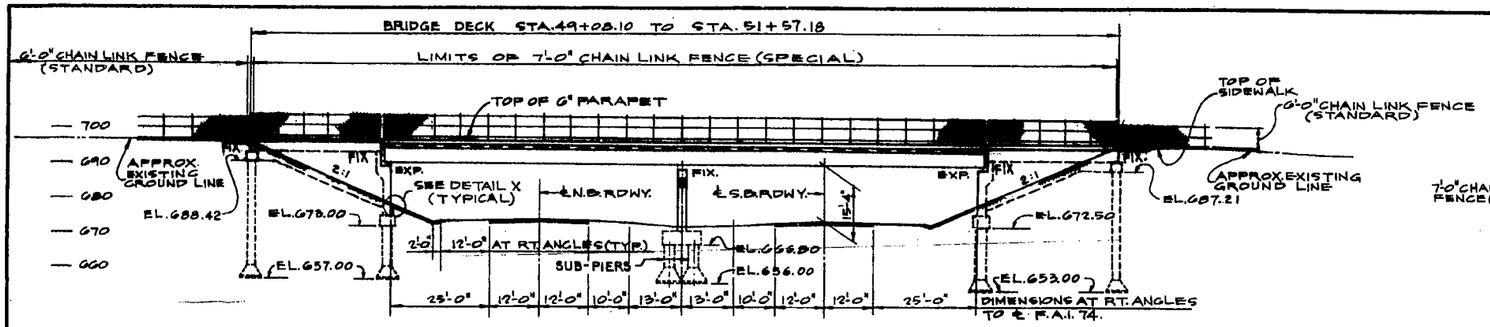
SN 081-0107

COUNTY	TOTAL SHEETS	SHEET NO.
ROCK ISLAND	438	147
FED. AID PROJECT I-74-1(240)		

DWG. NO. S-16



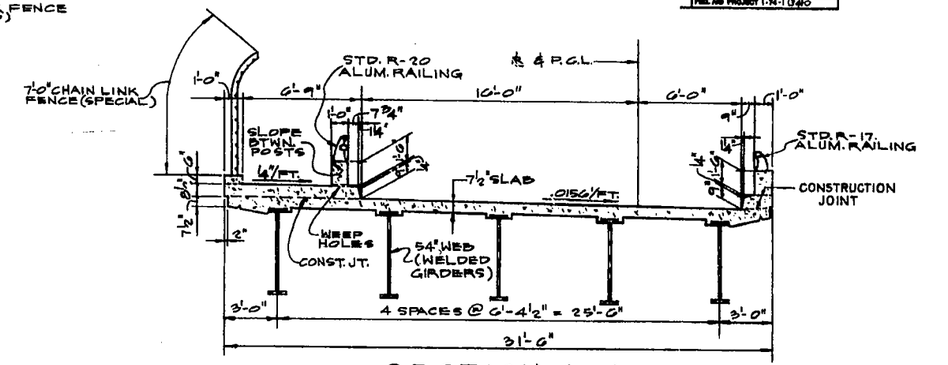
WEST ELEVATION

SCALE: 1" = 20'-0"

BENCH MARKS

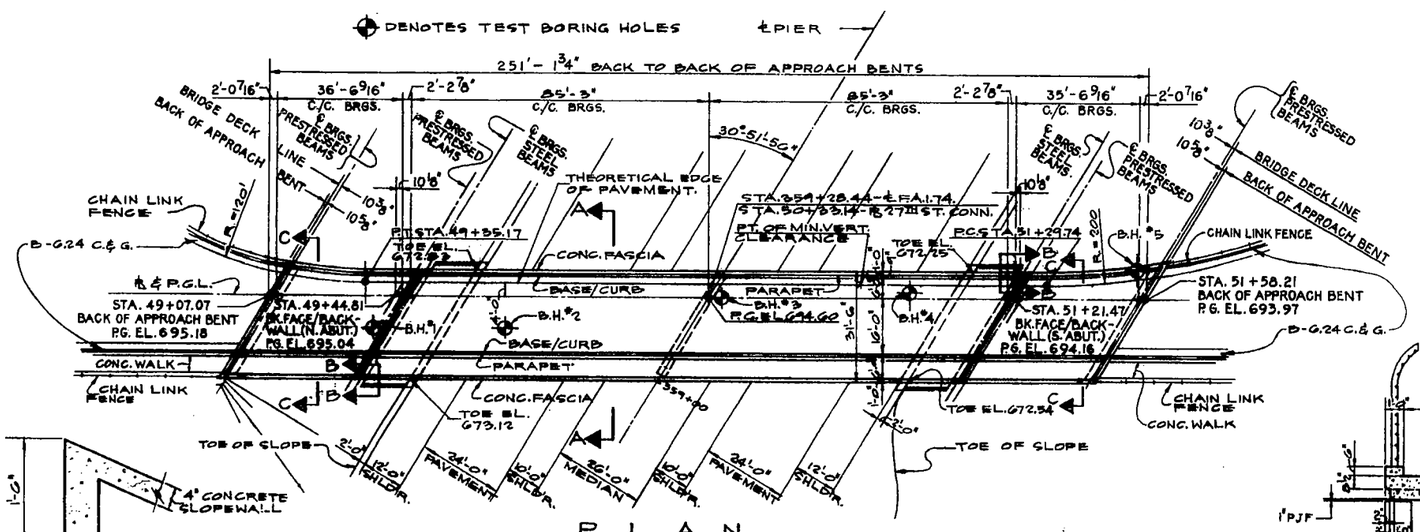
A-13 : BRASS CAP IN CONC. MON. STA. 360+46 ℄ F.A.I. 74 - 200' RT. ELEV. 693.10.

A-14 : BRASS CAP IN CONC. MON. STA. 370+50 ℄ F.A.I. 74 - 310' LT. ELEV. 695.08.



SECTION A-A

SCALE: ¼" = 1'-0"

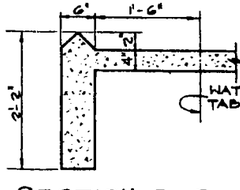


PLAN

SCALE: 1" = 20'-0"

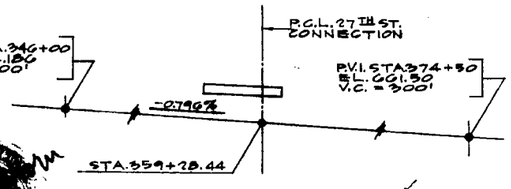
DETAIL X

SCALE: 1" = 1'-0"

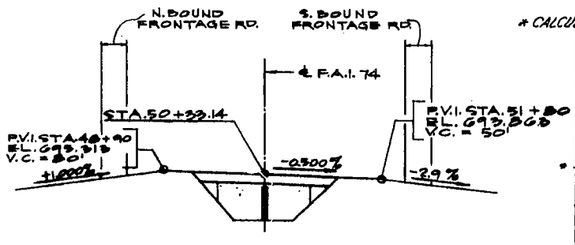


SECTION B-B

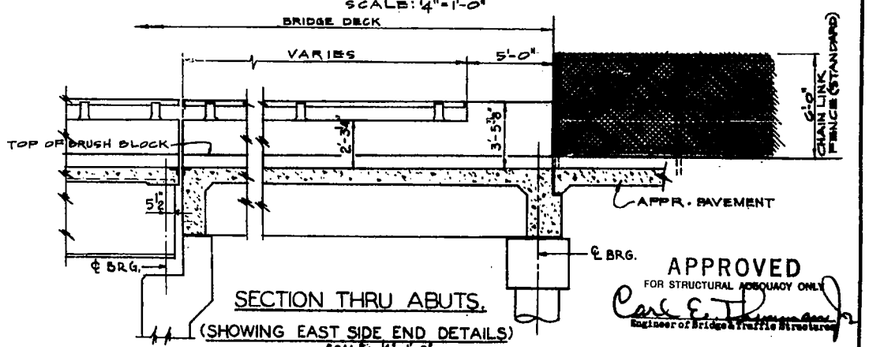
SCALE: 1" = 1'-0"



PROFILE GRADE - F.A.I. 74



PROFILE GRADE - 27TH ST. CONNECTION



SECTION THRU ABUTS.

(SHOWING EAST SIDE END DETAILS)

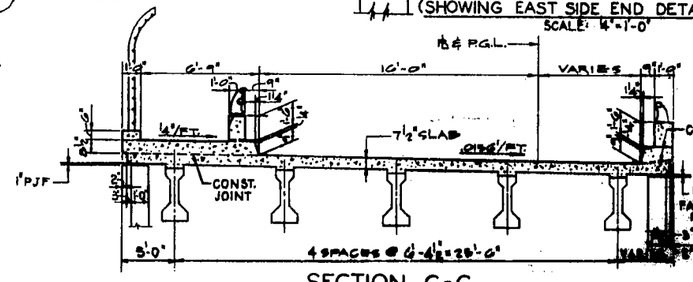
SCALE: ¼" = 1'-0"

APPROVED

FOR STRUCTURAL ADEQUACY ONLY

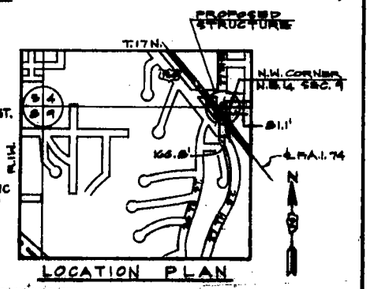
Carl E. Thompson

Engineer of Bridges & Traffic Structures



SECTION C-C

SCALE: ¼" = 1'-0"



LOCATION PLAN

* CALCULATED QUANT. - 173,605 SQ. FT.

TOTAL BILL OF MATERIAL (BRIDGE ONLY)

ITEM	UNIT	SUPERSTRUCTURE	SUB-STRUCTURE	TOTAL
CLASS A EXCAVATION FOR STRUCTURES	CU. YD.		885	885
FURNISHING AND ERECTING PRECAST, PRE-STRESSED CONCRETE I BEAMS 36"	LIN. FT.	980		980
CLASS X CONCRETE	CU. YD.	311.0	361.1	672.0
PROTECTIVE COAT	SQ. YD.	894		894
FURNISHING AND ERECTING STRUCTURAL STEEL	L. SUM	01		01
REINFORCEMENT BARS	POUND	72,400	89,200	161,600
900-PIER SHAFTS	CU. FT.		2,670.0	2,670.0
NAME PLATES	EACH		1	1
SLOPE WALL (14-INCH)	SQ. YD.		180	180
ALUMINUM RAILING	LIN. FT.	980		980
ALUMINUM RAILING (SPECIAL)	LIN. FT.	80		80
REINFORCED CONCRETE MARKER, TYPE I	EACH		1	1
DRIVEN PILE FOOTING	LIN. FT.		0.4	0.4
CONCRETE SEAL	CU. YD.		0.4	0.4

DESIGN NOTES:

LOADING - HS 20-44 & ALT. + 25 #/FT² FUTURE W.S.

f'_c = 1400 P.S.I. CAST IN PLACE CONCRETE, EXCEPT SLAB.

f'_c = 1500 P.S.I. CAST IN PLACE CONCRETE, SLAB ONLY.

f'_c = 5000 P.S.I. } PRECAST PRESTRESSED UNITS.

f'_{ci} = 4000 P.S.I. }

f'_s = 240,000 P.S.I. } (STRANDS 7/16 ϕ)

f_{si} = 173,600 P.S.I.

f_s = 20,000 P.S.I. REINF. BARS & STRUCT. STEEL.

v = 75 P.S.I. ALLOWABLE SHEAR IN FOOTING.

n = 12 FOR CAST-IN PLACE CONCRETE.

ALLOWABLE L.L. DEFLECTION - $\frac{L}{1000}$ (NON-COMPOSITE) $\frac{L}{1200}$ (COMPOSITE)

GENERAL PLAN & ELEVATION

F.A.I. 74 - SECTION 51-1HB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

ROCK ISLAND COUNTY

STATION 359 + 28.44

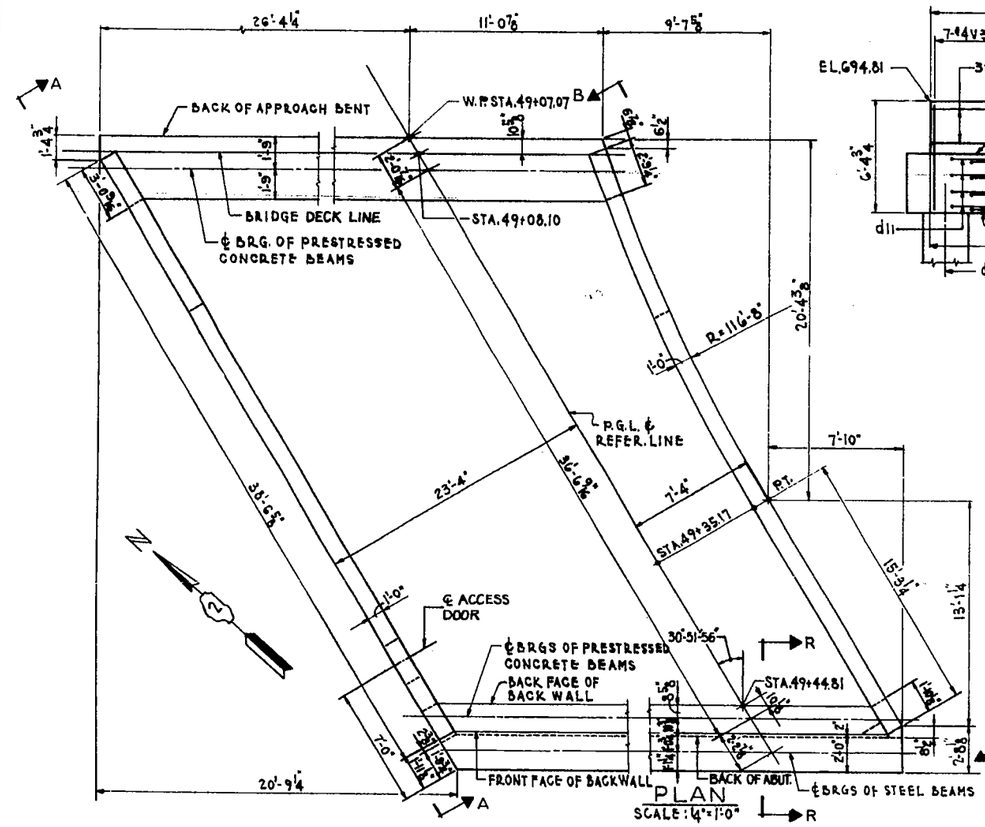
SCALE AS NOTED DATE

DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY F.S. MARTINS
DRAWN BY G.P. ALLEMAN
CHECKED
IN CHARGE F.S. MARTINS
APPROVED W.G. HOHN

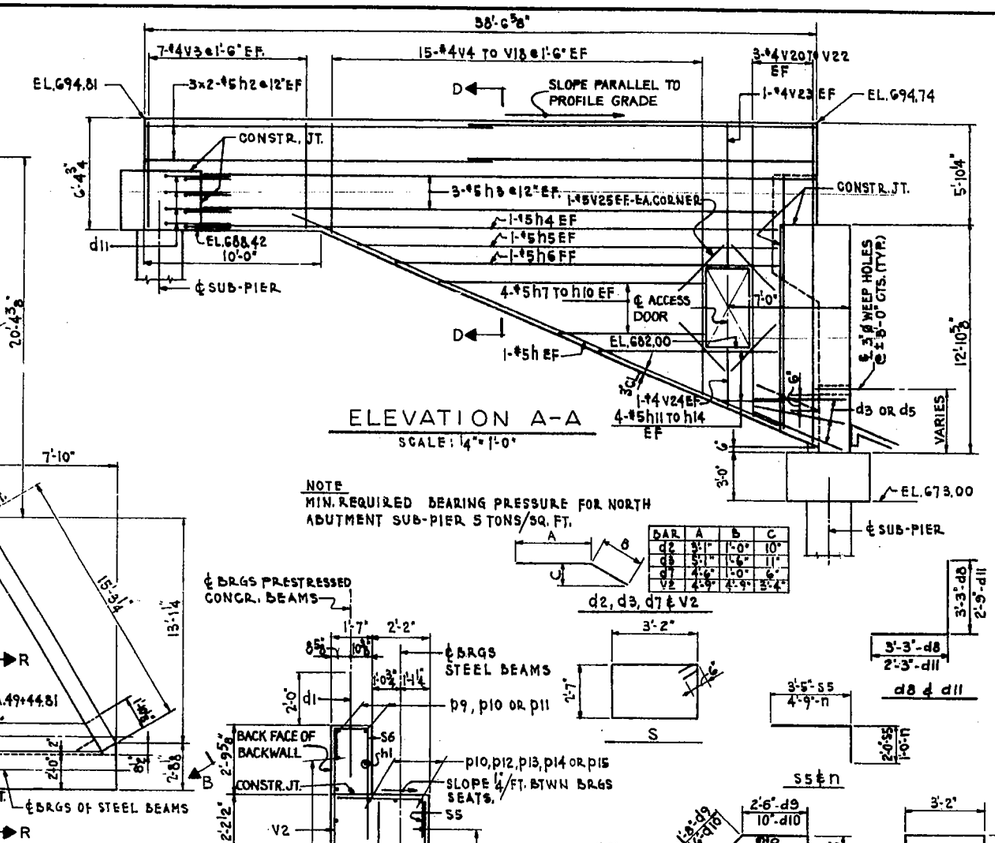
Rock 11-20-69 WL

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	458	148
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

DWG. NO. S-17



PLAN
SCALE: ¼"=1'-0"

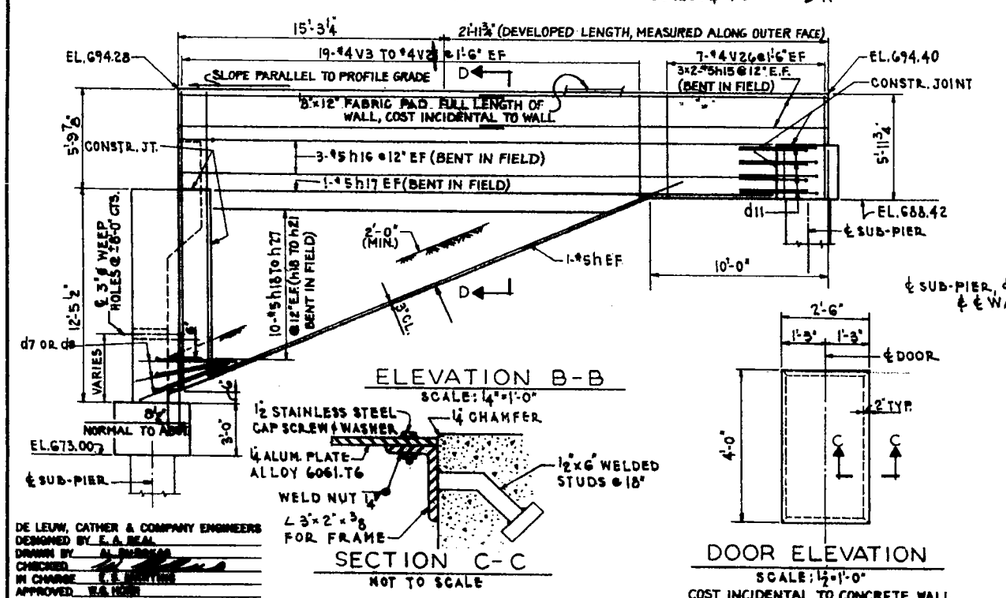


ELEVATION A-A
SCALE: ¼"=1'-0"

NOTE
MIN. REQUIRED BEARING PRESSURE FOR NORTH ABUTMENT SUB-PIER 5 TONS/SQ. FT.

BAR	A	B	C
d2	3'-1"	1'-0"	10"
d3	3'-1"	1'-6"	11"
d7	4'-6"	1'-0"	1'-0"
V2	4'-9"	4'-9"	8'-4"

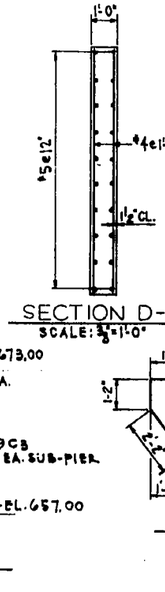
d2, d3, d7 & V2



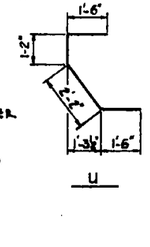
ELEVATION B-B
SCALE: ¼"=1'-0"

SECTION C-C
NOT TO SCALE

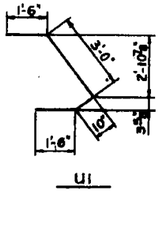
DOOR ELEVATION
SCALE: ½"=1'-0"
COST INCIDENTAL TO CONCRETE WALL



SECTION D-D
SCALE: ⅜"=1'-0"



U



U1

NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT

BAR LIST*

BAR	NO.	SIZE	LENGTH	SHAPE	BAR	NO.	SIZE	LENGTH	SHAPE
c1	16	#9	34'-0"		P6	1	#6	4'-4"	
c3	44	#9	18'-0"		P7	1	#6	4'-0"	
					P8	1	#6	3'-0"	
d1	46	#6	4'-0"		P12	2	#7	2'-6"	
d2	25	#5	4'-1"		P13	5	#7	16'-7"	
d3	13	#5	6'-7"		P14	2	#7	17'-6"	
d5	13	#5	5'-5"		P15	1	#7	3'-7"	
d7	13	#5	5'-6"		P16	1	#7	4'-2"	
d8	13	#5	6'-6"		P17	1	#7	4'-9"	
d9	13	#5	5'-8"		P18	3	#7	17'-6"	
d10	3	#5	5'-10"						
d11	16	#5	5'-0"		S	35	#5	12'-6"	
					S1	19	#4	6'-2"	
h	4	#5	30'-0"		S5	35	#5	5'-5"	
h1	54	#4	18'-0"		S6	35	#5	7'-0"	
h2	12	#5	20'-4"		S7	64	#4	7'-8"	
h3	6	#5	35'-2"		S8	64	#4	8'-10"	
h4	2	#5	33'-4"		t	74	#5	3'-6"	
h5	2	#5	23'-10"		U	4	#6	6'-4"	
h6	2	#5	21'-6"		U1	4	#6	6'-10"	
h7	2	#5	14'-10"		VI	71	#5	12'-4"	
h8	2	#5	12'-4"		V2	88	#5	9'-6"	
h9	2	#5	9'-11"		V3	16	#4	6'-0"	
h10	2	#5	7'-6"		V4	4	#4	6'-6"	
h11	2	#5	10'-6"		V6	4	#4	7'-2"	
h12	2	#5	8'-2"		V6	4	#4	7'-9"	
h13	2	#5	5'-10"		V7	4	#4	8'-5"	
h14	2	#5	3'-6"		V8	4	#4	9'-1"	
h15	12	#5	19'-9"		V9	4	#4	9'-8"	
h16	6	#5	34'-0"		V10	4	#4	10'-4"	
h17	2	#5	32'-2"		V11	4	#4	11'-0"	
h18	2	#5	23'-0"		V12	4	#4	11'-7"	
h19	2	#5	20'-8"		V13	4	#4	2'-3"	
h20	2	#5	18'-4"		V14	4	#4	2'-11"	
h21	2	#5	16'-0"		V15	4	#4	13'-6"	
h22	2	#5	13'-8"		V16	4	#4	14'-2"	
h23	2	#5	11'-4"		V17	4	#4	14'-10"	
h24	2	#5	9'-0"		V18	4	#4	15'-5"	
h25	2	#5	6'-8"		V19	2	#4	16'-1"	
h26	2	#5	4'-4"		V20	4	#4	16'-9"	
h27	2	#5	2'-0"		V21	4	#4	17'-4"	
					V22	2	#4	18'-0"	
n	71	#5	5'-9"		V23	2	#4	8'-5"	
					V24	2	#4	8'-2"	
p1	10	#10	20'-6"		V25	3	#4	3'-0"	
p2	12	#10	14'-0"		V26	14	#4	5'-6"	
p3	10	#10	26'-6"						
p4	6	#10	9'-5"		W	10	#5	36'-6"	
p5	3	#6	16'-2"						

BILL OF MATERIAL*

ITEM	UNIT	QUANTITY
REINFORCING BARS	POUND	16,250
CLASS X CONCRETE	CU. YD.	106.7
SUB-PIERS SHAFTS	CU. FT.	1047.0
CLASS A EXCAVATION FOR STRUCTURES	CU. YD.	134.
NAME PLATE	EACH	1

*INCLUDES MATERIALS FOR DETAILS SHOWN FOR NORTH ABUTMENT & N. APPROACH BENT ON DWGS S-18 & S-19.

DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY E. A. BEAL
DRAWN BY
CHECKED
IN CHARGE E. E. [illegible]
APPROVED W. A. HOOD

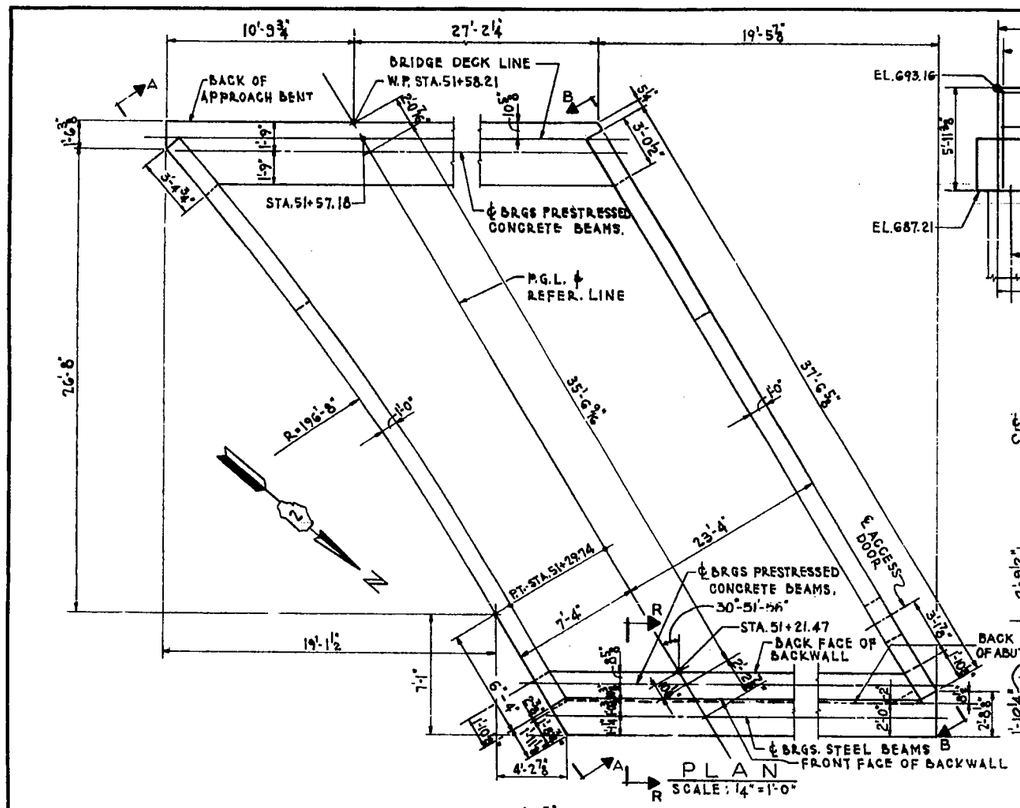
NORTH VAULTED ABUTMENT GENERAL PLAN & DETAILS

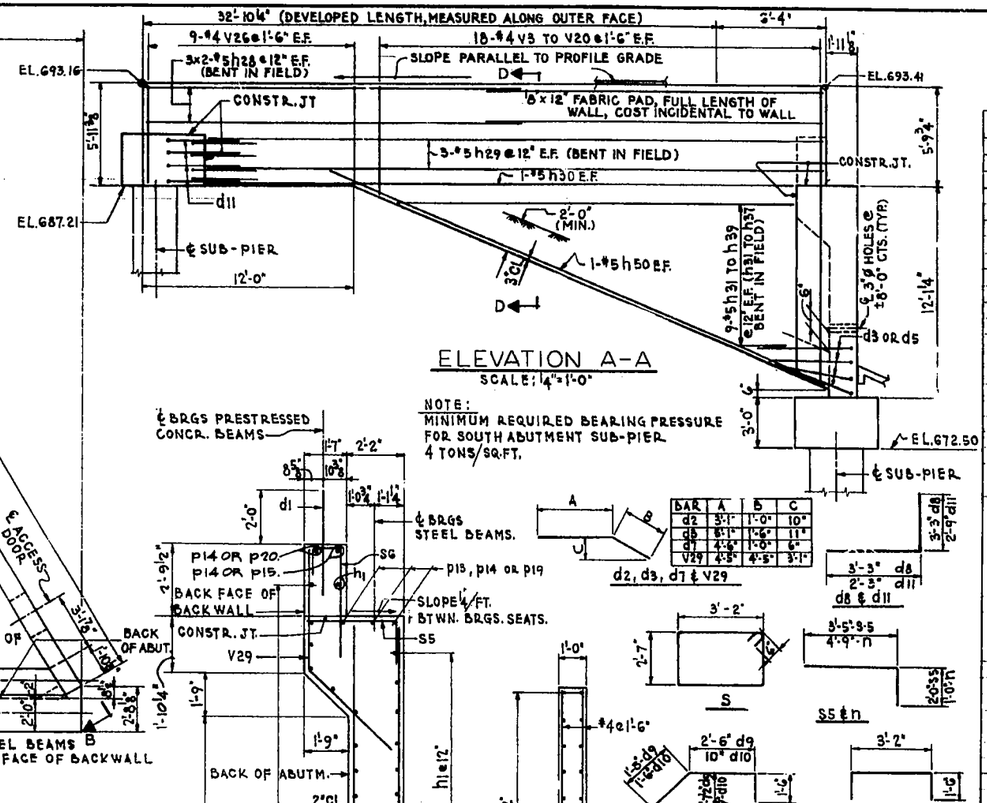
F.A.I. 74 - SECTION 81-1HB-4
F.A.I. 74 UNDER 27TH STREET CONNECTION
ROCK ISLAND COUNTY
STATION 389+28.44

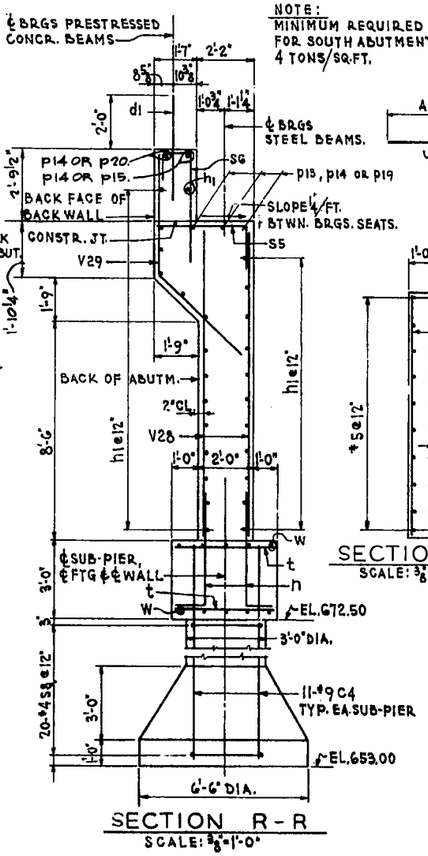
SCALE: AS NOTED DATE:

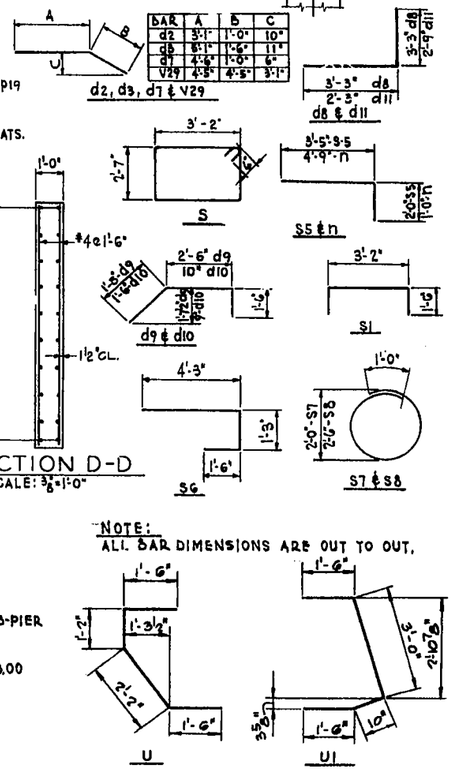
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	438	149
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

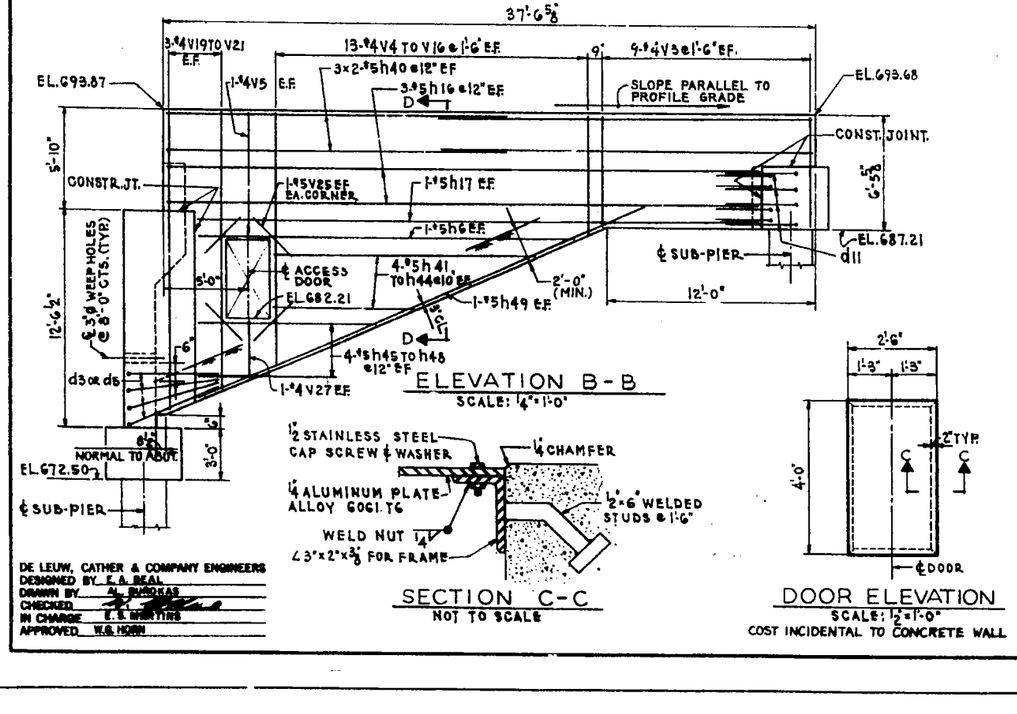
DWG. NO. S-18











DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY F. A. BEAL
DRAWN BY A. BUROKAS
CHECKED
IN CHARGE E. S. MARTINS
APPROVED W. G. HORN

BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE	BAR	NO.	SIZE	LENGTH	SHAPE
c2	16	#9	36'-9"		P11	6	#10	10'-0"	
c4	44	#9	22'-0"		P13	3	#7	16'-7"	
					P14	7	#7	17'-6"	
d1	48	#6	4'-0"		P15	1	#7	3'-7"	
d2	25	#5	4'-1"		P19	3	#7	3'-9"	
d3	13	#5	6'-7"		P20	1	#7	2'-8"	
d5	13	#5	5'-5"		S	35	#5	12'-6"	
d7	13	#5	5'-6"		S1	19	#4	6'-2"	
d8	13	#5	6'-6"		S5	35	#5	5'-5"	
d9	13	#5	5'-8"		S6	33	#5	7'-0"	
d10	3	#5	3'-10"		S7	68	#4	7'-2"	
d11	16	#5	5'-0"		S8	80	#4	8'-10"	
h1	52	#5	18'-0"		t	74	#5	3'-6"	
h6	2	#5	21'-6"		U	4	#6	6'-4"	
h16	6	#5	54'-0"		U1	4	#6	6'-10"	
h17	2	#5	32'-2"						
h28	12	#5	20'-6"		V3	20	#4	6'-0"	
h29	6	#5	35'-4"		V4	4	#4	6'-6"	
h30	2	#5	38'-6"		V5	6	#4	7'-2"	
h31	2	#5	22'-10"		V6	4	#4	7'-9"	
h32	2	#5	20'-5"		V7	4	#4	8'-5"	
h33	2	#5	17'-11"		V8	4	#4	9'-1"	
h34	2	#5	15'-7"		V9	4	#4	9'-8"	
h35	2	#5	13'-2"		V10	4	#4	10'-4"	
h36	2	#5	10'-9"		V11	4	#4	11'-0"	
h37	2	#5	8'-4"		V12	4	#4	11'-7"	
h38	2	#5	5'-11"		V13	4	#4	12'-3"	
h39	2	#5	3'-6"		V14	4	#4	12'-11"	
h40	12	#5	19'-4"		V15	4	#4	13'-6"	
h41	2	#5	14'-9"		V16	4	#4	14'-2"	
h42	2	#5	12'-10"		V17	2	#4	4'-10"	
h43	2	#5	10'-11"		V18	2	#4	15'-5"	
h44	2	#5	8'-2"		V19	4	#4	16'-1"	
h45	2	#5	10'-9"		V20	4	#4	16'-9"	
h46	2	#5	8'-9"		V21	2	#4	17'-4"	
h47	2	#5	6'-5"		V25	8	#5	5'-0"	
h48	2	#5	4'-1"		V26	18	#4	5'-6"	
h49	2	#5	27'-3"		V27	2	#4	3'-9"	
h50	2	#5	29'-0"		V28	77	#5	11'-11"	
n	71	#5	5'-9"		V29	33	#5	8'-10"	
p3	10	#10	26'-6"						
p5	3	#6	16'-2"		W	10	#5	30'-6"	
p6	1	#6	4'-4"						
p7	1	#6	4'-0"						
p8	1	#6	3'-0"						
p9	10	#10	20'-10"						
p10	12	#10	14'-6"						

NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL*

ITEM	UNIT	QUANTITY
CLASS X CONCRETE	CU. YD.	104.7
REINFORCING BARS	POUND	17,440
SUB-PIER SHAFTS	CU. FT.	1237.0
CLASS A EXCAVATION FOR STRUCTURES	CU. YD.	156.
NAME PLATE	EACH	1

*INCLUDES MATERIALS FOR DETAILS SHOWN FOR SOUTH ABUTMENT & SOUTH APPROACH BENT ON DWGS S-19 & S-20.

