

- 1. COVER SHEET
- 2. SUMMARY OF QUANTITIES, TYPICAL SECTIONS, AND GENERAL NOTES
- 3. TRAFFIC CONTROL AND PROTECTION SPECIAL
- 4-5. PLAN AND PROFILE
- 6.-21. BRIDGE PLANS
- 22. CROSS SECTION

STANDARDS:	1686-4	2298-6	2307-5	2382-1
	2113-2	2299-9	2311-7	2383-1
	2228-4	2300-2	2324-5	
	2230-13	2302-4	2336-3	
	2239-7	2305-4	2341-1	

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

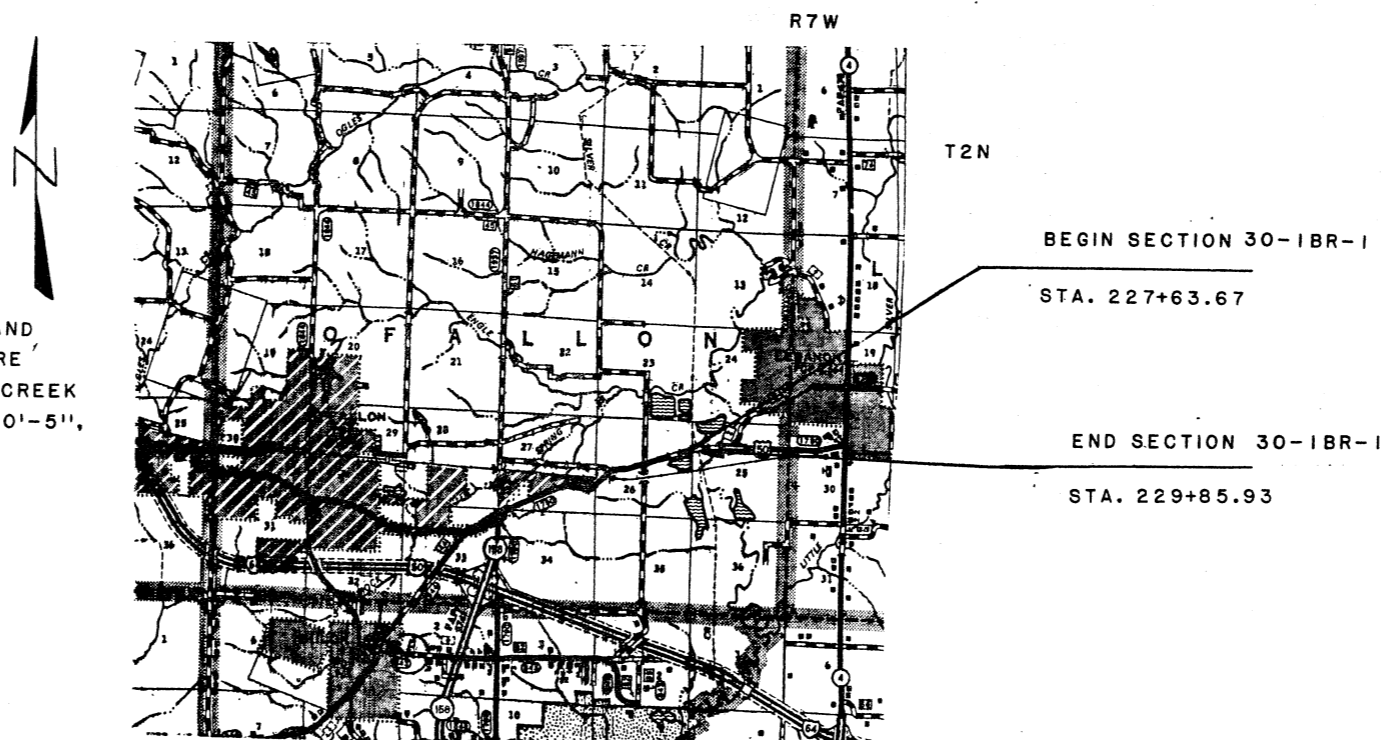
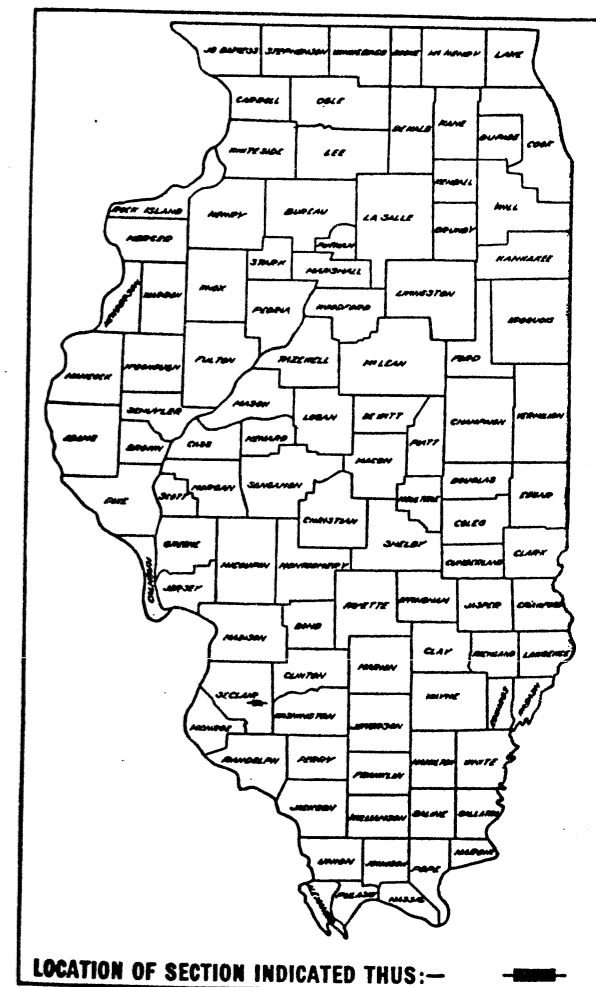
## PLANS FOR PROPOSED FEDERAL AID HIGHWAY

### FAS ROUTE 1780 SECTION 30-1BR-1 BRIDGE DECK REPLACEMENT ST. CLAIR COUNTY C-98-142-83

F.A.S. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
1780	*	St. Clair	22	1
P.W.A. DIST. NO. 4		ILLINOIS	PROJECT	

P-98-044-82

\*30-1BR-1



SECTION 30-1BR-1 INCLUDES WIDENING AND REHABILITATION OF THE 3 SPAN STRUCTURE CARRYING FAS ROUTE 1780 OVER SILVER CREEK AT STATION 228+74.79 SPANS 56'-7", 70'-5", 56'-7 1/4"

MICROFILMED \_\_\_\_\_  
 REEL NUMBER \_\_\_\_\_  
 AWARDED \_\_\_\_\_  
 RESIDENT ENGINEER \_\_\_\_\_  
 AS BUILT CHANGES WERE MADE ON THE FOLLOWING SHEETS

O'FALLON TOWNSHIP

LOCATION MAP

1" = 1 MILE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
SUBMITTED	October 22, 83
EXAMINED	11-21-83
PASSED	11-4-83
APPROVED	John A. Adams DIRECTOR OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	
DIVISION ENGINEER	DATE

8-144

082-0036  
820036

082-0036

CONTRACT NO. 22

NET LENGTH OF SECTION= 222.26 FEET=0.042 MILES

8-144

**B.M.:** No. 1 Chiseled "a" in S.E. corner of East abutment wingwall of bridge  
 U.S. Rte. 50 over Silver Creek. Elev. 438.4  
**Existing Structure:** \*082-0036—183'-7 1/4" long by 32'-6" wide. Built as S.B.I.  
 Rte. 12, Section 30-1R-B, at Sta. 228+75 in 1939. The existing super-  
 structure shall be removed and rebuilt using stage construction so as to  
 maintain oneway traffic during reconstruction. The existing substructure  
 shall be modified as required. The existing super is 3 span WF Beam & R.C. Slab.  
 Existing bridge rail system and expansion bearings shall be salvaged to the  
 State Maintenance Yard in Highland.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. /
1780	182-1	ST. CLAIR	22	6	16 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. (For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed).

Fasteners shall be high strength bolts (AASHTO M 164, Type 3). Bolts 7/8" φ, open holes 1 1/16" φ, unless otherwise noted.  
 Calculated weight of Structural Steel : M 222 = 121,420 Lbs.  
 M 183 = 2200 Lbs.  
 The basic lead silico chromate paint system shall be used for shop and field painting of Structural Steel except where otherwise noted.

All structural steel shall be AASHTO M 222 except expansion joint angles and attached bars which shall be AASHTO M 183.

All contact surfaces of joints for the diaphragms, shall be free of paint or lacquer.

Expansion joint angles and attached bars shall be shop painted with two coats of basic lead silico chromate paint.

AASHTO M 222 structural steel shall not be painted except, that for a distance of three times the depth of the beams (but not exceeding 10 feet) each way from deck joints, the AASHTO M 222 structural steel shall be cleaned and given one coat of the basic lead silico chromate primer and maroon field coat. Both coats to be applied in the shop with spot painting only in the field.

Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

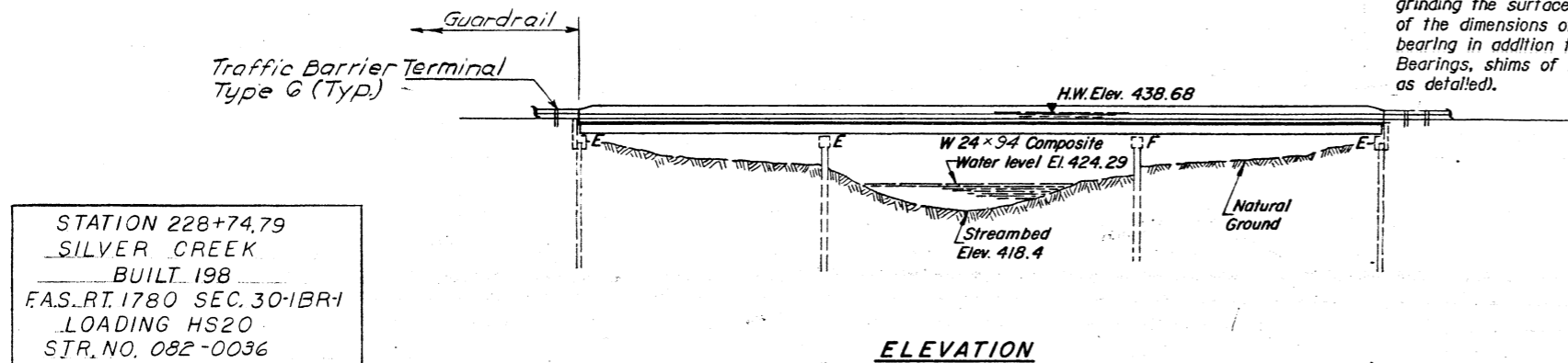
Anchor bolts shall be set before bolting diaphragms over supports. The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 222.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material of the wide flange beams.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

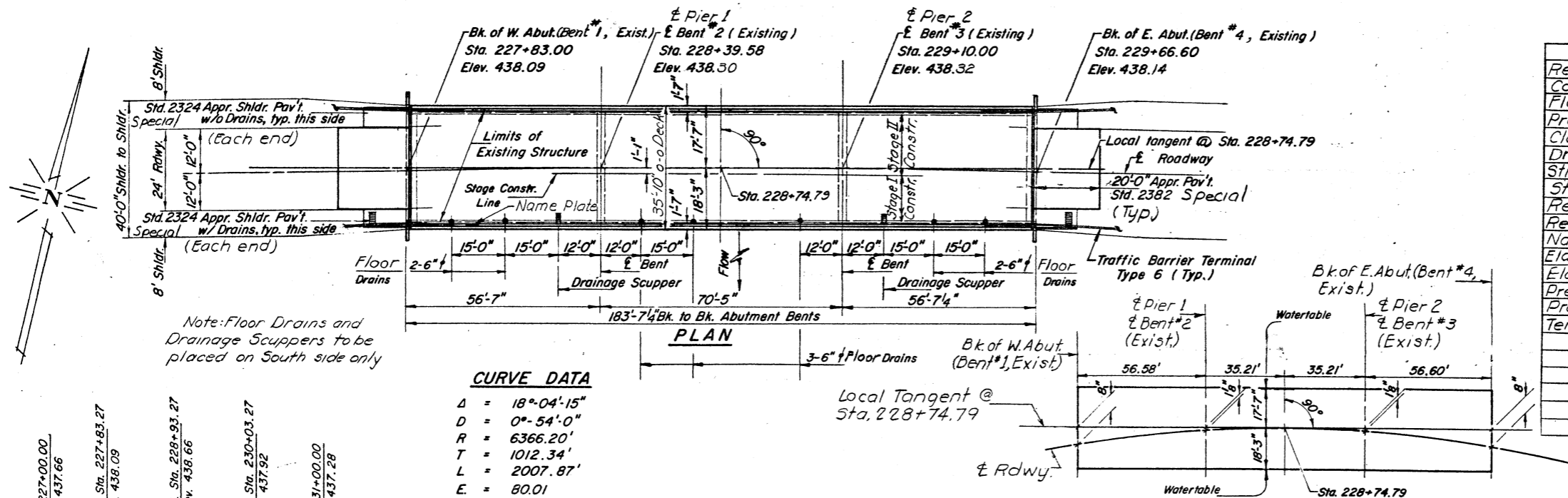
Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

Note: Approach Pavement and Approach Shoulder Pavement shall be modified as detailed on Sheet #7 of 16, Secs. A-A and B-B



STATION 228+74.79  
 SILVER CREEK  
 BUILT 198  
 F.A.S. RT. 1780 SEC. 30-1B-1  
 LOADING HS20  
 S.T.R. NO. 082-0036

NAME PLATE  
 See Std. 2113



Note: Floor Drains and Drainage Scuppers to be placed on South side only

CURVE DATA

Δ = 18°-04'-15"  
 D = 0°-54'-0"  
 R = 6366.20'  
 T = 1012.34'  
 L = 2007.87'  
 E = 80.01  
 P.C. Sta. 221+68.85  
 P.T. Sta. 231+81.19  
 P.T. Sta. 241+76.72  
 S.E. = 0.0125%

WATERWAY INFORMATION

Drainage Area = 335 sq. mi.		Low Grade Elev. 433.6		Sta.		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist. Prop.	Nat. H.W.E.	Head-Ft. Exist. Prop.	Headwater-EI. Exist. Prop.
Design	30	22,758	1260 1345	438.68	0.59 0.55	439.27 439.23
Base	100	28,890	1260 1345	440.14	0.71 0.68	440.85 440.82
Overtopping						
Max. Calc.	500	36,748	1260 1345	441.84	0.41 0.40	442.25 442.24

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yds.		2	2
Floor Drains	Each	7		7
Protective Coat	Sq. Yds.	806		806
Class X Concrete	Cu. Yds.	195.5	11.7	207.2
Drainage Scuppers	Each	2		2
Structural Steel	L.S.			1
Stud Shear Connectors	Each	2820		2820
Reinforcement Bars	Lbs.		880	880
Reinforcement Bars (Epoxy Coated)	Lbs.	45600		45600
Name Plates	Each	1		1
Elastomeric Bearing Assembly Type I	Each	12		12
Elastomeric Bearing Assembly Type II	Each	6		6
Preformed Joint Seal 2 1/2"	Lin. Ft.	36		36
Preformed Joint Seal 4"	Lin. Ft.	36		36
Temporary Concrete Barrier	Lin. Ft.	184		184

OFFSET SKETCH

DESIGN STRESSES

FIELD UNITS

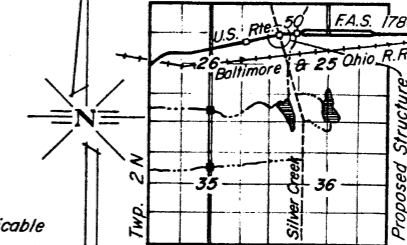
f<sub>c</sub> = 3,500 psi  
 f<sub>y</sub> = 50,000 psi (M 222) Structural Steel  
 f<sub>y</sub> = 60,000 psi (Reinforcement)

LOADING HS-20 (New Construction)

Design Specifications: AASHTO (1977) and applicable Interims (1978 thru 1982).

Allow 25# / sq. ft. for future wearing surface. (New Constr.)

Range 7 W 3rd. P.M.



LOCATION SKETCH

GENERAL PLAN  
 U.S. Rte. 50 Over Silver Creek  
 F.A.S. Rte. 1780 SECTION 30-1B-1  
 ST. CLAIR COUNTY  
 Sta. 228+74.79

DESIGNED	Romina Balis
CHECKED	Rumatt
DRAWN	PWS F.M.
CHECKED	Rum

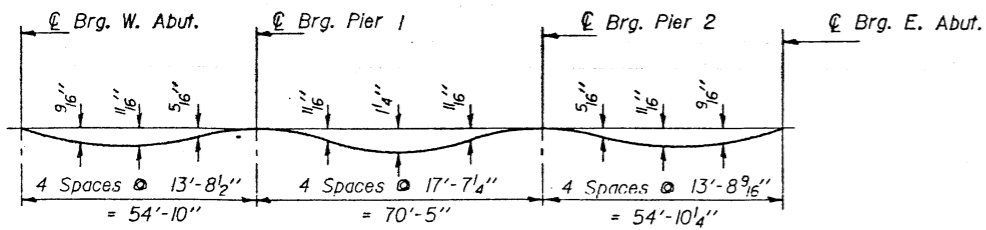
OCT 25, 1983  
 EXAMINED James J. Korburn  
 PASSED  
 APPROVED  
 DIRECTOR OF HIGHWAYS



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1780	30-1BR-1	ST. CLAIR	22	7
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

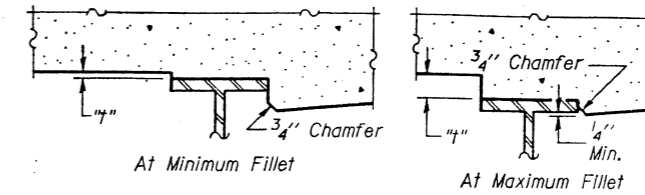
SHEET NO. 2  
16 SHEETS



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**

**BEAM # 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	22783.217	-15.327	438.279	438.279
€ Brg. West Abut.	22784.963	-15.302	438.288	438.288
A	22794.938	-15.169	438.335	438.371
B	22804.914	-15.051	438.376	438.429
C	22814.890	-14.949	438.412	438.464
D	22824.866	-14.863	438.443	438.471
€ Brg. Pier 1	22839.665	-14.764	438.480	438.480
E	22849.641	-14.716	438.498	438.532
F	22859.618	-14.685	438.511	438.577
G	22869.595	-14.669	438.519	438.609
H	22879.572	-14.668	438.521	438.612
I	22889.549	-14.684	438.519	438.585
J	22899.526	-14.715	438.511	438.546
€ Brg. Pier 2	22909.919	-14.764	438.497	438.497
K	22919.895	-14.827	438.479	438.497
L	22929.872	-14.906	438.455	438.495
M	22939.848	-15.000	438.427	438.483
N	22949.824	-15.110	438.393	438.443
€ Brg. East Abut.	22964.641	-15.302	438.333	438.333
Back of East Abut.	22966.387	-15.327	438.325	438.325

**BEAM # 2**

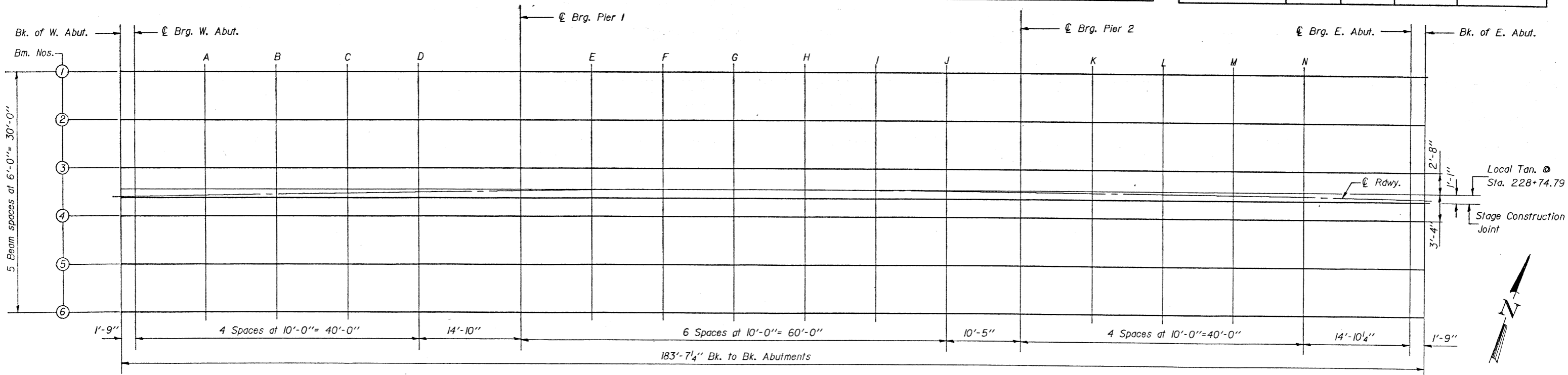
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	22783.131	-9.327	438.204	438.204
€ Brg. West Abut.	22784.878	-9.303	438.213	438.213
A	22794.863	-9.169	438.259	438.295
B	22804.848	-9.051	438.301	438.354
C	22814.833	-8.949	438.337	438.389
D	22824.819	-8.863	438.368	438.396
€ Brg. Pier 1	22839.632	-8.764	438.405	438.405
E	22849.618	-8.717	438.423	438.457
F	22859.604	-8.685	438.436	438.502
G	22869.590	-8.669	438.444	438.534
H	22879.577	-8.669	438.446	438.537
I	22889.563	-8.684	438.444	438.510
J	22899.549	-8.715	438.436	438.471
€ Brg. Pier 2	22909.952	-8.764	438.422	438.422
K	22919.938	-8.827	438.404	438.422
L	22929.924	-8.906	438.380	438.420
M	22939.909	-9.000	438.351	438.408
N	22949.894	-9.110	438.317	438.367
€ Brg. East Abut.	22964.726	-9.303	438.257	438.257
Back of East Abut.	22966.473	-9.328	438.250	438.250

