallel to the theoretical  $\frac{1}{2}$  grade.

The barrier rail ~~may be~~ placed in sections or continuously. When it is placed continuously a 3-inch sheet of either aluminum, galvanized steel, high density styrene, or pig glass shall be placed at the joints to separate the sections. When the barrier rail is placed in sections, the end of the section to be poured against is to be coated with paraffin or other bond breaker approved by the Engineer and the plate separators ~~may be~~ omitted. The joint sealer shall conform to Fed. Spec. TT-S00230 or TT-S00227 for Type II, Class A or B.

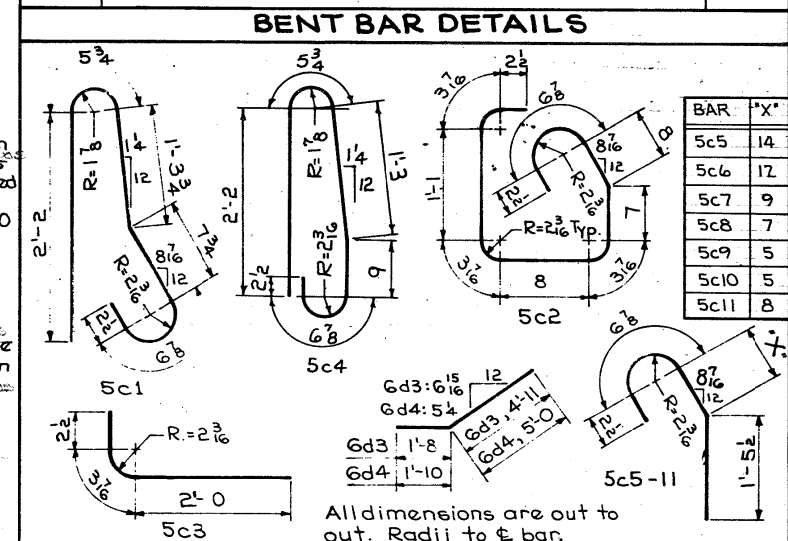
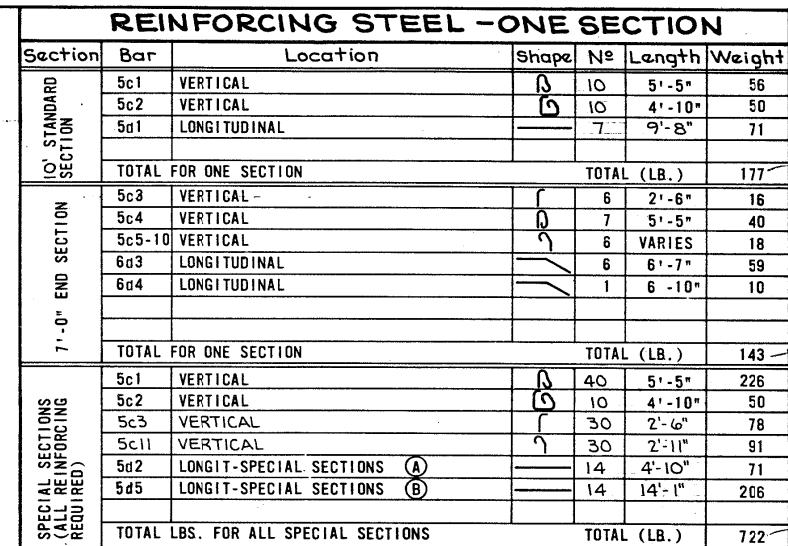
Cost of the joint sealer and bond breaker ~~shall be~~ <sup>were</sup> considered incidental to other construction.

The concrete barrier rail is to be bid on a lineal foot basis measured from end to end of rail. The number of lineal feet of barrier rail installed will be paid for at the contract price per lineal foot based on plan quantities. Price bid for Concrete Barrier Rail shall be full compensation for furnishing all material, excluding reinforcing steel, and all of the equipment and labor required to erect the rail in accordance with these plans and current specifications. All barrier rail reinforcing steel is to be included with the superstructure reinforcing steel.

All barrier rail concrete is to be Class D.

