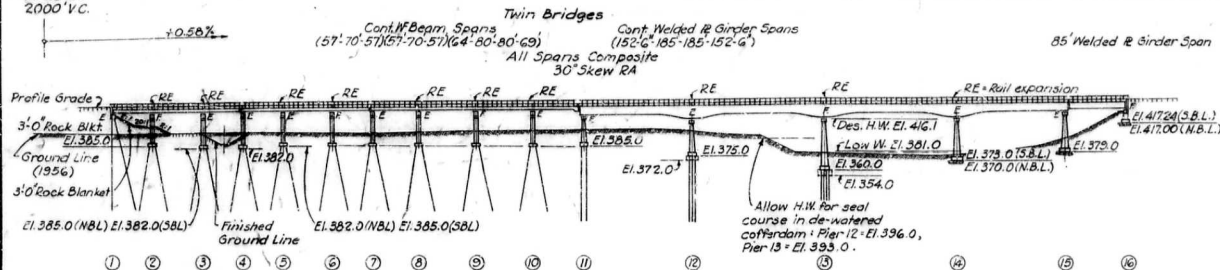
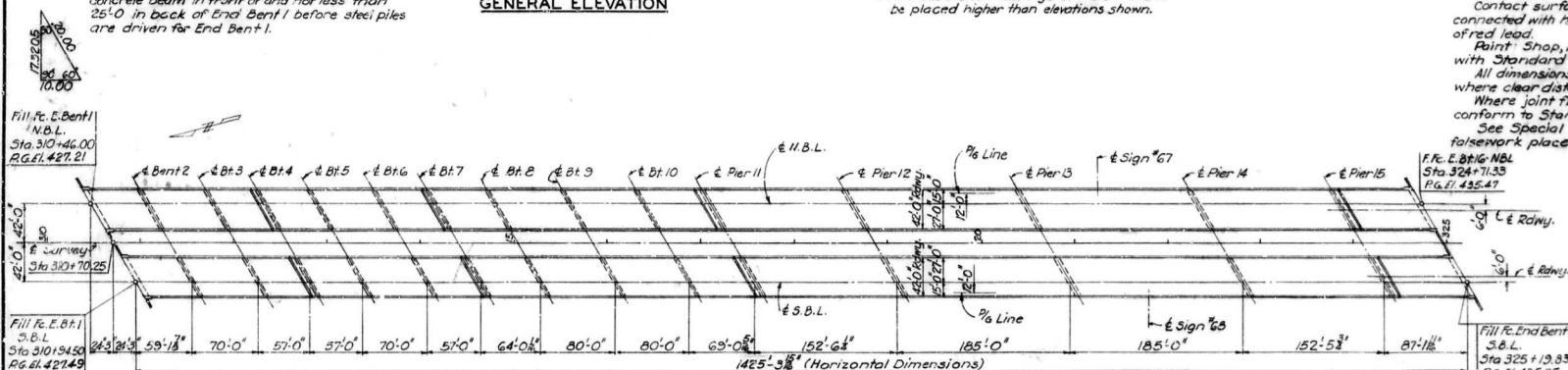


R.V.I. Sta. 295+50  
El. 418.53  
2000' V.C.



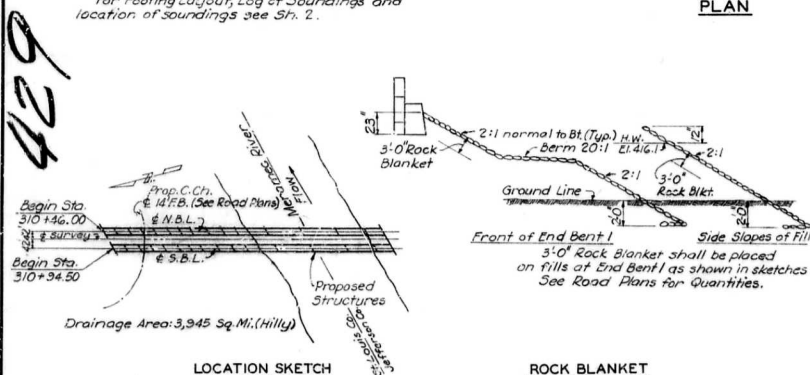
Compacted roadway fill (full roadway width) shall be placed up to elevation of bottom of concrete beam in front of and not less than 25' 0" in back of End Bent 1 before steel piles are driven for End Bent 1.

Notes: For drain outlet locations see Sheet 28.  
In no case shall footings of Piers 14 and 15  
be placed higher than elevations shown.



For Footing Layout, Log of Soundings and location of soundings see Sh. 2.

### PLAN



## LOCATION SKETCH

## ROCK BLANKET

Drawn Oct. 1963 by JER  
Checked Jan. 1964 by FJD

**Note:** This drawing is not to scale. Follow dimensions.

### ESTIMATED QUANTITIES

Item	Substr	Superstr	Totals
Class 1 Excavation for Structures	Cu. Yds. 5,210		5,210
Class 2 Excavation for Structures	Cu. Yds. 1,942		1,942
Steel Piles in Place (10")	Lin. Ft. 19,860		19,860
Steel Piles in Place (12")	Lin. Ft. 10,048		10,048
Steel Pile Cut-offs (10")	Lin. Ft. 729		729
Steel Pile Cut-offs (12")	Lin. Ft. 516		516
Class B Concrete	Cu. Yds. 3,367.6		3,367.6
Class B1 Concrete	Cu. Yds.	3,460.4	3,460.4
Class B Concrete (Seal Course)	Cu. Yds. 420.6		420.6
Reinforcing Steel	Lbs. 430,690	118,670	617,650
Painting	Tons	1,791.1	1,791.1
Fabricated Struct Carbon Steel (R Beam Spans) Lbs		1,280,890	1,280,890
Fabricated Struct Carbon Steel (R Girder Spans) Lbs		2,331,280	2,331,280
Pile Loading Test	Lump Sum		7

Note: Excavation for Structures made above Elev 98.0 will be paid for as Class I.  
Excavation for Structures made below Elev 98.0 will be paid for as Class II.  
Excavation for Structures will be computed from the original ground line or  
from the lower limits of channel change excavation, whichever is proved regard-  
less of the sequence of operation and the method of removal.  
No payment for excavation will be allowed if End Spot No. 1,  
Weight of bolls (steel or steel) is included in weight of fabricated structural steel on  
the basis of the following weights per 100 bolls: 76.0 lbs., 76.0 lbs., 99.0 lbs., 135.0

W.H.M.J., Jr. of 28

GENERAL NOTES:

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	MO.		19	96	

Design Specifications: AASHO - 1961.  
Loading: H20-S34 (15' Spacing Future Wearing Surface).  
(Modified 24,000 "Tordem Axle).  
Structural Steel Stress: (ASTM A36-G21") 20,000 psi  
Reinforcing Steel Stress: 20,000 psi  
Concrete, Class 3 Stress: 1,200 psi  
Concrete, Class 3 Stress: 1,600 psi  
Superstructure concrete shall be Class B.  
Substructure concrete shall be Class B or Class B1  
except payment will be on the basis of Class B.  
All reinforced concrete is not required for seal course.  
Superstructure deck to be surface sealed (See Special Provisions)  
Fabricated structural steel shall be ASTM A36-G21 except  
as noted. Payment will be made as fabricated Structural  
Steel. Steel shall be ASTM A36-G21.  
See Standard Specification 55.3.13 for qualification  
of welding operators.  
Details of welded joints shown are for manual arc welding.  
See Special Provisions for welding inspection.  
Field connections, High strength bolts 1/2", holes 3/4"  
except as otherwise noted.  
Contact surfaces of bearings and beam flanges  
contacted with high strength bolts shall receive one coat  
of red lead.  
Paint: Shop, none; Field by contractor in accordance  
with Standard Specification 55.4.10.  
All dimensions to reinforcing steel are to % bar except  
where clear distance from face of concrete is indicated.  
Where joint filler is specified on the plans it shall  
conform to Standard Specification 123.  
See Special Provisions for required approval of  
falsework placed in river.

The estimated quantity of 10" & 12" Steel Piles in Place includes 243 and 88 estimated splices respectively, at 8' per splice.

B.M. #30-Elev. 402.04-Square head of lag screw with washer in roof of East side of 16" Black Oak tree in yard of cabin, lot #26; 20' West of gravel road; 450' Rt. @ Sta. 317+00.

B.M. #31 - Elev. 394.78 - Square head of lag screw with washer in West side of 16' Maple tree, 30' from water line (normal) @ edge of path down hill @ South side of Meramec River; 60' Rt. @ Sta. 324+00.

## BRIDGE OVER MERAMEC RIVER

STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310 +70.25

## ST. LOUIS-JEFFERSON COUNTIES

FINISHED

SUBMITTED BY D.B. Jenkins DATE 1/16/69  
BRIDGE ENGINEER

APPROVED BY W. S. Miller DATE 1/16/69

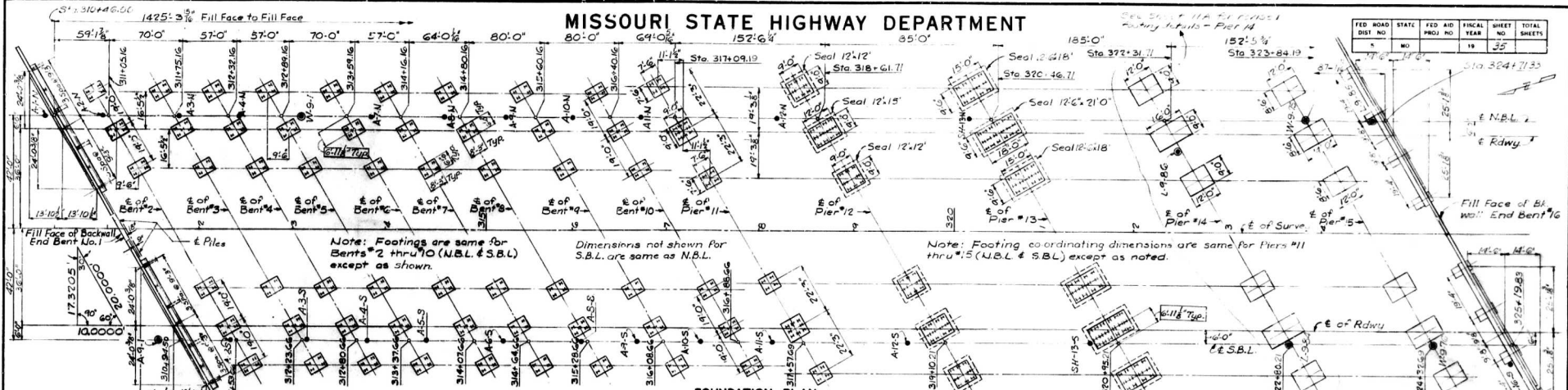
HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO

STD 54.00
A-609

SEE FINAL PLANS BROWN-LINES

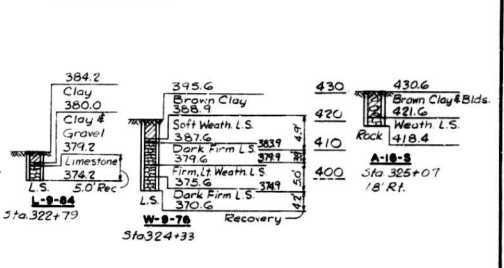
# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO		19	35	



Station	400	398.6	398.5	398.9	398.8	399.1	400.0	400.8	401.4	402.1	402.7	401.7
390	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil
380	376.6	376.6	376.9	375.6	377.6	377.0	377.8	377.4	377.6	378.4	377.7	377.7
370	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel	Sandy Gravel
360	318.6	319.8	319.9	319.8	320.5	321.3	321.4	322.1	322.2	321.7	321.7	321.7
350	Shale	Shale	Shale	Shale	Shale	Shale	Shale	Shale	Shale	Shale	Shale	Shale
340	299.9	300.8	301.3	301.3	303.6	304.0	303.7	303.6	303.7	303.7	303.7	303.4
330	Rock A-1-N	Rock A-2-N	Rock A-3-N	Rock A-4-N	Rock A-5-N	Rock A-6-N	Rock A-7-N	Rock A-8-N	Rock A-9-N	Rock A-10-N	Rock A-11-N	Rock A-12-N
320	310+35	310+99	311+80	312+44	313+10	313+90	314+69	315+53	316+39	317+27	318+23	319+09
310	398.4	398.5	398.7	398.9	399.2	399.8	400.7	401.3	401.9	402.7	403.2	403.6
300	383.9	376.5	376.7	376.9	377.2	377.8	378.7	379.1	379.4	379.7	379.2	379.2
290	318.9	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
280	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
270	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
260	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
250	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
240	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
230	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
220	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
210	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9
200	300.4	318.5	319.7	319.9	320.2	320.3	322.2	323.1	323.4	324.7	323.9	323.9

Notes:  
All dimensions are horizontal.  
See Sh. No. 3 for Pile & Foundation Data.  
A-9-1 or L-9-B4 indicates Core Drill Hole location.  
A-9-1 or L-9-B4 indicates Auger Drill Hole location.  
SH-13-N indicates Sleeve Hammered Hole location.  
Stations and locations of soundings are from E. of Lane.



## BRIDGE OVER MERAMEC RIVER

STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7) (RTE. I-55) STA. 310+70.25

## ST. LOUIS-JEFFERSON COUNTIES

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS  
KANSAS CITY, MO.

A-609



# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	56	

BILL OF REINFORCING STEEL						
NO.	SIZE	LENGTH	MARK	LOCATION	BENDING SKETCHES & CUTTING DIAGRAMS	
<b>END BENT 1 N&amp;L &amp; S&amp;L</b>						
Quantities for one Bent (2 read.)						
4	6	29'-4"	H1	Backwall		
8	4	29'-0"	H2	do		
16	9	32'-0"	H3	Beam		
4	6	30'-2"	H4	do		
2	6	7'-10"	H5	Wings		
2	6	7'-4"	H6	do		
2	6	9'-2"	H7	do		
2	6	10'-9"	H8	do		
2	6	9'-11"	H9	do		
2	4	3'-2"	H10	Beam		
4	6	13'-10"	T1	Wings		
4	6	11'-8"	T2	do		
58	4	12'-5"	U1	Beam		
20	4	3'-9"	U2	do		
110	5	5'-1"	V1	Backwall		
7	4	9'-9"	V2	Wings		
2	4	6'-5"	V3	do		
4	4	6'-11"	V4	do		
10	2	19'-9"	W1	A.B. Wells		
<b>END BENT 16 N&amp;L &amp; S&amp;L</b>						
Quantities for one Bent (2 read.)						
36	6	8'-8"	D1	Footing		
32	5	3'-10"	D2	do		
40	4	4'-8"	D3	do		
24	6	8'-1"	F1	Column		
8	6	8'-1"	F2	do		
9	6	14'-0"	H11	Wings		
12	6	11'-8"	H12	do		
10	9	23'-6"	H13	Beam		
5	9	22'-4"	H14	do		
12	10	14'-10"	H15	do		
8	6	32'-7"	H16	do		
10	9	34'-7"	H17	do		
4	10	32'-4"	H18	do		
12	4	32'-5"	H19	Backwall		
4	6	22'-0"	H20	do		
4	6	9'-6"	T3	Wings		
4	6	14'-0"	T4	do		
32	5	10'-8"	U3	Beam		
54	4	12'-0"	U4	do		
17	4	4'-3"	U5	do		
3	4	3'-4"	U6	do		
12	3	23'-8"	V5	Column		
110	5	7'-4"	V6	Backwall		
2	5	8'-10"	V7	Wings		
8	5	15'-8"	V8	do		
12	4	11'-8"	V9	do		
40	6	8'-3"	V10	Column		
8	4	8'-0"	V11	do		
10	2	19'-9"	W1	A.B. Wells		

Note:  
Dimensions shown are out to out of bar.  
Bars shall be billed and tagged separately  
for each unit.

Note: This drawing is not to scale. Follow dimensions.

FOOTING AND PILE DATA													
Bent No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Foundation Materials													
Design Bearing Test (Sp. Ft.)													
See Standard Specification 50.4.2													
File Type & Size	10B42	10B42	10B42	10B42	10B42	10B42	10B42	10B42	10B42	10B42	10B42	10B42	10B42
Number Each Bent	7	15	12	13	16	28	42						
Approximate Length, Ft.	105	75	75	75	85	75	75						
Plan Bearing Test	55.6	55.6	55.6	55.6	70.1	70.1	70.1						
Min. Required Bearing Test	30.5	45.5	51.5	52.5	51.5	68.5	68.5						
Hammer	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy						
See Standard Specification 52.2.6													

All 12" piles shall be driven to practical refusal on or with solid rock or other point bearing material of not less than the Fla. B. rating shown, or less exacting, as applying is required to obtain Fla. B. rating, in which case the engineer will authorize a lesser bearing, but in no case less than the Minimum Required Bearing.  
All 10" pile shall be driven to a minimum bearing of 55.6 tons per pile and to a minimum tip penetration of less than 35.0'. A pile load test will be required, and the actual lengths and bearing values of the 10" piles will be determined in accordance with the load test. (See Special Provisions).  
All piling shall be driven with an approved power hammer developing an energy of not less than 12,000 ft.-lbs. and having a ram weighing not less than 4500 lbs.  
Steel pile authorized in lengths greater than 65 ft. may be furnished in two pieces for field splicing and these splices, if made, will be paid for in accordance with Standard Specification 52.2.5.

## SHEET INDEX

- GENERAL PLAN AND ELEVATION
- FOOTING PLAN AND LOG OF SOUNDINGS
- REINFORCING BAR LIST, FOOTING TABLE
- REINFORCING BAR LIST
- REINFORCING BAR LIST
- END BENT 1
- BENTS 2, 3, 5, 6
- BENTS 4, 7
- BENTS 8, 9, 10
- PIERS 11, 12, 13
- PIERS 14, 15
- END BENT 16
- FRAMING PLAN-WF BEAM SPANS
- FRAMING PLAN-GIRDER SPANS
- FRAMING PLAN SPAN 15, GIRDER SPLICES, MISC.
- LONGIT. SECTION AND HINGE 11, 15
- HINGE 4, 7-WF BEAM DETAILS
- GIRDER ELEVATION AND DETAILS
- DIAPHRAGMS, LATERAL CONNECTIONS
- CROSS FRAMES, LATERAL CONNECTIONS
- EXPANSION DEVICE AND SECTIONS AT HINGE 11, 15
- PLATE EXPANSION DEVICE
- WF BEAM BEARINGS, TYPE D
- GIRDER BEARINGS, TYPE E
- CROSS SECTION, D.L. DEFLECTION AND MISC.
- SLAB PLAN, SPANS 1-10
- SLAB PLAN, SPANS 11-15
- HANDRAIL, DRAIN SPACING

## BRIDGE OVER MERAMEC RIVER

STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310+70.25

ST. LOUIS - JEFFERSON COUNTIES

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

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Sheet No. 3 of 28

NO CONSTRUCTION SHALL BE

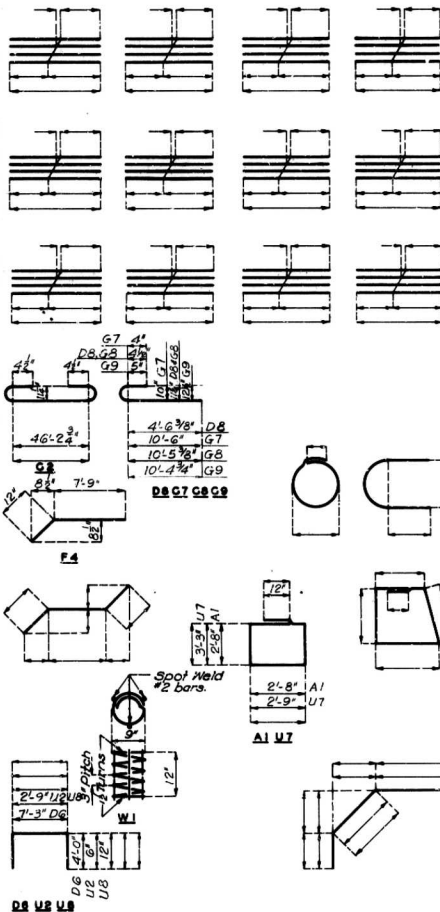
Drawn Nov 1963 by R.H.  
Checked Jan 1964 by R.J.D.

Revised  
June 1961

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	37	

BILL OF REINFORCING STEEL					
NO.	SIZE	LENGTH	MARK	LOCATION	
<b>BENTS 2, 3, 5 &amp; 9 N.B.L. &amp; S.B.L.</b>					
Quantities for one Bent (8 req'd.)					
24	#8	5'-4"	D4	Footings	
12	9	7'-9"	D5	do	
6	9	15'-3"	D6	do	
18	5	5'-6"	D7	do	
24	6	8'-9"	F4	Column	
4	6	24'-7"	G1	Cap	
5	9	49'-6"	G2	do	
4	9	12'-8"	G3	do	
3	4	3'-5"	G4	do	
10	9	25'-3"	G5	do	
8	10	10'-0"	G6	do	
8	9	12'-2"	G8	do	
4	4	3'-9"	U2	Cap	
61	4	13'-0"	U7	do	
7	4	4'-9"	U8	do	
10	2	19'-9"	W1	A.B. Well	
Variable Bent 2 N.B.L.					
93	3	11'-8"	A1	Column	
24	8	34'-8"	B2N	do	
Variable Bent 2 S.B.L.					
93	3	11'-8"	A1	Column	
24	8	35'-0"	B2S	do	
Variable Bent 3 N.B.L.					
93	3	11'-8"	A1	Column	
24	8	34'-6"	B3N	do	
Variable Bent 3 S.B.L.					
102	3	11'-8"	A1	Column	
24	8	37'-9"	B3S	do	
Variable Bent 5 N.B.L.					
102	3	11'-8"	A1	Column	
24	8	38'-2"	B5N	do	
Variable Bent 5 S.B.L.					
96	3	11'-8"	A1	Column	
24	8	35'-5"	B5S	do	
Variable Bent 6 N.B.L.					
96	3	11'-8"	A1	Column	
24	8	36'-2"	B6N	do	
Variable Bent 6 S.B.L.					
99	3	11'-8"	A1	Column	
24	8	36'-5"	B6S	do	
<b>BENTS 4 &amp; 7 N.B.L. &amp; S.B.L.</b>					
Quantities for one Bent (4 req'd.)					
12	9	7'-9"	D5	Footings	
6	9	15'-3"	D6	do	
18	5	5'-6"	D7	do	
24	6	8'-9"	F4	Column	
4	6	24'-7"	G1	Cap	
4	9	49'-6"	G2	do	
3	9	12'-8"	G3	do	
3	4	3'-5"	G4	do	
8	9	25'-3"	G5	do	
6	10	10'-0"	G6	do	



Note:  
Dimensions shown are out to out of bars.  
Bars shall be billed & tagged separately  
for each unit.

Note: This drawing is not to scale. Follow dimensions.

Drawn Dec. 1963 by R.H.  
Checked Jan. 1964 by H.G.J.

NO.	SIZE	LENGTH	MARK	LOCATION	
<b>BENTS 4 &amp; 7 N.B.L. &amp; S.B.L. CONT.</b>					
Quantities for one Bent (4 req'd.)					
6	#8	12'-0"	G7	Cap	
12	4	3'-9"	U2	Cap	
48	4	13'-0"	U7	do	
7	4	4'-9"	U8	do	
10	2	19'-9"	W1	A.B. Well	
Variable For Bent 4					
Quantities for one Bent (2 req'd.)					
105	3	11'-8"	A1	Column	
24	9	38'-2"	B4	do	
24	9	6'-3"	D8	do	
Variable For Bent 7					
Quantities for one Bent (2 req'd.)					
99	3	11'-8"	A1	Column	
24	8	36'-2"	B7	do	
24	8	5'-4"	D4	do	
<b>BENTS 8 &amp; 10 N.B.L. &amp; S.B.L.</b>					
Quantities for one Bent (6 req'd.)					
24	8	5'-4"	D4	Footings	
12	9	7'-9"	D5	do	
6	9	15'-3"	D6	do	
18	5	5'-6"	D7	do	
24	6	8'-9"	F4	Column	
4	6	24'-7"	G1	Cap	
5	9	49'-6"	G2	do	
3	4	3'-5"	G4	do	
8	10	10'-0"	G6	do	
8	10	12'-4"	G9	do	
8	10	12'-8"	G10	do	
10	10	25'-3"	G11	do	
4	4	3'-9"	U2	Cap	
61	4	13'-0"	U7	do	
7	4	4'-9"	U8	do	
10	2	19'-9"	W1	A.B. Well	
Variable For Bent 8 N.B.L.					
96	3	11'-8"	A1	Column	
24	8	36'-3"	B8N	do	
Variable For Bent 8 S.B.L.					
99	3	11'-8"	A1	Column	
24	8	36'-5"	B8S	do	
Variable For Bent 9 N.B.L.					
102	3	11'-8"	A1	Column	
24	8	37'-4"	B9N	do	
Variable For Bent 9 S.B.L.					
102	3	11'-8"	A1	Column	
24	8	37'-7"	B9S	do	
Variable For Bent 10 N.B.L.					
99	3	11'-8"	A1	Column	
24	8	37'-2"	B10N	do	
Variable For Bent 10 S.B.L.					
102	3	11'-8"	A1	Column	
24	8	37'-5"	B10S	do	

**BRIDGE OVER MERAMEC RIVER**  
STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310+70.25  
**ST. LOUIS-JEFFERSON COUNTIES**

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

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Sheet No. 4 of 28

NO CONSTRUCTION CHANGES

Revised  
June 1961  
No 90.3

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		18	35	

BILL OF REINFORCING STEEL						
NO.	SIZE	LENGTH	MARK	LOCATION	BENDING SKETCHES & CUTTING DIAGRAMS	
<b>PIERS 11, 12, 13 N.B.L. &amp; S.B.L.</b>						
Quantities for one pier (reg'd.)						
12	#7	23'-4"	P1	Cap		
4	#6	25'-5"	P2	do		
5	#5	24'-4"	P3	Web		
5	#6	7'-2"	P5	Cap		
45	#6	7'-6"	P6	do		
2	#6	5'-6"	P7	do		
45	#5	9'-1"	P8	do		
2	#4	4'-3"	P9	do		
23	#4	5'-2"	P10	do		
4	#7	10'-11"	P11	do		
5	#4	4'-8"	P12	do		
40	#5	7'-9"	P13	do		
Variable for Pier 11 N.B.L. & S.B.L.						
Quantities for both Lanes (reg'd.)						
56	#4	22'-11"	P4	Web		
144	#7	16'-4"	P37	Column		
144	#7	4'-5"	P38	Footing		
32	#6	9'-0"	P39	do		
24	#6	10'-8"	P40	do		
144	#8	5'-4"	P41	do		
72	#4	17'-5"	P42	Web		
144	#8	16'-8"	P43	Column		
144	#8	17'-5"	P44	do		
45	#4	27'-2"	P45	do		
20	#2	23'-0"	W2	A.B. Well		
Variable for Pier 12 N.B.L. & S.B.L.						
Quantities for both Lanes (reg'd.)						
64	#4	22'-11"	P4	Web		
48	#6	10'-8"	P40	Footing		
4	#8	21'-8"	P46	do		
20	#8	11'-6"	P47	do		
18	#5	8'-6"	P48	do		
288	#10	6'-10"	P49	do		
288	#10	23'-5"	P50	Column		
144	#10	18'-8"	P51	do		
54	#4	28'-8"	P52	do		
72	#4	18'-8"	P53	Web		
20	#2	23'-0"	W2	A.B. Well		
Variable for Pier 13 N.B.L. & S.B.L.						
Quantities for both Lanes (reg'd.)						
104	#4	22'-11"	P4	Web		
288	#10	6'-10"	P49	Footing		
8	#8	25'-2"	P54	do		
56	#8	14'-6"	P55	do		
66	#5	9'-0"	P56	do		
4	#11	29'-4"	P57	do		
32	#11	17'-6"	P58	do		
288	#10	29'-5"	P59	Column		
144	#10	29'-6"	P60	do		
87	#4	33'-8"	P61	do		
72	#4	29'-6"	P62	Web		
40	#2	23'-0"	W2	A.B. Well		
<b>PIERS 14, 15 N.B.L. &amp; S.B.L.</b>						
Quantities for one pier (reg'd.)						
12	#7	23'-4"	P1	Cap		
4	#6	25'-5"	P2	do		
6	#5	24'-4"	P3	Web		
2	#6	7'-2"	P5	Cap		
45	#6	7'-6"	P6	do		
2	#6	5'-6"	P7	do		
45	#5	9'-1"	P8	do		
2	#4	4'-3"	P9	do		
23	#4	5'-2"	P10	do		
4	#7	10'-11"	P11	do		
5	#4	4'-8"	P12	do		
40	#5	7'-9"	P13	Web		
10	#2	23'-0"	W2	A.B. Well		
Variable for Pier 14 N.B.L. & S.B.L.						
Quantities for both Lanes (reg'd.)						
112	#4	22'-11"	P4	Web		
72	#4	29'-5"	P14	do		
32	#9	18'-0"	P16	Footing		
80	#5	8'-8"	P17	do		
36	#8	13'-8"	P18	do		
288	#10	6'-10"	P19	do		
144	#10	19'-5"	P21	Column		
33	#4	30'-5"	P23	do		
72	#10	30'-0"	P24	do		
144	#10	16'-5"	P25	do		
30	#4	29'-8"	P26	do		
72	#10	29'-6"	P20	do		
Variable for Pier 15 N.B.L. & S.B.L.						
Quantities for both Lanes (reg'd.)						
108	#4	22'-11"	P4	Web		
36	#4	29'-5"	P14	do		
72	#8	14'-8"	P15	Column		
72	#8	12'-8"	P20	do		
72	#8	31'-4"	P22	do		
22	#9	16'-0"	P27	Footing		
76	#5	8'-0"	P28	do		
44	#6	12'-10"	P29	do		
144	#8	5'-4"	P30	do		
144	#7	4'-8"	P31	do		
36	#4	31'-4"	P32	Web		
72	#7	12'-4"	P33	Column		
60	#4	28'-9"	P34	do		
72	#8	29'-6"	P35	do		
72	#7	14'-4"	P36	do		

Note: Dimension shown are out to out of bar.  
Bars shall be billed and tagged separately for each unit.

Note: This drawing is not to scale. Follow dimensions.

BRIDGE OVER MERAMEC RIVER  
STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)XRT. I-55) STA. 310+70.25  
ST. LOUIS-JEFFERSON COUNTIES

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

Sheet No. 5 of 28

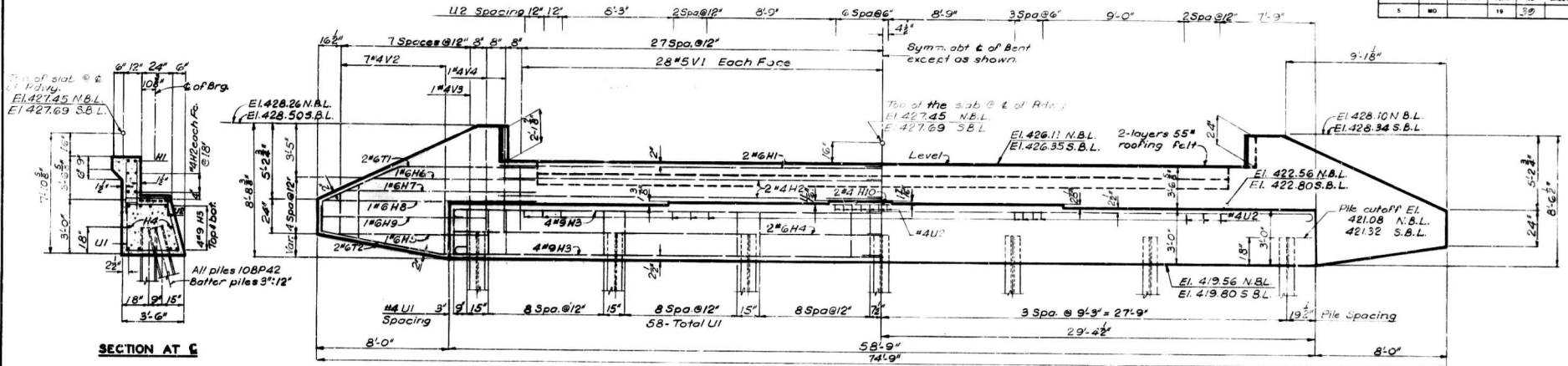
A-609

Drawn Dec. 1963 by R.H.  
Checked Jan. 1964 by H.G.J.

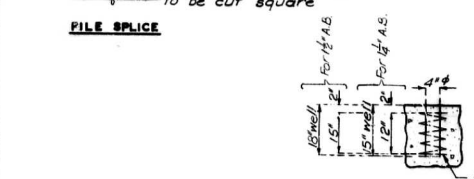
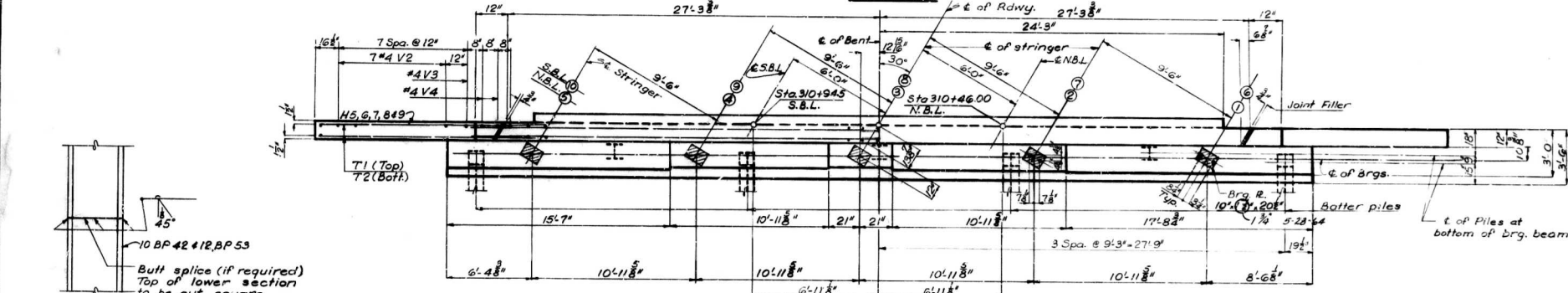
Revised  
June 1961

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	29	



ELEVATION



DETAIL OF ANCHOR BOLT WELLS

Note: Anchor bolts for Type D'4E bearings may be set in wells as shown or in holes drilled into concrete substructure. #2 bar (Spiral)

Notes:  
Bearing steps shall be poured monolithically with beam.  
Reinforcing steel in bridge seats shall be placed to clear anchor bolts.  
Fill at End Bent No. 1 shall not be carried above bottom of beam and wings until superstructure Span 1 is in place.

END BENT NO. 1  
N.B.L. & S.B.L.

BRIDGE OVER MERAMEC RIVER  
STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.3 MILES S.W. OF LEMAY  
PROJECT NO. 1-55-3(7) (RTE. 1-55) STA. 310+70.25  
ST. LOUIS-JEFFERSON COUNTIES

DETAILED OCT. 1963 BY R.H.  
CHECKED JAN. 1964 BY F.J.D.

Note: This drawing is not to scale. Follow dimensions.

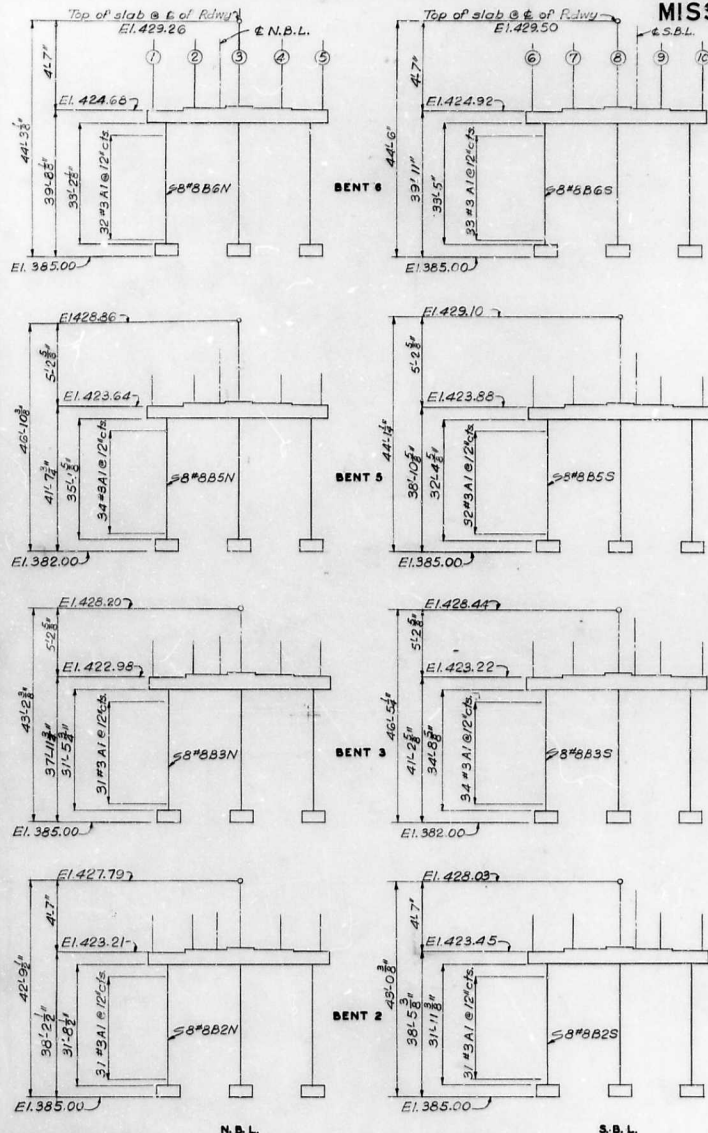
Sheet No. 6 of 28

A-609



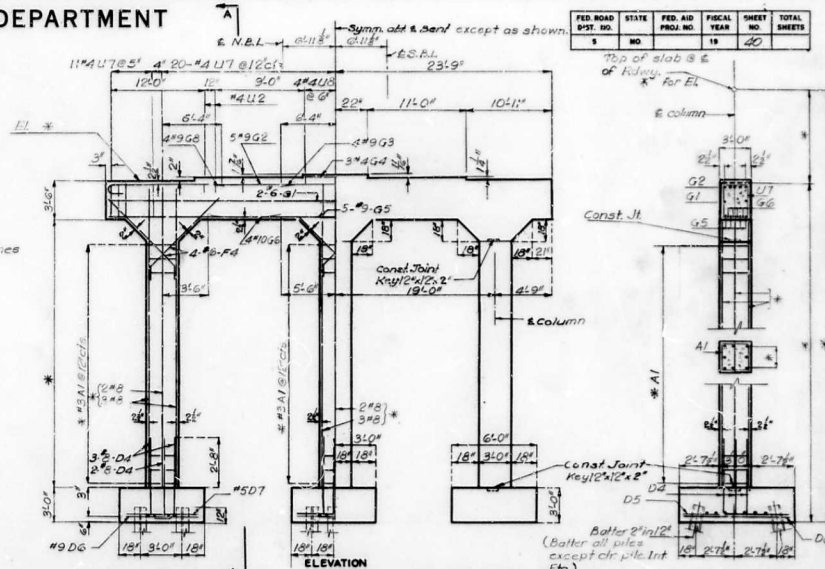
# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MO		19	20	

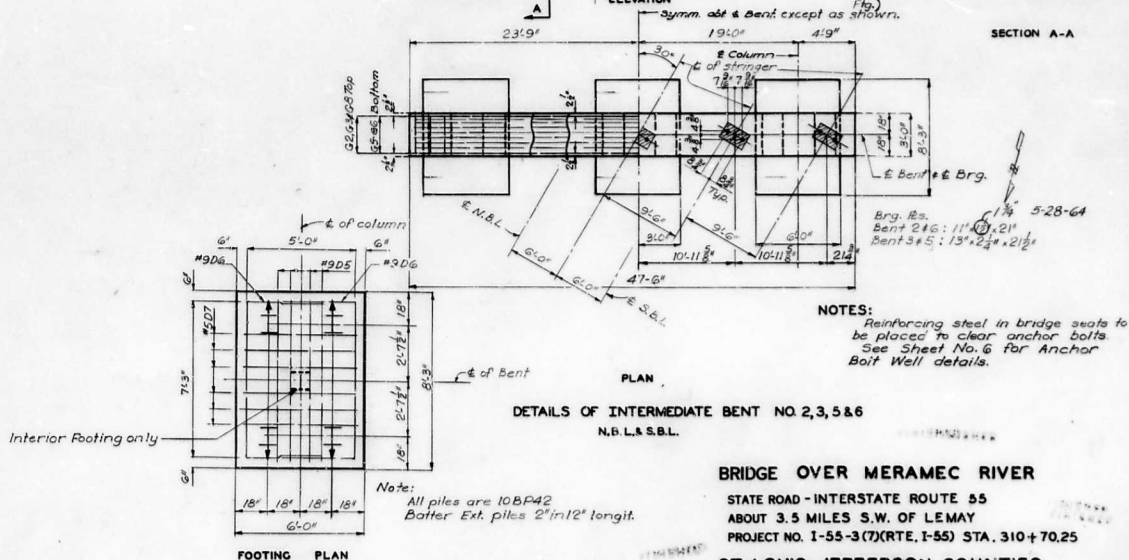


ELEVATION SKETCHES

Note:  
\* See sketches



SECTION A-A



DETAILS OF INTERMEDIATE BENT NO. 2, 3, 5 & 6  
N.B.L. & S.B.L.

NOTES:  
Reinforcing steel in bridge spans to be placed to clear anchor bolts.  
See Sheet No. 6 for Anchor Bolt Well details.

## BRIDGE OVER MERAMEC RIVER

STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310+70.25

ST. LOUIS-JEFFERSON COUNTIES

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

A-609

DETAILED Oct. 1963 BY R.H.  
CHECKED Jan. 1964 BY H.G.J.

Note: This drawing is not to scale. Follow dimensions.

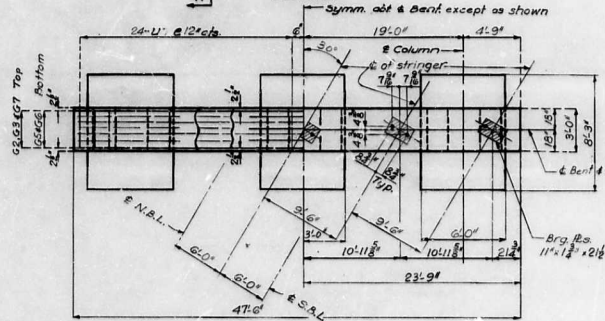
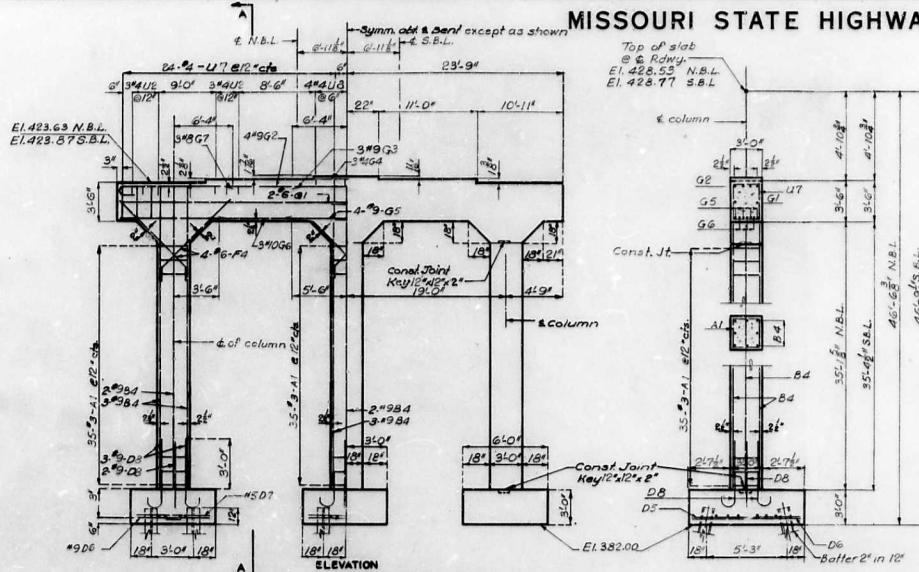
Sheet No. 7 of 28

NO CONSTRUCTION CHANGES

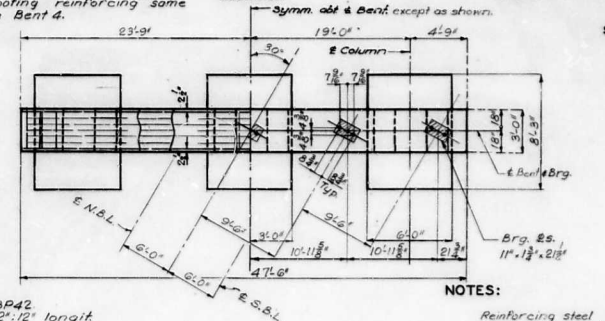
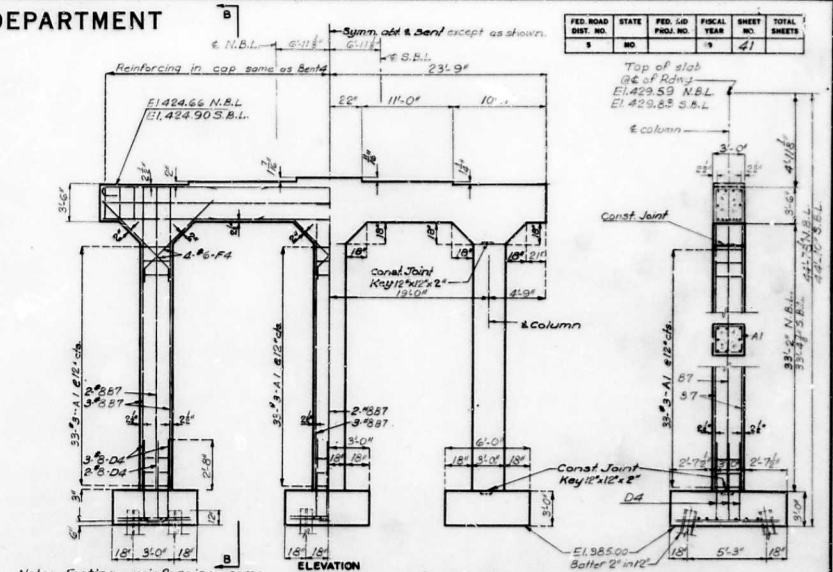
Revised  
June 1963

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	7	47		



DETAILS OF INTERMEDIATE BENT NO. 4  
N.B.L. & S.B.L.



DETAILS OF INTERMEDIATE BENT NO. 7  
N.B.L. & S.B.L.

All piles are 10BP42  
Batter all piles 2" in 12"

## NOTES:

Reinforcing steel in bridge seatings  
be placed to clear anchor bolts.  
See Sheet No. 6 for Anchor Bolt  
Wall detail.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 8

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

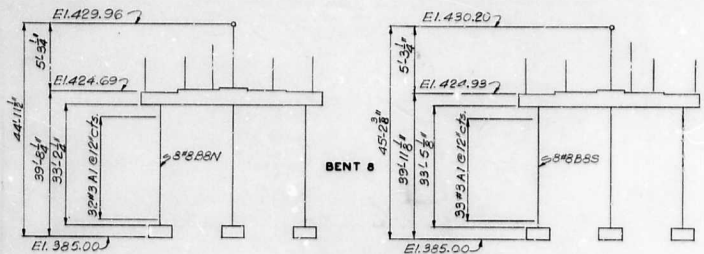
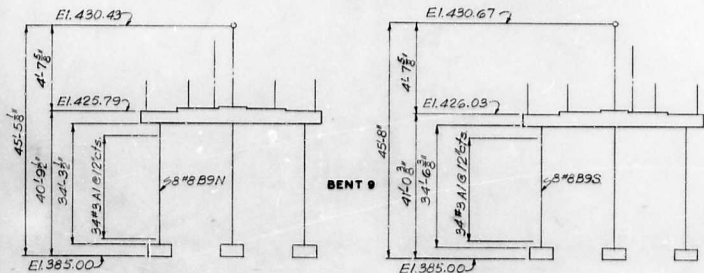
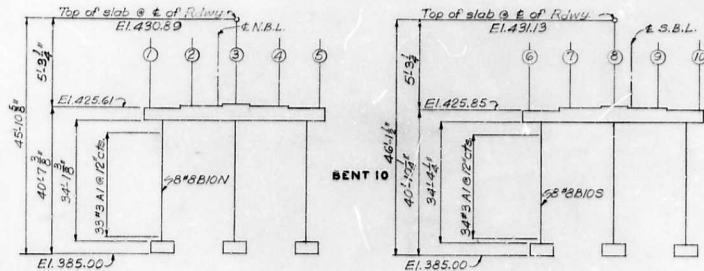
A-609

NO CONSTRUCTION CHANGES

DETAILED Oct 1963 BY R.H.  
CHECKED Jan 1964 BY H.G.J.

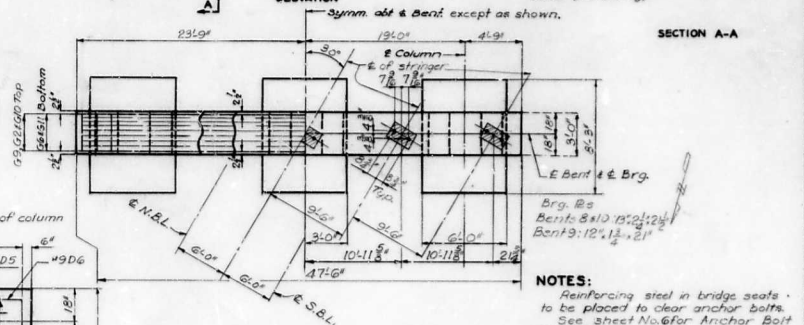
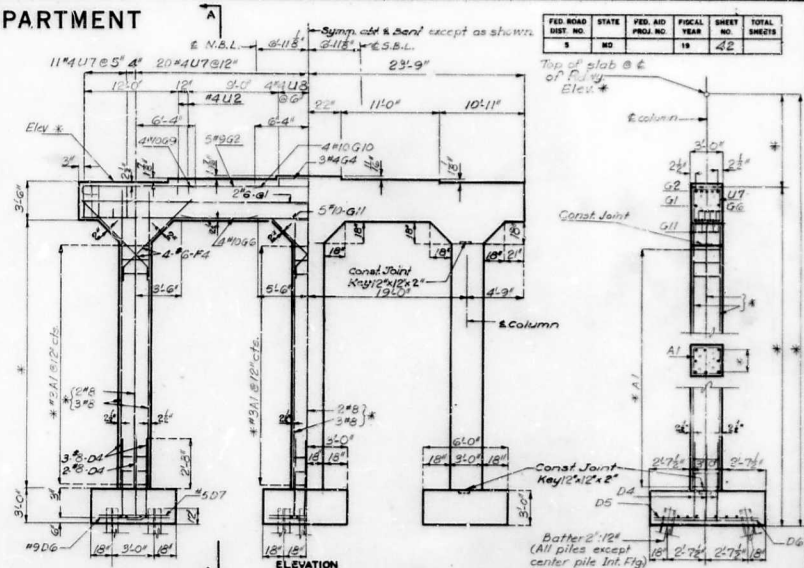
BRIDGE OVER MERAMEC RIVER  
STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. 1-55-3(7)(RTE. 1-55) STA. 310+70.25  
ST. LOUIS-JEFFERSON COUNTIES

# MISSOURI STATE HIGHWAY DEPARTMENT



ELEVATION SKETCHES

Note:  
\* See sketches



DETAILS OF INTERMEDIATE BENT NO. 8, 9 & 10  
N.B.L. & S.B.L.

## BRIDGE OVER MERAMEC RIVER

STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. 1-55-3(7)(RTE. 1-55) STA. 310+70.25

ST. LOUIS-JEFFERSON COUNTIES

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

A-609

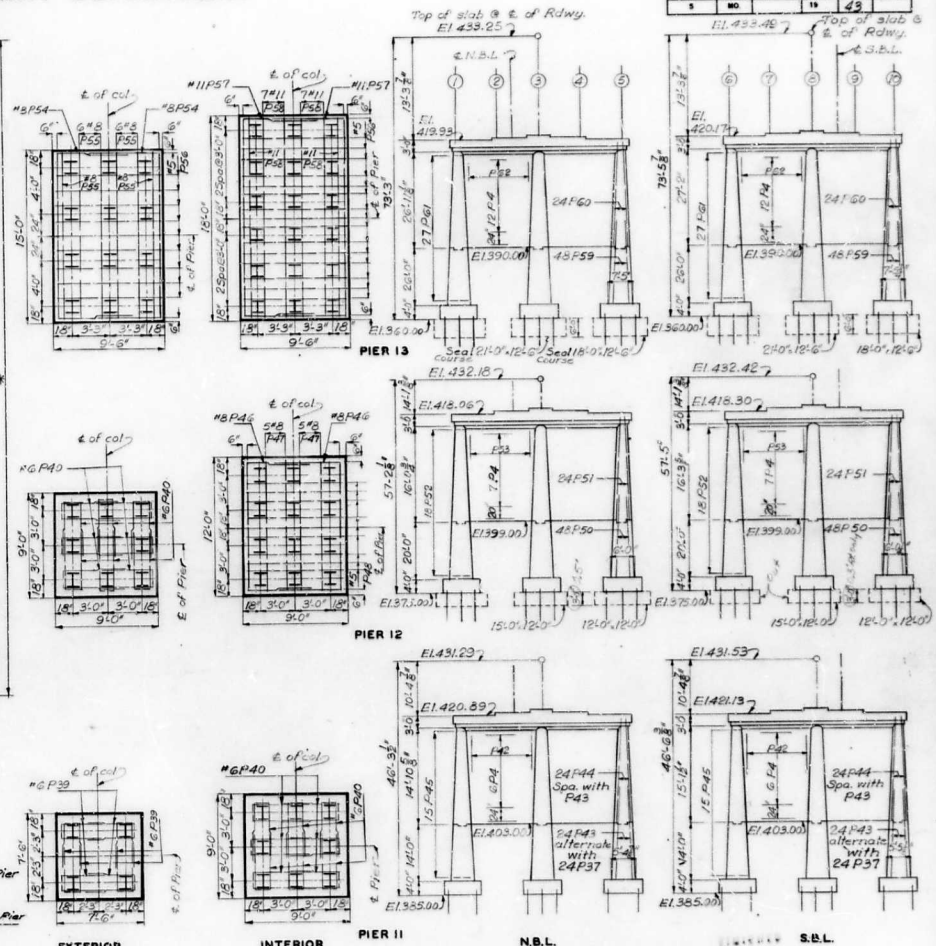
DETAILS OCT 1963 BY R.H.  
CHECKED JAN. 1964 BY H.G.J.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 28

NO CONSTRUCTION CHANGES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	43	



### ELEVATION SKETCHES

STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. 1-55-3(7)(RTE. 1-55) STA. 310 + 70.25

ST. LOUIS-JEFFERSON COUNTIES

HARRINGTON AND CORTELYOU  
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CONSTRUCTION CHANGES NOTED HEREON (Seal courses - Apr 12)

A-609

Assembled Nov. 1963 by R.H.  
checked Jan. 1964 by H.G.J.

DETAILS OF PIER NO. 11 12&13

Note: This drawing is not to scale. Follow dimensions.

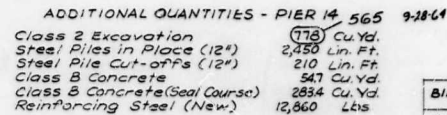
ANCHOR BOLT LAYOUT PLAN

Sheet No.10 of 28

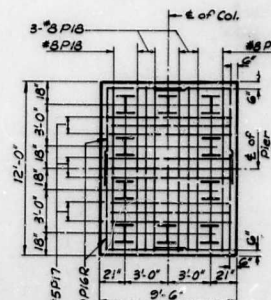




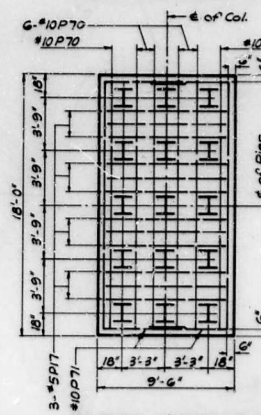
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		



See Sheet 1 for General Notes.

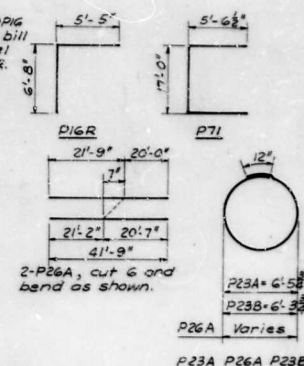


**EXTERIOR FOOTING PLAN**



INTERIOR FOOTING PLAN

Note: Use #9P  
from existing b  
of reinf. steel  
to make P1GR.



BENDING SKETCHES &amp; CUTTING DIAGRAMS

PILE DATA	
Pile type & size	28P53
Number each Lane	35
Approx. length, Ft.	35
Plan bearing, Tons	70
Min. reqd. bearing, Tons	69.4
Hammer	Heavy Power

See Sheet 3 of design plans for pile notes.

**BRIDGE OVER MERAMEC RIVER**  
**STATE ROAD-INTERSTATE ROUTE 55**  
**ABOUT 3.5 MILES S.W. OF LEMAY**  
**PROJECT NO. I-55-3 (7) (RTE. I-55) STA. 310 + 70.25**  
**ST. LOUIS-JEFFERSON COUNTIES**

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

A-609

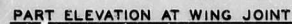
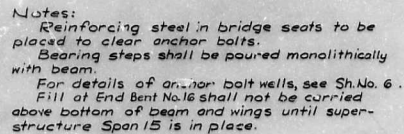
DETAILED Sept. 1964 BY FJD  
CHECKED Sept. 1964 BY GEG

**Note:** This drawing is not to scale. Follow dimensions.

Sheet No. 11A of 28

CONSTRUCTION CHANGES NOTED HEREON (Seal Course)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	45	



STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)(RTE.I-55) STA. 310+70.25

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

A-609

DETAILED *Oct. 1963* BY *Y.E.P.*  
CHECKED *Jan. 1964* BY *FJD*

**Note:** This drawing is not to scale. Follow dimensions.

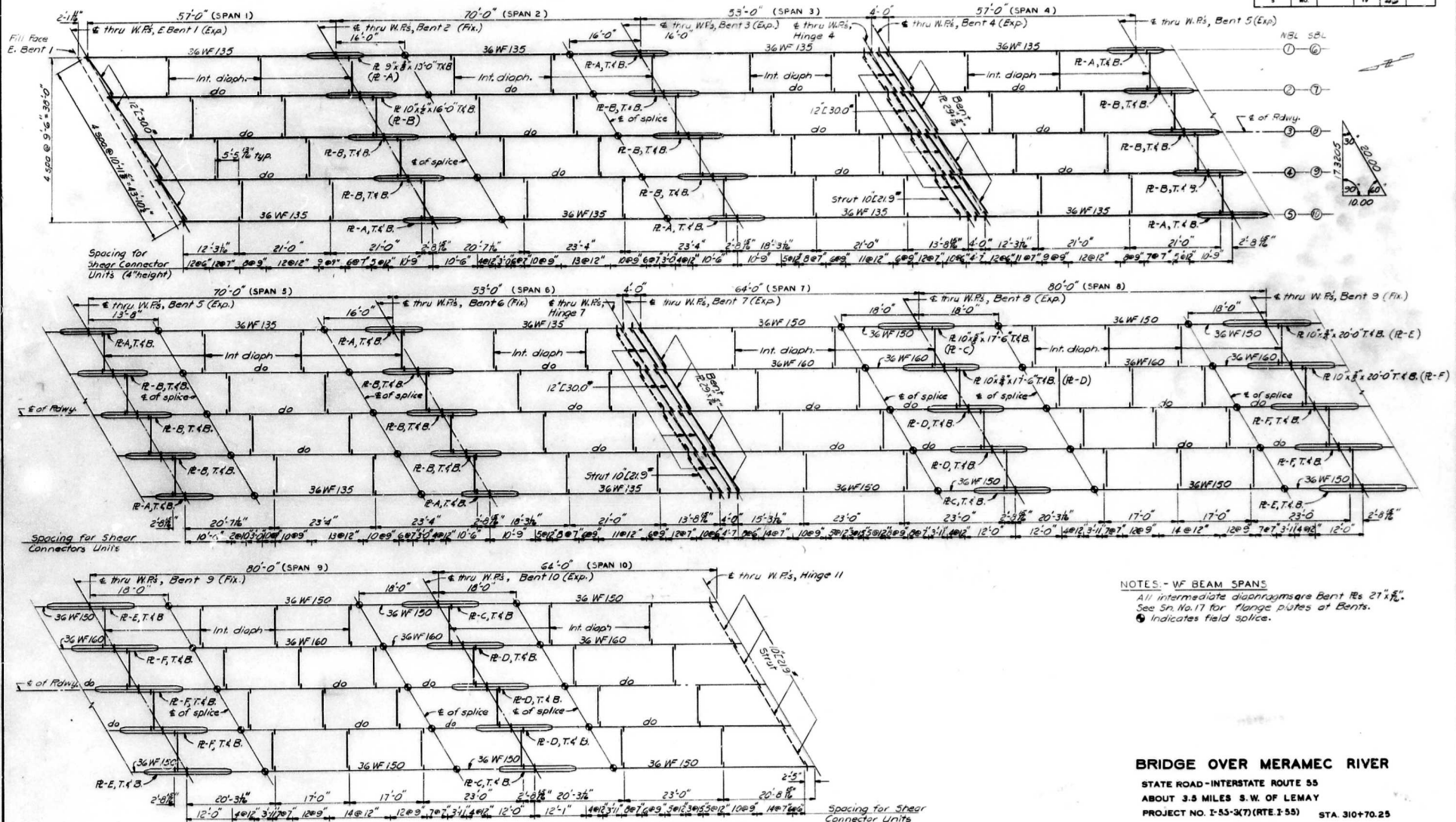
Sheet No. 12 of 28

SEE FINAL PLANS BROWN-LINES



# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	46	



**FRAMING PLAN-W BEAM SPANS**

Longitudinal dimensions are taken along top of stringer flange.

## NOTES - W BEAM SPANS

All intermediate diaphragms are bent ribs 21" x 15". See S.N. 17 for flange plates at bents. indicates field splice.

## BRIDGE OVER MERAMEC RIVER

STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.8 MILES S.W. OF LEMAY  
PROJECT NO. E-55-3(7) (RTE. 1-55) STA. 310+70.25  
ST. LOUIS-JEFFERSON COUNTIES

DETAILED Oct. 1963 BY J.W.  
CHECKED Jan. 1964 BY F.J.D.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 13 of 28

HARRINGTON AND CORTELYOU  
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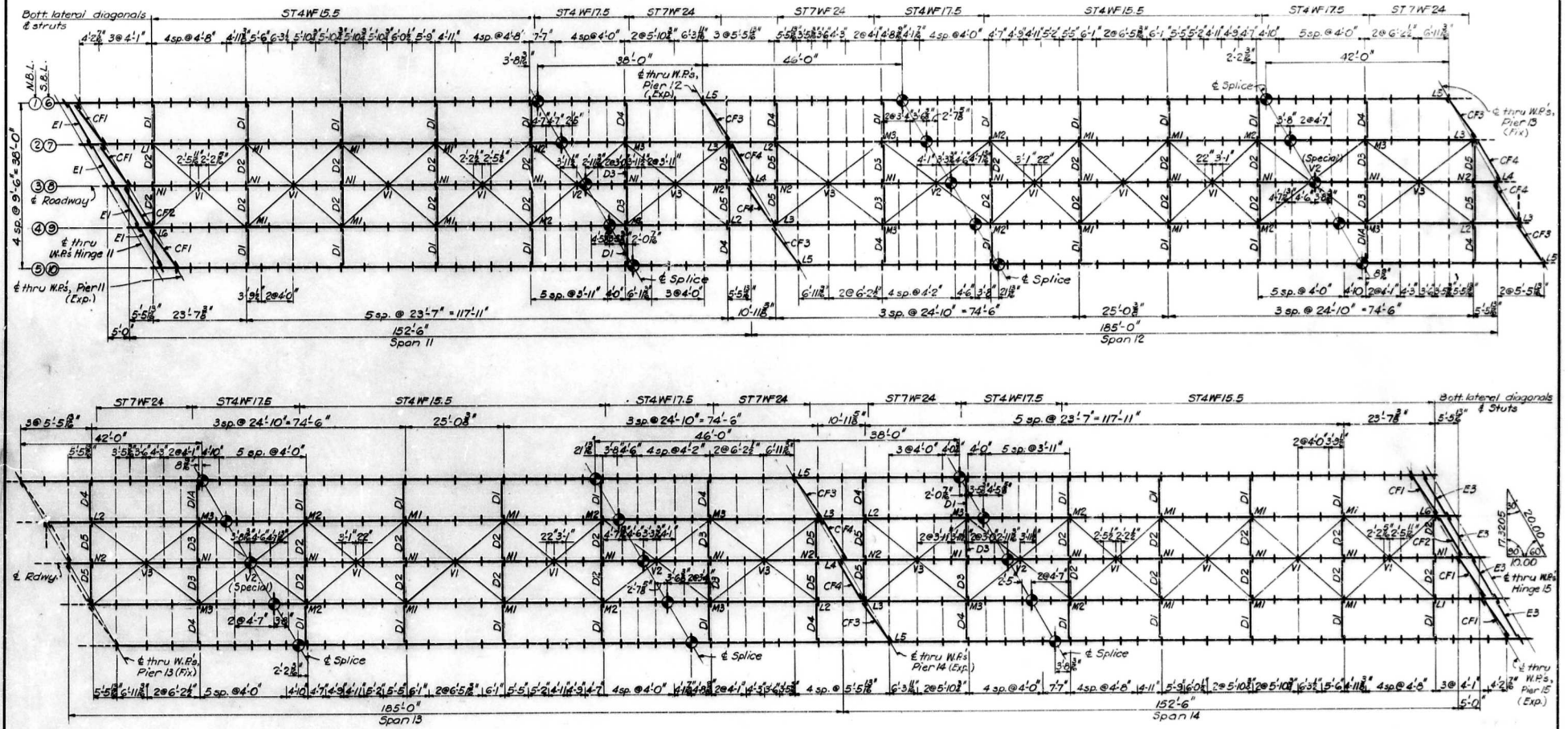
A-609

NO CONSTRUCTION CHANGES



# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	17	



**FRAMING PLAN-PLATE GIRDER SPANS.**  
 Longitudinal dimensions are taken along top of girder web.  
 Indicates field splice.  
 For details of crossframes, diaphragms and lateral bracing connections see Sheets 19 and 20.

**BRIDGE OVER MERAMEC RIVER**  
 STATE ROAD-INTERSTATE ROUTE 55  
 ABOUT 3.5 MILES S.W. OF LEMAY  
 PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310+70.25  
 ST. LOUIS-JEFFERSON COUNTIES

Drawn Oct. 1963 by JER  
 Checked Jan. 1964 by RJD

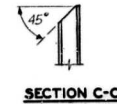
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Sheet No. 14 of 28

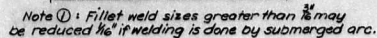
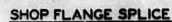
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 CONSULTING ENGINEERS KANSAS CITY, MO.

A-609

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	48	



Longit. dimensions are along top of girder web



4#5 @ 12" 4#6 @ 8" 4#8 @ 8"

2' 7 1/2"

4" max

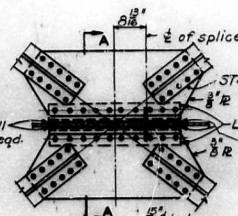
± of splice

**TOP FLANGE**

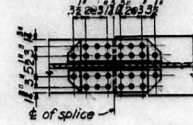
3#5 2#8

Fill 12" x 4" or 12" x 5" as required

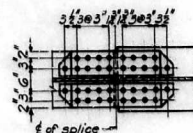
TOP FLANGE



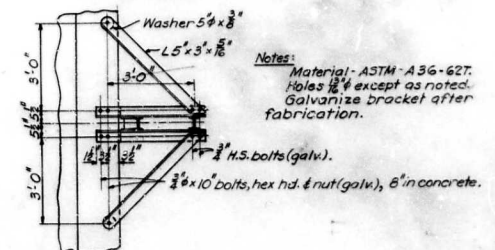
**LATERAL CONN.-V2 SPECIAL**



**BOTT. FLG.-EXTERIOR**



**BOTT. FLG.-INTERIOR**



**SECTION B-B**

### SIGN BRACKET

2 reqd. See Sh.28 for location of brackets.  
Signs by others.

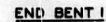
**NOTES:**

**NOTES:**  
See Sh. 9 for lateral bracing connections and diaphragm details.  
See Sh. 14 for location of splices, V2 connection and diaphragm DIA.  
Weight of sign brackets including anchor bolts, 794 # is included in weight of Fabricated Structural Steel.

**BRIDGE OVER MERAMEC RIVER**  
STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO.1-55-3 (7XRT.1-55) STA.310+70.25  
**ST. LOUIS-JEFFERSON COUNTIES**

NO CONSTRUCTION CHANGES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	49	



INT. DIAPH.

**BENTS 2,3,5,6,8,9&10**

HINGE 4 & 7

## HINGE II

**DIAPHRAGM**

**HINGE 15**

END BENT 16

PIERS 12, 13 & 14



For location of bearing stiff. with  
relation to W.P. see Sheets 17 & 18.

STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310+70.25

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

**A-609**

DETAILED Nov 1965 BY K.K.D.  
CHECKED Jan 1964 BY FJD

**Note:** This drawing is not to scale. Follow dimensions

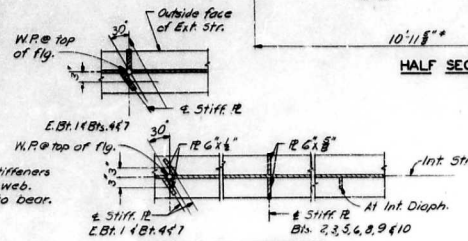
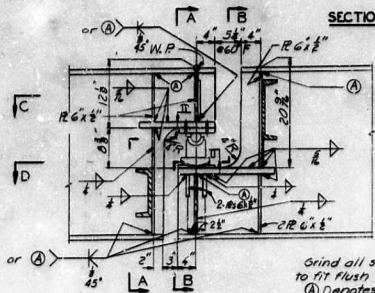
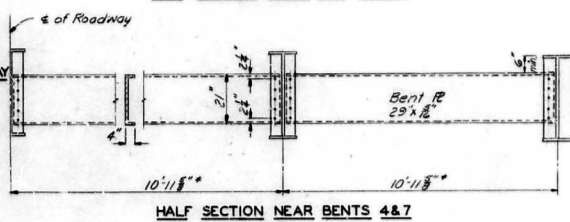
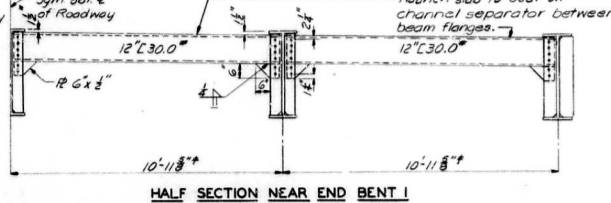
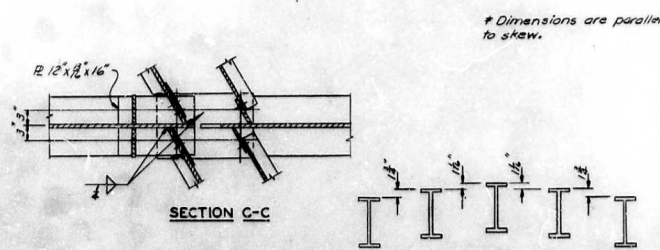
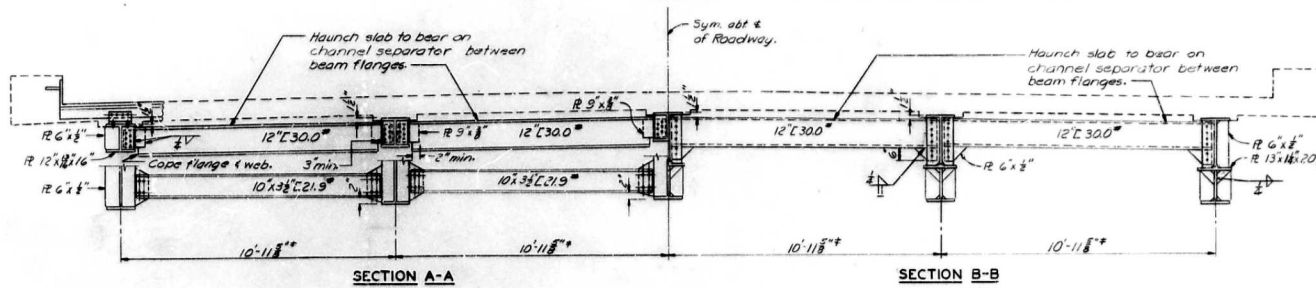
Sheet No. 16 of 28

NO CONSTRUCTION CHANGES

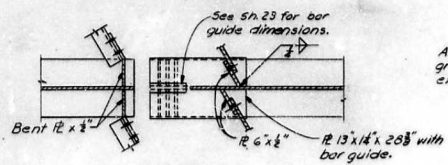
HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		59	20	

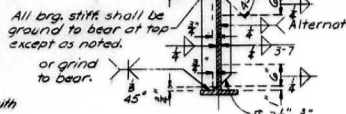


DETAILS AT HINGE 4 & 7



SECTION D-D

DETAILS OF STIFFENERS

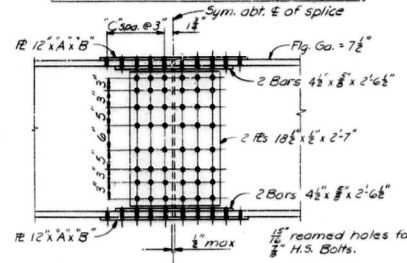


BRG. STIFF. INT. DIAPH.

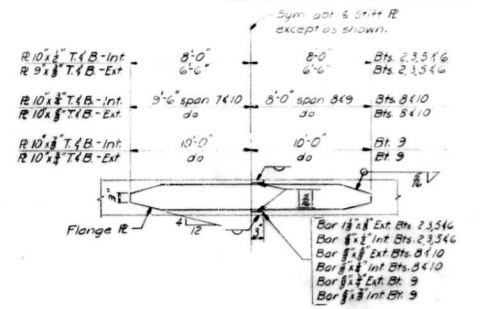
WELDING DETAILS

BEAM SPANS

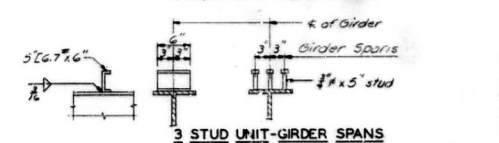
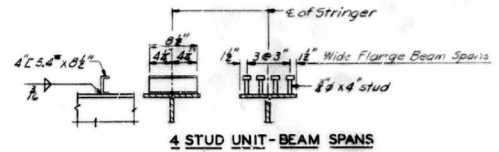
Splice	"A"	"B"	"C"
36" WF @ 135' to 36" WF @ 135'	2'	2' 6"	4'
36" WF @ 135' to 36" WF @ 135'	2'	3' 0"	5'
36" WF @ 140' to 36" WF @ 160'	2'	3' 6"	6'



FIELD SPLICES



DETAIL OF FLANGE PLATES AT BENTS 2, 3, 5, 6, 8, 9 & 10



Weight of 15,179 # of shear connectors (based on studs) is included in weight of Fabricated Structural Carbon Steel (WF-Beam Spans) and 14,751 # is included in weight of Fabricated Structural Carbon Steel (Girder Spans) but not included in painting.  
Locate channel connectors with backs toward ends of spans.  
Playweight for shear connectors will be based on the weight of studs regardless of the type actually furnished.  
See Special Provisions for shear connectors.

SHEAR CONNECTOR DETAILS

## BRIDGE OVER MERAMEC RIVER

STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310+70.25  
ST. LOUIS-JEFFERSON COUNTIES

DETAILED Oct. 1963 BY J.W.  
CHECKED Jan. 1964 BY F.J.D.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 17 of 28

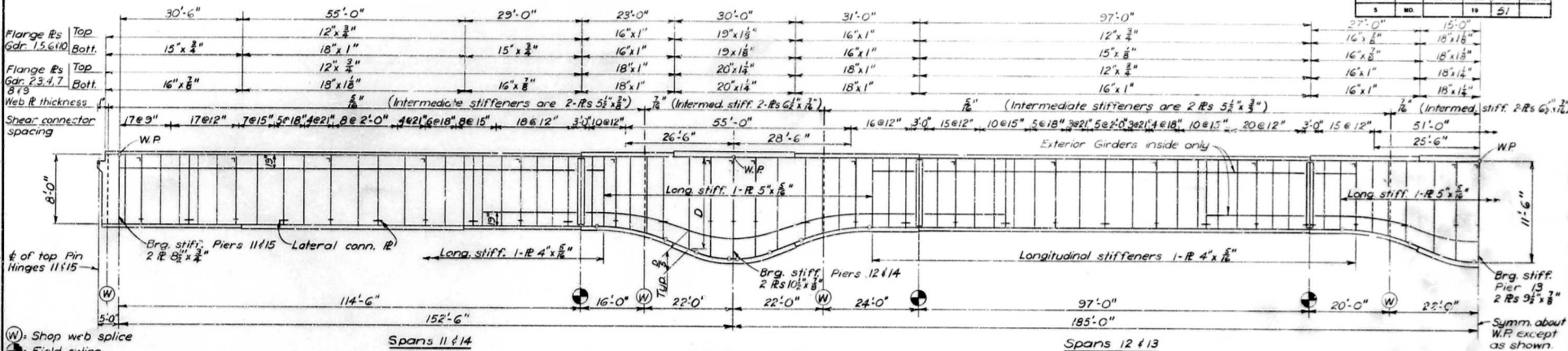
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# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	51	



## GIRDER ELEVATION

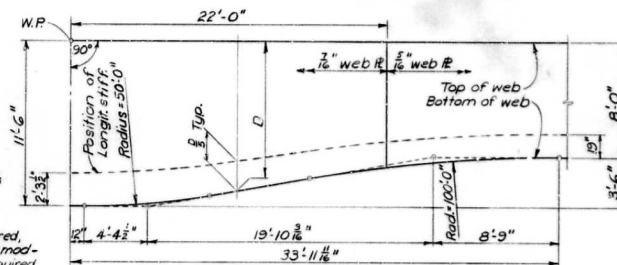
Girders 3 & 8 shown.  
Other girders are the same except lateral connections and stiff. spacing.

## NOTES:

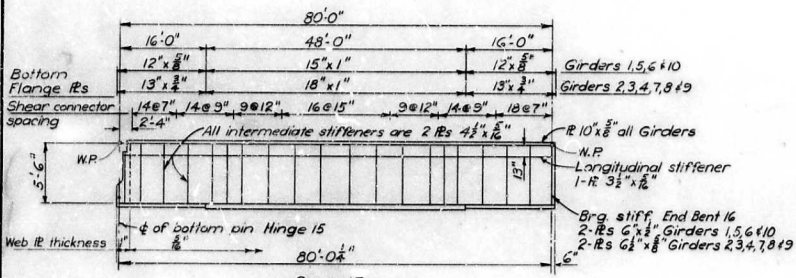
For General Notes see Sh. 1  
For stiffener spacing see Sh. 14.  
For splice and welding details see Sh. 15.  
For cross frame details see Sh. 20.  
For shear connector details see Sh. 17.  
All stiffeners shall be normal to the top flange.  
Longitudinal dimensions are taken along top of girder web.

Spans 11, 12, 13 and 14 shall be completely erected and splices bolted prior to erection of adjacent spans on girders 11 and 14.

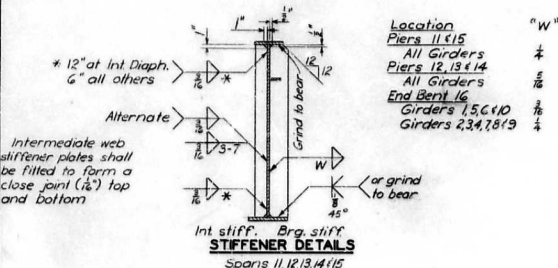
Additional shop web splices may be made at locations approved by the engineer.  
The contractor may omit any shop flange splice, if desired, by extending the heavier flange plate and providing approved modifications of details at field flange splices and elsewhere as required. Payweight in any case will be based on material shown on design plans.



## GIRDER HAUNCH DIMENSIONS



## GIRDER ELEVATION



## PLAN OF BEARING STIFFENERS

DETAILED Oct. 1963 BY HGU  
CHECKED Jan. 1964 BY FJD

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 16 of 28

## BRIDGE OVER MERAMEC RIVER

STATE ROAD - INTERSTATE ROUTE 55

ABOUT 3.5 MILES S.W. OF LEMAY

PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310 + 70.25

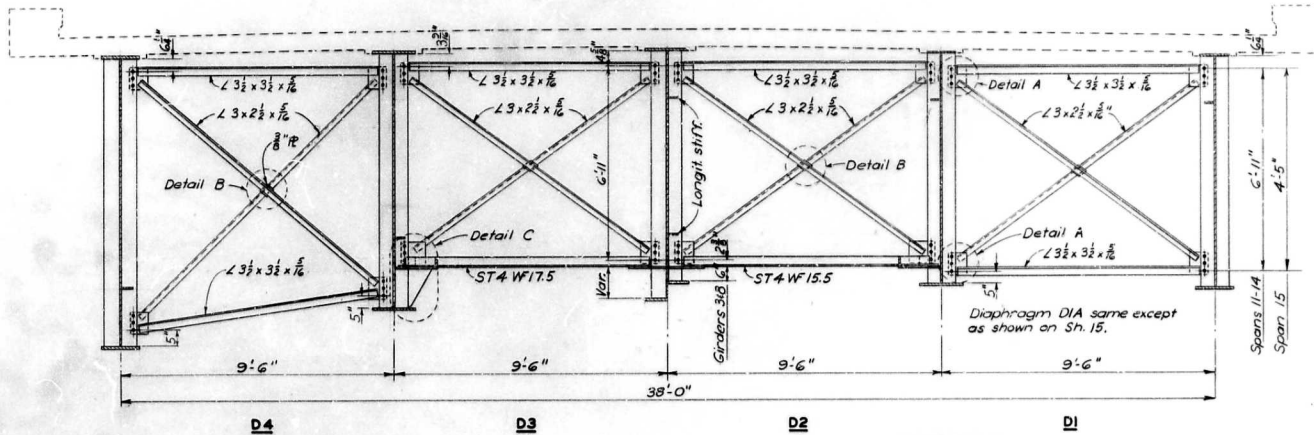
ST. LOUIS-JEFFERSON COUNTIES

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

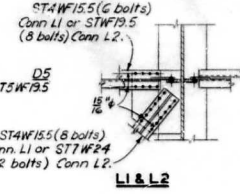
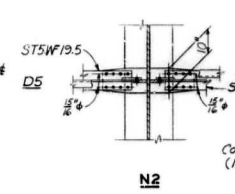
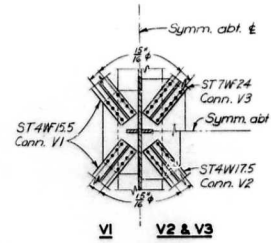
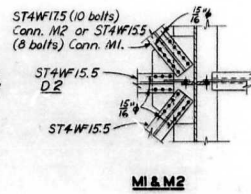
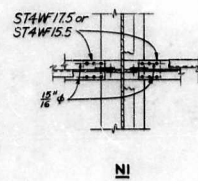
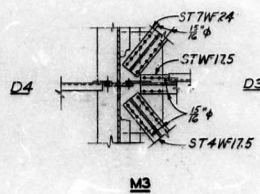
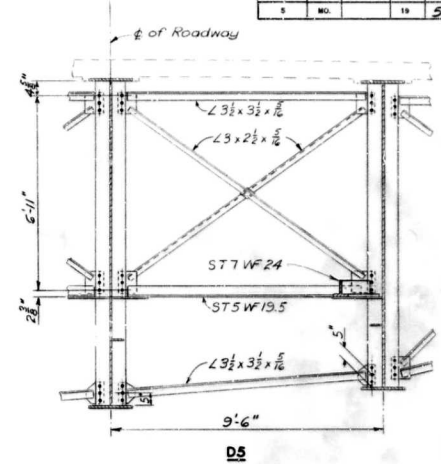
A-609

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	52	



**DIAPHRAGMS**

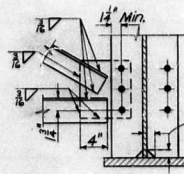


D1 (L1)  
D4 (L2)

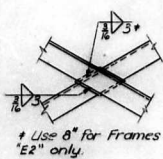
**LATERAL BRACING CONNECTIONS**  
(V2 special conn. shown on Sh. 15)

## NOTES:

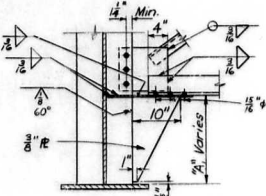
- 1/2" open holes are for 3/4" High Strength bolts in lateral bracing only. All other open holes are 1/4".
- All connection plates are 3/8".
- See Sh. 14 for location of diaphragms and lateral bracing connections.
- See Sh. 18 for stiffener details and additional notes.



**DETAIL A**

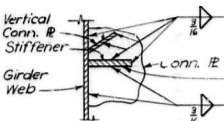


**DETAIL B**



**DETAIL C**

Omit Detail C when dimension "A" is less than 9".



