

STATE OF INDIANA
 STATE HIGHWAY COMMISSION
 BUREAU OF BRIDGES

PLANS FOR BRIDGES OVER 20 FEET SPAN
 FOR PROPOSED
 STATE HIGHWAY

FEDERAL AID PROJECT NO. 13
 SECTION "D"

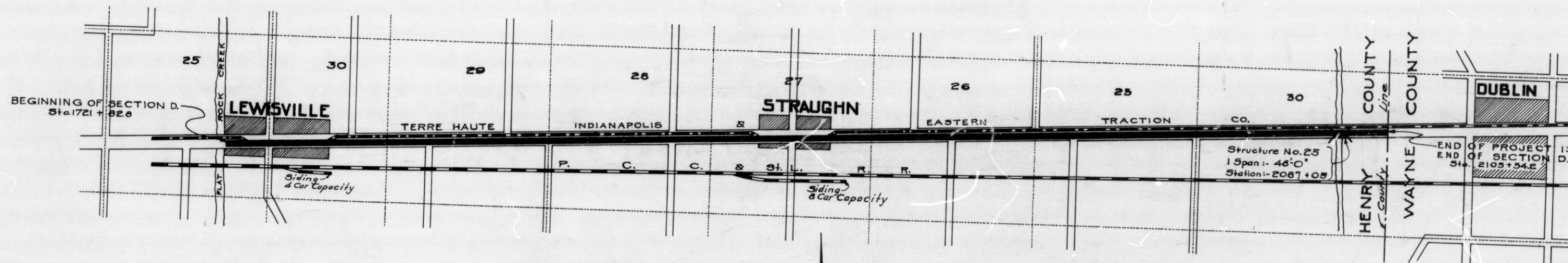
NATIONAL ROAD, BEGINNING AT THE WEST CORPORATION LINE OF LEWISVILLE AND EXTENDING IN AN EASTERLY DIRECTION TO THE EAST LINE OF HENRY COUNTY. LENGTH 7.267 MILES.

BRIDGES OVER 20'-0" SPAN

FEDERAL ROAD DISTRICT NO.	STATE	FED. AID PROJ. NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	13	1921	1	10

SECTION "D"

INDEX		STRUCTURE		SUBJECT	
SHEET NUMBER	SECTION	No.	Type	SPAN OVER	STATION
1					
2	D	25	Wooden Truss	52'-0"	2087+05
3	D	25	Wooden Truss	48'-0"	2087+05
4					
5					
6	D	25	Steel Truss	48'-0"	2087+05
7					
8					
9					
10					



INDIANA STATE HIGHWAY STANDARD BRIDGE SPECIFICATIONS, 1919, ON FILE WITH U. S. BUREAU OF PUBLIC ROADS, TO BE USED WITH THESE PLANS.

SCALE - 1" = 2000'

CONVENTIONAL SIGNS

- STATE AND NATIONAL LINE
- COUNTY LINE
- CITY, VILLAGE OR BOROUGH
- TOWNSHIP LINE
- SECTION LINE
- RIGHT OF WAY LINE
- UNFENCED PROPERTY LINE
- FENCE LINES: BARBED WIRE, RAIL, WORM, STONE
- RAILROAD
- TEST BORINGS

- RIVETS: TWO FULL HEADS, FAR SIDE COUNTERSUNK AND CHIPPED, NEAR SIDE COUNTERSUNK AND CHIPPED, BOTH SIDES COUNTERSUNK AND CHIPPED
- FLATTENED TO 1/4" HIGH.
- FLATTENED TO 1/2" HIGH.
- FLATTENED TO 3/8" HIGH.

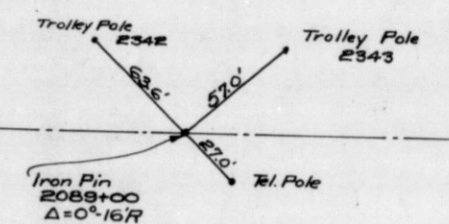
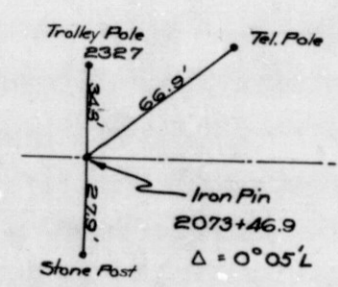
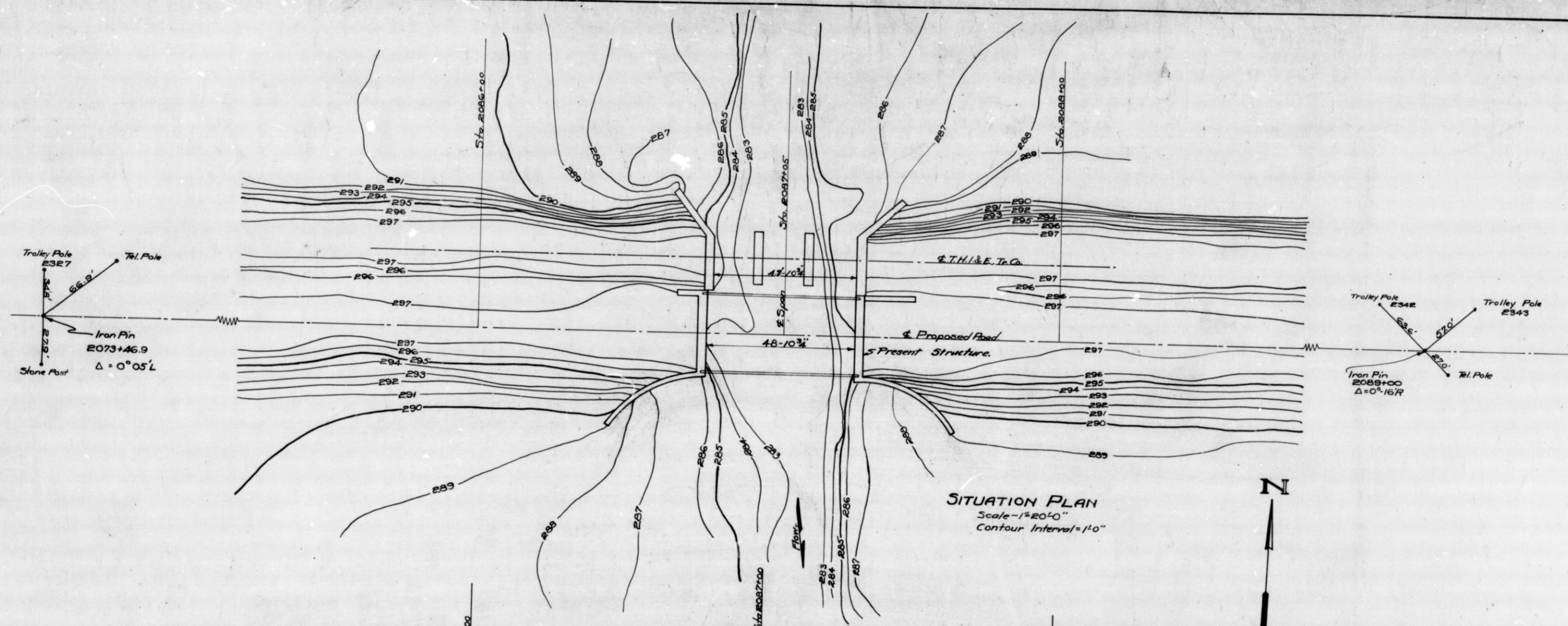
- SECTIONS: STEEL, CAST IRON, CAST STEEL, WOOD, WATER, CONCRETE, EARTH, ROCK, BRICK, RUBBLE, ASHLAR

APPROVED DATE 2-4-21.
 L. H. Wright
 DIRECTOR, INDIANA STATE HIGHWAY COMMISSION
 APPROVED DATE 1-21-21.
 C. Gray
 CHIEF ENGINEER, INDIANA STATE HIGHWAY COMMISSION
 RECOMMENDED FOR APPROVAL
 DISTRICT ENGINEER, BUREAU OF PUBLIC ROADS
 RECOMMENDED FOR APPROVAL
 CHIEF ENGINEER, BUREAU OF PUBLIC TRADES
 APPROVED
 DIRECTOR, BUREAU OF PUBLIC TRADES

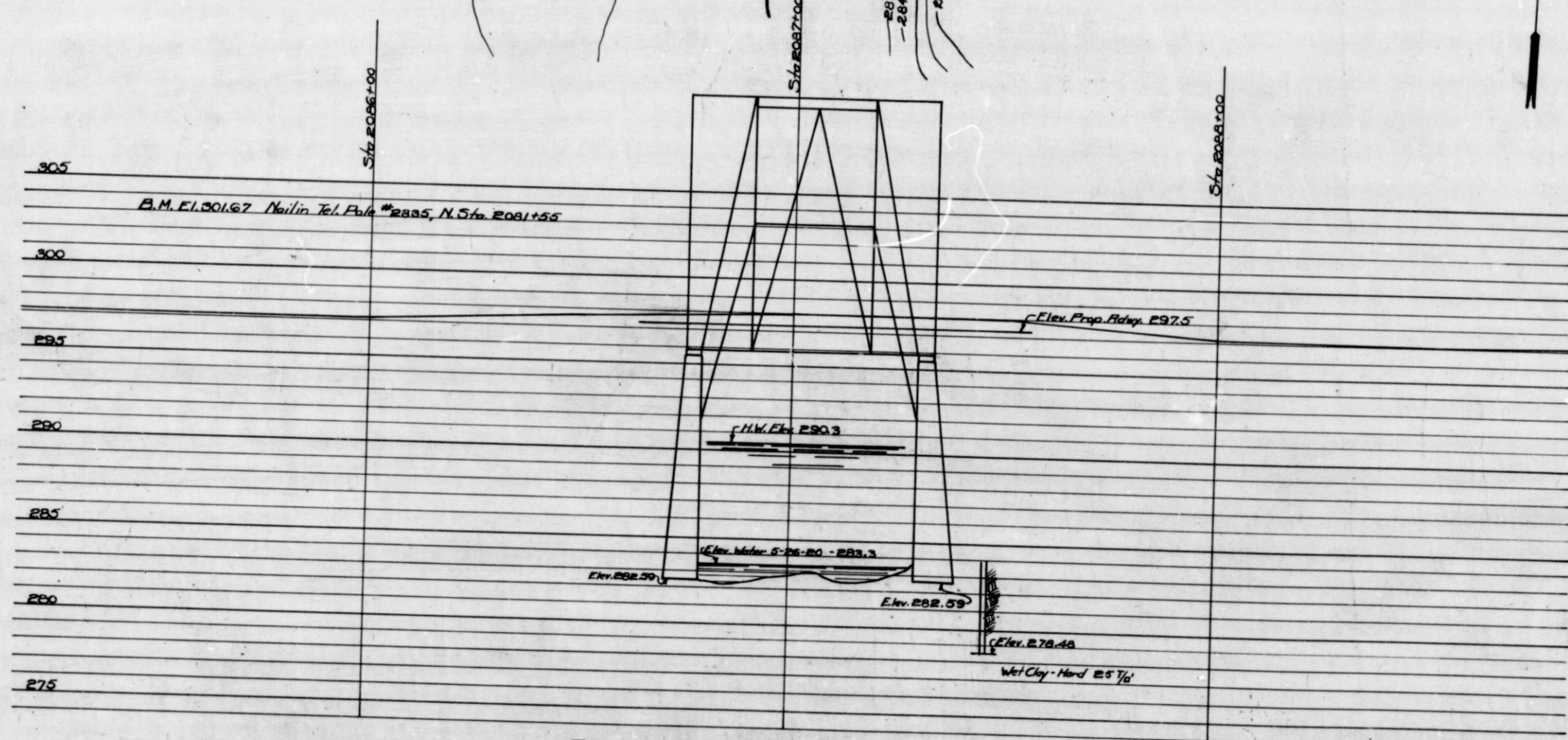
BRIDGES OVER 20' SPAN

FED. ROAD DIST. NO.	STATE	FED. NO.	ROAD NO.	YEAR	NO. OF SPANS	TOTAL LENGTH
7	IND.	13	1921	2	10	

SECTION - D



SITUATION PLAN
Scale - 1" = 20'-0"
Contour Interval = 1'-0"



