

PLAN VIEW

OPEN STEEL GRID FLOOR:

The open grid steel floor is to be a 5' open steel grating. It may be I-beam, Lock Type Tr. as made by the U.S. Steel Corp., I-beam, Weiklock Type Tr. made by Reliance Steel Products Co., Mc Keesport, Pa., Greulich 4 way grid or other approved equal.

The floor sections are to be fabricated in maximum widths practicable but not less than 4 ft. and are to be installed in accordance with manufacturers recommended details and details shown on Sheets 3 & 4. Where grating is interrupted by floor expansion devices, the grating is to be fully welded to the expansion device. The connection shall be fully equal to the connection between any two adjacent ribs of the grating. At other points where grating is discontinuous such as the east end of bridge and expansion joints between the approach trusses the unsupported edge is to be stiffened by the addition of 5x4 pl. edge stiffeners as shown on sheet No. 4. The space between the edge plate and the adjacent rib is not to exceed the normal rib spacing. All transverse and diagonal elements of grating are to be fully welded to the stiffener so that the connection is fully equal to the connection between any two adjacent ribs.

A.S.T.M. Specifications A-750 with a min. of a 2% copper.

FENCING AT WEST END:

After removal of toll house the fencing on top of the wall to the south of toll house is to be extended to join with the south wing post on the abutment as shown on sheet #2. The fence is to be similar in height, weight, design and coating, and shall be neatly and securely joined to the existing fencing. Posts shall correspond in size, weight, height, design, coating and spacing to the existing posts, and shall be set 1/3 into existing concrete wall and grouted firmly in place with portland cement mortar.

CLEARING:

30' diameter tree growing into south side of bridge near West abutment is to be removed and disposed of by the Contractor.

See notice to bidders for complete estimate of clearing grubbing and brushing.

LIGHTING

The contractor is to furnish all material and perform all work necessary to install complete and ready for operation the roadway lighting system at west end of bridge and the navigation light system on the bridge as shown and described on Sheet 6.

He shall conduct his operations in such a way that the existing navigation light can be kept in operation until the new system is in operation so that at no time between the hours of sunset and sunrise is the bridge not properly lighted.

No wire splices to occur in conduit. All splices to be flooded with solder wrapped with rubber tape and varnished, painted and pointed with waterproof varnish so that electrically and mechanically the splice is equal to the conductor.

Complete installation including material, equipment and workmanship is to comply with the requirements of the National Electric Code and any local ordinances or regulations applicable.

REMOVAL

Old asphalt plank wearing surface is to be removed by the contractor and dumped at a point one block south and one block east of the west end of the bridge, for the use of the city of Lansing.

Old lumber including stringers, floor plank and rail is to be removed by the contractor. All unfit for reuse is to be disposed of by the Contractor. Material suitable for reuse shall be piled (after removing nails) at both ends of bridge in approximately equal amounts.

Existing toll house at west end of bridge is to be removed and disposed of by the contractor.

Existing roadway lighting system including all wiring and lighting fixtures is to be removed and disposed of by the contractor.

GENERAL NOTES:

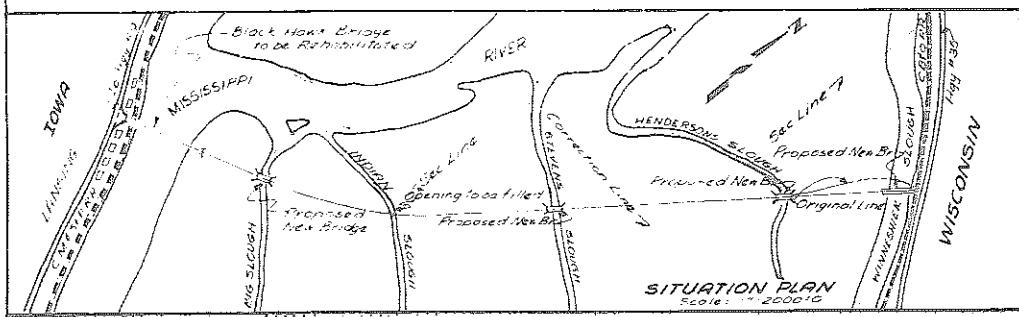
The work contemplated under this contract consists of removing existing floor and wood stringers, and toll house, adding new steel grid floor, stringers, curb and rail, strengthening existing floor beams and stringers and certain truss members, adding new I-Beam approach span and concrete abutment at East end, cleaning and painting existing steel work, remodeling concrete abutment at West end, including necessary fencing, and renovation of lighting system, all in accordance with these plans and specifications.

SPECIFICATIONS:

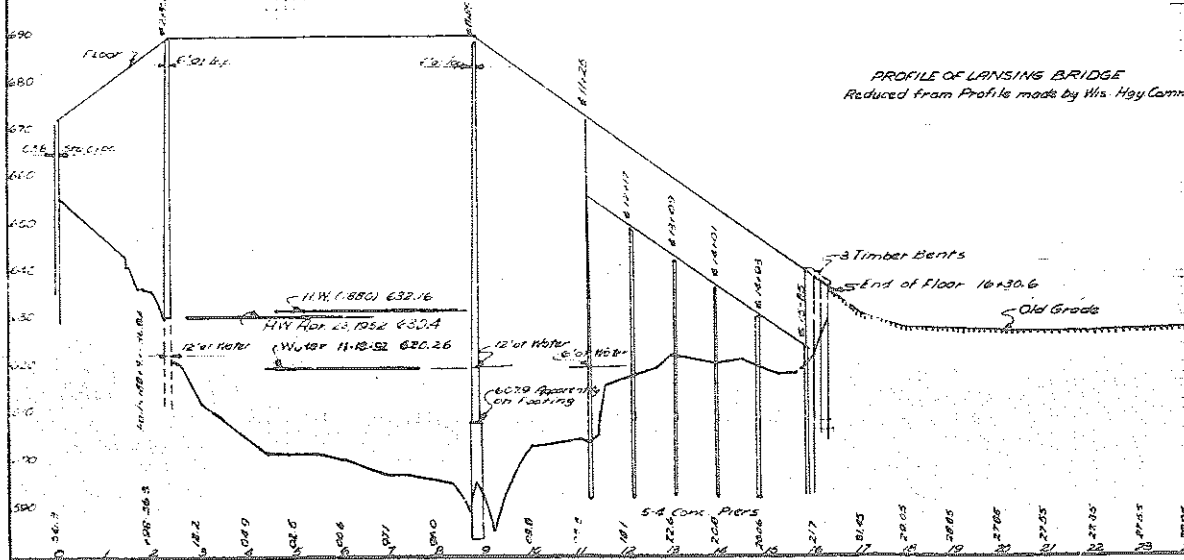
Design: A.R.S.H.O., 1953 for H 20 loading
 Construction: Iowa State Highway Commission Series 1952, with Special Provisions 1344 Jan 11-55 for painting and clearing and other special provisions applicable.

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Structural Steel	Stringers 15x16	722.98
	Field Strengthening	10.56
	Rail & Curb	388.15
5' Open Steel Grid Floor		
Concrete		
Reinforcing Steel		
Crested Piling		
Cleaning & Painting Existing Steel		
Lighting	See Notes	
Removal (See Notes)		
Fencing at West End	See Notes	
Clearing, Grubbing & Brushing		8452.10
Excavation - 20' East Abutment		18

Revision Note: Top curb changed from 12" to 18" to eliminate the interference between curb and field details of strengthening #3 #4 #5 #6 #7 and changes to avoid interference with existing structural members.



SITUATION PLAN



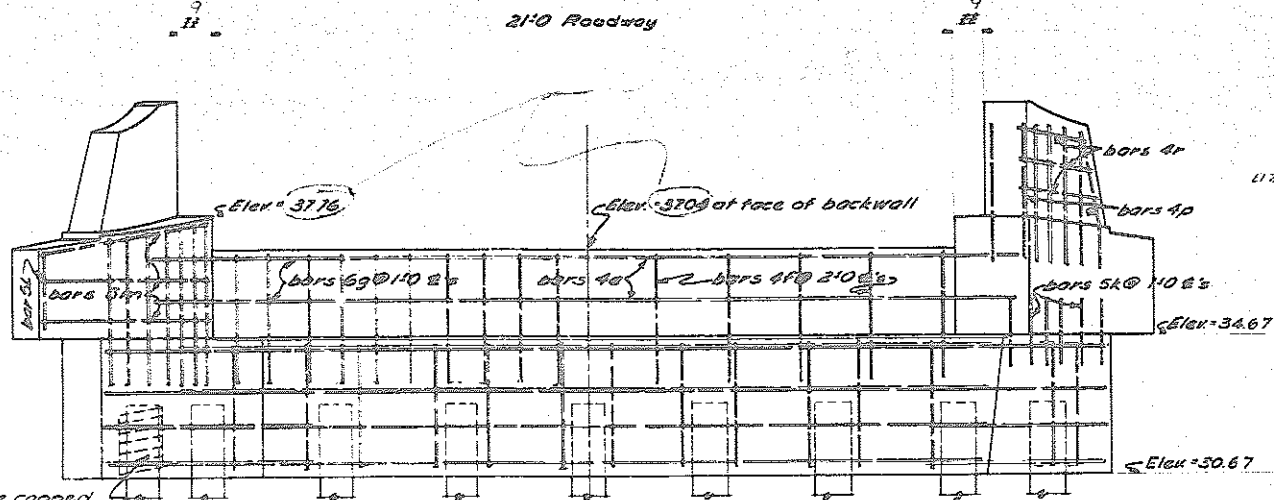
PROFILE OF LANSING BRIDGE

Rev. 5-55
 Revised 4-12-55
 Revised 12-15-58

Location: E. Abutment Steel Quantity
 Structural steel quantity changed, see note
 Date of Special Provisions changed to Jan 11 1955

