

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
304	401-1BP,401-2BP	JERSEY	14	1
ILLINOIS			CONTRACT NO. 76P51	

\* 14 + 1 = 15 TOTAL SHEETS

D-98-056-21

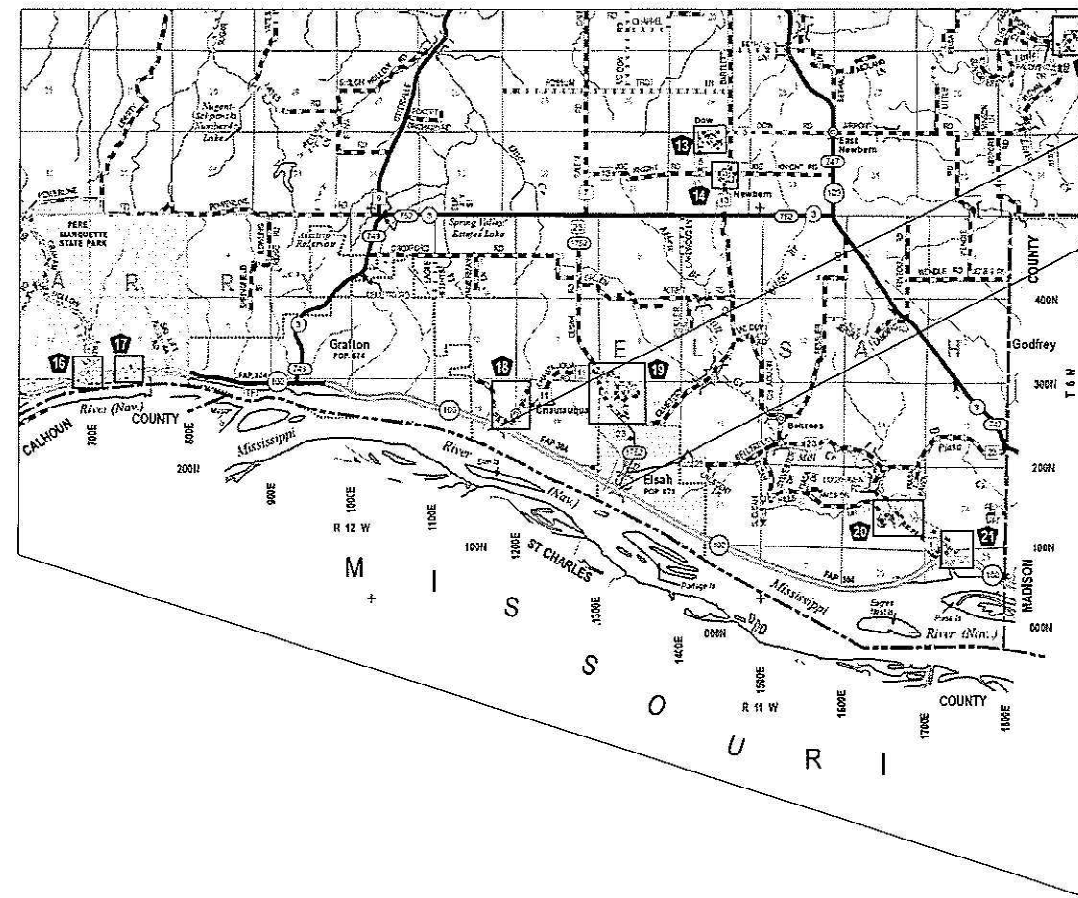


FOR INDEX OF SHEETS, SEE SHEET NO. 2

**PROPOSED  
HIGHWAY PLANS**

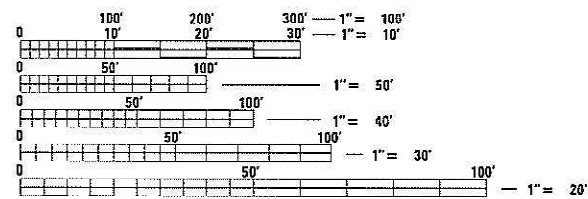
FAP ROUTE 304 (IL 100)  
SECTION 401-1BP,401-2BP  
PROJECT STP-0JZC(338)  
BRIDGE PAINTING  
JERSEY COUNTY

C-98-087-21



CHAUTAUQUA CREEK  
SN 042-0013  
LATITUDE 38.962361  
LONGITUDE -90.389519

ELSAH CREEK  
SN 042-0014  
LATITUDE 38.951258  
LONGITUDE -90.362533



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS  
1-800-892-0123  
OR 811

PROJECT ENGINEER: CHERYL KEPLAR (618) 346-3123  
PROJECT MANAGER: TONI MANN (618) 346-3189

GROSS LENGTH = 213.07 FT. = 0.04 MILE  
NET LENGTH = 213.07 FT. = 0.04 MILE

CONTRACT NO. 76P51

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED Aug. 12 2021  
*Keith Roberts*  
REGIONAL ENGINEER

October 1 2021  
*[Signature]*  
ENGINEER OF DESIGN AND ENVIRONMENT

October 21 2021  
*Stephen M. Faria*  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS



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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FED 20% STATE	80% FED 20% STATE
				BRIDGE	BRIDGE
				0047	0047
				042-0013	042-0014
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	2	1	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	35	20	15
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3343	1680	1663
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1050	525	525
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1050	525	525
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	1	1
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	1	1
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1	0
X5060602	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	0	1
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	1114	560	554
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1	0
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	0	1

USER NAME = Agboolato	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/9/2021	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITY**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
304	401-1BP,4012BP	JERSEY	14	3
			CONTRACT NO. 76P51	
		ILLINOIS	FED. AID PROJECT	

REV-SEP

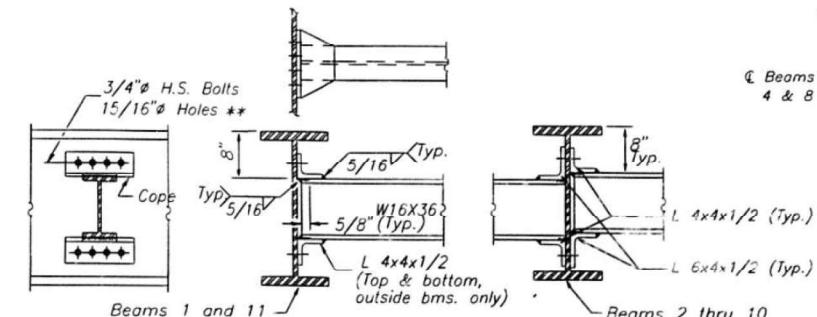
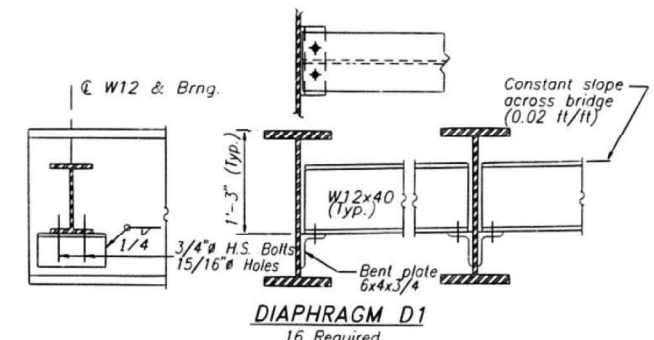
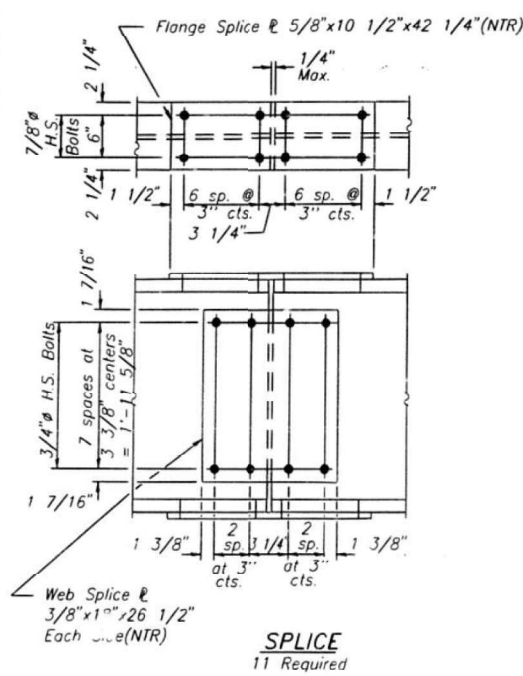






STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EAP. 304	401-1BR	JERSEY	25	20
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				

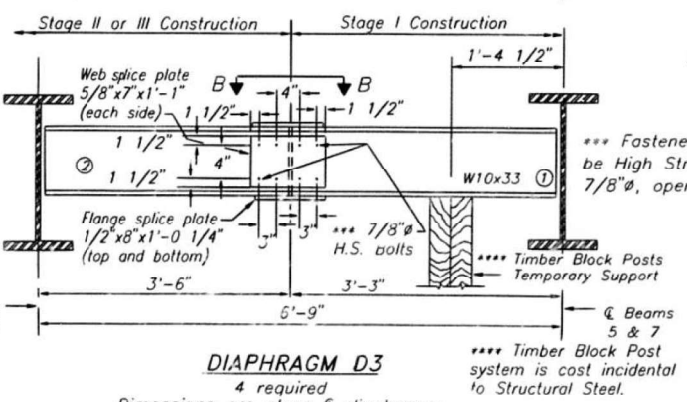
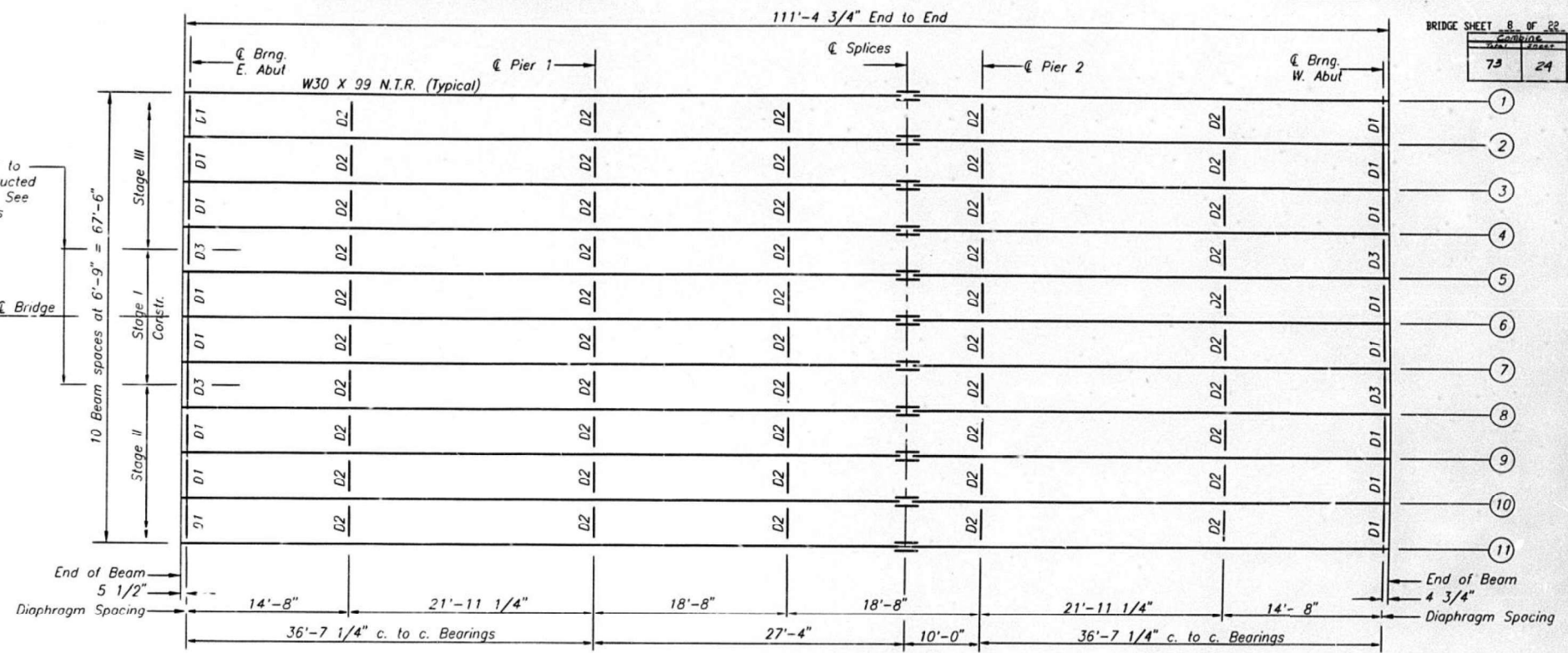


**DIAPHRAGM D1**  
16 Required

**DIAPHRAGM D2**  
50 Required

Note: Two hardened washers shall be required over all holes in diaphragm connections.

\* 1 1/2" x 13/16" slotted holes in L 4x4x1/2 & L 6x4x1/2 @ beams #4 & #8. Provide 5/16" washers for slotted holes. Bolts shall be finger tightened prior to the deck pour for the next stage. Fully tighten bolts after deck is poured.



**DIAPHRAGM D3**  
4 required  
Dimensions are along centerline of diaphragm.  
For details of connections to beams see diaphragm D1.

**DIAPHRAGM D3 CONSTRUCTION SEQUENCE**

- Order Diaphragm D3 in two sections with lengths of 3'-5 1/4" and 3'-2 1/4"
- Attach part ① of Diaphragm to Beams 5 & 7 during Stage I Construction.
- Place Timber Block Post System between part ① of Diaphragm and abutment bearing seat. Install top flange splice plate before placing concrete.
- Attach part ② of diaphragm to Beams 4 & 8 and part ① of diaphragm during Stage III & II Construction respectively.
- Attach all splice plates to part ① and part ② of diaphragms.
- Remove Timber Block Posts.

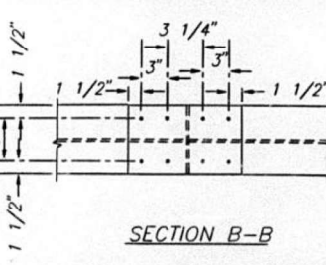
**FRAMING PLAN**  
N.T.R. DENOTES NOTCH TOUGHNESS REQUIRED

\* TOP OF W.B.M. ELEVATIONS

Loc.	Bm.	1	2	3	4	5	6	7	8	9	10	11
Brng. East Abut.		434.475	434.610	434.745	434.880	435.015	435.150	435.285	435.420	435.555	435.690	435.825
Brng. Pier 1		434.472	434.607	434.742	434.877	435.012	435.147	435.282	435.417	435.552	435.687	435.822
Splice		434.470	434.605	434.740	434.875	435.010	435.145	435.280	435.415	435.550	435.685	435.820
Brng. Pier 2		434.472	434.607	434.742	434.877	435.012	435.147	435.282	435.417	435.552	435.687	435.822
Brng. West Abut.		434.480	434.615	434.750	434.885	435.020	435.155	435.290	435.425	435.560	435.695	435.830

\* For Fabrication Only

Elevations of splices are given to the top of W30x99 beams



**STRUCTURAL STEEL**  
IL. 100 over CHAUTAUQUA CREEK  
F.A.P. 304 Section 401-1BR  
JERSEY COUNTY  
STATION 669+00.00  
S.N. 042-0013