SOUTH VAULTED ABUTMENT
GENERAL PLAN & DETAILS

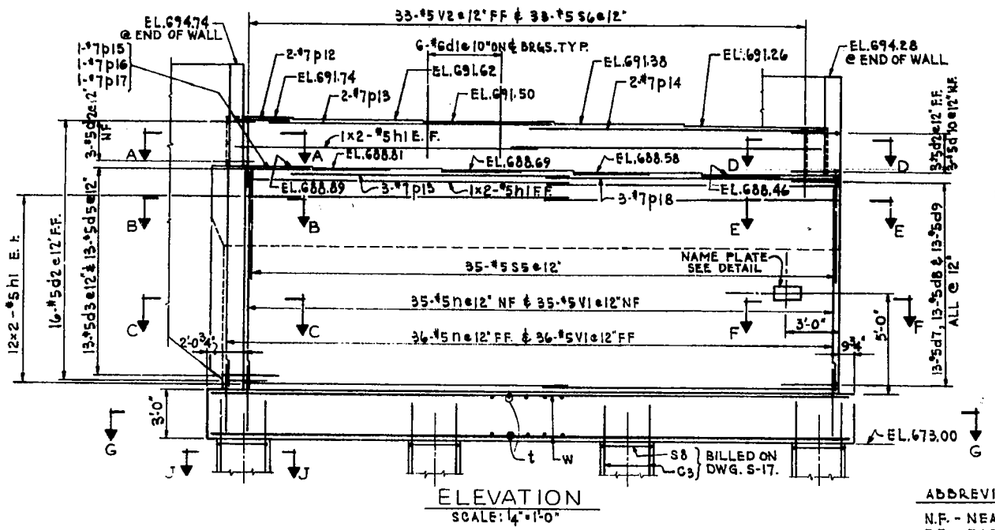
F.A.I. 74-SECTION 81-1HB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

ROCK ISLAND COUNTY

STATION 359+28.44

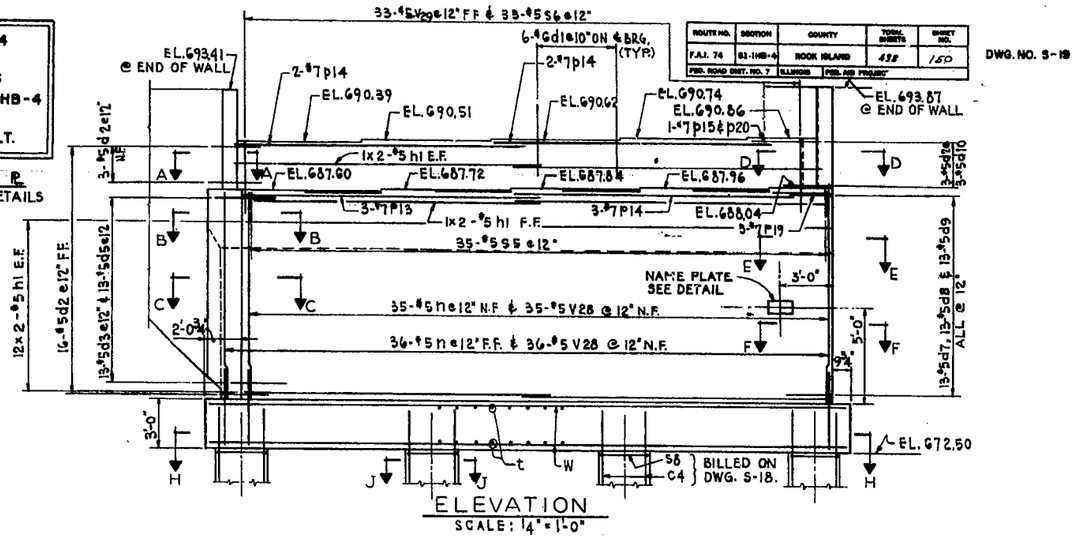
SCALE: AS NOTED DATE:



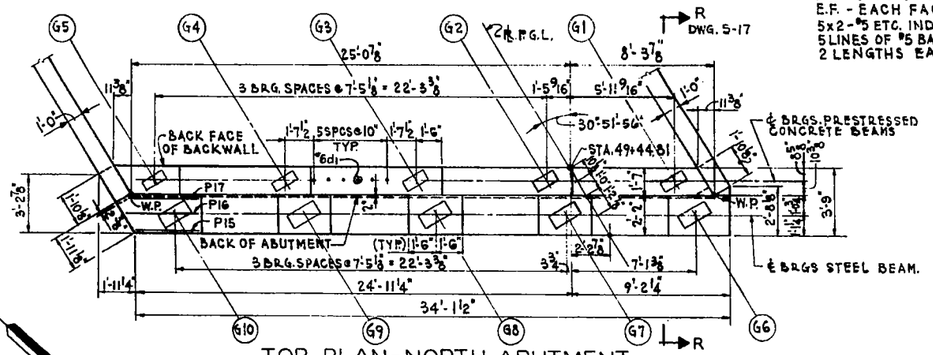
ELEVATION
SCALE: 1/4"=1'-0"

STATION 359+28.44
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. 81-1HB-4
F.A. PROJ. I-74-1(34)
LOADING HS20 & ALT.

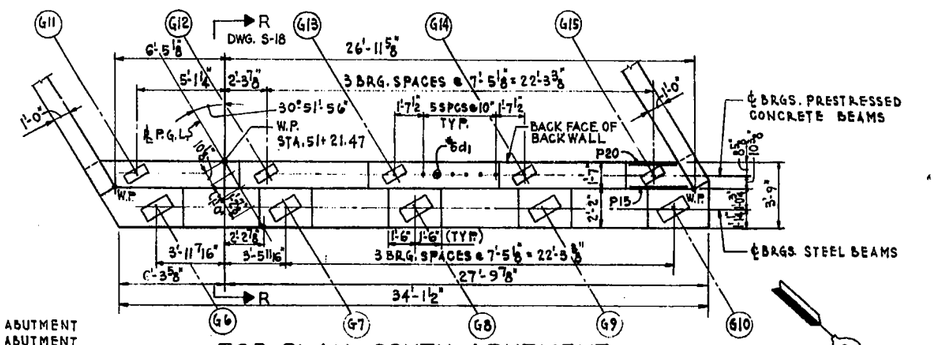
LETTERING FOR NAME PL
SEE STANDARD 2113-1 FOR DETAILS



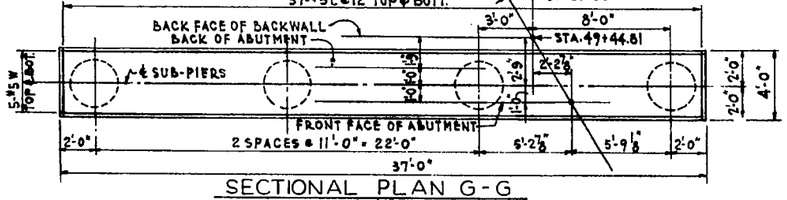
ELEVATION
SCALE: 1/4"=1'-0"



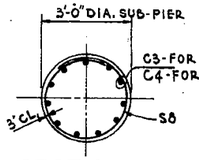
TOP PLAN-NORTH ABUTMENT
SCALE: 1/4"=1'-0"



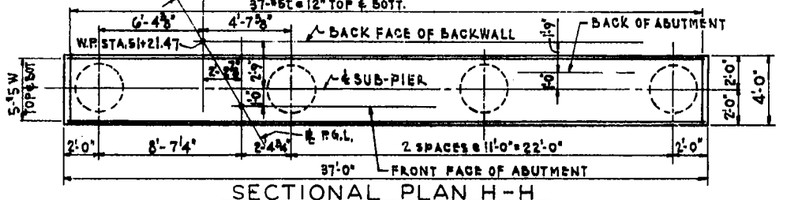
TOP PLAN-SOUTH ABUTMENT
SCALE: 1/4"=1'-0" (SEE N. ABUT. FOR DIMENSIONS NOT SHOWN HERE.)



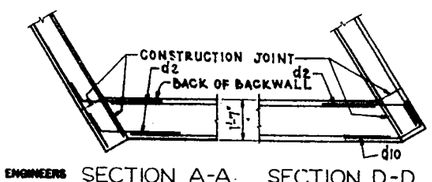
SECTIONAL PLAN G-G
SCALE: 1/4"=1'-0"



SECTION J-J
SCALE: 3/8"=1'-0"

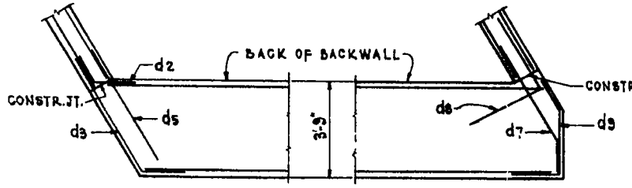


SECTIONAL PLAN H-H
SCALE: 1/4"=1'-0"



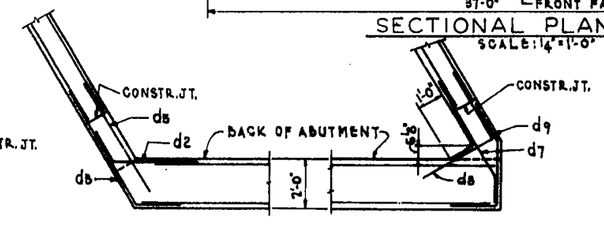
SECTION A-A
SCALE: 3/8"=1'-0"

SECTION D-D
SCALE: 3/8"=1'-0"



SECTION B-B
SCALE: 3/8"=1'-0"

SECTION E-E
SCALE: 3/8"=1'-0"



SECTION C-C
SCALE: 3/8"=1'-0"

SECTION F-F
SCALE: 3/8"=1'-0"

ABBREVIATIONS:
N.F. - NEAR FACE
F.F. - FAR FACE
E.F. - EACH FACE
5x2-#5 ETC. INDICATES 5 LINES OF #5 BARS WITH 2 LENGTHS EACH.

NOTES:
SPACE REINFORCEMENT IN ABUTMENT TO MISS ANCHOR BOLTS.
POUR STEPS MONOLITHICALLY WITH ABUT. WALL.
WORK THIS SHEET WITH DWG. S-16, S-17 & S-18.
FOR BILL OF MATERIAL AND BAR LIST SEE DWG. S-17 & 18.
FOR TYPICAL NORTH ABUT. SECTION SEE DWG. S-17.
FOR TYPICAL SOUTH ABUT. SECTION SEE DWG. S-18.

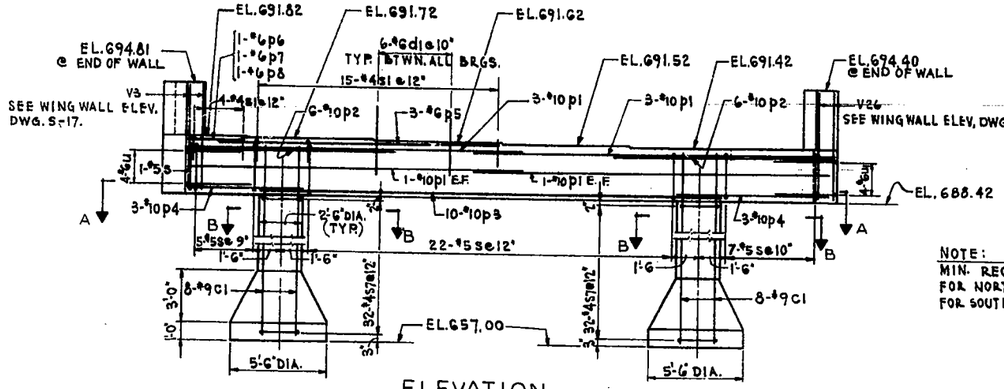
DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY E. A. BEAL
DRAWN BY AL. BURCKAS
CHECKED
IN CHARGE E. B. [illegible]
APPROVED W. G. HORN

ABUTMENT DETAILS
F.A.I. 74 - SECTION 81-1HB-4
F.A.I. 74 UNDER 27TH STREET CONNECTION
ROCK ISLAND COUNTY
STATION 359+28.44

SCALE: AS NOTED DATE:

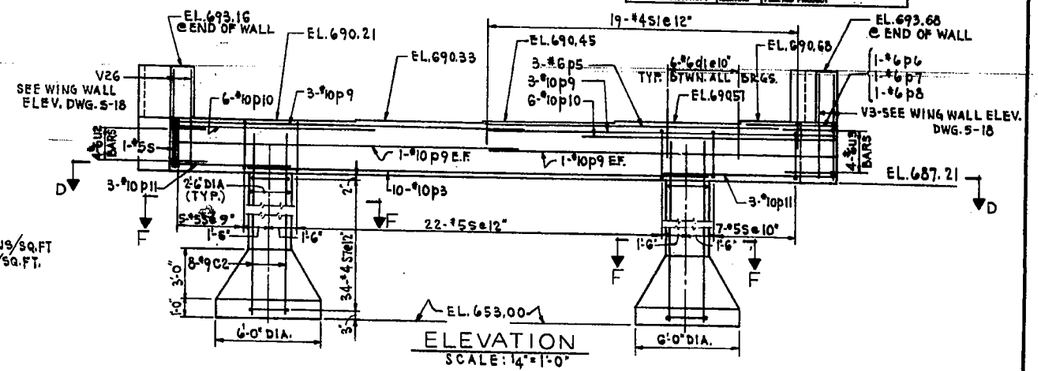
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-IHB-4	ROCK ISLAND	458	151
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

DWG. NO. S-20

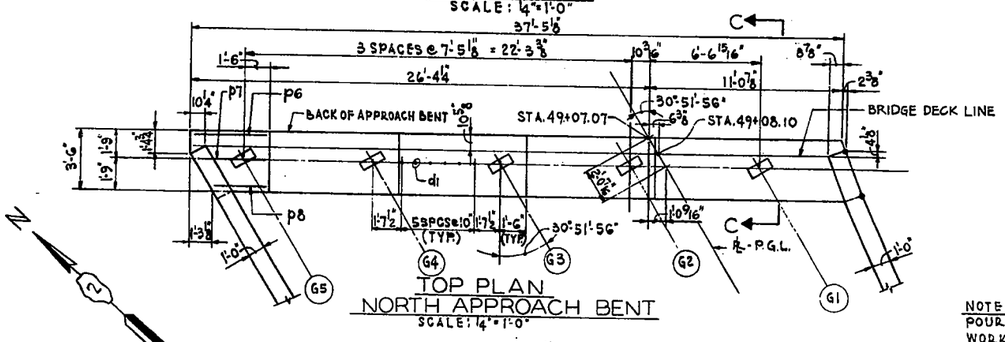


ELEVATION
SCALE: 1/4"=1'-0"

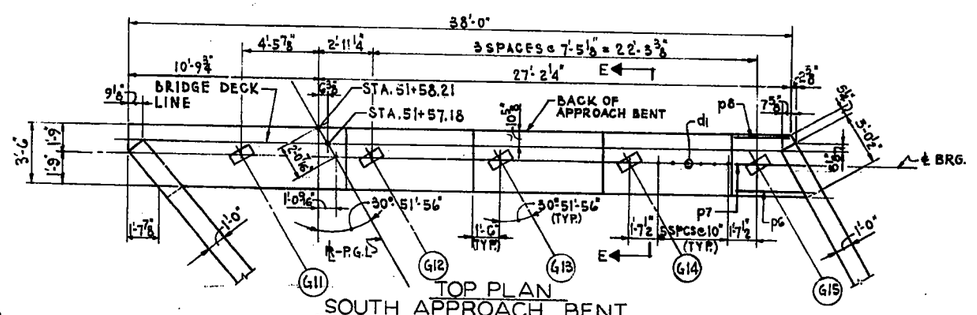
NOTE:
MIN. REQUIRED BEARING PRESSURE:
FOR NORTH APPROACH BENT SUB-PIERS 5 TONS/SQ.FT
FOR SOUTH APPROACH BENT SUB-PIER - 4 TONS/SQ.FT.



ELEVATION
SCALE: 1/4"=1'-0"

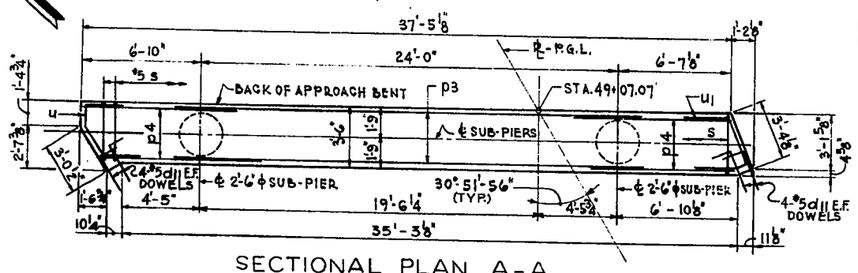


TOP PLAN
NORTH APPROACH BENT
SCALE: 1/4"=1'-0"

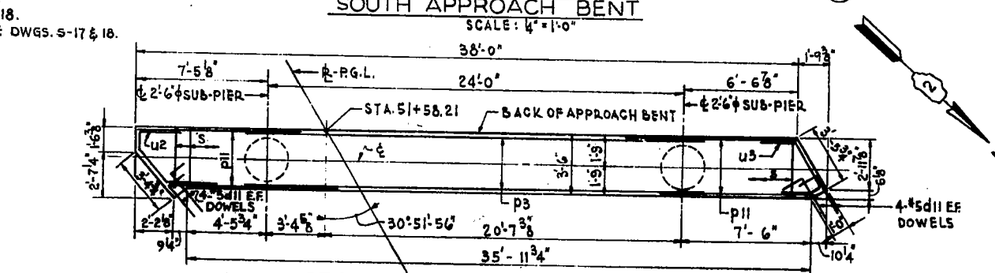


TOP PLAN
SOUTH APPROACH BENT
SCALE: 1/4"=1'-0"

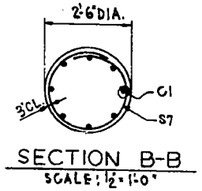
NOTE:
POUR STEPS MONOLITHICALLY WITH CAP.
WORK THIS SHEET WITH DWGS. S-17 & S-18.
FOR BILL OF MATERIALS AND BAR LIST SEE DWGS. S-17 & 18.
E.F. DENOTES EACH FACE



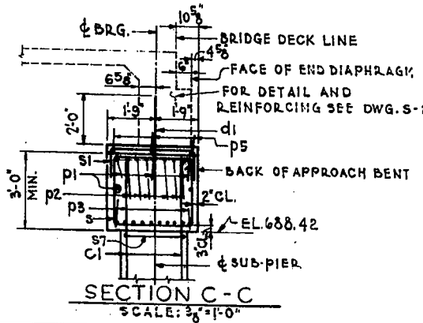
SECTIONAL PLAN A-A
SCALE: 1/4"=1'-0"



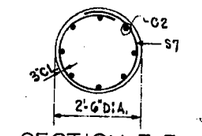
SECTIONAL PLAN D-D
SCALE: 1/4"=1'-0"



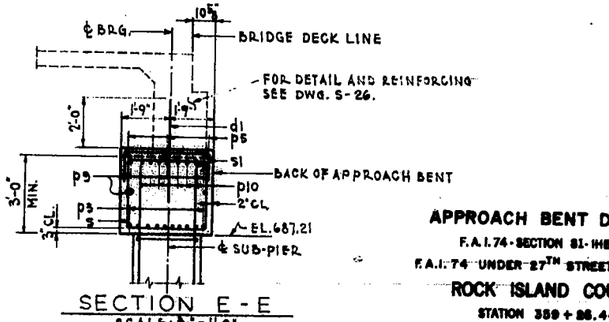
SECTION B-B
SCALE: 1/2"=1'-0"



SECTION C-C
SCALE: 3/8"=1'-0"



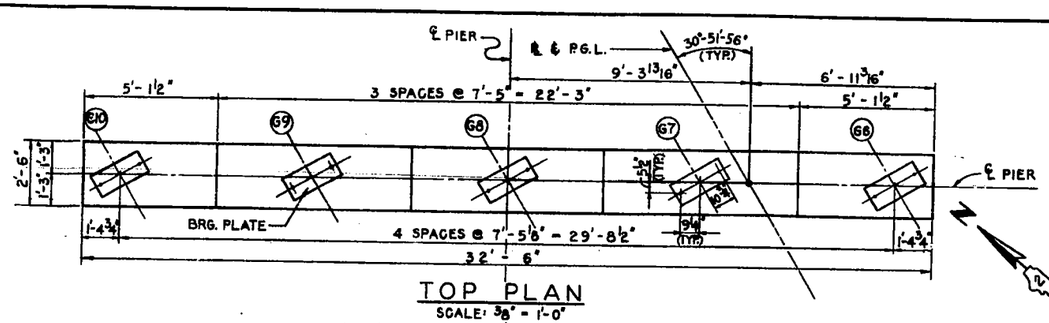
SECTION F-F
SCALE: 1/2"=1'-0"



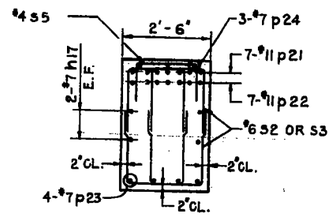
SECTION E-E
SCALE: 3/8"=1'-0"

DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY E. A. BEAL
DRAWN BY AL BUROKAS
CHECKED
IN CHARGE E. S. MARTINS
APPROVED W. G. HORN

APPROACH BENT DETAILS
F.A.I. 74 - SECTION 81-IHB-4
F.A.I. 74 UNDER 27TH STREET CONNECTION
ROCK ISLAND COUNTY
STATION 359+88.44
SCALE: AS NOTED DATE:



TOP PLAN
SCALE: 3/8" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"

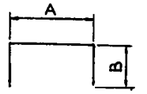
NOTES:
SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
MIN. BAR LAPS = 24" DIA. UNLESS OTHERWISE NOTED.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS, EXCEPT AS NOTED.
POUR STEPS MONOLITHICALLY WITH CAP.
MINIMUM REQUIRED BEARING PRESSURE FOR SUB-PIER 5 TONS/SQ.FT.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	458	152
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

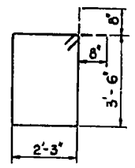
DWG. NO. S-21

BAR LIST

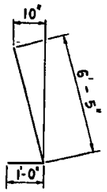
BAR	NO.	SIZE	LENGHT	SHAPE
h17	4	#5	32'-2"	—
h51	6	#5	28'-6"	—
h52	26	#5	14'-8"	—
n1	37	#7	14'-8"	—
n2	4	#7	7'-5"	L
p21	7	#11	32'-2"	—
p22	14	#11	11'-7"	—
p23	8	#7	11'-0"	—
p24	3	#7	12'-4"	—
s2	48	#6	6'-4"	□
s3	56	#6	6'-1"	□
s4	39	#5	8'-2"	□
s5	13	#4	3'-8"	□
s9	21	#5	4'-6"	□
s10	44	#4	6'-10"	○
s11	60	#7	12'-10"	□
t1	12	#11	15'-4"	⊓
t2	36	#11	10'-6"	—
u3	8	#6	5'-0"	⊓
u4	20	#6	6'-4"	⊓
v30	8	#6	10'-0"	—
v31	40	#6	13'-2"	—
v32	30	#6	15'-0"	—
v33	44	#9	13'-5"	—
w1	6	#9	18'-6"	—
w2	6	#8	18'-6"	—
w3	12	#7	10'-8"	—
w4	6	#10	18'-6"	—



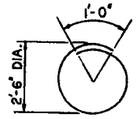
BAR	A	B
s2	1'-7"	2'-4 1/2"
s3	1'-7"	3'-3"
s4	2'-2"	3'-0"
s5	1'-8"	1'-0"
s9	2'-0"	1'-3"
n1	2'-0"	6'-4"
t1	10'-4"	2'-6"
u3	2'-0"	1'-6"
u4	3'-4"	1'-6"



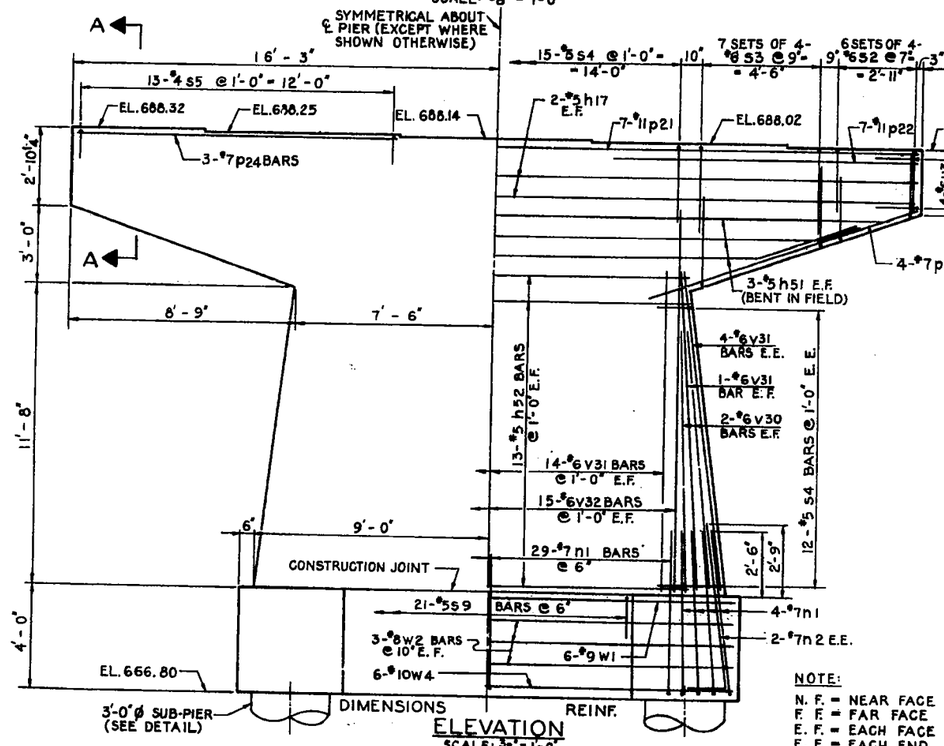
BAR S11



BAR n2

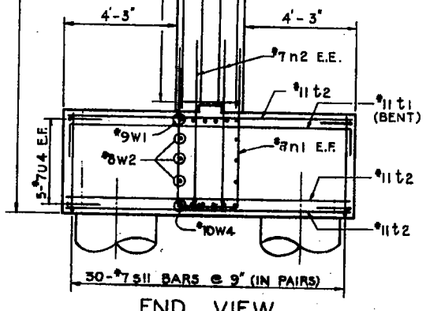


BAR S10

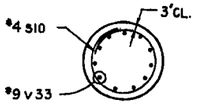


ELEVATION
SCALE: 3/8" = 1'-0"

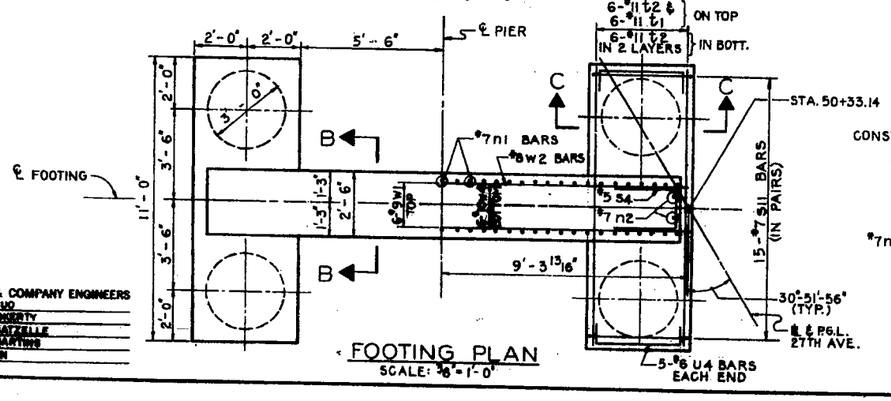
NOTE:
N. F. = NEAR FACE
F. F. = FAR FACE
E. F. = EACH FACE
E. E. = EACH END



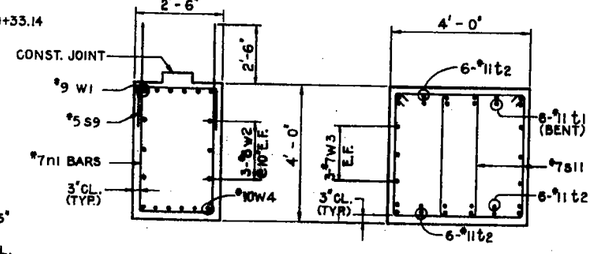
END VIEW
SCALE: 3/8" = 1'-0"



SECTION D-D

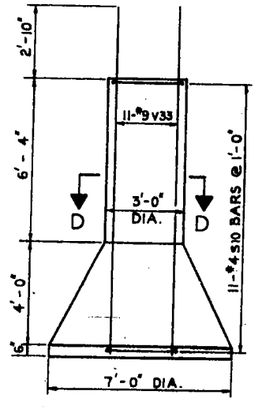


FOOTING PLAN
SCALE: 3/8" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"

SECTION C-C
SCALE: 1/2" = 1'-0"



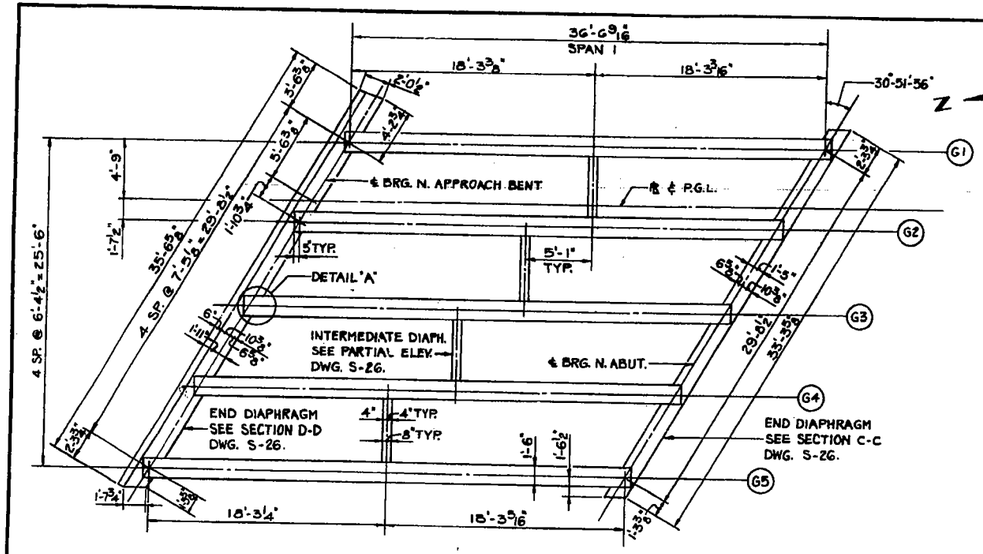
SUB-PIER DETAILS
SCALE: 3/8" = 1'-0"

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CLASS A EXCAVATION FOR STRUCTURES	CU.YD.	55
SUB-PIER SHAFTS	CU. FT.	331.0
CLASS X CONCRETE	CU.YD.	49.7
REINFORCEMENT BARS	POUND	15,870

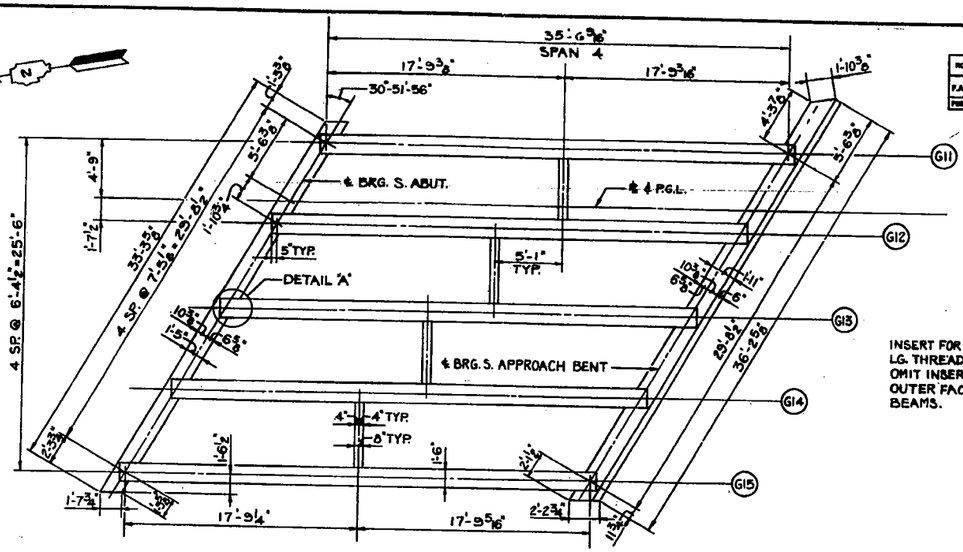
PIER DETAILS
F.A.I. 74 - SECTION 81-1HB-4
F.A.I. 74 UNDER 27TH STREET CONNECTION
ROCK ISLAND COUNTY
STATION 359+28.44
SCALE: AS NOTED DATE:

LEUW, CATHER & COMPANY ENGINEERS
SIGNED BY W. Y. HUO
DRAWN BY H. WLODKOWSKI
CHECKED W. J. BATTZELLE
CHARGE E. G. MARTYNS
APPROVED W. G. HORN



FRAMING PLAN - NORTH END SPAN

SCALE: 3/16" = 1'-0"

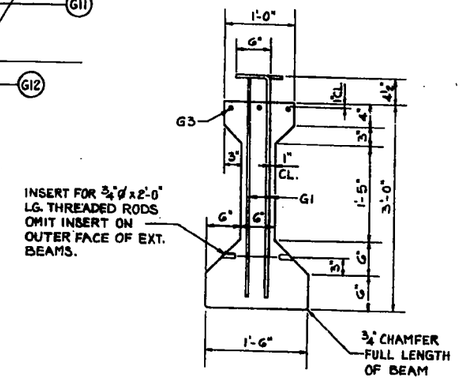


FRAMING PLAN SOUTH END SPAN

SCALE: 3/16" = 1'-0"

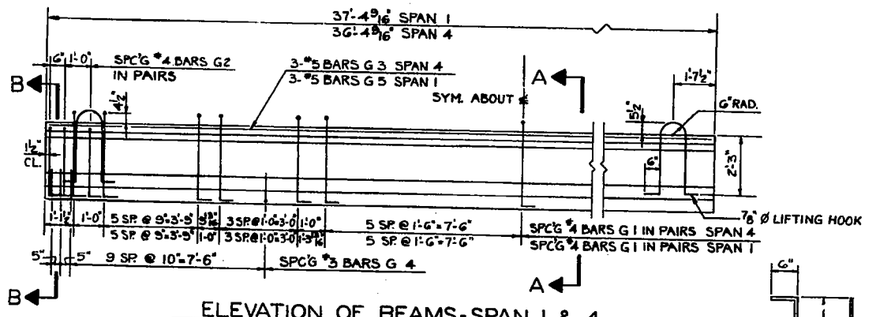
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1NB-4	ROCK ISLAND	198	153
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

DWG. NO. S-22



SECTION A-A

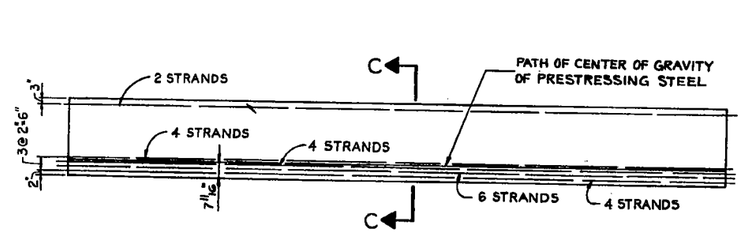
SCALE: 1" = 1'-0"



ELEVATION OF BEAMS - SPAN 1 & 4

SHOWING REINFORCEMENT

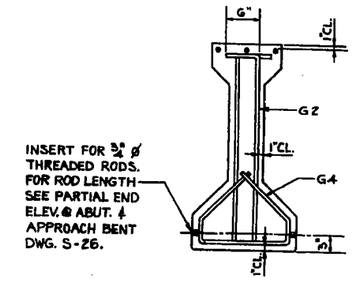
SCALE: 3/8" = 1'-0"



ELEVATION OF BEAMS SPAN 1 & 4

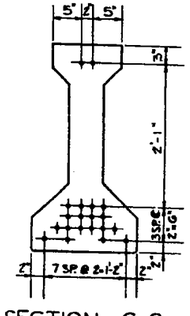
SHOWING PRESTRESSING STEEL

SCALE: 3/8" = 1'-0"



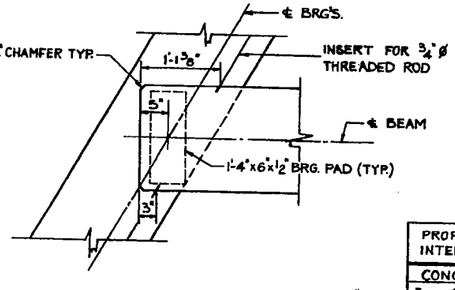
SECTION B-B

SCALE: 1" = 1'-0"



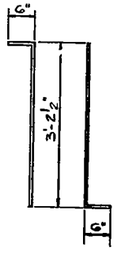
SECTION C-C

SCALE: 1" = 1'-0"



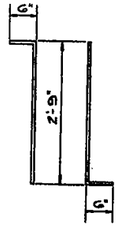
DETAIL "A"

SCALE: 1" = 1'-0"



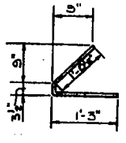
BAR G-1

SCALE: 3/4" = 1'-0"



BAR G-2

SCALE: 3/4" = 1'-0"



BAR G-4

SCALE: 3/4" = 1'-0"

BAR LIST				
BAR	NO.	SIZE	LENGTH	SHAPE
G1	660	#4	4'-2 1/2"	7 L
G2	120	#4	3'-9"	7 L
G3	15	#5	36'-2"	—
G4	480	#5	2'-7"	∠
G5	15	#5	37'-2"	—

PROPERTIES OF INTERIOR BEAMS	
CONCRETE I BEAM	
I in⁴	48648
S_T in³	2358
S_B in³	3165
COMPOSITE SEC.	
I_C in⁴	142379
S_{TC} in³	6757
S_{BC} in³	5426

TABLE OF MOMENTS & SHEARS - INTERIOR BEAMS

		SPAN 1			SPAN 4			
		CONCRETE I BEAM			CONCRETE I BEAM			
LOAD	MAX. MIN. FT. KIPS	SHEAR (KIPS) SUPPORT	¼ POINT	½ POINT	MAX. MOM. FT. KIPS	SHEAR (KIPS) SUPPORT	¼ POINT	½ POINT
D.L.	176	18.3	9.2	0	167	18.0	9.0	0
	COMPOSITE SECTION				COMPOSITE SECTION			
S.D.L.	63	7.0	3.5	0	60	6.8	3.4	0
L.L.	225	31.0	20.7	11.5	214	30.7	20.5	11.2
IMPACT	68	9.3	6.2	3.5	65	9.2	6.1	3.4

NOTES

STEEL FOR LIFTING HOOKS SHALL BE NON-DEFORMED BARS OF STRUCTURAL OR INTERMEDIATE GRADE BILLET STEEL.