**BEAM # 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	22783.045	-3.328	438.128	438.128
€ Brg. West Abut.	22784.794	-3.303	438.137	438.137
A	22794.788	-3.170	438.184	438.220
B	22804.782	-3.052	438.225	438.279
C	22814.777	-2.950	438.262	438.314
D	22824.772	-2.863	438.293	438.321
€ Brg. Pier 1	22839.598	-2.764	438.330	438.330
E	22849.594	-2.717	438.348	438.382
F	22859.590	-2.685	438.361	438.427
G	22869.585	-2.669	438.369	438.459
H	22879.581	-2.669	438.371	438.462
I	22889.577	-2.684	438.369	438.435
J	22899.573	-2.715	438.361	438.396
€ Brg. Pier 2	22909.985	-2.764	438.347	438.347
K	22919.980	-2.827	438.329	438.347
L	22929.976	-2.906	438.305	438.345
M	22939.970	-3.001	438.276	438.333
N	22949.965	-3.111	438.242	438.292
€ Brg. East Abut.	22964.810	-3.303	438.182	438.182
Back of East Abut.	22966.559	-3.328	438.174	438.174

**LOCAL TANGENT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	22783.006	-0.662	438.095	438.095
€ Brg. West Abut.	22784.756	-0.637	438.104	438.104
A	22794.754	-0.503	438.150	438.186
B	22804.753	-0.385	438.192	438.245
C	22814.751	-0.283	438.228	438.280
D	22824.751	-0.197	438.260	438.287
€ Brg. Pier 1	22839.584	-0.097	438.296	438.296
E	22849.583	-0.050	438.315	438.349
F	22859.583	-0.018	438.328	438.393
G	22869.583	-0.002	438.335	438.425
H	22879.583	-0.002	438.338	438.429
I	22889.583	-0.017	438.335	438.402
J	22899.583	-0.048	438.328	438.363
€ Brg. Pier 2	22910.000	-0.097	438.314	438.314
K	22919.999	-0.161	438.295	438.313
L	22929.999	-0.239	438.272	438.312
M	22939.998	-0.334	438.243	438.299
N	22949.997	-0.444	438.209	438.259
€ Brg. East Abut.	22964.848	-0.637	438.148	438.148
Back of East Abut.	22966.598	-0.662	438.141	438.141



DESIGNED *Dennis Balvin*  
CHECKED *R. J. Matton*  
DRAWN *Mercado*  
CHECKED *R. J. Matton*

OCT 25 1983  
EXAMINED *James J. K...  
PASSED *[Signature]*  
APPROVED *[Signature]*  
DIRECTOR OF HIGHWAYS*

**PLAN**

TOP OF DECK ELEVATIONS  
F.A.S. RTE. 1780 SEC. 30-1BR-1  
ST. CLAIR COUNTY  
STA. 228 + 74.79

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1780	30-1BR-1	St. Clair	22	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3  
16 SHEETS

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	22782.991	0.421	438.081	438.081
€ Brg. West Abut.	22784.741	0.446	438.090	438.090
A	22794.741	0.580	438.137	438.173
B	22804.741	0.698	438.178	438.232
C	22814.742	0.800	438.215	438.267
D	22824.743	0.887	438.246	438.274
€ Brg. Pier 1	22839.578	0.986	438.283	438.283
E	22849.579	1.033	438.301	438.335
F	22859.581	1.065	438.314	438.380
G	22869.582	1.081	438.322	438.412
H	22879.584	1.081	438.324	438.415
I	22889.586	1.066	438.322	438.389
J	22899.587	1.035	438.314	438.349
€ Brg. Pier 2	22910.006	0.986	438.300	438.300
K	22920.007	0.923	438.282	438.300
L	22930.008	0.844	438.258	438.298
M	22940.009	0.749	438.229	438.286
N	22950.009	0.639	438.195	438.245
€ Brg. East Abut.	22964.864	0.446	438.135	438.135
Back of East Abut.	22966.613	0.421	438.127	438.127

BEAM # 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	22782.958	2.671	438.053	438.053
€ Brg. West Abut.	22784.709	2.696	438.062	438.062
A	22794.712	2.830	438.109	438.145
B	22804.716	2.948	438.150	438.203
C	22814.720	3.050	438.187	438.238
D	22824.725	3.137	438.218	438.245
€ Brg. Pier 1	22839.565	3.236	438.255	438.255
E	22849.570	3.283	438.273	438.307
F	22859.575	3.315	438.286	438.352
G	22869.581	3.331	438.294	438.384
H	22879.586	3.331	438.296	438.387
I	22889.591	3.316	438.294	438.360
J	22899.596	3.285	438.286	438.321
€ Brg. Pier 2	22910.018	3.236	438.272	438.272
K	22920.023	3.173	438.254	438.272
L	22930.028	3.094	438.230	438.270
M	22940.032	2.999	438.201	438.257
N	22950.036	2.889	438.167	438.217
€ Brg. East Abut.	22964.895	2.696	438.107	438.107
Back of East Abut.	22966.646	2.671	438.099	438.099

BEAM # 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	22782.872	8.671	437.978	437.978
€ Brg. West Abut.	22784.624	8.696	437.986	437.986
A	22794.637	8.829	438.033	438.069
B	22804.650	8.947	438.075	438.128
C	22814.664	9.050	438.111	438.163
D	22824.678	9.136	438.143	438.170
€ Brg. Pier 1	22839.532	9.236	438.180	438.180
E	22849.546	9.283	438.198	438.232
F	22859.561	9.315	438.211	438.277
G	22869.576	9.331	438.219	438.309
H	22879.590	9.331	438.221	438.312
I	22889.605	9.316	438.219	438.285
J	22899.620	9.285	438.211	438.246
€ Brg. Pier 2	22910.051	9.236	438.197	438.197
K	22920.066	9.173	438.179	438.197
L	22930.080	9.094	438.155	438.195
M	22940.093	8.999	438.126	438.182
N	22950.107	8.888	438.092	438.142
€ Brg. East Abut.	22964.980	8.695	438.031	438.031
Back of East Abut.	22966.733	8.670	438.023	438.023

BEAM # 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	22782.785	14.670	437.902	437.902
€ Brg. West Abut.	22784.539	14.695	437.911	437.911
A	22794.561	14.829	437.958	437.994
B	22804.584	14.947	438.000	438.053
C	22814.607	15.050	438.036	438.088
D	22824.630	15.136	438.068	438.095
€ Brg. Pier 1	22839.499	15.236	438.104	438.104
E	22849.523	15.283	438.123	438.157
F	22859.547	15.315	438.136	438.202
G	22869.571	15.331	438.144	438.234
H	22879.595	15.331	438.146	438.237
I	22889.619	15.316	438.144	438.210
J	22899.643	15.285	438.136	438.171
€ Brg. Pier 2	22910.085	15.236	438.122	438.122
K	22920.108	15.172	438.103	438.122
L	22930.132	15.093	438.080	438.120
M	22940.155	14.999	438.051	438.107
N	22950.178	14.888	438.016	438.066
€ Brg. East Abut.	22965.066	14.695	437.956	437.956
Back of East Abut.	22966.819	14.670	437.948	437.948

DESIGNED <i>Domini Balvic</i>
CHECKED <i>Lu Matton</i>
DRAWN <i>Mercado</i>
CHECKED <i>Rum</i>

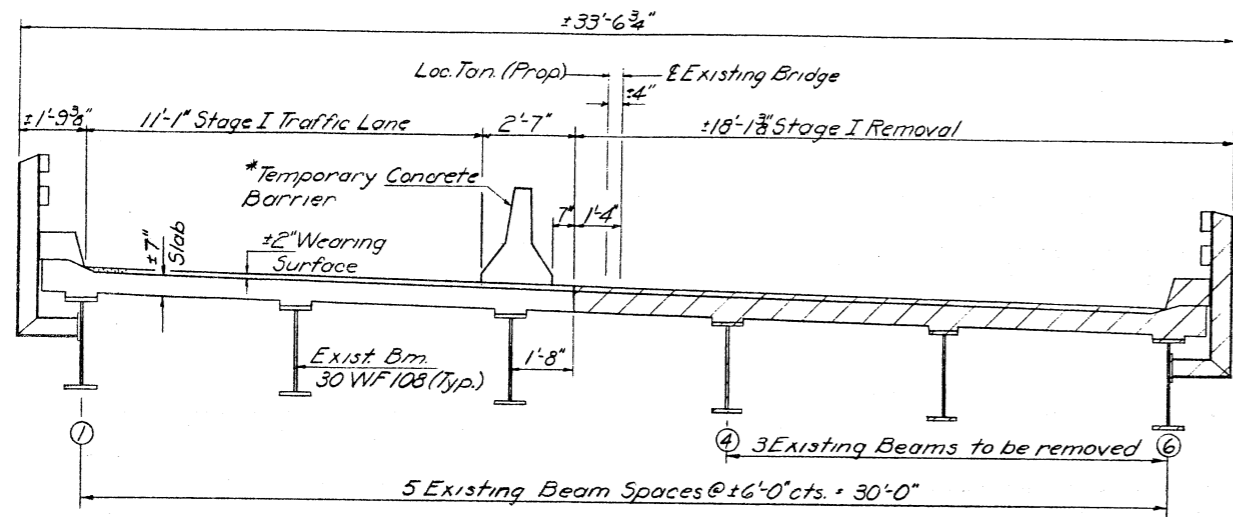
Oct. 25 1983  
 EXAMINED *James J. Robinson*  
 PASSED *James J. Robinson*  
 APPROVED *James J. Robinson*  
 DIRECTOR OF HIGHWAYS

TOP OF DECK ELEVATIONS  
 F.A.S. RTE. 1780 SEC. 30-1BR-1  
 ST. CLAIR COUNTY  
 STA. 228 + 74.79

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

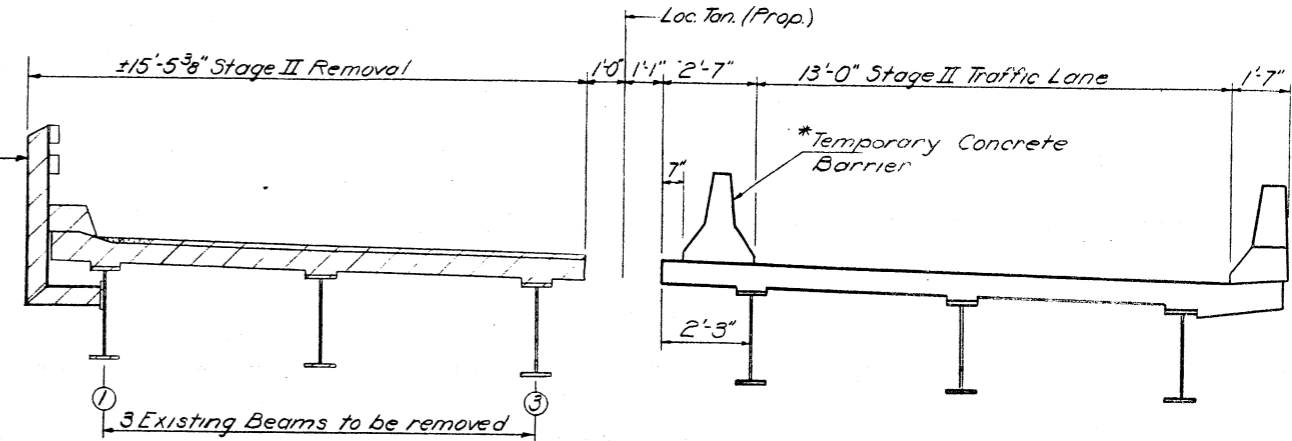
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P. S. 1. P. AS 1780	30- 1BR-1	ST. CLAIR	22	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4  
16 SHEETS



STAGE I REMOVAL

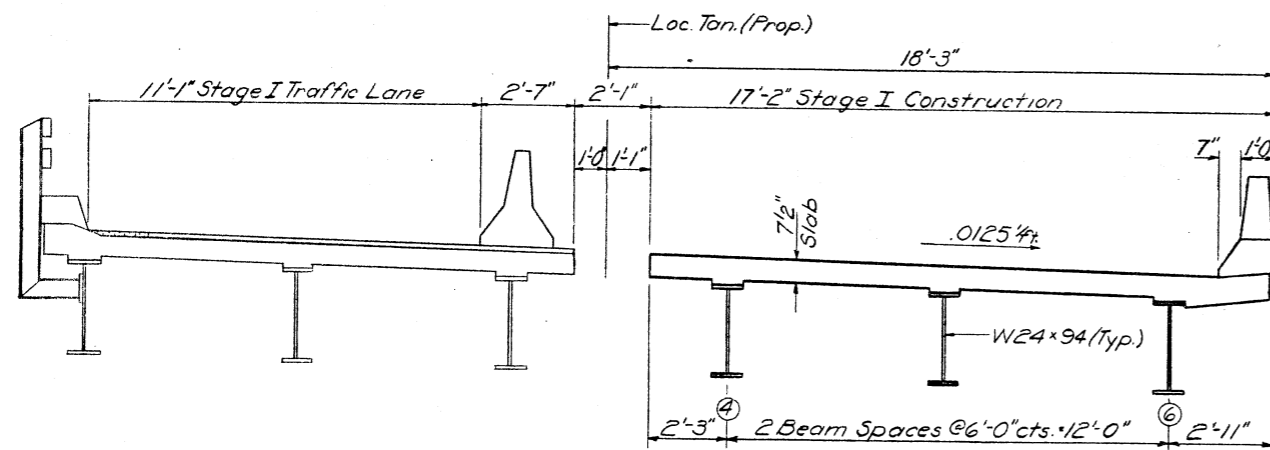
Removal and Salvaging of existing metal railing is incidental to Removal of Existing Superstructures.



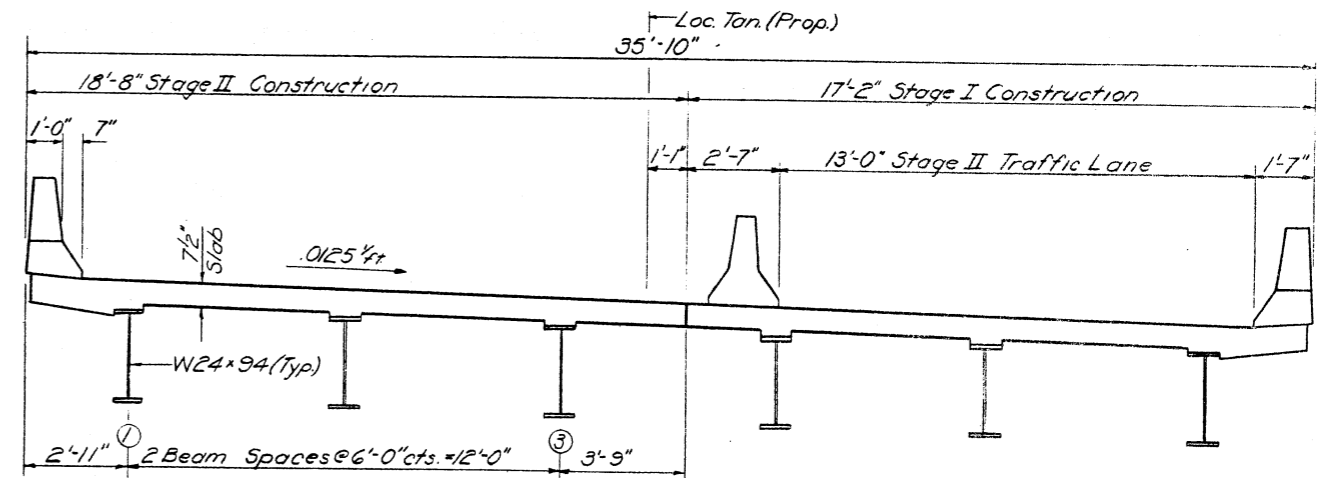
STAGE II REMOVAL

Notes:  
All sections are looking East.  
Hatched portions indicate removal areas.

\*See Sheet #5 for Temporary Concrete Barrier installation details.



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

DESIGNED	<i>James Boliva</i>
CHECKED	<i>Rumattin</i>
DRAWN	<i>Boliva</i>
CHECKED	<i>Rum</i>

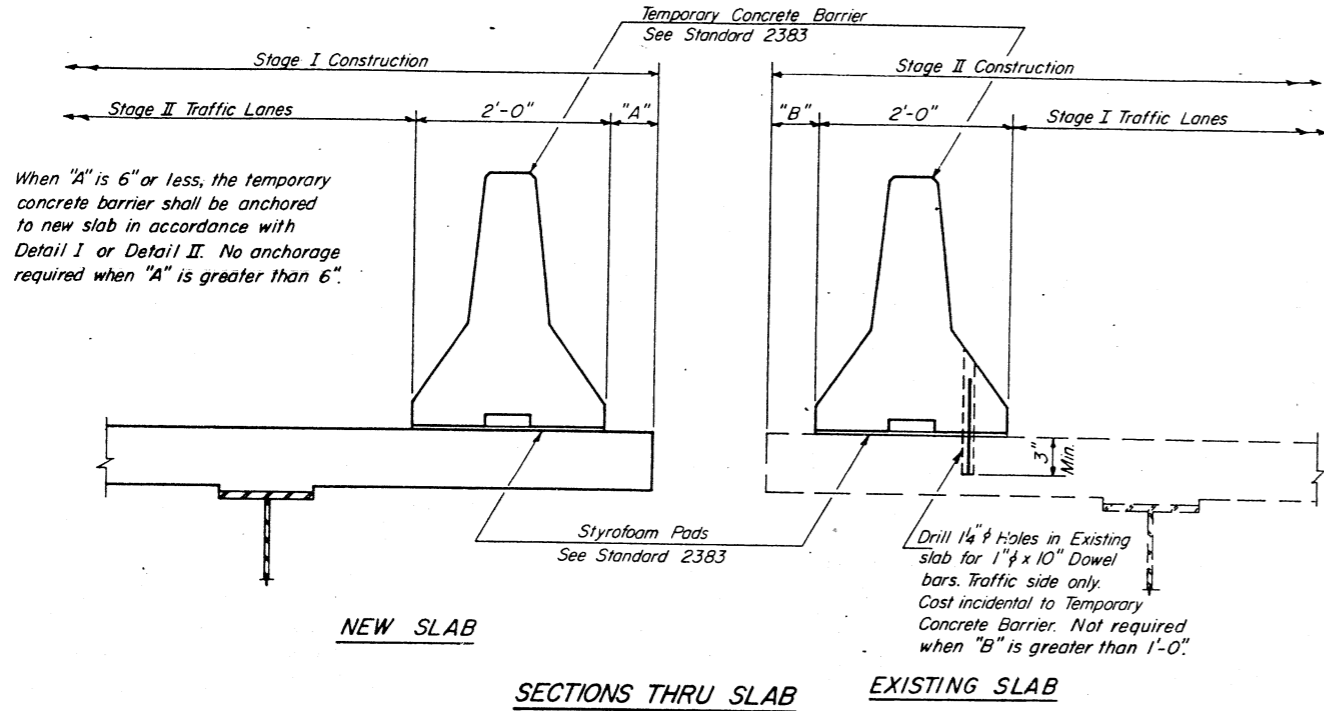
Oct 25 1983  
EXAMINED *James J. Rayburn*  
PASSED *[Signature]*  
APPROVED \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

STAGING SEQUENCE  
F.A.S. Rte. 1780 Sec. 30-1BR-1  
ST. CLAIR COUNTY  
Sta. 228+74.79

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1780	1BR-1	ST. CLAIR	22	10
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 5  
16 SHEETS



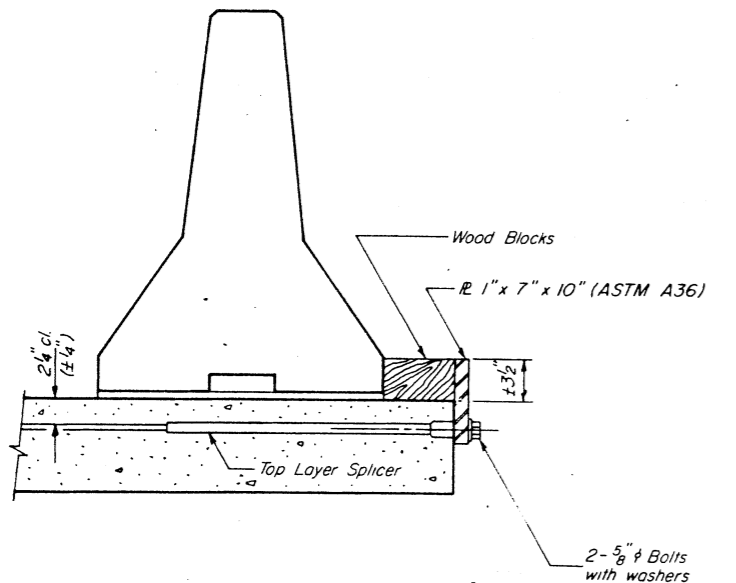
When "A" is 6" or less, the temporary concrete barrier shall be anchored to new slab in accordance with Detail I or Detail II. No anchorage required when "A" is greater than 6".