FOR INFORMATION ONLY

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USER NAME = agbo@ato	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 9/1/2021	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAIL 042-0013

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
304	401-1BR, 401-2BP	JERSEY	14	7
CONTRACT NO. 76P51				
ILLINOIS FED. AID PROJECT				

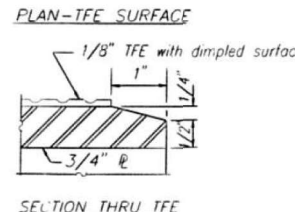
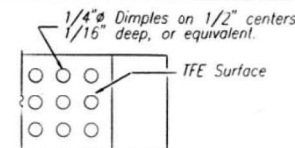
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
304	401-1BR	JERSEY	26	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

BRIDGE SHEET 9 OF 25  
73 25

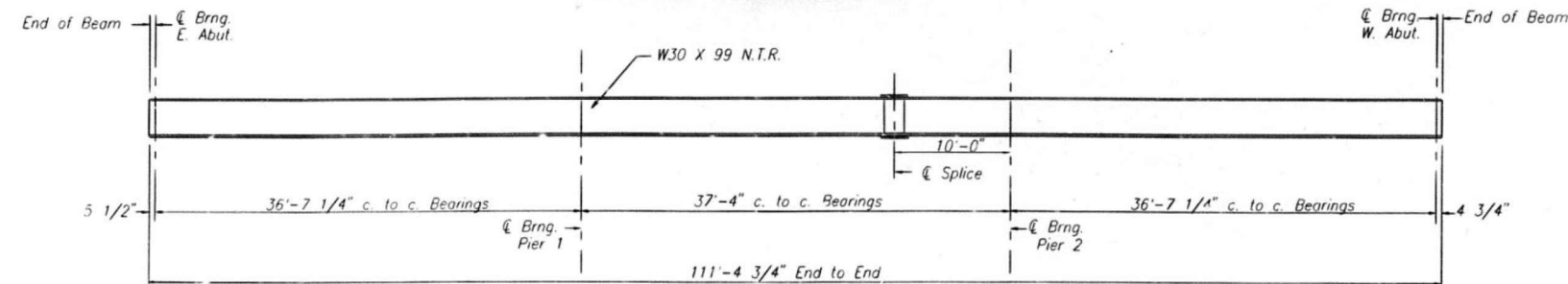
INTERIOR GIRDER MOMENT TABLE

	0.4Sp. 1&2	Piers	0.5Sp. 2
$I_s$ (in <sup>4</sup> )	3990	3990	3990
$S_s$ (in <sup>3</sup> )	269	269	269
$Z$ (in <sup>3</sup> )	312	--	312
$DL$ (ft.-K)	0.988	0.988	0.988
$MDL$ (ft.-K)	104	134	38
$MLL$ (ft.-K)	188	142	155
$MIMP$ (ft.-K)	56	43	47
$5/3(MLL+I)$ (ft.-K)	407	308	336
$Ma$ (ft.-K)	664	575	486
$M_u$ (ft.-K)	936	--	936
$f_s DL$ (ksi)	4.6	6.0	1.7
$f_s 5/3(MLL+I)$ (ksi)	18.2	13.7	15.0
$f_s$ (overload) (ksi)	22.8	19.7	16.7
$f_s$ (Total) (ksi)	--	25.7	--



Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



N.T.R. DENOTES NOTCH TOUGHNESS REQUIRED

\*\* Weight of adjusting shims, lead plates, side retainers and anchor bolts shall be included in "Structural Steel".

NOTES:

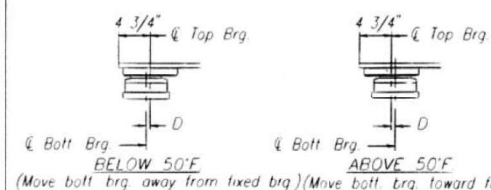
$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $I_s$  (Total and Overload).

$M_a$  (applied moment) =  $1.3[MDL + 5/3(MLL + I)]$ .

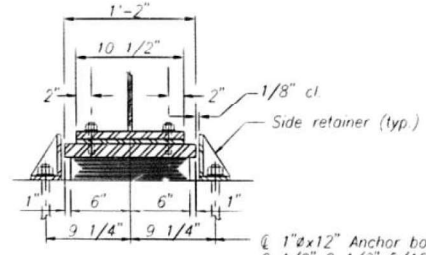
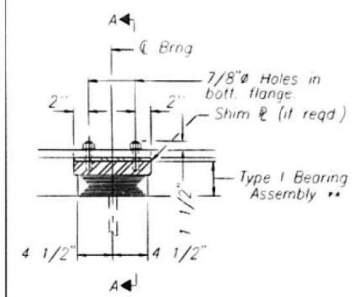
$f_s$  (Overload) is the sum of the stresses due to  $MDL + 5/3(MLL + I)$ .

$f_s$  (Total) is the sum of the stresses due to  $1.3[MDL + 5/3(MLL + I)]$ .

$Z$  is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas. The Fully Plastic Moment capacity ( $M_p$ ) is computed according to AASHTO 10.48.1.

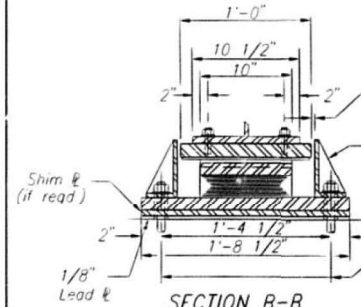


SETTING ANCHOR BOLTS AT EXP. BRG.  
 $\Delta = 1/8$ " per each 100' of expansion for every 15' temp. change from the normal temp. of 50°F.



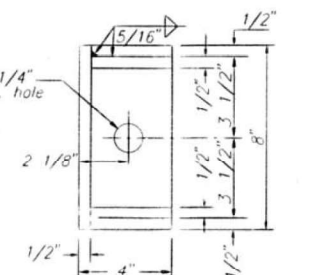
ELEVATION SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.  
At Piers 1 & 2  
(11 required of each pier)



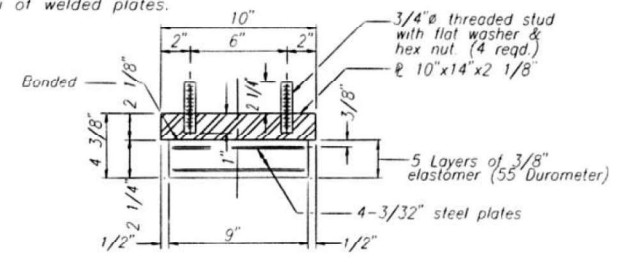
SECTION B-B

TYPE II TFE ELASTOMERIC EXP. BRG.  
At West Abutment  
(11 required)