NOTE: All barrier rail reinforcing steel is to be epoxy-coated

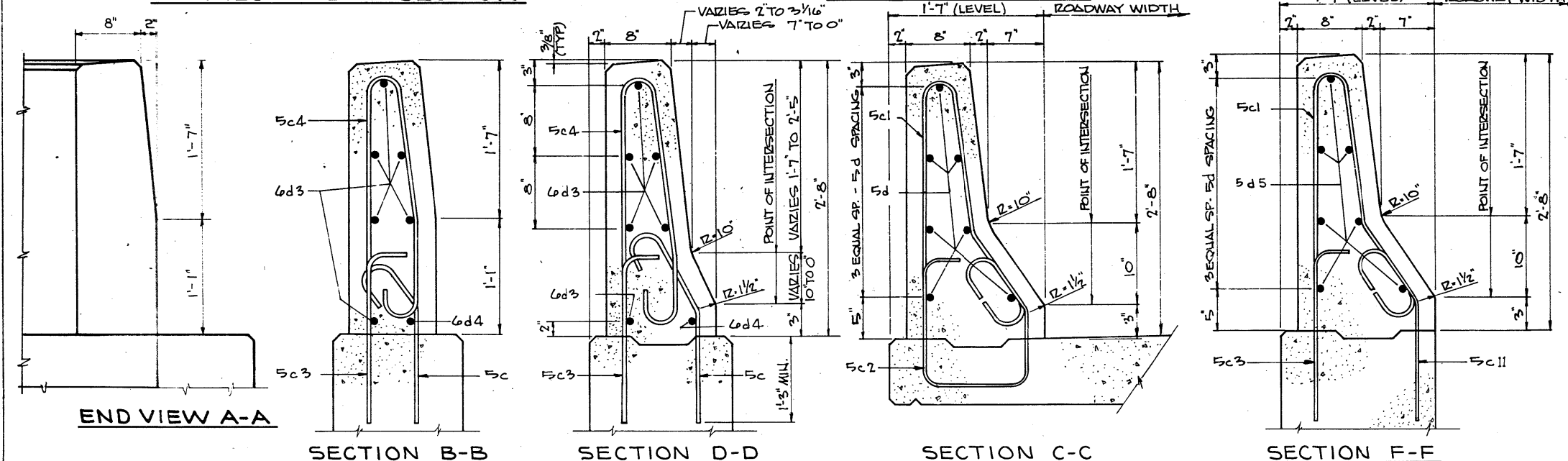
Cross Sectional Area of the Special Section and Standard Section of the Barrier Rail = 2.47 square feet.



EPOXY REINFORCING SUMMARY			
Section	Number of Sections	Reinforcing Per Section	Total
Standard	25	177	4425
End	2	143	286
Special	4	-	722

(Include with Superstructure Reinforcing)		Total (lb.)	5433
<b>CONCRETE PLACEMENT SUMMARY</b>			
Section	Number of Sections	Concrete Per Section	Total
Standard	25	.91	22.8
End	2	.58	1.2
Special (A)	2	.48	1.0
Special (B)	2	1.32	2.6
Total (c.y.)			27.6

CONCRETE BARRIER RAIL QUANTITIES		
Item	Unit	Quantity
WEST CONCRETE BARRIER RAIL	L.F.	303.8 ✓



DESIGN FOR 12°18'42.77" SKEW  
260' X VAR. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
WEST CURB BARRIER RAIL DETAILS  
STATION: 478+73.99 (±S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
DESIGN SHEET NO. 22 OF 24 FILE NO. 25588 DESIGN NO. 1180



NOTE: The grounding buttons are to be blind drilled and tapped for  $\frac{3}{8}$ "  $\phi$  x 0'-0 $\frac{3}{4}$  bolts.

LIGHTING NOTES:

Construction <sup>did</sup> conform to the current Iowa D.O.T. Standard Specifications and Special Provisions and current Supplemental Specifications for Highway Lighting.

2523. Conduit installation shall comply with the article "Electrical Ducts", section

All "C" entrance holes in junction boxes shall be drilled and tapped for the specified conduit size. All other holes shall have a concrete - tight slip fit. Conduit ends shall not protrude into junction box more than 1/4". Drain pipe end shall be flush with inside surface of box. Grounding buttons shall be located approximately 3" from the inside surface of the box wall, and not closer than 3" to the edge of any hole in the box floor. Holes for drain pipe shall be placed in the low corner of the box, with a minimum clearance of 1" between the edge of the hole and the inside surface of the box wall. Typical details are shown on this sheet.

The contract unit price per lineal foot of conduit shall be full compensation for furnishing all material (including junction boxes and fittings), labor and any work incidental to the installation. The concrete and weight of reinforcing steel is included in the Superstructure Estimated Quantities.

The length of conduit installed shall be measured in feet by the Engineer.  
Cost of furnishing and installing poles, lights and lighting conductor is not a part of this estimate.

