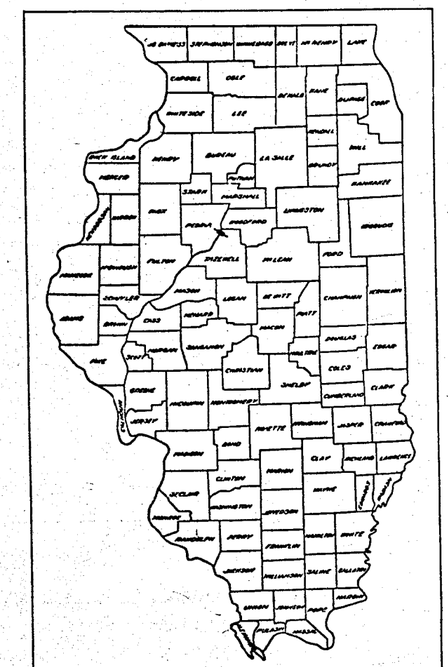
— W.I.D. LUEKING COPY —

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	PEORIA AND TAZEWELL	134	A
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT EACF-49(37)		

P-94-156-69

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY
F.A. ROUTE 49
SECTION 15-2(F&E)
PROJECT EACF-49(37)
PEORIA-TAZEWELL COUNTIES
C-94-113-79



LOCATION OF SECTION INDICATED THUS

SCHEDULE OF QUANTITIES TAZEWELL COUNTY		
QUANTITY	UNIT	ITEM
0.2	L. SUM	FURNISHING & ERECTING STRUCTURAL
0.2	L. SUM	MOBILIZATION
	HOURS	TRAINEES
5	CAL.MO.	ENGINEERS FIELD OFFICE, TYPE A
5	VEH.MO.	FURNISHING & MAINTAINING AUTOMOTIVE VEH.
1	EACH	SAFETY CAGES

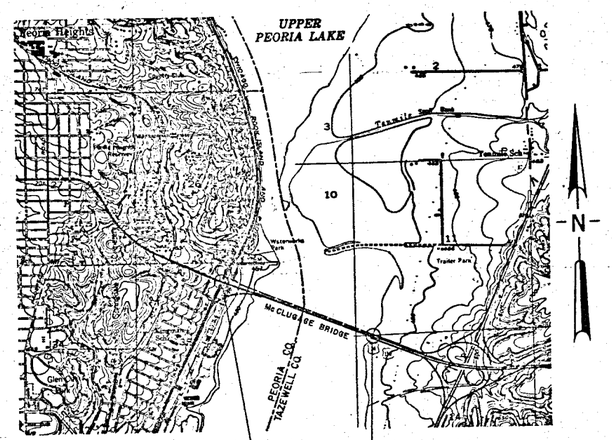
SCHEDULE OF QUANTITIES PEORIA COUNTY		
QUANTITY	UNIT	ITEM
0.8	L. SUM.	FURNISHING & ERECTING STRUCTURAL STEEL
1	L. SUM.	RAIL ALTERATIONS
2	EACH	FLOATING BEARINGS-PIER 4E (E. BRGS.)
4	EACH	FLOATING BEARINGS-PIER 4E (W. BRGS.)
4	EACH	FLOATING BEARINGS-S. ABUTMENT
4	EACH	FLOATING BEARINGS-N. ABUTMENT
4	EACH	FLOATING BEARINGS-PIER 4-RAMP F
4	EACH	FLOATING BEARINGS-PIER 2E
4	EACH	FLOATING BEARINGS-PIER 2F
4	EACH	FLOATING BEARINGS-PIER 3E
4	EACH	FLOATING BEARINGS-PIER 3-RAMP F
0.8	L. SUM.	MOBILIZATION
1000	HOURS	TRAINEES
22	CAL. MO.	ENGINEERS FIELD OFFICE, TYPE A
22	VEH. MO.	FURNISHING & MAINTAINING AUTOMOTIVE VEH.
4	EACH	SAFETY CAGES

SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM	CODE NO.
1	L. SUM.	FURNISHING & ERECTING STRUCTURAL STEEL	507001
1	L. SUM.	RAIL ALTERATIONS	X06887
2	EACH	FLOATING BEARINGS-PIER 4E (E. BRGS.)	X06888
4	EACH	FLOATING BEARINGS-PIER 4E (W. BRGS.)	X06889
4	EACH	FLOATING BEARINGS-S. ABUTMENT	X06890
4	EACH	FLOATING BEARINGS-N. ABUTMENT	X06891
4	EACH	FLOATING BEARINGS-PIER 4-RAMP F	X06892
4	EACH	FLOATING BEARINGS-PIER 2E	X06893
4	EACH	FLOATING BEARINGS-PIER 2F	X06894
4	EACH	FLOATING BEARINGS-PIER 3E	X06895
4	EACH	FLOATING BEARINGS-PIER 3-RAMP F	X06896
4	EACH	MOBILIZATION	X04748
1	L.SUM.	TRAINEES	Z10527
1,000	HOURS	ENGINEERS FIELD OFFICE, TYPE A	646004
27	CAL.MO.	FURNISHING & MAINTAINING AUTOMOTIVE VEH.	Z10240
27	VEH.MO.	SAFETY CAGES	X06897
5	EACH		

DESIGN DESIGNATION
3996 (94) MAJOR (PCC-20)

CONTRACT NO. 34179



PROPOSED PROJECT EACF-49(37) BEGINS STA. 199+00.77

PROPOSED PROJECT EACF-49(37) ENDS STA. 246+46.02

NET LENGTH OF PROPOSED IMPROVEMENT
4745.25 LIN. FT. = 0.90 MI.

LAYOUT
SCALE = 1" = 2000'

THE PROPOSED IMPROVEMENT INCLUDES THE FABRICATION AND ERECTION OF THE STRUCTURAL STEEL FOR THE FOLLOWING SPANS OF THE McCLUGAGE BRIDGE:
SPANS 3 THRU 14 INCLUSIVE FROM STA. 199+03.24 TO STA. 230+52.77
SPANS 3F, 4F & 5F OF RAMP F FROM STA. 5+94.86 TO STA. 9+65.54
SPANS 3E THRU 10E INCLUSIVE OF RAMP E FROM STA. 8+58.5 TO STA. 24+35.39
THESE SPANS CONSIST OF PLATE GIRDERS, A 3 SPAN CANTILEVER TRUSS, FLOOR BEAMS, CROSS FRAMES, LATERAL BRACING, STEEL BEARINGS AND FLOATING BEARINGS.
THE IMPROVEMENT ALSO INCLUDES ALTERATIONS TO A PORTION OF THE RAIL ON THE EXISTING BRIDGE AND THE STRENGTHENING OF SOME PLATE GIRDER MEMBERS OF THE EXISTING BRIDGE AND THE ATTACHMENT OF RAMP E TO THE EXISTING BRIDGE.

SUBMITTED Sept. 27, 1979 — DIST. DESIGN ENGR.
EXAMINED Sept 28, 1979 — DIST. CONST. ENGR.
EXAMINED October 2, 1979 — DIST. MAINT. ENGR.
EXAMINED Sept 28, 1979 — DIST. TRAFFIC ENGR.
Entire section inspected and approved as to policy.
DATE 10-22-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 10-22 19 79 — DISTRICT ENGINEER
EXAMINED 1/10 19 80 — ENGINEER OF PLANS AND CONTRACTS
PASSED 1/10 19 80 — ENGINEER OF DESIGN
APPROVED 1/10 19 80 — DIRECTOR OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR — DATE

Rev. 2-29-80

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	PEORIA AND TAZEWELL	134	8
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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F
E

STANDARDS: 2298-4, 2299-7, 2300-1, 2302-3, 2307-4

NOTE: SHEETS 85 THRU 134 ARE INCLUDED FOR INFORMATIONAL PURPOSES ONLY.

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McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (F&E)
PEORIA & TAZEWELL COUNTIES

C.R.N.
S.C.O.
K.B.B.
C.R.N.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

REV. 2-29-80

FEDERAL ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 49	15-2(F&E)	PEORIA	134	C
STA.		TO STA.		
FHWA REG. NO. 4		ILLINOIS FED. AID PROJECT		

RIVER

CONC. ENCASEMENT

PROPOSED FENCE

LORENTZ AVE.

EXISTING 8'CHAIN LINK GATE

20'±

CONSTRUCTION ACCESS ROAD TO BE MAINTAINED BY THE CONTRACTOR. COST INCIDENTAL TO THE CONTRACT.

N

RIVER ILLINOIS

226

MC CLUGAGE BRIDGE

℄ EXISTING MC CLUGAGE BRIDGE

20' T.E.

PROPOSED FENCE

4' DITCH

INFILTRATION PIT

INFILTRATION PIT

BRIER BRIDGE

TEMP. EASEMENT

PROPOSED FENCE

PROPOSED FENCE

GARAGE

HIGH TENSION TOWERS

CHEM. FEED BLDG.

FLOCCULATOR NO. 1

FLOCCULATOR NO. 2

CLARIFIER N91

CLARIFIER N92

CLEAR WELL

CHEM. STORAGE

PUMP STATION N91

PUMP STATION N92

MAIN

CHEM.

PURIFICATION UNIT NO. 1

PURIFICATION UNIT NO. 2

WASTE TANK

WASTE TANK

CREEK

RAILROAD

C R I & P

LIMITS OF IRR. EASEMENT

RAILROAD

STATE OF ILLINOIS

GALENA RD.

50'

50'

200

199

201

202

203

204

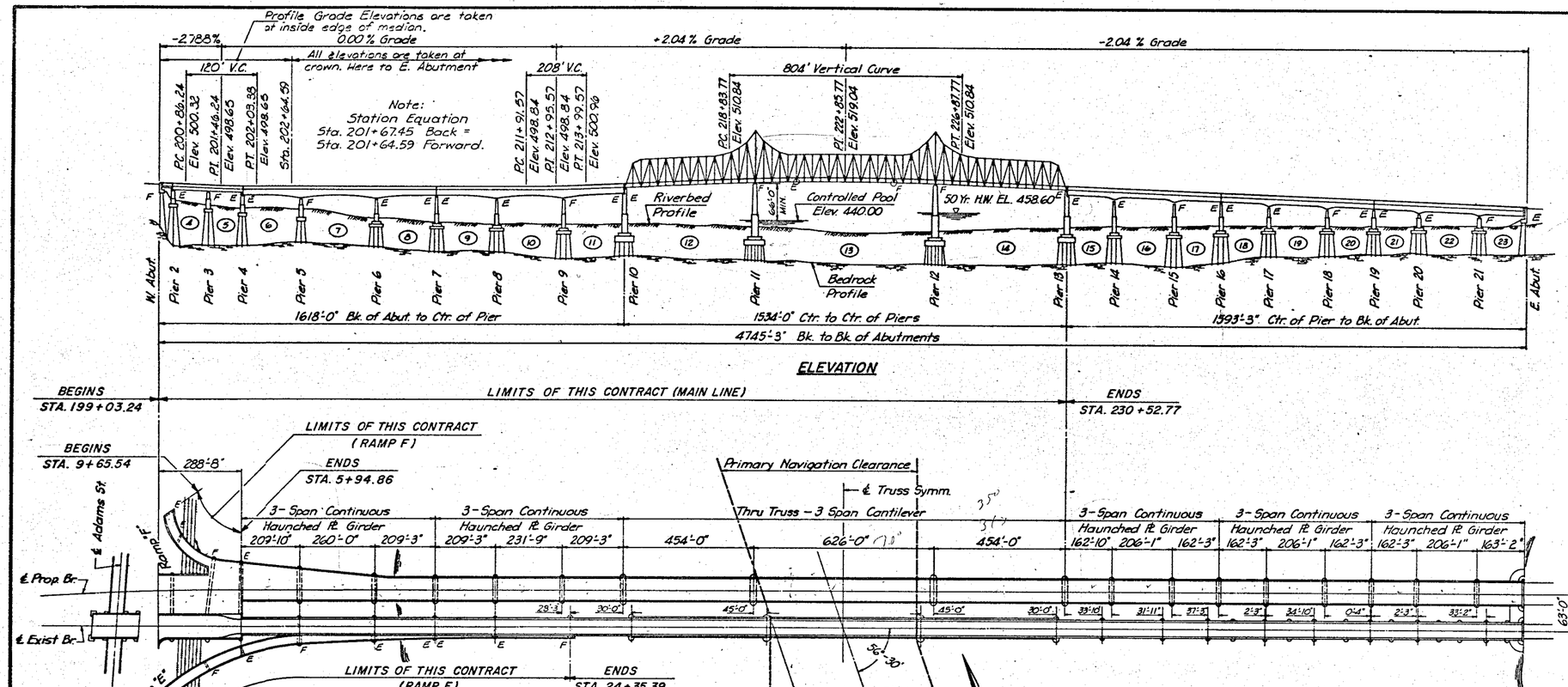
205

FA-ROUTE 49
SECTION 15-2(F&E)

ACCESS ROAD
RIGHT OF WAYS
TEMPORARY EASEMENT

ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA AND TAZEWELL	134	1
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 1 of 134



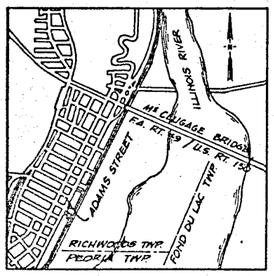
ELEVATION

PLAN

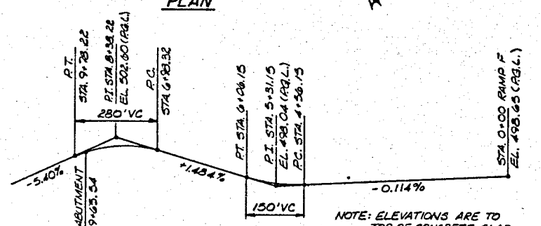
TABLE OF STATIONS & ELEVATIONS

SUBSTRUCTURE	STATION	℄ ROWY EL.	P.G. EL.
BK. W. ABUTMENT	199+03.24		503.45
PIER 2	199+54.80		504.00
3	200+75.17		500.66
4	201+89.44		498.67
5	203+99.27	498.84	
6	206+59.27	498.84	
7	208+68.52	498.84	
8	210+77.77	498.84	
9	213+09.52	499.52	
10	215+18.77	503.39	
11	219+72.77	512.45	
12	225+98.77	512.45	
13	230+52.77	503.39	
14	232+15.60	500.07	
15	234+21.69	495.87	
16	235+83.94	492.56	
17	237+46.19	489.25	
18	239+52.27	485.04	
19	241+14.52	481.73	
20	242+76.77	478.42	
21	244+82.85	474.22	
BK. E. ABUTMENT	246+46.02	470.89	
BK. N. ABUTMENT	9+65.54		495.71
PIER 2F	8+55.80		499.81
BK. S. ABUTMENT	8+58.50		499.59
PIER 2E	9+93		502.31
3E	11+60		501.22
4E	12+92.88		498.37
5E	14+96.68		497.67
6E	17+56.74		498.41
7E	19+66.04		498.48
8E	21+75.38		498.55
9E	24+35.36		498.84

THESE ELEVATIONS ARE TO TOP OF CONCRETE SLAB
THESE ELEVATIONS ARE TO TOP OF CLASS I SURFACE

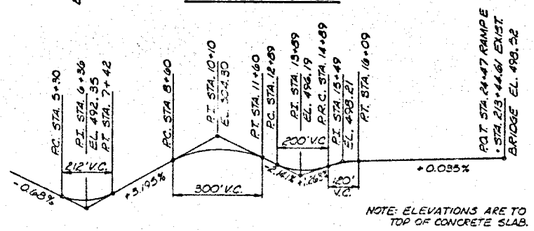


LOCATION MAP



NOTE: ELEVATIONS ARE TO TOP OF CONCRETE SLAB.

RAMP F PROFILE



NOTE: ELEVATIONS ARE TO TOP OF CONCRETE SLAB.

RAMP E PROFILE

Note: All dimensions shown are measured horizontally.

TOTAL BILL OF MATERIAL

Furnishing & Erecting Structural Steel **		Lump Sum
**Calculated Weight of Structural Steel:		
M-183	8,069,030 Lbs.	
M-222	1,852,960 Lbs.	
M-223	5,641,020 Lbs.	
M-169	1,040 Lbs.	
Bearings	209,890 Lbs.	
Rail Alterations		Lump Sum
Floating Bearings - Pier 4E (E. Brgs.)		2 Each
Floating Bearings - Pier 4E (W. Brgs.)		4 Each
Floating Bearings - South Abutment		4 Each
Floating Bearings - North Abutment		4 Each
Floating Bearings - Pier 4 - Ramp F		4 Each
Floating Bearings - Pier 2E		4 Each
Floating Bearings - Pier 2F		4 Each
Floating Bearings - Pier 3E		4 Each
Floating Bearings - Pier 3 - Ramp F		4 Each
Safety Cages		5 Each

2969 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
EUGENE R. WILKINSON

11-1-79

APPROVED FOR STRUCTURAL ADEQUACY ONLY
Carl E. Hausmann
Engineer of Design & Environmental Standards

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts 7/8" ϕ open holes 15/16" ϕ unless otherwise noted.

The basic lead silica chromate paint system shall be used for shop and spot painting of structural steel.

Structural steel noted on the plans as M-223 shall be Grade 50.

Field welding of construction accessories will not be permitted to the bottom flange of beams or 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.

Plan dimensions and details relative to the substructure and to the 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.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of steel girders or wide flange beams, and the tension members, gusset plates and all splice plate material in the truss.

Certain components of main members and attachments thereto shall conform to the requirements for Fracture Critical Members set forth in the Special Provisions. Such members are designated on the plans by the letters "F.C.M." The requirements for Fracture Critical Members shall apply to members so designated in place of the Supplemental Requirements for Notch Toughness.

Anchor bolts shall be set before bolting diaphragms or cross frames over support.

Bearing seat surfaces shall be adjusted to the designated elevations within a tolerance of 'a'. Adjustment shall be made by shimming the bearing. Two 'a' adjusting shims of the dimensions of the bottom bearing plate shall be provided for each bearing in addition to all other plates or shims.

See Note A on sheet 2 of 134

DESIGN STRESSES

STRUCTURAL STEEL	M183	M223	M222
THICKNESS OF PLATES	ALL	UP TO 2"	UP TO 4"
AXIAL TENSION	20,000 PS.I.	27,000 PS.I.	27,000 PS.I.
AXIAL COMPRESSION	$16980-.53(\frac{L}{r})^2$	$23580-103(\frac{L}{r})^2$	$23580-103(\frac{L}{r})^2$
REINFORCEMENT BARS M31	F_y = 60,000 PS.I.		
CONCRETE f'c = 3500 PS.I.			

LOADING H15 20-44 & Future Wearing Surface of 25 lbs./Sq. Ft. A.A.S.H.T.O SPECIFICATIONS 1973 & INTERIM 1974.

GENERAL PLAN & ELEVATION

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED	C.R.N.
CHECKED	R.A.H.
DRAWN	R.A.H.
CHECKED	C.R.N.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

FILE NO. 74001
DATE 11-2-79

Rev. 4-14-80 D.D

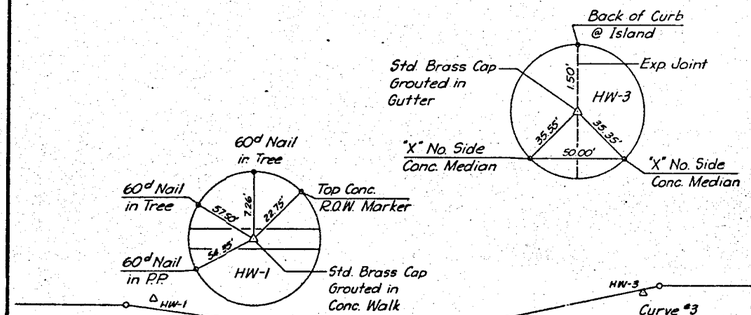
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA AND TAZEWELL	134	2
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	

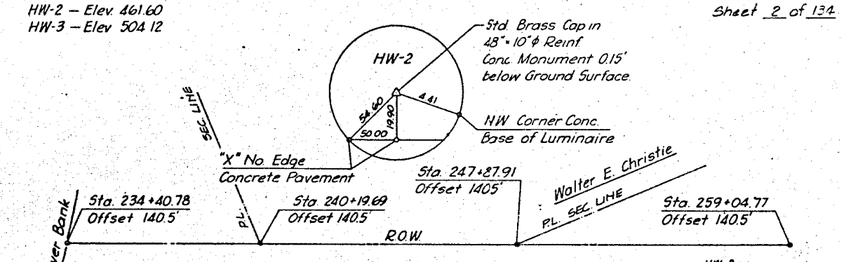
Sheet 2 of 134

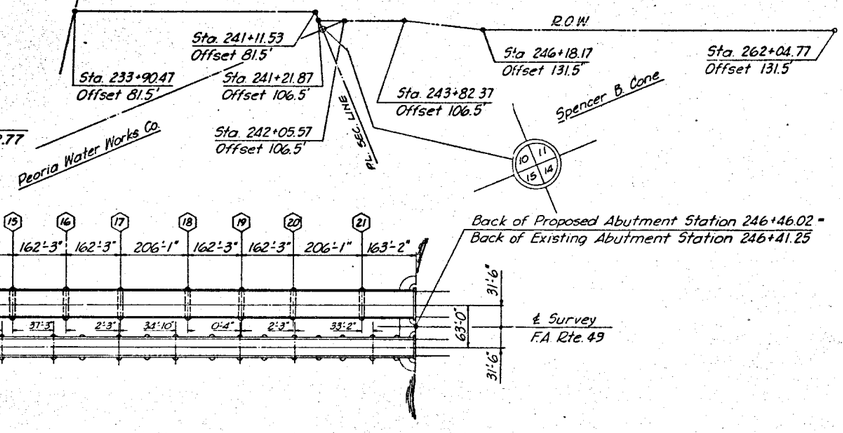
Curve #1	Curve #2	Curve #3
PI = 183+00.081	PI = 191+00.637	PI = 199+35.06
Δ = 4°-00'-00"	Δ = 10°-00'-00"	Δ = 6°-00'-00"
D = 1°-00'-00"	D = 2°-00'-00"	D = 2°-00'-00"
T = 200.081'	T = 250.637'	T = 150.137'
R = 5729.578'	R = 2864.789'	R = 2864.789'
L = 400.00'	L = 500.00'	L = 300.00'

Bench Mark Data

HW-1 – Elev 562.11
HW-2 – Elev 461.60
HW-3 – Elev 504.12

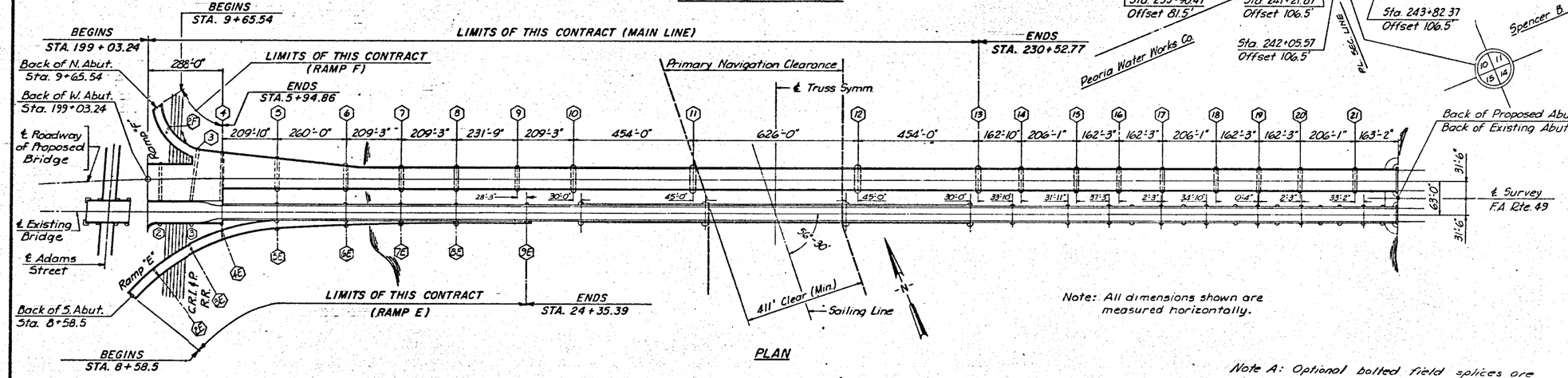






Back of Proposed Abutment Station 246+46.02 = Back of Existing Abutment Station 246+41.25

℄ SURVEY F.A. ROUTE 49



PLAN

⬡ Denotes Pier No.

Note: All dimensions shown are measured horizontally.

Note A: Optional bolted field splices are allowed in one (1) diagonal leg of the struts at Piers 5E, 6E, 8E and 9E shown on sheets 66, 77 and 78. The appropriate location and design details for the splices will be supplied by the designer upon request of the fabricator after the project has been awarded.

RAMP F CURVE DATA

P.I. =	8+74.623
Δ =	91°-59'-00.68"
D =	27°-56'-56.98"
T =	212.223'
R =	205.0'
L =	329.110'

RAMP E CURVE DATA

P.I. =	9+3.15	P.I. =	13+6.99
Δ =	53°-30'-58.01"	Δ =	29°-08'-50.90"
D =	12°-00'-00"	D =	7°-30'-00"
T =	240.746'	T =	198.619'
R =	477.465'	R =	763.944'
L =	445.968'	L =	388.633'

HORIZONTAL CONTROL, BENCH MARKS & R.O.W.

Mc CLUGAGE BRIDGE OVER THE ILLINOIS RIVER

F.A. ROUTE 49 SEC. 15-2(F&E)

PEORIA & TAZEWELL COUNTIES

DESIGNED CRN CHECKED DLB DRAWN RAH CHECKED CRN	HANSON ENGINEERS INCORPORATED SPRINGFIELD ILLINOIS PEORIA ILLINOIS	JOB NO. 74001 DATE 11-2-79

Rev. 4-14-80 D.D

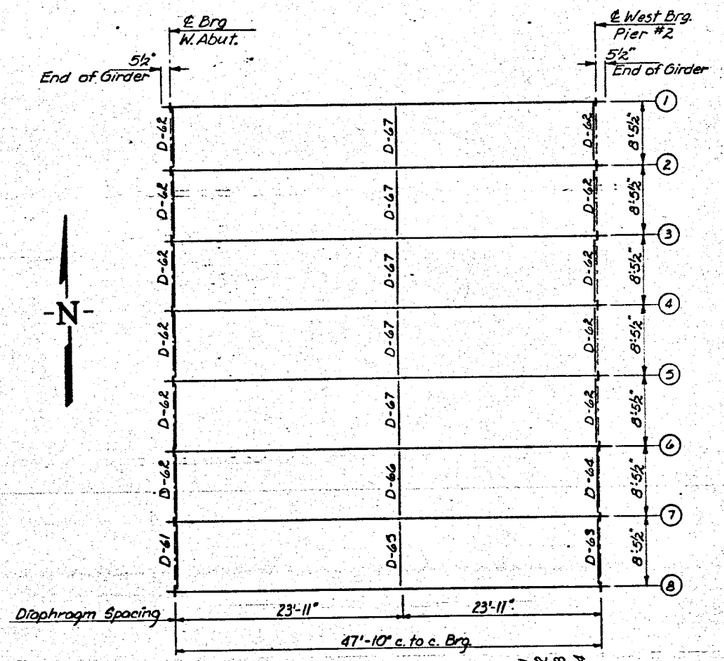
ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	(F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 3 of 134

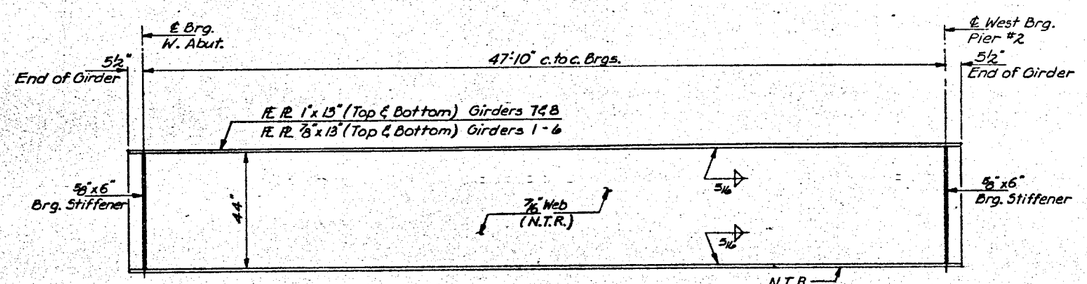
Note: All dimensions shown are measured horizontally.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: The designation "N.T.R." signifies main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.



FRAMING PLAN



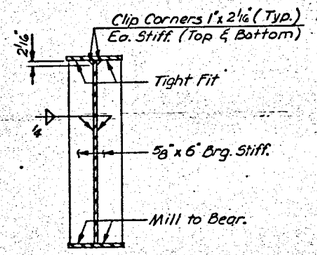
GIRDER ELEVATION

TOP OF WEB ELEVATIONS								
Girder Number	1	2	3	4	5	6	7	8
℄ Brg-W. Abut.	506.353	506.063	505.763	505.463	505.173	504.883	504.584	503.135
℄ West Brg. - Pier 2	504.906	504.606	504.306	504.006	503.706	503.406	502.844	501.858

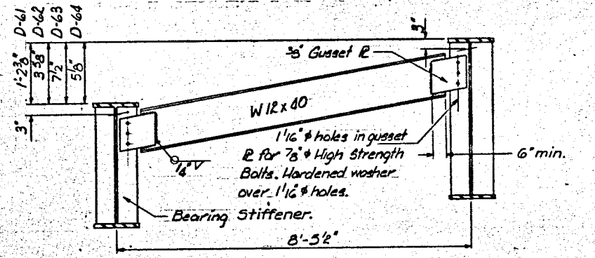
Note: For Deck Elevations and Cross Section see Sheets 85 & 87 of 134.

GIRDER 8 REACTION TABLE		
	West Abut.	Pier #2
R ℄ (k)	36	36
R ℄ (k)	46	46
Imp. (k)	13	13
R TOTAL (k)	95	95

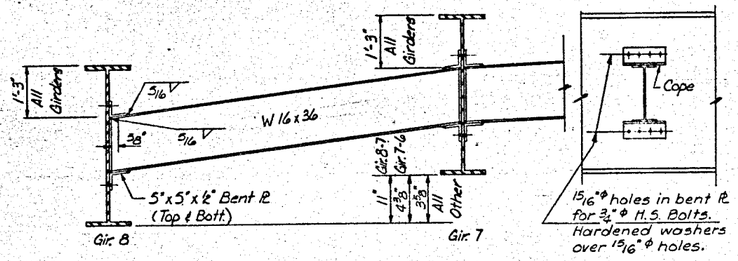
Note: Reaction Table for Girder 8 is based on a concrete Dead Load weight of 227 #/sq.ft. This includes both slab and a future median and weight of structural steel.



BEARING STIFFENER



DIAPHRAGMS D-61, D-62, D-63, & D-64



DIAPHRAGMS D-65, D-66, & D-67

MOMENT TABLE FOR GIRDERS 7 & 8		0.5 Point Span
I	(in⁴)	16270
ℙ	(K/')	1.51
M ℙ	('K)	432
M ℄	('K)	475
Imp.	('K)	138
M TOTAL	('K)	1045
fs	(KSI)	18

Note: Moment Table for Girders 7 & 8 is based on a Dead Load of 212 #/sq.ft. of Concrete Slab and future Concrete Median plus the weight of Structural Steel.

MOMENT TABLE FOR GIRDERS 1 - 6		0.5 Point Span
I	(in⁴)	14,561
ℙ	(K/')	1.21
M ℙ	('K)	346
M ℄	('K)	460
Imp.	('K)	134
M TOTAL	('K)	940
fs	(KSI)	17.5

Note: Moment Table for Girders 1 thru 6 is based on a Dead Load of 25 #/sq.ft. of future Cl.1 Surfacing and 94 #/sq.ft. of Concrete Slab plus weight of structural steel.

GIRDERS 1 THRU 7 REACTION TABLE		
	West Abut.	Pier #2
R ℙ (k)	29	29
R ℄ (K)	43	43
Imp. (K)	13	13
R TOTAL (K)	85	85

Note: Reaction Table for Girders 2 thru 6 is based on a Dead Load of 25 #/sq.ft. of future Cl.1 Surfacing & 94 #/s.f. of Concrete Slab plus weight of structural steel.

Steel Specifications this sheet:
Diaphragms - AASHTO M183
Diaphragm Bolts - AASHTO M164
Steel Plate - AASHTO M183

STRUCTURAL STEEL
SPAN 3

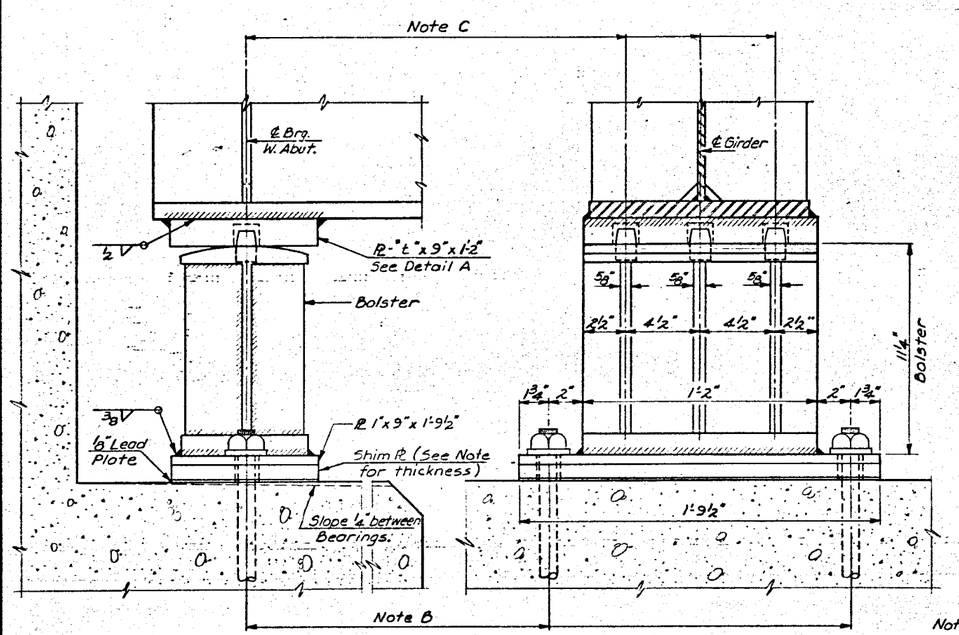
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED	C.E.N.	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
CHECKED	S.C.O.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	DATE 11-2-79
DRAWN	DAN		
CHECKED	C.E.N.		

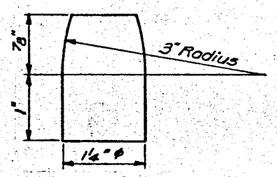
SHEET NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 4 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



BEARING DETAILS

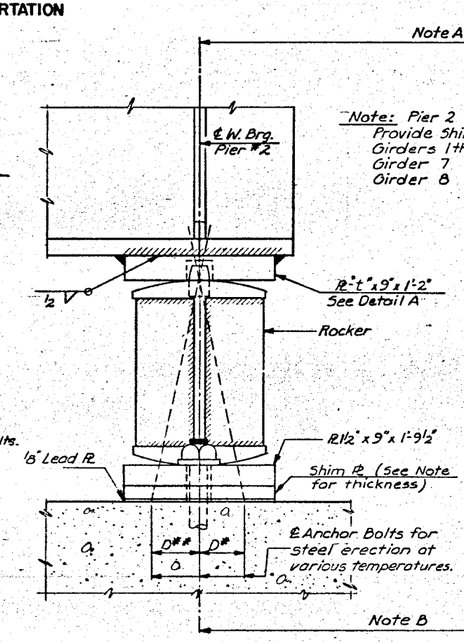


PINTLE DETAIL

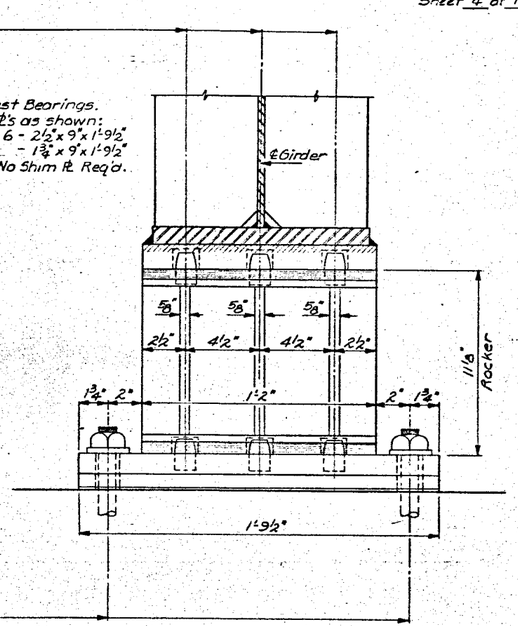
NOTE A
1⅜" ϕ Holes - 1" deep in top PL for pintles. Thread or press fit pintles into bottom PL.

NOTE B
½" ϕ Holes for 1" ϕ x 12" anchor bolts. 5/16 x 2½" x 2½" PL. Washers under nuts.

NOTE C
1⅜" ϕ Holes 1" deep in top PL only for 1¼" ϕ pintles



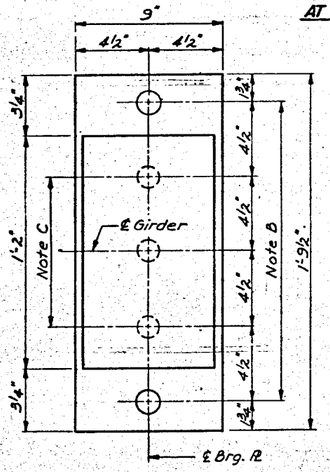
Note: Pier 2 West Bearings.
Provide Shim PL's as shown:
Girders 1 thru 6 - 2½" x 9" x 1'-9½"
Girder 7 - 1¾" x 9" x 1'-9½"
Girder 8 No Shim PL Req'd.



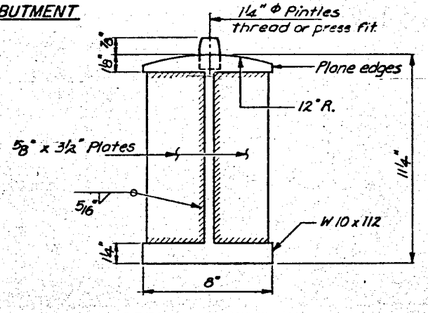
WEST BEARING DETAILS

Note: West Abutment Bearings.
Provide 2¼" Shim PL @ Girder 8
Provide 2" Shim PL's @ Girders 1 to 7 incl.

BEARING DETAILS AT WEST ABUTMENT



PLAN AT WEST ABUTMENT



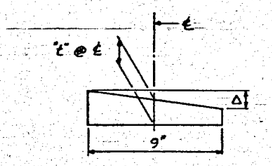
DETAIL OF BOLSTER AT WEST ABUTMENT

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

a) D* (Side of Bearing away from Fixed Bearing.)
D* = 1/8" per each 100' of expansion for every 15° fall below the Normal Temperature of 50°F.

D** (Side of Bearing toward Fixed Bearing.)
D** = 1/8" per each 100' of expansion for every 15° above the Normal Temperature of 50°F.

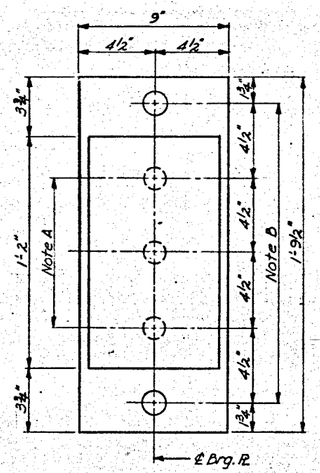
b.) After Girders have been erected and dimensions D* & D** determined, holes shall be drilled & anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.



For Brgs. at Girders 1 thru 6 & 8
W. Abut. & W. Brg. Pier 2
"t" = 1 5/8"
Δ = 1/4"

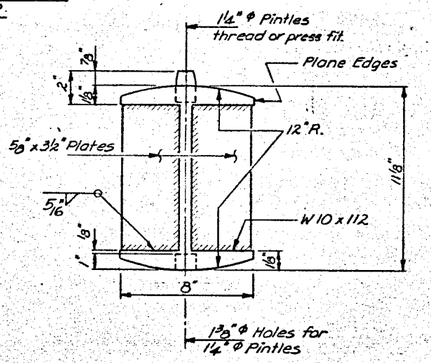
For Brgs. at Girder 7
W. Abut. & W. Brg. Pier 2
"t" = 1 5/8"
Δ = 5/16"

DETAIL A



PLAN AT WEST BEARING OF PIER 2

Steel Specifications this sheet:
Bearing Plate Material — AASHTO M183



DETAIL OF ROCKER AT WEST BEARING OF PIER 2

BEARINGS - SPAN 3

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED	C.R.W.
CHECKED	S.C.C.
DRAWN	DAM
CHECKED	C.R.W.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

SHEET NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA:49	15-2 (F&E)	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 5 of 134

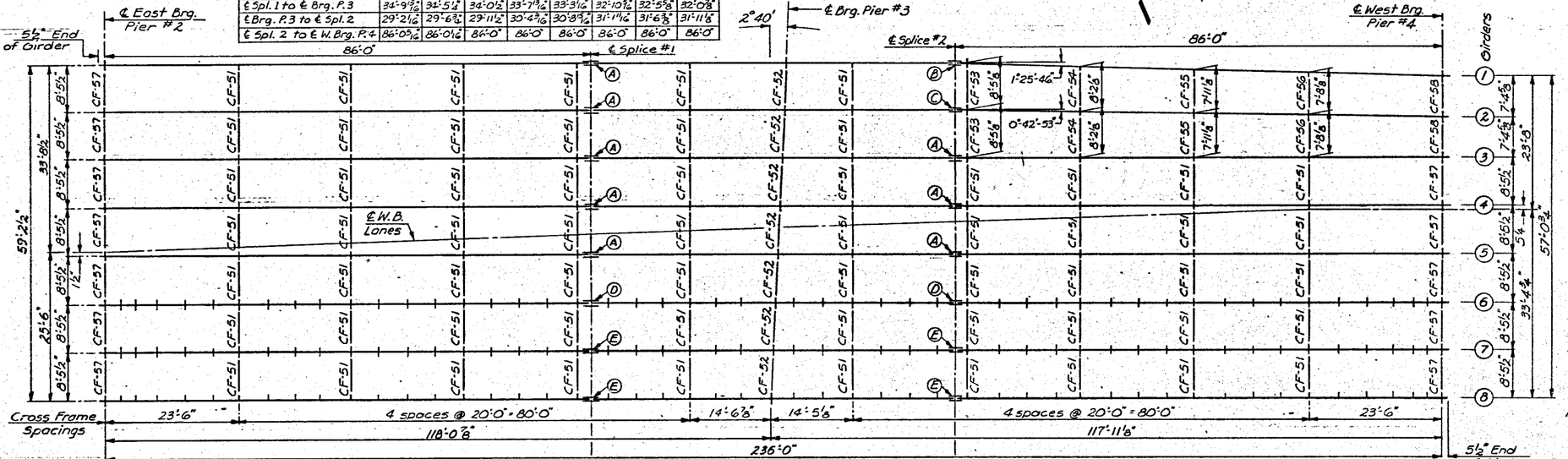
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TABLE OF SPAN LENGTHS & SPLICE DISTANCES **

** Note: Lengths given along ℄ of girder.

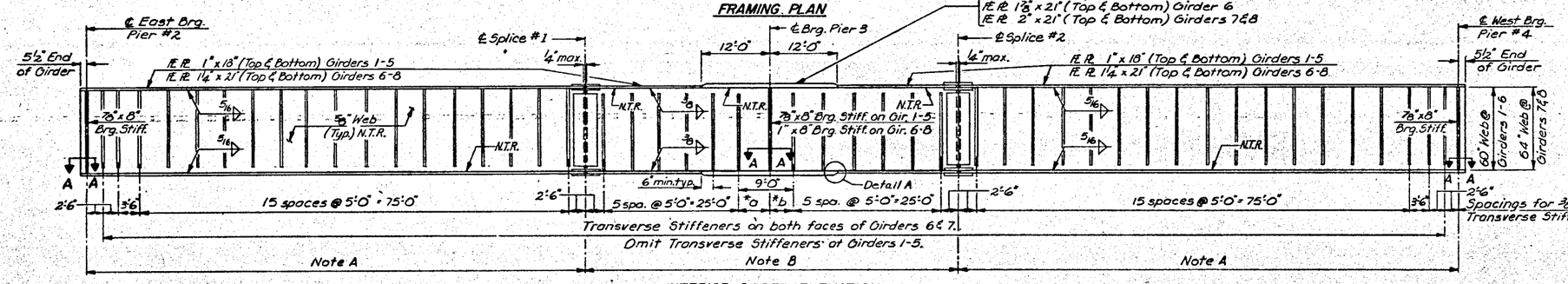
Girder No.	1	2	3	4	5	6	7	8
℄ E. Brg. P.2 to ℄ Brg. P.3	120'-9 9/16"	120'-5 1/4"	120'-0 1/2"	119'-7 13/16"	119'-3 1/16"	118'-10 5/16"	118'-5 5/8"	118'-0 7/8"
℄ Brg. P.3 to ℄ W. Brg. P.4	115'-2 3/8"	115'-6 13/16"	115'-11 1/2"	116'-4 3/16"	116'-8 5/16"	117'-1 1/16"	117'-6 3/8"	117'-11 5/8"
℄ E. Brg. P.2 to ℄ Spl. 1	86'-0"	86'-0"	86'-0"	86'-0"	86'-0"	86'-0"	86'-0"	86'-0"
℄ Spl. 1 to ℄ Brg. P.3	34'-9 9/16"	34'-5 1/4"	34'-0 1/2"	33'-7 13/16"	33'-3 1/16"	32'-10 5/16"	32'-5 5/8"	32'-0 7/8"
℄ Brg. P.3 to ℄ Spl. 2	29'-2 1/16"	29'-6 3/16"	29'-11 1/2"	30'-4 3/16"	30'-8 5/16"	31'-1 1/16"	31'-6 3/8"	31'-11 5/8"
℄ Spl. 2 to ℄ W. Brg. P.4	86'-0 1/16"	86'-0 1/16"	86'-0"	86'-0"	86'-0"	86'-0"	86'-0"	86'-0"

Note: All dimensions shown are measured horizontally.



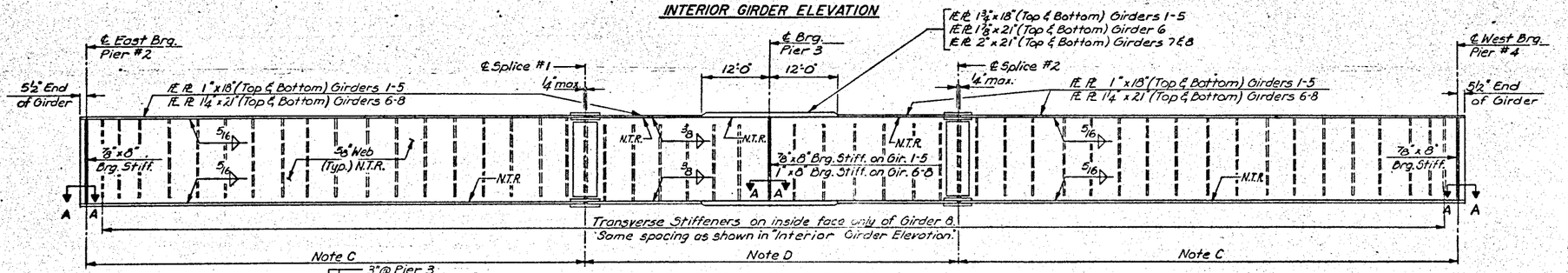
FRAMING PLAN

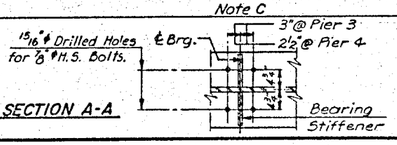
[℄ ℛ 1¾" x 18" (Top & Bottom) Girders 1-5
℄ ℛ 1⅞" x 21" (Top & Bottom) Girder 6
℄ ℛ 2" x 21" (Top & Bottom) Girders 7 & 8



INTERIOR GIRDER ELEVATION

[℄ ℛ 1¾" x 18" (Top & Bottom) Girders 1-5
℄ ℛ 1⅞" x 21" (Top & Bottom) Girder 6
℄ ℛ 2" x 21" (Top & Bottom) Girders 7 & 8



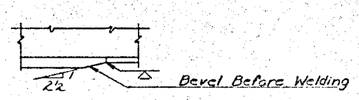


SECTION A-A

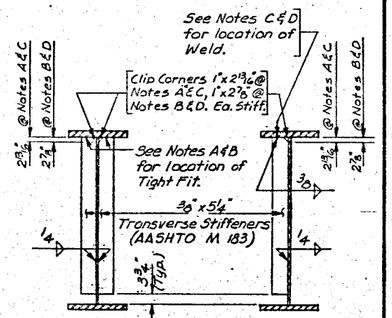
EXTERIOR GIRDER ELEVATION

* TABLE FOR DIMENSIONS a & b

	Girder No. 1	2	3	4	5	6	7	8
a	—	—	—	—	—	5'-4 5/16"	4'-11⅝"	4'-6⅞"
b	—	—	—	—	—	3'-7 11/16"	4'-0⅝"	4'-5⅛"



DETAIL A



At Girders 6 & 7 — At Girder 8

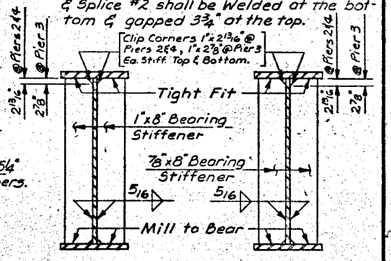
TRANSVERSE STIFFENERS

Note A: Transverse Stiffeners between Pier #2 & Splice #1 and between Splice #2 & Pier #4 shall be Tight Fit at the top & gapped 3¾" at the bottom.

Note B: Transverse Stiffeners between Splice #1 & Splice #2 shall be Tight Fit at the bottom and gapped 3¾" at the top.

Note C: Transverse Stiffeners between Pier #2 & Splice #1 and between Splice #2 & Pier #4 shall be Welded at the top & gapped 3¾" at the bottom.

Note D: Transverse Stiffeners between Splice #1 & Splice #2 shall be Welded at the bottom & gapped 3¾" at the top.



At Pier 3 (Gir. 6-8) — At Piers 2 & 4 At Pier 3 (Gir. 1-5)

BEARING STIFFENERS

Note: All structural steel shall conform to AASHTO M223 unless otherwise noted.

STRUCTURAL STEEL
SPANS 4 & 5

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED	D.L.B.	HANSON ENGINEERS INCORPORATED	FILE NO. 7400
CHECKED	S.C.O.		
DRAWN	D.A.N.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	DATE 11-2-79
CHECKED	S.C.O.		

ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.49	15-2 (FAE)	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

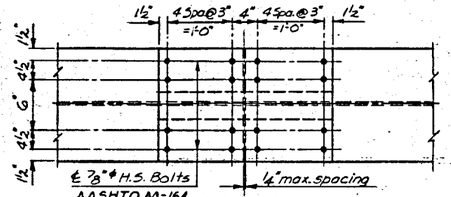
Sheet 6 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

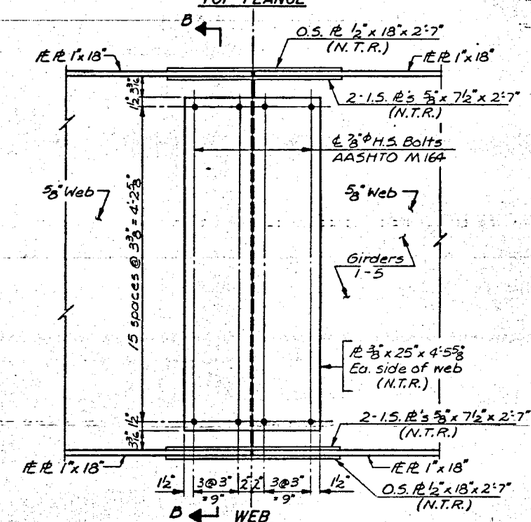
Notes

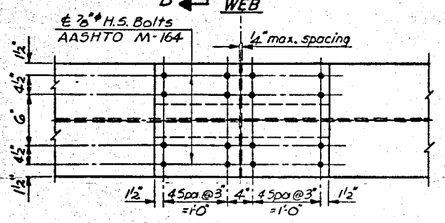
The designation 'N.T.R. signifies main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

All structural steel shall conform to AASHTO M223 unless otherwise noted.

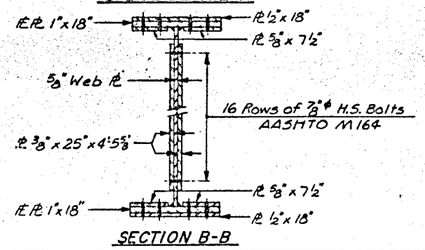


TOP FLANGE

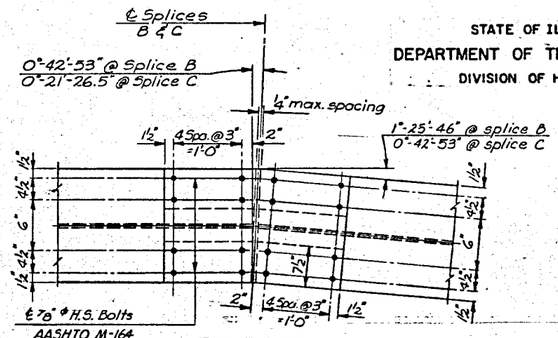




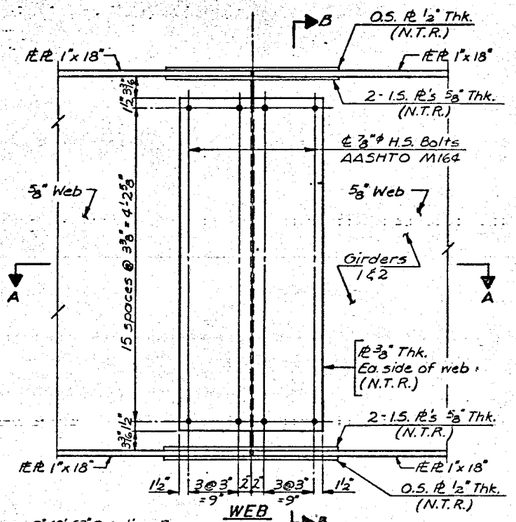
BOTTOM FLANGE
SPLICE DETAIL A

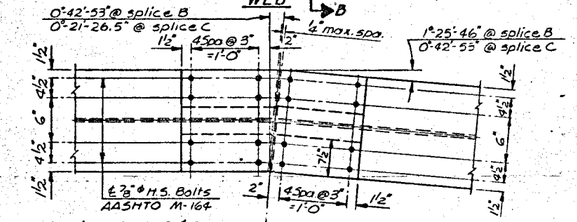


SECTION B-B

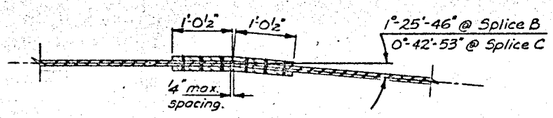


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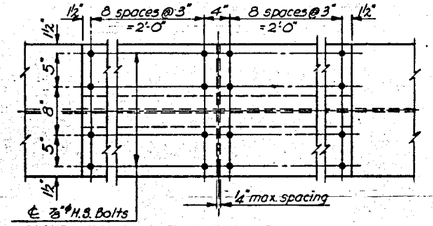




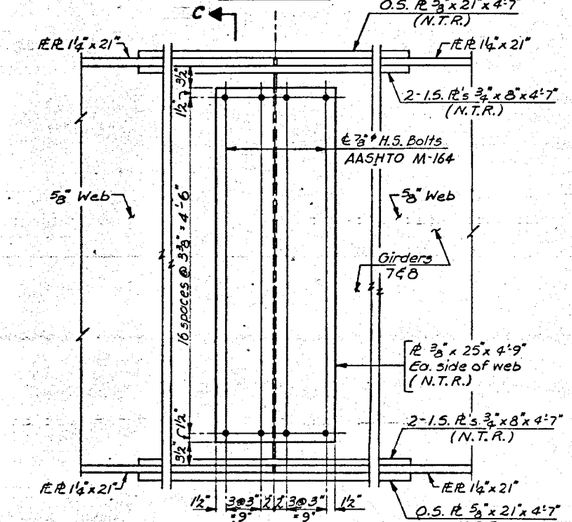
BOTTOM FLANGE
SPLICE DETAILS B&C
℄ Splices B & C

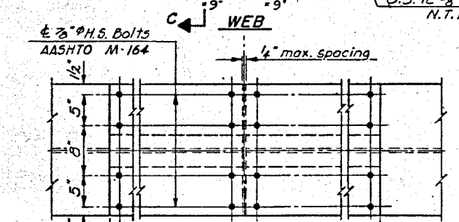


SECTION A-A

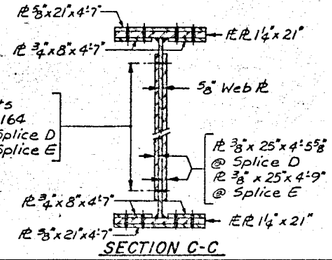


TOP FLANGE

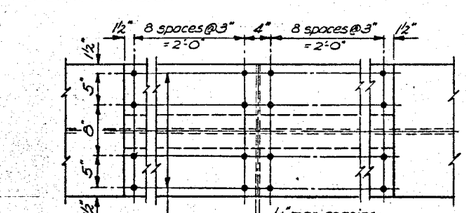




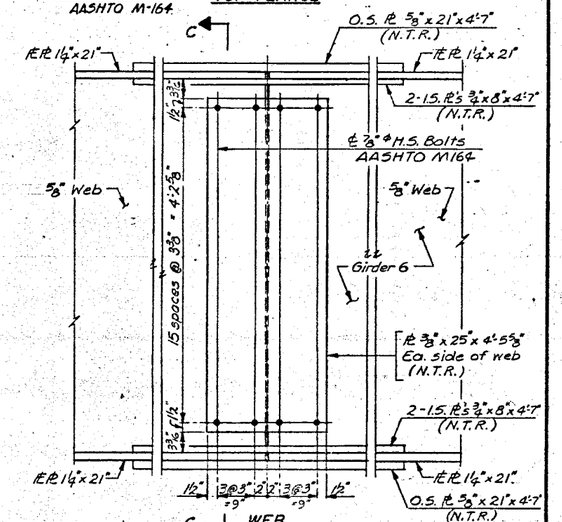
BOTTOM FLANGE
SPLICE DETAIL E

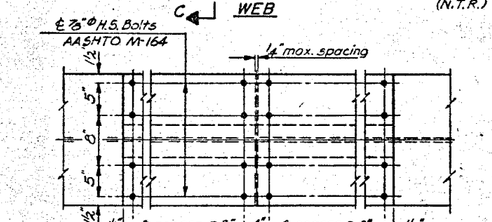


SECTION C-C



TOP FLANGE





BOTTOM FLANGE
SPLICE DETAIL D

GIRDER SPLICE DETAILS
SPANS 4&5

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(FAE)
PEORIA & TAZEWELL COUNTIES

DESIGNED	D.L.B.
CHECKED	S.C.O.
DRAWN	DAN
CHECKED	S.C.O.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	(FAE)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 7 of 134

TOP OF WEB ELEVATIONS

Girder No.	℄ East Brg. Pier 2	℄ Splice Span 4	℄ Brg. Pier 3	℄ Splice Span 5	℄ West Brg. Pier 4
1	504.787	502.339	501.044	500.340	498.546
2	504.487	501.980	500.924	500.171	498.390
3	504.188	501.674	500.627	499.857	498.247
4	503.890	501.367	500.328	499.547	498.087
5	503.590	501.061	500.031	499.236	497.926
6	503.261	500.691	499.681	498.861	497.735
7	502.693	500.727	499.686	498.906	497.967
8	501.666	500.843	499.762	499.040	498.297

Note: These elevations include camber for dead load deflections and are for fabrication only.

REACTION TABLE GIRDERS 1 THRU 5

		Pier 2 or 4	Pier 3
R ℄	(k)	37.5	215.2
R ℄	(k)	49.8	94.6
Imp.	(k)	10.5	19.9
R TOTAL	(k)	117.8	329.7

REACTION TABLE GIRDER 6

		Crossover Stage		Final Stage	
		Pier 2 or 4	Pier 3	Pier 2 or 4	Pier 3
R ℄	(k)	80.6	293.0	60.5	223.2
R ℄	(k)	49.8	94.6	49.8	94.6
Imp.	(k)	10.5	19.9	10.5	19.9
R TOTAL	(k)	140.9	407.5	120.8	337.7

REACTION TABLE GIRDERS 7 & 8

		Crossover Stage		Final Stage	
		Pier 2 or 4	Pier 3	Pier 2 or 4	Pier 3
R ℄	(k)	102.9	384.5	59.0	227.2
R ℄	(k)	49.7	94.6	49.7	94.6
Imp.	(k)	10.4	19.9	10.4	19.9
R TOTAL	(k)	163.0	499.0	119.1	341.7

MOMENT TABLE GIRDERS 1 THRU 5

		.4 pt. Span 4 or .6 pt. Span 5	Pier 3
I	(in⁴)	44,742	71,322
℄	(k_{ft})	1.314	1.421
M ℄	(ik)	1,257	2,800
M ℄	(ik)	1,141	1,328
Imp.	(ik)	240	279
M TOTAL	(ik)	2,638	4,407
fs	(ksi)	21.9	23.5

MOMENT TABLE GIRDER 6

		Crossover Stage		Final Stage	
		.4 pt. Span 4 or .6 pt. Span 5	Pier 3	.4 pt. Span 4 or .6 pt. Span 5	Pier 3
I	(in⁴)	60,496	86,647	60,496	86,647
℄	(k_{ft})	1.845	1.934	1.385	1.474
M ℄	(ik)	1,765	3,812	1,325	2,905
M ℄	(ik)	1,141	1,328	1,141	1,328
Imp.	(ik)	240	279	240	279
M TOTAL	(ik)	3,146	5,419	2,706	4,512
fs	(ksi)	19.5	23.9	16.8	19.9

MOMENT TABLE GIRDERS 7 & 8

		Crossover Stage		Final Stage	
		.4 pt. Span 4 or .6 pt. Span 5	Pier 3	.4 pt. Span 4 or .6 pt. Span 5	Pier 3
I	(in⁴)	69,541	105,157	69,541	105,157
℄	(k_{ft})	2.433	2.541	1.393	1.501
M ℄	(ik)	2,174	5,005	1,244	2,957
M ℄	(ik)	1,116	1,328	1,116	1,328
Imp.	(ik)	234	279	234	279
M TOTAL	(ik)	3,524	6,612	2,594	4,564
fs	(ksi)	20.2	25.7	14.9	17.7

Note: Reaction and Moment Tables are based on a Dead Load of 25#/sq. ft. of Cl. I surfacing and 94#/sq. ft. of concrete slab plus the weight of the structural steel.

STRUCTURAL STEEL DETAILS
SPANS 4 & 5

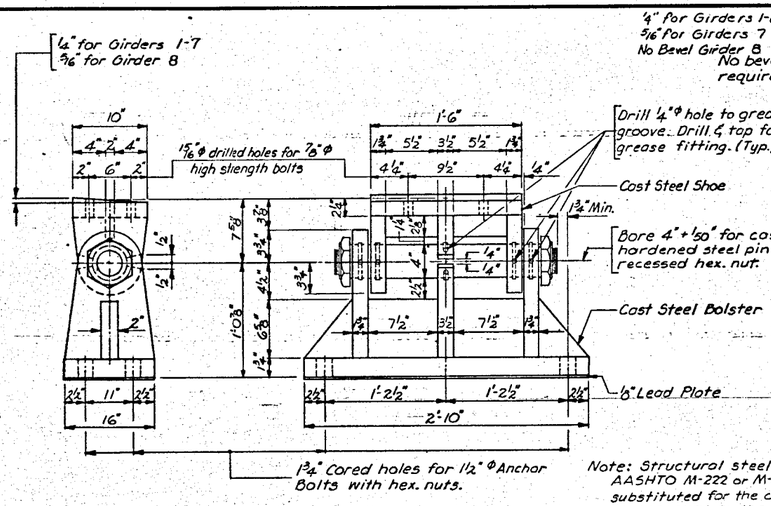
Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(FAE)
PEORIA & TAZEWELL COUNTIES

DESIGNED SSA
CHECKED WDL
DRAWN D.A.N.
CHECKED WDL

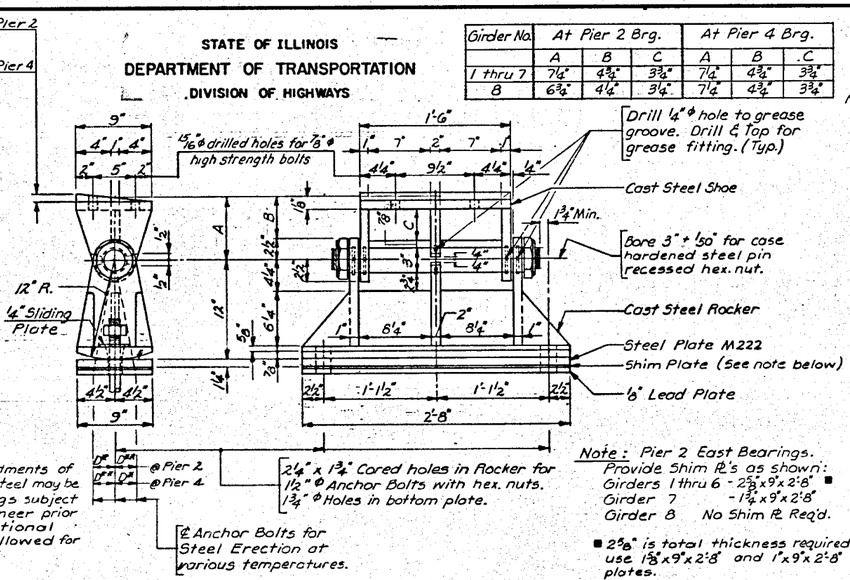
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		



BEARING AT PIER 3

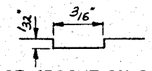


Note: Structural steel weldments of AASHTO M-222 or M-223 steel may be substituted for the castings subject to approval by the Engineer prior to fabrication. No additional compensation will be allowed for this substitution.

BEARING AT PIERS 2 & 4

Girder No.	At Pier 2 Brg.			At Pier 4 Brg.		
	A	B	C	A	B	C
1 thru 7	7 1/4"	4 3/4"	3 3/4"	7 1/4"	4 3/4"	3 3/4"
8	6 3/4"	4 1/4"	3 1/4"	7 1/4"	4 3/4"	3 3/4"

Note: Cast steel shoes, rockers and bolsters shall meet requirements of A.A.S.H.T.O. M-192 Class 90



GREASE GROOVE ON SADDLE

Note: Grease bearing assembly with molybdenum grease before installation.

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

a) D* (Side of Bearing away from Fixed Bearing.) D* = 1/8" per each 100° of contraction for every 15° fall below the Normal Temperature of 50°F.

D** (Side of Bearing toward Fixed Bearing.) D** = 1/8" per each 100° of expansion for every 15° rise above the Normal Temperature of 50°F.

b.) After Girders have been erected and dimensions D* & D** determined, holes shall be drilled & anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

Note: Pier 2 East Bearings. Provide Shim Pl's as shown:
Girders 1 thru 6 - 2 5/8" x 9" x 2'-8" ■
Girder 7 - 1 3/4" x 9" x 2'-8"
Girder 8 No Shim Pl Req'd.

■ 2 5/8" is total thickness required; use 1 5/8" x 9" x 2'-8" and 1" x 9" x 2'-8" plates.

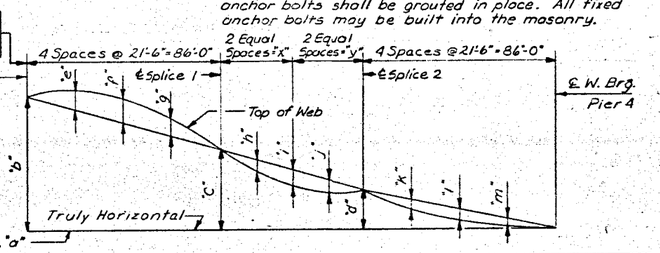
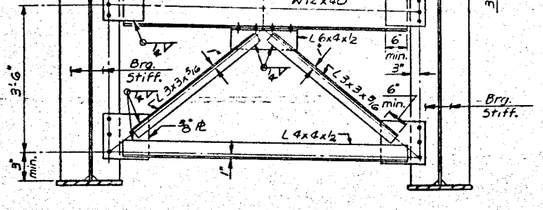


TABLE OF CAMBER DIMENSIONS

Gir. No.	"x"	"y"	Elev. "a"	"b"	"c"	"d"	"e"	"f"	"g"	"h"	"i"	"j"	"k"	"l"	"m"
1	34'-9 5/16"	29'-2 1/16"	498.546	6'-2 7/8"	3'-9 1/2"	1'-9 1/2"	1/8"	1 5/8"	1 3/16"	3/4"	2 1/2"	1 3/4"	0"	1/16"	0"
2	34'-5 1/4"	29'-6 3/4"	498.390	6'-1 5/8"	3'-7 1/16"	1'-9 3/8"	3/4"	1"	1 1/16"	5/8"	1"	1 3/8"	1/8"	1 1/16"	7/8"
3	34'-0 1/2"	29'-11 1/2"	498.247	5'-11 5/8"	3'-5 5/8"	1'-7 3/8"	1 1/16"	1"	1 1/16"	5/8"	1 5/16"	1 3/8"	5/8"	1 5/8"	7/8"
4	33'-7 13/16"	30'-4 3/16"	498.087	5'-9 3/8"	3'-3 3/8"	1'-5 1/8"	1 1/16"	1"	1 1/16"	5/8"	1 5/16"	1 3/8"	3/8"	1/4"	1"
5	33'-3 1/16"	30'-8 15/16"	497.926	5'-8"	3'-1 5/8"	1'-3 3/4"	1 1/16"	1"	1 1/16"	5/8"	1 5/16"	1 3/8"	1/8"	3/16"	1 1/8"
6	32'-10 5/16"	31'-1 11/16"	497.735	5'-6 5/16"	2'-11 1/8"	1'-1 1/2"	1/2"	1 1/16"	1/2"	9/16"	7/8"	3/4"	1 3/16"	1 9/16"	1 7/16"
7	32'-5 5/8"	31'-6 3/8"	497.967	4'-8 1/16"	2'-9 1/8"	11/4"	-2 1/8"	-2 1/16"	-1 15/16"	-3 1/16"	1 3/16"	1 5/8"	1/16"	1/4"	3/8"
8	32'-0 7/8"	31'-11 1/8"	498.297	3'-4 7/16"	2'-6 3/16"	8 15/16"	5/8"	1/2"	1/2"	-1/16"	2 1/8"	2 5/8"	1/2"	3/8"	1/8"

CAMBER DIAGRAM
GIRDERS 1 THRU 8

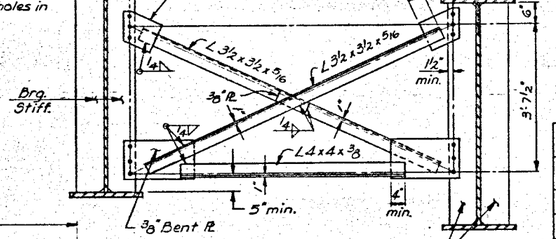


CROSS FRAMES CF-57 & CF-58
(CF-57 12 Required)
(CF-58 2 Required)

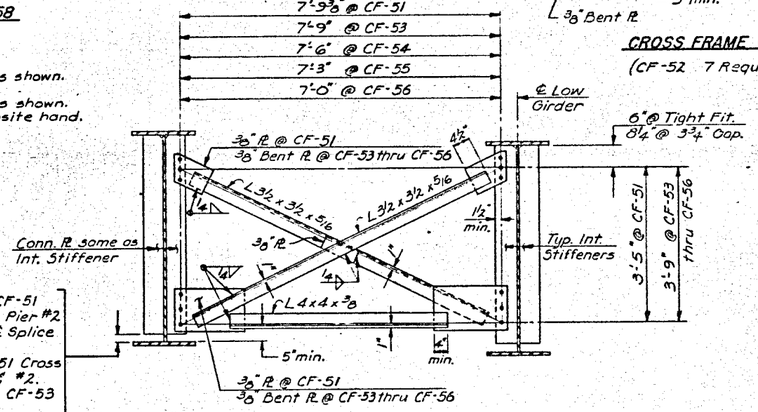
Pier 2 W. Brg. Girders 1 thru 8 as shown.

Pier 4 E. Brg. Girders 1 thru 6 as shown. Girders 7 & 8 opposite hand.

Note: 15/16" ϕ holes in gusset Pl's for 3/4" ϕ bolts. Hardened washers shall be required over holes in gusset Pl's.



CROSS FRAME CF-52
(CF-52 7 Required)



3 3/4" Gap @ Bottom for all CF-51 Cross Frames between ℄ Brg. Pier #2 & ℄ Splice #1 and between ℄ Splice #2 & ℄ Brg. Pier #4.
3 3/4" Gap @ Top for all CF-51 Cross Frames between Splices #1 & #2.
3 3/4" Gap @ Bottom for all CF-53 thru CF-56 Cross Frames.

CROSS FRAMES CF-51 & CF-53 Thru CF-56
(CF-51 62 Required) (CF-55 2 Required)
(CF-53 2 Required) (CF-56 2 Required)
(CF-54 2 Required)

Steel Specifications This Sheet:
Bearing Plate Material - AASHTO M-222
Cross Frames & Diaphragms - AASHTO M-183
Cross Frame & Diaphragm Bolts - AASHTO M-164

BEARINGS & CROSS FRAMES
SPANS 4 & 5

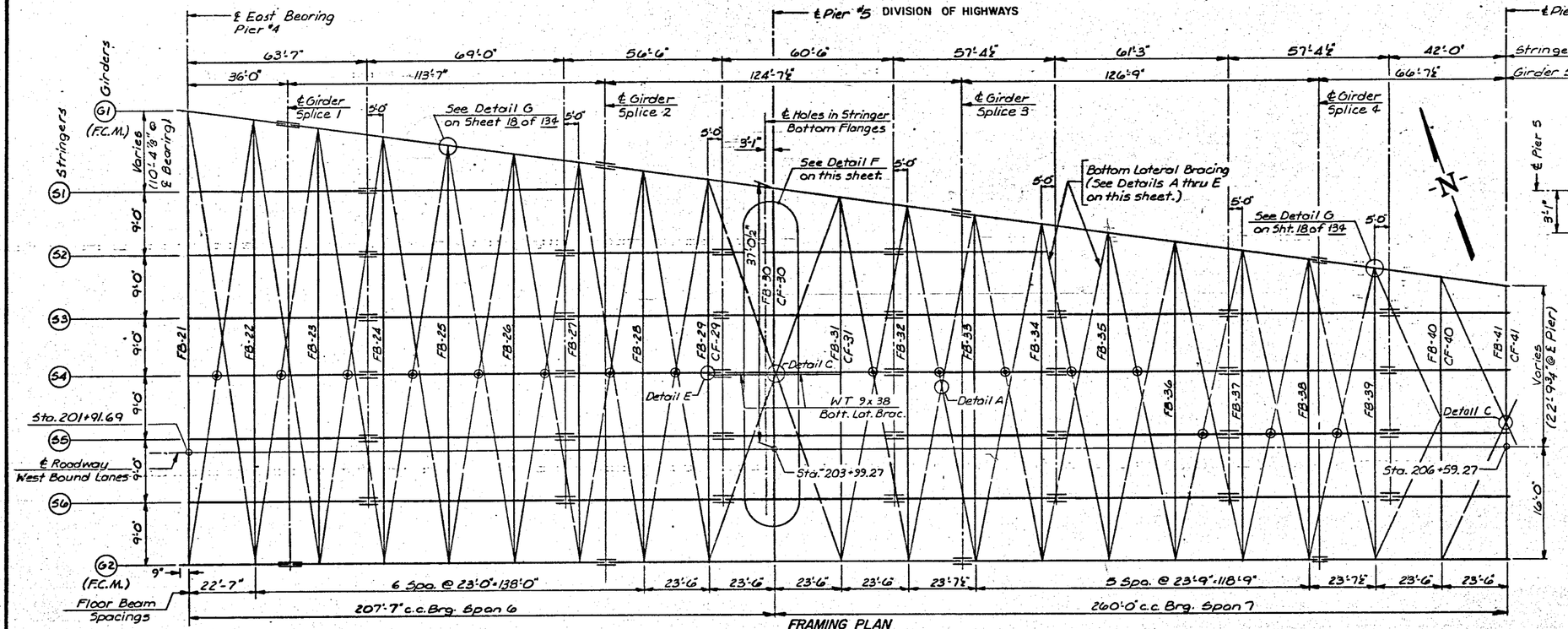
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

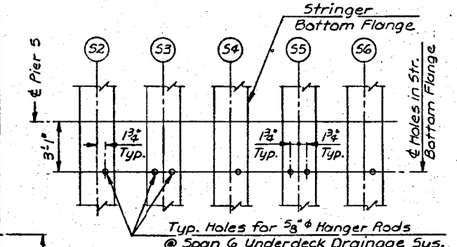
DESIGNED	W.D.L.	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
CHECKED	S.C.A.		
DRAWN	D.A.N.		DATE 11-2-79
CHECKED	W.D.L.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

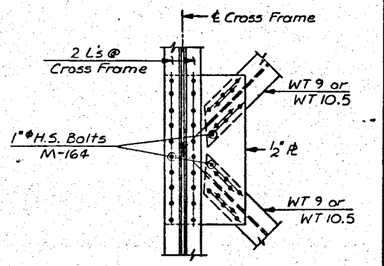
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 9 of 134

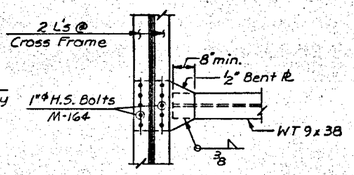




DETAIL F



DETAIL D



DETAIL E

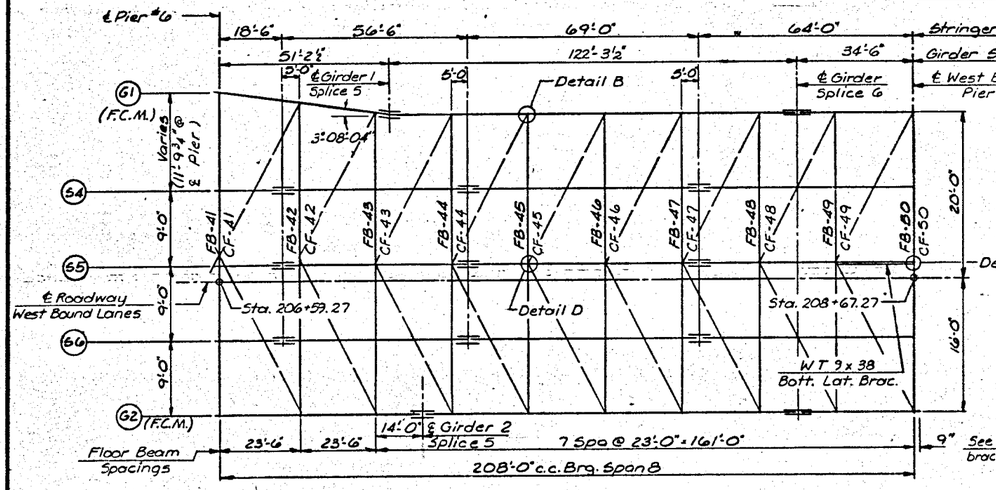
Notes:

Structural steel for bottom lateral bracing shall meet the requirements for AASHTO M-183 unless otherwise noted.

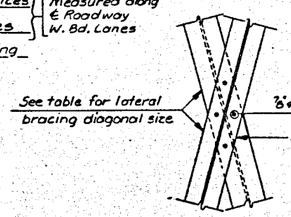
⊙ On the framing plan indicates the general location of the tie rod hanger between the stringer ℄ lateral bracing system.

All dimensions shown in framing plan are measured horizontally.

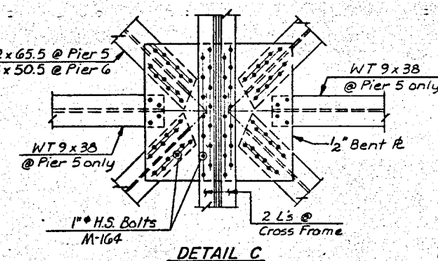
For cross section see sheets 91 & 92 of 134



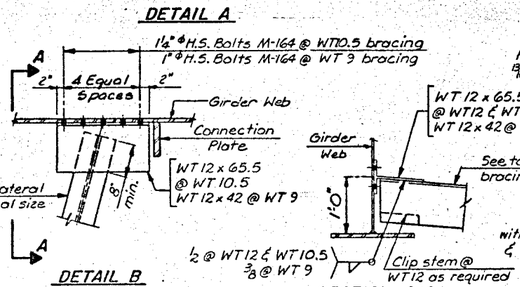
Location	Bottom Lateral Bracing Diagonal
FB 21 thru FB 31	WT 12 x 65.5
FB 31 thru FB 39	WT 9 x 38
FB 39 thru FB 44	WT 10.5 x 50.5
FB 44 thru FB 50	WT 9 x 38



DETAIL A

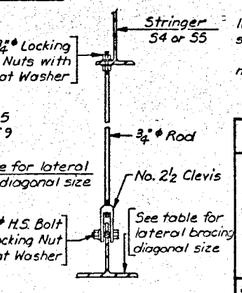


DETAIL C



DETAIL B

SECTION A-A



LATERAL BRACING TIE ROD

BOTTOM LATERAL BRACING DETAILS

STRUCTURAL STEEL PLAN
SPANS 6,7&8

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED S.C.O.
CHECKED W.D.L.
DRAWN P.M.
CHECKED W.D.L.

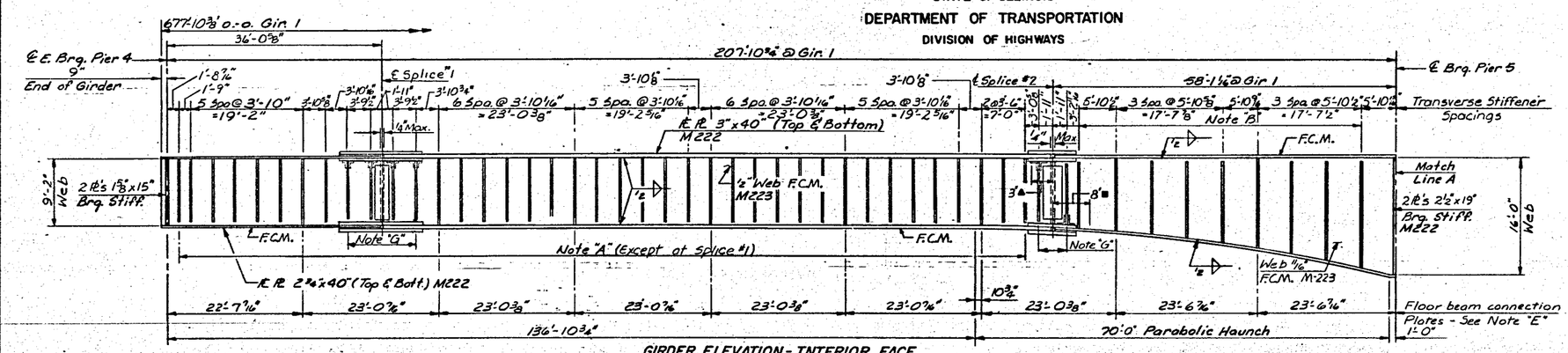
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

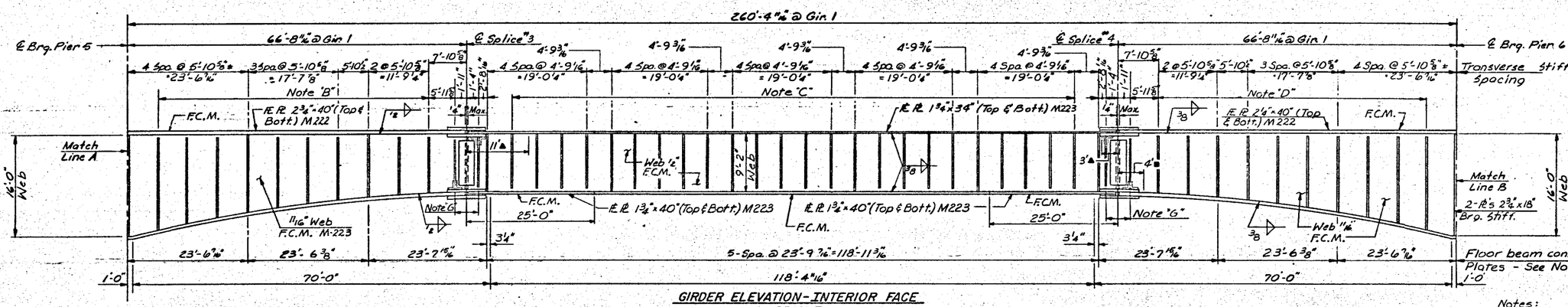
FILE NO. 74001
DATE 11-2-79

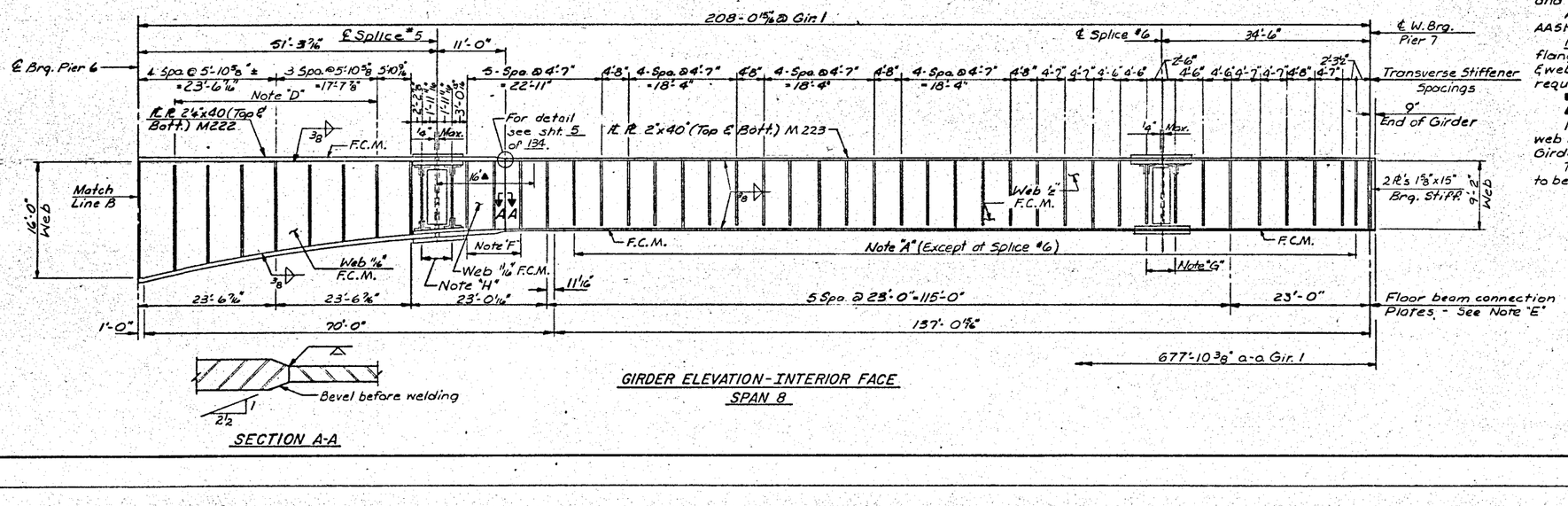
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-19	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 10 of 134







Note "A": 5/8" x 10" Transverse Stiffeners with 1/2" or 3/8" fillet welds at top flange & 3" gap at bottom flange.
Note "B": 11/16" x 11" Transverse Stiffeners with 1/2" fillet welds at bottom flange & 4 1/8" gap at top flange.
Note "C": 9/16" x 8 1/2" Transverse Stiffeners with 3/8" fillet welds at top flange & 3" gap at bottom flange.
Note "D": 5/8" x 10" Transverse Stiffeners with 3/8" fillet welds at bottom flange & 4 1/8" gap at top flange.
Note "E": 1 3/4" x 10" Floor beam connection plates (M-223) on each side of web. Groove weld to web & both flanges.
Note "F": 1 1/4" x 18" Transverse Stiffeners on each side of web with fillet welds to both flanges & web.
Note "G": 7/8" x 10" Transverse Stiffeners with fillet weld to web & bolted connection to flanges. See Splice Details for ℄ details.
Note "H": 1 1/4" x 18" Transverse Stiffeners with fillet weld to web & bolted connection to both flanges. See Splice 5 Details.

Notes:
All dimensions shown are measured horizontally and along ℄ of Girder.
All structural steel shown on this sheet shall be AASHTO M-183 unless otherwise noted.
F.C.M. denotes Fracture Critical Member. Girder flanges as shown, webs, bearing stiffeners, & flange & web splice plates for Spans 6, 7 & 8 shall meet the requirements for fracture critical members.
■ F.C.M. @ lower girder flange this region.
▲ F.C.M. @ upper girder flange this region.
Inside face for Girder 1 shown on this sheet. For web haunch details & stiffeners on outside face of Girder 1. see Sheet 12 of 134.
The inside connecting plates @ floor beams are to be welded normal to ℄ Roadway. See Sht. 16 of 134

TRANSVERSE STIFFENER LOCATIONS
GIRDER 1 - SPANS 6, 7, & 8

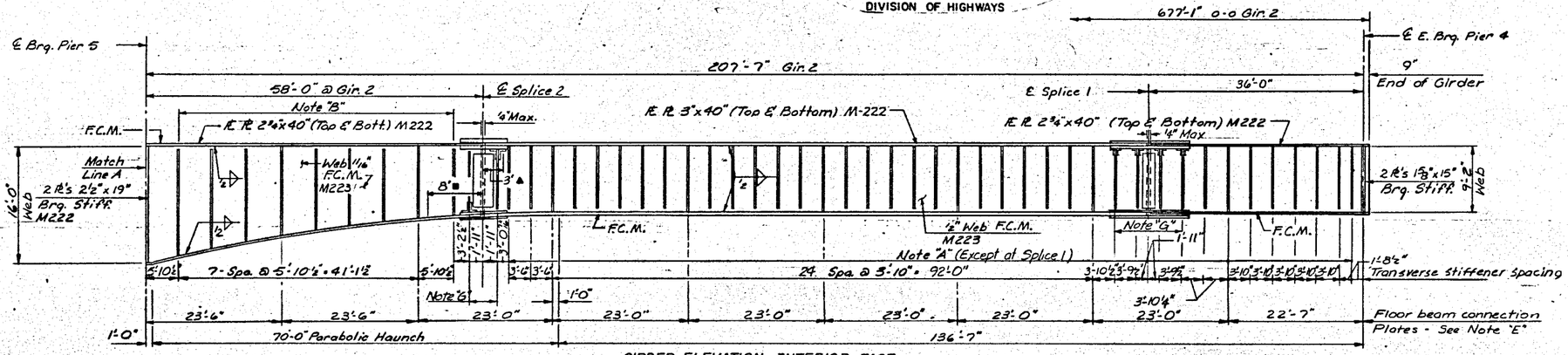
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

WDL	HANSON ENGINEERS INCORPORATED	FILE NO.	74001
SCO.		DATE	11-2-79
B.J.D.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS		
WDL			

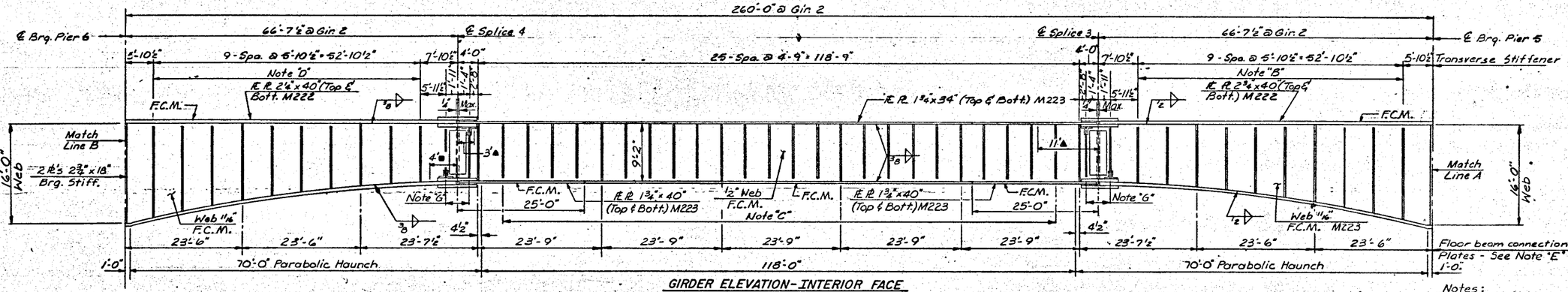
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

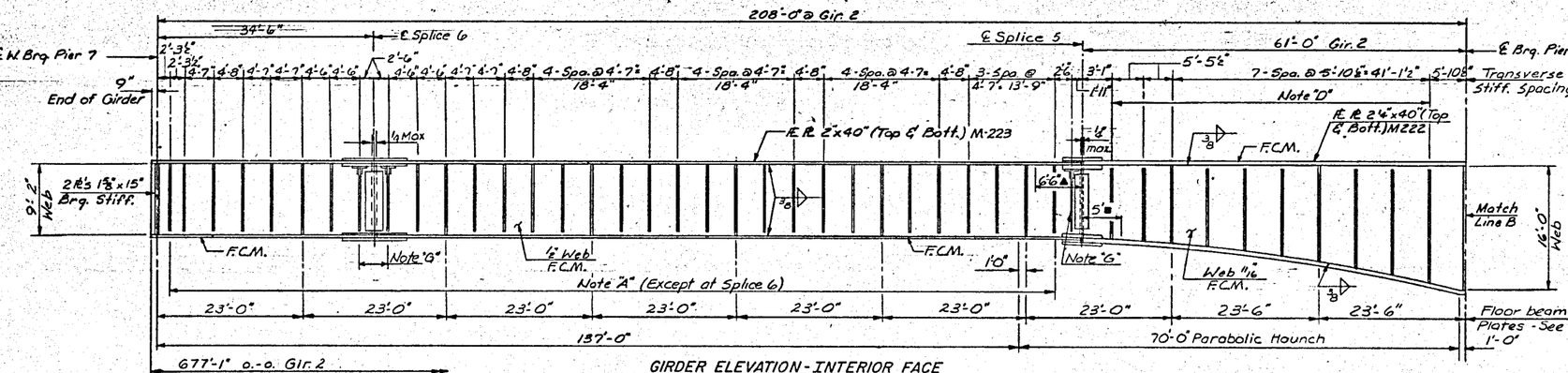
Sheet 11 of 134



GIRDER ELEVATION - INTERIOR FACE
SPAN 6



GIRDER ELEVATION - INTERIOR FACE
SPAN 7



GIRDER ELEVATION - INTERIOR FACE
SPAN 8

Note "A": ⅝"x10" Transverse Stiffeners with ⅜" or ½" Fillet Welds at top flange & 3" Gap at bottom flange.
Note "B": 11/16"x11" Transverse Stiffeners with ½" Fillet Welds at bottom & 4½" Gap at top flange.
Note "C": 11/16"x8½" Transverse Stiffeners with ⅜" Fillet Welds at top flange & 3" Gap at bottom flange.
Note "D": ⅝"x10" Transverse Stiffeners with ⅜" Fillet Welds at bottom & 4½" Gap at top flange.
Note E: 1¾"x10" Floor beam connection ℄'s (M-223) on each side of web. Groove weld to web & both flanges.
Note "G": ⅞"x10" Transverse Stiffeners with fillet welds to web & bolted connection to flanges. See Splice Details.

Notes:
All dimensions shown are measured horizontally and along ℄ Girder.
All structural steel shown on this sheet shall be AASHTO M-183 unless otherwise noted.
F.C.M. denotes Fracture Critical Member. Girder flanges as shown, webs, bearing stiffeners, & flange & web splice plates for Spans 6, 7 & 8 shall meet the requirements for fracture critical members.
■ F.C.M. @ lower girder flange this region.
▲ F.C.M. @ upper girder flange this region.
Inside face of Girder 2 shown on this sheet. For web haunch details & stiffeners on outside face of Girder 2 see Sheet 12 of 134.
The inside connecting plates @ floor beams are to be welded normal to ℄ Roadway. See Sheet 16 of 134.

TRANSVERSE STIFFENER LOCATIONS
GIRDER 2 - SPANS 6, 7, & 8

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.
CHECKED S.C.D.
DRAWN B.J.D.
CHECKED W.D.L.

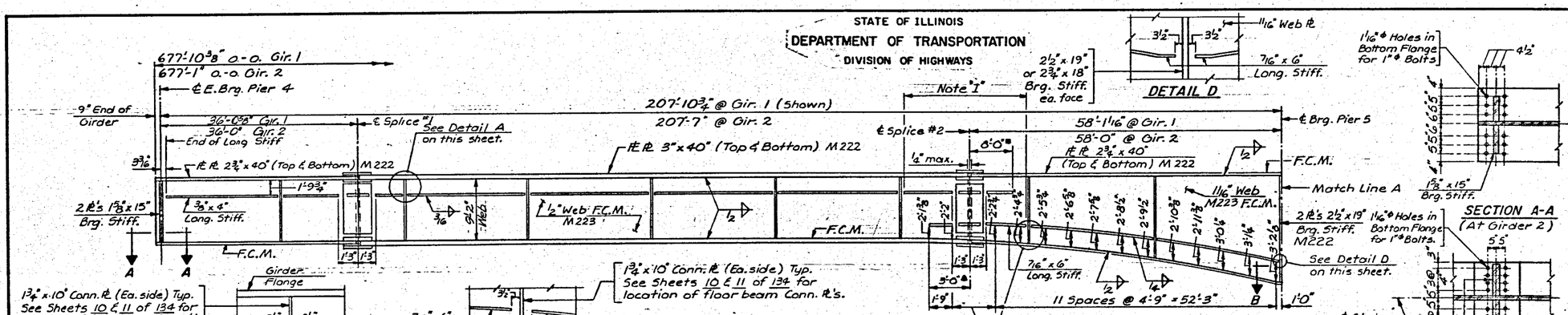
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

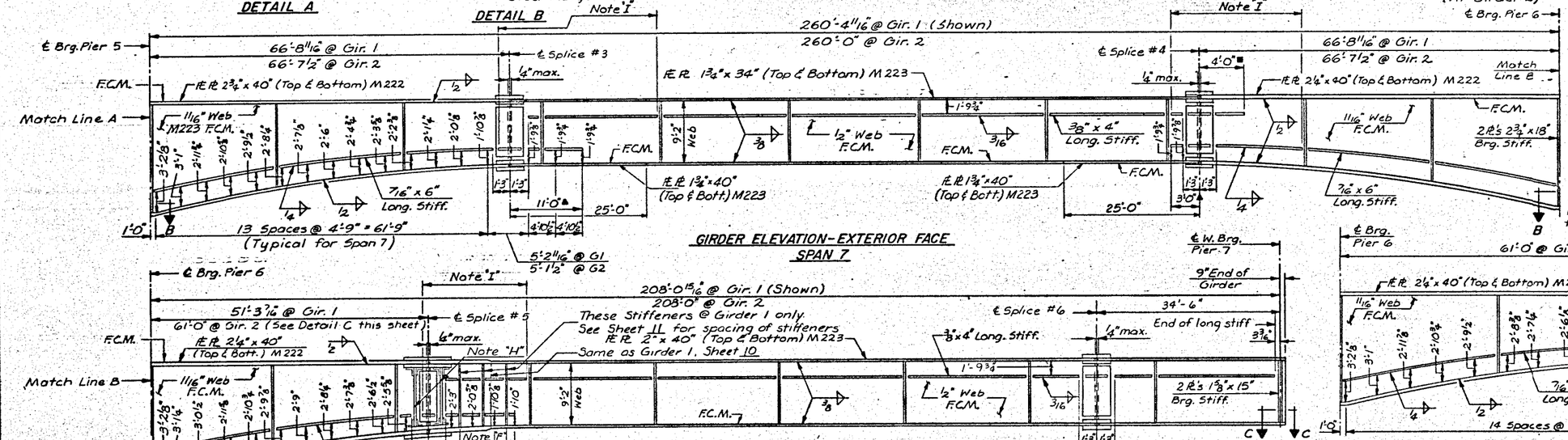
JOB NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 12 of 134





Notes:
All dimensions shown are measured horizontally along ℄ Girder.
All structural steel shown on this sheet shall be AASHTO M-183 unless otherwise noted.
F.C.M. denotes Fracture Critical Members.
Outside face of Girders 1 & 2 shown on this sheet. For inside face of Girders 1 & 2 see Sheets 10 & 11 of 134.
■ F.C.M. lower girder flange this region.
▲ F.C.M. upper girder flange this region.
Note "I": Limits of F.C.M. for longitudinal stiffeners.

DETAIL C
Girder 2 only
Note "F": 1/4" x 18" Transverse Stiffeners with fillet welds to both flanges and web. (Gir. 1 only)
Note "H": 1/4" x 18" Transverse Stiffeners with fillet weld to web and bolted connection to both flanges. See Splice 5 Details. (Gir. 1 only)

STRUCTURAL STEEL GIRDERS SPANS 6, 7 & 8

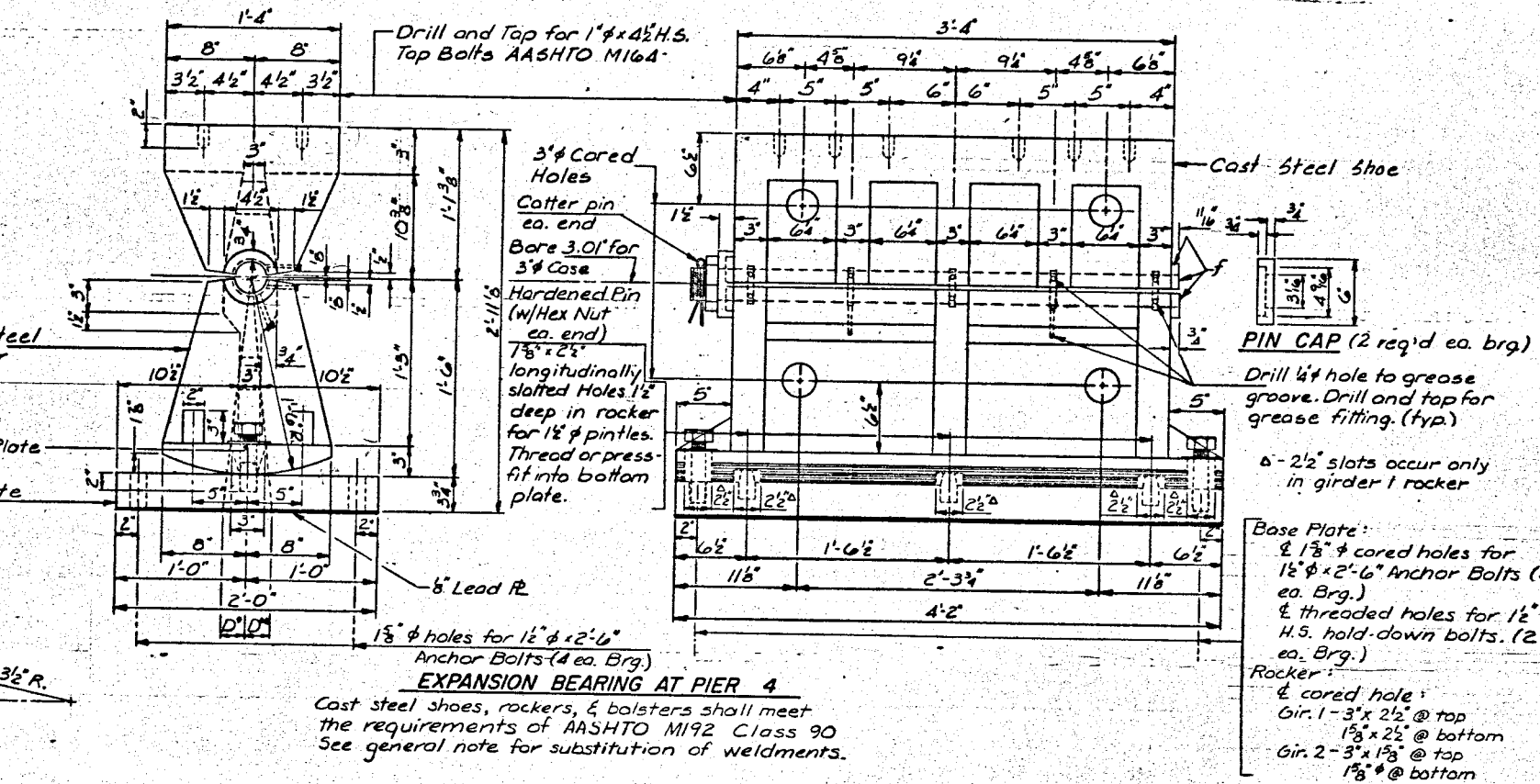
Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED	S.C.O.
CHECKED	W.D.L.
DRAWN	D.A.N.
CHECKED	S.C.O.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

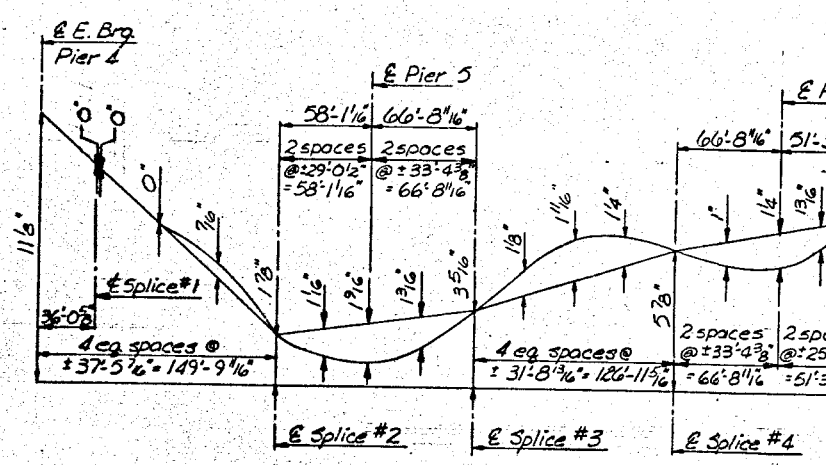
FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

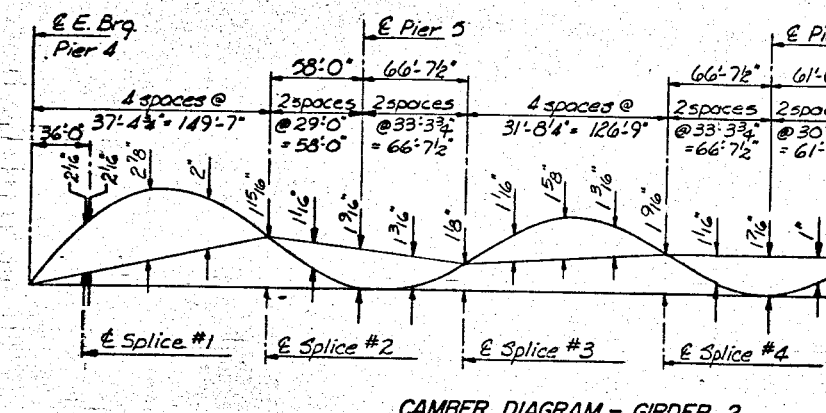


EXPANSION BEARING AT PIER 4

Cast steel shoes, rockers, & bolsters shall meet the requirements of AASHTO M192 Class 90 See general note for substitution of weldments.



CAMBER DIAGRAM - GIRDER 1

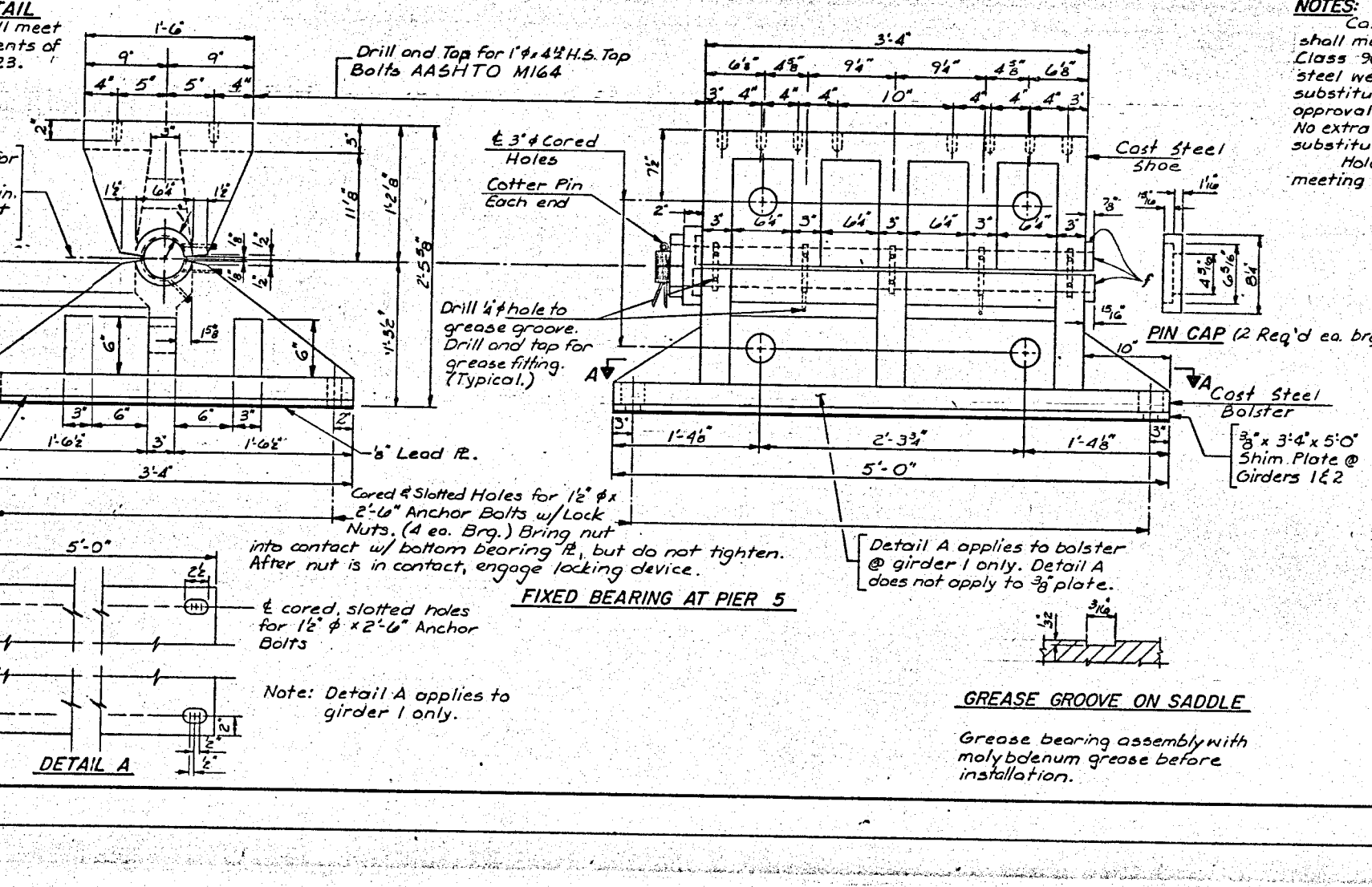


CAMBER DIAGRAM - GIRDER 2

NOTES:

Cast steel shoes, rockers, & bolsters shall meet requirements of AASHTO M192 Class 90 unless noted otherwise. Structural steel weldments of M222 or M223 may be substituted for the castings subject to approval by the Engineer prior to fabrication. No extra compensation will be allowed for the substitution.

Hold down bolts, Pier 4, shall be high strength meeting the requirements of AASHTO M-164.



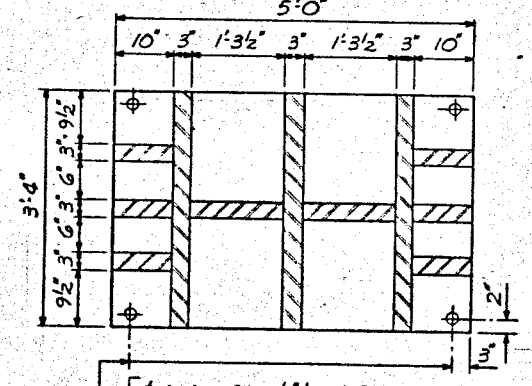
FIXED BEARING AT PIER 5

Note: Detail A applies to girder 1 only.

DETAIL A

GREASE GROOVE ON SADDLE

Grease bearing assembly with molybdenum grease before installation.



SECTION A-A

Note: Elevation deflection.

NOTES

A) D* (Side D* = ⅛" per fall belo D** (Side D** = ⅛" pe rise abo

B) After Gi D* and D and anc All fixed the mas

F.A. RO

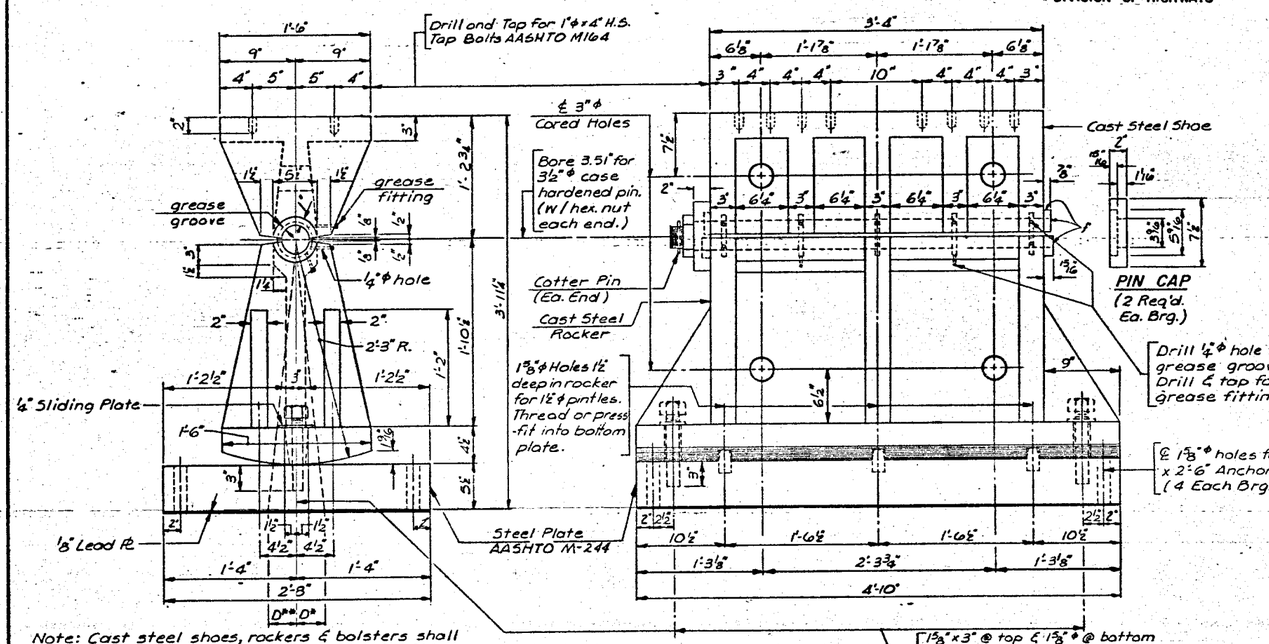
PEO

S.C.Q.
W.D.L.
P.M.
W.D.L.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 49	15-2 (F&E)	Tazewell & Peoria		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

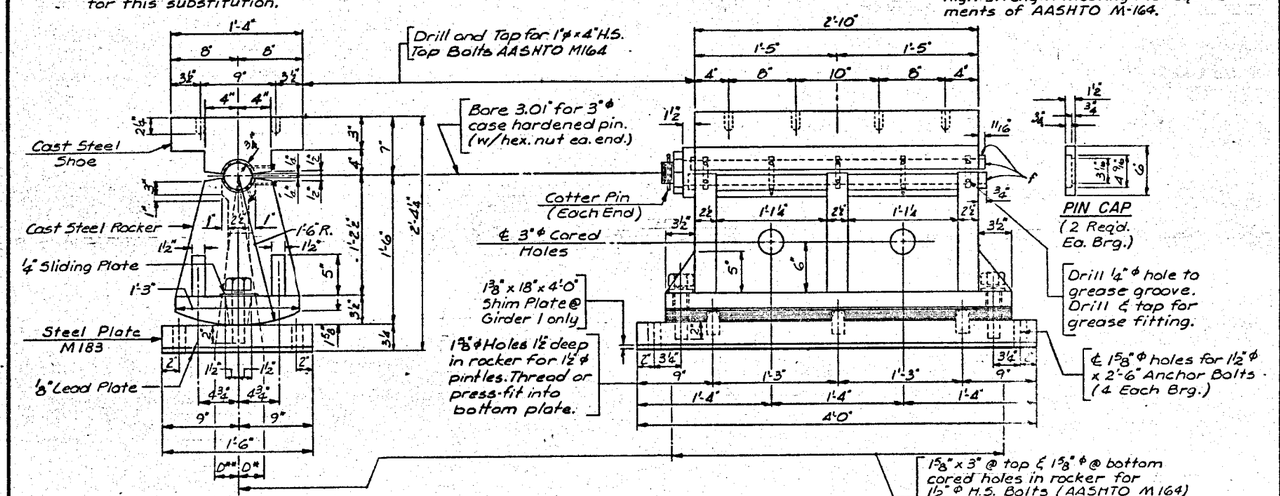
Sheet 14 of 134



EXPANSION BEARING AT PIER 6

Note: Cast steel shoes, rockers & bolsters shall meet requirements of AASHTO M192 Class 90 unless noted otherwise. Structural steel weldments of M222 or M223 may be substituted for the castings, subject to approval by the Engineer prior to fabrication. No extra compensation will be allowed for this substitution.

Note: Hold down bolts, Piers 6 & 7, shall be high strength meeting the requirements of AASHTO M-164.



EXPANSION BEARING AT PIER 7

Note: See Sheet 13 of 134 for notes pertaining to bearings.

FLOOR BEAM MOMENT TABLE

Fl. Bm. No.	I (0.5 pt. Fl. Bm. in.⁴)	D ◆ P(k)	D ◆ W(k/ft)	0.5 point-Floor Beam M D (ft.k)	M L (ft.k)	Imp. (ft.k)	M TOTAL (ft.k)	fs (ksi)
21	53,360	10.4	.23	701	1,500	450	2,532	19.3
22	85,193	30.0	.31	1,783	1,916	575	4,274	21.5
23	81,067	25.2	.31	1,469	1,846	554	3,869	20.0
24	89,217	25.8	.32	1,449	1,777	533	3,759	18.4
25	91,683	25.5	.32	1,380	1,708	512	3,600	17.4
26	71,835	25.2	.27	1,291	1,652	496	3,439	21.0
27	72,080	24.3	.27	1,178	1,563	471	3,217	19.6
28	71,613	28.4	.27	1,416	1,499	450	3,365	20.6
29	71,170	27.7	.27	1,281	1,430	429	3,140	19.2
30	58,445	26.6	.26	1,130	1,360	408	2,898	19.8
31	58,032	26.2	.26	1,060	1,316	395	2,771	19.0
32	57,875	25.6	.26	984	1,273	382	2,639	18.2
33	57,464	25.6	.26	930	1,230	369	2,529	17.5
34	46,609	25.4	.22	837	1,146	344	2,327	19.6
35	46,075	30.5	.22	931	1,122	337	2,390	20.3
36	45,946	29.1	.22	849	1,079	330	2,278	19.4
37	45,609	27.7	.22	772	1,056	317	2,145	18.3
38	35,087	26.3	.21	697	1,012	304	2,013	19.9
39	34,800	25.7	.21	646	971	291	1,908	19.0
40	34,514	25.1	.21	597	930	279	1,806	18.0
41	25,515	24.7	.20	532	869	261	1,662	19.6
42	20,450	31.1	.19	616	848	254	1,718	22.9
43	20,450	29.0	.19	556	807	242	1,605	21.4
44-48	19,459	26.9	.19	515	766	230	1,511	20.7
49	19,459	30.5	.19	580	766	230	1,576	21.6
50	26,854	10.6	.20	223	579	174	976	11.2

◆Note:
P designates concentrated load at each stringer.
W designates uniform load due to weight of floor beam.

GIRDER MOMENT TABLE

	0.4 point Span 6	Pier 5	0.5 point Span 7	Pier 6	0.6 point Span 8
I (in.⁴)	821,778	2,491,658	427,008	2,103,568	557,271
D (k/ft.)	6.46	6.26	4.97	4.55	4.26
M D (ft.k)	17,291	38,290	7,704	23,688	10,548
M L (ft.k)	7,349	10064	4,954	9,743	5,739
Imp (ft.k)	1,102	1,510	743	1,461	861
M TOTAL (ft.k)	25,742	49,864	13,401	40,892	17,148
fs (ksi)	21.8	24.2 A	21.4	23.3 B	21.0

A - Includes .5 ksi additional stress due to haunch.
B - Includes .4 ksi additional stress due to haunch.

GIRDER REACTION TABLE

	℄ E. Brg. Pier 4	℄ Brg. Pier 5	℄ Brg. Pier 6	℄ W. Brg. Pier 7
R D (K)	435.0	1,467.0	1,152.6	282.2
R L (K)	174.6	372.8	345.7	142.4
Imp. (K)	26.2	55.9	51.8	21.4
R TOTAL (K)	635.8	1,895.7	1,550.1	446.0

STRINGER MOMENT TABLE

	0.4 point End Spans	0.5 point All Int. Spans	1st Int Floor Beam	All Other Int. Floor Beams
I (in.⁴)	1,350	1,350	1,350	1,350
D (k/ft.)	1.15	1.15	1.15	1.15
M D (ft.k)	50	22	68	55
M L (ft.k)	126	95	113	106
Imp. (ft.k)	38	29	34	32
M TOTAL (ft.k)	214	146	215	193
fs (ksi)	22.5	15.4	22.6	20.3

FLOOR BEAM SHEAR & REACTION TABLE

	At Girder 1				At Girder 2			
Fl. Bm. No.	V D or R D (k)	V L or R L (k)	Imp. (k)	V or R TOTAL (k)	V D or R D (k)	V L or R L (k)	Imp. (k)	V or R TOTAL (k)
21	37.9	102.2	30.7	170.8	39.3	102.2	30.7	172.2
22	99.6	133.6	40.1	273.3	100.0	133.6	40.1	273.7
23	86.5	132.2	39.7	258.4	83.9	132.2	39.7	255.8
24	90.1	130.6	39.2	259.9	84.1	130.6	39.2	253.9
25	90.6	129.0	38.7	258.3	81.4	129.0	38.7	249.1
26	89.8	127.4	38.2	255.4	77.1	127.4	38.2	242.7
27	75.2	116.0	34.8	226.0	72.0	116.0	34.8	222.8
28	76.4	114.9	34.5	225.8	80.6	114.9	34.5	230.0
29	75.6	113.7	34.1	223.4	76.5	113.7	34.1	224.3
30	74.6	112.6	33.8	221.0	72.2	112.6	33.8	218.6
31	75.3	111.2	33.4	219.9	69.5	111.2	33.4	214.1
32	76.0	109.9	33.0	218.9	66.8	109.9	33.0	209.7
33	76.7	108.5	32.6	217.8	64.1	108.5	32.6	205.2
34	62.8	106.9	32.1	201.8	59.8	106.9	32.1	198.8
35	64.0	105.3	31.6	200.9	68.2	105.3	31.6	205.1
36	62.8	109.6	32.9	205.3	63.6	109.6	32.9	206.1
37	61.5	108.4	32.5	202.4	59.0	108.4	32.5	199.9
38	61.0	107.3	32.2	200.5	55.2	107.3	32.2	194.7
39	60.8	106.1	31.8	198.7	51.8	106.1	31.8	189.7
40	60.6	104.7	31.4	196.7	48.3	104.7	31.4	184.4
41	47.9	103.2	31.0	182.1	44.4	103.2	31.0	178.6
42	48.3	101.8	30.5	180.6	52.1	101.8	30.5	184.4
43	46.6	100.0	30.0	176.6	47.2	100.0	30.0	177.2
44-48	43.8	99.7	29.9	173.4	43.8	99.7	29.9	173.4
49	49.2	99.7	29.9	178.8	49.2	99.7	29.9	178.8
50	19.5	75.5	22.6	117.6	19.5	75.5	22.6	117.6

STRINGER SHEAR & REACTION TABLE

	End Floor Beam		First Interior Floor Beam			All Other Floor Beams		
	V R	R	V L	V R	R	V L	V R	R
R D (k)	10.7	10.7	16.5	14.3	30.8	13.6	13.6	27.2
R L (k)	34.5	34.5	39.7	37.1	45.3	37.3	37.3	42.2
Imp. (k)	10.4	10.4	11.9	11.1	13.6	11.2	11.2	12.7
R TOTAL (k)	55.6	55.6	68.1	62.5	89.7	62.1	62.1	82.1

V R - denotes shear to right of support.
V L - denotes shear to left of support.
R - denotes reaction.

BEARINGS, MOMENTS & REACTIONS
SPANS 6, 7 & 8

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

S.C.O.
W.D.L.
P.M.
W.D.L.

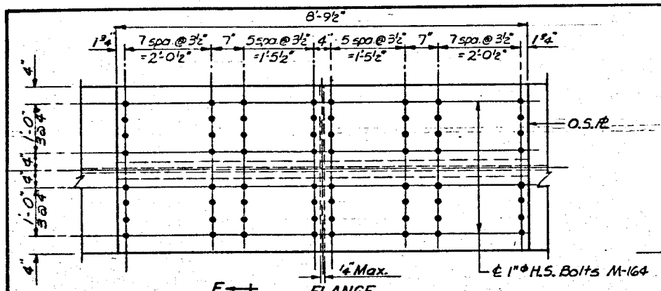
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SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

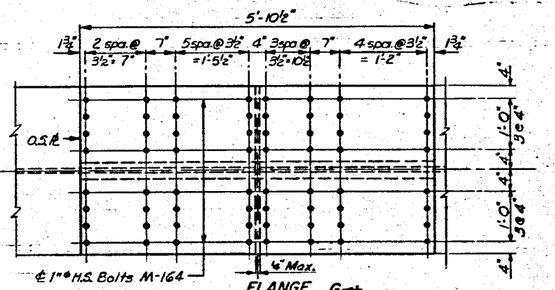
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FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 15 of 134

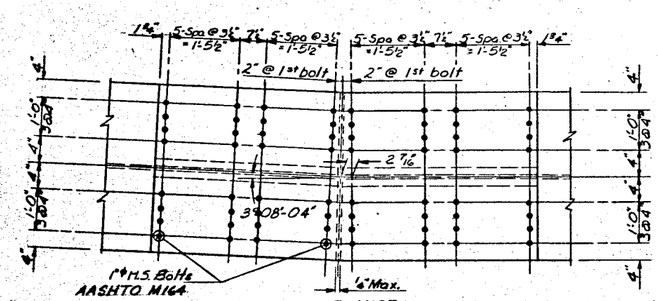
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DIVISION OF HIGHWAYS



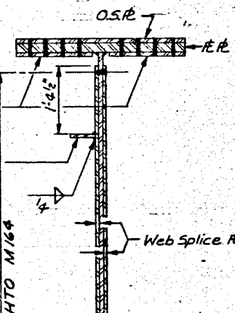
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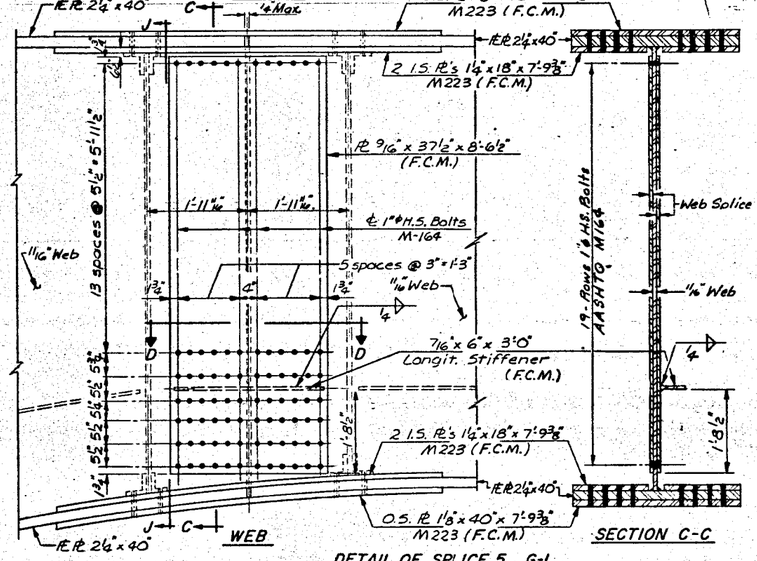


SECTION B-B

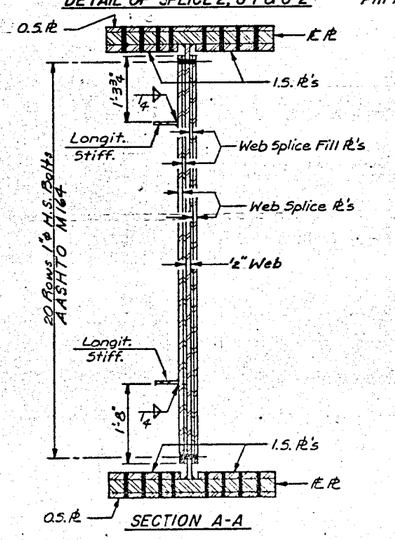


Note: Flange Splice plate lengths given along ℄ Girder.

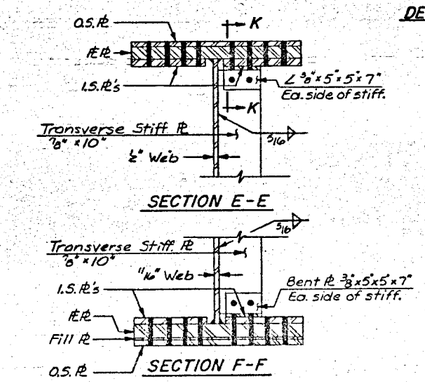


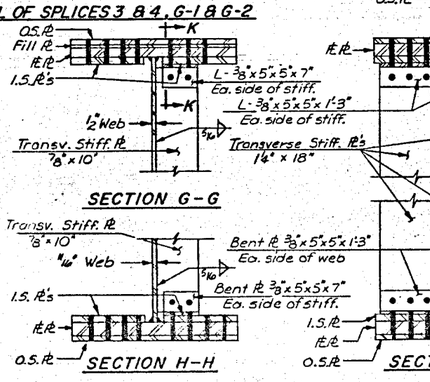


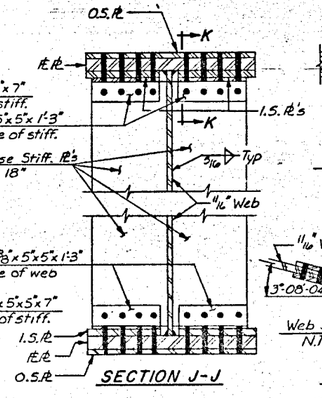
DETAIL OF SPLICE 5, G-1

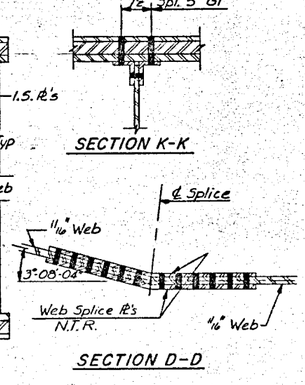


SECTION A-A









Notes:
All splice plate, transverse & longitudinal stiffener structural steel shown on this sheet shall be AASHTO M-183 unless otherwise noted.
See girder sheets for girder steel.
See Sheet 16 of 134 for Detail of Splice 5, G-2.
All flange splice plates, web splice plates & longitudinal stiffener plates shown on this sheet shall be (F.C.M.) Fracture Critical Members.

SPLICE DETAILS 2,3,4 & 5 GIRDER 1
AND SPLICE DETAILS 2,3 & 4 GIRDER 2

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (F & E)
PEORIA & TAZEWELL COUNTIES

DESIGNED	W.D.L.
CHECKED	S.C.O.
DRAWN	B.J.D.
CHECKED	W.D.L.

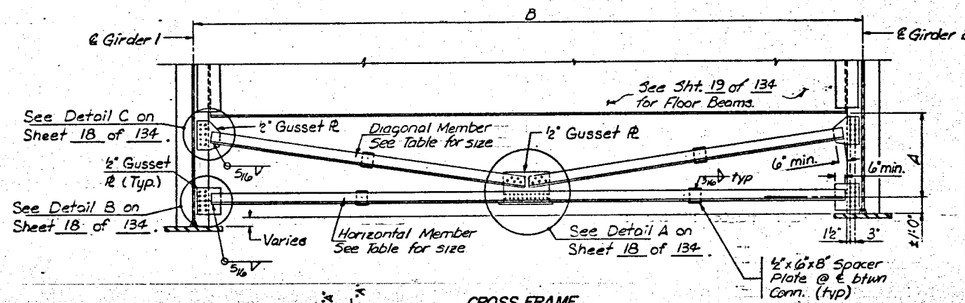
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

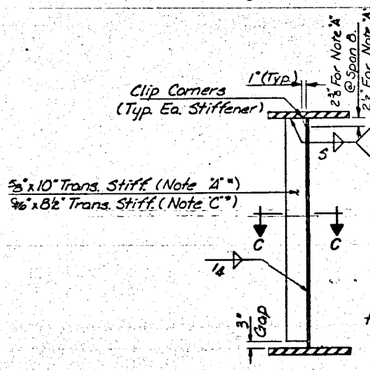
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

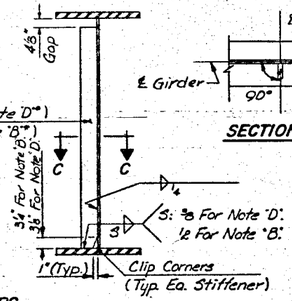
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FA. 49	15-2 (F&E)	PEORIA & TAZEWELL		
PROJ. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 16 of 134

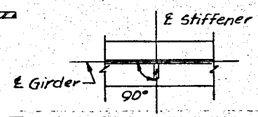


CROSS FRAME
(CF-29,30,31,40-49,& 50)
(1 EACH)





GIRDERS 1 & 2
TRANSVERSE STIFFENERS

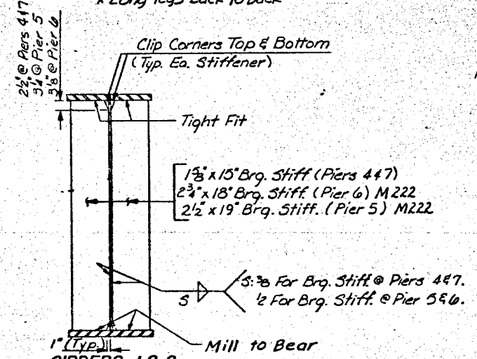


SECTION C-C

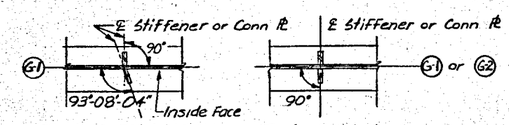
CROSS-FRAME DIMENSIONS

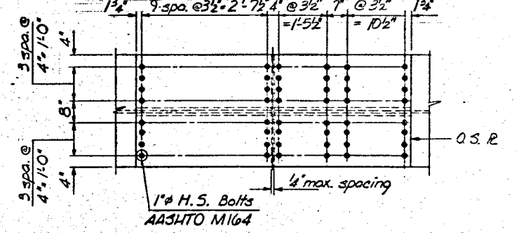
C.F. NO.	DIM. "A"	DIM. "B"	SIZE - 2 ANGLES * DIAGONAL	HORIZONTAL
29	3'-9"	54'-4"	8"x6"x½"	8"x6"x½"
30	8'-0"	53'-0½"	8"x6"x½"	8"x6"x½"
31	4'-3"	51'-9⅜"	8"x6"x½"	8"x6"x½"
40	5'-2"	40'-1⅜"	6"x6"x⅜"	6"x4"x⅜"
41	9'-5"	38'-9¾"	8"x6"x½"	8"x6"x½"
42	6'-0"	37'-6¼"	6"x6"x⅜"	6"x4"x⅜"
43	3'-9"	36'-2¾"	6"x6"x⅜"	6"x4"x⅜"
44-49	3'-0"	36'-0"	6"x6"x⅜"	6"x4"x⅜"
50	4'-2"	36'-0"	6"x6"x⅜"	6"x4"x⅜"

* Long legs back to back

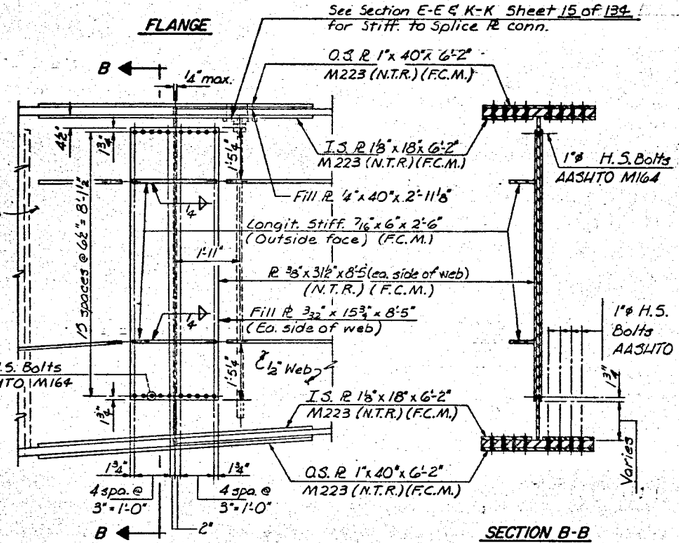


GIRDERS 1 & 2
BEARING STIFFENERS





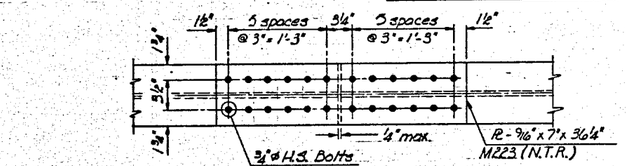
FLANGE



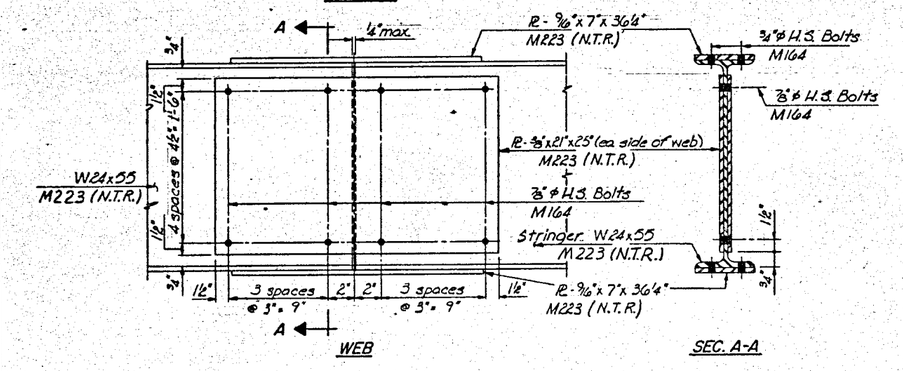
SECTION B-B

WEB

DETAIL OF SPLICE 5, G-2



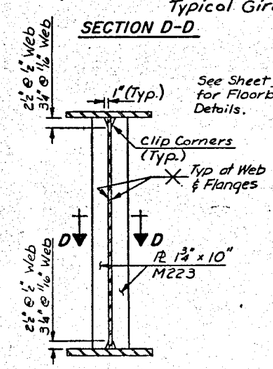
FLANGE



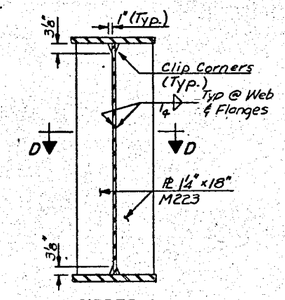
WEB

SEC. A-A

STRINGER SPLICE DETAIL



GIRDERS 1 & 2
FLOOR BEAM CONNECTION Pls



GIRDER 1
TRANSVERSE STIFFENERS
FB-43 to FB-44

Notes

N.T.R denotes material that shall conform to the Supplemental Requirements for Notch Toughness.

All Steel shall be AASHTO M183 unless otherwise noted.

STRUCTURAL STEEL DETAILS
SPANS 6, 7 & 8

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.	HANSON ENGINEERS INCORPORATED	FILE NO.	74001
DETAILED S.C.Q.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	DATE	11-2-79
DRAWN R.J.F.			
CHECKED W.D.L.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

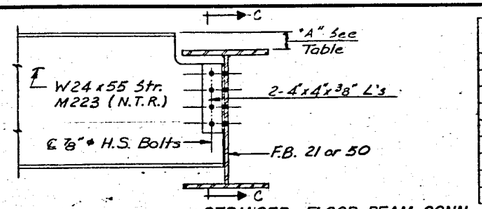
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 49	15-2 (FBE)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 17 of 134

Note: N.T.R. denotes material that shall conform to the Supplemental Requirements for Notch Toughness.

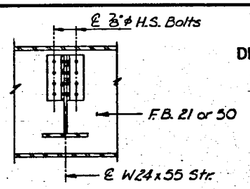
All steel shall be A.A.S.H.T.O. M183 unless otherwise noted.