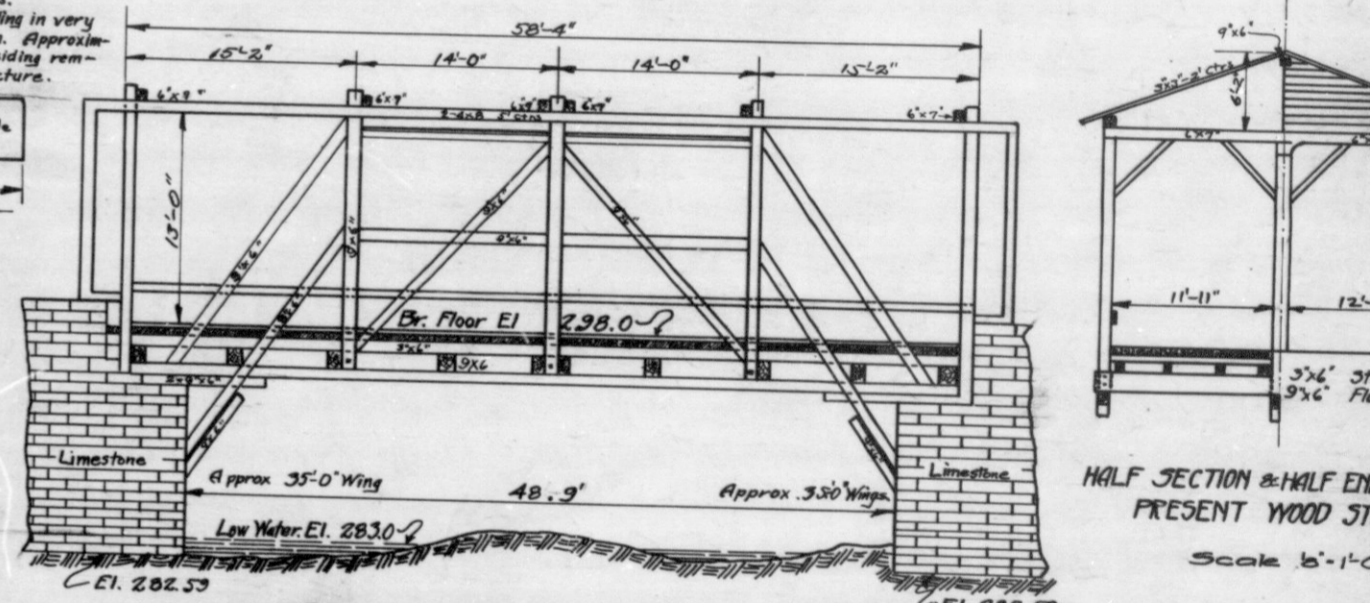
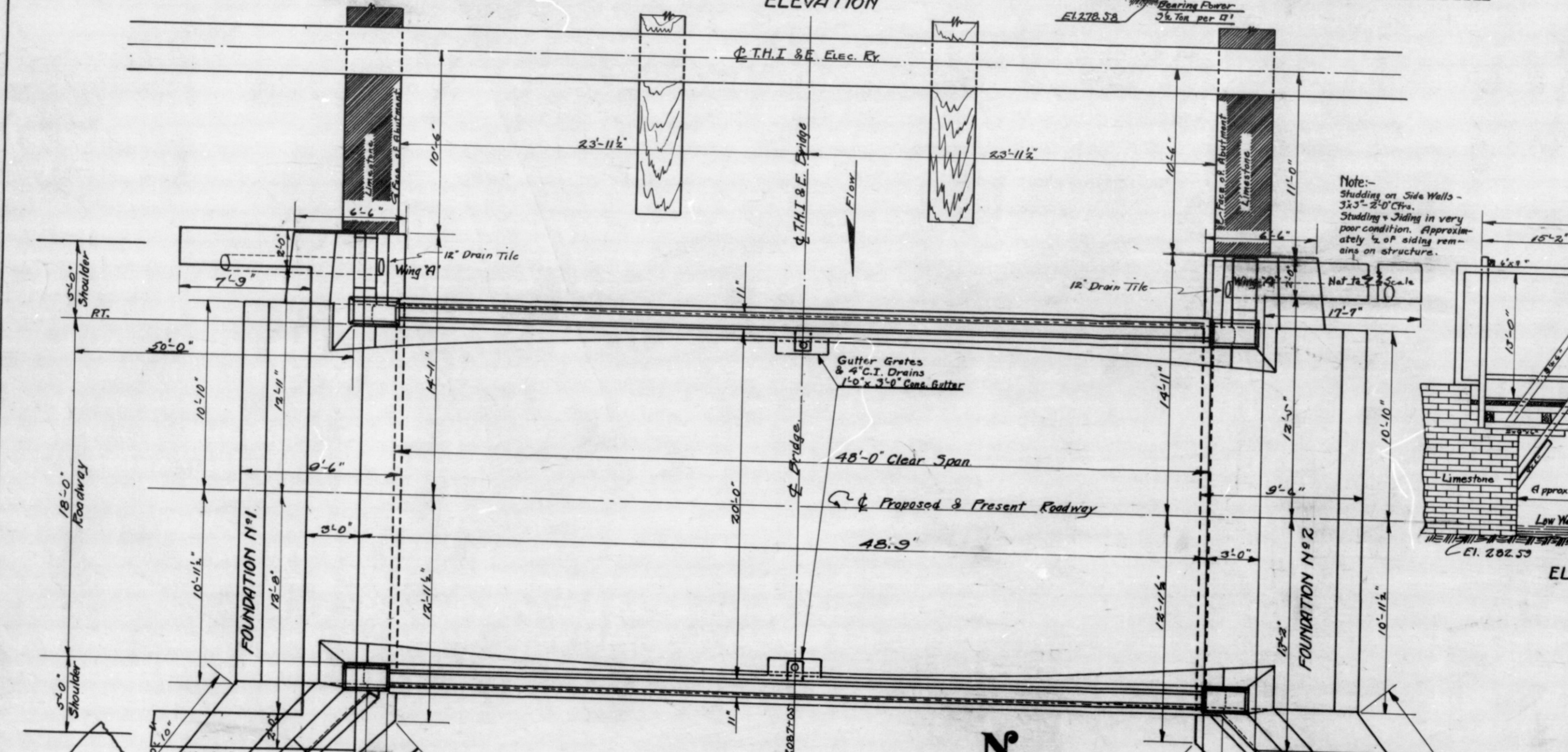
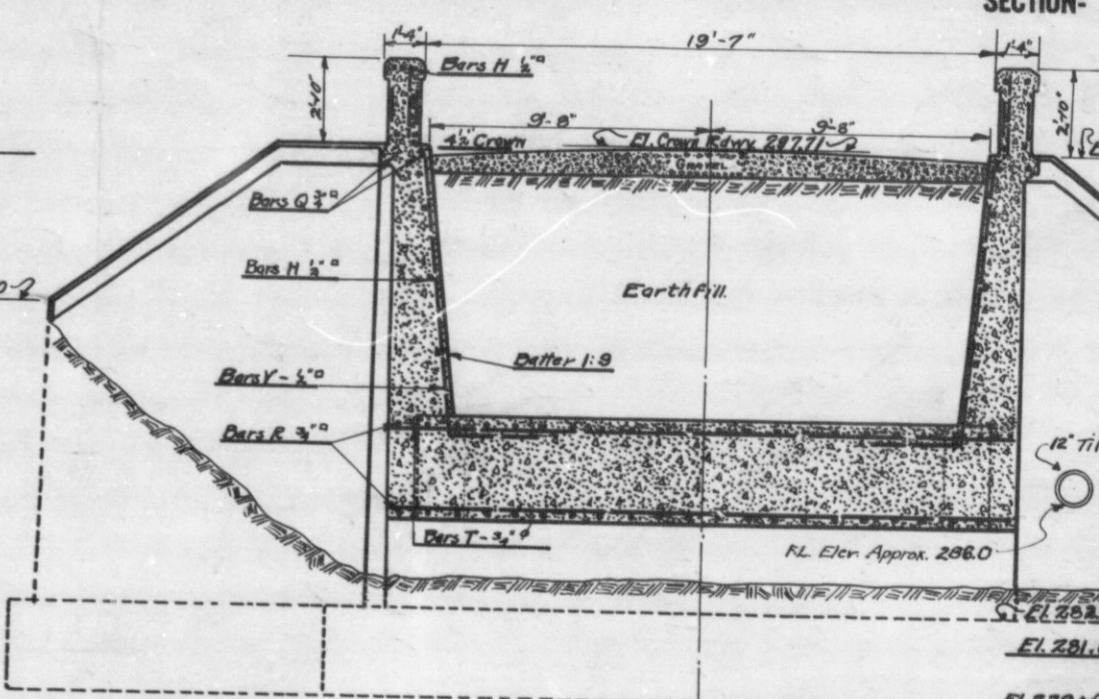
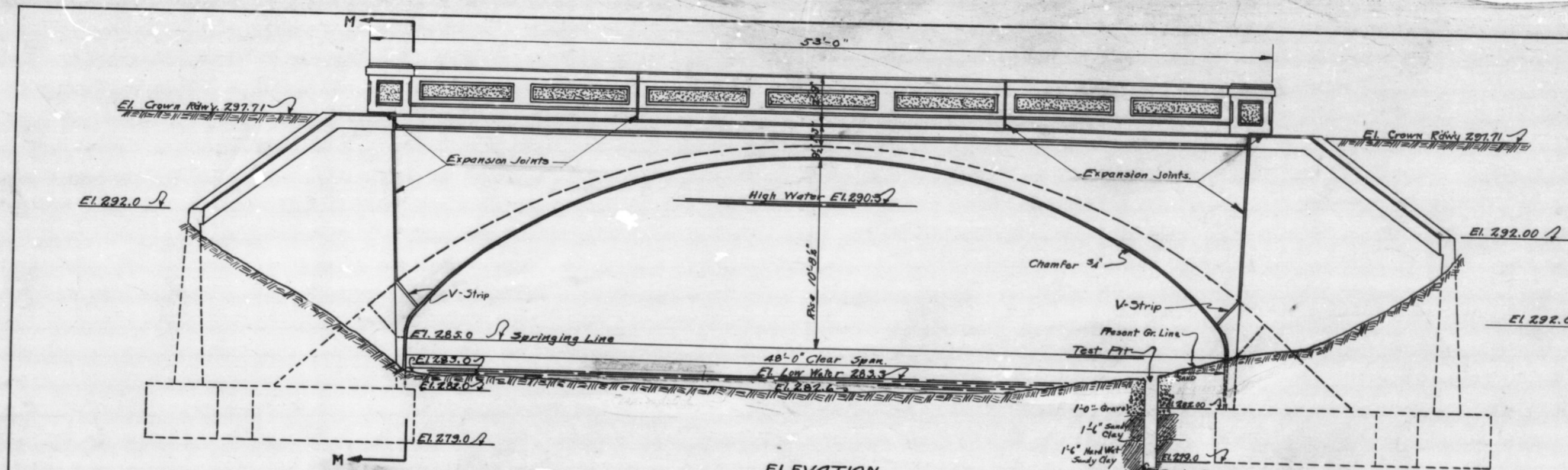
PROFILE ON & ROAD
Scales (Horiz. 1" = 20'-0"
Vert. 1" = 5'-0")

FIELD NOTES: - Book Br. "9 pp 138-161

**LAY-OUT
PRESENT STRUCTURE**
1-SPAN: 52'-0" 24'-0" ROADWAY
OVER DRAINAGE DITCH ON NATIONAL ROAD
**INDIANA STATE HIGHWAY COMMISSION
HENRY COUNTY**
SCALE: - AS SHOWN JAN. 18, 1921
RECOMMENDED FOR APPROVAL: *[Signature]* CHIEF, BUREAU OF BRIDGES
PROJECT: - F.A. No. 13 STATION: - 2087+05
SECTION: - D DRAWING: - LI OF 1 STRUCTURE NO. 25

DESIGNED: C.K.D.
DRAWN: E.L.G. T.M. R.C.K. D. E.H.H. H.W.B.
TRACED: H.H. B.C. K.D. E.H.H. H.W.B.

BRIDGES OVER 20'			
DES. YEAR	STATE	DES. NO.	SCALE
7	IND.	13	1921



ELEVATION PRESENT WOOD STRUCTURE.
Scale 1/2" = 1'-0"

General Notes:
 1-See Special Provision for Removal of Present Structure.
 2-The T.H.I.E. Abutment Walls shall not be disturbed. The North Wings of the proposed structure shall abut against the T.H.I.E. Abutment Walls. Provision to be made for Protection of T.H.I.E. Walls.
 3-See Specifications for Waterproofing Arch Ring, Spandrel Walls, Abutment, & Wing Walls.
 4-All Concrete in Footings to be Class "C" concrete.
 5-All Concrete in Wing Walls, Abutment, and that portion of Spandrel Walls poured monolithic with Wing Walls to be Class "B" Concrete.
 6-All Concrete in handrail Above Curb, El. 287.5, to be Class "D" Concrete.
 7-All other Concrete to be Class "C".
 8-See Errata Sheets of Specifications for details of Construction.
 9-Present Structure is a Covered Wooden Bridge on Limestone Abutments.
 10-Provide 12" tile drains as shown.