**WELDING DETAIL FOR LATERAL BRACING CONNECTIONS**

**BRIDGE OVER MERAMEC RIVER**  
STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7)(RTE I-55) STA. 310+70.25  
ST. LOUIS-JEFFERSON COUNTIES

Drawn Nov. 1963 by H.G.J.  
Checked Jan. 1964 by F.J.D.

Note: This drawing is not to scale. Follow dimensions.

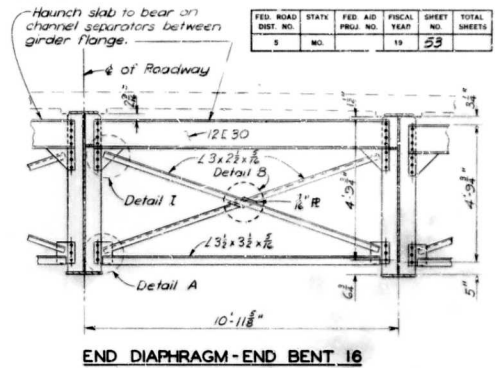
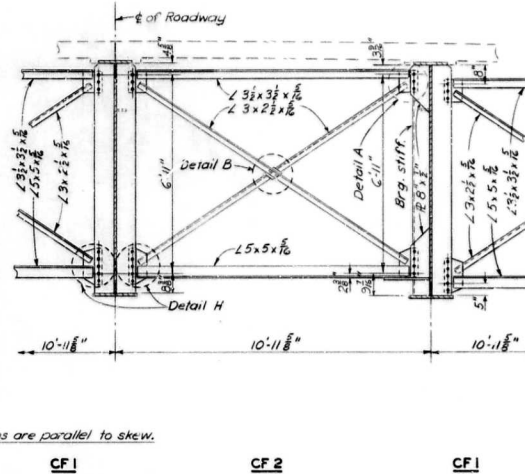
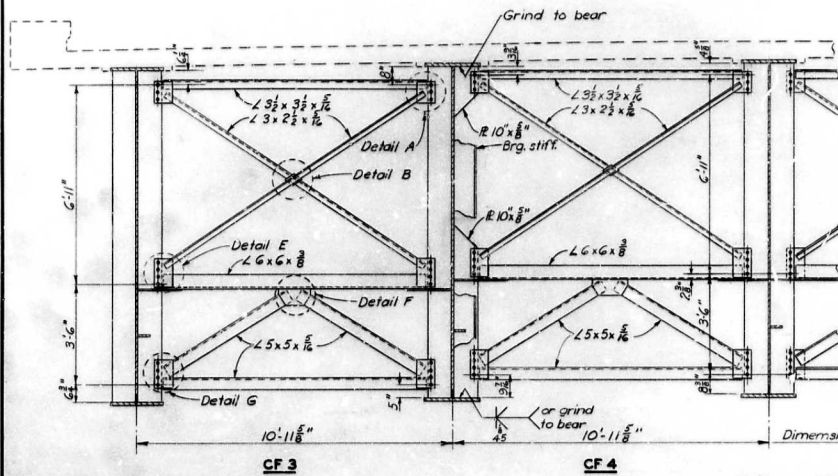
Sheet No. 13 of 28

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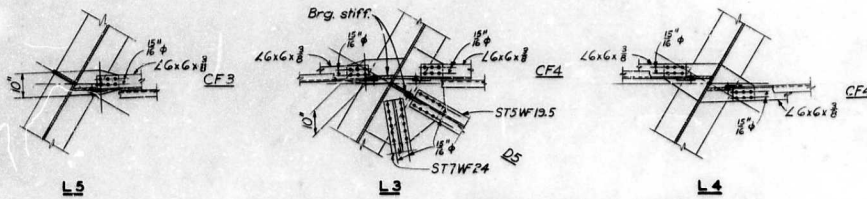
NO CONSTRUCTION CHANGES

457

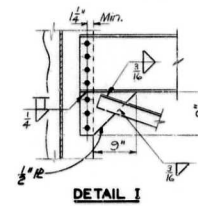
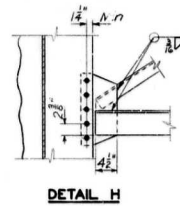
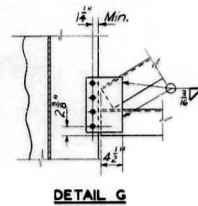
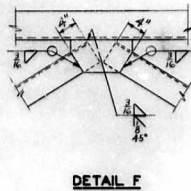
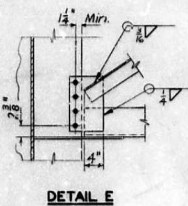
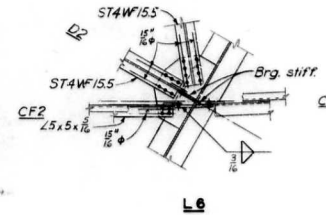


END DIAPHRAGM - END BENT 16

### CROSS FRAMES



### LATERAL BRACING CONNECTIONS



NOTES:

See Sh 13 for location of cross frames and lateral bracing connections.

**BRIDGE OVER MERAMEC RIVER**  
STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3 (7) (RTE. I-55) STA. 310 + 70.25  
**ST. LOUIS-JEFFERSON COUNTIES**

Drawn Nov. 1963 by HGU  
Checked Jan 1964 by FJD

ENCLOSURE 00-1 1704 07/1/00

**Note:** This drawing is not to scale. Follow dimensions.

Sheet No. 20 of 28

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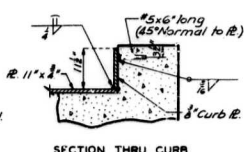
CONSULTING ENGINEERS KANSAS CITY, MO

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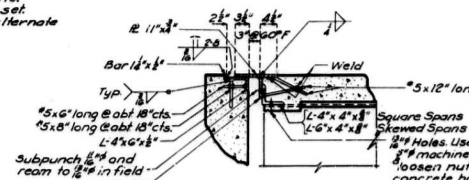




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	55	



SECTION THRU CURB



SECTION A-A

**SECTION B-B**

Note: See Longitudinal Section sheet No. 6 of 28  
for orientation of expansion device.  
Details shown are for Right Advance  
Skew, Left Advance Details are similar.



PERMISSIBLE FIELD SPLICE AT HINGES NO. 4 & 7  
(End Bent Similar)



DETAILS OF BEVEL PLATE AT BENT NO.

\*5 Bors shall be structural grade. Approved stud welded anchors may be used in lieu of #5 bars.

\*Bowl plates shall be used at end bents when the grade of the slab at the expansion device is 30% or more.

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Sheet No. 22 of 28

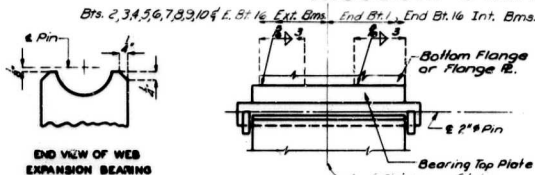
NO CONSTRUCTION CHANGES

Drawn Nov. 1963 by R.H.  
Checked Jan. 1964 by FJD

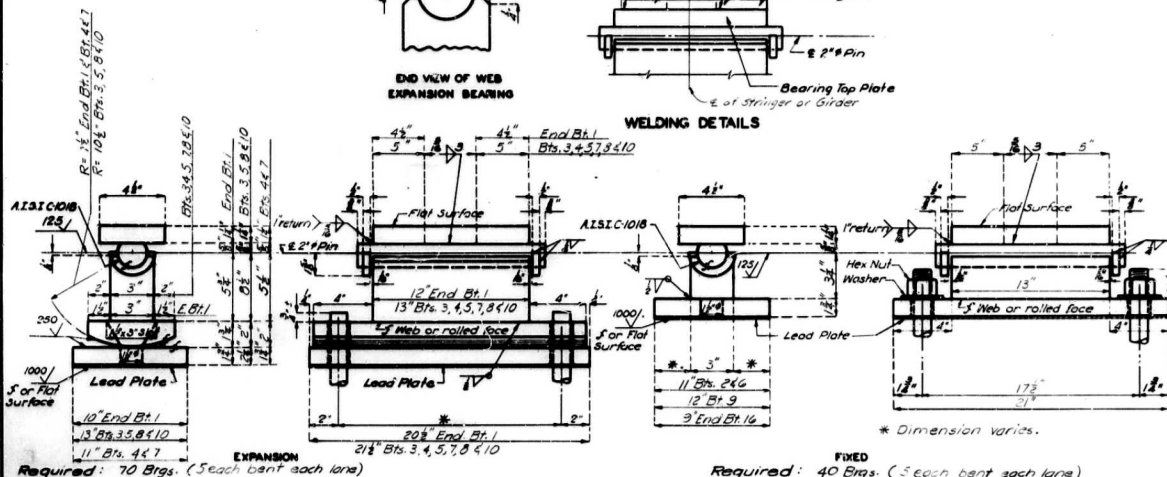
**Note:** This drawing is not to scale. Follow dimensions

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO		19	30	



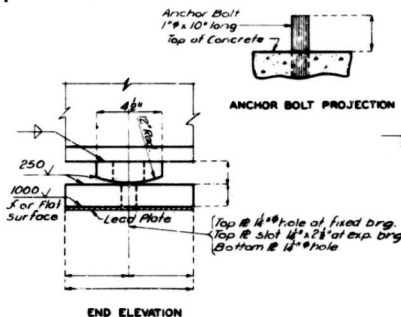
## WELDING DETAILS



## TYPE "D" BEARINGS

Estimated weight of 100 bearings 27,920 lb. (with W Bm. Spans)  
Estimated weight of 10 bearings 2,792 lb. (with R Girder Spans)

Required: 40 Brs. (5 each bent each lane)



Required: -Fixed Bearings  
-Expansion Bearings

TYPE "C" BEARINGS  
(Estimated Weight)

## NOTES: TYPE "C" BEARINGS

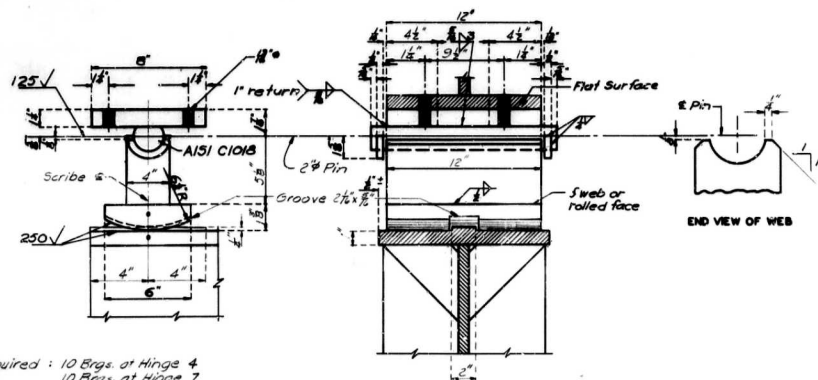
Anchor Bolts for Type "C" Bearings shall be 1" x 10" swaged bolts, 10" long with no heads or nuts. Top of Anchor Bolts shall be set approximately 1/4" below top of bearing.

## NOTES: TYPE "D" BEARINGS

Anchor Bolts for Type "D" Bearings shall be 1 1/2" x 10" swaged bolts and shall extend 12" into concrete, with hexagon nuts and plain washers for Fixed Bearings, no nuts for Expansion Bearings.

## GENERAL NOTES:

Lead plates under bearings shall be approximately 4" thickness and weigh 8 lb/sq. ft. Cost of lead plates shall be included in price bid for other items.  
\*Estimated Weight\* does not include weight of anchor bolts.



Required: 10 Brs. at Hinge 4  
10 Brs. at Hinge 7

## TYPE "D" MODIFIED BEARINGS

(Estimated Wt of 20 bearings 2,573 lb.)  
(with W Bm. Spans.)

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 28

BRIDGE OVER MERAMEC RIVER  
STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3 (7) (RTE. I-55) STA. 310 + 70.25

ST. LOUIS-JEFFERSON COUNTIES

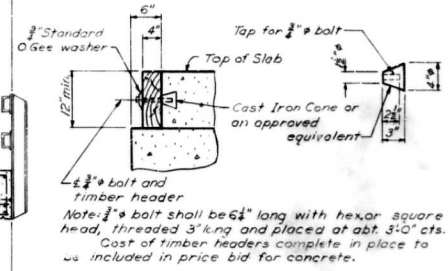
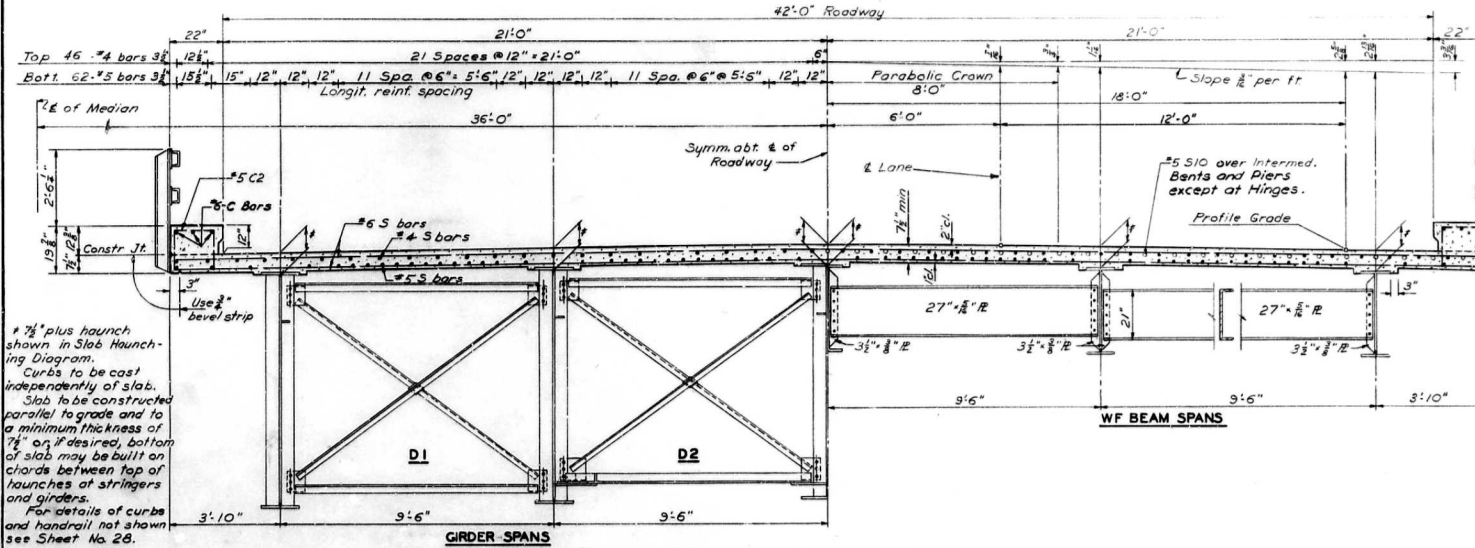
HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

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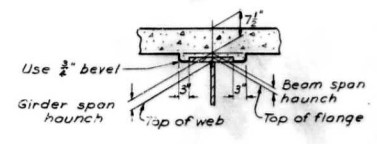
NO. 41/A Revised Aug 15, 1961  
Dec 1961  
Assembled Oct 1963 by J.W.  
Checked Jan 1964 by H.G.J.

# MISSOURI STATE HIGHWAY DEPARTMENT

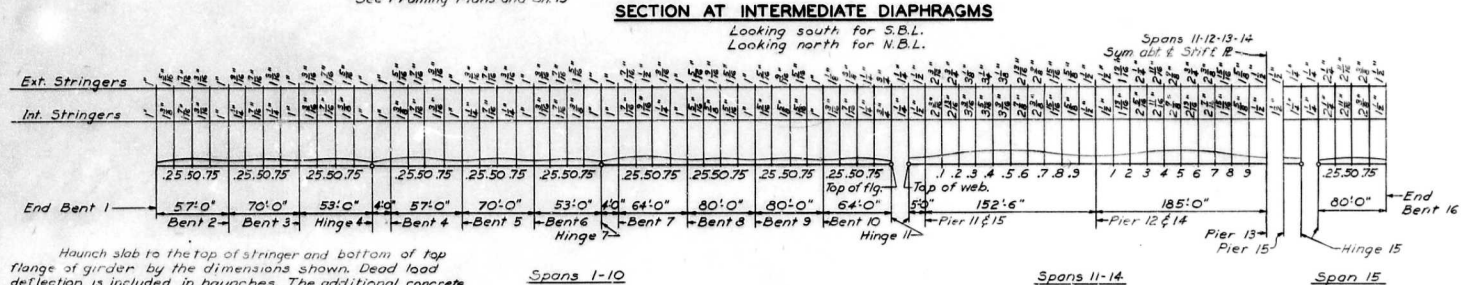
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5	MO.		19	58	



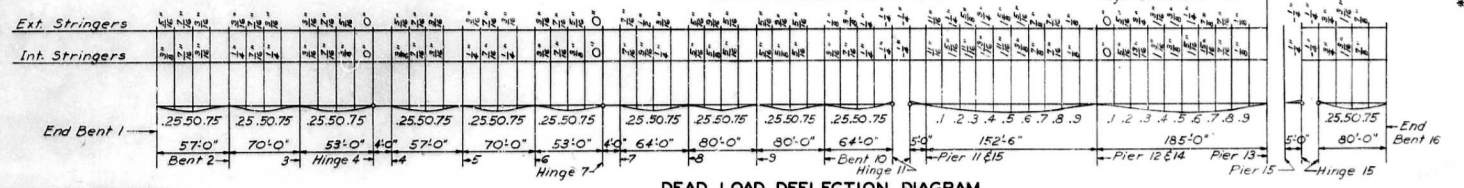
DETAILS OF TIMBER HEADER



TYPICAL HAUNCH



SLAB HAUNCHING DIAGRAM



DEAD LOAD DEFLECTION DIAGRAM

DL Deflection includes \* % due to weight of structural steel.  
 \* 12% beam spans  
 22% girder spans

## BRIDGE OVER MERAMEC RIVER

STATE ROAD - INTERSTATE ROUTE 55  
 ABOUT 3.5 MILES S.W. OF LEMAY  
 PROJECT NO. 1-55-3(7) (RTE. 1-55) STA. 310+70.25  
 ST. LOUIS-JEFFERSON COUNTIES

DETAILED Oct. 1963 BY W.E.M.  
 CHECKED Jan. 1964 BY F.J.D.

Note: This drawing is not to scale. Follow dimensions.

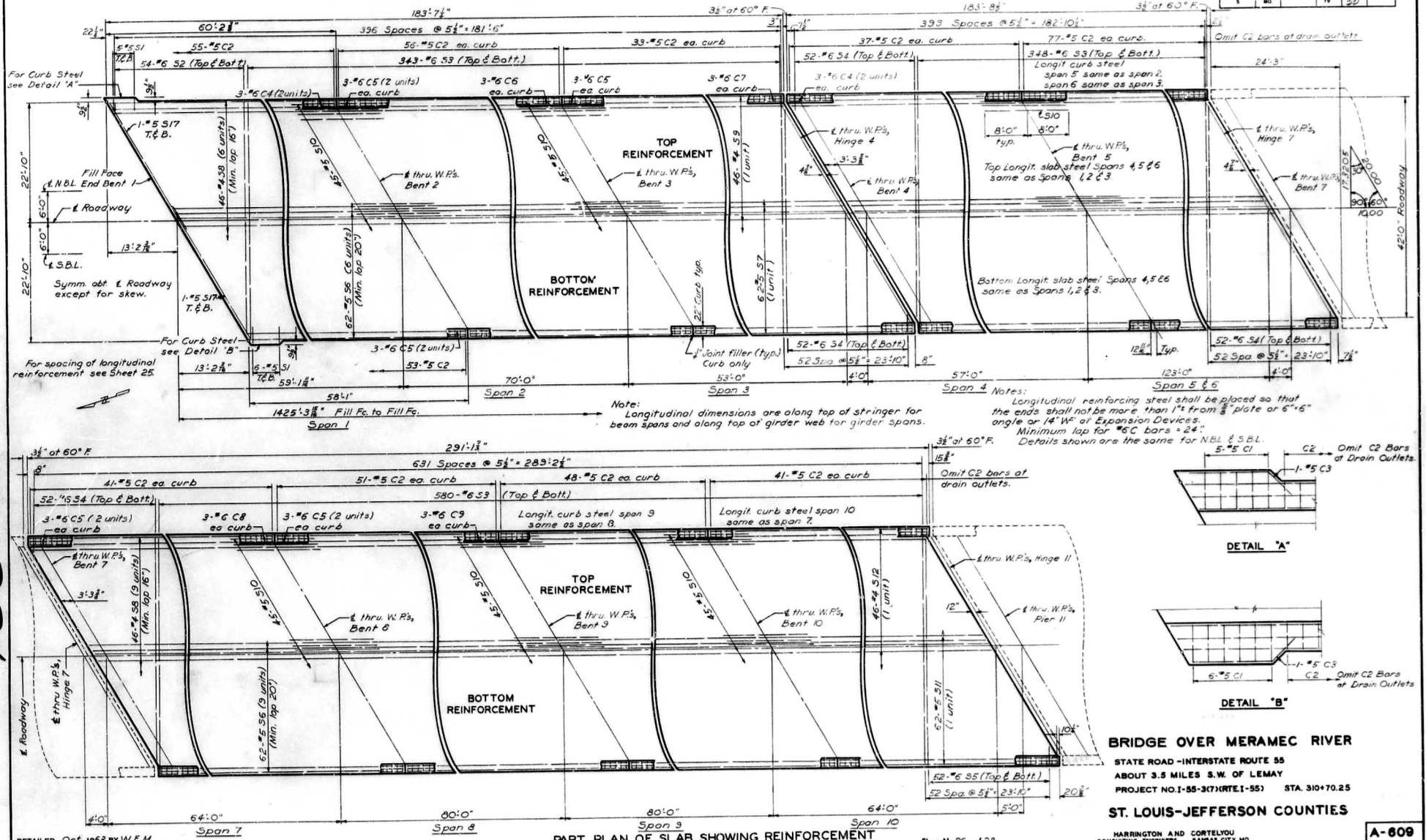
Sheet No. 25 of 28

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# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	22	



452

DETAILED Oct. 1953 BY W.E.M.  
 CHECKED Jan. 1964 BY F.J.D.

Note: This drawing is not to scale. Follow dimensions.

PART PLAN OF SLAB SHOWING REINFORCEMENT

Sheet No. 26 of 28.

BRIDGE OVER MERAMEC RIVER

STATE ROAD - INTERSTATE ROUTE 55  
 ABOUT 3.5 MILES S.W. OF LEMAY  
 PROJECT NO. I-55-3(7)(RTE. I-55) STA. 310+70.25

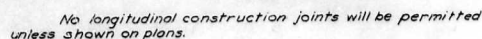
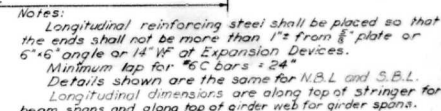
ST. LOUIS-JEFFERSON COUNTIES

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	MO.		19	60	



The contractor shall use an approved oscillating screed type, self-propelled mechanical finishing machine. It shall finish an approved retarder for the roadway slab between hinges 11 and 15 to retard the set of the concrete to 3 hours and shall pour and satisfactorily finish the pours of this slab at a rate of at least 49 cubic yards per hour. (See Standard Specification 47.8.1 for payment of retarder.) For the remainder of the roadway slab the contractor shall pour and satisfactorily finish the slab pours at a rate of not less than 37 cubic yards per hour for spans 1 to 6, inclusive; and not less than 44 cubic yards per hour for spans 7, 8, 9, 10 and 15 unless he elects to use an approved retarder at his own expense to retard the set of the concrete to 2.5 hours in which case he may reduce his pouring and finishing rate to not less

than 25 cubic yards per hour for spans 1 to 6, inclusive, and not less than 26 cubic yards per hour for spans 7, 8, 9, 10 and 15.

The contractor shall observe each basic pouring sequence unless he can demonstrate to the engineer that he can pour and satisfactorily finish one of the longer alternate pours. Finishing machine load will not be permitted on concrete less than 48 hours old.

	Sequence of Pours			
	Direction			
Basic Sequence	1	2	3	4
Alternate "A" Pours	Hinge to 1 1+2	1 to 3 3	2 to 4 3+4	3 to Hinge 4
Alternate "B" Pours	Hinge to 3 1+2	2 to 4 3	3 to Hinge 3+4	
Alternate "C" Pours		Hinge to 3 1+2+3+4	2 to Hinge Hinge to Hinge	
		4-Spoon		

Diagram illustrating a constant joint in a concrete slab. The joint is shown as a vertical line through the slab. The joint is filled with a sealant. The joint is labeled "Const. Joint". The joint is also labeled "Key to extend full width of slab". The joint is also labeled "Finish each side of joint with 1/2" radius edging tool. Fill groove with joint seal."

SECTION A-A

STATE ROAD -INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. 1-55-3(7)(RTE.1-55) STA.310+70.25

**Note:** This drawing is not to scale. Follow dimensions.

Sheet No. 27 of 28

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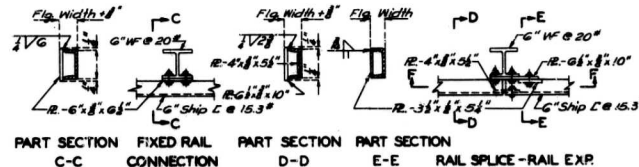
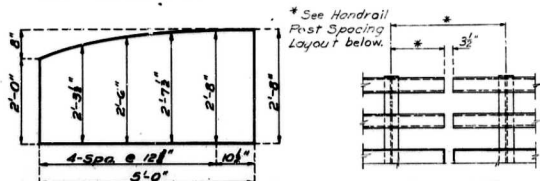
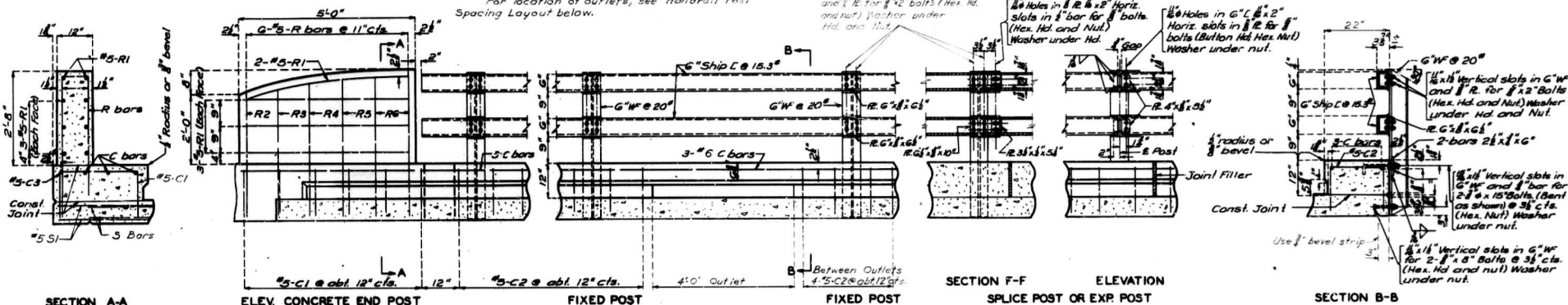
A-609

NO CONSTRUCTION CHANGES

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO		19	61	

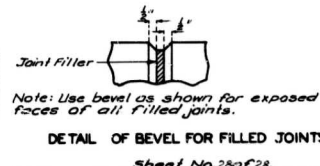
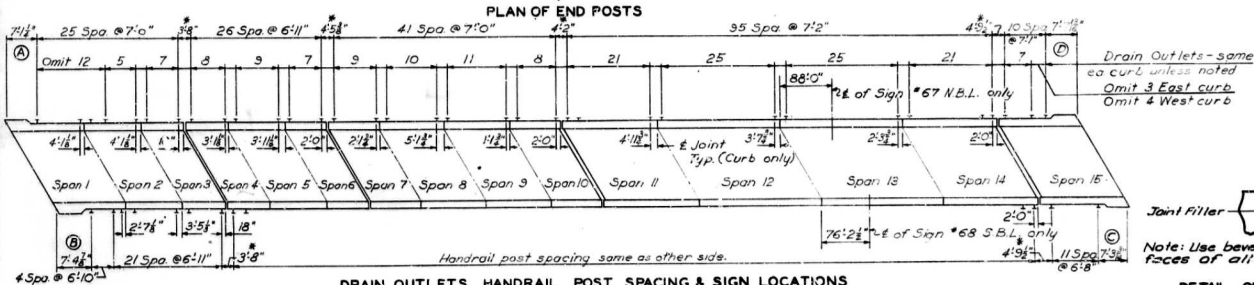
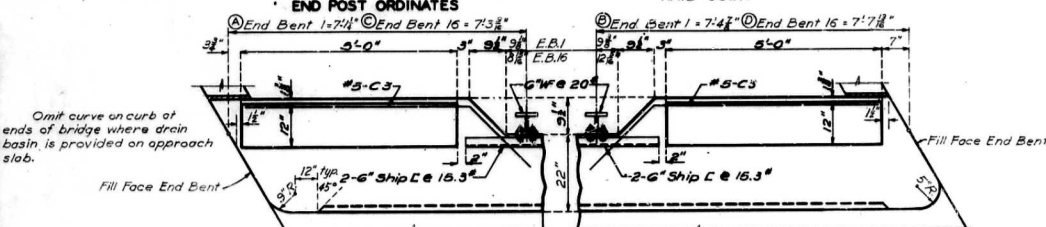
Note:  
Outlets to be centered between rail posts.  
For location of outlets, see Handrail Post Spacing Layout below.



Note: Channel rail to be adjusted for horizontal alignment by use of full size metal shims placed between G.W. and connection. Shims 3/16" thick and 1/4" thickness with 1/4" vertical slots to be furnished with structural steel. Cost of shims to be included in price bid for other items.

## GENERAL NOTES:

Top of curbs to be built parallel to grade. Vertical faces of end posts to be vertical. All exposed edges of end posts to be beveled 1/4". G.W. posts to be set normal to grade. G.W. rails shall be fabricated to conform to horizontal and vertical alignment of curb. Material: ASTM A36-62 T



## BRIDGE OVER MERAMEC RIVER

STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. I-55-3(7) (RTE. I-55) STA. 310+70.25  
ST. LOUIS-JEFFERSON COUNTIES

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO.

A-609

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 28 of 28

DETAILED Oct. 1963 BY W.E.M.  
CHECKED Jan. 1964 BY F.J.D.

REVISIONS  
March 1963

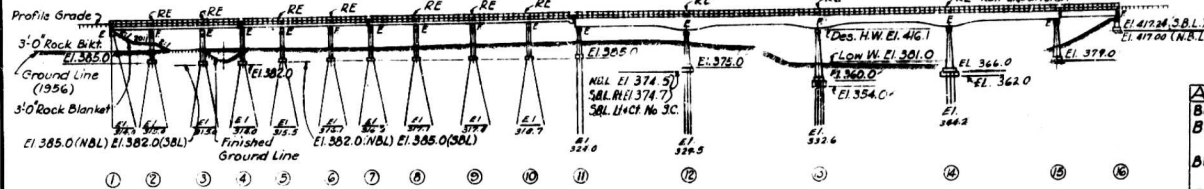
# MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

PVI Sta 295+80  
E1 418.55  
2000' V.C.

Twin Bridges  
Cont. W. Begm. Spans (57'-70'-57') (57'-70'-57') (64'-60'-80'-69')  
Cont. Welded & Girder Spans (152'-6'-185'-185'-152'-6')  
All Spans Composite  
30° Skew RA

85' Welded & Girder Span



Compacted roadway fill (full roadway width) was placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bent 1 before steel piles were driven for End Bent 1.

## GENERAL ELEVATION

Note: For drain outlet locations see Sheet 28.  
In no case were footings of Piers and Bents placed higher than elevations shown.

## AUTHORIZED PILE LENGTHS

Bent No 1-14 @ 112 feet 10" BP42  
Bents No 2,3,4,5,6,7,8,10 - 204 @ 73 feet 10" BP42  
Bent No 9 - 21 @ 73 feet 10" BP42  
Pier No 11-32 @ 85 feet 12" BP33  
Pier No 12-56 @ 73 feet 12" BP33  
Pier No 13-84 @ 35 feet 12" BP33  
Pier No 14-70 @ 27 feet 12" BP33

## GENERAL NOTES:

Design Specifications: AASHTO - 1961.  
Loading: H20-S16-44 (15' long ft Future Wearing Surface) (Modified 24,000 lb Tandem Axle).  
Structural Steel Stress: (ASTM A36-62T) 20,000 psi  
Reinforcing Steel Stress: 1,200 psi  
Concrete, Class B Stress: 1,200 psi  
Concrete, Class B Stress: 1,600 psi  
Superstructure concrete was Class B  
Sub-structure concrete was Class B

Air-entrained concrete was not required on seal courses.  
Fabricated structural steel was ASTM A36-62T except as noted. Payment was made for fabricated structural carbon steel. Steel piles were ASTM A36-62T.  
See Standard Specification, SS 8.13 for qualification of welding operators.  
Details of welded joints shown are for manual arc welding.  
See Special Provisions for welding inspection.  
Field connections, high strength bolts, holes, etc. except as otherwise noted.  
Contact surfaces of bearings and beam flanges connected with high strength bolts did receive one coat of lead.  
Paint: Shop, none; Field by contractor in accordance with Standard Specification SS 4.10.  
All dimensions to reinforcing steel are to 1/4" bar except where clear distance from face of concrete is indicated.  
Where joint filler is specified on the plans it did conform to Standard Specification 157.2.4.

Fill R. E. Bent 1  
N.B.L.  
Sta 310+46.00  
R.G. E1 427.21

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R.G. E1 427.21

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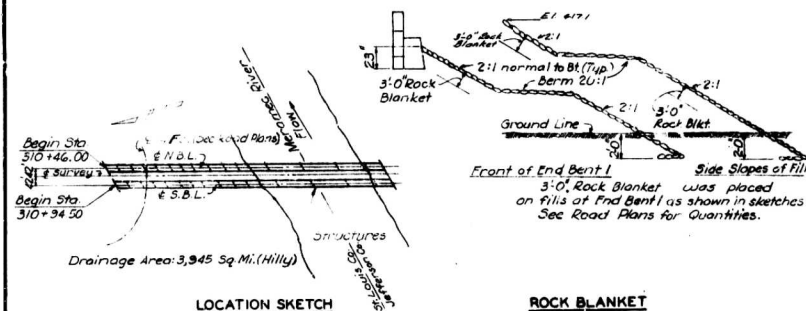
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R.G. E1 427.21

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Sta 310+46.00  
R.G. E1 427.21

Fill R. E. Bent 1  
N.B.L.  
Sta 310+46.00  
R.G. E1 427.21

For Footing Layout, Log of Soundings and location of soundings see Sh. 2.

## PLAN



## LOCATION SKETCH

## ROCK BLANKET

## Test Holes Total Lin. Ft. 56 See Sheet 2 For Location

QUANTITIES		
Item	Substr.	Superstr.
Class 1 Excavation for Structures	5145	5145
Class 2 Excavation for Structures	1770	1770
Steel Piles in Place (10")	1758'	1758'
Steel Piles in Place (12")	8386'	8386'
Steel Pile Cut-offs (10")	930	930
Steel Pile Cut-offs (12")	2829'	2829'
Class B Concrete	3422.3	3422.3
Class B Concrete	3460.4	3460.4
Class B Concrete (Seal Course)	515.8	515.8
Reinforcing Steel	443,530	1,086,970
Painting	1022.2	1022.2
Fabricated Struct Carbon Steel (R Beam Spans)	1,340,820	1,340,820
Fabricated Struct Carbon Steel (R Girder Spans)	2330,420	2330,420
File Loading Test	0	0
Class 2 Excavation for Structures	370	370

Note: Excavation for structures made below Elev 322.0 was paid for as Class 2.  
Excavation for structures was computed from the original ground line or from the lower limits of channel change excavation, whichever was lower and less of the sequence of operation and the method of removal.  
No payment for excavation was allowed of End Bent No. 1.  
Weight of bolts (steel to steel) is included in weight of fabricated structural steel on the basis of the following weights per 100 bolts: 40' 14' 6", 15' 9", 1' 15".  
\* See Sheet 23 for Breakdown of Quantities  
Sheet No. 16 of 3

The quantity of concrete paid for in seal courses includes only that within horizontal limits of 18' outside of neat lines of footings proper.  
The quantity of 10" & 12" Steel Piles in Place includes and splices respectively, at 6' per splice.

B.M. "a" S.E. corner of safety curb, N.B.L. @ About 1/6 Elev. 436.36

B.M. "b" N.E. corner top of wing wall N.B.L. @ About 1/4 Elev. 428.04

## BRIDGE OVER MERAMEC RIVER

STATE ROAD-INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. 1-55-37(HRTE. 1-55) STA. 310+70.25

## ST. LOUIS-JEFFERSON COUNTIES

DESIGNED BY DBJ  
CHECKED BY THJ  
DATE 1/14/64  
DATE 1/16/64

FINISHED HARRINGTON AND COMPANY  
CONSULTING ENGINEERS  
ST. LOUIS, MO.

STD. 54.00

A-609

FINAL PLANS

FINAL PLANS

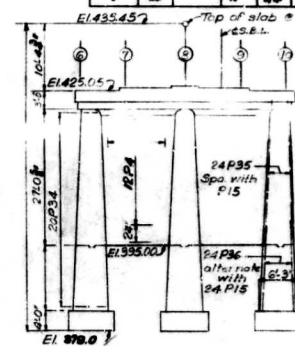
Drawn Oct. 1963 by JER  
Checked Jan. 1964 by FJD

Note: This drawing is not to scale. Follow dimensions.

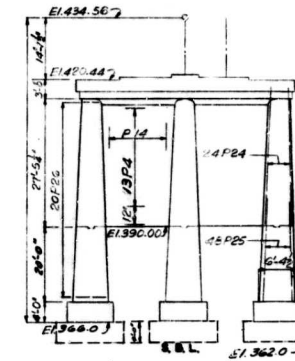
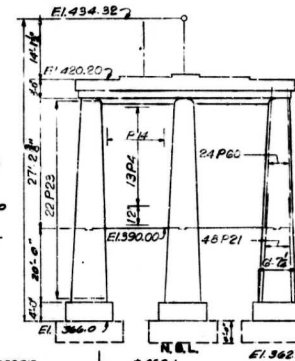
\* See Sheet 23 for Breakdown of Quantities

Sheet No. 16 of 3

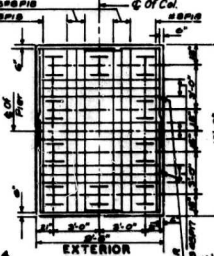
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PIER NO. 15



PIER NQ14



### ELEVATION SKETCHES

FINISHED

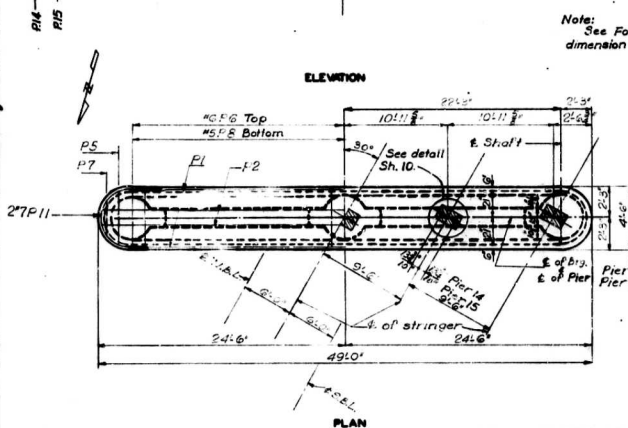
**BRIDGE OVER MERAMEC RIVER**

STATE ROAD - INTERSTATE ROUTE 55  
ABOUT 3.5 MILES S.W. OF LEMAY  
PROJECT NO. 1-55-3(7)(RTE. 1-55) STA. 310+70.25

ST. LOUIS-JEFFERSON COUNTIES

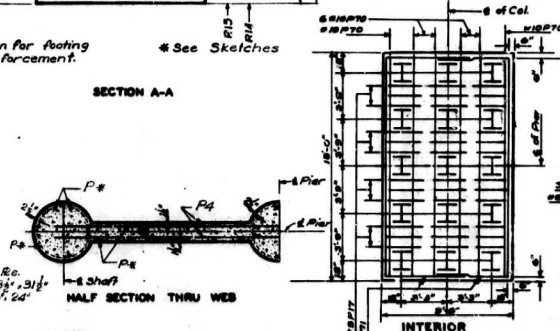
HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO. FINAL PLANS

A-609



### DETAILS OF PIER NO. 14 & 15

~~App: This drawing is not to scale. Follow dimensions.~~



FOOTING PLANS PIER NO.14

**NOTES:**  
Reinforcing steel in bridge seats  
placed to clear anchor bolts.  
See Sheet No. 6 for Anchor Bolt Well  
Detail.  
See sheet No. 10 for Anchor Bolt Plan.

**FINAL PLANS**

Sheet No. 114 E/S

**HARRINGTON AND CORTELYOU**  
CONSULTING ENGINEERS KANSAS CITY

### FINAL PLANS

A-609



The image contains two detailed structural drawings of a bridge. On the left is 'SECTION A-A', a cross-section of the bridge deck and support. It shows a 12' wide roadway with a 3' sidewalk on each side. The deck is supported by a central pier and two side piers. Reinforcement includes top and bottom bars (e.g., 6#H20, 6#G10) and vertical stirrups (e.g., 4#G10, 4#G11). The section is labeled with various dimensions and reinforcement details. On the right is 'ELEVATION', a side view of the bridge. It shows the bridge deck, the central pier, and the abutments. The elevation includes details for the bridge deck, the pier, and the abutments. Reinforcement includes top and bottom bars (e.g., 6#H20, 6#G10) and vertical stirrups (e.g., 4#G10, 4#G11). The elevation is labeled with various dimensions and reinforcement details. Both drawings include a title block with the project name 'BRIDGE' and the drawing number '45'.

[illegible]

END BENT NO. 16  
N.B.L. & S.B.L.

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO. **FINAL PLANS**

HARRINGTON AND CORTELYOU  
CONSULTING ENGINEERS KANSAS CITY, MO

## FINAL PLANS

A-609

DETAILED *Oct. 1963* BY *Y.E.P.*  
CHECKED *Jan. 1964* BY *FJD*

**Note:** This drawing is not to scale. Follow dimensions.

Sheet No. 12A of 3

## FINAL PLANS

A-609

## MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

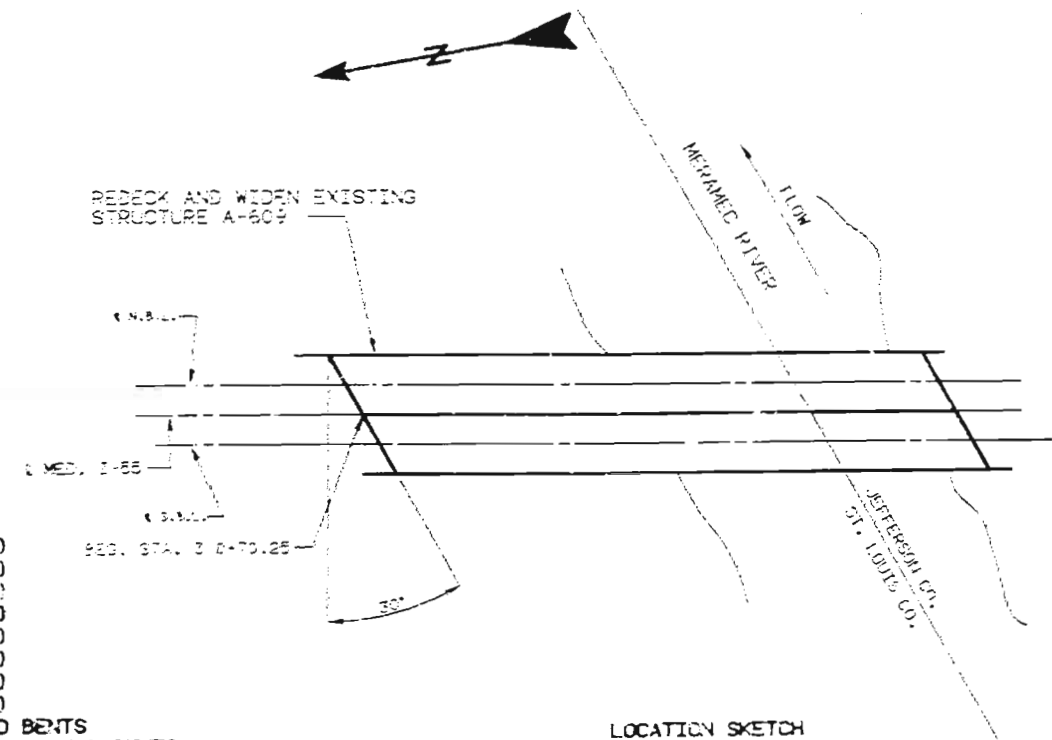
STATE	PROJ. NO.	SHEET NO.
MO.	HA-55-2153	1
SUR. 408 & 817 TWP. 40N. R9E. S2		

1. INDEX OF DRAWINGS
2. PART PLAN & ELEVATION
3. PART PLAN & ELEVATION
4. PART PLAN & ELEVATION
5. PART PLAN & ELEVATION
6. QUANTITY SHEET
7. STAGE CONSTRUCTION SHEET
8. DETAILS OF END BENT NO. 1 (N.B.L.)
9. DETAILS OF END BENT NO. 1 (N.B.L.)
10. DETAILS OF END BENT NO. 1 (S.B.L.)
11. DETAILS OF END BENT NO. 1 (S.B.L.)
12. VERTICAL DRAIN AT END BENTS
13. DETAILS OF INT. BENT NO. 2 (N.B.L.)
14. DETAILS OF INT. BENT NO. 2 (N.B.L.)
15. DETAILS OF INT. BENT NO. 2 (N.B.L.)
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110. DETAILS OF END BENT NO. 16 (S.B.L.)
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129. PART PLAN OF STRUCTURAL STEEL (S.B.L.)
130. PART PLAN OF STRUCTURAL STEEL (S.B.L.)
131. ELEVATION OF PLATE GIRDER
132. ELEVATION OF PLATE GIRDER
133. PART LONGITUDINAL SECTION
134. WELDING DETAILS AND ANCH. BOLT WELL DETAILS
135. REPAIRS
136. COLTED SPLICES
137. DETAIL "A"
138. DETAIL "B"
139. DETAILS OF END DIAPH. (END BENT NO. 1)
140. TYP. PART SECTION SHOWING INT. DIAPH. (WF)
141. DETAILS OF DIAPHS. AND CROSS FRAMES @ BENT NO. 11 & 15.
142. DETAILS OF INT. DIAPH. SPAN (11-12)(12-13)(13-14) & (15-16)
143. DETAILS OF CROSS FRAMES AT PIER NO. 12, 13 & 14
144. INT. DIAPH. DETAILS SPAN (15-16)

145. END DIAPH. DETAILS BENT NO. 16
146. DETAILS OF HINGE CONNECTION NO. 4 & NO. 7
147. DETAILS OF HINGE CONNECTION NO. 4 & NO. 7
148. DETAILS OF HINGE CONNECTION NO. 4 & NO. 7
149. DETAILS OF HINGE CONNECTION NO. 4 & NO. 7
150. DETAILS SHOWING HINGE NO. 11 CONNECTION
151. DETAILS SHOWING HINGE NO. 11 CONNECTION
152. DETAILS SHOWING HINGE NO. 15 CONNECTION
153. DETAILS SHOWING HINGE NO. 15 CONNECTION
154. DETAILS OF EARTHQUAKE RESTRAINERS AT END BENT NO. 1
155. DETAILS OF EARTHQUAKE RESTRAINERS AT END BENT NO. 16
156. DETAILS OF LAMINATED NEOPRENE BRGS. (STEEL STRUCTURE)
157. DETAILS OF TYPE "N" PTFE BRGS. AT HINGE NO. 4 & 7
158. DETAILS OF TYPE "N" PTFE BRGS. AT BENT. 11, 12, 14, & 15.
159. DETAILS OF STRIP SEAL EXPANSION DEVICE BT. NO. 4 & 7
160. DETAILS OF STRIP SEAL EXPANSION DEVICE BT. NO. 4 & 7
161. DETAILS OF FINGER PLATE EXP. DEVICE PIER NO. 11 & 15
162. DETAILS OF DRAINAGE TROUGH PIER NO. 11 & 15
163. DETAILS OF DRAINAGE TROUGH PIER NO. 11 & 15
164. DETAILS OF SLAB (N.B.L.)
165. DETAILS OF SLAB (N.B.L.)
166. DETAILS OF SLAB (N.B.L.)
167. DETAILS OF SLAB (N.B.L.)
168. DETAILS OF SLAB (N.B.L.)
169. DETAILS OF SLAB (N.B.L.)
170. DETAILS OF SLAB (N.B.L.)
171. DETAILS OF SLAB (N.B.L.)
172. DETAILS OF SLAB (N.B.L.)
173. DETAILS OF SLAB (N.B.L.)
174. DETAILS OF SLAB (S.B.L.)
175. DETAILS OF SLAB (S.B.L.)
176. DETAILS OF SLAB (S.B.L.)
177. DETAILS OF SLAB (S.B.L.)
178. DETAILS OF SLAB (S.B.L.)
179. DETAILS OF SLAB (S.B.L.)
180. DETAILS OF SLAB (S.B.L.)
181. DETAILS OF SLAB (S.B.L.)
182. DETAILS OF SLAB (S.B.L.)
183. DETAILS OF SLAB (S.B.L.)
184. SLAB HAIRPIN BARS
185. SLAB POURING SEQUENCE
186. SLAB POURING SEQUENCE
187. CAMBER DIAGRAMS
188. DEAD LOAD DEFLECTION DIAGRAMS
189. SLAB HAUNCHING DIAGRAMS
190. SLAB HAUNCHING DIAGRAMS
191. SLAB DRAINS
192. SLAB DRAINS
193. SLAB DRAINS
194. BARRIER CURB (NORTHBOUND LANE)
195. BARRIER CURB (NORTHBOUND LANE)
196. BARRIER CURB (NORTHBOUND LANE)
197. BARRIER CURB (NORTHBOUND LANE)
198. BARRIER CURB (SOUTHBOUND LANE)
199. BARRIER CURB (SOUTHBOUND LANE)
200. BARRIER CURB (SOUTHBOUND LANE)
201. BARRIER CURB (SOUTHBOUND LANE)
202. DETAILS OF BARRIER CURB AT END BENTS
203. DETAILS OF MEDIAN BARRIER CURB AT END BENTS
204. BARRIER CURB SLIP FORM OPTION
205. BRIDGE APPROACH SLAB
206. DETAILS OF CONCRETE TRAFFIC BARRIER CURB ON APPROACH SLAB
207. MODIFICATION TO SIGN SUPPORT BRACKET (NBL)
208. MODIFICATION TO SIGN SUPPORT BRACKET (SBL)
209. BARBILL
210. BARBILL
211. BARBILL
212. BARBILL
213. BARBILL
214. BARBILL
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226. BARBILL
227. BARBILL
228. BARBILL
229. BARBILL
230. BARBILL
231. PILEDATA
232. PILEDATA
233. PILEDATA
234. PILEDATA
235. PILEDATA
236. PILEDATA
237. PILEDATA
238. PILEDATA



## BRIDGE OVER MERAMEC RIVER

STATE ROAD: ROUTE I-55

AT ST. LOUIS CO. &amp; JEFFERSON CO. LINE

PROJECT NO. HA-55-2153 STA. 310+70.25

JOB NO. J610626F RTE. I-55

ST. LOUIS-JEFFERSON COUNTIES

STD. 504.00
STD. 505.00
STD. 509.00
STD. 510.00
STD. 704.35
A-609R

DESIGNED JAN. 1993  
DETAILS MAY 1993  
CHECKED MAY 1993

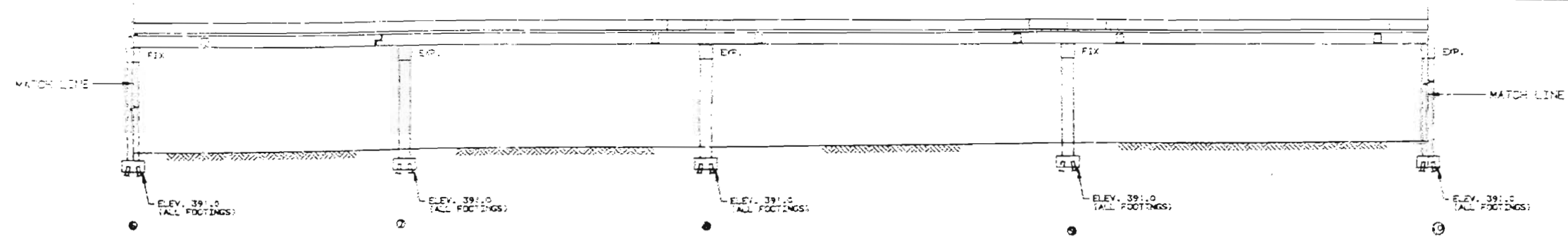
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SHEET NO. OF 238

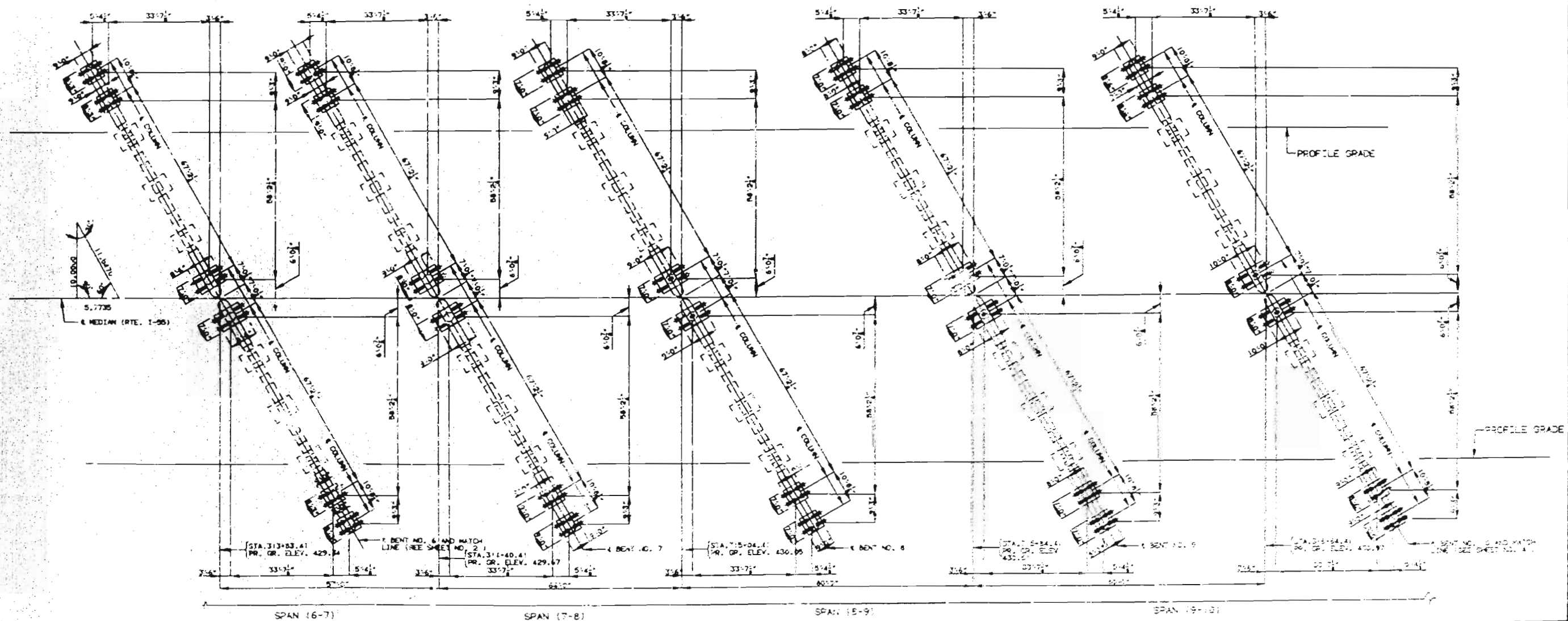
DATE 1/5/93







PART ELEVATION



PART PLAN

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 3 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

4  
 DETAIL APRIL 1993  
 CHECKED APRIL 1993







## GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1989 & INTERIM 1990 LOAD FACTOR DESIGN  
A.A.S.H.T.O.-1983 GUIDE SPECIFICATIONS FOR  
SEISMIC DESIGN  
SEISMIC PERFORMANCE CATEGORY B

DESIGN LOADING:  
HS20-44 MODIFIED 24,000# TANDEM AXLE  
NO FUTURE WEARING SURFACE  
EARTH 120#/CU. FT., EQUIVALENT FLUID PRESSURE 45#/CU. FT.  
FATIGUE STRESS - CASE I

DESIGN UNIT STRESSES:  
CLASS B CONCRETE (SUBSTRUCTURE) F'C=3,000 PSI.  
CLASS B1 CONCRETE (SAFETY BARRIER CURB) F'C=4,000 PSI.  
CLASS B2 CONCRETE (SUBSTRUCTURE EXCEPT SAFETY BARRIER  
CURB) F'C=4,000 PSI.  
REINFORCING STEEL (GRADE 60) F<sub>y</sub>=60,000 PSI.  
STRUCTURAL CARBON STEEL F<sub>y</sub>=36,000 PSI.  
STEEL PILE FB=9,000PSI

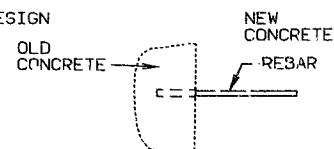
FABRICATED STEEL CONNECTIONS:  
FIELD CONNECTIONS, HIGH STRENGTH BOLTS 3/4"Ø, HOLES 13/16"Ø,  
EXCEPT AS NOTED.

HIGH STRENGTH BOLTS, NUTS AND WASHERS WILL BE SAMPLED FOR  
QUALITY ASSURANCE AS SPECIFIED IN STANDARD SPECIFICATION 106.

JOINT FILLER:  
ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC.  
1057.2.4, EXCEPT AS NOTED.

REINFORCING STEEL:  
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2",  
UNLESS OTHERWISE SHOWN.  
ALL REINFORCING BARS IN TOPS OF SUBSTRUCTURE BEAMS OR CAPS  
SHALL BE SPACED TO CLEAR ANCHOR BOLTS FOR BEARINGS BY AT LEAST 1/2".  
BARS BONDED IN OLD CONCRETE NOT REMOVED SHALL BE CLEANLY  
STRIPPED AND EMBEDDED INTO NEW CONCRETE WHERE POSSIBLE. IF LENGTH  
IS AVAILABLE, OLD BARS SHALL EXTEND INTO NEW CONCRETE AT LEAST 40  
DIAMETERS FOR SMOOTH BARS AND 30 DIAMETERS FOR DEFORMED BARS,  
UNLESS OTHERWISE NOTED.  
JOINT:  
SYSTEM E SHOP COAT (GRAY) IN ACCORDANCE WITH THE SPECIAL PROVISIONS.  
FIELD PAINTING OF NEW STEEL EXCEPT FOR TOUCH UP.  
COST OF PAINTING NEW STRUCTURAL STEEL SHALL BE INCLUDED  
PRICE BID FOR FABRICATED STRUCTURAL STEEL. SEE SPECIAL PROVISIONS.  
NOTE: OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY  
LINES INDICATE NEW WORK.  
CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE  
ERECTING NEW STEEL.  
TRAFFIC: TRAFFIC OVER STRUCTURE TO BE MAINTAINED DURING CONSTRUCTION.

SHEET NO. 7 FOR STAGED CONST. DETAILS.



## DETAIL OF INJECTED EPOXY RESIN SYSTEMS

NOTE: COST OF FURNISHING AND INSTALLING INJECTED  
EPOXY RESIN SHALL BE INCLUDED IN CONTRACT  
UNIT PRICE BID FOR CONCRETE.  
SEE SPECIAL PROVISIONS FOR ACCEPTABLE INJECTED  
EPOXY RESIN.

THE CONTRACTOR SHALL USE ONE OF THE INJECTED EPOXY  
RESINS LISTED IN THE JOB SPECIAL PROVISIONS.

THESE INJECTED EPOXY RESIN SYSTEMS SHALL BE INSTALLED  
ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS, EXCEPT  
AS MODIFIED BY THE JOB SPECIAL PROVISIONS. SEE CHART  
BELOW AND BAR BILL FOR EMBEDMENT LENGTH, PULLOUT  
STRENGTH, SIZE, LENGTH, AND SHAPE OF BAR.

BAR SIZE	f <sub>y</sub>	EMBEDMENT LENGTH	PULLOUT STRENGTH
4	60,000	6 INCH	10,000
5	60,000	8 INCH	15,500
6	60,000	9 INCH	20,000
7	60,000	11 INCH	27,000
8	60,000	12 INCH	33,500
9	60,000	13 INCH	44,000
10	60,000	15 INCH	56,000

③ 2 1/2" NEW STRINGERS AND GIRDERS  
3 1/4" OLD STRINGERS AND GIRDERS.

## ESTIMATED QUANTITIES

ITEM	NORTHBOUND LANE		SOUTHBOUND LANE		TOTAL N.B.L. & S.B.L.
	SUBSTR.	SUPERSTR.	SUBSTR.	SUPERSTR.	
PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE					
REMOVAL OF EXISTING BRIDGE DECK					
CLASS 1 EXCAVATION		1710		1770	130,180
CLASS 2 EXCAVATION		614		632	3480
BRIDGE APPROACH SLAB (BRIDGE)					
STRUCTURAL STEEL PILES (10IN.)		422		422	1246
PRE-BORE FOR PILING		12,339		12,232	844
CLASS B CONCRETE (SUBSTRUCTURE)		150		130	24,571
SUBSTRUCTURE REPAIR (UNFORMED)		1202.7		1214.4	280
SEAL CONCRETE		30		180	2417.1
PROTECTIVE COATING-CONCRETE BENTS(DELETERIOUS AGENTS)		235.6		235.6	210
CLASS B-2 CONCRETE (SUPSTR ON STEEL)					471.2
* SAFETY BARRIER CURB		3007.4		3007.4	6,014.8
LAMINATED NEOPRENE BRG. PAD (STEEL STRUCTURE)		2876		2876	5752
TYPE N PTFE BEARINGS		83		83	166
REINFORCING STEEL (BRIDGES)		54		54	108
REINFORCING STEEL (EPOXY COATED)		177,500		177,290	355,370
STRIP SEAL EXPANSION DEVICE		640		660	1,931,270
EXPANSION DEVICE (FINGER PLATE)		171		171	342
MODIFICATION TO EXISTING SIGN SUPPORT BRACKET		171		171	342
FABRICATED STRUCTURAL CARBON STEEL (I-BEAM)					
FABRICATED STRUCTURAL CARBON STEEL (PLT GIR)		537,960		537,960	1,075,920
SLAB DRAINS		990,360		990,360	1,980,720
VERTICAL DRAINS AT END BENTS		246		246	492
REPAINTING (SYSTEM E) GRAY		2		2	4
NON-DESTRUCTIVE TESTING					
CONCRETE TRAFFIC BARRIER ON APP. SLAB		163		163	326
TRAIL PORTING SANDBLAST RESIDUE		50			50
					1

NOTE: ALL CONCRETE BELOW THE UPPER CONSTRUCTION JOINT IN BACKWALL IS INCLUDED WITH  
CLASS B CONCRETE.

\* SAFETY BARRIER CURB MAY BE CAST-IN-PLACE OPTION OR SLIP FORM OPTION ON EXT. BARRIER ONLY.

NON-DESTRUCTIVE TESTING SHALL BE PERFORMED ON ALL EXISTING COVER PLATE  
TO FLANGE WELDS, SEE SPECIAL PROVISIONS.

THE ESTIMATED QUANTITY OF CLASS B-2 CONCRETE IS BASED ON A MINIMUM SLAB THICKNESS AND  
AN AVERAGE HAUNCH OF ③. NO PAYMENT WILL BE MADE FOR ADDITIONAL LABOR OR MATERIALS REQUIRED  
FOR VARIATION IN HAUNCHING, SLAB THICKNESS OR GRADE ADJUSTMENT.

HAUNCH IS MEASURED FROM BOTTOM OF SLAB TO BOTTOM OF TOP FLANGE.

## PILE &amp; FOOTING DATA (NORTHBOUND LANE)

BENT NO.	BENT NO. 1	BENT NO. 2	BENT NO. 3	BENT NO. 4	BENT NO. 5	BENT NO. 6	BENT NO. 7	BENT NO. 8	BENT NO. 9	BENT NO. 10	PIER NO. 11	PIER NO. 12	PIER NO. 13	PIER NO. 14	PIER NO. 15	PIER NO. 16
PILE TYPE AND SIZE	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42		
NUMBER		13	13	12	13	12	12	13	13	13	10	22	17	17		
APPROXIMATE LENGTH FT.	107	80	①	70	70	80	80	80	80	80	65	50	35	25		
DESIGN BEARING TONS	56	49	53	51	52	54	48	51	51	55	55	52	56	55		
HAMMER ENERGY REQUIRED FT.-LBS.	13,800	11,800	12,400	12,000	12,200	12,600	11,200	12,000	12,000	13,000	12,200	11,500	12,400	12,200		
FOUNDATION MATERIAL															ROCK	ROCK
DESIGN BEARING TONS/SQ. FT.															6.0	4.0

① 80 FT. LEFT & 70 FT. MEDIAN

## PILE &amp; FOOTING DATA (SOUTHBOUND LANE)

BENT NO.	BENT NO. 1	BENT NO. 2	BENT NO. 3	BENT NO. 4	BENT NO. 5	BENT NO. 6	BENT NO. 7	BENT NO. 8	BENT NO. 9	BENT NO. 10	PIER NO. 11	PIER NO. 12	PIER NO. 13	PIER NO. 14	PIER NO. 15	PIER NO. 16
PILE TYPE AND SIZE	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42		
NUMBER	6	13	13	12	13	12	12	13	13	13	10	22	17	17		
APPROXIMATE LENGTH FT.	107	80	70	70	②	80	80	80	80	80	65	50	35	25		
DESIGN BEARING TONS	56	49	53	51	52	54	48	51	51	55	55	52	56	55		
HAMMER ENERGY REQUIRED FT.-LBS.	13,800	11,800	12,400	12,000	12,200	12,600	11,200	12,000	12,000	13,000	12,200	11,500	12,400	12,200		
FOUNDATION MATERIAL															ROCK	ROCK
DESIGN BEARING TONS/SQ. FT.															6.0	4.0

② 70 FT. MED. & 80 FT. RT.

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING  
VALUE OF PILES.

ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.  
PREBORE FOR PILES AT BENT NO. 1 TO ELEVATION 398.0.

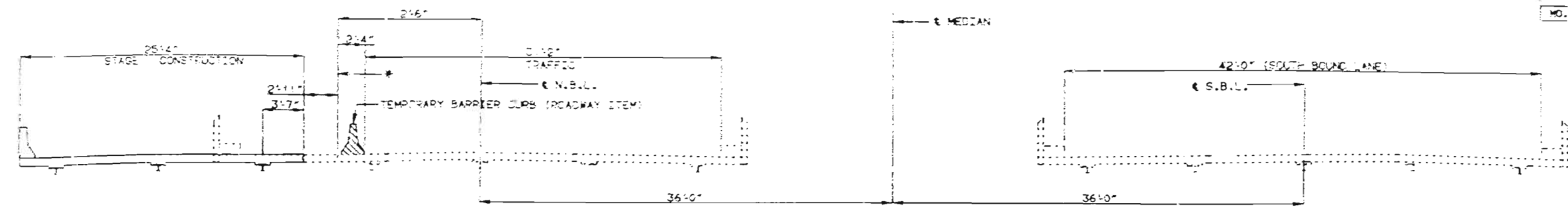
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 6 OF 238.

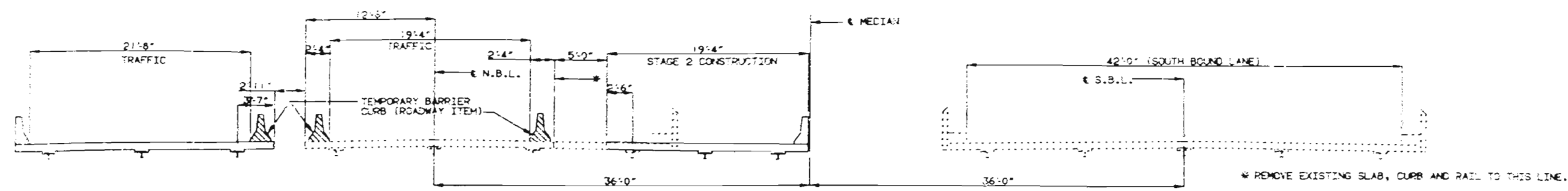
ST. LOUIS-JEFFERSON

COUNTIES

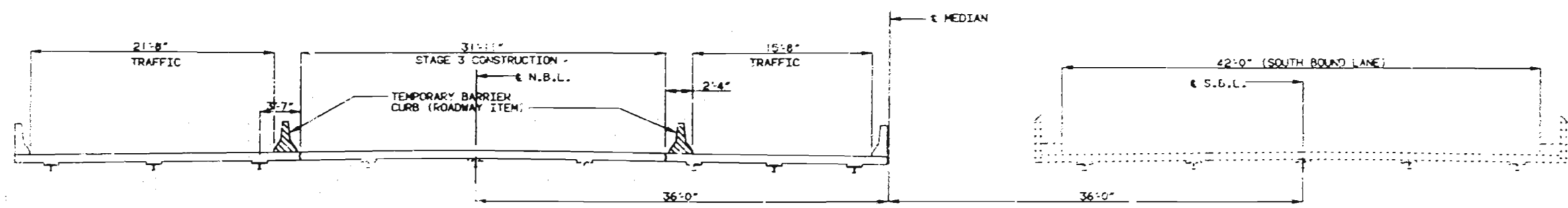
A-609R



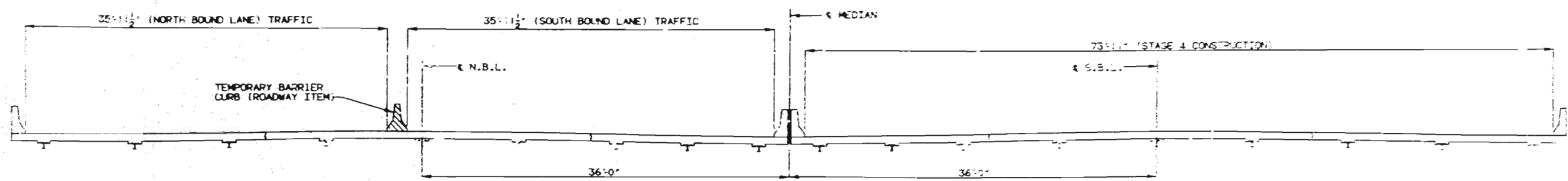
STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION



STAGE 3 CONSTRUCTION



STAGE 4 CONSTRUCTION

DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 7 OF 235

ST. LOUIS-JEFFERSON COUNTIES A-609R

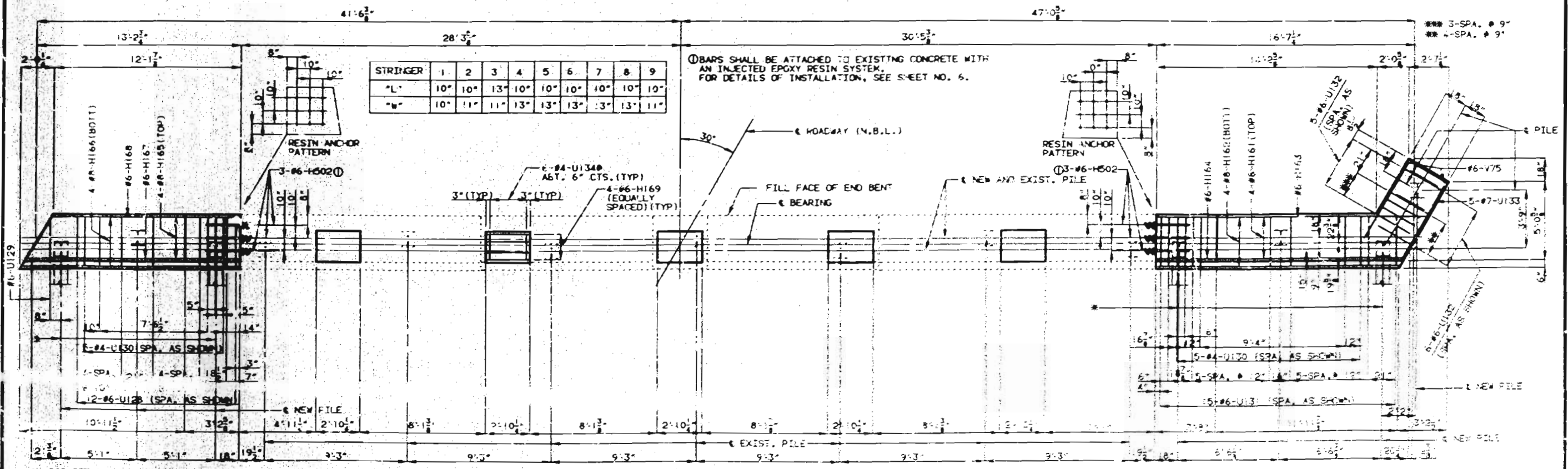
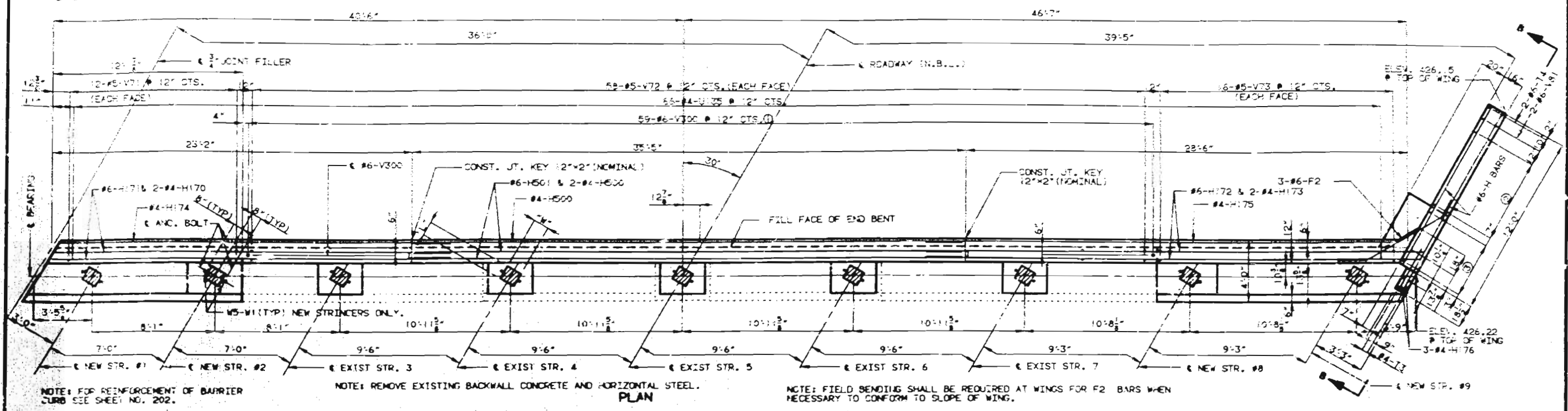
13

DETAILED JAN. 1992  
CHECKED MAY 1992



① 5-#6-V72 (OUTSIDE FACE) & 5-#6-V78 (INSIDE FACE) • 12" CTS.  
 ② 12-#6-V78 (OUTSIDE FACE) & 12-#6-V80 (INSIDE FACE) • 6" CTS.

STATE	PROJ. NO.	SHEET NO.
MO.		9



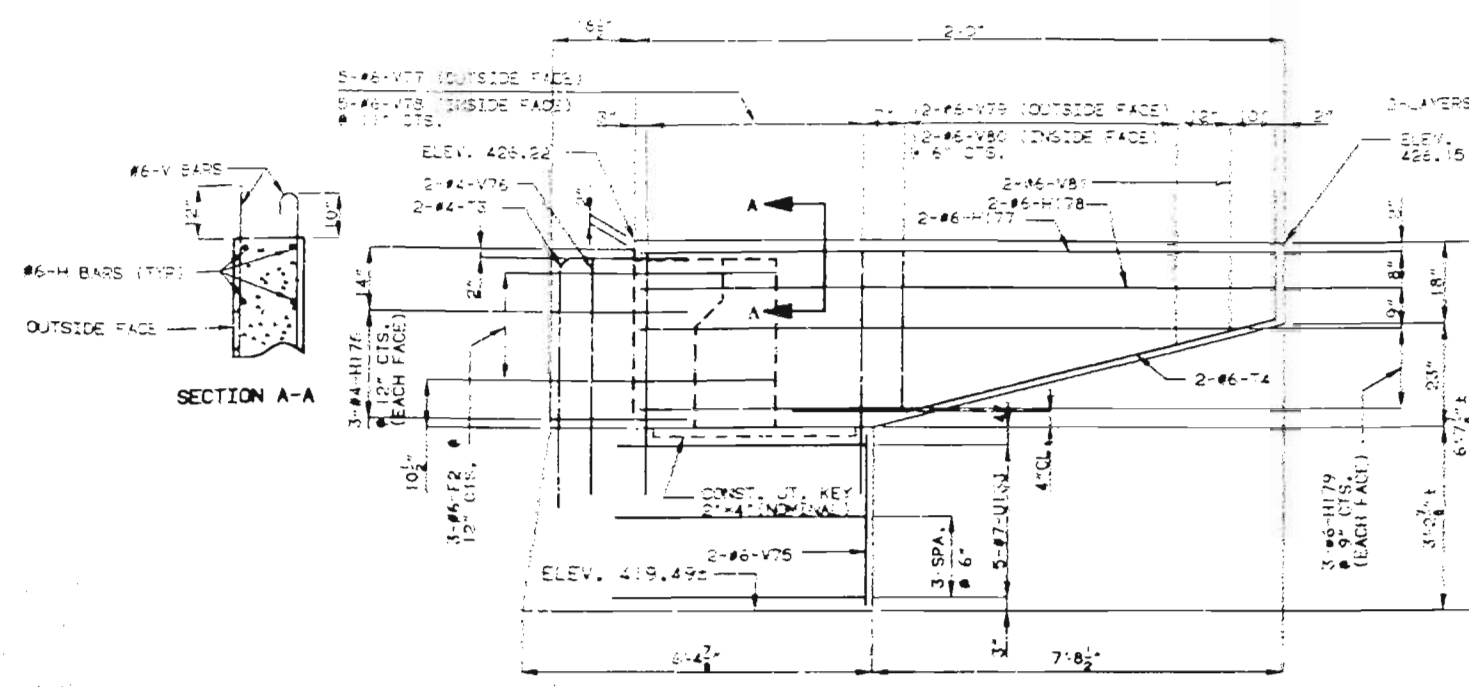
DETAILS OF END BT. NO. 1 (NORTHBOUND LANE)

14 1500  
 DETAILED JUNE 1992  
 CHECKED JULY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 3 OF 272

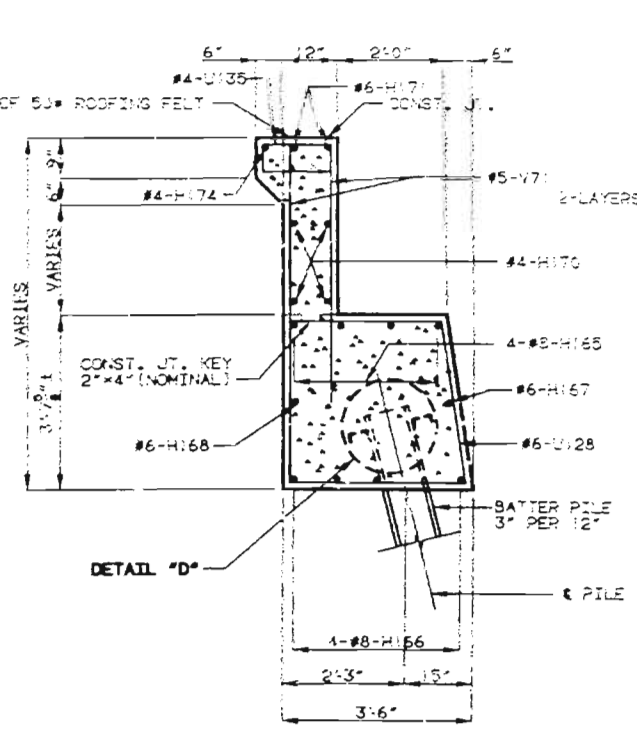
ST. LOUIS-JEFFERSON COUNTIES A-609R



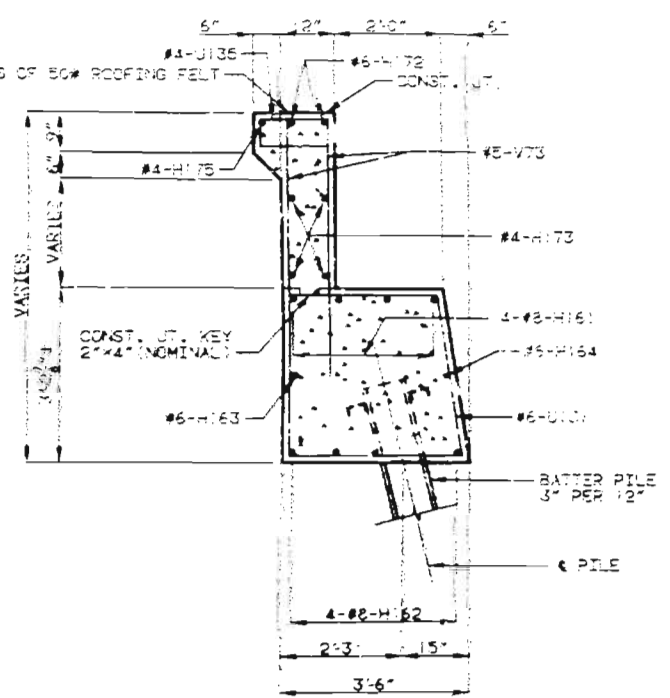
ELEVATION B-B

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1 (NORTHBOUND LANE)		
ITEM	UNIT	QUANTITY
STRUCTURAL STEEL PILE (10")	LN. FT.	749
PREPARE FOR PILING	LN. FT.	150
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	30.2
REINFORCING STEEL (BRIDGES)	LBS.	4190
REINFORCING STEEL (EPOXY COATED)	LBS.	260

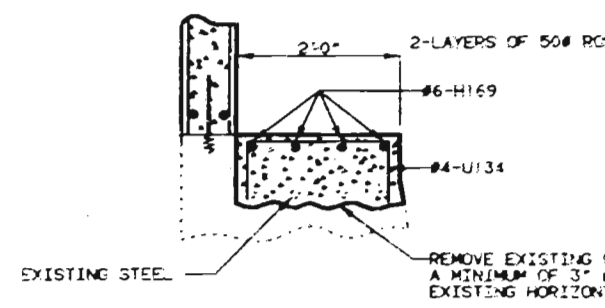
NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



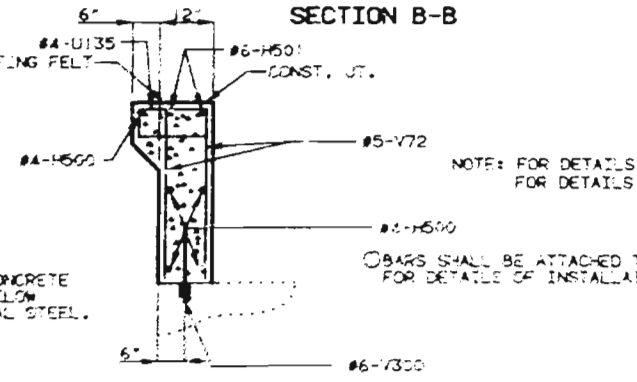
SECTION B-B



SECTION C-C

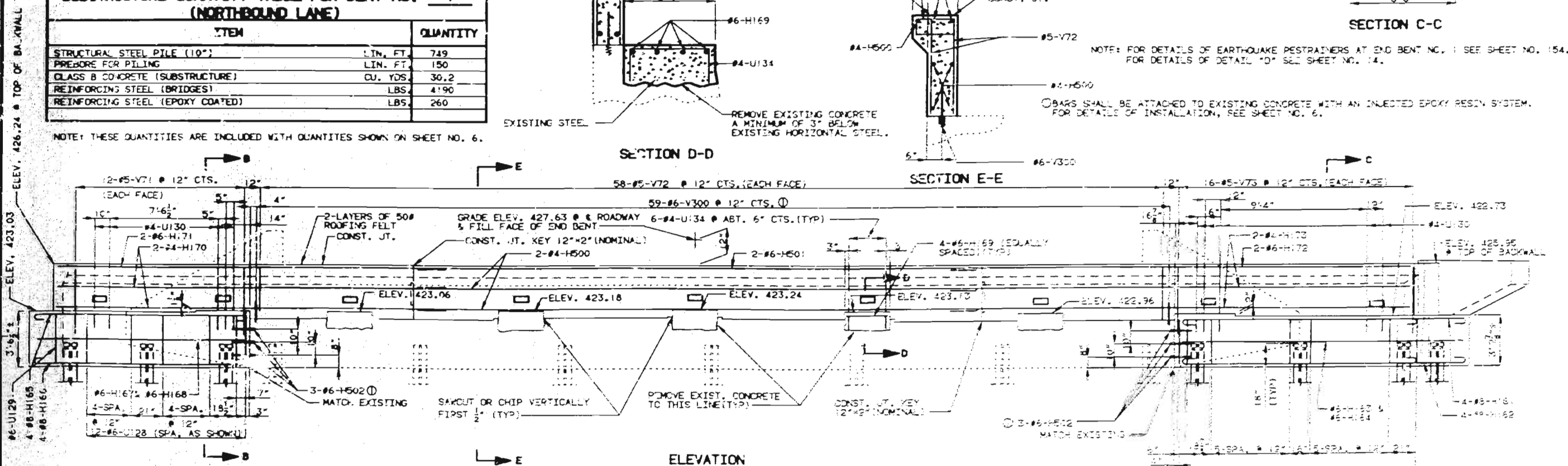


SECTION D-D



SECTION E-E

NOTE: FOR DETAILS OF EARTHQUAKE RESTRAINTERS AT END BENT NO. 1 SEE SHEET NO. 154.  
FOR DETAILS OF DETAIL "D" SEE SHEET NO. 14.  
BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.