All bolts shall be A.A.S.H.T.O. H.S. M 164

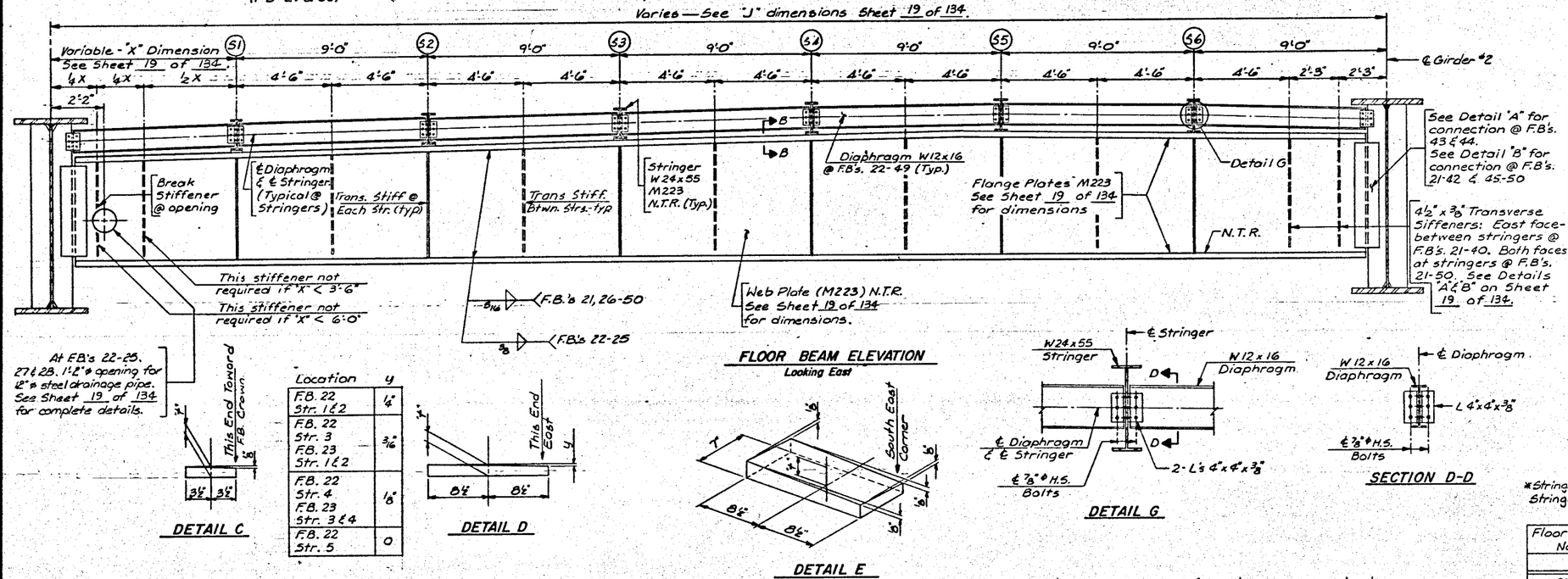


STRINGER FLOOR BEAM CONN. (FB 21 & 50)

F.B. No.	STR. No.	"A" Dim.
21	1	4 3/8"
21	2	3"
21	3	3"
21	4	4 1/8"
21	5	5 3/8"
21	6	6 1/2"
50	4	4 3/8"
50	5	3 3/8"
50	6	5 1/4"



SECTION C-C



FLOOR BEAM ELEVATION
Looking East

DETAIL E

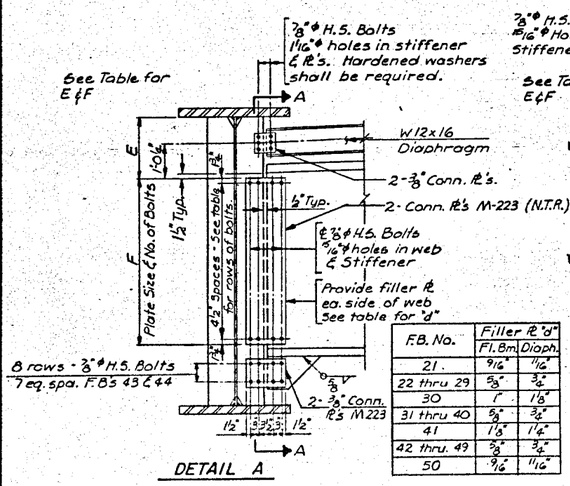
DETAIL G

SECTION D-D

DETAIL C

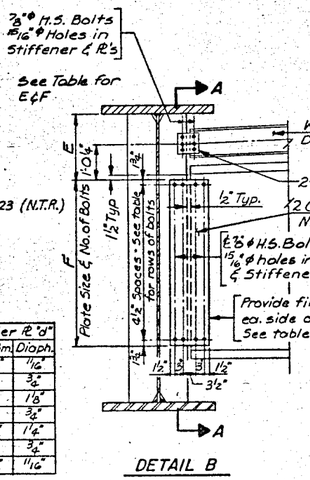
Location	y
F.B. 22 Str. 1 & 2	1/4"
F.B. 22 Str. 3 F.B. 23 Str. 1 & 2	3/16"
F.B. 22 Str. 4 F.B. 23 Str. 3 & 4	1/8"
F.B. 22 Str. 5	0

DETAIL D

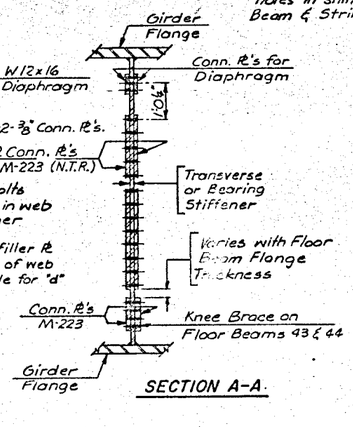


DETAIL A

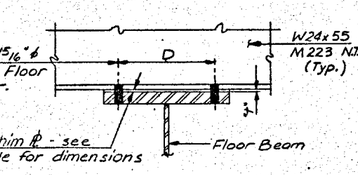
F.B. No.	Filler ℄ "d" Fl. Bm.	Diaph.
21	9/16"	11/16"
22 thru 29	5/8"	3/4"
30	1"	1 1/8"
31 thru 40	6/8"	3/4"
41	1 1/8"	1 1/4"
42 thru 49	5/8"	3/4"
50	9/16"	11/16"



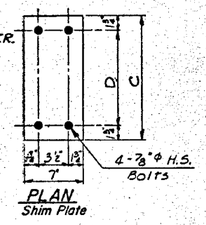
DETAIL B



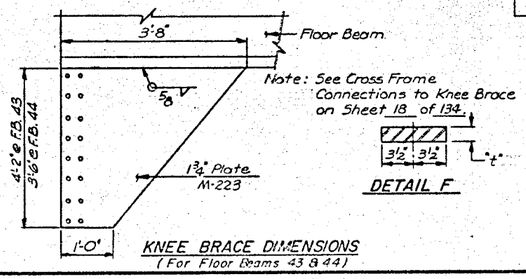
SECTION A-A



SECTION B-B
STRINGER FLOOR BEAM CONN. (FB 22 thru 49)



PLAN
Shim Plate



KNEE BRACE DIMENSIONS
(For Floor Beams 43 & 44)

DETAIL F

FLOOR BEAM CONNECTIONS

Floor Beam No.	E Gir.#1	E Gir.#2	F Plate Size & No. of Bolts Girder 1 & 2
21	0'-5 3/8"	0'-5 1/2"	3/8" x 12 1/2" x 4'-5" 12 rows x 4 = 48
22	1'-11"	1'-9 1/8"	3/8" x 12 1/2" x 4'-9 1/2" 13 rows x 4 = 52
23	1'-11"	1'-9 3/8"	
24	2'-1 1/4"	1'-9 3/8"	
25	2'-1"	1'-9 1/2"	
26	1'-11 3/8"	1'-9 1/2"	
27	1'-10 3/4"	1'-9 3/8"	
28	1'-10"	1'-9 1/2"	
29	1'-10 1/8"	1'-9 1/2"	
30	1'-10 1/8"	1'-9 1/2"	3/8" x 12 1/2" x 4'-5" 12 rows x 4 = 48
31	1'-10 3/8"	1'-9 1/2"	
32	1'-10 5/8"	1'-9 1/2"	
33	1'-10 5/8"	1'-9 1/2"	
34	1'-10 5/8"	1'-9"	
35	1'-10 1/2"	1'-9"	
36	1'-10 5/8"	1'-9"	
37	1'-10 3/8"	1'-9"	
38	1'-10 3/4"	1'-9"	3/8" x 12 1/2" x 3'-8" 10 rows x 4 = 40
39	1'-10 3/4"	1'-9"	
40	1'-10 7/8"	1'-9"	
41	1'-10 3/4"	1'-9"	3/8" x 12 1/2" x 2'-11" 8 rows x 4 = 32
42	1'-8 5/8"	1'-8 1/2"	
43	1'-8 3/8"	1'-8 1/2"	
44	1'-8 7/8"	1'-8 1/2"	
45	1'-9"	1'-8 1/2"	
46	1'-9 1/4"	1'-8 1/2"	
47	1'-9 3/8"	1'-8 1/2"	
48	1'-9 5/8"	1'-8 1/2"	
49	1'-9 3/4"	1'-8 1/2"	
50	0'-5 1/2"	0'-5 1/2"	

*Stringers 1, 2, 3, see detail E
Stringer 4 see detail C.

SHIM PLATE DIMENSIONS

Floor Beam No.	DET	"t" Str.1	Str.2	Str.3	Str.4	Str.5	Str.6	C	D
21,50			Not Appl.						
22	D	1/4"	1 3/8"	1/4"	1/4"	1/4"	—	1'-5"	1'-1 1/2"
23	D	1/4"	1 5/8"	1/2"	5/8"	—	—	1'-5"	1'-1 1/2"
24	*	1 3/8"	2 1/4"	1 5/8"	1/4"	—	—	1'-5"	1'-1 1/2"
25	C	1 3/8"	1 1/2"	1 1/4"	1/4"	—	—	1'-5"	1'-1 1/2"
26	C	1/4"	1/2"	1/2"	1/4"	—	—	1'-3"	0'-11 1/2"
27	C	1/4"	1/4"	1/4"	1/4"	—	—	1'-3"	0'-11 1/2"
28-33	C	—	1/4"	1/4"	1/4"	—	—	1'-3"	0'-11 1/2"
34	C	—	1/4"	1/4"	1/4"	—	—	1'-2"	0'-10 1/2"
35-41	C	—	—	1/4"	1/4"	—	—	1'-2"	0'-10 1/2"
42-49	F	—	—	—	—	1 3/4"	2 3/4"	1'-2"	0'-10 1/2"

STRUCTURAL STEEL DETAILS
SPANS 6,7,8

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(FBE)
PEORIA & TAZEWELL COUNTIES

DESIGNED S.C.O.
CHECKED W.D.L.
DRAWN P.M.
CHECKED W.D.L.

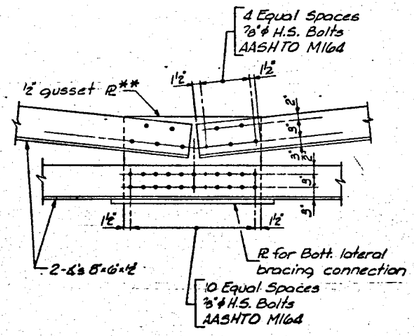
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

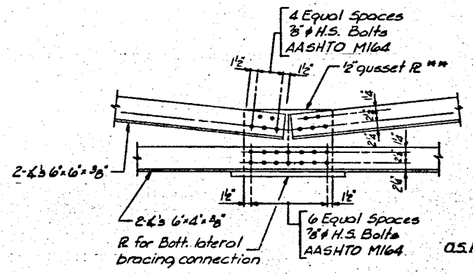
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

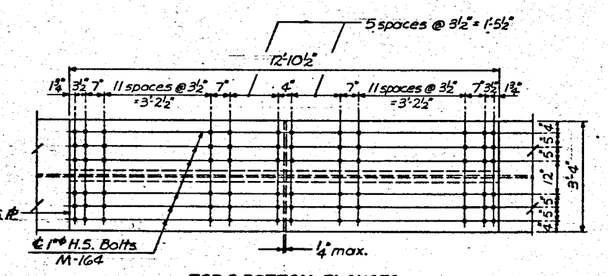
Sheet 18 of 134



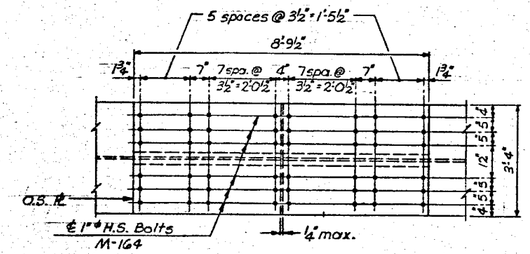
CROSS FRAMES 29 THRU 31 & 41



CROSS FRAMES 40, 42 THRU 50

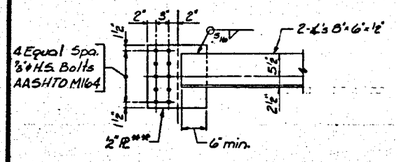


TOP & BOTTOM FLANGES

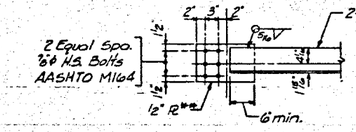


TOP & BOTTOM FLANGES

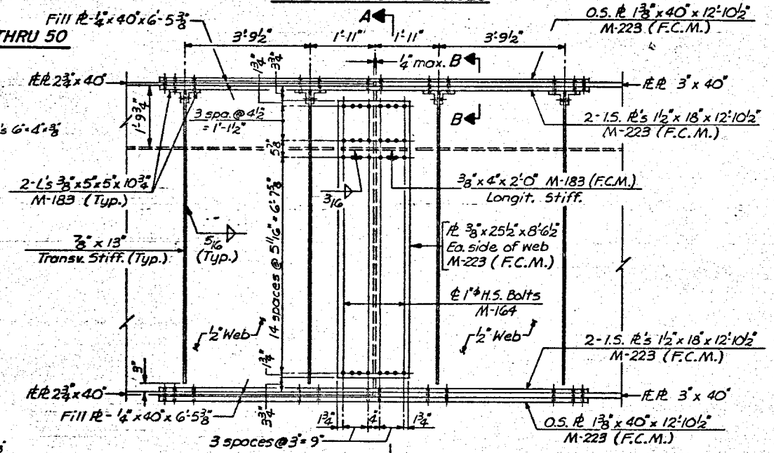
DETAIL A



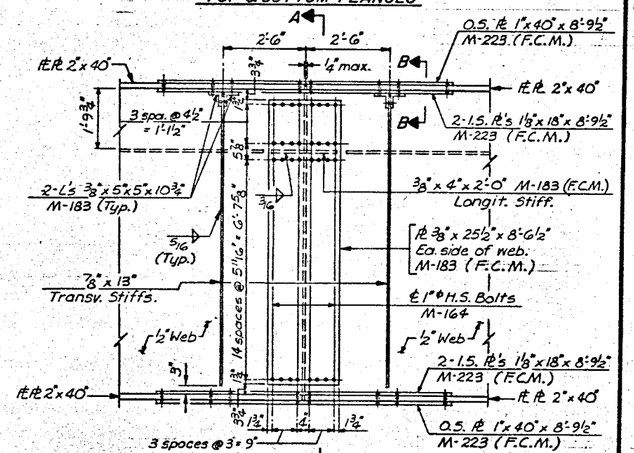
CROSS FRAMES 29 THRU 31 & 41



CROSS FRAMES 40, 42 THRU 50

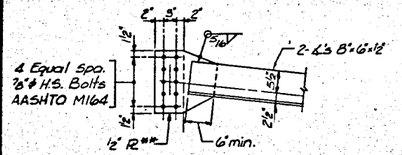


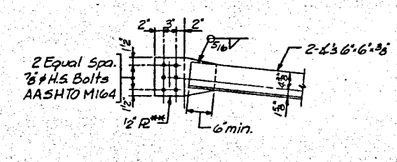
DETAIL OF SPLICE 1, G1 & G2



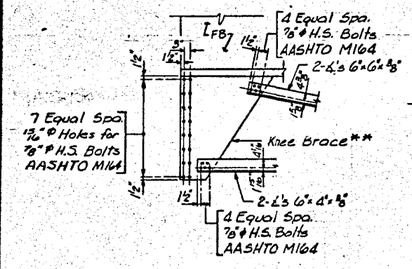
DETAIL OF SPLICE 6, G1 & G2

DETAIL B





CROSS FRAMES 29 THRU 31 & 41

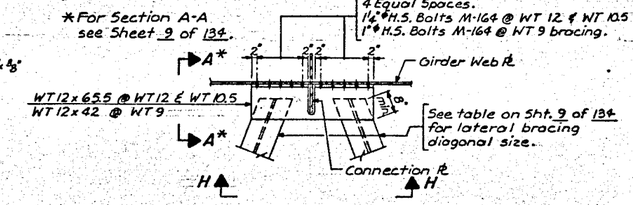


CROSS FRAMES 43 & 44

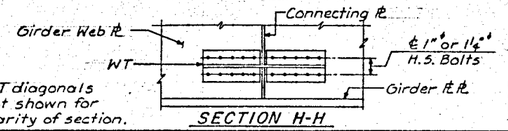
DETAIL C

CROSS FRAMES 40, 42 THRU 50

*For Section A-A see Sheet 9 of 134.

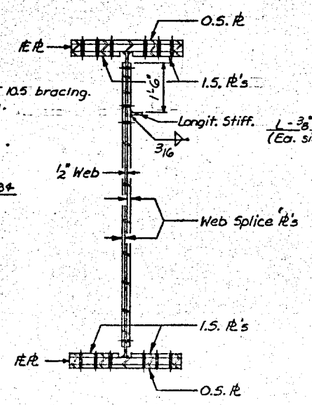


DETAIL G
(From Sheet 9 of 134)

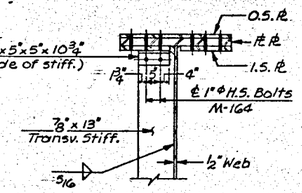


Note: WT diagonals not shown for clarity of section.

SECTION H-H



SECTION A-A



SECTION B-B

Note: All splice plate and stiffener steel shown on this sheet shall be AASHTO M-183 unless otherwise noted. See girder sheets for girder steel.
** 1⅛"ϕ holes in gusset plates and knee brace (at angle conn.'s only). Hardened washers req'd.

STRUCTURAL STEEL DETAILS
SPANS 6, 7 & 8

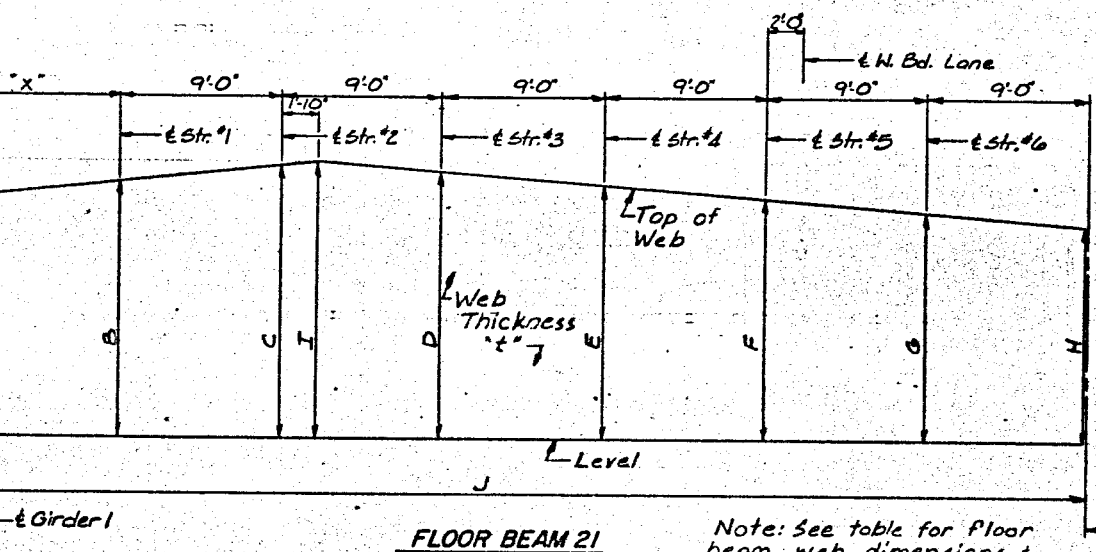
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

W.D.L.	
S.C.O.	
P.M.C.	
D.A.N.	
CHECKED W.D.L.	

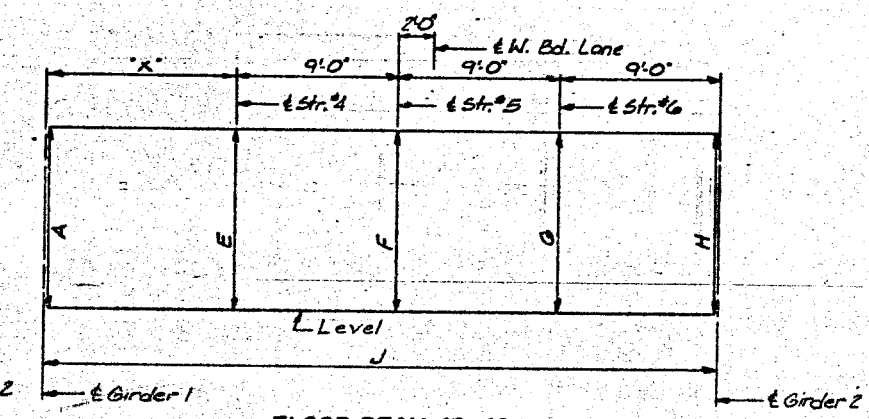
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

PROJ. NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

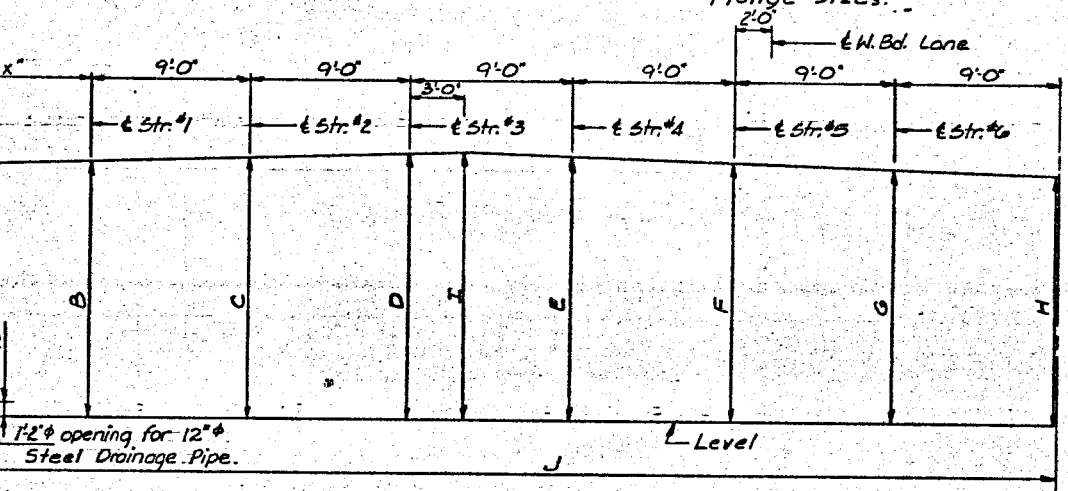


FLOOR BEAM 21

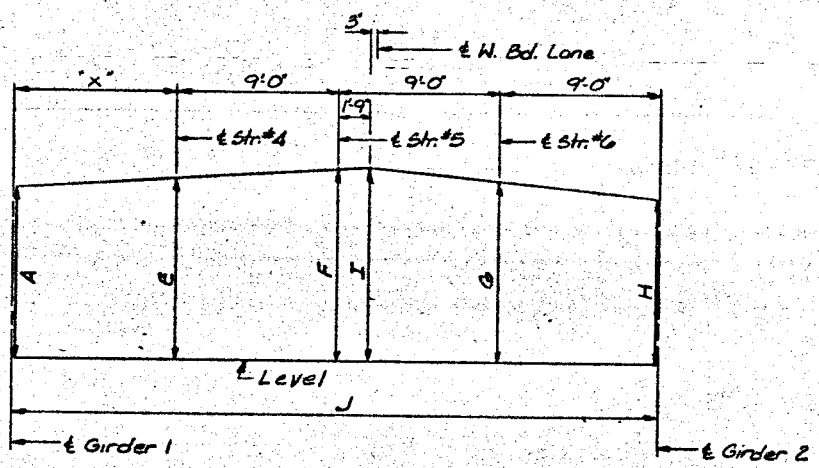


FLOOR BEAM 42-49

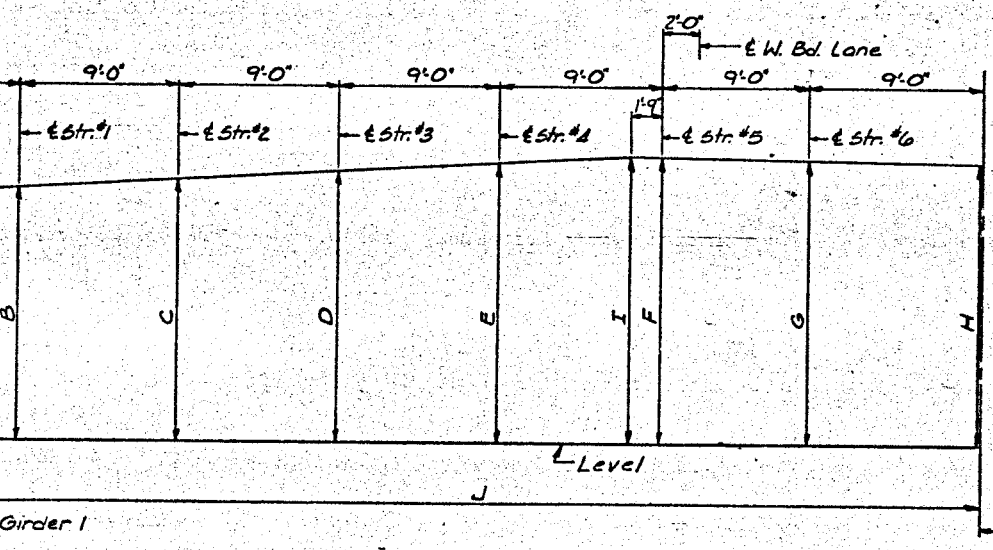
Note: See table for floor beam web dimensions & flange sizes.



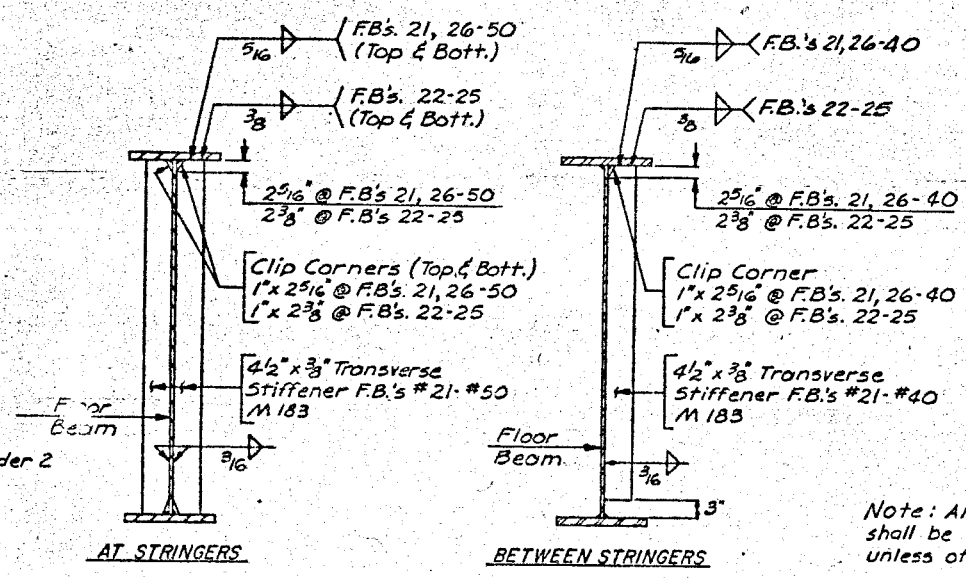
FLOOR BEAM 22



FLOOR BEAM 50



FLOOR BEAM 23-41

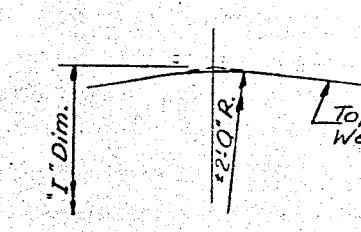


DETAIL A
FLOOR BEAM
TRANSVERSE STIFFENERS

Note: All steel this sheet shall be AASHTO M 223 unless otherwise shown.

FLOOR BEAM WE
CAMBERED FOR CROWN AND

Floor Beam No.	A	B	C	D
21	59½"	64⅝"	68 3/8"	66 3/4"
22	63¾"	65⅛"	66 3/8"	67 3/4"
23	62 3/4"	63⅝"	64 7/8"	65 3/4"
24	62 3/4"	64⅛"	66⅛"	68⅛"
25	62⅞"	64⅛"	66 3/8"	68⅝"
26	62⅞"	63¼"	66"	68⅝"
27	62⅞"	63⅛"	65⅜"	68⅛"
28	62⅞"	—	65½"	67¾"
29	62⅞"	—	65⅝"	67½"
30	57"	—	58⅜"	61⅛"
31	56⅝"	—	58⅛"	60⅜"
32	56⅝"	—	58⅛"	60½"
33	56¾"	—	57⅞"	60⅛"
34	56¾"	—	57½"	59⅞"
35	56¾"	—	—	59½"
36	56¾"	—	—	59⅛"
37	56¾"	—	—	58¾"
38	49¾"	—	—	51½"
39	49⅞"	—	—	51⅝"
40	49⅞"	—	—	50⅞"
41	43"	—	—	43⅝"
42	43"	—	—	—
43	43"	—	—	—
44-49	42"	—	—	—
50	43⅜"	—	—	—



OPTIONAL WEB CONFIGURA
AT CROWN

FLOOR

Floor Bean
21
22-25
26-33
34-50

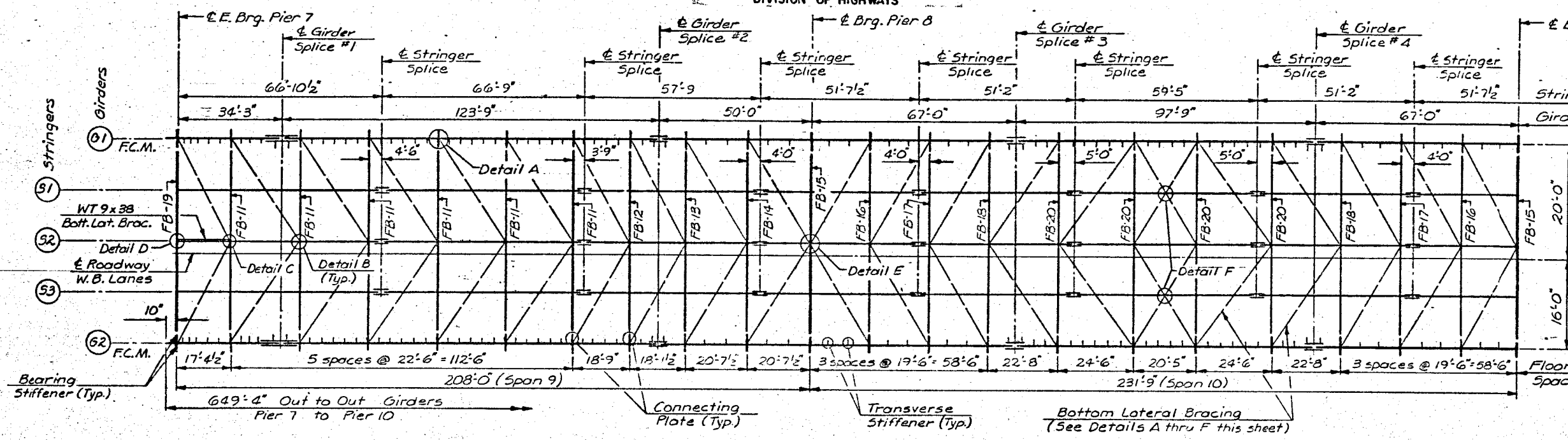
FLOOR

Mc
OVER
F.A. ROUTE
PEORIA

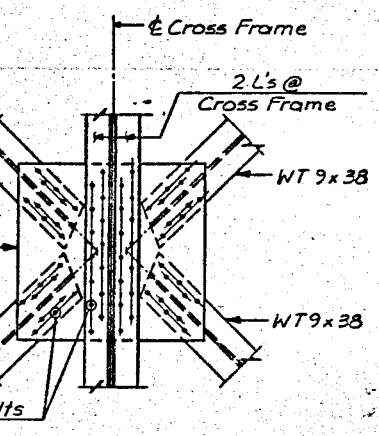
DESIGNED S.C.O.
CHECKED W.D.L.
DRAWN P.M.
CHECKED W.D.L.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

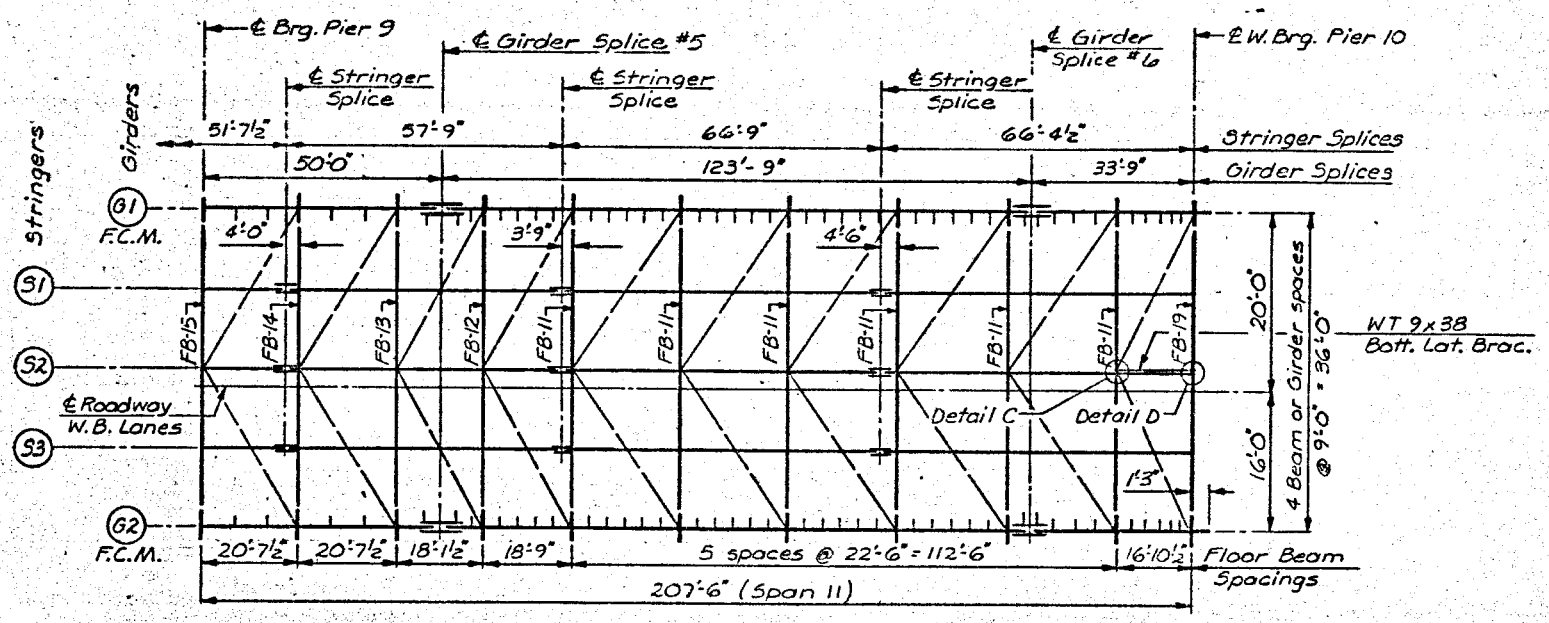
Note: Floor beam designation shown below also indicates cross frames. See sheet 24 of 134 for details.



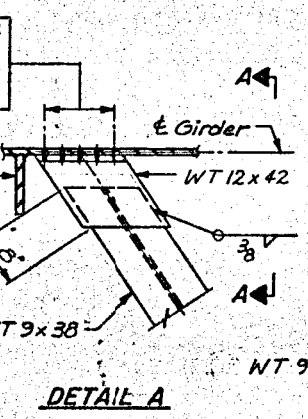
FRAMING PLAN



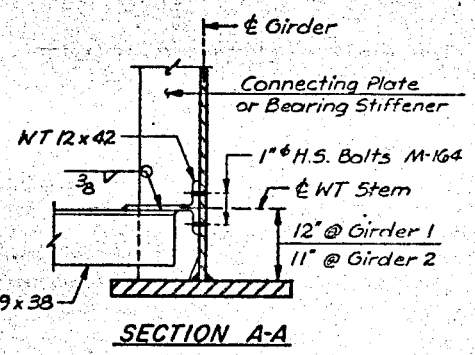
DETAIL E



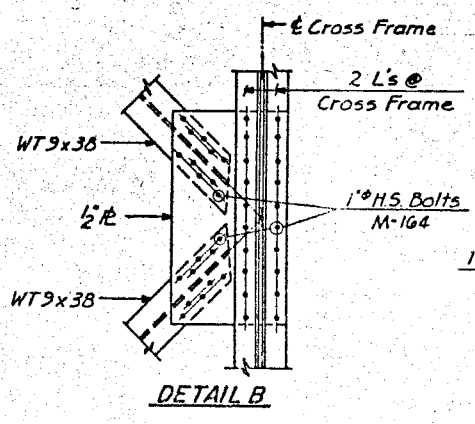
FRAMING PLAN



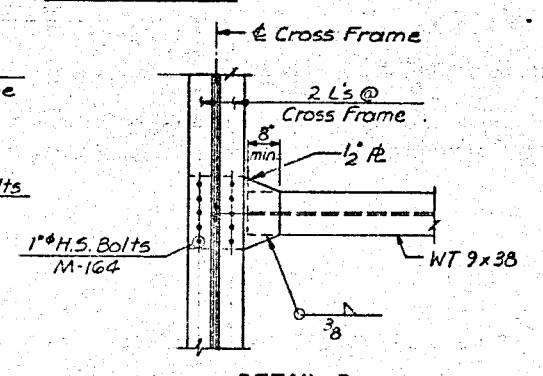
DETAIL A



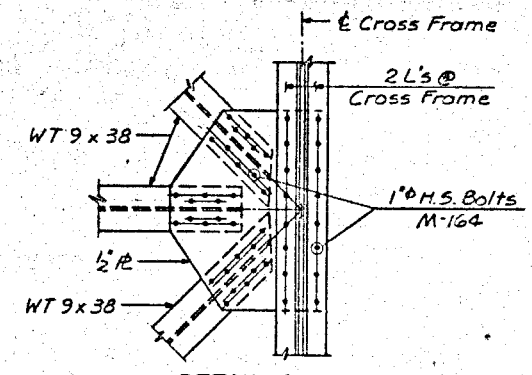
SECTION A-A



DETAIL B



DETAIL D



DETAIL C

BOTTOM LATERAL BRACING DETAILS

1"ϕ H.S. Bo
M-164

Structural
shall meet the
unless otherwi
All dimens
horizontally.
F.C.M. den
See note on
For cross

STR
M
OVE
F.A. ROUT
PEORIA

S.C.O.
W.D.L.
D.A.N.
C.A.N.

ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 49	15-2 (F&E)	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 21 of 134

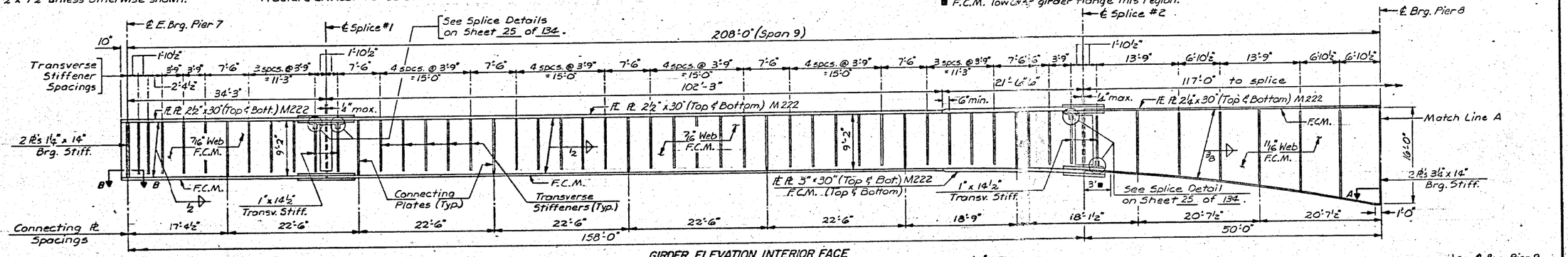
Note: All transverse stiffeners gapped at top are 11/16" x 10¼" & all transverse stiffeners gapped at bottom are ½" x 7½" unless otherwise shown.

Note: All girder tension flanges, webs, longitudinal stiffeners in tension, flange splice plates and web splice plates for Spans 9, 10 & 11 shall meet the requirements for Fracture Critical Members.

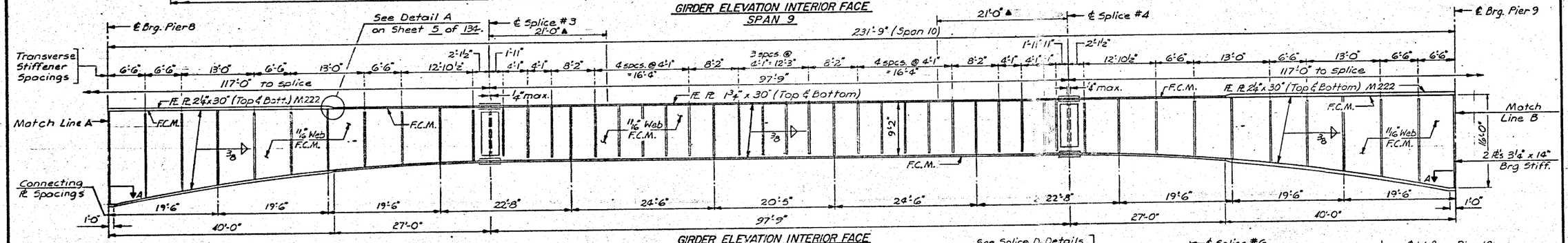
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: All dimensions shown on this sheet are measured horizontally & along ℄ girder.

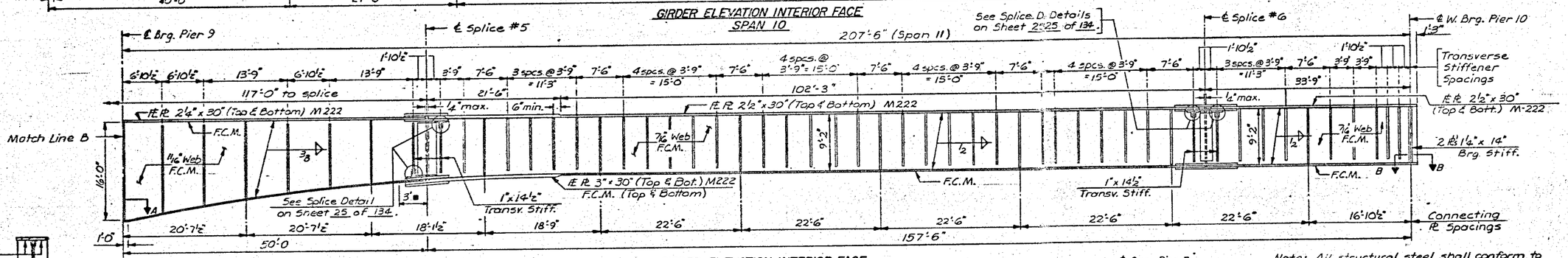
Note: ▲ F.C.M. upper girder flange this region.
■ F.C.M. lower girder flange this region.



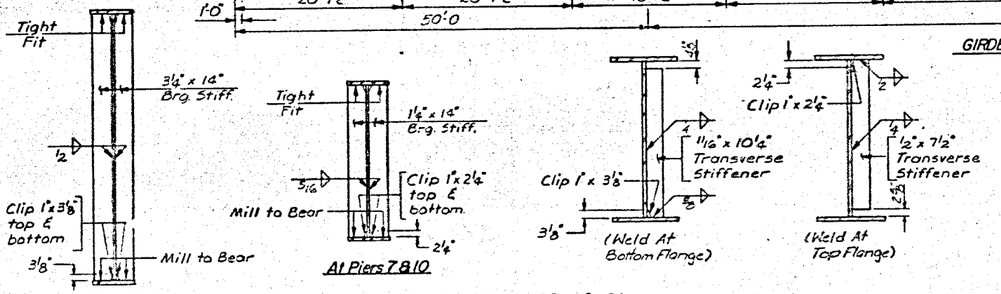
GIRDER ELEVATION INTERIOR FACE
SPAN 9



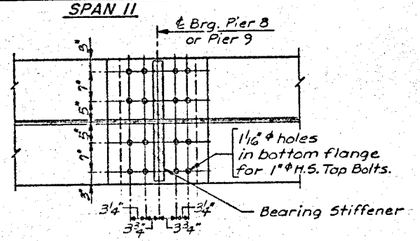
GIRDER ELEVATION INTERIOR FACE
SPAN 10

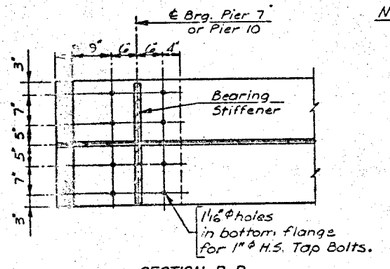


GIRDER ELEVATION INTERIOR FACE
SPAN 11



Note: See Sheet 23 of 134 for details of connecting plate.





Note: All structural steel shall conform to AASHTO M 183 unless otherwise noted.

STRUCTURAL STEEL GIRDERS
SPANS 9, 10 & 11

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

REVISIONS	S.C.O.
	W.D.L.
DRAWN	D.A.N.
CHECKED	C.R.N.

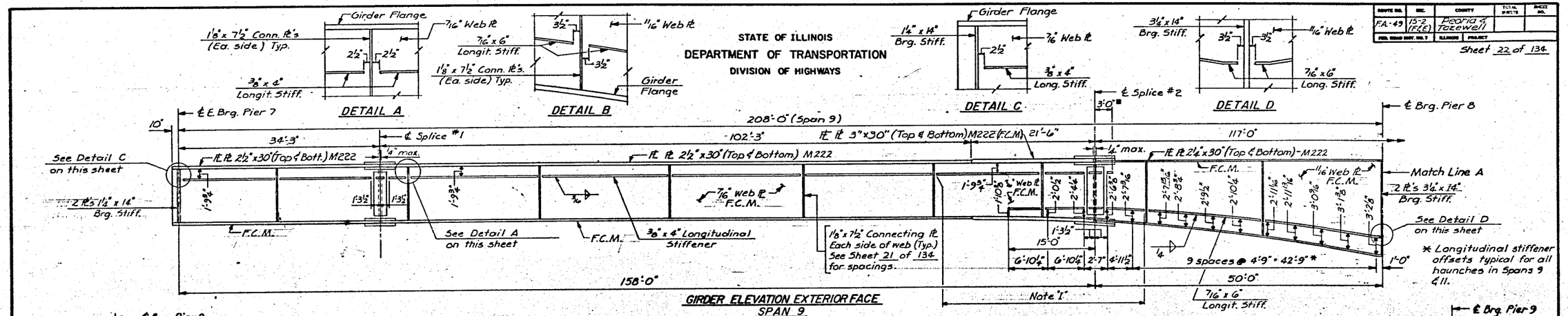
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

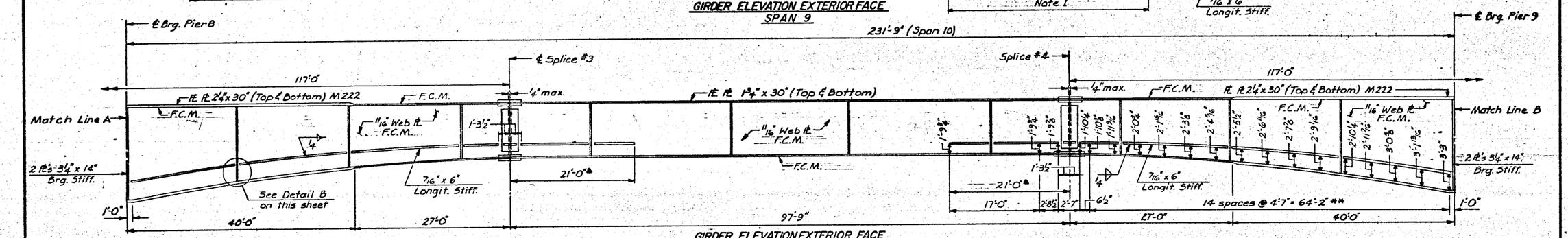
FILE NO. 74001
DATE 11-2-79

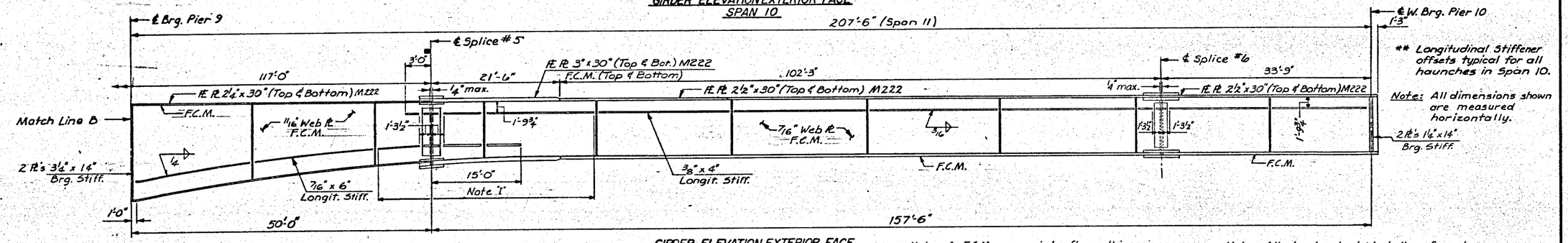
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 22 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



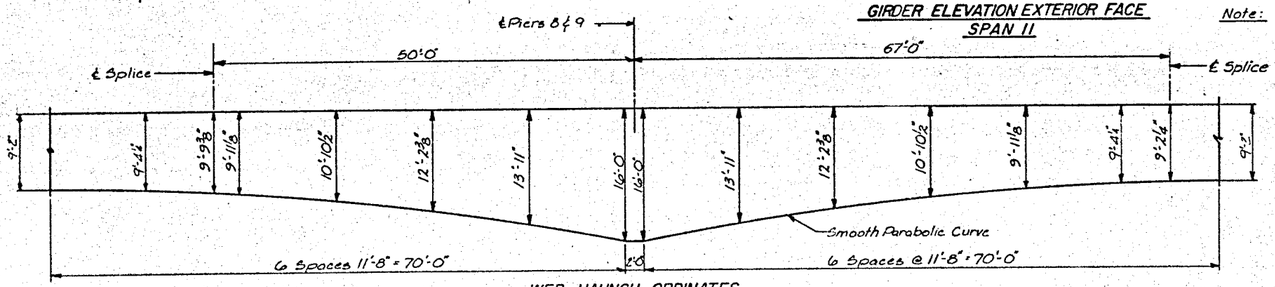


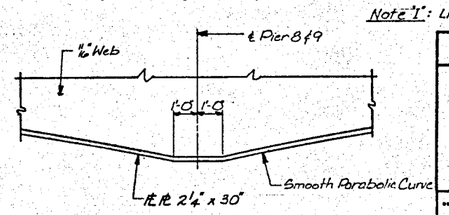


Note: ▲ F.C.M. upper girder flange this region.
■ F.C.M. lower girder flange this region.

Note: All structural steel shall conform to AASHTO M183 unless otherwise noted.

Note "1": Limits of F.C.M. for longitudinal stiffeners.





STRUCTURAL STEEL GIRDERS
SPANS 9, 10 & 11

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED S.C.O.
CHECKED W.D.L.
DRAWN D.A.N.
CHECKED C.R.N.

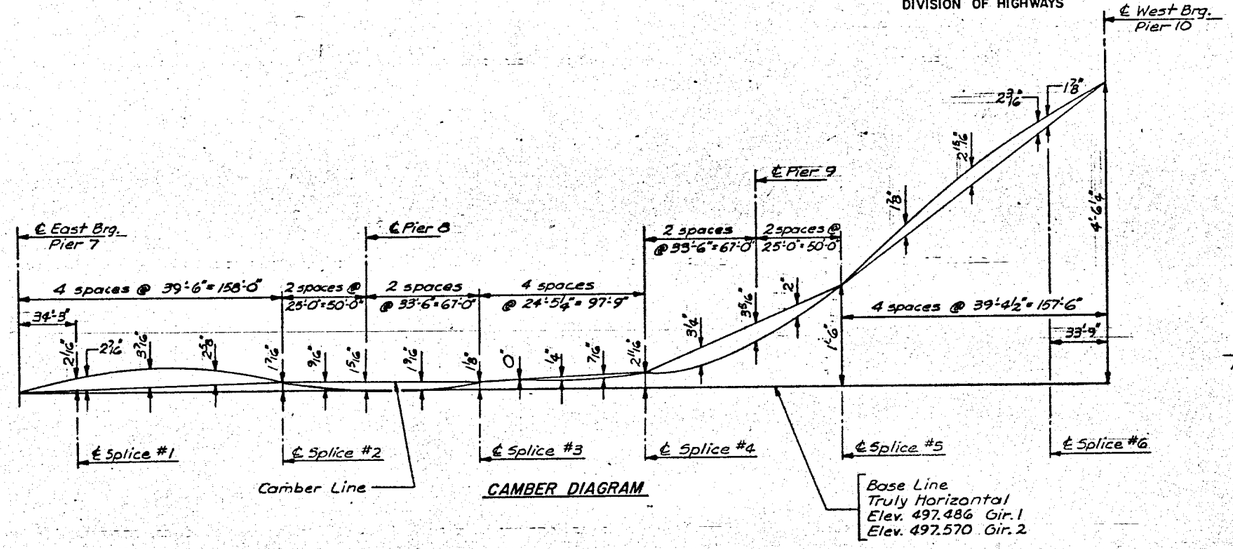
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

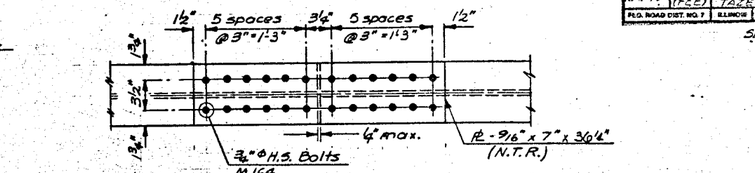
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

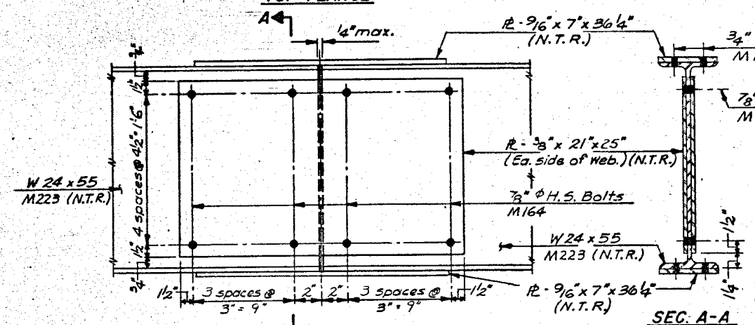
Sheet 23 of 134



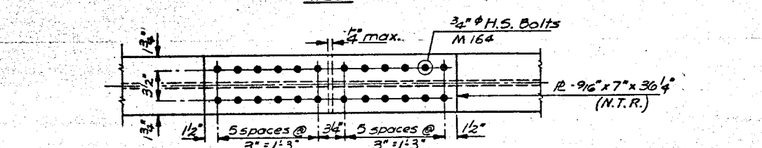
CAMBER DIAGRAM



TOP FLANGE

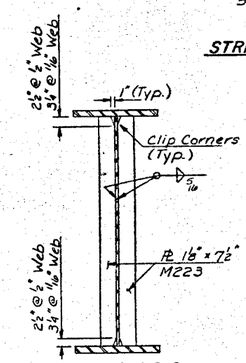


WEB



BOTTOM FLANGE

STRINGER SPLICE DETAIL



GIRDERS 1 & 2
FLOOR BEAM CONNECTION DETAILS

FLOOR BEAM MOMENT TABLE

	I (in.⁴)	℄ ♦ P(k)	℄ ♦ W(k/ft)	0.5 point M℄(ft k)	0.5 point M℄(ft k)	0.5 point Imp(ft k)	0.5 point Mtot(ft k)	0.5 point fs (ksi)
End F.B.	19,459	11.2	0.21	235	579	174	988	13.6
Typ. Int. F.B.	19,459	28.2	0.21	543	704	211	1,458	20.0
1st. Int. F.B.	19,459	32.0	0.21	611	758	227	1,596	21.9

Note ♦ — P designates concentrated load at each stringer.
W designates uniform load due to weight of floor beam.

STRINGER SHEAR & REACTION TABLE

	End Floor Beam VR	End Floor Beam R	First Interior Floor Beam VL	First Interior Floor Beam VR	First Interior Floor Beam R	All Other Floor Beams VL	All Other Floor Beams VR	All Other Floor Beams R
R ℄ (k)	9.4	9.4	16.1	16.3	32.5	20.3	20.3	39.0
R ℄ (k)	29.7	29.7	32.6	36.3	40.7	39.4	39.4	44.5
Imp (k)	8.9	8.9	9.8	10.9	12.2	11.8	11.8	13.4
RTOTAL (k)	48.0	48.0	58.5	63.5	85.4	71.5	71.5	96.9

VR - denotes shear to right of support.
VL - denotes shear to left of support.
R - denotes reaction.

TOP OF WEB ELEVATIONS

Location	Girder 1	Girder 2
Pier 7, E. Brg.	497.486	497.570
Splice #1	497.684	497.768
Splice #2	497.606	497.690
Pier 8, Brg.	497.486	497.570
Splice #3	497.580	497.664
Splice #4	497.710	497.794
Pier 9, Brg.	498.165	498.249
Splice #5	498.986	499.070
Splice #6	501.509	501.593
Pier 10, W. Brg.	502.007	502.091

Elevations include camber for dead load deflections and are for fabrication only.

GIRDER REACTION TABLE

	℄ E. Brg. Pier 7 & ℄ W. Brg. Pier 10	℄ Brg. Pier 8 & ℄ Pier 9
R ℄ (K)	321.5	1,037.7
R ℄ (K)	135.5	315.7
Imp. (K)	20.3	45.8
RTOTAL (K)	477.3	1,399.2

STRINGER MOMENT TABLE

	0.4 point End Spans	0.5 point Int. Spans	1st Int. Floor Beam	Other Int. Floor Beams
I (in.⁴)	1350	1350	1350	1350
℄ (k/ft)	1.47	1.47	1.47	1.47
M ℄ (ft k)	30	35	59	70
M ℄ (ft k)	95	111	94	110
Imp (ft k)	28	33	28	33
Mtot (ft k)	153	179	181	213
fs (ksi)	16.1	18.8	19.1	22.4

FLOOR BEAM REACTION TABLE

	End Fl. Bm.	1st. Int. Fl. Bm.	Typ. Int. Fl. Bm.
R ℄ (k)	20.5	51.8	46.2
R ℄ (k)	68.3	89.7	83.4
RI (k)	20.5	26.9	25.0
RTot (k)	109.3	168.4	154.6

GIRDER MOMENT TABLE

	0.4 Point Spans 9 & 11	Pier 8 or 9	0.5 Point Span 10
I (in.⁴)	523,213	1,679,052	404,094
℄ (K/in)	4.18	4.18	4.18
M ℄ (ft K)	12,221	23,904	4,312
M ℄ (ft K)	5,543	8,375	4,116
Imp (ft K)	832	1,214	576
MTOTAL (ft K)	18,596	33,493	9,004
fs (ksi)	24.5	23.5	15.2

NOTE: Reaction & Moment Tables are based on a Dead Load of 25 #/sq. ft. for Class I surfacing and 94 #/sq. ft. of concrete slab plus the weight of the structural steel.

Notes:
The designation N.T.R. signifies main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

Splice Plate Material shall conform to AASHTO M223

STRUCTURAL STEEL DETAILS
SPANS 9, 10 & 11

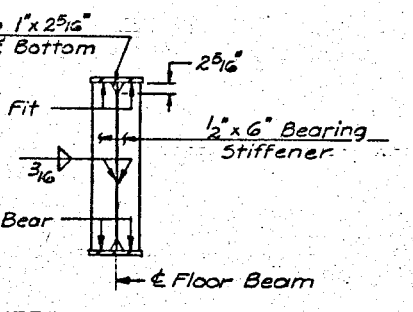
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.
CHECKED C.R.N.
DRAWN D.A.N.
CHECKED S.C.O.

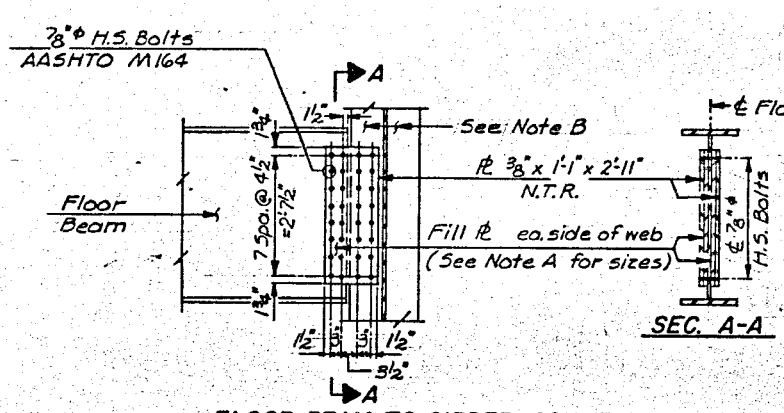
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



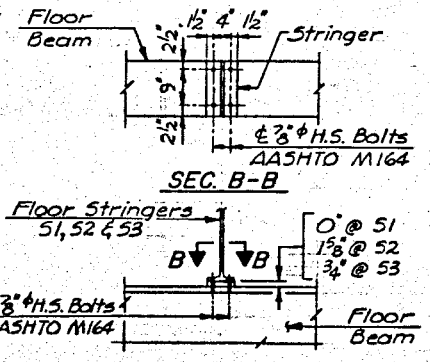
INTERIOR FLOOR BEAM
BEARING STIFFENER



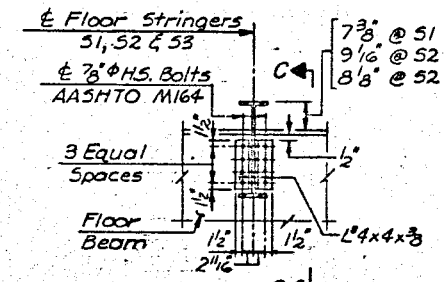
FLOOR BEAM TO GIRDER CONNECTION

Note A:
2 - 3/8" x 6" x 2'-11" Fill Pl's @ F.B.-19
2 - 1 3/8" x 6" x 2'-11" Fill Pl's @ F.B.-15
2 - 5/16" x 6" x 2'-11" Fill Pl's @ F.B's. 11, 12, 13, 14, 16, 17, 18 & 20

Note B:
1 1/4" x 14" Brg. Stiff. @ F.B.-19
3 1/4" x 14" Brg. Stiff. @ F.B.-15
1 1/8" x 7 1/2" Conn. Pl @ F.B's. 11, 12, 13, 14, 16, 17, 18 & 20

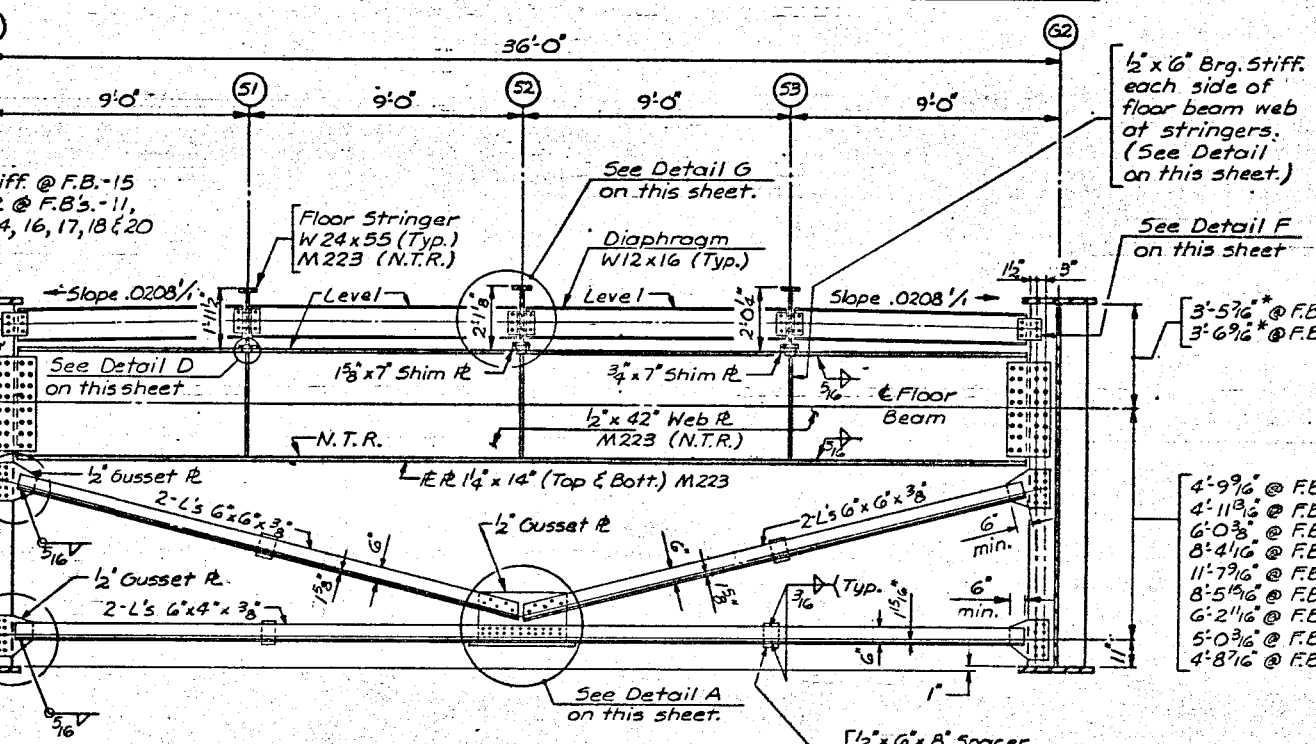


DETAIL D
(AT INTERIOR FLOOR BEAM)



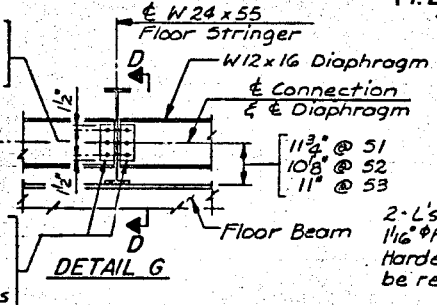
DETAIL E
(AT END FLOOR BEAM)

STRINGER TO FLOOR BEAM CONNECTIONS

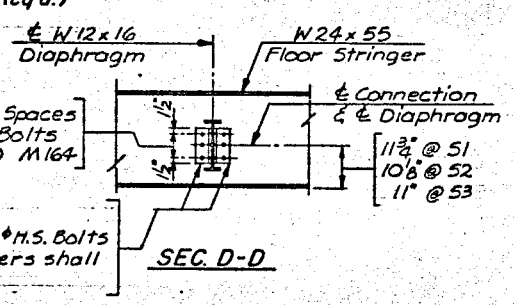


END FLOOR BEAM
(F.B.-19 2 Req'd.)

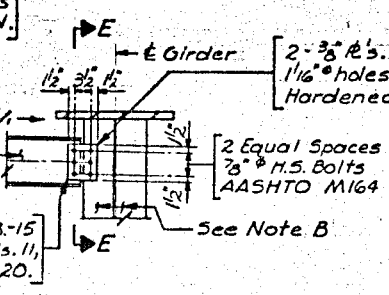
INTERIOR FLOOR BEAM
(F.B.-11 12 Req'd.) (F.B.-15 2 Req'd.)
(F.B.-12 2 Req'd.) (F.B.-16 2 Req'd.)
(F.B.-13 2 Req'd.) (F.B.-17 2 Req'd.)
(F.B.-14 2 Req'd.) (F.B.-18 2 Req'd.)
(F.B.-20 4 Req'd.)



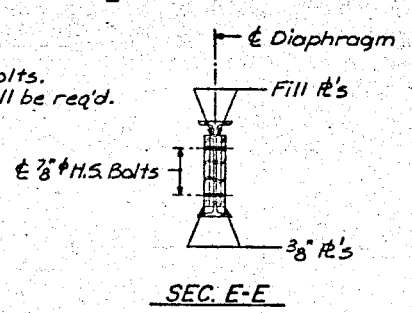
DETAIL G



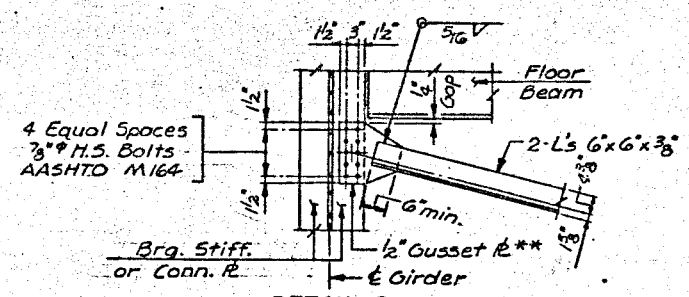
SEC. D-D



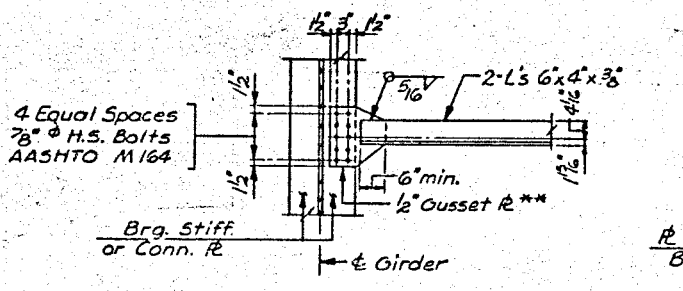
DETAIL F



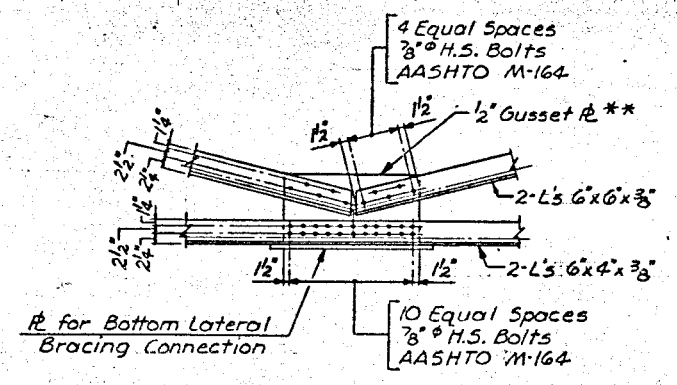
SEC. E-E



DETAIL C



DETAIL B



DETAIL A

N.T.R. c
to the S
Toughnes
Structu
the requir
otherwise
* = 1"
** = 1/

Hardened

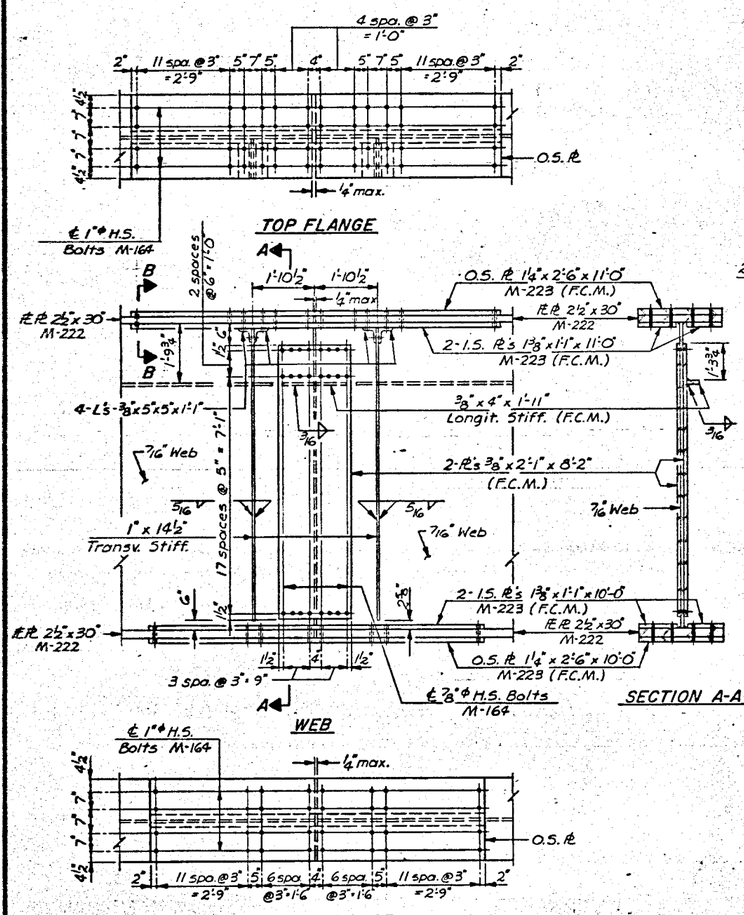
F.A. R
PE

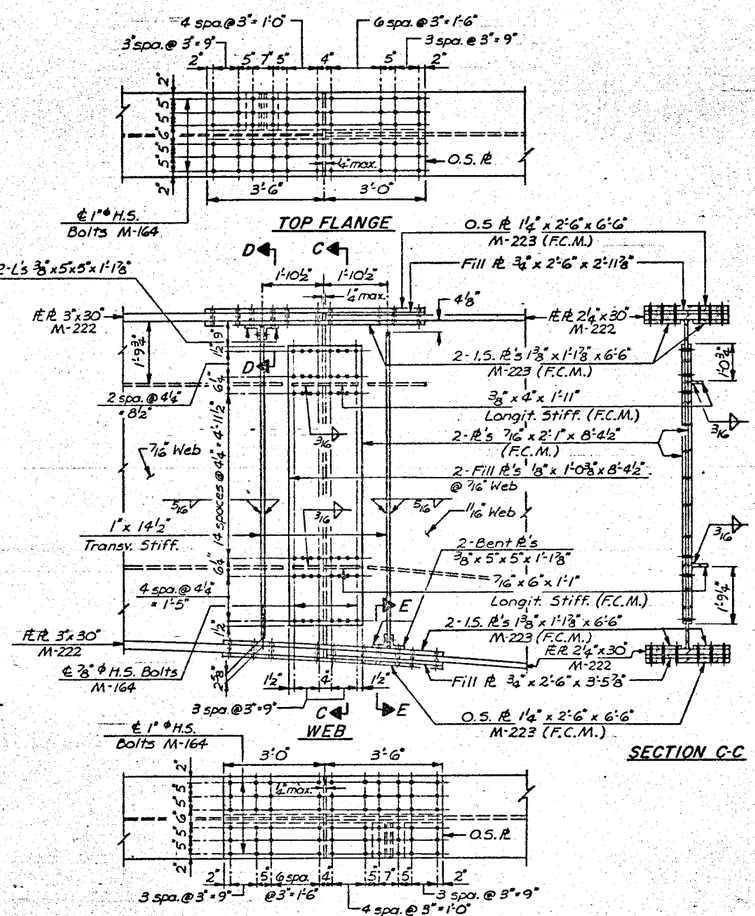
S.C.Q.
W.D.L.
D.A.N.
C.R.N.

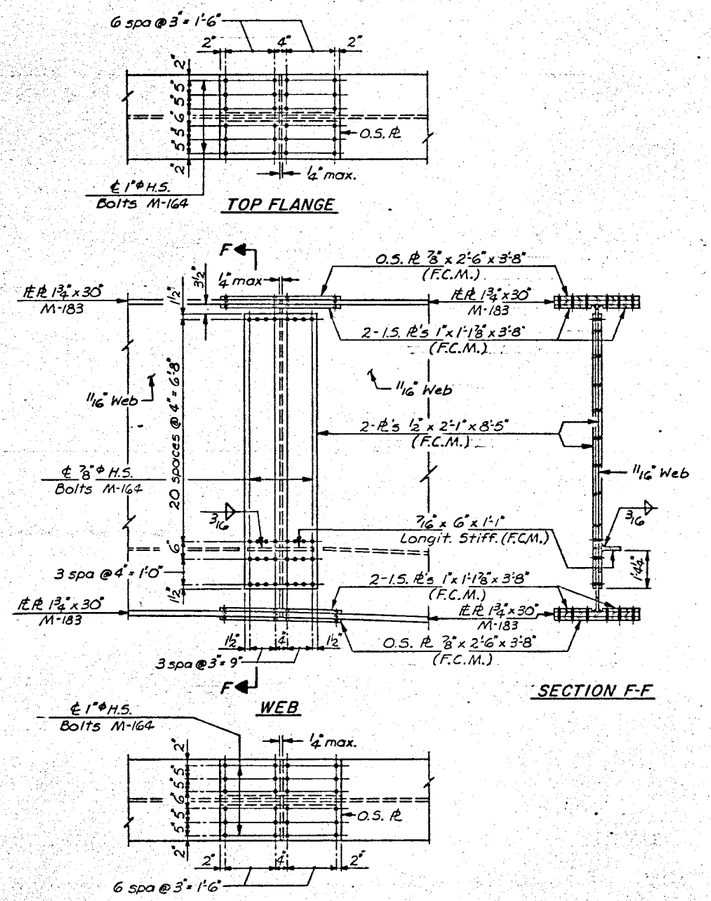
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

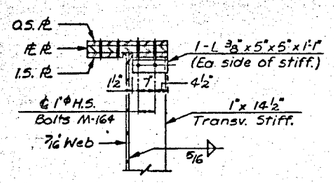
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

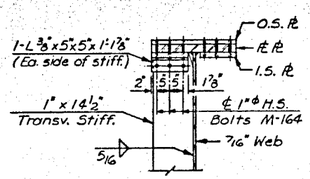
Sheet 25 of 134

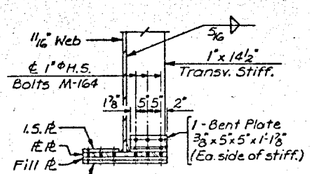












Notes

Structural steel shall meet the requirements of AASHTO M-183 unless otherwise noted.

Flange splice plates, web splice plates and longitudinal stiffeners attached to web splice plates shall meet the requirements of Fracture Critical Members. (F.C.M.)

GIRDER SPLICE DETAILS
SPANS 9, 10 & 11

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

S.C.O.
C.R.N.
D.A.N.
S.C.O.

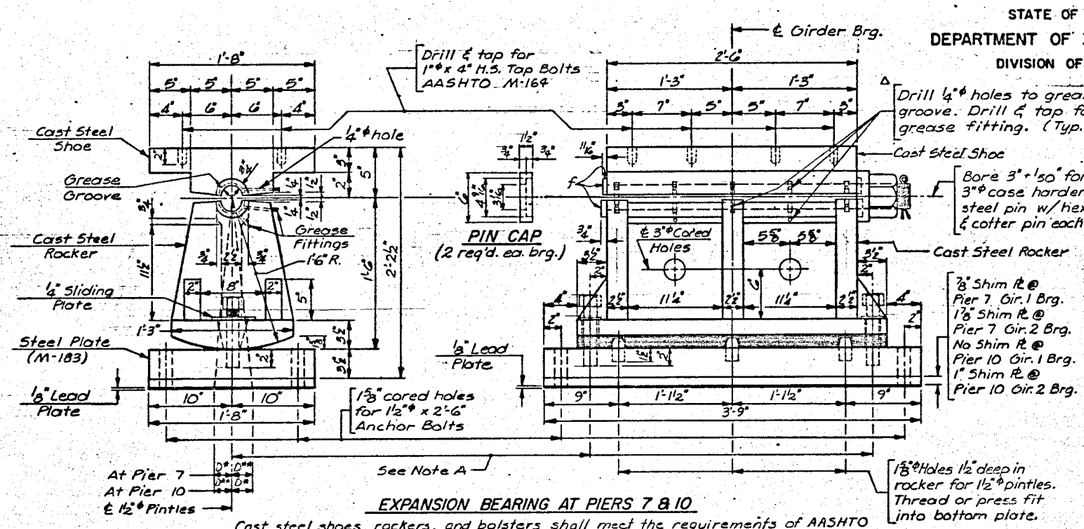
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

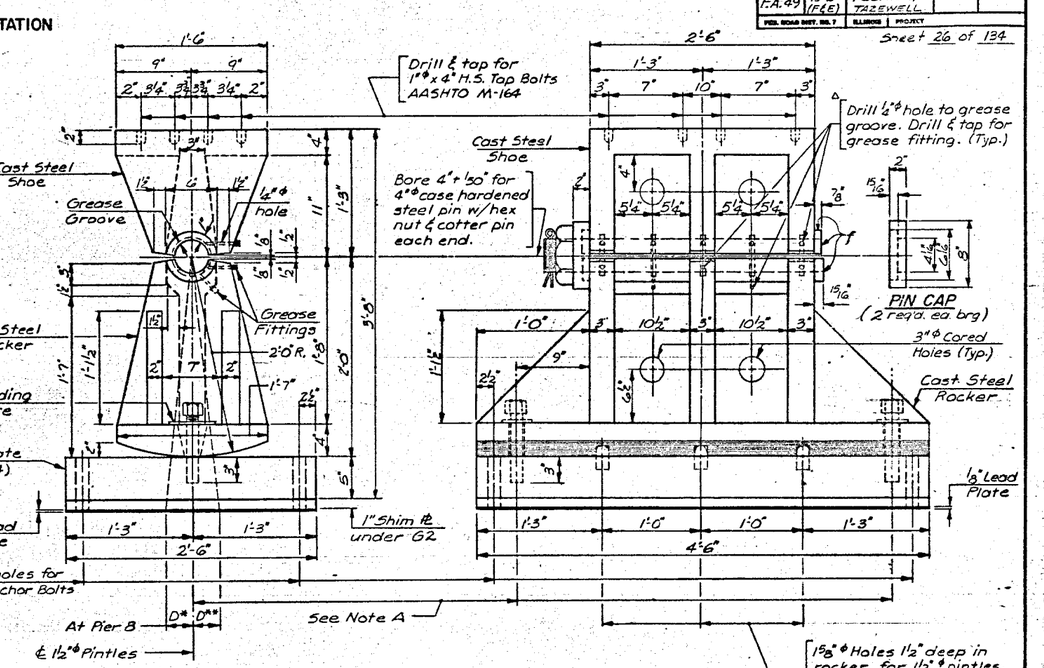
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 26 of 134



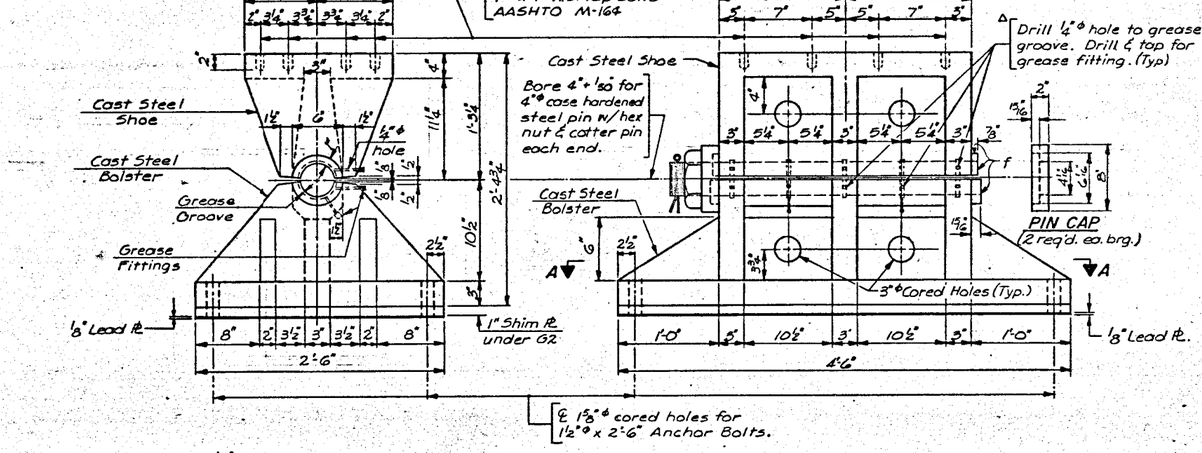
EXPANSION BEARING AT PIERS 7 & 10

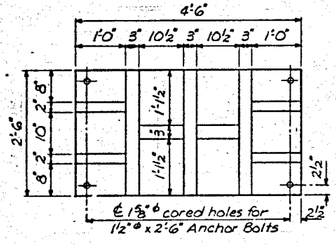
Cast steel shoes, rockers, and bolsters shall meet the requirements of AASHTO M192 Class 90. Structural steel weldments meeting the requirements of AASHTO M222 or M223 may be substituted for the castings, subject to approval by the Engineer prior to fabrication. No extra compensation will be allowed for the substitution.



EXPANSION BEARING AT PIER 8

Cast steel shoes, rockers and bolsters shall meet the requirements of AASHTO M-192 Class 90 unless otherwise noted. Structural steel weldments meeting the requirements of AASHTO M-222 or M-223 may be substituted for the castings, subject to approval by the Engineer prior to fabrication. No extra compensation will be allowed for the substitution.

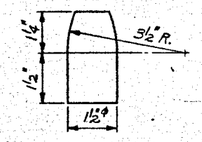




SECTION A-A

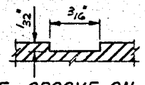
FIXED BEARING AT PIER 9

Cast steel shoes, rockers, and bolsters shall meet the requirements of AASHTO M192 Class 90. Structural steel weldments meeting the requirements of AASHTO M-222 or M-223 may be substituted for the castings, subject to approval by the Engineer prior to fabrication. No extra compensation will be allowed for the substitution.



PINTLE DETAIL

Steel for pintles shall meet the requirements of AASHTO M-223



GREASE GROOVE ON SADDLE

△Note: Grease bearing assembly with molybdenum grease before installation.

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

a.) D* (Side of bearing away from fixed bearing.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temperature of 50°F.

D** (Side of bearing toward fixed bearing.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temperature of 50°F.

b.) After girders have been erected and dimensions D* & D** determined, holes shall be drilled & anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

Note A: 1 5/8" x 3 1/2" Cored holes in Rocker for 1 1/2"ϕ H.S. Bolts (AASHTO M-164) Threaded holes in bottom plate for 1 1/2"ϕ H.S. Bolts (AASHTO M-164)

BEARING DETAILS
SPANS 9, 10, & 11

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

D.L.B.
J.E.H.
P.M.
C.R.N.

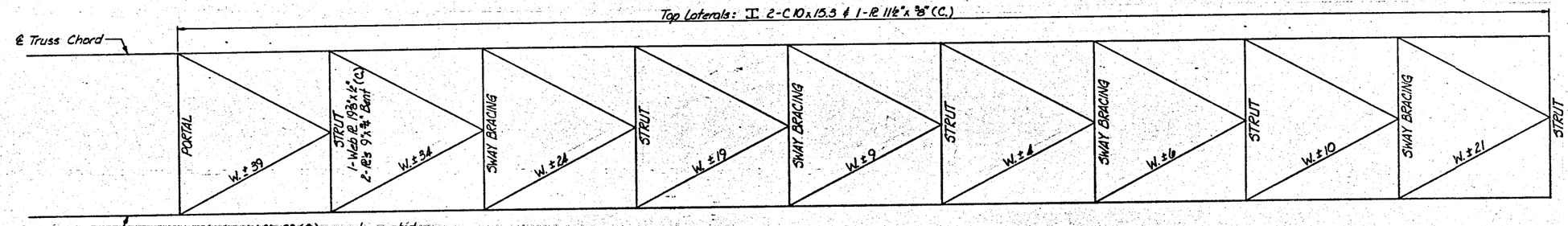
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

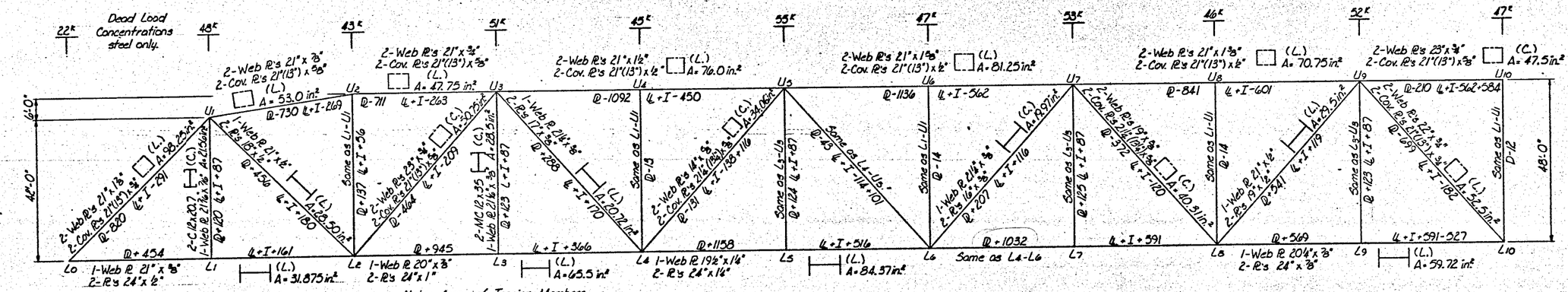
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 27 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



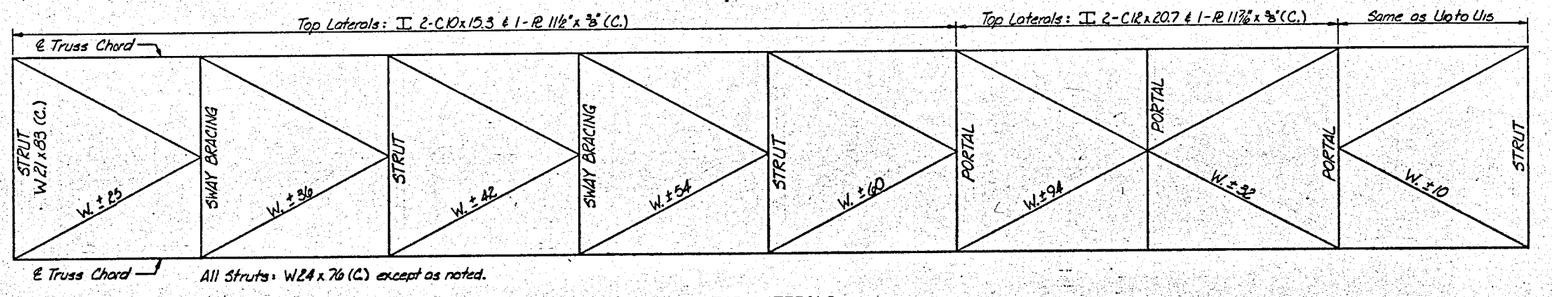
TOP LATERALS


22k
Dead Load Concentrations steel only.
48k
43k
51k
45k
55k
47k
53k
46k
52k
47k
2-Web PL's 21"x⅜"
2-Cov. PL's 21"(13")x⅜"
(L.) A=53.0 in²
2-Web PL's 21"x⅝"
2-Cov. PL's 21"(13")x⅝"
(L.) A=47.75 in²
2-Web PL's 21"x½"
2-Cov. PL's 21"(13")x½"
(L.) A=76.0 in²
2-Web PL's 21"x⅝"
2-Cov. PL's 21"(13")x½"
(L.) A=81.25 in²
2-Web PL's 21"x½"
2-Cov. PL's 21"(13")x½"
(L.) A=70.75 in²
2-Web PL's 23"x¾"
2-Cov. PL's 21"(13")x⅝"
(C.) A=47.5 in²
U1
U2
U3
U4
U5
U6
U7
U8
U9
U10
42'-0"
48'-0"
L0
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
1-Web PL 21"x⅜"
2-PL's 24"x½"
(L.) A=31.875 in²
1-Web PL 20"x⅜"
2-PL's 21"x1"
2-MC 12x35
1-Web PL 214"x⅜"
(L.) A=65.5 in²
1-Web PL 19½"x1¼"
2-PL's 24"x1¼"
(L.) A=84.37 in²
Same as L4-L6
1-Web PL 204"x⅜"
2-PL's 24"x⅝"
(L.) A=59.72 in²
D-711 L+I-263
D-1092 L+I-450
D-1136 L+I-562
D-841 L+I-601
D-210 L+I-562+384
D-730 L+I-269
D-820 L+I-291
D-454 L+I-161
D-945 L+I-366
D-1158 L+I-516
D-1032 L+I-391
D-569 L+I-591-527
Same as L1-U1
Same as L3-U3
Same as L4-U5
Same as L5-U5
Same as L7-U7
Same as L8-U8
Same as L9-U9
Same as L1-U1
D-12
D-13
D-14
D-123
D-124
D-125
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D-182

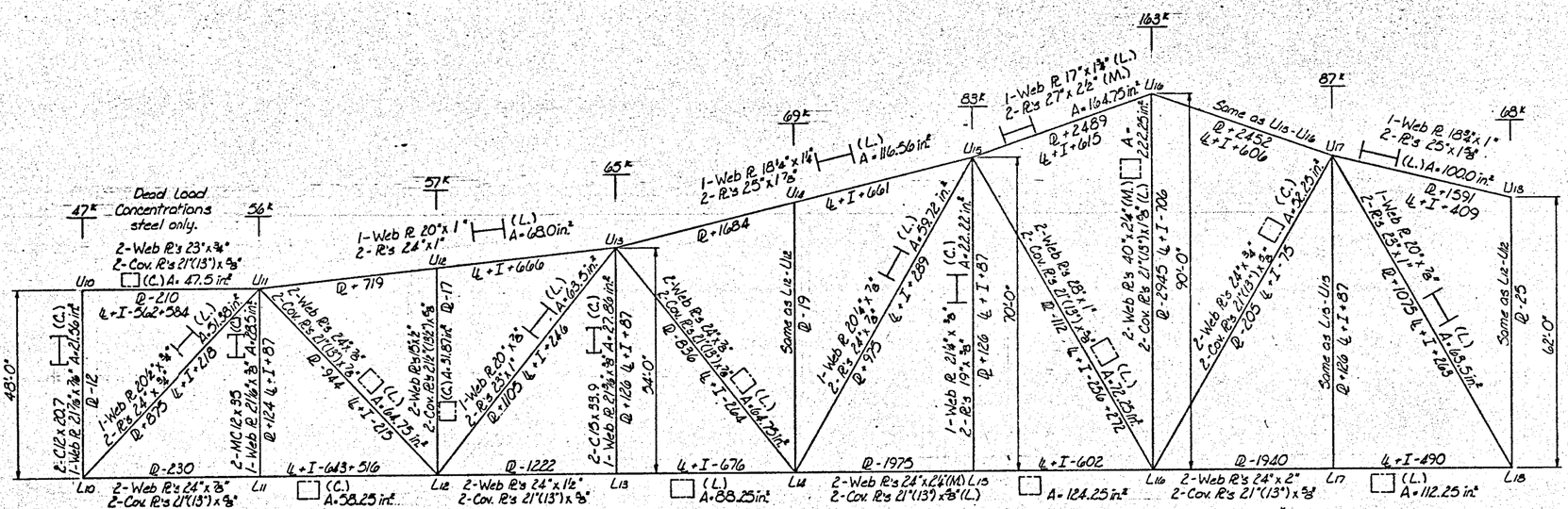
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA.49	15-2 (F&E)	PEORIA & TAZEWELL	-	-
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 28 of 134

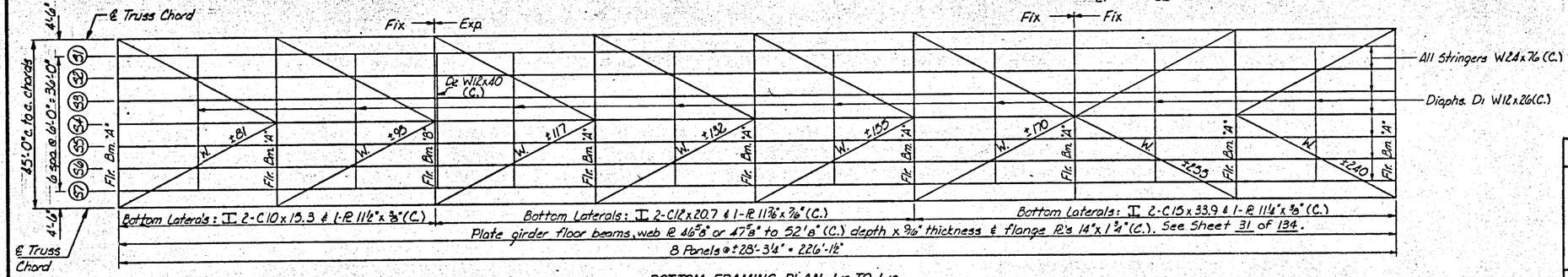


TOP LATERALS



Note: Areas of Tension Members are gross areas.

TRUSS ELEVATION

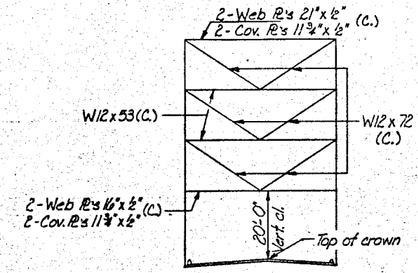


BOTTOM FRAMING PLAN L10 TO L18

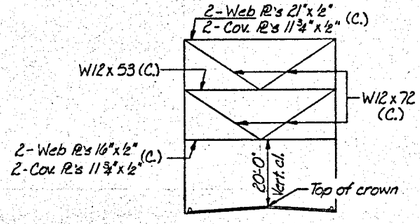
For truss members to be designated "N.T.R." see truss detail sheets 34 thru 41.

Dead Load, live load and wind forces are given in kips.

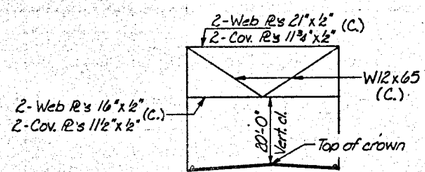
Steel shown on this sheet noted (C.) shall be Carbon M183.
Steel noted (L.) shall be Low-alloy M 223.
Steel noted (M.) shall be Low-alloy M 222.



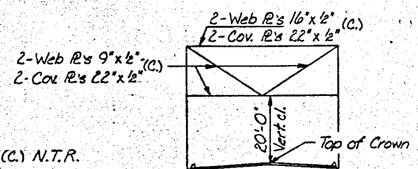
PORTAL L16-U16



PORTAL L16-U15 & L16-U17



PORTAL L20-U21 & L21-U22



PORTAL L0-U1

MEMBER LAYOUT & FORCES L10-L18
TRUSS — SPANS 12, 13, & 14

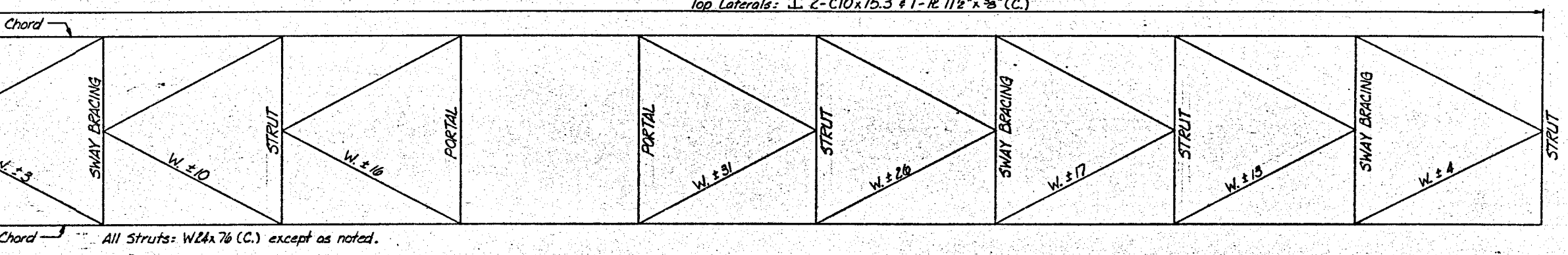
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED R.W.C.
CHECKED M.D.L.
DRAWN R.J.F.
CHECKED R.W.C.

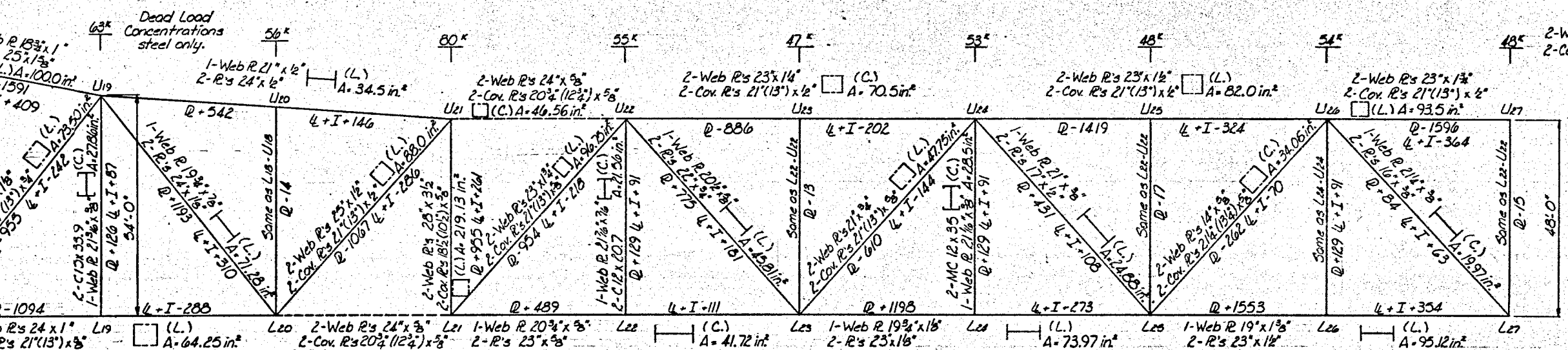
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

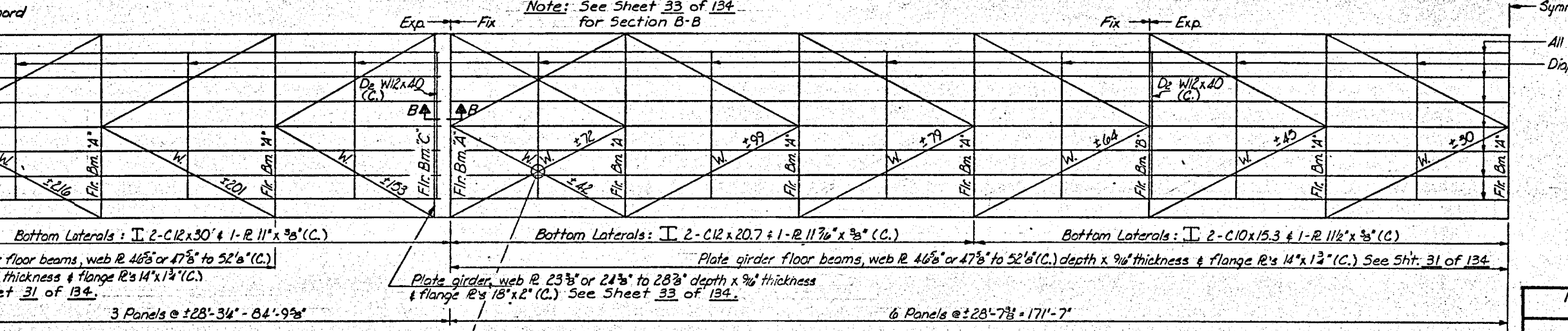


TOP LATERALS



TRUSS ELEVATION

Note: See Sheet 33 of 134 for Section B-B



BOTTOM FRAMING PLAN L18 TO L27

members
ignated "N.T.R." see truss
eets 34 thru 41.

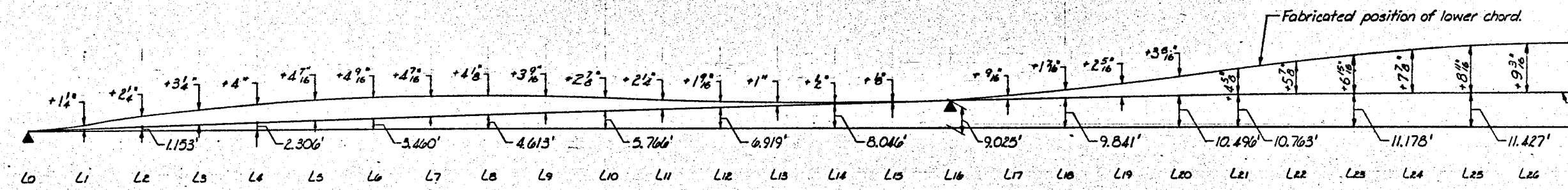
Dead Load, live load and wind forces are given in kips.

Note:
Steel shown on this sheet noted (C.) shall be Carbon M183
Steel noted (L.) shall be Low-alloy M223

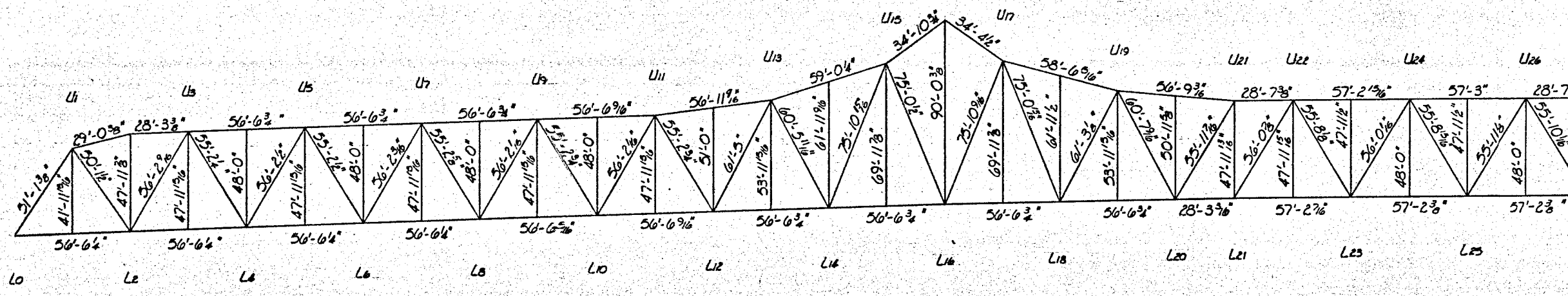
MEMBER
TRU
M
OVE
F.A. ROUT
PEORIA

R.H.C.
N.D.L.
R.J.E.
N.D.L.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



CAMBER BLOCKING ORDINATES
& BOTTOM CHORD OFFSETS



FABRICATED LENGTHS

F.A. ROU
PEOR

R.W.C.
W.D.L.
R.J.F.
R.W.C.

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

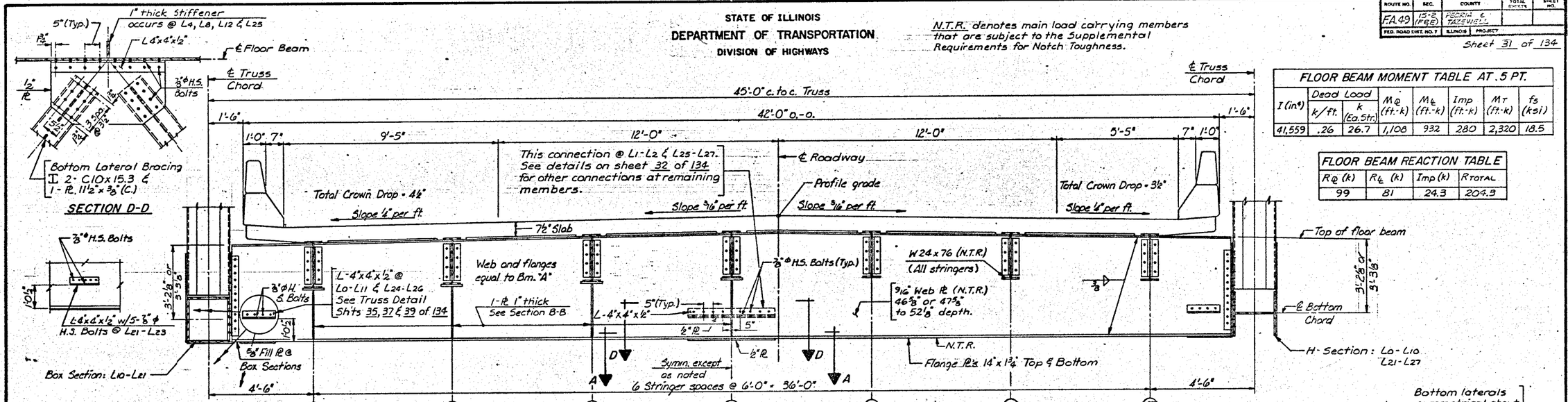
Sheet 31 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

FLOOR BEAM MOMENT TABLE AT .5 PT.								
I (in⁴)	Dead Load k/ft.	Dead Load k (Eq. Str.)	M@ (ft.-k)	M℄ (ft.-k)	Imp (ft.-k)	MT (ft.-k)	fs (ksi)
41,559	.26	26.7	1,108	932	280	2,320	18.5

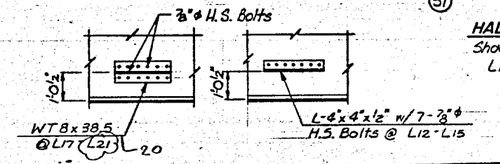
FLOOR BEAM REACTION TABLE			
R@ (k)	R℄ (k)	Imp (k)	RTOTAL
99	81	24.3	204.3

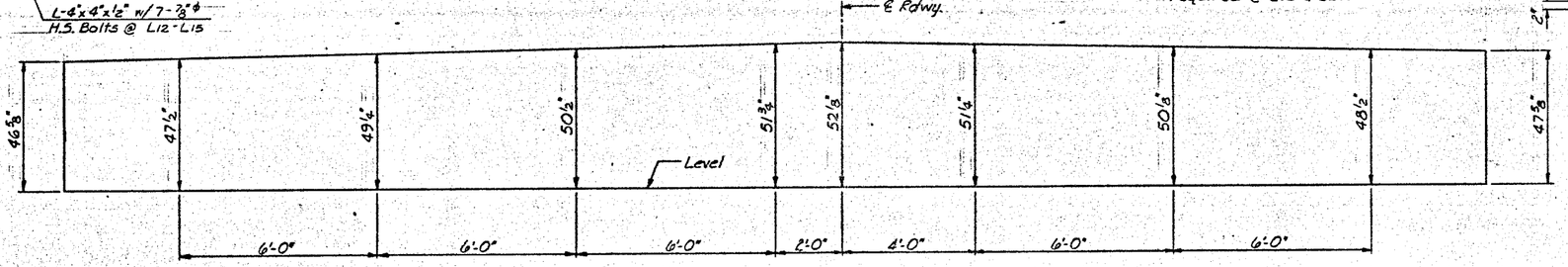


HALF ELEVATION INTERMEDIATE FLOOR BEAM "B"
Showing expansion side @ L1, L8, L12, L25, L4', L8', L12' & L25'. Opposite side equal to Flr. Bm. "A"

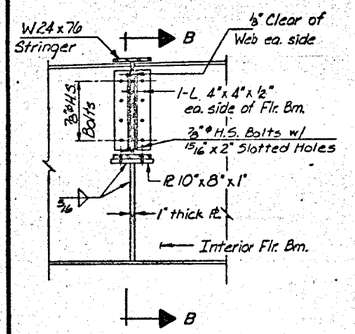
HALF ELEVATION INTERMEDIATE FLOOR BEAM "A"
(Stringer conn. one side only at L21)

• - Indicates additional bolts required @ L16 & L27.

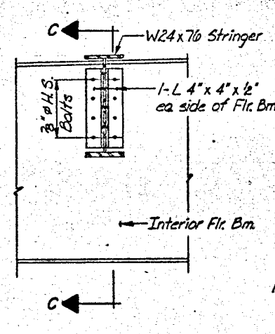




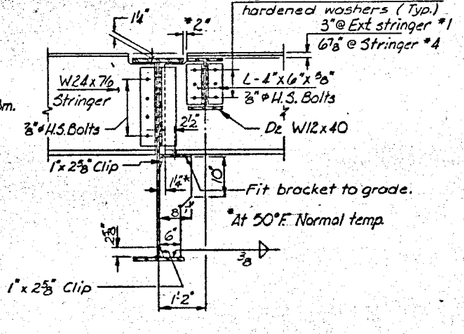
WEB PLATE OFFSETS CAMBERED FOR CROWN & DEAD LOAD DEFLECTIONS



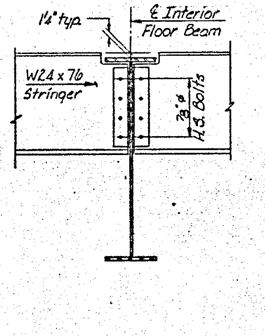
STRINGER CONNECTION AT FLOOR BEAM "B"



STRINGER CONNECTION AT FLOOR BEAM "A"

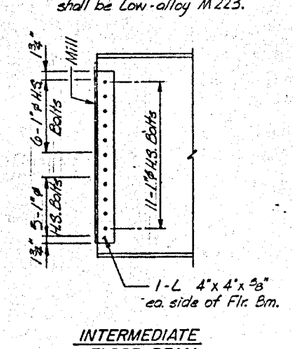


SECTION B-B

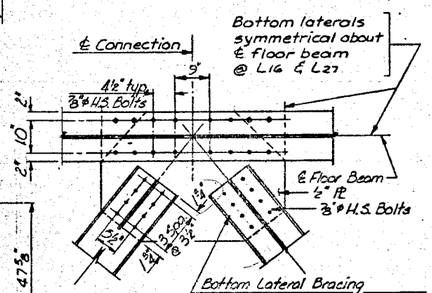


SECTION C-C

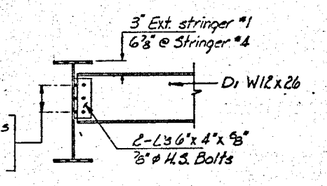
Note: All steel shown on this sheet shall be carbon steel M183 except as noted. Steel noted (L.) shall be Low-alloy M223.



INTERMEDIATE FLOOR BEAM CONNECTION



SECTION A-A



DIAPHRAGM D1

INTERIOR FLOOR BEAMS A & B
TRUSS — SPANS 12, 13, & 14

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED R.W.C.
CHECKED H.D.L.
DRAWN R.L.F.
CHECKED R.W.C.

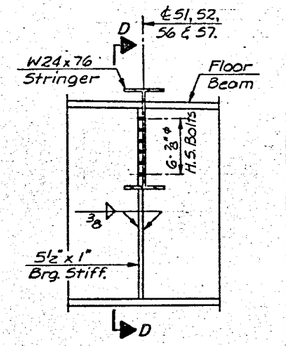
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

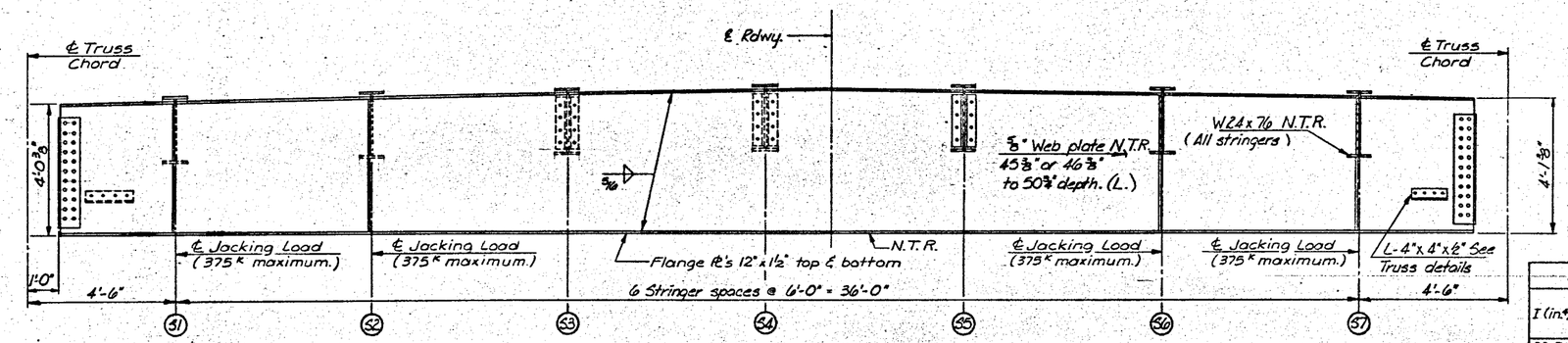
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA:49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 32 of 134



END FLOOR BEAM STRINGER CONNECTION
(At Location of Jacking Load)



HALF ELEVATION — END FLOOR BEAM
Showing approach span side.

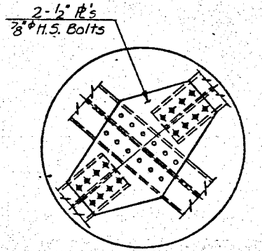
HALF ELEVATION — END FLOOR BEAM
Showing truss span side.

FLOOR BEAM REACTION TABLE

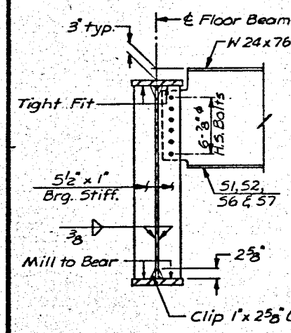
R_{ℓ} (k)	$R_{\mathbb{L}}$ (k)	Imp (k)	R_{TOTAL}
51	73	22	146

FLOOR BEAM MOMENT TABLE AT .5 PT.

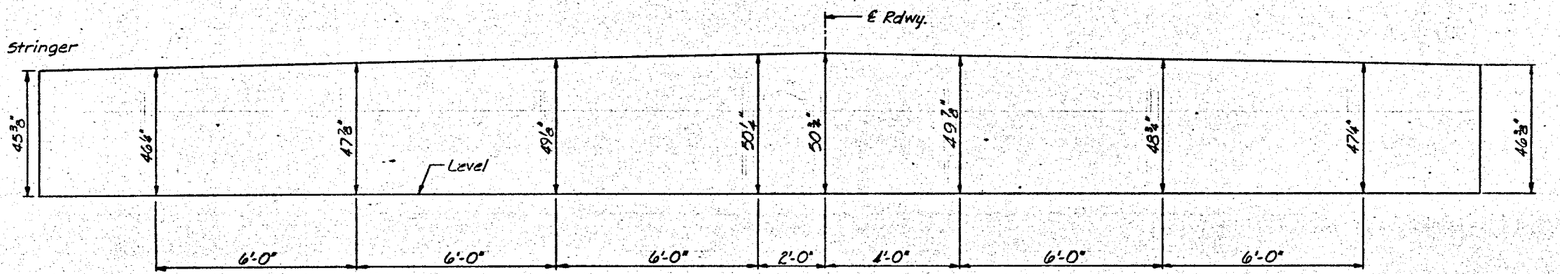
I (in⁴)	Dead Load k/ft.	Dead Load k (Eq. Str.)	M_{ℓ} (ft-k)	$M_{\mathbb{L}}$ (ft-k)	Imp (ft-k)	M_T (ft-k)	f_s (ksi)
30,711	.22	13.4	585	864	259	1,708	17.8



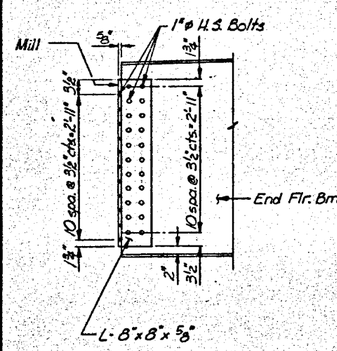
DETAIL "D"
(From Sheet 29 of 134.)



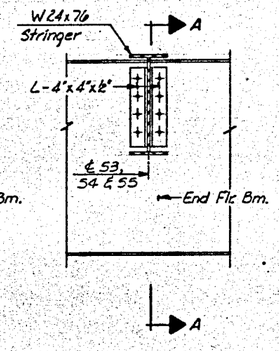
SECTION D-D



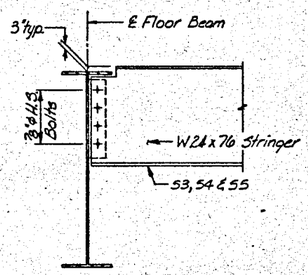
WEB PLATE OFFSETS CAMBERED FOR CROWN & DEAD LOAD DEFLECTIONS



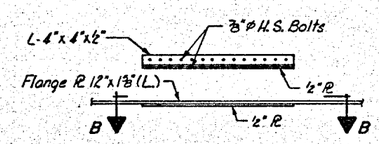
END FLOOR BEAM CONNECTION DETAIL



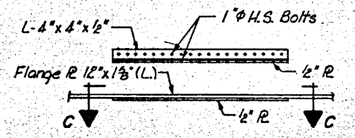
END FLOOR BEAM STRINGER CONNECTION



SECTION A-A

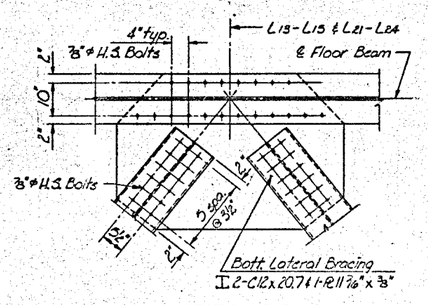


DETAIL I

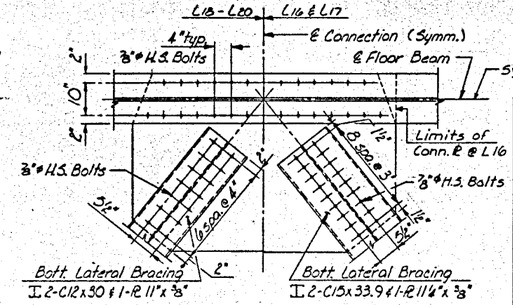


DETAIL II

BOTTOM LATERAL BRACING CONNECTION DETAILS
(At center of Floor Beam)



SECTION B-B



SECTION C-C

Note: All steel shown on this sheet shall be Carbon M183 except as noted. Steel noted (L.) shall be Low-alloy M223

N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

END FLOOR BEAM
TRUSS — SPANS 12, 13, & 14

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED	R.W.C.
CHECKED	W.D.L.
DRAWN	R.J.F.
CHECKED	R.W.C.

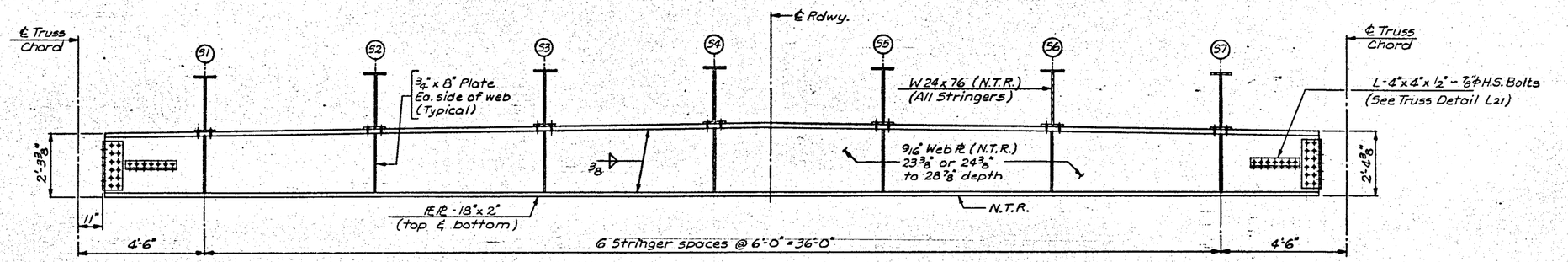
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

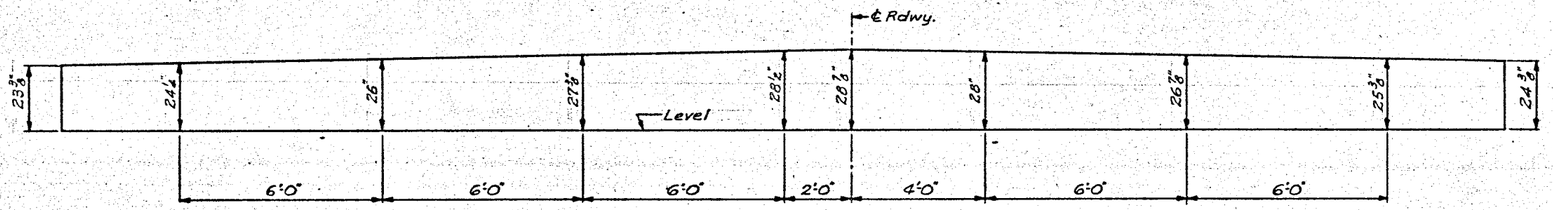
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	(P-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

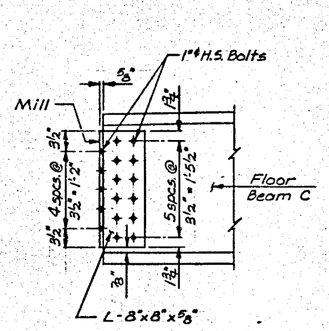
Sheet 33 of 134



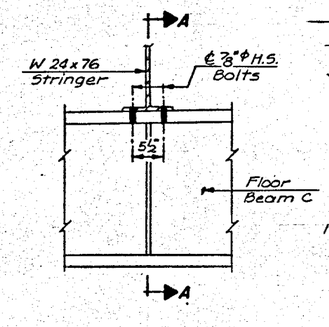
ELEVATION – FLOOR BEAM C



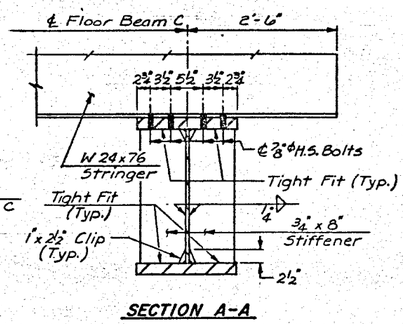
WEB PLATE OFFSETS CAMBERED FOR CROWN & DEAD LOAD DEFLECTIONS



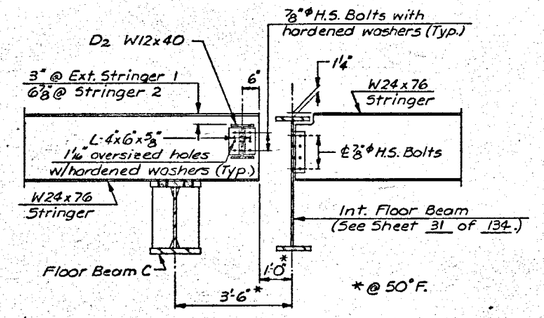
FLOOR BEAM C
CONNECTION DETAIL



FLOOR BEAM C
STRINGER CONNECTION



SECTION A-A



SECTION B-B
(From Sheet 29 of 134.)

Notes:

All steel shown on this sheet shall be Carbon M183

N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

FLOOR BEAM C
TRUSS - SPANS 12, 13 & 14

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED R.H.C.	HANSON ENGINEERS INCORPORATED	FILE NO.	74001
CHECKED W.D.L.			
DRAWN D.A.N.		DATE	11-2-79
CHECKED R.H.C.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS		

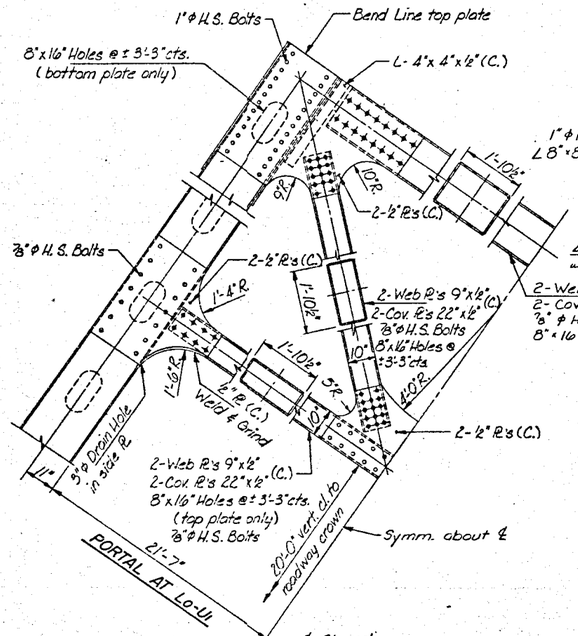
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

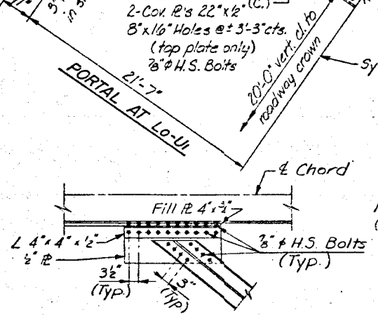
See Detail "C" on sheet 44 of 134 for typical detail of Handhole at splice locations.

N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 34 of 134

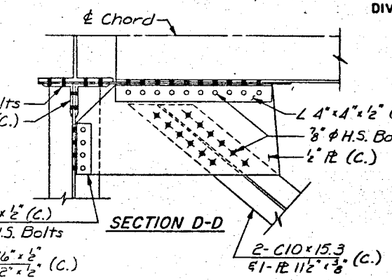




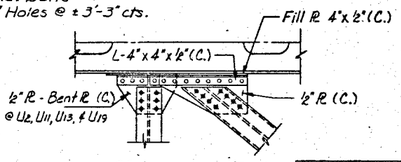
SECTION C-C

END VIEW

Note: All bolts 1"ϕ unless shown otherwise. Steel shown on this sheet noted (C.) shall be Carbon M183. Steel noted (L.) shall be Low-alloy M223.



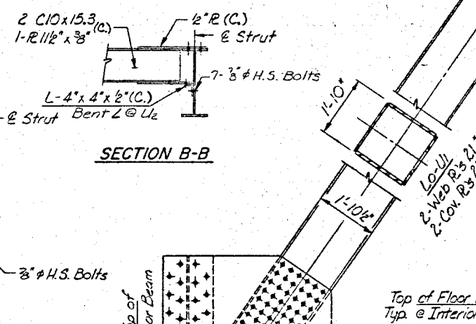
SECTION D-D



SECTION A-A

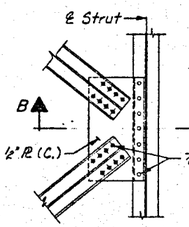
Typical @ U2, U3, U5, U7, U9 thru U14, U16 thru U20

BOLT DESIGNATION	
•	Field Bolt
○	Shop Bolt



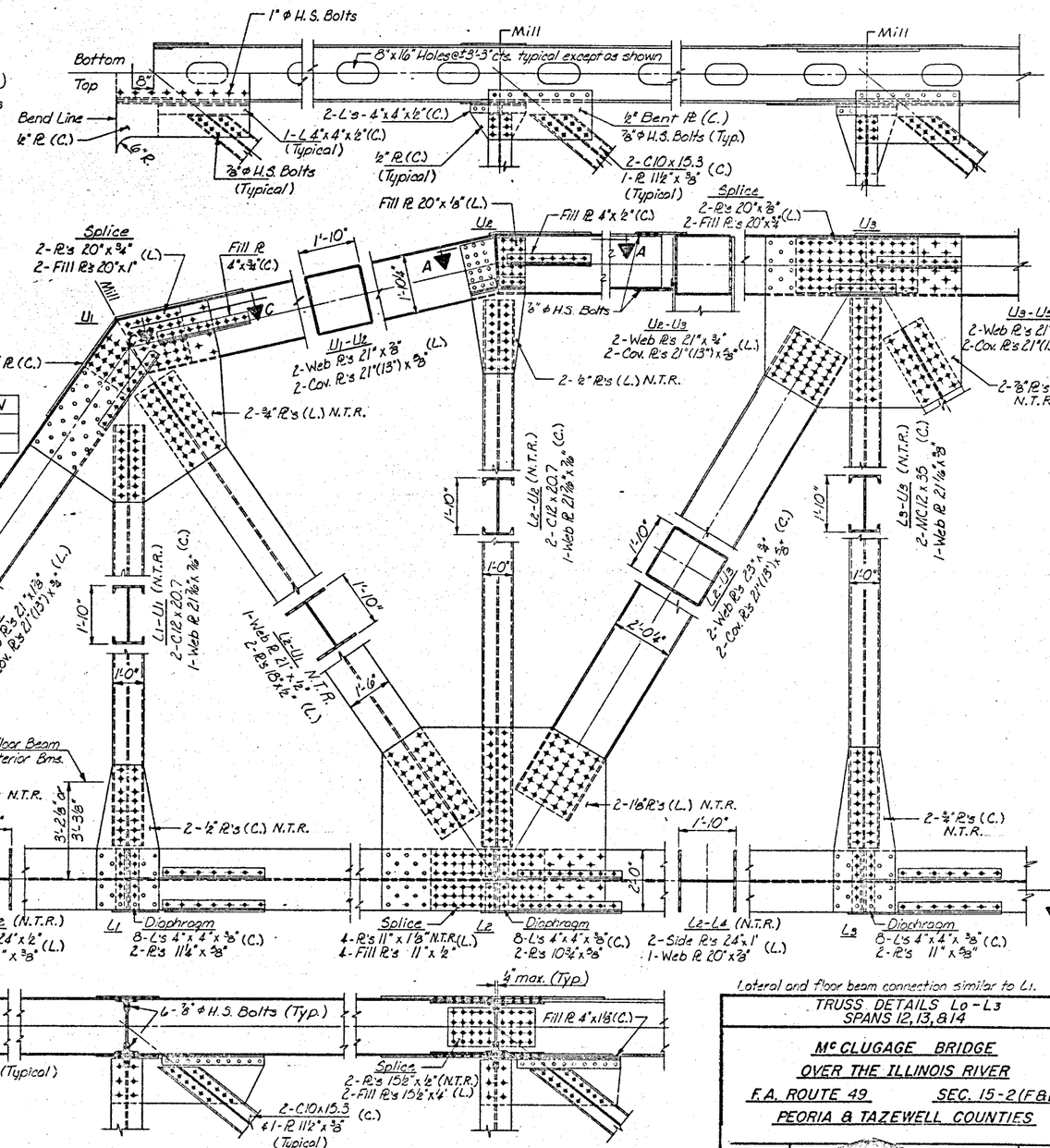
SECTION B-B

PLAN
TOP LATERAL CONNECTION



PLAN
BOTTOM LATERAL CONNECTION

TOP LATERALS TO ℄ STRUT
Typical @ U2, U4, U6, U8, U10, U12, U14, U16, U22, & U25



TRUSS DETAILS L0 - L3
SPANS 12, 13, & 14

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED	R.W.S.
CHECKED	W.D.L.
DRAWN	R.J.F.
CHECKED	R.H.C.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

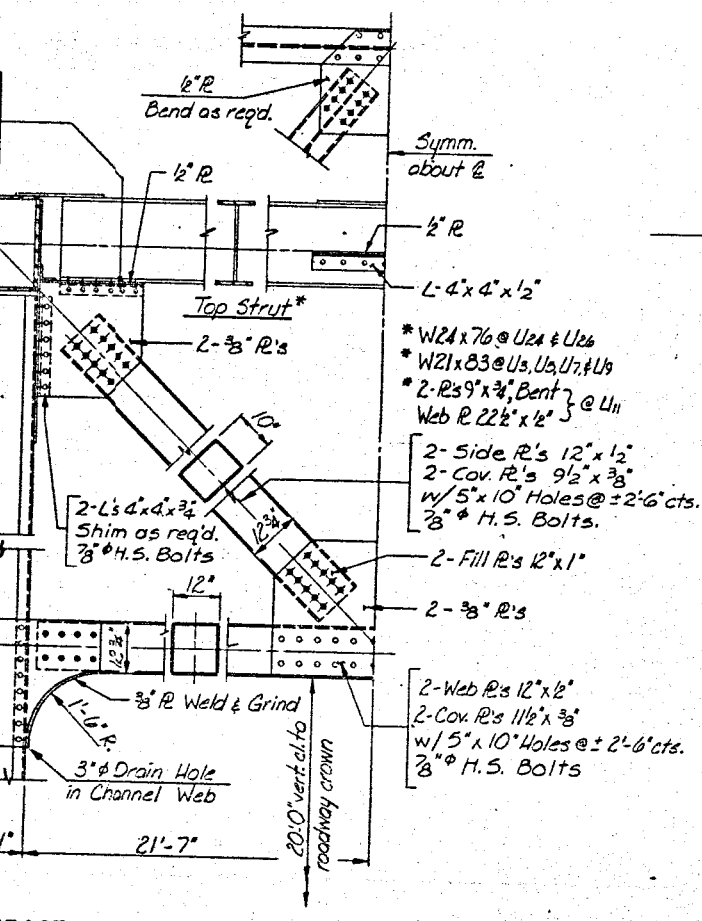
FILE NO. 74001
DATE 11-2-79

Revisions 4-14-80 S.C.O.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

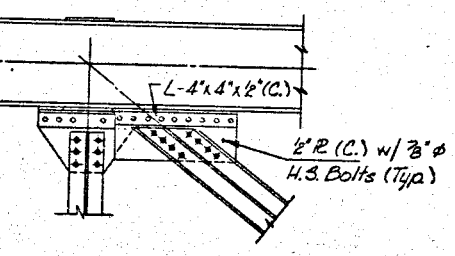
See Detail "C" on sheet 44 of 134 for typical detail of Handhole at splice locations.

N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.



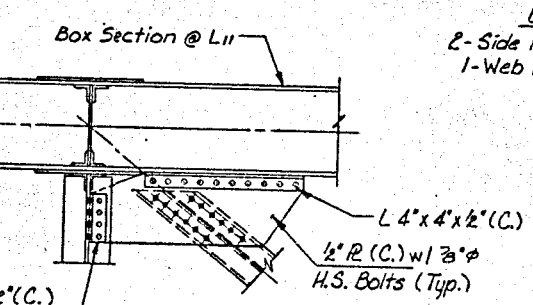
BRACE AT U3, U5, U7, U9, U11, U24, & U26

...el shown in sway brace shall be Carbon M183;
...olts. For details of strut at U11, see sheet 37 of 134.



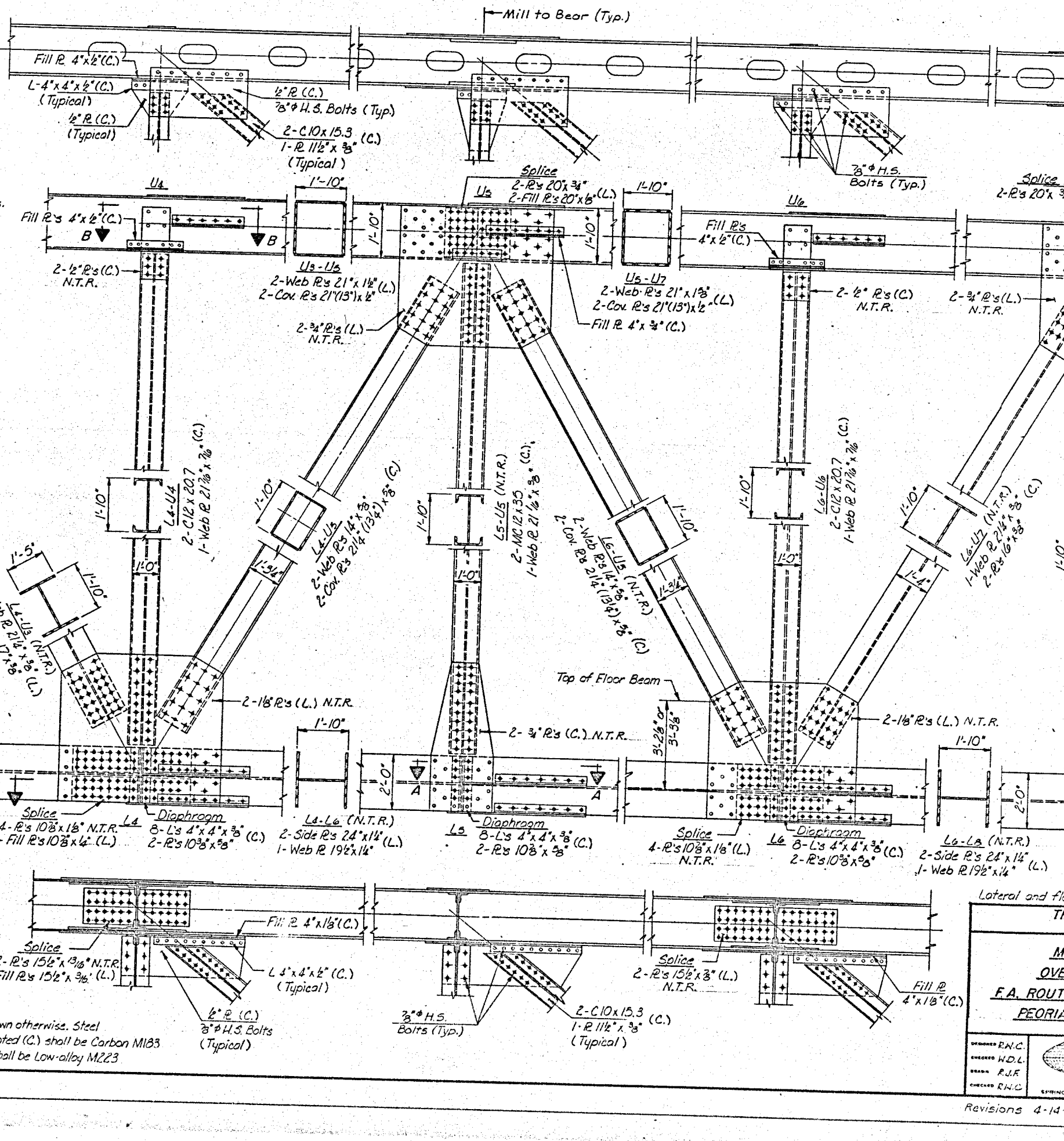
SECTION B-B

...ical @ U4, U6, U8, U23, & U25



SECTION A-A

Typical @ L1 thru L10
Similar @ L11



Note: All bolts 1"Φ unless shown otherwise. Steel shown on this sheet noted (C.) shall be Carbon M183 Steel noted (L.) shall be Low-alloy M223

Lateral and fl...

T...

M...
OVE...
F.A. ROUT...
PEORIA...

DESIGNED R.N.C.
CHECKED W.D.L.
DRAWN R.J.F.
CHECKED R.N.C.

Revisions 4-14-...

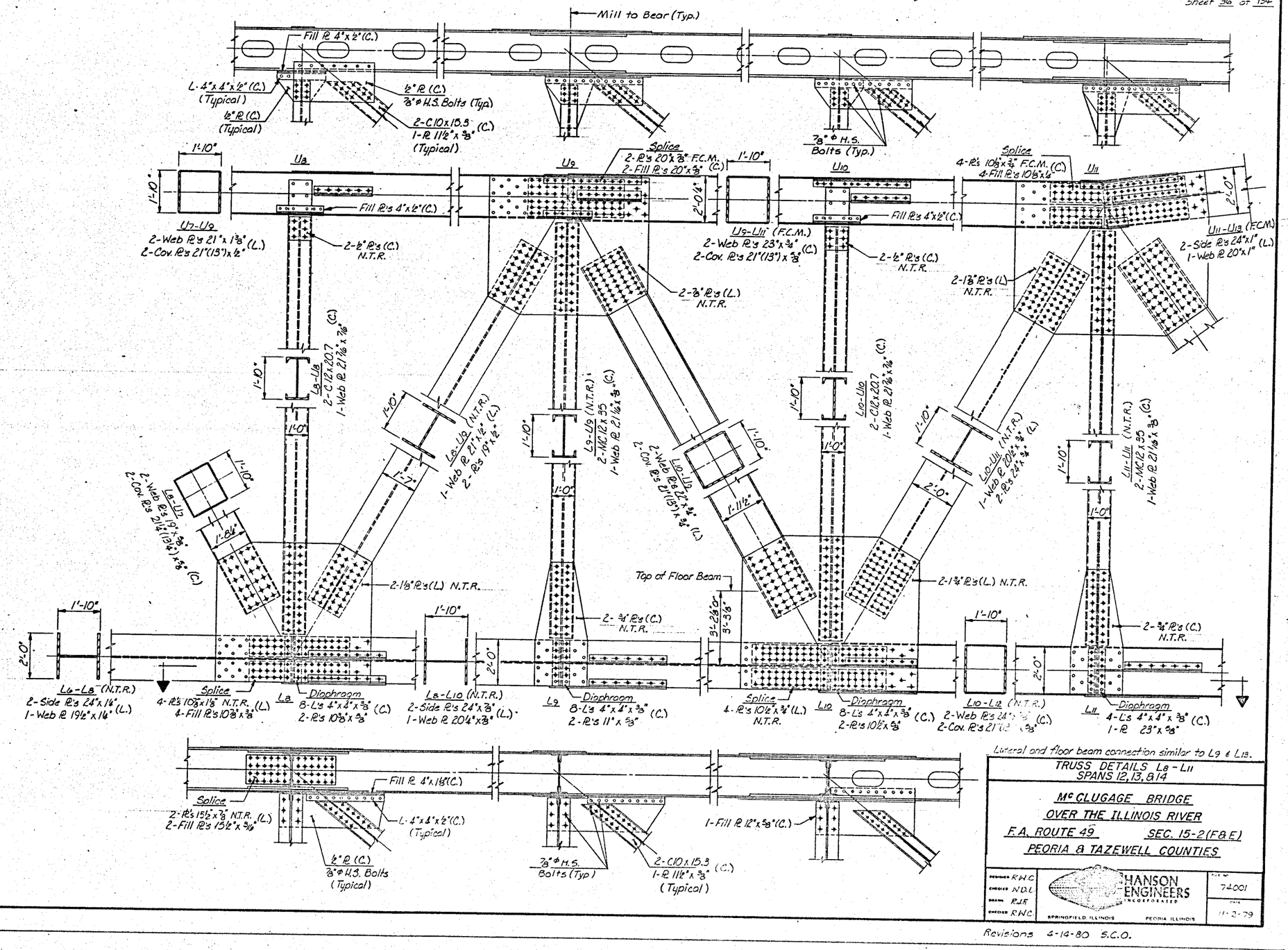
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

See Detail "C" on sheet 44 of 134 for typical detail of handhole at splice locations.

N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA:49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 36 of 134



Note: Tension chord & tension splices @ the interior piers & hanger for suspended span shall meet the requirements for Fracture Critical Members (F.C.M.)

Note: All bolts 1" ø unless shown otherwise. Steel shown on this sheet noted (C.) shall be Carbon M183. Steel noted (L.) shall be Low-alloy M223.

Lateral and floor beam connection similar to L9 & L13.

