

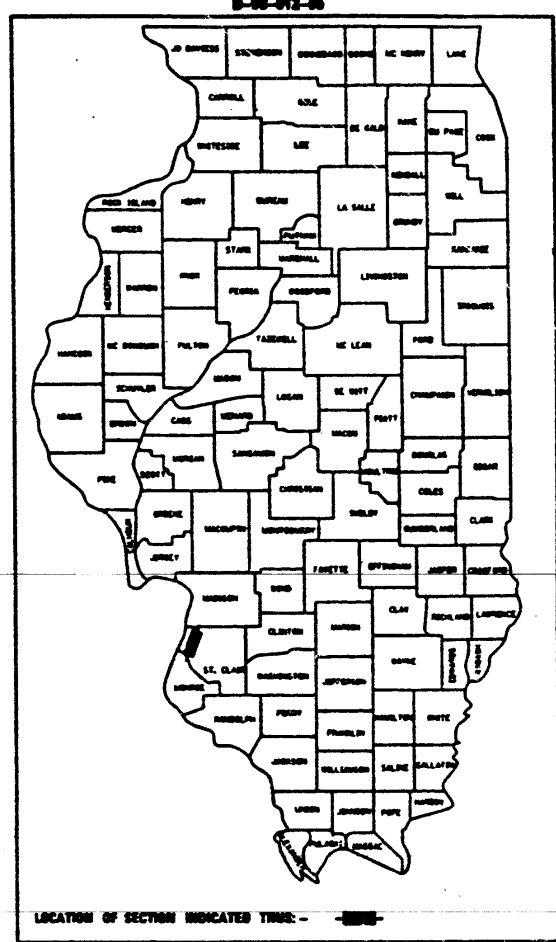
1413

95%
6-17-2000

PROJECT NO.	SECTION	SHEET NO.	TOTAL SHEETS
F.A.I. 70	82-3HVB-2R-1-I	51	1
SHEETS			

© 82-3HVB-2R-1-I ***ACIM-70-1(171)1

THIS CONTRACT
CONSISTS OF
4 SETS



- SET 1 OF 4
STRUCTURE NO. 082-0141 (ROADWAY A)
STRUCTURE NO. 082-0253 (RAMP R)
STRUCTURE NO. 082-0201 (RAMP O)
STRUCTURE NO. 082-0254 (ROADWAY G)
- SET 2 OF 4
STRUCTURE NO. 082-0144 (ROADWAY D)
STRUCTURE NO. 082-0255 (RAMP Q)
STRUCTURE NO. 082-0203 (RAMP P)
STRUCTURE NO. 082-0256 (ROADWAY H)
- SET 3 OF 4
STRUCTURE NO. 082-0206 (RAMP G OVER 4TH ST.)
- SET 4 OF 4
STRUCTURE NO. 082-0140 (RAMP H OVER TRENDLEY AVE.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
SEISMIC AND REDUNDANCY
RETROFIT REPAIRS**
FAI ROUTE 70

SECTION 82-3HVB-2R-1-I

POPLAR STREET BRIDGE APPROACHES

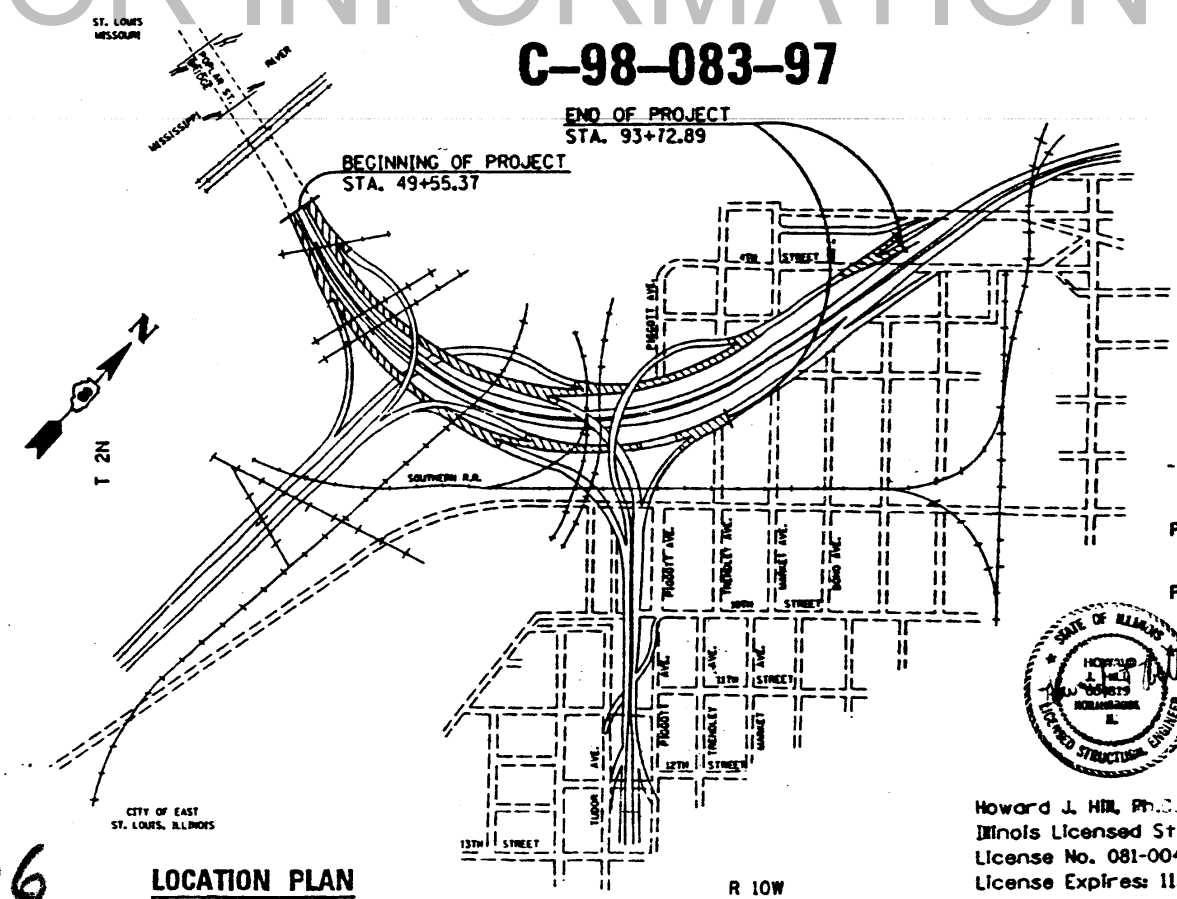
PROJECT ACIM-70-1(171)1

ST. CLAIR COUNTY

C-98-083-97

FOR INFORMATION ONLY

STANDARDS
701406
702001



APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Richard E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PROJECT NET LENGTH :
0.79 MI. = 4178.58 FT.
PROJECT GROSS LENGTH :
0.84 MI. = 4417.52 FT.



Howard J. Hill, Ph.D. SE
Illinois Licensed Structural Engineer
License No. 081-004819
License Expires: 11/30/98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED
DATE: Feb 5 1998
DISTRICT ENGINEER: *James Eastley (MCE)*

ENGINEER OF PROJECT DEVELOPMENT AND IMPLEMENTATION
DATE: June 26 1998
ENGINEER OF DESIGN AND ENVIRONMENT: *Bill Jenkins*

DATE: June 26 1998
DIRECTOR, DIVISION OF HIGHWAYS: *James P. Stutz*

8-231

CONTRACT NO. 96680
082-0206

LOCATION PLAN

WJE Wiss, Janney, Eitner Associates, Inc.
Engineers, Architects, Material Scientists
330 Pfingsten Road, Northbrook, Illinois 60062
(847) 272-7400 FAX (847) 291-4813

PROJECT LEADER: BILL ULIVI (618)340-310
LOCAL LEADER: STEVE JINES (618)340-319

URBAN

90% FED.
10% STATE
SFTY-2A

PROJECT NO.	SECTION	DATE	SHEET NO.
FAJL 70	ST. CLAIR	91	2

82-3000-20-11

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
50102400	Concrete removal	CUYD	810
50206200	STRUCTURE EXCAVATION (SPECIAL)	CUYD	70
50500405	Furnish & erect structural steel	LBS.	230760
50301245	Formed concrete repair (depth equal to less than 5')	SQ.FT.	570
X0322549	Column wrap	SQ.FT.	10303
X0322550	Wire rope	FT.	206.3
X0322551	Epoxy grouted dowels	EACH	1099
X0322552	Embankment protection	SQ.FT.	150
X0322553	Foundation wall dowel modification	EACH	544
X0322554	Foundation wall modification	SQ.FT.	1915
X0522555	Cross frame removal	EACH	23
X0322556	Stiffener intersection modification	EACH	1920
X0322557	Long span floor beam retrofit	EACH	64
X0322558	Bottom flange splice - bolt replacement	EACH	22
X0322559	Bolt replacement	EACH	18
X0322560	Crack extension modifications	EACH	5
X0322561	Cross beam retrofit	EACH	10
X0322562	Steel girder web reinforcement plate	LBS.	807900
X0322563	Vertical web stiffener removal	EACH	2797
X0322564	Column wrap protection	EACH	4
70101800	Traffic Control and Protection Special	L Sum	1
70048000	Railroad Protective Liability Insurance	L Sum	1
X1013000	CHANGEABLE MESSAGE SIGN	CALMU	12
16700000	ENGINEER'S FIELD OFFICE, TYPE A	CALMU	12

* Sheet 2A & 2B
Traffic Control and
Protection, Special

5A0

998,300

** Sheets 21A & 61A
Redundancy Retrofit Details

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2 *	QUANTITIES AND INDEX OF SHEETS
3	SET 1 - TITLE SHEET
4	GENERAL NOTES
5	SCOPE OF WORK
6	PROJECT PLAN
7	KEY PLAN ROADWAYS A, G, R & O
8	ELEVATION ROADWAYS A, G, R & O
9	TYPICAL SUBSTRUCTURE DETAILS
10	SEISMIC RETROFIT DETAILS
11	SEISMIC RETROFIT DETAILS
12	SEISMIC RETROFIT DETAILS
13	SEISMIC RETROFIT DETAILS
14	SEISMIC RETROFIT DETAILS
15	SEISMIC RETROFIT DETAILS
16	SEISMIC RETROFIT DETAILS
17	SEISMIC RETROFIT DETAILS
18	STIFFENER INTERSECTION MODIFICATION DETAIL
19	LONG SPAN FLOOR BEAM RETROFIT & BOLT REPLACEMENT
20	CRACK EXTENSION RETROFITS
21 **	REDUNDANCY RETROFIT DETAILS
22	REDUNDANCY RETROFIT DETAILS
23	REDUNDANCY RETROFIT DETAILS
24	CONCRETE REPAIR DETAILS
25	SEISMIC RETROFIT DETAILS
26	TEMPORARY EMBANKMENT PROTECTION
27	PIER A2 RETROFIT
28	PIER A5 RETROFIT
29	PIERS A7 & A8 RETROFIT
30	PIERS A9 & A11 RETROFIT
31	PIERS A12 & A15 RETROFIT
32	PIERS A16 & A18 RETROFIT
33	PIER A19 RETROFIT
34	PIER A21 RETROFIT
35	PIERS R1-1 & R2-1 RETROFIT
36	PIER R3-1 RETROFIT
37	PIERS R4-1 & O1-R RETROFIT
38	PIER G1 RETROFIT
39	PIERS G2 & G5 RETROFIT
40	PIERS G9 & G11 RETROFIT
41	PIER G12 RETROFIT
42	PIER G13 RETROFIT
43	SET 2 - TITLE SHEET
44	GENERAL NOTES
45	SCOPE OF WORK
46	PROJECT PLAN
47	KEY PLAN ROADWAYS D, H, O & P
48	ELEVATION ROADWAYS D, H, O & P
49	TYPICAL SUBSTRUCTURE DETAILS
50	SEISMIC RETROFIT DETAILS
51	SEISMIC RETROFIT DETAILS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
52	SEISMIC RETROFIT DETAILS
53	SEISMIC RETROFIT DETAILS
54	SEISMIC RETROFIT DETAILS
55	SEISMIC RETROFIT DETAILS
56	SEISMIC RETROFIT DETAILS
57	SEISMIC RETROFIT DETAILS
58	STIFFENER INTERSECTION MODIFICATION DETAIL
59	LONG SPAN FLOOR BEAM RETROFIT & BOLT REPLACEMENT
60	CRACK EXTENSION & CROSS BEAM RETROFITS
61 **	REDUNDANCY RETROFIT DETAILS
62	REDUNDANCY RETROFIT DETAILS
63	REDUNDANCY RETROFIT DETAILS
64	CONCRETE REPAIR DETAILS
65	SEISMIC RETROFIT DETAILS
66	PIERS D2 & D5 RETROFIT
67	PIERS D8 & D9 RETROFIT
68	PIER D11 RETROFIT
69	PIERS D12 & D13 RETROFIT
70	PIERS D15 & D17 RETROFIT
71	PIERS D18 & D21 RETROFIT
72	PIERS D22 & D23 RETROFIT
73	PIER D24 RETROFIT
74	PIER D26 RETROFIT
75	PIERS Q1-1 & Q2-1 RETROFIT
76	PIER P14 RETROFIT
77	PIERS P15 & H1 RETROFIT
78	PIERS H2 & H3 RETROFIT
79	PIER H4 RETROFIT
80	SET 3 - TITLE SHEET
81	GENERAL NOTES
82	PROJECT PLAN/SCOPE OF WORK
83	KEY PLAN AND ELEVATION FOR RAMP G OVER 4TH STREET
84	SEISMIC RETROFIT DETAILS
85	PIER NO. 1 & NO. 2 RETROFIT
86	SET 4 - TITLE SHEET
87	GENERAL NOTES
88	PROJECT PLAN/SCOPE OF WORK
89	KEY PLAN AND ELEVATION FOR RAMP H OVER TRENDLEY AVE.
90	SEISMIC RETROFIT DETAILS
91	PIER NO. 1 & NO. 2 RETROFIT

QUANTITIES AND INDEX OF SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SEISMIC AND REDUNDANCY RETROFIT REPAIRS
FAI ROUTE TO
POPLAR STREET BRIDGE APPROACHES
ST. CLAIR COUNTY

SCALE: NONE
DATE 1-23-98

DRAWN BY JH
CHECKED BY JH

Revised 10/21/98 JCM

Revised 7-9-98 R.S.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

* ENCOMPASSING RAMP G OVER 4TH STREET, STRUCTURE NO. 082-0206

SET 3 OF
 4 SETS

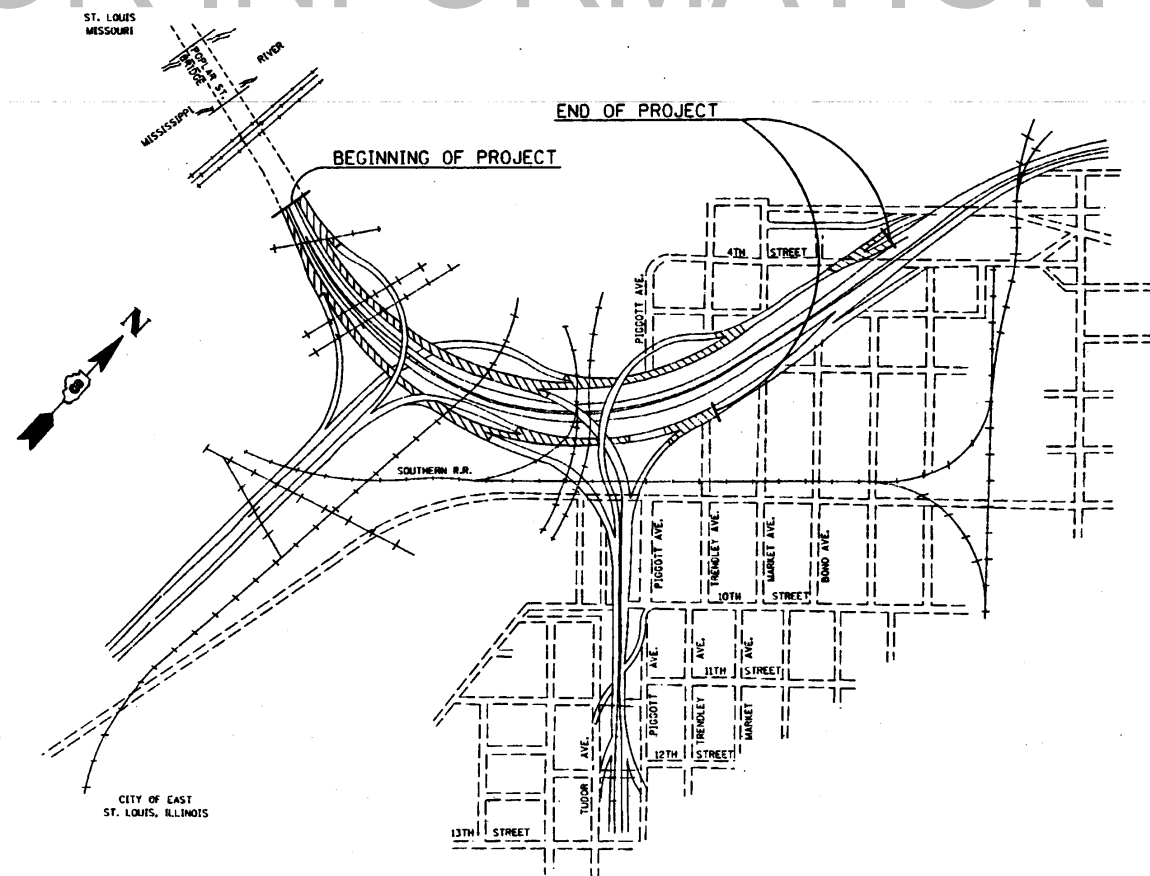
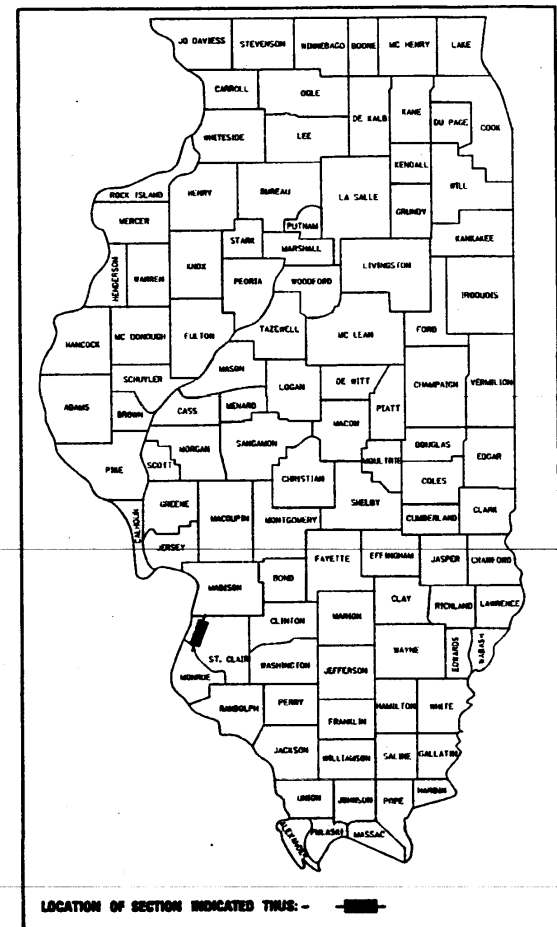
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S-1
F.A.I. 70	*	ST. CLAIR	91	80	SHEETS
FED. ROAD DIST. NO. 7 ILL. HIGH. FED. AID PROJECT					
* 82-3HVB-2R-1-1					

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
S-1	SET 3 - TITLE SHEET
S-2	GENERAL NOTES
S-3	PROJECT PLAN/SCOPE OF WORK
S-4	KEY PLAN AND ELEVATION FOR RAMP G OVER 4TH STREET
S-5	SEISMIC RETROFIT DETAILS
S-6	PIER NO. 1 & NO. 2 RETROFIT

PLANS FOR PROPOSED
 SEISMIC
 RETROFIT REPAIR *

FAI ROUTE 70
 SECTION 82-3HVB-2R-1-1
 POPLAR STREET BRIDGE APPROACHES
 ST. CLAIR COUNTY

FOR INFORMATION ONLY



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED _____ 19 _____
 _____ DISTRICT ENGINEER
 _____ 19 _____
 _____ ENGINEER OF PROJECT DEVELOPMENT AND IMPLEMENTATION
 _____ 19 _____
 _____ ENGINEER OF DESIGN AND ENVIRONMENT
 _____ 19 _____
 _____ DIRECTOR, DIVISION OF HIGHWAYS

CONTRACT NO. 96680

PROJECT NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. OF SHEETS
F.A.I. 70	6	ST. CLAIR	31	31	31

• A2-34V8-2R-1-1

GENERAL NOTES:

1. 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 materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
2. This project addresses selected seismic, redundancy and fatigue issues related only to those structures that are listed on the drawings. Related hazards associated with nearby structures or roadways that pass over the subject structures were not considered.
3. Unless noted otherwise, all materials and workmanship shall conform to :
 - a. The Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction", January 1, 1997.
 - b. Bridge Welding Code, American Welding Society, AWS D1.5-95.

STEEL NOTES:

1. Actual dimensions may vary slightly from the design drawings. The Contractor shall field verify existing dimensions prior to starting work. Dimensions of new members shall be adjusted as required to fit as-built conditions.
2. All new steel assemblies and pieces shall be shop painted with Inorganic zinc rich primer/ Acrylic/ Acrylic paint system. The color of the final finish coat shall be Interstate Green, Munsell No. 7.5 G 4/8. Locations to receive field welding shall be masked off prior to shop painting and field painted after welding.
3. Unless noted otherwise, all bolts shall be high strength bolts (AASHTO M164). All threaded rods and dowels shall conform to the mechanical properties and thread configuration of AASHTO M164 bolts. All bolts, threaded rods, wire rope and hardware shall be galvanized according to IDOT galvanized bolt provisions. In bolted applications, threads shall not be permitted in shear planes, unless noted otherwise. AASHTO M253 BOLTS SHALL NOT BE GALVANIZED.
4. Unless noted otherwise, all new steel shall be AASHTO M270 Grade 36 and have a minimum CVN impact toughness of 25 Ft.-Lb. at 40° F. All rods with upset ends shall have a maximum yield strength of 45 ksi.



~~5. Welding electrodes shall be low hydrogen E70XX, unless noted otherwise. Weld metal shall have a minimum CVN of 25 Ft.-Lb. at 30° F.~~

CONCRETE NOTES:

1. The Engineers' Intent is to repair only large areas of unsound concrete or unsound areas receiving column wraps. The contract quantities do not include all of the unsound concrete on the piers. Areas of unsound concrete to be repaired shall be approved by the Engineer.
2. The extent of deteriorated concrete in columns and walls shall be determined by hammer tapping. The concrete removal shall extend a minimum of 4 in. beyond the edge of the unsound area, be as nearly rectangular as possible, and conform to the concrete repair details included in the drawings.
3. Concrete removal equipment consisting of pneumatic chipping hammers shall not exceed a maximum nominal weight of 30 lb. and shall be equipped with a cutting edge not less than 3/4 in. or greater than 2 1/2 in. in width. During concrete removal, exercise reasonable care to avoid cracking of underlying sound concrete.

FOR INFORMATION ONLY

GENERAL NOTES

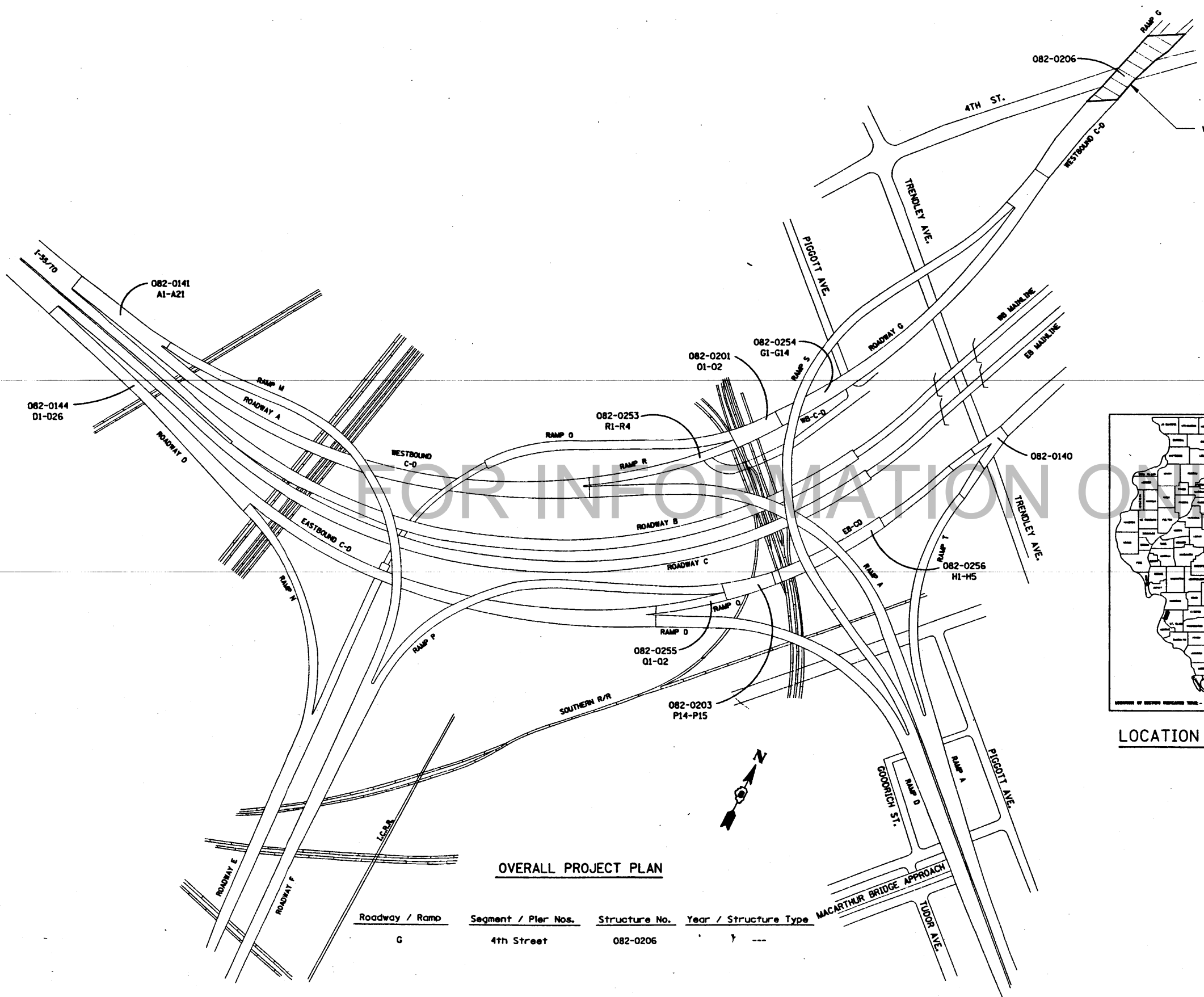
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 SEISMIC AND REDUNDANCY RETROFIT REPAIRS
 FAI ROUTE 70
 POPLAR STREET BRIDGE APPROACHES
 ST. CLAIR COUNTY
 STRUCTURE NO. 082-0206 (RAMP G OVER 4TH STREET)

SCALE: NONE DRAWN BY JM
 DATE 1-23-98 CHECKED BY JH

⚠ Revised 10/21/98 JCM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S-3
F.A.L. 70		ST. CLAIR	91	82	SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

82-3HVB-2R-1-1



Work area included in this set (Set 3).

SCOPE OF WORK

SEISMIC RETROFIT

1. Install column wraps on columns of piers 1 and 2 of Structure No. 082-0206.

SEISMIC DATA

Bedrock acceleration coefficient (A) = 0.12g
 Site coefficient (S) = 1.0
 Seismic performance requirements:
 • Use of roadways without long delay or major repair.

DESIGN SPECIFICATIONS

1996 AASHTO
 1995 FHWA Seismic Retrofit Manual

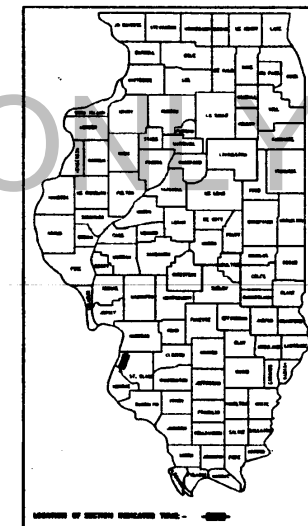
DESIGN LOADING

HS20-44

DESIGN STRESSES

New Construction:
 $f'_c = 4500$ psi
 $f_y = 60,000$ psi (Reinf.)
 $f_y = 36,000$ psi (M270 Grade 36)

Existing Construction:
 $f'_c = 3500$ psi
 $f_y = 40,000$ psi (Reinf.)
 $f_y = 36,000$ psi (M270 Grade 36)



LOCATION SKETCH

OVERALL PROJECT PLAN

Roadway / Ramp	Segment / Pier Nos.	Structure No.	Year / Structure Type
G	4th Street	082-0206	1 ---

PROJECT PLAN / SCOPE OF WORK

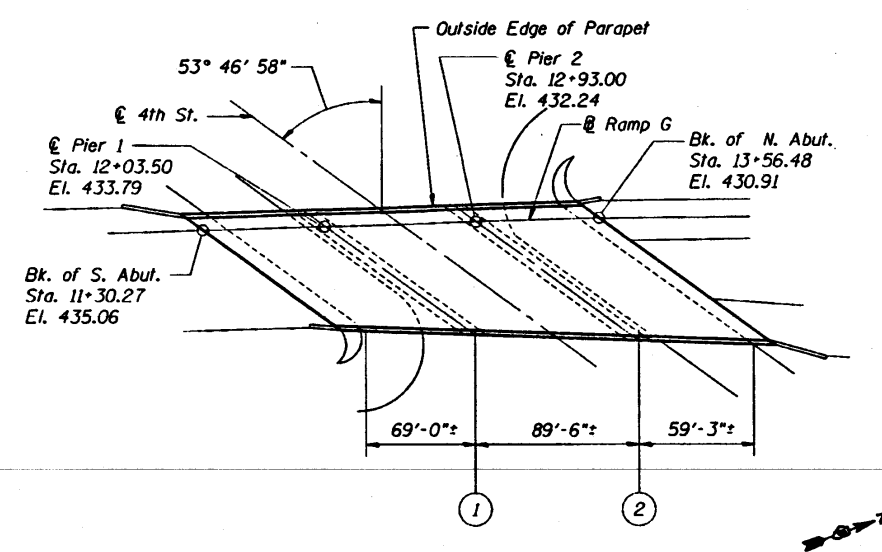
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 SEISMIC AND REDUNDANCY RETROFIT REPAIRS
 I-55/70
 POPLAR STREET BRIDGE APPROACHES
 ST. CLAIR COUNTY

STRUCTURE NO. 082-0206 (RAMP G OVER 4TH STREET)

SCALE: NONE DRAWN BY JN
 DATE 1-23-98 CHECKED BY HH

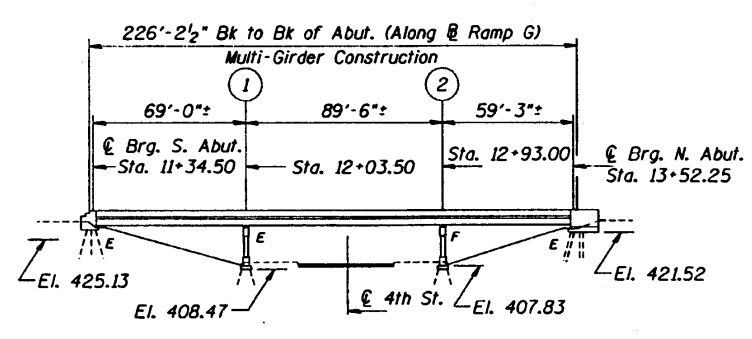
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F.A.I. 78	*	ST. CLAIR	91	83	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

82-3HV8-2R-1-1



1 PLAN RAMP G OVER 4TH STREET
S4

FOR INFORMATION ONLY



2 ELEVATION RAMP G OVER 4TH ST.
S4

KEY PLAN AND ELEVATION FOR RAMP G OVER 4TH STREET

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 SEISMIC AND REDUNDANCY RETROFIT REPAIRS
 FAI ROUTE TO
 POPLAR STREET BRIDGE APPROACHES
 ST. CLAIR COUNTY

STRUCTURE NO. 082-0206 (RAMP G OVER 4TH STREET)

SCALE: NONE
 DATE: 1-23-98

DRAWN BY: JN
 CHECKED BY: HH

\structure\97422\SET3\ST3\KPLS4.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	W	ST. CLAIR	91	84
PRO. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
# 82-3HVB-2R-1-1				

SHEET NO. S-5
SHEETS

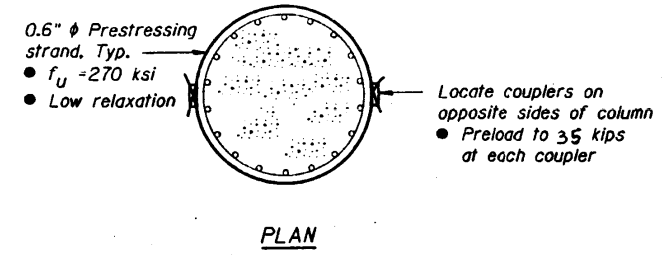
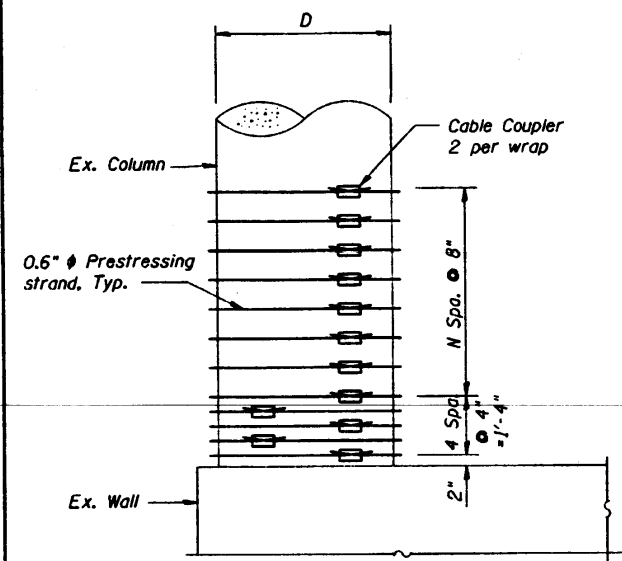


TABLE OF COLUMN WRAP PARAMETERS

Pier	No. Cols.	D (in.)	N	Comments
4th St. Overpass				
Pier 1	8	30	10	
Pier 2	9	30	Varies	See Note 2

- Notes:
- See detail 1/S5 for column wrap U.N.O.
 - N=9 except for Eastern most col. where N=10.



- Notes:
- See table for dimensions not shown and additional notes.
 - Alternative column wraps may be used. Extent of column wrap retrofit for quantity calculations shall be the height of the column times the column circumference. See Special Provisions.

FOR INFORMATION ONLY

1
S5
ELEVATION - TYPICAL COLUMN WRAP

SEISMIC RETROFIT DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SEISMIC AND REDUNDANCY RETROFIT REPAIRS
FAI ROUTE 70
POPLAR STREET BRIDGE APPROACHES
ST. CLAIR COUNTY

STRUCTURE NO. 082-0206 (RAMP G OVER 4TH STREET)

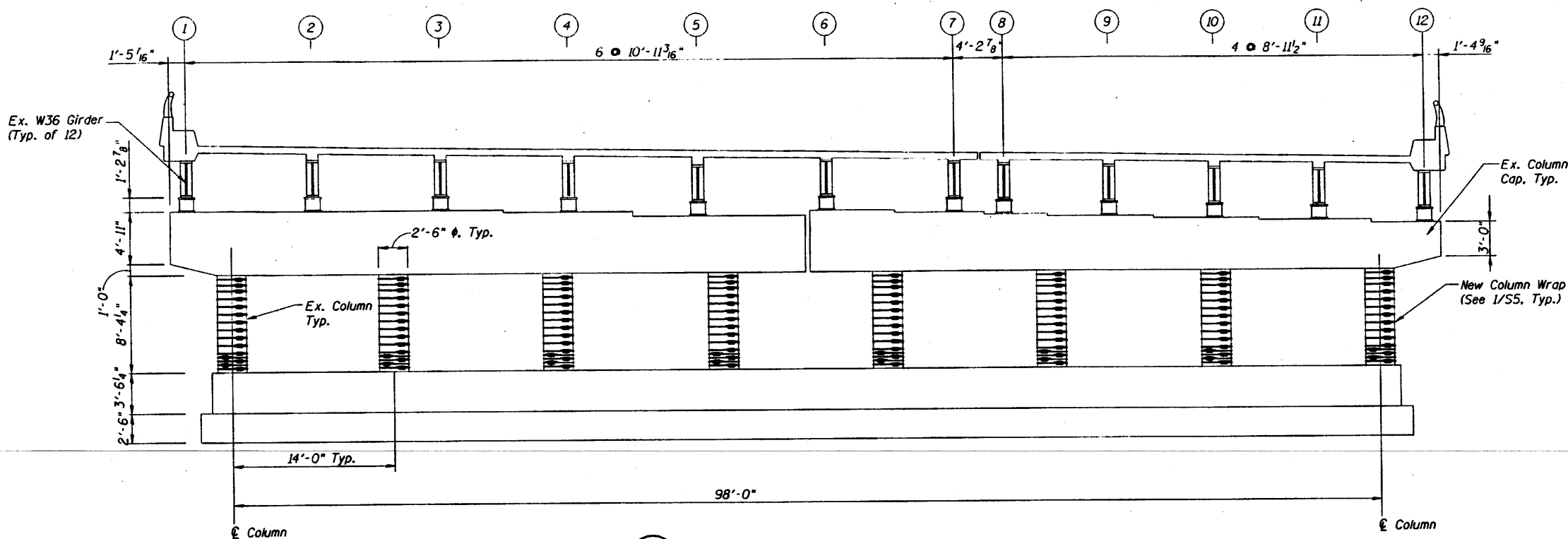
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DATE: 1-23-98

DRAWN BY: JN
CHECKED BY: IH

STRUCTUR/97422/SET3/5130155.DGN

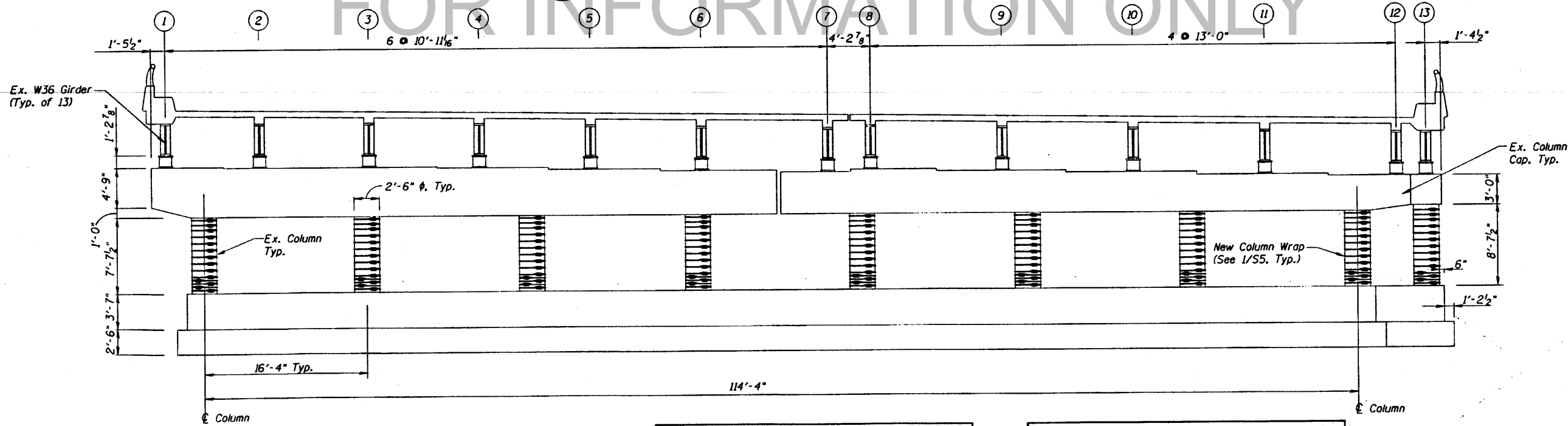
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S 6 SHEETS
F.A.I. 78	*	ST. CLAIR	91	85	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

82-3HV8-2R-1-1



1
S6
ELEVATION PIER No. 1

FOR INFORMATION ONLY



2
S6
ELEVATION PIER No. 2

BILL OF MATERIAL - PIER NO. 1

ITEM	UNIT	QUANTITY
Column wrap	SQ. FT.	328.1

52A9

BILL OF MATERIAL - PIER NO. 2

ITEM	UNIT	QUANTITY
Column wrap	SQ. FT.	341.8

5113

PIER NO. 1 & PIER NO. 2 RETROFITS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SEISMIC AND REDUNDANCY RETROFIT REPAIRS
FAI ROUTE 70
POPLAR STREET BRIDGE APPROACHES
ST. CLAIR COUNTY

STRUCTURE NO. 082-0206 (RAMP G OVER 4TH STREET)

SCALE: NONE DRAWN BY: JN
DATE: 1-23-98 CHECKED BY: JH

STRUCTURAL SERVICES INTERNATIONAL

SEE SHEET NO. 7 FOR
INDEX OF SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 82-3HVB-2R-1				
ROUTE NO.	SEC.	COUNTY	TOTAL LENGTH	SHEET NO.
70	#	ST. CLAIR	320	1
P-98-021-85				

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

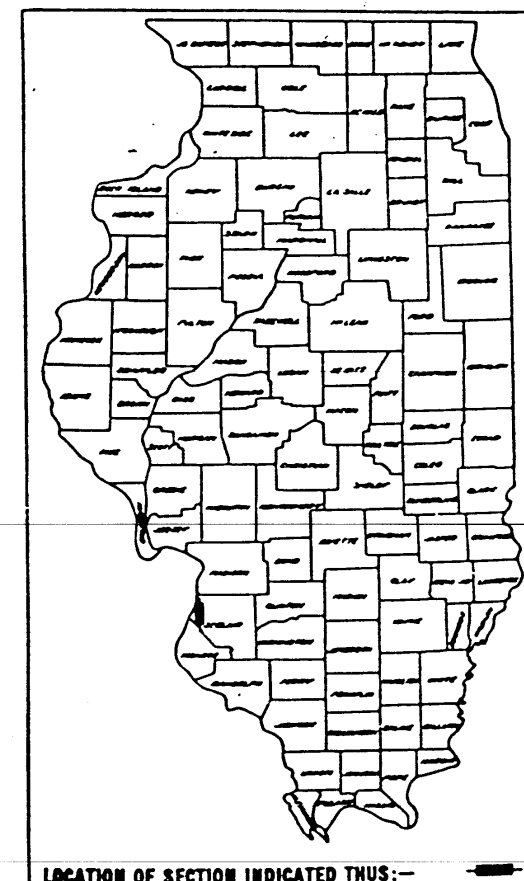
THE STRUCTURES REHABILITATED IN THIS
PROJECT WERE BUILT AS SECTIONS:

- 82-4HB
- 82-4HB-1
- 82-3HVF&E-1
- 82-4HVB

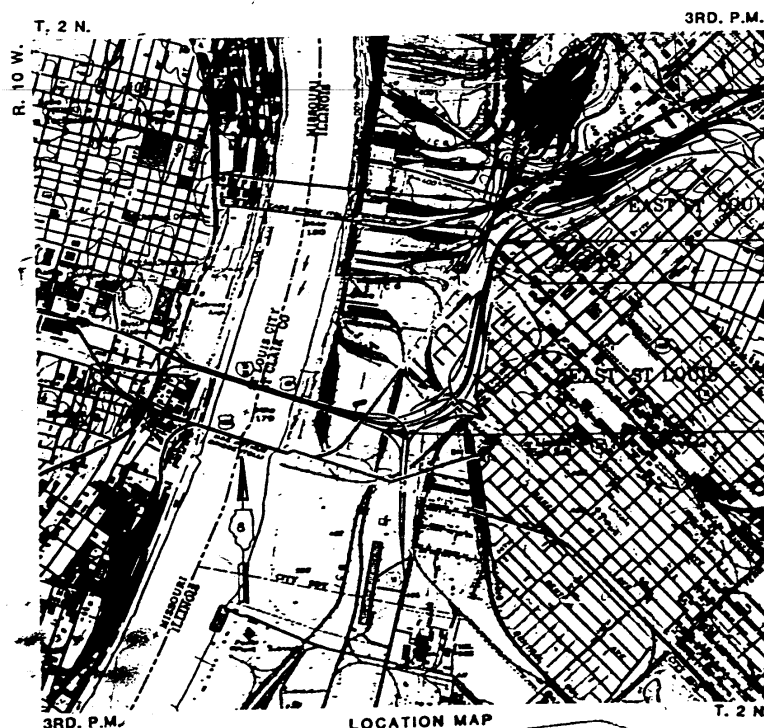
SCALE IN FEET
PLAN 1 INCH 50 FT.
PROFILE HOR. 1 INCH 50 FT.
VERT. 1 INCH 5 FT.
CROSS-SECTIONS
HOR. 1 INCH 10 FT.
VERT. 1 INCH 5 FT.

F.A.I. ROUTE 70
SECTION 82 - 3HVB - 2R - 1
PROJECT IR - 70 - 1(155)1
ST. CLAIR COUNTY
C-98-106-86

FOR INFORMATION ONLY



LOCATION OF SECTION INDICATED THUS:—



PROJECT
ENDS 115 + 34.53 E.B. I-55/70
EQUATION: 111 + 70.90 E.B. C-D BK. =
109 + 39.40 E.B. I-55/70 AHD.

PROJECT
BEGINS 59+00.14 E.B. C-D

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____

AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS

DESIGN DESIGNATION
C-D'S 2 LANES: 1800(06) TRUNK 17.6(C-20)

1000 0 1000 2000 3000
SCALE IN FEET

NET LENGTH OF PROJECT - 5,865.89 FT. - 1.111 MILES

ANTHONY W. NEMEYER
NO. 62 -39027

CARLOS A. LIZANA-FARIAS
NO. 81-3958

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIRECTOR OF HIGHWAYS

CONTRACT NO. 42345

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.I. 70		ST. CLAIR	320	199

PROJECT: 82-3HVB-2R-1

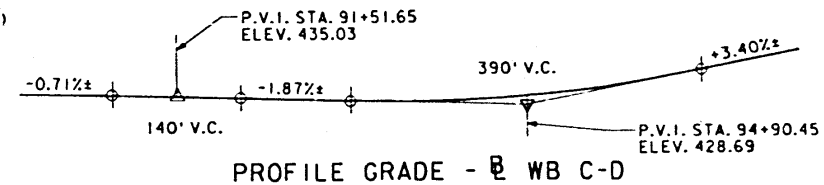
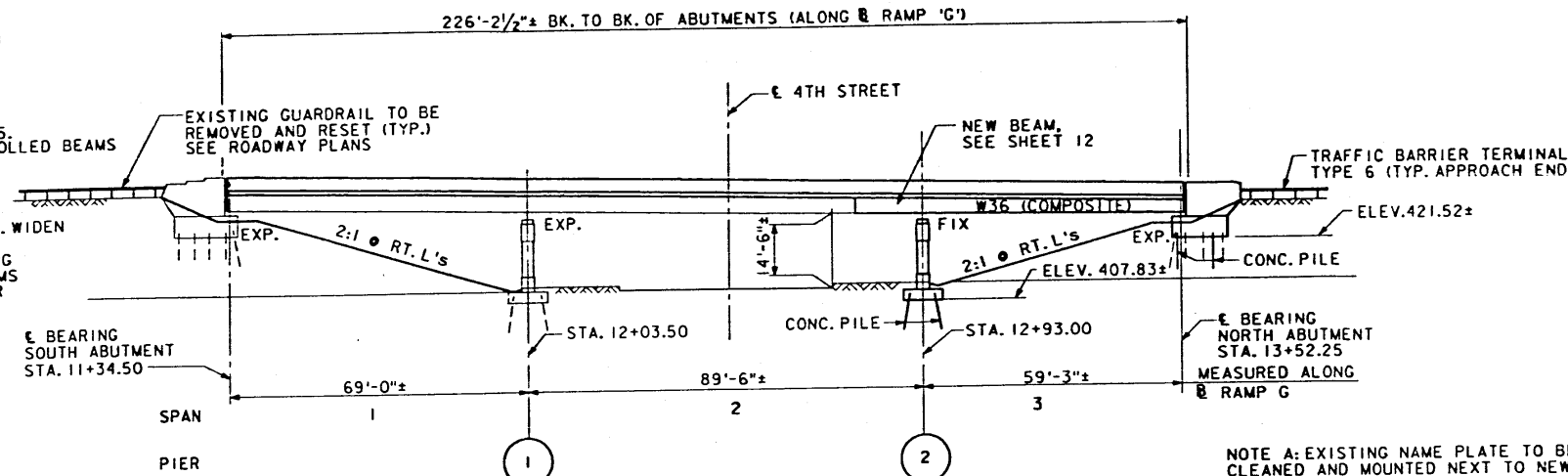
BENCH MARK C-3

CHISELED "C" IN CONC. FOUNDATION OF PIER 2 ON WB 1-55/70 BRIDGE OVER 4TH ST. ELEV. 413.44.

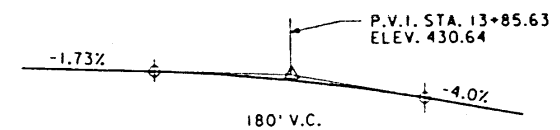
EXISTING STRUCTURE NO. 082-0206 BUILT AS F.A.I. RTE. 70, SECTION 82-4HB-1 AT STA. 92+64.64 IN 1965. SUPERSTRUCTURE - 3 SPAN CONT. ROLLED BEAMS SUBSTRUCTURES - 2 R.C. MULTIPLE COLUMNS PIERS & 2 R.C. PILE

WORK TO BE DONE:

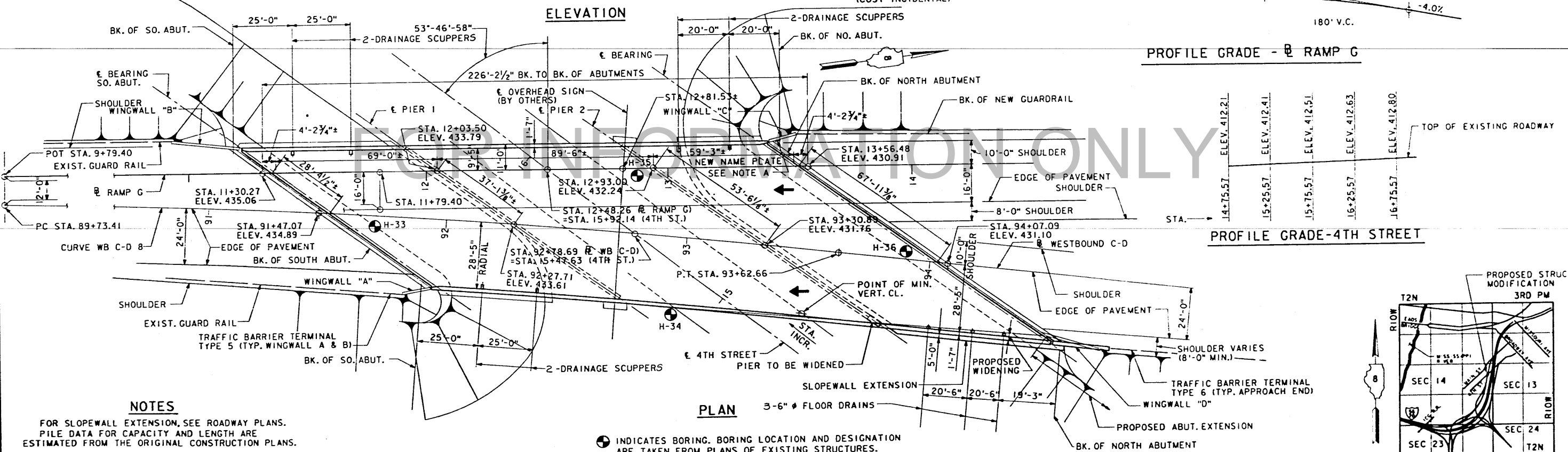
REMOVE & REPLACE CONCRETE DECK. WIDEN DECK ON NORTHEAST SIDE WHICH REQUIRES NEW BEAM AND EXTENDING NO. ABUT. & PIER 2. ALL EXIST. BEAMS & NEW BEAM TO BE COMPOSITE FOR FUTURE WEARING SURFACE.



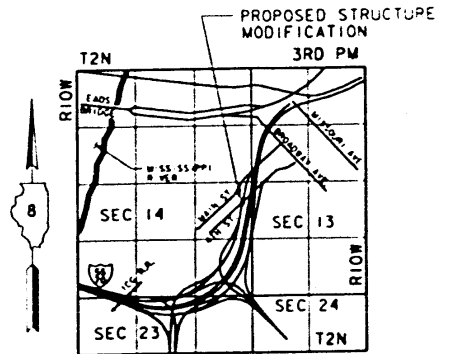
PROFILE GRADE - WB C-D



PROFILE GRADE - RAMP G



PROFILE GRADE - 4TH STREET



LOCATION SKETCH

NOTES

FOR SLOPEWALL EXTENSION, SEE ROADWAY PLANS. PILE DATA FOR CAPACITY AND LENGTH ARE ESTIMATED FROM THE ORIGINAL CONSTRUCTION PLANS.

⊕ INDICATES BORING. BORING LOCATION AND DESIGNATION ARE TAKEN FROM PLANS OF EXISTING STRUCTURES.

DESIGN STRESSES

EXISTING STRUCTURES

DESIGN SPECIFICATIONS: AASHTO 1961 AND APPLICABLE 1962 AND 1963 INTERIMS.

LOADING: HS20-44 AND ALTERNATE

REINFORCED CONCRETE:
DECK SLAB fc=1400 psi n=10
SUBSTRUCTURE fc=1400 psi n=10
REINFORCING Vc=75 psi - FOOTINGS fs=20,000 psi

STRUCTURAL STEEL: fs=20,000 psi

NEW CONSTRUCTION

AASHTO 1983 & APPLICABLE INTERIM 1984 thru 1987 INTERIM SPECIFICATIONS

LOADING: HS20-44

ALLOW 25 p.s.f. FOR FUTURE WEARING SURFACE

fc=3500 psi (CONCRETE)

fy=60,000 psi (REINF.)

fs=20,000 psi (STRUCT. STEEL) M183

STA. 11+32.81
BUILT 198 BY
STATE OF ILLINOIS
F.A.I. 70 SEC. 82-3HVB-2R-1
PROJ. IR-70-11(1551)
LOADING HS20 & ALT.
STR. NO. 082-0206

NAME PLATE
(STANDARD 2113)

CURVE DATA - WB C-D 8

P.I. STA. = 91+68.27
Δ = 6° - 51' - 03" RT.
D = 1° - 45' - 36"
R = 3255.50'
T = 194.86'
L = 389.25'
E = 5.83'
P.C. STA. = 89+73.41
P.T. STA. = 93+62.66
S.E. = 0.032 FT./FT.
S.E. TRANSITION
STA. 93+12.66 TO 94+62.66

APPROVED

FOR STRUCTURAL DESIGN ONLY
James J. Heuborn
Engineer of Bridges & Structures
ILLINOIS PROFESSIONAL ENGINEER
NO. 81-3955
CHICAGO

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
GENERAL PLAN AND ELEVATION

STRUCTURE NO. 082-0206

STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

LEVELS PLOTTED DATE: OCT. 14, 1987
2 3 20 26-29 35 39 42 43 46 50 54 55 63

FILE: ZF31101.DET45E.DGN
87:555 PRF:DET45E

K. PATEL	DESIGNED
S. KNEIP	CHECKED
K. SCHULT	DESIGN
K. PATEL	CHECKED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	MILE POSTS	SHEET
F.A.I. 70		ST. CLAIR	320	200
ILLINOIS PROJECT		* 82-3HVB-2R-1		

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: THE 1983 EDITION OF THE STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADDENDA AND THE SPECIAL PROVISIONS SHALL GOVERN.
CALCULATED WEIGHT OF ERECTING STRUCTURAL STEEL:

25,100 LBS. (M183) FABRICATED UNDER SEPARATE CONTRACT. (SEE SPECIAL PROVISIONS FOR FIELD PAINTING REQMTS.) FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS $\frac{3}{4}$ " ϕ OPEN HOLES $\frac{1}{16}$ " UNLESS OTHERWISE NOTED.

THE CONCRETE, FOR BRIDGE FLOORS FINISHED IN ACCORDANCE WITH ARTICLE 503.15 OF THE STANDARD SPECIFICATIONS, SHALL BE PLACED AND COMPACTED PARALLEL TO THE SKEW IN UNIFORM INCREMENTS ALONG CENTER LINE OF BRIDGE. THE FINISHING MACHINE, WHEN REQUIRED, SHALL BE SET PARALLEL TO THE SKEW FOR STRIKING OFF AND SCREEDING THE CONCRETE.

THE ZINC - SILICATE AND VINYL PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUC. STEEL EXCEPT WHERE OTHERWISE NOTED.

CONTACT SURFACES OF EXISTING STEEL, WHERE NEW STEEL DIAPHRAGM CONNECT, SHALL BE CLEANED BY METHOD I AND TOUCHED UP WITH THE LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM AFTER CONNECTIONS ARE MADE. COST IS INCIDENTAL TO ERECTING STRUCTURAL STEEL.

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 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.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

LAYOUT OF SLOPE WALLS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AND TO MATCH EXISTING SLOPEWALL AS DIRECTED BY THE ENGINEER.

SHOULDER TRANSITION TO WINGWALL SHALL BE SHAPED WITH BROKEN CONCRETE. COST INCIDENTAL.

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 BEFORE ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF 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 ELEVATION WITHIN A TOLERANCE OF $\frac{1}{8}$ IN. 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 OTHERS PLATES OR SHIMS.

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT PIER NO. 2 AND NORTH ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

THE ENTIRE EXISTING CONCRETE DECK INCLUDING THE CURBS AND RAILS ARE TO BE REMOVED IN THREE STAGES.

EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND $\frac{3}{4}$ " ϕ \times 12" HOOKED BOLTS.

TRAFFIC CONTROL ON THE RAMP "G" & WESTBOUND C-D IS TO BE PART OF THE ROADWAY CONTRACT BUT IT SHALL NOT EXEMPT THE BRIDGE CONTRACTOR FROM PROVIDING ADDITIONAL TRAFFIC CONTROL AND PROTECTION THAT MAY BE REQUIRED FOR THE SAFETY OF THE PUBLIC.

* INDICATES HIGH STRENGTH BOLT, SHOP OR FIELD INSTALLED UNLESS OTHERWISE NOTED.

SEE PROPOSAL FOR BORING DATA.

FOR MAINTENANCE AND CONSTRUCTION SIGN SUPPORT DETAILS AND LOCATION, SEE SHEET 292 OF 320.