Expansion fitting shall be as specified or as approved by the Engineer. Typical details are shown on this sheet.

Anchor bolt material shall comply with the requirements of ASTM A-325 or A-193 Grade B7. Anchor bolt nuts shall comply with ASTM A-325. Anchor bolts shall be galvanized.

ALL LIGHT POLE BASE REINFORCING STEEL IS ~~TO BE~~  
EPOXY-COATED.

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NOTE: The location and length of each of your seedbeds

NOTE: For location and lengths of conduits needed see Design Sheet . Total quantities for concrete and reinforcing steel for pole bases are included in the superstructure quantities on another sheet.

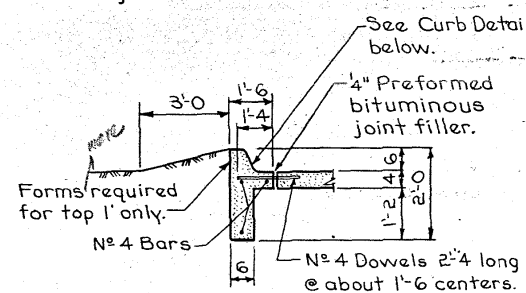
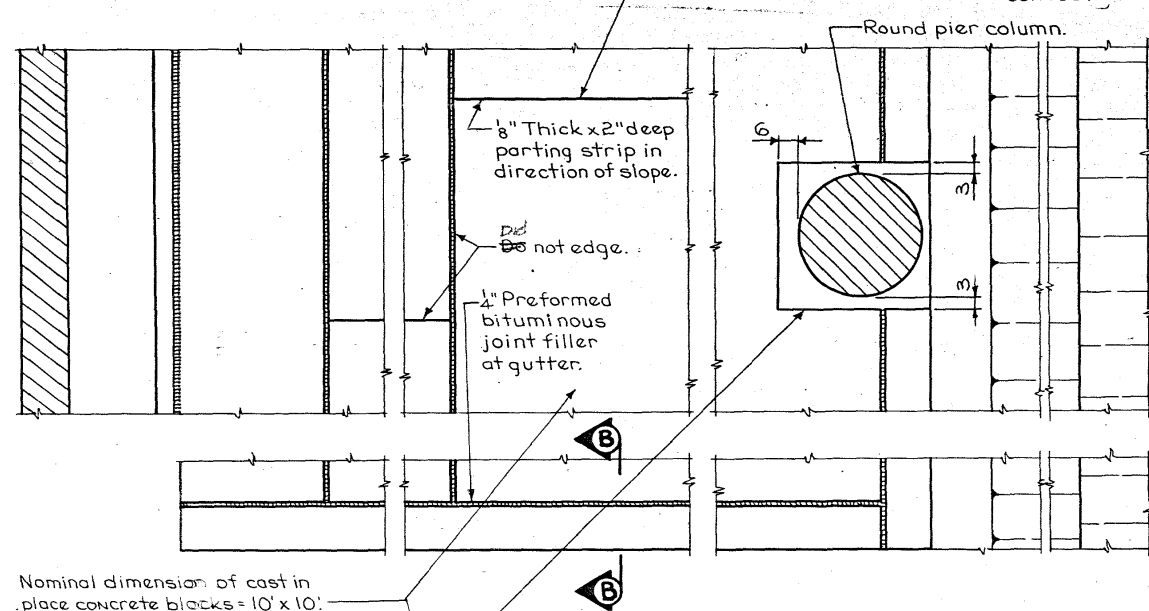
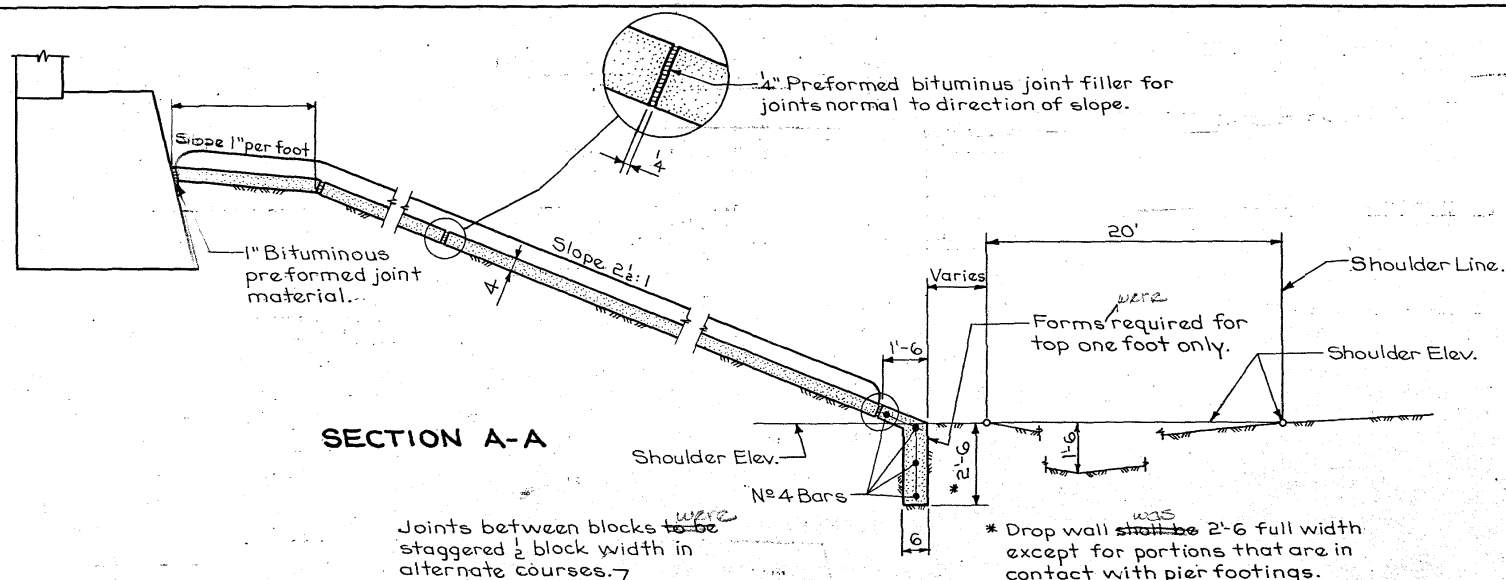
Design for 12° 18' 42.77" Skew  
260' x VARJ. WELDED PLATE GIRDER BRIDGE  
67'-6" End Spans 125'-0" Interior Spans