TRUSS DETAILS L8 - L11
SPANS 12, 13, & 14

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED R.W.C.	HANSON ENGINEERS INCORPORATED	JOB NO.	74001
CHECKED N.D.L.		DATE	11-2-79
DRAWN R.J.E.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS		
CHECKED R.W.C.			

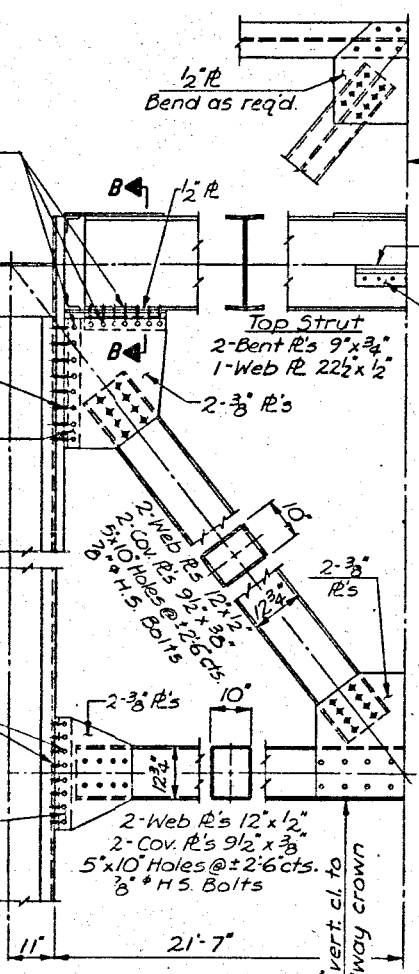
Revisions 4-14-80 S.C.O.

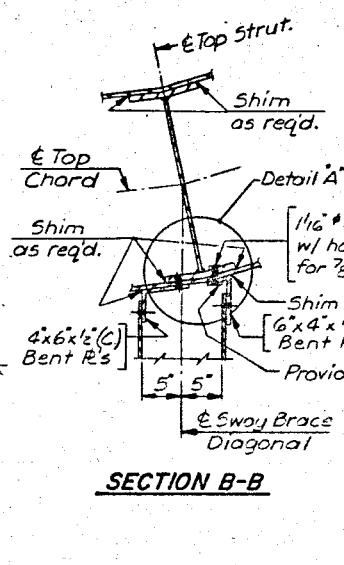
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Tension chord & tension splices at the interior piers & hanger for suspended span shall meet the requirements for Fracture Critical Members (F.C.M.)

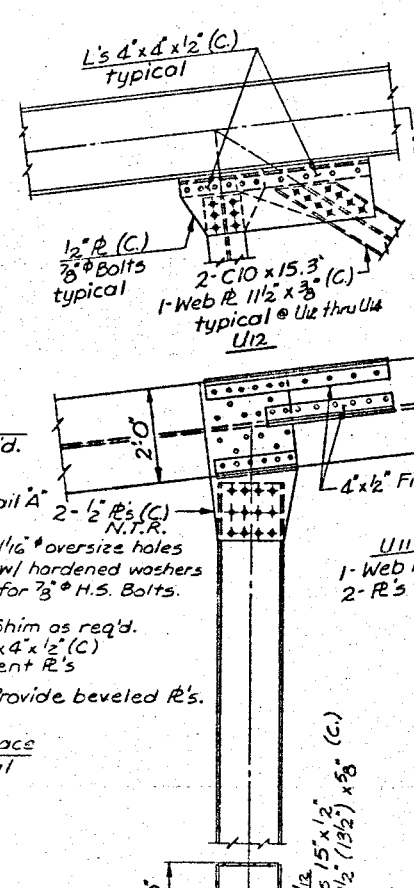
See Detail "C" on sheet 44 of 134 for typical detail of Handhole at splice locations.

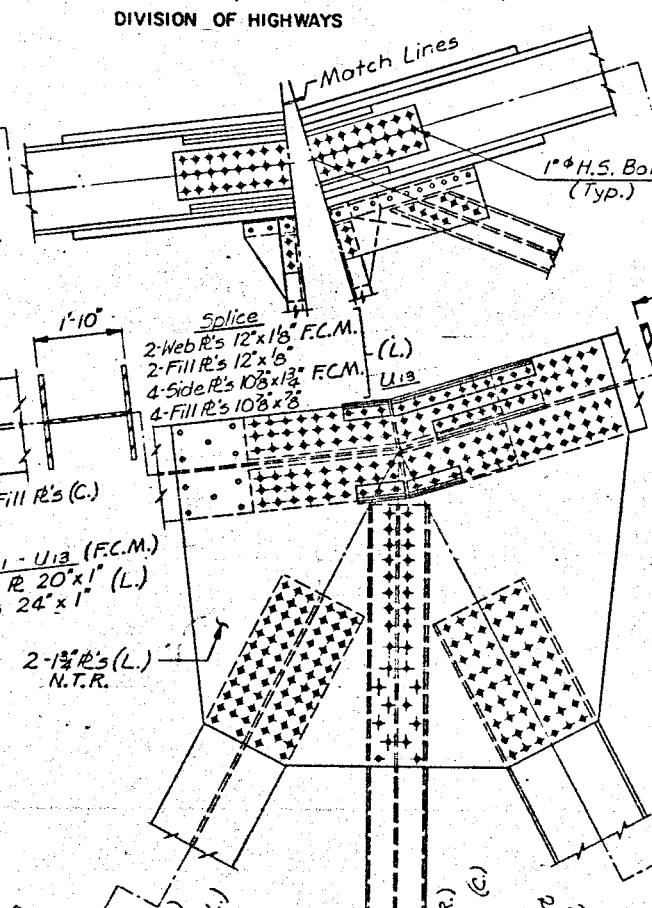
N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

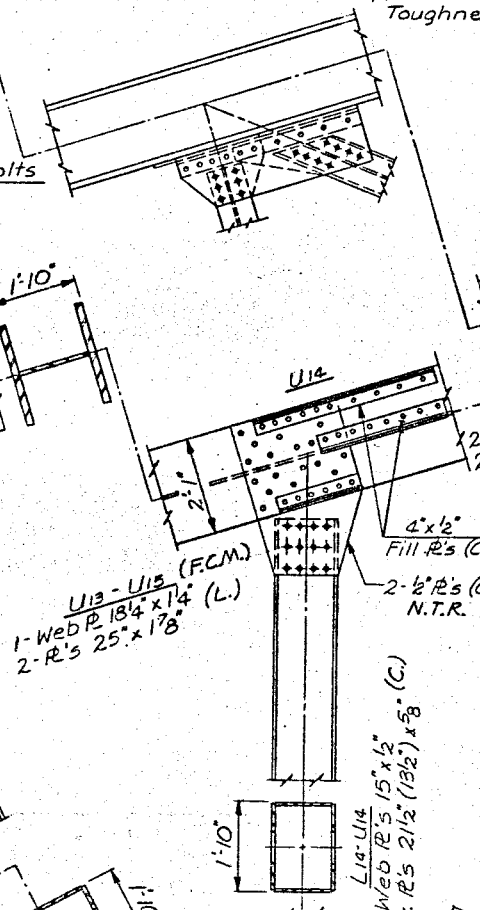




SECTION B-B

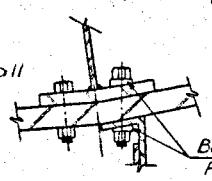




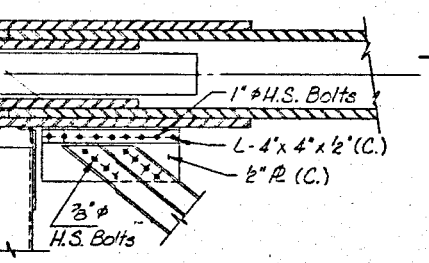


SWAY BRACE AT U13 & U19

Steel shown in sway brace shall Carbon M183. All bolts ⅞" ϕ, ept as noted.

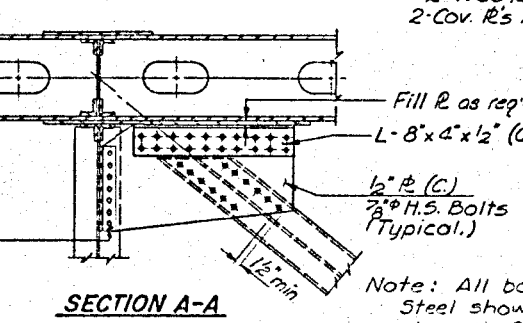


DETAIL A



SECTION C-C

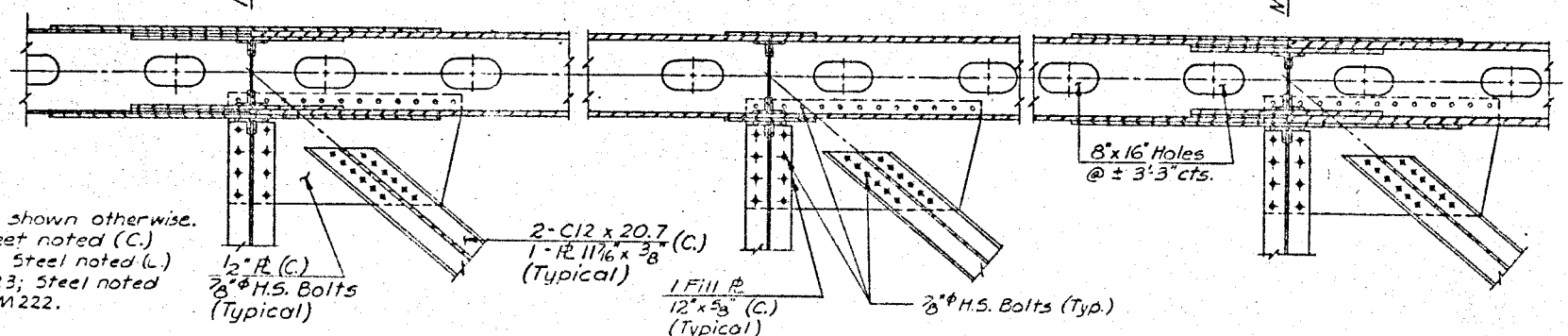
Typical @ U13 & U17



SECTION A-A

Typical @ L12 thru L15
connection detail @ L21
te side of panel point.

Note: All bolts 1"ϕ unless shown otherwise. Steel shown on this sheet noted (C.) shall be Carbon M183; Steel noted (L.) shall be Low-alloy M223; Steel noted (M.) shall be Low-alloy M222.



DESIGNED R.H.C.
CHECKED W.D.L.
DRAWN D.A.N.
CHECKED R.W.C.

F.A. ROU
PEOR

Revisions 4

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA:49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

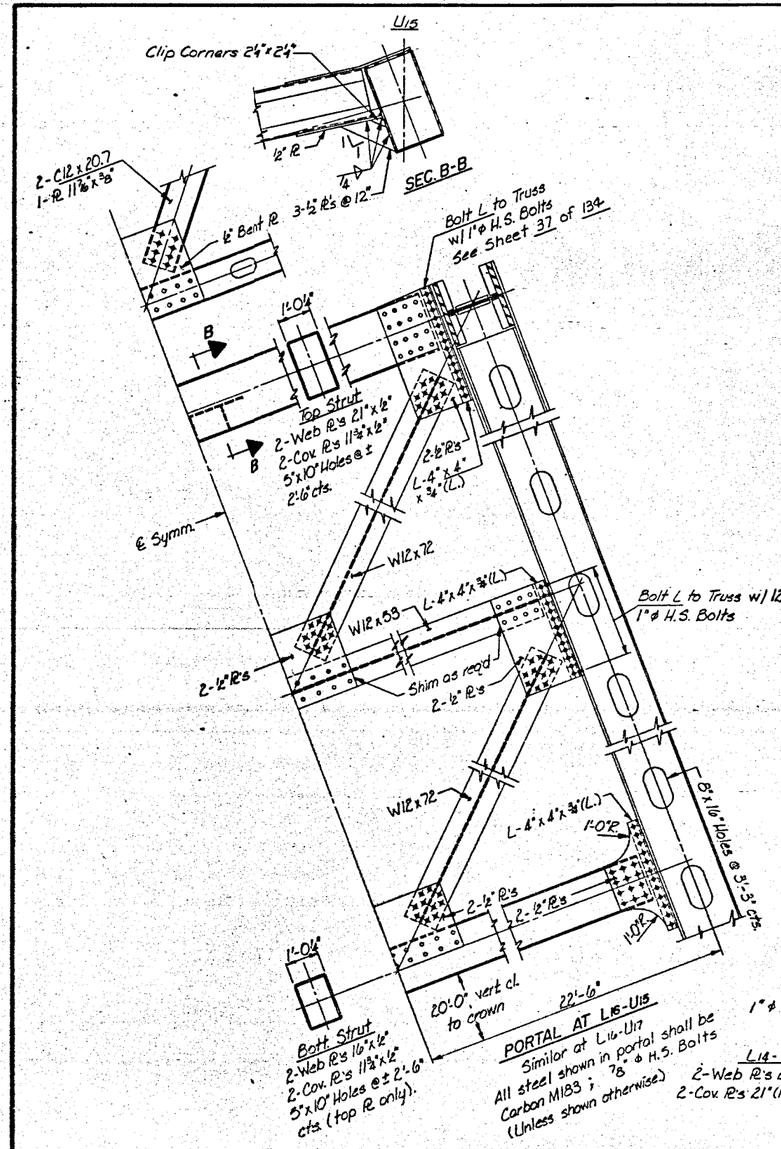
Sheet 38 of 134

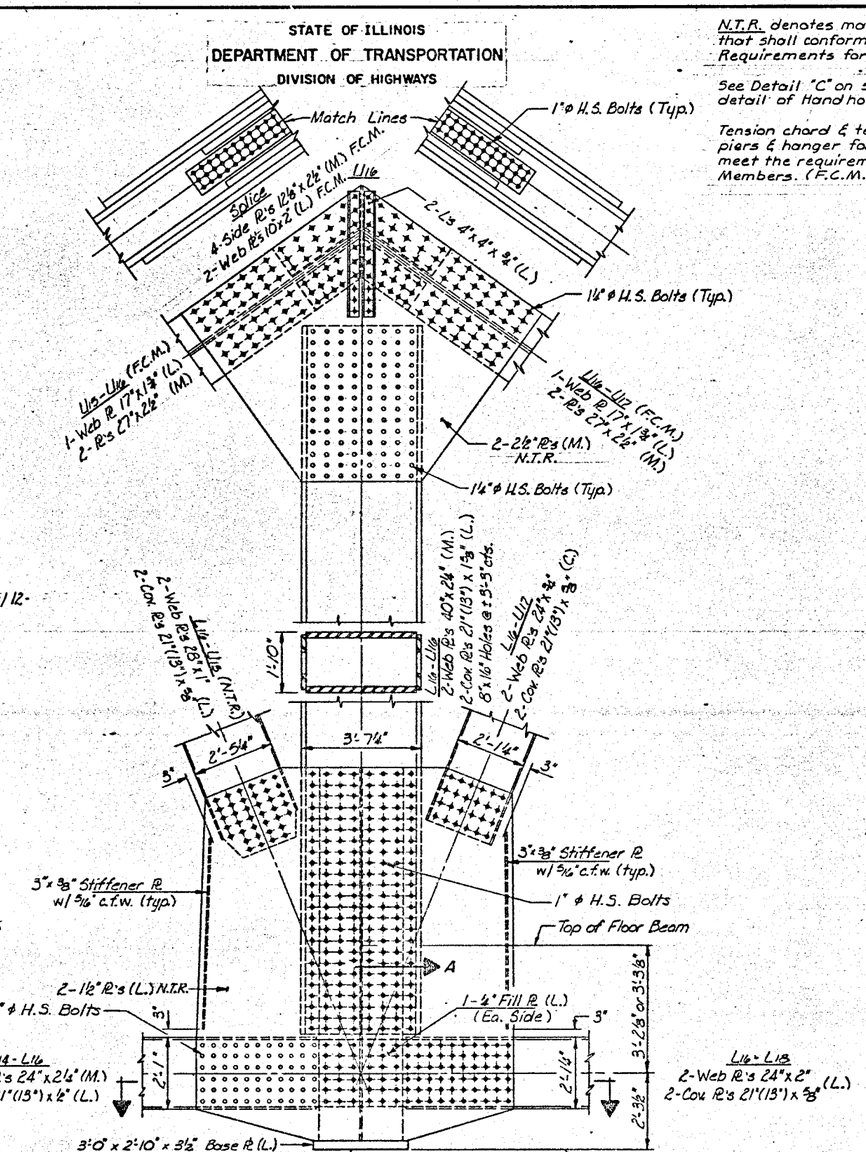
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

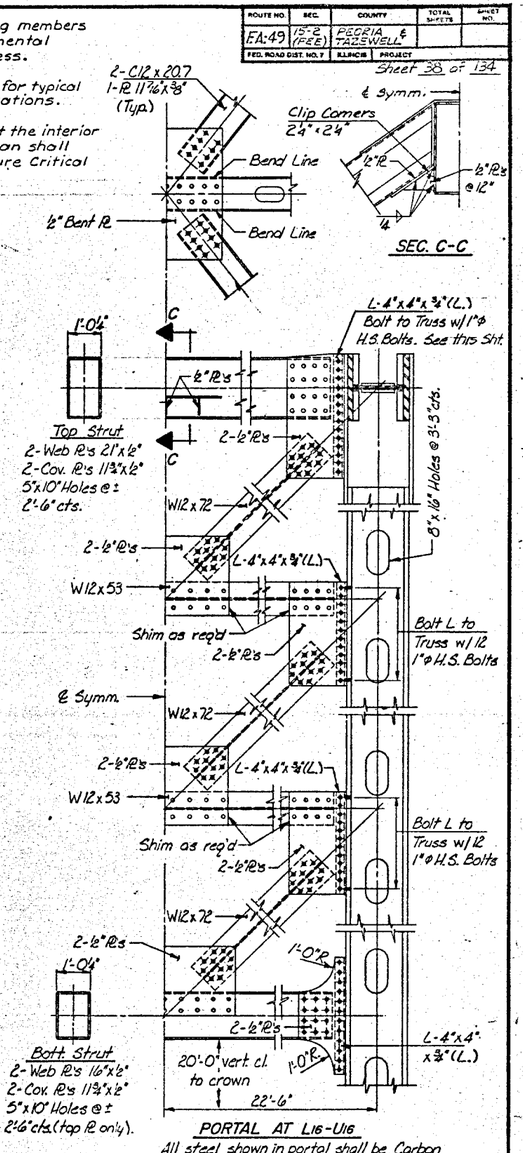
N.T.R. denotes main load carrying members that shall conform to the Supplemental Requirements for Notch Toughness.

See Detail "C" on sheet 44 of 134 for typical detail of Hand hole at splice locations.

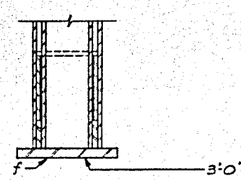
Tension chord & tension splices at the interior piers & hanger for suspended span shall meet the requirements for Fracture Critical Members. (F.C.M.)



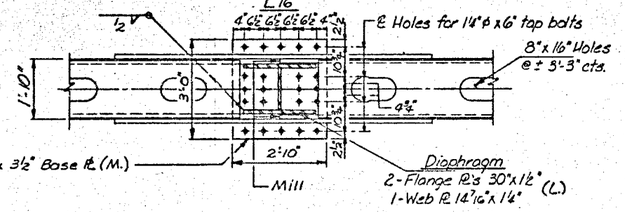




Note: All bolts 1"ø unless shown otherwise. Steel shown on this sheet noted (C.) shall be Carbon M183 ; Steel noted (L.) shall be Low-alloy M223; Steel noted (M.) shall be Low-alloy M 222.



SECTION A-A



TRUSS DETAILS L16
SPANS 12, 13, 814

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED R.H.C.	HANSON ENGINEERS INCORPORATED	FILE NO.	74001
CHECKED W.D.L.		DATE	11-2-79
DRAWN R.L.E.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS		
CHECKED R.H.C.			

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49 (FAE)	15-2	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

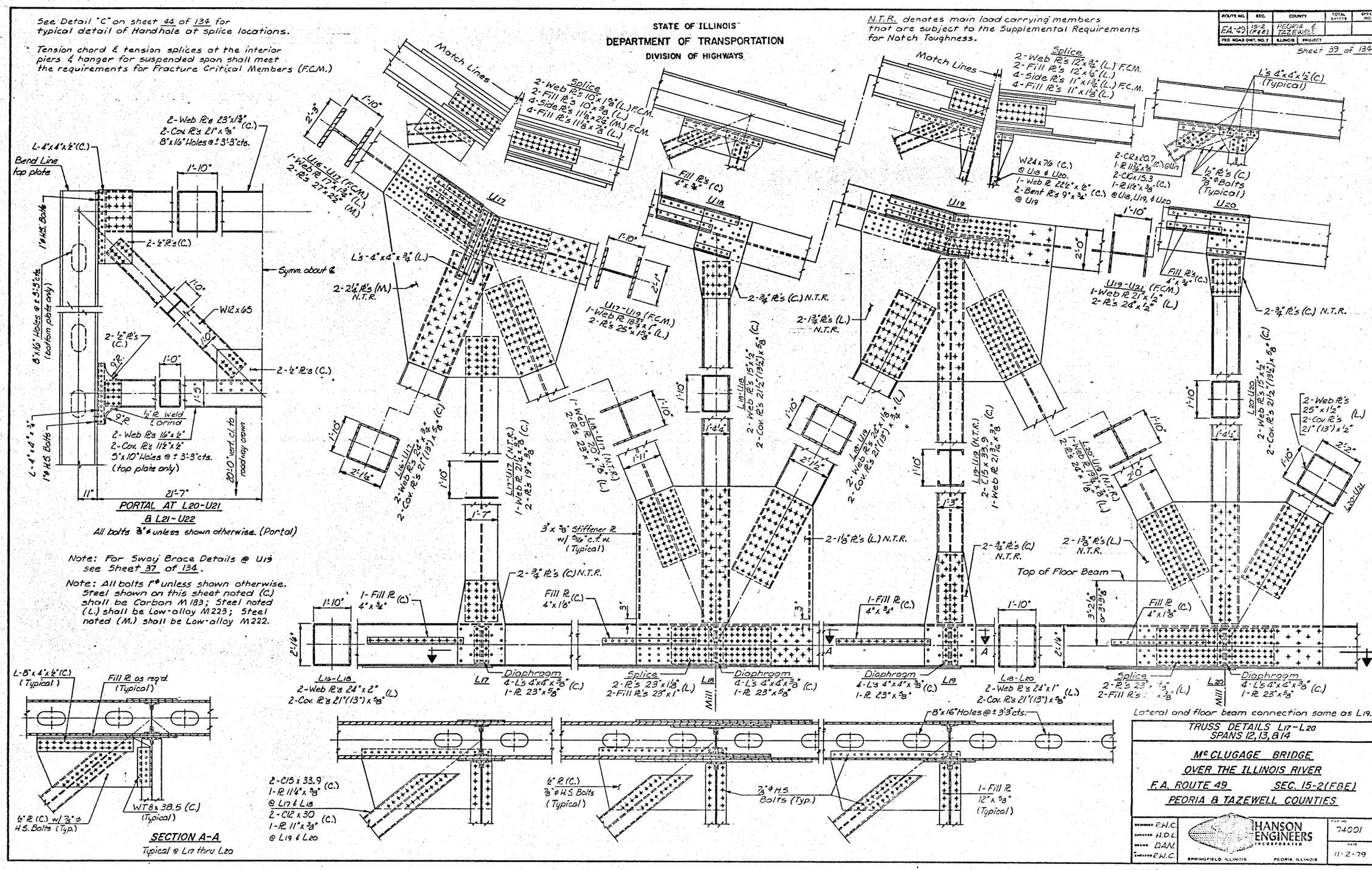
Sheet 39 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

See Detail "C" on sheet 44 of 134 for typical detail of Handhole at splice locations.

Tension chord & tension splices at the interior piers & hanger for suspended span shall meet the requirements for Fracture Critical Members (F.C.M.)

N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.



SECTION A-A
Typical @ L17 thru L20

Lateral and floor beam connection same as L19.

TRUSS DETAILS L17-L20
SPANS 12, 13, & 14

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(FBE)
PEORIA & TAZEWELL COUNTIES

DESIGNED P.W.C.
CHECKED H.D.L.
DRAWN D.A.M.
CHECKED P.W.C.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

Note: For Sway Brace Details @ U19 see Sheet 37 of 134.

Note: All bolts 1" ϕ unless shown otherwise. Steel shown on this sheet noted (C.) shall be Carbon M183; Steel noted (L.) shall be Low-alloy M223; Steel noted (M.) shall be Low-alloy M222.

Revisions 4-14-80 S.C.O.

Note: See Sheet 44 of 134 for Section E-E. (Complete Pin Assemoly)

See Detail "C" on sheet 44 of 134 for typical detail of Handhole at splice locations.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 40 of 134

N.T.R. denotes main load carrying members that shall conform to the Supplemental Requirements for Notch Toughness.

Tension chord & tension splices at the interior piers & hanger for suspended span shall meet the requirements for Fracture Critical Members (F.C.M.)

Lateral and floor beam connection same as L26.

DETAIL OF PIN

HANGER U21–L21
(Same at bottom end)
(•) Use Steel Forging conforming to AASHTO M-102, Class G & Recessed Pin Nuts of Steel or Cast Steel.

SECTION D-D

SECTION C-C

Note: Section C-C typical @ L21 & L23. Similar connection on both sides of floor beam @ L22.

SECTION A-A

SECTION B-B

SWAY LOCK PLATE DETAILS

Note: All bolts 1"ϕ unless shown otherwise. Steel shown on this sheet noted (C.) shall be Carbon M183; Steel noted (L.) shall be Low-alloy M223; steel noted (M.) shall be Low-alloy M-222

TRUSS DETAILS L21–L24
SPANS 12, 13, & 14

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED R.H.C.
CHECKED W.D.L.
DRAWN R.J.F.
CHECKED R.H.C.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

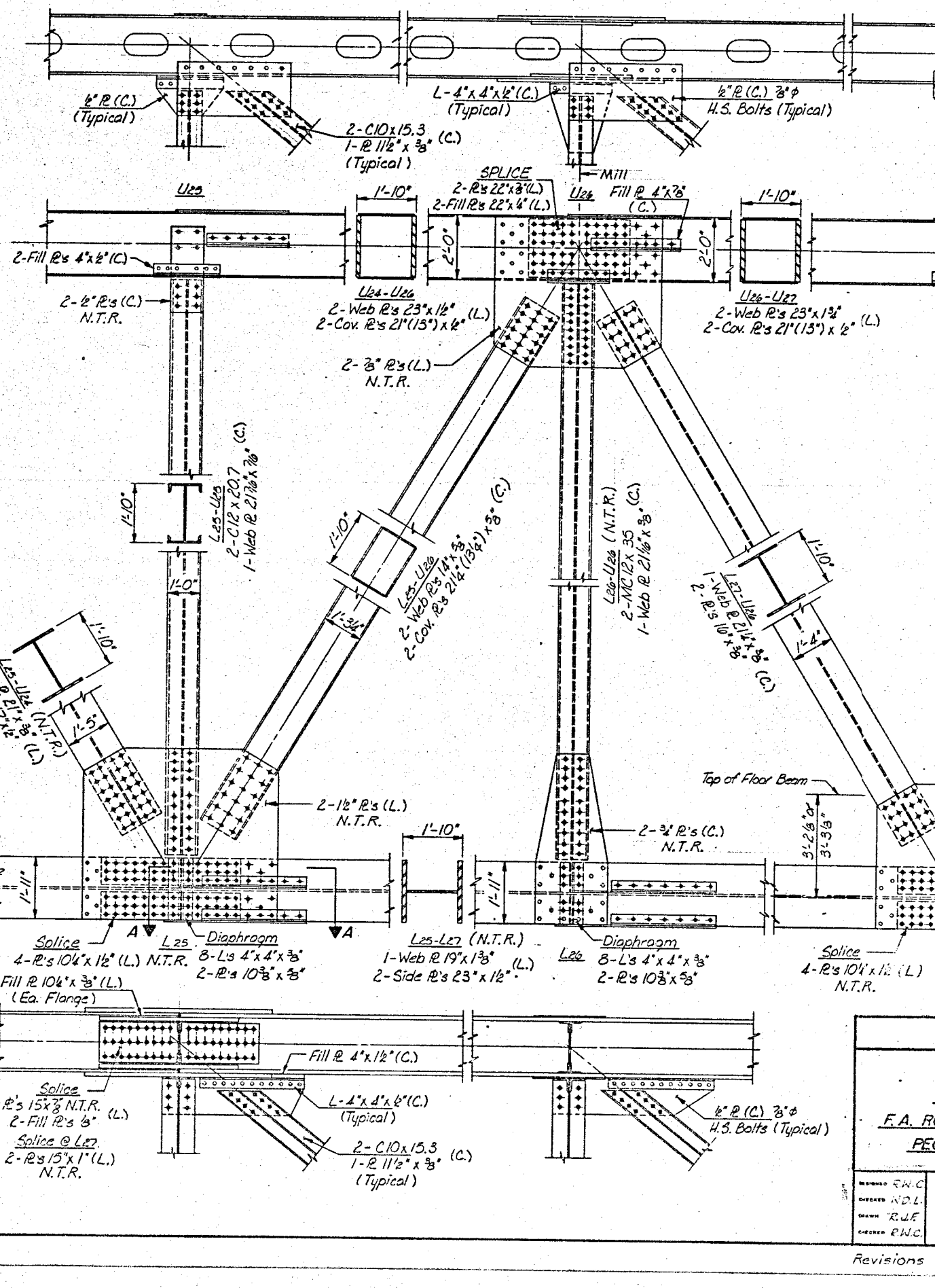
FILE NO. 74001
DATE 11-2-79

Revisions 4-14-80 S.C.O.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

See Detail "C" on sheet 44 of 134 for typical detail of Handhole at splice locations.

N.T.R. denotes main load carry members that are subject to t Supplemental Requirements f Notch Toughness.



lts 1"ϕ unless shown otherwise.
wn on this sheet noted (C.)
Carbon M183; Steel
) shall be Low-alloy M223

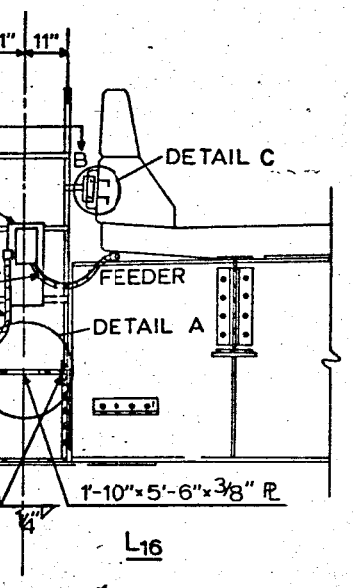
F.A. R
PE

REVISED R.W.C.
CHECKED N.D.L.
DRAWN R.U.F.
CHECKED R.W.C.

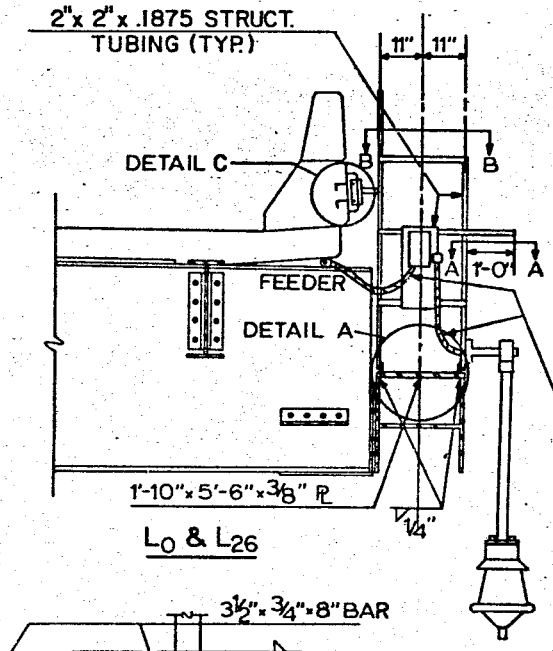
Revisions

T NAVIGATIONAL LIGHTS WILL BE FURNISHED
ECTED BY THE DECKING CONTRACTOR.
ETY CAGE WILL BE FURNISHED BY THIS CONTRACT
RED AT THE LOCATION DESIGNATED BY THE
R. IT IS TO BE ERECTED BY THE DECKING CONTRACTOR.

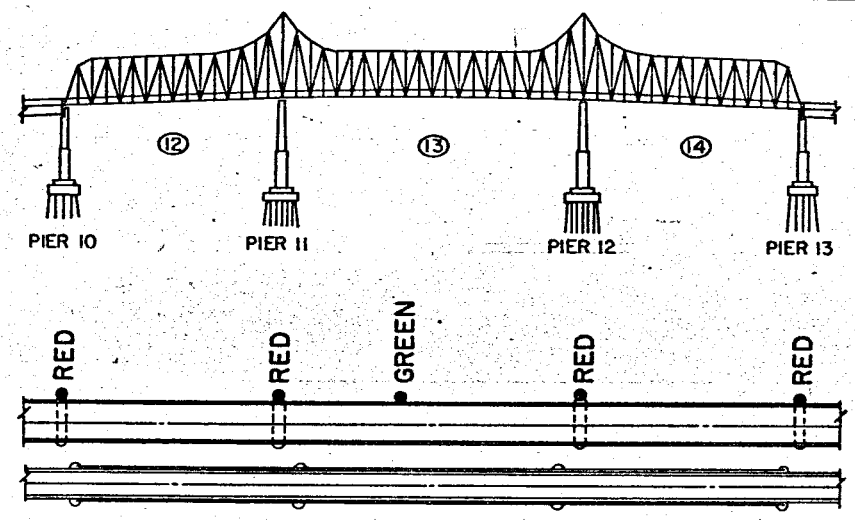
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



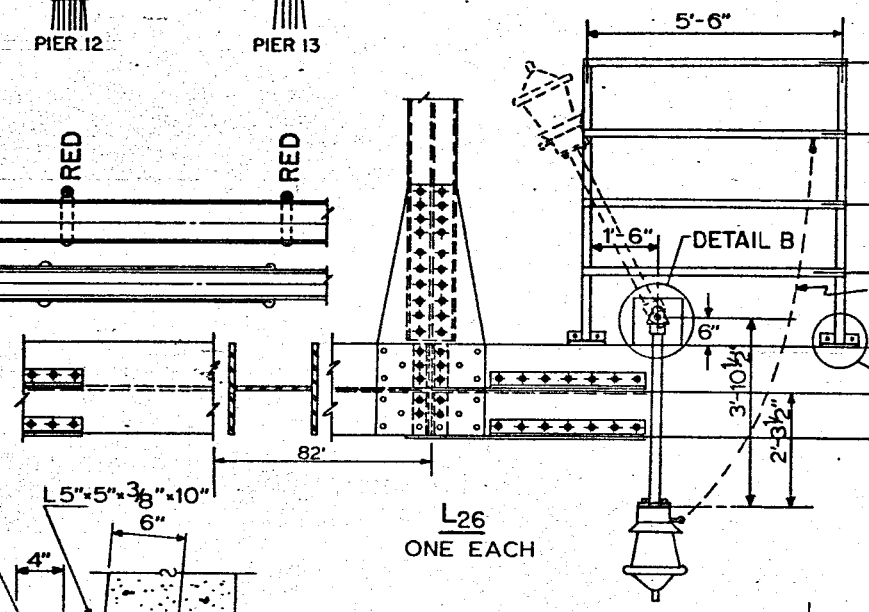
L16



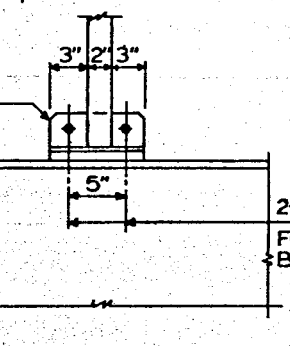
L0 & L26

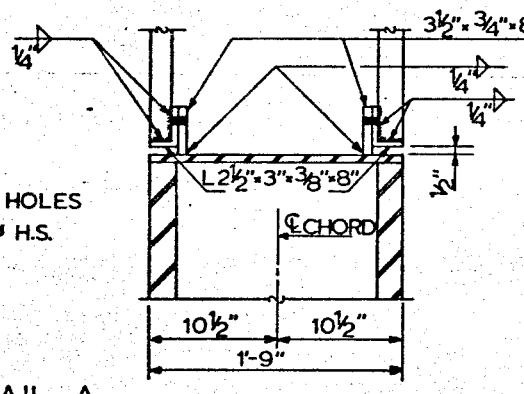


2" FLEXIBLE LIQUID-TIGHT CONDUIT W/2 - 1/C #12 CABLE

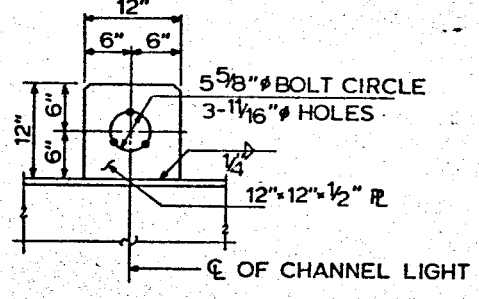


L26
ONE EACH

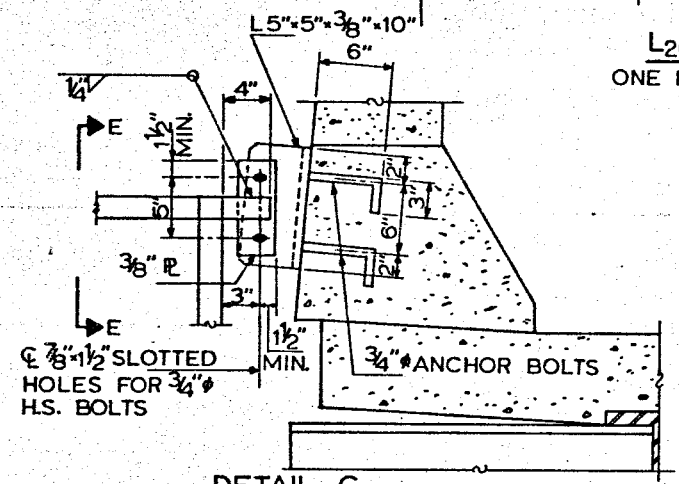




DETAIL A



DETAIL B

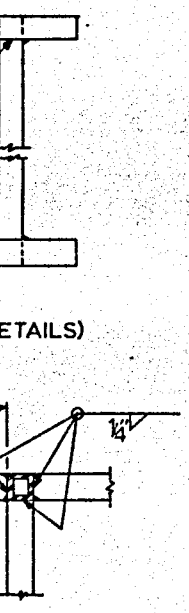


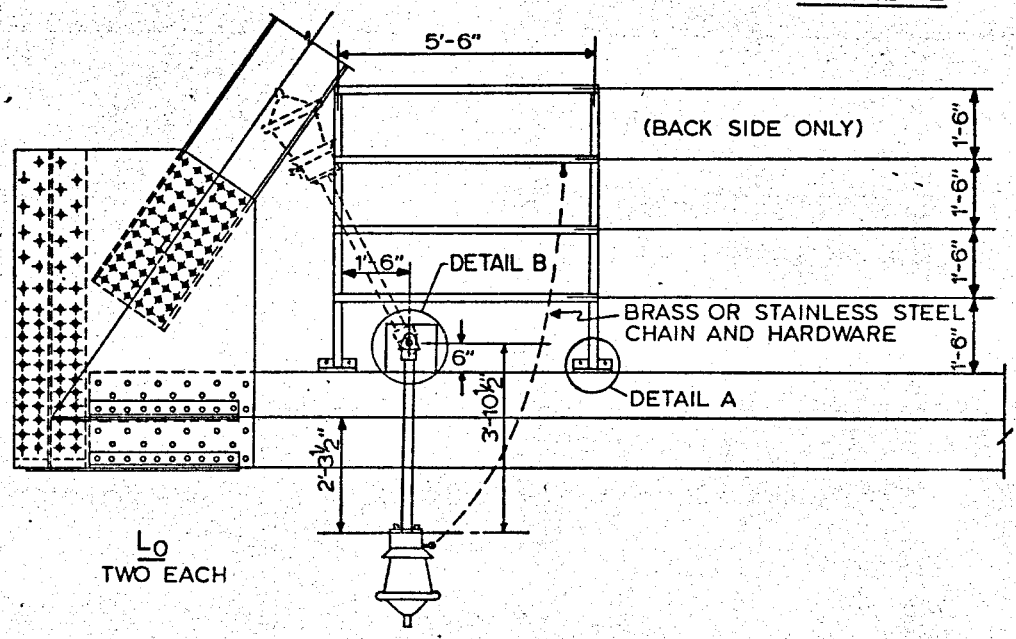
DETAIL C

NOTES:
HOLLOW STRUCTURAL
CONFORM TO THE REQUIRE
TION A501 "HOT FORMED WE
CARBON STEEL STRUCTURAL
BOLTING MATERIALS,
NUTS SHALL CONFORM TO T
ASTM DESIGNATION A307.

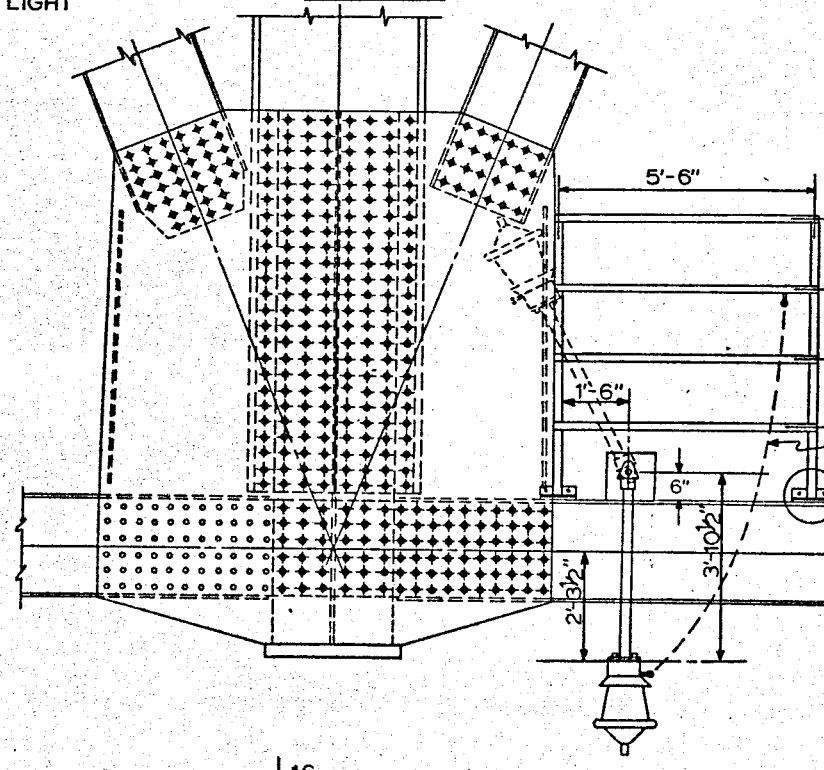
BILL OF
ITEM
STRUCTURAL STEEL TUBING SAF

SEC





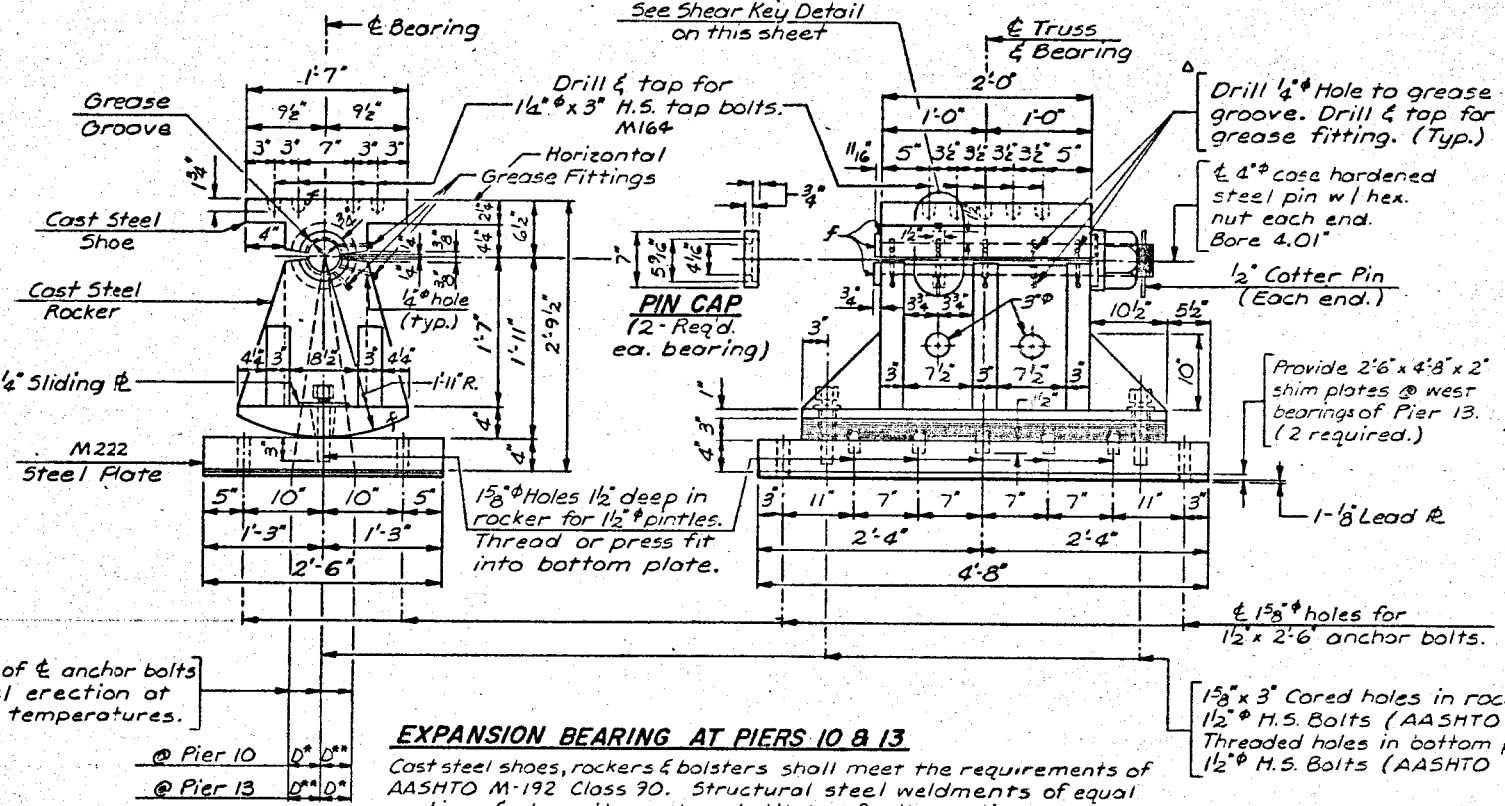
L0
TWO EACH



L16
TWO EACH

PEO

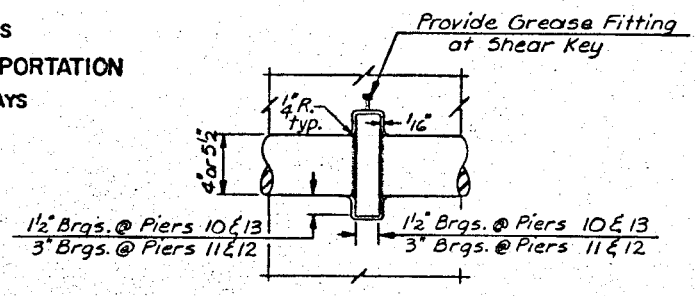
STATE OF ILLINOIS
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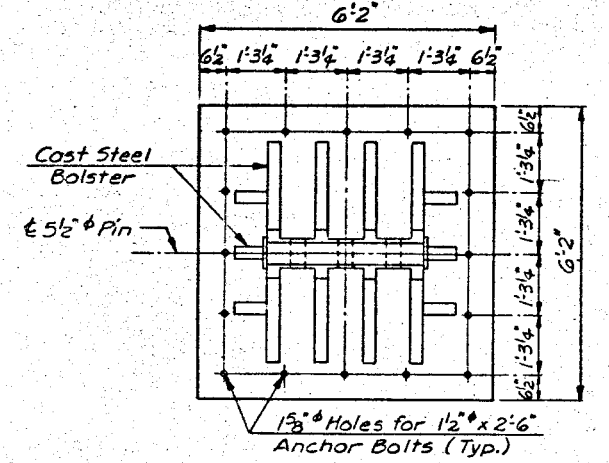
of ℄ anchor bolts		
l erection at		
temperatures.		
@ Pier 10	0*	0**
@ Pier 13	0**	0*

EXPANSION BEARING AT PIERS 10 & 13

Cast steel shoes, rockers & bolsters shall meet the requirements of AASHTO M-192 Class 70. Structural steel weldments of equal sections & strength may be substituted for the castings subject to approval by the Engineer prior to fabrication but at no additional compensation.

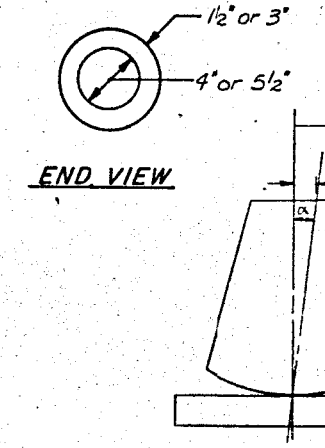


SHEAR KEY DETAIL



PLAN OF BOLSTER & STEEL PLATE AT FIXED BEARING AT PIERS 11 & 12

(Showing anchor bolt hole locations)



END VIEW

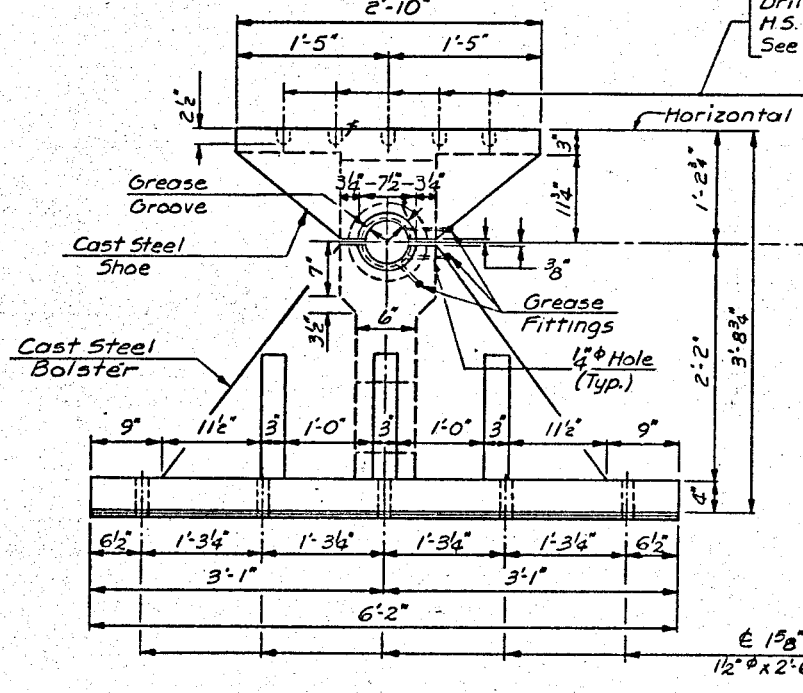
ROCKER

NOTES FOR SE... AT EXPA...

a) D* (Side of bearing ... D* = ⅛" per eac... every 15° fall be... of 50°F.

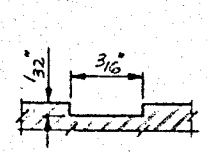
b.) D** (Side of bearin... D** = ⅛" per eac... every 15° rise ... of 50°F.

c.) After girders have ... D* & D** deter... & anchor bolts ... fixed anchor bo... masonry.



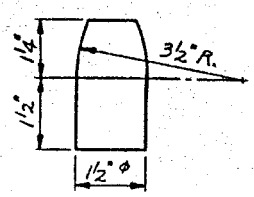
FIXED BEARING AT PIERS 11 & 12

TOP PLATE PLAN



GREASE GROOVE ON SADDLE

△Note: Grease bearing assembly with molybdenum grease before installation.



PINTLE DETAIL

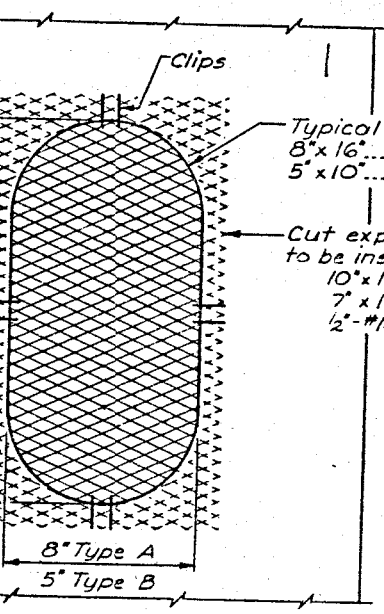
Cast s... shall me... Class 12C...

The su... meet the ... Requirem...
a) Top ...
b) Bott... Top ...
c) Cyli... all s... cylin... Pint...

F.A...

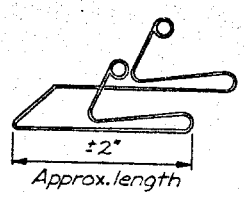
R.W...
C.R...
D.A...
R.W...

d hole screens & clips are not included with this contract.



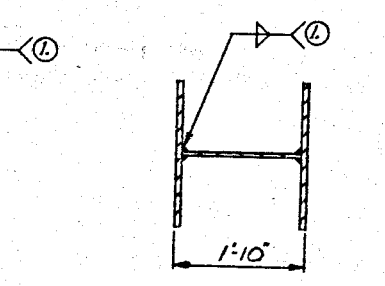
N - HANDHOLE SCREEN

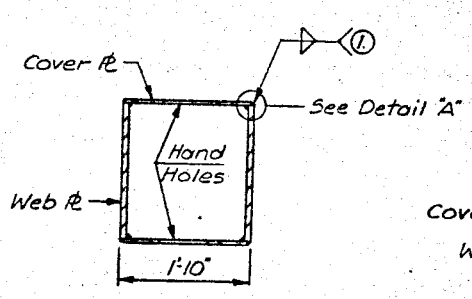
must attach securely steel plates, varying from 3/8" to ½".



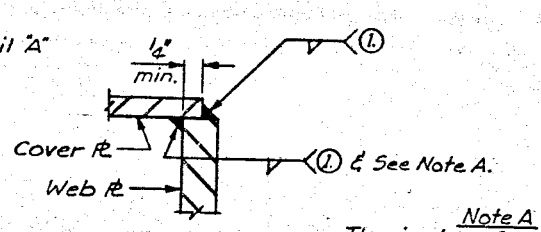
CLIP

Number required = 28600.
Cost incidental to hand-hole screens.



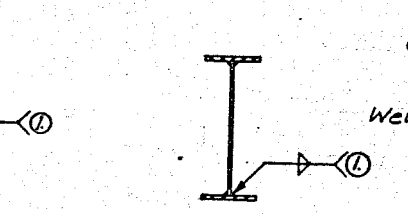


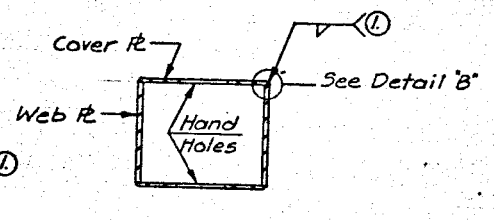
P CHORDS, BOTTOM CHORDS, DIAGONALS & VERTICAL TRUSS MEMBERS



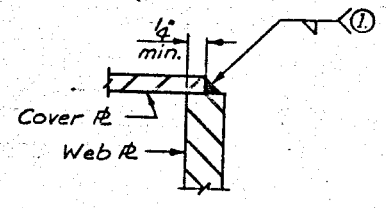
DETAIL "A"

Note A
The inside fillet weld shall be the same size as the outside weld and extend from the end of the member to 1'-0" beyond the edge of the gusset plate.





LATERALS, STRUTS, SWAY & PORTALS



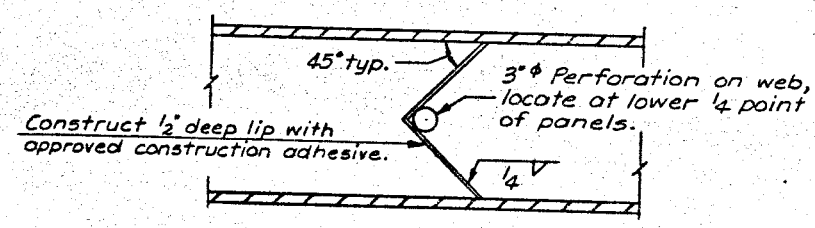
DETAIL "B"

① FILLET WELD SIZES OF MAIN TRUSS MEMBERS

Material Thickness of Thicker Part Joined (in.)	Size of Fillet Weld (in.)
To ¾ incl.	¼
Over ¾ to 1½	5/16
Over 1½ to 2¼	⅜
Over 2¼	½

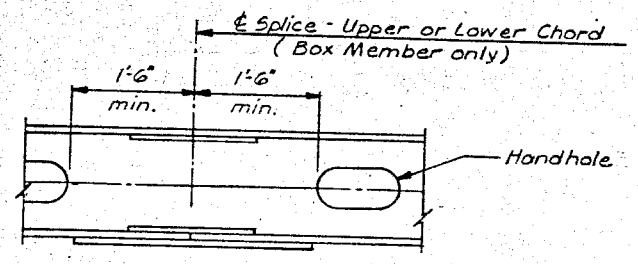
WELDING DETAILS

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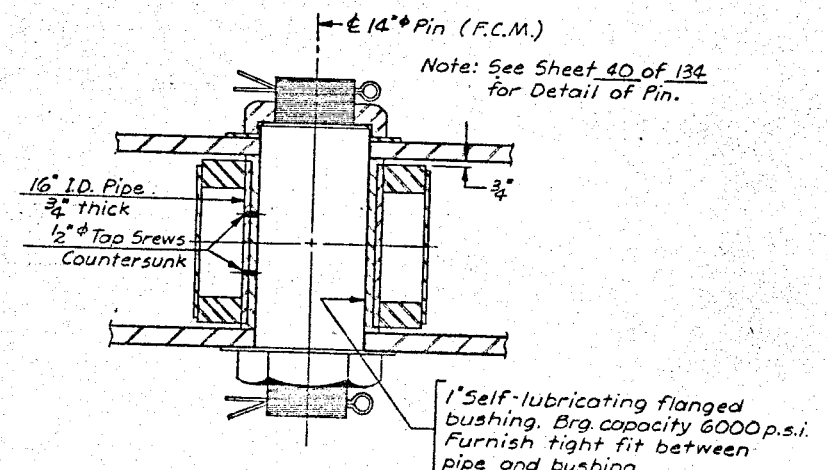
DRAIN DETAIL

Typical @ Chord Members
U11-U21, L0-L10 & L21-L27



DETAIL C

(Typical detail for all upper or lower chord box member splices.)



SECTION E-E

(From Sheet 40 of 134.)
Hanger U21-L21

16" I.D. pipe ANSI/ASTM A steel tubing.

14"ϕ pin shal Fracture Critica be made of ste AASHTO M-102

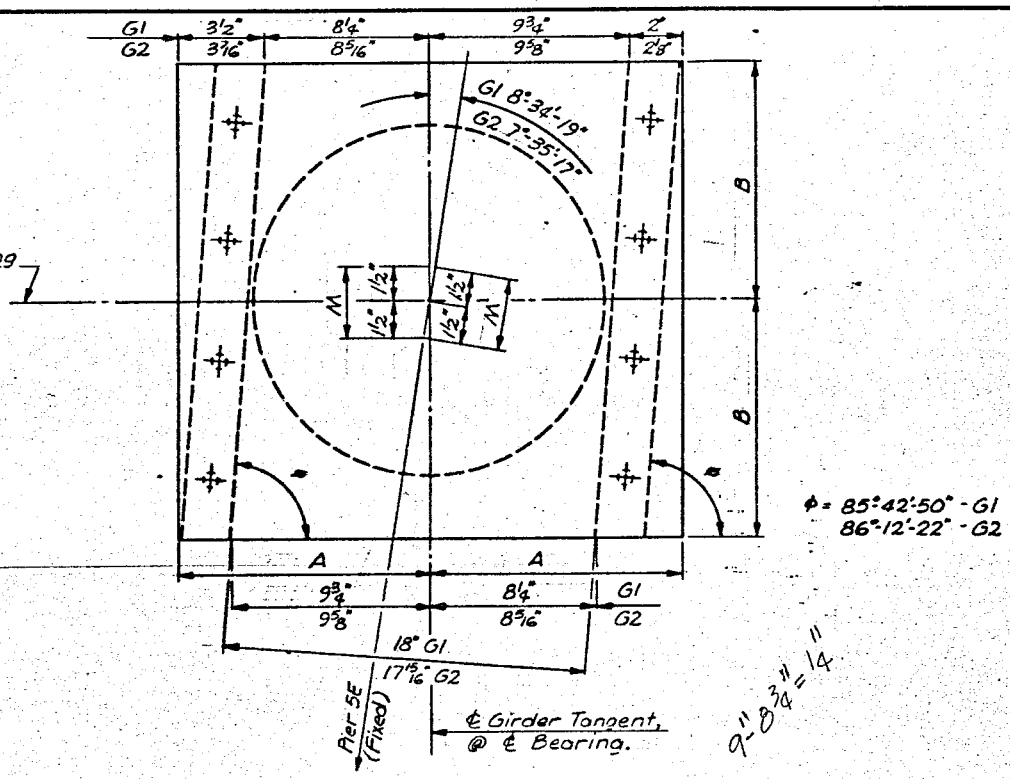
STRUCT TRUS
Mc C
OVER
F.A. ROUTE
PEORIA C

DESIGNED R.W.C
CHECKED C.R.N.
DRAWN D.A.N.
CHECKED R.W.C

SPRINGFIEL

Revisions 4-14-

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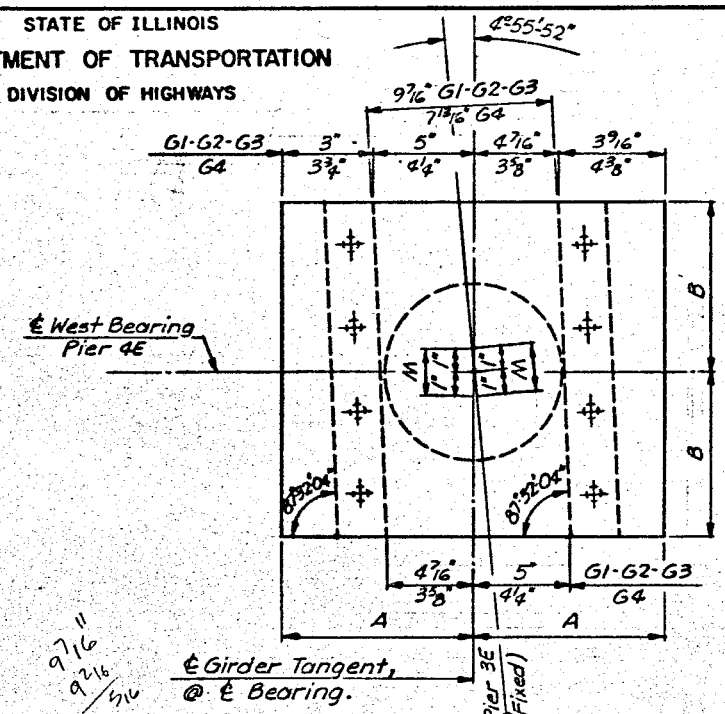


φ = 85°-42'-50" - G1
86°-12'-22" - G2

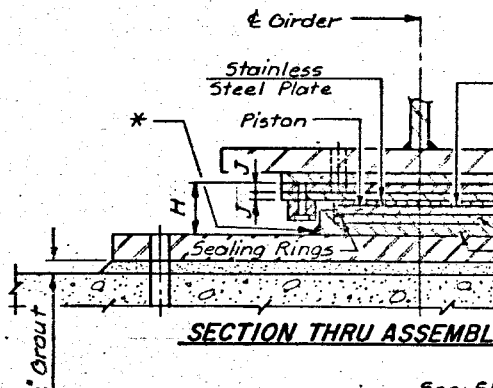
PLAN VIEW TOP PLATE AT PIER 4E EAST BEARINGS

GUIDED EXPANSION FLOATING BEARING
TABLE OF DIMENSIONS AT PIER 4E E. BRGS.

Capacity (Tons)	Location Support	Location Girder	Sole Pl Bevel	Dimensions A	B	H	J	L	M	I.D.	Spreader Pl t"	w"	l"	Top Bolts** A₁	B₁
300	E. Brg.	1	⅜"	11¾"	10"	5¼"	1"	8¾"	3"	14¾"	4½"	17½"	44"	9½"	7½"
300	Pier 4E	2	⅜"	11¾"	10"	5¼"	1"	8¾"	3"	14¾"	4½"	17½"	44"	9½"	7½"

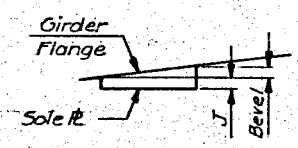


PLAN VIEW TOP PLATE AT PIER 4E WEST BEARINGS



SECTION THRU ASSEMBL

See Sh
locations

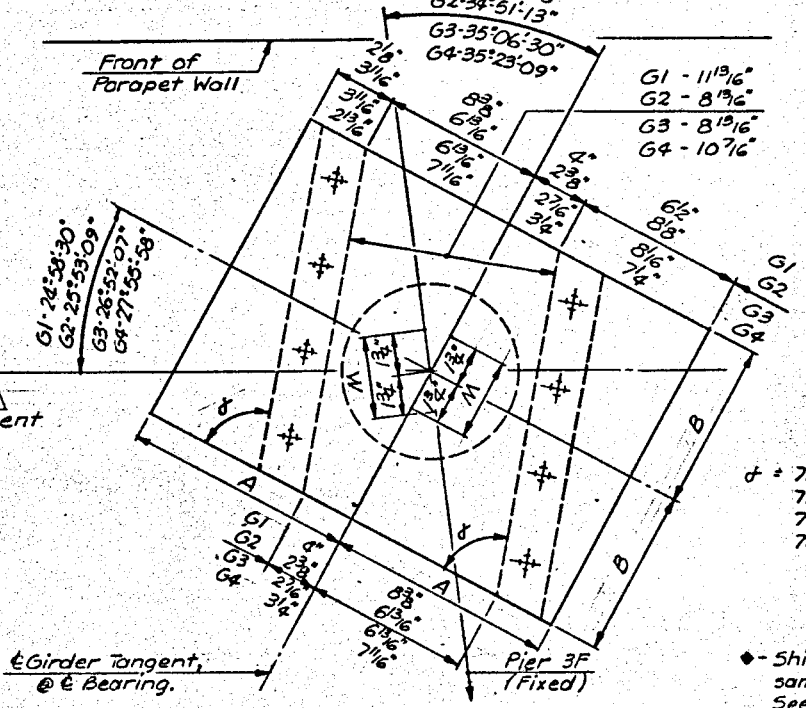


SIDE VIEW OF SOLE PLATE

C1. 5/32"

GUIDED EXPANSION FLOATING BEARING
TABLE OF DIMENSIONS AT PIER 4E W. BRGS.

Capacity (Tons)	Location Support	Location Girder	Sole Pl Bevel	Dimensions A	B	H	J	L	M	I.D.	Spreader Pl t"	w"	l"	Top Bolts** A₁	B₁
75	W. Brg	1,2 & 3	5/16"	8"	7"	3⅛"	⅝"	4⁹/₁₆"	2"	7⅜"	2½"	10"	26"	6¼"	5¼"
50	Pier 4E	4	5/16"	8"	7"	3"	⅝"	3¾"	2"	6"	2½"	10"	26"	6¼"	5¼"



γ = 72°-41'-26" - G1
72°-34'-24" - G2
72°-26'-45" - G3
72°-18'-26" - G4

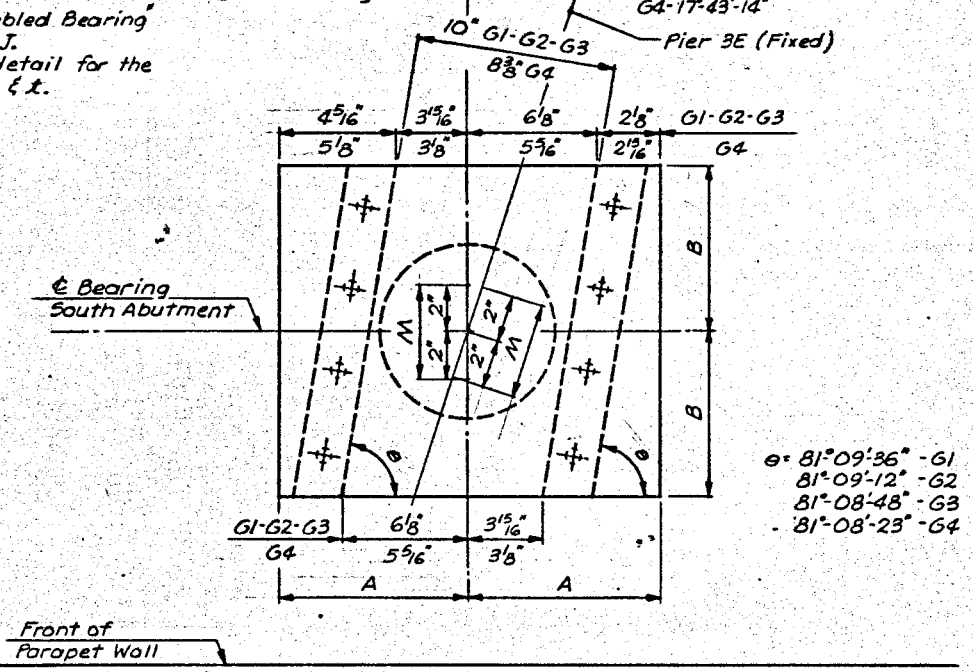
See "Typical Section thru Assembled Bearing" for the location of dimensions H & J.
See Base Pot & Spreader Plate detail for the location of dimensions L, I.D., l, w, & t.

◆ - Shim plate wide & length same as sole plate dimensions. See Plan View of Top Plate at North Abutment.

PLAN VIEW TOP PLATE AT NORTH ABUTMENT

GUIDED EXPANSION FLOATING BEARING
TABLE OF DIMENSIONS AT N. ABUT.

Capacity (Tons)	Location Support	Location Girder	Sole Pl Bevel	Dimensions A	B	H	J	L	M	I.D.	Spreader Pl t"	w"	l"	Top Bolts** A₁	B₁	Shim Pl t"	w"	l"
100	N. Abut	1	1/16"	10½"	7"	3¾"	¾"	5¼"	3½"	8⁹/₁₆"	3½"	11"	33½"	3½"	3¼"	¼"	◆	◆
50	N. Abut	2	1/16"	10½"	7"	3"	⅝"	3¾"	3½"	6"	2¼"	10"	33½"	3½"	3¼"	1⅜"	◆	◆
50	N. Abut.	3	1/16"	10½"	7"	3"	⅝"	3¾"	3½"	6"	2¼"	10"	33½"	3½"	3¼"	½"	◆	◆
75	N. Abut.	4	1/16"	10½"	7"	3⅛"	⅝"	4⁹/₁₆"	3½"	7⅜"	3"	10"	33½"	3½"	3¼"	¾"	◆	◆



θ = 81°-09'-36" - G1
81°-09'-12" - G2
81°-08'-48" - G3
81°-08'-23" - G4

PLAN VIEW TOP PLATE AT SOUTH ABUTMENT

GUIDED EXPANSION FLOATING BEARING
TABLE OF DIMENSIONS AT S. ABUT.

Capacity (Tons)	Location Support	Location Girder	Sole Pl Bevel	Dimensions A	B	H	J	L	M	I.D.	Spreader Pl t"	w"	l"	Top Bolts** A₁	B₁
75	South	1,2 & 3	7/16"	8¼"	7"	3⅛"	⅝"	4⁹/₁₆"	4"	7⅜"	2¾"	10"	26"	6¼"	5¼"
50	Abut.	4	7/16"	8¼"	7"	3"	⅝"	3¾"	4"	6"	2¾"	10"	26"	6¼"	5¼"

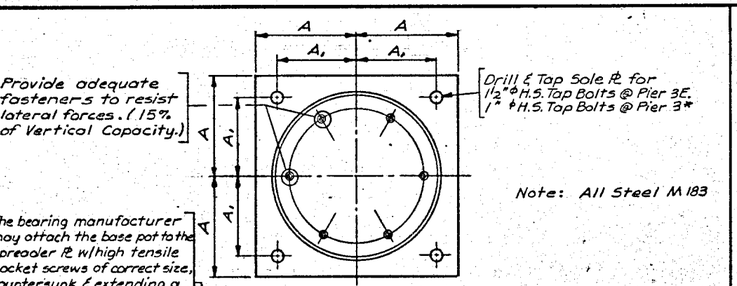
Bearing
tie downs
Capacity
after steel
* Bear
the base p
tensile so
sunk and
into the sp
the base p
** Top
Sheet 4/6
M = Tot
The bea
shop draw
before pro
bearings.
Bearings
epoxy quar
No load sha
grout has s
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On the
provide gui
resisting 3
So. Abut.
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BAS

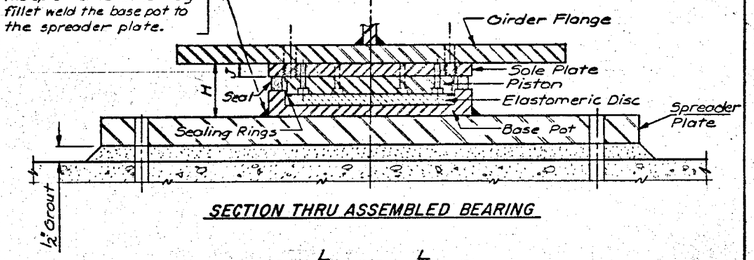
Nor
Sou
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C
F.A. RO
PEO

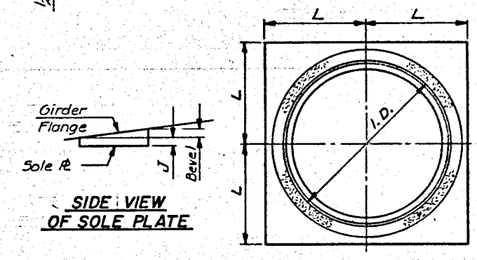
C.R.N.
S.C.O.
D.A.N.
S.C.O.



SOLE PLATE (INVERTED)



SECTION THRU ASSEMBLED BEARING



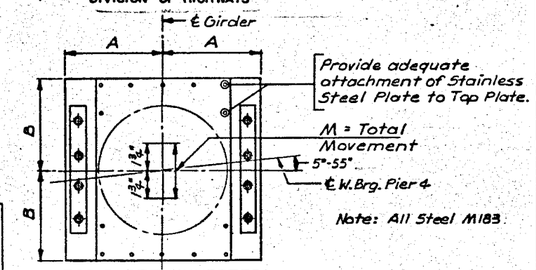
SIDE VIEW OF SOLE PLATE

BASE POT

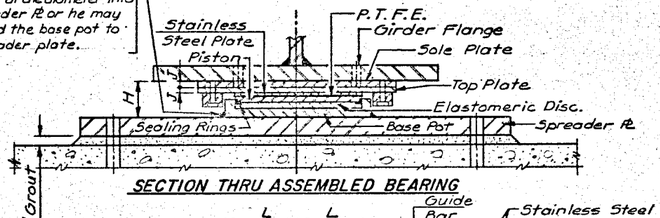
FIXED FLOATING BEARING TABLE OF DIMENSIONS											
Capacity (Tons)	Location		Sole Pl. Bevel	Dimensions					Spreader Pl.			**
	Support	Girder		A	H	J	L	I.D.	t"	w"	l"	A_1
100	Pier 3*	1	1/8"	5 1/4"	3"	7/8"	5 1/4"	8 3/16"	2 3/4"	15 1/4"	27 1/2"	3 1/2"
150	Pier 3*	4	1/8"	6 5/16"	3 7/16"	1"	6 5/16"	10 1/4"	2 3/4"	15 1/4"	27 1/2"	4 1/2"
200	Pier 3E	1, 3 & 4	5/16"	7 1/4"	3 1/2"	1"	7 1/4"	12 1/16"	3"	16"	32 1/2"	5 1/2"
225	Pier 3E	2	5/16"	7 5/8"	3 3/4"	1"	7 5/8"	12 3/16"	3"	16"	32 1/2"	5 3/4"
	Pier 3*	2 & 3	3/16"						2 3/4"	15 1/4"	27 1/2"	

FIXED FLOATING BEARING

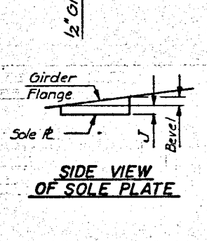
STATE OF ILLINOIS
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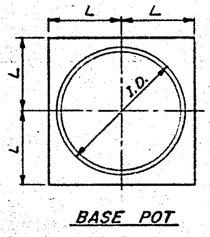
TOP PLATE (INVERTED)

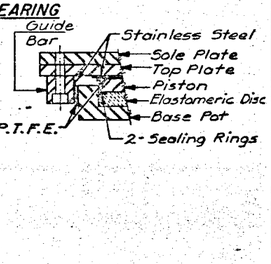


SECTION THRU ASSEMBLED BEARING



SIDE VIEW OF SOLE PLATE





BASE POT

GUIDED EXPANSION FLOATING BEARING TABLE OF DIMENSIONS																
Capacity (Tons)	Location		Sole Pl. Bevel	Dimensions								Spreader Pl.			**	
	Support	Girder		A	B	H	J	L	M	I.D.	t"	w"	l"	A_1	B_1
50	Pier 4*	1, 2, 3 & 4	3/16	5 7/16	5 3/4"	3"	5/8"	3 3/4"	3 1/2"	6"	2 1/2"	7 1/2"	23 1/2"	3 1/2"	3 1/4"

GUIDED EXPANSION FLOATING BEARING

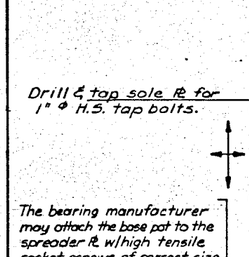
Provide adequate attachment of Stainless Steel Plate & Top Plate.

Drill & tap sole Pl. for 1" ϕ H.S. tap bolts.

N = Lateral Movement

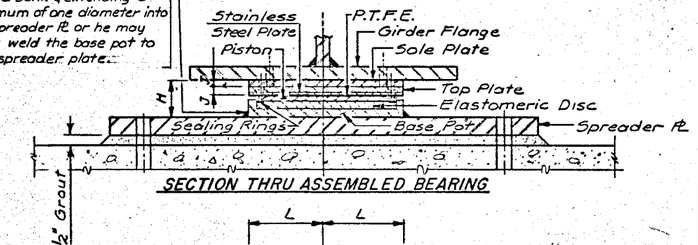
M = Total Movement

Note: All Steel M 183

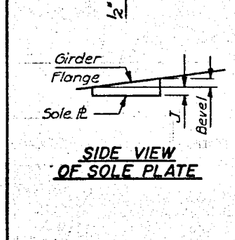


TOP PLATE (INVERTED)

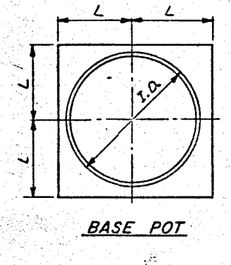
The bearing manufacturer may attach the base pot to the spreader Pl. w/high tensile socket screws of correct size, countersunk & extending a minimum of one diameter into the spreader Pl. or he may fillet weld the base pot to the spreader plate.



SECTION THRU ASSEMBLED BEARING



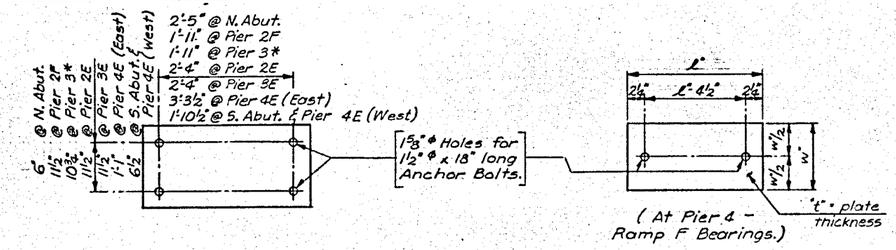
SIDE VIEW OF SOLE PLATE



BASE POT

NON-GUIDED EXPANSION FLOATING BEARING TABLE OF DIMENSIONS																
Capacity (Tons)	Location		Sole Pl. Bevel	Dimensions								Spreader Pl.			**	
	Support	Girder		A	B	H	J	L	M	N	I.D.	t"	w"	l"	A_1	B_1
175	Pier 2E	1	1/8"	7 5/8"	7 5/8"	4 3/16"	3/4"	6 3/4"	2"	2"	11 1/4"	3"	16"	32 1/2"	5 3/4"	5 3/4"
	Pier 2F	1	5/16"													
200	Pier 2E	3 & 4	1/8"	8"	8"	4 7/16"	7/8"	7 1/4"	2"	2"	12 1/16"	3"	16"	32 1/2"	6 1/4"	6 1/4"
	Pier 2F	2 & 4	3/8"													
225	Pier 2E	2	1/8"	8 3/8"	8 3/8"	4 5/8"	7/8"	7 5/8"	2"	2"	12 13/16"	3"	16"	32 1/2"	6 1/2"	6 1/2"
	Pier 2F	3	3/8"													

NON-GUIDED EXPANSION FLOATING BEARING



SPREADER PLATE DETAILS

Notes

Bearing manufacturer to provide temporary tie downs to resist uplift (10% of Vertical Capacity) during construction. To be removed after steel has been erected.

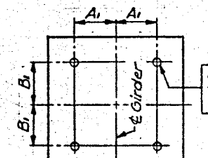
** Tap bolt hole locations on sole plate.

The bearing manufacturer shall submit shop drawings to the Engineer for approval before proceeding with the fabrication of the bearings.

Bearings shall be placed on a 1/2" thick bed of epoxy quarte sand grout and carefully levelled. No load shall be placed on the bearing until the grout has set and developed a minimum of 80% strength.

* Applies only to Ramp F Bearings.

On the Guided Expansion Floating Bearings provide guide bars and fasteners capable of resisting 35% of vertical capacity at the No. 4 Sa Abut. & 10% of vertical capacity at all other locations.



(At Pier 4 *, N. & S. Abut's, & East & West Brgs. Pier 4E.)

TAP BOLT HOLE LOCATIONS IN SOLE PLATE AT GUIDED EXPANSION FLOATING BEARING

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (FEE)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 46 of 134

FLOATING BEARINGS

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (FEE)
PEORIA & TAZEWELL COUNTIES

DESIGNED C.R.N.
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED S.C.O.

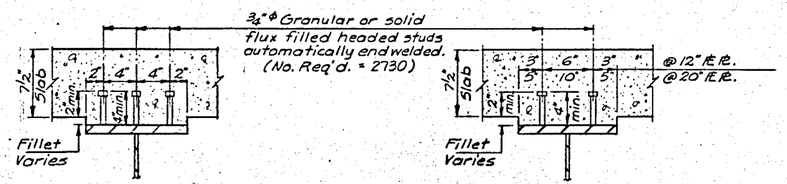
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

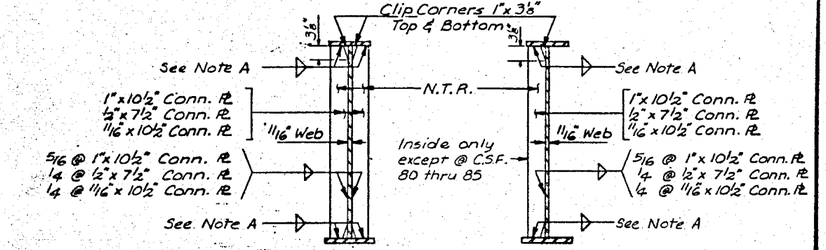
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 47 of 134



SHEAR STUDS
PIER 4 to SPLICE 1
SPLICE 2 to SPLICE 3
SPLICE 4 to N. ABUT.

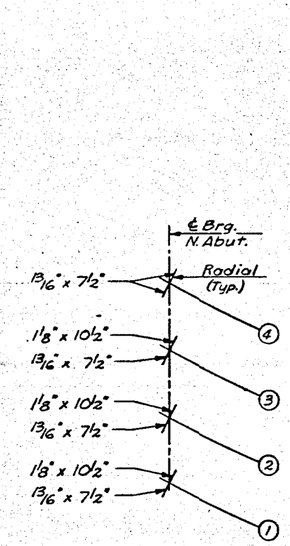
SHEAR STUDS
SPLICE 1 to SPLICE 2
SPLICE 3 to SPLICE 4



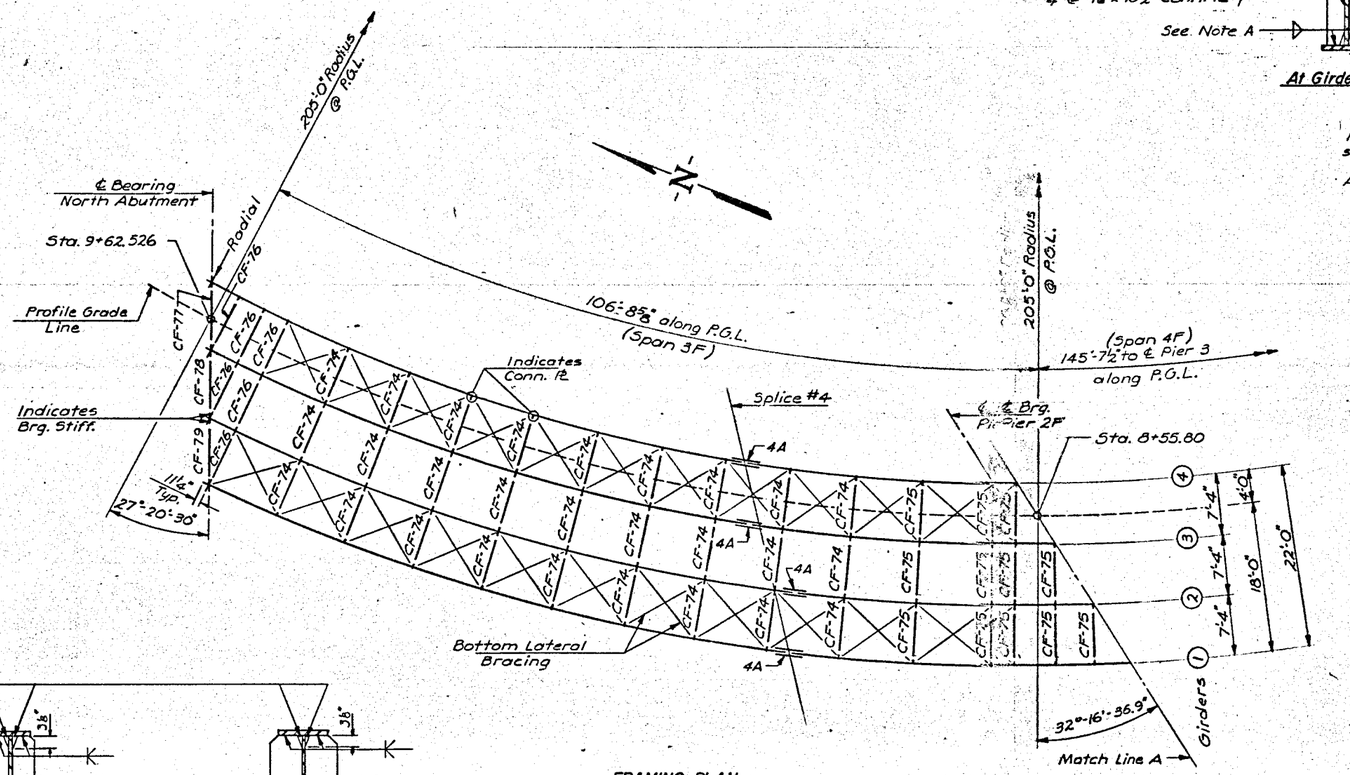
At Girders 2 & 3 **At Girders 1 & 4**

CONNECTING PLATES
For locations of Conn. Pl's see Ramp F - Girder Details.
All Conn. Pl's - M183 Steel

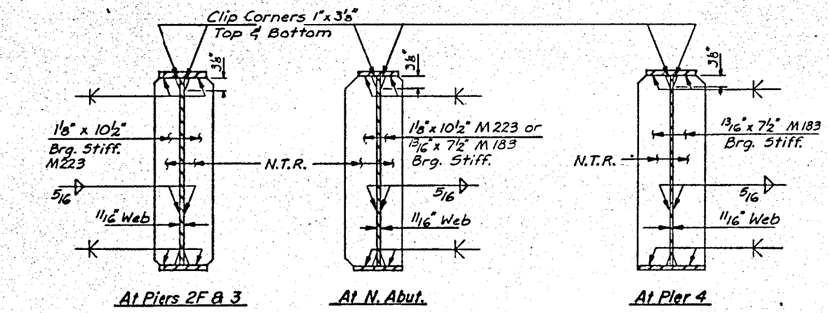
Note A:
9/16 @ 1" Conn Pl
5/16 @ ½" Conn Pl
3/8 @ 11/16" Conn Pl



BEARING STIFFENERS AT NORTH ABUTMENT



FRAMING PLAN
(Span 3F)



At Piers 2F & 3 **At N. Abut.** **At Pier 4**

BEARING STIFFENERS
For locations of Brg. Stiff's. see Ramp F - Girder Details.

Note: All dimensions shown are measured horizontally.

Note: See Sheet 52 to 72 of 134 for X & Y coordinates for girder layout.

STRUCTURAL STEEL FRAMING PLAN
RAMP F - SPAN 3F

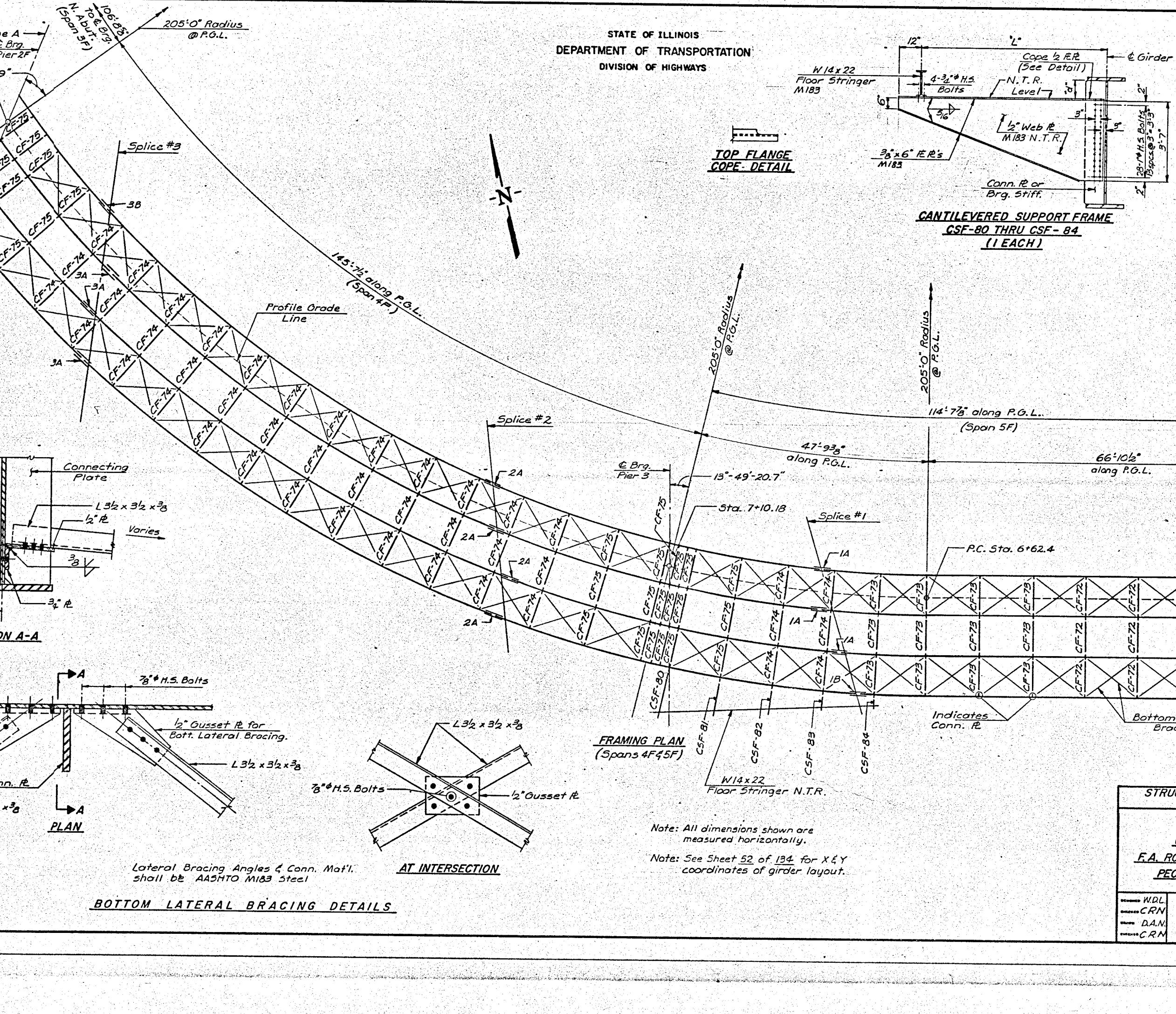
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 **SEC. 15-2(F&E)**
PEORIA & TAZEWELL COUNTIES

DESIGNED WDL
DETAILED CRN
CHECKED D.A.N.
DRAWN CRN

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

JOB NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



FRAMING PLAN
(Spans 4F & 5F)

TOP FLANGE COPE- DETAIL

CANTILEVERED SUPPORT FRAME
CSF-80 THRU CSF-84
(1 EACH)

ON A-A

PLAN

AT INTERSECTION

Lateral Bracing Angles & Conn. Mat'l. shall be AASHTO M183 Steel

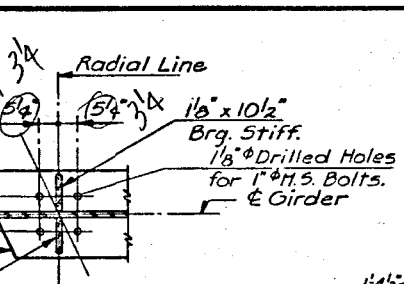
Note: All dimensions shown are measured horizontally.

Note: See Sheet 52 of 134 for X & Y coordinates of girder layout.

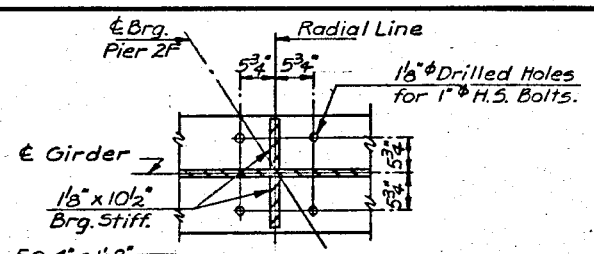
BOTTOM LATERAL BRACING DETAILS

STRUC
F.A. RO
PEO
W.D.L.
C.R.N.
D.A.N.
C.R.M.

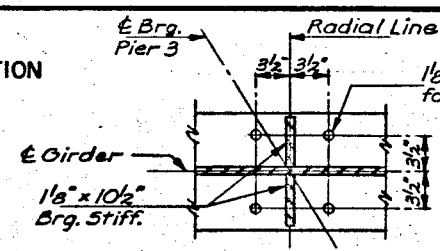
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



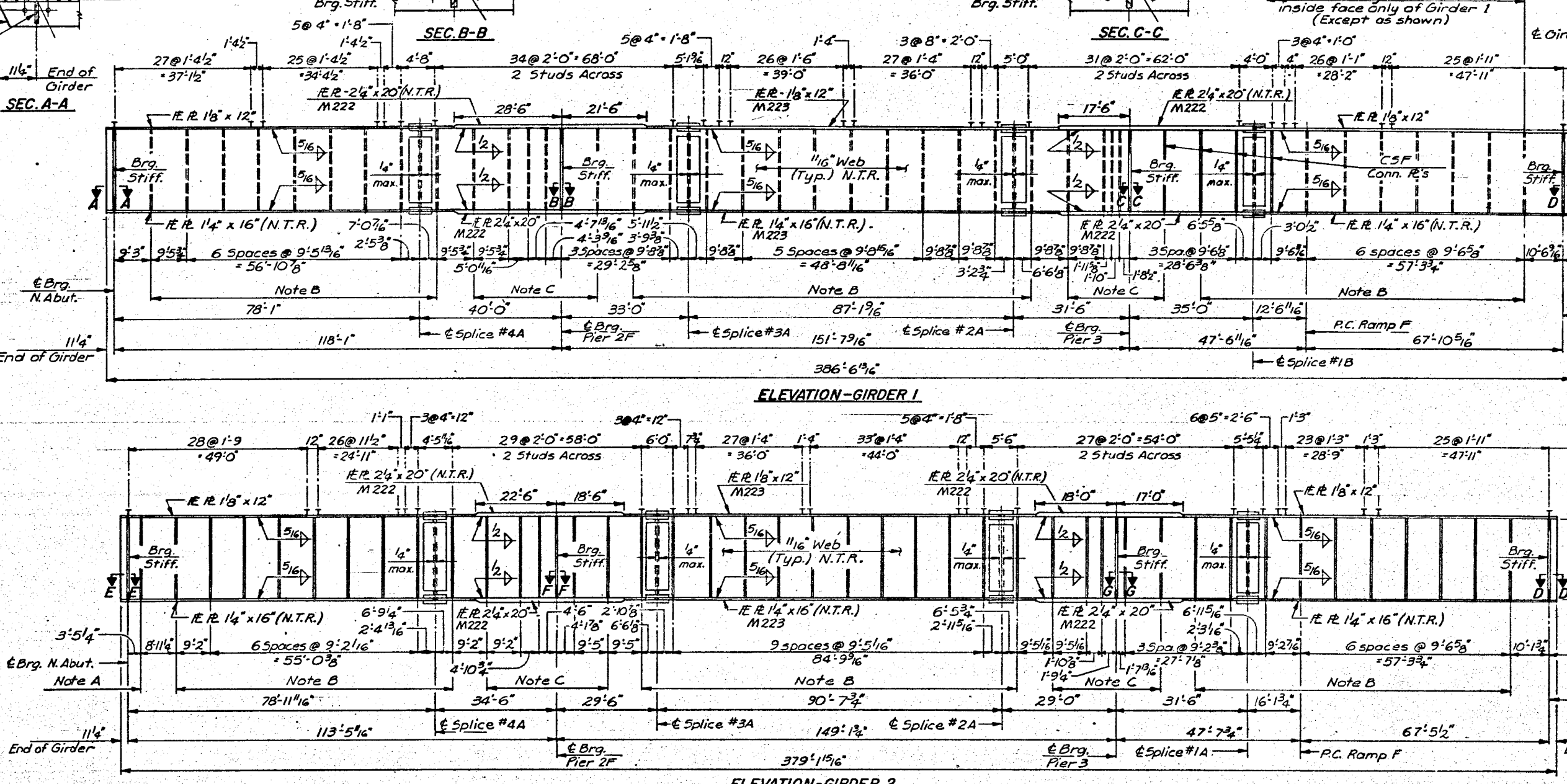
SEC. A-A



SEC. B-B

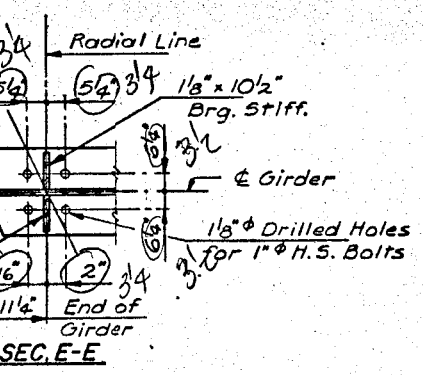


SEC. C-C

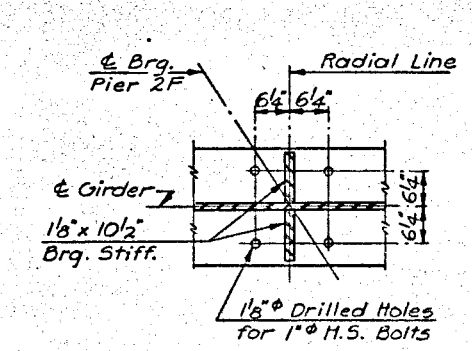


ELEVATION-GIRDER 1

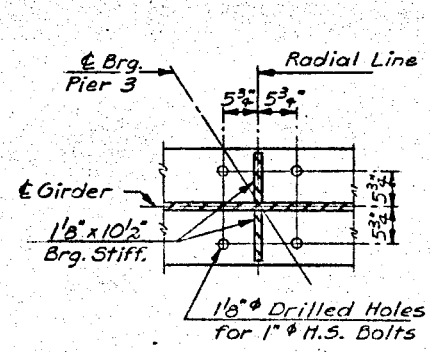
ELEVATION-GIRDER 2



SEC. E-E



SEC. F-F



SEC. G-G

Notes

All dimensions are measured along ℄ Girder.

N.T.R. refers to the Supplemental Requirements for Notch Toughness.

Note A: 1"x10½" Connecting Plates.

Note B: ½"x7½" Connecting Plates.

Note C: 11/16"x10½" Connecting Plates.

Steel Specifications this sheet shall be AASHTO M183 Steel unless otherwise noted.

All dimensions shown are measured horizontally.

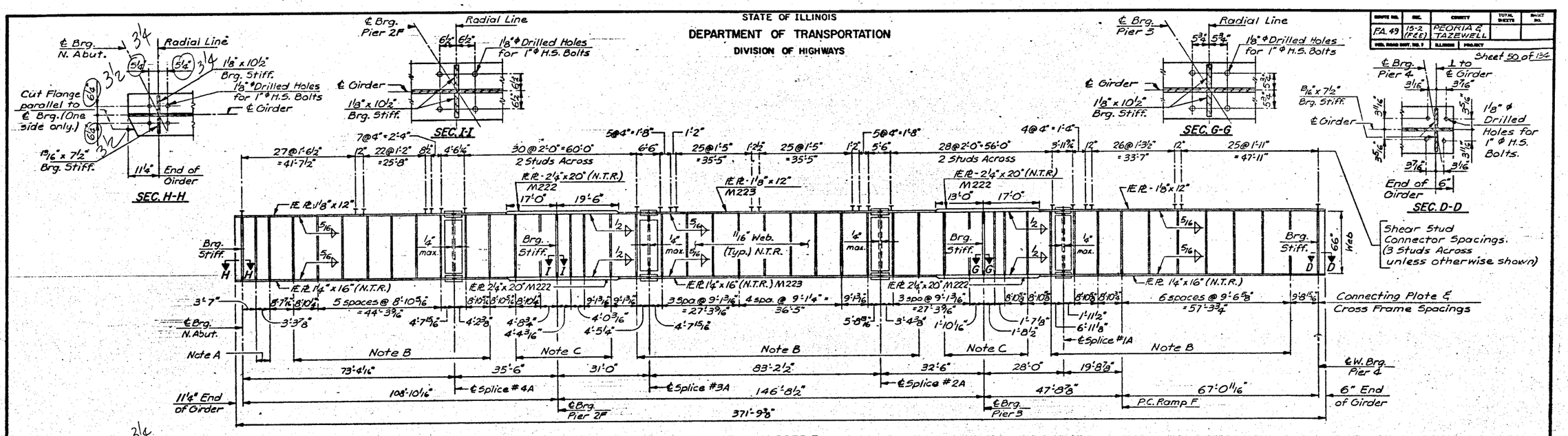
RAM
M
OVE
F.A. ROUT
PEORIA

W.DL
CRN
D.A.N.
CRN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

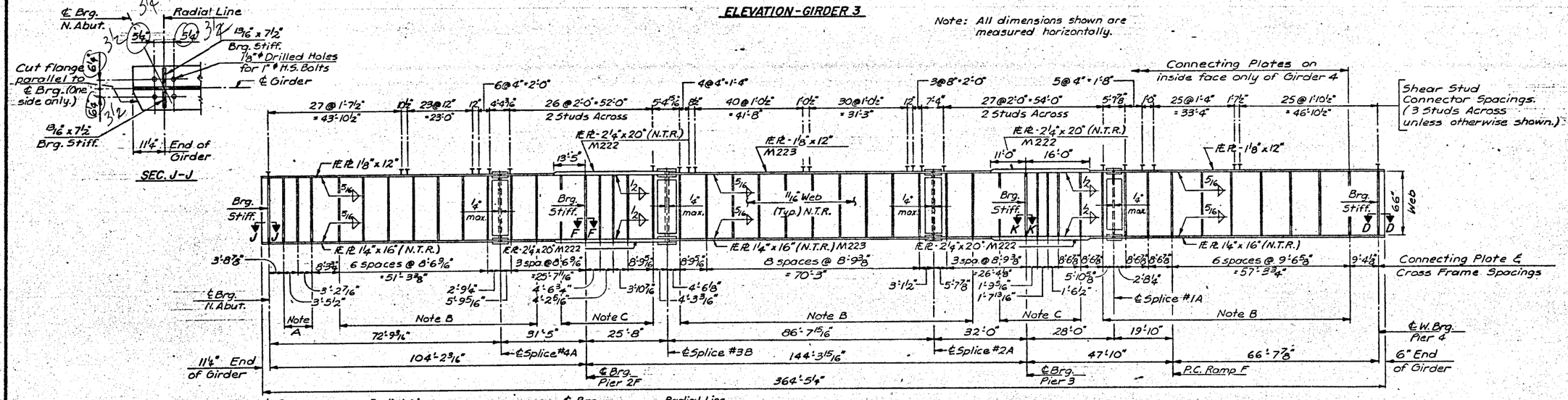
SHEET NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 5	ILLINOIS	PROJECT		

1 to Sheet 50 of 134

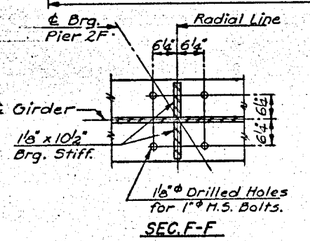


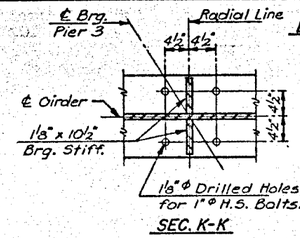
ELEVATION - GIRDER 3

Note: All dimensions shown are measured horizontally.



ELEVATION - GIRDER 4





Notes

All dimensions are measured along ℄ Girder.

N.T.R. refers to the Supplemental Requirements for Notch Toughness.

Note A: 1" x 10½" Connecting Plates.

Note B: ½" x 7½" Connecting Plates.

Note C: 11/16" x 10½" Connecting Plates.

Steel Specifications this sheet shall be AASHTO M183 Steel unless otherwise noted.

RAMP F - GIRDER DETAILS

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED N.D.L.	HANSON ENGINEERS INCORPORATED
CHECKED C.R.N.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS
DRAWN D.A.N.	FILE NO. 74001
CHECKED C.R.N.	DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

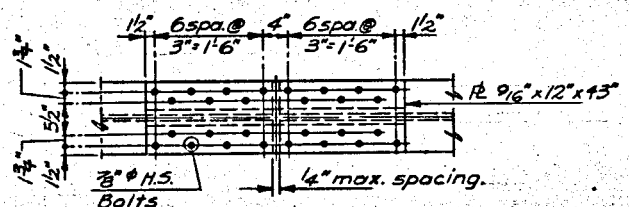
GIRDER I MOMENT TABLE

	0.4 Span 3F or Span 5F		Pier 2F or 3F	0.5 Span 4F	
	53,684		121,316	53,684	
)	77,988		——	77,988	
)	106,923		——	106,923	
	T. Fl.	B. Fl.		T. Fl.	B. Fl.
	1,455	1,706	3,442	1,455	1,706
)	2,657	1,999	——	2,657	1,999
)	5,245	2,228	——	5,424	2,228
	1.06		1.27	1.06	
	964	964	2,576	1,103	1,103
	7.95	6.78	8.98	9.10	7.76
	1.48	0.75	1.13	1.85	0.95
	0.20		0.20	0.20	
	204	204	490	257	257
	0.92	1.22	1.71	1.16	1.54
	0	0.25	0.20	0	0.31
	906	906	1,240	1,072	1,072
	226	226	310	269	269
)	1,132	1,132	1,550	1,341	1,341
	2.59	6.10	5.40	3.07	7.22
	0	0.92	0.61	0	0.99
si)	11.46	14.1	16.09	13.33	16.52
si)	12.94	16.02	18.03	15.18	18.77
ksi)	14.0	20.0	18.20	18.10	25.9
ksi)	20.0	20.0	26.50	25.9	25.9

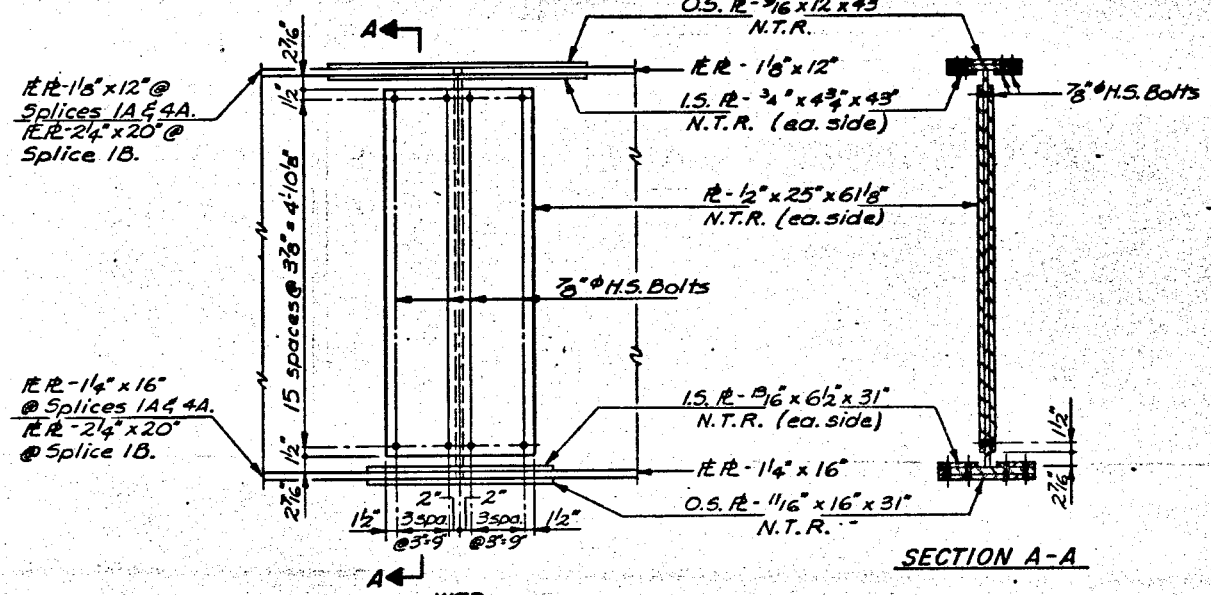
(Composite in Positive Moment Areas .)
re the moment of inertia and section ulus of the steel section.
re the moment of inertia and section ulus of the composite section used in puting f_s, N = 30 for Superimposed @ N=10 for 4.
rmal Stress due to Lateral Flange ding.

rder I has largest Moments and is for Table.

wable stress due to bending alone.
allowable stress due to bending and niform torsion (lateral flange bending).



TOP FLANGE

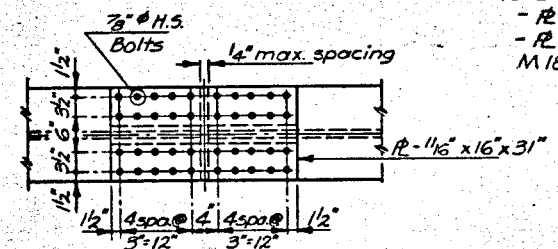


SECTION A-A

Note: Fill Pl. Req'd. @ Splice 1B
- Pl. - 1⅛" x 12" x 21 3/8" @ Top Flange.
- Pl. - 1" x 16" x 15 3/8" @ Bott. Flange.
M 183

Note: The designation N.T.R. signifies main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

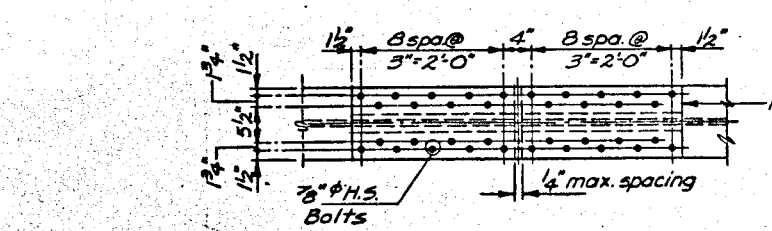
Type A Splice - No fill plates required.
Type B Splice - Flange fill plates required.



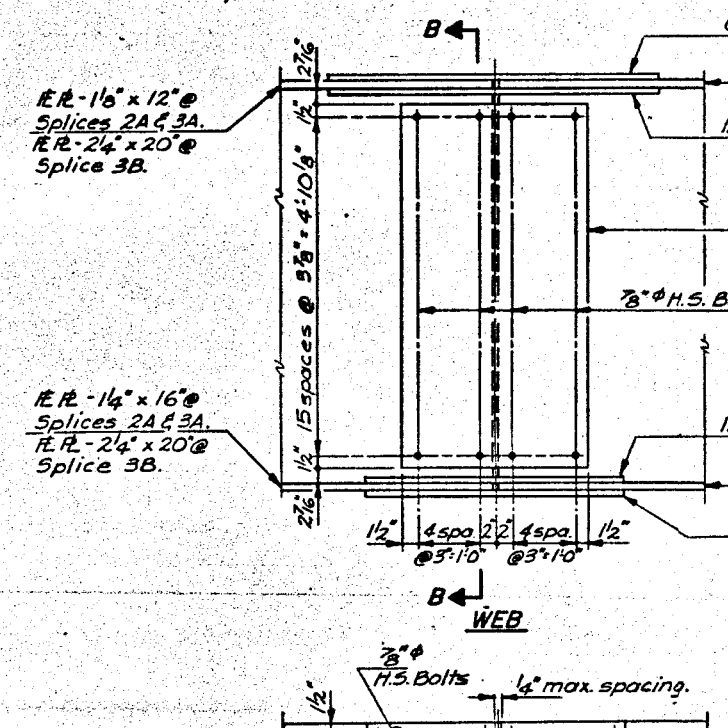
BOTTOM FLANGE

DETAIL OF SPLICE 1A, 1B & 4A

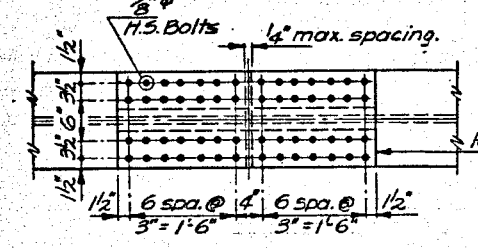
All Splice Pl's = AASHTO M 183 Steel.



TOP FLANGE



WEB



BOTTOM FLANGE

DETAIL OF SPLICE 2A, 3A & 3B

Flange Splice Pl's = AASHTO M 223 Steel
All other Splice Pl's = AASHTO M 183 Steel

REACTION TABLE

	N. Abut. Girders				Pier 2F Girders				Pier 3F Girders				Pier 4 (Ramp F Girders only.)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
)	75.3	20.4	15.9	47.2	119.2	178.1	204.4	169.6	64.5	225.5	220.1	156.5	40.1	41.3	43.0	45.5
)	14.5	5.1	3.7	8.6	26.1	29.9	33.6	31.5	12.9	42.9	40.8	25.9	7.9	8.3	8.5	9.2
	65.3	23.5	21.8	35.3	138.5	122.2	122.4	142.2	65.1	114.5	109.5	75.6	32.7	31.5	30.1	27.8
)	19.6	7.0	6.5	10.6	41.6	36.6	36.7	42.7	19.5	34.4	32.8	22.7	9.8	9.4	9.0	8.4
)	174.7	56.0	47.9	101.7	325.4	366.8	397.1	386.0	162.0	417.3	403.2	280.7	90.5	90.5	90.6	90.9

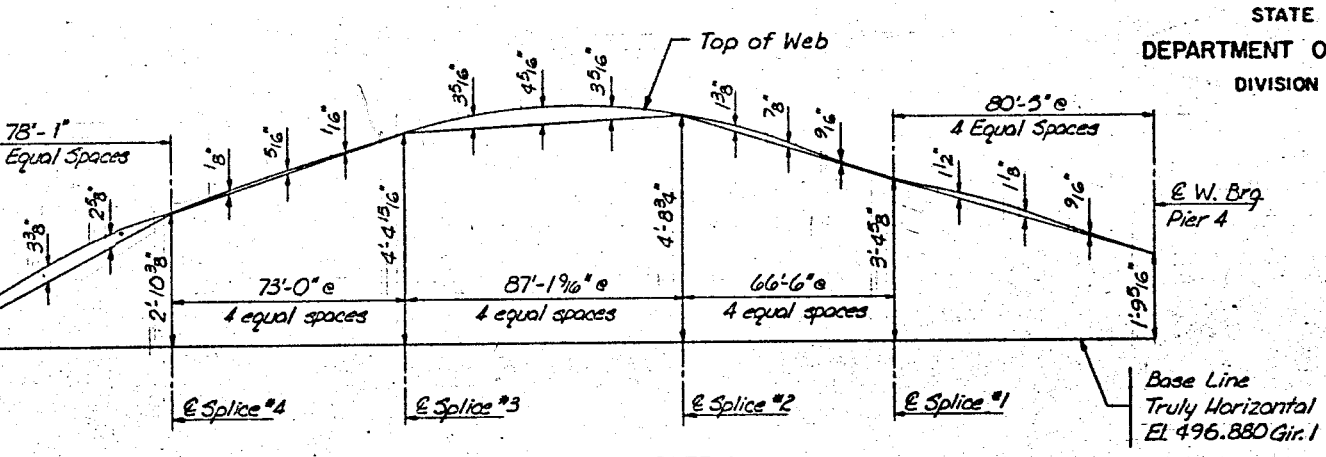
Reaction and Moment tables are based on a Dead Load of 25 #/sq.ft. of future Cl. I Surfacing & 94#/sq.ft. of concrete slab in addition to the weight of the structural steel.

SPLI

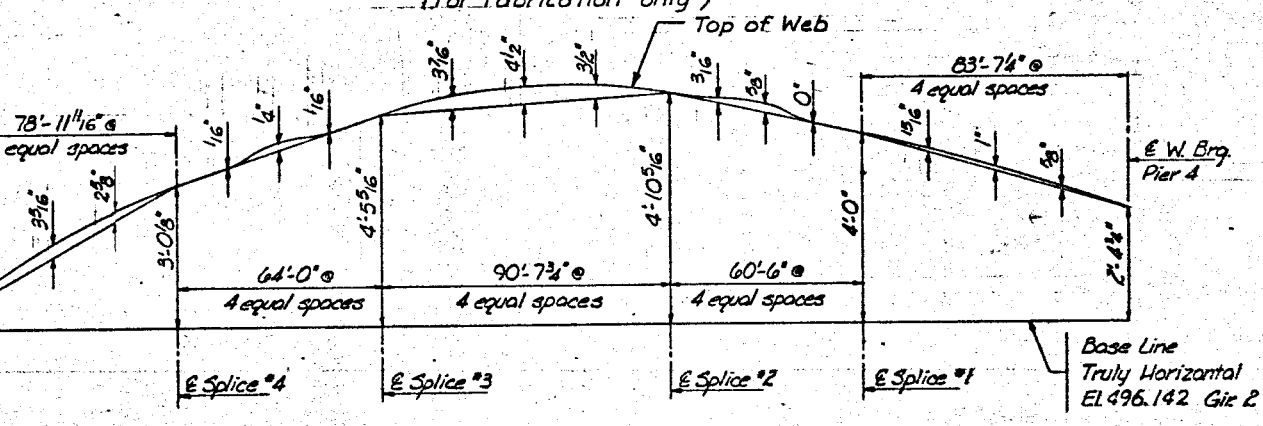
F.A.

WDL
C.R.N
D.A.
C.R.

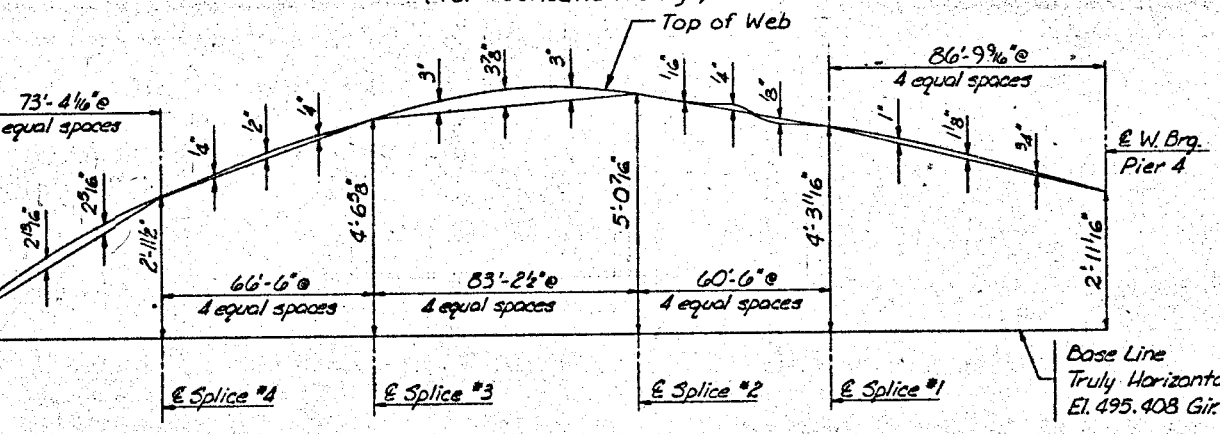
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



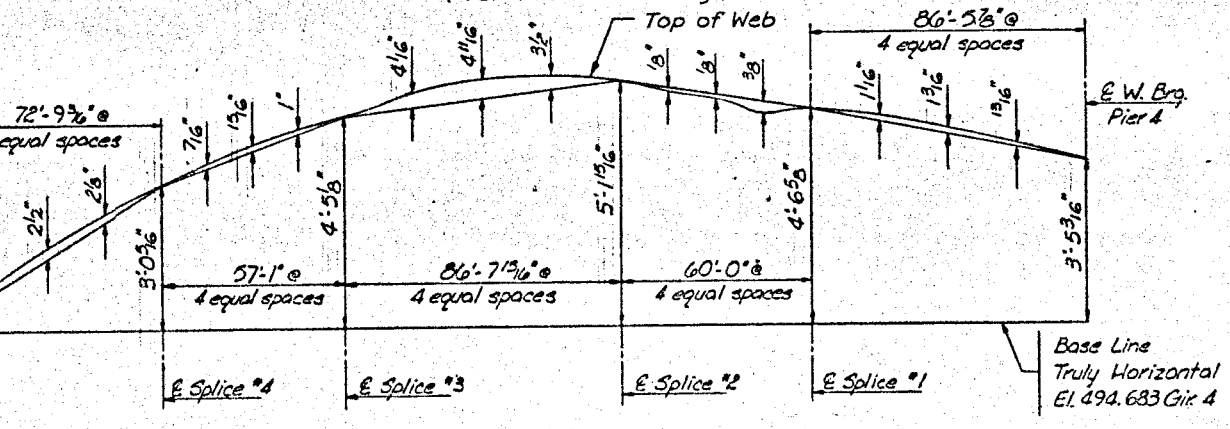
CAMBER DIAGRAM – GIRDER 1
(For Fabrication only)



CAMBER DIAGRAM – GIRDER 2
(For Fabrication only)



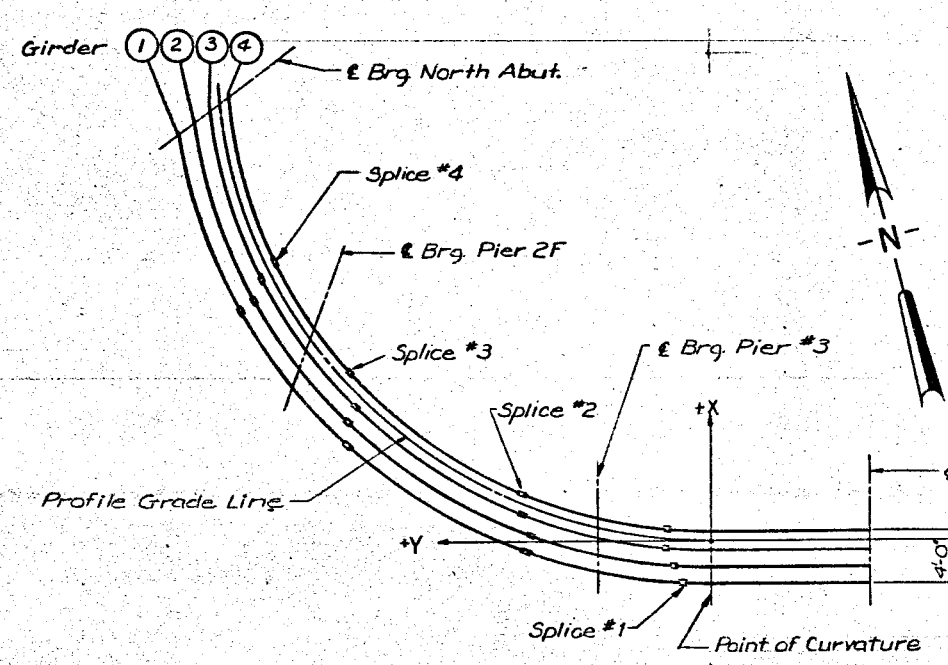
CAMBER DIAGRAM – GIRDER 3
(For Fabrication only)



CAMBER DIAGRAM – GIRDER 4
(For Fabrication only)

TOP OF WEB ELEVATIONS				
Location	Girder 1	Girder 2	Girder 3	Girder 4
N. Abut. Brg.	496.880	496.142	495.408	494.683
Splice #4	499.745	499.152	498.366	497.709
Pier 2F Brg.	500.610	499.937	499.253	498.555
Splice #3	501.292	500.585	499.960	499.110
Splice #2	501.609	501.001	500.445	499.845
Pier 3 Brg.	501.037	500.634	500.069	499.503
Splice #1	500.265	500.142	499.715	499.235
Pier 4, W. Brg.	498.656	498.537	498.328	498.116

Note: Elevations include camber for Dead Load deflection and are for fabrication only.



Note: All coordinates are measured horizontally.

PLAN-RAMP F

TABLE OF COORDINATES							
Location	Girder 1		Girder 2		Girder 3		Gir
	X	Y	X	Y	X	Y	X
Pt of Curvature	-18.000	0.000	-10.667	0.000	-3.333	0.000	4.00
Splice #1	-17.647	12.550	-10.063	16.130	-2.399	19.707	4.97
℄ Brg Pier 3	-12.948	47.197	-5.425	47.259	2.112	47.320	9.66
Splice #2	-4.133	77.411	2.810	75.042	11.928	78.268	19.64
Splice #3	41.109	151.224	51.027	151.011	57.560	147.187	69.10
℄ Brg. Pier 2F	65.197	173.736	73.057	170.596	81.010	167.419	89.07
Splice #4	98.437	195.891	101.915	189.435	111.196	186.020	116.04
℄ Brg. N Abut	172.094	220.559	176.571	213.785	181.084	206.956	185.63

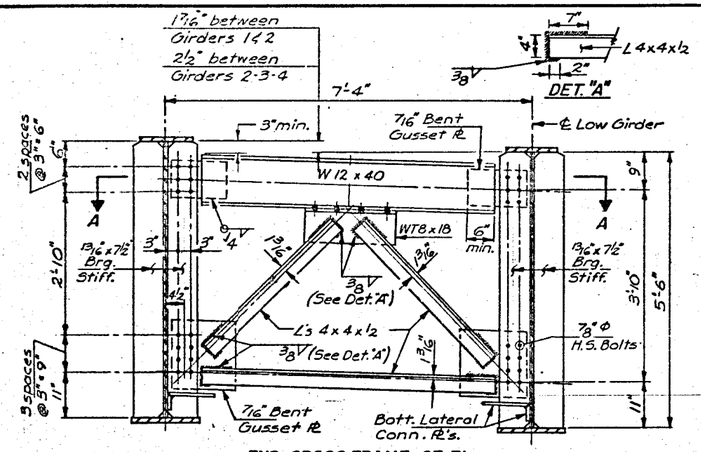
R
O
F.A. ROU
PEOR

W.D.L.
C.R.N.
R.J.F.
C.R.N.

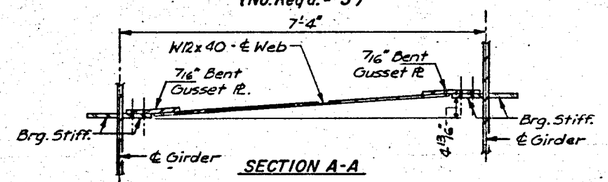
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.-47	15-2 (FEE)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 53 of 134

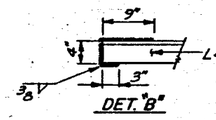


END CROSS FRAME CF-71
(No. Req'd. = 3)

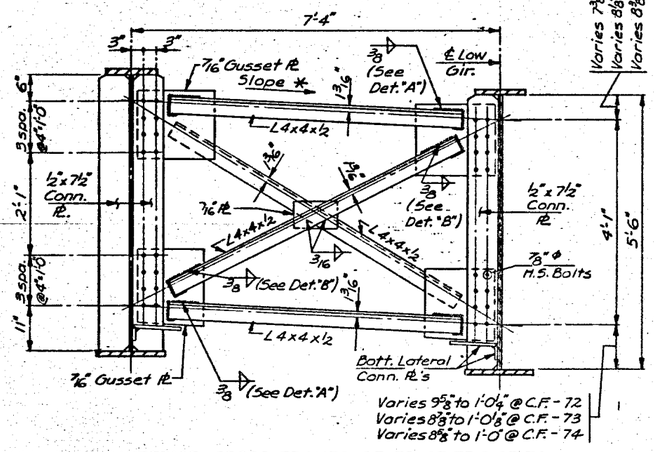


SECTION A-A

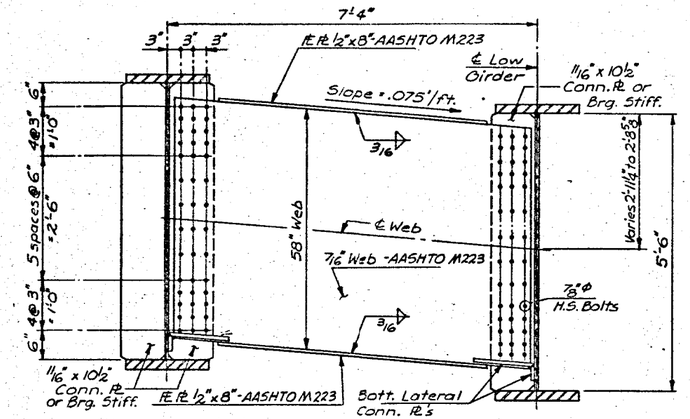
Note: 1" ϕ Holes in Brg. Stiff's. for 7/8" ϕ Bolts.
1 1/16" ϕ Holes in Gusset Pl's for 7/8" ϕ Bolts.
Hardened washers shall be required over holes in gusset Pl's.



* Slope = 0.033'/ft. @ C.F.-72
* Slope = 0.051'/ft. @ C.F.-73
* Slope = 0.068'/ft. @ C.F.-74



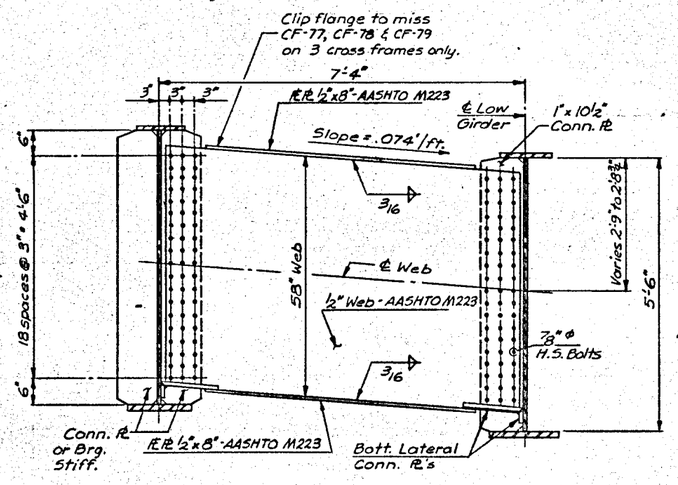
INTERIOR CROSS FRAMES CF-72, CF-73 & CF-74
(No. CF-72 Req'd. = 12)
(No. CF-73 Req'd. = 12)
(No. CF-74 Req'd. = 69)



INTERIOR CROSS FRAME CF-75
(No. Req'd. = 36)

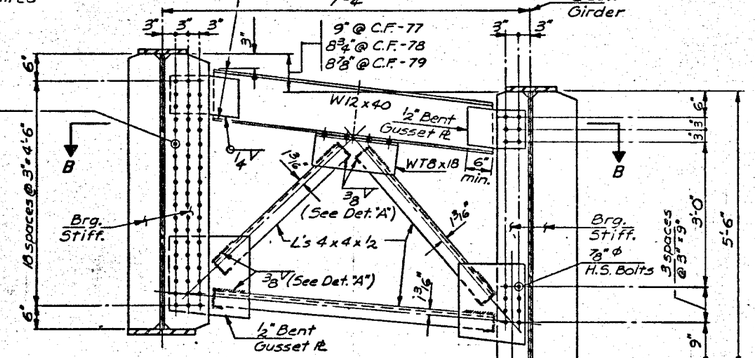
Note: 1" ϕ Holes in Pl Gir. Web for 7/8" ϕ Bolts.
1 1/16" ϕ Holes in Conn. Pl's for 7/8" ϕ Bolts.
Hardened washers shall be required over holes in conn. Pl's.

Note: 1" ϕ Holes in Conn. Pl's for 7/8" ϕ Bolts.
1 1/16" ϕ Holes in Gusset Pl's for 7/8" Bolts.
Hardened washers shall be required over holes in gusset Pl's.



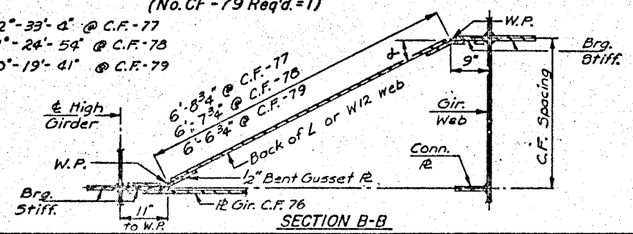
INTERIOR CROSS FRAME CF-76
(No. Req'd. = 6)

Note: 1" ϕ Holes in Pl Gir. Web for 7/8" ϕ Bolts.
1 1/16" ϕ Holes in Conn. Pl's for 7/8" ϕ Bolts.
Hardened washers shall be required over holes in conn. Pl's.



Note: 1" ϕ Holes in Brg. Stiff's for 7/8" ϕ Bolts.
1 1/16" ϕ Holes in Gusset Pl's for 7/8" ϕ Bolts.
Hardened washers shall be required over holes in gusset Pl's.

END CROSS FRAMES CF-77, CF-78 & CF-79
(No. CF-77 Req'd. = 1)
(No. CF-78 Req'd. = 1)
(No. CF-79 Req'd. = 1)



ϕ = 92°-33'-0" @ C.F.-77
ϕ = 31°-24'-54" @ C.F.-78
ϕ = 30°-19'-41" @ C.F.-79

6'-8 3/4" @ C.F.-77
6'-7 3/4" @ C.F.-78
6'-6 3/4" @ C.F.-79

SECTION B-B

Note: All Cross Frame material shown on this sheet shall conform to the Supplemental Requirements for Notch Toughness.

Note: All dimensions shown are measured horizontally.

Note: See sheets 47 & 48 of 134 for location of Bottom Lateral Bracing & the connection details.

Superelevation:
Attain Sta. 5+74.4 (.02'/ft.) to Sta. 7+06.40 (.08'/ft.)
Full Sta. 7+06.40 to Sta. 9+47.51 (.08'/ft.)
Remove Sta. 9+47.51 (.08'/ft.) to Sta. 10+79.51 (.02'/ft.)

Steel Specifications this sheet:
Cross Frames - AASHTO M 183
Bolts - AASHTO M 164
(Unless otherwise noted)

RAMP F - CROSS FRAMES

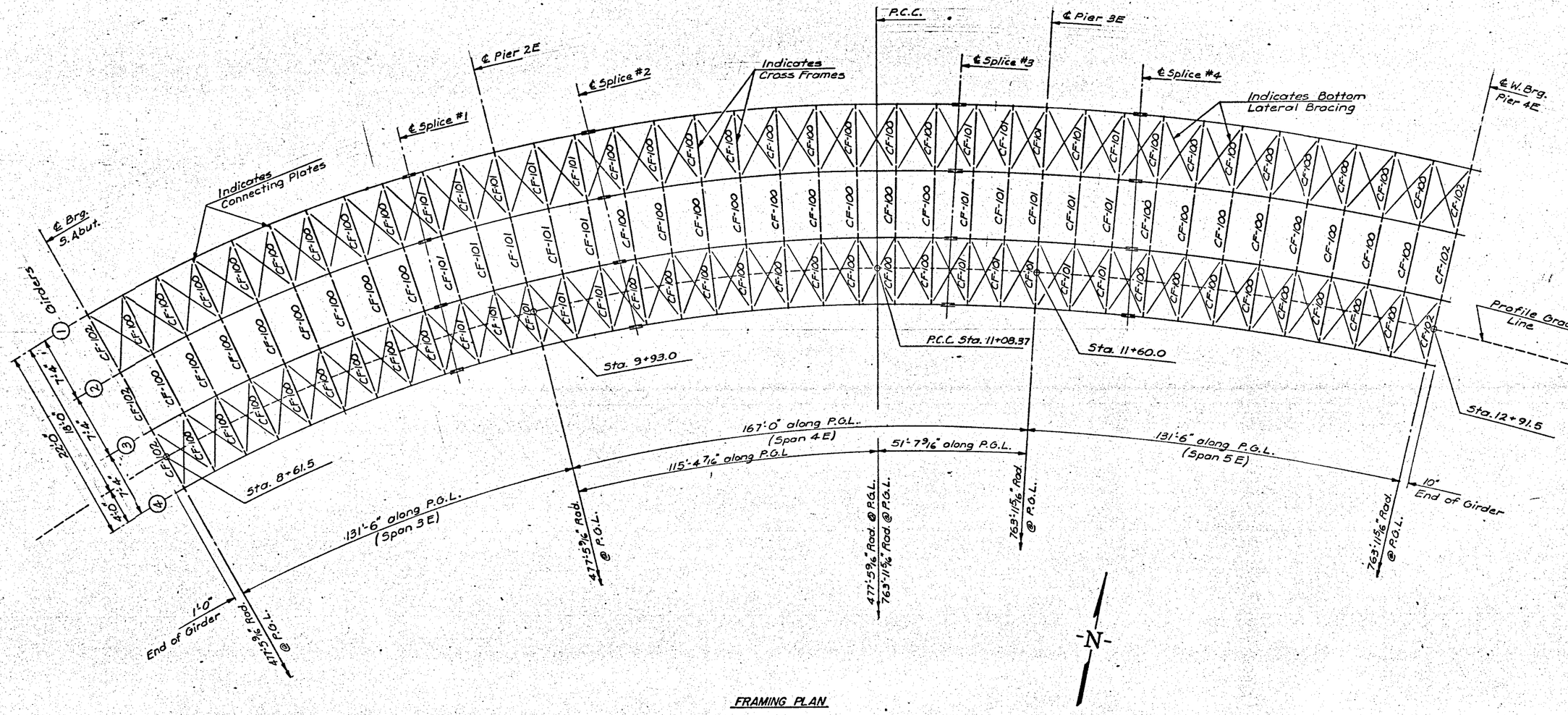
Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (FBE)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L. CHECKED C.R.N. DRAWN D.A.M. CHECKED C.R.M.	HANSON ENGINEERS INCORPORATED SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	FILE NO. 74001 DATE 11-2-79

ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (FBE)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 54 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



FRAMING PLAN

Note: All dimensions shown are measured horizontally.

Note: See Sheet 58 of 134 for X & Y coordinates of girder layout.

RAMP E - SPANS 3E, 4E & 5E
STRUCTURAL STEEL-FRAMING PLAN

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(FBE)
PEORIA & TAZEWELL COUNTIES

W.D.L.
S.C.D.
D.A.N.
R.W.C.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

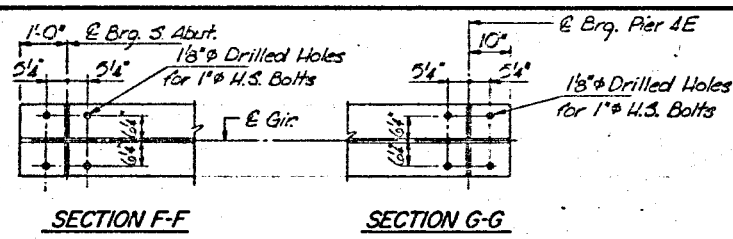
FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

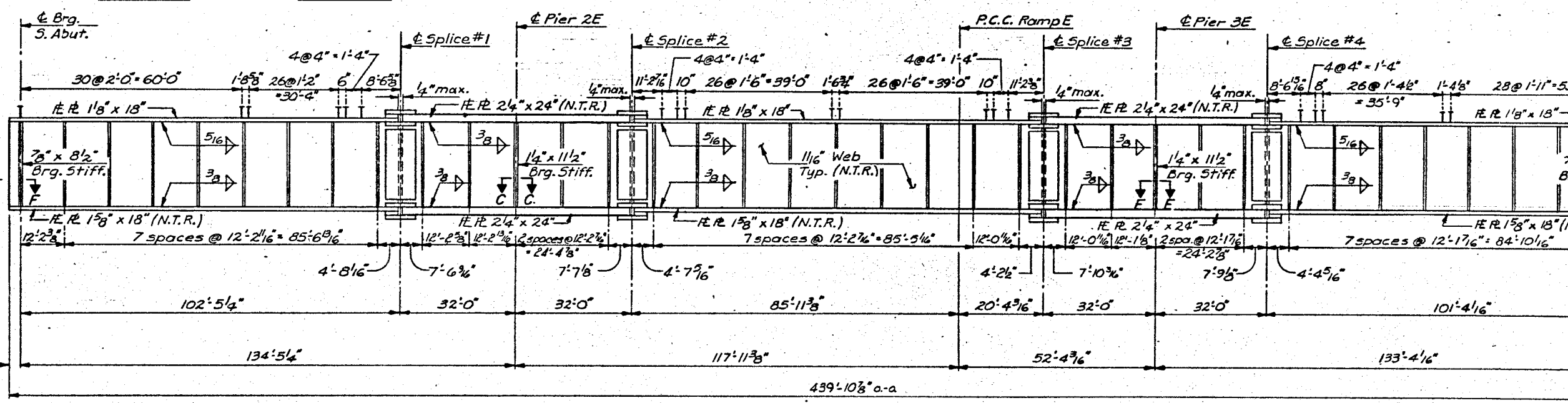
Note:
Steel Specifications this sheet
(Unless otherwise noted)

Flanges	1⅜" x 18"	AASHTO	M223
	1⅝" x 18"	AASHTO	M223
	2¼" x 24"	AASHTO	M222
Web	11/16" x 68"	AASHTO	M183
Bearing Stiffners —		AASHTO	M223

Note: All dime
horizon

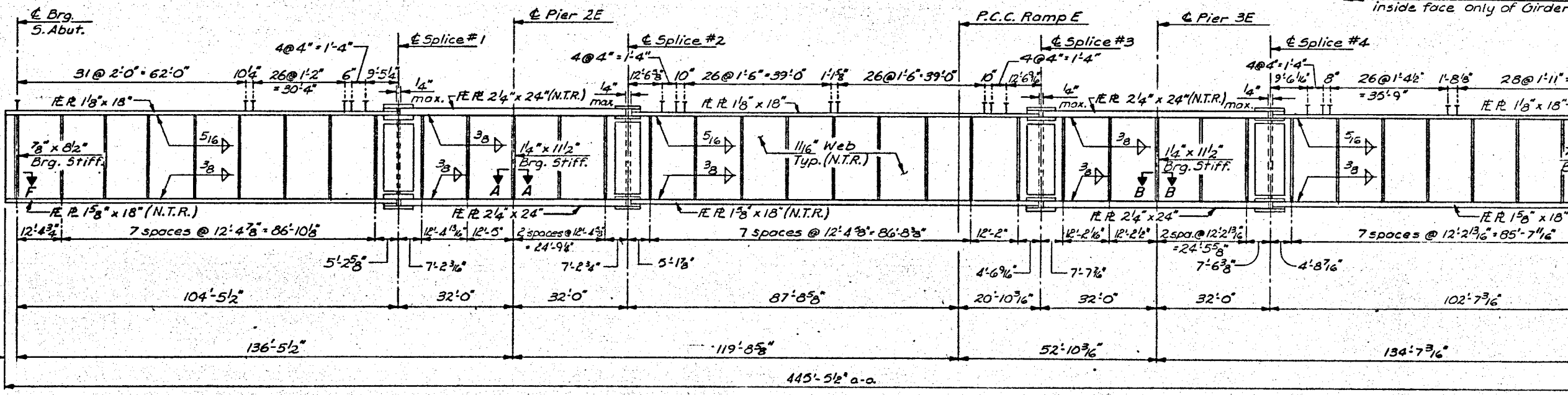


SECTION F-F SECTION G-G

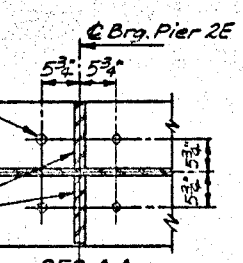


ELEVATION-GIRDER 2

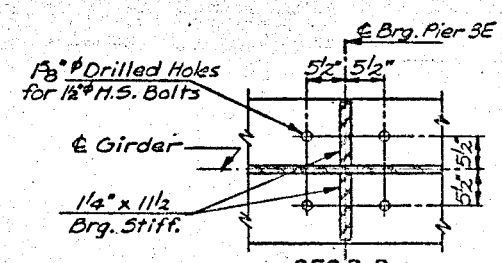
Connecting Plates on inside face only of Girder



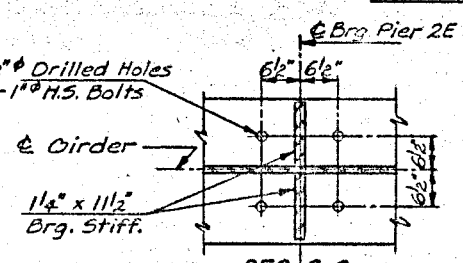
ELEVATION-GIRDER 1



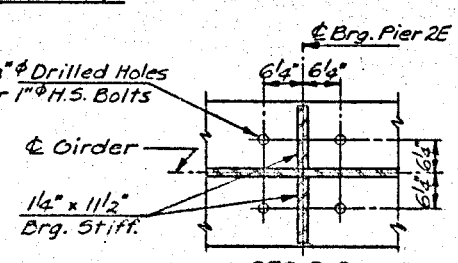
SEC. A-A



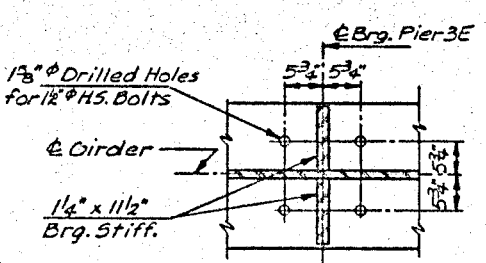
SEC. B-B



SEC. C-C



SEC. D-D



SEC. E-E

For location of Section D-D see Sheet 56 of 134.