INDEX OF DRAWINGS

- 1 GENERAL PLAN AND ELEVATION
- 2 GENERAL NOTES, ESTIMATED QUANTITIES AND INDEX OF DRAWINGS.
- 3 STAGE CONSTRUCTION DETAILS
- 4 STAGE CONSTRUCTION DETAILS
- 5 TOP OF SLAB ELEVATIONS
- 6 TOP OF SLAB ELEVATIONS
- 7 TOP OF SLAB ELEVATIONS
- 8 SLAB - SPANS 1 THRU 3
- 9 SLAB - CROSS SECTIONS
- 10 WEST PARAPET
- 11 EAST PARAPET
- 12 FRAMING PLAN AND DETAILS
- 13 DIAPHRAGM DETAILS
- 14 STEEL DETAILS
- 15 STEEL DRAINAGE SCUPPER
- 16 ALTERNATE - CAST IRON DRAINAGE SCUPPER
- 17 NEOPRENE EXPANSION JOINT (2")
- 18 CONCRETE REMOVAL
- 19 NORTH ABUTMENT - MODIFICATIONS
- 20 NORTH ABUTMENT - MODIFICATIONS
- 21 NORTH AND SOUTH ABUTMENT MODIFICATIONS
- 22 PIER 2
- 23 ANCHOR BOLT DETAILS FOR BEARING
- 24 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
- 25 BAR SPLICER DETAILS AT STAGE CONSTRUCTION
- 26 CONCRETE PILES (FIVE ALTERNATES)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
CONCRETE REMOVAL	CU. YDS.	—	22.0	22.0
REMOVAL OF EXISTING CONCRETE DECK	EACH	1	—	1
STRUCTURE EXCAVATION	CU. YDS.	—	19	19
FLOOR DRAINS	EACH	3	—	3
* PROTECTIVE COAT	SQ. YDS.	196	—	196
CLASS X CONCRETE SUPERSTRUCTURE	CU. YDS.	443.9	—	443.9
CLASS X CONCRETE	CU. YDS.	—	27.9	27.9
FURNISHING AND ERECTING STRUCTURAL STEEL	LUMP SUM	1	—	1
ERECTING STRUCTURAL STEEL	LBS.	675	—	675
REINFORCEMENT BARS	LBS.	—	4130	4130
REINFORCEMENT BARS, EPOXY COATED	LBS.	121,610	—	121,610
FURNISHING CONCRETE PILES	LIN. FT.	—	155	155
DRIVING CONCRETE PILES	LIN. FT.	—	155	155
TEST PILE CONCRETE	EACH	—	2	2
NAME PLATE	EACH	1	—	1
DRAINAGE SCUPPERS	EACH	6	—	6
NEOPRENE EXPANSION JOINT (2")	LIN. FT.	245	—	245
EPOXY MORTAR REPAIR	CU. FT.	—	2.7	2.7
STUD SHEAR CONNECTORS	EACH	7,209	—	7,209
EXPANSION BOLTS $\frac{3}{4}$ " ϕ \times 12"	EACH	—	57	57

FOR TEMPORARY CONCRETE BARRIER PAY ITEM SEE ROADWAY PLANS.

* Quantity does not include bridge deck surface.

FOR INFORMATION ONLY

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
GENERAL NOTES, ESTIMATED QUANTITIES
AND INDEX OF DRAWINGS
STRUCTURE NO. 082-0206

STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

SHEET NO. 2 OF 26

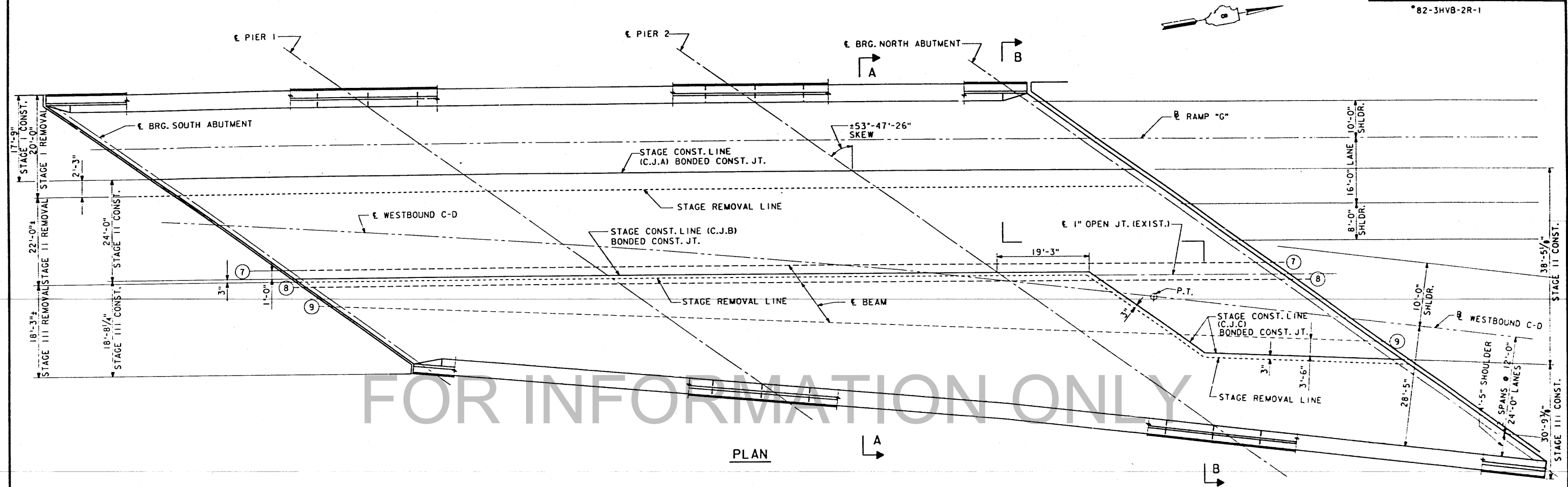
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

K. PATEL	DESIGNED
S. KNEIP	CHECKED
P. NELSON	DRAWN
K. PATEL	CHECKED

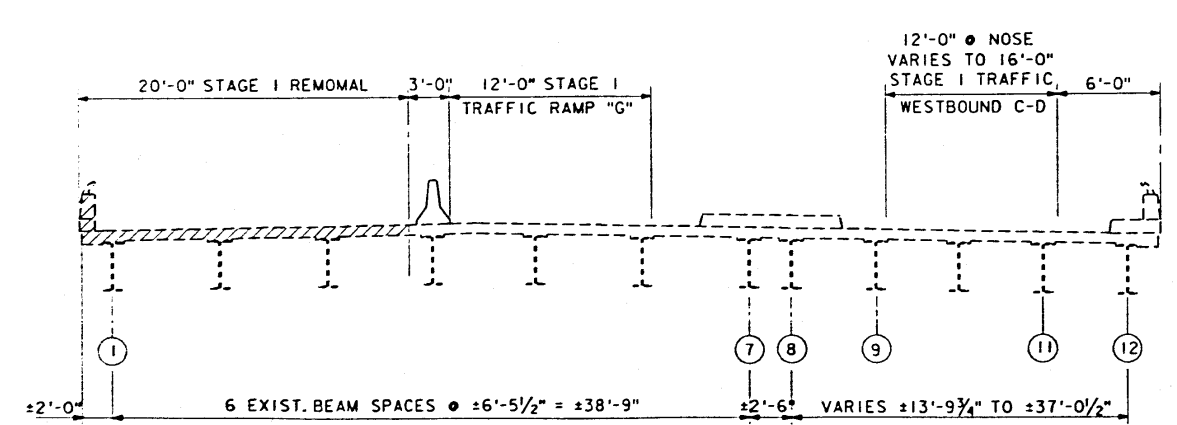
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

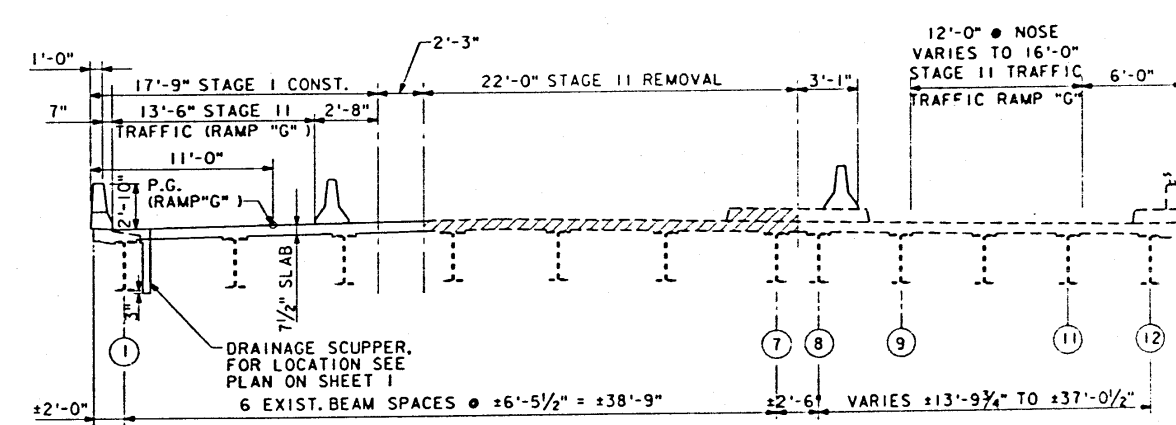
ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET
F.A.I. TO	•	ST. CLAIR	320	201
PROJECT		82-3HVB-2R-1		



PLAN



CROSS SECTION
(LOOKING NORTH)
STAGE I



CROSS SECTION A-A
(LOOKING NORTH)
STAGE II

NOTES

1. WORK THIS SHEET WITH SHEET 4.
2. FOR FLOOR FINISH, SEE GENERAL NOTES.

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
STAGE CONSTRUCTION DETAILS

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

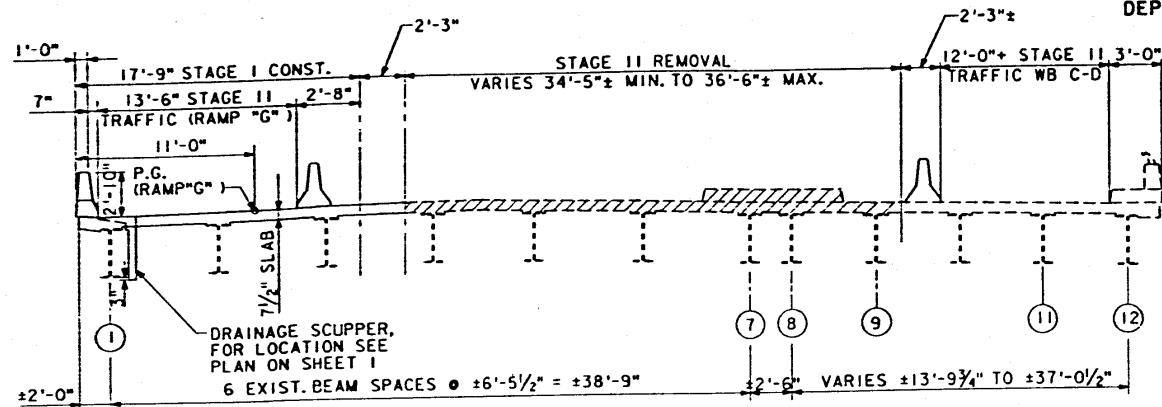
PREPARED BY
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10320 FILER 2F31110.1 DET154E.DGN
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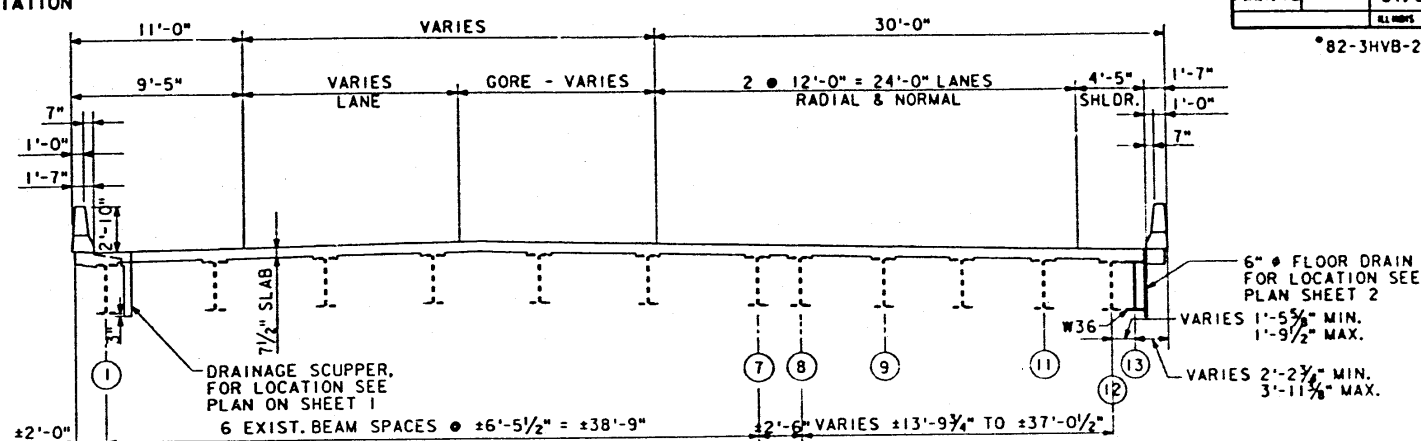
K. PATEL	DESIGNED
S. KNEIP	CHECKED
P. NELSON	DRAWN
K. PATEL	CHECKED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

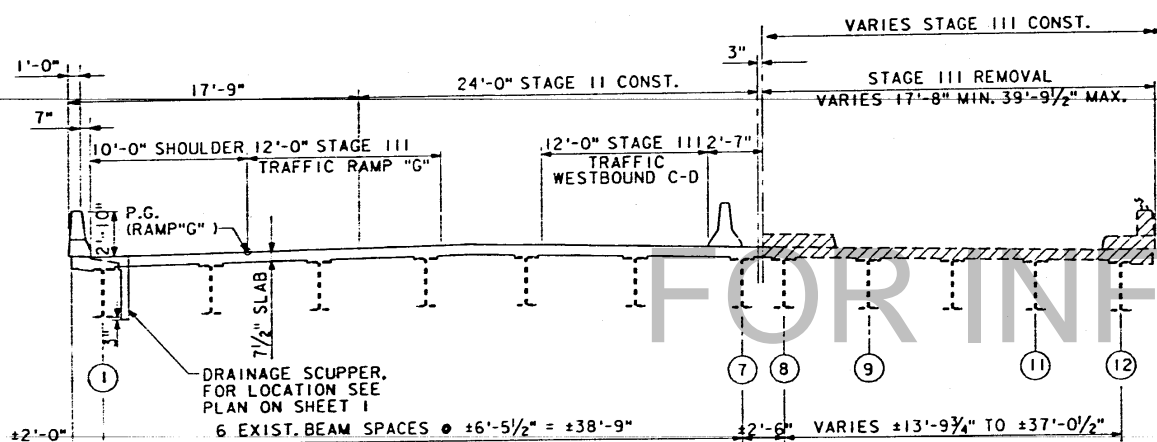
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FAI-70		ST. CLAIR	320	202
ILLINOIS PROJECT				



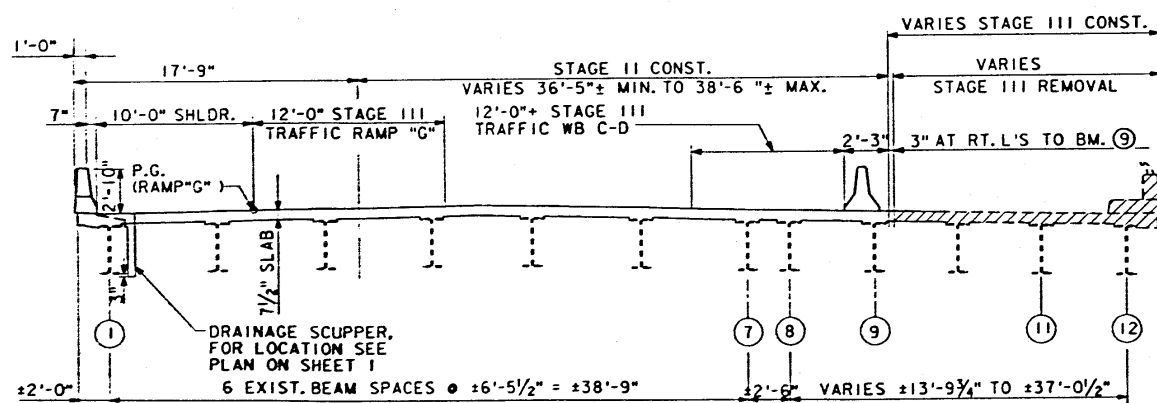
CROSS SECTION B-B
(LOOKING NORTH)
STAGE II



CROSS SECTION
(LOOKING NORTH)
(COMPLETED STRUCTURE)



CROSS SECTION A-A
(LOOKING NORTH)
STAGE III



CROSS SECTION B-B
(LOOKING NORTH)
STAGE III

FOR INFORMATION ONLY

NOTE
FOR STAGING PLAN, SEE SHEET 3.

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
STAGE CONSTRUCTION DETAILS

STRUCTURE NO 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

SHEET NO. 4 OF 26

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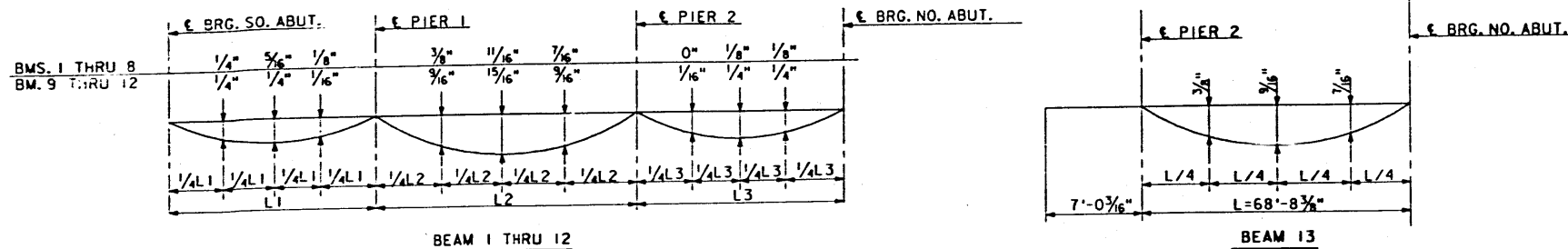
K. PATEL	DESIGNED
S. KNEIP	CHECKED
P. NELSON	DRAWN
K. PATEL	CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHAPE NO.	SECTION	COUNTY	STA.	SHEET
F.A.I. 70		ST. CLAIR	320	203
		ILLINOIS	PROJECT	

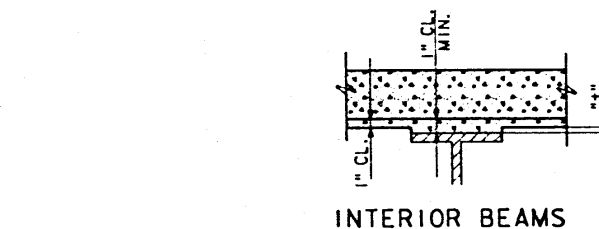
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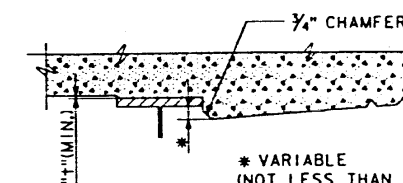
DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE DECK SLAB ONLY)

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 IN TABLES.

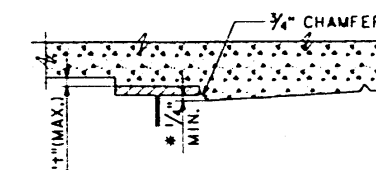
	L1	L2	L3
BMS. 1 THRU 8	4 SPA. • 17'-3"=69'-0"	4 SPA. • 22'-4 1/2"=89'-6"	4 SPA. • 14'-9 3/4"=59'-3"
BM. 9	71'-6 1/8"	4 SPA. • 23'-2 3/8"=92'-9 1/2"	61'-5 1/8"
BM. 10	74'-1 1/8"	96'-1 5/8"	4 SPA. • 15'-10 1/2"=63'-7 1/4"
BM. 11	76'-8 1/8"	99'-6 1/8"	4 SPA. • 16'-5 1/8"=65'-10 3/4"
BM. 12	79'-4 1/8"	4 SPA. • 25'-8 1/2"=102'-11 1/4"	68'-2 1/8"



INTERIOR BEAMS



AT MINIMUM FILLET

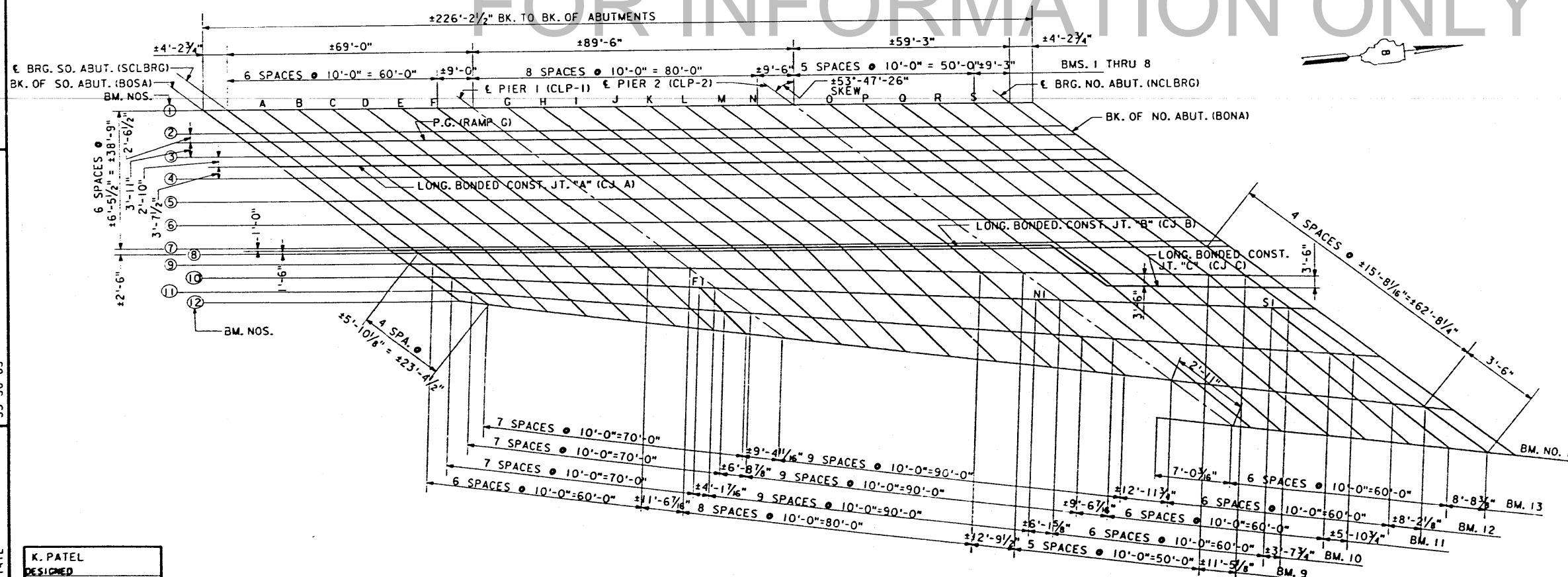


AT MAXIMUM FILLET

EXTERIOR BEAMS

NOTE: TO DETERMINE "+" AFTER ALL 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 HEIGHT "+" ABOVE TOP FLANGES OF BEAMS.

FOR INFORMATION ONLY



PLAN

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
TOP OF SLAB ELEVATIONS

STRUCTURE NO. 082-0206

STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

SHEET NO. 5 OF 26

K. PATEL	DESIGNED
S. KNEIP	CHECKED
P. NELSON	DRAWN
K. PATEL	CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10320 FILE: ZF3\C110\DETATE.DGN
875567 PRF:DETATE
LEVELS PLOTTED DATE: OCT. 14, 1987
35 56 63

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	CURT	POST MILE	POST MILE
F.A.I. TO	*	ST. CLAIR	320	204
MILES		PROJECT		

*82-3HVB-2R-1

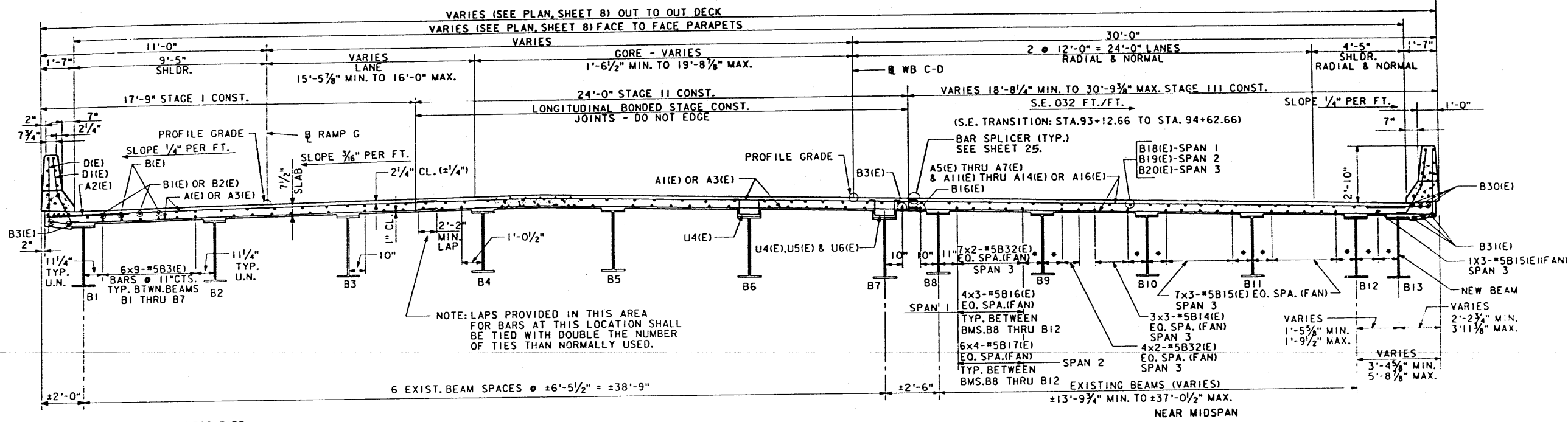
LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	
BM-1	BOSA	11 + 17.980	9.000	435.053	435.053	BM-3	BOSA	11 + 35.617	-3.917	435.026	435.026	BM-5	BOSA	91 + 47.350	-0.190	434.892	434.887	BM-7	BOSA	91 + 65.734	-12.056	434.250	434.245	
	SOLBRG	11 + 22.211	9.000	435.010	435.010		SOLBRG	11 + 39.848	-3.917	434.953	434.953		SOLBRG	91 + 51.586	0.039	434.827	434.827		SOLBRG	91 + 69.973	-11.844	434.197	434.197	
	A	11 + 32.211	9.000	434.837	434.849		A	11 + 49.848	-3.917	434.780	434.792		A	91 + 61.569	0.601	434.679	434.691		A	91 + 79.969	-11.225	434.069	434.081	
	B	11 + 42.211	9.000	434.664	434.685		B	11 + 59.848	-3.917	434.607	434.628		B	91 + 71.548	1.194	434.513	434.534		B	91 + 90.002	-10.576	433.932	433.954	
	C	11 + 52.211	9.000	434.491	434.515		C	11 + 69.848	-3.917	434.434	434.458		C	91 + 81.524	1.818	434.314	434.339		C	92 + 10.014	-9.895	433.799	433.814	
	D	11 + 62.211	9.000	434.318	434.339		D	11 + 79.848	-3.917	434.261	434.282		D	92 + 01.464	3.156	434.166	434.187		D	92 + 20.013	-8.443	433.480	433.492	
	E	11 + 72.211	9.000	434.145	434.157		E	11 + 89.848	-3.917	434.088	434.100		E	92 + 11.428	3.872	433.814	433.819		E	92 + 30.008	-7.671	433.318	433.324	
	F	11 + 82.211	9.000	433.972	433.977		F	11 + 99.848	-3.917	433.915	433.920		F	92 + 20.391	4.541	433.654	433.654		F	92 + 39.000	-6.950	433.173	433.173	
	CLP-1	11 + 91.211	9.000	433.816	433.816		CLP-1	12 + 08.848	-3.917	433.759	433.759		CLP-1	92 + 30.346	5.315	433.476	433.476		CLP-1	92 + 48.985	-6.120	433.013	433.027	
	G	12 + 01.211	9.000	433.643	433.657		G	12 + 18.848	-3.917	433.596	433.600		G	92 + 40.297	6.118	433.300	433.328		G	92 + 58.965	-5.299	432.854	432.881	
	H	12 + 11.211	9.000	433.470	433.498		H	12 + 28.848	-3.917	433.413	433.441		H	92 + 50.242	6.952	433.124	433.164		H	92 + 78.910	-4.368	432.695	432.735	
	I	12 + 21.211	9.000	433.297	433.337		I	12 + 38.848	-3.917	433.240	433.280		I	92 + 60.182	7.817	432.949	433.001		I	92 + 88.873	-2.494	432.382	432.435	
	J	12 + 31.211	9.000	433.124	433.176		J	12 + 48.848	-3.917	433.067	433.119		J	92 + 70.116	8.712	432.774	432.827		J	92 + 98.871	-1.511	432.228	432.271	
	K	12 + 41.211	9.000	432.951	433.003		K	12 + 58.848	-3.917	432.894	432.947		K	92 + 80.046	9.637	432.600	432.643		K	93 + 08.783	-0.498	432.086	432.117	
	L	12 + 51.211	9.000	432.778	432.821		L	12 + 68.848	-3.917	432.721	432.764		L	92 + 90.896	10.593	432.427	432.458		L	93 + 18.728	0.546	431.940	431.965	
	M	12 + 61.211	9.000	432.605	432.637		M	12 + 78.848	-3.917	432.548	432.580		M	92 + 99.896	11.579	432.250	432.266		M	93 + 28.170	1.565	431.798	431.799	
	N	12 + 71.211	9.000	432.432	432.447		N	12 + 88.848	-3.917	432.375	432.391		N	93 + 09.302	12.544	432.071	432.071		N	93 + 38.013	2.668	431.617	431.617	
	CLP-2	12 + 80.711	9.000	432.258	432.268		CLP-2	12 + 98.848	-3.917	432.210	432.210		CLP-2	93 + 19.208	13.589	431.872	431.872		CLP-2	93 + 48.029	3.801	431.488	431.492	
	O	12 + 90.711	9.000	432.085	432.095		O	13 + 08.348	-3.917	432.028	432.028		O	93 + 29.107	14.664	431.661	431.664		O	93 + 57.947	4.964	431.353	431.373	
	P	12 + 100.711	9.000	431.912	431.924		P	13 + 18.348	-3.917	431.832	431.832		P	93 + 39.000	15.770	431.438	431.449		P	93 + 67.859	6.158	431.237	431.248	
	Q	13 + 00.711	9.000	431.734	431.745		Q	13 + 28.348	-3.917	431.624	431.624		Q	93 + 48.895	16.905	431.203	431.213		Q	93 + 77.763	7.392	431.109	431.115	
	R	13 + 10.711	9.000	431.556	431.546		R	13 + 38.348	-3.917	431.414	431.424		R	93 + 58.764	18.071	430.957	430.964		R	93 + 96.918	8.441	431.017	431.017	
	S	13 + 20.711	9.000	431.378	431.332		S	13 + 48.348	-3.917	431.177	431.183		S	93 + 67.895	19.176	430.718	430.718		S	93 + 91.115	9.073	430.970	430.970	
	NOLBRG	13 + 30.711	9.000	431.201	431.119		NOLBRG	13 + 57.986	-3.917	430.944	430.944		NOLBRG	93 + 77.070	19.691	430.606	430.606		NOLBRG	93 + 91.115	9.073	430.970	430.970	
	BONA	13 + 39.961	9.028	431.021	431.021		BONA	13 + 61.846	-3.929	430.836	430.836		BONA	93 + 86.000	19.691	430.606	430.606		BONA	93 + 91.115	9.073	430.970	430.970	
		13 + 44.154	9.028	431.021	431.021																			
BM-2	BOSA	11 + 26.798	2.542	434.065	434.065	CJ A	BOSA	11 + 39.486	-6.750	435.004	435.004	BM-6	BOSA	91 + 56.530	-6.156	434.566	434.561	CJ B	BOSA	91 + 67.164	-13.015	434.200	434.195	
	SOLBRG	11 + 31.029	2.542	434.992	434.992		SOLBRG	11 + 43.717	-6.750	434.931	434.931		SOLBRG	91 + 60.762	-5.915	434.516	434.516		SOLBRG	91 + 71.405	-12.761	434.147	434.147	
	A	11 + 41.029	2.542	434.819	434.831		A	11 + 53.717	-6.750	434.758	434.770		A	91 + 70.762	-5.325	434.395	434.407		A	91 + 81.429	-12.138	433.880	433.902	
	B	11 + 51.029	2.542	434.646	434.667		B	11 + 63.717	-6.750	434.585	434.607		B	91 + 80.768	-4.704	434.265	434.287		B	91 + 91.449	-11.484	433.605	433.627	
	C	11 + 61.029	2.542	434.473	434.493		C	11 + 73.717	-6.750	434.412	434.437		C	91 + 90.750	-4.052	434.129	434.154		C	92 + 01.449	-10.799	433.336	433.358	
	D	11 + 71.029	2.542	434.300	434.321		D	11 + 83.717	-6.750	434.229	434.259		D	92 + 00.739	-3.370	433.985	434.006		D	92 + 11.456	-10.084	433.064	433.086	
	E	11 + 81.029	2.542	434.127	434.139		E	11 + 93.717	-6.750	434.056	434.078		E	92 + 09.739	-2.657	433.835	433.847		E	92 + 22.456	-9.368	432.723	432.745	
	F	11 + 91.029	2.542	433.954	433.959		F	12 + 03.717	-6.750	433.883	433.898		F	92 + 18.722	-1.919	433.677	433.682		F	92 + 35.456	-8.562	432.463	432.485	
	CLP-1	12 + 00.029	2.542	433.798	433.798		CLP-1	12 + 12.717	-6.750	433.737	433.737		CLP-1	92 + 28.702	-1.193	433.531	433.531		CLP-1	92 + 48.448	-7.837	433.263	433.285	
	G	12 + 10.029	2.542	433.625	433.625		G	12 + 22.717	-6.750	433.561	433.578		G	92 + 38.679	-0.416	433.370	433.384		G	92 + 68.448	-7.032	432.997	433.019	
	H	12 + 20.029	2.542	433.452	433.452		H	12 + 32.717	-6.750	433.391	433.419		H	92 + 48.915	0.416	433.197	433.225		H	92 + 98.396	-5.241	432.680	432.702	
	I	12 + 30.029	2.542	433.279	433.319		I	12 + 42.717	-6.750	433.218	433.258		I	92 + 59.330	1.279	433.003	433.039		I	93 + 08.334	-4.315	432.483	432.505	
	J	12 + 40.029	2.542	433.106	433.158		J	12 + 52.717	-6.750	433.045	433.097		J	92 + 69.530	2.172	432.778	432.800		J	93 + 18.334	-3.368	432.287	432.309	
	K	12 + 50.029	2.542	432.933	432.985		K	12 + 62.717	-6.750	432.872	432.925		K	92 + 79.479	3.096	432.591	432.643		K	93 + 28.334	-2.371	432.094	432.116	
	L	12 + 60.029	2.542	432.760	432.803		L	12 + 72.717	-6.750	432.699	432.742		L	92 + 89.422	4.050	432.407	432.450		L	93 + 38.334	-1.353	431.798	431.820	
	M	12 + 70.029	2.542	432.587	432.619		M	12 + 82.717	-6.750	432.526	432.568		M	92 + 99.360	5.034	432.232	432.264		M	93 + 48.334	-0.305	431.498	431.520	
	N	12 + 80.029	2.542	432.414	432.429		N	12 + 92.717	-6.750	432.355	432.399		N	93 + 09.291	6.041	432.062	432.082		N	93 + 58.334	-0.251	431.198	431.220	
	CLP-2	12 + 90.029	2.542	432.250	432.250		CLP-2	13 + 02.717	-6.750	432.186	432.186		CLP-2	93 + 19.291	7.041	431.911	431.911		CLP-2	93 + 68.334	-0.201	430.898	430.920	
	O	13 + 00.029	2.542	432.076	432.076		O	13 + 12.717	-6.750	431.999	431.999		O	93 + 29.640										

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
F.A.I. 70		ST. CLAIR	320	205
PROJECT		82-3HVB-2R-1		

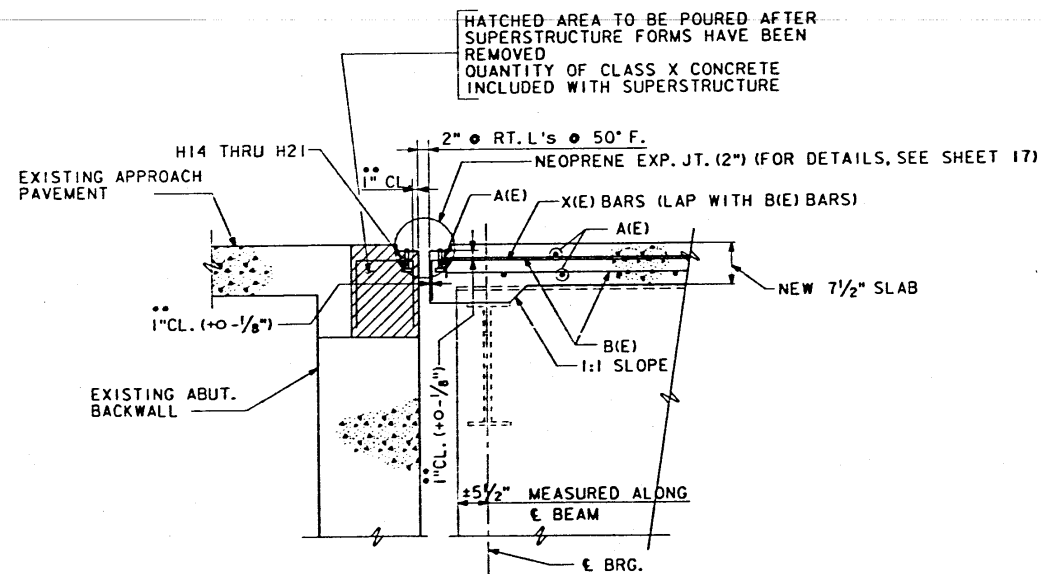
LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION
BM-9	BOSA SOLBRG	91 + 74.241	-17.453	433.956	433.951	BM-12	BOSA SOLBRG	91 + 89.124	-26.593	433.463	433.458
		91 + 78.492	-17.298	433.897	433.897			91 + 93.398	-26.702	433.392	433.392
		91 + 88.537	-16.910	433.753	433.765			92 + 03.468	-26.940	433.217	433.228
		91 + 98.580	-16.492	433.602	433.623			92 + 13.500	-27.146	433.035	433.056
		92 + 08.620	-16.042	433.444	433.464			92 + 23.633	-27.321	432.846	432.867
		92 + 18.657	-15.562	433.278	433.295			92 + 33.717	-27.466	432.654	432.675
		92 + 28.691	-15.050	433.107	433.115			92 + 43.801	-27.579	432.463	432.476
		92 + 38.722	-14.509	432.936	432.940			92 + 53.887	-27.661	432.273	432.278
		92 + 48.759	-13.845	432.741	432.741			92 + 63.972	-27.713	432.083	432.085
		92 + 58.799	-13.237	432.573	432.573			92 + 73.446	-27.733	431.905	431.905
		92 + 68.832	-12.598	432.406	432.406			92 + 83.532	-27.725	431.716	431.735
		92 + 78.867	-11.929	432.240	432.296			92 + 93.617	-27.685	431.529	431.565
		92 + 88.900	-11.229	432.075	432.145			93 + 03.703	-27.615	431.346	431.398
		92 + 98.933	-10.498	431.913	431.966			93 + 13.788	-27.514	431.178	431.243
		93 + 08.966	-9.737	431.753	431.823			93 + 23.872	-27.382	431.034	431.110
		93 + 18.999	-8.944	431.593	431.696			93 + 33.955	-27.219	430.904	430.872
		93 + 29.032	-8.122	431.433	431.580			93 + 44.037	-27.024	430.789	430.845
		93 + 39.065	-7.275	431.273	431.444			93 + 54.118	-26.799	430.689	430.731
		93 + 49.098	-6.405	431.113	431.367			93 + 64.200	-26.537	430.597	430.648
		93 + 59.131	-5.514	430.953	430.999			93 + 74.282	-26.237	430.517	430.577
		93 + 69.164	-4.598	430.793	430.862			93 + 84.364	-25.927	430.446	430.497
		93 + 79.197	-3.657	430.633	430.725			93 + 94.446	-25.671	430.381	430.431
		93 + 89.230	-2.691	430.473	430.587			94 + 04.528	-25.415	430.321	430.371
		93 + 99.263	-1.700	430.313	430.447			94 + 14.610	-25.159	430.261	430.311
		94 + 09.296	-0.684	430.153	430.317			94 + 24.692	-24.903	430.201	430.251
		94 + 19.329	0.352	430.000	430.181			94 + 34.774	-24.648	430.141	430.191
		94 + 29.362	1.386	429.846	430.051			94 + 44.856	-24.392	430.081	430.131
		94 + 39.395	2.420	429.692	429.921			94 + 54.938	-24.136	430.021	430.071
		94 + 49.428	3.454	429.538	429.791						
		94 + 59.461	4.488	429.384	429.645						
		94 + 69.494	5.522	429.230	429.499						
		94 + 79.527	6.556	429.076	429.355						
		94 + 89.560	7.590	428.922	429.211						
94 + 99.593	8.624	428.768	429.067								
95 + 09.626	9.658	428.614	428.923								
95 + 19.659	10.692	428.460	428.779								
95 + 29.692	11.726	428.306	428.635								
95 + 39.725	12.760	428.152	428.491								
95 + 49.758	13.794	428.000	428.347								
95 + 59.791	14.828	427.846	428.203								
95 + 69.824	15.862	427.692	428.059								
95 + 79.857	16.896	427.538	427.915								
95 + 89.890	17.930	427.384	427.771								
95 + 99.923	18.964	427.230	427.627								
96 + 09.956	19.998	427.076	427.483								
96 + 19.989	21.032	426.922	427.339								
96 + 29.022	22.066	426.768	427.195								
96 + 39.055	23.100	426.614	427.051								
96 + 49.088	24.134	426.460	426.907								
96 + 59.121	25.168	426.306	426.763								
96 + 69.154	26.202	426.152	426.619								
96 + 79.187	27.236	426.000	426.475								
96 + 89.220	28.270	425.846	426.331								
96 + 99.253	29.304	425.692	426.187								
97 + 09.286	30.338	425.538	426.043								
97 + 19.319	31.372	425.384	425.900								
97 + 29.352	32.406	425.230	425.756								
97 + 39.385	33.440	425.076	425.612								
97 + 49.418	34.474	424.922	425.468								
97 + 59.451	35.508	424.768	425.324								
97 + 69.484	36.542	424.614	425.180								
97 + 79.517	37.576	424.460	425.036								
97 + 89.550	38.610	424.306	424.892								
97 + 99.583	39.644	424.152	424.748								
98 + 09.616	40.678	424.000	424.604								
98 + 19.649	41.712	423.846	424.460								
98 + 29.682	42.746	423.692	424.316								
98 + 39.715	43.780	423.538	424.172								
98 + 49.748	44.814	423.384	424.028								
98 + 59.781	45.848	423.230	423.884								
98 + 69.814	46.882	423.076	423.740								
98 + 79.847	47.916	422.922	423.596								
98 + 89.880	48.950	422.768	423.452								
98 + 99.913	49.984	422.614	423.308								
99 + 09.946	51.018	422.460	423.164								
99 + 19.979	52.052	422.306	423.020								
99 + 29.012	53.086	422.152	422.876								
99 + 39.045	54.120	422.000	422.732								
99 + 49.078	55.154	421.846	422.588								
99 + 59.111	56.188	421.692	422.444								
99 + 69.144	57.222	421.538	422.300								
99 + 79.177	58.256	421.384	422.156								
99 + 89.210	59.290	421.230	422.012								
99 + 99.243	60.324	421.076	421.868								
100 + 09.276	61.358	420.922	421.724								
100 + 19.309	62.392	420.768	421.580								
100 + 29.342	63.426	420.614	421.436								
100 + 39.375	64.460	420.460	421.292								
100 + 49.408	65.494	420.306	421.148								
100 + 59.441	66.528	420.152	421.004								
100 + 69.474	67.562	420.000	420.860								
100 + 79.507	68.596	419.846	420.716								
100 + 89.540	69.630	419.692	420.572								
100 + 99.573	70.664	419.538	420.428								
101 + 09.606	71.698	419.384	420.284								
101 + 19.639	72.732	419.230	420.140								
101 + 29.672	73.766	419.076	420.000								
101 + 39.705	74.800	418.922	419.860								
101 + 49.738	75.834	418.768	419.720								
101 + 59.771	76.868	418.614	419.580								
101 + 69.804	77.902	418.460	419.440								
101 + 79.837	78.936	418.306	419.300								
101 + 89.870	79.970	418.152	419.160								
101 + 99.903	81.004	418.000	419.020								
102 + 09.936	82.038	417.846	418.880								
102 + 19.969	83.072	417.692	418.740								
102 + 29.002	84.106	417.538	418.600								
102 + 39.035	85.140	417.384	418.460								
102 + 49.068	86.174	417.230	418.320								
102 + 59.101	87.208	417.076	418.180								
102 + 69.134	88.242	416.922	418.040								
102 + 79.167	89.276	416.768	417.900								
102 + 89.200	90.310	416.614	417.760								
102 + 99.233	91.344	416.460	417.620								
103 + 09.266	92.378	416.306	417.480								
103 + 19.300	93.412	416.152	417.340								
103 + 29.333	94.446	416.000	417.200								
103 + 39.366	95.480	415.846	417.060								
103 + 49.399	96.514	415.692	416.920								
103 + 59.432	97.548	415.538	416.780								
103 + 69.465	98.582	415.384	416.640								
103 + 79.498	99.616	415.230	416.500								
103 + 89.531	100.650	415.076	416.360								
103 + 99.564	101.684	414.922	416.220								
104 + 09.597	102.718	414.768	416.080								
104 + 19.630	103.752	414.614	415.940								
104 + 29.663	104.786	414.460	415.800								
104 + 39.696	105.820	414.306	415.660								
104 + 49.729	106.854	414.152	415.520								
104 + 59.762	107.888	414.000	415.380								
104 + 69.795	108.922	413.846	415.240								
104 + 79.828	109.956	413.692	415.100								
104 + 89.861	110.990	413.538	414.960								
104 + 99.894	112.024	413.384	414.820								
105 + 09.927	113.058	413.230	414.680			</					

*82-3HVB-2R-1



FOR INFORMATION ONLY

CROSS SECTION (LOOKING NORTH)



SECTION A-A

•• PLACE A(E) AND H14 THRU H21 BARS IN BACK OF ANCHOR BOLT AS SHOWN IF REQUIRED TO MAINTAIN 1" CL. (+0 - 1/8"). ANCHOR BOLTS SHOULD BE TIED TO A(E) AND H14 THRU H21 BARS.

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
SLAB - CROSS SECTIONS

STRUCTURE NO. 082-0206

STA.11+32.81 TO STA.13+53.94 (FAI-70) ST. CLAIR CO.

SHEET NO. 9 OF 26

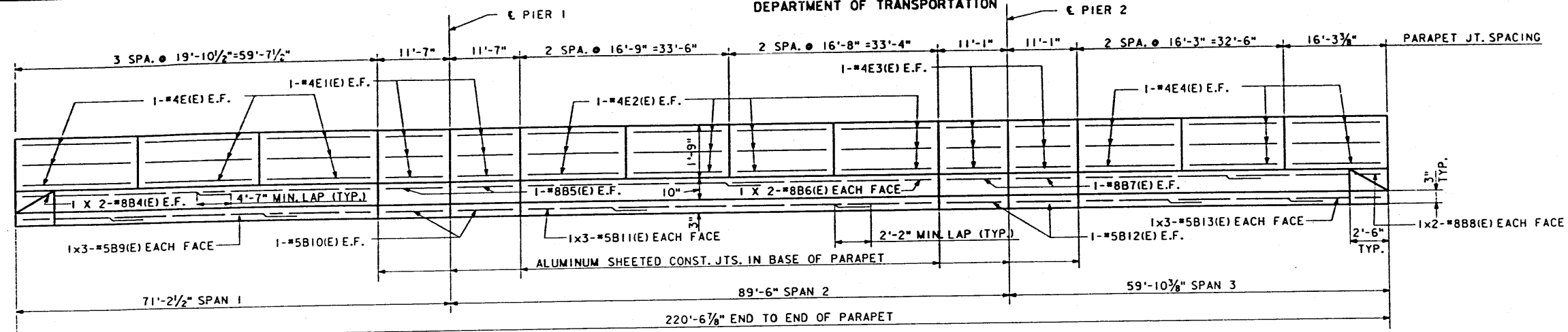
PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10320 FILE: ZF31110.DETLISTE.DGN
875674 PRF.DETLISTE

LEVELS PLOTTED DATE: OCT. 14, 1987
35 56 57 58 63

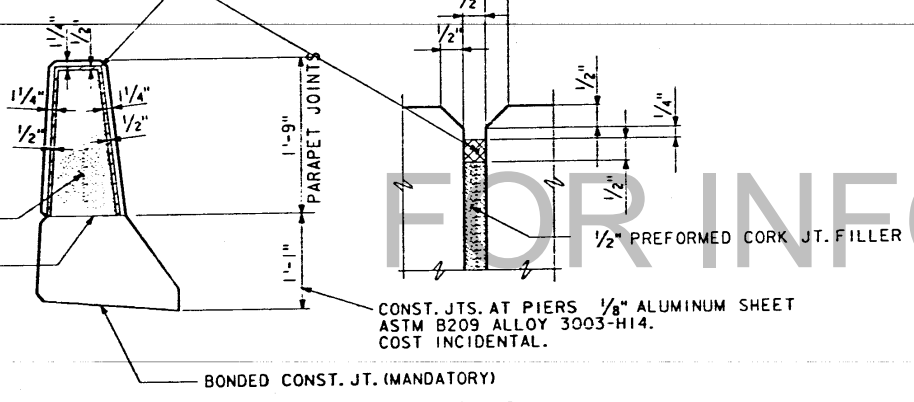
DESIGNED	K. PATEL
CHECKED	S. KNEIP
CHECKED	J. CORLEY
DRAWN	K. PATEL
CHECKED	

82-3HVB-2R-1



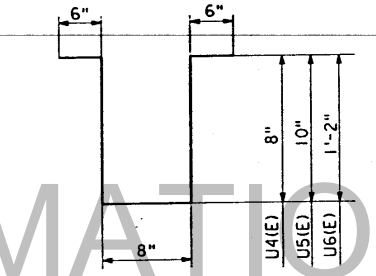
INSIDE ELEVATION OF WEST PARAPET

TWO COMPONENT NON-STAINING GRAY SEALING COMPOUND WITH POLYSULFIDE LIQUID POLYMER GUN-GRADE WITH PRIMER.

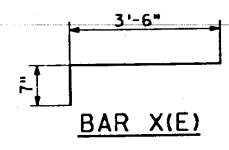


PARAPET JOINT DETAILS

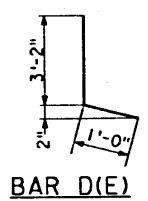
NOTE: ALL EDGES SHALL HAVE A 3/4" CHAMFER.



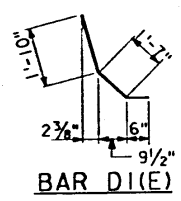
BARS U4(E), U5(E) & U6(E)



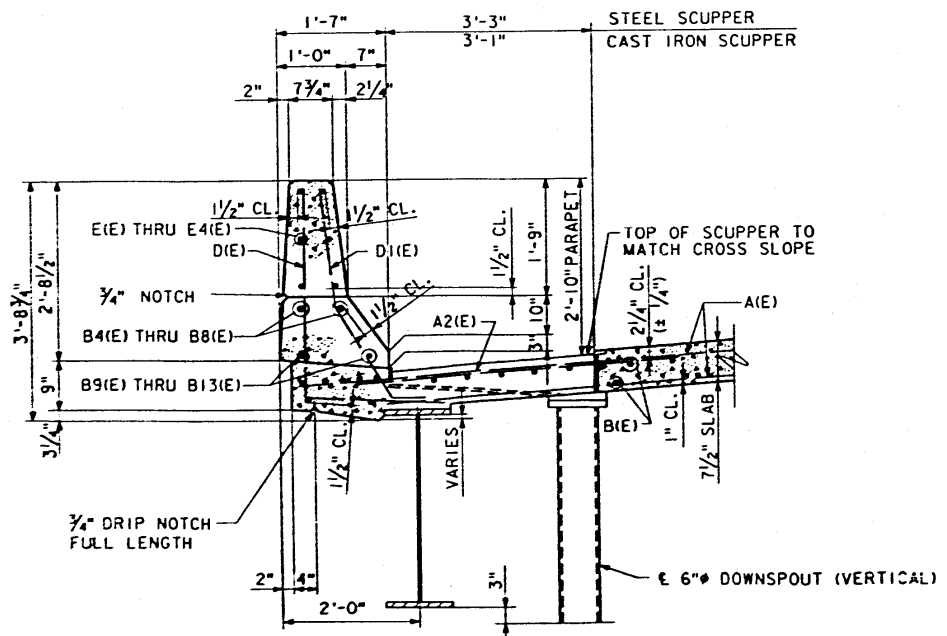
BAR X(E)



BAR D1(E)



BAR D2(E)



SECTION THRU PARAPET

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
A1(E)	571	#5	19'-0"	
A11(E)	545	#5	24'-0"	
A2(E)	465	#6	4'-0"	
A3(E)	73	#5	18'-3"	
A4(E)	50	#5	23'-10"	
A5(E)	36	#5	17'-0"	
A6(E)	290	#5	12'-8"	
A7(E)	290	#5	15'-4"	
A8(E)	42	#5	30'-2"	
A9(E)	17	#5	54'-2"	
A10(E)	89	#5	30'-0"	
A11(E)	308	#5	16'-1"	
A12(E)	38	#5	53'-2"	
A13(E)	354	#5	13'-7"	
A14(E)	82	#5	25'-7"	
A15(E)	48	#5	2'-0"	
A16(E)	158	#5	17'-2"	
B1(E)	352	#5	29'-6"	
B11(E)	42	#6	29'-0"	
B2(E)	42	#6	27'-9"	
B3(E)	351	#5	26'-5"	
B4(E)	4	#8	32'-0"	
B5(E)	4	#8	11'-3"	
B6(E)	4	#8	35'-7"	
B7(E)	4	#8	10'-9"	
B8(E)	4	#8	26'-7"	
B9(E)	6	#5	21'-3"	
B10(E)	4	#5	11'-3"	
B11(E)	6	#5	23'-8"	
B12(E)	4	#5	10'-9"	
B13(E)	6	#5	17'-8"	
B14(E)	9	#5	23'-2"	
B15(E)	45	#5	25'-10"	
B16(E)	60	#5	28'-5"	
B17(E)	96	#5	28'-9"	
B18(E)	88	#5	21'-10"	
B19(E)	160	#5	23'-5"	
B20(E)	120	#5	19'-11"	
B21(E)	38	#6	34'-0"	
B22(E)	4	#8	34'-7"	
B23(E)	8	#8	13'-2"	
B24(E)	6	#8	29'-5"	
B25(E)	4	#8	32'-0"	
B26(E)	6	#5	23'-0"	
B27(E)	8	#5	13'-2"	
B28(E)	8	#5	21'-5"	
B29(E)	6	#5	21'-3"	
B30(E)	30	#5	27'-9"	
B31(E)	33	#5	25'-5"	
B32(E)	52	#5	23'-4"	
B33(E)	26	#5	21'-6"	
D1(E)	484	#4	4'-2"	
D11(E)	514	#5	3'-11"	
D2(E)	9	#5	3'-9"	
E1(E)	18	#4	19'-7"	
E11(E)	12	#4	11'-3"	
E2(E)	24	#4	16'-5"	
E3(E)	12	#4	10'-9"	
E4(E)	18	#4	16'-0"	
E5(E)	24	#4	15'-11"	
E6(E)	24	#4	13'-2"	
E7(E)	42	#4	19'-6"	
U4(E)	280	#5	3'-0"	
U5(E)	20	#5	3'-4"	
U6(E)	35	#5	4'-0"	
X(E)	149	#5	4'-1"	
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	443.9
REINFORCEMENT BARS (EPOXY COATED)			LBS.	121,610

BILL OF MATERIAL

NOTES

BARS INDICATED THUS 20x3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
FOR EAST PARAPET, SEE SHEET 11
MIN. BAR LAP: FOR #5 BARS = 2'-2"
#8 BARS = 4'-7"

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
WEST PARAPET

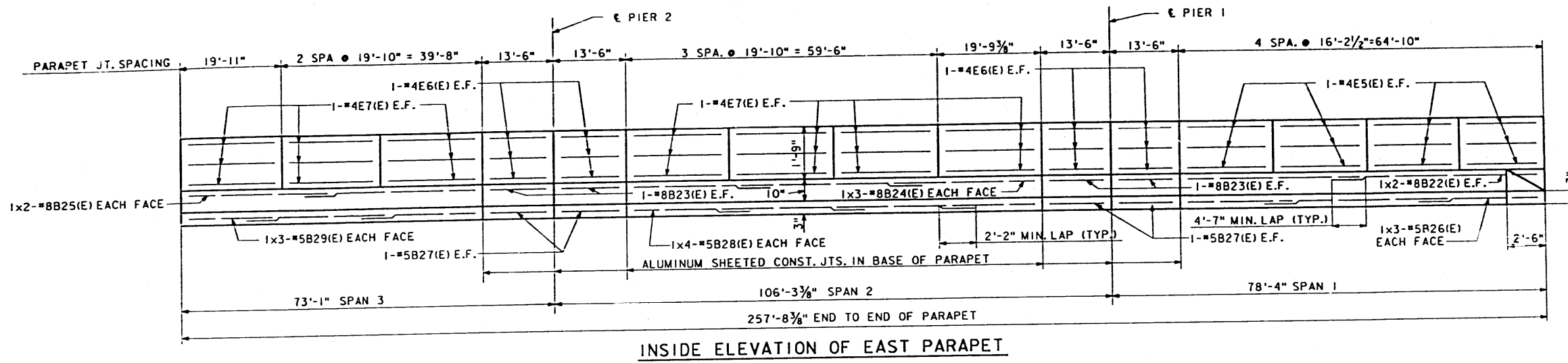
STRUCTURE NO. 082-0206
STA.11+32.81 TO STA.13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10320 FILE:ZF3110.1JDET158E.DGN
8/15/87
LEVELS PLOTTED DATE: OCT. 14, 1987
35 56 57 58 63
PRF:DET158E

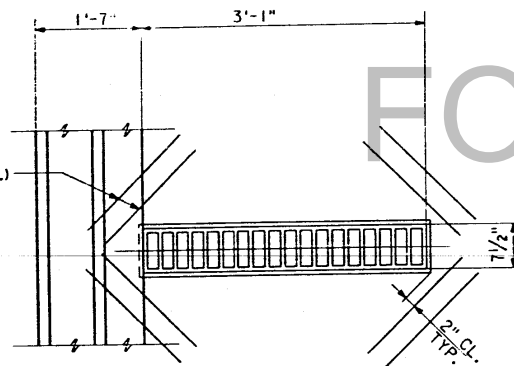
K. PATEL
DESIGNED
S. KNEIP
CHECKED
J. CORLEY
DRAWN
K. PATEL
CHECKED

*82-3HVB-2R-1



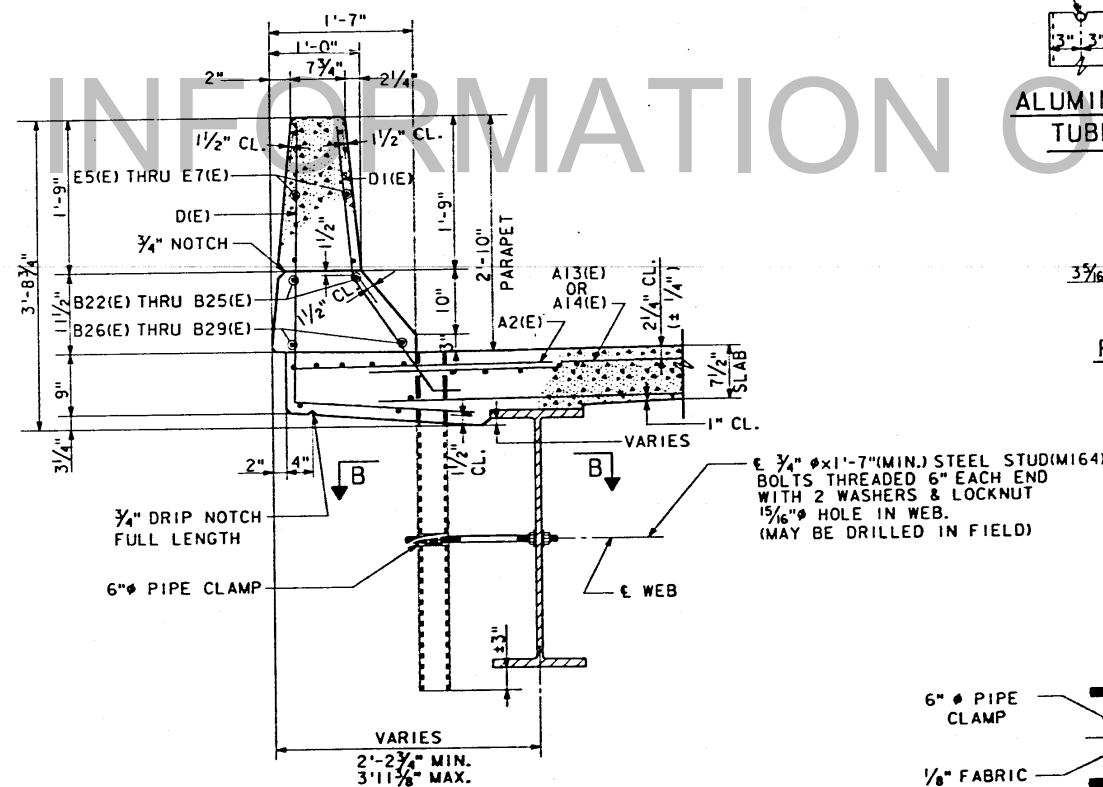
INSIDE ELEVATION OF EAST PARAPET

1-#5A15(E) BARS (2'-0" LG.)
AT 4" CTS., TOP
(TYP. EACH CORNER)



DETAIL "A"

NOTES: THE EXTERIOR SURFACE OF THE FLOOR DRAIN SHALL BE PAINTED WITH THE PAINT SYSTEM SPECIFIED FOR STRUCTURAL STEEL. THE EXTERIOR SURFACES OF THE ALUMINUM TUBE SHALL BE CLEANED AND GIVEN A WASHCOAT PRETREATMENT IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL'S SPEC. SSPC-SPI & SSPC-PAINT 27 PRIOR TO PAINTING. FIBERGLASS PIPE SHALL CONFORM TO ASTM: D2936, WITH SHORT TIME RUPTURE STRENGTH HOOP TENSILE STRESS OF 30,000 P.S.I. MINIMUM. THE SURFACE OF THE FIBERGLASS PIPE SHALL BE FREE OF BOND INHIBITING AGENTS.