**LIGHTING DETAILS**

Station: 47B + 73.99 (L S.B. Lane US N° 561) June, 1977  
Station: 247B + 38.16 (Mt. Joy Road + S.B. Lane)

**SCOTT COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
Design Sheet No.: 23 Of 24 File No.: 25386 Design No.: 1180



CURB DETAIL

### GENERAL NOTES:

This sheet shows details for placing portland cement concrete slope protection under overhead structures. The standard specifications of the Iowa Department of Transportation shall apply with modifications or additions listed below:

Concrete - Class C Structural.

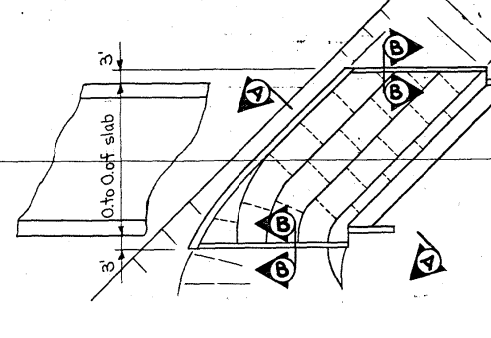
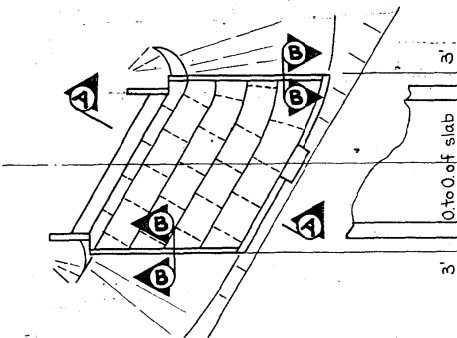
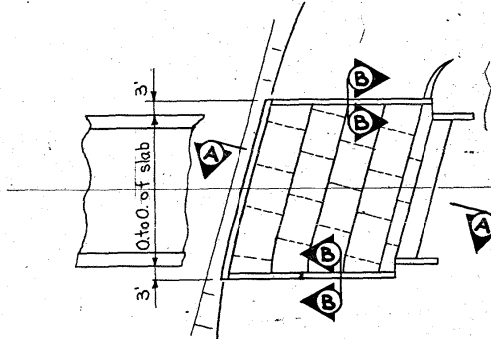
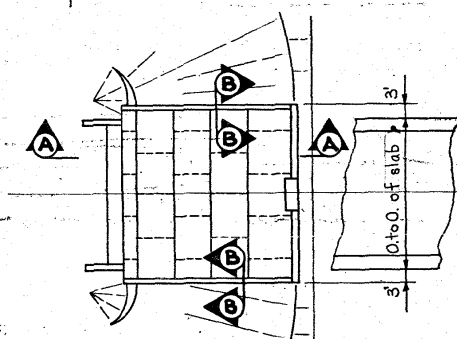
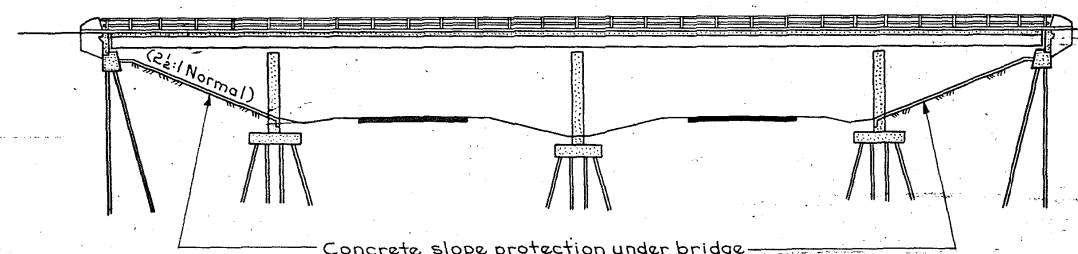
Finish - Class 1, Floated Surface Finish.