RAM
M
OV
F.A. ROUT
PEORI

DESIGNED W.D.L.
CHECKED S.C.C.
DRAWN D.A.N.
CHECKED R.W.C.

Note:
Steel Specifications this sheet.
(Unless otherwise noted)

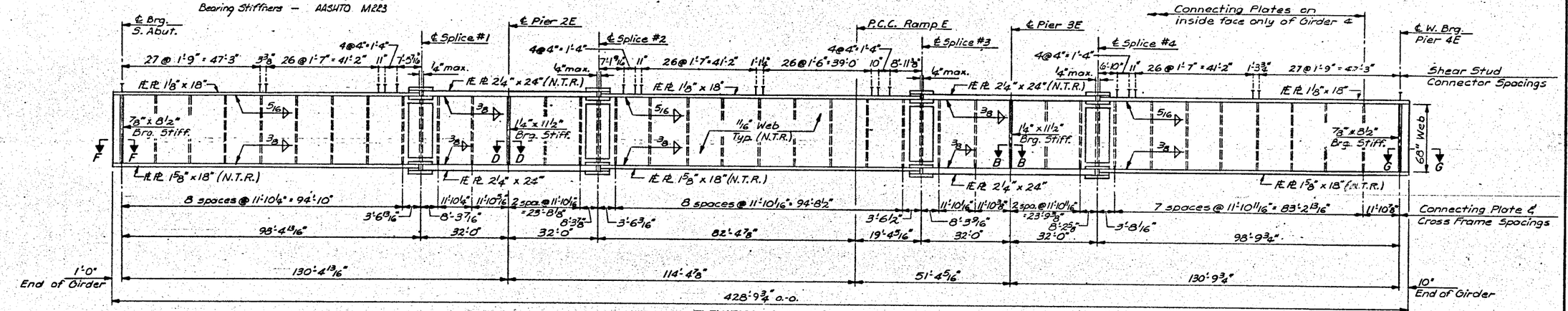
Flanges	16"x18"	AASHTO M223
	18"x18"	AASHTO M223
	24"x24"	AASHTO M222
Web	7/16"x68"	AASHTO M183
Bearing Stiffners	—	AASHTO M223

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

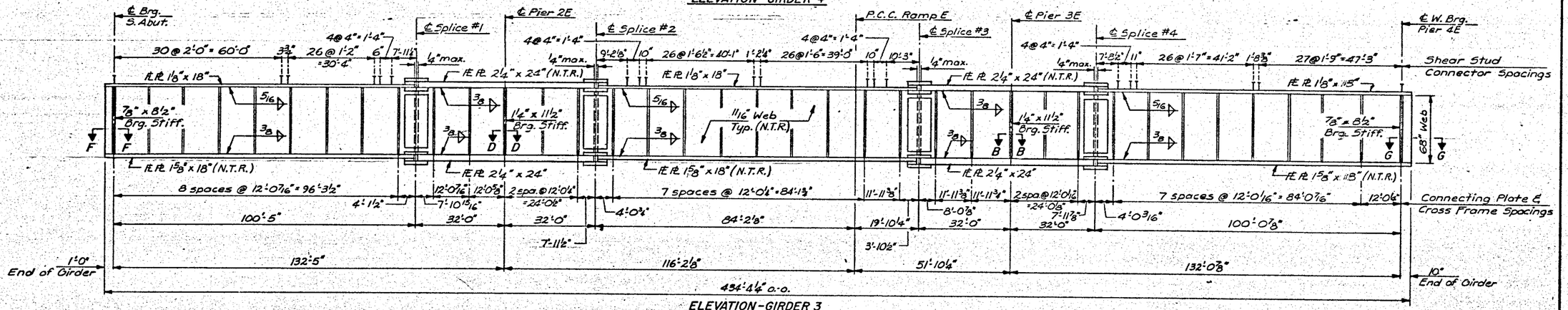
Note: For Sections B-B, D-D, F-F & G-G see Sheet 55 of 134.

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

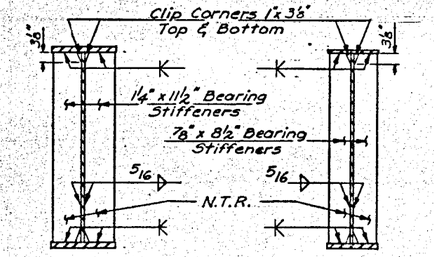
Sheet 56 of 134



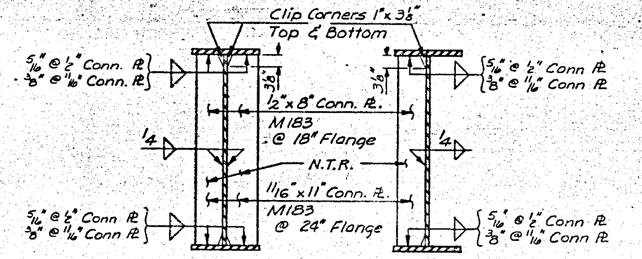
ELEVATION - GIRDER 4



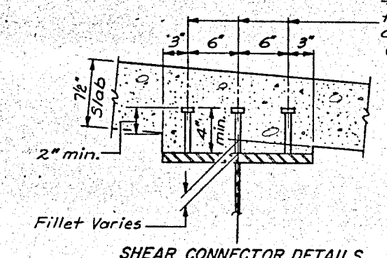
ELEVATION - GIRDER 3



BEARING STIFFENERS



CONNECTING PLATES



SHEAR CONNECTOR DETAILS

3/4" Φ Granular or solid flux filled headed studs automatically end welded. (No. Required = 2244)

Note: All dimensions shown are measured horizontally & along ℄ Girder.

GIRDER DETAILS
RAMP E - SPANS 3E, 4E & 5E

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED R.W.C.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (FAE)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 57 of 134

GIRDER I MOMENT TABLE

		0.4 Span 3E or Span 5E		Pier 2E or 3E	0.5 Span 4E	
I_S	($in.^4$)	76,608		151,306	76,608	
I_C N=30	($in.^4$)	104,961		——	104,961	
I_C N=10	($in.^4$)	141,358		——	141,358	
		T.Fl.	B.Fl.		T.Fl.	B.Fl.
S_S	($in.^3$)	1,993	2,370	4,174	1,993	2,370
S_C N=30	($in.^3$)	3,318	2,683	——	3,318	2,683
S_C N=10	($in.^3$)	6,169	2,955	——	6,169	2,955
℄	(K/Ft.)	1.20		1.40	1.20	
$M_{℄}$	(ft.K)	1,632		3,936	1,032	
$f_{S℄}$	(KSI)	9.82	8.26	11.32	6.21	5.22
$f_{W℄}$	(KSI)	2.16	1.50	1.28	1.37	0.95
$S_{℄}$	(K/Ft.)	0.55		0.55	0.55	
$M_{S℄}$	(ft.K)	861		1,575	787	
$f_{S℄}$	(KSI)	3.11	3.85	4.53	2.85	3.52
$f_{WS℄}$	(KSI)	0	0.78	0.50	0	0.72
M_L	(ft.K)	1,251		1,292	1,337	
M_{IMP}	(ft.K)	313		323	334	
M_{TOTAL}	(ft.K)	1,564		1,615	1,671	
f_{SL}	(KSI)	3.04	6.35	4.64	3.25	6.78
f_{WL}	(KSI)	0	1.46	0.51	0	1.55
f_S + W TOTAL	(KSI)	18.13	22.20	22.78	13.68	18.74
				B.Fl.		
F_B allowable	(KSI)	23.5		22.2	23.5	
$F_B + F_W$ allow	(KSI)	26.8	26.8	26.1	26.8	26.8
VR	(K)	70		——	67	

S Span (Composite in Positive Moment Areas Only.)
I_S & S_S are the moment of inertia and section modulus of the steel section.
I_C & S_C are the moment of inertia and section modulus of the composite section used in computing f_S, N=30 for superimposed ℄ and N=10 for L.
f_W is Normal stress due to Lateral Flange Bending.
VR is the maximum L + Impact Shear Range in the span used to determine shear connector spacing.
F_B allowable is the maximum allowable normal stress, tension or compression, in the extreme fibers of the member.
$F_B + F_W$ allowable is the maximum total stress allowed due to both normal bending and lateral flange bending stresses.

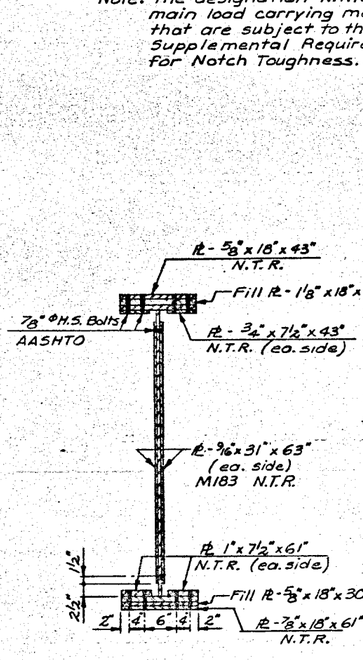
REACTION TABLE

	S. Abut. Girders				Pier 2E Girders				Pier 3E Girders				Pier 4E Girders *			
	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1
R ℄ (K)	40.0	50.3	58.4	68.5	243.2	222.9	241.7	191.3	232.4	219.7	233.1	205.6	45.7	51.9	56.9	63.2
R S℄ (K)	18.8	24.8	28.2	34.7	90.6	90.6	102.8	88.2	91.1	91.3	100.2	92.3	21.9	25.0	26.9	30.3
R L (K)	25.4	31.5	36.2	44.3	68.3	70.9	80.4	71.5	68.1	71.4	79.6	75.2	27.4	32.4	35.6	41.2
R IMP (K)	6.4	7.9	9.1	11.1	17.1	17.7	20.1	17.9	17.0	17.9	19.9	18.8	6.8	8.1	8.9	10.3
R TOTAL (K)	90.6	114.5	131.9	158.6	419.2	402.1	445.0	368.9	408.6	400.3	432.8	391.9	101.8	117.4	128.3	145.0

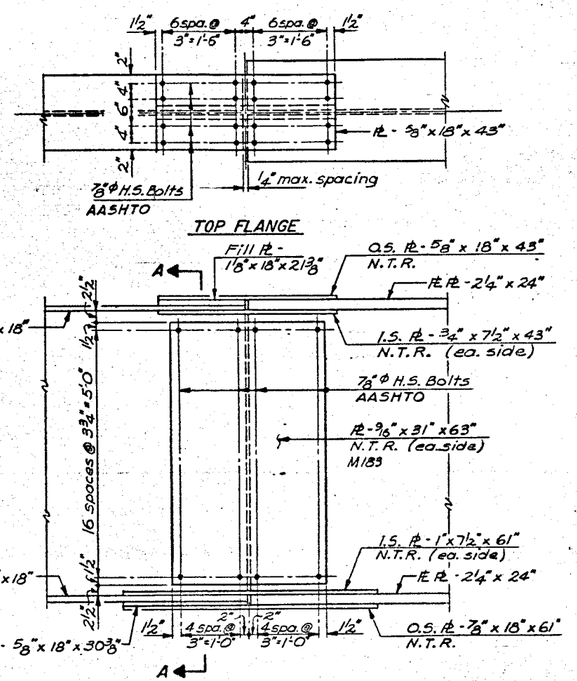
* Reactions are for West Brgs. only at Pier 4E.

Reaction and Moment tables are based on a Dead Load of 42.5 #/sq.ft of Cl.I surfacing & 94 #/sq. ft. of concrete slab in addition to the weight of the structural steel.

Note: The designation N.T.R. signifies main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.



SECTION A-A



Steel Specifications this sheet:
Splice Pl's. - AASHTO M 223
Bolts - AASHTO M 164
Unless otherwise noted.

STRUCTURAL STEEL DETAILS
RAMP E - SPANS 3E, 4E & 5E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(FAE)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED P.W.C.

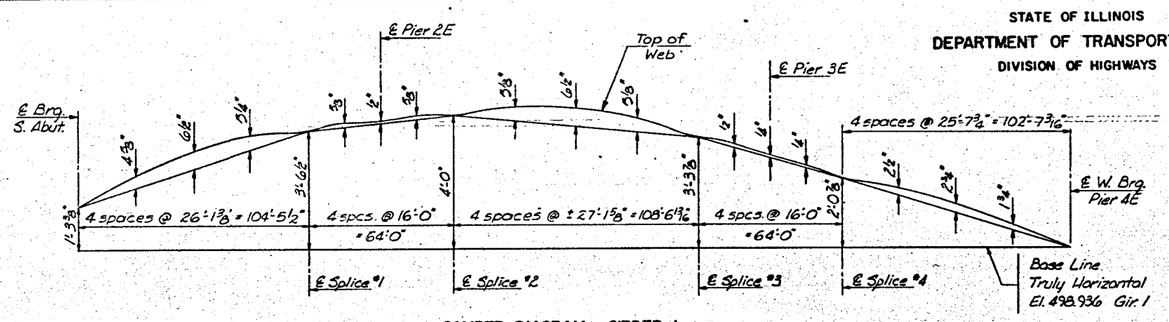
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

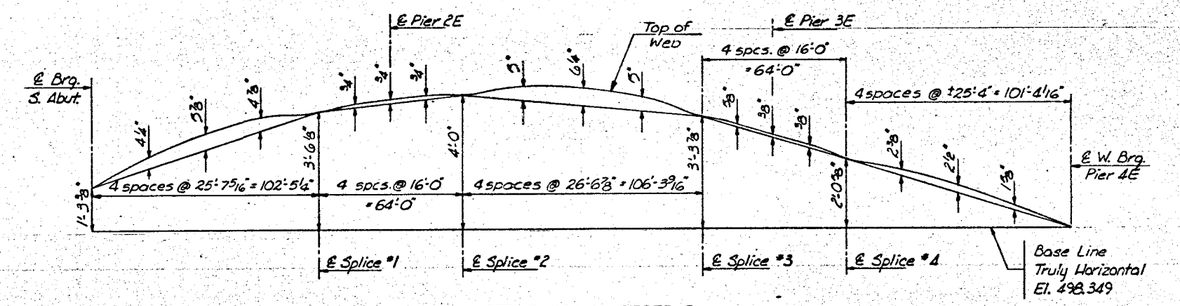
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2(F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

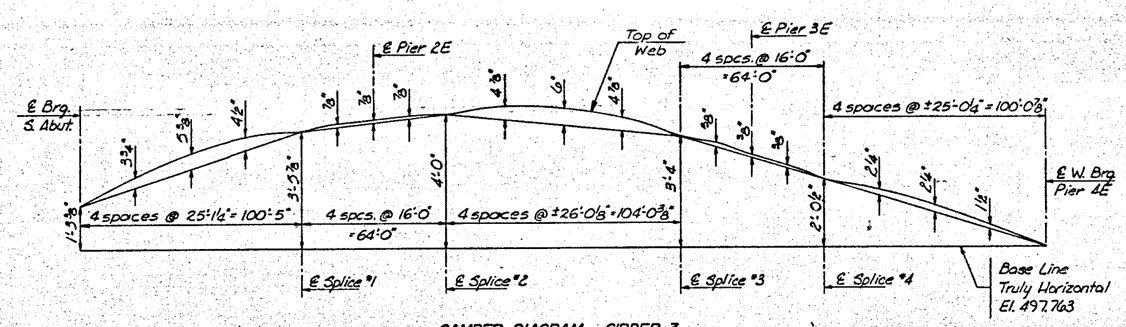
Sheet 58 of 134



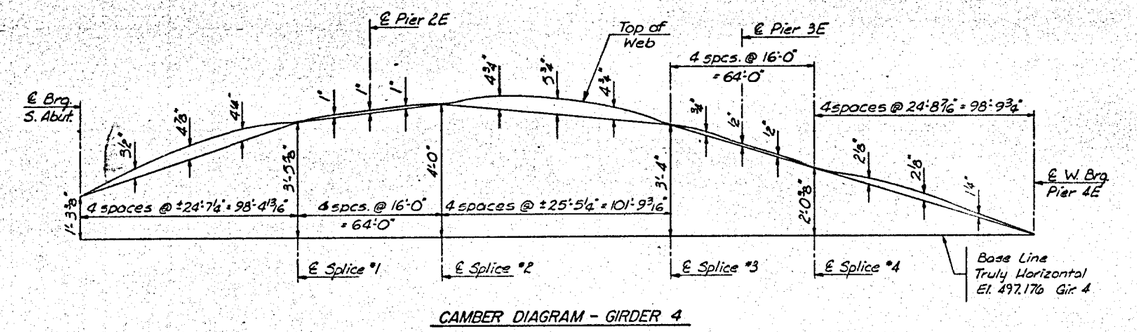
CAMBER DIAGRAM – GIRDER 1



CAMBER DIAGRAM – GIRDER 2



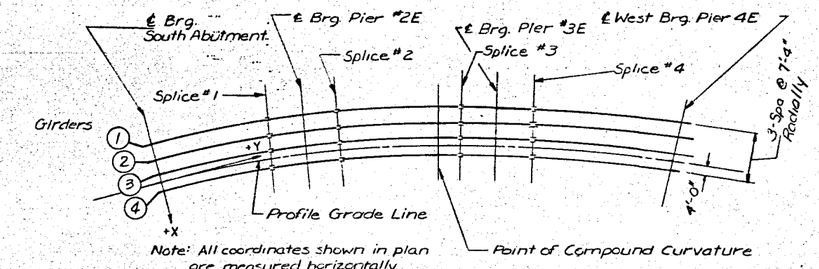
CAMBER DIAGRAM – GIRDER 3



CAMBER DIAGRAM – GIRDER 4

TOP OF WEB ELEVATIONS				
Location	Girder 1	Girder 2	Girder 3	Girder 4
S. Abut. Brg.	500.217	499.630	499.044	498.457
Splice #1	502.478	501.859	501.253	500.645
Pier 2E Brg.	502.751	502.164	501.578	500.991
Splice #2	502.936	502.349	501.763	501.176
Splice #3	502.259	501.672	501.096	500.509
Pier 3E Brg.	501.656	501.069	500.483	499.896
Splice #4	501.009	500.401	499.805	499.207
Pier 4E, W. Brg.	498.936	498.349	497.763	497.176

Note: Elevations include camber for Dead Load deflection and are for fabrication only.



Note: All coordinates shown in plan are measured horizontally

PLAN-RAMP E

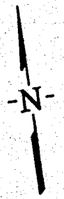


TABLE OF COORDINATES								
Location	Girder 4		Girder 3		Girder 2		Girder 1	
	Y	Y	X	Y	X	Y	X	Y
℄ Brg. S. Abut	4.000	0.000	-3.333	0.000	-10.667	0.000	-18.000	0.000
℄ Splice #1	14.188	97.692	7.115	99.690	0.042	101.688	-7.030	103.685
℄ Brg. Pier 2E	21.844	128.756	14.787	130.750	7.729	132.745	0.673	134.739
℄ Splice #2	31.579	159.233	24.507	161.232	17.434	163.232	10.363	165.231
Pr of Com Curv.	65.889	234.039	59.515	237.664	53.139	241.290	46.765	244.914
℄ Splice #3	75.672	250.745	69.552	254.795	63.430	258.846	57.310	262.896
℄ Brg. Pier 3E	92.766	277.794	86.651	281.841	80.535	285.889	74.419	289.936
℄ Splice #4	110.983	304.100	104.862	308.130	98.741	312.202	92.621	316.252
℄ W. Brg Pier 4E	173.968	380.144	168.637	385.179	163.305	390.214	157.973	395.249

RAMP E - SPANS 3E, 4E & 5E
CAMBER DIAGRAMS

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.
CHECKED R.W.C
DRAWN R.L.F
CHECKED W.D.L.

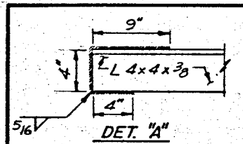
HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA, ILLINOIS

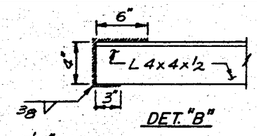
FILE NO. 74001
DATE 11-2-79

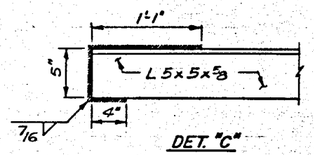
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

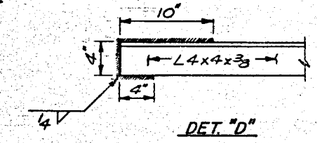
ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

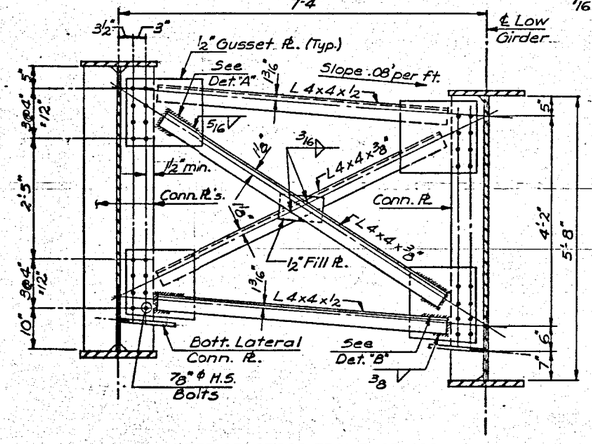
Sheet 59 of 134





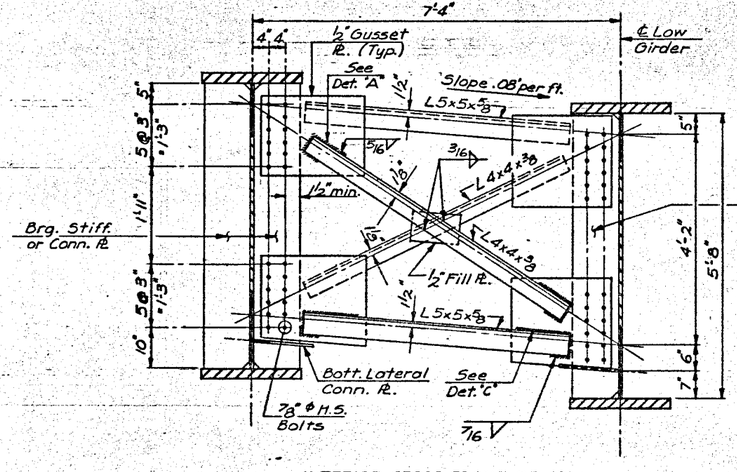






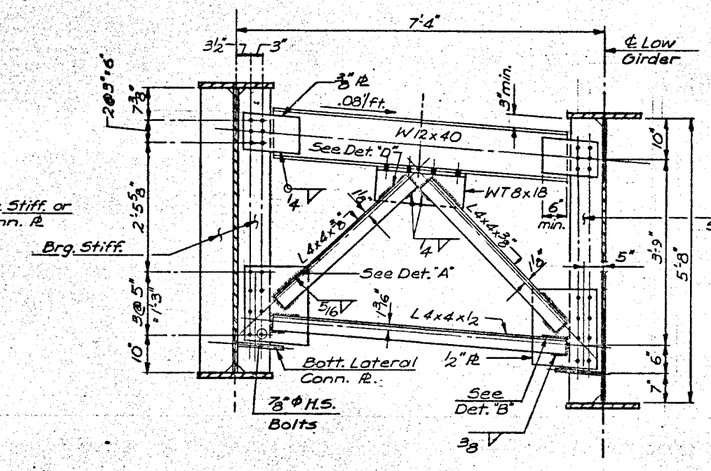
INTERIOR CROSS FRAME CF-100
(No. Req'd. = 75)

Note: 1 1/16" ϕ holes in gusset Pl's for 7/8" ϕ bolts. Hardened washers shall be required over holes in gusset Pl's. Bottom Lateral Connection Pl required as shown on Steel Framing Plan.



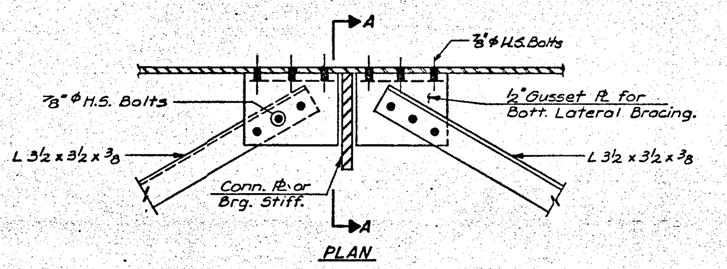
INTERIOR CROSS FRAME CF-101
(No. Req'd = 30)

Note: 1 1/16" ϕ holes in gusset Pl's for 7/8" ϕ bolts. Hardened washers shall be required over holes in gusset Pl's. Bottom Lateral Connection Pl required as shown on Steel Framing Plan.

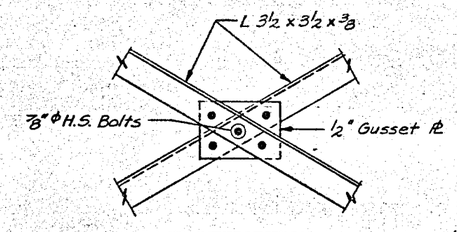


END CROSS FRAME CF-102
(No. Req'd. = 6)

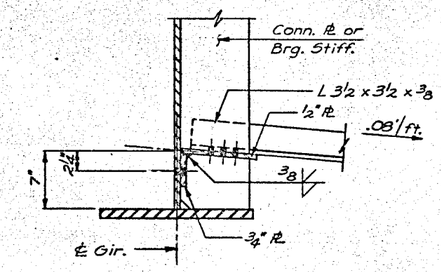
Note: 1 1/16" ϕ holes in gusset Pl's for 7/8" ϕ bolts. Hardened washers shall be required over holes in gusset Pl's. Bottom Lateral Connection Pl required as shown on Steel Framing Plan.



PLAN



AT INTERSECTION



SECTION A-A

BOTTOM LATERAL BRACING DETAILS

Steel Specifications this sheet:

Cross Frames -	AASHTO M-183
Bottom Lateral Bracing -	AASHTO M-183
Bolts -	AASHTO M-164

Note: All cross frame material shown on this sheet shall conform to the Supplemental Requirements for Notch Toughness.

CROSS FRAMES & BOTT. LATERAL BRACING
RAMP E - SPANS 3E, 4E & 5E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.Q.L.	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
CHECKED S.C.O.		
DRAWN D.A.N.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	DATE 11-2-79
CHECKED P.W.C.		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 60 of 134

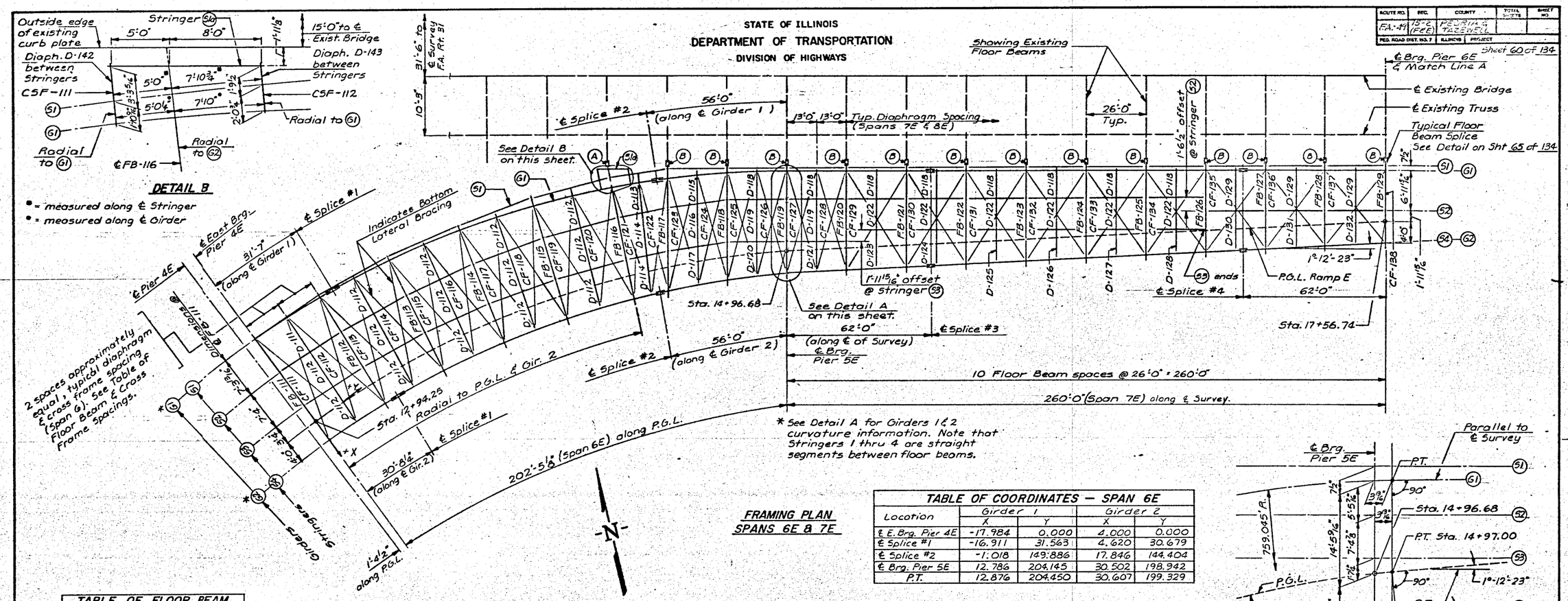


TABLE OF COORDINATES — SPAN 6E

Location	Girder 1 X	Girder 1 Y	Girder 2 X	Girder 2 Y
℄ E. Brg. Pier 4E	-17.984	0.000	4.000	0.000
℄ Splice #1	-16.911	31.563	4.620	30.679
℄ Splice #2	-1.018	149.886	17.846	144.404
℄ Brg. Pier 5E	12.786	204.145	30.502	198.942
P.T.	12.876	204.450	30.607	199.329

TABLE OF FLOOR BEAM & CROSS FRAME SPACINGS (SPAN 6E ONLY)

		along ℄ Girder 1	along ℄ Girder 2
Floor Beams	111 to 112	25'-0 1/2"	24'-4 1/16"
	112 to 113	26'-2"	25'-5 3/8"
	113 to 114	26'-2"	25'-5 1/2"
	114 to 115	26'-2"	25'-5 5/8"
	115 to 116	26'-2"	25'-5 13/16"
	116 to 117	25'-4 1/4"	22'-11 3/8"
	117 to 118	26'-0 1/16"	26'-0 1/8"
	118 to 119	26'-0 1/16"	26'-0 1/4"
Cross Frames	111 to 112	12'-6 1/4"	12'-2"
	112 to 113	12'-6 1/4"	12'-2 1/16"
	113 to 114	13'-1"	12'-8 1/16"
	114 to 115	13'-1"	12'-8 1/16"
	115 to 116	13'-1"	12'-8 3/4"
	116 to 117	13'-1"	12'-8 3/4"
	117 to 118	13'-1"	12'-8 13/16"
	118 to 119	13'-1"	12'-8 13/16"
	119 to 120	13'-1"	12'-8 7/8"
	120 to 121	13'-1"	12'-8 15/16"
	121 to 122	12'-8 7/8"	11'-5 15/16"
	122 to 123	12'-8 7/8"	11'-5 15/16"
	123 to 124	13'-0 1/4"	13'-0 7/16"
	124 to 125	13'-0 3/16"	13'-0 7/16"
	125 to 126	13'-0 1/16"	13'-0 3/8"
	126 to 127	13'-0"	13'-0 3/8"

STRUCTURAL STEEL FRAMING PLAN
RAMP E - SPANS 6E, 7E & 8E

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

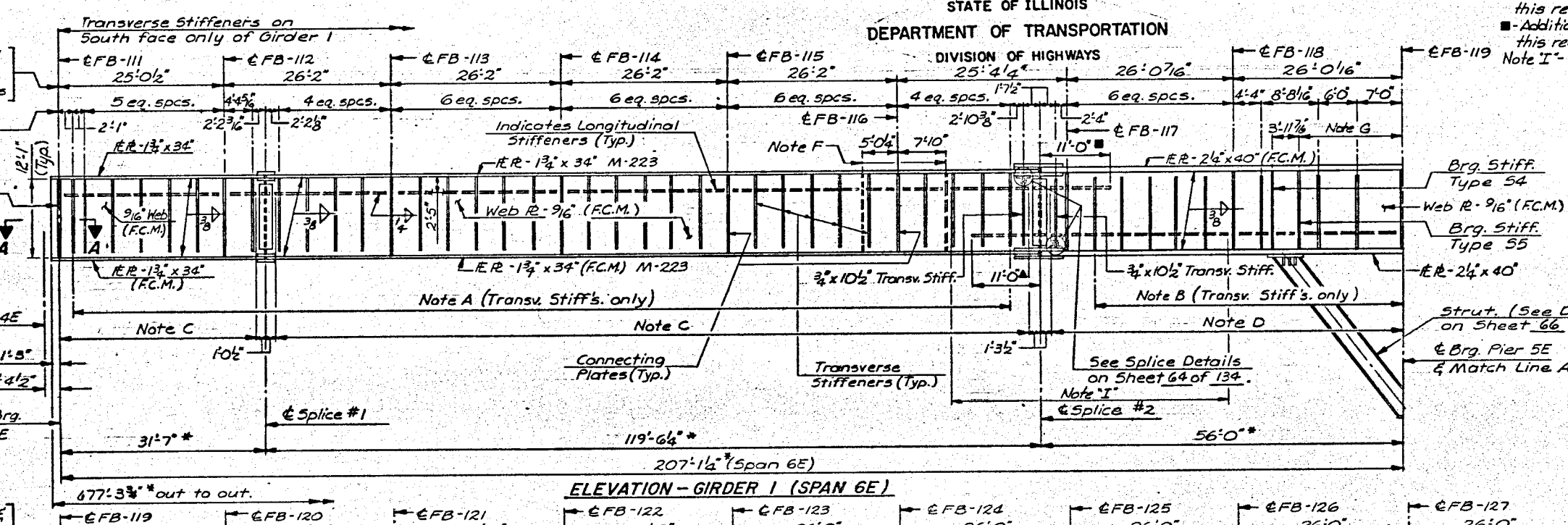
DESIGNED W.D.L.
DRAWN M.E.B.
TRACED D.A.N.
CHECKED S.C.O.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

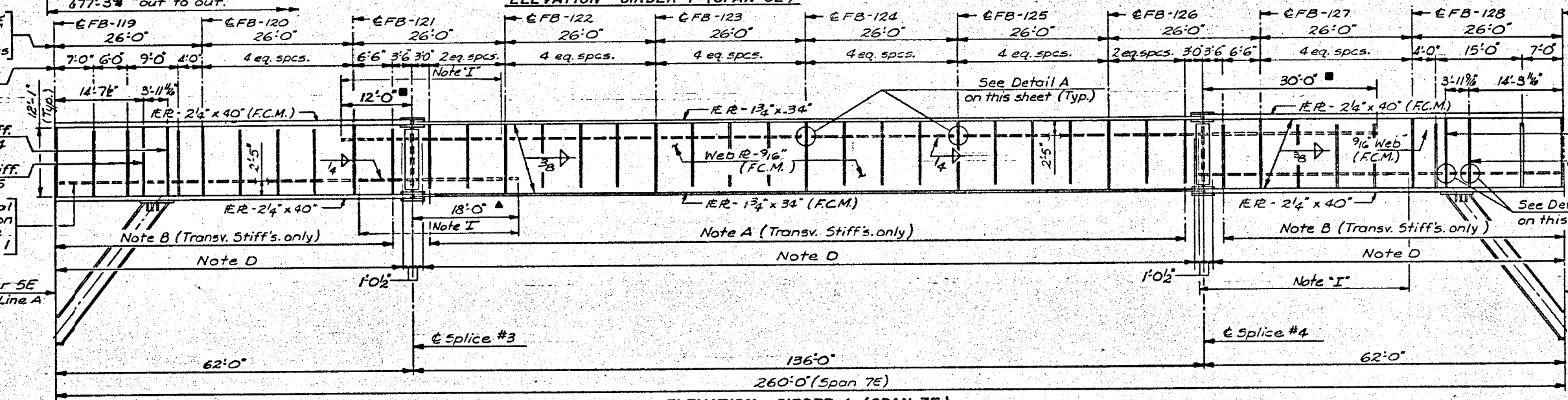
FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

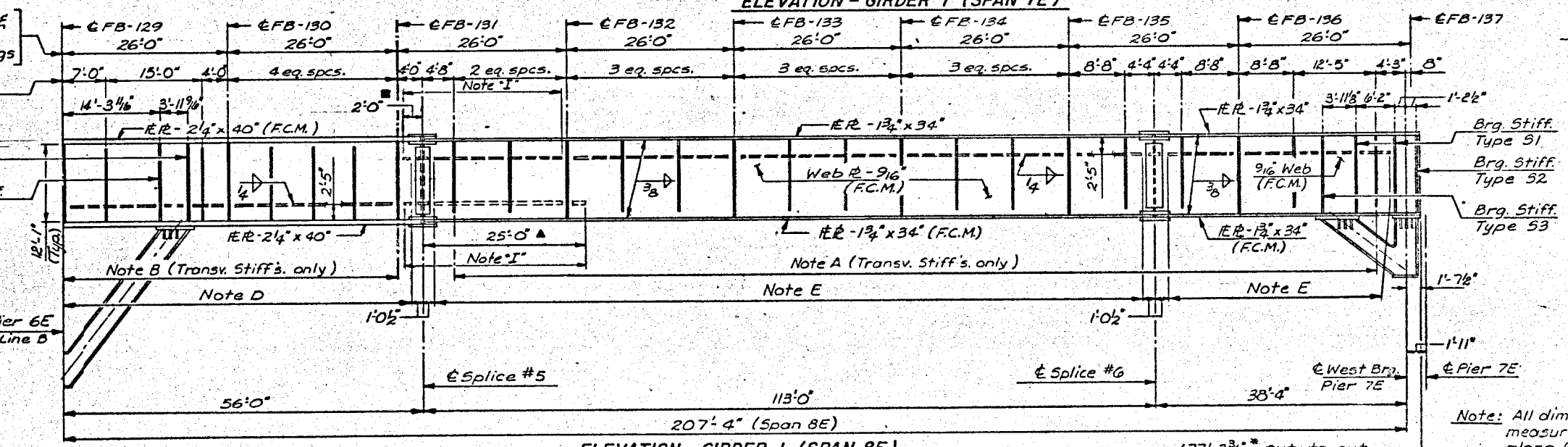
▲-Additional F.C.M. required on upper girder this region.
■-Additional F.C.M. required on lower girder this region.
Note "I"- Limits of F.C.M. for longitudinal stiff



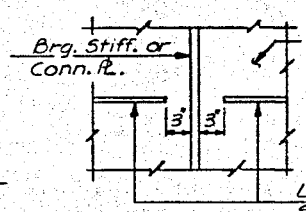
ELEVATION - GIRDER 1 (SPAN 6E)



ELEVATION - GIRDER 1 (SPAN 7E)



ELEVATION - GIRDER 1 (SPAN 8E)



DETAIL A

Note: All dimensions shown are measured horizontally & along ℄ of girder.

All structura
M183 unless ot

All dimens
of the Girder.
Note A: 5/8
with 3/8" fillet
at bottom flan
Note B: 3/4
with 3 3/8" gap
at bottom flan
Note C: Lim
Stiffeners.
Note D: Lim
Stiffeners.
Note E: Lim
Stiffeners.
Note F: 1 1/8
C5F-111 & C5F-11
Note G: For
Stiffeners S4 & S5
For Details o
Stiffeners & Conne

F.A.
P

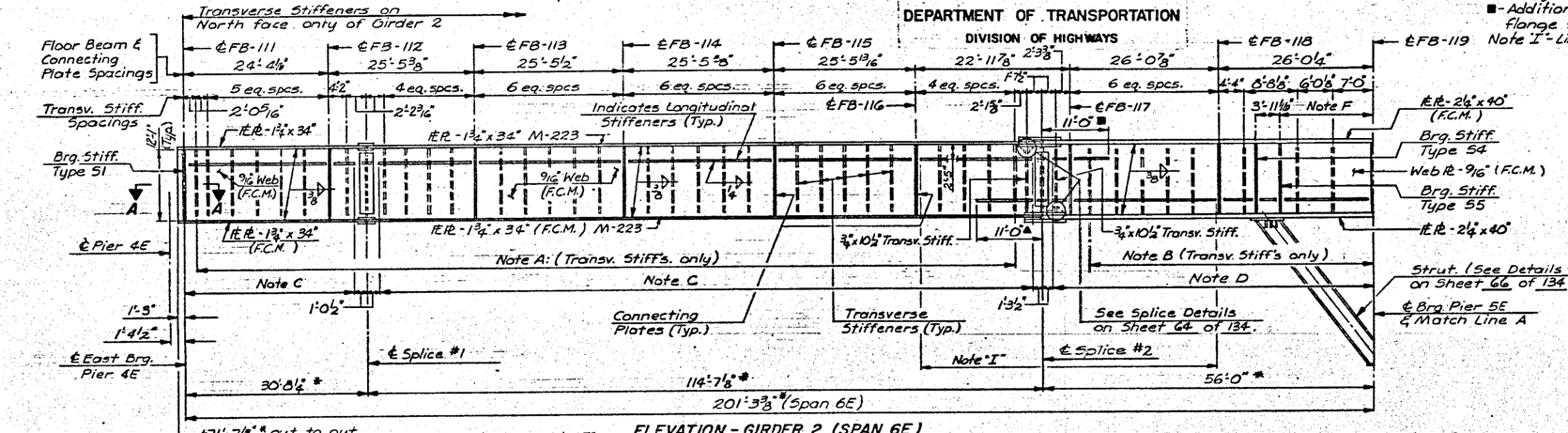
W.O.L.
S.C.O.
D.A.N.
S.C.O.

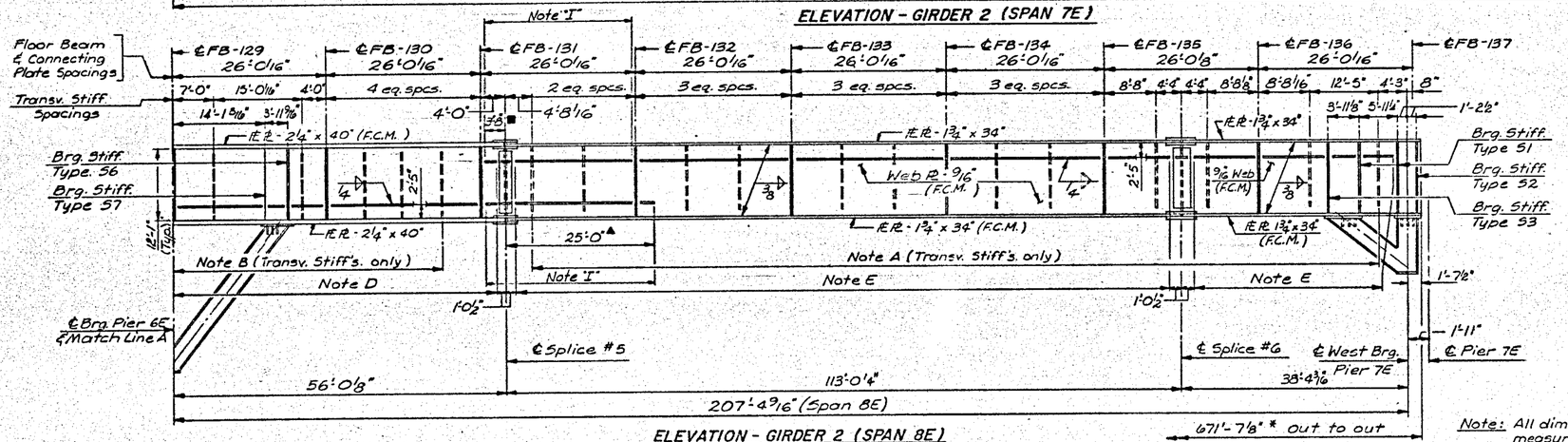
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 49	152 (FAP)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 62 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

▲ - Additional F.C.M. required on upper girder flange this region.
■ - Additional F.C.M. required on lower girder flange this region.
Note I - Limits of F.C.M. for longitudinal stiffeners.





Notes:
All structural steel shall conform to AASHTO M-183 unless otherwise noted.

All dimensions are measured along ℄ of the Girder
Note A: ⅝" x 8½" Transverse Stiffeners with ⅜" fillet weld at top flange & 3⅜" gap at bottom flange.
Note B: ¾" x 10" Transverse Stiffeners with 3⅜" gap at top flange & ⅜" fillet weld at bottom flange.
Note C: Limits of ⅜" x 4" Longitudinal Stiffeners.
Note D: Limits of ⅜" x 5" Longitudinal Stiffeners.
Note E: Limits of 7/16" x 6" Longitudinal Stiffeners.
Note F: For the exact location of Bearing Stiffeners S4 & S5, see Det shown on sheet 63 of 134.
For Details of Bearing Stiffeners, Transverse Stiffeners and Connecting Plates see Sheet 64 of 134.
* See Structural Steel Framing Plan, sh. 60 of 134; for span 6E girder 2 radius of curvature.
For Section A-A see Sheet 61 of 134.

Note: Girder flanges as shown, webs, longitudinal stiffeners as shown, flange splice plates, web splice plates, strut flanges, webs and end plates shall meet the requirements for Fracture Critical Members (F.C.M.).

Note: All dimensions shown are measured horizontally & along ℄ of girder.

GIRDER 2 DETAILS
RAMP E - SPANS 6E, 7E & 8E

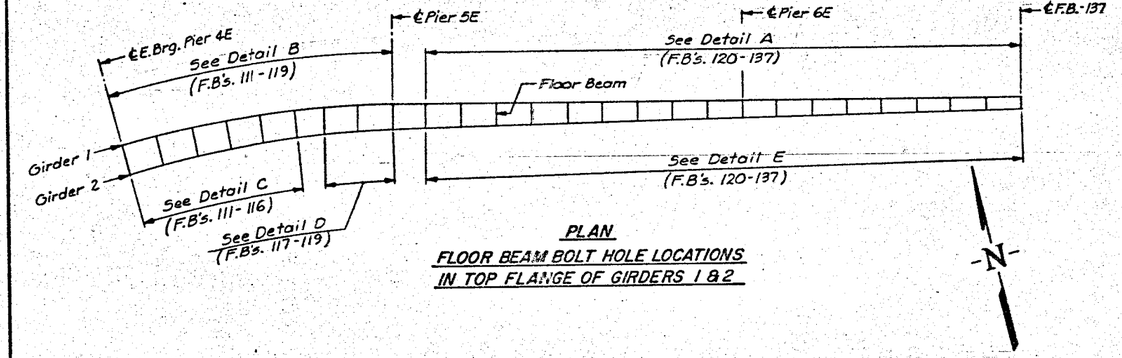
Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.	HANSON ENGINEERS INCORPORATED	FILE NO.	74001
DRAWN S.C.Q.		DATE	11-2-79
CHECKED D.A.N.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS		
QUANTITIES S.C.Q.			

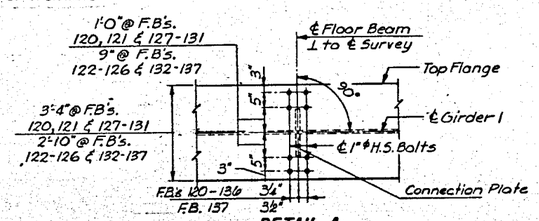
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

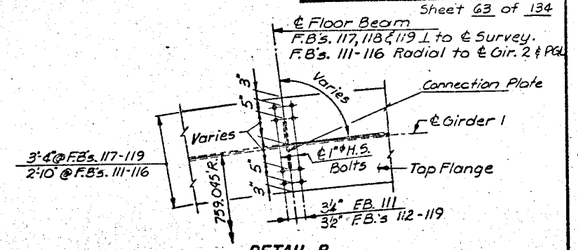
Sheet 63 of 134



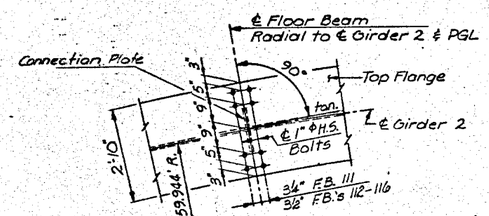
PLAN
FLOOR BEAM BOLT HOLE LOCATIONS IN TOP FLANGE OF GIRDERS 1 & 2



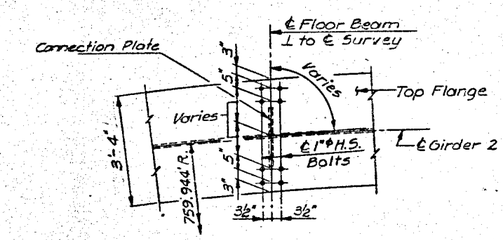
DETAIL A
(F.B's. 120-137 @ Girder 1)



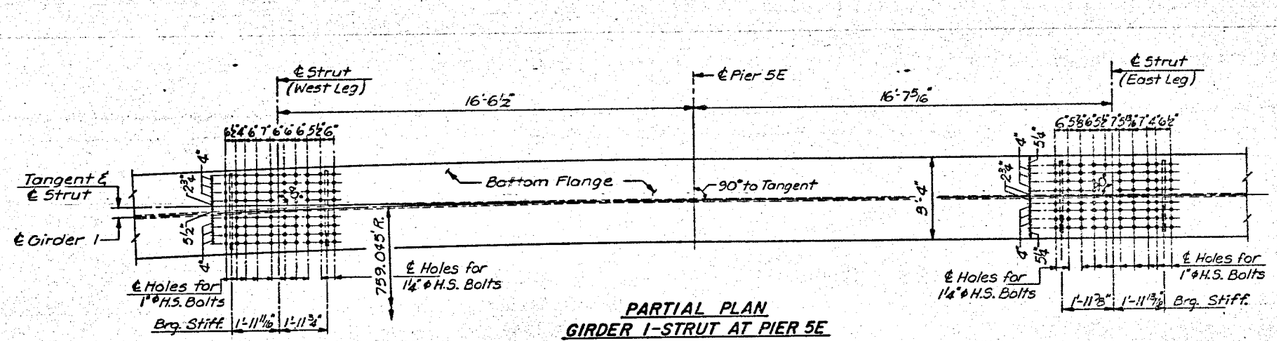
DETAIL B
(F.B's. 111-119 @ Girder 1)



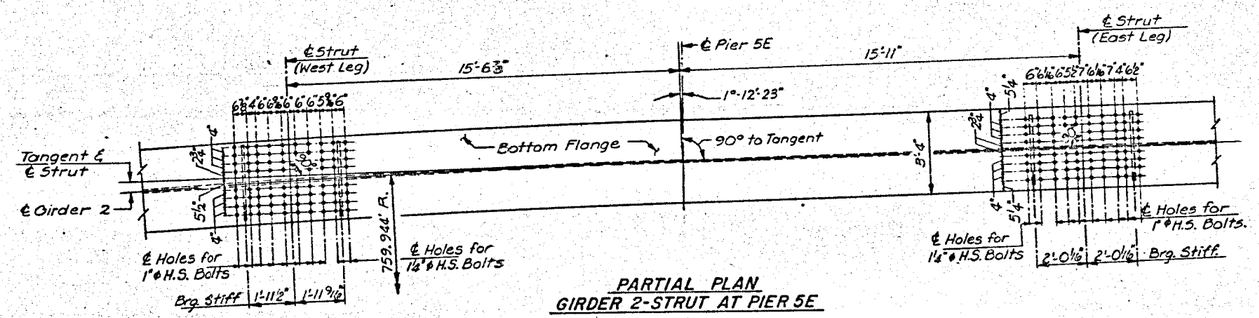
DETAIL C
(F.B's. 111-116 @ Girder 2)



DETAIL D
(F.B's. 117-119 @ Girder 2)

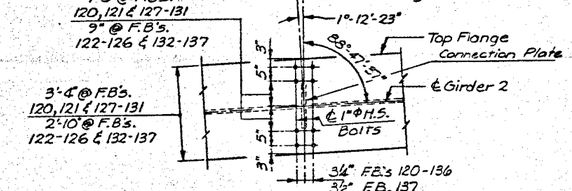


PARTIAL PLAN
GIRDER 1-STRUT AT PIER 5E



PARTIAL PLAN
GIRDER 2-STRUT AT PIER 5E

STRUT BOLT HOLE LOCATIONS IN BOTTOM FLANGE OF GIRDERS 1&2



DETAIL E
(F.B's. 120-137 @ Girder 2)

Note: See Strut Details, Sheet 66 of 134, for Bolt Hole Locations for Struts @ Piers 6E & 7E, Girders 1 & 2.

GIRDERS 1&2 FLANGE DETAILS
RAMP E - SPANS 6E, 7E & 8E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (F&E)
PEORIA & TAZEWELL COUNTIES

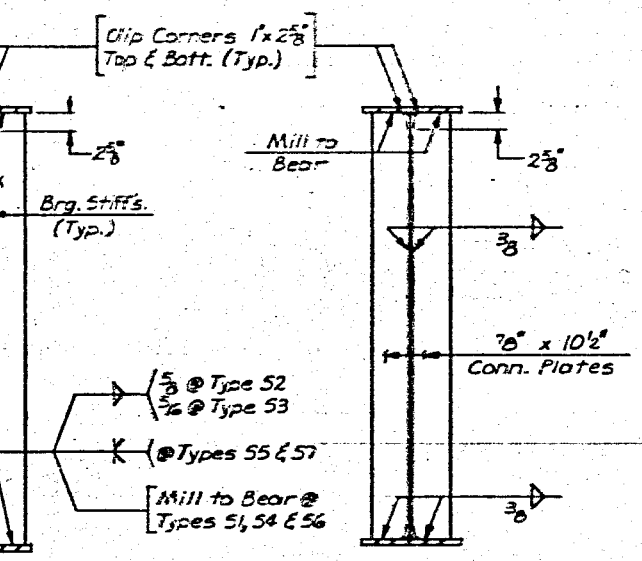
DESIGNED S.C.O.
CHECKED W.D.L.
DRAWN D.A.N.
CHECKED W.D.L.

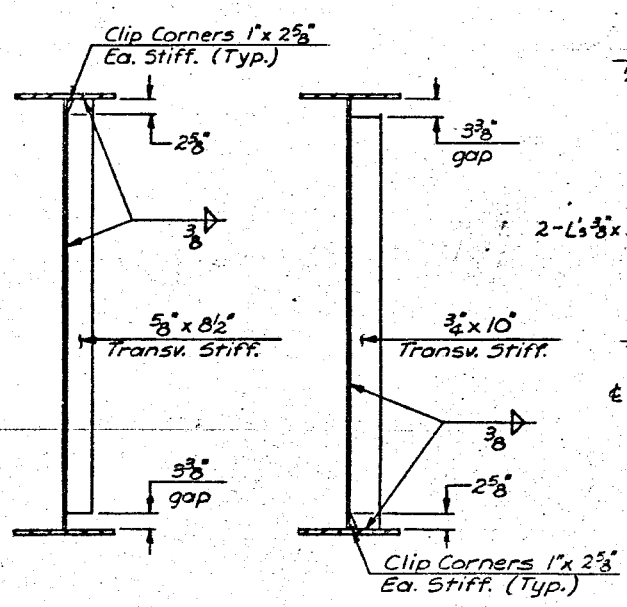
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

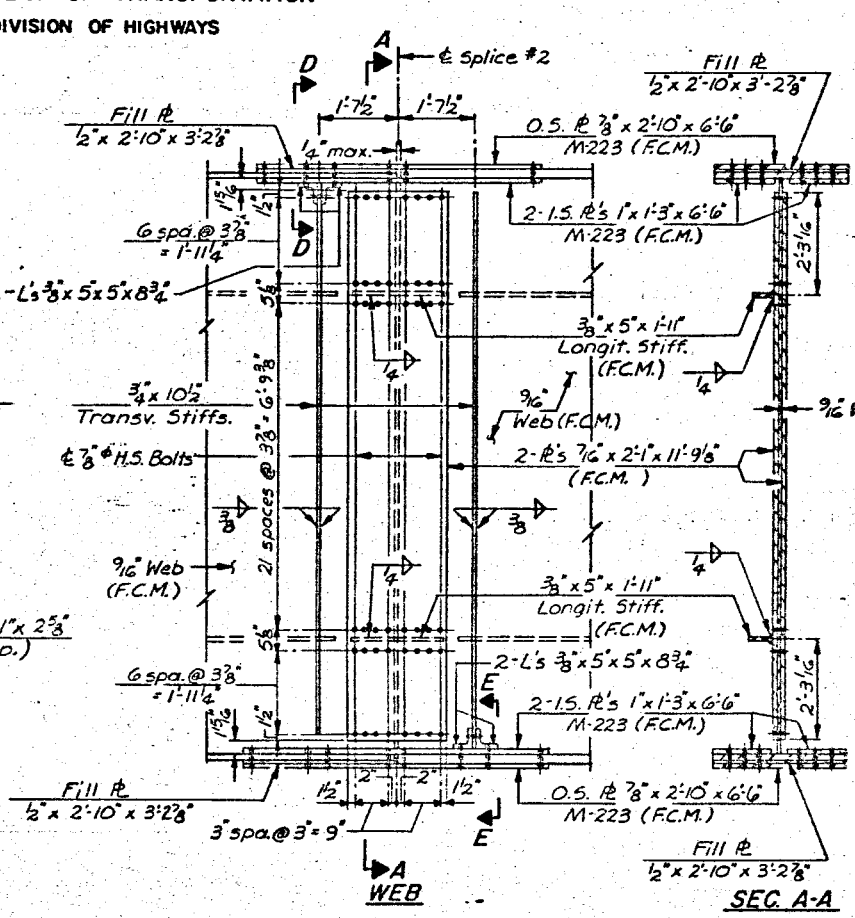
FILE NO. 74001
DATE 11-2-79

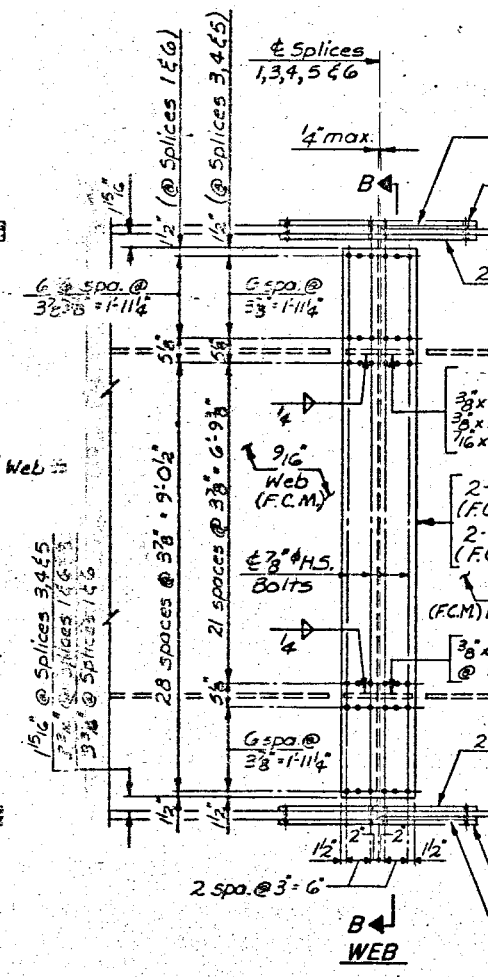
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

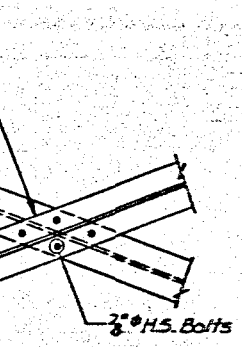
s S1, S2 & S3
s S4 & S5
s S6 & S7



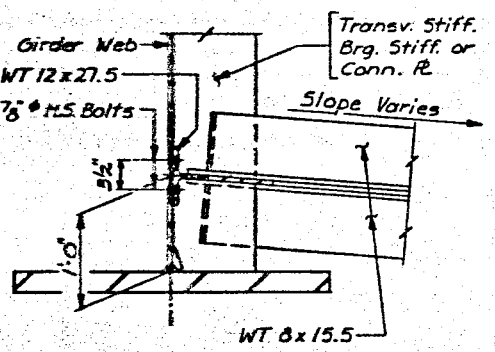




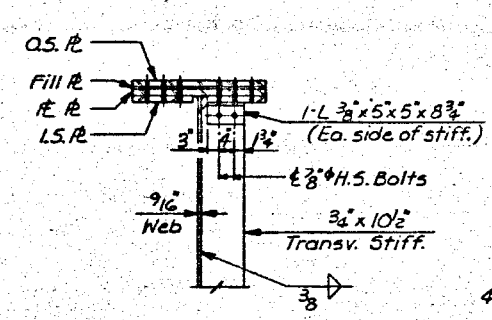




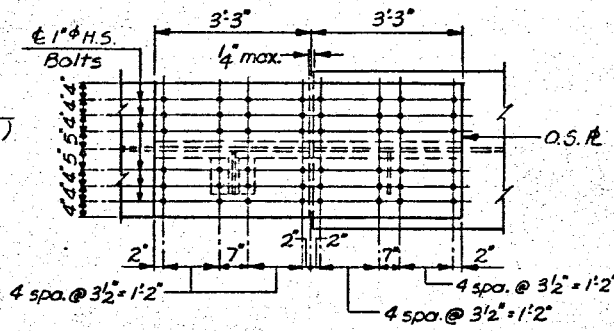
INTERSECTION



SECTION C-C

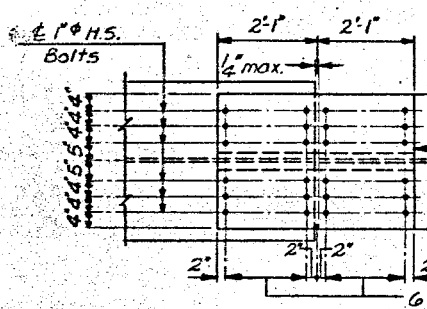


SECTION D-D
(Section E-E is reverse of Section D-D)



TOP FLANGE
(Bottom Flange is reverse of Top Flange)

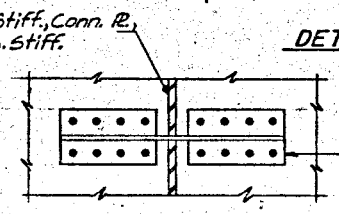
Note: For location of Connections A, B & C see Sheet 66 of 194



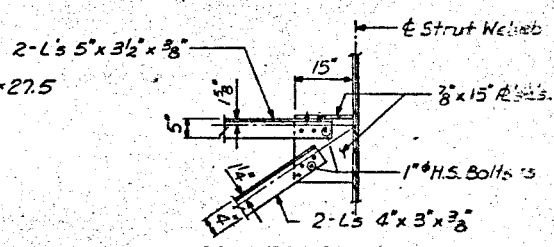
TOP & BOTTOM FLANGE

DETAIL OF SPLICES 1,3,4

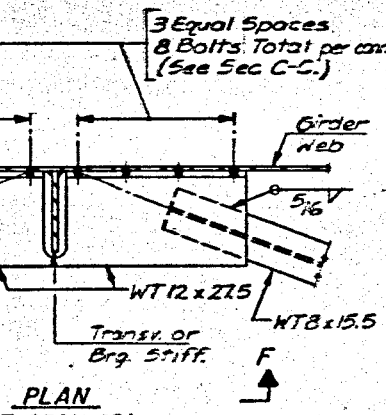
DETAIL OF SPLICE 2



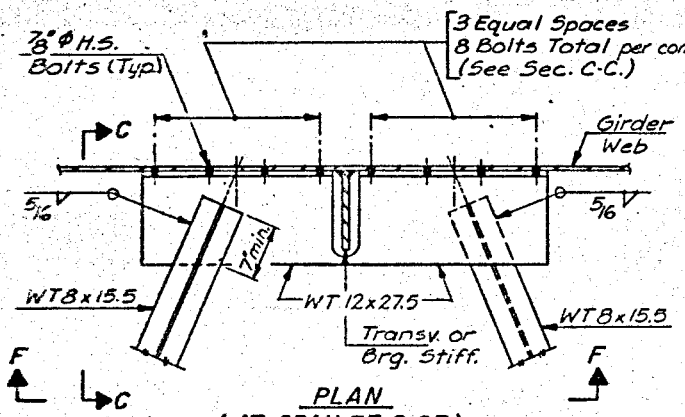
VIEW F-F
(For purposes of clarity WT's 8x15.5 are not shown.)



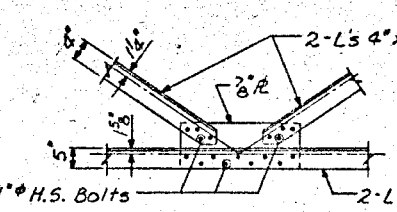
CONNECTION A



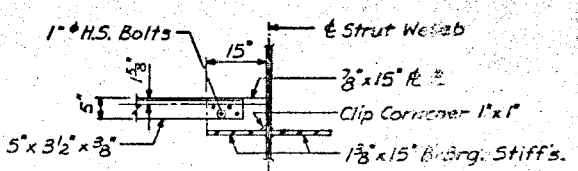
PLAN
T SPAN 6E)



PLAN
(AT SPAN 7E & 8E)



CONNECTION C



CONNECTION B

HORIZONTAL BRACING DETAILS FOR STRUTS AT PIERS 5E & 6E

BOTTOM LATERAL BRACING DETAILS

S1-S7

FFENERS

ns 'of Bearing S1-S7 See eets 61 & 62.

CONNECTING PLATES

For locations of Conn. Plates see Girder Detail Sheets 61 & 62.

* NOTE A

* NOTE B

TRANSVERSE STIFFENERS

*' For Note A & Note B See Girder Detail Sheets 61 & 62.

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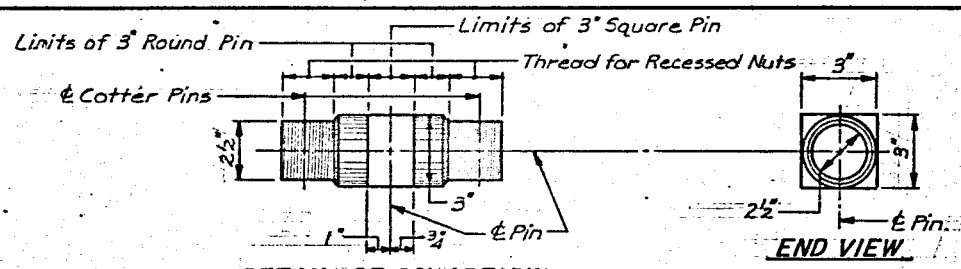
STRUC
RAMP E

MC
OVER
F.A. ROUTE
PEORIA

W.D.L.
S.C.O.
D.A.N.
S.C.O.

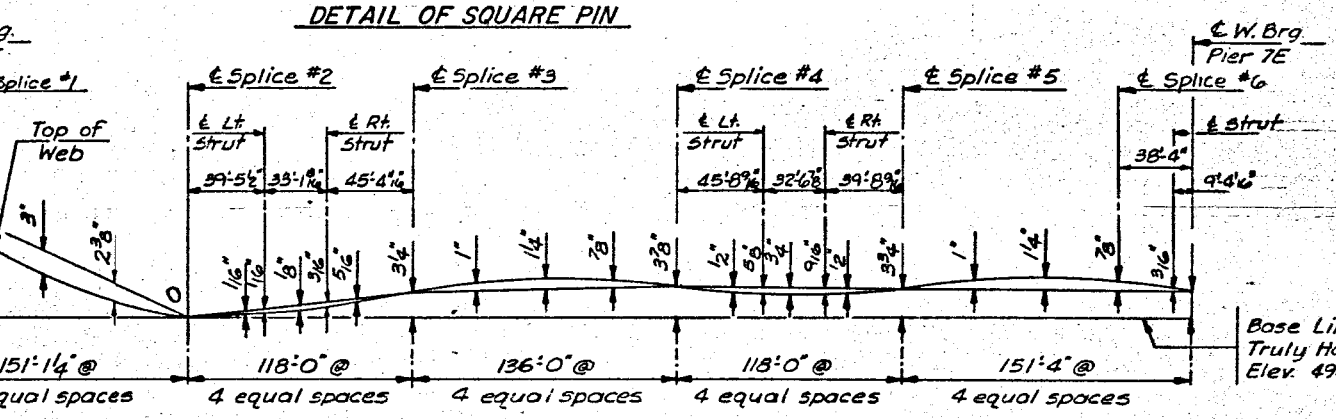
SPRINGFI

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DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

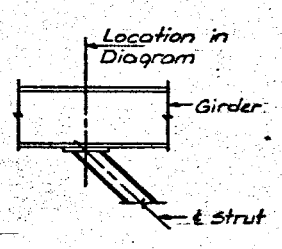


DETAIL OF SQUARE PIN

END VIEW



CAMBER DIAGRAM - GIRDER 1



LOCATION SKETCH AT STRUT

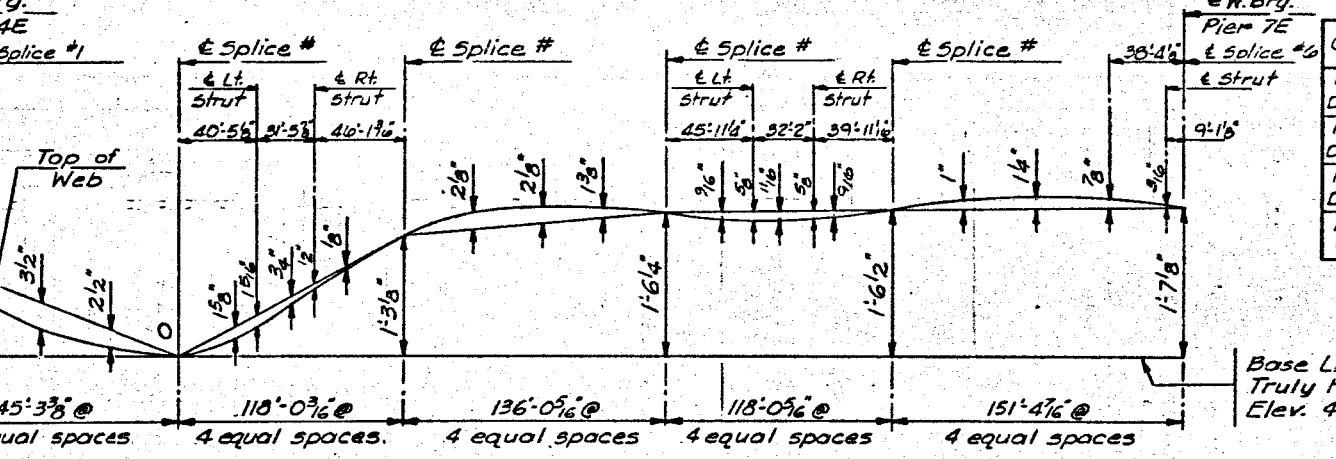
GIRDER MOMENT TABLE

	.4 Span 6E	Pier 5E @ Lt Strut	Pier 5E @ Rt Strut	.5 Span 7E	Pier 6E @ Lt Strut	Pier 6E @ Rt S
I (in.⁴)	783,618	1,118,696	1,118,696	783,618	1,118,696	1,118,6
℄ (*I)	Varies	Varies	Varies	Varies	Varies	Varie
M℄ (1K)	15,549	13,390	15,437	4,504	8,448	8,2
M℄ (1K)	5,869	4,012	4569	3,037	2,982	3,1
Imp (1K)	880	602	685	456	447	46
M TOT (1K)	22,298	18,004	20,692	7,997	11,877	11,8
f_s (ksi)	25.4	* 15.2	* 17.5	9.1	* 10.00	* 10.
f_w (ksi)	1.40	0.60	.70	N.A.	N.A.	N.A
f_s+f_w TOT (ksi)	26.8	* 15.80	* 18.2	9.1	* 10.00	* 10.

* At Tension Flange
f_w is normal stress due to lateral flange bending.
f_s is primary and secondary stress combined.
N.A. — not applicable.

GIRDER REACTION TABLE

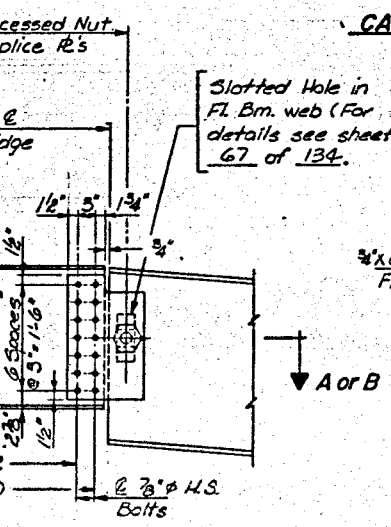
	Pier 4E	Pier 5E	Pier 6E	Pier 7E
R℄ (K)	381.5	991.2	678.1	195.0
R℄ (K)	152.3	278.1	203.4	74.3
Imp (K)	22.8	41.7	30.5	11.1
Total (K)	556.6	1311.0	912.0	280.4



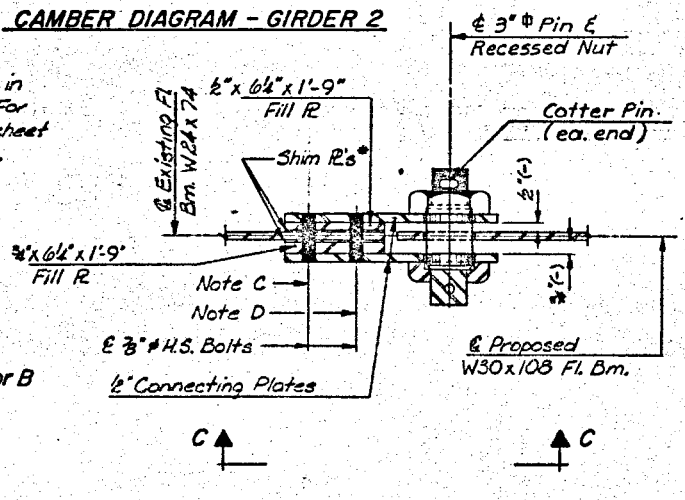
CAMBER DIAGRAM - GIRDER 2

STRUT LOAD TABLE

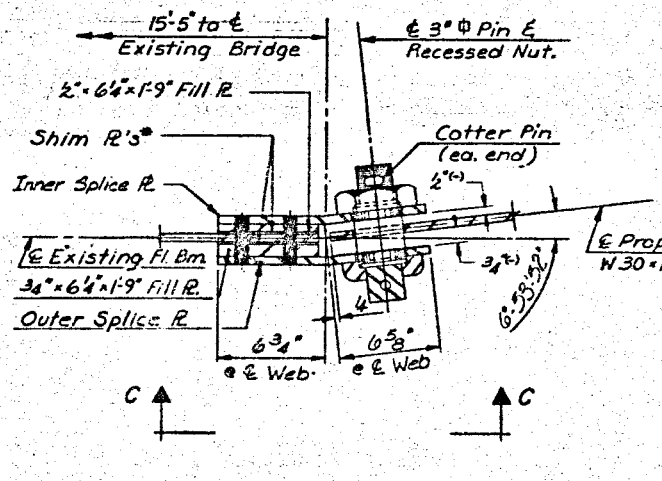
Girder 1 & 2	A (in²)	I (in⁴)	S (in³)	PQ (K)	P℄ (K)	P IMP (K)	M Q (K')	M℄ (K')	M IMP (K')	VQ (K)	V℄ (K)	V IMP (K)
Pier 5E Diagonals	133.5	39,281	2,014	655	155	27	T 1,071 B 336	312 123	55 22	49	12	2
Pier 6E Diagonals	133.5	39,281	2,014	442	120	21	T 588 B 128	217 85	38 15	25	8	2
Pier 7E Diagonals	53.5	8,715	581	9	2.2	0.4	T 134 B. 47	44 12	8 2	7	1.7	.3
Pier 7E Vertical	53.5	8,715	581	180	49	9	T 4.6 B 47	.8 12	.2 2	1.5	.4	.1



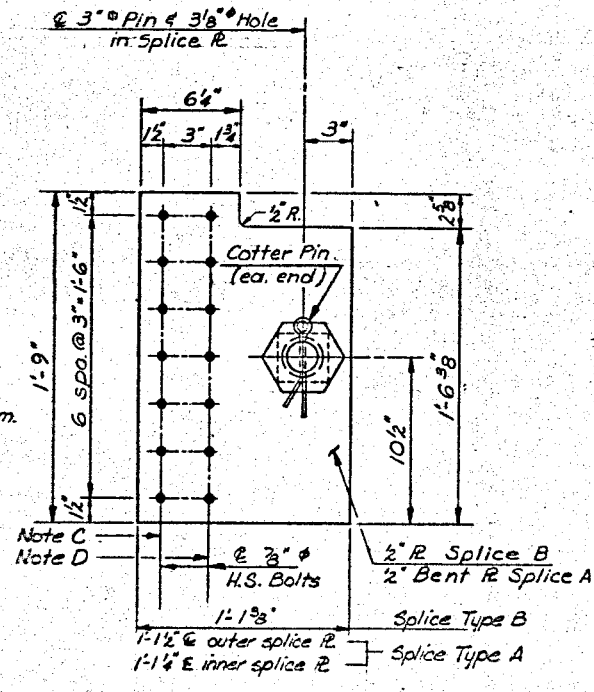
ELEVATION



SECTION A-A - TYPE B



SECTION B-B - TYPE A



VIEW C-C

FLOOR BEAM SPLICE TYPES A&B

TOP OF W

℄ E. Brg. Pier 4E
℄ Splice #1
℄ Splice #2
℄ Lt Dia. Strut 5E
℄ Rt. Dia. Strut 5E
℄ Splice #3
℄ Splice #4
℄ Lt. Dia. Strut 6E
℄ Rt. Dia. Strut 6E
℄ Splice #5
℄ Splice #6
℄ Dia. Strut 7E
℄ Vertical Strut 7

** Elevations inc
load deflecti

All structura
of A.A.S.H.T.O.

All high st
of A.A.S.H.T.O. M

3"ø Pins st
M169

Note C: ℄
bolts.

Note D: ℄
removal of 6" s

* 2-⅞"x 6¼" x
floor beam con
when the ℄ of
up with the ℄ o

STR
RAM

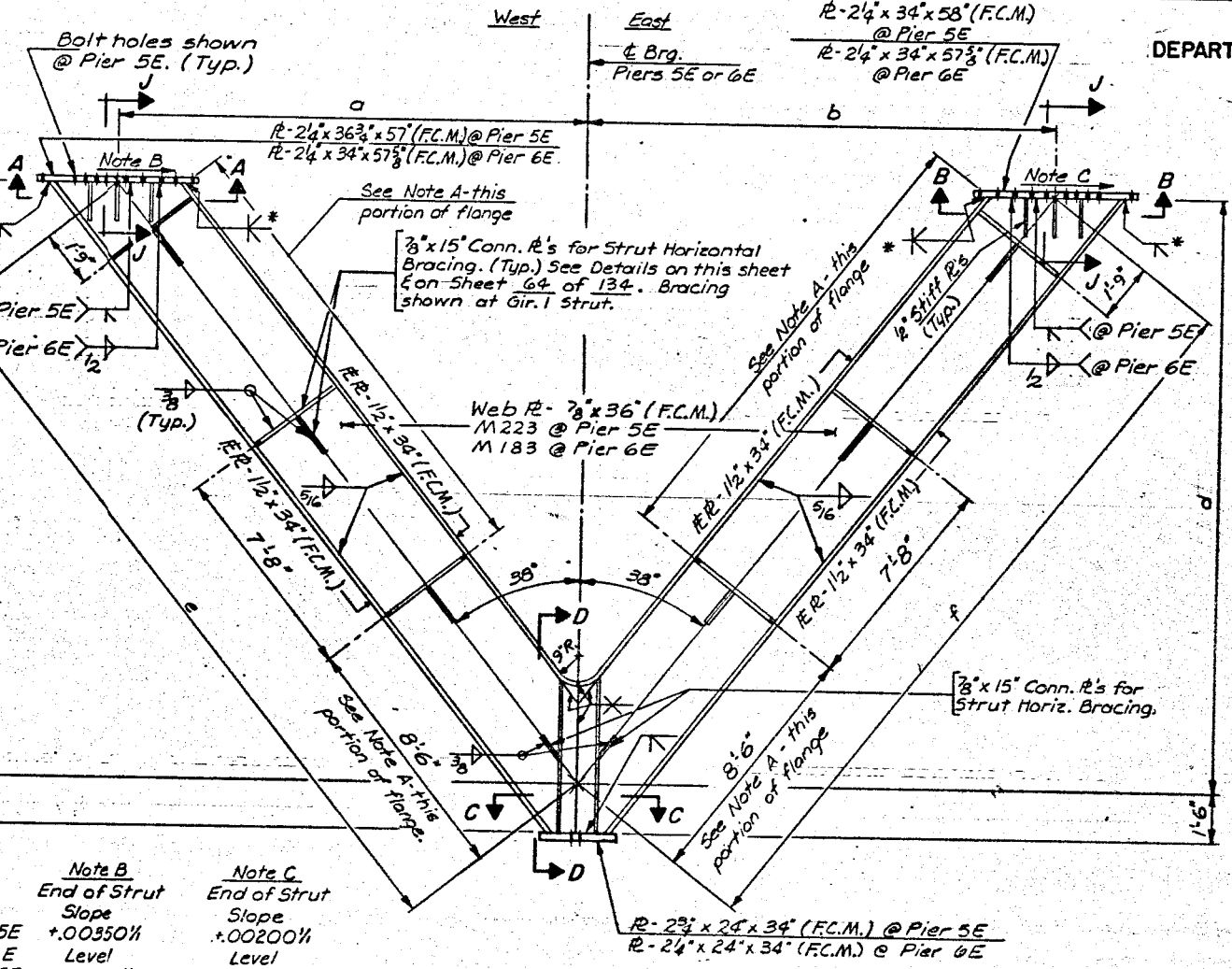
OV

F.A. ROU

PEORI

DESIGNED V.I.D.L.
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED S.C.O.

STATE OF ILLINOIS
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DIVISION OF HIGHWAYS



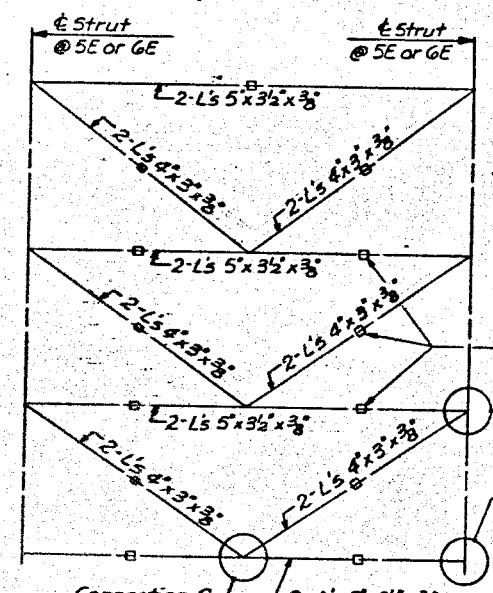
STRUT AT PIERS 5E & 6E
GIRDERS 1 & 2

Note B	Note C
End of Strut	End of Strut
Slope	Slope
5E +.00350%	+.00200%
E Level	Level
5E +.01460%	+.01327%
E Level	Level

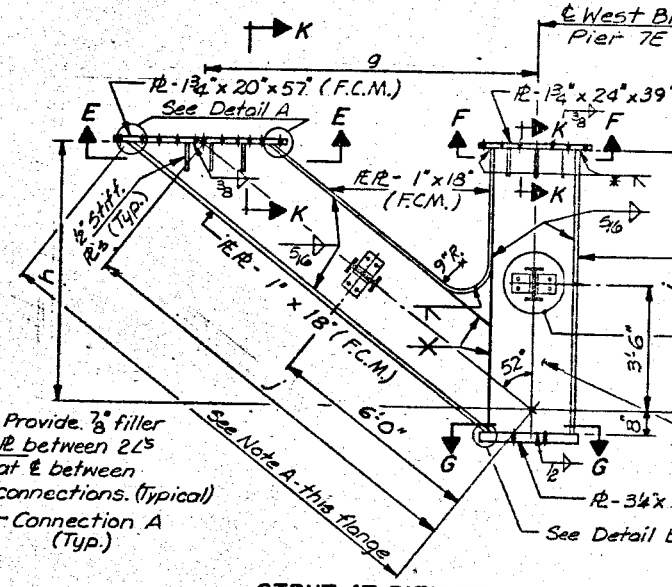
Slope indicates rise from west to east.

TABLE OF DIMENSIONS
(STRUT AT PIERS 5E & 6E)

Strut	a	b	c	d	e	f
Gir. 1 Strut @ Pier 5E	16'-6½"	16'-7 5/16"	21'-2 1/16"	21'-3⅜"	26'-10⅜"	26'-11¾"
Gir. 1 Strut @ Pier 6E	16'-3 7/16"	16'-3 7/16"	20'-10 7/16"	20'-10 5/16"	26'-5½"	26'-5½"
Gir. 2 Strut @ Pier 5E	15'-6⅞"	15'-11"	19'-11 3/16"	20'-4 7/16"	25'-3 9/16"	25'-10¼"
Gir. 2 Strut @ Pier 6E	16'-0 15/16"	16'-1 1/16"	20'-7"	20'-7⅞"	26'-1⅜"	26'-1 9/16"



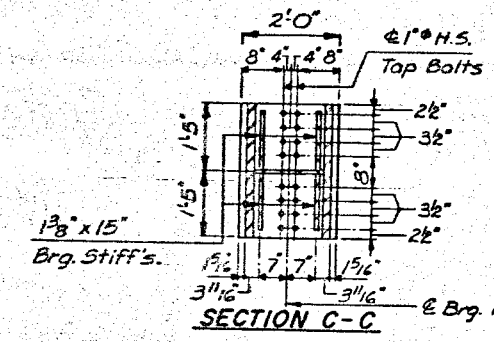
HORIZONTAL BRACING DETAILS
FOR STRUTS AT PIERS 5E & 6E
(For Details of Connections A, B & C see Sheet 64 of 134.)



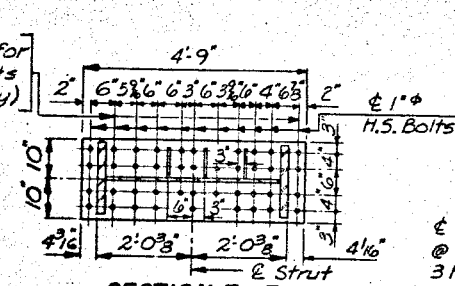
STRUT AT PIER 7E
GIRDERS 1 & 2

TABLE OF DIMENSIONS
(STRUT AT PIER 7E)

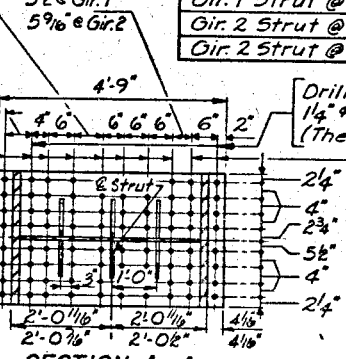
Strut	g	h	i	j
Gir. 1 Strut @ Pier 7E	9'-4 1/16"	7'-3 9/16"	7'-3 9/16"	11'-10
Gir. 2 Strut @ Pier 7E	9'-1⅛"	7'-1 5/16"	7'-1 5/16"	11'-6½



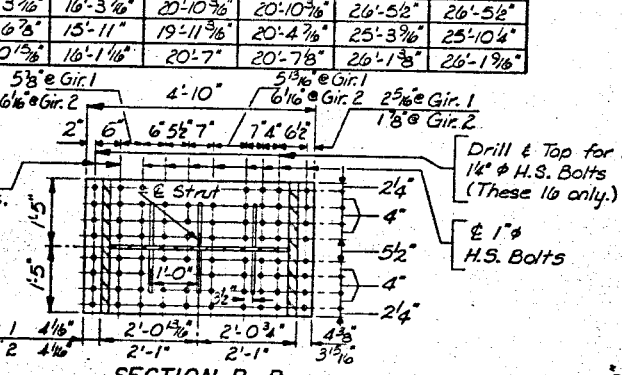
SECTION C-C



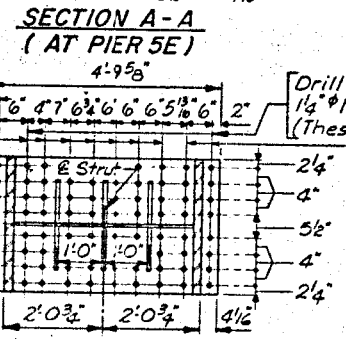
SECTION E-E



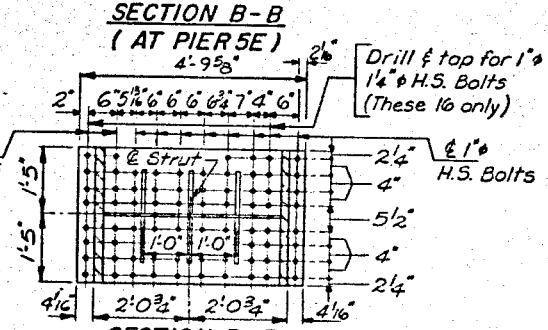
SECTION A-A
(AT PIER 5E)



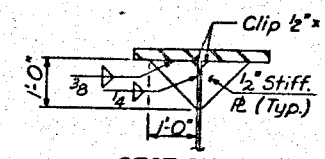
SECTION B-B
(AT PIER 5E)



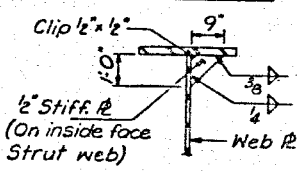
SECTION A-A
(AT PIER 6E)



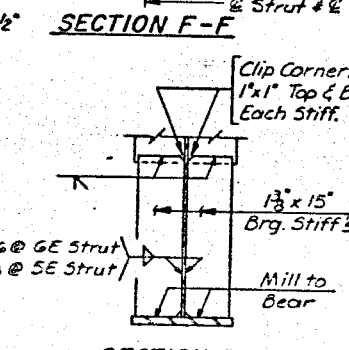
SECTION B-B
(AT PIER 6E)



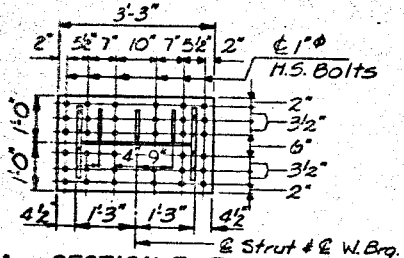
SECTION J-J



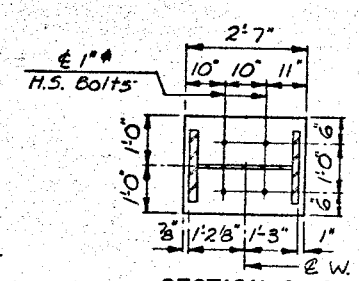
SECTION K-K



SECTION D-D
BEARING STIFFENERS



SECTION F-F



SECTION G-G

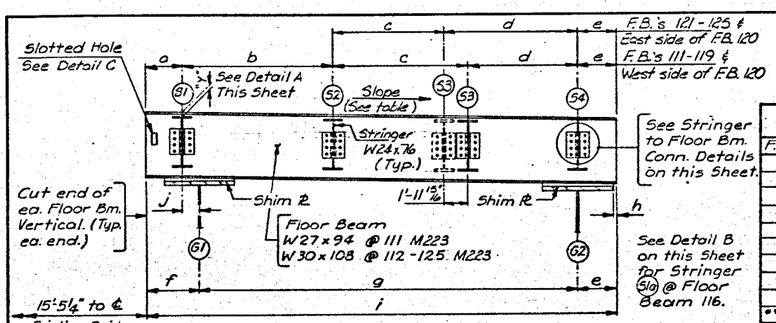
Notes:
All Structural Steel shall conform to A.A.S.H.T.O. M183 unless otherwise noted.
All High Strength Bolts shall conform to A.A.S.H.T.O. M164.
Strut flanges, webs & end ℝ's shall meet the requirements for Fracture Critical Members (F.C.M.)
All strut to girder connections shall have the bolt heads at the top of the connection.
* Fillet and groove welds between end plates and flanges shall be radiographically tested.
Note A: Flange to web fillet welds in tension areas of struts shall be electromagnetically tested.

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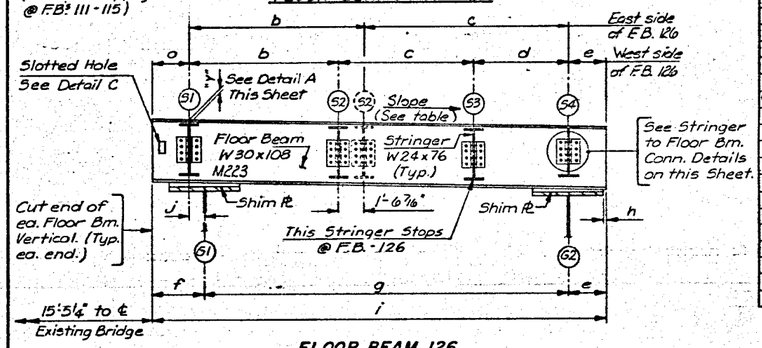
** W.- West side of floor beam
*** E.- East side of floor beam

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

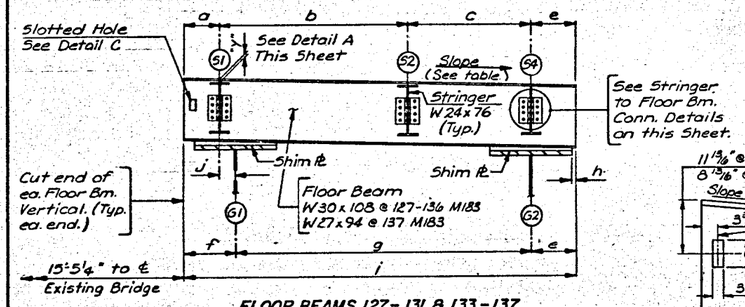
Sheet 67 of 134



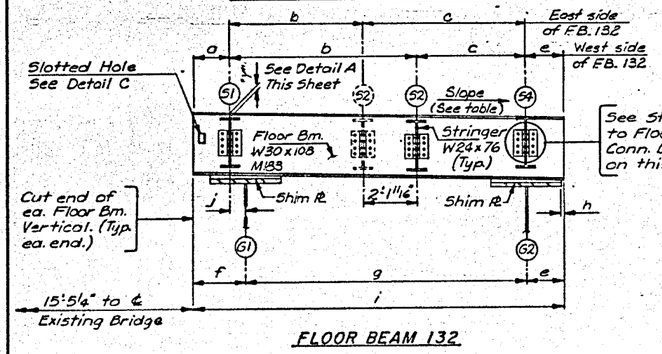
FLOOR BEAMS 111-125



FLOOR BEAM 126



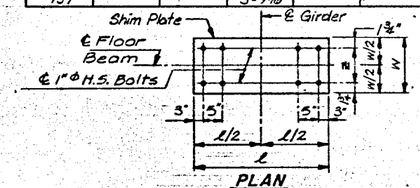
FLOOR BEAMS 127-131 & 133-137



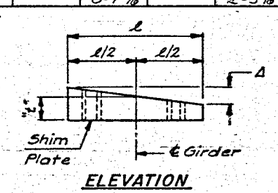
FLOOR BEAM 132

TABLE OF DIMENSIONS
FLOOR BEAMS 111 - 137

F.B. No.	a	b	c	d	e	f	g	h	i	j	Slope ft/ft
111	1'-8 13/16"	7'-4"	7'-4"	7'-4"	1'-9"	1'-9"	21'-11 13/16"	4"	25'-5 7/16"	3/16"	.08
112	"	"	"	"	"	2'-1 1/16"	21'-7 3/4"	"	25'-5 13/16"	4 1/4"	"
113	"	"	"	"	"	2'-5 11/16"	21'-3 1/8"	"	25'-5 7/16"	8 7/8"	"
114	"	"	"	"	"	2'-10 3/8"	20'-10 7/8"	"	25'-5 7/16"	1'-1 13/16"	"
115	"	"	"	"	"	3'-3 13/16"	20'-5"	"	25'-5 13/16"	1'-7"	"
116	4'-1"	"	"	"	"	6'-1 1/2"	19'-11 1/2"	"	27'-10"	2'-0 1/2"	.0711
117	1'-5 3/4"	7'-9"	7'-1 1/2"	7'-1 1/2"	"	3'-10 15/16"	19'-6 7/16"	1"	25'-2 3/4"	2'-5 3/16"	.0758
118	"	6'-1"	7'-4 3/8"	6'-7 5/16"	"	2'-6 3/4"	19'-0 3/16"	"	23'-3 5/16"	1'-1"	.0713
119	"	"	"	5'-7 1/4"	"	2'-1 1/4"	18'-5 5/8"	"	22'-3 3/8"	7 1/2"	.0578
** 120W	"	"	"	5'-0 11/16"	"	"	17'-11"	"	21'-9 1/4"	"	.0432
*** 120E	"	"	5'-4 15/16"	7'-0 3/8"	"	"	17'-11"	"	21'-9 1/4"	"	.0432
121	"	"	"	6'-6 1/16"	"	"	17'-4 7/16"	"	21'-2 11/16"	"	.0314
122	"	"	"	5'-11 5/8"	"	"	16'-9 3/8"	4"	20'-8 1/16"	"	.0235
123	"	"	"	5'-4 13/16"	"	"	16'-3 5/16"	"	20'-1 9/16"	"	.0198
124	"	"	"	4'-10 3/8"	"	"	15'-8 3/4"	"	19'-7"	"	.0197
125	"	"	"	4'-3 3/8"	"	"	15'-2 3/16"	"	19'-0 7/16"	"	.0198
** 126W	"	"	"	3'-9 5/16"	"	"	14'-7 7/16"	"	18'-5 3/16"	"	.0199
*** 126E	"	7'-7 7/16"	7'-7 7/16"	N.A.	"	"	14'-7 7/16"	"	18'-5 7/16"	"	.0199
127	"	"	7'-1 1/16"	"	"	"	14'-1"	1"	17'-11 1/4"	"	.0200
128	"	"	6'-6 7/8"	"	"	"	13'-6 7/16"	"	17'-4 11/16"	"	.0201
129	"	"	5'-11 7/8"	"	"	"	12'-11 7/8"	"	16'-10 1/8"	"	.0202
130	"	"	5'-5 3/8"	"	"	"	12'-5 5/16"	"	16'-3 11/16"	"	.0203
131	"	"	4'-10 3/4"	"	"	"	11'-10 3/4"	"	15'-9"	"	.0205
** 132W	"	"	4'-4 1/4"	"	"	"	11'-4 3/16"	4"	15'-2 7/16"	"	.0207
*** 132E	"	5'-5 3/4"	6'-5 5/16"	"	"	"	11'-4 3/16"	"	15'-2 7/16"	"	.0207
133	"	"	5'-11 3/8"	"	"	"	10'-9 3/8"	"	14'-7 5/8"	"	.0208
134	"	"	5'-4 7/16"	"	"	"	10'-3 1/16"	"	14'-1 9/16"	"	.0210
135	"	"	4'-10 1/4"	"	"	"	9'-8 7/16"	"	13'-6 1/16"	"	.0213
136	"	"	4'-3 1/16"	"	"	"	9'-1 3/8"	"	13'-0 5/8"	"	.0213
137	"	"	3'-9 1/16"	"	"	"	8'-7 5/16"	"	12'-5 7/16"	"	.0217



PLAN

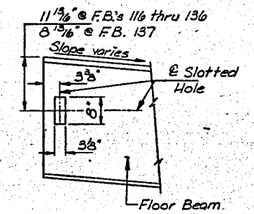


ELEVATION

SHIM PLATE DETAILS

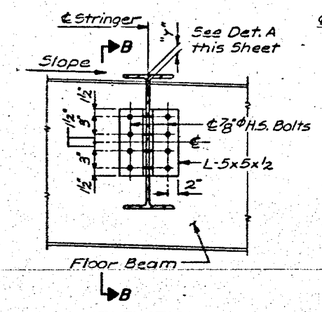
TABLE OF DIMENSIONS
SHIM PLATES

Shim ℄ @ F.B. No.	ℓ	w	z	Δ	"t"
111	2'-10"	10"	6 1/2"	2 3/4"	1 3/4"
112	"	10 1/2"	7"	"	"
113	"	"	"	"	"
114	"	"	"	"	"
115	"	"	"	"	"
116	"	"	"	2 7/8"	"
117	3'-4"	"	"	3"	"
118	"	"	"	2 7/8"	"
119	"	"	"	2 7/16"	1 3/8"
120	"	"	"	1 3/4"	1 1/8"
121	"	"	"	1 1/4"	7/8"
122	2'-10"	"	"	13/16"	5/8"
123	"	"	"	11/16"	"
124	"	"	"	"	"
125	"	"	"	"	"
126	"	"	"	"	"
127	3'-4"	"	"	13/16"	"
128	"	"	"	"	"
129	"	"	"	"	"
130	"	"	"	"	"
131	"	"	"	"	"
132	2'-10"	"	"	11/16"	"
133	"	"	"	"	"
134	"	"	"	"	"
135	"	"	"	3/4"	"
136	"	"	"	"	"
137	"	10"	6 1/2"	"	"

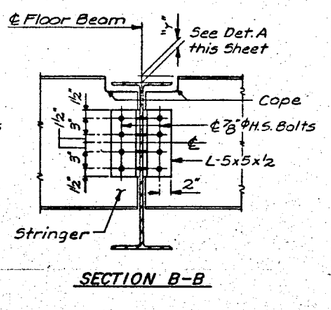


DETAIL C

Note: Does not apply at F.B.'s 111 thru 115.

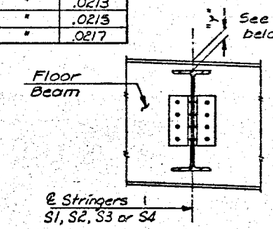


ELEVATION

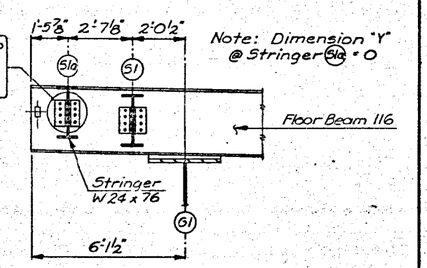


SECTION B-B

STRINGER - FLOOR BEAM CONNECTION DETAILS



DETAIL A (DIMENSION "Y")



DETAIL B

*Note:
Positive (+) "Y" indicates Stringer above Floor Beam.
Negative (-) "Y" indicates Stringer below Floor Beam.

TABLE OF DIMENSIONS
(DIMENSION "Y")*

F.B. No.	S1	S2	S3	S4
111	+ 3"	+ 3"	+ 3"	+ 3"
112	0	0	0	0
113	"	"	"	"
114	"	"	"	"
115	"	"	"	"
116	+ 2 5/8"	+ 1 3/8"	+ 5/8"	"
117	- 1/4"	+ 3/8"	- 1/4"	"
118	- 1 1/4"	- 7/8"	- 3/8"	"
119	- 1"	- 3/4"	- 1/4"	"
120 W&E	- 3/8"	- 3/8"	"	"
121	"	"	"	"
122	"	"	"	"
123	"	"	"	"
124	"	"	"	"
125	"	"	"	"
126 W&E	"	"	"◆	"
127	"	- 1/4"	N.A.	"
128	"	"	"	"
129	"	"	"	"
130	"	"	"	"
131	"	"	"	"
132 W&E	"	"	"	"
133	"	"	"	"
134	"	"	"	"
135	"	"	"	"
136	"	"	"	"
137	+ 2 3/8"	+ 2 3/4"	"	+ 3"

◆ West side only. N.A. - not applicable.

Notes:
All Structural Steel shall meet the requirements of AASHTO M-183 unless otherwise noted.

All High Strength Bolts shall meet the requirements of AASHTO M-164.

All Stringers and Floor Beams shall meet the requirements for Notch Toughness.

FLOOR BEAM DETAILS
RAMP E - SPANS 6E, 7E & 8E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED S.C.O.
CHECKED W.D.L.
DRAWN D.A.N.
CHECKED S.C.O.

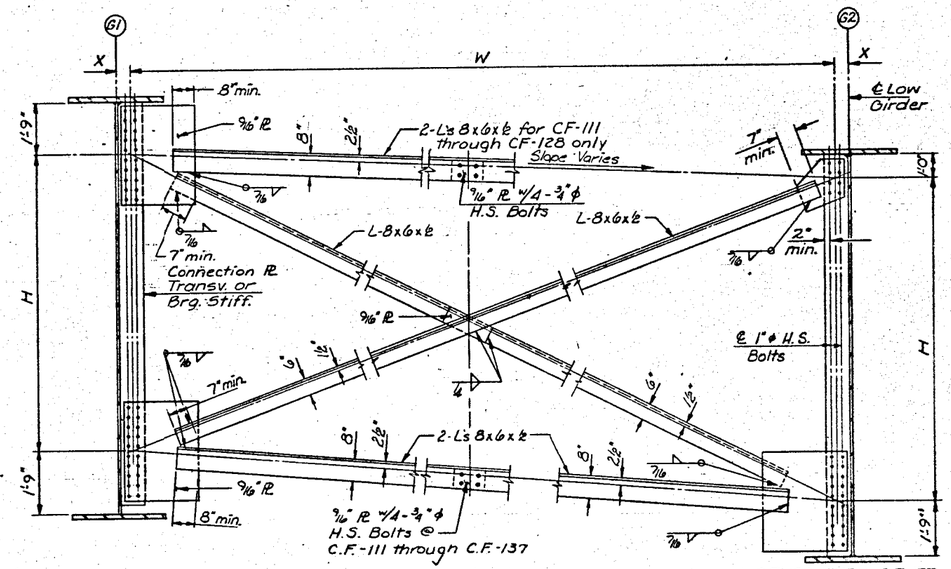
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 68 of 136

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

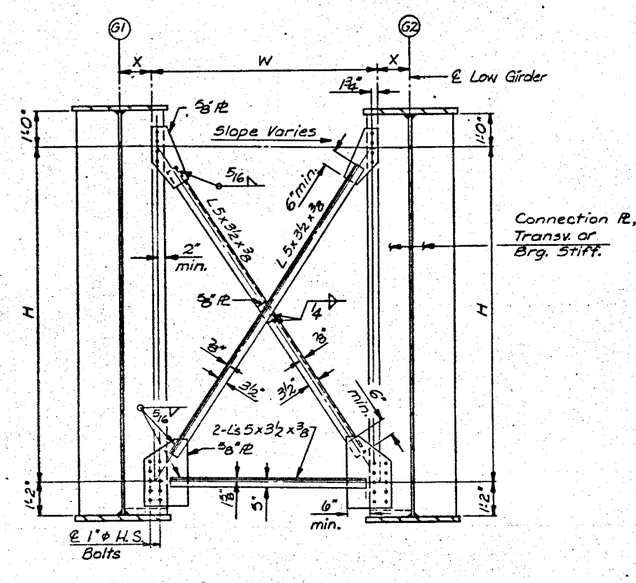


C.F-111 THRU C.F-128

C.F-129 THRU C.F-137

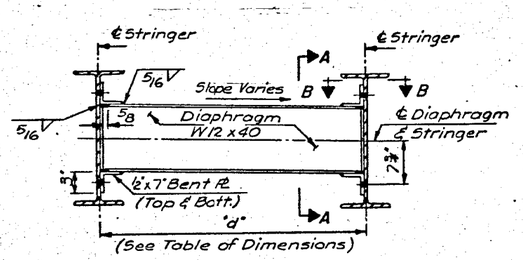
CROSS FRAMES C.F-111 THRU C.F-137
(TYPE 1)

Note: See Girder Flange Details, Sheet 63, for orientation of cross frame connection plates.



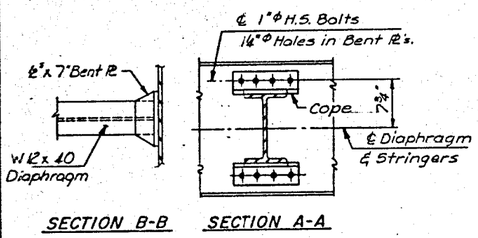
CROSS FRAMES C.F-138 THRU C.F-146
(TYPE 2)

TABLE OF DIMENSIONS CROSS FRAMES			
Cross Frame No.	Dimensions W	H	X
Type 1 C.F-111	20'-0 13/16"	8'-7"	11½"
C.F-112	20'-11 3/4"	"	5"
C.F-113	20'-9 3/4"	"	"
C.F-114	20'-7 1/16"	"	"
C.F-115	20'-5 3/8"	"	"
C.F-116	20'-2 11/16"	"	"
C.F-117	20'-0 3/16"	"	"
C.F-118	19'-9 5/8"	"	"
C.F-119	19'-7"	"	"
C.F-120	19'-4 1/4"	"	"
C.F-121	19'-1 1/2"	"	"
C.F-122	18'-10 3/16"	"	"
C.F-123	18'-5 3/16"	"	6½"
C.F-124	18'-2 1/2"	"	"
C.F-125	17'-11 3/16"	"	"
C.F-126	17'-7 7/8"	"	"
C.F-127	17'-4 9/16"	"	"
C.F-128	17'-1 5/16"	"	"
C.F-129	16'-10"	9'-4"	"
C.F-130	16'-3 7/16"	"	"
C.F-131	15'-11 7/8"	"	5"
C.F-132	15'-5 5/16"	"	"
C.F-133	14'-10 3/4"	"	"
C.F-134	14'-4 3/16"	"	"
C.F-135	13'-9 7/16"	"	"
C.F-136	13'-0"	"	6½"
C.F-137	12'-5 7/16"	"	6½"
Type 2 C.F-138	11'-10 3/8"	9'-11"	6½"
C.F-139	11'-4 5/16"	"	"
C.F-140	10'-9 3/4"	"	"
C.F-141	10'-6 3/16"	"	5"
C.F-142	9'-11 5/8"	"	"
C.F-143	9'-5 1/16"	"	"
C.F-144	8'-10 7/16"	"	"
C.F-145	8'-3 7/8"	"	"
C.F-146	6'-8 3/16"	"	11½"

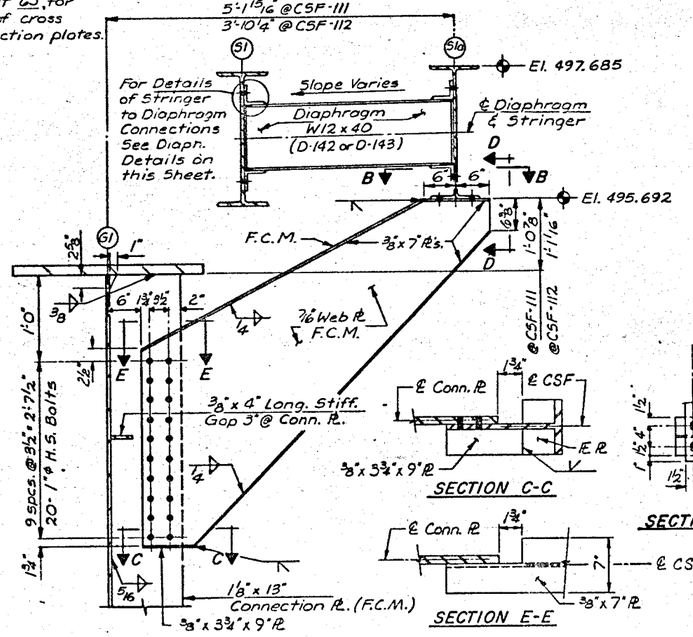


DIAPHRAGMS D-111 THRU D-143

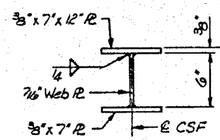
TABLE OF DIMENSIONS DIAPHRAGMS	
Diaphragm No.	Dimension "d"
D-111	7'-3 5/16"
D-112	7'-4"
D-113	7'-6 5/16"
D-114	7'-2 5/8"
D-115	6'-11"
D-116	7'-3 3/16"
D-117	6'-10 7/16"
D-118	6'-1"
D-119	7'-4 7/8"
D-120	6'-1 3/16"
D-121	5'-3 13/16"
D-122	5'-4 15/16"
D-123	6'-9 5/16"
D-124	6'-2 3/4"
D-125	5'-8 3/16"
D-126	5'-1 5/8"
D-127	4'-7 1/16"
D-128	4'-0 1/2"
D-129	7'-7 7/16"
D-130	7'-4 5/8"
D-131	6'-9 13/16"
D-132	6'-3 1/4"
D-133	5'-8 5/8"
D-134	5'-2 1/16"
D-135	4'-7 1/2"
D-136	5'-5 7/8"
D-137	6'-2 11/16"
D-138	5'-8 1/16"
D-139	5'-1 1/2"
D-140	4'-6 15/16"
D-141	4'-0 3/8"
D-142	3'-3 5/16"
D-143	1'-9 1/2"



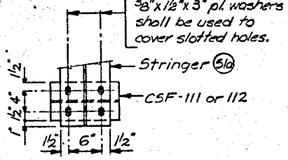
SECTION B-B SECTION A-A



CANTILEVERED SUPPORT FRAMES CSF-111 & CSF-112



VIEW D-D



SECTION B-B

NOTES:

F.C.M. denotes material that shall conform to the Supplemental Requirements for Fracture Critical Members

1⅛" ϕ holes in gusset ℓ's for 1" ϕ high strength bolts.

Hardened washers shall be required over holes in cross frame gusset ℓ's and Diaphragm bent ℓ's.

All Structural Steel shall meet the requirements of AASHTO M-183 unless otherwise noted.

All High Strength Bolts shall meet the requirements of AASHTO M-164

15/16" ϕ holes in CSF 1⅛" slotted holes in Stringer for ⅞" ϕ H.S. Bolts ⅜"x1½"x3" pl. washers shall be used to cover slotted holes.

STRUCTURAL STEEL DETAILS
RAMP E - SPANS 6E, 7E & 8E

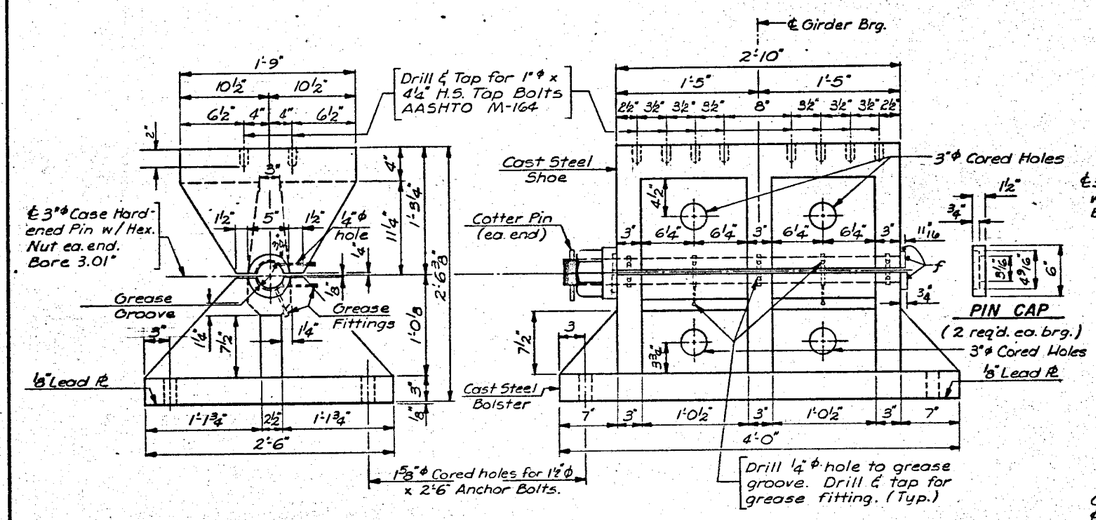
Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.	HANSON ENGINEERS INCORPORATED	FILE NO.	74001
CHECKED S.C.O.			
DRAWN D.A.N.		DATE	11-2-79
CHECKED S.C.O.	SPRINGFIELD ILLINOIS PEORIA ILLINOIS		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

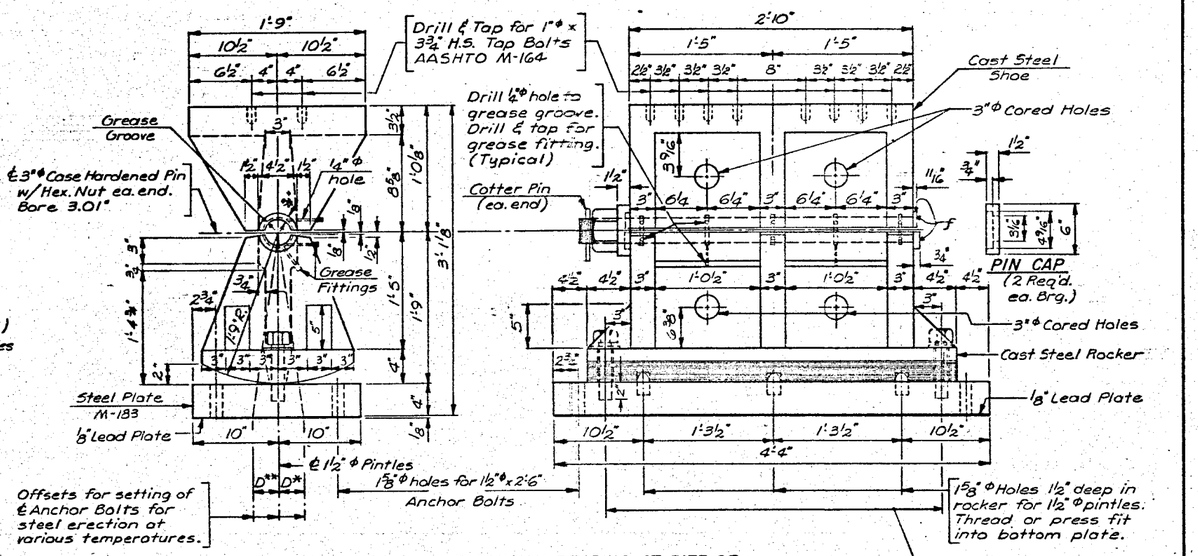
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-2 (FEE)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 69 of 134



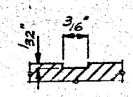
FIXED BEARING AT PIER 5E

Cast steel shoe ℄ bolster shall meet the requirements of AASHTO M-192 Class 90. Structural steel weldments of equal sections meeting the requirements of AASHTO M-222 or M-223 may be substituted for the castings, subject to approval by the Engineer prior to fabrication. No extra compensation will be allowed for the substitution.



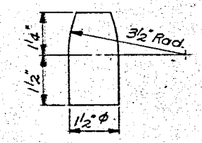
EXPANSION BEARING AT PIER 6E

Cast steel shoe ℄ rocker shall meet the requirements of AASHTO M-192 Class 90. Structural steel weldments of equal sections meeting the requirements of AASHTO M-222 or M-223 may be substituted for the castings, subject to approval by the Engineer prior to fabrication. No extra compensation will be allowed for the substitution.



GREASE GROOVE ON SADDLE

Grease bearing assembly with molybdenum grease before installation.



PINTLE DETAIL

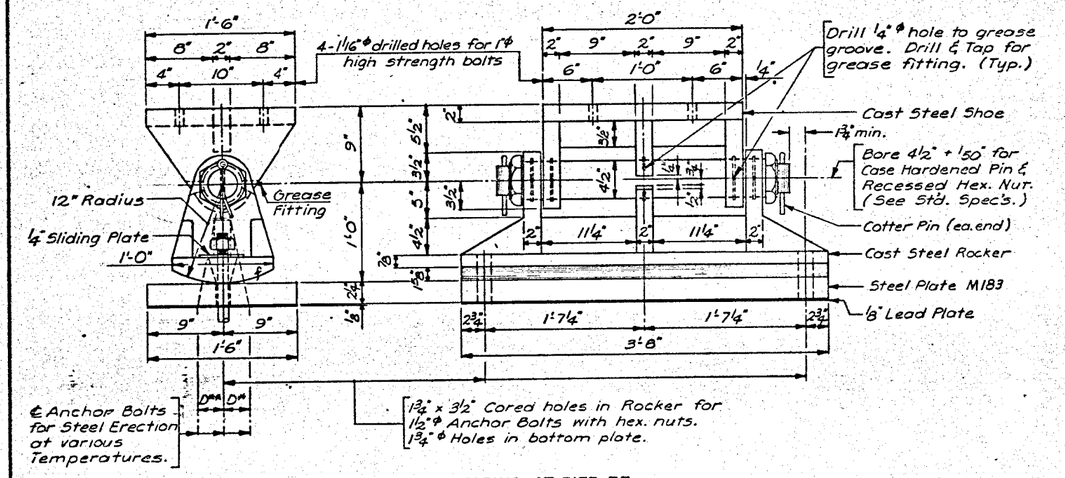
Steel for pintles shall meet the requirements of AASHTO M-223.

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

A.) D* (Side of Bearing away from Fixed Bearing. D* = ⅛" per each 100' of expansion for every 15° fall below the Normal Temperature of 50°F.

D** (Side of Bearing toward Fixed Bearing. D** = ⅛" per each 100' of expansion for every 15° rise above the Normal Temperature of 50°F.

B.) After Girders have been erected and dimensions D* & D** determined, holes shall be drilled & anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.



EXPANSION BEARING AT PIER 7E

Cast steel shoe ℄ rocker shall meet the requirements of AASHTO M-192 Class 90. Structural steel weldments of equal sections meeting the requirements of AASHTO M-222 or M-223 may be substituted for the castings, subject to approval by the Engineer prior to fabrication. No extra compensation will be allowed for the substitution.

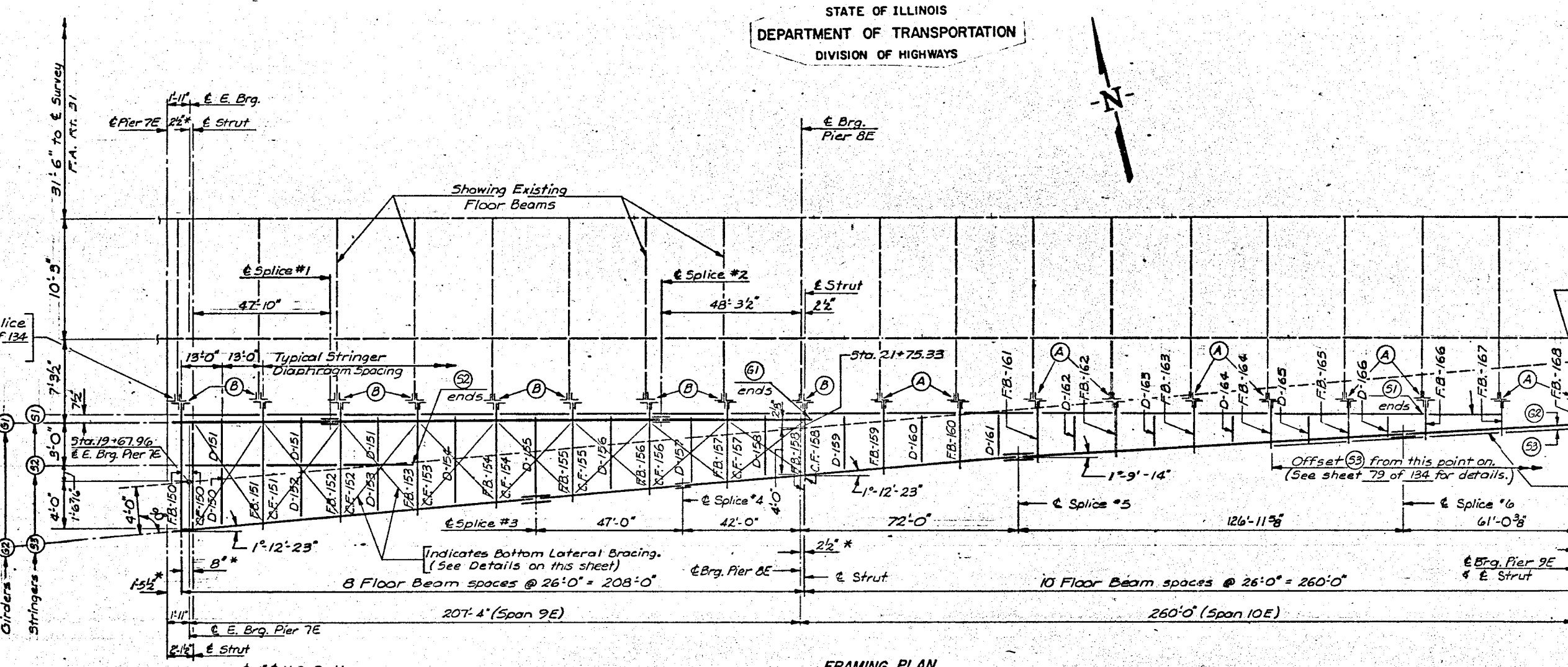
For details of Bearing Assembly @ ℄ East Bearing of Pier 4E see sheet 45 of 134.

BEARING DETAILS
RAMP E - SPANS 6E, 7E & 8E

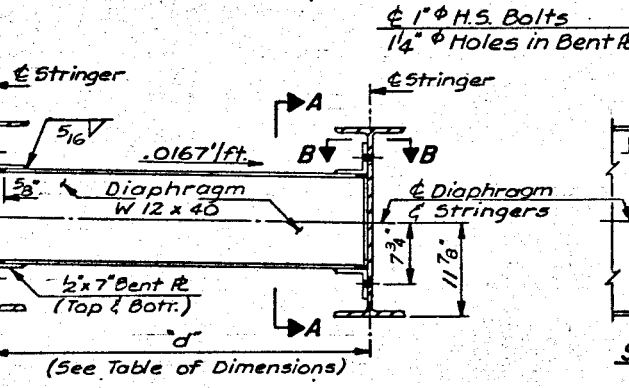
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.	HANSON ENGINEERS INCORPORATED	FILE NO.	74001
CHECKED S.C.Q.			
DRAWN D.A.N.		DATE	11-2-79
CHECKED S.C.Q.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



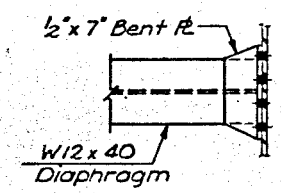
FRAMING PLAN SPANS 9E & 10E



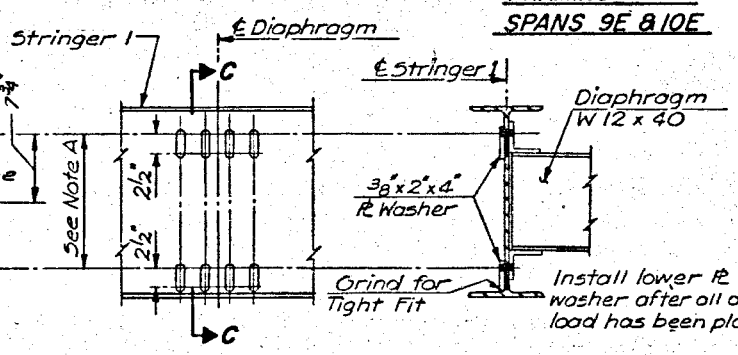
DIAPHRAGMS D-150 THRU D-166

TABLE OF DIMENSIONS DIAPHRAGMS D-150 - D-166	
Diaphragm No.	Dimension "d"
D-150	5'-3 7/16"
D-151	3'-7½"
D-152	4'-8⅜"
D-153	4'-2 5/16"
D-154	7'-3¼"
D-155	6'-8⅝"
D-156	6'-2 1/16"
D-157	5'-7½"
D-158	5'-0 15/16"
D-159	4'-6⅜"
D-160	3'-11 13/16"
D-161	3'-5¼"
D-162	2'-10⅜"
D-163	2'-4 9/16"
D-164	1'-10 5/16"
D-165	1'-10 7/16"
D-166	1'-4 3/16"

Note: Hardened washers shall be required over 1¼" Φ holes in Bent Plates.



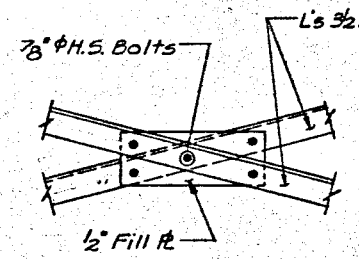
SECTION B-B



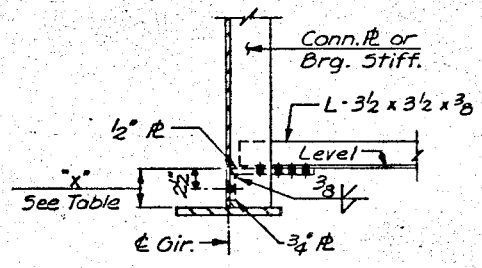
SECTION A-A

DETAIL AT STRINGER 1

SECTION C-C



AT INTERSECTION

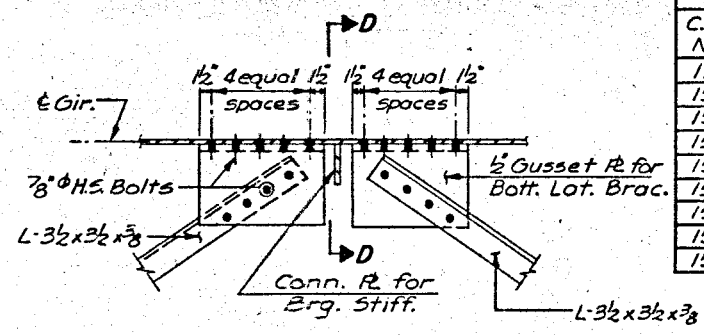


SECTION D-D

NOTE A

℄ 1" Φ H.S. Bolts after all dead load is in place. Use 2½" slotted hole in all stringer 1 connections. Note that for the installation of diaphragms, the ℄ of the 1" Φ H.S. bolts will be near the bottom of the slots. All 1" Φ H.S. bolts used in the stringer 1 connection should have self-locking nuts. The nuts should be installed onto the bolts but not tightened, so that the stringer may be free to move as additional dead load deflects the girder - stringer system. The nuts should have the self-locking device in use during construction to prevent them from backing off of the bolt. After all dead load has been placed, the nuts on the stringer 1 connections should then be tightened by the Deck Contractor.

TABLE OF "X" DIMENSIONS		
C.F. No.	Gir. 1	Gir. 2
150	5"	6½"
151	5"	6⅜"
152	5"	6¼"
153	5"	6⅛"
154	5"	6"
155	5"	5 15/16"
156	5"	5 13/16"
157	5"	5 11/16"
158	5"	5 9/16"



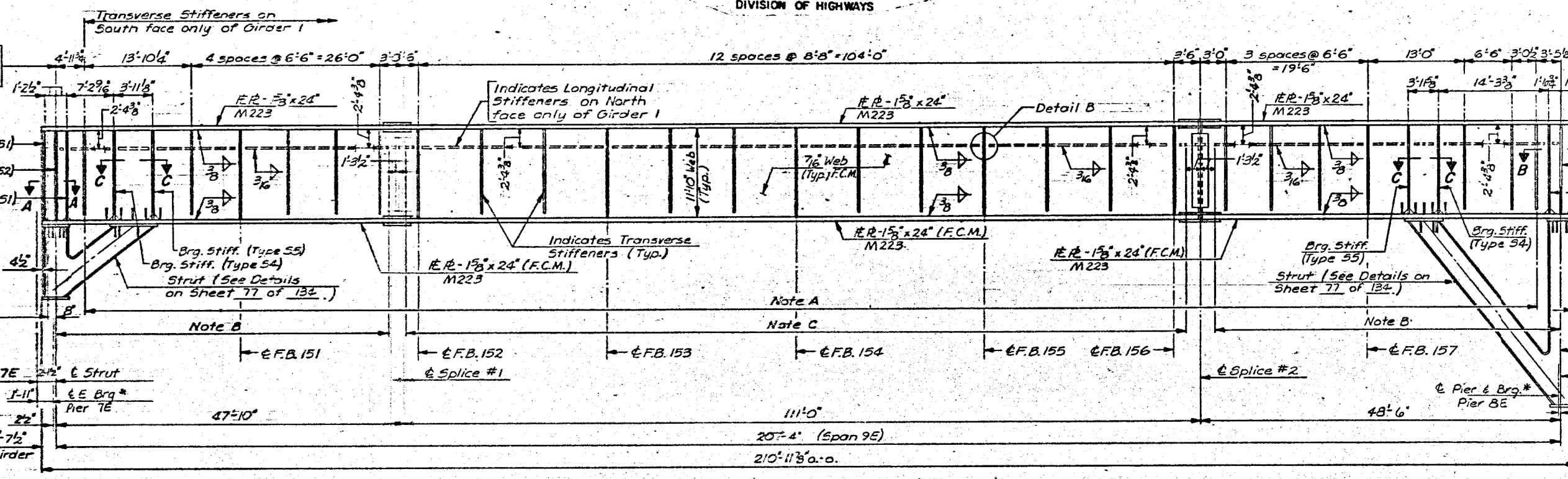
PLAN

BOTTOM LATERAL BRACING DETAILS

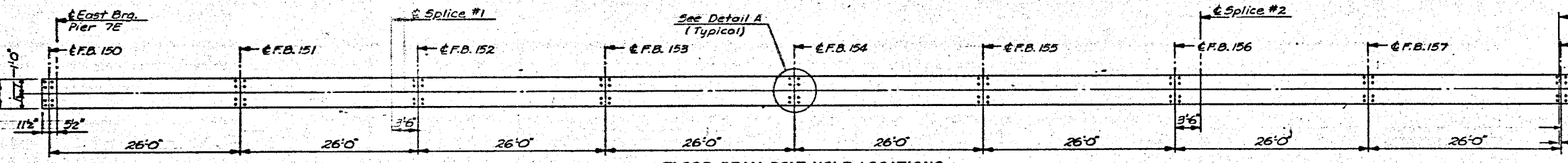
F.A.

S.C.O
CRN
D.A.N.
S.C.O

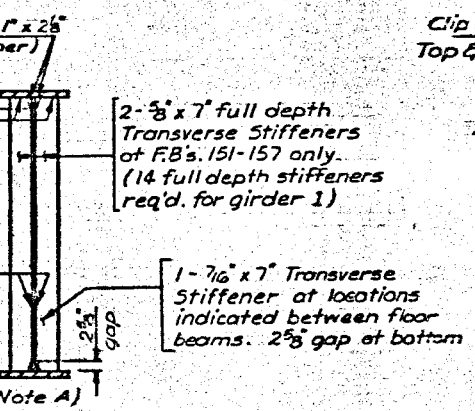
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



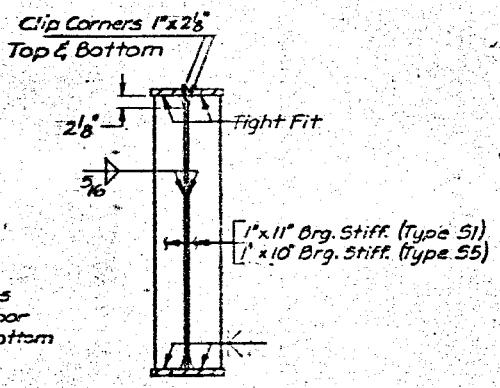
ELEVATION - GIRDER 1



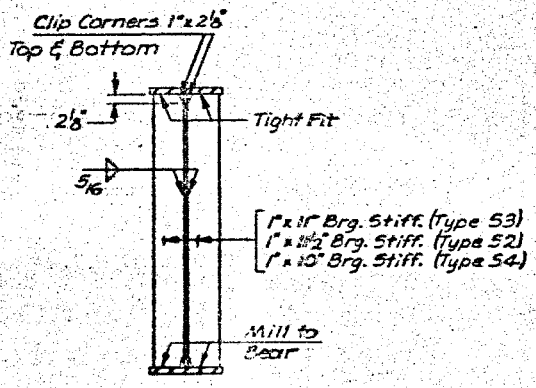
FLOOR BEAM BOLT HOLE LOCATIONS IN TOP FLANGE OF GIRDER 1



RSE STIFFENER

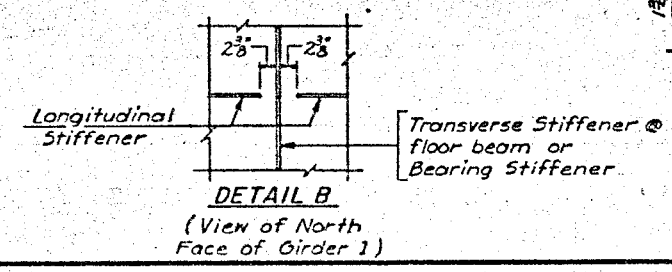


Types S1 & S5

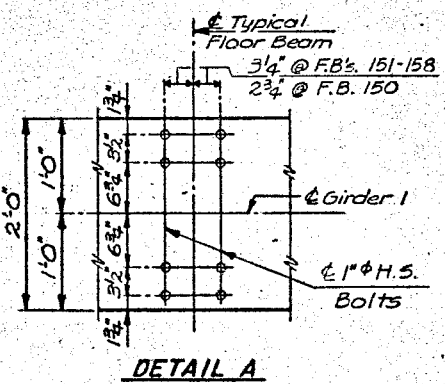


Types S2, S3 & S4

BEARING STIFFENERS



DETAIL B
(View of North Face of Girder 1)



DETAIL A

Girder tension and all strut flo shall meet the Critical Member.
All structural M183 unless othe
All dimensior the Girder.
Note A: 7/16" x with ⅜" fillet we bottom flange.
Note B: Limi Stiffeners.
Note C: Limi Stiffeners.
For Sections 76 of 134.
All dimension horizontally and

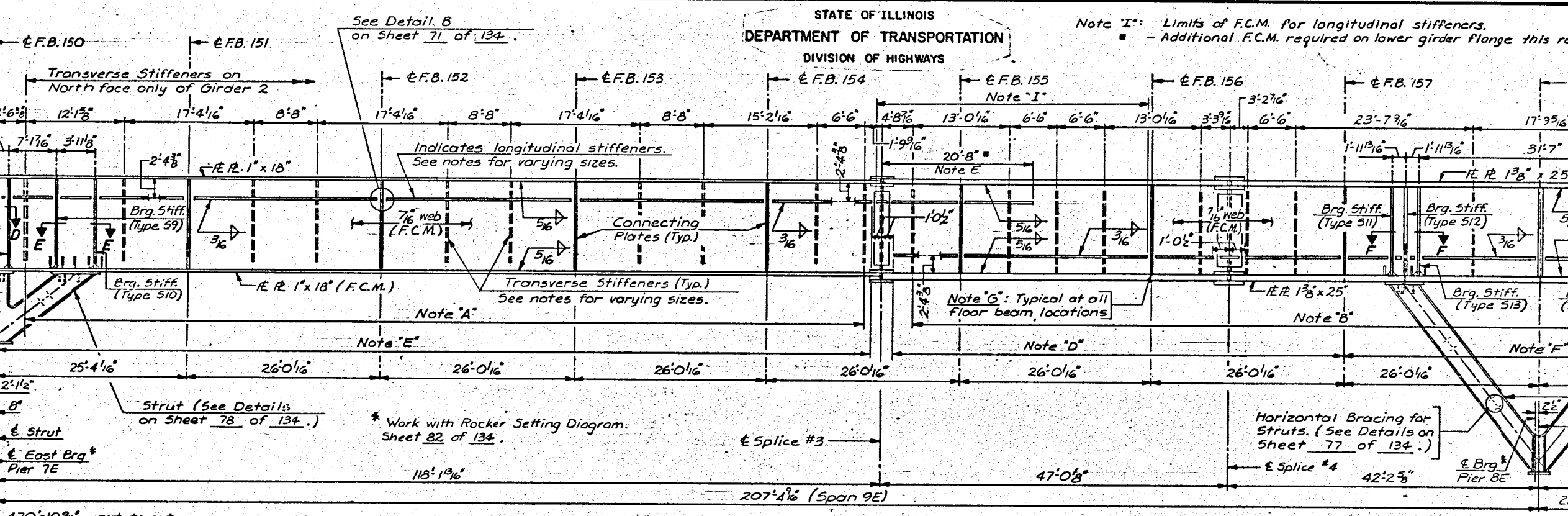
GIR
RAM
Mc CL
OVER T
F.A. ROUTE 4
PEORIA &

DESIGNED S.C.O.
CHECKED C.R.N.
DRAWN D.A.N.
CHECKED S.C.O.
SPRINGFIELD,

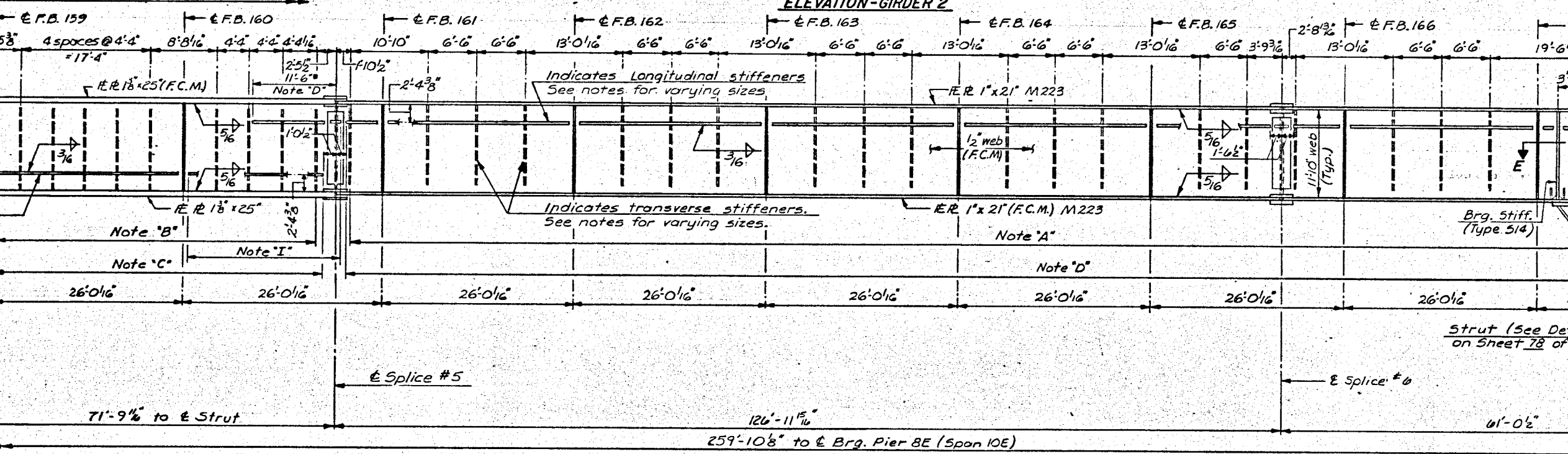
* Work w Sheet

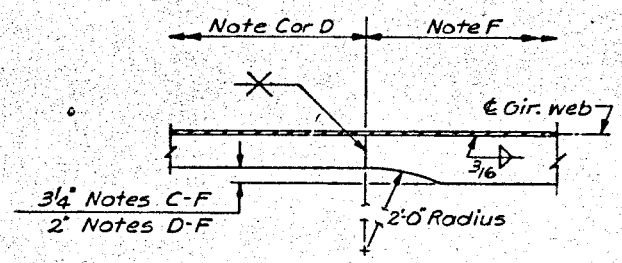
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note "I": Limits of F.C.M. for longitudinal stiffeners.
■ – Additional F.C.M. required on lower girder flange this re



ELEVATION-GIRDER 2





LONGITUDINAL STIFFENER TRANSITION

ELEVATION-GIRDER 2

Note "A": 7/16" x 6 3/4" transverse stiffeners with 5/16 fillet weld at top flange, 3/16 fillet weld along web, & 2 5/8" gap at bottom flange.

