071-0061

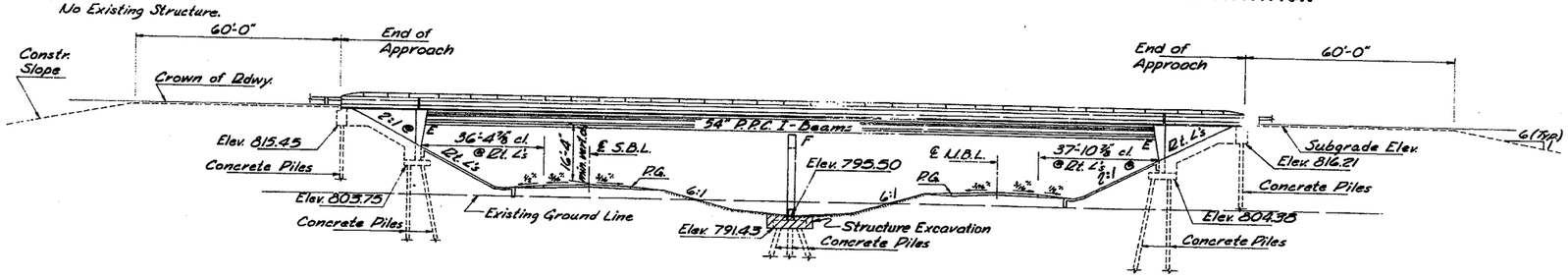
Bench Mark #13: Punch mark on S. end of middle CMP of 3 CMP's crossing Creston Rd. 234' Rt. Sta. 16+79.70 Elev. 793.68.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

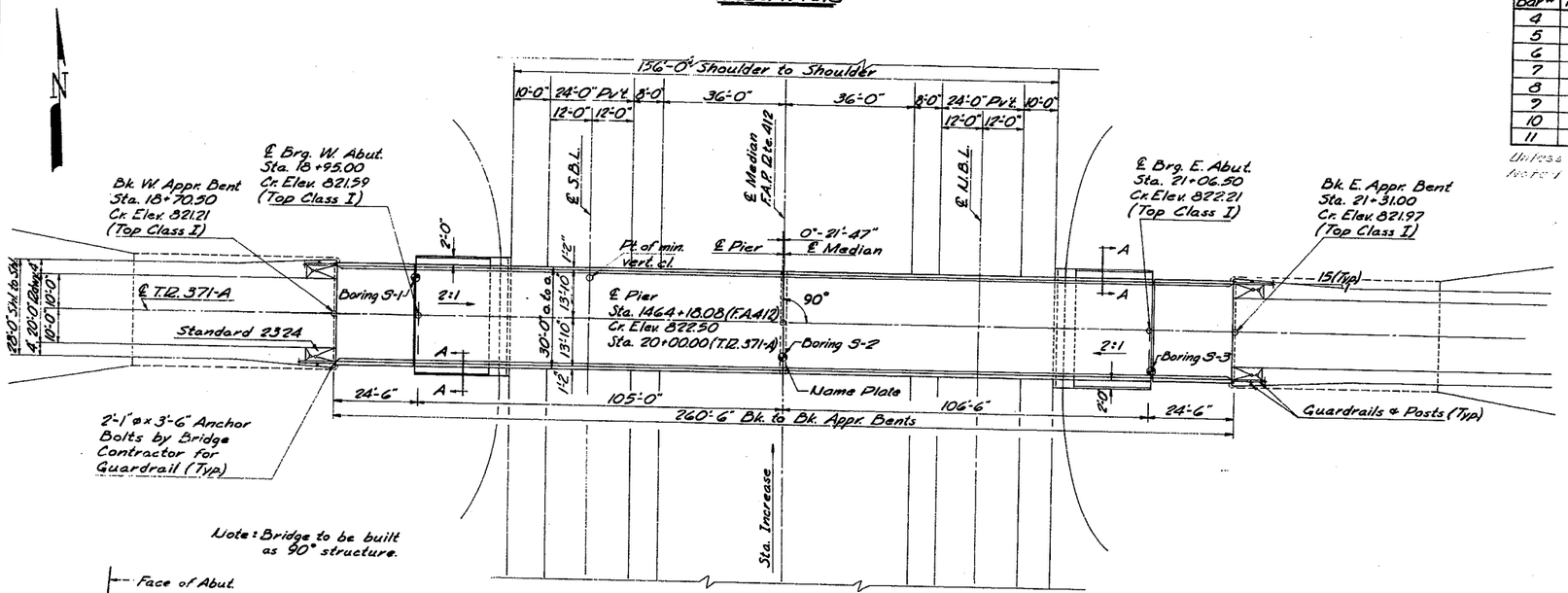
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 412	141-1A	OGLE	628	228
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 1
11 SHEETS

No Existing Structure.

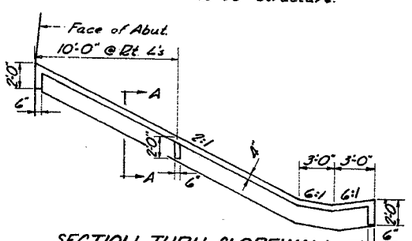


ELEVATION

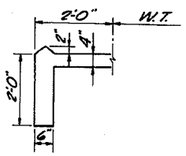


Note: Bridge to be built as 90° structure.

PLAN



SECTION THRU SLOPEWALL



SEC. A-A

DESIGN STRESSES

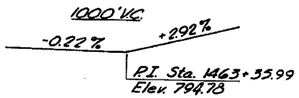
FIELD UNITS

DECK SLAB
f_y = 60,000 psi
f'_c = 3500 psi

f_c = 1,400 psi (Curb Parapet, Sub., Appr. slab)
f_s = 20,000 psi (Reinf.)
f_s = 20,000 psi (Struct.)
v_c = 75 psi (Ftgs.)
n = 9

PRECAST PRESTRESSED UNITS

f'_c = 6,000 psi
f'_{ci} = 5,000 psi
f_s = 270,000 psi (½" ø Strands)
f_{si} = 189,000 psi (½" ø Strands)

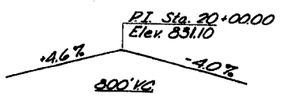


PROFILE - F.A. RTE. 412

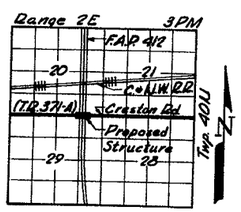
APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Carl E. Thurnmond
Engineer of Bridge & Traffic Structures

LOADING HS 20-44

Allow 25 #/a' for future W.S.
Design Specifications - 1973 AASHO as applicable.



PROFILE - T.R. 371-A



LOCATION SKETCH

Reinforcement Bar Min. Splice Length	
Bar #	Min. Length
4	1'-0"
5	1'-3"
6	1'-9"
7	2'-4"
8	3'-0"
9	3'-10"
10	4'-10"
11	6'-0"

Unless Otherwise Noted

GENERAL NOTES

ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH TWO COATS OF BASIC LEAD SILICO CHROMATE PAINT.

SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6"X6" MESH, WEIGHING 58# PER 100 SQ. FT.

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN PERMANENT LOCATIONS AT THE PIER AND EACH ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.

THE CONCRETE PARAPET SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF HANDRAIL CONCRETE.

PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED.

SEE SPECIAL PROVISIONS FOR BORING LOGS.

All reinforcement bars in this plan shall conform to AASHTO M-31 grade 60 or M-322 grade 60.

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER.	SUB.	TOTAL
Protective Coat	Sq. Yds.	193	——	193
Class X Concrete	Cu. Yds.	287.7	196.7	484.4
P.P.C. I Beams (54")	Lin. Ft.	1275	——	1275
Structural Steel	Lbs.	2515	150	2665
Reinforcement Bars	Lbs.	61130	35380	96560
Concrete Piles	Lin. Ft.	——	2419	2419
Test Piles (Concrete)	Each	——	3	3
Name Plates	Each	——	1	1
Slopewall (4")	Sq. Yds.	——	215	215
Waterproofing Membrane System	Sq. Yds.	764	——	764
Bitum. Surface, Mixture D, Class I	Tons	52	——	52
Preformed Joint Sealer (4")	Lin. Ft.	60	——	60
Structure Excavation	Cu. Yds.	——	60	60
Sand Backfill	Cu. Yds.	——	192	192
Aluminum Railing	Lin. Ft.	515	——	515

STATION 1464 + 18.08
BUILT 19 BY
STATE OF ILLINOIS
F.A. RTE. 412 SEC. 141-1HB-2
PROJECT FF-FFG-412-5(9)
LOADING HS-20

NAME PLATE

See Std. 2113

GENERAL PLAN & ELEVATION
T.R. 371-A OVER F.A. RTE. 412
F.A. RTE. 412 SECTION 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE. 412)

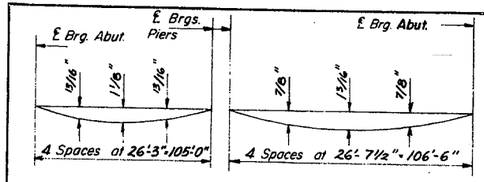
DESIGNED	MVM
CHECKED	HMW
DRAWN	CWB
CHECKED	HMW

PLANS PREPARED BY AMERICAN ENG. CO.

Rev. 12-15-78

Rev. 2-16-79 DD

Rev Concrete Piles from 2217 L.F. to 2419 L.F. 1-26-79 D.D.

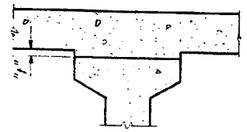


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete slab 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.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 412	141-1A	OGLE	628	229
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 2
11 SHEETS

To determine "f": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted algebraically from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown below, minus slab thickness, equals the fillet heights "f". A positive value of "f" equals the fillet height above the top of the beam. A negative value of "f", not to exceed 2", equals the embedment of the beam above the theoretical bottom of slab elevation.