ELEVATION

NOTE: FOR DETAILS OF BT. NO. 1 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NO. 8.  
FOR LOCATION OF ELEVATION B-B, SEE SHEET NO. 8.  
FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.  
FOR DETAILS OF STEEL PILE SPLICE, SEE SHEET NO. 15.

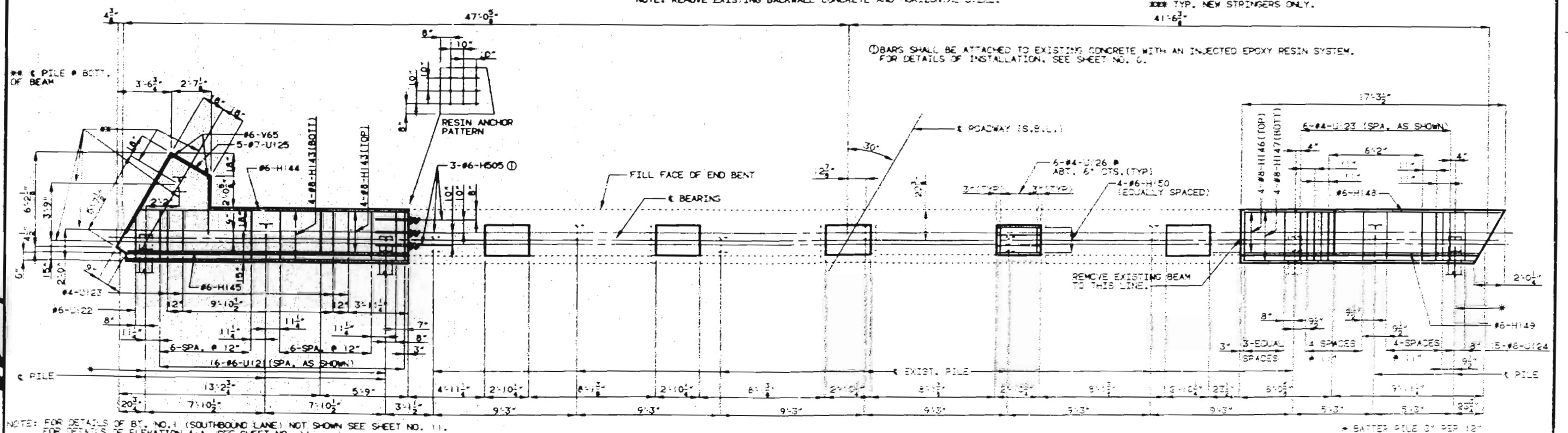
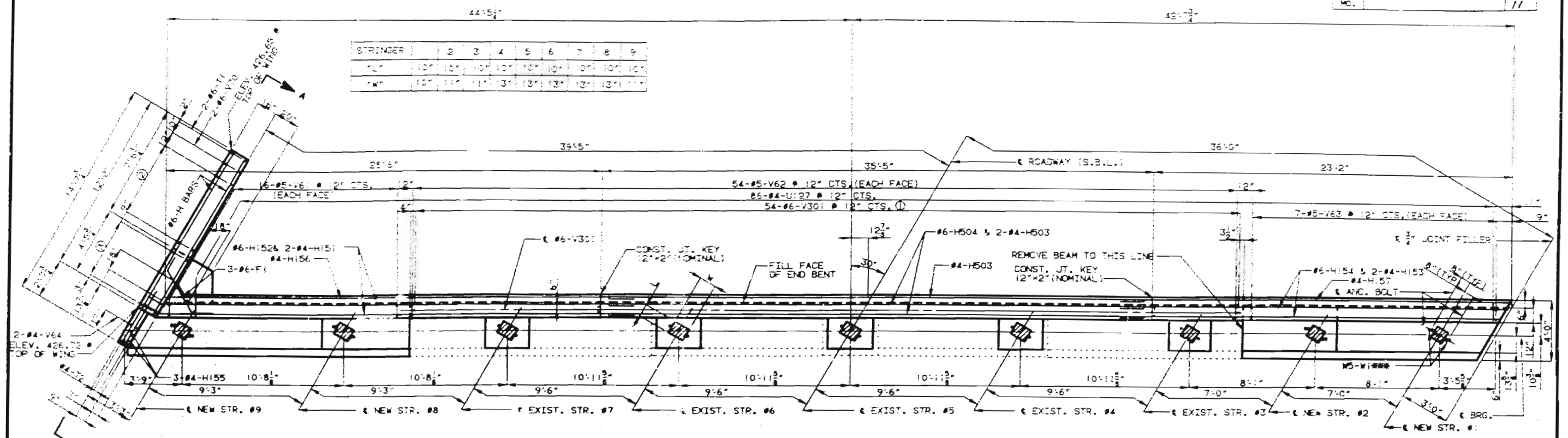
NOTE: REMOVE EXISTING BACKWALL CONCRETE AND HORIZONTAL STEEL.

DETAILS OF END BT. NO. 1 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

① 4-#6-V62 TO TOP FACE & 5-#6-V67 (INSIDE FACE) @ 12" CTS.  
 ② 1-#6-V69 (OUTSIDE FACE) & 1-#6-V69 (INSIDE FACE) @ 6" CTS.

STATE	PROJ. NO.	SHEET NO.
MO.		11



DETAILS OF END BT. NO. 1 (SOUTHBOUND LANE)

16

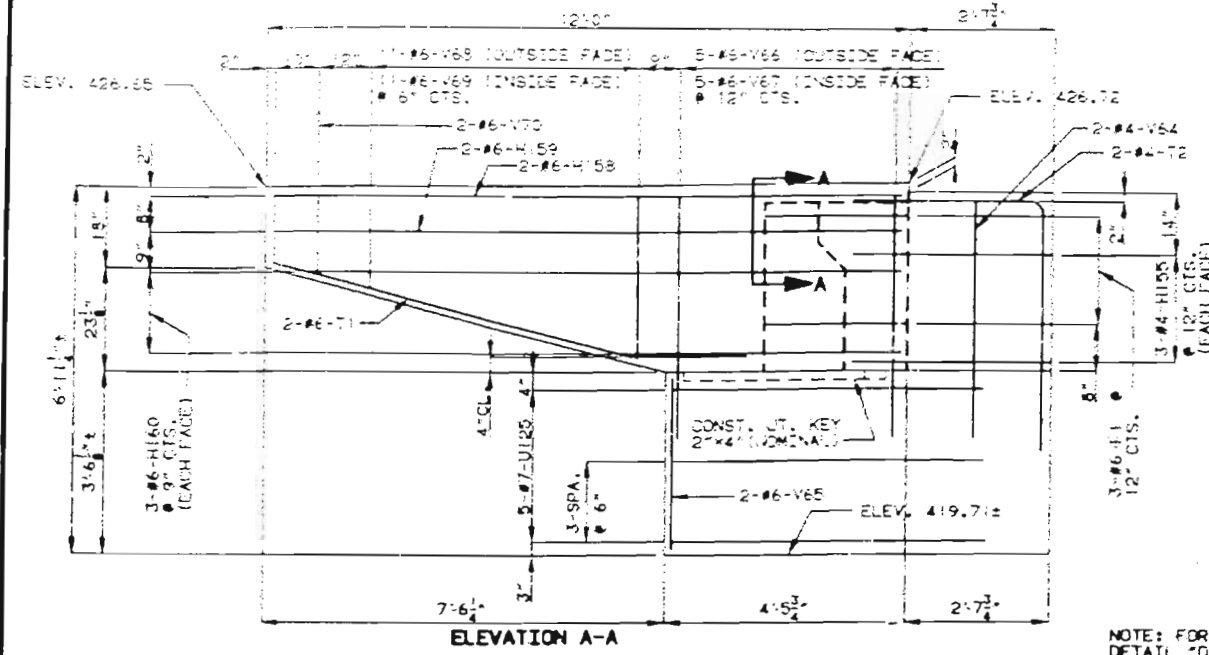
DETAILED JUNE 1992  
 CHECKED JUNE 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

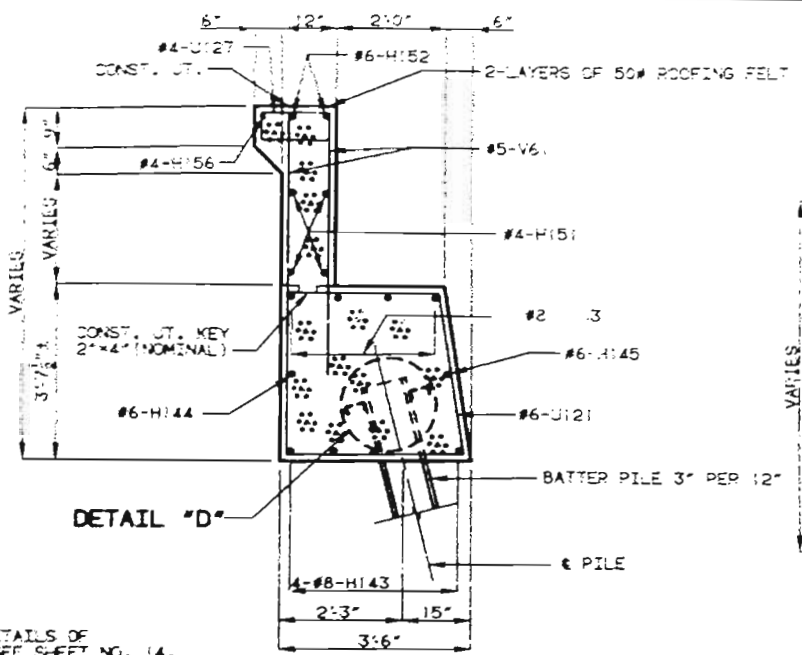
SHEET NO. 10 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

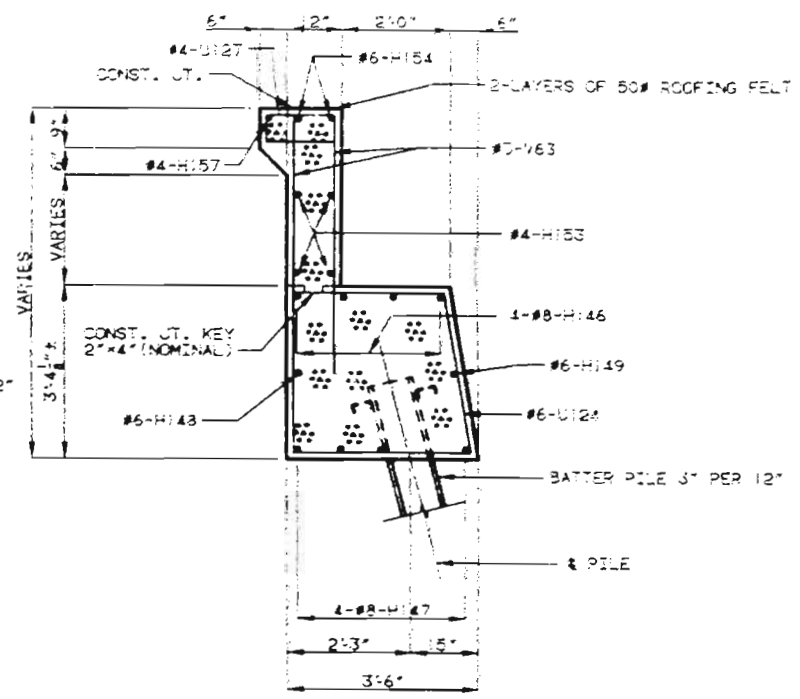




ELEVATION A-A



SECTION B-B



SECTION C-C

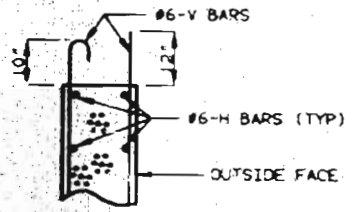
**SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 1 (SOUTHBOUND LANE)**

ITEM	QUANTITY
STRUCTURAL STEEL PILE (10")	LIN. FT. 442
PREFORM FOR PILING	LIN. FT. 130
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS. 32.7
REINFORCING STEEL (BRIDGES)	LBS. 3780
REINFORCING STEEL (EPOXY COATED)	LBS. 250

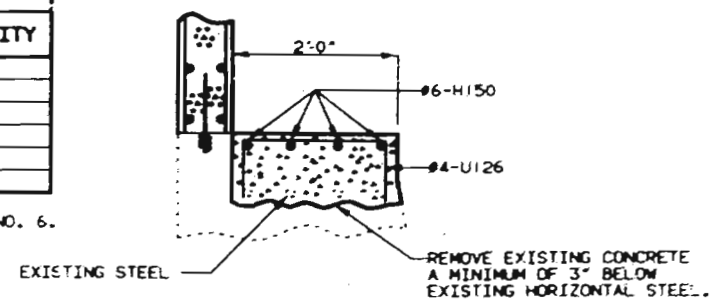
NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.

NOTE: FOR DETAILS OF DETAIL "D" SEE SHEET NO. 14.

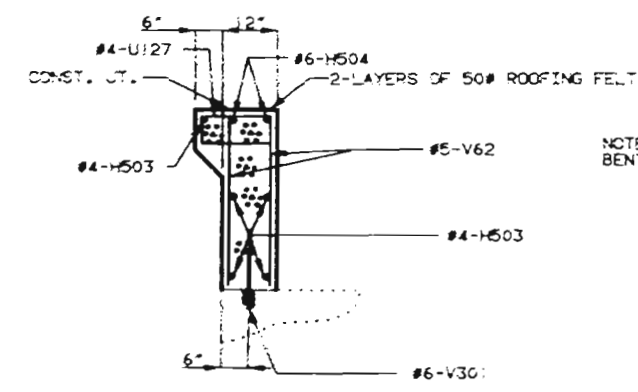
NOTE: FOR DETAILS OF EARTHQUAKE RESTRAINTERS AT END BENT NO. 1 SEE SHEET NO. 154.



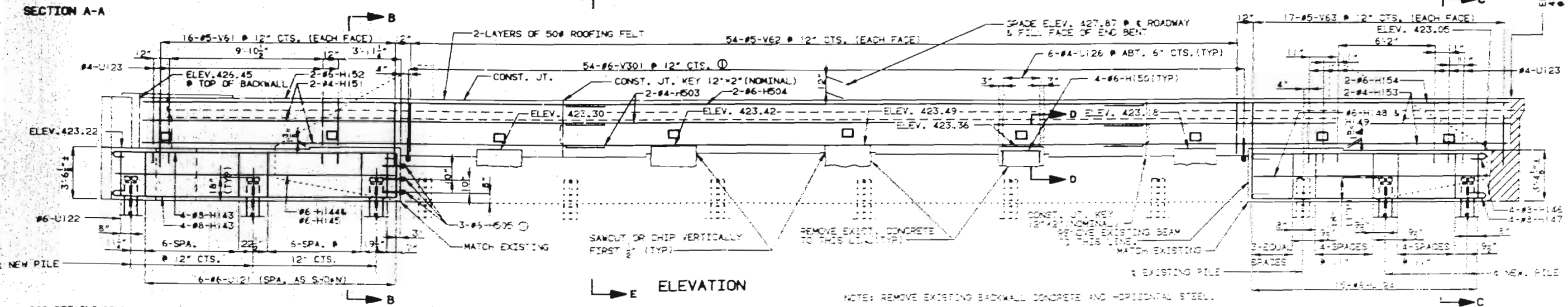
SECTION A-A



SECTION D-D



SECTION E-E



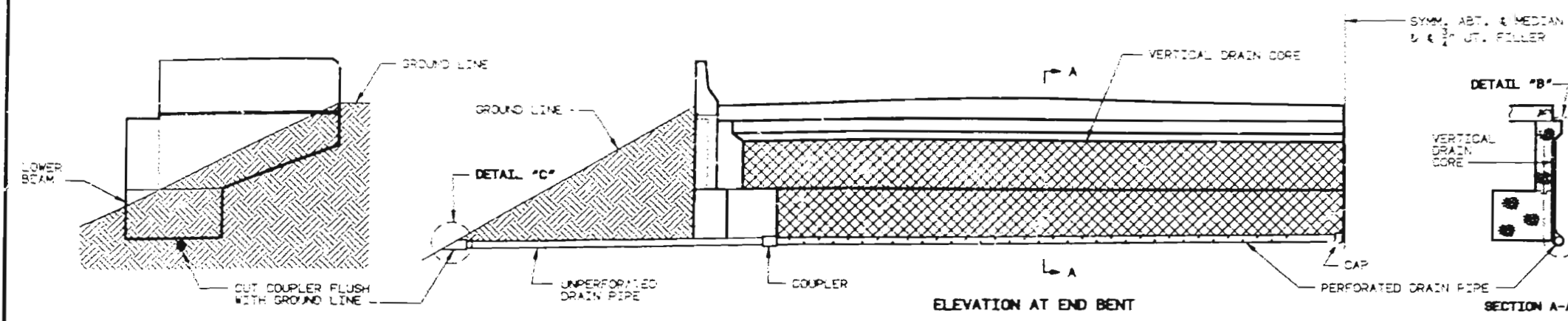
DETAILS OF END BT. NO. 1 (SOUTHBOUND LANE)

NOTE: FOR DETAILS OF BT. NO. 1 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NO. 10.  
 DETAILED JUNE 1992  
 CHECKED JULY 1992

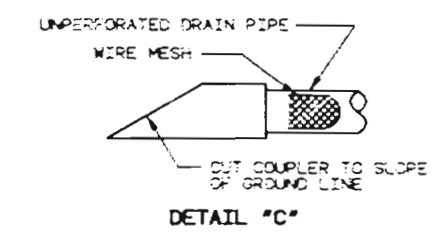
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 11 OF 238





VERTICAL DRAIN AT END BENT NO. 1 (NORTHBOUND & SOUTHBOUND LANE)

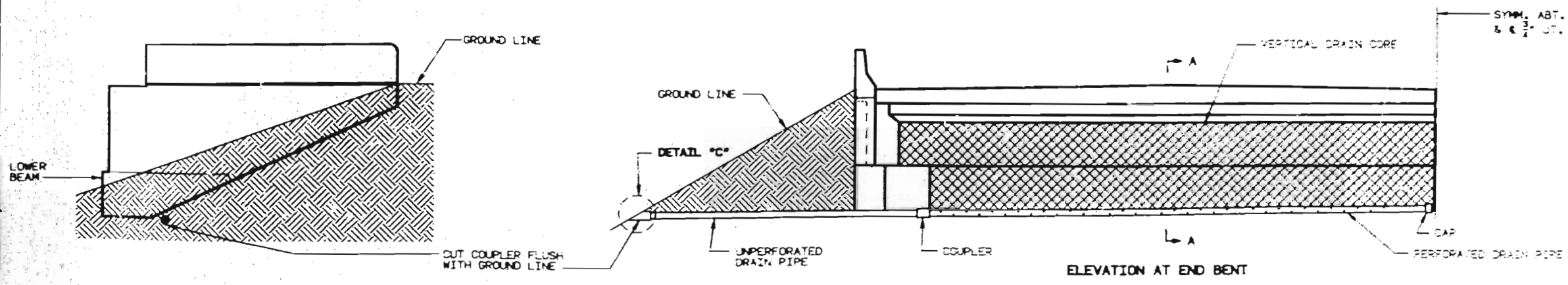
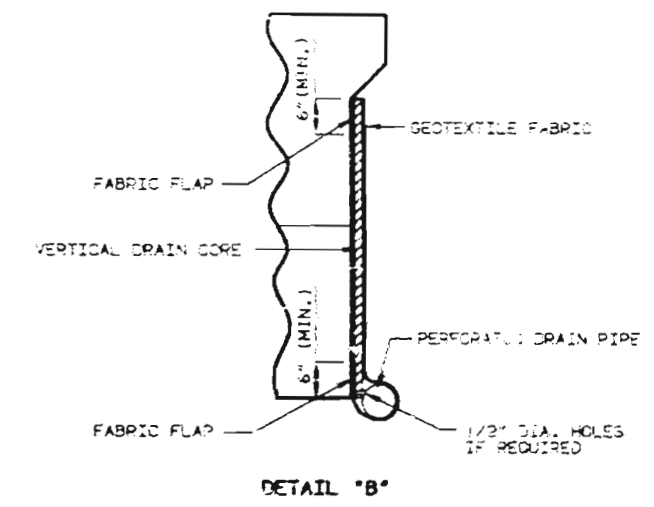


GENERAL NOTES:

DRAIN PIPE MAY BE EITHER 6" DIAMETER CORRUGATED METALLIC-COATED STEEL PIPE UNDERPAINT, 4" DIAMETER CORRUGATED POLY VINYL CHLORIDE (PVC) DRAIN PIPE, OR 4" DIAMETER CORRUGATED POLYETHYLENE (PE) DRAIN PIPE.

PLACE DRAIN PIPE AT FILL FACE OF END BENT AND SLOPE TO LOWEST GRADE OF GROUND LINE, ALSO MISSING THE LOWER BEAM OF END BENT BY 1-1/2". (SEE ELEVATION AT END BENT)

PERFORATED PIPE SHALL BE PLACED AT FILL FACE SIDE AT THE BOTTOM OF END BENT AND PLAIN PIPE SHALL BE USED WHERE THE VERTICAL DRAIN ENDS TO THE EXIST AT GROUND LINE.



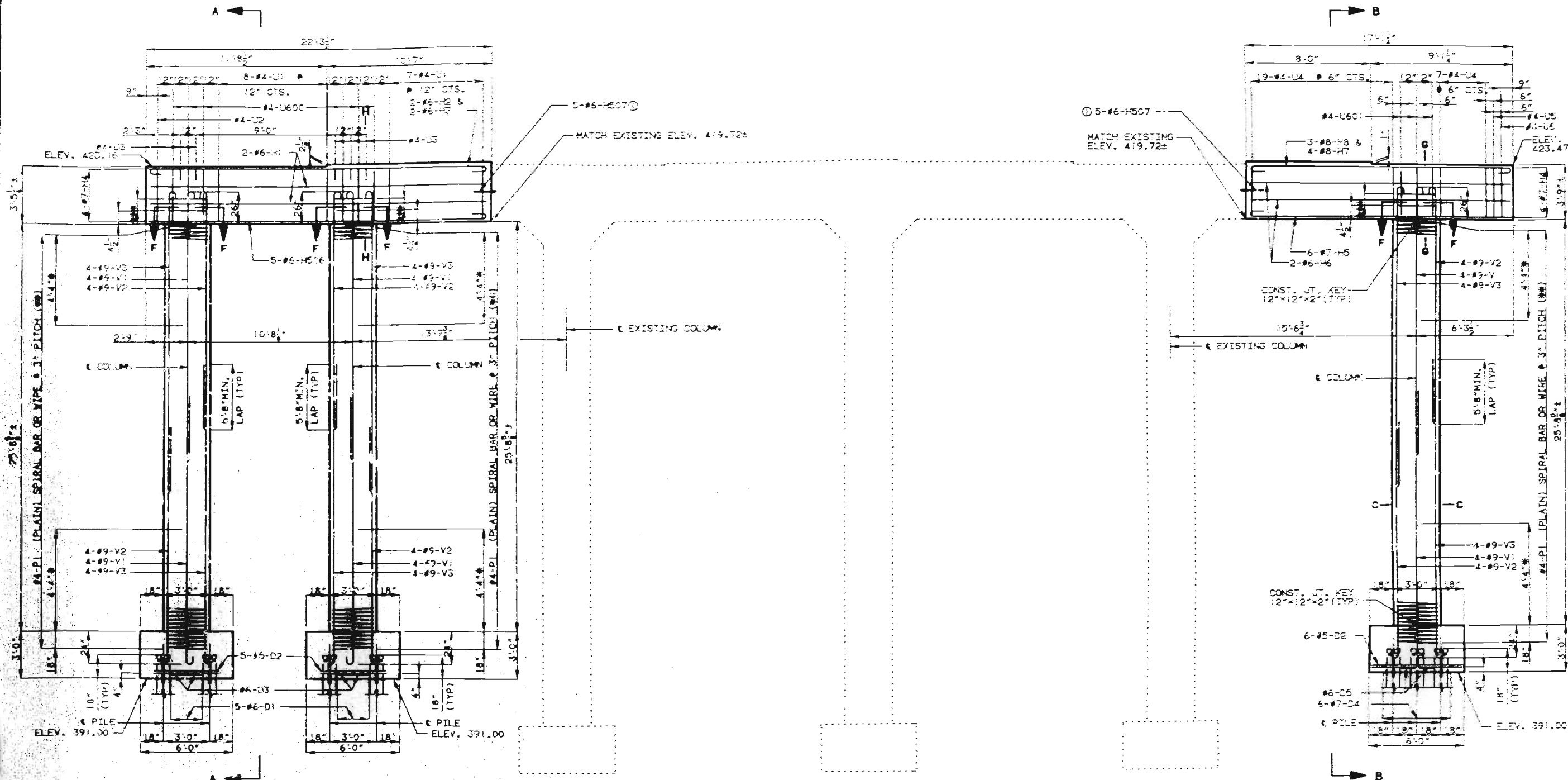
VERTICAL DRAIN AT END BENT NO. 16 (NORTHBOUND & SOUTHBOUND LANE)

18208  
DETAILED APRIL 1953  
CHECKED APRIL 1997

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 12 OF 235

STATE	PROJ. NO.	SHEET NO.
MO.		14



NOTE: LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 6-#4-P2 @ 3' CTS. (TYP). P2 SPLICE LOCATIONS SHALL BE STAGGERED.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

NOTE: FOR DETAILS OF SECTION C-C, F-F, G-G, AND H-H SEE SHEET NO. 13.  
 FOR DETAILS OF PILE SPLICE SEE SHEET NO. 15.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 FOR DETAILS OF RESIN ANCHOR PATTERN, SEE SHEET NO. 14.

NOTE: FOR DETAILS OF 5' NO. 2 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 14 & 15.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 14.

DETAILS OF INT. BT. NO. 2 (NORTHBOUND LANE)

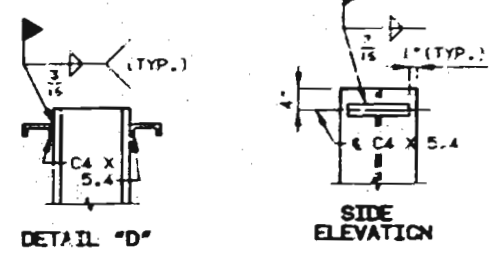
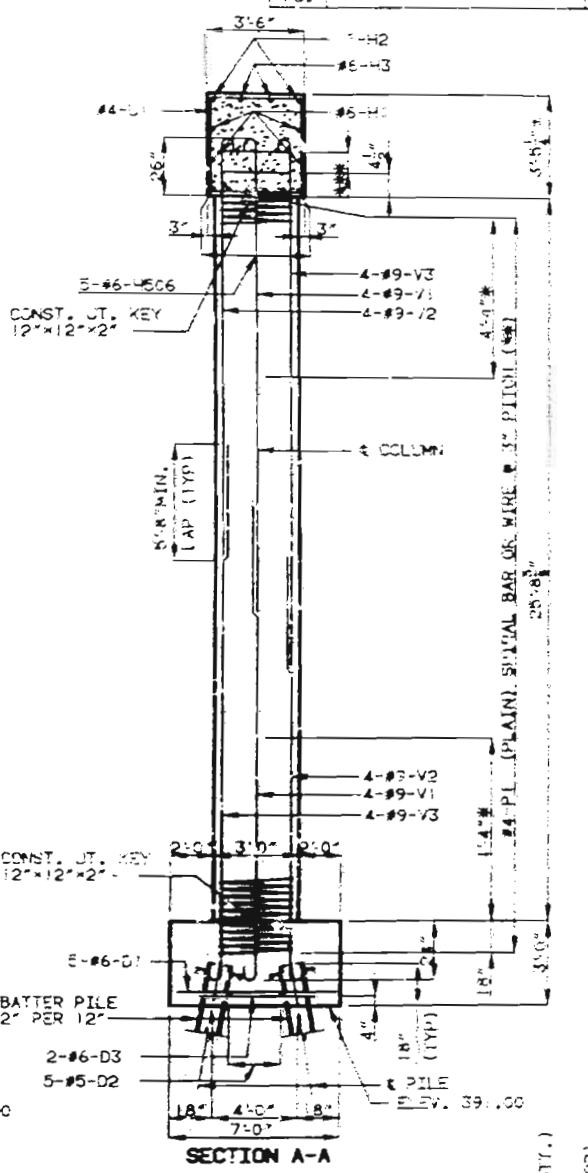
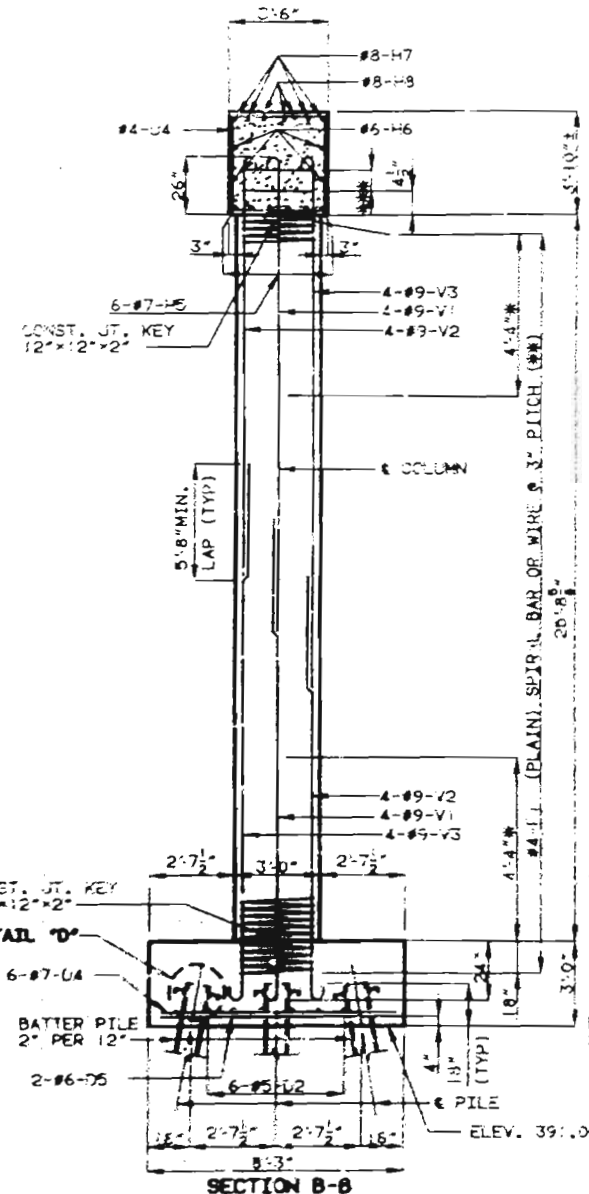
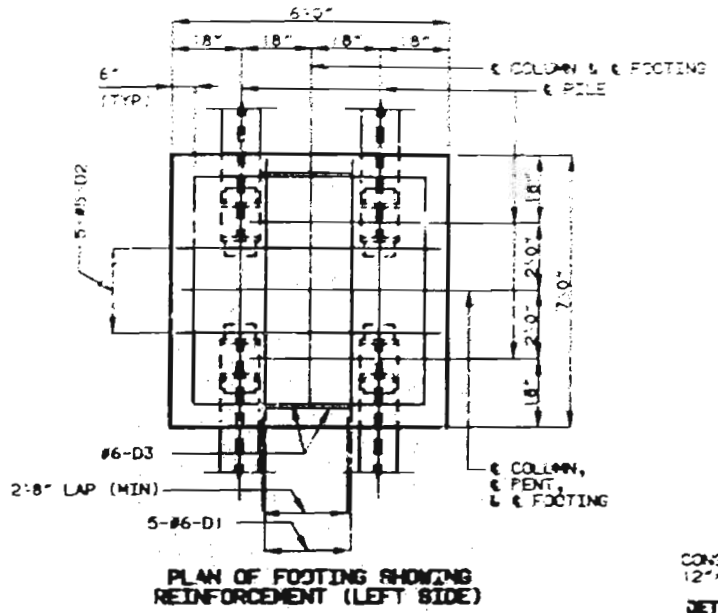
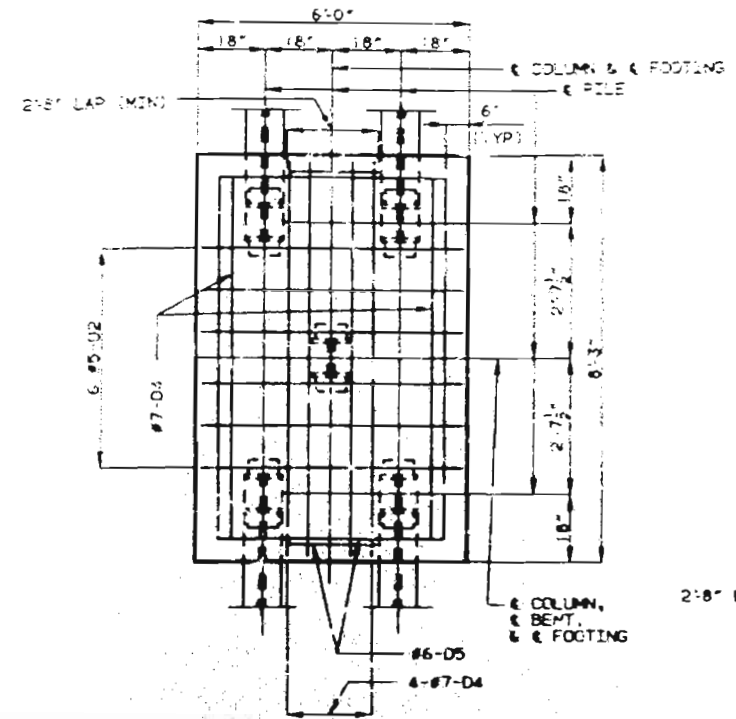
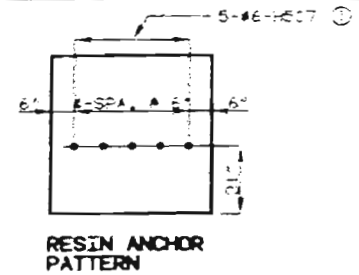
DETAILED APRIL 1992  
 CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

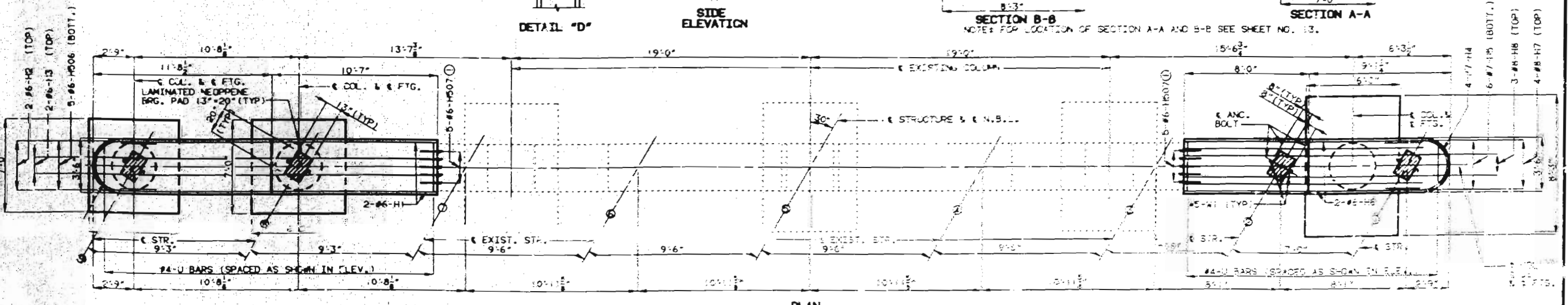
SHEET NO. 13 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP SPIRAL REIN. BAR.  
 \*\*\* 6-#4-P2 & 6-#4-P1 (TYP) P2 SPLICE LOCATIONS SHALL BE STAGGERED.  
 ① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.



NOTE: FOR DETAILS OF PILE SPLICE SEE SHEET NO. 15.  
 FOR DETAILS OF BT. NO. 2 (NORTHBOUND LANE) NOT SHOWN SEE SHEETS NOS. 13 & 15.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



DETAILS OF INT. BENT NO. 2 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

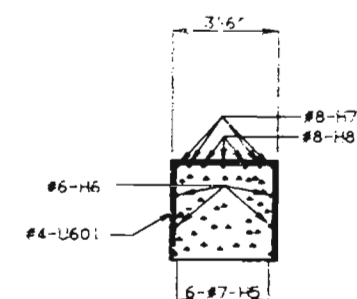
SHEET NO. 14 OF 228

2024

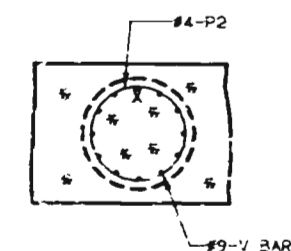
DETAILED APRIL 1992  
 CHECKED APRIL 1993

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2 (NORTHBOUND LANE)		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	75
STRUCTURAL STEEL PILE (10")	LIN. FT.	1540
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	53.3
REINFORCING STEEL (BRIDGES)	LBS.	8920

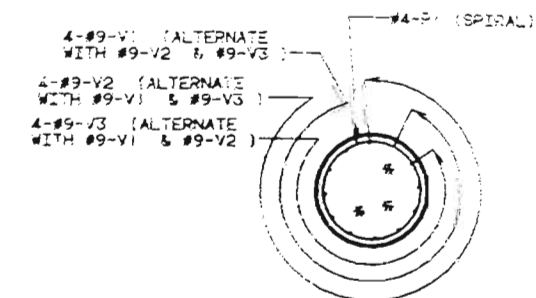
NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 8.



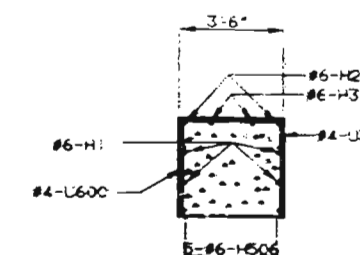
SECTION G-G



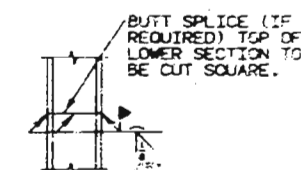
SECTION F-F



PART SECTION C-C



SECTION H-H



STEEL PILE SPlice

NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, AND H-H SEE SHEET NO. 13.  
FOR DETAILS OF BT. NO. 2 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 13 & 14.

DETAILS OF INT. BENT NO. 2 (NORTHBOUND LANE)

21  
DETAILED APRIL 1992  
CHECKED APRIL 1993

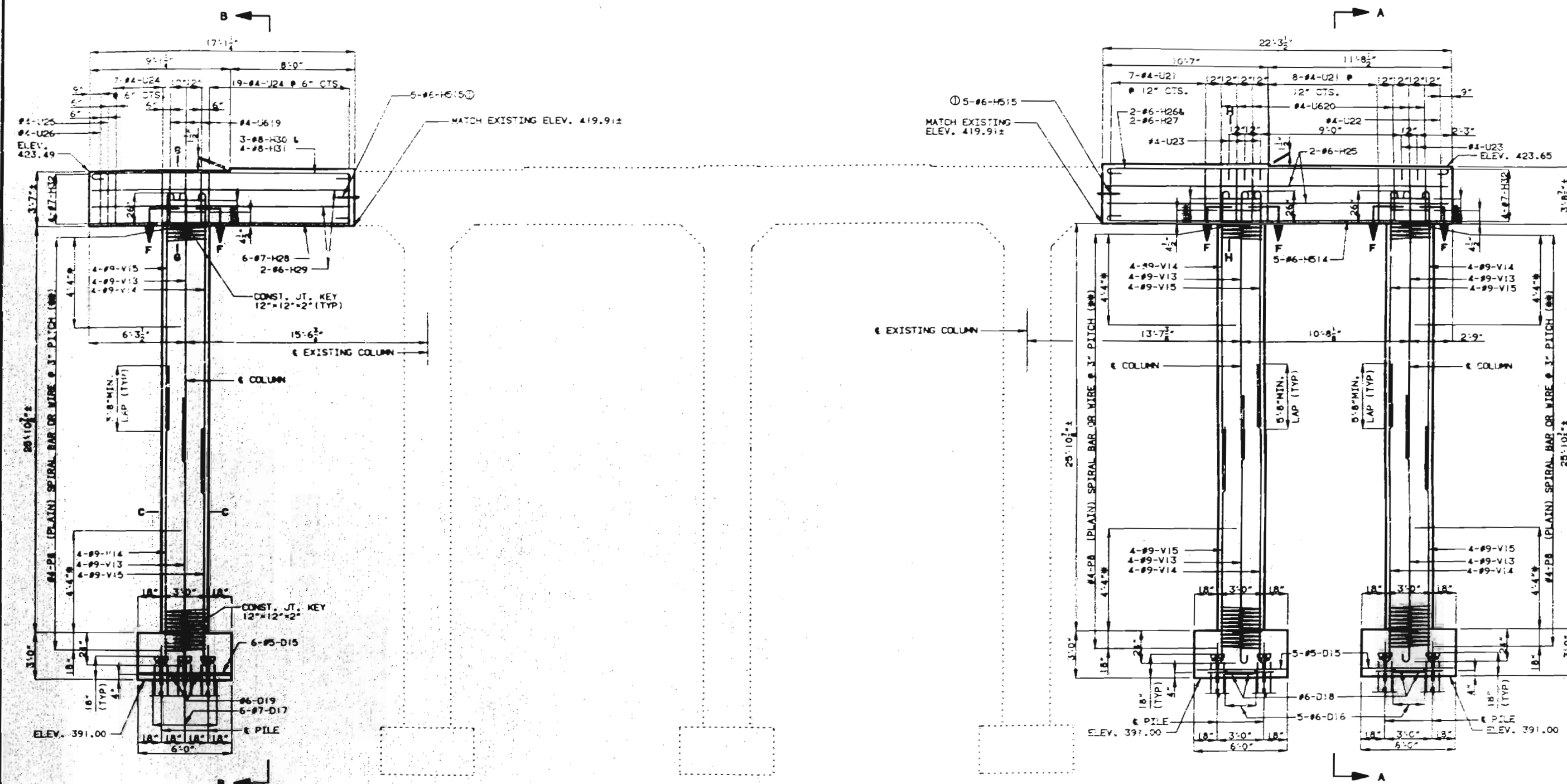
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 15 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



STATE	PROJ. NO.	SHEET NO.
MO.		17



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P9 @ 3" CTS. (TYP) P9 SPLICE LOCATIONS SHALL BE STAGGERED.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

ELEVATION

DBARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 FOR DETAILS OF RESIN ANCHOR PATTERN, SEE SHEET NO. 17.

NOTE: FOR DETAILS OF SECTION C-C, F-F, G-G, AND H-H SEE SHEET NO. 18.  
 FOR DETAILS OF PILE SPLICE SEE SHEET NO. 15.

NOTE: FOR DETAILS OF BT. NO. 2 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 17 & 18.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 17.

DETAILS OF INT. BT. NO. 2 (SOUTHBOUND LANE)

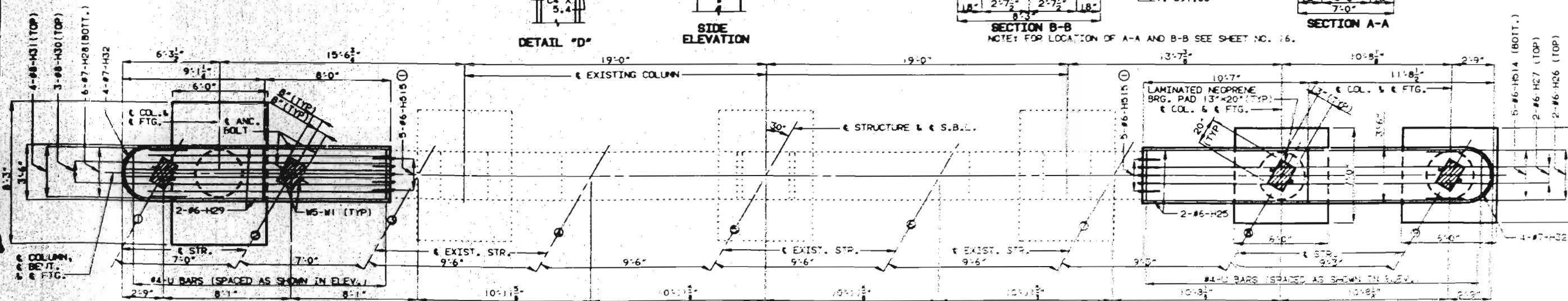
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 16 OF 233

ST. LOUIS-JEFFERSON COUNTIES A-609R

22  
 DETAILED APRIL 1992  
 CHECKED APRIL 1993

ⓄBARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.



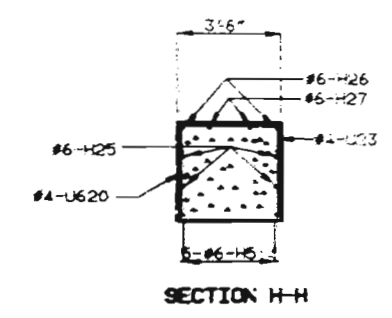
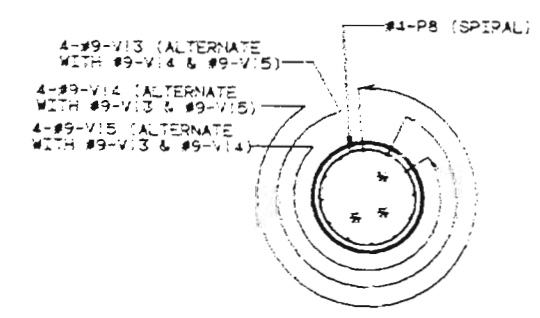
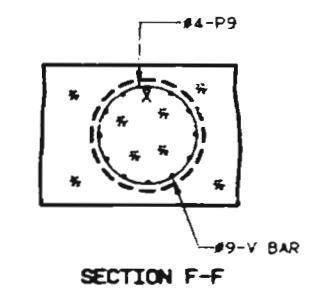
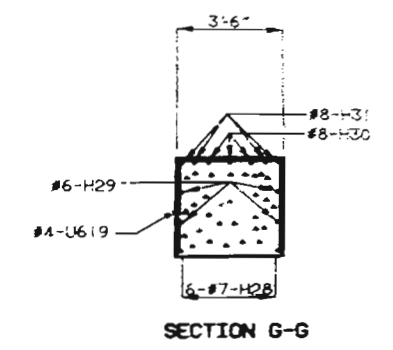
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 7 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	75
STRUCTURAL STEEL PILE (10")	LIN. FT.	1040
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	53.9
REINFORCING STEEL (BRIDGES)	LBS.	8790

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, AND H-H SEE SHEET NO. 16.  
FOR DETAILS OF BT. NO. 2 (SOUTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 16 & 17.

DETAILS OF INT. BENT NO. 2 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

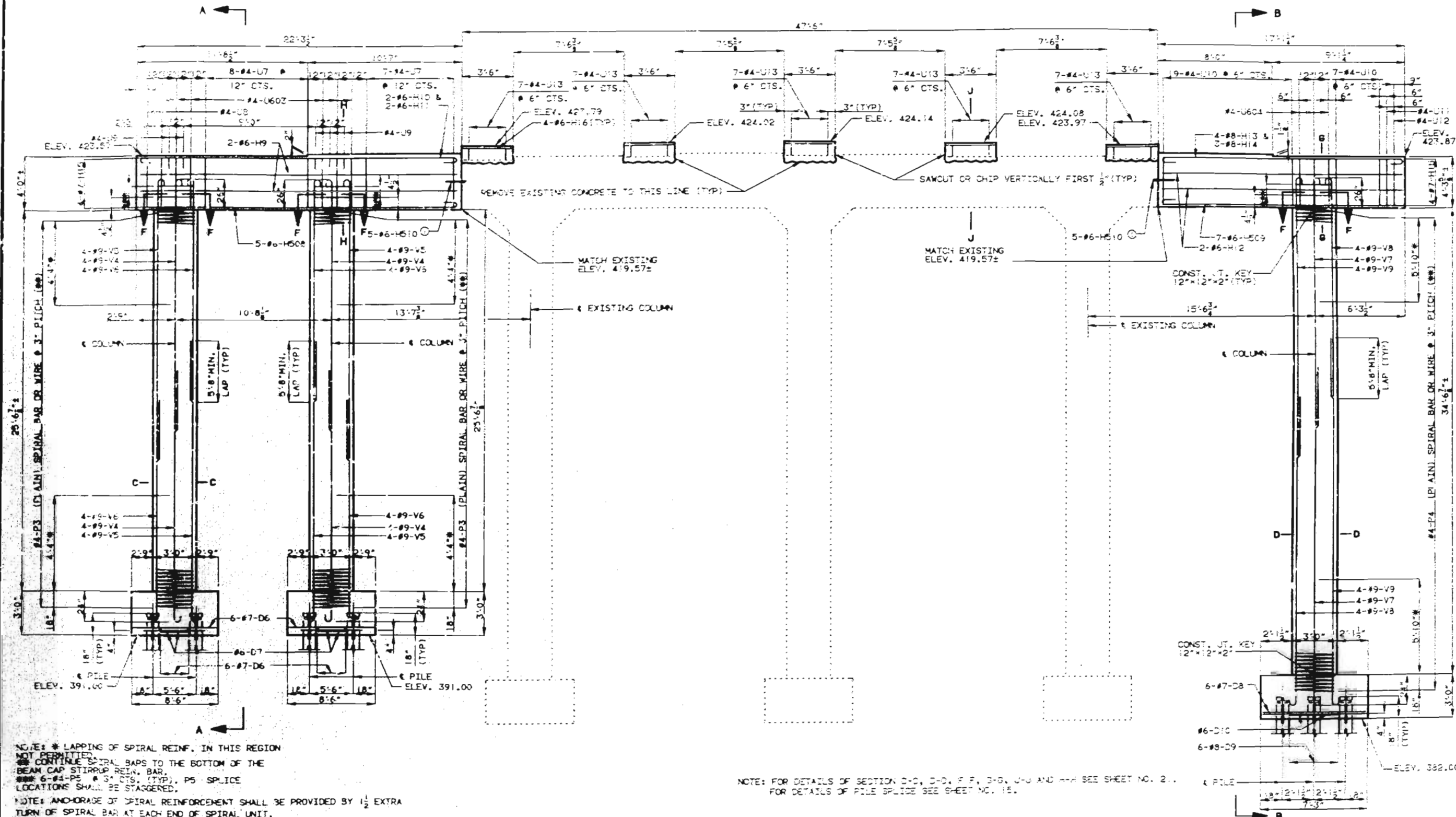
SHEET NO. 13 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

24

NOTE: TRIM #1113 IF NECESSARY TO FIT.

STATE	PROJ. NO.	SHEET NO.
MO.		20



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P5 @ 3" CTS. (TYP). P5 SPLICE LOCATIONS SHALL BE STAGGERED.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1/2 EXTRA TURN OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR DETAILS OF BT. NO. 3 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 20 & 21. FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 20.

NOTE: FOR DETAILS OF SECTION D-C, D-D, F-F, G-G, H-H AND I-I SEE SHEET NO. 21. FOR DETAILS OF PILE SPLICE SEE SHEET NO. 15.

ELEVATION

DETAILS OF INT. BT. NO. 3 (NORTHBOUND LANE)

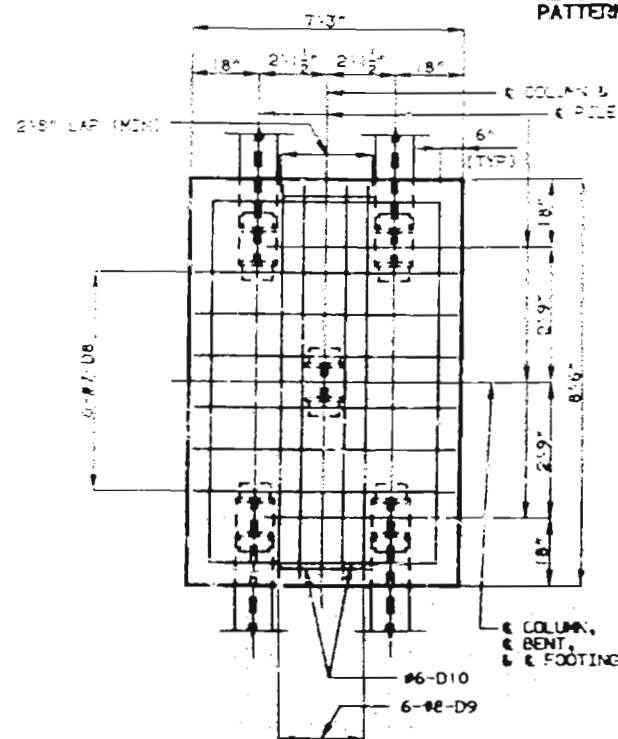
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 19 OF 238

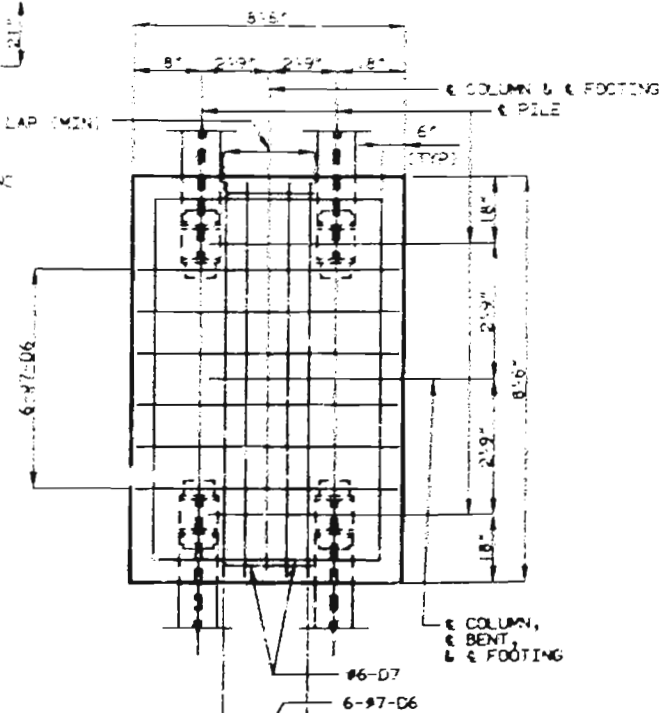
ST. LOUIS-JEFFERSON COUNTIES A-609R

DETAILED APRIL 1992  
 CHECKED APRIL 1992

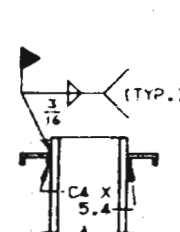




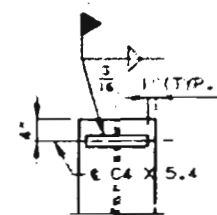
PLAN OF FOOTING SHOWING  
REINFORCEMENT (RIGHT SIDE)



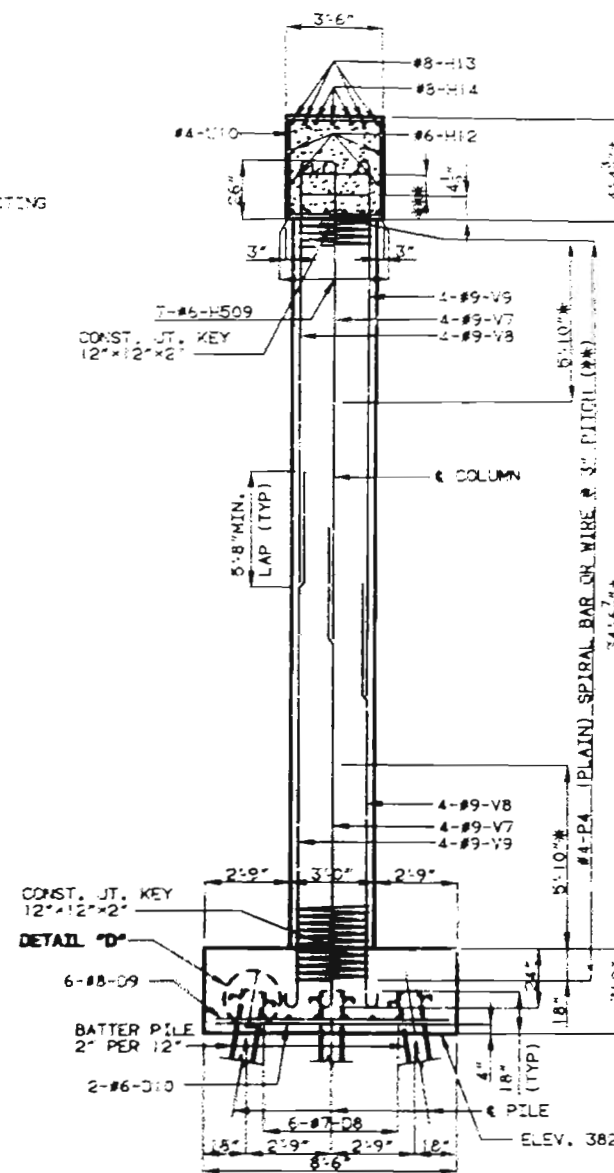
PLAN OF FOOTING SHOWING  
REINFORCEMENT (LEFT SIDE)



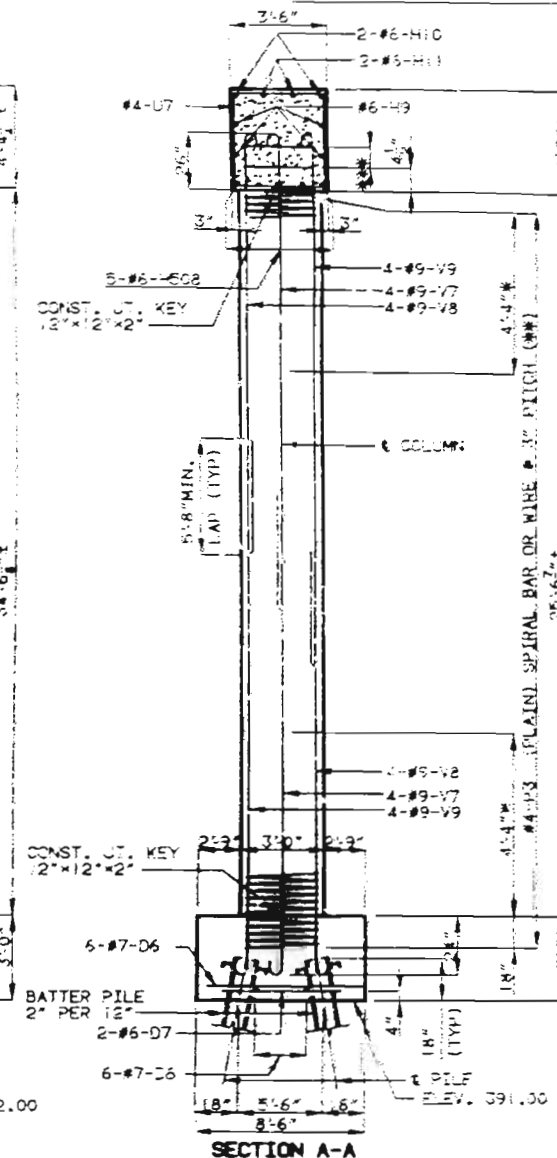
DETAIL "D"



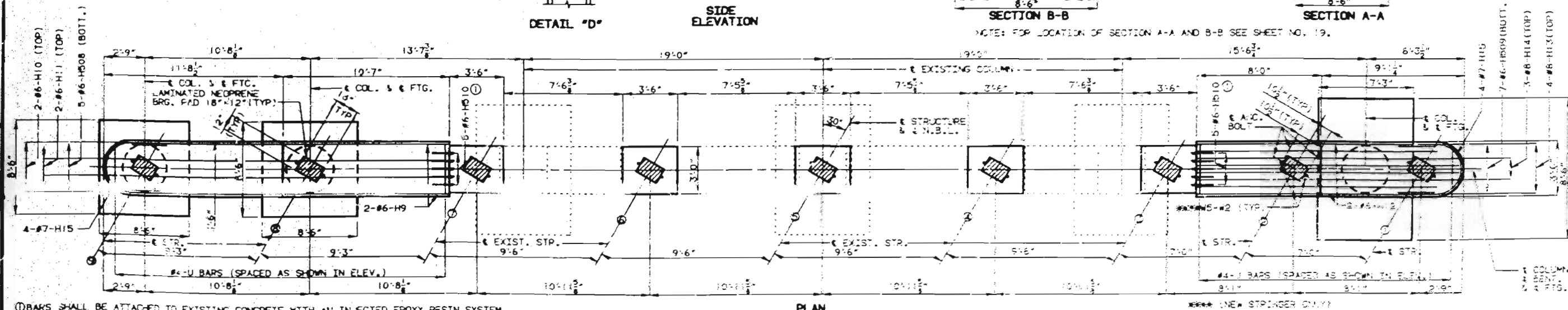
**SIDE  
ELEVATION**



NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 19.



SECTION A-A



## PLAN

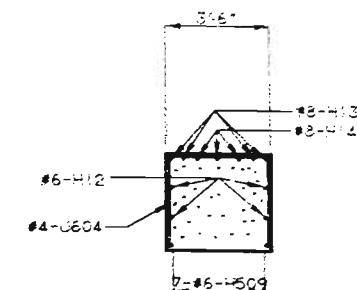
DETAILS OF INT. BENT NO. 3 (NORTHSOUND LANE)

SHEET NO. 20 OF 234

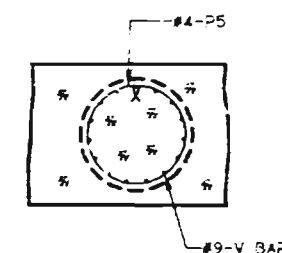
ST. LOUIS-JEFFERSON COUNTIES A-609R

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3 (NORTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	160
STRUCTURAL STEEL PILE (10")	LIN. FT.	990
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	69.0
REINFORCING STEEL (BRIDGES)	LBS.	9940

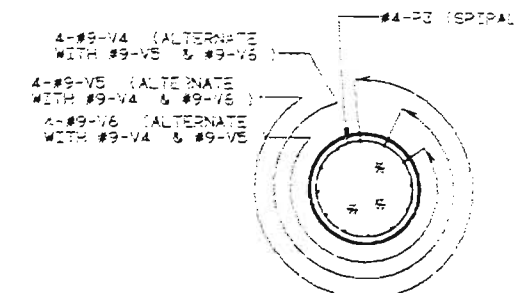
NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



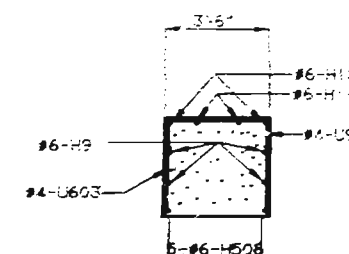
SECTION G-G



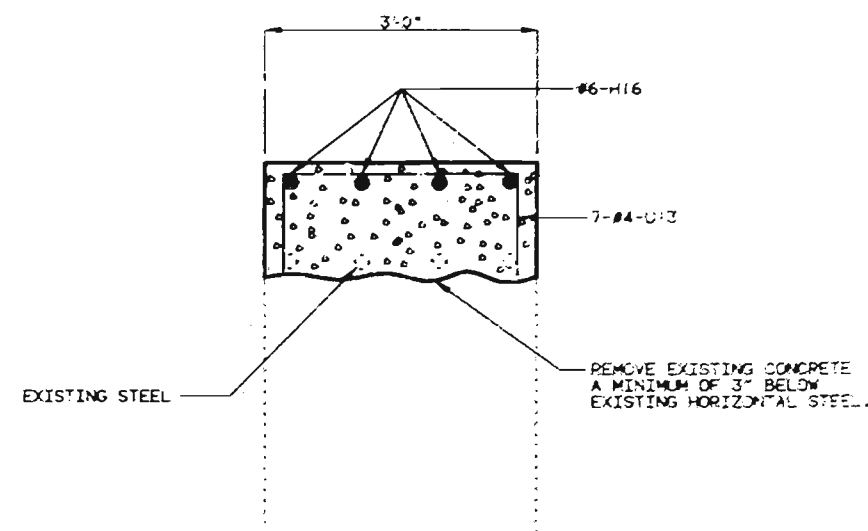
SECTION F-F



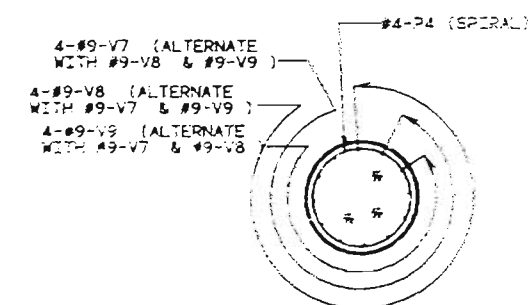
PART SECTION C-C



SECTION H-H



SECTION J-J



PART SECTION D-D

NOTE: FOR LOCATION OF SECTION C-C, D-D, F-F, G-G, J-J AND H-H SEE SHEET NO. 19.  
FOR DETAILS OF BT. NO. 2 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 19 & 20.

DETAILS OF INT. BENT NO. 3 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

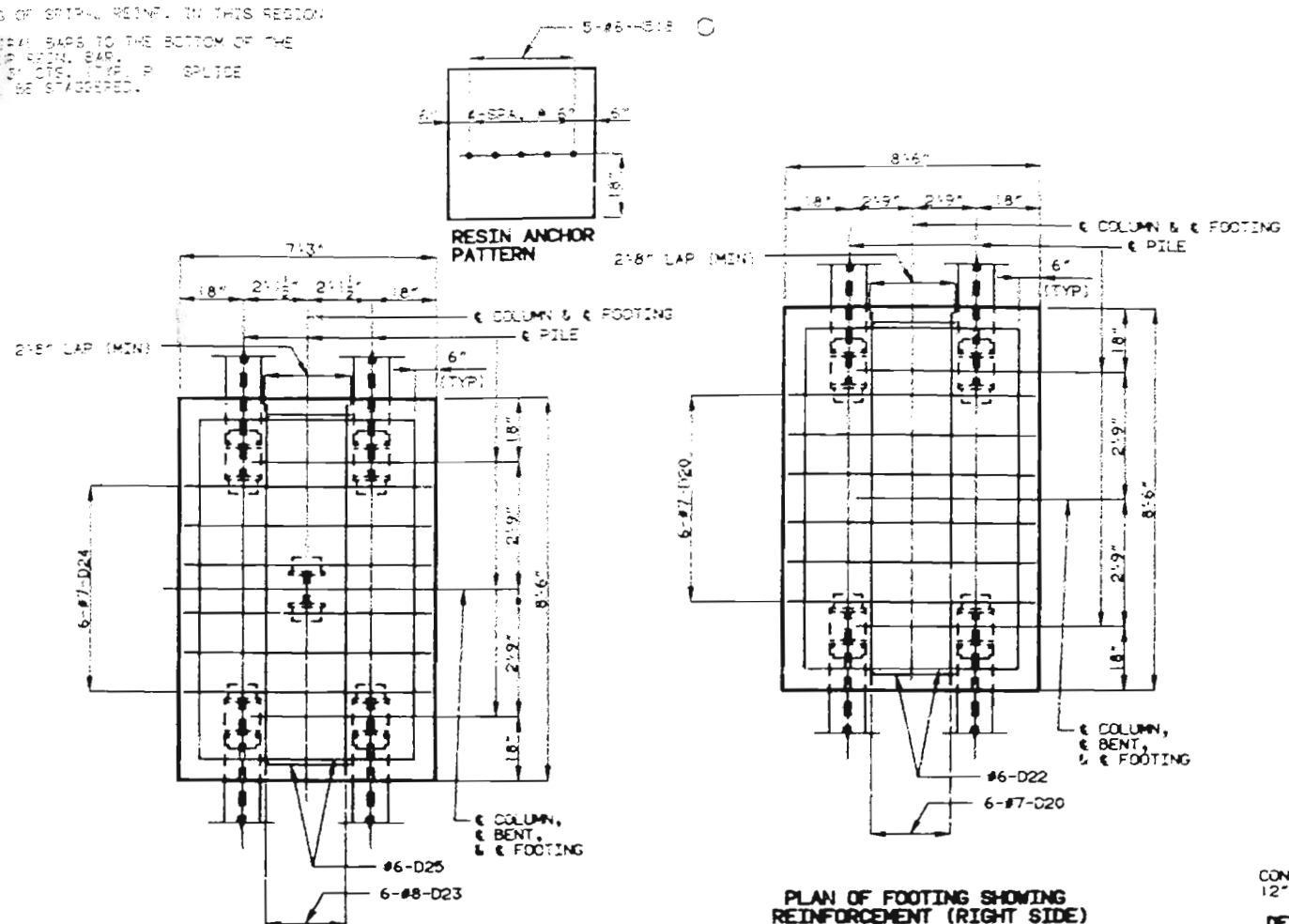
SHEET NO. 21 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

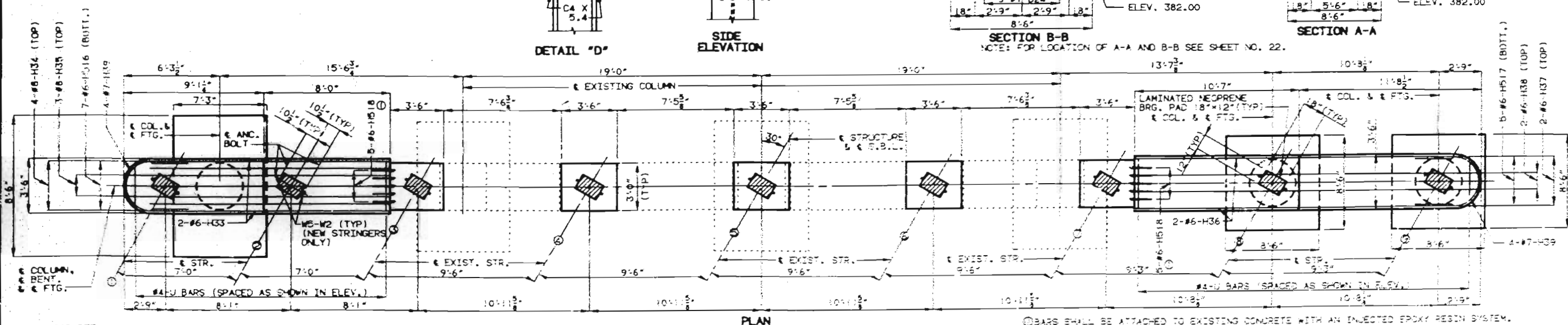
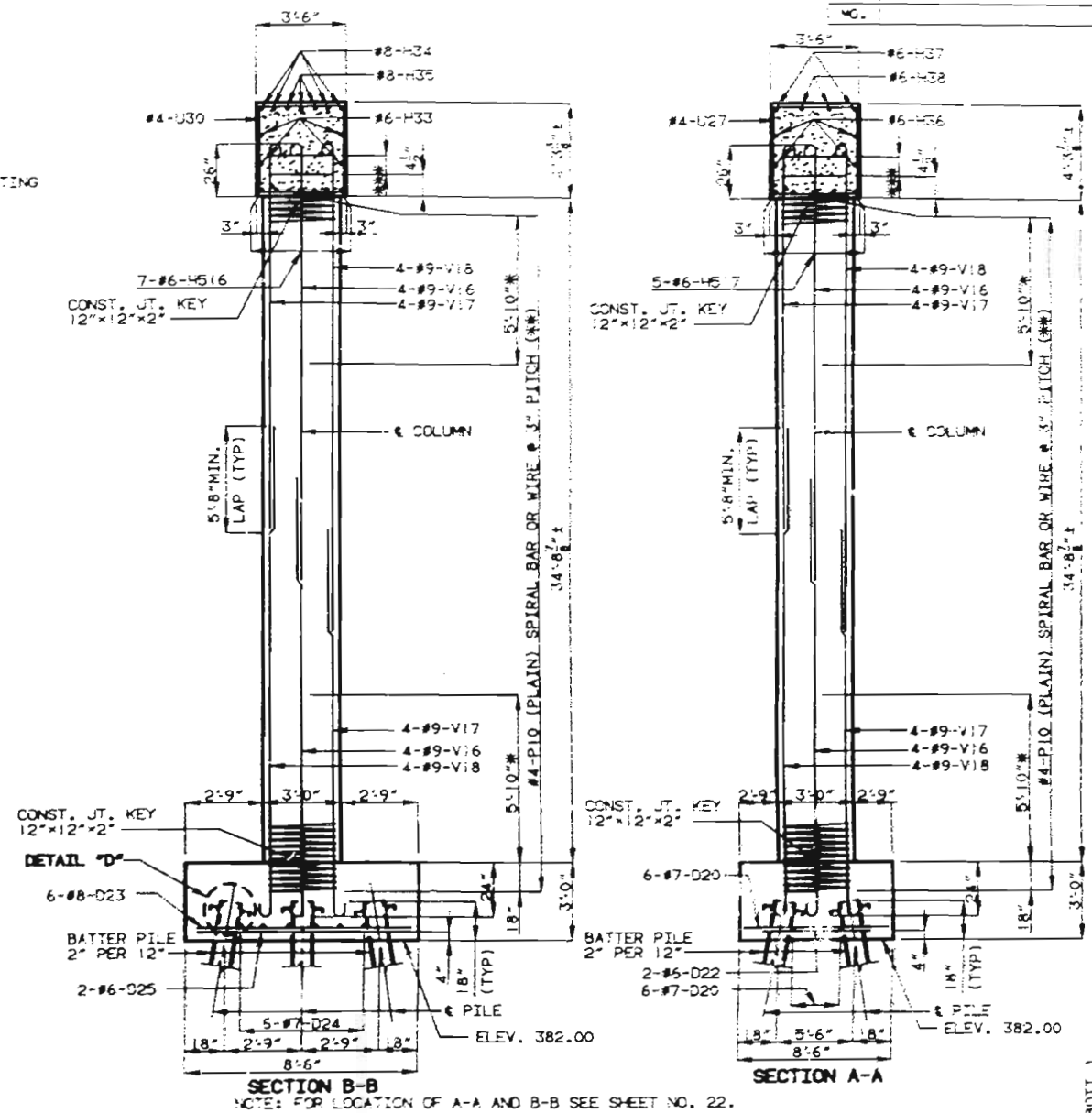
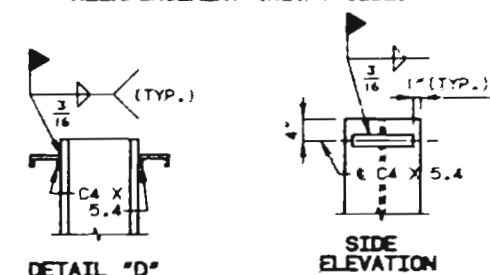
27  
DETAILED APRIL 1992  
CHECKED APRIL 1993



NOTE: LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BENT AND STOPPED 2'-0" FROM THE BOTTOM.  
 \*\*\* 6-#4-D25 3'-0" CTS. 1'-0" P. SPLICE LOCATIONS SHALL BE STAGGERED.



NOTE: FOR DETAIL OF PILE SPICE, SEE SHEET NO. 15.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



NOTE: FOR DETAILS OF BT. 3 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 22 & 24.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.

DETAILS OF INT. BENT NO. 3 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

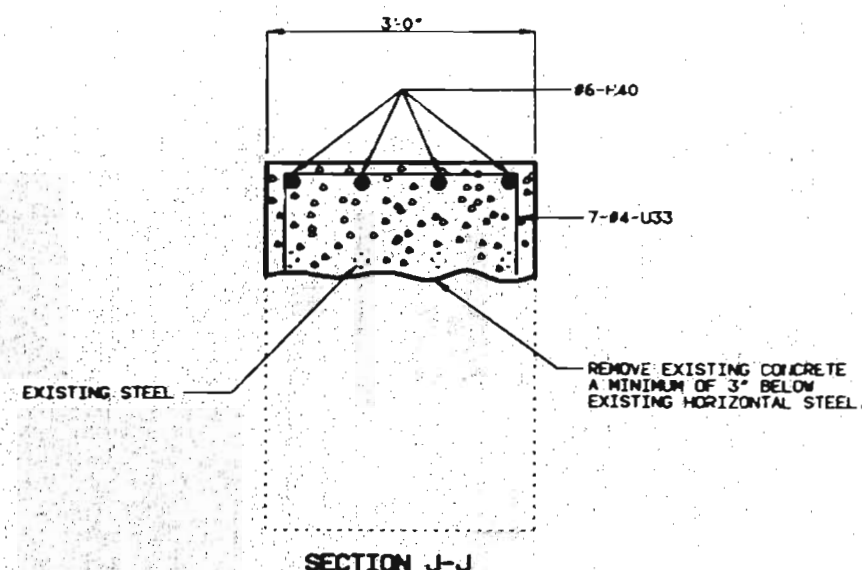
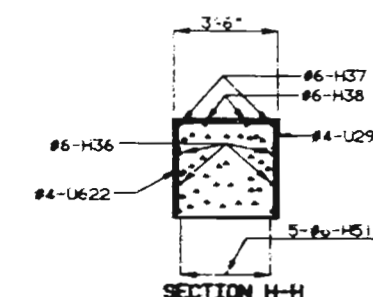
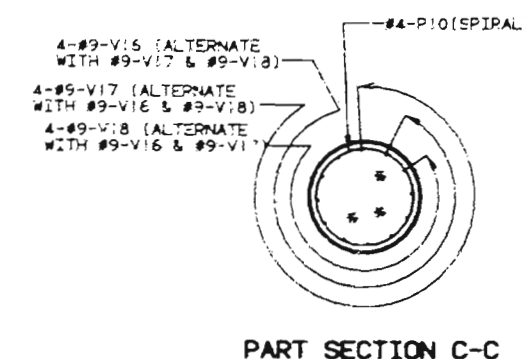
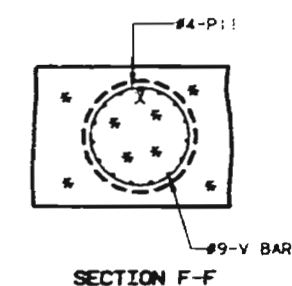
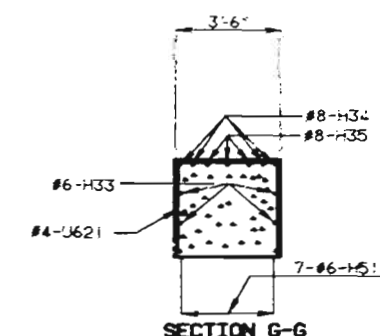
REINFORCEMENT SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

29



SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 3 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	190
STRUCTURAL STEEL PILE (10")	LIN. FT.	910
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	74.7
REINFORCING STEEL (BRIDGES)	LBS.	11230

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, J-J AND H-H SEE SHEET NO. 22.  
FOR DETAILS OF BT. NO. 3 (SOUTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 22 & 23.

DETAILS OF INT. BENT NO. 3 (SOUTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED APRIL 1993

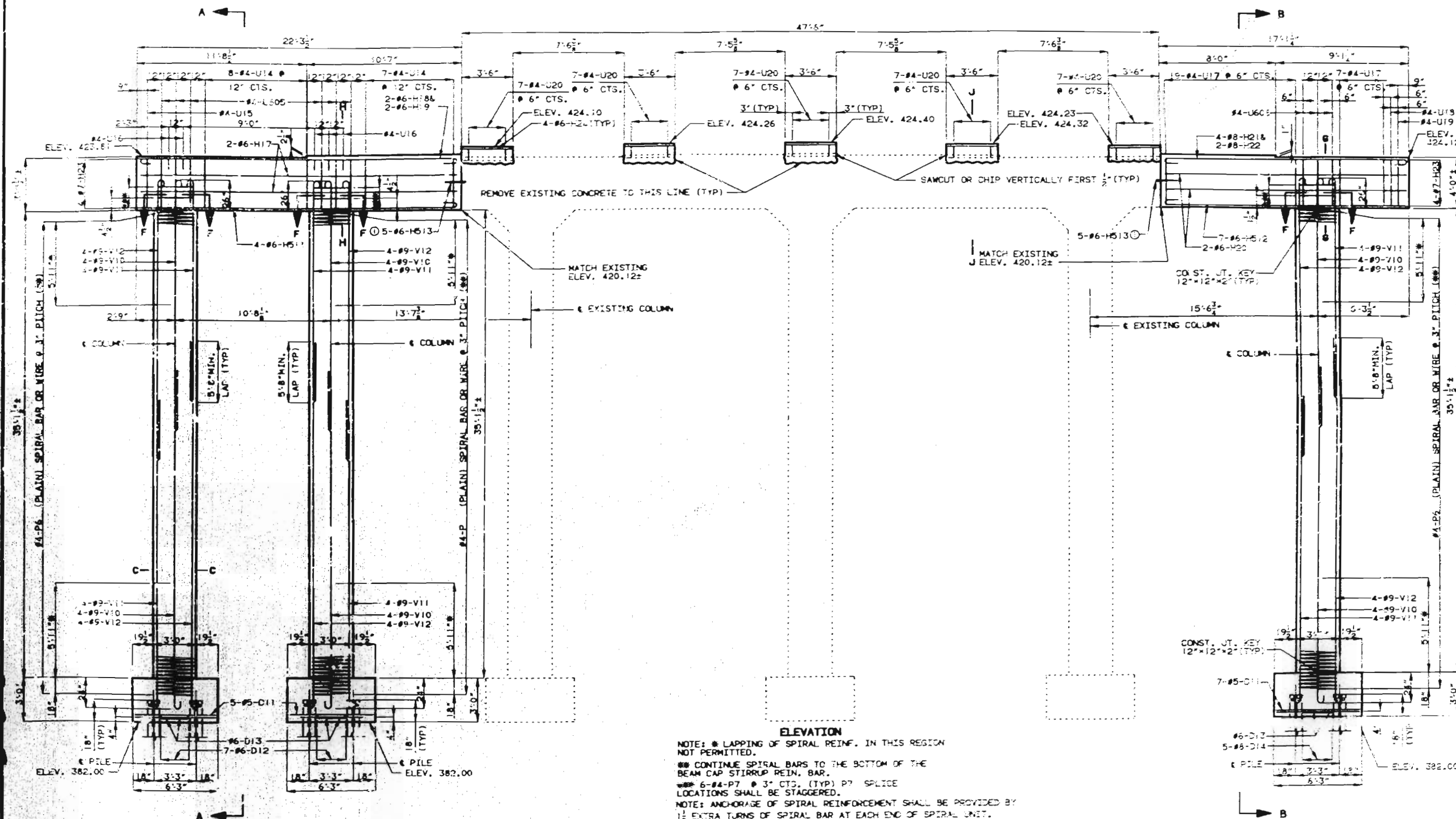
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 24 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

NOTE: TRIM #4-U20 IF NECESSARY TO FIT.

STATE	PROJ. NO.	SHEET NO.
MO.		26



**ELEVATION**  
 NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P7 @ 3" CTS. (TYP) P7 SPLICE LOCATIONS SHALL BE STAGGERED.  
 NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.  
 NOTE: FOR DETAILS OF BT. NO. 4 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 26 & 27.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 26.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 FOR DETAILS OF RESIN ANCHOR PATTERN, SEE SHEET NO. 26.

**DETAILS OF INT. BT. NO. 4 (NORTHBOUND LANE)**

NOTE: FOR DETAILS OF SECTION C-C, F-F, G-G, J-J AND H-H SEE SHEET NO. 27.  
 FOR DETAILS OF PILE SPLICE SEE SHEET NO. 30.