END OF BEAMS TO BE ENCASED WITH CAST IN-PLACE CONCRETE SHALL NOT BE COATED WITH ASPHALT PAINT.

AN ALTERNATE STRAND PATTERN USING EXTRA-HIGH STRENGTH PRESTRESSING STRAND (270 K.S.I.) IS PERMITTED. SEE SPECIAL PROVISIONS.

ALL INSERTS & THREADED RODS FOR INSERTS, REINFORCING & PRESTRESSING STEEL & OTHER ITEMS WHICH ARE CAST INTO THE PRECAST CONCRETE I-BEAMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LINEAL FOOT OF "FURNISHING & ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36 IN."

INSERTS FOR 3/4" ø THREADED RODS ARE TO BE TWO STRUT, COIL TYPE FOR INTERIOR I-BEAMS & SINGLE COIL, FLARED LOOP TYPE FOR EXTERIOR I-BEAMS.

PRESTRESSING STEEL SHALL HAVE A NOMINAL DIAMETER OF 7/16".

BILL OF MATERIAL		
ITEM	UNIT	TOTAL
FURNISHING & ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36"	LIN. FT.	369

QUANTITY OF CAST IN-PLACE CONCRETE FOR DIAPHRAGM INCLUDED IN BILL OF MATERIAL FOR DECK SLAB DWG. S-26.

DE LEUW, CATHER & COMPANY ENGINEERS

DESIGNED BY W.Y. HUO

DRAWN BY R.S. SHORBAGHAN

CHECKED W.F. MATZELLE

IN CHARGE E.S. MARTINS

APPROVED W.G. HORN

PRESTRESSED CONCRETE FRAMING & DETAILS

F.A.I. 74 - SECTION 81-1NB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

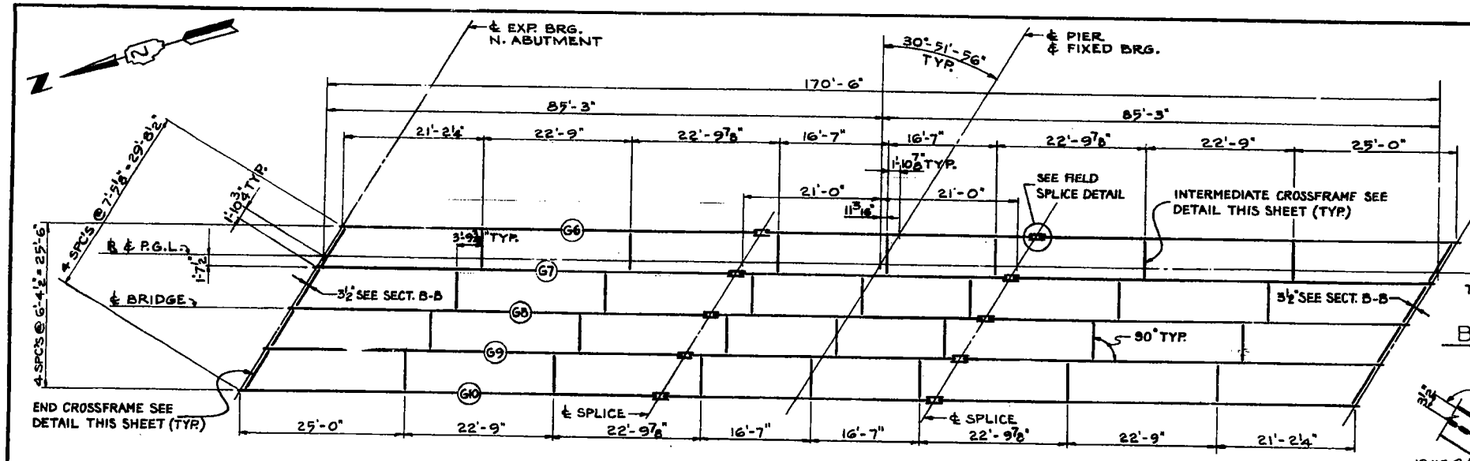
ROCK ISLAND COUNTY

STATION 359 + 20.44

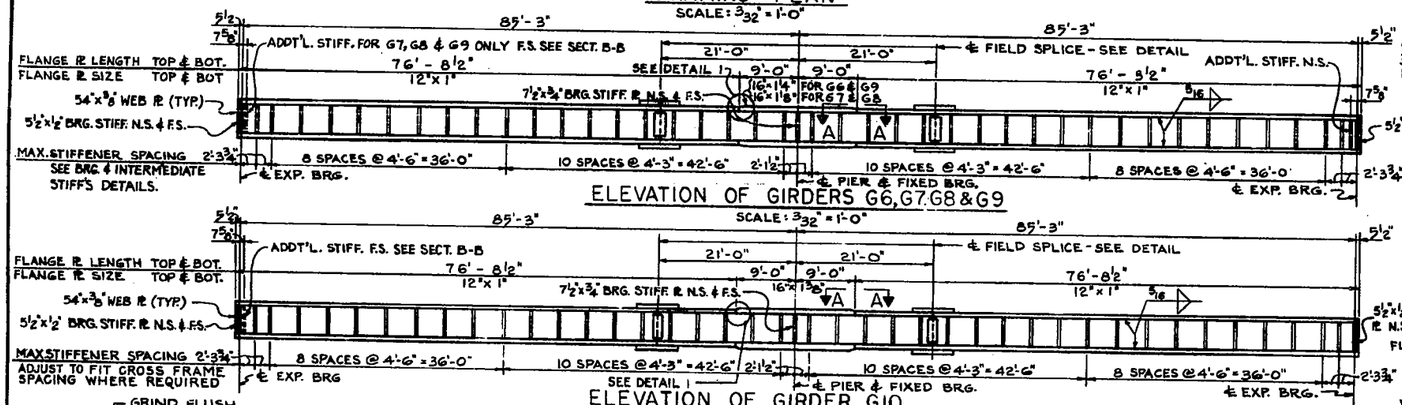
SCALE: AS NOTED DATE:

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	458	154
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

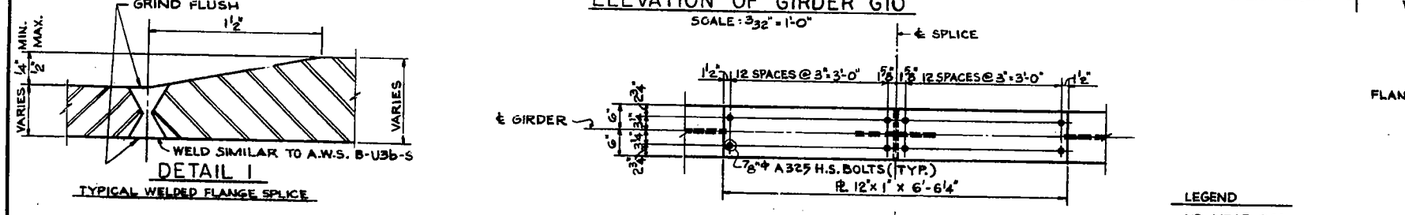
DWG. NO. S-23



FRAMING PLAN
SCALE: 3/32" = 1'-0"

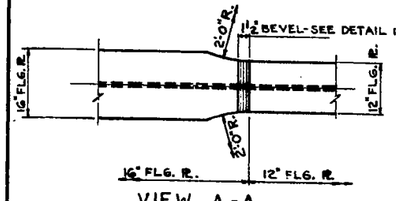


ELEVATION OF GIRDERS G6, G7, G8 & G9
SCALE: 3/32" = 1'-0"

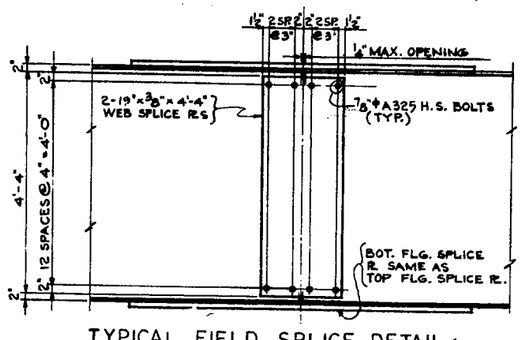


ELEVATION OF GIRDER G10
SCALE: 3/32" = 1'-0"

DETAIL 1
TYPICAL WELDED FLANGE SPLICE

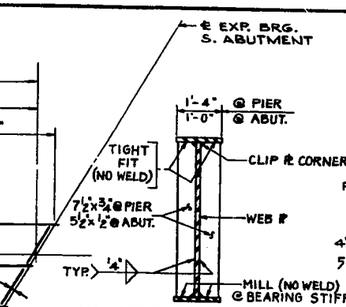


VIEW A-A
PLAN OF TYPICAL TRANSITION FROM 16" TO 12" FLANGE ℝ
SCALE: 3/4" = 1'-0"

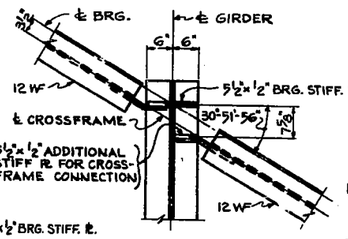


TYPICAL FIELD SPLICE DETAIL (G6 THRU G10)
SCALE: ¾" = 1'-0"

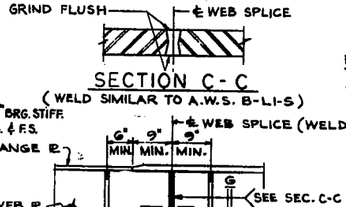
LEGEND
NS = NEAR SIDE
FS = FAR SIDE



BRG. STIFFENER DETAIL
SCALE: ½" = 1'-0"



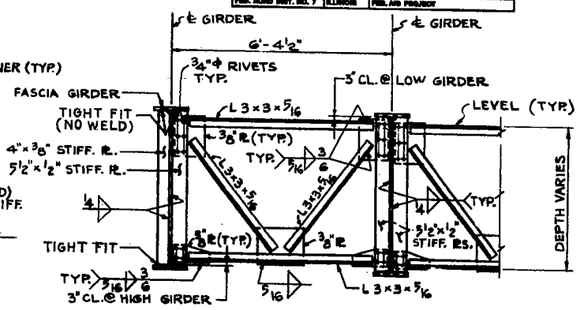
SECTION B-B
SCALE: ¾" = 1'-0"



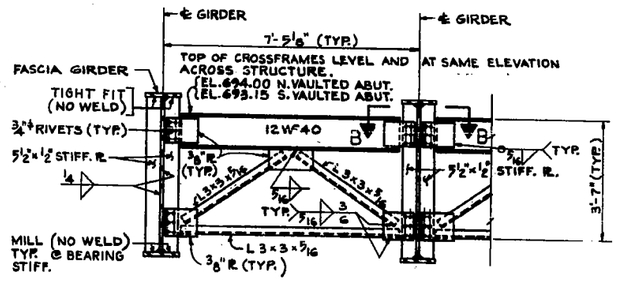
SECTION C-C
(WELD SIMILAR TO A.W.S. B-LI-S)

SPLICE ELEVATION

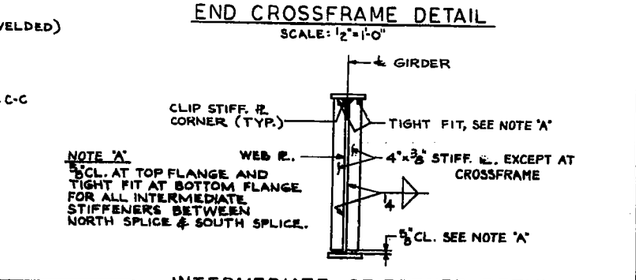
TYPICAL GIRDER SHOP SPLICE DETAIL
(OPTIONAL) NOT TO SCALE



INTERMEDIATE CROSSFRAME DETAIL
SCALE: ½" = 1'-0"



END CROSSFRAME DETAIL
SCALE: ½" = 1'-0"



INTERMEDIATE STIFFENER DETAIL
SCALE: 1" = 1'-0"
TYP. INTERMEDIATE STIFFENERS OTHER THAN AT CROSSFRAMES AS SHOWN - STIFFENERS LOCATED BETWEEN ABUTS. & SPLICES.
AS NOTED - STIFFENERS LOCATED BETWEEN SPLICES.

TABLE OF PROPERTIES INTERIOR BEAMS

STEEL SECTION	ABUT.	.4 SPAN	7 SPAN	PIER
I_S	18410	25072	18410	32270
S_{TS}	663	824	663	1146
S_{BS}	663	824	663	1146

TABLE OF MOMENTS AND REACTIONS - INTERIOR BEAMS

	MOMENTS		REACTIONS	
	.4 SPAN	PIER	ABUT	PIER
D.L.	586.0	-1087	37	125
L.L.	620.0	-568	38	56
IMP.	147.0	-133	9	13
TOTAL	1393.0	-1788	84	194

MOMENTS ARE IN FT.-KIPS.
REACTIONS ARE IN KIPS.

* NOTE:
ADD 690.0000' TO ALL TABULATED ELEVATIONS

TOP OF WEB ELEVATION*

PT GIR.	℄ BRG's N. ABUT.	℄ NORTH SPLICE	℄ PIER	℄ SOUTH SPLICE	℄ BRG's. S. ABUT.
G6	4.189	3.864	3.759	3.654	3.335
G7	4.304	3.983	3.878	3.772	3.451
G8	4.422	4.101	3.996	3.891	3.570
G9	4.341	4.220	4.114	4.010	3.688
G10	4.617	4.296	4.191	4.086	3.765

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	166,490

DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY W.Y. HUO
DRAWN BY R. K. MILLER
CHECKED W. E. MATZELLE
IN CHARGE E. E. SANTINI
APPROVED W. S. HORN

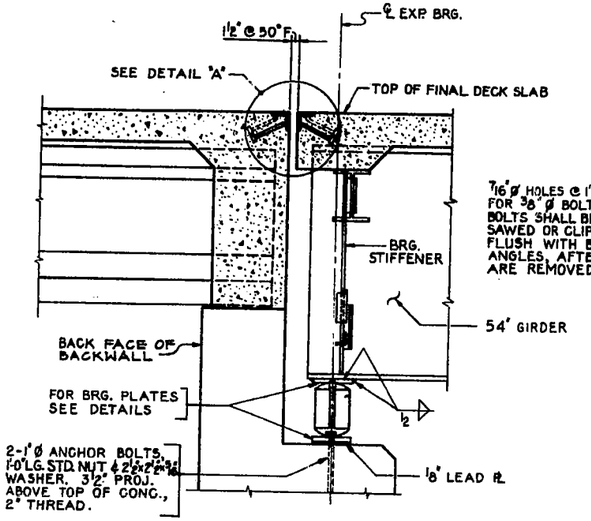
STEEL FRAMING PLAN & DETAILS
F.A.I. 74 - SECTION 81-1HB-4
F.A.I. 74 UNDER 27TH STREET CONNECTION
ROCK ISLAND COUNTY
STATION 359 + 28.44

SCALE: AS NOTED DATE:

Rev. 11-20-69 WEL

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	82-1HB-4	ROCK ISLAND	458	155
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

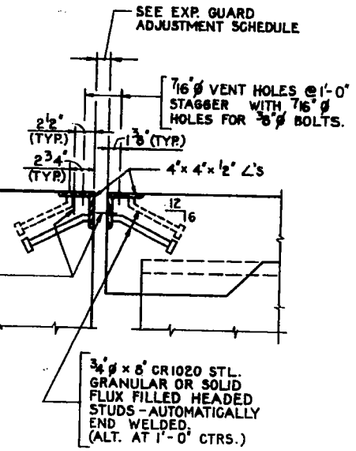
DWG. NO. S-24



TYPICAL SECTION AT ABUTMENT

SCALE: ¾" = 1'-0"

EACH BRG. ASSEMBLLY WEIGHS 285 LB.
-10 REQUIRED-



DETAIL "A"

SCALE: 1½" = 1'-0"

EXPANSION GUARD ADJUSTMENT SCHEDULE						
	110°F	90°F	70°F	50°F	30°F	10°F
OPENING AT N. ABUT. *	1 3/16	1 9/32	1 3/8	1 1/2	1 19/32	1 23/32
OPENING AT S. ABUT. *	1 3/16	1 9/32	1 3/8	1 1/2	1 19/32	1 23/32

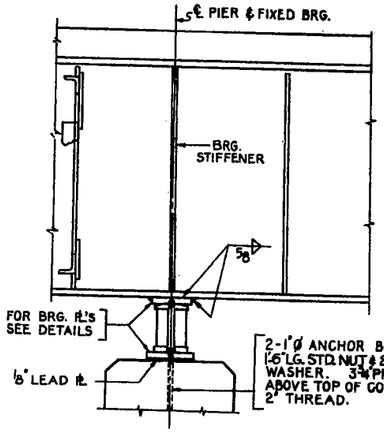
* OPENING MEASURED NORMAL TO ABUTMENT.

EXPANSION GUARD NOTES:

EXPANSION GUARD ASSEMBLIES SHALL BE FABRICATED & ERECTED TO CONFORM TO THE ROADWAY SUPERERELEV. AND SLOPE OF GRADE AT THE GUARD. THEY SHALL BE ASSEMBLED IN THE SHOP FOR INSPECTION.

ALL PARTS OF GUARD ASSEMBLY, INCLUDING STUDS SHALL BE INCLUDED IN WEIGHT OF STRUCTURAL STEEL FOR PAYMENT.

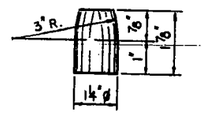
TOTAL WEIGHT OF EXPANSION GUARDS = 1430 LBS.



SECTION AT PIER

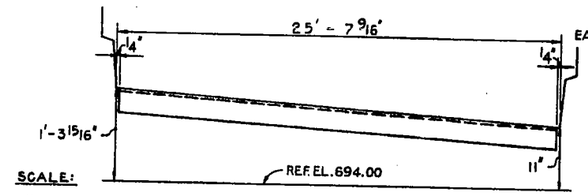
SCALE: ¾" = 1'-0"

EACH BRG. ASSEMBLY WEIGHS 447 LB.
- 5 REQUIRED -



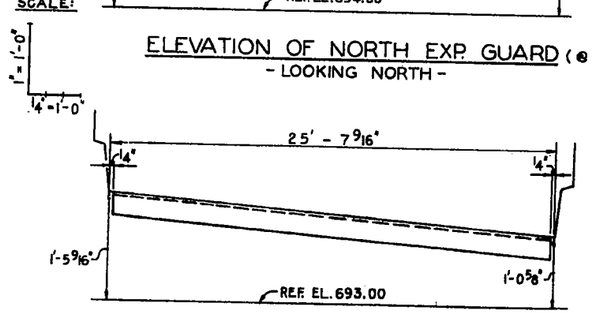
PINTLE DETAIL

HALF SCALE



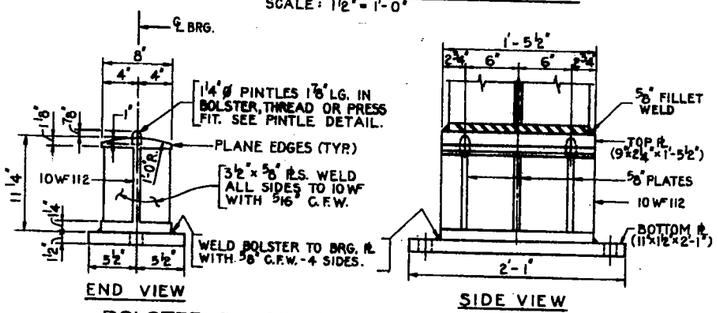
ELEVATION OF NORTH EXP. GUARD (@ ℄ OPEN JT.)

- LOOKING NORTH -



ELEVATION OF SOUTH EXP. GUARD (@ ℄ OPEN JT.)

- LOOKING NORTH -

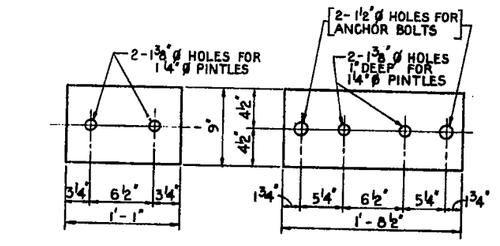


ROCKER DETAIL OF EXPANSION BEARINGS

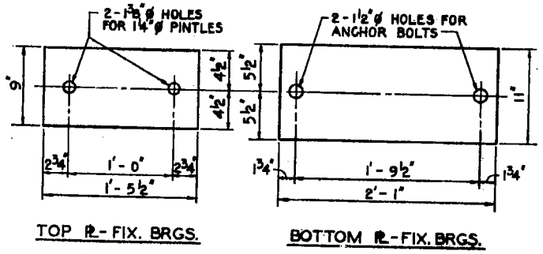
SCALE: 1½" = 1'-0"

BOLSTER DETAIL OF FIXED BEARINGS

SCALE: 1½" = 1'-0"



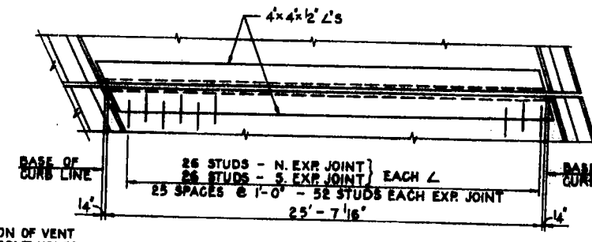
TOP PL - EXP. BRGS. BOTTOM PL - EXP. BRGS.



TOP PL - FIX. BRGS. BOTTOM PL - FIX. BRGS.

BEARING PLATE DETAILS

SCALE: 1½" = 1'-0"



NOTE:
FOR LOCATION OF VENT HOLES AND BOLT HOLES SEE DETAIL "A".

TYPICAL PLAN OF EXPANSION GUARDS

SCALE: 1¼" = 1'-0"

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
FURNISHING & ERECTING STRUCTURAL STEEL	POUND	6,515

BEARINGS & EXPANSION GUARD DETAILS

F.A.I. 74 - SECTION 82-1HB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

ROCK ISLAND COUNTY

STATION 359 + 28.44

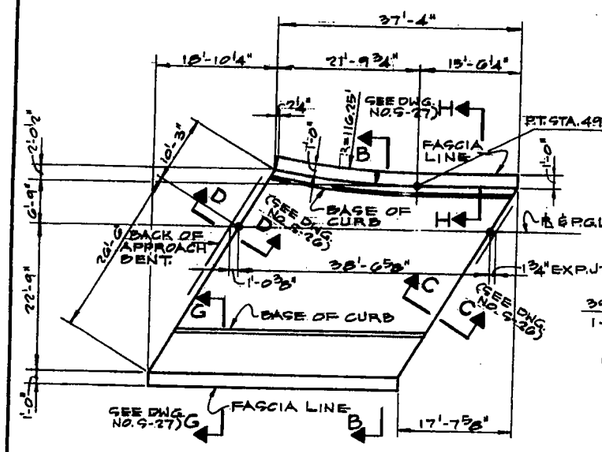
SCALE: AS NOTED DATE:

DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY W.Y. HUO
DRAWN BY M. VAGHERTY
CHECKED W. F. MATZELLE
IN CHARGE E. S. MARTINS
APPROVED W.G. HOSH

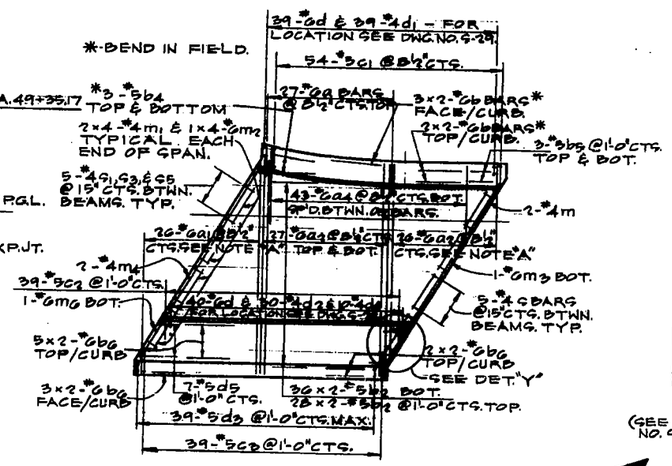
Rev. 4-20-67 WL

ROUTE NO.	DIRECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	438	156
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

DWG. NO. S-25



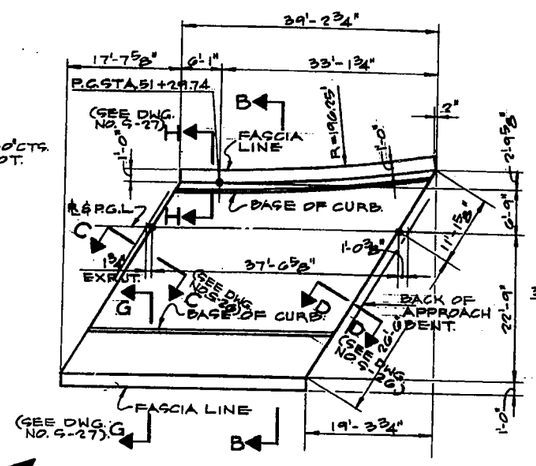
DIMENSIONS



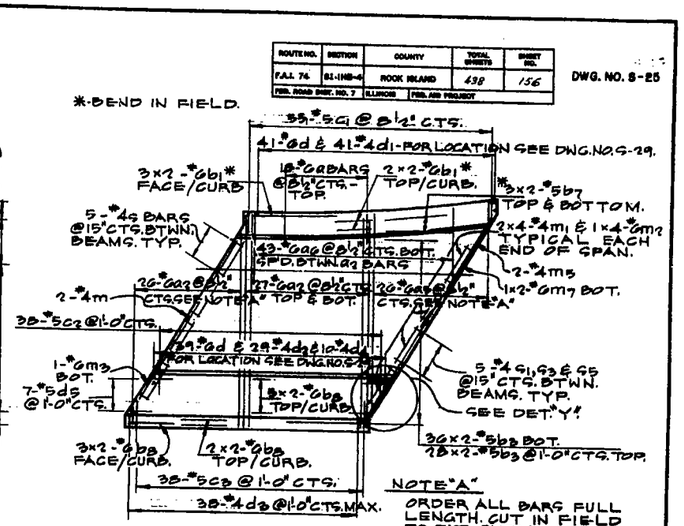
REINFORCEMENT

SPAN 1

NOT TO SCALE



DIMENSIONS



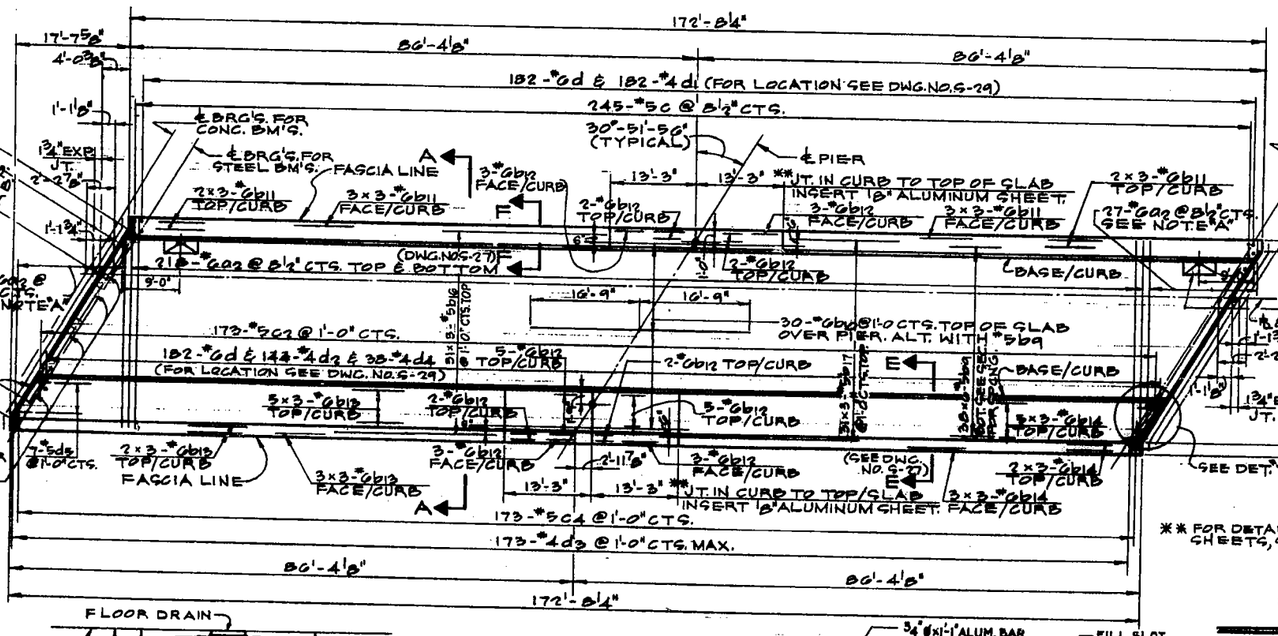
REINFORCEMENT

NOTE "A"

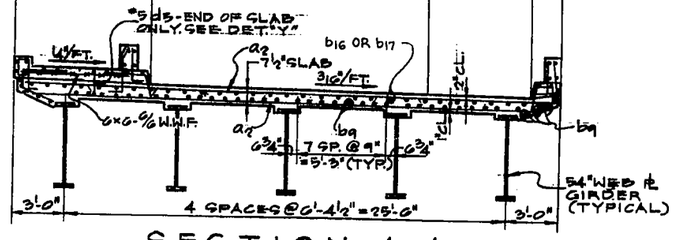
ORDER ALL BARS FULL LENGTH. CUT IN FIELD TO FIT SKEW FOR TOP OF SLAB. USE REMAINDER OF BARS AS BOTTOM REINFORCEMENT IN SAME PANEL.

SPAN 4

NOT TO SCALE

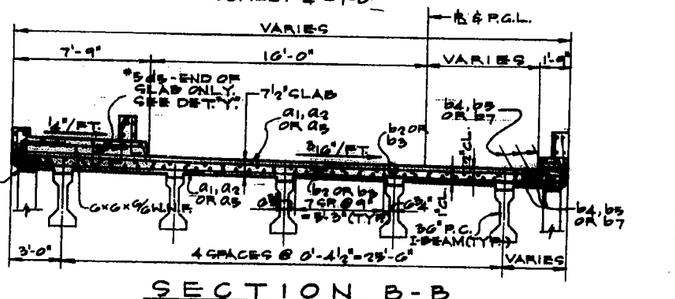


** FOR DETAIL OF ALUMINUM SHEETS, SEE DWG. NO. S-27.



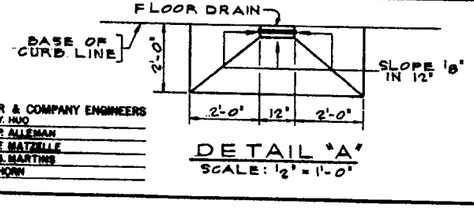
SECTION A-A

SCALE: 1" = 1'-0"



SECTION B-B

SCALE: 1" = 1'-0"

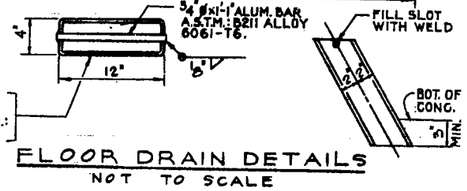


DETAIL "A"

SCALE: ½" = 1'-0"

SPANS 2 & 3

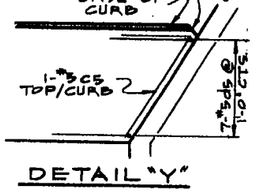
NOT TO SCALE



⅛" ALUM. SHEETS WELDED A.S.T.M.: B209 ALLOY 6061-T6 OR ALUM. EXTRUSIONS, A.S.T.M.: B221 ALLOY 6061-T6.

FLOOR DRAIN DETAILS

NOT TO SCALE



DETAIL "Y"

NOTE:

ALL PLAN DIMENSIONS ARE AT 50°F.

DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY W. Y. HUO
DRAWN BY G. P. ALLEMAN
CHECKED W. F. MATZELLE
IN CHARGE E. S. MARTINS
APPROVED W. G. HORN

DECK SLAB PLAN & SECTIONS

F.A.I. 74 - SECTION 81-1HB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

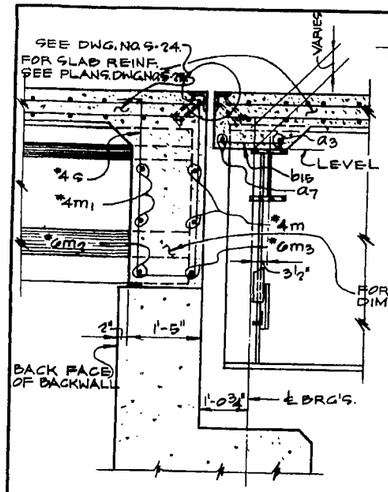
ROCK ISLAND COUNTY

STATION 359+28.44

SCALE: AS NOTED DATE:

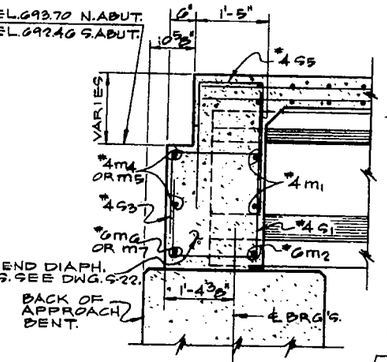
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	458	157
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

DWG. NO. S-26



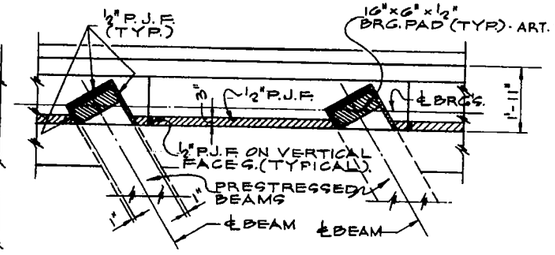
SECTION C-C

SCALE: ¾" = 1'-0"



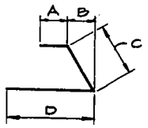
SECTION D-D

SCALE: ¾" = 1'-0"



DETAIL OF BRG. PAD & P.J.F.

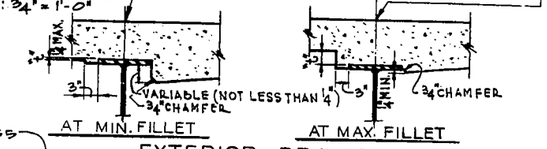
SCALE: ½" = 1'-0"



BARS m8, m9, m10, m12, m19 AND m21

BAR DIM.	m8	m9	m10	m12	m19	m21
A	1'-0"	5"	2'-0"	2'-0"	1'-1"	0"
B	10"	10"	8½"	8½"	8"	8"
C	1'-8"	1'-8"	1'-8"	1'-8"	1'-4"	1'-4"
D	2'-0"	2'-0"	3'-9"	3'-2"	2'-0"	2'-0"

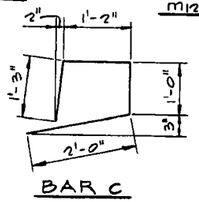
TOP OF CONCRETE SLAB ELEVATIONS, ADJUSTED FOR DEAD LOAD DEFLECTIONS, TABULATED IN TABLE "A" DWG. S-27.