DESIGNED R.M.D. 12-14-20 'K'D. C.B. 12-18-20
 DRAWN C.K.D.
 TRACED R.C.H. 12-27-20 'K'D. R.M.D. 1-13-21

REINFORCED CONCRETE ARCH BRIDGE
 1'-SPAN-48'-0"
 OVER DRAINAGE DITCH
 20'-0" ROADWAY
 ON NATIONAL ROAD

INDIANA STATE HIGHWAY COMMISSION
HENRY COUNTY

SCALE: 1/4" = 1'-0" EXCEPT AS NOTED
 RECOMMENDED FOR APPROVAL: *[Signature]* JAN. 18, 1921
 CHIEF, BUREAU OF BRIDGES

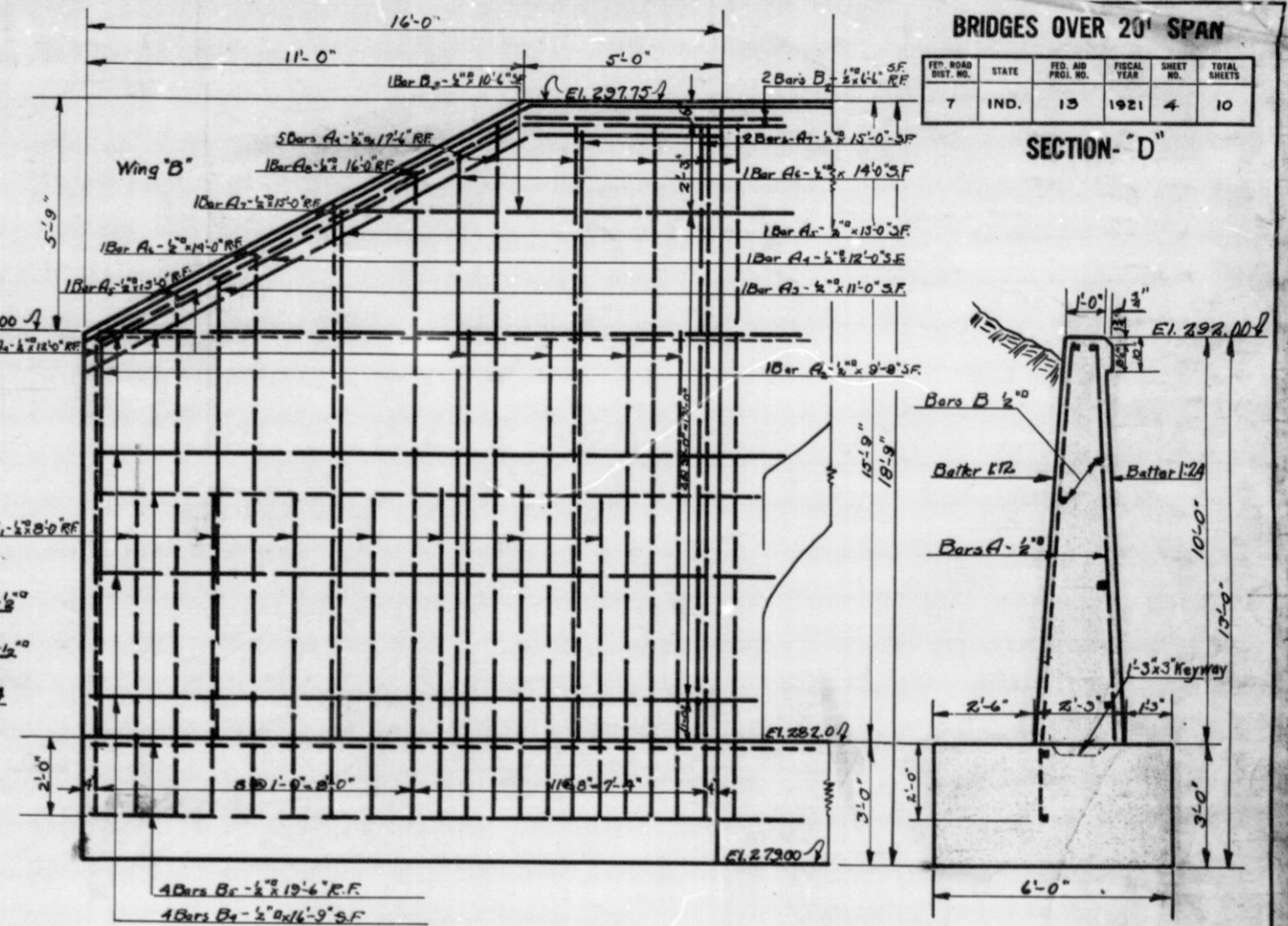
PROJECT: F.A. No. 13
 SECTION: D
 DRAWING: C1 OF 3

STATION: 2087+0
 STRUCTURE NO.

Field Notes - Book BR '9
 pp. 139-161

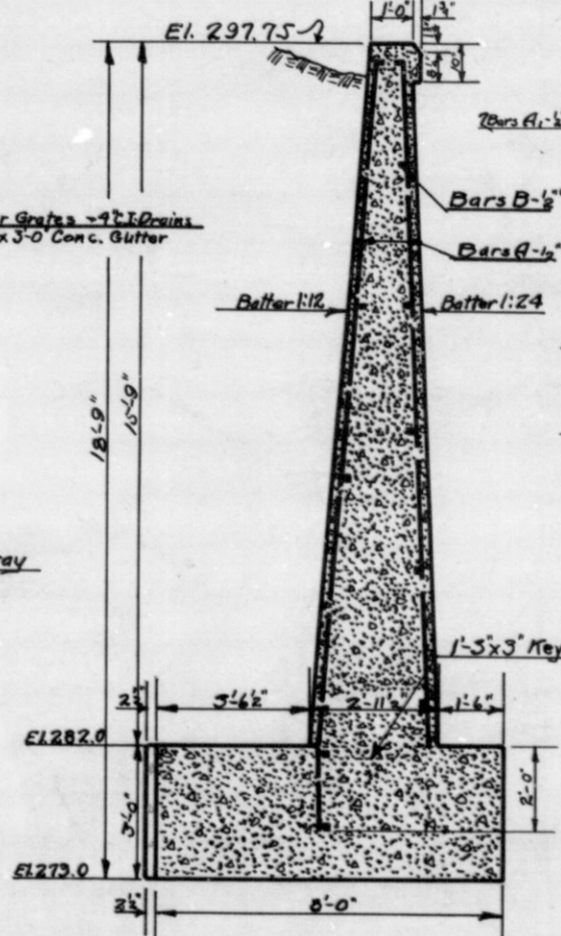
IND.	STATE	FED. NO.	TYPICAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	13	1921	4	10