Note "B": 7/16" x 6 3/4" transverse stiffeners with 2 5/8" gap at top flange, 5/16 fillet weld at bottom flange, & 3/16 fillet weld along web.

Note "C": 3/8" x 2 3/4" Longitudinal stiffener.

Note "D": 3/8" x 4" Longitudinal stiffener.

Note "E": 3/8" x 5" Longitudinal stiffener.

Note "F": 3/8" x 6" Longitudinal stiffener.

Note "G": 5/16 fillet weld at top & bottom flange, & 1/4" fillet weld along web.

Notes:

All structural steel shall conform to AASHTO M183 unless otherwise noted.

All girder tension flanges, webs, splice plates, longitudinal stiffeners in tension and all strut flanges, webs, and end plates shall meet the requirements for Fracture Critical Members (F.C.M.).

All dimensions shown are measured horizontally and along ℄ Girder.

All bearing stiffener & transverse stiffener sizes & details are shown on Sheet 73 of 134.

For Sections D-D thru G-G see Sheet 76 of 134.

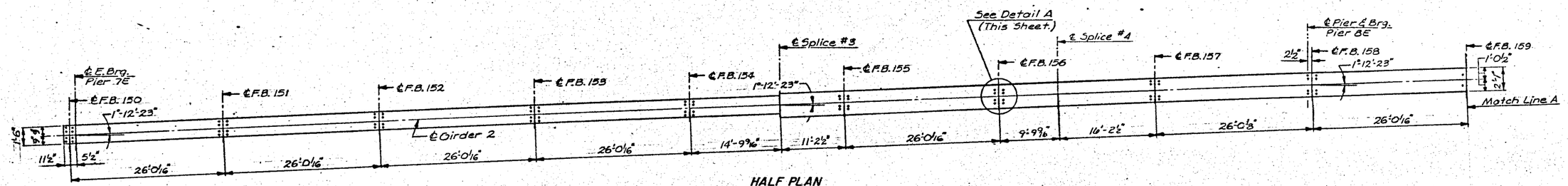
F.A. R
PE

S.C.Q.
R.W.G.
D.A.N.
S.C.O.

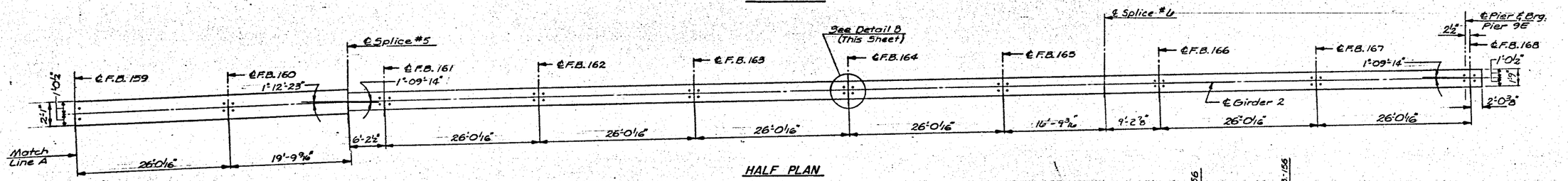
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 9	ILLINOIS	PROJECT		

Sheet 73 of 134

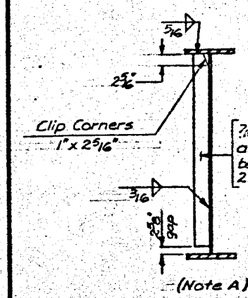


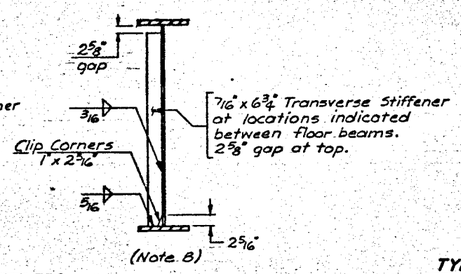
HALF PLAN



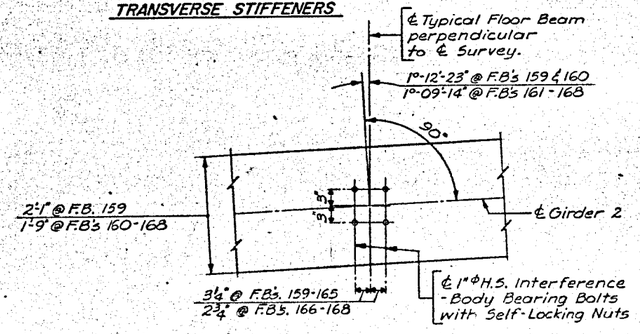
HALF PLAN

FLOOR BEAM BOLT HOLE LOCATIONS IN TOP FLANGE OF GIRDER 2

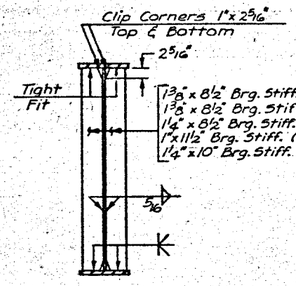




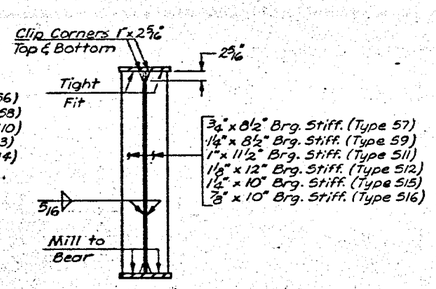
TRANSVERSE STIFFENERS



DETAIL B
(@ F.B's. 159 thru 168)

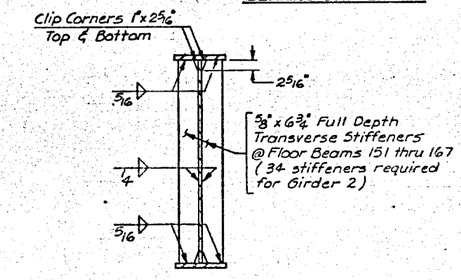


TYPES S6, S8, S10, S13 & S14

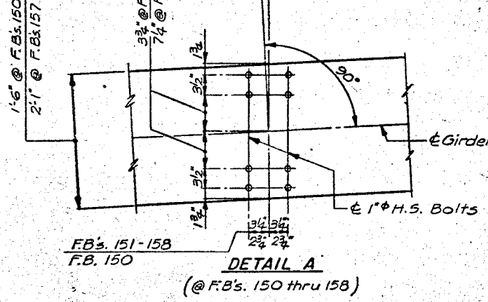


TYPES S7, S9, S11, S12, S15 & S16

BEARING STIFFENERS



TRANSVERSE STIFFENER AT FLOOR BEAM



DETAIL A
(@ F.B's. 150 thru 158)

Notes:

Angles shown in Half Plan are measured from a line parallel to ℄ of survey.

See Sheet 72 of 134 for location of transverse stiffeners and of bearing stiffeners.

All dimensions shown are measured horizontally.

GIRDER 2 DETAILS
RAMP E - SPANS 9E & 10E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

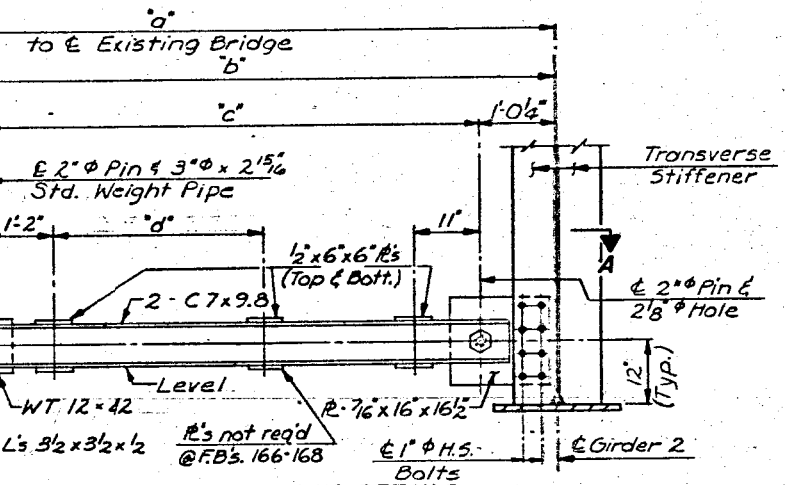
DESIGNED S.C.O.
DRAWN R.W.C.
TRACED D.A.M.
CHECKED S.C.O.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

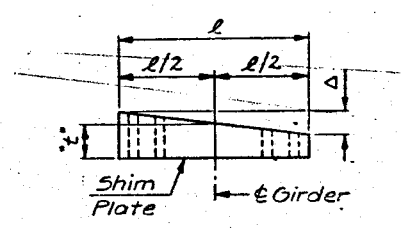
e: For dimensions "a" thru "d" see Table at right.



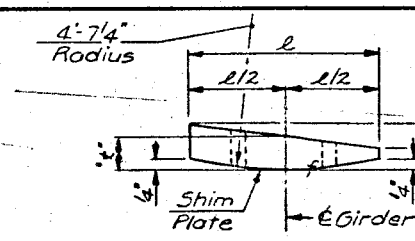
BOTTOM LATERAL BRACING DETAILS (SPAN 10E ONLY)

F.B. No.	Dimensions "a"	"b"	"c"	"d"	Existing Vertical
159	21'-2 1/16"	10'-11 1/16"	8'-11¼"	3'-6"	14 WF 43
160	20'-7½"	10'-4½"	8'-4 9/16"	3'-3"	14 WF 61
161	20'-1"	9'-10"	7'-10 3/16"	3'-0"	14 WF 43
162	19'-6 1/16"	9'-3 1/16"	7'-3¾"	2'-9"	14 WF 61
163	19'-0 7/16"	8'-9 7/16"	6'-9 5/8"	2'-6"	14 WF 43
164	18'-6⅞"	8'-3⅞"	6'-3 3/16"	2'-3"	14 WF 61
165	17'-11⅞"	7'-8⅞"	5'-9 1/16"	2'-0"	14 WF 43
166	17'-5 9/16"	7'-2 9/16"	5'-2⅝"	N.A.	14 WF 61
167	16'-11 5/16"	6'-8 5/16"	4'-8½"	N.A.	14 WF 43
168	16'-5"	6'-2"	4'-2"	N.A.	14 WF 87

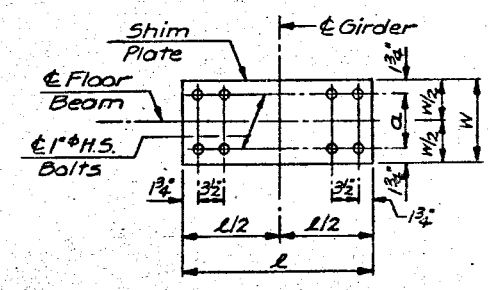
Note A: ℄ back of channels, one side of WT web in contact with channel, ℄ edge of pipe in contact with channel.



ELEVATION 1

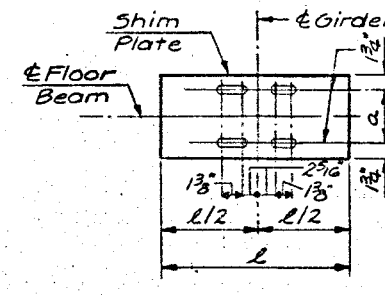


ELEVATION 2



PLAN 1

SHIM PLATE DETAIL 1



PLAN 2

SHIM PLATE DETAIL

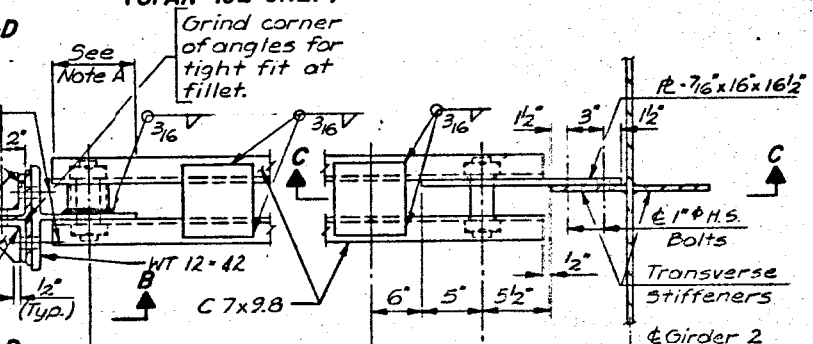
TABLE OF DIMENSIONS SHIM PLATES

Type	Detail	ℓ	w	a	"t"	Δ
A	1	18"	10"	6½"	13/16"	5/16"
B	1	24"	10"	6½"	7/16"	3/8"
C	1	25"	10"	6½"	7/16"	7/16"
D	2	10½"	10"	6½"	7/16"	3/16"
E	2	10½"	10"	6½"	13/16"	3/16"
F	1	18"	9"	5½"	13/16"	5/16"
G	1	24"	9"	5½"	7/16"	3/8"
H	2	10½"	9"	5½"	1 1/16"	1 1/16"
I	2	10½"	9"	5½"	1 5/16"	1⅜"
J	2	10½"	9"	5½"	2 5/16"	1¾"

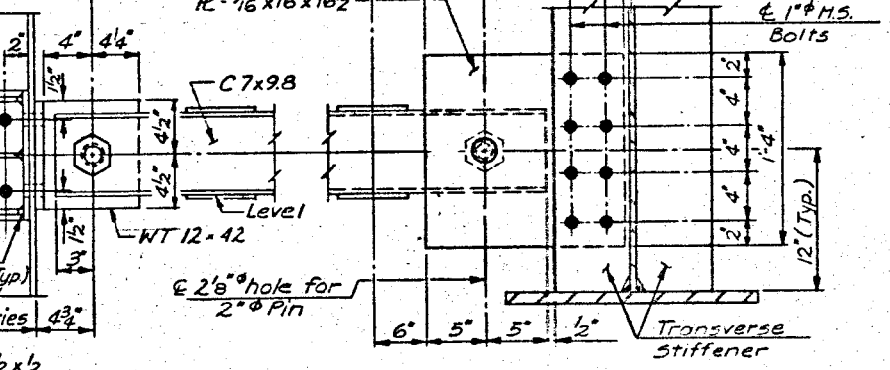
All … sheet … unless …

All … this sh… M 164.

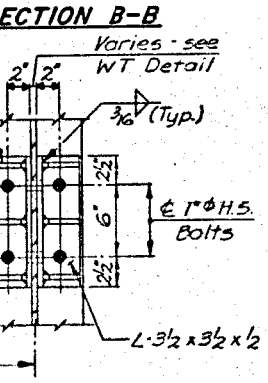
N.T. … membe… Supplen… Toughn…



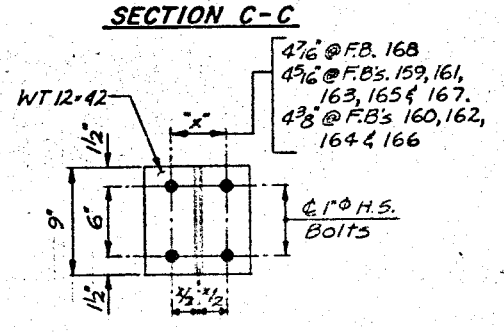
SECTION A-A



SECTION C-C

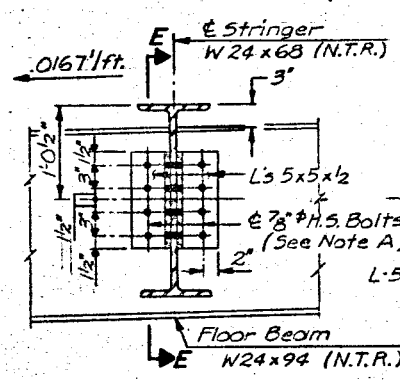


SECTION B-B

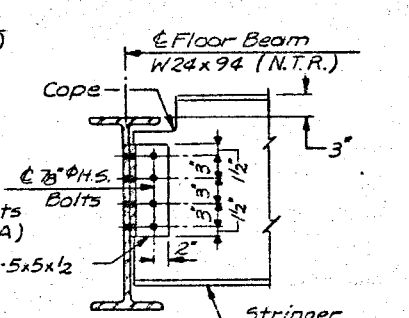


WT DETAIL

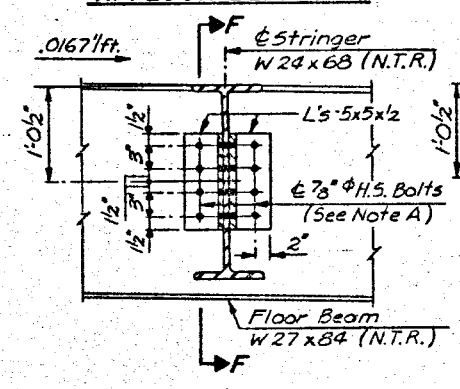
TION D-D



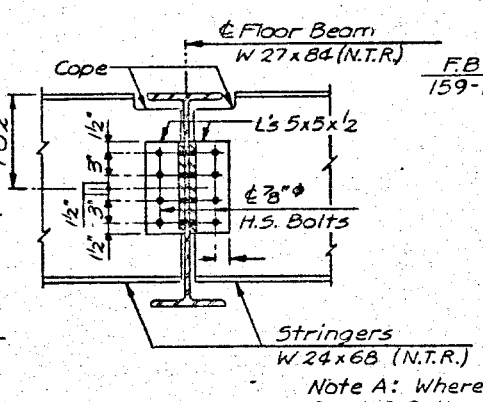
ELEVATION AT FLOOR BEAM 150



SECTION E-E

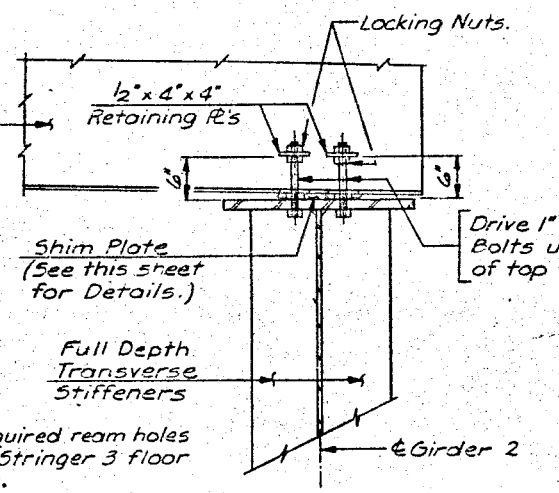


ELEVATION AT FLOOR BEAMS 151 - 165



SECTION F-F

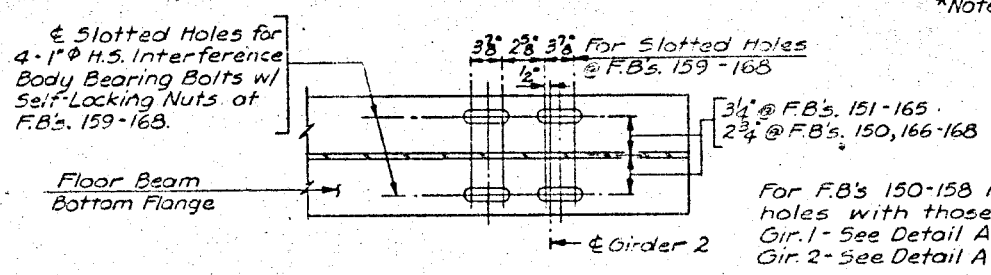
Note A: Where required ream holes for H.S. Bolts for Stringer 3 floor beam connections.



FLOOR BEAM TO GIRDER CONNECTION
(@ F.B's. 159 thru 168)

STRINGER TO FLOOR BEAM CONNECTION DETAILS *

*Note: For Stringer to Floor Beam Connection Details at Floor Beams 166, 167 & 168 see Box Stringer Connection Details on Sheet 75 of 134.



For F.B's 150-158 match 8-1 1/16"Φ holes with those in girder flange.
Gir. 1 - See Detail A on Sht. 71 of 134.
Gir. 2 - See Detail A on Sht. 73 of 134.

FLOOR BEAM BOLT HOLE LOCATIONS

ST… RA…

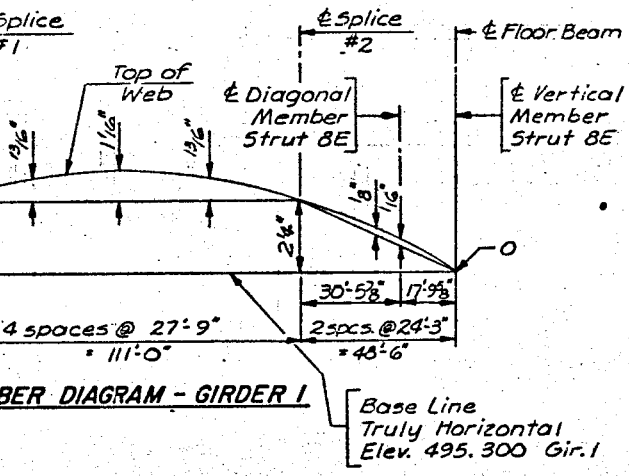
C…

F.A. RO…

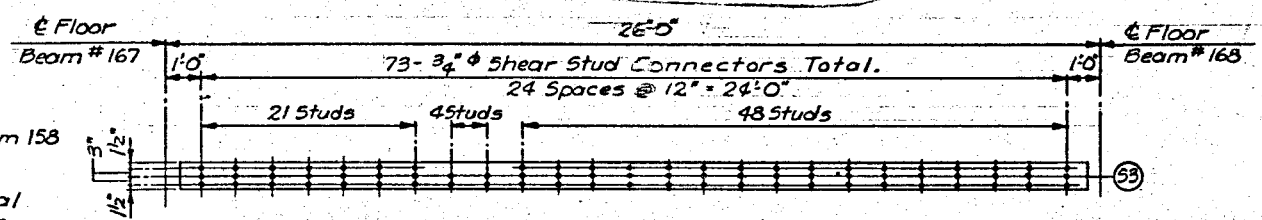
PEO…

S.C.O.
W.D.L.
D.A.N.
W.D.L.

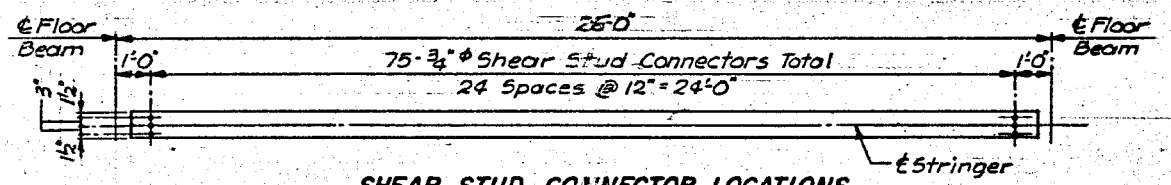
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



CAMBER DIAGRAM - GIRDER 1



SHEAR STUD CONNECTOR LOCATIONS
(On Stringer 53 between Floor Beams 167 & 168.)

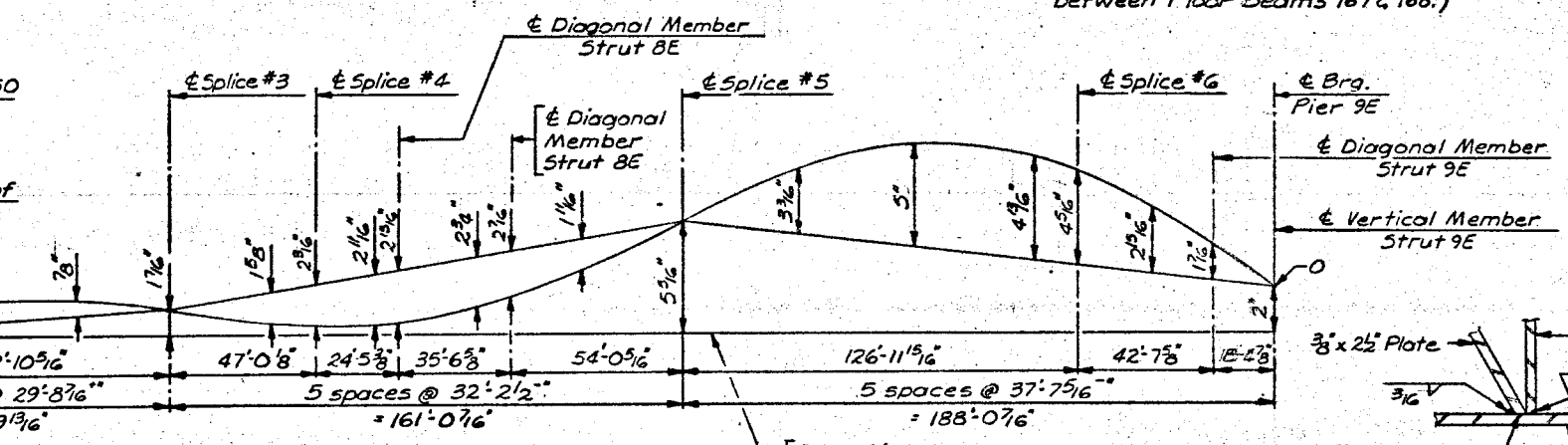


SHEAR STUD CONNECTOR LOCATIONS
(For all Stringers in Span 10E except Box Stringer & Stringer between Floor Beams 167 & 168.)

GIRDER MOMENT TABLE

	Girder 1	Girder 2			
	Span 9E	Span 9E			Span 10
	.5pt.	.375pt.	.91pt.	.07pt.	
I (in.⁴)	506,657	288,435	457,715	457,715	31
℄* (K/1)	1.845	1.538	1.549	1.643	
M℄ (1k)	9,219	3,123	8,258	7,687	
M℄ (1k)	2,048	1,470	1,337	1,285	
Imp. (1k)	287	206	187	180	
MTOTAL (1k)	11,554	4,799	9,782	9,152	
fs (ksi)	19.9	14.4	18.6	17.4	

* Due to varying super width, this figure is only an average of varying dead load.



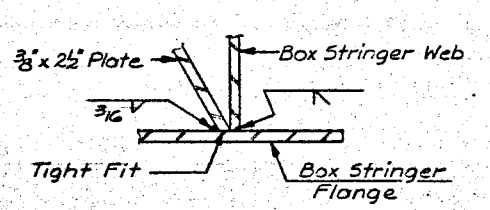
CAMBER DIAGRAM - GIRDER 2

GIRDER 2 REACTION TABLE

	Pier 7E	Pier 8E	Pier 9E
R℄ (K)	105.9	466.1	145.8
R℄ (K)	41.8	77.7	14.1
Imp. (K)	5.8	10.9	2.0
RTOTAL (K)	153.5	554.7	161.9

GIRDER 1 REACTION TABLE

	Pier 7E	Pier 8E
R℄ (K)	176.5	189.3
R℄ (K)	43.7	41.6
Imp (K)	6.2	5.8
RTOTAL (K)	226.4	236.7



DETAIL F

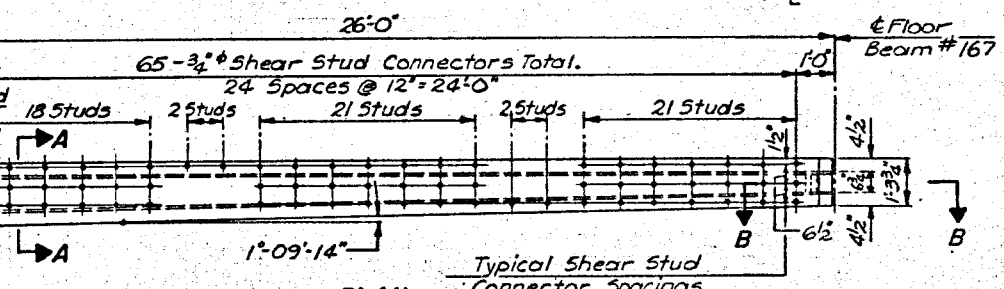
TABLE OF "t" DIMENSIONS

Fl. Brn. No.	Str. 1	Str. 3
166	7/8"	1 15/16"
167	—	1 3/4"
168	—	1 1/2"

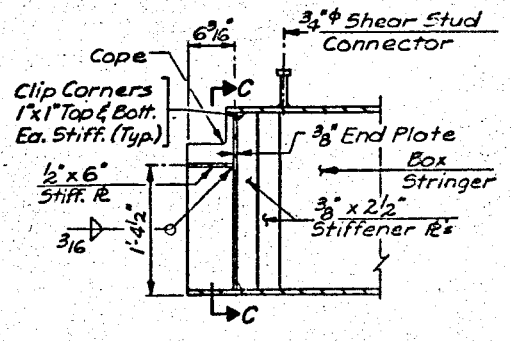
TOP OF

℄ Vertical Member
℄ Diagonal Member
℄ Splice #1
℄ Splice #3
℄ Splice #2
℄ Splice #4
℄ Diagonal Member
℄ Vertical Member
℄ Diagonal Member
℄ Splice #5
℄ Splice #6
℄ Diagonal Member
℄ Vertical Member

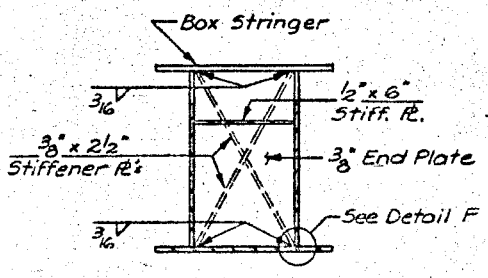
** Elevations include and are for faces applicable.



PLAN

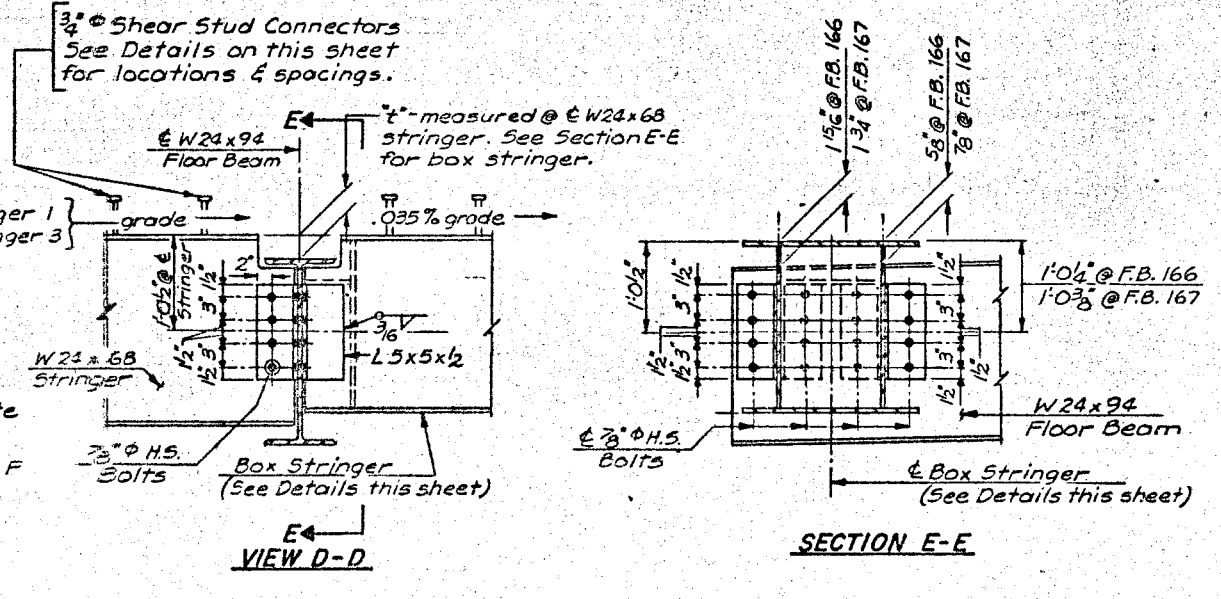


SECTION B-B



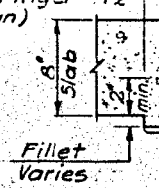
SECTION C-C

Notes:
Structural steel shall meet the requirements of AASHTO M-183.
Box Stringer shall be subject to the Supplemental Requirements for Notch Toughness.



SECTION E-E

@ W24x68 Stringers (Span 10E only) 1 1/2"
@ Box Stringer 1 1/2" (See plan)



SHEA
CONNEC

STRU
RAM
M
OVE
F.A. ROUT
PEORI

DESIGNED S.C.O.
CHECKED W.O.L.
DRAWN D.A.N.
CHECKED S.C.O.

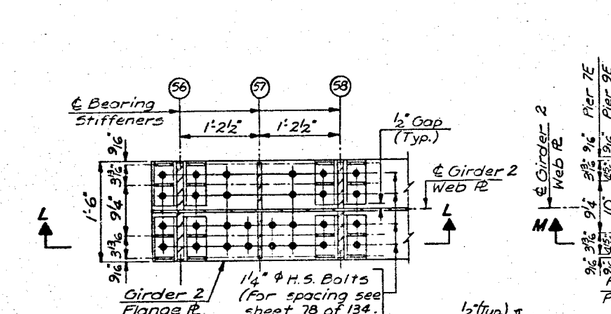
BOX STRINGER DETAILS

BOX STRINGER CONNECTION DETAILS

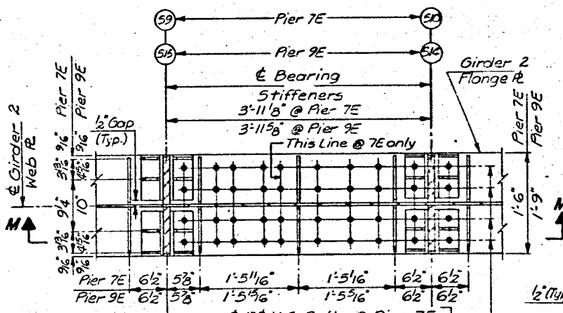
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

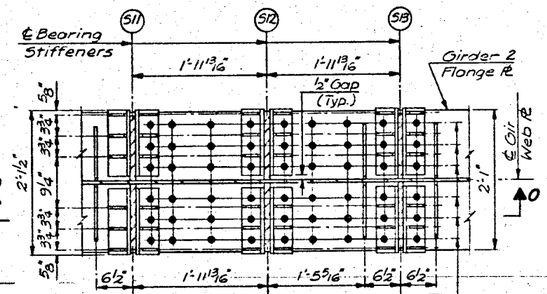
Sheet 76 of 134



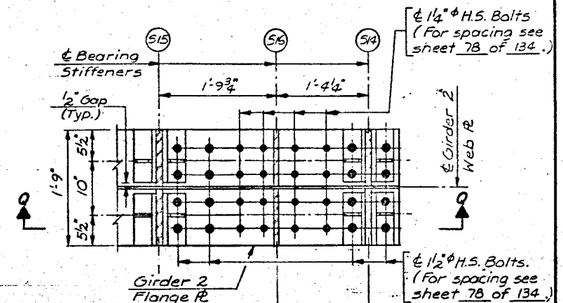
SECTION D-D



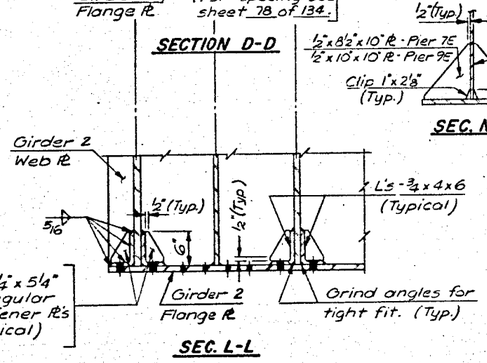
SECTION E-E



SECTION F-F

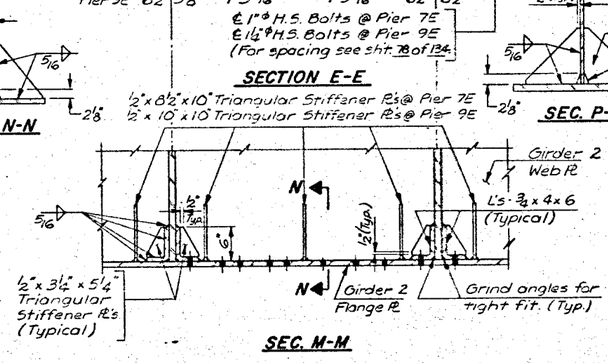


SECTION G-G



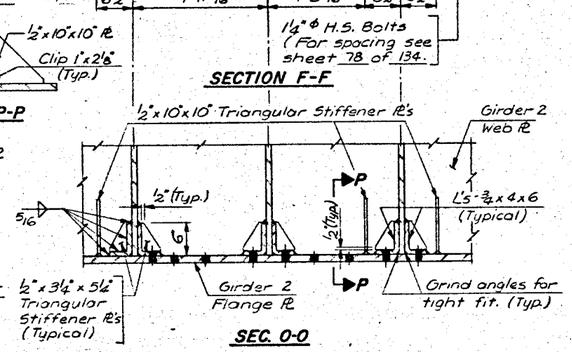
SEC. L-L

SEC. N-N

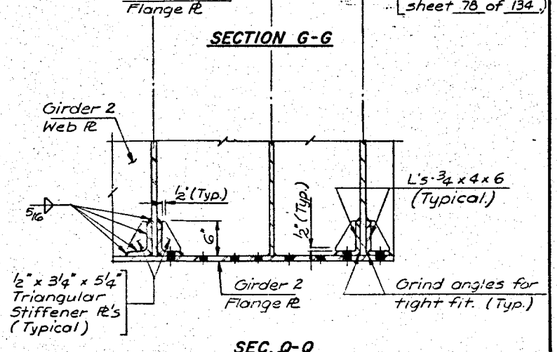


SEC. M-M

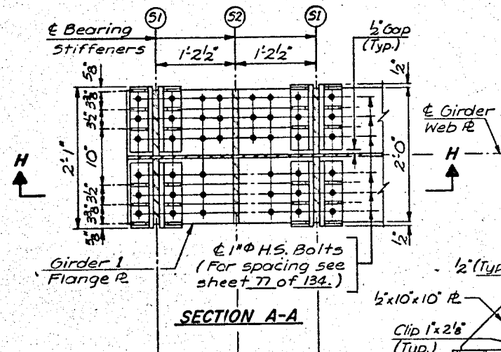
SEC. P-P



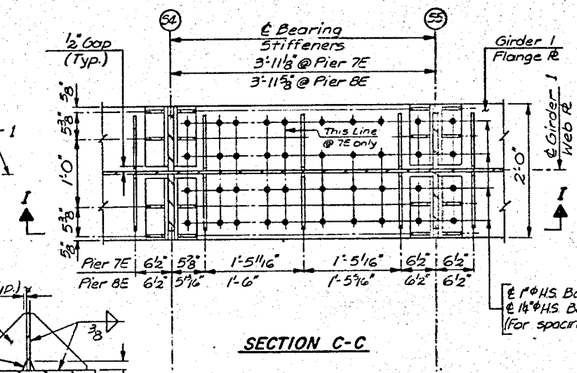
SEC. O-O



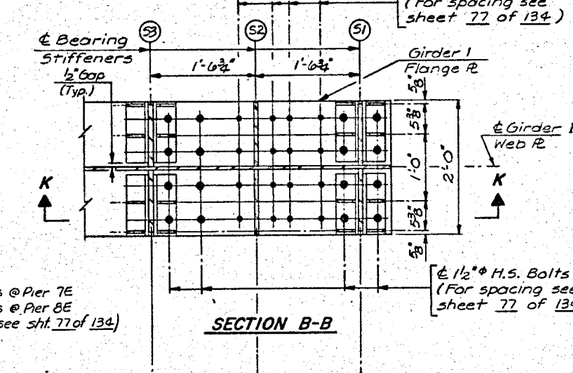
SEC. Q-Q



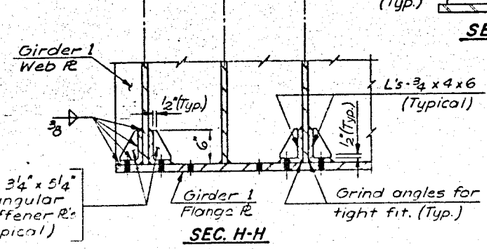
SECTION A-A



SECTION C-C

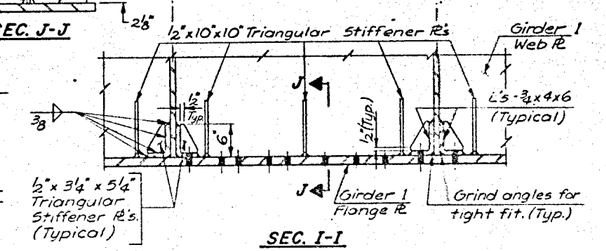


SECTION B-B

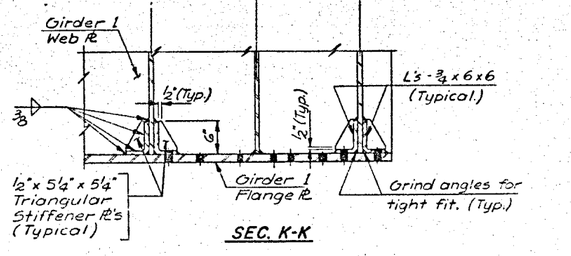


SEC. H-H

SEC. J-J



SEC. I-I



SEC. K-K

Notes:

All Structural Steel shall conform to A.A.S.H.T.O. M-183

Work this sheet with sheets 71 of 134 & 72 of 134.

STRUT CONNECTIONS - GIRDERS 1&2
RAMP E - SPANS 9E & 10E

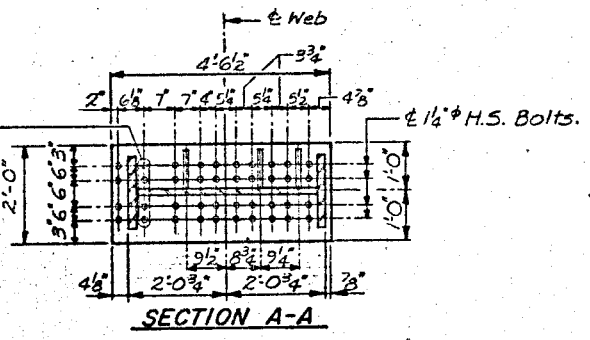
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED S.C.O.
CHECKED W.D.L.
DRAWN D.A.N.
CHECKED W.D.L.

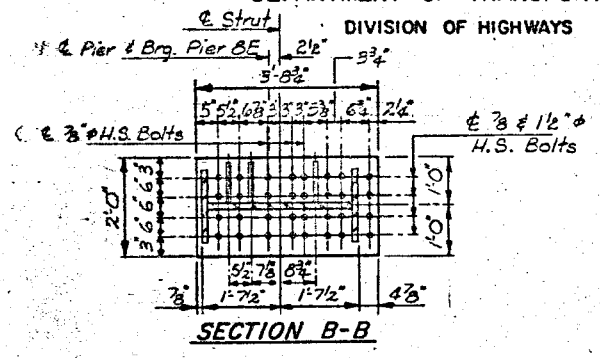
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

JOB NO. 74501
DATE 11-2-79

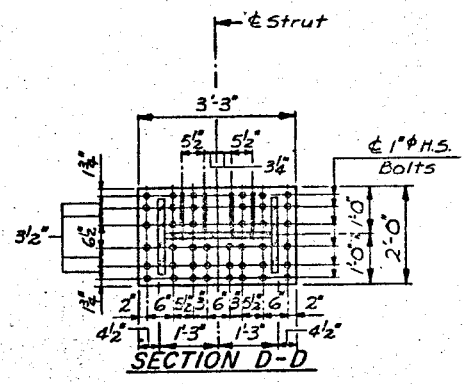
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



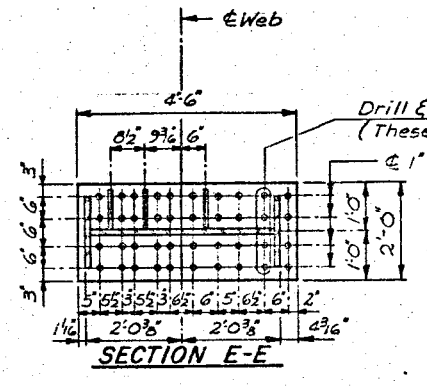
SECTION A-A



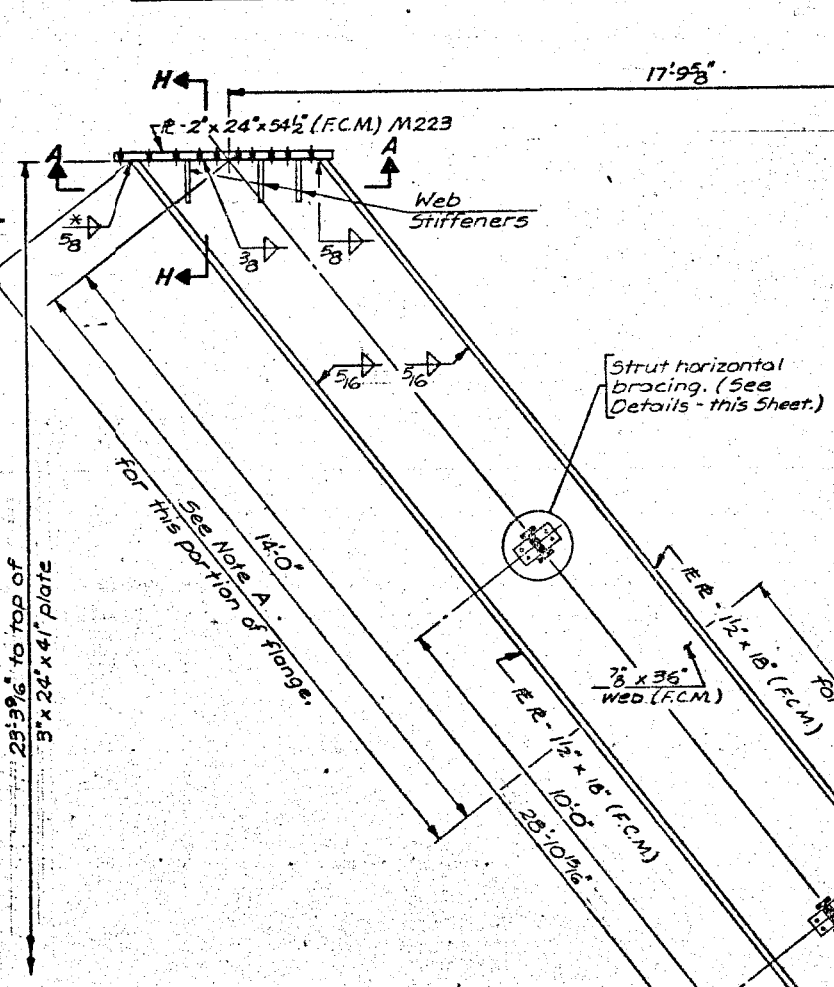
SECTION B-B

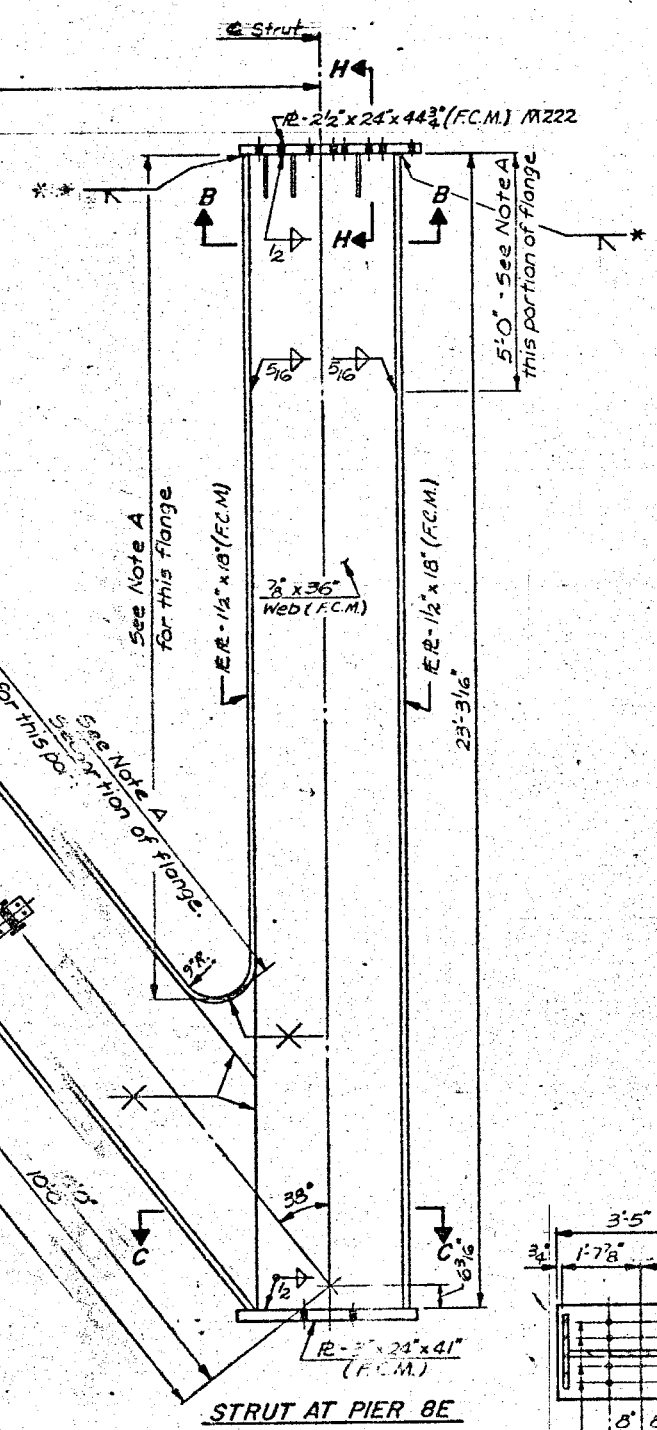


SECTION D-D

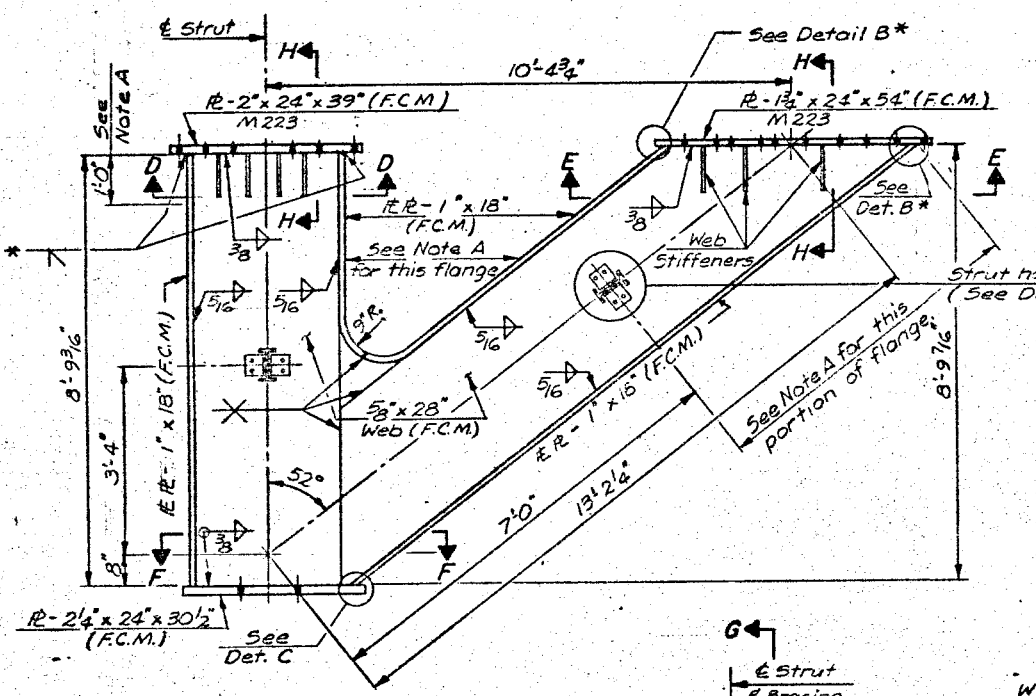


SECTION E-E

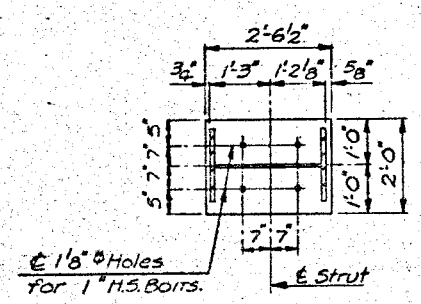




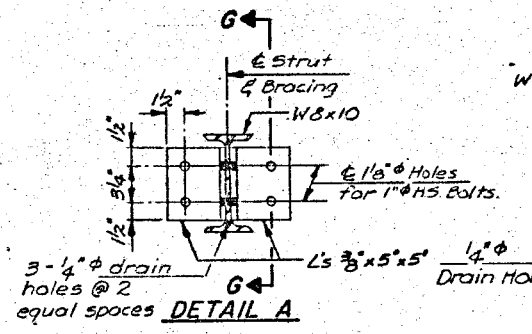
STRUT AT PIER 8E



STRUT AT PIER 7E

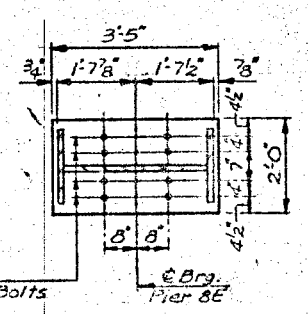


SECTION F-F



DETAIL A

STRUT HORIZONTAL BRA



SECTION C-C

UT LOAD TABLE - GIRDER 1

(in.³)		P℄ (K)	P℄ (K)	PIMP (K)	M℄ (I-K)	M℄ (I-K)	MIMP (I-K)	V℄ (K)	V℄ (K)	VIMP (K)
581	T 177.0	40.0	6.0	53.3	9.7	1.5	8.7	1.6	.2
	B 180.8	40.0	6.0	68.1	12.3	1.9	8.7	1.6	.2
581	T 2.5	.5	*	149.8	34.7	5.3	11.9	2.1	.3
	B 5.5	.5	*	68.1	12.3	1.9	7.1	2.1	.3
/148	T 187.4	39.8	6.0	54.4	8.4	1.3	4.4	.6	.1
	B 198.9	39.8	6.0	80	10.9	1.7	4.4	.6	.1
/148	T 3	.5	*	195.6	32.6	4.9	5.5	1.1	.2
	B 6	.5	*	80	10.9	1.3	5.5	1.1	.2

an .1ᴷ

UT LOAD TABLE - GIRDER 2

(in.³)		P℄ (K)	P℄ (K)	PIMP (K)	M℄ (I-K)	M℄ (I-K)	MIMP (I-K)	V℄ (K)	V℄ (K)	VIMP (K)
581	T 98.6	25.7	3.9	6.3	0.7	.1	1.1	.4	.1
	B 100	25.7	3.9	15.3	4.1	.6	1.1	.4	.1
581	T 1.3	.5	.1	42.7	14.0	1.5	5.4	1.3	.2
	B 2.7	.5	.1	15.3	4.1	.6	3.5	1.3	.2
/148	T 311.3	48.0	7.2	734.0	117.7	17.7	34.9	5.4	.8
	B 318	49.0	7.2	268.6	48.7	7.3	29.6	5.4	.8
/148	T 130.8	13.4	2.0	48.5	5.4	.8	4.5	.4	.1
	B 137.5	13.4	2.0	62.4	5.7	.9	4.5	.4	.1
/143	T 3.0	.2	*	124.5	16.0	2.4	3.4	.7	.1
	B 3.7	.2	*	62.4	5.7	.9	8.6	.7	.1

than .1ᴷ

Notes

Note A: Flange to web fillet welds in tension areas of struts shall be electromagnetically tested.

Strut flanges, webs, and end plates shall meet the requirements for Fracture Critical Members (F.C.M.).

All Structural Steel shall meet the requirements for A.A.S.H.T.O. M-183 unless otherwise noted.

All High Strength Bolts shall conform to A.A.S.H.T.O. M-164

All strut to girder connections shall have the bolt heads at the top of the connection.

* - Fillet and groove welds between end plates and flanges shall be radiographically tested.

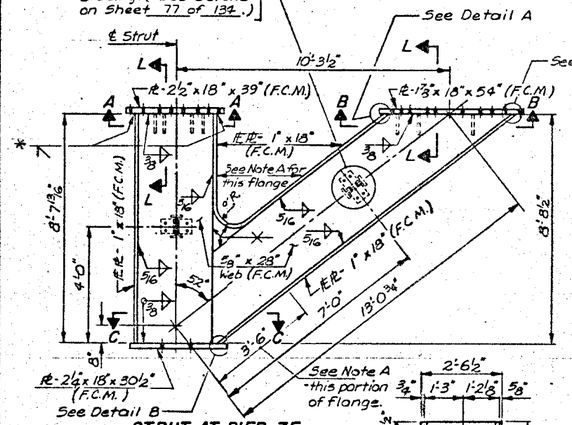
ST
M
OV
F.A. ROUT
PEORI

DESIGNED R.W.C.
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED S.C.O.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49 (IFB)	15-2	PEORIA & TAZEWELL		
PROJ. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 78 of 134

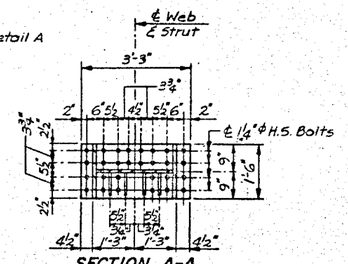


STRUT AT PIER 7E

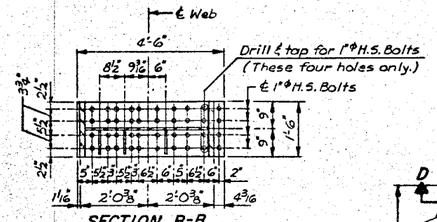
8" - Strut @ Pier 7E
11½" - Strut @ Pier 8E
9½" - Strut @ Pier 9E

Clip 1½"x1½"
½" R
12"

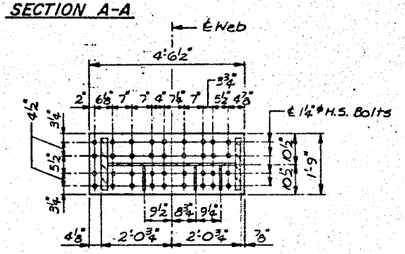
SECTION C-C



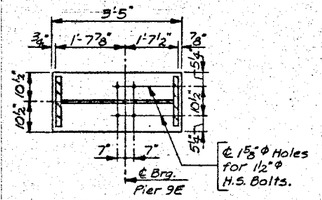
SECTION A-A



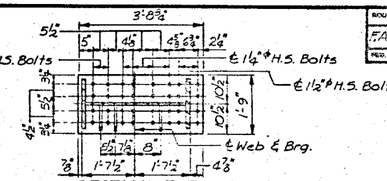
SECTION B-B



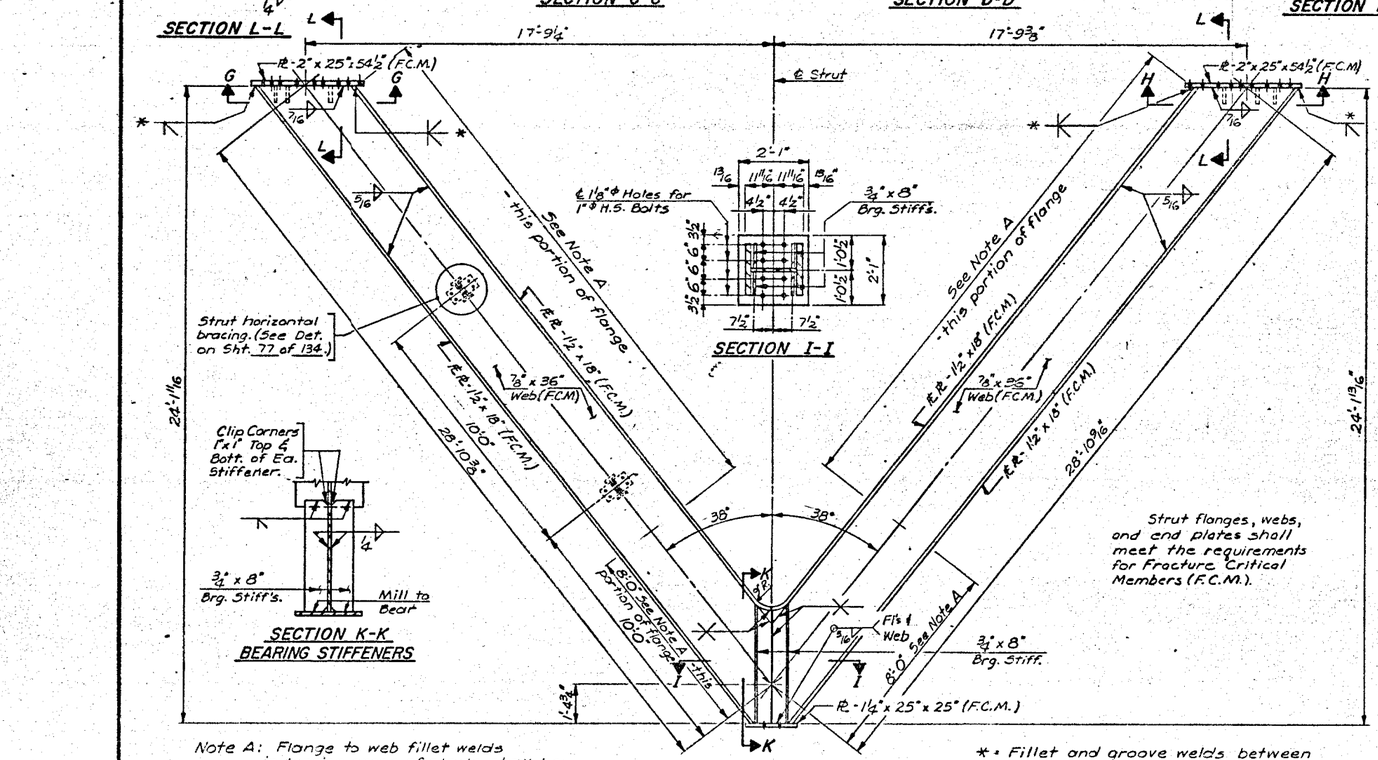
SECTION D-D



SECTION F-F



SECTION E-E



SECTION I-I

DETAIL B

DETAIL A

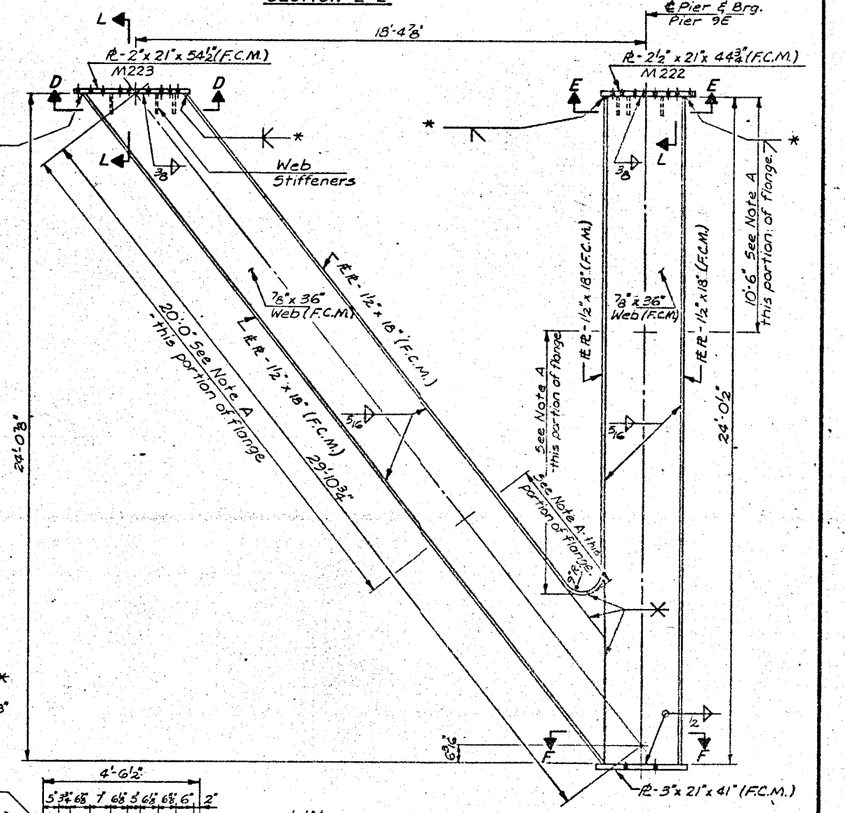
SECTION K-K
BEARING STIFFENERS

STRUT AT PIER 8E

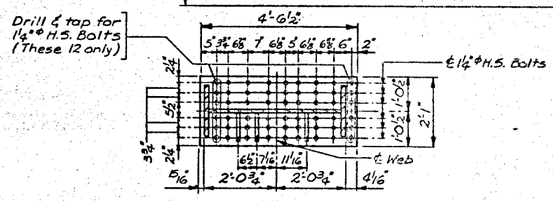
Note A: Flange to web fillet welds in tension areas of struts shall be electromagnetically tested.

Strut flanges, webs, and end plates shall meet the requirements for Fracture Critical Members (F.C.M.).

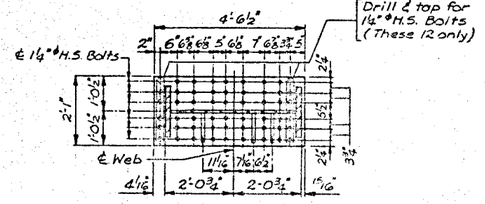
* • Fillet and groove welds between end plates and flanges shall be radiographically tested.



STRUT AT PIER 9E



SECTION G-G



SECTION H-H

Notes

All structural steel shall conform to AASHTO M-183 unless otherwise noted.
All high strength bolts shall conform to AASHTO M-164

STRUT DETAILS (GIR. 2)
RAMP E - SPANS 9E & 10E

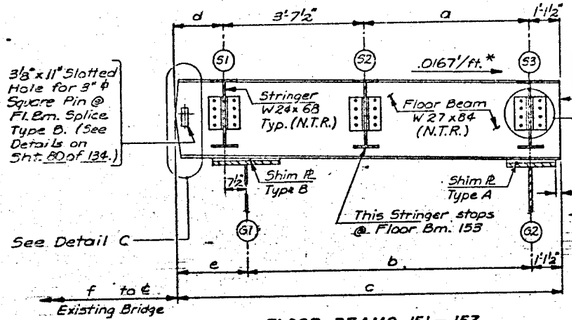
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(FBE)
PEORIA & TAZEWELL COUNTIES

DESIGNED R.W.C.	HANSON ENGINEERS INCORPORATED
CHECKED S.C.O.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS
DRAWN D.A.N.	FILE NO. 74001
TRACED S.C.O.	DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

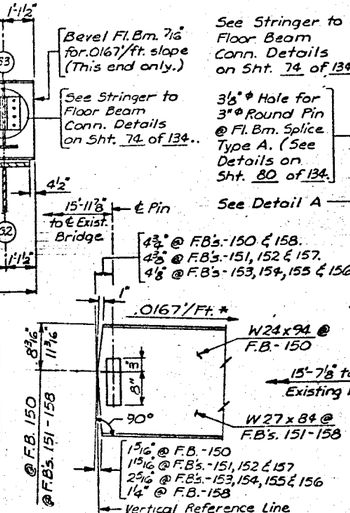
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.-49	15-2 (FBE)	PEORIA & TAZEWELL		
F.A. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 79 of 134

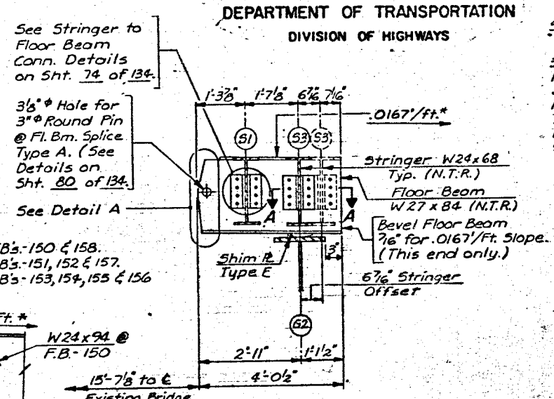


FLOOR BEAMS 151 – 153

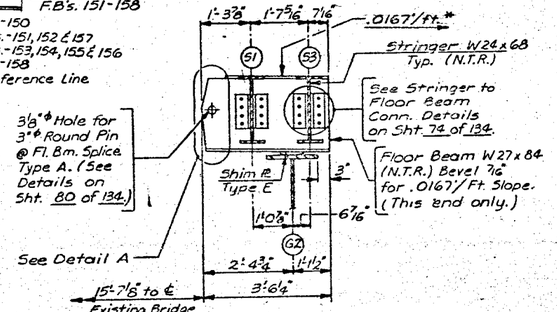
TABLE OF DIMENSIONS FLOOR BEAMS 151 – 153						
F.B. No.	a	b	c	d	e	f
151	5'-0⅛"	8'-0⅛"	11'-0⅝"	1'-3½"	1'-11"	15'-7½"
152	4'-5⅜"	7'-5⅜"	10'-6⅛"	1'-3½"	1'-11"	15'-7½"
153	3'-11"	6'-11"	9'-11⅝"	1'-3⅝"	1'-10⅝"	15'-7⅝"



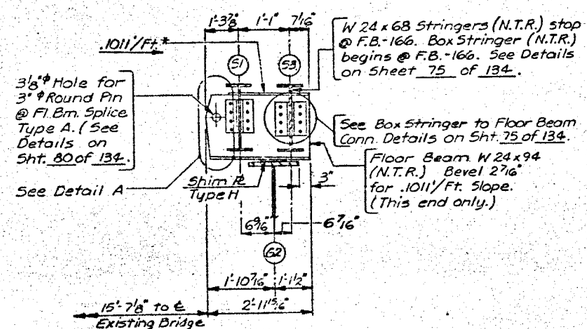
DETAIL C



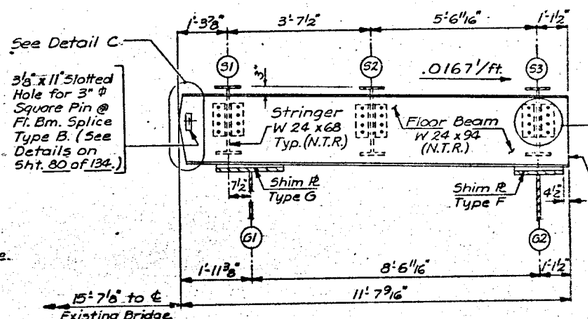
FLOOR BEAM 164



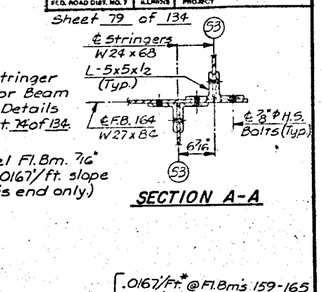
FLOOR BEAM 165



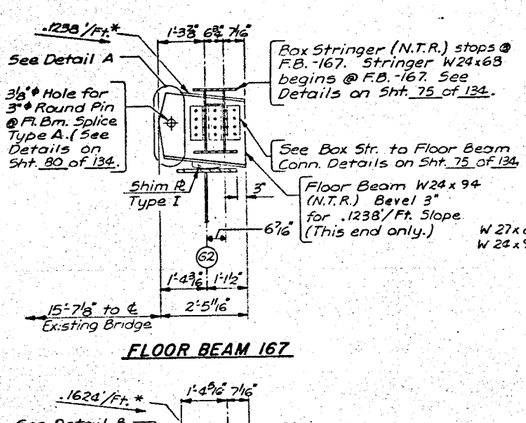
FLOOR BEAM 166



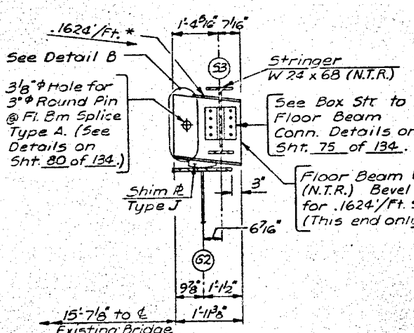
FLOOR BEAM 150



SECTION A-A



FLOOR BEAM 167



FLOOR BEAM 168

Notes:

N.T.R. denotes main load carrying members that are subject to the Supplemental Requirements for Notch Toughness.

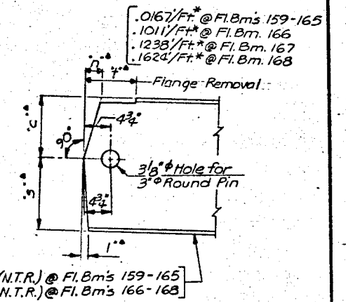
* Final floor beam slope shown. Slope will vary during construction due to girder camber.

All dimensions shown are parallel or perpendicular to a truly horizontal line unless otherwise noted.

The 3"ϕ pin and angles 1 & 4 of the floor beam splice detail, sheet 80 of 134, shall be installed to the floor beams before removing from the shop.

Due to the large camber of Girder 2 in Span 10E, floor beams 166 to 168 should be placed after all other floor beams and adjoining stringers have been placed.

See Sheet 74 of 134 for shim plate details.

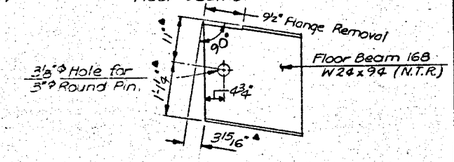


DETAIL A

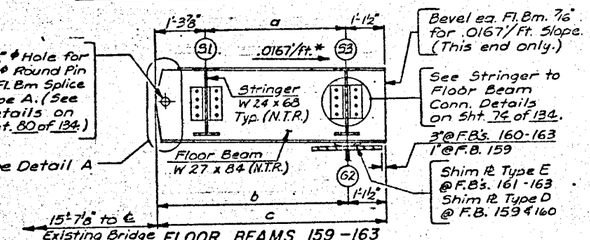
TABLE OF DIMENSIONS FOR DETAILS A & B				
F.B. No.	"n"▲	"t"▲	"s"▲	"c"▲
159	0"	8"	1'-3½"	11⅜"
160	⅜"	8"	1'-3½"	11⅜"
161	¾"	8"	1'-3½"	11⅜"
162	⅞"	8"	1'-3½"	11⅜"
163	1¼"	8"	1'-3½"	11⅜"
164	1¾"	8"	1'-3½"	11⅜"
165	2⅛"	8"	1'-3½"	11⅜"
166	1¼"	9½"	1'-1⅞"	11⅞"
167	1¾"	9½"	1'-1⅜"	11⅜"
168	**	**	**	**

** = Does not apply (See Detail B)

▲ = Dimensions that are measured perpendicular or parallel to the floor beams.



DETAIL B



FLOOR BEAMS 154 – 158

TABLE OF DIMENSIONS FLOOR BEAMS 154 – 158						
F.B. No.	a	b	c	d	e	f
154	6'-11 15/16"	6'-4 7/16"	9'-4 11/16"	1'-3¼"	1'-10¾"	15'-7⅜"
155	6'-5⅜"	5'-9⅞"	8'-10⅛"	1'-3¼"	1'-10¾"	15'-7⅜"
156	5'-10⅞"	5'-3⅜"	8'-3⅛"	1'-3¼"	1'-10¾"	15'-7⅜"
157	5'-4⅜"	4'-8 11/16"	7'-9 3/16"	1'-3½"	1'-11"	15'-7½"
158	4'-9⅝"	4'-2⅛"	7'-3"	1'-3⅜"	1'-11⅜"	15'-7⅜"

FLOOR BEAMS 159 – 163

TABLE OF DIMENSIONS FLOOR BEAMS 159 – 163			
F.B. No.	a	b	c
159	4'-3 1/16"	5'-6 9/16"	6'-8 7/16"
160	3'-8½"	5'-0⅜"	6'-1⅞"
161	3'-2"	4'-5⅞"	5'-7⅜"
162	2'-7 1/16"	3'-11 9/16"	5'-1 1/16"
163	2'-1⅞"	3'-5 5/16"	4'-6 5/16"

Structural Steel Specifications (This Sheet):

Structural Steel : AASHTO M183

High Strength Bolts : AASHTO M164

FLOOR BEAM DETAILS
RAMP E – SPANS 9E & 10E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (FBE)
PEORIA & TAZEWELL COUNTIES

DESIGNED S.C.O.
DRAWN W.D.L.
CHECKED D.A.M.
QUANTITIES S.C.O.

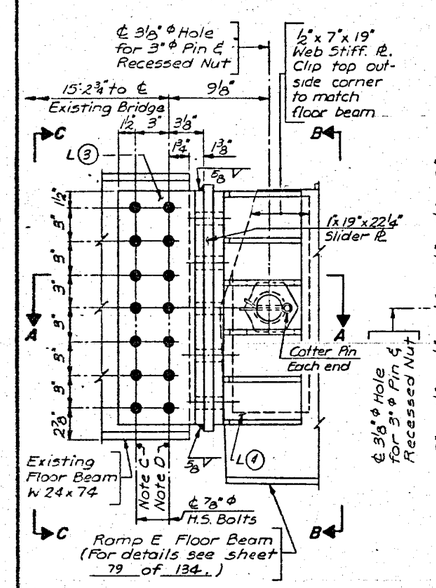
HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

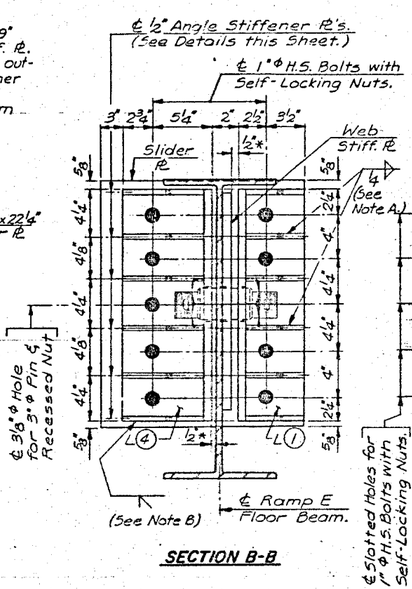
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA: 49	15-2 (F&E)	PEORIA & TAZEWELL		
DIST. HIGHWAY DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 80 of 134

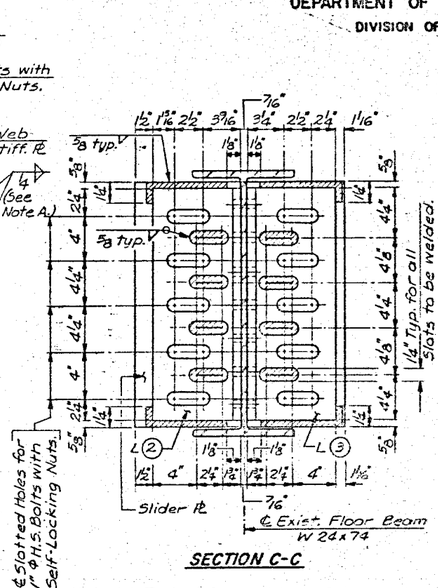


ELEVATION

FLOOR BEAM SPLICE TYPE A



SECTION B-B



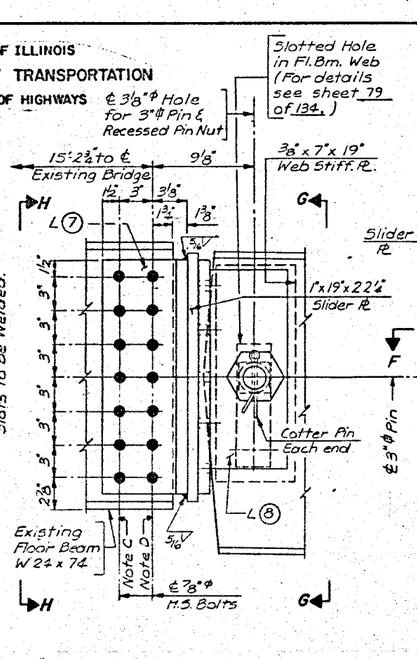
SECTION C-C

Note A: Typical for both legs of all angle interior stiffener plates.

Note B: Typical for both legs of all angle exterior stiffener plates.

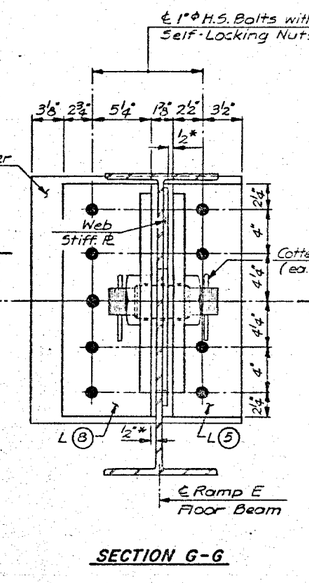
Note C: ℄ field drilled holes for ⅞"ϕ high strength bolts.

Note D: ℄ of existing ⅞"ϕ rivet holes after removal of 6" stanchion rail post.

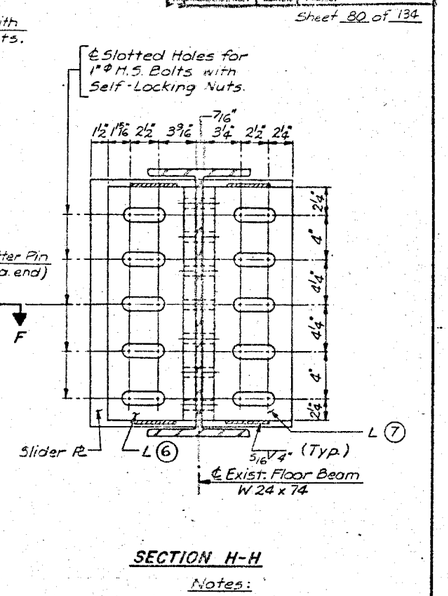


ELEVATION

FLOOR BEAM SPLICE TYPE B



SECTION G-G



SECTION H-H

Notes:

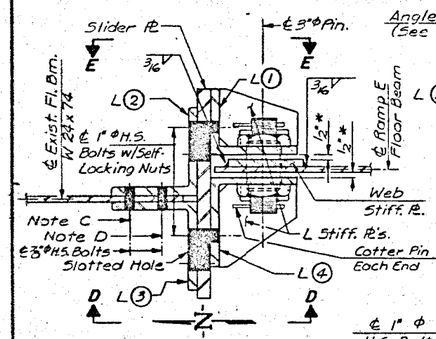
The 3"ϕ pin and angles L4 of floor beam splice type A shall be installed to the floor beams before removing from the shop.

No field welding shall be allowed for floor beam splices.

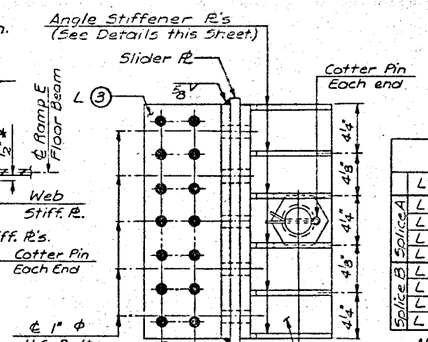
During the construction phase, the 1"ϕ H.S. bolts of splice type A and the 1"ϕ H.S. bolts of splice type B shall be installed with the locking nut just making contact with the part to be joined. The nuts should then be locked into this position. After all dead load has been placed, i.e. final dead load movement has taken place, the bolts are to be fully tightened and locked into position by the deck contractor.

L2, L3, L6, & L7 are to receive ½"x3"x6" plate washers over the slotted holes for the H.S. bolts. L2 & L6 should have the plate washers installed with the H.S. bolts. L3 & L7 cannot have the plate washers installed until all dead load is in place and final dead load movement has occurred. They should then be installed before final bolt tightening.

* Maintain ½" gap after all dead load has been placed.

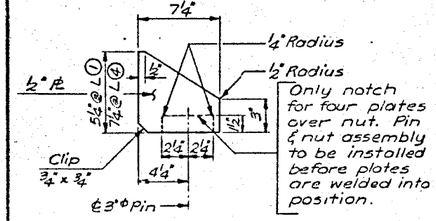


SECTION A-A



VIEW D-D

Note: VIEW E-E reverse of VIEW D-D.



ANGLE STIFFENER PLATE DETAILS

TABLE OF ANGLE SIZES				
	L No.	L Size	Cut from L	Steel Spec.
Splice A	L①	8"x6"x¾"	N.A.	M183
	L②	8"x7⅝"x¾"	8"x8"x¾"	M183
	L③	8"x7⅝"x¾"	8"x8"x¾"	M183
	L④	8"x8"x¾"	N.A.	M183
Splice B	L⑤	8"x6"x1"	N.A.	M183
	L⑥	8"x7⅝"x1"	8"x8"x1"	M223
	L⑦	8"x7⅝"x1"	8"x8"x1"	M223
	L⑧	8"x8"x1"	N.A.	M183

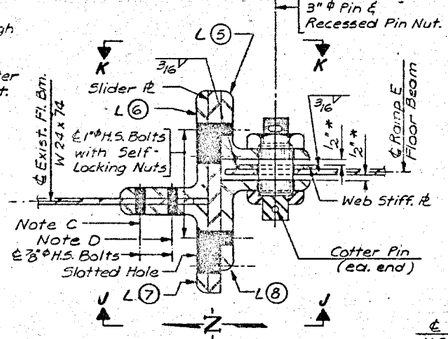
N.A. = Not Applicable
Note L's ②③⑥&⑦ clipped ⅜" to clear exist. stringer to floor beam conn.

Steel Specifications This Sheet:

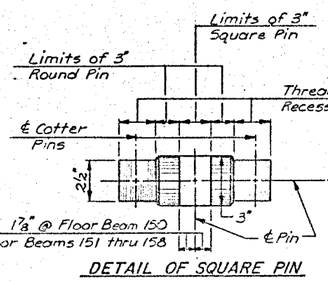
All structural steel shall meet the requirements of AASHTO M183 unless otherwise noted.

All high strength bolts shall meet the requirements of AASHTO M164.

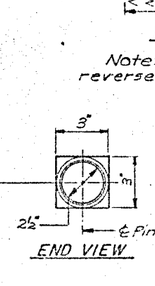
3" Pins shall meet the requirements of AASHTO M169.



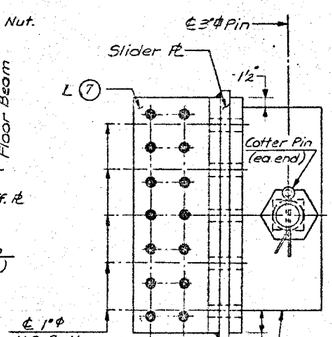
SECTION F-F



DETAIL OF SQUARE PIN



END VIEW



VIEW J-J

Note: VIEW K-K reverse of VIEW J-J.

FLOOR BEAM SPLICE TYPES A&B
RAMP E - SPANS 9E & 10E

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

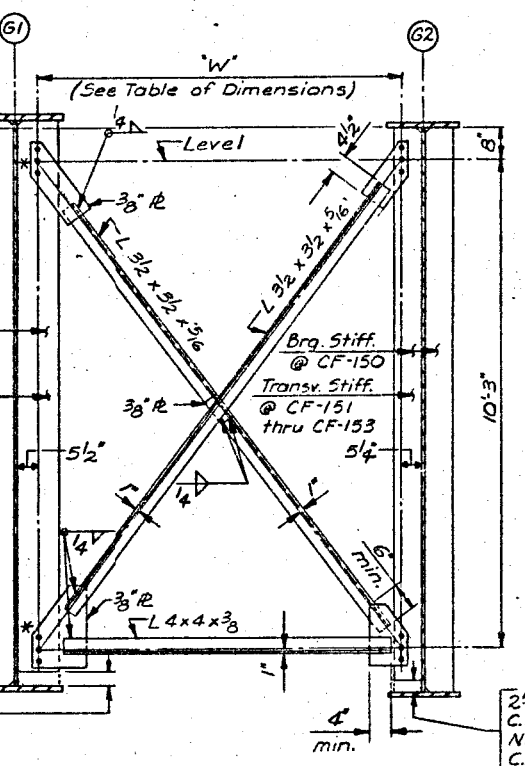
DESIGNED	S.C.O.
CHECKED	W.D.L.
DRAWN	D.A.N.
CHECKED	W.D.L.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS — PEORIA, ILLINOIS

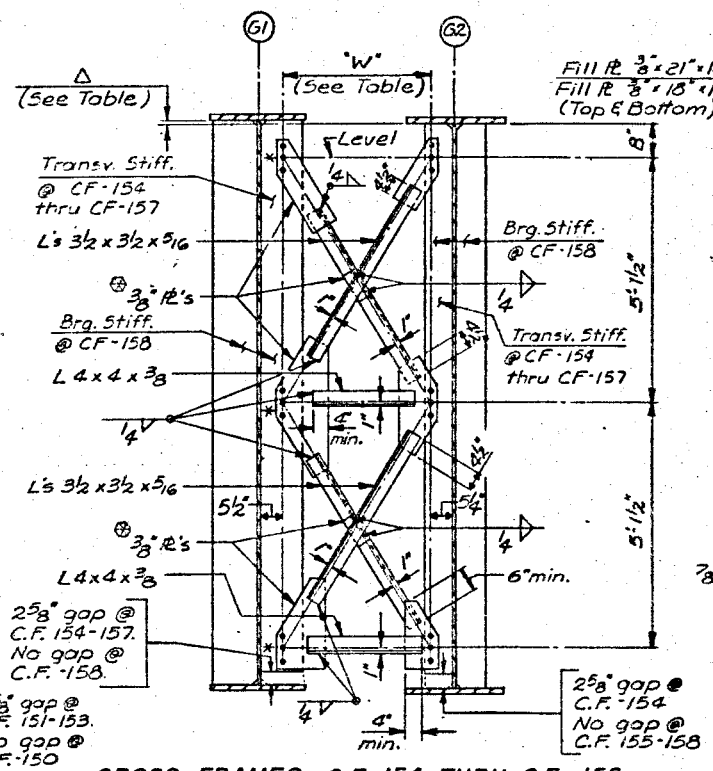
FILE NO.	74001
DATE	11-2-79

Rev. 12-18-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



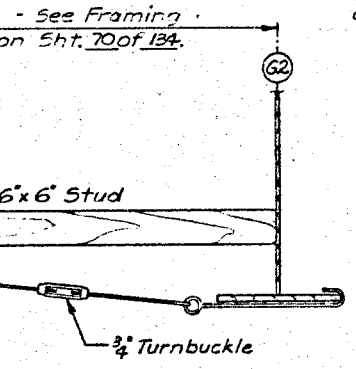
CROSS FRAMES C.F.-150 THRU C.F.-153



CROSS FRAMES C.F.-154 THRU C.F.-158

Note: 1 1/16" Φ holes in gusset Pl's for 7/8" Φ H.S. Bolts.

Hardened washers shall be required over holes in gusset Pl's.



STED TEMPORARY BRACING DETAIL

y girder bracing shall be used during ction of Span 9E. As shown in the mporary girder bracing detail, the ge of the girder shall be braced h inward and outward movements. ary bracing shall be installed adjacent frames at ± 26 ft. intervals and iss all girder splices and transverse Note that the cross frames shall nstalled only to girder 2. After all as been placed, the holes in the transverse stiffeners of girder 1 hose holes in the gusset plates of omes. The cross frames should ted to girder 1. the temporary girder bracing idental to the cost of the el.

TABLE OF DIMENSIONS CROSS FRAMES		
Cross Frame No.	Dimension "W"	Δ
C.F. 150	7'-7¼"	1½"
C.F. 151	7'-0 15/16"	1 3/8"
C.F. 152	6'-6 3/8"	1¼"
C.F. 153	5'-11 13/16"	1⅛"
C.F. 154	5'-5¼"	1"
C.F. 155	4'-10 11/16"	15/16"
C.F. 156	4'-4 1/16"	13/16"
C.F. 157	3'-9½"	11/16"
C.F. 158	3'-2 15/16"	9/16"

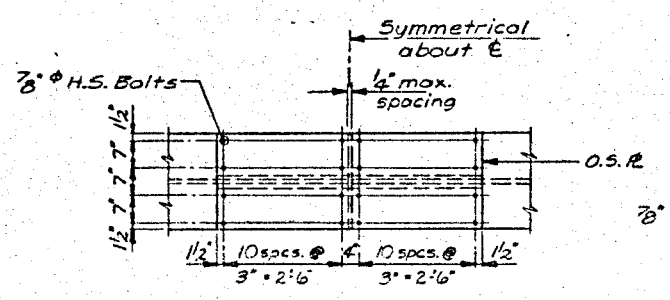
* See note with Suggested Temporary Girder Bracing Detail on this sheet.

⊛ 3/8" Bent Plate shall be used @ C.F.-158.

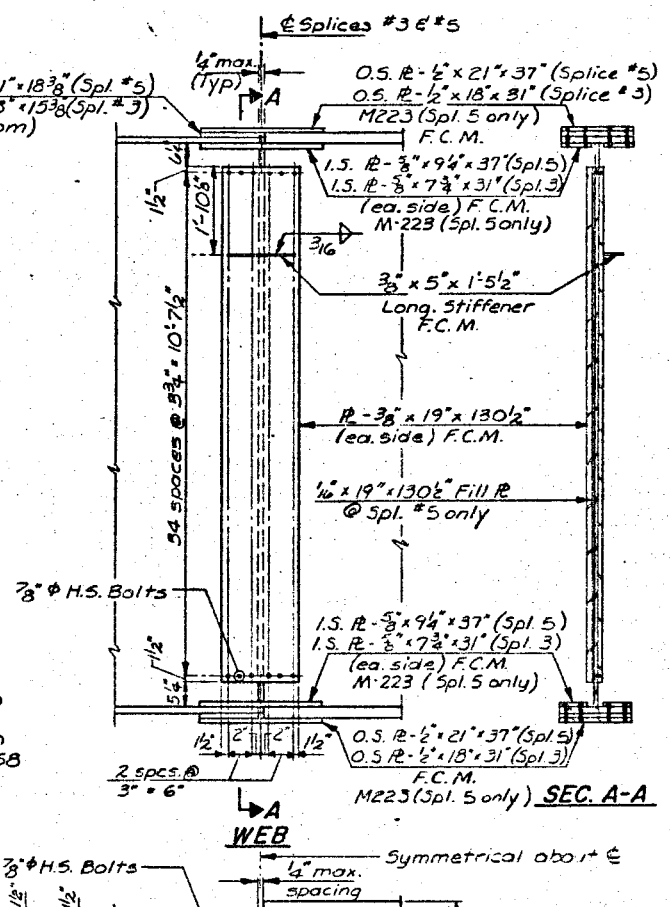
Steel Specifications This Sheet:

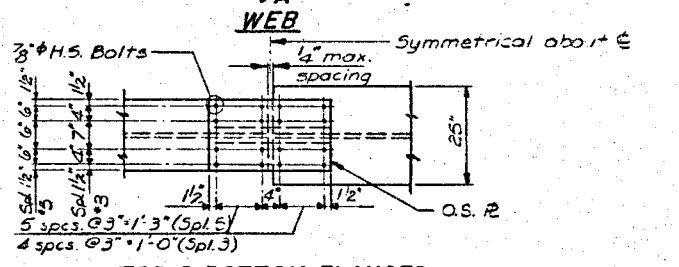
All structural steel shall meet the requirements of AASHTO M-183 unless otherwise noted.

All high strength bolts shall meet the requirements of AASHTO M-164.

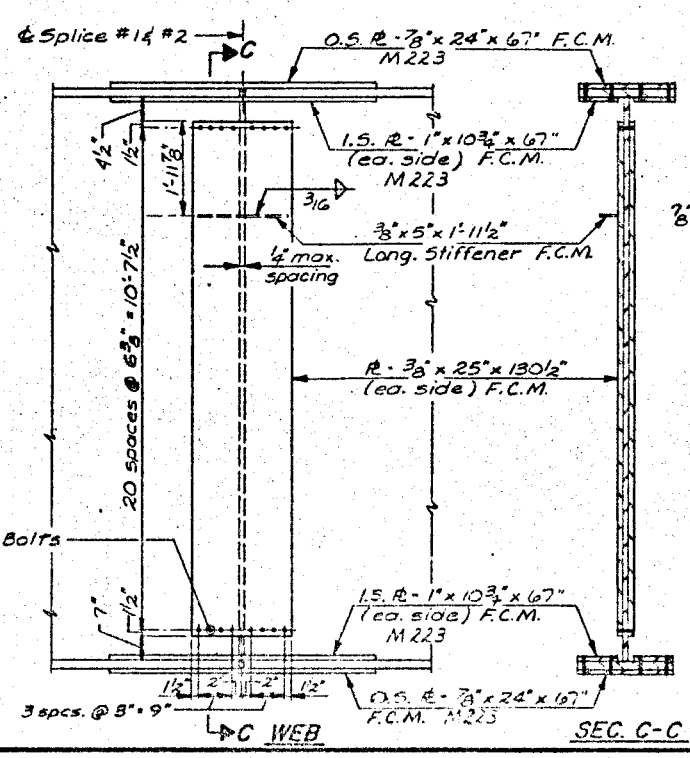


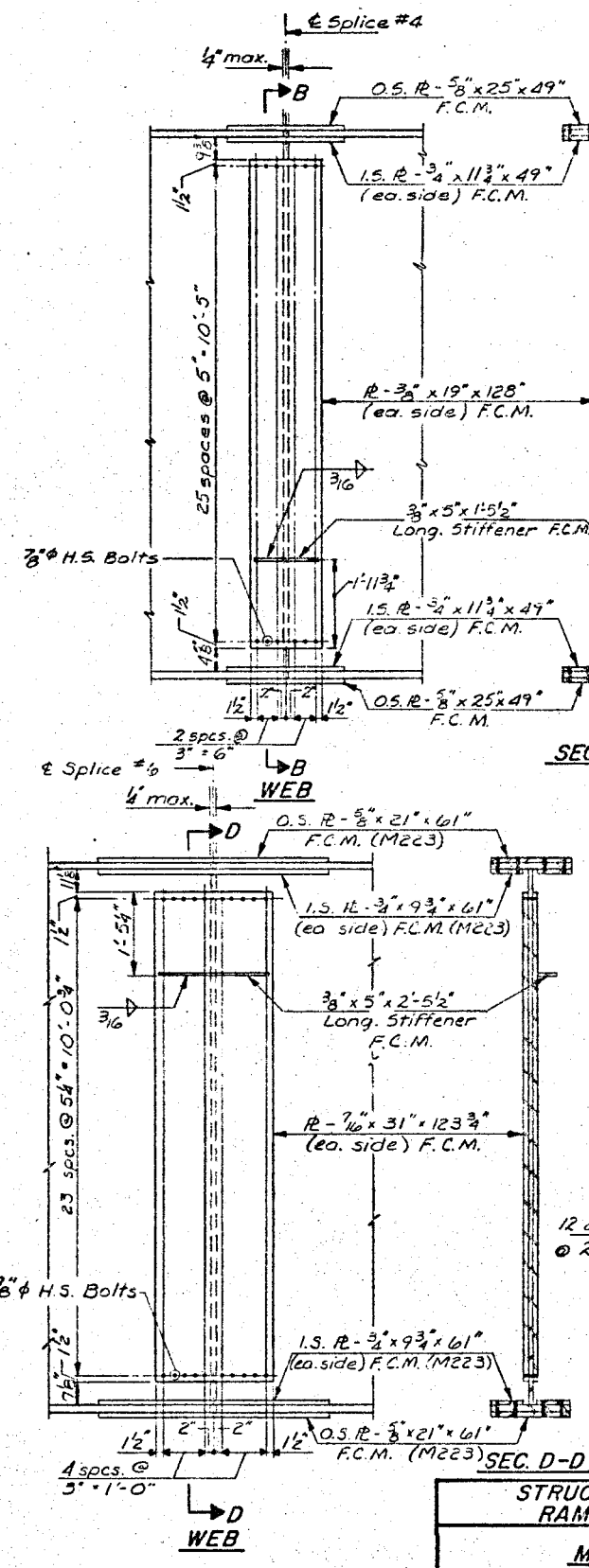
TOP & BOTTOM FLANGES DETAIL OF SPLICES 1 & 2





TOP & BOTTOM FLANGES DETAIL OF SPLICES 3 & 5





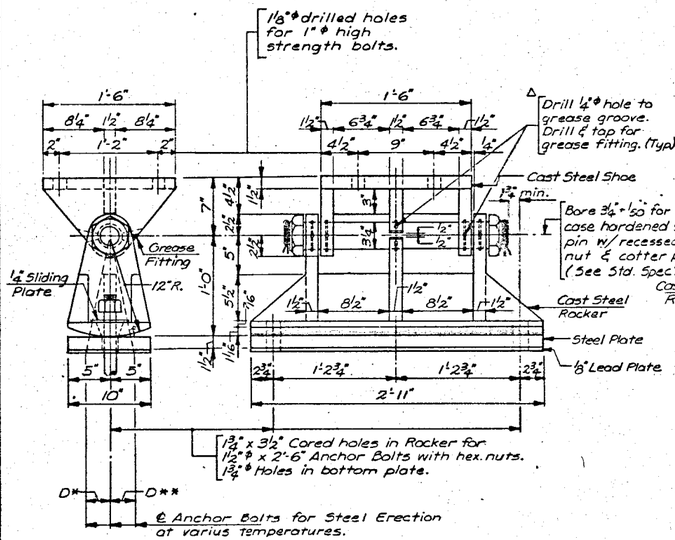
STRUC
RAM
M
OVE
F.A. ROUT
PEORIA

DESIGNED S.C.O.
CHECKED R.W.C.
DRAWN D.A.M.
CHECKED S.C.O.

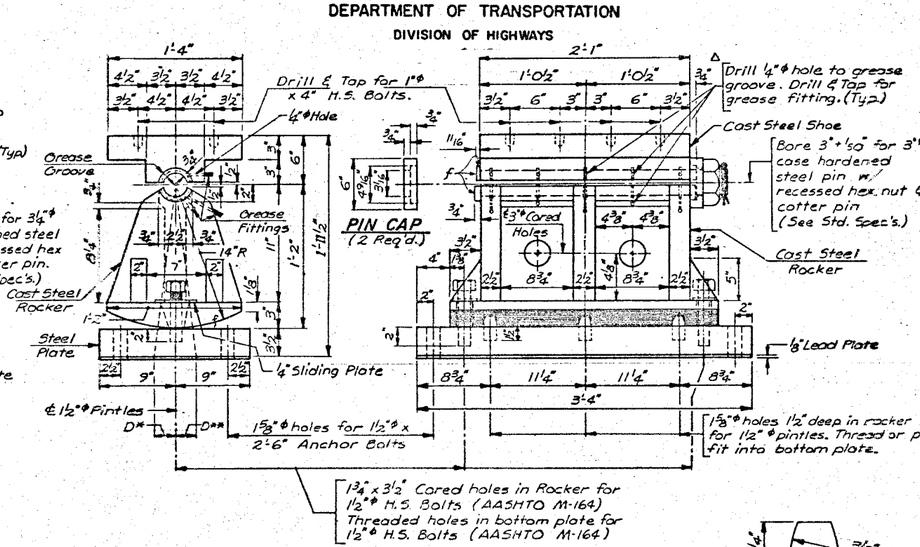
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (FBE)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

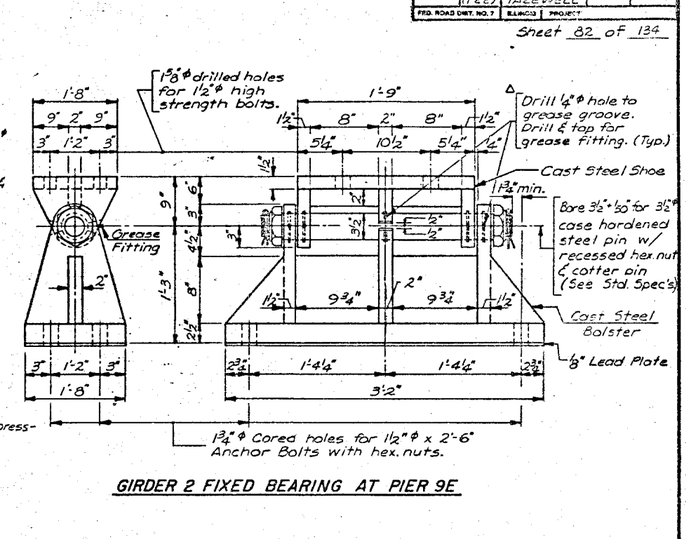
Sheet 82 of 134



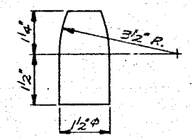
GIRDER 2 EXPANSION BEARING AT PIER 7E



GIRDER 2 EXPANSION BEARING AT PIER 8E



GIRDER 2 FIXED BEARING AT PIER 9E



PINTLE DETAIL

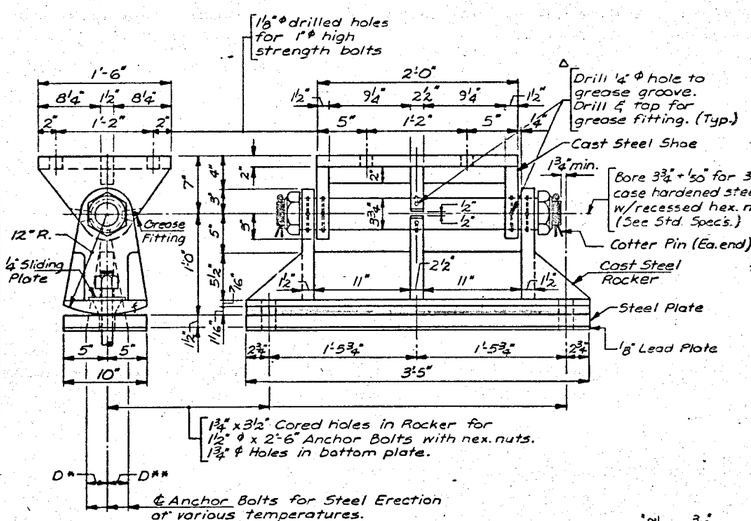
Steel for pintles shall meet the requirements of AASHTO M-223.

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

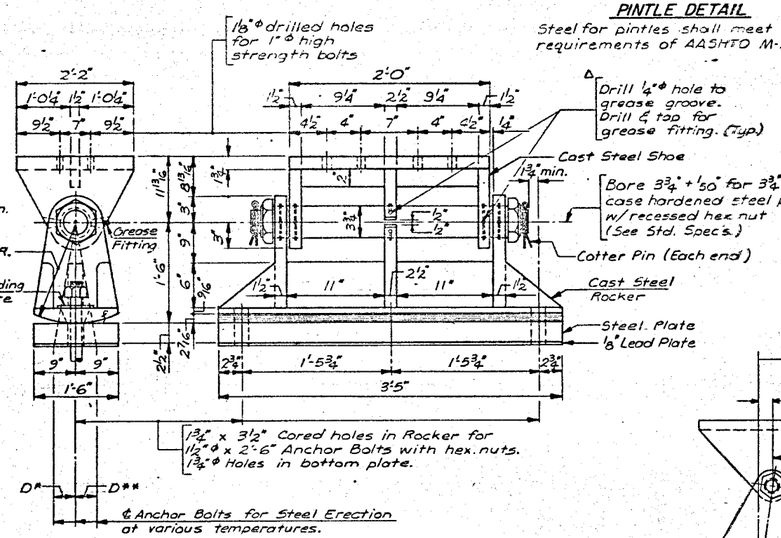
a.) D* (Side of bearing away from fixed bearing.)
D* = ⅛" per each 100' of expansion for every 15° fall below the normal temperature of 50° F.

D** (Side of bearing toward fixed bearing.)
D** = ⅛" per each 100' of expansion for every 15° rise above the normal temperature of 50° F.

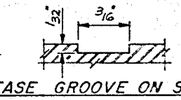
b.) After girders have been erected and dimensions D* & D** determined, holes shall be drilled & anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.



GIRDER 1 EXPANSION BEARING AT PIER 7E

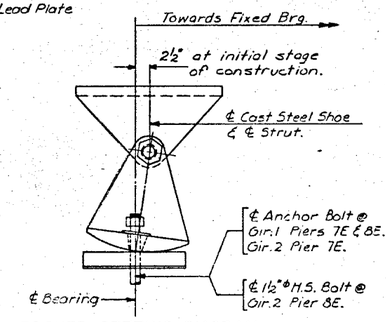


GIRDER 1 EXPANSION BEARING AT PIER 8E



GREASE GROOVE ON SADDLE

△Note: Grease bearing assembly with molybdenum grease before installation.



ROCKER SETTING DIAGRAM

For Bearings @ Piers 7E & 8E Girders 1 & 2 in addition to expansion requirements.

Notes:

Cast steel shoes, rockers, & bolsters shall meet requirements of AASHTO M-192 Class 90 unless otherwise indicated.

Bearing plate material shall meet requirements of AASHTO M-222 or M223 unless otherwise indicated.

Structural steel weldments of equal sections of M222 or M223 may be substituted for the castings subject to approval by the Engineer prior to fabrication but at no additional compensation.

BEARING DETAILS
RAMP E - SPANS 9E & 10E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2 (FBE)
PEORIA & TAZEWELL COUNTIES

DESIGNED S.C.O.
DRAWN R.W.C.
TRACED D.A.N.
CHECKED S.C.O.

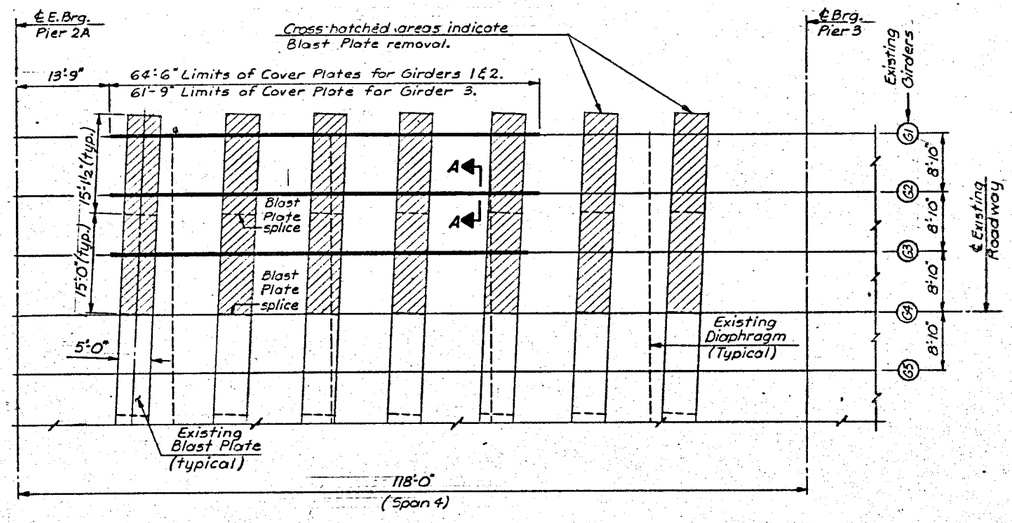
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

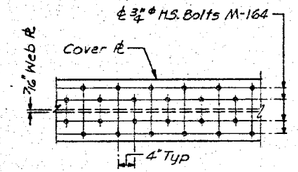
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-2 (F&E)	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

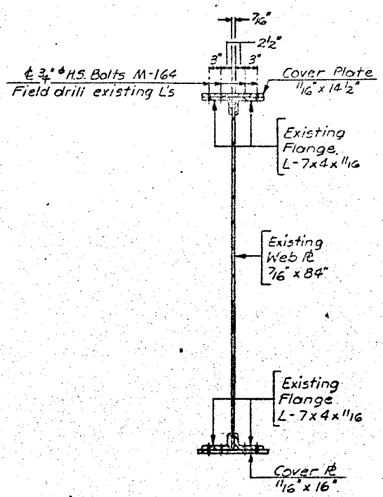
Sheet 83 of 134



COVER PLATE LAYOUT



TYPICAL COVER PLATE CONNECTION



SECTION A-A
TYPICAL - SPAN 4 - GIRDERS 1,2&3

Note: Cover plates shall be made of M183 steel.

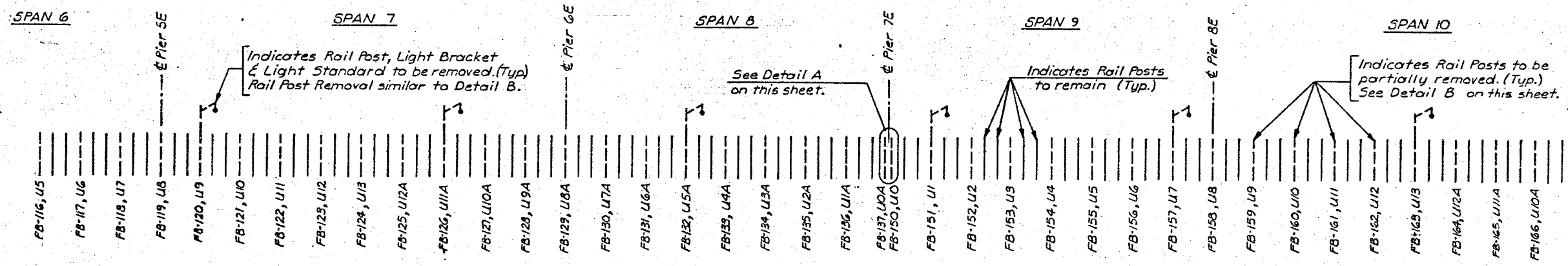
THIS SHEET IS NOT INCLUDED IN THIS CONTRACT.

STRUCTURAL STEEL DETAILS
EXISTING SPAN 4

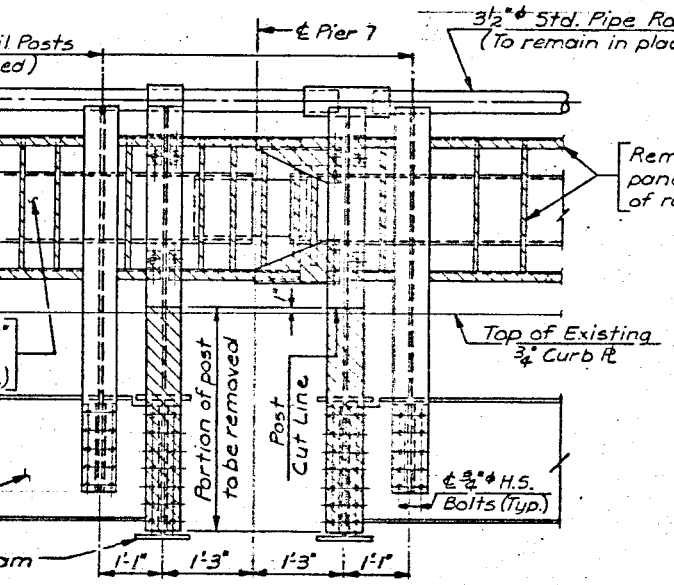
Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-2(F&E)
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.C. CHECKED S.C.O.	HANSON ENGINEERS INCORPORATED SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	FILE NO. 74001
DRAWN D.A.N. CHECKED S.C.O.		DATE

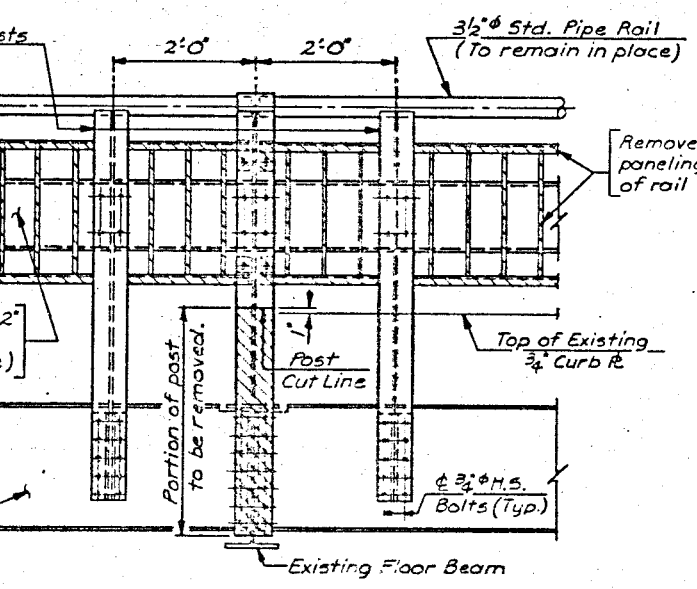
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



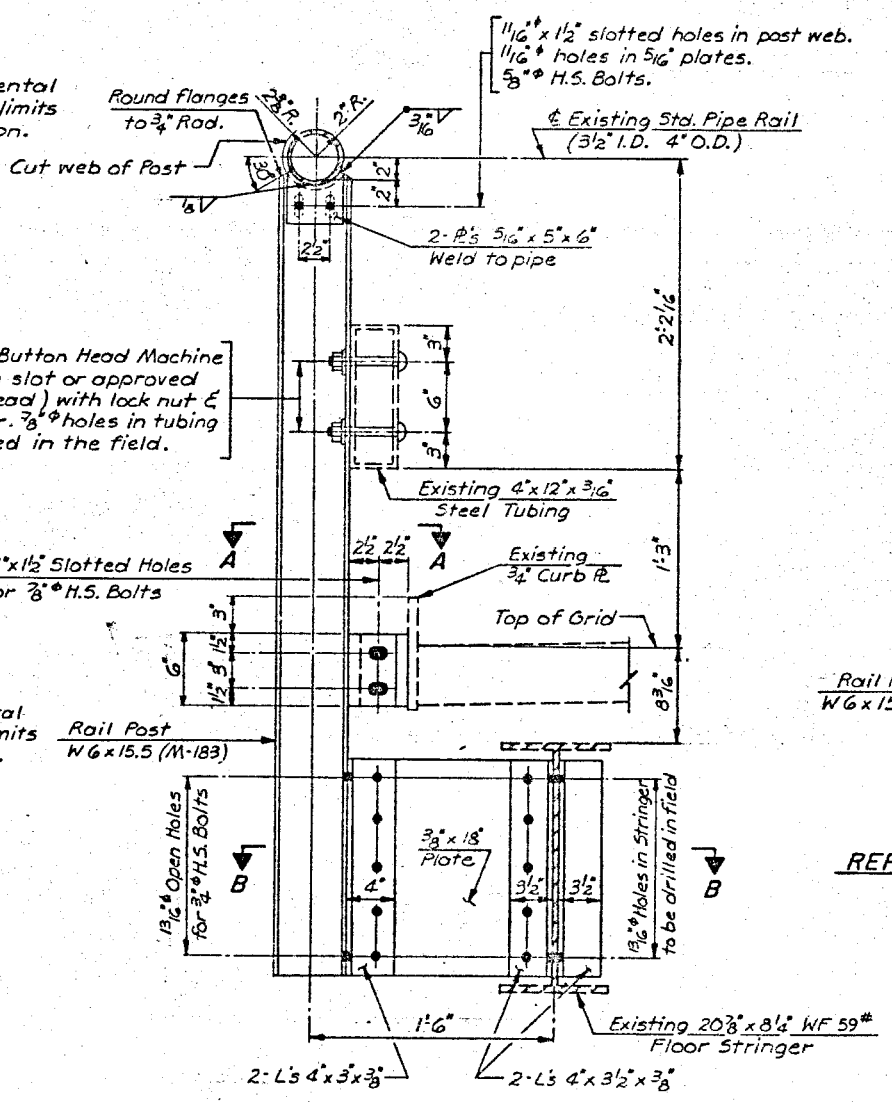
SCHEMATIC OF EXISTING RAIL TO BE ALTERED



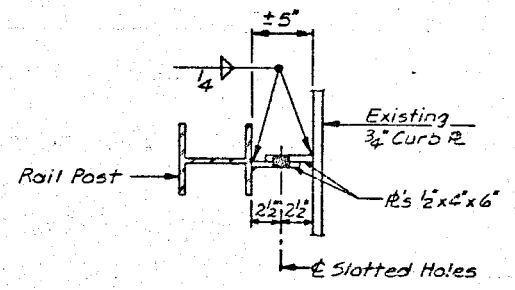
DETAIL A



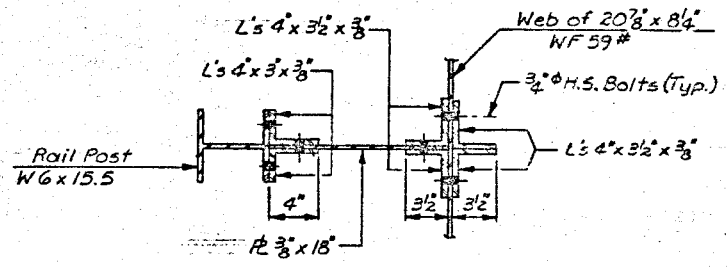
DETAIL B



SECTION AT RAIL POST



SECTION A-A



SECTION B-B

REPLACEMENT HANDRAIL POST CONNECTION

117 - Orna... remo...
1 - Orna... remo...
35 - Rail
6 - Comb... Brack...
80 - New

F.A. R...
PE...

C.R.N.
S.C.O.
D.A.M.
C.R.N.

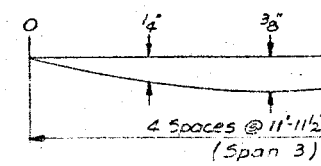
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

STATION	GIRDER 1 ELEV. A	ELEV. B	STATION	GIRDER 2 ELEV. A	ELEV. B	STATION	GIRDER 3 ELEV. A	ELEV. B	STATION	GIRDER 4 ELEV. A	ELEV. B
199+09.005	507.125	507.125	199+08.250	506.830	506.830	199+07.492	506.535	506.535	199+06.728	506.240	506.240
199+18.838	506.817	506.829	199+18.112	506.522	506.534	199+17.382	506.226	506.238	199+16.647	505.930	505.942
199+28.677	506.511	506.531	199+27.980	506.215	506.235	199+27.278	505.918	505.938	199+26.572	505.622	505.642
199+38.522	506.206	506.224	199+37.853	505.909	505.927	199+37.180	505.611	505.629	199+36.503	505.314	505.332
199+48.372	505.902	505.912	199+47.732	505.604	505.614	199+47.087	505.306	505.316	199+46.440	505.007	505.017
199+56.092	505.665	505.665	199+55.474	505.366	505.366	199+54.852	505.067	505.067	199+54.227	504.768	504.768

STATION	GIRDER 1 ELEV. A	ELEV. B	STATION	GIRDER 2 ELEV. A	ELEV. B	STATION	GIRDER 3 ELEV. A	ELEV. B	STATION	GIRDER 4 ELEV. A	ELEV. B
199+57.896	505.610	505.610	199+57.283	505.310	505.310	199+56.667	505.011	505.011	199+56.047	504.713	504.713
199+67.756	505.308	505.359	199+67.172	505.008	505.039	199+66.585	504.708	504.739	199+65.994	504.408	504.439
199+77.621	505.007	505.104	199+77.066	504.707	504.766	199+76.507	504.405	504.464	199+75.945	504.105	504.164
199+87.491	504.708	504.840	199+86.964	504.407	504.486	199+86.434	504.105	504.184	199+85.901	503.803	503.882
199+97.364	504.410	504.566	199+96.866	504.108	504.200	199+96.366	503.805	503.897	199+95.862	503.502	503.594
200+07.242	504.113	504.278	200+06.773	503.809	503.903	200+06.301	503.506	503.600	200+05.826	503.203	503.297
200+17.124	503.817	503.977	200+16.684	503.513	503.601	200+16.241	503.209	503.297	200+15.795	502.904	502.992
200+27.009	503.522	503.665	200+26.598	503.218	503.293	200+26.184	502.912	502.987	200+25.767	502.607	502.682
200+36.898	503.230	503.345	200+36.515	502.923	502.978	200+36.130	502.617	502.672	200+35.743	502.311	502.366
200+46.789	502.937	503.018	200+46.436	502.630	502.664	200+46.080	502.323	502.357	200+45.722	502.016	502.050
200+56.684	502.646	502.692	200+56.359	502.338	502.353	200+56.032	502.030	502.045	200+55.704	501.722	501.737
200+66.581	502.215	502.232	200+66.285	502.047	502.050	200+65.988	501.739	501.742	200+65.688	501.430	501.433
200+77.308	501.867	501.867	200+76.575	501.747	501.747	200+75.915	501.450	501.450	200+75.252	501.151	501.151
200+87.135	501.607	501.595	200+86.506	501.459	501.464	200+85.875	501.160	501.165	200+85.241	500.862	500.867
200+97.039	501.362	501.348	200+96.438	501.185	501.203	200+95.837	500.883	500.901	200+95.232	500.582	500.600
201+06.944	501.140	501.134	201+05.373	500.934	500.972	201+05.801	500.631	500.669	201+05.225	500.327	500.365
201+16.844	500.927	500.934	201+16.306	500.703	500.763	201+15.766	500.402	500.462	201+15.220	500.096	500.156
201+26.746	500.687	500.708	201+26.241	500.431	500.509	201+25.732	500.154	500.232	201+25.215	499.866	499.944
201+36.651	500.451	500.488	201+36.178	500.177	500.267	201+35.700	499.922	500.012	201+35.212	499.653	499.743
201+46.559	500.229	500.269	201+46.116	499.947	500.042	201+45.668	499.715	499.810	201+45.210	499.466	499.561
201+56.469	500.022	500.064	201+56.056	499.744	499.834	201+55.636	499.532	499.622	201+55.208	499.303	499.393
201+66.381	499.825	499.863	201+65.997	499.563	499.639	201+65.606	499.374	499.450	201+65.206	499.163	499.239
201+73.508	499.637	499.665	201+73.131	499.409	499.463	201+72.740	499.239	499.293	201+72.346	499.049	499.103
201+83.505	499.459	499.472	201+83.130	499.279	499.304	201+82.740	499.127	499.152	201+82.346	498.957	498.982
201+88.770	499.369	499.369	201+88.770	499.213	499.213	201+88.770	499.070	499.070	201+88.770	498.910	498.910



DEAD LOAD DEFLECT
(SPAN 3

(Includes weight of

Note: The above deflections
in the field if the Enginee
the grade elevations adju
deflection (Elev. B) as sh
Top of Concrete" table.

STATION	GIRDER 5 ELEV. A	ELEV. B	STATION	GIRDER 6 ELEV. A	ELEV. B	STATION	GIRDER 7 ELEV. A	ELEV. B	STATION	GIRDER 8 ELEV. A	ELEV. B
199+05.961	505.946	505.946	199+05.188	505.652	505.652	199+04.412	505.358	505.358	199+03.630	503.909	503.909
199+15.908	505.635	505.647	199+15.165	505.340	505.352	199+12.418	505.045	505.056	199+13.666	503.621	503.632
199+25.862	505.325	505.345	199+25.148	505.029	505.049	199+24.430	504.656	504.674	199+23.708	503.341	503.359
199+35.822	505.017	505.035	199+35.137	504.720	504.738	199+34.449	504.266	504.283	199+33.756	503.067	503.084
199+45.788	504.709	504.719	199+45.132	504.411	504.421	199+44.473	503.897	503.906	199+43.809	502.797	502.806
199+53.598	504.468	504.468	199+52.965	504.171	504.171	199+52.329	503.623	503.623	199+51.688	502.588	502.588

STATION	GIRDER 5 ELEV. A	ELEV. B	STATION	GIRDER 6 ELEV. A	ELEV. B	STATION	GIRDER 7 ELEV. A	ELEV. B	STATION	GIRDER 8 ELEV. A	ELEV. B
199+55.423	504.413	504.413	199+54.796	504.115	504.115	199+54.165	503.547	503.547	199+53.530	502.520	502.520
199+65.399	504.108	504.139	199+64.801	503.809	503.831	199+64.200	503.210	503.229	199+63.594	502.396	502.410
199+75.380	503.804	503.863	199+74.811	503.504	503.545	199+74.239	502.880	502.915	199+73.664	502.339	502.364
199+85.365	503.501	503.580	199+84.826	503.199	503.254	199+84.283	502.560	502.607	199+83.738	502.283	502.318
199+95.355	503.200	503.292	199+94.845	502.897	502.961	199+94.332	502.239	502.294	199+93.816	502.205	502.245
200+05.349	502.899	502.993	200+04.868	502.596	502.662	200+04.385	501.957	502.014	200+03.899	502.124	502.165
200+15.347	502.599	502.687	200+14.896	502.296	502.358	200+14.442	501.890	501.944	200+13.986	502.032	502.071
200+25.348	502.302	502.377	200+24.927	501.996	502.049	200+24.503	501.815	501.861	200+24.077	501.925	501.958
200+35.354	502.005	502.060	200+34.962	501.699	501.739	200+34.568	501.710	501.744	200+34.171	501.794	501.819
200+45.362	501.710	501.744	200+45.000	501.403	501.428	200+44.636	501.467	501.488	200+44.269	501.616	501.632
200+55.373	501.414	501.429	200+55.041	501.105	501.117	200+54.706	501.210	501.220	200+54.370	501.405	501.412
200+65.387	501.121	501.124	200+65.084	500.812	500.815	200+64.780	500.927	500.929	200+64.473	501.135	501.137
200+74.584	500.854	500.854	200+73.913	500.552	500.552	200+73.238	500.561	500.561	200+72.558	500.637	500.637
200+84.603	500.563	500.568	200+83.961	500.260	500.264	200+83.316	500.220	500.223	200+82.666	500.237	500.239
200+94.624	500.281	500.299	200+94.012	499.977	499.991	200+93.396	499.986	499.998	200+92.776	500.065	500.074
201+04.646	500.024	500.062	201+04.064	499.718	499.746	201+03.478	499.773	499.797	201+02.888	499.910	499.927
201+14.670	499.791	499.851	201+14.117	499.485	499.528	201+13.561	499.582	499.619	201+13.002	499.774	499.801
201+24.695	499.575	499.653	201+24.172	499.281	499.336	201+23.646	499.418	499.465	201+23.117	499.657	499.691
201+34.722	499.382	499.472	201+34.228	499.107	499.171	201+33.732	499.279	499.334	201+33.233	499.558	499.598
201+44.749	499.214	499.309	201+44.285	498.959	499.025	201+43.819	499.162	499.219	201+43.350	499.475	499.516
201+54.776	499.071	499.161	201+54.343	498.836	498.899	201+53.906	499.062	499.116	201+53.467	499.400	499.439
201+64.804	498.951	499.027	201+64.400	498.736	498.789	201+63.994	498.977	499.022	201+63.585	499.330	499.363
201+71.952	498.857	498.910	201+71.558	498.664	498.701	201+71.164	498.910	498.942	201+70.770	499.265	499.288
201+81.952	498.785	498.810	201+81.558	498.611	498.628	201+81.164	498.856	498.871	201+80.770	499.204	499.215
201+81.770	498.749	498.749	201+88.770	498.589	498.589	201+88.770	498.821	498.821	201+88.770	499.151	499.151

See Shee
Deflection D

See Shee
Plan of Top

See Shee
Determining

ELEVATIONS-TOP OF CONCRETE

ELEV A = THEORETICAL GRADE ELEVATIONS
ELEV B = THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION

T

Q

F.A. RO

PEO

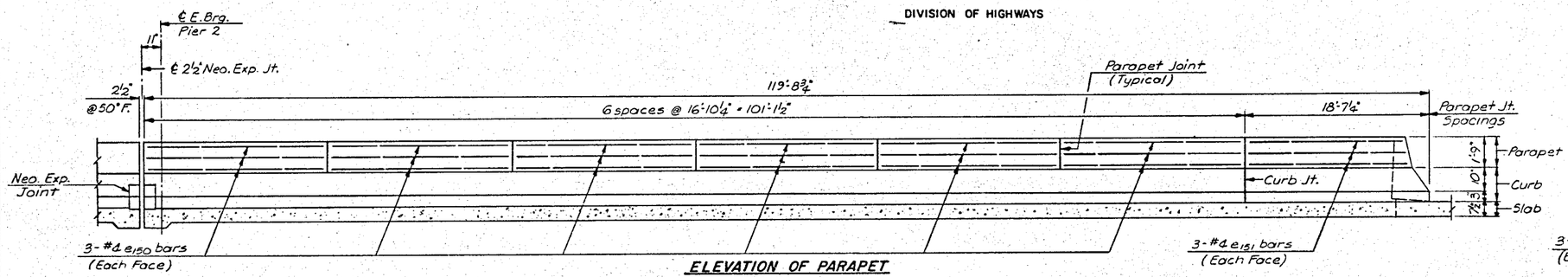
S.C.O.
WDL
D.A.N.
WDL

FOR INFORMATIONAL PURPOSES ONLY.

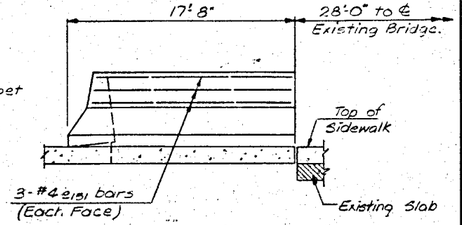
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15-D	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 86 of 134

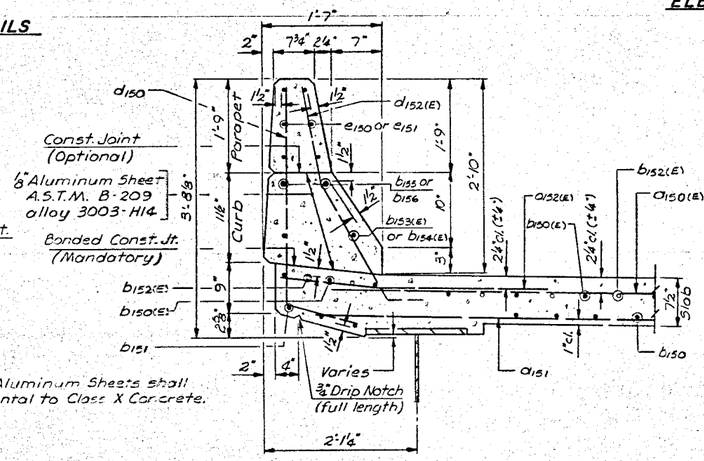


ELEVATION OF PARAPET (SPAN 4)

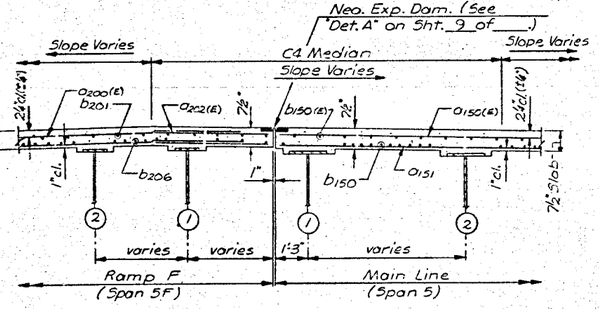


ELEVATION OF PARAPET (SPAN 5)

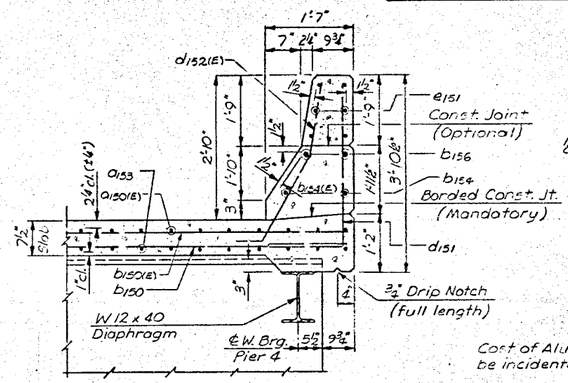
PARAPET DETAILS



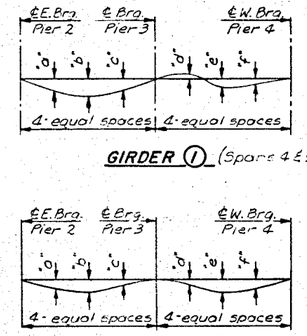
Cost of Aluminum Sheets shall be incidental to Class X Concrete.



SECTION A-A



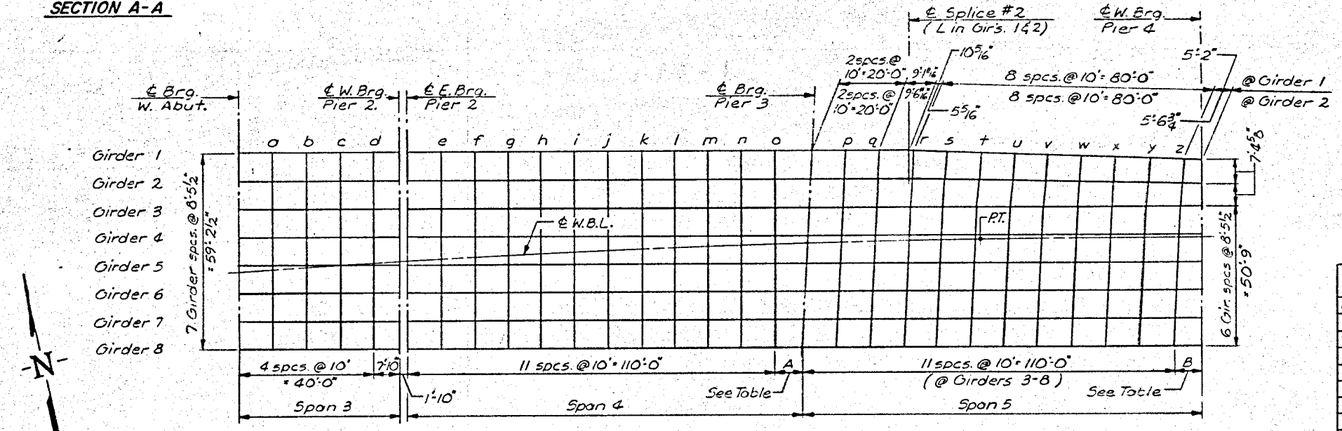
SECTION B-B



GIRDER ① (Spans 4 & 5)

GIRDERS ② - ⑧ (Spans 4 & 5)

SECTION THRU CURB (Span 4)



DIAGRAMMATIC PLAN - TOP OF SLAB ELEVATIONS

Note: All dimensions shown in plan are measured horizontally.

TABLE FOR DIMENSIONS A & B

Gir. No.	A	B
1	10'-10"	——
2	10'-5½"	——
3	10'-0½"	5'-11½"
4	9'-7⅛"	6'-4⅜"
5	9'-3⅛"	6'-8⅜"
6	8'-10⅜"	7'-1⅛"
7	8'-5⅜"	7'-6⅛"
8	8'-0⅝"	7'-11⅛"

DEAD LOAD DEFLECTION DIAGRAMS

(Includes weight of Concrete only.)

TABLE OF DEAD LOAD DEFLECTIONS

Girder No.	Deflections "a"	"b"	"c"	"d"	"e"	"f"
1	1 5/16"	1 15/16"	1"	1/16"	3/8"	7/16"
2	15/16"	1 1/16"	7/16"	7/16"	1 1/16"	15/16"
3	"	"	"	"	"	"
4	"	"	"	"	"	"
5	"	"	"	"	"	"
6	1 1/16"	3/4"	5/16"	5/16"	3/4"	1 1/16"
7	9/16"	1 1/16"	5/16"	5/16"	1 1/16"	9/16"
8	1/16"	1/2"	3/16"	3/16"	1/2"	7/16"

Note: See Sheet 11 of ____ for Span 3 Girder Dead Load Deflection Diagram.

SUPERSTRUCTURE DETAILS SPANS 4 & 5

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

DESIGNED	S.C.O.
CHECKED	W.D.L.
DRAWN	D.A.N.
CHECKED	W.D.L.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS — PEORIA, ILLINOIS

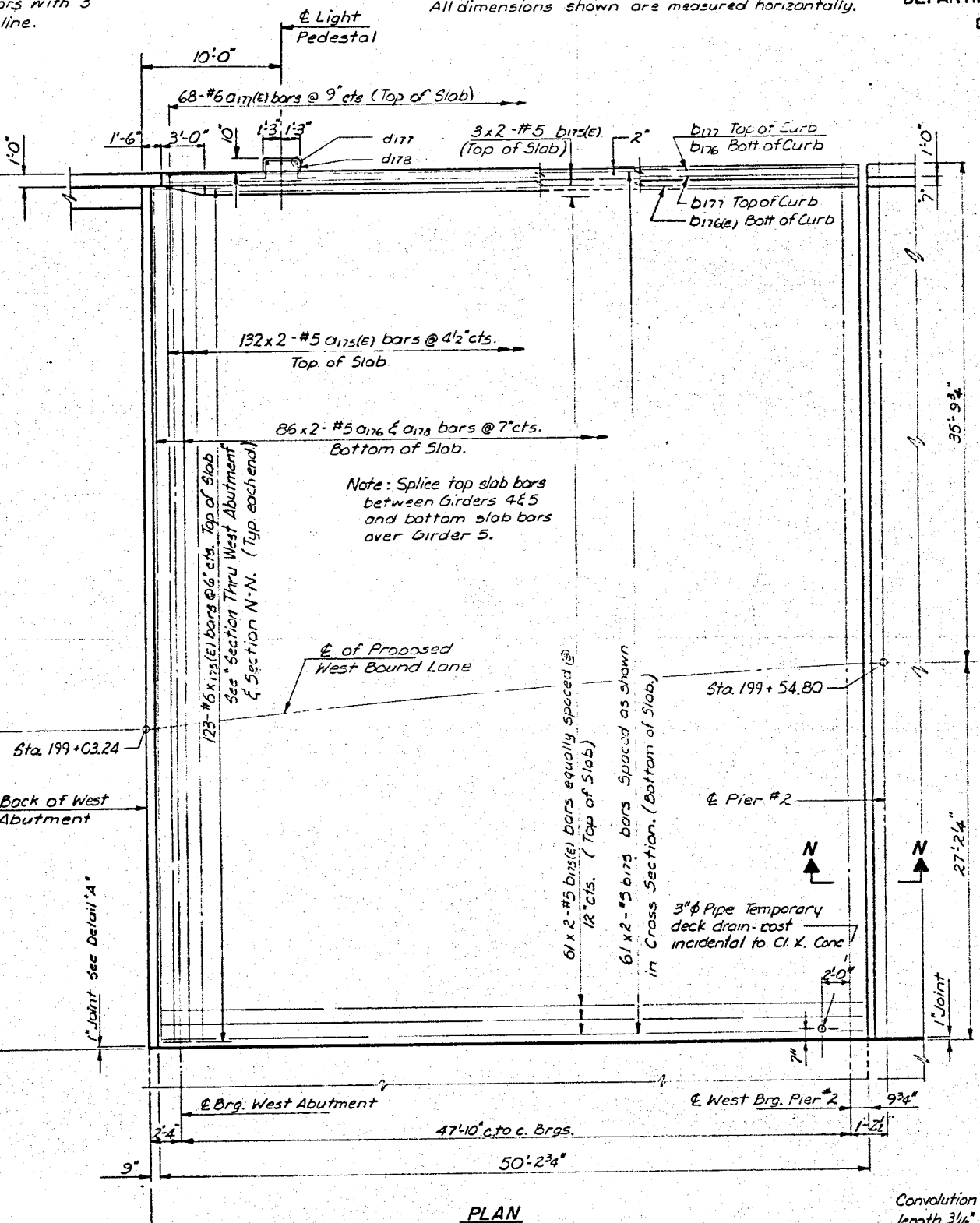
FILE NO. 74001
DATE 11-2-79

FOR INFORMATIONAL PURPOSES ONLY - (DIAGRAMMATIC PLAN)

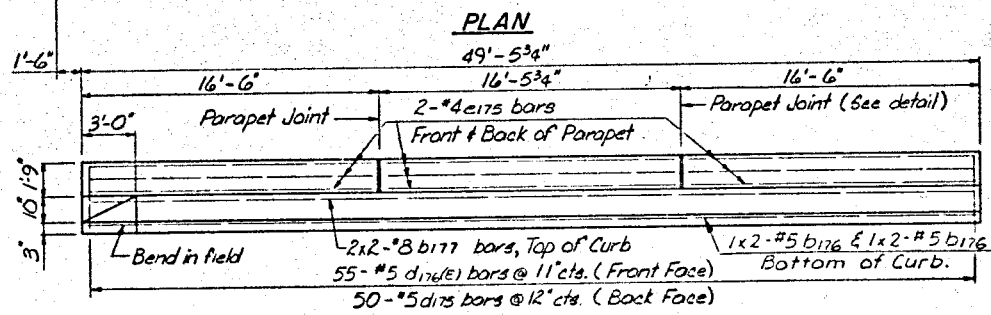
icated thus
tc. indicates
ors with 3
line.