FILLET HEIGHTS

GIRDER LINES 1 & 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Appr. Slab	18+71.00	13.250	820.870	820.870
A	18+81.00		821.033	821.033
Bk. W. Abut.	18+94.00		821.229	821.229
Bk. E. Abut.	21+07.50		821.852	821.852
V	21+17.50		821.761	821.761
Bk. E. Appr. Slab	21+30.50	13.250	821.627	821.627

BEAMS 1 & 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Appr. Slab	18+71.00	12.083	820.894	820.894
A	18+81.00		821.057	821.057
Bk. W. Abut.	18+94.00		821.253	821.253
℄ Brg. W. Abut.	18+95.00		821.268	821.268
B	19+05.00		821.405	821.438
C	19+15.00		821.532	821.590
D	19+25.00		821.648	821.725
E	19+35.00		821.753	821.842
F	19+45.00		821.848	821.941
G	19+55.00		821.932	822.023
H	19+65.00		822.005	822.088
I	19+75.00		822.067	822.135
J	19+85.00		822.118	822.164
K	19+95.00		822.159	822.176
℄ Pier	20+00.00		822.175	822.175
L	20+10.00		822.200	822.234
M	20+20.00		822.214	822.274
N	20+30.00		822.217	822.297
O	20+40.00		822.209	822.302
P	20+50.00		822.191	822.290
Q	20+60.00		822.162	822.259
R	20+70.00		822.122	822.211
S	20+80.00		822.071	822.145
T	20+90.00		822.010	822.062
U	21+00.00		821.938	821.960
℄ Brg. E. Abut.	21+06.50		821.885	821.885
Bk. E. Abut.	21+07.50		821.877	821.877
V	21+17.50		821.786	821.786
Bk. E. Appr. Slab	21+30.50	12.083	821.652	821.652

BEAMS 2 & 5

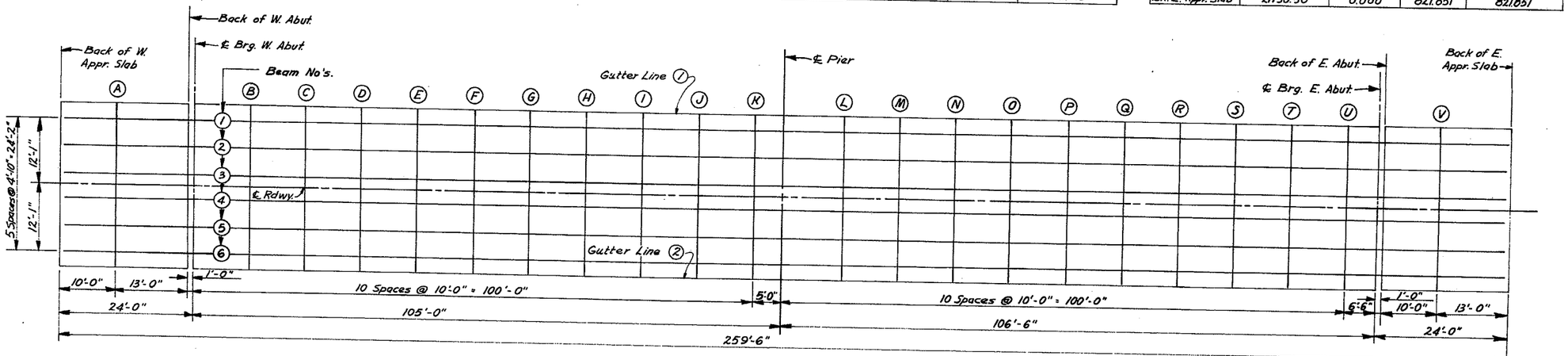
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Appr. Slab	18+71.00	7.250	820.980	820.980
A	18+81.00		821.144	821.144
Bk. W. Abut.	18+94.00		821.340	821.340
℄ Brg. W. Abut.	18+95.00		821.354	821.354
B	19+05.00		821.492	821.524
C	19+15.00		821.618	821.676
D	19+25.00		821.734	821.811
E	19+35.00		821.840	821.928
F	19+45.00		821.934	822.026
G	19+55.00		822.018	822.110
H	19+65.00		822.091	822.174
I	19+75.00		822.153	822.221
J	19+85.00		822.205	822.251
K	19+95.00		822.245	822.262
℄ Pier	20+00.00		822.262	822.262
L	20+10.00		822.286	822.320
M	20+20.00		822.300	822.361
N	20+30.00		822.303	822.384
O	20+40.00		822.296	822.389
P	20+50.00		822.277	822.376
Q	20+60.00		822.248	822.346
R	20+70.00		822.208	822.298
S	20+80.00		822.158	822.232
T	20+90.00		822.096	822.148
U	21+00.00		822.024	822.047
℄ Brg. E. Abut.	21+06.50		821.972	821.972
Bk. E. Abut.	21+07.50		821.963	821.963
V	21+17.50		821.872	821.872
Bk. E. Appr. Slab.	21+30.50	7.250	821.738	821.738

BEAMS 3 & 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Appr. Slab	18+71.00	2.4167	821.056	821.056
A	18+81.00		821.219	821.219
Bk. W. Abut.	18+94.00		821.415	821.415
℄ Brg. W. Abut.	18+95.00		821.430	821.430
B	19+05.00		821.567	821.599
C	19+15.00		821.694	821.752
D	19+25.00		821.810	821.886
E	19+35.00		821.915	822.004
F	19+45.00		822.010	822.103
G	19+55.00		822.093	822.185
H	19+65.00		822.166	822.250
I	19+75.00		822.229	822.297
J	19+85.00		822.280	822.326
K	19+95.00		822.321	822.338
℄ Pier	20+00.00		822.337	822.337
L	20+10.00		822.362	822.396
M	20+20.00		822.376	822.436
N	20+30.00		822.379	822.459
O	20+40.00		822.371	822.464
P	20+50.00		822.353	822.452
Q	20+60.00		822.324	822.421
R	20+70.00		822.284	822.373
S	20+80.00		822.233	822.307
T	20+90.00		822.172	822.224
U	21+00.00		822.100	822.122
℄ Brg. E. Abut.	21+06.50		822.047	822.047
Bk. E. Abut.	21+07.50		822.039	822.039
V	21+17.50		821.948	821.948
Bk. E. Appr. Slab	21+30.50	2.4167	821.813	821.813

℄ ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Appr. Slab	18+71.00	0.000	821.094	821.094
A	18+81.00		821.257	821.257
Bk. W. Abut.	18+94.00		821.453	821.453
℄ Brg. W. Abut.	18+95.00		821.467	821.467
B	19+05.00		821.605	821.637
C	19+15.00		821.732	821.789
D	19+25.00		821.848	821.924
E	19+35.00		821.953	822.041
F	19+45.00		822.047	822.141
G	19+55.00		822.131	822.223
H	19+65.00		822.204	822.288
I	19+75.00		822.266	822.334
J	19+85.00		822.318	822.364
K	19+95.00		822.359	822.376
℄ Pier	20+00.00		822.375	822.375
L	20+10.00		822.400	822.433
M	20+20.00		822.414	822.474
N	20+30.00		822.417	822.497
O	20+40.00		822.409	822.502
P	20+50.00		822.391	822.489
Q	20+60.00		822.362	822.459
R	20+70.00		822.322	822.411
S	20+80.00		822.271	822.345
T	20+90.00		822.210	822.262
U	21+00.00		822.138	822.160
℄ Brg. E. Abut.	21+06.50		822.085	822.085
Bk. E. Abut.	21+07.50		822.076	822.076
V	21+17.50		821.985	821.985
Bk. E. Appr. Slab	21+30.50	0.000	821.851	821.851



PLAN

DESIGNED	SLM
CHECKED	HMW
DRAWN	BSB
CHECKED	HMW

PI-E 1-27-66

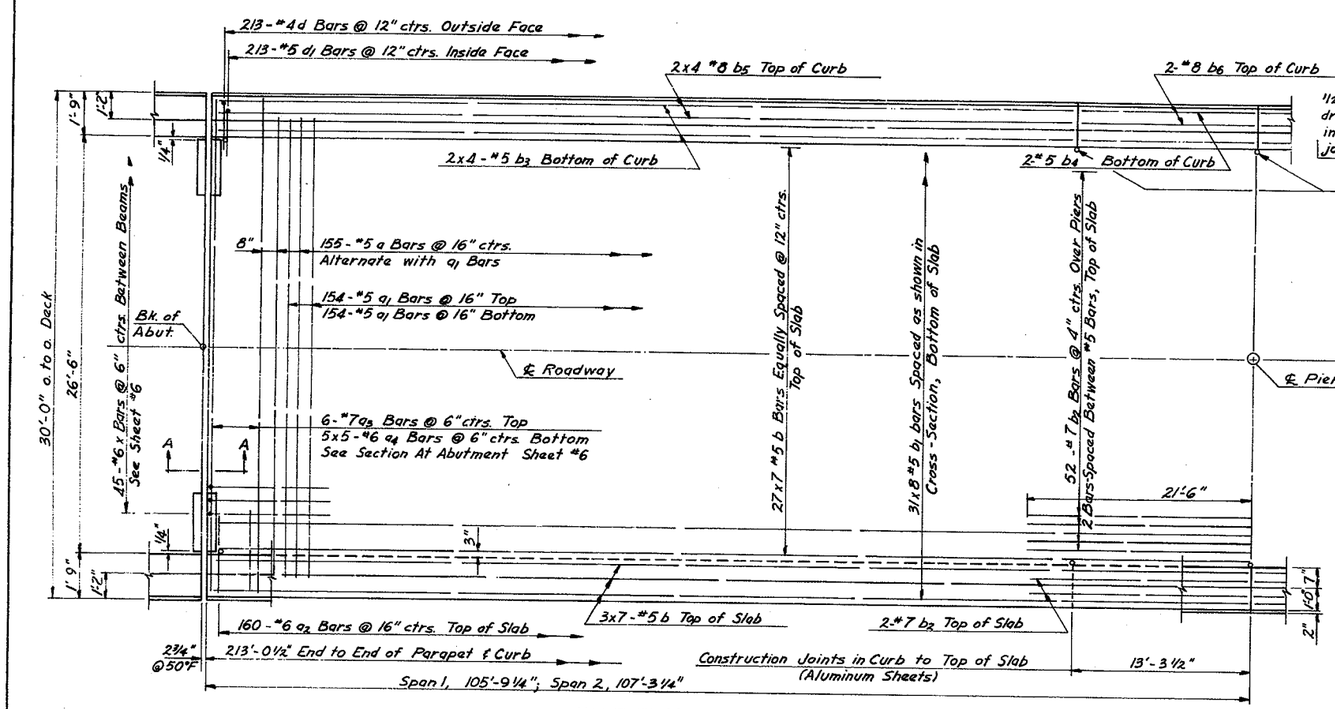
TOP OF SLAB ELEVATIONS
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)