SECTION - D

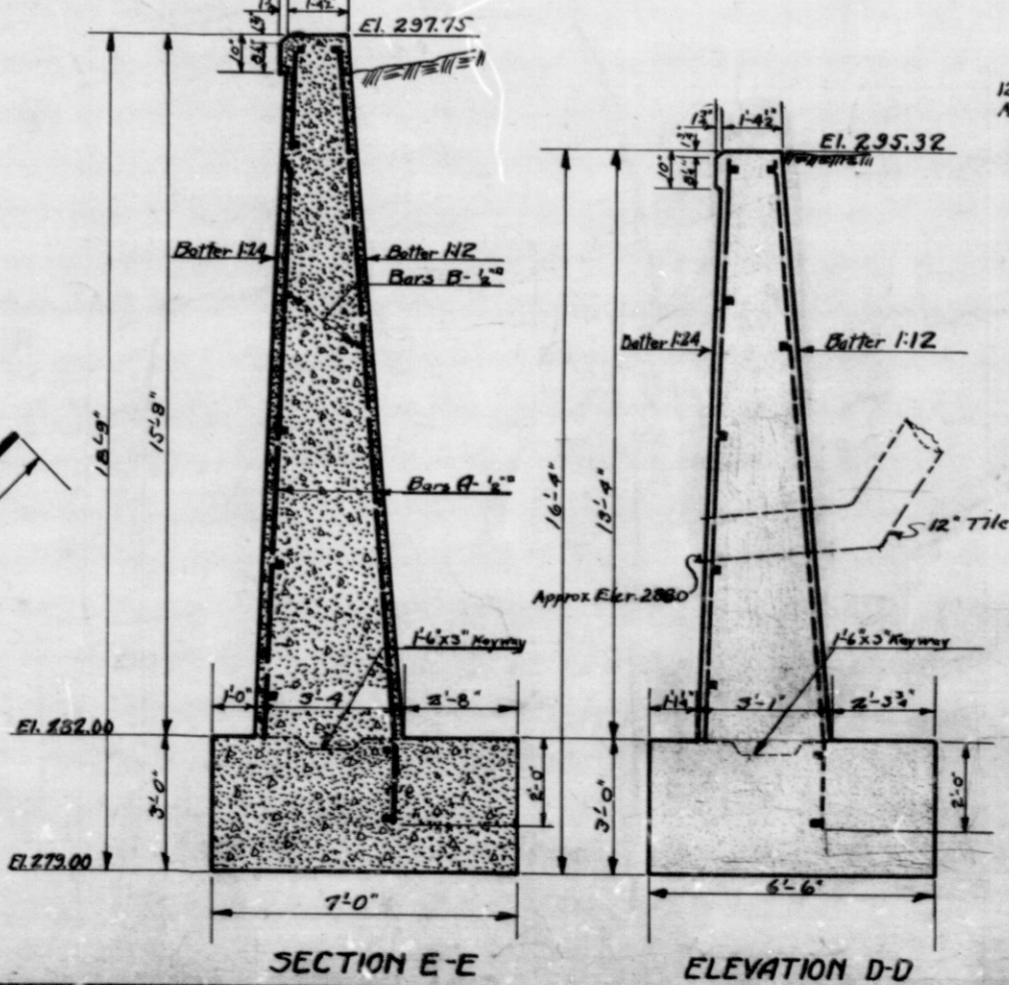


ELEVATION F-F

ELEVATION B-B

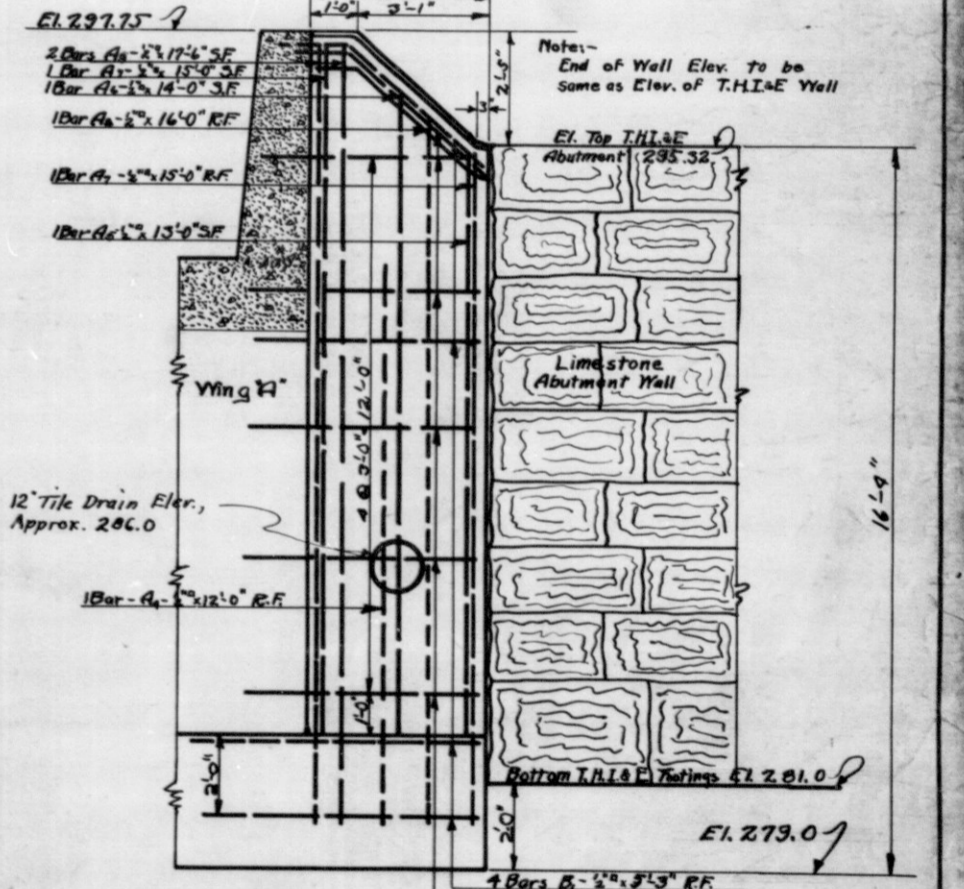


SECTION C-C



SECTION E-E

ELEVATION D-D



ELEVATION G-G

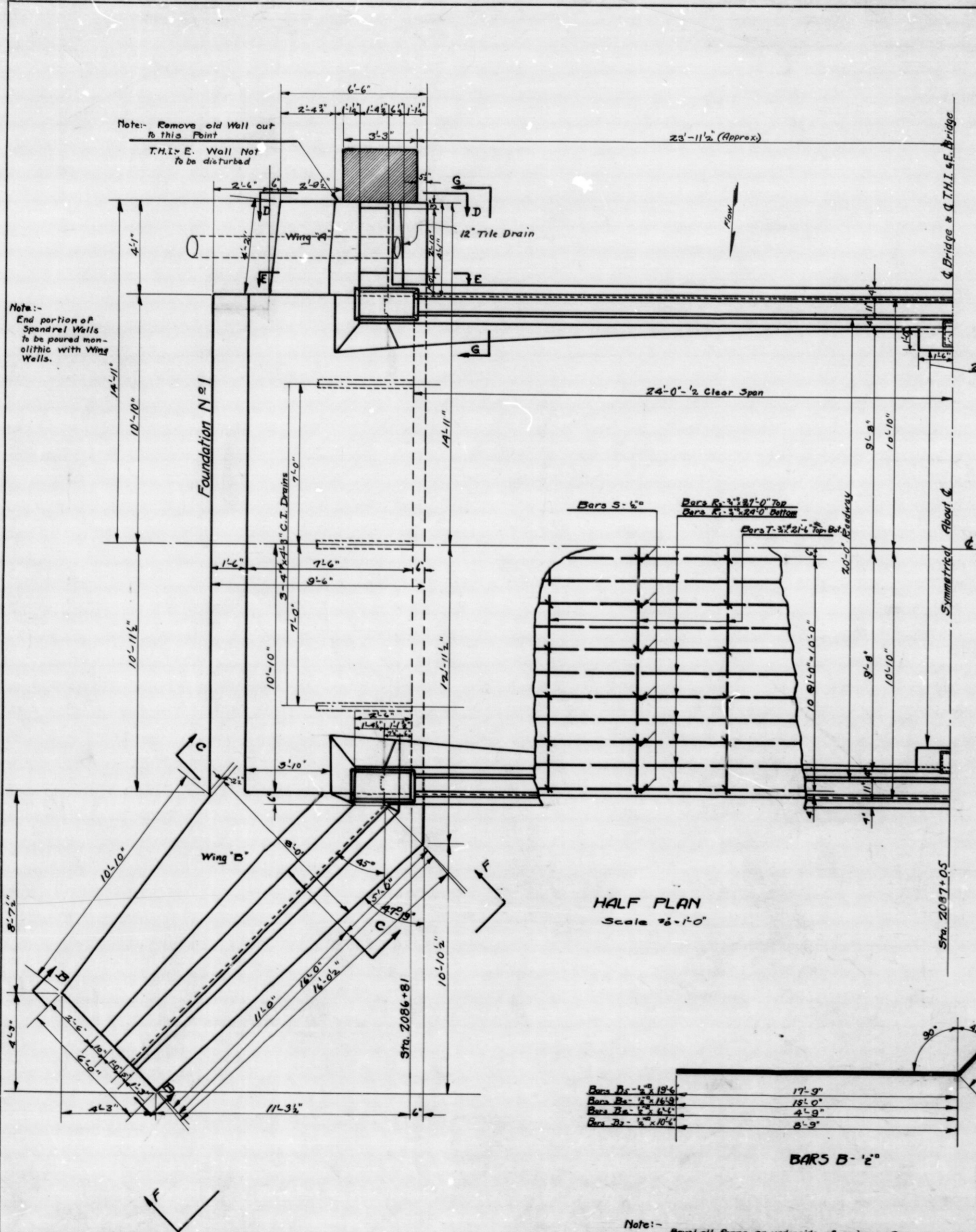
PLAN, ELEVATIONS, & SECTIONS

REINFORCED CONCRETE ARCH BRIDGE
 1-SPAN: 48'-0"
 OVER DRAINAGE DITCH
 20'-0" ROADWAY
 ON NATIONAL ROAD

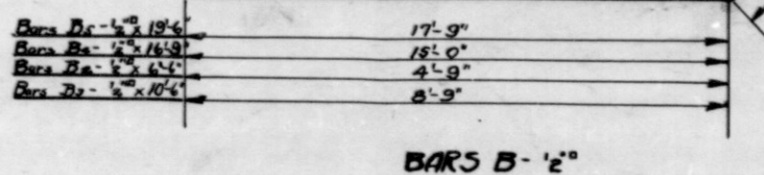
INDIANA STATE HIGHWAY COMMISSION
 HENRY COUNTY

SCALE: 3/8" = 1'-0"
 RECOMMENDED FOR APPROVAL: [Signature]
 PROJECT: F.A. No. 13
 SECTION: D
 DRAWING: C-2 OF 3

JAN 18, 1921
 CHIEF, BUREAU OF BRIDGES
 STATION: 2087+05
 STRUCTURE NO. 28



HALF PLAN
 Scale 3/8" = 1'-0"



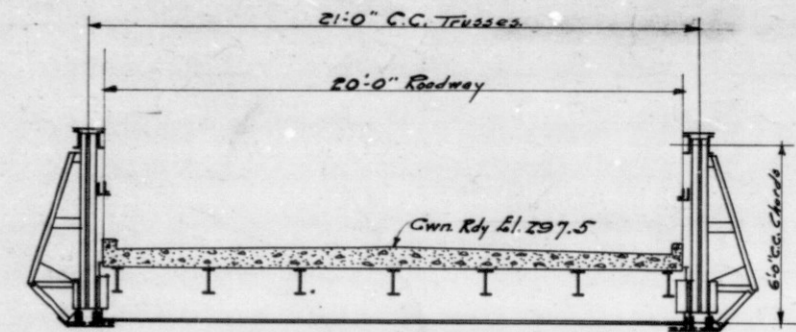
Note: Bore all forms on underside of copings. See detail of hand rail. Chamfer all exposed edges 3/4" except hand rail.

DESIGNED BY: M.B. 12-14-20 C.K.D. C.B. 12-14-20
 DRAWN BY: C.K.D.
 TRACED BY: P.H. 12-14-20 C.K.D. M.B. 1-3-21

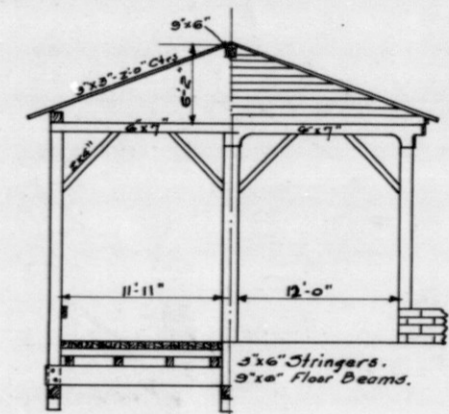
BRIDGES OVER 20' SPAN

PER. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	CONTRACT NO.	TOTAL SHEETS
7	IND.	13	1921	6	10

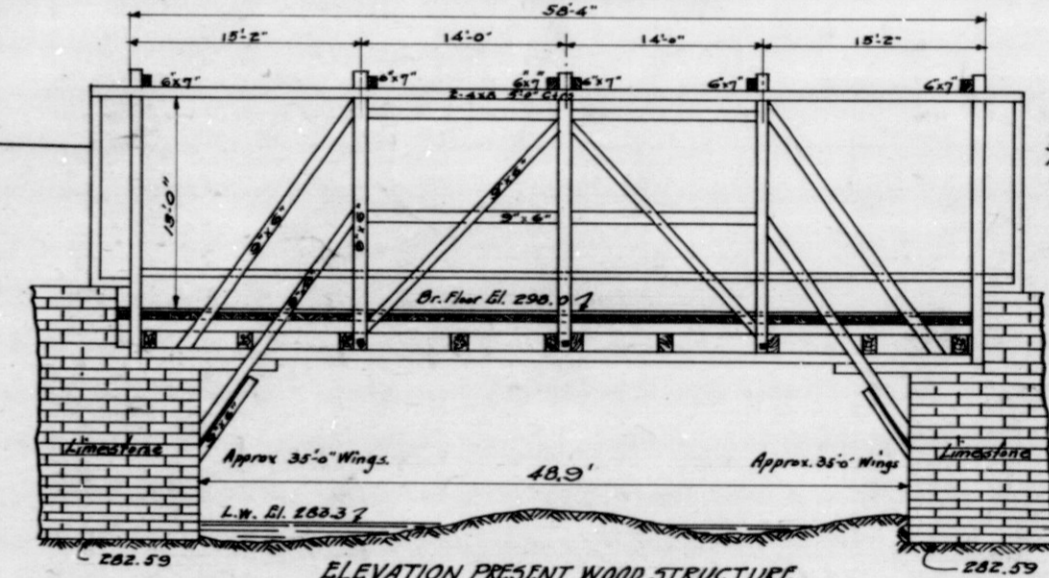
SECTION- D



SECTION PROPOSED BRIDGE



HALF SECTION & HALF ELEVATION - PRESENT STRUCTURE



ELEVATION PRESENT WOOD STRUCTURE

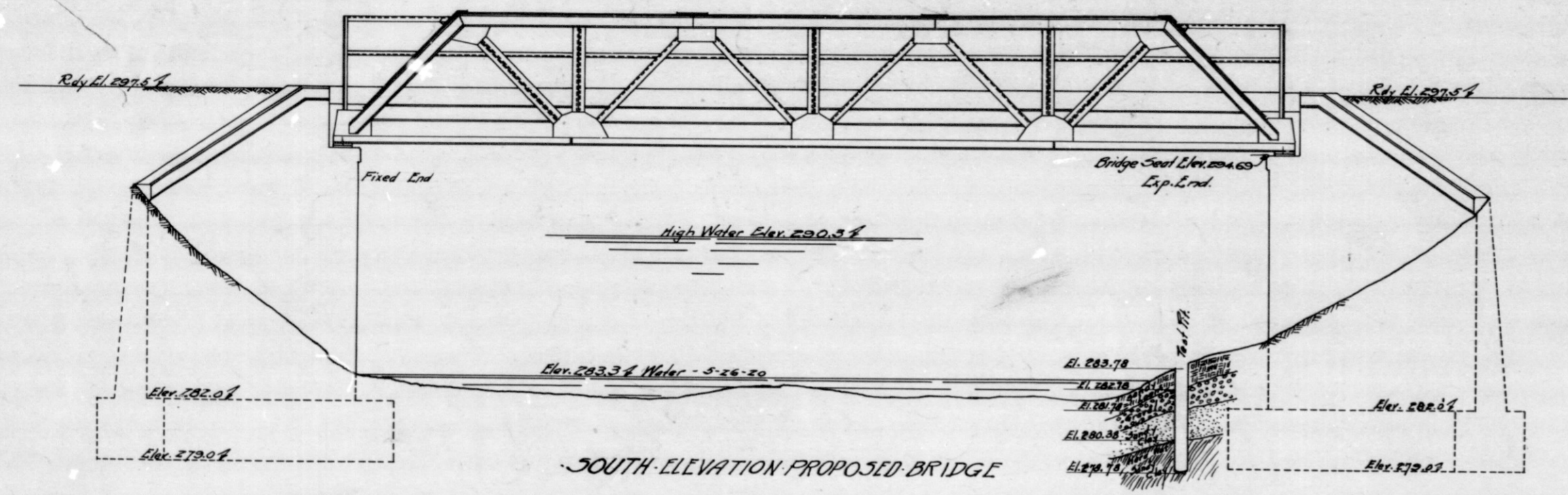
Note: Studying on Sheets 257-260, including Siding in very poor condition. Approximately one half of siding remains on structure.