Notes:
For Light Pedestal Details see Sheet 3 of ____.
For Section N-N see Sheet 10 of ____.
All dimensions shown are measured horizontally.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

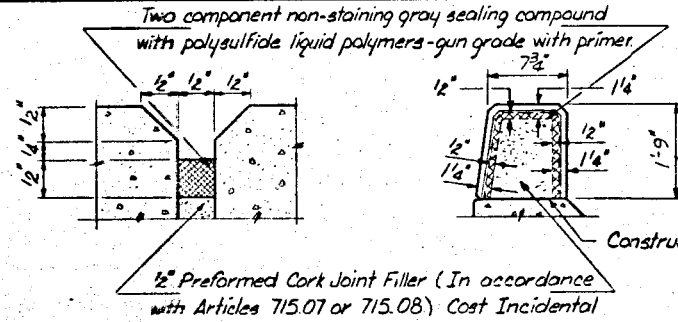


PLAN

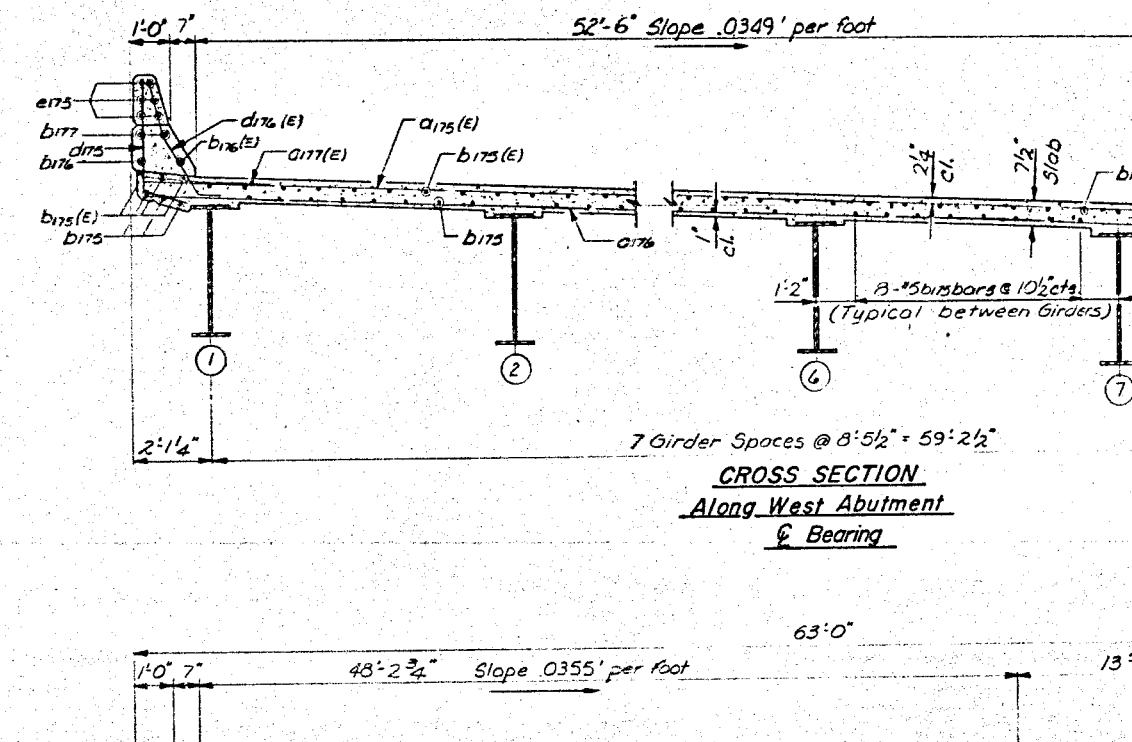


ELEVATION - CURB & PARAPET

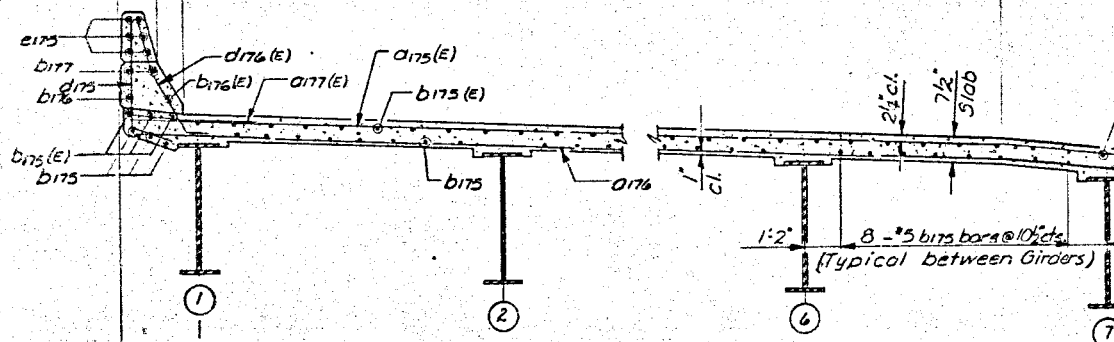
Also see "Section Thru Curb" on Sheet 10 of ____.



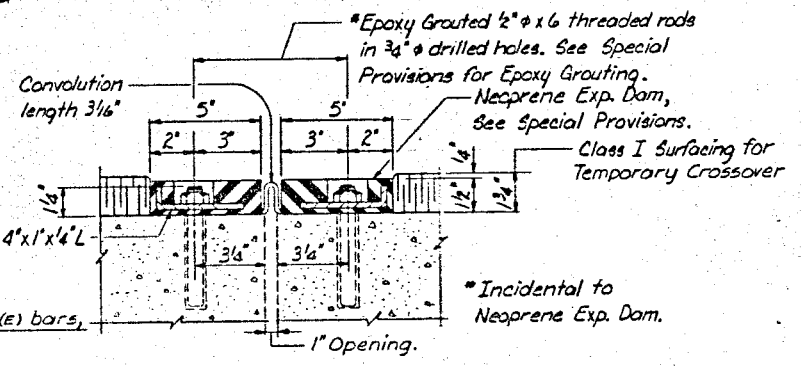
PARAPET JOINT DETAILS



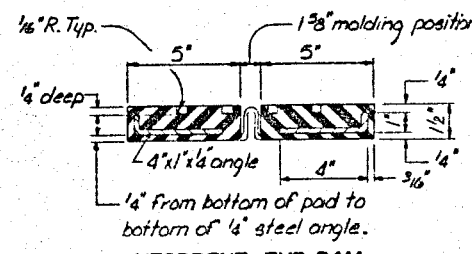
CROSS SECTION
Along West Abutment
℄ Bearing



CROSS SECTION
Along Pier 2
℄ West Bearing



DETAIL "A"



NEOPRENE EXP DAM

crete and
nt bars for
ail are included
terial," sheet 10.

FOR INFORMATIONAL PURPOSES ONLY - (CROSS SECTIONS)

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA:49	15-D	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

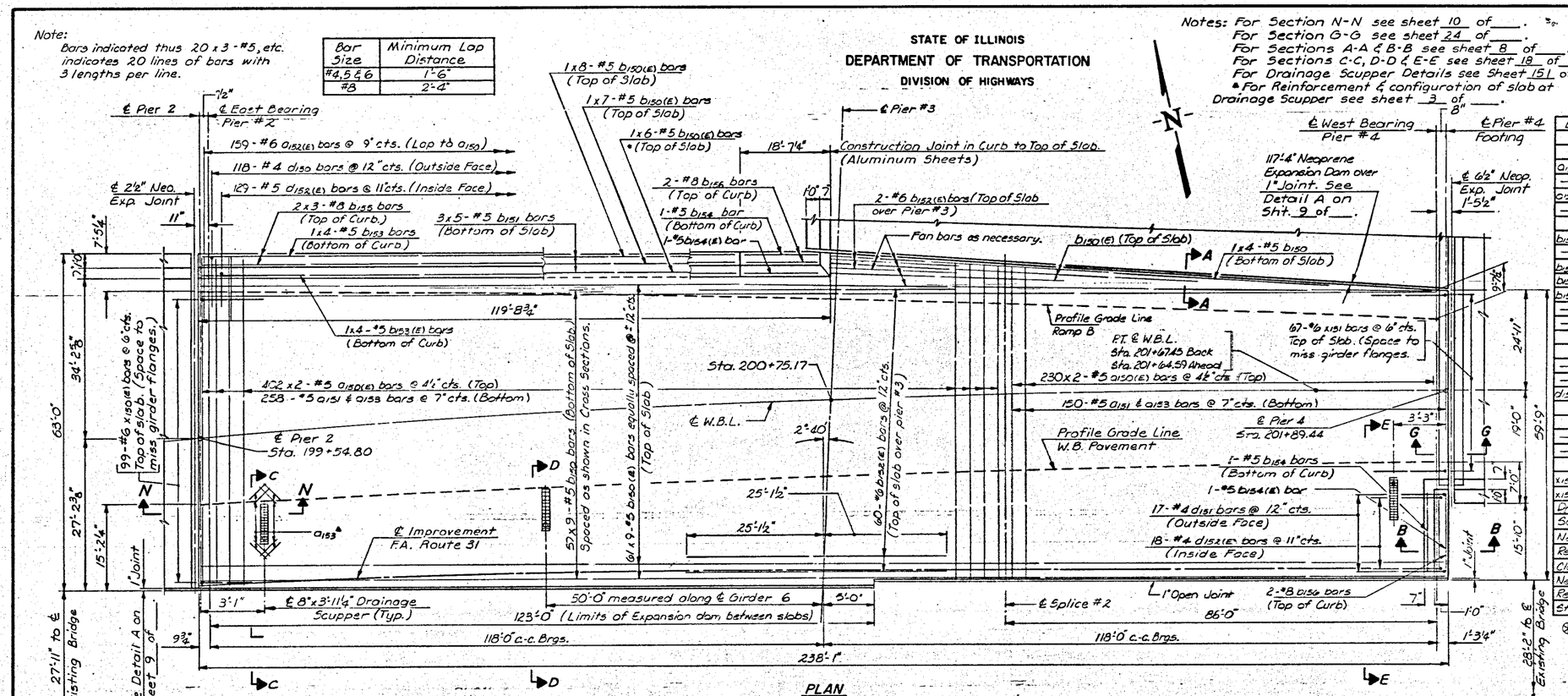
Sheet 88 of 134

Note:
Bars indicated thus 20 x 3 - #5, etc. indicates 20 lines of bars with 3 lengths per line.

Bar Size	Minimum Lap Distance
#4,5 & 6	1'-6"
#8	2'-4"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Notes: For Section N-N see sheet 10 of ___.
For Section G-G see sheet 24 of ___.
For Sections A-A & B-B see sheet 8 of ___.
For Sections C-C, D-D & E-E see sheet 18 of ___.
For Drainage Scupper Details see Sheet 151 of ___.
*For Reinforcement & configuration of slab at Drainage Scupper see sheet 3 of ___.



PLAN

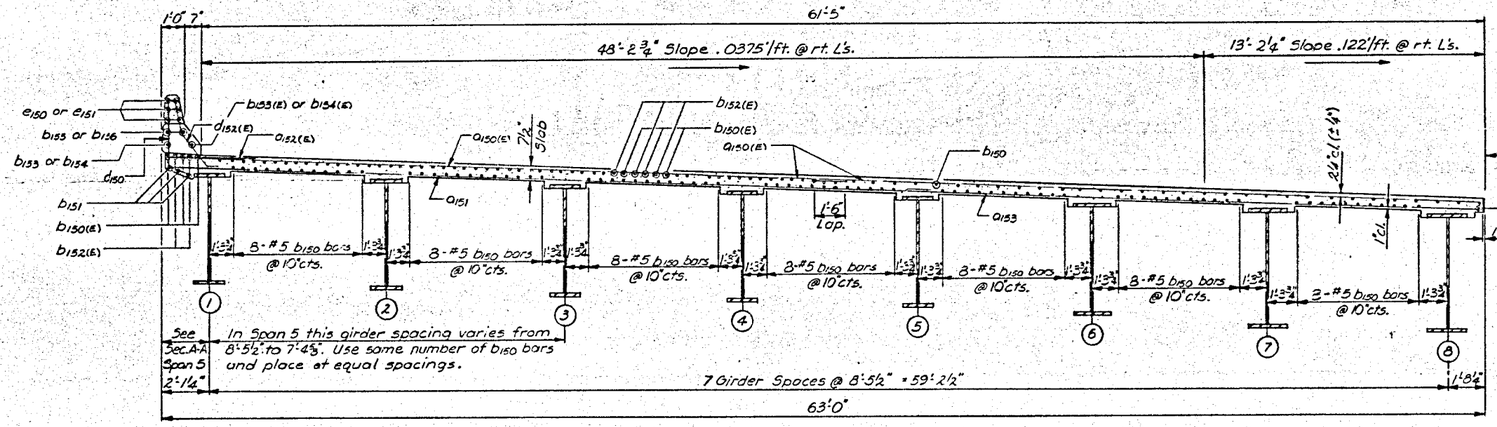
Note: All dimensions shown are measured horizontally.

SPANS 4&5
BILL OF MATERIAL

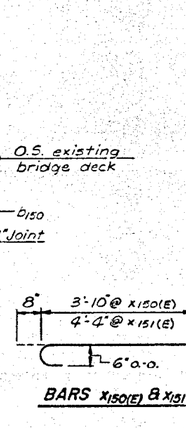
Bar	No.	Bar	No	Size	Length	Shape
a150(E)	1264			#5	31'-8"	
		a151	408	#5	36'-0"	
a152(E)	159			#6	4'-0"	
		a153	408	#5	27'-6"	
b150(E)	570	b150	517	#5	27'-5"	
		b151	15	#5	24'-7"	
b152(E)	62			#6	50'-3"	
b153(E)	4	b153	4	#5	26'-2"	
b154(E)	2	b154	2	#5	17'-3"	
		b155	6	#8	34'-9"	
		b156	4	#8	16'-10"	
		d150	118	#4	4'-1"	
		d151	17	#4	4'-8"	
d152(E)	147			#5	3'-11"	
		e150	36	#4	17'-3"	
		e151	12	#4	16'-8"	
x150(E)	99			#6	4'-6"	
x151(E)	67			#6	5'-0"	
Drainage System Complete					Lump Sum	
Scuppers					Each	3
Neoprene Expansion Dam					Lin. Ft.	260'-4"
Reinforcement Bars					Pounds	43,970
Class X Concrete					Cu. Yds.	377.6 ⊛
Neoprene Expansion Joint 6½"					Lin. Ft.	69'-0"
Reinforcement Bars (Epoxy Coated)					Lbs	65,610
Structural Steel					Lump Sum	

⊛ Includes 7.1 Cu. Yds. for parapet concrete.

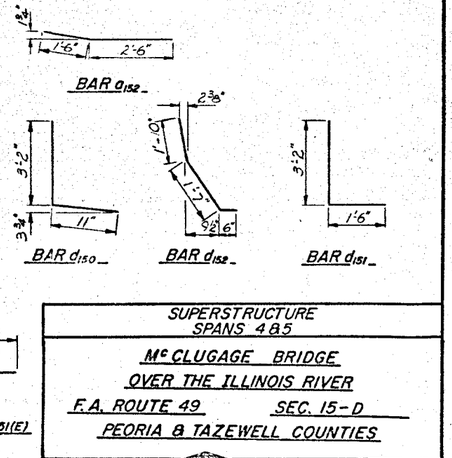
Estimated Weight Structural Steel:
M 223 (A-572) 548,600 lbs.
M 183 (A-36) 33,234 lbs.
Bearings 14,709 lbs.



CROSS SECTION
Along ℄ East Bearing of Pier 2
Looking East



BARS x150(E) & x151(E)



SUPERSTRUCTURE
SPANS 4&5

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

DLB
CRM
DAN
CRN

HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

FILE NO. 74001
DATE 11-2-79

FOR INFORMATIONAL PURPOSES ONLY-(CROSS SECTION)

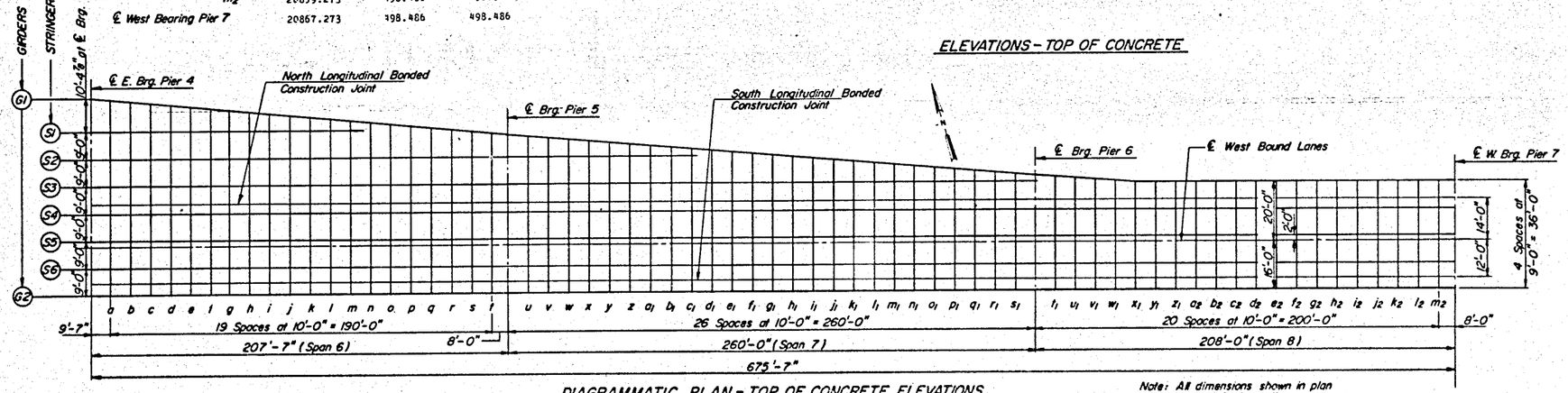
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO
FA-49	15-D	PEORIA & TAZEWELL		
FED. ROAD DIST NO 7	ILLINOIS	PROJECT		

Sheet 89 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

	GIRDER 1			STRINGER 1			STRINGER 2			STRINGER 3			NORTH LONGITUDINAL BONDED CONSTRUCTION JOINT		
	STATION	ELEV. A	ELEV.B	STATION	ELEV. A	ELEV.B	STATION	ELEV. A	ELEV.B	STATION	ELEV. A	ELEV.B	STATION	ELEV. A	ELEV.B
℄ East Bearing Pier 4	20191.690	498.858	498.858	20191.690	499.156	499.168	20191.690	499.407	499.429	20191.690	499.261	499.268	20191.690	499.129	499.155
b	20201.273	498.746	498.784	20201.273	498.985	499.037	20201.273	499.144	499.207	20201.273	499.135	499.203	20201.273	499.064	499.132
c	20211.273	498.643	498.719	20211.273	498.838	498.929	20211.273	499.024	499.127	20211.273	499.020	499.129	20211.273	498.939	499.048
d	20221.273	498.536	498.643	20221.273	498.718	498.840	20221.273	498.906	499.039	20221.273	498.932	499.071	20221.273	498.823	499.062
e	20231.273	498.438	498.576	20231.273	498.610	498.760	20231.273	498.797	498.958	20231.273	498.850	499.017	20231.273	498.893	499.020
f	20241.273	498.352	498.511	20241.273	498.512	498.682	20241.273	498.699	498.880	20241.273	498.773	498.960	20241.273	498.787	498.974
g	20251.273	498.276	498.455	20251.273	498.425	498.614	20251.273	498.612	498.811	20251.273	498.704	498.909	20251.273	498.725	498.930
h	20261.273	498.211	498.400	20261.273	498.348	498.586	20261.273	498.535	498.743	20261.273	498.640	498.853	20261.273	498.664	498.877
i	20271.273	498.156	498.351	20271.273	498.282	498.485	20271.273	498.469	498.682	20271.273	498.596	498.814	20271.273	498.638	498.857
j	20281.273	498.113	498.305	20281.273	498.227	498.427	20281.273	498.414	498.624	20281.273	498.564	498.779	20281.273	498.630	498.845
k	20291.273	498.079	498.265	20291.273	498.182	498.374	20291.273	498.370	498.573	20291.273	498.536	498.745	20291.273	498.623	498.833
l	20301.273	498.057	498.230	20301.273	498.149	498.328	20301.273	498.336	498.527	20301.273	498.513	498.711	20301.273	498.616	498.818
m	20311.273	498.046	498.202	20311.273	498.125	498.287	20311.273	498.313	498.487	20311.273	498.496	498.678	20311.273	498.613	498.797
n	20321.273	498.044	498.181	20321.273	498.113	498.255	20321.273	498.300	498.454	20321.273	498.487	498.648	20321.273	498.611	498.774
o	20331.273	498.054	498.168				20331.273	995.299	995.429	20331.273	498.486	498.623	20331.273	498.611	498.750
p	20341.273	498.065	498.156				20341.273	498.299	498.405	20341.273	498.486	498.599	20341.273	498.611	498.726
q	20351.273	498.077	498.144				20351.273	498.299	498.380	20351.273	498.486	498.575	20351.273	498.611	498.702
r	20361.273	498.088	498.134				20361.273	498.299	498.358	20361.273	498.486	498.553	20361.273	498.611	498.680
s	20371.273	498.100	498.129				20371.273	498.299	498.341	20371.273	498.486	498.535	20371.273	498.611	498.662
t	20381.273	498.111	498.125				20381.273	498.299	498.326	20381.273	498.486	498.520	20381.273	498.611	498.647
	20391.273	498.122	498.128				20391.273	498.299	498.317	20391.273	498.486	498.513	20391.273	498.611	498.640
℄ Bearing Pier 5	20399.273	498.132	498.132				20399.273	498.299	498.310	20399.273	498.486	498.507	20399.273	498.611	498.634
u	20409.273	498.143	498.146				20409.273	498.299	498.313	20409.273	498.486	498.509	20409.273	498.611	498.636
v	20419.273	498.154	498.161				20419.273	498.299	498.315	20419.273	498.486	498.511	20419.273	498.611	498.639
w	20429.273	498.166	498.181				20429.273	498.299	498.322	20429.273	498.486	498.518	20429.273	498.611	498.646
x	20439.273	498.177	498.208				20439.273	498.299	498.337	20439.273	498.486	498.533	20439.273	498.611	498.661
y	20449.273	498.189	498.236				20449.273	498.299	498.352	20449.273	498.486	498.547	20449.273	498.611	498.675
z	20459.273	498.200	498.269				20459.273	498.299	498.373	20459.273	498.486	498.569	20459.273	498.611	498.697
a_1	20469.273	498.211	498.303				20469.273	498.299	498.396	20469.273	498.486	498.591	20469.273	498.611	498.719
b_1	20479.273	498.223	498.339				20479.273	498.299	498.420	20479.273	498.486	498.615	20479.273	498.611	498.744
c_1	20489.273	498.234	498.371				20489.273	498.299	498.441	20489.273	498.486	498.638	20489.273	498.611	498.767
d_1	20499.273	498.246	498.405							20499.273	498.486	498.660	20499.273	498.611	498.789
e_1	20509.273	498.257	498.431							20509.273	498.486	498.674	20509.273	498.611	498.803
f_1	20519.273	498.268	498.452							20519.273	498.486	498.683	20519.273	498.611	498.812
g_1	20529.273	498.280	498.474							20529.273	498.486	498.692	20529.273	498.611	498.821
h_1	20539.273	498.291	498.480							20539.273	498.486	498.686	20539.273	498.611	498.815
i_1	20549.273	498.303	498.486							20549.273	498.486	498.679	20549.273	498.611	498.808
j_1	20559.273	498.314	498.487							20559.273	498.486	498.667	20559.273	498.611	498.796
k_1	20569.273	498.325	498.479							20569.273	498.486	498.647	20569.273	498.611	498.776
l_1	20579.273	498.337	498.472							20579.273	498.486	498.628	20579.273	498.611	498.758
m_1	20589.273	498.348	498.460							20589.273	498.486	498.605	20589.273	498.611	498.735
n_1	20599.273	498.360	498.448							20599.273	498.486	498.580	20599.273	498.611	498.711
o_1	20609.273	498.371	498.436							20609.273	498.486	498.556	20609.273	498.611	498.687
p_1	20619.273	498.382	498.429							20619.273	498.486	498.538	20619.273	498.611	498.668
q_1	20629.273	498.394	498.422							20629.273	498.486	498.518	20629.273	498.611	498.648
r_1	20639.273	498.405	498.421							20639.273	498.486	498.506	20639.273	498.611	498.636
s_1	20649.273	498.417	498.425							20649.273	498.486	498.498	20649.273	498.611	498.628
℄ Bearing Pier 6	20659.273	498.428	498.428							20659.273	498.486	498.490	20659.273	498.611	498.621
t_1	20669.273	498.439	498.441										20669.273	498.611	498.621
u_1	20679.273	498.451	498.456										20679.273	498.611	498.623
v_1	20689.273	498.462	498.478										20689.273	498.611	498.633
w_1	20699.273	498.473	498.501										20699.273	498.611	498.645
x_1	20709.273	498.485	498.530										20709.273	498.611	498.662
y_1	20719.273	498.486	498.549										20719.273	498.611	498.680
z_1	20729.273	498.486	498.570										20729.273	498.611	498.700
a_2	20739.273	498.486	498.591										20739.273	498.611	498.721
b_2	20749.273	498.486	498.608										20749.273	498.611	498.738
c_2	20759.273	498.486	498.624										20759.273	498.611	498.754
d_2	20769.273	498.486	498.634										20769.273	498.611	498.765
e_2	20779.273	498.486	498.642										20779.273	498.611	498.772
f_2	20789.273	498.486	498.643										20789.273	498.611	498.773
g_2	20799.273	498.486	498.638										20799.273	498.611	498.769
h_2	20809.273	498.486	498.629										20809.273	498.611	498.760
i_2	20819.273	498.486	498.614										20819.273	498.611	498.744
j_2	20829.273	498.486	498.595										20829.273	498.611	498.725
k_2	20839.273	498.486	498.570										20839.273	498.611	498.700
l_2	20849.273	498.486	498.543										20849.273	498.611	498.673
m_2	20859.273	498.486	498.511										20859.273	498.611	498.640
℄ West Bearing Pier 7	20867.273	498.486	498.486										20867.273	498.611	498.614

ELEVATIONS - TOP OF CONCRETE



DIAGRAMMATIC PLAN - TOP OF CONCRETE ELEVATIONS

Note: All dimensions shown in plan are measured horizontally.

Note:
Elev. A = Theoretical Grade Elevations
Elev. B = Theoretical Grade Elevations Adjusted For Dead Load Deflection.

TOP OF SLAB ELEVATIONS
SPANS 6, 7 & 8

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

S.C.O.
W.D.L.
R.J.E.
W.D.L.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

FILE NO. 74001
DATE 11-2-79

FOR INFORMATIONAL PURPOSES ONLY.

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-D	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

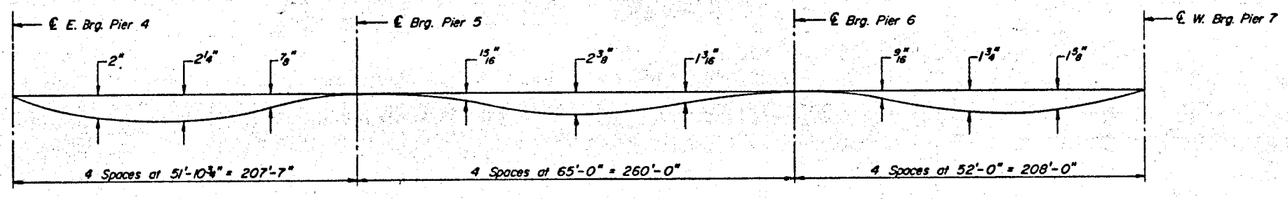
Sheet 90 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

	STRINGER 4			STRINGER 5			STRINGER 6			SOUTH LONGITUDINAL BONDED CONSTRUCTION JOINT			GIRDER 2		
	STATION	ELEV. A	ELEV.B	STATION	ELEV. A	ELEV.B	STATION	ELEV. A	ELEV.B	STATION	ELEV. A	ELEV.B	STATION	ELEV. A	ELEV.B
℄ East Bearing Pier 4	20191.690	499.091	499.117	20191.690	498.926	498.987	20191.690	498.761	498.772	20191.690	498.670	498.675	20191.690	498.596	498.596
a	20201.273	499.017	499.084	20201.273	498.875	498.937	20201.273	498.732	498.783	20201.273	498.653	498.697	20201.273	498.590	498.628
b	20211.273	498.961	499.070	20211.273	498.861	498.963	20211.273	498.731	498.821	20211.273	498.652	498.734	20211.273	498.569	498.645
c	20221.273	498.906	499.045	20221.273	498.852	498.985	20221.273	498.731	498.853	20221.273	498.652	498.765	20221.273	498.569	498.676
d	20231.273	498.851	499.018	20231.273	498.842	499.004	20231.273	498.731	498.882	20231.273	498.652	498.796	20231.273	498.569	498.707
e	20241.273	498.796	498.983	20241.273	498.832	499.014	20241.273	498.731	498.903	20241.273	498.652	498.817	20241.273	498.569	498.728
f	20251.273	498.741	498.946	20251.273	498.822	499.023	20251.273	498.731	498.922	20251.273	498.652	498.837	20251.273	498.569	498.748
g	20261.273	498.686	498.900	20261.273	498.812	499.022	20261.273	498.731	498.932	20261.273	498.652	498.846	20261.273	498.569	498.758
h	20271.273	498.668	498.887	20271.273	498.809	499.024	20271.273	498.731	498.938	20271.273	498.652	498.852	20271.273	498.569	498.764
i	20281.273	498.668	498.884	20281.273	498.809	499.021	20281.273	498.731	498.934	20281.273	498.652	498.849	20281.273	498.569	498.761
j	20291.273	498.668	498.879	20291.273	498.809	499.015	20291.273	498.731	498.928	20291.273	498.652	498.843	20291.273	498.569	498.755
k	20301.273	498.668	498.868	20301.273	498.809	499.004	20301.273	498.731	498.917	20301.273	498.652	498.831	20301.273	498.569	498.742
l	20311.273	498.668	498.852	20311.273	498.809	498.988	20311.273	498.731	498.901	20311.273	498.652	498.814	20311.273	498.569	498.726
m	20321.273	498.668	498.832	20321.273	498.809	498.967	20321.273	498.731	498.880	20321.273	498.652	498.794	20321.273	498.569	498.706
n	20331.273	498.668	498.808	20331.273	498.809	498.944	20331.273	498.731	498.857	20331.273	498.652	498.771	20331.273	498.569	498.683
o	20341.273	498.668	498.784	20341.273	498.809	498.921	20341.273	498.731	498.834	20341.273	498.652	498.748	20341.273	498.569	498.660
p	20351.273	498.668	498.760	20351.273	498.809	498.897	20351.273	498.731	498.810	20351.273	498.652	498.724	20351.273	498.569	498.636
q	20361.273	498.668	498.738	20361.273	498.809	498.875	20361.273	498.731	498.789	20361.273	498.652	498.703	20361.273	498.569	498.615
r	20371.273	498.668	498.720	20371.273	498.809	498.858	20371.273	498.731	498.772	20371.273	498.652	498.687	20371.273	498.569	498.596
s	20381.273	498.668	498.705	20381.273	498.809	498.843	20381.273	498.731	498.758	20381.273	498.652	498.672	20381.273	498.569	498.584
t	20391.273	498.668	498.698	20391.273	498.809	498.836	20391.273	498.731	498.749	20391.273	498.652	498.664	20391.273	498.569	498.575
℄ Bearing Pier 5	20399.273	498.668	498.692	20399.273	498.809	498.830	20399.273	498.731	498.743	20399.273	498.652	498.657	20399.273	498.569	498.569
u	20409.273	498.668	498.695	20409.273	498.809	498.833	20409.273	498.731	498.746	20409.273	498.652	498.661	20409.273	498.569	498.572
v	20419.273	498.668	498.697	20419.273	498.809	498.836	20419.273	498.731	498.750	20419.273	498.652	498.664	20419.273	498.569	498.576
w	20429.273	498.668	498.704	20429.273	498.809	498.844	20429.273	498.731	498.758	20429.273	498.652	498.672	20429.273	498.569	498.584
x	20439.273	498.668	498.719	20439.273	498.809	498.859	20439.273	498.731	498.773	20439.273	498.652	498.688	20439.273	498.569	498.600
y	20449.273	498.668	498.734	20449.273	498.809	498.873	20449.273	498.731	498.788	20449.273	498.652	498.703	20449.273	498.569	498.616
z	20459.273	498.668	498.755	20459.273	498.809	498.895	20459.273	498.731	498.810	20459.273	498.652	498.725	20459.273	498.569	498.638
a_1	20469.273	498.668	498.778	20469.273	498.809	498.917	20469.273	498.731	498.833	20469.273	498.652	498.748	20469.273	498.569	498.661
b_1	20479.273	498.668	498.803	20479.273	498.809	498.942	20479.273	498.731	498.857	20479.273	498.652	498.772	20479.273	498.569	498.685
c_1	20489.273	498.668	498.826	20489.273	498.809	498.966	20489.273	498.731	498.880	20489.273	498.652	498.794	20489.273	498.569	498.706
d_1	20499.273	498.668	498.848	20499.273	498.809	498.988	20499.273	498.731	498.902	20499.273	498.652	498.817	20499.273	498.569	498.728
e_1	20509.273	498.668	498.862	20509.273	498.809	499.002	20509.273	498.731	498.917	20509.273	498.652	498.831	20509.273	498.569	498.743
f_1	20519.273	498.668	498.871	20519.273	498.809	499.012	20519.273	498.731	498.927	20519.273	498.652	498.841	20519.273	498.569	498.753
g_1	20529.273	498.668	498.880	20529.273	498.809	499.021	20529.273	498.731	498.936	20529.273	498.652	498.851	20529.273	498.569	498.763
h_1	20539.273	498.668	498.874	20539.273	498.809	499.014	20539.273	498.731	498.930	20539.273	498.652	498.845	20539.273	498.569	498.758
i_1	20549.273	498.668	498.867	20549.273	498.809	499.007	20549.273	498.731	498.924	20549.273	498.652	498.839	20549.273	498.569	498.752
j_1	20559.273	498.668	498.855	20559.273	498.809	498.995	20559.273	498.731	498.912	20559.273	498.652	498.828	20559.273	498.569	498.742
k_1	20569.273	498.668	498.835	20569.273	498.809	498.976	20569.273	498.731	498.893	20569.273	498.652	498.809	20569.273	498.569	498.723
l_1	20579.273	498.668	498.817	20579.273	498.809	498.959	20579.273	498.731	498.875	20579.273	498.652	498.791	20579.273	498.569	498.704
m_1	20589.273	498.668	498.795	20589.273	498.809	498.937	20589.273	498.731	498.853	20589.273	498.652	498.768	20589.273	498.569	498.681
n_1	20599.273	498.668	498.770	20599.273	498.809	498.912	20599.273	498.731	498.829	20599.273	498.652	498.744	20599.273	498.569	498.657
o_1	20609.273	498.668	498.745	20609.273	498.809	498.888	20609.273	498.731	498.805	20609.273	498.652	498.721	20609.273	498.569	498.634
p_1	20619.273	498.668	498.727	20619.273	498.809	498.869	20619.273	498.731	498.787	20619.273	498.652	498.703	20619.273	498.569	498.616
q_1	20629.273	498.668	498.708	20629.273	498.809	498.850	20629.273	498.731	498.767	20629.273	498.652	498.684	20629.273	498.569	498.597
r_1	20639.273	498.668	498.695	20639.273	498.809	498.838	20639.273	498.731	498.756	20639.273	498.652	498.672	20639.273	498.569	498.585
s_1	20649.273	498.668	498.688	20649.273	498.809	498.831	20649.273	498.731	498.749	20649.273	498.652	498.664	20649.273	498.569	498.577
℄ Bearing Pier 6	20659.273	498.668	498.681	20659.273	498.809	498.825	20659.273	498.731	498.742	20659.273	498.652	498.657	20659.273	498.569	498.569
t_1	20669.273	498.668	498.682	20669.273	498.809	498.826	20669.273	498.731	498.743	20669.273	498.652	498.659	20669.273	498.569	498.571
u_1	20679.273	498.668	498.683	20679.273	498.809	498.827	20679.273	498.731	498.744	20679.273	498.652	498.660	20679.273	498.569	498.574
v_1	20689.273	498.668	498.694	20689.273	498.809	498.838	20689.273	498.731	498.755	20689.273	498.652	498.672	20689.273	498.569	498.585
w_1	20699.273	498.668	498.705	20699.273	498.809	498.849	20699.273	498.731	498.767	20699.273	498.652	498.684	20699.273	498.569	498.597
x_1	20709.273	498.668	498.722	20709.273	498.809	498.866	20709.273	498.731	498.784	20709.273	498.652	498.701	20709.273	498.569	498.614
y_1	20719.273	498.668	498.740	20719.273	498.809	498.884	20719.273	498.731	498.802	20719.273	498.652	498.719	20719.273	498.569	498.632
z_1	20729.273	498.668	498.760	20729.273	498.809	498.904	20729.273	498.731	498.823	20729.273	498.652	498.739	20729.273	498.569	498.653
a_2	20739.273	498.668	498.781	20739.273	498.809	498.925	20739.273	498.731	498.844	20739.273	498.652	498.760	20739.273	498.569	498.674
b_2	20749.273	498.668	498.798	20749.273	498.809	498.942	20749.273	498.731	498.861	20749.273	498.652	498.777	20749.273	498.569	498.691
c_2	20759.273	498.668	498.814	20759.273	498.809	498.958	20759.273	498.731	498.877	20759.273	498.652	498.793	20759.273	498.569	498.707
d_2	20769.273	498.668	498.824	20769.273	498.809	498.968	20769.273	498.731	498.887	20769.273	498.652	498.804	20759.273	498.569	498.717
e_2	20779.273	498.668	498.832	20779.273	498.809	498.976	20779.273	498.731	498.895	20779.273	498.652	498.811	20779.273	498.569	498.725
f_2	20789.273	498.668	498.833	20789.273	498.809	498.977	20789.273	498.731	498.896	20789.273	498.652	498.812	20789.273	498.569	498.726
g_2	20799.273	498.668	498.828	20799.273	498.809	498.972	20799.273	498.731	498.891	20793.273	498.652	498.808	20739.273	498.569	498.721
h_2	20809.273	498.668	498.819	20809.273	498.809	498.963	20809.273	498.731	498.882	20809.273	498.652	498.799	20809.273	498.569	498.712
i_2	20819.273	498.668	498.804	20819.273	498.809	498.948	20819.273	498.731	498.867	20819.273	498.652	498.783	20819.273	498.569	498.697
j_2	20829.273	498.668	498.785	20829.273	498.809	498.930	20829.273	498.731	498.848	20829.273	498.652	498.765	20829.273	498.569	498.678
k_2	20839.273	498.668	498.760	20839.273	498.809	498.906	20839.273	498.731	498.823	20839.273	498.652	498.739	20839.273	498.569	498.653
l_2	20849.273	498.668	498.733	20849.273	498.809	498.878	20849.273	498.731	498.796	20849.273	498.652	498.712	20849.273	498.569	498.626
m_2	20859.273	498.668	498.698	20859.273	498.809	498.842	20859.273	498.731	498.761	20859.273	498.652	498.679	20859.273	498.569	498.594
℄ West Bearing Pier 7	20867.273	498.668	498.672	20867.273	498.809	498.814	20867.273	498.731	498.735	20867.273	498.652	498.654	20867.273	498.569	498.569

ELEVATIONS - TOP OF CONCRETE

Note:
Elev. A = Theoretical Grade Elevations
Elev. B = Theoretical Grade Elevations Adjusted For Dead Load Deflection.



DEAD LOAD DEFLECTION DIAGRAM
(Includes Weight of Concrete Slab)

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 in "Elevations – Top of Concrete" tables.

Note: For notes on method of determining fillet heights "I" see sheet 68 of

TOP OF SLAB ELEVATIONS
SPANS 6, 7 & 8

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

S.C.Q.
W.D.L.
R.J.F.
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HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

74001
DATE 11-2-79

FOR INFORMATIONAL PURPOSES ONLY.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Bar Size	Min. Lap Distance
#4, #5, & #6	1'-6"
#8	2'-4"

679 - #4 d_{125} bars @ 12" cts. Outside Face Both Curbs.
741 - #5 $d_{126(E)}$ bars @ 11" cts. Inside Face Both Curbs.

℄ to Face of Curb (typ.)
℄ Drainage Scupper (Typical)

50'-10⅝"
21'-0"
19'-0"
20'-0"
20'-0"
10'-0"
19'-0"
24'-0"
19'-0"
6'-3⅜"

2 x 6 - #8 b_{129} bars Top of curb (Typ. ea. curb)
1 x 6 - #5 b_{130} bars Bott. of curb (Typ. ea. curb)
1 x 6 - #5 $b_{130(E)}$ bars Estt. of Curb (Typ. ea. curb)
2 - #8 b_{127} bars Top of curb (Typ. ea. curb)
℄ Light Pedestal
a_{140} (typ.)
d 128
d 127
1'-3"
1'-3"
10"
21'-4"

67 - #5 $b_{128(E)}$ bars @ 12" cts. Top
133 - #6 $a_{125(E)}$ bars @ 6" cts. space between b bars
68 - #5 b_{125} bars @ 10" cts. Bott. (10 @ fanned bay)
65 - #5 $b_{128(E)}$ bars @ 12" cts. Top
66 - #5 b_{125} bars @ 10" cts. Bott. (8 @ fanned bay)
64 - #5 $b_{128(E)}$ bars @ 12" cts. Top
63 - #5 b_{125} bars @ 10" cts. Bott. (5 @ fanned bay)
62 - #5 $b_{128(E)}$ bars @ 12" cts. Top
62 - #5 b_{125} bars @ 10" cts. Bott. (14 @ fanned bay)
61 - #5 $b_{128(E)}$ bars @ 12" cts. Top
60 - #5 b_{125} bars @ 10" cts. Bott. (12 @ fanned bay)
59 - #5 $b_{128(E)}$ bars @ 12" cts. Top
58 - #5 b_{125} bars @ 10" cts. Bott. (10 @ fanned bay)
58 x 3 - #6 $b_{134(E)}$ bars @ 12" cts. Top of Slab over Pier 5
57 - #5 $b_{128(E)}$ bars @ 12" cts. Top
56 - #5 b_{125} bars @ 10" cts. Bott. (8 @ fanned bay)
55 - #5 $b_{128(E)}$ bars @ 12" cts. Top
55 - #5 b_{125} bars @ 10" cts. Bott. (7 @ fanned bay)

℄ E. Brg. Pier 4 Sta. 201+91.69
107 - #5 $a_{128(E)}$ & $a_{127(E)}$ @ 4" cts. Top - lap between S3 & S4
68 - #5 a 130 & a_{125} @ 6½ cts. Bott. Bars - lap over S4
℄ (typ.)
110 x 2 - #5 $a_{128(E)}$ @ 4" cts. Top - lap between S3 & S4
68 - #5 a 130 & a_{126} @ 6½ cts. Bott. Bars - lap over S4
110 - #5 $a_{128(E)}$ & $a_{127(E)}$ @ 4" cts. Top - lap between S3 & S4
68 - #5 a 130 & a_{127} @ 6½ cts. Bott. Bars - lap over S4
110 - #5 $a_{128(E)}$ & $a_{130(E)}$ @ 4" cts. Top - lap between S3 & S4
68 - #5 a 128 @ 6½ cts. Bott. Bars - lap over S4
110 - #5 $a_{128(E)}$ & $a_{131(E)}$ @ 4" cts. Top - lap between S3 & S4
68 - #5 a 130 & a 129 @ 6½ cts. Bott. Bars - lap over S4
110 - #5 $a_{128(E)}$ & $a_{132(E)}$ @ 4" cts. Top - lap between S3 & S4
68 x 2 - #5 a 130 @ 6½ cts. Bott. Bars - lap over S4
℄ P Sta. 2

1'-6" Lap typ.
2 x 7 - #5 b_{125} bars Bott. of Slab (Typ. Ea. Side)
3 x 7 - #5 $b_{125(E)}$ bars Top of Slab (Typ. Ea. Side)

℄ 4" x 12" Floor Drain (Typical)
33 - Floor Drain Spaces @ 6'-0" = 198'-0"
5'-0"
4" x

℄ E. Brg. Pier 4
677'-9¾" end to end of deck
170'-4¼"
42'-9"
38'-6"
209'-10"

1013 - #6 $a_{139(E)}$ bars @ 8" cts. Alternate with Top Steel. (Typ. Ea. Side)

PLAN - SPAN 6

Out to out of deck varies from 70'-5¾" to 42'-0"
Face to face of parapet varies from 68'-5¾" to 40'-0"
Varies from 51'-5¾" to 23'-0"

1'-0" 7" 5'-5" 16'-0" Lane Width (RAMP "F") Varies 12'-0" Lane Width 12'-0" Lane Width 5'-5" 7" 1'-0"
19'-0"

Superelevation varies throughout cross section. See Sht. 5 of ___ for superelevation details.
C-4 Modified Median See Sht. 5 of ___ for location & Standard 2122-8 for details.
Longitudinal Bonded Construction Jt. - do not edge - (Optional)
℄ Rdwy. W. Bd. Lanes
Crown Elev. Varies
2'-0"
e bars
b_{129}
b_{130}
$b_{128(E)}$
b_{128}
$a_{127(E)}$ $b_{125(E)}$ a_{125} b_{126} $b_{128(E)}$ $a_{128(E)}$ $b_{125(E)}$ a_{130} $b_{130(E)}$ $b_{125(E)}$
7½" 24¼" (1'-½")
2¾" 2¼"
2"
3'-0"
See Plan - Span 6 for number of fanned bars. Varies - min. 2'-1⅝" max. 2'-8⅜"
9" 9" 10 - #5 b_{125} bars @ 10" cts. Typ. between stringers 9"
9" 8 - #5 b_{125} bars @ 10" cts. 2'-5" Typ. between stringers & girders.
Varies 9'-0" 9'-0" 9'-0" 9'-0" 9'-0" 2'-0" 7'-0" 9'-0" 5'-0"
S1 S2 S3 S4 S5 S6
G1 G2

Note: All dimensions shown are measured horizontally.

CROSS SECTION A-A
(Looking East)

TOTAL CROWN DROP

	North of ℄ Rdwy.	South of ℄ Rdwy.
℄ E. Brg. Pier 4	⅞"	3⅜"
℄ Pier 5	8⅜"	3⅝"

Bars indi
20 lines of ba
For Sectio
For Sectio
For Light
For Drain
150 thru 153
*For Reinfo
@ Scupper se
For Detai
24 of ___.
Space 4" x
Cross Frames
Lateral Brac
Reinforcemen
epoxy coated.

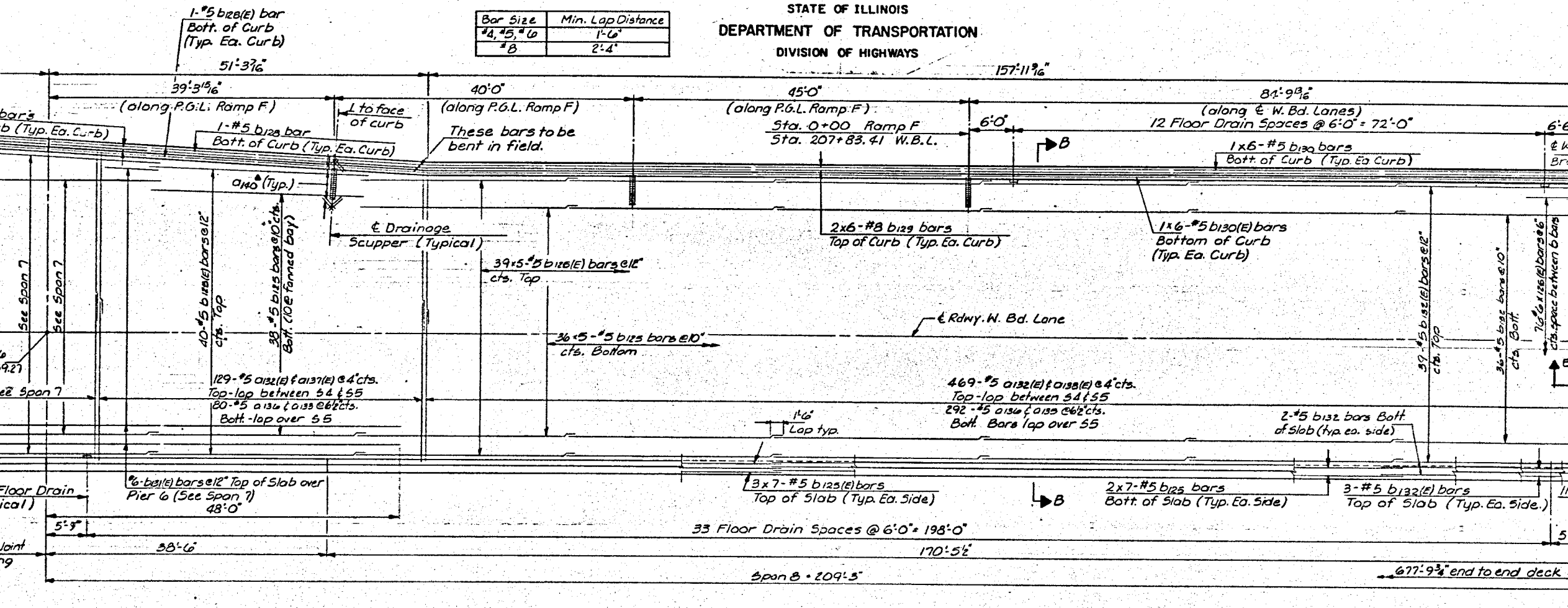
M
OVE
F.A. ROUT
PEORIA

W.D.L.
S.C.Q.
P.M.
W.D.L.

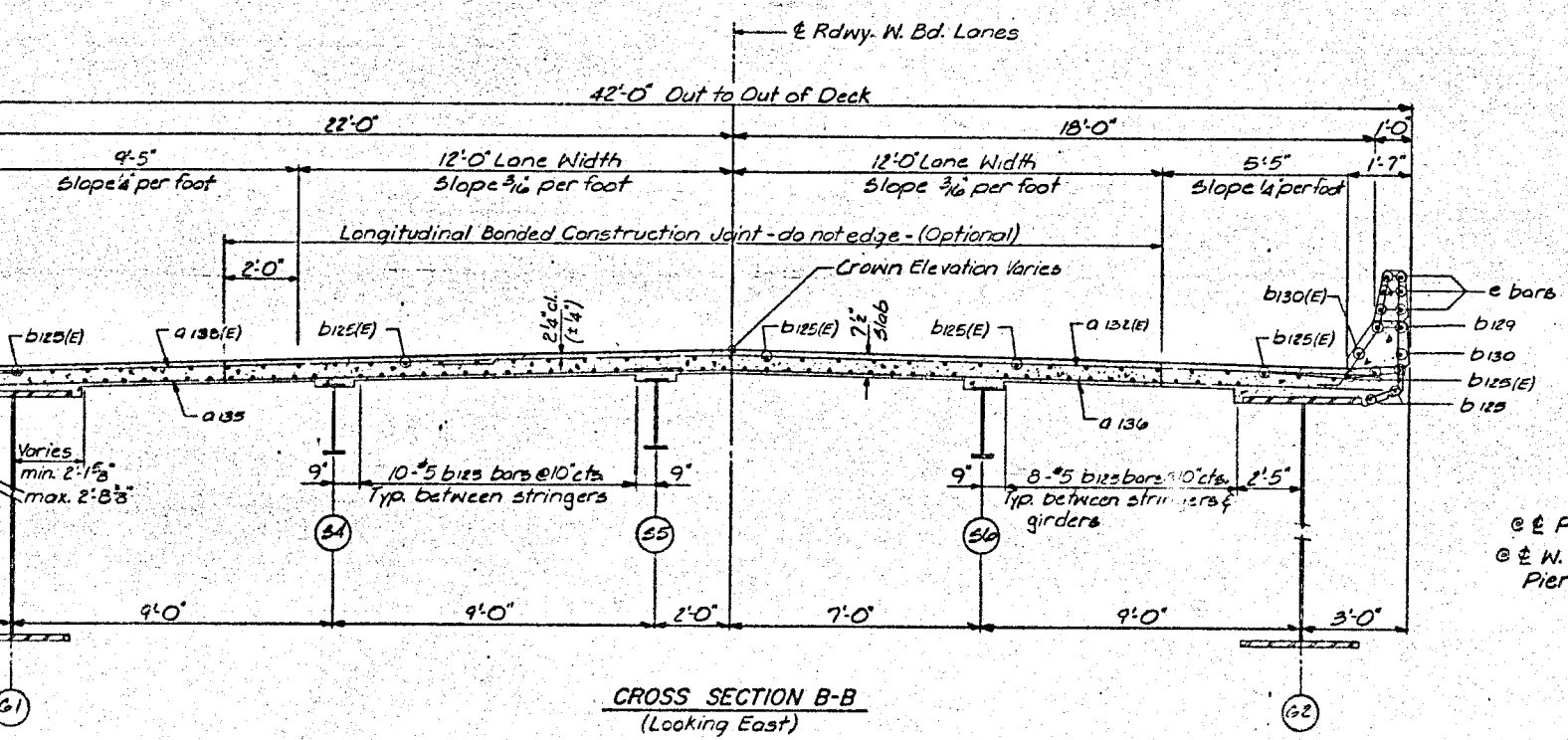
FOR INFORMATIONAL PURPOSES ONLY - (CROSS SECTION A-A)

Bar Size	Min. Lap Distance
#4, #5, #6	1'-6"
#8	2'-4"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



PLAN-SPAN 8



CROSS SECTION B-B
(Looking East)

TOTAL CROWN DROP

	North of ℄ Rdwy.	South of ℄ Rdwy.
@ ℄ Pier 6	5 3/8"	3 5/8"
@ ℄ W. Brg. Pier 7	4 5/8"	3 5/8"

Bars indi
indicates 20
per line.
For Sectio
All dimer
horizontally.
For Drain
150 thru 153
For Reinf
@ Scupper se
For Detai
24 of .
Space 4"
Cross Frames
Bracing.
Reinforceme
Epoxy Coated.

M
OVE
F.A. ROUT
PEORIA

W.D.L.
S.C.Q.
P.M.
W.D.L.

FOR INFORMATIONAL PURPOSES ONLY-(CROSS SECTION B-B)

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

	GIRDER 1			STRINGER 1			STRINGER 2			STRINGER 3			
	STATION	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION
East Bearing Pier 7	208+69.770	498.486	498.486	208+69.770	498.668	498.668	208+69.770	498.809	498.809	208+69.770	498.731	498.731	208+69.770
a	208+79.770	498.486	498.523	208+79.770	498.668	498.705	208+79.770	498.809	498.845	208+79.770	498.731	498.767	208+79.770
b	208+89.770	498.486	498.559	208+89.770	498.668	498.742	208+89.770	498.809	498.882	208+89.770	498.731	498.804	208+89.770
c	208+99.770	498.486	498.596	208+99.770	498.668	498.778	208+99.770	498.809	498.919	208+99.770	498.731	498.841	208+99.770
d	209+09.770	498.486	498.633	209+09.770	498.668	498.815	209+09.770	498.809	498.956	209+09.770	498.731	498.877	209+09.770
e	209+19.770	498.486	498.669	209+19.770	498.668	498.852	209+19.770	498.809	498.992	209+19.770	498.731	498.914	209+19.770
f	209+29.770	498.486	498.682	209+29.770	498.668	498.864	209+29.770	498.809	499.005	209+29.770	498.731	498.927	209+29.770
g	209+39.770	498.486	498.689	209+39.770	498.668	498.871	209+39.770	498.809	499.012	209+39.770	498.731	498.934	209+39.770
h	209+49.770	498.486	498.696	209+49.770	498.668	498.878	209+49.770	498.809	499.019	209+49.770	498.731	498.941	209+49.770
i	209+59.770	498.486	498.703	209+59.770	498.668	498.885	209+59.770	498.809	499.026	209+59.770	498.731	498.948	209+59.770
j	209+69.770	498.486	498.710	209+69.770	498.668	498.892	209+69.770	498.809	499.033	209+69.770	498.731	498.955	209+69.770
k	209+79.770	498.486	498.699	209+79.770	498.668	498.881	209+79.770	498.809	499.022	209+79.770	498.731	498.944	209+79.770
l	209+89.770	498.486	498.677	209+89.770	498.668	498.859	209+89.770	498.809	499.000	209+89.770	498.731	498.922	209+89.770
m	209+99.770	498.486	498.655	209+99.770	498.668	498.837	209+99.770	498.809	498.978	209+99.770	498.731	498.899	209+99.770
n	210+09.770	498.486	498.632	210+09.770	498.668	498.815	210+09.770	498.809	498.955	210+09.770	498.731	498.877	210+09.770
o	210+19.770	498.486	498.610	210+19.770	498.668	498.792	210+19.770	498.809	498.933	210+19.770	498.731	498.855	210+19.770
p	210+29.770	498.486	498.588	210+29.770	498.668	498.770	210+29.770	498.809	498.911	210+29.770	498.731	498.833	210+29.770
q	210+39.770	498.486	498.567	210+39.770	498.668	498.749	210+39.770	498.809	498.890	210+39.770	498.731	498.812	210+39.770
r	210+49.770	498.486	498.546	210+49.770	498.668	498.728	210+49.770	498.809	498.868	210+49.770	498.731	498.790	210+49.770
s	210+59.770	498.486	498.524	210+59.770	498.668	498.706	210+59.770	498.809	498.847	210+59.770	498.731	498.769	210+59.770
t	210+69.770	498.486	498.503	210+69.770	498.668	498.685	210+69.770	498.809	498.826	210+69.770	498.731	498.748	210+69.770
Bearing Pier 8	210+77.770	498.486	498.486	210+77.770	498.668	498.668	210+77.770	498.809	498.809	210+77.770	498.731	498.731	210+77.770
u	210+87.770	498.486	498.486	210+87.770	498.668	498.668	210+87.770	498.809	498.809	210+87.770	498.731	498.731	210+87.770
v	210+97.770	498.486	498.486	210+97.770	498.668	498.669	210+97.770	498.809	498.809	210+97.770	498.731	498.731	210+97.770
w	211+07.770	498.486	498.487	211+07.770	498.668	498.669	211+07.770	498.809	498.810	211+07.770	498.731	498.731	211+07.770
x	211+17.770	498.486	498.487	211+17.770	498.668	498.669	211+17.770	498.809	498.810	211+17.770	498.731	498.732	211+17.770
y	211+27.770	498.486	498.487	211+27.770	498.668	498.670	211+27.770	498.809	498.810	211+27.770	498.731	498.732	211+27.770
z	211+37.770	498.486	498.489	211+37.770	498.668	498.671	211+37.770	498.809	498.812	211+37.770	498.731	498.734	211+37.770
a_1	211+47.770	498.486	498.496	211+47.770	498.668	498.679	211+47.770	498.809	498.819	211+47.770	498.731	498.741	211+47.770
b_1	211+57.770	498.486	498.504	211+57.770	498.668	498.686	211+57.770	498.809	498.827	211+57.770	498.731	498.748	211+57.770
c_1	211+67.770	498.486	498.511	211+67.770	498.668	498.693	211+67.770	498.809	498.834	211+67.770	498.731	498.756	211+67.770
d_1	211+77.770	498.486	498.518	211+77.770	498.668	498.701	211+77.770	498.809	498.841	211+77.770	498.731	498.763	211+77.770
e_1	211+87.770	498.486	498.526	211+87.770	498.668	498.708	211+87.770	498.809	498.849	211+87.770	498.731	498.770	211+87.770
f_1	211+97.770	498.486	498.527	211+97.770	498.668	498.709	211+97.770	498.809	498.850	211+97.770	498.731	498.772	211+97.770
g_1	212+07.770	498.499	498.533	212+07.770	498.681	498.715	212+07.770	498.822	498.855	212+07.770	498.743	498.777	212+07.770
h_1	212+17.770	498.519	498.546	212+17.770	498.702	498.728	212+17.770	498.842	498.869	212+17.770	498.764	498.791	212+17.770
i_1	212+27.770	498.550	498.569	212+27.770	498.732	498.752	212+27.770	498.873	498.892	212+27.770	498.795	498.814	212+27.770
j_1	212+37.770	498.591	498.602	212+37.770	498.773	498.785	212+37.770	498.913	498.925	212+37.770	498.835	498.847	212+37.770
k_1	212+47.770	498.641	498.645	212+47.770	498.823	498.827	212+47.770	498.964	498.968	212+47.770	498.886	498.890	212+47.770
l_1	212+57.770	498.701	498.702	212+57.770	498.883	498.885	212+57.770	499.024	499.025	212+57.770	498.946	498.947	212+57.770
m_1	212+67.770	498.771	498.772	212+67.770	498.953	498.954	212+67.770	499.093	499.095	212+67.770	499.015	499.017	212+67.770
n_1	212+77.770	498.850	498.851	212+77.770	499.033	499.033	212+77.770	499.173	499.174	212+77.770	499.095	499.096	212+77.770
o_1	212+87.770	498.940	498.940	212+87.770	499.122	499.123	212+87.770	499.263	499.263	212+87.770	499.184	499.185	212+87.770
p_1	212+97.770	499.039	499.039	212+97.770	499.221	499.222	212+97.770	499.362	499.362	212+97.770	499.284	499.284	212+97.770
Bearing Pier 9	213+09.520	499.168	499.168	213+09.520	499.350	499.350	213+09.520	499.491	499.491	213+09.520	499.413	499.413	213+09.520
q_1	213+19.520	499.289	499.310	213+19.520	499.471	499.492	213+19.520	499.612	499.633	213+19.520	499.533	499.555	213+19.520
r_1	213+29.520	499.419	499.461	213+29.520	499.601	499.644	213+29.520	499.742	499.784	213+29.520	499.664	499.706	213+29.520
s_1	213+39.520	499.559	499.623	213+39.520	499.742	499.805	213+39.520	499.882	499.946	213+39.520	499.804	499.868	213+39.520
t_1	213+49.520	499.709	499.794	213+49.520	499.892	499.976	213+49.520	500.032	500.117	213+49.520	499.954	500.039	213+49.520
u_1	213+59.520	499.869	499.975	213+59.520	500.051	500.157	213+59.520	500.192	500.298	213+59.520	500.114	500.220	213+59.520
v_1	213+69.520	500.039	500.167	213+69.520	500.221	500.349	213+69.520	500.362	500.489	213+69.520	500.283	500.411	213+69.520
w_1	213+79.520	500.218	500.368	213+79.520	500.400	500.550	213+79.520	500.541	500.691	213+79.520	500.463	500.613	213+79.520
x_1	213+89.520	500.407	500.579	213+89.520	500.590	500.762	213+89.520	500.730	500.902	213+89.520	500.652	500.824	213+89.520
y_1	213+99.520	500.606	500.800	213+99.520	500.789	500.983	213+99.520	500.929	501.123	213+99.520	500.851	501.045	213+99.520
z_1	214+09.520	500.811	501.027	214+09.520	500.993	501.209	214+09.520	501.134	501.350	214+09.520	501.056	501.272	214+09.520
a_2	214+19.520	501.015	501.235	214+19.520	501.197	501.417	214+19.520	501.338	501.558	214+19.520	501.260	501.480	214+19.520
b_2	214+29.520	501.219	501.432	214+29.520	501.401	501.614	214+29.520	501.542	501.755	214+29.520	501.464	501.677	214+29.520
c_2	214+39.520	501.423	501.629	214+39.520	501.605	501.812	214+39.520	501.746	501.952	214+39.520	501.668	501.874	214+39.520
d_2	214+49.520	501.627	501.827	214+49.520	501.809	502.009	214+49.520	501.950	502.149	214+49.520	501.872	502.071	214+49.520
e_2	214+59.520	501.831	502.024	214+59.520	502.013	502.206	214+59.520	502.154	502.347	214+59.520	502.076	502.269	214+59.520
f_2	214+69.520	502.035	502.208	214+69.520	502.217	502.390	214+69.520	502.358	502.531	214+69.520	502.280	502.453	214+69.520
g_2	214+79.520	502.239	502.376	214+79.520	502.421	502.558	214+79.520	502.562	502.698	214+79.520	502.484	502.620	214+79.520
h_2	214+89.520	502.443	502.543	214+89.520	502.625	502.725	214+89.520	502.766	502.866	214+89.520	502.688	502.788	214+89.520
i_2	214+99.520	502.647	502.711	214+99.520	502.829	502.893	214+99.520	502.970	503.034	214+99.520	502.892	502.955	214+99.520
j_2	215+09.520	502.851	502.878	215+09.520	503.033	503.060	215+09.520	503.174	503.201	215+09.520	503.096	503.123	215+09.520
West Bearing Pier 10	215+17.020	503.004	503.004	215+17.020	503.186	503.186	215+17.020	503.327	503.327	215+17.020	503.249	503.249	215+17.020

ELEVATIONS - TOP OF CONCRETE

Note: See sh. ___ of ___ for diagrammatic plan of top of slab elevations.

F.A. [illegible]
[illegible]

W.D.L.
S.C.D.
D.A.N.
S.C.D.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.49	15-D	PEORIA & TAZEWELL	-	
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

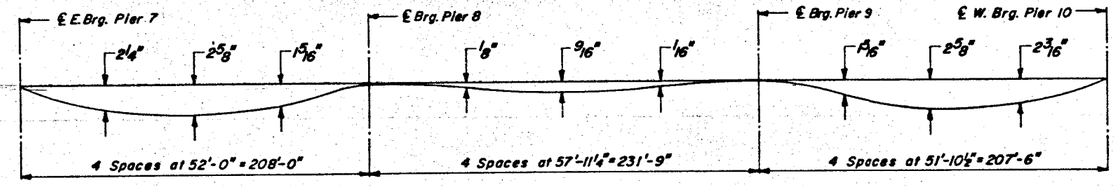
NORTH LONGITUDINAL BONDED CONSTRUCTION JOINT

	STATION	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
℄ East Bearing Pier 7	208+69.770	498.611	498.611
a	208+79.770	498.611	498.648
b	208+89.770	498.611	498.684
c	208+99.770	498.611	498.721
d	209+09.770	498.611	498.758
e	209+19.770	498.611	498.794
f	209+29.770	498.611	498.807
g	209+39.770	498.611	498.814
h	209+49.770	498.611	498.821
i	209+59.770	498.611	498.828
j	209+69.770	498.611	498.835
k	209+79.770	498.611	498.824
l	209+89.770	498.611	498.802
m	209+99.770	498.611	498.780
n	210+09.770	498.611	498.757
o	210+19.770	498.611	498.735
p	210+29.770	498.611	498.713
q	210+39.770	498.611	498.692
r	210+49.770	498.611	498.671
s	210+59.770	498.611	498.649
t	210+69.770	498.611	498.628
℄ Bearing Pier 8	210+77.770	498.611	498.611
u	210+87.770	498.611	498.611
v	210+97.770	498.611	498.611
w	211+07.770	498.611	498.612
x	211+17.770	498.611	498.612
y	211+27.770	498.611	498.612
z	211+37.770	498.611	498.614
a_1	211+47.770	498.611	498.621
b_1	211+57.770	498.611	498.629
c_1	211+67.770	498.611	498.636
d_1	211+77.770	498.611	498.643
e_1	211+87.770	498.611	498.651
f_1	211+97.770	498.611	498.652
g_1	212+07.770	498.624	498.658
h_1	212+17.770	498.644	498.671
i_1	212+27.770	498.675	498.694
j_1	212+37.770	498.716	498.727
k_1	212+47.770	498.766	498.770
l_1	212+57.770	498.824	498.827
m_1	212+67.770	498.896	498.897
n_1	212+77.770	498.975	498.976
o_1	212+87.770	499.065	499.065
p_1	212+97.770	499.164	499.164
℄ Bearing Pier 9	213+09.520	499.293	499.293
q_1	213+19.520	499.414	499.435
r_1	213+29.520	499.544	499.566
s_1	213+39.520	499.684	499.748
t_1	213+49.520	499.834	499.919
u_1	213+59.520	499.994	500.100
v_1	213+69.520	500.164	500.292
w_1	213+79.520	500.343	500.493
x_1	213+89.520	500.532	500.704
y_1	213+99.520	500.731	500.925
z_1	214+09.520	500.936	501.152
a_2	214+19.520	501.140	501.360
b_2	214+29.520	501.344	501.557
c_2	214+39.520	501.543	501.754
d_2	214+43.520	501.752	501.952
e_2	214+59.520	501.956	502.149
f_2	214+69.520	502.160	502.333
g_2	214+79.520	502.364	502.501
h_2	214+89.520	502.568	502.666
i_2	214+99.520	502.772	502.836
j_2	215+09.520	502.976	503.003
℄ West Bearing Pier 10	215+17.020	503.129	503.129

SOUTH LONGITUDINAL BONDED CONSTRUCTION JOINT

STATION	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
208+69.770	498.652	498.652
208+79.770	498.652	498.689
208+89.770	498.652	498.726
208+99.770	498.652	498.763
209+09.770	498.652	498.799
209+19.770	498.652	498.836
209+29.770	498.652	498.849
209+39.770	498.652	498.856
209+49.770	498.652	498.863
209+59.770	498.652	498.870
209+69.770	498.652	498.876
209+79.770	498.652	498.866
209+89.770	498.652	498.844
209+99.770	498.652	498.821
210+09.770	498.652	498.799
210+19.770	498.652	498.777
210+29.770	498.652	498.755
210+39.770	498.652	498.733
210+49.770	498.652	498.712
210+59.770	498.652	498.691
210+69.770	498.652	498.670
210+77.770	498.652	498.652
210+87.770	498.652	498.653
210+97.770	498.652	498.653
211+07.770	498.652	498.653
211+17.770	498.652	498.654
211+27.770	498.652	498.654
211+37.770	498.652	498.656
211+47.770	498.652	498.663
211+57.770	498.652	498.670
211+67.770	498.652	498.678
211+77.770	498.652	498.685
211+87.770	498.652	498.692
211+97.770	498.652	498.694
212+07.770	498.665	498.699
212+17.770	498.686	498.713
212+27.770	498.717	498.736
212+37.770	498.757	498.769
212+47.770	498.807	498.812
212+57.770	498.867	498.869
212+67.770	498.937	498.938
212+77.770	499.017	499.018
212+87.770	499.106	499.107
212+97.770	499.206	499.206
213+09.520	499.335	499.335
213+19.520	499.455	499.477
213+29.520	499.586	499.628
213+39.520	499.726	499.790
213+49.520	499.876	499.961
213+59.520	500.036	500.142
213+69.520	500.205	500.333
213+79.520	500.385	500.535
213+89.520	500.574	500.746
213+99.520	500.773	500.967
214+09.520	500.977	501.193
214+19.520	501.181	501.401
214+29.520	501.385	501.599
214+39.520	501.589	501.796
214+49.520	501.793	501.993
214+59.520	501.997	502.190
214+69.520	502.201	502.375
214+79.520	502.405	502.542
214+89.520	502.609	502.710
214+99.520	502.813	502.877
215+09.520	503.017	503.045
215+17.020	503.170	503.170

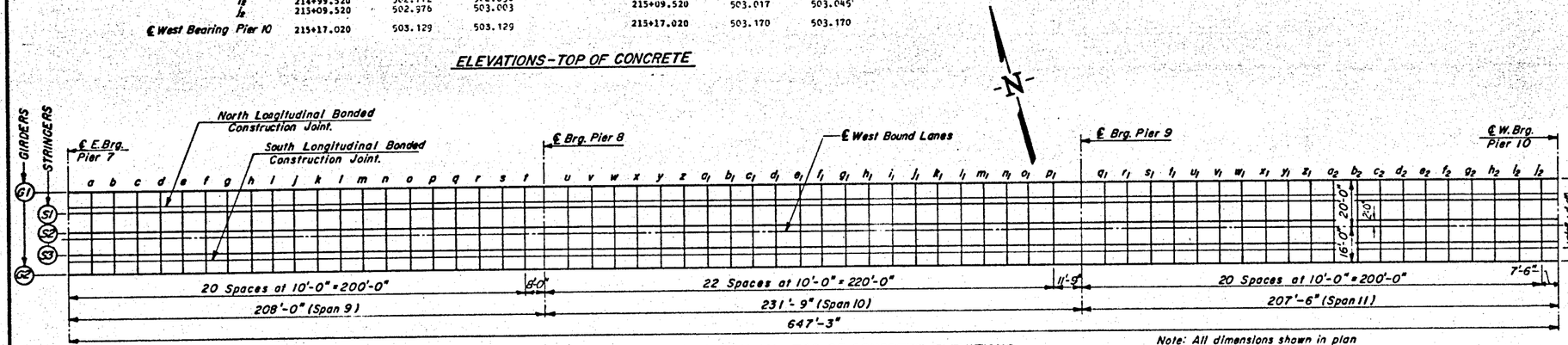
ELEVATIONS-TOP OF CONCRETE



DEAD LOAD DEFLECTION DIAGRAM
(Includes Weight of Concrete Slab)

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 in "Elevations - Top of Concrete" tables.

Note: For notes on method of determining fillet heights "t" see sheet 68 of ___.



DIAGRAMMATIC PLAN - TOP OF CONCRETE ELEVATIONS

Note: All dimensions shown in plan are measured horizontally.

FOR INFORMATIONAL PURPOSES ONLY.

TOP OF SLAB ELEVATIONS
SPANS 9, 10 & 11

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

W.D.L.
C.R.N.
D.A.N.
S.C.Q.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

39 of ___ for
r Drain Down-
tions, Types,
No.

650 - #4 d100 bars @ 12"cts. Outside Face
709 - #5 d101(E) bars @ 11" cts. Inside Face
℄ Light Pedestal
209'-3" | 88'-0" | 90'-0" | 53'-9" | 81'-3" | 128'-0"
℄ D.S. Type A
℄ D.S. Type
℄ D.S. Type A
33'-3"
82'-2¾"
98'-9¼"
℄ W. Brg. Pier 7
℄ E. Brg. Pier 7
2 x 6 - #8 b105 bars Top of Curb
2 - #8 b107 bars Top of Curb
2 x 5 - #8 b106 bars Top of Curb
2 - #8 b107 bars Top of Curb
10" | 1'-3" | 1'-3"
d102
d103
1'-0"
2"
1 x 7 - #5 b102(E) bars Bottom of Curb
1 x 7 - #5 b102 bars Bottom of Curb
1 - #5 b103 bar Bottom of Curb
1 - #5 b103(E) bar Bottom of Curb
a104
1 - #5 b103 bar Bottom of Curb
1 x 7 - #5 b102 bars Bottom of Curb
℄ Light Pedestal
1 x 6 - #5 b103 bars Bottom of Curb
1 x 6 - #5 b103(E) bars Bottom of Curb
1 - #5 b103(E) bar Bottom of Curb
℄ Light Pedestal.
1 x 7 - #b102(E) bars Bottom of Curb
E
E
D
76 - #6 x100(E) bars @ 6"cts. Top of Slab Each End Lap to b100a bars
℄ 8" x 3'-11¼" Drainage Scupper (Typ.)
1939 - #5 a105(E) @ 4"cts. Top of Slab Lap to a106(E) bars
℄ Roadway W. Bd. Lanes
1939 - #5 a106(E) @ 4"cts. Top of Slab Lap to a105(E) bars
1198 Ea. - #5 a101 & a102 bars @ 6'2"cts. Bottom of Slab (lap over S1)
℄ Pier 8 Sta. 210+77.77
38 x 3 - #6 ba01(E) bars @ ±12"cts. Top of Slab over piers 8 & 9.
39 x 23 - #5 b100(E) bars @ ±12"cts. Top of Slab
44 x 23 - #5 b100 bars spaced as shown in Cross Section. Bottom of Slab.
4"x12" Floor Drain Spacings (Typical North & South Shoulders)
℄ Pier 9 Sta. 213+09.52
℄ W. Brg.
Pier 7
a 208+68.52
2 Floor Drain Spcs. @ 5'-0" = 10'-0"
33 Floor Drain Spaces @ 6'-0" = 198'-0"
5'-6"
5'-9"
12 Floor Drain Spcs. @ 6'-0" = 72'-0"
110'-0"
33'-9"
136'-3"
73'-0"
℄ 4"x12" Floor Drain (Typical)
969 - #6 a103(E) bars @ 8" cts. Top of Slab. (Each Side)
39'-0"
49'-9"
6'-0"
℄ D.S. Type A
℄ D.S. Type B
49'-9"
39'-0"
℄ D.S. Type A
3"
7"
2"
1'-8¼"
1'-8¼"
3½"
1'-3"
1'-3" (Girder Brg.)
2 x 3 - #6 b101(E) bars Top of Slab
3 x 23 - #5 b100(E) bars Top of Slab (ea. side)
178'-11½"
208'-0" c-c. Brg.
30'-0"
30'-0"
171'-9"
231'-9" c-c. Brg.
30'-0"
30'-0"
179'-0"
207'-6" c-c. Brg.
1'-2½"
1'-9"
T @ 50°F
649'-8½" o-a. Parapet
Const. Jts. in curb to top of slab (⅛" Alum. Sheets) Typ.

Note: All dimensions shown are measured horizontally.

PLAN - SPANS 9 THRU 11

℄ Rdwy. W. Bd. Lanes
31'-6" to ℄ F.A. Route 31
42'-0" Out - Out of Deck
1'-0" | 22'-0" | 18'-0" | 1'-0"
1'-7" | 9'-5" | 12'-0" Lane Width | 12'-0" Lane Width | 5'-5" | 1'-7"
Slope ¼" per foot.
Slope 3/16" per foot.
Slope 3/16" per foot.
Slope ¼" per foot.
Longitudinal Bonded Construction Joint - do not edge. (Optional)
Total Drop = 4½"
Total Drop = 3½"
2'-0"
b107
b103
b101(E)
b103(E)
a103(E)
b100(E)
b101(E)
2¼" cl. (±¼")
a105(E)
7½" Slab
a106(E)
b100(E)
a103(E)
b102(E)
d101(E)
d100
b105 or b106
b102 or b103
b100(E)
b100
1" cl.
a102
a101
⅞" Shim Pl.
⅞" Shim Pl.
1'-7" | 9-#5 b100 bars @10"cts. | 9" | 9" | 10-#5 b100 bars @10"cts. | 9" | 9" | 10-#5 b100 bars @10"cts. | 9" | 9" | 9-#5 b100 bars @10"cts. | 1'-7"
3'-0" | 9'-0" | S1 | 9'-0" | S2 | 2'-0" | 7'-0" | S3 | 9'-0" | 3'-0"
G1
G2
1"

NEAR PIER
NEAR MIDSPAN

CROSS SECTION
(Looking East)

Bar Size	Minimum Lap Distance
#4, 5 & 6	1'-6"
#8	2'-4"

Bonded Construction Joint (Optional)
⅛" Aluminum Sheet A S T M : B209 alloy 3003 - H14
Bonded Construction Joint (Mandatory)
1'-7" | 7" | 7¾" | 2"
2¼"
e100 or e101
12" | 1½"
d101(E) | d100
2'-10"
10"
3"
¾" | ¾" | 1½"
11½"
1'-9"
5'-10¼"
9"
42°
4" | 2"
Varies 1½" ¾" Δ Drip Notch Full Length 3'-0"
8" x 3'-11½" Drainage Scupper See Sheets 150 & 151 for Details.

CURB SECTION

Cost of Aluminum Sheets shall be incidental to Class X Concrete

FOR INFORMATIONAL PURPOSES ONLY - (CROSS SECTION)

STATE OF ILLINOIS

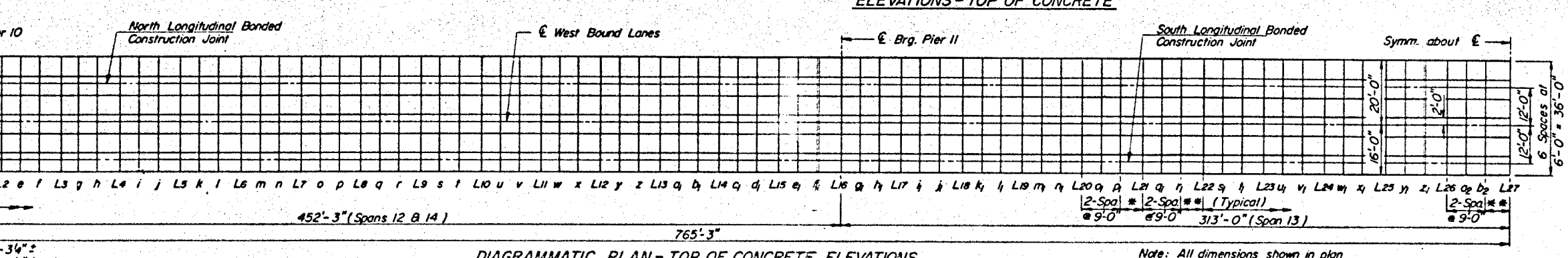
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

		STRINGER 1			STRINGER 2			NORTH LONGITUDINAL BONDED CONSTRUCTION JOINT			STRINGER 3			STRIN
		STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	STATION	ELE
℄ Abut. Pier 10	L_0	21520.520	503.076	503.083	21520.520	503.201	503.219	21520.520	503.242	503.263	21520.520	503.305	503.331	21520.520	503
	a	21529.520	503.259	503.301	21529.520	503.384	503.437	21529.520	503.425	503.481	21529.520	503.488	503.549	21529.520	503
	b	21538.520	503.443	503.507	21538.520	503.568	503.643	21538.520	503.609	503.687	21538.520	503.672	503.755	21538.520	503
	L_1	21548.786	503.652	503.724	21548.786	503.777	503.860	21548.786	503.818	503.904	21548.786	503.881	503.972	21548.786	503
	c	21557.786	503.836	503.939	21557.786	503.961	504.075	21557.786	504.002	504.119	21557.786	504.065	504.187	21557.786	504
	d	21566.786	504.020	504.142	21566.786	504.145	504.278	21566.786	504.186	504.322	21566.786	504.249	504.390	21566.786	504
	L_2	21577.051	504.229	504.355	21577.051	504.354	504.491	21577.051	504.395	504.535	21577.051	504.458	504.603	21577.051	504
	e	21586.051	504.413	504.568	21586.051	504.538	504.704	21586.051	504.579	504.748	21586.051	504.642	504.816	21586.051	504
	f	21595.051	504.596	504.770	21595.051	504.721	504.906	21595.051	504.762	504.950	21595.051	504.825	505.018	21595.051	504
	L_3	21605.317	504.806	504.982	21605.317	504.931	505.118	21605.317	504.972	505.162	21605.317	505.035	505.230	21605.317	505
	g	21614.317	504.989	505.191	21614.317	505.114	505.327	21614.317	505.155	505.371	21614.317	505.218	505.439	21614.317	505
	h	21623.317	505.173	505.389	21623.317	505.298	505.525	21623.317	505.339	505.569	21623.317	505.402	505.637	21623.317	505
	L_4	21633.582	505.382	505.596	21633.582	505.507	505.732	21633.582	505.548	505.776	21633.582	505.611	505.844	21633.582	505
	i	21642.582	505.566	505.803	21642.582	505.691	505.939	21642.582	505.732	505.983	21642.582	505.795	506.051	21642.582	505
	j	21651.582	505.749	505.997	21651.582	505.874	506.133	21651.582	505.915	506.177	21651.582	505.978	506.245	21651.582	506
	L_5	21661.848	505.959	506.201	21661.848	506.084	506.337	21661.848	506.125	506.381	21661.848	506.188	506.449	21661.848	506
	k	21670.848	506.142	506.400	21670.848	506.267	506.536	21670.848	506.308	506.580	21670.848	506.371	506.648	21670.848	506
	l	21679.848	506.326	506.588	21679.848	506.451	506.724	21679.848	506.492	506.768	21679.848	506.555	506.836	21679.848	506
	L_6	21690.114	506.535	506.783	21690.114	506.660	506.919	21690.114	506.701	506.963	21690.114	506.764	507.031	21690.114	506
	m	21699.114	506.719	506.980	21699.114	506.844	507.116	21699.114	506.885	507.160	21699.114	506.948	507.228	21699.114	507
	n	21708.114	506.903	507.164	21708.114	507.028	507.300	21708.114	507.069	507.344	21708.114	507.132	507.412	21708.114	507
	L_7	21718.379	507.112	507.356	21718.379	507.237	507.492	21718.379	507.278	507.536	21718.379	507.341	507.604	21718.379	507
	o	21727.379	507.296	507.549	21727.379	507.421	507.685	21727.379	507.462	507.729	21727.379	507.525	507.797	21727.379	507
	p	21736.379	507.479	507.729	21736.379	507.604	507.865	21736.379	507.645	507.909	21736.379	507.708	507.977	21736.379	507
	L_8	21746.645	507.689	507.917	21746.645	507.814	508.053	21746.645	507.855	508.097	21746.645	507.918	508.165	21746.645	508
	q	21755.645	507.872	508.106	21755.645	507.997	508.242	21755.645	508.038	508.286	21755.645	508.101	508.354	21755.645	508
	r	21764.645	508.056	508.283	21764.645	508.181	508.419	21764.645	508.222	508.463	21764.645	508.285	508.531	21764.645	508
	L_9	21774.910	508.265	508.466	21774.910	508.390	508.602	21774.910	508.431	508.646	21774.910	508.494	508.714	21774.910	508
	s	21783.910	508.449	508.653	21783.910	508.574	508.789	21783.910	508.615	508.833	21783.910	508.678	508.901	21783.910	508
	t	21792.910	508.632	508.828	21792.910	508.757	508.964	21792.910	508.798	509.008	21792.910	508.861	509.076	21792.910	508
	L_{10}	21803.176	508.842	509.009	21803.176	508.967	509.145	21803.176	509.008	509.189	21803.176	509.071	509.257	21803.176	509
	u	21812.176	509.025	509.196	21812.176	509.150	509.332	21812.176	509.191	509.376	21812.176	509.254	509.444	21812.176	509
	v	21821.176	509.209	509.370	21821.176	509.334	509.506	21821.176	509.375	509.550	21821.176	509.438	509.618	21821.176	509
	L_{11}	21831.442	509.419	509.552	21831.442	509.544	509.688	21831.442	509.585	509.732	21831.442	509.648	509.800	21831.442	509
	w	21840.442	509.602	509.737	21840.442	509.727	509.873	21840.442	509.768	509.917	21840.442	509.831	509.985	21840.442	509
	x	21849.442	509.786	509.911	21849.442	509.911	510.047	21849.442	509.952	510.091	21849.442	510.015	510.159	21849.442	510
	L_{12}	21859.707	509.995	510.091	21859.707	510.120	510.227	21859.707	510.161	510.271	21859.707	510.224	510.339	21859.707	510
	y	21868.707	510.179	510.279	21868.707	510.304	510.415	21868.707	510.345	510.459	21868.707	510.408	510.527	21868.707	510
	z	21877.707	510.362	510.455	21877.707	510.487	510.591	21877.707	510.528	510.635	21877.707	510.591	510.703	21877.707	510
	L_{13}	21887.973	510.571	510.636	21887.973	510.696	510.772	21887.973	510.737	510.816	21887.973	510.800	510.884	21887.973	510
	a_1	21896.973	510.751	510.822	21896.973	510.876	510.958	21896.973	510.917	511.002	21896.973	510.980	511.070	21896.973	511
	b_1	21905.973	510.926	510.991	21905.973	511.051	511.127	21905.973	511.092	511.171	21905.973	511.155	511.239	21905.973	511
	L_{14}	21916.238	511.122	511.161	21916.238	511.247	511.297	21916.238	511.288	511.341	21916.238	511.351	511.409	21916.238	511
	c_1	21925.238	511.288	511.334	21925.238	511.413	511.470	21925.238	511.454	511.514	21925.238	511.517	511.582	21925.238	511
	d_1	21934.238	511.451	511.492	21934.238	511.576	511.628	21934.238	511.617	511.672	21934.238	511.680	511.740	21934.238	511
	L_{15}	21944.504	511.631	511.648	21944.504	511.756	511.784	21944.504	511.797	511.828	21944.504	511.860	511.896	21944.504	511
	e_1	21953.504	511.785	511.813	21953.504	511.910	511.949	21953.504	511.951	511.993	21953.504	512.014	512.061	21953.504	512
	f_1	21962.504	511.935	511.962	21962.504	512.060	512.098	21962.504	512.101	512.142	21952.504	512.164	512.210	21962.504	512
℄ Bearing Pier II	L_{16}	21972.770	512.101	512.108	21972.770	512.226	512.244	21972.770	512.267	512.288	21972.770	512.330	512.356	21972.770	512
	g_1	21981.770	512.242	512.270	21981.770	512.367	512.406	21981.770	512.408	512.450	21931.770	512.471	512.518	21981.770	512
	h_1	21990.770	512.378	512.417	21990.770	512.503	512.553	21990.770	512.544	512.597	21990.770	512.607	512.665	21990.770	512
	L_{17}	22001.036	512.529	512.560	22001.036	512.654	512.696	22001.036	512.695	512.740	22001.036	512.758	512.808	22001.036	512
	i_1	22010.036	512.657	512.713	22010.036	512.782	512.849	22010.036	512.823	512.893	22010.036	512.886	512.961	22010.036	512
	j_1	22019.036	512.781	512.849	22019.036	512.906	512.985	22019.036	512.947	513.029	22019.036	513.010	513.097	22019.036	513
	L_{18}	22029.301	512.917	512.981	22029.301	513.042	513.117	22029.301	513.083	513.161	22029.301	513.146	513.229	22029.301	513
	k_1	22038.301	513.033	513.123	22038.301	513.158	513.259	22038.301	513.199	513.303	22038.301	513.262	513.371	22038.301	513
	l_1	22047.301	513.143	513.249	22047.301	513.268	513.385	22047.301	513.309	513.429	22047.301	513.372	513.497	22047.301	513
	L_{19}	22057.567	513.265	513.369	22057.567	513.390	513.505	22057.567	513.431	513.549	22057.567	513.494	513.617	22057.567	513
	m_1	22066.567	513.367	513.499	22066.567	513.492	513.635	22066.567	513.533	513.679	22066.567	513.596	513.747	22066.567	513
	n_1	22075.567	513.465	513.613	22075.567	513.590	513.749	22075.567	513.631	513.793	22075.567	513.694	513.861	22075.567	513
	L_{20}	22085.832	513.572	513.719	22085.832	513.697	513.855	22085.832	513.738	513.899	22085.832	513.801	513.967	22085.832	513
	o_1	22094.832	513.661	513.841	22094.832	513.786	513.977	22094.832	513.827	514.021	22094.832	513.890	514.089	22094.832	513
	p_1	22103.832	513.747	513.946	22103.832	513.872	514.082	22103.832	513.913	514.126	22103.832	513.976	514.194	22103.832	514
	L_{21}	22114.098	513.839	514.044	22114.098	513.964	514.180	22114.093	514.005	514.224	22114.098	514.068	514.292	22114.093	514
	q_1	22123.098	513.915	514.153	22123.098	514.040	514.289	22123.098	514.081	514.333	22123.098	514.144	514.401	22123.098	514
	r_1	22132.098	513.987	514.247	22132.098	514.112	514.383	22132.098	514.153	514.427	22132.098	514.216	514.495	22132.098	514
	L_{22}	22142.710	514.067	514.334	22142.710	514.192	514.470	22142.710	514.233	514.514	22142.710	514.296	514.582	22142.710	514
	s_1	22151.710	514.130	514.428	22151.710	514.255	514.564	22151.710	514.296	514.608	22151.710	514.359	514.676	22151.710	514
	t_1	22160.710	514.190	514.505	22160.710	514.315	514.641	22160.710	514.356	514.685	22160.710	514.419	514.753	22160.710	514
	L_{23}	22171.322	514.254	514.573	22171.322	514.379	514.709	22171.322	514.420	514.753	22171.322	514.483	514.821	22171.322	514
	u_1	22180.322	514.304	514.651	22180.322	514.429	514.787	22180.322	514.470	514.831	22180.322	514.533	514.899	22180.322	514
	v_1	22189.322	514.350	514.714	22189.322	514.475	514.850	22189.322	514.516	514.894	22189.322	514.579	514.962	22189.322	514
	L_{24}	22199.934	514.399	514.763	22199.934	514.524	514.899	22199.934	514.565	514.943	22199.934	514.628	515.011	22199.934	514
	w_1	22208.934	514.437	514.828	22208.934	514.562	514.964	22208.934	514.603	515.008	22208.934	514.666	515.076	22208.934	514
	x_1	22217.934	514.470	514.876	22217.934	514.595	515.012	22217.934	514.636	515.056	22217.934	514.699	515.124	22217.934	514
	L_{25}	22228.546	514.503	514.909	22228.546	514.628	515.045	22228.546	514.669	515.089	22228.546	514.732	515.157	22228.546	514
	y_1	22237.546	514.527	514.954	22237.546	514.652	515.090	22237.546	514.693	515.134	22237.546	514.756	515.202	22237.546	514
	z_1	22246.546	514.547	514.983	22246.546	514.672	515.119	22246.546	514.713	515.163	22246.546	514.776	515.231	22246.546	514
	L_{26}	22257.158	514.566	514.994	22257.158	514.691	515.130	22257.158	514.732	515.174	22257.158	514.795	515.242	22257.158	514
	a_2	22266.158	514.577	515.021	22266.158	514.702	515.157	22266.158	514.743	515.201	22266.158	514.806	515.269	22266.158	514
	b_2	22275.158	514.584	515.033	22275.158	514.709	515.169	22275.158	514.750	515.213	22275.158	514.813	515.281	22275.158	514
	L_{27}	22285.770	514.586	515.023	22285.770	514.711	515.159	22285.770	514.752	515.203	22285.770	514.815	515.271	22285.770	514

ELEVATIONS - TOP OF CONCRETE

ELEV A = THRO
ELEV B = THRO
FOR



DIAGRAMMATIC PLAN - TOP OF CONCRETE ELEVATIONS

Note: All dimensions shown in plan are measured horizontally.

TOP C

M
OVE
F.A. ROUTE
PEORIA

W.D.L.
R.W.C.
R.J.F.
W.D.L.

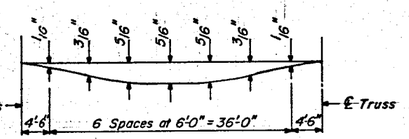
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ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO
FA-49	15-D	PEORIA & TAZEWELL		
FED ROAD DIST NO 7	ILLINOIS	PROJECT		

Sheet 97 of 134

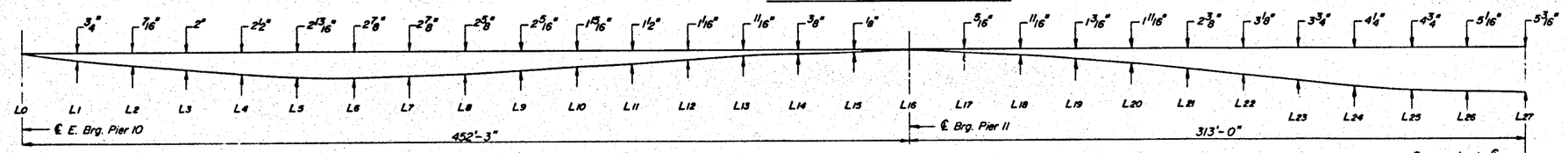
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

		STRINGER 5			STRINGER 6			SOUTH LONGITUDINAL BONDED CONSTRUCTION JOINT			STRINGER 7		
		STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B
℄ East Bearing Pier 10	L_0	21520.520	503.368	503.394	21520.520	503.274	503.292	21520.520	503.242	503.256	21520.520	503.159	503.166
	o	21529.520	503.551	503.612	21529.520	503.457	503.510	21529.520	503.425	503.474	21529.520	503.342	503.384
	b	21538.520	503.735	503.818	21538.520	503.641	503.716	21538.520	503.609	503.680	21538.520	503.526	503.590
	L_1	21548.786	503.944	504.035	21548.786	503.850	503.933	21548.786	503.818	503.897	21548.786	503.735	503.807
	c	21557.786	504.128	504.250	21557.786	504.034	504.148	21557.786	504.002	504.112	21557.786	503.919	504.022
	d	21566.786	504.312	504.453	21566.786	504.218	504.351	21566.786	504.186	504.315	21566.786	504.103	504.225
	L_2	21577.051	504.521	504.666	21577.051	504.427	504.564	21577.051	504.395	504.528	21577.051	504.312	504.438
	e	21586.051	504.705	504.879	21586.051	504.611	504.777	21586.051	504.579	504.741	21586.051	504.496	504.651
	f	21595.051	504.888	505.081	21595.051	504.794	504.979	21595.051	504.762	504.943	21595.051	504.679	504.853
	L_3	21605.317	505.098	505.293	21605.317	505.004	505.191	21605.317	504.972	505.155	21605.317	504.889	505.065
	g	21614.317	505.281	505.502	21614.317	505.187	505.400	21614.317	505.155	505.364	21614.317	505.072	505.274
	h	21623.317	505.465	505.700	21623.317	505.371	505.598	21623.317	505.339	505.562	21623.317	505.256	505.472
	L_4	21633.582	505.674	505.907	21633.582	505.580	505.805	21633.582	505.548	505.769	21633.582	505.465	505.679
	i	21642.582	505.858	506.114	21642.582	505.764	506.012	21642.582	505.732	505.976	21642.582	505.649	505.886
	j	21651.582	506.041	506.308	21651.582	505.947	506.206	21651.582	505.915	506.170	21651.582	505.832	506.080
	L_5	21661.848	506.251	506.512	21661.848	506.157	506.410	21661.848	506.125	506.374	21661.848	506.042	506.284
	k	21670.848	506.434	506.711	21670.848	506.340	506.609	21670.848	506.308	506.573	21670.848	506.225	506.483
	l	21679.848	506.618	506.899	21679.848	506.524	506.797	21679.848	506.492	506.761	21679.848	506.409	506.671
	L_6	21690.114	506.827	507.098	21690.114	506.733	506.992	21690.114	506.701	506.956	21690.114	506.618	506.866
	m	21699.114	507.011	507.291	21699.114	506.917	507.189	21699.114	506.885	507.153	21699.114	506.802	507.063
	n	21708.114	507.195	507.475	21708.114	507.101	507.373	21708.114	507.069	507.337	21708.114	506.986	507.247
	L_7	21718.379	507.404	507.667	21718.379	507.310	507.565	21718.379	507.278	507.529	21718.379	507.195	507.439
	o	21727.379	507.588	507.860	21727.379	507.494	507.758	21727.379	507.462	507.722	21727.379	507.379	507.632
	p	21736.379	507.771	508.040	21736.379	507.677	507.938	21736.379	507.645	507.902	21736.379	507.562	507.812
	L_8	21746.645	507.981	508.228	21746.645	507.887	508.126	21746.645	507.855	508.090	21746.645	507.772	508.000
	q	21755.645	508.164	508.417	21755.645	508.070	508.315	21755.645	508.038	508.279	21755.645	507.955	508.189
	r	21764.645	508.348	508.594	21764.645	508.254	508.492	21764.645	508.222	508.456	21764.645	508.139	508.366
	L_9	21774.910	508.557	508.777	21774.910	508.463	508.675	21774.910	508.431	508.639	21774.910	508.348	508.549
	s	21783.910	508.741	508.964	21783.910	508.647	508.862	21783.910	508.615	508.826	21783.910	508.532	508.736
	t	21792.910	508.924	509.139	21792.910	508.830	509.037	21792.910	508.798	509.001	21792.910	508.715	508.911
	L_{10}	21803.176	509.134	509.320	21803.176	509.040	509.218	21803.176	509.008	509.182	21803.176	508.925	509.092
	u	21812.176	509.317	509.507	21812.176	509.223	509.405	21812.176	509.191	509.369	21812.176	509.108	509.279
	v	21821.176	509.501	509.681	21821.176	509.407	509.579	21821.176	509.375	509.543	21821.176	509.292	509.453
	L_{11}	21831.442	509.711	509.863	21831.442	509.617	509.761	21831.442	509.585	509.725	21831.442	509.502	509.635
	w	21840.442	509.894	510.048	21840.442	509.800	509.946	21840.442	509.768	509.910	21840.442	509.685	509.820
	x	21849.442	510.078	510.222	21849.442	509.984	510.120	21849.442	509.952	510.084	21849.442	509.869	509.994
	L_{12}	21859.707	510.287	510.402	21859.707	510.193	510.300	21859.707	510.161	510.264	21859.707	510.078	510.174
	y	21868.707	510.471	510.590	21868.707	510.377	510.488	21868.707	510.345	510.452	21868.707	510.262	510.362
	z	21877.707	510.654	510.766	21877.707	510.560	510.664	21877.707	510.528	510.628	21877.707	510.445	510.538
	L_{13}	21887.973	510.863	510.947	21887.973	510.769	510.845	21887.973	510.737	510.809	21887.973	510.654	510.719
	o_1	21896.973	511.043	511.133	21896.973	510.949	511.031	21896.973	510.917	510.995	21896.973	510.834	510.905
	b_1	21905.973	511.218	511.302	21905.973	511.124	511.200	21905.973	511.092	511.164	21905.973	511.009	511.074
	L_{14}	21916.238	511.414	511.472	21916.238	511.320	511.370	21916.238	511.288	511.334	21916.238	511.205	511.244
	c_1	21925.238	511.580	511.645	21925.238	511.486	511.543	21925.238	511.454	511.507	21925.238	511.371	511.417
	d_1	21934.238	511.743	511.803	21934.238	511.649	511.701	21934.238	511.617	511.665	21934.238	511.534	511.575
	L_{15}	21944.504	511.923	511.959	21944.504	511.829	511.857	21944.504	511.797	511.821	21944.504	511.714	511.731
	g_1	21953.504	512.077	512.124	21953.504	511.983	512.022	21953.504	511.951	511.986	21953.504	511.868	511.896
	f_1	21962.504	512.227	512.273	21962.504	512.133	512.171	21962.504	512.101	512.135	21962.504	512.018	512.045
℄ Bearing Pier 11	L_{16}	21972.770	512.393	512.419	21972.770	512.299	512.317	21972.770	512.267	512.281	21972.770	512.184	512.191
	g_1	21981.770	512.534	512.581	21981.770	512.440	512.479	21981.770	512.408	512.443	21981.770	512.325	512.353
	h_1	21990.770	512.670	512.728	21990.770	512.576	512.626	21990.770	512.544	512.590	21990.770	512.461	512.500
	L_{17}	22001.036	512.821	512.871	22001.036	512.727	512.769	22001.036	512.695	512.733	22001.036	512.612	512.643
	i_1	22010.036	512.949	513.024	22010.036	512.855	512.922	22010.036	512.823	512.886	22010.036	512.740	512.796
	j_1	22019.036	513.073	513.160	22019.036	512.979	513.058	22019.036	512.947	513.022	22019.036	512.864	512.932
	L_{18}	22029.301	513.209	513.292	22029.301	513.115	513.190	22029.301	513.083	513.154	22029.301	513.000	513.064
	k_1	22038.301	513.325	513.434	22038.301	513.231	513.332	22038.301	513.199	513.296	22038.301	513.116	513.206
	l_1	22047.301	513.435	513.560	22047.301	513.341	513.458	22047.301	513.309	513.422	22047.301	513.226	513.332
	L_{19}	22057.567	513.557	513.680	22057.567	513.463	513.578	22057.567	513.431	513.542	22057.567	513.348	513.452
	m_1	22066.567	513.659	513.810	22066.567	513.565	513.708	22066.567	513.533	513.672	22066.567	513.450	513.582
	n_1	22075.567	513.757	513.924	22075.567	513.663	513.822	22075.567	513.631	513.786	22075.567	513.548	513.696
	L_{20}	22085.832	513.864	514.030	22085.832	513.770	513.928	22085.832	513.738	513.892	22085.832	513.655	513.802
	o_1	22094.832	513.953	514.152	22094.832	513.859	514.050	22094.832	513.827	514.014	22094.832	513.744	513.924
	p_1	22103.832	514.039	514.257	22103.832	513.945	514.155	22103.832	513.913	514.119	22103.832	513.830	514.029
	L_{21}	22114.098	514.131	514.355	22114.098	514.037	514.253	22114.098	514.005	514.217	22114.098	513.922	514.127
	q_1	22123.098	514.207	514.464	22123.098	514.113	514.362	22123.098	514.081	514.326	22123.098	513.998	514.236
	r_1	22132.098	514.279	514.558	22132.098	514.185	514.456	22132.098	514.153	514.420	22132.098	514.070	514.330
	L_{22}	22142.710	514.359	514.645	22142.710	514.265	514.543	22142.710	514.233	514.507	22142.710	514.150	514.417
	s_1	22151.710	514.422	514.739	22151.710	514.328	514.637	22151.710	514.296	514.601	22151.710	514.213	514.511
	t_1	22160.710	514.482	514.816	22160.710	514.388	514.714	22160.710	514.356	514.678	22160.710	514.273	514.588
	L_{23}	22171.322	514.546	514.884	22171.322	514.452	514.782	22171.322	514.420	514.746	22171.322	514.337	514.656
	u_1	22180.322	514.596	514.962	22180.322	514.502	514.860	22180.322	514.470	514.824	22180.322	514.387	514.734
	v_1	22189.322	514.642	515.025	22189.322	514.548	514.923	22189.322	514.516	514.887	22189.322	514.433	514.797
	L_{24}	22199.934	514.691	515.074	22199.934	514.597	514.972	22199.934	514.565	514.936	22199.934	514.482	514.846
	w_1	22208.934	514.729	515.139	22208.934	514.635	515.037	22208.934	514.603	515.001	22208.934	514.520	514.911
	x_1	22217.934	514.762	515.187	22217.934	514.668	515.085	22217.934	514.636	515.049	22217.934	514.553	514.959
	L_{25}	22228.546	514.795	515.220	22228.546	514.701	515.118	22228.546	514.669	515.082	22228.546	514.586	514.992
	y_1	22237.546	514.819	515.265	22237.546	514.725	515.163	22237.546	514.693	515.127	22237.546	514.610	515.037
	z_1	22246.546	514.839	515.294	22246.546	514.745	515.192	22246.546	514.713	515.156	22246.546	514.630	515.066
	L_{26}	22257.158	514.858	515.305	22257.158	514.764	515.203	22257.158	514.732	515.167	22257.158	514.649	515.077
	o_2	22266.158	514.869	515.332	22266.158	514.775	515.230	22266.158	514.743	515.198	22266.158	514.660	515.104
	b_2	22275.158	514.876	515.344	22275.158	514.782	515.242	22275.158	514.750	515.206	22275.158	514.667	515.116
	L_{27}	22285.770	514.878	515.334	22285.770	514.784	515.232	22285.770	514.752	515.196	22285.770	514.669	515.106



FLOOR BEAM
DEAD LOAD DEFLECTION DIAGRAM

ELEVATIONS - TOP OF CONCRETE



DEAD LOAD DEFLECTION DIAGRAM
(Includes Weight of Concrete Slab)

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 in "Elevations – Top of Concrete" tables.

ELEV. A = THEORETICAL GRADE ELEVATIONS
ELEV. B = THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION

Note: For notes on method of determining fillet heights "t" see sheet ____ of ____.

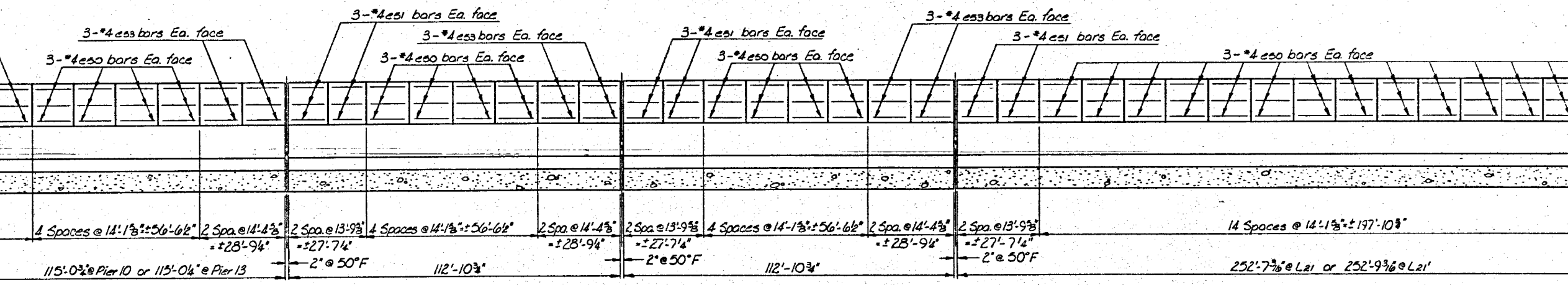
TOP OF SLAB ELEVATIONS
SPANS 12, 13 & 14

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

....W.D.L.	HANSON ENGINEERS INCORPORATED	FILE NO	74001
.....R.W.C.	SPRINGFIELD ILLINOIS	DATE	11-2-79
.....R.I.F.			
.....W.D.L.			

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DIVISION OF HIGHWAYS



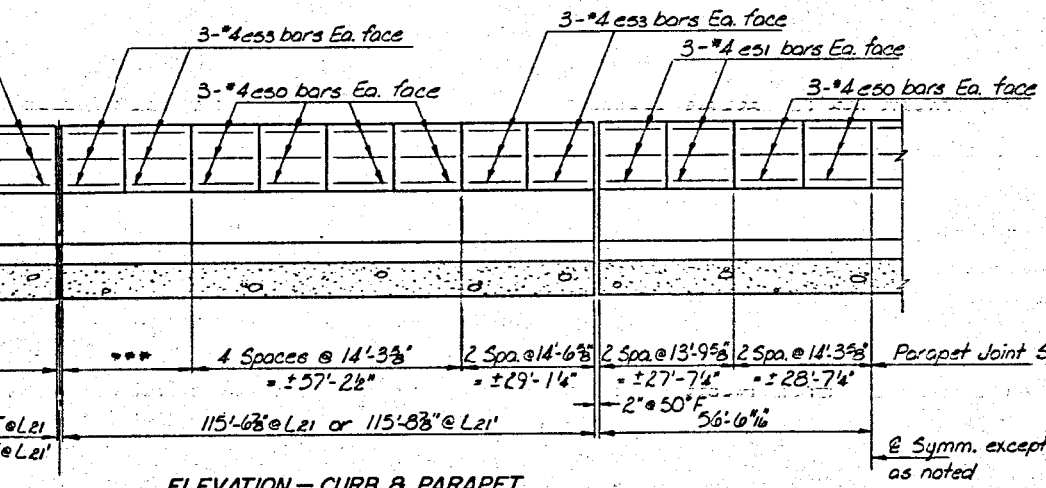
ELEVATION — CURB & PARAPET
L0 to L20

Note: All dimensions shown are measured horizontally.

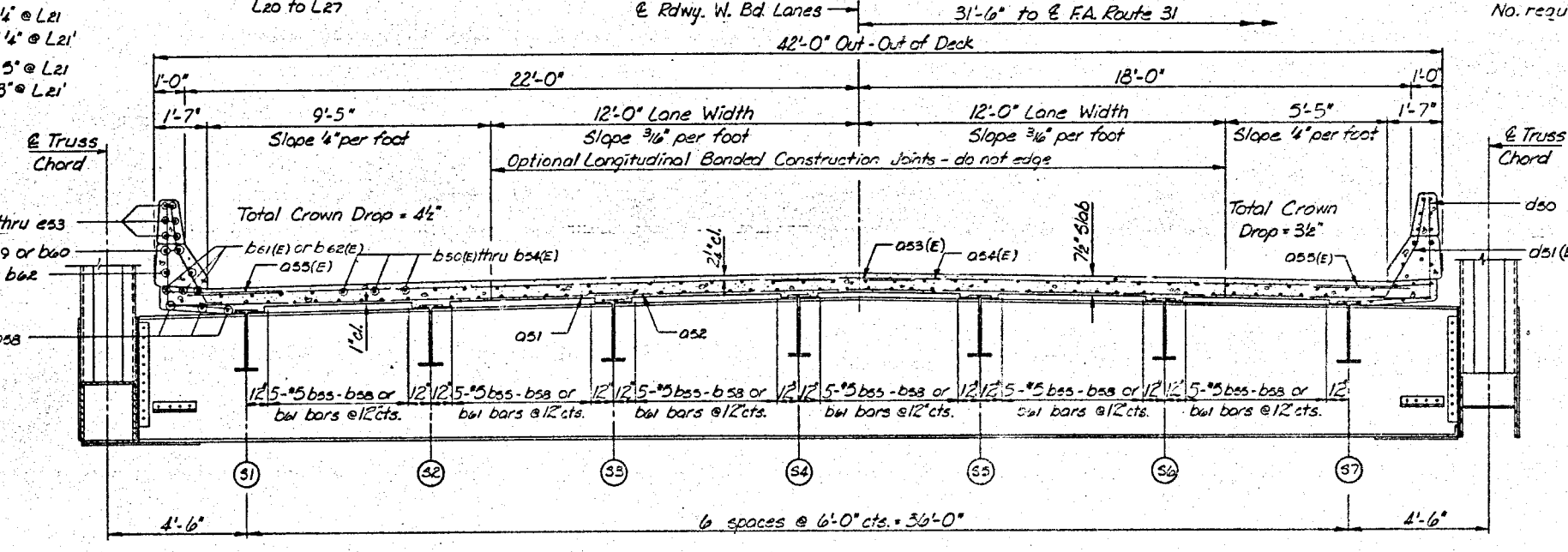
DRAINAGE SCUPPER SPACING TABLE

NORTH GUTTER	SOUTH GUTTER
Sta. 215+25	Sta. 216+15
216+60	217+85
217+95	219+65
219+30	221+15
220+80	221+95
221+45	223+75
222+10	224+55
223+60	226+05
224+25	227+85
224+90	229+55
226+40	
227+75	
229+10	
230+45	

Note: Drains shall be located clear of all diaphragms, floorbeams & lateral bracing.



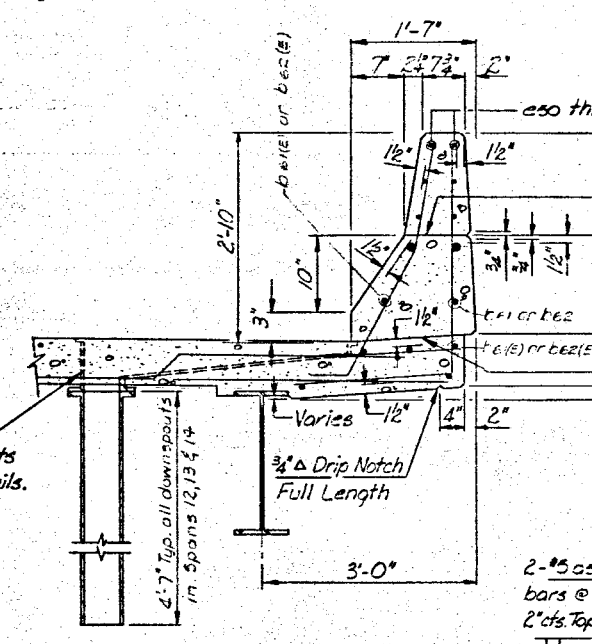
ELEVATION — CURB & PARAPET
L20 to L27



AT BOTTOM CHORD COMPRESSION MEMBER

AT BOTTOM CHORD TENSION MEMBER

CROSS SECTION
(Looking East)



CURB SECTION

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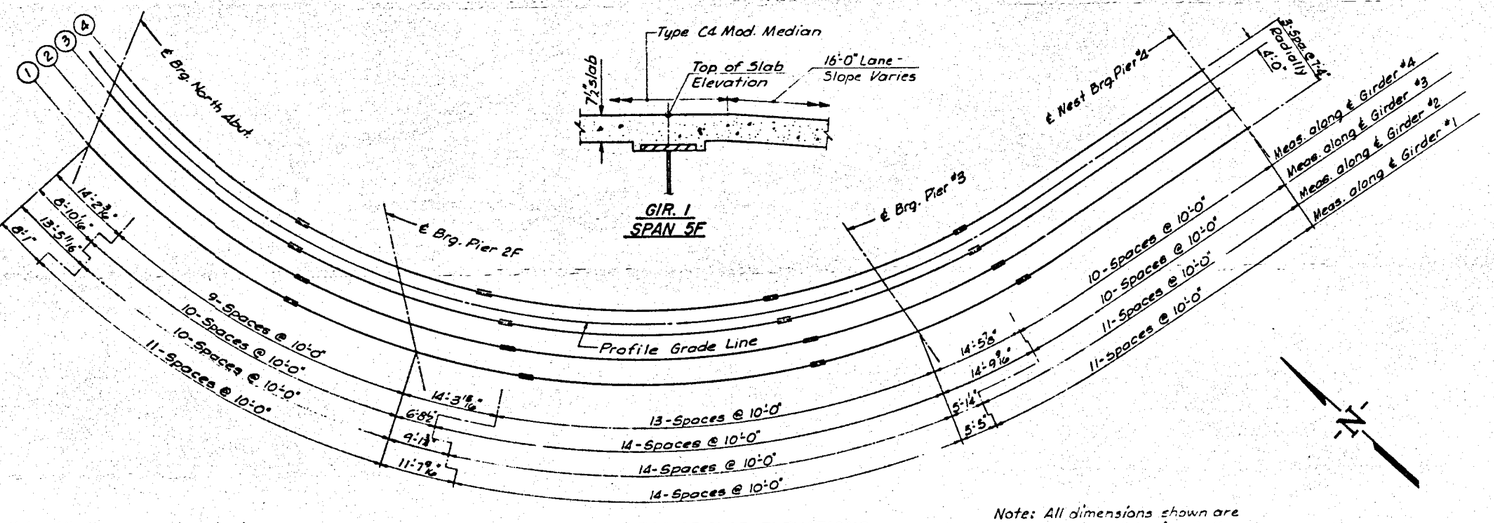
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO
FA:49	15-D	PEORIA AND TAZEWELL		
FED ROAD DIST NO 7	ILLINOIS	PROJECT		

Sheet 99 of 134

	STATION	GIRDER 1 THEORETICAL GRADE ELEVATIONS	GIRDER 1 THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	GIRDER 2 THEORETICAL GRADE ELEVATIONS	GIRDER 2 THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	GIRDER 3 THEORETICAL GRADE ELEVATIONS	GIRDER 3 THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	GIRDER 4 THEORETICAL GRADE ELEVATIONS	GIRDER 4 THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
℄ W. Brg. Pier 4	5+94.544	499.432	499.432	5+94.946	499.313	499.313	5+95.347	499.104	499.104	5+95.749	498.892	498.892
	6+04.544	499.625	499.643	6+04.946	499.503	499.523	6+05.347	499.262	499.284	6+05.749	499.017	499.042
	6+14.544	499.835	499.868	6+14.946	499.701	499.738	6+15.347	499.425	499.467	6+15.749	499.147	499.193
	6+24.544	500.049	500.092	6+24.946	499.897	499.946	6+25.347	499.589	499.645	6+25.749	499.278	499.340
Spaces @ 10'-0" cts. Along ℄ Girder	6+34.544	500.267	500.314	6+34.946	500.094	500.149	6+35.347	499.752	499.815	6+35.749	499.407	499.479
	6+44.544	500.490	500.534	6+44.946	500.291	500.345	6+45.347	499.916	499.980	6+45.749	499.538	499.611
	6+54.544	500.716	500.753	6+54.946	500.488	500.535	6+55.347	500.079	500.136	6+55.749	499.668	499.735
	6+64.372	500.943	500.968	6+64.820	500.683	500.718	6+65.300	500.242	500.287	6+65.816	499.799	499.854
	6+73.564	501.158	501.169	6+74.326	500.870	500.891	6+75.140	500.403	500.433	6+76.015	499.933	499.971
	6+82.757	501.372	501.372	6+83.831	501.057	501.065	6+84.980	500.564	500.579	6+86.214	500.065	500.088
	6+91.950	501.588	501.583	6+93.336	501.244	501.244	6+94.820	500.725	500.729	6+96.413	500.198	500.207
	7+01.142	501.803	501.800	7+02.842	501.428	501.427						
℄ Brg. Pier 3	7+06.118	501.912	501.912	7+07.689	501.509	501.509	7+09.373	500.944	500.944	7+11.184	500.378	500.378
	7+15.311	502.184	502.199	7+17.194	501.617	501.629	7+19.213	501.051	501.058	7+21.383	500.484	500.486
	7+24.504	502.271	502.306	7+26.700	501.702	501.731	7+29.053	501.134	501.155	7+31.582	500.565	500.577
	7+33.697	502.358	502.400	7+36.205	501.766	501.819	7+38.893	501.194	501.234	7+41.781	500.619	500.645
	7+42.890	502.384	502.476	7+45.711	501.807	501.885	7+48.733	501.229	501.290	7+51.980	500.649	500.690
	7+52.083	502.409	502.528	7+55.216	501.826	501.926	7+58.573	501.241	501.319	7+62.179	500.653	500.708
	7+61.275	502.413	502.554	7+64.721	501.823	501.940	7+68.413	501.229	501.320	7+72.378	500.631	500.696
Spaces @ 10'-0" cts. Along ℄ Girder	7+70.468	502.397	502.550	7+74.227	501.797	501.922	7+78.253	501.194	501.290	7+82.577	500.583	500.654
	7+79.661	502.360	502.514	7+83.732	501.749	501.873	7+88.093	501.134	501.229	7+92.776	500.510	500.580
	7+88.854	502.302	502.446	7+93.238	501.680	501.794	7+97.933	501.051	501.138	8+02.975	500.412	500.476
	7+98.047	502.223	502.348	8+02.743	501.587	501.683	8+07.773	500.944	501.016	8+13.174	500.288	500.342
	8+07.239	502.123	502.221	8+12.248	501.473	501.546	8+17.613	500.813	500.867	8+23.373	500.138	500.178
	8+16.432	502.003	502.070	8+21.754	501.337	501.386	8+27.453	500.658	500.692	8+33.572	499.963	499.989
	8+25.625	501.862	501.901	8+31.259	501.178	501.204	8+37.293	500.480	500.498	8+43.771	499.762	499.775
	8+34.818	501.700	501.717	8+40.765	500.997	501.008	8+47.133	500.277	500.283			
℄ Brg. Pier 2F	8+45.508	501.485	501.485	8+49.457	500.812	500.812	8+53.735	500.128	500.128	8+58.387	499.430	499.430
	8+54.700	501.278	501.276	8+58.962	500.588	500.586	8+63.575	499.886	499.886	8+68.586	499.167	499.166
	8+63.893	501.051	501.051	8+68.468	500.343	500.346	8+73.415	499.620	499.624	8+78.785	498.878	498.881
	8+73.086	500.802	500.812	8+77.973	500.075	500.088	8+83.255	499.330	499.344	8+88.984	498.564	498.576
	8+82.279	500.533	500.559	8+87.479	499.785	499.812	8+93.095	499.017	499.043	8+99.183	498.224	498.245
Spaces @ 10'-0" cts. Along ℄ Girder	8+91.472	500.243	500.286	8+96.984	499.472	499.513	9+02.935	498.679	498.715	9+09.382	497.859	497.887
	9+00.664	499.933	499.991	9+06.489	499.138	499.188	9+12.775	498.318	498.360	9+19.581	497.468	497.500
	9+09.857	499.601	499.667	9+15.995	498.781	498.835	9+22.615	497.933	497.975	9+29.780	497.051	497.083
	9+19.050	499.249	499.316	9+25.500	498.402	498.453	9+32.455	497.525	497.562	9+39.979	496.609	496.636
	9+28.243	498.876	498.935	9+35.006	498.001	498.042	9+42.295	497.092	497.120	9+50.178	496.147	496.165
	9+37.436	498.482	498.525	9+44.511	497.578	497.604	9+52.135	496.629	496.643			
	9+46.629	498.067	498.088									
℄ Brg. No. Abut	9+54.059	497.664	497.664	9+57.318	496.925	496.925	9+60.834	496.192	496.192	9+64.642	495.465	495.465

ELEVATIONS - TOP OF CONCRETE



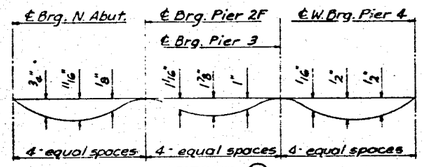
GIR. 1
SPAN 5F

Note: All dimensions shown in plan are measured horizontally.

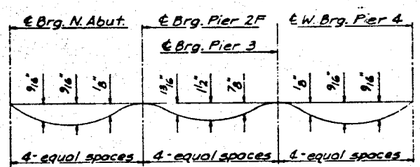
DIAGRAMMATIC PLAN - TOP OF SLAB ELEVATIONS

Note: For notes on method of determining fillet heights "t" see Sheet ___ of ___

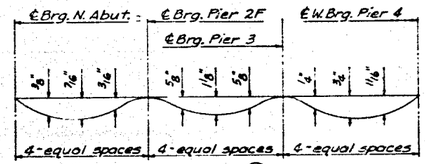
Note: All dimensions shown are measured horizontally.



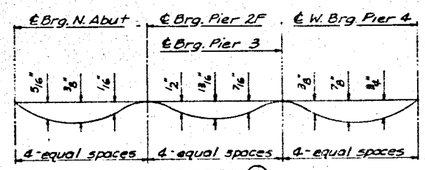
GIRDER (1)



GIRDER (2)



GIRDER (3)



GIRDER (4)

DEAD LOAD DEFLECTION DIAGRAMS

Note: The above are not to be used in the field if the engineer is working from the slab elevations adjusted for dead load deflection shown in table above.

TOP OF SLAB ELEVATIONS
RAMP F - SPANS 3F, 4F & 5F
Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

DESIGNED	WDL
DETAILED	RAH
DRAWN	RAH
TRACED	DAN
CHECKED	WDL

HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

FILE NO 74001
DATE 11-2-79

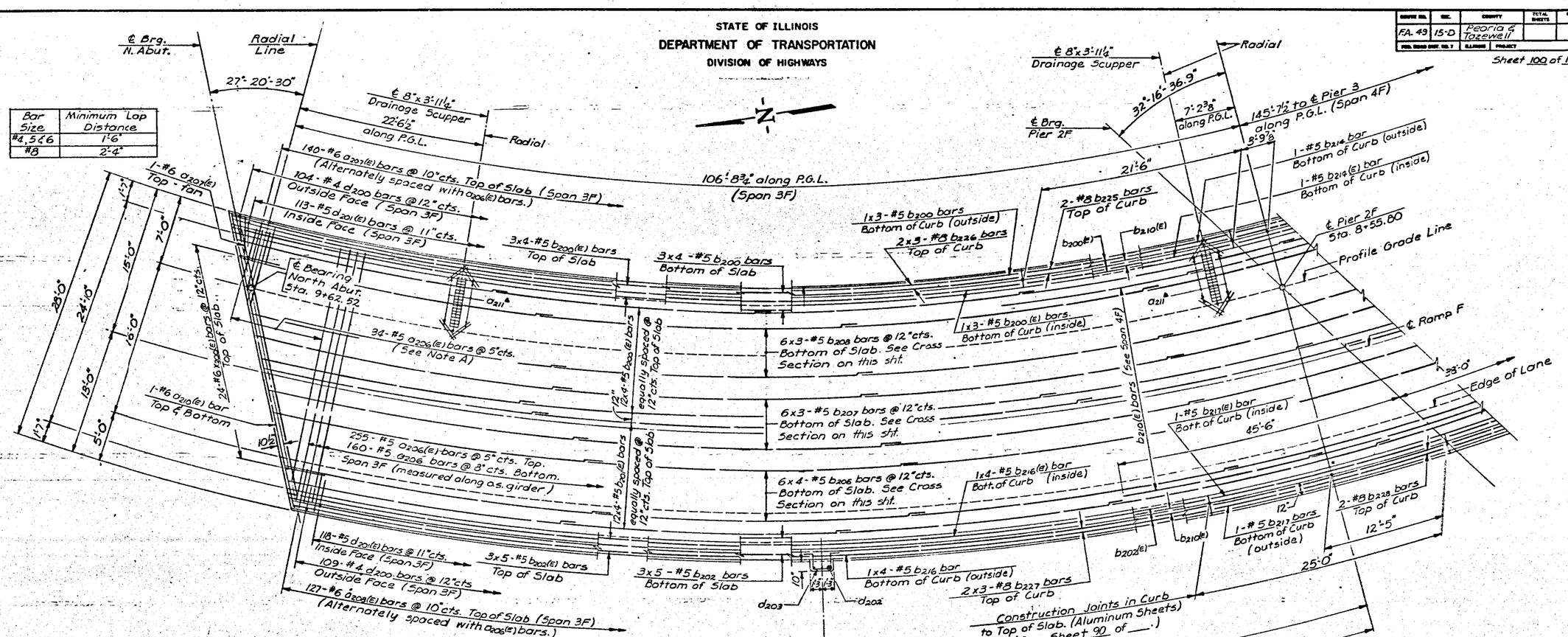
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

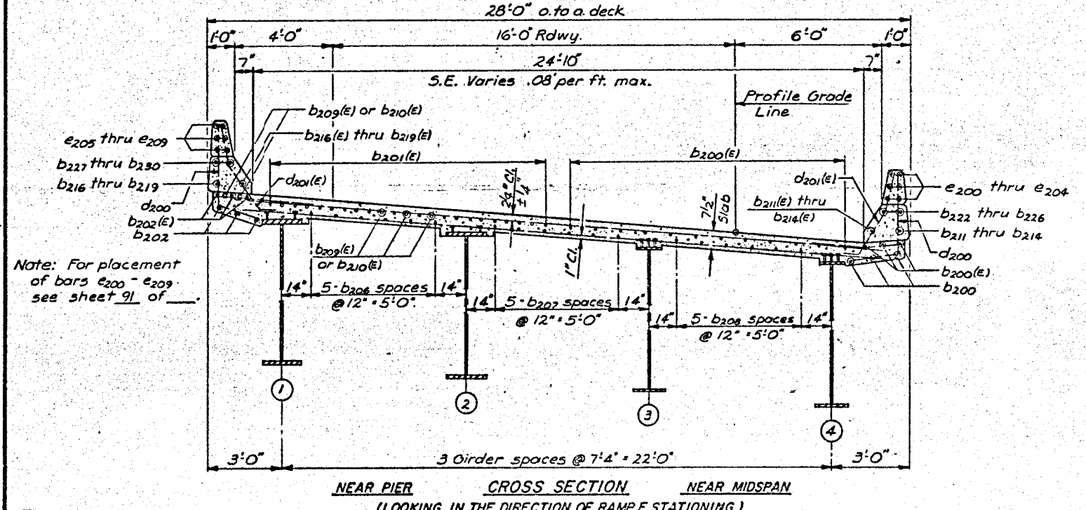
SHEETS NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 49	15-D	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 100 of 134

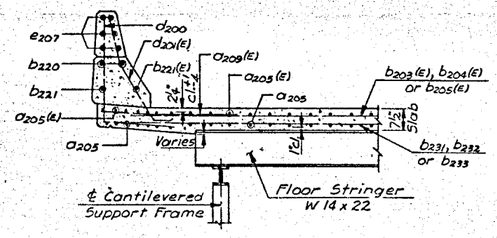
Bar Size	Minimum Lap Distance
#4, 5 & 6	1'-6"
#8	2'-4"



PLAN



Note: For placement of bars e200 - e209 see sheet 91 of ___.



SECTION C-C
(From Sheet 89 of ___.)

Notes:

For Light Pedestal Details see Sht. 3 of ___.

For Drainage Scupper Details see Sht. 150 thru 153.

*For Reinforcement & configuration of slab at Scupper see Sheet 3 of ___.

Bars indicated thus: 20x3-#5, etc. indicates 20 lines of bars with 3 lengths per line.

Note A: Order a206(E) bars full length, cut bars in field to fit skew and use remainder of bars in bottom of slab. See Special Provisions for the proceedure for epoxy coating of cut reinforcement bars.

All dimensions shown are measured horizontally.

RAMP F SUPERSTRUCTURE
SPAN 3F

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

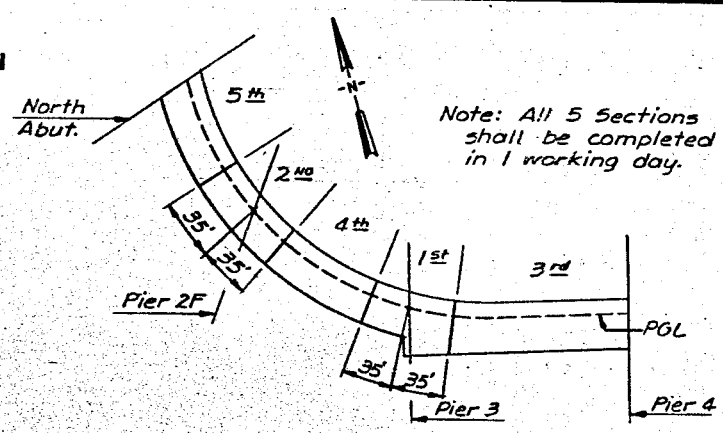
DESIGNED DAN	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
DRAWN WDL	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	DATE 11-2-79
TRACED DAN.		
CHECKED C.R.M.		

FOR INFORMATIONAL PURPOSES ONLY -(CROSS SECTIONS)

ed thus: 20 x 3 - #5, etc.
lines of bars with
er line.

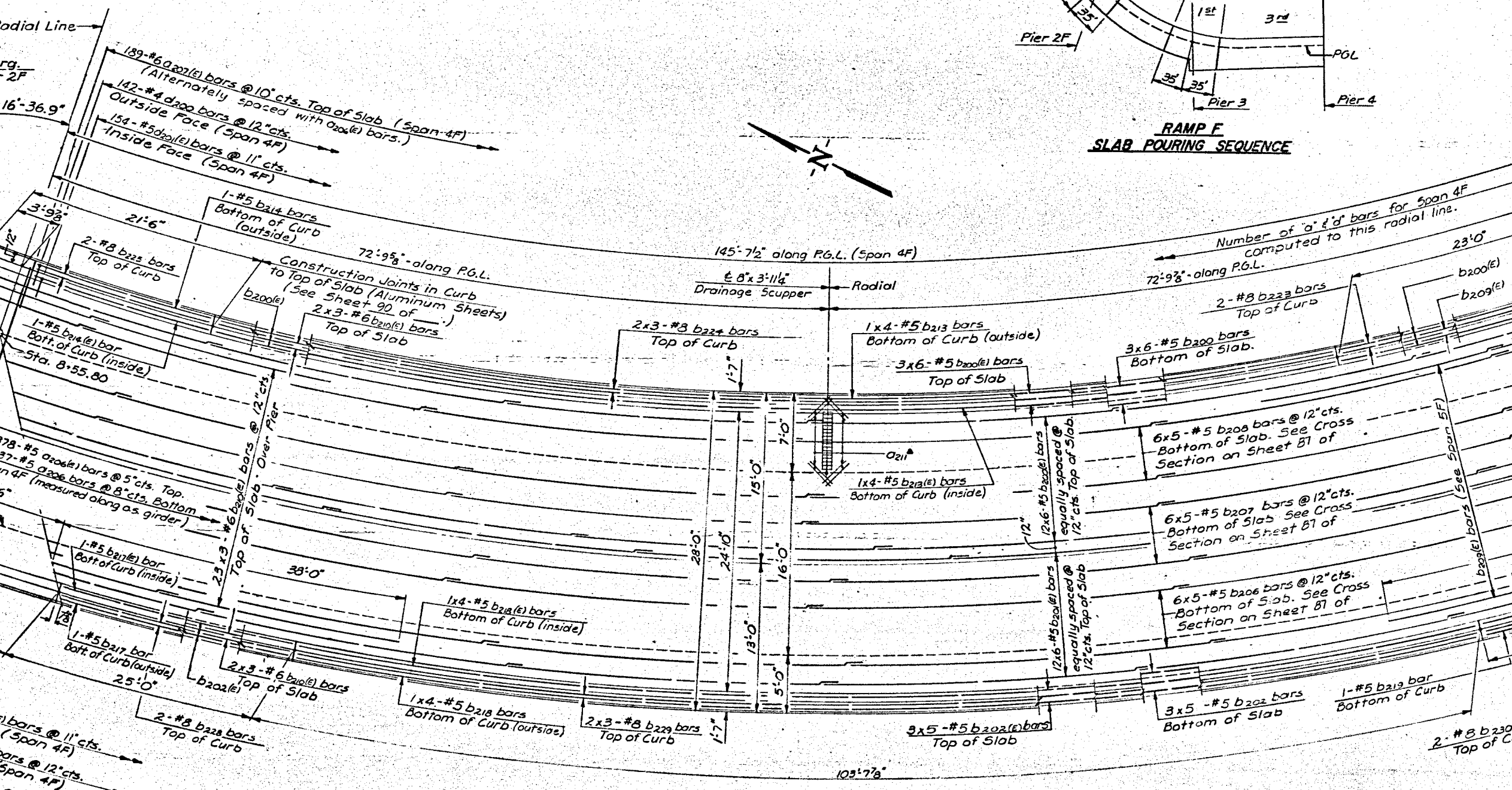
Minimum Lap Distance
1'-6"
2'-4"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



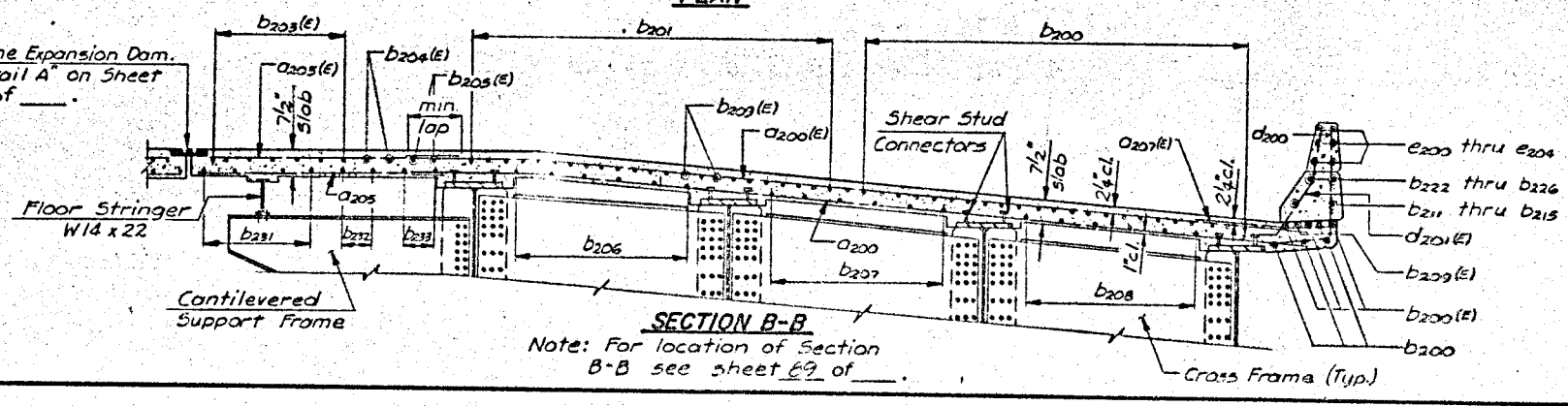
Note: All 5 Sections shall be completed in 1 working day.

RAMP F
SLAB POURING SEQUENCE



Notes:
Scupper Details see Sht. 150
ment & configuration of slab
Sheet 3 of ___.
s shown are measured horizontally.

PLAN



SECTION B-B
Note: For location of Section B-B see sheet 69 of ___.

RA
M
OV
F.A. ROUT
PEORIA

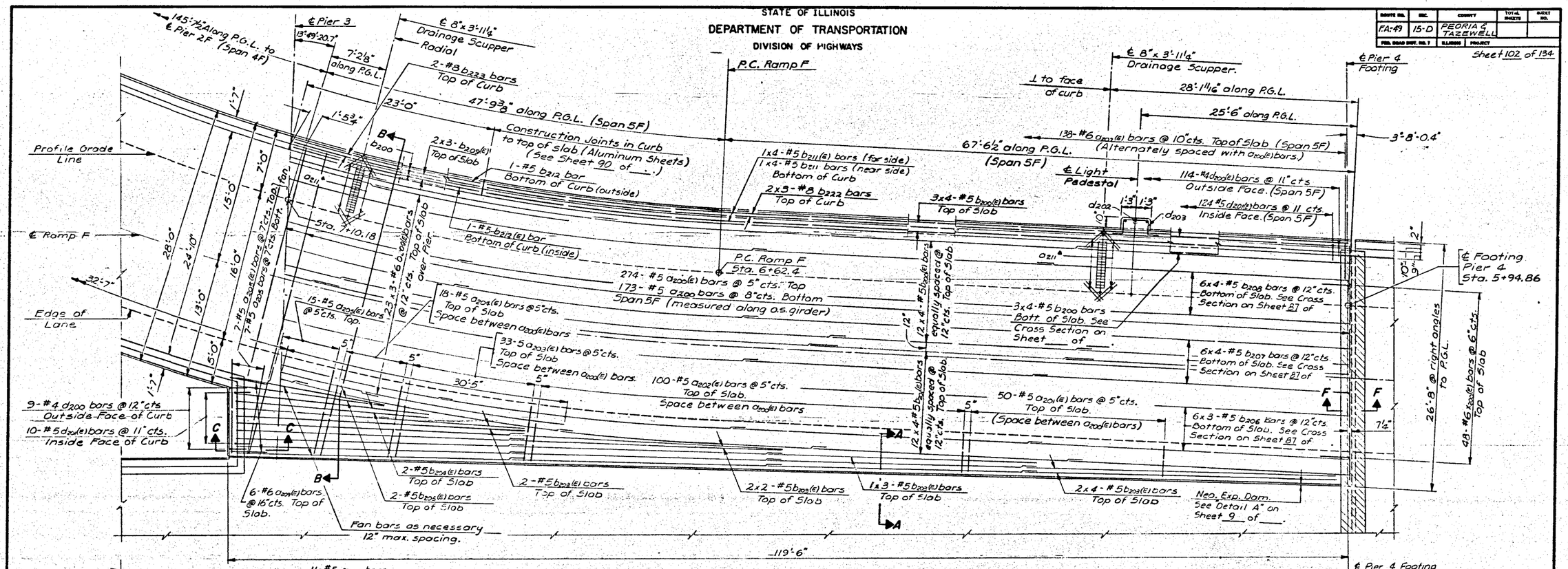
DESIGNED	D.A.N.
CHECKED	W.D.L.
DRAWN	D.A.N.
CHECKED	C.R.N.

FOR INFOMATIONAL PURPOSES ONLY -(SECTION B-B)

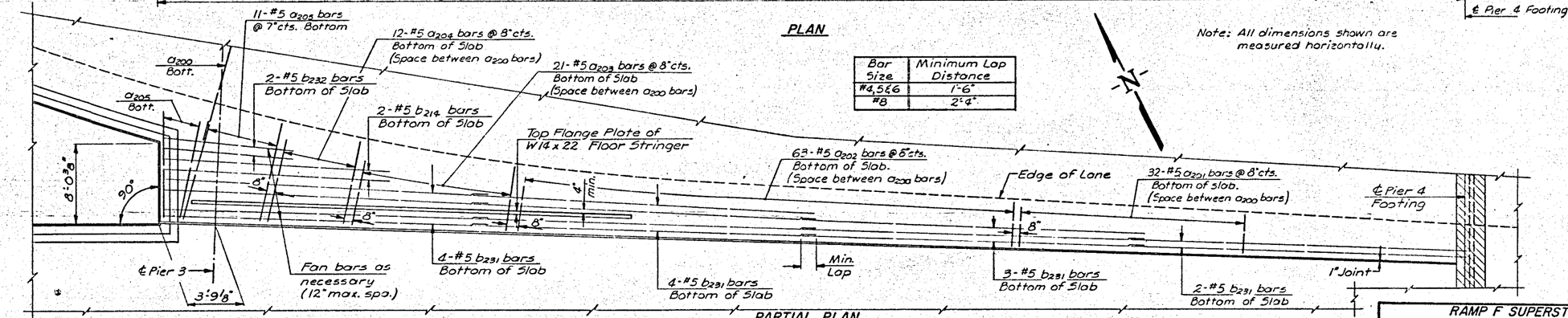
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

DISTRICT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA:49	15-D	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 102 of 134



PLAN



PARTIAL PLAN
(Showing Bottom Longitudinal & Transverse Reinforcement)

Bar Size	Minimum Lap Distance
#4,5&6	1'-6"
#8	2'-4"

Note: All dimensions shown are measured horizontally.