Note: Bars indicated thus 20 x 3-#5 etc indicates 20 lines of bars with 3 lengths per line
Min bar laps = 24 dia

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 412	141-1A	OGLE	628	230

SHEET NO. 3
11 SHEETS



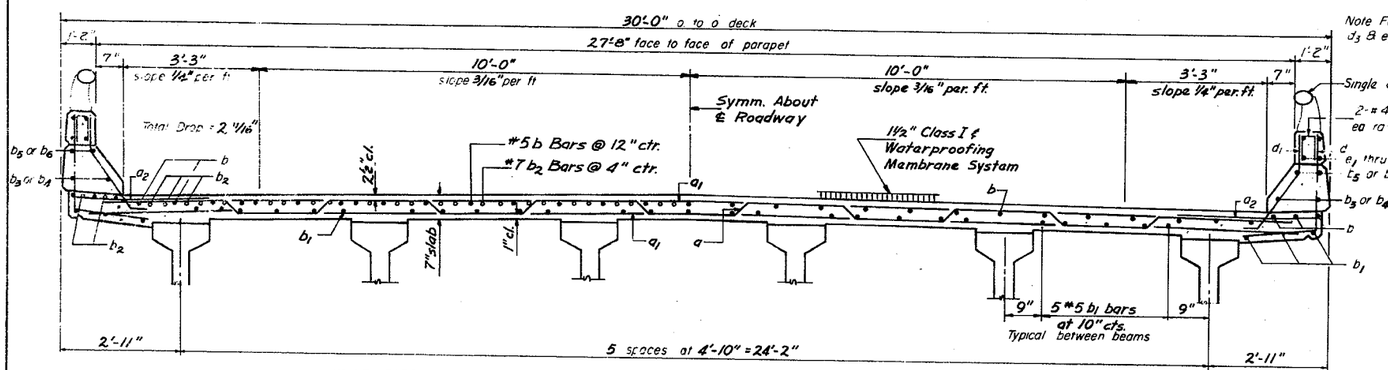
HALF PLAN

1/8" Aluminum Sheet

Do not provide opening in Water-proofing Membrane at aluminum sheeted curb joints. Do provide opening through membrane at expansion joints and other dammed low points.

1/2" ϕ drilled or formed drain holes at each joint in curb & at expansion joints.

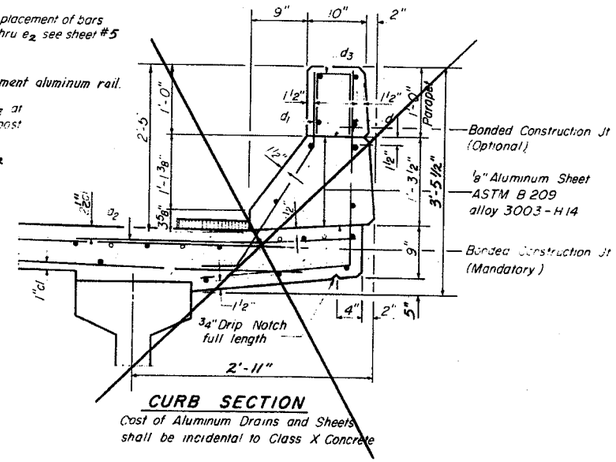
DRAIN HOLES



NEAR PIER — NEAR MIDSPAN

CROSS SECTION
LOOKING EAST

Note: See Sheet 3A for revised Curb Section.



CURB SECTION

Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete

BILL OF MATERIAL

	Bar	No	Size	Length	Shape
	a	155	#5	29'-3"	
	a1	308	#5	28'-0"	
	a2	320	#6	4'-0"	
	a3	12	#7	29'-4"	
	a4	50	#6	4'-0"	
*	b	231	#5	31'-6"	
*	b1	248	#5	27'-9"	
*	b2	56	#7	43'-0"	
	b3	32	#5	24'-6"	
	b4	8	#5	13'-0"	
	b5	32	#8	25'-9"	
	b6	8	#8	13'-0"	
	d	426	#4	4'-4"	
	d1	426	#5	3'-7"	
	m	20	#4	4'-0"	
	m1	10	#6	2'-9"	
	s	15	#4	12'-0"	
	x	90	#6	8'-2"	
	Reinforcement Bars		Lbs	43,900	
	Class X Concrete		Cu Yds	202.4	

Parapet Reinforcement and Class X Concrete are billed on sheet #5

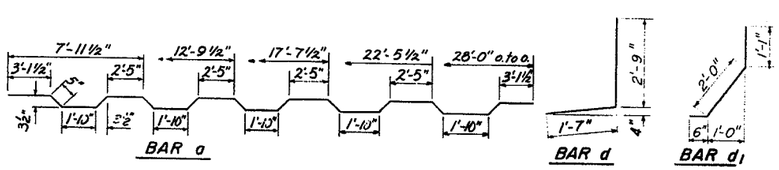
For placement and details of bars m, m1 and s see sheet #6

* Longitudinal Reinforcement in deck (bars b, b1 & b2) shall be Grade 60

For Section "A-A" sheet #6

DESIGNED	MVM
CHECKED	HMW
DRAWN	BSB
CHECKED	HMW

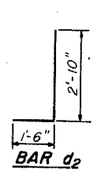
PI-1 2-15-79
Rev. 2-16-79 D.D.



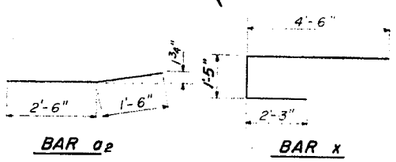
BAR a

BAR d

BAR d1



BAR d2



BAR a2

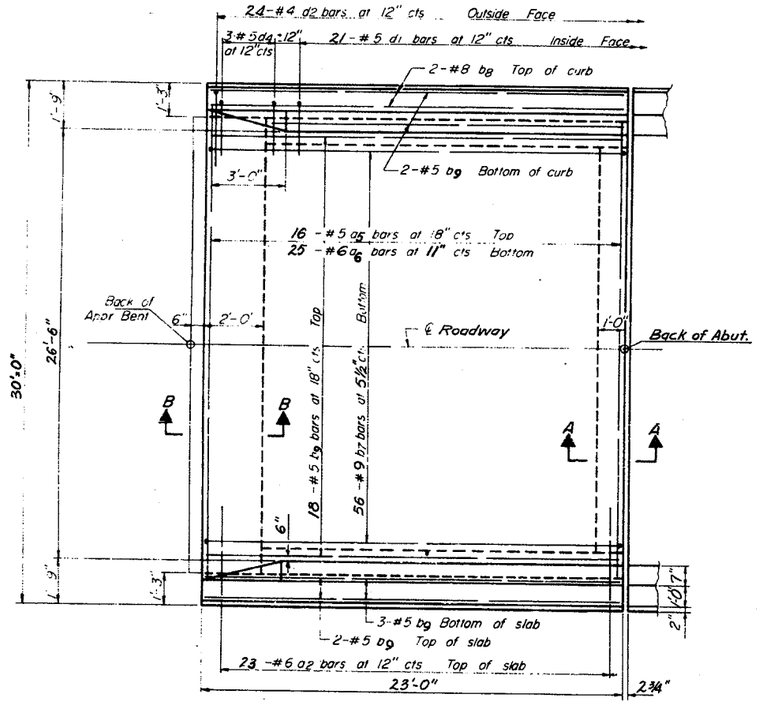
BAR x

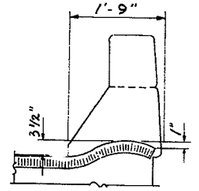
SUPERSTRUCTURE DETAILS
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

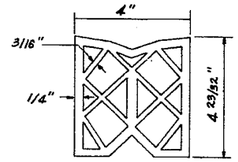
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 412	141-1A	OGLE	268	231

SHEET NO. 4
11 SHEETS

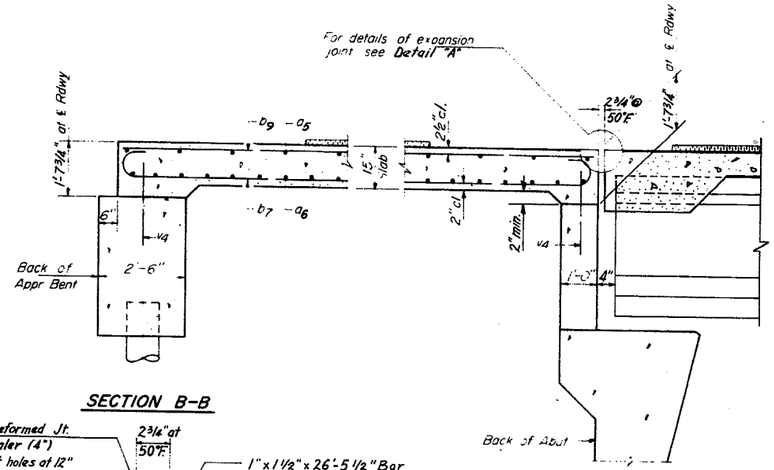




END OF SEALER TREATMENT

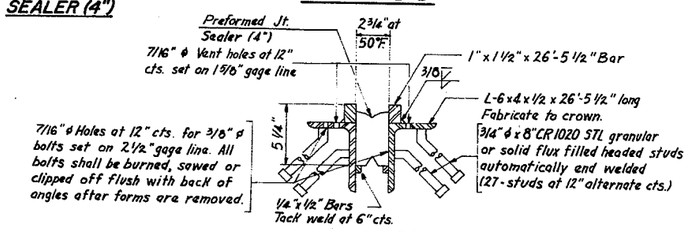


PREFORMED JOINT SEALER (4")