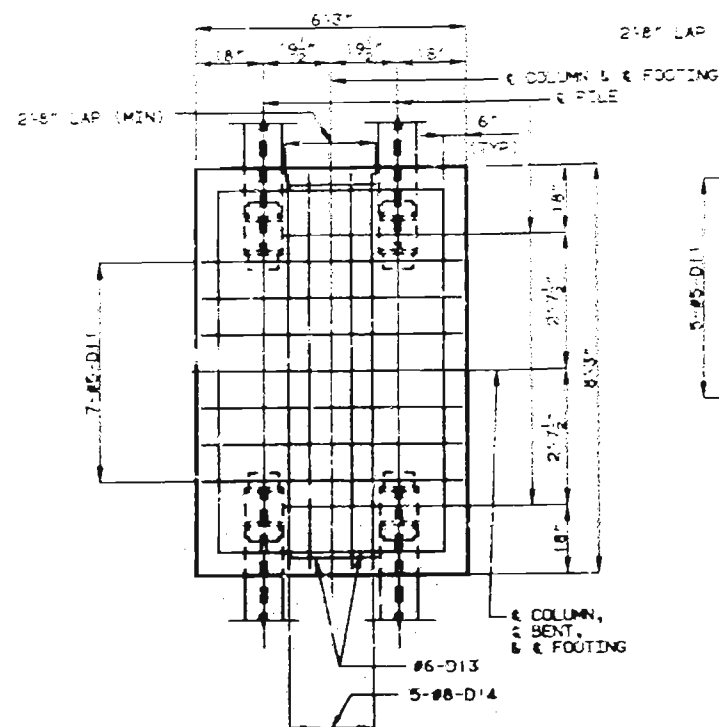
DETAILED APRIL 1992  
 CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

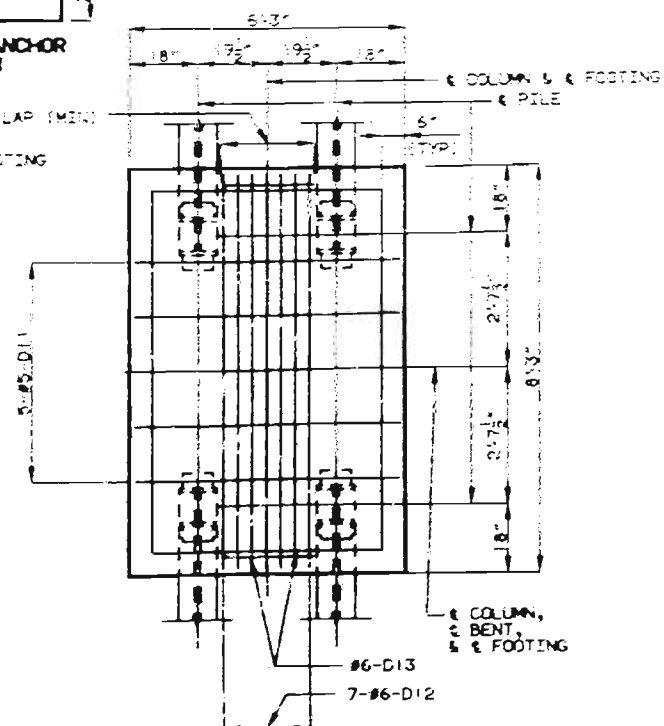
SHEET NO. 25 OF 238

ST. LOUIS-JEFFERSON COUNTIES **A-609R**

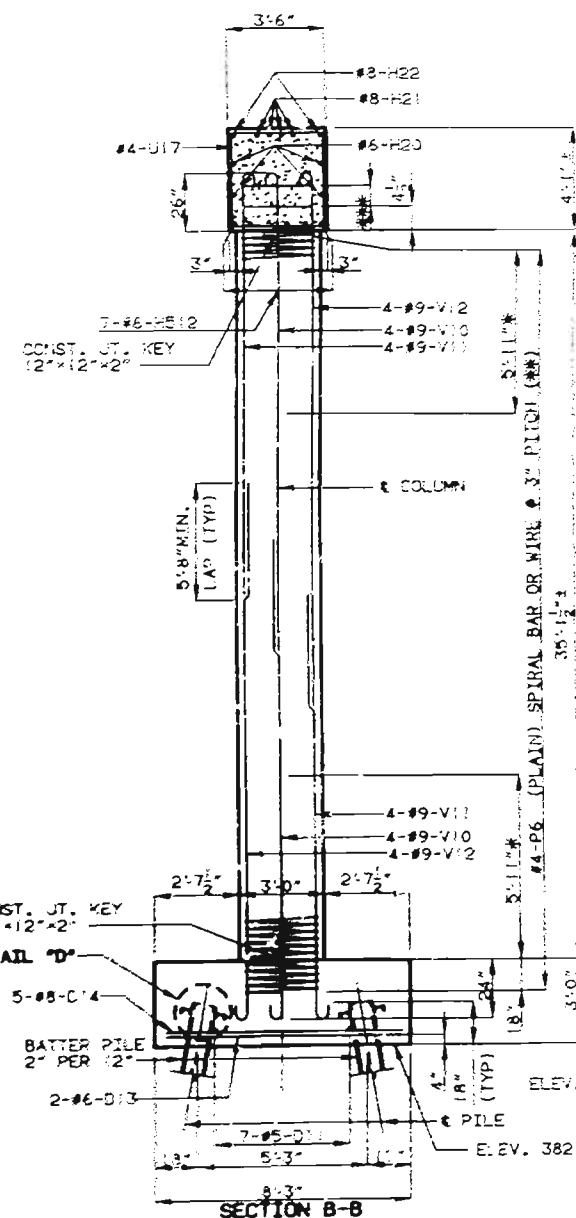
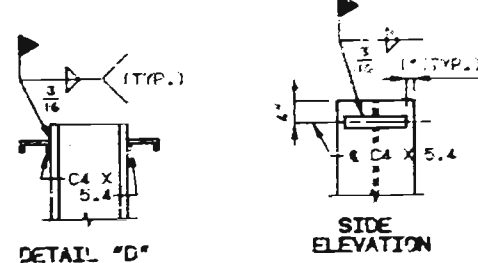
RESIN ANCHOR  
PATTERN



PLAN OF FOOTING SHOWING  
REINFORCEMENT (RIGHT SIDE)

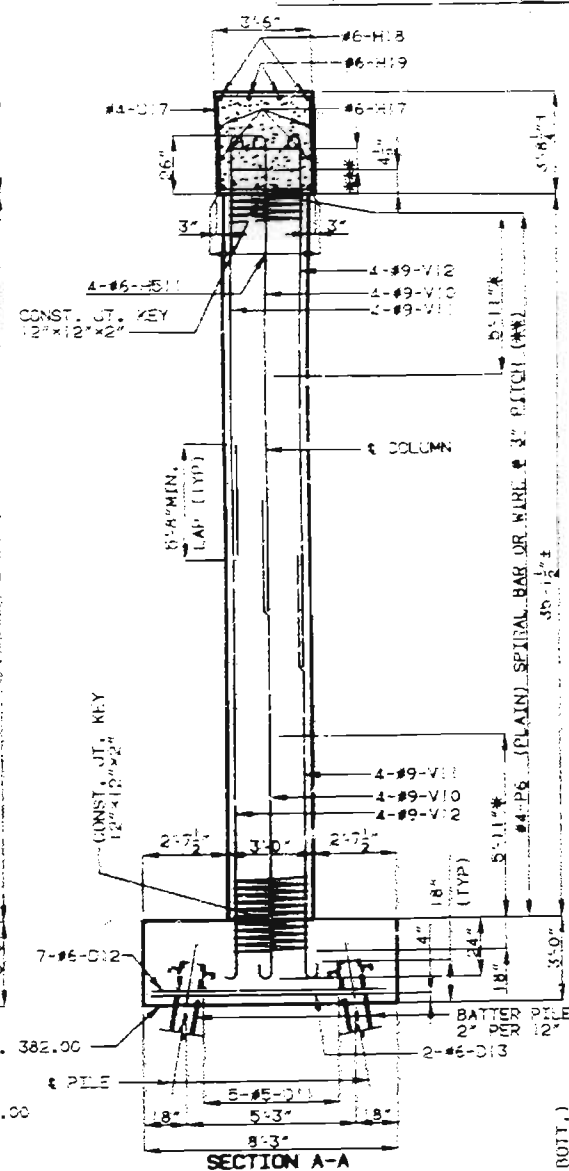


PLAN OF FOOTING SHOWING  
REINFORCEMENT (LEFT SIDE)

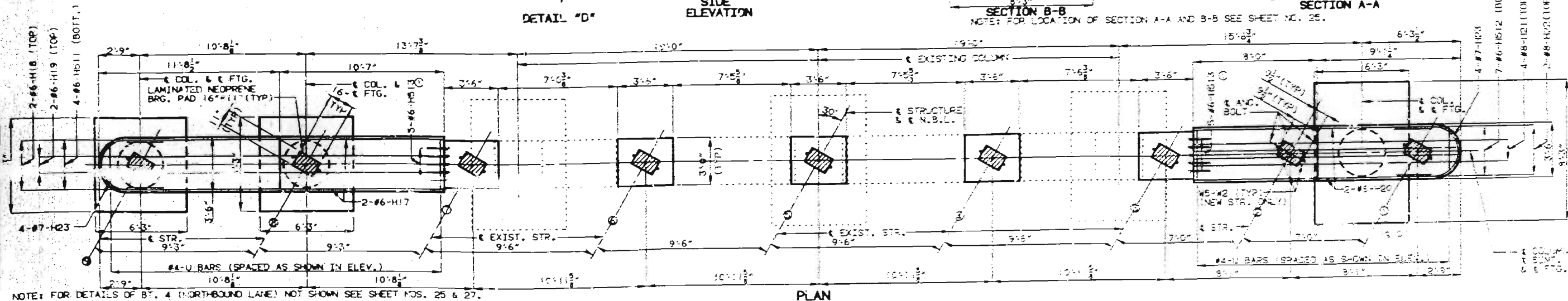


**SECTION B-B**

NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 25.



SECTION A-A



NOTE: FOR DETAILS OF BT. 4 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 25 & 27.  
FOR DETAILS OF ANCHOR BOLT WELL SEE SHEET NO. 132.

DETAILS OF INT. BENT NO. 4 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET 42 OF 238

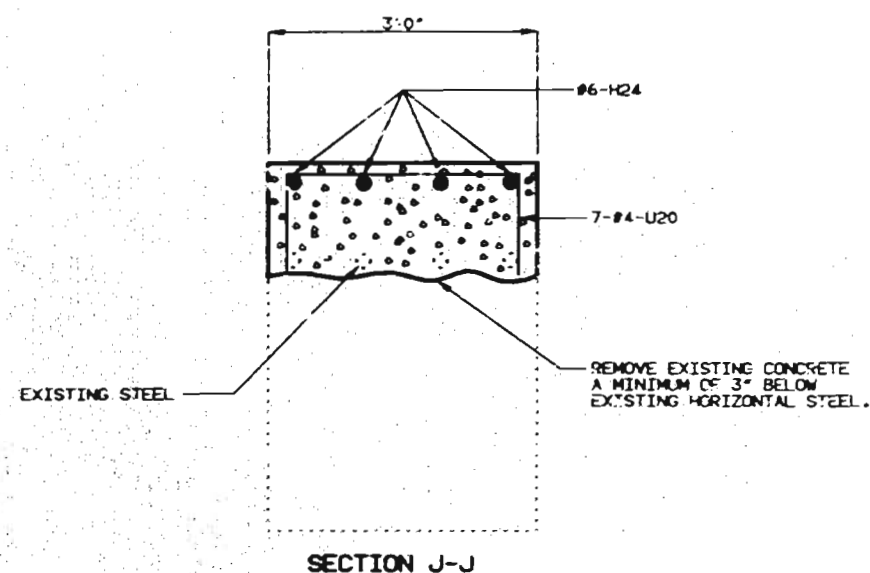
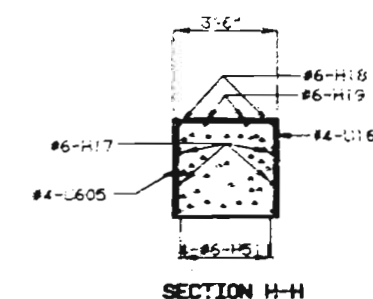
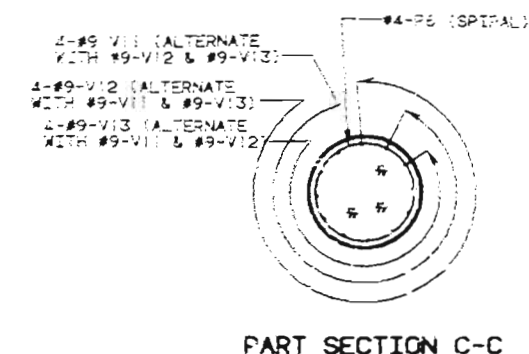
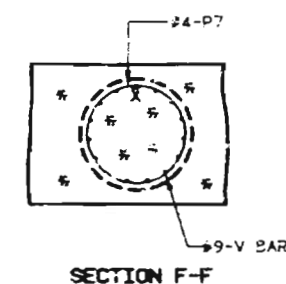
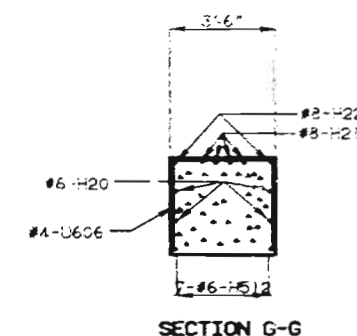
ST. LOUIS-JEFFERSON COUNTIES A-509R

DETAILED APRIL 1992  
CHECKED APRIL 1993

100

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 4 (NORTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	185
STRUCTURAL STEEL PILE (10")	LIN. FT.	840
CLASS 5 CONCRETE (SUBSTRUCTURE)	CU. YDS.	65.1
REINFORCING STEEL (BRIDGES)	LBS.	10930

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, J-J AND H-H SEE SHEET NO. 25.  
FOR DETAILS OF BT. NO. 4 (NORTHBOUND LANE) NOT SHOWN, SEE SHEETS NOS. 25 & 26.

DETAILS OF INT. BENT NO. 4 (NORTHBOUND LANE)

33  
DETAILED APRIL 1992  
CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

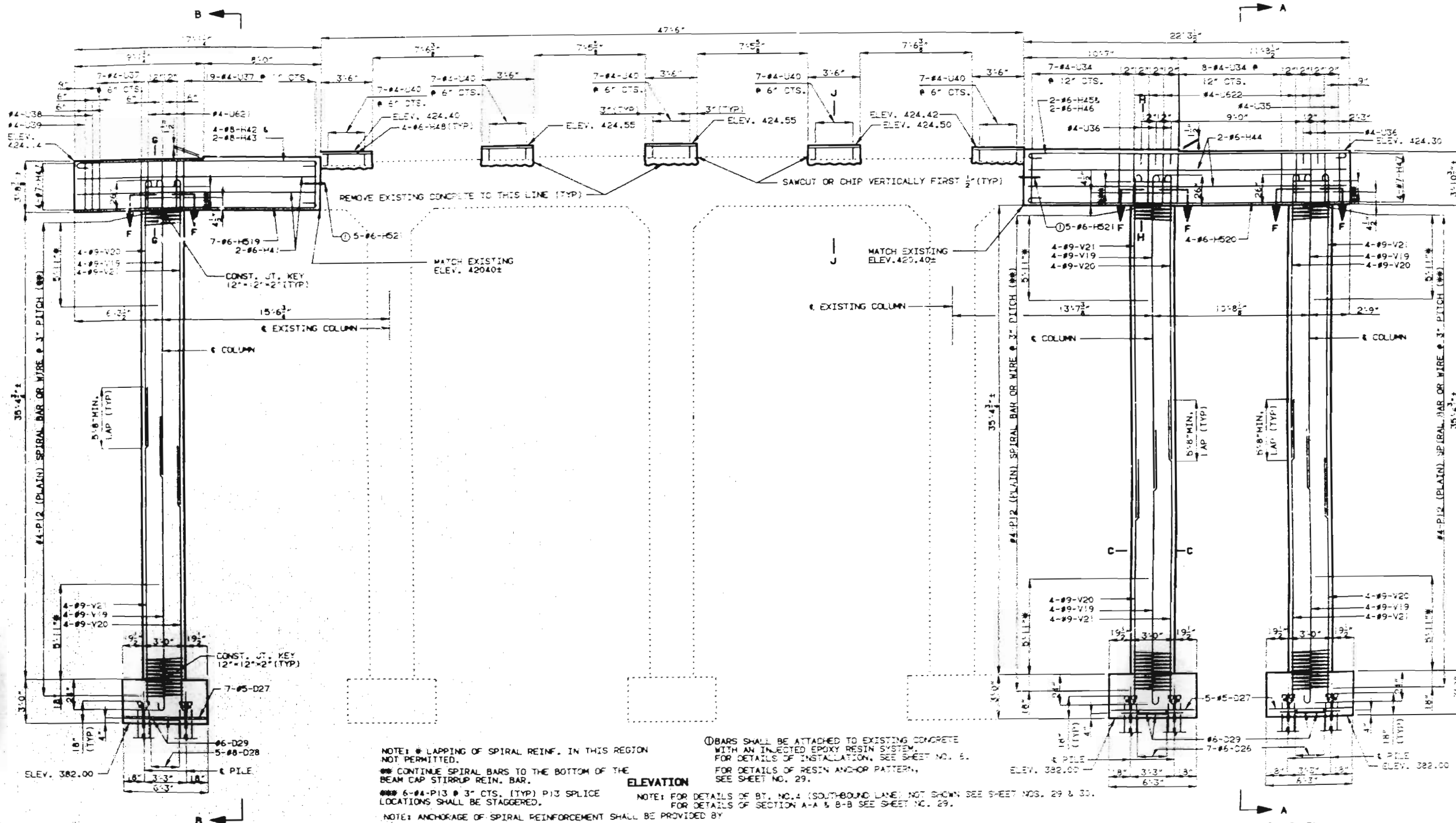
SHEET NO. 27 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



NOTES: TRIM AND/OR PATCH IF NECESSARY TO FIT.

STATE	PROJ. NO.	SHEET NO.
MO.		29



NOTE: \* LAPPING OF SPIRAL REIN. IN THIS REGION NOT PERMITTED.

\*\*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.

\*\*\* 6-#4-P13 @ 3" CTS. (TYP) P13 SPLICE LOCATIONS SHALL BE STAGGERED.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 5. FOR DETAILS OF RESIN ANCHOR PATTERN, SEE SHEET NO. 29.

ELEVATION

NOTE: FOR DETAILS OF BT. NO. 4 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 29 & 30. FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 29.

NOTE: FOR DETAILS OF SECTION C-C, F-F, G-G, H-H AND I-I SEE SHEET NO. 30. FOR DETAILS OF PILE SPLICE SEE SHEET NO. 30.

# DETAILS OF INT. BT. NO. 4 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

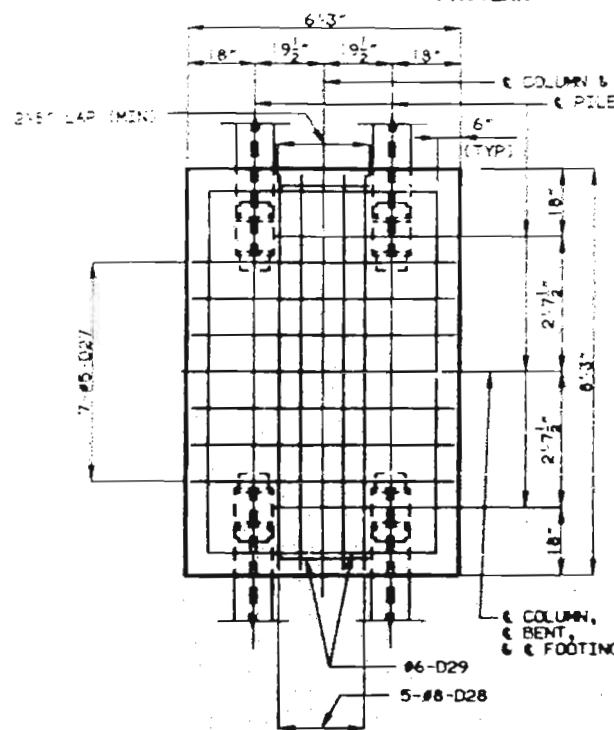
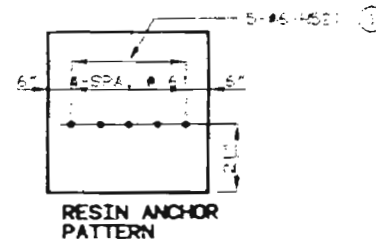
SHEET NO. 29 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

DETAILED APRIL 1992  
CHECKED APRIL 1993

34

NOTE: \* LAPPING OF SPIRAL REIN. IN THIS REGION NOT ALLOWED.  
 \*\* CONTINUOUS SPIRAL REIN. TO THE BOTTOM OF THE BEAM CAP. SPIRAL REIN. BAS.  
 \*\*\* 6-#4-#10 @ 12" (TYP) WITH SPLICE LOCATIONS SHALL BE STAGGERED.

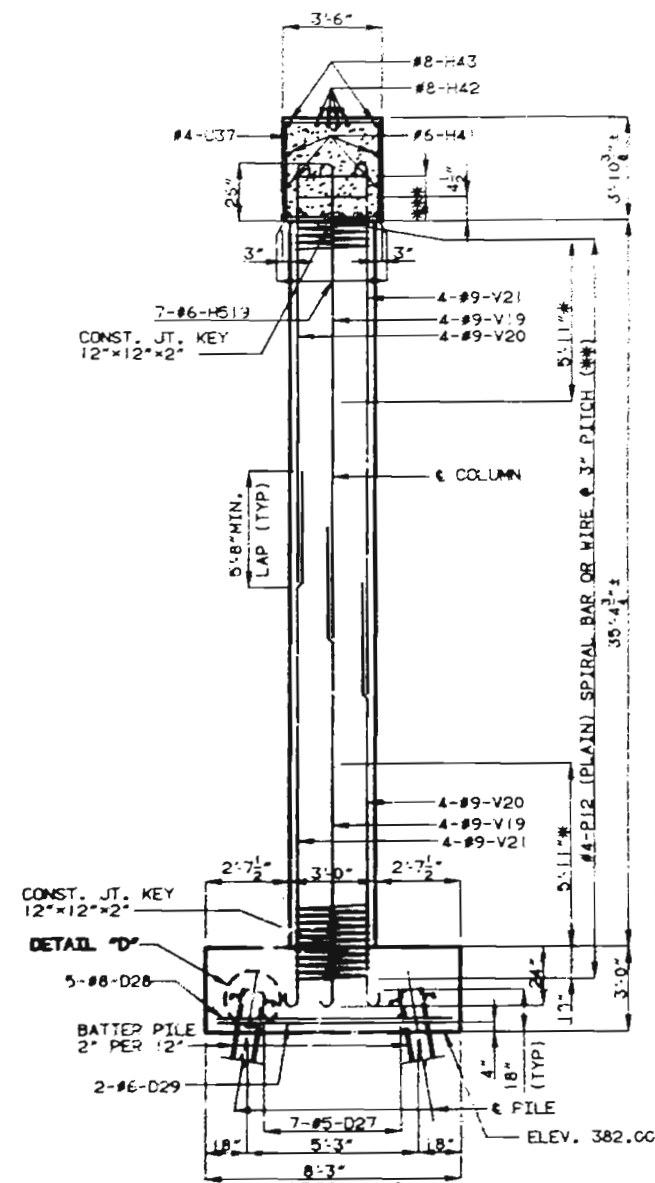
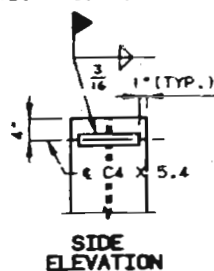
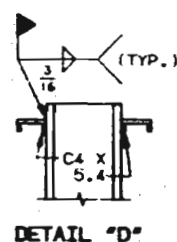
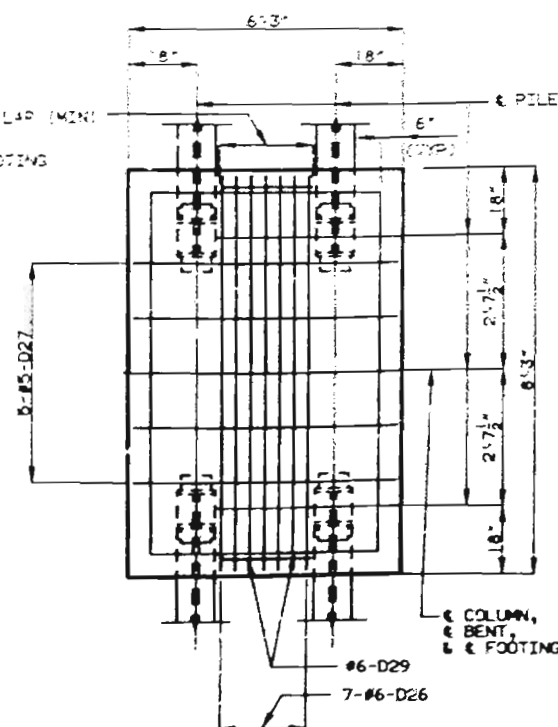


PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)

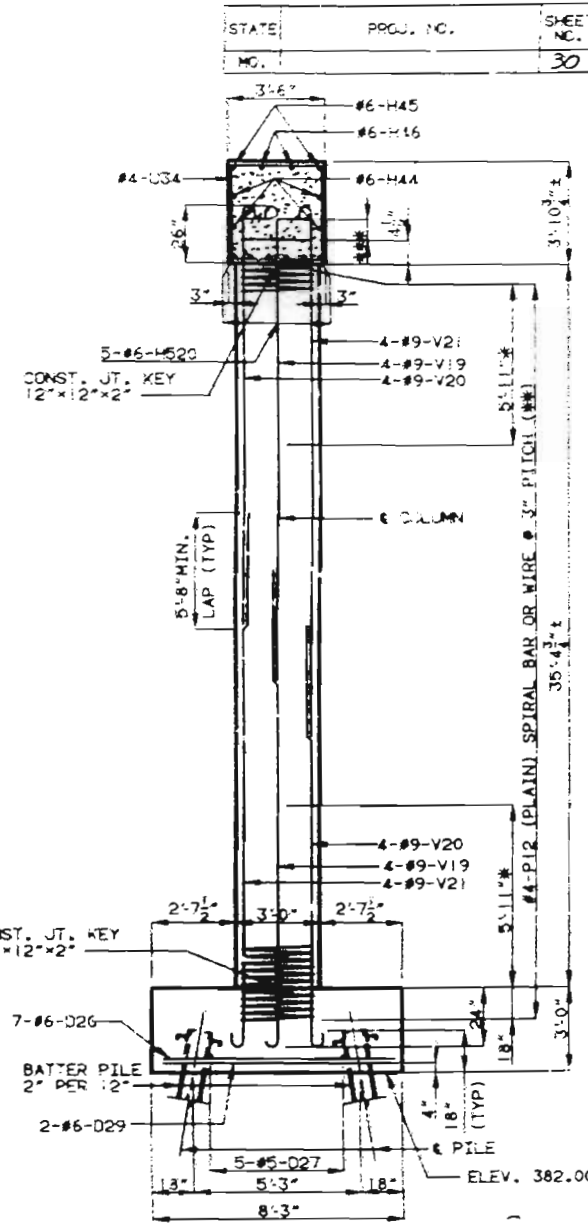
① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR DETAIL OF PILE SPLICE, SEE SHEET NO. 30.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.

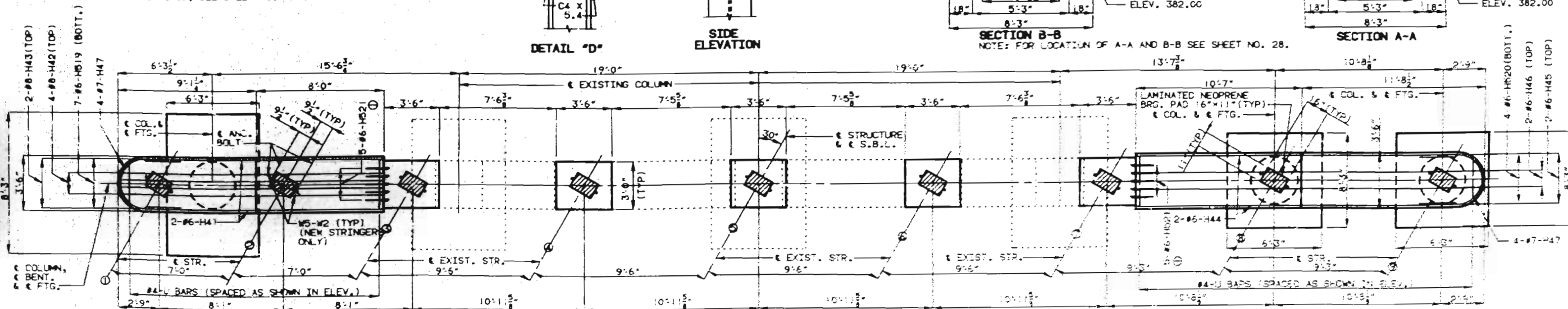
PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)



SECTION B-B  
 NOTE: FOR LOCATION OF A-A AND B-B SEE SHEET NO. 28.



SECTION A-A



PLAN

NOTE: FOR DETAILS OF BT. 4 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 28 & 30.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.

DETAILED APRIL 1992  
 CHECKED APRIL 1993

DETAILS OF INT. BENT NO. 4 (SOUTHBOUND LANE)

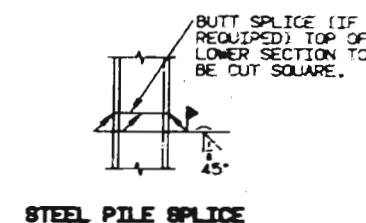
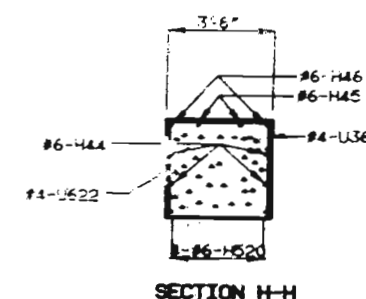
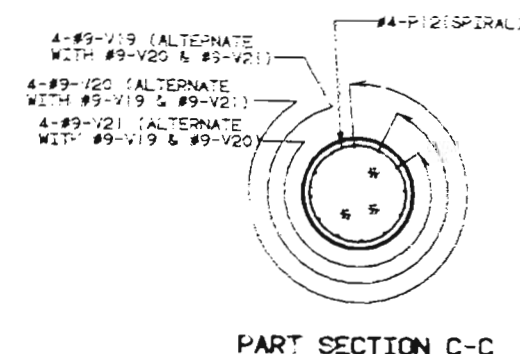
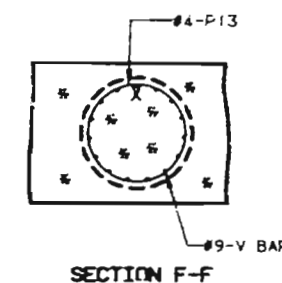
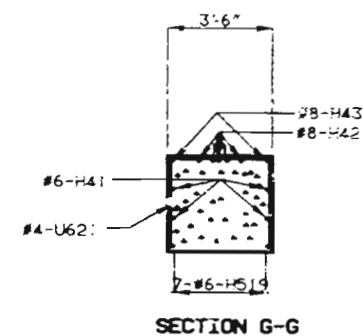
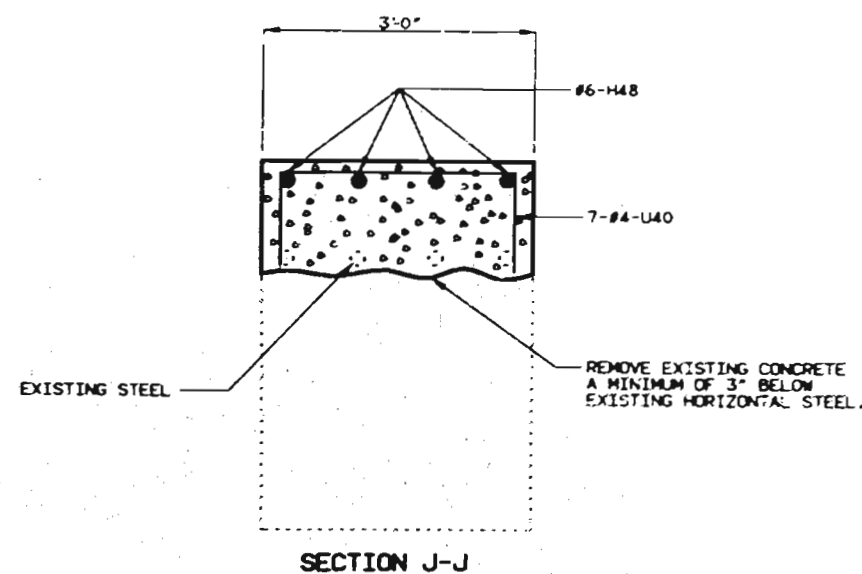
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 29 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 4 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	175
STRUCTURAL STEEL PILE (10")	LIN. FT.	840
CLASS 5 CONCRETE (SUBSTRUCTURE)	CU. YDS.	67.2
REINFORCING STEEL (BRIDGES)	LBS.	10980

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, J-J AND H-H SEE SHEET NO. 23.  
FOR DETAILS OF BT. NO. 2 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 28 & 29.

DETAILS OF INT. BENT NO. 4 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

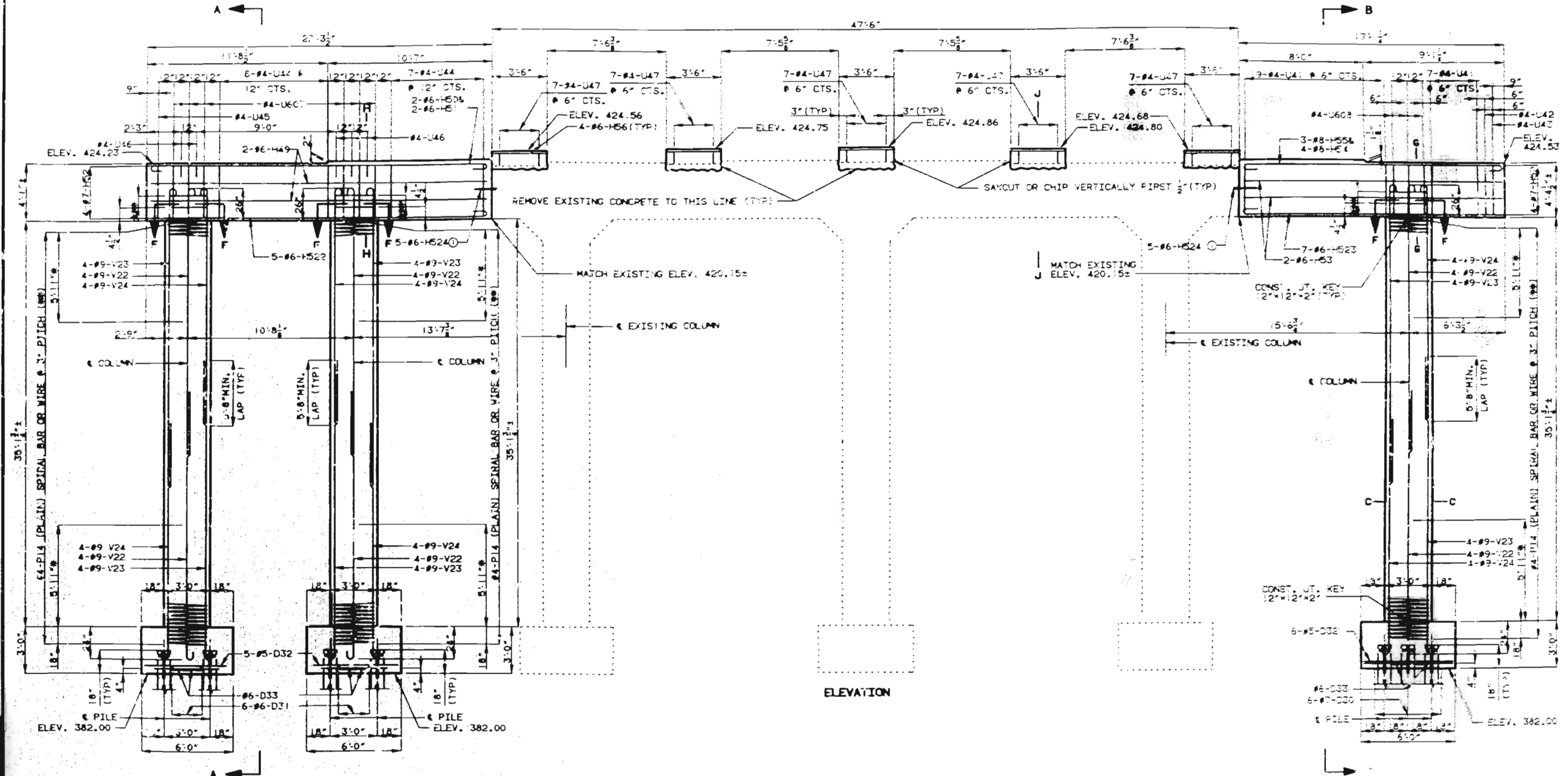
SHEET NO. 30 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

36  
DETAILED APRIL 1992  
CHECKED APRIL 1993

NOTE: TRIM #4-U47 IF NECESSARY TO FIT.

STATE	PGO. NO.	SHEET NO.
MO.		30



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 5-#4-P15 @ 3' CTS. (TYP) P15 SPLICE LOCATIONS SHALL BE STAGGERED.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 NOTE: FOR DETAILS OF BT. NO. 5 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 32 & 33.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 32.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

NOTE: FOR DETAILS OF SECTION C-C, F-F, G-G, J-J AND H-H SEE SHEET NO. 33.  
 FOR DETAILS OF PILE SPLICES SEE SHEET NO. 29.

# DETAILS OF INT. BT. NO. 5 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 31 OF 238

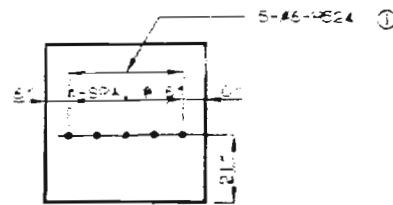
ST. LOUIS-JEFFERSON COUNTIES A-609R

DETAILED APRIL 1992  
 CHECKED APRIL 1993

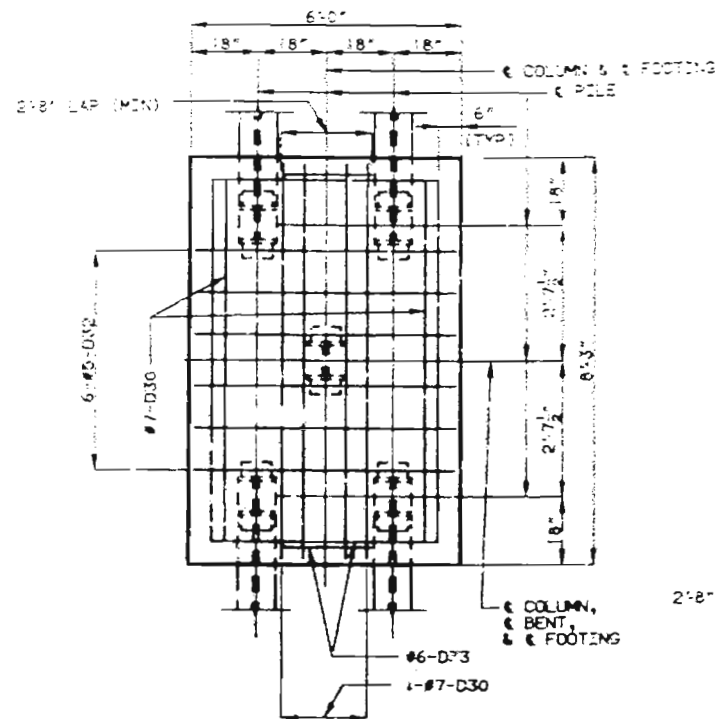
37 2222



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P15 \* 3" CTS. (TYP) P15 SP. ICE LOCATIONS SHALL BE STAGGERED.

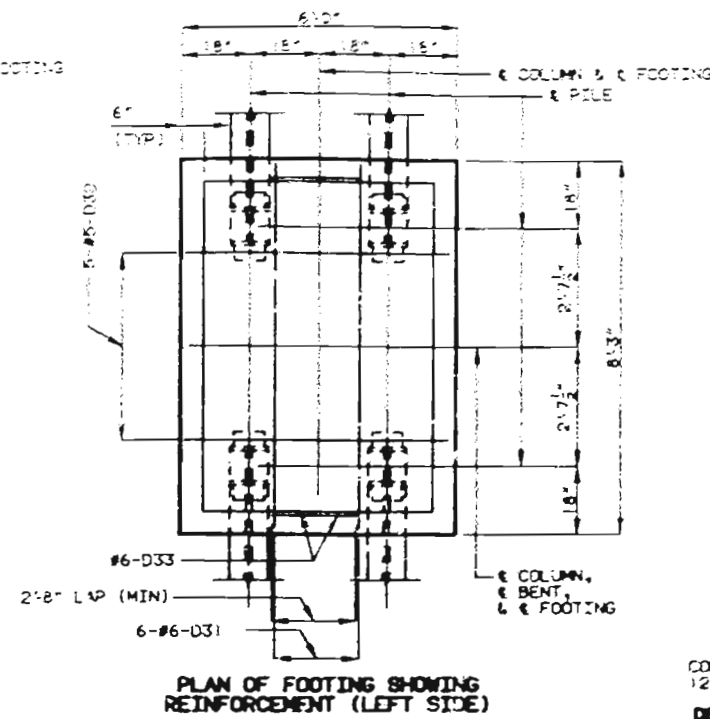


RESIN ANCHOR PATTERN

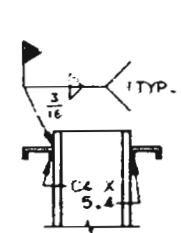


PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)

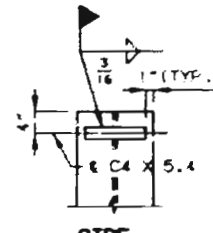
\*BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 NOTE: FOR DETAILS OF PILE SPlice SEE SHEET NO. 39.  
 FOR DETAILS OF BT. NO. 2 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 31 & 33.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



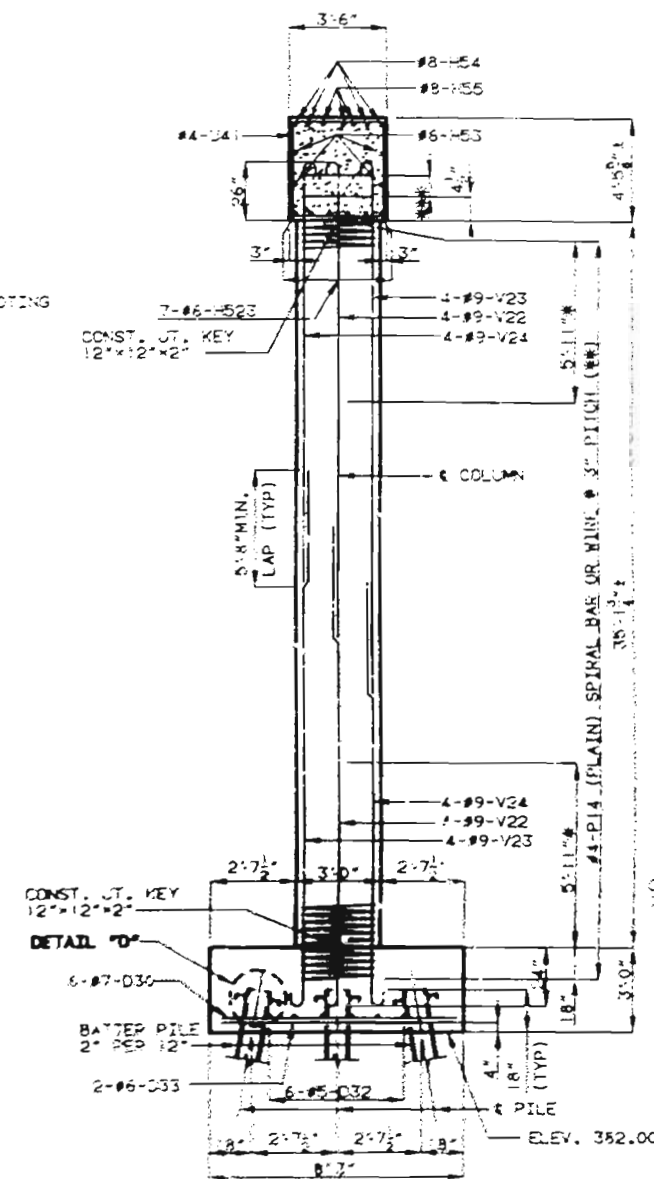
PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)



DETAIL "D"

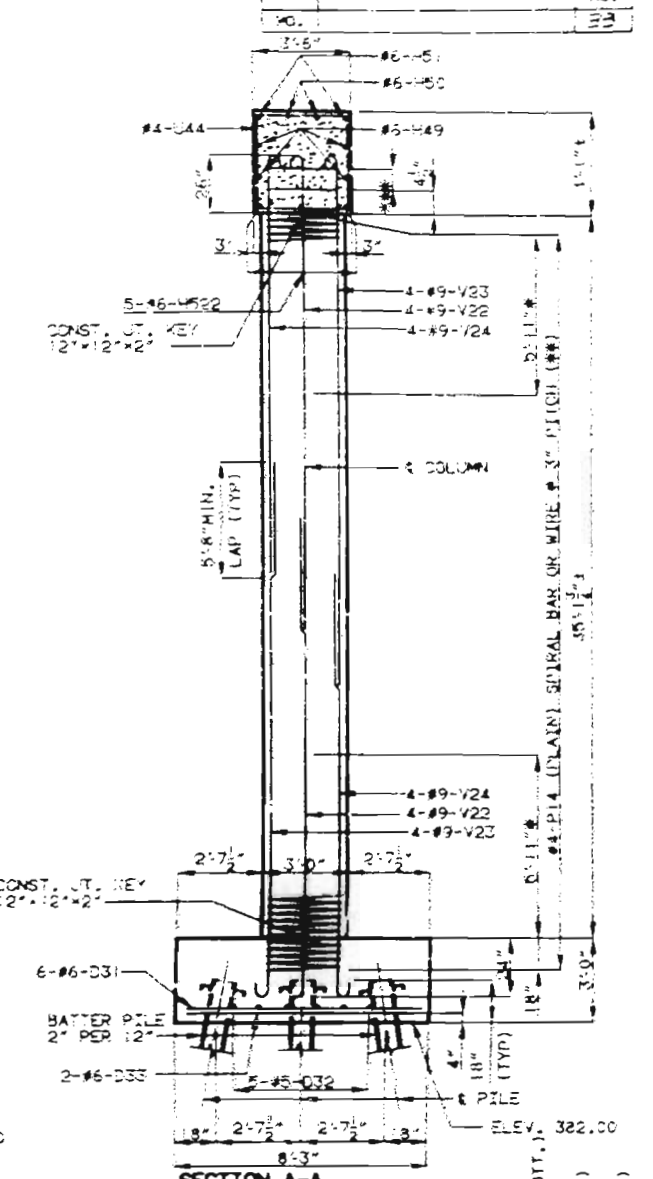


SIDE ELEVATION

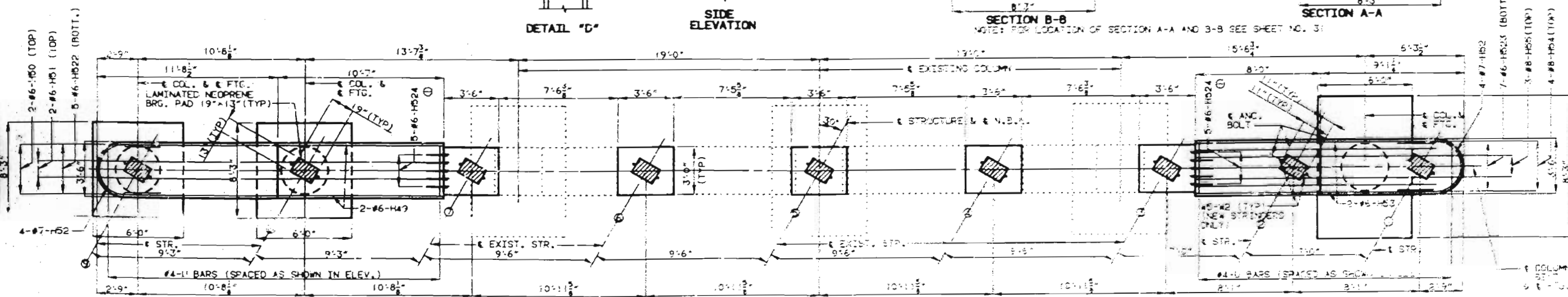


SECTION B-B

NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 31



SECTION A-A



PLAN

DETAILS OF INT. BENT NO. 5 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 32 OF 208

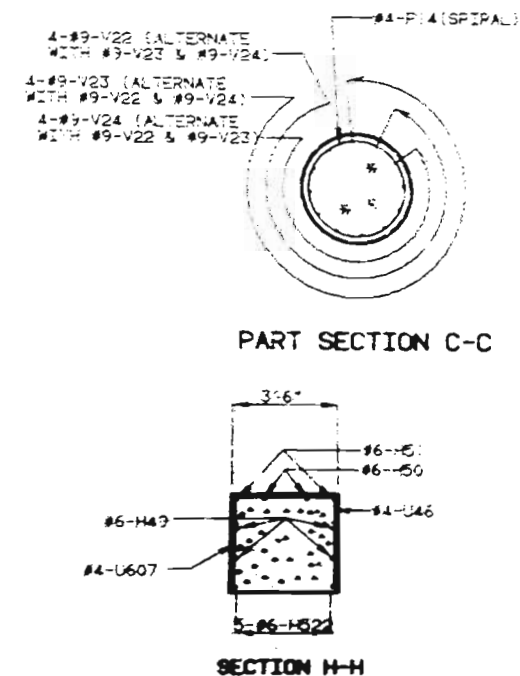
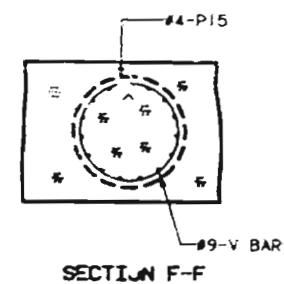
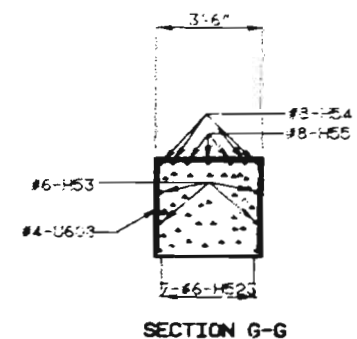
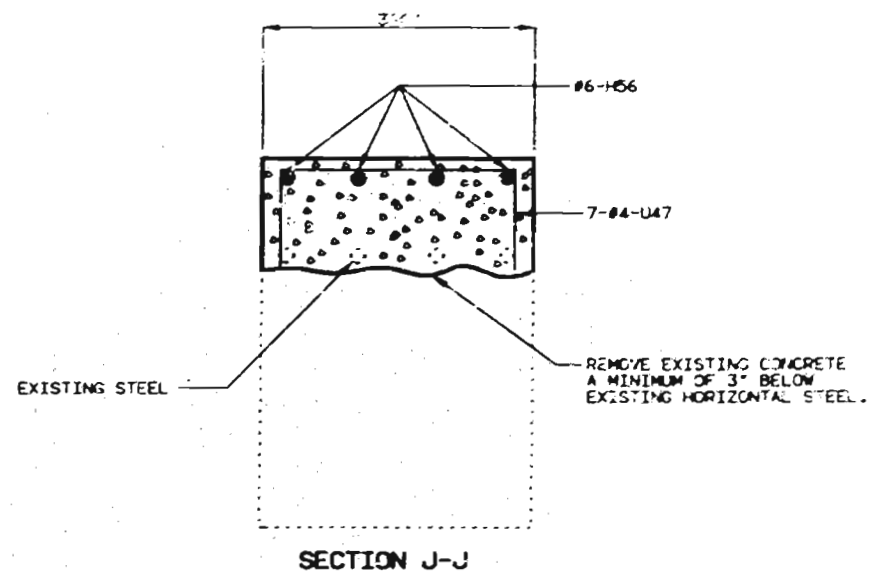
ST. LOUIS-JEFFERSON COUNTIES A-609R

DETAILED APRIL 1992  
 CHECKED APRIL 1992

38 222

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 5 (NORTHBOUND LANE)			
ITEM		QUANTITY	
CLASS 1 EXCAVATION	CU. YDS.	180	
STRUCTURAL STEEL PILE (10")	LIN. FT.	970	
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	68.2	
REINFORCING STEEL (BRIDGES)	LBS.	11010	

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



SECTION H-H

NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, J-J AND H-H SEE SHEET NO. 31.  
FOR DETAILS OF ST. NO. 5 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 31 & 32.

DETAILS OF INT. BENT NO. 5 (NORTHBOUND LANE)

39 230  
DETAILED: APRIL 1992  
CHECKED: APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

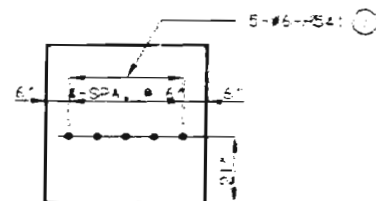
SHEET NO. 34 OF 335

ST. LOUIS-JEFFERSON COUNTIES A-609R

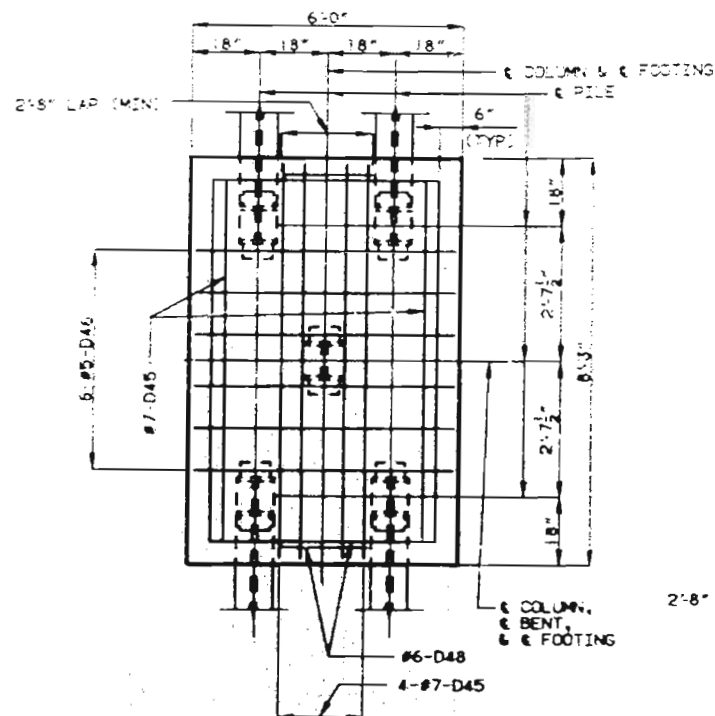


NOTE: LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STEEPED REIN. BAR.  
 \*\*\* 6-#4-P22 # 3" O.S. (TYP) P22 SPLICE LOCATIONS SHALL BE STAGGERED.

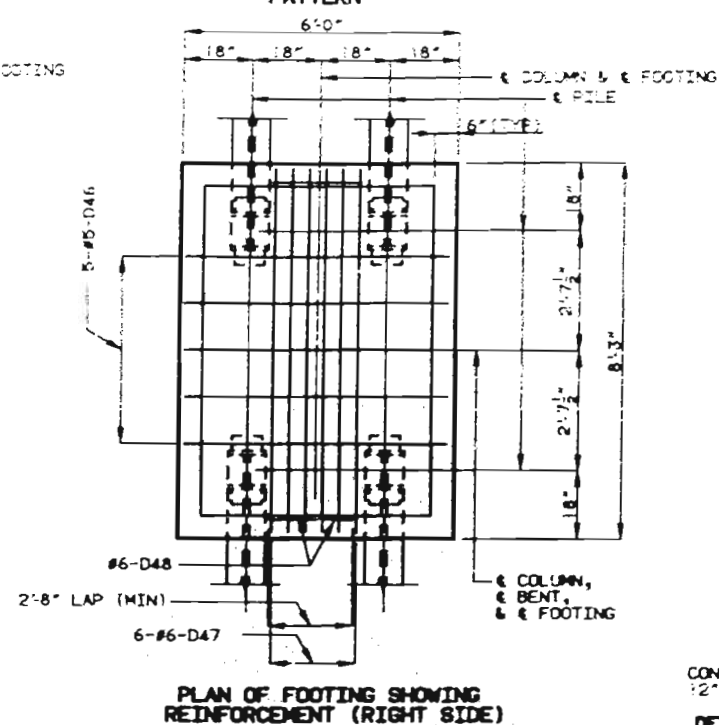
OBARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.



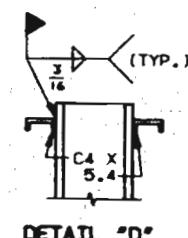
RESIN ANCHOR PATTERN



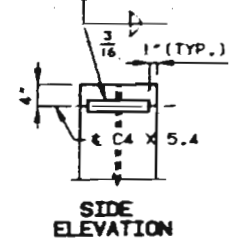
PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)



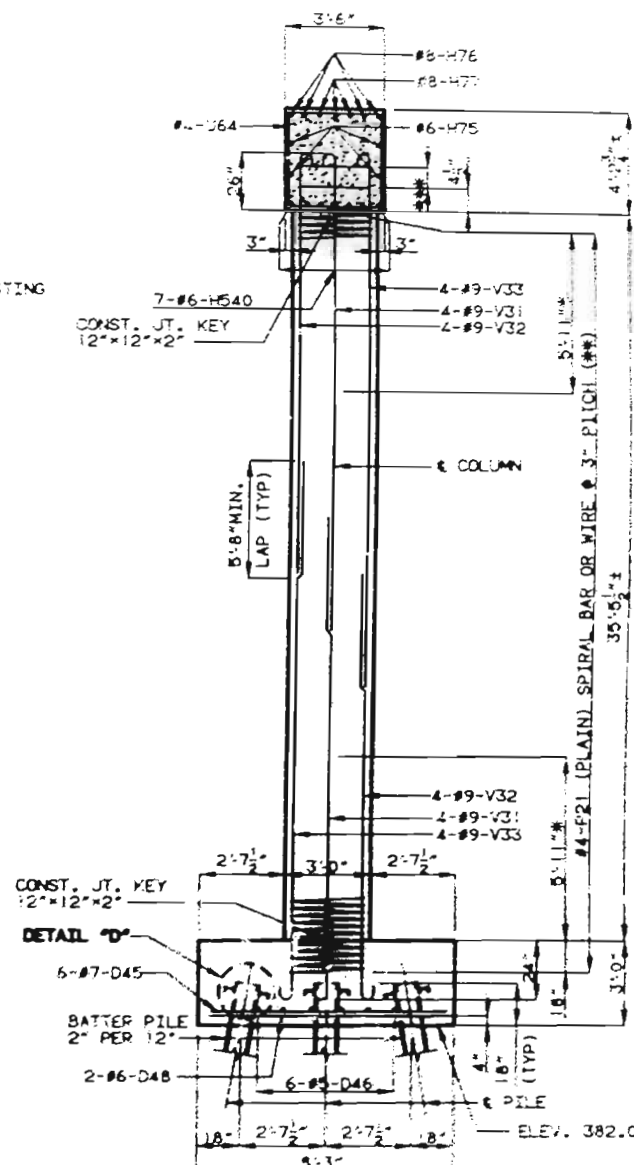
PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)



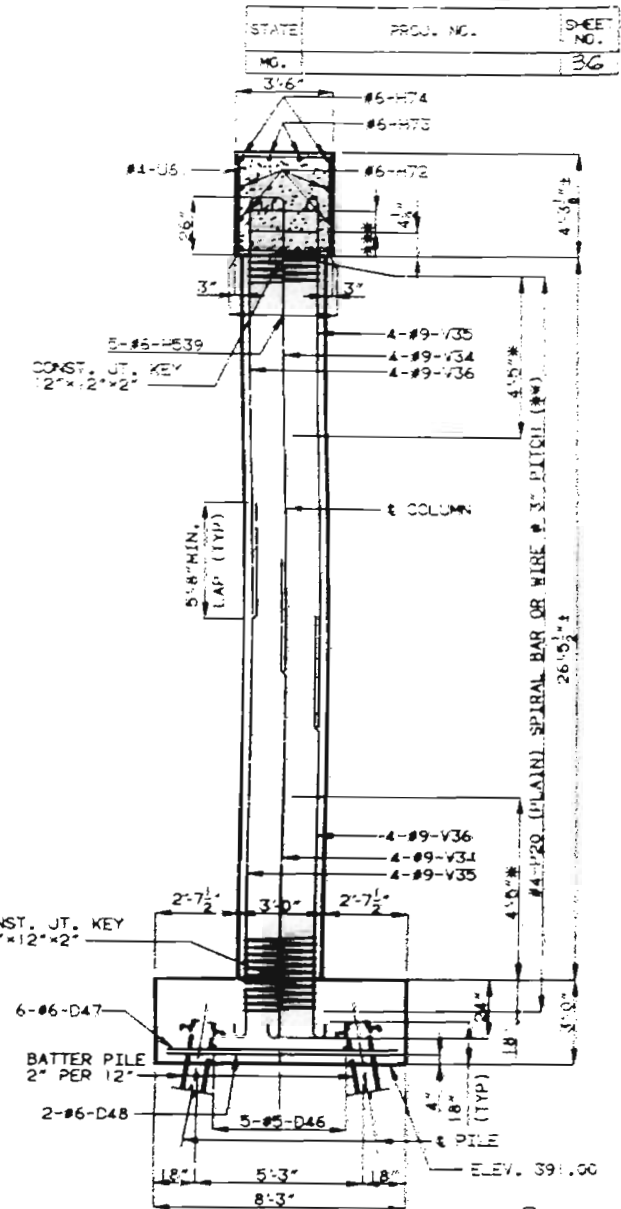
DETAIL "D"



SIDE ELEVATION

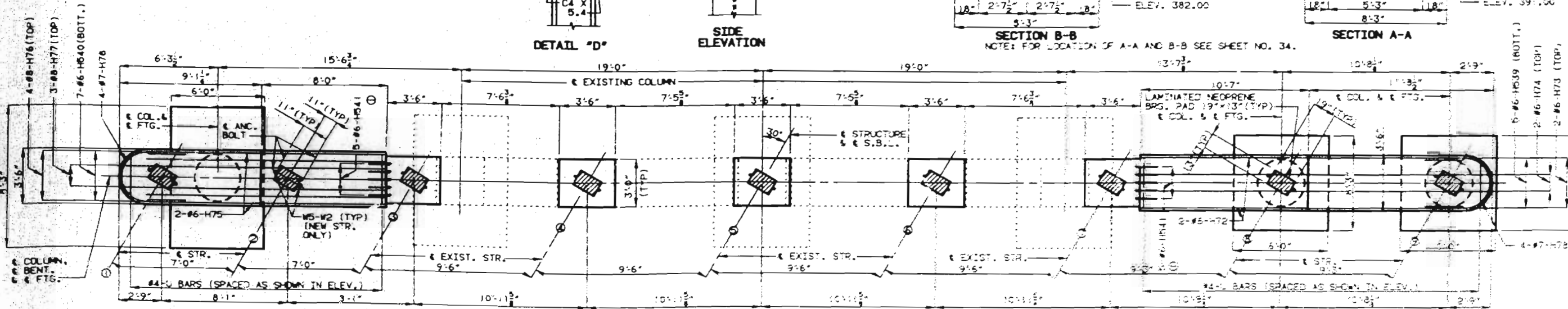


SECTION B-B  
 NOTE: FOR LOCATION OF A-A AND B-B SEE SHEET NO. 34.



SECTION A-A

NOTE: FOR DETAIL OF PILE SPLICE, SEE SHEET NO. 39.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



PLAN

NOTE: FOR DETAILS OF BT. 5 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 34 & 36.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.  
 DETAILED APRIL 1992  
 CHECKED MAY 1993

DETAILS OF INT. BENT NO. 5 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

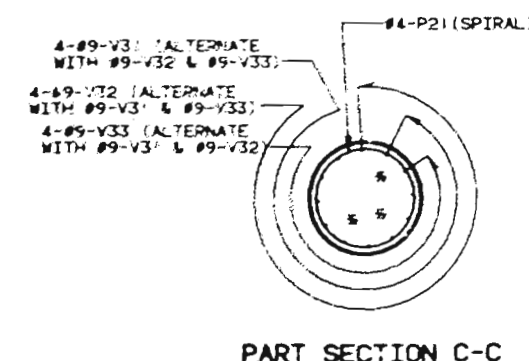
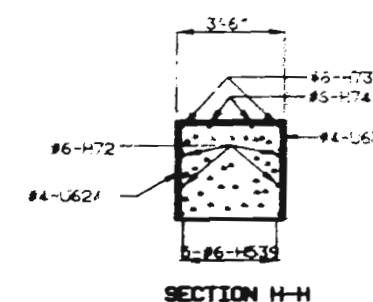
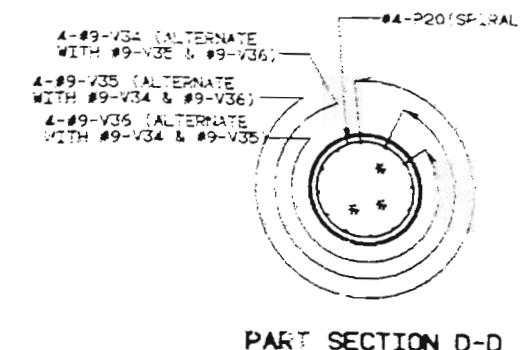
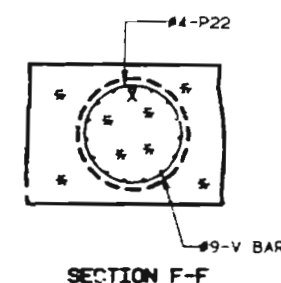
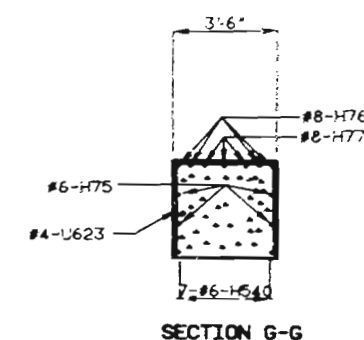
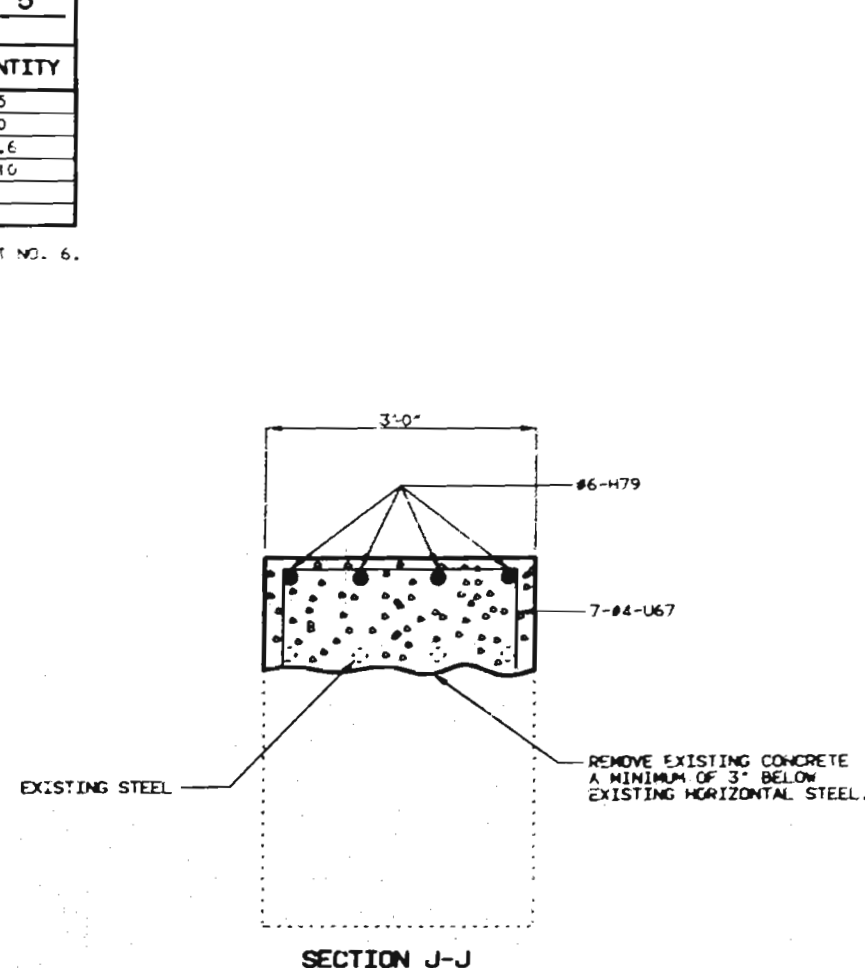
SHEET NO. 35 OF 233 ST. LOUIS-JEFFERSON

COUNTIES A-609R



SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 5 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	115
STRUCTURAL STEEL PILE (10")	LIN. FT.	990
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	63.6
REINFORCING STEEL (BRIDGES)	LBS.	9910

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, D-D, F-F, G-G, J-J AND H-H SEE SHEET NO. 34.  
FOR DETAILS OF BT. NO. 5 (SOUTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 34 & 35.

# DETAILS OF INT. BENT NO. 5 (SOUTHBOUND LANE)

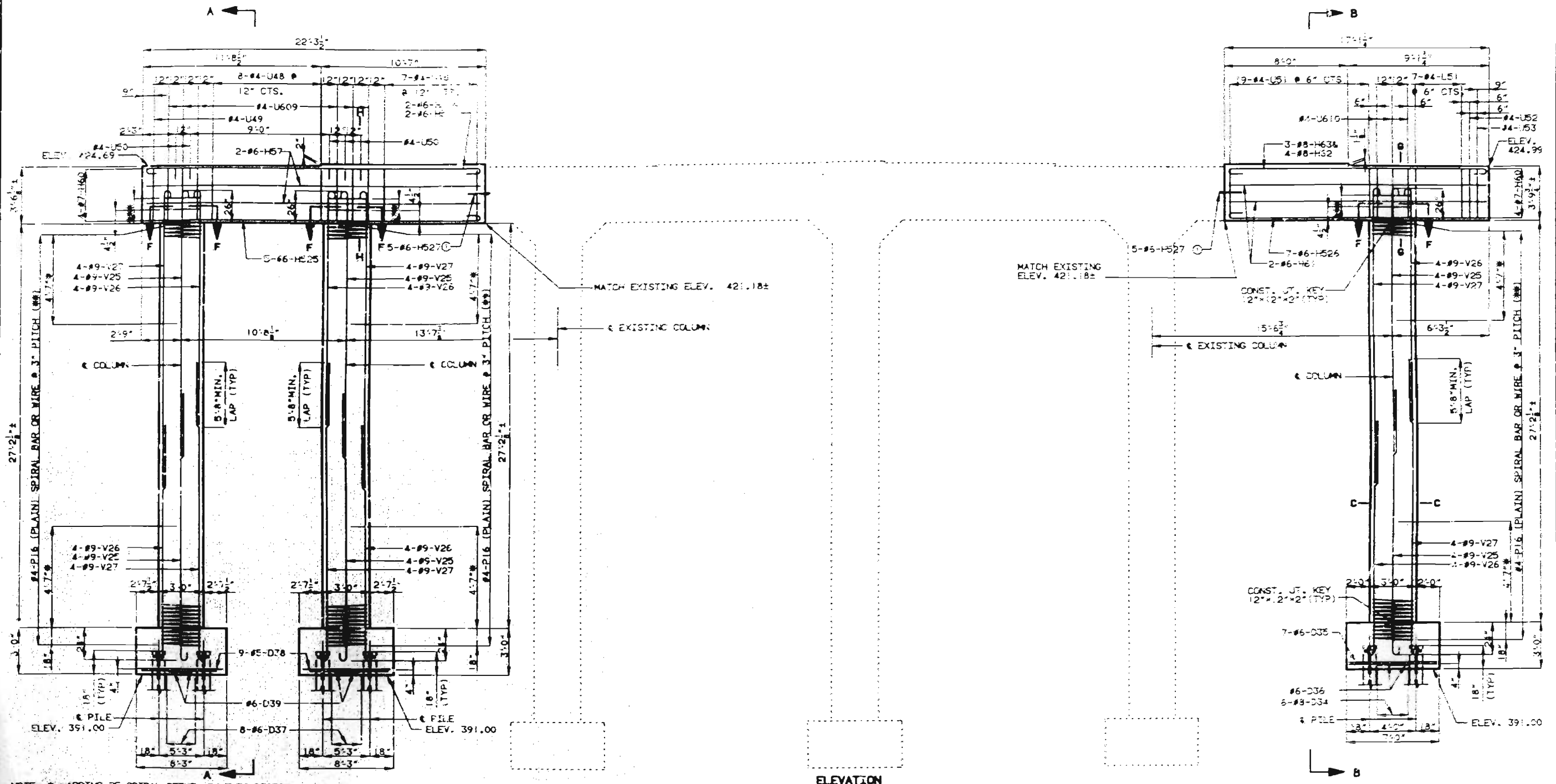
DETAILED APRIL 1992  
CHECKED MAY 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 36 OF 236

ST. LOUIS-JEFFERSON COUNTIES A-609R

42 233



NOTES: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P17 @ 3\" CTS. (TYP) P17 SPLICE LOCATIONS SHALL BE STAGGERED.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTES: FOR DETAILS OF BT. NO. 6 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 38 & 39.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 38.

NOTES: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED WITH 1 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

NOTES: FOR DETAILS OF SECTION C-C, P-P, Q-Q, AND R-R SEE SHEET NO. 39.  
 FOR DETAILS OF PILE SPLICE SEE SHEET NO. 39.

### DETAILS OF INT. BT. NO. 6 (NORTHBOUND LANE)

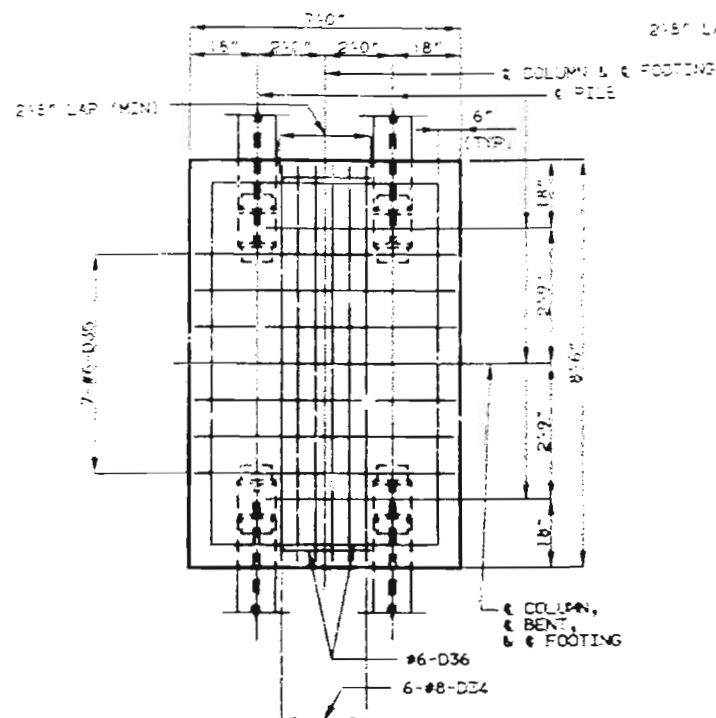
DETAILED: APRIL 1992  
 CHECKED: MAY 1993

NOTES: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 38 OF 338

ST. LOUIS-JEFFERSON COUNTIES A-609R

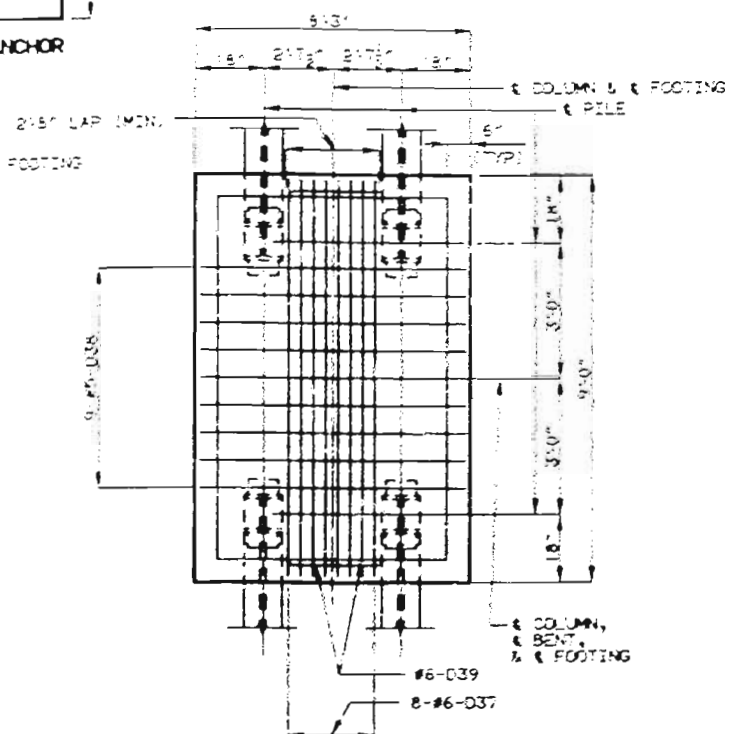
RESIN ANCHOR  
PATTERN



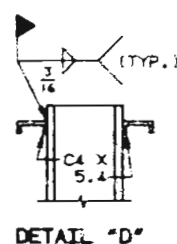
PLAN OF FOOTING SHOWING  
REINFORCEMENT (RIGHT SIDE)

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

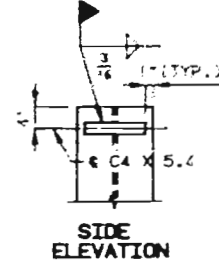
NOTE: FOR DETAILS OF PILE SPLICE, SEE SHEET NO. 35.  
FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



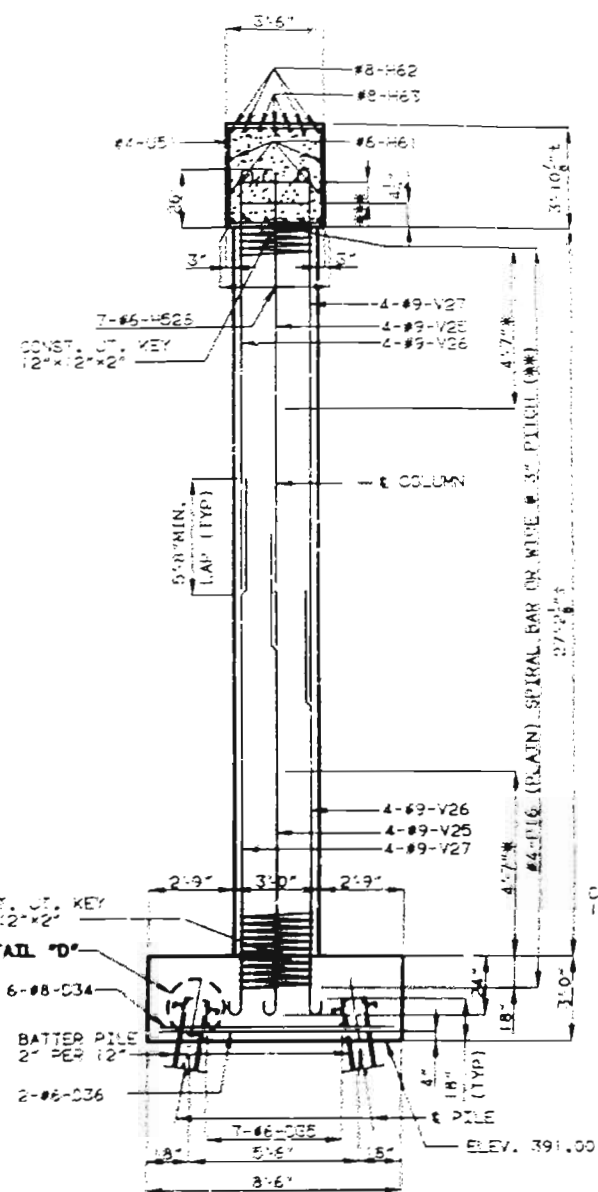
PLAN OF FOOTING SHOWING  
REINFORCEMENT (LEFT SIDE)



DETAIL "D"

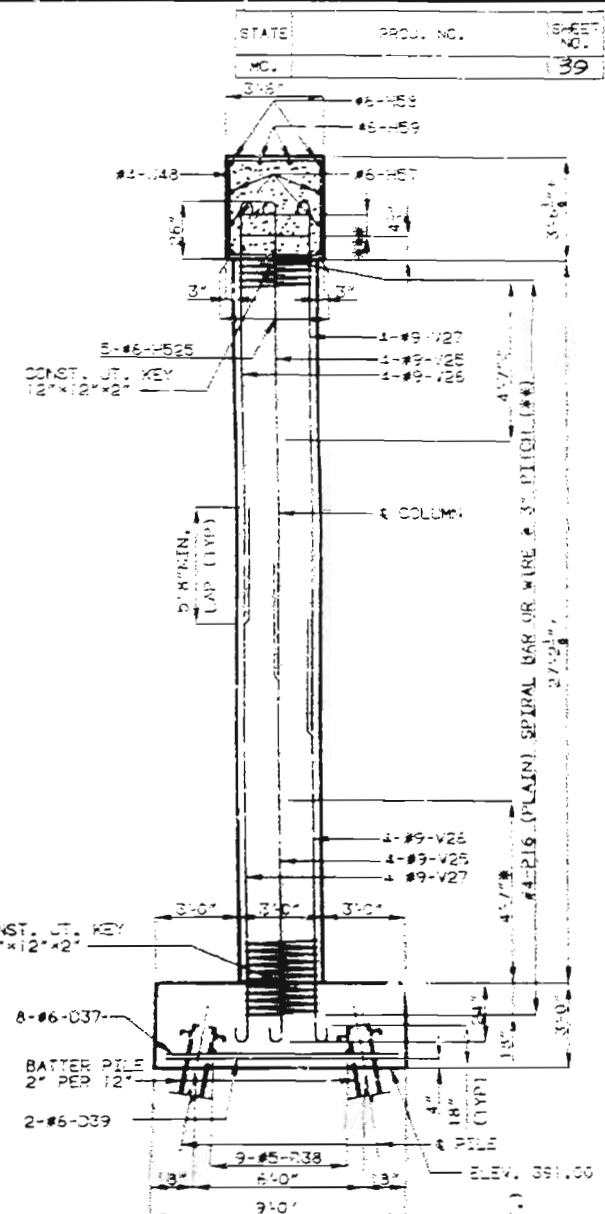


**SIDE  
ELEVATION**

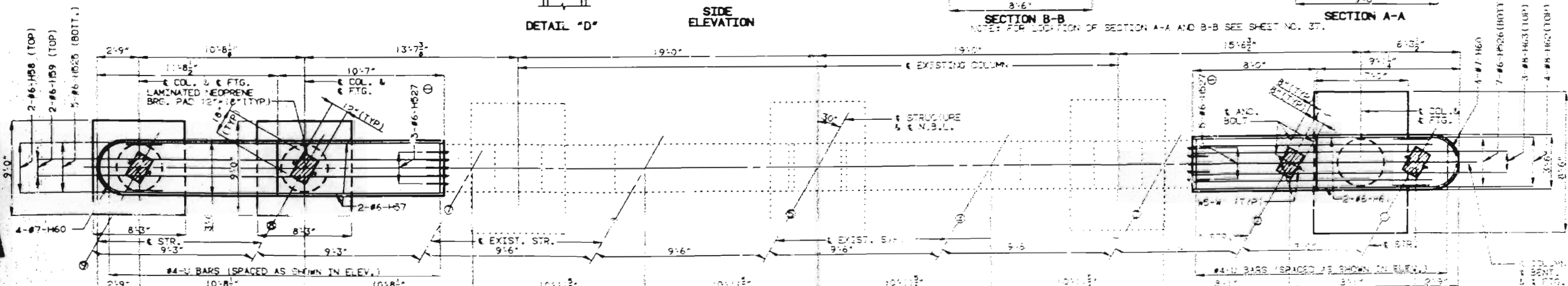


## SECTION 8

SECTION 8-B  
NOTE: FOR LOCATION OF SECTION A-A AND 8-B SEE SHEET NO. 37.



SECTION A-A



PLAN

NOTE: FOR DETAILS OF BT, 6 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 37 & 39.  
FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 34.

