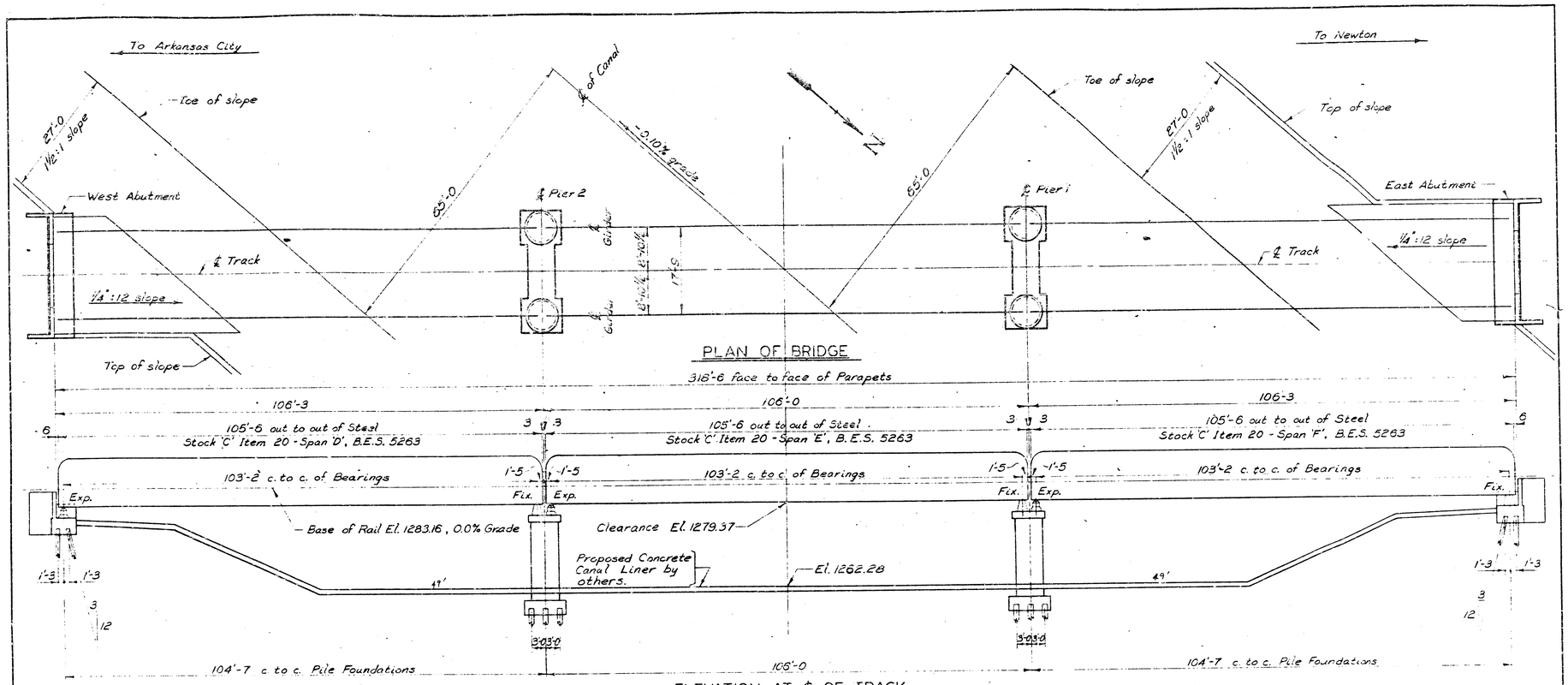


Base of Rail	To Masonry	To Clearance
Tie & Tie Plate	7¾	7¾
Ballast	8	8
Deck	4	4
Floorbeam	1'-8	1'-8
To back of Flange ∠	2⅛	2⅛
Sole Plate	0⅞	2⅞ (4-Cov. Pl's)
Cast Shoe	2'-2⅛	0¾ Rivet Hd.
Total	5'-8⅞	3'-9½

468-76-245-81104 - 000-000-907

3-105'-6 S.T. 'DD'-Spans on Tangent

SHEET 2 OF 6 DRAWINGS

B.E.S. 2215

THE A. T. & S.F. RY. COMPANY

BR. 215.9, 3RD DIST., MIDDLE DIVISION

GENERAL PLAN

SCALE: NONE

CHICAGO, ILL., MAY 1979

CORRECT:

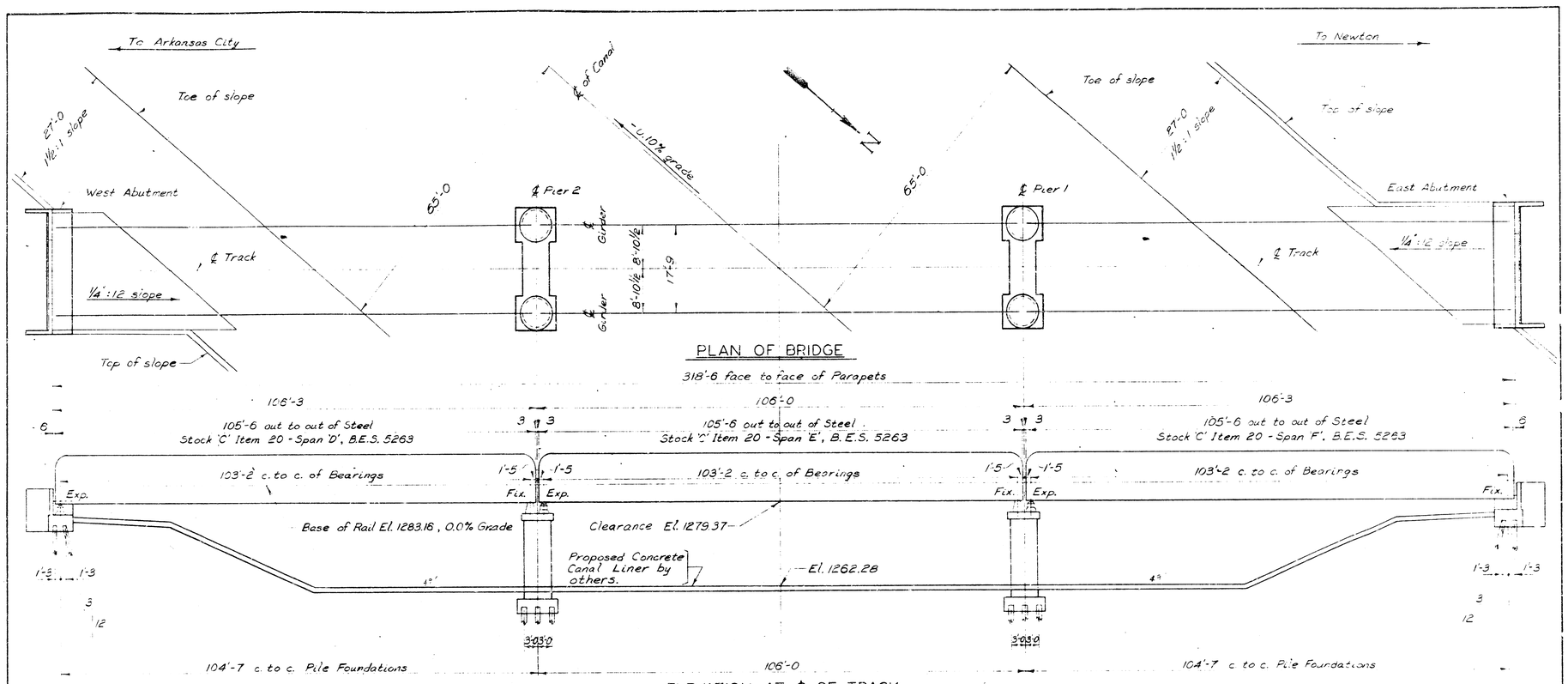
APPROVED:

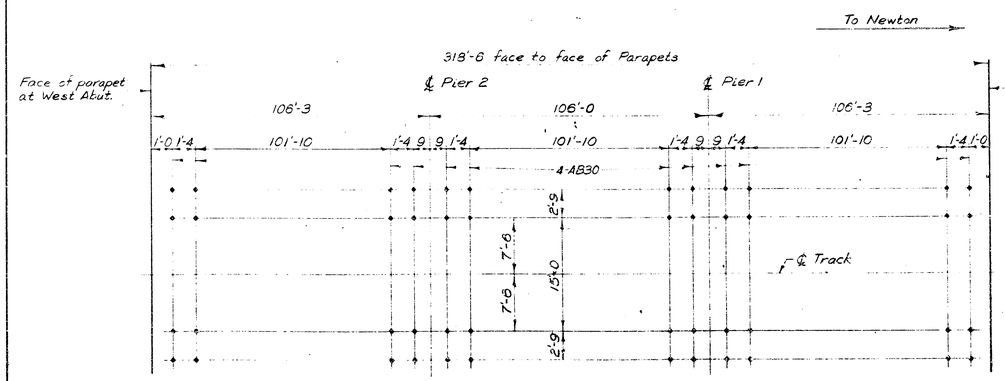
BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

Made by: WPW
Checked by: FMS
Examined by: CAP

FILMED FROM THE BEST AVAILABLE COPY....