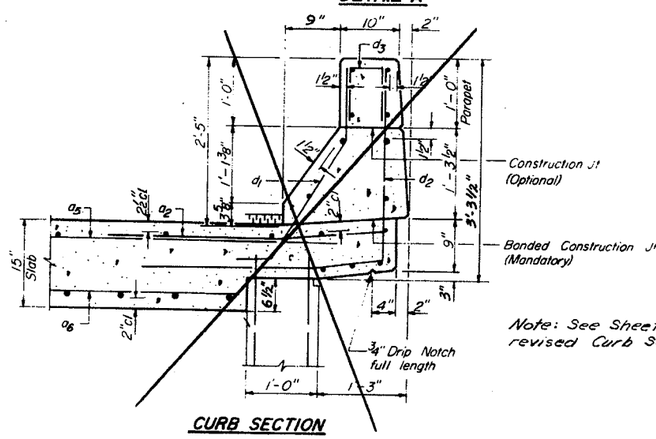


SECTION B-B

SECTION A-A



DETAIL "A"



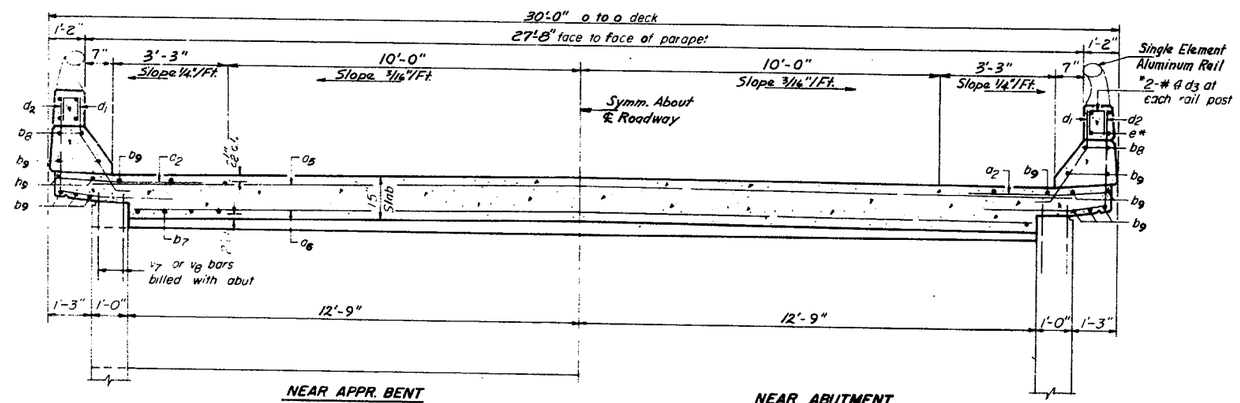
CURB SECTION

Note: See Sheet 4A for revised Curb Section.

TWO APPR. SLABS
BILL OF MATERIAL

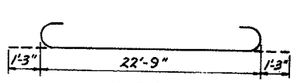
Bar	No.	Size	Length	Shape
a2	92	#6	4'-0"	
a5	32	#5	28'-0"	
a6	50	#6	25'-3"	
b7	112	#9	25'-3"	
b8	8	#8	22'-9"	
b9	64	#5	22'-9"	
d1	84	#5	3'-7"	
d2	96	#4	6'-0"	
d4	12	#5	4'-2"	
Reinforcement Bars			Lbs.	15,750
Class X Concrete			Cu Yds	68.6

*Parapet Reinforcement and Class X Concrete are billed on sheet #5.

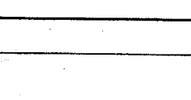


NEAR APPR. BENT — NEAR ABUTMENT

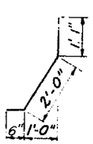
CROSS SECTION



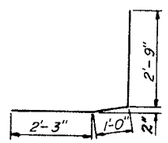
BAR b7



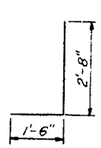
BAR a2



BAR d1



BAR d2



BAR d4

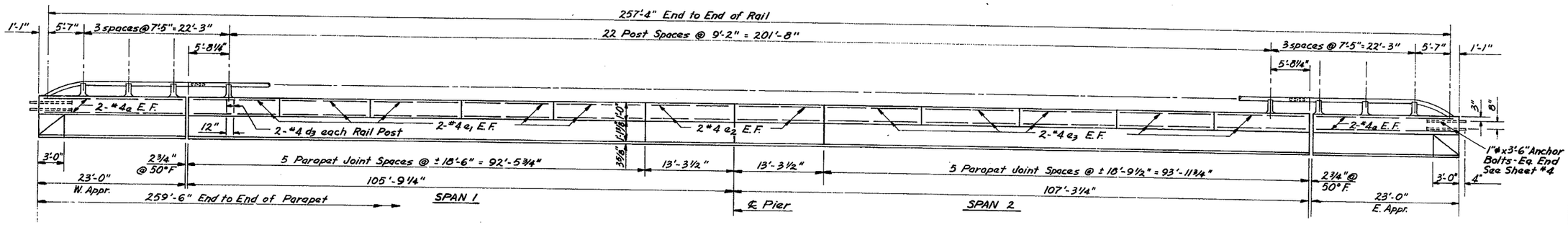
DESIGNED	MVM
CHECKED	HMW
DRAWN	BSB
CHECKED	HMW

SAS-0 8-1-73
Rev. 2-16-79 D.D.

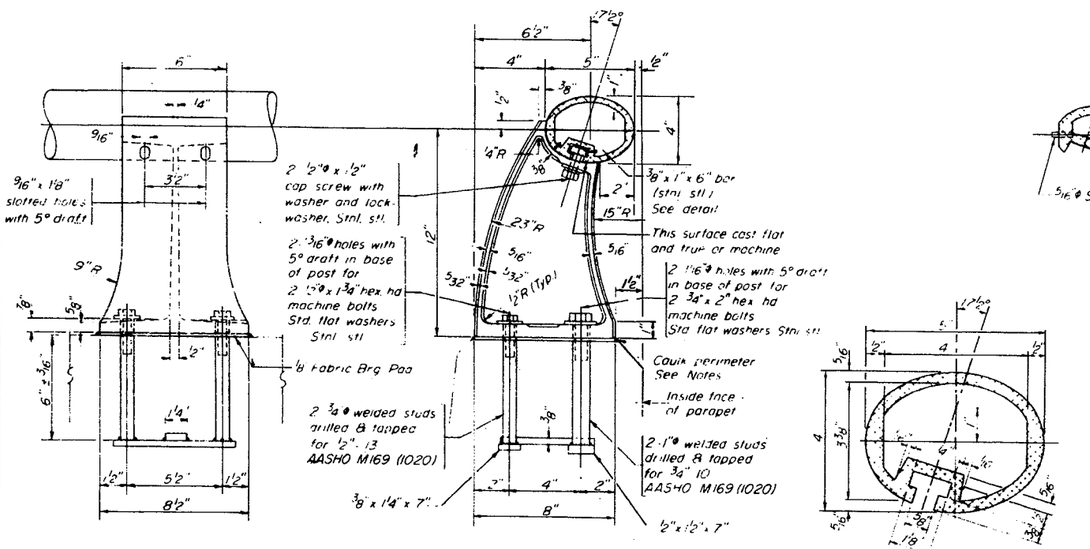
APPROACH SLABS
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO 5
F.A. 412	141-1A	OGLE	628	232	11 SHEETS

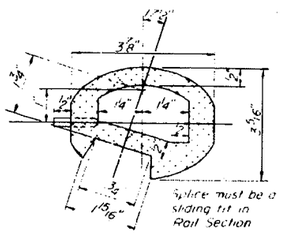


INSIDE ELEVATION

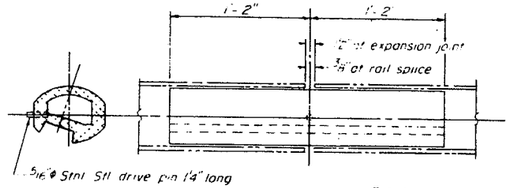


RAIL POST DETAILS

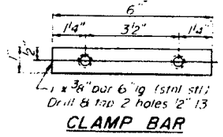
SEC. THRU ELLIPTICAL RAIL SECTION



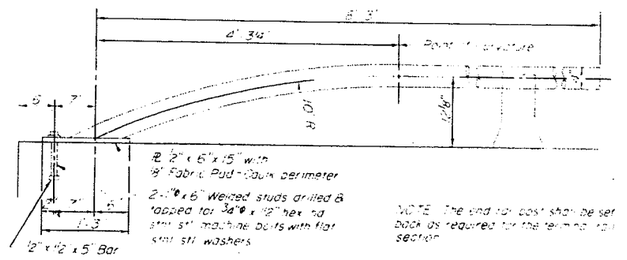
SEC. THRU SPLICE

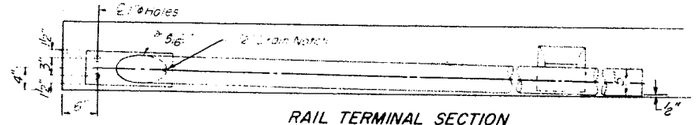


RAIL SPLICE



CLAMP BAR

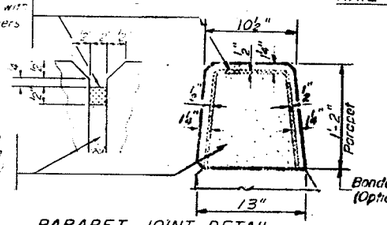




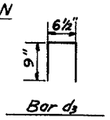
RAIL TERMINAL SECTION

"Two component non-staining grey sealing compound with polysulfide liquid polymers gun grade with primer

¾" Preformed Cork Joint Filler (in accordance with Articles 705-2 or 705-3) Cost incidental



PARAPET JOINT DETAIL



Bar d_3

PARAPETS & RAILS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_1	16	#4	22'-9"	
a_2	40	#4	18'-3"	
a_3	16	#4	13'-0"	
d_3	40	#4	18'-6"	
d_3	116	#4	2'-1"	⊓
Reinforcement Bars			Lbs.	1,530
Class X Concrete			Cu. Yds.	167
Aluminum Railing			Lin. Ft.	515

ALUMINUM RAILING

NOTES:

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced, but shall be attached to a minimum of 3 posts.