**NOTES**

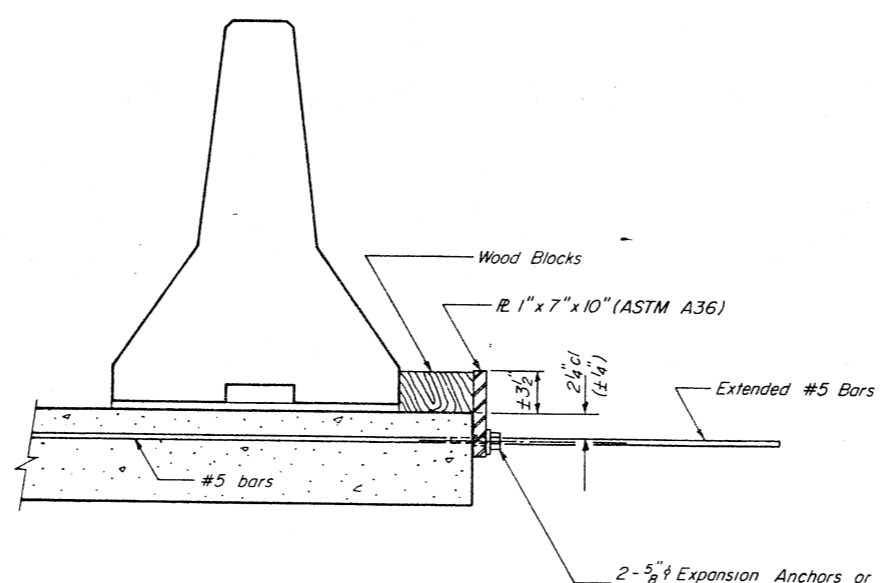
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x 10" steel  $\mathbb{R}$  to the top layer of couplers with 2- $\frac{5}{8}$ "  $\phi$  bolts screwed to coupler at approximate  $\frac{1}{2}$  of each 10'-0" barrier panel.

Detail II - With Extended Reinforcement Bars  
Connect one (1) 1" x 7" x 10" steel  $\mathbb{R}$  to the concrete slab with 2- $\frac{5}{8}$ "  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\frac{1}{2}$  of each 10'-0" barrier panel.

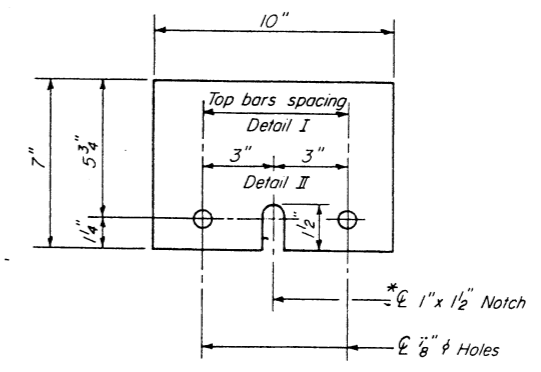
Cost of anchorage is incidental to Temporary Concrete Barrier.



**DETAIL I**  
The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



**DETAIL II**  
The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



**1" x 7" x 10"**  
\* Required only with Detail II

DESIGNED <i>Prima Baliva</i>	EXAMINED <i>James H. Kaufman</i>
CHECKED <i>Rumallu</i>	PASSED <i>[Signature]</i>
DRAWN <i>Baliva</i>	APPROVED <i>[Signature]</i>
CHECKED <i>RW</i>	DIRECTOR OF HIGHWAYS

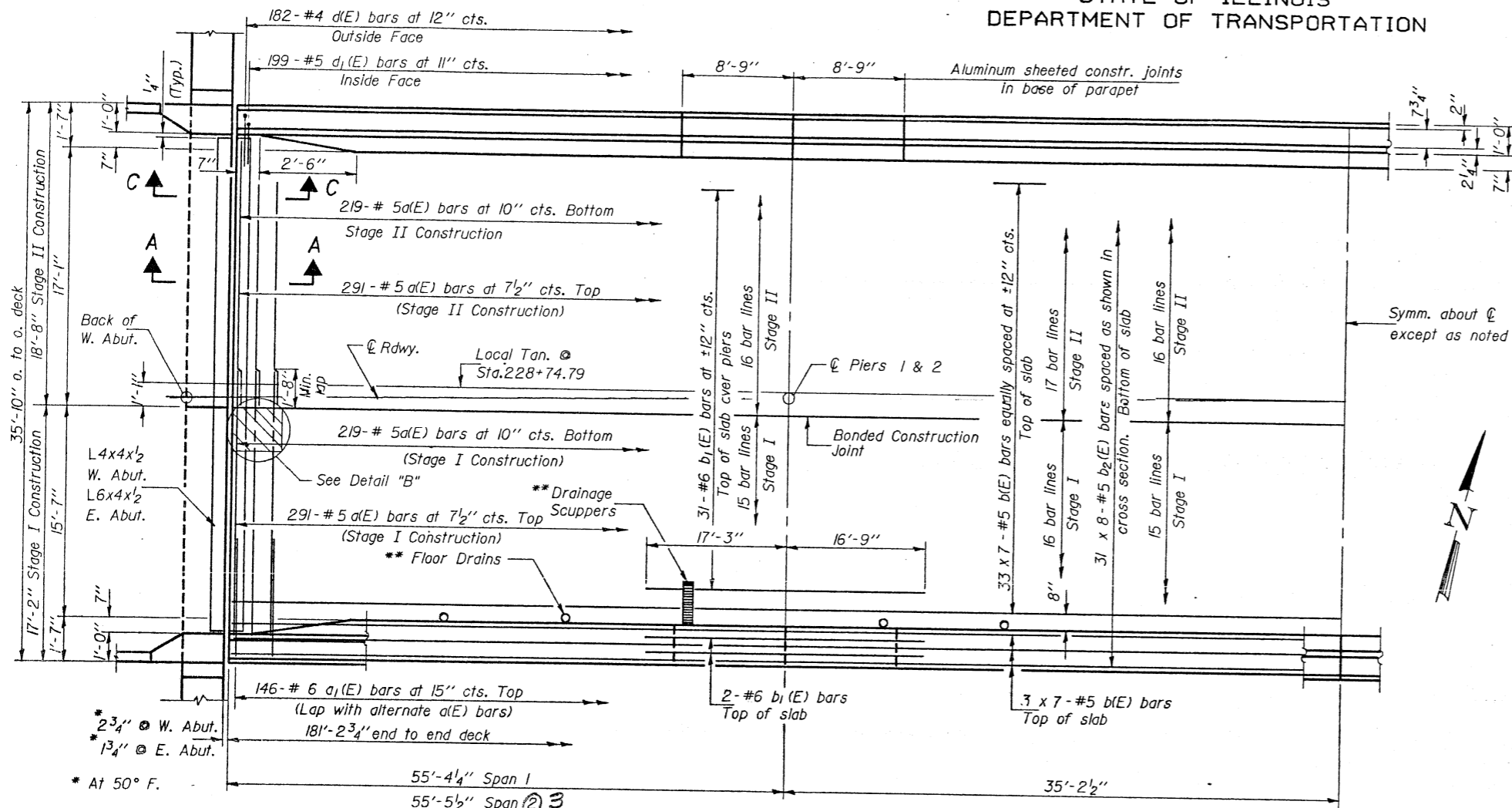
R-27 6-15-83

TEMPORARY CONCRETE BARRIER FOR  
STAGE CONSTRUCTION  
F.A.S. Rte. 1780 Sec. 30-1BR-1  
ST. CLAIR COUNTY  
Sta. 228+74.73

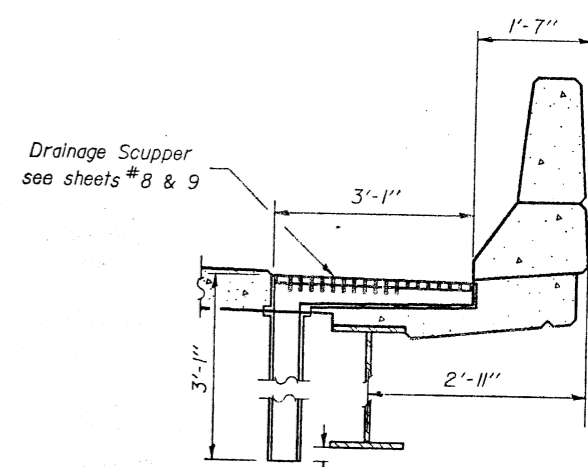
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1780	IBR-1	ST. CLAIR	22	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

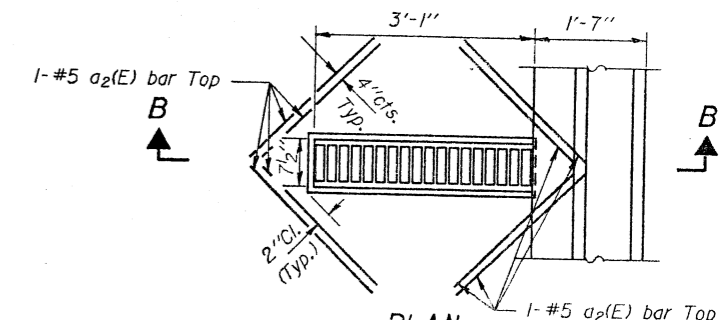
SHEET NO. 6  
16 SHEETS



HALF PLAN



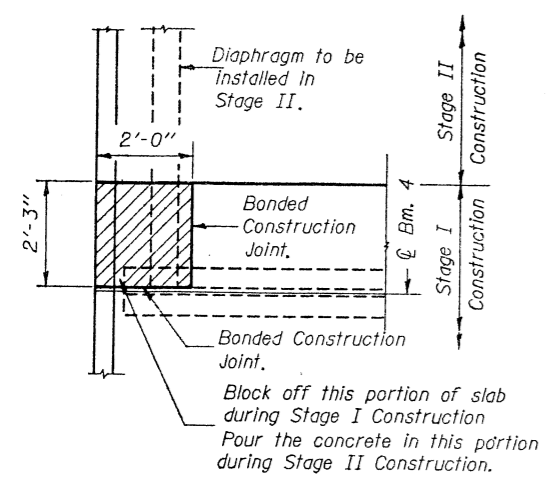
SECTION B-B



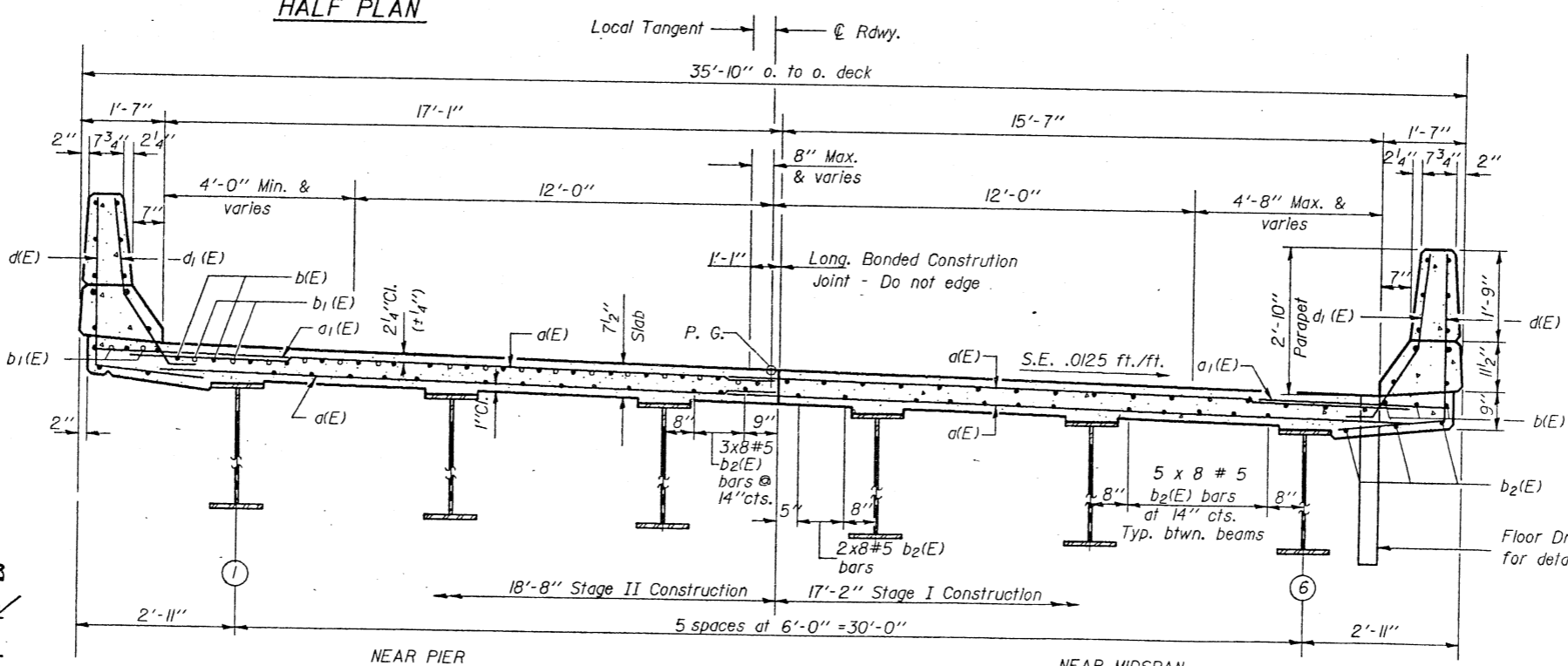
PLAN

DRAINAGE SCUPPER DETAILS

Notes: See sheet # 7 for superstructure details Bill of Material and Sec's. A-A & C-C Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line. Min. Lap #5 bars = 1'-8"



DETAIL "B"



CROSS SECTION (Looking East)

DESIGNED	Domino Balon
CHECKED	R. W. Matton
DRAWN	Mercado
CHECKED	Rum

OCT. 25 1983

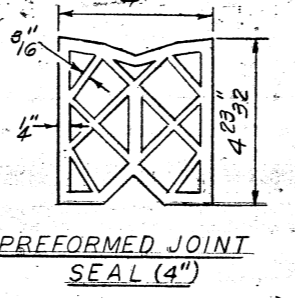
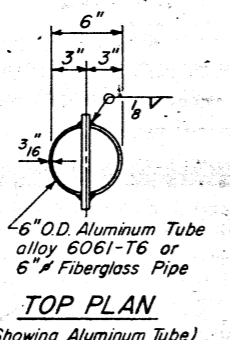
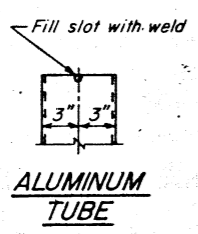
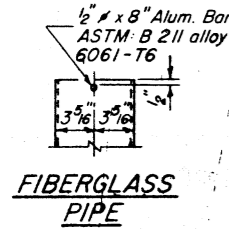
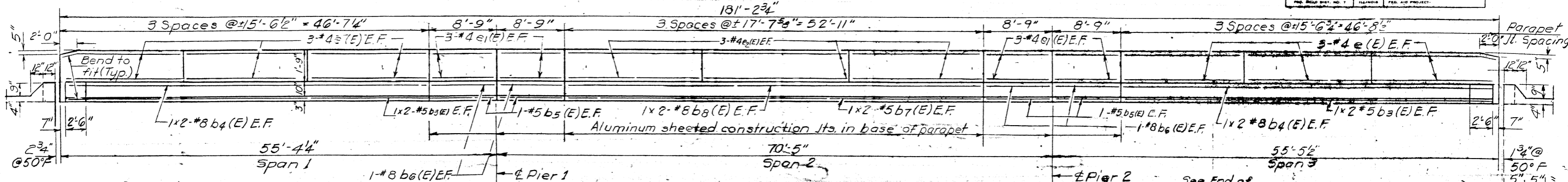
EXAMINED James J. Rayburn

PASSED

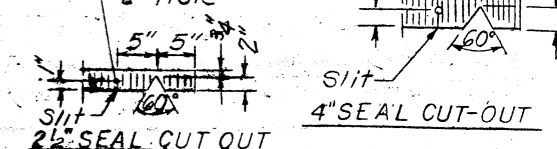
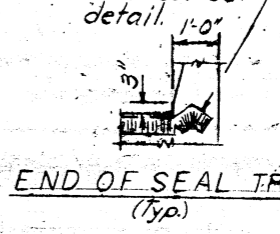
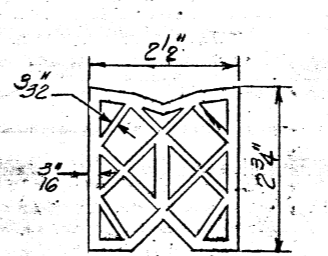
APPROVED

DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE  
F.A.S. RTE. 1780 SEC. 30-IBR-1  
ST. CLAIR COUNTY  
STA. 228 + 74.79

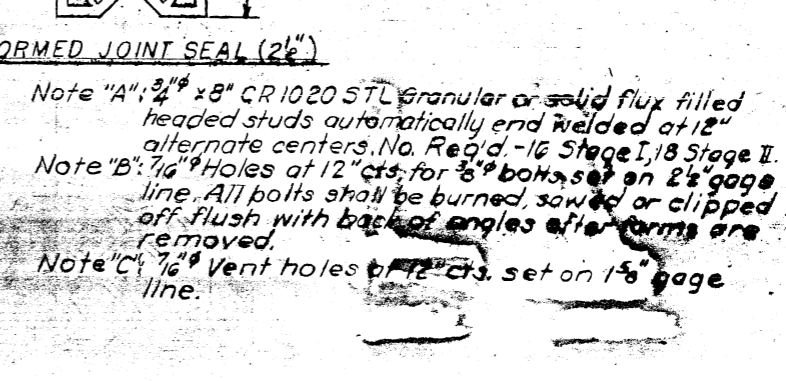
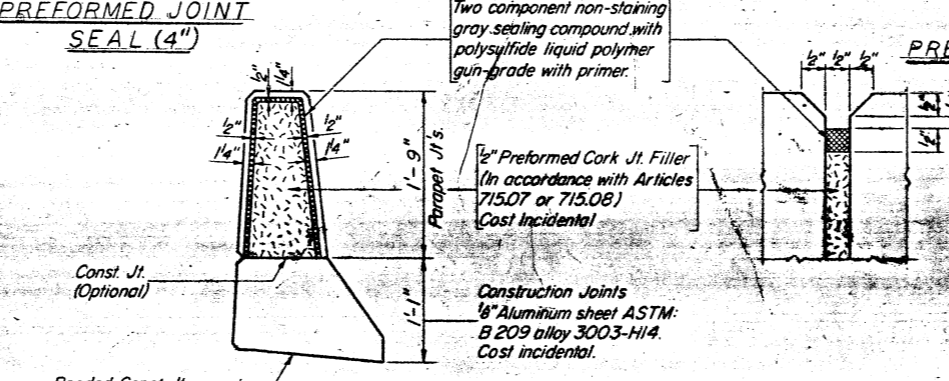
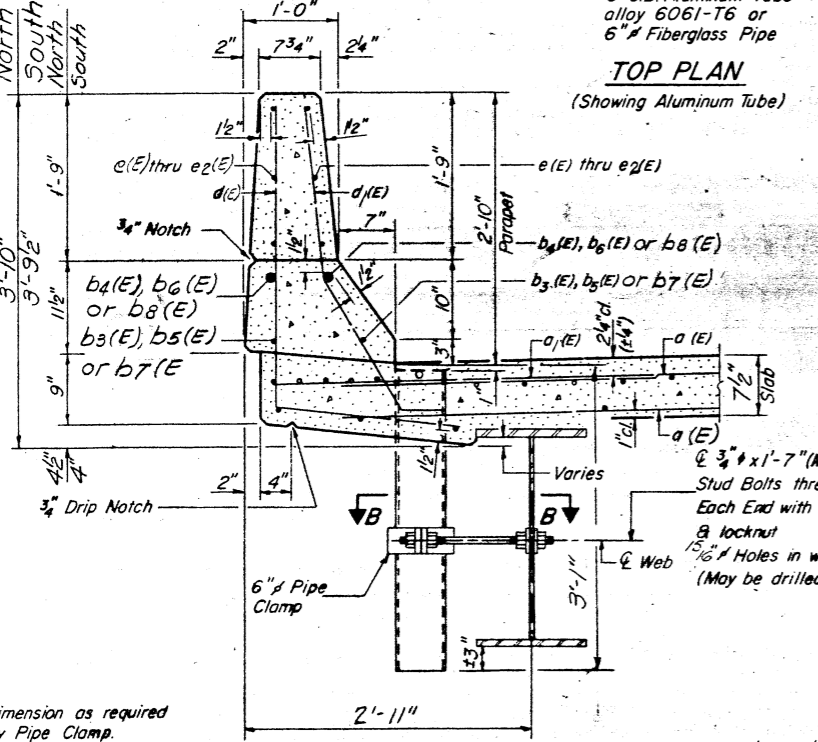


**INSIDE ELEVATION OF PARAPET**  
E.F. = Each Face  
Min. laps - #5 bars - 2'-2"  
#8 bars - 4'-0"  
Bars designated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.