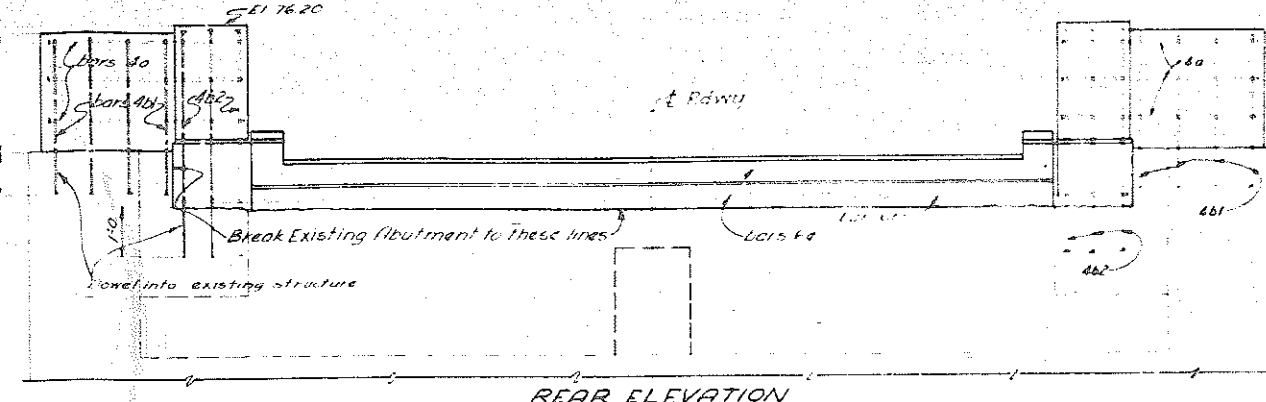
Location:
 Sect 29
 Lansing Twp
 R 3 W T 9 N
 Allamakee Co.

GENERAL & SITUATION PLANS
 Project P 1951
ALLAMAKEE COUNTY
 Iowa State Highway Commission
 September 1954
 Sheet 1 of 7

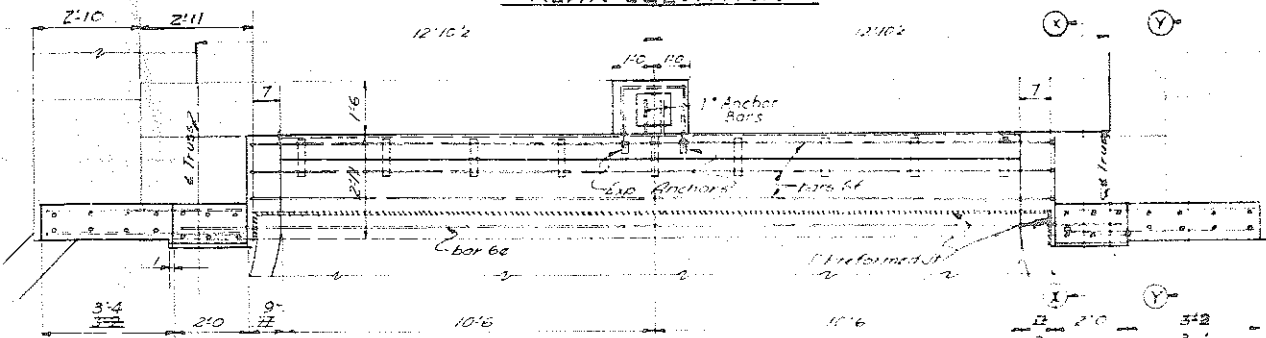


Each pile to be capped with a reinforcing spiral of 7 turns of #2 bar @ 2" dia. @ 5" pitch on 2" x 0.68 E spacers punched to hold spiral

HALF REAR ELEVATION HALF FRONT ELEVATION



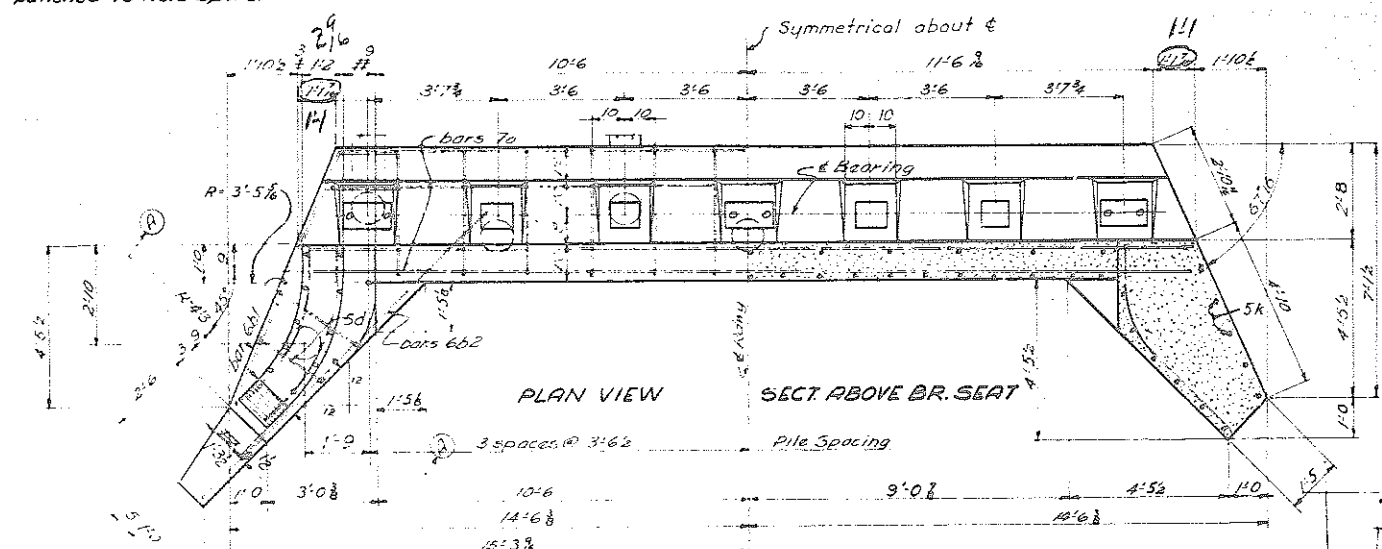
REAR ELEVATION



PLAN VIEW WEST ABUTMENT

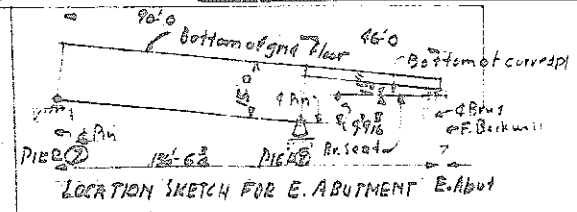
REINFORCING BAR LIST - WEST ABUT.

Bar	Location	Shape	No.	Length	Weight
4a	Wing Post - Hor	—	12	5'-3"	43
4b1	Wing Post - Vert	—	16	4'-3"	45
4b2	Wing Post	—	12	6'-10"	55
4c	Fl Em Brg Block	—	3	7'-0"	14
4d	7 Em Brg Block	—	4	2'-9"	8
6a	Backwall Longit	—	1	27'-0"	41
6f	Backwall Longit	—	5	22'-8"	170
				Total	376

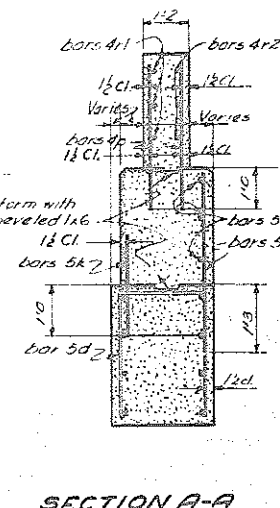
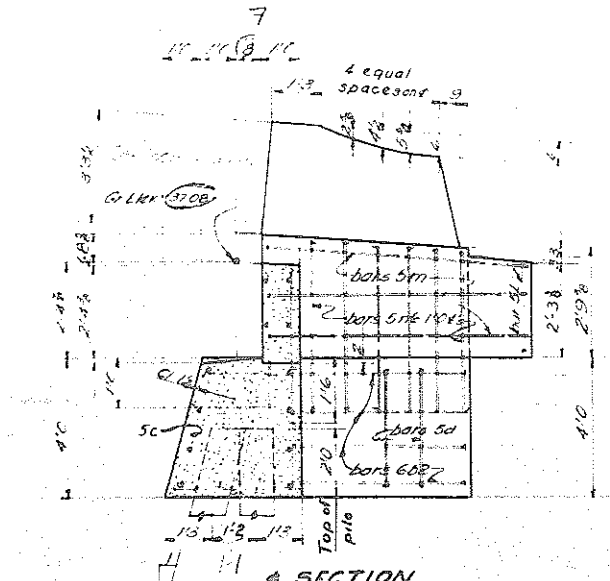


PLAN VIEW SECT ABOVE BR. SEAT

EAST ABUTMENT Scale: 1/4" = 1'-0"



LOCATION SKETCH FOR E. ABUTMENT E. Abut



SECTION A-A

REINFORCING BAR LIST - EAST ABUT.

