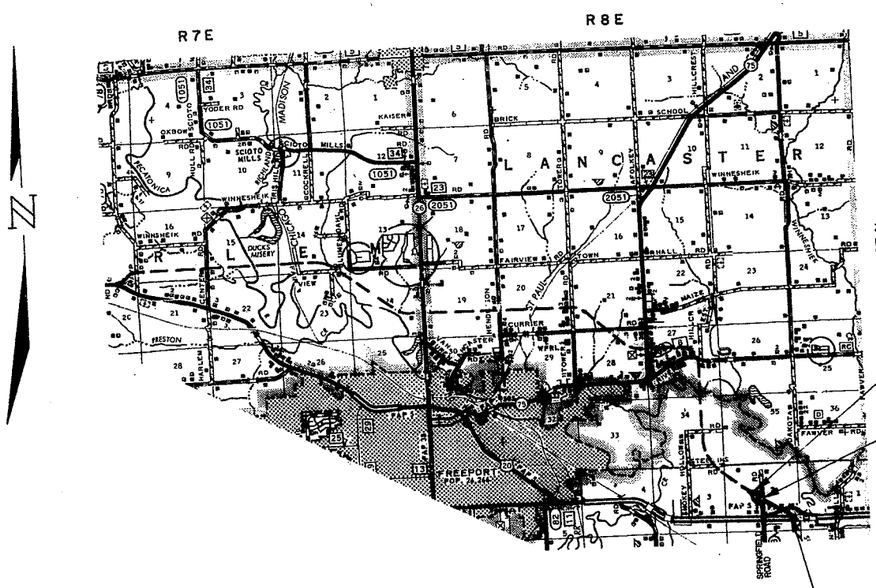
089-0050

INDEX OF SHEETS
SEE SHEET # 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY
FA ROUTE 401
SECTION 177-4A-2 & 177-4HB-3
STEPHENSON COUNTY
PROJECT F-401-2(16)

C-92-010-85



DESIGN DESIGNATION
950(04) MAJOR 8.87(CRCP-20)

GROSS LENGTH OF SECTION = 3200 LIN. FT. = 0.606 MI.

* 177-4A-2 & 177-4HB-3

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 401	*	STEPHENSON	75	1
FJWA REG. 4		ILLINOIS PROJECT		

P-92-014-74

LOCATION OF SECTION INDICATED THUS:—

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 17, 19 85
Wilbur D. Ott
DISTRICT ENGINEER

EXAMINED 6-25, 19 85
W W Wilson
ENGINEER OF PLANS AND CONTRACTS

PASSED 6-25, 19 85
ENGINEER OF DESIGN

APPROVED 6-25, 19 85
DIRECTOR, DIVISION OF HIGHWAYS

DISTRICT 2
DIXON, IL.

CALL J.U.L.I.E.
BEFORE YOU DIG
800-892-0123
SILVER CREEK TWP.

CONTRACT NO. 40254

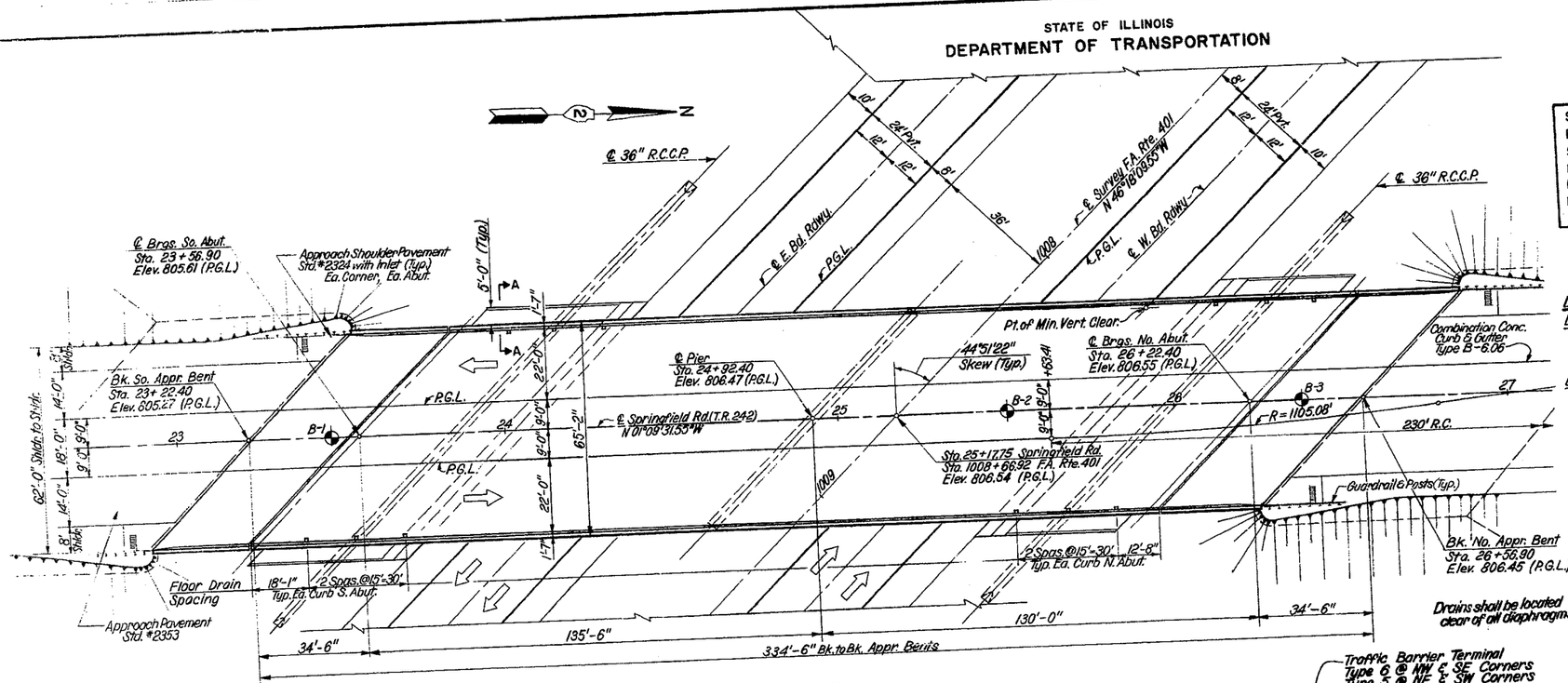
STEPHENSON COUNTY SECTION 177-4A-2 & F.A. ROUTE 401

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

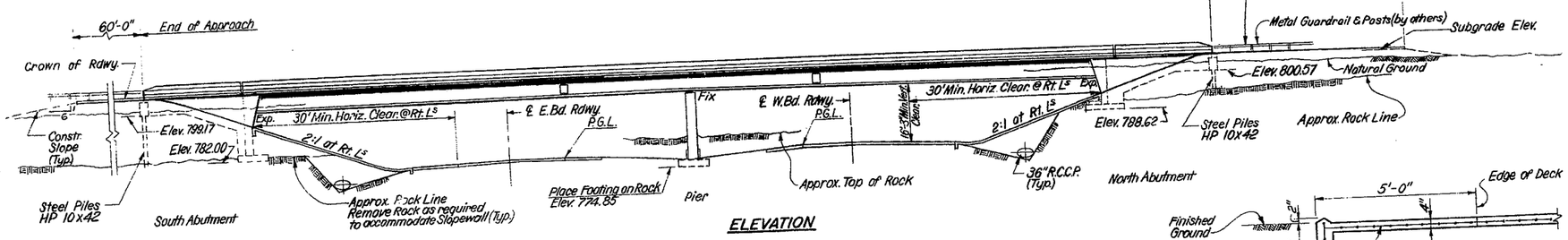
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
S. B. I. F. A. 401	177-4	STEPHENSON	44	33
FED. ROAD DIST. NO 7	ILLINOIS	FED. AID PROJECT		

#177-4A-2 & 4H8-3

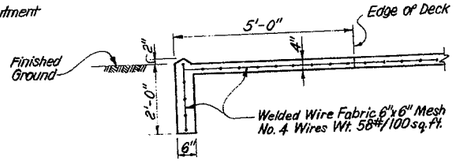
SHEET NO. 1
15 SHEETS



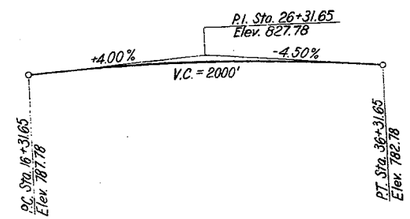
PLAN



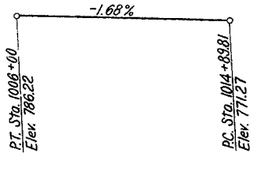
ELEVATION



SECTION A-A

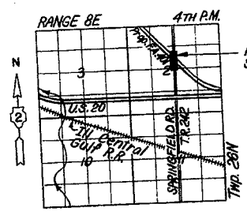


PROFILE SPRINGFIELD RD.
(Along Median Edge of Pavement)



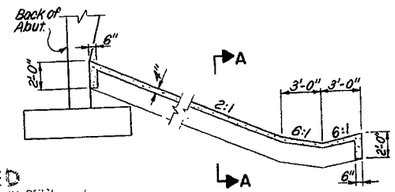
PROFILE F.A. RTE. 401
(Along Median Edge of Pavement)

DESIGNED	S. J.
CHECKED	Y. V.
DRAWN	H. P.
CHECKED	Y. V.