Cure - Cure as per current Specifications.

Subgrade Preparation - The subgrade shall be shaped and compacted so that finished slope protection will be similar to examples shown on this sheet. The subgrade shall be firm when concrete is placed. Sprinkling required shall be done early enough so that concrete is not placed on a muddy subgrade. No subgrade paper will be required.

The cast in place concrete is to be poured in approximately 10' wide courses, but all courses on one slope shall have approximately equal widths. Adjacent courses shall not be poured within 15 hours of one another. The joints in the direction of the slope shall be staggered about 1/2 block width.

Basis of payment: Payment will be made on a square yard basis for slope protection constructed. The unit price bid per square yard is to include costs of all materials and labor required to construct this protection as shown or intended by these plans. The subgrade preparation including any necessary



SLOPE PROTECTION LAYOUT 30° SKEW

SLOPE PROTECTION LAYOUT 45° SKEW

excavation or filling required to shape the slope to the lines shown on the plans and disposal of excess earth excavated as directed by the Engineer, are considered incidental to placing the concrete slope protection.

Pay quantities are to be based on field measured out to out dimensions.

Where erosion control work is completed the Contractor shall be responsible for any plant materials destroyed adjacent to slope protection area. The Contractor shall replant, reseed and mulch areas in accordance with Section 2601 of the Standard Specifications, Series of 1977, at his expense.

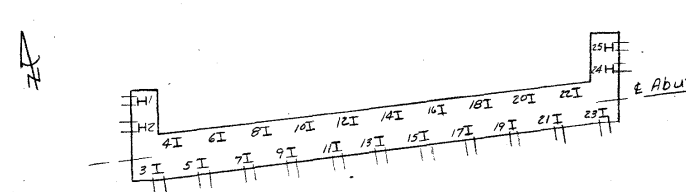
### CONCRETE SLOPE PROTECTION

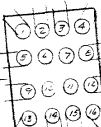
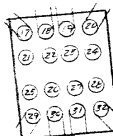
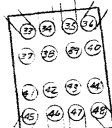
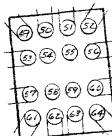
BRIDGE	S. ABUT.	N. ABUT.	TOTAL
SOUTH BOUND	304	304	700
	433.31	427.83	861.14
Total			861.14

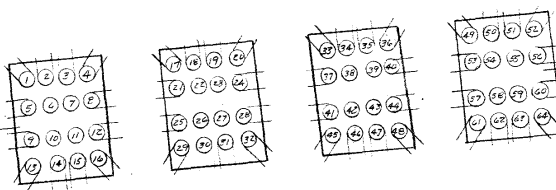
DESIGN FOR 12°18'42.77" SKEW  
260' X VARI. WELDED PLATE GIRDER BRIDGE  
67'-6" END SPANS 125'-0" INTERIOR SPAN  
CONCRETE SLOPE PROTECTION  
STATION: 478+73.99 (± S.B. LANE U.S. NO. 561) JUNE, 1978  
STATION: 2478+38.16 (MT. JOY ROAD & S.B. LANE)  
SCOTT COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION  
Design Sheet No.: 24 OF 24 File No.: 25588 Design No.: 1180

1-25-78 this sheet retraced.