Bar	Location	Shape	No.	Length	Weight
7a	Bridge Seat Longit	—	8	22'-8"	371
6b1	Wing Ftg FF	—	8	Var.	110
6b2	Wing Ftg BF	—	8	8'-6"	108
5c	Bridge Seat Hoops	—	12	13'-11"	175
5d	Wing Ftg Hoops	—	4	Var.	41
5k	Wing Wall Dowels FF	—	10	2'-8"	26
5l	Wing Wall Exten. Vert	—	2	2'-0"	4
5m	Wing Wall Horiz BF	—	6	8'-6"	53
5n	Wing Wall Vert. BF	—	12	Var.	50
4p	Wing Post Vert	—	26	3'-7"	58
4r1	Wing Post Horiz is	—	6	5'-4"	22
4r2	Wing Post Horiz as	—	6	4'-8"	19
2w	Pile Spiral	—	9	38'-6"	58
2x	Pile Spiral Spacers	—	18	2'-0"	23
4e	Backwall Horiz.	—	4	24'-0"	64
5f	Backwall Vert. FF	—	11	3'-6"	40
6g	Backwall Vert. BF	—	21	4'-1"	130
				Total	1328

GENERAL NOTES:

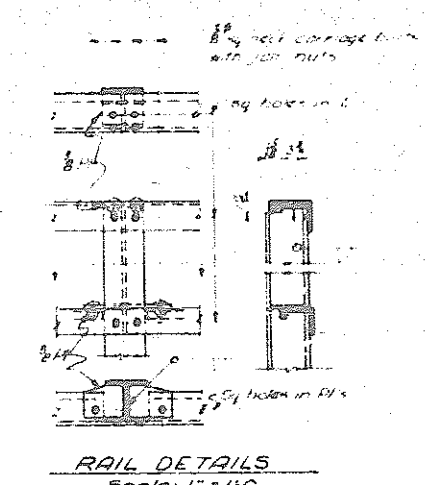
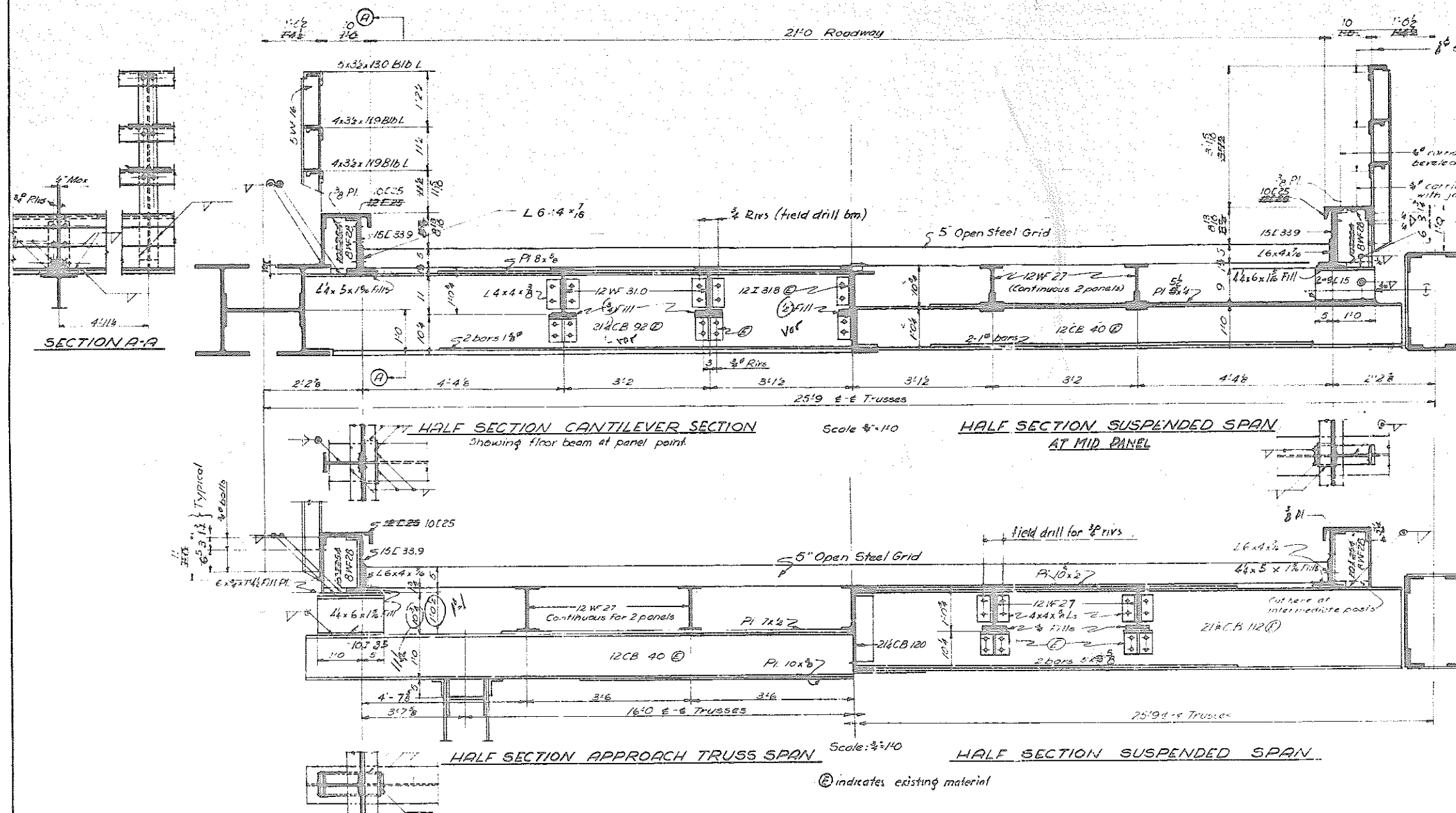
All reinforcing steel is to be securely wired in place before concrete is placed.
 Piling is to be driven to full penetration if practicable but to not less than 18 tons bearing.
 Where new concrete bonds to old work, special care shall be taken to secure complete bond. (See Par. 2403.16 of the Std. Specs.)
 Where reinforcing bars are doveled into existing work special care shall be taken to insure complete anchorage. (See Par. 2407.35 of the Std. Specs.)

ESTIMATED QUANTITIES

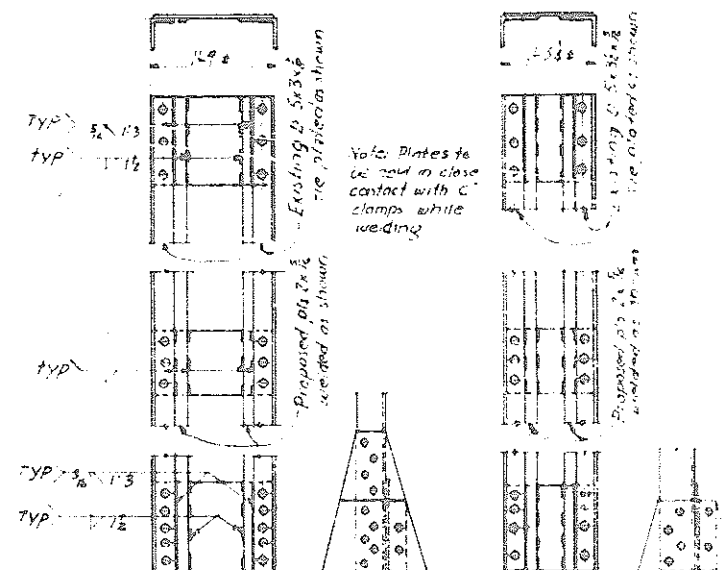
Item	Quantity	Unit	Weight
Concrete	30.0	cu yd	26.0 cu yd
Reinforcing Steel	376	lb	1724 lbs
Reinforcing Piling	90	30' LF	270 LF
Excavation (Class 1)	30	cu yd	30 cu yd

Design for
REHABILITATION OF MISSISSIPPI RIVER BRIDGE at LANSING, IOWA
 New steel stringers - Grid floor - Fluted curb
 & Addition of I Brn Span at East End

Location
 Sect. 29
 Lansing Twp
 R3W T49N
 Allamakee Co.
ALLAMAKEE COUNTY
 Iowa State Highway Commission
 September 1954 Sheet 2 of 7

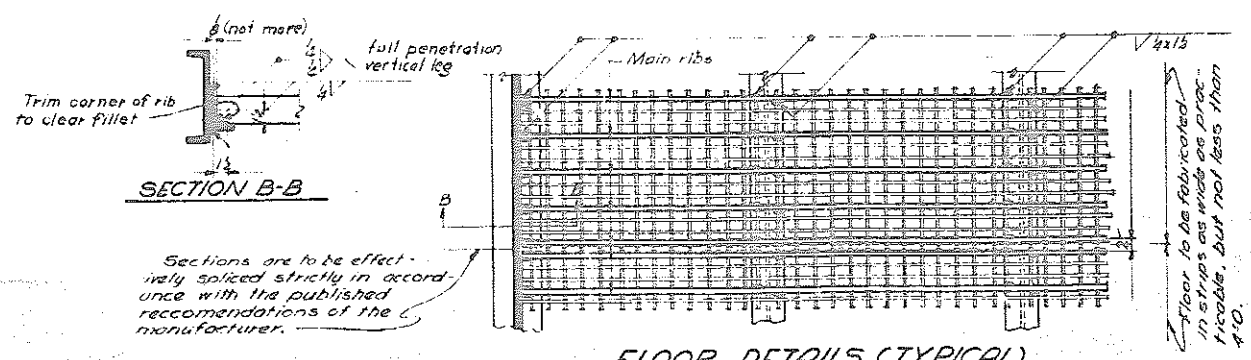


Notes:
All welds unless otherwise shown are to be 1/4 fillet welds.