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ASSURANCE ONLY
James J. Kaufman
Engineer of Design and Structures



SECTION THRU SLOPE WALL

STATION 1008+66.92
BUILT 19 BY
STATE OF ILLINOIS
F.A. 401 SECTION 177-4HB-3
PROJECT F-401-2(16)
LOADING HS 20
STRUCTURE NO. 089-0050

NAME PLATE
See Std. 2113

DESIGN NOTES

Design Loading

H.S. 20-44 and allowance for 25 P.S.F. future wearing surface

Design Stresses - Load Factor Design

f'_c = 3,500 P.S.I.
f_y = 60,000 P.S.I. (Reinf.)
f_y = 50,000 P.S.I. (M223)
f_y = 36,000 P.S.I. (M183)

Design Specifications

AASHTO 1983 as applicable

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$"ø, open holes $\frac{15}{16}$" unless otherwise noted.

Calculated Weight of Structural Steel = 474,100 Lbs. M223 Gr 50
38,310 Lbs. M183

The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel except where noted otherwise.

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

Anchor bolts shall be set before bolting cross frames over supports.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M222.

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 tension flanges, webs and all splice plate material of the steel girders or wide flange beams.

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

Slope wall shall be reinforced with welded wire fabric, 6"x6"-W4.0xW4.0, weighing 58 lbs. per 100 sq. ft.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

The Contractor shall drive two steel test piles in a permanent location (one each at South and North Abutment) as directed by the Engineer before ordering the remainder of piles.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$" 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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCT.	SUB STRUCT.	TOTAL
Structure Excavation	Cu. Yds.	—	848	848
Rock Excavation for Structures	Cu. Yds.	—	230	230
Protective Coat	Sq. Yds.	2,553	—	2,553
Class "X" Concrete	Cu. Yds.	786.7	564.2	1,350.9
Furnishing and Erecting Structural Steel	L. Sum.	1	—	1
Reinforcement Bars	Lbs.	54,320	79,450	133,770
Reinforcement Bars (Epoxy Coated)	Lbs.	156,780	—	156,780
Stud Shear Connectors	Each	3,184	—	3,184
Steel Piles HP 10x42	Lin. Ft.	—	308	308
Test Piles Steel HP 10x42	Each	—	2	2
Name Plate	Each	1	—	1
Slope Wall (4")	Sq. Yds.	—	620	620
Sand Backfill	Cu. Yds.	—	616	616
Neoprene Joint 2"	Lin. Ft.	190	—	190
Floor Drains	Each	12	—	12
Metal Shoes	Each	—	22	22
Permanent Bench Mark, Type I	Each	1	—	1
Elastomeric Bearing, Type I	Each	—	16	16

For Footing Layout see Sheet #15.

E. Fowley Jarvis
4/10/85

GENERAL PLAN

FA 401 SECTION 177-4 HB-3
FA 401 UNDER SPRINGFIELD RD. (T.R. 242)

STEPHENSON COUNTY

STATION 1008+66.92

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 401	#177-4	STEPHENSON	44	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

#177-4A-2 & 4HB-3

SHEET NO. 4
15 SHEETS

Floor Drains Spacing Each Side — 18'-1" — 2 Spas. @ 15'-0" = 30'-0"
269-#7/8 d(E) bars at 12" cts. Outside Face
293-#5 d(E) bars at 11" cts. Inside Face
Aluminum sheeted const. Joints in base of Parapet
25'-9" — 25'-9"
12-#6 a_{13}(E) bars. Fan out as shown Top (Each acute corner)
2 Spas. @ 15'-8" = 30'-0" — 12'-8"
1'-6⅛"
64-#5 a_{14}(E) bars at 5½" cts. Top Each end of deck
5½" Top
7½" Bottom
518-#5 a(E) bars at 5½" cts. Top Lap 1'-9" Min.
373-#5 a_3(E) bars at 7½" cts. Bottom. Lap 1'-9" Min. with a_5
1 x 3-#5 a_{12}(E) bars Top & Bottom
Lap 1'-9" Min. (Typ.)
Back of S. Abut.
℄ Springfield Road
44°51'22" Skew (Typ.)
℄ Pier
1" Deep Sawed Joint in Superimposed Median
255-#5 c_1(E) bars at 12" cts. Top of Median
11-#5 c_2(E) bars at 12" cts. Top of Median
53-#5 a_6(E) bars at 7½" cts. Bottom. Each end of deck
88-#5 x(E) bars at 12" cts.
℄ P.G.L.
R=1105.08'
41-#5 a_7(E) bars at 7½" cts. Bottom. Each end of deck
Back of N. Abut.
P.G.L.
1 x 3-#5 a_{12}(E) bars Top & Bottom
65'-2" o. to o. deck
62'-0"
22'-0"
9'-0"
22'-0"
7"
1'-7"
1'-0"
269-#5 c(E) bars at 12" cts.
516-#5 a(E) @ 5½" cts. Top
61 x 3-#6 b_1(E) bars at 12" cts Top of slab over pier Equally Spaced between b(E) bars
62 x 9-#5 b(E) bars equally spaced at ± 12" cts Top of Slab
62 x 9-#5 b_2(E) bars spaced as shown in cross section, Bottom of slab
b_3(E) bars
9'-0"
3'-0"
37'-3" — 37'-3"
24'-0" — 13'-3" — 13'-3" — 24'-0"
71'-0⅛"
386-#5 a_8(E) at 7½" cts. Bottom Lap 1'-9" Min. with a_1(E)
Lap 1'-9" Min. at splices (Bars b)
6"
2'-6" Min. Lap
291-#6 a_2(E) bars at 11" cts Top Lap with alternate a(E), a_3(E) or a_4(E) bars
3 x 9-#5 b(E) bars Top of slab
2 x 3-#6 b_1(E) bars Top of slab
137'-0⅜"
131'-6⅜"
268'-6¾" end to end deck
2⅞"

PLAN

** Order c_2(E) bars full length, cut to fit skew and variable width of median and use remainder of bars in opposite end.

Bridge Apprl. Slab
#5 a_{12}(E) 2" c650'F
See Sh. #6 for Expansion Joint Detail
#5 b_{15}(E)
#5 b_{16}(E)
#5 b(E)
#5 a_{10}(E)
#6 a_{11}(E)
#5 a(E)
#5 a_3(E)
#5 b_2
#5 a_1(E)
#5 a_6(E)
#5 x(E)
3"
#5 V_4
#5 V_3
#5 h_2
1'-0"
1'-3"
℄ Brgs.
7" Measured along ℄ Girder
#5 h_1
#6 h
Constr. Joint
#5 V_2
#6 V
#6 V_1
Back of Abut.

SECTION A-A

NOTES:
See sheet #5 for superstructure details and Bill of Material.
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.

53-a_6(E) bars
41-a_7(E) bars
65-a_9(E) bars
64-a_4(E) bars
a_1(E) a_6(E) a_7(E) a_4(E) a_3(E) a_4(E)
2'-3" 2'-9" 3'-3" 2'-9"
29'-6" 30'-0" 32'-3" 34'-3"
Cut Line
3'-3" 2'-9" 2'-3" 2'-9"

FIELD CUTTING DIAGRAM

*Order a_3, a_4, a_6 & a_7 bars full length. Cut to fit as shown and use remainder of bars in other corner of deck.