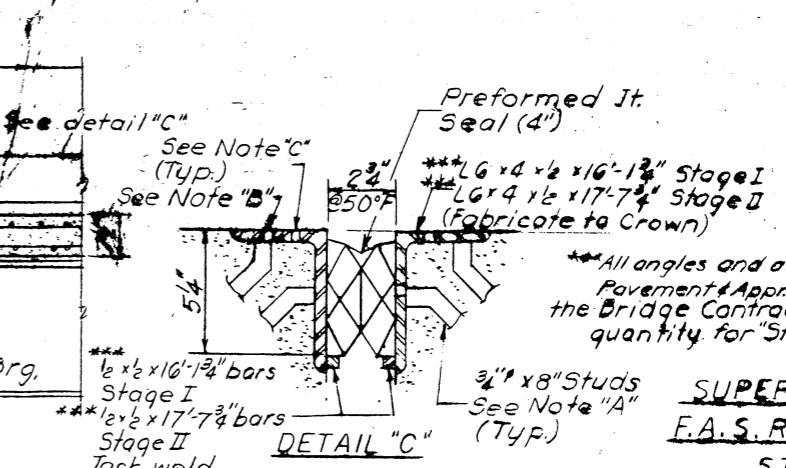
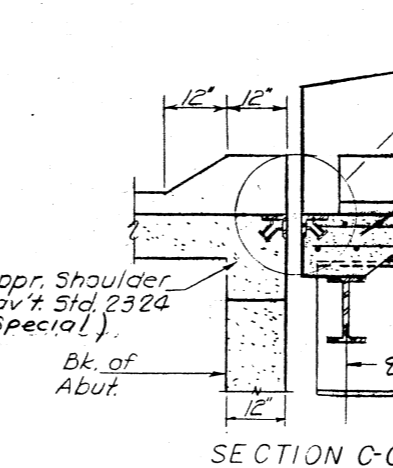
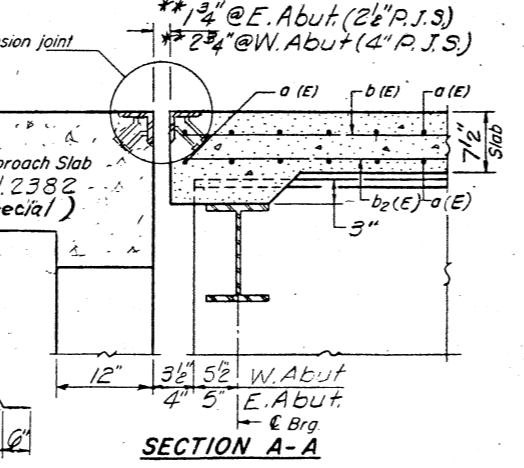
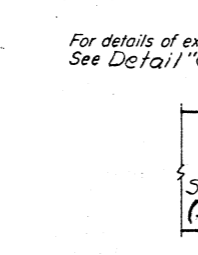
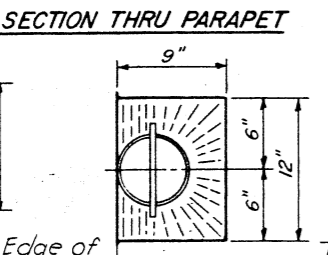
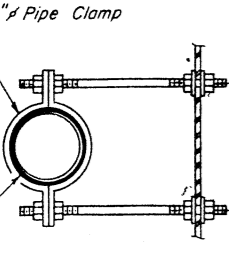
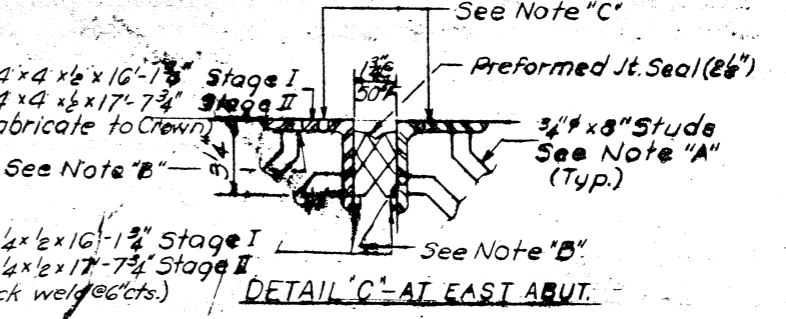


**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	1020	#5	17'-10"	—
a1(E)	292	#6	4'-0"	—
a2(E)	16	#5	2'-0"	—
b1(E)	273	#5	27'-6"	—
b2(E)	70	#6	31'-0"	—
b3(E)	233	#5	24'-3"	—
b4(E)	18	#5	24'-6"	—
b5(E)	10	#5	25'-9"	—
b6(E)	16	#5	8'-0"	—
b7(E)	16	#8	8'-0"	—
b8(E)	8	#5	27'-9"	—
b9(E)	8	#8	28'-9"	—



**Note:**  
The exterior surfaces of the floor drains shall be painted with one coat of the Basic Lead Silica Chromate Primer and maroon field coat. Both coats may be applied in the shop with spot painting only in the field. The exterior surface of the aluminum pipe shall be cleaned and given a wash coat pretreatment in accordance with Steel Structures Painting Councils Spec. SSPC-SPI & SSPC-FT3 prior to painting.  
Fiberglass pipe shall conform to ASTM D2996, with short time rupture hoop tensile stress of 30,000 psi, minimum. The surface of the fiberglass pipe shall be free of bond inhibiting agents.



Bar	No.	Size	Length	Shape
a(E)	364	#4	5'-2"	L
a1(E)	398	#5	3'-11"	L
b(E)	72	#4	15'-3"	—
b1(E)	48	#4	8'-6"	—
b2(E)	36	#4	17'-4"	—

Reinforcement Bars (Epoxy Coated) Lbs. 45600  
Class X Concrete Cu Yds. 195.5

Reinforcement bars designated (E) shall be epoxy coated.  
All angles and attached bars to be used in Appr. Pavement & Appr. Shoulder drains to be supplied by the Bridge Contractor and are included in the quantity for Structural Steel!

**SUPERSTRUCTURE DETAILS**  
F.A.S. RTE. 1780 SEC. 30-1BR-1  
ST. CLAIR COUNTY  
STA. 228+74.75

DESIGNED *Ramiro Palencia*  
CHECKED *Ramiro Palencia*  
DRAWN *Mercado*  
CHECKED *RUM*

EXAMINED *James J. Rauhman*  
PASSED *James J. Rauhman*  
APPROVED *James J. Rauhman*  
DIRECTOR OF HIGHWAYS

BAR d(E) BAR d1(E)

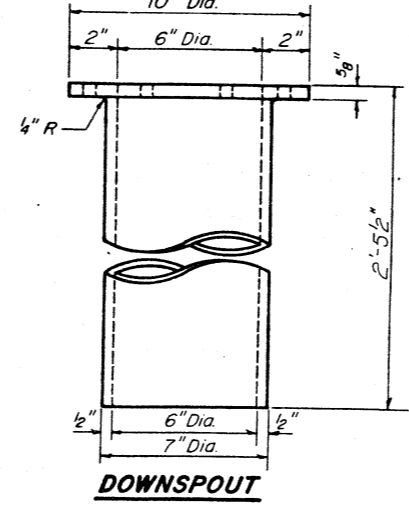
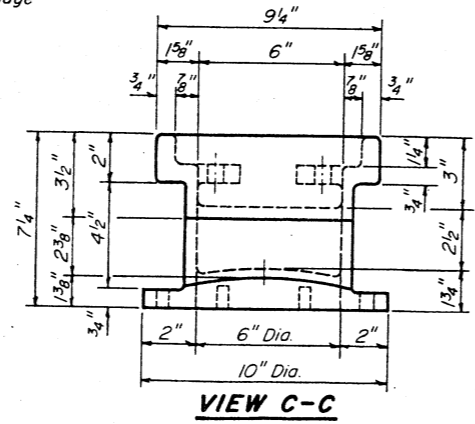
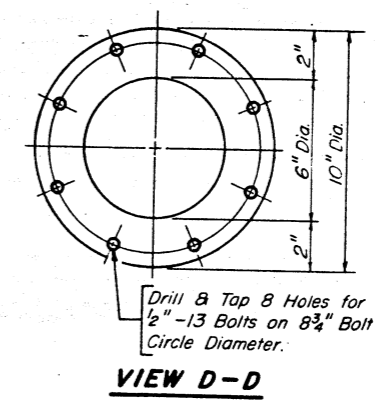
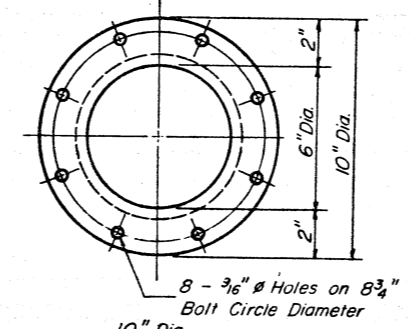
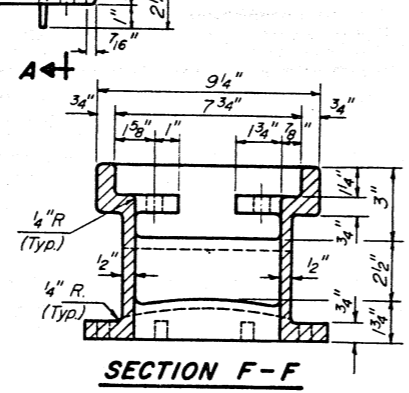
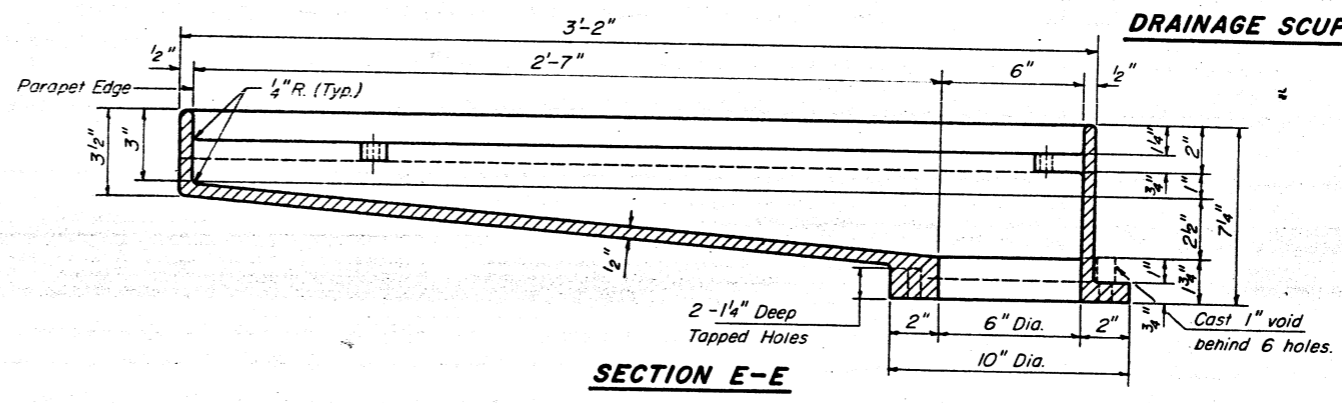
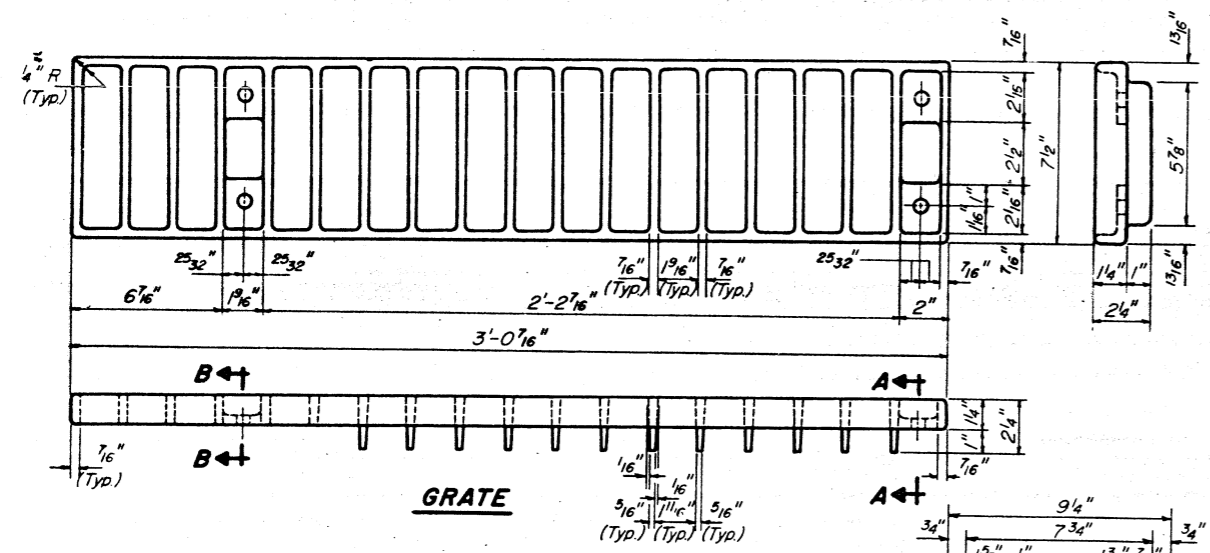
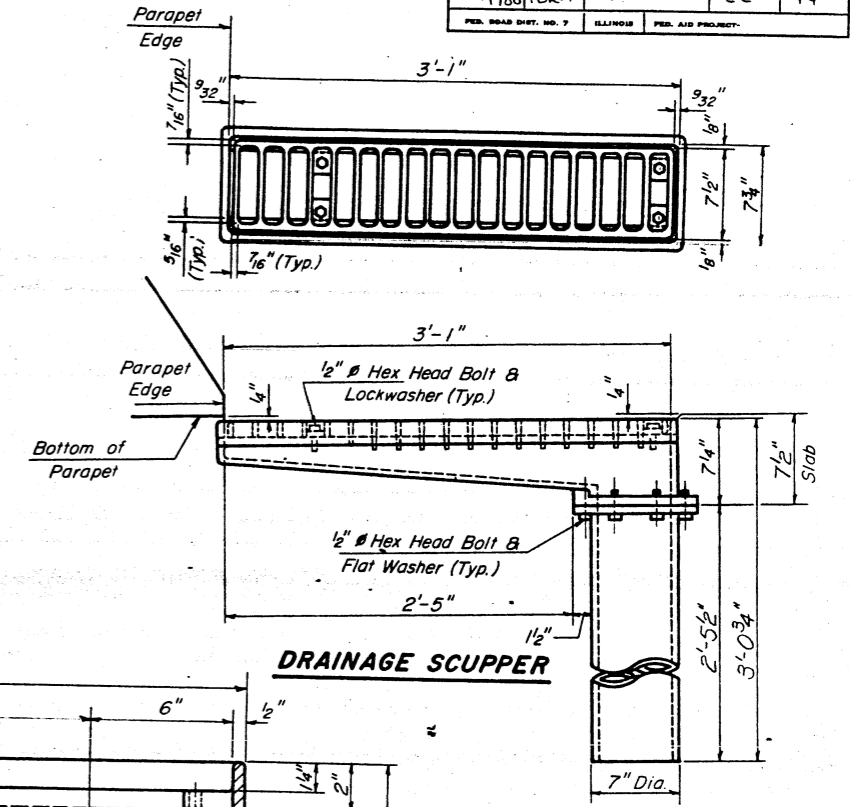
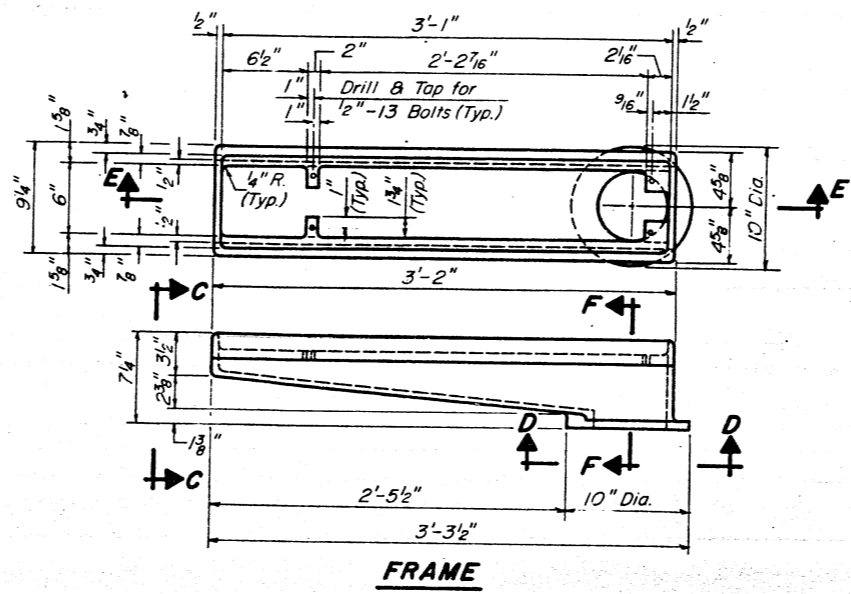
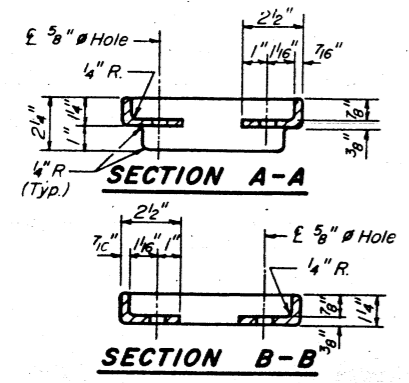




STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1780	1BR-1	ST. CLAIR	22	14
ILLINOIS		FED. AID PROJECT		