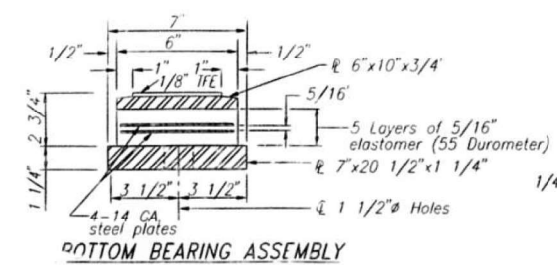
SIDE RETAINER

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

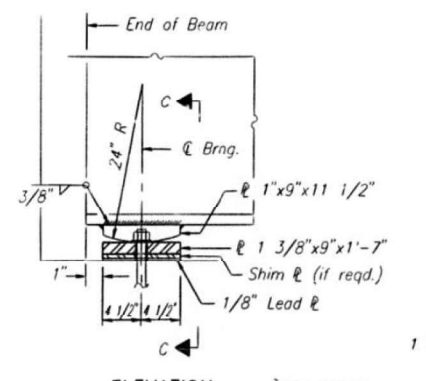


TYPE I BEARING ASSEMBLY

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



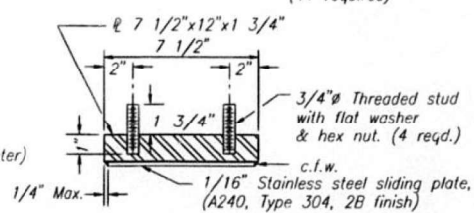
TYPE II BEARING ASSEMBLIES



ELEVATION

PINTLE

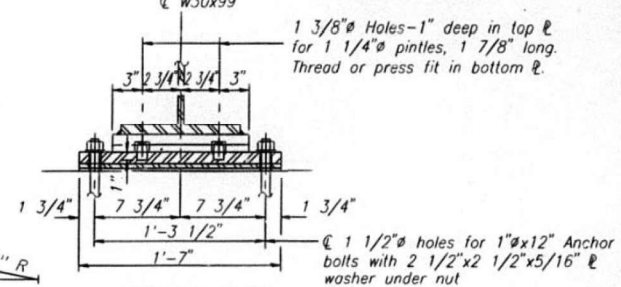
FIXED BEARING  
At East Abutment  
(11 required)



TOP BEARING ASSEMBLY

INTERIOR GIRDER REACTION TABLE

	Abut.	Pier
$RDL$ (K)	14.3	40.2
$RLL$ (K)	30.9	40.1
$Imp.$ (K)	9.3	12.0
$Rtotal$ (K)	54.5	92.3



SECTION C-C

\* Notes: Anchor bolts at fixed bearings may be built into the masonry. See sheet #12 for Anchor Bolt installation.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Elastomeric Bearing Assembly Type I	Each	22
Elastomeric Bearing Assembly Type II	Each	11

STRUCTURAL STEEL DETAILS

IL. 100 over CHAUTAUQUA CREEK  
F.A.P. 304 Section 401-1BR  
JERSEY COUNTY  
STATION 669+00.00  
S.N. 042-0013

FOR INFORMATION ONLY

USER NAME = agbo:ato	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 9/1/2021	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAIL 042-0013

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
304	401-1BR,401-2BP	JERSEY	14	8
			CONTRACT NO. 76P51	
		ILLINOIS	FED. AID PROJECT	

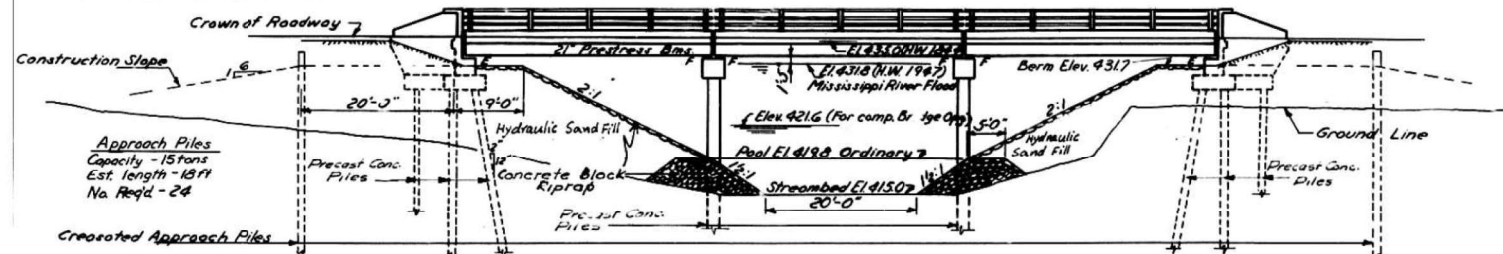
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 DATE: 9/1/2021



STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 155	401-2B	Jersey	52	12
SHEET NO. 1 OF SHEETS				

BM. RR Spike in 4" Cottonwood tree  
135 ft. Pt. of Sta 586+10 Elev 429.31  
Existing structure: Timber Railroad Trestle, 6 Spans  
@14.5 To be removed by contractor  
before new bridge is built.



**GENERAL NOTES**

**Concrete:**  
Class X concrete shall be used throughout except in handrail end posts.  
Handrail concrete shall be used in all handrail end posts.

**Structural Steel:**  
Railings shall be adjusted to true alignment after curbs have been poured.  
Expansion guard shall be fabricated and erected in accordance with Art. 5113(a) of the Standard Specifications, and are included in Structural Steel quantities.

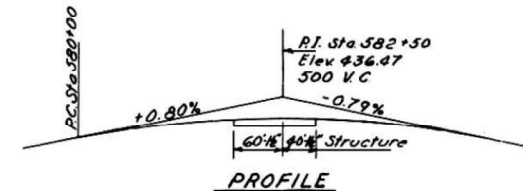
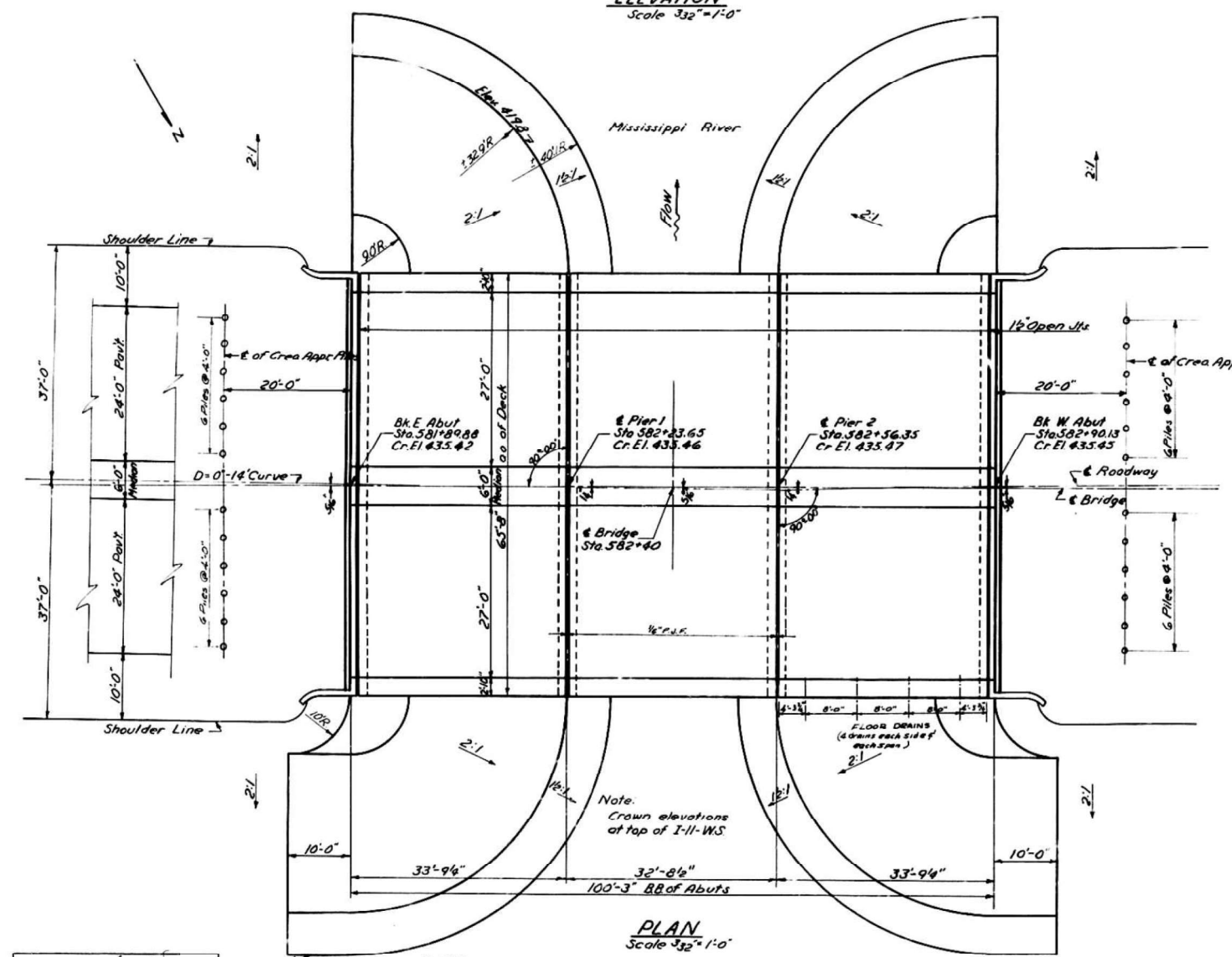
**Paint:**  
Structural Steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Art. 50.1 to 50.5 inclusions of the Standard Specifications.  
All paint shall be furnished and applied by the Contractor.