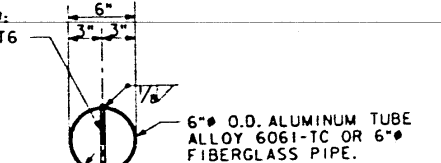


SECTION THRU EAST PARAPET
(LOOKING SOUTH)
(Showing Floor Drain)

FILL SLOT WITH WELD

ALUMINUM TUBE

1/2" x 8" ALUM. BAR ASTM:
B 211 ALLOY 6061-T6

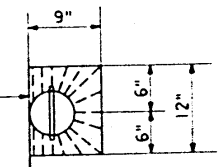


TOP PLAN
(SHOWING ALUMINUM TUBE)

1/2" x 8" ALUM. BAR ASTM:
B 211 ALLOY 6061-T6

FIBERGLASS PIPE

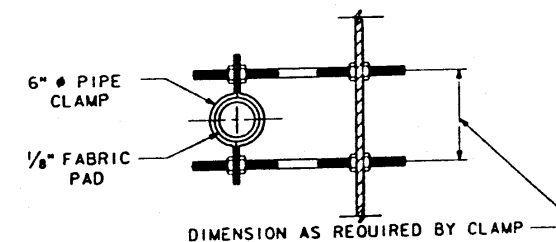
EDGE OF PARAPET



TOP PLAN

NOTES

- SEE SHEET 10 FOR WEST PARAPET DETAILS & BILL OF MATERIALS
- REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- BARS INDICATED THUS 20x3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.



SECTION B-B

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
FLOOR DRAINS	EACH	3

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
EAST PARAPET

STRUCTURE NO. 082-0206

STA.11+32.81 TO STA.13+53.94 (FAI-70) ST. CLAIR CO.

SHEET NO. 11 OF 26

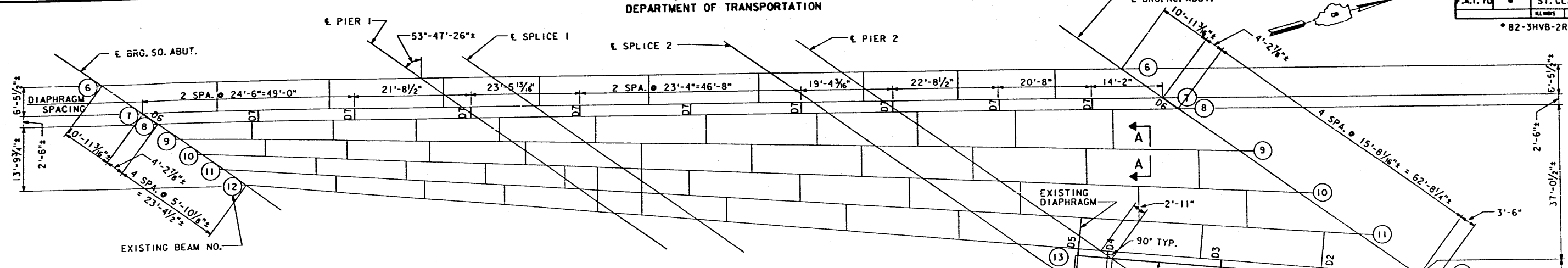
PREPARED BY
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10370
875676
FILE: ZF3\1101\DET1159E.DGN
PRF: DET1159E
LEVELS PLOTTED
35 56 57 58 63
DATE: OCT. 14, 1987

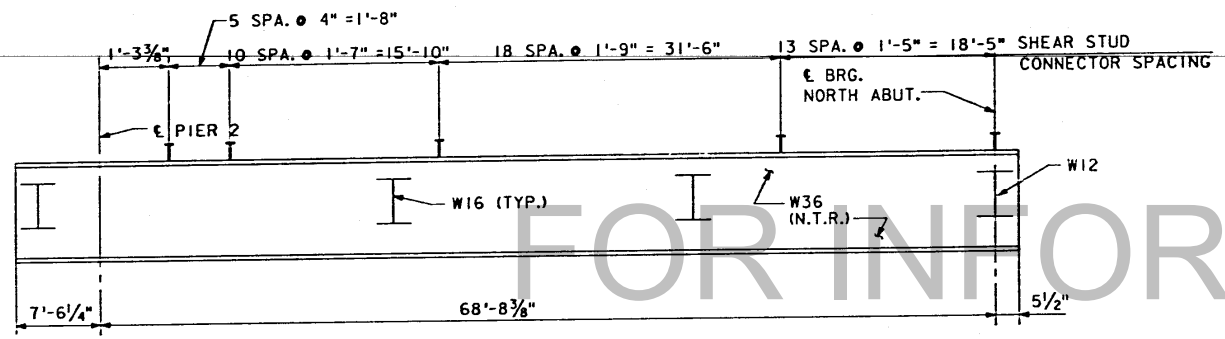
K. PATEL DESIGNED
S. KNEIP CHECKED
J. CORLEY DRAWN
K. PATEL CHECKED

ROUTE NO.	SECTION	COUNTY	POST MILES	SHEET NO.
F.A.I. 70		ST. CLAIR	320	210
PROJECT				

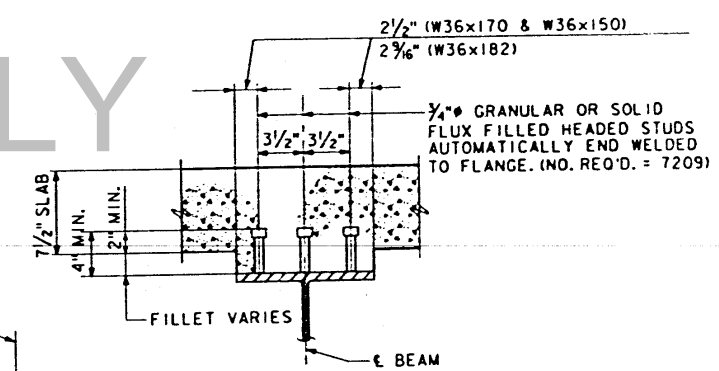
*82-3HVB-2R-1



FRAMING PLAN



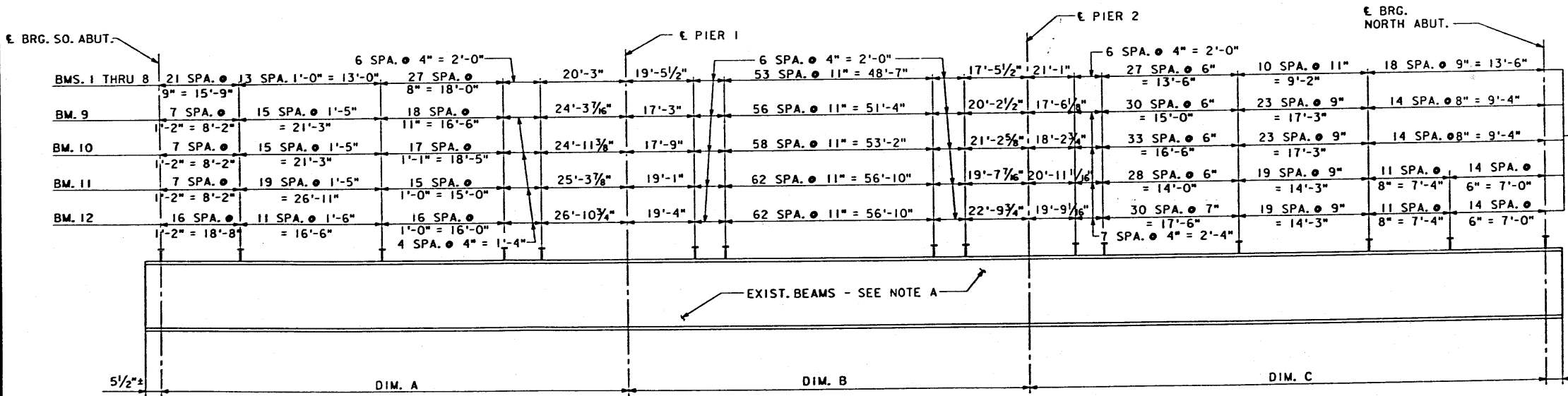
ELEVATION (BM. NO. 13)
N.T.R. = NOTCH TOUGHNESS REQUIREMENT



SECTION A-A

NOTES

SEE SHEET 14 FOR BEARING DETAILS.
NOTCH TOUGHNESS REQUIREMENTS ARE REQUIRED FOR WIDE FLANGE BEAM (W36 X 182).
SEE GENERAL NOTES FOR DIMENSIONS RELATED TO EXISTING STRUCTURES.
FURNISHING OF STRUCTURAL STEEL IS NOT PART OF THIS CONTRACT UNLESS OTHERWISE NOTED.
FIELD DRILLING, FIELD WELDING AND ERECTION OF STRUCTURAL STEEL, FURNISHING AND INSTALLATION OF SHEAR STUDS ARE PART OF THIS CONTRACT. SEE SHOP DRAWINGS AND SPECIAL PROVISIONS.



ELEVATION (EXIST. BMS. 1 THRU 12)

	DIM. A	DIM. B	DIM. C
BMS. 1 THRU 8	69'-0"±	89'-6"±	59'-3"±
BM. 9	71'-6 3/8"±	92'-9 1/2"±	61'-5 1/8"±
BM. 10	74'-1 3/8"±	96'-1 3/8"±	63'-7 3/8"±
BM. 11	76'-8 3/8"±	99'-6 3/8"±	65'-10 3/8"±
BM. 12	79'-4 3/8"±	102'-11 3/8"±	68'-2 3/8"±

NOTE A: BEAMS 1 THRU 8 - W36x170
BEAMS 9 THRU 12 FROM SO. ABUT. TO SPLICE #1 - W36x150
BEAMS 9 THRU 12 FROM SPLICE #1 TO NO. ABUT. - W36x182

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
FRAMING PLAN AND DETAILS

STRUCTURE NO. 082-0206

STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

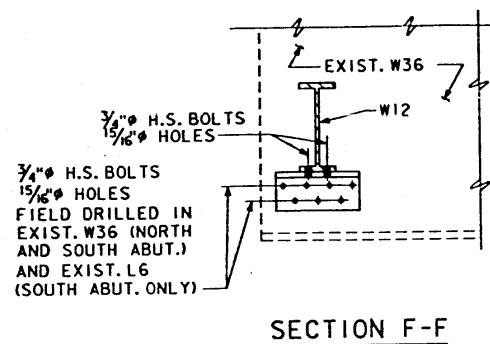
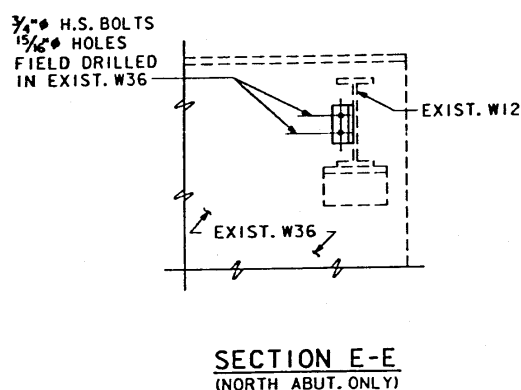
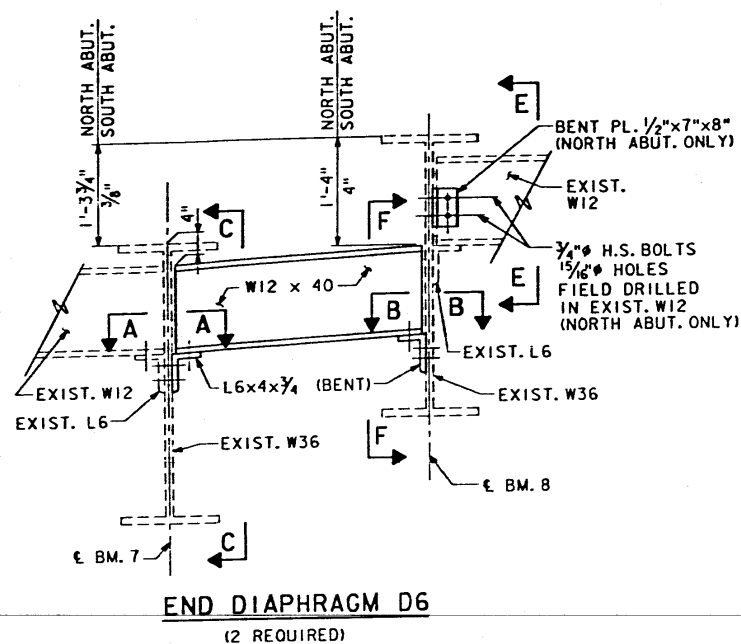
PREPARED BY:
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ST. LOUIS, MISSOURI

REV. 8/26/88

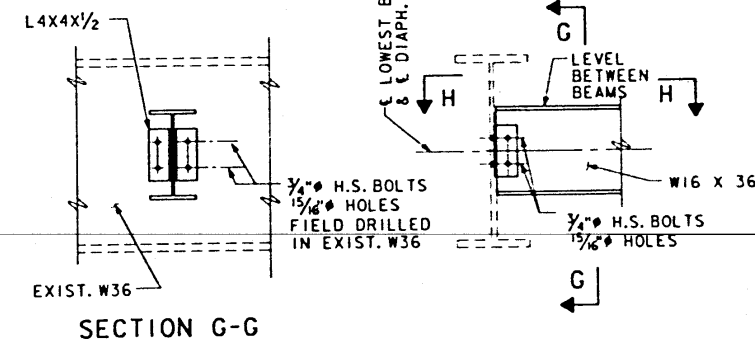
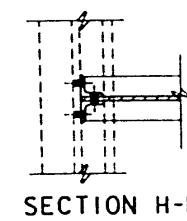
SHEET NO. 12 OF 26

10320 FILE: ZF31101.DETSOE.DGN
8/25/87 PRF:DETSDO
LEVELS PLOTTED DATE: OCT. 14, 1987
35 56 58

K. PATEL	DESIGNED
S. KNEIP	CHECKED
J. CORLEY	CHECKED
K. PATEL	CHECKED



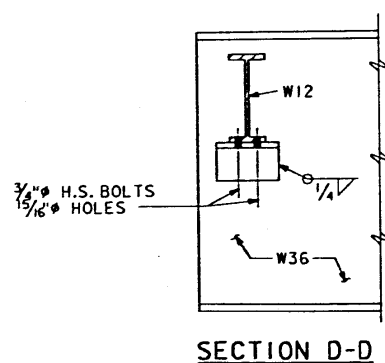
LENGTH OF DIAPHRAGMS (CENTER TO CENTER OF BEAMS)		
MARK	LENGTH	NO. REQUIRED
D1	3'-6"	1
D2	1'-8 1/2"	1
D3	1'-7 1/2"	1
D4	1'-5 1/2"	1
D5	1'-5 1/2"	1
D6	±4'-2 1/4"	2
D7	±2'-6"	9



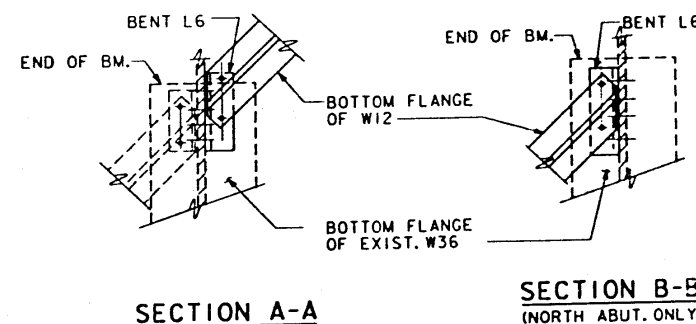
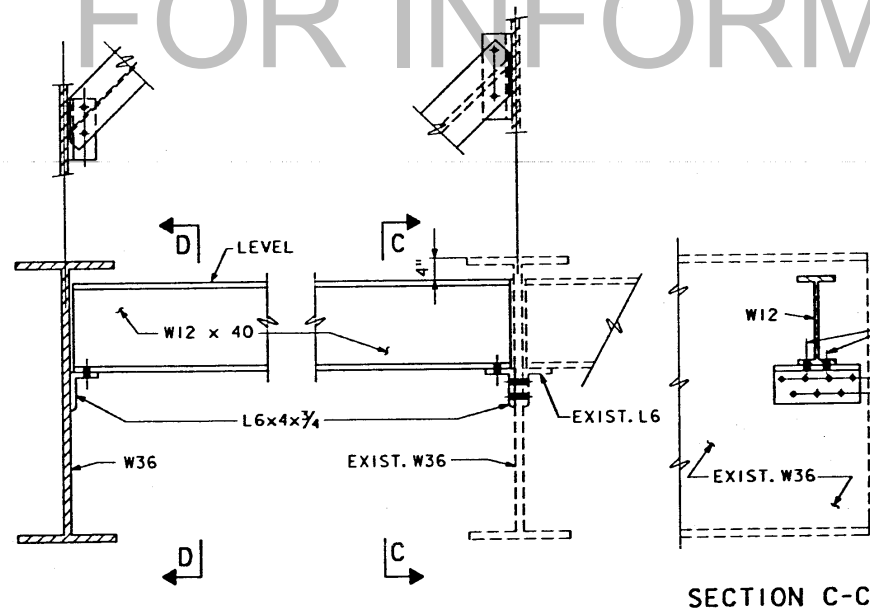
FOR INFORMATION ONLY

NEW INTERMEDIATE DIAPHRAGM
D2 THRU D5 & D7
(13 REQUIRED)

NOTE: HARDENED WASHERS SHALL BE REQUIRED OVER ALL 1 5/16" HOLES IN DIAPHRAGM CONNECTIONS.



END DIAPHRAGM D1
(1 REQUIRED)



NOTES

FURNISHING OF STRUCTURAL STEEL IS NOT PART OF THIS CONTRACT, UNLESS OTHERWISE NOTED. FIELD DRILLING, FIELD WELDING AND ERECTION OF STRUCTURAL STEEL ARE PART OF THIS CONTRACT. SEE SHOP DRAWINGS AND SPECIAL PROVISIONS.

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
DIAPHRAGM DETAILS

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REV. 8/26/88
REV. 2/26/88

SHEET NO. 13 OF 26

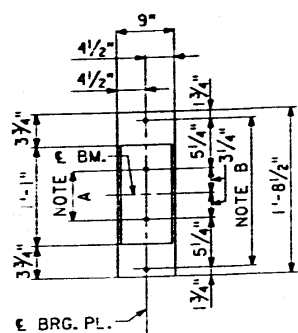
10320 FILE: ZF3C110, DETS1R.DGN DATE: JUNE 23, 1987
875362 PRF: DETS1R LEVELS PLOTTED 35 56 58 63

K. PATEL	DESIGNED
S. KNEIP	CHECKED
E. WELZ	CHECKED
K. PATEL	DRAWN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE	SECTION	COUNTY	NO.	SHEET
F.A.I. 70		ST. CLAIR	320	212

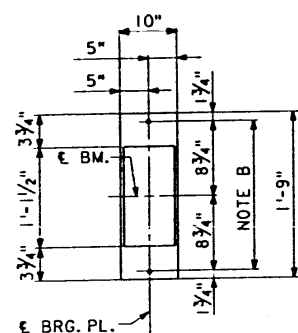
*82-3HVB-2R-1



NOTE A

1 1/4" ϕ PINTLES - 1 7/8" LONG IN BOTTOM R-THREAD OR PRESS FIT

PLAN - BOTTOM PLATE
AT ABUTMENT



NOTE B

1 1/2" ϕ HOLES FOR 1" ϕ ANCHOR BOLTS.
5/16" x 2 1/2" x 2 1/2" PL. WASHERS UNDER NUT.

PLAN - BOTTOM PLATE
AT PIER 2

INTERIOR BEAM REACTION TABLE

	SO. ABUT.	PIER 1	PIER 2	NO. ABUT.
--	-----------	--------	--------	-----------

BEAMS NO.2 THRU 6				
R D (K)	26.0	93.6	86.8	20.8
R L (K)	35.7	49.5	47.7	34.6
IMP. (K)	9.2	8.8	8.7	9.4
R TOTAL (K)	70.9	151.9	143.2	64.8

BEAM NO. 11				
R D (K)	18.8	89.7	110.2	30.7
R L (K)	19.3	43.7	61.3	50.7
IMP. (K)	4.8	7.3	10.6	13.3
R TOTAL (K)	42.9	140.7	182.1	94.7

BEAM NO. 13				
R D (K)			30.7	27.6
R L (K)			23.4	20.7
IMP. (K)			5.8	5.4
R TOTAL (K)			59.9	53.7

NOTE: FURNISHING OF BEARING ASSEMBLIES IS NOT PART OF THIS CONTRACT. INSTALLATION AND SETTING OF BEARING ASSEMBLIES IS PART OF THIS CONTRACT, SEE SHOP DRAWINGS AND SPECIAL PROVISIONS.

INTERIOR BEAM MOMENT TABLE

	0.4 SP.1	PIER 1	0.5 SP.2	PIER 2	0.6 SP.3
--	----------	--------	----------	--------	----------

BEAMS NO.2 THRU 6					
IS (IN ⁴)	10470	14642	10470	14166	10470
IC (IN ⁴)	24199		24199		24199
SS (IN ³)	579	785	579	762	579
SC (IN ³)	796		796		796
D (K/')	0.80	1.08	0.80	1.08	0.80
M D (K)	238	682	290	595	153
fs-non-comp (KSI)	5.0	10.5	6.0	9.4	3.2
S D (K/')	0.24		0.24		0.24
MSD (K)	84		115		54
M L (K)	481	346	546	321	393
M IMP (K)	124	85	127	81	107
TOTAL (K)	689	431	788	402	554
fs-comp (KSI)	10.4	6.6	11.9	6.4	8.4
fs TOTAL (KSI)	15.4	17.1	17.9	15.8	11.6
VR (K)	49.5				49.7

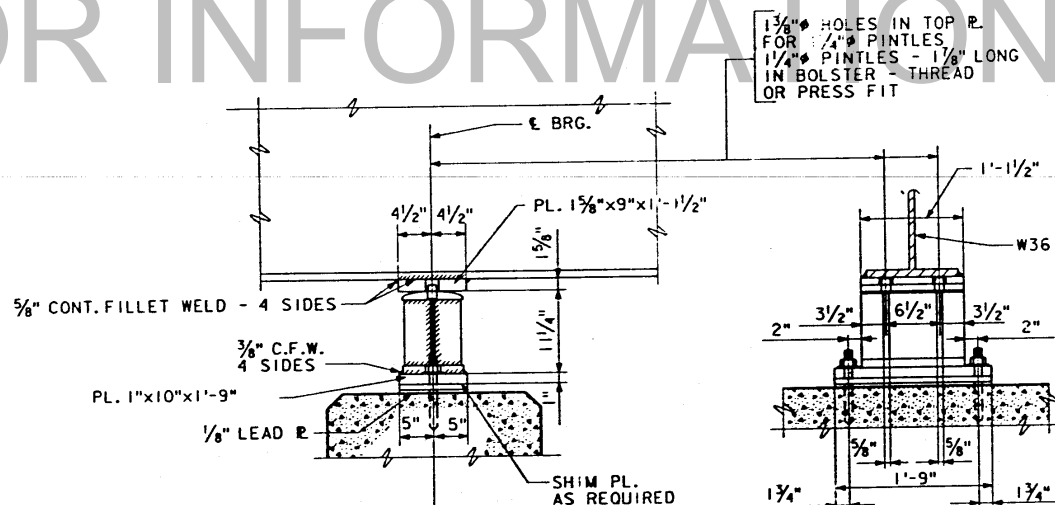
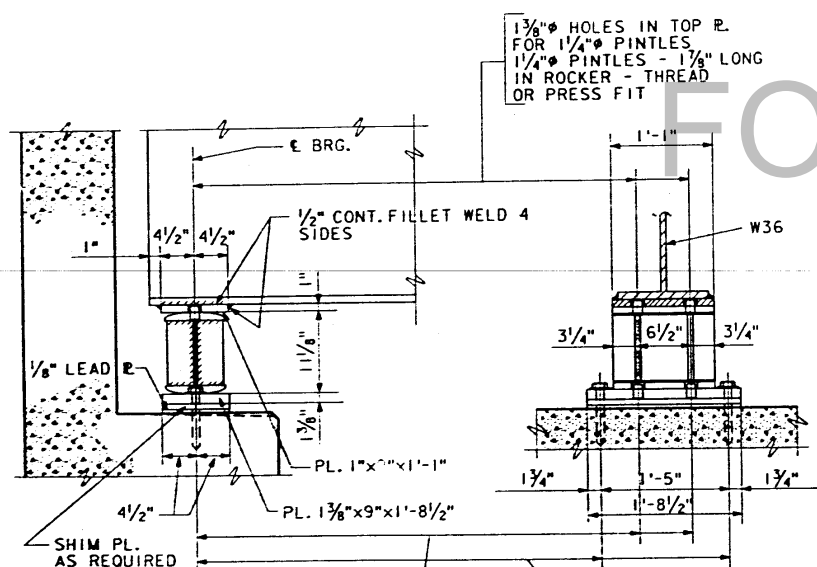
BEAM 11					
IS (IN ⁴)	9012	15500	11281	16460	11281
IC (IN ⁴)	19485		25635		26628
SS (IN ³)	502	824	621	873	621
SC (IN ³)	680		850		860
D (K/')	0.57	0.95	0.81	1.24	1.01
M D (K)	182	727	374	840	255
fs-non-comp (KSI)	4.4	10.6	7.2	11.6	5.0
S D (K/')	0.18		0.24		0.29
MSD (K)	71		143		87
M L (K)	361	345	633	464	598
M IMP (K)	90	81	141	112	157
TOTAL (K)	522	426	917	576	842
fs-comp (KSI)	9.3	6.2	13.0	8.0	11.8
fs TOTAL (KSI)	13.7	16.8	20.2	19.6	16.8
VR (K)	33.5				66.5

BEAM 13				
			PIER 2	0.5 SPAN
IS (IN ⁴)			11300	11300
IC (IN ⁴)				19278
SS (IN ³)			623	623
SC (IN ³)				774
D (K/')			0.65	0.63
M D (K)			21	364
fs-non-comp (KSI)			0.5	7.0
S D (K/')				0.15
MSD (K)				85
M L (K)			95	319
M IMP (K)			29	82
TOTAL (K)			124	486
fs-comp (KSI)			2.4	7.6
fs TOTAL (KSI)			2.9	14.6
VR (K)				36.2

IS AND S_S ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING f_s TOTAL.
IC AND SC ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING f_s TOTAL.
VR IS THE MAXIMUM ℓ + IMPACT SHEAR RANGE IN SPAN.

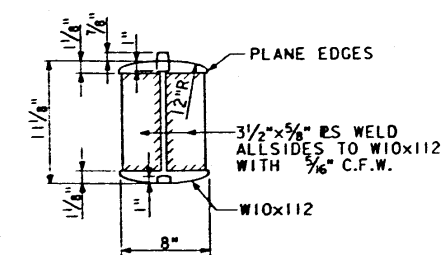
NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- A) D* (SIDE OF BRG. AWAY FROM FIXED BRG.)
D* = 1/8" PER EACH 100' OF EXPANSION FOR EVERY 15' FALL BELOW THE NORMAL TEMP. OF 50° F.
D** (SIDE OF BRG. TOWARD FIXED BRG.)
D** = 1/8" PER EACH 100' OF EXPANSION FOR EVERY 15' RISE ABOVE THE NORMAL TEMP. OF 50° F.
- B) AFTER BEAMS HAVE BEEN ERECTED AND DIMENSIONS D* OR D** DETERMINED, HOLES SHALL BE DRILLED AND ANCHOR BOLTS SHALL BE INSTALLED AS SHOWN ON SHEET 23. ALL FIXED ANCHOR BOLTS MAY BE BUILT INTO THE MASONRY.

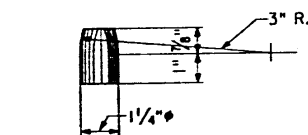


ABUT. EXP. BRG.
(FOR BM. 13 AT NO. ABUT. - 1 REQUIRED)

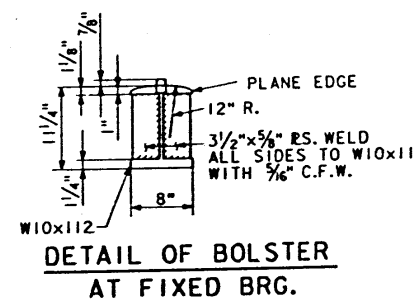
FIXED BRG. (PIER 2)
(FOR BM. 13 - 1 REQUIRED)



DETAIL OF ROCKER
AT EXPANSION BEARING



PINTLE DETAIL



DETAIL OF BOLSTER
AT FIXED BRG.

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REV. 8/26/88
REV. 8/3/87

SHEET NO. 14 OF 26

10320
87-572
LEVELS PLOTTED
DATE: OCT. 14, 1987
35 56 58

K. PATEL DESIGNED
S. KNEIP CHECKED
J. CORLEY DRAWN
K. PATEL CHECKED

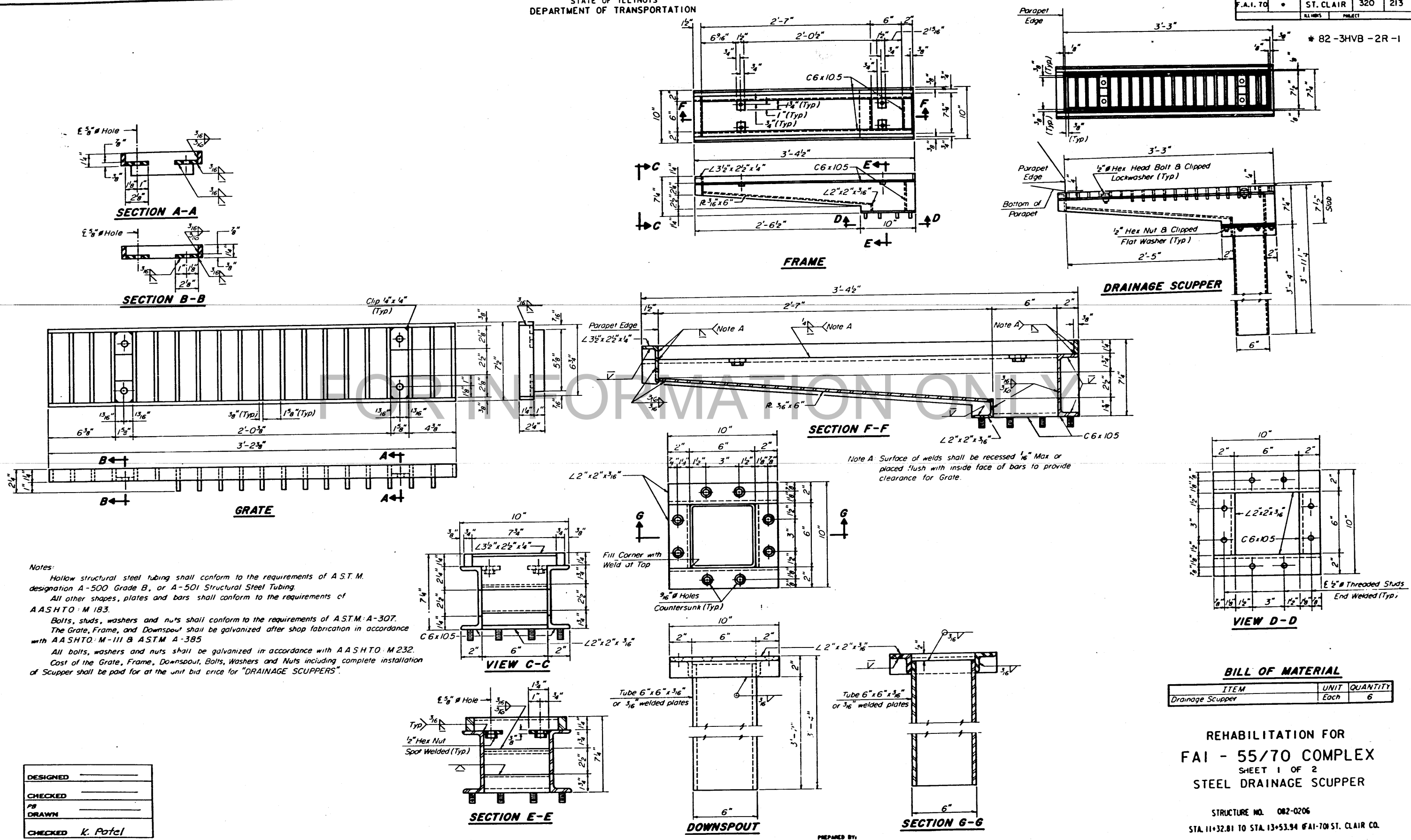
REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
STEEL DETAILS

STRUCTURE NO. 082-0206

STA.11+32.81 TO STA.13+53.94 (FAI-70) ST. CLAIR CO.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
F.A.I. 70		ST. CLAIR	320	213
PROJECT		* 82-3HVB-2R-1		



Notes:
 Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B, or A-501 Structural Steel Tubing.
 All other shapes, plates and bars shall conform to the requirements of AASHTO: M 183.
 Bolts, studs and nuts shall conform to the requirements of A.S.T.M.: A-307.
 The Grate, Frame, and Downspout shall be galvanized after shop fabrication in accordance with AASHTO: M-111 & ASTM A-385
 All bolts, washers and nuts shall be galvanized in accordance with AASHTO: M 232.
 Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".

DESIGNED	_____
CHECKED	_____
FR	_____
DRAWN	_____
CHECKED	K. Patel

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	6

REHABILITATION FOR
FAI - 55/70 COMPLEX
 SHEET 1 OF 2
STEEL DRAINAGE SCUPPER

STRUCTURE NO. 082-0206
 STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TYP. SHEET	SHEET NO.
F.A.I. 70	•	ST. CLAIR	320	215
REVISIONS	PROJECT			

82-3HVB-2R-1

Joint Size	"C" at 50°F	"D" at 50°F	Location
2"	2"	1 1/2" Min.	No. 8 So. Abuts.
2 1/2"	2 1/2"	1 3/4" Min.	
4"	3"	2 1/2" Min.	

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B695, class 50. Zinc-coated nuts shall be tapped over steel in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S1.1 thru S1.2.1 of the same specifications for lubricant and test-oil.

INSTALLATION NOTES

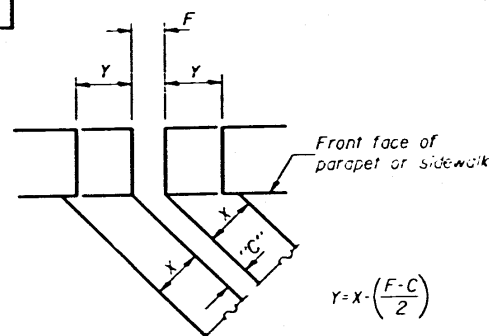
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

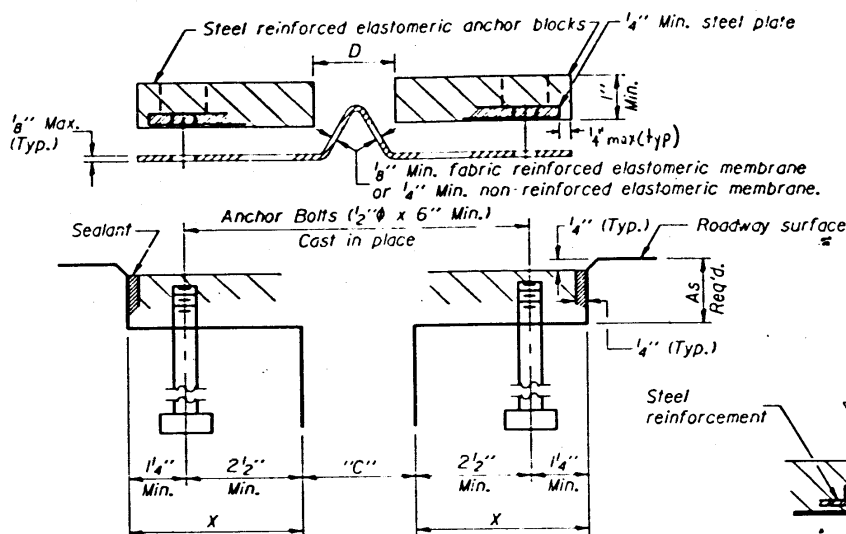
SKREW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

For skews greater than 50° the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D" might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at 12" cts.

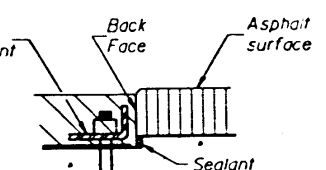


FORMING BLOCKOUT SKETCH



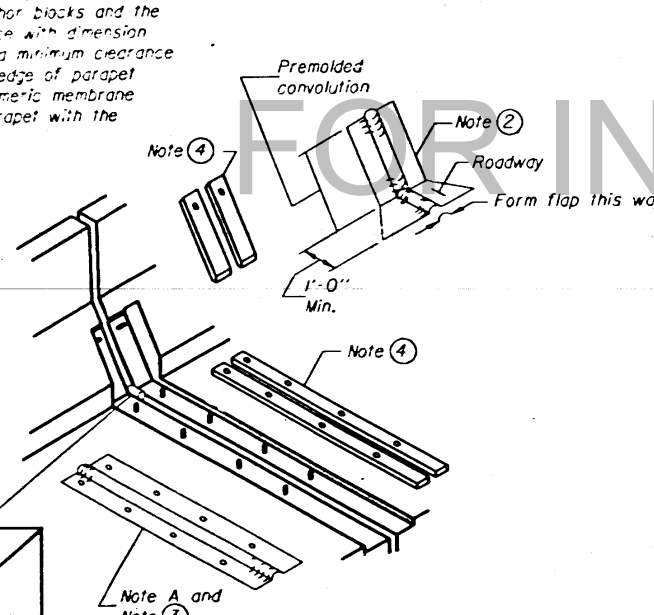
CROSS SECTION

ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

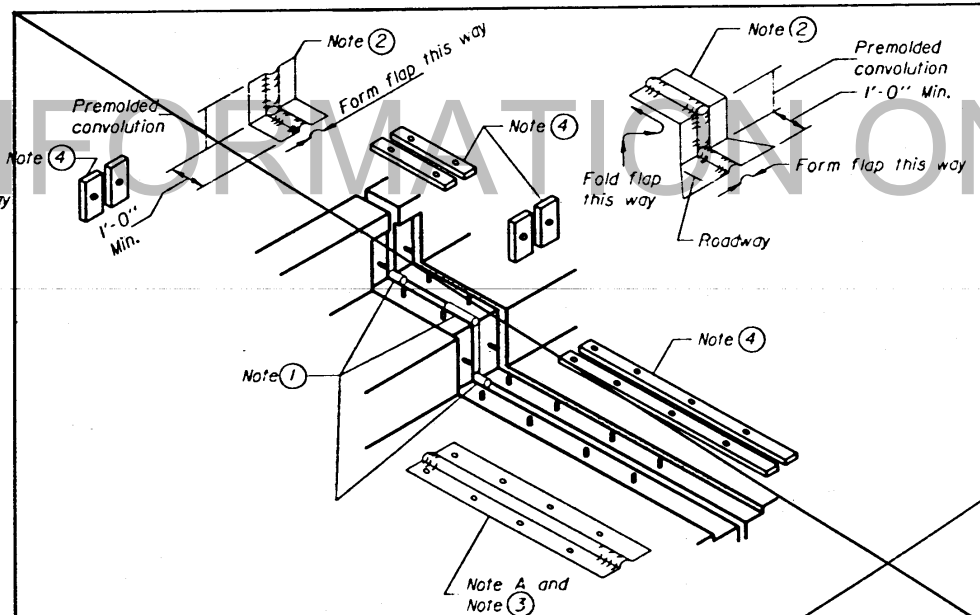


SKREW LIMITATIONS

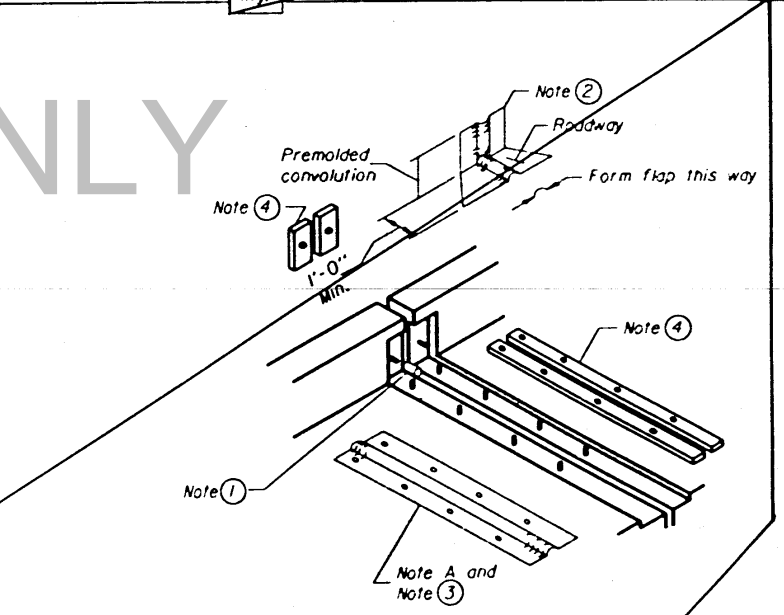
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50° the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D" might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at 12" cts.



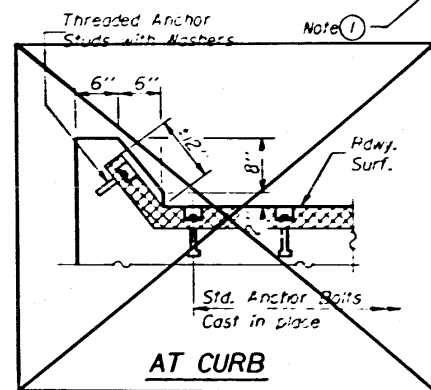
AT PARAPET



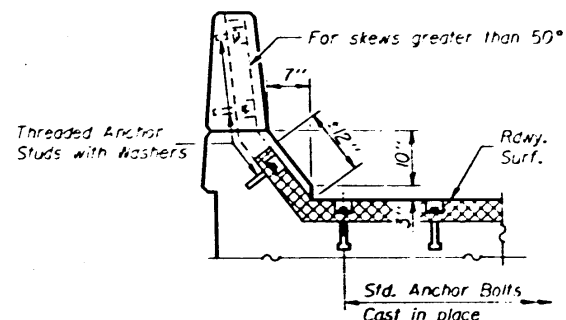
AT SIDEWALK OR MEDIAN



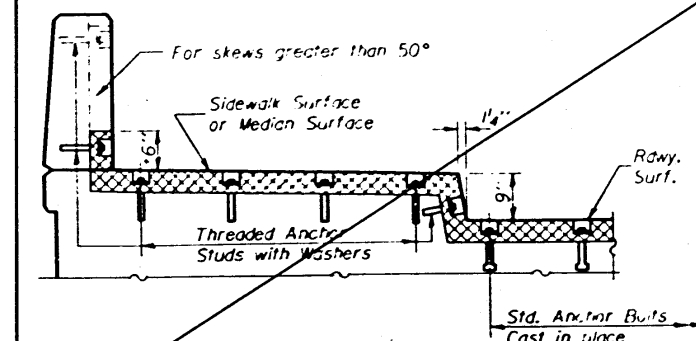
AT WALL



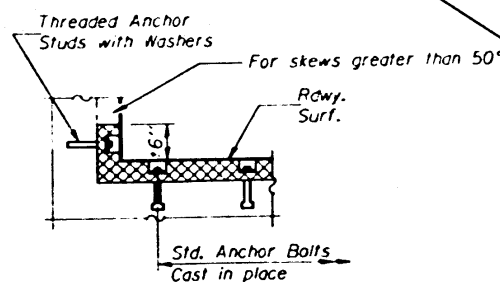
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL

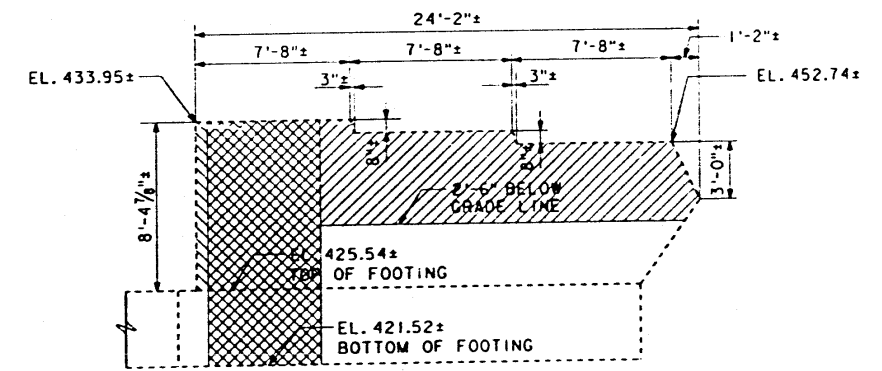
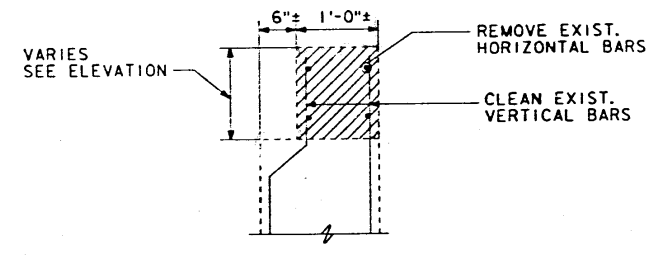
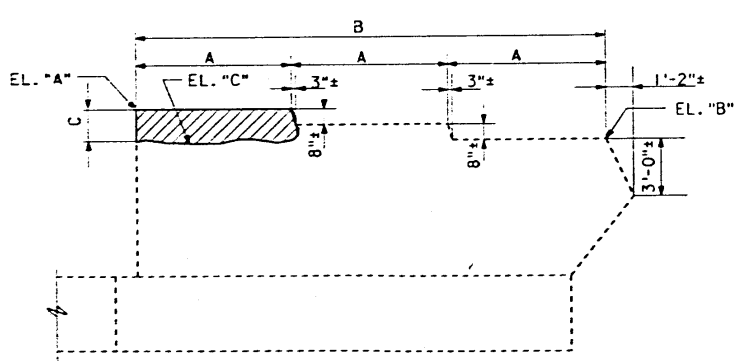
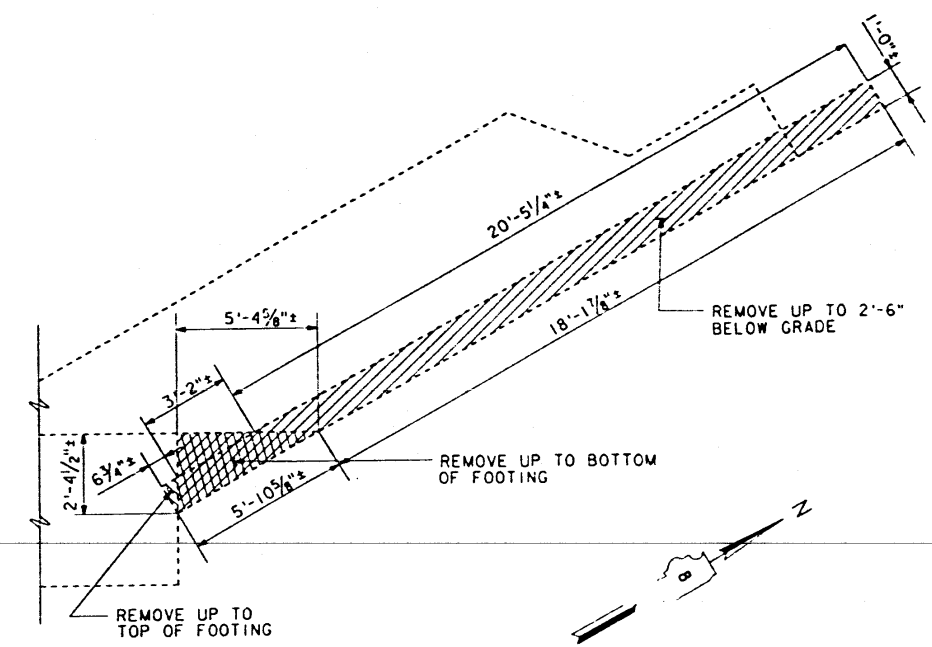
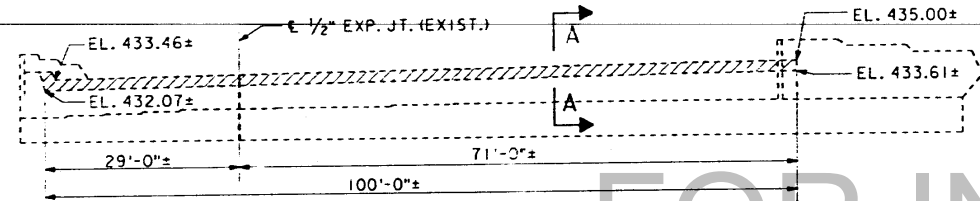
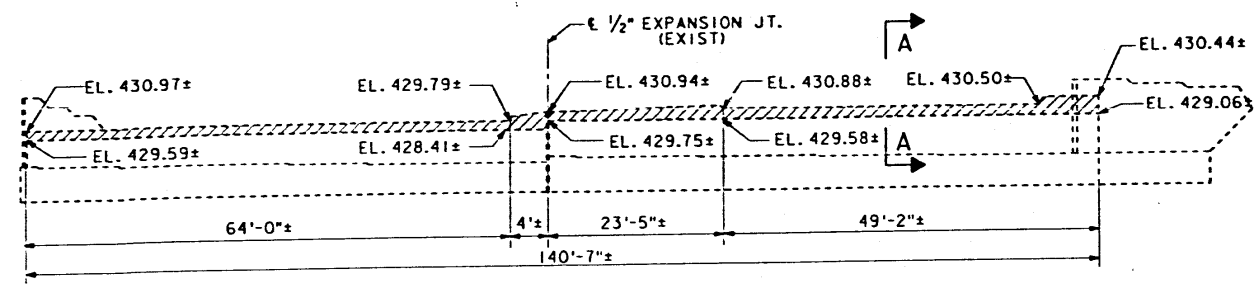
DESIGNED	
CHECKED	
DRAWN	
CHECKED	K. Patel
EJ-CS	12-1-83

REHABILITATION FOR
FAI - 55/70 COMPLEX
CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
FOR 2", 2 1/2" AND 4" MOVEMENT

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

*82-3HVB-2R-1



FOR INFORMATION ONLY

DESCRIPTION	EL. "A"	EL. "B"	A	B	EL. "C"	C
W.W. "A"	±436.85	±435.70	3'-8"±	12'-2"±	±436.03	3 3/8"±
W.W. "B"	±438.46	±437.57	8'-8"±	27'-2"±	±437.75	8 1/2"±
W.W. "C"	±434.53	±432.94	3'-8"±	12'-2"±	±433.69	10 1/8"±

10:20 FILE: 2F311101DET160E.DGN
 875577 PRF, DET160E
 LEVELS PLOTTED DATE: OCT. 14, 1987
 35 56 63

DESIGNED	K. PATEL
CHECKED	S. KNEIP
DRAWN	E. WELZ
CHECKED	K. PATEL

PREPARED BY:
SVDRUP CORPORATION
ST. LOUIS, MISSOURI

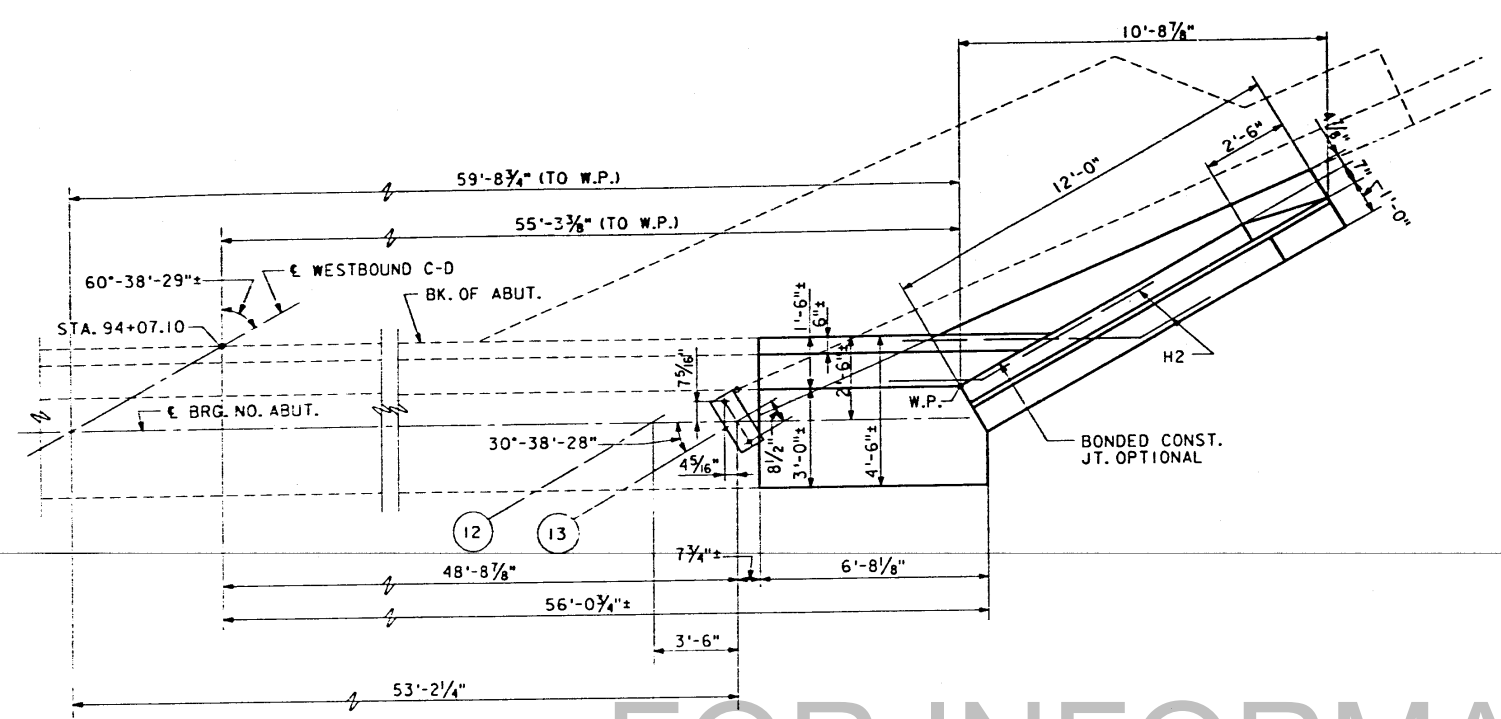
REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
CONCRETE REMOVAL