BASE OF RAIL	TO MASONRY	TO CLEARANCE
Tie & Tie Plate	7 3/4	7 3/4
Ballast	8	8
Deck	4	4
Floorbeam	1'-8	1'-8
To back of Flange ∠	2 1/8	2 1/8
Sole Plate	0 7/8	2 1/8 (4-Con. R's)
Cast Shoe	2'-2 1/8	0 3/4 Rivet Hd.
Total	5'-8 7/8	3'-9 1/2

458-76-245-8110.1 - 040-000-007

3-105'-6 S.T. 'DD'-Spans on Tangent

SHEET 2 OF 6 DRAWINGS

B.E.S. 2215

THE A.T. & S.F. RY. COMPANY

BR. 215.9, 3RD DIST., MIDDLE DIVISION

GENERAL PLAN

SCALE: NONE

CHICAGO, ILL., MAY 1979

CORRECT:

APPROVED:

BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

Made by: WPW
Checked by: DHE
Examined by: CAA

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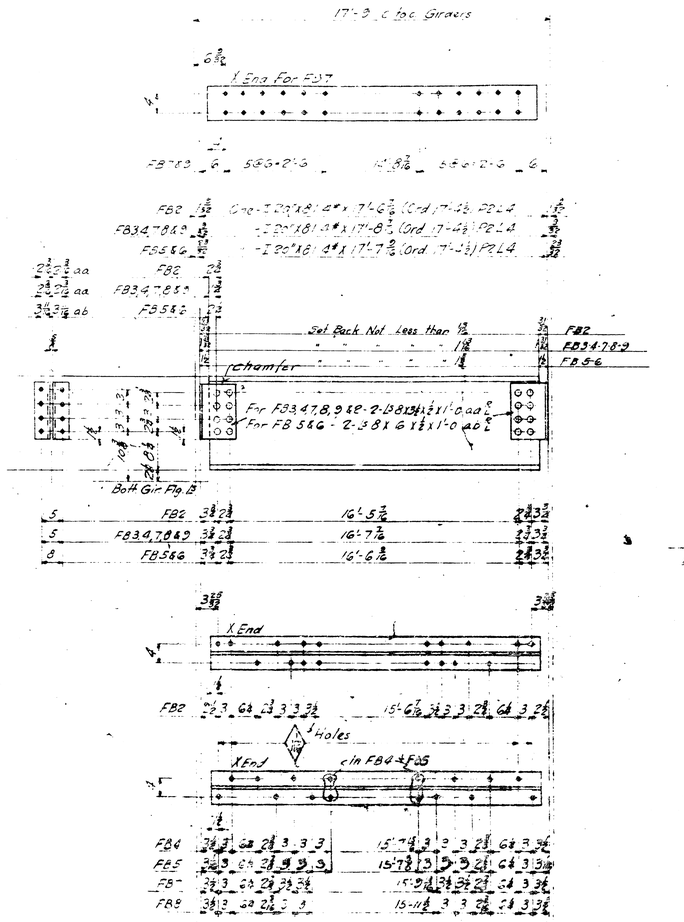
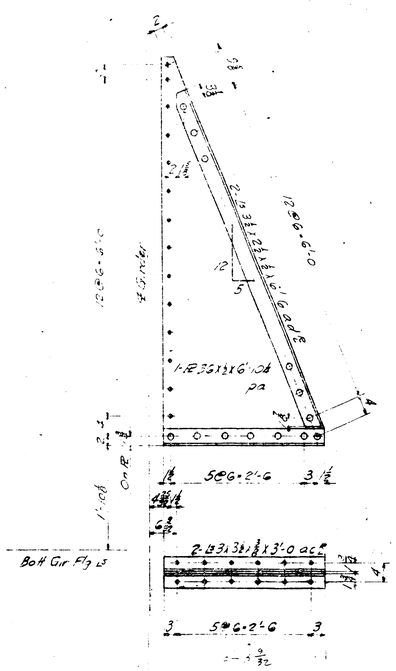
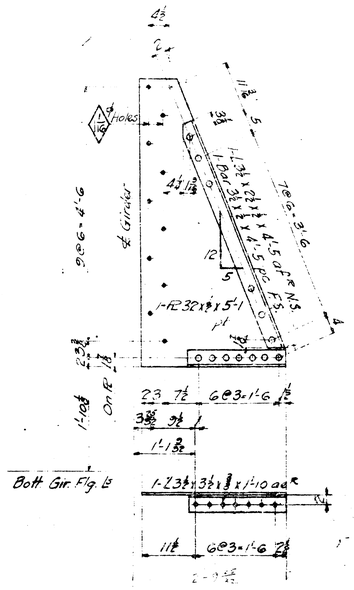


FLOOR BEAMS



BRACKET BK1

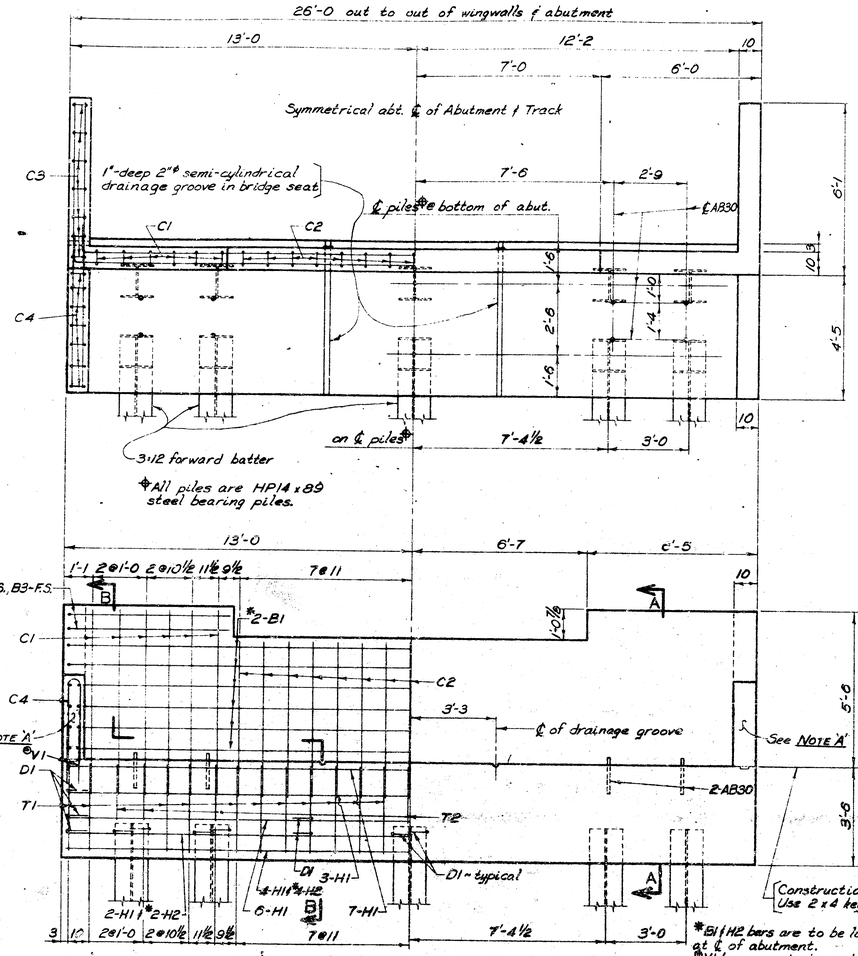


BRACKET BK2R

GENERAL NOTES

Welds: 3/16" unless noted.
Holes: 13/16" unless noted.
Reaming: None.
Shop Paint: One coat oil. Use fitting up paint.

FILMED FROM THE BEST



REINFORCEMENT REQUIRED FOR ONE ABUTMENT

NO.	MARK	SIZE	LENGTH	SHAPE	GRADE
22	H1	#6	25' 8	STRAIGHT	60
12	H2	#6	13' 7	"	60
16	H3	#4	6' 11	"	40
16	H4	#4	5' 8	"	40
16	H5	#4	4' 3	"	40
24	V1	#4	2' 0	"	40
24	B1	#4	14' 4	SEE DETAIL	40
4	B2	#4	7' 1	"	40
4	B3	#4	6' 8	"	40
12	C1	#5	13' 5	"	40
15	C2	#5	11' 3	"	40
14	C3	#4	13' 5	"	40
12	C4	#4	5' 11	"	40
20	D1	#4	6' 7	"	40
22	T1	#4	17' 6	"	40
7	T2	#4	15' 4	"	40

PILES AND ANCHOR BOLTS AB30 ARE ORDERED ON SHEET 5.

SEE SHEET 4 FOR NOTES.

ESTIMATED QUANTITIES FOR ONE ABUTMENT

REINFORCEMENT - GRADE 40	1384 LBS.
REINFORCEMENT - GRADE 60	1093 LBS.
3500 P.S.I. CONCRETE	25.1 CU. YDS.

NOTE 'A':
The bridge seat end wall on the R.R. North side of each abutment shall be cast after the steel girder spans have been moved into position.
Provide 2"x4" keyed construction joints in the bridge seat & parapet wall where this wall will be cast.
V1 bars must be located as shown to facilitate proper placement of falsework stringers.

Made by: WPW
Checked by: RHH
Examined by: CEH

SHEET 3 OF 6 DRAWINGS

B.E.S. 2215

THE A.T. & S.F. RY. COMPANY

BR. 215.9, 3RD DIST., MIDDLE DIVISION

TYPICAL ABUTMENT

SCALE: NONE
CORRECT:
BRIDGE ENGINEER/SYSTEM

CHICAGO, ILL., MAY 1979
APPROVED:
CHIEF ENGINEER

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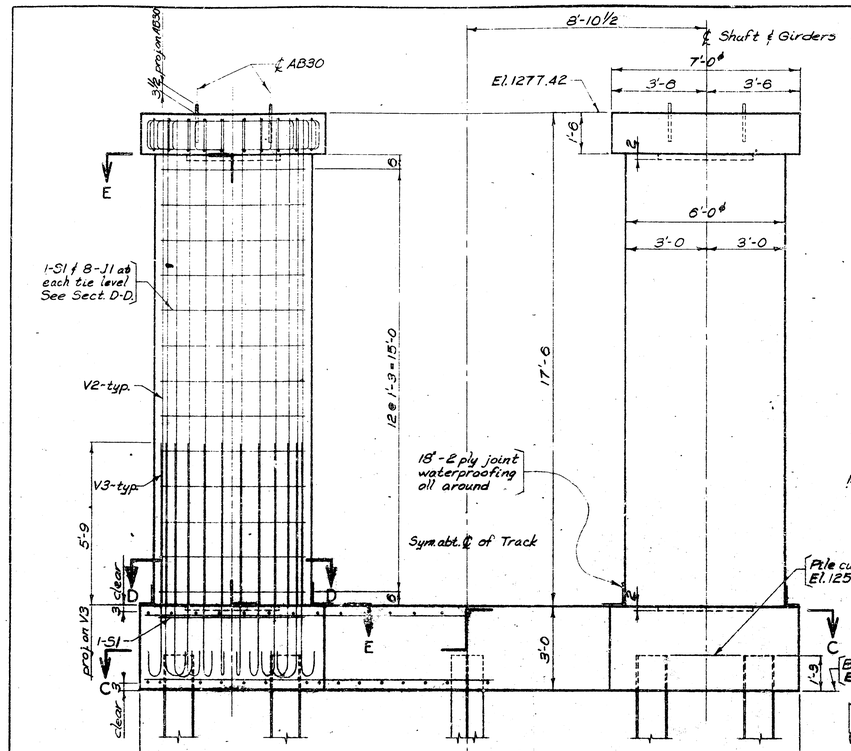
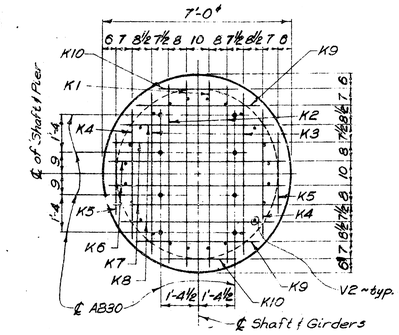
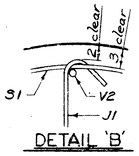


ELEVATION

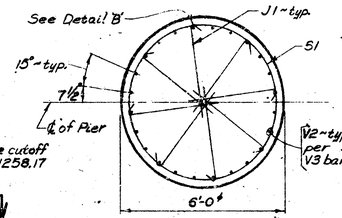
Note:
To facilitate placement of horizontal bars through piles at bottom of footing, burn 1¼" holes in outside piles for single bars and 1¼" x 2½" slotted holes in piles at ℄ Trk. for lapping of H7 bars.