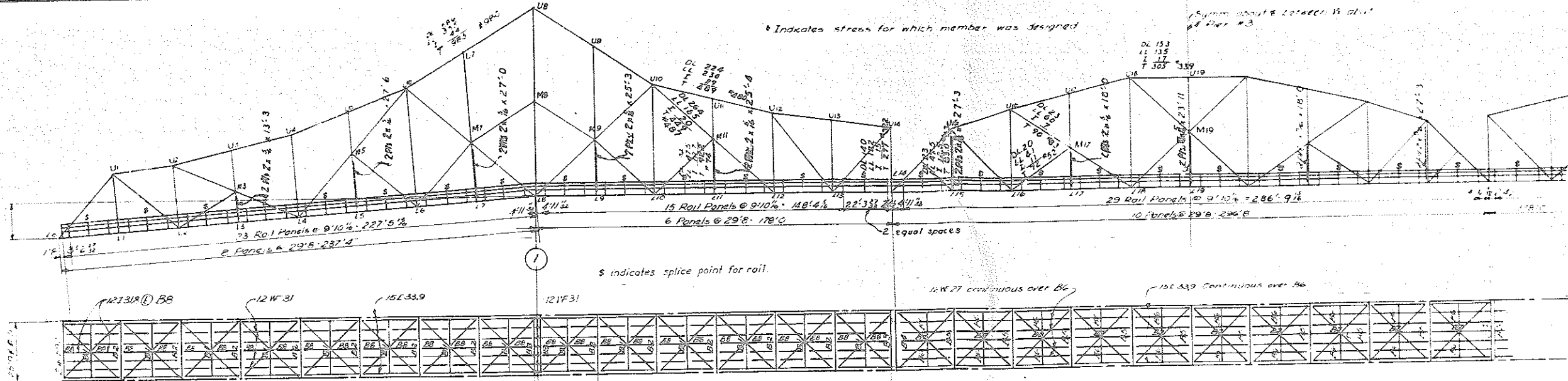
MSL, MSLS, MSL7, MSL9, MSL10, MSL11, MSL12, MSL13, MSL14, MSL15
CANTILEVER SECTION SUSPENDED SPAN
DETAILS OF HANGER STRENGTHENING
Scale: 1/2" = 1'-0"

MEMBER	MSL3	MSLS	MSL7	MSL9	MSL10	MSL11	MSL12	MSL13	MSL14	MSL15
Length of Plates	13'3"	21'6"	21'0"	25'3"	25'4"	21'3"	18'0"	21'11"		

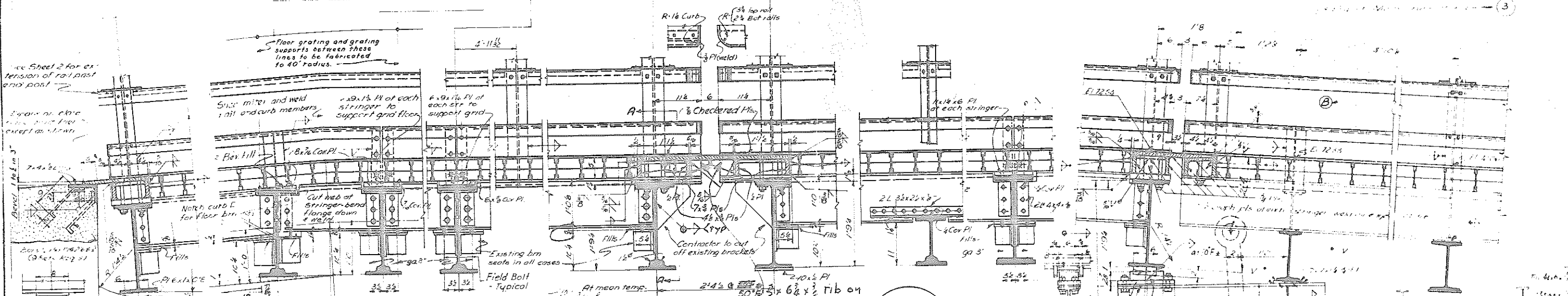


FLOOR NOTES:
Floor is to be 5" open steel grating either:
I Beam Lock Type Tr. made by U.S. Steel Corp.,
I Beam Weldlock with supplementary 2 1/2" bars -
Type P made by Reliance Steel Products Co.,
McCleesport, Pa.
Klemp 5" Welded Deck - by Klemp Metal Grating Co. Chicago
Greulich 4-way Grid or approved equal.

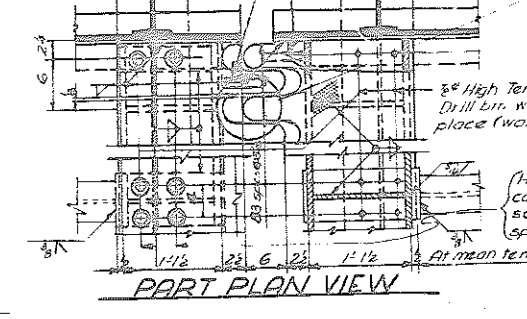
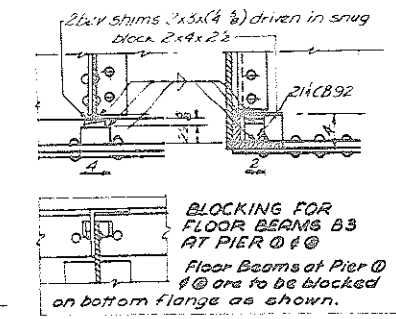
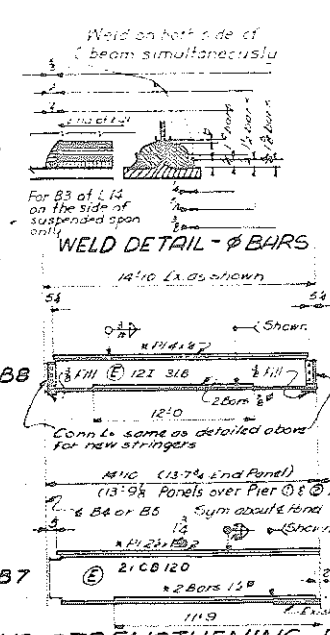
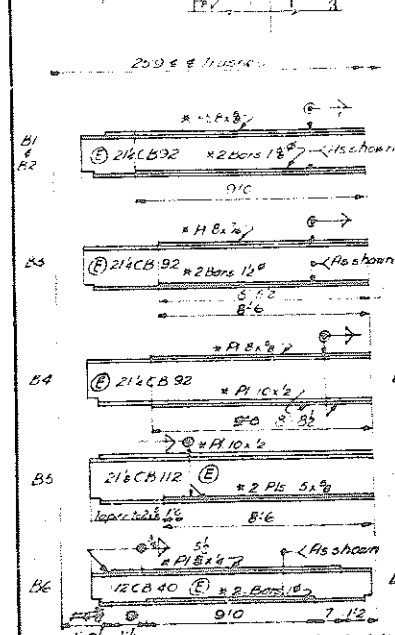
Design for
REHABILITATION OF MISSISSIPPI RIVER BRIDGE at LANSING, IOWA
New steel stringers - Grid floor - Rail & Curb
& Addition of I-Beam Span at East End.
TYPICAL CROSS SECTIONS & DETAILS
Project P 1051
ALLAMAKEE COUNTY
Iowa State Highway Commission
September 1954 Sheet 3 of 7



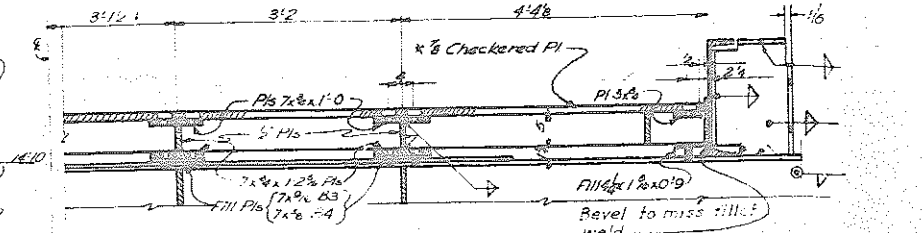
Notes
 All field connections to be riveted unless shown otherwise.
 All rivets & bolts to be $\frac{3}{4}$ " unless shown otherwise.
 All welds to be $\frac{1}{2}$ " fillet welds except as shown.