Notes:
Bars indicated thus: 20 x 3-#5, etc. indicates 20 lines of bars with 3 lengths per line.
For Light Pedestal Details see Sheet 3 of ___.
For Section A-A see Sheet 8 of ___.
For Section B-B see Sheet 88 of ___.
For Section C-C see Sheet 87 of ___.
For Section F-F see Sheet 90 of ___.
For Scupper Details see Sheet 150 thru 153.
*For Reinforcement & configuration of slab at Scupper see Sheet 3 of ___.

RAMP F SUPERSTRUCTURE
SPAN 5F

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 · SEC. 15-D
PEORIA & TAZEWELL COUNTIES

D.A.N.
W.D.L.
D.A.N.
C.R.N.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 74001
DATE 11-2-79

FOR INFORMATIONAL PURPOSES ONLY-(LOCATION OF SECTION B-B)

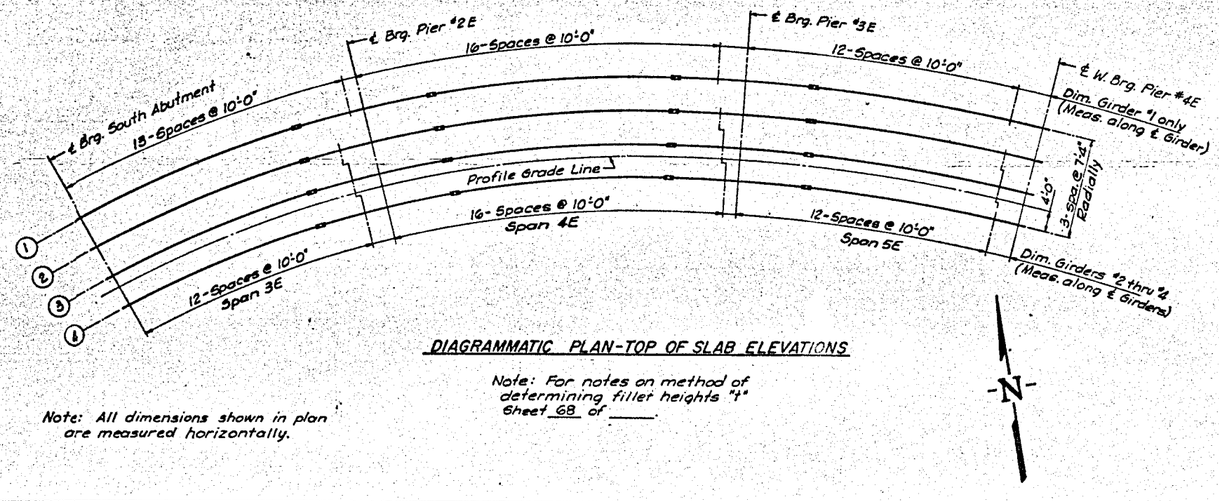
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15-D	PEORIA and TAZEWELL		
FED. ROAD DIST NO. 7	ILLINOIS	PROJECT		

Sheet 103 of 134

	STATION	GIRDER 1 THEORETICAL GRADE ELEVATIONS	GIRDER 1 THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	GIRDER 2 THEORETICAL GRADE ELEVATIONS	GIRDER 2 THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	GIRDER 3 THEORETICAL GRADE ELEVATIONS	GIRDER 3 THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	STATION	GIRDER 4 THEORETICAL GRADE ELEVATIONS	GIRDER 4 THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
℄ Brg. So. Abut:	8+61.500	500.998	500.998	8+61.500	500.411	500.411	8+61.500	499.824	499.824	8+61.500	499.238	499.238
	8+71.137	501.295	501.347	8+71.281	500.712	500.755	8+71.431	500.130	500.164	8+71.584	499.548	499.574
	8+80.773	501.575	501.679	8+81.063	500.997	501.083	8+81.361	500.419	500.487	8+81.669	499.841	499.892
	8+90.410	501.839	501.995	8+90.844	501.264	501.393	8+91.292	500.689	500.792	8+91.753	500.115	500.192
	9+00.047	502.087	502.262	9+00.626	501.515	501.659	9+01.223	500.943	501.059	9+01.838	500.371	500.459
Spaces @ 10'-0" cts. Along ℄ Girder	9+09.684	502.318	502.500	9+10.407	501.748	501.898	9+11.153	501.176	501.299	9+11.922	500.609	500.700
	9+19.320	502.532	502.721	9+20.189	501.964	502.120	9+21.084	501.396	501.522	9+22.007	500.829	500.924
	9+28.957	502.730	502.909	9+29.970	502.164	502.312	9+31.015	501.597	501.716	9+32.091	501.031	501.121
	9+38.594	502.912	503.059	9+39.752	502.346	502.468	9+40.945	501.780	501.878	9+42.176	501.215	501.289
	9+48.230	503.077	503.192	9+49.533	502.511	502.607	9+50.876	501.946	502.022	9+52.260	501.381	501.438
	9+57.867	503.225	503.309	9+59.315	502.659	502.730	9+60.807	502.094	502.150	9+62.345	501.528	501.570
	9+67.504	503.357	503.414	9+69.096	502.791	502.838	9+70.737	502.224	502.262	9+72.429	501.658	501.686
	9+77.140	503.472	503.503	9+78.878	502.905	502.930	9+80.668	502.337	502.357	9+82.514	501.769	501.785
℄ Brg. Pier 2E	9+93.000	503.626	503.626	9+93.000	503.040	503.040	9+93.000	502.453	502.453	9+93.000	501.866	501.866
	10+02.637	503.698	503.716	10+02.781	503.112	503.130	10+02.931	502.526	502.542	10+03.084	501.941	501.957
	10+12.273	503.753	503.789	10+12.563	503.168	503.203	10+12.861	502.582	502.616	10+13.169	501.997	502.029
	10+21.913	503.792	503.846	10+22.344	503.206	503.258	10+22.792	502.621	502.671	10+23.253	502.036	502.083
	10+31.547	503.814	503.886	10+32.126	503.228	503.297	10+32.723	502.642	502.708	10+33.338	502.056	502.119
	10+41.181	503.819	503.911	10+41.907	503.232	503.319	10+42.653	502.645	502.727	10+43.422	502.058	502.135
Spaces @ 10'-0" cts. Along ℄ Girder	10+50.823	503.808	503.920	10+51.689	503.220	503.324	10+52.584	502.631	502.728	10+53.507	502.042	502.131
	10+60.457	503.781	503.913	10+61.470	503.191	503.312	10+62.515	502.600	502.711	10+63.591	502.009	502.110
	10+70.091	503.737	503.888	10+71.252	503.144	503.283	10+72.445	502.550	502.677	10+73.676	501.956	502.070
	10+79.733	503.677	503.823	10+81.033	503.080	503.215	10+82.376	502.484	502.606	10+83.760	501.886	501.996
	10+89.367	503.600	503.729	10+90.815	503.000	503.118	10+92.307	502.399	502.507	10+93.845	501.798	501.895
	10+99.004	503.506	503.617	11+00.596	502.902	503.005	11+02.237	502.298	502.391	11+03.929	501.692	501.776
	11+08.641	503.396	503.492	11+10.378	502.788	502.875	11+12.168	502.178	502.258	11+14.014	501.567	501.639
	11+18.418	503.268	503.345	11+20.240	502.655	502.725	11+22.124	502.041	502.105	11+24.066	501.426	501.483
	11+28.188	503.122	503.179	11+30.103	502.505	502.557	11+32.081	501.886	501.933	11+34.119	501.266	501.307
	11+37.958	502.960	502.997	11+39.964	502.338	502.371	11+42.037	501.714	501.743	11+44.172	501.088	501.114
	11+47.728	502.781	502.798	11+49.827	502.153	502.168	11+51.994	501.523	501.536	11+54.224	500.892	500.902
℄ Brg. Pier 3E	11+60.000	502.531	502.531	11+60.000	501.944	501.944	11+60.000	501.358	501.358	11+60.000	500.771	500.771
	11+69.770	502.322	502.338	11+69.862	501.733	501.748	11+69.957	501.144	501.158	11+70.053	500.556	500.567
	11+79.540	502.113	502.145	11+79.725	501.522	501.551	11+79.913	500.931	500.958	11+80.105	500.341	500.363
	11+89.309	501.903	501.952	11+89.587	501.311	501.355	11+89.870	500.718	500.758	11+90.158	500.125	500.160
	11+99.079	501.694	501.763	11+99.449	501.100	501.162	11+99.826	500.505	500.560	12+00.211	499.910	499.958
Spaces @ 10'-0" cts. Along ℄ Girder	12+08.849	501.485	501.576	12+09.311	500.889	500.969	12+09.783	500.292	500.363	12+10.263	499.695	499.756
	12+18.619	501.276	501.388	12+19.174	500.677	500.777	12+19.739	500.079	500.167	12+20.316	499.480	499.555
	12+28.389	501.067	501.199	12+29.036	500.466	500.576	12+29.696	499.865	499.962	12+30.368	499.264	499.347
	12+38.151	500.858	500.977	12+38.898	500.255	500.361	12+39.652	499.652	499.745	12+40.421	499.049	499.129
	12+47.921	500.648	500.744	12+48.761	500.044	500.146	12+49.609	499.439	499.529	12+50.474	498.834	498.911
	12+57.698	500.439	500.546	12+58.623	499.833	499.927	12+59.566	499.226	499.310	12+60.526	498.619	498.690
	12+67.466	500.230	500.303	12+68.485	499.622	499.686	12+69.522	499.013	499.070	12+70.579	498.404	498.452
	12+77.238	500.021	500.060	12+78.348	499.411	499.445	12+79.479	498.800	498.830	12+80.632	498.188	498.214
℄ W. Brg. Pier 4E	12+91.500	499.716	499.716	12+91.500	499.129	499.129	12+91.500	498.542	498.542	12+91.500	497.956	497.956

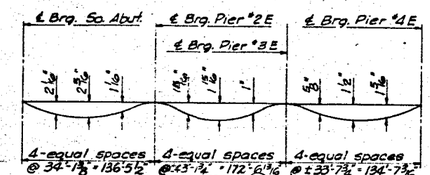
ELEVATIONS-TOP OF CONCRETE

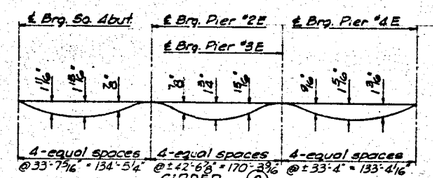


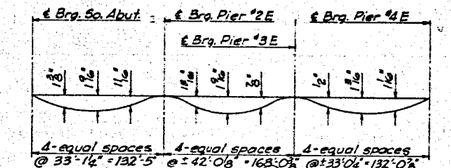
DIAGRAMMATIC PLAN-TOP OF SLAB ELEVATIONS

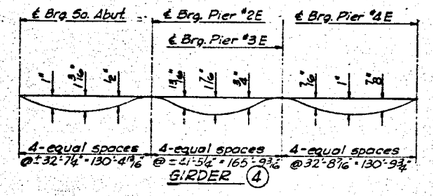
Note: All dimensions shown in plan are measured horizontally.

Note: For notes on method of determining filler heights "f" Sheet 68 of ____.









DEAD LOAD DEFLECTION DIAGRAMS

Note: The above are not to be used in the field if the engineer is working from the slab elevations adjusted for dead load deflection shown in table above.

TOP OF SLAB ELEVATIONS
RAMP E - SPANS 3E, 4E & 5E

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

DESIGNED	WDL	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
DRAWN	R.W.C.	SPRINGFIELD ILLINOIS PEORIA ILLINOIS	DATE 11-2-79
TRACED	RAH		
CHECKED	WDL		

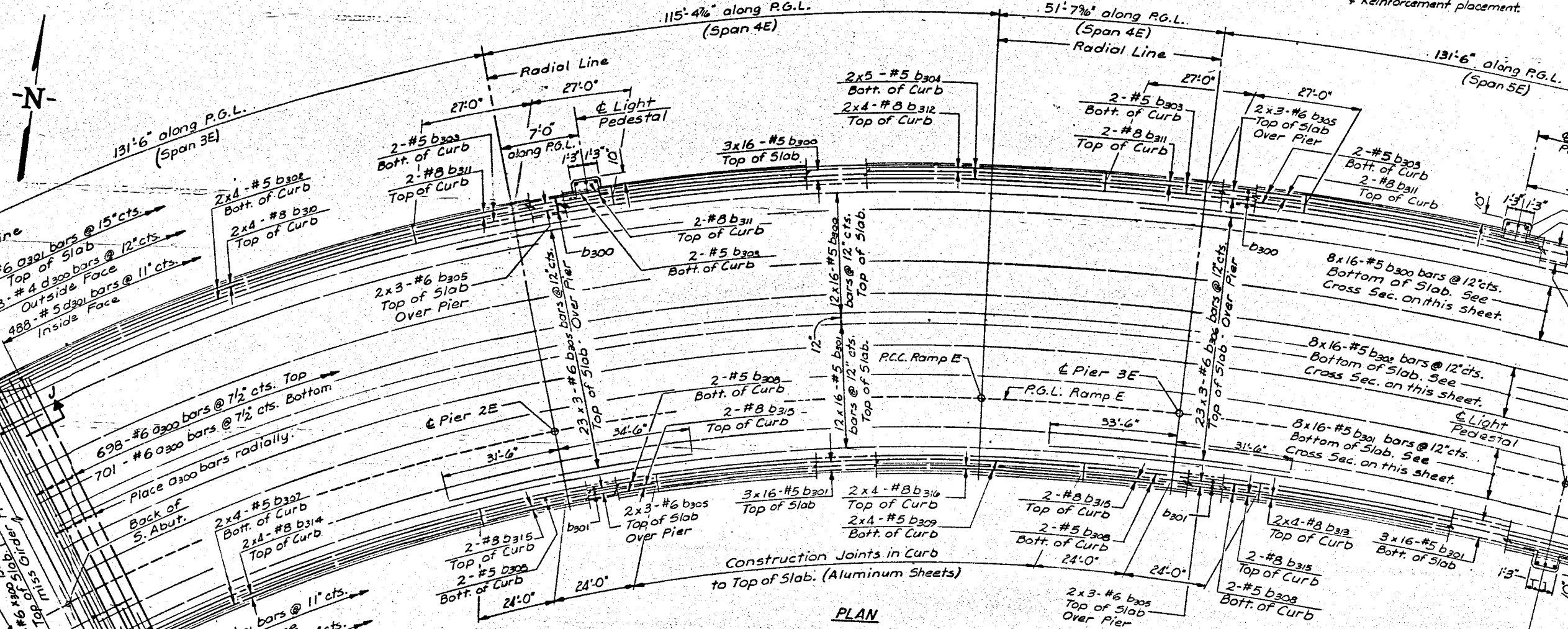
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indicated thus: 20 x 3 - #5, indicates 20 lines of bars 3 lengths per line.

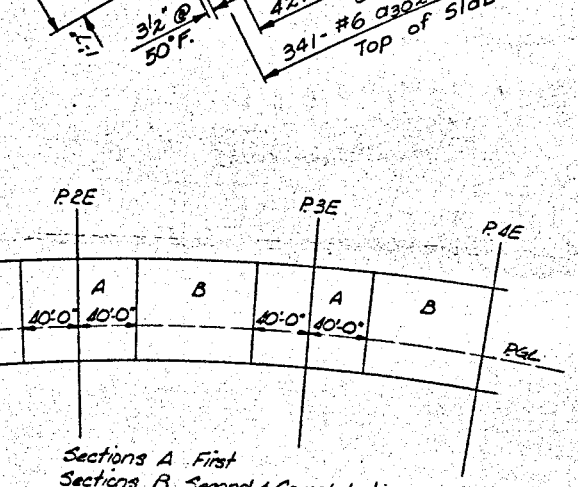
BAR SIZE	MIN. LAP DISTANCE
#4, #5, #6	1'-6"
#8	2'-4"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: See Sheet 3 for Light Pedestal Details & Reinforcement placement.

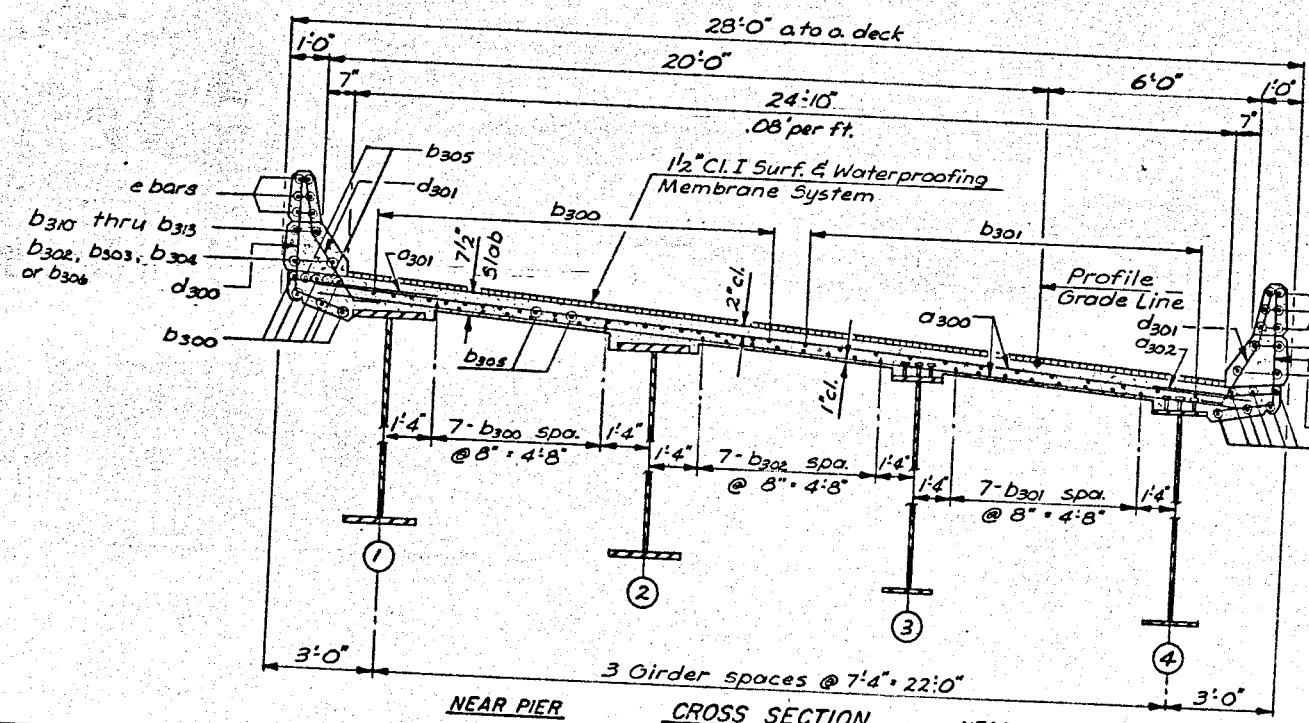


PLAN



Sections A First
Sections B Second & Completed in one working day.

SLAB POURING SEQUENCE



NEAR PIER CROSS SECTION NEAR MIDSPAN
(LOOKING IN THE DIRECTION OF RAMP E STATIONING)

Note: For placement of bars e300 thru e307 see sheet 102 of

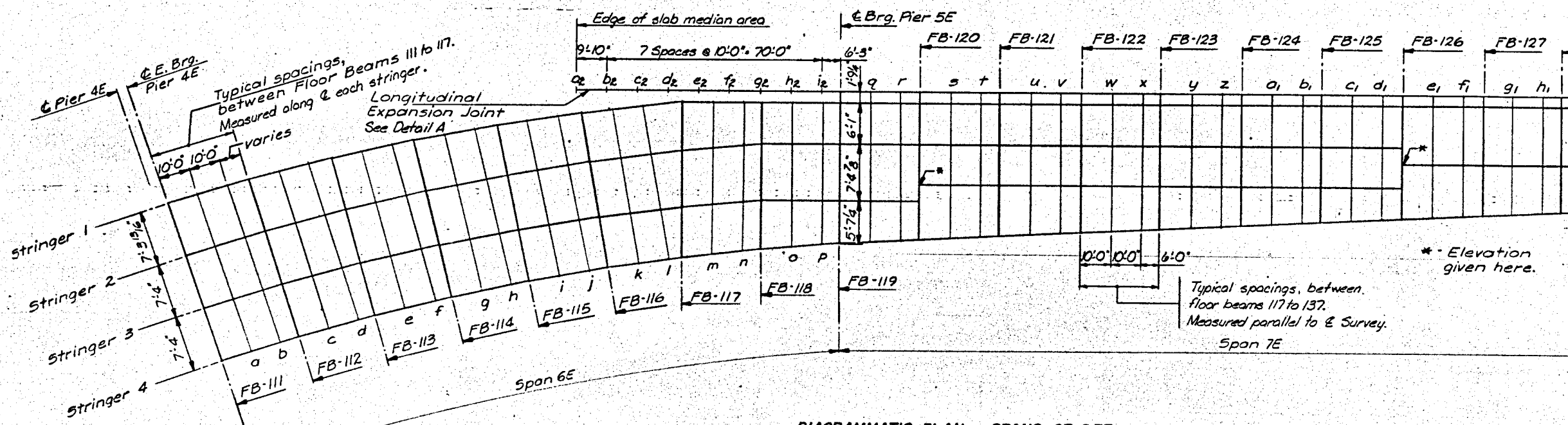
Note: All dimensions shown are measured horizontally.

RA
OV
F.A. ROU
PEORI

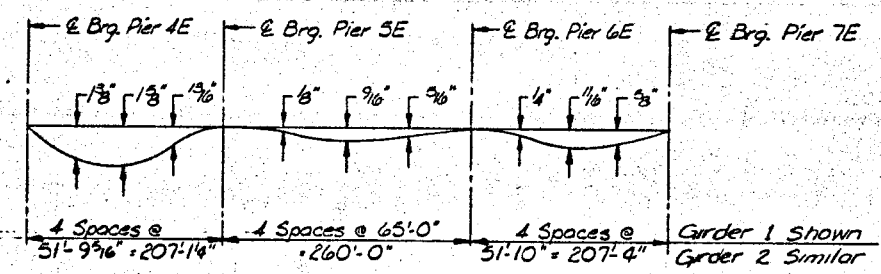
W.D.L.
C.R.N.
D.A.M.
P.W.C.

FOR INFORMATIONAL PURPOSES ONLY—(CROSS SECTION)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



DIAGRAMMATIC PLAN - SPANS 6E & 7E
TOP OF CONCRETE ELEVATIONS



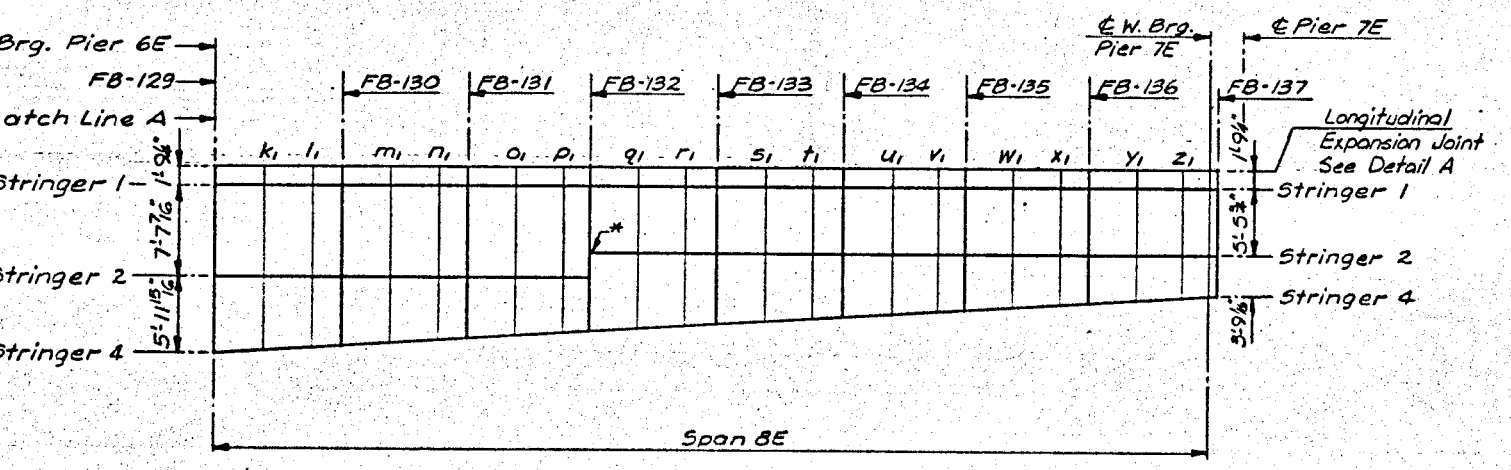
15'-0" to ℄ Exist. Bridge

Existing Grid Floor

DEAD LOAD DEFLECTION DIAGRAM
(Includes Weight of Concrete Slab & Cl I)

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 in "Elevations - Top of Concrete" tables.

Note: For notes on method of determining fillet heights "t" see sheet 68 of .



DIAGRAMMATIC PLAN - SPAN 8E
TOP OF CONCRETE ELEVATIONS

NOTES

F.B.'s 111 thru 116 are radial, therefore stringer stationing, shown on next sheet, is the same for all stringers at each F.B.

Points a thru l are not radial, therefore stringer stationing will be different at each point.

F.B.'s 117 thru 137 & points m thru z, have been adjusted for individual stringer stationing. Stations shown are stations of the intersection of F.B.'s & section lines with the profile grade line.

All dimensions shown are measured horizontally.

F.A.
P

W.D.L.
S.C.D.
D.A.N.
S.C.D.

FOR INFORMATIONAL PURPOSES ONLY.

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FA:49	15-D	PEORIA & TAZEWELL		
FED ROAD DIST NO. 7	ILLINOIS	PROJECT		

Sheet 106 of 134

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

	STRINGER 4			STRINGER 3			STRINGER 2			STRINGER 1			LONGITUDINAL EXPANSION JOINT			
	STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	STATION	ELEV. A	ELEV. B	
℄ East Bearing Pier 4E (FB.-111)	12+94.25	497.900	497.900	12+94.25	498.487	498.487	12+94.25	499.073	499.073	12+94.25	499.660	499.660				
a	13+04.30	497.702	497.727	13+04.21	498.291	498.316	13+04.11	498.879	498.904	13+04.02	499.468	499.493				
b	13+14.36	497.522	497.571	13+14.16	498.112	498.161	13+13.98	498.701	498.750	13+13.79	499.292	499.341				
FB.-112	13+18.72	497.449	497.513	13+18.72	498.036	498.100	13+18.72	498.622	498.686	13+18.72	499.209	499.273				
c	13+28.77	497.293	497.376	13+28.67	497.882	497.965	13+28.58	498.469	498.552	13+28.49	499.057	499.140				
d	13+38.82	497.155	497.257	13+38.63	497.744	497.846	13+38.44	498.332	498.434	13+38.26	498.922	499.024				
FB.-113	13+44.30	497.084	497.200	13+44.30	497.673	497.787	13+44.30	498.259	498.373	13+44.30	498.846	498.960				
e	13+54.35	496.974	497.098	13+54.25	497.562	497.686	13+54.16	498.149	498.273	13+54.07	498.737	498.861				
f	13+64.40	496.879	497.012	13+64.21	497.468	497.601	13+64.02	498.056	498.189	13+63.84	498.644	498.777				
FB.-114	13+69.89	496.835	496.974	13+69.89	497.422	497.561	13+69.89	498.008	498.147	13+69.89	498.595	498.734				
g	13+79.94	496.767	496.905	13+79.84	497.354	497.492	13+79.75	497.941	498.079	13+79.66	498.528	498.666				
h	13+89.99	496.716	496.853	13+89.80	497.304	497.441	13+89.61	497.890	498.027	13+89.43	498.478	498.615				
FB.-115	13+95.49	496.695	496.831	13+95.49	497.282	497.418	13+95.49	497.868	498.004	13+95.49	498.455	498.591				
i	14+05.55	496.671	496.796	14+05.45	497.258	497.383	14+05.36	497.844	497.969	14+05.26	498.431	498.556				
	14+15.60	496.663	496.777	14+15.41	497.250	497.364	14+15.22	497.836	497.950	14+15.03	498.423	498.537				
FB.-116	14+21.11	496.667	496.775	14+21.11	497.254	497.362	14+21.11	497.840	497.948	14+21.11	498.427	498.535	14+10.28	498.473	498.590	a_2
k	14+31.17	496.698	496.790	14+31.07	497.270	497.362	14+30.98	497.843	497.935	14+30.88	498.411	498.503	14+20.20	498.473	498.578	b_2
l	14+41.22	496.731	496.837	14+41.03	497.289	497.365	14+40.84	497.849	497.925	14+40.65	498.396	498.472	14+30.27	498.473	498.562	c_2
FB.-117	14+44.59	496.741	496.857	14+44.59	497.296	497.362	14+44.59	497.851	497.917	14+44.59	498.388	498.454	14+40.32	498.473	498.546	d_2
m	14+54.62	496.833	496.883	14+54.62	497.342	497.392	14+54.62	497.871	497.921	14+54.62	498.357	498.407	14+50.36	498.473	498.530	e_2
n	14+64.65	496.926	496.960	14+64.65	497.389	397.423	14+64.65	497.892	497.926	14+64.65	498.326	498.360	14+60.39	498.473	498.514	f_2
FB.-118	14+70.66	496.982	497.007	14+70.66	497.417	497.442	14+70.66	497.904	497.929	14+70.66	498.307	498.332	14+70.41	498.473	498.498	g_2
o	14+80.67	497.116	497.131	14+80.67	497.499	497.514	14+80.67	497.950	497.965	14+80.67	498.322	498.337	14+80.42	498.473	498.488	h_2
p	14+90.68	497.250	497.254	14+90.68	497.580	497.584	14+90.68	497.996	498.000	14+90.68	498.337	498.341	14+90.43	498.473	498.477	l_2
℄ Bearing Pier 5E (FB.-119)	14+96.68	497.331	497.329	14+96.68	497.629	497.627	14+96.68	498.023	498.021	14+96.68	498.346	498.344	14+96.68	498.473	498.471	℄ Bearing Pier 4E (FB.-119)
q	15+06.68	497.456	497.451	15+06.68	497.718	497.713	15+06.68	498.076	498.071	15+06.68	498.369	498.364	15+06.68	498.473	498.468	
FB.-120	15+16.68	497.580	497.572	15+16.68	497.807	497.799	15+16.68	498.128	498.120	15+16.68	498.392	498.384	15+16.68	498.473	498.465	
r	15+22.69	497.655	497.645	15+22.69	497.941	497.931	15+22.69	498.160	498.150	15+22.69	498.406	498.396	15+22.69	498.473	498.463	
s	15+32.69	497.752	497.746	15+32.69	497.999	497.993	15+32.69	498.193	498.187	15+32.69	498.411	498.405	15+32.69	498.473	498.467	
FB.-121	15+42.69	497.850	497.847	15+42.69	498.058	498.055	15+42.69	498.226	498.223	15+42.69	498.416	498.413	15+42.69	498.473	498.470	
t	15+48.69	497.908	497.908	15+48.69	498.093	498.093	15+48.69	498.246	498.246	15+48.69	498.419	498.419	15+48.69	498.473	498.473	
u	15+58.69	497.972	497.980	15+58.69	498.133	498.141	15+58.69	498.270	498.278	15+58.69	498.425	498.433	15+58.69	498.473	498.481	
v	15+68.69	498.036	498.051	15+68.69	498.173	498.188	15+68.69	498.294	498.309	15+68.69	498.431	498.446	15+68.69	498.473	498.488	
FB.-122	15+74.70	498.075	498.095	15+74.70	498.197	498.217	15+74.70	498.309	498.329	15+74.70	498.434	498.454	15+74.70	498.473	498.493	
w	15+84.70	498.107	498.134	15+84.70	498.217	498.244	15+84.70	498.321	498.348	15+84.70	498.437	498.464	15+84.70	498.473	498.500	
x	15+94.70	498.138	498.172	15+94.70	498.236	498.270	15+94.70	498.332	498.366	15+94.70	498.439	498.473	15+94.70	498.473	498.507	
FB.-123	16+00.70	498.157	498.195	16+00.70	498.248	498.286	16+00.70	498.339	498.377	16+00.70	498.441	498.479	16+00.70	498.473	498.511	
y	16+10.70	498.162	498.204	16+10.70	498.248	498.290	16+10.70	498.339	498.381	16+10.70	498.441	498.483	16+10.70	498.473	498.515	
z	16+20.70	498.166	498.212	16+20.70	498.249	498.295	16+20.70	498.339	498.385	16+20.70	498.441	498.487	16+20.70	498.473	498.519	
FB.-124	16+26.71	498.169	498.218	16+26.71	498.249	498.298	16+26.71	498.339	498.388	16+26.71	498.441	498.490	16+26.71	498.473	498.522	
z_1	16+36.71	498.173	498.222	16+36.71	498.249	498.298	16+36.71	498.339	498.388	16+36.71	498.441	498.490	16+36.71	498.473	498.522	
FB.-125	16+46.71	498.176	498.224	16+46.71	498.249	498.297	16+46.71	498.339	498.387	16+46.71	498.441	498.489	16+46.71	498.473	498.521	
z_2	16+52.71	498.178	498.226	16+52.71	498.249	498.297	16+52.71	498.339	498.387	16+52.71	498.441	498.489	16+52.71	498.473	498.521	
z_3	16+62.71	498.182	498.225	16+62.71	498.249	498.292	16+62.71	498.339	498.382	16+62.71	498.441	498.484	16+62.71	498.473	498.516	
z_4	16+72.71	498.186	498.225	16+72.71	498.249	498.288	16+72.71	498.339	498.378	16+72.71	498.441	498.480	16+72.71	498.473	498.512	
FB.-126	16+78.72	498.187	498.223	16+78.72	498.249	498.285	16+78.72	498.350	498.350	16+78.72	498.441	498.477	16+78.72	498.473	498.509	
z_5	16+88.72	498.191	498.220				16+88.72	498.314	498.343	16+88.72	498.441	498.470	16+88.72	498.473	498.502	
z_6	16+98.72	498.195	498.218				16+98.72	498.314	498.337	16+98.72	498.441	498.464	16+98.72	498.473	498.496	
FB.-127	17+04.73	498.196	498.215				17+04.73	498.314	498.333	17+04.73	498.441	498.460	17+04.73	498.473	498.492	
z_7	17+14.73	498.200	498.213				17+14.73	498.314	498.327	17+14.73	498.441	498.454	17+14.73	498.473	498.486	
z_8	17+24.73	498.204	498.211				17+24.73	498.314	498.321	17+24.73	498.441	498.448	17+24.73	498.473	498.480	
FB.-128	17+30.73	498.206	498.210				17+30.73	498.314	498.318	17+30.73	498.441	498.445	17+30.73	498.473	498.477	
z_9	17+40.73	498.209	498.211				17+40.73	498.314	498.316	17+40.73	498.441	498.443	17+40.73	498.473	498.475	
z_{10}	17+50.73	498.213	498.213				17+50.73	498.314	498.314	17+50.73	498.441	498.441	17+50.73	498.473	498.473	
℄ Bearing Pier 6E (FB.-129)	17+56.74	498.215	498.214				17+56.74	498.314	498.313	17+56.74	498.441	498.440	17+56.74	498.473	498.472	
z_{11}	17+66.74	498.218	498.220				17+66.74	498.314	498.316	17+66.74	498.441	498.443	17+66.74	498.473	498.475	
z_{12}	17+76.74	498.222	498.226				17+76.74	498.314	498.318	17+76.74	498.441	498.445	17+76.74	498.473	498.477	
FB.-130	17+82.74	498.224	498.230				17+82.74	498.314	498.320	17+82.74	498.441	498.447	17+82.74	498.473	498.479	
m_1	17+92.74	498.228	498.241				17+92.74	498.314	498.327	17+92.74	498.441	498.454	17+92.74	498.473	498.486	
n_1	18+02.74	498.231	498.250				18+02.74	498.314	498.333	18+02.74	498.441	498.460	18+02.74	498.473	498.492	
FB.-131	18+08.75	498.233	498.256				18+08.75	498.314	498.337	18+08.75	498.441	498.464	18+08.75	498.473	498.496	
o_1	18+18.75	498.237	498.268				18+18.75	498.314	498.345	18+18.75	498.441	498.472	18+18.75	498.473	498.504	
p_1	18+28.75	498.240	498.278				18+28.75	498.314	498.352	18+28.75	498.441	498.479	18+28.75	498.473	498.511	
FB.-132	18+34.76	498.242	498.285				18+34.76	498.350	498.393	18+34.76	498.441	498.484	18+34.76	498.473	498.516	
q_1	18+44.76	498.246	498.295				18+44.76	498.350	498.399	18+44.76	498.441	498.490	18+44.76	498.473	498.522	
r_1	18+54.76	498.249	498.304				18+54.76	498.350	498.405	18+54.76	498.441	498.496	18+54.76	498.473	498.528	
FB.-133	18+60.76	498.251	498.309				18+60.76	498.350	498.408	18+60.76	498.441	498.499	18+60.76	498.473	498.531	
s_1	18+70.76	498.255	498.315				18+70.76	498.350	498.410	18+70.76	498.441	498.501	18+70.76	498.473	498.533	
FB.-134	18+80.76	498.258	498.319				18+80.76	498.350	498.411	18+80.76	498.441	498.502	18+80.76	498.473	498.534	
u_1	18+86.77	498.260	498.322				18+86.77	498.350	498.412	18+86.77	498.441	498.503	18+86.77	498.473	498.535	
v_1	18+96.77	498.264	498.322				18+96.77	498.350	498.408	18+96.77	498.441	498.499	18+96.77	498.473	498.531	
FB.-135	19+06.77	498.267	498.321				19+06.77	498.350	498.404	19+06.77	498.441	498.495	19+06.77	498.473	498.527	
w_1	19+12.77	498.269	498.321				19+12.77	498.350	498.402	19+12.77	498.441	498.493	19+12.77	498.473	498.525	
x_1	19+22.77	498.273	498.317				19+22.77	498.350	498.394	19+22.77	498.441	498.485	19+22.77	498.473	498.517	
FB.-136	19+32.77	498.277	498.312				19+32.77	498.350	498.385	19+32.77	498.441	498.476	19+32.77	498.473	498.508	
y_1	19+38.78	498.278	498.308				19+38.78	498.350	498.380	19+38.78	498.441	498.471	19+38.78	498.473	498.503	
z_1	19+48.78	498.282	498.300				19+48.78	498.350	498.368	19+48.78	498.441	498.459	19+48.78	498.473	498.491	
FB.-137	19+58.78	498.286	498.293				19+58.78	498.350	498.357	19+58.78	498.441	498.448	19+58.78	498.473	498.480	
	19+64.78	498.287	498.288				19+64.78	498.350	498.351	19+64.78	498.441	498.442	19+64.78	498.473	498.474	
℄ West Bearing Pier 7E	19+64.12	498.287	498.288				19+64.12	498.350	498.351	19+64.12	498.441	498.442	19+64.12	498.473	498.474	

ELEVATIONS - TOP OF CONCRETE

Note:
Elev. A = Theoretical Grade Elevations
Elev. B = Theoretical Grade Elevations Adjusted For Dead Load Deflection.

See Sheet 68 for Method of Determining Fillet Heights.

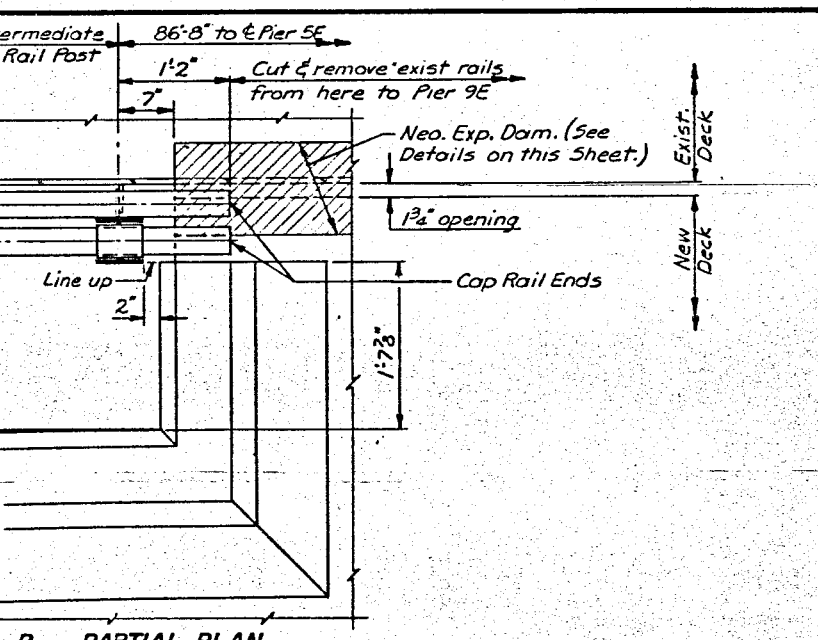
TOP OF SLAB ELEVATIONS
RAMP E - SPANS 6E, 7E & 8E

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

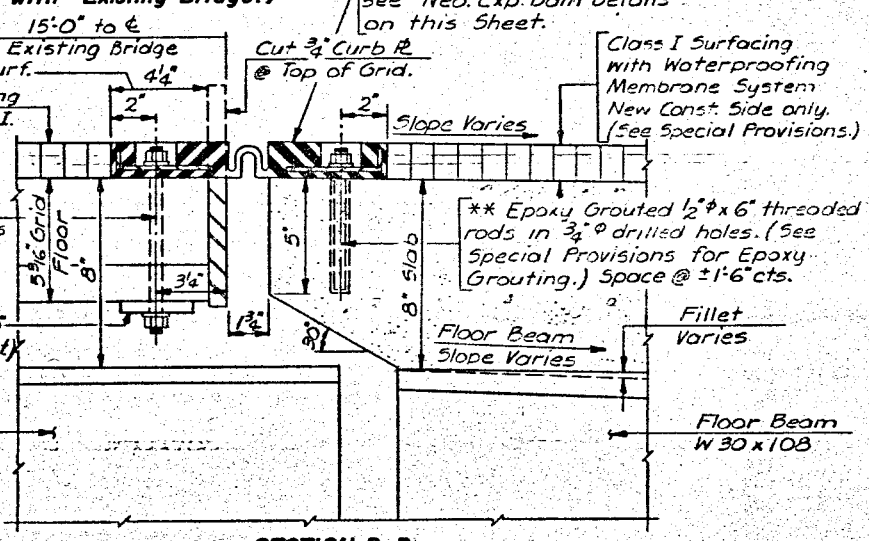
DESIGNED	S.C.O.	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
CHECKED	W.D.L.	SPRINGFIELD ILLINOIS PEORIA ILLINOIS	DATE 11-2-79
DRAWN	R.J.F.		
CHECKED	W.D.L.		

FOR INFORMATIONAL PURPOSES ONLY.

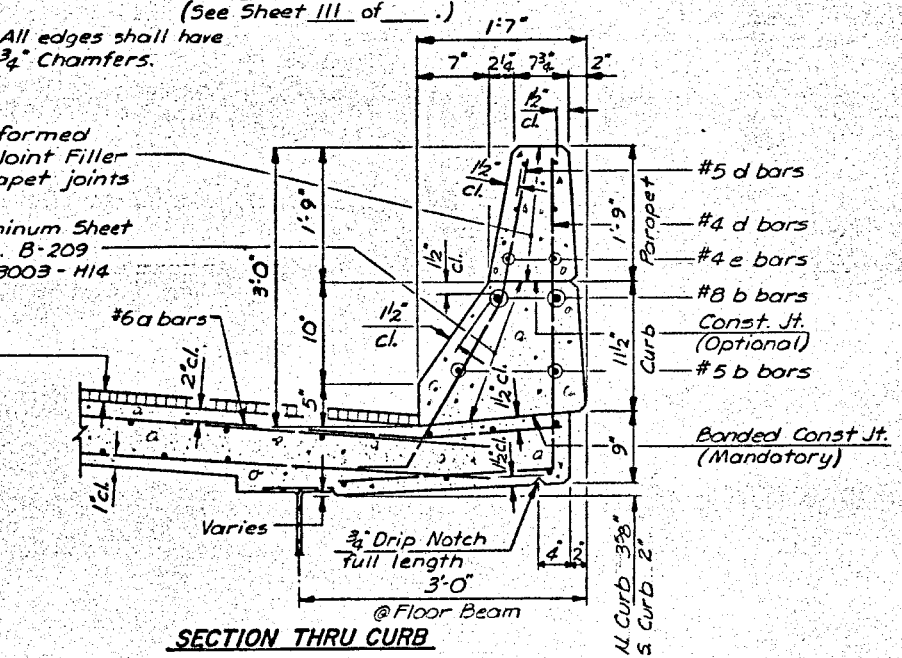
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



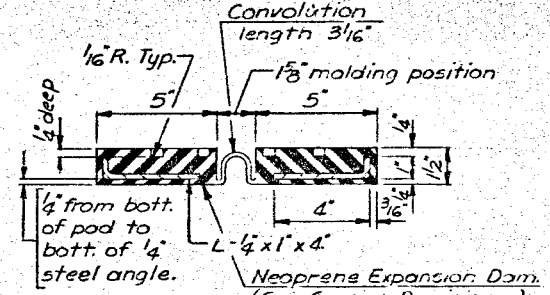
B - PARTIAL PLAN
Curb & Slab at Junction with Existing Bridge.)



SECTION D-D
(See Sheet 111 of ___.)

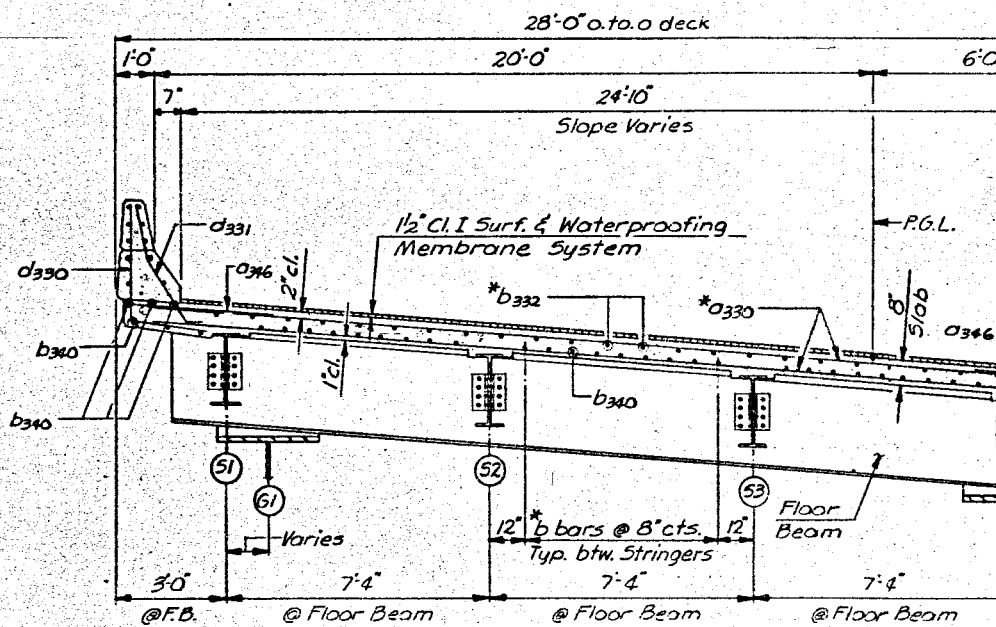


SECTION THRU CURB
Cost of Aluminum Sheets shall be incidental to Class X Concrete.

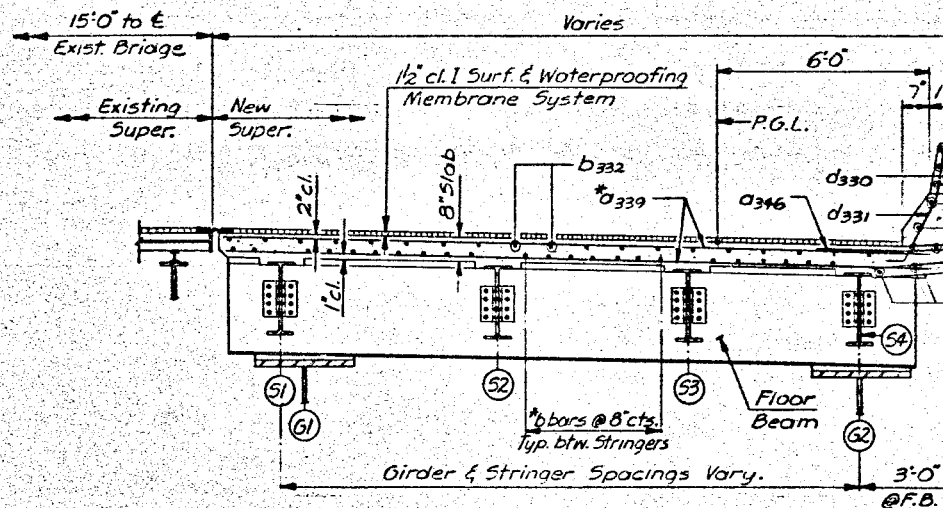


NEOPRENE EXPANSION DAM DETAILS

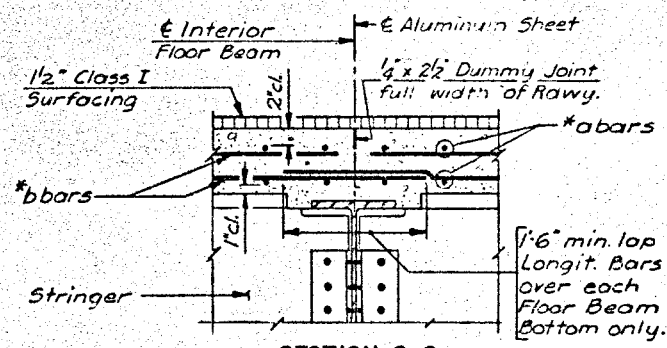
* - For bar, size, No. & spacing see "Table of Slab Reinf." on Sheet 114 of ___.



SECTION A-A
(Typ. at Floor Beams 111-115)



SECTION B-B
(Typ. at Floor Beams 116-137)



SECTION C-C
(See Sheet 111 of ___.)

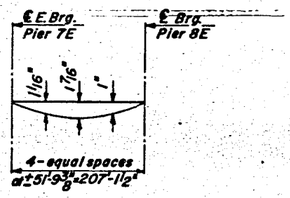
WOL
C.R.N.
D.A.N.
C.R.N.

FOR INFORMATIONAL PURPOSES ONLY-(SECTION A-A & SECTION B-B)

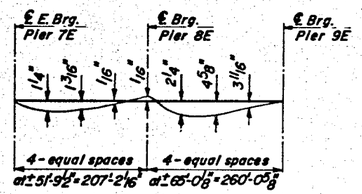
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA:49	15-D	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 108 of 134



GIRDER 1



GIRDER 2

DEAD LOAD DEFLECTION DIAGRAMS

Note: *The above deflections are not to be used in the field if the Engineer is working from The Theoretical Grade Elevations Adjusted for Dead Load Deflection (Elev. B) of the adjacent tables.*

Note: *Span 10E adjusted elevations include girder deflection plus additional adjustment due to rotation of pin connected floor beams.*

STRINGER 1

	STATION	ELEV. A	ELEV. B
F.B.-150	19+67.284	498.442	498.442
a	19+77.286	498.442	498.460
b	19+87.288	498.442	498.477
F.B.-151	19+93.289	498.442	498.488
c	20+03.291	498.442	498.503
d	20+13.293	498.442	498.518
F.B.-152	20+19.294	498.442	498.527
e	20+29.296	498.442	498.537
f	20+39.298	498.442	498.547
F.B.-153	20+45.300	498.442	498.553
g	20+55.302	498.442	498.557
h	20+65.304	498.442	498.561
F.B.-154	20+71.305	498.442	498.564
i	20+81.307	498.442	498.561
j	20+91.309	498.442	498.559
F.B.-155	20+97.310	498.442	498.557
k	21+07.312	498.442	498.549
l	21+17.314	498.442	498.541
F.B.-156	21+23.315	498.442	498.535
m	21+33.317	498.442	498.520
n	21+43.319	498.442	498.505
F.B.-157	21+49.320	498.442	498.496
o	21+59.322	498.442	498.475
p	21+69.324	498.442	498.454
F.B.-158	21+75.326	498.442	498.442
q	21+85.328	498.442	498.445
r	21+95.330	498.442	498.448
F.B.-159	22+01.331	498.442	498.450
s	22+11.333	498.442	498.458
t	22+21.335	498.442	498.466
F.B.-160	22+27.336	498.442	498.470
u	22+37.338	498.442	498.480
v	22+47.340	498.442	498.490
F.B.-161	22+53.341	498.442	498.495
w	22+63.343	498.442	498.505
x	22+73.345	498.442	498.515
F.B.-162	22+79.346	498.442	498.520
y	22+89.348	498.442	498.532
z	22+99.350	498.442	498.544
F.B.-163	23+05.352	498.442	498.550
a_1	23+15.354	498.442	498.567
b_1	23+25.356	498.442	498.584
F.B.-164	23+31.357	498.442	498.595
c_1	23+41.359	498.442	498.608
d_1	23+51.361	498.442	498.621
F.B.-165	23+57.362	498.442	498.630
e_1	23+67.364	498.442	498.626
f_1	23+77.366	498.442	498.622
F.B.-166	23+83.367	498.442	498.620
g_1	23+93.369	498.442	498.620
h_1	24+03.371	498.442	498.620
F.B.-167	24+09.372	498.442	498.620
i_1			
j_1			
F.B.-168			

STRINGER 2

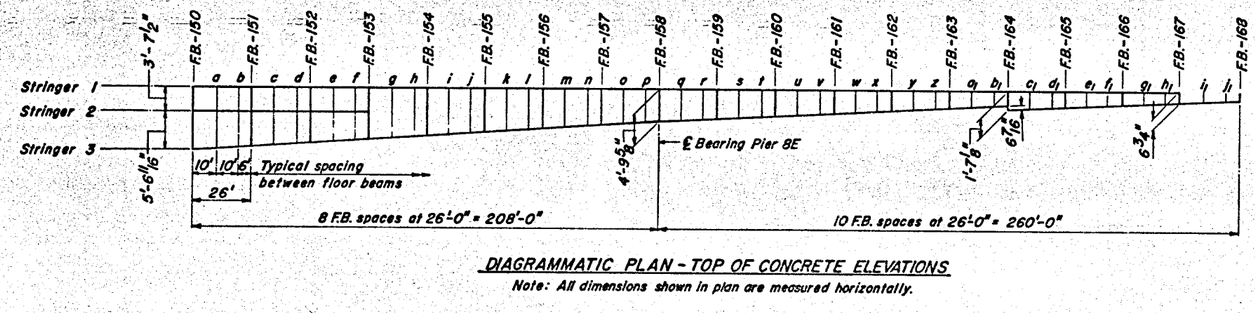
STATION	ELEV. A	ELEV. B
19+67.284	498.381	498.381
19+77.286	498.381	498.402
19+87.288	498.381	498.423
19+93.289	498.381	498.435
20+03.291	498.381	498.451
20+13.293	498.381	498.467
20+19.294	498.381	498.476
20+29.296	498.381	498.484
20+39.298	498.381	498.492
20+45.300	498.381	498.496

STRINGER 3

STATION	ELEV. A	ELEV. B
19+67.284	498.288	498.288
19+77.286	498.291	498.316
19+87.288	498.295	498.344
19+93.289	498.297	498.361
20+03.291	498.300	498.381
20+13.293	498.304	498.401
20+19.294	498.306	498.413
20+29.296	498.309	498.421
20+39.298	498.313	498.429
20+45.300	498.315	498.435
20+55.302	498.318	498.430
20+65.304	498.322	498.425
20+71.305	498.324	498.423
20+81.307	498.328	498.410
20+91.309	498.331	498.397
20+97.310	498.333	498.388
21+07.312	498.337	498.373
21+17.314	498.340	498.358
21+23.315	498.342	498.350
21+38.317	498.346	498.343
21+43.319	498.350	498.336
21+49.320	498.352	498.333
21+59.322	498.355	498.341
21+69.324	498.359	498.349
21+75.326	498.361	498.355
21+85.328	498.364	498.380
21+95.330	498.368	498.405
22+01.331	498.370	498.420
22+11.333	498.373	498.455
22+21.335	498.377	498.490
22+27.336	498.379	498.510
22+37.338	498.382	498.556
22+47.340	498.386	498.602
22+53.341	498.388	498.630
22+63.343	498.391	498.669
22+73.345	498.395	498.708
22+79.346	498.397	498.730
22+89.348	498.400	498.761
22+99.350	498.404	498.792
23+05.352	498.406	498.810
23+15.354	498.409	498.841
23+25.356	498.412	498.872
23+31.357	498.414	498.980
23+41.359	498.409	498.997
23+51.361	498.412	499.014
23+57.362	498.414	499.025
23+67.364	498.418	498.958
23+77.366	498.421	498.891
23+83.367	498.423	498.850
23+93.369	498.426	498.819
24+03.371	498.430	498.788
24+09.372	498.432	498.770
24+19.374	498.435	498.643
24+29.376	498.438	498.516
24+35.390	498.440	498.440

ELEVATIONS - TOP OF CONCRETE

ELEV A = THEORETICAL GRADE ELEVATIONS
ELEV B = THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION



N

DIAGRAMMATIC PLAN - TOP OF CONCRETE ELEVATIONS

Note: All dimensions shown in plan are measured horizontally.

NOTES:

F.B's. 150 thru 168 & points a thru j_1 have been adjusted for individual stringer stationing. Stations shown are stations of the intersection of F.B's. & section lines with the profile grade line.

See Sheet 68 for Method of Determining Fillet Heights.

TOP OF SLAB ELEVATIONS
RAMP E - SPANS 9E & 10E

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

DESIGNED W.D.L.
CHECKED S.C.A.
DRAWN D.A.N.
CHECKED W.D.L.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

FILE NO. 74001
DATE 11-2-79

FOR INFORMATIONAL PURPOSES ONLY.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GIRDER 1

	STATION	ELEV. A	ELEV. B
Bearing Pier 2A	199+48.000	502.523	502.523
a	199+58.000	502.481	502.501
b	199+68.000	502.441	502.477
c	199+78.000	502.375	502.423
d	199+88.000	502.284	502.339
e	199+98.000	502.192	502.248
f	200+08.000	502.085	502.137
g	200+18.000	501.957	501.999
h	200+28.000	501.828	501.858
i	200+38.000	501.658	501.674
j	200+48.000	501.457	501.462
k	200+58.000	501.193	501.193
Bearing Pier 3			
l	200+66.000	500.806	500.806
	200+71.000	500.383	500.383

GIRDER 2

STATION	ELEV. A	ELEV. B
199+48.000	502.713	502.713
199+58.000	502.713	502.742
199+68.000	502.711	502.765
199+78.000	502.635	502.708
199+88.000	502.512	502.597
199+98.000	502.386	502.473
200+08.000	502.254	502.336
200+18.000	502.090	502.160
200+28.000	501.913	501.965
200+38.000	501.635	501.667
200+48.000	501.288	501.302
200+58.000	501.961	500.964
200+66.000	500.735	500.735
200+71.000	500.378	500.379

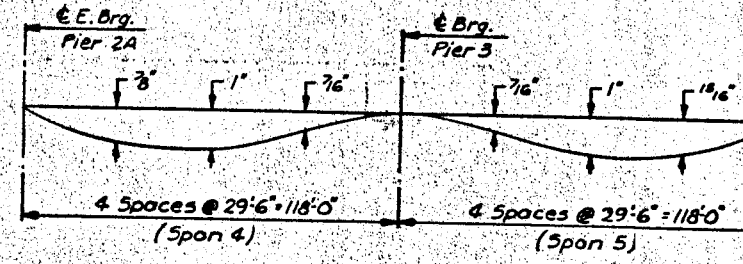
GIRDER 3

	STATION	ELEV. A	ELEV. B
℄ East Bearing Pier 2A	199+48.000	502.892	502.892
a	199+58.000	502.931	502.960
b	199+68.000	502.965	503.019
c	199+78.000	502.872	502.945
d	199+88.000	502.681	502.766
e	199+98.000	502.489	502.576
f	200+08.000	502.225	502.307
g	200+18.000	501.882	501.952
g'	200+24.500	501.428	501.489

ns used above are
ng bridge stations.

TOP OF CONCRETE ELEVATIONS

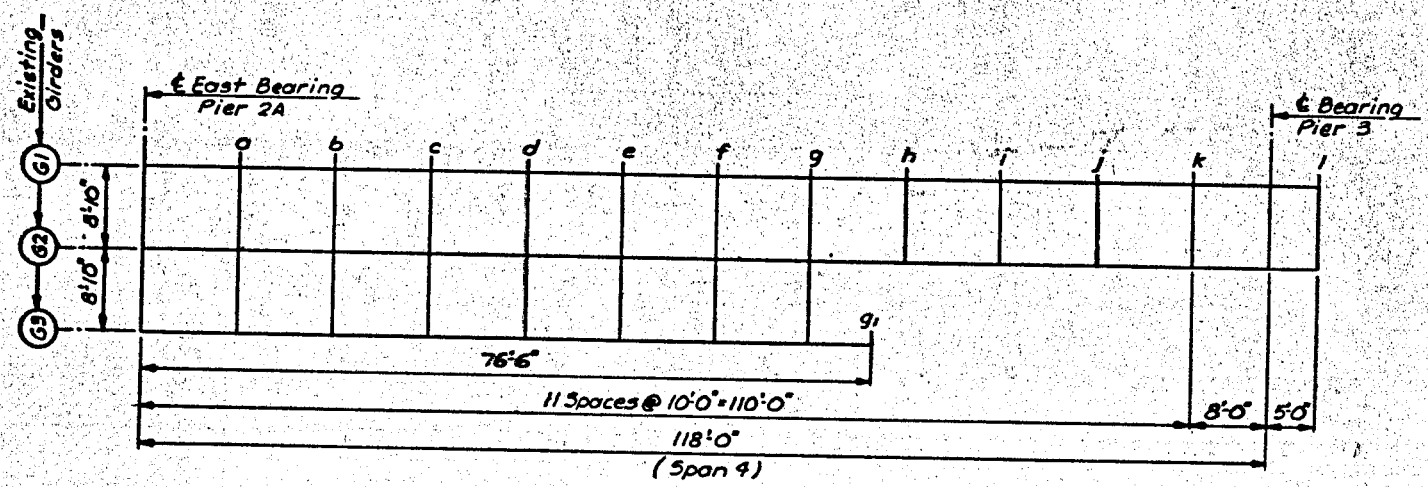
ELEV A = THEORETICAL GRADE ELEVATIONS
ELEV B = THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION



DEAD LOAD DEFLECTION DIAGRAM

(Includes Weight of Concrete Slab & Cl. I)

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 (Elev. B) as shown in table of Top of Concrete Elevations.



DIAGRAMMATIC PLAN



See Shee
Fillet Height

TO
F.A. ROU
PEOR
S.C.O.
C.R.N.
D.A.N.
S.C.O.

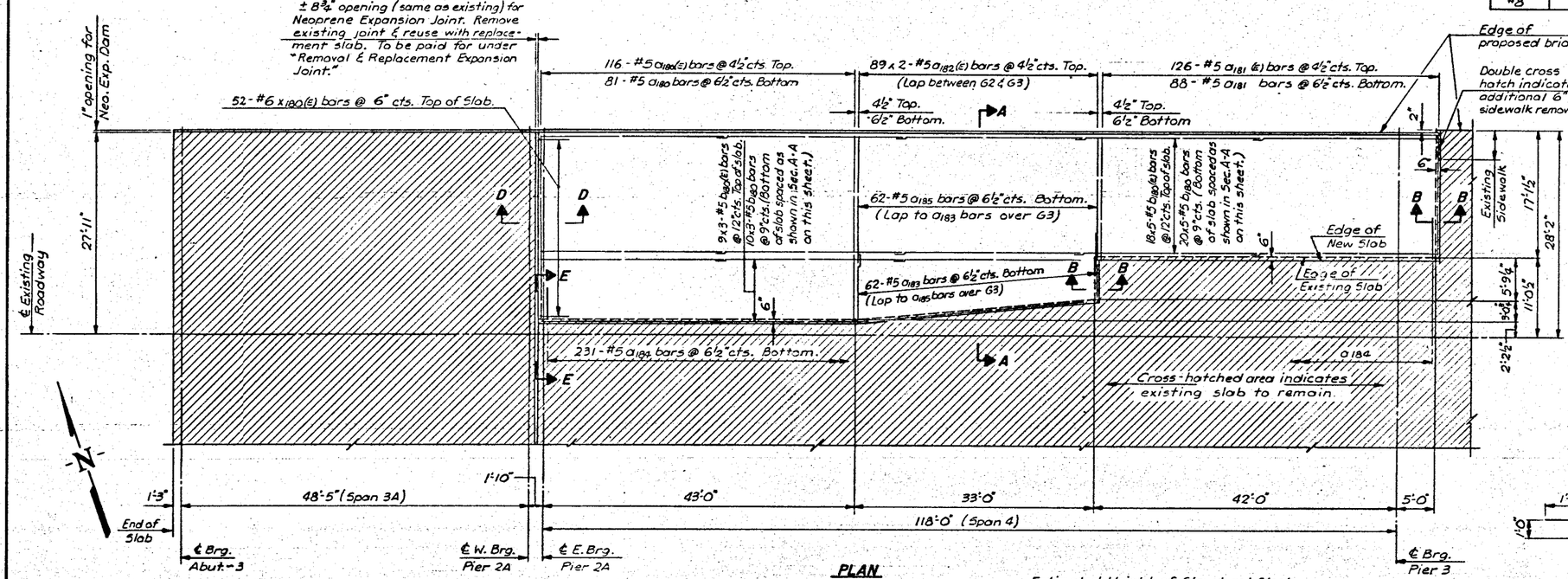
FOR INFORMATIONAL PURPOSES ONLY.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.49	15-D	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 110 of 134

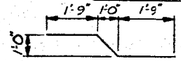
Bar Size	Minimum Lap Distance
#4,5,&6	1'-6"
#8	2'-4"

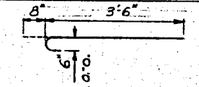


BILL OF MATERIAL
EXISTING SPANS 3A, 48S

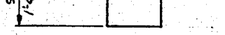
BAR	NO.	BAR	NO.	SIZE	LENGTH	SHAPE
a180(E)	116	a180	81	#5	25'-10"	
a181(E)	126	a181	88	#5	17'-0"	
a182(E)	178			#5	13'-8"	
		a183	62	#5	7'-9"	
		a184	231	#5	4'-11"	
		a185	62	#5	19'-8"	
b180(E)	117	b180	130	#5	26'-2"	
		b181	20	#5	23'-10"	
		b182	6	#5	23'-2"	
		s180	35	#5	6'-0"	
		s181	31	#5	5'-0"	
		s182	132	#5	7'-2"	
		s183	74	#5	6'-2"	
x180(E)	52			#6	4'-2"	

Class X Concrete	Cu.Yds.	96.0
Reinforcement Bars	Lbs.	12,733.8
Reinforcement Bars (Epoxy Coated)	Lbs.	11,415.5
Neoprene Expansion Joint -- Dam	Lin. Ft.	175.0
Rem. & Repl. Expan. Jt.	Lin. Ft.	27.0
Structural Steel	Lump Sum	
Concrete Removal	Cu.Yds.	79.7
Blast Plate Removal	Lump Sum	





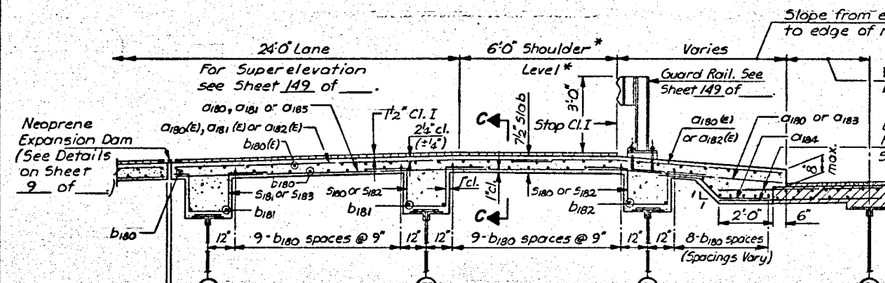
BAR a184

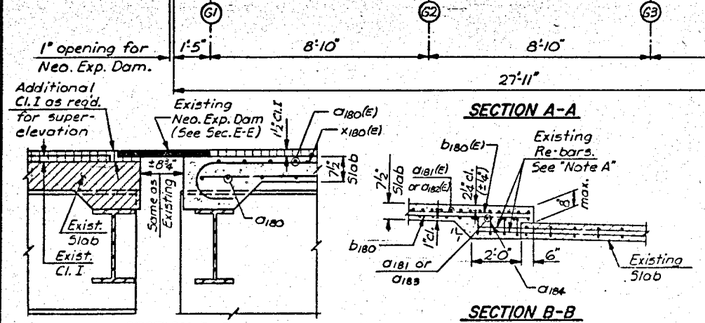


BAR x180(E)



PLAN

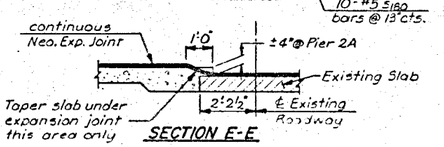




SECTION D-D

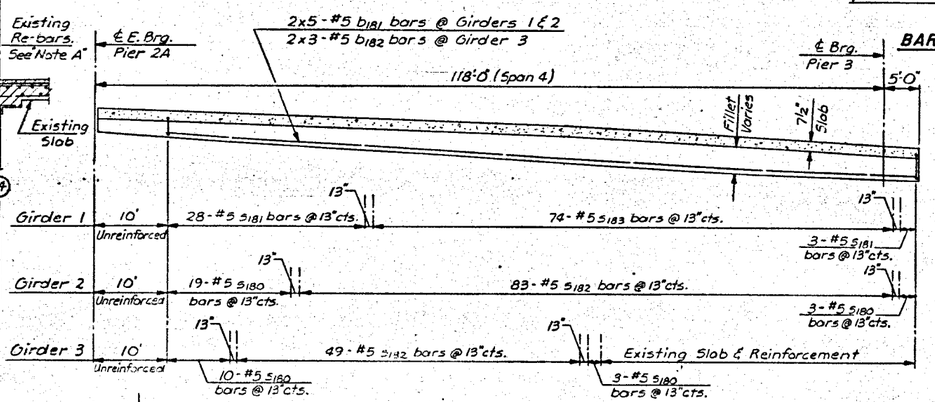
SECTION B-B

SECTION A-A



SECTION E-E

Estimated Weight of Structural Steel:
M 183 (A-36) 12,970 Lbs.



SECTION C-C
(Showing Reinforcement of Fillets above Girders 1, 2 & 3)

BARS s180 & s182

BARS s181 & s183

Notes:
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Reinforcement bars designoted (E) shall be epoxy coated. See Special Provisions.
* = For limits of shoulder transition & for shoulder superelevation see Sheet 149 of ___.
"Note A": Leave 1'-10" extension length on existing reinforcement bars and clean for reimbedment.

SUPERSTRUCTURE
EXISTING SPANS 3A, 48S

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15-D
PEORIA & TAZEWELL COUNTIES

DESIGNED WDL
CHECKED S.C.O
DRAWN D.A.N.
CHECKED S.C.O.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

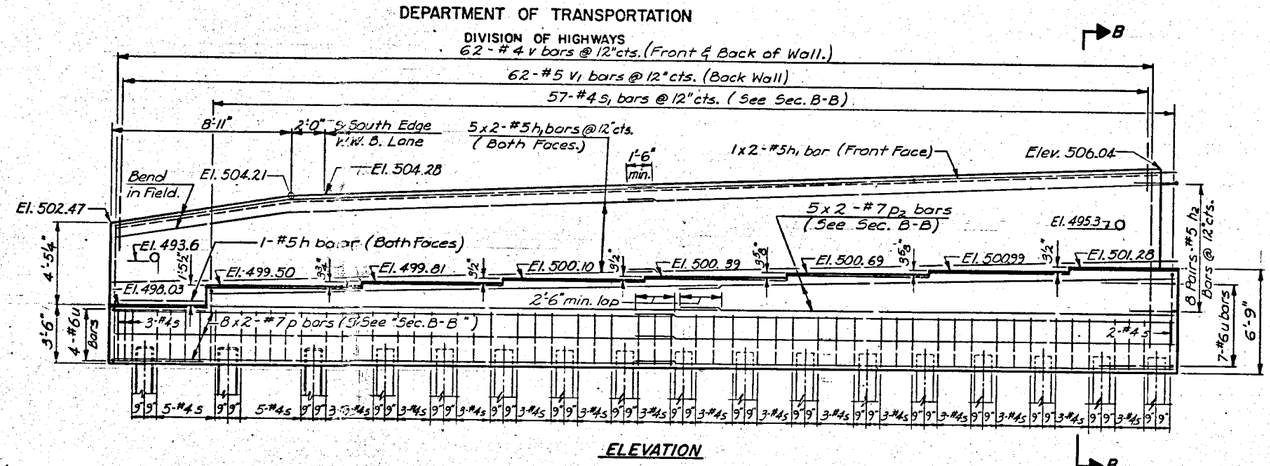
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DATE 11-2-79

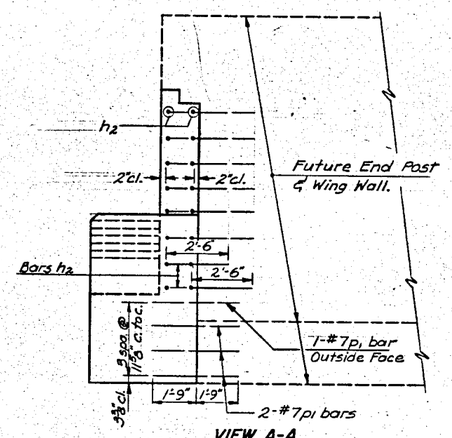
FOR INFORMATIONAL PURPOSES ONLY-(SECTION A-A)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

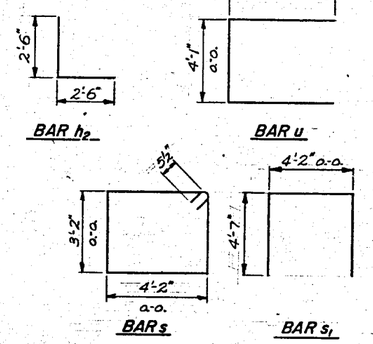
ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15B-2	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

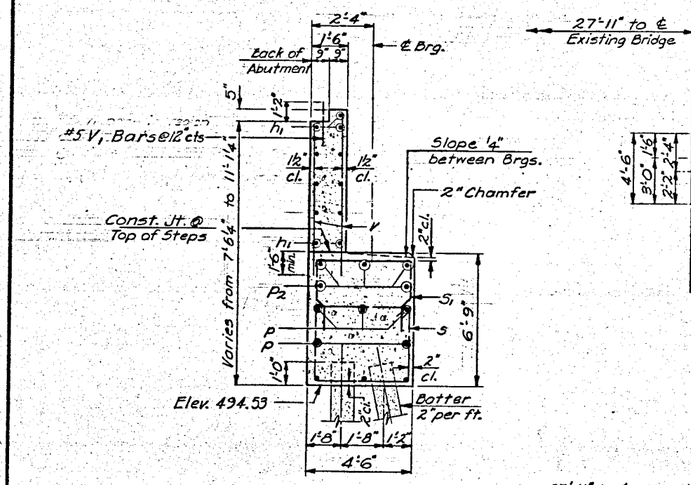
Sheet 111 of 134



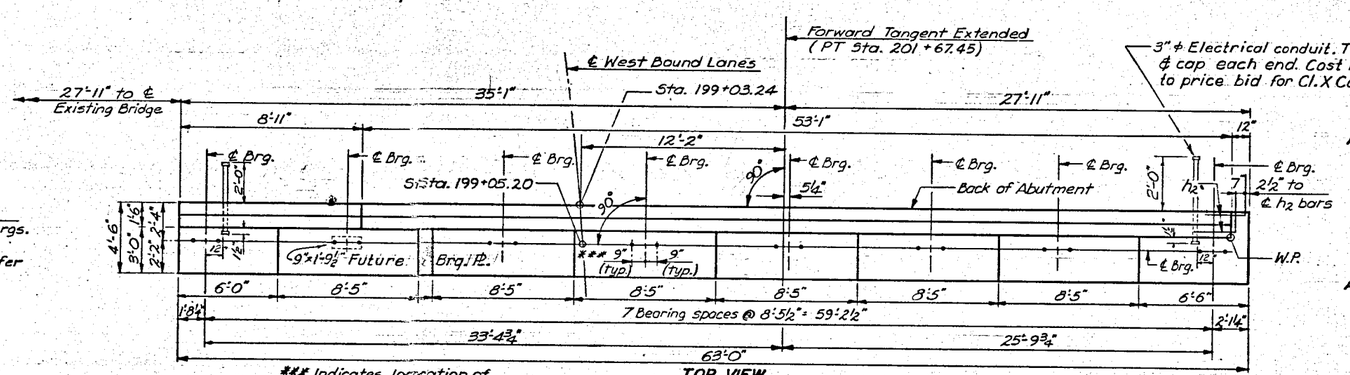


VIEW A-A





SECTION B-B



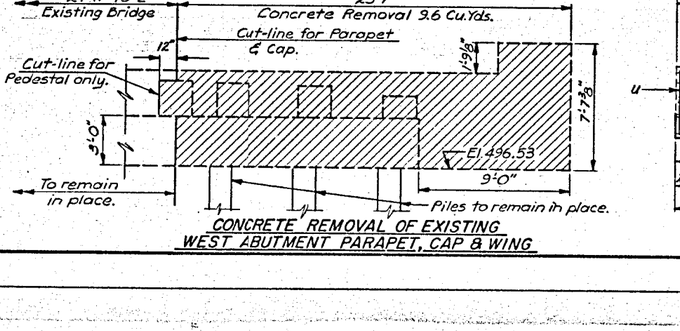
*** Indicates location of future Anchor Bolts.

TOP VIEW

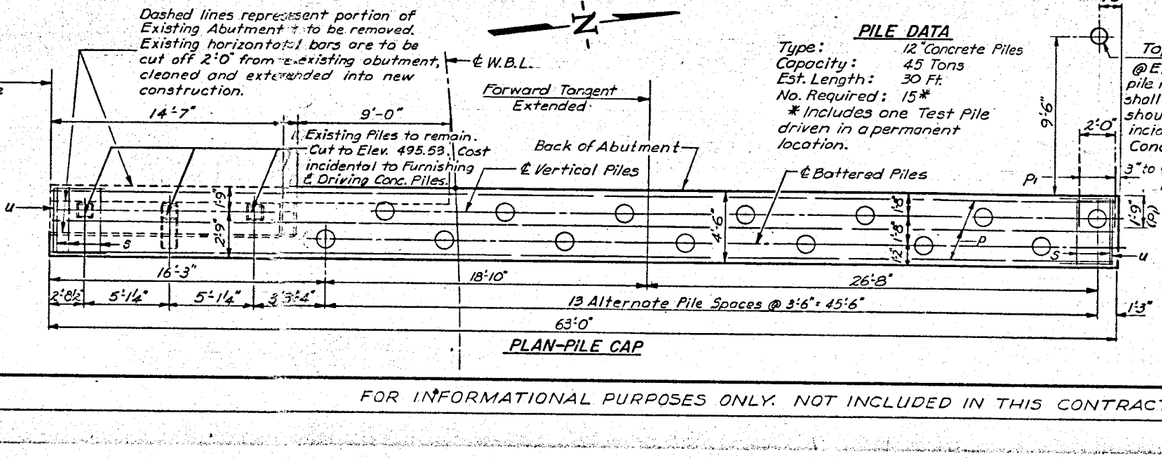
3" ℄ Electrical conduit. Thread & cap each end. Cost incidental to price bid for Cl. X Concrete.

A

Note: See Sheet 18 for Steel Sheet Piling.

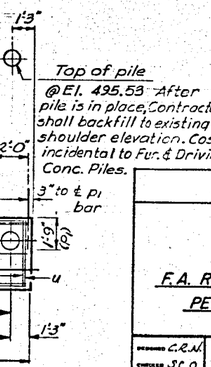


CONCRETE REMOVAL OF EXISTING WEST ABUTMENT PARAPET, CAP & WING



PLAN-PILE CAP

PILE DATA
Type: 12" Concrete Piles
Capacity: 45 Tons
Est. Length: 30 Ft.
No. Required: 15*
* Includes one Test Pile driven in a permanent location.



WEST ABUTMENT
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	2	#5	5'-6"	
h1	22	#5	32'-0"	
h2	16	#5	5'-0"	L
p	16	#7	32'-6"	
p1	7	#7	3'-6"	
p2	10	#7	29'-6"	
s	57	#4	15'-7"	
s1	57	#4	13'-4"	
u	11	#6	13'-1"	
v	124	#4	6'-0"	
v1	62	#5	2'-8"	
Test Pile 12" Conc.		Each	1	
Class X Concrete		Cu. Yds.	74.4	
Reinforcement Bars		Lbs.	4,530	
Concrete Piles 12"		Lin. Ft.	420	
Structure Excavation		Cu. Yds.	152	
Concrete Removal		Cu. Yds.	9.6	
Steel Sheet Piling		Sq. Ft.	1,482	

WEST ABUTMENT

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15 B-2
PEORIA & TAZEWELL COUNTIES

DESIGNED C.R.M.
CHECKED S.C.A.
DRAWN D.A.N.
CHECKED C.R.M.

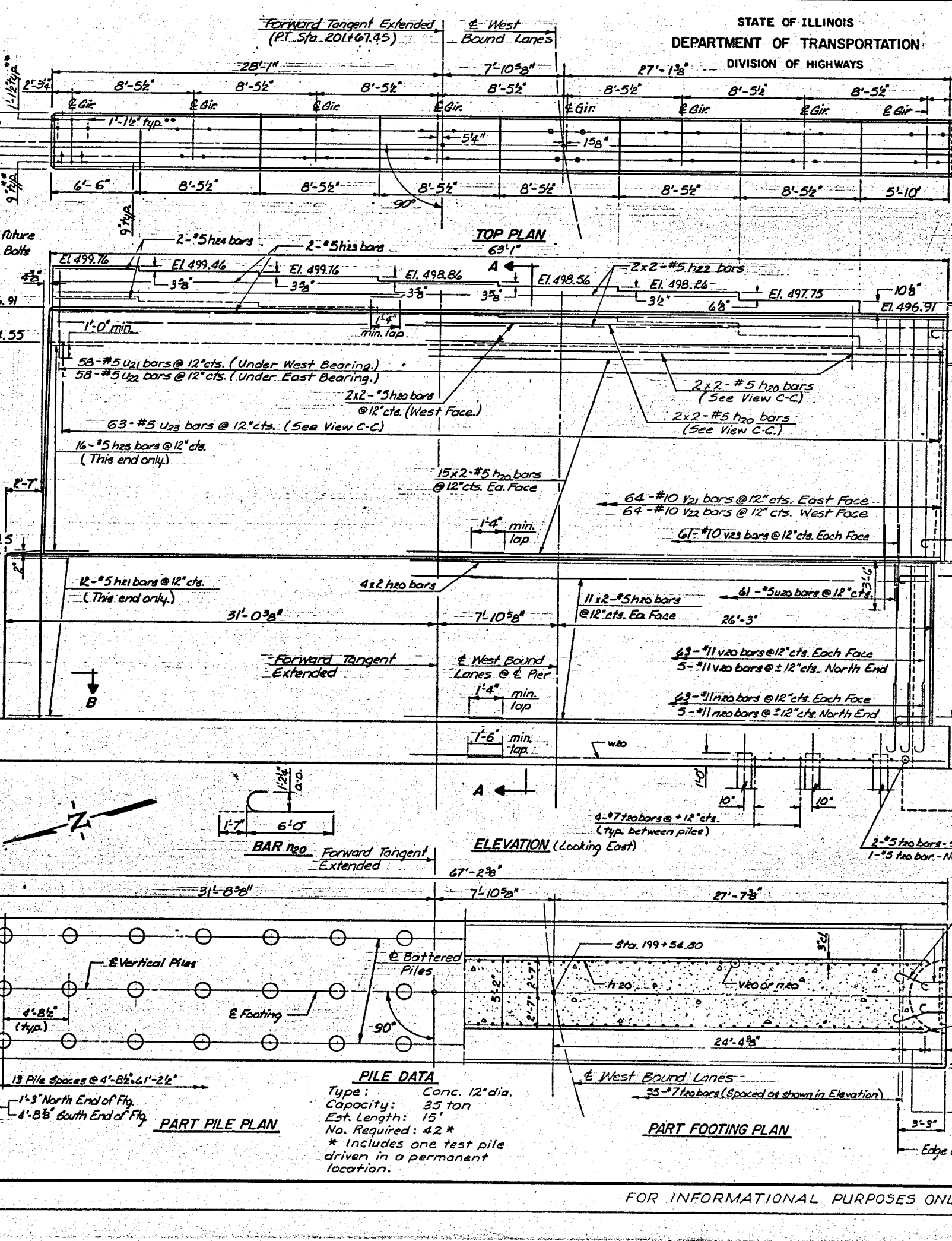
HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

74001

6-22-76

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



DESIGNED	C.R.M.
CHECKED	S.C.O.
DRAWN	R.J.E.
CHECKED	S.C.O.

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15B-2	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 113 of 134

TOP PLAN

ELEVATION (Looking East)

HALF PILE PLAN

HALF FOOTING PLAN

SECTION A-A

SECTION B-B

BARS u_{30}, u_{31} & u_{32}

BAR h31

BAR n30

BAR h33

PLAN AT END OF EXISTING PIER

PILE DATA

Type	Conc. 12" dia.
Capacity	45 ton
Est. Length	25'
No. Required	75 *

*Includes one test pile driven in a permanent location.

PIER 3
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h30	250	#5	25'-10"	
h31	12	#5	8'-2"	
h32	6	#5	29'-0"	
h33	19	#5	5'-6"	
h34	6	#5	23'-4"	
n30	201	#10	7'-9"	
t30	101	#9	8'-10"	
u30	98	#5	6'-7"	
u31	93	#5	10'-10"	
u32	99	#5	5'-7"	
v30	201	#10	11'-3"	
v31	201	#9	19'-0"	
v32	199	#9	5'-3"	
w30	24	⅝	34'-9"	
Class A Concrete		Cu. Yd.	504.9	
Reinforcement Bars		Lbs.	46,830	
Conc. Piles 12" Dia.		Lin. Ft.	1850	
Test Pile 12" Conc.		Each	1	
Struc. Excavation		Cu. Yd.	400	
Expansion Bolts ⅞ ϕ		Each	16	

PIER 3
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-2
PEORIA & TAZEWELL COUNTIES

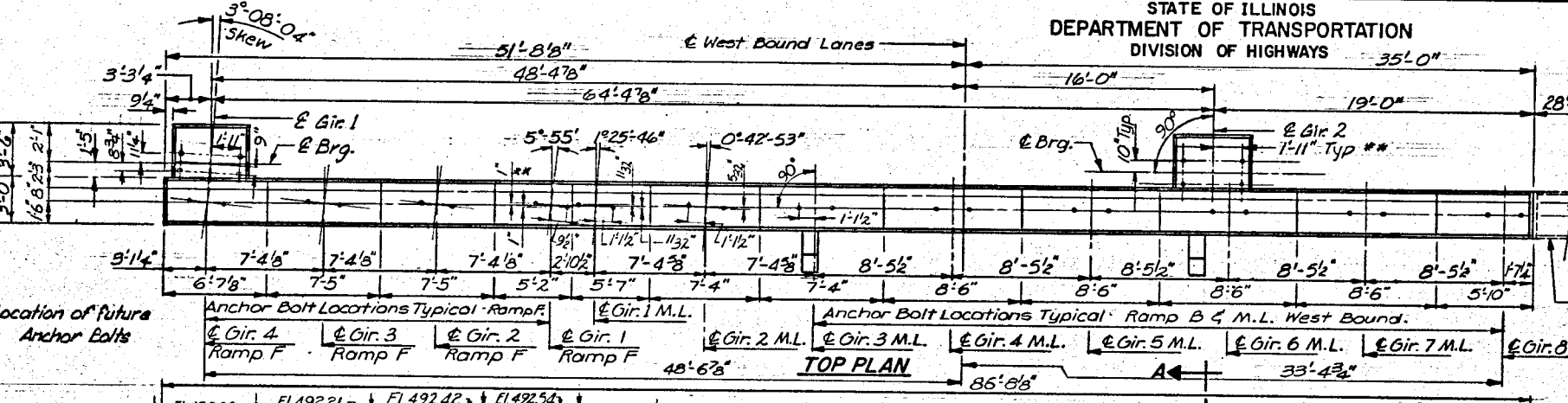
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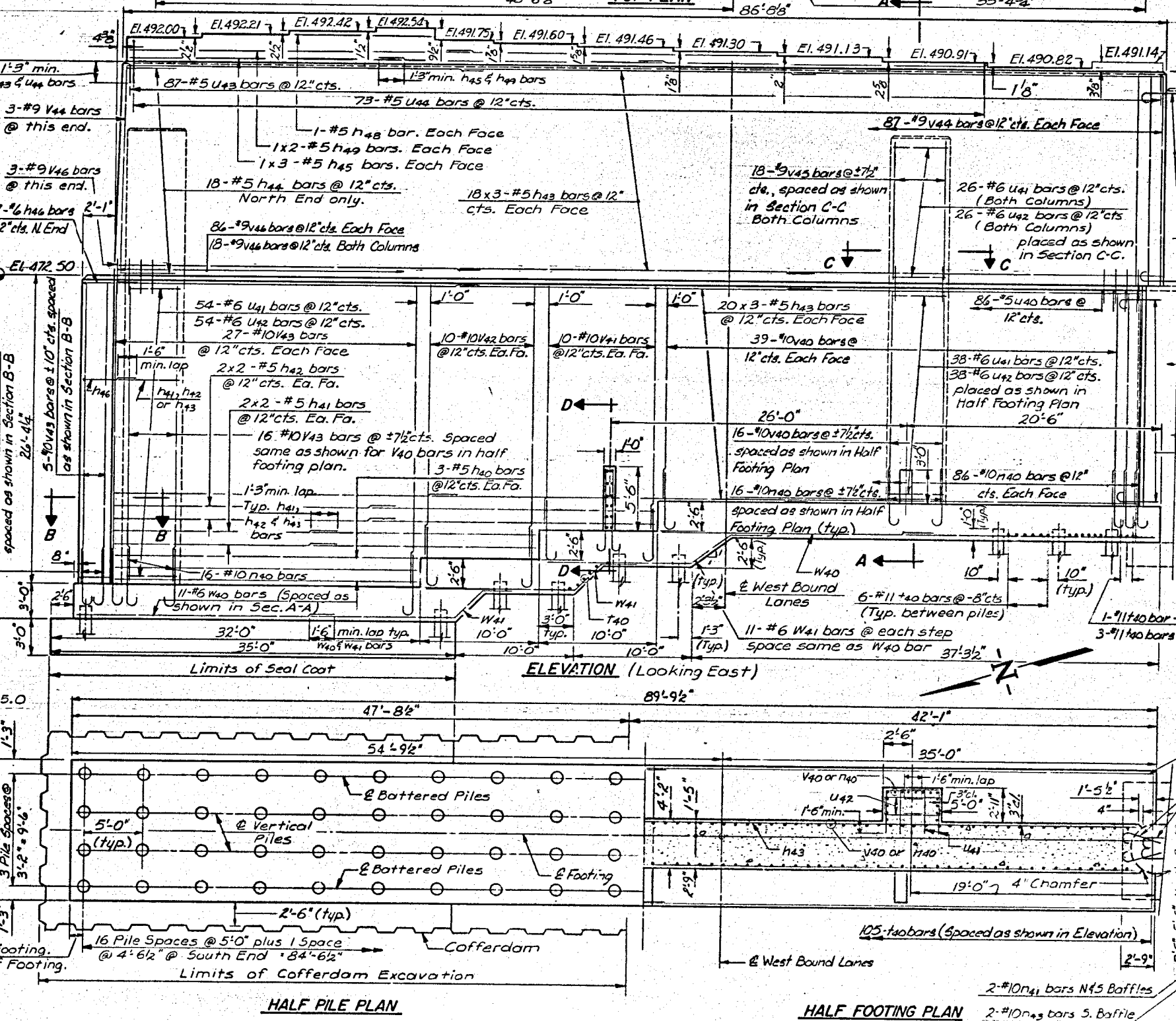
HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

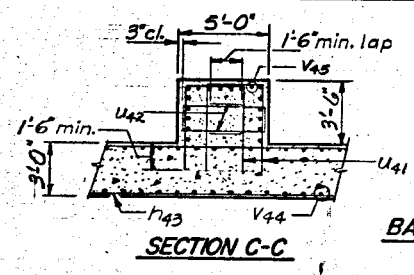
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DATE 6-22-76

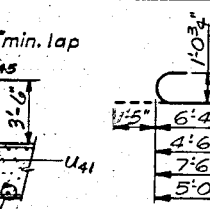
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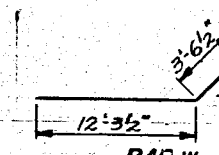
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



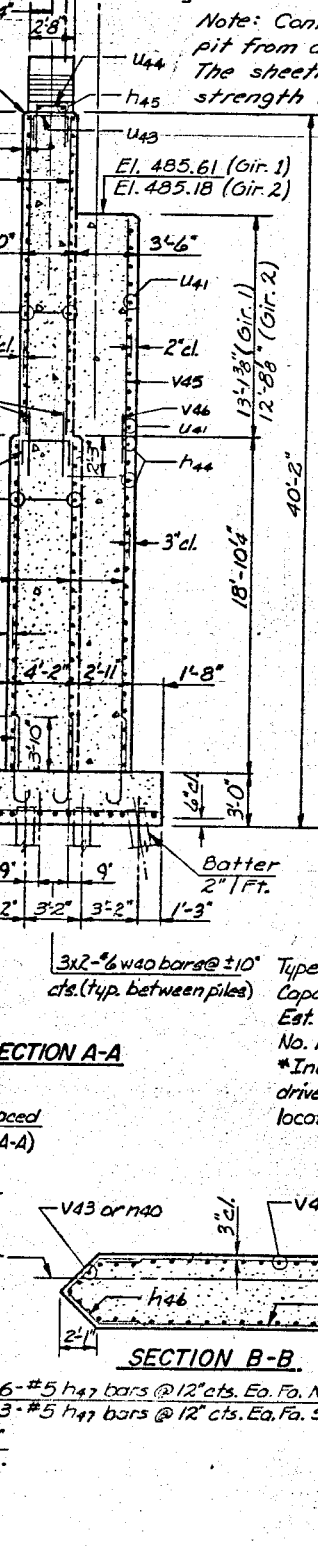


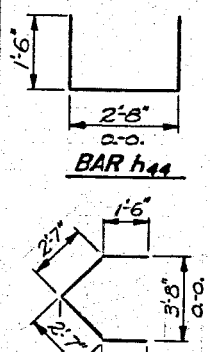






Note: Contr. shall design pit from all foreign mate... The sheeting shall be of... strength to protect exca... from construc... methods and e... See Special Prov...

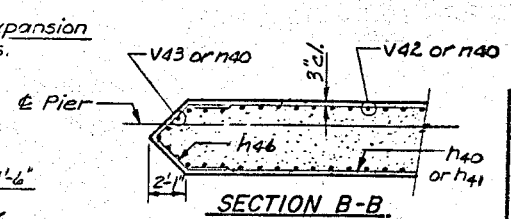




PILE DATA

Type	Conc. 12"ø
Capacity	45 ton
Est. Length	35'
No. Required	72*

*Includes one test pile driven in a permanent location.



6-#5 h47 bars @ 12" cts. Ea. Fa. N. Baffle.
3-#5 h47 bars @ 12" cts. Ea. Fa. S. Baffle.

F.A.

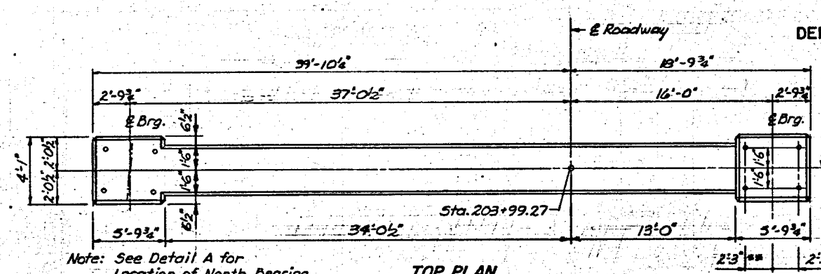
DESIGNED S.C.
CHECKED W.E.B.
DRAWN R.J.E.
CHECKED W.E.B.

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

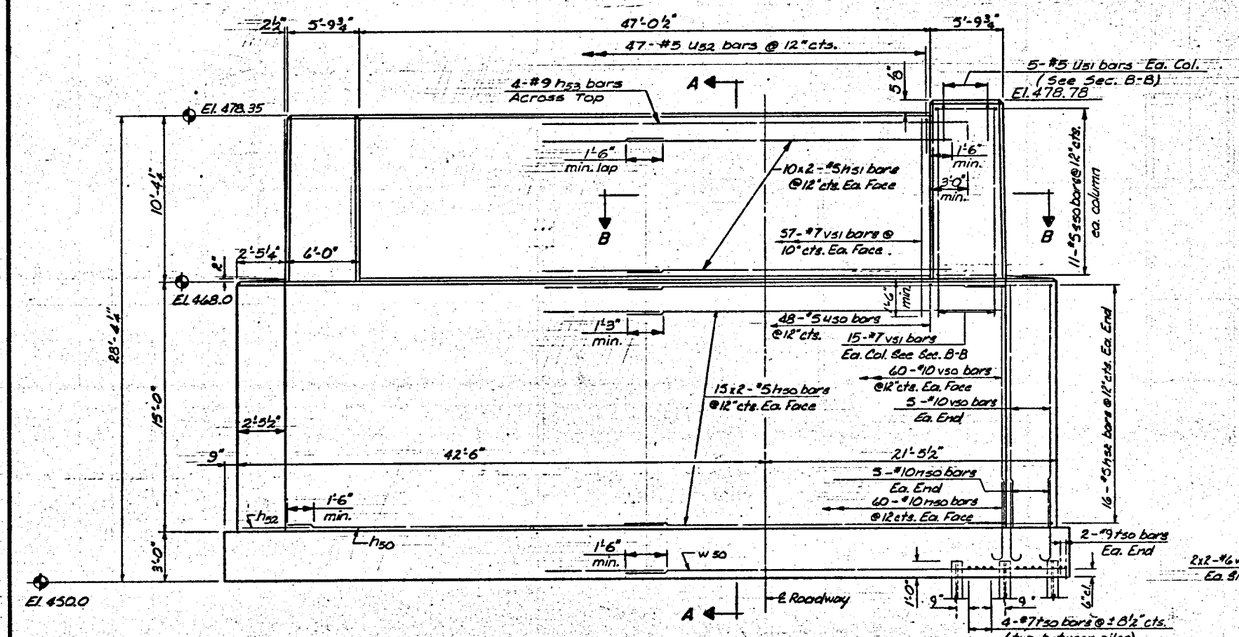
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 49	15B-2	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

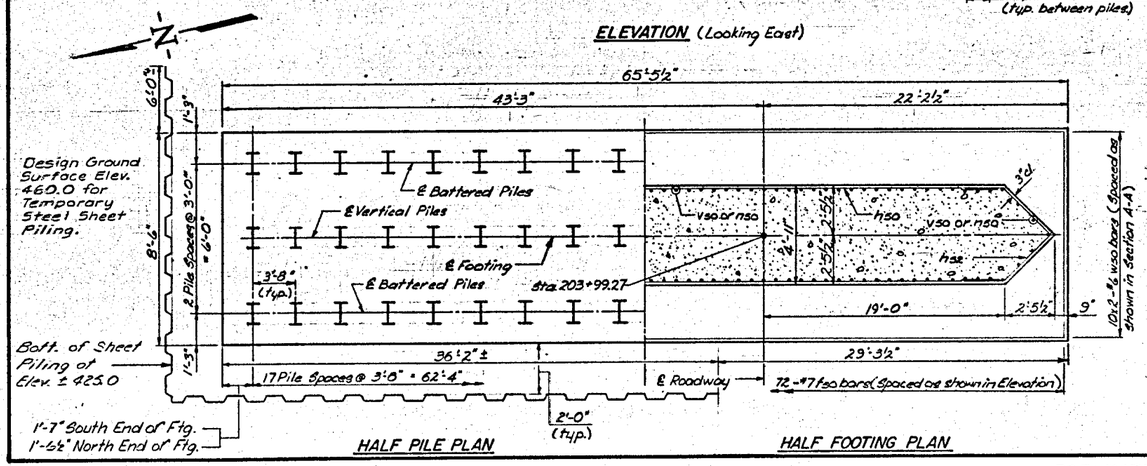
Sheet 115 of 134



TOP PLAN

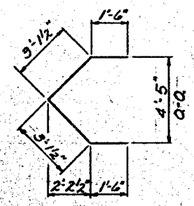


ELEVATION (Looking East)

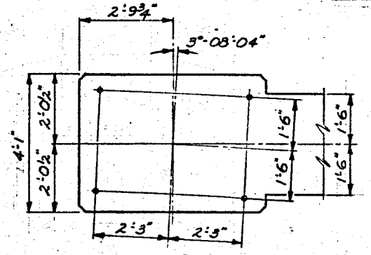


HALF PILE PLAN

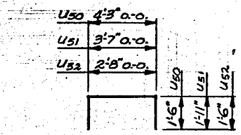
HALF FOOTING PLAN



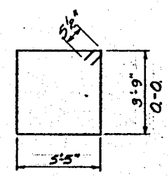
BAR hs2



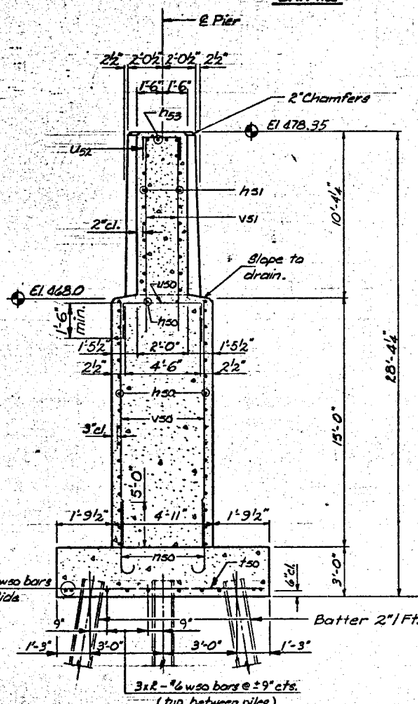
DETAIL A



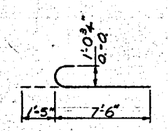
BARS Us0, Us1 & Us2



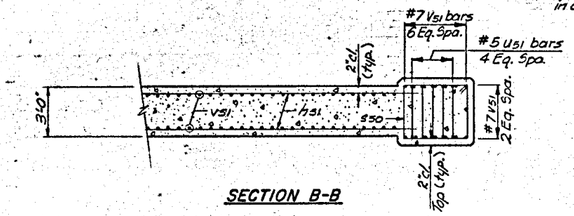
BAR s50



SECTION A-A



BAR n50



SECTION B-B

Note:
Contractor shall design sheet piling to protect infiltration pit from all foreign material present during construction of pier. The sheeting shall be of sufficient strength to protect excavation from construction methods and equipment. See Special Provisions.

PILE DATA

Type	HP 12 x 53
Capacity	Drive to Refusal
Est. Length	58'
No. Required	54*

*Includes one test pile driven in a permanent location.

PIER 5
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
hs0	68	#5	30'-2"	——
hs1	40	#5	25'-9"	——
hs2	32	#5	9'-3"	⊂
hs3	4	#9	53'-0"	——
ns0	130	#10	8'-11"	⊂
s50	22	#5	19'-3"	□
ts0	72	#7	8'-0"	——
us0	48	#5	7'-3"	▭
Us1	10	#5	7'-5"	▭
Us2	47	#5	5'-8"	▭
vs0	130	#10	14'-9"	——
vs1	144	#7	12'-0"	——
ws0	20	#6	33'-5"	——

Class A Concrete	Cu. Yds.	302.6
Reinforcement Bars	Lbs.	24,360
Steel Piles HP12 x 53	Lin. Ft.	3,074
Test Pile HP12 x 53	Each	1
Struct. Exc.	Cu. Yds.	273
Temporary Steel Sheet Piling.	Sq. Ft.	1,950

PIER 5

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-2
PEORIA & TAZEWELL COUNTIES

DESIGNED BCD.
CHECKED WEB.
DRAWN RJF
CHECKED BCD.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

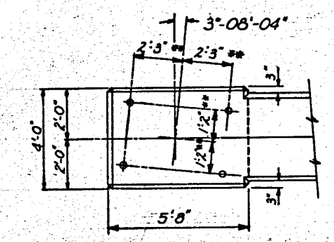
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DATE 6-22-76

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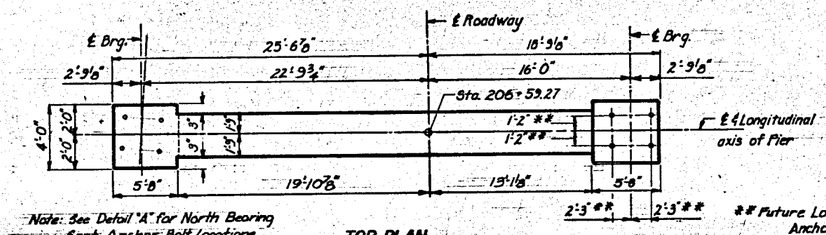
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SURVEY NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15B-2	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 116 of 134



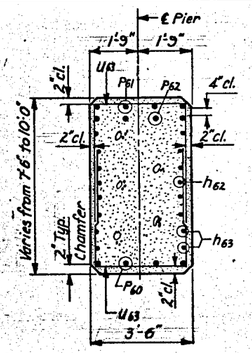
DETAIL "A"



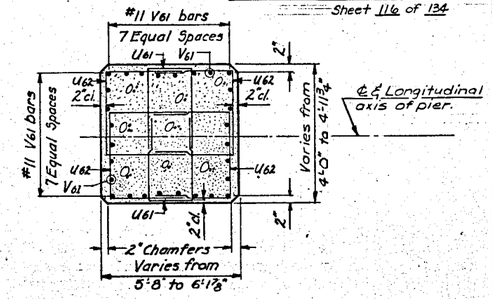
Note: See Detail "A" for North Bearing Seat Anchor Bolt Locations.

** Future Location of Anchor Bolts.

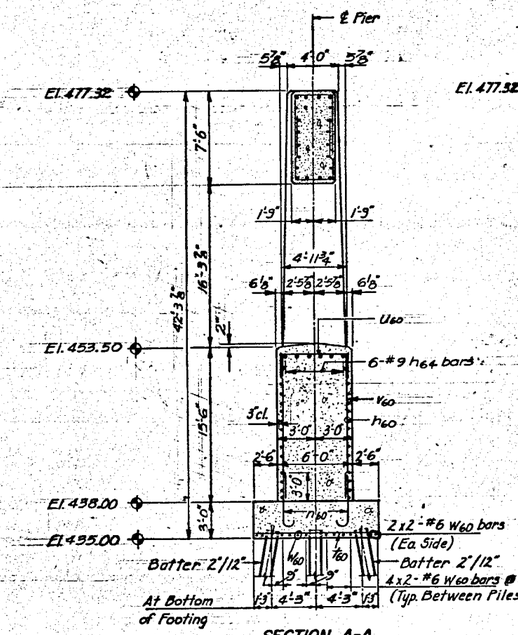
TOP PLAN



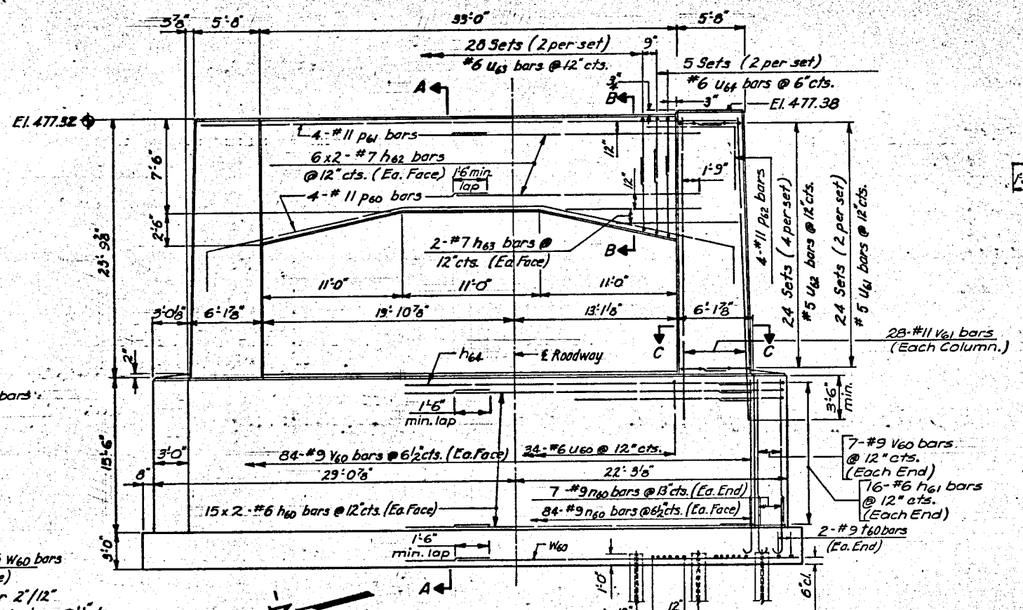
SECTION B-B



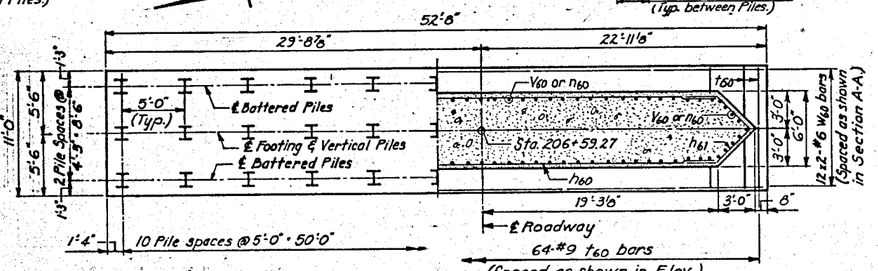
SECTION C-C



SECTION A-A

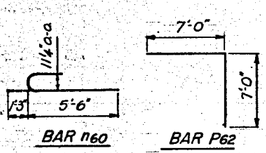


ELEVATION (Looking East)



HALF PILE PLAN

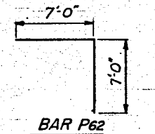
HALF FOOTING PLAN



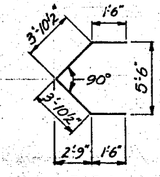
BAR P60



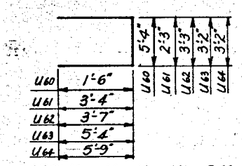
BAR n60



BAR P62



BAR h61



BARS U60, U61, U62, U63 & U64

PIER 6
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h60	60	#6	28'-5"	
h61	32	#6	10'-9"	
h62	24	#7	19'-0"	
h63	8	#7	11'-0"	
h64	6	#9	45'-4"	
n60	182	#9	6'-9"	
P60	4	#11	48'-8"	
P61	4	#11	43'-4"	
P62	8	#11	14'-0"	
T60	64	#9	10'-6"	
U60	34	#6	8'-4"	
U61	96	#5	8'-11"	
U62	192	#5	10'-5"	
U63	56	#6	13'-10"	
U64	20	#6	14'-8"	
V60	182	#9	15'-3"	
V61	56	#11	27'-0"	
W60	24	#6	27'-0"	
Class A Concrete		Cu. Yds.	313.1	
Reinforcement Bars		Lbs.	37,130	
Steel Piles HP 10x57		Lin. Ft.	1,568	
Test Pile HP 10x57		Each	1	
Cofferdam Excav.		Cu. Yds.	189	
Cofferdam		Each	One	

PILE DATA

Type	Steel HP 10 x 57
Capacity	Drive to refusal.
Est. Length	49'-0"
No. Required	33 *

* Includes one test pile driven in a permanent position.

PIER 6

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-2
PEORIA & TAZEWELL COUNTIES

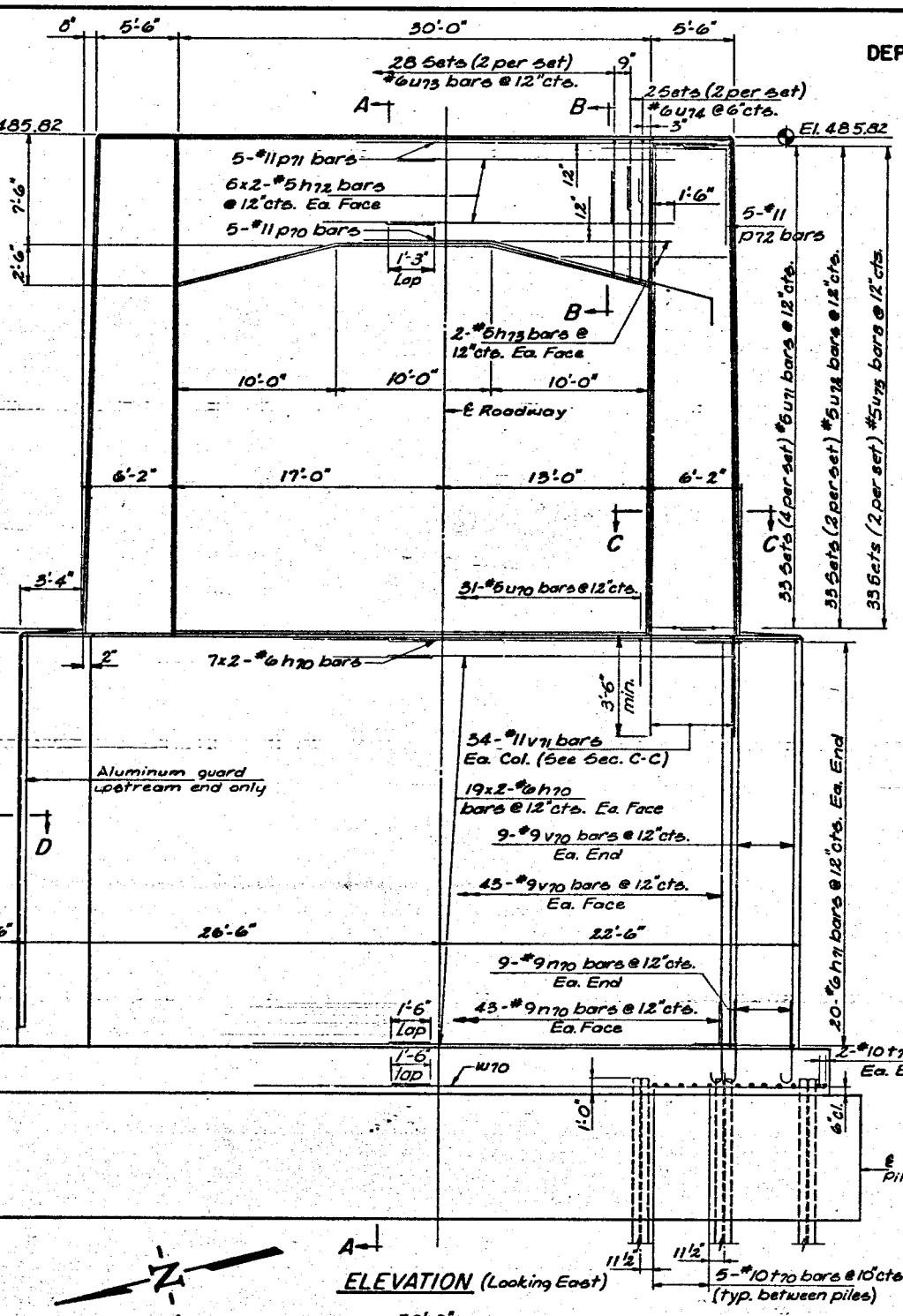
DESIGNED SCO
CHECKED WEB
DRAWN DAN
CHECKED CRN

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

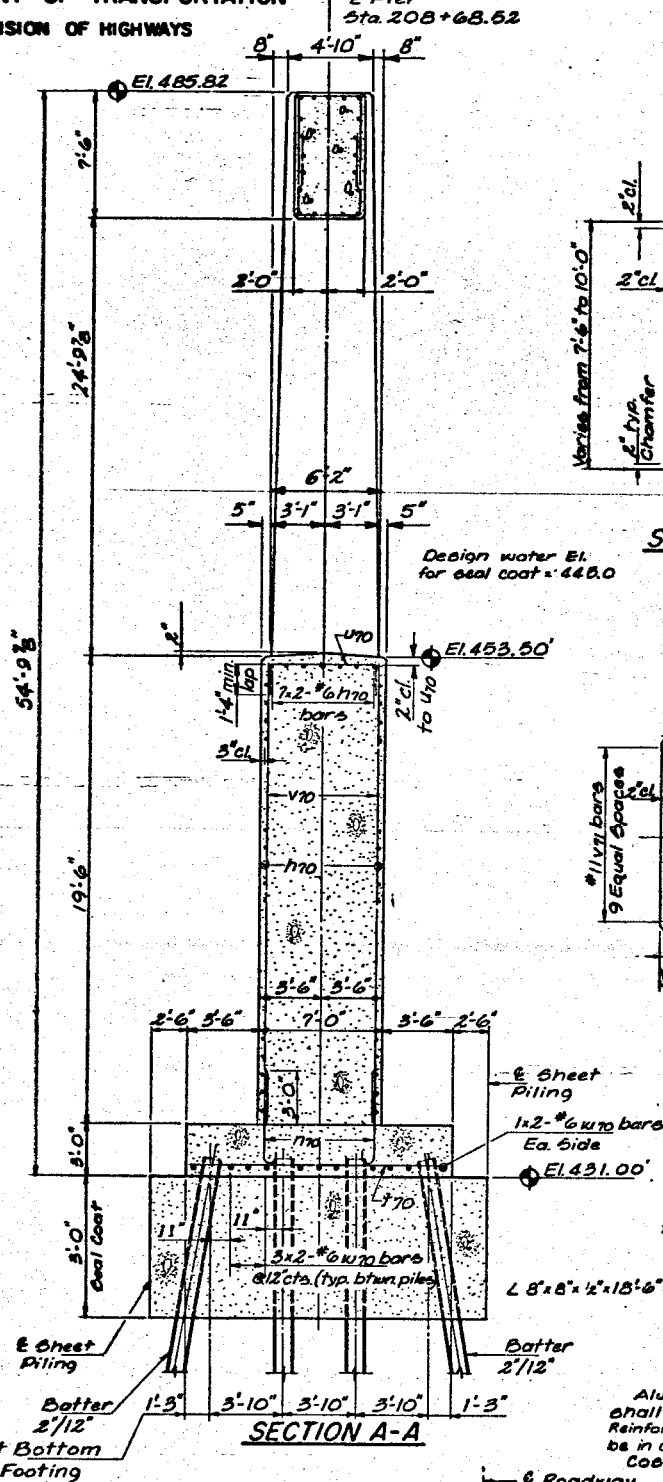
FILE NO. 74001
DATE 6-22-76

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

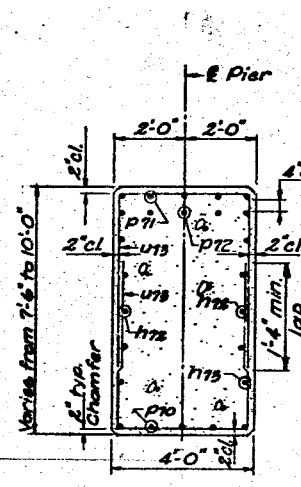
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



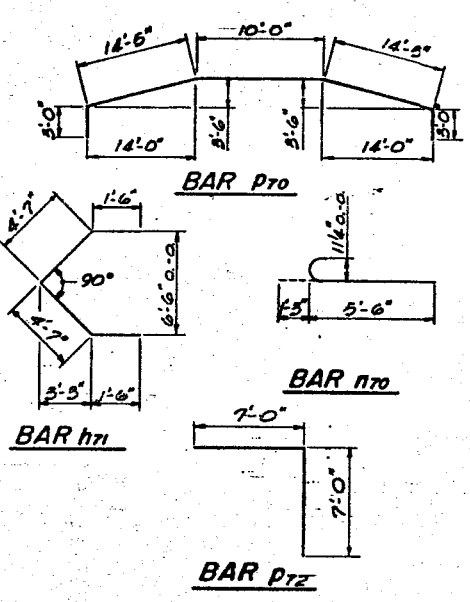
ELEVATION (Looking East)

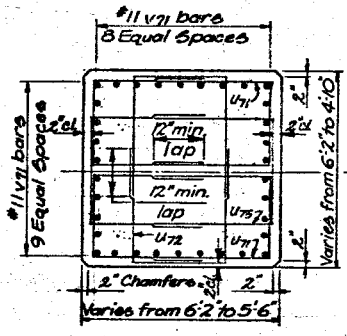


SECTION A-A



SECTION B-B

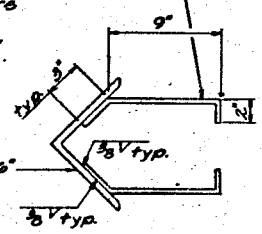




SECTION C-C

u70	1'-6"
u71	3'-5½"
u72	3'-5"
u73	5'-4"
u74	5'-9"
u75	3'-5"

BARS u70, u71, u72, u73, u74 & u75



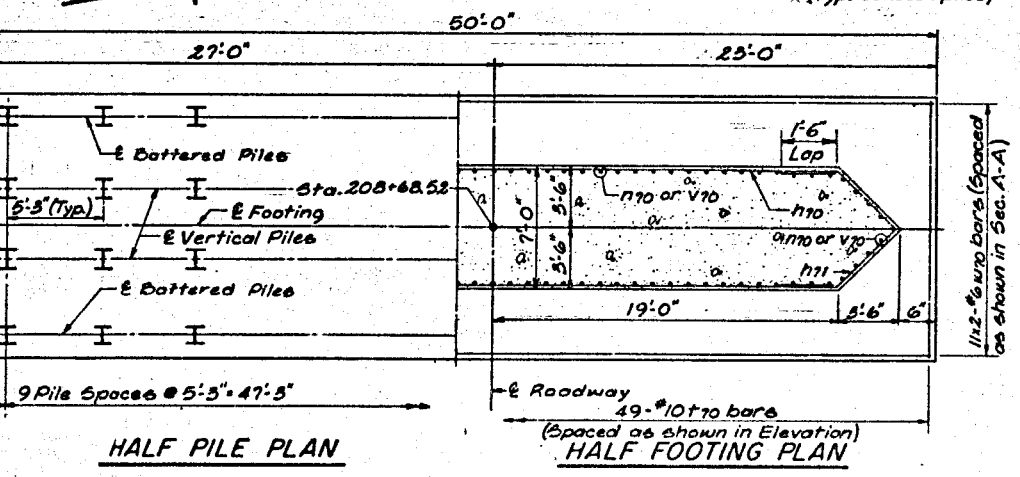
SECTION D-D

Aluminum bars and shapes shall be 6061-T6 alloy. Reinforcement bars shall not be in contact with the aluminum. Coat incidental to Class A Concrete.

PILE DATA

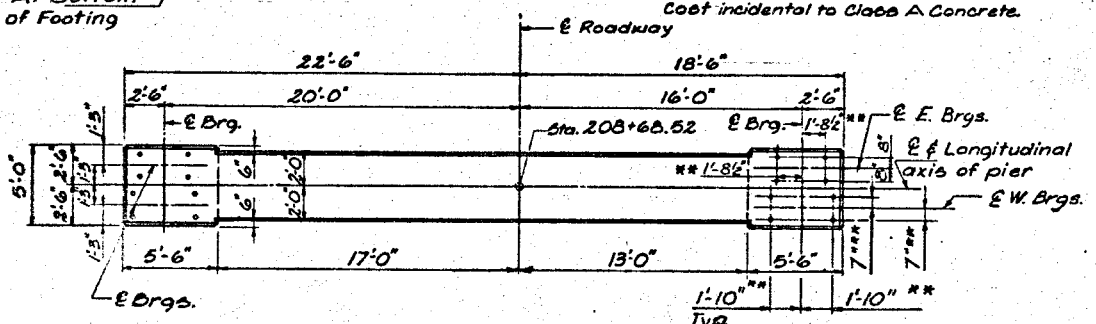
Type	Steel HP 10x42
Capacity	Drive to refusal
Est. Length	47'
No. Required	40*

*Includes one test pile driven in a permanent location.



HALF PILE PLAN

HALF FOOTING PLAN



TOP PLAN

Mc
OVER
F.A. ROUTE
PEORIA

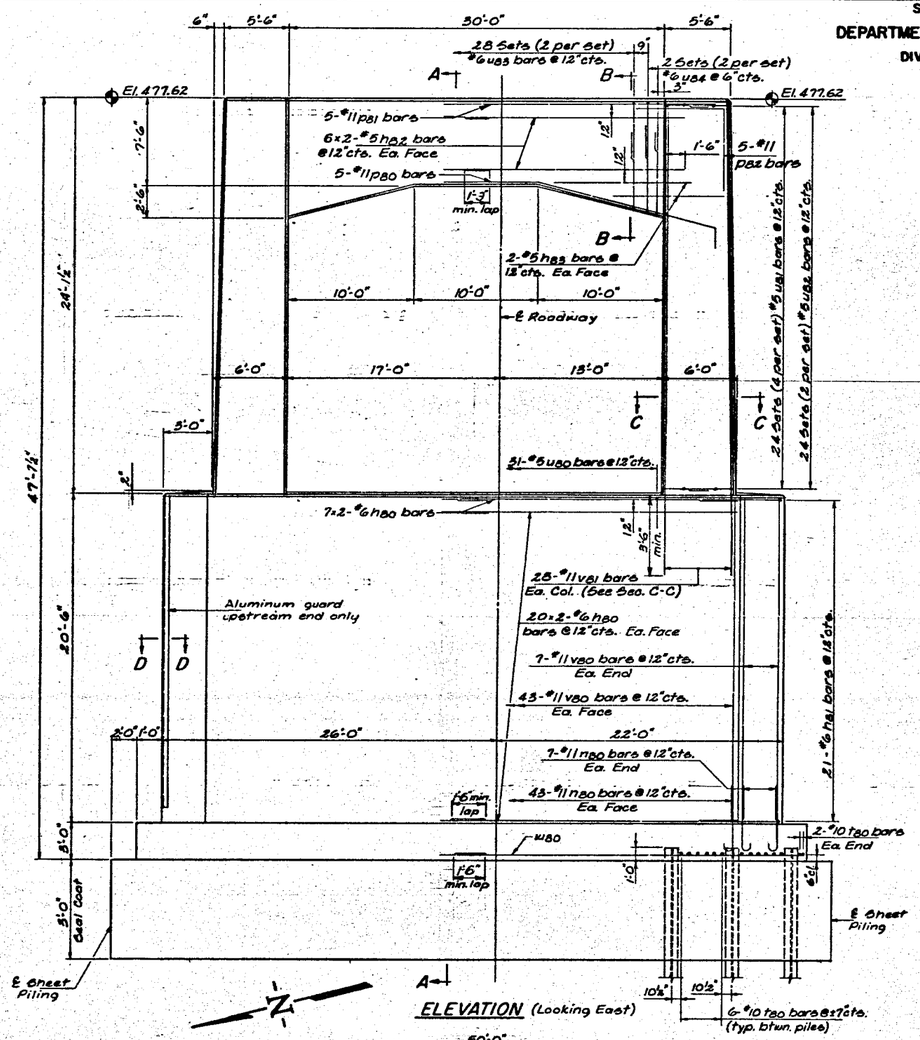
C.R.N.
W.E.B.
D.A.B.
C.R.N.

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

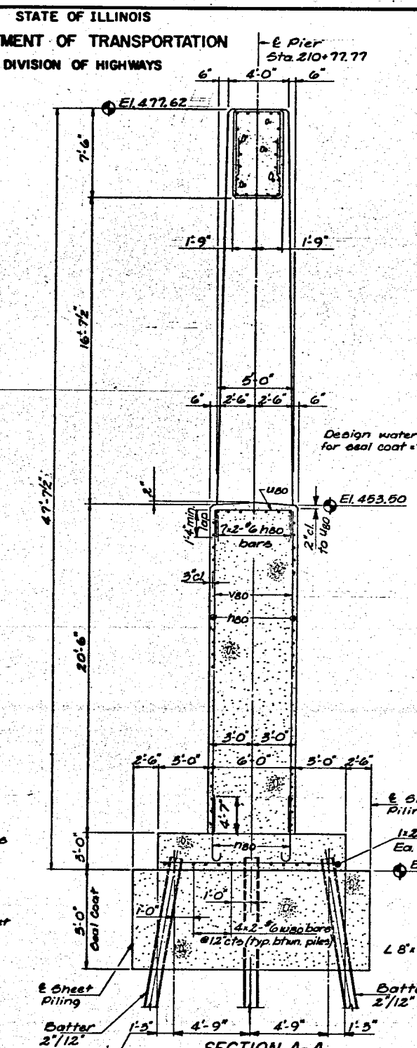
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SHEET NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.49	15B-2	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

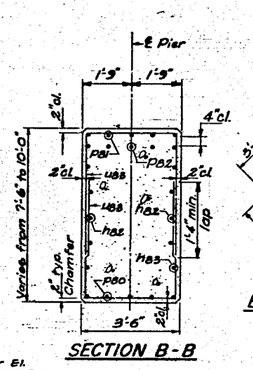
Sheet 112 of 134



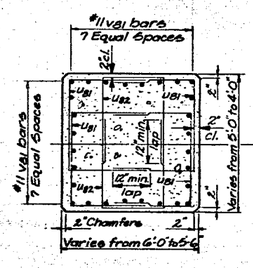
ELEVATION (Looking East)



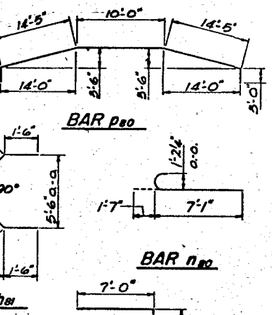
SECTION A-A



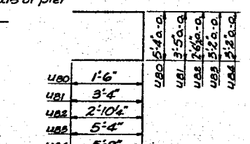
SECTION B-B



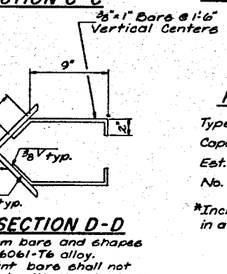
SECTION C-C



BAR P80 BAR H81 BAR N80 BAR P82



BARS U80, U81, U82, U83 & U84



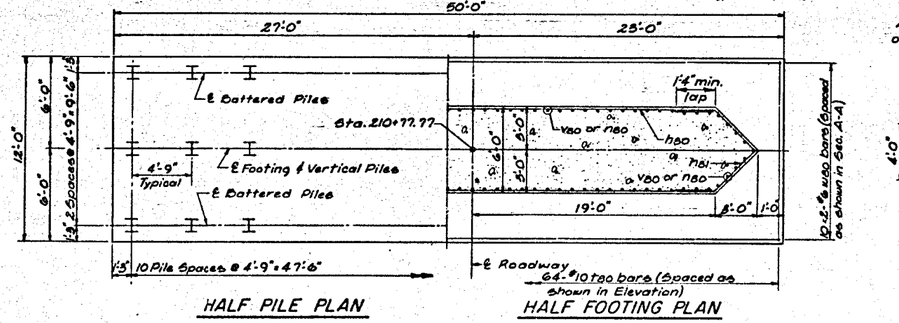
SECTION D-D

Aluminum bars and shapes shall be 6061-T6 alloy. Reinforcement bars shall not be in contact with the aluminum. Cost incidental to Class A Concrete.

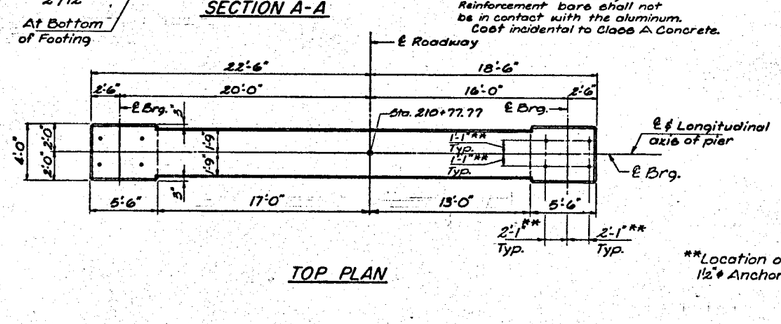
PILE DATA

Type	Steel HP12x53
Capacity	Drive to refusal
Est. Length	55'
No. Required	33*

*Includes one test pile driven in a permanent location.



HALF PILE PLAN



TOP PLAN

**Location of Future 1½"ø Anchor Bolts.

64-#10 T80 bars (Spaced as shown in Elevation)

HALF FOOTING PLAN

PIER 8
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
H80	94	#6	21'-9"	
H81	42	#6	10'-9"	
H82	24	#6	17'-2"	
H83	8	#6	10'-0"	
N80	100	#11	6'-8"	
P80	5	#11	44'-10"	
P81	5	#11	40'-0"	
P82	10	#11	14'-0"	
T80	64	#10	11'-6"	
U80	31	#6	8'-4"	
U81	192	#6	10'-1"	
U82	96	#6	8'-3"	
U83	56	#6	14'-8"	
U84	8	#6	17'-2"	
V80	100	#11	20'-3"	
V81	56	#11	27'-3"	
W80	20	#6	25'-6"	

Class A Concrete	Cu. Yds.	353.7
Reinforcement Bars	Lbs.	39,220
Seal Coat Concrete	Cu. Yds.	102.0
Steel Piles HP12x53	Lin. Ft.	1,760
Test Pile HP 12x53	Each	1
Cofferdam Excavation	Cu. Yds.	313
Cofferdam	Each	1

PIER 8

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15 B-2
PEORIA & TAZEWELL COUNTIES

DESIGNED	CRN
CHECKED	WEB
DRAWN	DAB
CHECKED	CRN

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

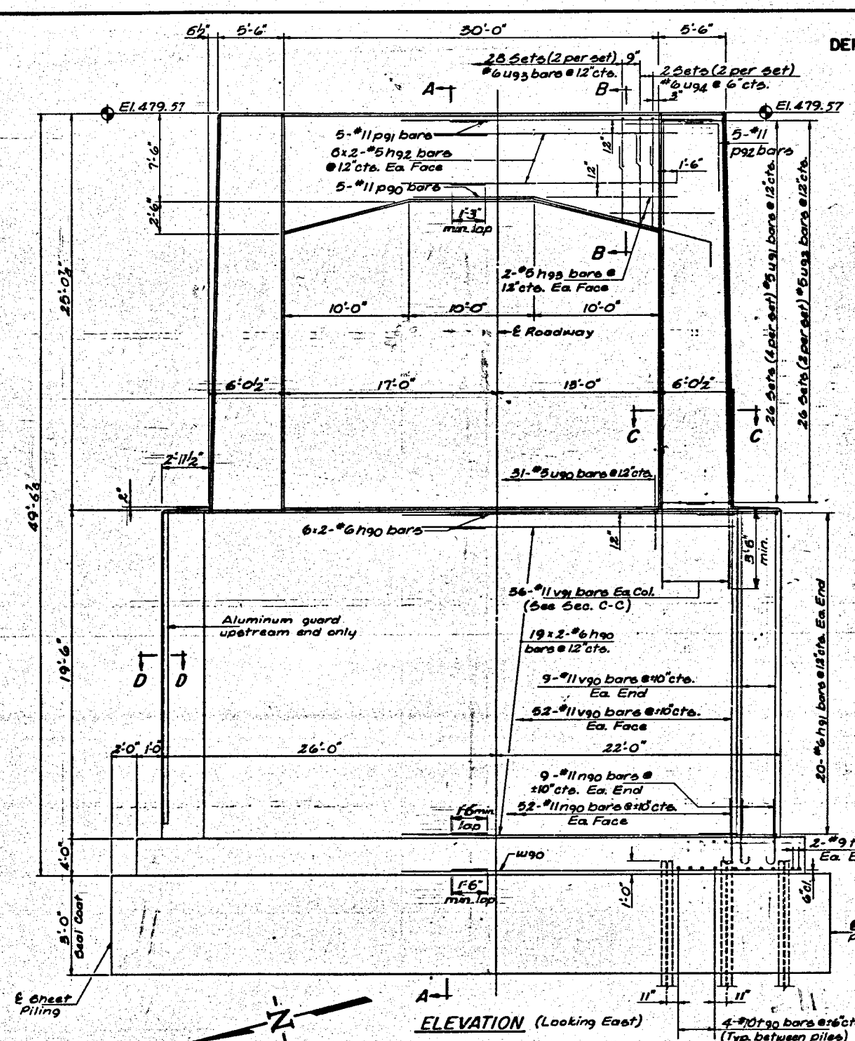
FILE NO. 14001
DATE 6-22-76

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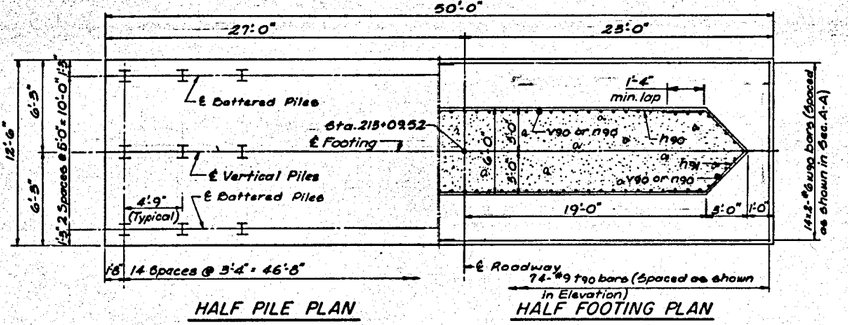
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	158-2	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 119 of 134

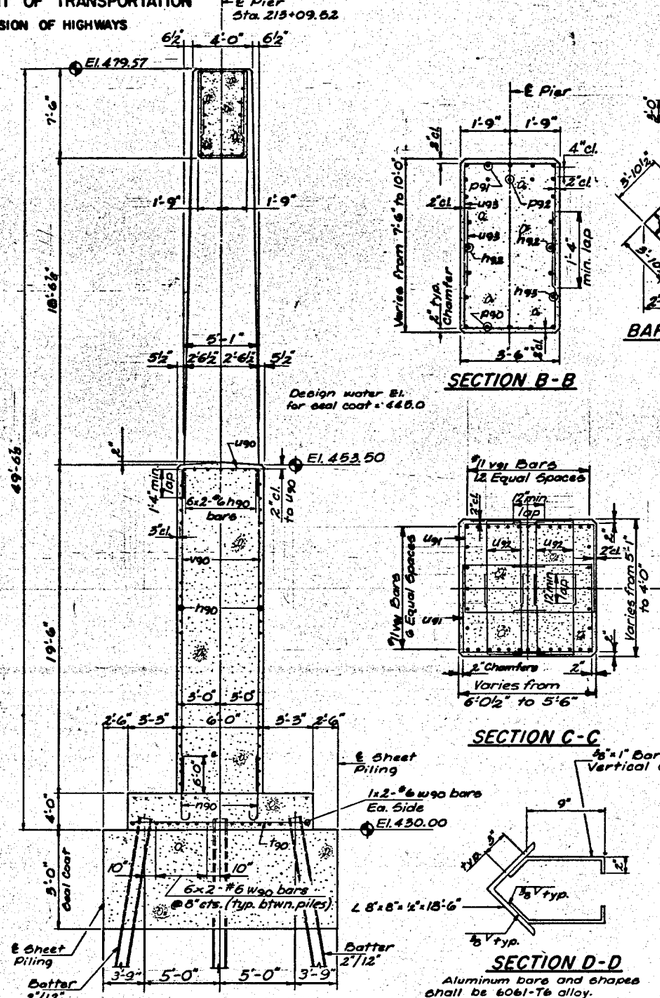


ELEVATION (Looking East)

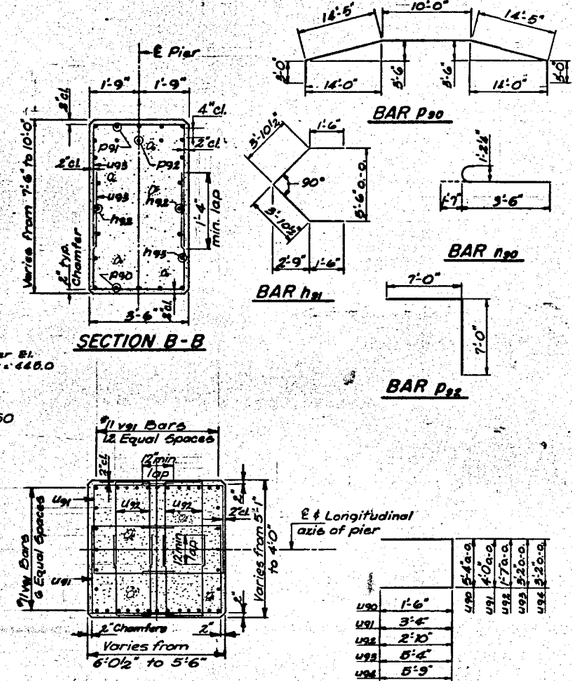


HALF PILE PLAN

HALF FOOTING PLAN

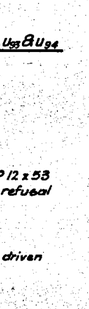


SECTION A-A

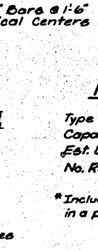


SECTION B-B

SECTION C-C

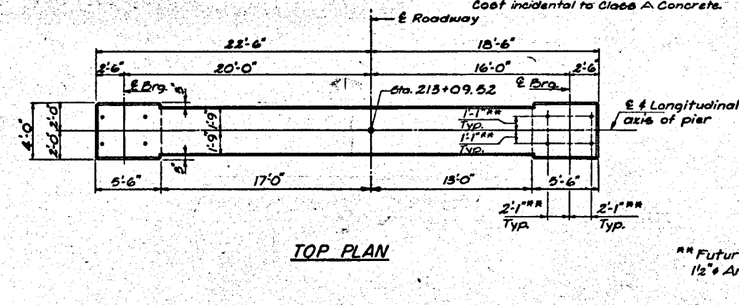


BARS u90, u91, u92, u93 & u94



SECTION D-D

Aluminum bars and shapes shall be 6061-T6 alloy. Reinforcement bars shall not be in contact with the aluminum. Cost incidental to Class A Concrete.



TOP PLAN

** Future Location of 1½"ø Anchor Bolts.

PIER 9
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h90	88	#6	21'-9"	
h91	40	#6	10'-9"	
h92	24	#5	17'-2"	
h93	8	#5	10'-0"	
n90	122	#11	11'-1"	
p90	5	#11	44'-10"	
p91	5	#11	40'-0"	
p92	10	#11	14'-0"	
t90	74	#9	12'-0"	
u90	31	#5	8'-4"	
u91	208	#5	10'-8"	
u92	104	#5	7'-3"	
u93	56	#6	13'-10"	
u94	8	#6	14'-8"	
v90	122	#11	19'-2"	
v91	72	#11	29'-5"	
w90	28	#6	25'-6"	
Class A Concrete			Cu. Yds.	370.4
Reinforcement Bars			Lbs.	46,610
Seal Coat Concrete			Cu. Yds.	105.0
Steel Piles HP 12x53			Lin. Ft.	2,508
Test Pile HP 12x53			Each	1
Cofferdam Excavation			Cu. Yds.	333
Cofferdam			Each	1

PILE DATA

Type	Steel HP 12x53
Capacity	Drive to refusal
Est. Length	61'
No. Required	45 *

*Includes one test pile driven in a permanent location.