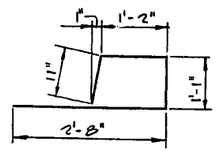
EXTERIOR BEAMS

SCALE: ¾" = 1'-0"

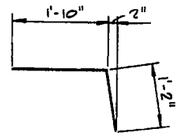
IN ALL CASES PROVIDE A MINIMUM CLEARANCE OF ¾ BETWEEN TRANSVERSE SLAB BAR AND TOP OF FLANGE PLATES OR SPLICE PLATES.



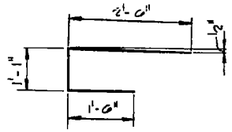
BAR c



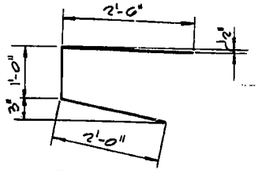
BAR c1



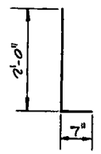
BAR c2



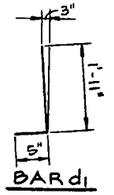
BAR c3



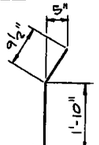
BAR c4



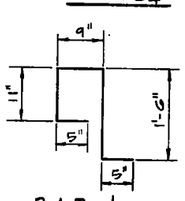
BAR d



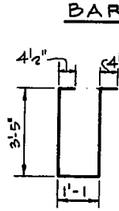
BAR d1



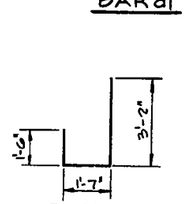
BAR d2



BAR d3

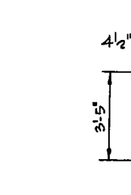


BARS

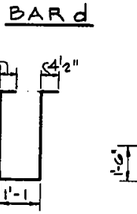


BAR s1

BAR d4



BAR s3



BAR s4

BAR s5

BAR c5

BAR d5

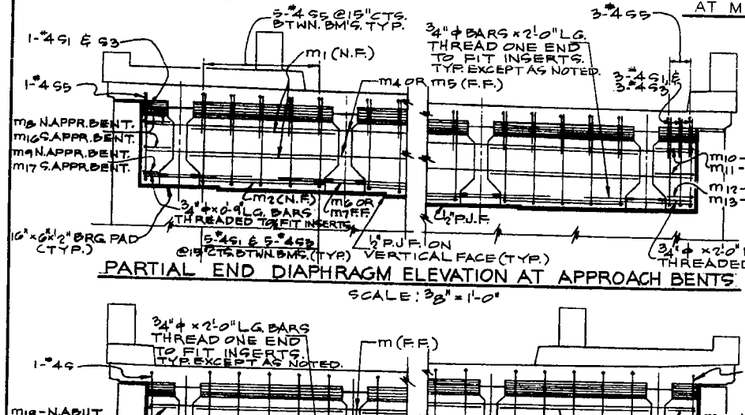
BARS m11, m13, m16, m17, m18 AND m20

BAR DIM.	m11	m13	m16	m17	m18	m20
A	4'-8"	3'-10"	2'-0"	2'-0"	2'-0"	2'-0"
B	1'-2½"	1'-2½"	1'-1½"	1'-1½"	8"	8"
C	1'-8"	1'-8"	1'-8"	1'-8"	1'-4"	1'-4"
D	2'-0"	2'-0"	3'-0"	6"	1'-1"	0"

NOTES:

BAR s2 NOT USED.

FOR LOCATION OF d, d1, d2 OR d4 BARS, SEE DWG. S-29.



PARTIAL END DIAPHRAGM ELEVATION AT APPROACH BENTS

SCALE: ⅜" = 1'-0"

INTERIOR BEAMS

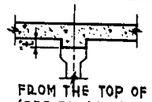
SCALE: ¾" = 1'-0"

PARTIAL END DIAPHRAGM ELEVATION AT ABUTMENTS

SCALE: ⅜" = 1'-0"

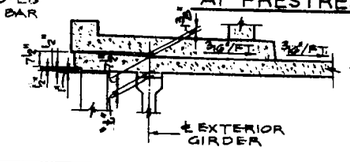
AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT THE POINTS SHOWN IN TABLE "A", DWG. S-27. THESE ELEVATIONS, SUBTRACTED FROM THE TABULATED TOP CONCRETE SLAB ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS, (SEE TABLE "A", DWG. S-27), MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS ABOVE THE TOP FLANGE OF THE GIRDERS.

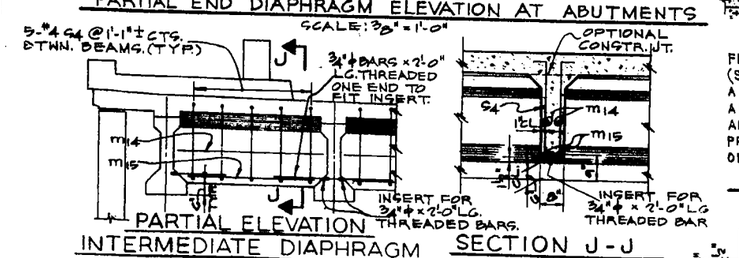
METHOD OF DETERMINING FILLET HEIGHTS "t" AT STEEL GIRDERS



TO DETERMINE "t": AFTER ALL PRECAST PRESTRESSED GIRDERS HAVE BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN IN TABLE "A", DWG. S-27. THESE ELEVATIONS, SUBTRACTED ALGEBRAICALLY FROM THE TOP OF CONCRETE SLAB ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS (SEE TABLE "A", DWG. S-27) MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHT "t". A POSITIVE VALUE OF "t" EQUALS THE FILLET HEIGHT ABOVE THE TOP OF THE GIRDER. A NEGATIVE VALUE OF "t", NOT TO EXCEED ½", EQUALS THE EMBEDMENT OF THE GIRDER ABOVE THE THEORETICAL BOTTOM OF SLAB ELEVATION. SLAB THICKNESS FOR PRESTRESSED GIRDERS UNDER SIDEWALK SHALL BE TAKEN AS 7½", AS SHOWN ON DETAIL BELOW.

METHOD OF DETERMINING FILLET HEIGHTS "t" AT PRESTRESSED I GIRDERS





PARTIAL ELEVATION INTERMEDIATE DIAPHRAGM

SCALE: ⅜" = 1'-0"

SECTION J-J

SCALE: ⅜" = 1'-0"

DE LEUW, CATHER & COMPANY ENGINEERS

DESIGNED BY W. Y. HUO

DRAWN BY G. P. ALLEMAN

CHECKED W. F. MATZELLE

IN CHARGE E. S. MARTINS

APPROVED W. G. HORN

BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
a	45	6	3'-8"	
a1	36	6	32'-3"	
a2	690	6	30'-11"	
a3	8	6	6'-0"	
a4	45	6	11'-0"	
a5	36	6	31'-0"	
a6	45	6	11'-9"	
a7	2	6	34'-6"	
b	10	6	19'-2"	
b1	10	6	20'-3"	
b2	128	5	19'-9"	
b3	128	5	19'-3"	
b4	6	5	20'-6"	
b5	6	5	18'-6"	
b6	20	6	19'-11"	
b7	12	5	20'-3"	
b8	20	6	19'-6"	
b9	228	5	19'-9"	
b10	30	6	22'-6"	
b11	30	6	18'-3"	
b12	30	6	13'-0"	
b13	30	6	22'-3"	
b14	30	6	14'-4"	
b15	16	5	1'-0"	
b16	93	5	27'-8"	
b17	93	5	31'-8"	
c	745	6	5'-5"	D
c1	109	5	5'-10"	D
c2	250	5	3'-0"	A
c3	77	5	5'-1"	E
c4	173	5	5'-6"	E
c5	3	5	8'-9"	7
d	523	6	2'-7"	
d1	262	4	2'-4"	
d2	203	4	2'-0"	
d3	250	4	4'-0"	
d4	58	4	3'-6"	
d5	42	5	3'-7"	
m	4	4	33'-0"	
m1	52	4	5'-8"	
m2	10	6	5'-8"	
m3	2	6	38'-0"	
m4	2	6	35'-3"	
m5	2	4	36'-10"	
m6	1	6	29'-3"	
m7	2	6	19'-10"	
m8	2	4	2'-8"	
m9	1	4	4'-1"	
m10	2	4	7'-5"	
m11	2	4	8'-1"	
m12	1	4	6'-10"	
m13	1	4	7'-6"	
m14	10	4	8'-7"	
m15	16	4	4'-7"	
m16	2	4	4'-8"	
m17	1	4	4'-11"	
m18	4	4	4'-8"	
m19	4	4	4'-8"	
m20	2	6	5'-10"	
m21	2	6	5'-10"	
s	44	4	8'-8"	
s1	48	4	6'-8"	
s3	48	4	8'-4"	
s4	48	4	6'-11"	
s5	48	4	4'-10"	

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CLASS X CONCRETE *	CU. YD.	286.2
REINFORCEMENT BARS *	POUND	70190.
PROTECTIVE COAT	SQ. YD	941.

* THE LENGTHS & QUANTITIES OF LONGIT. REINF. AND CLASS X CONC. IN PARAPETS ARE NOT INCLUDED. SEE DWG. S-28A.

DECK SLAB SECTIONS & BAR LIST

F.A.I. 74 - SECTION 81-1HB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

ROCK ISLAND COUNTY

STATION 359+28.44

SCALE: AS NOTED DATE:

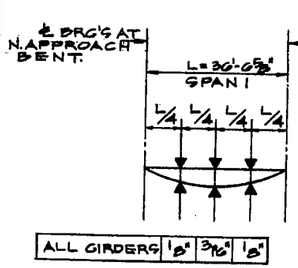
TABLE "A"

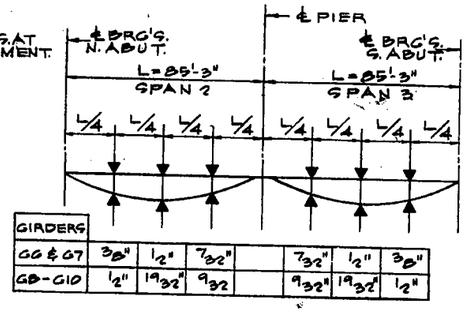
SPAN 1				
Distance from ℄ Bearings @ Appr. Slab N. Vaulted Abutment (Feet)	Beam No.	Normal Offset from P.G.L. (Feet)	*Final grade Elevations (Exclusive of Sidewalk Curb)	Top of Concrete Slab Elevations Adjusted for Deadload Deflections
0	1	4.75	695.099	695.099
10			695.073	695.081
20			695.029	695.040
30			694.979	694.985
36.55		4.75	694.946	694.946
0	2	-1.625	695.203	695.203
10			695.184	695.196
20			695.147	695.162
30			695.098	695.106
36.55		-1.625	695.065	695.065
0	3	-8.00	695.304	695.304
10			695.293	695.305
20			695.263	695.279
30			695.216	695.225
36.55		-8.00	695.183	695.183
0	4	-14.375	695.403	695.403
10			695.395	695.412
20			695.376	695.393
30			695.336	695.344
36.55		-14.375	695.302	695.302
0	5	-20.75	695.499	695.499
10			695.502	695.515
20			695.487	695.504
30			695.452	695.461
36.55		-20.75	695.420	695.420

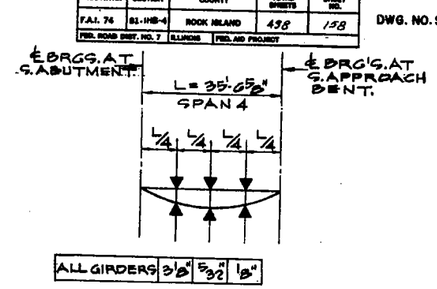
SPAN 2				
Distance from ℄ Bearings @ North Abutment (Feet)	Beam No.	Normal Offset from P.G.L. (Feet)	*Final Grade Elevations (Exclusive of Sidewalk Curb)	Top of Concrete Slab Elevations Adjusted for Deadload Deflections
0	6	4.75	694.935	694.935
10			694.885	694.902
20			694.835	694.865
30			694.785	694.822
40			694.735	694.773
50			694.685	694.717
60			694.635	694.657
70			694.585	694.596
80		4.75	694.535	694.537
0	7	-1.625	695.054	695.054
10			695.004	695.022
20			694.954	694.987
30			694.904	694.945
40			694.854	694.895
50			694.804	694.839
60			694.754	694.778
70			694.704	694.715
80		-1.625	694.654	694.655
0	8	-8.00	695.172	695.172
10			695.122	695.143
20			695.072	695.108
30			695.022	695.067
40			694.972	695.018
50			694.922	694.961
60			694.872	694.899
70			694.822	694.834
80		-8.00	694.772	694.774
0	9	-14.375	695.291	695.291
10			695.241	695.263
20			695.191	695.230
30			695.141	695.189
40			695.091	695.140
50			695.041	695.083
60			694.991	695.020
70			694.941	694.954
80		-14.375	694.891	694.893
0	10	-20.75	695.409	695.409
10			695.359	695.383
20			695.309	695.361
30			695.259	695.311
40			695.209	695.262
50			695.159	695.204
60			695.109	695.140
70			695.059	695.074
80		-20.75	695.009	695.012

SPAN 3				
Distance from ℄ Bearings @ Pier (Feet)	Beam No.	Normal Offset from P.G.L. (Feet)	*Final grade Elevations (Exclusive of Sidewalk Curb)	Top of Concrete Slab Elevations Adjusted for Deadload Deflections
0	6	4.75	694.509	694.509
10			694.459	694.464
20			694.409	694.424
30			694.359	694.386
40			694.309	694.344
50			694.259	694.297
60			694.209	694.243
70			694.159	694.183
80			694.109	694.118
85.25		4.75	694.083	694.083
0	7	-1.625	694.627	694.627
10			694.577	694.583
20			694.527	694.544
30			694.477	694.507
40			694.427	694.466
50			694.377	694.419
60			694.327	694.365
70			694.277	694.304
80			694.227	694.238
85.25		-1.625	694.201	694.201
0	8	-8.00	694.746	694.746
10			694.696	694.702
20			694.646	694.664
30			694.596	694.629
40			694.546	694.589
50			694.496	694.542
60			694.446	694.488
70			694.396	694.425
80			694.346	694.357
85.25		-8.00	694.320	694.320
0	9	-14.375	694.864	694.864
10			694.814	694.821
20			694.764	694.785
30			694.714	694.750
40			694.664	694.711
50			694.614	694.665
60			694.564	694.610
70			694.514	694.547
80			694.464	694.476
85.25		-14.375	694.438	694.438
0	10	-20.75	694.983	694.983
10			694.933	694.941
20			694.883	694.908
30			694.833	694.871
40			694.783	694.833
50			694.733	694.787
60			694.683	694.732
70			694.633	694.667
80			694.583	694.596
85.25		-20.75	694.557	694.557

SPAN 4				
Distance from ℄ Bearings @ South Abutment (Feet)	Beam No.	Normal Offset from P.G.L. (Feet)	*Final grade Elevations (Exclusive of Sidewalk Curb)	Top of Concrete Slab Elevations Adjusted for Deadload Deflections
0	11	4.75	694.072	694.072
10			694.021	694.029
20			693.971	693.982
30			693.921	693.926
35.55		4.75	693.890	693.890
0	12	-1.625	694.190	694.190
10			694.140	694.150
20			694.090	694.103
30			694.040	694.046
35.55		-1.625	694.012	694.012
0	13	-8.00	694.308	694.308
10			694.258	694.270
20			694.208	694.223
30			694.158	694.165
35.55		-8.00	694.131	694.131
0	14	-14.375	694.427	694.427
10			694.377	694.389
20			694.327	694.342
30			694.277	694.284
35.55		-14.375	694.249	694.249
0	15	-20.75	694.545	694.545
10			694.495	694.507
20			694.445	694.461
30			694.395	694.403
35.55		-20.75	694.368	694.368







NOTE:

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTIONS.

DEADLOAD DEFLECTION DIAGRAM

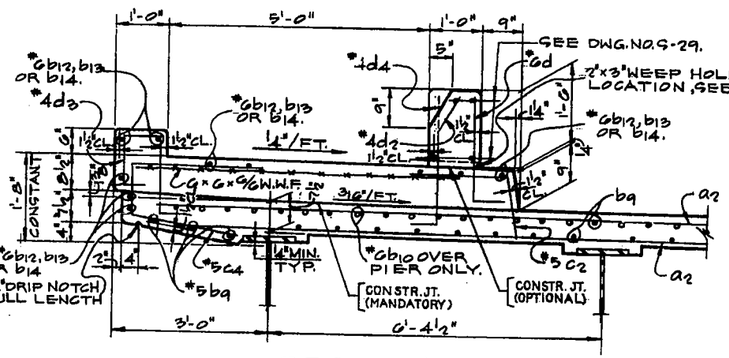
(INCLUDES WEIGHT OF CONCRETE SLAB & UNSYMMETRICAL SIDEWALK LOAD ONLY.)

NOTES:

* TABULATED ELEVATIONS ARE FOR TOP OF FINAL DECK SLAB, EXCEPT AT POINTS ALONG BEAMS UNDER THE CONCRETE SIDEWALK, WHERE THE TABULATED ELEVATIONS ARE FOR TOP OF THE CONSTRUCTION JOINT BETWEEN CONCRETE SLAB AND SIDEWALK.

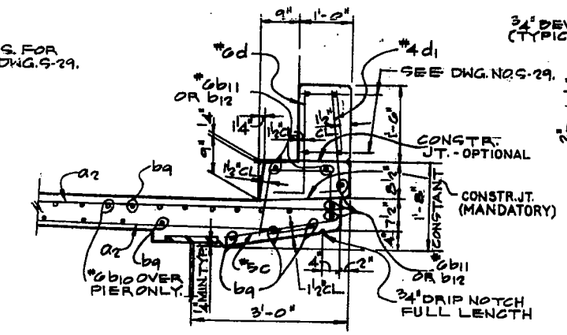
(+) OFFSETS ARE EAST OF P.G.L.; (-) OFFSETS ARE WEST OF P.G.L.

TABULATED DISTANCES ARE MEASURED ALONG CENTERLINE OF BEAMS. ALL TABULATED ELEVATIONS ARE ALONG BEAM CENTER LINES.



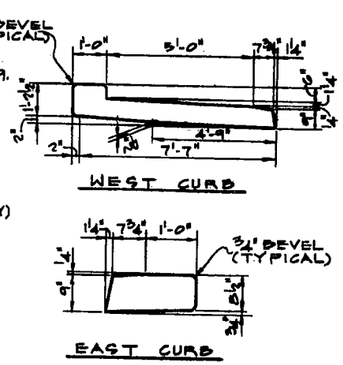
SECTION E-E

SCALE: ¾" = 1'-0"



SECTION F-F

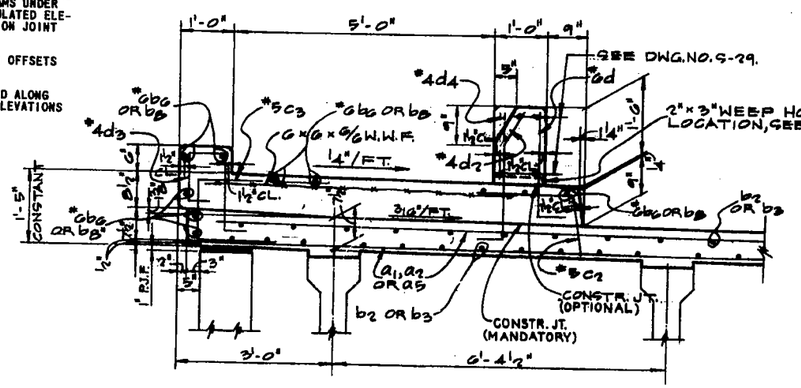
SCALE: ¾" = 1'-0"



DETAIL OF 16" ALUMINUM SHEETS

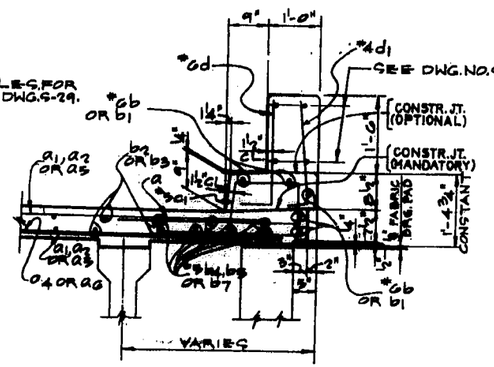
A.S.T.M.-B209 ALLOY 3003-H14

COST OF ALUMINUM SHEETS SHALL BE INCIDENTAL TO CLASS X CONC.



SECTION G-G

SCALE: ¾" = 1'-0"



SECTION H-H

SCALE: ¾" = 1'-0"

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	458	138
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

DWG. NO. S-27

DECK SLAB ELEVATIONS & DETAILS

F.A.I. 74 - SECTION 81-1HB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

ROCK ISLAND COUNTY

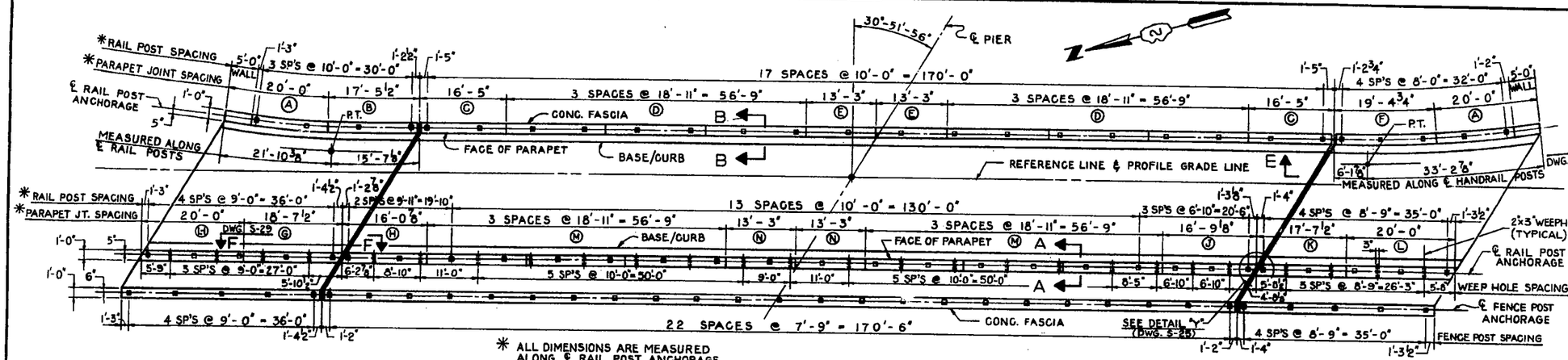
STATION 359+28.44

SCALE: AS NOTED DATE:

E LEUW, CATHER & COMPANY ENGINEERS
ESIGNED BY W. Y. HHO
RAWN BY G. P. ALLEMAN
HECKED W. F. MATZELLE
CHARGE E. S. MARTINS
PROVED W. G. HOHN

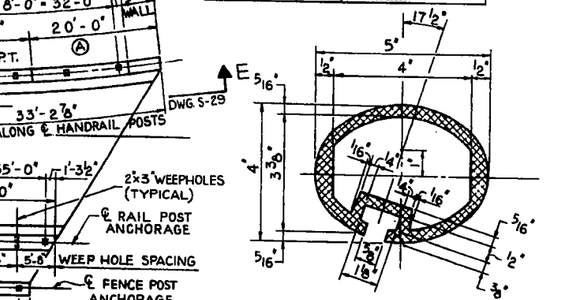
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	198	159
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

DWG. NO. S-28



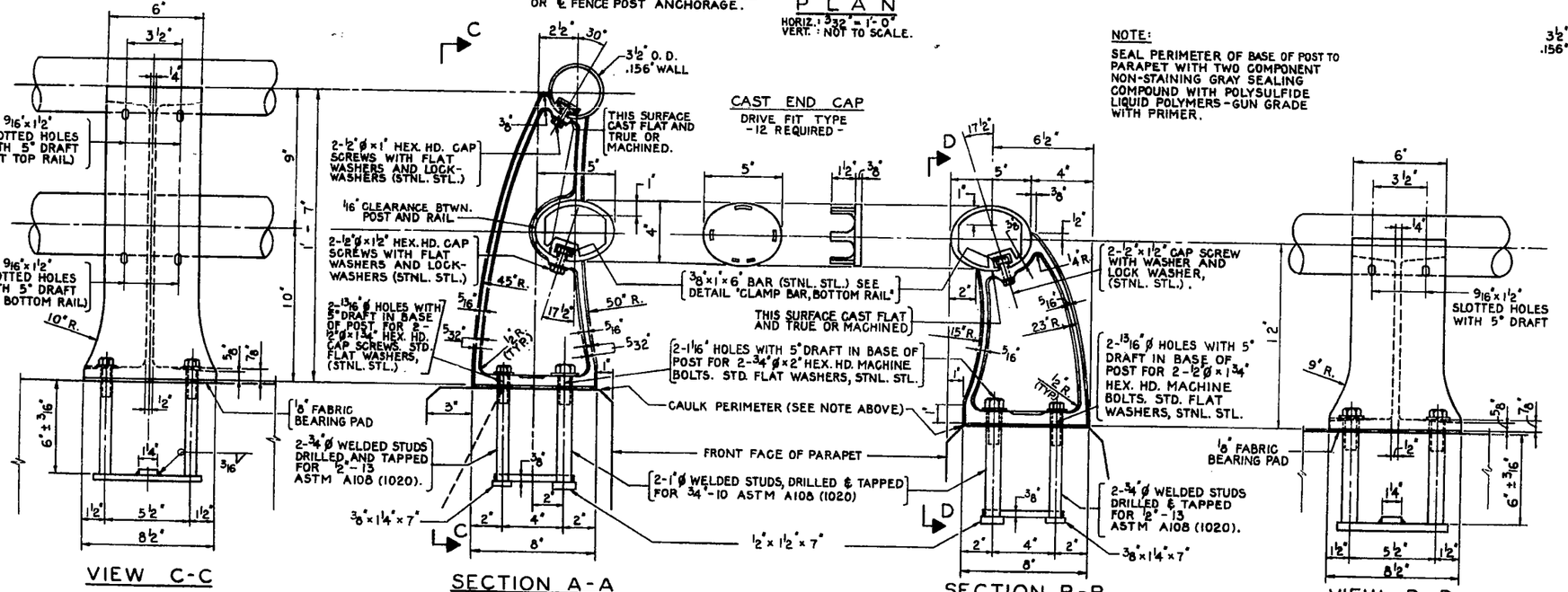
PLAN
HORIZ.: 3/32" = 1'-0"
VERT.: NOT TO SCALE.

* ALL DIMENSIONS ARE MEASURED ALONG ℄ RAIL POST ANCHORAGE OR ℄ FENCE POST ANCHORAGE.

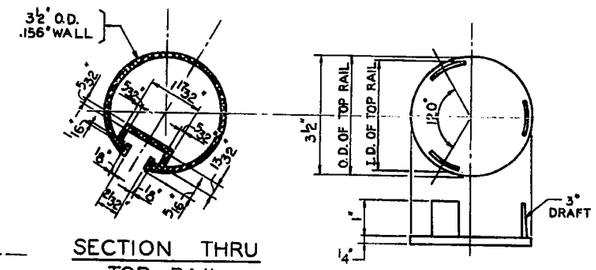


SECTION THRU ELLIPTICAL RAIL SECTION
SCALE: 1/2" = 1"

NOTE:
SEAL PERIMETER OF BASE OF POST TO PARAPET WITH TWO COMPONENT NON-STAINING GRAY SEALING COMPOUND WITH POLYSULFIDE LIQUID POLYMERS - GUN GRADE WITH PRIMER.

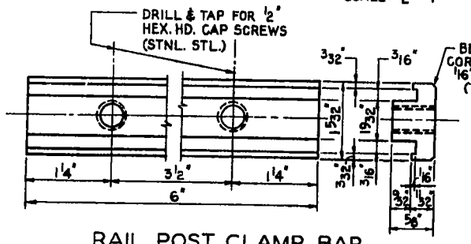


RAIL POST DETAILS
SCALE: 3" = 1'-0"

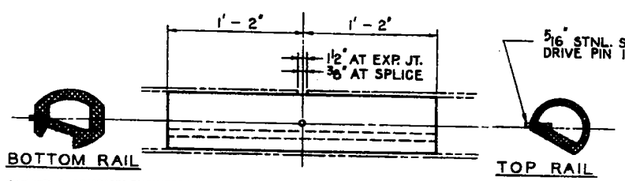


SECTION THRU TOP RAIL
SCALE: 1/2" = 1"

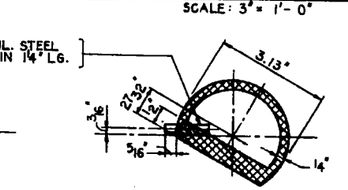
CAST END CAP
FOR TOP RAIL
- 6 REQUIRED -
SCALE: 1/2" = 1"



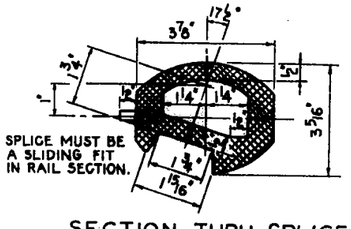
RAIL POST CLAMP BAR
FOR TOP RAIL
SCALE: 1" = 1"



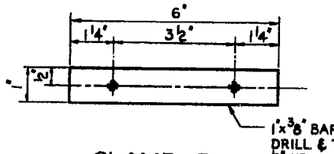
RAIL SPLICE
NO SCALE



SECTION THRU SPLICE
(TOP RAIL OF DOUBLE HANDRAIL)
SCALE: 1/2" = 1"



SECTION THRU SPLICE
(SINGLE RAIL OR BOTTOM RAIL OF DOUBLE HANDRAIL)
SCALE: 1/2" = 1"



CLAMP BAR
(FOR SINGLE RAIL OR BOTT. RAIL OF DOUBLE HANDRAIL)
SCALE: 1/2" = 1"

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 2,300 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 - 1/8" AND 2 - 1/16" ALUMINUM SHIMS FOR 25 PERCENT 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.

DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY W.Y. HHO
DRAWN BY M. VADKERTY
CHECKED
IN CHARGE E. S. MARTINS
APPROVED W.G. HORN

RAILING DETAILS

F.A.I. 74 - SECTION 81-1HB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

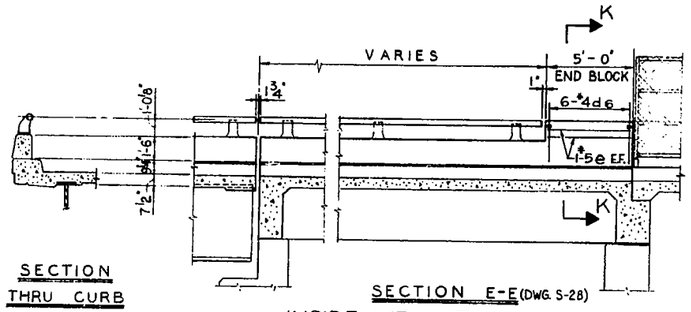
ROCK ISLAND COUNTY

STATION 359+28.44

SCALE: AS NOTED DATE:

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-IHB-4	ROCK ISLAND	438	160
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

DWG. NO. S-28A

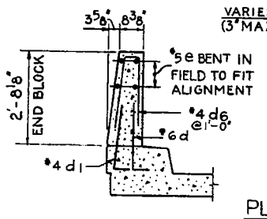


SECTION THRU CURB

SECTION E-E (DWG. S-28)

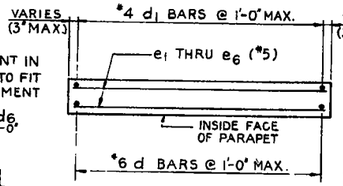
INSIDE VIEW AT ABUTMENT

SCALE: ¼" = 1'-0"



SECTION K-K THRU END BLOCK

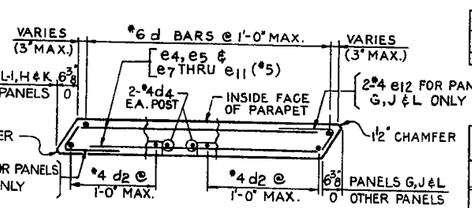
SCALE: ½" = 1'-0"



PLAN - TYP. EAST PARAPET PANEL REINFORCEMENT

(SEE TABLE BELOW)

NOTE:
REINFORGEMENT SHOWN AT END BLOCK IS ADDITIONAL TO THAT SHOWN IN PANEL REINF.



PLAN - TYP. WEST PARAPET PANEL REINFORCEMENT

(SEE TABLE BELOW)

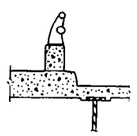
	PANEL	NO. OF PANEL	NUMBER OF BARS EACH PANEL *6 d	*4 d1	*4 d2	*4 d4	e1 THRU e12
EAST PARAPET	A	2	21	21			2-*e1 E.F.
	B	1	18	18			2-*e2 E.F.
	C	2	17	17			2- e3 E.F.
	D	6	20	20			2- e4 E.F.
	E	2	14	14			2- e5 E.F.
	F	1	20	20			2-*e6 E.F.
WEST PARAPET	G	1	19		15	4	2- e7 E.F.
	H	1	17		13	4	2- e8 E.F.
	J	1	17		11	6	2- e9 E.F.
	K	1	18		14	4	2- e10 E.F.
	L & L-1	2	21		15	6	2- e11 E.F.
	M	6	20		16	4	2- e4 E.F.
	N	2	14		12	2	2- e5 E.F.