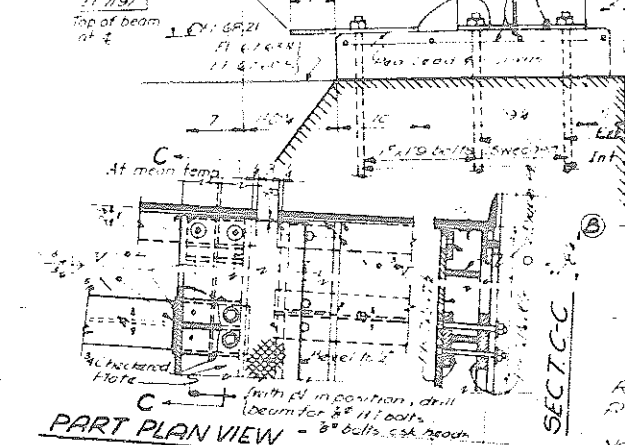
LONGITUDINAL SECTION THRU FLOOR
 Scale: 1"=10'



PART PLAN VIEW



SECTION A-A
 Scale: 1"=10'



PART PLAN VIEW

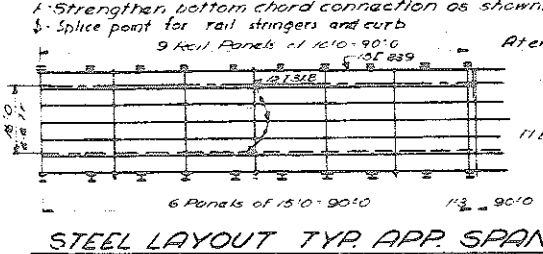
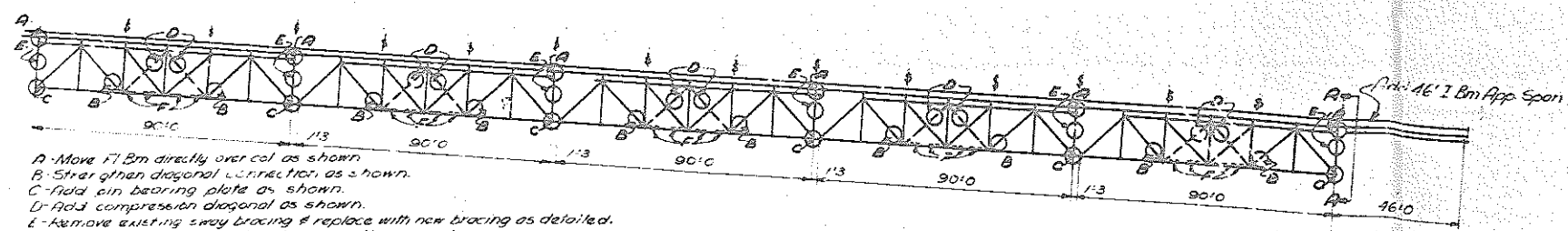
SECTION B-B
 Scale: 1"=10'

Notes: Contractor to verify all dimensions deriving from existing work.

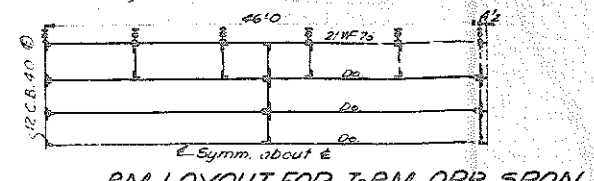
Rev. Exp. Pl. at L 19 and L 14 Revised 5-5-55
 Revision Details of B3, B4, B6 & B7 changed (April 8, 1955)

Location
 Sect. 24
 Lansing Twp
 R-2W T94N
 Allamakee Co

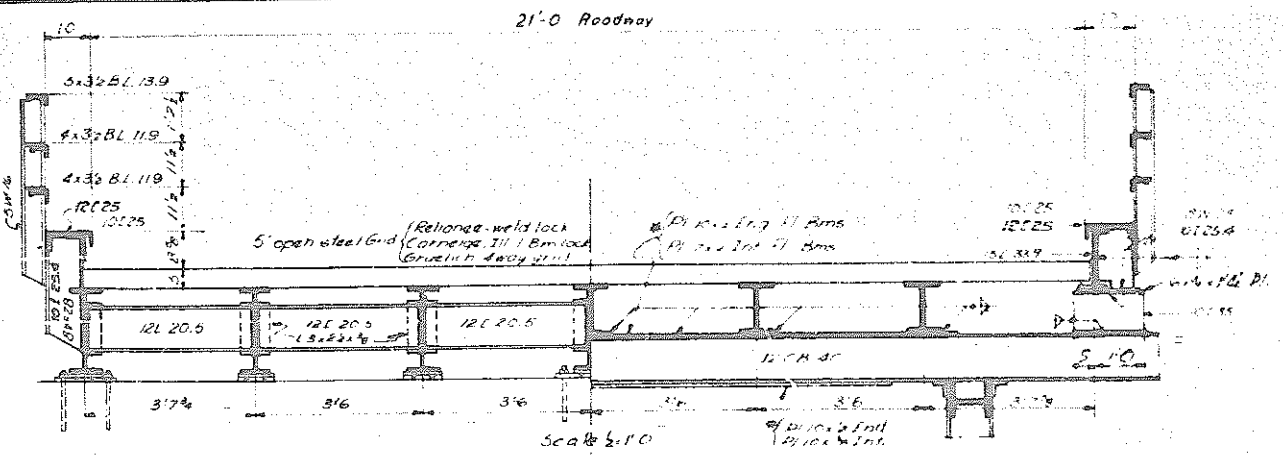
FLOOR DETAILS - MAIN STRUCTURE
 Project # 1051
ALLAMAKEE COUNTY
 Iowa State Highway Commission
 September 1954
 Sheet # of 7



FLOOR BM. REINFORC.