**Substructure:**  
The Contractor shall drive 1 test piles in permanent location as directed by the Engineer before ordering the remainder of piles. One Reinforced Concrete test pile at West Abutment.

**TOTAL BILL OF MATERIALS**

Item	Unit	Super	Sub	Total
Precast Prestressed Bridge Deck	Sq. Ft.	6,158		6,158
Class X Concrete	Cu Yds.	370	150.0	167.0
Handrail Concrete	Cu Yds.	2.3		2.3
Reinforcement Bars	Lb.	4,950	5,400	10,350
Metal Handrail	Lin Ft.	190		190
Concrete Block Riprap - Special	Sq. Yds.		940	940
Stone Gr. Size	Cu Yds.		800	800
Name Plate	Each	1		1
Precast Concrete Piles 16"	Lin Ft.		1276	1276
Precast Concrete Test Pile 16"	Each		1	1
Created Piles up to 20'	Lin Ft.		432	432
Bituminous Concrete Surface Course, Sub Class III	Tons	66		66
Bituminous Materials Prime Coat	Gal.	60		60
Hydraulic Sand Fill	Cu Yds.		8740	8740
Removal of Existing Structure	Each		1	1
Structural Steel	Lb.	940		940
Precast Conc. Piles 16"	Lin Ft.		720	720

Stone Gr. Size shall be constructed to the lines shown on this plan and constructed in accordance with the Special Provisions.



**CURVE DATA**  
P.I. Sta. 575+82.33  
Δ = 4°-36' T = 906.41  
D = 0°-14' L = 1971.71  
R = 24,530.84 E = 19.80

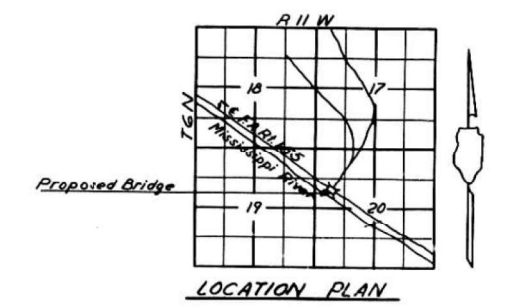
STATION 582+40  
BUILT 196 BY  
STATE OF ILLINOIS  
F.A. Rt 155 SEC. 401-2B  
FA PROJECT F-325 (16)  
LOADING H20-516-44

**NAME PLATE DATA**  
Standard 2113

**DESIGN STRESSES (Field Units)**  
fc = 1400 psi Super  
vc = 75 psi Footings  
fs = 20,000 psi Reinf.  
fs = 18,000 psi Struct  
n = 10

**DESIGN STRESSES (Prestressed Units)**  
fc = 5000 psi  
fci = 4,000 psi  
fsi = 250,000 psi (cables)  
fse = 160,000 psi (cables)

**LOADING H20-516-44**



**WATERWAY INFORMATION**  
Drainage Area----- 970 Acres  
Character----- Hilly, Clay, Wooded  
Required Opening (30 Yr. Flood) 190 Sq. Ft. Below El. 421.6  
Present Opening----- 220 Sq. Ft. Below Pool Elev.  
Proposed Opening----- 193 Sq. Ft. Below El. 421.6  
Ordinary Water Elev. 419.8  
Low Water Elev. 419.8

**GENERAL PLAN**  
**BRIDGE OVER ELSA CREEK**  
**PROJECT F-325 (16)**  
**F.A. RT. 155 - SEC. 401-2B**  
**JERSEY COUNTY**  
**STA. 582+40**

DESIGNED Douglas G. Nutt  
CHECKED L. D. Winn  
DRAWN DGH J.L. Armstrong  
CHECKED L. D. W.  
EXAMINED M. R. ...  
PASSED E. S. ...  
APPROVED P. R. ...

MARCH 26 1959

Class X Conc. Quantity Key F-17-60

FOR INFORMATION ONLY

USER NAME = agb040	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STRUCTURE DETAIL 042-0014	F.A.P. RTE. 304	SECTION 401-18P, 401-2BP	COUNTY JERSEY	TOTAL SHEETS 14	SHEET NO. 8A
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -	SCALE:	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT CONTRACT NO. 76P51			
PLOT DATE = 9/1/2021	DATE -	REVISED -							

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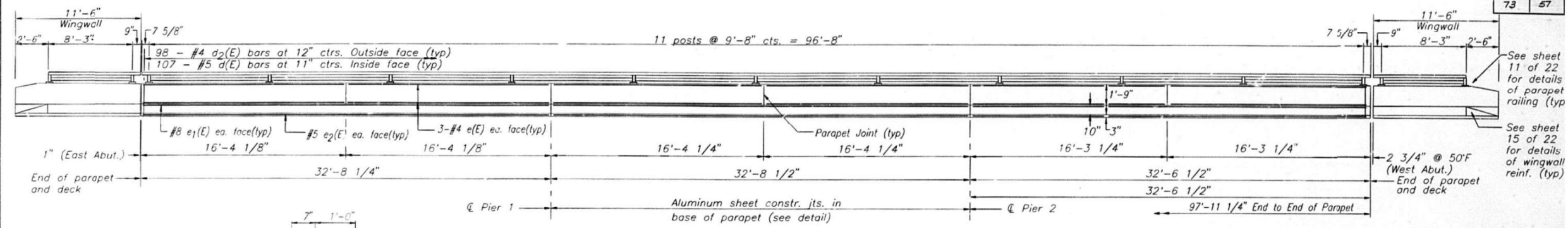


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

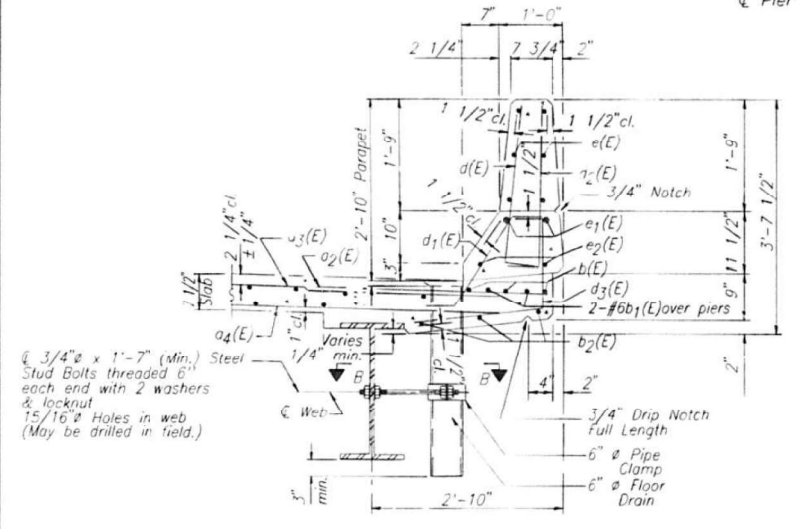
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FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				