2-*4 e12 (1-TOP, 1-BOTT) EACH PANEL

*DENOTES BAR TO BE BENT IN FIELD TO FIT ALIGNMENT

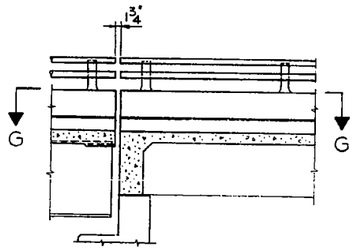
BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
d6	24	*4	5'-1"	
e	8	*5	4'-8"	—
e1	8		19'-8"	—
e2	4		17'-2"	—
e3	8		16'-1"	—
e4	48		18'-7"	—
e5	16		12'-11"	—
e6	4		19'-0"	—
e7	4		18'-0"	—
e8	4		15'-5"	—
e9	4		16'-0"	—
e10	4		16'-10"	—
e11	8	*5	19'-4"	—
e12	12	*4	2'-3"	7



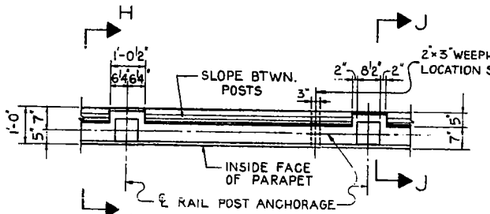
SECTION THRU CURB

SCALE: ¼" = 1'-0"



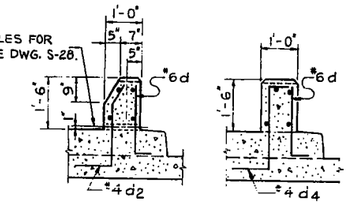
SECTION F-F (DWG. S-28)

(INSIDE VIEW AT ABUTMENT)



SECTION G-G

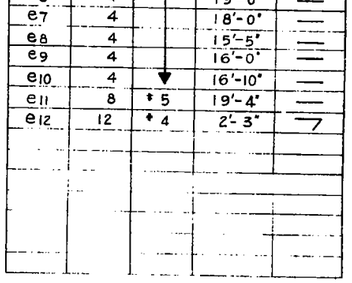
SCALE: ½" = 1'-0"



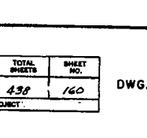
SECTION H-H

SECTION J-J

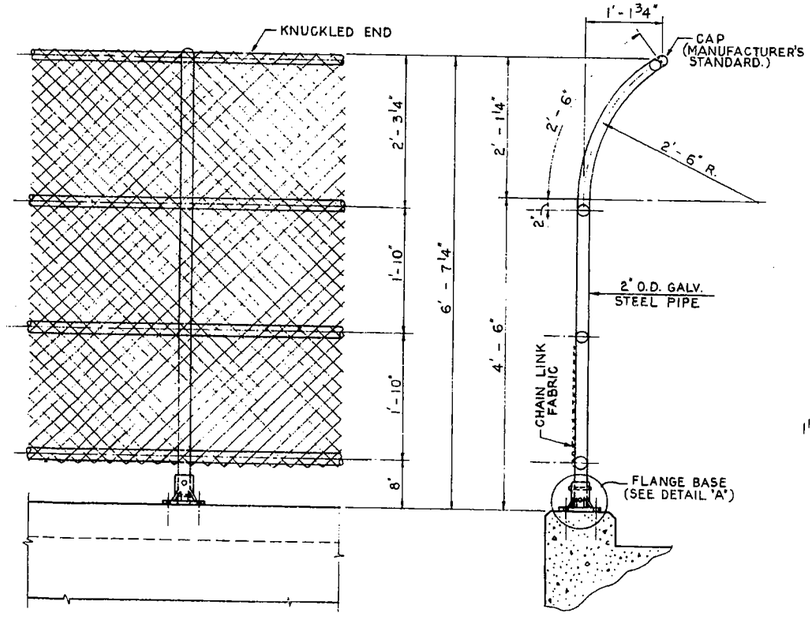
SCALE: ½" = 1'-0"



BAR d6

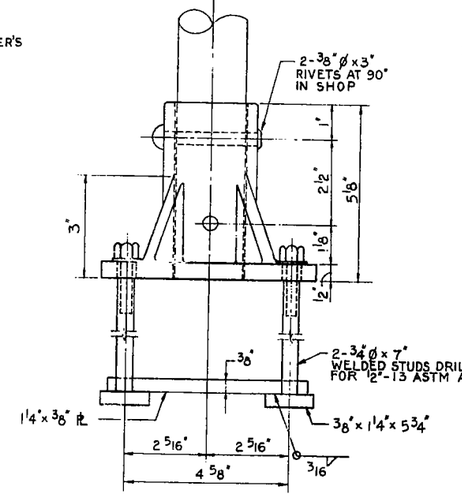


BAR e11



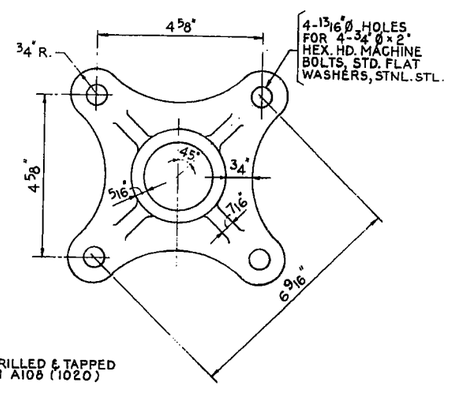
TYPICAL SECTION CHAIN LINK FENCE & POST

SCALE: 1" = 1'-0"



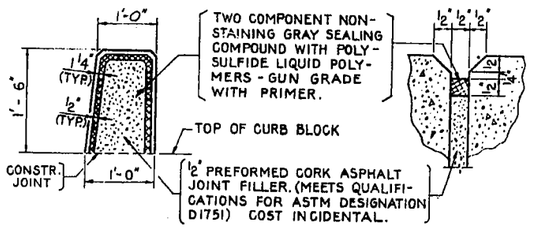
DETAIL "A"

SCALE: ½" = 1'-0"



PLAN - CAST IRON FLANGE BASE

SCALE: ½" = 1'-0"



PARAPET JOINT DETAIL

* FOR HANDRAIL PARAPET ONLY

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CLASS X CONCRETE*	CU. YD.	25.7
REINFORCEMENT BARS	POUND	2180
ALUMINUM RAILING	LIN. FT.	240
CHAIN LINK FENCE	LIN. FT.	249
ALUMINUM RAILING, TYPE L	LIN. FT.	249

PARAPET & FENCE DETAILS

F.A.I. 74 - SECTION 81-IHB-4

F.A.I. 74 UNDER 27TH STREET CONNECTION

ROCK ISLAND COUNTY

STATION 359+28.44

SCALE: AS NOTED DATE:

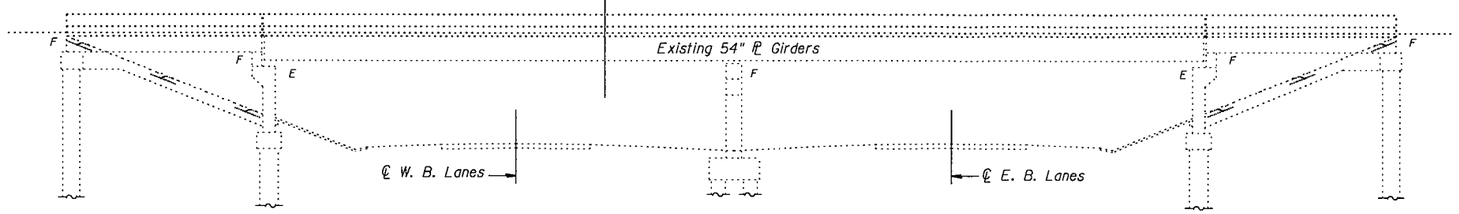
DE LEUW, CATHER & COMPANY ENGINEERS
DESIGNED BY W. Y. HUO
DRAWN BY M. VADKERTY
CHECKED
IN CHARGE E. S. MARTINS
APPROVED W. G. HORN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Rock Island		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

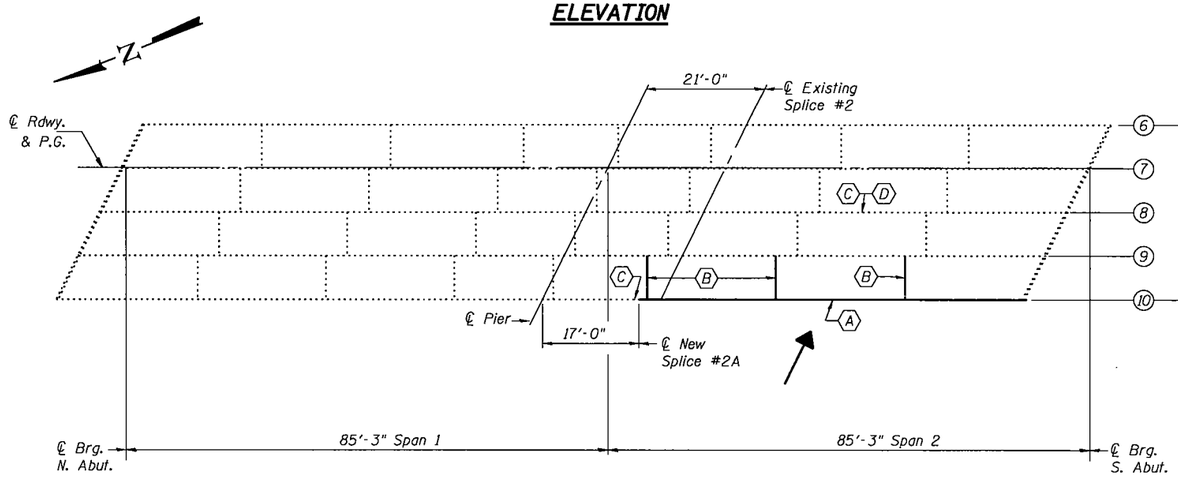
SHEET NO. 1
5 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

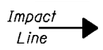
Temporary shoring may be required to facilitate alignment of existing splice. Use 12" x 12" Timbers or HP's to be paid for as Temporary Shoring and Cribbing. The shoring shall be removed as soon as possible after the splice is completed to minimize Traffic Control.



ELEVATION



PLAN



(A) *Replace Plate Girder Segment.*

(B) *Replace Cross Frame.*

(C) *Straighten Plate Girder.*

(D) *Add Strengthening ℄ to Bottom Flange.*

DESIGNED
CHECKED
DRAWN
CHECKED PSJ MJT

AUGUST 31, 2004
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER
EXPIRES 11-30-04

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$" ϕ, open holes $\frac{13}{16}$" ϕ, unless otherwise noted.

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing" and "Temporary Slab Support System."

After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection".

Prior to pouring the new concrete deck, all loose rust, loose mill scale and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will 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.

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.

Cost of removal and/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Furnishing and Erecting Structural Steel.

The inorganic zinc rich primer/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the acrylic finish coat for interior surfaces shall be Gray, Munsell No. 5B 7/1 and the exterior and bottom flange of fascia girders shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision "Cleaning and Painting New Metal Structures".

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

TOTAL BILL OF MATERIAL

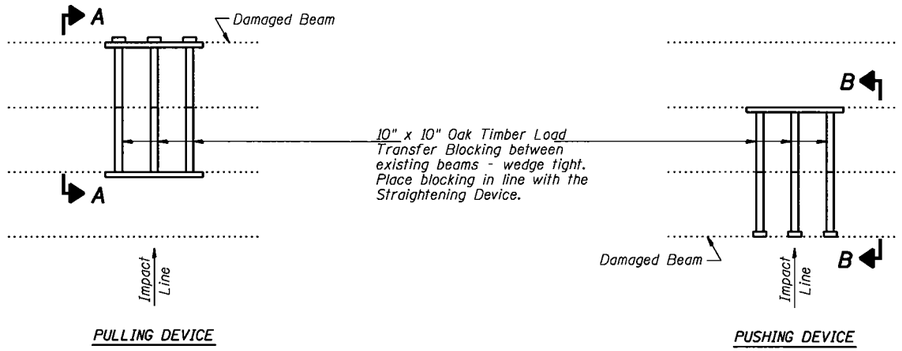
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	0.3
Concrete Supersructure	Cu. Yd.	0.3
Furnishing and Erecting Structural Steel	Pound	12470
Temporary Slab Support System	L.S.	1
Beam Straightening	L.S.	1
Temporary Shoring and Cribbing	L.S.	1
Structural Steel Removal	Pound	12780
Structural Steel Repair	Pound	410

PLAN AND ELEVATION
27th STREET OVER I-74
ROCK ISLAND COUNTY
SN.081-0107

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Rock Island		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
5 SHEETS

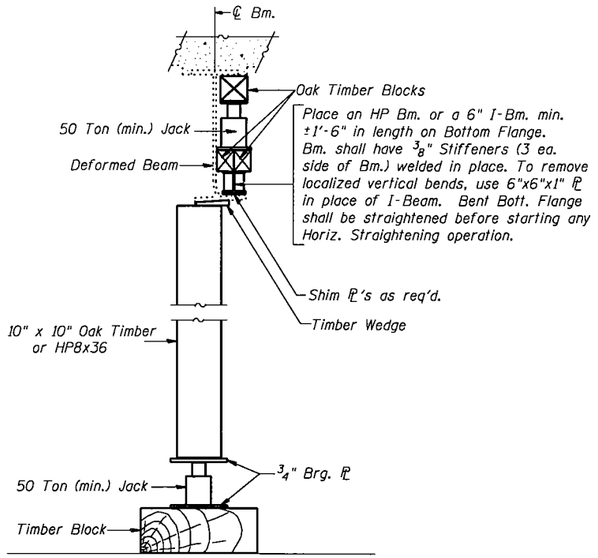


PULLING DEVICE

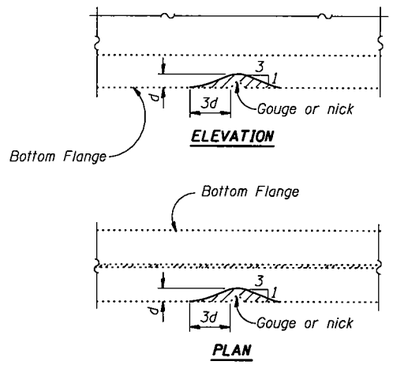
PUSHING DEVICE

PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS

Straightening force shall be maintained on all load transfer blocking during beam straightening.

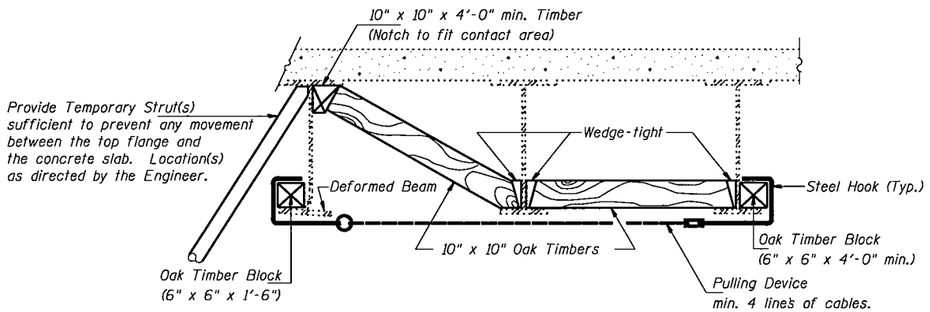


SUGGESTED VERTICAL STRAIGHTENING DETAIL

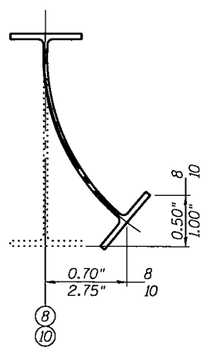


GRINDING DETAIL

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using magnetic particle testing prior to initiating any beam straightening operations. Cost included with Beam Straightening. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition.

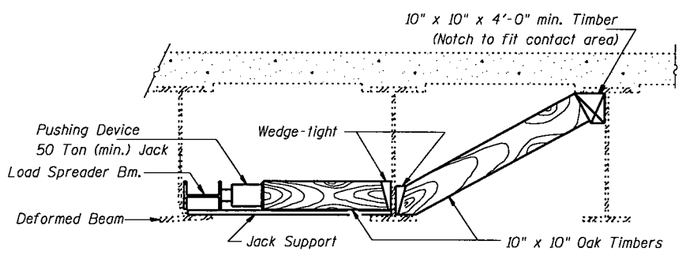


SECTION A-A



Span 2, Looking North
Section for Grider 8 at Point of Impact
Section for Girder 10 at location of New Splice 2A

MAXIMUM HORIZONTAL AND VERTICAL DISPLACEMENT OF IMPACT DAMAGE



SECTION B-B

DESIGNED	P.S.J.
CHECKED	M.J.T.
DRAWN	Drew Christopher
CHECKED	P.S.J. M.J.T.

August 31, 2004
EXAMINED John A. Morris, ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

REP-1 1-27-2000

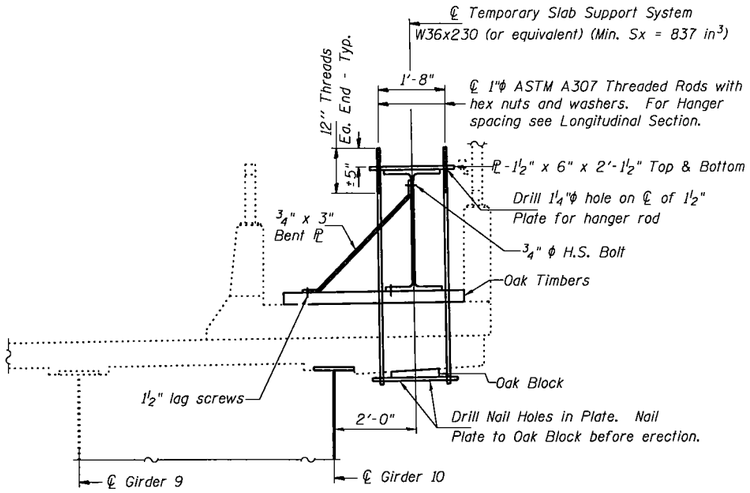
BEAM STRAIGHTENING DETAILS
27th STREET OVER I-74
ROCK ISLAND COUNTY
SN.081-0107

...\projects\mac00034\0810107.dgn 8/31/2004 10:05:18 AM

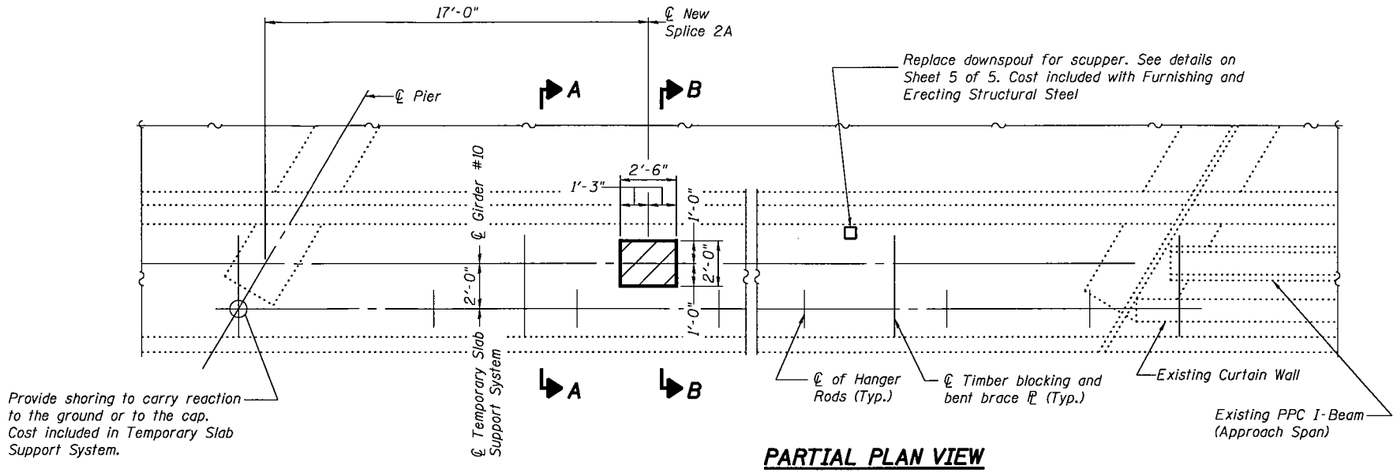
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Rock Island		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
5 SHEETS



SECTION A-A



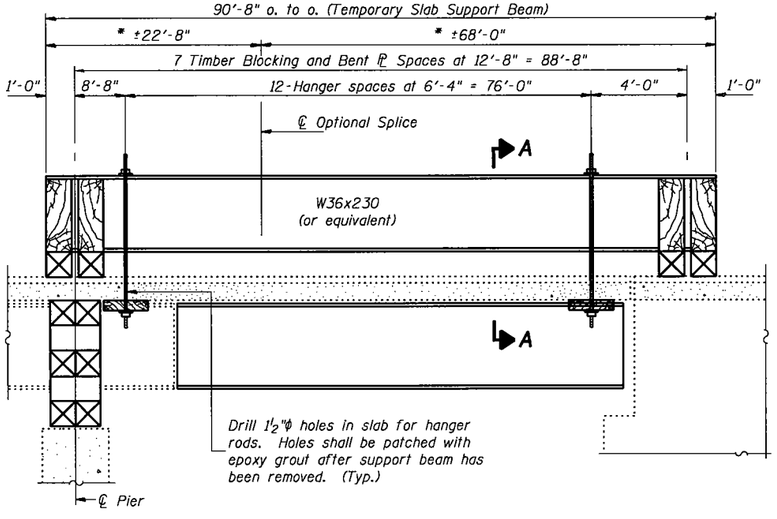
PARTIAL PLAN VIEW
CONCRETE REMOVAL AND REPLACEMENT

Hatched areas indicate concrete sections to be removed and replaced. Perimeters of concrete removal areas shall be saw cut ¾" prior to the removal of concrete.

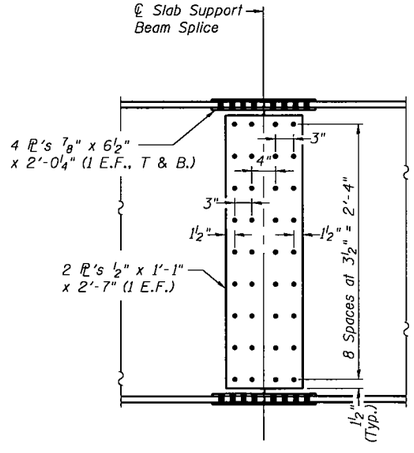
Reinforcement shall be cut only if required for fitting bolts. Cut reinforcement shall be spliced as directed by the Engineer. Cost shall be included with Concrete Removal.

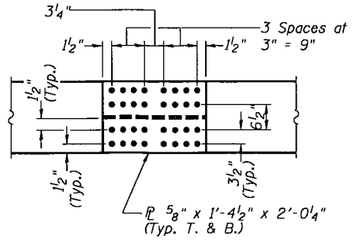
Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.

* These dimensions may vary for available beams in stock.

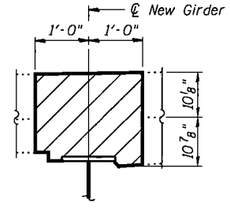


LONGITUDINAL SECTION
SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM





OPTIONAL SPLICE



SECTION B-B

DESIGNED	P.S.J.
CHECKED	M.J.T.
DRAWN	Drew Christopher
CHECKED	P.S.J. M.J.T.

August 31, 2004
EXAMINED John A. Morris, ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

TEMPORARY SLAB SUPPORT
27th STREET OVER I-74
ROCK ISLAND COUNTY
SN.081-0107

...\projects\mac00034\0810107.dgn 8/31/2004 10:05:18 AM

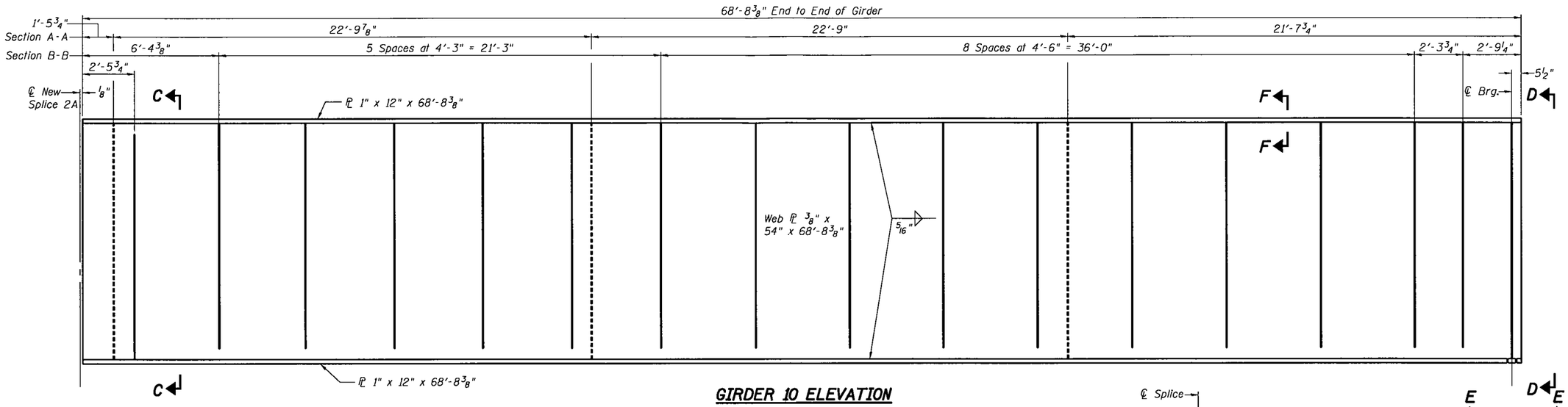
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Rock Island		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

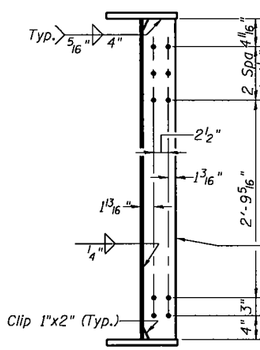
SHEET NO. 4
5 SHEETS

Fasteners shall be high strength bolts. Flange splice holes shall be $^{15}/_{16}$"ϕ for $^{7}/_{8}$"ϕ bolts. Web splice holes shall be $^{13}/_{16}$"ϕ for $^{3}/_{4}$"ϕ bolts.

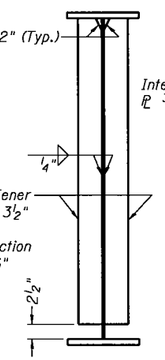
Void left over new beam from existing flange splice shall be filled with grout through $1\frac{1}{2}$" holes drilled from the top of the deck. Holes shall be drilled prior to installation of the new beam section.



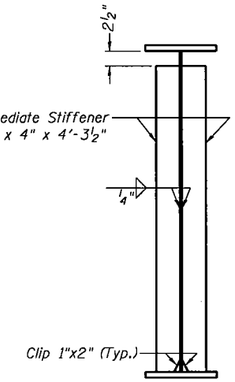
GIRDER 10 ELEVATION
(Looking East)



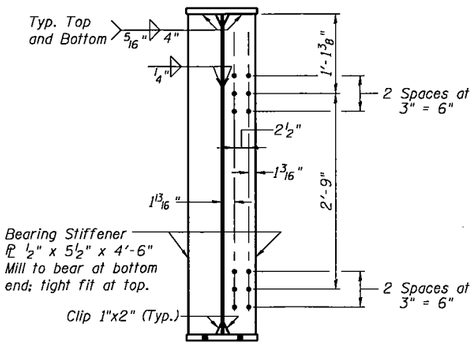
SECTION A-A



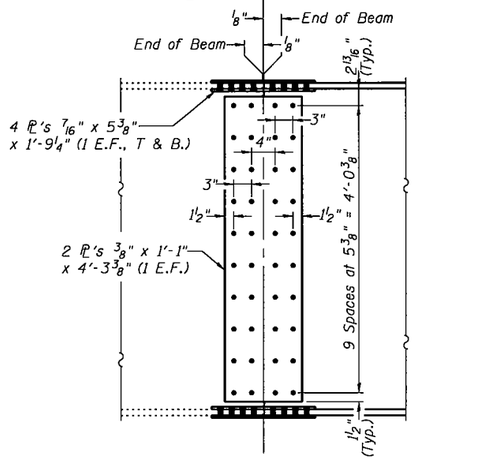
SECTION B-B



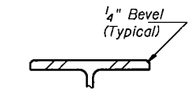
SECTION C-C



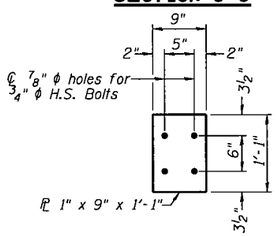
SECTION D-D



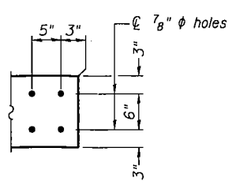
NEW SPLICE 2A



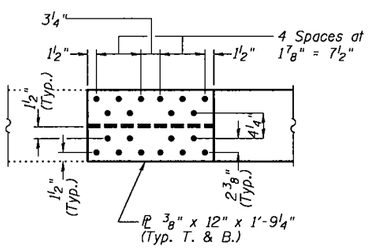
SECTION F-F



BEARING SHIM PL
(1 Req'd)



VIEW E-E



NEW SPLICE 2A

DESIGNED	P.S.J.
CHECKED	M.J.T.
DRAWN	Drew Christopher
CHECKED	P.S.J. M.J.T.

August 31, 2004
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

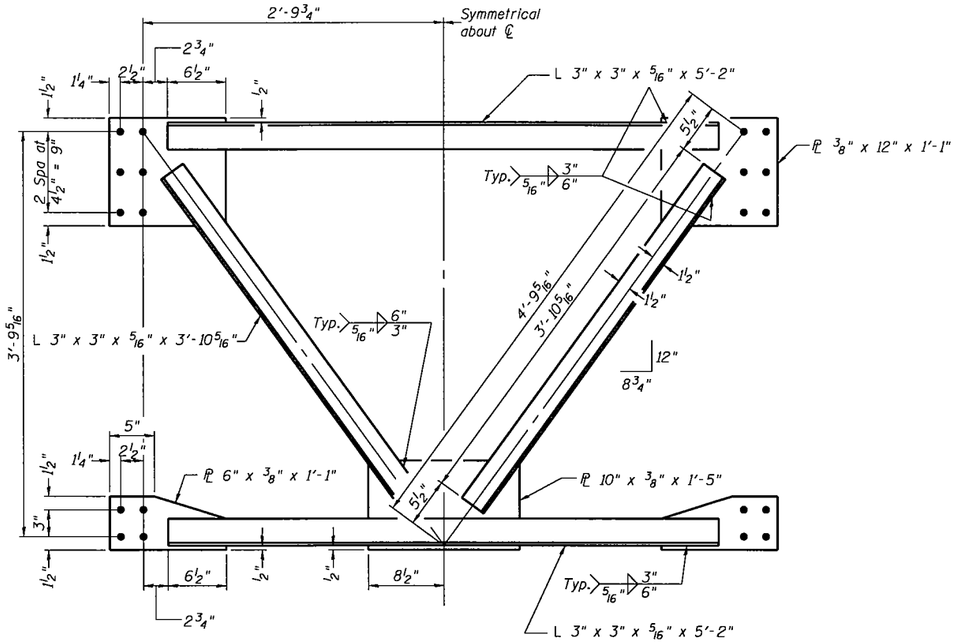
GIRDER DETAILS
27th STREET OVER I-74
ROCK ISLAND COUNTY
SN.081-0107

...\projects\mac00034\0810107.dgn 8/31/2004 10:05:18 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

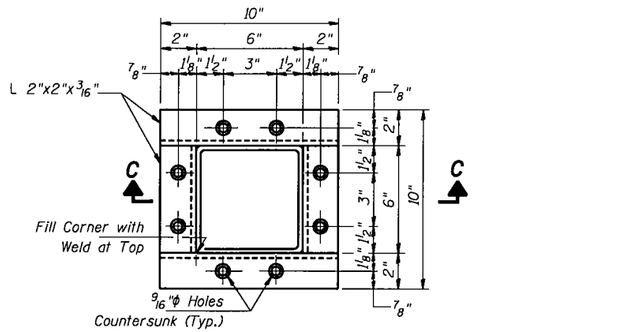
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Rock Island		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

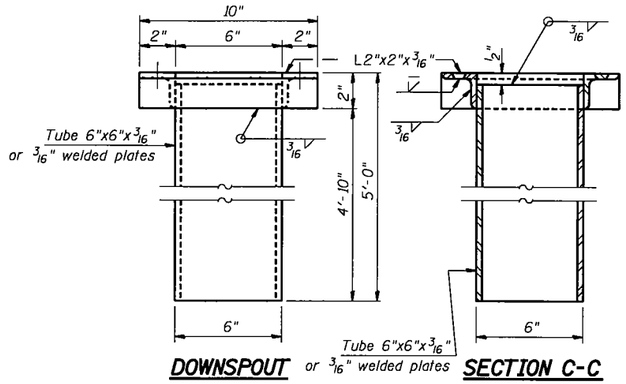
SHEET NO. 5
5 SHEETS



TYPICAL CROSS-FRAME DETAIL

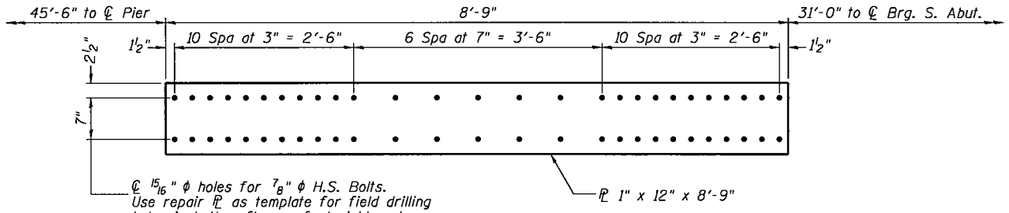
3 Required





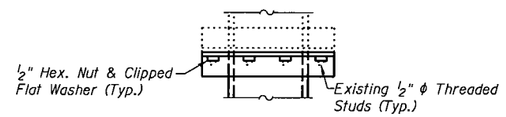
DOWNSPOUT

SECTION C-C



STRENGTHENING PL (GIRDER #8)

(1 Req'd)



DOWNSPOUT CONNECTION DETAIL

DESIGNED	P.S.J.
CHECKED	M.J.T.
DRAWN	Drew Christopher
CHECKED	P.S.J. M.J.T.

August 31, 2004

EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

CROSS FRAME, DOWNSPOUT AND STRENGTHENING PLATE DETAILS
27th STREET OVER I-74
ROCK ISLAND COUNTY
SN.081-0107

...\projects\mac00034\0810107.dgn 8/31/2004 10:05:18 AM

Bench Mark: Disk on overhead sign foundation loacated in median of F.A.I. Rt. 74 below bridge , Elev. 672.37.

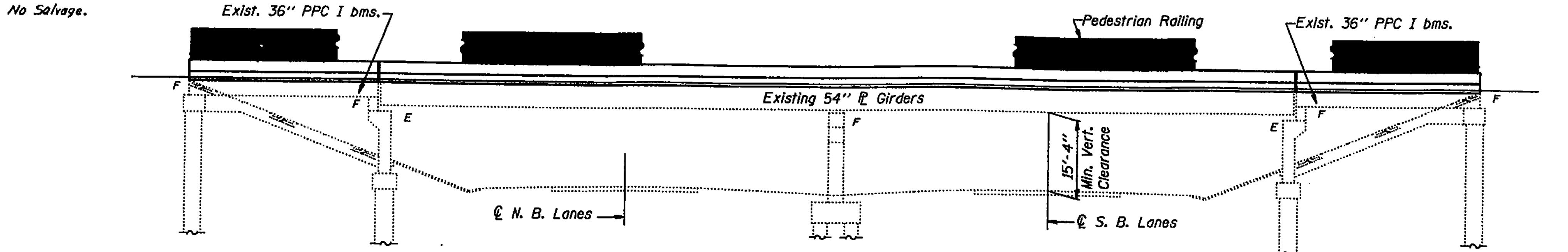
Existing Structure: No. 081-0107 is 31'-6" wide by 251'-1¾" long built as F.A.I. Rte. 74, Section 81-1HB-4 in 1970. The existing concrete deck will be removed and a new deck constructed. The structure will be closed to traffic during reconstruction.

No Salvage.

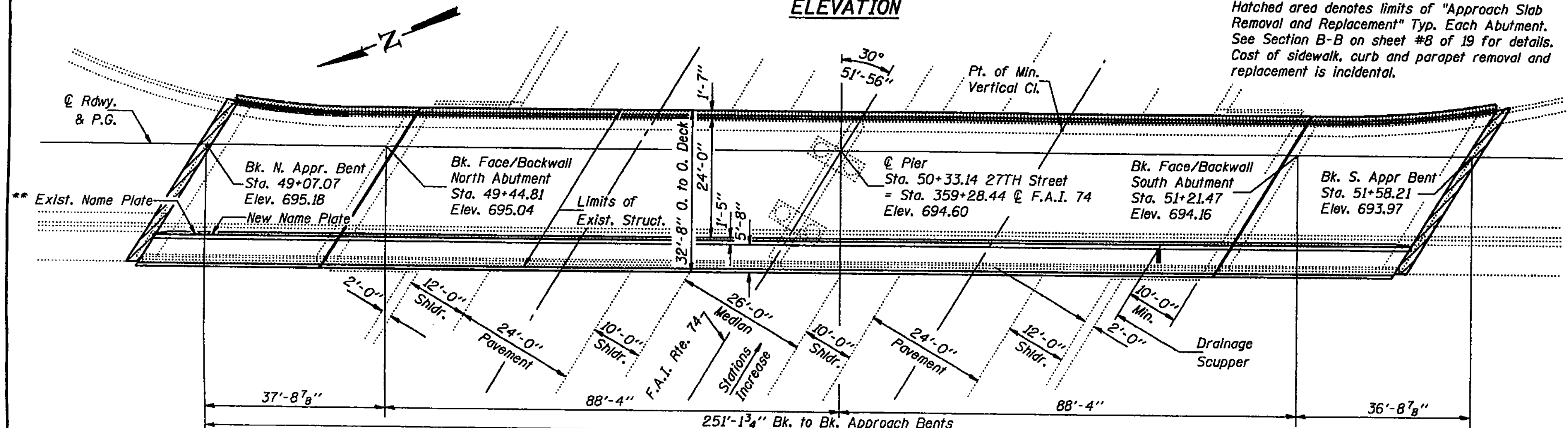
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	17[illegible]	133
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
19 SHEETS



ELEVATION



Hatched area denotes limits of "Approach Slab Removal and Replacement" Typ. Each Abutment. See Section B-B on sheet #8 of 19 for details. Cost of sidewalk, curb and parapet removal and replacement is incidental.

** Existing Name Plate to be cleaned and relocated. Cost incidental to "Name Plates".

PLAN

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 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.

Field welding of construction accessories will not be permitted to the bottom flange of girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

The existing Structural Steel shall be cleaned by Method A.

The three coat lead and chromate free alkyd paint system shall be used for shop and field painting of New Structural Steel. The color of the final finish coat shall be Munshell Standard 7.5G 4/8 Interstate Green.

The three coat lead and chromate free alkyd paint system shall be used for field painting of Existing Structural Steel. The color of the final finish coat shall be Munshell Standard 7.5G 4/8 Interstate Green.

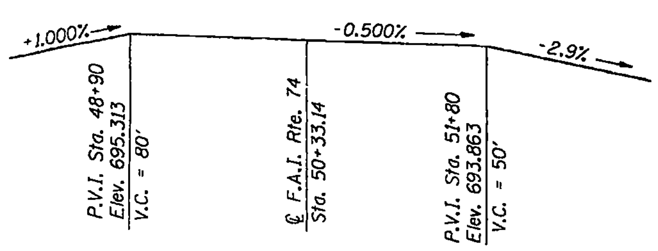
The Contractor will be required to mark, on top of the concrete deck, the locations of the top flange of all the steel girders, prior to any removal of the bridge concrete deck. Saw cutting directly over the top of the girder flanges is not permitted.

Front face of Abutment backwalls and top surfaces of Abutment seats shall receive "Bridge Seat Sealer". Estimated quantity = 340 Sq. Ft.

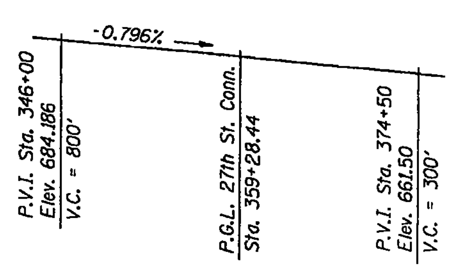
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1		1
Preformed Joint Seal (4")	Lin. Ft.	77		77
Class X Concrete Superstructure	Cu. Yd.	312.5		312.5
* Protective Coat	Sq. Yd.	424		424
Elastomeric Brg. Assembly, Type I	Each	10		10
Structural Steel	Pound	3,800		3,800
Pedestrain Railing	Lin. Ft.	244		244
Parapet Railing	Lin. Ft.	230		230
~~Cleaning and Painting Steel Bridge~~	~~L.S.~~	~~1~~		~~1~~
Reinforcement Bars, Epoxy Coated	Pound	62,740		62,740
Name Plares	Each	1		1
Jack & Remove Existing Bearings	Each	10		10
Approach Slab Removal & Replacement	Sq. Yd.	21		21
Bridge Seat Sealer	L.S.		.24	.24
Drainage Scuppers	Each	1		1
△1 Formed Concrete Repair (Depth Less Then or Equal to 5")	Sq. Ft.		472	472

* Quantity is for top and inside surfaces of Parapets and Sidewalks.