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

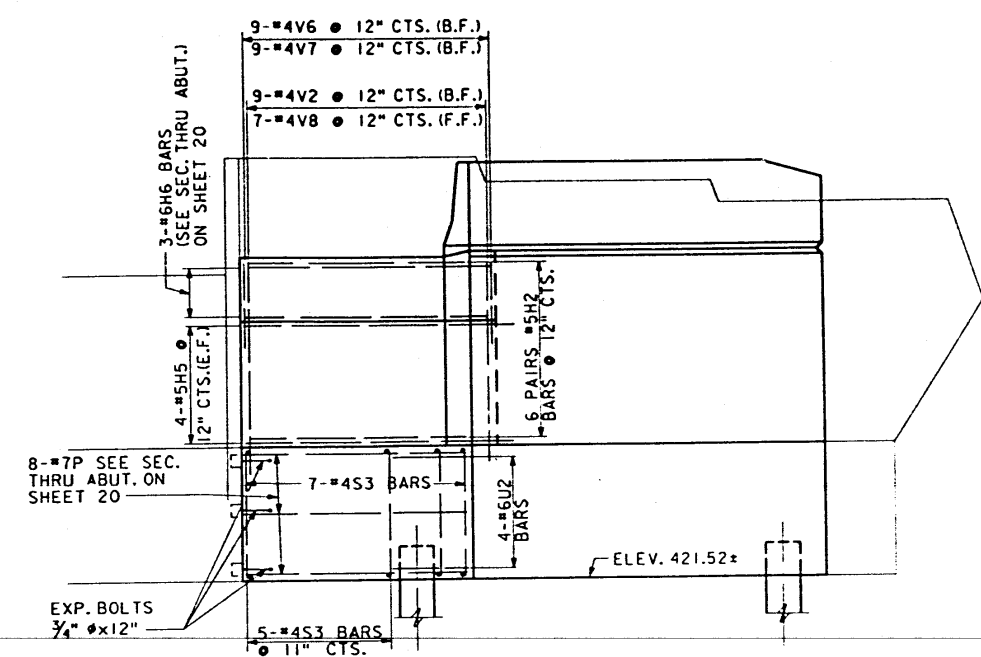
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	PROJECT	SHEET NO.
F.A.I. 70		ST. CLAIR	320	217
		ILLINOIS	PROJECT	

*82-3HVB-2R-1

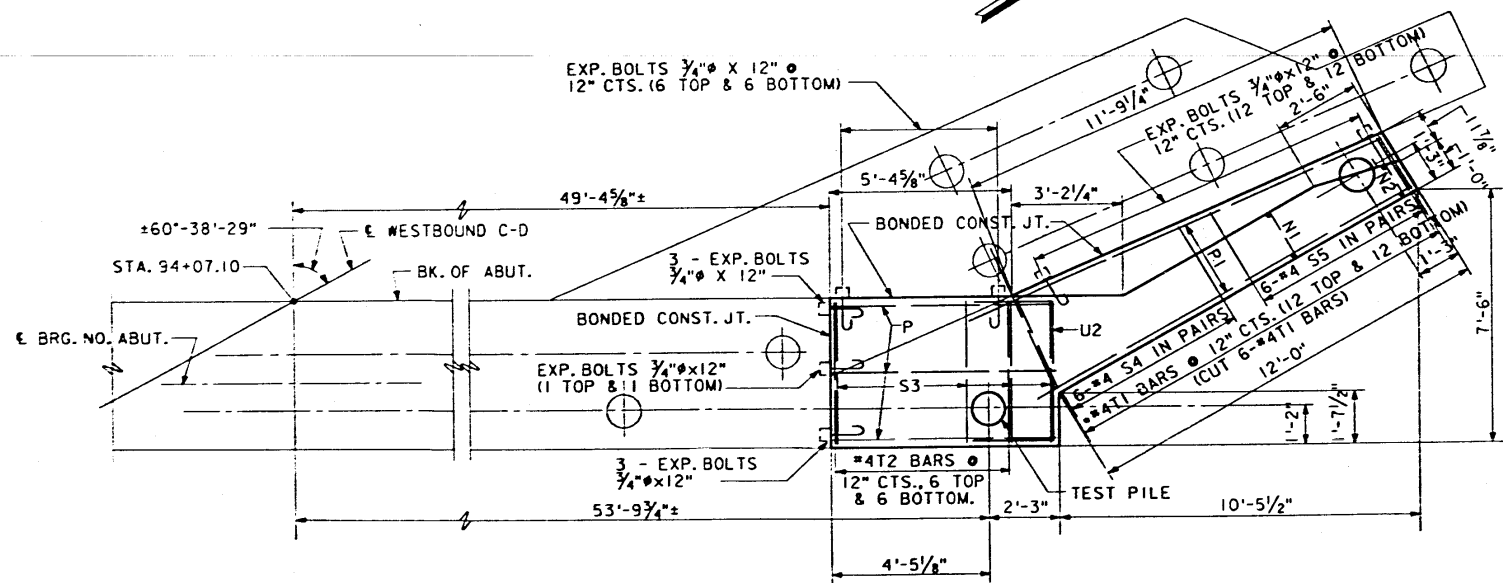


TOP PLAN



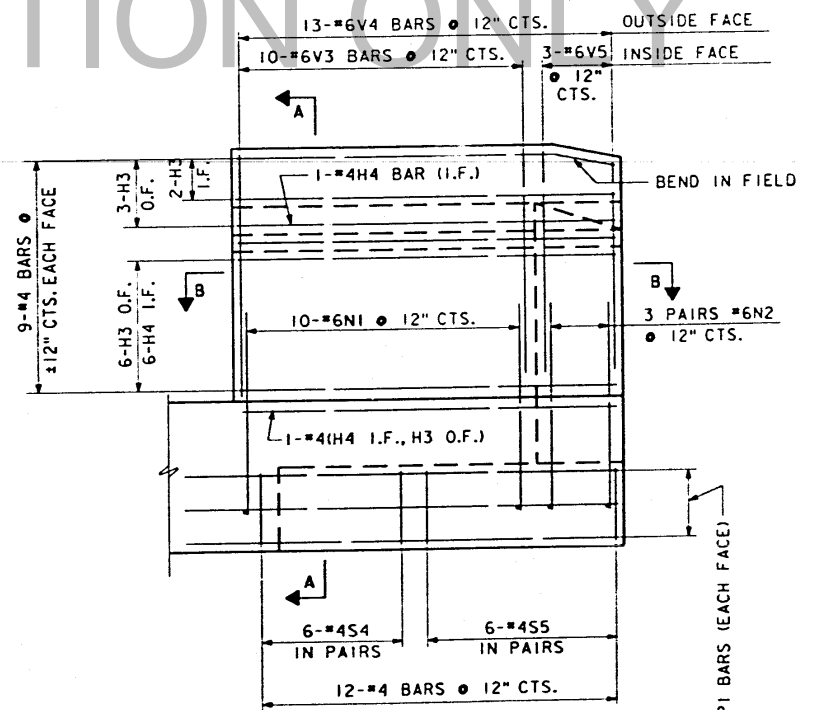
ELEVATION
(LOOKING WEST)

FOR INFORMATION ONLY



PLAN - PILE CAP

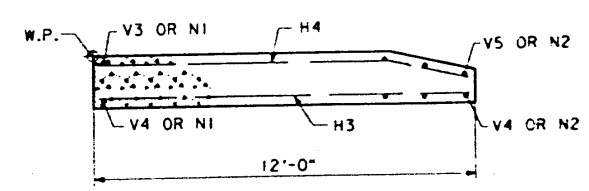
• FIELD CUTTING DIAGRAM - SEE SHEET 20



WINGWALL ELEVATION
(REINFORCEMENT)

PILE DATA

TYPE: CONCRETE PILE
CAPACITY: 35 TONS
ESTIMATED LENGTH: 32 FT.
NO. REQUIRED: 1 **
TEST PILES: 1
** DOES NOT INCLUDE TEST PILE



SECTION B-B

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
NORTH ABUTMENT - MODIFICATIONS

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

10320 FILE: 2F311013DET161E.DGN
8/25/87 PRF: DET161E
LEVELS PLOTTED DATE: OCT. 14, 1987
35 56 57 58 63

DESIGNED	K. PATEL
CHECKED	S. KNEIP
CHECKED	D. FRIERDICH
CHECKED	K. PATEL

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

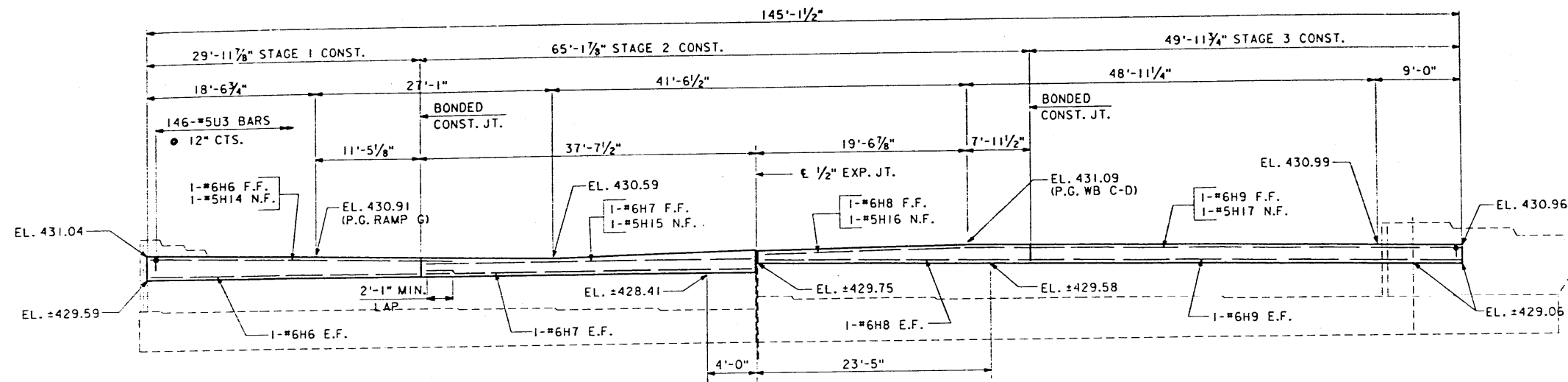
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	POST MILE	SHEET NO.
F.A.I. 70		ST. CLAIR	320	219
PROJECT				

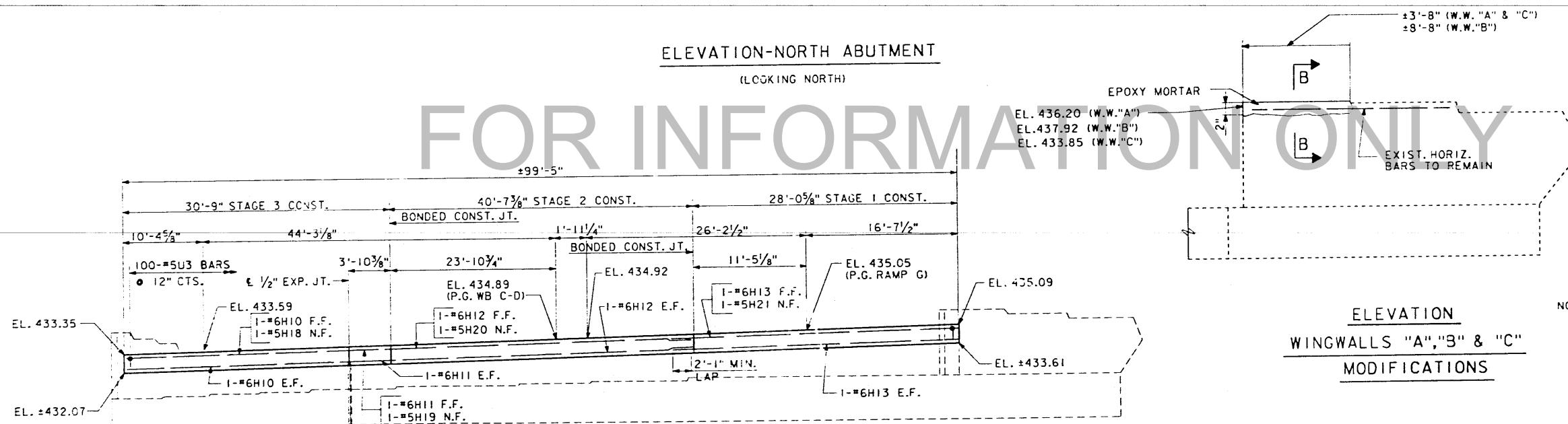
*82-3HVB-2R-1

BILL OF MATERIAL

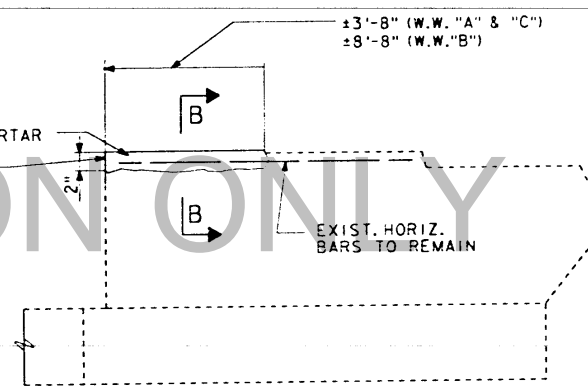
NORTH AND SOUTH ABUTMENTS				
BAR	NO.	SIZE	LENGTH	SHAPE
H6	3	#6	31'-11"	---
H7	3	#6	37'-4"	---
H8	3	#6	27'-5"	---
H9	3	#6	49'-10"	---
H10	3	#6	26'-7"	---
H11	3	#6	3'-8"	---
H12	3	#6	40'-6"	---
H13	3	#6	30'-0"	---
H14	1	#5	31'-11"	---
H15	1	#5	37'-4"	---
H16	1	#5	27'-5"	---
H17	1	#5	49'-10"	---
H18	1	#5	26'-7"	---
H19	1	#5	3'-8"	---
H20	1	#5	40'-6"	---
H21	1	#5	30'-0"	---
U3	246	#5	1'-11"	---
REINFORCEMENT BARS		LBS.	1,870	



ELEVATION-NORTH ABUTMENT
(LOOKING NORTH)

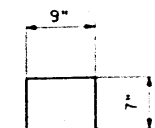


ELEVATION-SOUTH ABUTMENT
(LOOKING SOUTH)



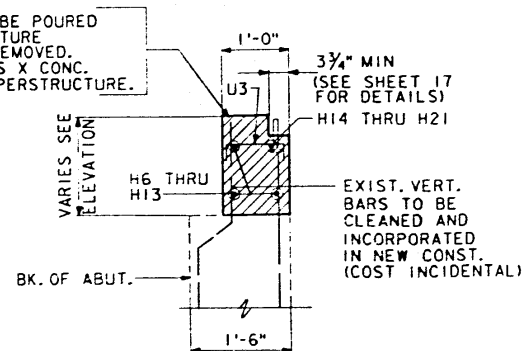
ELEVATION
WINGWALLS "A", "B" & "C"
MODIFICATIONS

NOTE: FOR CONCRETE REMOVAL.
SEE SHEET 18.

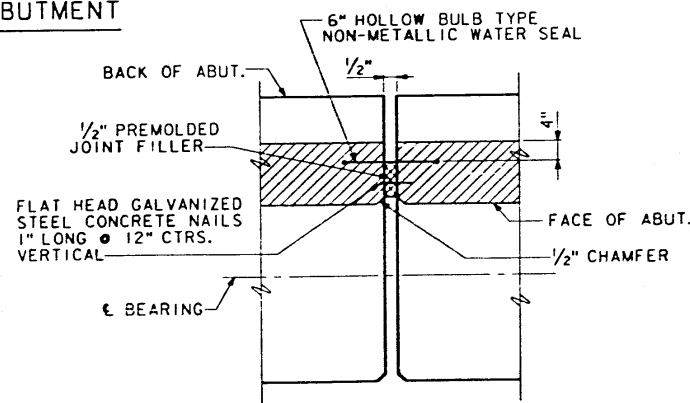


BAR U3

HATCHED AREA TO BE POURED AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS X CONC. INCLUDED WITH SUPERSTRUCTURE.

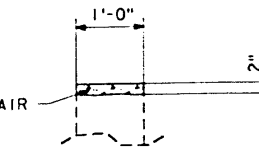


SECTION THRU ABUTMENT BACKWALL



PLAN OF EXPANSION JOINT DETAIL
(COST INCIDENTAL TO CLASS X CONCRETE)

EPOXY MORTAR REPAIR (SEE SPECIAL PROVISION)



SECTION B-B

NOTE: REINFORCEMENT NOT TO PASS THRU JOINT

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

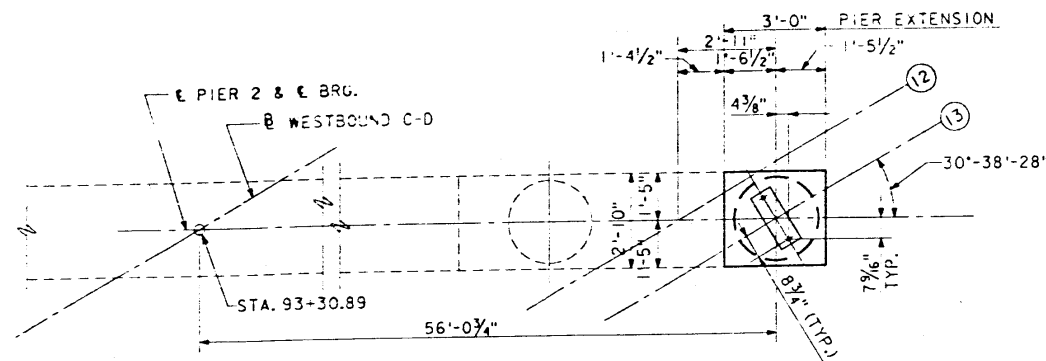
REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
NORTH AND SOUTH ABUTMENT MODIFICATIONS

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

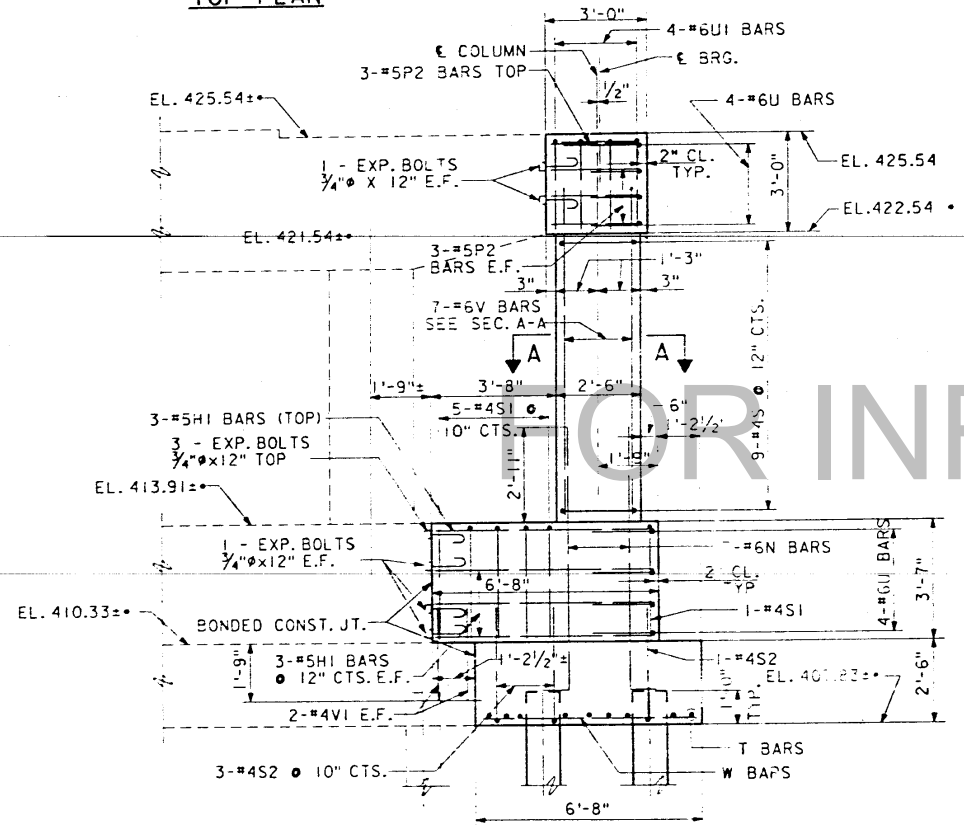
SHEET NO. 21 OF 26

IC320 FILE: ZF31C110.11DET163E.DGN DATE: OCT. 14, 1987 LEVELS PLOTTED 35 56 58 63

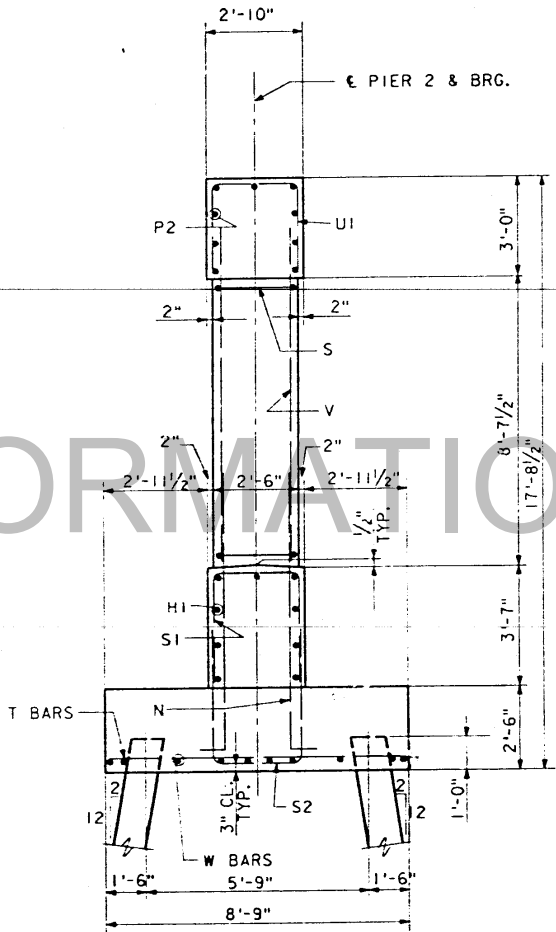
DESIGNED	K. PATEL
CHECKED	S. KNEIP
DRAWN	D. RIEHL
CHECKED	K. PATEL



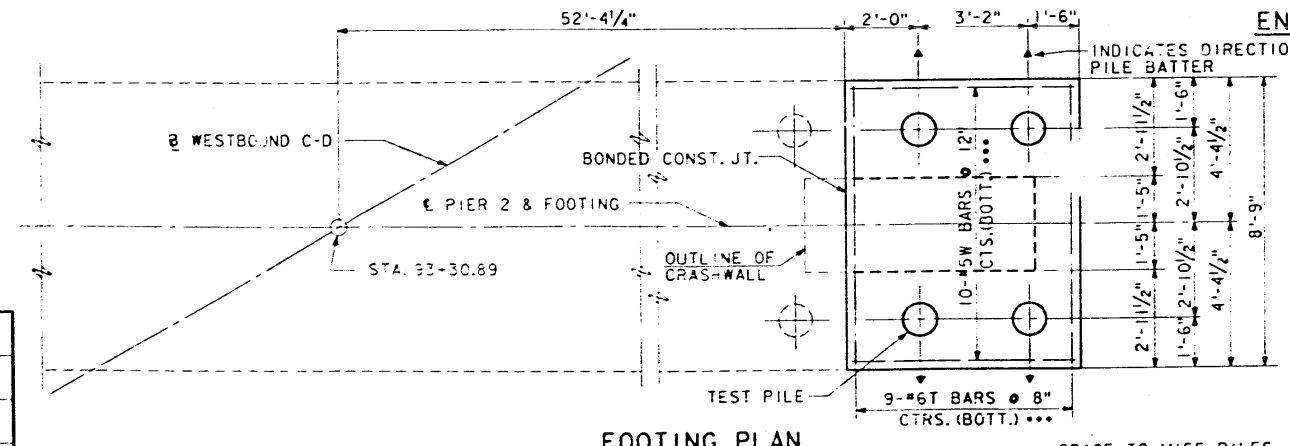
TOP PLAN



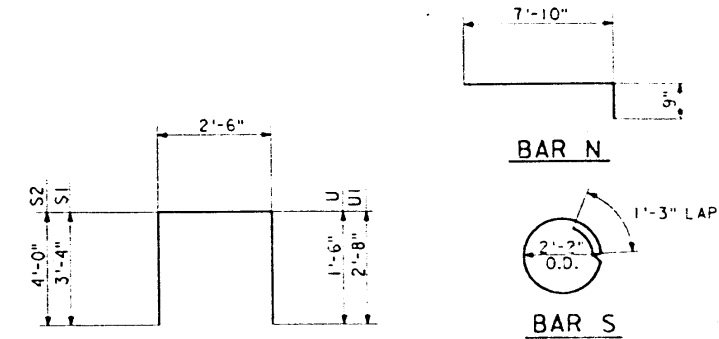
ELEVATION



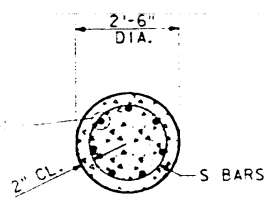
END VIEW



FOOTING PLAN



BARS U, UI, SI & S2



SECTION A-A

BILL OF MATERIAL

PIER NO. 2				
BAR	NO.	SIZE	LENGTH	SHAPE
H1	9	#5	6'-4"	—
N	7	#6	8'-7"	—
P2	9	#5	2'-8"	—
S	3	#4	6'-1"	○
SI	7	#5	3'-2"	—
SP	4	#4	10'-6"	—
U	8	#6	5'-6"	—
UI	7	#6	7'-10"	—
V	7	#6	10'-9"	—
VI	4	#4	3'-6"	—
W	10	#5	6'-4"	—
CLASS X CONCRETE		CU. YDS.	0.5	
REINFORCEMENT BARS		LBS.	710	
EXPANSION BOLTS 3/4" X 12"		EACH	13	
FURNISHING CONCRETE		LIN. FT.	123	
DRIVING CONCRETE PILES		LIN. FT.	23	
TEST PILE CONCRETE		EACH	1	
Structure Excavation		Cu. Yds.	10	

NOTES

SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
ALL EDGES SHALL HAVE 3/4" CHAMFER EXCEPT FOOTING.
FOR ANCHOR BOLTS & BEARING ASSEMBLIES. SEE SHEET 14.
DIMENSIONS BASED ON ELEVATION OF EXISTING FOOTING TAKEN FROM ORIGINAL BRIDGE PLANS.

PILE DATA

TYPE: CONCRETE PILES
CAPACITY: 40 TONS
ESTIMATED LENGTH: 41 FT.
NO. REQUIRED: 3 **
TEST PILES: 1
** DOES NOT INCLUDE TEST PILE

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
PIER NO. 2

STRUCTURE NO. G82-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10330 FILE: ZF3J110, IIDE 1164E, JUN 15 56 57 58 63
 LEVELS PLOTTED DATE: OCT. 14, 1987
 8 '5681 PRF: DET164E

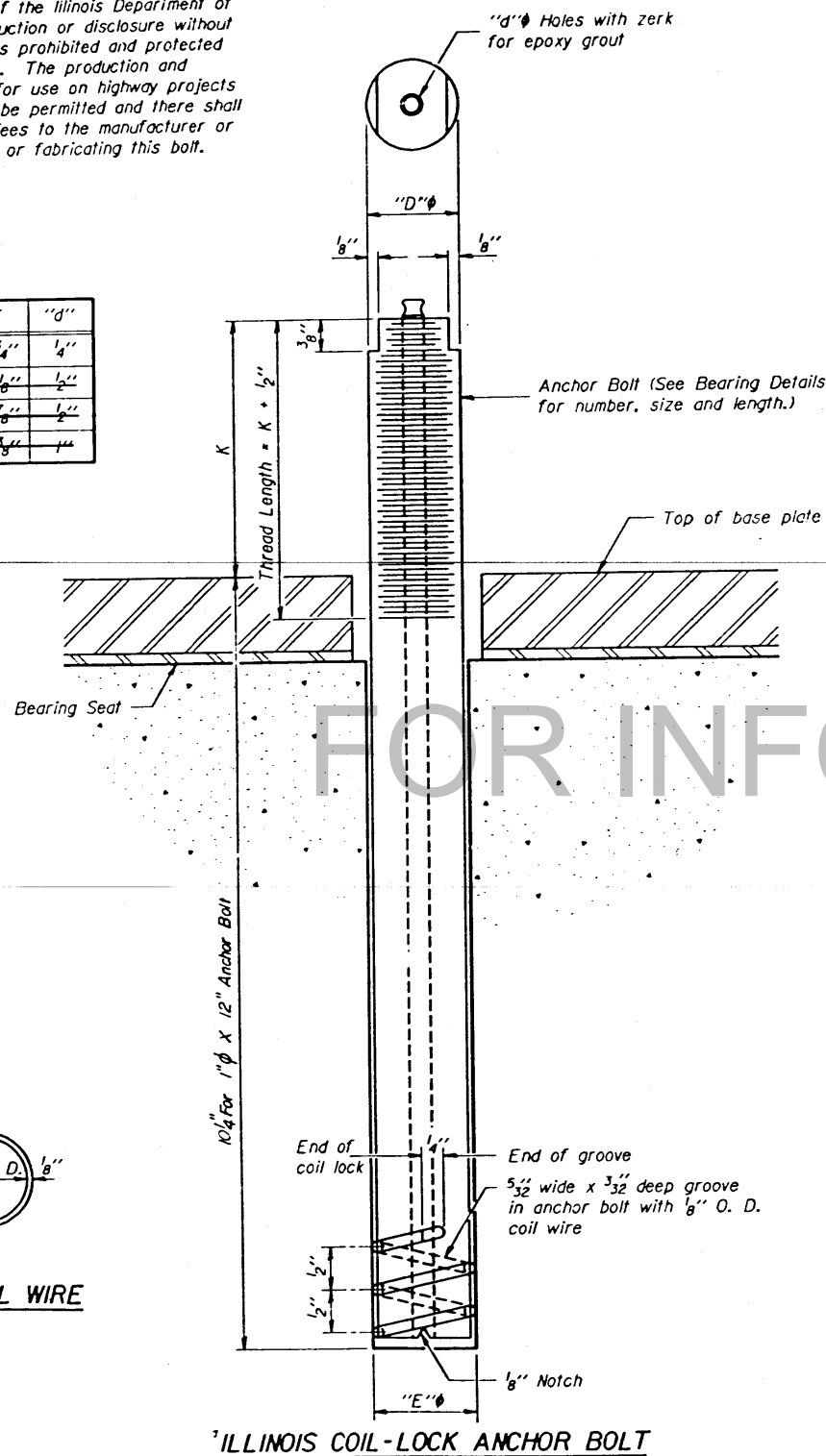
K. PATEL
 DESIGNED
 S. KNEIP
 CHECKED
 J. COPLER
 DRAWN
 K. PATEL
 CHECKED

FOR INFORMATION ONLY

◆ 82-3HVB-2R-1

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	"d"
1"	1 1/8"	1 3/8"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/8"	2 1/8"	1/2"
2"	2 1/8"	1 3/8"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/8"	3 3/8"	1"



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 K26 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 I and of a Class suitable for the temperature at installation.

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.

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.
Installation of the Anchor Bolts shall be included in the unit bid price for "Erecting Structural Steel".
Furnishing of anchor bolts, epoxy grout or capsules, hexagonal nuts and washers is not part of this Contract. See Special Provisions.

Anchor bolts, nuts and washers shall be completely coated by either the hot-dipped process conforming with AASHTO M232 or the mechanical plating method conforming to ASTM B695, Class 50. Zinc coated nuts shall be tapped oversize in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S11 thru S12.1 of the same specifications for lubricant and testing.

PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

DESIGNED	_____
CHECKED	_____
DRAWN	_____
CHECKED	K. Patel

ABB-1 12-1-83

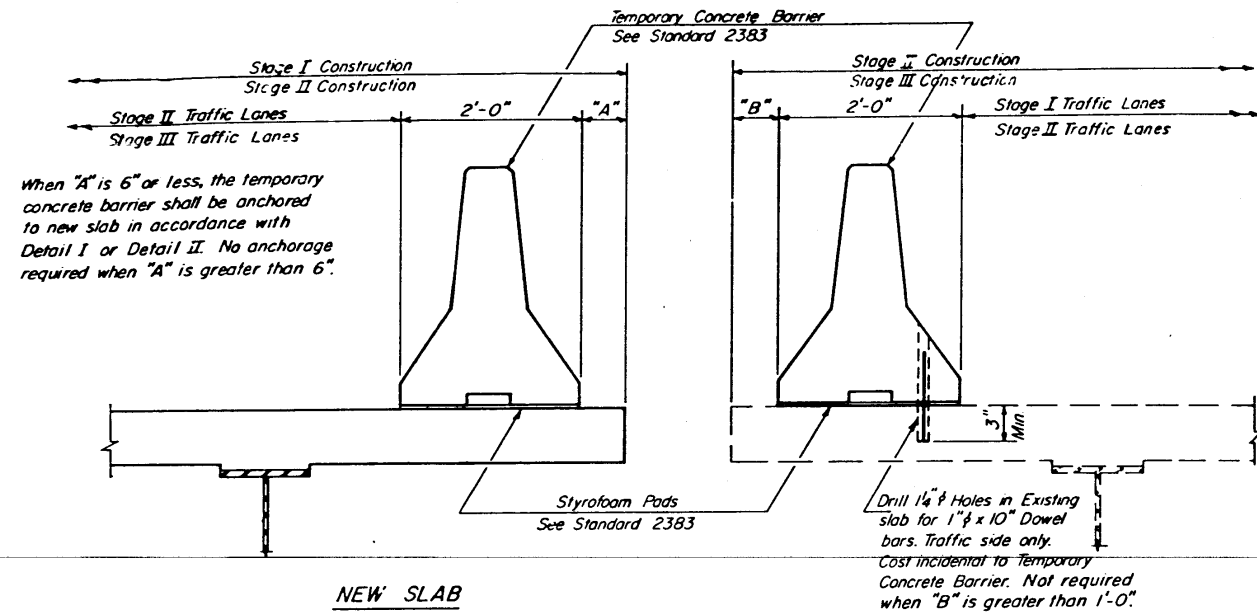
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ANCHOR BOLT DETAILS FOR BEARING

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. TO	*	ST. CLAIR	320	222
		ILLINOIS	PROJECT	

* 82-3HVB-2R-1



NEW SLAB

SECTION THRU SLAB

EXISTING SLAB

NOTES

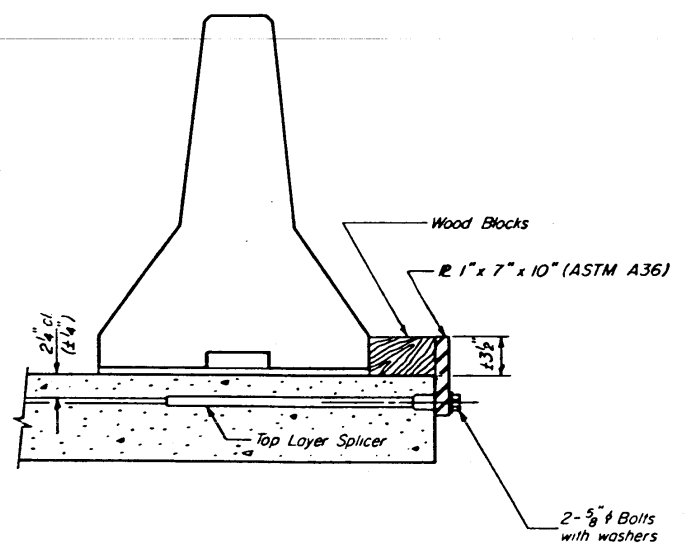
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x 10" steel R to the top layer of couplers with 2-5/8" bolts screwed to coupler at approximate \bar{C} of each 10'-0" barrier panel.

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

Cost of anchorage is incidental to Temporary Concrete Barrier.

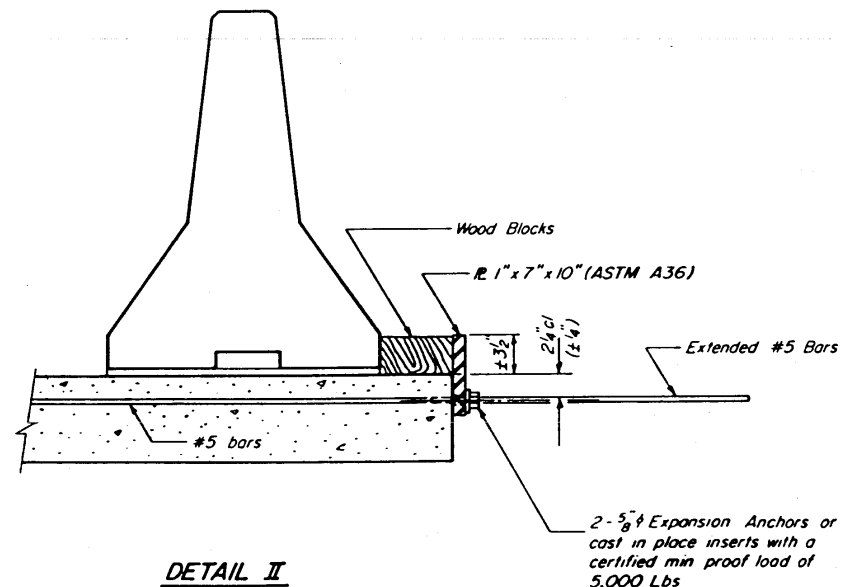
For "Temporary Concrete Barrier" pay item, see Roadway Plans.

FOR INFORMATION ONLY



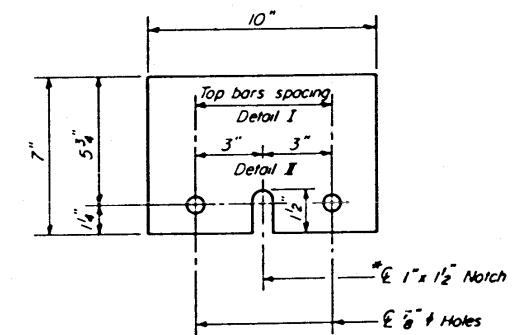
DETAIL I

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	
CHECKED	
DRAWN	
CHECKED	K. Patel

R-27 6-15-83

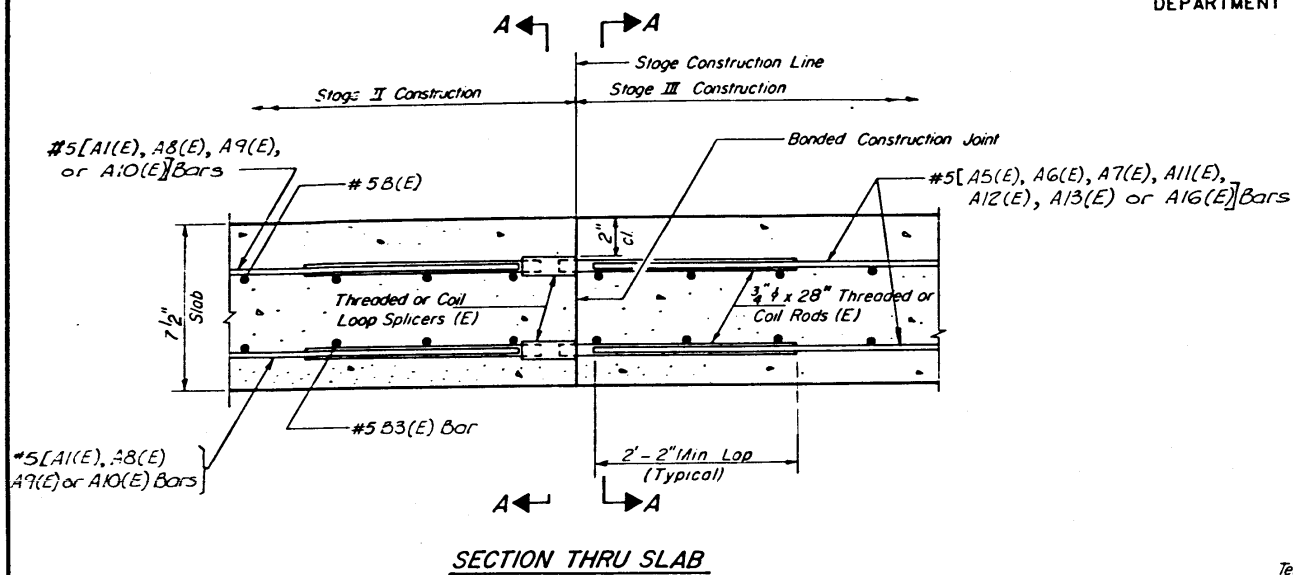
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION

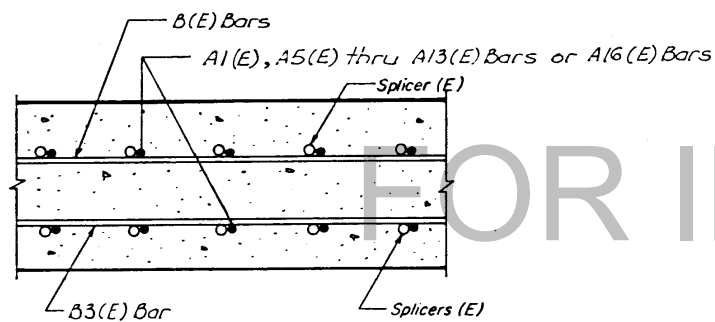
STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

SHEET NO. 24 OF 26

#82 - 3HVB - 2R - 1



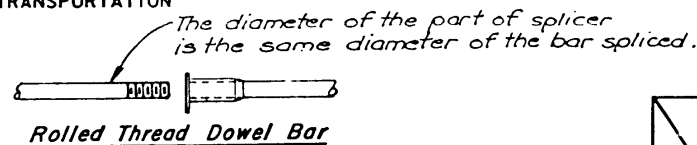
SECTION THRU SLAB



SECTION A-A

SPLICER DETAILS
(No Req'd 3-4-6)

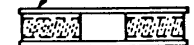
Cast incidental to reinforcement bars (Epoxy Coated).



Rolled Thread Dowel Bar



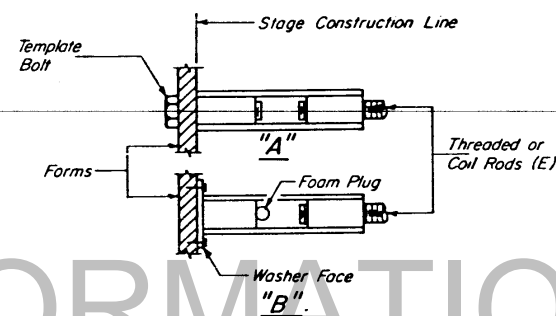
ONE PIECE



WELDED SECTIONS

SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A563, Grade C, D or DH may be used



INSTALLATION AND SETTING METHODS

- "A" : Set splicer by means of a template bolt.
- "B" : Set splicer by nailing to wood forms or cementing to steel forms.
- (E) : Indicates epoxy coating.

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the lapped reinforcement bars

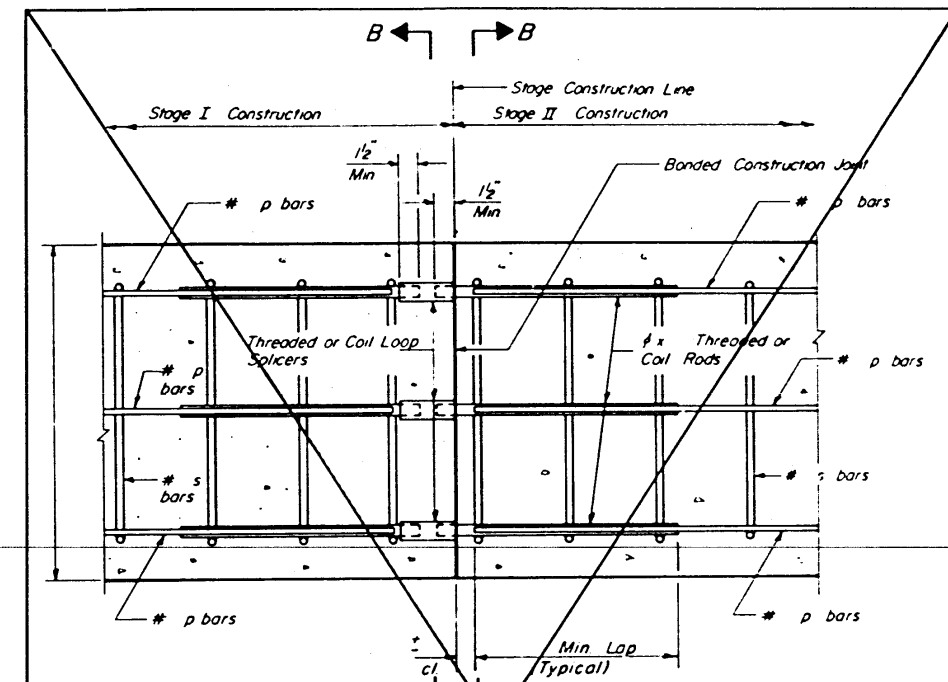
All reinforcement bars shall be lapped and tied to the splicer rods.
Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

- Minimum Capacity = $1.25 \times f_y \times A_r$
(Tension in kips)
- Minimum Pull-out Strength = $1.25 \times f_{allow} \times A_r$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi
 f_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_r = Tensile stress area of lapped reinforcement bars.
* 28 day concrete

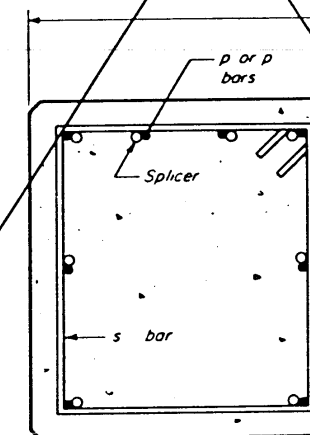
Typical Splicer (Coupler) Assembly Sizes:

In Slabs	#5 bar lap with 3/4" Splicer (Coupler) x 2'-4" Splicer Rods	Minimum Capacity = 230 kips-tension Minimum Pull-out Strength = 92 kips-tension
In Sub-structures	#7 bar lap with 1" Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 451 kips-tension Minimum Pull-out Strength = 180 kips-tension
	#8 bar lap with 1 1/4" Splicer (Coupler) x 4'-6" Splicer Rods	Minimum Capacity = 589 kips-tension Minimum Pull-out Strength = 236 kips-tension



SECTION THRU ABUTMENTS AND PIERS

No epoxy coating required



SECTION B-B
SPLICER DETAILS
(No Req'd)

Cast incidental to reinforcement bars.

DESIGNED	
CHECKED	
DRAWN	
CHECKED	K. Patel

BSD-1 12-31-84

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

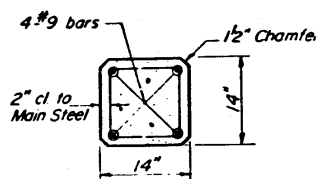
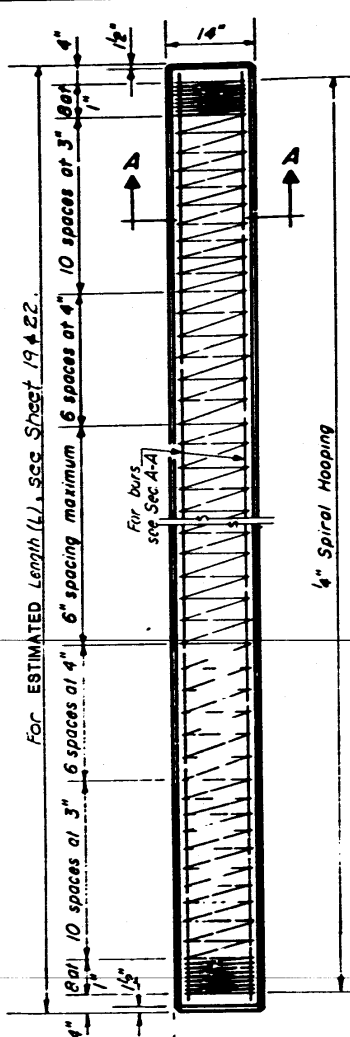
REHABILITATION FOR
FAI - 55/70 COMPLEX
BAR SPLICER (COUPLER) DETAILS
AT STAGE CONSTRUCTION

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

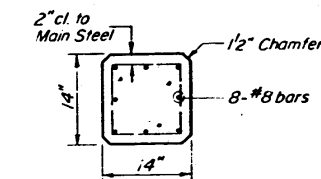
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TYPE SHEETS	SHEET NO.
F.A.I. TO	•	ST. CLAIR	320	224
ILLINOIS	PROJECT			

82-3HVB-2R-1



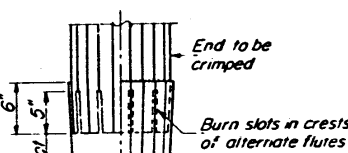
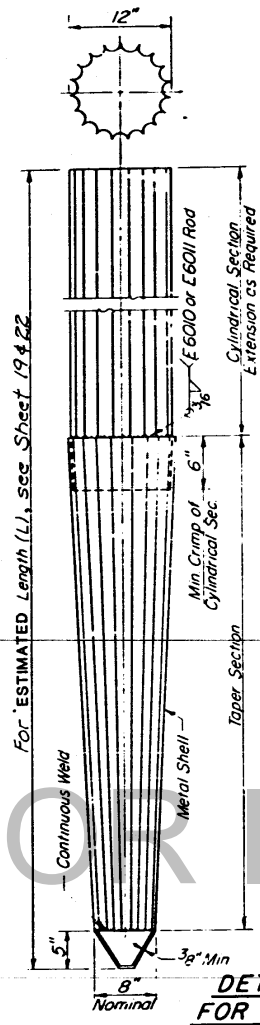
SECTION A-A
FOR PILES UNDER
45' LONG



SECTION A-A
FOR PILES 45'
OR MORE

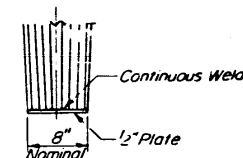
Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12L from each end and at mid point of pile.

DETAIL OF PRECAST
CONCRETE PILES



FIELD CRIMP DETAIL

Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed.



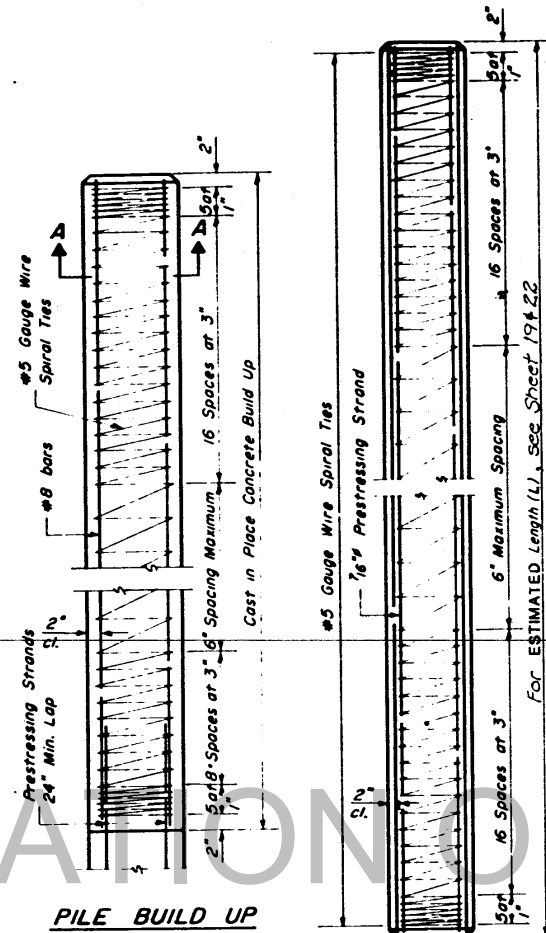
OPTIONAL FLAT END

ALLOWABLE TAPER SECTIONS

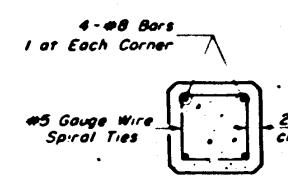
- 10' Length - Taper 1" in 2'-6"
- 17' Length - Taper 1" in 4'-0"
- 25' Length - Taper 1" in 7'-0"
- 30' Length - Taper 1" in 7'-0"

NOTE: The thickness of the shell shall be 0.1495 inches with a tolerance of 5%. The shell shall be in accordance with Article 710.05 (a) of the Standard Specification except that minimum yield strength for the steel after cold working shall be 50,000 psi.

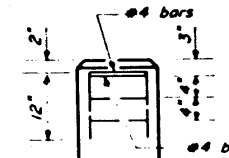
DETAIL OF TAPERED METAL SHELLS
FOR CAST IN PLACE CONCRETE PILES



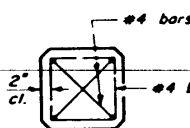
PILE BUILD UP



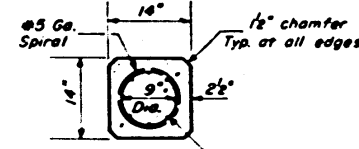
SECTION A-A



ELEVATION
(End Reinforcement)



PLAN
(End Reinforcement)



SECTION
THRU PILE

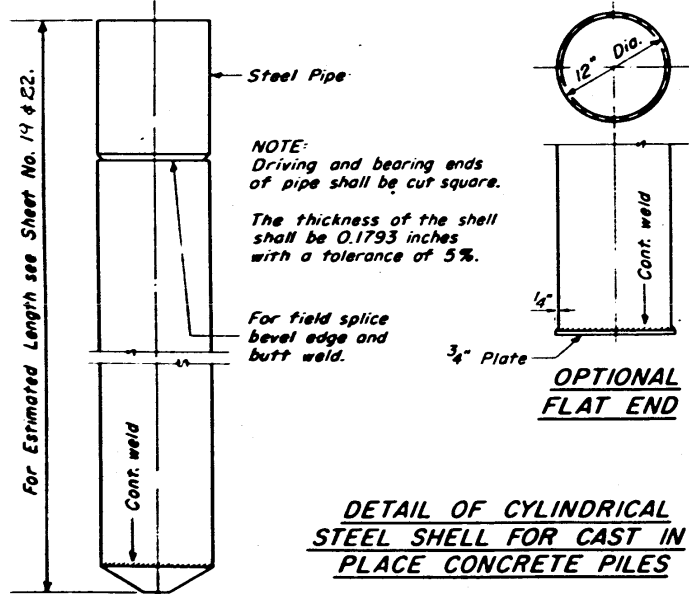
DESIGN STRESSES

- $f_c' = 5,000$ psi.
- $f_c' = 4,000$ psi.
- $f_s' = 270,000$ psi. (131,000 lbs. - 1/8" or 41,300 lbs. - 1/4")
- $f_s' = 189,000$ psi. (121,700 lbs. - 1/8" or 28,900 lbs. - 1/4")

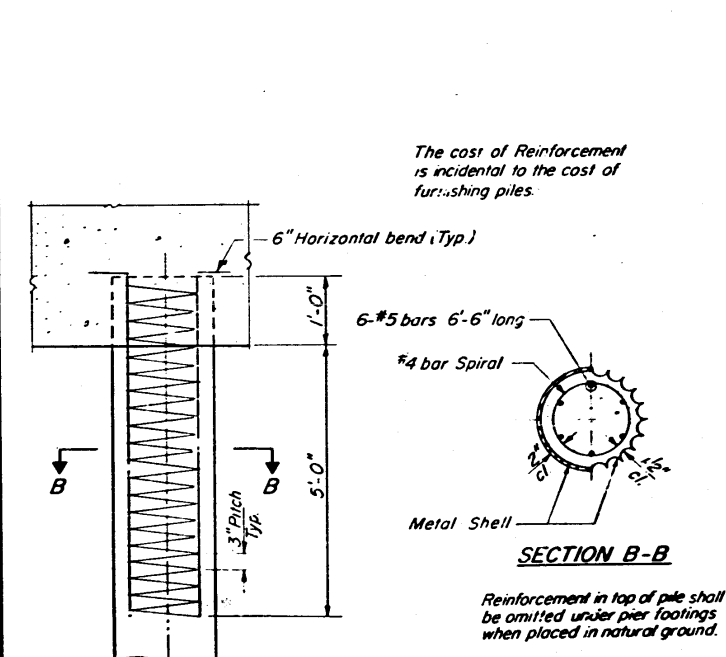
NOTES

Prestressing steel shall be non-galvanized extra high strength stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.115 sq in or the equivalent 6-1/2" strands with a cross-sectional area of 0.153 sq in may be used. For Pile lengths up to 65', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 65', use three slings placed at a distance of 0.12 L from each end and at mid-point of pile. L = Over all length of pile to be handled.

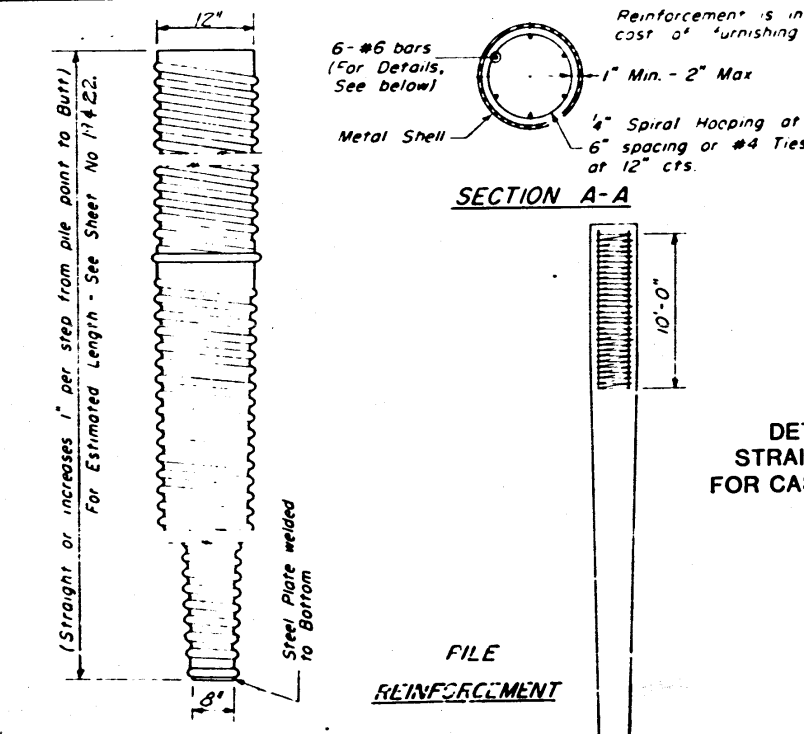
PRECAST PRESTRESSED CONCRETE PILE



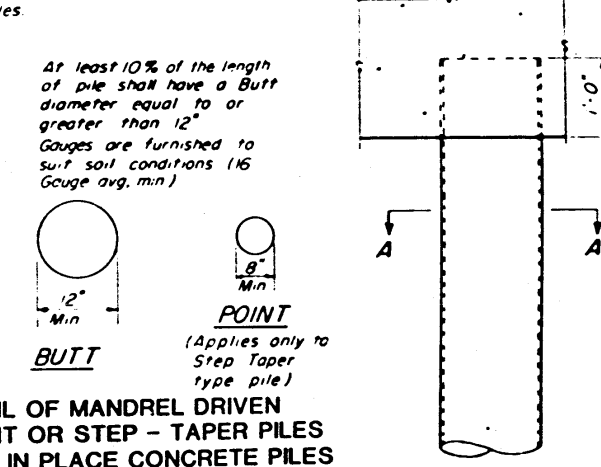
DETAIL OF CYLINDRICAL
STEEL SHELL FOR CAST IN
PLACE CONCRETE PILES



DETAIL OF REINFORCEMENT
FOR METAL SHELLS



FILE
REINFORCEMENT



DETAIL OF MANDREL DRIVEN
STRAIGHT OR STEP-TAPER PILES
FOR CAST IN PLACE CONCRETE PILES

REHABILITATION FOR
FAI - 55/70 COMPLEX
CONCRETE PILES
FIVE ALTERNATES

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

DESIGNED	
CHECKED	
DRAWN	
CHECKED	K. Patel

SEE SHEET NO. FOR INDEX OF SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 82-3HVB-2R-1(F)			
F.A.I. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS
70	*	ST. CLAIR	89
		ILLINOIS PROJECT NO. 70-1(157)	1

P-98-021-85

THE STRUCTURES REHABILITATED IN THIS PROJECT WERE BUILT AS SECTIONS:
82-4HB
82-4HB-1
82-3HVF&E-1
82-4HVB

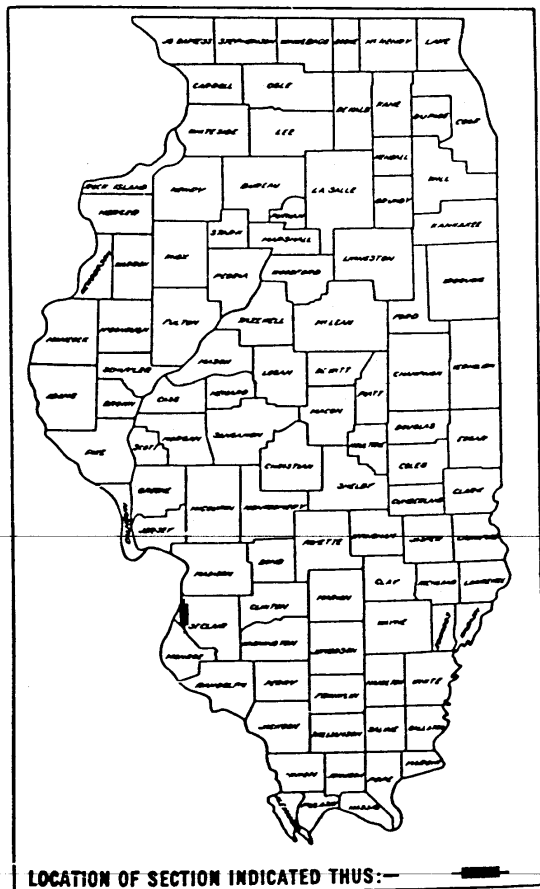
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALE IN FEET
PLAN 1 INCH 50 FT.
PROFILE HOR. 1 INCH 50 FT.
VERT. 1 INCH 5 FT.
CROSS-SECTIONS
HOR. 1 INCH 10 FT.
VERT. 1 INCH 5 FT.