All joints in rail shall be spliced per detail.

Provide 1 - ⅛" and 2 - 1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

Seal perimeter of base of post to parapet with two component non-staining grey sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.

Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

DESIGNED	SLM
CHECKED	HMW
DRAWN	BSB
CHECKED	HMW

R-17 4-15-73
Rev. 2-16-79 D.D.

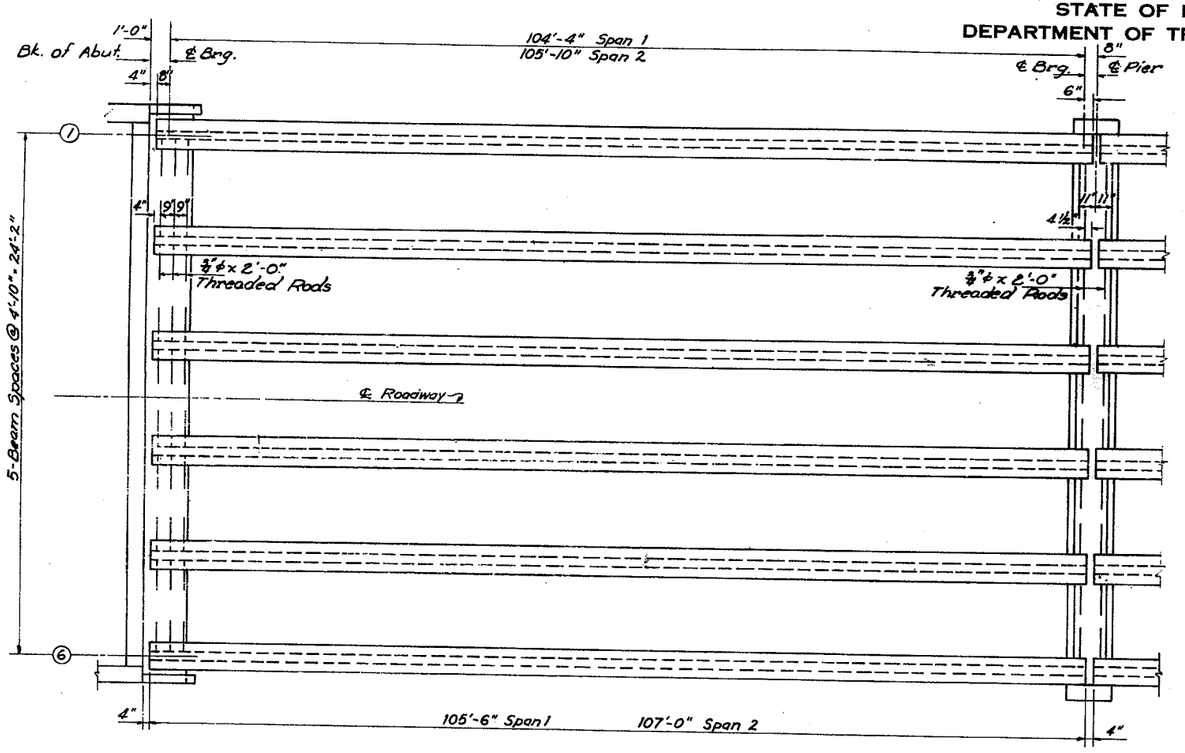
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)

FOR INFORMATION ONLY

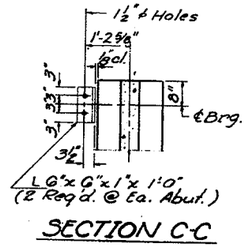
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 412	141-1A	OGLE	628	233
PED. ROAD DIST. NO.	TWP. NO.	PED. AID PROJECT		

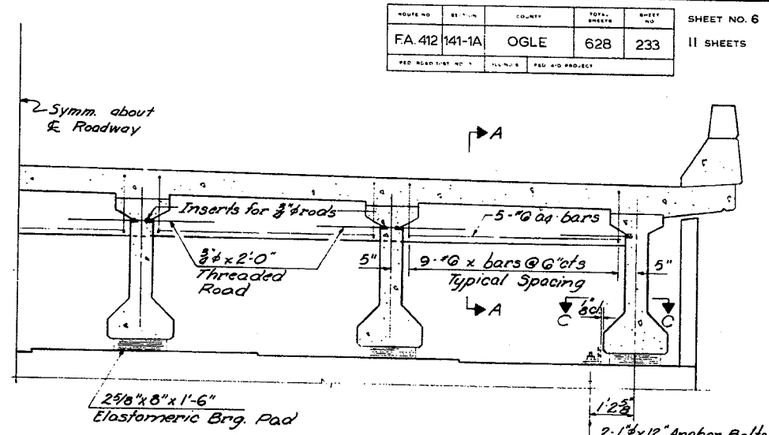
SHEET NO. 6
11 SHEETS



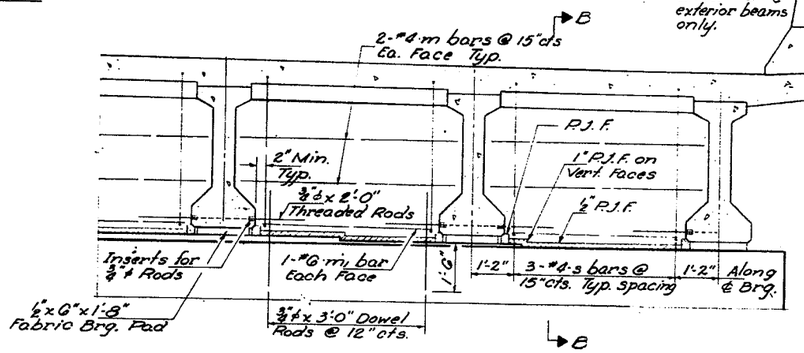
PART PLAN



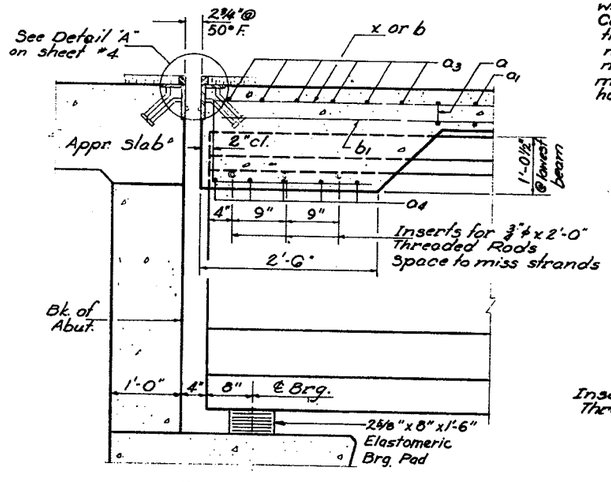
SECTION C-C



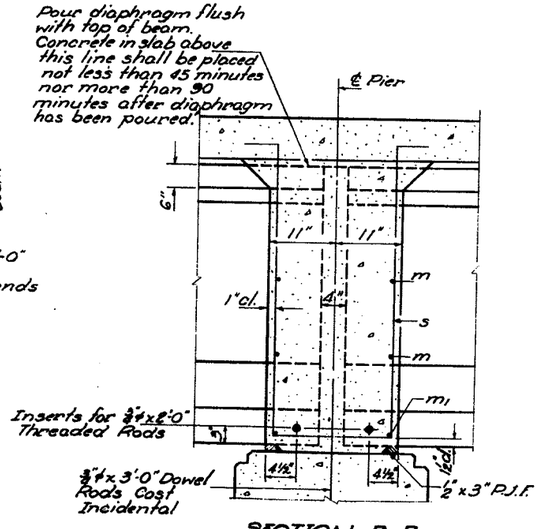
DIAPHRAGM AT ABUTMENT



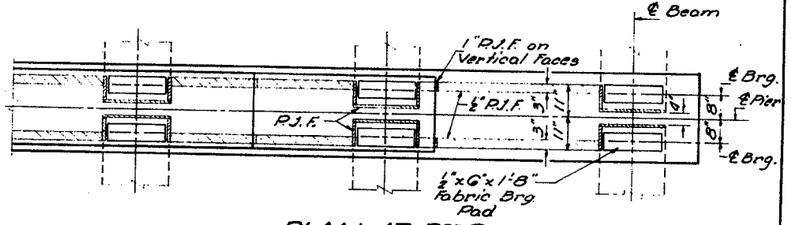
DIAPHRAGM AT PIER



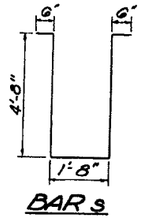
SECTION A-A AT ABUTS



SECTION B-B AT PIER



PLAN AT PIER



BAR s

Note
Reinforcement bars shown on this sheet are included in Bill of Material on sheet #3.