PLAN VIEW OF CAP

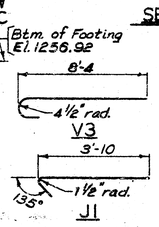


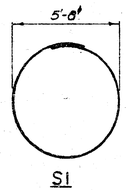
DETAIL 'B'

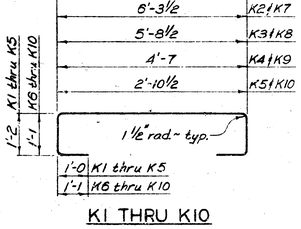


SECTION D-D*

***Note:**
V2 bars must be located as shown. For each successive tie level above the level shown, J1 bars shall be located 15° clockwise from the tie level below.

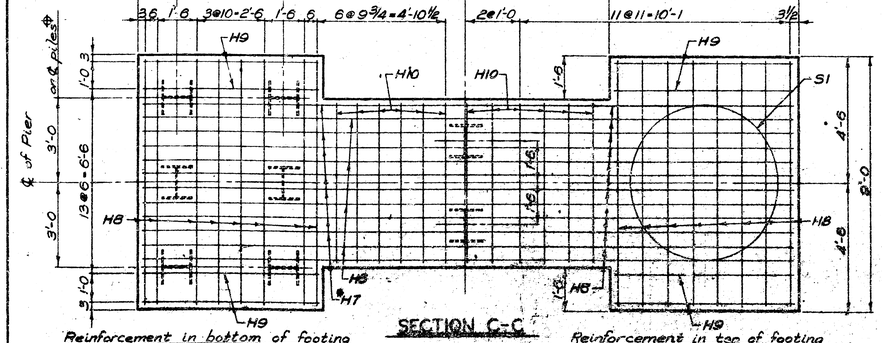






J1 S1 K1 THRU K10

REINFORCING STEEL DETAILS
All dimensions are out to out of bars.



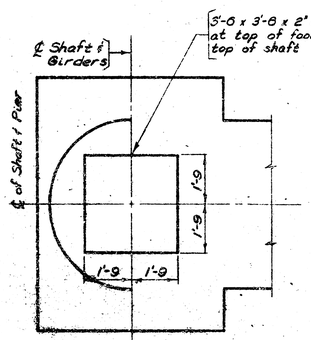
Reinforcement in bottom of footing

SECTION C-C

Reinforcement in top of footing

*All piles are HP14 x 89 steel bearing piles.

*Bar H7 to be lapped at ℄ of footing.



SECTION E-E

Reinforcement not shown

REQUIRED FOR ONE PIER

REINFORCEMENT

NO.	MARK	SIZE	LENGTH	SHAPE	GRADE
48	V2	#9	17' 4	STRAIGHT	60
48	V3	#9	9' 8	"	60
16	H6	#9	24' 6	"	60
16	H7	#9	15' 1	"	60
32	H8	#6	8' 8	"	60
16	H9	#6	6' 8	"	60
23	H10	#6	5' 8	"	60
208	J1	#4	4' 5	SEE DETAIL	40
28	S1	#4	18' 6	"	40
4	K1	#4	10' 11	"	40
4	K2	#4	10' 8	"	40
4	K3	#4	10' 1	"	40
4	K4	#4	8' 11	"	40
4	K5	#4	7' 3	"	40
4	K6	#4	10' 11	"	40
4	K7	#4	10' 8	"	40
4	K8	#4	10' 1	"	40
4	K9	#4	8' 11	"	40
4	K10	#4	7' 3	"	40

MISCELLANEOUS

1	GALLON ASPHALTIC PRIMER, A.S.T.M. D-41
43	LBS. ASPHALT, A.S.T.M. D-449, TYPE B
76	LIN. FT. OF 18" WIDE ASPHALT TREATED COTTON FABRIC A.S.T.M. D-173

PILES AND ANCHOR BOLTS AB30 ARE ORDERED ON SHEET 5.

NOTES:

STEEL BEARING PILES: PILES SHALL BE DRIVEN IN ACCORDANCE WITH SECTION 4 OF THE A.T. & S.F. STANDARD SPECIFICATIONS C.E. 50153-58, TO REFUSAL IF POSSIBLE, OR TO A MINIMUM ULTIMATE RESISTANCE OF 200 TONS BY THE HILEY FORMULA.

THAT PORTION OF PILES WHICH IS TO BE ENCASED IN CONCRETE SHALL, FOR THE PURPOSE OF BOND, BE CLEANED OF ALL DIRT, OIL AND GREASE AND ALL LOOSE SCALE AND RUST BEFORE CONCRETE IS PLACED.

REINFORCEMENT: MILD STEEL REINFORCEMENT SHALL BE AS PER A.S.T.M. DESIGNATION: A615 OR A617, GRADE 40 OR 60, AS DESIGNATED ON THE PLANS.

FABRICATION OF REINFORCEMENT SHALL BE AS PER CHAPTER 7 OF THE C.R.S.I. MANUAL OF STANDARD PRACTICE.

PLACEMENT OF REINFORCEMENT SHALL BE AS PER SECTION 6 OF THE A.T. & S.F. STANDARD SPECIFICATIONS C.E. 50153-58. UNLESS OTHERWISE NOTED, THE MINIMUM CONCRETE COVER ON REINFORCEMENT SHALL BE TWO INCHES.

CAST-IN-PLACE CONCRETE: ALL CONCRETE AND CONCRETE WORK SHALL BE AS PER SECTION 6 OF THE A.T. & S.F. STANDARD SPECIFICATIONS C.E. 50153-58.

ALL CONCRETE SHALL BE AIR-ENTRAINED CONTAINING NOT LESS THAN 4 PERCENT NOR MORE THAN 6 PERCENT AIR BY VOLUME AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 p.s.i. AT 28 DAYS. MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE ONE INCH.

ALL CONSTRUCTION JOINTS SHALL BE CLEANED TO THE EXTENT THAT AGGREGATE IS EXPOSED BEFORE FRESH CONCRETE IS PLACED AGAINST THE SURFACE OF THE JOINT.

BRIDGE SEATS SHALL BE FINISHED LEVEL WITH A WOOD FLOAT.

ANCHOR BOLTS: ANCHOR BOLTS AB30 MAY BE CAST-IN-PLACE OR SET IN 2-1¼" DIA. DRILLED HOLES WITH NON-SHRINK GROUT.

JOINT WATERPROOFING AT PIERS: JOINT WATERPROOFING FOR THE CONSTRUCTION JOINT BETWEEN THE FOOTINGS AND PIER SHAFTS SHALL BE AS PER PARAGRAPH 6.14 OF SECTION 6 OF THE A.T. & S.F. STANDARD SPECIFICATIONS C.E. 50153-58.

ESTIMATED QUANTITIES FOR ONE PIER

REINFORCEMENT - GRADE 40	1215 LBS.
REINFORCEMENT - GRADE 60	7335 LBS.
3500 p.s.i. CONCRETE	59.0 CU. YDS.
JOINT WATERPROOFING	38 LIN. FT.

For "Typical Pile Splice" detail, see Sheet 3.

SHEET 4 OF 6 DRAWINGS

B.E.S. 2215

THE A.T. & S.F. RY. COMPANY

BR. 215.9, 3RD DIST., MIDDLE DIVISION

PIERS 1 & 2

SCALE: NONE

CHICAGO, ILL., MAY 1979

CORRECT:

APPROVED:

ENGINEER SYSTEM

CHIEF ENGINEER

Handy by: LWW
Checked by: PAL
Examined by: EEA

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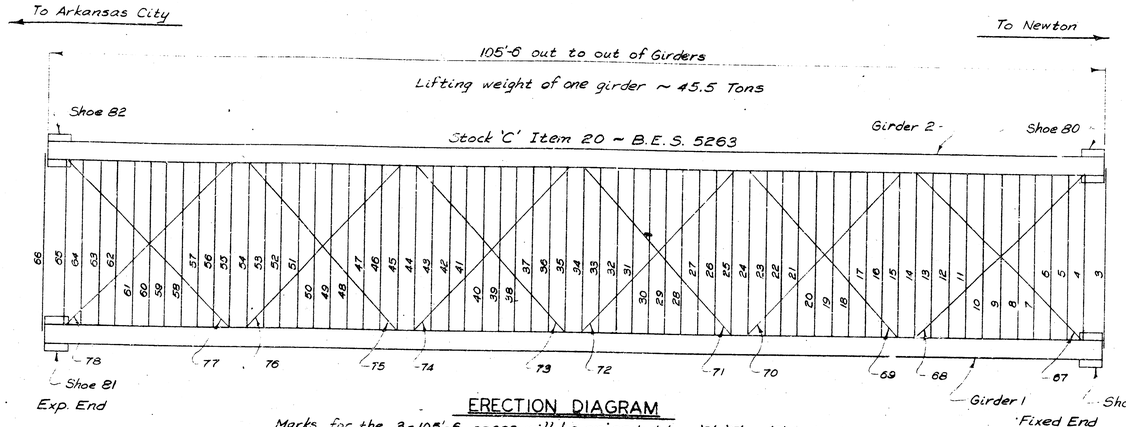
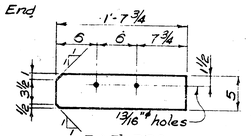


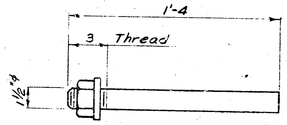
ERECTION DIAGRAM

Marks for the 3-105'-6 spans will be preceded by a 'D', 'E' or 'F' indicating the span to which parts so marked belong. Piece marks are on the fixed end of girders and on the end of floorbeams and lateral bars which connect to Girder 1. For location of 105'-6 Spans D, E and F, see Sheet 2.