65'-2" o. to o. deck
62'-0" face to face parapets
1'-7" — 1'-0" — 7" — 8'-0" slope ¼" per ft — 14'-0" slope 3/16" per ft — 9'-0" slope 3/16" per ft — Varies 9'-0" Max. slope 3/16" per ft — 14'-0" slope 3/16" per ft — 8'-0" slope ¼" per ft — 7" — 1'-0" — 1'-7"
23'-0" — 23'-0"
2" — 7¾" — 24" — 2½" — 7¾" — 2"
Longitudinal bonded construction joints - Do not edge
Total Drop = 4⅝" — Total Drop = 4⅝"
***Bonded Constr. Joint
19 x 9-#5 b_3(E) bars @ ± 12" cts. full length. Lap 1'-9" Min. at splices
P.G.L. — P.G.L.
1¾" Cl.
#5 c_2(E) bars & c_2(E) bars @ 12" cts
#5 c_1(E) bars @ 12" cts See Optional Method this sheet
1" Deep Sawed Joint
d(E) — d_1(E) — b(E) — b_1(E) — a_2(E) — a_4(E) a_3(E) a(E) — a_2(E) — a_4(E) a_3(E) a(E) — d_1(E) — d(E) — b(E) — b_2
2¼" Cl. ±
11" Cl.
7½" Slab
6" — 14" — 9" — 11½" — 3"
1'-9" Min. Lap
1'-0½" — 8-#5 b_8(E) bars @ 11" cts Typical between beams — 1'-0½"
a_5(E) a_7(E)
2'-10" — 2'-10"
G1 G2 G3 G4 G5 G6 G7 G8
Constr. Joint — 7 spaces at 8'-6" = 59'-6"

NEAR PIER — NEAR MIDSPAN

*** 3'-0" wide along each edge of Median

CROSS SECTION
LOOKING NORTH

Self Drilling Insert
a_4(E) a_3(E) a(E)
#5 c_1(E) or #5 c_2(E)
#5 b_3(E)
#5 c(E)
3" Max.

SELF DRILLING INSERT
Optional Method
Cost Incidental

DECK DETAILS

FA 401 SECTION 177-4 HB-3
FA 401 UNDER SPRINGFIELD RD. (T.R. 242)
STEPHENSON COUNTY
STATION 1008+66.92

DESIGNED	S.J.
CHECKED	Y.V.
DRAWN	H.P.
CHECKED	Y.V.

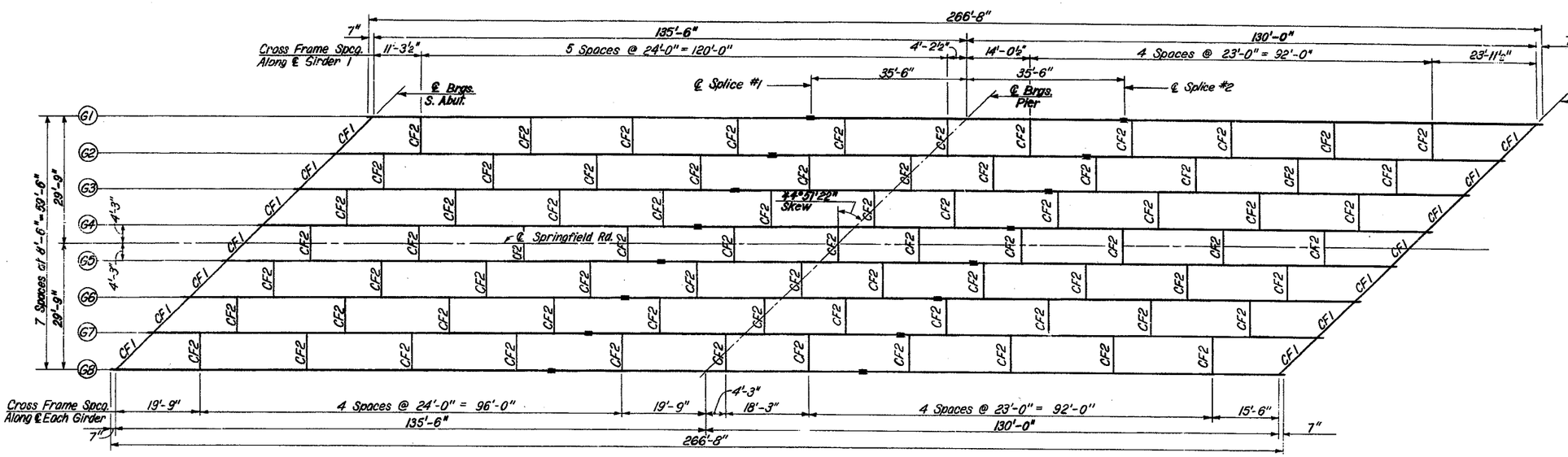
S-2-L

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

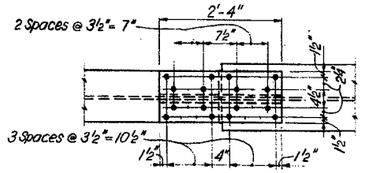
*177-4A-2 & 4HB-3

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 401	*177-4	STEPHENSON	44	41
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

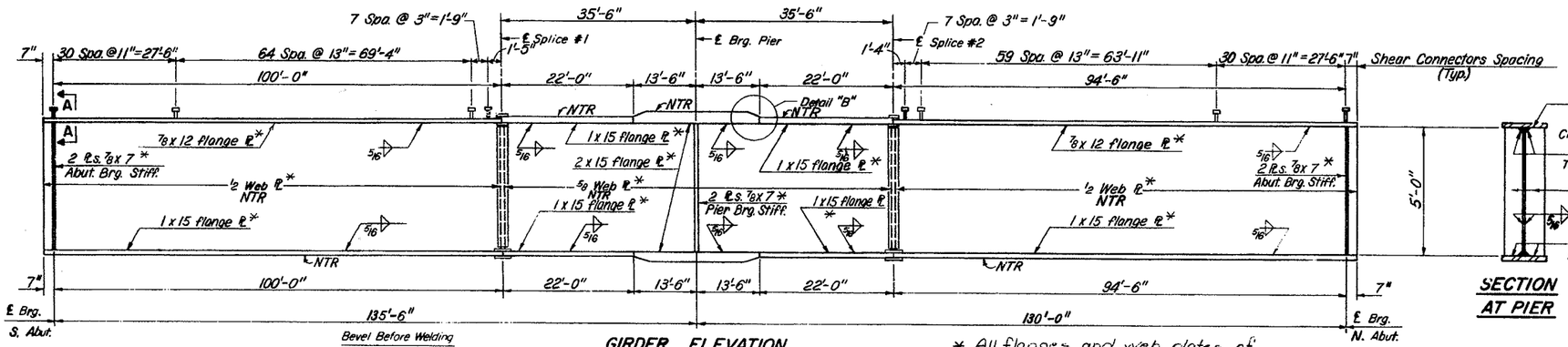
SHEET NO. 9
15 SHEETS



FRAMING PLAN



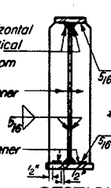
TOP FLANGE SPLICE



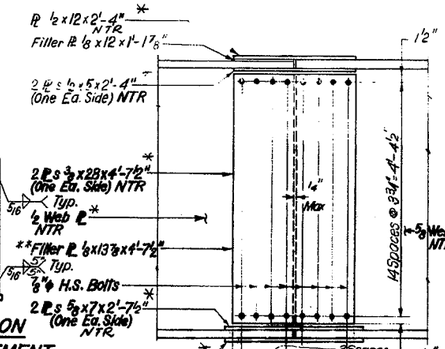
GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable

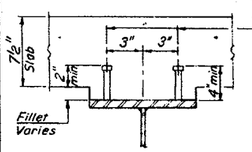
SECTION AT PIER



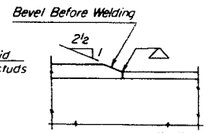
SECTION AT ABUTMENT



FIELD SPLICE DETAIL



SECTION A-A



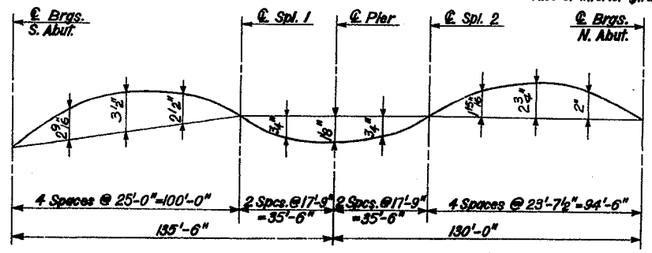
DETAIL "B"

* All flanges and web plates of the ℘ girder, and all splice plates (except fill plates) shall be AASHTO M223, Grade 50.

**Filler ℘ to be placed on the inside face of exterior girders, either face of interior girder

TOP WEB ELEVATIONS ***					
LOCATION	S. ABUT.	℄ SPLICE 1	PIER	℄ SPLICE 2	N. ABUT.
GIR. 1	804.641	805.368	805.324	805.472	805.246
GIR. 2	804.741	805.503	805.472	805.633	805.441
GIR. 3	804.802	805.600	805.582	805.756	805.598
GIR. 4	804.860	805.695	805.689	805.876	805.751
GIR. 5	804.783	805.653	805.660	805.859	805.769
GIR. 6	804.569	805.475	805.496	805.707	805.651
GIR. 7	804.353	805.295	805.328	805.552	805.530
GIR. 8	804.098	805.076	805.122	805.359	805.371

***For Fabrication only



CAMBER FOR GIRDERS 1 THRU 8

DESIGNED	S.J.
CHECKED	Y.V.
DRAWN	P.M.
CHECKED	Y.V.