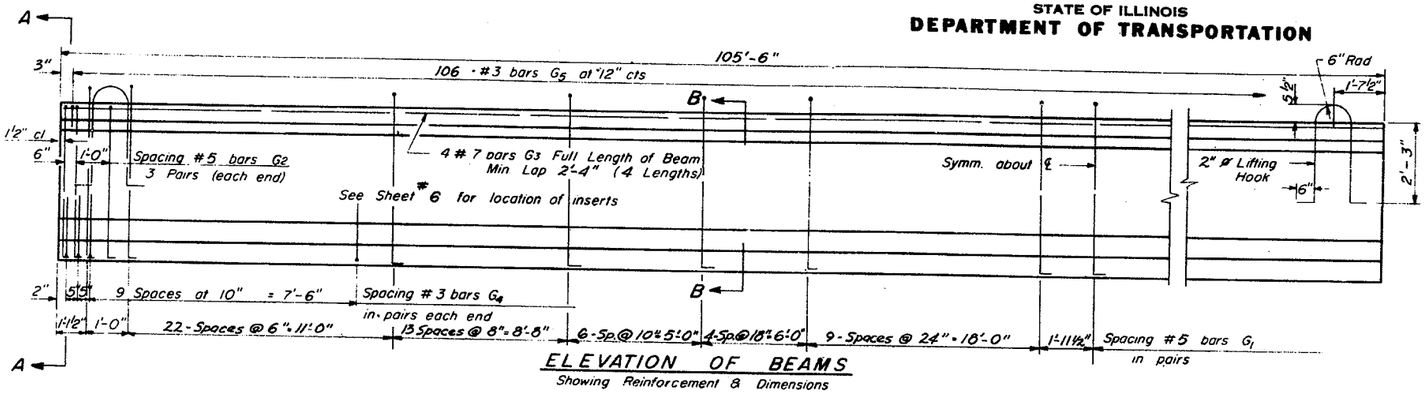
DESIGNED	MVM
CHECKED	HMW
DRAWN	BSB
CHECKED	HMW

BEAM LAYOUTS
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)

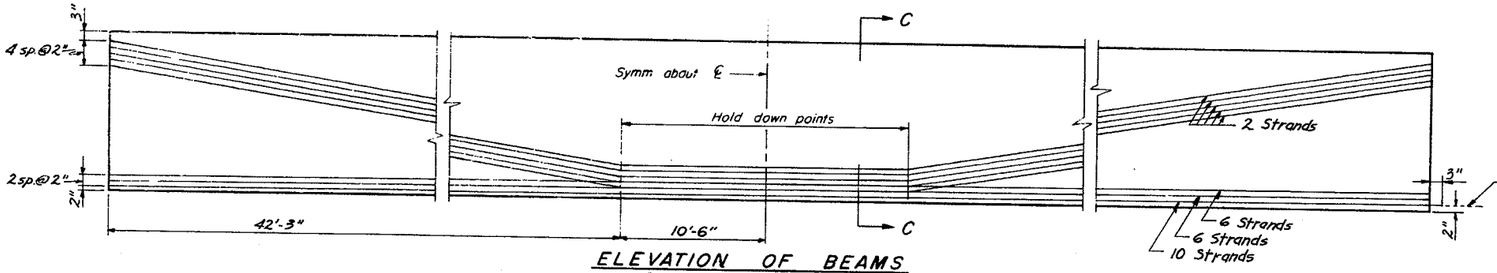
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 412	141-1A	OGLE	628	234
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

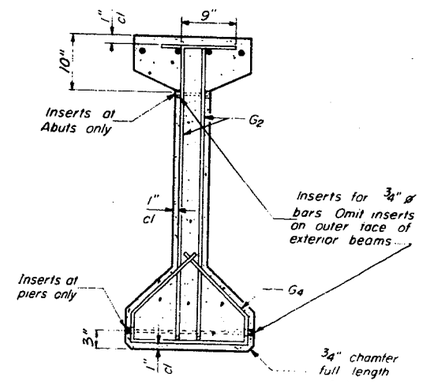
SHEET NO. 7
11 SHEETS



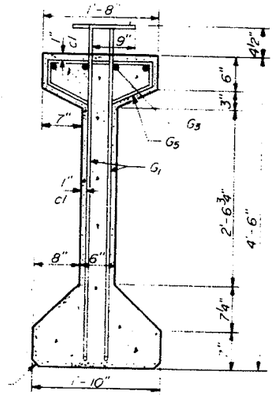
ELEVATION OF BEAMS
Showing Reinforcement & Dimensions



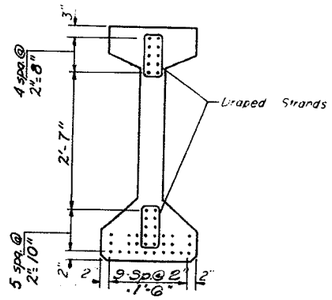
ELEVATION OF BEAMS
Showing Prestressing Steel



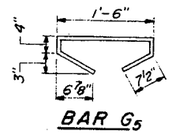
SECTION A-A



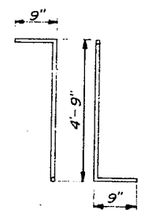
SECTION B-B



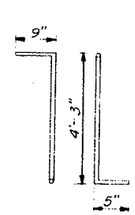
SECTION C-C
32 - ½" ø 270# Strands



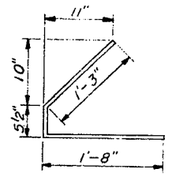
BAR G5



BAR G1



BAR G2



BAR G4

*BAR LIST

Bar	No	Size	Length	Shape
G1	226	#5	6'-3"	⅂L
G2	12	#5	5'-5"	⅂L
G3	16	#7	28'-1"	——
G4	48	#3	3'-4½"	∠
G5	106	#3	3'-5"	▭

* For one beam only

NOTES

All inserts and threaded rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lineal foot of "Furnishing And Erecting Precast Prestressed Concrete I-Beams, 54 in"

Prestressing Steel shall have a nominal diameter of ½"

Inserts for ¾" ø threaded rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams

Steel for lifting hooks shall be non-deformed bars $f_y = 60{,}000$ psi.

BILL OF MATERIAL

Item	Unit	Total
Furnishing & Erecting Precast Prestressed Concrete I-Beams, 54"	Lin Ft	633

Concrete shall have a compressive strength of 5,000 p.s.i. before strands are released and a 28 day compressive strength of 6,000 p.s.i. before the beams are placed in the structure.

DESIGNED	MVM
CHECKED	HMW
DRAWN	BSB
CHECKED	HMW

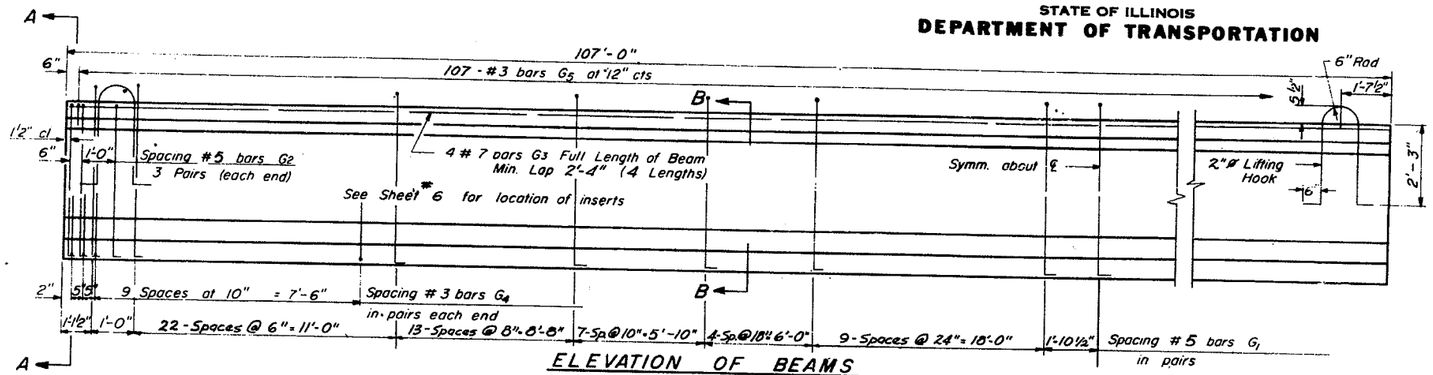
PI-4-54

SPAN I
BEAM DETAILS
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)

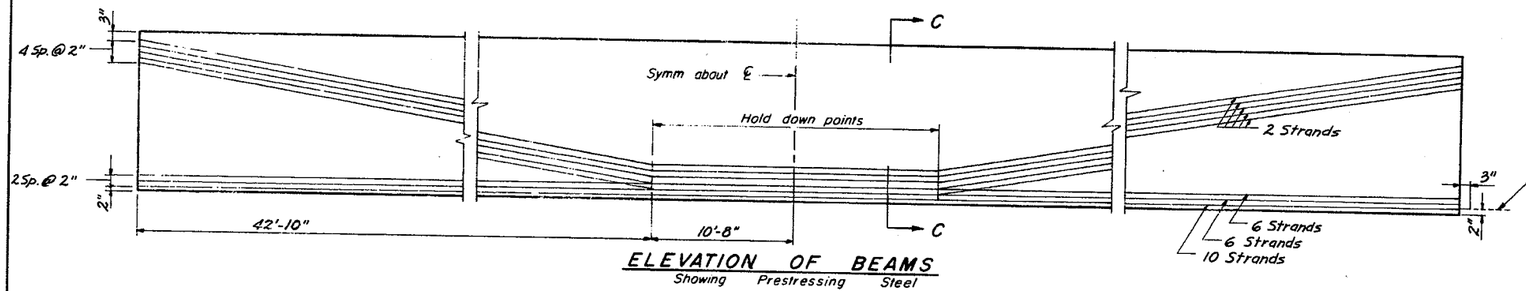
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FA. 412	141-1A	OGLE	628	235
FED. ROAD DIST. NO. *	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
11 SHEETS