PROFILE GRADE 27th ST. CONN.



PROFILE GRADE F.A.I. ROUTE 74

STATION 359+28.44
REBUILT 199 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. 81-1HB-4
PROJECT IR-74-1(82)
LOADING HS20 & ALT.
STR. NO. 081-0107

NAME PLATE

See Std. 2113

DESIGN SPECIFICATIONS

1989 AASHTO & Seismic Retrofitting Guidelines for Highway Bridges

LOADING HS20-44 & ALT.

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

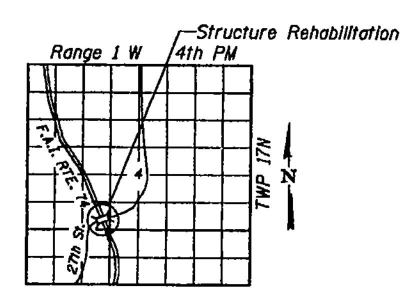
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fs = 20,000 psi (Exist. Struct. Steel.)

EXISTING PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
f's = 248,000 psi (7/16"ϕ Strands)
f'sl = 173,600 psi (7/16"ϕ Strands)
f'cl = 4,000 psi



LOCATION SKETCH

GENERAL PLAN
27TH STREET IN MOLINE
OVER F.A.I. RTE. 74
F.A.I. ROUTE 74
SECTION 81-1HB-4
ROCK ISLAND COUNTY
STATION 359+28.44
STRUCTURE NUMBER 081-0107

DESIGNED Chas Stillwell
CHECKED [signature]
jas
DRAWN John F. Schneller Jr.
CHECKED [signature]

November 20 1990
EXAMINED [signature]
ENGINEER OF BRIDGE DESIGN
PASSED [signature]
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

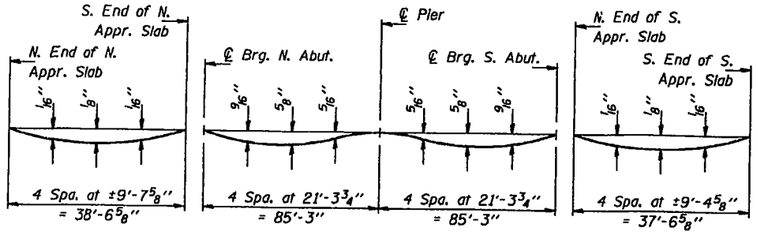
As Revised 2-13-91 T.E.A.

△1 2-13-91

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	19	134
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

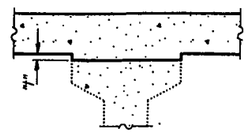
SHEET NO. 2
19 SHEETS



DEAD LOAD DEFLECTION DIAGRAM

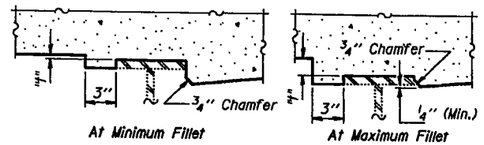
(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets #3 & #4 of 19.



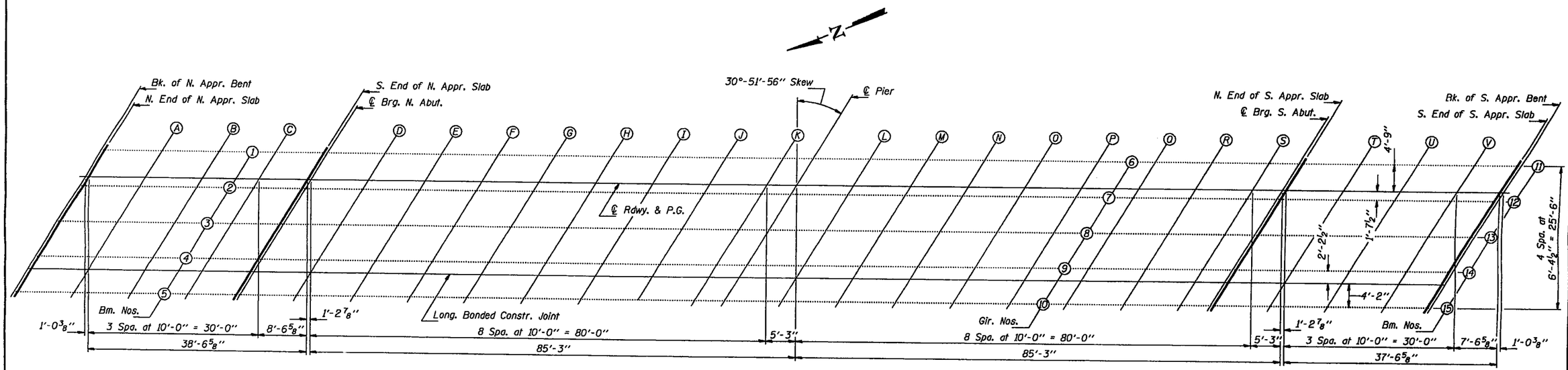
To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on sheets #3 & #4 of 19 minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets #3 & #4 of 19, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS



PLAN

DESIGNED	Chris Elliott
CHECKED	James D. Wilcoxon
DRAWN	John F. Schneller Jr.
CHECKED	CMK GMS

Nov 20 1990

EXAMINED Greg J. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

TOP OF SLAB ELEVATIONS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	138
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
19 SHEETS

BEAMS #1 & #11 & GIRDER #6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	4909.909	-4.750	695.102	695.102
N. End N. Appr. Slab	4910.940	-4.750	695.100	695.100
A	4920.940	-4.750	695.077	695.085
B	4930.940	-4.750	695.034	695.046
C	4940.940	-4.750	694.984	694.992
S. End N. Appr. Slab	4949.493	-4.750	694.941	694.941
℄ Brg. N. Abut.	4950.731	-4.750	694.935	694.935
D	4960.731	-4.750	694.885	694.906
E	4970.731	-4.750	694.835	694.877
F	4980.731	-4.750	694.785	694.833
G	4990.731	-4.750	694.735	694.787
H	5000.731	-4.750	694.685	694.728
I	5010.731	-4.750	694.635	694.664
J	5020.731	-4.750	694.585	694.602
K	5030.731	-4.750	694.535	694.541
℄ Pier	5035.981	-4.750	694.509	694.509
L	5045.981	-4.750	694.459	694.470
M	5055.981	-4.750	694.409	694.431
N	5065.981	-4.750	694.359	694.394
O	5075.981	-4.750	694.309	694.358
P	5085.981	-4.750	694.259	694.309
Q	5095.981	-4.750	694.209	694.255
R	5105.981	-4.750	694.159	694.191
S	5115.981	-4.750	694.109	694.120
℄ Brg. S. Abut.	5121.231	-4.750	694.083	694.083
N. End S. Appr. Slab	5122.469	-4.750	694.077	694.077
T	5132.469	-4.750	694.027	694.034
U	5142.469	-4.750	693.977	693.987
V	5152.469	-4.750	693.927	693.933
S. End S. Appr. Slab	5160.022	-4.750	693.883	693.883
Bk. S. Appr. Bent	5161.053	-4.750	693.875	693.875

℄ RDWY. & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	4907.070	0.000	695.178	695.178
N. End N. Appr. Slab	4908.102	0.000	695.178	695.178
A	4918.102	0.000	695.159	695.168
B	4928.102	0.000	695.122	695.134
C	4938.102	0.000	695.072	695.080
S. End N. Appr. Slab	4946.655	0.000	695.030	695.030
℄ Brg. N. Abut.	4947.892	0.000	695.024	695.024
D	4957.892	0.000	694.974	694.995
E	4967.892	0.000	694.924	694.966
F	4977.892	0.000	694.874	694.921
G	4987.892	0.000	694.824	694.875
H	4997.892	0.000	694.774	694.816
I	5007.892	0.000	694.724	694.752
J	5017.892	0.000	694.674	694.690
K	5027.892	0.000	694.624	694.629
℄ Pier	5033.142	0.000	694.597	694.597
L	5043.142	0.000	694.547	694.558
M	5053.142	0.000	694.497	694.519
N	5063.142	0.000	694.447	694.482
O	5073.142	0.000	694.397	694.446
P	5083.142	0.000	694.347	694.397
Q	5093.142	0.000	694.297	694.343
R	5103.142	0.000	694.247	694.279
S	5113.142	0.000	694.197	694.208
℄ Brg. S. Abut.	5118.392	0.000	694.171	694.171
N. End S. Appr. Slab	5119.630	0.000	694.165	694.165
T	5129.630	0.000	694.115	694.122
U	5139.630	0.000	694.065	694.075
V	5149.630	0.000	694.015	694.021
S. End S. Appr. Slab	5157.183	0.000	693.976	693.976
Bk. S. Appr. Bent	5158.214	0.000	693.969	693.969

BEAMS #2 & #12 & GIRDER #7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	4906.099	1.625	695.204	695.204
N. End N. Appr. Slab	4907.130	1.625	695.204	695.204
A	4917.130	1.625	695.187	695.196
B	4927.130	1.625	695.152	695.163
C	4937.130	1.625	695.103	695.110
S. End N. Appr. Slab	4945.683	1.625	695.060	695.060
℄ Brg. N. Abut.	4946.921	1.625	695.054	695.054
D	4956.921	1.625	695.004	695.025
E	4966.921	1.625	694.954	694.996
F	4976.921	1.625	694.904	694.952
G	4986.921	1.625	694.854	694.905
H	4996.921	1.625	694.804	694.846
I	5006.921	1.625	694.754	694.782
J	5016.921	1.625	694.704	694.720
K	5026.921	1.625	694.654	694.659
℄ Pier	5032.171	1.625	694.627	694.627
L	5042.171	1.625	694.577	694.588
M	5052.171	1.625	694.527	694.549
N	5062.171	1.625	694.477	694.513
O	5072.171	1.625	694.427	694.476
P	5082.171	1.625	694.377	694.427
Q	5092.171	1.625	694.327	694.374
R	5102.171	1.625	694.277	694.310
S	5112.171	1.625	694.227	694.239
℄ Brg. S. Abut.	5117.421	1.625	694.201	694.201
N. End S. Appr. Slab	5118.659	1.625	694.195	694.195
T	5128.659	1.625	694.145	694.153
U	5138.659	1.625	694.095	694.105
V	5148.659	1.625	694.045	694.051
S. End S. Appr. Slab	5156.212	1.625	694.007	694.007
Bk. S. Appr. Bent	5157.243	1.625	694.001	694.001

BEAMS #3 & #13 & GIRDER #8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	4902.289	8.000	695.304	695.304
N. End N. Appr. Slab	4903.320	8.000	695.304	695.304
A	4913.320	8.000	695.295	695.304
B	4923.320	8.000	695.267	695.278
C	4933.320	8.000	695.221	695.229
S. End N. Appr. Slab	4941.873	8.000	695.178	695.178
℄ Brg. N. Abut.	4943.111	8.000	695.172	695.172
D	4953.111	8.000	695.122	695.143
E	4963.111	8.000	695.072	695.114
F	4973.111	8.000	695.022	695.070
G	4983.111	8.000	694.972	695.024
H	4993.111	8.000	694.922	694.965
I	5003.111	8.000	694.872	694.901
J	5013.111	8.000	694.822	694.839
K	5023.111	8.000	694.772	694.778
℄ Pier	5028.361	8.000	694.746	694.746
L	5038.361	8.000	694.696	694.707
M	5048.361	8.000	694.646	694.668
N	5058.361	8.000	694.596	694.631
O	5068.361	8.000	694.546	694.595
P	5078.361	8.000	694.496	694.546
Q	5088.361	8.000	694.446	694.492
R	5098.361	8.000	694.396	694.428
S	5108.361	8.000	694.346	694.357
℄ Brg. S. Abut.	5113.611	8.000	694.320	694.320
N. End S. Appr. Slab	5114.848	8.000	694.314	694.314
T	5124.848	8.000	694.264	694.271
U	5134.848	8.000	694.214	694.224
V	5144.848	8.000	694.164	694.170
S. End S. Appr. Slab	5152.401	8.000	694.126	694.126
Bk. S. Appr. Bent	5153.433	8.000	694.121	694.121

DESIGNED Chas Elliott
CHECKED Thomas D. Wilcoxon
DRAWN John F. Schneller Jr.
CHECKED CWE GKA

Nov 20 1990
EXAMINED Engineer of Bridge Design
PASSED Ralph E. Anderson
Engineer of Bridges and Structures
APPROVED
Director of Highways

NOTE:
Work this sheet with sheet #2 of 19.

TOP OF SLAB ELEVATIONS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	136
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
19 SHEETS

BEAMS #4 & #14 & GIRDER #9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	4898.478	14.375	695.402	695.402
N. End N. Appr. Slab	4899.510	14.375	695.403	695.403
A	4909.510	14.375	695.400	695.409
B	4919.510	14.375	695.379	695.391
C	4929.510	14.375	695.340	695.347
S. End N. Appr. Slab	4938.063	14.375	695.297	695.297
℄ Brg. N. Abut.	4939.301	14.375	695.291	695.291
D	4949.301	14.375	695.241	695.268
E	4959.301	14.375	695.191	695.233
F	4969.301	14.375	695.141	695.189
G	4979.301	14.375	695.091	695.142
H	4989.301	14.375	695.041	695.083
I	4999.301	14.375	694.991	695.019
J	5009.301	14.375	694.941	694.957
K	5019.301	14.375	694.891	694.896
℄ Pier	5024.551	14.375	694.864	694.864
L	5034.551	14.375	694.814	694.825
M	5044.551	14.375	694.764	694.786
N	5054.551	14.375	694.714	694.750
O	5064.551	14.375	694.664	694.713
P	5074.551	14.375	694.614	694.664
Q	5084.551	14.375	694.564	694.611
R	5094.551	14.375	694.514	694.547
S	5104.551	14.375	694.464	694.476
℄ Brg. S. Abut.	5109.800	14.375	694.438	694.438
N. End S. Appr. Slab	5111.038	14.375	694.432	694.432
T	5121.038	14.375	694.382	694.390
U	5131.038	14.375	694.332	694.342
V	5141.038	14.375	694.282	694.288
S. End S. Appr. Slab	5148.591	14.375	694.244	694.244
Bk. S. Appr. Bent	5149.623	14.375	694.239	694.239

LONG. BONDED CONSTR. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	4897.159	16.583	695.435	695.435
N. End N. Appr. Slab	4898.190	16.583	695.436	695.436
A	4908.190	16.583	695.436	695.445
B	4918.190	16.583	695.418	695.429
C	4928.190	16.583	695.380	695.388
S. End N. Appr. Slab	4936.743	16.583	695.338	695.338
℄ Brg. N. Abut.	4937.981	16.583	695.332	695.332
D	4947.981	16.583	695.282	695.303
E	4957.981	16.583	695.232	695.274
F	4967.981	16.583	695.182	695.230
G	4977.981	16.583	695.132	695.183
H	4987.981	16.583	695.082	695.124
I	4997.981	16.583	695.032	695.060
J	5007.981	16.583	694.982	694.998
K	5017.981	16.583	694.932	694.938
℄ Pier	5023.231	16.583	694.906	694.906
L	5033.231	16.583	694.856	694.866
M	5043.231	16.583	694.806	694.827
N	5053.231	16.583	694.756	694.791
O	5063.231	16.583	694.706	694.754
P	5073.231	16.583	694.656	694.705
Q	5083.231	16.583	694.606	694.652
R	5093.231	16.583	694.556	694.588
S	5103.231	16.583	694.506	694.517
℄ Brg. S. Abut.	5108.481	16.583	694.479	694.479
N. End S. Appr. Slab	5109.718	16.583	694.473	694.473
T	5119.718	16.583	694.423	694.431
U	5129.718	16.583	694.373	694.383
V	5139.718	16.583	694.323	694.329
S. End S. Appr. Slab	5147.271	16.583	694.285	694.285
Bk. S. Appr. Bent	5148.303	16.583	694.280	694.280

BEAMS #5 & #15 & GIRDER #10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	4894.668	20.750	695.496	695.496
N. End N. Appr. Slab	4895.700	20.750	695.498	695.498
A	4905.700	20.750	695.503	695.511
B	4915.700	20.750	695.489	695.500
C	4925.700	20.750	695.456	695.464
S. End N. Appr. Slab	4934.253	20.750	695.415	695.415
℄ Brg. N. Abut.	4935.491	20.750	695.409	695.409
D	4945.491	20.750	695.359	695.380
E	4955.491	20.750	695.309	695.351
F	4965.491	20.750	695.259	695.307
G	4975.491	20.750	695.209	695.261
H	4985.491	20.750	695.159	695.202
I	4995.491	20.750	695.109	695.138
J	5005.491	20.750	695.059	695.076
K	5015.491	20.750	695.009	695.015
℄ Pier	5020.741	20.750	694.983	694.983
L	5030.741	20.750	694.933	694.944
M	5040.741	20.750	694.883	694.905
N	5050.741	20.750	694.833	694.868
O	5060.741	20.750	694.783	694.832
P	5070.741	20.750	694.733	694.783
Q	5080.741	20.750	694.683	694.729
R	5090.741	20.750	694.633	694.665
S	5100.741	20.750	694.583	694.594
℄ Brg. S. Abut.	5105.990	20.750	694.557	694.557
N. End S. Appr. Slab	5107.228	20.750	694.551	694.551
T	5117.228	20.750	694.501	694.508
U	5127.228	20.750	694.451	694.461
V	5137.228	20.750	694.401	694.407
S. End S. Appr. Slab	5144.781	20.750	694.363	694.363
Bk. S. Appr. Bent	5145.813	20.750	694.358	694.358

DESIGNED Chin Elliott
CHECKED David Wilcoxon
DRAWN John F. Schneller Jr.
CHECKED CWE CAN

Nov 20 1990
EXAMINED Engineer of Bridge Design
PASSED Robert E. Anderson Engineer of Bridges and Structures
APPROVED
Director of Highways

NOTE:
Work this sheet with sheet #2 of 19.

TOP OF SLAB ELEVATIONS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

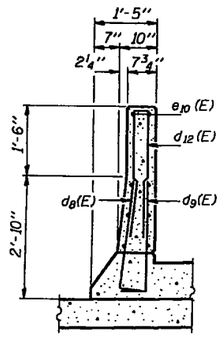
Notes: See sheets #8 & #9 of 19 for Approach details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet #11 of 19 for Section A-A.
See sheet #8 of 19 for Section B-B.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

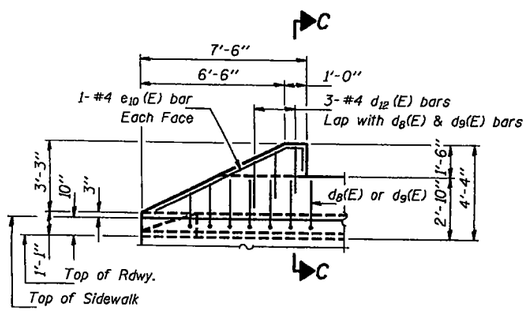
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	19	137
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
19 SHEETS

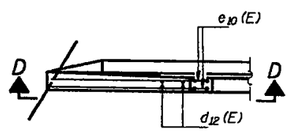
MIN. BAR LAPS
#5 bars = 1'-8"



SECTION C-C

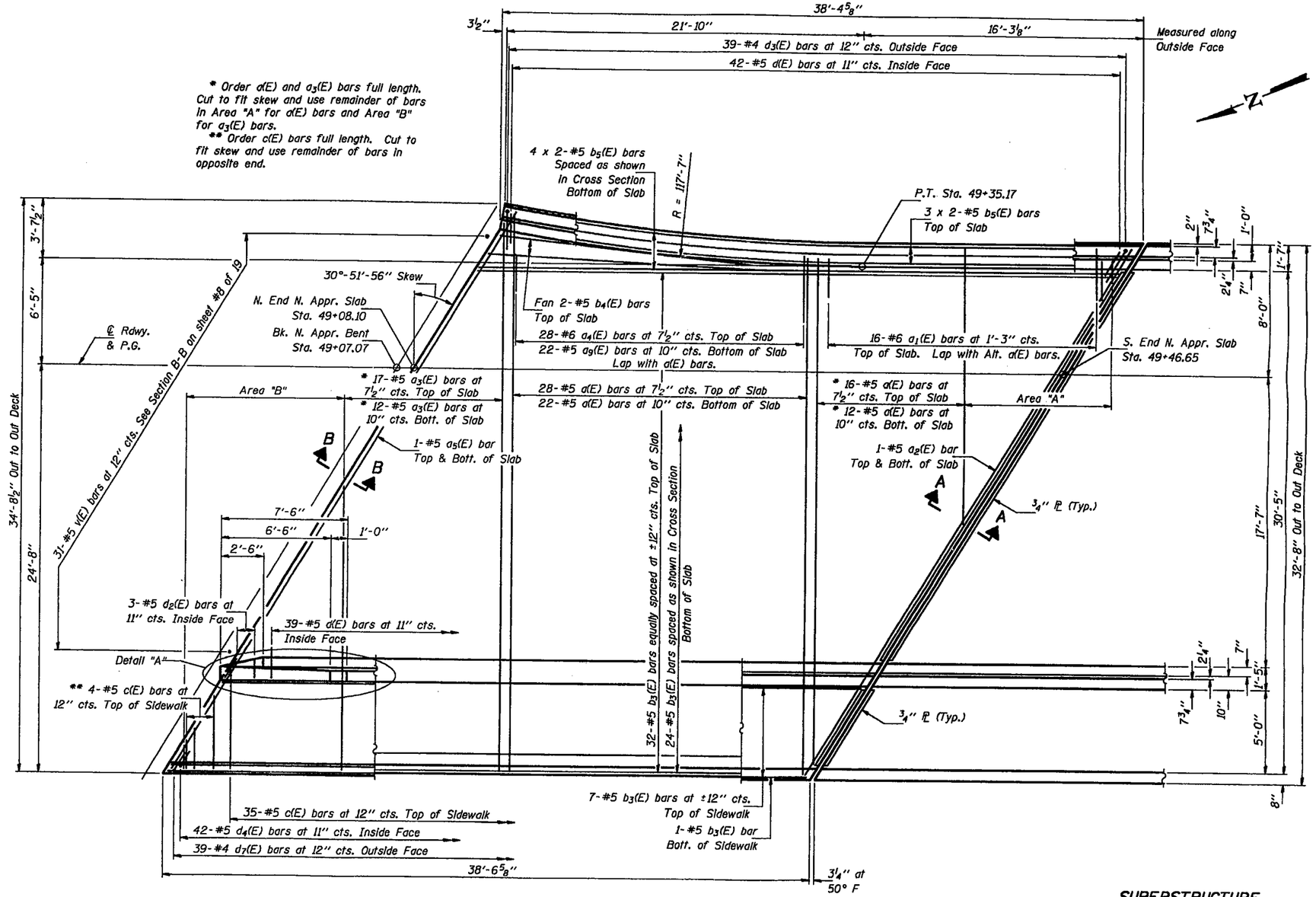


VIEW D-D



DETAIL "A"

* Order d(E) and a_3(E) bars full length. Cut to fit skew and use remainder of bars in Area "A" for d(E) bars and Area "B" for a_3(E) bars.
** Order c(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



PLAN

DESIGNED	Chris Elliott
CHECKED	Wayne D. Wilson
DRAWN	John F. Schneller Jr.
CHECKED	CWE SKA

Nov 20 1990
EXAMINED Greg O. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE
NORTH APPROACH
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

Notes: See sheets #8 & #9 of 19 for Approach details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet #11 of 19 for Section A-A.
See sheet #8 of 19 for Section B-B.

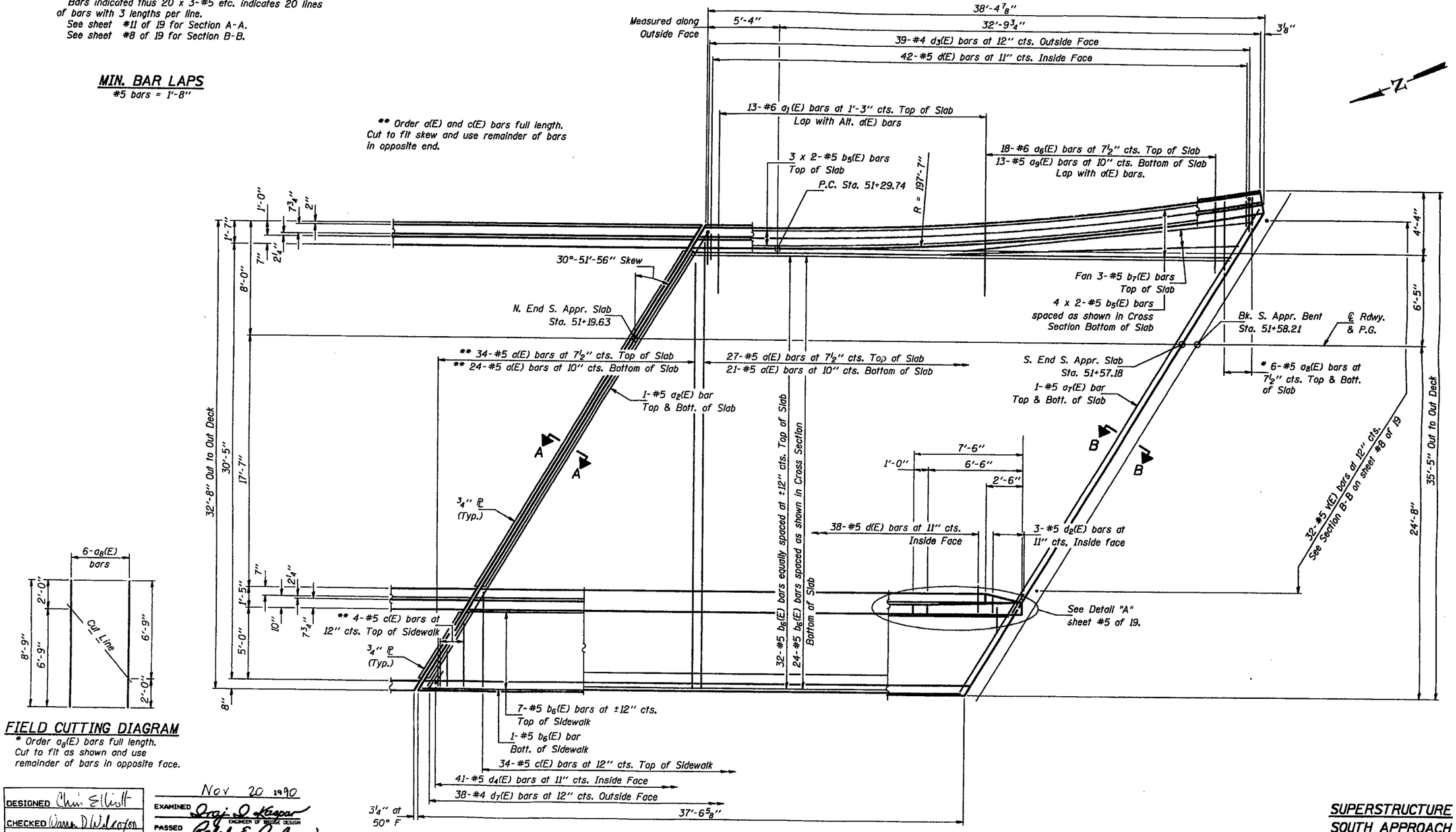
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	19	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
19 SHEETS

MIN. BAR LAPS
#5 bars = 1'-8"

** Order d(E) and c(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



PLAN

FIELD CUTTING DIAGRAM
* Order a8(E) bars full length. Cut to fit as shown and use remainder of bars in opposite face.

DESIGNED	Chris Elliott
CHECKED	James D. Widrofon
DRAWN	John F. Schneller Jr.
CHECKED	CWE GAH

Nov 20 1990

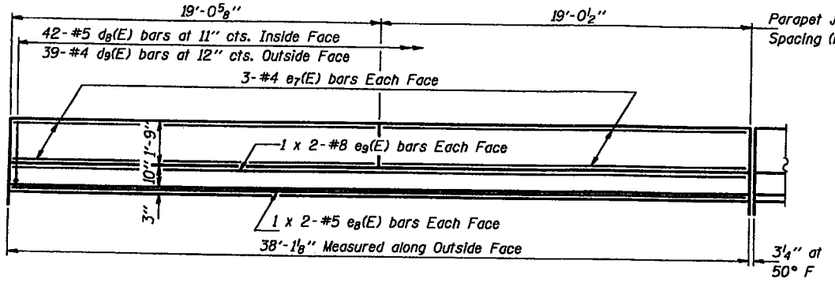
EXAMINED Engineer of Bridge Design
PASSED Ralph E. Anderson, Engineer of Bridges and Structures
APPROVED Director of Highways

SUPERSTRUCTURE
SOUTH APPROACH
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

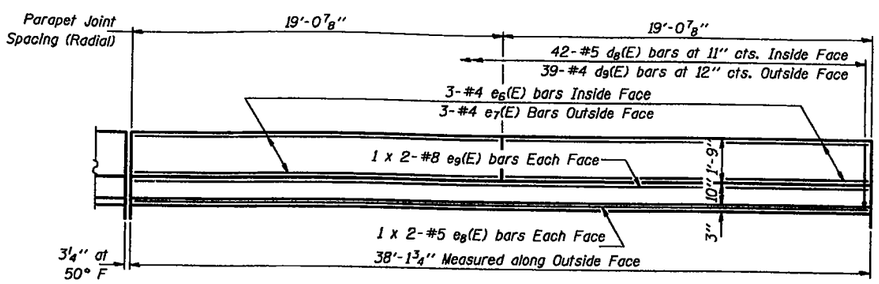
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	19	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

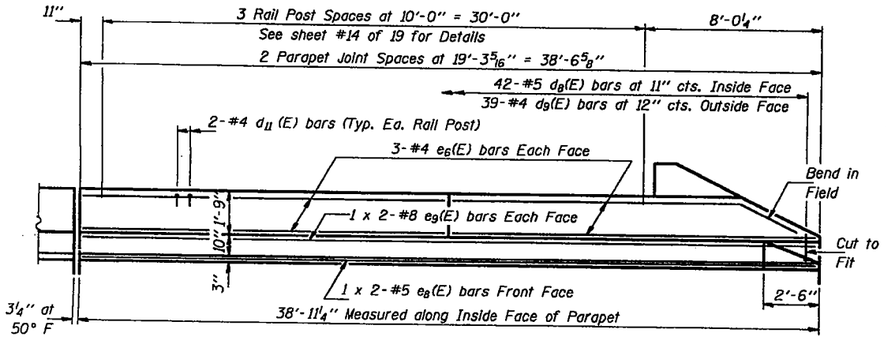
SHEET NO. 7
19 SHEETS



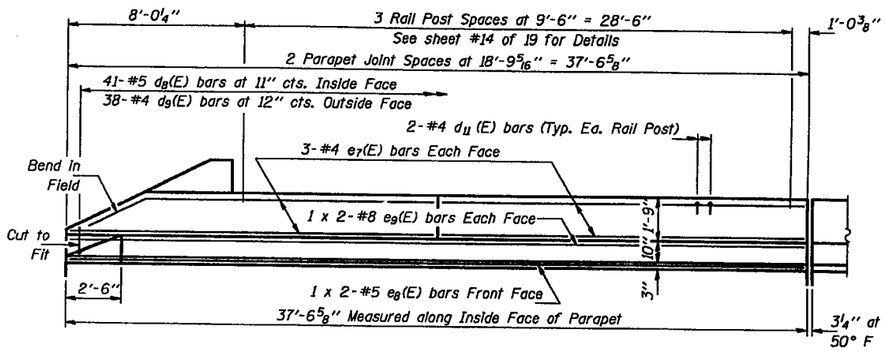
INSIDE ELEVATION OF EAST PARAPET NORTH APPROACH
(Looking East)



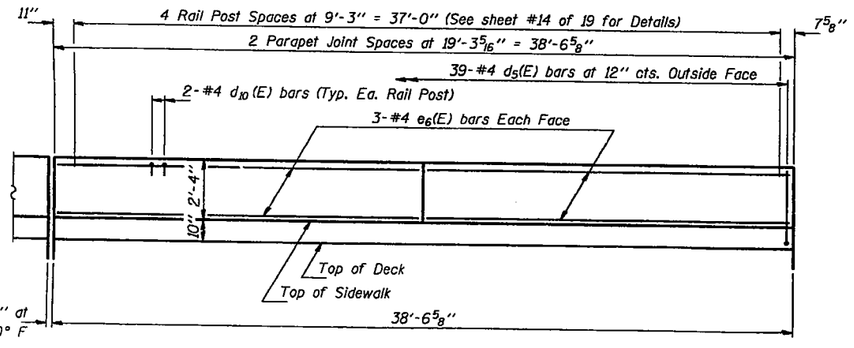
INSIDE ELEVATION OF EAST PARAPET SOUTH APPROACH
(Looking East)



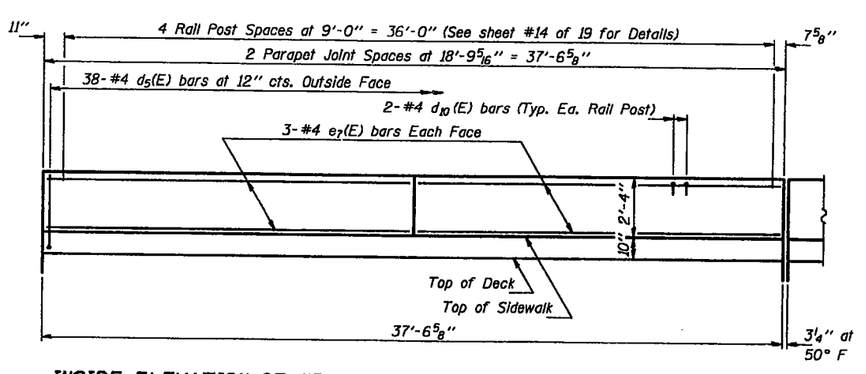
INSIDE ELEVATION OF WEST PARAPET NORTH APPROACH
(Looking West)



INSIDE ELEVATION OF WEST PARAPET SOUTH APPROACH
(Looking West)



INSIDE ELEVATION OF WEST SIDEWALK PARAPET NORTH APPROACH
(Looking West)



INSIDE ELEVATION OF WEST SIDEWALK PARAPET SOUTH APPROACH
(Looking West)

DESIGNED	Chas Elliott
CHECKED	Warren D. Wilcoxon
DRAWN	John F. Schneller Jr.
CHECKED	CWE GAA

Nov 20 1990

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson
Engineer of Bridges and Structures

APPROVED
Director of Highways

MIN. BAR LAPS
#5 bars = 2'-2"
#8 bars = 4'-6"

Notes: See sheets #8 & #9 of 19 for Approach Details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

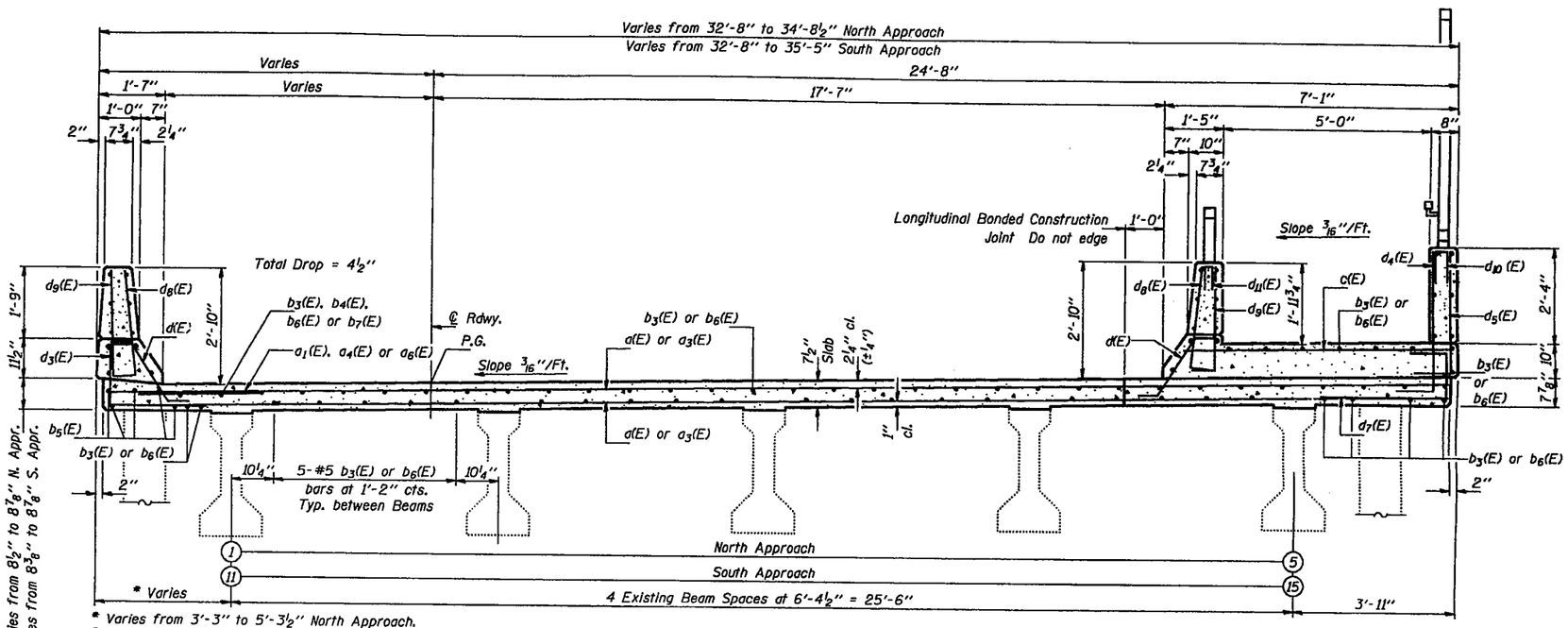
APPROACH PARAPET DETAILS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	140
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

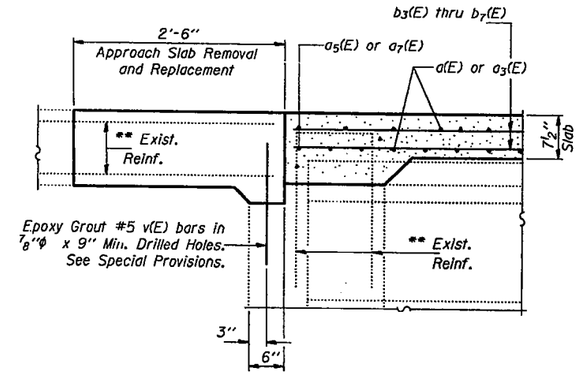
SHEET NO. 8
19 SHEETS

Notes: Reinforcement bars designated (E) shall be epoxy coated.
See Sheet #7 of 19 for parapet reinforcement.