PIER 9

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15 B-2
PEORIA & TAZEWELL COUNTIES

DESIGNED	C.R.N.
DRAWN	W.E.B.
TRACED	D.A.B.
CHECKED	C.R.N.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

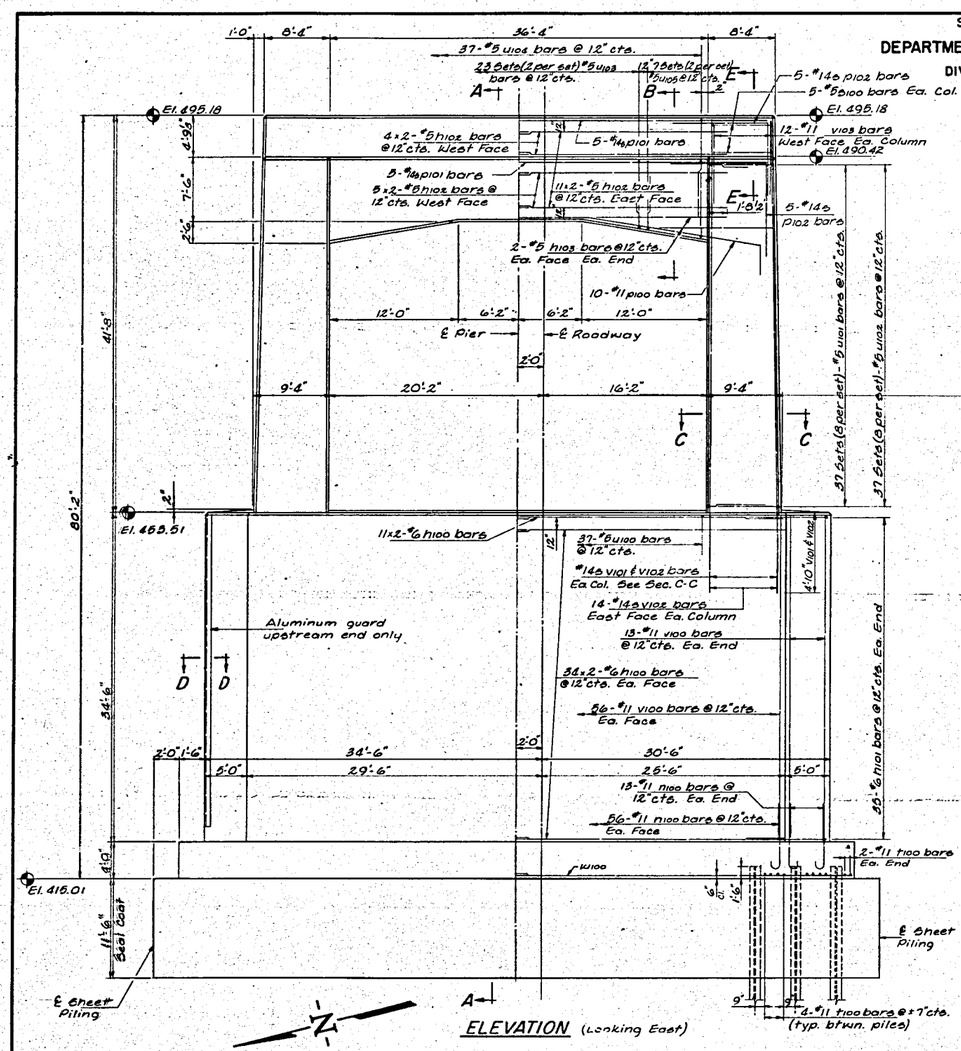
FILE NO. 7d001
DATE 6-22-76

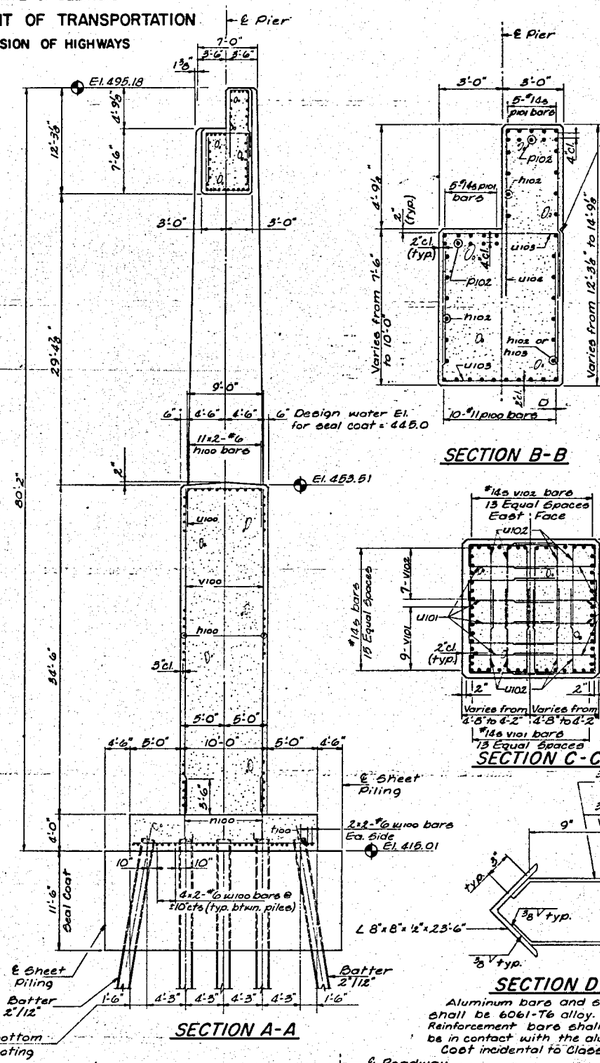
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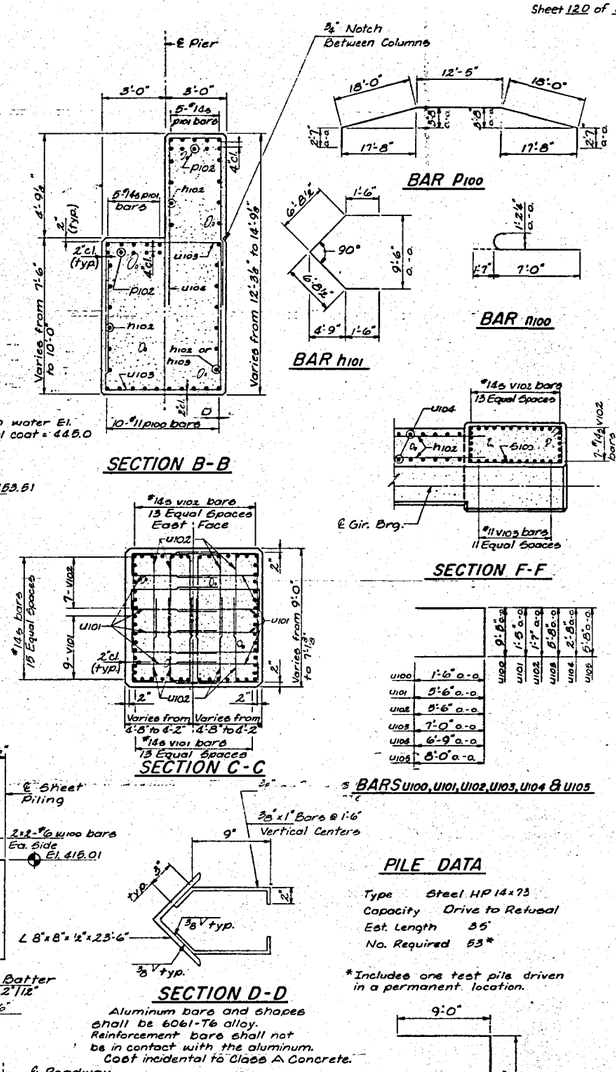
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

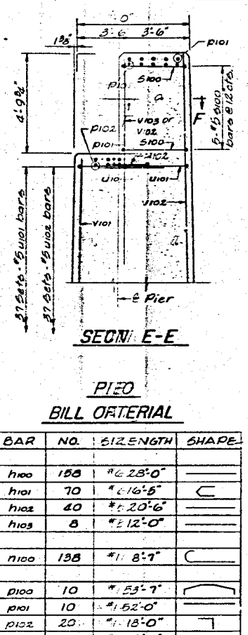
SHEETS NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	152-1 RS & 1 WBI			

FED. ROAD DIST. NO. 7 ORD. & REC. 2000-2007



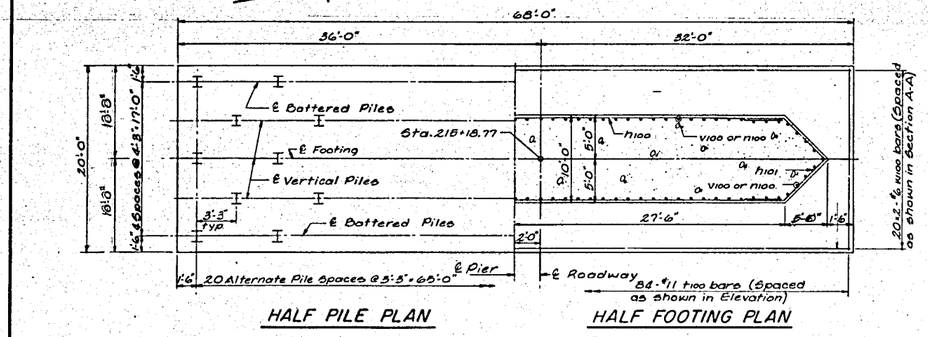


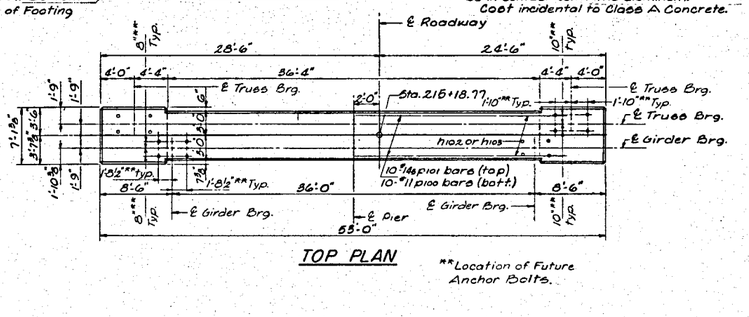




PIER
BILL OF MATERIAL

BAR	NO.	SIZE & LENGTH	SHAPE
H100	168	#6 @ 28'-0"	
H101	70	#6 @ 16'-5"	
H102	40	#5 @ 20'-6"	
H103	8	#5 @ 12'-0"	
H105	138	#11 @ 8'-7"	
P100	10	#14s @ 53'-7"	
P101	10	#14s @ 52'-0"	
P102	20	#14s @ 18'-0"	
S100	84	#11 @ 19'-6"	
S100	10	#6 @ 23'-1"	
U100	37	#5 @ 12'-6"	
U101	592	#5 @ 12'-5"	
U102	592	#5 @ 12'-7"	
U103	46	#5 @ 19'-8"	
U104	37	#5 @ 16'-2"	
U105	28	#5 @ 21'-8"	
V100	138	#11 @ 34'-2"	
V101	60	#11 @ 21'-4"	
V102	52	#11 @ 46'-2"	
V103	24	#11 @ 10'-0"	
W100	40	#11 @ 32'-6"	
Class A Concrete, Cu. Yds.			1,262.7
Reinforcement Bar Lbs.			118,000
Seal Coat Concrete, Cu. Yds.			889.3
Steel Piles HP 14 x 73, Ln. Ft.			1,820
Test Pile HP 14 x 73, Each			1
Cofferdam Excavation, Cu. Yds.			2,590
Cofferdam, Each			1

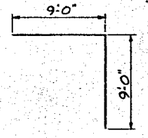


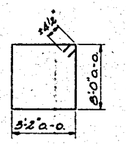


PILE DATA

Type Steel HP 14 x 73
Capacity Drive to Refusal
Est. Length 35'
No. Required 53*

*Includes one test pile driven in a permanent location.





PIER 10

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15 B-1
PEORIA & TAZEWELL COUNTIES

DESIGNED	O.L.B.
CHECKED	C.R.N.
DRAWN	D.A.B.
CHECKED	C.R.N.

HILTON ENGINEERS INC.
SPRINGFIELD ILLINOIS

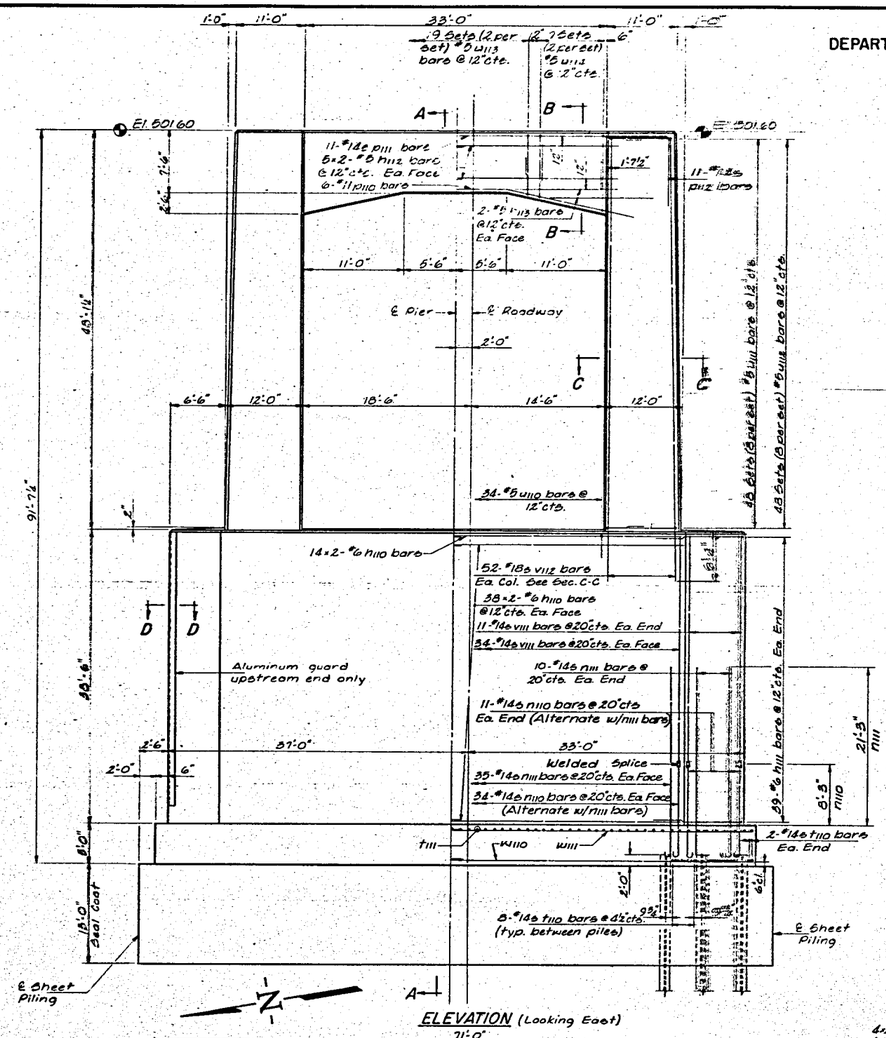
FILE NO. 74001
DATE 12-31-74

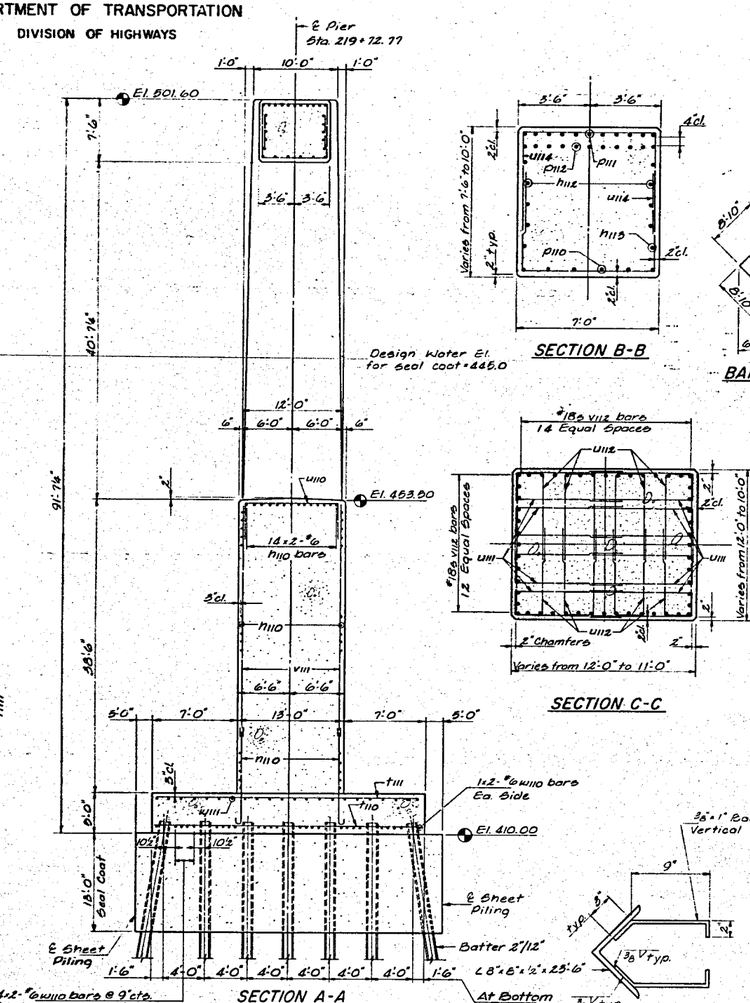
FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT

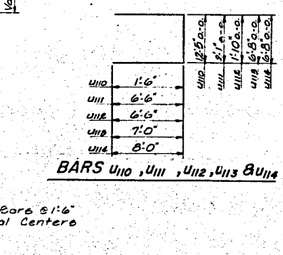
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

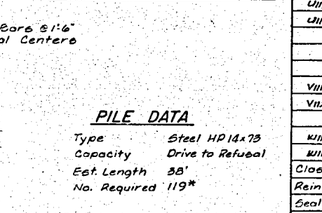
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 49	158-1	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 121 of 134









PIER 11
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
H110	180	#6	29'-5"	
H111	78	#6	20'-8"	
H112	20	#6	18'-9"	
H113	8	#6	11'-0"	
N110 ❷	90	#14s	14'-11"	
N111 ❷	90	#14s	27'-11"	
P110	6	#11	47'-0"	
P111	11	#14s	54'-0"	
P112	22	#14s	22'-0"	
T110	132	#14s	26'-6"	
T111	71	#5	26'-6"	
U110	34	#8	15'-5"	
U111	768	#8	15'-1"	
U112	768	#8	14'-10"	
U113	38	#8	20'-8"	
U114	25	#8	22'-8"	
V111 ❷	90	#14s	30'-0"	
V112	104	18s	54'-3"	
W110	52	#6	36'-5"	
W111	54	#8	36'-0"	
Class A Concrete		Cu. Yds.		2,056.1
Reinforcement Bars		Lbs.		207,010
Seal Coat Concrete		Cu. Yds.		1336.1
Steel Piles HP 14x73		Lin. Ft.		4484
Test Pile HP 14x73		Each		1
Cofferdam Excavation		Cu. Yds.		3023
Cofferdam		Each		1

PILE DATA

Type	Steel HP 14x73
Capacity	Drive to Refusal
Est. Length	88'
No. Required	119*

*Includes one test pile driven in a permanent location.

❷ Bars N110, N111 & V111 shall be Grade 60 Steel Reinforcement Bars.

Note: Lap splices for #18s & 18s bars will not be permitted.

PIER 11

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15 B-1
PEORIA & TAZEWELL COUNTIES

DESIGNED	C.R.N.
CHECKED	D.L.B.
DRAWN	D.A.B.
CHECKED	C.R.N.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA ILLINOIS

FILE NO. 72001
DATE 12-31-74

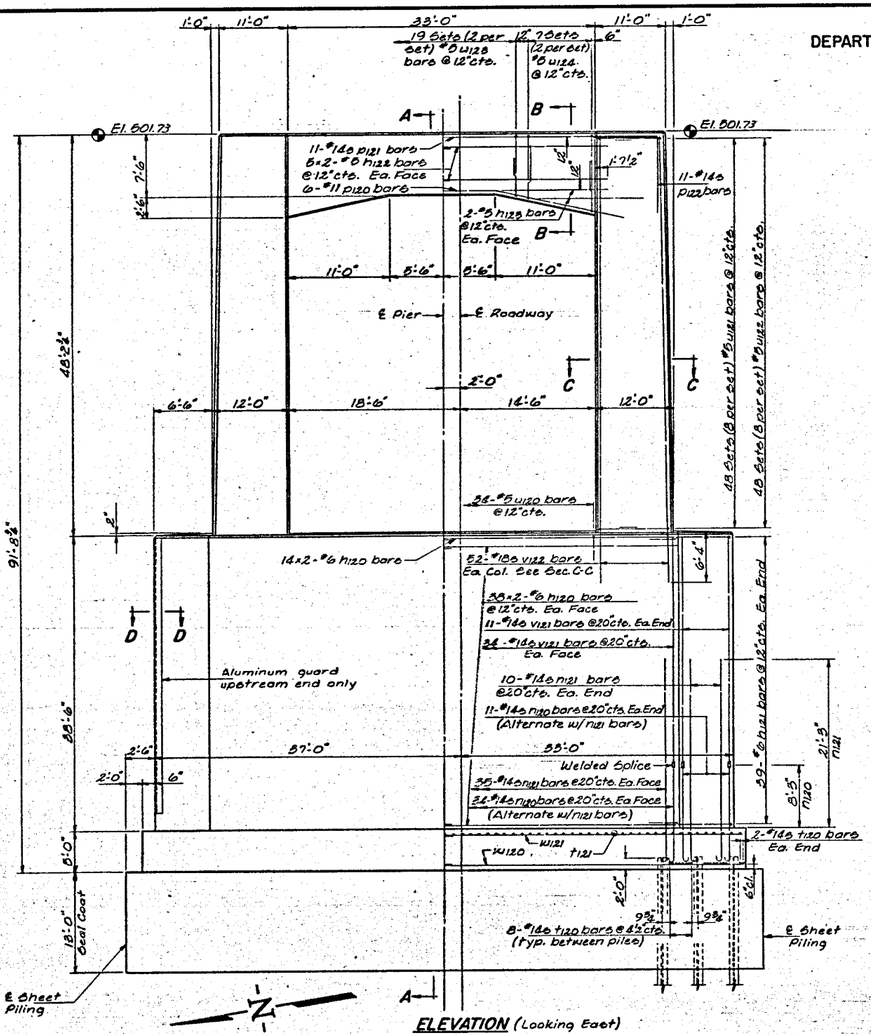
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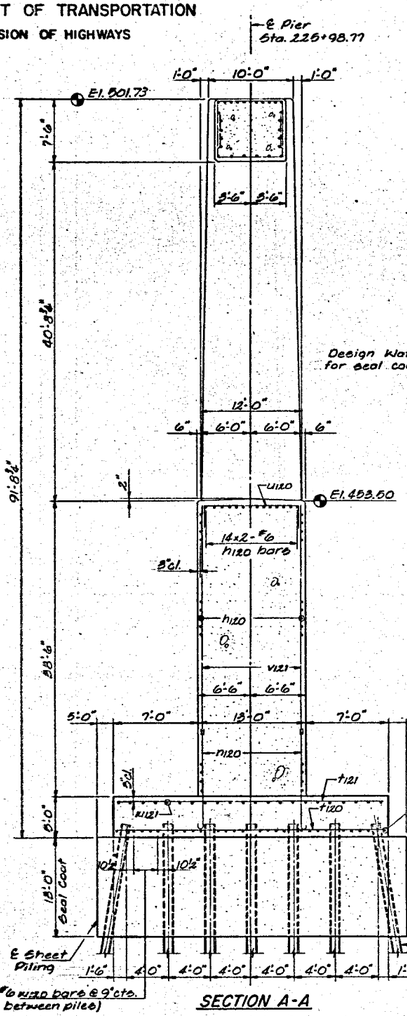
Rev. 7-31-75

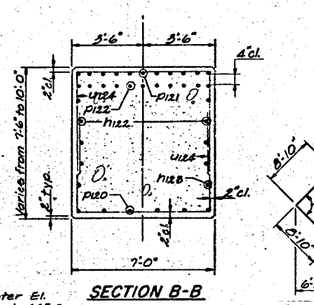
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

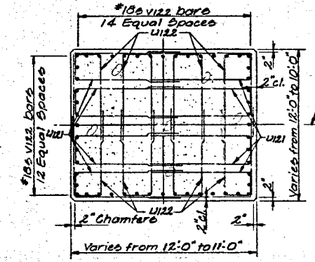
STATE SEC.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 49	15B-1	Peoria & Tazewell		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

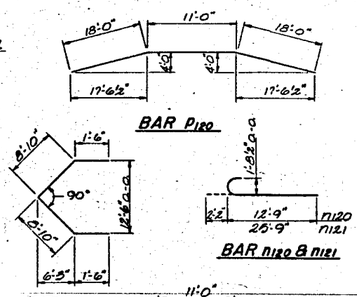
Sheet 122 of 134

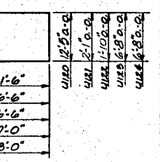












PIER 12
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h120	180	#6	29'-3"	
h121	78	#6	20'-8"	
h122	20	#6	18'-9"	
h128	8	#6	11'-0"	
n120 ⊛	90	#14s	14'-11"	
n121 ⊛	90	#14s	27'-11"	
p120	6	#11	47'-0"	
p121	11	#14s	54'-0"	
p122	22	#14s	22'-0"	
t120	182	#14s	26'-6"	
t121	71	#6	26'-6"	
u120	34	#6	18'-3"	
u121	768	#6	18'-1"	
u122	768	#6	14'-10"	
u123	38	#6	20'-8"	
u124	28	#6	22'-8"	
v121 ⊛	90	#14s	30'-0"	
v122	104	#18s	34'-3"	
w120	62	#6	36'-3"	
w121	54	#6	36'-0"	
Class A Concrete		Cu. Yds.	2056.1	
Reinforcement Bars		Lbs.	207,010	
Seal Coat Concrete		Cu. Yds.	1,356.1	
Steel Piles HP 14x73		Lin. Ft.	5,076	
Test Pile HP 14x73		Each	1	
Cofferdam Excavation		Cu. Yds.	2,888	
Cofferdam		Each	1	

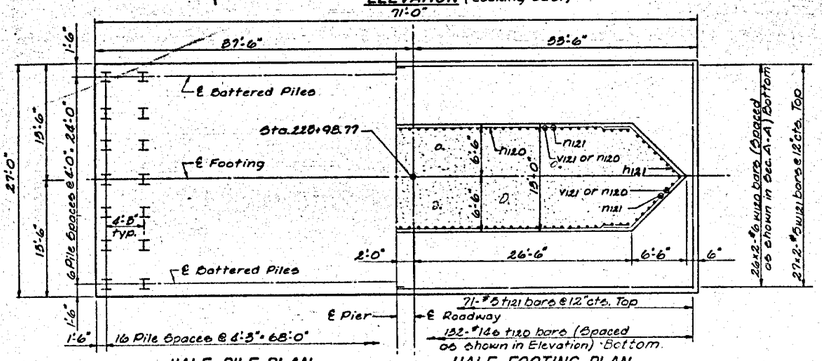
PILE DATA

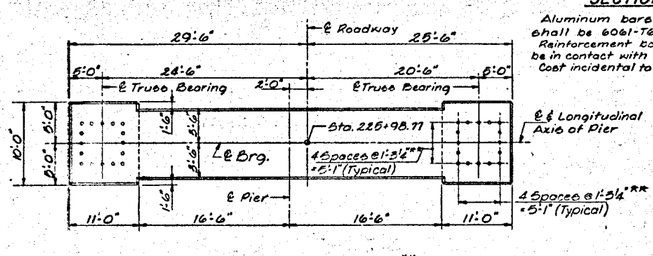
Type	Steel HP14x73
Capacity	Drive to Refusal
Est. Length	45'
No. Required	119*

*Includes one test pile driven in a permanent location.

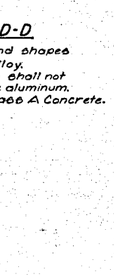
⊛ Bars n120, n121 & v121 shall be Grade 60 Steel Reinforcement Bars.

Note: Lap Splices for #14s & 18s bars will not be permitted.





** Future Location of 1½"ø Anchor Bolts.



Aluminum bars and shapes shall be 6061-T6 alloy. Reinforcement bars shall not be in contact with the aluminum. Cost incidental to Class A Concrete.

PIER 12

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-1
PEORIA & TAZEWELL COUNTIES

DESIGNED	C.R.N.	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
CHECKED	D.L.B.		
DRAWN	D.A.B.		DATE 12-31-74
CHECKED	C.R.N.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	

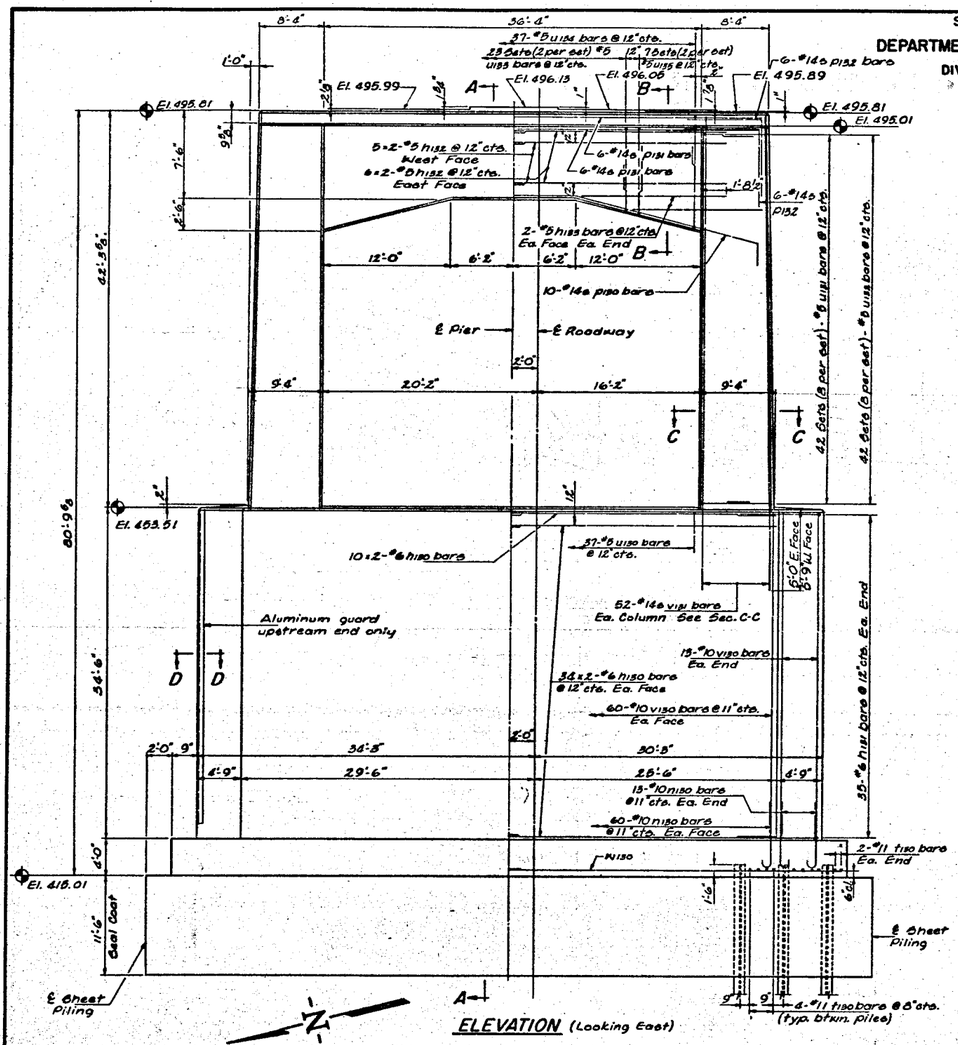
FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

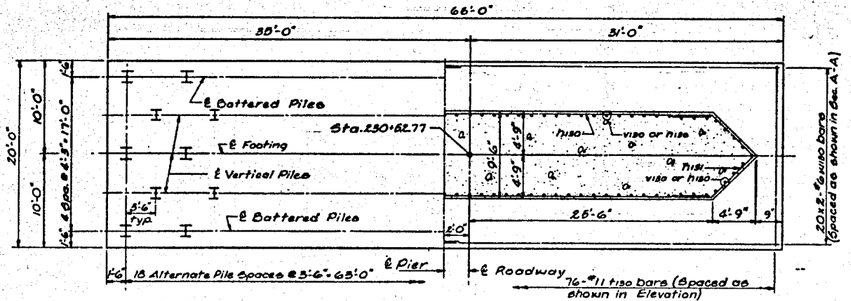
Rev. 7-31-75

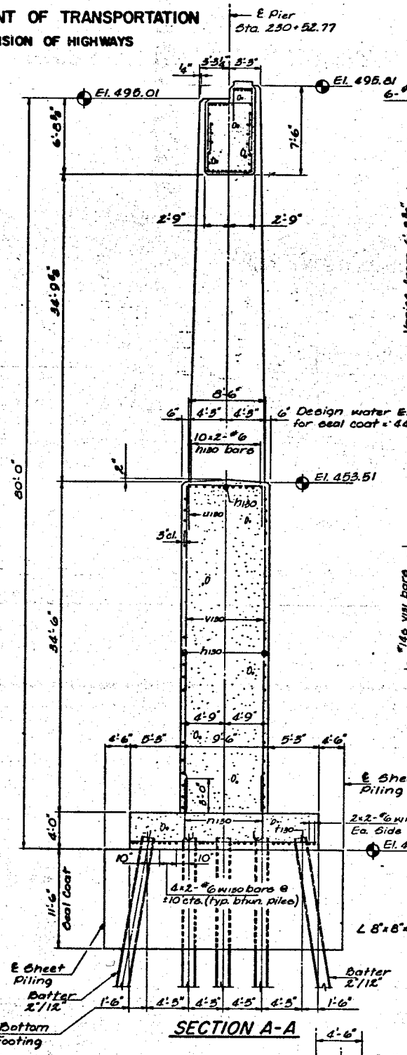
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

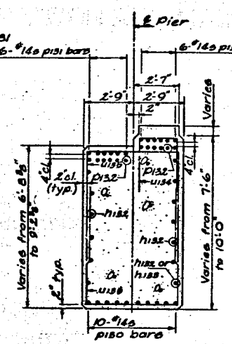
SECTION NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.49	15B-1	Peoria & Tazewell	25	15
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

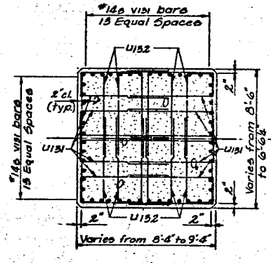
Sheet 123 of 134

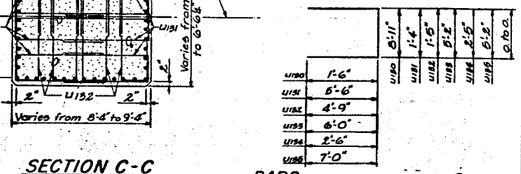


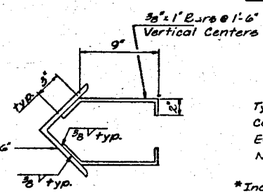










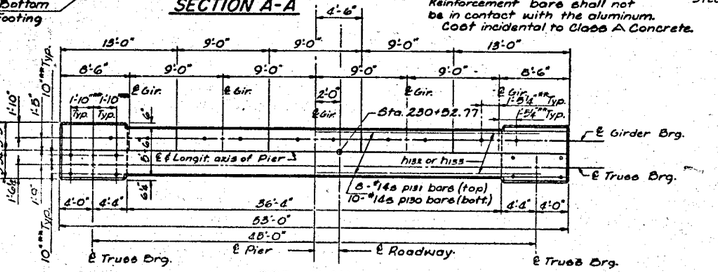


Aluminum bars and shapes shall be 6061-T6 alloy. Reinforcement bars shall not be in contact with the aluminum. Cost incidental to Class A Concrete.

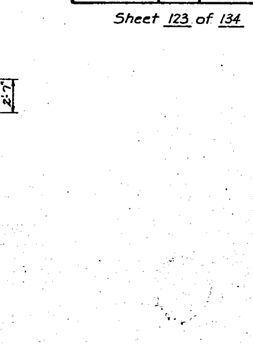
PILE DATA

Type	Steel HP 14x73
Capacity	Drive To Refusal
Est. Length	47'
No. Required	48*

*Includes one test pile driven in a permanent location.



** Location of Future Anchor Bolts.



PIER 13
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
hi30	186	#6	28'-0"	
hi31	70	#6	18'-9"	
hi32	22	#6	20'-6"	
hi33	8	#6	12'-0"	
ni30	146	#10	7'-11"	
pi30 ⊛	10	#14a	63'-7"	
pi31 ⊛	12	#14a	62'-0"	
pi32	24	#14a	18'-0"	
ti30	76	#11	19'-6"	
ui30	37	#5	11'-1"	
ui31	672	#5	12'-4"	
ui32	672	#5	10'-11"	
ui33	46	#5	17'-2"	
ui34	37	#5	7'-8"	
ui35	28	#5	19'-2"	
vi30	146	#10	34'-8"	
vi31	104	#14a	47'-0"	
wi30	40	#6	33'-6"	
Class A Concrete			Cu. Yds.	1,187.3
Reinforcement Bars			Lbs.	113,170
Seal Coat Concrete			Cu. Yds.	864.6
Steel Piles HP 14x73			Lin. Ft.	2,209
Test Pile HP 14x73			Each	1
Cofferdam Excavation			Cu. Yds.	2,256
Cofferdam			Each	1

⊛ Bars pi30 & pi31 shall be Grade 60 Steel Reinforcement Bars.

PIER 13

McCLUGAGE BRIDGE OVER THE ILLINOIS RIVER

F.A. ROUTE 49 SEC. 15 B-1

PEORIA & TAZEWELL COUNTIES

DESIGNED	D.L.B.
CHECKED	C.R.N.
DRAWN	D.A.B.
CHECKED	D.L.B.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 14001
DATE 12-31-74

For Informational Purposes Only - Not Included In This Contract.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade. Not included in this Contract.

** Note: Elevations along back of parapet. (See Sec. D-D)

Note: Space reinforcement in to miss anchor bolts.

WING WALL ELEVATION

ELEVATION

SECTION D-D

SECTION B-B

TOP VIEW

PLAN-PILE CAP

BARS n_1 & n_2

BAR v_6

BARS s_2, s_3 & s_4

BAR h_8

BAR h_4

BARS u_1 & u_3

BAR u_2

PILE DATA

Type: Conc. 12"ø I.Q.
Capacity: 45 Ton
Est. Length: 37'
No. Required: 11 *
* Includes one test pile driven in a permanent location.

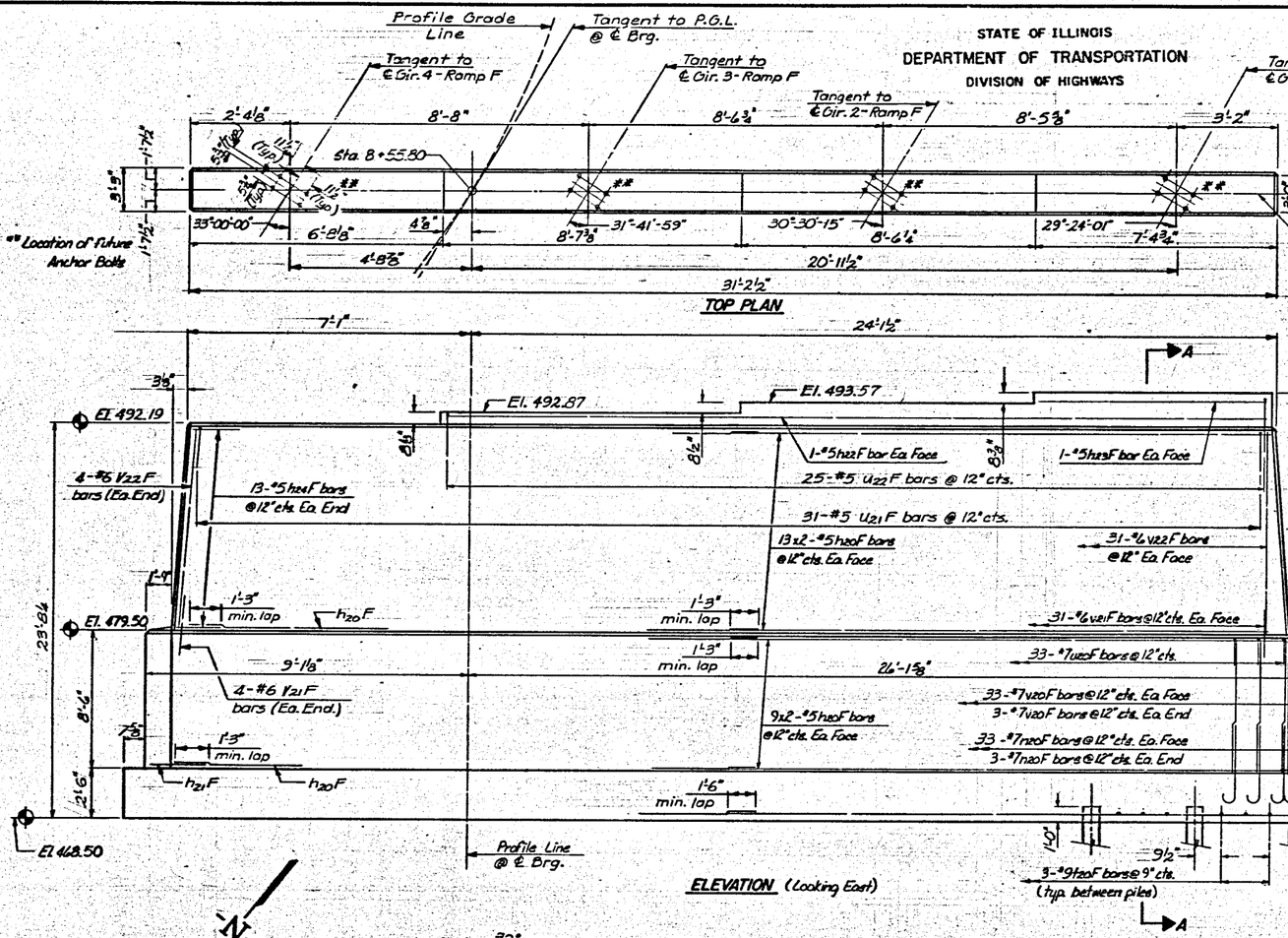
DESIGNED S.C.O.
CHECKED T.R.G.
DRAWN D.A.N.
CHECKED W.E.B.

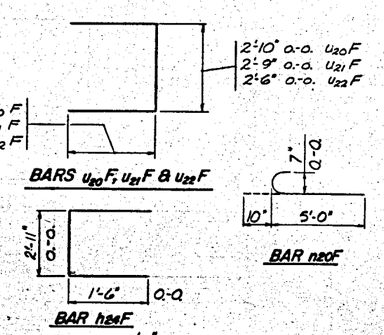
FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT

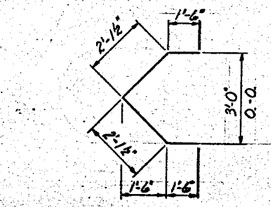
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

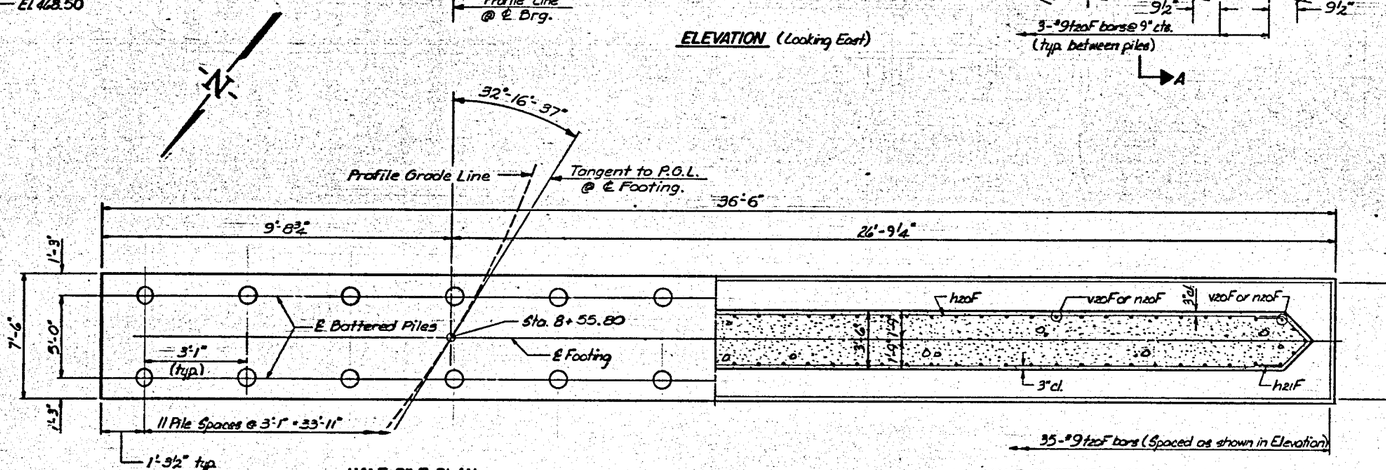
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-49	15B-2	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Sheet 125 of 134









PIER 2F
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h20F	88	#5	16'-3"	
h21F	18	#5	7'-3"	
h22F	2	#5	24'-0"	
h23F	2	#5	6'-11"	
h24F	26	#5	5'-11"	
n20F	72	#7	5'-10"	
t20F	35	#9	7'-0"	
U20F	33	#7	5'-10"	
U21F	31	#5	5'-3"	
U22F	25	#5	8'-10"	
V20F	72	#7	8'-3"	
V21F	70	#6	3'-6"	
V22F	70	#6	12'-4"	
W20F	16	#6	18'-10"	
Class A Concrete			Cu. Yd.	113.3
Reinforcement Bars			Lbs.	7,670
Conc. Piles 12" Dia.			Lin. Ft.	575
Test Pile 12" Dia. Conc.			Each	1
Struct. Exc.			Cu. Yd.	145

SECTION A-A

PILE DATA

Type	Conc. 12" dia.
Capacity	45 ton
Est. Length	25'
No. Required	24 *

* Includes one test pile driven in a permanent location.

PIER 2F

Mc CLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-2
PEORIA & TAZEWELL COUNTIES

DESIGNED	S.C.O.	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
CHECKED	W.E.B.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	DATE 6-22-76
DRAWN	R.L.F.		
CHECKED	W.E.B.		

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade. Not included in this Contract.

13'-6"

Bonded Const. Jt. with ¾" Notch on outside face.

Construction Joint

7'-3½" N. Wing Wall
7'-7⅛" S. Wing Wall
12'-6⅝" N. Wing Wall
10'-7⅛" S. Wing Wall
2'-9½"
5'-3⅜"
3'-6"

WALL ELEVATION
(. Wing Wall)

e furnished
actor.

l Areas
luded in this Contract.

Const. Jt.
otch.

3'-0" @ P.G.L.
1'-6"
1'-0"
Back of Abutment
℄ Brg.
4-#6 bars to be furnished by Deck Contractor
Slope ¼" between brgs. (10"x26" Rs)
2" Chamfer
Batter 2" per ft.
Varies from 8'-1¼" to 11'-0¾"
2'-9⅜"
2'-6"
2'-6"
S. Wing
N. Wing
2'-1"
1'-8"
1'-2"
4'-11"

SECTION D-D

Construction Joints same elevations as p of steps.

3" 9" 5"
1'-5"
1'-0"
℄ 1" Φ Anchor Bolts

VIEW C-C

27-#5 V11E bars @ 12" cts. (Back Face)
27-#5 V16E bars @ 12" cts. (Front Face)
17-#5 V12E bars @ 12" cts. (Back Face) in Approach Slab Region.
27-#4 V13E bars @ 12" cts. (Back Face)
Elev. 499.69
Hatched area to be included in Deck Contract.
4-#6 bars (See Sec. D-D)
Elev. 499.22
6-#5 h11E bars @ 12" cts. (Each Face)
El. 497.61
1½" Cl. T.
Elev. 498.09
Elev. 501.18
6-#5 h10E bars @ 12" cts. (Ea. Face)
6-#5 h11E bars @ 12" cts. (Each Face.)
℄ El. 492.9
7-#4 S7E bars @ 12" cts.
El. 492.13
El. 492.72
℄ El. 494.7
7-#4 S7E bars @ 12" cts.
7-#4 S7E bars @ 12" cts.
El. 493.31
El. 493.89
3'-6"
4-#6 U3E (Ea. End)
1-#4 S5E (Ea. End)
5'-3⅜"
Elev. 488.63
9" typ.
3-#4 S5E Bars. (Typ. Between Piles.)
8-#7 P9E (See Sec. D-D)
3-#7 P10E
3-#7 P11E (See Sec. D-D)
3-#7 P12E

ELEVATION

** Location of future anchor bolts.

Space reinforcement in cap to miss future anchor bolt locations.

4'-6"
18'-6"
Profile Grade Line
Tan. to P.G.L. @ Bk. of Abut.
Sta. 8+58.5
90°
3"ϕ Electrical conduit. Extend to clear end post & terminate outside of shoulder. Thread & cap each end. Cost incidental to price bid Cl X Conc.
Back of Abutment
Optional Const. Jt.
W.P.
h11E
2'-11⅞"
3¼"
6"
3'-0¼"
4'-11"
3'-5"
1'-6"
3'-0⅜"
4"
3'-1⅜"
12"
℄ Gir 4 Brg.
1¼"
1¼"
℄ Gir 3 Brg.
℄ Gir 2 Brg.
℄ Gir 1 Brg.
℄ Brg.
7'-0"
7'-0"
7'-0"
7'-0"
2'-11⅞"
3 Bearing Spaces @ 7'-4" = 22'-0"
3'-0⅛"
4'-0⅛"
17'-11⅞"
28'-0"

TOP VIEW

1'-0" 1'-6"
5'-9"
19'-9"
1'-3" 1'-3"
Profile Grade Line
Tan. to P.G.L @ Back of Abut.
N
S6E (See Wing Wall Elevation)
n2E
Sta. 8+58.5
P8E
20'-0"
Back of Abutment
℄ Vertical Piles
U3E
9'-6"
2'-6"
16'-11"
4'-11"
1'-8"
2'-1"
1'-2"
1'-4"
5'-8"
19'-8"
1'-4"
8 Alternate Pile Spaces @ 3'-2" cts. = 25'-4"
7'-0"
21'-0"

HALF PLAN
Reinforcement

HALF PLAN
Dimensions

A
14-#6 V14E bars @ 12"
14-#6 V15E bars @ 12"
3-#4
B
8-#4 h12E bars @ 12" cts. (Ea. Face)
3-#4 h
(Ea. Fac
1-#4 h12
(Ea. Fac
14-#6 n3E ba
14-#6 n2E ba
3-#7 P8E bars (Each Face)
A
11-#4 S6E bars @

WING WALL E
Reinforc
(N. Wing

W.P.
V14E
h12E
V15E
13'-6"

SECTION B-B

BAR h11E
2'-0"
3'-0"

BAR U3E
4'-6" o.-o.
4'-6"

BARS S5E & S6E
3'-2" S5E o.-o.
2'-2" S6E o.-o.
5¾"
4'-7" S5E o.-o.
2'-2" S6E o.-o.

BAR V13E
8½°
1'-3"
1'-4"
6"

BAR S7E
4'-7" o.-o.
2'-11" o.-o.

BARS n2E & n3E
n3E = 6'-9"
n2E
5'-3"
9" o.-o.

BAR V15E
1'-4"
3"
2'-7"

PILE DATA

Type:	12" Conc. Piles
Capacity:	45 Ton.
Est. Length:	18'
No Required:	11***

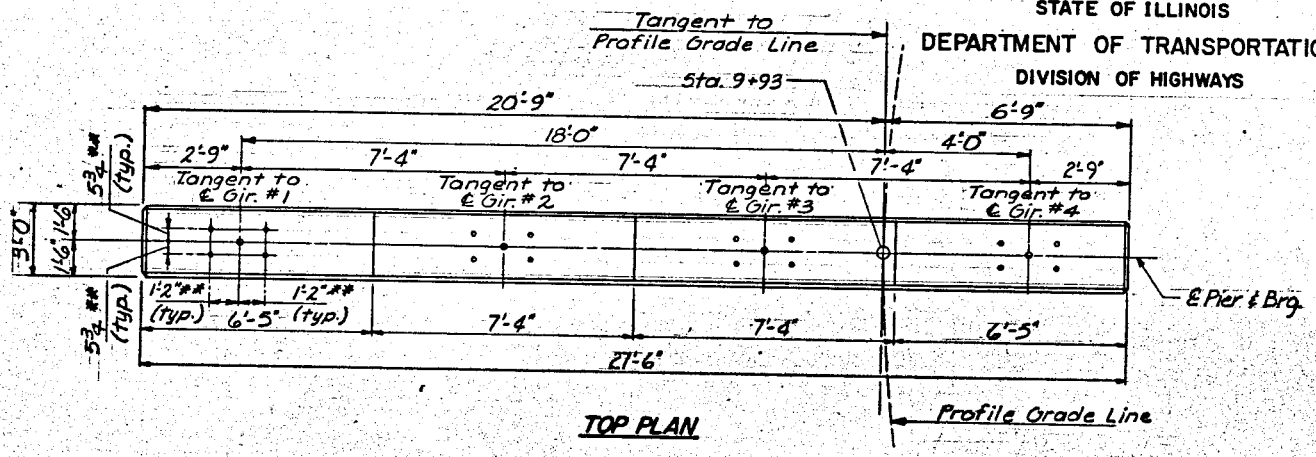
*** Includes one test pile driven in a permanent location.

DESIGNED W.D.L.
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED S.C.O.

M
OVE
F.A. ROUTE
PEORIA

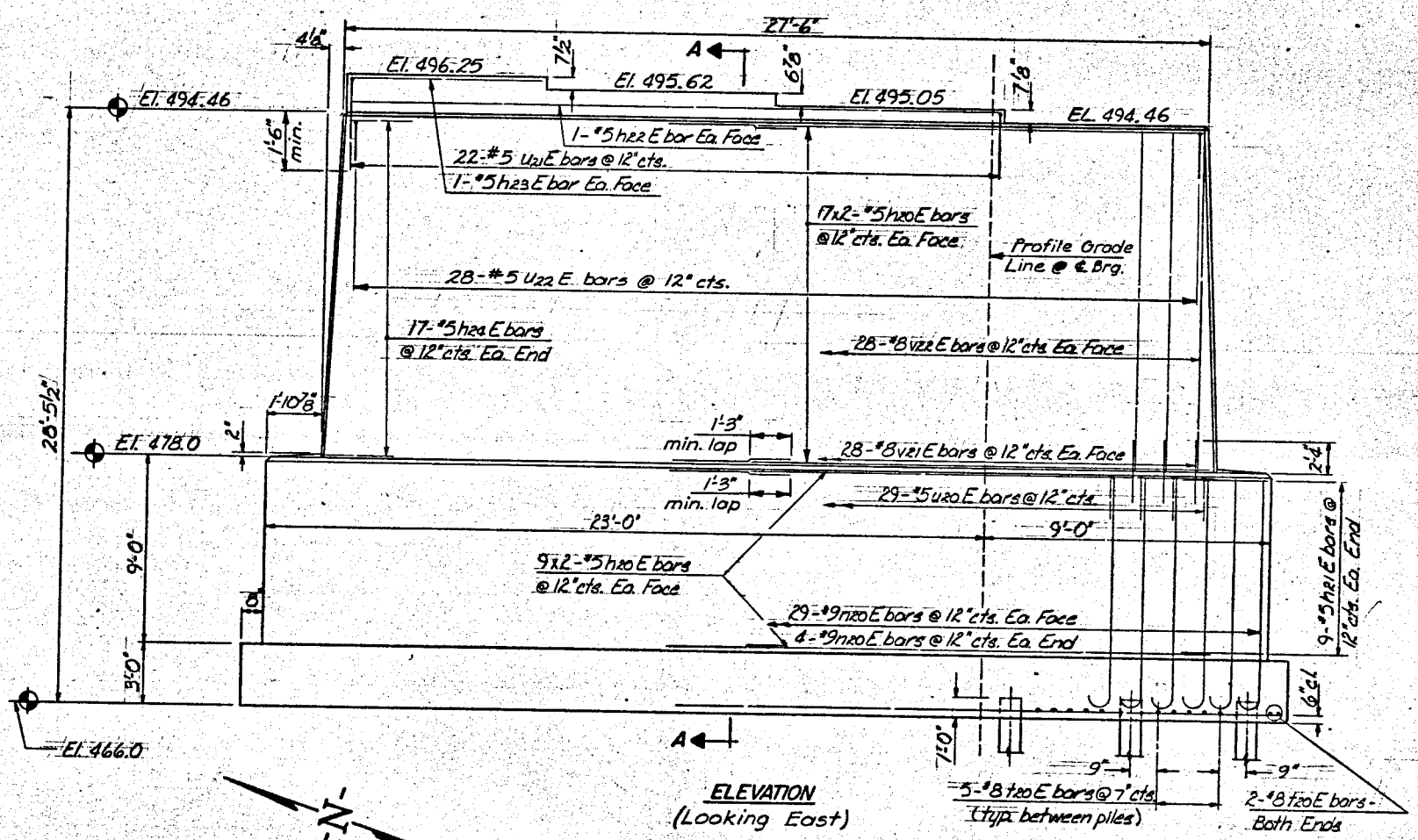
FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

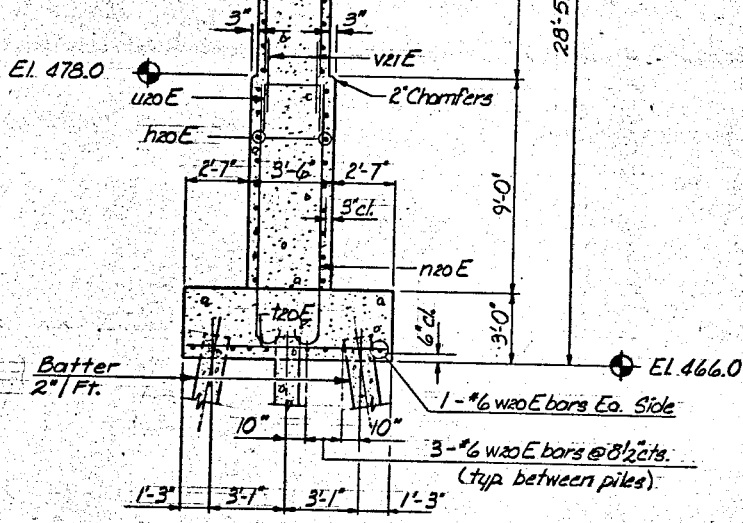


** Location of future Anchor Bolts.

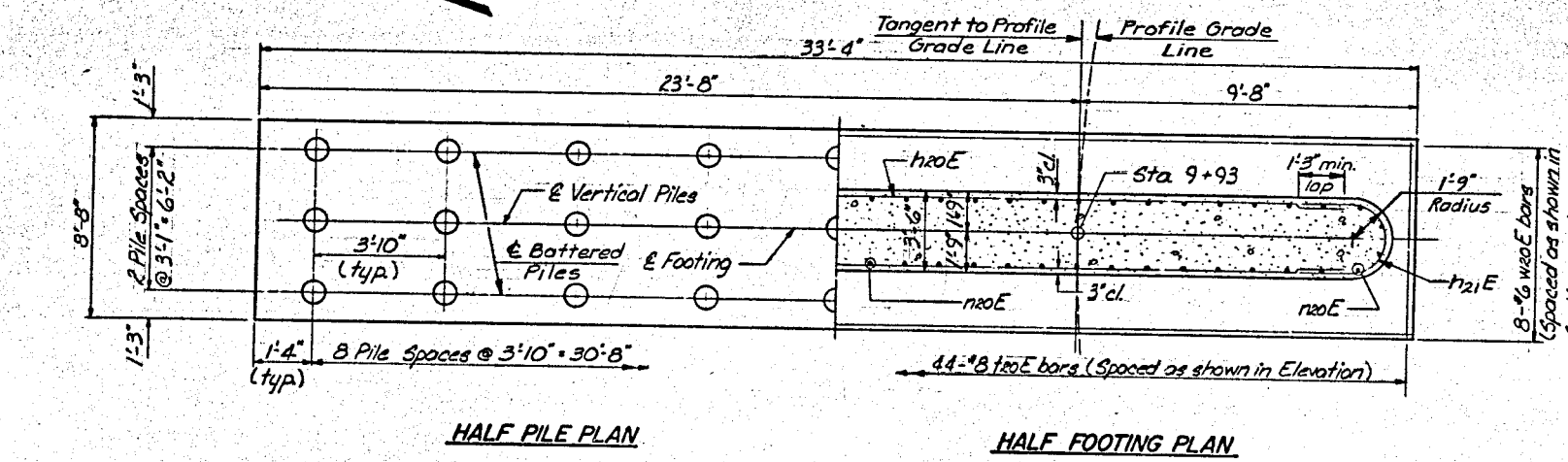
TOP PLAN



ELEVATION
(Looking East)



SECTION A-A



HALF PILE PLAN

HALF FOOTING PLAN

PILE DATA

Type	Conc. 12" dia.
Capacity	45 ton
Est. Length	25'
No. Required	27*

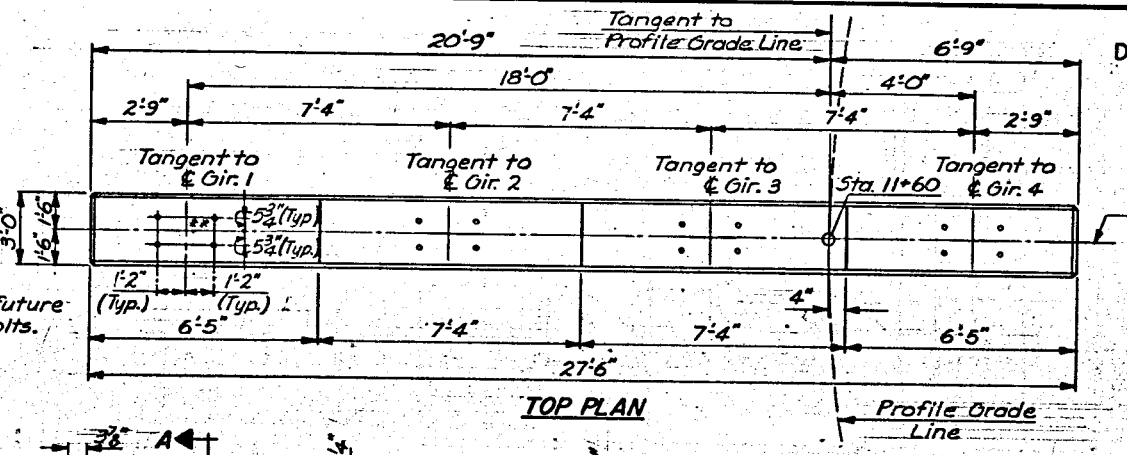
* Includes one test pile driven in a permanent location.

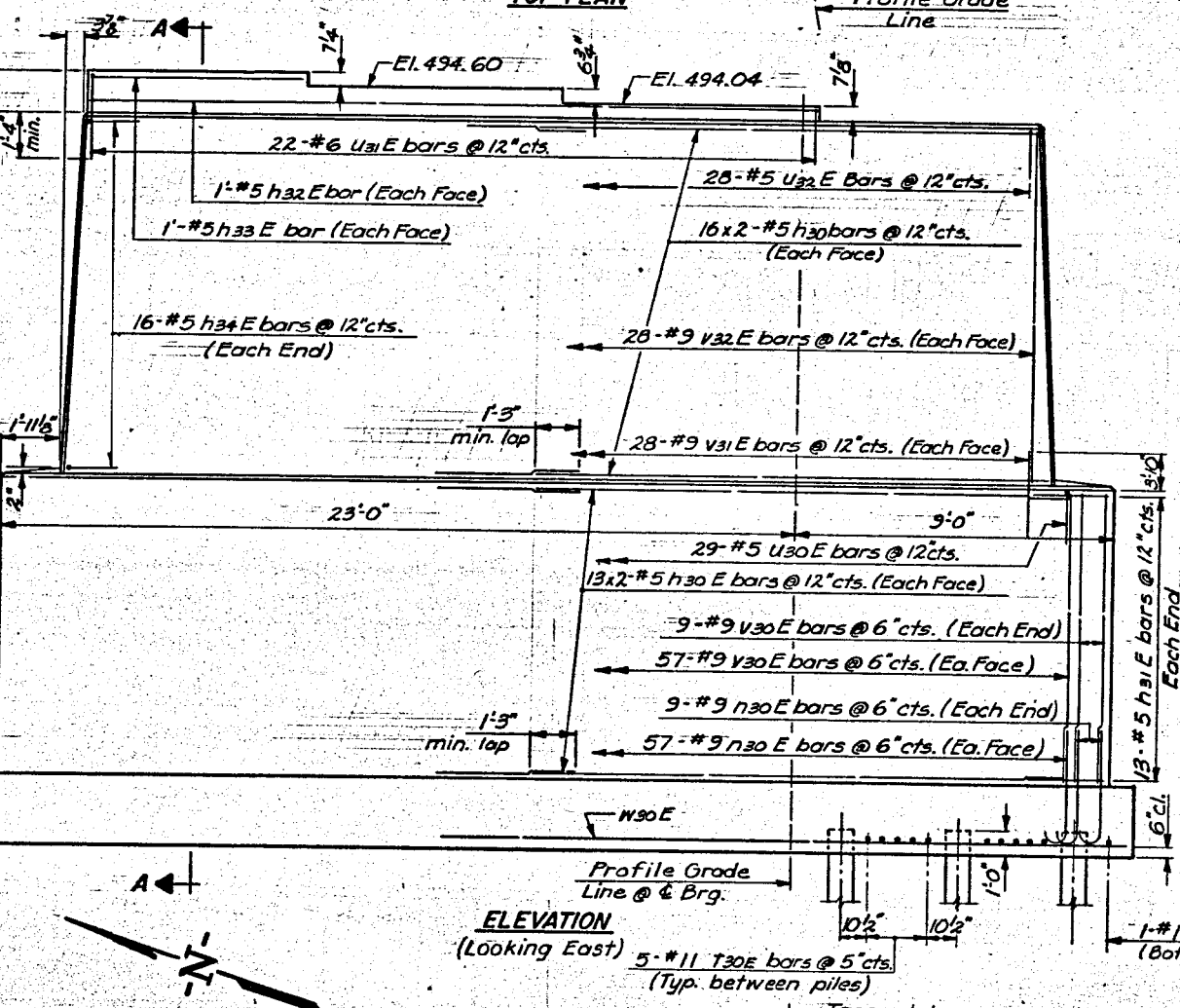
F.A. [illegible]
PL

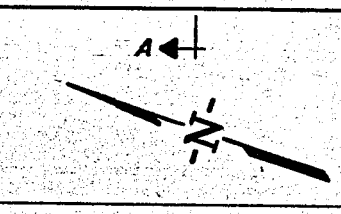
DESIGNED W.A.L.
CHECKED S.C.O.
DRAWN R.J.F.
CHECKED S.C.O.

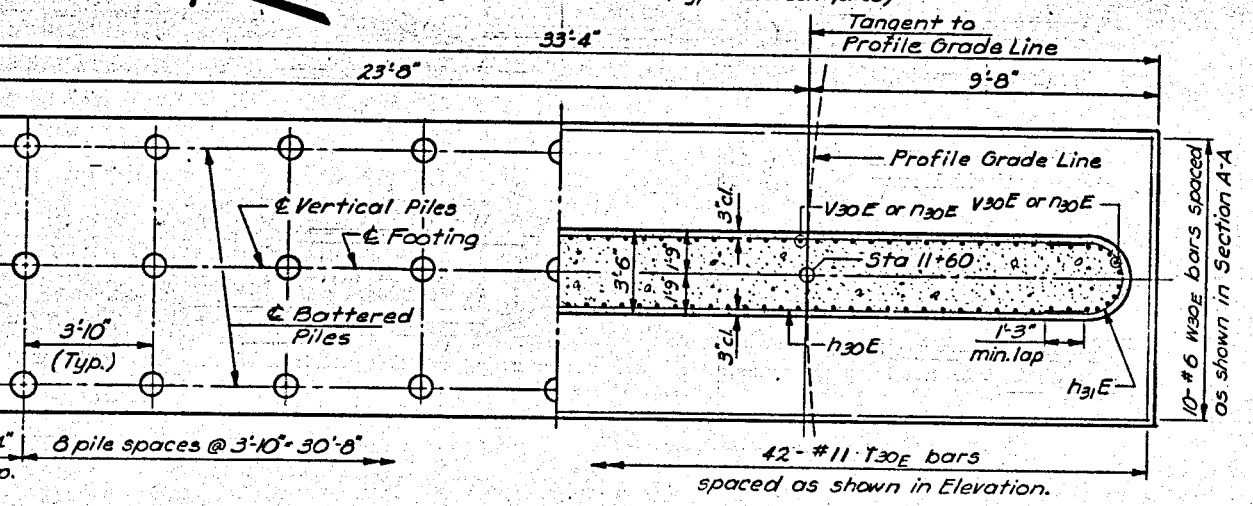
FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



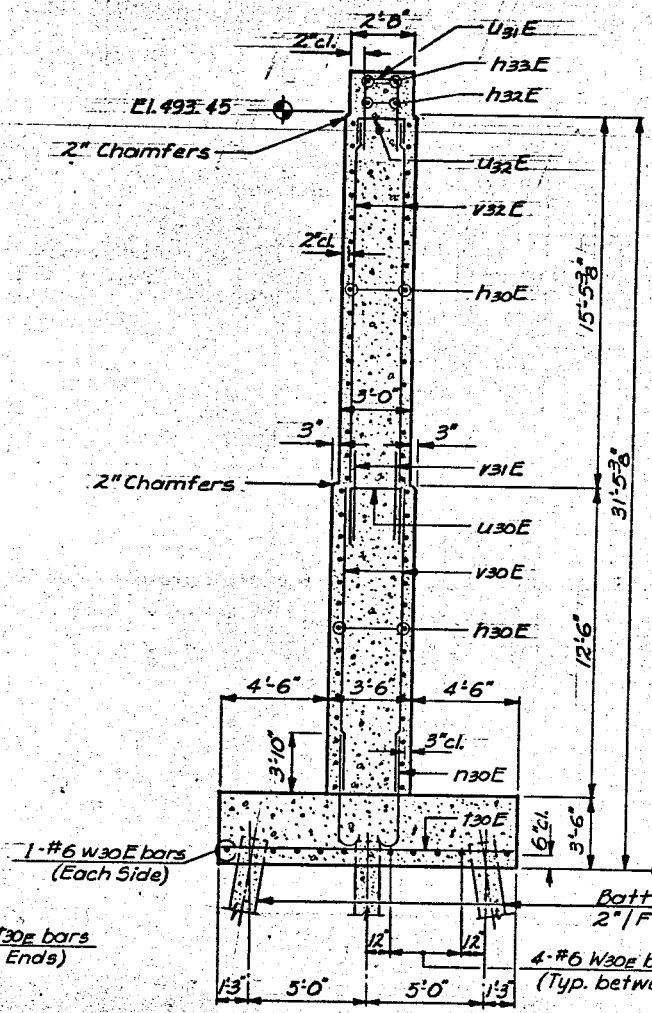




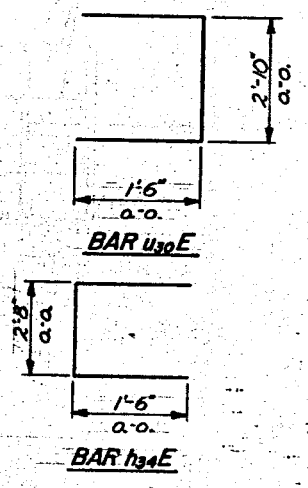


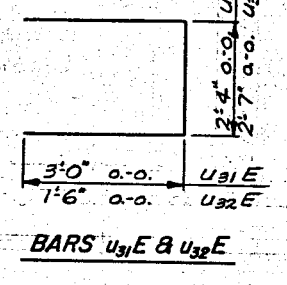
HALF PILE PLAN

HALF FOOTING PLAN



SECTION A-A





BAR
h30E
h31E
h32E
h33E
h34E
n30E
t30E
u30E
u31E
u32E
v30E
v31E
v32E
w30E
Class A
Reinforce
Conc. Pil
Test Pile
Struct.

PILE DATA

Type:	Conc. 12" dia.
Capacity:	45 Ton
Est. Length:	36'
No. Required:	27*

*. Includes one test pile driven in a permanent location.

Mc
OVER
F.A. ROUTE
PEORIA

DESIGNED WDL
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED S.C.O.

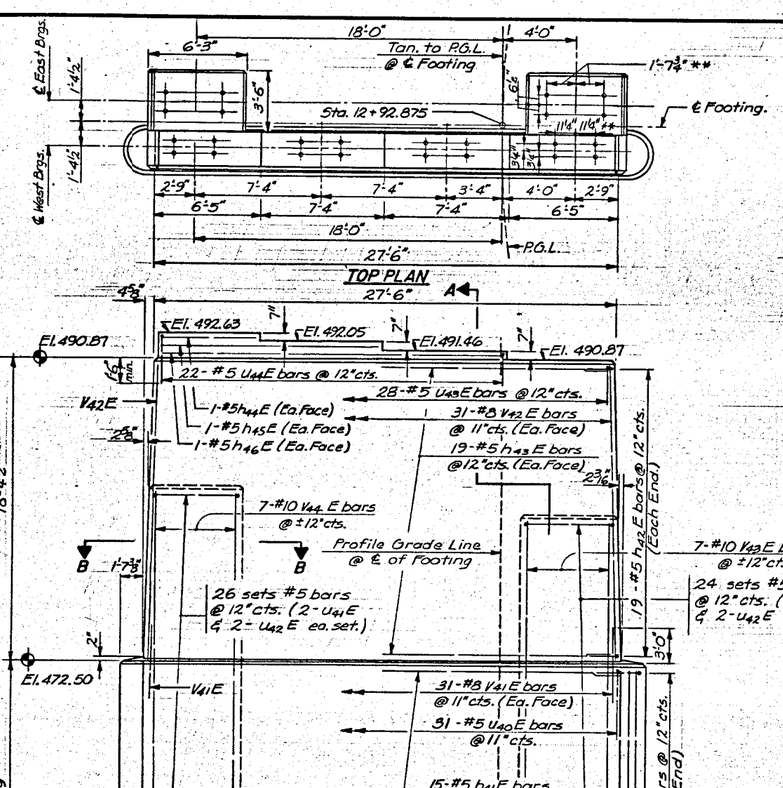
SPRINGFIE

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

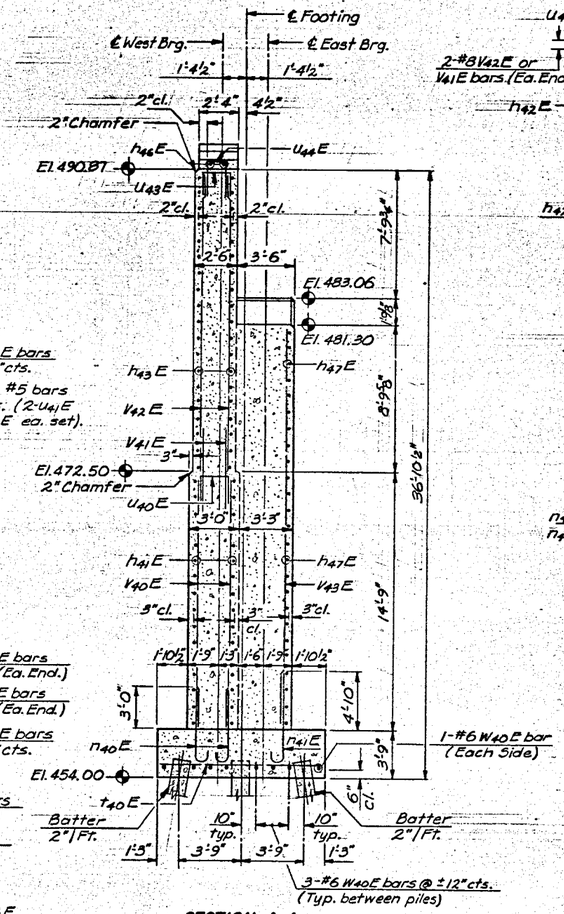
ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.-49	15B-2	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 9	ILLINOIS	PROJECT		

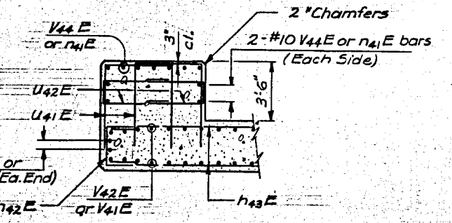
Sheet 129 of 134

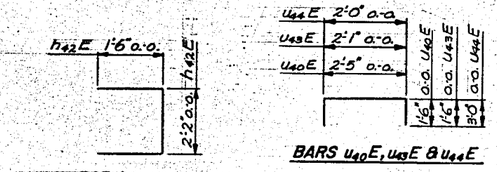
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

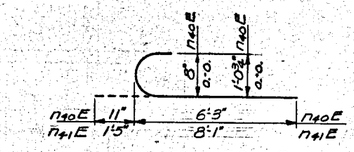


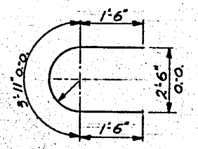
**Location of future Anchor Bolts.

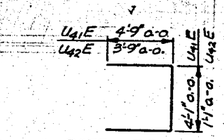












PIER 4E
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h40E	30	#5	6'-11"	
h41E	30	#5	28'-6"	
h42E	38	#5	5'-2"	
h43E	38	#5	27'-2"	
h44E	2	#5	5'-11"	
h45E	2	#5	13'-3"	
h46E	2	#5	20'-7"	
n40E	70	#8	7'-2"	
n41E	22	#10	9'-6"	
t40E	49	#11	9'-6"	
u40E	31	#5	5'-5"	
u41E	100	#5	13'-7"	
u42E	100	#5	8'-7"	
u43E	28	#5	5'-1"	
u44E	22	#5	8'-0"	
V40E	70	#8	14'-6"	
V41E	66	#8	6'-0"	
V42E	66	#8	17'-11"	
V43E	11	#10	23'-3"	
V44E	11	#10	25'-0"	
W40E	8	#6	32'-6"	
Class A Concrete		Cu. Yds.	182.7	
Reinforcement Bars		Lbs.	19,600	
Conc. Piles 12"ø		Lin. Ft.	1044	
Test Pile 12" Conc.		Each	1	
Structure Excavation		Cu. Yds.	96	

PILE DATA

Type: Concrete. 12" dia.
Capacity: 45 Ton
Est. Length: 36'
No. Required: 50 *
* Includes one Test Pile driven in a permanent location.

PIER 4E

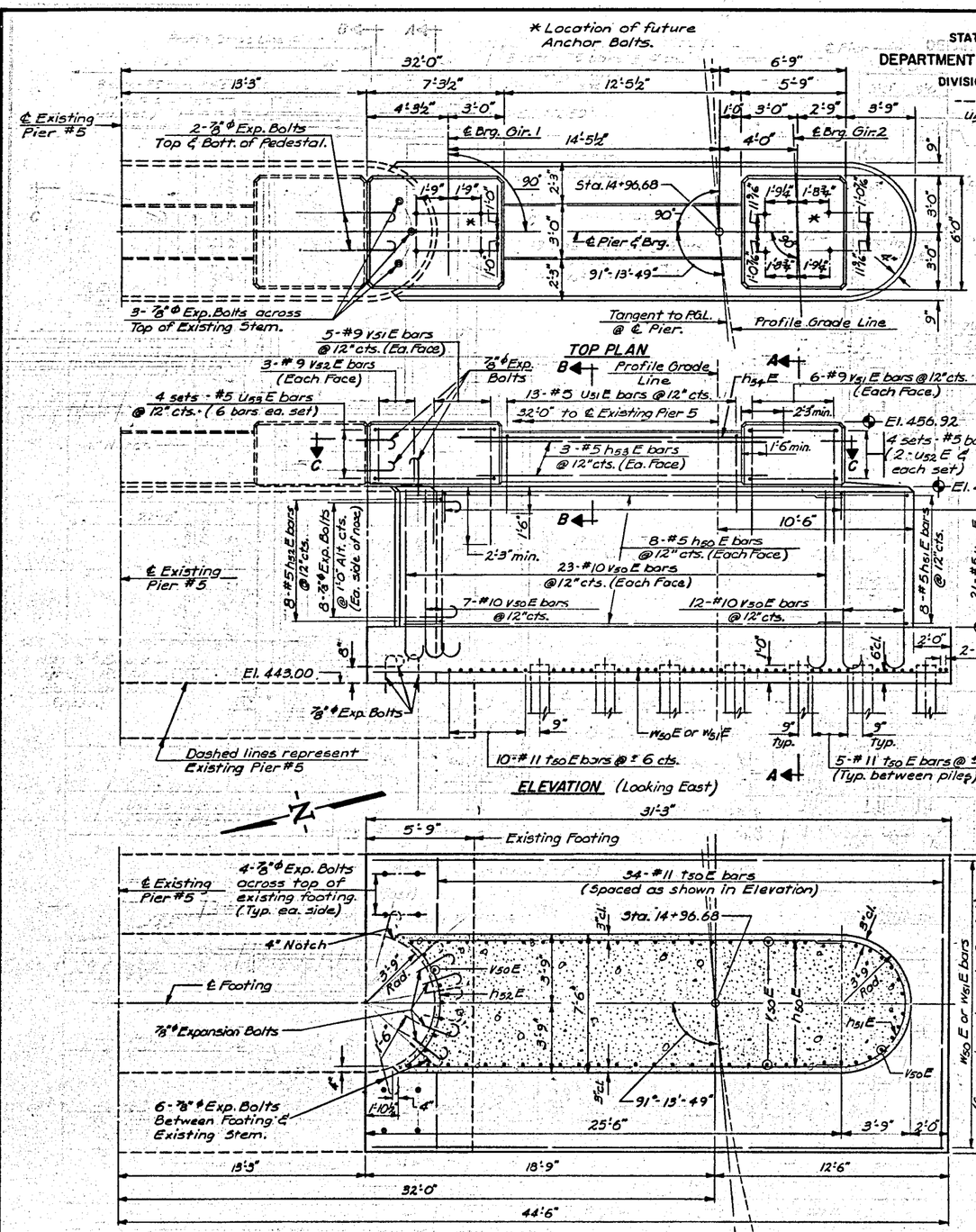
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-2
PEORIA & TAZEWELL COUNTIES

DESIGNED WDL	HANSON ENGINEERS INCORPORATED	FILE NO.	74001
CHECKED C.R.M.			
DRAWN D.A.M.	SPRINGFIELD ILLINOIS PEORIA ILLINOIS	DATE	6-22-76
CHECKED WDL			

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

DISTRICT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 49	15B-2	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



BAR	NO.	SIZE	LENGTH	SHAPE
h50E	16	#5	23'-3"	
h51E	8	#5	14'-0"	
h52E	8	#5	8'-6"	
h53E	6	#5	15'-5"	
h54E	4	#9	17'-0"	
t50E	42	#11	15'-6"	
U50E	21	#5	9'-10"	
U51E	13	#5	11'-4"	
U52E	8	#5	7'-11"	
U53E	40	#5	10'-11"	
V50E	65	#10	11'-2"	
V51E	31	#9	5'-6"	
V52E	11	#9	3'-3"	
W50E	8	#6	30'-9"	
W51E	12	#6	14'-11"	
Class A Concrete		Cu.Yd.	124.5	
Reinforcement Bars		Lbs.	9,720	
Conc. Piles - 12"ϕ		Lin.Ft.	1,088	
Test Pile 12" Conc.		Each	1	
Structure Excavation		Cu.Yd.	173	
Expansion Bolts - 7/8"ϕ		Each	37	

PIER 5E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-2
PEORIA & TAZEWELL COUNTIES

DESIGNED N.D.L.
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED S.C.O.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

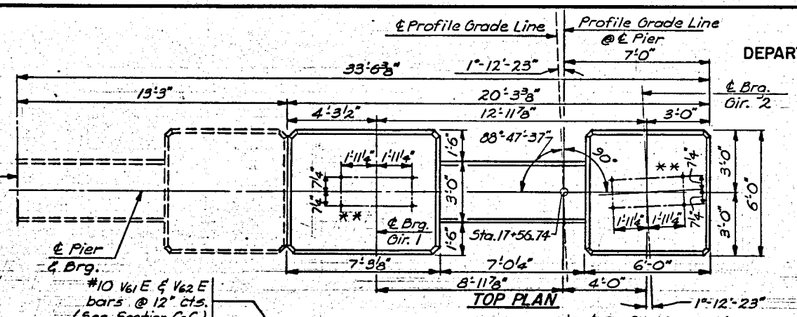
FILE NO. 74001
DATE 6-22-76

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

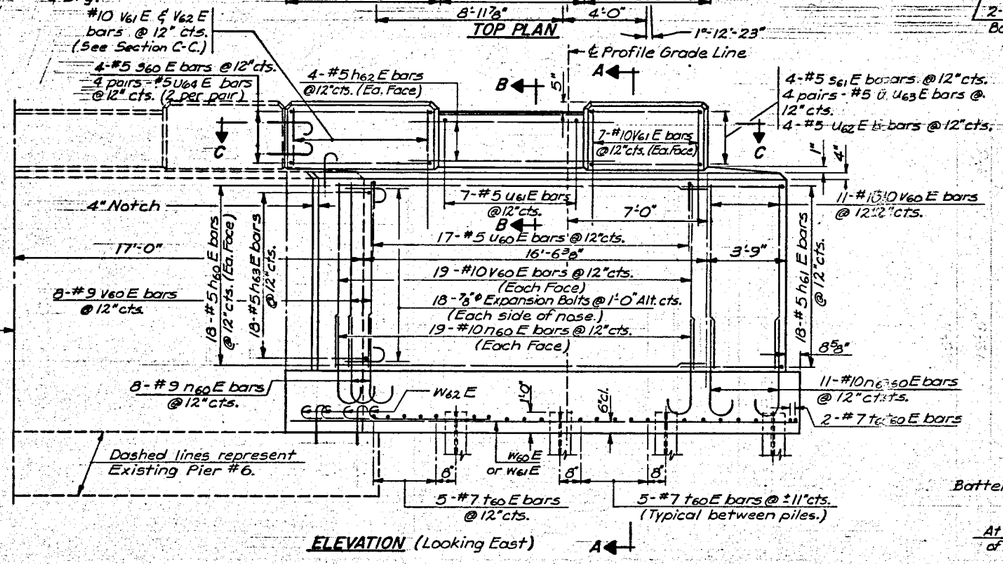
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.-49	15B-2	PEORIA & TAZEWELL		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

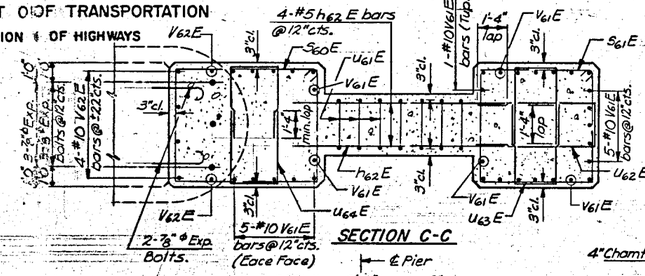
Sheet 131 of 134



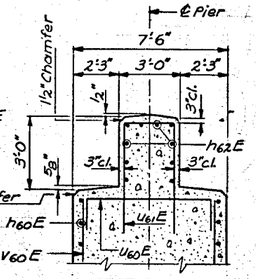
** : Location of future Anchor Bolts.



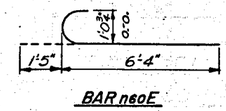
ELEVATION (Looking East)

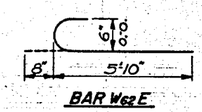


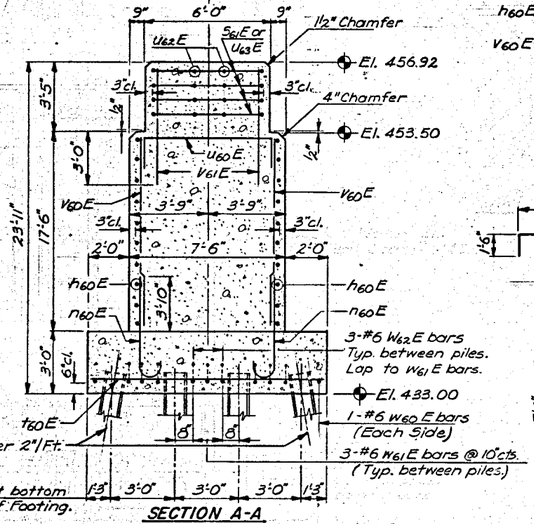
SECTION C-C



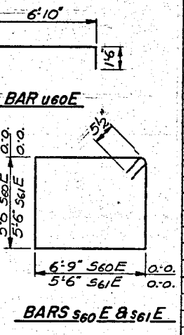
SECTION B-B





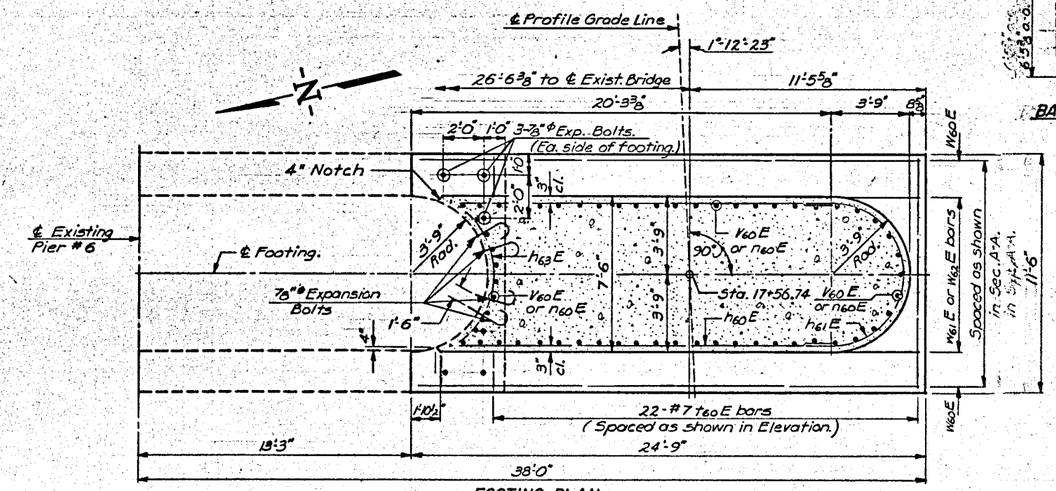


SECTION A-A

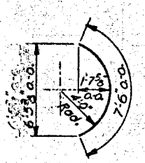


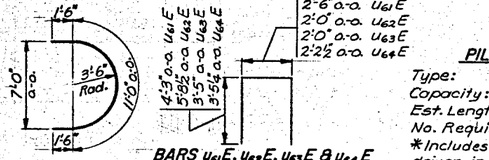
PIER 6E
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h60E	36	#5	18'-0"	
h61E	18	#5	14'-0"	
h62E	10	#5	10'-1"	
h63E	18	#5	7'-6"	
n60E	57	#10	7'-9"	
S60E	4	#5	25'-5"	
S61E	4	#5	22'-11"	
t60E	22	#7	11'-0"	
U60E	17	#5	9'-10"	
U61E	7	#5	11'-0"	
U62E	4	#5	13'-5"	
U63E	8	#5	8'-10"	
U64E	8	#5	9'-1"	
V60E	57	#10	17'-3"	
V61E	33	#10	6'-2"	
V62E	6	#10	3'-3"	
W60E	2	#6	24'-3"	
W61E	9	#6	19'-0"	
W62E	9	#6	6'-6"	
Class A Concrete		Cu.Yd.	140.2	
Reinforcement Bars		Lbs.	9860	
Steel Piles HP12x53		Lin.Ft.	705	
Test Pile HP12x53		Each	1	
Cofferdam Excavation		Cu.Yd.	121	
Cofferdam		Each	1	
Exposition Bolts-⅞"ϕ		Each	49	



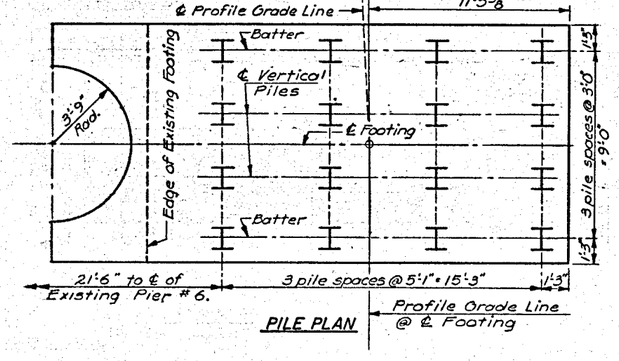
FOOTING PLAN





PILE DATA

Type: HP 12x53
Capacity: Drive to refusal.
Est. Length: 47'
No. Required: 16 *
*Includes one test pile driven in a permanent location.



PILE PLAN

Profile Grade Line @ ℄ Footing

PIER 6E

McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-2
PEORIA & TAZEWELL COUNTIES

DESIGNED C.R.M.
CHECKED S.C.O.
DRAWN D.A.N.
CHECKED S.C.O.

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

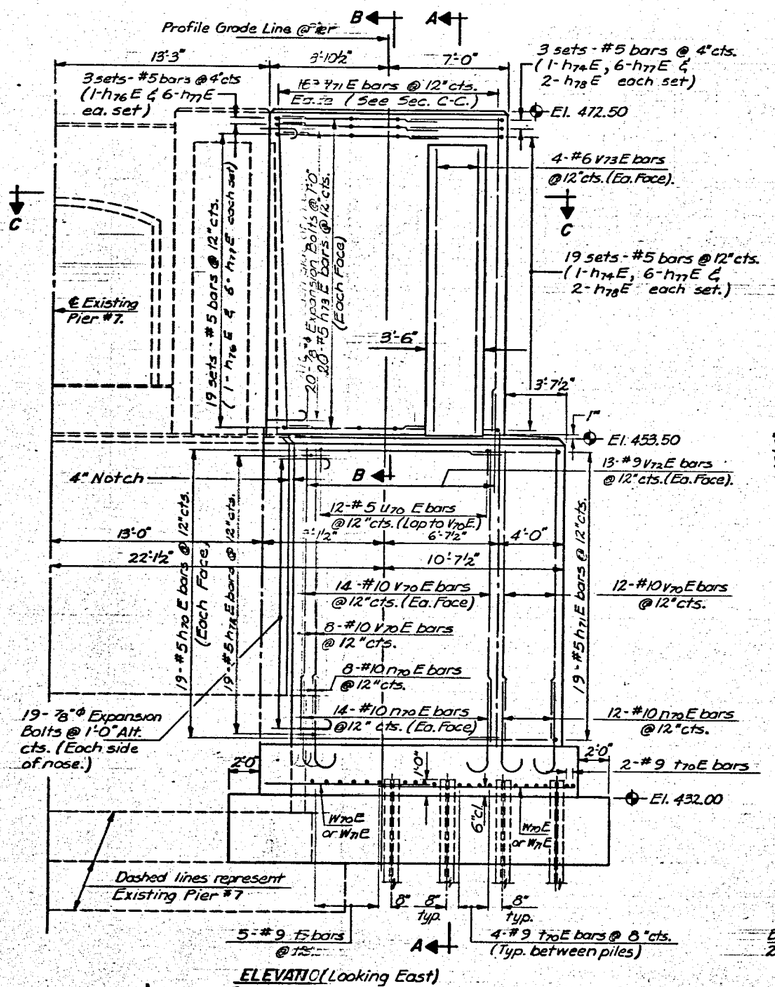
FILE NO. 74001
DATE 6-22-76

1 FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

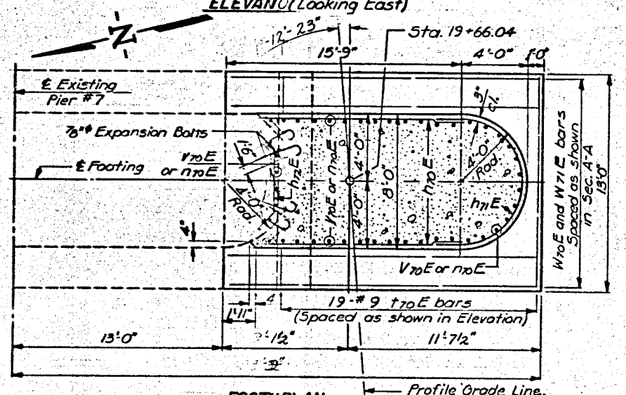
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A. Rte.	Sec.	County	Total Sheets	Sheet No.
F.A. Rte. 49	158-2	PEORIA & TAZEWELL		
Fed. Aid Highway Act of 1956, Sec. 7	ILLINOIS	PROJECT		

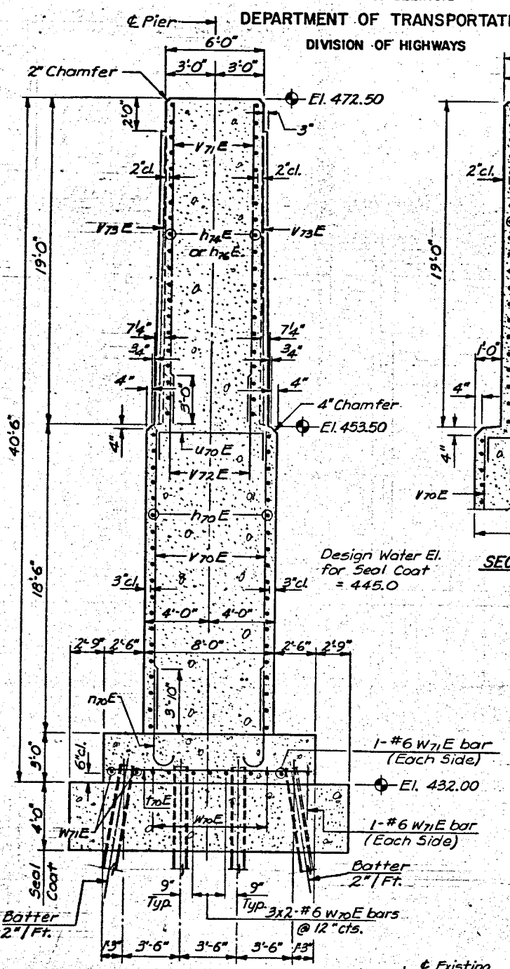
Sheet 132 of 134



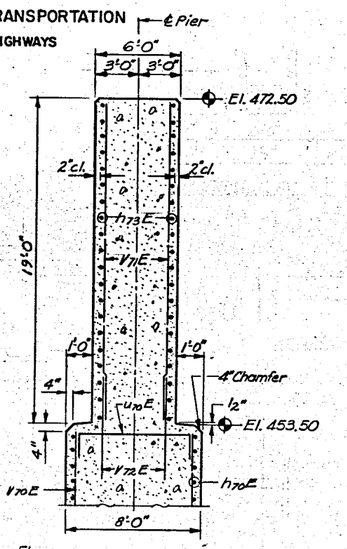
ELEVATION (Looking East)



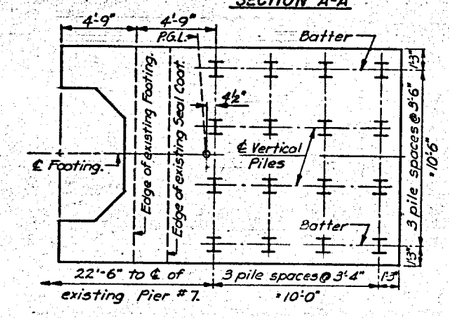
FOOTING PLAN



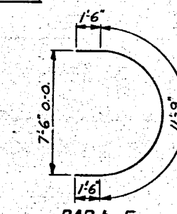
SECTION A-A



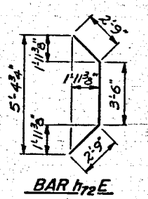
SECTION B-B



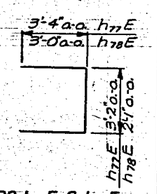
PILE PLAN



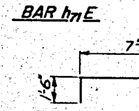
BAR h71E



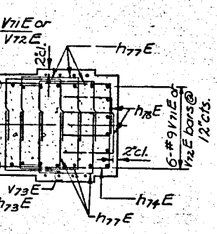
BAR h72E



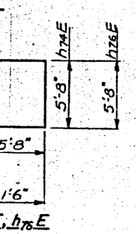
BARS h77E & h78E



BAR u70E

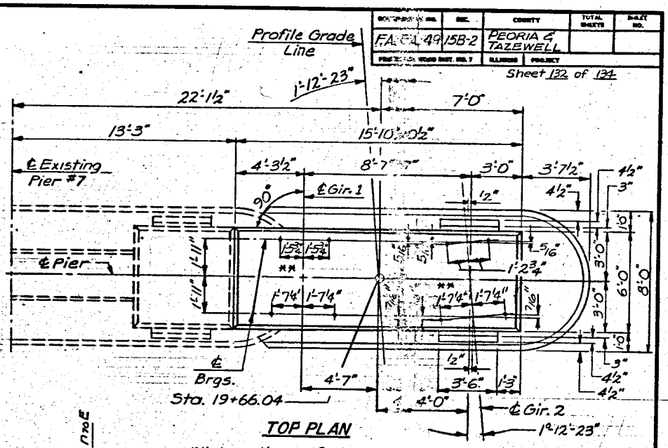


SECTION C-C



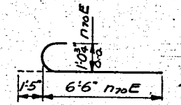
BARS h74E, h76E

PILE DATA
Type: HP 10 x 42
Capacity: Drive to refusal.
Est. Length: 47'
No. Required: 16*
* Includes one test pile driven in a permanent location.



TOP PLAN

** Locations of future Anchor Bolts.



BAR n70E

PIER 7E
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h70E	38	#5	13'-7"	
h71E	19	#5	14'-9"	
h72E	19	#5	9'-0"	
h73E	40	#5	11'-1"	
h74E	22	#5	17'-0"	
h76E	22	#5	8'-8"	
h77E	264	#5	9'-10"	
h78E	44	#5	8'-1"	
n70E	48	#10	7'-11"	
t70E	19	#9	12'-6"	
u70E	12	#5	10'-4"	
V70E	48	#10	18'-0"	
V71E	39	#9	18'-8"	
V72E	30	#9	6'-0"	
V73E	8	#6	16'-8"	
W70E	14	#6	9'-6"	
W71E	4	#6	20'-3"	
Class A Concrete		Cu.Yd.	180.7	
Reinforcement Bars		Lbs.	15,040	
Seal Coat Concrete		Cu.Yd.	56	
Steel Piles HP10x42		Lin.Ft.	705	
Test Pile HP10x42		Each	1	
Cofferdam Excavation		Cu.Yd.	151	
Cofferdam		Each	1	
Expansion Bolts ¾" ϕ		Each	78	

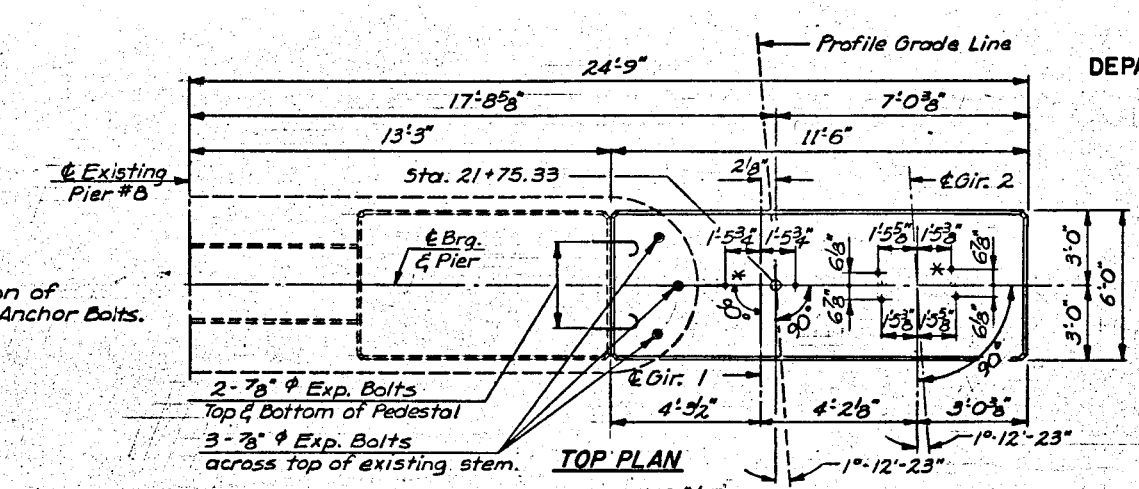
PIER 7E

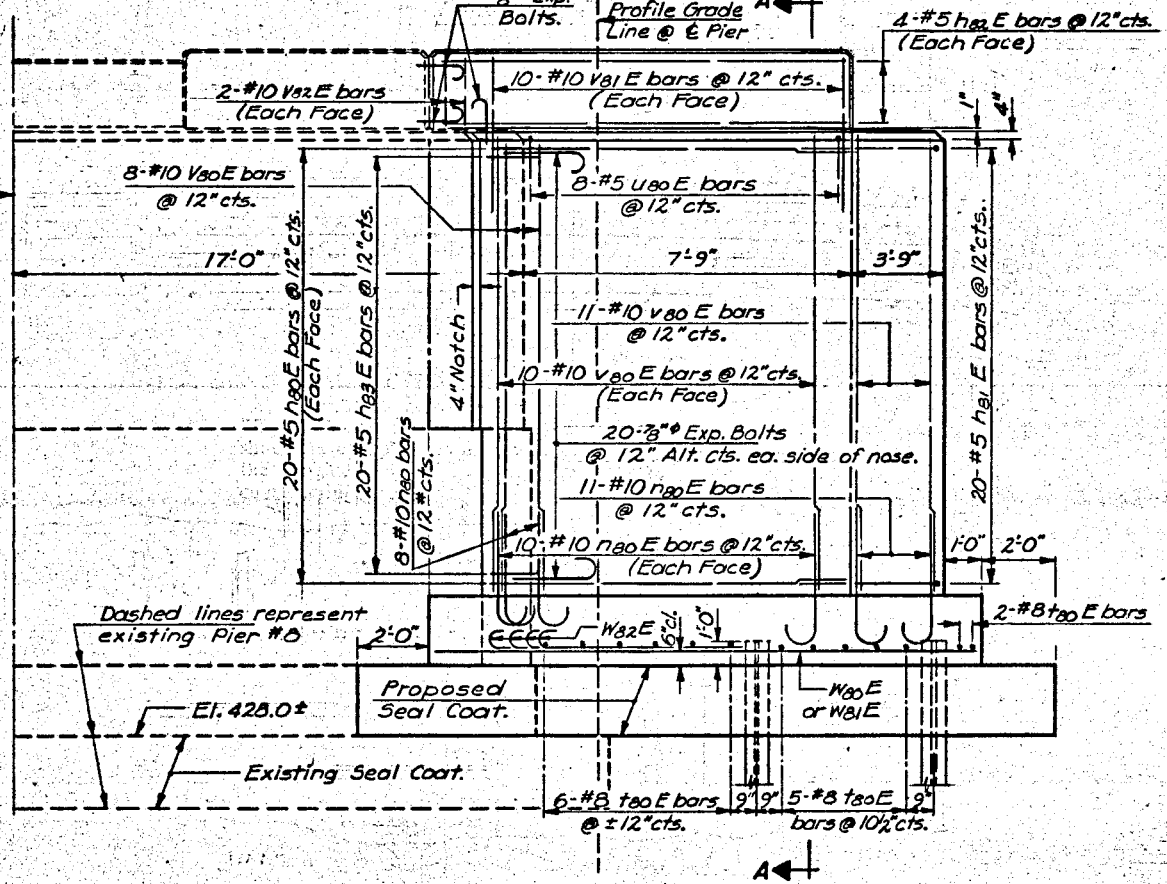
McCLUGAGE BRIDGE
OVER THE ILLINOIS RIVER
F.A. ROUTE 49 SEC. 15B-2
PEORIA & TAZEWELL COUNTIES

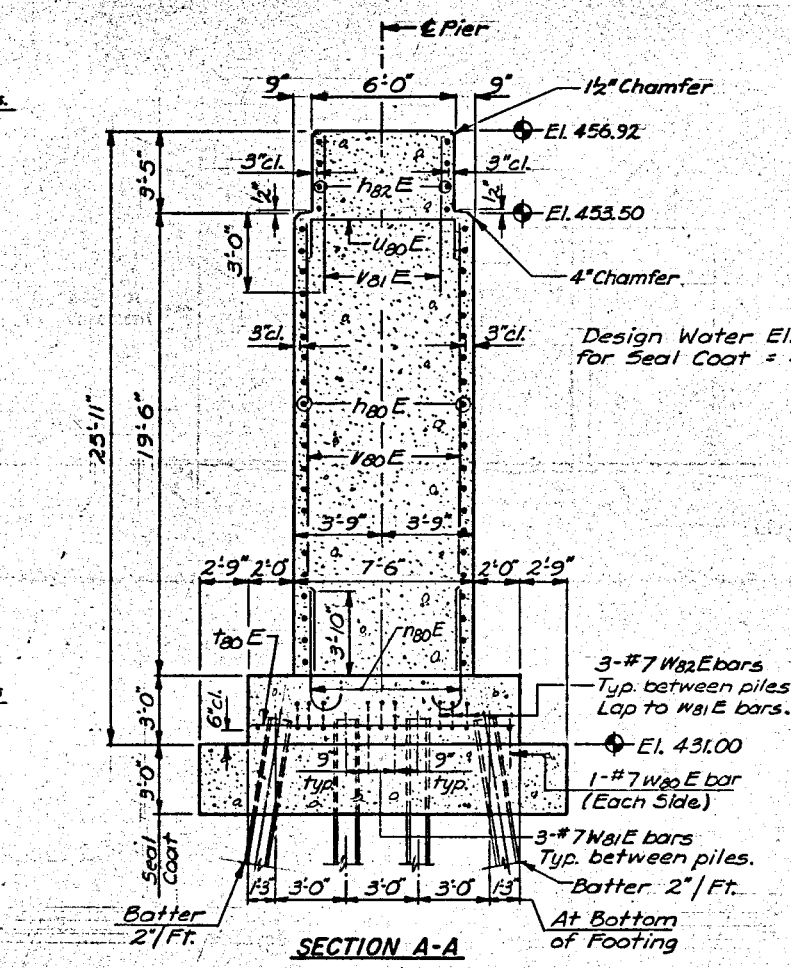
DESIGNED W.D.L.	HANSON ENGINEERS INCORPORATED	FILE NO. 74001
CHECKED C.R.N.		
DRAWN D.A.N.		DATE 6-22-76
CHECKED C.R.N.	SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS	

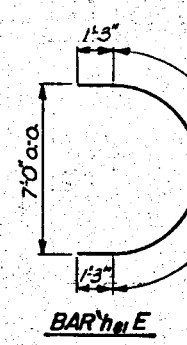
FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

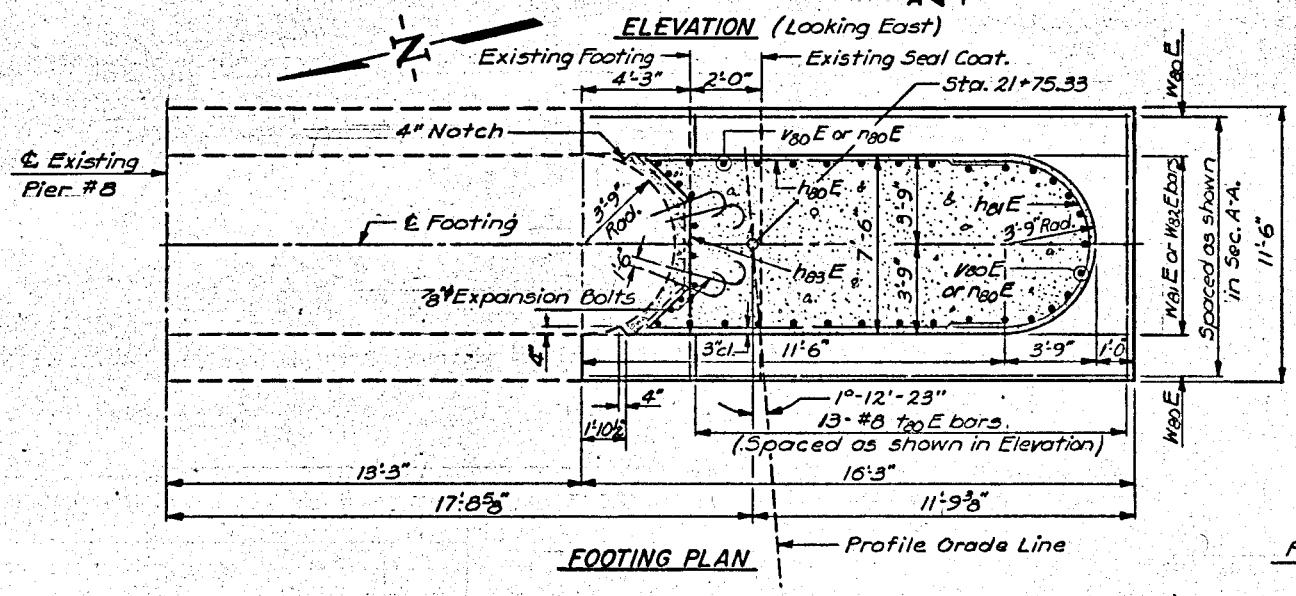
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

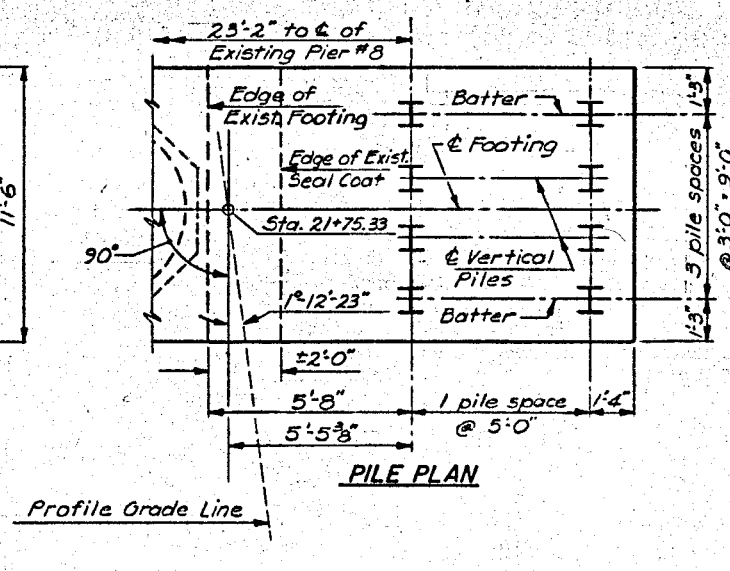












PILE DATA

Type:	HP 14 x 73
Capacity:	Drive to refusal.
Est. Length:	56'
No. Required:	8**

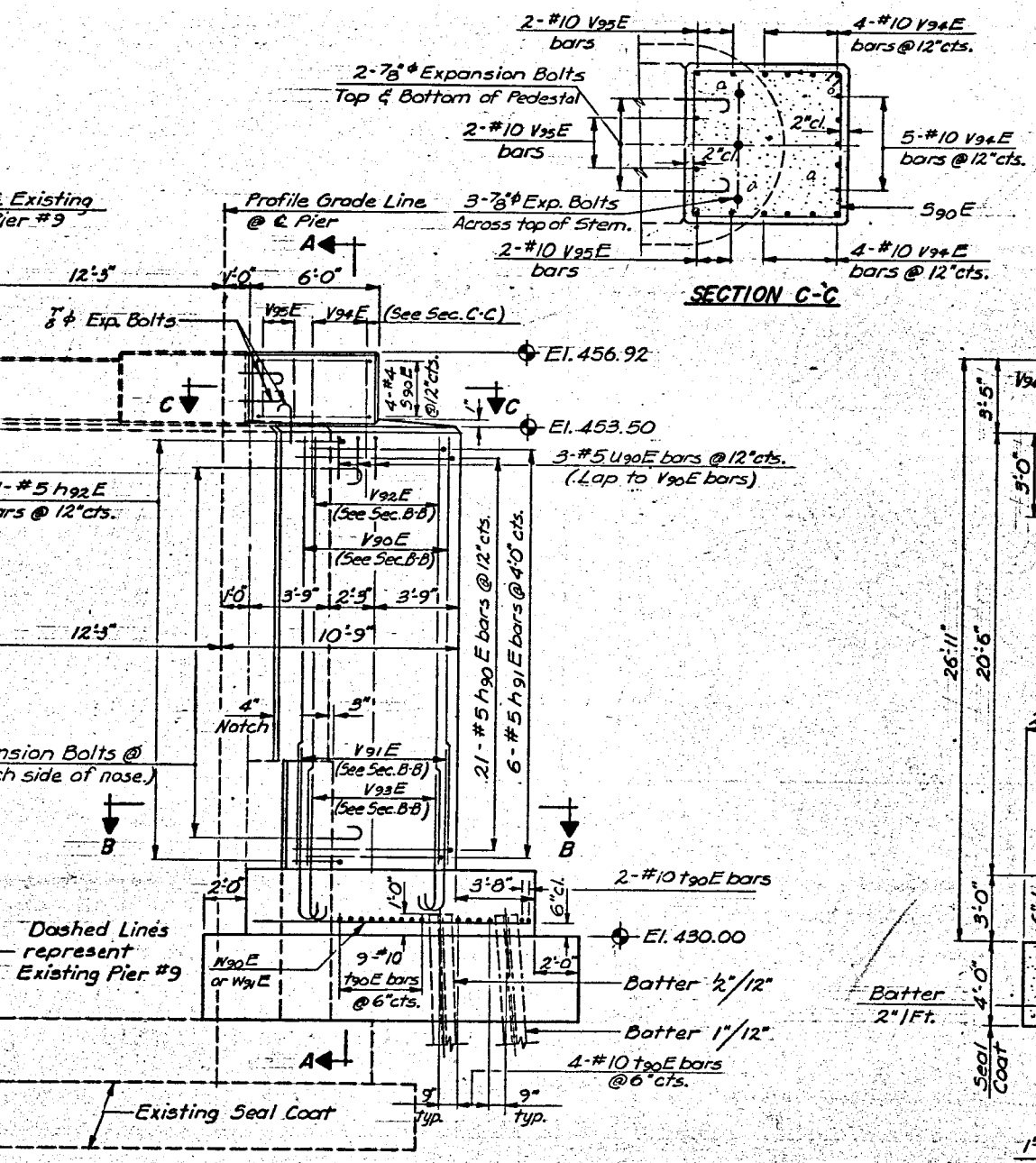
** Includes one test pile driven in a permanent location.

F.A. P

W.D.L.
C.R.M.
D.A.M.
C.R.M.

FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

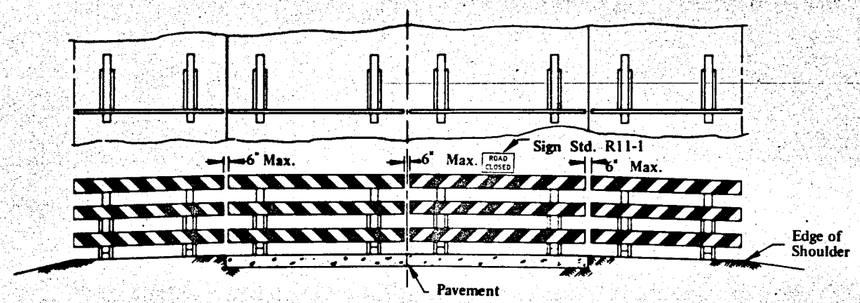


FOR INFORMATIONAL PURPOSES ONLY. NOT INCLUDED IN THIS CONTRACT.

STANDARD DESIGN

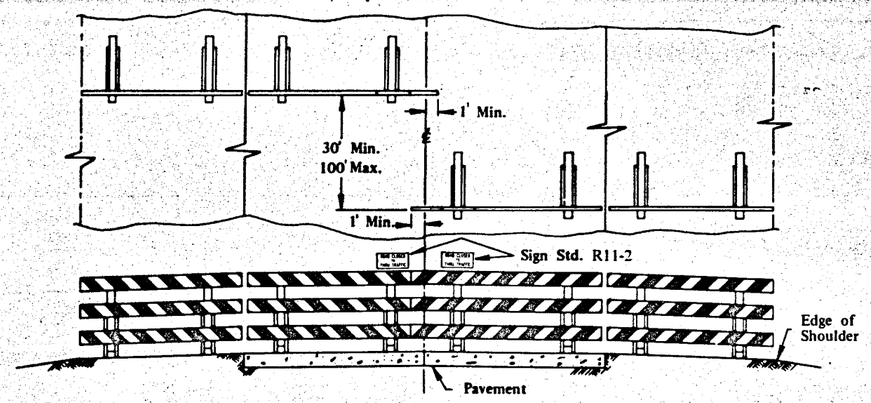
TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE

TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD



ROAD CLOSED TO ALL TRAFFIC

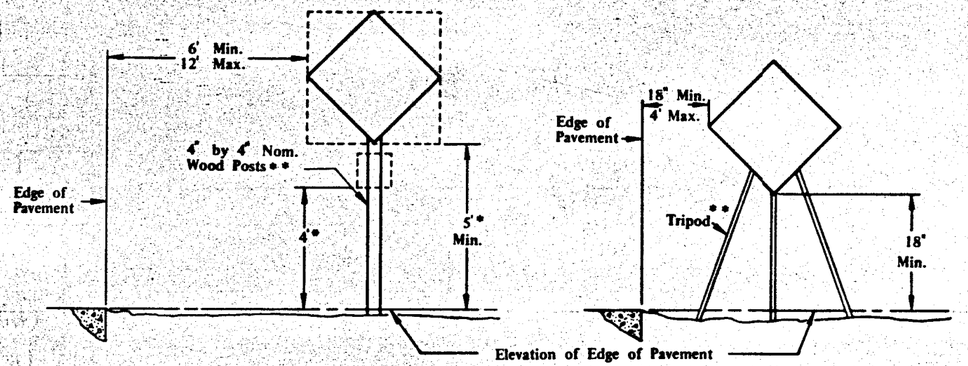
The barricades shall be to the edge of the shoulders except when otherwise directed by the Engineer or shown on the detailed construction plans.

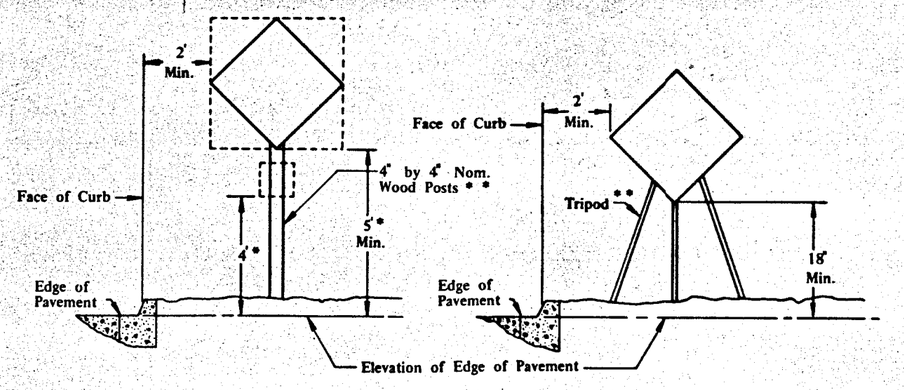


ROAD CLOSED TO THRU TRAFFIC

Reflectorized striping shall appear on both sides of barricades. The barricades shall be to the edge of the shoulders, except when otherwise directed by the Engineer or shown on the detailed construction plans.

TYPICAL SIGN INSTALLATIONS





*Add 2 ft. if parking exists within 200 ft. in advance of the sign location at any time during the project.

**Alternate designs and/or materials may be permitted when authorized by the Engineer. All materials shall be substantial and durable.

Signs on temporary supports shall be within 20° of a vertical position.

Weights of concrete, stone, or brick will not be allowed and all weights used to stabilize signs other than sandbags must be rigidly attached to the sign support as close to the ground as possible.

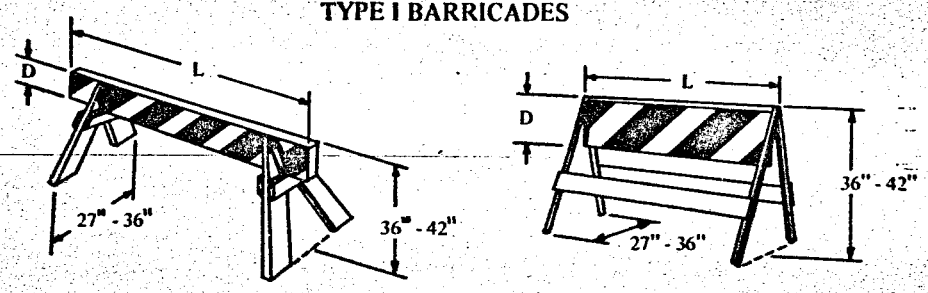
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69 REVISED BY	DATE
APPROVED 12-17-1973		
L. E. McBerly, Engineer of Traffic		

STANDARD 2298-4

F-6.01 c

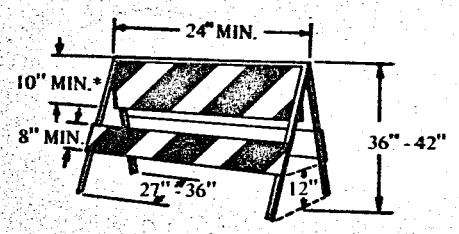
STANDARD DESIGN
DESIGN OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE

TYPE I BARRICADES



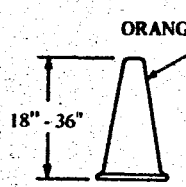
LENGTH (L)	DEPTH (D)
48" MIN.	8" MIN. (10" SLOPING RAIL)
36" MIN.	10" MIN. (12" SLOPING RAIL)

TYPE II BARRICADES

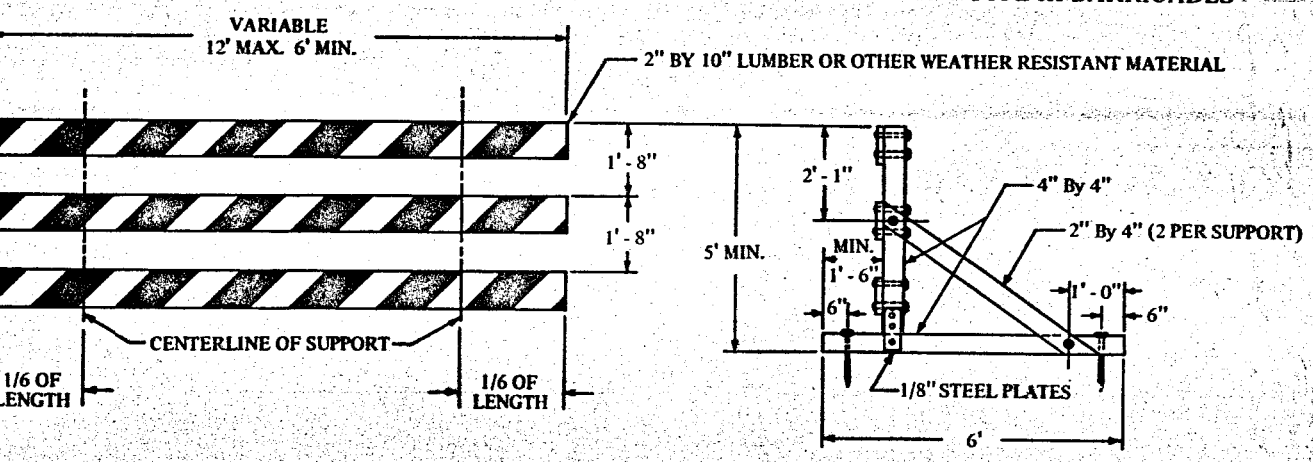


*12" SLOPING

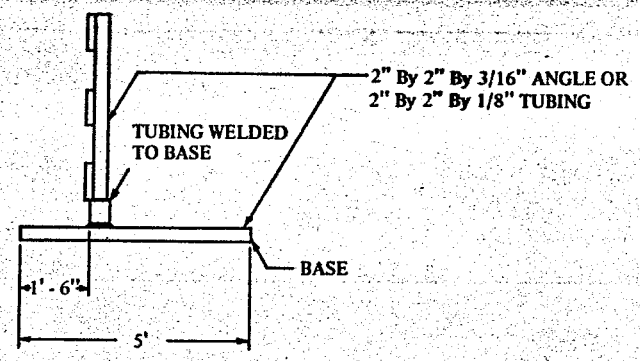
CONES



TYPE III BARRICADES

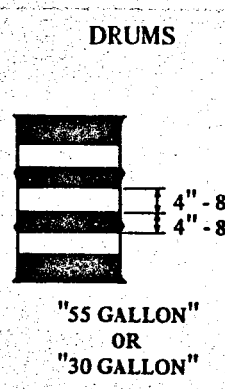


TYPICAL WOOD SUPPORTS

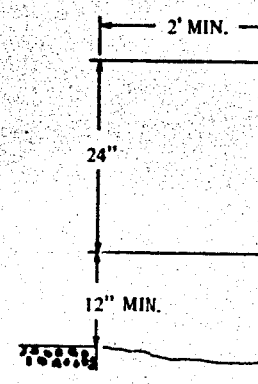


TYPICAL STEEL SUPPORTS

DRUMS



VERTICAL P



GENERAL NOTES

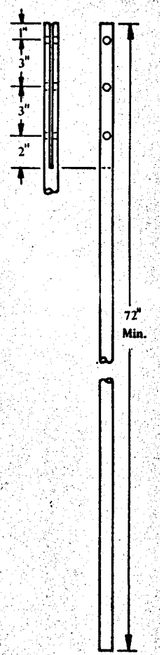
1. Barricade legs or supports shall be orange, white or silver in color.
2. All reflectorized material, shall meet the latest reflective sheeting requirements of the Department to be used in construction and maintenance areas.
3. All barricades and vertical panels shall have alternating reflectorized white and reflectorized orange stripes at 45° from the vertical. Barricade stripes shall be 6 inches in width on barricades 36 inches or greater in length and 4 inches in width on barricades less than 36 inches in length. Stripes on vertical panels shall be 3 inches in width.
4. Type I and Type II Barricades shall be striped on both sides. Type III Barricades shall be striped on both sides where traffic approaches from either direction.
5. Diagonal stripes shall slope downward at 45° toward the side on which traffic will pass.
6. Vertical panels placed on the outside of curves shall be reflectorized on both sides.
7. The top rail on Type I and Type II Barricades may be vertical as shown or sloping at no greater than a 30 degree angle.
8. Drums shall have alternating reflectorized orange and reflectorized white horizontal, circumferential stripes. Stripes shall be 4 inches to 8 inches in width. If non reflective spaces are left between the orange and white stripes or at the top and bottom of the drum, they shall be no more than 2 inches in width and shall be painted orange or white. Other than for these 2-inch spaces, the entire drum shall be striped.
9. Frames shown are typical. Alternate designs and/or materials may be permitted when authorized by the Engineer. All materials shall be substantial and durable. Nominal lumber sizes are acceptable to satisfy dimensions.
10. Barricades may be identified with a legend that does not exceed one inch in height at a location not visible to traffic.
11. Weights of concrete, stone, or brick will not be allowed and all weights used to stabilize barricades other than sandbags must be rigidly attached to the barricades as close to the ground as possible. No weights or sandbags will be allowed on the top rail of barricades. Drums may be weighted internally with just enough sand, water, or other material to provide stability.
12. When used, warning lights on Type I and Type II Barricades shall be mounted above the top rail to the side on which traffic will pass and shall not obscure any reflectorized portion of the rail.

NOIS ISPORTATION	ISSUED 4-3-69 REVISED By	DATE
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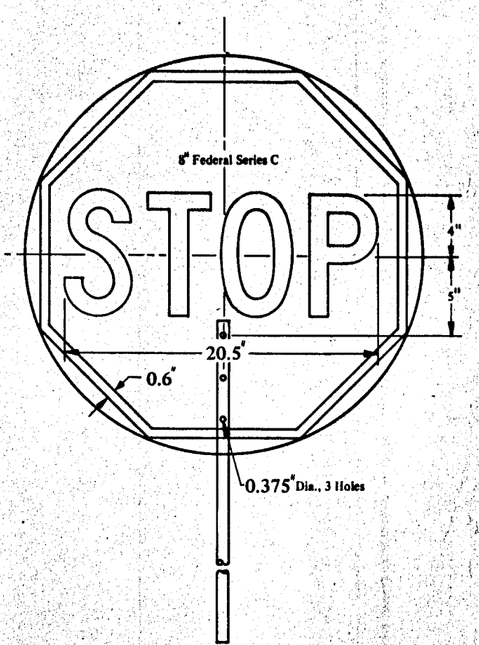
STAN

F603a

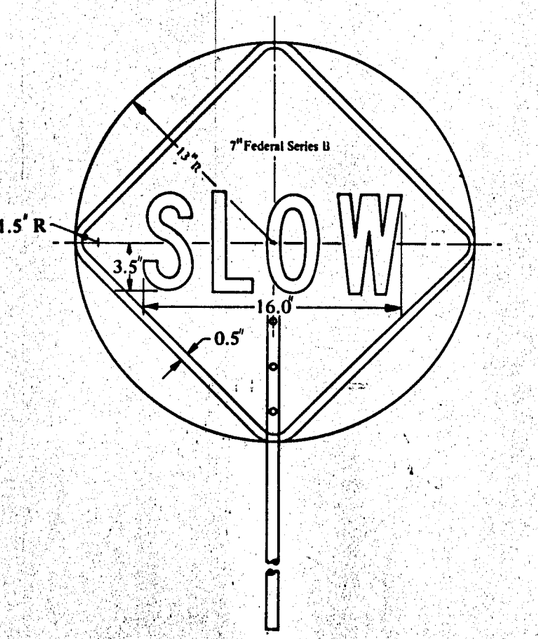
STANDARD DESIGN FOR FLAGMAN TRAFFIC CONTROL SIGN



STAFF



FRONT SIDE



REVERSE SIDE

GENERAL NOTES

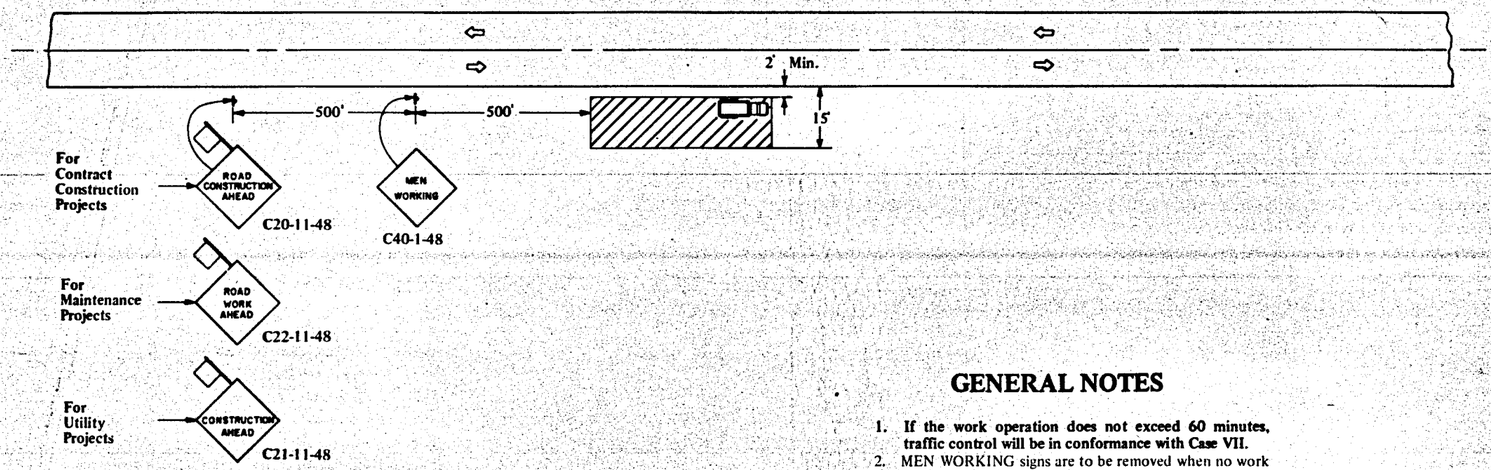
1. **The "STOP" face shall consist of white letters and border on a red reflectorized background.**
2. **The "SLOW" face shall consist of black letters and border on a orange reflectorized background.**
3. **Areas outside sign borders shall be light blue.**
4. **The portion of the staff within the sign face shall match the sign colors.**
5. **All colors and letters shall meet applicable federal standards.**
6. **The sign shall be attached to the staff with rust resistant hardware.**
7. The staff shall consist of two sections joined by a coupling located 60 in. from the bottom of the staff. Alternate designs may be used when approved by the Engineer. All materials shall be substantial and durable.
8. **This sign shall be furnished by the contractor and shall be used by the flagman in lieu of flags or other signaling devices. The cost of furnishing and maintaining the sign shall be considered incidental to the contract and no additional compensation will be allowed.**

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69 REVISED	
APPROVED 6-12 1973	BY	DATE
L. E. Moberly Engineer of Traffic		

STANDARD 2300-1

STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE



TYPICAL APPLICATIONS

Utility Operations
Culvert Extensions
Side Slope Changes
Guard Rail Installation and Maintenance
Delineator Installation and Maintenance
Landscaping Operations
Cleaning Ditches and Drainage Structures
Sign Installation and Maintenance
Shoulder Repair

SYMBOLS

Work Area.

Sign with 18 in. by 18 in. (minimum) orange flag attached.

Sign on portable or permanent support.

GENERAL NOTES

1. **If the work operation does not exceed 60 minutes, traffic control will be in conformance with Case VII.**
2. MEN WORKING signs are to be removed when no work is being performed. Any unattended obstacle or excavation in the work area, which in the opinion of the engineer constitutes a hazard, shall be protected by Type I or Type II Barricades at 50-foot centers with flashing lights or torches at night. When used, torches must be placed on the ground. If the hazard exceeds 100 feet in length, steady burning lights shall be substituted for flashing lights or torches. When the distance is greater than 250 feet, barricade spacing may be increased to 100 feet.
3. **If the work operation requires that four or more work vehicles enter the through traffic lanes in a one-hour period, a flagman shall be provided and the FLAGMAN 500 FT sign shall be substituted for the MEN WORKING sign.**
4. **Longitudinal dimensions may be adjusted slightly to fit field conditions.**
5. **All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background.**
6. All vehicles, equipment, men and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.

CASE II

TWO-LANE, TWO WAY TRAFFIC, RURAL DAY OR NIGHT OPERATIONS

Where, at any time, any vehicle, equipment, men or their activities will encroach in the area closer than 15 ft. but not closer than 2 ft. to the edge of pavement.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED BY	DATE
APPROVED 6-12 1973		
L. E. Moberly Engineer of Traffic		

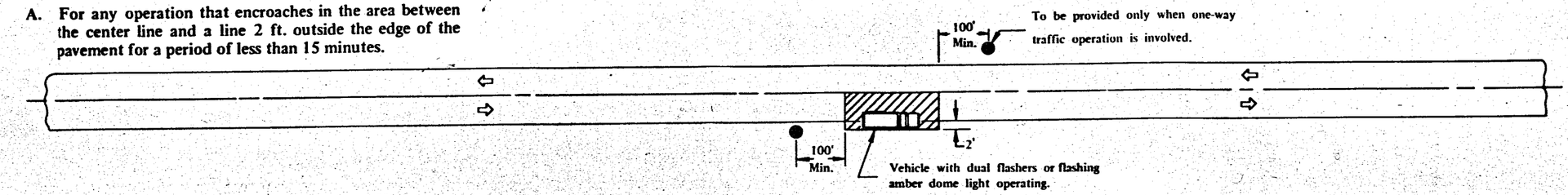
STANDARD 2302-3

F-6.07 b

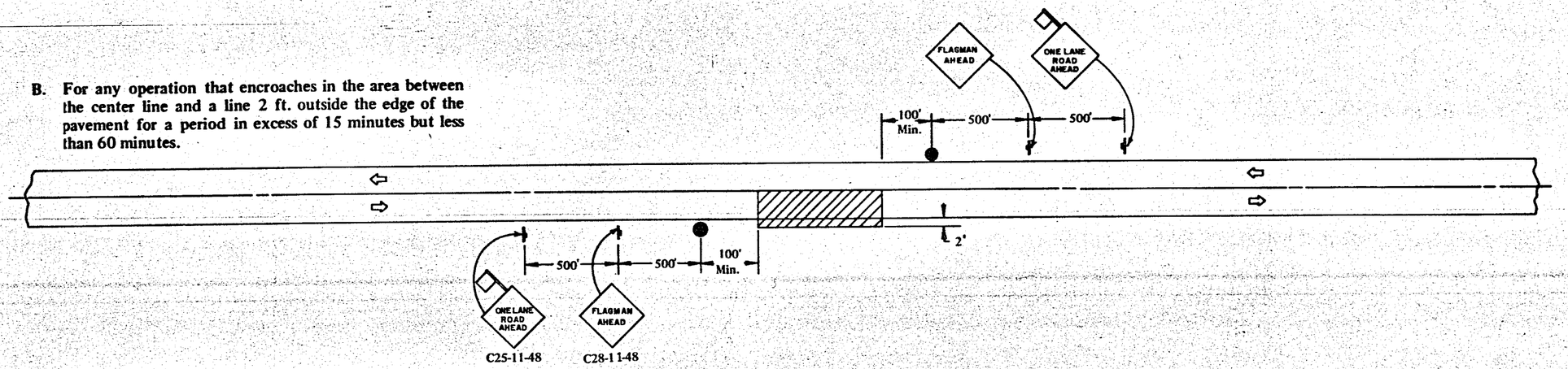
STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE

A. For any operation that encroaches in the area between the center line and a line 2 ft. outside the edge of the pavement for a period of less than 15 minutes.

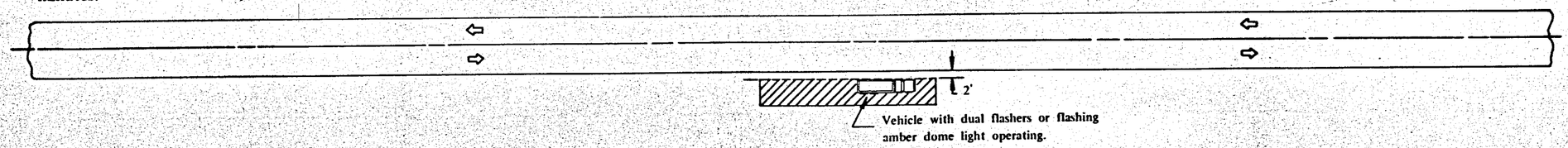


B. For any operation that encroaches in the area between the center line and a line 2 ft. outside the edge of the pavement for a period in excess of 15 minutes but less than 60 minutes.



C25-11-48 C28-11-48

C. For any operation that is more than 2 ft. outside the edge of the pavement for a period of less than 60 minutes.



TYPICAL APPLICATIONS

Marking Patches
Field Survey
String Line
Utility Operation
Cleaning Up Debris on Pavement

SYMBOLS

Work Area.

Sign with 18 in. by 18 in. (minimum) orange flag attached.

Sign on portable or permanent support.

Flagman with Traffic Control sign.

GENERAL NOTES

1. Construction operations shall be confined to one traffic lane. On two-lane roads, at least 500 ft. of both traffic lanes shall be available for traffic movement at intervals not greater than 1,000 ft. and a complete traffic control plan must be approved for any project expected to exceed 1,000 ft. in length.
2. The flagmen shall be in sight of each other or in direct communication at all times.
3. All signs are to be removed at completion of each operation.
4. For multilane roadways the flagman shown for traffic approaching from the opposite direction will be positioned as directed by the Engineer and the advance warning signs for traffic approaching from the opposite direction omitted.
5. Longitudinal dimensions may be adjusted slightly to fit field conditions. The lateral placement of the flagmen may be varied from that shown.
6. All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background.
7. All vehicles, equipment, men (except flagmen) and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.

CASE VII

SHORTTIME OPERATIONS
DAY OR NIGHT OPERATIONS

STATE OF ILLINOIS DEPARTMENT OF TRANSPCRTATION	ISSUED 4-3-69 REVISED BY	DATE
APPROVED 6-12 1973 L.E. Moberly Engineer of Traffic		

STANDARD 2307-4

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