BRIDGE SHEET 7 OF 22

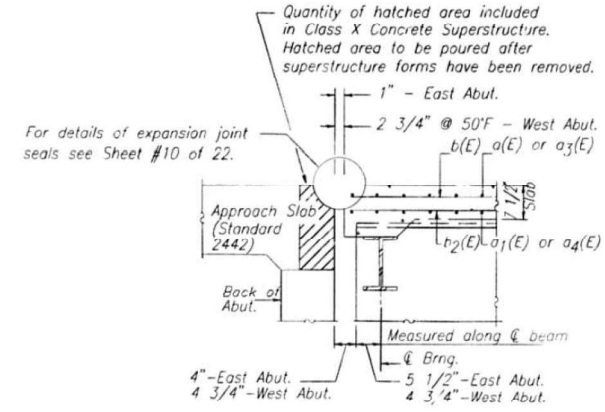
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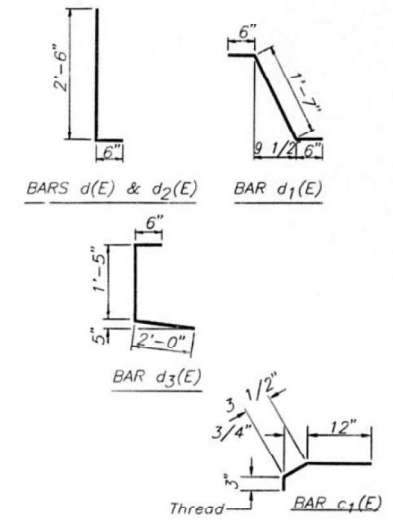
INSIDE ELEVATION OF PARAPET AND RAILING



SECTION THRU ROADWAY PARAPET



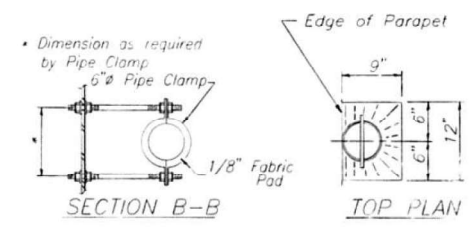
SECTION A-A  
(see sheet 6 of 22)



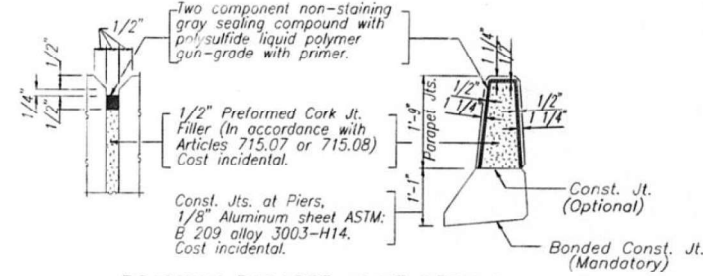
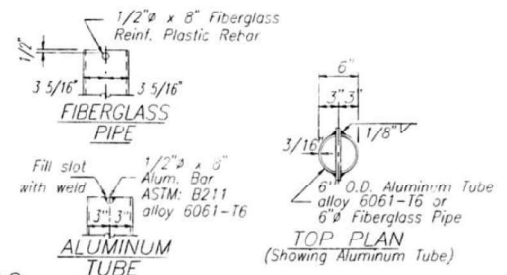
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	181	#5	19'-8"		
a1(E)	131	#5	19'-8"		
a2(E)	182	#6	4'-0"		
a3(E)	362	#5	25'-8"		
a4(E)	262	#5	25'-8"		
b(E)	304	#5	26'-1"		
b1(E)	150	#6	12'-0"		
b2(E)	330	#5	21'-4"		
b3(E)	24	#5	26'-1"		
c(E)	98	#5	4'-6"		
c1(E)	196	#5	1'-7"		
d(E)	214	#5	3'-0"		
d1(E)	214	#5	2'-7"		
d2(E)	196	#4	3'-0"		
d3(E)	196	#4	3'-11"		
e(E)	72	#4	15'-11"		
e1(E)	12	#8	32'-2"		
e2(E)	12	#5	32'-2"		
Class X Concrete Superstructure				Cu. Yds.	199.7
Reinforcement Bars (Epoxy Coated)				Lbs.	48,300

Reinforcement bars designated (E) shall be epoxy coated.



FLOOR DRAIN DETAILS  
(12 req'd)



ROADWAY PARAPET JOINT DETAILS

SUPERSTRUCTURE DETAILS

IL. 100 over ELSAH CREEK  
F.A.P. 304 Section 401-2BP  
JERSEY COUNTY  
STATION 582+40.00  
S.N. 042-0014

Notes:  
The exterior surfaces of the Floor Drain shall be painted with the vinyl enamel coat painting specified for Structural Steel. The exterior surfaces of the drain shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP1 & SSPC-Paint 27 prior to painting.  
Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

FOR INFORMATION ONLY

USER NAME = agb04dtd	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/3/2021	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAIL 042-0014

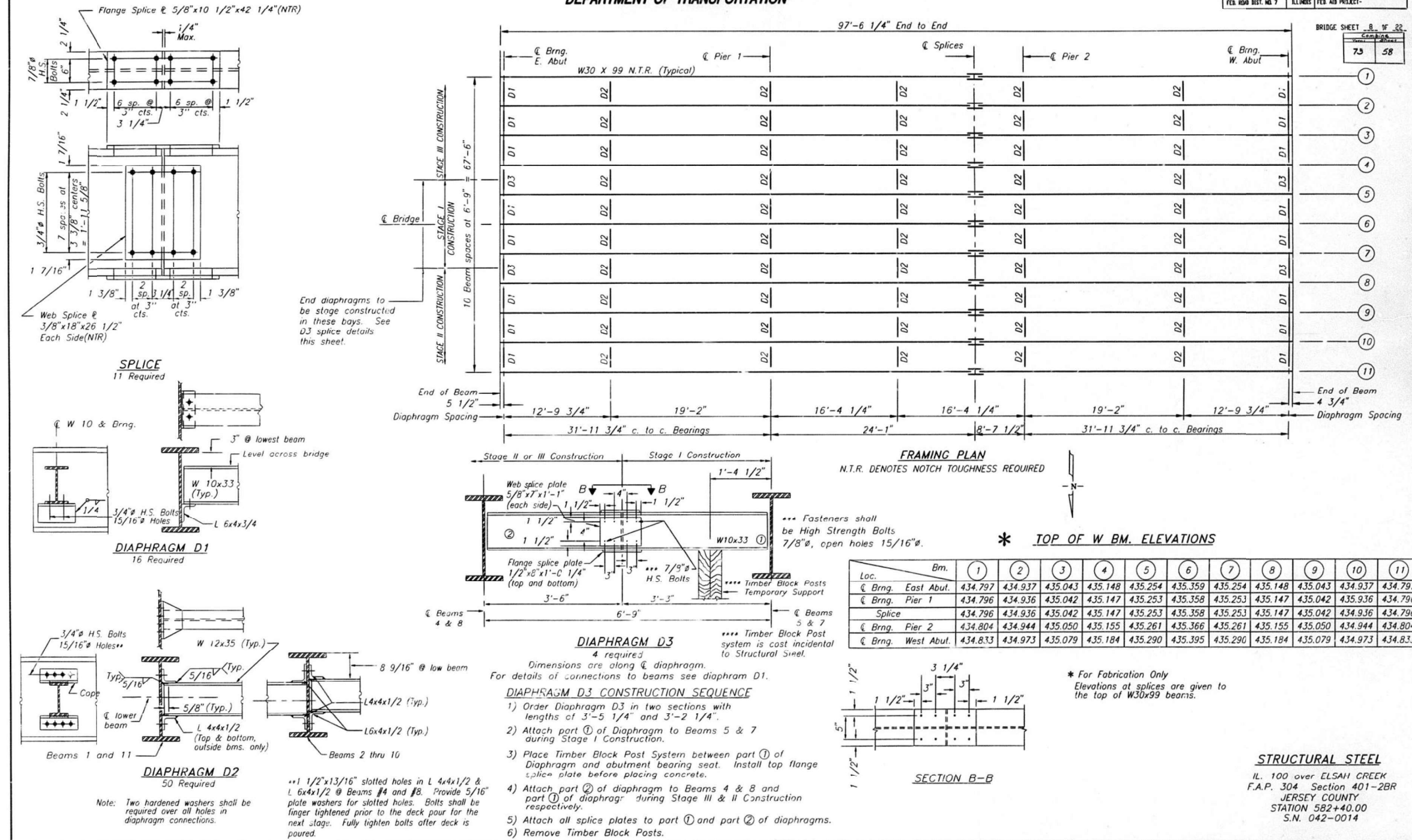
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
304	401-1BP,401-2BP	JERSEY	14	10
CONTRACT NO. 76P51				
ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 304	401-2BR	JERSEY	24	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		



FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAIL 042-0014

USER NAME = agb04ato	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/3/2021	DATE -	REVISED -

SCALE: SHEET OF SHEETS STA. TO STA.

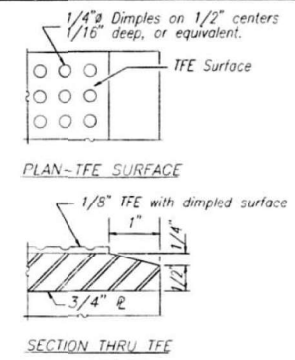
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
304	401-1BP,401-2BP	JERSEY	14	11
CONTRACT NO. 76P51				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 304	401-2BR	JERSEY	14	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

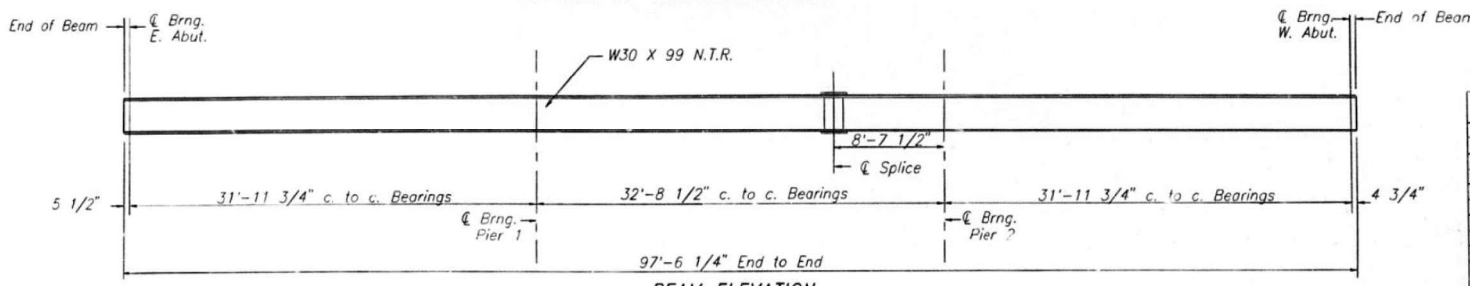
BRIDGE SHEET 3 OF 22  
INTERIOR GIRDER MOMENT TABLE

	0.4Sp. 18	Piers	0.5Sp. 2
Is (in. 4)	0.65p. 3		
Is (in. 3)	3990	3990	3990
Ss (in. 3)	269	269	269
Z (in. 3)	312	---	312
DL (K/ft.)	0.988	0.988	0.988
MDL (ft.-K)	80	103	29
MLL (ft.-K)	155	123	127
MIMP (ft.-K)	47	37	38
5/3(MLL+I)(ft.-K)	537	267	275
Ma (ft.-K)	542	481	395
Mu (ft.-K)	936	---	936
TsDL (ksi)	3.6	4.6	1.3
Ts 5/3(LL+I)(ksi)	15.0	11.9	12.3
Ts (overload)(ksi)	18.6	16.5	13.6
Ts (Total)(ksi)	---	21.5	---



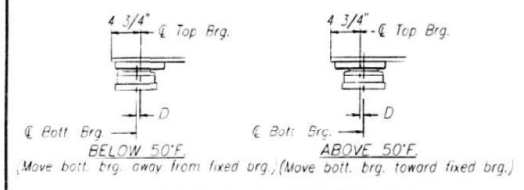
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

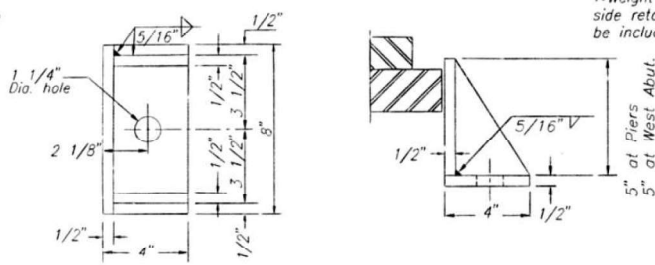


BEAM ELEVATION  
N.T.R. DENOTES NOTCH TOUGHNESS REQUIRED

Weight of adjusting shims, lead plated, side retainers and anchor bolts shall be included in "Structural Steel".

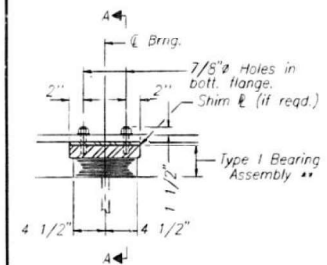


SETTING ANCHOR BOLTS AT EXP. BRG.  
D=1/8" for each 100° of expansion for every 15° temp. change from the normal temp. of 50°F.



SIDE RETAINER

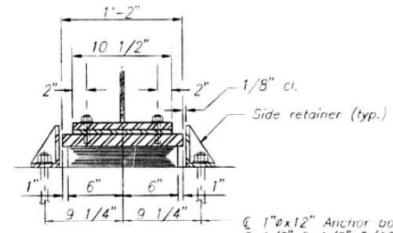
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ELEVATION

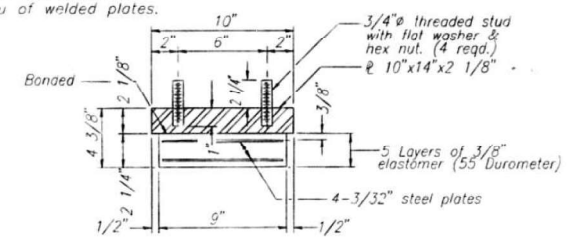
TYPE I ELASTOMERIC EXP. BRNG.

At Piers 1 & 2 (11 required at each pier)



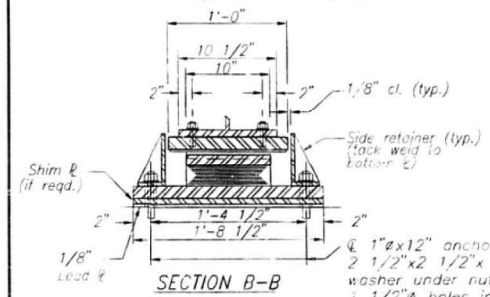
SECTION A-A

1" x 12" Anchor bolt with 2 1/2" x 2 1/2" x 5/16" washer under nut.