SHEET NO. 9  
16 SHEETS



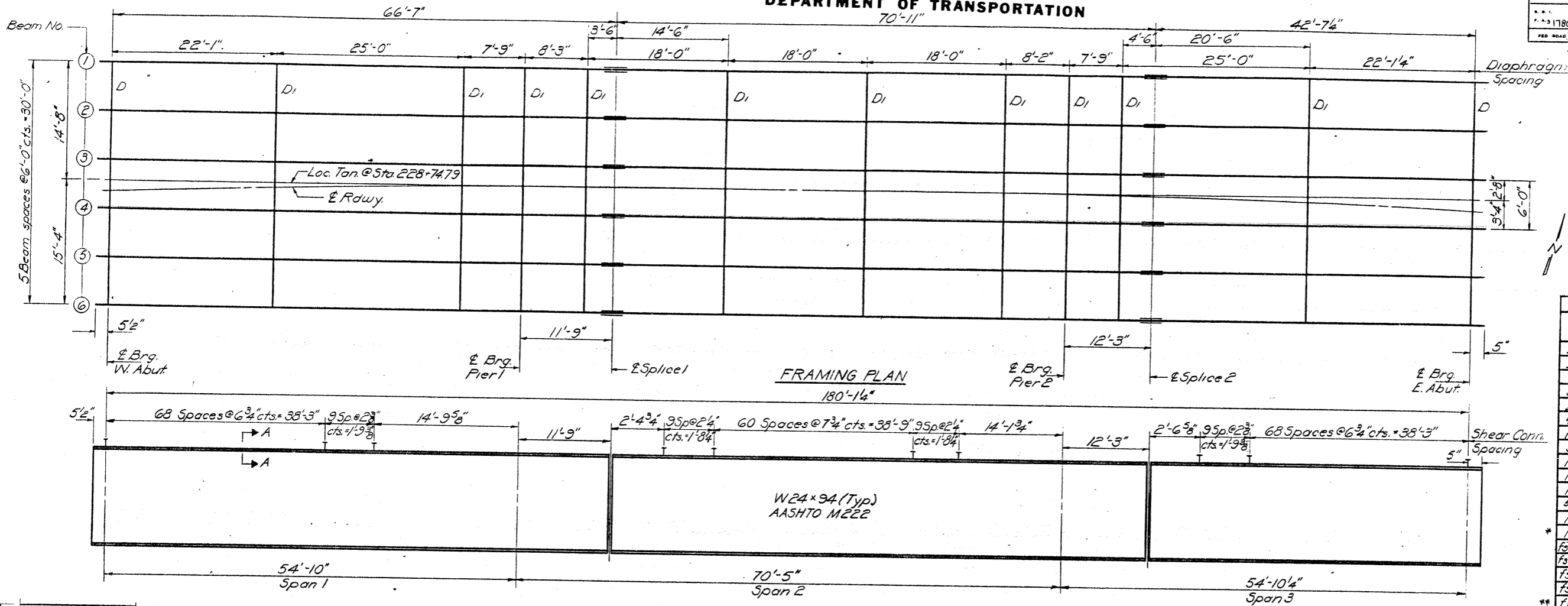
Notes:  
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M-105, Class 30.  
Bolts and washers shall conform to the requirements of A.S.T.M.: A-307.  
All bolts and washers shall be galvanized in accordance with A.A.S.H.T.O.: M-232.  
As an alternate bolts and washers may be stainless steel conforming to the requirements of A.S.T.M.: A-193, Type 304.  
Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".  
The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

DESIGNED *R. Baliva*  
CHECKED *R. Walther*  
DRAWN *Baliva*  
EXAMINED *James Taylor*  
PASSED *[Signature]*  
APPROVED *[Signature]*  
DIRECTOR OF HIGHWAYS

Oct 25 1983

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FA.S.Rtc.1780	1BR-1	ST. CLAIR	22	15	16 SHEETS
FED. ROAD DIST. NO. 3		ILLINOIS		FED. AID PROJECT	

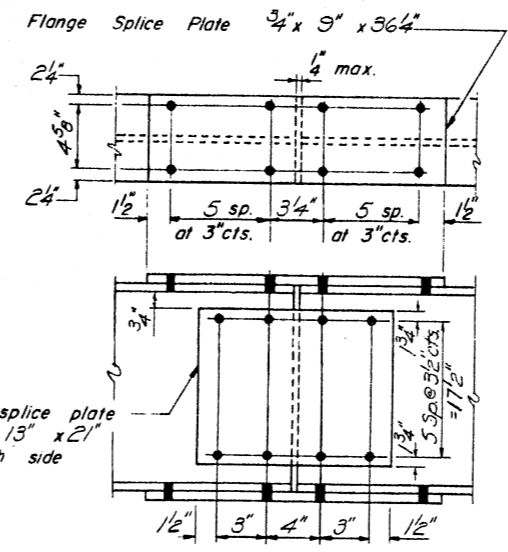
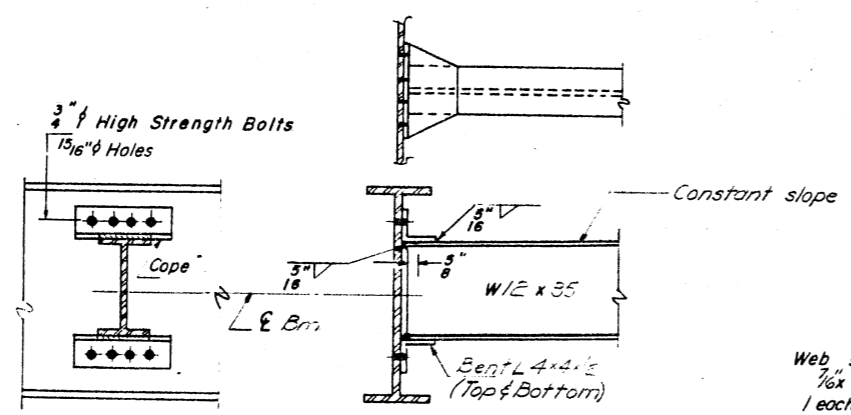
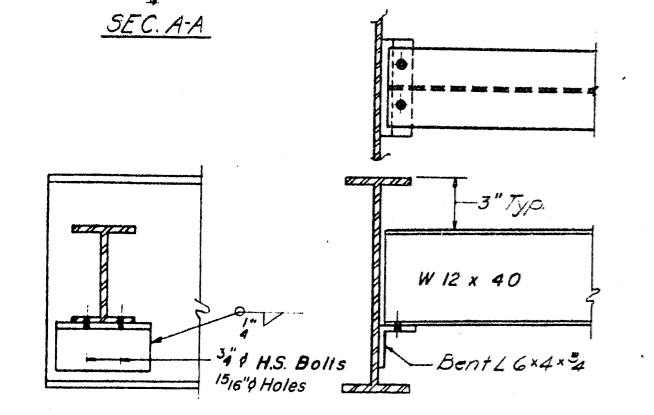
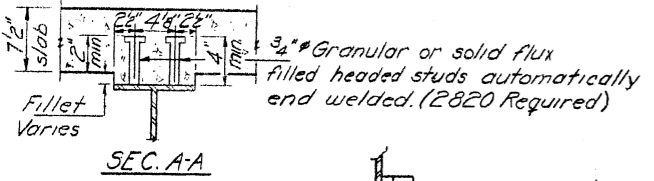


INTERIOR BEAM REACTION TABLE

	Abuts.	Piers
R <sub>D+S<sub>2</sub></sub> (k)	19.8	66.6
R <sub>E</sub> (k)	31.7	38.9
R <sub>Imp</sub> (k)	8.8	10.4
R <sub>Total</sub> (k)	60.3	115.9

INTERIOR BEAM MOMENT TABLE

	.45p.1 or .65p.3	Piers	.55p.2
I <sub>s</sub> (in <sup>4</sup> )	2700	2700	2700
I <sub>c</sub> (in <sup>4</sup> )	8081	-	8081
S <sub>s</sub> (in <sup>3</sup> )	222	222	222
S <sub>c</sub> (in <sup>3</sup> )	346	-	346
Z (in <sup>3</sup> )	253	253	253
M <sub>p</sub> (k-ft)	628	363	628
M <sub>E</sub> (k-ft)	149	322	179
M <sub>SE</sub> (k-ft)	.270	-	.270
M <sub>SE</sub> (k-ft)	68	-	94
M <sub>SE</sub> (k-ft)	344	173	411
M <sub>Imp</sub> (k-ft)	96	46	105
S <sub>3</sub> (M <sub>u</sub> I) (k-ft)	733	365	860
M <sub>u</sub> (k-ft)	1235	893	1472
M <sub>u</sub> (k-ft)	1978	1054	1978
f <sub>s</sub> non comp (ksi)	8.1	15.3	9.7
f <sub>s</sub> comp (ksi)	2.4	-	3.3
f <sub>s</sub> (k <sub>u</sub> I) (ksi)	25.4	17.3	29.8
f <sub>s</sub> overload (ksi)	35.9	32.6	42.8
f <sub>s</sub> Total (ksi)	46.7	42.4	55.6
VR	44	-	38



Note: For Notch Toughness Requirements, see General Notes on Sheet #1.

\*M<sub>u</sub> = Full Plastic Moment Capacity for Compact, Braced section.  
 \*\*Non-Compact section  
 M<sub>u</sub> (Applied Moment) ≤ 1.3[M<sub>p</sub> + M<sub>s<sub>2</sub></sub> + S<sub>3</sub>(M<sub>u</sub>I)]  
 I<sub>s</sub> and S<sub>s</sub> are the moment of inertia and section modulus of the steel section used in computing f<sub>s</sub> (Total and Overload).  
 I<sub>c</sub> and S<sub>c</sub> are the moment of inertia and section modulus of the composite section used in computing f<sub>s</sub> (Total and Overload).  
 VR is the maximum ± impact shear range in span.  
 Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.  
 The Fully Plastic Moment Capacity (M<sub>u</sub>) is computed according to AASHTO 1.7.62(A) & 1.7.62(A).  
 f<sub>s</sub>(Total) is the sum of the stresses due to 1.3[M<sub>p</sub> + M<sub>s<sub>2</sub></sub> + S<sub>3</sub>(M<sub>u</sub>I)]  
 f<sub>s</sub>(Overload) is the sum of the stresses due to M<sub>p</sub> + M<sub>s<sub>2</sub></sub> + S<sub>3</sub>(M<sub>u</sub>I).

TOP OF BEAM ELEVATIONS

Loc.	Bm	1	2	3	4	5	6
E Brq. W. Abut.		437.62	437.55	437.47	437.40	437.32	437.24
E Pier 1		437.71	437.64	437.56	437.49	437.41	437.34
E Splice 1		437.73	437.66	437.58	437.50	437.43	437.35
E Pier 2		437.71	437.63	437.56	437.48	437.41	437.33
E Splice 2		437.70	437.63	437.55	437.48	437.40	437.33
E Brq. E. Abut.		437.67	437.59	437.52	437.44	437.37	437.29

For fabrication purposes only

DESIGNED: *Rimmi Baliva*  
 CHECKED: *R. Maltus*  
 DRAWN: *Baliva*  
 CHECKED: *Rumz*

EXAMINED: *James L. Korburn*  
 PASSED: *[Signature]*  
 APPROVED: *[Signature]*

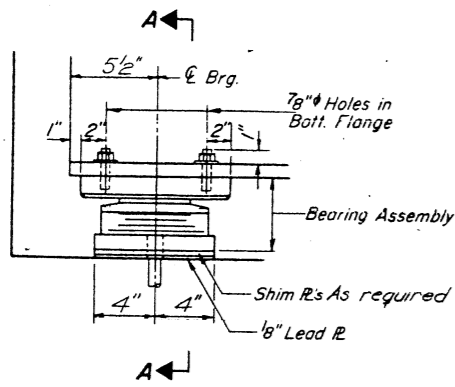
Oct 25 1983

Note: Two hardened washers shall be required over all 15/16" holes. All contact surfaces of joints shall be free of paint or lacquer.

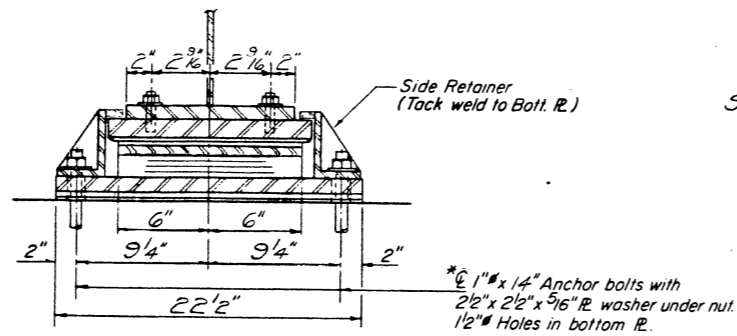
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30-	1780	ST. CLAIR	22	16
F.A.S. 1780-1B-1				
ILLINOIS FED. AID PROJECT				

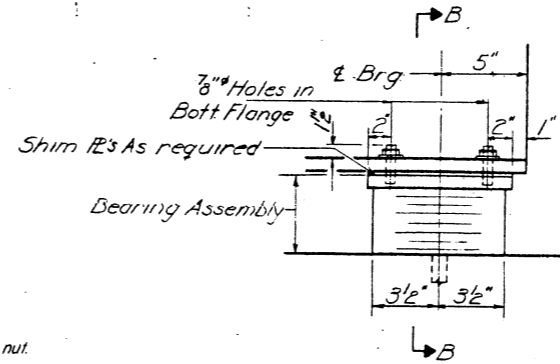
SHEET NO. 11  
16 SHEETS



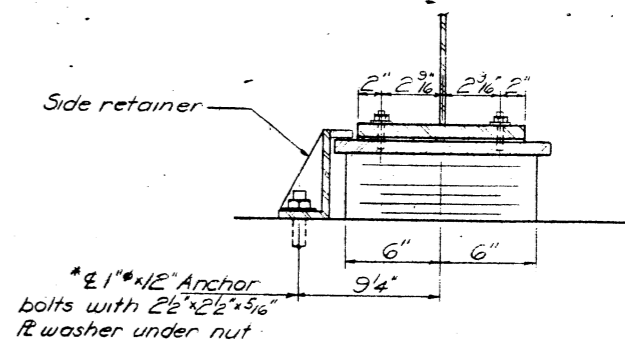
ELEVATION AT ABUT.



SECTION A-A



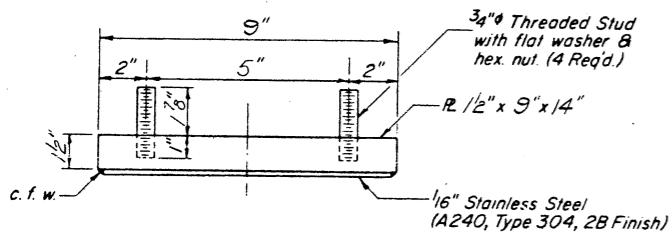
ELEVATION AT ABUT



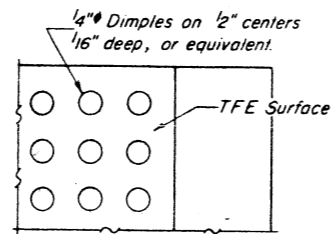
SECTION B-B

**TYPE II TFE ELASTOMERIC EXP. BRG.**  
AT WEST ABUTMENT

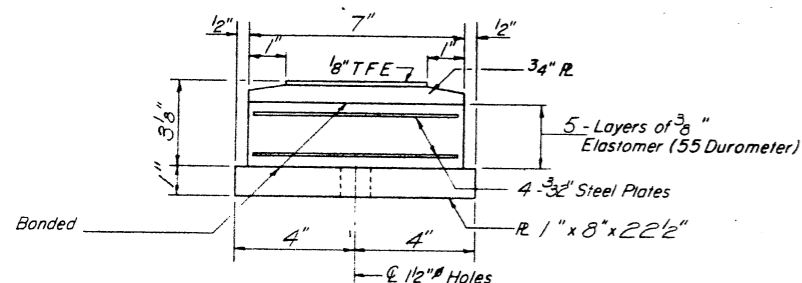
**TYPE I ELASTOMERIC EXP. BRG. - AT EAST ABUTMENT**



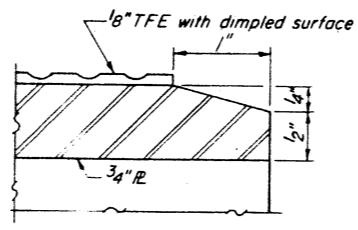
TOP BEARING ASSEMBLY



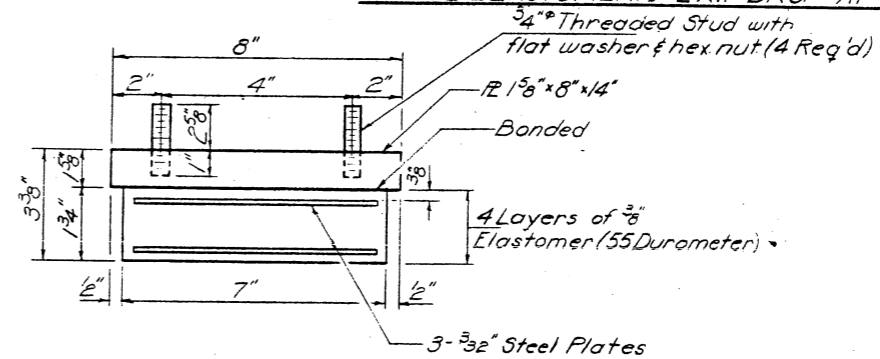
PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE



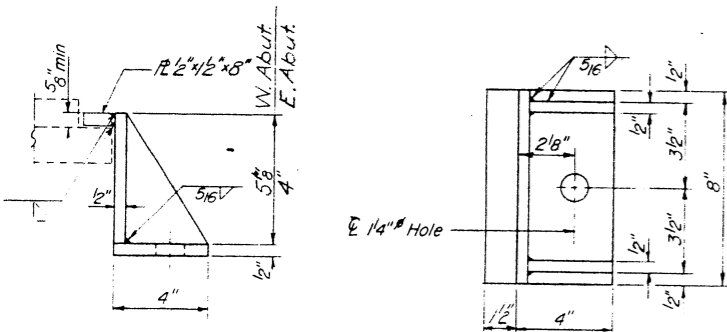
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly

\*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. For details showing drilled anchor bolts see sheet # 13.

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.

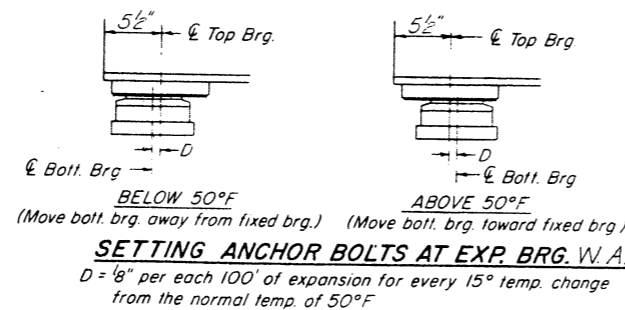


SIDE RETAINER

No. Required - 12 W. Abut, 6 E. Abut

DESIGNED	James T. Baliva
CHECKED	R. W. [Signature]
DRAWN	Baliva
CHECKED	R. W. [Signature]

OCT 25 1983  
EXAMINED James T. Baliva  
PASSED [Signature]  
APPROVED [Signature]  
DIRECTOR OF HIGHWAYS

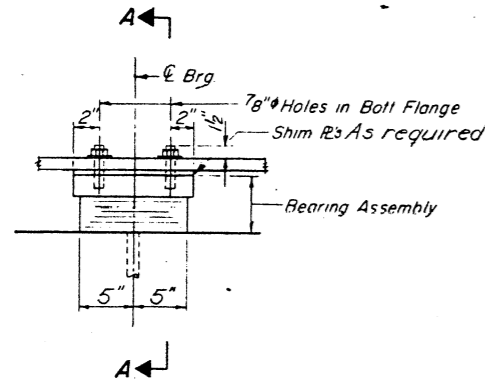


SETTING ANCHOR BOLTS AT EXP. BRG. W. ABUT  
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F

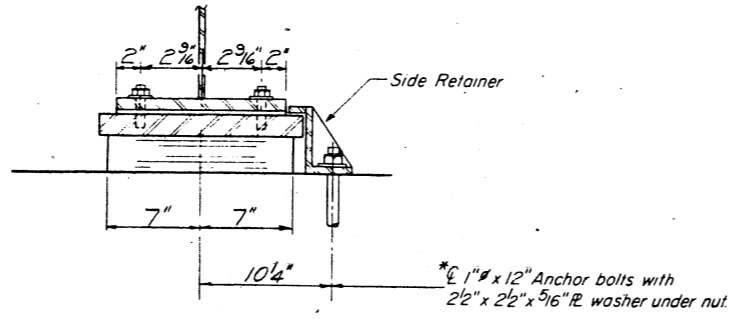
ABUTMENT BEARING DETAILS  
F.A.S. Rte. 1780 Sec. 30-1B-1  
ST. CLAIR COUNTY  
Sta. 229+74.75

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

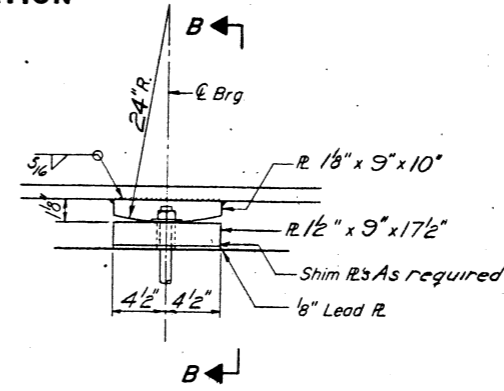
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12 16 SHEETS
1780	1BR-1	ST. CLAIR	22	17	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



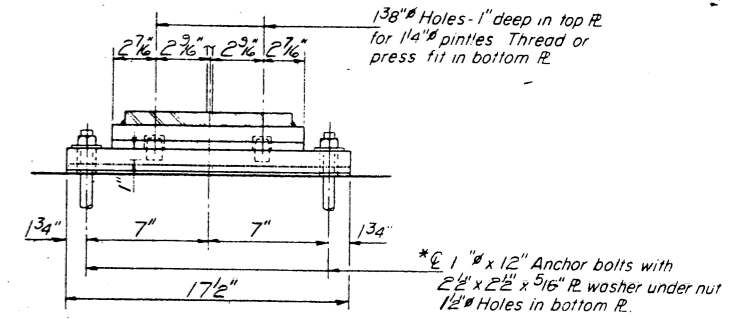
ELEVATION AT PIER 1



SECTION A-A

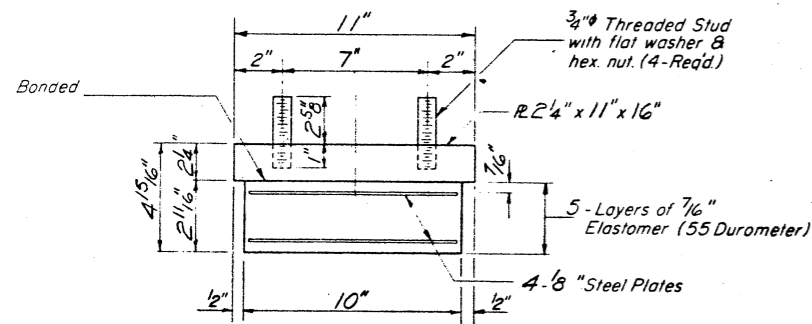


ELEVATION AT PIER 2



SECTION B-B

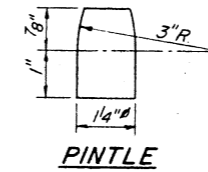
TYPE I ELASTOMERIC EXP. BRG.