General Notes:
 See special provisions for removal of present structure.
 The T.H.F. & L. abutment walls shall not be disturbed, the north wings of the proposed structure shall abut against the T.H.F. & L. abutment walls, provision being made for the protection of same.
 All concrete in footings below El. 282.0 to be class "C". All concrete in abutments and wing walls above El. 282.0 to be class "B". All concrete in roadway slab to be class "L".
 See specifications regarding waterproofing of abutments & wing walls.
 See Errata sheets of specifications regarding details of construction.
 Borel forms on under side of all copings.
 Chamfer all exposed edges 1/4"

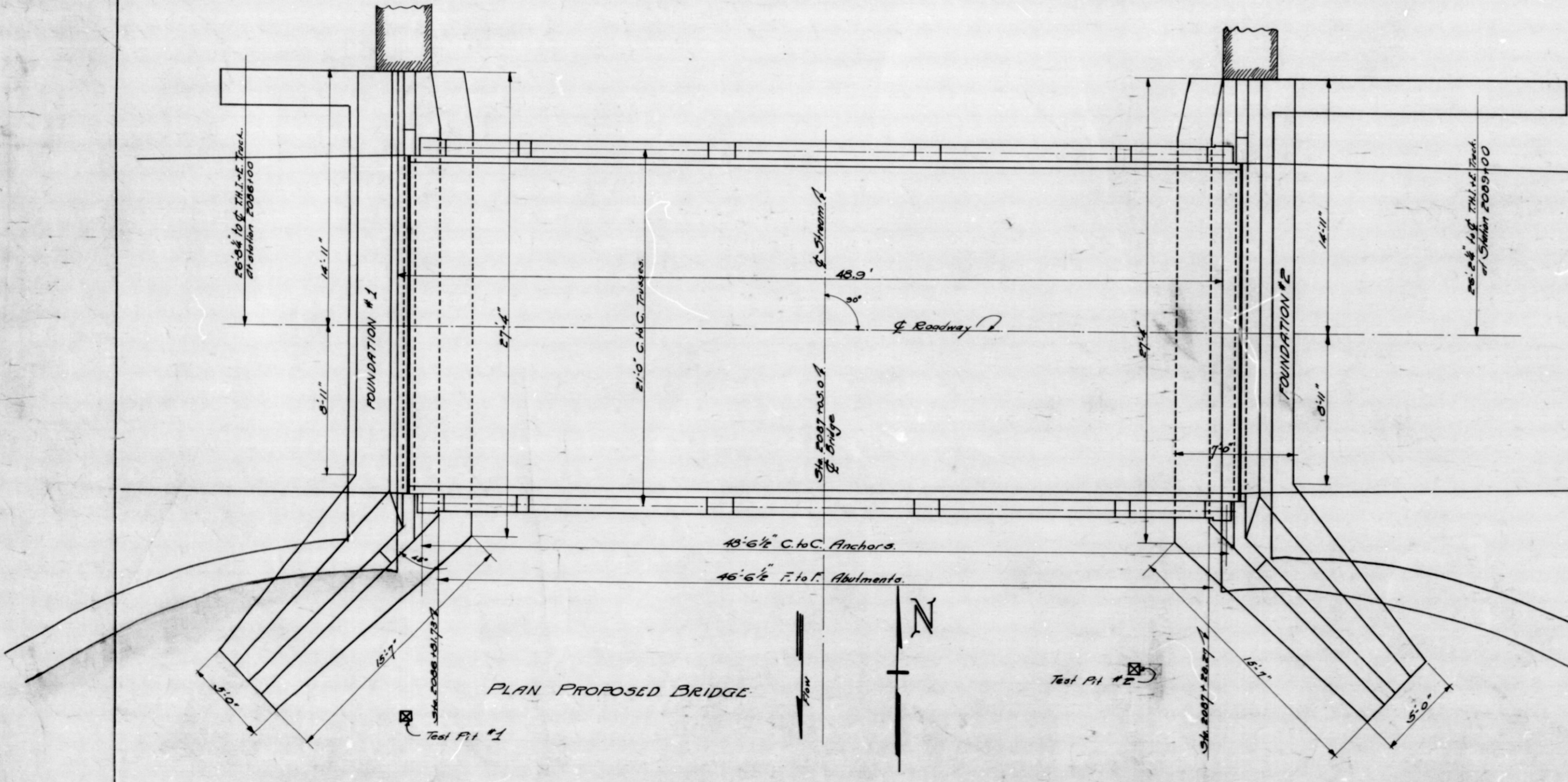
GENERAL PLAN STEEL TRUSS BRIDGE

1 SPAN:- 48'-0" 20'-0" ROADWAY
 OVER DRAINAGE DITCH ON NATIONAL ROAD
INDIANA STATE HIGHWAY COMMISSION
HENRY COUNTY

SCALE:- 1/4" = 1'-0" Except as Noted.
 RECOMMENDED FOR APPROVAL: *W. J. Ellis* JAN 18, 1921
 CHIEF, BUREAU OF BRIDGES
 PROJECT:- F.A. No. 13 STATION:- 2067
 SECTION:- D DRAWING:- 51 OF 5 STRUCTURE NO.



SOUTH ELEVATION PROPOSED BRIDGE



PLAN PROPOSED BRIDGE

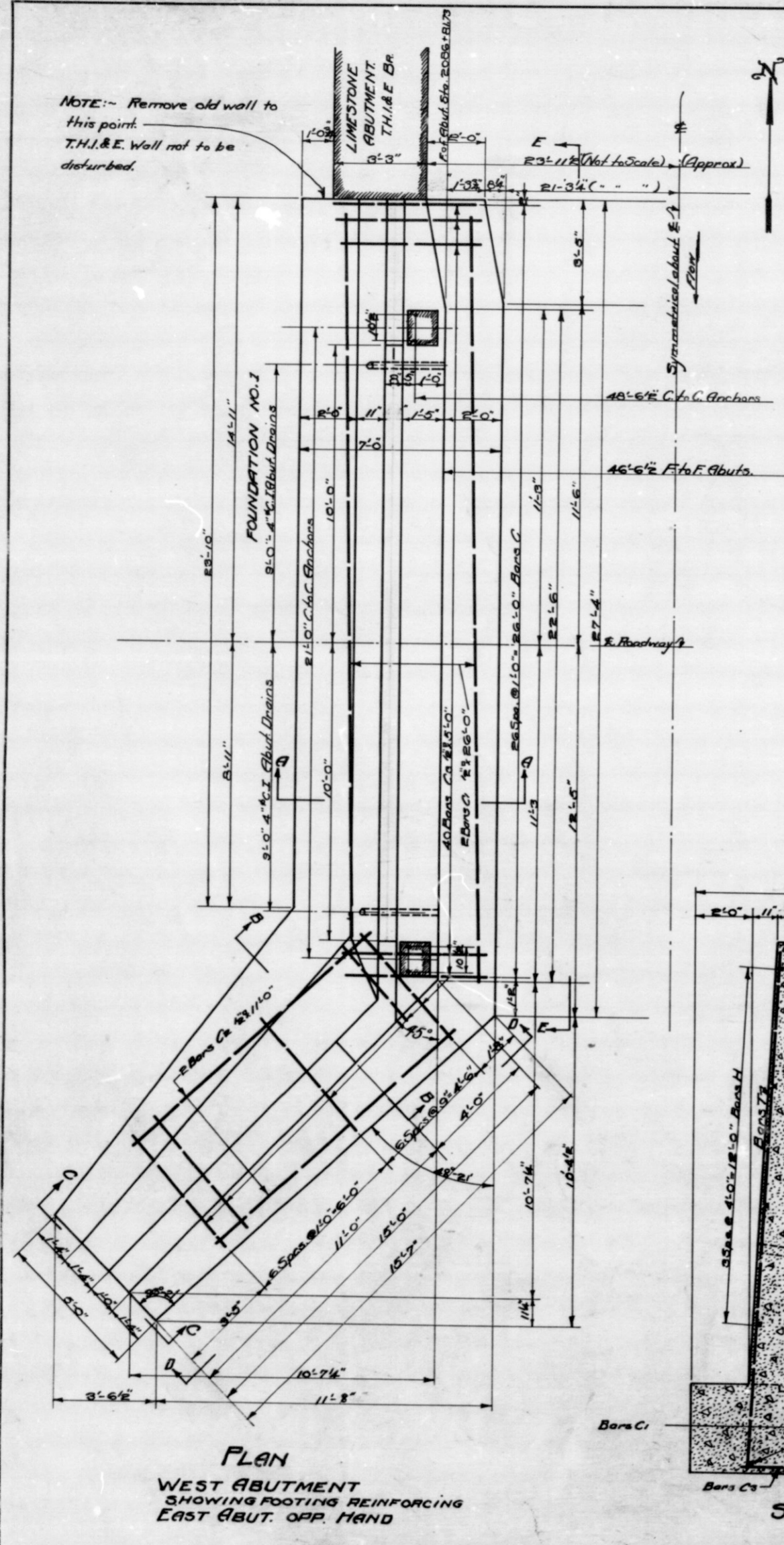
DESIGNED C.K.D.
 DRAWN A.C.L. 12-23-20 C.K.D. N.C.T. 1921
 TRACED H.H. 12-23-21 C.K.D. R.R. 1-8-22

Full Notes - B.R. 9 pp 159-161

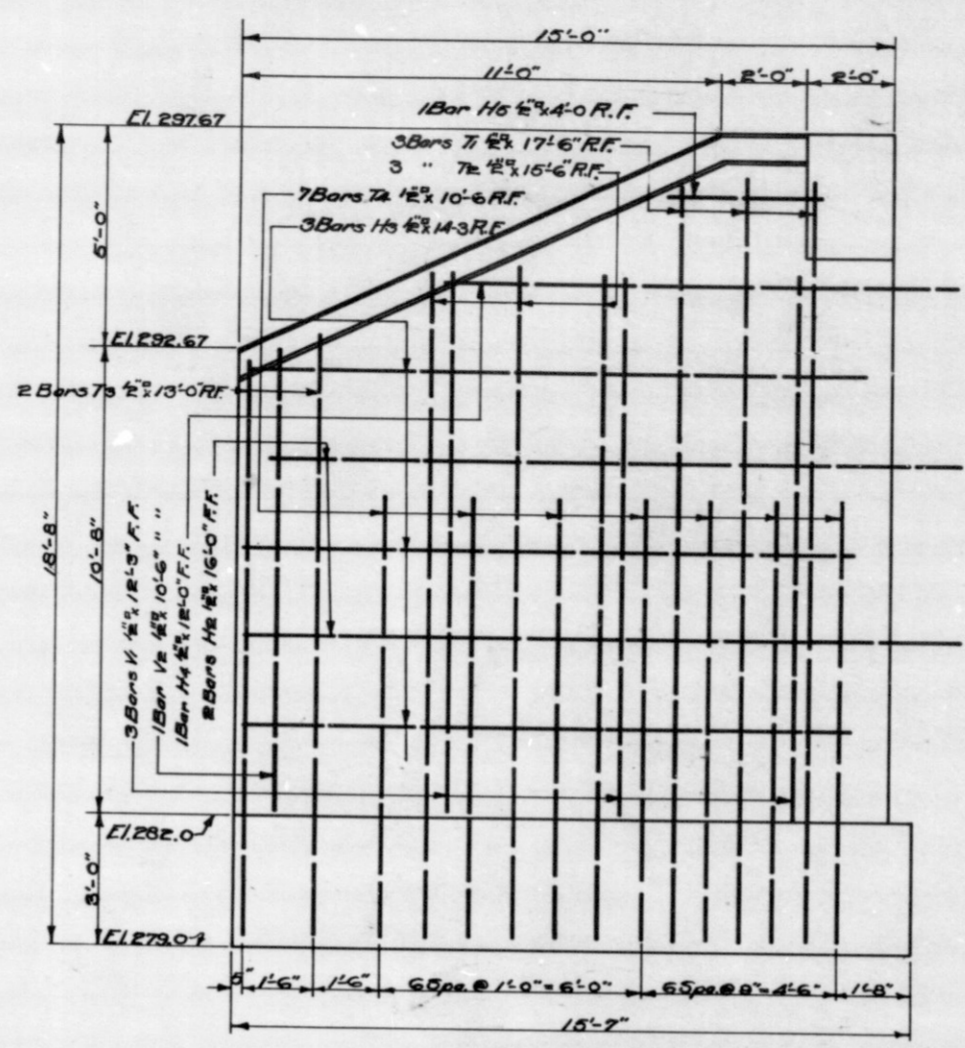
PROJ. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	13	1921	7	10