FOUNDATION NUMBER			PILING LOG		KIND OF PILING			
South Abutment					HP10x42 Steel Bearing			
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FOUNDATION NUMBER			PILING LOG		KIND OF PILING			
North Abutment					HP10x42 Steel Bearing			
								
PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)	PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)	PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)
1	54.9	43.7						
2	54.7	32.8						
3	54.8	39.3						
4	55.0	32.8						
5	55.0	34.2						
6	55.0	32.8						
7	55.0	35.7						
8	55.0	32.8						
9	55.0	32.8						
10	54.8	35.7						
11	55.0	32.8						
12	54.9	35.7						
13	55.0	34.3						
14	54.6	35.7						
15	54.4	35.7						
16	54.6	35.7						
17	54.1	39.3						
18	54.2	34.2						
19	54.2	35.7						
20	54.4	34.2						
21	54.1	39.3						
22	54.7	32.8						
23	53.6	49.2						
24	52.9	39.3						
25	53.6	44.3						

FOUNDATION NUMBER			PILING LOG		KIND OF PILING			
Pier #1					Crescoted			
   								
PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)	PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)	PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)
1	25.0	30.4	23	25.0	31.3	44	25.0	33.4
2		34.6	24		31.3	45		31.3
3		35.8	25		31.3	46		31.3
4		28.6	26		33.4	47		33.4
5		37.1	27		33.4	48		33.4
6		37.1	28		35.8	49		39.0
7		35.8	29		33.4	50		34.4
8		35.8	30		36.6	51	25.0	38.8
9		31.3	31	25.0	31.3	52	24.6	40.2
10		36.4	32	23.7	40.1	53	25.0	36.6
11		31.3	33	23.8	38.6	54	25.0	40.1
12		38.6	34	24.0	35.8	55	25.0	34.6
13		35.8	35	24.7	33.4	56	24.7	34.4
14		36.4	36	24.5	31.3	57	25.0	36.6
15		38.6	37	25.0	36.6	58	25.0	38.8
16		31.3	38		38.8	59	25.0	39.9
17		35.8	39		36.6	60	25.0	36.6
18		33.4	40		35.8	61	25.0	37.1
19	25.0	31.3	41		37.1	62	24.0	41.8
20	23.8	36.6	42		35.8	63	24.7	38.6
21	25.0	35.8	43	25.0	34.6	64	24.6	33.4
22	25.0	34.6						
				</				

FOUNDATION NUMBER			PILING LOG		KIND OF PILING			
Pier #2					Crescoted			
								
PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)	PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)	PILE NO.	LENGTH IN STRUCTURE	BEARING (in Tons)
1	24.8	30.2	23	25.0	27.6	44	25.0	22.6
2	25.0	31.0	24	24.4	27.1	45	24.6	29.5
3	24.7	33.9	25	25.0	24.7	46	24.8	27.1
4	25.0	33.9	26	24.2	24.7	47	25.0	26.4
5	24.5	37.4	27	25.0	23.6	48	25.0	27.8
6	25.0	28.6	28	25.0	25.8	49	25.0	28.6
7	25.0	25.8	29	25.0	29.5	50	24.3	27.8
8	25.0	36.2	30	25.0	31.3	51	25.0	31.3
9	25.0	33.9	31	24.7	31.3	52	25.0	34.3
10	25.0	22.6	32	25.0	27.8	53	25.0	32.3
11	25.0	23.6	33	24.4	31.3	54	25.0	27.1
12	25.0	31.9	34	25.0	22.8	55	25.0	27.1
13	24.7	33.5	35	25.0	27.1	56	24.6	29.3
14	25.0	24.2	36	25.0	26.4	57	25.0	28.6
15	25.0	31.3	37	25.0	28.6	58	25.0	31.9
16	25.0	21.9	38	25.0	27.1	59	25.0	22.6
17	25.0	29.5	39	25.0	28.6	60	24.4	21.6
18	24.6	28.6	40	25.0	27.1	61	25.0	27.1
19	25.0	28.6	41	24.5	27.1	62	24.7	27.8
20	25.0	30.2	42	25.0	28.6	63	25.0	27.1
21	25.0	21.6	43	25.0	22.6	64	25.0	27.5
22	25.0	23.6						