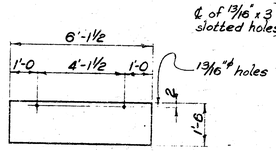
BAR B30

1-Bar 5 x 1/2 x 1'-7 3/4



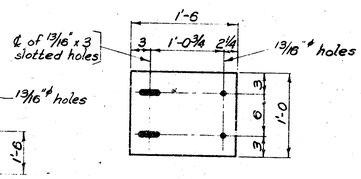
ANCHOR BOLT AB30

1-Bar 1 1/2 ø x 1'-4
1-Std. Hex. Nut, 1 1/2" ø tap
1-Std. Washer, 1 5/8" ø hole



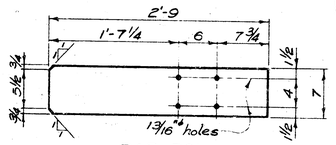
APRON PLATE AP30

1-ft 3/8 x 18 x 6'-1 1/2



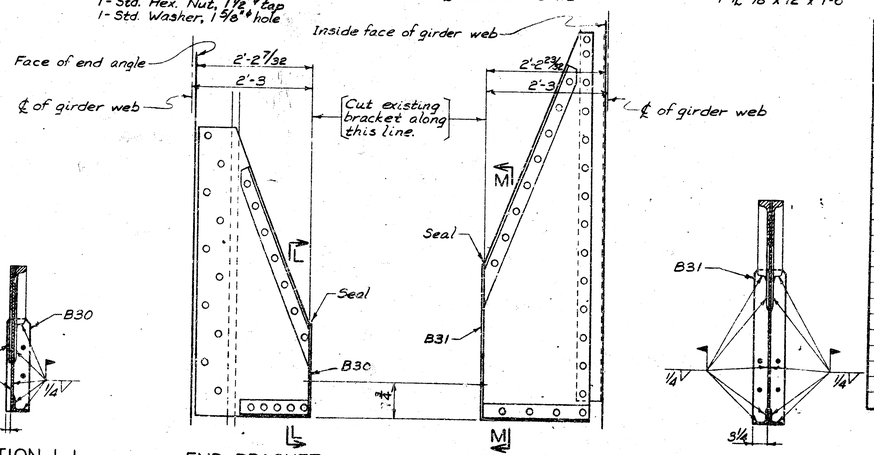
CURB SPLICE CS30

1-ft 3/8 x 12 x 1'-6



BAR B31

1-Bar 7 x 1/2 x 2'-9



SECTION L-L

END BRACKET

INTERIOR BRACKET

SECTION M-M

REVAMPING FLOORBEAM BRACKETS

ERECTOR'S LIST OF HUCKBOLT FASTENERS FOR ONE 105'-6 SPAN				
NO. REQ'D.	DIAMETER INCHES	GRIP NO.		LOCATION
32	1	32	20	END FLOORBEAMS TO GIRDER ENDS
8	1	32	48	FLOORBEAMS & LATERAL PLATES TO GIRDER BOTTOM FLANGE
16	1	32	72	do
24	1	32	92	do
768	7/8	28	16	FLOORBEAMS TO GIRDER WEB
64	7/8	28	20	FLOORBEAMS TO GIRDER WEB + STIFFENER
64	7/8	28	20	FLOORBEAMS TO GIRDER WEB + FILL AT WEB SPLICE
64	7/8	28	28	FLOORBEAMS TO GIRDER WEB + SPLICE PLATES
16	7/8	28	32	FLOORBEAMS TO GIRDER WEB + FILL AT END STIFFENER
16	7/8	28	48	FLOORBEAMS TO GIRDER WEB + PLATES AT END STIFFENER
20	7/8	28	12	END BRACKETS TO FLOORBEAMS
128	7/8	28	20	INTERIOR BRACKETS TO FLOORBEAMS
100	7/8	28	20	FLOORBEAM TO LATERAL PLATES
8	7/8	28	28	LATERALS TO LATERAL PLATES AND FLOORBEAMS
8	7/8	28	28	do
8	7/8	28	28	do
32	7/8	28	12	LATERALS TO LATERAL PLATES
72	7/8	28	12	do
72	7/8	28	12	do
16	7/8	28	20	CLIPS TO LATERALS
16	7/8	28	20	do
16	7/8	28	24	do

REQUIRED NO.	DESCRIPTION	LOCATION
	PILING	
48	HP14" X 89# STEEL BEARING PILES	ABUTMENTS AND PIERS
	STOCK "C" STEEL	
3	105'-6 DISASSEMBLED CLASS DD SPANS DESIGNATED D, E AND F. STOCK "C" ITEM 20. STORED AT SAN BERNARDINO	SUPERSTRUCTURE
	NEW STRUCTURAL STEEL	
48	ANCHOR BOLTS AB30	BRIDGE SEATS
8	APRON PLATES AP30	ENDS OF DECKS
12	BARS B30	END FLOORBEAM BRACKETS
48	BARS B31	INTERIOR FLOORBEAM BRACKETS
4	CURB SPLICES CS30	JOINING CURBS BETWEEN SPANS
	HARDWARE	
48	1-1 4" X 6-1 4" MACHINE BOLTS H.H. & N.	SHOES TO GIRDERS
	HIC" TENSILE HUCKBOLT FASTENERS *	
101	C50LR-BR32-20	SEE ERECTOR'S LIST
25	C50LR-BR32-48	do
50	C50LR-BR32-72	do
76	C50LR-BR32-92	do
618	C50LR-BR28-12	do
2419	C50LR-BR28-16	do
1223	C50LR-BR28-20	do
50	C50LR-BR28-24	do
277	C50LR-BR28-28	do
50	C50LR-BR28-32	do
50	C50LR-BR28-48	do
	INDUSTRIAL HUCKBOLT COLLARS *	
252	LC-2832	1" DIA. FASTENERS
4687	LC-2828	7/8" DIA. FASTENERS
	PAINT	
85	GALLONS, CHEM FLEX 100 * *	

* 5% ADDED. ORDER FROM HUCK MFG. CO.

* * MANUFACTURED BY STERLING LACQUER MFG. CO.

NOTES:

STEEL BEARING PILES: STEEL BEARING PILES SHALL MEET THE MATERIAL REQUIREMENTS OF SECTION 4 OF THE A.T. & S.F. STANDARD SPECIFICATIONS C.E. 50153-58.

NEW STRUCTURAL STEEL: ALL MATERIAL AND WORKMANSHIP SHALL BE AS PER CURRENT A.R.E.A. SPECIFICATIONS FOR STEEL RAILWAY BRIDGES.

SHOP NOTES: OPEN HOLES: AS NOTED.
SHOP PAINT: NONE

STEEL ERECTION: STEEL ERECTION SHALL BE AS PER SECTION 7 OF THE A.T. & S.F. STANDARD SPECIFICATIONS C.E. 50153-58.

EXPANSION SHOES SHALL BE DISASSEMBLED, CLEANED AND OILED BEFORE ERECTION.

PAINTING: ALL EXPOSED SURFACES OF THE STEEL SPANS, INCLUDING AREAS TO BE IN CONTACT WITH THE TIMBER DECK, ARE TO BE PAINTED WITH CHEM FLEX 100, MANUFACTURED BY STERLING LACQUER MANUFACTURING CO., APPLIED IN ONE FIELD COAT TO A WET FILM THICKNESS OF 10 MILS.

ALL AREAS TO BE PAINTED ARE TO BE ABRASIVE BLAST CLEANED. AREAS WHERE PETROLATUM IS PRESENT SHALL RECEIVE A "NEAR WHITE BLAST CLEANING" AND ALL OTHER AREAS SHALL RECEIVE A "COMMERCIAL BLAST CLEANING." BOTH IN ACCORDANCE WITH THE APPLICABLE STEEL STRUCTURES PAINTING COUNCIL SURFACE PREPARATION SPECIFICATION.

CHEM FLEX 100 IS TO BE MIXED AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE STEEL MEMBERS MAY BE PAINTED BEFORE ERECTION, IF ALL FAYING SURFACES ARE MASKED, WITH FINAL TOUCHUP AND REPAIR OF DAMAGED COATING AFTER ERECTION. ALL PAINTING ON THE INSIDE OF THE SPANS LOCATED BELOW TOP OF RAIL MUST BE COMPLETED BEFORE THE TIMBER DECK IS PLACED.