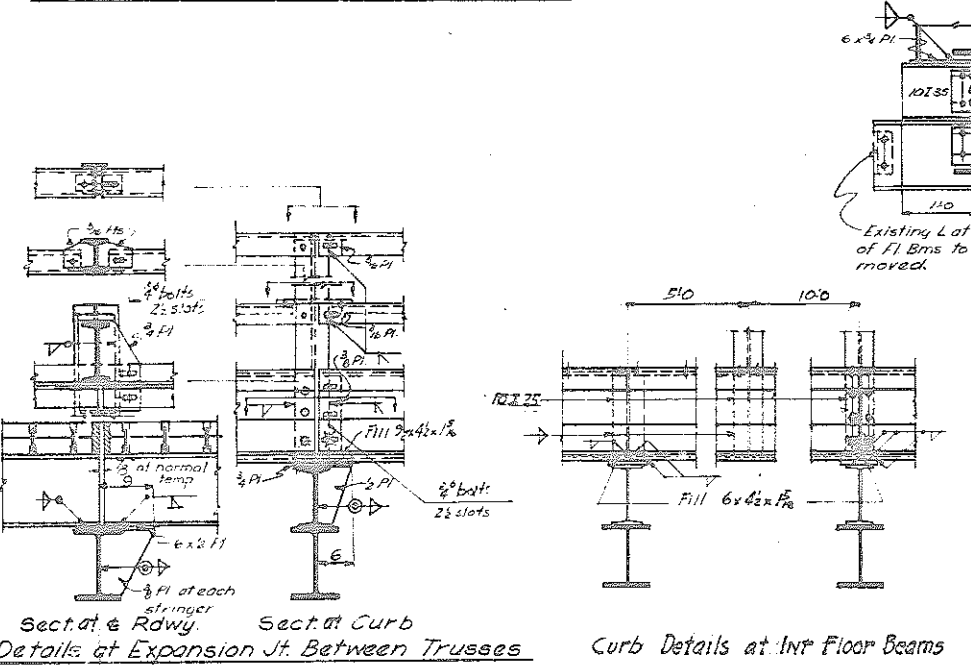


BM. LAYOUT FOR I-BM. APP. SPAN

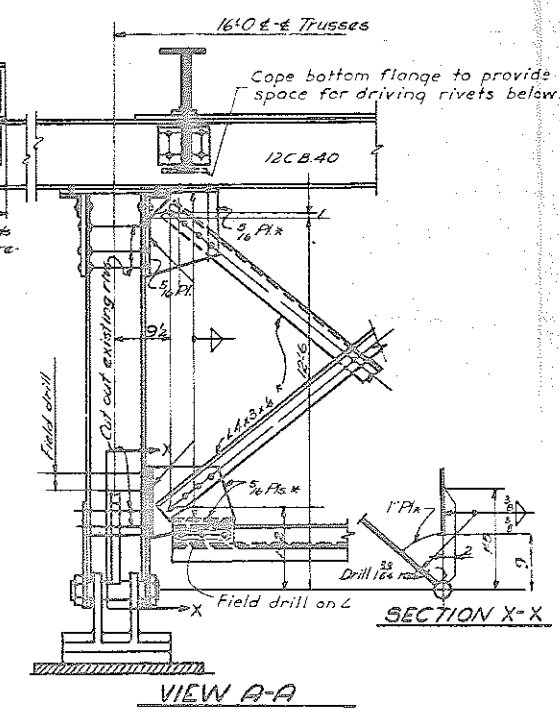


HALF SECTION I-BEAM SPAN

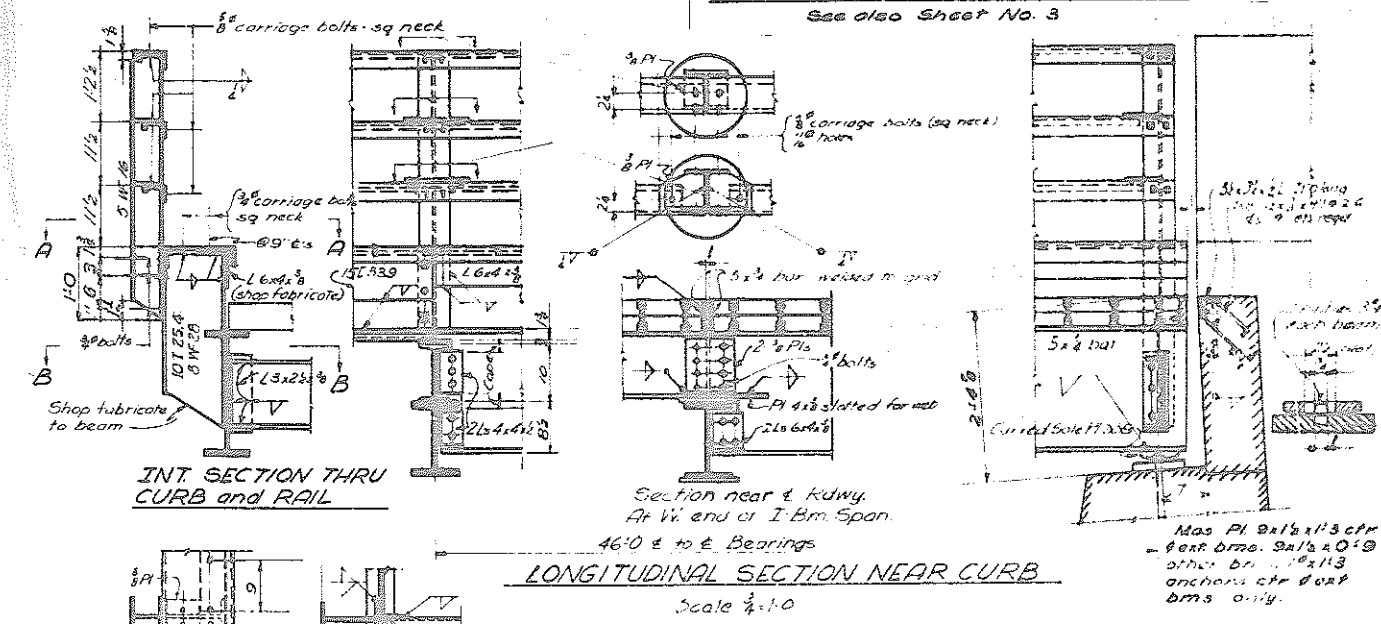
HALF SECTION TRUSS SPAN



Details at Expansion Jt. Between Trusses



VIEW A-A

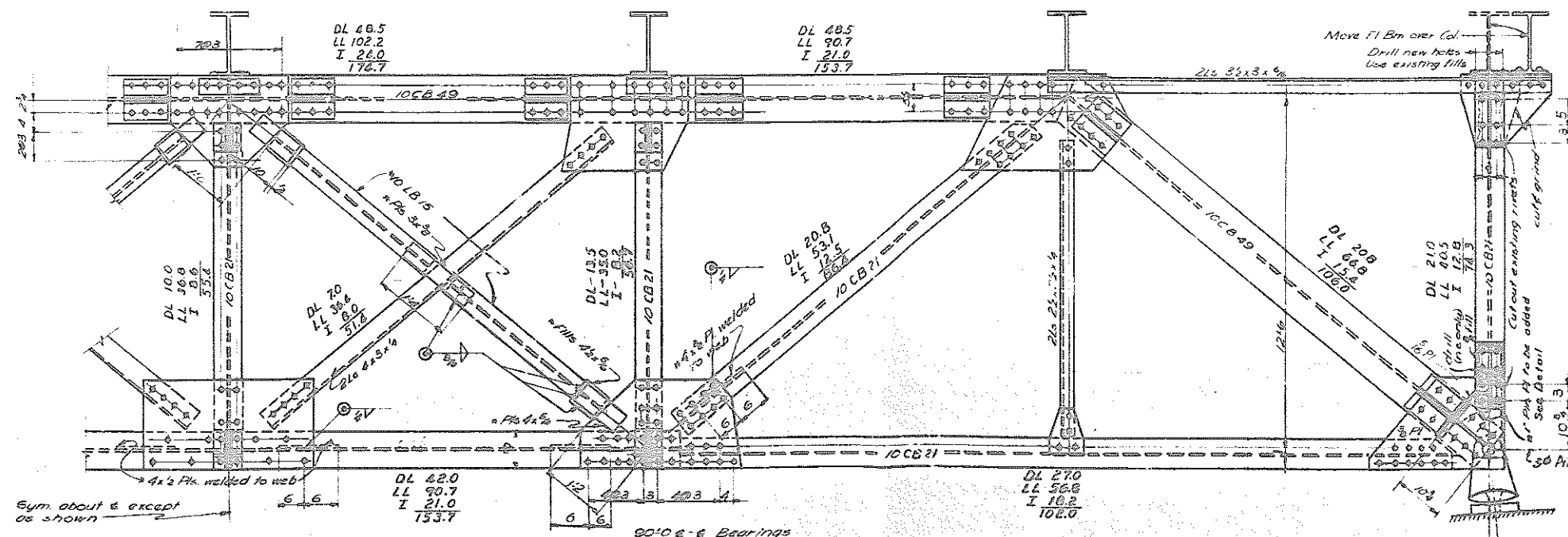
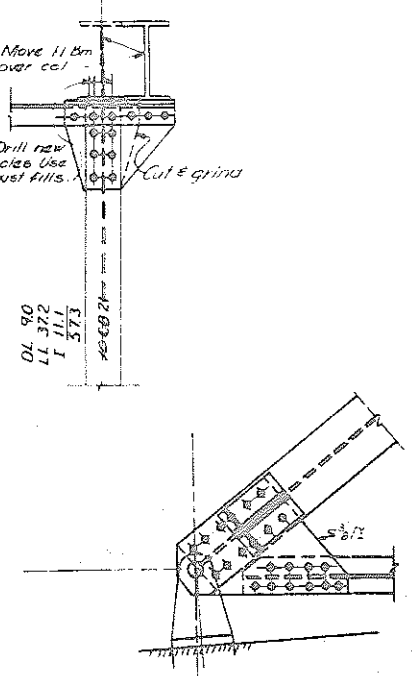


INT. SECTION THRU CURB and RAIL

LONGITUDINAL SECTION NEAR CURB

SECT. A-A SECT. B-B

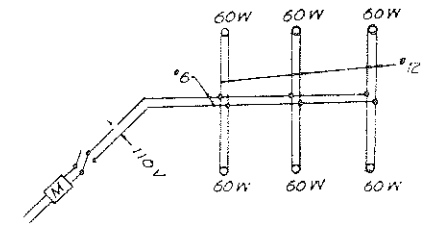
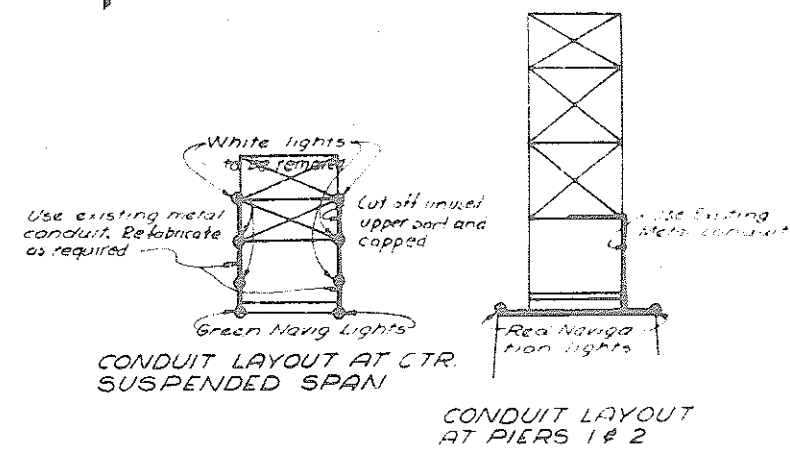
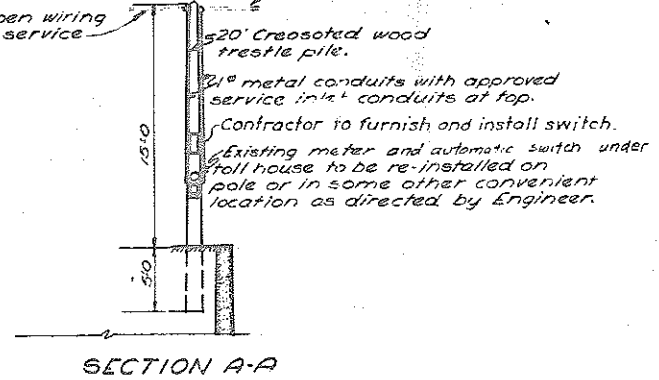
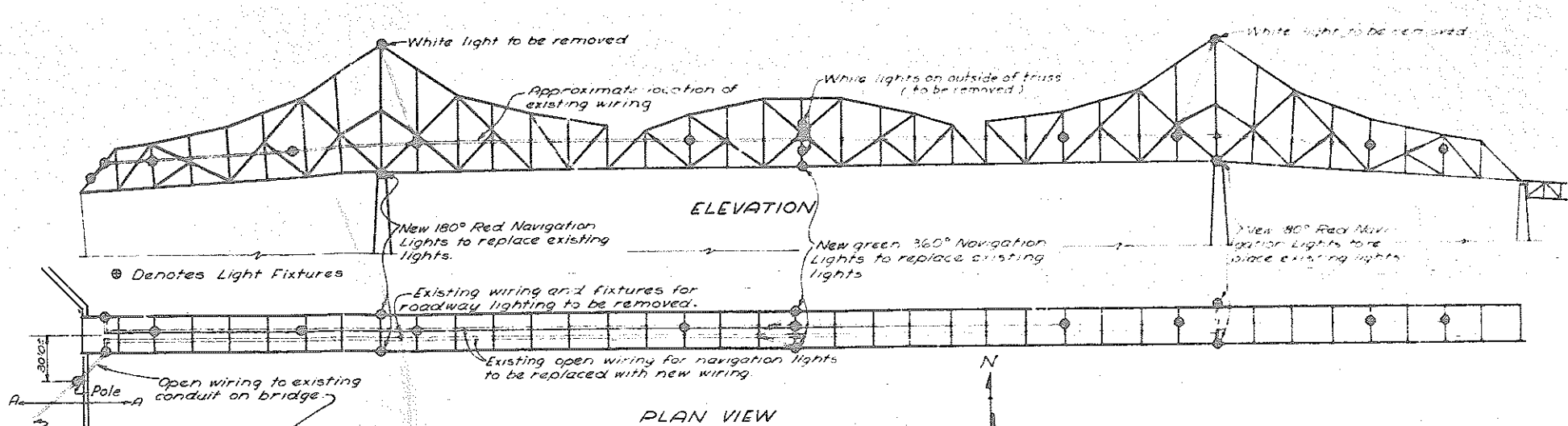
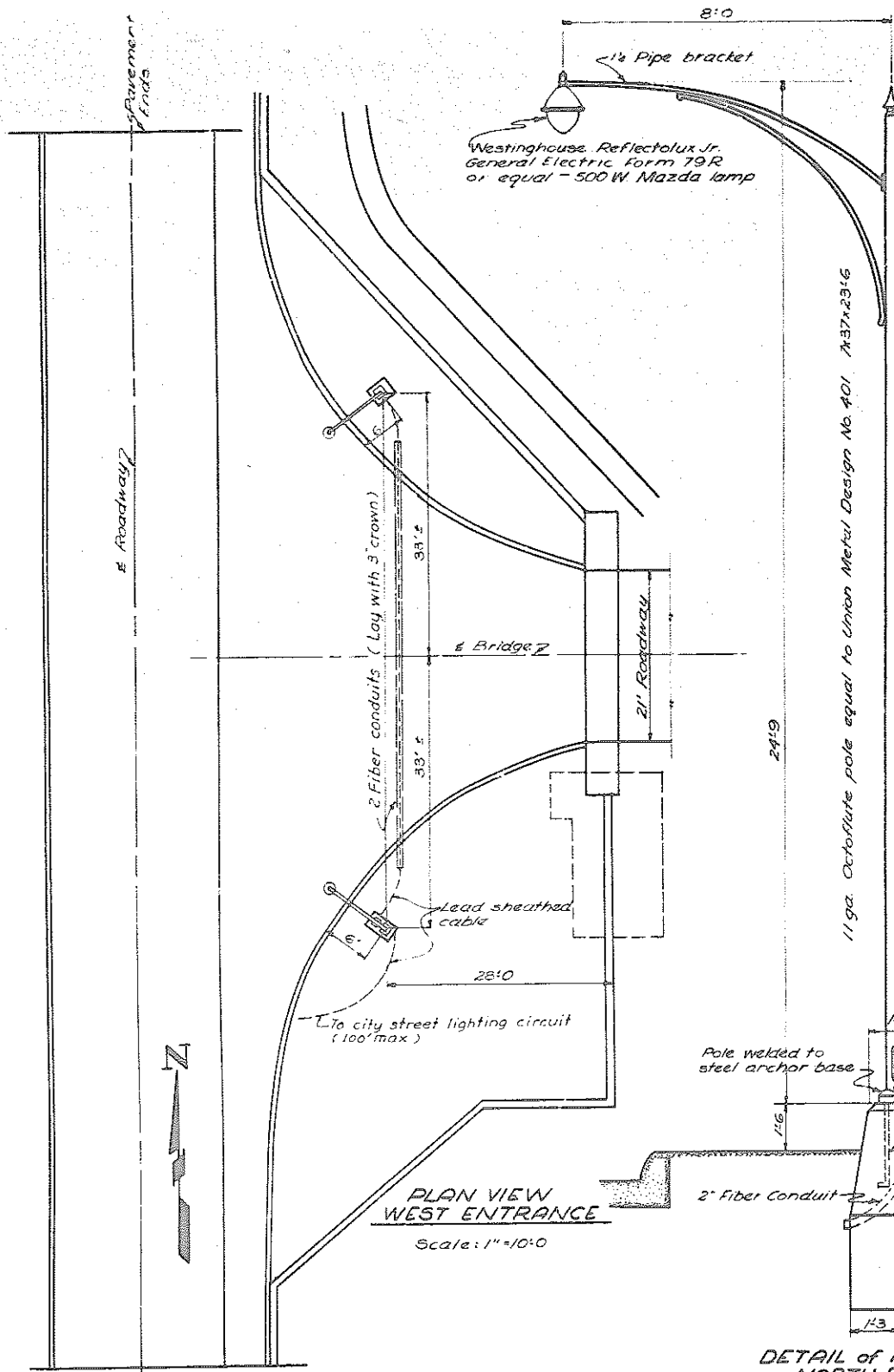
GENERAL NOTES:
 All field connections to be riveted unless otherwise shown
 All bolts & rivets to be $\frac{3}{4}$ " unless otherwise noted.
 Where carriage bolts are indicated the holes for the square necks are to be punched square & $\frac{1}{16}$ " larger than the neck size.
 All welds to be $\frac{1}{4}$ " fillet welds unless otherwise shown.
 Contractor to verify all dimensions deriving from existing work.
 * Indicates new material.