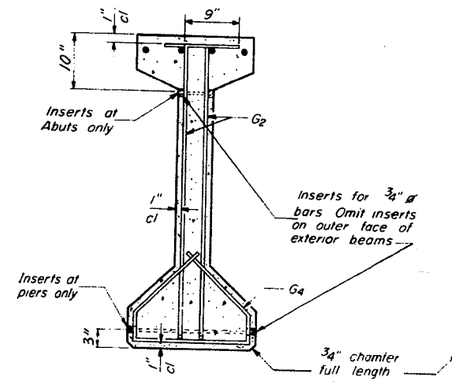


ELEVATION OF BEAMS
Showing Reinforcement & Dimensions

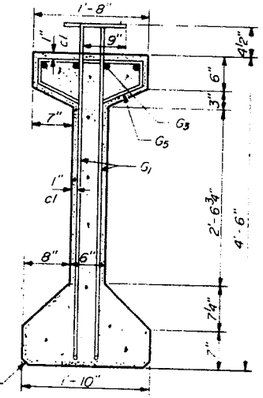


ELEVATION OF BEAMS
Showing Prestressing Steel

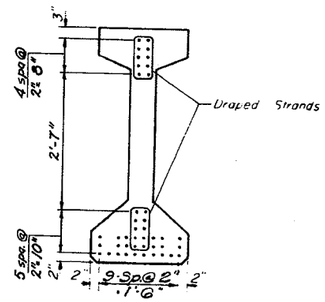
Cut the 8 strands in bottom row with 12" projection f shop bend. (AT PIER END ONLY)



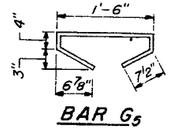
SECTION A-A



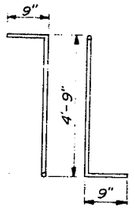
SECTION B-B



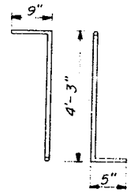
SECTION C-C
32-½"ø 270ᴷ Strands



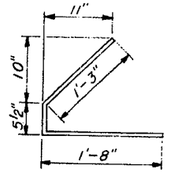
BAR G5



BAR G1



BAR G2



BAR G4

***BAR LIST**

Bar	No	Size	Length	Shape
G1	230	#5	6'-3"	⅂L
G2	12	#5	5'-5"	⅂L
G3	16	#7	28'-1"	——
G4	48	#3	3'-4½"	L
G5	107	#3	3'-5"	▱

* For one beam only

NOTES

All inserts and threaded rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lineal foot of "Furnishing And Erecting Precast Prestressed Concrete I-Beams, 54 in"

Prestressing Steel shall have a nominal diameter of ½"

Inserts for ¾"ø threaded rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams

Steel for lifting hooks shall be non-deformed bars fy = 60,000 psi.

BILL OF MATERIAL

Item	Unit	Total
Furnishing & Erecting Precast Prestressed Concrete I-Beams, 54"	Lin Ft	642

Concrete shall have a compressive strength of 5,000 p.s.i. before strands are released and a 28 day compressive strength of 6,000 p.s.i. before the beams are placed in the structure.

DESIGNED	MVM
CHECKED	HMW
DRAWN	BSB
CHECKED	HMW

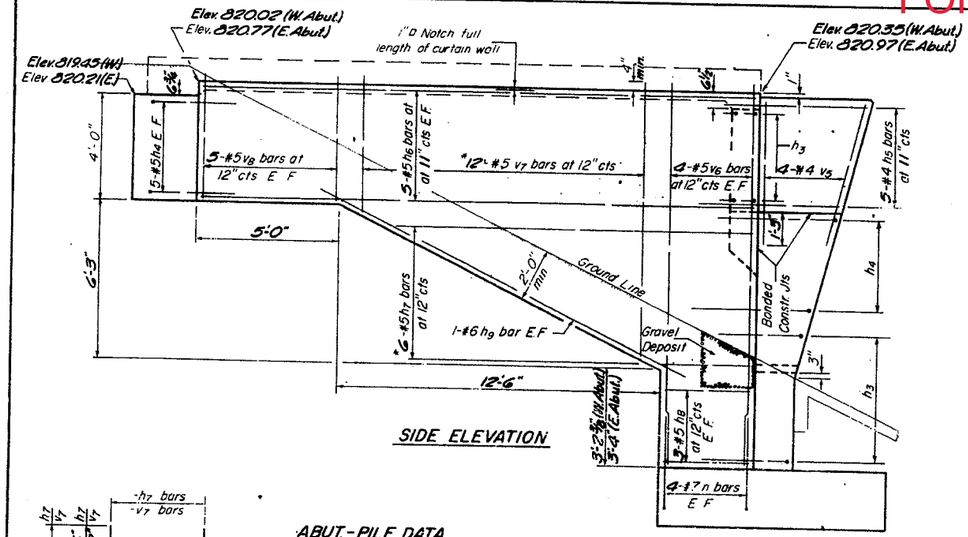
PI-4-54

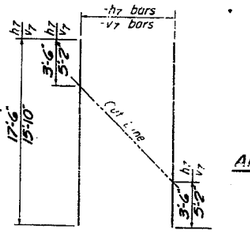
SPAN 2
BEAM DETAILS
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE. NO.	SECTION	COUNTIES	TOTAL SHEETS	SHEET NO.
FA. 412	141-1A	OGLE	628	236

SHEET NO 9
11 SHEETS

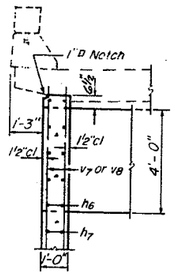


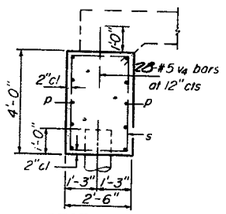


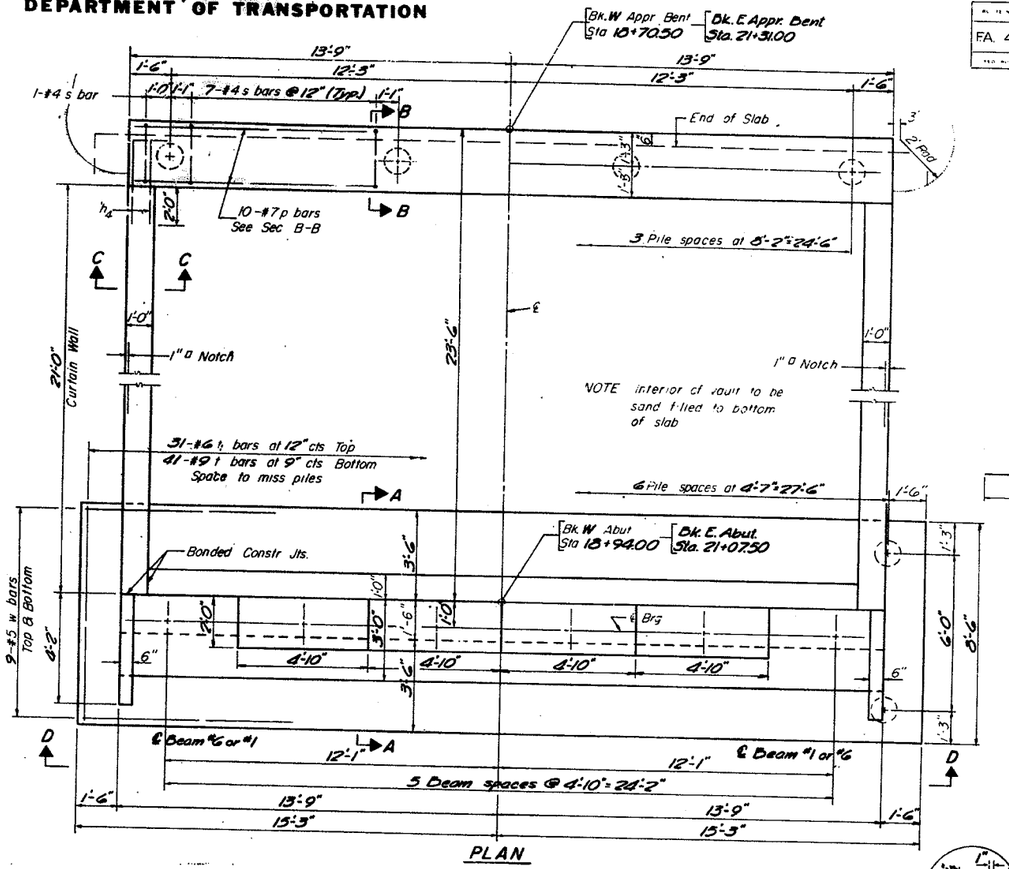
*Under h_7 & v_7 bars full length Cut to fit as shown and use remainder of bars in other face

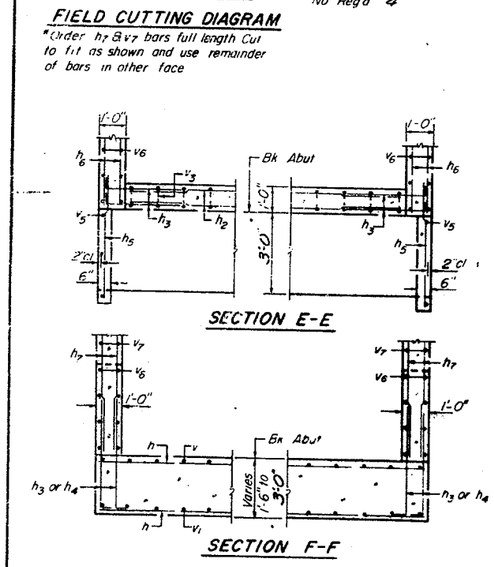
ABUT-PILE DATA
Type Concrete
Capacity 40 Ton
Est Length 51'(W) 50'(E)
No Req'd 13+1 Test Pile

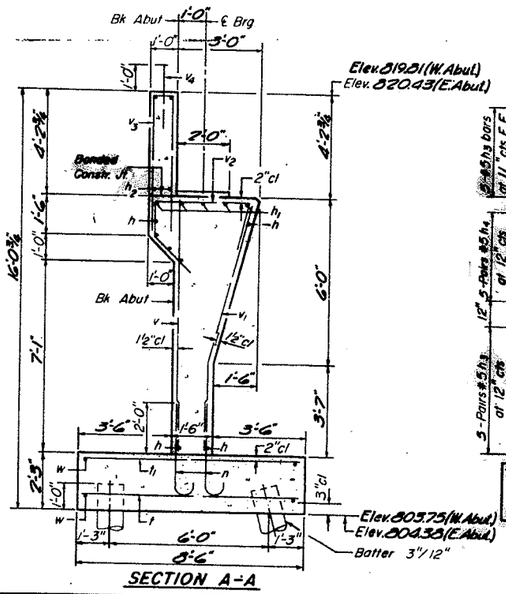
APPR. BENT-PILE DATA
Type Concrete
Capacity 30 Ton
Est Length 59'(W) 56'(E)
No Req'd 4