ESTIMATED QUANTITIES FOR THREE SPANS

STOCK "C" STEEL	438.96 TONS
NEW STRUCTURAL STEEL	1.68 TONS

3-105'-6 S.T. 'D-D'-Spans on Tangent

SHEET 5 OF 6 DRAWINGS

B.E.S. 2215

THE A.T. & S.F. RY. COMPANY

BR. 215.9, 3RD DIST., MIDDLE DIVISION
ERECTION OF STEEL & MISC. STEEL

SCALE: NONE
CORRECT:

CHICAGO, ILL., MAY 1979
APPROVED:

BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

Made by: WPW
Checked by: PHy
Examined by: CEA

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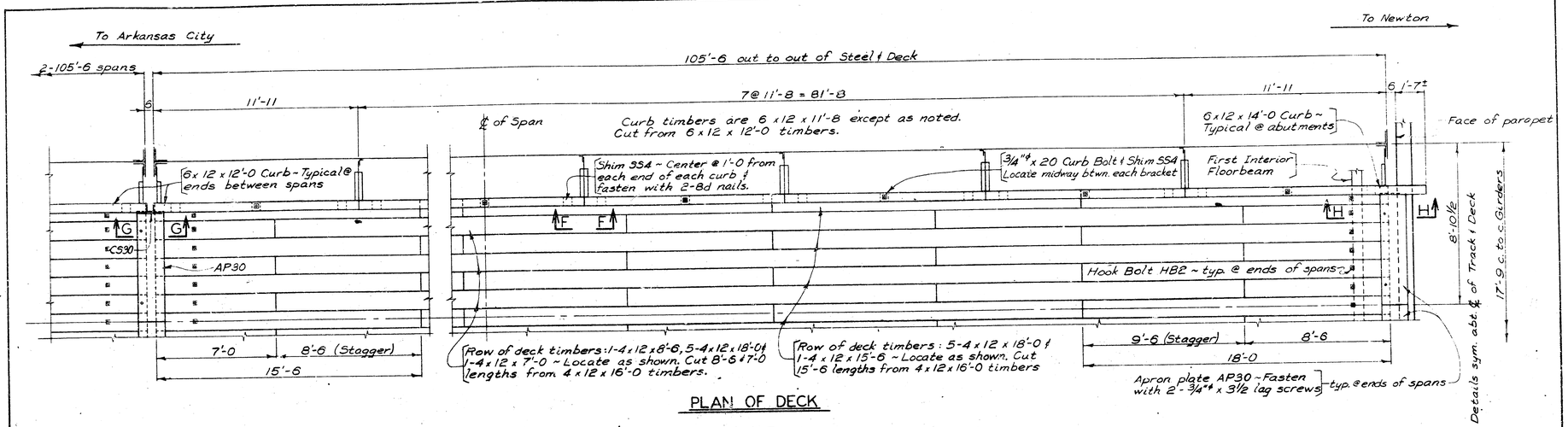
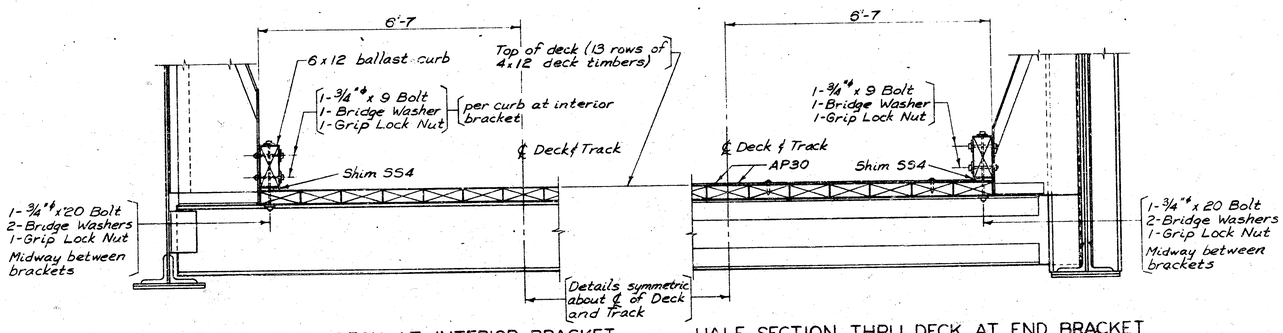


PLAN OF DECK



HALF SECTION THRU DECK AT INTERIOR BRACKET

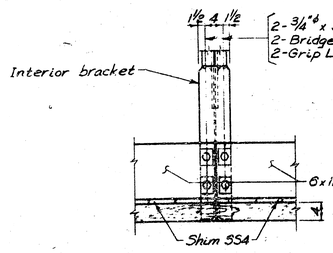
HALF SECTION THRU DECK AT END BRACKET

BILL OF MATERIAL (EXACT QUANTITIES)

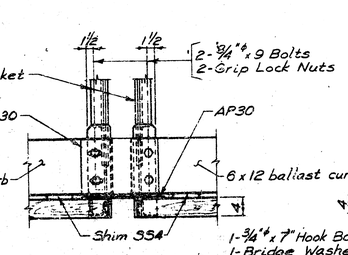
NO.	DESCRIPTION	LOCATION
	TREATED TIMBER	
195	4 X 12 X 18'-0	DECK TIMBERS
39	4 X 12 X 16'-0	DECK TIMBERS
4	6 X 12 X 14'-0	BALLAST CURBS
50	6 X 12 X 12'-0	BALLAST CURBS
162	SHIM SS4, C.E.S. 5282-A, SHEET 7	UNDER CURB
	HARDWARE	
78	3/4"ø X 7" HOOK BOLTS HB2, C.E.S. 5288	DECK TO FLOORBEAMS
216	3/4"ø X 9" BOLTS WITH NUT	CURB TO BRACKETS
54	3/4"ø X 20" do	CURB TO DECK
386	BRIDGE WASHERS, C.E.S. 5279	3/4"ø BOLTS
348	GRIP LOCK NUTS, 3/4"ø TAP	3/4"ø BOLTS
16	3/4"ø X 3-1/2" LAG SCREWS	AP30 TO DECK
2	LBS. 8d NAILS	SHIMS SS4 TO CURBS
	MISCELLANEOUS	
5	GALS. PETROLATUM	AP30, CS30 AND HARDWARE

PRESERVATIVE, PLASTIC CEMENT AND TREATED WOODEN PLUGS ARE TO BE ORDERED AS REQUIRED.

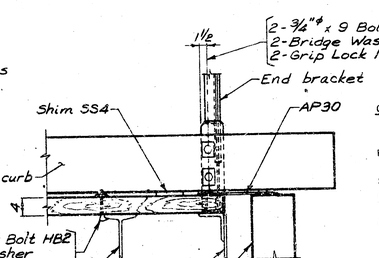
APRON PLATES AP30 AND CURB SPLICES CS30 ARE ORDERED AND DETAILED ON SHEET 5.



SECTION F-F
At Interior Brackets



SECTION G-G
Between Spans



SECTION H-H
At Abutments

GENERAL NOTES:

ALL TIMBER SHALL HAVE A PRESERVATIVE TREATMENT.

FOR GENERAL NOTES ON HANDLING OF TREATED TIMBER, HARDWARE AND GRIP LOCK NUTS, SEE C.E.S. 5282-A, SHEET 5.

APRON PLATES AP30, CURB SPLICES CS30 AND HARDWARE SHALL BE GIVEN A HEAVY COATING OF PETROLATUM BEFORE BEING PLACED IN POSITION.

LONGITUDINAL DECK TIMBERS SHALL BE JACKED AS TIGHT AS PRACTICAL.

USE GRIP LOCK NUTS ON ALL 3/4"ø BOLTS.

3-105'-6 S.T. 'DD'-Spans on Tangent

SHEET 6 OF 6 DRAWINGS

B.E.S. 2215

THE A.T. & S.F. RY. COMPANY

BR. 215.9, 3RD DIST., MIDDLE DIVISION

BALLAST DECK

SCALE: NONE

CHICAGO, ILL., MAY 1979

CORRECT: W. L. Hymo
BRIDGE ENGINEER SYSTEM

APPROVED: 7/13
CHIEF ENGINEER

Made by WPW
Checked by FMH
Examined by LEG

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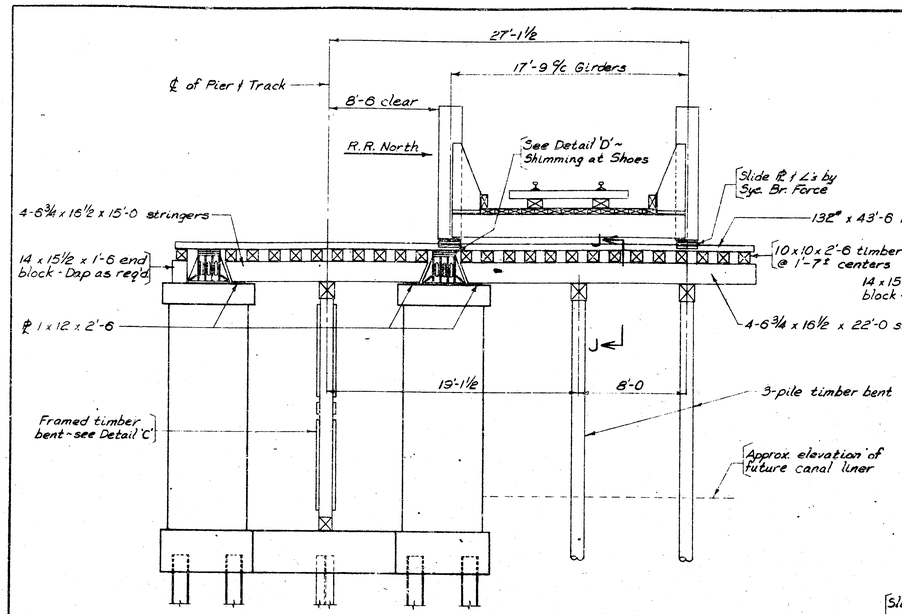
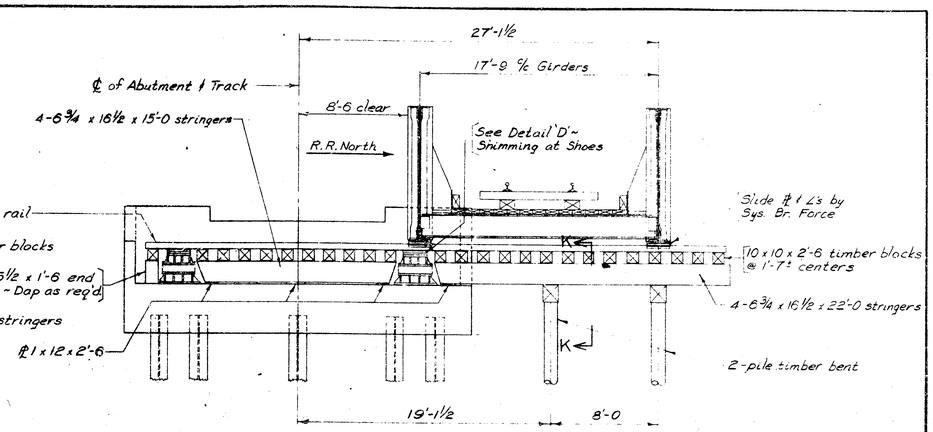
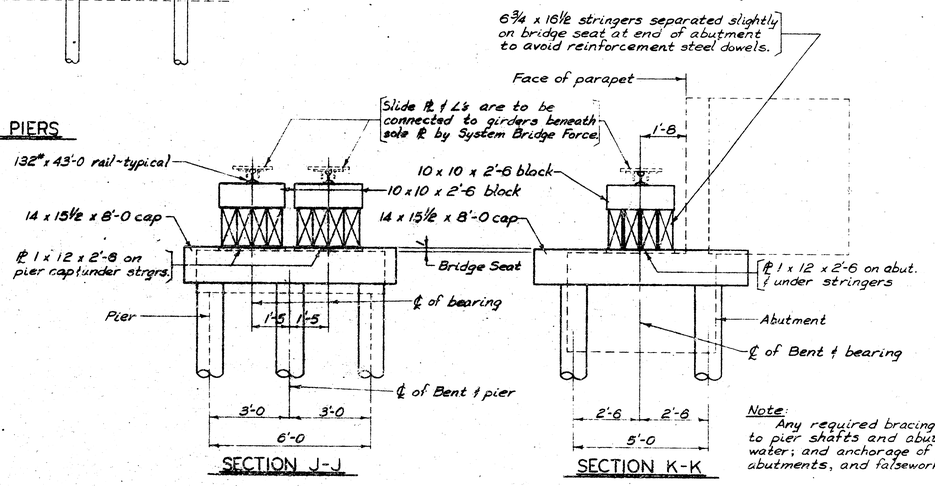