TYPE I BEARING ASSEMBLY

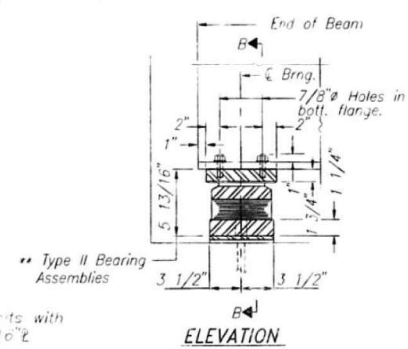
Note: Shim plates shall not be placed under Bearing Assembly.



SECTION B-B

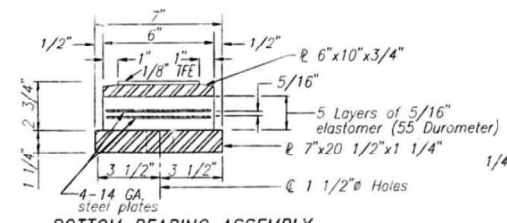
TYPE II TFE ELASTOMERIC EXP. BRNG.

At West Abutment (11 required)



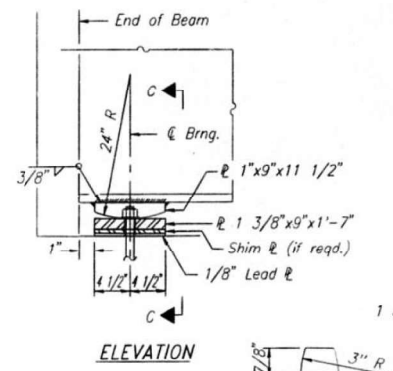
ELEVATION

Type II Bearing Assemblies



BOTTOM BEARING ASSEMBLY

TYPE II BEARING ASSEMBLIES

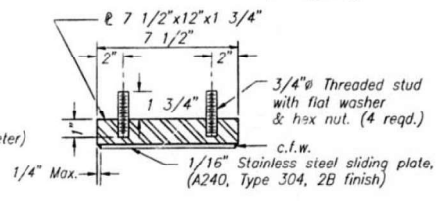


ELEVATION

PINTLE

FIXED BEARING

At East Abutment (11 required)



TOP BEARING ASSEMBLY

INTERIOR GIRDER REACTION TABLE

RD. (K)	Abut.	Pier
RL (K)	12.6	35.2
Imp. (K)	29.2	39.0
RTotal (K)	8.8	11.7
	50.6	65.9

Notes:  
Is and Ss are the moment of inertia and section modulus of the steel section used in computing Is (Total and Overload).  
Ma (applied moment) = 1.3[MDL + 5/3(MLL + I)].  
Is (Overload) is the sum of the stresses due to MDL + 5/3 (MLL + I).  
Is (Total) is the sum of the stresses due to 1.3[MDL + 5/3(MLL + I)].  
Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas. The Fully Plastic Moment capacity (M) is computed according to AASHTO 10.48.1.

Notes: Anchor bolts at fixed bearings may be built into the masonry. See sheet #12 for Anchor Bolt installation.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Elastomeric Bearing Assembly Type I	Each	22
Elastomeric Bearing Assembly Type II	Each	11

STRUCTURAL STEEL DETAILS

IL 100 over ELSAH CREEK  
F.A.P. 304 Section 401-2BR  
JERSEY COUNTY  
STATION 582+40.00  
S.N. 042-0014

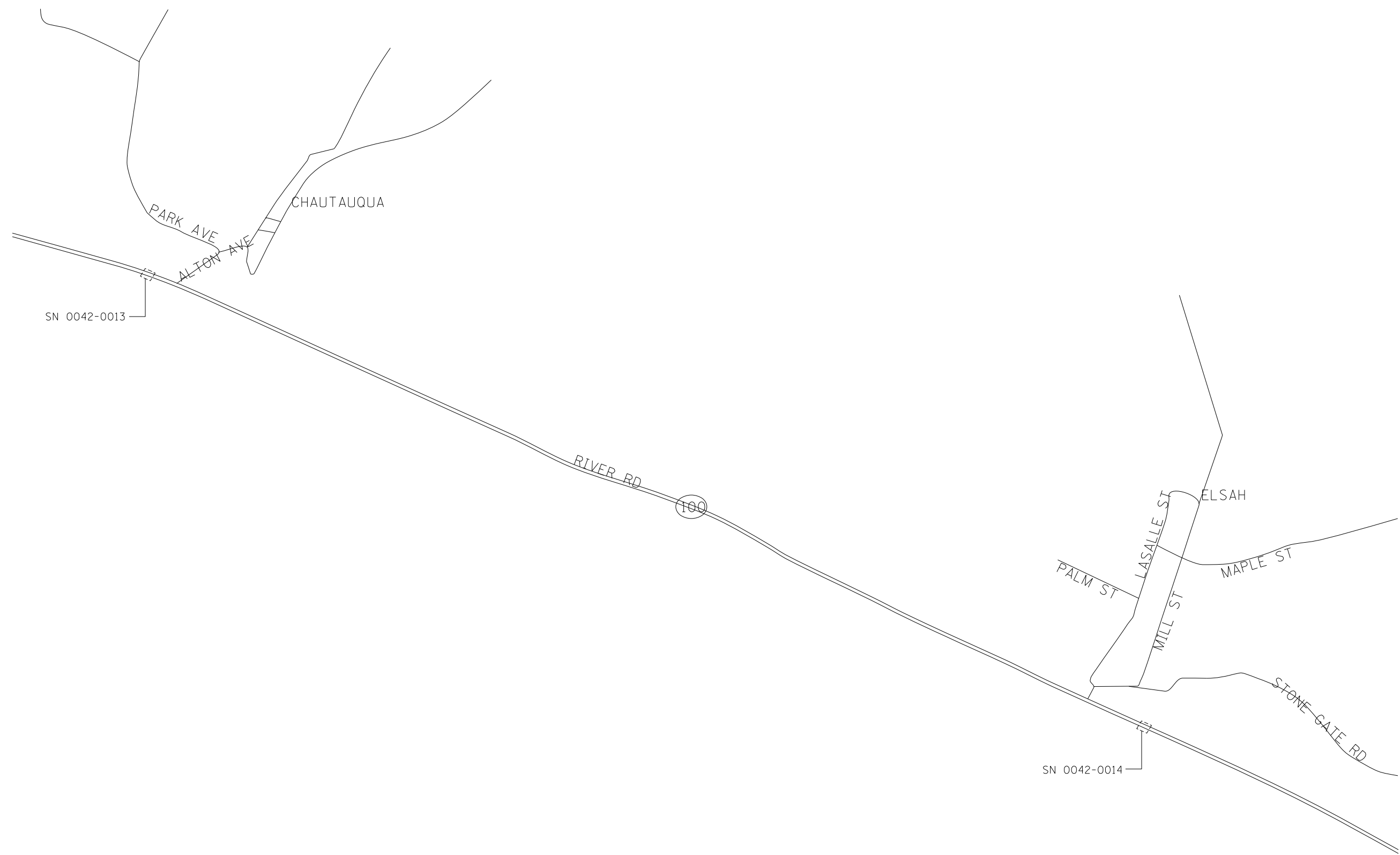
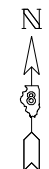
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USER NAME	DESIGNED	REVISIONS	SCALE	SHEET	OF SHEETS	STA.	TO STA.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
agb040	-	-						304	401-18P,401-2BR	JERSEY	14	12
PLOT SCALE = 100,0000' / in.	CHECKED	REVISIONS										CONTRACT NO. 76P51
PLOT DATE = 8/3/2021	DATE	REVISIONS								ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAIL 042-0014





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PLOT DATE = 8/6/2021	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SITE MAP DETAIL**

SCALE:      SHEET    OF    SHEETS    STA.                    TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
304	401-18P,401-2BP	JERSEY	14	14
CONTRACT NO. 76P51				
		ILLINOIS	FED. AID PROJECT	