DETAILED APRIL 1992  
CHECKED MAY 1993

DETAILS OF INT. BENT NO. 6 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 33 OF 233

ST. LOUIS-JEFFERSON COUNTIES A-609R

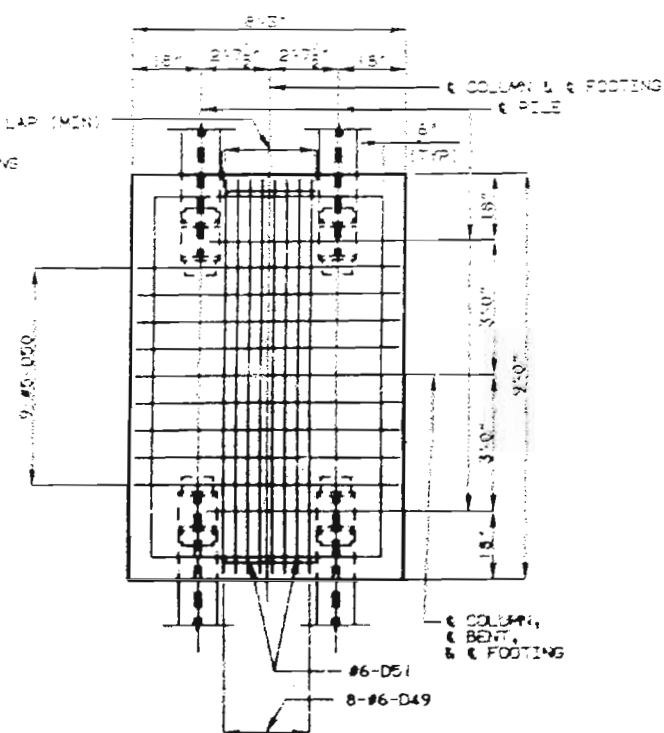






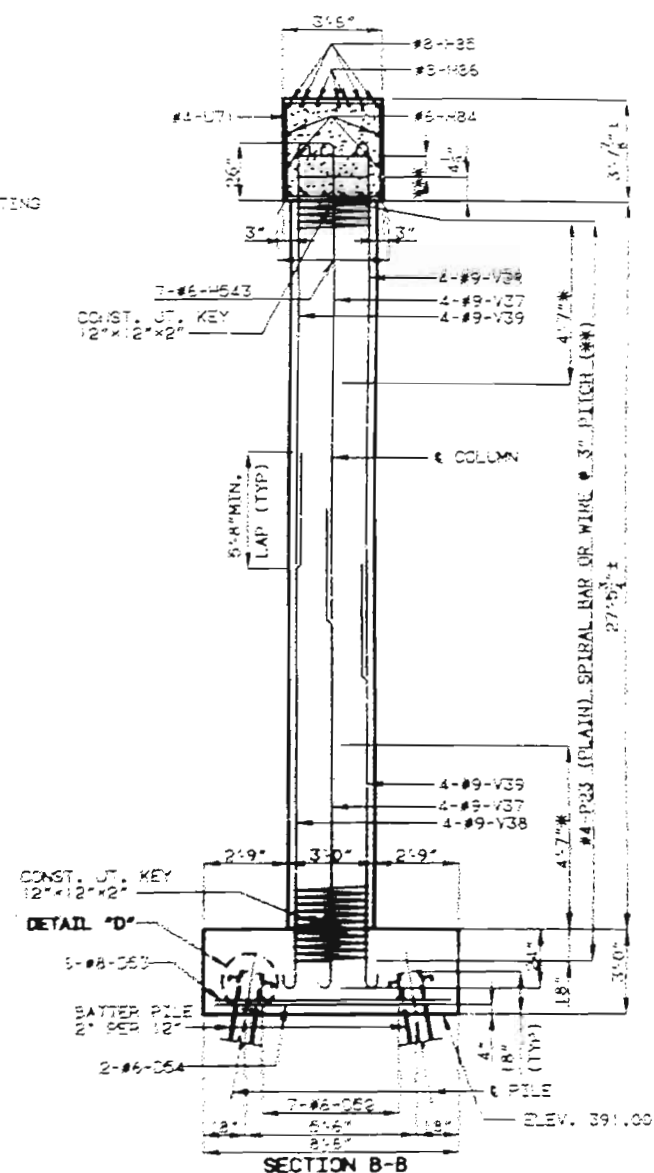
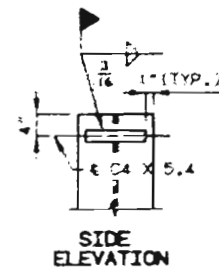
ST. LOUIS-JEFFERSON COUNTIES A-609R

47 ~~238~~



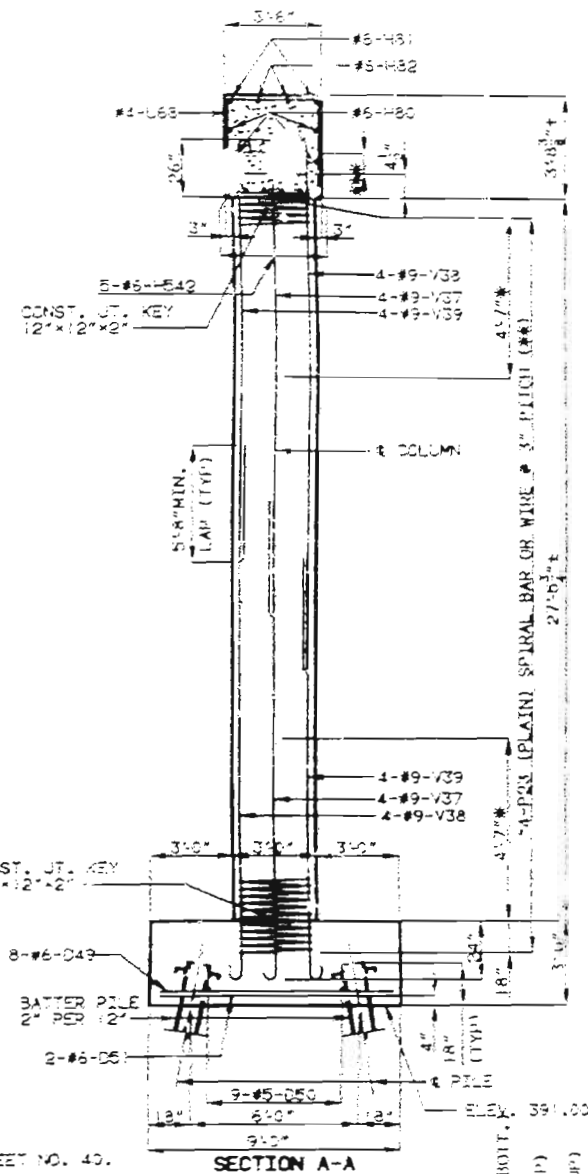
PLAN OF FOOTING SHOWING  
REINFORCEMENT (RIGHT SIDE)

NOTE: FOR DETAILS OF FILE SPLICE, SEE SHEET NO. 45.  
FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.

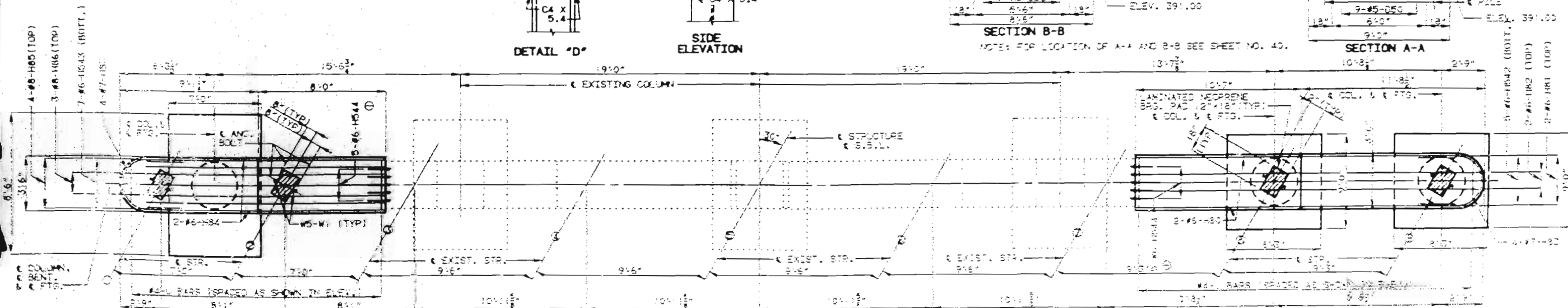


SECTION B-B

NOTE: SEE LOCATION OF A-A AND B-B SEE SHEET NO. 40



SECTION A-A



### PLAN

DETAILS OF INT. BENT NO. 6 (SOUTHBOUND LANE)

NOTE: FOR DETAILS OF ST. A (SOUTH) AND LANES, NOT SHOWN, SEE SHEET NOS. 40 & 42.  
FOR DETAILS OF ANCHOR SOIL NAILS, SEE SHEET NO. 134.  
DETAILED APRIL 1990  
CHECKED MAY 1993  
NOTE: THIS DRAWING IS

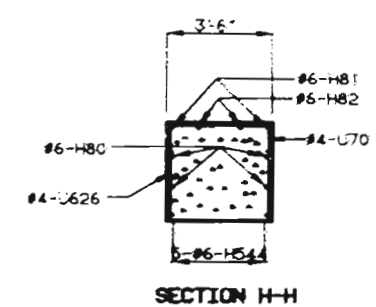
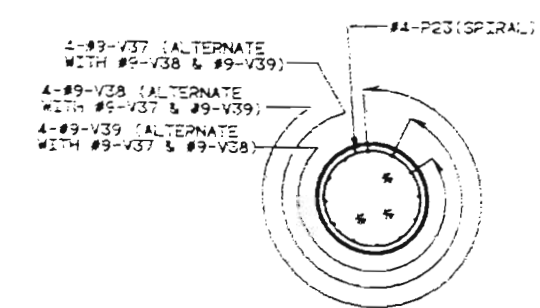
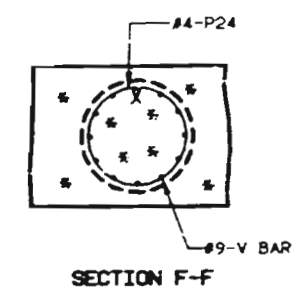
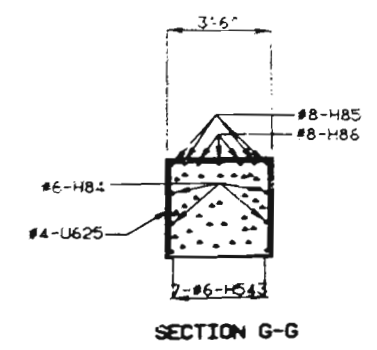
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

3-11-1964 15. 5' 27" 22.2

ST. LOUIS-JEFFERSON COUNTIES A-609R

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 6 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	115
STRUCTURAL STEEL PILE (10")	LIN. FT.	960
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	63
REINFORCING STEEL (BRIDGES)	LBS.	9510

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, AND H-H SEE SHEET NO. 40.  
FOR DETAILS OF BENT NO. 6 (SOUTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 40 & 41.

DETAILS OF INT. BENT NO. 6 (SOUTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED MAY 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 42 OF 238

48



NOTE: FOR DETAILS OF SECTION C-C, E-E, G-G, J-J AND K-K SEE SHEET NO. 45.  
FOR DETAILS OF PILE SPICE SEE SHEET NO. 45.

ELEVATION

DETAILS OF INT. BT. NO. 7 (NORTHBOUND LANE)

SHEET NO. 42 OF 235

ST. LOUIS-JEFFERSON COUNTIES A-609R

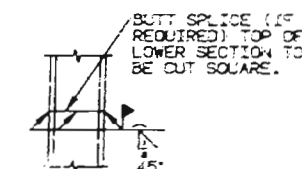
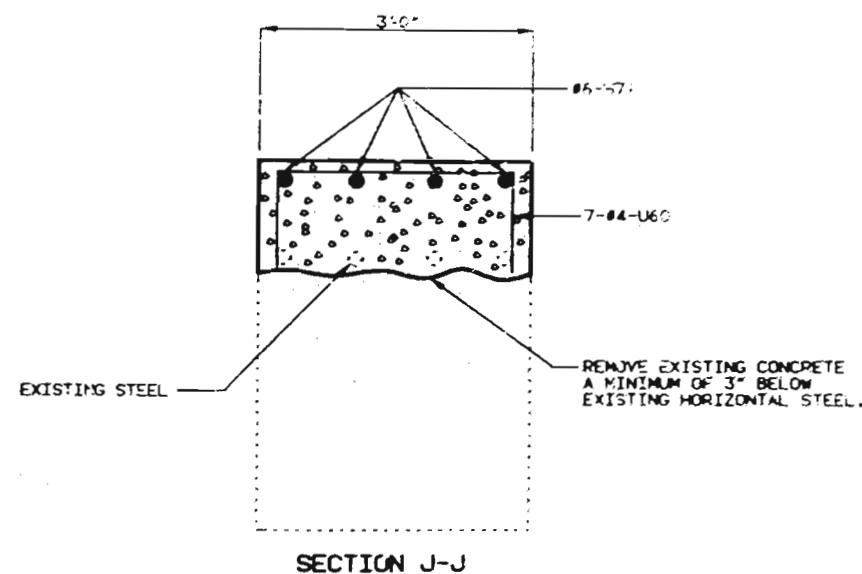
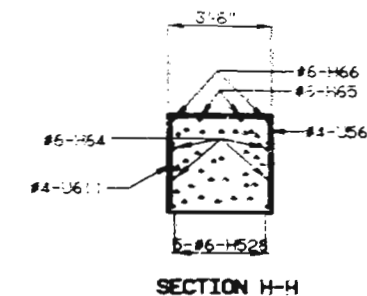
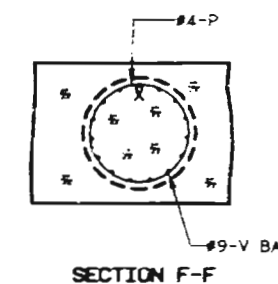
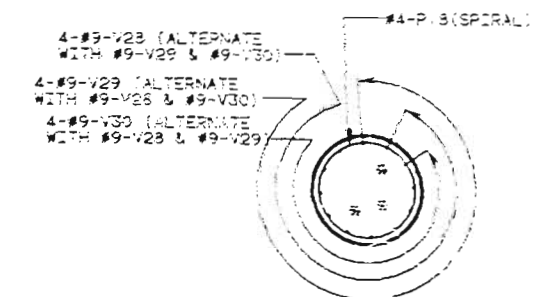
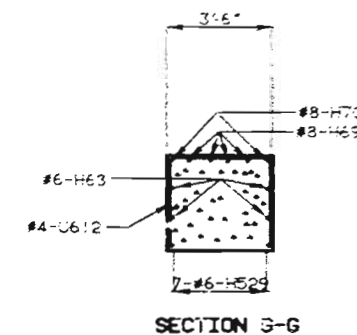


U.S. ARMY, 22 FEB 1967.



SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 7 (NORTHBOUND LANE)		
ITEM		QUANTITY
CLASS II EXCAVATION	CU. YDS.	110
STRUCTURAL STEEL PILE (10")	LIN. FT.	960
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	66.3
REINFORCING STEEL (BRIDGES)	LBS.	9740

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, J-J AND H-H SEE SHEET NO. 43.  
FOR DETAILS OF BT. NO. 7 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 43 & 44.

# DETAILS OF INT. BENT NO. 7 (NORTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED MAY 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

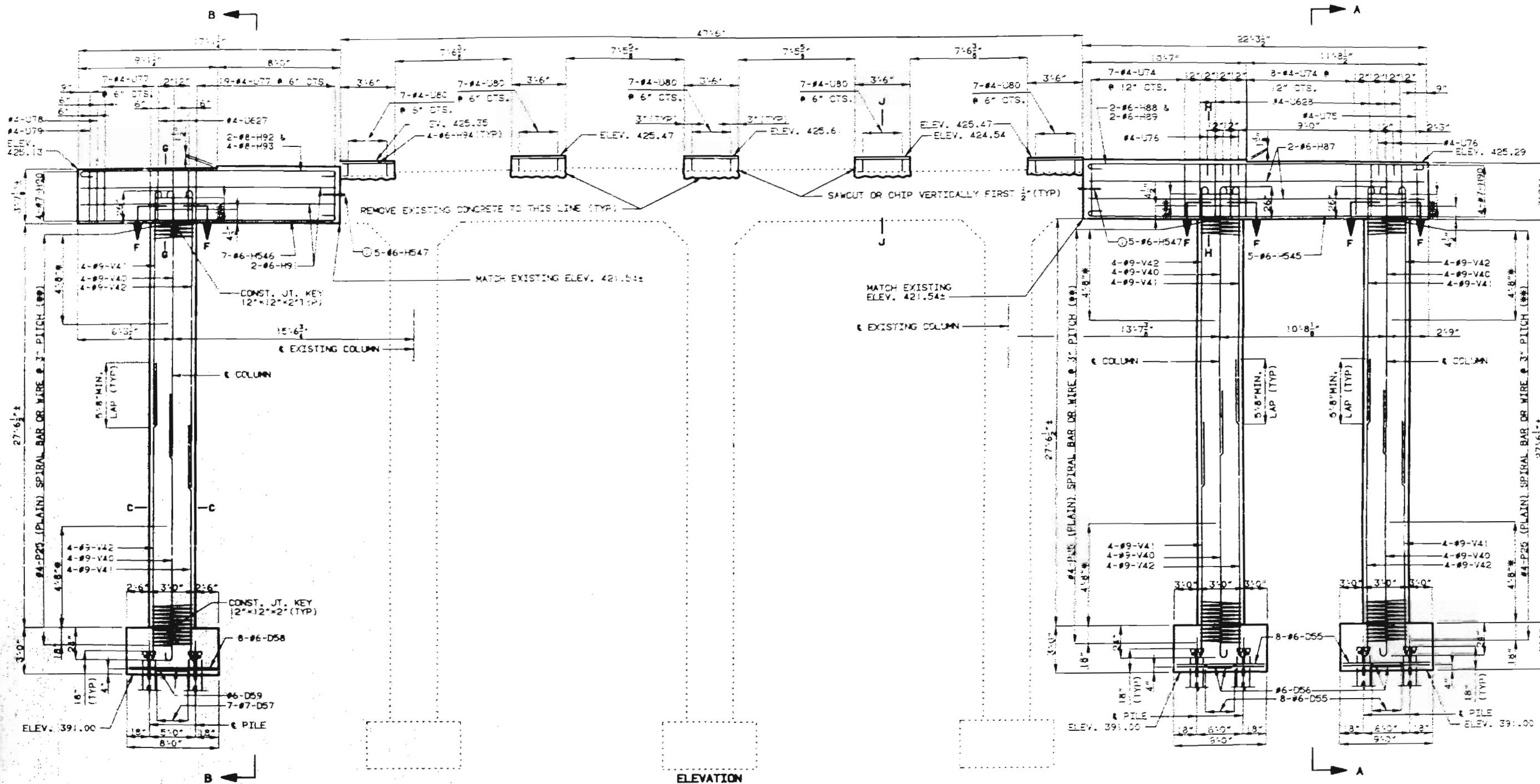
SHEET NO. 45 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

51 244

NOTES FROM NO. 46 IF NECESSARY TO FIT.

STATE	PROJ. NO.	SHEET
MO.		47



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P25 @ 3\"/>

NOTE: BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 NOTE: FOR DETAILS OF BT. NO. 7 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 47 & 48.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 47.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

NOTE: FOR DETAILS OF SECTION C-C, F-F, G-G, H-H AND I-I SEE SHEET NO. 48.  
 FOR DETAILS OF PILE SPLICE SEE SHEET NO. 45.

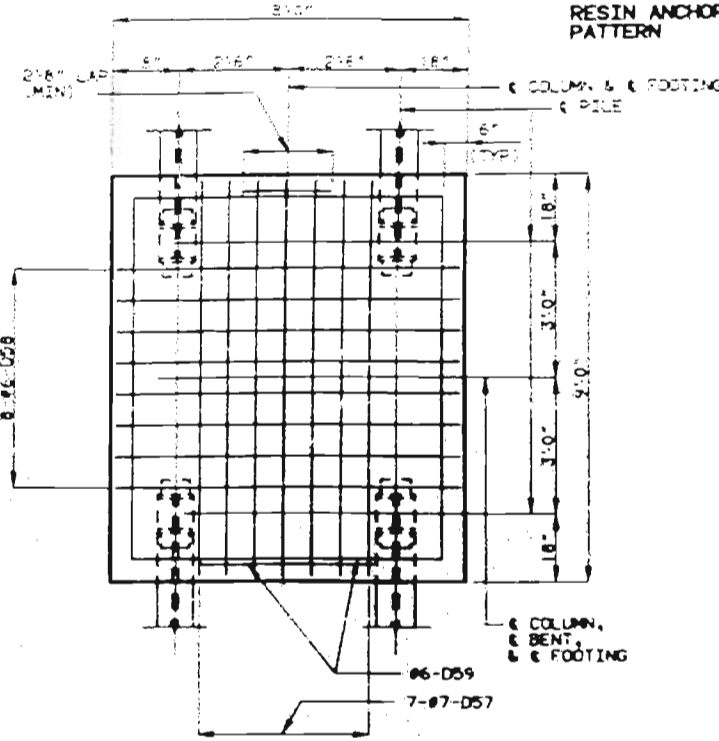
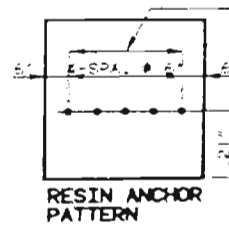
DETAILS OF INT. BT. NO. 7 (SOUTHBOUND LANE)

DETAILED APRIL 1992  
 CHECKED MAY 1993

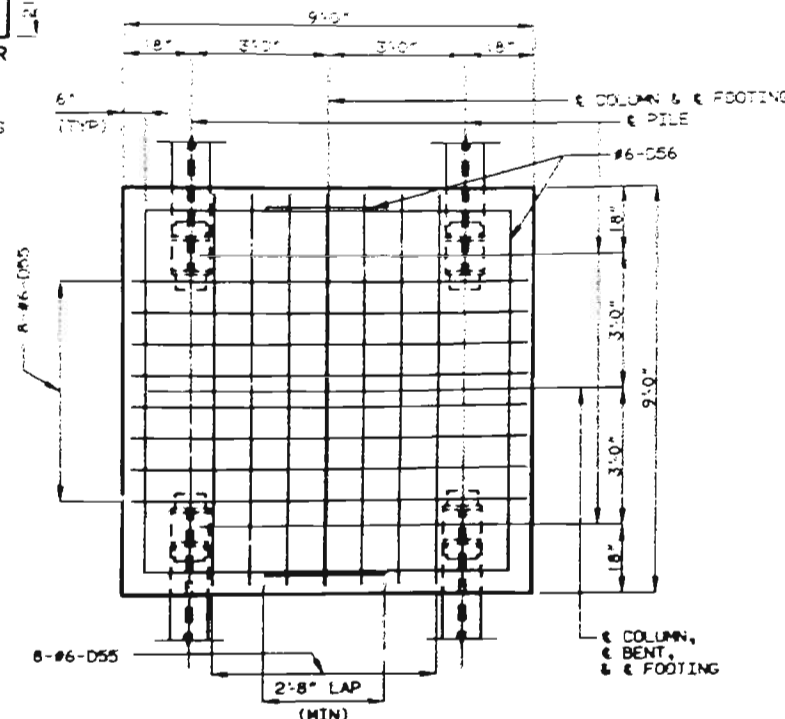
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 46 OF 238

NOTE: LAPPING OF SPIRAL REIN. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STEEL REIN. BARS.  
 \*\*\* 6-#4-P25 3" CTS. TYP. P25 SPLICE LOCATIONS SHALL BE STAGGERED.



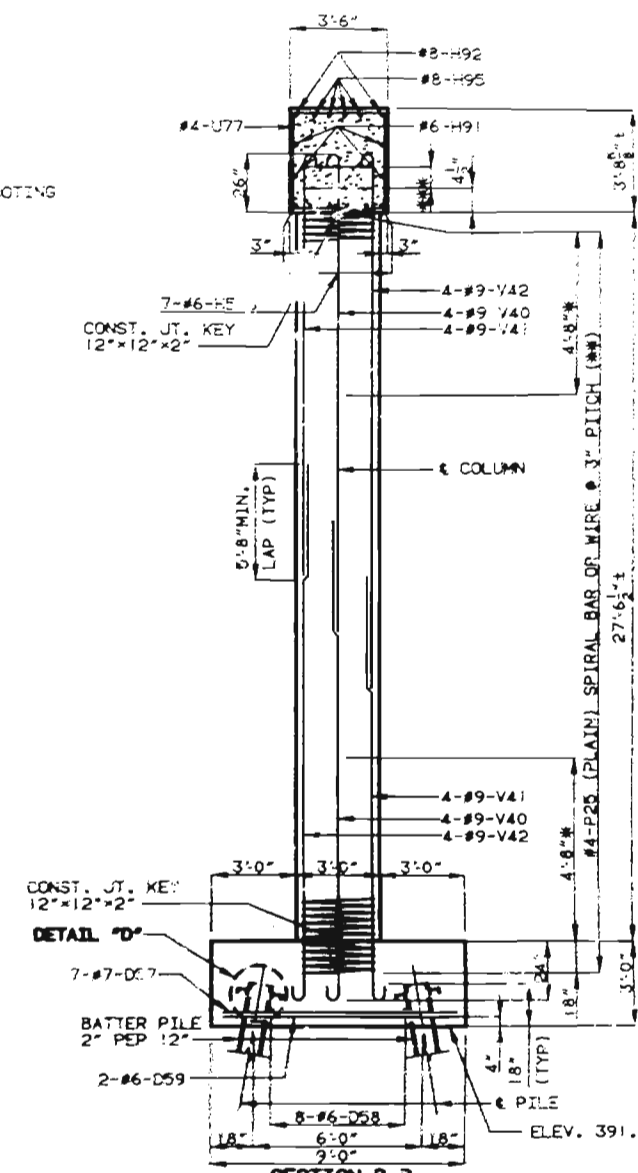
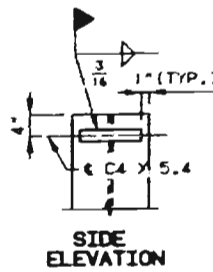
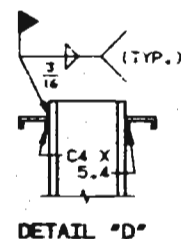
PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)



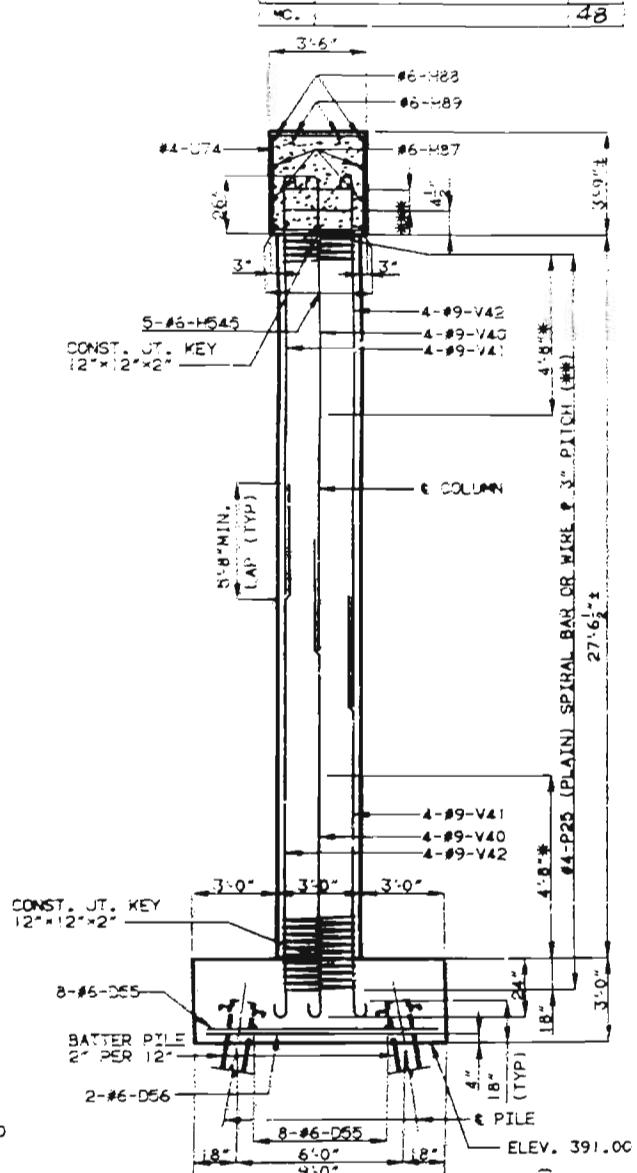
PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

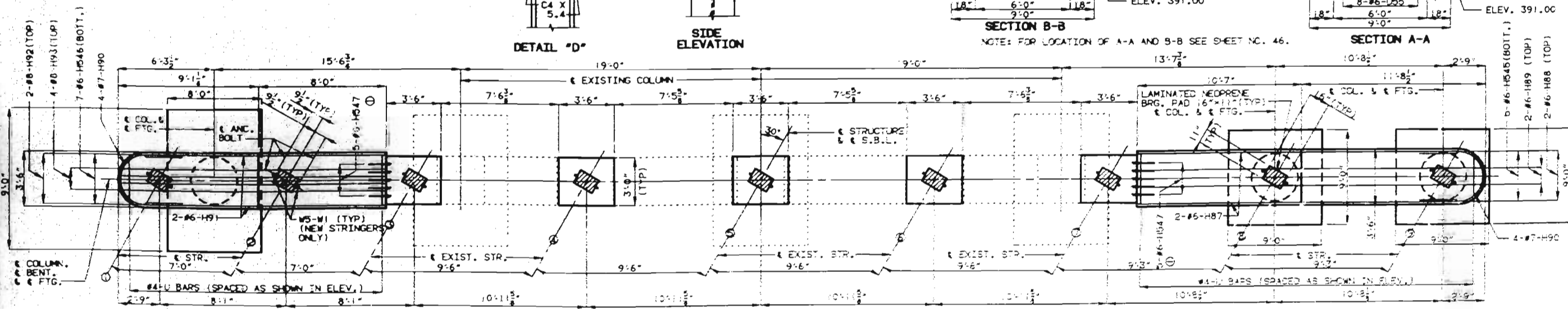
NOTE: FOR DETAILS OF PILE SPLICE, SEE SHEET NO. 145.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



SECTION B-B  
 NOTE: FOR LOCATION OF A-A AND B-B SEE SHEET NO. 46.



SECTION A-A



PLAN  
 DETAILS OF INT. BENT NO. 7 (SOUTHBOUND LANE)

NOTE: FOR DETAILS OF BT. 7 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 46 & 48.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.  
 DETAILED APRIL 1992  
 CHECKED MAY 19 93

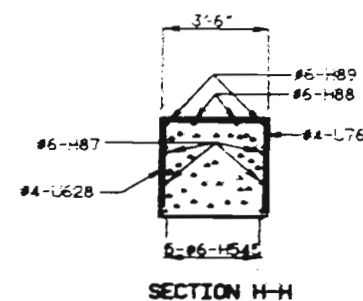
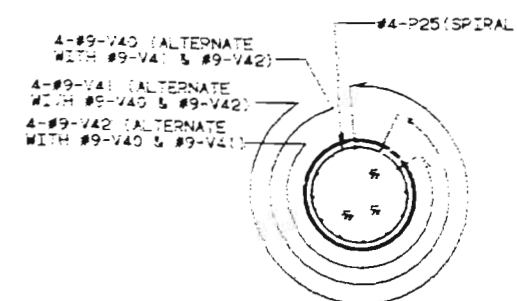
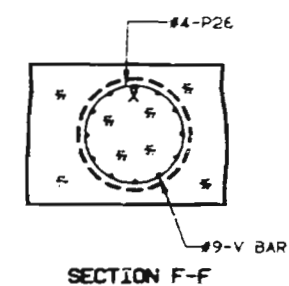
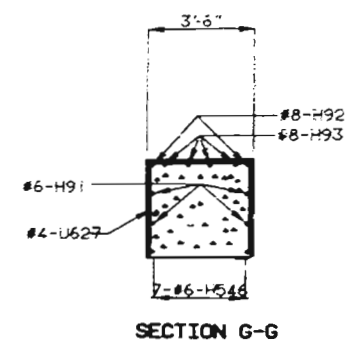
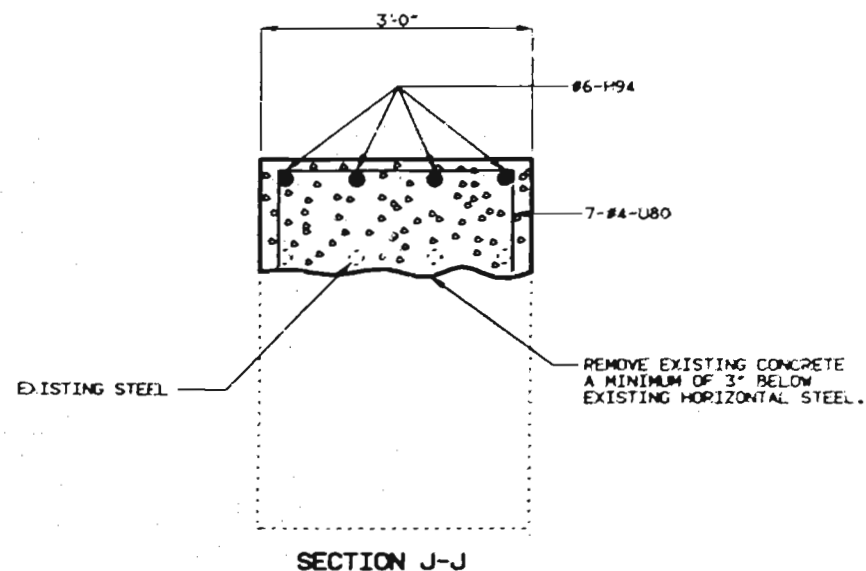
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 47 OF 238



SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 7 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	145
STRUCTURAL STEEL PILE (10")	LIN. FT.	960
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	68.0
REINFORCING STEEL (BRIDGES)	LBS.	9790

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, J-J AND H-H SEE SHEET NO. 6.  
FOR DETAILS OF BENT NO. 7 (SOUTHBOUND LANE) NOT SHOWN, SEE SHEET NO. 6.

DETAILS OF INT. BENT NO. 7 (SOUTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED MAY 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

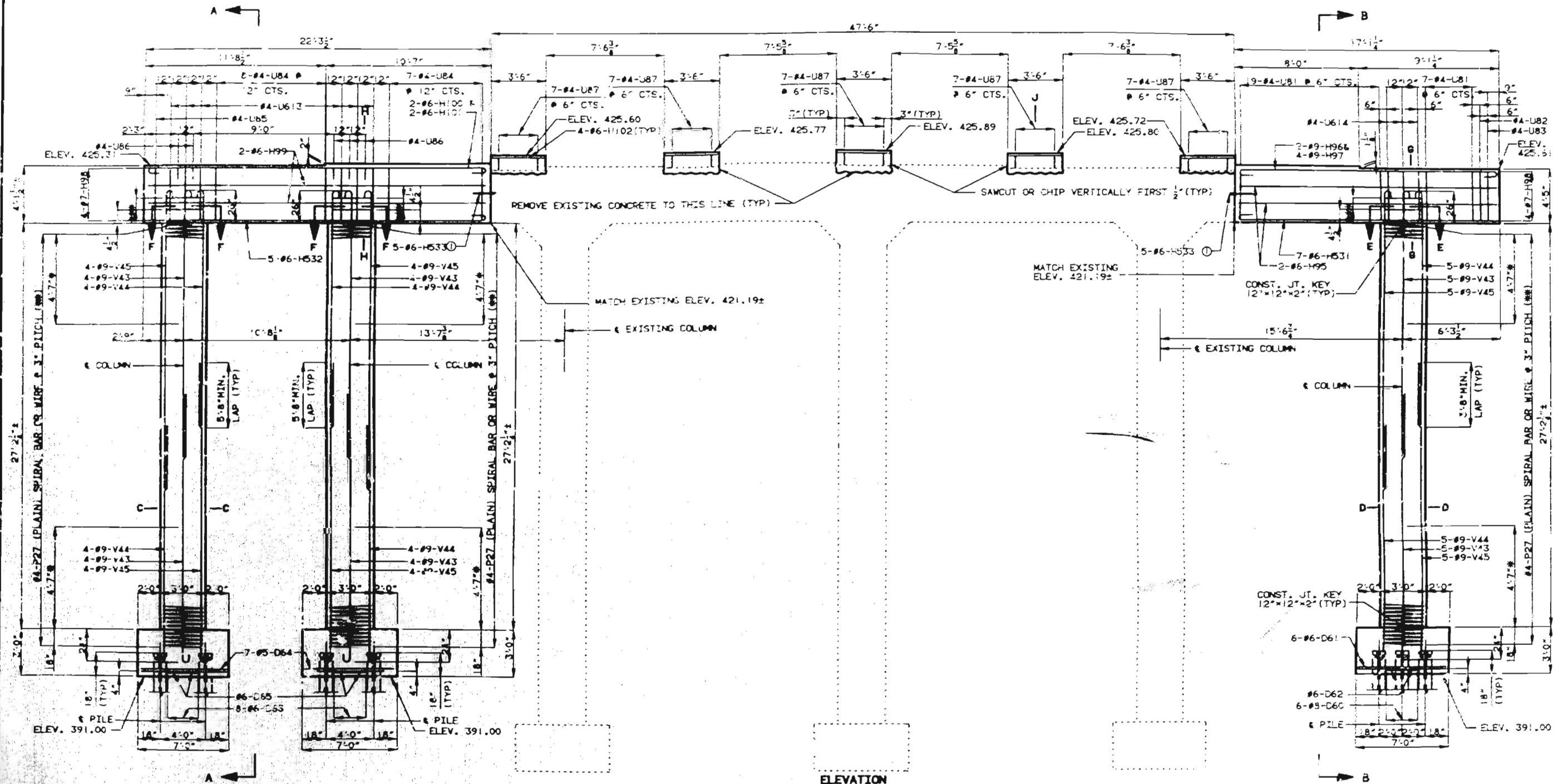
SHEET NO. 48 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

54

NOTE: FROM #4-U87 IF NECESSARY TO FILL.

STATE	PROJ. NO.	SHEET NO.
MO.		50



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P28 @ 3" CTS. (TYP) P28 SPLICE LOCATIONS SHALL BE STAGGERED.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR DETAILS OF 3T, NO. 8 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 50 & 51.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 50.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

NOTE: FOR DETAILS OF SECTION C-C, D-D, E-E, F-F, G-G, H-H AND I-I SEE SHEET NO. 51.  
 FOR DETAILS OF PILE SPLICE SEE SHEET NO. 51.

# DETAILS OF INT. PT. NO. 8 (NORTHBOUND LANE)

DETAILED APRIL 1992  
 CHECKED MAY 1993

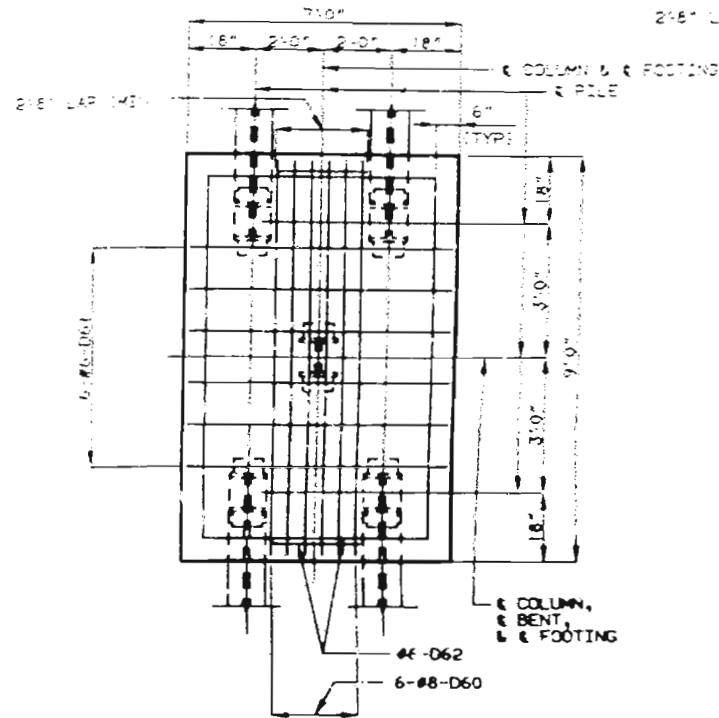
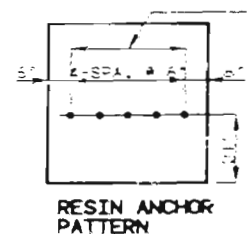
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 49 OF 238

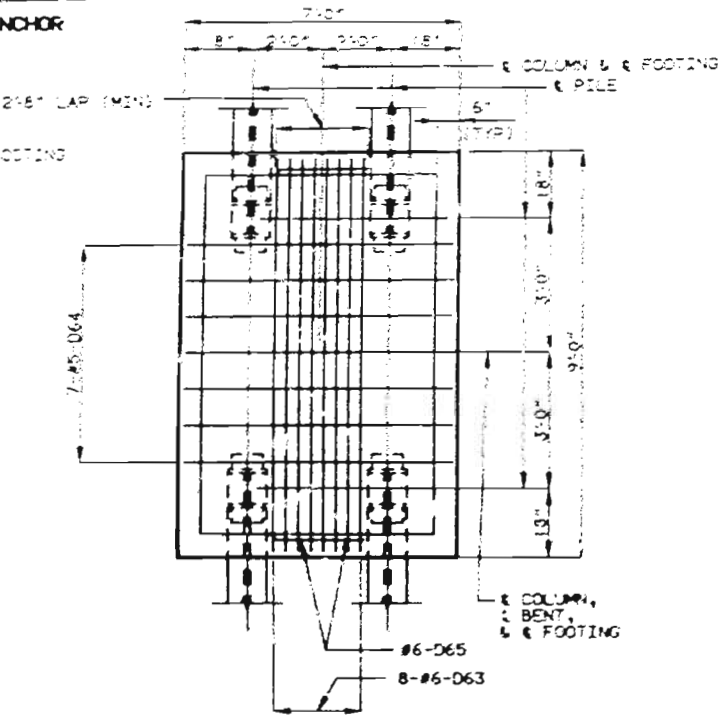
ST. LOUIS-JEFFERSON COUNTIES A-609R

55 2445

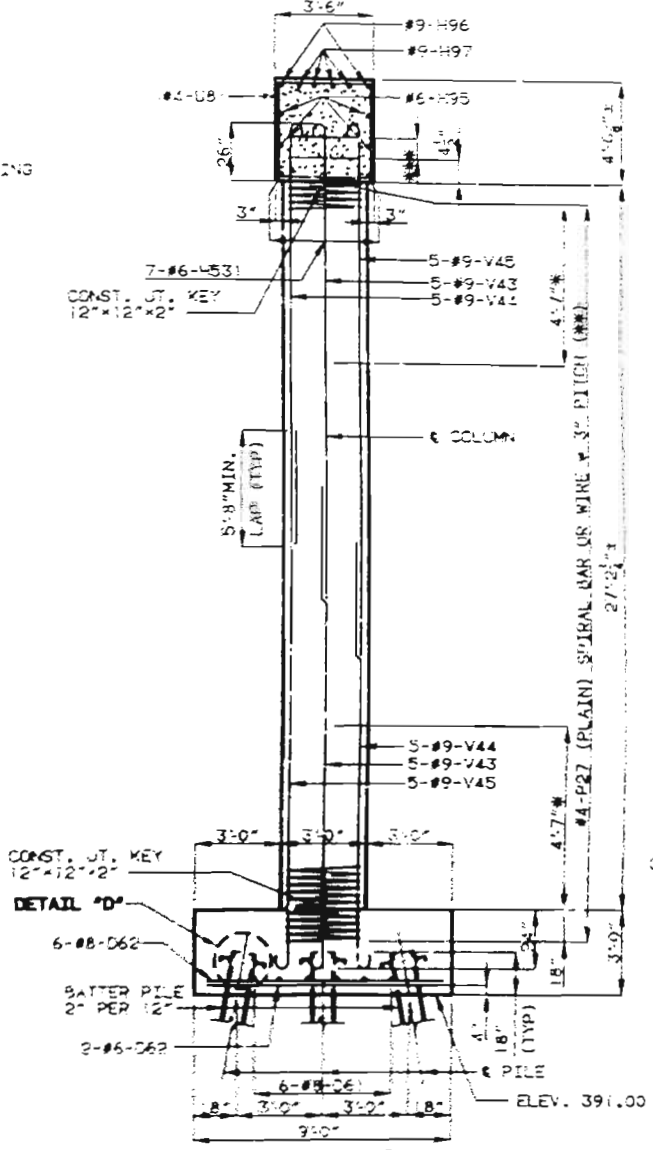
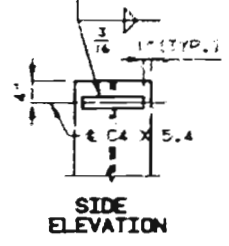
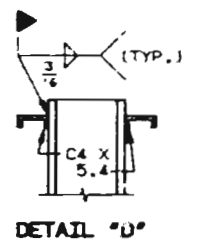
NOTE: \* APPLICATION OF SPIRAL REIN. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUOUS SPIRAL BARS TO THE BOTTOM OF THE BEAM OR AT SPICE BARS.  
 \*\*\* 5-#4 PER 4' (TYP.) P20 SPICE LOCATIONS SHALL BE SPACED.



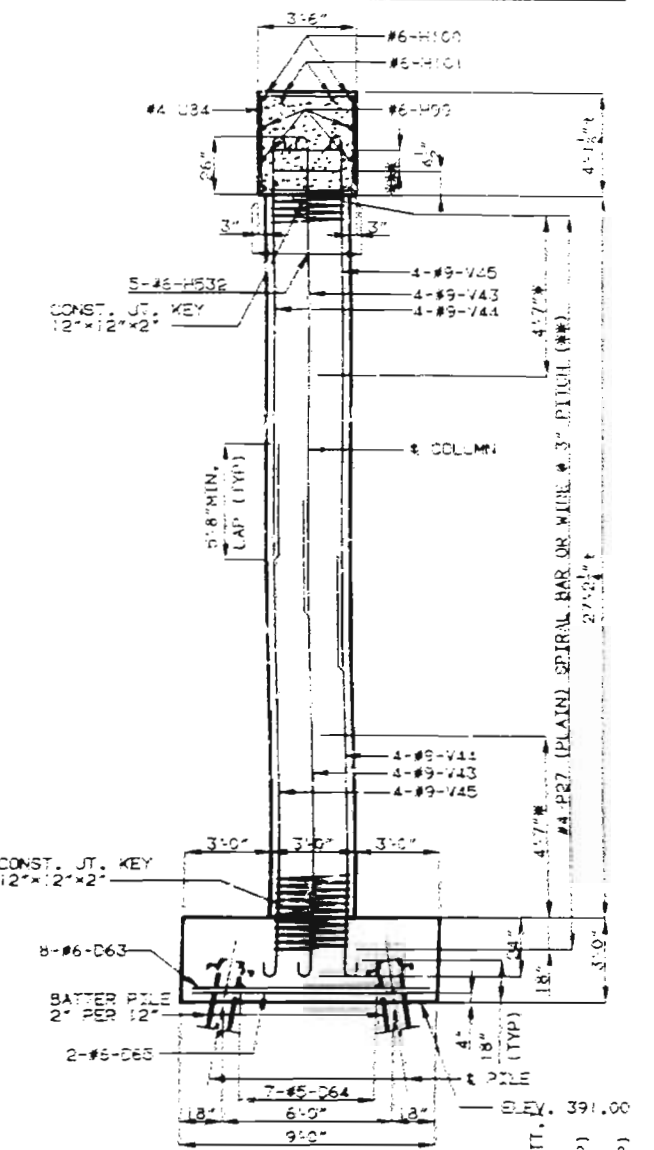
PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)



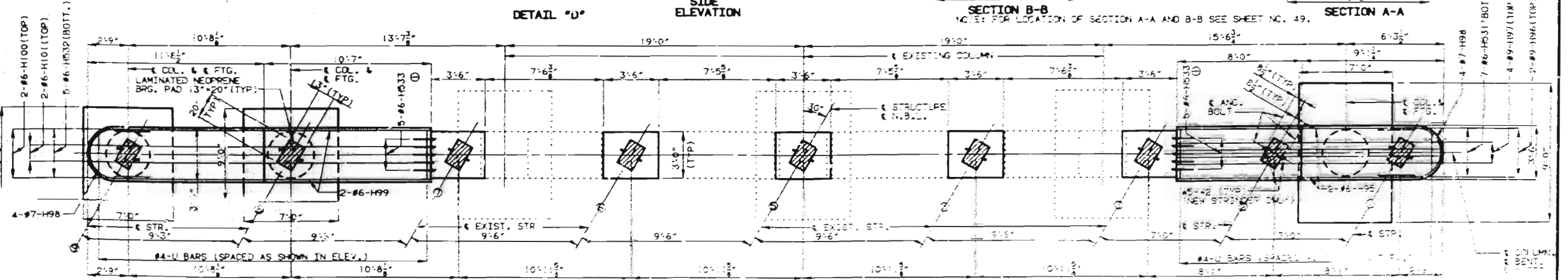
PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)



SECTION B-B  
 NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 49.



SECTION A-A



PLAN

DETAILS OF INT. BENT NO. 8 (NORTHBOUND LANE)

NOTE: FOR DETAILS OF BT. #6 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 49 & 51.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.

DETAILED APRIL 1992  
 CHECKED MAY 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

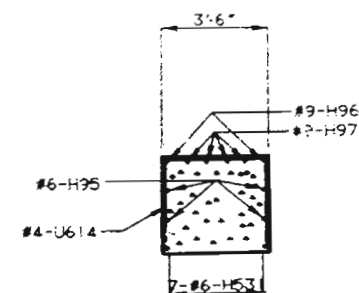
SHEET NO. 50 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

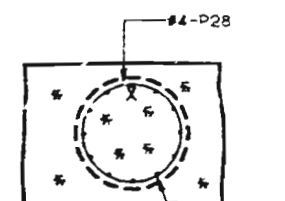
56.277

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 8 (NORTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	120
STRUCTURAL STEEL PILE (10")	LIN. FT.	1040
CLASS 3 CONCRETE (SUBSTRUCTURE)	CU. YDS.	65.8
REINFORCING STEEL (BRIDGES)	LBS.	10,300

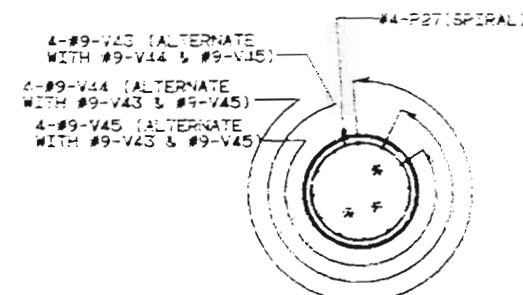
NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



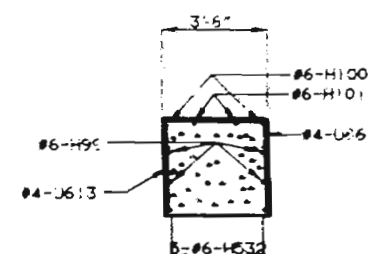
SECTION G-G



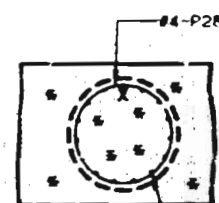
SECTION F-F



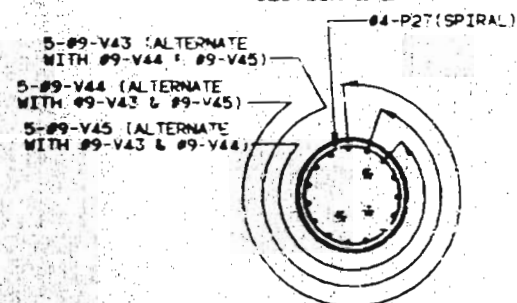
PART SECTION C-C



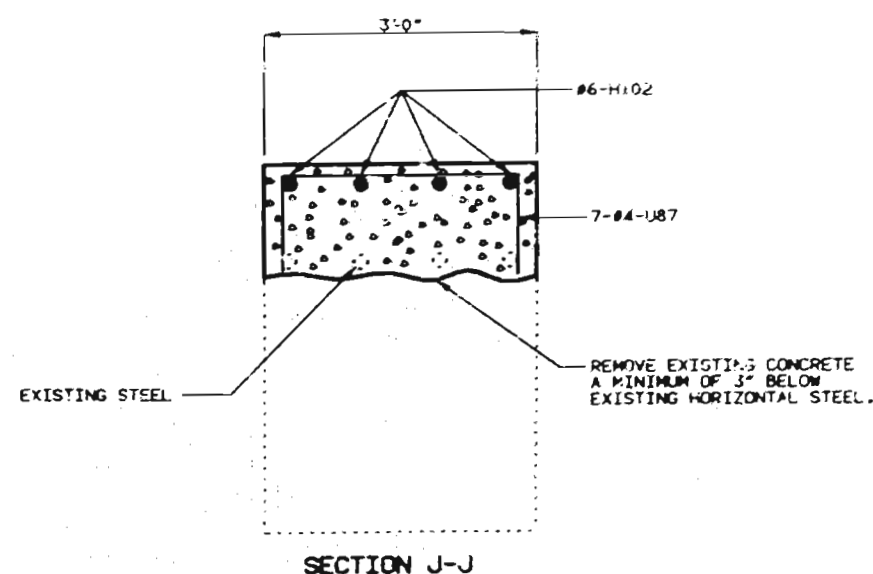
SECTION H-H



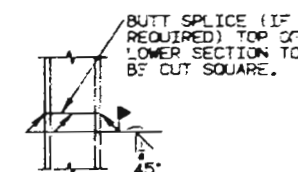
SECTION E-E



PART SECTION D-D



SECTION J-J



STEEL PILE SPlice

NOTE: FOR LOCATION OF SECTION C-C, D-D, E-E, F-F, G-G, J-J AND H-H SEE SHEET NO. 49.  
FOR DETAILS OF BENT NO. 8 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 49 & 50.

DETAILS OF INT. BENT NO. 8 (NORTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED MAY 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

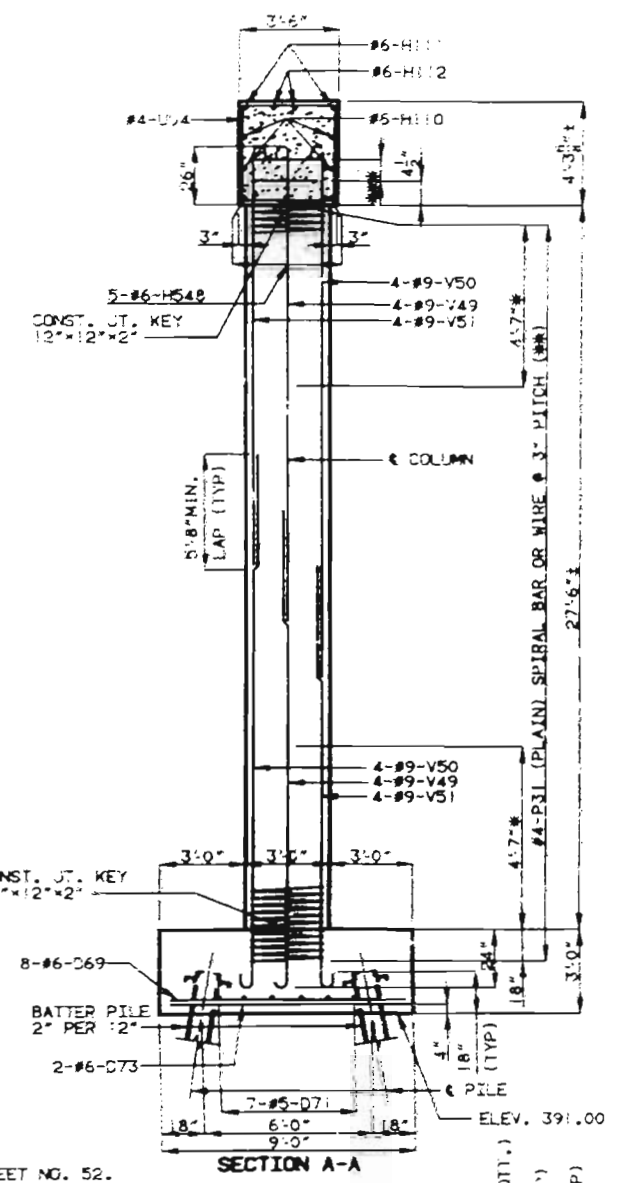
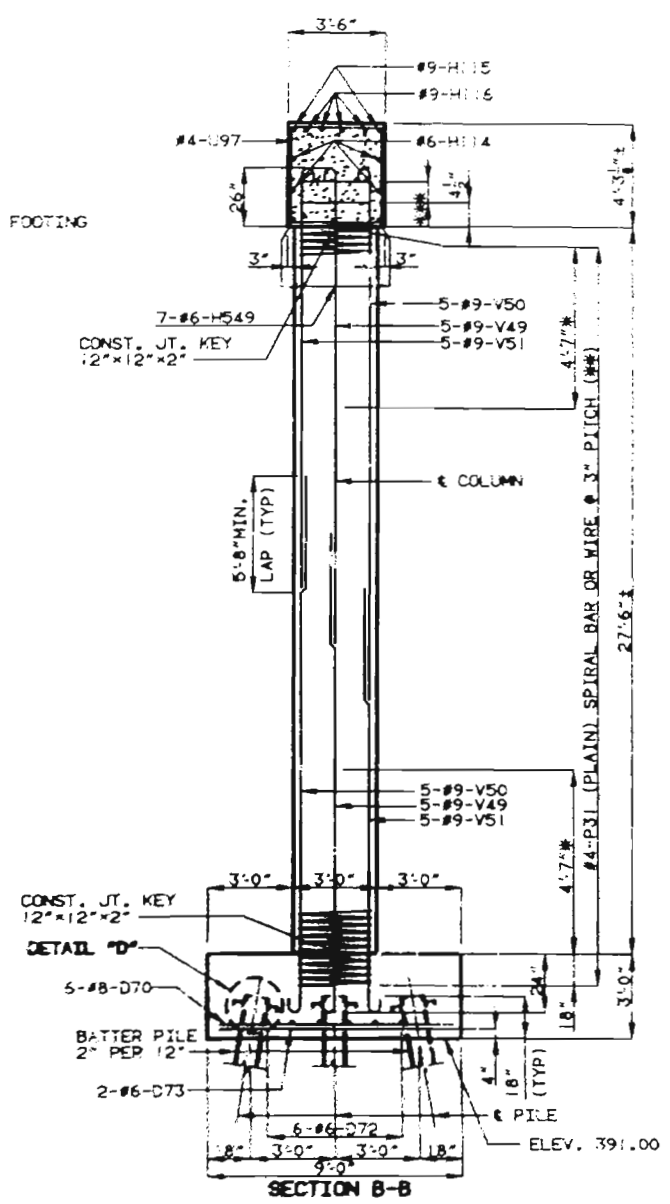
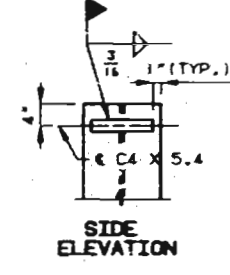
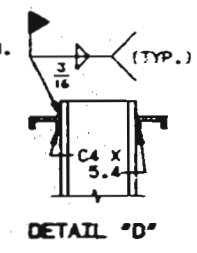
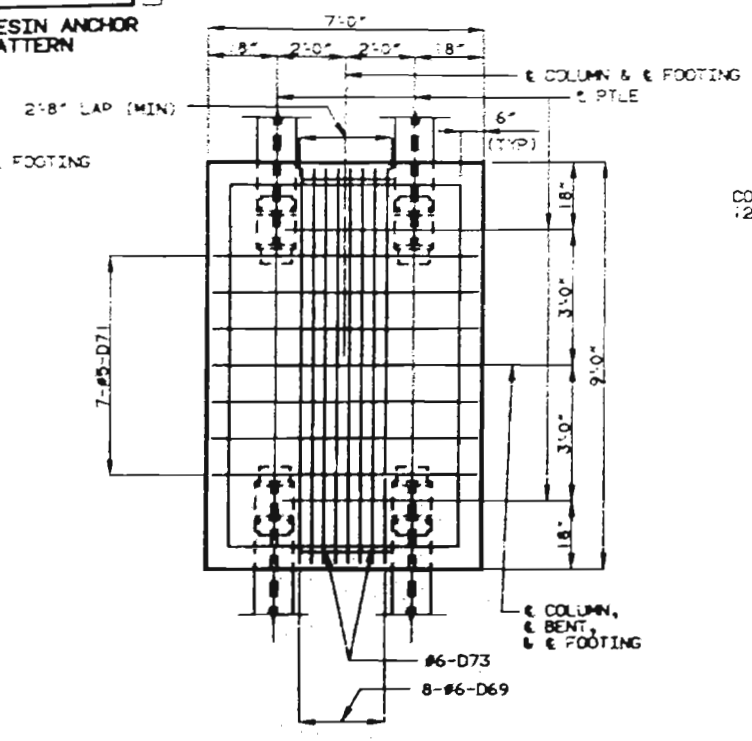
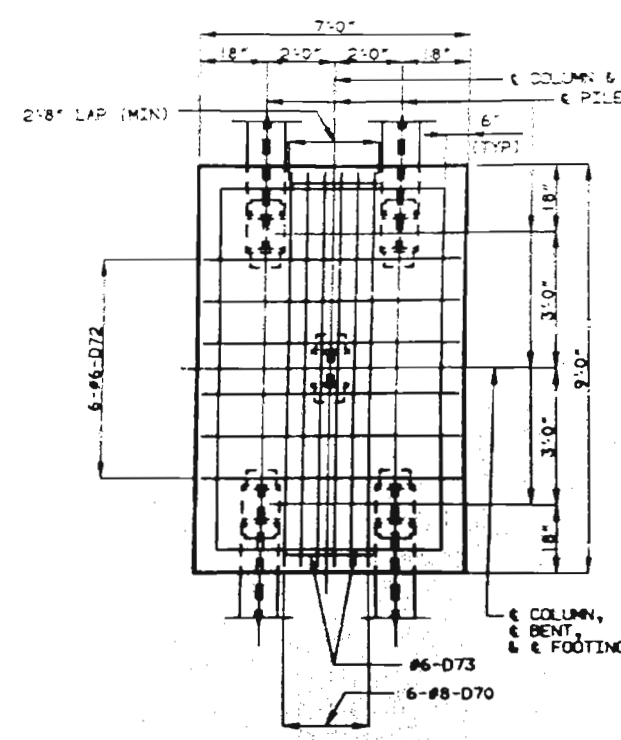
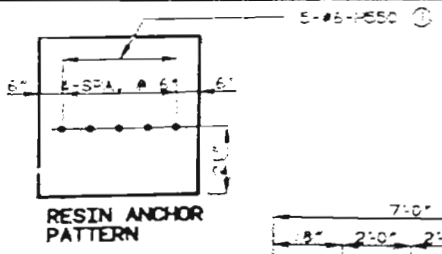
SHEET NO. 51 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

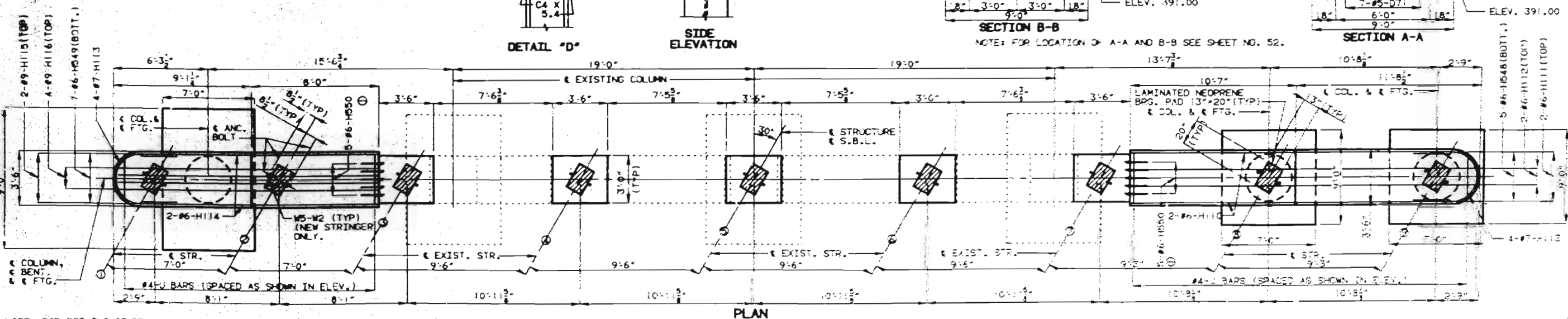




NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P32 & 3" PITCH (TYP) P32 SPLICE LOCATIONS SHALL BE STAGGERED.



① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 NOTE: FOR DETAILS OF PILE SPLICE, SEE SHEET NO. 151.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



NOTE: FOR DETAILS OF BT. 8 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 54 & 55.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.  
 DETAILED APRIL 1992  
 CHECKED MAY 1993

DETAILS OF INT. BENT NO. 8 (SOUTHBOUND LANE)

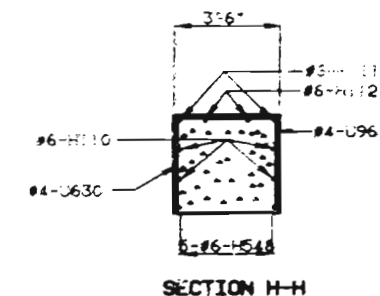
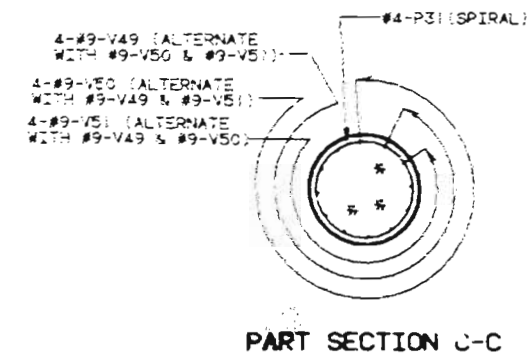
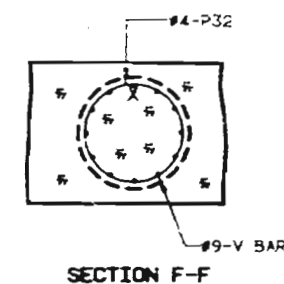
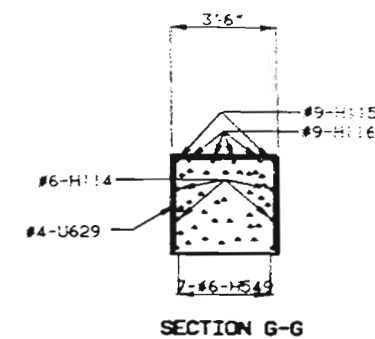
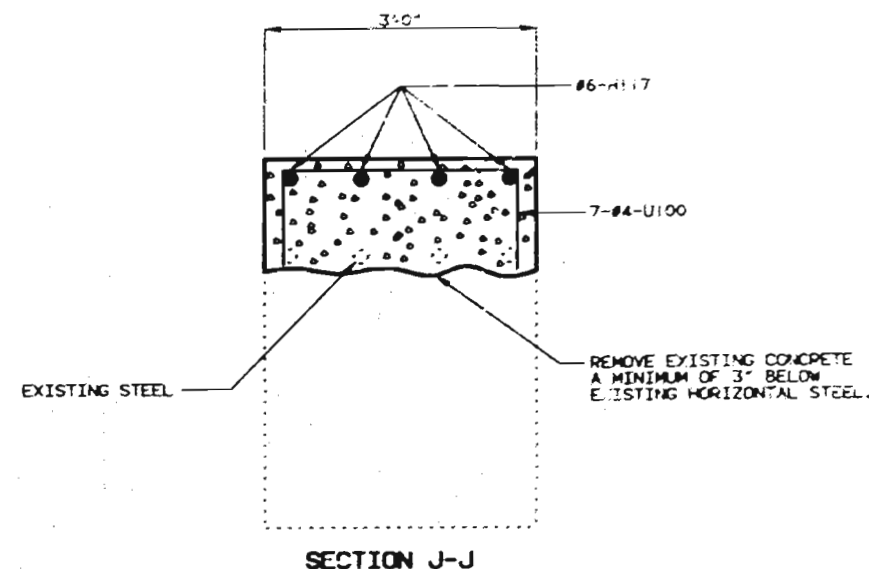
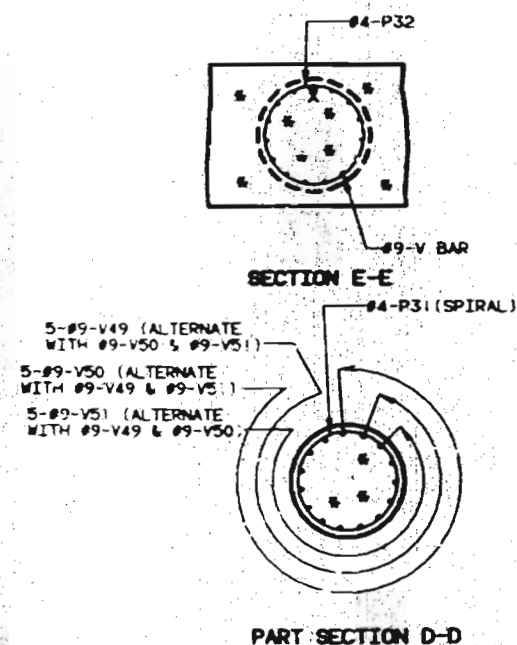
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 53 OF 238

59

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 8 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	135
STRUCTURAL STEEL PILE (10")	LIN. FT.	1040
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	66.8
REINFORCING STEEL (BRIDGES)	LBS.	10190

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, D-D, E-E, F-F, G-G, J-J AND H-H SEE SHEET NO. 52.

NOTE: FOR DETAILS OF BT. 8 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 52 & 53.

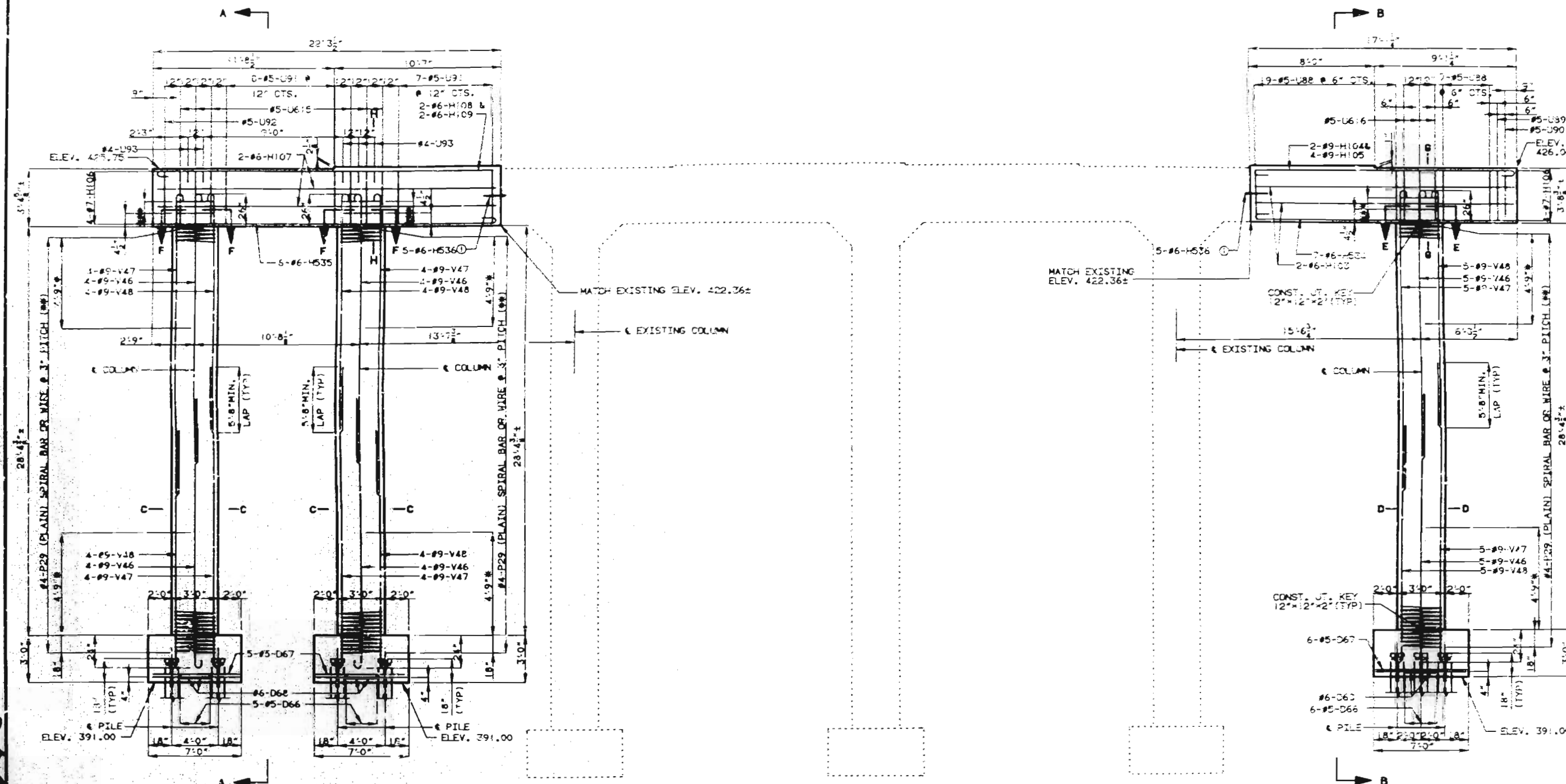
# DETAILS OF INT. BENT NO. 8 (SOUTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED MAY 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 54 OF 533

ST. LOUIS-JEFFERSON COUNTIES A-609R



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P30 # 3" CTS. (TYP) P30 SPLICE LOCATIONS SHALL BE STAGGERED.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR DETAILS OF BT. NO. 9 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 56 & 57.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 56.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

NOTE: FOR DETAILS OF SECTION D-C, D-D, E-E, F-F, G-G, AND H-H SEE SHEET NO. 57.  
 FOR DETAILS OF PILE SPLICE SEE SHEET NO. 57.

ELEVATION

DETAILS OF INT. BT. NO. 3 (NORTHBOUND LANE)

DETAILED APRIL 1992  
 CHECKED MAY 1993

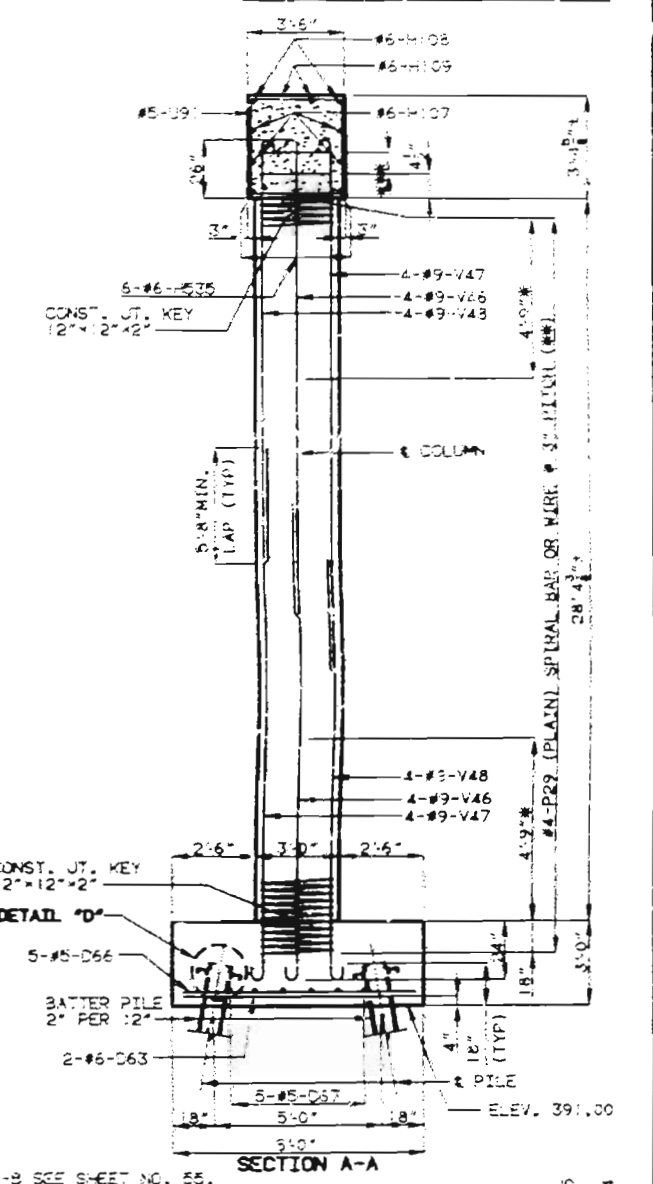
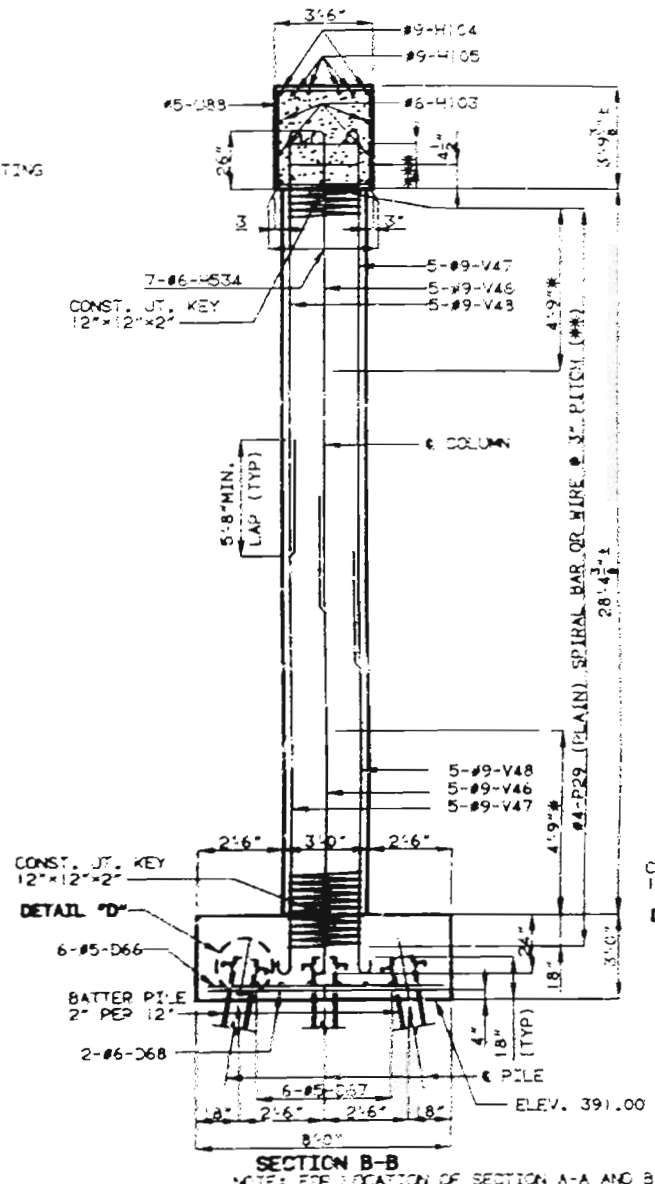
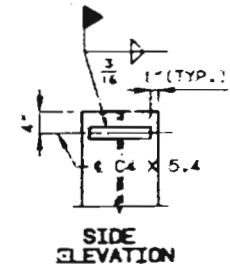
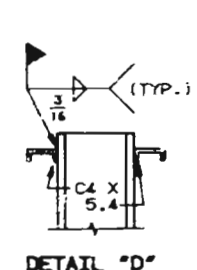
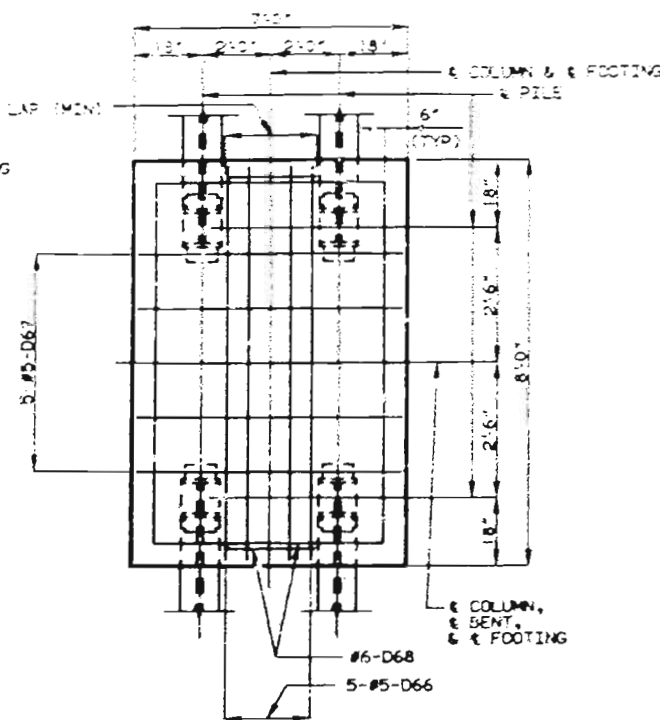
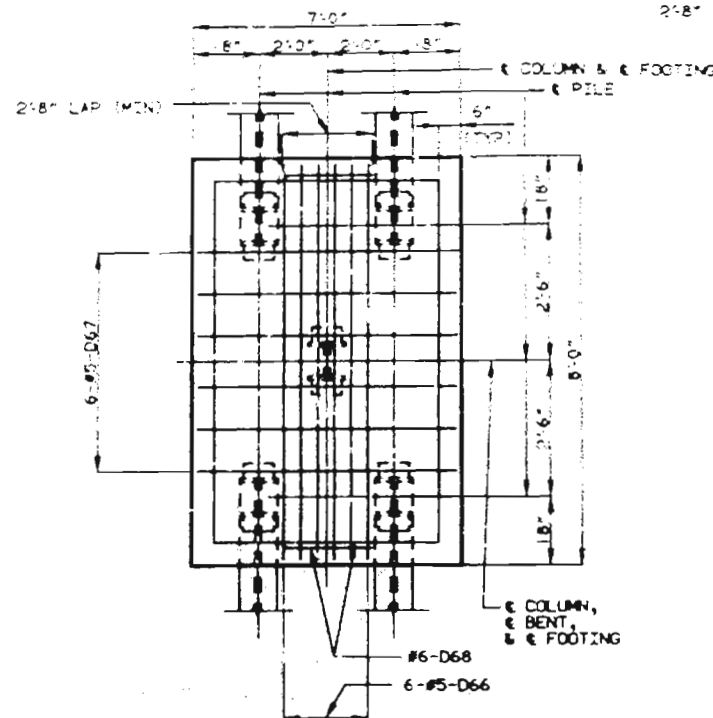
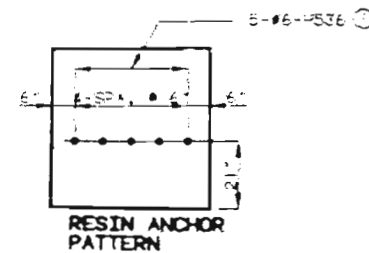
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 55 OF 233

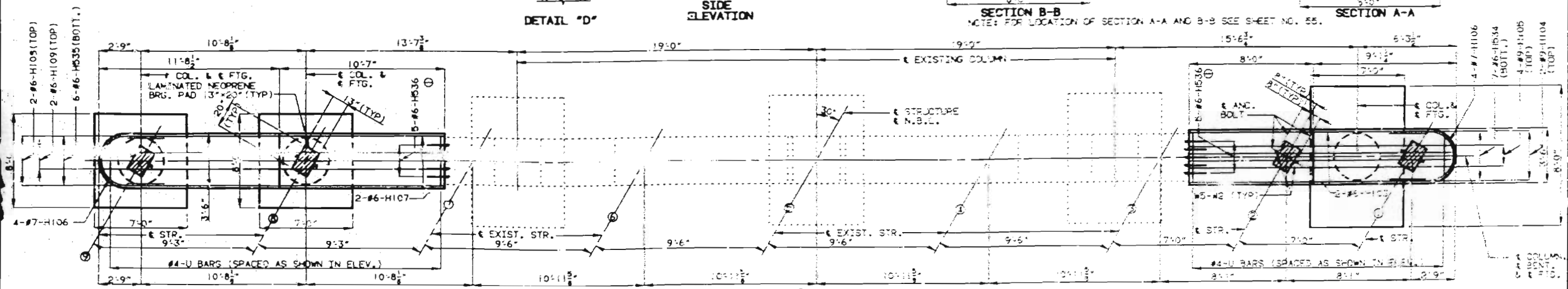
ST. LOUIS-JEFFERSON COUNTIES A-609R



NOTES: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUOUS SPIRAL BARS TO THE BOTTOM OF THE BEAM OR STEEPED REIN. BAR.  
 \*\*\* 6-#4-P29 & 2-#5-TYP. P29 SPLICE LOCATIONS SHALL BE STAGGERED.



① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 NOTE: FOR DETAILS OF PILE SPLICE, SEE SHEET NO. 57.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



NOTE: FOR DETAILS OF BENT NO. 9 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 55 & 57.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.

DETAILS OF INT. BENT NO. 9 (NORTHBOUND LANE)

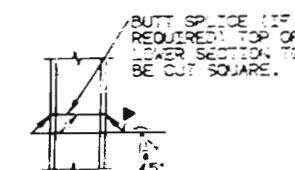
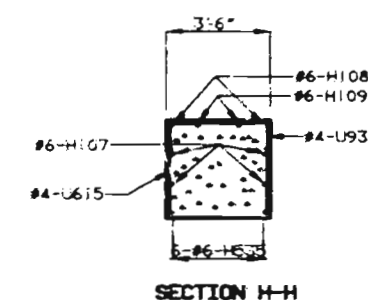
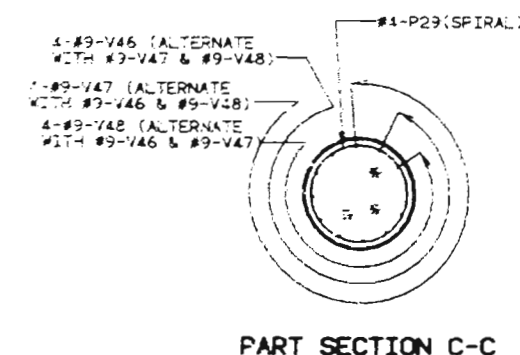
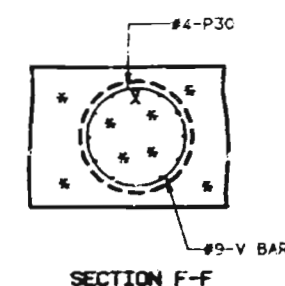
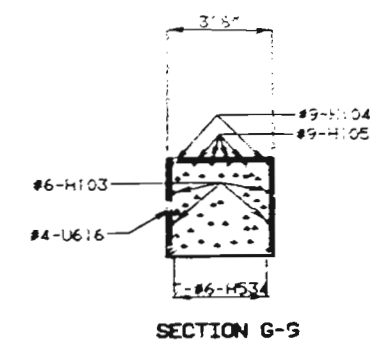
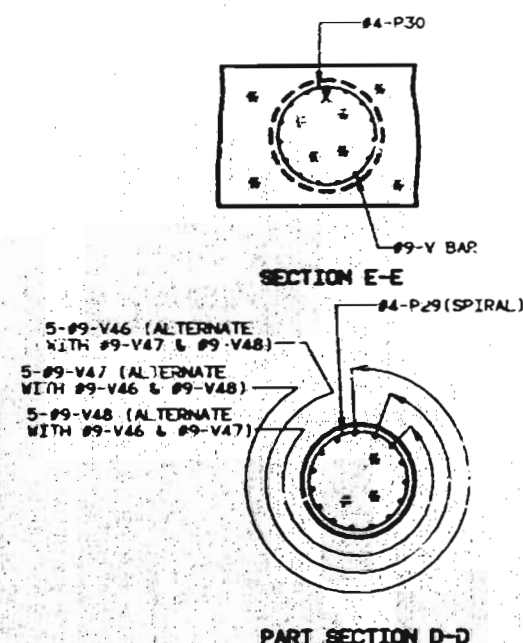
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 56 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 9		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	125
STRUCTURAL STEEL PILE (110")	LIN. FT.	1040
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	58.9
REINFORCING STEEL (BRIDGES)	LBS.	10080

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



STEEL PILE SPLICE

NOTE: FOR LOCATION OF SECTION C-C, D-D, E-E, F-F, G-G, AND H-H SEE SHEET NO. 15.  
FOR DETAILS OF BT. NO. 9 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 55 & 56.