FALSEWORK AT PIERS



FALSEWORK AT WEST ABUTMENT



SECTION J-J

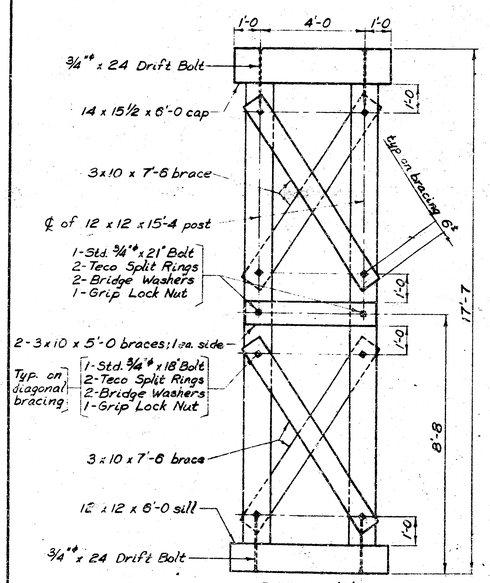
SECTION K-K

Note:
Any required bracing of bents; tying in of bents to pier shafts and abutments due to possible high water; and anchorage of 6-¾ x 16½ stringers to piers, abutments, and falsework bent caps to be by Field Forces.

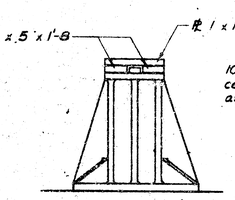
LOADS

WEIGHT OF ONE GIRDER	45.5 TONS
JACKING LOAD PER SHOE	45.0 TONS
MAXIMUM PILE LOAD	81.3 TONS

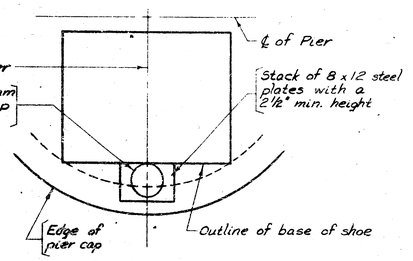
NOTE:
MATERIAL FOR FALSEWORK TO BE ORDERED AS REQUIRED BY THE DIVISION.



DETAIL 'C'
FRAMED TIMBER BENT



DETAIL 'D'
SHIMMING AT SHOES



JACKING AT PIER
(Plan View)

Made by: WPW
Checked by: PHZ
Examined by: CEA

SHEET 7 OF 6 DRAWINGS

B.E.S. 2215

THE A.T. & S.F. RY. COMPANY

BR. 215.9, 3RD DIST., MIDDLE DIVISION

FALSEWORK

SCALE: NONE CHICAGO, ILL., MAY 1979

CORRECT: APPROVED: 8/13

BRIDGE ENGINEER SYSTEM CHIEF ENGINEER

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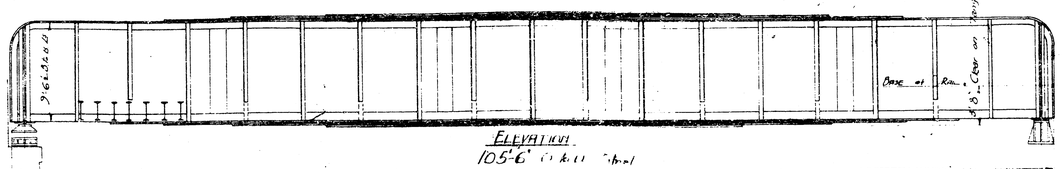
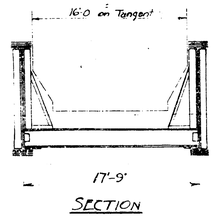




LIST OF DRAWINGS

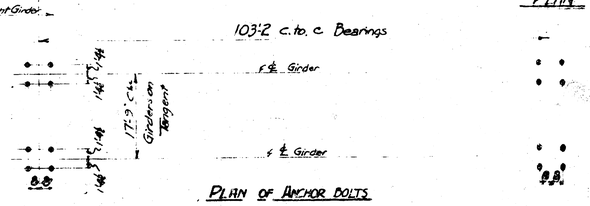
Sh No.	Description
1	Castings, Roller Nests, Anchor Bolts
2 & 2A	Girders
2B	
3	Lateral Bracing, End Floor Bms.
4	Interior Floor Bms., Brackets
5	Erection & Masonry Plans Rivet Lists

ERECTOR'S LIST of FIELD RIVETS (ONE SPAN)

No.	Diam.	Grip	Length	Connecting
32	1	1⅛	3½	End Fl. Bms. to Girs.
8	1	3½	5½	Fl. Bms. & Lat Pls to Girs
16	1	4½	6½	
24	1	6	8½	
16	1	2½	4	Lat Pls to Girs
32	1	3½	5½	
96	1	5	7½	
16	⅞	2⅛	3½	Fl Bms to Girs
768	-	1½	2½	
64	-	1½	3½	
64	-	1½	3½	
224	-	⅞	2½	Brackets to Girs
28	-	1	2½	End Bkts to End Fl. Bms.
192	-	1⅛	2½	Brackets to Fl Bms
98	-	1⅜	2½	Fl Bms to Lat Pls
8	-	2	3½	Lats to Lat Pls & Fl Bms
8	-	1⅛	3½	
72	-	1	2½	Lats to Lat Pls
72	-	⅞	2½	
16	-	⅞	3½	Clips to Lats
16	-	1⅛	3½	
16	-	⅞	2½	
32	-	⅞	2½	Lats to Lat Pls
16	-	3⅛	5	Fl Bms to Girs.
64	-	1⅛	3½	
8	-	1⅛	3½	Lats to Lat Pls & Fl Bms
40	1	⅛	3	End Bkts to Girs.

SUMMARY OF FIELD RIVETS - ONE SPAN

Rot No.	No.	Dia.	Length	Remarks
32	45	1	3½	
16	30	1	4	
8	20	1	5½	
32	45	1	5⅝	
16	30	1	6½	No. Req. - Rot No. + 15% +10
96	65	1	7½	
24	40	1	8½	
256	305	⅞	2½	
72	95	-	2⅝	
100	125	-	2½	
768	890	-	2⅝	
256	350	-	2⅞	
448	175	-	3⅛	
16	30	-	3⅜	
8	20	-	3½	
72	95	-	3⅝	
16	30	-	3⅞	
8	20	-	3¾	
16	30	-	5	



SPANS ON TANGENT

TABLE of HEIGHTS

BASE of RAIL TO CLEARANCE		BASE OF RAIL TO MASONRY	
Tie & Tie Pl	7/16	Tie & Tie Pl	7½
Ballast	6½	Ballast	6½
Timber	4	Timber	4
Floor I	1-8	Floor I	1-8
Clearance	1/8	Clearance	1/8
Fillings I	1	Fillings I	1
Shoe Pl	2½	Shoe Pl	0 7/16
Rivet Head	0 1/16	Shoe	2-2 5/8
Total	3-0	Total	5-7 1/16

HAND-RAIL

Girders are called "Right" and "Left" on Account of Handrail to be furnished in the future.
In ordering Handrail they are "Right" and "Left" looking from Expansion to Fixed End. Handrail will be ordered in the future by Railroad Co. for "Right" or "Left" Girder.
Handrail to be riveted in the Field
Provide Future Conns. for Handrail.