G-1 4-1-79

STRUCTURAL STEEL

FA 401 SECTION 177-4 HB-3
FA 401 UNDER SPRINGFIELD RD. (T.R. 242)

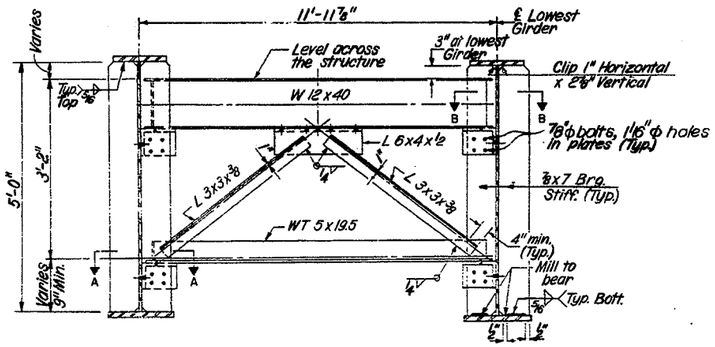
STEPHENSON COUNTY

STATION 1008+66.92

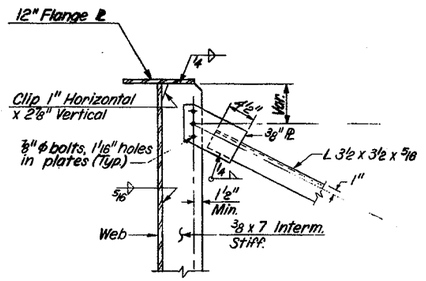
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

#177-4A-2 & 4HB-3				
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 401	177-4	STEPHENSON	44	42
FED. ROAD DIST. NO 7	ILLINOIS	FED. AID PROJECT		

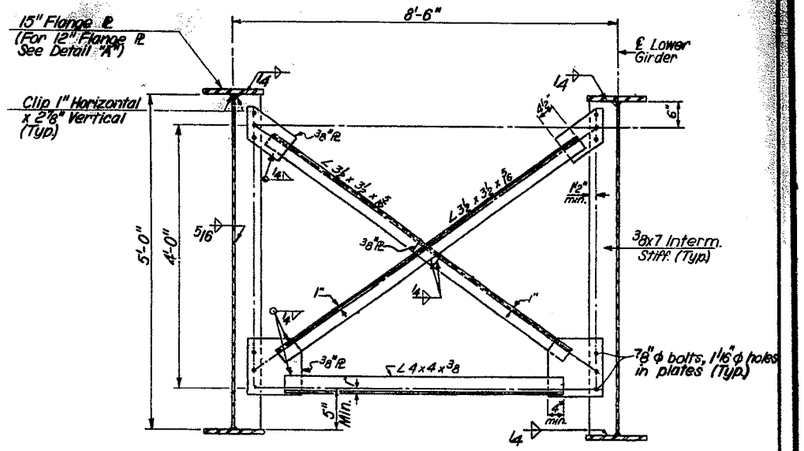
SHEET NO. 10
15 SHEETS



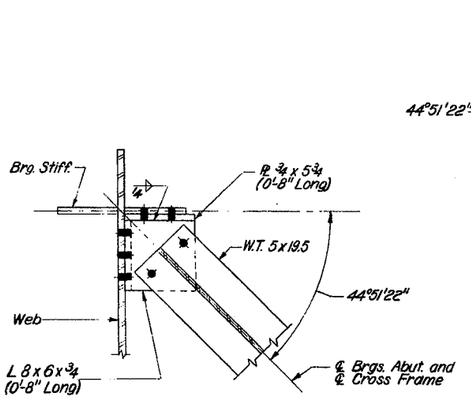
TYPICAL END CROSS FRAME CF-1



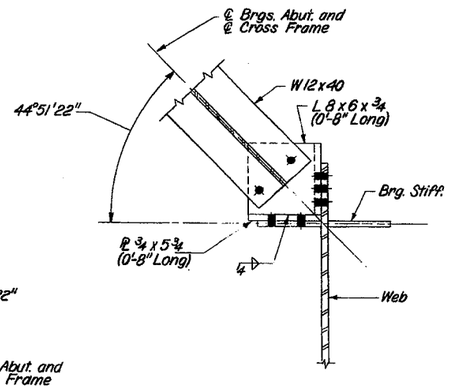
DETAIL "A"



TYPICAL INTERIOR CROSS FRAME CF-2



SECTION A-A



SECTION B-B

DESIGNED	Y.V.
CHECKED	J.D.S.
DRAWN	H.P.
CHECKED	Y.V.

NOTES

Hardened washers shall be required over holes in plates or angles.

Work this sheet with sheet # 9.

Cross Frames and Connection Plates shall be AASHTO M183.

STRUCTURAL STEEL

FA 401 SECTION 177-4 HB-3
FA 401 UNDER SPRINGFIELD RD(T.R.242)

STEPHENSON COUNTY

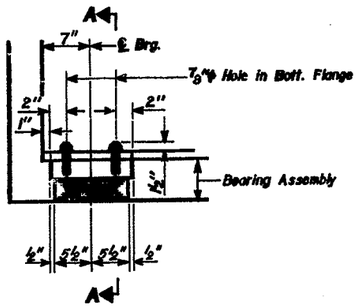
STATION 1008+66.92

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

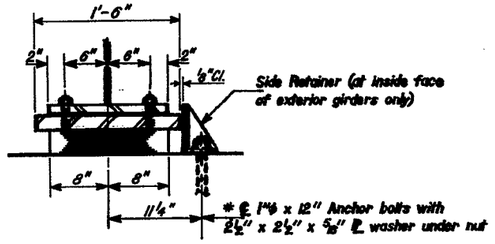
*177-4A-2 & 4HB-3

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
S.B.I. F.A. 401	177-4	STEPHENSON	44	43
FED. ROAD DIST. NO 7	ILLINOIS	FED. AID PROJECT		

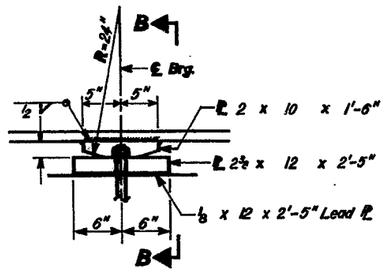
SHEET NO. 11
15 SHEETS



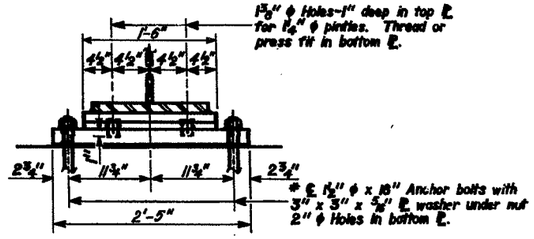
ELEVATION AT ABUT.



SECTION A-B

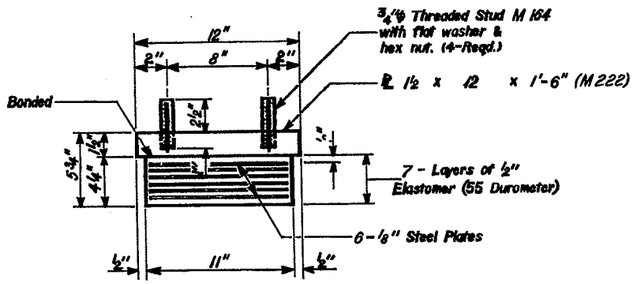


ELEVATION AT PIER



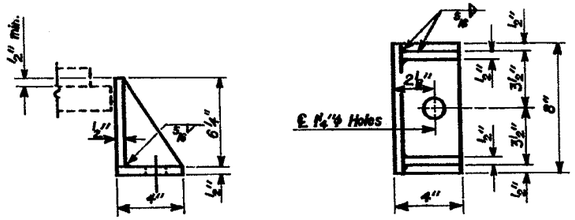
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

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

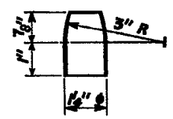


SIDE RETAINER

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

* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet #11A for Anchor Bolt installation.

FIXED BEARING



PINTLE

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp.1	PIER	0.6 Sp.2
Is (in.⁴)	32342	68910	32342
Ic (in.⁴)	82408		82408
Ss (in.³)	1134	2153	1134
Sc (in.³)	1609	2153	1609
℄ (K/I)	1.06 Aver.	1.06 Aver.	1.06 Aver.
M℄ ('K)	1242	2734	1056
s℄ (K/I)	0.408	0.408	0.408
Ms℄ ('K)	543	889	472
M℄ ('K)	1392	1245	1334
M imp ('K)	267	300	261
S3(M℄+I)('K)	2765	2575	2658
Ma ('K)	5915	8289	5442
fs℄ non-comp.(ksi)	13.1	16.2	11.2
fs℄ (comp) (k.s.i.)	4.1	5.9	3.5
fsS3(℄+I) (k.s.i.)	20.6	14.4	19.8
fs(Overload)(ksi.)	37.8	35.5	34.5
* fs(Total) (k.s.i.)	49.1	46.2	44.9
VR (K)	66.6	72.5	67.7

GIRDER REACTION TABLE			
	S. ABUT.	PIER	N. ABUT.
R℄ (K)	73	249	68
R℄ (K)	51	100	51
Imp (K)	10	20	10
R Total (K)	134	369	129

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total and Overload).

Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total and Overload).

VR is the maximum ℄ + impact shear range in span.

fs(Total) is the sum of the stresses due to 1.3[M℄ + Ms℄ + S3(M℄ + I)]

fs(Overload) is the sum of the stresses due to M℄ + Ms℄ + S3(M℄ + I)

M℄ - Moment due to dead loads on non-composite section.

Ms℄ - Moment due to dead loads on composite section.

M℄ - Moment due to live load on non-composite or composite section.

I - Live load impact.

*Non-compact section
Ma (Applied Moment) = 1.3[M℄ + Ms℄ + S3(M℄ + I)]

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	16

DESIGNED	S. J.
CHECKED	Y. V.
DRAWN	P. M.
CHECKED	Y. V.

BEARINGS

FA 401 SECTION 177-4 HB-3
FA 401 UNDER SPRINGFIELD RD.(T.R. 242)

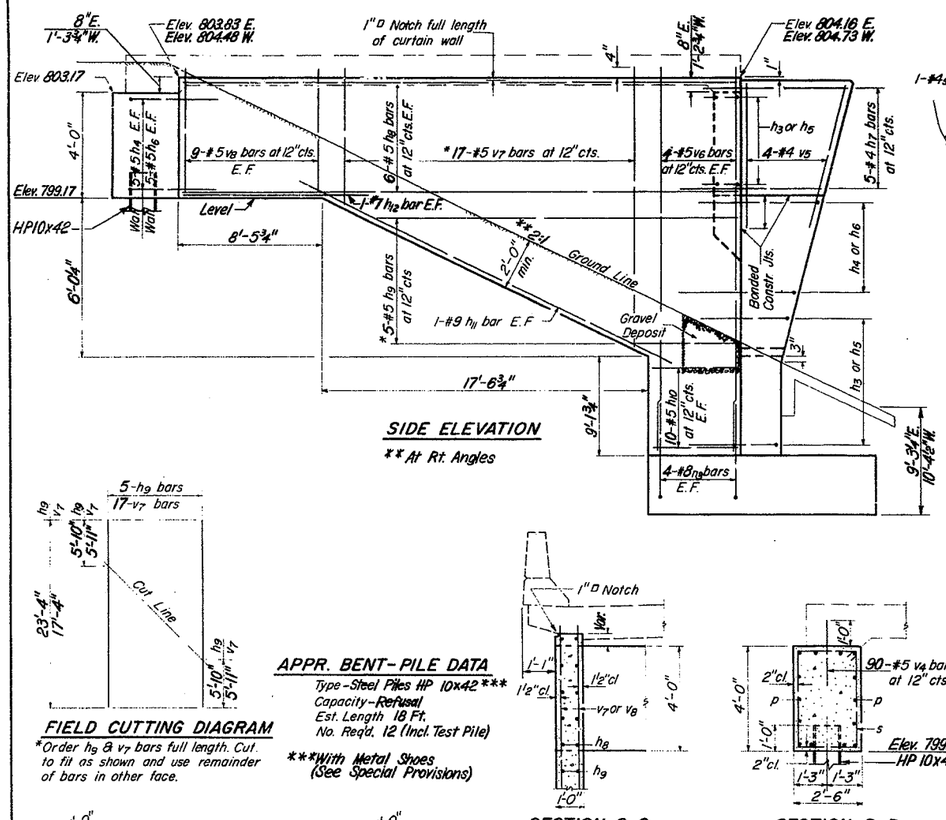
STEPHENSON COUNTY

STATION 1008+66.92

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*177-4A-2 & 4HB-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FED. ROAD DIST. NO.				SHEET NO. 12
FA 401	177-4	STEPHENSON	44	44
FED. ROAD DIST. NO.	STATE	FED. AID PROJECT		15 SHEETS



SIDE ELEVATION

** At Rt. Angles

FIELD CUTTING DIAGRAM

*Order h_9 & v_7 bars full length. Cut to fit as shown and use remainder of bars in other face.

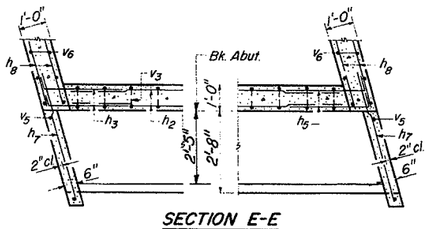
APPR. BENT-PILE DATA

Type-Steel Piles HP 10x42***
Capacity-Refusal
Est. Length 18 Ft.
No. Req'd. 12 (Incl. Test Pile)

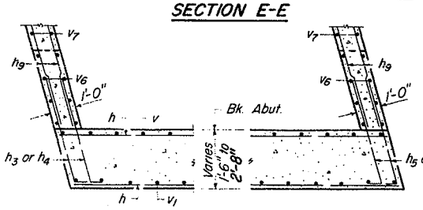
***With Metal Shoes (See Special Provisions)

SECTION C-C

SECTION B-B



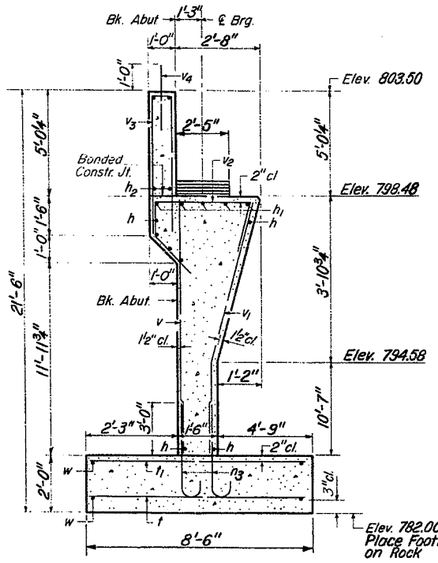
SECTION E-E



SECTION F-F

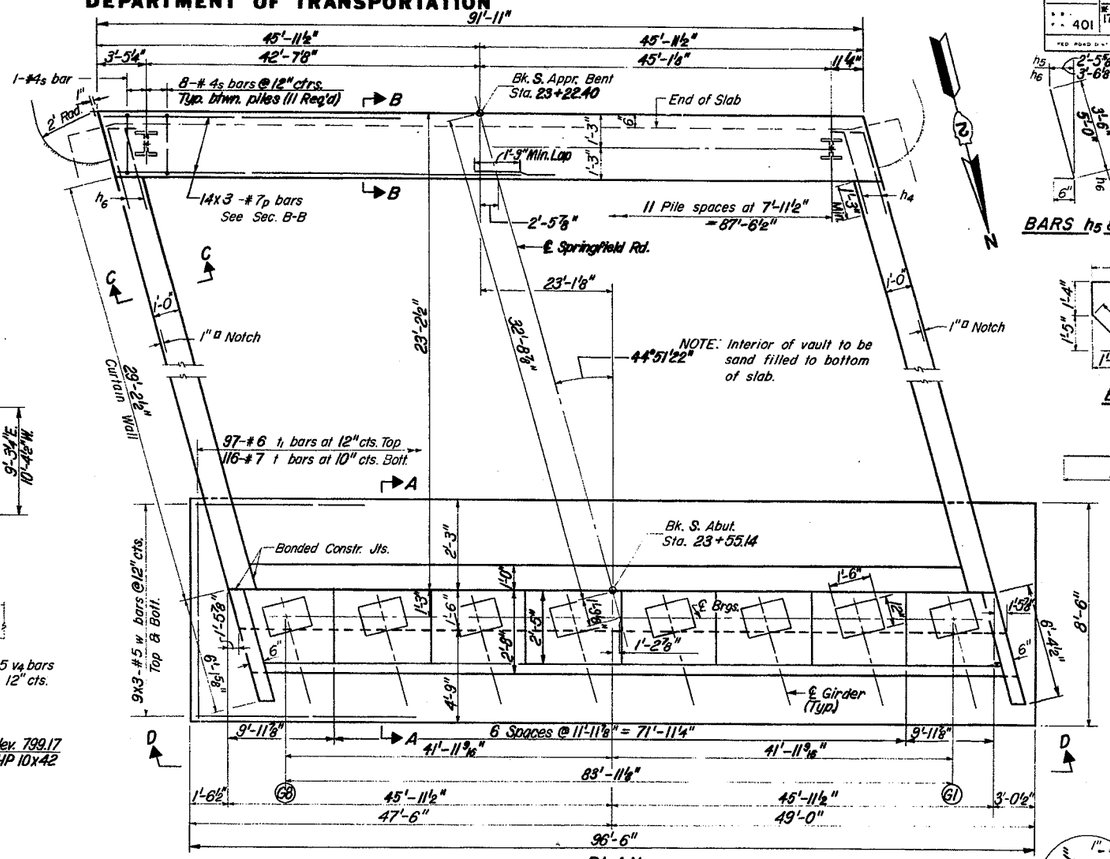
DESIGNED	S.J.
CHECKED	Y.V.
DRAWN	P.M.
CHECKED	Y.V.