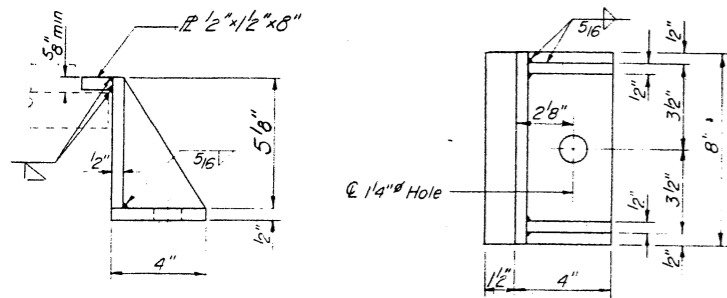
BEARING ASSEMBLY

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

\*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry. For details showing drilled Anchor Bolts see sheet #13.



PINTLE



SIDE RETAINER

6 Required

DESIGNED	Domine Boliva
CHECKED	R. M. M.
DRAWN	Boliva
CHECKED	R. M. M.

EXAMINED	James J. Keshorn	1983
PASSED		
APPROVED		

PIER BEARING DETAILS  
F.A.S. Rte. 1780 Sec. 30-1BR-1  
ST. CLAIR COUNTY  
Sta. 228+74.75

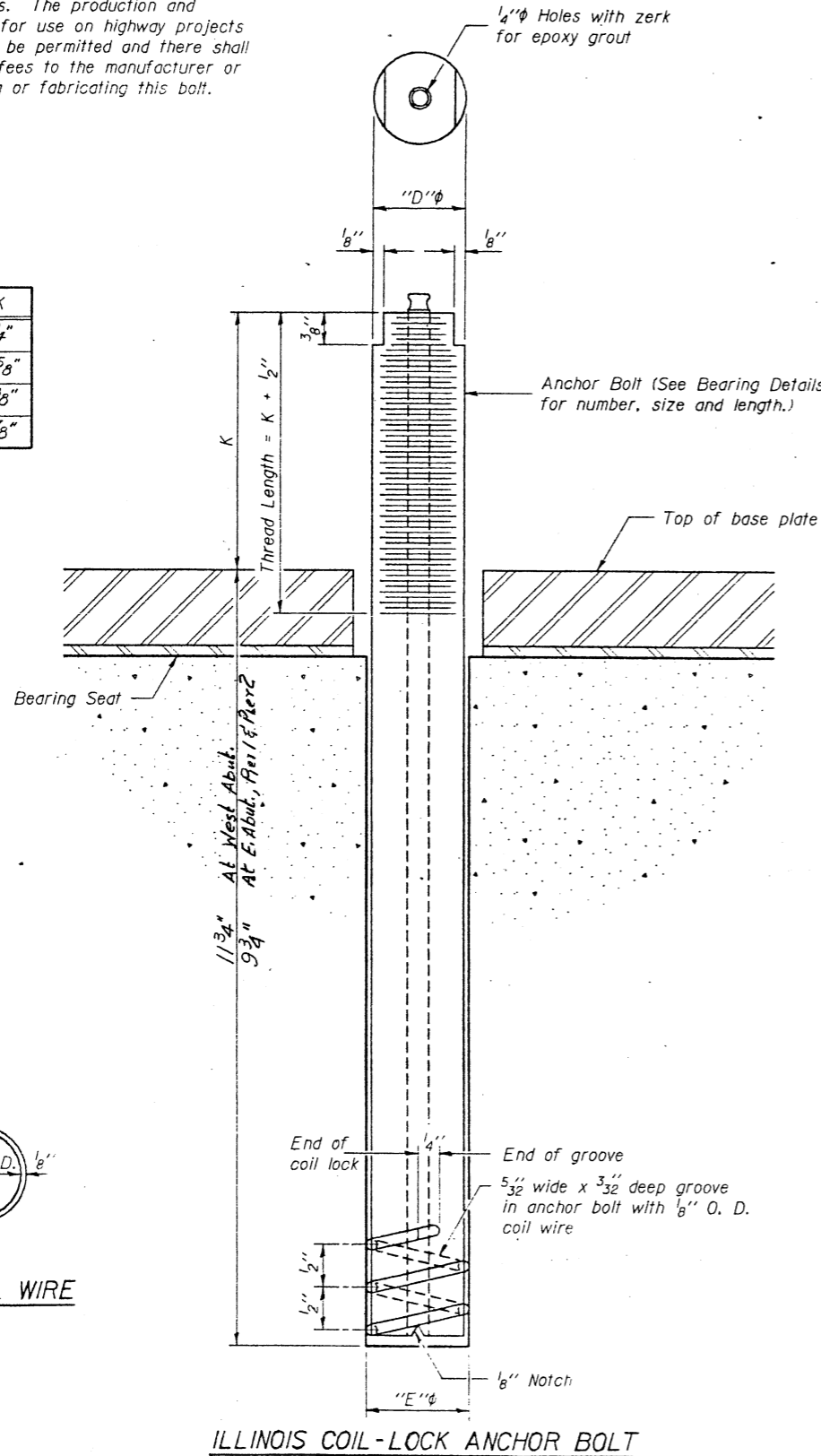
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1780	1BR-1	ST. CLAIR	22	18
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 13  
16 SHEETS

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K
1"	1 1/8"	1 3/16"	2 1/4"
1 1/2"	1 5/8"	1 5/16"	2 5/8"
2"	2 1/8"	1 3/16"	3 3/8"
2 1/2"	2 5/8"	2 5/16"	3 7/8"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.  
The coil wire shall be made of any suitable soft steel wire.  
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.  
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.  
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.  
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.  
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:  
1. A threaded rod stud with nut and washer conforming to ASTM A307.  
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

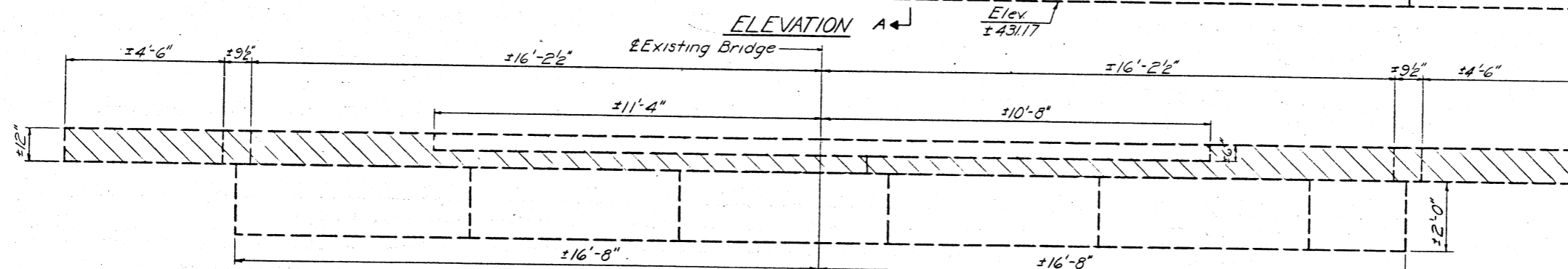
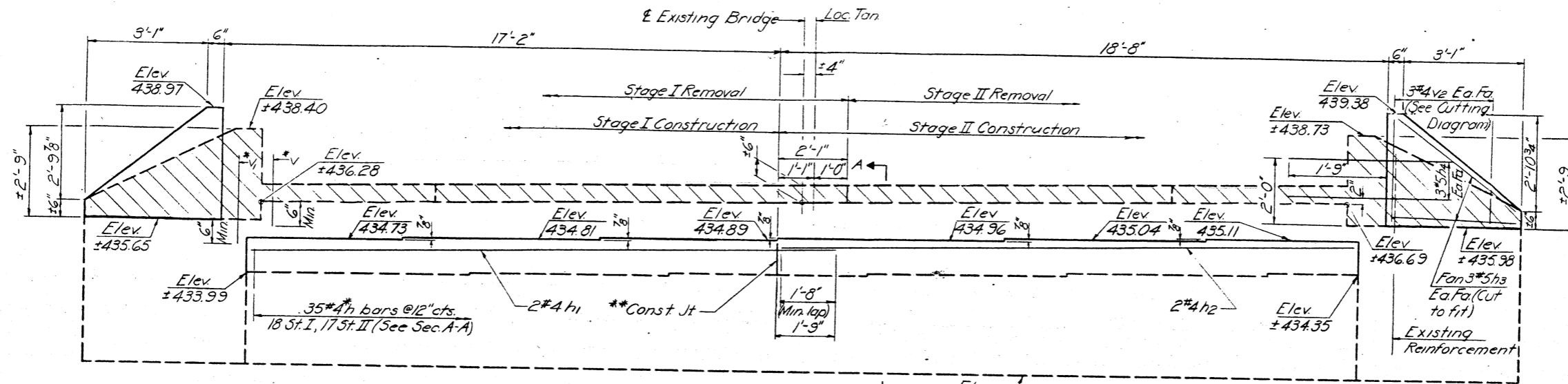
ANCHOR BOLT DETAILS FOR BEARINGS  
F.A.S. Rte. 1780 Sec. 30-15F-1  
ST. CLAIR COUNTY  
Sta. 228+74.75

DESIGNED <i>Primo Baliva</i>	EXAMINED <i>James J. Keuborn</i>
CHECKED <i>R. W. W.</i>	PASSED <i>[Signature]</i>
DRAWN <i>Baliva</i>	APPROVED <i>[Signature]</i>
CHECKED <i>R. W. W.</i>	DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

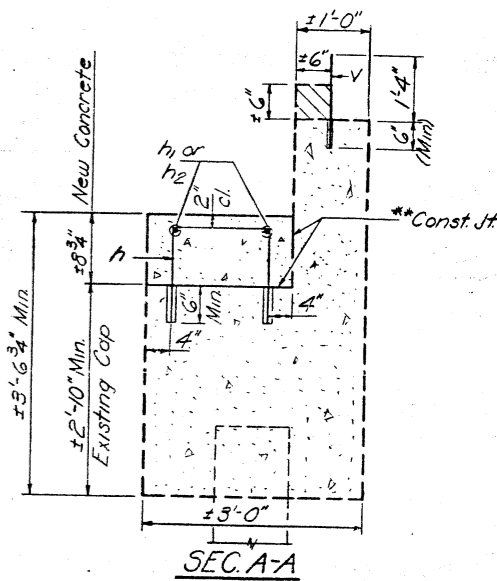
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30-	1780-1BR-1	ST. CLAIR	22	19
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 14  
16 SHEETS

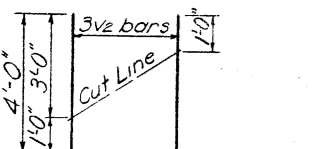


PLAN

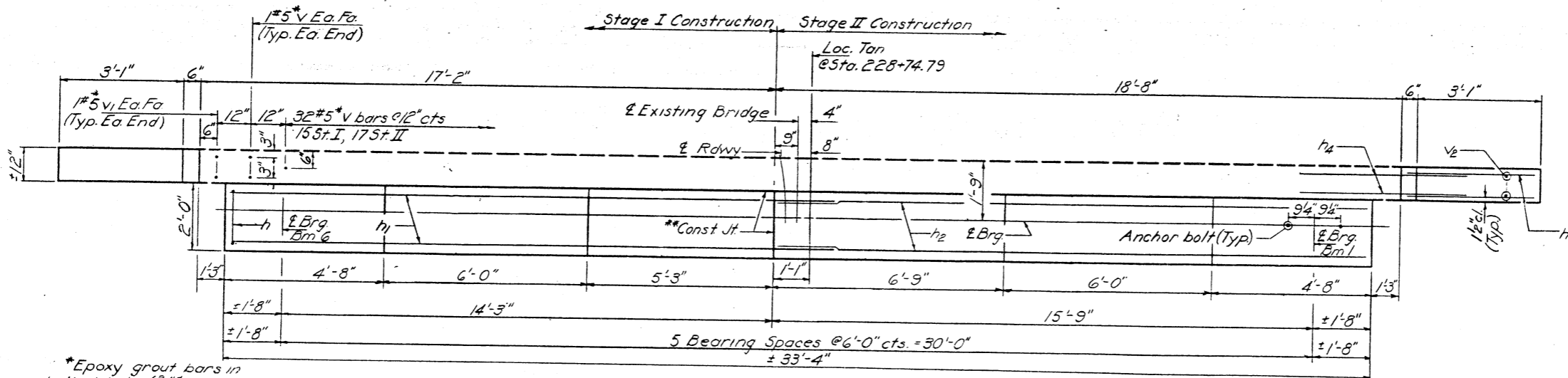
Showing removal limits



SEC. A-A



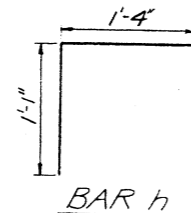
**CUTTING DIAGRAM**  
Order  $V_2$  bars full length, cut as shown and use remainder of bars in other face.  $V_2$  bars to be tied to existing bars.



PLAN

Showing new construction

\*Epoxy grout bars in drilled holes ( $\frac{3}{4}$ " for h bars &  $\frac{5}{8}$ " for  $V_2$  bars) (See Special Provisions)



\*\*Bonded, in accordance with Article 504.13 a(2) of the Standard Specifications.

Notes:  
Hatched areas indicate concrete removal. Existing reinforcement, extending into new construction, shall be cleaned, straightened, and incorporated into new construction. All edges shall have standard  $\frac{3}{4}$ " chamfers

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h	35	#4	3'-6"	□
h1	2	#4	17'-7"	—
h2	2	#4	17'-3"	—
h3	12	#4	4'-3"	—
h4	12	#4	3'-0"	—
v	36	#5	1'-10"	—
v1	4	#5	2'-5"	—
v2	6	#4	4'-0"	—
Class X Concrete		Cu. Yds.	2.4	
Concrete Removal		Cu. Yds.	1.0	
Reinforcement Bars		Lbs.	280	

DESIGNED	<i>R. Baliva</i>
CHECKED	<i>R. M. Mathis</i>
DRAWN	<i>Baliva</i>
CHECKED	<i>R. M. Mathis</i>

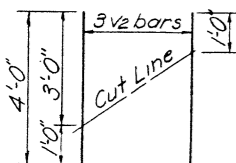
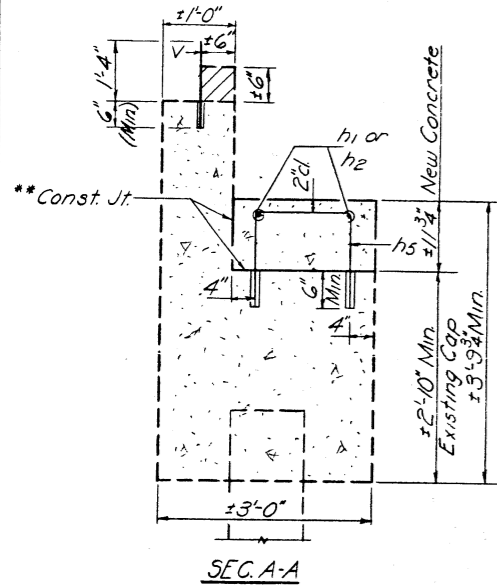
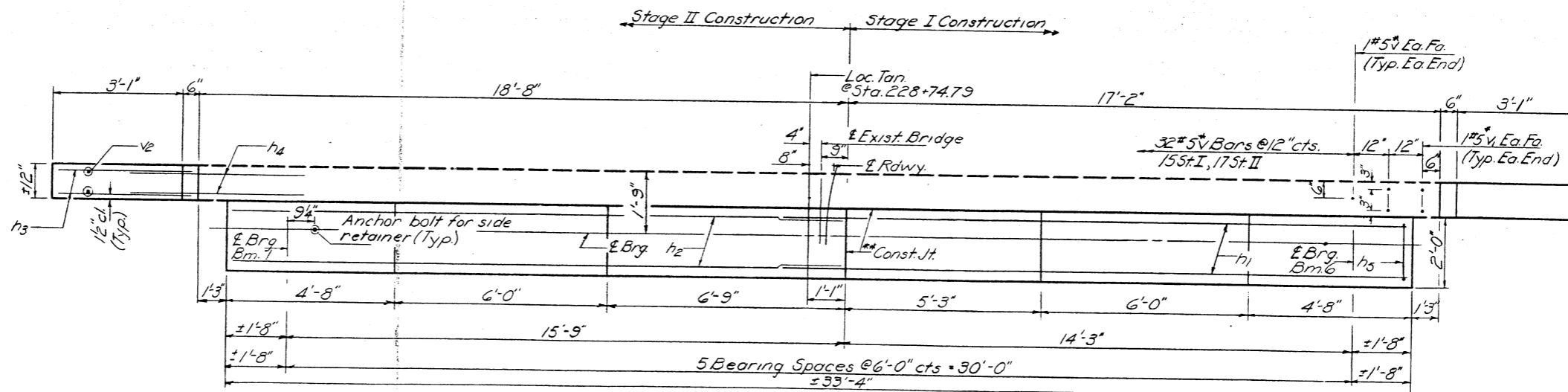
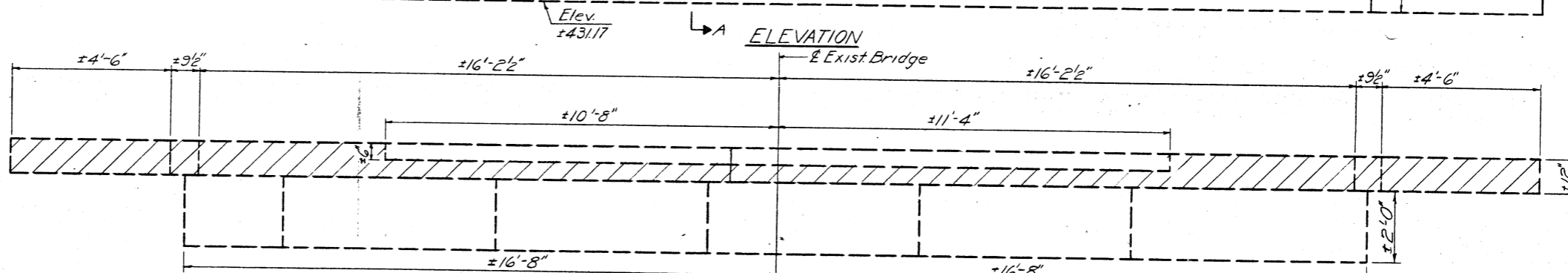
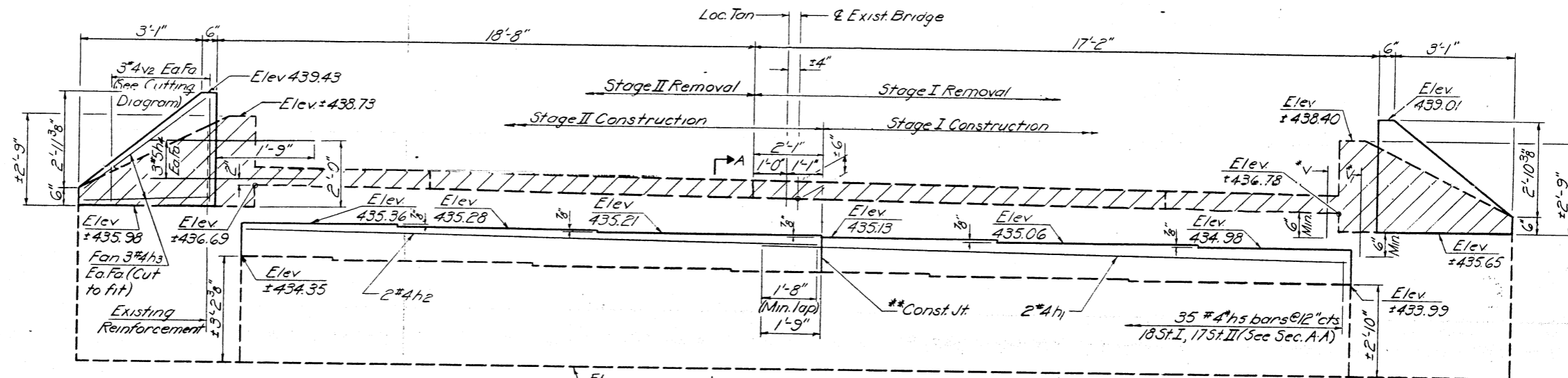
EXAMINED	<i>James J. Kuehn</i>	1983
PASSED	<i>[Signature]</i>	
APPROVED	<i>[Signature]</i>	
DIRECTOR OF HIGHWAYS		

WEST ABUTMENT  
FA S. Rte. 1780 Sec. 30-1BR-1  
ST. CLAIR COUNTY  
Sta. 228+74.79

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P. A. 1780	1BR-1	ST. CLAIR	22	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15  
16 SHEETS



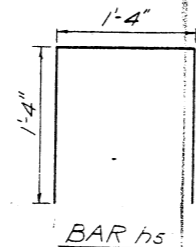
**CUTTING DIAGRAM**  
Order  $\frac{1}{2}$  bars full length, cut as shown and use remainder of bars other face.  $\frac{1}{2}$  bars to be tied to existing bars.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h1	2	#4	17'-7"	—
h2	2	#4	17'-3"	—
h3	12	#4	4'-3"	—
h4	12	#4	3'-0"	—
h5	35	#4	4'-0"	□
v	36	#5	1'-10"	—
v1	4	#5	2'-5"	—
v2	6	#4	4'-0"	—
Class X Concrete		Cu Yds	3.0	
Concrete Removal		Cu Yds	1.0	
Reinforcement Bars		Lbs.	290	

\*\*Bonded, in accordance with Article 504.13 a(2) of the Standard Specifications.