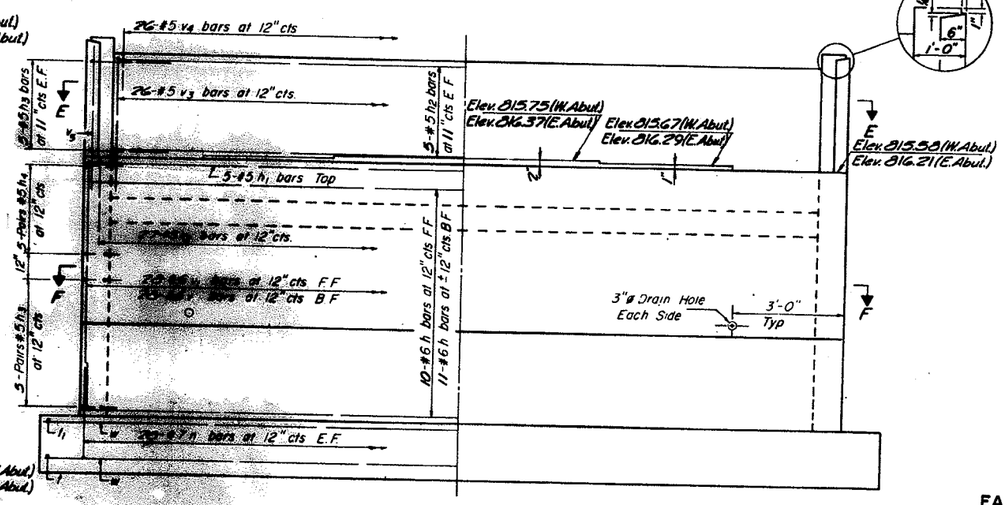












DESIGNED	MVM
CHECKED	HMW
DRAWN	CWB
CHECKED	HMW

VAF-0

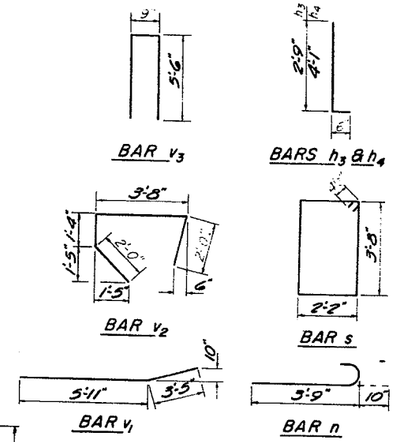
Rev. 2-16-79 DD

Rev. Concrete Piles from 1,571 L.F. to 1,773 L.F. 1-26-79 D.D.

* BILL OF MATERIAL

Bar	No	Size	Length	Shape
h	42	#6	27'-3"	—
h_1	10	#5	27'-3"	—
h_2	20	#5	23'-3"	—
h_3	80	#5	3'-3"	L
h_4	80	#5	4'-7"	L
h_5	20	#4	5'-6"	—
h_6	40	#5	20'-9"	—
h_7	24	#5	17'-6"	—
h_8	12	#5	3'-3"	—
h_9	8	#6	16'-0"	—
n	144	#7	4'-7"	—
p	20	#7	27'-3"	—
s_1	46	#4	12'-3"	—
t	82	#9	8'-3"	—
t_1	62	#6	8'-3"	—
v	56	#6	9'-3"	—
v_1	36	#6	9'-6"	—
v_2	34	#5	9'-0"	—
v_3	52	#5	11'-9"	—
v_4	108	#5	2'-6"	—
v_5	16	#4	3'-9"	—
v_6	32	#5	14'-8"	—
v_7	40	#5	15'-10"	—
v_8	40	#5	4'-9"	—
w	36	#5	30'-3"	—
Reinforcement Bars			Lbs	16,390
Class X Concrete			Cu Yds	140.6
Concrete Piles			Lin. Ft.	1,773
Test Piles (Concrete)			Each	2

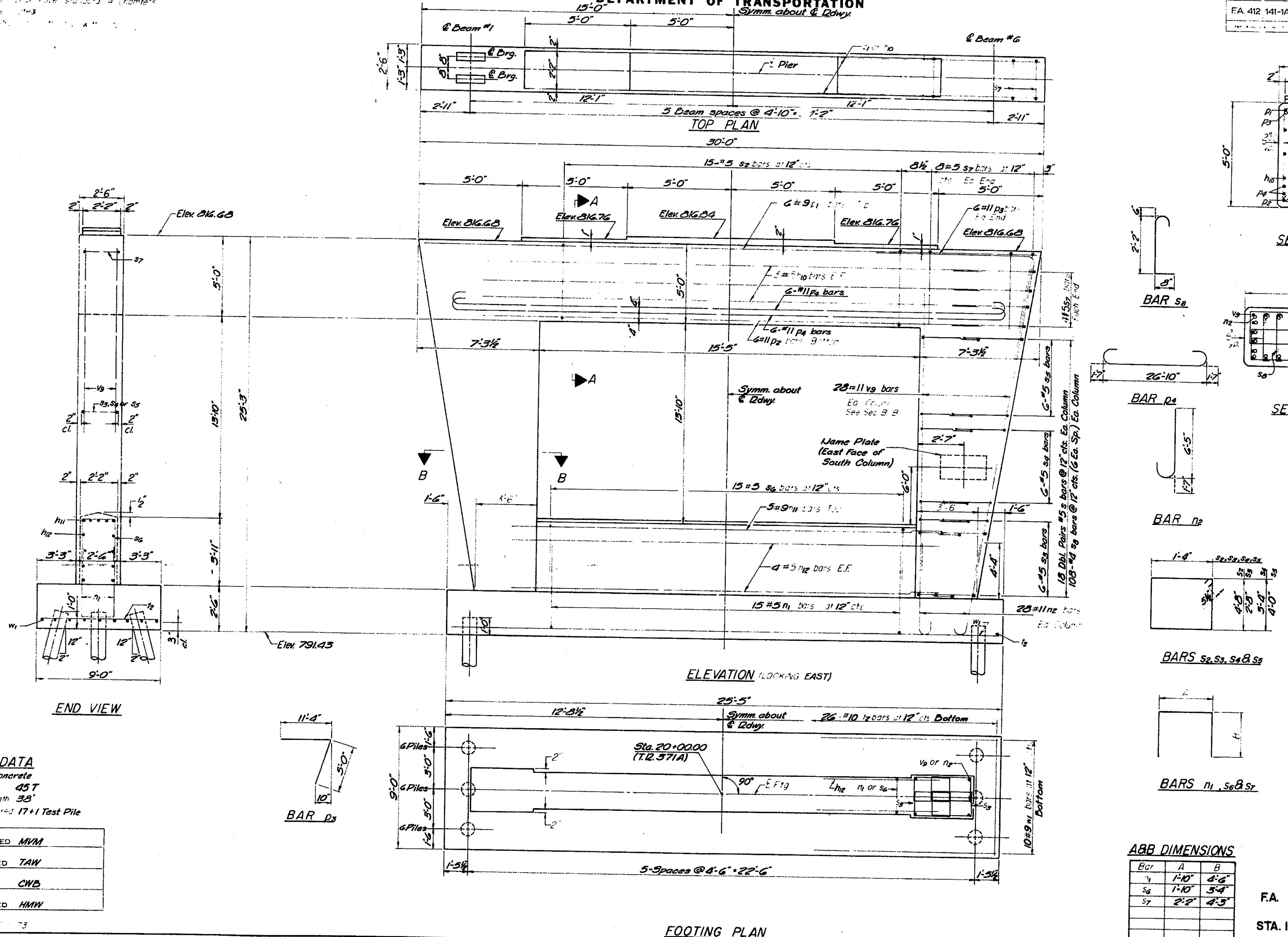
* Total for East & West Abutments



ABUTMENT DETAILS
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)

NOTES:

Space reinforcement in cap to miss anchor bolts
All edges of pier have standard 3/4" chamfers
except as noted



PILE DATA
Type Concrete
Capacity 45 T
Est. Length 38'
No. Required 17+1 Test Pile

DESIGNED	MVM
CHECKED	TAW
DRAWN	CWB
CHECKED	HMW

P-11

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{10}	6	#5	23'-6"	——
h_{11}	5	#9	19'-11"	——
h_{12}	8	#5	17'-11"	——
n_1	15	#5	10'-10"	⊔
n_2	56	#11	8'-0"	⊃
p_1	6	#11	27'-6"	——
p_2	6	#11	26'-6"	——
p_3	12	#11	16'-4"	⌐
p_4	12	#11	30'-0"	⊂⊃
S_2	30	#5	12'-11"	□
S_3	48	#5	8'-11"	□
S_4	48	#5	10'-3"	□
S_5	48	#5	11'-7"	□
S_6	15	#5	8'-6"	⊓
S_7	24	#5	10'-8"	⊓
S_8	216	#4	3'-4"	⊔
t_2	26	#10	8'-9"	——
v_9	56	#11	21'-9"	——
w_1	10	#9	25'-2"	——
Class X Concrete			Cu. Yds.	56.1
Reinforcement Bars			Lbs.	18,990
Concrete Piles			Lin. Ft.	646
Test Piles (Concrete)			Each	1

A&B DIMENSIONS

Bar	A	B
n_1	1'-10"	4'-6"
S_6	1'-10"	3'-4"
S_7	2'-2"	4'-3"

PIER DETAILS
F.A. RTE. 412 SEC. 141-1HB-2
OGLE COUNTY
STA. 1464+18.08 (F.A. RTE 412)