	MOMENT	SHEAR	WEB	FLANGE
FLOOR I Tangent	D 13000 / L 92000 / I 39000 / T 193000	D 2800 / L 18100 / I 14100 / T 51000		20" I @ 81.4# U.S. - 15800#
MAIN GIRDER	D 3728000 / L 5536000 / I 4030000 / T 13340000	D 144000 / L 230000 / I 135800 / T 579000	114 x 9/16	2 L's 8 x 8 x 1 12" I Cov. Pl. 21 x ¾ F.L. Top 84.0 Bottom / 1 - - - - 73.0 Top B. - - / 1 - - - - 52.0 - - - / 1 - - 21 x ⅝ - 41.0 - - -

LIST OF SPANS

DATE	ORDER No.	Fab. P.	No Spans	Br. No	LOCATION	RAILROAD	App. Pt.	Class	Ends	Skew
July 13	E7418	"	3	4748	Arizona Div.	"	3	"	"	"
Apr 25	E8543	Gary	5	376 A	Plains Div. Waterloo	A.T. & S.F.	6	DD	Rocker	
June 1918	E8668	Gary	2	304A	Near Kiowa Kansas	A.T. & S.F.	3	DD	Fixed	

NOTES:

Specifications - AREA 1910
Live Load - E65 To use E Plate Loads for E
Dead Load - Rail 100# Ballast 150# Floor 80# Total 3500#
Rivets 1" diam Rivets for Main Girders & Floor Beams
Assumed D.L. Rail & Fastenings
Ballast
Timber
Steel
DL Forces
Lateral Force on Loaded Panel
On Structure
On Train
Horz. Impact
Total

THIS SHEET TO BE USED FOR BRIDGE ON TANGENT ONLY B.E.S. 5263

A. T. & S. F. RY. SYSTEM
105'-6" CLASS DD SPAN
Details by
Approved W. H. Rodgers
SCALE
AMERICAN BRIDGE COMPANY
GARY PLANT DRAWING ROOM

9/13

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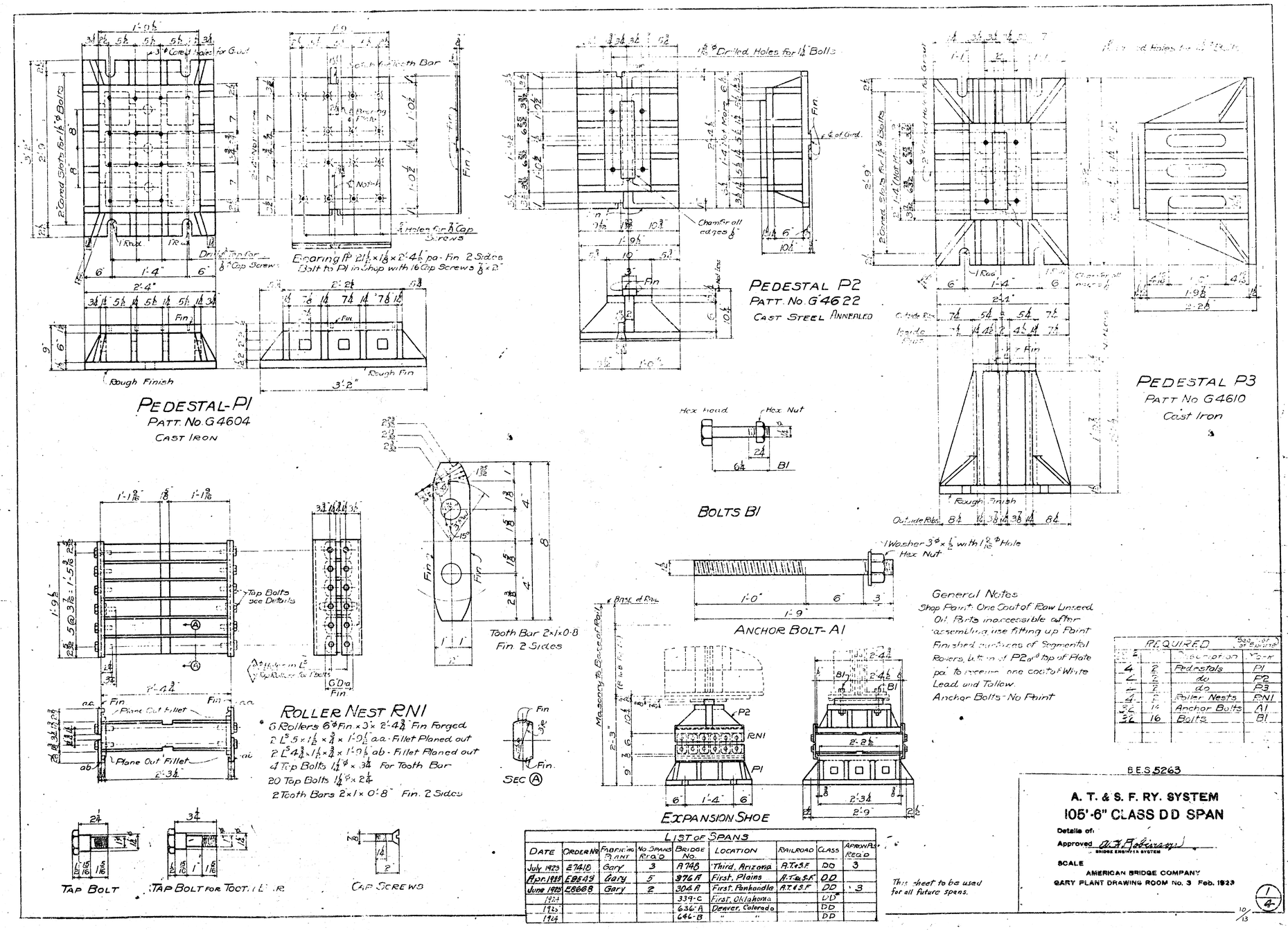

General Notes

Shop Paint: One Coat of Raw Linseed Oil. Parts inaccessible after assembling use fitting up Paint. Finished surfaces of Segmental Rollers, bottom of P2 and top of Plate pa to receive one coat of White Lead and Tallow.

Anchor Bolts - No Paint

REQUIRED			See list of Spans
		Description	Work
4	2	Pedestals	P1
4	2	do	P2
4	2	do	P3
4	2	Roller Nests	RN1
32	16	Anchor Bolts	A1
32	16	Bolts	B1

LIST OF SPANS

DATE	ORDER No	FABRICING PLANT	No SPANS REQ'D	BRIDGE No.	LOCATION	RAILROAD	CLASS	APRON PLS REQ'D
July 1923	E7418	Gary	3	A748	Third, Arizona	A.T.&S.F.	DD	3
Apr. 1925	E8543	Gary	5	376 A	First, Plains	A.T.&S.F.	DD	
June 1925	E8668	Gary	2	304 A	First, Panhandle	A.T.&S.F.	DD	3
1924				339-C	First, Oklahoma		DD*	
1925				636-A	Denver, Colorado		DD	
1924				646-B	" "		DD	

This sheet to be used for all future spans.

B.E.S. 5263

A. T. & S. F. RY. SYSTEM

105'-6" CLASS DD SPAN

Details of:

Approved A. H. Robinson
BRIDGE ENGINEER SYSTEM

SCALE

AMERICAN BRIDGE COMPANY
GARY PLANT DRAWING ROOM No. 3 Feb. 1923

1/4

10/13

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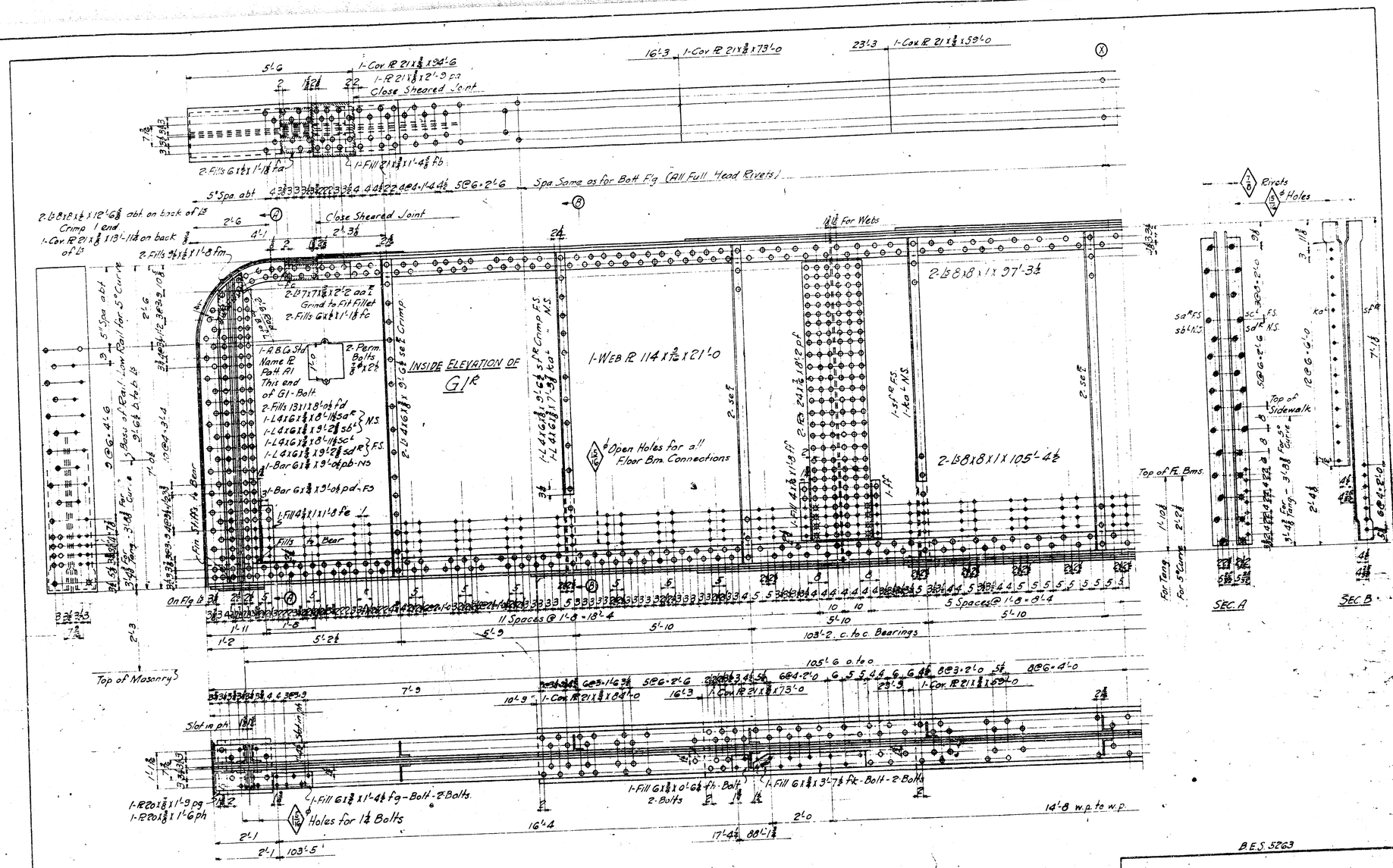

GENERAL NOTES

Rivets: 1" ø unless noted.
Holes: 1⅛" ø "
Reaming: None.
Shop Paint: One coat of oil. Use fitting up paint.
Camber: ⅝".