\*Epoxy grout bars in drilled holes ( $\frac{3}{4}$ " for h5 bars,  $\frac{1}{2}$ " for v1, v2 bars) (See Special Provisions) Notes.  
Hatched areas indicate concrete removal. Existing reinforcement, extending into new construction, shall be cleaned, straightened, and incorporated into new construction. All edges shall have standard  $\frac{3}{4}$ " chamfers.



DESIGNED	<i>R. Baliva</i>
CHECKED	<i>R. Mattern</i>
DRAWN	<i>Baliva</i>
CHECKED	<i>R. M.</i>

Oct 25 1963  
EXAMINED *James J. Harburn*  
PASSED *[Signature]*  
APPROVED *[Signature]*  
DIRECTOR OF HIGHWAYS

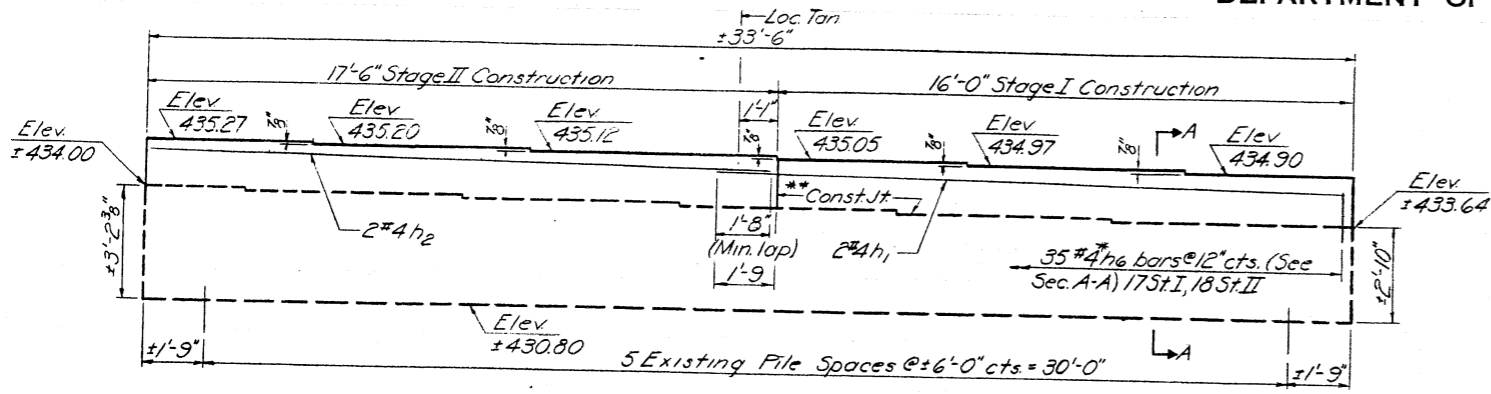
EAST ABUTMENT  
F.A.S. Rte. 1780 Sec. 30-1BR-1  
ST. CLAIR COUNTY  
Sta. 228+74.79



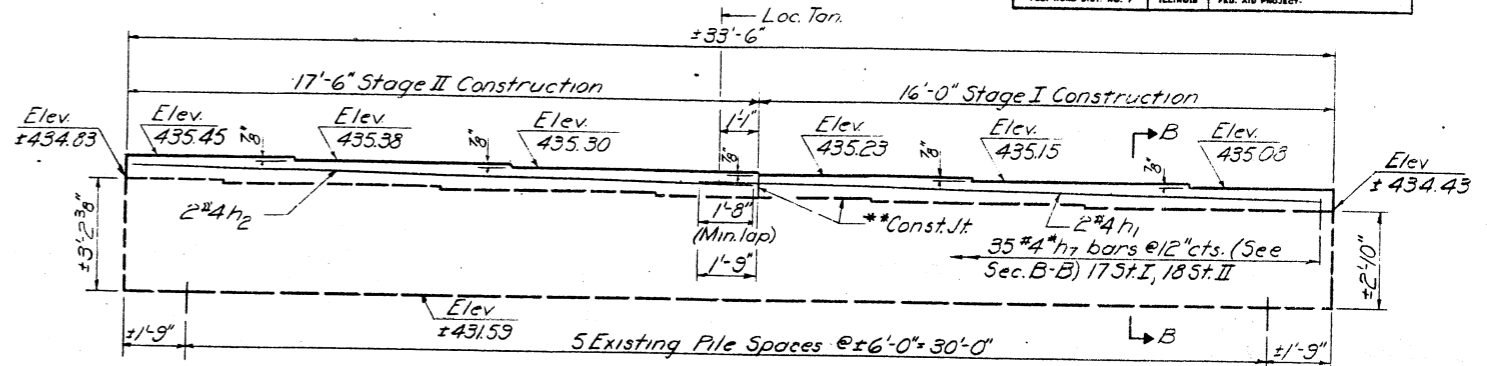
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
30-1	BR-1	ST. CLAIR	22	21
PER. ROAD DIST. NO. 7		ILLINOIS	PER. AID PROJECT	

SHEET NO. 16  
16 SHEETS

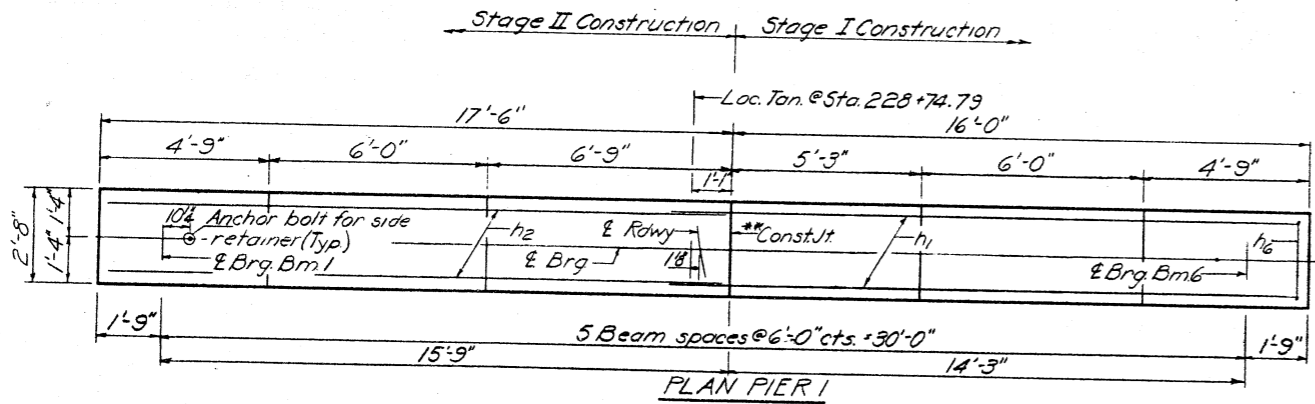


ELEVATION PIER 1  
Looking East

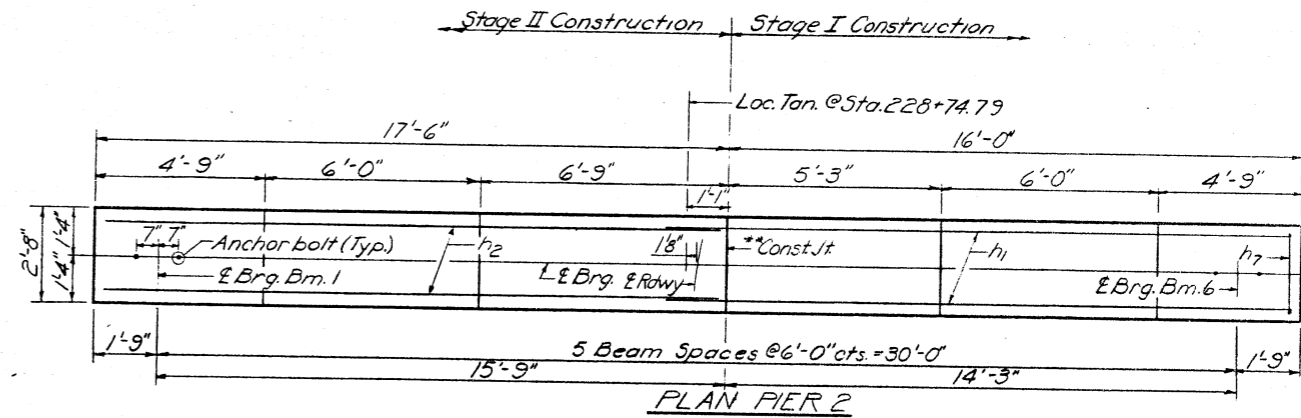


ELEVATION PIER 2  
Looking East

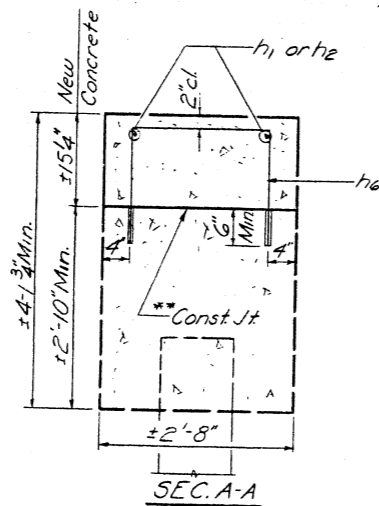
\*Drill 3/4" holes and Epoxy grout the h6 & h7 bars (See Special Provisions)  
\*Bonded, in accordance with Article 504.13 a(2) of the Standard Specifications.



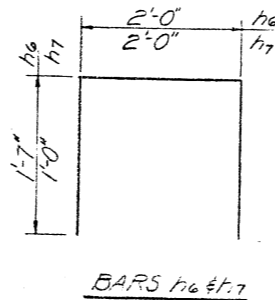
PLAN PIER 1



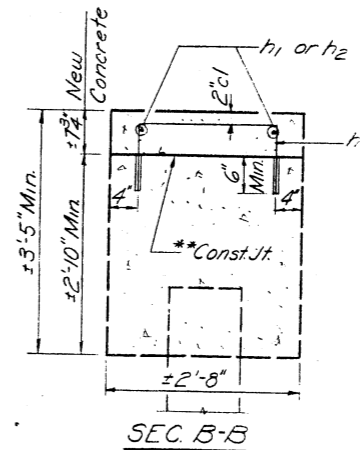
PLAN PIER 2



SEC. A-A



BARS h6 & h7



SEC. B-B

Note:  
All edges shall have standard 3/4" chamfers.

TWO PIERS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1	4	#4	17'-7"	—
h2	4	#4	17'-3"	—
h6	35	#4	5'-2"	□
h7	35	#4	4'-0"	□
Class X Concrete			Cu Yds	6.3
Reinforcement Bars			Lbs.	310

DESIGNED *Bruni Baliva*  
CHECKED *R. U. Watten*  
DRAWN *Baliva*  
CHECKED *RUM*

Oct 25 1983  
EXAMINED *James J. Kuybura*  
PASSED *[Signature]*  
APPROVED *[Signature]*  
DIRECTOR OF HIGHWAYS

PIERS  
F.A.S. Rte. 1780 Sec. 30-1BR-1  
ST. CLAIR COUNTY  
Sta. 228+74.79

**STATE OF ILLINOIS**  
**DEPARTMENT OF PUBLIC WORKS AND BUILDINGS**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**FEDERAL AID HIGHWAY**

**SET NO. 1**

FOR INDEX OF SHEETS SEE SHEET NO-2

S.B.I. ROUTE 12 (FA. RTE. 13)

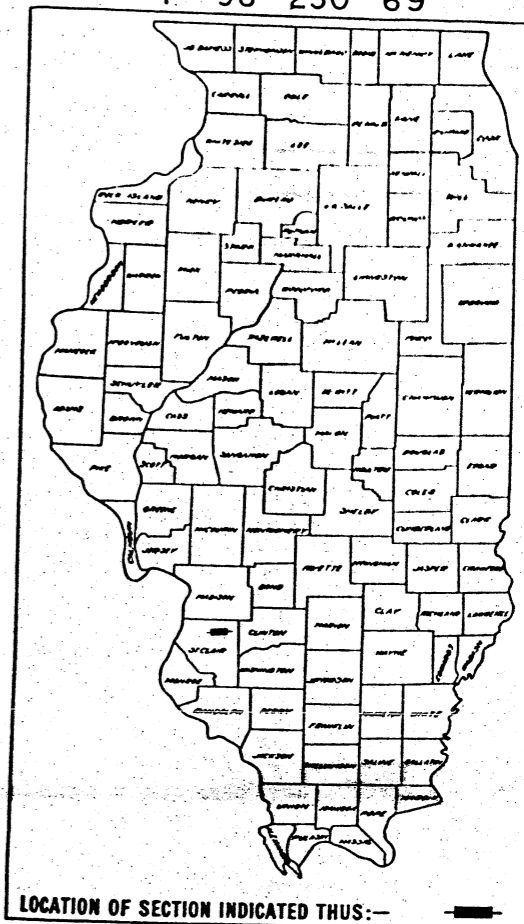
SECTION 30-1BY

BRIDGE ROADWAY WIDENING  
 ST. CLAIR COUNTY

C-98-549-70

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
SBI-12	30-1BY	St. Clair	5	1
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				

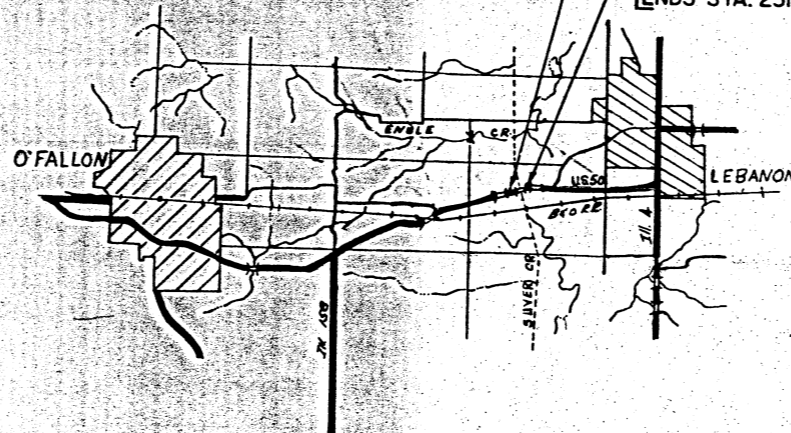
P-98-230-69



SECTION 30-1BY  
 BEGINS STA. 226+23

SECTION 30-1BY INCLUDES THE REMOVAL AND RECONSTRUCTION OF THE HANDRAIL, PROVIDING FOR ADDITIONAL ROADWAY WIDTH ACROSS THE BRIDGE STRUCTURE; RESURFACING; AND ALL INCIDENTAL WORK.

SECTION 30-1BY  
 ENDS STA. 231+27



NET LENGTH: 5040 FEET = 0.095 MILE

LOCATION MAP

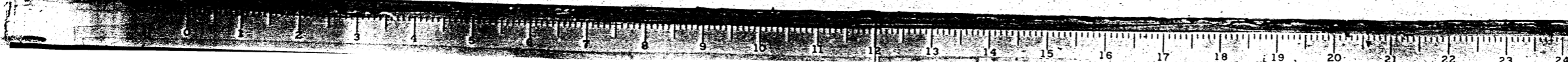
Scale 1"=1 Mile



STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED	Jan 5 1970 Robert S. E. [Signature]
EXAMINED	Feb 11 1970 R. M. [Signature]
PASSED	Feb 11 1970 [Signature]
APPROVED	Feb 11 1970 [Signature]
APPROVED	Feb 11 1970 Wm. F. Collins [Signature]

082-0036

8-80



INDEX TO SHEETS

SEC. 30-1R

Sheet No.	Title Page
1	Standards: 1815 (with cover); 1810, 1820, 1635.
2	Standards: 1783; 1766.
3	Standards: 1791; 1793.
4	Standards: 1688; 1744.
5	Detail of Gutter Layout (Sta. 243+60 to Sta. 248+00)
6	Plan and Profile (Sta. 220+50 to Sta. 248+00)
7	Plan and Profile (Sta. 220+50 to Sta. 248+00)
8 to 13 Inc.	Cross Sections.

SEC. 30-1R-B

Sheet No.	Title Page
1	Plan and Profile (Sta. 220+50 to Sta. 248+00).
7	Plan and Profile (Sta. 220+50 to Sta. 248+00).
14 to 16 Inc.	Special Bridge Design - Sta. 228+75 (Sheets 1 of 3).
17	Special Culvert Design - Sta. 237+69.
18	Standard No. 1178.

SUMMARY OF QUANTITIES

SEC. 30-1R

2.56 Acres	Clearing
1250 Cu Yds.	Earth Excavation.
3703 Cu Yds.	Channel Excavation.
29723 Cu Yds.	Barrow Excavation.
4743 Sq Yds.	Earth Shoulders.
5815 Sq Yds.	P.C. Concrete Pavement.
456 Lbs.	Cast Iron Grates.
42 Lin. Ft.	Corrugated Metal Pipe, 15 Inch.
632 Lin. Ft.	Plain Concrete Gutter, Type A.
10 Each.	Erecting Right of Way Markers.
60 Lin. Ft.	Pipe Culverts, Type 1, 12 Inch.
204 Lin. Ft.	Pipe Culverts, Type 2, 24 Inch.
22.8 Cu Yds.	Class X Concrete.
6150 Lbs.	Reinforcement Bars.
2101 Bbls.	Portland Cement.
98 Sq Yds.	P.C. Concrete Pavement (16% - 10% - 16%).
5815 Sq Yds.	Pavement Fabric.
1064 Sq Yds.	Pavement Removal.
1 Each.	Removal of Existing Structures.
1 Each.	Automatic Drainage Gate, 24 Inch.

SEC. 30-1R-B

2700 Cu Yds.	Channel Excavation.
308.9 Cu Yds.	Class X Concrete.
59800 Lbs.	Reinforcement.
174150 Lbs.	Structural Steel.
420 Lin. Ft.	Furnishing Precast Concrete Piles (16 Inch).
516 Lin. Ft.	Furnishing Precast Concrete Piles (18 Inch).
480 Lin. Ft.	Driving Precast Concrete Piles (16 Inch) 40 Feet Long.
516 Lin. Ft.	Driving Precast Concrete Piles (18 Inch) 43 Feet Long.
1 Each.	Hand Plates.
18.4 Cu Yds.	Hand Rail Concrete.
1 Each.	Test Piles (16 Inch).
1 Each.	Test Piles (18 Inch).
188 Sq Yds.	Slope Wall.
678 Bbls.	Portland Cement.

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS  
DIVISION OF HIGHWAYS  
PLANS FOR PROPOSED  
STATE BOND ISSUE HIGHWAY

BOND ISSUE ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
12	30-1R	ST. CLAIR	18	1

SCALES

PLAN	1 INCH	100 FT.
PROFILE HOR.	1 INCH	100 FT.
PROFILE VERT.	1 INCH	10 FT.
CROSS SECTIONS	1 INCH	5 FT.