DETAILS OF INT. BENT NO. 9 (NORTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED MAY 1993

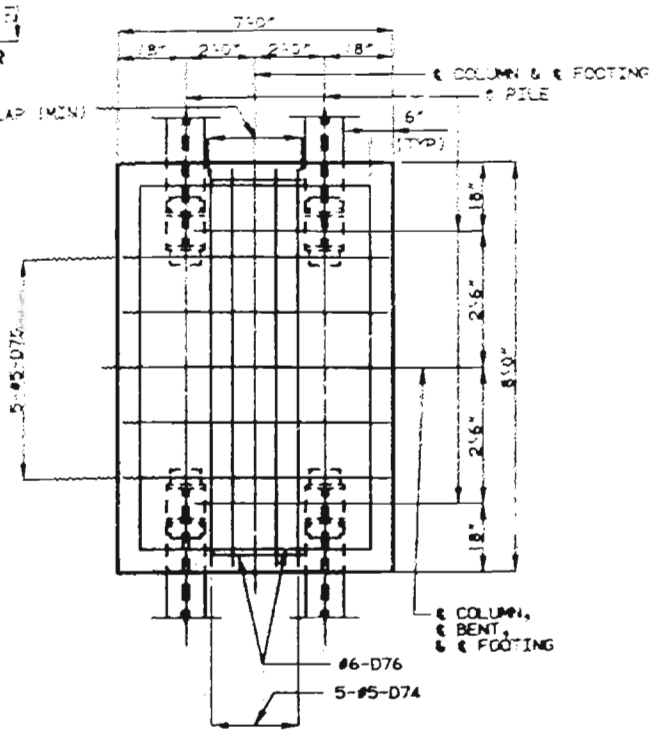
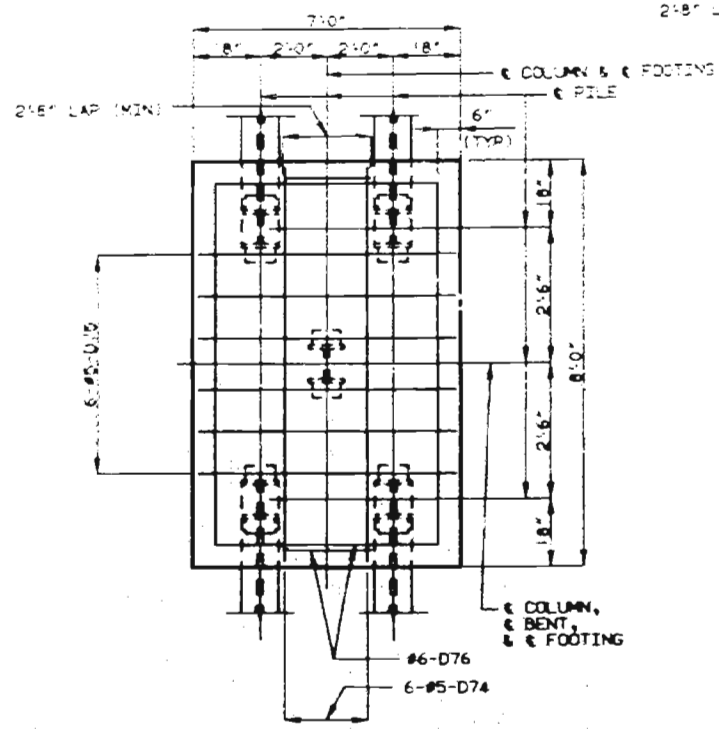
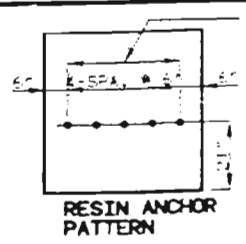
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 58 OF 232

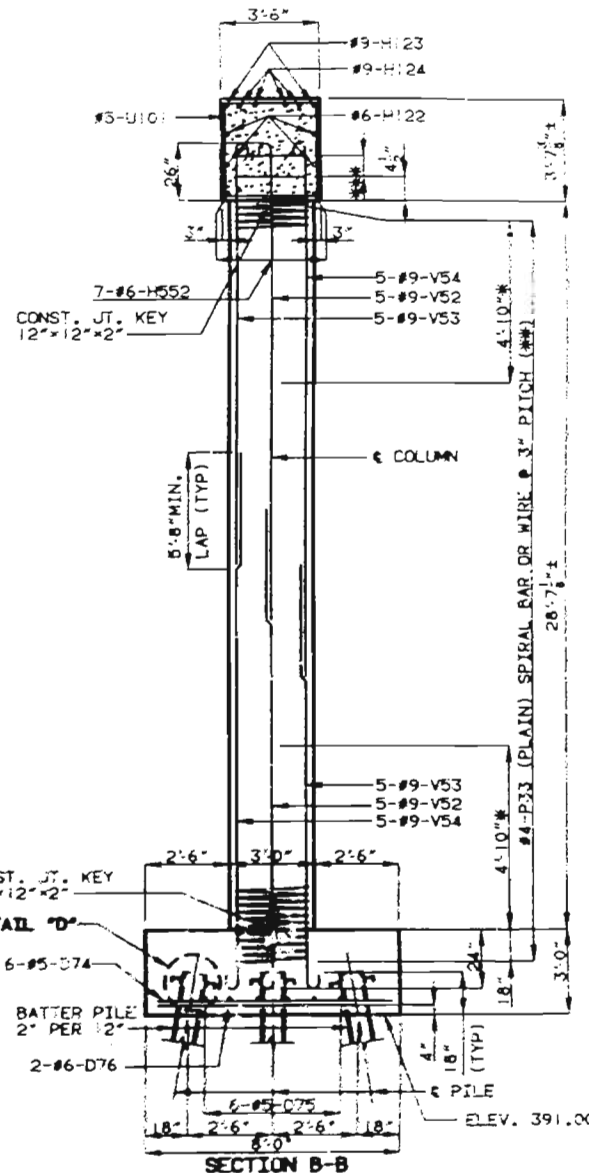
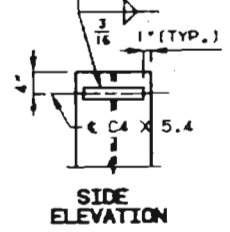
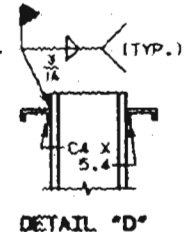
ST. LOUIS-JEFFERSON COUNTIES A-609R



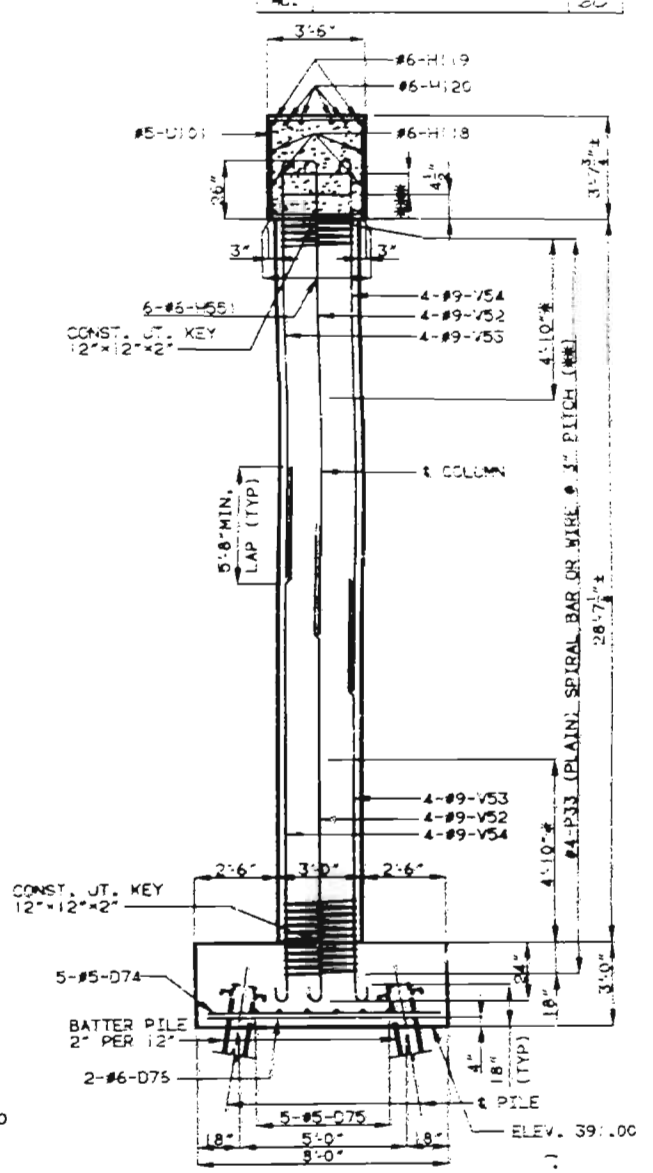
NOTE: \* LAPPING OF SPIRAL REINF. ON THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#6-H553 (TYP) P54 SPLICE LOCATIONS SHALL BE STAGGERED.



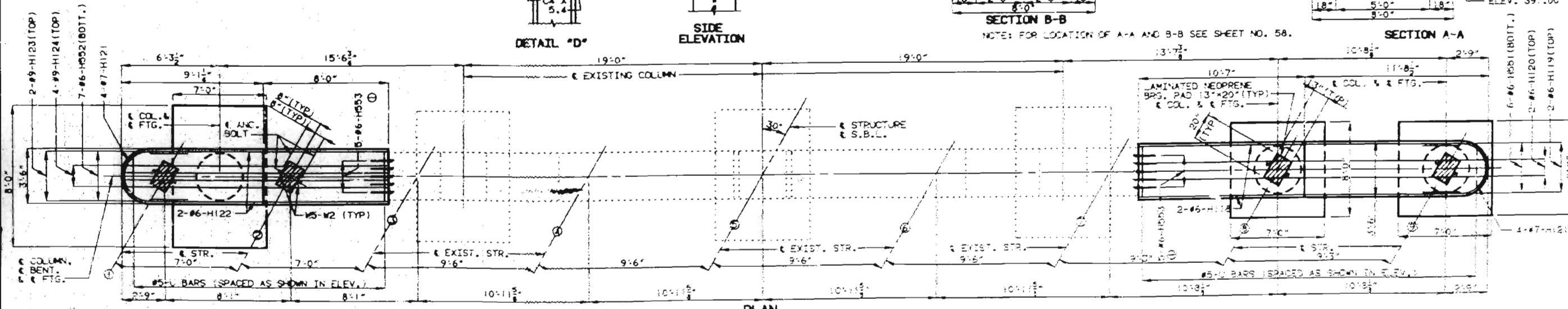
PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)



NOTE: FOR LOCATION OF A-A AND B-B SEE SHEET NO. 58.



① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.  
 NOTE: FOR DETAILS OF PILE SPLICE, SEE SHEET NO. 57.  
 FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



NOTE: FOR DETAILS OF BTL. 9 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 58 & 60.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.

DETAILS OF INT. BENT NO. 9 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

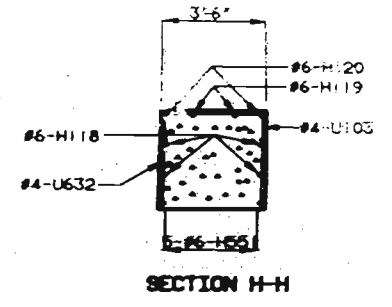
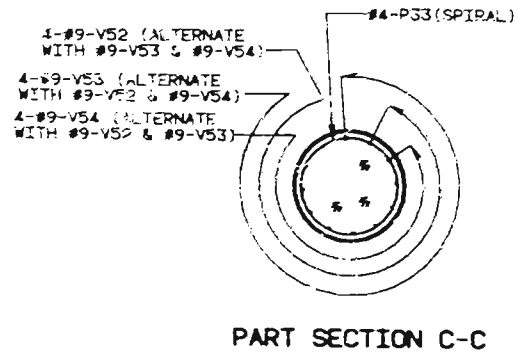
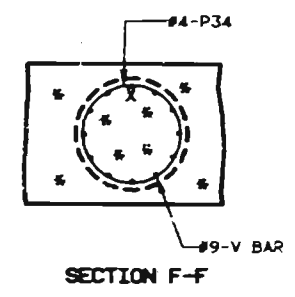
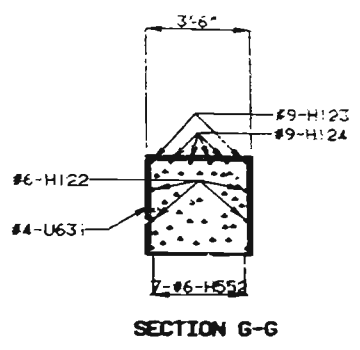
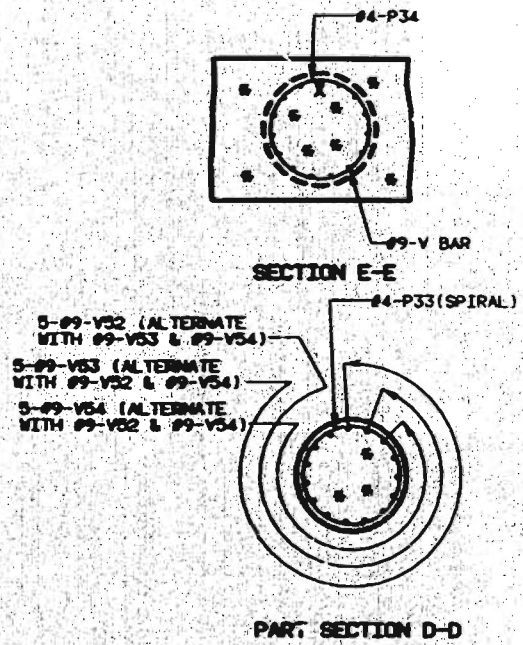
65



STATE	PROJ. NO.	SHEET NO.
MO.		61

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 9 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	135
STRUCTURAL STEEL PILE (10")	LIN. FT.	1040
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	59.3
REINFORCING STEEL (BRIDGES)	LBS.	10130

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, D-D, E-E, F-F, G-G, AND H-H, SEE SHEET NO. 6. FOR DETAILS OF BENT NO. 9 (SOUTHBOUND LANE) NOT SHOWN, SEE SHEET NO. 6.

DETAILS OF INT. BENT NO. 9 (SOUTHBOUND LANE)

66  
 DETAILED APRIL 1992  
 CHECKED MAY 1993

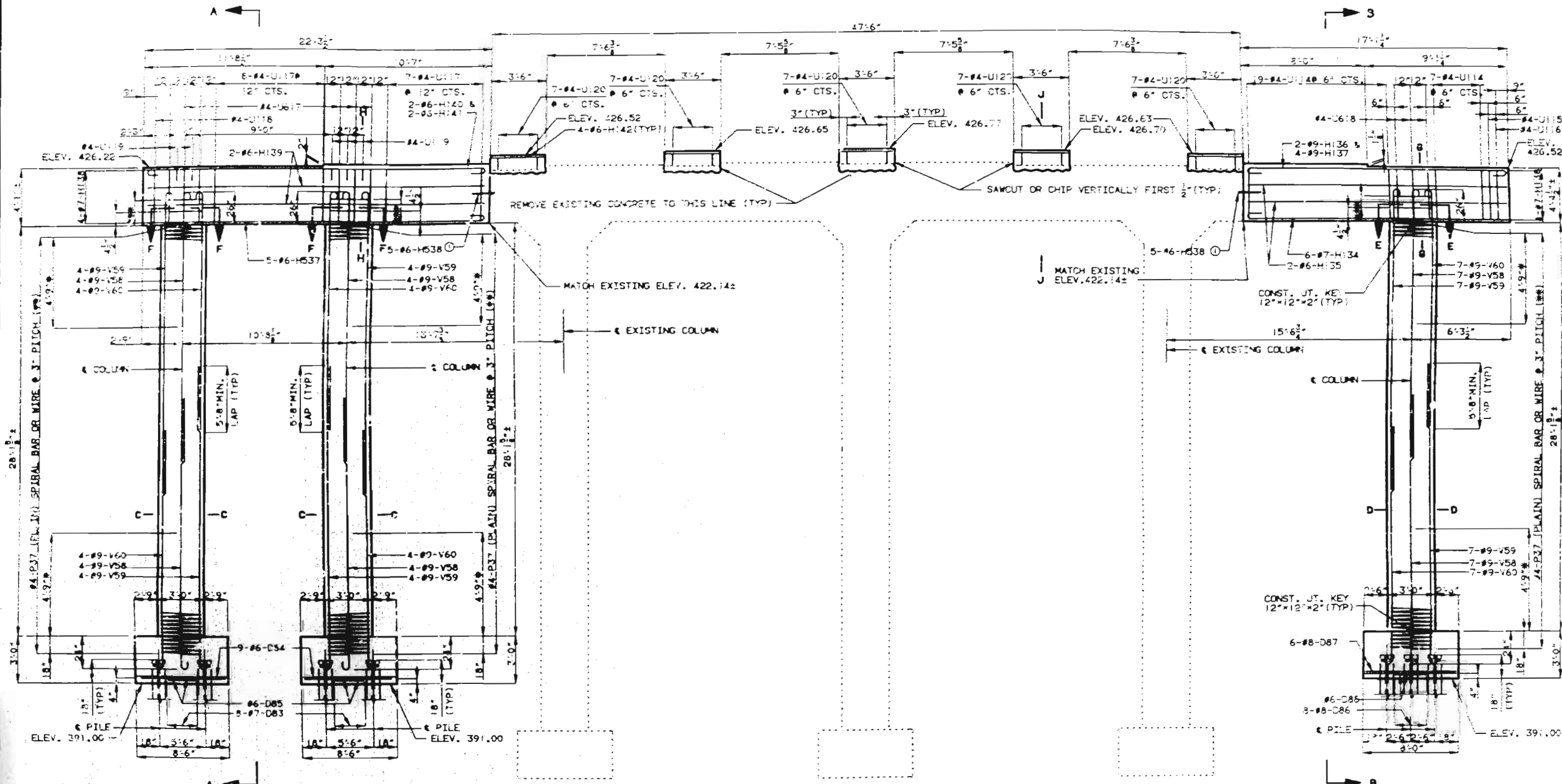
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 61 OF 233

ST. LOUIS-JEFFERSON COUNTIES A-609R

NOTE: FROM #4-U-20 IF NECESSARY TO FIT.

STATE	PROJ. NO.	SHEET NO.
MO.		62



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P38 @ 3" CTS. (TYP) P38 SPLICE LOCATIONS SHALL BE STAGGERED.

DBARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: ANCHORAGE OF SPIRAL REINFORCEMENT SHALL BE PROVIDED BY 1 1/2 EXTRA TURNS OF SPIRAL BAR AT EACH END OF SPIRAL UNIT.

NOTE: FOR DETAILS OF SECTION C-D, D-D, E-E, F-F, G-G, H-H AND I-I SEE SHEET NO. 63.

FOR DETAILS OF PILE SPLICE SEE SHEET NO. 63.

NOTE: FOR DETAILS OF BT. NO. 10 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 62 & 63. FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 62.

### DETAILS OF INT. BT. NO. 10 (NORTHBOUND LANE)

DATE: APRIL 1992  
 CHECKED: MAY 1993

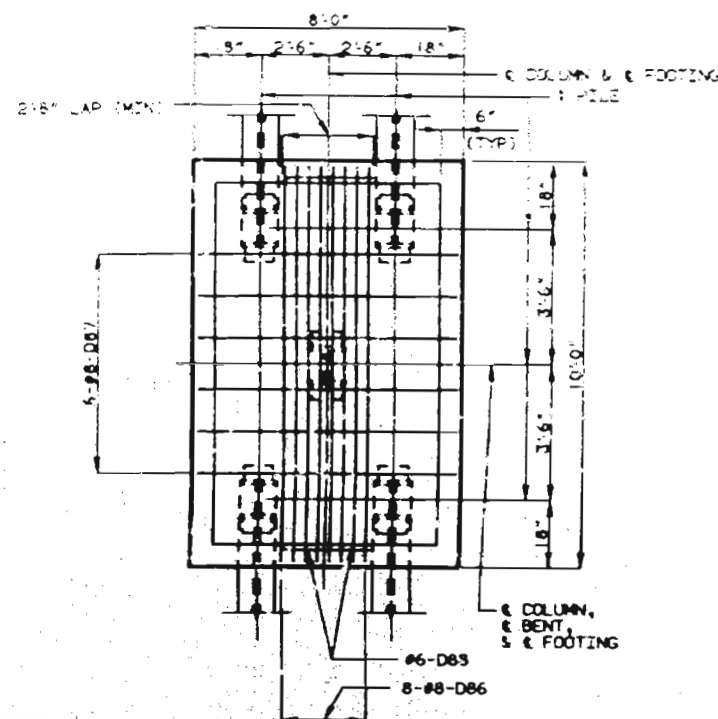
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 61 OF 238

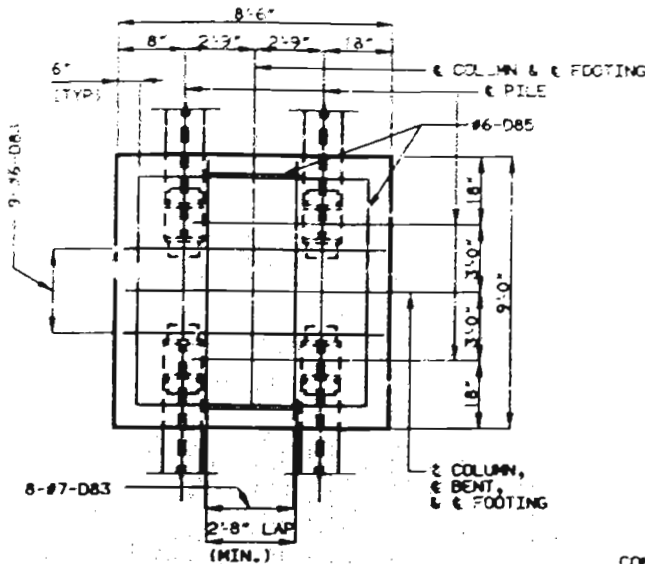
ST. LOUIS-JEFFERSON COUNTIES A-609R

NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STOPPED REIN. BAR.  
 \*\*\* 5-#4-D55 \* 3" DIA. (TYP) PILE SPLICE LOCATIONS SHALL BE STAGGERED.

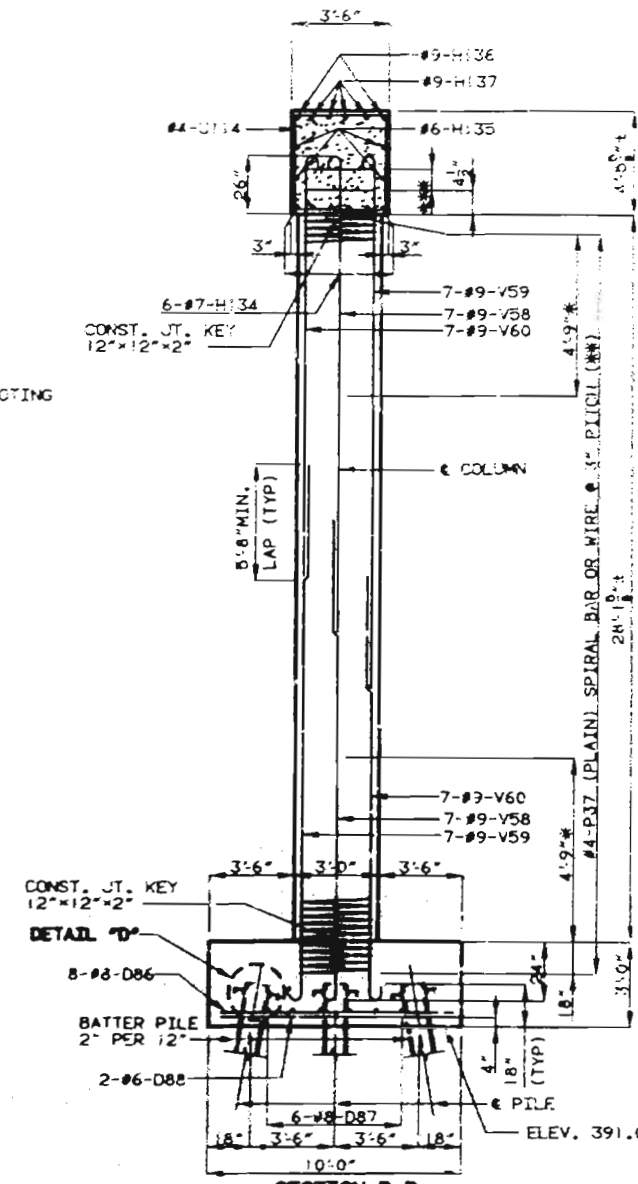
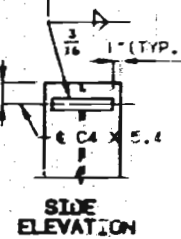
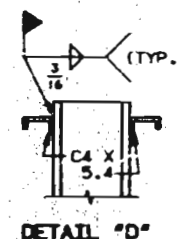
STATE	PROJ. NO.	SHEET NO.
		69



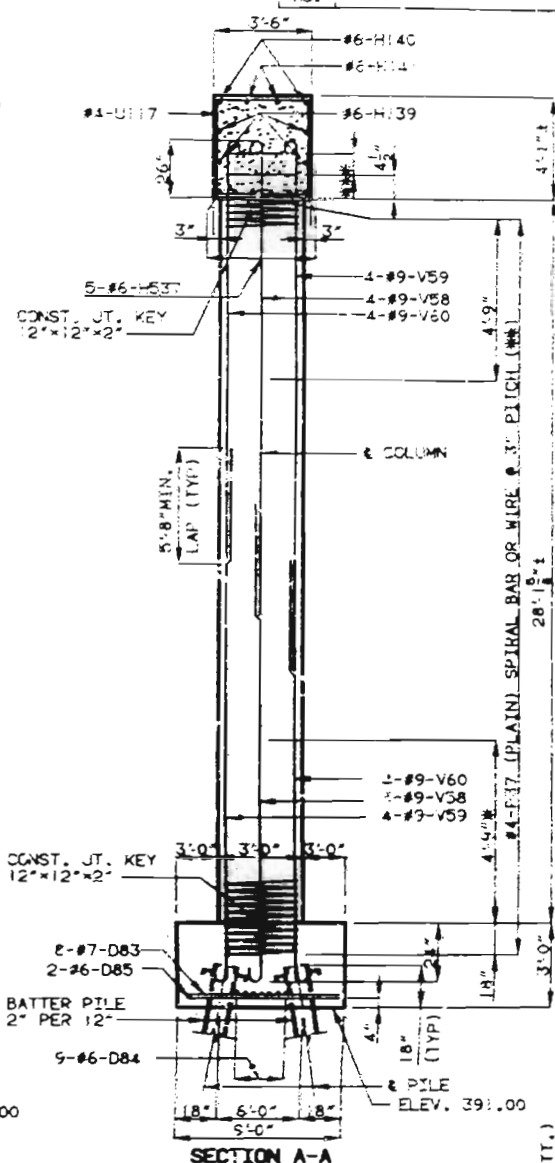
PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)



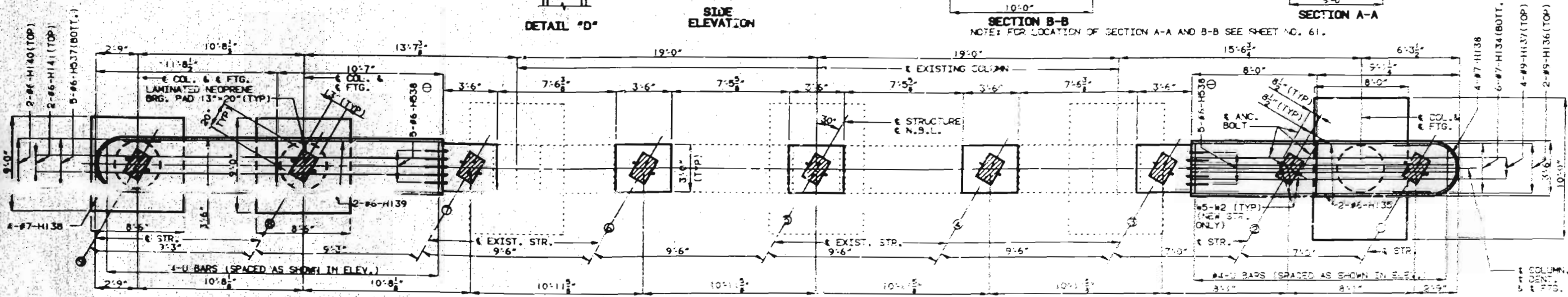
PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)



SECTION B-B  
 NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 61.



SECTION A-A



PLAN

DETAILS OF INT. BENT NO. 10 (NORTHBOUND LANE)

NOTE: FOR DETAILS OF DT, 10 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 61 & 63.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 62 OF 238

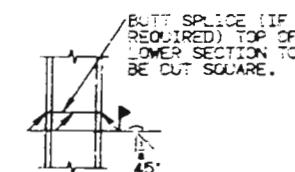
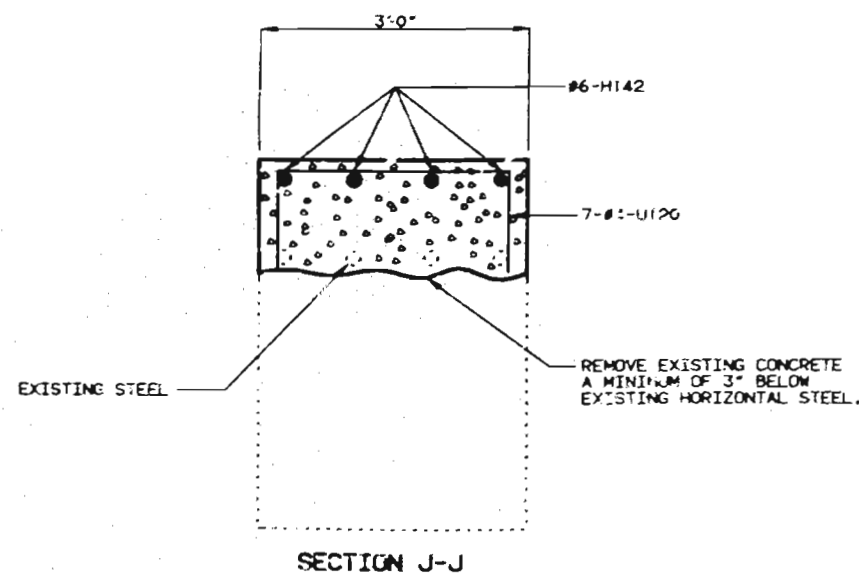
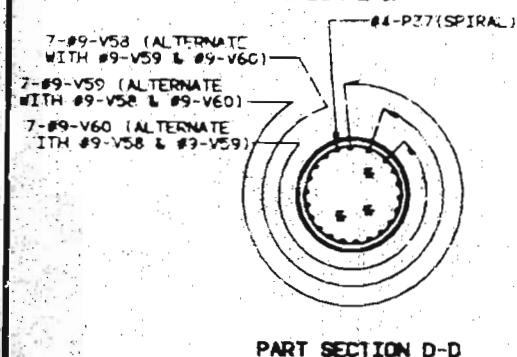
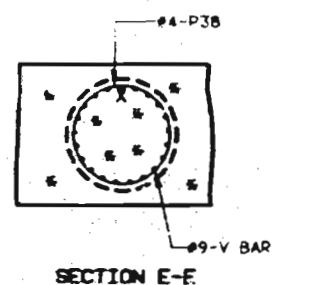
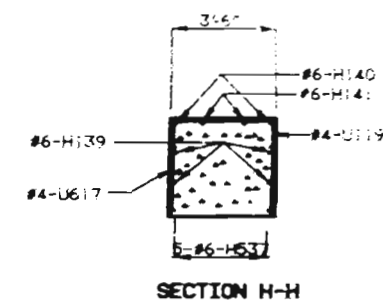
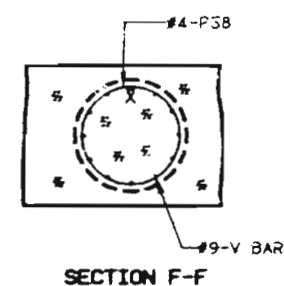
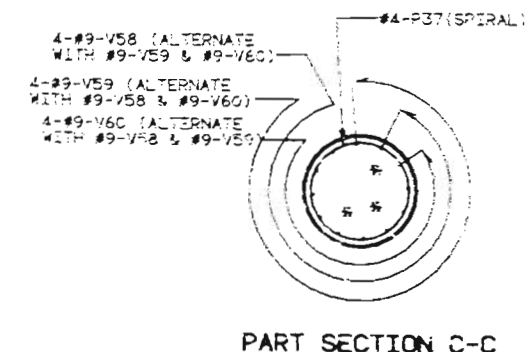
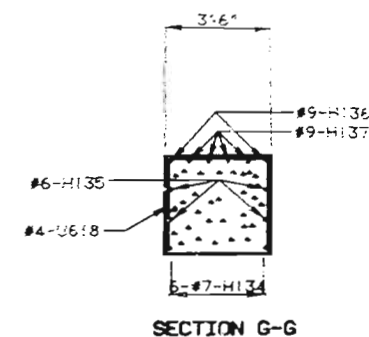
ST. LOUIS-JEFFERSON COUNTIES A-609R

68 200



SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 10 (NORTHBOUND LANE)		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	170
STRUCTURAL STEEL PILE (10")	LIN. FT.	1040
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	72.2
REINFORCING STEEL (BRIDGES)	LBS.	11530

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, D-D, E-E, F-F, G-G, J-J AND H-H SEE SHEET NO. 61.  
FOR DETAILS OF BT. NO. 10 (NORTHBOUND LANE) NOT SHOWN, SEE SHEET NOS. 62 & 63.

# DETAILS OF INT. BENT NO. 10 (NORTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED MAY 1993

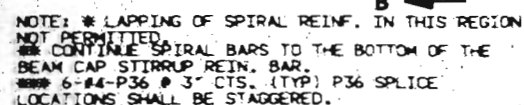
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 63 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



STATE	DOCU. NO.	SHEET NO.
NC		65



NOTE: FOR DETAILS OF BT, NO. 10 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 65 & 66.  
FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 65.

ELEVATION

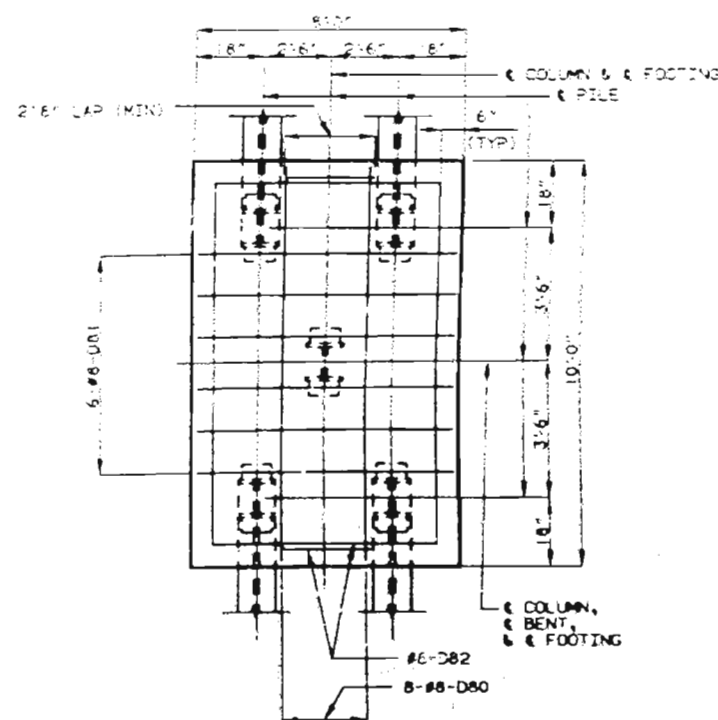
NOTE: FOR DETAILS OF SECTION C-C, D-D, E-E, F-F, G-G, H-H AND I-I SEE SHEET NO. 55.  
FOR DETAILS OF PIPE SECTION SEE SHEET NO. 53.

DETAILED APRIL 1992  
CHECKED MAY 1993

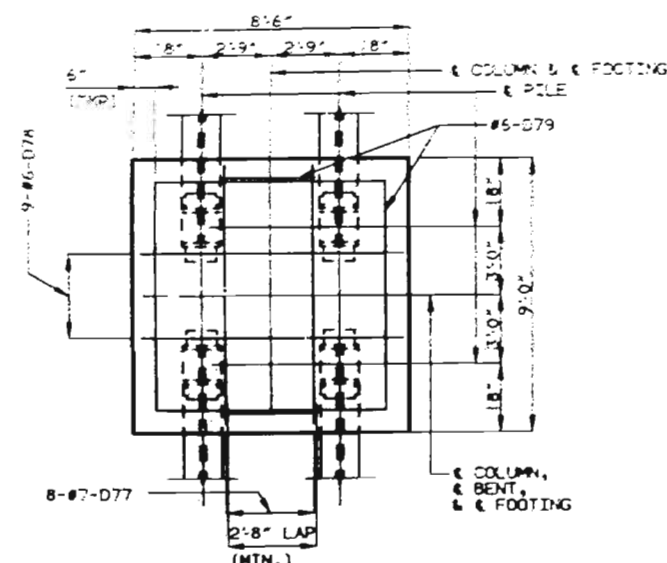
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 54 OF 239

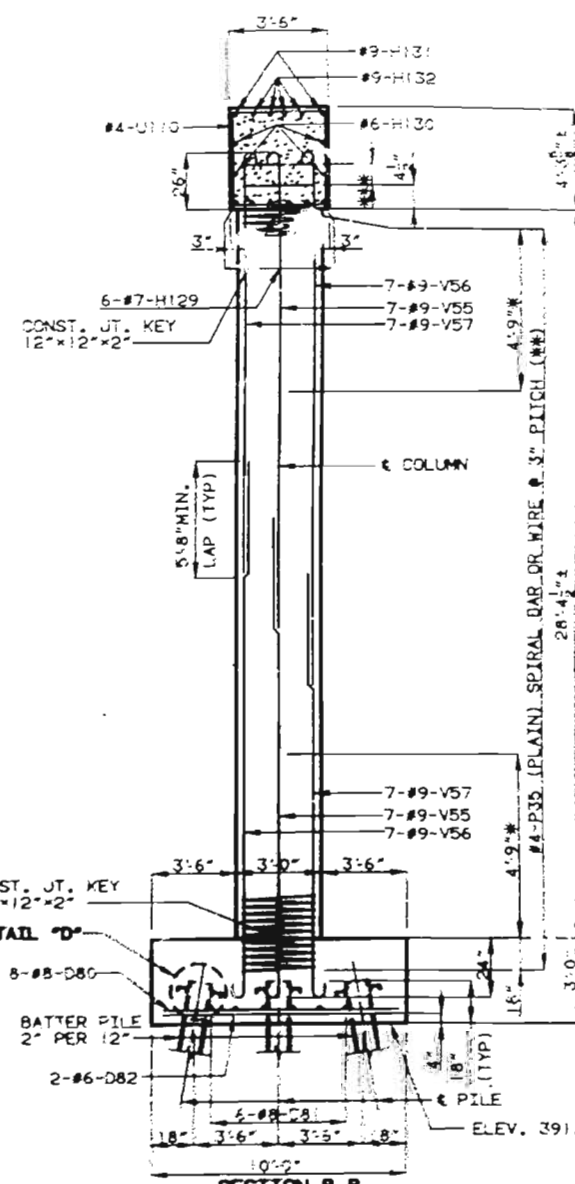
ST. LOUIS-JEFFERSON COUNTIES A-609R



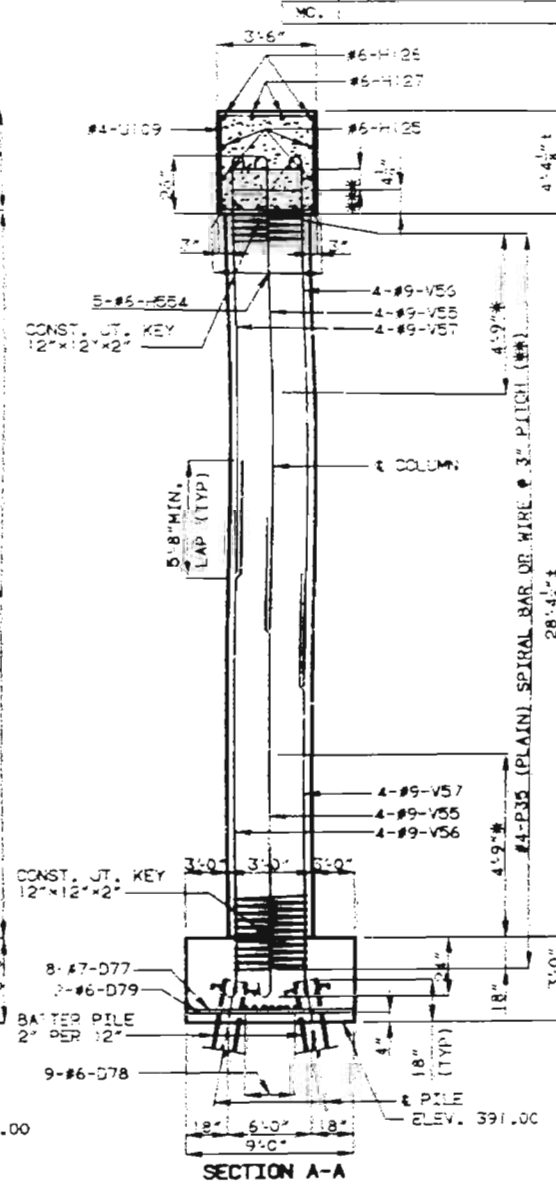
PLAN OF FOOTING SHOWING  
REINFORCEMENT (LEFT SIDE)



PLAN OF FOOTING SHOWING  
REINFORCEMENT (RIGHT SIDE)



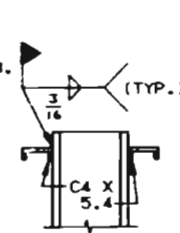
SECTION B-B  
NOTES: FOR LOCATION OF A-A AND B-B SEE SHEET NO. 64



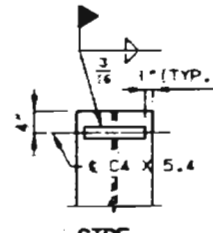
SECTION A-A

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

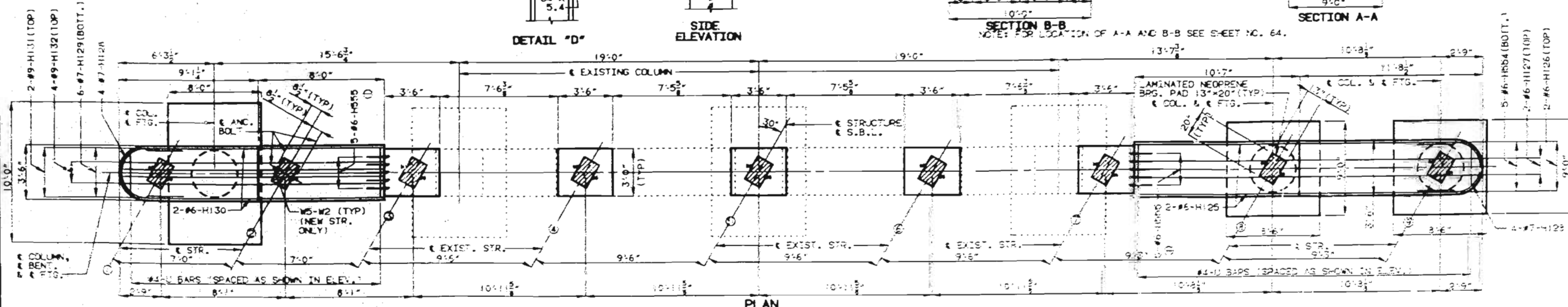
NOTE: FOR DETAIL OF PILE SPLICE, SEE SHEET NO. 63.  
FOR DETAILS OF BEARINGS, SEE SHEET NO. 156.



DETAIL "D"



**SIDE  
ELEVATION**



## PLAN

NOTE: FOR DETAILS OF BT. 10 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 64 & 66.  
FOR DETAIL OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.  
DETAILED APRIL 1992  
CHECKED MAY 1993  
NOTE: THIS DRAWING IS

DETAILS OF INT. BENT NO. 10 (SOUTHBOUND LANE)

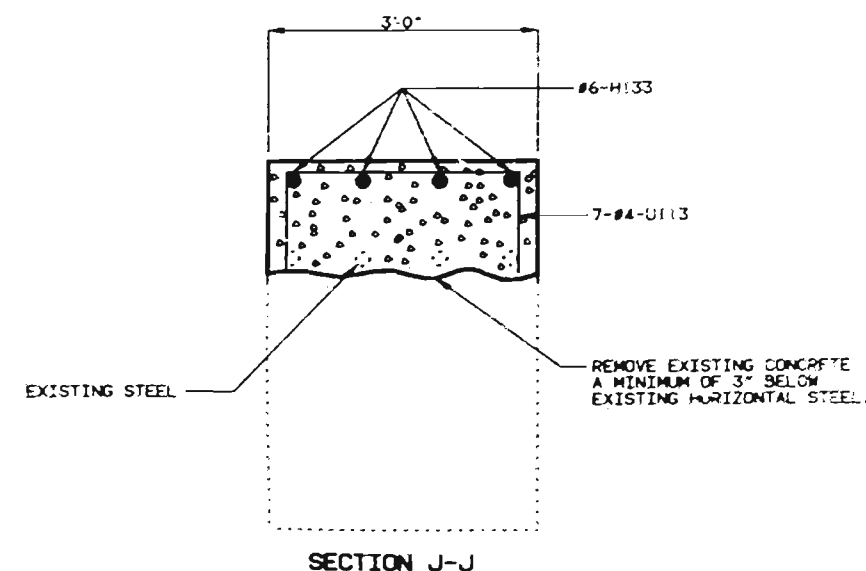
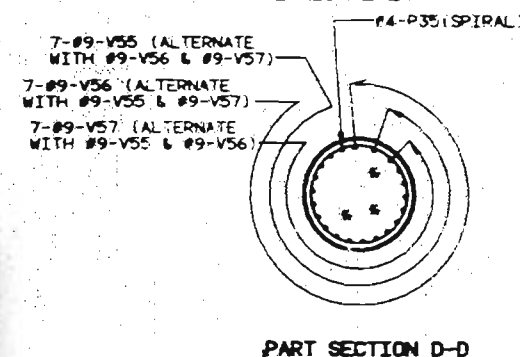
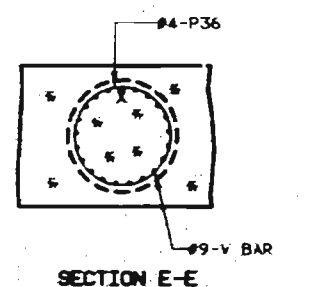
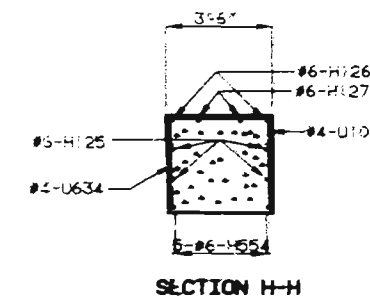
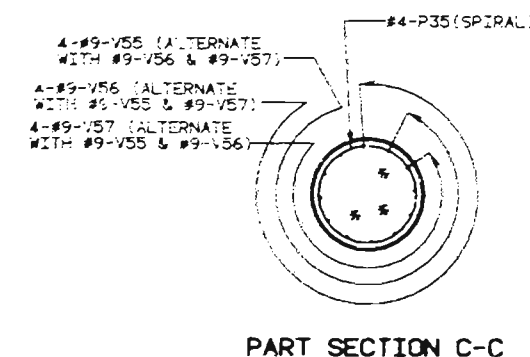
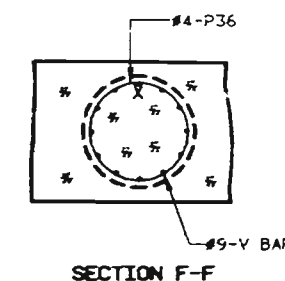
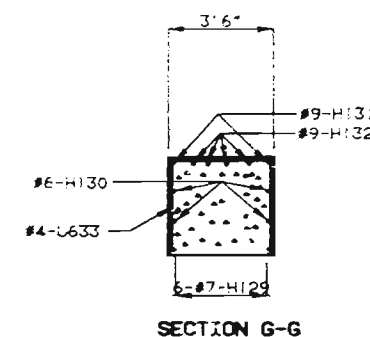
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 65 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 10 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	170
STRUCTURAL STEEL PILE (10")	LIN. FT.	1040
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	72.8
REINFORCING STEEL (BRIDGES)	LBS.	9540

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, D-D, E-E, F-F, G-G, H-H AND J-J SEE SHEET NO. 64.  
NOTE: FOR DETAILS OF BT. 10 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 64 & 65.

# DETAILS OF INT. BENT NO. 10 (SOUTHBOUND LANE)

DETAILED APRIL 1992  
CHECKED MAY 1993

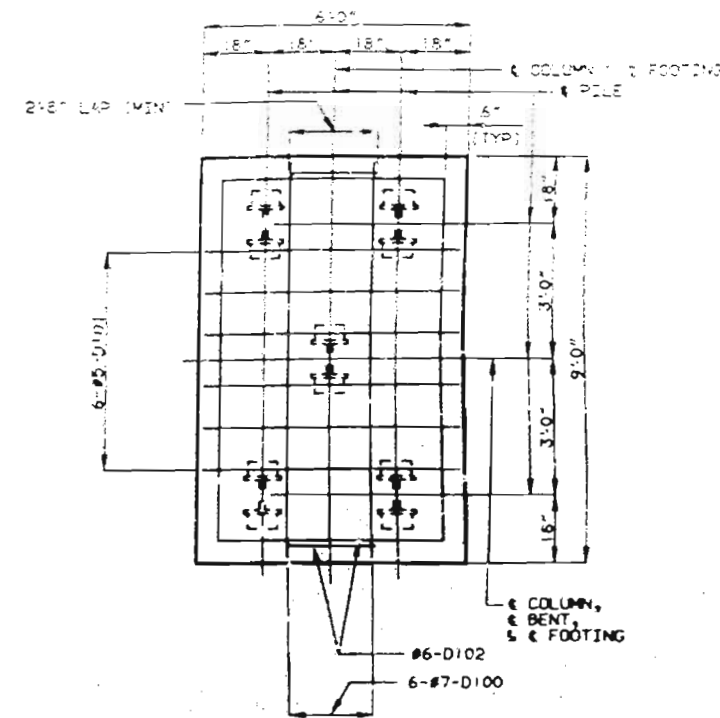
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 55 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



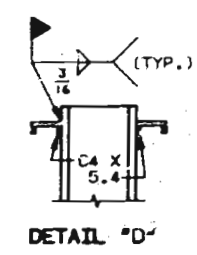




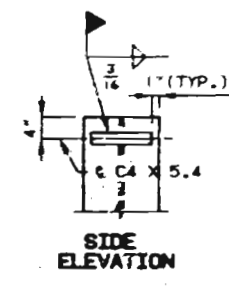
PLAN OF FOOTING  
SHOWING REINFORCEMENT

NOTE: LAP-ING OF SPIRAL REIN. IN THIS REGION NOT PERMITTED.  
#6 CONTINUOUS SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
#6-#4-F51 @ 3" CTS. (TYP) F51 SPLICE LOCATIONS SHALL BE STAGGERED.

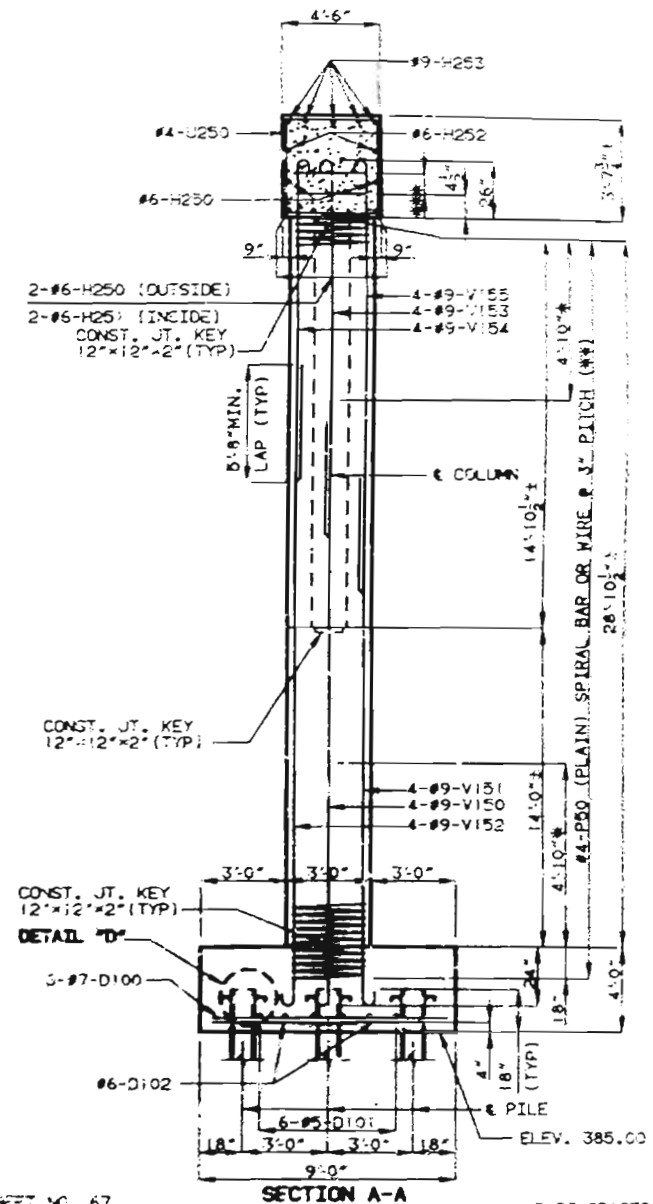
NOTE: FOR DETAIL OF PILE SPLICE SEE SHEET NO. 15.



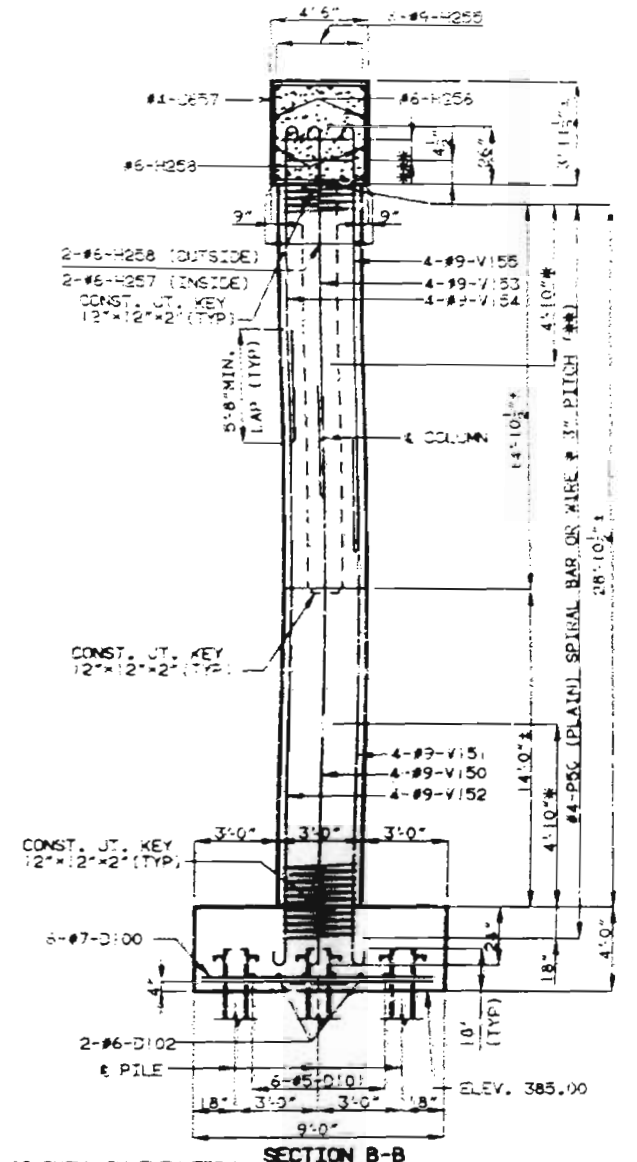
DETAIL "D"



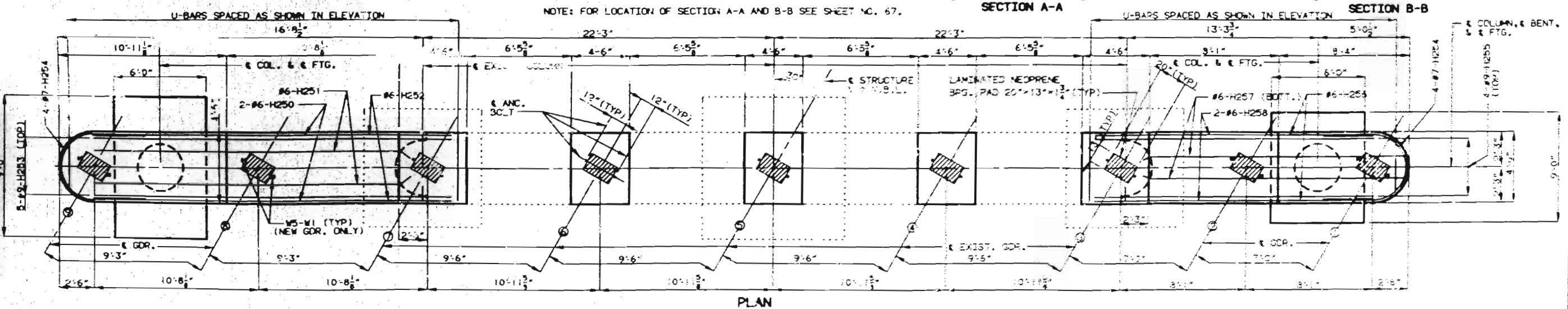
SIDE ELEVATION



SECTION A-A



SECTION B-B



PLAN

DETAILS OF INT. BENT NO. 11 (NORTHSOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 68 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

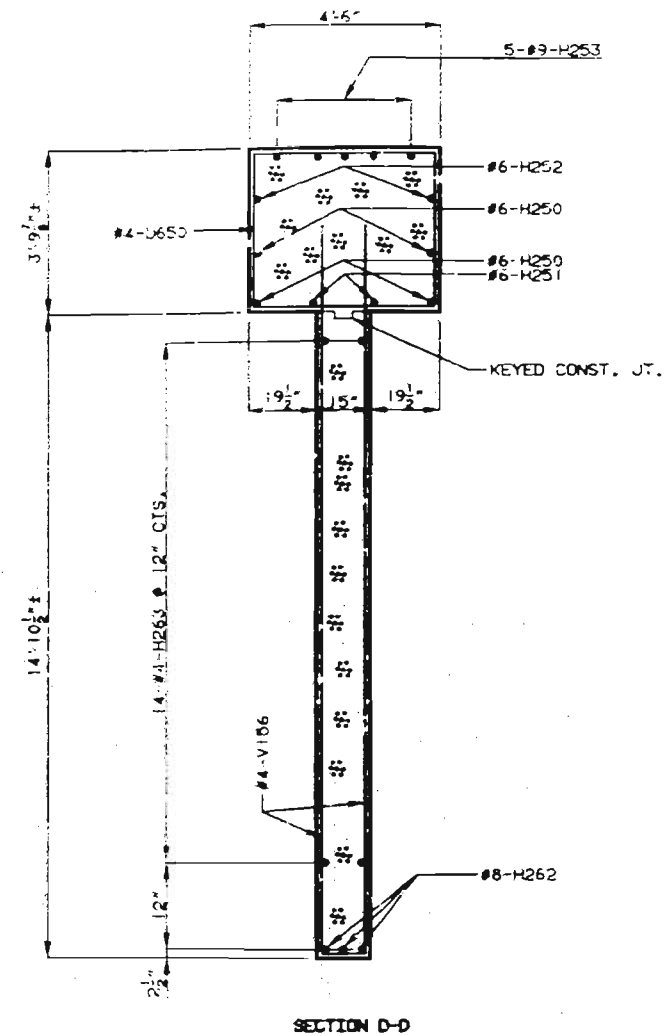
DETAILED MAY 1992  
CHECKED AUG. 1992

74

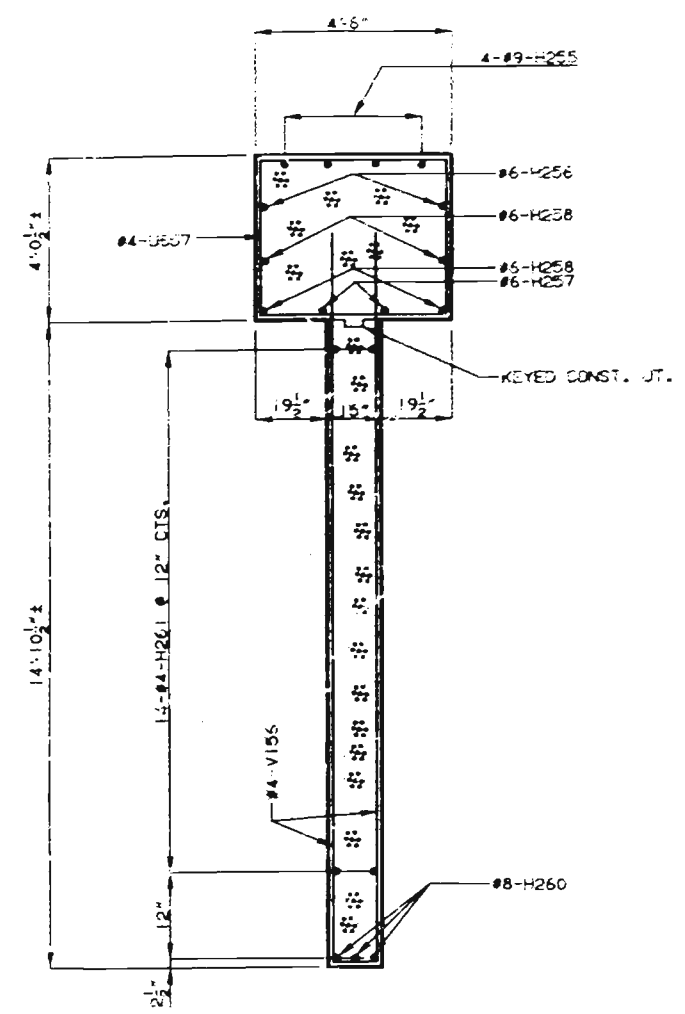
SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 11 (NORTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	35
STRUCTURAL STEEL PILE (13)	LIN. FT.	660
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	77.0
REINFORCING STEEL (BRIDGES)	LBS.	9210

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.

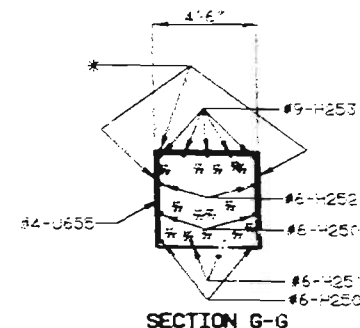
\* SEAL TOP & SIDE OF BEAM CAP WITH PROTECTIVE COATING (DETERIOROUS AGENTS). (SEE SPECIAL PROVISIONS).



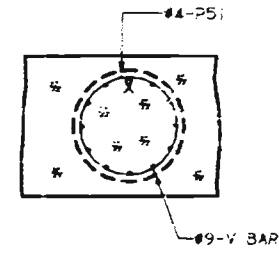
SECTION D-D



SECTION E-E

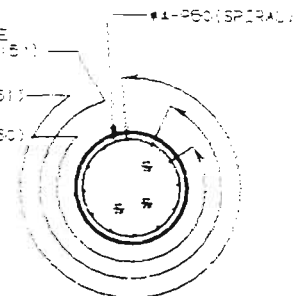


SECTION G-G

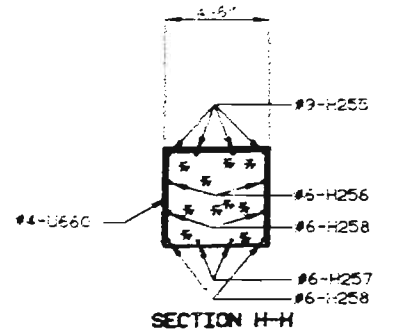


SECTION F-F

4-#9-V152 (ALTERNATE WITH #9-V150, #9-V151)  
4-#9-V150 (ALTERNATE WITH #9-V152, #9-V151)  
4-#9-V151 (ALTERNATE WITH #9-V152, #9-V150)

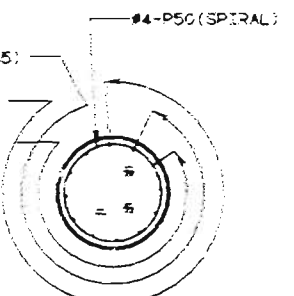


PART SECTION C-C

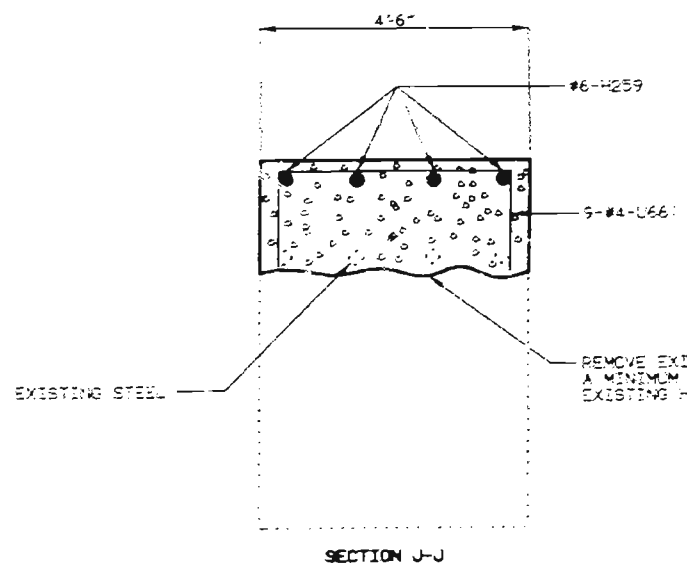


SECTION H-H

4-#9-V153 (ALTERNATE WITH #9-V154, #9-V155)  
4-#9-V154 (ALTERNATE WITH #9-V153, #9-V155)  
4-#9-V155 (ALTERNATE WITH #9-V153, #9-V154)



PART SECTION K-K



SECTION J-J

NOTE: FOR LOCATION OF SECTION C-C, D-D, E-E, H-H, J-J, AND K-K SEE SHEET NO. 67.

DETAILS OF INT. BENT NO. 11 (NORTHBOUND LANE)

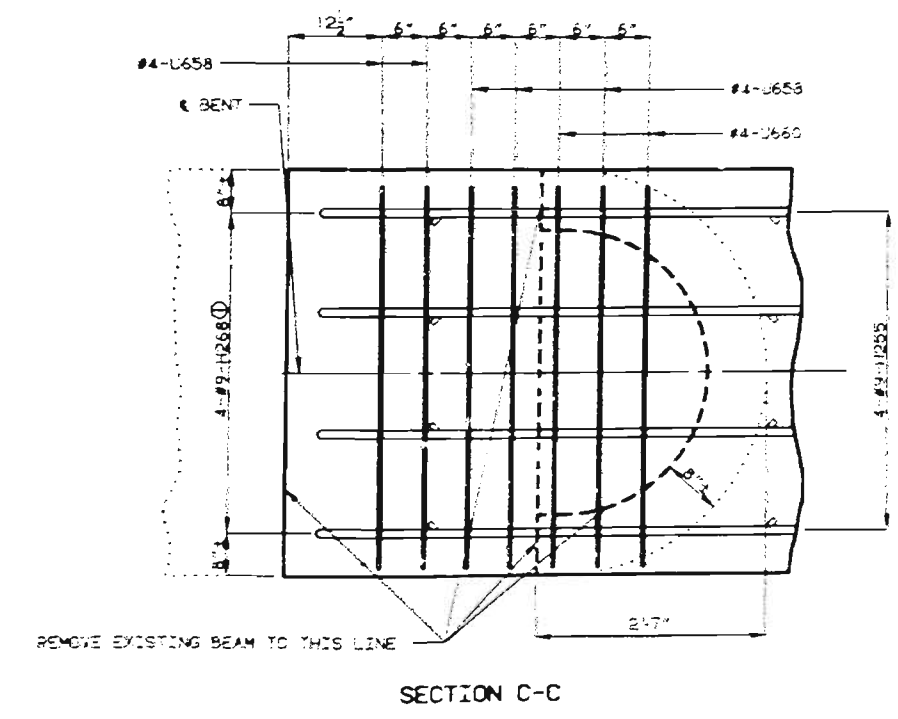
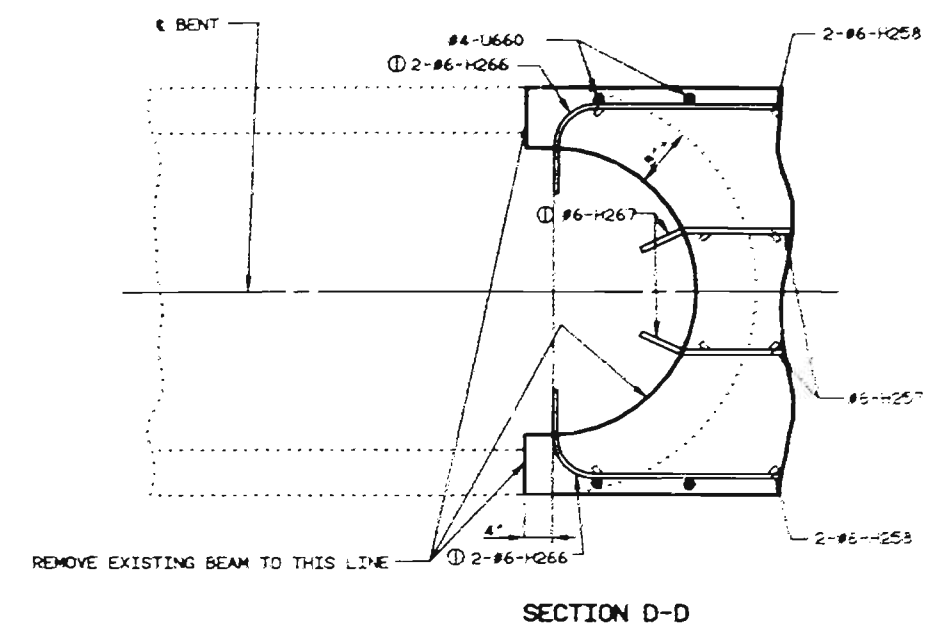
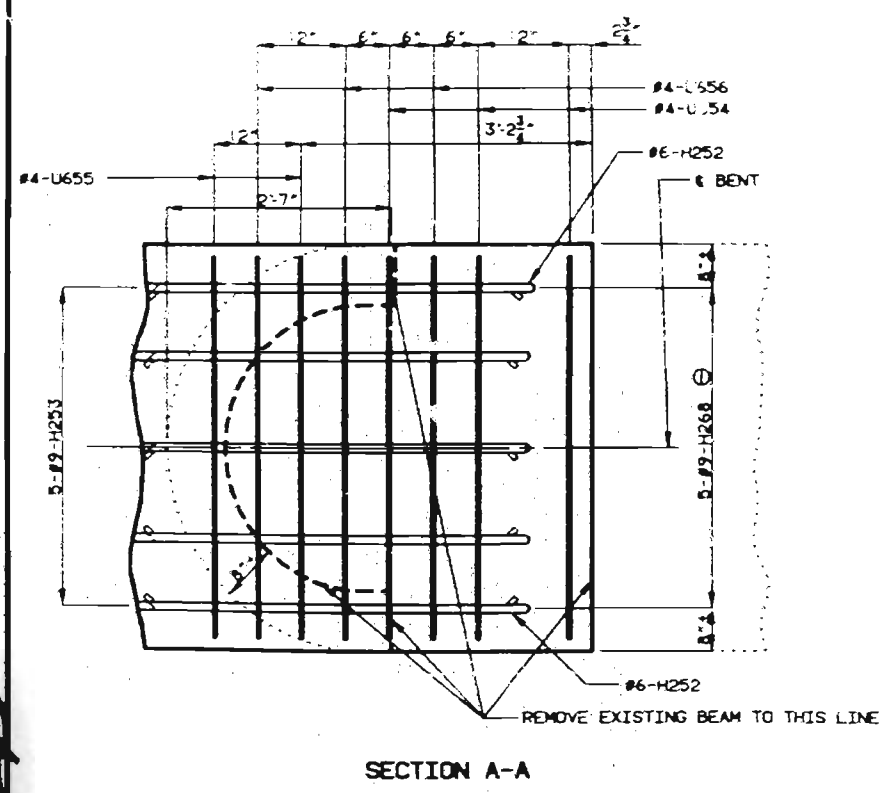
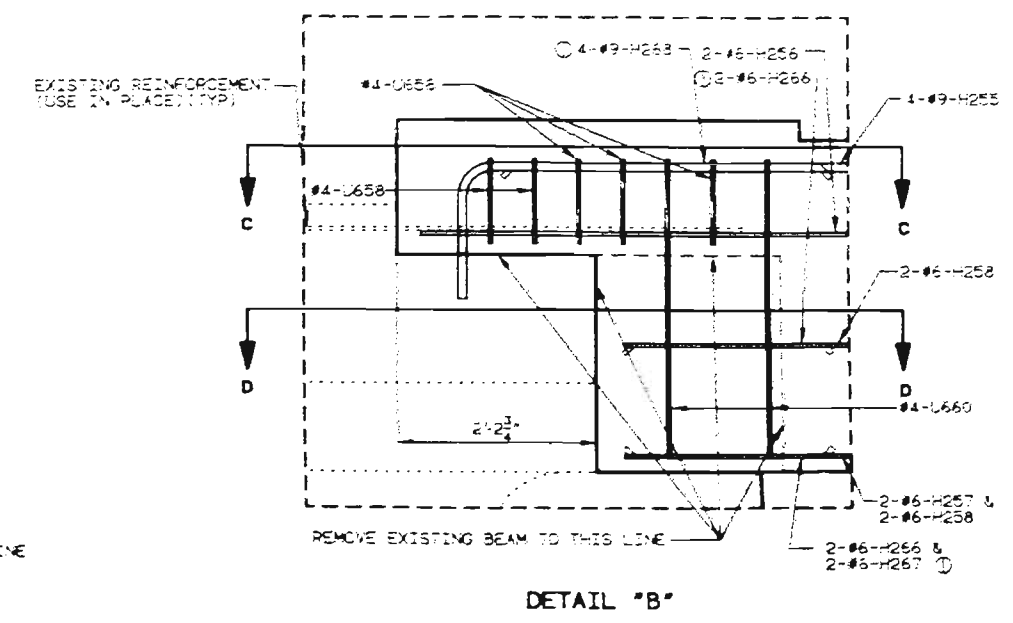
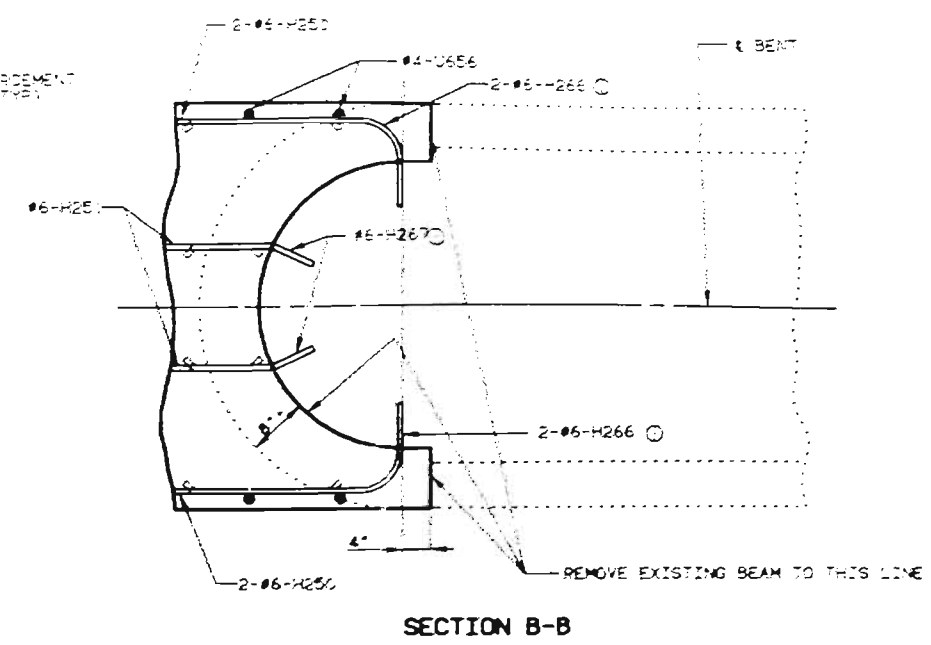
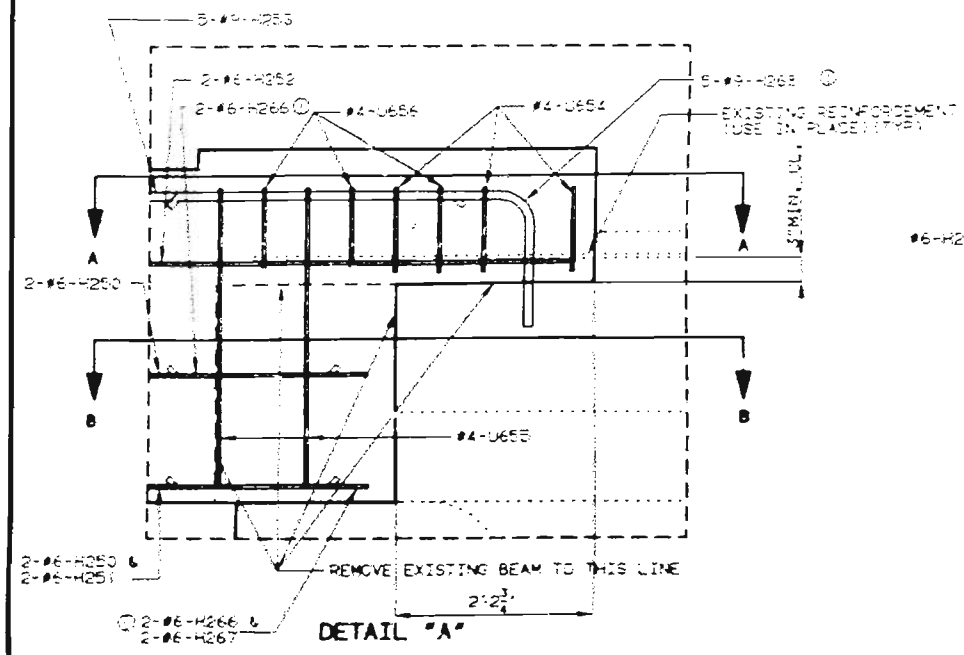
DETAILED MAY 1992  
CHECKED AUG. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 69 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

75



① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

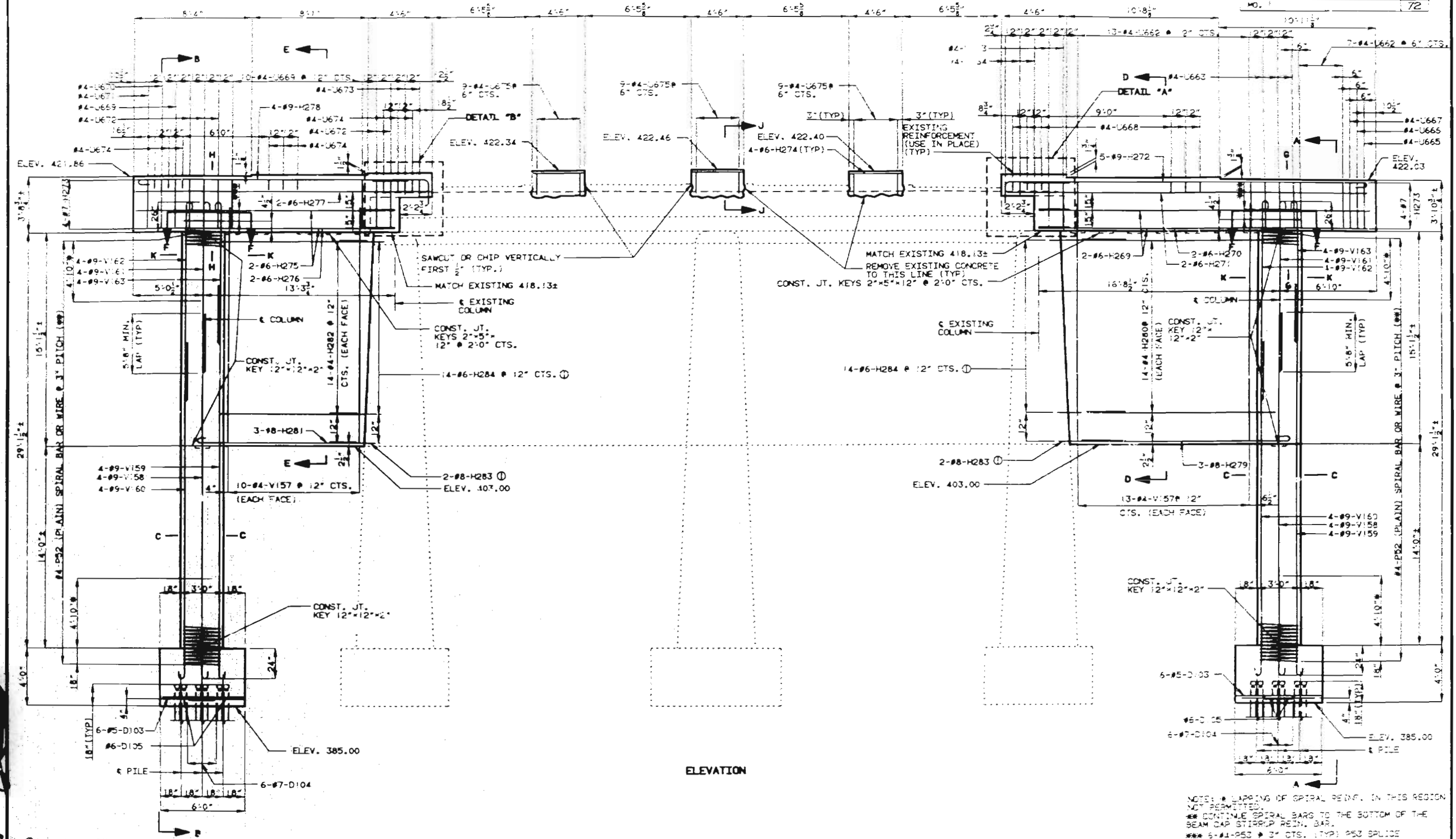
NOTE: FOR LOCATION OF DETAIL "A" AND "B" SEE SHEET NO. 67.

DETAILS OF INT. BENT NO. 11 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 70 OF 233

7/6



77

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR DETAILS OF BT. NO. 11 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NO. 72, 73, & 74. FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 72.