TRUSS DETAILS SHOWING MODIFICATIONS

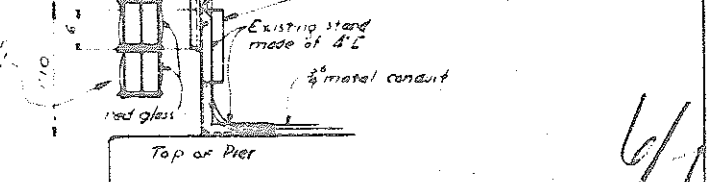
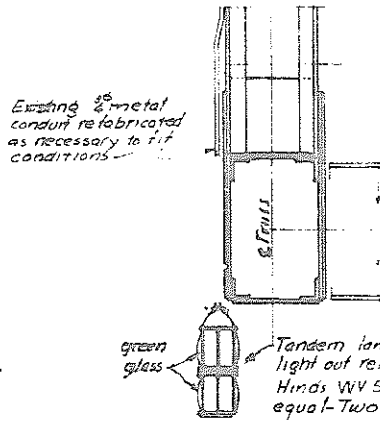
Revision: Curb details changed (April 8, 1955)

Design for
REHABILITATION OF MISSISSIPPI RIVER BRIDGE at LANSING, IOWA
 New steel stringers, Grid Floor, Rail & Curb & Addition of I-Bm Span at East End
DETAILS of LAST APPROACH
 Project P-1051
ALLAMAKEE COUNTY
 Iowa State Highway Commission
 September 1954
 Location: Sect. 29, Lansing Twp, RSW 199N, Allamakee Co.
 Sheet 5 of 7



Notes on Navigation Lights
 New navigation lights to replace existing lights are to be as follows:
 1 - 180° red navigation light on each end of Pier #1 and #2
 1 - 360° green navigation light on each side of bridge middle of span between Pier #1 and #2
 All navigation lights to be tandem units similar to Crouse-Hinds WV 5822 and WV 5825 with 60 watt Mazda lamps. Each lantern is to be equipped with light out relay, so that when one lamp is cut out for any reason the other lamp is automatically cut in. For this purpose Crouse-Hinds fuse block and relay assembly, 1 x WV 5824 DR-954-L or approved equal is to be used.

SCHEMATIC DIAGRAM For Navigation Lights



NAVIGATION LIGHT ON END OF PIER

Design for
 REHABILITATION OF MISSISSIPPI RIVER BRIDGE at LANSING, IOWA
 New steel stringers - Grid Floor - Rail Cut
 & Addition of 1 Brn Span at East End

LIGHTING DETAILS
 Project P-1051
 ALLAMAKEE COUNTY
 Iowa State Highway Commission
 September 1954

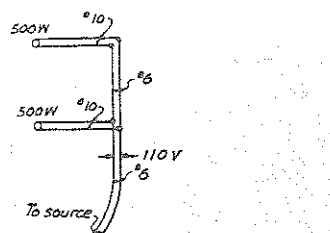
Location
 Sect. 29
 Lansing Twp
 R 3 W T 99 N
 Allamakee Co.

NAVIGATION LIGHT AT CTR OF SUSPENDED SPAN

For details of lamp suspension and inspection cage and location of fuse block and relay assembly see sheet 7