SECTION - D

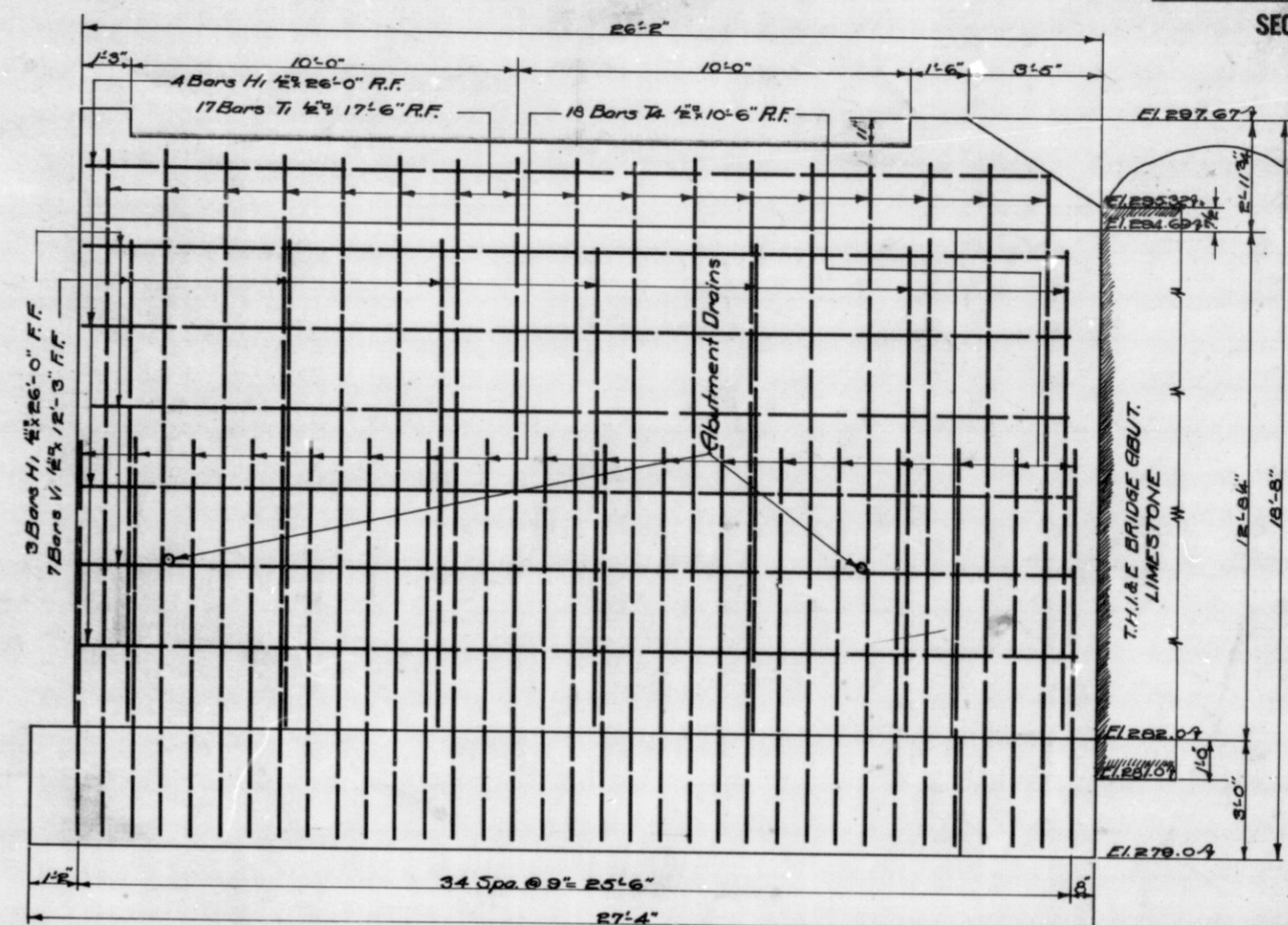
NOTE: - Remove old wall to this point. T.H.I. & E. Wall not to be disturbed.



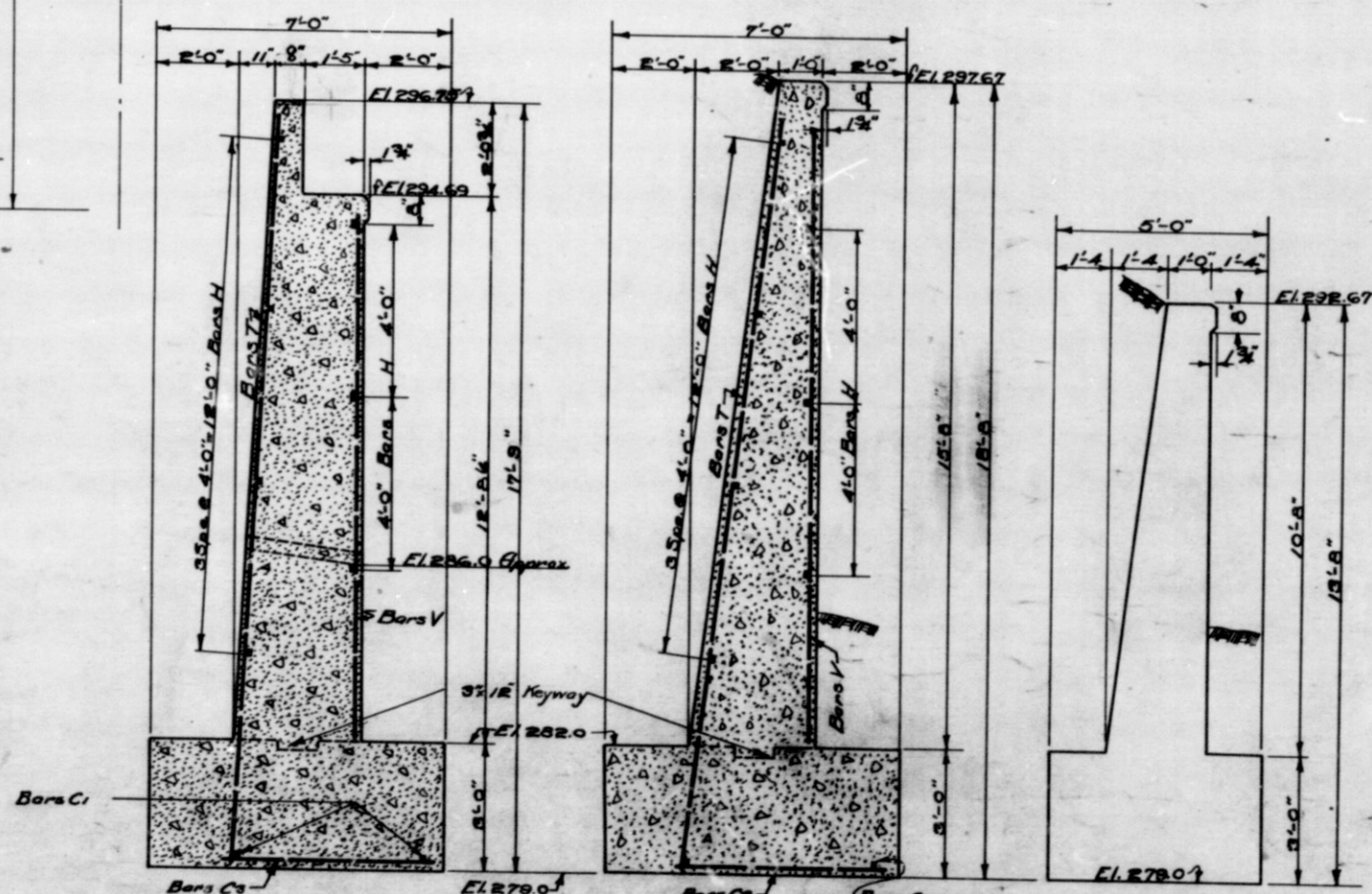
PLAN
WEST ABUTMENT
SHOWING FOOTING REINFORCING
EAST ABUT. OPP. HAND



ELEVATION D-D

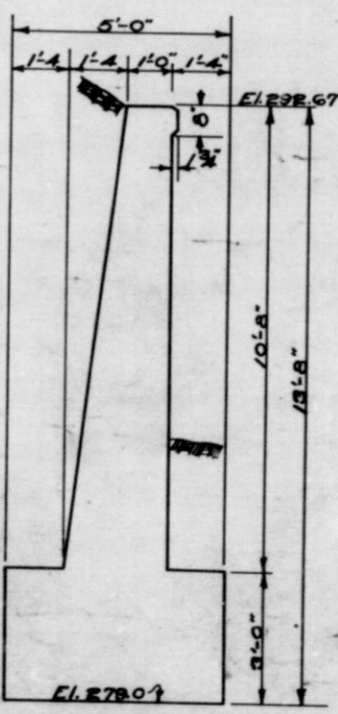


ELEVATION E-E

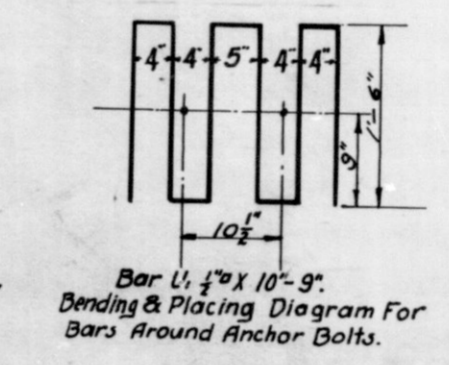


SECTION A-A

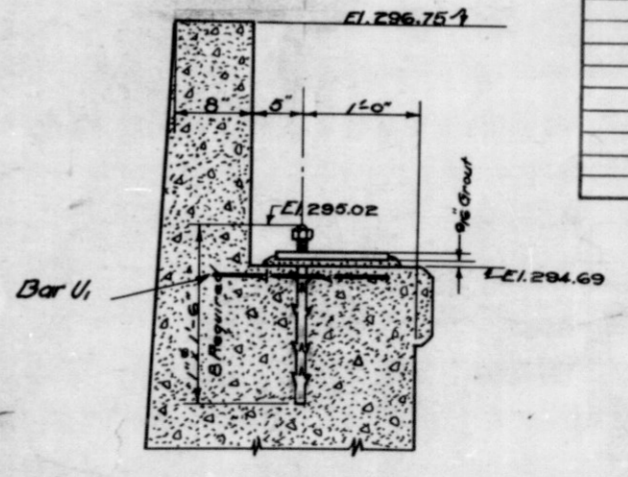
SECTION B-B



ELEVATION C-C



Bar U, 4\"/>



SECTION THRU BRIDGE SEAT
Scale - 1/4\"/>

BILL OF MATERIAL						
REINFORCING STEEL						
Bar	Mark	No. Pos.	Size	Length	Location	Total Length Weight
	T1	40	1/2"	17'-6"	Rear Face Abut. & Wings	700'-0"
	T2	6	"	19'-6"	" " Wings	98'-0"
	T3	4	"	13'-0"	" " " "	52'-0"
	T4	20	"	10'-6"	" " Abut. & Wings	210'-0"
	C1	4	"	26'-0"	Longitud. in Footings	104'-0"
	C2	4	"	11'-0"	" " " "	44'-0"
	C3	80	"	5'-0"	Transverse " " "	400'-0"
	H1	14	"	26'-0"	Horizontal in Abuts.	364'-0"
	H2	4	"	16'-0"	" " " "	64'-0"
	H3	6	"	14'-0"	" " " "	84'-0"
	H4	2	"	11'-0"	" " " "	22'-0"
	H5	2	"	4'-0"	" " " "	8'-0"
	V1	20	"	18'-0"	Vertical in F.F. Abut. & Wings	360'-0"
	V2	2	"	10'-6"	" " " "	21'-0"
	U1	4	"	18'-0"	Around Anchor Bolts	72'-0"
Total						2772'-0" 23377
CONCRETE						
Class B 32.5 Cu. Yds.						
" C 38.5 " "						
Total 152.0 " "						
MISCELLANEOUS						
4-4" C.I. Abut. Drains @ 2'-9" Min. Sp.						
8-14" 1/2" Hopped Anchor Bolts						