F.A.I. ROUTE 70
SECTION 82 - 3HVB - 2R - 1(F)
PROJECT 70-1(157)
ST. CLAIR COUNTY

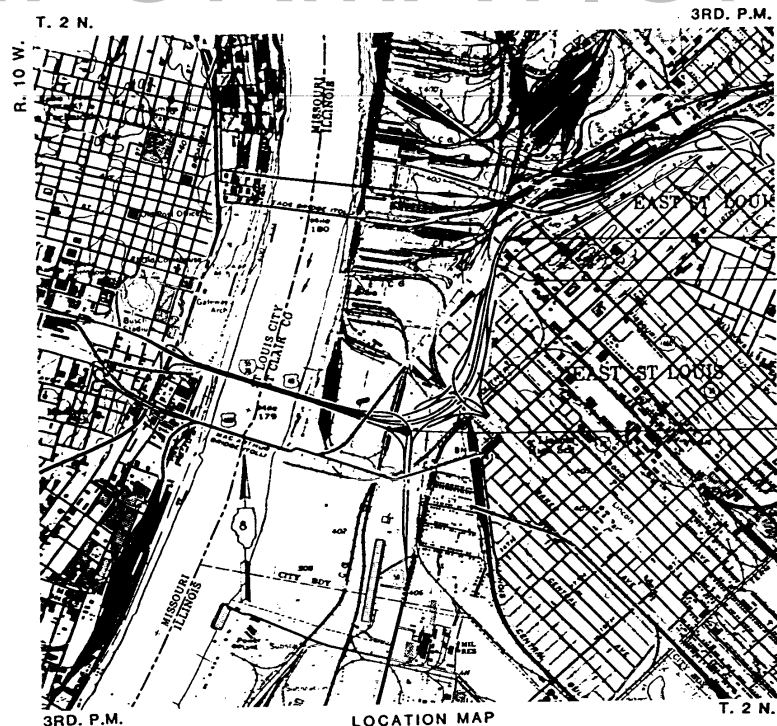
C-98-005-66

FOR INFORMATION ONLY



INDEX OF SHEETS

Sheet No.	Description
1	Title Sheet
2	Summary of Quantities
3-20	Roadway A, G & D Deck Rehabilitation
21-38	Ramp R
39-52	Ramp Q, P & Roadway H
53-57	Roadway H over Trembley Avenue
58-66	Ramp G over 4th Street
67-73	Ramp C over 4th Street
74-83	Roadway B & C over Broadway and Main Street



PROJECT
ENDS 115 + 34.53 E.B. I-55/70
EQUATION: 111 + 70.90 E.E. C-D BK. =
109 + 39.40 E.B. I-55/70 AHD.

PROJECT
BEGINS 59+00.14 E.B. C-D

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

DESIGN DESIGNATION
C-D'S 2 LANES: 1800(06) TRUNK 17.6(C-20)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED: *[Signature]*
EXAMINED: 7-24-87
PREPARED: *[Signature]*
APPROVED: *[Signature]* DIRECTOR OF HIGHWAYS

CARLOS A. LIZANA-FARIAS
NO. 81-3956

NET LENGTH OF PROJECT - 5,865.89 FT. - 1.111 MILES

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

CONTRACT NO. 44-315

ST. CLAIR COUNTY SECTION 82-3HVB-2R-1(F) F.A.I. ROUTE 70

REEL 8-166

9020-280

5/19/87

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

82-3HVB-2R-1(F)				
70	8	ST. CLAIR	B9	1A
P-98-021-85				

SEE SHEET NO. FOR
INDEX OF SHEETS

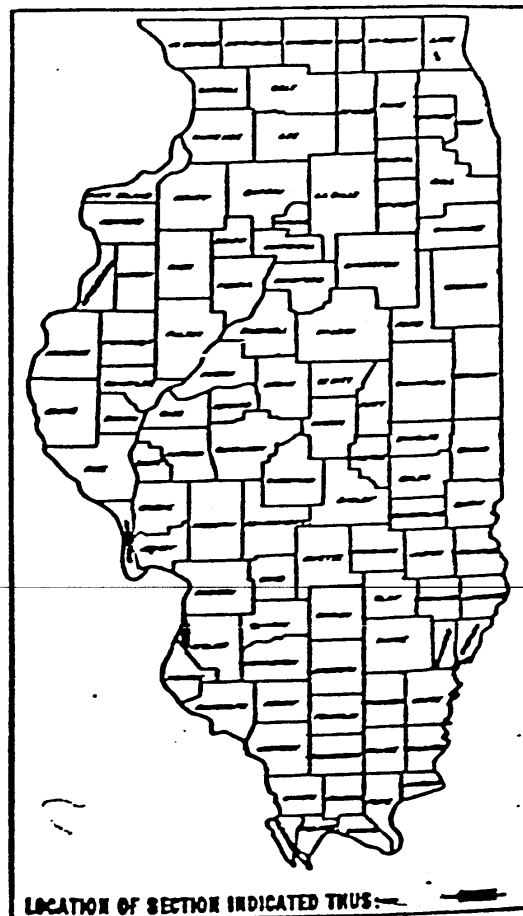
THE STRUCTURES REHABILITATED IN THIS
PROJECT WERE BUILT AS SECTIONS:
82-4HB
82-4MB-1
82-3HVF&E-1
82-4HVB

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALE IN FEET
PLAN 1 INCH 50 FT.
PROFILE HOR. 1 INCH 50 FT.
VERT. 1 INCH 5 FT.
CROSS-SECTIONS
HOR. 1 INCH 10 FT.
VERT. 1 INCH 5 FT.

F.A.I. ROUTE 70
SECTION 82 - 3HVB - 2R - 1(F)
PROJECT 70-1(157)1
ST. CLAIR COUNTY

C-98-005-88



INDEX OF SHEETS

Sheet No. Title Sheet
1A, 1
2 Summary of Quantities
3-20 Roadway A, G & D Deck Rehabilitation
* 21-38 Ramp R
* 39-52 Ramp Q, P & Roadway H
53-57 Roadway H over Trendley Avenue
△ 58-66 Ramp G over 4TH Street
□ 67-73 Ramp C over 4TH Street
○ 74-89 Roadway B & Cover Broadway and Main Street

*-Includes sht.'s 27A, 28A, 31A, 33A & 35A.

** -Includes sht.'s 44A, 46A, 48A, 50A
and 52A.

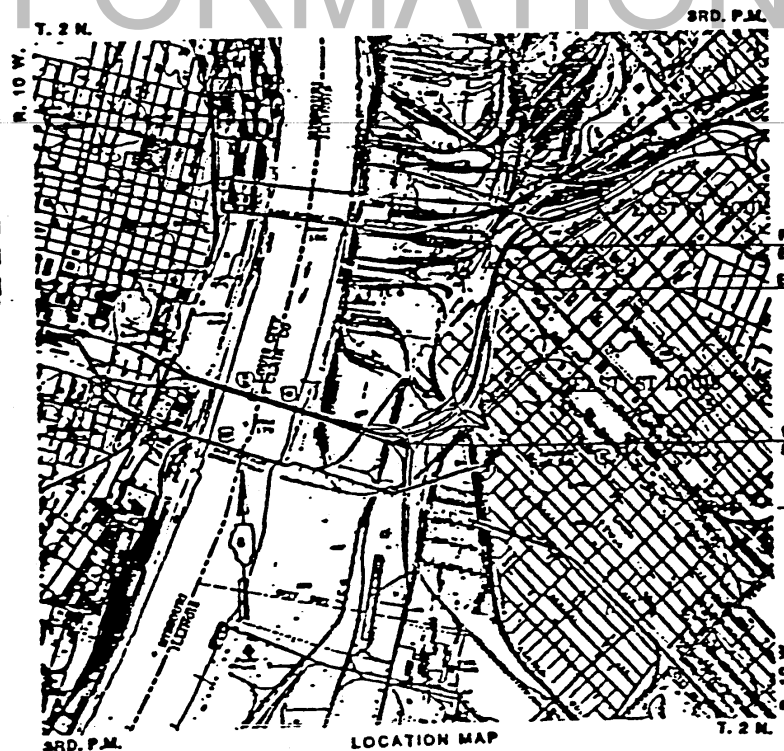
△ -Includes sht. 64A.

□ -Includes sht. 70A.

○ -Includes sht. 81A, 82A, 83A, 84A, 85A, 86A
and 87A.

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

DESIGN DESIGNATION
C-D'S 2 LANES: 1800(08) TRUNK 17.8(C-20)



1000 0 1000 2000 3000
SCALE IN FEET

NET LENGTH OF PROJECT - 5,265.28 FT. - 1.111 MILES

PROJECT
BEGINS 115+00.00 E.B. P-85/70
EQUATION: 111+70.80 E.B. C-D B.C.
308+36.40 E.B. P-85/70 AHD.

PROJECT
BEGINS 36+00.14 E.B. C-D

AS REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
7-24-87
7-24-87
7-24-87
7-24-87
7-24-87

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED _____
DIVISION ADMINISTRATOR DATE _____

CARLOS A. LIZANA-FARIAS
NO. 81-3858

PREPARED BY:
SYNERGUP CORPORATION
ST. LOUIS, MISSOURI

CONTRACT NO. 42835

ST. CLAIR COUNTY SECTION 82-3HVB-2R-W1 F.A.I. ROUTE 70

Revised 4-20-88, R.T.B.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOWN	SHEET
F.A.I. 70	*	ST. CLAIR	89	58
		ILLINOIS	PROJECT	

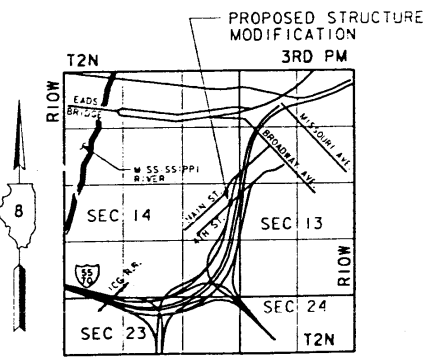
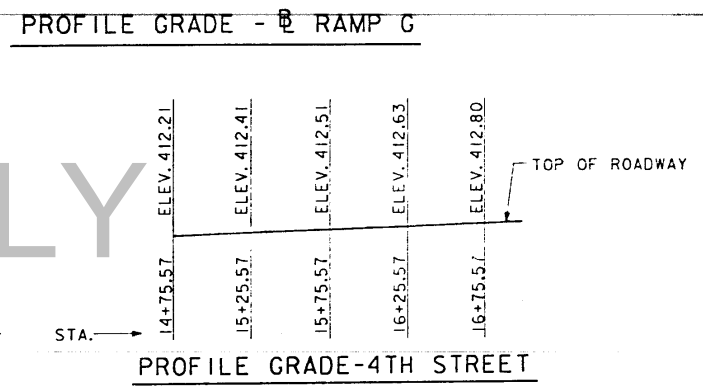
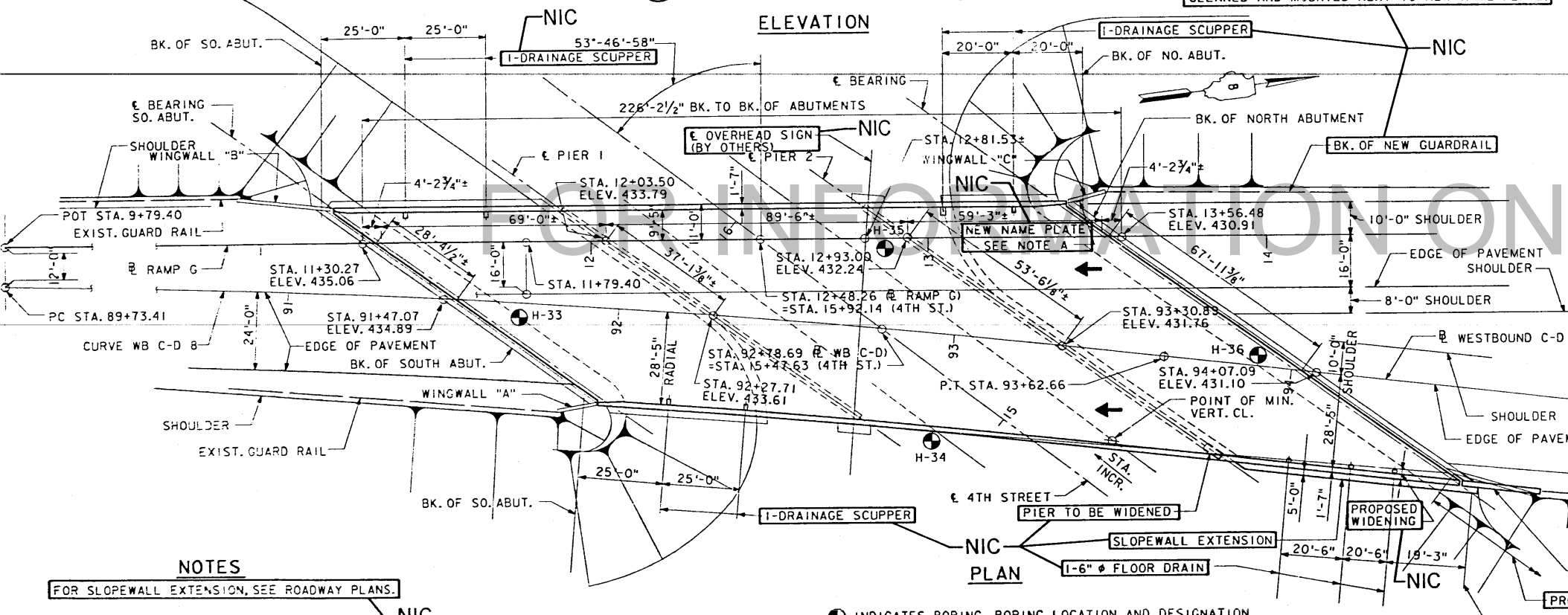
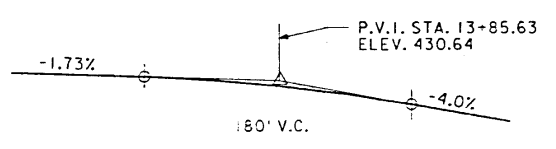
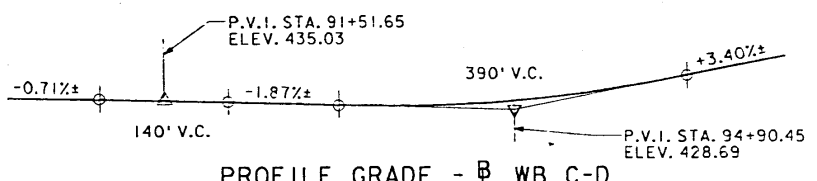
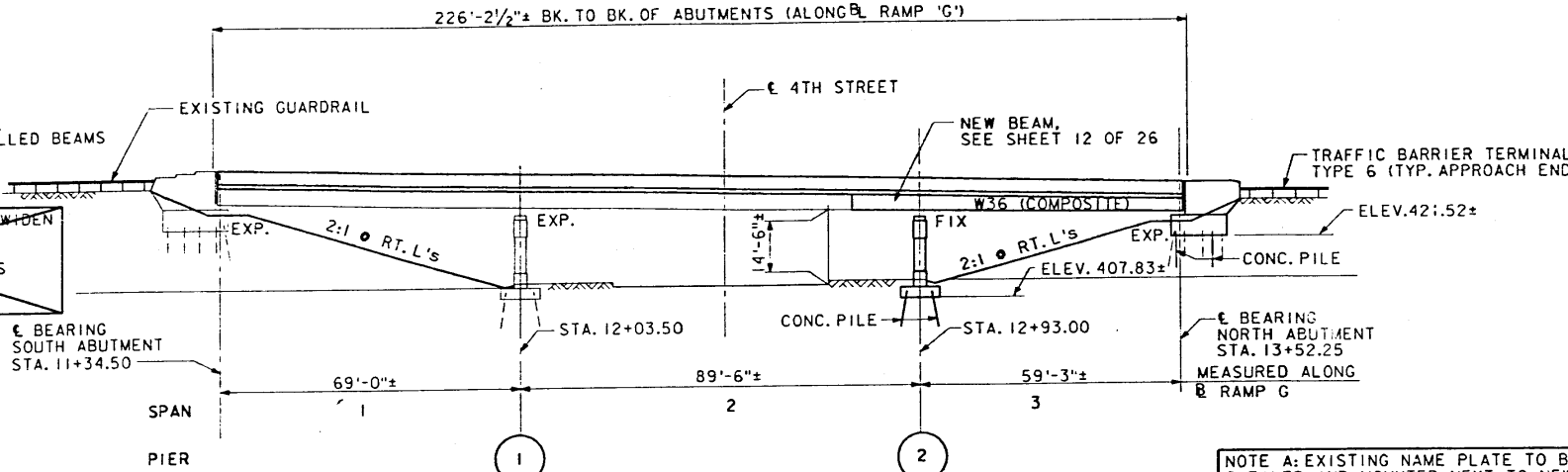
* 82-3HVB-2R-1(F)

BENCH MARK C-3
CHISELED "C" IN CONC. FOUNDATION OF PIER 2 ON WB 1-55/70 BRIDGE OVER 4TH ST. ELEV. 413.44.

EXISTING STRUCTURE NO. 082-0206 BUILT AS F.A.I. RTE. 70, SECTION 82-4HB-1 AT STA. 92+64.64 IN 1965. SUPERSTRUCTURE - 3 SPAN CONT. ROLLED BEAMS SUBSTRUCTURES - 2 R.C. MULTIPLE COLUMNS PIERS & 2 R.C. PILE

WORK TO BE DONE:
REMOVE & REPLACE CONCRETE DECK WIDEN DECK ON NORTHEAST SIDE WHICH REQUIRES NEW BEAM AND EXTENDING NO. ABUT. & PIER 2 ALL EXIST. BEAMS & NEW BEAM TO BE COMPOSITE FOR FUTURE WEARING SURFACE.

NOT IN CONTRACT



NOTES
FOR SLOPEWALL EXTENSION, SEE ROADWAY PLANS.

INDICATES BORING. BORING LOCATION AND DESIGNATION ARE TAKEN FROM PLANS OF EXISTING STRUCTURES.

NOT IN CONTRACT

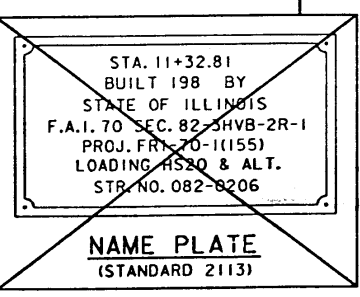
NIC = NOT IN CONTRACT

DESIGN STRESSES

DESIGN SPECIFICATIONS: AASHTO 1961 AND APPLICABLE 1962 AND 1963 INTERIMS.
LOADING: HS20-44 AND ALTERNATE
REINFORCED CONCRETE: fc=1400 psi n=10
DECK SLAB SUBSTRUCTURE Vc=75 psi - FOOTINGS fs=20,000 psi
REINFORCING fs=20,000 psi
STRUCTURAL STEEL: fs=20,000 psi

NEW CONSTRUCTION

AASHTO 1983 & APPLICABLE INTERIM 1984 & 1985 INTERIM SPECIFICATIONS
HS20-44 LOADING
ALLOW 25 p.s.f. FOR FUTURE WEARING SURFACE
fc=3500 psi (CONCRETE) NIC
fy=60,000 psi (REINF.)
fs=20,000 psi (STRUCT. STEEL) M183



CURVE DATA - WB C-D 8

P.I. STA. = 91+68.27
Δ = 6° - 51' - 03" RT.
D = 1° - 45' - 36"
R = 3255.50'
T = 194.86'
L = 389.25'
E = 5.83'
P.C. STA. = 89+73.41
P.T. STA. = 93+62.66
S.E. = 0.032 FT./FT.
S.E. TRANSITION STA. 93+12.66 TO 94+62.66

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

James T. Rybar
REGISTERED PROFESSIONAL ENGINEER



REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
GENERAL PLAN AND ELEVATION

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10320 FILE:ZF3110,1JDET45.DGN
8'5357 PRF,DET45
LEVELS PLOTTED DATE: JUNE 23, 1987
2 3 20 26-29 35 39 42 43 46 50 54 55 63

K. PATEL	DESIGNED
S. KNEIP	CHECKED
SCHULT	DRAWN
K. PATEL	CHECKED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOP SHEET	SHEET NO.
F.A.I. 70	*	ST. CLAIR	89	59
		ILLINOIS	PROJECT	

* 82-3HVB-2R-11(F)

GENERAL NOTES

- FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS $\frac{3}{4}$ " ϕ OPEN HOLES $\frac{13}{16}$ " UNLESS OTHERWISE NOTED.
- CALCULATED WEIGHT OF STRUCTURAL STEEL = 25,100 LBS. (M183)
- ~~THE CONCRETE, FOR BRIDGE FLOORS FINISHED IN ACCORDANCE WITH ARTICLE 503.15 OF THE STANDARD SPECIFICATIONS, SHALL BE PLACED AND COMPACTED PARALLEL TO THE SKEW IN UNIFORM INCREMENTS ALONG CENTER LINE OF BRIDGE. THE FINISHING MACHINE, WHEN REQUIRED, SHALL BE SET PARALLEL TO THE SKEW FOR STRIKING OFF AND SCREEDING THE CONCRETE.~~
- ALL CONTACT SURFACES OF JOINTS FOR THE DIAPHRAGMS SHALL BE FREE OF PAINT OR LACQUER.
- THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF ALL STRUCTURAL STEEL.
- ~~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 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.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-47 OR M-53 GRADE 60.
- LAYOUT OF SLOPE WALLS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AND TO MATCH EXISTING SLOPEWALL AS DIRECTED BY THE ENGINEER.
- SHOULDER TRANSITION TO WINGWALL SHALL BE SHAPED WITH BROKEN CONCRETE. COST INCIDENTAL.
- 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 BEFORE ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

NOT IN CONTRACT

NOT IN CONTRACT

NOT IN CONTRACT

NOT IN CONTRACT

INDEX OF DRAWINGS

- GENERAL PLAN AND ELEVATION
- GENERAL NOTES, ESTIMATED QUANTITIES AND INDEX OF DRAWINGS.
- ~~STAGE CONSTRUCTION DETAILS~~
- ~~STAGE CONSTRUCTION DETAILS~~
- TOP OF SLAB ELEVATIONS
- TOP OF SLAB ELEVATIONS
- TOP OF SLAB ELEVATIONS
- ~~SLAB - SPANS 1 THRU 3~~
- ~~SLAB - CROSS SECTIONS~~
- WEST PARAPET
- EAST PARAPET
- FRAMING PLAN AND DETAILS
- DIAPHRAGM DETAILS
- STEEL DETAILS
- ~~STEEL DRAINAGE SCUPPER~~
- ~~ALTERNATE - CAST IRON DRAINAGE SCUPPER~~
- ~~NEOPRENE EXPANSION JOINT (2")~~
- ~~CONCRETE REMOVAL~~
- ~~NORTH ABUTMENT MODIFICATIONS~~
- ~~NORTH ABUTMENT MODIFICATIONS~~
- ~~NORTH AND SOUTH ABUTMENT MODIFICATIONS~~
- ~~PIER 2~~
- ANCHOR BOLT DETAIL FOR BEARING
- ~~TEMPORARY CONCRETE BARRIER~~
- ~~BAR SPLICER DETAIL~~
- CONCRETE PILES (FIVE ALTERNATES)

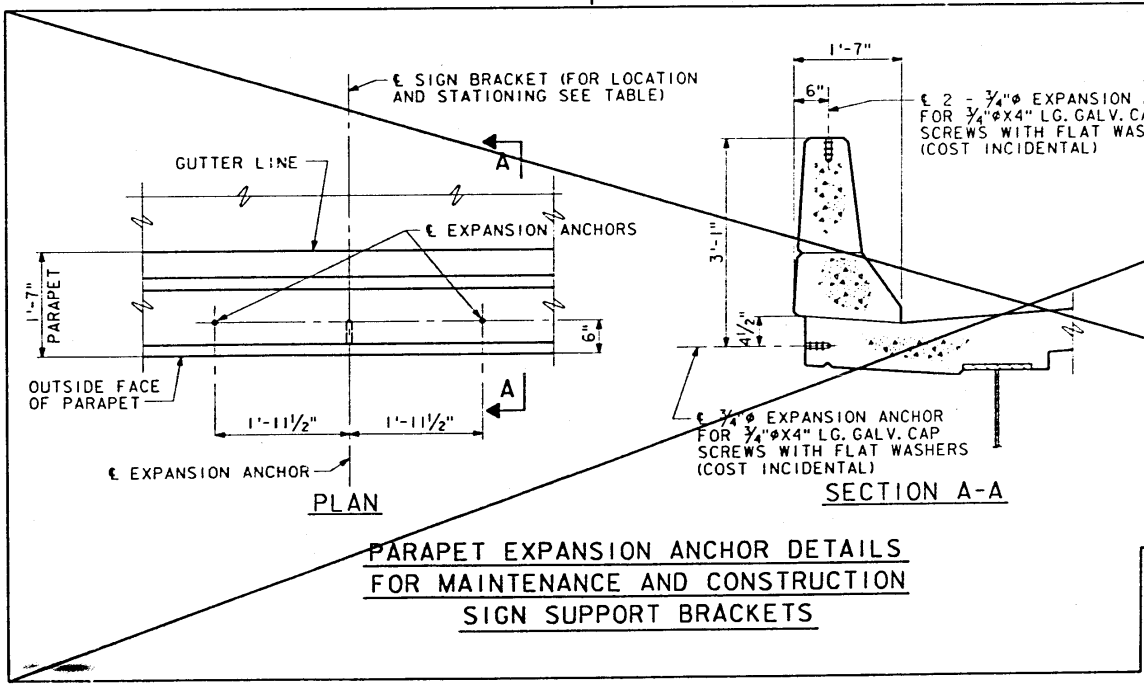
NOT IN CONTRACT

NOT IN CONTRACT

NOT IN CONTRACT

NOT IN CONTRACT

TOTAL BILL OF MATERIAL				
ITEM	UNIT	SUPER STRUCTURE	SUB STRUCTURE	TOTAL
FURNISHING STRUCTURAL STEEL	LUMP SUM	1	—	1



SIGN BRACKET LOCATIONS		
STATION	LEFT PARAPET	RIGHT PARAPET
13+35 (RAMP G)	•	—
14+50 (RAMP G)	—	•

NOTE: LEFT AND RIGHT PARAPETS ARE ORIENTED LOOKING AHEAD STATIONING.

NOTES

CAP SCREWS SHALL BE LEFT IN PLACE WHEN SIGN BRACKETS ARE NOT ATTACHED.
SIGN BRACKETS SHALL BE FURNISHED BY IDOT.
EXPANSION ANCHORS SHALL BE APPROVED EXPANSION ANCHORS PROVIDING A MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS.

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
GENERAL NOTES, ESTIMATED QUANTITIES
AND INDEX OF DRAWINGS

STRUCTURE NO. 082-0206

STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

REV. 8-3-87

SHEET NO. 2 OF 26

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

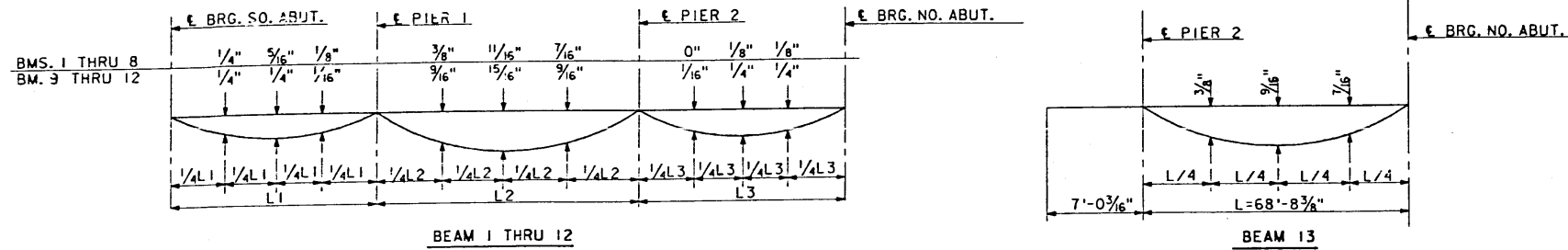
LEVELS PLOTTED DATE: JUNE 23, 1987
35, 56, 58, 63
10320 FILE: ZF31110.1DET46.DGN
8/5317 PRF: DET46

K. PATEL DESIGNED
S. KNEIP CHECKED
P. NELSON DRAWN
K. PATEL CHECKED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70		ST. CLAIR	89	60
ILLINOIS		PROJECT		

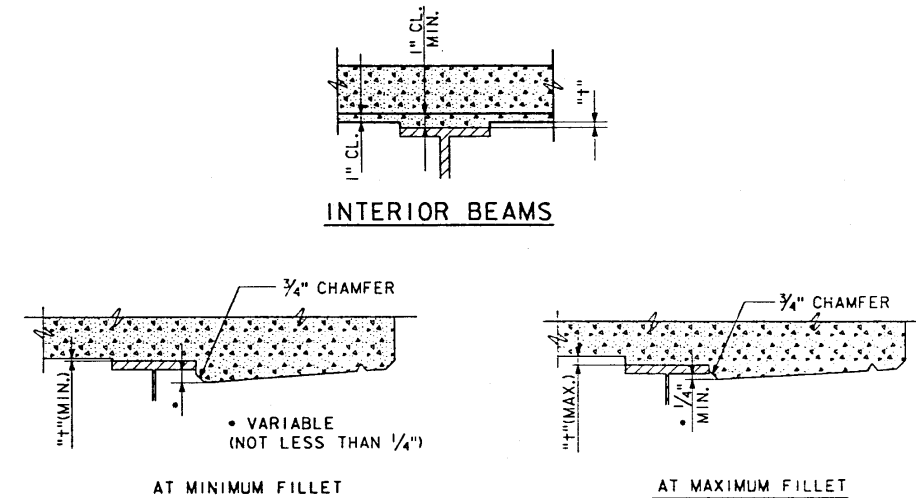
* 82-3HVB-2R-1(F)



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE DECK 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 IN TABLES.

	L1	L2	L3
BMS. 1 THRU 8	4 SPA. • 17'-3"=69'-0"	4 SPA. • 22'-4 1/2"=89'-6"	4 SPA. • 14'-9 3/4"=59'-3"
BM. 9	71'-6 7/16"	4 SPA. • 23'-2 3/8"=92'-9 1/2"	61'-5 1/8"
BM. 10	74'-1 1/16"	96'-1 7/8"	4 SPA. • 15'-10 1/16"=63'-7 1/4"
BM. 11	76'-8 1/8"	99'-6 1/16"	4 SPA. • 16'-5 1/16"=65'-10 3/4"
BM. 12	79'-4 1/16"	4 SPA. • 25'-8 1/16"=102'-11 1/4"	68'-2 1/8"



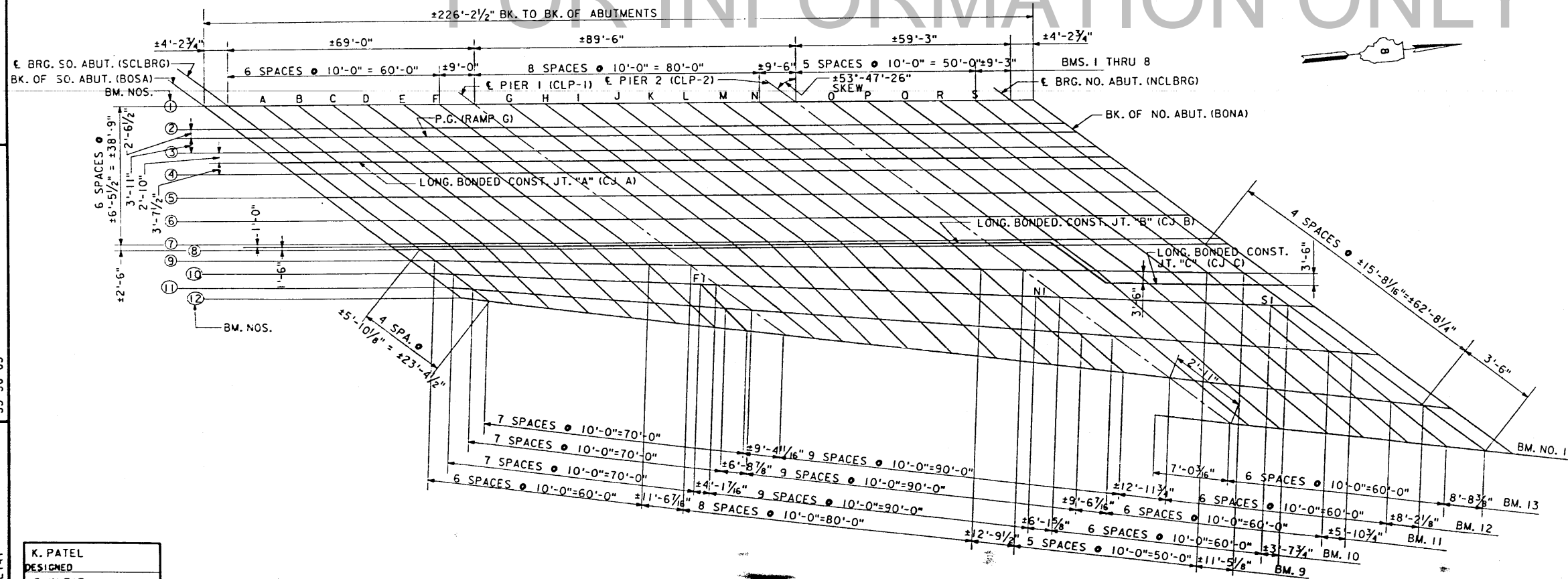
AT MINIMUM FILLET

AT MAXIMUM FILLET

EXTERIOR BEAMS

NOTE: TO DETERMINE "+" AFTER ALL 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 HEIGHT "+" ABOVE TOP FLANGES OF BEAMS.

FOR INFORMATION ONLY



PLAN

FOR REFERENCE ONLY

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
TOP OF SLAB ELEVATIONS

STRUCTURE NO. 082-0206

STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

SHEET NO. 5 OF 26

LEVELS PLOTTED DATE: JUNE 23, 1987
35 56 63

10120 FILE: ZF3:110,13DET47.DGN
875338 PRF:DET47

DESIGNED	K. PATEL
CHECKED	S. KNEIP
DRAWN	P. NELSON
	K. PATEL

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
F.A.I. 70	*	ST. CLAIR	89	61
		ILLINOIS	PROJECT	

* B2-3HVB-2R-1(F)

LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BM-1	BOSA	11 + 17.990	9.000	435.083	435.083	BM-3	BOSA	11 + 35.617	-3.917	435.026	435.026	BM-5	BOSA	91 + 47.360	-0.190	434.892	434.887	BM-7	BOSA	91 + 65.734	-12.096	434.250	434.245
	SCLBRG	11 + 22.211	9.000	435.010	435.010		SCLBRG	11 + 39.848	-3.917	434.953	434.953		SCLBRG	91 + 51.596	0.039	434.827	434.827		SCLBRG	91 + 69.973	-11.844	434.197	434.197
		11 + 30.211	9.000	434.837	434.849		A	11 + 49.848	-3.917	434.780	434.782		A	91 + 61.569	0.601	434.679	434.691		A	91 + 79.869	-11.225	434.069	434.061
		11 + 42.211	9.000	434.664	434.685		B	11 + 59.848	-3.917	434.607	434.628		B	91 + 71.548	1.194	434.513	434.534		B	91 + 90.002	-10.576	433.932	433.954
		11 + 52.211	9.000	434.491	434.515		C	11 + 69.848	-3.917	434.434	434.458		C	91 + 81.524	1.818	434.314	434.339		C	92 + 00.010	-9.895	433.789	433.814
		11 + 62.211	9.000	434.318	434.339		D	11 + 79.848	-3.917	434.261	434.282		D	91 + 91.496	2.472	434.166	434.187		D	92 + 10.014	-9.185	433.638	433.659
		11 + 72.211	9.000	434.145	434.157		E	11 + 89.848	-3.917	434.088	434.100		E	92 + 01.464	3.156	433.990	434.002		E	92 + 20.013	-8.443	433.480	433.492
		11 + 82.211	9.000	433.972	433.977		F	11 + 99.848	-3.917	433.915	433.920		F	92 + 11.428	3.872	433.814	433.819		F	92 + 30.008	-7.671	433.318	433.324
		11 + 91.211	9.000	433.816	433.816		G	12 + 08.848	-3.917	433.759	433.759		G	92 + 20.391	4.541	433.654	433.654		G	92 + 39.000	-6.950	433.173	433.227
		12 + 01.211	9.000	433.657	433.657		H	12 + 18.848	-3.917	433.592	433.592		H	92 + 30.346	5.215	433.476	433.476		H	92 + 48.985	-6.120	433.013	433.027
		12 + 11.211	9.000	433.496	433.496		I	12 + 28.848	-3.917	433.413	433.411		I	92 + 40.297	6.118	433.300	433.328		I	92 + 58.965	-5.259	432.854	432.881
		12 + 21.211	9.000	433.337	433.337		J	12 + 38.848	-3.917	433.240	433.240		J	92 + 50.242	6.952	433.124	433.164		J	92 + 68.940	-4.368	432.695	432.735
		12 + 31.211	9.000	433.174	433.174		K	12 + 48.848	-3.917	433.067	433.119		K	92 + 60.182	7.817	432.949	433.001		K	92 + 78.910	-3.446	432.538	432.590
		12 + 41.211	9.000	433.003	433.003		L	12 + 58.848	-3.917	432.894	432.947		L	92 + 70.116	8.712	432.774	432.827		L	92 + 88.879	-2.494	432.382	432.435
		12 + 51.211	9.000	432.821	432.821		M	12 + 68.848	-3.917	432.721	432.764		M	92 + 80.046	9.637	432.600	432.643		M	92 + 98.831	-1.511	432.228	432.271
		12 + 61.211	9.000	432.605	432.605		N	12 + 78.848	-3.917	432.548	432.591		N	92 + 89.969	10.593	432.427	432.458		N	93 + 08.783	-0.498	432.086	432.117
		12 + 71.211	9.000	432.447	432.447		CLP-1	12 + 88.848	-3.917	432.391	432.391		CLP-2	92 + 99.886	11.579	432.250	432.266		CLP-2	93 + 18.728	0.546	431.940	431.966
		12 + 81.211	9.000	432.268	432.268		O	12 + 98.348	-3.917	432.210	432.210		O	93 + 09.302	12.544	432.071	432.071		O	93 + 28.170	1.565	431.799	431.799
		12 + 91.211	9.000	432.095	432.095		P	13 + 08.348	-3.917	432.028	432.028		P	93 + 19.208	13.589	431.872	431.872		P	93 + 38.103	2.668	431.617	431.617
		13 + 00.711	9.000	431.920	431.924		CLP-2	13 + 18.348	-3.917	431.832	431.832		CLP-2	93 + 29.107	14.664	431.661	431.664		CLP-2	93 + 48.029	3.801	431.488	431.492
		13 + 10.711	9.000	431.734	431.745		R	13 + 28.348	-3.917	431.624	431.635		R	93 + 39.000	15.770	431.438	431.443		R	93 + 57.947	4.964	431.363	431.373
		13 + 20.711	9.000	431.536	431.546		S	13 + 38.348	-3.917	431.414	431.424		S	93 + 48.885	16.905	431.203	431.219		S	93 + 77.859	6.158	431.237	431.248
		13 + 30.711	9.000	431.338	431.352		NCLBRG	13 + 48.348	-3.917	431.177	431.183		NCLBRG	93 + 58.764	18.071	430.957	430.964		NCLBRG	93 + 97.763	7.382	431.109	431.115
		13 + 40.711	9.000	431.119	431.119		BONA	13 + 57.598	-3.917	430.944	430.944		BONA	93 + 67.895	19.176	430.718	430.718		BONA	93 + 116.918	8.541	431.017	431.017
		13 + 50.711	9.000	430.921	430.921			13 + 61.846	-3.929	430.836	430.836			93 + 72.070	19.691	430.506	430.506			93 + 135.575	9.075	430.970	430.970
BM-2	BOSA	11 + 26.758	2.542	434.065	434.065	CLP-1	BOSA	11 + 39.496	-6.750	435.004	435.004	BM-6	BOSA	91 + 56.530	-6.156	434.566	434.561	CLP-1	BOSA	91 + 67.164	-13.015	434.200	434.195
	SCLBRG	11 + 31.029	2.542	434.992	434.992		SCLBRG	11 + 43.717	-6.750	434.931	434.931		SCLBRG	91 + 60.762	-5.915	434.516	434.516		SCLBRG	91 + 71.425	-12.761	434.147	434.147
		11 + 41.029	2.542	434.819	434.831		A	11 + 53.717	-6.750	434.758	434.770		A	91 + 70.762	-5.325	434.395	434.407		A	91 + 81.423	-12.138	434.017	434.029
		11 + 51.029	2.542	434.646	434.667		B	11 + 63.717	-6.750	434.585	434.607		B	91 + 80.758	-4.704	434.265	434.287		B	91 + 91.438	-11.484	433.890	433.902
		11 + 61.029	2.542	434.473	434.497		C	11 + 73.717	-6.750	434.412	434.437		C	91 + 90.750	-4.052	434.129	434.154		C	92 + 00.449	-10.799	433.736	433.760
		11 + 71.029	2.542	434.300	434.321		D	11 + 83.717	-6.750	434.239	434.260		D	92 + 00.739	-3.370	433.985	434.006		D	92 + 11.456	-10.084	433.584	433.605
		11 + 81.029	2.542	434.127	434.139		E	12 + 03.717	-6.750	434.066	434.078		E	92 + 10.722	-2.657	433.835	433.847		E	92 + 21.458	-9.338	433.425	433.437
		11 + 91.029	2.542	433.954	433.959		F	12 + 13.717	-6.750	433.893	433.898		F	92 + 20.702	-1.913	433.677	433.682		F	92 + 31.455	-8.562	433.263	433.268
		12 + 01.029	2.542	433.781	433.796		G	12 + 23.717	-6.750	433.720	433.737		G	92 + 29.679	-1.218	433.531	433.531		G	92 + 40.448	-7.837	433.118	433.118
		12 + 11.029	2.542	433.608	433.639		H	12 + 33.717	-6.750	433.544	433.578		H	92 + 39.649	-0.416	433.370	433.384		H	92 + 50.436	-7.002	432.957	432.971
		12 + 21.029	2.542	433.432	433.480		I	12 + 43.717	-6.750	433.367	433.419		I	92 + 49.615	0.416	433.197	433.225		I	92 + 60.419	-6.137	432.798	432.826
		12 + 31.029	2.542	433.259	433.319		J	12 + 53.717	-6.750	433.188	433.258		J	92 + 59.575	1.279	432.968	433.009		J	92 + 70.396	-5.241	432.640	432.680
		12 + 41.029	2.542	433.086	433.158		K	12 + 63.717	-6.750	433.015	433.097		K	92 + 69.530	2.172	432.778	432.830		K	92 + 80.368	-4.315	432.483	432.536
		12 + 51.029	2.542	432.913	432.985		L	12 + 73.717	-6.750	432.842	432.925		L	92 + 79.479	3.096	432.591	432.643		L	92 + 90.334	-3.358	432.327	432.380
		12 + 61.029	2.542	432.740	432.803		M	12 + 83.717	-6.750	432.669	432.742		M	92 + 89.422	4.050	432.407	432.450		M	93 + 00.294	-2.971	432.174	432.217
		12 + 71.029	2.542	432.567	432.619		N	12 + 93.717	-6.750	432.496	432.568		N	92 + 99.360	5.034	432.232	432.284		N	93 + 10.247	-1.253	432.034	432.065
		12 + 81.029	2.542	432.394	432.429		CLP-1	12 + 03.717	-6.750	432.323	432.386		CLP-2	93 + 09.291	6.049	432.067	432.082		CLP-2	93 + 20.195	-0.305	431.908	431.924
		12 + 91.029	2.542	432.221	432.250		O	13 + 13.717	-6.750	432.156	432.186		O	93 + 18.721	7.041	431.911	431.911		O	93 + 29.639	0.718	431.778	431.778
		13 + 01.029	2.542	432.048	432.076		P	13 + 23.717	-6.750	431.989	431.999		P	93 + 28.640	8.115	431.744	431.744		P	93 + 39.821	1.691	431.617	431.617
		13 + 11.029	2.542	431.875	431.855		CLP-2	13 + 33.717	-6.750	431.822	43												

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	89	62
		ILLINOIS	PROJECT	

* 82-3HVB-2R-1(F)

LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION		
BM-9	BOSA SOLBRG A B C D E F CLP-1 G H I J K L M N CLP-2 O P Q R S NOLBRG BONA	91	74.241	-17.453	433.956	433.951	BM-12	BOSA SOLBRG A B C D E F F1 CLP-1 G H I J K L M N NI CLP-2 O P Q R S NOLBRG BONA	91	89.124	-26.593	433.463	433.458
		91	78.492	-17.298	433.897	433.897			91	93.888	-26.702	433.392	433.392
		91	88.537	-16.910	433.753	433.753			92	03.468	-26.940	433.217	433.228
		91	98.580	-16.452	433.622	433.623			92	13.550	-27.146	433.035	433.056
		92	08.620	-16.042	433.444	433.464			92	23.633	-27.321	432.846	432.867
		92	18.657	-15.562	433.278	433.295			92	33.717	-27.466	432.654	432.675
		92	28.691	-15.050	433.107	433.115			92	43.801	-27.579	432.463	432.476
		92	38.722	-14.509	432.936	432.940			92	53.887	-27.661	432.273	432.278
		92	50.289	-13.845	432.741	432.741			92	63.972	-27.713	432.083	432.085
		92	60.312	-13.237	432.573	432.593			92	73.446	-27.733	431.905	431.905
		92	70.332	-12.598	432.406	432.466			92	83.532	-27.725	431.716	431.725
		92	80.347	-11.929	432.240	432.296			92	93.617	-27.685	431.529	431.565
		92	90.358	-11.229	432.075	432.145			93	03.703	-27.615	431.346	431.398
		93	00.365	-10.498	431.913	431.986			93	13.788	-27.514	431.178	431.243
		93	10.367	-9.737	431.763	431.823			93	23.872	-27.382	431.034	431.110
		93	20.364	-8.944	431.650	431.696			93	33.955	-27.219	430.904	430.872
		93	30.356	-8.122	431.554	431.580			93	44.037	-27.024	430.789	430.845
		93	43.130	-7.025	431.444	431.444			93	54.118	-26.799	430.689	430.731
		93	53.110	-6.132	431.367	431.401			93	60.124	-26.637	430.637	430.668
		93	60.295	-5.444	431.318	431.366			93	77.150	-26.183	430.517	430.517
93	68.862	-4.638	431.264	431.295	93	86.695	-25.927	430.468	430.497				
93	77.429	-3.831	431.215	431.236	93	96.241	-25.671	430.431	430.479				
93	85.995	-3.025	431.172	431.193	94	05.786	-25.415	430.407	430.438				
94	04.317	-1.300	431.099	431.099	94	15.331	-25.159	430.397	430.417				
93	96.966	5.705	431.136	431.136	94	24.877	-24.903	430.399	430.419				
					94	34.422	-24.648	430.413	430.427				
					94	45.231	-24.366	430.446	430.446				
					94	50.389	-24.366	430.462	430.462				
CJ C	P O R S NOLBRG BOSA	93	65.648	-8.456	431.230	431.278	BM-13	CLP-2 O P O R S S NOLBRG BONA	93	79.692	-27.613	430.460	430.460
		93	74.215	-7.650	431.189	431.220			93	89.309	-27.397	430.411	430.438
BM-10	BOSA SOLBRG A B C D E F F1 CLP-1 G H I J K L M N NI CLP-2 O P Q R S NOLBRG BONA	91	79.194	-20.494	433.784	433.779	93	98.925	-27.181	430.375	430.426		
		91	83.452	-20.434	433.720	433.720	94	08.542	-26.966	430.352	430.420		
		91	93.513	-20.270	433.565	433.576	94	18.158	-26.750	430.342	430.415		
		92	03.574	-20.075	433.422	433.423	94	27.775	-26.534	430.345	430.406		
		92	13.633	-19.850	433.232	433.253	94	37.391	-26.318	430.360	430.410		
		92	23.691	-19.593	433.055	433.073	94	48.342	-26.073	430.394	430.394		
		92	33.746	-19.306	432.876	432.896	94	53.465	-26.897	430.411	430.411		
		92	43.801	-18.988	432.698	432.702							
		92	53.853	-18.638	432.521	432.522							
		92	63.900	-18.258	432.344	432.349							
		92	73.947	-17.853	432.167	432.173							
		92	83.994	-17.426	431.990	431.996							
		92	94.041	-16.978	431.813	431.821							
		93	04.088	-16.510	431.636	431.668							
		93	14.135	-16.022	431.459	431.526							
		93	24.182	-15.514	431.282	431.414							
		93	34.229	-14.987	431.105	431.314							
		93	44.276	-14.450	430.928	431.230							
		93	54.323	-13.893	430.751	431.187							
		93	64.370	-13.316	430.574	431.154							
93	74.417	-12.719	430.397	431.133									
93	84.464	-12.102	430.220	431.113									
93	94.511	-11.465	430.043	431.092									
93	04.558	-10.808	429.866	431.078									
94	07.849	-9.995	431.072	431.099									
94	17.896	-9.166	430.922	431.072									
94	27.943	-8.327	430.775	431.073									
94	37.990	-7.478	430.628	431.079									
BM-11	BOSA SOLBRG A B C D E F F1 CLP-1 G H I J K L M N NI CLP-2 O P Q R S NOLBRG BONA	91	84.153	-23.544	433.610	433.605							
		91	88.415	-23.572	433.542	433.542							
		91	98.488	-23.616	433.376	433.396							
		92	08.561	-23.629	433.202	433.223							
		92	18.634	-23.612	433.021	433.041							
		92	28.707	-23.563	432.834	432.854							
		92	38.780	-23.483	432.648	432.659							
		92	48.851	-23.373	432.463	432.468							
		92	58.923	-23.231	432.279	432.281							
		92	68.995	-23.118	432.156	432.156							
		92	79.067	-22.925	431.974	431.992							
		92	89.139	-22.702	431.792	431.830							
		92	99.211	-22.447	431.612	431.665							
		93	09.283	-22.161	431.440	431.506							
		93	19.355	-21.844	431.269	431.367							
		93	29.427	-21.497	431.100	431.231							
		93	39.499	-21.118	430.938	431.111							
		93	49.571	-20.709	430.786	431.004							
		93	59.643	-20.268	430.643	430.911							
		93	69.715	-19.807	430.500	430.839							
93	79.787	-19.368	430.357	430.829									
93	89.859	-18.929	430.214	430.822									
93	99.931	-18.489	430.071	430.792									
94	09.003	-18.050	430.928	430.782									
94	19.075	-17.610	430.785	430.796									
94	29.147	-17.171	430.642	430.815									
94	39.219	-16.731	430.499	430.848									
94	49.291	-16.292	430.356	430.862									

NOTE: ELEVATIONS ARE AT TOP OF CONCRETE.

FOR INFORMATION ONLY

FOR REFERENCE ONLY

REHABILITATION FOR
FAI - 55/70 COMPLEX

RAMP G OVER 4TH STREET
TOP OF SLAB ELEVATIONS

STRUCTURE NO. 082-0206

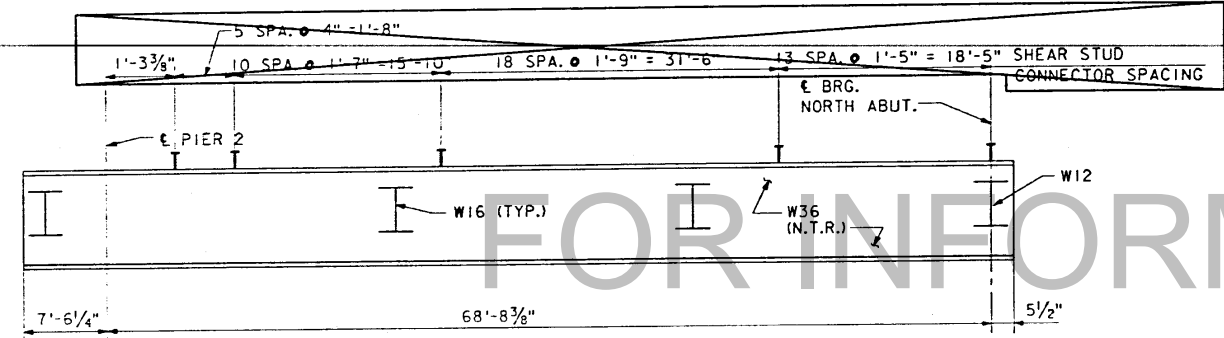
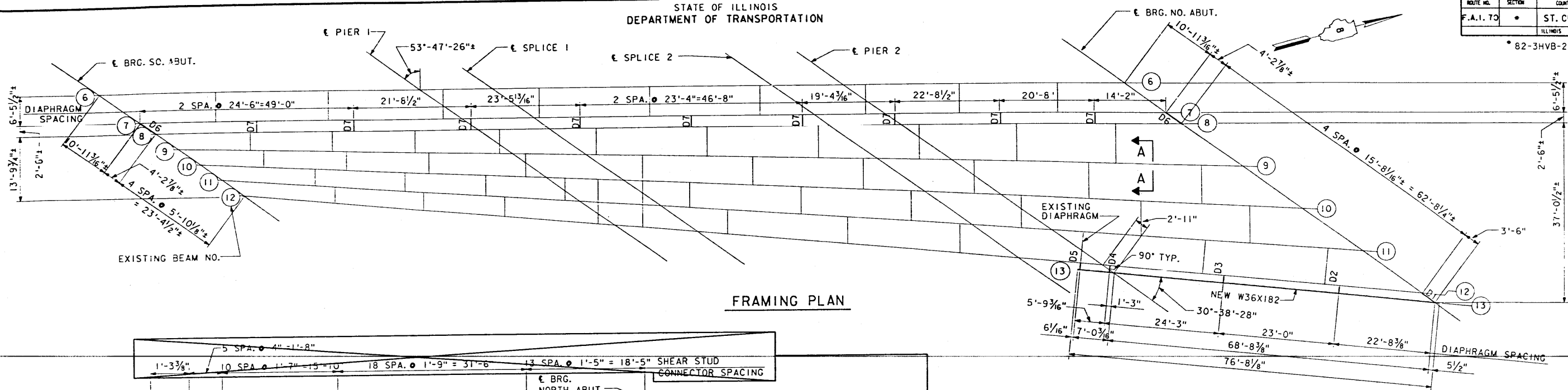
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

SHEET NO. 7 OF 26

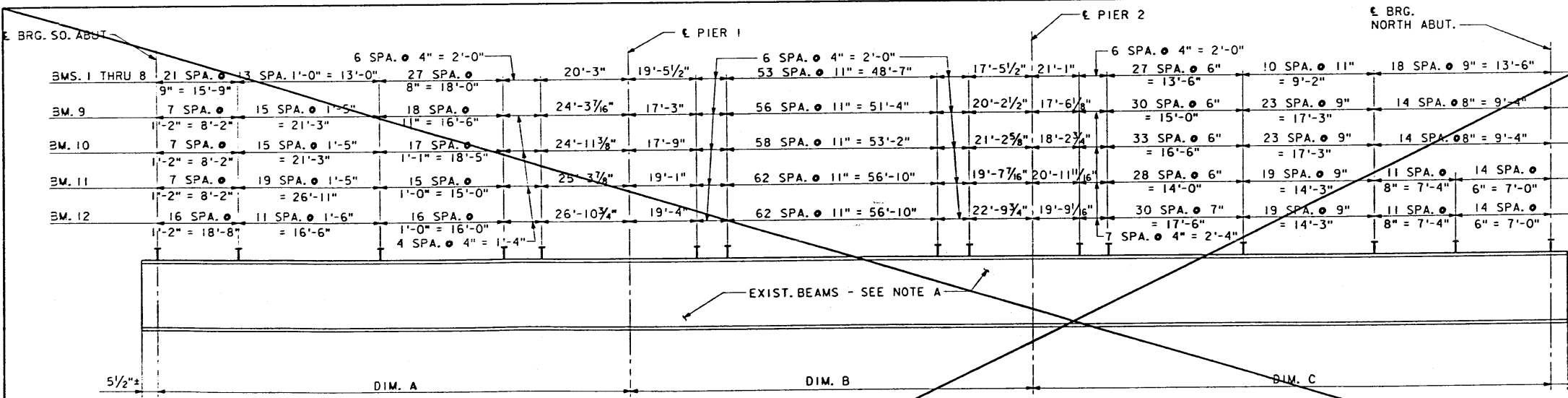
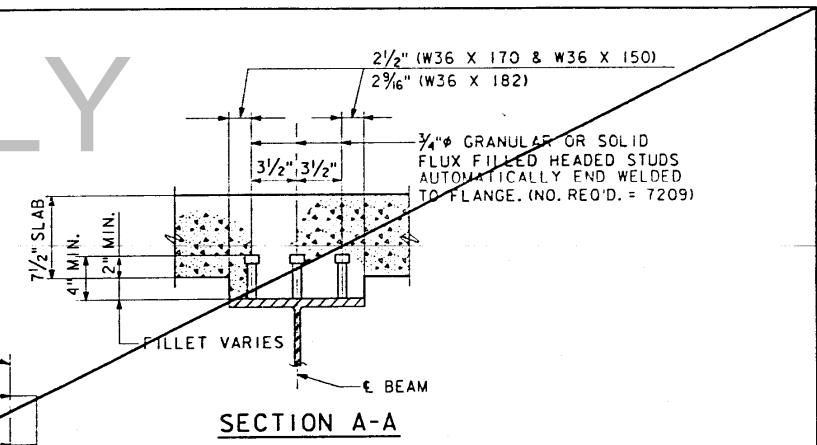
LEVELS PLOTTED DATE: JUNE 23, 1987
FILE: ZF3(110,1)DET49.DGN
PRF:DET49
56 63

K. PATEL
DESIGNED
S. KNEIP
CHECKED
S. STEGMAN
DRAWN
K. PATEL
CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI



NOT IN CONTRACT



NOTES
SEE SHEET 14 OF 26 FOR BEARING DETAILS.
NOTCH TOUGHNESS REQUIREMENTS ARE REQUIRED FOR WIDE FLANGE BEAM (W36 X 182).
SEE GENERAL NOTES FOR DIMENSIONS RELATED TO EXISTING STRUCTURES.