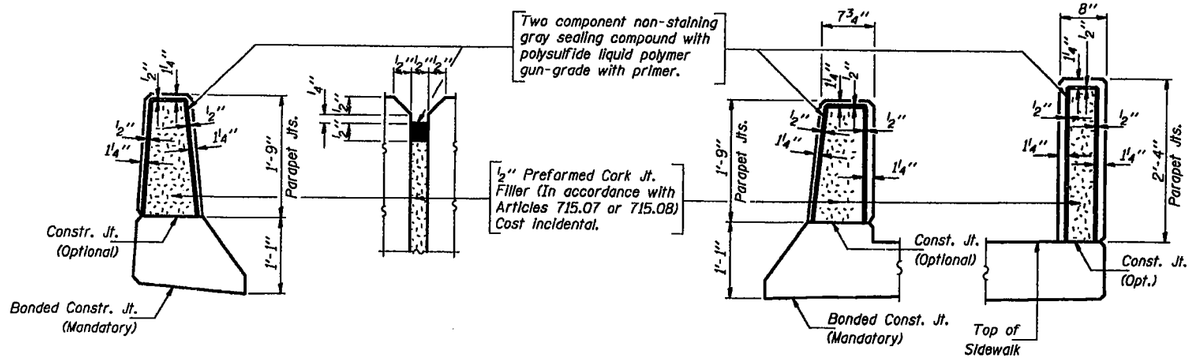
* Varies from 3'-3" to 5'-3½" North Approach.
* Varies from 3'-3" to 6'-0" South Approach.

CROSS SECTION
(Looking South)



SECTION B-B

** Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into new construction. Cost is incidental to "Removal of Existing Superstructures".



PARAPET JOINT DETAILS

DESIGNED	Chas Elliott
CHECKED	Wm D Wheaton
DRAWN	John F. Schueller Jr.
CHECKED	CWE GKA

Nov 20 1990

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson Engineer of Bridges and Structures

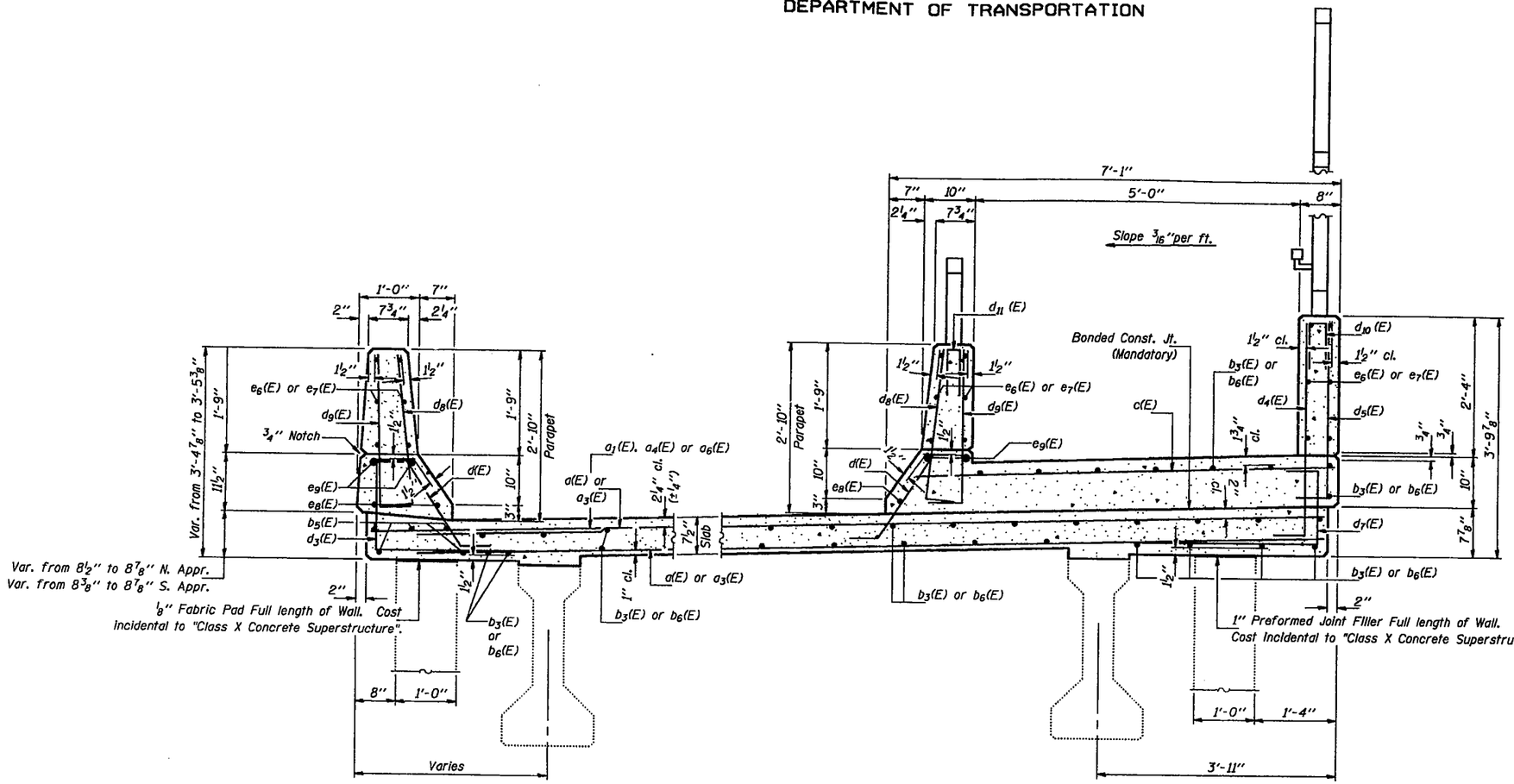
APPROVED Director of Highways

APPROACH DETAILS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	141
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 9
19 SHEETS



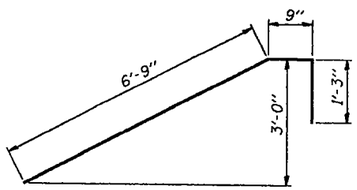
SECTION THRU EAST PARAPET

SECTION THRU WEST SIDEWALK

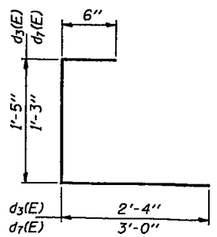
TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	184	#5	31'-6"	——
a_1(E)	29	#6	4'-0"	——
a_2(E)	4	#5	37'-4"	——
a_3(E)	29	#5	33'-6"	——
a_4(E)	28	#6	6'-0"	——
a_5(E)	2	#5	39'-3"	——
a_6(E)	18	#6	6'-9"	——
a_7(E)	2	#5	38'-9"	——
a_8(E)	6	#5	8'-9"	——
a_9(E)	35	#5	3'-10"	——
b_3(E)	64	#5	38'-3"	——
b_4(E)	2	#5	15'-0"	——
b_5(E)	28	#5	20'-5"	——
b_6(E)	64	#5	37'-3"	——
b_7(E)	3	#5	18'-0"	——
c(E)	77	#5	6'-7"	——
d(E)	161	#5	2'-7"	⌞
d_2(E)	6	#5	2'-5"	⌞
d_3(E)	78	#4	4'-3"	⊏
d_4(E)	83	#5	4'-5"	⌙
d_5(E)	77	#4	3'-9"	⌙
d_7(E)	77	#4	4'-9"	⊏
d_8(E)	167	#5	3'-0"	⌙
d_9(E)	155	#4	3'-0"	⌙
d_{10} (E)	20	#4	1'-10½"	⊓
d_{11} (E)	16	#5	1'-10"	⊓
d_{12} (E)	6	#4	5'-4"	⊓
e_6(E)	30	#4	19'-0"	——
e_7(E)	42	#4	18'-6"	——
e_8(E)	12	#5	20'-8"	——
e_9(E)	16	#8	21'-9"	——
e_{10} (E)	4	#4	8'-9"	⌒
v(E)	63	#5	1'-9"	——
Reinforcement Bars (Epoxy Coated)			Lbs.	18,975
Class X Concrete Superstructure			Cu. Yds.	95.5

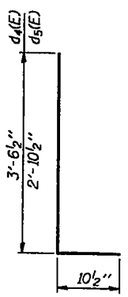
Reinforcement bars designated (E) shall be epoxy coated.



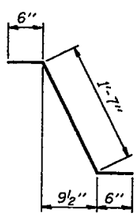
BAR e_{10} (E)



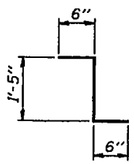
BARS d_3(E) & d_7(E)



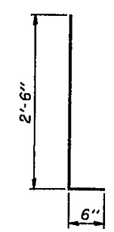
BARS d_4(E) & d_5(E)



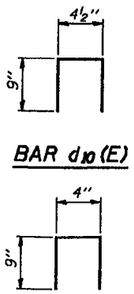
BAR d(E)



BAR d_2(E)

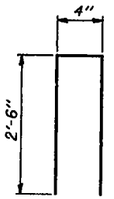


BARS d_8(E) & d_9(E)



BAR d_{10} (E)

BAR d_{11} (E)



BAR d_{12} (E)

DESIGNED	Chris E. Wolf
CHECKED	Warren D. W. Lemon
DRAWN	John F. Schneller Jr.
CHECKED	CME GKA

Nov 20 1990

EXAMINED Greg O. Hagen
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

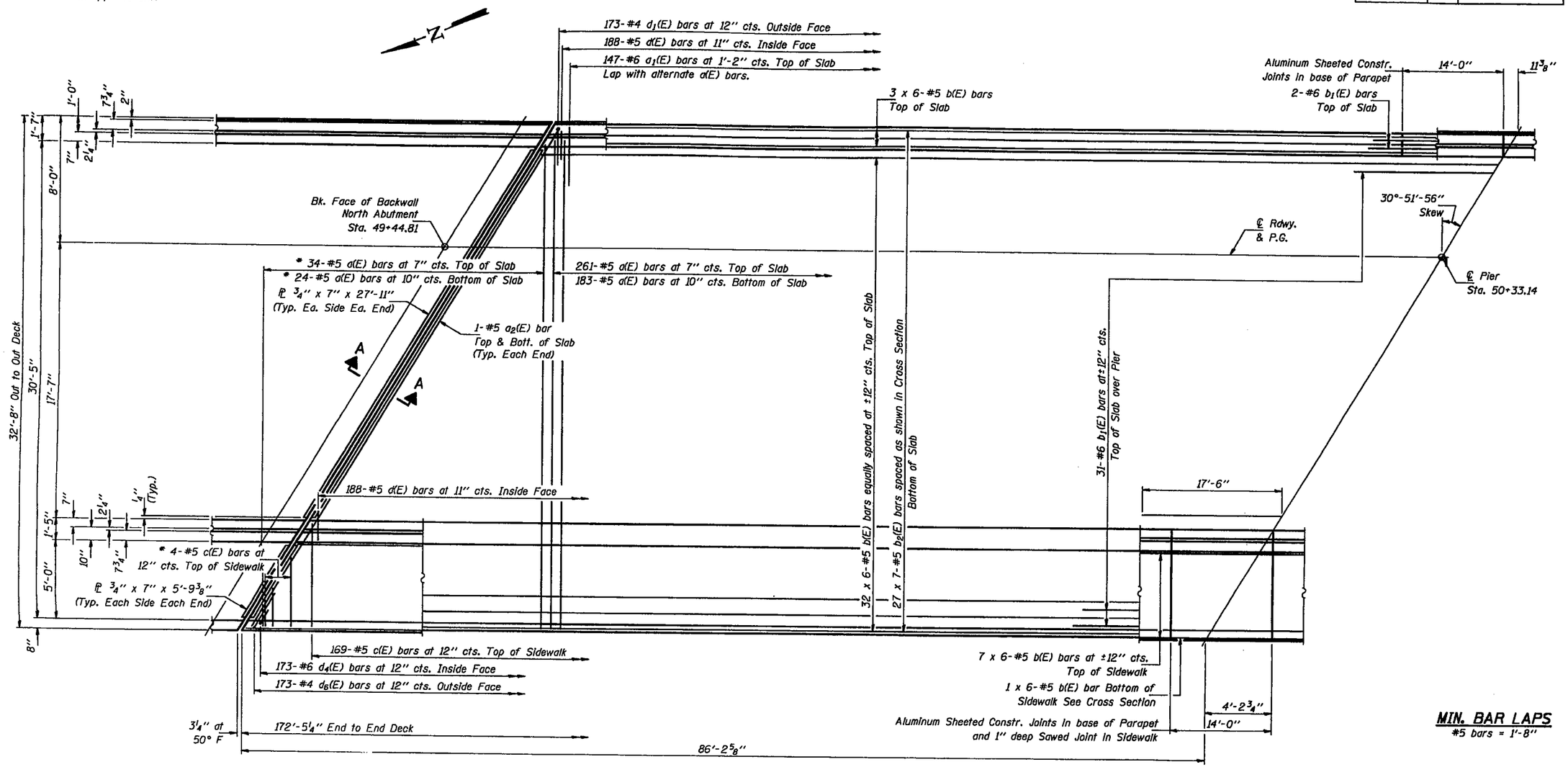
APPROACH DETAILS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

* Order a(E) and c(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	19	14
FED. ROAD DIST. NO. 7	S.J.3688	FED. AID PROJECT-		

SHEET NO. 10
19 SHEETS



PLAN

MIN. BAR LAPS
#5 bars = 1'-8"

Notes: See sheets #11, #12 & #13 of 19 for Superstructure Details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	Wm. Elliott
CHECKED	Wm. D. Wilson
DRAWN	John F. Schneller Jr.
CHECKED	CWE GRA

Nov 20 1990

EXAMINED Greg O. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

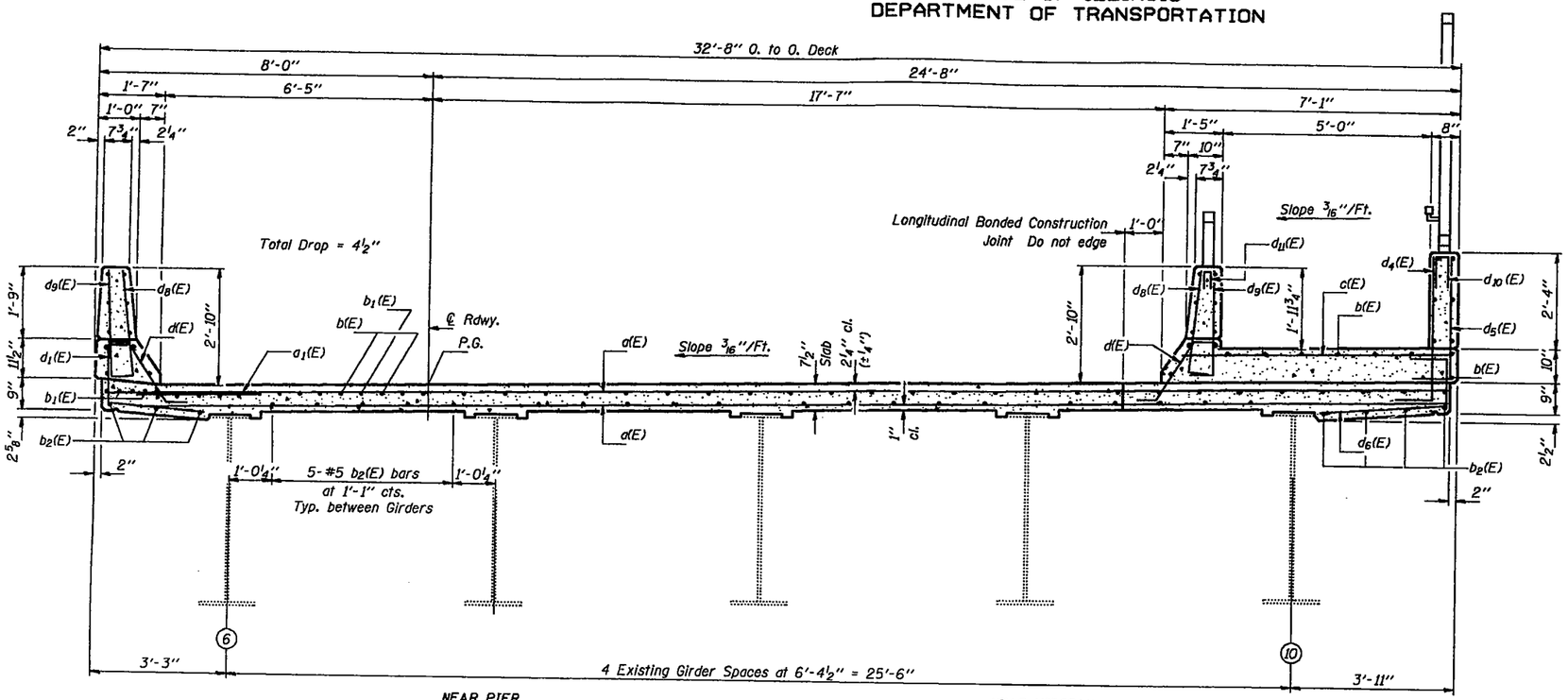
APPROVED
DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	143
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

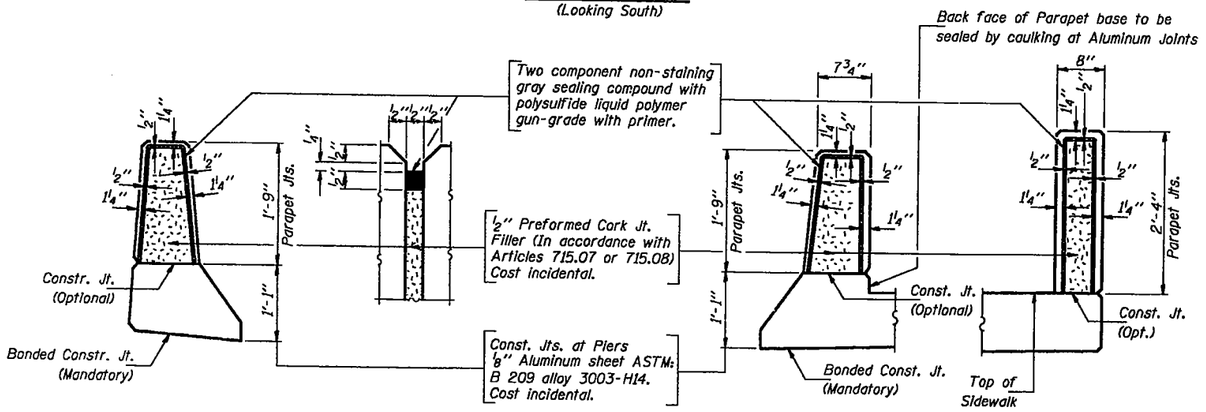
SHEET NO. 11
19 SHEETS



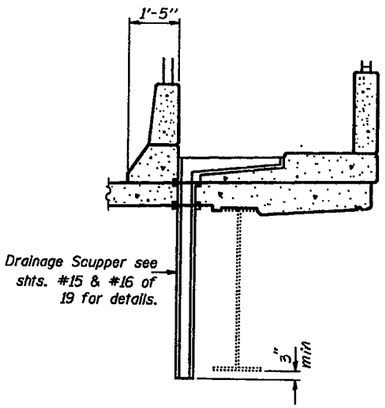
NEAR PIER

NEAR MIDSPAN

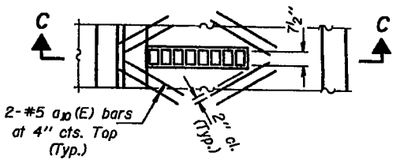
CROSS SECTION
(Looking South)



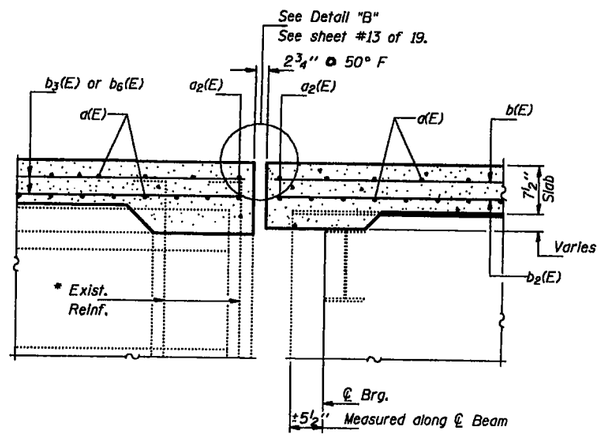
PARAPET JOINT DETAILS



SECTION C-C



PLAN



SECTION A-A

DESIGNED	Chris Elliott
CHECKED	James D. Wilcoxen
DRAWN	John F. Schneller Jr.
CHECKED	CWE GFH

Nov 20 1990

EXAMINED Graj D. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

Notes: Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

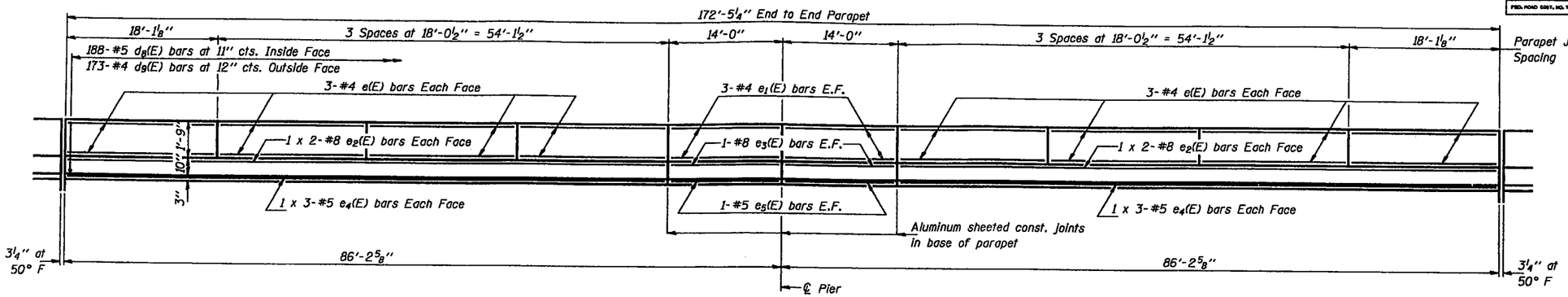
* Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into new construction. Cost is incidental to "Removal of Existing Superstructures".

SUPERSTRUCTURE DETAILS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

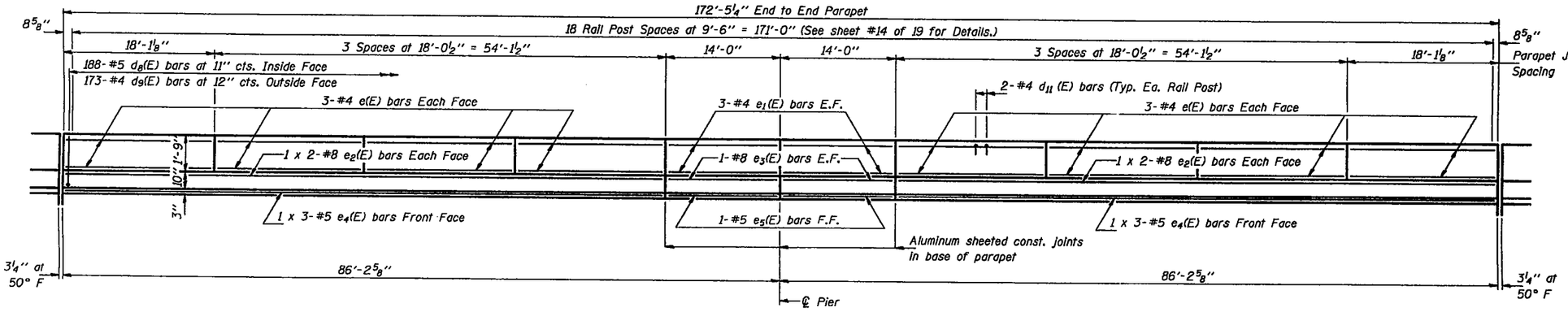
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	144
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

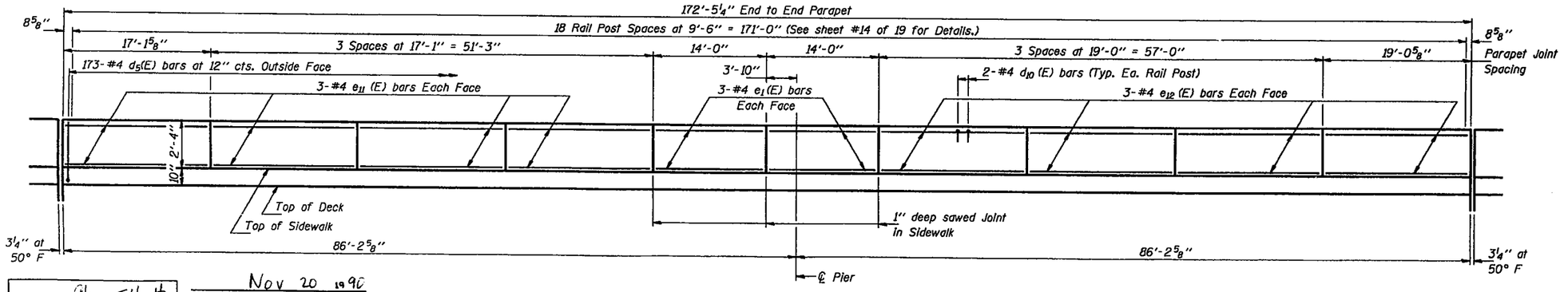
SHEET NO. 12
19 SHEETS



INSIDE ELEVATION OF EAST PARAPET
(Looking East)



INSIDE ELEVATION OF WEST PARAPET
(Looking West)



INSIDE ELEVATION OF WEST SIDEWALK PARAPET
(Looking West)

MIN. BAR LAPS
#5 bars = 2'-2"
#8 bars = 4'-6"

DESIGNED	Chas Elliott
CHECKED	Wm D Wilcox
DRAWN	John F. Schneller Jr.
CHECKED	CWE GKA

NOV 20 1996
EXAMINED Raj D. Kapur ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

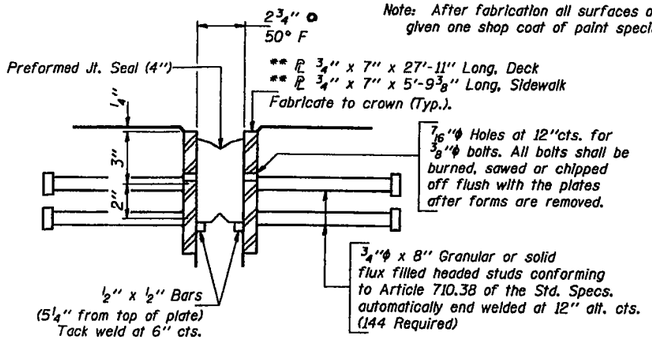
Notes: Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

SUPERSTRUCTURE PARAPET DETAILS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	145
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
19 SHEETS

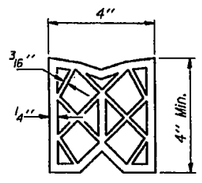
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



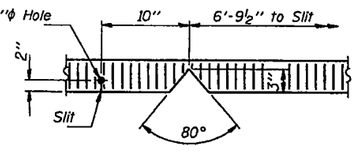
Note: After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel.

DETAIL "B"

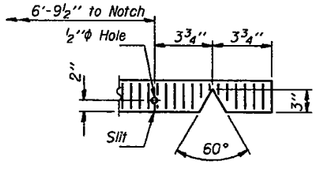
** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel. Cut retainer bars in sidewalk 6" short of sidewalk face.



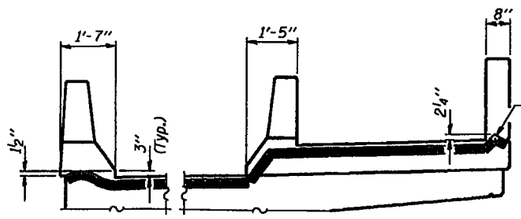
PREFORMED JOINT SEAL (4")



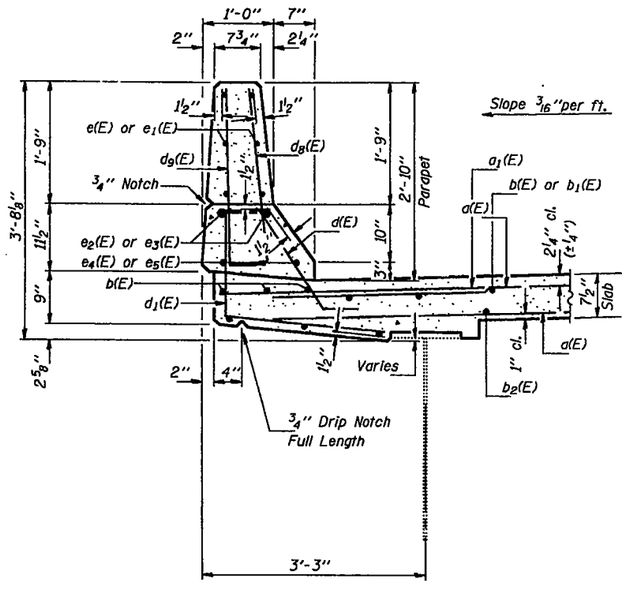
SEAL CUT-OUT



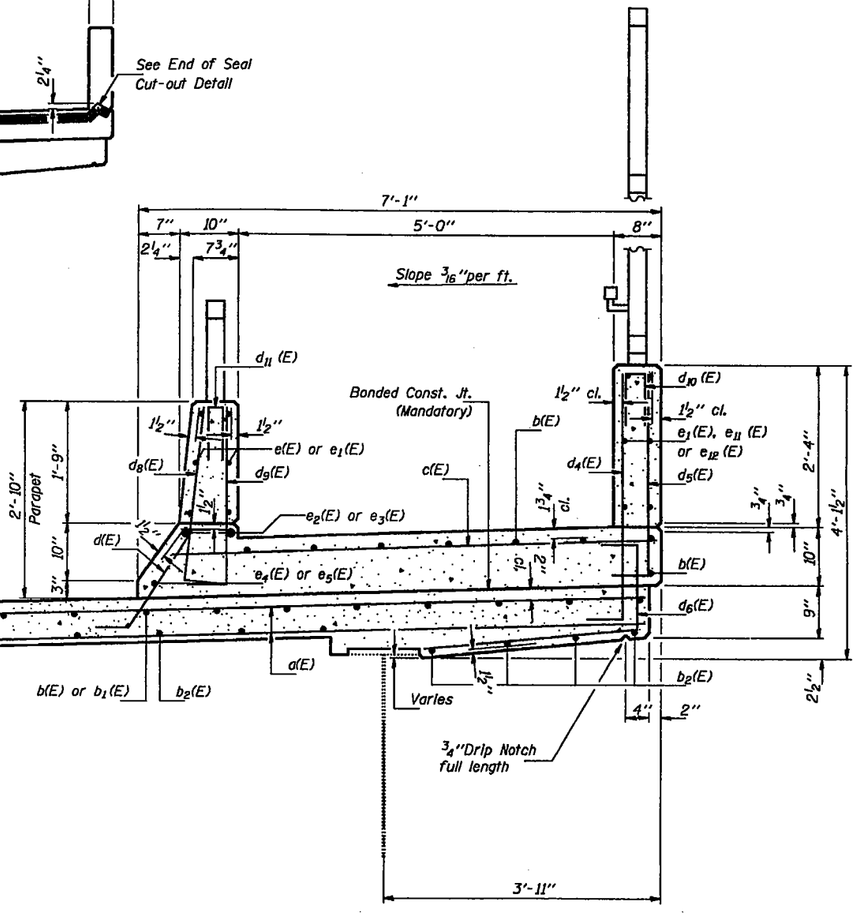
SEAL CUT-OUT



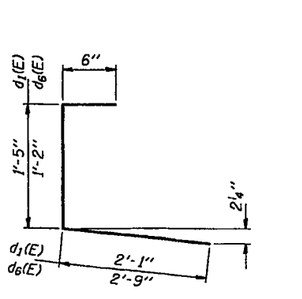
END TREATMENT



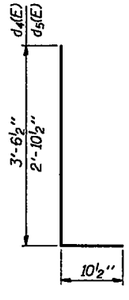
SECTION THRU EAST PARAPET



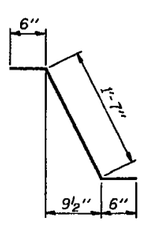
SECTION THRU WEST SIDEWALK



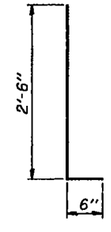
BARS $d_1(E)$ & $d_6(E)$



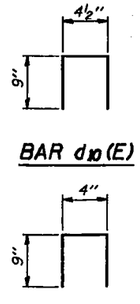
BARS $d_4(E)$ & $d_5(E)$



BAR d(E)



BARS $d_8(E)$ & $d_9(E)$



BAR $d_{10}(E)$

BAR $d_{11}(E)$

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	502	#5	31'-6"	
$a_1(E)$	147	#6	4'-0"	
$a_2(E)$	4	#5	37'-4"	
$d_{10}(E)$	8	#5	2'-0"	
b(E)	258	#5	30'-1"	
$b_1(E)$	33	#6	35'-0"	
$b_2(E)$	189	#5	26'-0"	
c(E)	173	#5	6'-7"	
d(E)	376	#5	2'-7"	
$d_1(E)$	173	#4	4'-0"	
$d_4(E)$	173	#5	4'-5"	
$d_5(E)$	173	#4	3'-9"	
$d_6(E)$	173	#4	4'-5"	
$d_8(E)$	376	#5	3'-0"	
$d_9(E)$	346	#4	3'-0"	
$d_{10}(E)$	38	#4	1'-10 1/2"	
$d_{11}(E)$	38	#4	1'-10"	
e(E)	96	#4	17'-9"	
$e_1(E)$	36	#4	13'-9"	
$e_2(E)$	16	#8	38'-6"	
$e_3(E)$	8	#8	13'-9"	
$e_4(E)$	18	#5	25'-9"	
$e_5(E)$	6	#5	13'-9"	
$e_{11}(E)$	24	#4	16'-10"	
$e_{12}(E)$	24	#4	18'-9"	
Reinforcement Bars (Epoxy Coated)		Lbs.	43,765	
Class X Concrete Superstructure		Cu. Yds.	217.0	

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	Chun Elliott
CHECKED	Wayne D. Watson
DRAWN	John F. Schneller Jr.
CHECKED	CWE GKH

Nov 20 1990

EXAMINED Greg D. Kaspar, ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

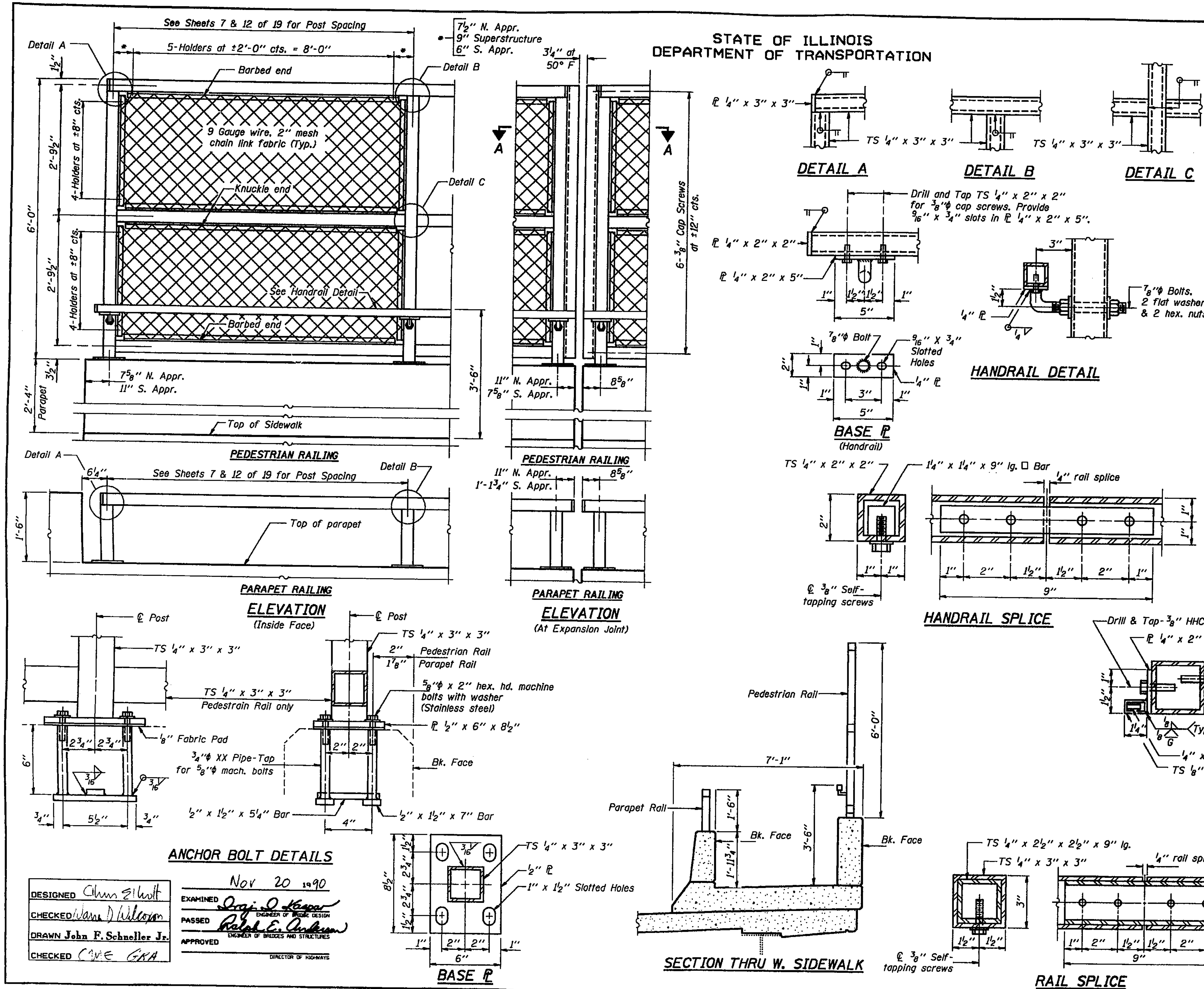
APPROVED DIRECTOR OF HIGHWAYS

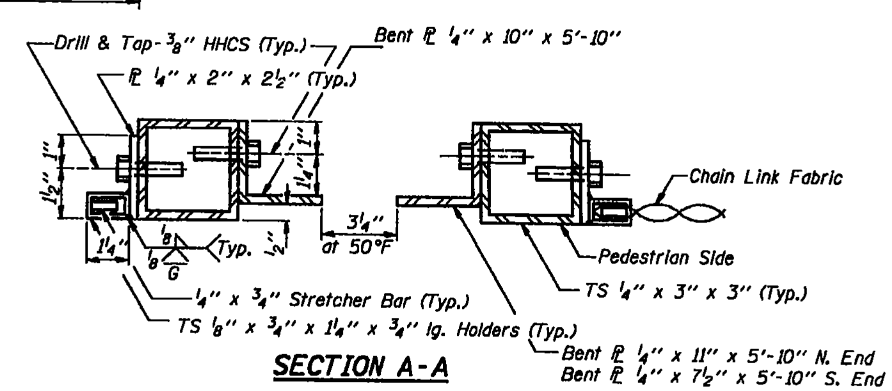
SUPERSTRUCTURE DETAILS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	146

SHEET NO. 14
19 SHEETS





NOTES

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per lineal foot for Pedestrian Railing.