AV-L

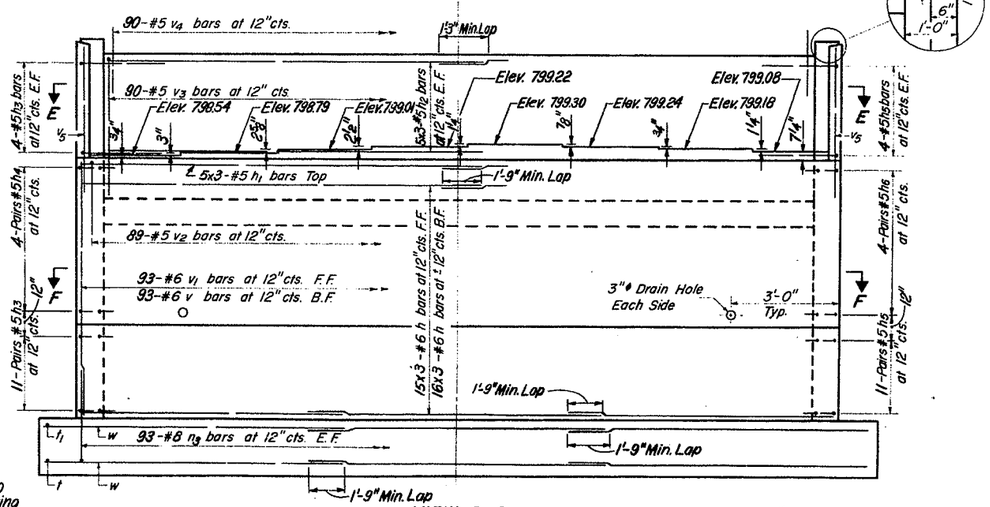


SECTION A-A

Max. Soil Pressure: 2.8 T.S.F. (Group I Loading)

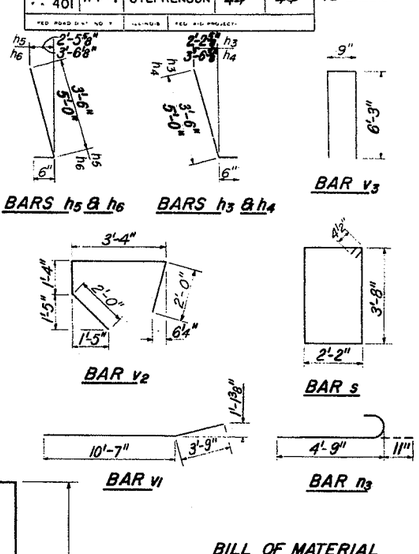


PLAN



VIEW D-D

Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	93	#6	31'-8"	
h1	15	#5	31'-8"	
h2	30	#5	30'-2"	
h3	30	#5	4'-0"	
h4	18	#5	5'-6"	
h5	30	#5	4'-0"	
h6	18	#5	5'-6"	
h7	10	#4	7'-6"	
h8	24	#5	28'-10"	
h9	10	#5	23'-4"	
h10	40	#5	2'-11"	
h11	4	#9	24'-0"	
h12	4	#7	12'-0"	
n3	202	#8	5'-8"	
p	42	#7	32'-0"	
s	89	#4	12'-5"	
t	116	#7	8'-0"	
t1	97	#6	8'-0"	
v	93	#6	14'-2"	
v1	93	#6	14'-4"	
v2	89	#5	8'-8"	
v3	90	#5	13'-3"	
v4	90	#5	2'-6"	
v5	8	#4	6'-3"	
v6	16	#5	21'-0"	
v7	34	#5	17'-4"	
v8	36	#5	5'-6"	
w	54	#5	33'-3"	
Structure Excav.			Cu. Yds.	620
Rock Excav. for Structures			Cu. Yds.	61
Reinforcement Bars			Lbs	26,830
Class X Concrete			Cu. Yds.	223.7
Steel Piles HP 10x42			Lin. Ft.	198
Test Pile HP 10x42			Each	1
Sand Backfill			Cu. Yds.	306
Metal Shoes			Each	11

SOUTH ABUTMENT

FA 401 SECTION 177-4 HB-3
FA 401 UNDER SPRINGFIELD RD.(T.R.242)

STEPHENSON COUNTY

STATION 1008+66.92

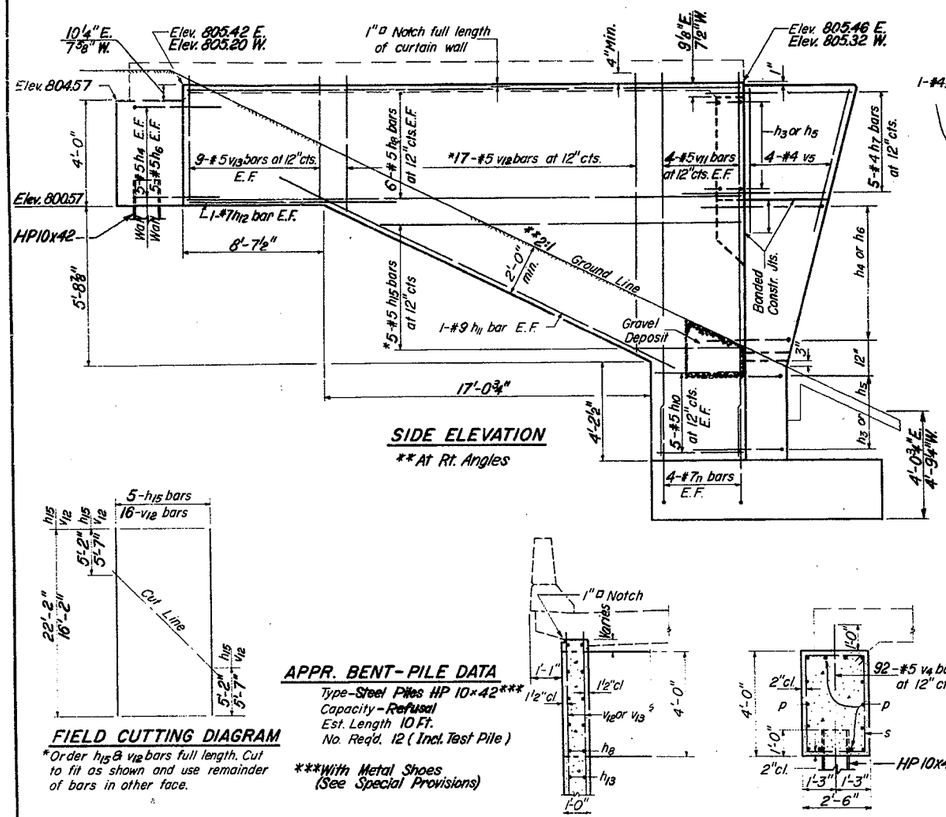
SHEET NO. 12
15 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 401	177-4	STEPHENSON	44	45
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

*177-4A-2 & 4HB-3

SHEET NO. 13
15 SHEETS



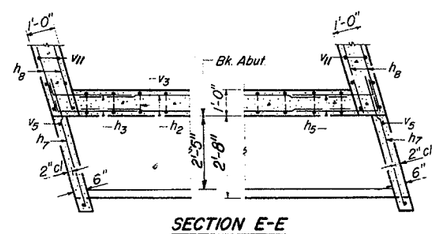
SIDE ELEVATION
**At Rt. Angles

FIELD CUTTING DIAGRAM
*Order h_{15} & v_{12} bars full length. Cut to fit as shown and use remainder of bars in other face.