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
FRAMING PLAN AND DETAILS

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

	DIM. A	DIM. B	DIM. C
BMS. 1 THRU 8	69'-0"±	89'-6"±	59'-3"±
BM. 9	71'-6 1/4"±	92'-9 1/2"±	61'-5 1/8"±
BM. 10	74'-1 1/2"±	96'-1 1/2"±	63'-7 3/4"±
BM. 11	76'-8 1/4"±	99'-6 1/2"±	65'-10 1/16"±
BM. 12	79'-4 3/4"±	102'-11 3/4"±	68'-2 1/16"±

NOTE A: BEAMS 1 THRU 8 - W36 X 170
BEAMS 9 THRU 12 FROM SO. ABUT TO SPLICE #1 - W36 X 150
BEAMS 9 THRU 12 FROM SPLICE #1 TO NO. ABUT. - W36 X 182

PREPARED BY
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

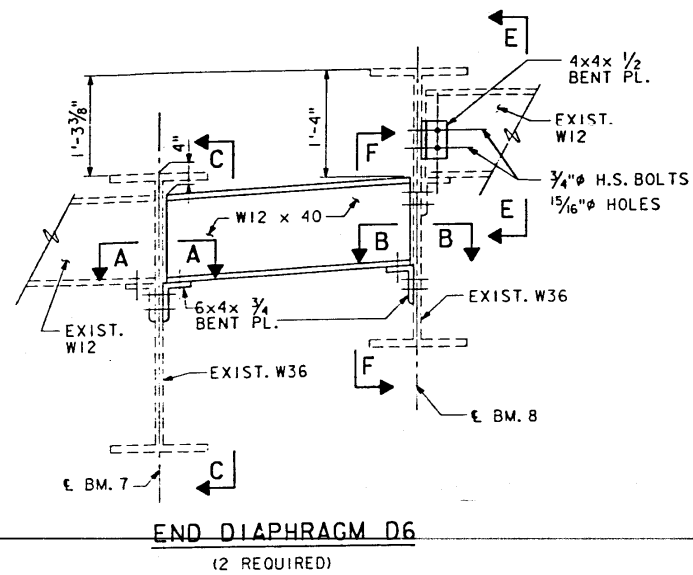
LEVELS PLOTTED DATE: JUNE 23, 1987
35 56 58
10320 FILE: ZF3:110.13DET50.DGN
875361 PRF: DET50

K. PATEL
DESIGNED
S. KNEIP
CHECKED
J. COPLEY
DRAWN
K. PATEL
CHECKED

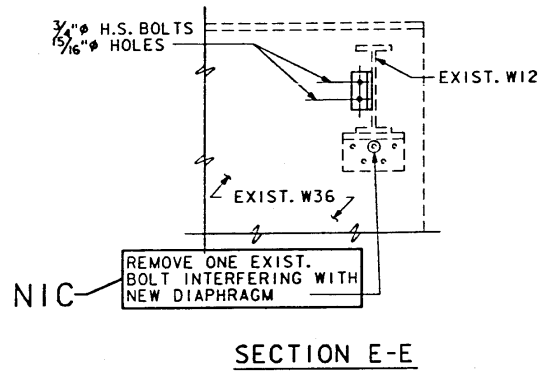
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	89	64-A
ILLINOIS		PROJECT		

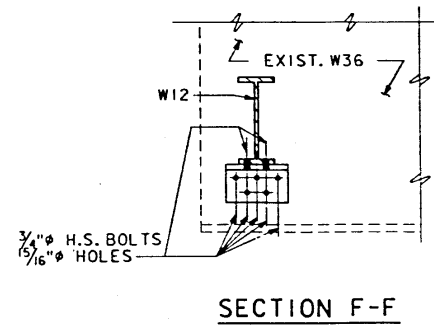
*82-3HVB-2R-1(F)



END DIAPHRAGM D6
(2 REQUIRED)

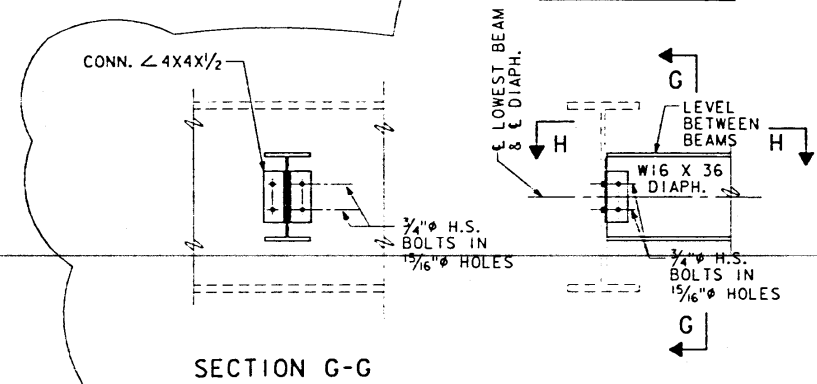


SECTION E-E



SECTION F-F

MARK	LENGTH	NO. REQUIRED
D1	3'-6"	1
D2	1'-8 3/4"	1
D3	1'-7 1/8"	1
D4	1'-5 1/4"	1
D5	1'-5 1/4"	1
D6	±4'-2 1/8"	2
D7	±2'-6"	9

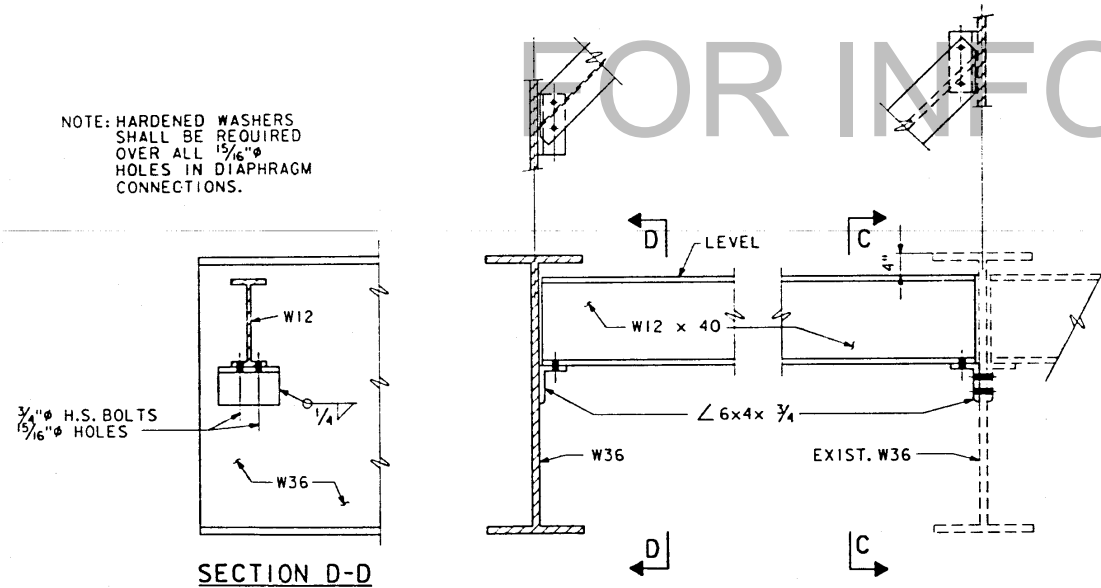


SECTION G-G

NEW INTERMEDIATE DIAPHRAGM
D2 THRU D5 & D7
(13-REQUIRED)

NOTE:
FIELD DRILLING AND ERECTION OF STEEL NOT
IN THIS CONTRACT. SEE SPECIAL PROVISIONS
AND GENERAL NOTES SHEET 2 OF 26.

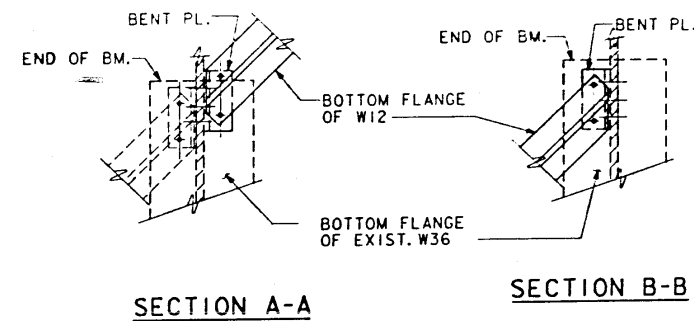
NOTE: HARDENED WASHERS
SHALL BE REQUIRED
OVER ALL 1 5/16\"/>



SECTION D-D

END DIAPHRAGM D1
(1 REQUIRED)

SECTION C-C



SECTION A-A

SECTION B-B

NIC = NOT IN CONTRACT

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
DIAPHRAGM DETAILS

STRUCTURE NO. 082-0206

STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REV. 2/26/88

SHEET NO. 13 OF 26

10320 FILE:ZF3:110.11DET51R.DGN
815362 PRF: DET51R

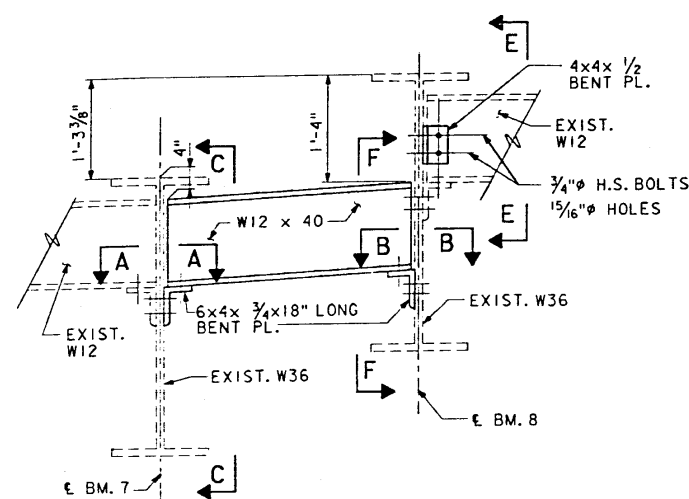
K. PATEL	DESIGNED
S. KNEIP	CHECKED
E. WELZ	DRAWN
K. PATEL	CHECKED

FOR INFORMATION ONLY

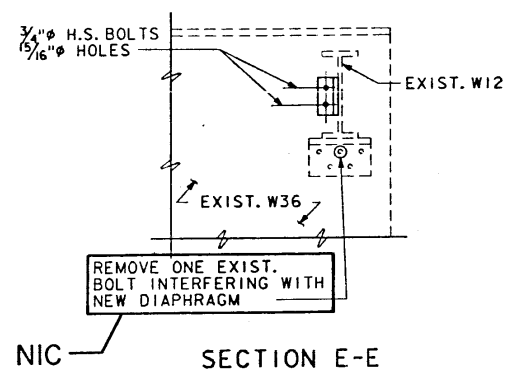
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	•	ST. CLAIR	89	64
		ILLINOIS	PROJECT	

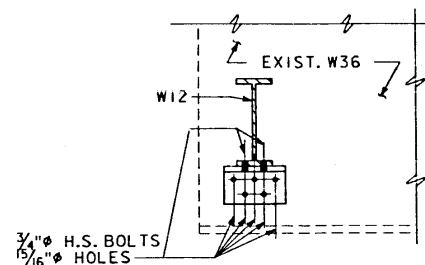
*82-3HVB-2R-1(F)



END DIAPHRAGM D6
(2 REQUIRED)

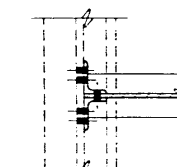


SECTION E-E



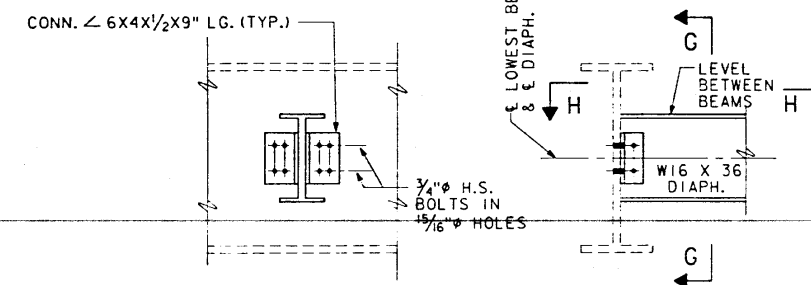
SECTION F-F

LENGTH OF DIAPHRAGMS (CENTER TO CENTER OF BEAMS)		
MARK	LENGTH	NO. REQUIRED
D1	3'-6"	1
D2	1'-8 3/4"	1
D3	1'-7 1/2"	1
D4	1'-5 1/2"	1
D5	1'-5 1/2"	1
D6	±4'-2 1/2"	2
D7	±2'-6"	9



SECTION H-H

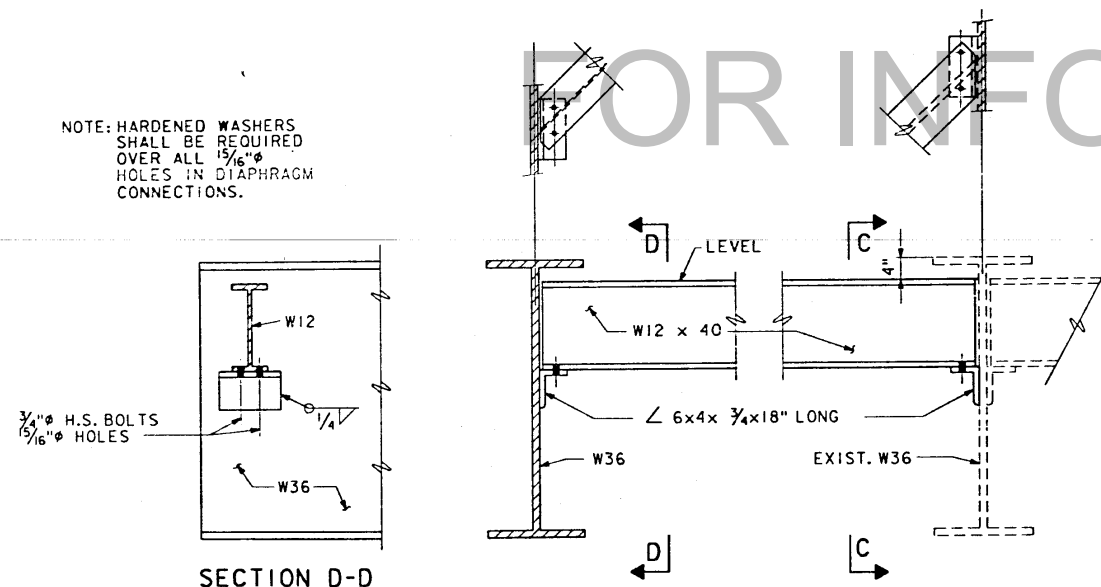
NOTE:
FIELD DRILLING AND ERECTION OF STEEL NOT
IN THIS CONTRACT SEE SPECIAL PROVISIONS
AND GENERAL NOTES SHEET 2 OF 26.



SECTION G-G

**NEW INTERMEDIATE DIAPHRAGM
D2 THRU D5 & D7**
(13-REQUIRED)

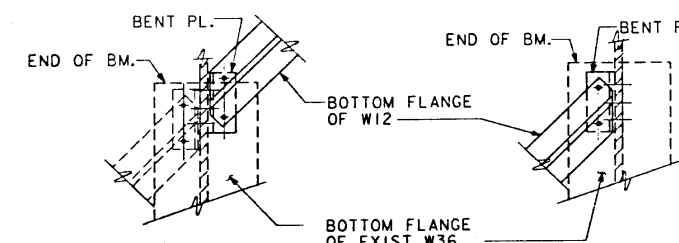
NOTE: HARDENED WASHERS
SHALL BE REQUIRED
OVER ALL 1 5/16" HOLES
IN DIAPHRAGM
CONNECTIONS.



SECTION D-D

END DIAPHRAGM D1
(1 REQUIRED)

SECTION C-C



SECTION A-A

SECTION B-B

NIC = NOT IN CONTRACT

REHABILITATION FOR
FAI - 55/70 COMPLEX
RAMP G OVER 4TH STREET
DIAPHRAGM DETAILS

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

SHEET NO. 13 OF 26

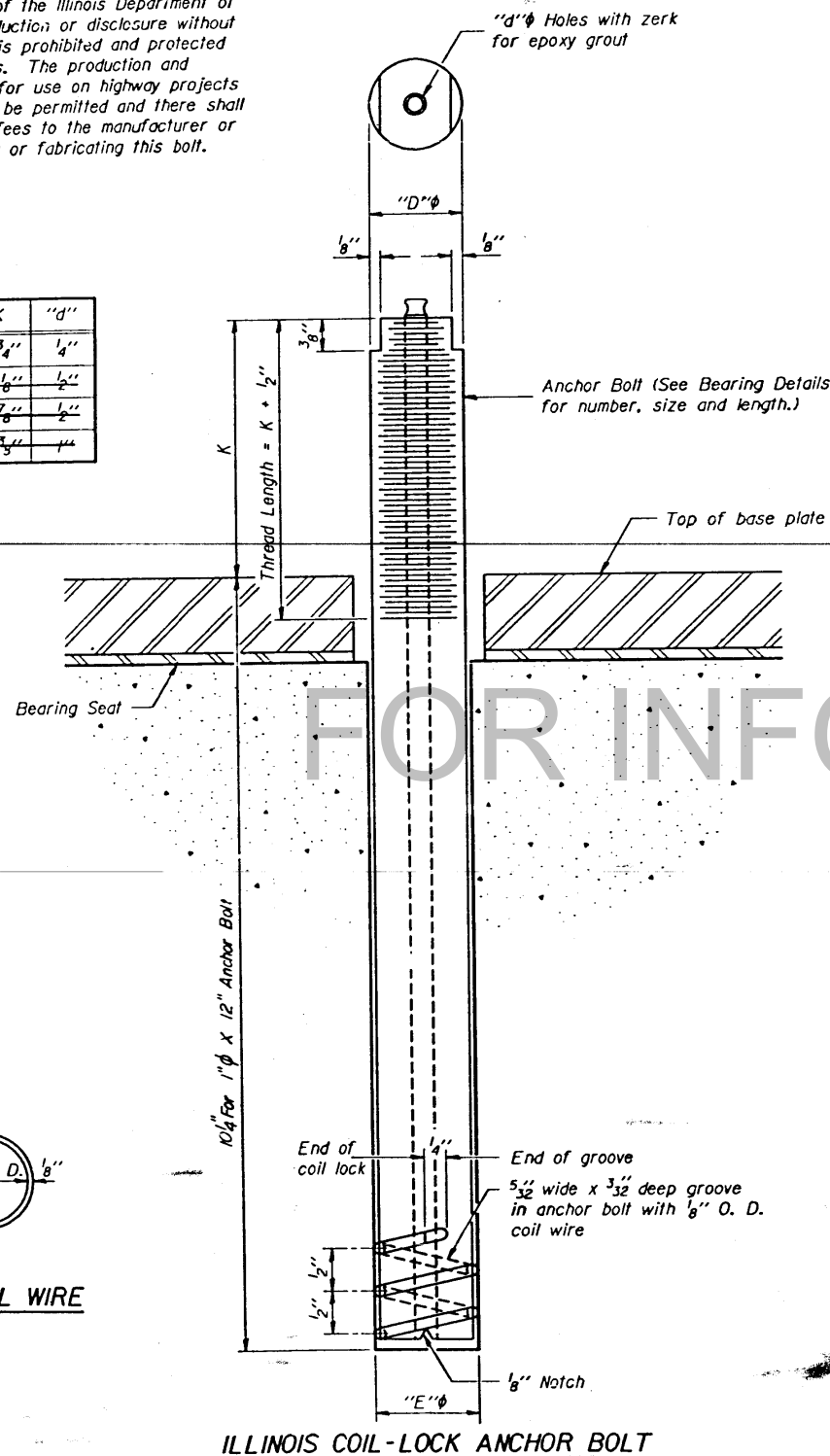
10320 FILE: ZF3:110.130ETS1.DGN
8/13/82 PRF: DET51

K. PATEL
DESIGNED
S. KNEIP
CHECKED
E. WELZ
DRAWN
K. PATEL
CHECKED

FOR INFORMATION ONLY

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	"d"
1"	1 1/8"	1 3/8"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/8"	2 1/8"	1/2"
2"	2 1/8"	1 3/4"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/8"	3 3/4"	1/2"



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 I and of a Class suitable for the temperature at installation.

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.

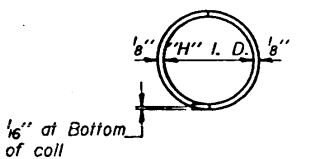
NOT IN CONTRACT

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~~ including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing ~~and~~ Structural Steel".

Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B 695, class 50. Zinc-coated nuts shall be tapped oversize in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S1.1 thru S1.2.1 of the same specifications for lubricant and testing.



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

DESIGNED	_____
CHECKED	_____
DRAWN	_____
CHECKED	K. Patel

ABB-1 12-1-83

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ANCHOR BOLT DETAILS FOR BEARING

STRUCTURE NO. 082-0206
STA. 11+32.81 TO STA. 13+53.94 (FAI-70) ST. CLAIR CO.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-4HB-1	ST. CLAIR	92	1
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT	I-70-1(75)1	

P-98-087-00

FOR INDEX OF SHEETS, SEE SHEET NO.3

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

F. A. I. ROUTE 70

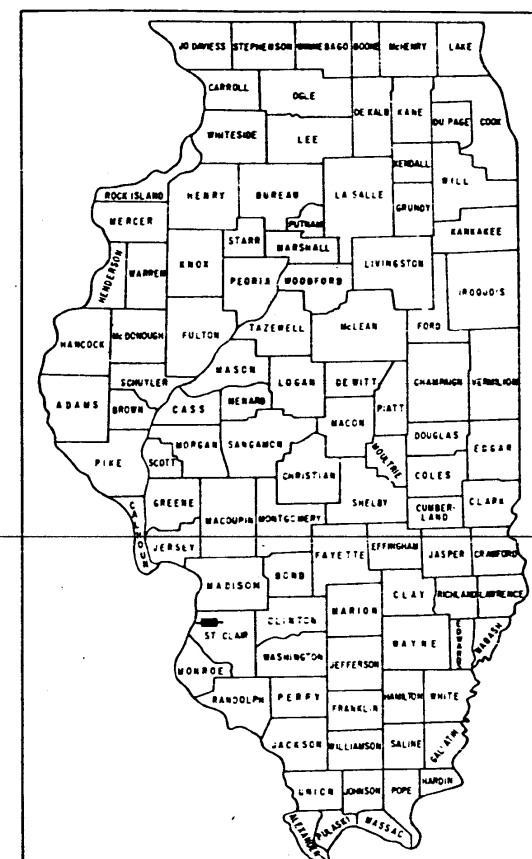
PROJECT I-70-1(75)1

SECTION 82-4HB-1

ST. CLAIR COUNTY

GRADE SEPARATIONS

C-98-003-65



LOCATION OF SECTION INDICATED THUS: [Black Box]

APPROVED

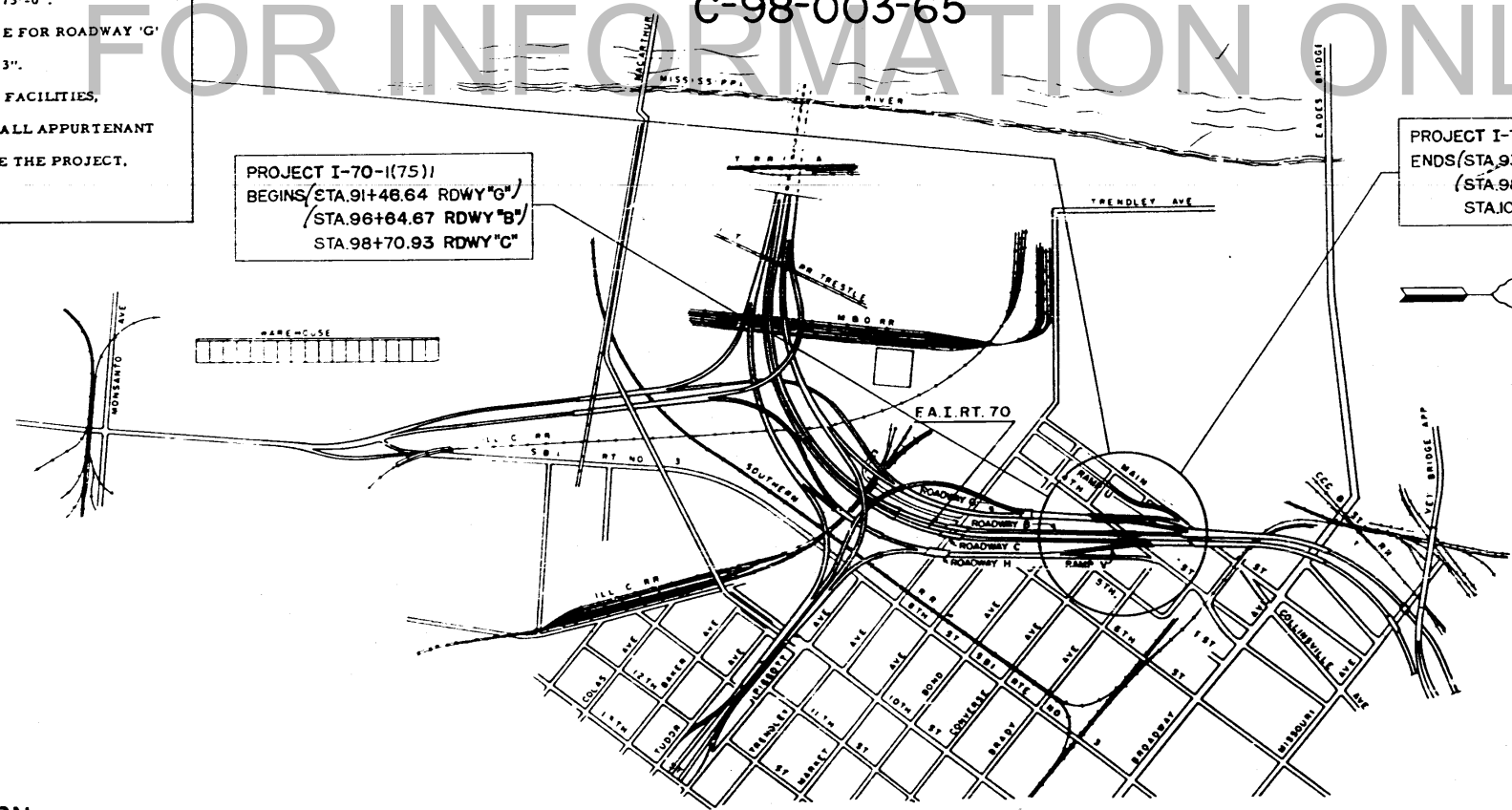
[Signature]
District Engineer

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED	4-20-65
DESIGNED	June 10, 1965
DRAWN	William Quaddell
CHECKED	June 10, 1965
APPROVED	H. P. Carter
DATE	June 10, 1965
	Francis J. Perry

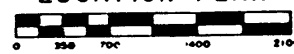
SECTION 82-4HB-1 INCLUDES THE COMPLETE CONSTRUCTION OF THREE BRIDGES ON R. C. OPEN PIERS AND ABUTMENTS ON PILES CARRYING F. A. I. ROUTE 70 OVER 4TH STREET AND CONSISTING OF:
ONE 3 SPAN CONTINUOUS WF BEAM STRUCTURE FOR ROADWAY 'B' AT STATION 97+67.92, SPANS 54'-3", 89'-6" AND 74'-6".
ONE 3 SPAN CONTINUOUS PLATE GIRDER STRUCTURE FOR ROADWAY 'C' AT STATION 99+80.16, SPANS 60'-3", 94'-7" AND 73'-0".
ONE 1 SPAN CONTINUOUS WF BEAM STRUCTURE FOR ROADWAY 'G' AT STATION 92+64.64, SPANS 69'-0", 89'-6" AND 59'-3".
THIS SECTION ALSO INCLUDES GRADING, DRAINAGE FACILITIES, THE CONSTRUCTION OF RETAINING WALL 'A', AND ALL APPURTENANT AND COLLATERAL WORK NECESSARY TO COMPLETE THE PROJECT, AS SHOWN ON THE PLANS.

PROJECT I-70-1(75)1
BEGINS (STA. 91+46.64 RDWY "G")
(STA. 96+64.67 RDWY "B")
STA. 98+70.93 RDWY "C"

PROJECT I-70-1(75)1
ENDS (STA. 93+72.89 RDWY "G")
(STA. 98+91.42 RDWY "B")
STA. 101+07.26 RDWY "C"



CITY OF EAST ST. LOUIS
LOCATION PLAN



LENGTH TO BE IMPROVED

(226.25 FT. - 0.043 MILE RDWY "G")
(226.75 FT. - 0.043 MILE RDWY "B")
PROJECT LENGTH = 236.33 FT. - 0.045 MILE RDWY "C"

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED
DISTRICT ENGINEER DATE

CONTRACT NO. 24249

ROAD CLASSIFICATION
F.A.I.-70 (ROADWAY B & C) ROAD CLASS 4234-T-50
4th STREET ROAD CLASS 305-T-30
ROADWAY G & RAMP U ROAD CLASS 1512-T-50

2259
[Signature]
March 13, 1965

082-0206

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-4HB-1	ST. CLAIR	92	3
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

SUMMARY OF QUANTITIES

SECTION 82-4HB-1

CODE NO	CONSTRUCTION TYPE CODE Y231 ITEM	UNIT	TOTAL QUANTITY
010001	TREE REMOVAL (6 TO 15 INCH DIAMETER)	IN DIA	330
010002	TREE REMOVAL (OVER 15 INCH DIAMETER)	IN DIA	50
014001	SPECIAL EXCAVATION	CU YD	312
016001	EMBANKMENT	CU YD	147,048
020001	TRENCH BACKFILL	CU YD	1,313
050001	CLASS A EXCAVATION FOR STRUCTURES	CU YD	1,356
052003	CLASS X CONCRETE	CU YD	30173
052021	PROTECTIVE COAT	SQ YD	4,591
054001	FURNISHING AND ERECTING STRUCTURAL STEEL POUND		1,236,860
059001	REINFORCEMENT BARS	POUND	469,180
060005	FURNISHING CREOSOTED PILES 20.1 TO 38 FEET	LIN FT	2,249
060008	DRIVING TIMBER PILES	LIN FT	2,249
060043	DRIVING CONCRETE PILES	LIN FT	20,705
060044	FURNISHING CONCRETE PILES	LIN FT	20,705
060047	TEST FILE CONCRETE	EACH	13
061001	NAME PLATES	EACH	3
063021	PERFORATED CORRUGATED METAL PIPE 8"	LIN FT	280
066105	STORM SEWER, TYPE 1, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS III, 48"	LIN FT	4
066210	STORM SEWER, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS II, 12"	LIN FT	128
066211	STORM SEWER, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS II, 15"	LIN FT	38
066212	STORM SEWER, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS II, 18"	LIN FT	602
066214	STORM SEWER, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS II, 24"	LIN FT	340
066216	STORM SEWER, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS II, 30"	LIN FT	522
066218	STORM SEWER, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS II, 36"	LIN FT	4
066281	STORM SEWER, TYPE 3, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS III, 18"	LIN FT	300
066288	STORM SEWER, TYPE 3, REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE CLASS III, 42"	LIN FT	378
075021	CATCH BASIN, TYPE A, 4' DIAMETER, TYPE 8, GRATE	EACH	1
075081	MANHOLE, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	5
075096	MANHOLE, TYPE A, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	3
075105	INLETS, TYPE A, TYPE 10 FRAME	EACH	1
079001	FILLING EXISTING MANHOLES	EACH	4
079003	FILLING EXISTING INLETS	EACH	4
083002	SLOPE WALL 4 INCH	SQ YD	3,085
085022	PAVEMENT REMOVAL AND BITUMINOUS REPLACEMENT, TYPE 1A, 9 INCH	SQ YD	101
085023	PAVEMENT REMOVAL AND BITUMINOUS REPLACEMENT, TYPE 2, 9 INCH	SQ YD	92
201380	COMBINATION ENGINEER'S FIELD OFFICE AND LABORATORY	EACH	1
200004	ALUMINUM HANDRAIL	LIN FT	1,365
201023	BRIDGE SEAT SEALANT	LUMP SUM	1

INDEX OF SHEETS
SECTION 82-4HB-1

SHEET NO.	TITLE
1	TITLE SHEET
2	TYPICAL SECTIONS FOR GRADING
3	INDEX OF SHEETS, SUMMARY OF QUANTITIES, GENERAL NOTES
4	PLAN - F. A. I. ROUTE 70 RDWY 'B' STA. 88/00 TO STA. 95/00
5	PLAN - F. A. I. ROUTE 70 RDWY 'B' STA. 95/00 TO STA. 107/00
6	PROFILE - F. A. I. ROUTE 70 RDWY 'B' STA. 79/49.83 TO STA. 103/00
7	PROFILE - F. A. I. ROUTE 70 RDWY 'C' STA. 80/37.83 TO STA. 102/50
8	PROFILE - F. A. I. ROUTE 70 RDWY 'G' STA. 102/00 TO STA. 118/00
9	PROFILE - F. A. I. ROUTE 70 RDWY 'G' STA. 87/00 TO STA. 99/00
10	PROFILE - F. A. I. ROUTE 70 RAMP U - RAMP V - RAMP T
11	PLAN OF EXISTING CONDITIONS & UTILITIES (BOND AVE. TO WALNUT AVE.)
12	DRAINAGE PLANS - RDWY 'B' STA. 79/49.83 TO STA. 88/00
13	DRAINAGE PLANS - RDWY 'B' STA. 88/00 TO STA. 95/00
14	DRAINAGE PLANS - RDWY 'B' STA. 95/00 TO STA. 107/00
15	DRAINAGE DETAILS FOR INLET BEHIND RETAINING WALL 'A'
16	DETAILS FOR JUNCTION BOX 'A'
17	RIGHT OF WAY PLANS (FOR INFORMATION ONLY)
18	RIGHT OF WAY PLANS (FOR INFORMATION ONLY)
19	RIGHT OF WAY PLANS (FOR INFORMATION ONLY)
20	LIST OF BENCH MARKS, TIES TO TRAVERSE LINE AND GENERAL PLAN OF TRAVERSE LINE.
21	ALIGNMENT PLAN - RDWY 'C' STA. 93/00 TO STA. 116/00
22	LIST OF COORDINATES AND DESCRIPTIONS
23	LIST OF COORDINATES AND DESCRIPTIONS
24 THRU 36	BRIDGE PLANS - F. A. I. ROUTE 70 RDWY 'B' OVER FOURTH STREET (1 THRU 13 OF 13)
37 THRU 53	BRIDGE PLANS - F. A. I. ROUTE 70 RDWY 'C' OVER FOURTH STREET (1 THRU 17 OF 17)
54 THRU 71	BRIDGE PLANS - F. A. I. ROUTE 70 RDWY 'G' OVER FOURTH STREET (1 THRU 18 OF 18)
72 THRU 78	RETAINING WALL 'A' (1 THRU 7 OF 7)
79 THRU 86	CROSS SECTION SHEETS
87, 87A, 87B	STANDARD DRAWINGS 1683-2, 1514-2 AND 1527-2
88, 88A, 88B	STANDARD DRAWINGS 2217, 2213 AND 2219
89, 89A, 89B	STANDARD DRAWINGS 1686-2, 2176 AND 2117
90, 90A, 90B	STANDARD DRAWINGS 1971-3, 2208-1 AND 2114
91	STANDARD DRAWING 2209
92, 92A	STANDARD DRAWINGS 2153-4 AND 2113-1

GENERAL NOTES

THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 2, 1958 AND THE SUPPLEMENTAL SPECIFICATIONS EFFECTIVE MARCH 2, 1964 SHALL GOVERN THIS CONSTRUCTION.

ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.

THE PROFILE GRADE LINE REFERS TO THE GRADE ELEVATION AT THE POINT SHOWN ON THE TYPICAL SECTIONS AND PLANS.

ALL EXPOSED EXISTING PAVEMENT WHICH WILL NOT BE IN SERVICE SHALL BE REMOVED WITHIN THE LIMITS OF RIGHT OF WAY, OR AS DIRECTED BY THE ENGINEER.

BUILDINGS WITHIN R. O. W. LIMITS HAVE BEEN REMOVED OR ARE IN THE PROCESS OF BEING REMOVED DOWN TO EXISTING GROUND LEVEL AND BASEMENTS BACKFILLED WITH BRICK OR MASONRY RUBBLE, AND SAND TO FILL THE VOIDS.

THE FOLLOWING UTILITY COMPANIES HAVE FACILITIES WITHIN THE LIMITS OF CONSTRUCTION WHICH MAY REQUIRE ADJUSTMENTS:
EAST ST. LOUIS AND INTERURBAN WATER COMPANY
ILLINOIS POWER COMPANY
SOUTHWESTERN BELL TELEPHONE COMPANY
UNION ELECTRIC COMPANY

TWO EACH SIGNS (STANDARD 2153-4) TO BE CONSTRUCTED AT LOCATIONS AS INDICATED ON SHEETS 4 & 5.

POSITIVE PROFILE GRADES ARE IN THE DIRECTION OF TRAFFIC AND HIGHER ELEVATIONS. NEGATIVE PROFILE GRADES ARE IN THE DIRECTION OF TRAFFIC AND LOWER ELEVATIONS.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS

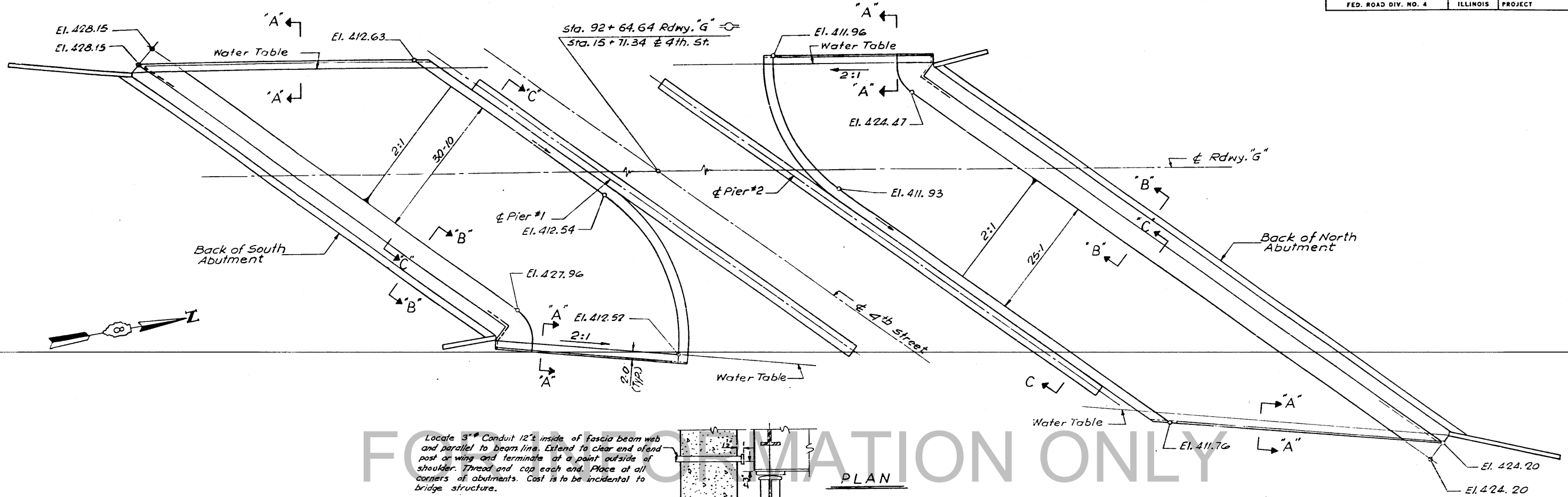
INDEX OF SHEETS
SUMMARY OF QUANTITIES
GENERAL NOTES

F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

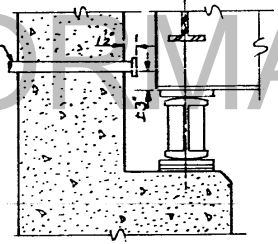
* CONSTRUCTION TYPE CODE CR-50
Rev. Typ. Section 11

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. -70	82-4HB-1	ST. CLAIR	92	55
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

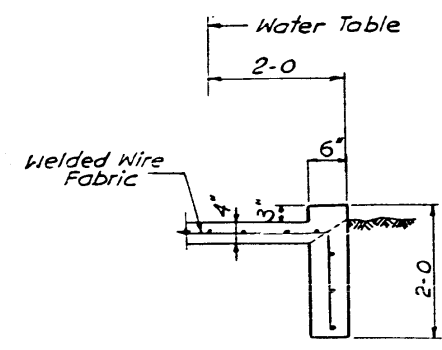


FOR INFORMATION ONLY

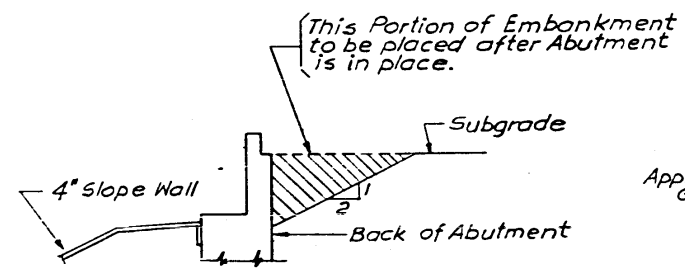
Locate 3" Conduit 12' inside of fascia beam web and parallel to beam line. Extend to clear end of end post or wing and terminate at a point outside of shoulder. Thread and cap each end. Place at all corners of abutments. Cost is to be incidental to bridge structure.



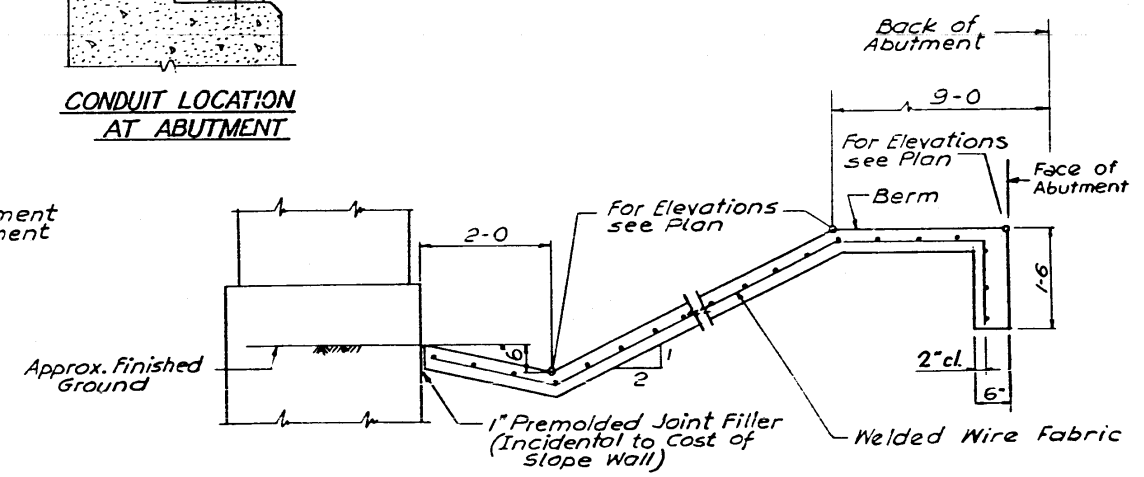
CONDUIT LOCATION AT ABUTMENT



SECTION "A-A"



SECTION "B-B"



SECTION "C-C"

STATION 92+64.64
 BUILT 1965 BY
 STATE OF ILLINOIS
 F.A.I.R.T.70 SEC.82-4HB-1
 FA. PROJ. I-70-1(75)1
 LOADING HS20 #ALT.

NOTE: Name Plate to be placed at location shown on Sheet #1 See Standard 2113-1 for Details of Name Plate

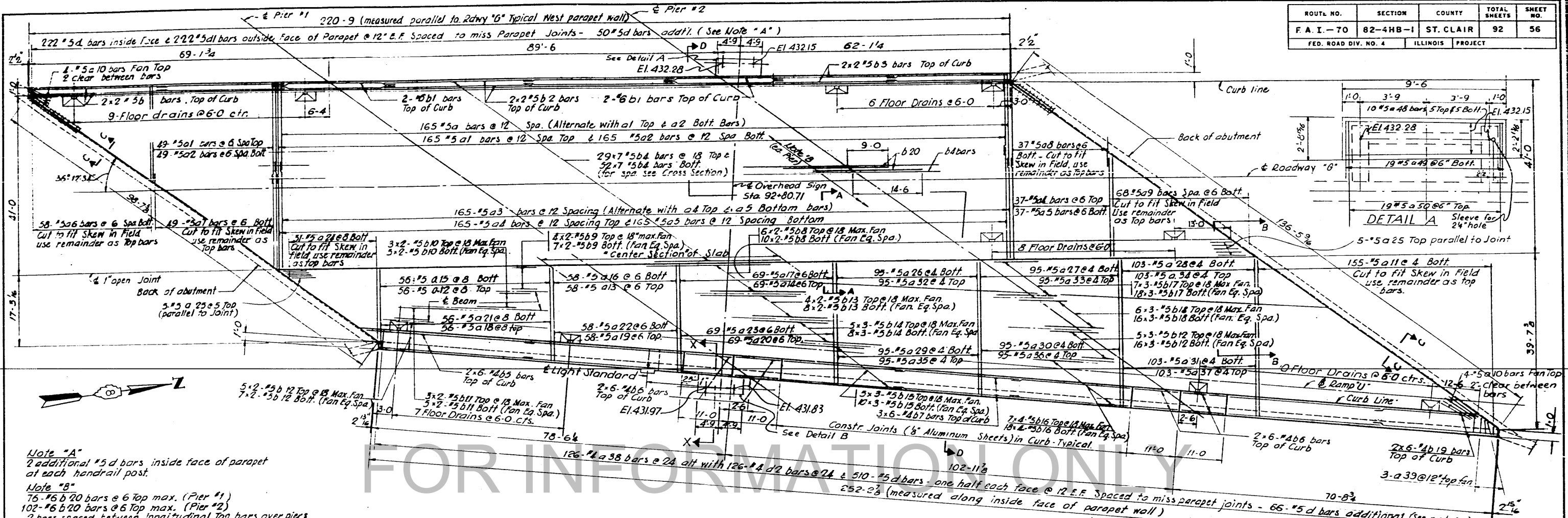
BILL OF MATERIAL		
Item	Unit	Quantity
Slope Wall 4"	Sq. Yds.	1045
Name Plate	Each	1
Class "A" Excavation for Structures	Cu. Yds.	5

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
**SLOPE WALL DETAILS
 AND NAME PLATE**
 F. A. I. ROUTE 70 ROADWAY "G"
 OVER 4TH STREET
 STATION 92 + 64.64
 F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
2 of 18

DESIGNED BY: R.F.W.
 DRAWN BY: K.M.
 CHECKED BY: M.A.O.
 APPROVED BY: K.A.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-4HB-1	ST. CLAIR	92	56
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		

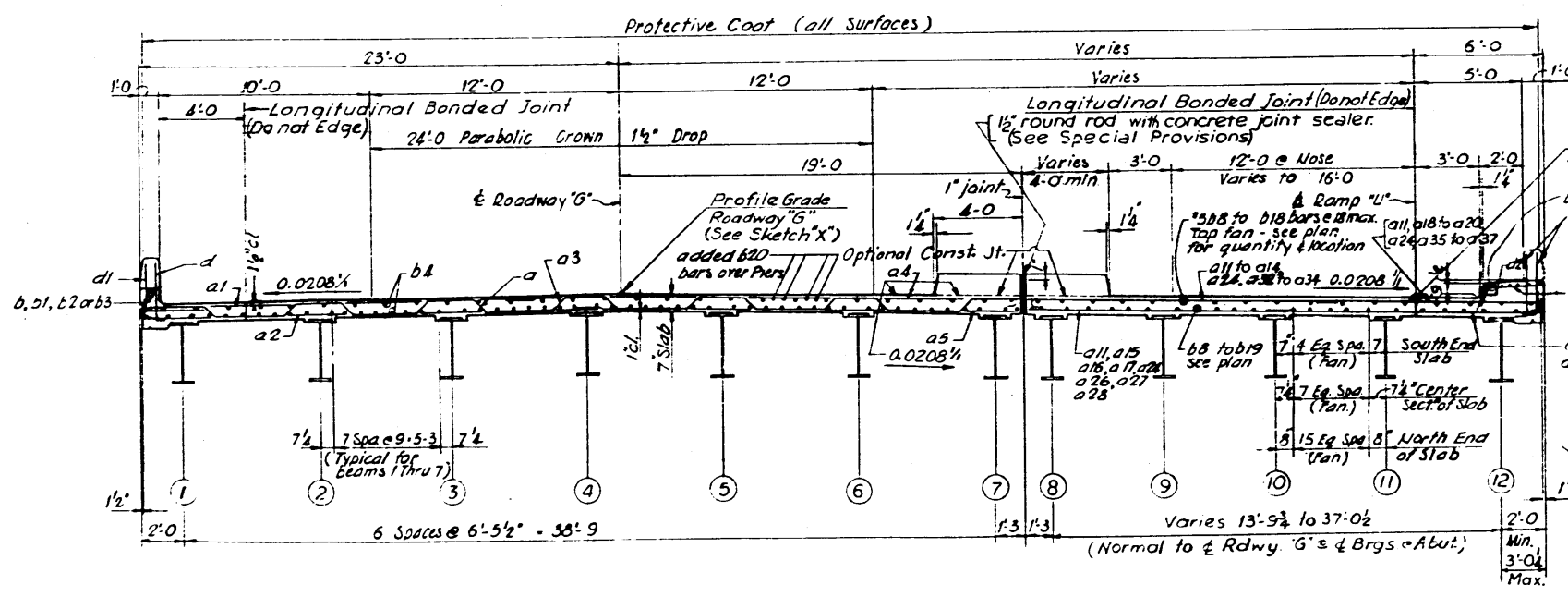


Note "A"
2 additional #5 d bars inside face of parapet at each handrail post.

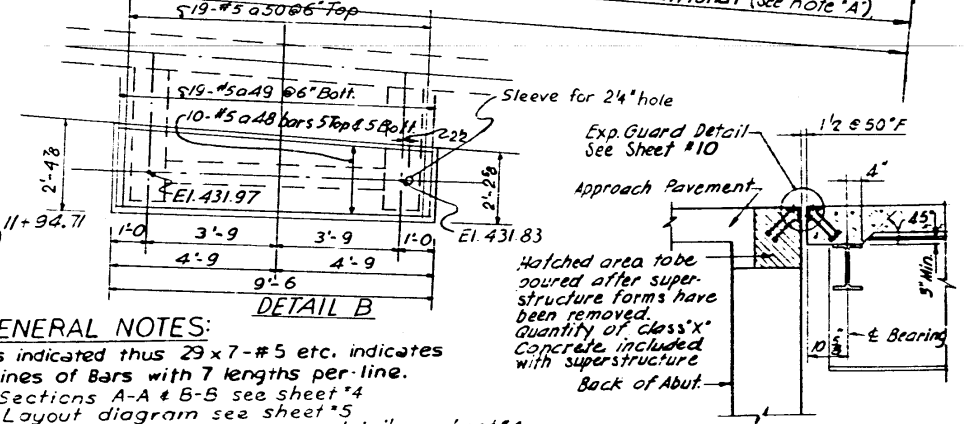
Note "B"
76-#6 b 20 bars @ 6 Top max. (Pier #1)
102-#6 b 20 bars @ 6 Top max. (Pier #2)
2 bars spaced between longitudinal top bars over piers

FOR INFORMATION ONLY

PLAN



CROSS SECTION D-D



GENERAL NOTES:
Bars indicated thus 29 x 7 - #5 etc. indicates 29 lines of Bars with 7 lengths per line.
For Sections A-A & B-B see sheet #4
For Layout diagram see sheet #5
For Light Standard Anchorage detail see sheet #4
For parapet reinforcing, handrail posts & joint spacing see sheet #6.
For Median curb dimensions & reinforcing details see sheet #4.

SECTION "C-C"

SKETCH "X"

Notes: All elevations shown on plans for hatched portion of bridge were derived from Profile Grade Line on & Ramp "U". Elevations for remainder of bridge were derived from Profile Grade Line on & Roadway "G".

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS

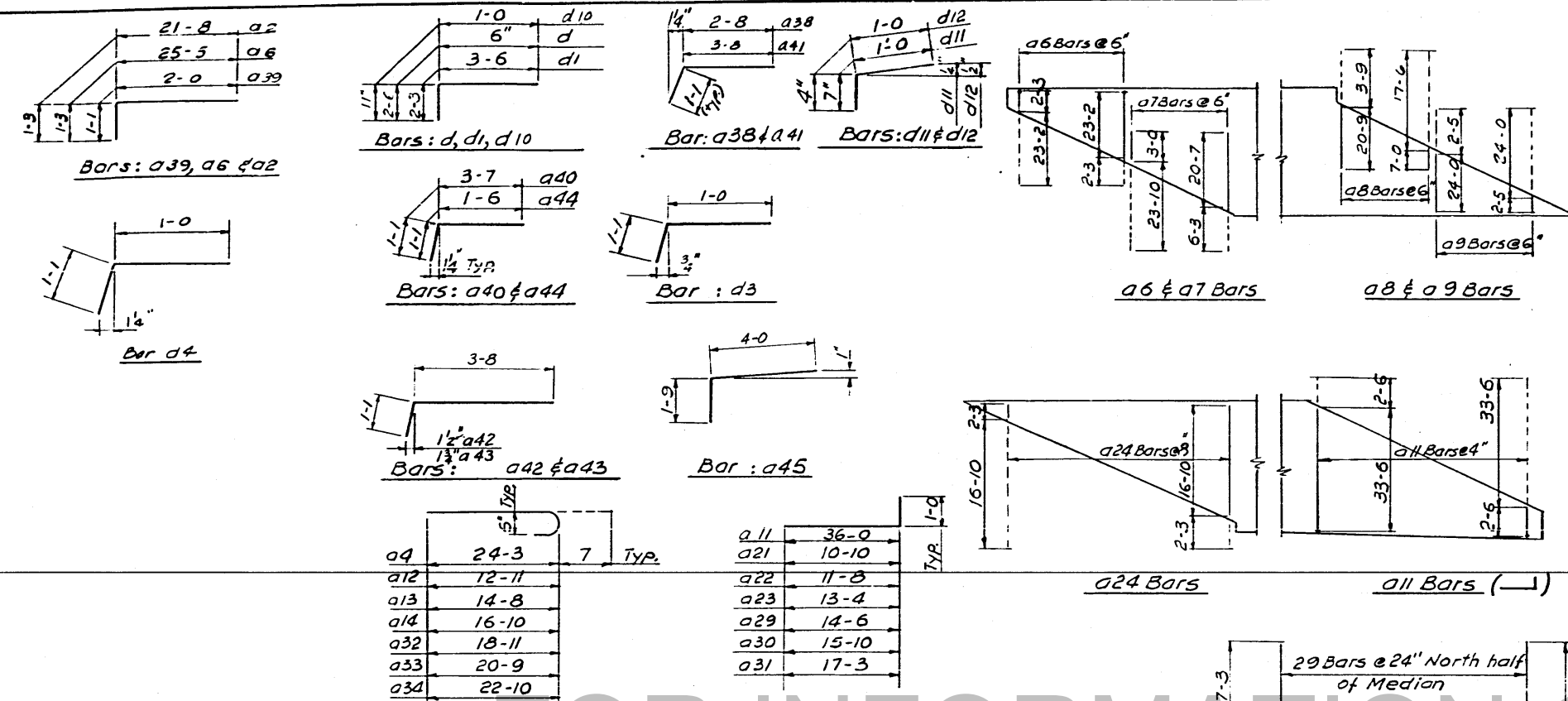
SLAB
F. A. I. ROUTE 70 ROADWAY "G"
OVER 4TH STREET
STATION 92 + 64.64

F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1

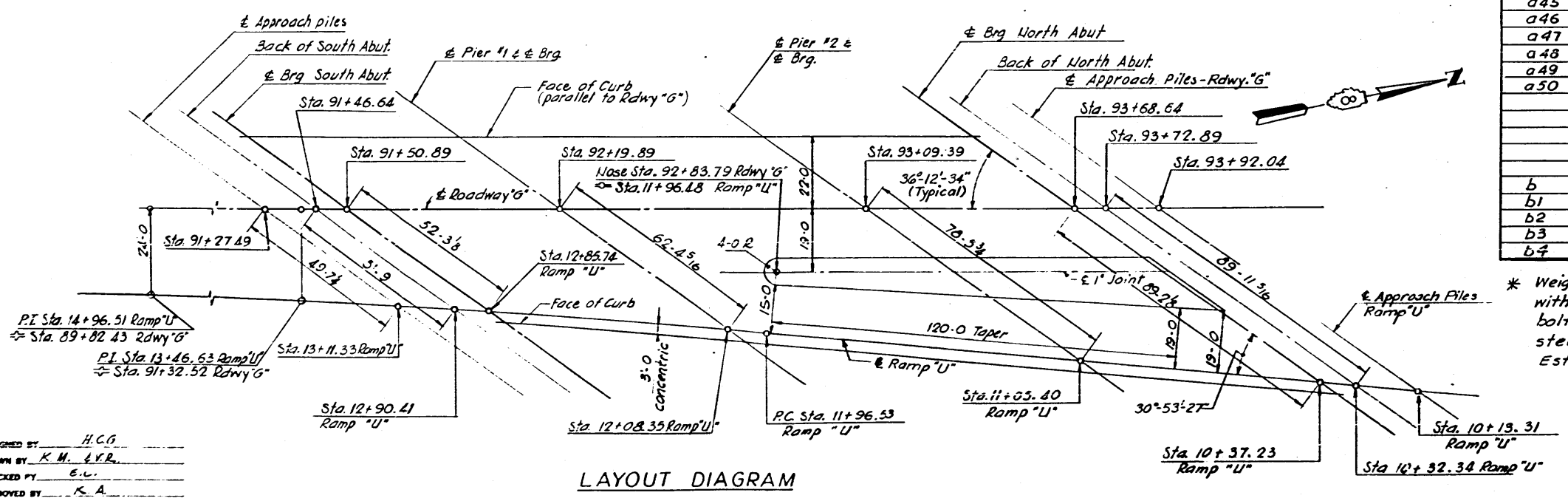
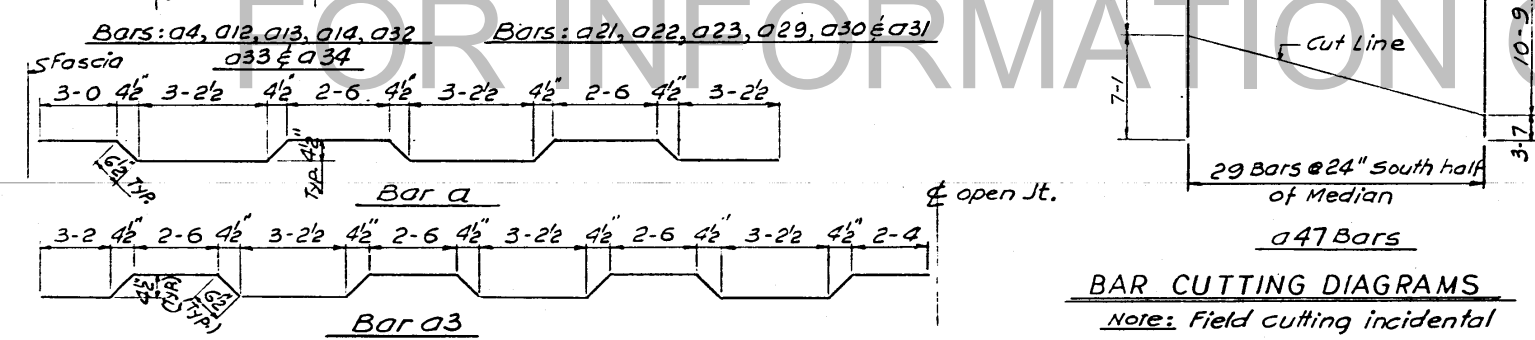
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
3 OF 18

DESIGNED BY: R.F.U.
DRAWN BY: F.R.
CHECKED BY: B.L.
APPROVED BY: K.A.