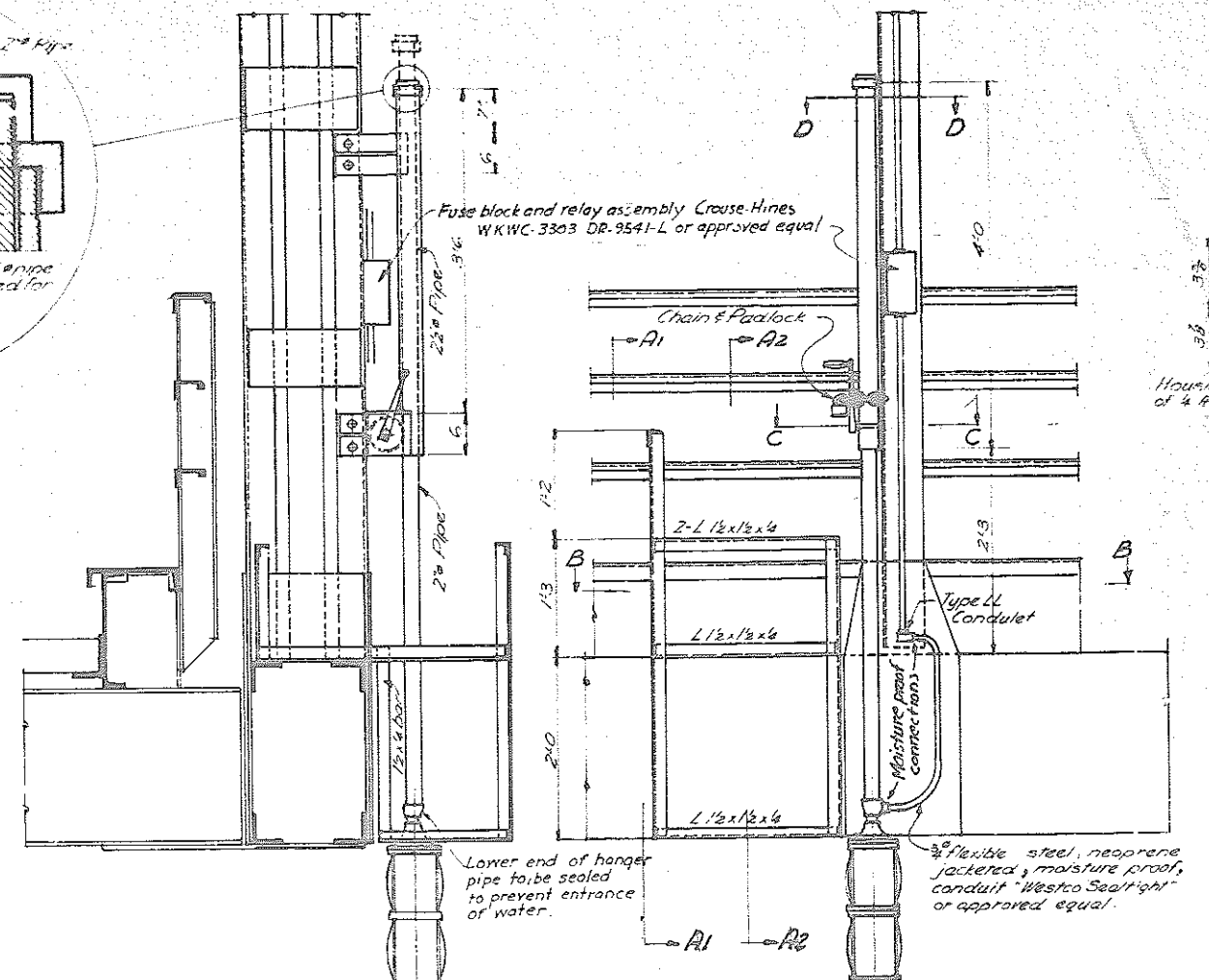
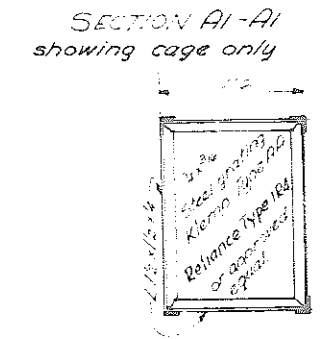
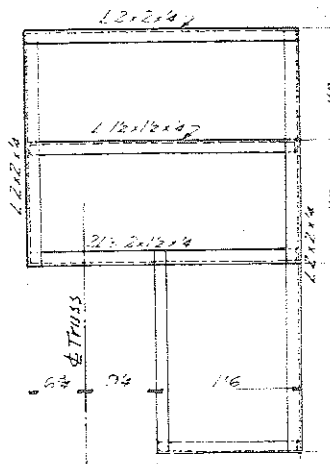
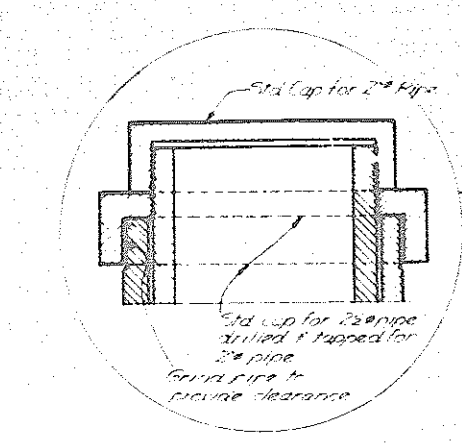
DETAIL of POLE and NORTH POLE BASE

DETAIL of SOUTH POLE BASE

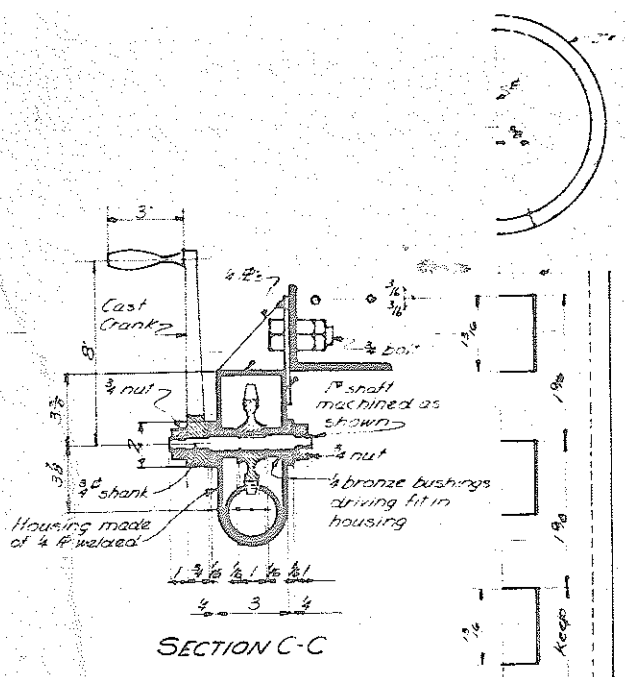
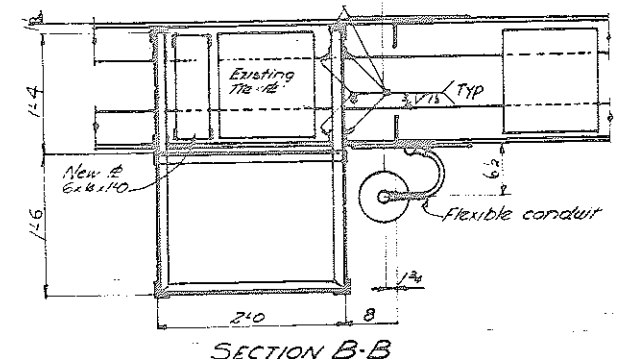


Notes on Roadway Lighting:
 Poles to be as noted above. They are to be factory primed and to be given 2 field coats of paint after erection. Final field coat to be aluminum.
 Wiring: Pole extensions to be No 10 solid copper rubber covered wire. Connection between poles and from south pole to source of supply is to be No. 6 solid copper wire in lead sheathed cable. Cable to be carried under pavement in 2" fiber conduit.
 All work to be in accordance with the National Electric Code and any local ordinances relating thereto.
 Each lamp pole to be grounded with a No. 6 bare wire connected into the base of the lamp standard, carried in a 1/2" steel conduit on the face of the concrete and connected to a 3/8" diameter by 8'-0" copper weld rod driven fully into the ground.
 Fiber conduit to be standard quality asbestos cement conduit - Johns Manville transite or approved equal.
 Cost of concrete lamp pole bases to be included in price bid for lighting.

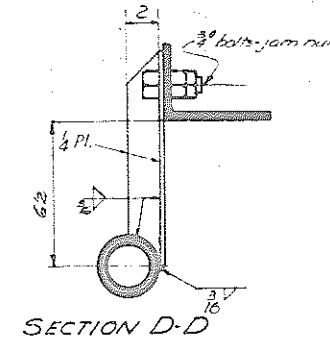
Rev. Jan 11, 1955. Crouse-Hinds tandem light lanterns substituted.
 Rev. 12-16-54. Note regarding cost of lamp pole bases added.
 Rev. 12-8-54. Catalog reference revised and location of fuse block and relay assembly for pier lights shown.



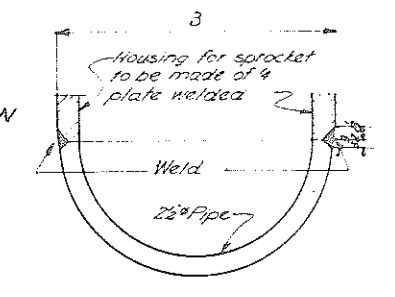
SECTION A2-A2
 OUTSIDE ELEVATION AT CTR. OF SUSPENDED SPAN
 DETAILS OF INSPECTION CAGE AND RETRACTABLE LAMP SUSPENSION
 Scale: 1"=140



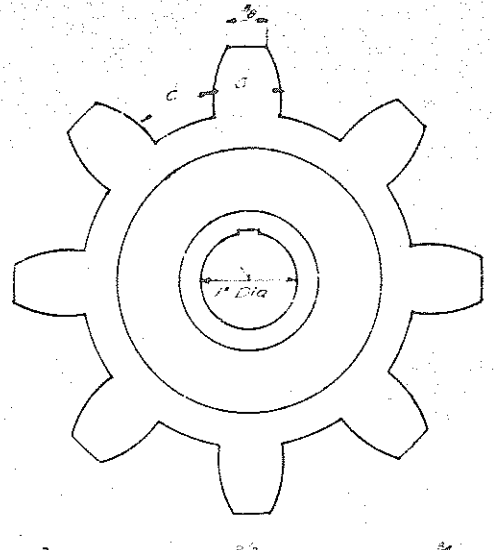
SECTION C-C



SECTION D-D



SECTION C-C
 F.S.D.



SPROCKET DETAIL
 F.S.D.

RACK DETAIL
 F.S.D.

GENERAL NOTES:
 Lamp suspension to be fabricated in accordance with the design shown on this sheet and approved by the Iowa Highway Commission. Workmanship shall be such that the device works freely and smoothly in all positions, and with adequately the outside for which intended.
 Cost of all material shown unless noted to be furnished by the contractor shall be shown.

Design for
REHABILITATION OF MISSISSIPPI RIVER BRIDGE at LANSING, IOWA
 New Steel Stringers - Guard Floor - Rail & Curb & Protection of 2-Main Span at East Abut.

Location:
 Section 29
 Lansing Twp
 R3W 79N
 Allamakee Co.

LIGHTING DETAILS
 Project #1051
ALLAMAKEE COUNTY

Rev. 12-8-54. Location of fuse block and relay assembly shown.

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