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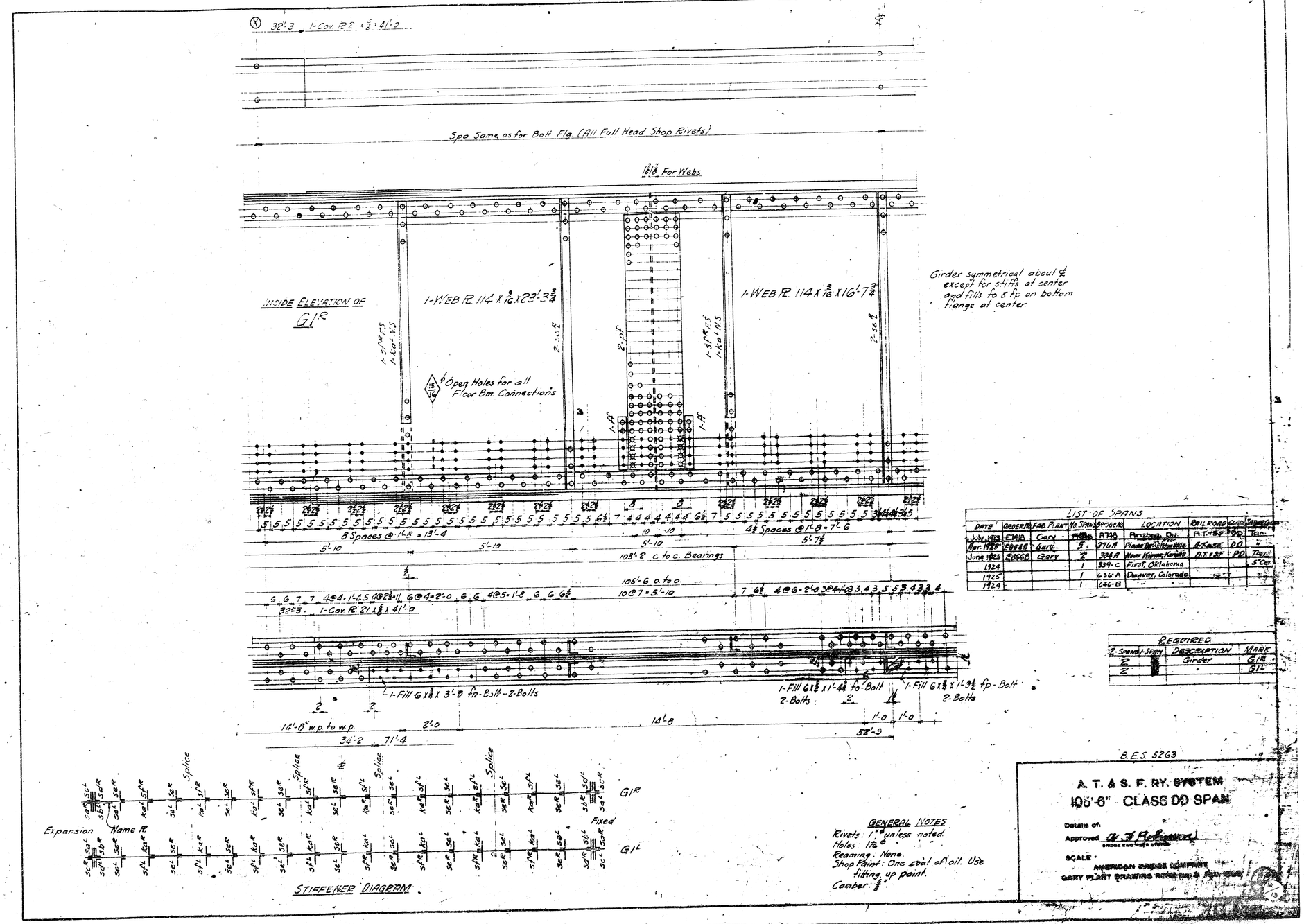

LIST OF SPANS

DATE	ORDER NO.	FAB. PLANT	NO. SPANS	BRIDGE NO.	LOCATION	RAILROAD	CLASS	SPAN
July, 1923	E7418	Gary	[illegible]	A748	Arizona, Ohio	A.T.&S.F.	DD	Tan.
Apr. 1925	E8848	Gary	5	376A	Plains Dev. Silver Hills	A.T.&S.F.	DD	"
June 1925	E8668	Gary	2	304A	New Kiowa, Kansas	A.T.&S.F.	DD	Tan.
1924			1	839-C	First, Oklahoma			5" Cov.
1925			1	636-A	Denver, Colorado			
1924			1	646-B	"			

REQUIRED

2-SPANS	1-SPAN	DESCRIPTION	MARK
2		Girder	G1R
2		"	G1L

GENERAL NOTES
Rivets: 1" unless noted.
Holes: 1 7/16"
Reaming: None.
Shop Paint: One coat of oil. Use fitting up paint.
Camber: 3/8"

B.E.S. 5263

A. T. & S. F. RY. SYSTEM
105'-6" CLASS DD SPAN

Details of:
Approved [signature]
BRIDGE ENGINEER STRUCT.
SCALE:
AMERICAN BRIDGE COMPANY
GARY PLANT DRAWING ROOM No. 8 [illegible]

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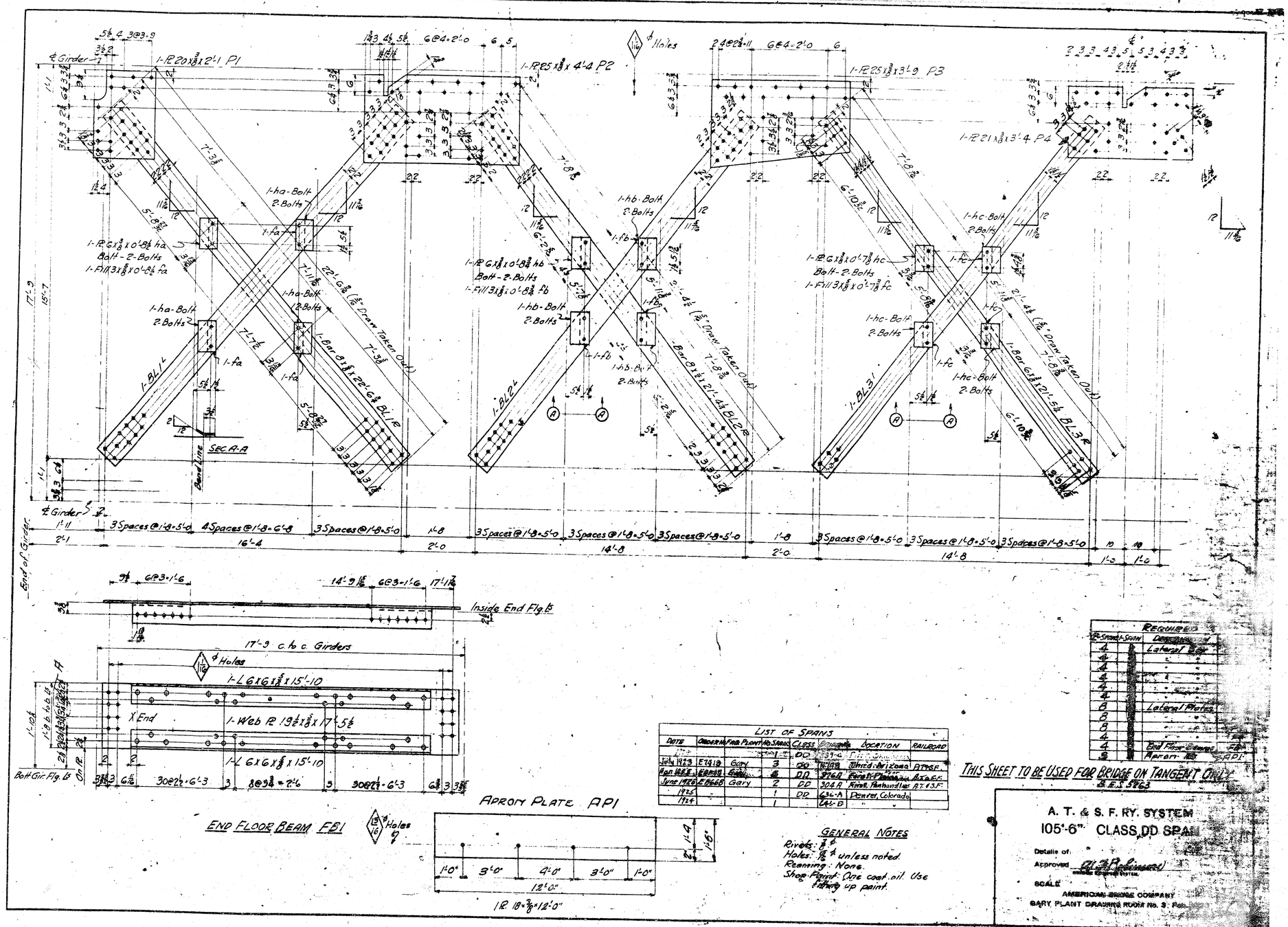

Required		
2-Spans	1-Span	Description
4		Lateral Bar
4		" "
4		" "
4		" "
4		" "
4		" "
8		Lateral Plates
8		" "
8		" "
4		" "
4		End Floor Beams FB1
3		Apron Plate API

THIS SHEET TO BE USED FOR BRIDGE ON TANGENT ONLY
B.E.S. 5263

LIST OF SPANS

Date	Order No.	Fab. Plant	No. Spans	Class	Bridge	Location	Railroad
[illegible]			1	DD	[illegible]	[illegible]	
July 1923	E7418	Gary	3	DD	[illegible]	Wind, Arizona	A.T.&S.F.
Apr. 1925	[illegible]	[illegible]	6	DD	376A	[illegible]	A.T.&S.F.
June 1926	E8668	Gary	2	DD	304A	Fort Panhandle	A.T.&S.F.
1925			1	DD	636-A	Denver, Colorado	
1924			1		646-B	" "	

GENERAL NOTES

Rivets: 7/8 ϕ
Holes: 9/16 ϕ unless noted.
Reaming: None.
Shop Paint: One coat oil. Use fitting up paint.

A. T. & S. F. RY. SYSTEM
105'-6" CLASS DD SPAN

Details of:
Approved [illegible]
Bridge Engineer System
SCALE
AMERICAN BRIDGE COMPANY
GARY PLANT DRAWING ROOM No. 3 Fab.

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