BILL OF MATERIAL				BILL OF MATERIAL					
Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape
a1	165	#5	20-4	U	b5	12	#4	35-5	—
a2	214	—	18-5	—	b6	24	#4	10-9	—
a3	165	—	26-5	U	b7	18	#4	27-8	—
a4	202	—	24-10	U	b8	32	#5	34-6	—
a5	202	—	21-0	—	b9	22	—	32-8	—
a6	58	—	26-8	—	b10	16	—	33-9	—
a7	49	—	26-10	—	b11	16	—	35-3	—
a8	37	—	24-6	—	b12	87	—	36-0	—
a9	68	—	26-5	—	b13	24	—	35-9	—
a10	8	—	6-0	—	b14	39	—	25-0	—
a11	155	—	37-0	—	b15	45	—	25-11	—
a12	56	—	13-6	U	b16	100	—	28-3	—
a13	58	—	15-3	U	b17	75	—	33-8	—
a14	69	—	17-5	U	b18	66	#5	34-10	—
a15	56	—	10-10	—	b19	12	#4	31-5	—
a16	58	—	12-4	—	b20	178	#6	23-6	—
a17	69	—	14-1	—	b21	32	#5	29-0	—
a18	56	—	8-8	—	b22	5	#5	10-0	—
a19	58	—	9-1	—	b23	54	#5	30-6	—
a20	69	—	10-3	—	b24	16	#5	5-0	—
a21	56	—	11-10	—					
a22	58	—	12-8	—					
a23	69	—	14-4	—					
a24	31	—	19-1	—					
a25	10	—	5-6	—					
a26	95	—	15-9	—					
a27	95	—	17-0	—					
a28	103	—	18-11	—					
a29	95	—	15-6	—					
a30	95	—	16-10	—					
a31	103	—	18-3	—					
a32	95	—	19-6	—					
a33	95	—	21-4	—					
a34	103	—	23-5	—					
a35	95	—	11-4	—					
a36	95	—	12-2	—					
a37	103	#5	13-5	—					
a38	126	#4	3-9	—					
a39	3	—	3-1	—					
a40	33	—	4-8	—					
a41	10	—	4-9	—					
a42	10	—	4-9	—					
a43	6	—	4-9	—					
a44	6	—	2-7	—					
a45	4	—	5-9	—					
a46	15	—	10-0	—					
a47	29	#4	14-4	—					
a48	20	#5	9-3	—					
a49	38	#5	3-6	—					
a50	38	#5	7-0	—					



* Weight of bearing assemblies with lead plates and anchor bolts included as structural steel.
Estimated weight = 13,990 lbs.

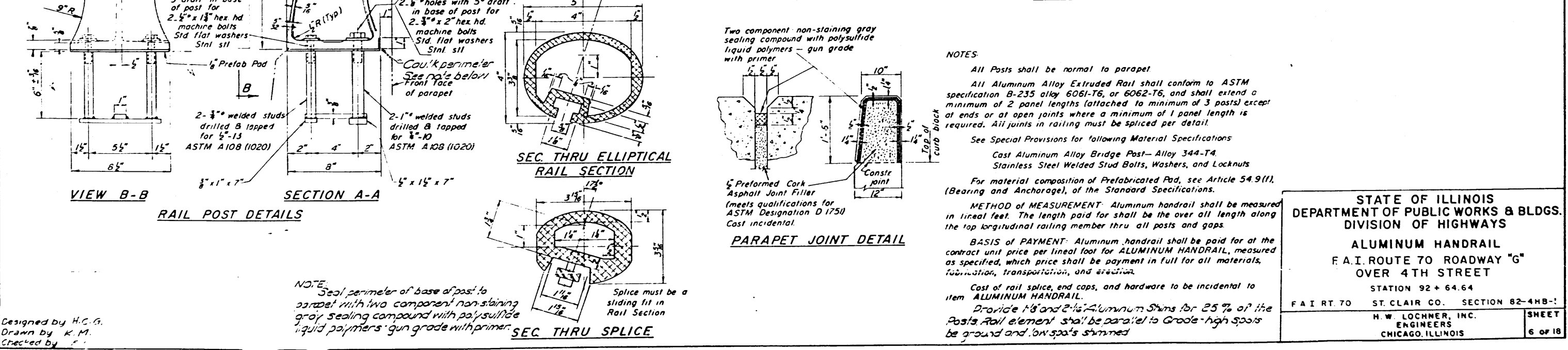
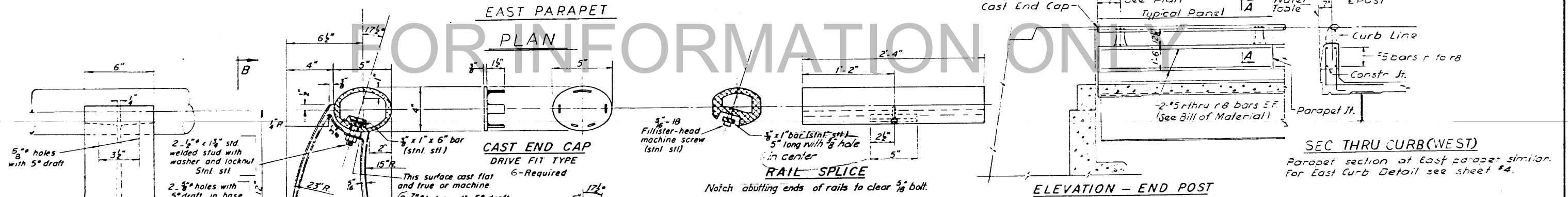
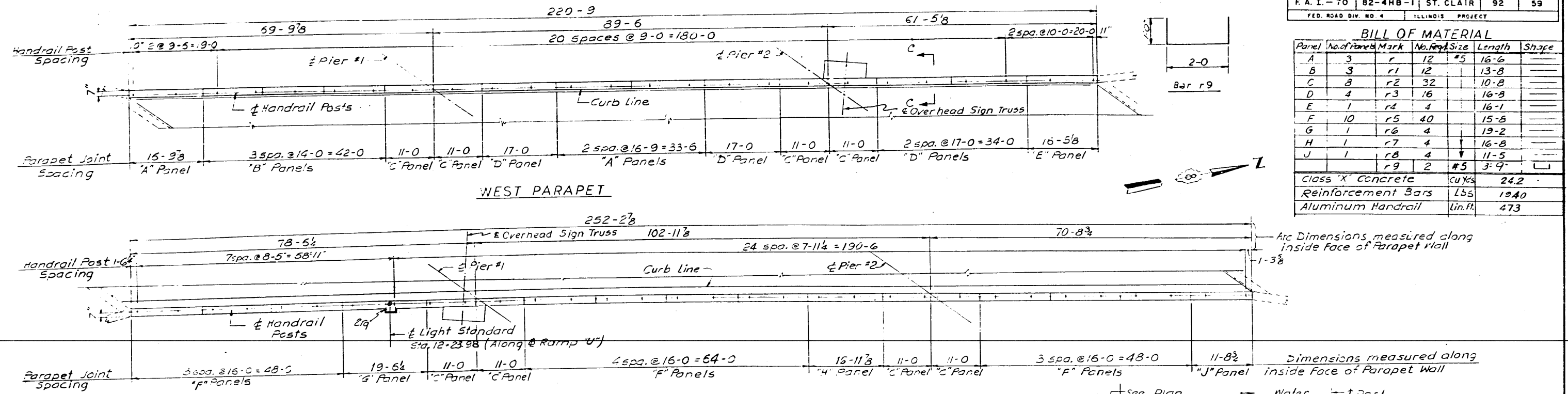
Item	Unit	Quantity
b	4	#5 29-10
b1	4	#6 24-6
b2	4	#5 34-2
b3	4	#5 25-8
b4	567	#5 32-6
Class "X" Concrete	Cu. Yds	471.1
Reinforcement Bars	Lbs.	123,150
Structural Steel	Lbs.	562,880
Protective Coat	Sq. Yds	1,934

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
LAYOUT DIAGRAM AND
REINFORCEMENT DETAILS
F. A. I. ROUTE 70 ROADWAY "G"
OVER 4TH STREET
STATION 92 + 64.64
F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS
SHEET 5 of 18

DESIGNED BY H.C.G.
DRAWN BY K.M. & Y.R.
CHECKED BY E.L.
APPROVED BY R.A.

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-4HB-1	ST. CLAIR	92	59
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				

Panel	No. of Panels	Mark	No. Req'd	Size	Length	Shape
A	3	r1	12	#5	16'-6"	
B	3	r1	12		13'-8"	
C	8	r2	32		10'-8"	
D	4	r3	16		16'-8"	
E	1	r4	4		16'-1"	
F	10	r5	40		15'-8"	
G	1	r6	4		19'-2"	
H	1	r7	4		16'-8"	
J	1	r8	4		11'-5"	
		r9	2	#5	3'-9"	
Class "X" Concrete					Cu.Yds	24.2
Reinforcement Bars					Lbs	1040
Aluminum Handrail					Lin.Ft.	473



NOTES

All Posts shall be normal to parapet

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications

Cast Aluminum Alloy Bridge Post - Alloy 344-T4

Stainless Steel Welded Stud Bolts, Washers, and Locknuts

For material composition of Prefabricated Pad, see Article 54.9(1), (Bearing and Anchorage), of the Standard Specifications.

METHOD OF MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

BASIS OF PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to ALUMINUM HANDRAIL.

Provide 1" x 8" and 2" x 4" Aluminum Strips for 25% of the Posts Rail element shall be parallel to Grade-high spots be ground and low spots shimmed

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS

ALUMINUM HANDRAIL
F. A. I. ROUTE 70 ROADWAY "G"
OVER 4TH STREET

STATION 92 + 64.64

F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
6 OF 18

Designed by H.C.G.
Drawn by K.M.
Checked by

NOTE: Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers - gun grade with primer.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-4HB-1	ST. CLAIR	92	60
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

D.L. DEFLECTIONS (F_w)

BEAMS	BEARINGS S. ABUT	A1	A2	A3	A4	A5	A6	PIER 1	B1	B2	B3	B4	B5	B6	B7	B8	PIER 2	C1	C2	C3	C4	C5	BEARING N. ABUT
1-8	.000	.014	.024	.026	.020	.009	.000	.000	.008	.024	.040	.050	.051	.043	.027	.010	.000	-.002	.002	.008	.010	.006	.000
9-11	.000	.009	.015	.014	.007	.001	-.005	.000	.017	.041	.063	.075	.073	.059	.035	.006	.000	.001	.012	.022	.024	.015	.000
12	.000	.031	.050	.054	.040	.017	-.000	.000	.022	.059	.097	.119	.120	.100	.063	.024	.000	-.002	.010	.024	.028	.018	.000

TABLE 1
THEORETICAL ELEVATION TOP OF CONCRETE

1	434.928	434.758	434.588	434.418	434.248	434.078	433.908	433.755	433.505	433.415	433.245	433.075	432.905	432.735	432.565	432.395	432.234	432.061	431.878	431.685	431.480	431.264	431.055
2	434.913	434.743	434.573	434.403	434.233	434.063	433.893	433.740	433.570	433.400	433.230	433.060	432.890	432.720	432.550	432.380	432.216	432.035	431.842	431.639	431.425	431.199	430.981
3	434.898	434.714	434.544	434.374	434.204	434.034	433.864	433.711	433.541	433.371	433.201	433.031	432.861	432.691	432.521	432.349	432.178	431.987	431.784	431.571	431.347	431.112	430.885
4	434.883	434.688	434.518	434.348	434.178	434.008	433.838	433.685	433.515	433.345	433.175	433.005	432.835	432.665	432.495	432.325	432.154	431.963	431.750	431.529	431.295	431.050	430.815
5	434.868	434.663	434.493	434.323	434.153	433.983	433.813	433.660	433.490	433.320	433.150	432.980	432.810	432.640	432.470	432.300	432.129	431.938	431.725	431.504	431.269	431.024	430.789
6	434.853	434.638	434.468	434.298	434.128	433.958	433.788	433.635	433.465	433.295	433.125	432.955	432.785	432.615	432.445	432.275	432.104	431.913	431.690	431.469	431.234	430.989	430.754
7	434.838	434.613	434.443	434.273	434.103	433.933	433.763	433.610	433.440	433.270	433.100	432.930	432.760	432.590	432.420	432.250	432.079	431.888	431.665	431.444	431.209	430.964	430.729
8	434.823	434.588	434.418	434.248	434.078	433.908	433.738	433.585	433.415	433.245	433.075	432.905	432.735	432.565	432.395	432.225	432.054	431.863	431.640	431.419	431.184	430.939	430.704
9	434.808	434.563	434.393	434.223	434.053	433.883	433.713	433.560	433.390	433.220	433.050	432.880	432.710	432.540	432.370	432.200	432.029	431.838	431.615	431.394	431.159	430.914	430.679
10	434.793	434.538	434.368	434.198	434.028	433.858	433.688	433.535	433.365	433.195	433.025	432.855	432.685	432.515	432.345	432.175	432.004	431.813	431.590	431.369	431.134	430.889	430.654
11	434.778	434.513	434.343	434.173	434.003	433.833	433.663	433.510	433.340	433.170	433.000	432.830	432.660	432.490	432.320	432.150	431.979	431.788	431.565	431.344	431.109	430.864	430.629
12	434.763	434.488	434.318	434.148	433.978	433.808	433.638	433.485	433.315	433.145	432.975	432.805	432.635	432.465	432.295	432.125	431.954	431.763	431.540	431.319	431.084	430.839	430.604

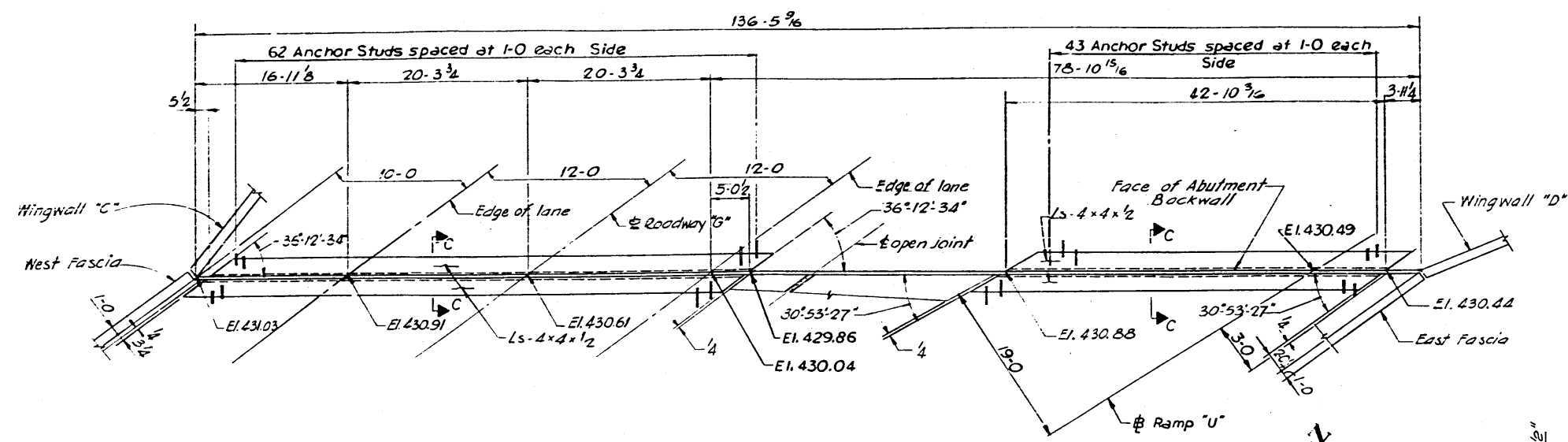
TABLE 2
THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION

1	434.928	434.773	434.613	434.445	434.269	434.068	433.909	433.755	433.594	433.440	433.286	433.126	432.956	432.778	432.593	432.406	432.234	432.059	431.881	431.693	431.490	431.271	431.055
2	434.913	434.757	434.597	434.429	434.253	434.072	433.894	433.740	433.578	433.424	433.270	433.110	432.941	432.763	432.577	432.390	432.216	432.033	431.845	431.647	431.435	431.206	430.981
3	434.898	434.729	434.568	434.400	434.224	434.043	433.865	433.711	433.549	433.395	433.241	433.081	432.912	432.734	432.548	432.360	432.178	431.985	431.787	431.580	431.358	431.119	430.885
4	434.883	434.703	434.542	434.374	434.198	434.022	433.846	433.685	433.524	433.363	433.202	433.041	432.880	432.719	432.558	432.397	432.236	432.075	431.914	431.753	431.592	431.431	431.270
5	434.868	434.678	434.517	434.356	434.180	434.004	433.828	433.667	433.506	433.345	433.184	433.023	432.862	432.701	432.540	432.379	432.218	432.057	431.896	431.735	431.574	431.413	431.252
6	434.853	434.653	434.492	434.331	434.155	433.979	433.803	433.642	433.481	433.320	433.159	432.998	432.837	432.676	432.515	432.354	432.193	432.032	431.871	431.710	431.549	431.388	431.227
7	434.838	434.628	434.467	434.306	434.130	433.954	433.778	433.617	433.456	433.295	433.134	432.973	432.812	432.651	432.490	432.329	432.168	432.007	431.846	431.685	431.524	431.363	431.202
8	434.823	434.603	434.442	434.281	434.105	433.929	433.753	433.592	433.431	433.270	433.109	432.948	432.787	432.626	432.465	432.304	432.143	431.982	431.821	431.660	431.499	431.338	431.177
9	434.808	434.578	434.417	434.256	434.080	433.904	433.728	433.567	433.406	433.245	433.084	432.923	432.762	432.601	432.440	432.279	432.118	431.957	431.796	431.635	431.474	431.313	431.152
10	434.793	434.553	434.392	434.231	434.055	433.879	433.703	433.542	433.381	433.220	433.059	432.898	432.737	432.576	432.415	432.254	432.093	431.932	431.771	431.610	431.449	431.288	431.127
11	434.778	434.528	434.367	434.206	434.030	433.854	433.678	433.517	433.356	433.195	433.034	432.873	432.712	432.551	432.390	432.229	432.068	431.907	431.746	431.585	431.424	431.263	431.102
12	434.763	434.493	434.332	434.171	434.005	433.829	433.653	433.492	433.331	433.170	433.009	432.848	432.687	432.526	432.365	432.204	432.043	431.882	431.721	431.560	431.399	431.238	431.077

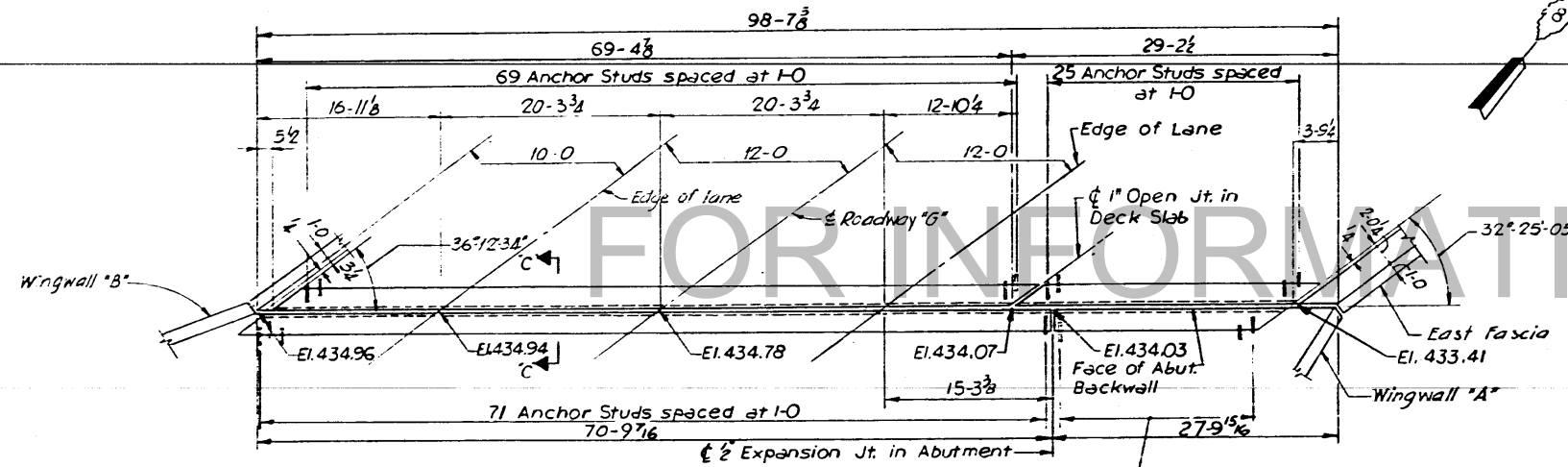
TABLE 3
THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION - SLAB THICKNESS

1	434.345	434.190	434.029	433.861	433.685	433.505	433.326	433.172	433.011	432.856	432.703	432.542	432.373	432.195	432.009	431.823	431.650	431.476	431.298	431.110	430.907	430.688	430.472
2	434.329	434.174	434.014	433.846	433.670	433.489	433.310	433.156	432.995	432.841	432.687	432.527	432.358	432.179	431.994	431.807	431.633	431.449	431.262	431.064	430.851	430.623	430.396
3	434.300	434.145	433.985	433.817	433.641	433.460	433.281	433.127	429.966	432.812	432.658	432.498	432.329	432.150	431.965	431.777	431.595	431.401	431.204	430.997	430.774	430.536	430.302
4	434.285	434.130	433.975	433.807	433.631	433.450	433.271	433.117	429.956	432.802	432.648	432.488	432.319	432.140	431.955	431.767	431.581	431.387	431.190	430.983	430.769	430.531	430.297
5	434.270	434.115	433.960	433.792	433.616	433.435	433.256	433.102	429.941	432.787	432.633	432.473	432.304	432.125	431.940	431.752	431.566	431.372	431.175	430.968	430.754	430.516	430.282
6	434.255	434.100	433.945	433.777	433.601	433.420	433.241	433.087	429.926	432.772	432.618	432.458	432.289	432.110	431.925	431.737	431.551	431.357	431.160	430.953	430.739	430.501	430.267
7	434.240	434.085	433.930	433.762	433.586	433.405	433.226	433.072	429.911	432.757	432.603	432.443	432.274	432.095	431.910	431.722	431.536	431.342	431.145	430.938	430.724	430.486	430.252
8	434.225	434.070	433.915	433.747	433.571	433.390	433.211	433.057	429.896	432.742	432.588	432.428	432.259	432.080	431.895	431.707	431.521	431.327	431.130	430.923	430.709	430.471	430.237
9	434.210	434.055	433.900	433.732	433.556	433.375	433.196	433.042	429.881	432.727	432.573	432.413	432.244	432.065	431.880	431.692	431.506	431.312	431.115	430.908	430.694	430.456	430.222
10	434.195	434.040	433.885	433.717	433.541	433.360	433.181	433.027	429.870	432.716	432.562	432.402	432.233	432.054	431.869	431.681	431.495	431.301	431.104	430.897	430.683	430.445	430.211
11	434.180	434.025	433.870	433.702	433.526	433.345	433.166	433.012	429.859	432.705	432.551	432.391	432.222	432.043	431.858	431.670	431.484	431.290	431.093				

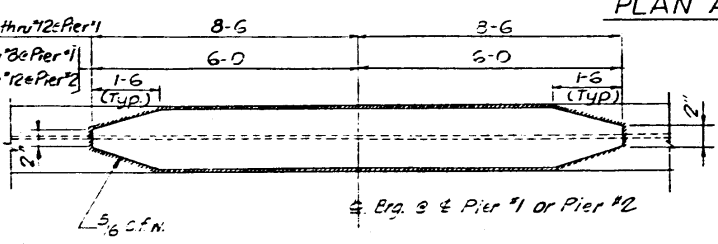
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-4HB-1	ST. CLAIR	92	63
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



PLAN AT NORTH ABUTMENT



PLAN AT SOUTH ABUTMENT



EXPANSION GUARD

Note: For section 'C-C' see Sheet #9

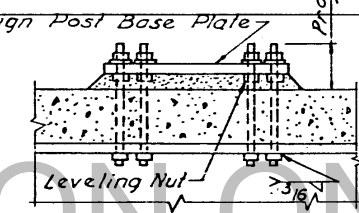
COVER PLATE SIZE (each Flange)

Beam	At Pier #1	At Pier #2
L2.1 thru L6.8	11 x 9/16	11 x 1/2
L6.9 thru L6.12	11 x 1/2	11 x 11/16

DETAIL OF COVER PLATE

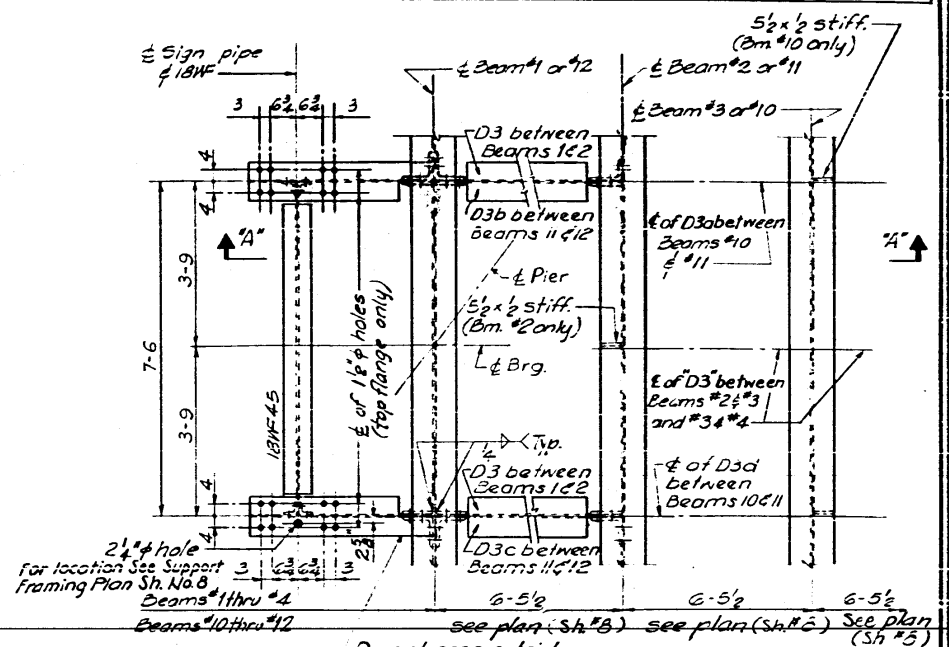
TABLE OF THICKNESS OF SHIMS

Bearing for Beam	1	2	3	4	5	6	7	8	9	10	11	12
South Abutment	5/8	3/8	0	0	0	0	0	0	0	0	0	0
Pier No. 1	1/2	3/8	0	0	0	0	0	0	0	0	0	0
Pier No. 2	0	1/2	0	0	0	0	0	0	0	0	0	0
North Abutment	0	0	0	0	0	0	0	0	0	0	0	0



DETAIL 'A'

Note: 1/8" φ Bolts, nuts & washers for overhead sign trusses incidental to Structural Steel.



SECTION 'A-A'

Note: For Bolts see Detail 'A'

Note: Do not cap outside half of Bolt Flange. See Sign Support Framing Plan (Sh #8) for dimensions and angles not shown.

Note: 30W124-D3 or D3b caps Top & Bottom Flange (D3a, D3c & D3d Details identical except outside half of Bolt Flange).
 Note: All bolts 3/4" High Strength bolts. Holes 1/8" φ.
 Diaphragms not shown.

NOTE: For Location of Diaphragms see Framing Plan Sheet No.8 For Sign Support Framing Plan see Sheet No.8

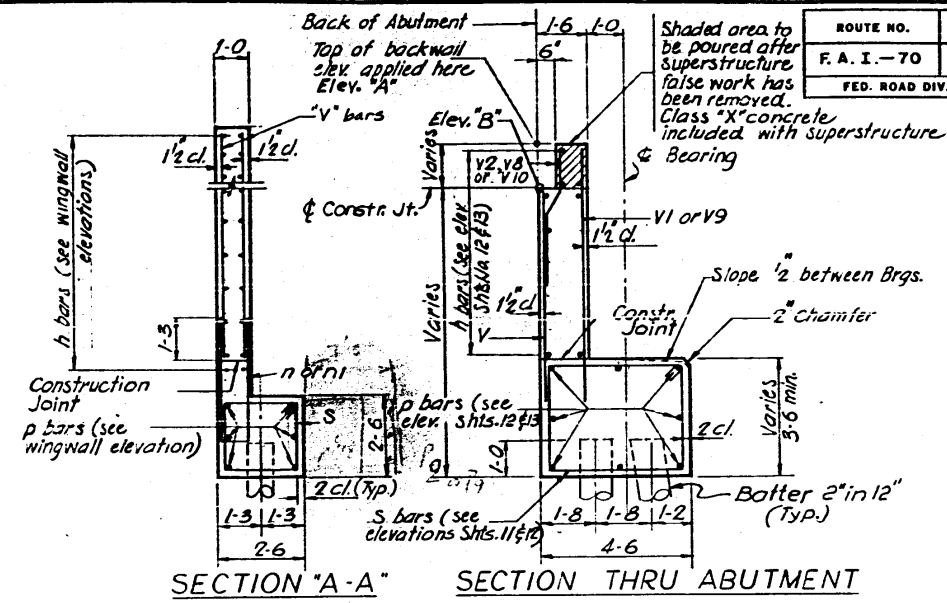
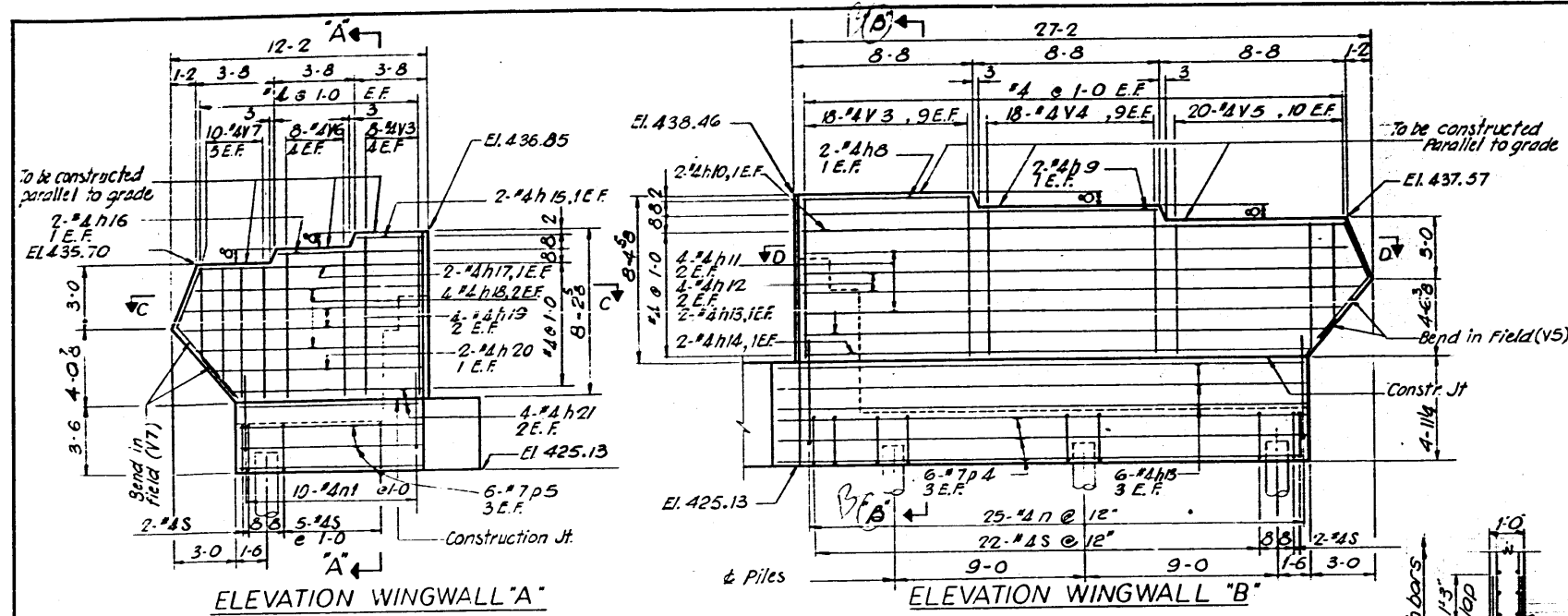
LENGTH OF DIAPHRAGMS (center to center of beams)

Mark	Length	No. Reqd	Mark	Length	No. Reqd
D-1	10-11 1/2	12	D-24	6-1 1/2	1
D-2	6-5 1/2	41	D-25	6-8 1/2	1
D-3	6-5 1/2	4	D-26	7-10 1/2	1
D-4	6-5 1/2	11	D-27	8-5 1/2	1
D-5	5-2 3/8	1	D-28	3-7 1/2	1
D-6	5-0 1/2	1	D-29	4-0 1/2	1
D-7	4-10 1/2	1	D-30	4-5 1/2	1
D-8	7-6 1/2	1	D-31	5-4 1/2	1
D-9	7-3 1/2	1	D-32	5-11 1/2	1
D-10	6-11 1/2	1	D-33	6-5 3/8	1
D-11	6-9 3/4	1	D-34	7-6 3/8	1
D-12	3-10 1/2	1	D-35	8-1 3/8	1
D-13	4-3 1/2	1	D-36	3-6 3/8	1
D-14	4-9 1/2	1	D-37	3-10 1/2	1
D-15	5-3 1/2	1	D-38	4-3 1/2	1
D-16	6-4 1/4	1	D-39	5-3	1
D-17	6-11 1/2	1	D-40	5-9 1/4	1
D-18	8-0 1/2	1	D-41	6-3 1/2	1
D-19	8-6 1/2	1	D-42	7-4	1
D-20	3-8 1/2	1	D-43	7-10 1/4	1
D-21	4-1 1/2	1	D-44	5-10 1/2	4
D-22	4-6 3/8	1	D-45	15-8 1/2	4
D-23	5-6 3/4	1	D-30b	varies	1

DESIGNED BY H.C.G.
 DRAWN BY R.E.
 CHECKED BY R.F.W.
 APPROVED BY K.A.

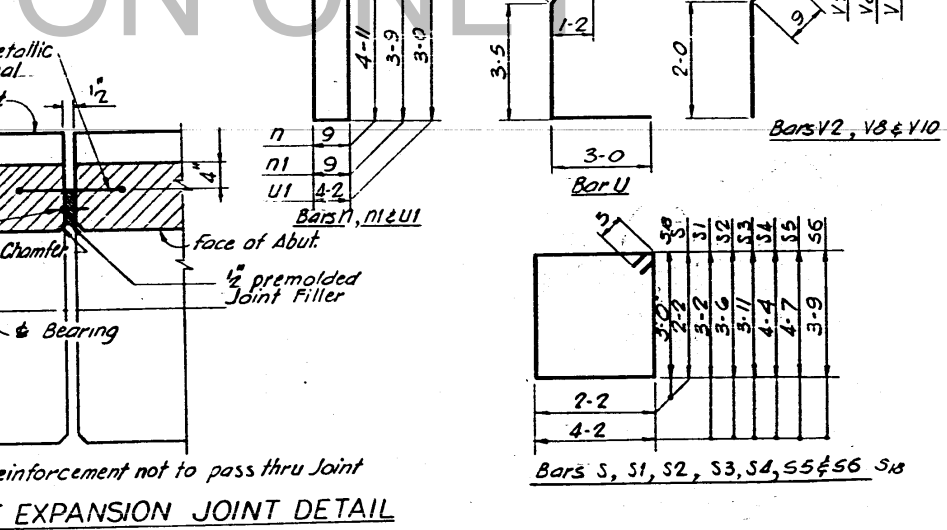
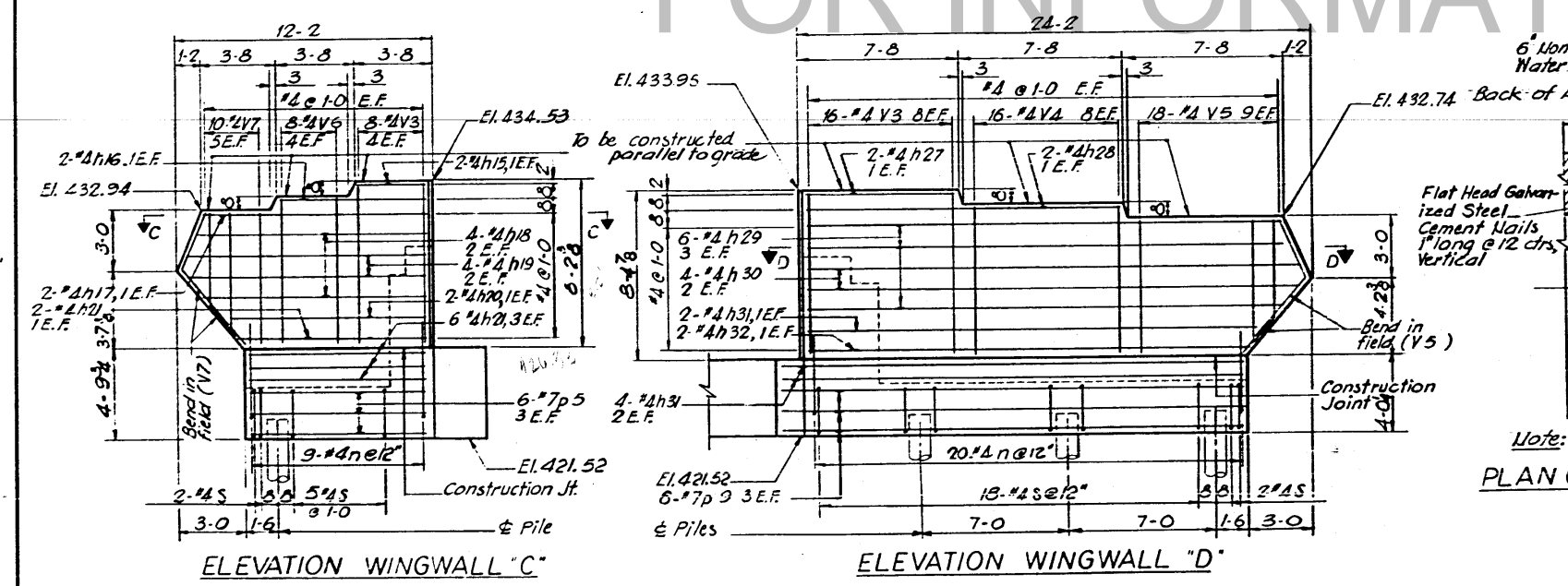
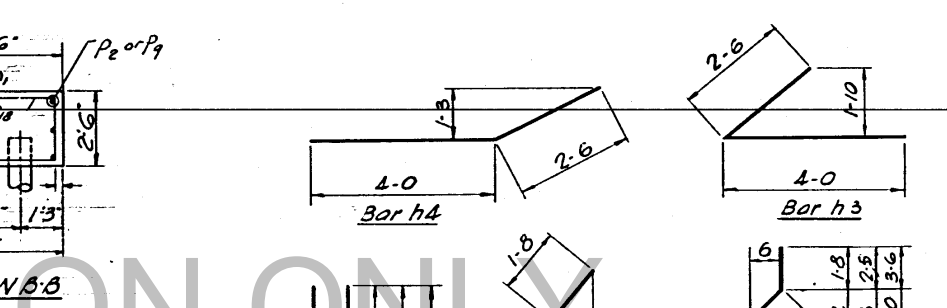
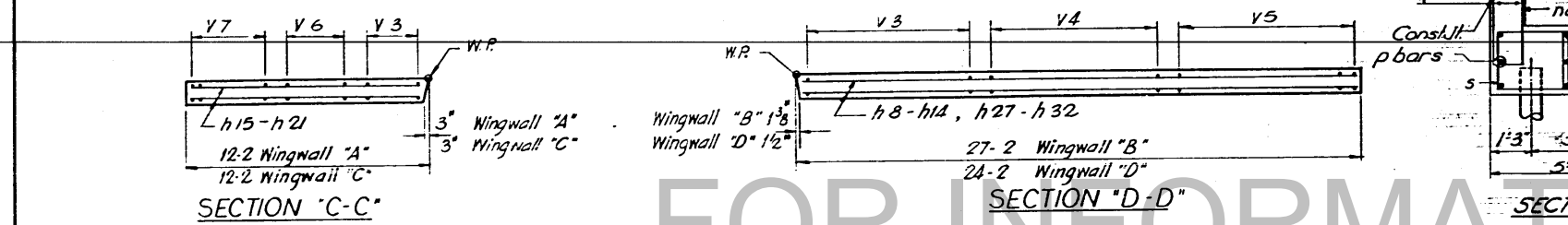
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
 EXPANSION GUARD AND STEEL DETAILS
 F. A. I. ROUTE 70 ROADWAY "G"
 OVER 4TH STREET
 STATION 92 + 64.64
 F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET NO. OF 18



**NORTH ABUTMENT
BILL OF MATERIALS**

Bar	No.	Size	Length	Shape
h	32	#5	36.0	
h3	8	#5	6.6	
h4	8	#5	6.6	
h5	6	#6	36.0	
h5a	6	#6	19.6	
h15	2	#4	3.3	
h16	2	#4	6.10	
h17	2	#4	10.3	
h18	4	#4	10.9	
h20	2	#4	9.9	
h21	8	#4	8.10	
h22	2	#6	3.0	
h25	1	#6	4.10	
h27	1	#6	3.7	
h28	1	#6	21.6	
h29	1	#6	20.10	
h56	8	#6	24.8	
h57	4	#6	24.0	
h58	2	#4	7.3	
h59	2	#4	18.10	
h30	4	#4	22.7	
h31	4	#4	22.4	
h32	2	#4	22.0	
h32	2	#4	20.9	
n	29	#4	10.7	
p5	6	#7	8.8	
p6	30	#7	35.0	
p7	8	#7	24.5	
p8	8	#7	12.0	
p9	9	#7	22.0	
s	27	#4	9.6	
s1	10	#4	15.6	
s2	50	#4	16.2	
s3	60	#4	17.0	
s1a	12	#4	11.2	
u	6	#6	8.1	
u1	4	#6	10.2	
v	141	#4	4.9	
v1	108	#4	6.0	
v2	108	#4	4.5	
v3	24	#4	7.9	
v4	16	#4	7.4	
v5	18	#4	6.9	
v6	8	#4	7.0	
v7	10	#4	6.0	
v8	28	#4	5.2	
v9	33	#4	6.9	
v10	5	#4	6.3	



Item	Unit	Quantity
Class 'X' Concrete	Cu Yds	M 4.0
Reinforcement Bars	Lbs	9570
Concrete Piles	Unit	1853
Test Pile	Each	1

* Test Pile not included.

DESIGNED BY M.A.D.
 CHECKED BY H.C.G.
 APPROVED BY K.A.

ABBREVIATIONS

W.P.	- Work Point
N.F.	- Near Face
F.F.	- Far Face
E.F.	- Each Face

- Notes:**
- For General Plan see Sheet No.1
 - In placing reinforcing bars, care shall be taken to clear Anchor Bolts.
 - For Bearing and Anchor Bolt Details see Sheet No.9
 - For Expansion Guard see Sheet No.10
 - For Pile encasement see Sheet No.13
 - Minimum Bar Lap for all Reinforcing Bars shall be twenty (20) Bar Diameters.
 - For Pile Details see Sheet No.15
 - For Bill of Materials (Reinforcement, etc.) for South Abutment, see Sheet No.11.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
ABUTMENT DETAILS
 F. A. I. ROUTE 70 ROADWAY "G"
 OVER 4TH STREET
 STATION 92 + 64.64
 F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

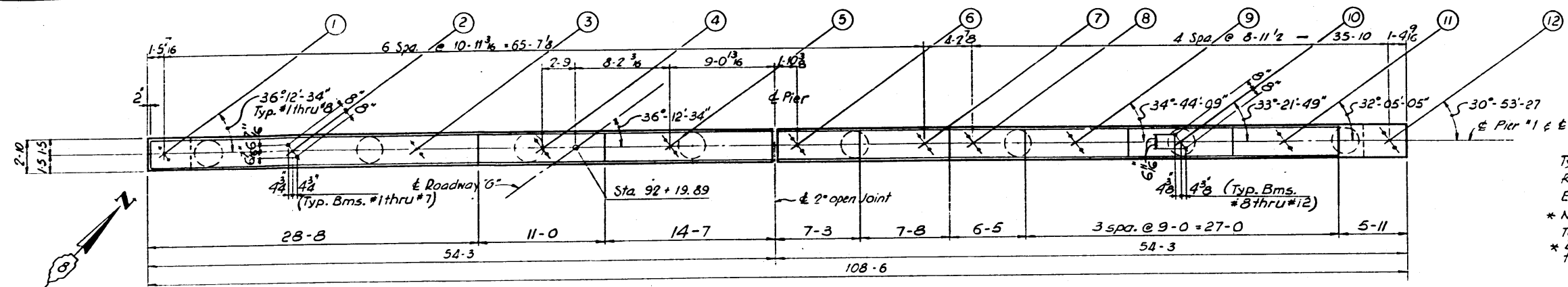
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-4HB-1	ST. CLAIR	92	67
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		

BILL OF MATERIAL

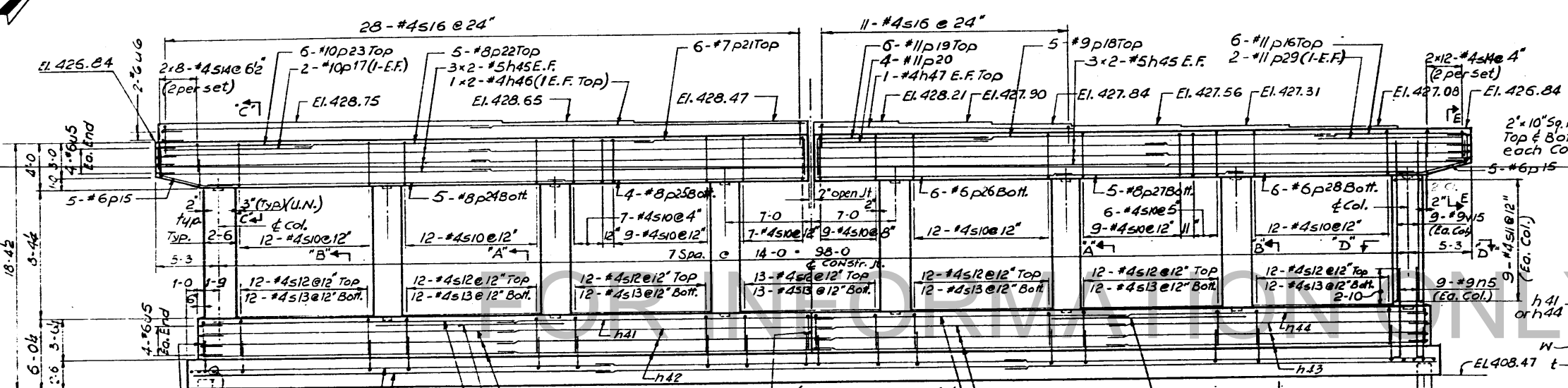
Mark	Qty	Size	Length	Shape
h40	4	#5	15-0	—
h41	6	#7	28-0	—
h42	12	#4	26-5	—
h43	12	#4	25-9	—
h44	6	#7	26-0	—
h45	24	#5	27-6	—
h46	4	#4	27-5	—
h47	2	#4	21-0	—
n5	72	#9	8-9	—
p15	10	#6	5-6	—
p16	6	#11	16-0	—
p17	2	#10	13-4	—
p18	5	#9	30-5	—
p19	6	#11	18-8	—
p20	4	#11	15-0	—
p21	6	#7	18-3	—
p22	5	#8	29-10	—
p23	6	#10	16-0	—
p24	5	#8	29-8	—
p25	4	#8	21-7	—
p26	6	#6	21-6	—
p27	5	#8	15-8	—
p28	6	#6	15-6	—
p29	2	#11	13-4	—
s10	95	#4	13-2	□
s11	72	#4	8-1	○
s12	87	#4	9-2	□
s13	87	#4	8-4	□
s14	40	#4	7-4	□
s16	39	#4	7-8	□
t	191	#6	8-3	—
u5	16	#6	5-5	—
u6	2	#6	3-1	—
v15	72	#9	11-4	—
w	21	#7	35-4	—
w1	6	#4	35-1	—

PILE DATA

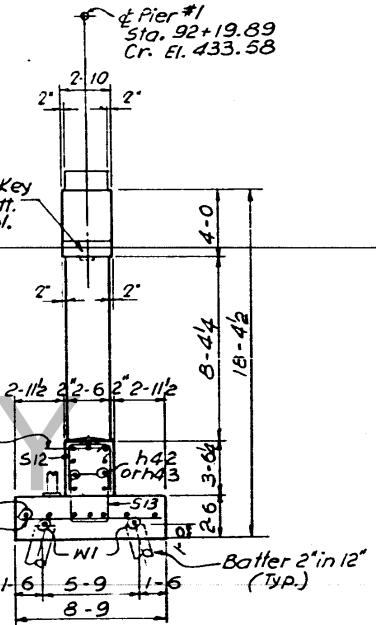
Type: Concrete Piles
 Required Capacity: 33 Tons
 Est. Length: 41 Ft.
 * No. Required: 37
 Test Piles: 1
 * Does not include test pile



TOP PLAN

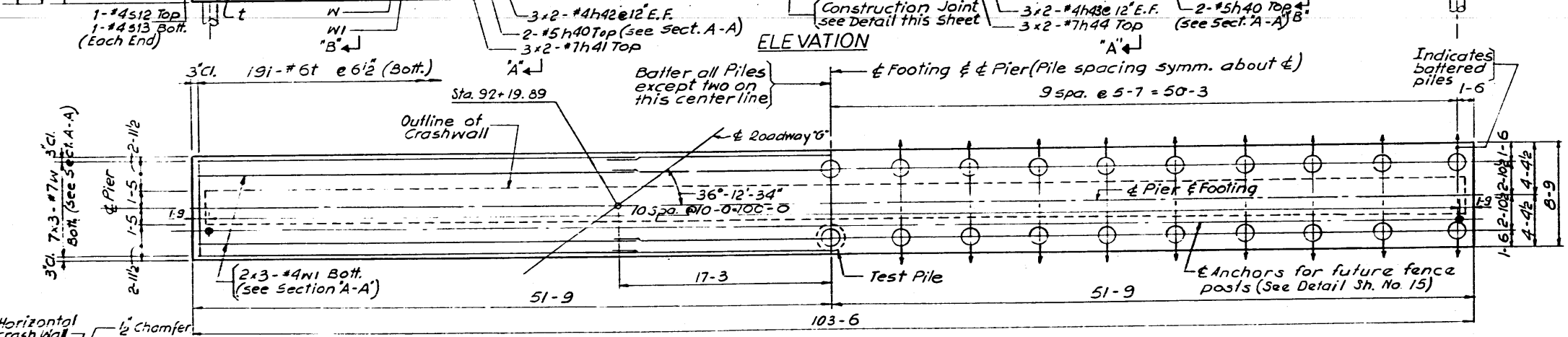


ELEVATION

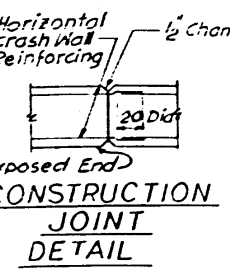


END VIEW

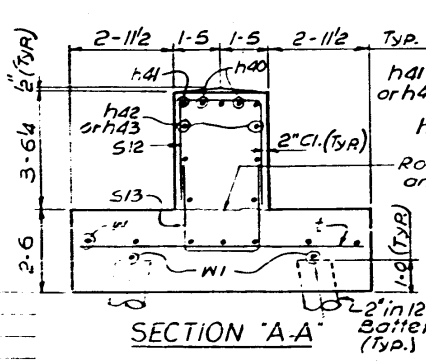
Notes:
 Pour Slabs monolithically with cap.
 Place Reinforcing to clear Anchor Bolts.
 For Anchor Bolts & Brg. Assemblies see Sht. 9
 Min. Bar Lap = 20 Dia. unless otherwise noted
 All Edges shall have 3/4 Chamfer except Footing.



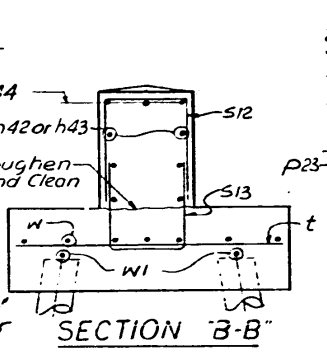
FOOTING PLAN



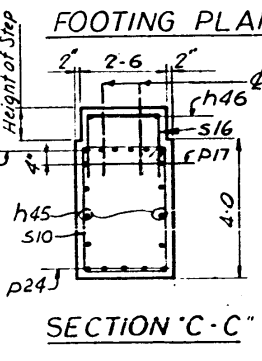
CONSTRUCTION JOINT DETAIL



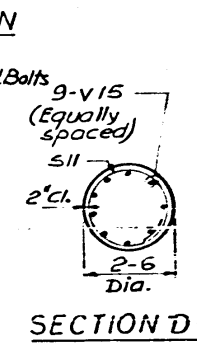
SECTION 'A-A'



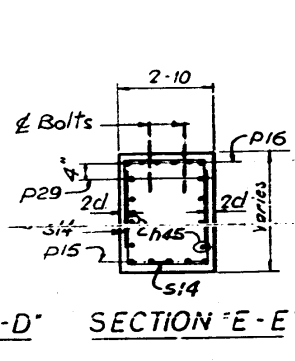
SECTION 'B-B'



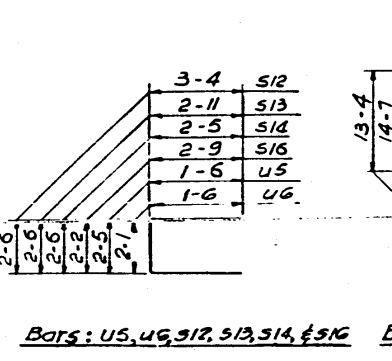
SECTION 'C-C'



SECTION 'D-D'



SECTION 'E-E'



Bars: u5, u6, s12, s13, s14, & s16 Bars: n5, p16, p19, p21 & p23

Item	Unit	Quantity
Class 'X' Concrete	Cu. Yds.	191.0
Reinforcement Bars	Lbs.	18,140
Concrete Piles	Lin. Ft.	1517*
Test Piles	Each	1

* Does not include test Pile

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS

PIER No. 1
 F.A.T. ROUTE 70 ROADWAY "G"
 OVER 4TH STREET
 STATION 92+64.64

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1

H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET 14 OF 18

DESIGNED BY: E.L.
 DRAWN BY: R.D. & K.M.
 CHECKED BY: M.A.D.
 APPROVED BY: K.A.