The 9 gauge fabric ties shall be in accordance with Article 710.33(f) of the Standard Specifications.

Installation of the chain link fabric shall be in accordance with Section 629 of the Standard Specifications.

Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M183.

The chain link fabric shall be placed along Pedestrian Side as shown on Section A-A.

All posts, railing, splices, anchor devices, and bent plates shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. All bolts, nuts, and washers shall be galvanized in accordance with AASHTO M-232.

Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.

The chain link fabric shall conform to the requirements of Article 710.33(a)(1)(2) or (3) of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Pedestrian Railing	Lin. Ft.	244
Parapet Railing	Lin. Ft.	230

PEDESTRIAN RAILING AND PARAPET RAILING
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

DESIGNED	Chris Elliott
CHECKED	Wayne D. Wilcoxen
DRAWN	John F. Schneller Jr.
CHECKED	Clive GKA

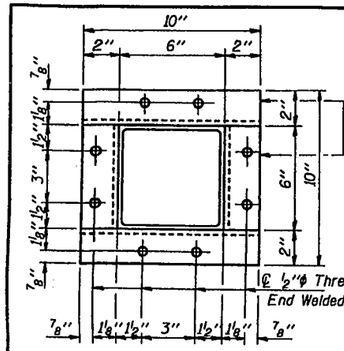
Nov 20 1990
EXAMINED — Iraj O. Kaspar, ENGINEER OF BRIDGE DESIGN
PASSED — Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

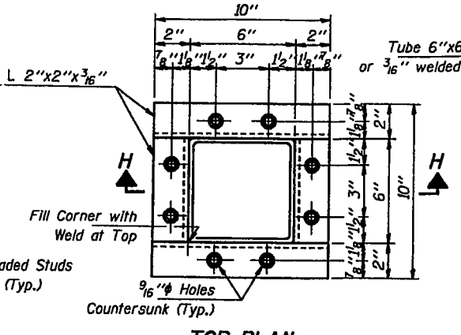
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	178	147
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
19 SHEETS

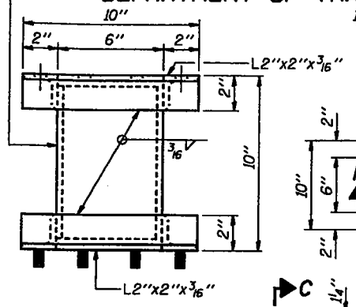
Note A: Surface of welds shall be recessed 1/16" Max. or placed flush with inside face of bars to provide clearance for Grate.



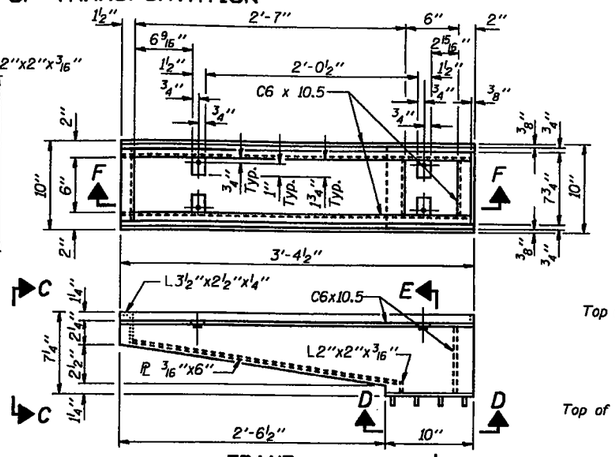
BOTTOM PLAN



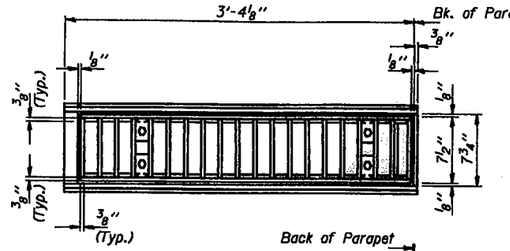
TOP PLAN

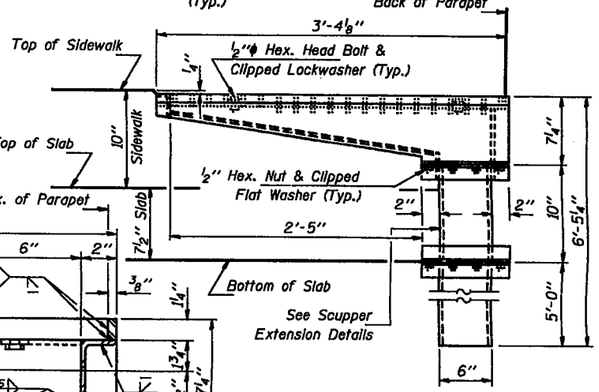


ELEVATION



FRAME

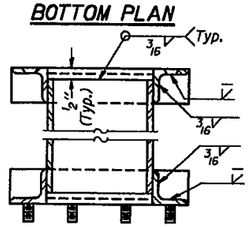




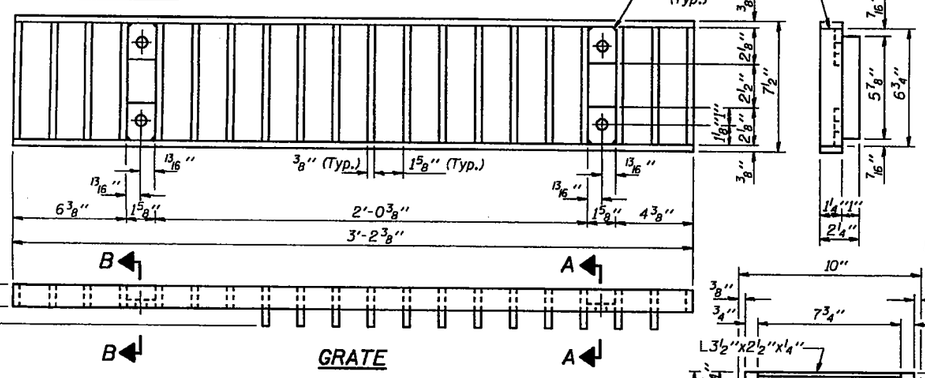
DRAINAGE SCUPPER

SCUPPER EXTENSION DETAILS

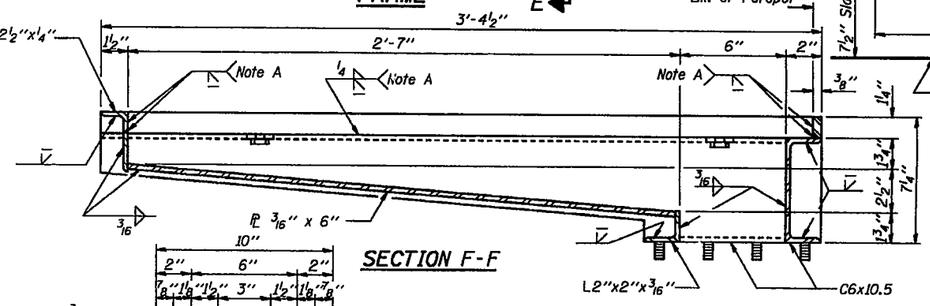
Cost of Scupper Extension is incidental to "Drainage Scupper".



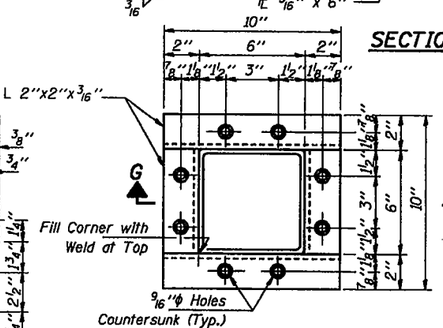
SECTION H-H

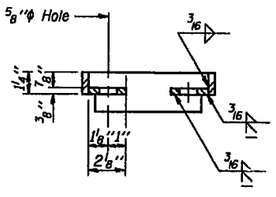


GRATE

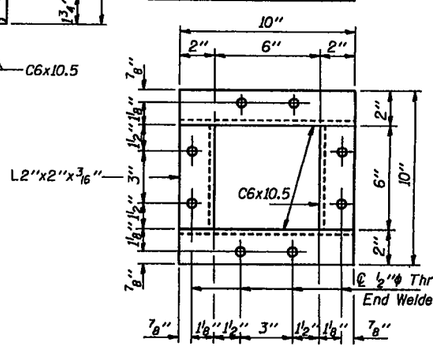


SECTION F-F

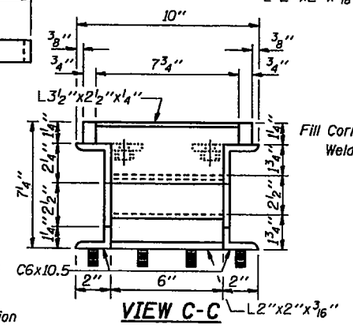




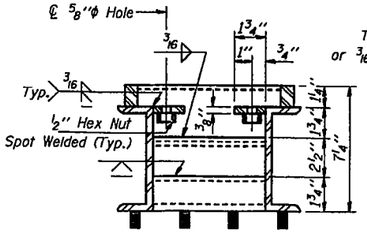
SECTION A-A



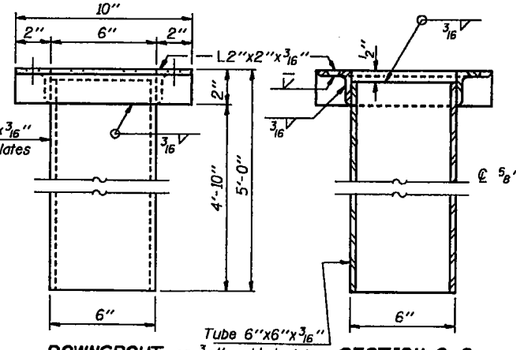
VIEW D-D



VIEW C-C

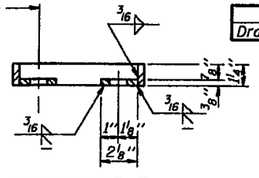


SECTION E-E



DOWNSPOUT

SECTION G-G



SECTION B-B

Notes: Hollow structural steel tubing shall conform to the requirements of ASTM designation A500 Grade B, or A501 Structural Steel Tubing.
All other shapes, plates and bars shall conform to the requirements of AASHTO M183.
Bolts, studs, washers and nuts shall conform to the requirements of ASTM A307.
The Grate, Frame and Downspout shall be galvanized after shop fabrication in accordance with AASHTO M111 & ASTM A385.
All bolts, washers and nuts shall be galvanized in accordance with AASHTO M232.
Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper will be paid for at the unit bid price for "DRAINAGE SCUPPERS."

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers	Each	1

(Sheet 1 of 2)

STEEL DRAINAGE SCUPPER
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

DESIGNED	Chas Elliott
CHECKED	Dana Dickerson
DRAWN	John F. Schneller Jr.
CHECKED	CWE GRH

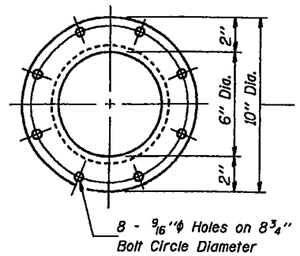
Nov 20 1990
EXAMINED Oraj O Kaspar, ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

DS-3

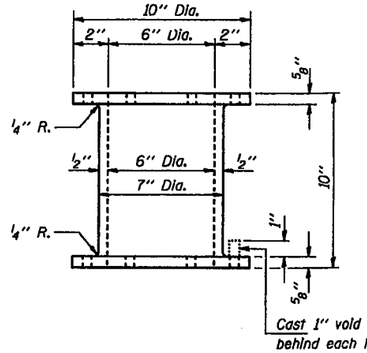
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	148
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

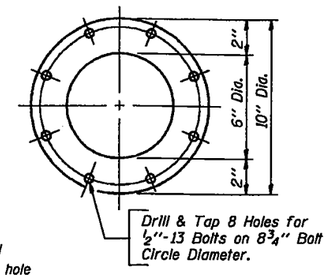
SHEET NO. 16
19 SHEETS



TOP VIEW



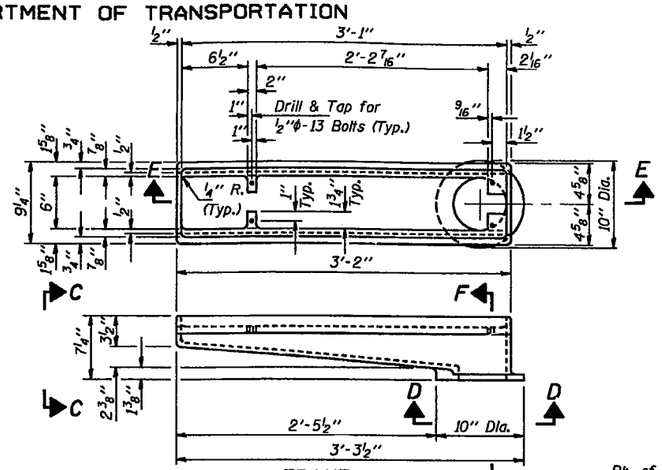
ELEVATION



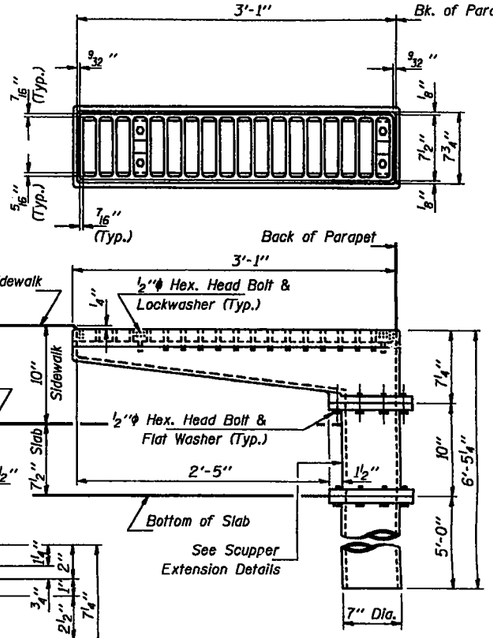
BOTTOM VIEW

SCUPPER EXTENSION DETAILS

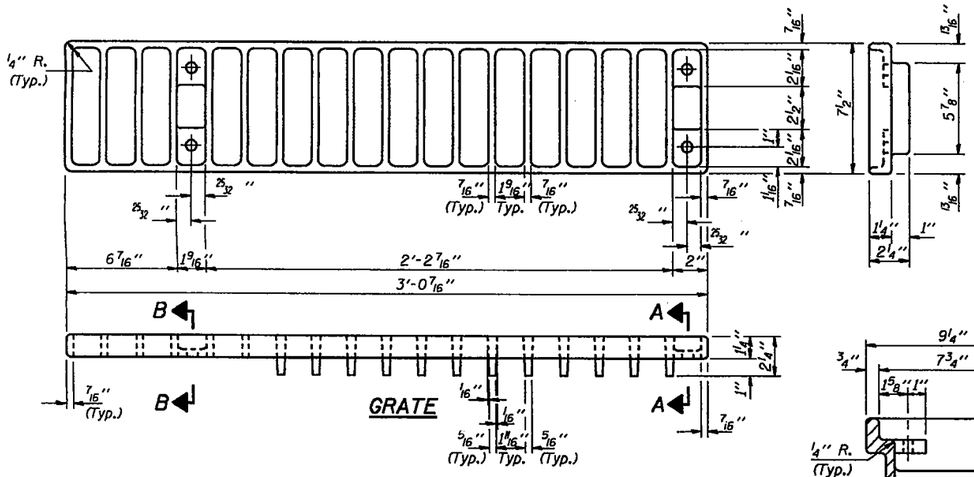
Cost of Scupper Extension is incidental to "Drainage Scupper".



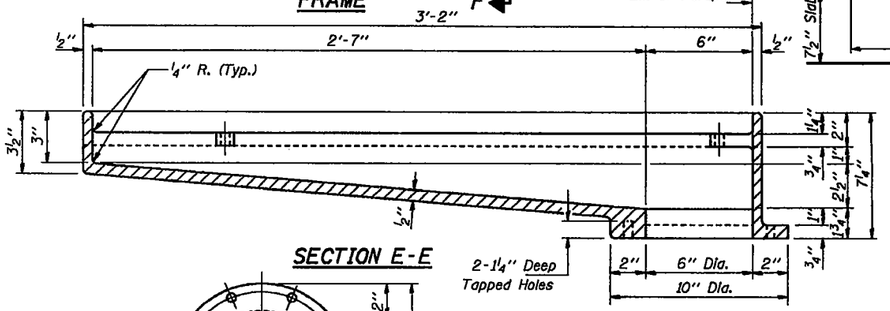
FRAME



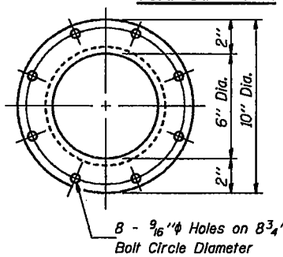
DRAINAGE SCUPPER

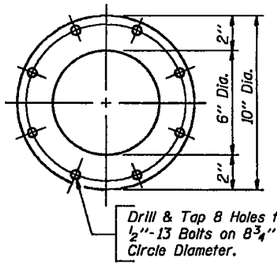


GRATE

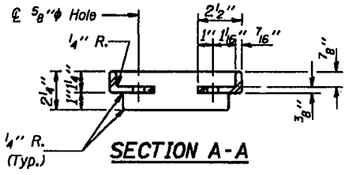


SECTION E-E

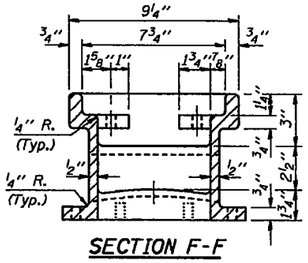




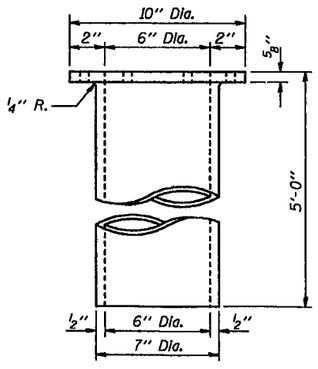
VIEW D-D



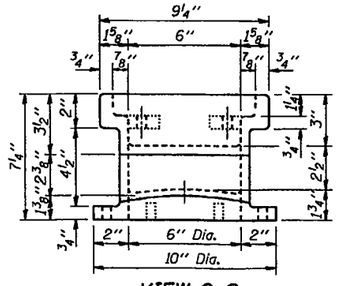
SECTION A-A



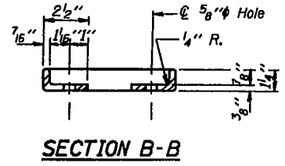
SECTION F-F



DOWNSPOUT



VIEW C-C



SECTION B-B

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105. Class 30.

Bolts and washers shall conform to the requirements of ASTM A307.

All bolts and washers shall be galvanized in accordance with AASHTO M232.

As an alternate bolts and washers may be stainless steel conforming to the requirements of ASTM A193. Type 304.

Cost of the Grate. Frame. Downspout. bolts and washers including complete installation of Scupper will be paid for at the unit bid price for "DRAINAGE SCUPPERS."

The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

DESIGNED	Thomas Elliott
CHECKED	Hans Dahlman
DRAWN	John F. Schneller Jr.
CHECKED	CWE GRH

Nov 20 1990

EXAMINED Iraj O. Hagpar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

DS-4

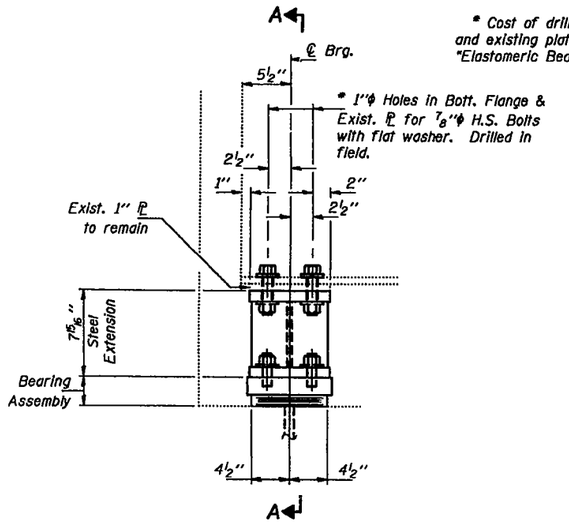
(Sheet 2 of 2)

ALTERNATE - CAST IRON
DRAINAGE SCUPPER
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

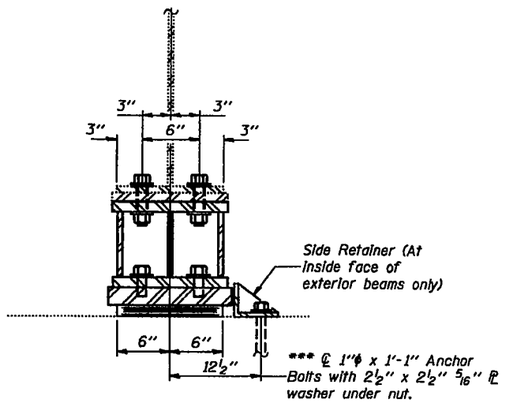
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	178	149
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
19 SHEETS



ELEVATION AT ABUT.

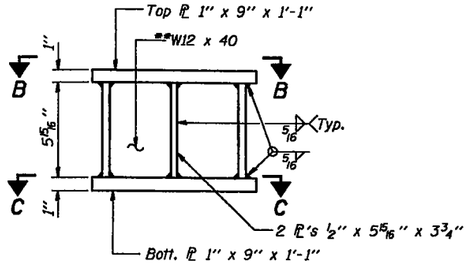
* Cost of drilling holes in bottom flanges and existing plates in field is incidental to "Elastomeric Bearing Assembly Type I".



*** See sheet #18 of 19 for Anchor Bolt installation.

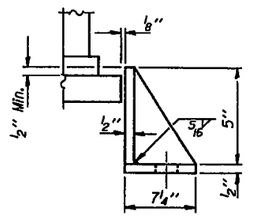
SECTION A-A

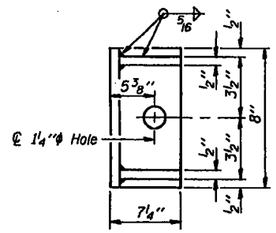
TYPE I ELASTOMERIC EXP. BRG.



STEEL EXTENSION

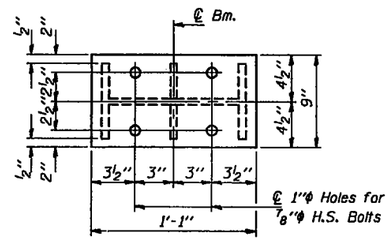
**Equivalent welded plates will be allowed in lieu of W12 x 40



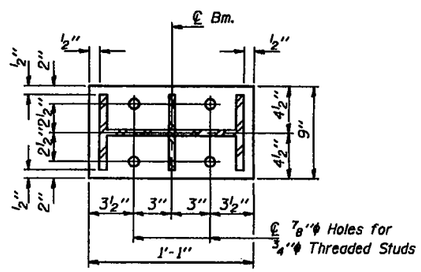


SIDE RETAINER

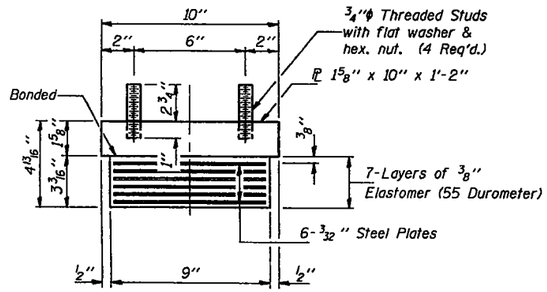
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



VIEW B-B



SECTION C-C



BEARING ASSEMBLY

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

Notes: Existing Anchor Bolts at the Abutments shall be cut off and ground flush with the top of the Abutment cap. (Cost Incidental to "Jack and Remove Existing Bearing".)

Weight of Steel Extensions, Side Retainers, Bolts with nuts and washers is is included in "Structural Steel".

Jacking, Cribbing and bearing replacement shall be done after superstructure slab has been removed and before Concrete Slab is poured.

The max. dead load reaction per bearing is 5.6 Kips without the weight of the concrete slab.

Use minimum 5 Ton capacity Jack per bearing.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	10
Jack and Remove Existing Bearings	Each	10

DESIGNED	Chris Elliott
CHECKED	Jason D. Wilcoxon
DRAWN	John F. Schneller Jr.
CHECKED	CWE GAH

Nov 20 1990

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson
Engineer of Bridges and Structures

APPROVED
Director of Highways

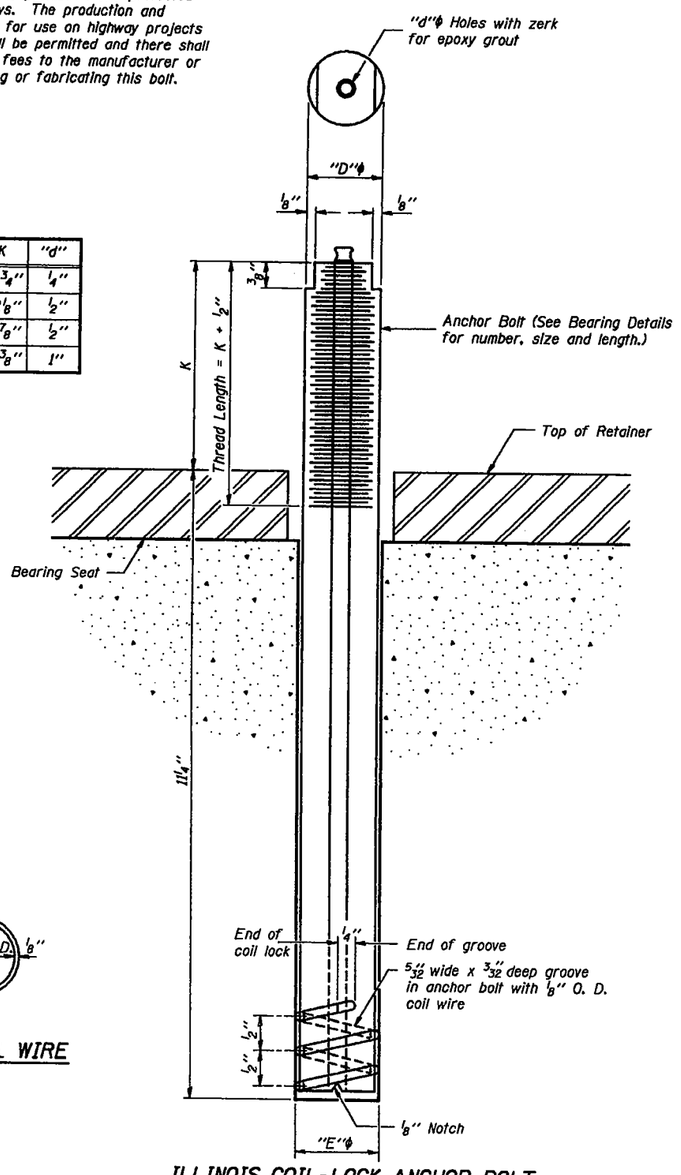
BEARING DETAILS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

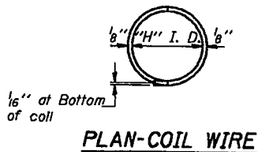
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	179	150
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
19 SHEETS

D	E	H	K	"d"
1"	$1\frac{1}{8}$"	$\frac{13}{16}$"	$1\frac{3}{4}$"	$\frac{1}{4}$"
$1\frac{1}{2}$"	$1\frac{5}{8}$"	$1\frac{5}{16}$"	$2\frac{1}{8}$"	$\frac{1}{2}$"
2"	$2\frac{1}{8}$"	$1\frac{13}{16}$"	$2\frac{7}{8}$"	$\frac{1}{2}$"
$2\frac{1}{2}$"	$2\frac{5}{8}$"	$2\frac{5}{16}$"	$3\frac{3}{8}$"	1"





PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place,the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

DESIGNED	Chin Elliott
CHECKED	John D. Wilcox
DRAWN	John F. Schneller Jr.
CHECKED	CWE GAA

Nov 20 1990

EXAMINED Raji O. Kapur
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

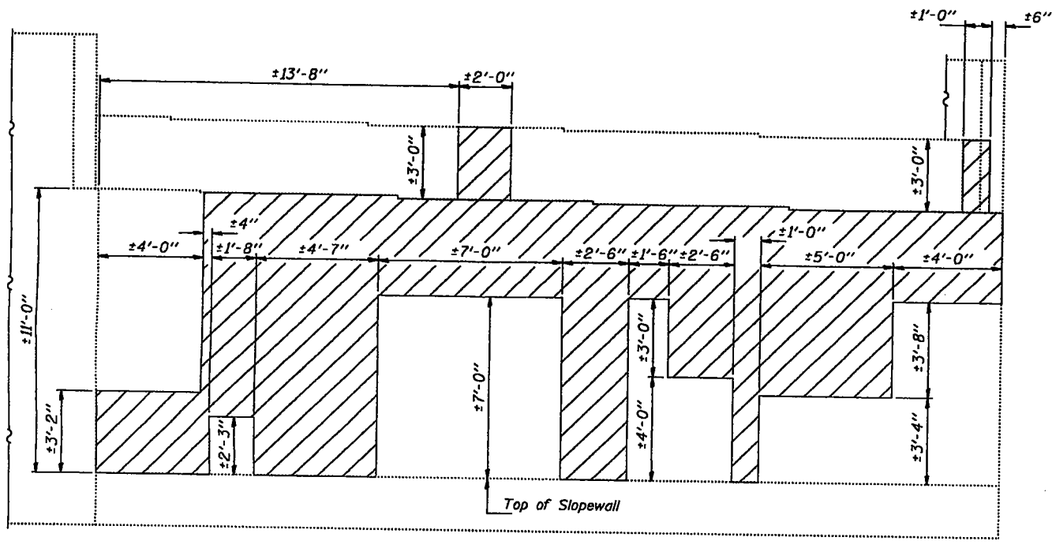
ABB-1 12-1-83

ANCHOR BOLT DETAILS FOR BEARINGS F.A.I. RT. 74 SEC. 81-1HB-4 ROCK ISLAND COUNTY STA. 359+28.44

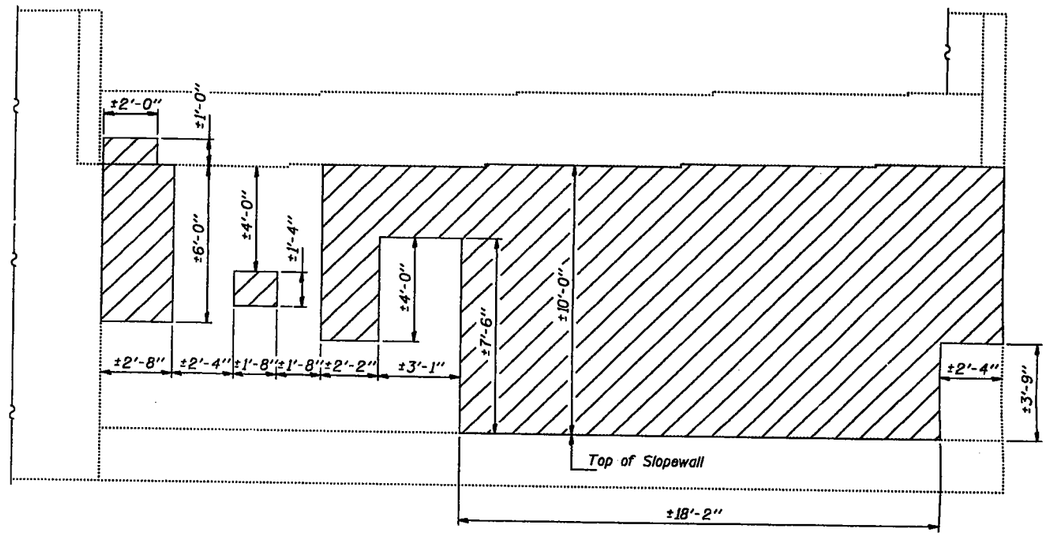
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-1HB-4	ROCK ISLAND	174	151
PROJ. PROVO SEQT. NO. 7	ILLINOIS	FED. AID PROJECT-		

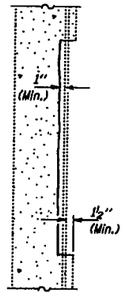
SHEET NO. 19
19 SHEETS

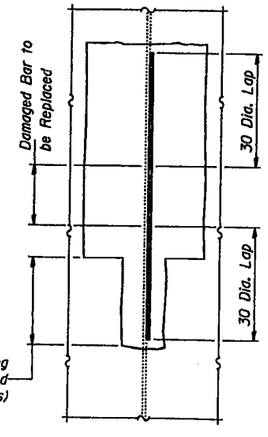


NORTH ABUTMENT
(Looking North)



SOUTH ABUTMENT
(Looking South)





Extend repair to where existing reinf. has 1½" (Min.) cover of sound concrete (See Special Provisions)

CONCRETE STRUCTURE REPAIR DETAILS

△ Notes: Hatched area indicates "Formed Concrete Repair."

△ BILL OF MATERIAL

ITEM	UNIT	TOTAL
Formed Concrete Repair (Depth Less Than or Equal to 5"	Sq. Ft.	472

ABUTMENT REPAIRS
F.A.I. RT. 74 SEC. 81-1HB-4
ROCK ISLAND COUNTY
STA. 359+28.44

DESIGNED	Chris Elliott
CHECKED	Darrin D. Wilson
DRAWN	John F. Schueller Jr.
CHECKED	CME GPA

Nov 20 1990
EXAMINED Gregory O. Harper ENGINEER OF BRIDGE DESIGN
PASSED Rafael E. Anduaga ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

Detail applies where existing reinforcement is exposed as a result of removing unsound concrete. Existing reinforcement having 10% or more of cross sectional area lost due to corrosion or damage during concrete removal shall be replaced by new reinforcement lapped as shown. Cost of additional reinforcement steel shall be incidental to △ "Formed Concrete Repair".

As Revised 2-13-91 T.E.A.

△ 2-13-91