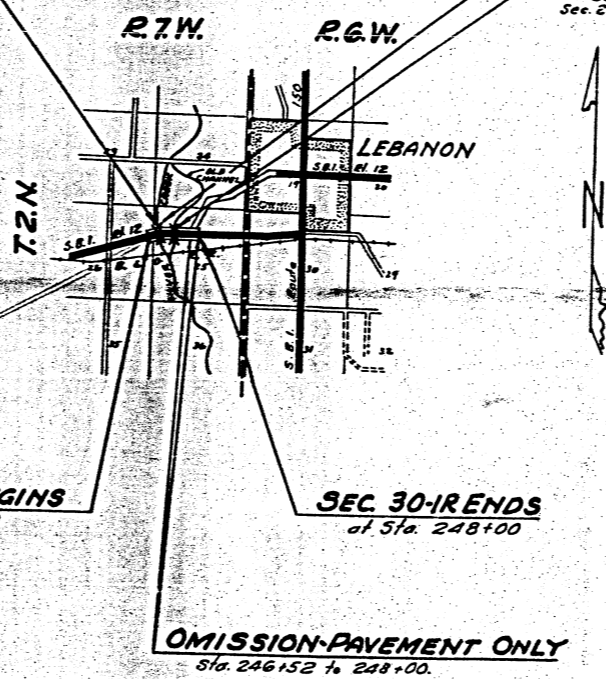
S. B. I. ROUTE 12 - SEC'S 30-1R  
30-1R-B - ST. CLAIR CO.

From a point near the N.E. Corner of the S.E. 1/4, of the N.E. 1/4 of Sec. 26, T. 2. N., R. 7. W., of the 3<sup>rd</sup> P.M.  
To a point near the N.E. Corner of the S.E. 1/4, of the N.W. 1/4 of Sec. 25, T. 2. N., R. 7. W., of the 3<sup>rd</sup> P.M.

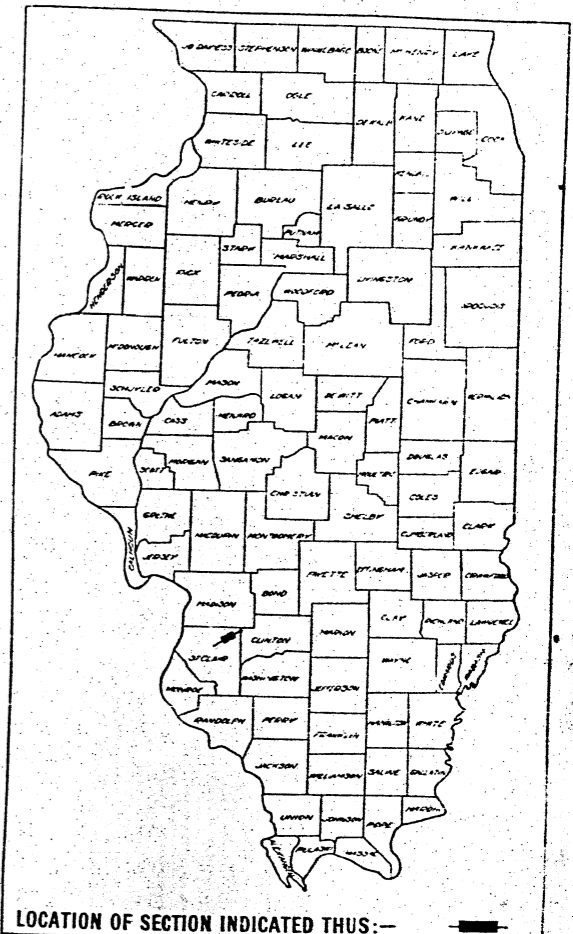
OMISSION - SEC. 30-1R  
Sta. 227+83.5 to 229+66.5

SEC. 30-1R-B INCLUDES

I-Beam Bridge, spans: 2 of 55' 1" at 70' 6" at Sta. 228+75, a point near the SW Corner of the N.W. 1/4 of the N.W. 1/4 of Sec. 25, T. 2. N., R. 7. W., of the 3<sup>rd</sup> P.M.  
R.C. Double Box Culvert Extension, spans: 2 of 10 x 12' at Sta. 237+69, a point near the Center of the N.W. 1/4 of Sec. 25, T. 2. N., R. 7. W., of the 3<sup>rd</sup> P.M.



PROPOSED EXTENSION (Auth. # 2)  
Sta. 220+44.5 to Sta. 220+50.0



LOCATION OF SECTION INDICATED THIS: -

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

SUBMITTED June 21, 1938

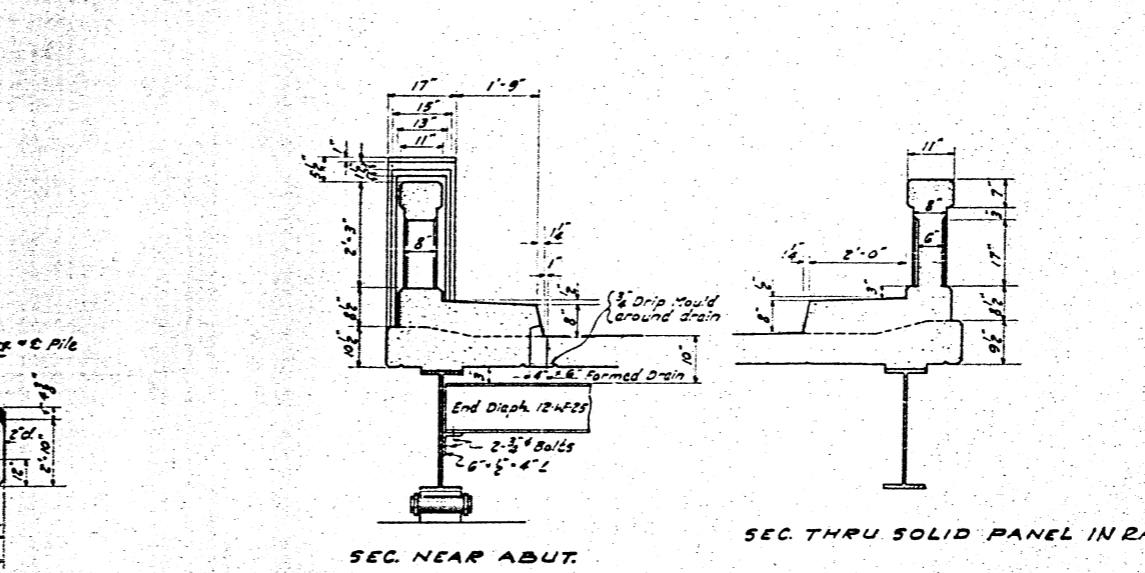
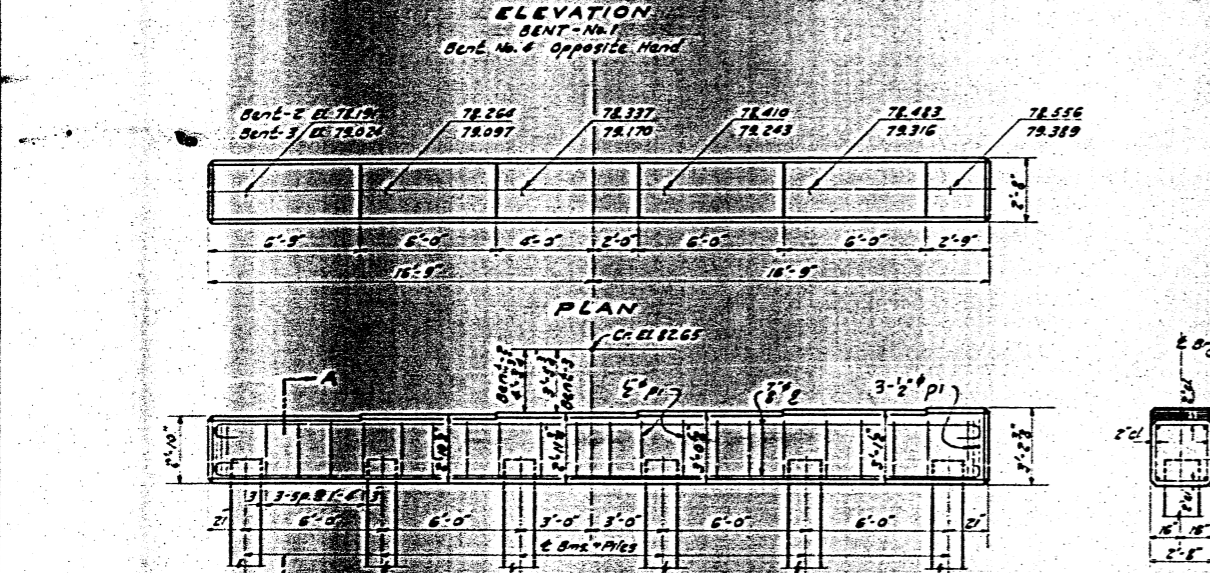
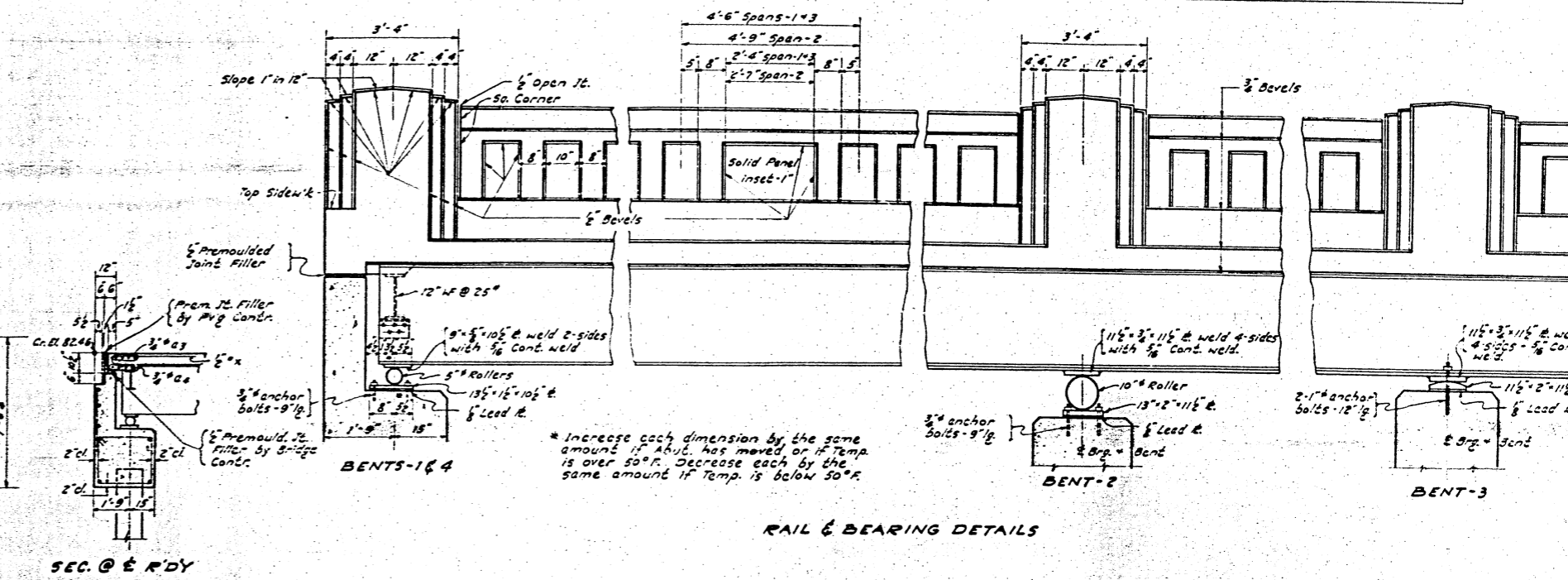
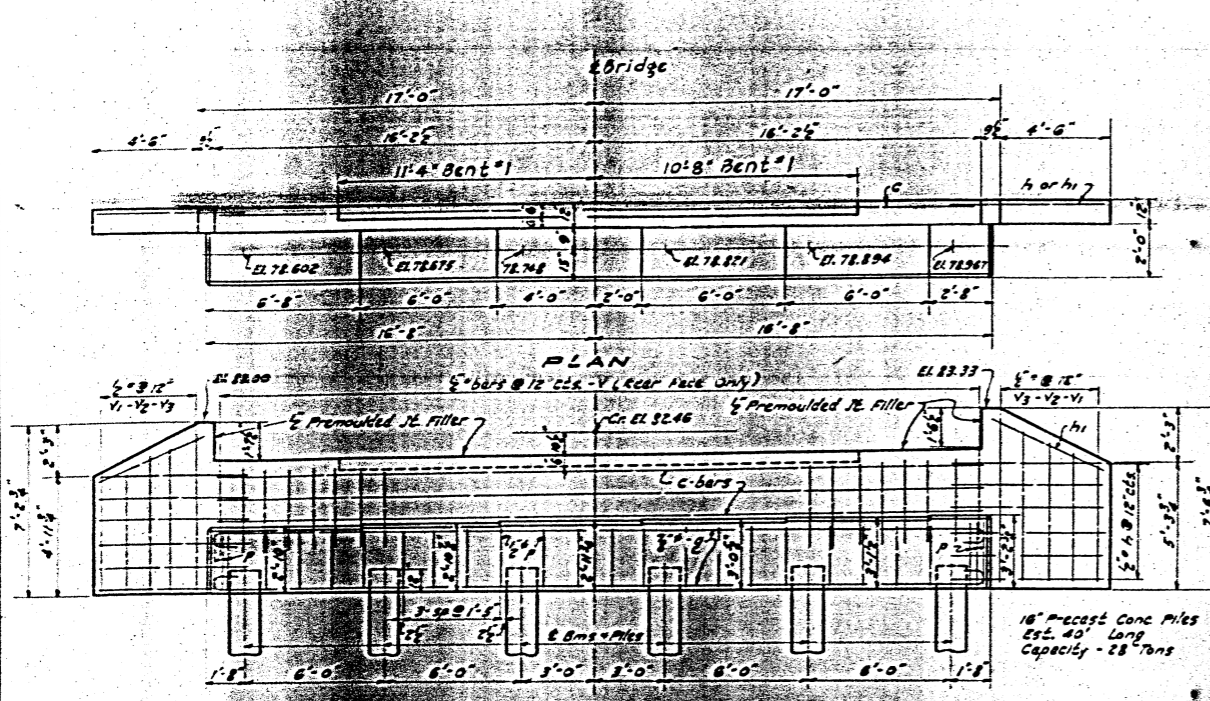
S. F. Wilson DISTRICT ENGINEER

EXAMINED: F. H. [Signature] 1938  
E. D. [Signature] 1938  
PAID: [Signature] 1938

APPROVED: [Signature] 1938  
[Signature] 1938  
[Signature] 1938

LAYOUT  
Approximate Scale = 1 Inch = 1 Mile.  
Net Length of Layout = 2750.0 Ft. = 0.5208 Miles

STATE LINE	RETAINING WALL	[Symbol]
COUNTY LINE	BASE OR SURVEY LINE	[Symbol]
CITY, VILLAGE OR TOWN	LEVEE	[Symbol]
TOWNSHIP LINE	CULVERT	[Symbol]
SECTION LINE	STORM SEWER	[Symbol]
GRANT LINE	TILE DRAIN	[Symbol]
SECTION CORNER	DROP INLET	[Symbol]
FENCE LINE	TROLLEY POLE	[Symbol]
UNFENCED PROPERTY	POWER POLE	[Symbol]
RIGHT OF WAY LINE	TELEPHONE OR TELEGRAPH POLE	[Symbol]
GUARD RAIL	MARSH	[Symbol]
STEAM RAILROAD	HEDGE	[Symbol]
ELECTRIC RAILROAD		



**GENERAL NOTES**

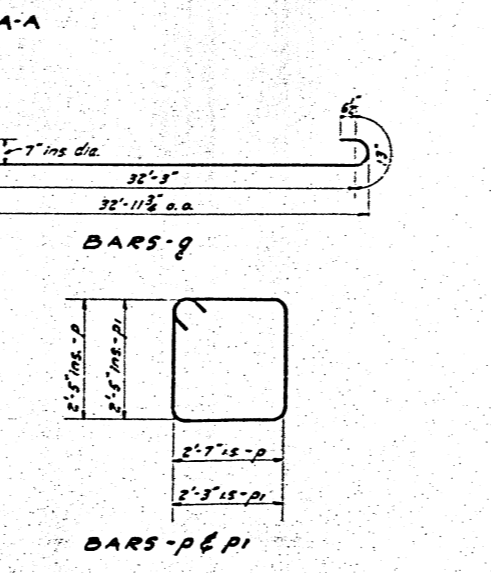
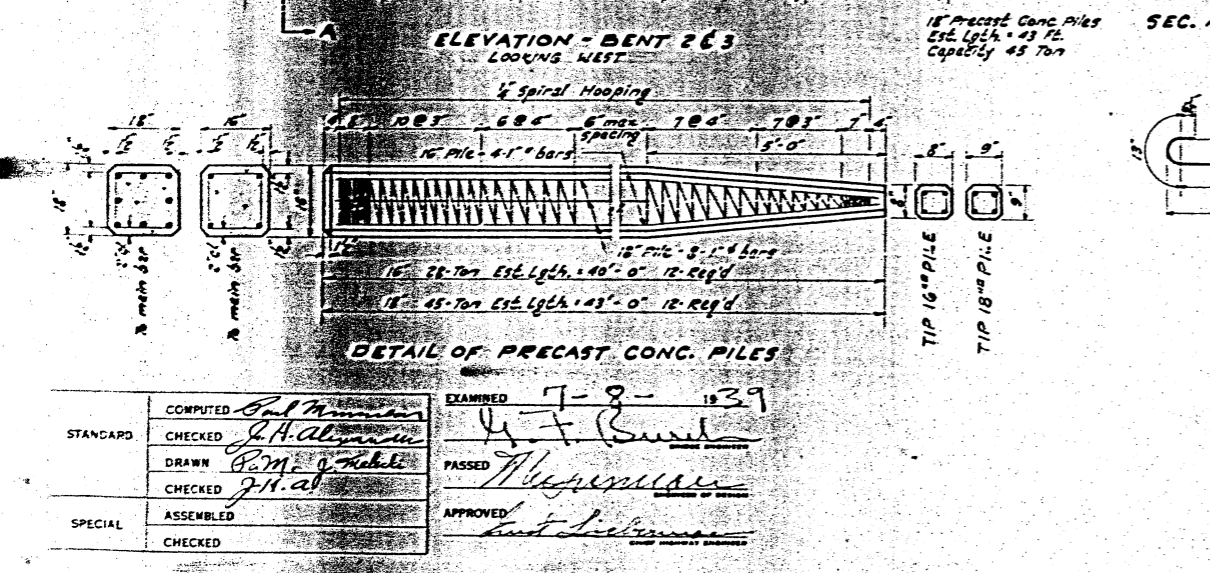
Class "X" concrete shall be used throughout. Concrete floor shall be finished in accordance with Art. 57.3 (C) of the Standard Spec. Rivets 3/4" - Holes 13/16" unless noted. Ribbed eight-ft bolts may be substituted for field rivets. See Supplemental Spec's.

Inspection of Structural Steel by Illinois Division of Highways before painting. Structural steel shall receive one shop coat of blue lead paint and two field coats of white lead paint. All paint furnished by the Department. All paint shall be applied with brushes. The use of a paint gun will not be permitted.

Estimated weight of rollers, bearing plates, lead plates and anchor bolts 560 lbs. included in the Bill of Material as Structural Steel.

Premoulded joint filler shall conform to Articles 105.6 to 105.9 inclusive of the Supplemental Spec's.

Continuous welding of cover plates to I beams shall be made in such a manner as to prevent warping or buckling of the main material. The plate shall be clamped securely to the beam flanges before welding. The skip step-back method of welding or other effective means shall be used, if necessary, to obtain satisfactory results.



**BILL OF MATERIAL - SUBSTR.**

Bar	No.	Size	Length
2	16	3/4"	35'-6"
P	52	1/2"	11'-0"
Pi	52	1/2"	10'-0"
C	12	1/2"	17'-3"
h	24	1/2"	6'-6"
h1	4	1/2"	5'-0"
V	66	1/2"	4'-0"
V1	8	"	5'-0"
V2	8	"	5'-0"
V3	4	1/2"	7'-0"

Class "X" Concrete      Cutts      51.4  
Reinforcement Bars      Lbs      2540  
16" Precast Conc. Piles (40' Lg.) Lin. Ft.      480  
18" Precast Conc. Piles (40' Lg.) Lin. Ft.      516

COMPUTED *Paul M. ...*  
CHECKED *J.A. ...*  
DRAWN *P.M. ...*  
CHECKED *J.H. ...*  
SPECIAL ASSEMBLED  
CHECKED

EXAMINED *J. ...*  
PASSED *M. ...*  
APPROVED *...*

7-8-1939

S.B.I. RTE. 12 SEC. 30-1R-B  
ST. CLAIR COUNTY  
STA. 228 + 75