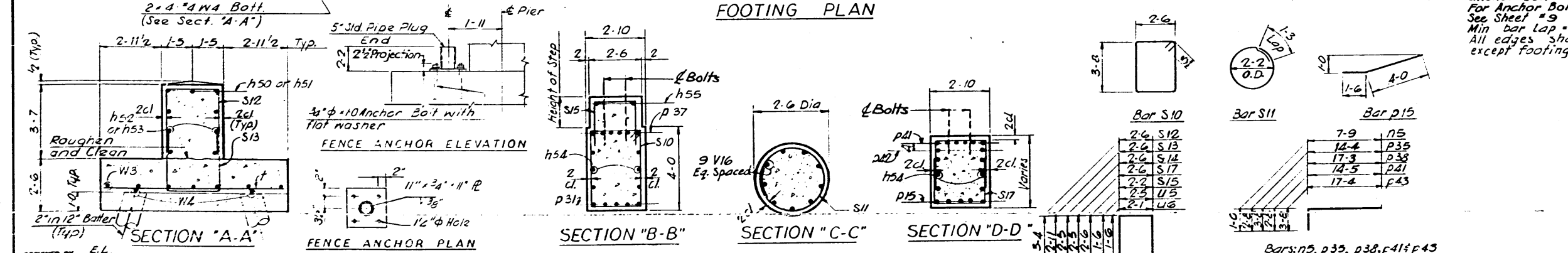
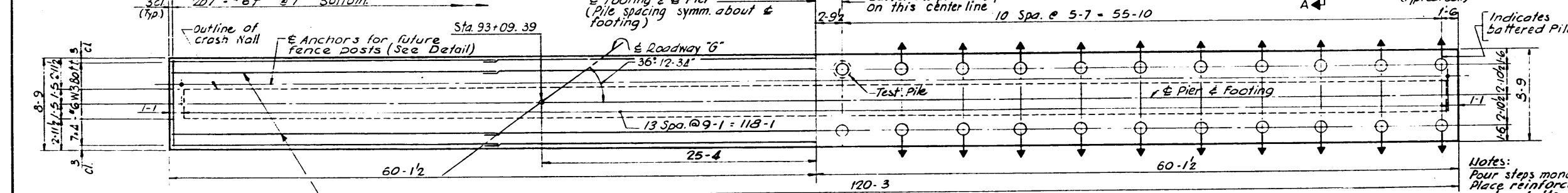
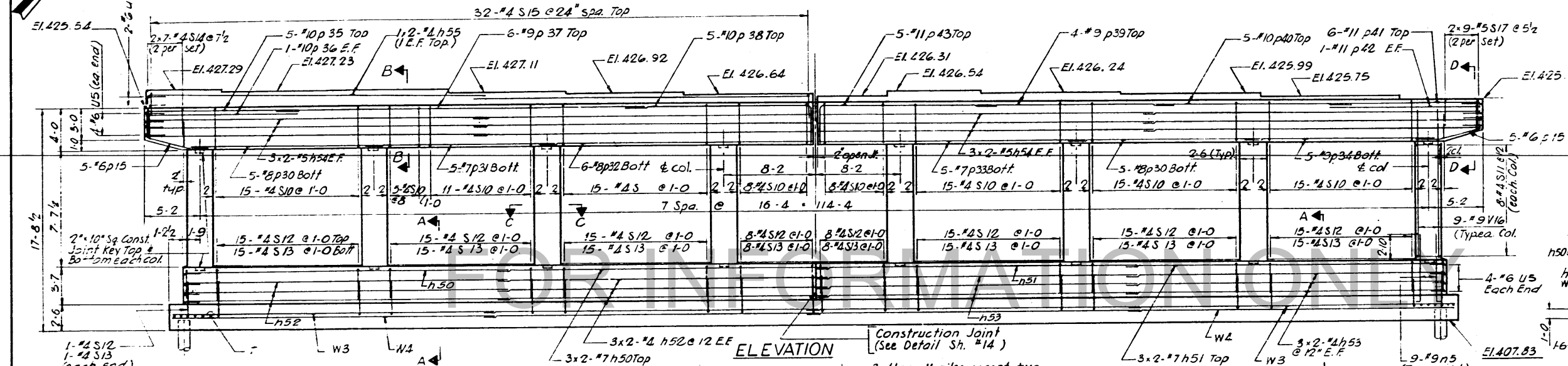
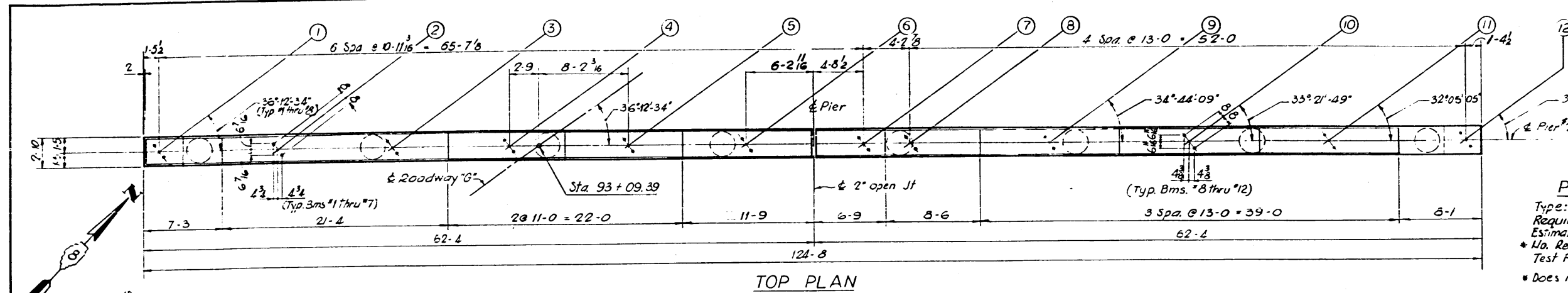
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-4HB-1	ST. CLAIR	92	68
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

BILL OF MATERIAL

Mark	Qty	Size	Length	Shape
n50	6	#7	32-0	—
n51	6	#7	30-1	—
n52	12	#4	30-6	—
n53	12	#4	29-10	—
n54	24	#5	31-6	—
n55	4	#4	31-5	—
n5	72	#9	8-9	—
f15	10	#6	5-6	—
p50	10	#8	18-2	—
p31	5	#7	17-11	—
p32	6	#8	25-3	—
p33	5	#7	25-2	—
p34	5	#9	18-4	—
p35	5	#10	17-0	—
p36	2	#10	18-4	—
p37	6	#9	34-7	—
p38	5	#10	20-11	—
p39	4	#9	18-6	—
p40	5	#10	18-9	—
p41	6	#11	17-1	—
p42	2	#11	14-5	—
p43	5	#11	21-0	—
S10	107	#4	13-2	—
S11	64	#4	8-1	—
S12	108	#4	9-2	—
S13	108	#4	8-4	—
S14	14	#4	7-4	—
S15	32	#4	7-2	—
S17	18	#5	7-4	—
U5	16	#6	5-5	—
U6	2	#6	5-1	—
U16	72	#9	10-7	—
W3	28	#6	31-0	—
W2	8	#4	30-8	—

Item	Unit	Quantity
Class X Concrete	Cu Yds	218.2
Reinforcement Bars	Lbs	19200
Concrete Piles	Lin. Ft	1720*
Test Piles	Each	1

* Does not include test pile.



PILE DATA
 Type: Concrete Piles
 Required Capacity: 30 Tons
 Estimated Length: 40 FT
 * No. Required: 43
 Test Pile: 1
 * Does not include Test Pile

Notes:
 Pour steps monolithically with cap. Place reinforcing to clear anchor bolts.
 For Anchor Bolts & Brg assemblies See Sheet #9
 Min bar Lap = 20 dia. unless noted.
 All edges shall have 3/4" chamfer except footing.

DESIGNED BY: E.L.
 DRAWN BY: F.R.
 CHECKED BY: E.L.
 APPROVED BY: S.A.

Note: Fence Anchors incidental to cost of Class X* Concrete Spaced at 10'-0" Min Centers

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS

PIER No. 2
 F.A.I. ROUTE 70 ROADWAY "G"
 OVER 4TH STREET

STATION 92 + 64.64
 F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1

H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET 15 OF 18

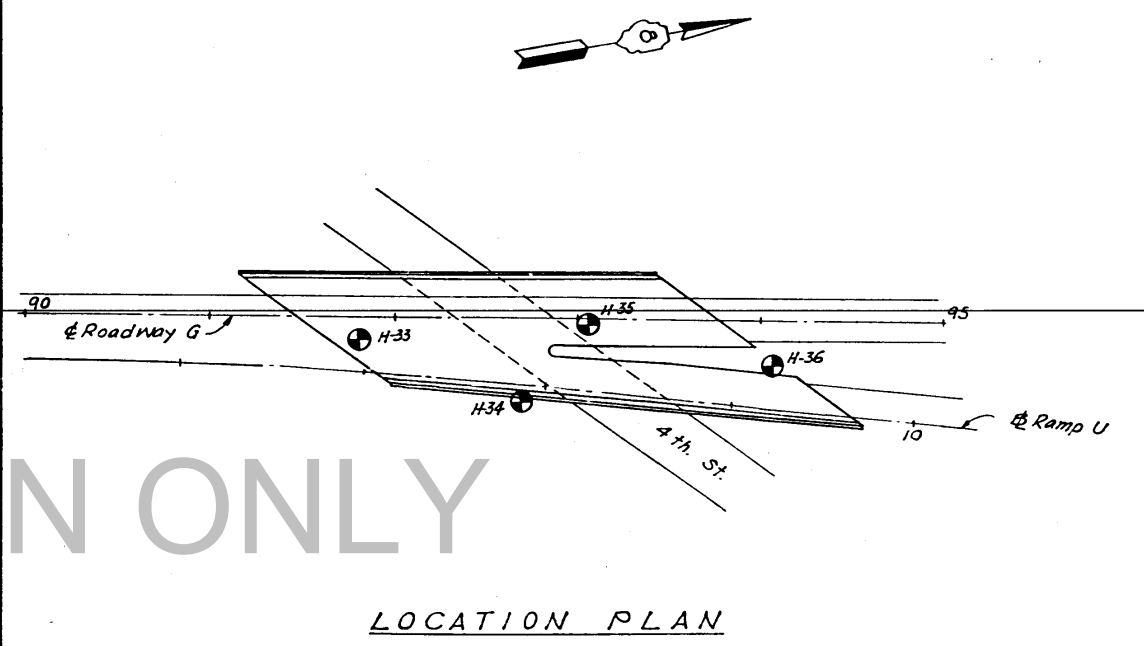
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-4HB-1	ST. CLAIR	92	69
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

BORING No. H-33

BORING No. H-34

Elevation	N	Qu / s.f.	w (%)	Description	Elevation	N	Qu / s.f.	w (%)
412.7	0			Ground Surface	-45			
409.2				Flaktop, Brick Sand and Cinders	20			
					29			
					362.2			
					-50			
				Stiff Brown Mottled Clay	39			
	5	1.0	30		48			
				Dense Gray Fine Sand	48			
	4	1.3	30		358.2			
					-55			
				Loose Brown Silty Loam	52			
	4				60			
				Very Dense Gray Fine Sandy Loam	80			
	9				58			
					350.7			
					20			
	6			Medium Well Graded Gray Sand With Some Gravel	18			
					345.7			
					-65			
	24			Medium Brown Fine Sand	31			
					341.2			
					-70			
	15			Medium Gray Silty Loam	33			
					389.7			
					-25			
	29			Dense Well Graded Gray Sand With Some Gravel	12			
					380.7			
					-30			
	12			Medium Brown Fine Sand	10			
					378.5			
					-35			
	8			Loose Gray Silty Loam	20			
					26			
					-40			
	20			Medium Gray Well Graded Sand With Some Gravel	14			
					21			
					-45			

Elevation	N	Qu / s.f.	w (%)	Description	Elevation	N	Qu / s.f.	w (%)
411.8	0			Ground Surface	-45			
				SAND, CINDERS & DEBRIS	18			
					28			
					362.3			
					-50			
				Loose Brown Silty Loam	44			
	8				49			
					-55			
	6			Dense Brown Fine Sand	34			
					354.8			
					27			
				Medium Brown Sandy Loam	8			
	15				352.3			
					-80			
				Loose Brown Poorly Graded Gravel. Some Wood Fibre.	26			
					349.8			
					7			
				Medium Brown Fine Sand	34			
	16				347.3			
					-65			
				Dense Brown Fine Sand	34			
	37				344.8			
					25			
				Loose Gray Fine Sand	34			
	24				342.3			
					-70			
				Medium Gray Fine Sand	25			
	37				340.3			
					18			
				Very Dense Brown Well Graded Sand	33			
	83				17			
					-30			
				Medium Brown Fine Sand	19			
	379.8				379.8			
					-35			
				Dense Brown Well Graded Sand	33			
	377.3				28			
					-40			
				Medium Brown Well Graded Sand & Small Gravel	20			
					27			
					-45			

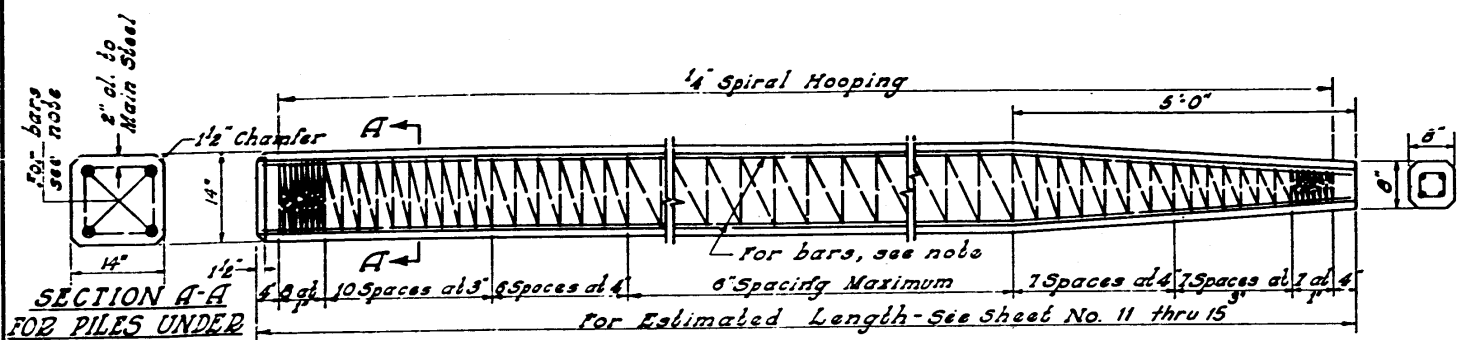


FOR INFORMATION ONLY

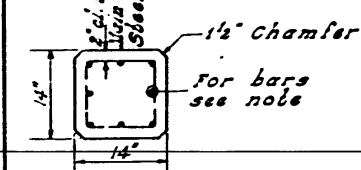
N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb hammer falling 30".
 Qu - Unconfined Compressive Strength - t/d
 w - Water Content - percentage of oven dry weight - %
 Type failure:
 B - Bulge Failure
 S - Shear Failure
 E - Estimated Value

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
 BORING LOGS
 F.A.I. ROUTE 70 ROADWAY "G"
 OVER 4TH STREET
 STATION 92 + 64.64
 F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET
 16 of 18

FEDERAL AID DISTRICT	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	B2-4HB-1	ST. CLAIR	92	71
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				



SECTION A-A FOR PILES UNDER 45' LONG

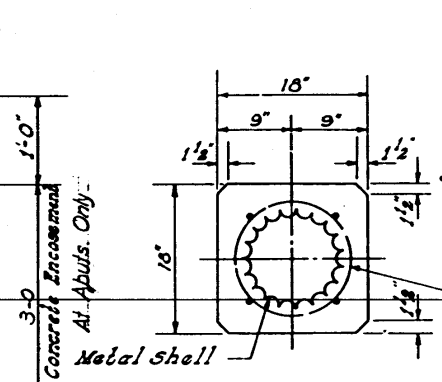
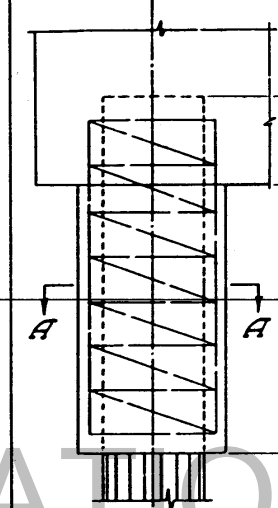
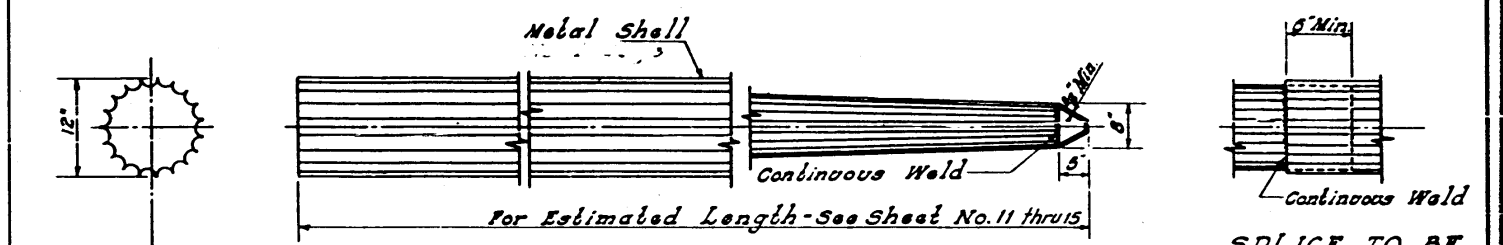


SECTION A-A FOR PILES 45' OR MORE

NOTE:- For 14" dia piles 45' long or more use 6-#6 bars - 4 for the full length and 4 to the point of bevel. For 14" dia Piles under 45'-0" long use 4-#9 bars the full length.

HANDLING:- For pile lengths up to 45 ft, use slings placed at a distance of 0.21 L from each end. For Piles longer than 45 ft., use three slings placed at a distance of 0.12 L from each end and at mid-point of pile. *L = Over all length of pile to be handled

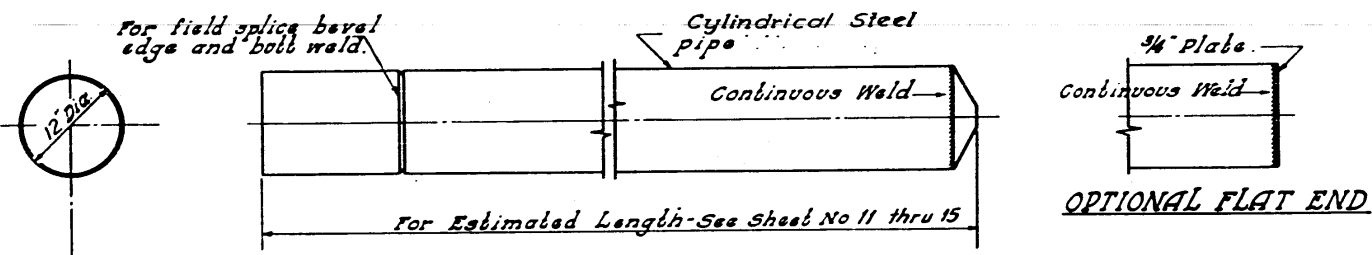
DETAIL OF PRECAST CONCRETE PILES



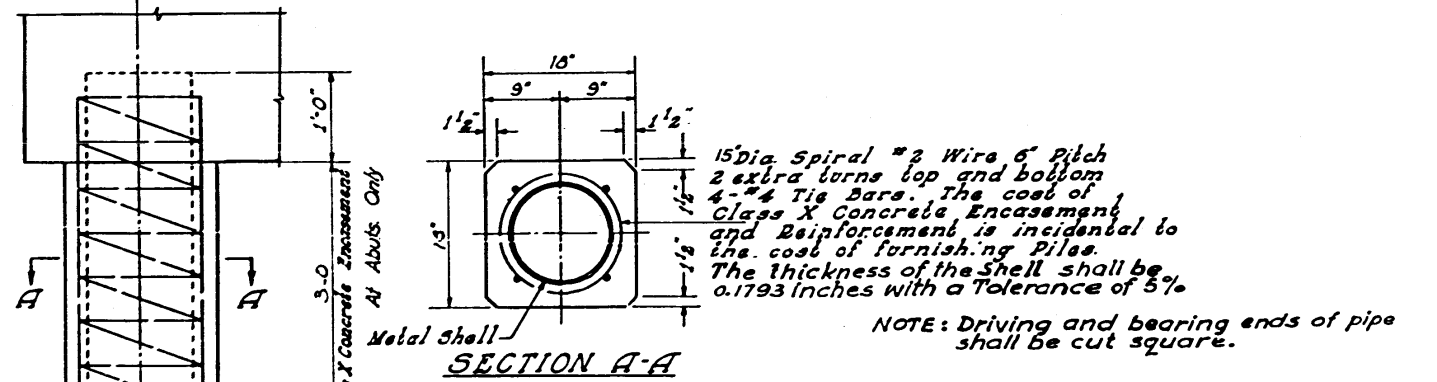
ALLOWABLE TAPERS
 1. Taper 1/2'-6" for 10' + 12" Cylindrical Section Extension
 2. Taper 1/4'-0" for 17' + 12" Cylindrical Section Extension
 3. Taper 1/7'-0" for 30' + 12" Cylindrical Section Extension

15" Dia Spiral #2 Wire, 6" Pitch
 2 extra turns top and bottom
 4-#4 Tie Bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing Piles. The thickness of the Shell shall be 0.1793 inches with a Tolerance of 5%.

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONG. PILES

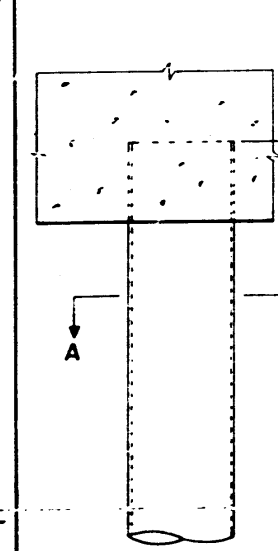
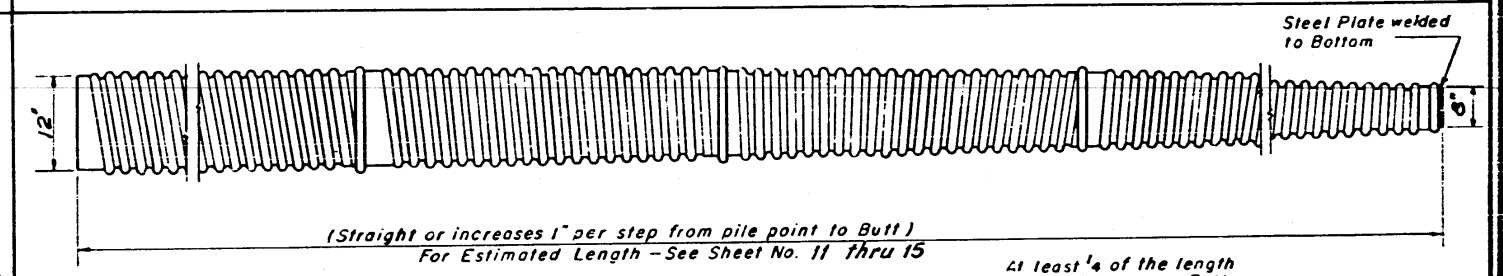


OPTIONAL FLAT END



DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONG. PILES

NOTE: Driving and bearing ends of pipe shall be cut square.



(Straight or increases 1" per step from pile point to Butt)
 For Estimated Length - See Sheet No. 11 thru 15

At least 1/4 of the length of pile shall have a Butt diameter equal to or greater than 12".
 Gages are furnished to suit soil conditions (14 Gage Min.)

Reinforcement is incidental to the cost of furnishing piles.

6-#6 bars (For Details, See below)

1/4" Spiral Hooping at 6" Spacing or #4 Ties at 12" cts.

DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONG. PILES

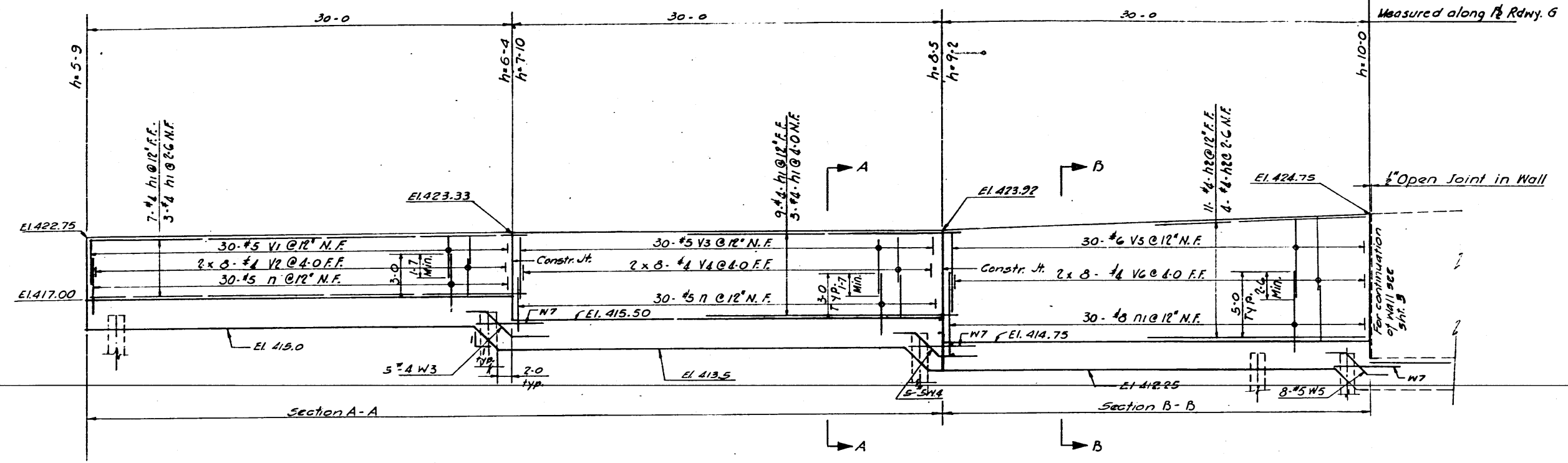


STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
 CONCRETE PILE DETAILS
 F.A.I. ROUTE 70 ROADWAY "G"
 OVER 4TH STREET
 STATION 92 + 64.64
 F.A.I. RT. 70 ST. CLAIR CO. SECTION B2-4HB-1
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

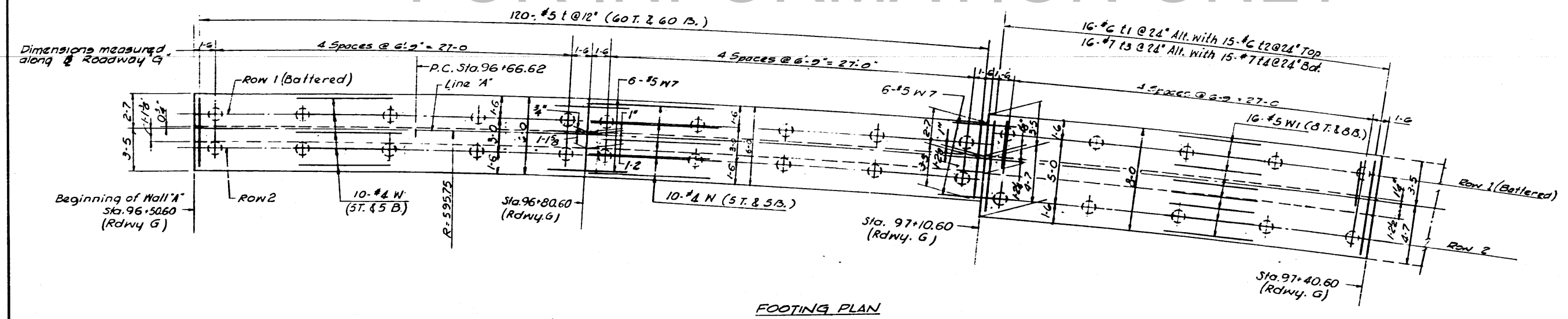
SHEET 18 of 13

7-2-65 Added of encasement "At Abutts Only" JRD:ASA

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-4HB-1	ST. CLAIR	92	73
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



FOR INFORMATION ONLY



FILE DATA:
 Estimated Length - 46'-0"
 Number Required - 30 Piles

N.F. - Near Face
 F.F. - Far Face

NOTES:
 For Sections & additional details See Sheet #5

DESIGNED BY C.D.
 DRAWN BY V.F.
 CHECKED BY L.H.W.
 APPROVED BY K.A.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS

DETAILS

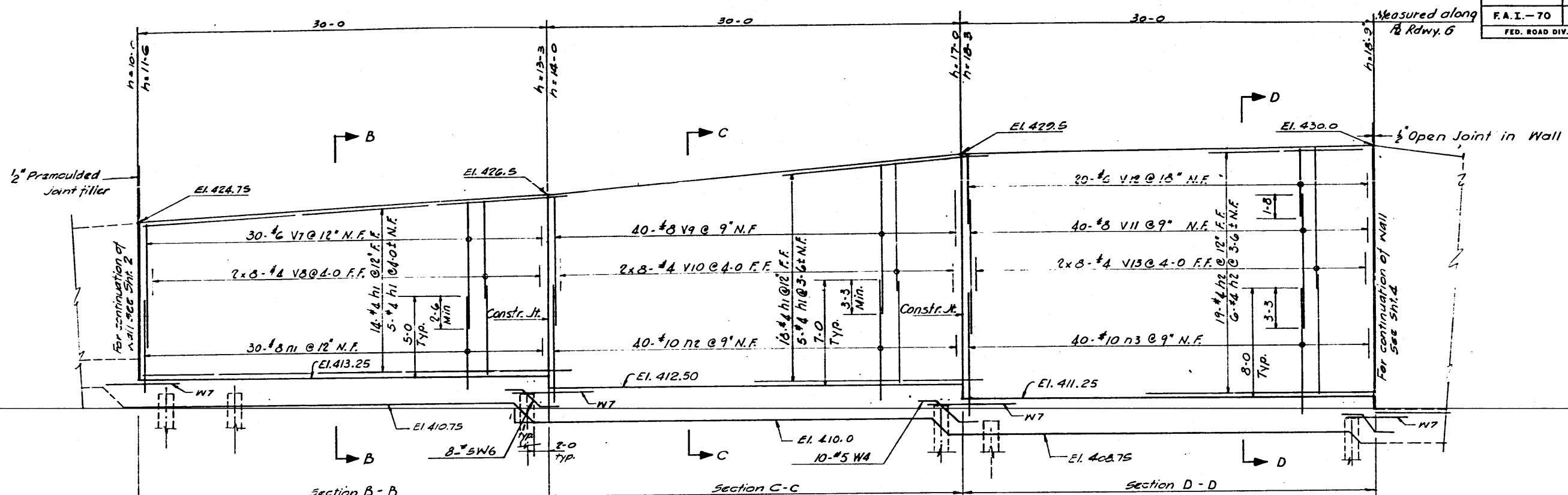
F.A.I. ROUTE 70
 RETAINING WALL "A"
 BETWEEN ROADWAY "G" AND RAMP "U"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1

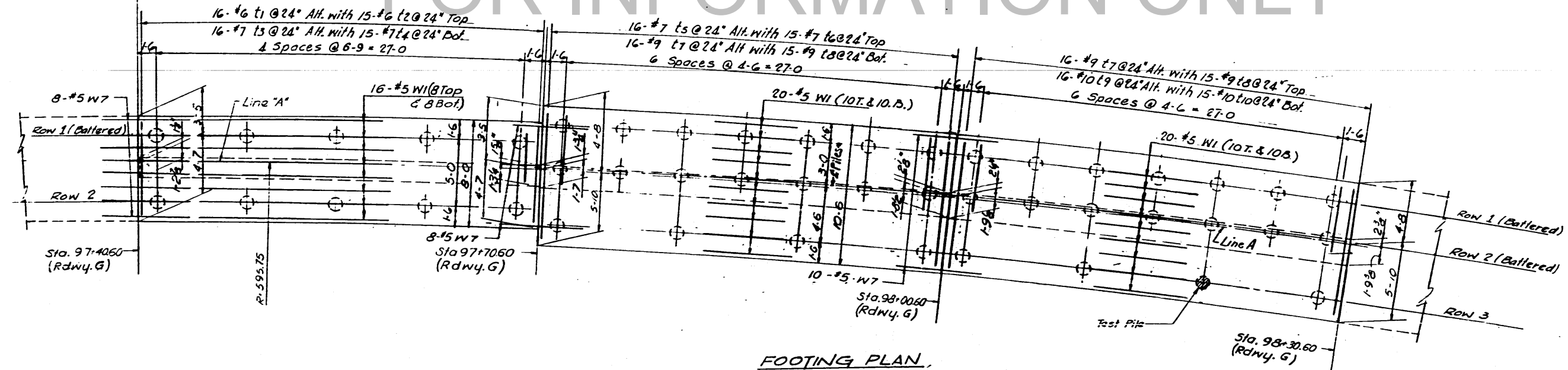
H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 2 of 7

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-4HB-1	ST. CLAIR	92	74
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



FOR INFORMATION ONLY



FOOTING PLAN

PILE DATA:
 Estimated Length - 41'-0"
 * Number Required - 45 Piles
 Test Pile - 1

* Does not include Test Pile

N.F. - Near Face
 F.F. - Far Face

DESIGNED BY G.D.
 DRAWN BY VF
 CHECKED BY L.H.W.
 APPROVED BY K.A.

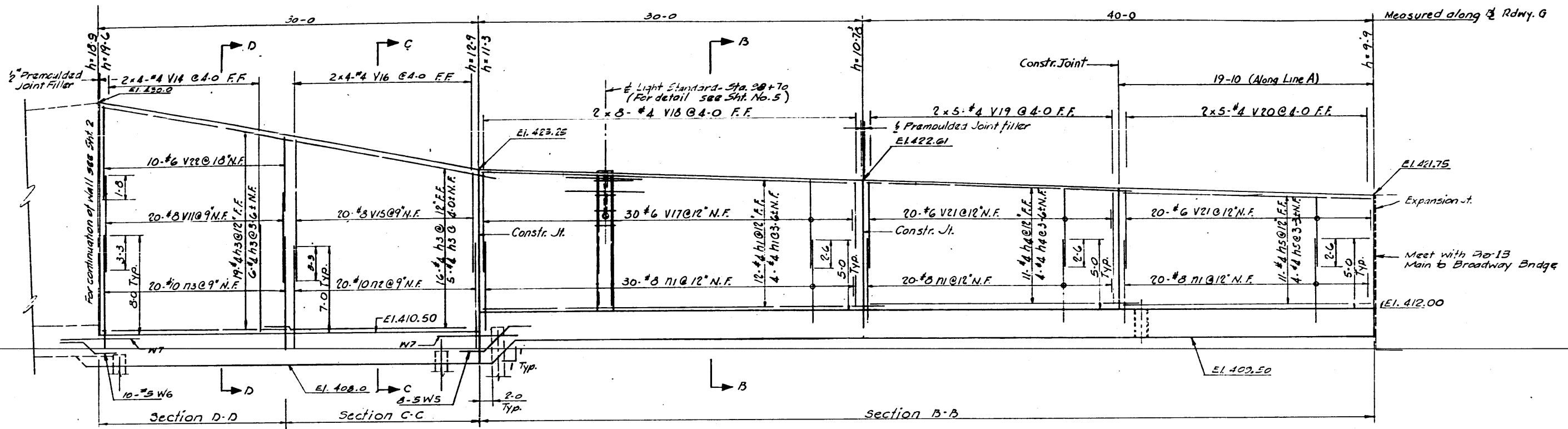
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS

DETAILS
 F.A.I. ROUTE 70
 RETAINING WALL "A"
 BETWEEN ROADWAY "G" AND RAMP "U"

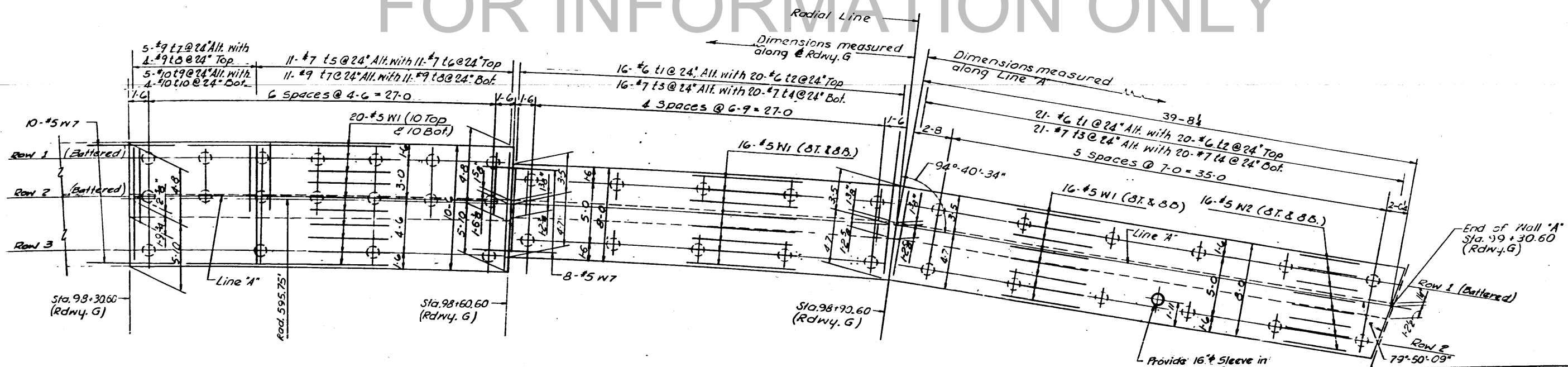
F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
3 of 7

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-4HB-1	ST. CLAIR	92	75
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



FOR INFORMATION ONLY



FOOTING PLAN

FILE DATA:
 Estimated Length - 39-0
 Number Required - 40 Piles

N.F. = Near Face
 F.F. = Far Face

For notes see Sit. 2

DESIGNED BY: C.D.
 DRAWN BY: V.C.
 CHECKED BY: T.H.W.
 APPROVED BY: K.A.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS

DETAILS

F.A.I. ROUTE 70
 RETAINING WALL "A"
 BETWEEN ROADWAY "G" AND RAMP "U"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

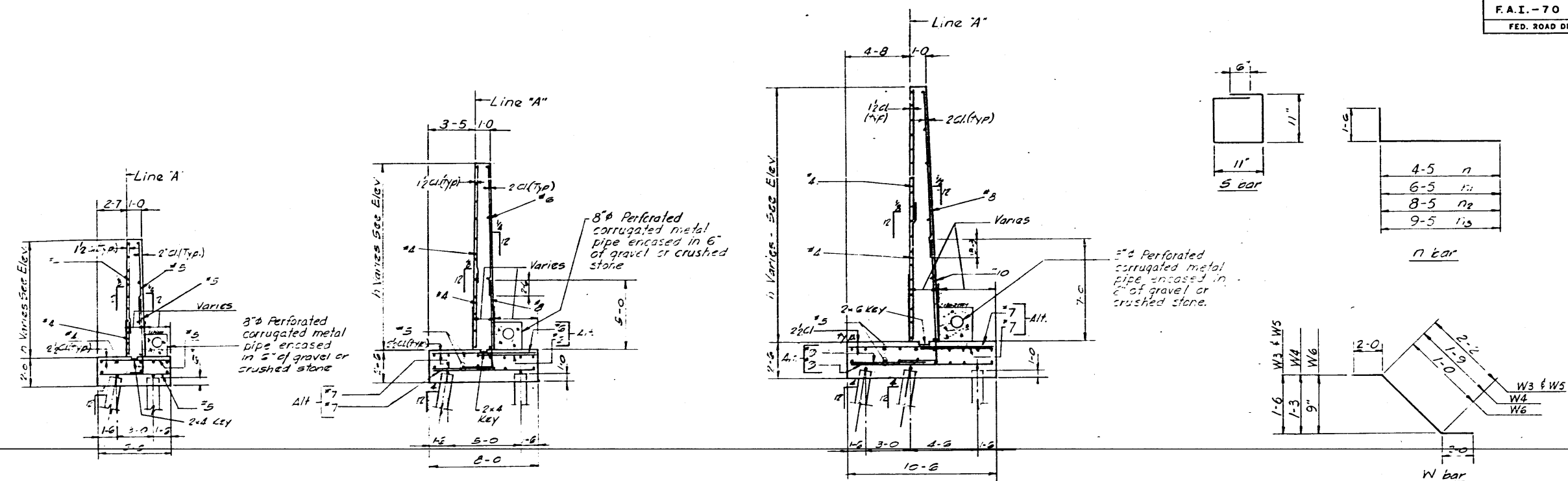
SHEET
 4 of 7

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-4HB-1	ST. CLAIR	92	76
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

BILL OF MATERIAL

MARK	REQ. SIZE	LENGTH	SHAPE
h1	80 #4	31-0	
h2	40 #4	29-8	
h3	46 #4	16-0	
h4	15 #4	21-0	
h5	15 #4	19-8	
h6	4 #4	8-0	
n	20 #5	5-11	
n1	130 #5	7-11	
n2	30 #10	3-11	
n3	60 #10	10-11	
s	10 #4	4-2	
f	120 #5	3-8	
f1	69 #6	7-8	
f2	65 #6	5-7	
f3	69 #7	7-8	
f4	65 #7	5-9	
f5	27 #7	10-2	
f6	26 #7	6-11	
f7	48 #9	10-2	
f8	45 #9	7-6	
f9	31 #10	10-2	
f10	19 #10	7-9	
v1	30 #5	4-7	
v2	12 #4	3-6	
v3	30 #5	6-10	
v4	16 #4	4-8	
v5	30 #4	7-5	
v6	16 #4	5-6	
v7	30 #5	10-8	
v8	16 #4	7-1	
v9	40 #5	13-1	
v10	12 #4	9-0	
v11	60 #3	9-3	
v12	20 #2	6-4	
v13	15 #2	9-10	
v14	8 #4	10-11	
v15	20 #8	12-2	
v16	8 #4	8-6	
v17	34 #6	8-8	
v18	15 #4	6-0	
v19	10 #4	5-9	
v20	10 #4	5-6	
v21	40 #6	8-0	
v22	10 #6	7-1	
w	20 #4	29-4	
w1	124 #5	29-3	
w2	16 #5	11-6	
w3	5 #4	6-2	
w4	15 #8	5-9	
w5	16 #5	6-2	
w6	18 #5	5-0	
w7	56 #5	10-0	

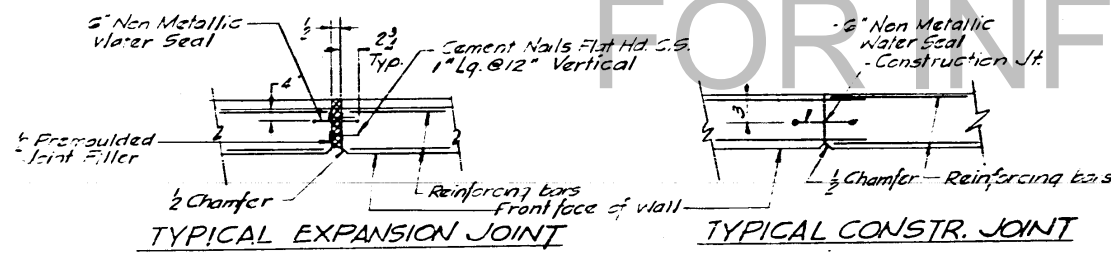
ITEM	UNIT	TOTAL
Class X Concrete	C.Y.	332.5
Reinforcement Bars	Lbs.	32,980



SECTION A-A

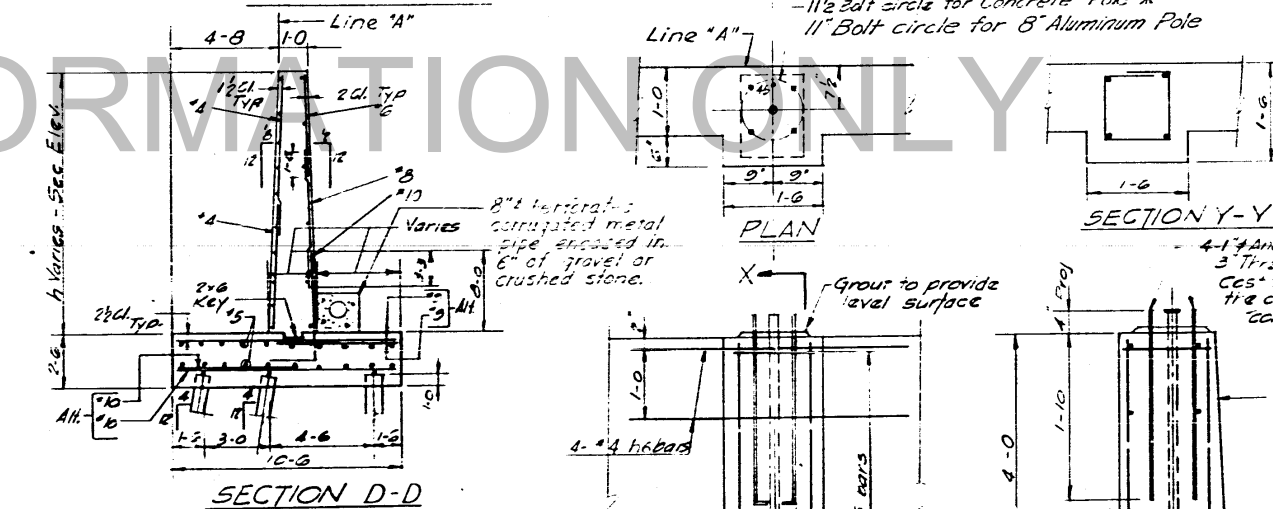
SECTION B-B

SECTION C-C



TYPICAL EXPANSION JOINT

TYPICAL CONSTR. JOINT

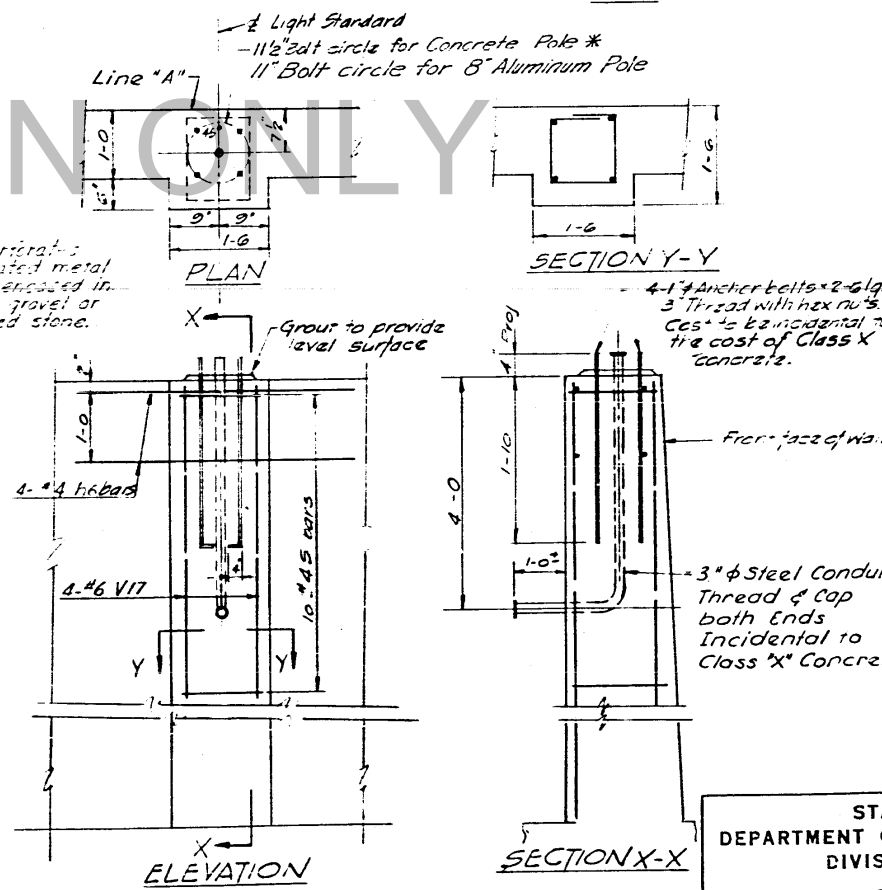


SECTION D-D

PLAN

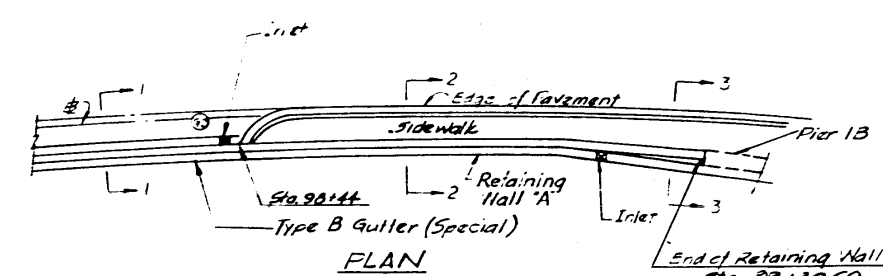
SECTION Y-Y

SECTION X-X



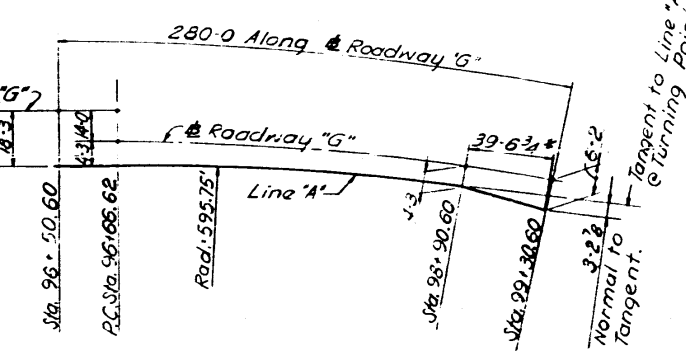
ELEVATION

LIGHT STANDARD BASE DETAIL



PLAN

NOTE: For Sections 1-1, 2-2 and 3-3 See Sheet #1



* Measured along Tangent to Line "A" @ Turning Point

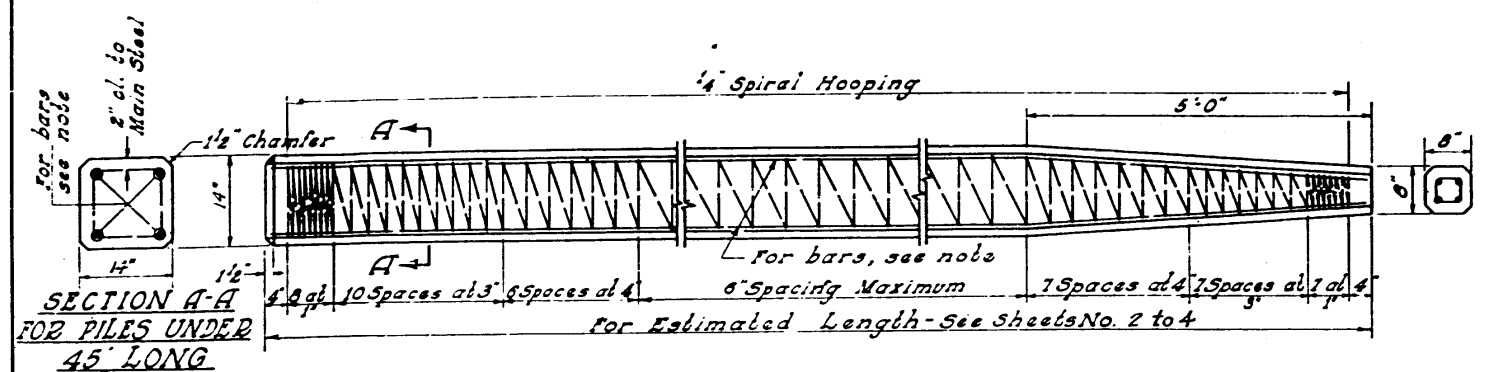
GEOMETRIC LAYOUT

DESIGNED BY: G.D.
 DRAWN BY: V.T.
 CHECKED BY: E.H.W.
 APPROVED BY: K.A.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
 SECTIONS AND DETAILS
 F.A.I. ROUTE 70
 RETAINING WALL "A"
 BETWEEN ROADWAY "G" AND RAMP "U"
 F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-4HB-1
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET
 5 OF 7

* NOTE: Bolt Circle Diameter to be determined by the Engineer subsequent to the award of this contract.

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-4HB-1	ST. CLAIR	92	77
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



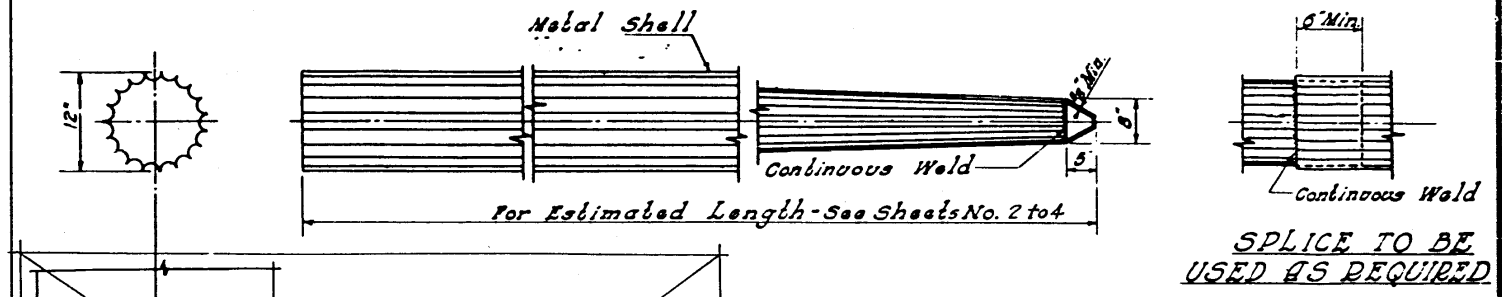
SECTION A-A FOR PILES UNDER 45' LONG

SECTION A-A FOR PILES 45' OR MORE

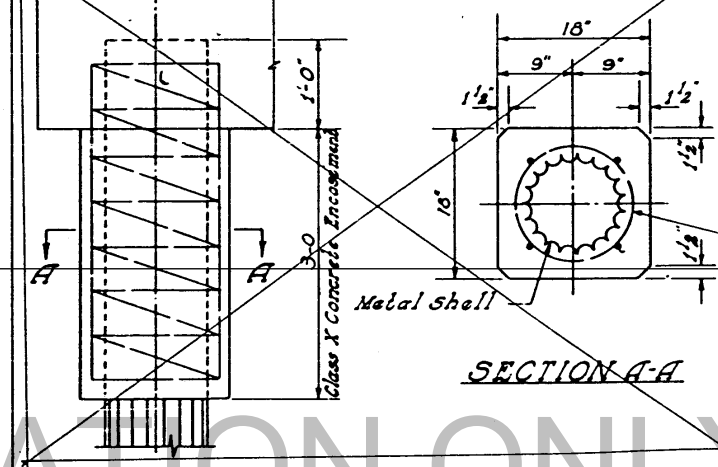
NOTE:
For 14 1/4" piles 45' long or more use 8-#8 bars - 4 for the full length and 4 to the point of bevel. For 14 1/4" piles under 45'-0" long use 4-#9 bars the full length.

HANDLING: For pile lengths up to 45 ft. use 2 slings placed at a distance of 0.21 L* from each end. For Piles longer than 45 ft., use three slings placed at a distance of 0.12 L* from each end and at mid-point of pile.
*L = Over all length of pile to be handled

DETAIL OF PRECAST CONCRETE PILES

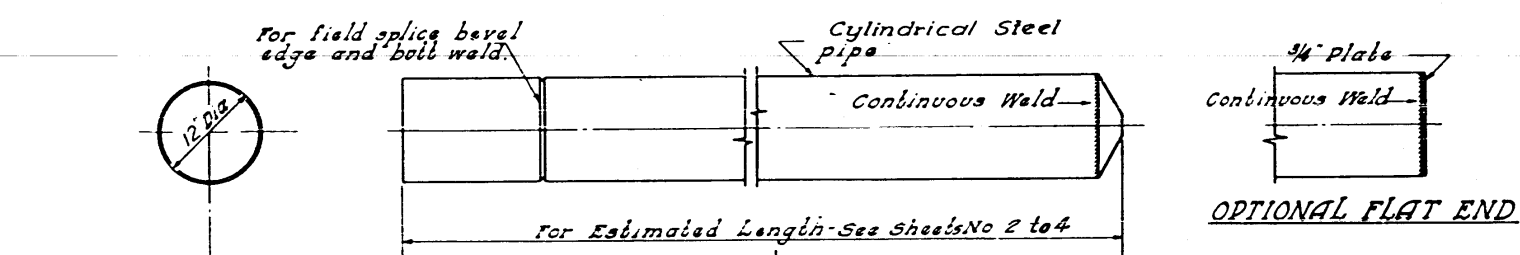


- ALLOWABLE TAPERS**
1. Taper 1 1/2'-0" for 10' 12" Cylindrical Section Extension
 2. Taper 1 1/4'-0" for 17' 12" Cylindrical Section Extension
 3. Taper 1 1/7'-0" for 30' 12" Cylindrical Section Extension

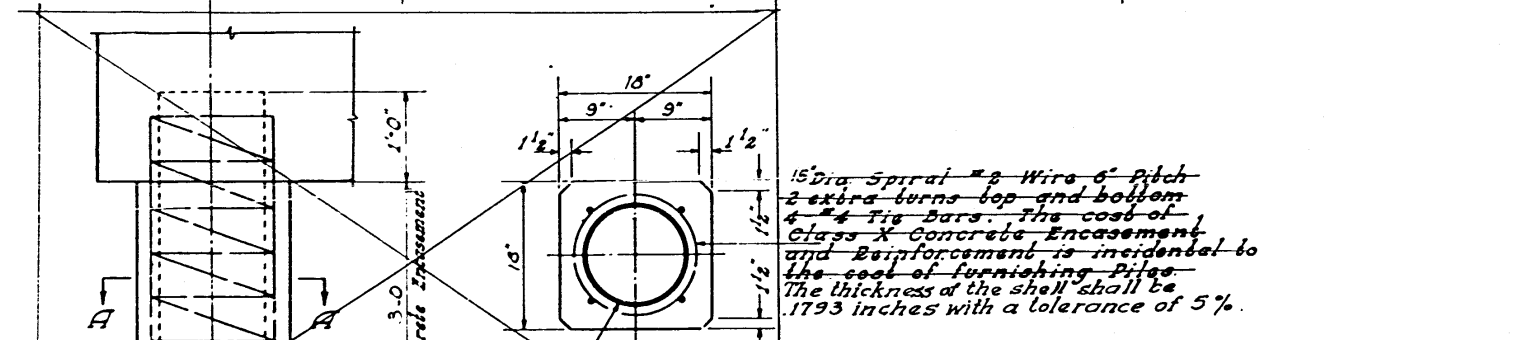


15 Dia Spiral #2 Wire, 6 Pitch, 2 extra turns top and bottom
4 #4 Tie Bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing Piles. The thickness of the shell shall be .1793 inches with a tolerance of 5%.

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONG. PILES.



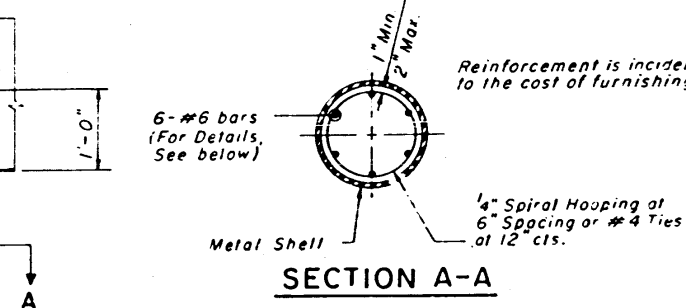
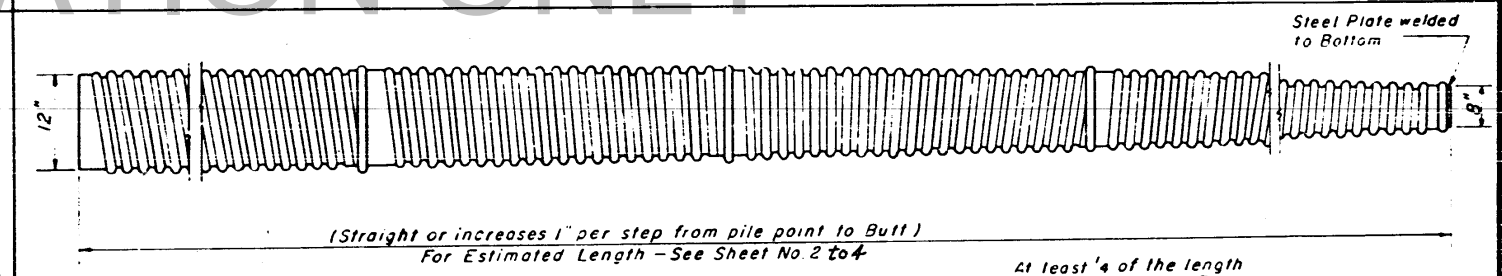
OPTIONAL FLAT END



15 Dia Spiral #2 Wire, 6 Pitch, 2 extra turns top and bottom
4 #4 Tie Bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing Piles. The thickness of the shell shall be .1793 inches with a tolerance of 5%.

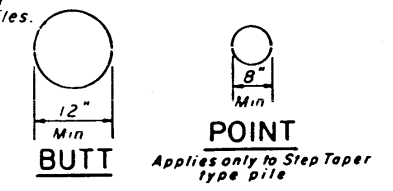
Note: Driving and Bearing ends of Pipe shall be cut square.

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

At least 1/4 of the length of pile shall have a Butt diameter equal to or greater than 12" Gages are furnished to suit soil conditions (14 Gage Min.)



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
CONCRETE PILE DETAILS
F. A. I. ROUTE 70
RETAINING WALL "A"
BETWEEN ROADWAY "G" AND RAMP "U"
F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-4HB1
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
6 of 7