SUBSTRUCTURE
STEEL TRUSS BRIDGE

1 SPAN: - 48'-0" 20'-0" ROADWAY
OVER DRAINAGE DITCH ON NATIONAL ROAD

INDIANA STATE HIGHWAY COMMISSION
HENRY COUNTY

SCALE: - 3/8" = 1'-0" EXCEPT AS NOTED JAN. 18, 1921
RECOMMENDED FOR APPROVAL

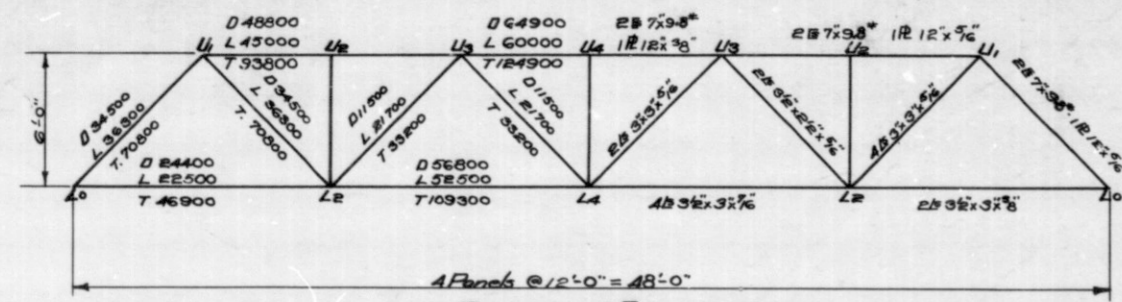
PROJECT: - F.A. No. 13 3 STATION: - 2087+05
SECTION: - D DRAWING: - 5 OF 5 STRUCTURE NO. 21

DESIGNED N.E.L. 12/20/20 C.K.D. R.M.B. 12/20/20
DRAWN A.S. C.K.D.
TRACED A.S. 12/20/20 C.K.D. N.E.L. 12/20/20

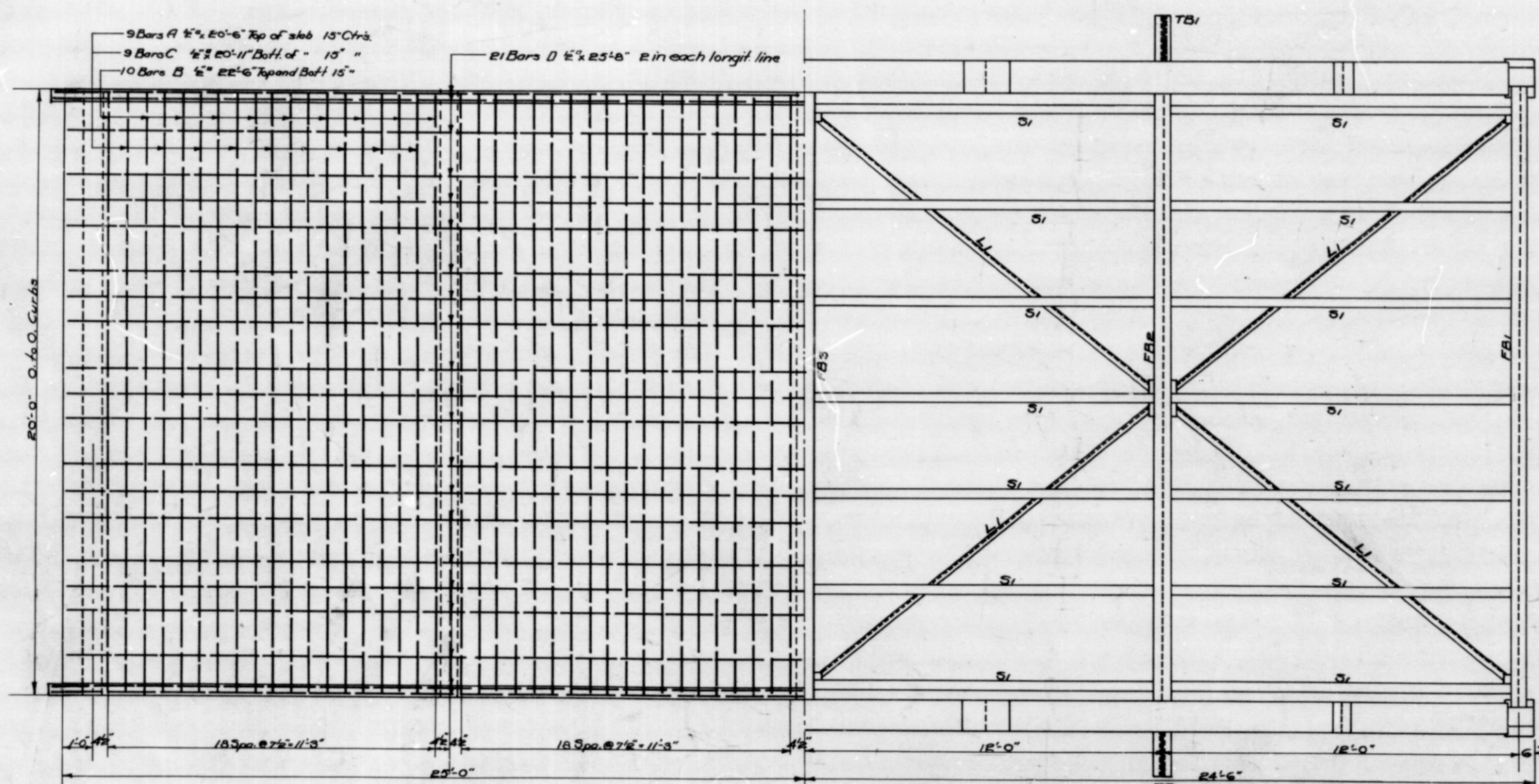
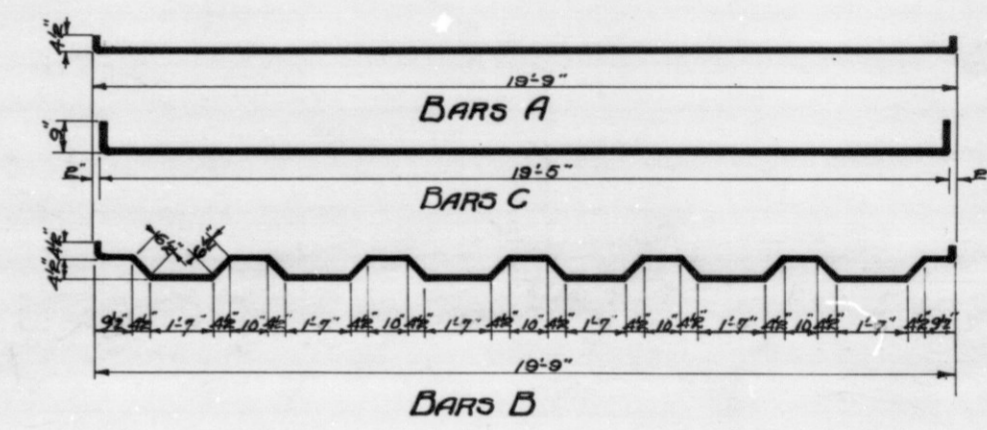
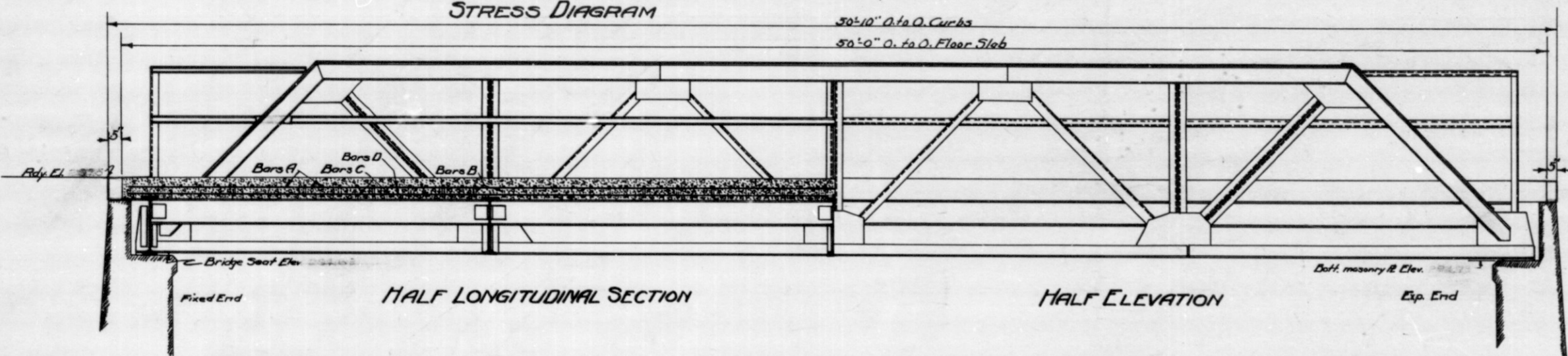
BRIDGES OVER 20' SPAN

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	13	1921	8	10

SECTION - D



Floor Beams 84"x174" I's
Stringers 10"x254" I's
Laterals 24"x24" B



BILL OF MATERIAL						
REINFORCING STEEL						
Bar	Mark	Size	No. Pcs.	Length	Location	Tot. Length Weight
A	"	1/2"	36	20'-6"	Transverse in Slab Top	738'-0"
B	"	1/2"	40	22'-6"	" " " end Bottom	904'-0"
C	"	3/8"	36	20'-11"	" " " Bottom	753'-0"
D	"	1/2"	42	25'-8"	Longitudinal in Slab	1078'-0"
Total						3463'-0" 2248'
CONCRETE						
Class E Concrete						25.4 Cu. Yds.
MISCELLANEOUS						

SUPERSTRUCTURE (PLAN)
STEEL TRUSS BRIDGE

1 SPAN:- 48'-0" OVER DRAINAGE DITCH
20'-0" ROADWAY ON NATIONAL ROAD

INDIANA STATE HIGHWAY COMMISSION
HENRY COUNTY

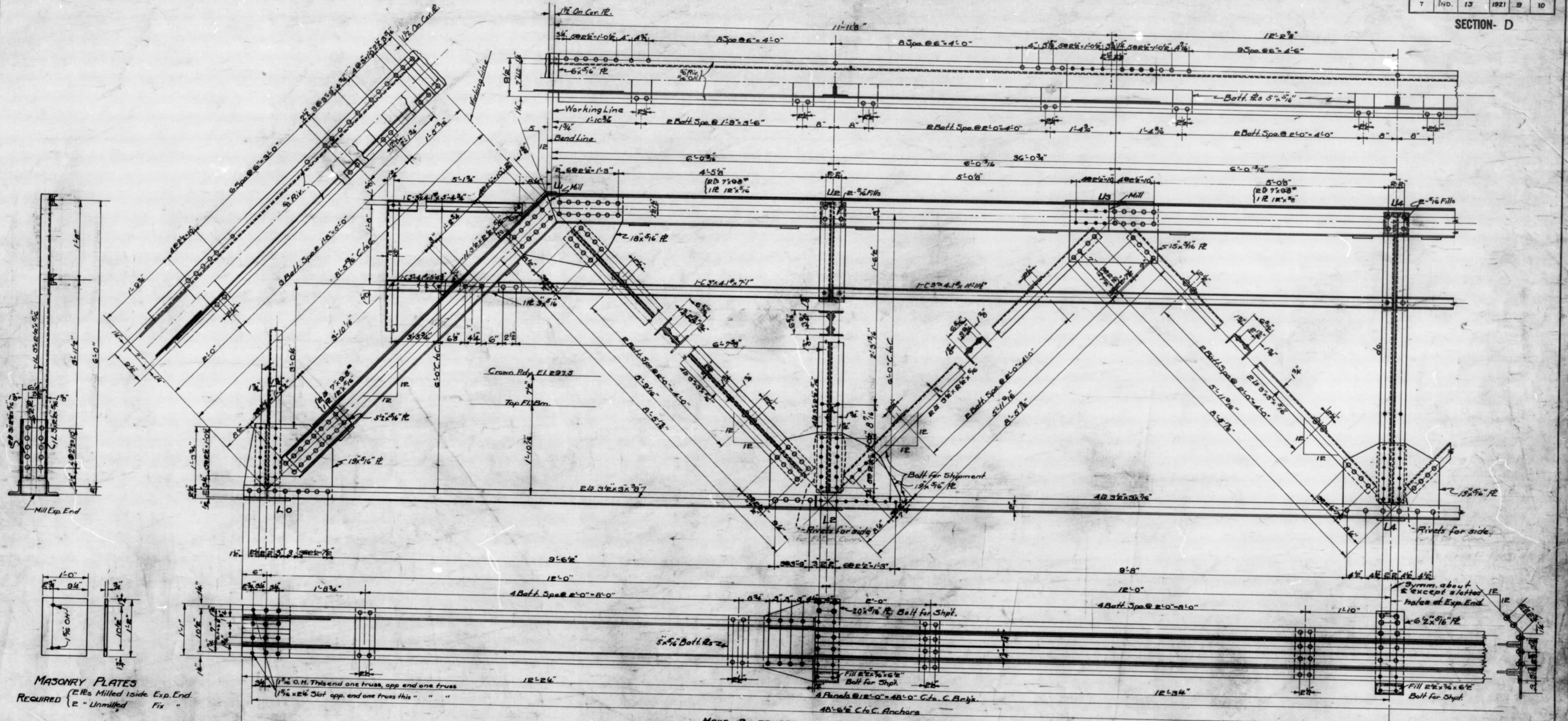
SCALE:- 3/4"=1'-0"
RECOMMENDED FOR APPROVAL: *[Signature]* JAN. 18, 1921
CHIEF, BUREAU OF HIGHWAYS
PROJECT:- F.A. No. 13 STATION:- 2087
SECTION:- D DRAWING:- 33 OF 5 STRUCTURE NO.