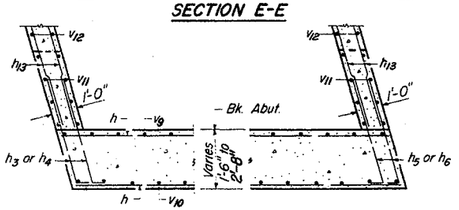
APPR. BENT-PILE DATA
Type-Steel Piles HP 10×42***
Capacity-Refusal
Est. Length 10 Ft.
No. Req'd. 12 (Incl. Test Pile)
***With Metal Shoes (See Special Provisions)

SECTION C-C

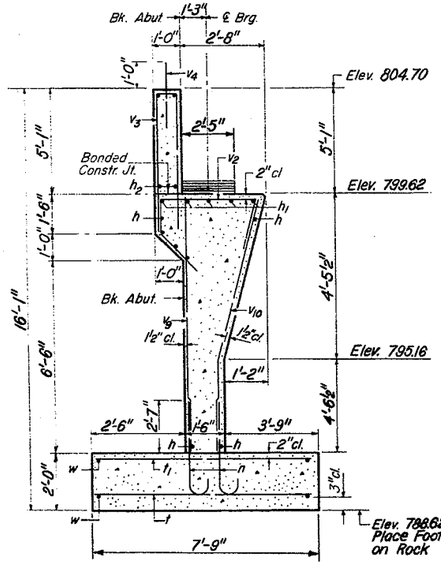
SECTION B-B



SECTION E-E



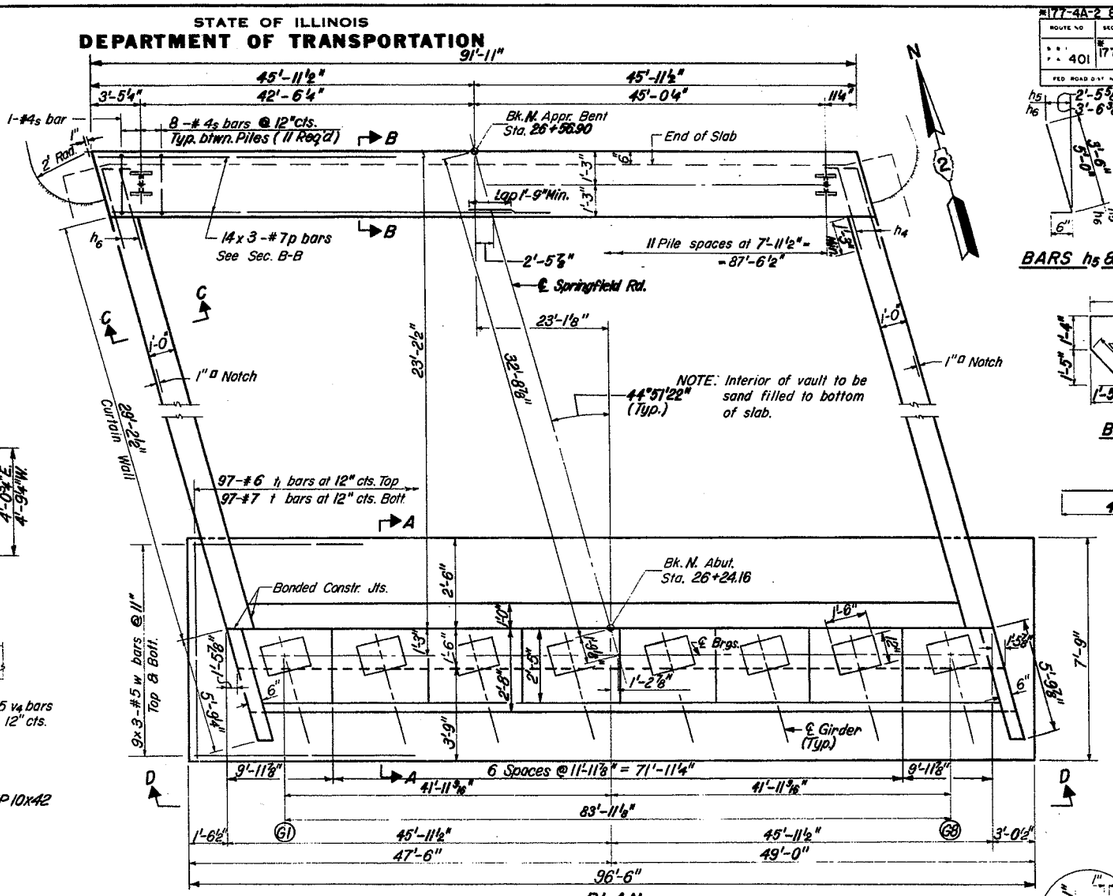
SECTION F-F



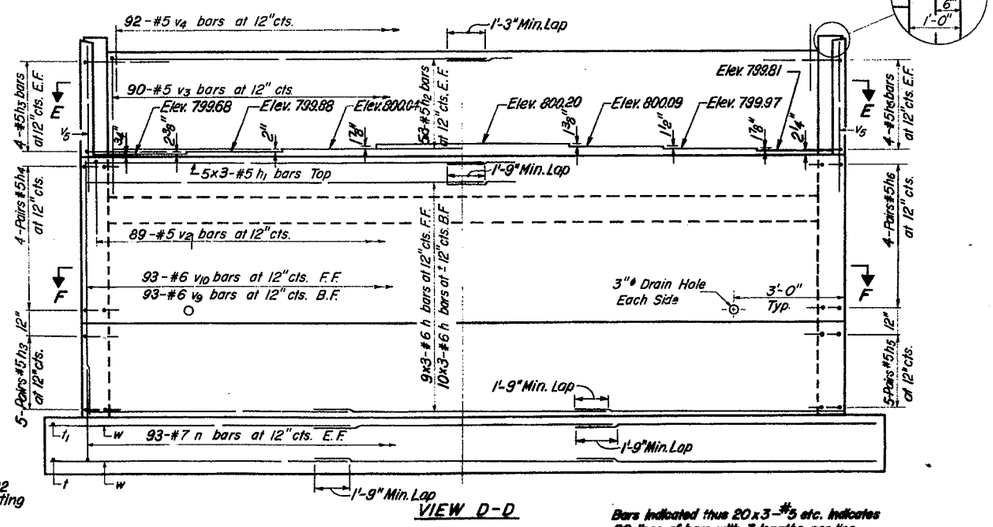
SECTION A-A

DESIGNED	S.J.
CHECKED	Y.V.
DRAWN	H.P.
CHECKED	Y.V.

AV-L 8-30-80



PLAN

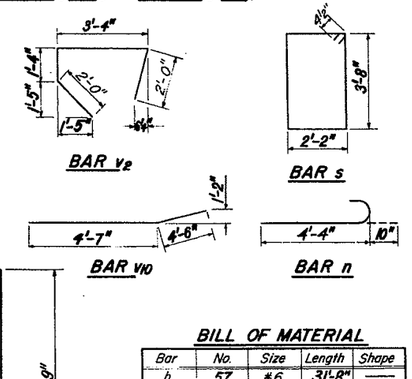


VIEW D-D

Max. Soil Pressure: 2.8 T.S.F. (Group I Loading)

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

BARS h_5 & h_6 BARS h_3 & h_4 BAR v_3



BAR v_2 BAR s

BAR v_{10} BAR n

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	57	#6	31'-8"	
h1	15	#5	31'-8"	
h2	30	#5	30'-2"	
h3	18	#5	4'-0"	
h4	18	#5	5'-6"	
h5	18	#5	4'-0"	
h6	18	#5	5'-6"	
h7	10	#4	7'-6"	
h8	24	#5	28'-10"	
h15	10	#5	22'-2"	
h10	20	#5	2'-11"	
h11	4	#9	24'-0"	
h12	4	#7	12'-0"	
n	202	#7	5'-2"	
p	42	#7	32'-0"	
s	89	#4	12'-5"	
f	97	#7	7'-3"	
f1	97	#6	7'-3"	
v9	93	#6	8'-10"	
v10	93	#6	9'-1"	
v2	89	#5	8'-8"	
v3	90	#5	13'-3"	
v4	92	#5	2'-6"	
v5	8	#4	6'-3"	
v11	16	#5	15'-2"	
v12	34	#5	16'-2"	
v13	36	#5	5'-1"	
w	54	#5	33'-3"	
Structure Excav.			Cu. Yds.	228
Rock Excav. for Structures			Cu. Yds.	121
Reinforcement Bars			Lbs.	21,820
Class X Concrete			Cu. Yds.	187.7
Steel Piles HP 10 x 42			Lin. Ft.	110
Test Pile HP 10 x 42			Each	1
Sand Backfill			Cu. Yds.	310
Metal Shoes			Each	11

NORTH ABUTMENT

FA 401 SECTION 177-4 HB-3
FA 401 UNDER SPRINGFIELD RD. (T.R. 242)

STEPHENSON COUNTY

STATION 1008+66.92
6-3-85 Revised Quantities

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

#177-4A-2 & 4HB-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 401	177-4	STEPHENSON	44	46

SHEET NO. 14
15 SHEETS

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT:

NOTES:

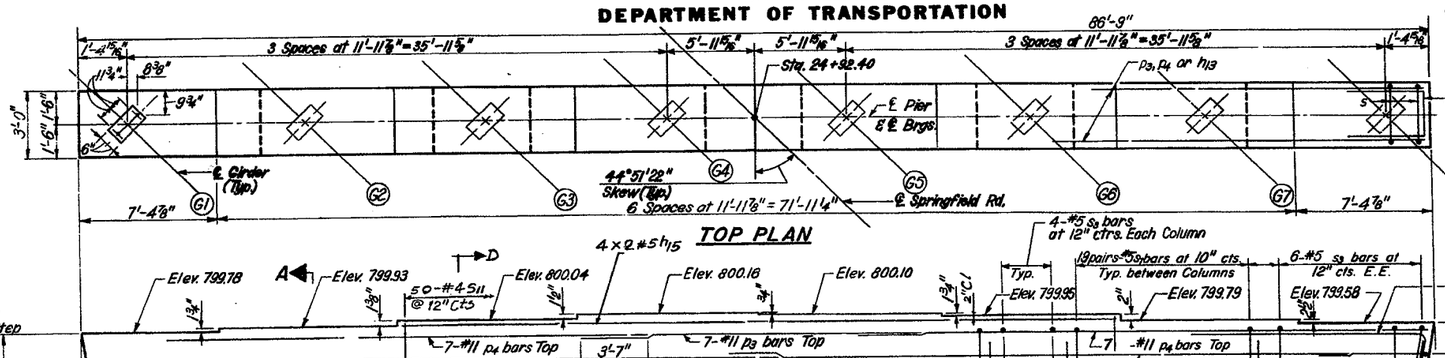
Space reinforcement in cap to miss anchor bolts.

All edges shall have standard ¾" chamfers except as noted.

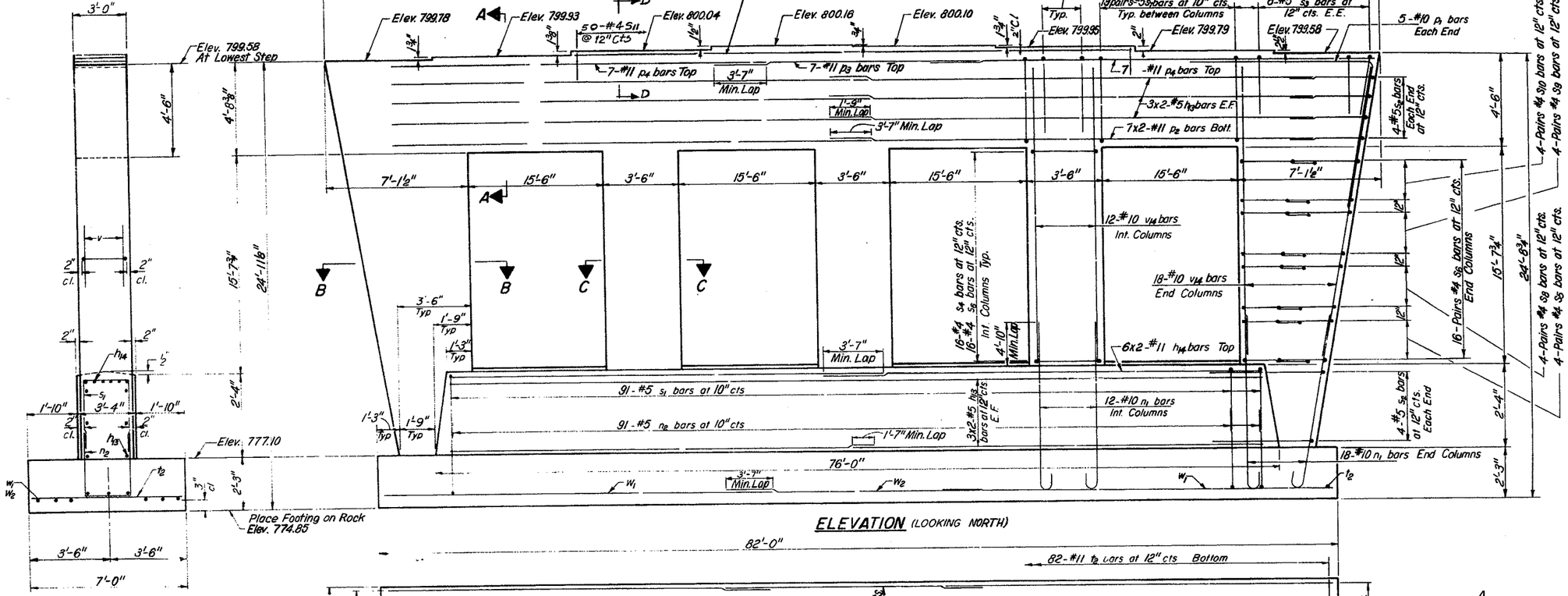
Pour steps monolithically with cap.

Bars indicated thus 20 x 3-#5 etc. inaicates 20 lines of bars with 3 lengths per line.

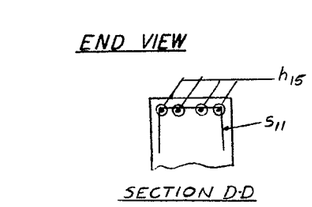
TOP PLAN



ELEVATION (LOOKING NORTH)

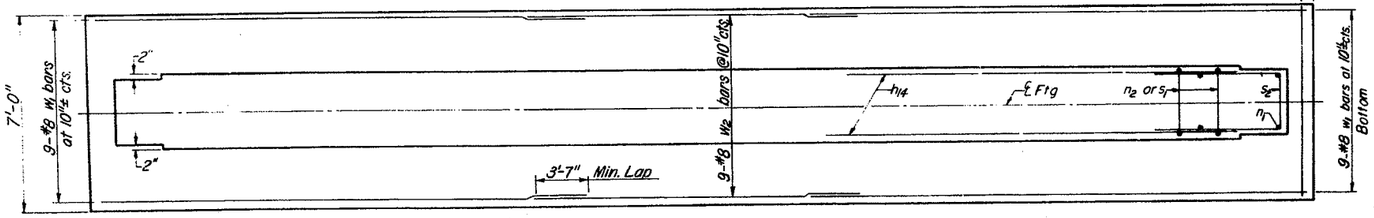


END VIEW



SECTION D-D

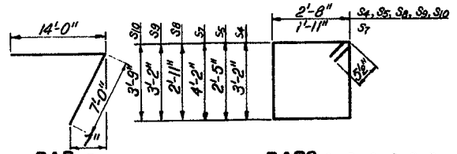
ELEVATION



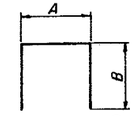
Maximum Soil Pressure : 2.8 T.S.F. (Group I loading)

FOOTING PLAN

BAR s6 BAR n1



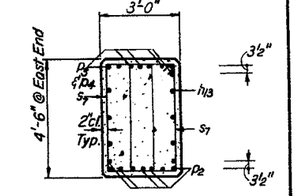
BAR p1 BARS s4, s5, s7, s8, s9, s10



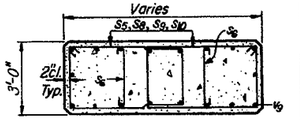
BARS n2, s1, s2 & s3

A & B DIMENSIONS

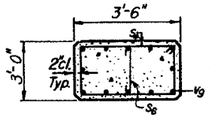
Bar	A	B
n2	3'-0"	4'-0"
s1	3'-0"	2'-1"
s2	2'-8"	7'-0"
s3	2'-6"	3'-0"
s11	2'-8"	1'-0"



SECTION A-A



SECTION B-B



SECTION C-C

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h13	24	#5	38'-3"	
h14	12	#11	39'-3"	
h15	8	#5	25'-0"	
n1	72	#10	10'-7"	
n2	91	#5	11'-0"	
p1	10	#10	21'-0"	
p2	14	#11	42'-0"	
p3	7	#11	22'-7"	
p4	14	#11	35'-6"	
s1	91	#5	7'-2"	
s2	16	#5	16'-8"	
s3	24	#5	8'-6"	
s4	48	#4	12'-7"	
s5	16	#4	8'-5"	
s6	112	#4	3'-8"	
s7	152	#5	13'-1"	
s8	16	#4	9'-5"	
s9	16	#4	9'-11"	
s10	16	#4	11'-1"	
s11	50	#4	4'-8"	
t2	82	#11	6'-6"	
v14	72	#10	20'-0"	
w1	18	#8	33'-3"	
w2	9	#8	22'-7"	
Class X Concrete			Cu. Yds.	152.8
Reinforcement Bars			Lbs.	30,800
Rock Excav. for Structures			Cu. Yds.	48

DESIGNED	S.J.
CHECKED	Y.V.
DRAWN	H.P.
CHECKED	Y.V.

P-14 8 30 80

PIER

FA 401 SECTION 177-4 HB-3
FA 401 UNDER SPRINGFIELD RD. (T.R. 242)

STEPHENSON COUNTY

STATION 1008+66.92