DESIGNED N.E.L. 11/20/20 C.K.D. 1/19/21
DRAWN " " C.K.D. 1/28/21
TRACED R.L. 1/29/21 C.K.D. 1/28/21

BRIDGES OVER 20' SPAN

Table with 5 columns: PER. DES. NO., DATE, DES. BY, YEAR, SHEET NO., TOTAL SHEETS. Row 1: 7, IND., 13, 1921, 9, 10.

SECTION - D



MASONRY PLATES
REQUIRED
(R.Rs Milled inside Exp. End
" Unmilled Fix "

MAKE 2 TRUSSES COMPLETE AS SHOWN

GENERAL NOTES:-
Rivets 1/2" Except in Figs. of 7/8" as noted
O.H. 1/8"
Gusset Rs 5/8"
Edge distance 1 1/2" except as shown

SUPERSTRUCTURE (DETAILS)
STEEL TRUSS BRIDGE

1 SPAN: 48'-0"
OVER DRAINAGE DITCH
20'-0" ROADWAY
ON NATIONAL ROAD

INDIANA STATE HIGHWAY COMMISSION
HENRY COUNTY

SCALE: 1"=10'

RECOMMENDED FOR APPROVAL

JAN. 18, 1922
CHIEF, BUREAU OF BRIDGES

PROJECT: F.A. No. 13

SECTION: D

STATION: 2087.00

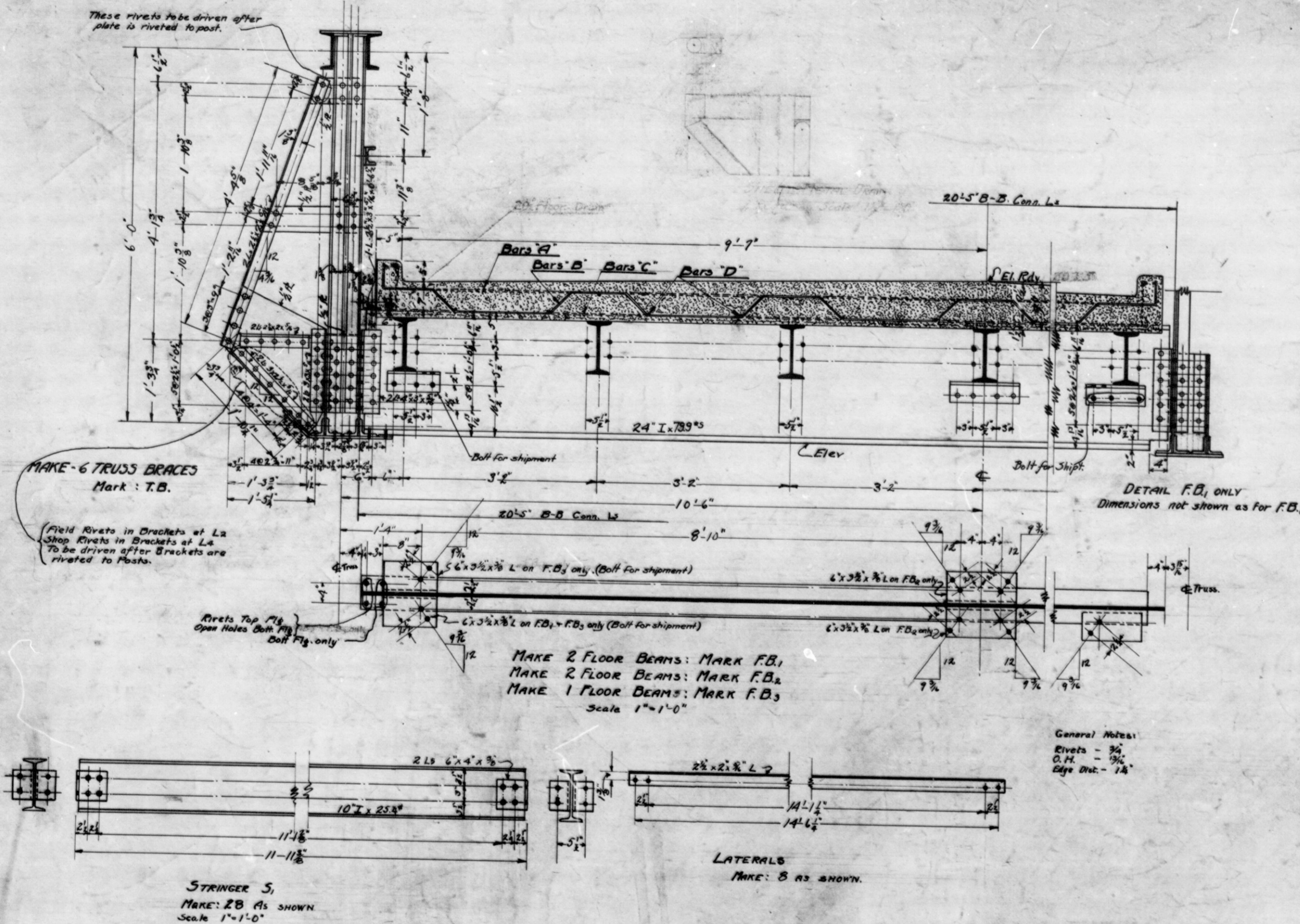
DRAWING: S 4 OF 5

STRUCTURE NO.

DESIGNED N.E.L.K. 20/30 C.V.D. J.W.R. 1/23/20
DRAWN " " " C.V.D. J.W.R. 1/23/20
TRACED C.A.M. 1/12/20 C.V.D. N.E.L.K. 1/23/20

DES. NO.	STATE	DES. NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	13	1921	10	10

SECTION - D



BILL OF MATERIALS				
STRUCTURAL STEEL				
No. Pcs.	Section	Length	Location	Weight
5	L ₂ 24" x 789 ³ / ₈ "	20'-4"	Floor Beams	812.8
28	D ₁₀ 10" x 25.3 ³ / ₈ "	11'-11"	Stringers	287.5
4	L ₂ 7" x 9.8"	12'-2 1/2"	Top Chord Mid. Sec.	4.8
8	L ₂ 7" x 9.8"	12'-0 1/2"	Top Chord End. Sec.	9.6
8	L ₂ 7" x 9.8"	8'-2 1/2"	End Post.	14.4
8	L ₂ 3 1/2" x 5 1/2"	24'-4 1/2"	Bottom Chord Mid. Sec.	9.1
8	L ₂ 3 1/2" x 5 1/2"	12'-2 1/2"	Bottom Chord End. Sec.	7.9
16	L ₂ 3 1/2" x 5 1/2"	7'-2 1/2"	Diagonal U.L.s	6.1
8	L ₂ 3 1/2" x 5 1/2"	7'-5"	Diagonal U.L.s	6.1
8	L ₂ 3 1/2" x 5 1/2"	7'-5"	Diagonal U.L.s	6.1
24	L ₂ 3 1/2" x 5 1/2"	6'-0"	Verticals U.L.s U.L.s	5.6
4	L ₂ 3 1/2" x 5 1/2"	5'-8 1/2"	Rail Post	5.6
12	L ₂ 3 1/2" x 5 1/2"	1'-3"	End Floor Bm Diaphragm	5.6
4	B ₂ 3" x 4 1/2"	11'-11"	Handrail	4.1
4	B ₂ 3" x 4 1/2"	9'-7"	Handrail	4.1
4	B ₂ 3" x 4 1/2"	3'-4 1/2"	Handrail	4.1
4	B ₂ 3" x 4 1/2"	3'-0 1/2"	Handrail	4.1
8	L ₂ 3 1/2" x 5 1/2"	0'-5"	Handrail Cmn. L.	6.1
12	L ₂ 2 1/2" x 3 1/2"	4'-7 1/2"	Truss Brace	4.5
12	L ₂ 2 1/2" x 3 1/2"	7'-1 1/2"	Truss Brace	4.5
12	L ₂ 3 1/2" x 5 1/2"	1'-9"	Truss Brace	5.6
12	L ₂ 3 1/2" x 5 1/2"	1'-4 1/2"	Truss Brace	4.5
20	L ₂ 4" x 3 1/2"	1'-4 1/2"	Floor Beam Conn. L.	7.2
4	L ₂ 6" x 3 1/2" x 3/8"	1'-2"	Floor Beam Lateral Conn.	11.7
8	L ₂ 6" x 3 1/2" x 3/8"	0'-11"	Floor Beam Lateral Conn.	11.7
112	L ₂ 6" x 4" x 3/8"	0'-3 1/2"	Stringer Conn. L.	18.3
8	L ₂ 2 1/2" x 3 1/2"	14'-8 1/2"	Laterals	4.5
8	L ₂ 3 1/2" x 5 1/2"	1'-8"	Bearing L ₂ @ L ₁	7.9
6	L ₂ 3 1/2" x 5 1/2"	0'-6 1/2"	Floor Beam to Post	6.6
4	B ₂ 3" x 4 1/2"	1'-3 1/2"	Handrail to End post	3.2
2	B ₂ 12" x 9"	1'-5 1/2"	B ₂ @ L ₁	5.84
4	B ₂ 12" x 9"	12'-8 1/2"	Top Chord C ₂ E. Mid. Sec.	15.3
4	B ₂ 12" x 9"	12'-0 1/2"	Top Chord C ₂ E. End Sec.	12.75
4	B ₂ 12" x 9"	6'-10 1/2"	End Post C ₂ E.	12.75
4	B ₂ 12" x 9"	1'-10 1/2"	Top Chord C ₂ E. Splice	12.75
4	B ₂ 12" x 9"	0'-6 1/2"	Hip Cap	12.75
8	B ₂ 19" x 7 1/2"	1'-10"	L ₂ Gussetts	19.15
4	B ₂ 19" x 7 1/2"	2'-0 1/2"	L ₂ Gussetts	20.19
4	B ₂ 17" x 7 1/2"	2'-5 1/2"	U ₂ Gussetts	15.94
8	B ₂ 14" x 9"	1'-11"	U ₂ Gussetts	14.88
12	B ₂ 5 1/2" x 3 1/2"	0'-6 1/2"	Fills at U ₂ = U ₁	3.74
4	B ₂ 12" x 9"	1'-7"	Sole R.	20.4
32	B ₂ 5" x 3 1/2"	1'-8"	Masonry R.	30.6
36	B ₂ 5" x 3 1/2"	1'-0"	End Post's Top Chord. Batten	3.51
4	B ₂ 6" x 5"	0'-6"	Web Batten	3.31
4	B ₂ 6" x 5"	1'-3"	End Floor Bm. Diaphragm	10.2
40	B ₂ 5" x 3 1/2"	1'-7"	Lower Chord. Batten	3.31
6	B ₂ 5" x 3 1/2"	0'-10"	Truss Brace	2.7
6	B ₂ 5" x 3 1/2"	1'-7"	Truss Brace	2.7
6	B ₂ 6" x 4"	2'-5"	Truss Brace	4.5
2	B ₂ 6" x 4"	1'-11"	Floor Bm. to Truss Brace	4.7
6	B ₂ 6" x 4"	1'-3"	Diaphragm Inposts at L ₂ L ₁	4.7
4	B ₂ 20" x 7 1/2"	1'-11"	Floor Bm. to Truss Brace	28.8
6	B ₂ 8" x 7 1/2"	0'-6 1/2"	Floor Bm. to Truss Brace	3.72
6	B ₂ 3 1/2" x 5 1/2"	0'-6 1/2"	Fills under Handrail	3.2
2280	Field Rivets			124.0
760	Field Rivets			38.0
Total				32,336

SUPERSTRUCTURE (SECTIONS)
STEEL TRUSS BRIDGE

1 SPAN: 48'-0"
OVER DRAINAGE DITCH

20'-0" ROADWAY
ON NATIONAL ROAD

INDIANA STATE HIGHWAY COMMISSION
HENRY COUNTY

SCALE: AS SHOWN
RECOMMENDED FOR APPROVAL

PROJECT: F.A. No. 13
SECTION: 8
DRAWING: S. 803

JAN 18 1921
STATION: 2067

DESIGNED BY: H. B. ...
DRAWN BY: ...
CHECKED BY: ...