DETAILS OF INT. BT. NO. 11 (SOUTHBOUND LANE)

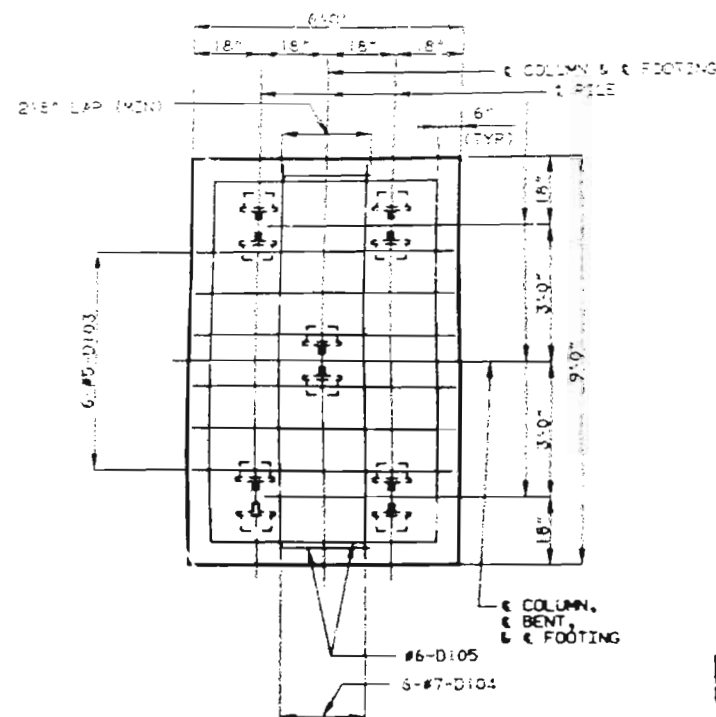
DETAILED MAY 1992  
CHECKED NOV. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

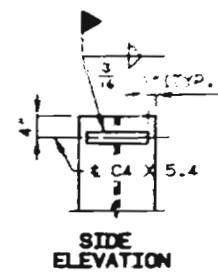
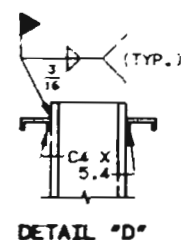
SHEET NO. 7 OF 233

ST. LOUIS-JEFFERSON COUNTIES A-609R

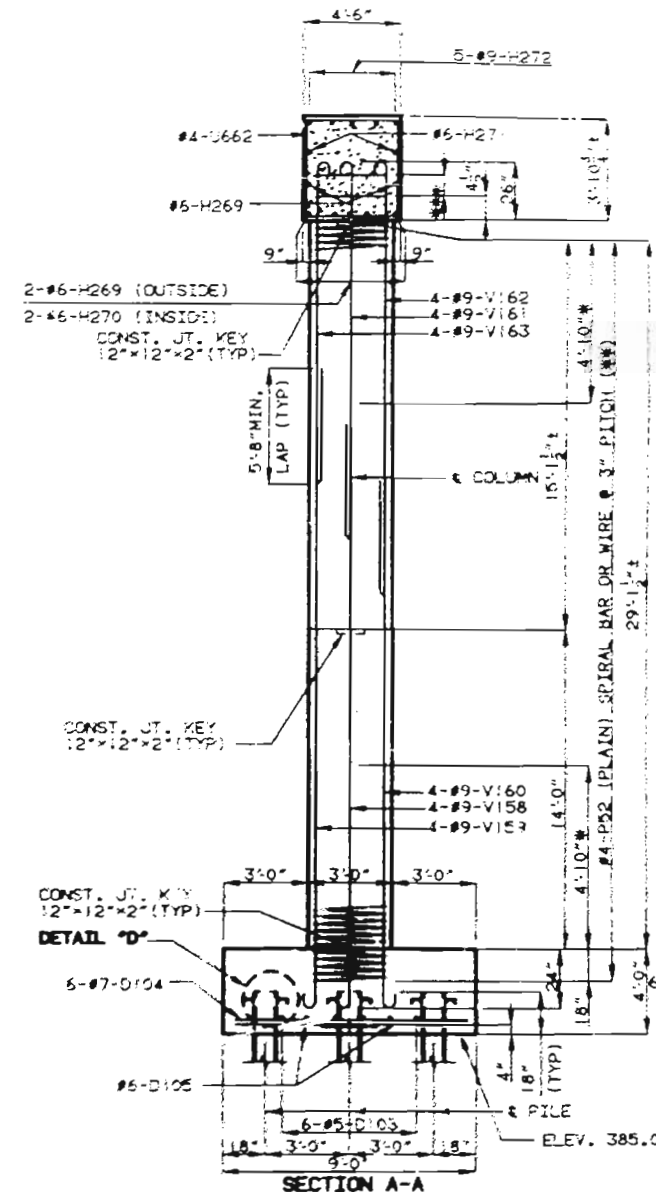




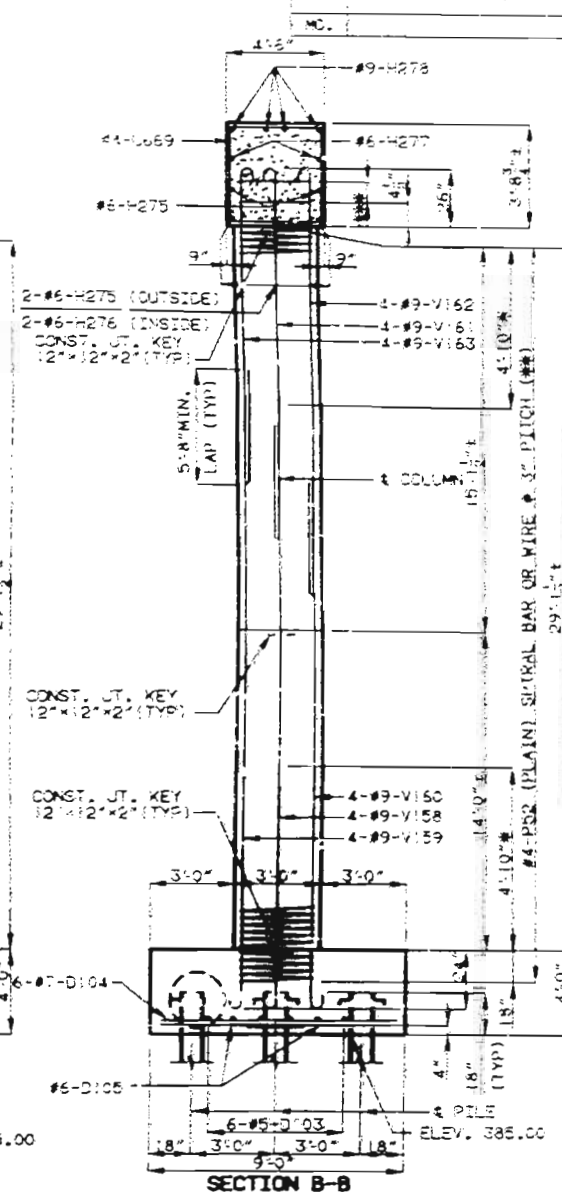
PLAN OF FOOTING  
SHOWING REINFORCEMENT



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
\* 6-#4-P53 @ 3' CTS. (TYP) P53 SPLICE LOCATIONS SHALL BE STAGGERED.

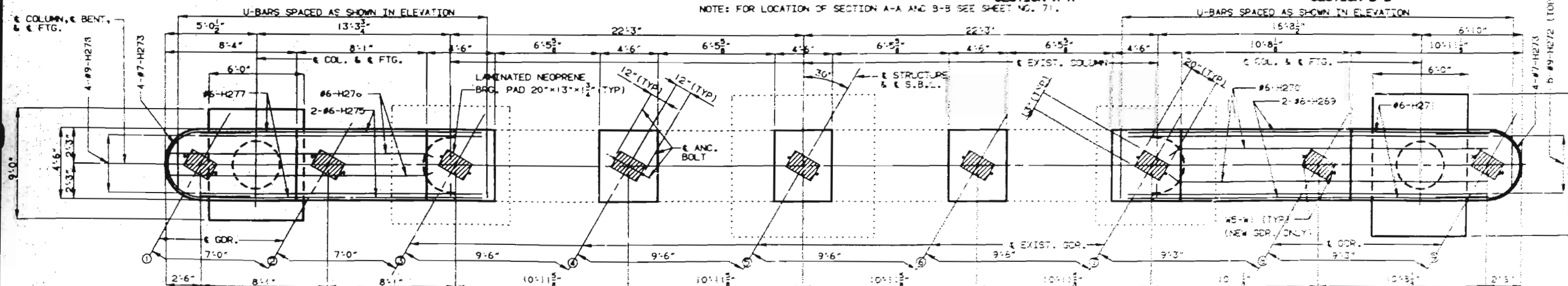


SECTION A-A



SECTION B-B

NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 71.



PLAN  
DETAILS OF INT. BENT NO. 11 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

DETAILED MAY 1992  
CHECKED MAR. 1993

SHEET NO. 72 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

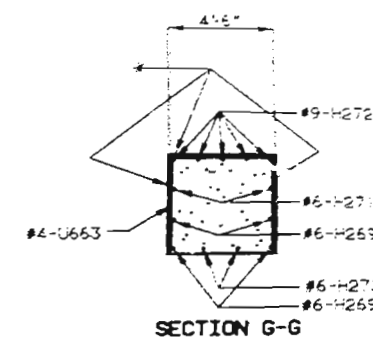
# SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 11

ITEM	QUANTITY
CLASS 1 EXCAVATION	CU. YDS. 140
STRUCTURAL STEEL PILE (10%)	LN. FT. 650
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS. 78.5
REINFORCING STEEL (PROCES)	LBS. 9240

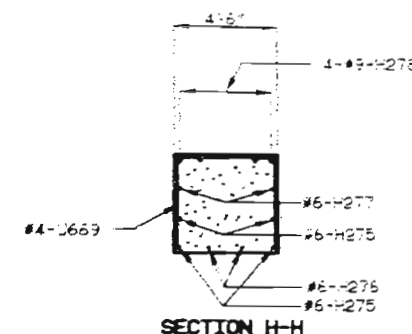
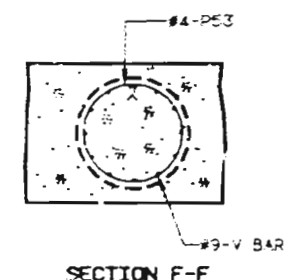
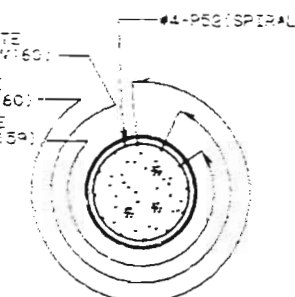
NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 10.

\* SEAL TOP & SIDE OF BEAM CAP WITH PROTECTIVE COATING (DELETERIOUS AGENTS). (SEE SPECIAL PROVISIONS).

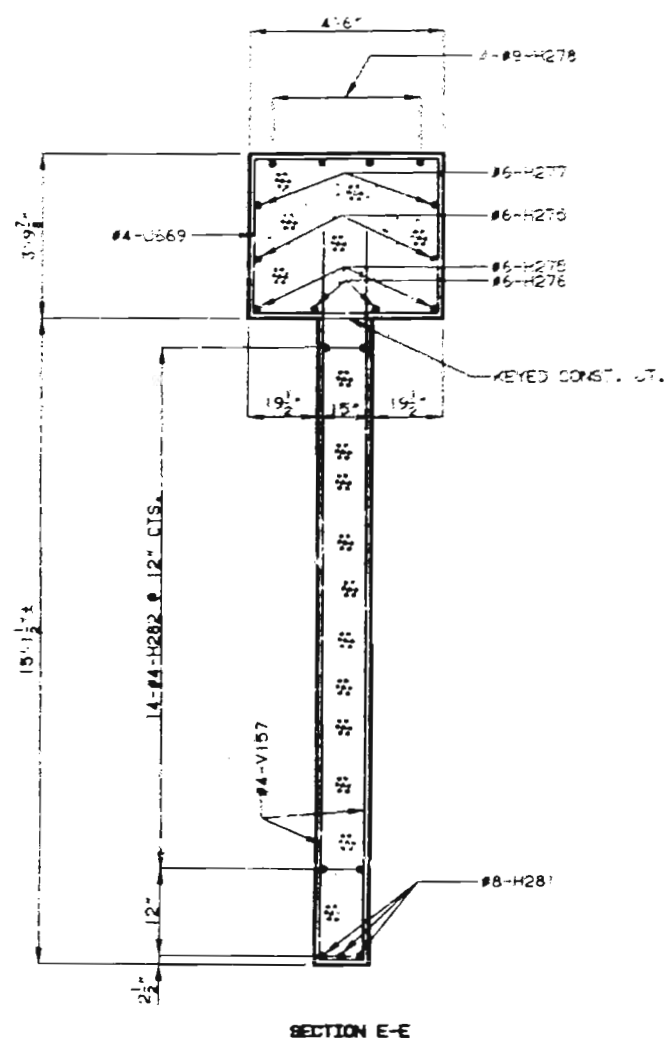
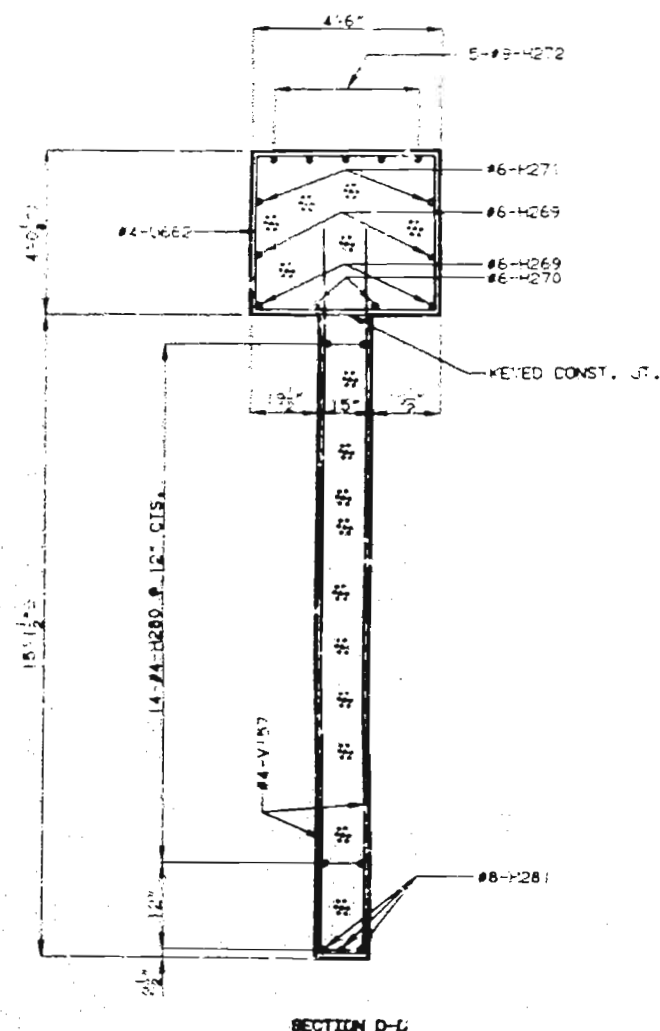
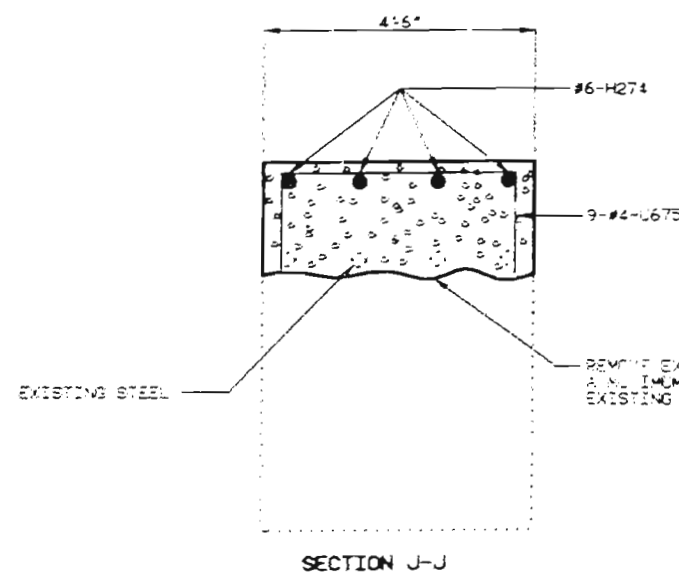
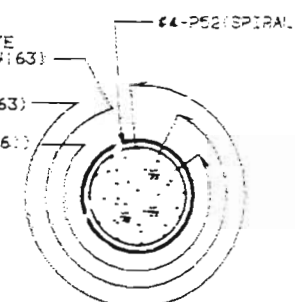
STATE	PROJ. NO.	SHEET
MO.		74



4-#9-V158 (ALTERNATE WITH #9-V159L #9-V160)  
4-#9-V159 (ALTERNATE WITH #9-V158L #9-V160)  
4-#9-V160 (ALTERNATE WITH #9-V158L #9-V159)



4-#9-V161 (ALTERNATE WITH #9-V162L #9-V163)  
4-#9-V162 (ALTERNATE WITH #9-V161L #9-V163)  
4-#9-V163 (ALTERNATE WITH #9-V162L #9-V161)



NOTE: FOR LOCATION OF SECTION D-D, F-F, G-G, H-H AND K-K SEE SHEET NO. 71.

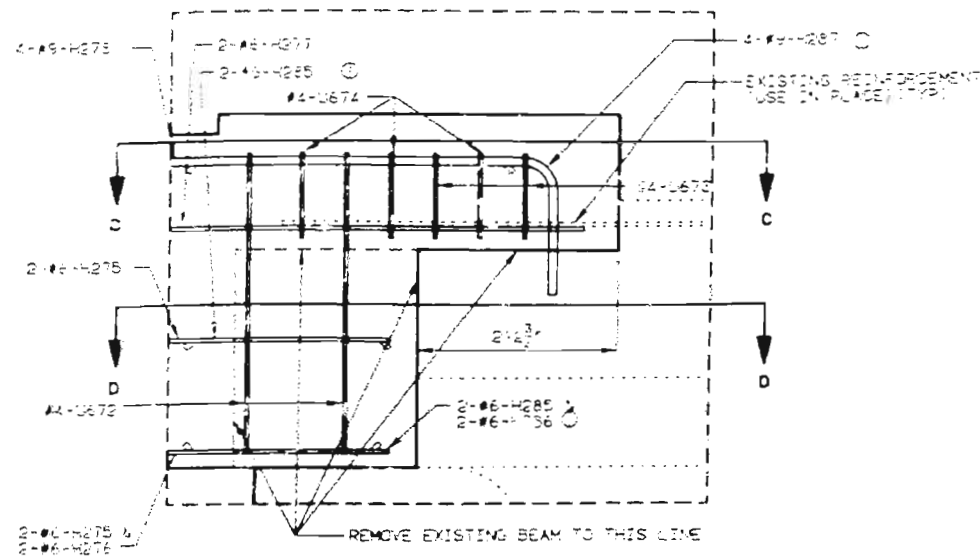
## DETAILS OF INT. BENT NO. 11 (SOUTHBOUND LANE)

DETAILED MAY 1992  
CHECKED NOV. 1992

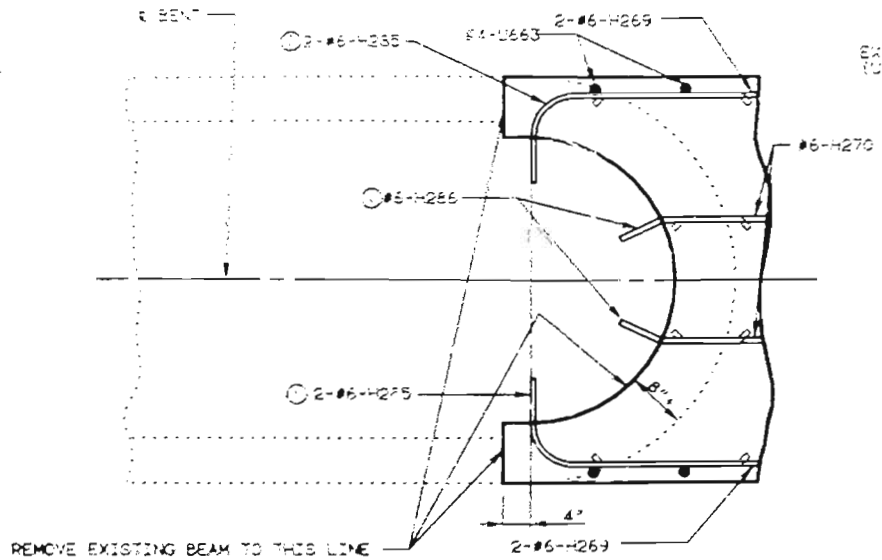
NOTE: THIS DRAWING IS NOT TO SCALE, FOLLOW DIMENSIONS.

SHEET NO. 73 OF 238

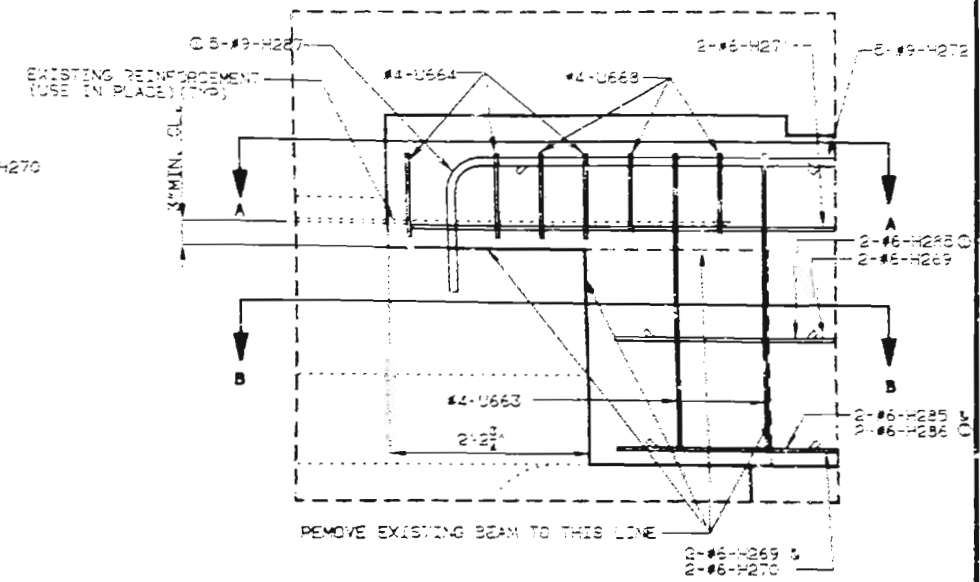
ST. LOUIS-JEFFERSON COUNTIES A-609R



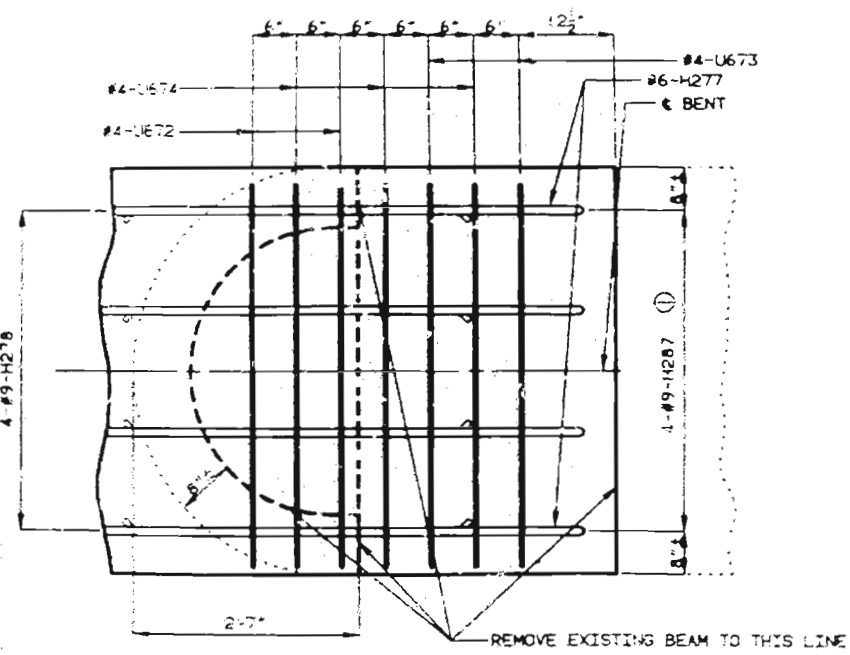
DETAIL "B"



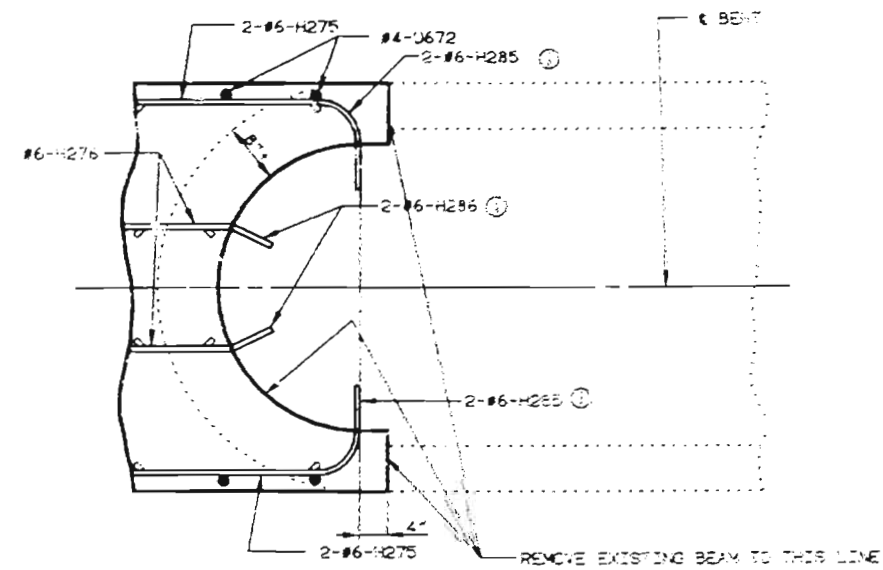
SECTION B-B



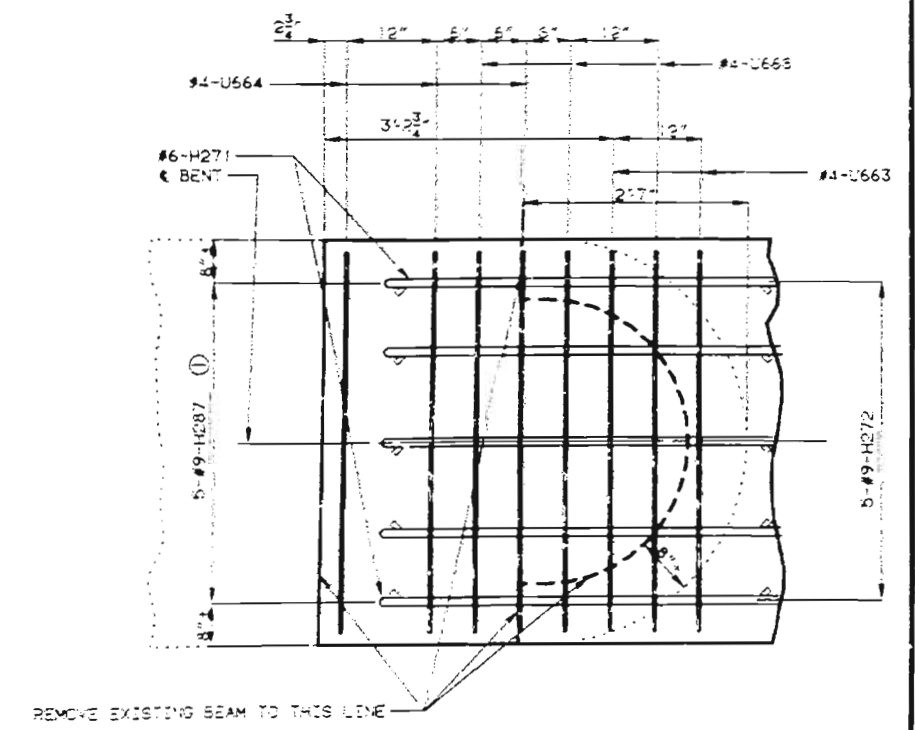
DETAIL "A"



SECTION C-C



SECTION D-D



SECTION A-A

REINFORCEMENT BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

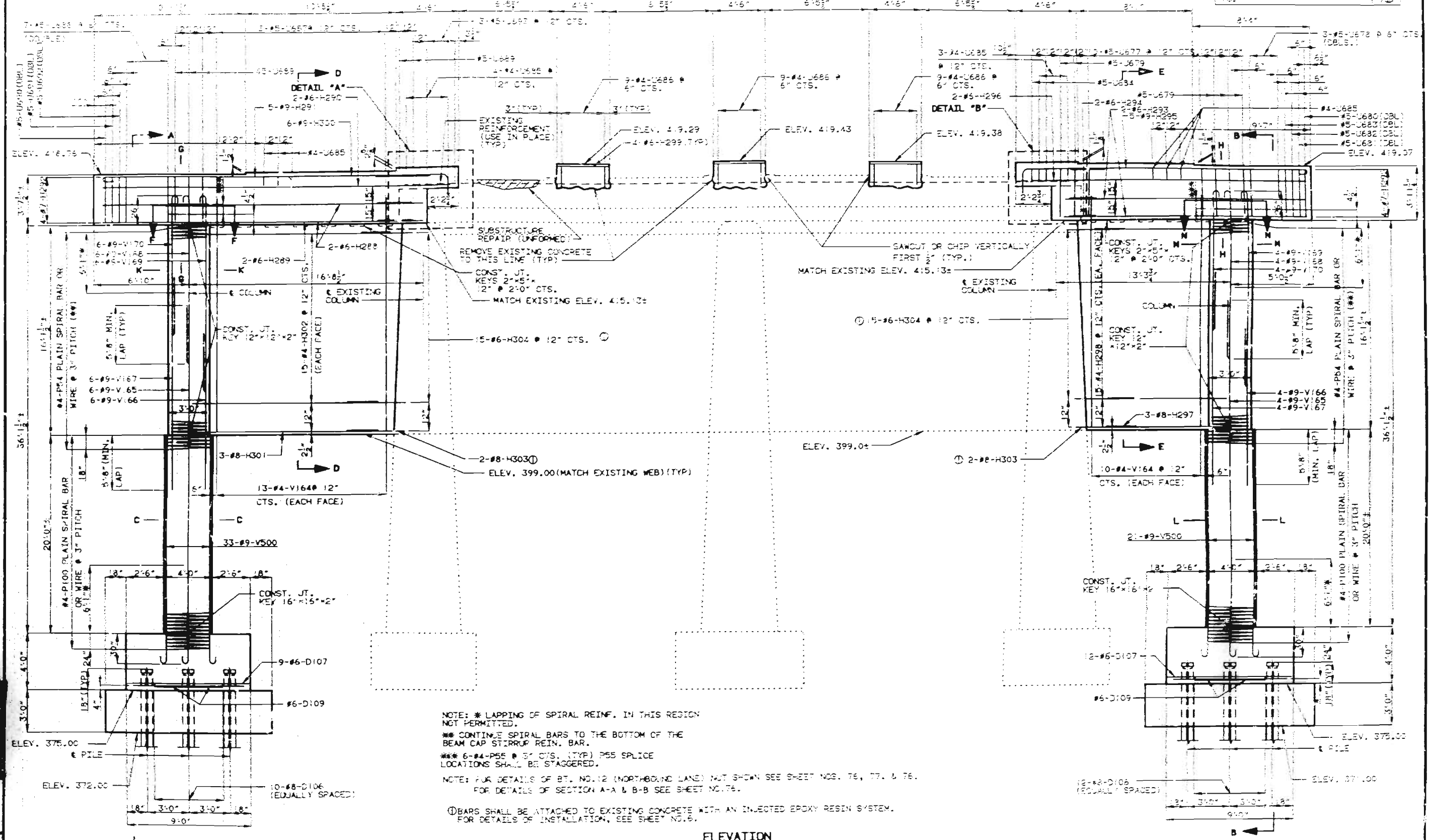
NOTE: FOR LOCATION OF DETAIL "A" AND "B" SEE SHEET NO. 74.

DETAILS OF INT. BENT NO. 11 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 74 OF 238

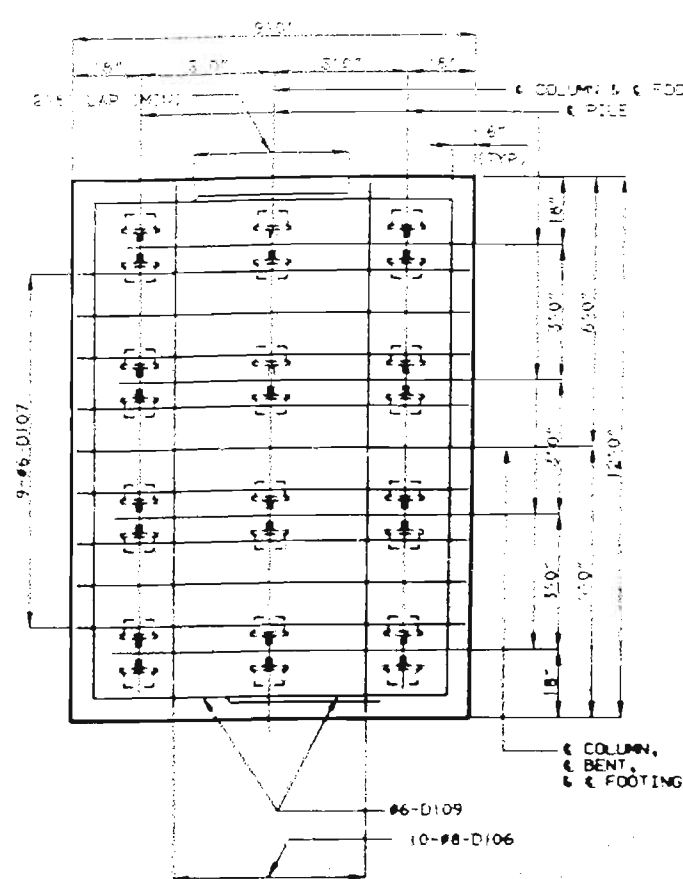
80



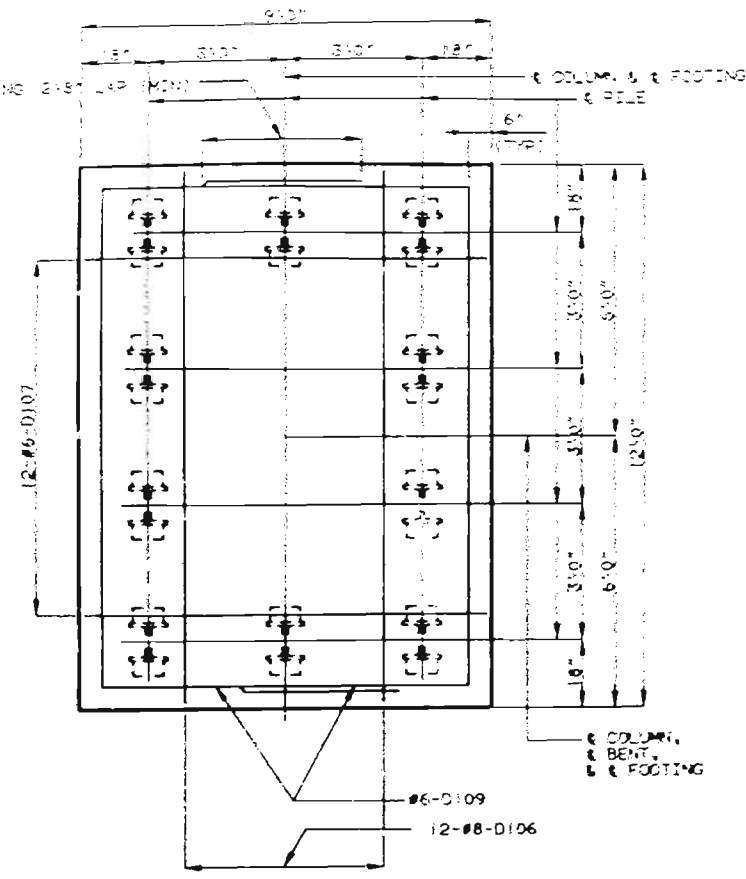
NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P55 @ 3' CTS. (TYP) P55 SPLICE LOCATIONS SHALL BE STAGGERED.  
 NOTE: FOR DETAILS OF BT. NO. 12 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 76, 77, & 78.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 76.  
 (1) BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 76.

ELEVATION  
 DETAILS OF INT. BT. NO. 12 (NORTHBOUND LANE)



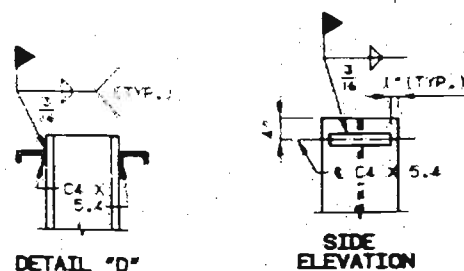


PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)

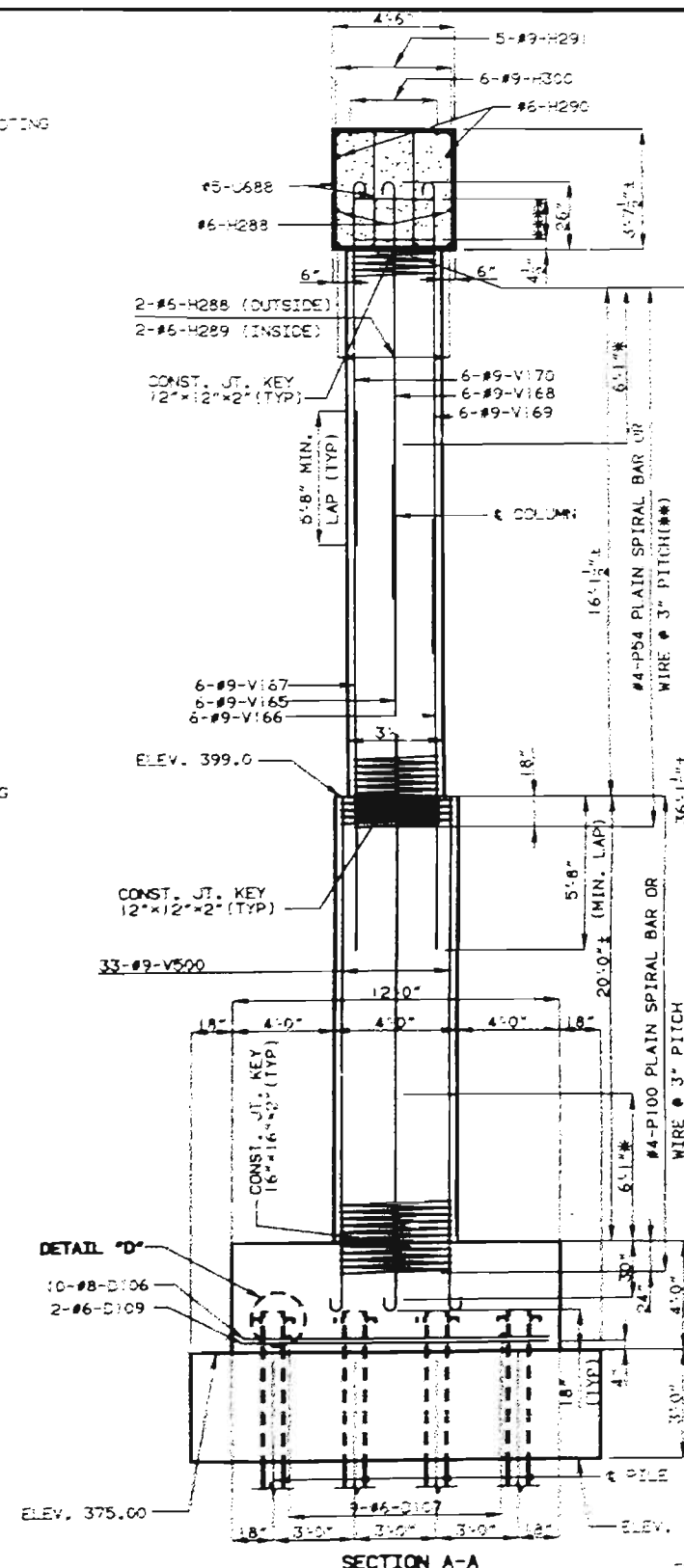


PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)

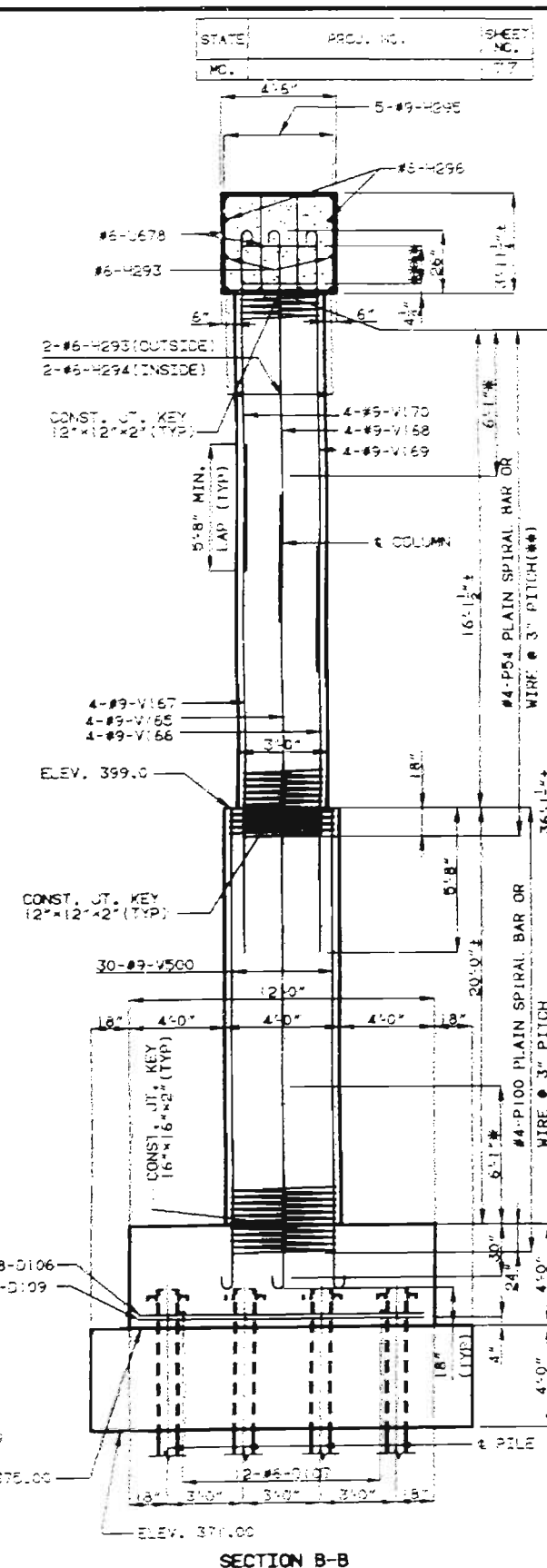
NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P55 # 3" CTS. (TYP) P55 SPLICE LOCATIONS SHALL BE STAGGERED.



NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 75



SECTION A-A



SECTION B-B

DETAILS OF INT. BENT NO. 12 (NORTHBOUND LANE)

DETAILED MAY 1992  
 CHECKED OCT. 1992

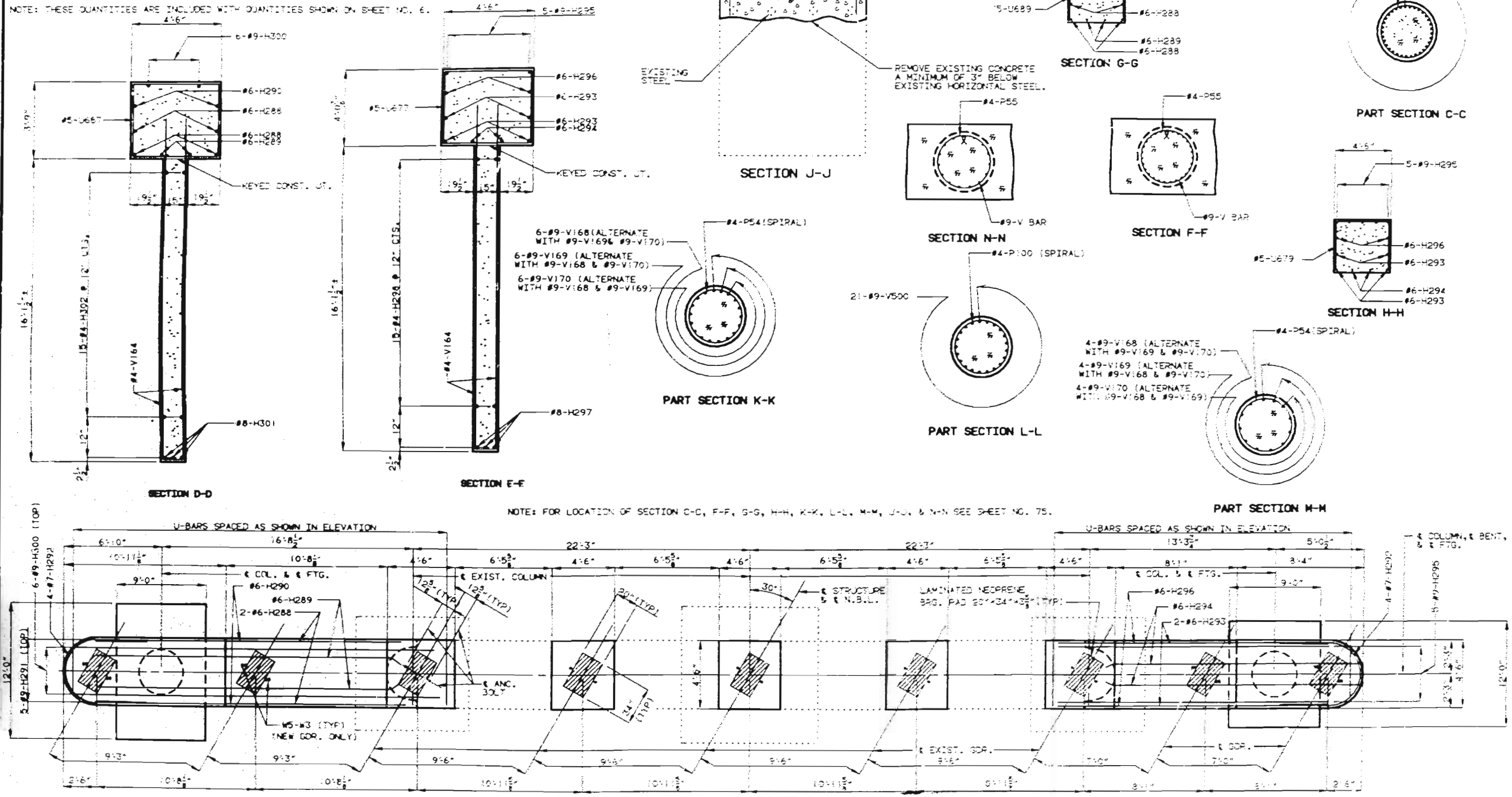
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 76 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 12		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	2.5
CLASS 2 EXCAVATION	CU. YDS.	140
STRUCTURAL STEEL PILE (10")	LIN. FT.	1100
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	107.6
SUBSTRUCTURE CONCRETE REPAIR (UNFORMED)	SG. FT.	10
SEAL CONCRETE	CU. YDS.	46.7
REINFORCING STEEL (BRIDGES)	LBS.	16070

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.

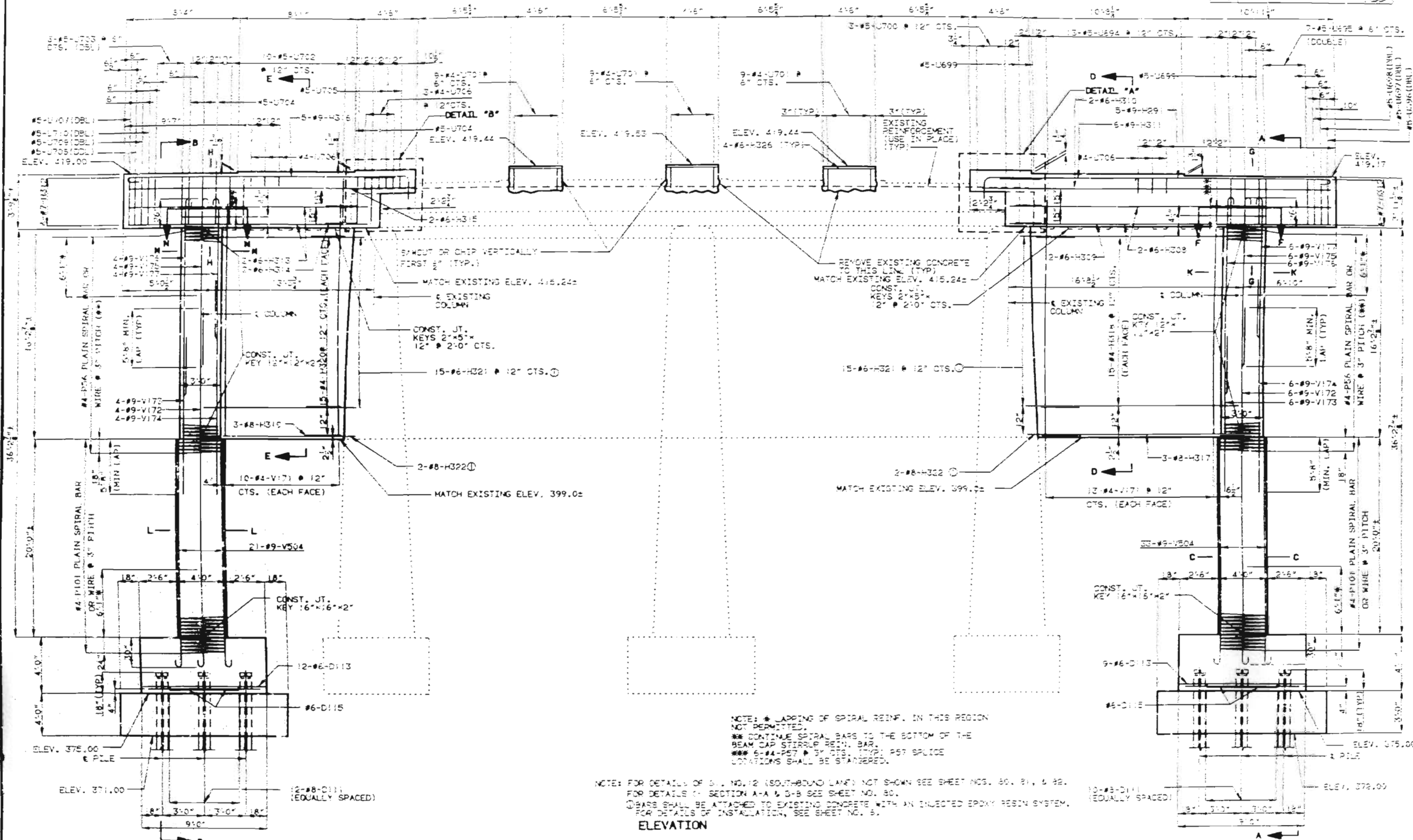


DETAILED MAY 1992  
CHECKED OCT. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 77 OF 233





NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 6-#4-P57 @ 3\"/>

NOTE: FOR DETAILS OF S. L. NO. 12 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 80, 81, & 82.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 80.  
 @BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 81.

ELEVATION

DETAILS OF INT. BT. NO. 12 (SOUTHBOUND LANE)

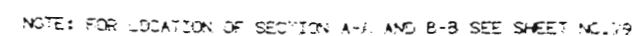
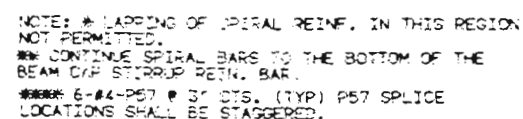
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 79 OF 238

85

DETAILED MAY 1992  
 CHECKED OCT. 1992

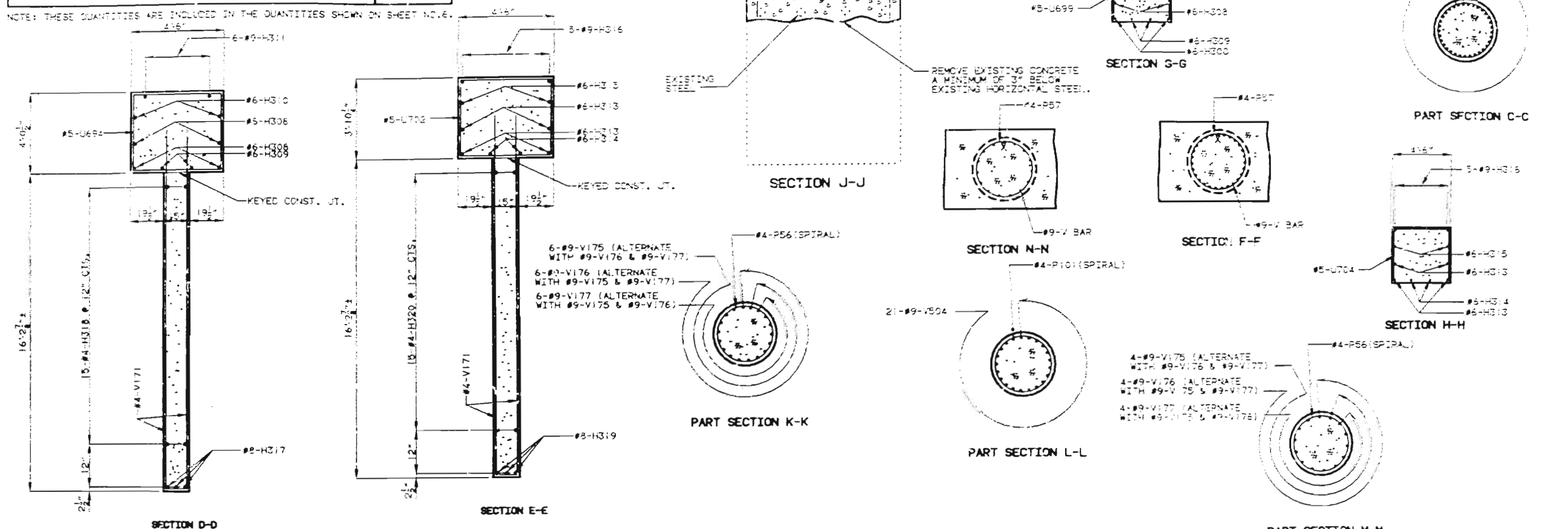




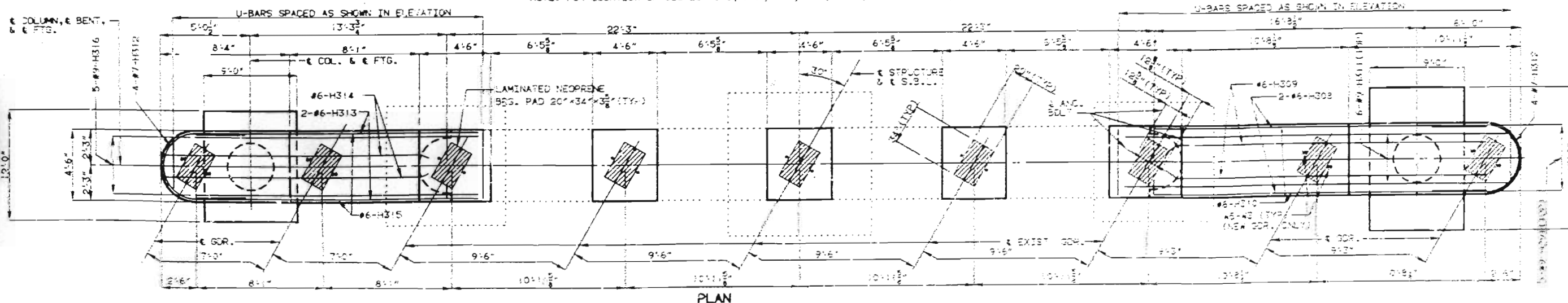
SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 12

ITEM	QUANTITY
CLASS 1 EXCAVATION	CU. YDS. 215
CLASS 2 EXCAVATION	CU. YDS. 140
STRUCTURAL STEEL PILE (100%)	LIN. FT. 1100
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS. 107.3
SEAL CONCRETE	CU. YDS. 46.7
REINFORCING STEEL (BRIDGES)	LBS. 10980

NOTE: THESE QUANTITIES ARE INCLUDED IN THE QUANTITIES SHOWN ON SHEET NO. 6.



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, H-H, K-K, L-L, M-M, N-N, SEE SHEET NO. 13.



DETAILS OF INT. BENT NO. 12 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 81 OF 208

ST. LOUIS-JEFFERSON COUNTIES A-509R

87



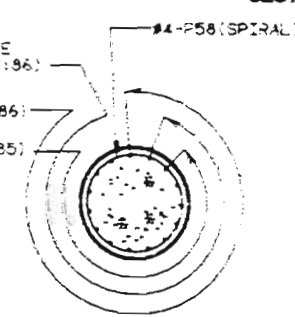
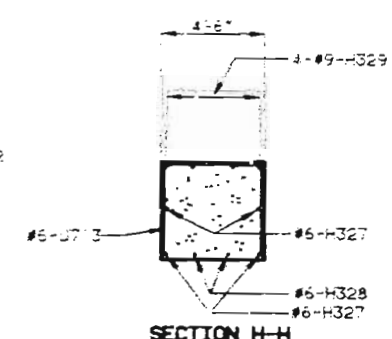
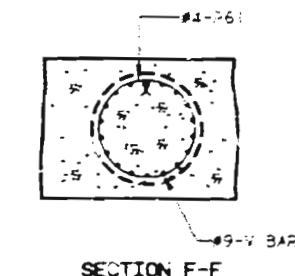
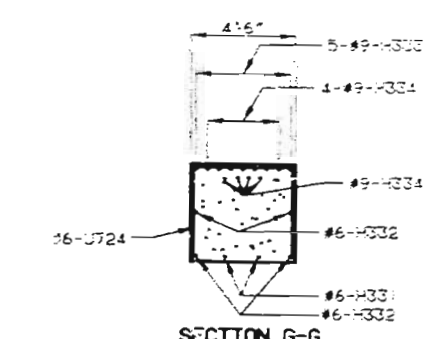
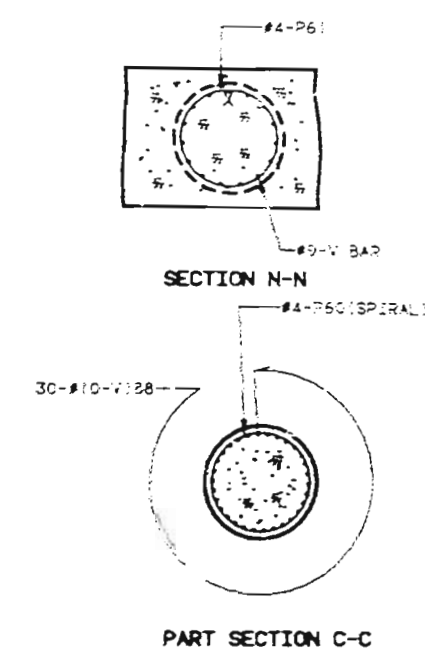
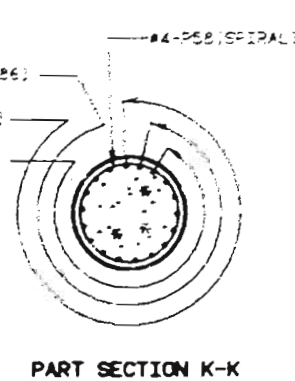
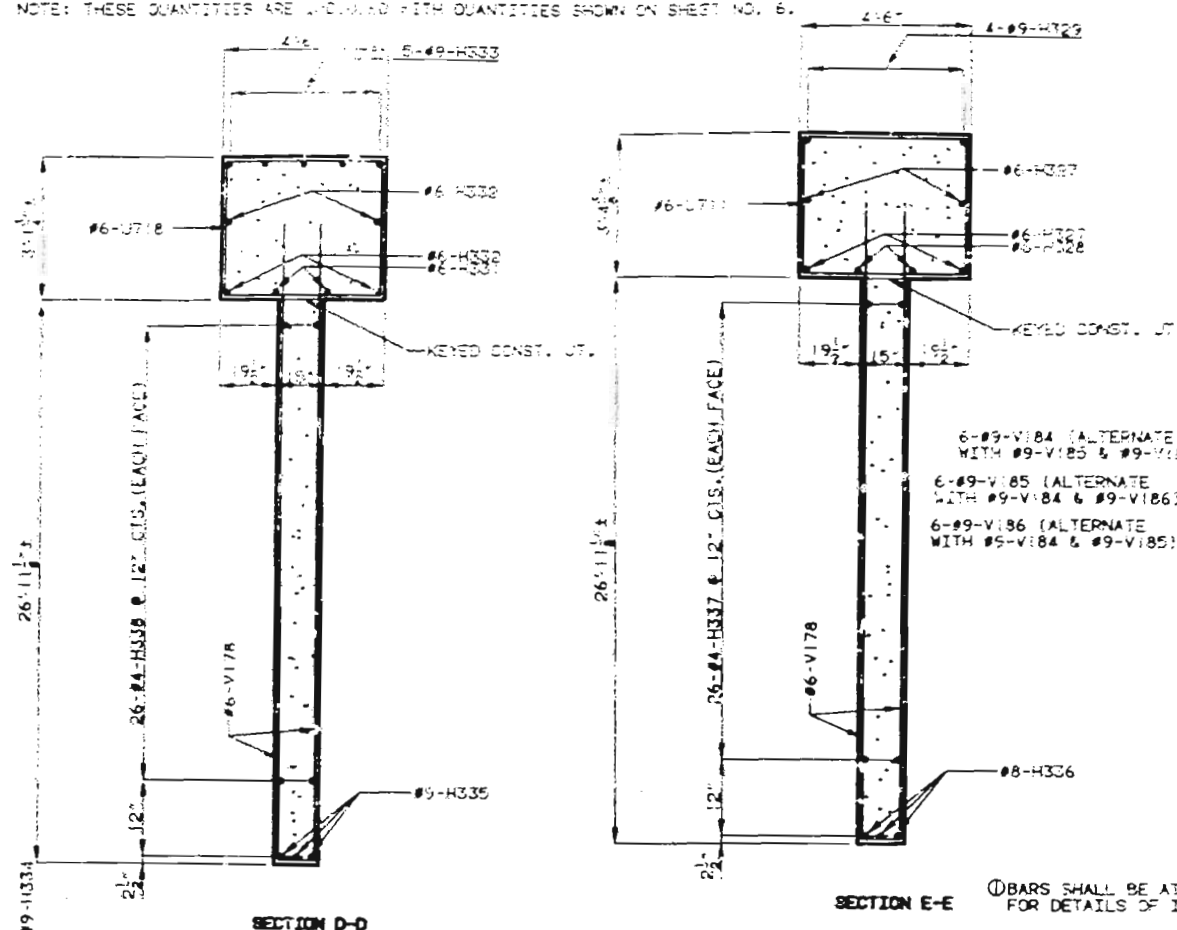






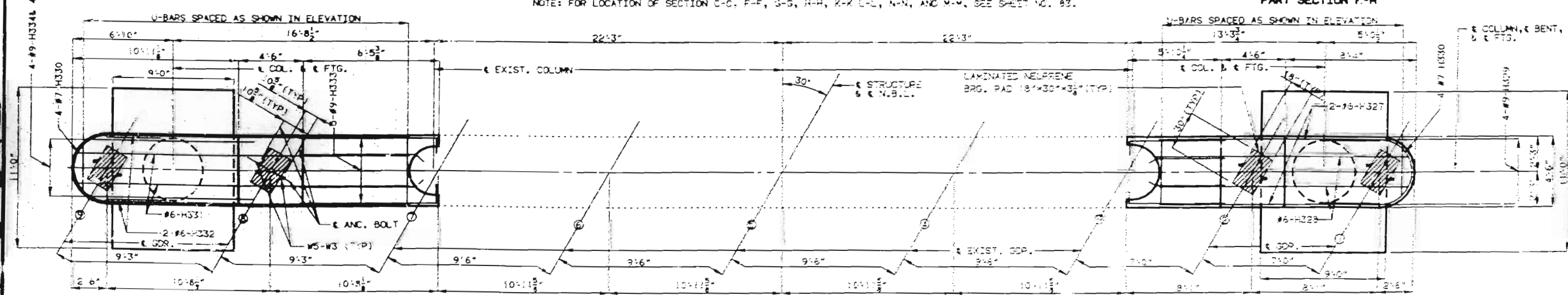
SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 13		
ITEM		QUANTITY
CLASS 2 EXCAVATION	CU. YDS.	243
STRUCTURAL STEEL PILE (10")	LTN. FT.	595
CLASS 3 CONCRETE (SUBSTRUCTURE)	CU. YDS.	120.4
SUBSTRUCTURE REPAIR (UNFORMED)	SQ. FT.	10
SEAL CONCRETE	CU. YDS.	105.8
REINFORCING STEEL (BRIDGES)	LBS.	21090

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 5.

NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, H-H, K-K, L-L, N-N, AND M-M, SEE SHEET NO. 83.



91

REVISED MAY 1992  
OCT. 1992

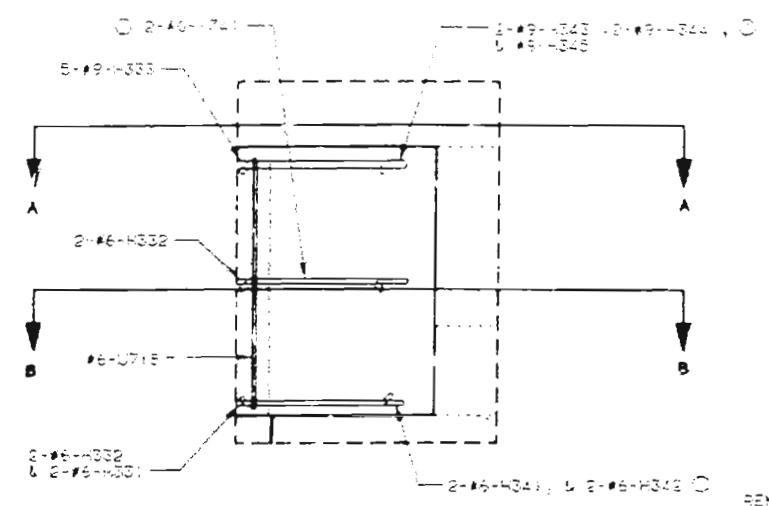
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

DETAILS OF INT. BENT NO. 13 (NORTHBOUND LANE)

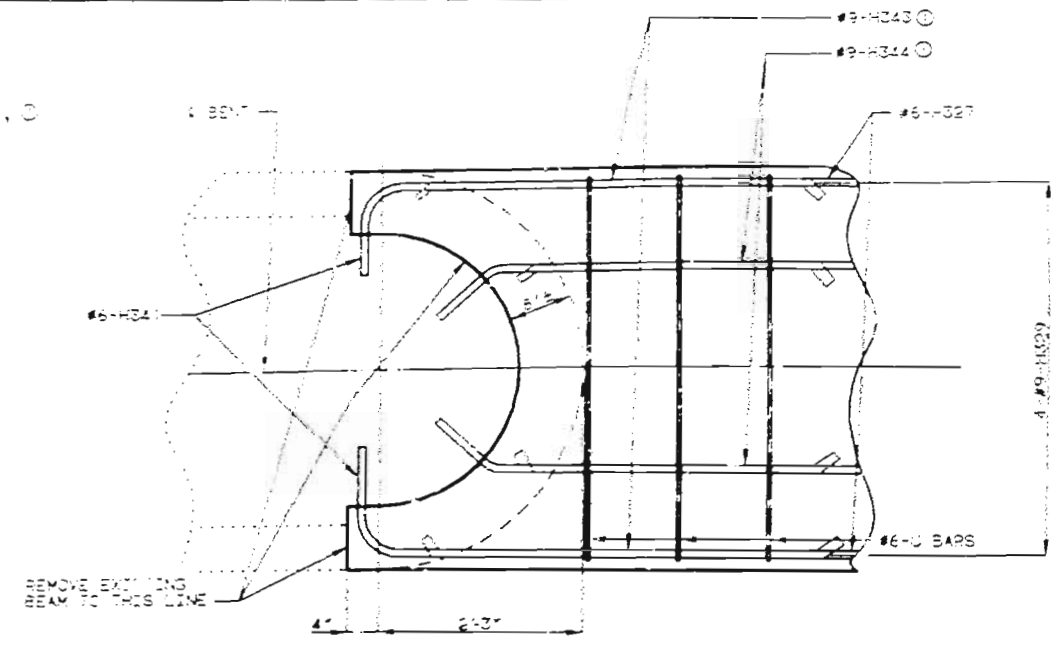
SHEET NO. 85 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

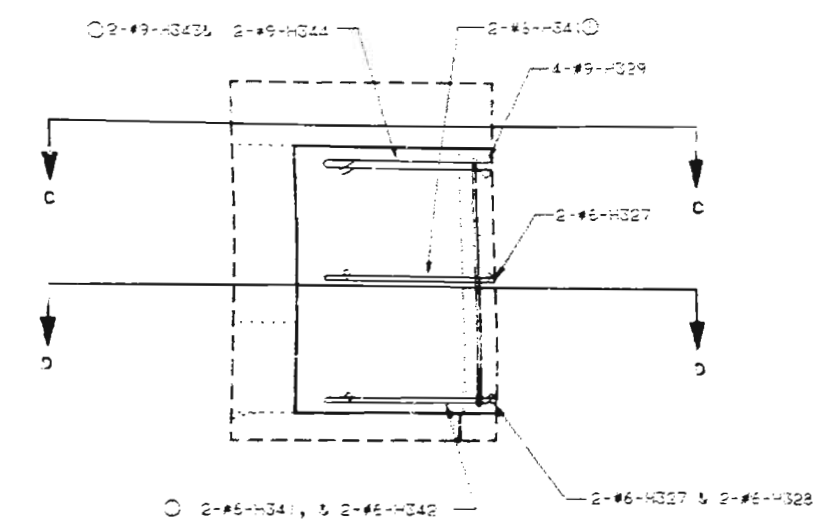
STATE	PROJ. NO.	SHEET
MO.		87



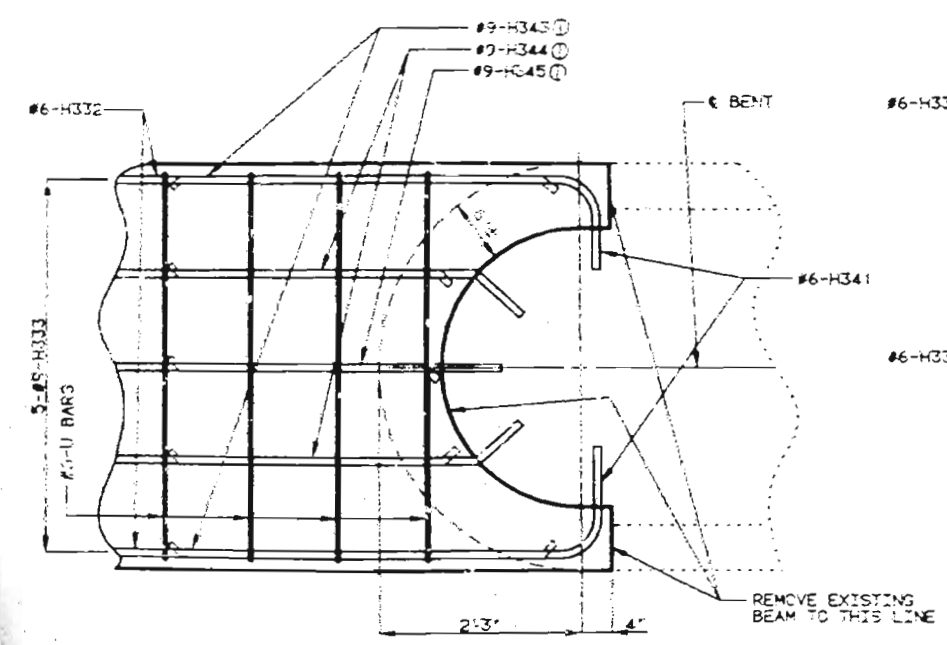
DETAIL "A"



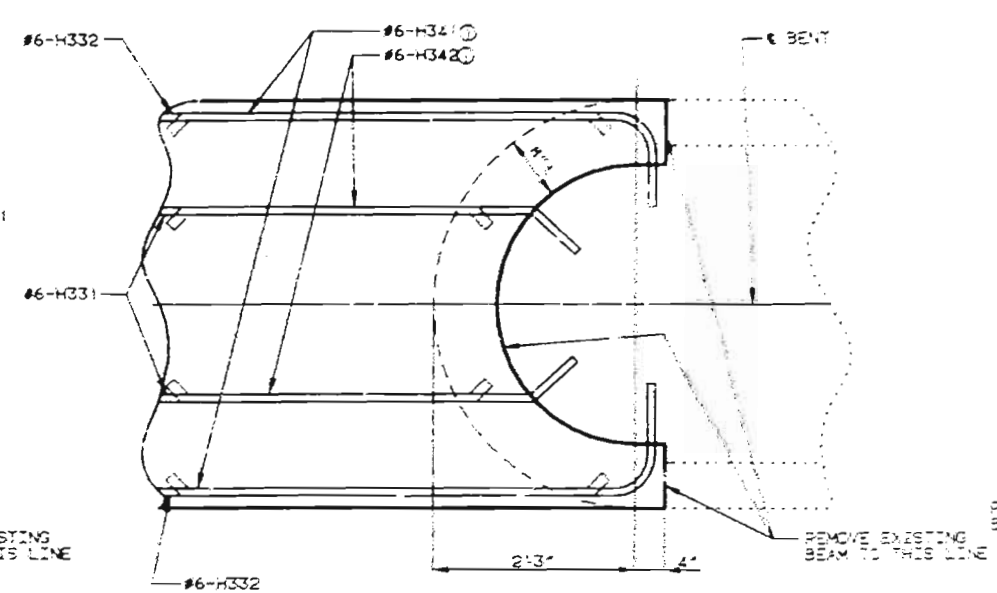
SECTION C-C



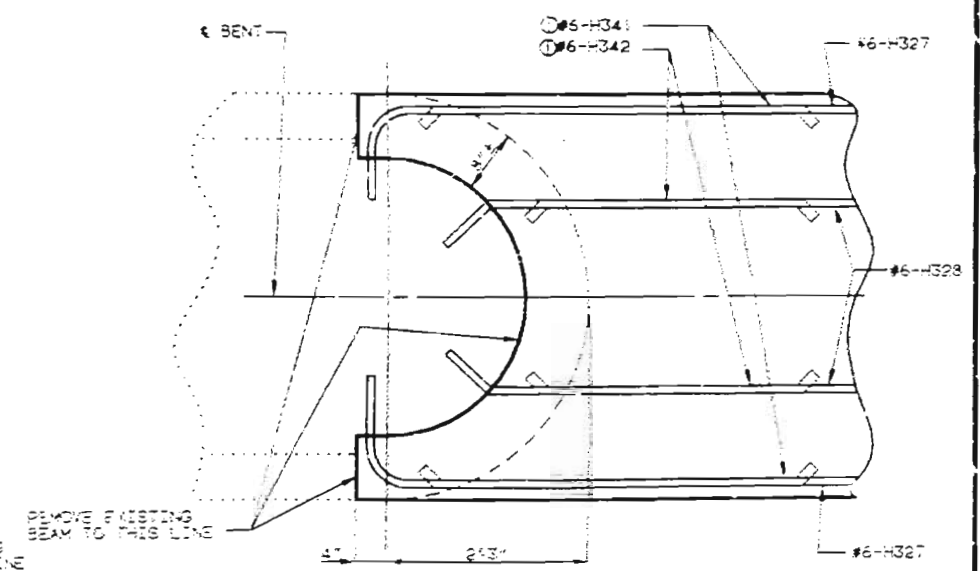
DETAIL "B"



SECTION A-A



SECTION B-B



SECTION D-D

①BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 83.

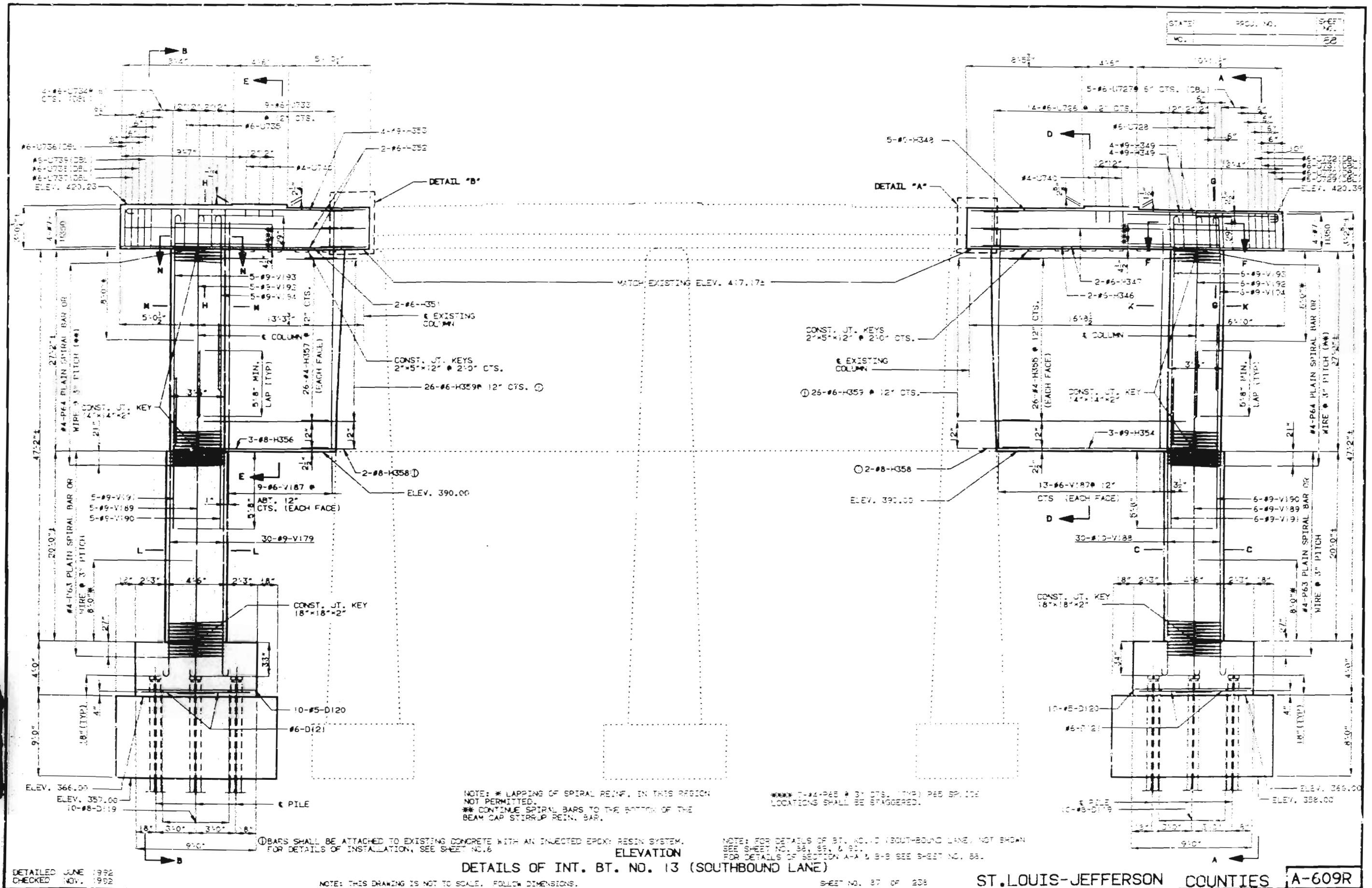
NOTE: FOR LOCATION OF DETAIL "A" AND "B" SEE SHEET NO. 83.

DETAILS OF INT. BENT NO. 13 (NORTHBOUND LANE)

92  
 DETAIL MAY 1992  
 CHECKED OCT. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

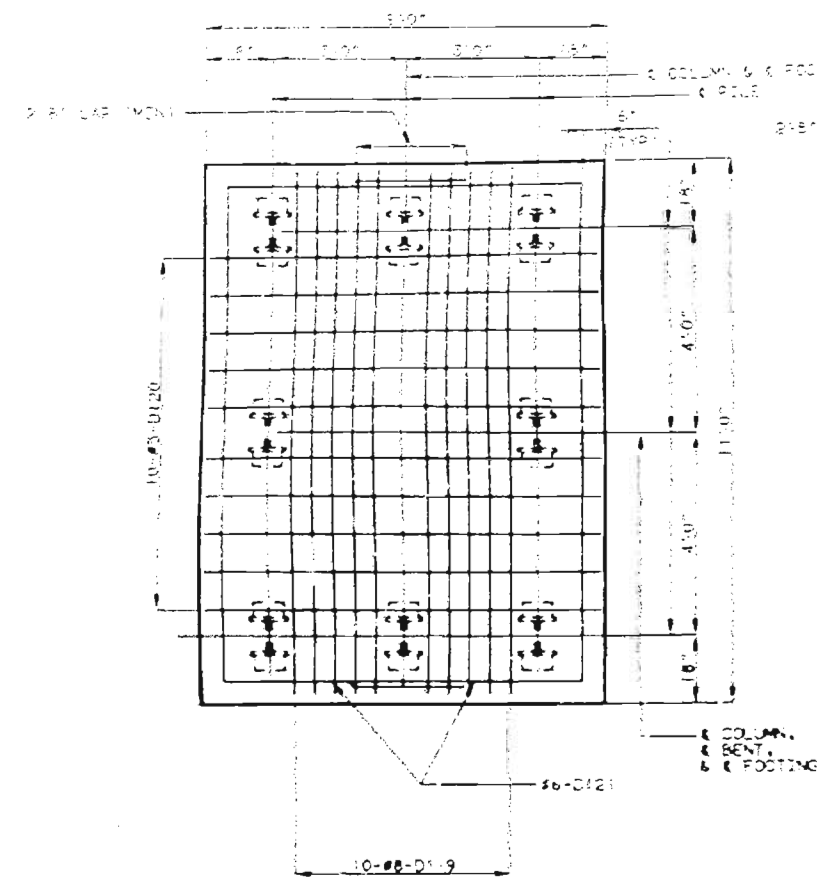
SHEET NO. 86 OF 232



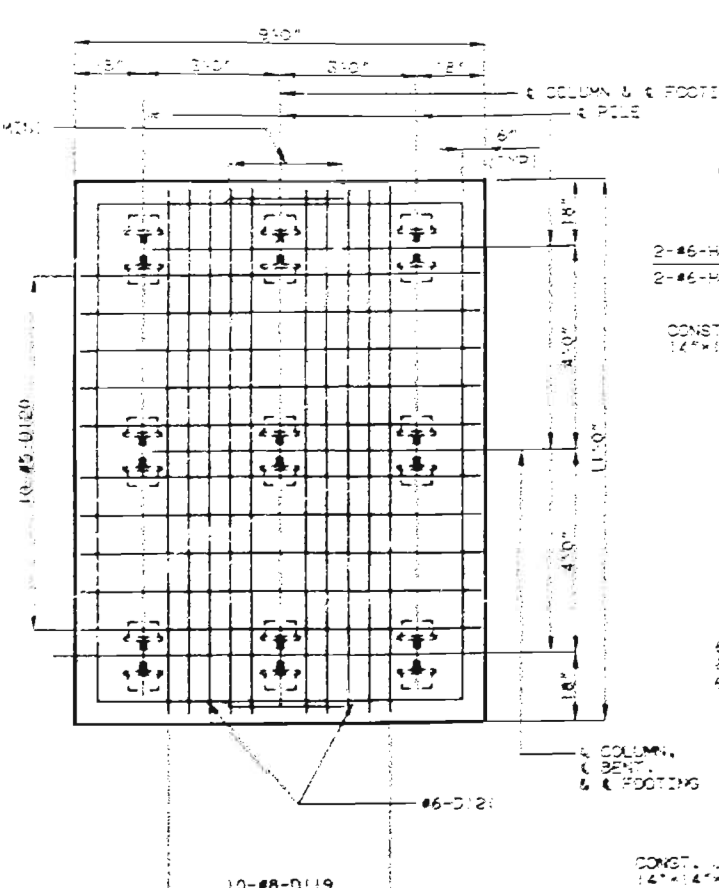
93

DETAILED JUNE 1992  
CHECKED NOV. 1992



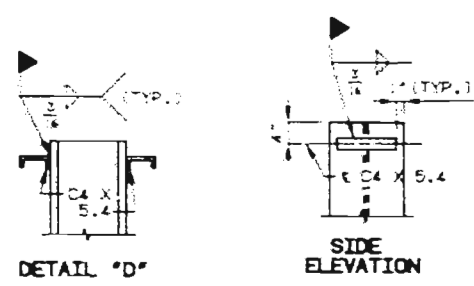


PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)

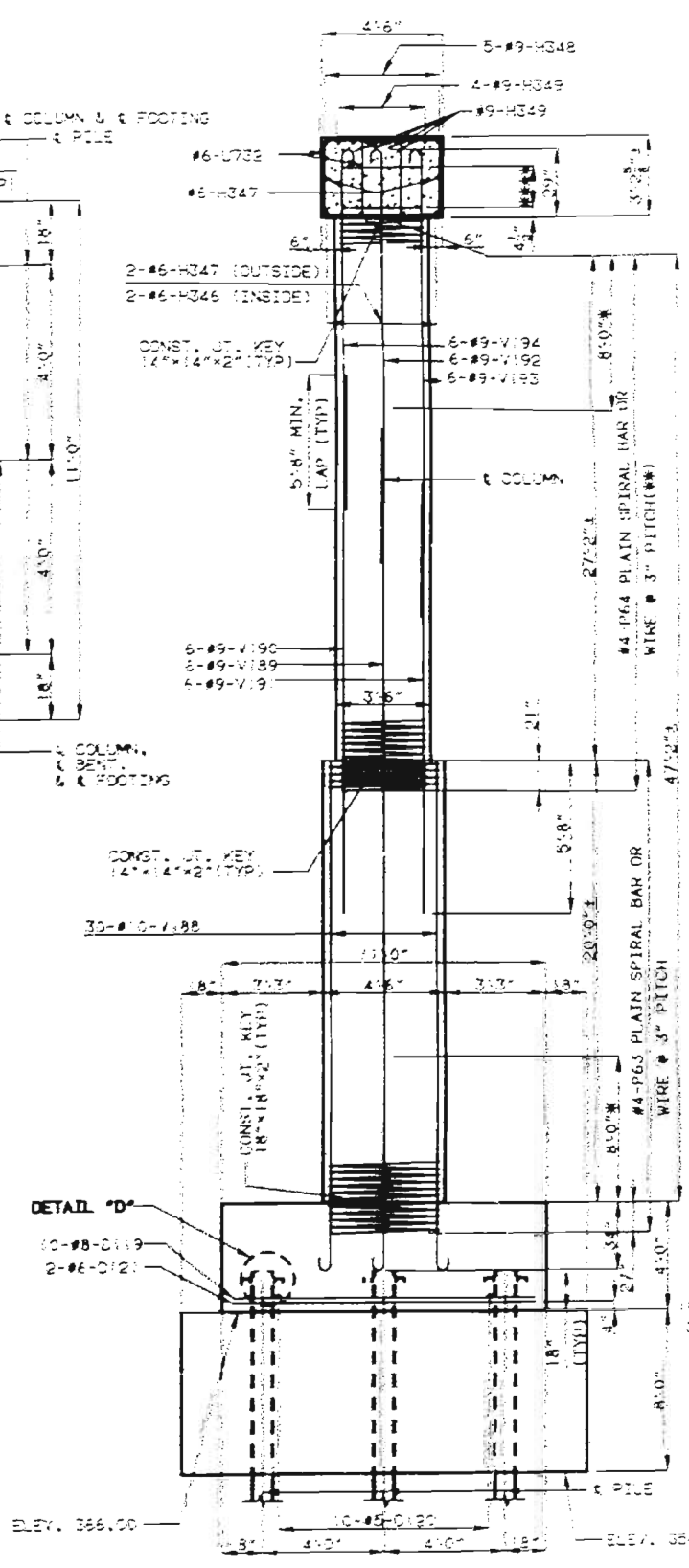


PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)

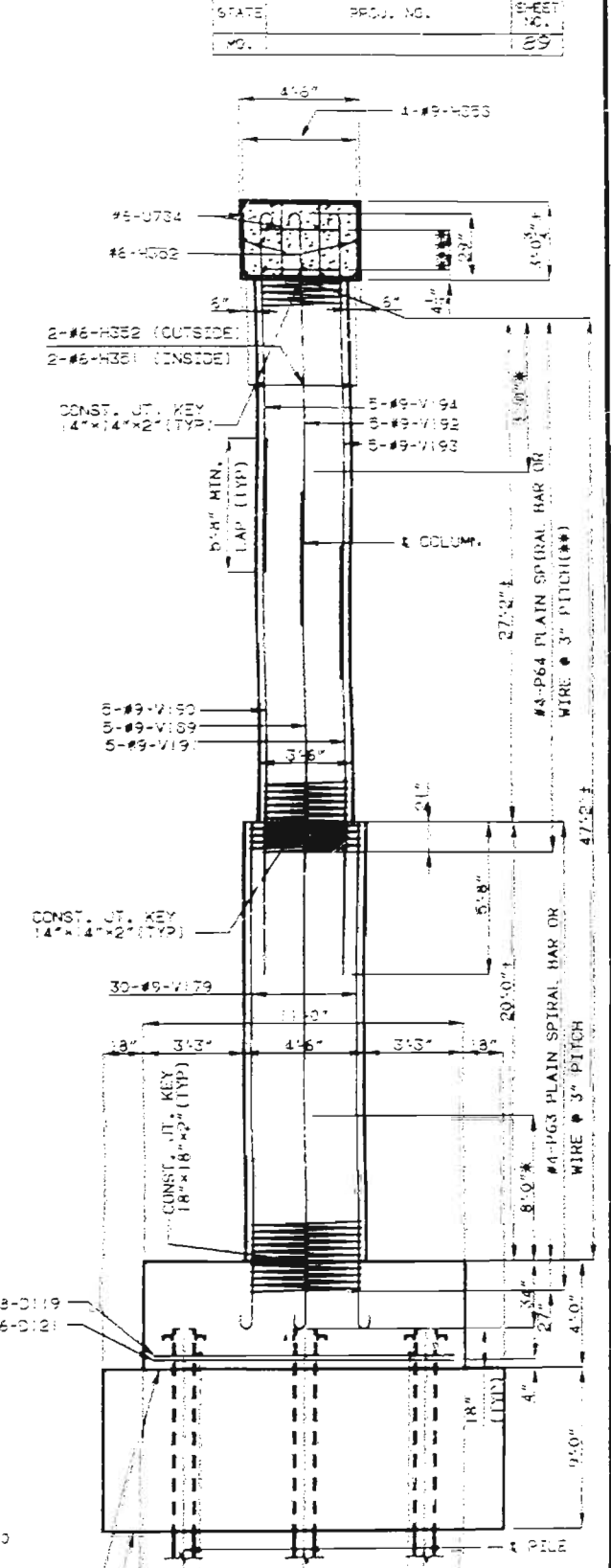
NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED. \* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP BEIN. BAR. \* 7-#4-P65 @ 3" C/S. (TYP) P65 SPLICE LOCATIONS SHALL BE STAGGERED.



NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 87.



SECTION A-A

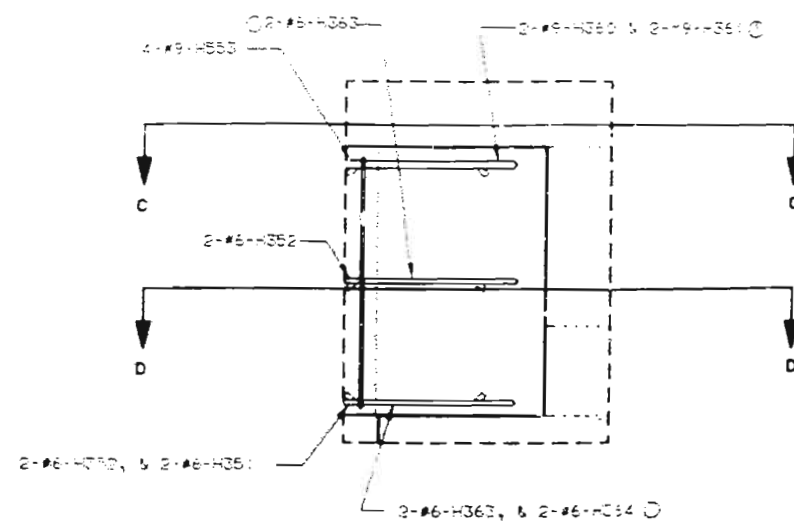


SECTION B-B

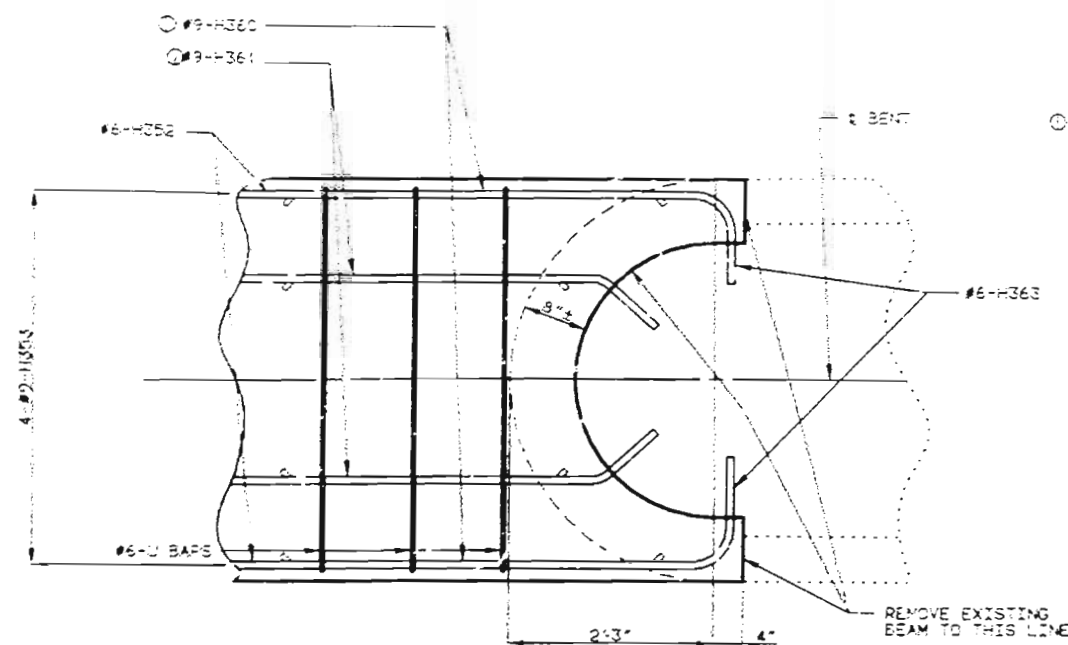
DETAILS OF INT. BENT NO. 13 (SOUTHBOUND LANE)

94

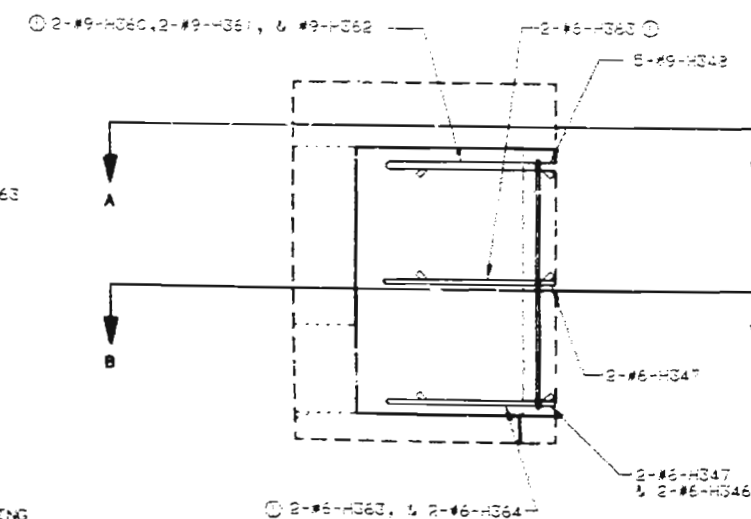




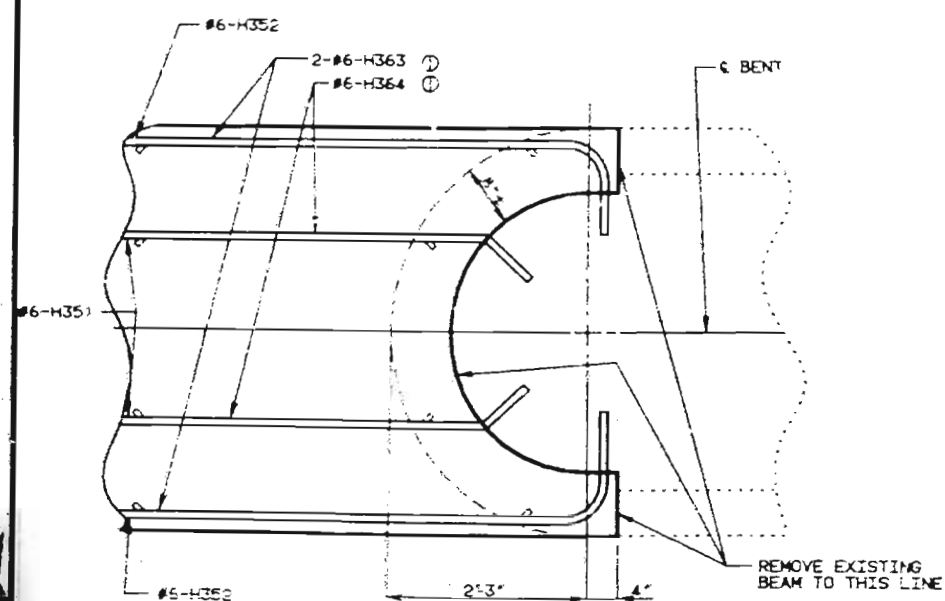
DETAIL "B"



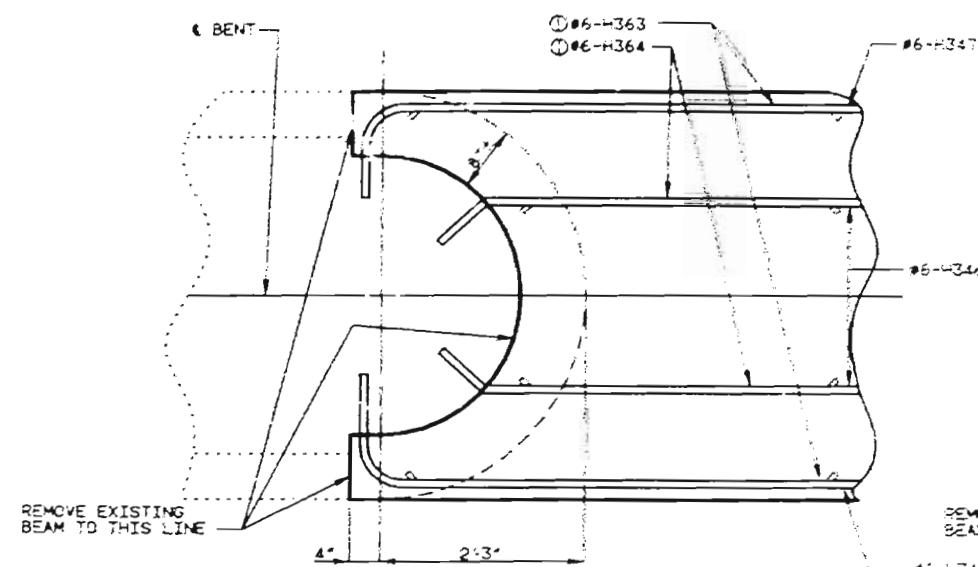
SECTION C-C



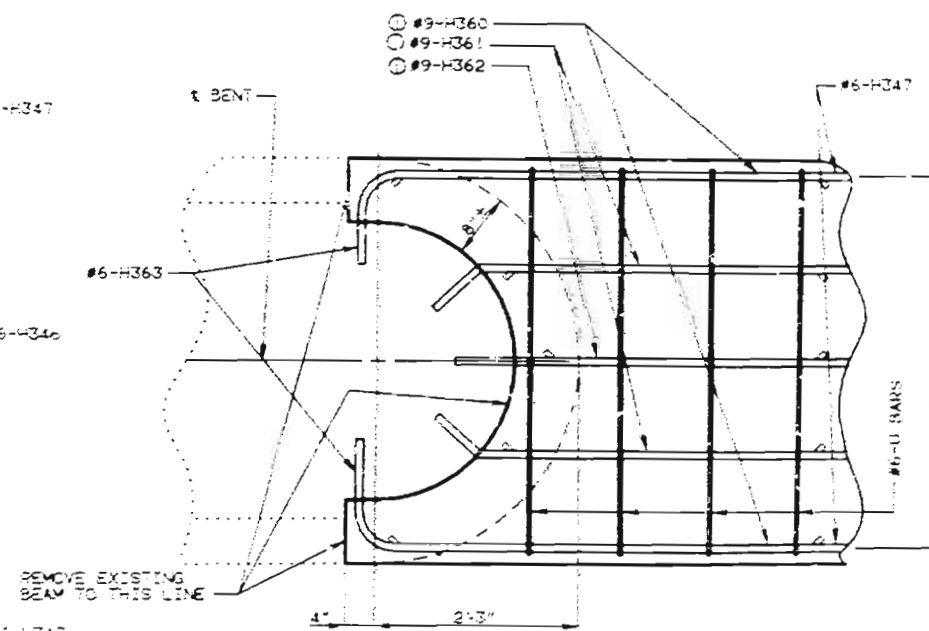
DETAIL "A"



SECTION D-D



SECTION B-B



SECTION A-A

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR LOCATION OF DETAIL "A" AND "B" SEE SHEET NO. 57.

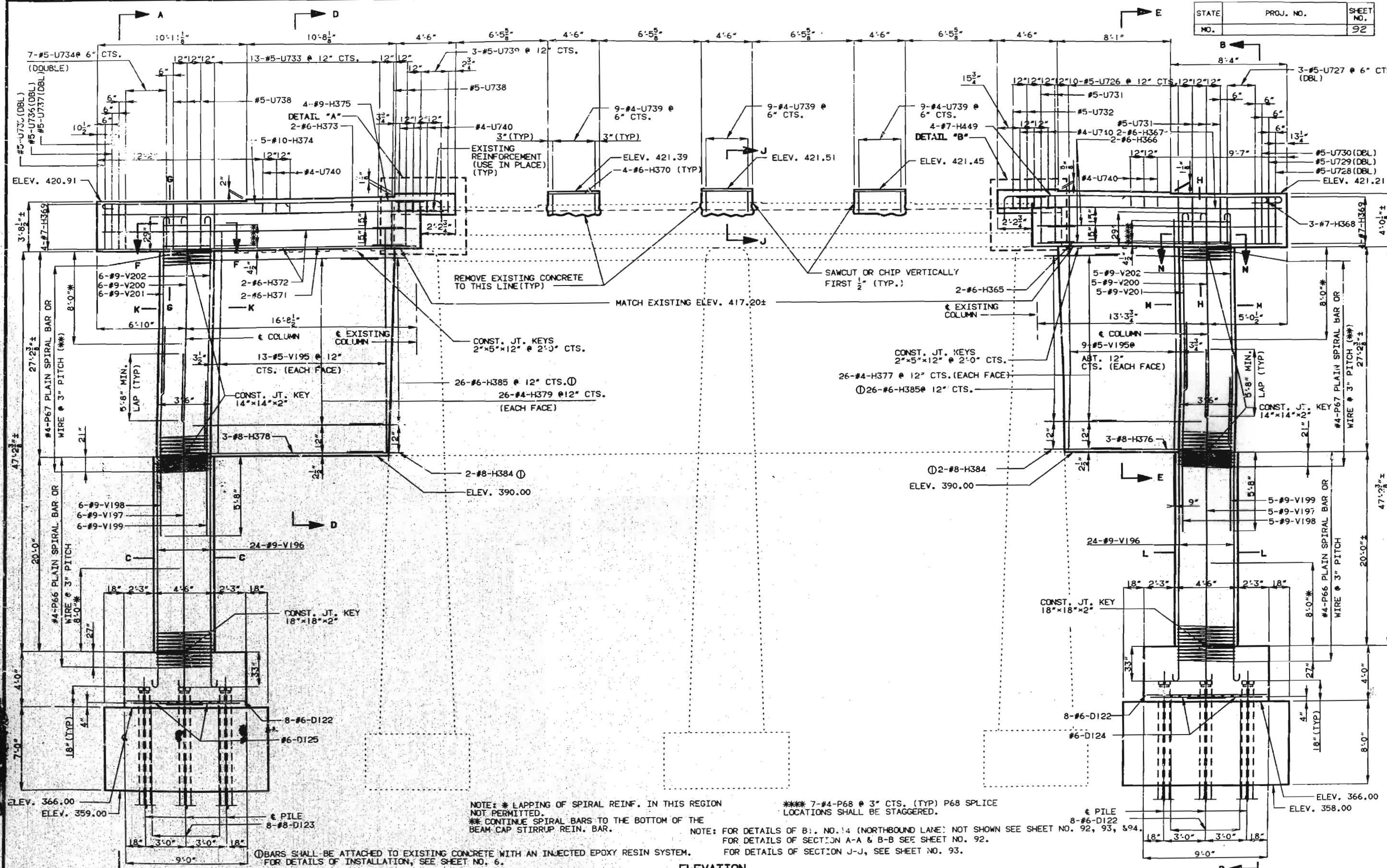
DETAILS OF INT. BENT NO. 13 (SOUTHBOUND LANE)

96  
 DETAILED JUNE 1990  
 CHECKED NOV. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 50 OF 233

ST. LOUIS-JEFFERSON COUNTIES A-609R



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.

\*\*\* 7-#4-P68 @ 3\" CTS. (TYP) P68 SPLICE LOCATIONS SHALL BE STAGGERED.

NOTE: FOR DETAILS OF B: NO. 14 (NORTHBOUND LANE): NOT SHOWN SEE SHEET NO. 92, 93, & 94.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 92.  
 FOR DETAILS OF SECTION J-J, SEE SHEET NO. 93.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

ELEVATION

DETAILS OF INT. BT. NO. 14 (NORTHBOUND LANE)

SHEET NO. 91 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

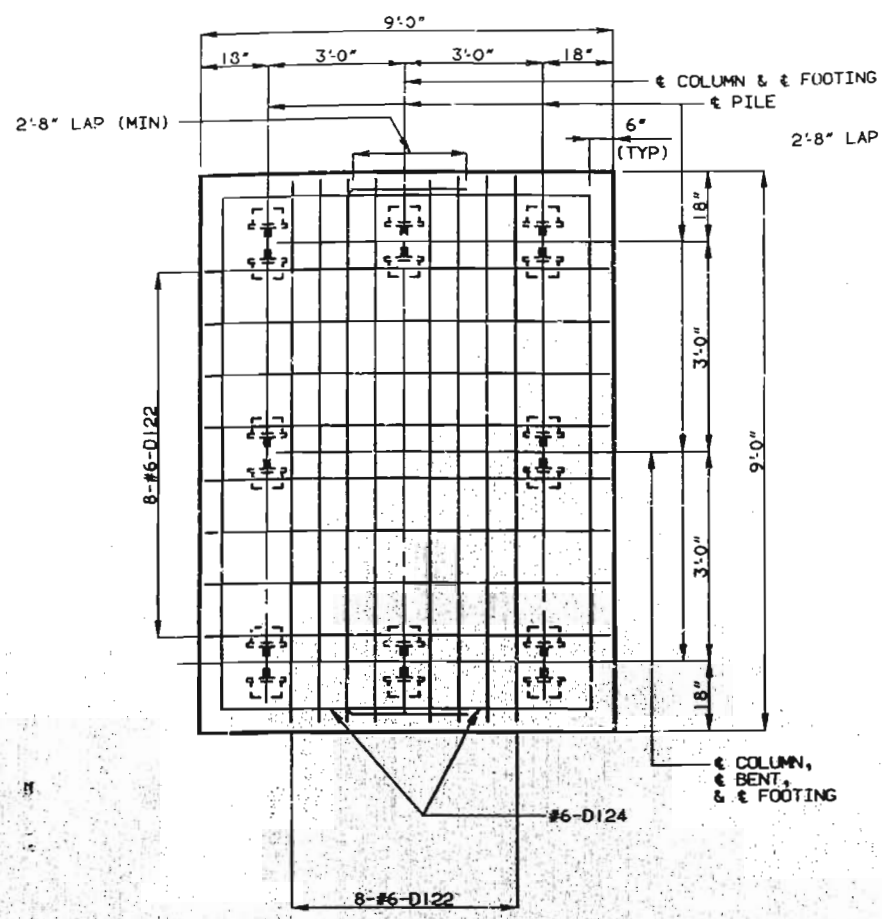
DETAILED JUNE 1992  
 CHECKED NOV. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

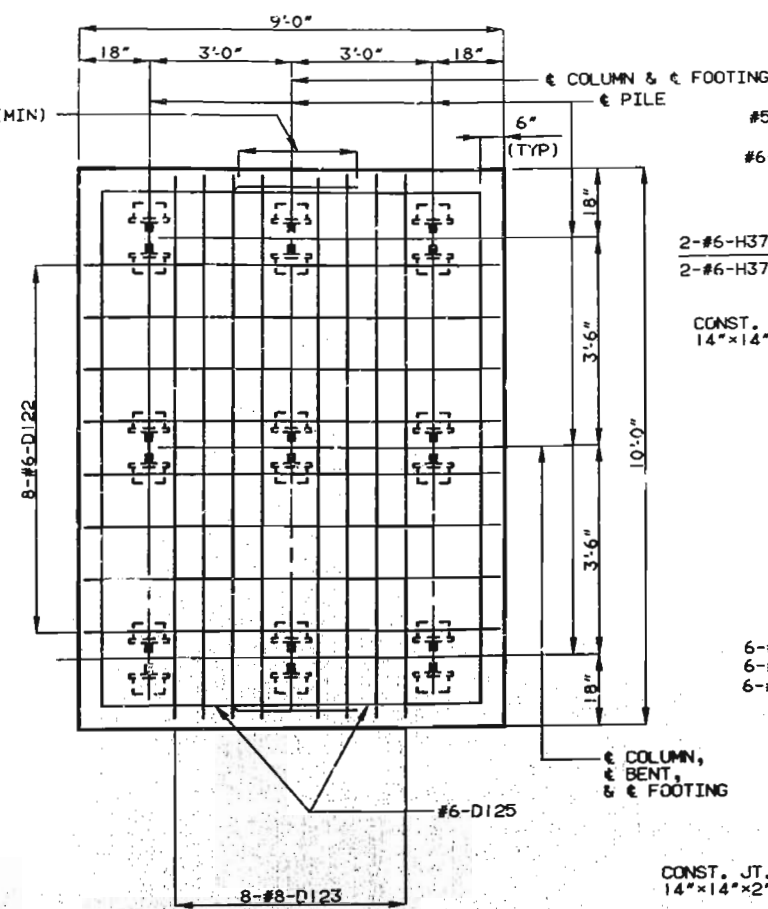
97



STATE	PROJ. NO.	SHEET NO.
MO.		93

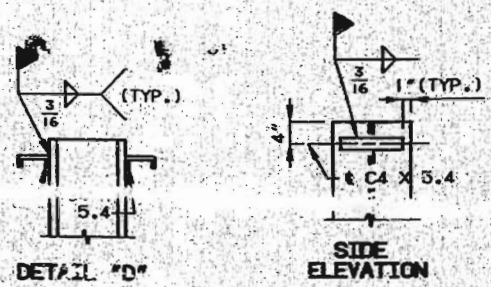


PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)

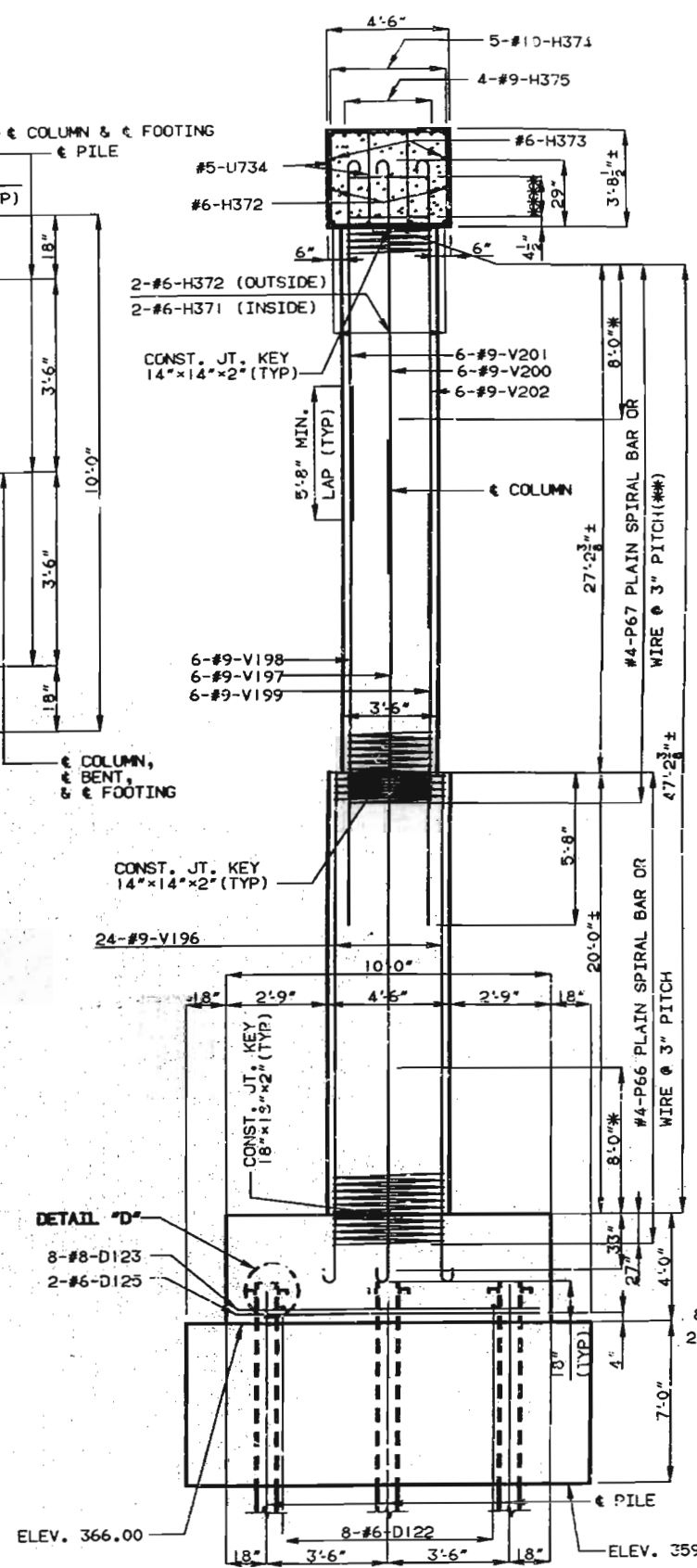


PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)

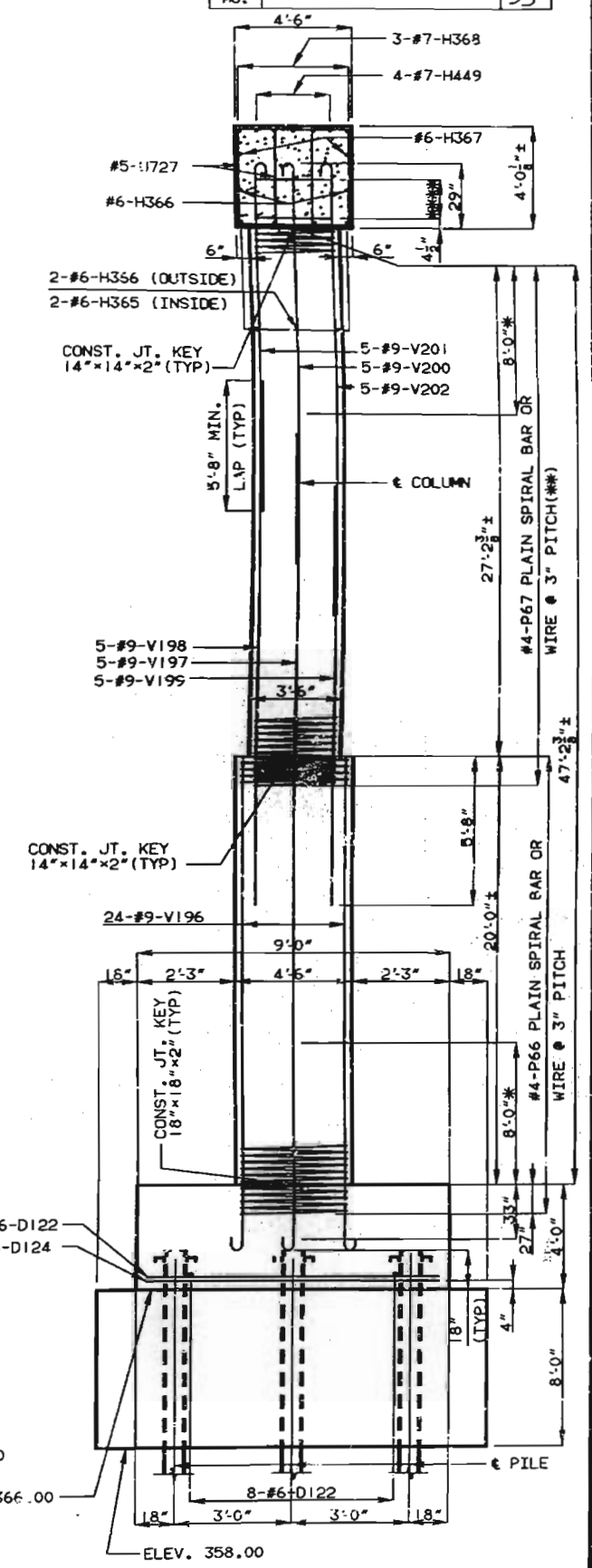
NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 7-#4-P68 @ 3" CTS. (TYP) P68 SPLICE LOCATIONS SHALL BE STAGGERED.



NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 91.



SECTION A-A



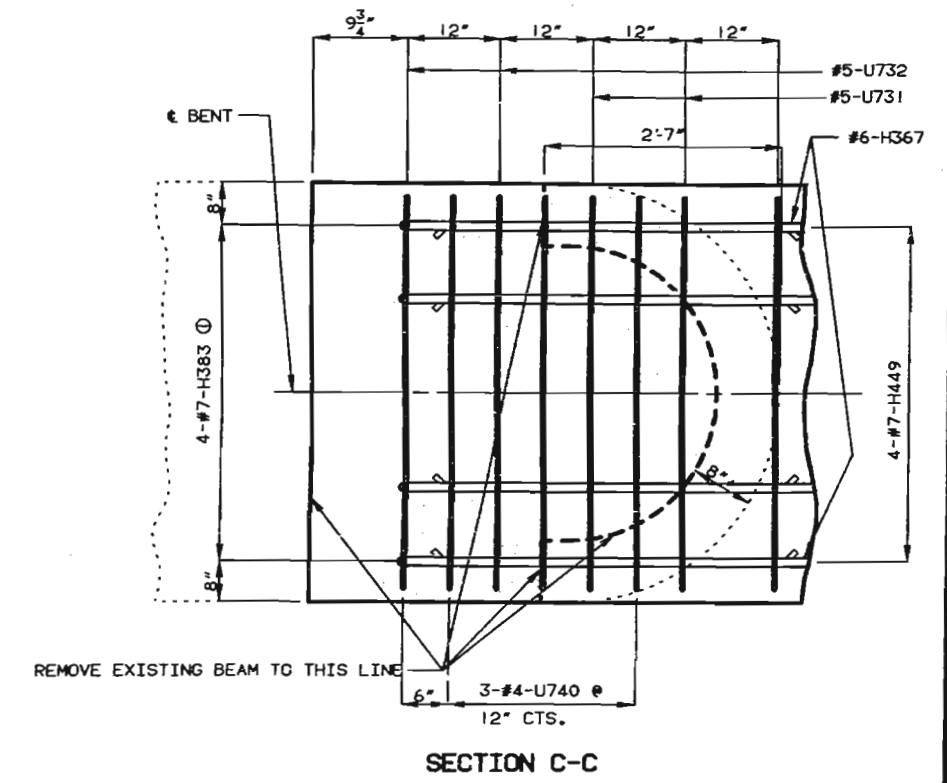
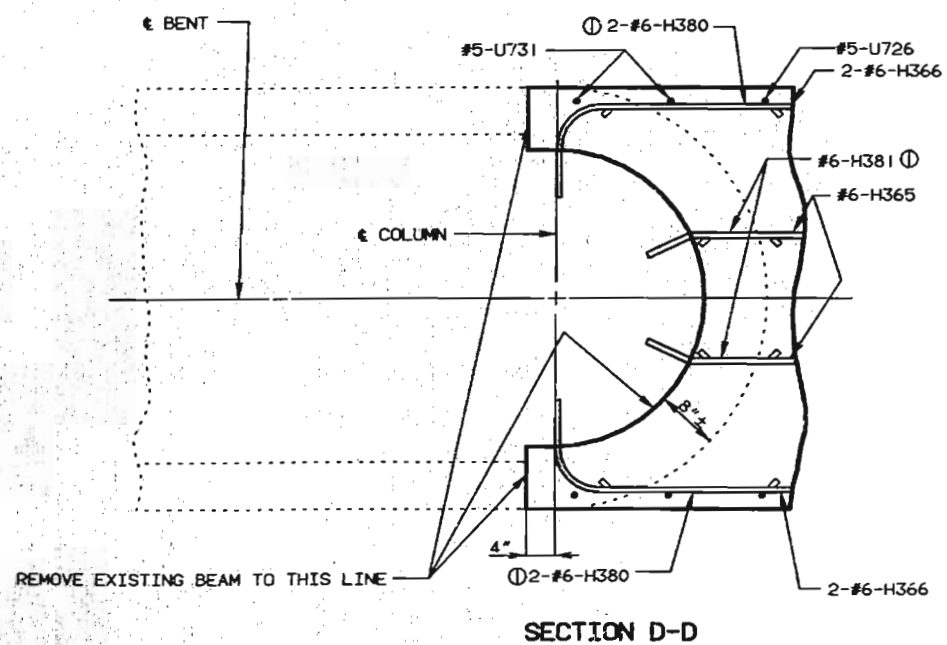
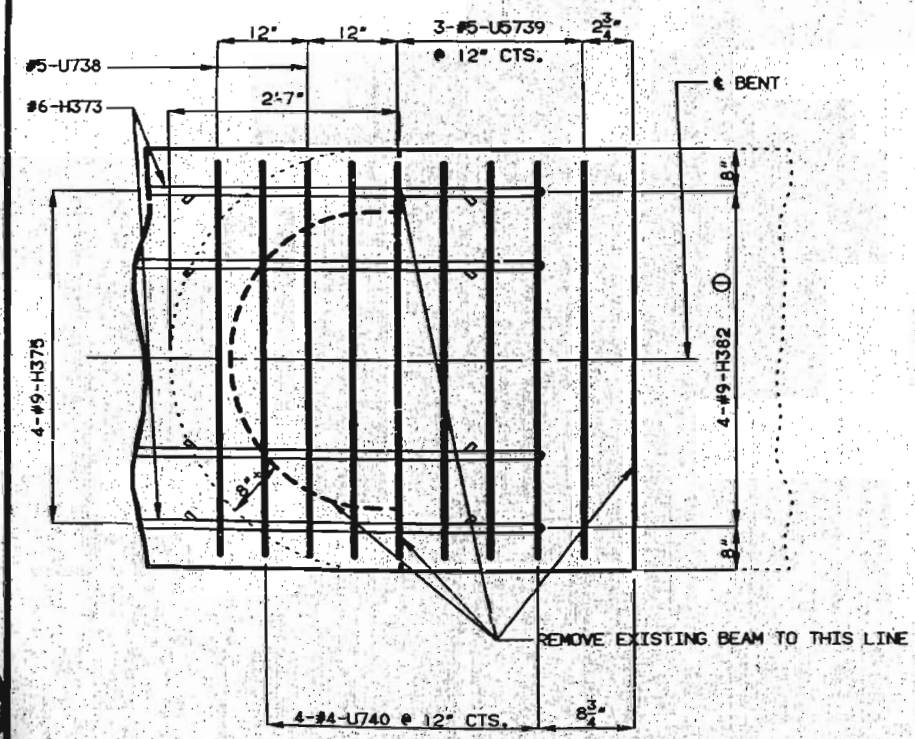
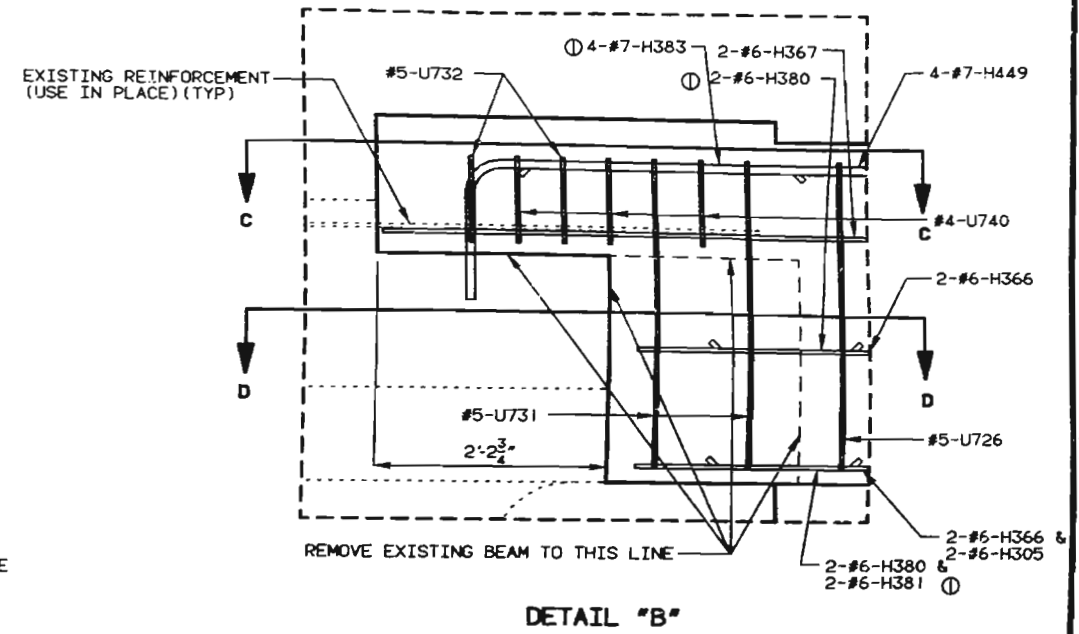
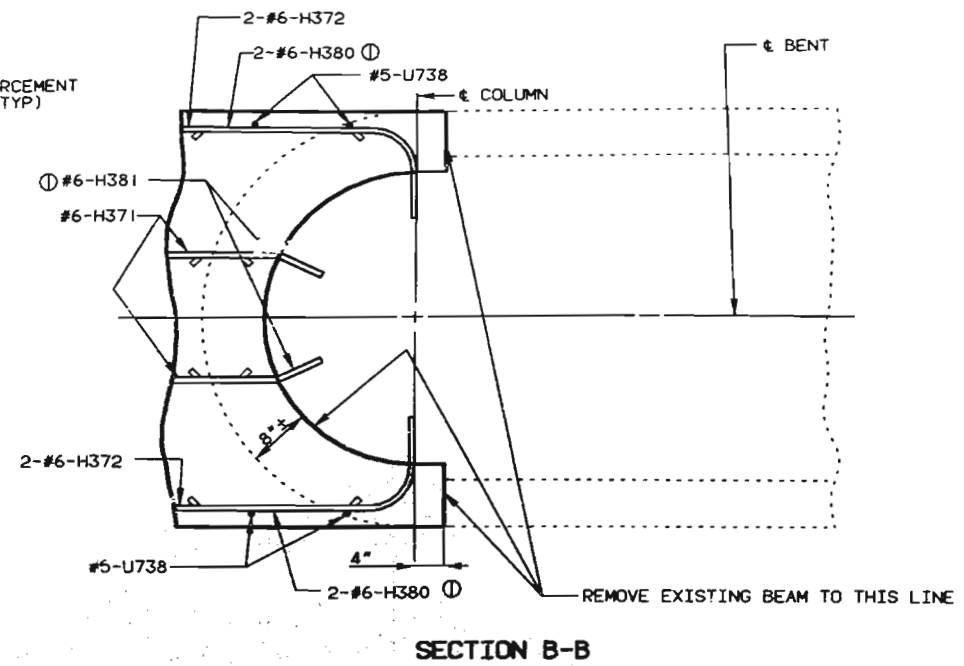
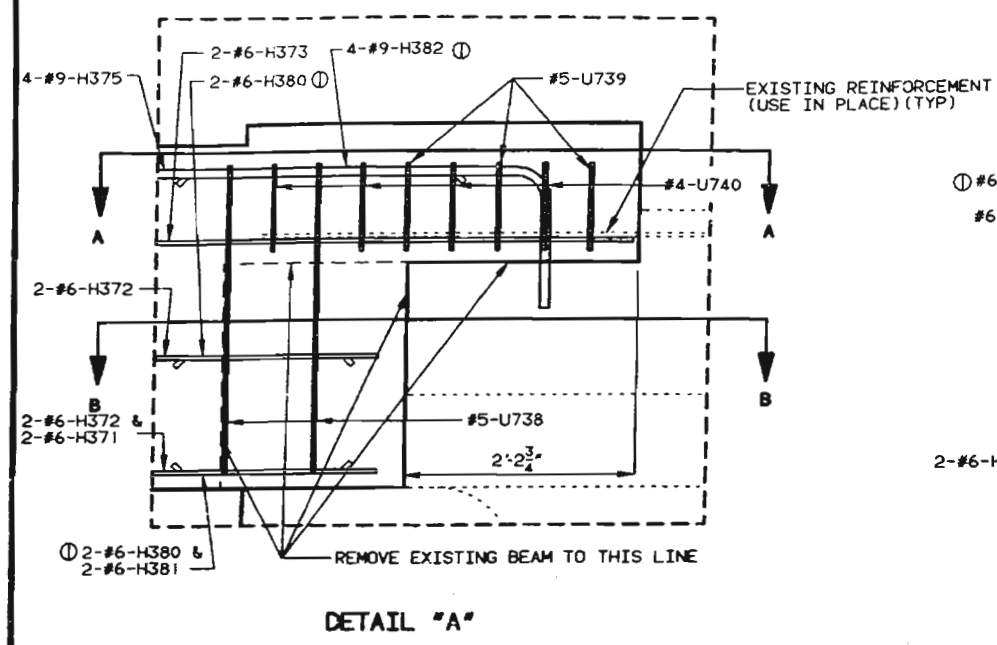
SECTION B-B

DETAILS OF INT. BENT NO. 14 (NORTHBOUND LANE)

98







①BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR LOCATION OF DETAIL "A" AND "B" SEE SHEET NO. 91.

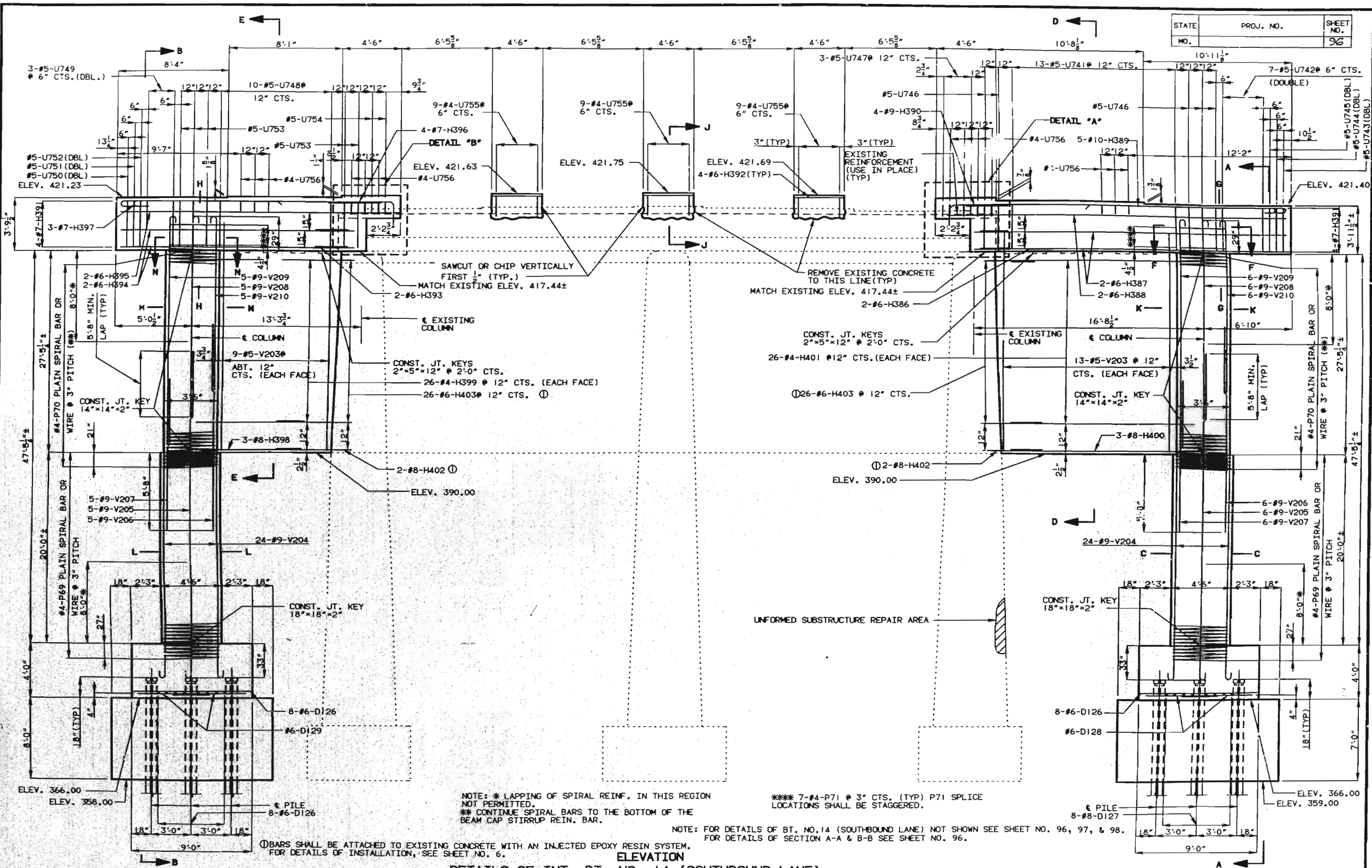
DETAILS OF INT. BENT NO. 14 (NORTHBOUND LANE)

100  
 DETAILED: JUNE 1992  
 CHECKED: OCT. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 94 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.

\*\*\* 7-#4-P71 @ 3" CTS. (TYP) P71 SPLICE LOCATIONS SHALL BE STAGGERED.

NOTE: FOR DETAILS OF BT. NO. 14 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NO. 96, 97, & 98.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 96.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

### ELEVATION DETAILS OF INT. BT. NO. 14 (SOUTHBOUND LANE)

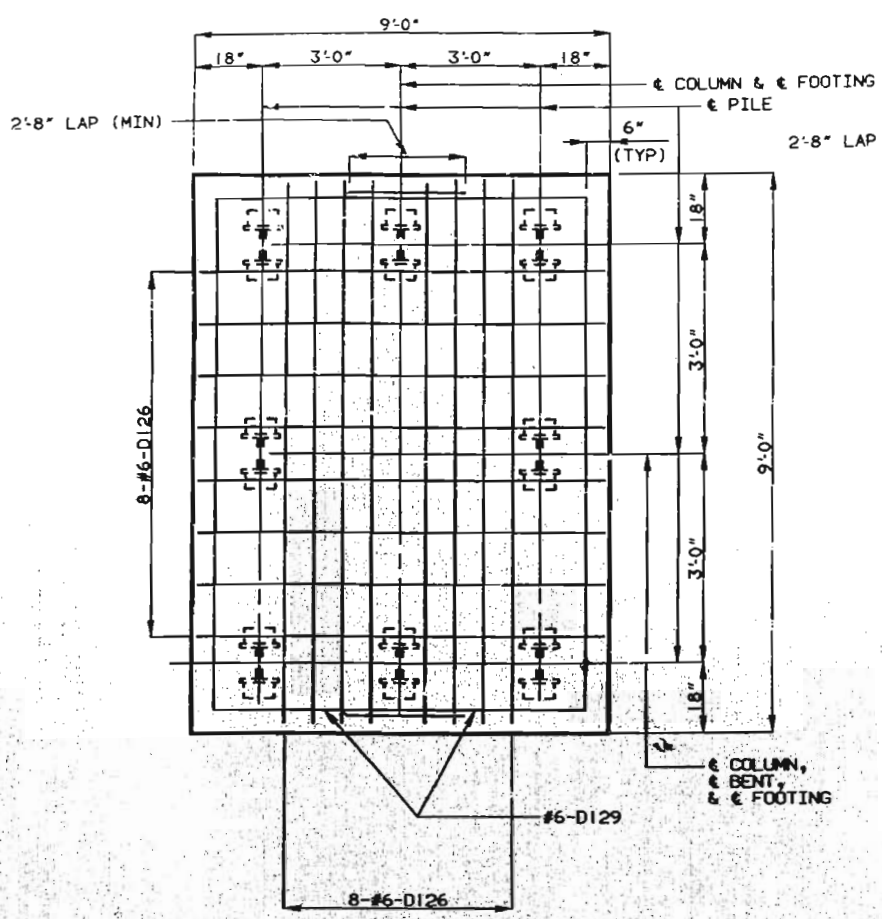
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 95 OF 238

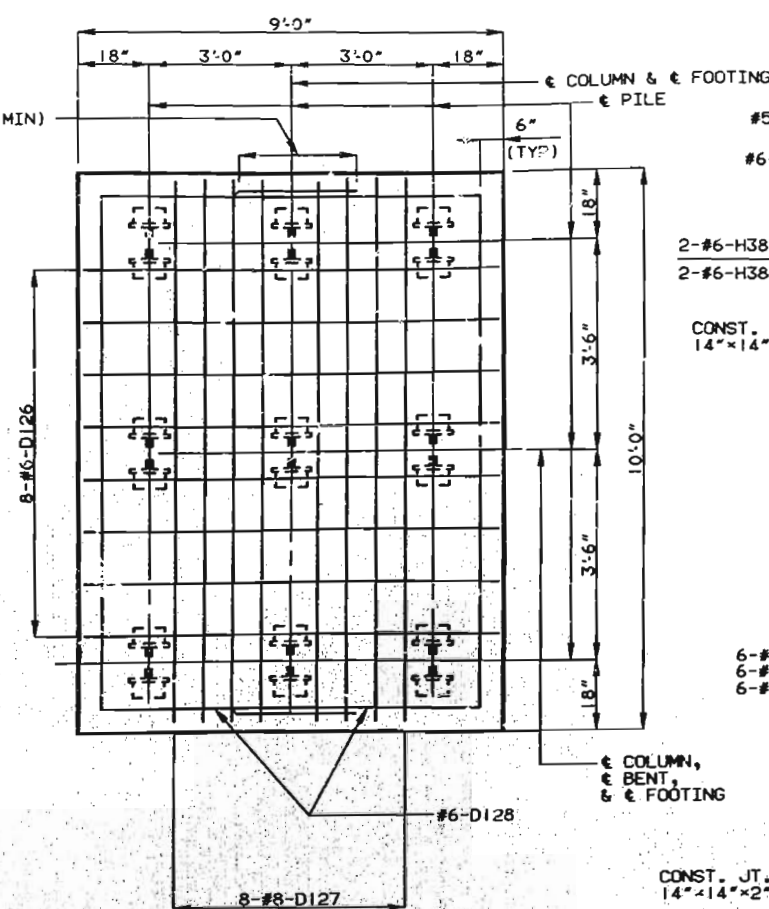
DETAILED JUNE 1992  
 CHECKED NOV. 1992

101



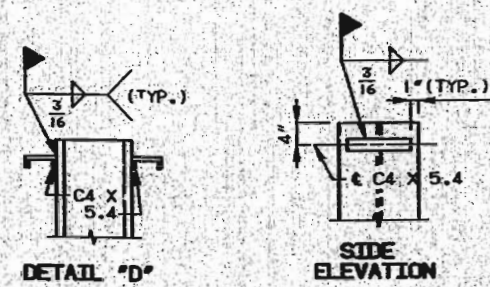


PLAN OF FOOTING SHOWING REINFORCEMENT (LEFT SIDE)



PLAN OF FOOTING SHOWING REINFORCEMENT (RIGHT SIDE)

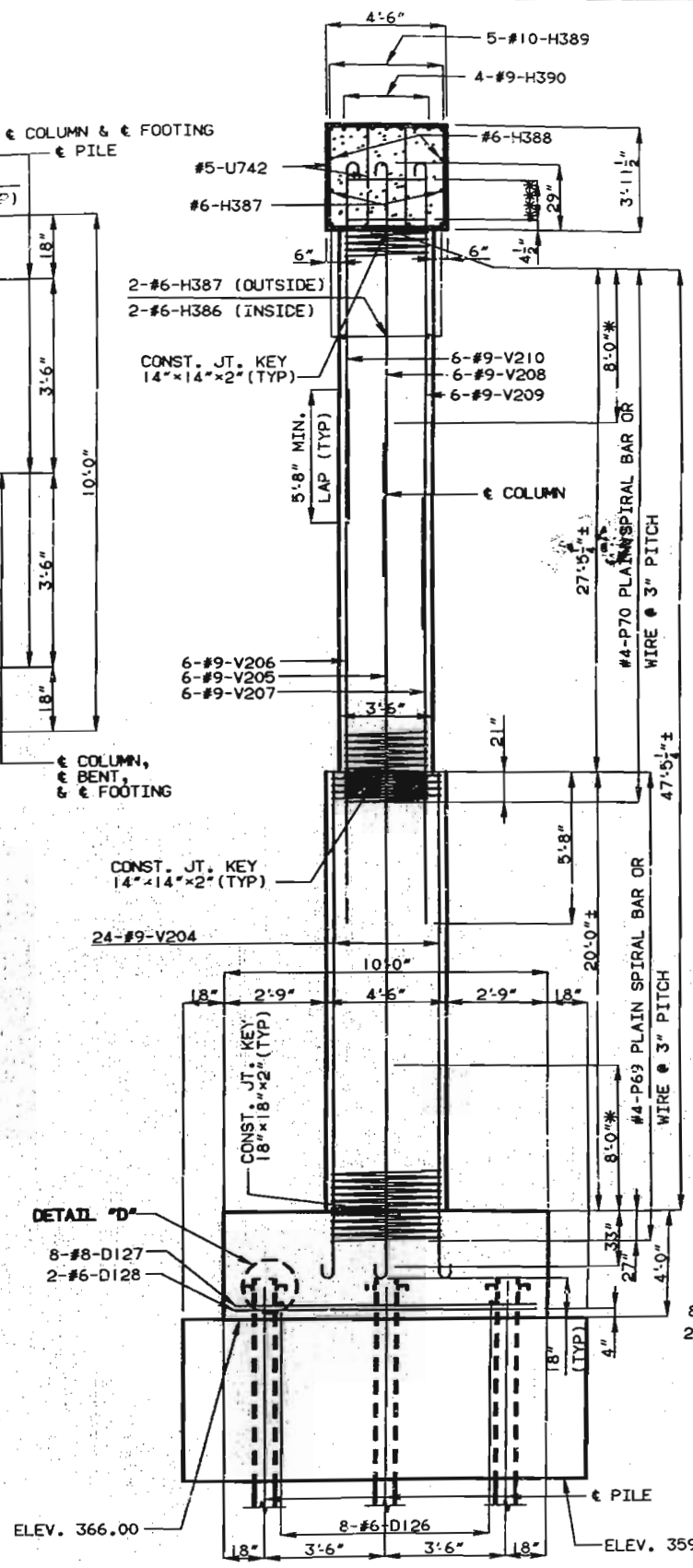
NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 7-#4-P71 @ 3" CTS. (TYP) P71 SPLICE LOCATIONS SHALL BE STAGGERED.



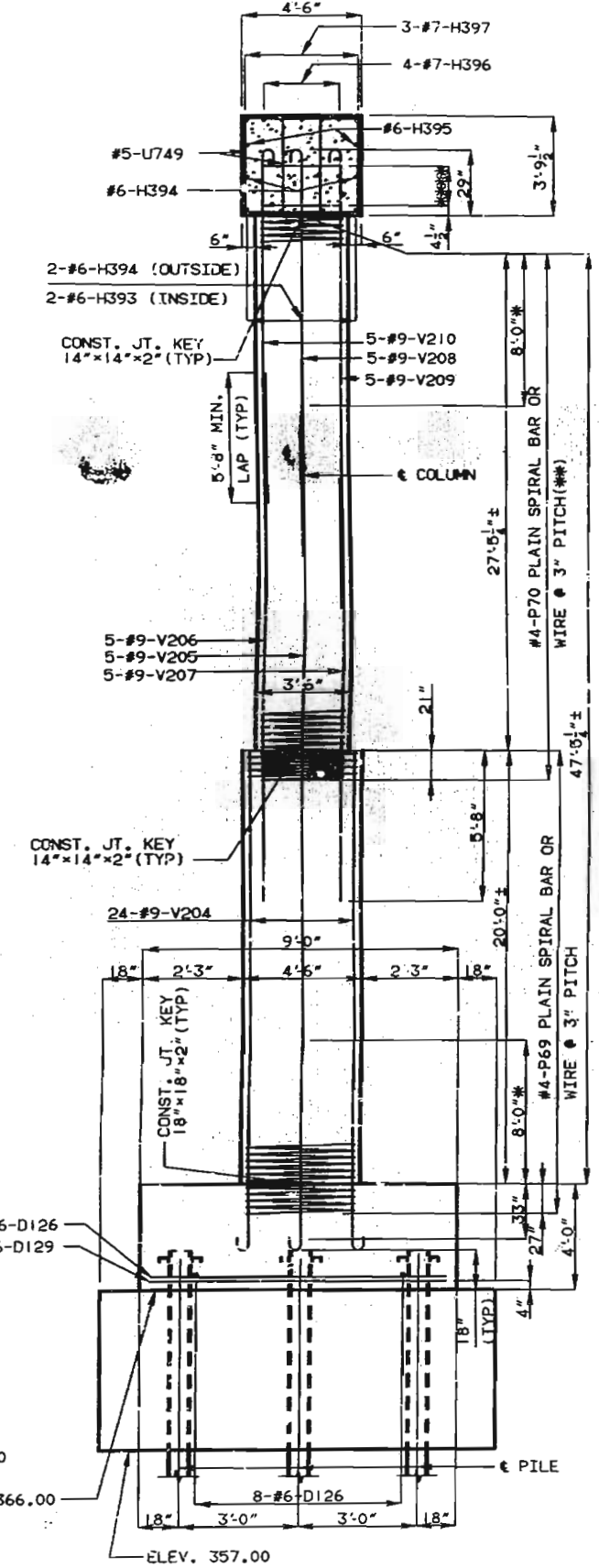
DETAIL "D"

SIDE ELEVATION

NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 95.



SECTION A-A



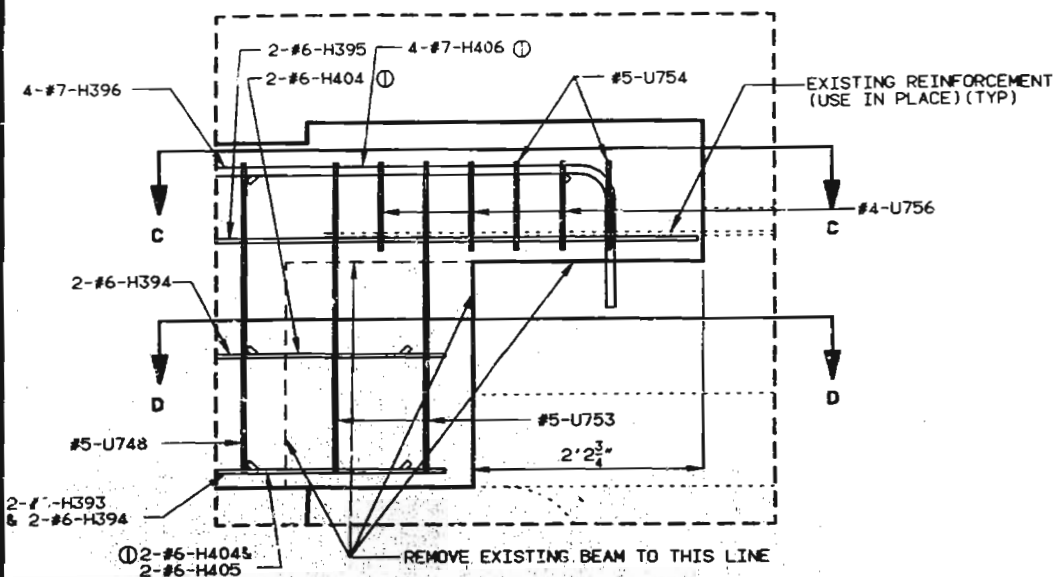
SECTION B-B

DETAILS OF INT. BENT NO. 14 (SOUTHBOUND LANE)

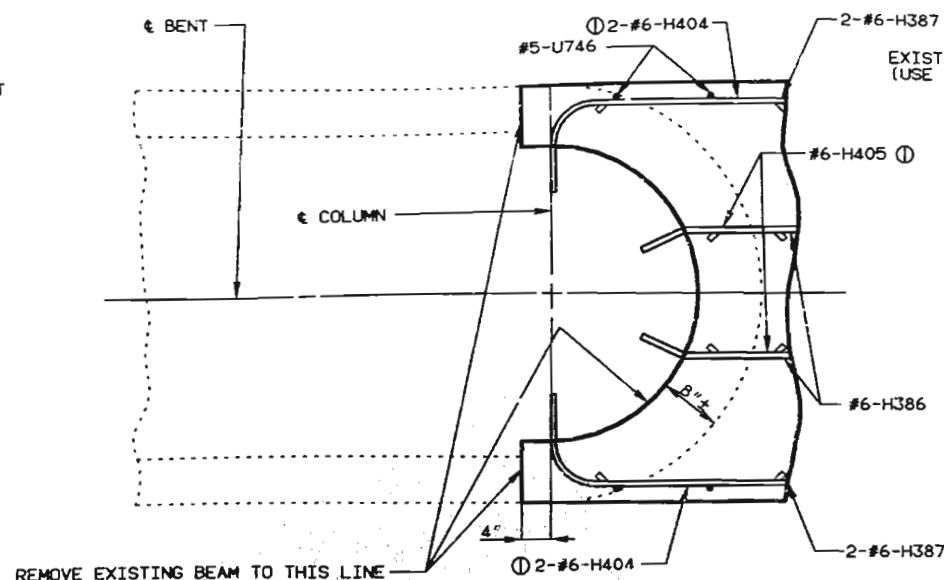
102



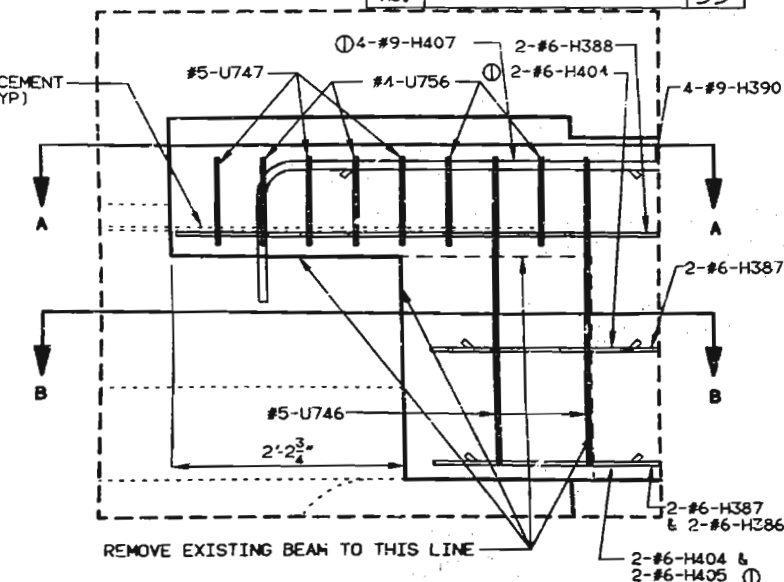




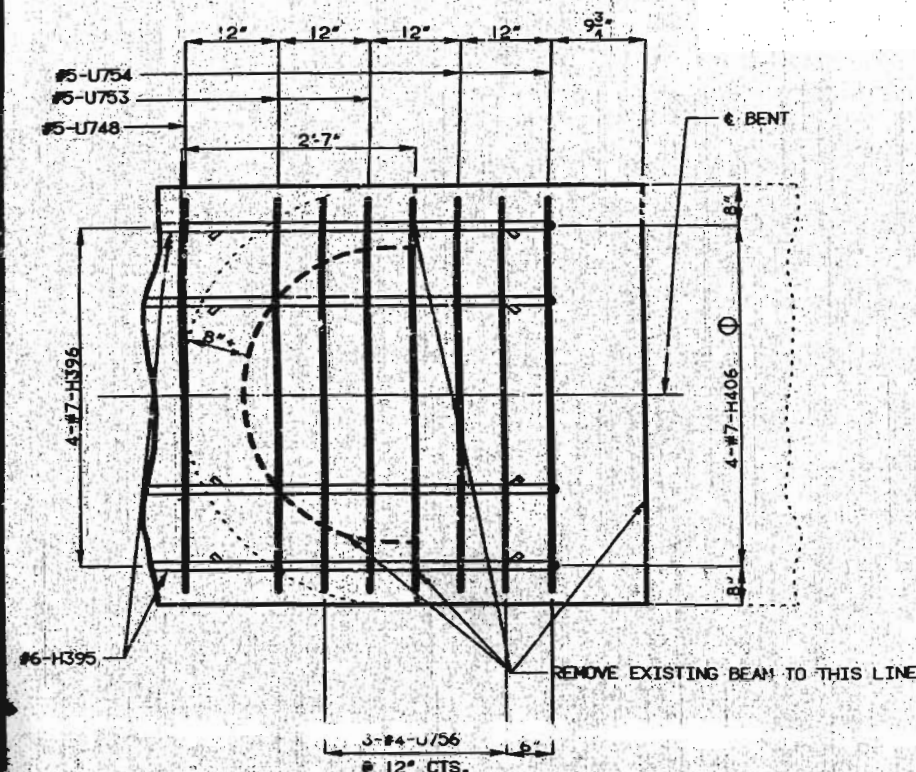
DETAIL "B"



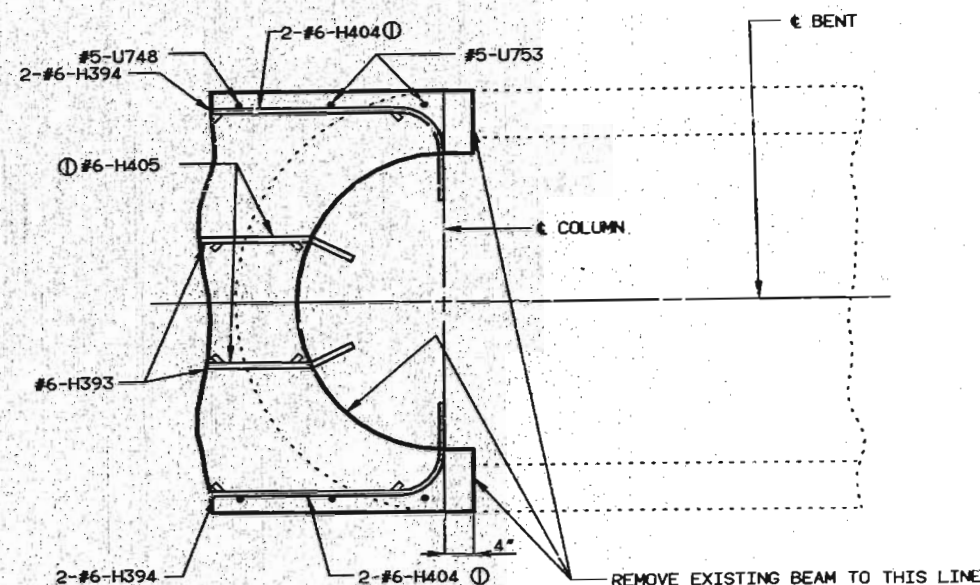
SECTION B-B



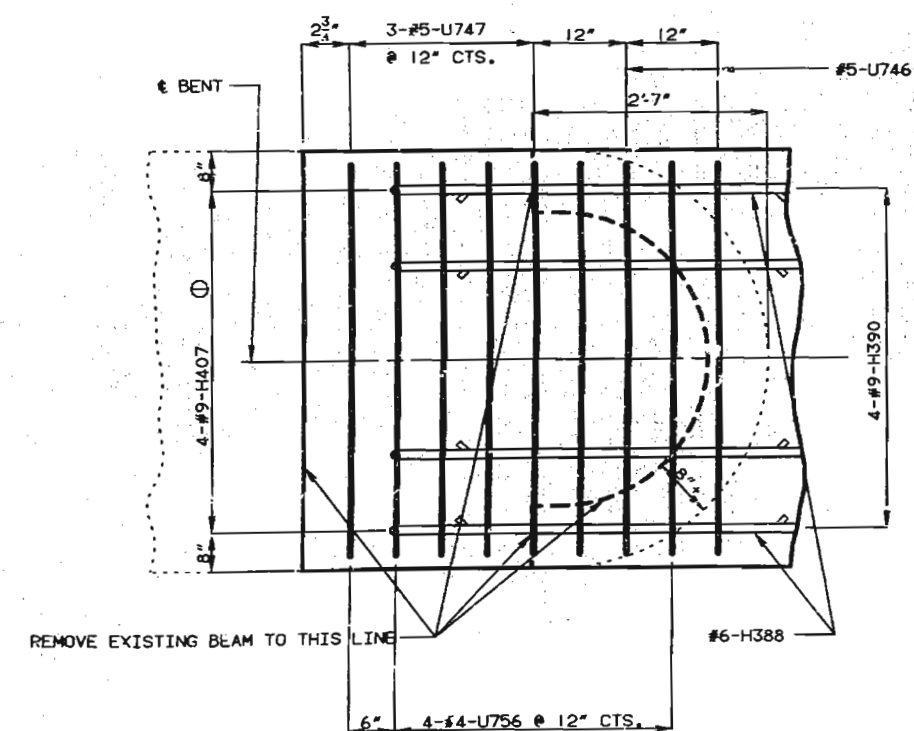
DETAIL "A"



SECTION C-C



SECTION D-D



SECTION A-A

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR LOCATION OF DETAIL "A" AND "B" SEE SHEET NO. 95.

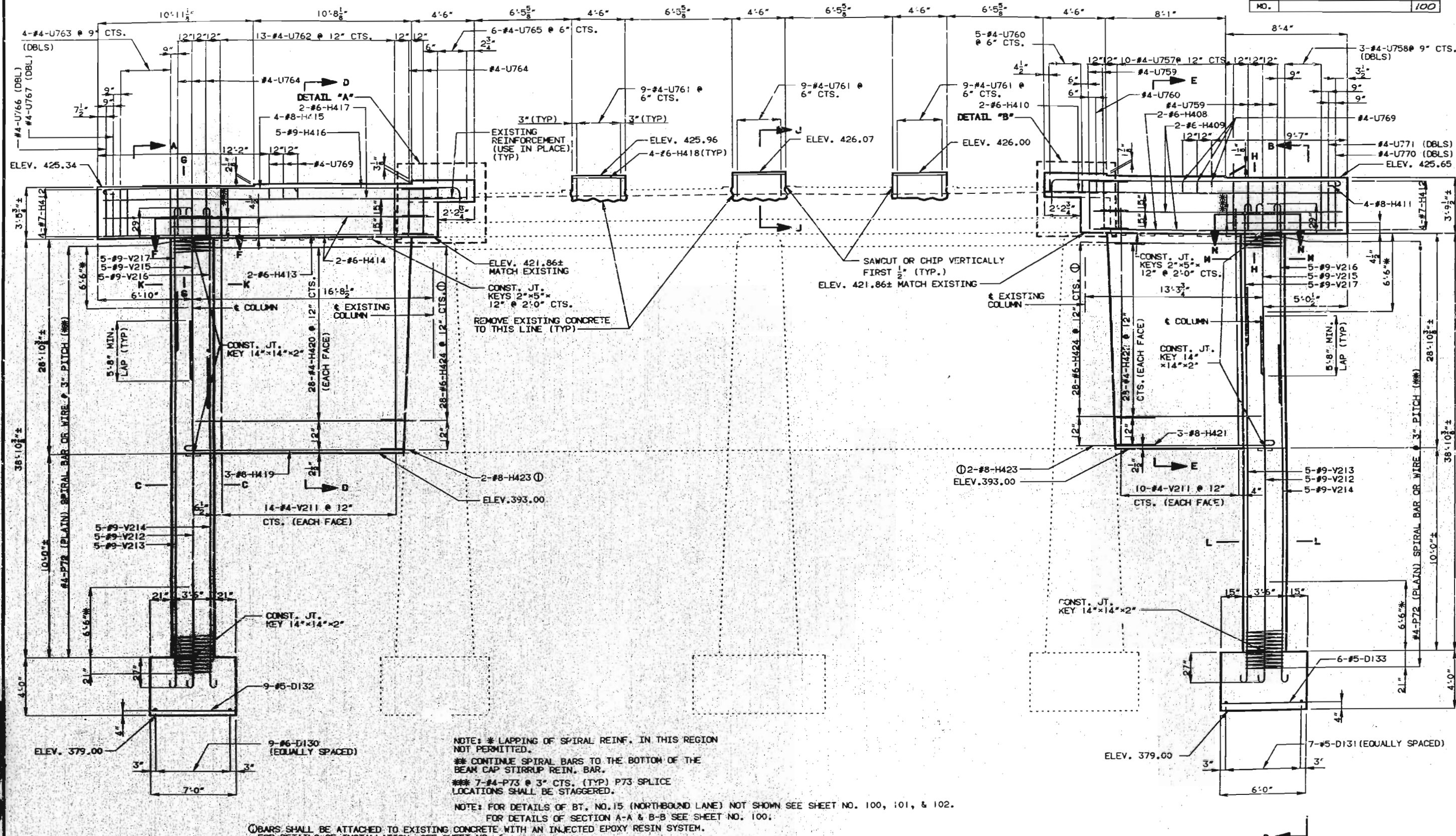
DETAILS OF INT. BENT NO. 14 (SOUTHBOUND LANE)

104  
 DETAILED JUNE 1992  
 CHECKED NOV. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 98 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 7-#4-P73 @ 3\"/>

NOTE: FOR DETAILS OF BT. NO. 15 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NO. 100, 101, & 102.  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 100.  
 @BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

ELEVATION

DETAILS OF INT. BT. NO. 15 (NORTHBOUND LANE)

DETAILED JUNE 1992  
 CHECKED OCT. 1992

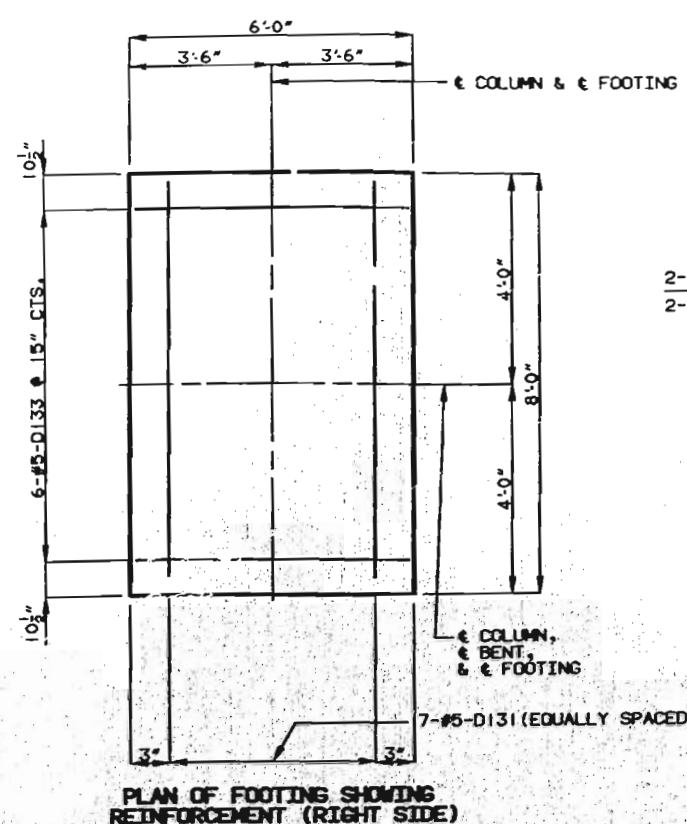
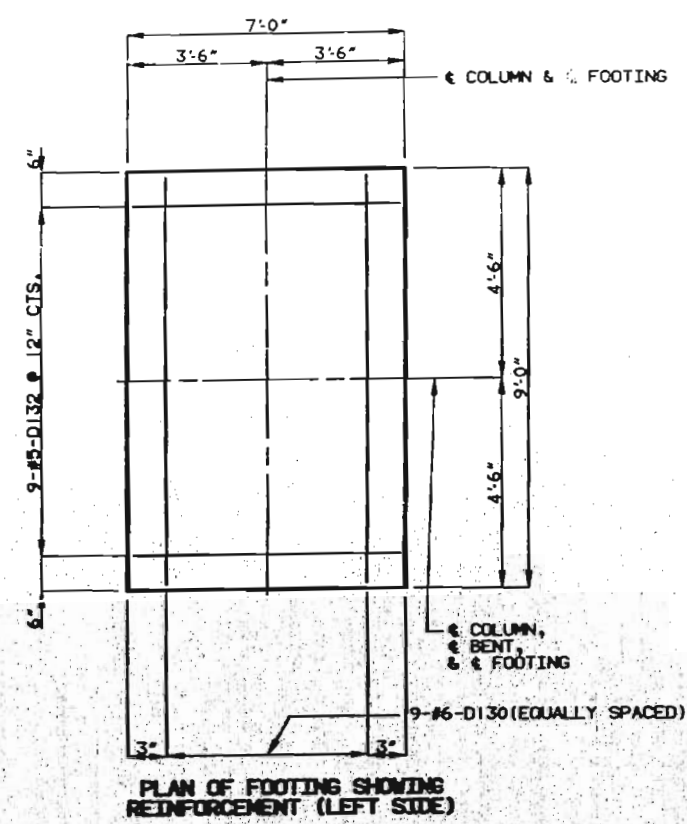
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 99 OF 238

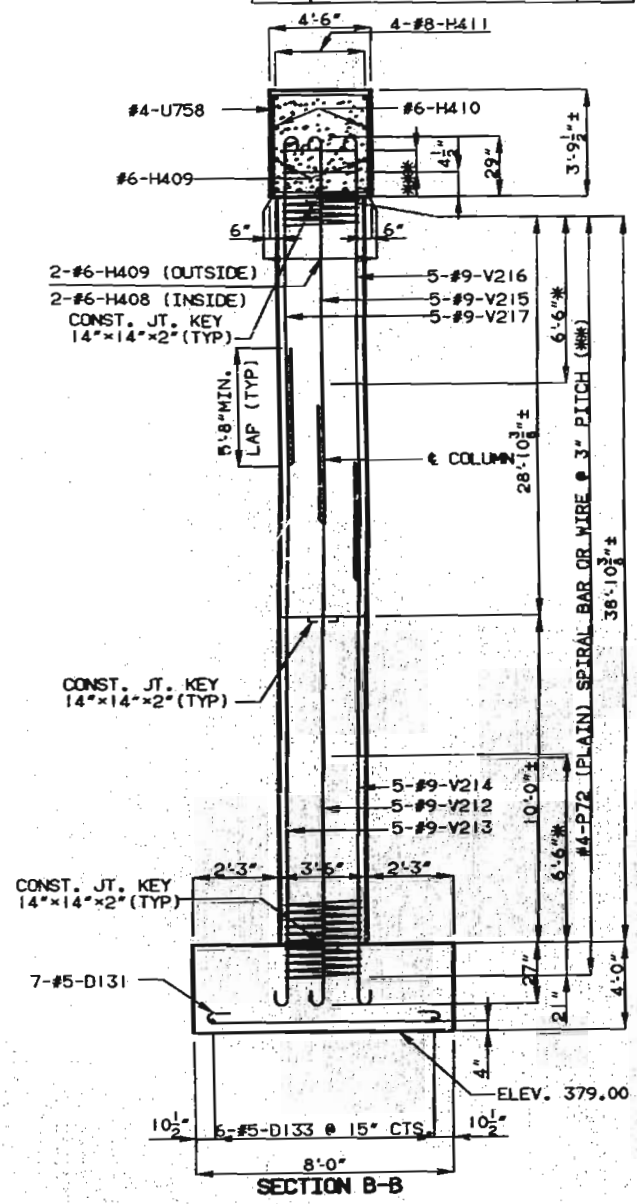
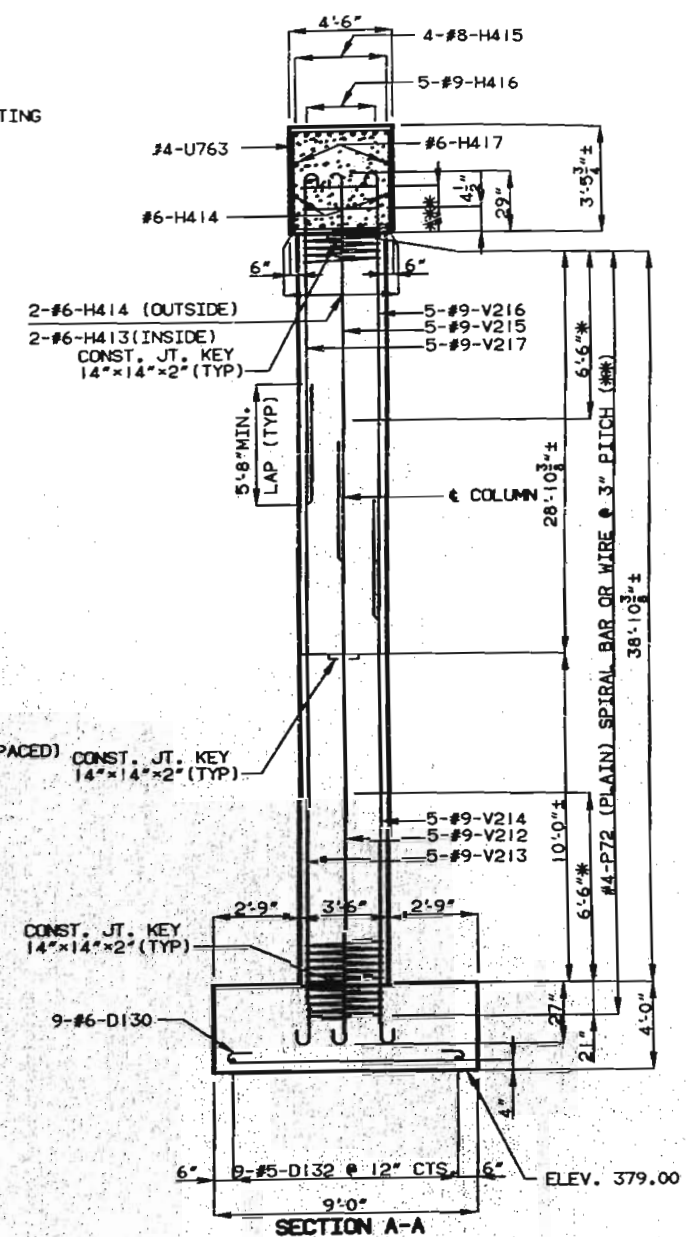
ST. LOUIS-JEFFERSON COUNTIES A-609R

105





NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 7-#4-P73 @ 3" CTS. (TYP) P73 SPLICE LOCATIONS SHALL BE STAGGERED.



NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 99.

DETAILS OF INT. BENT NO. 15 (NORTHBOUND LANE)

DETAILED JUNE 1992  
 CHECKED OCT. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 100 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

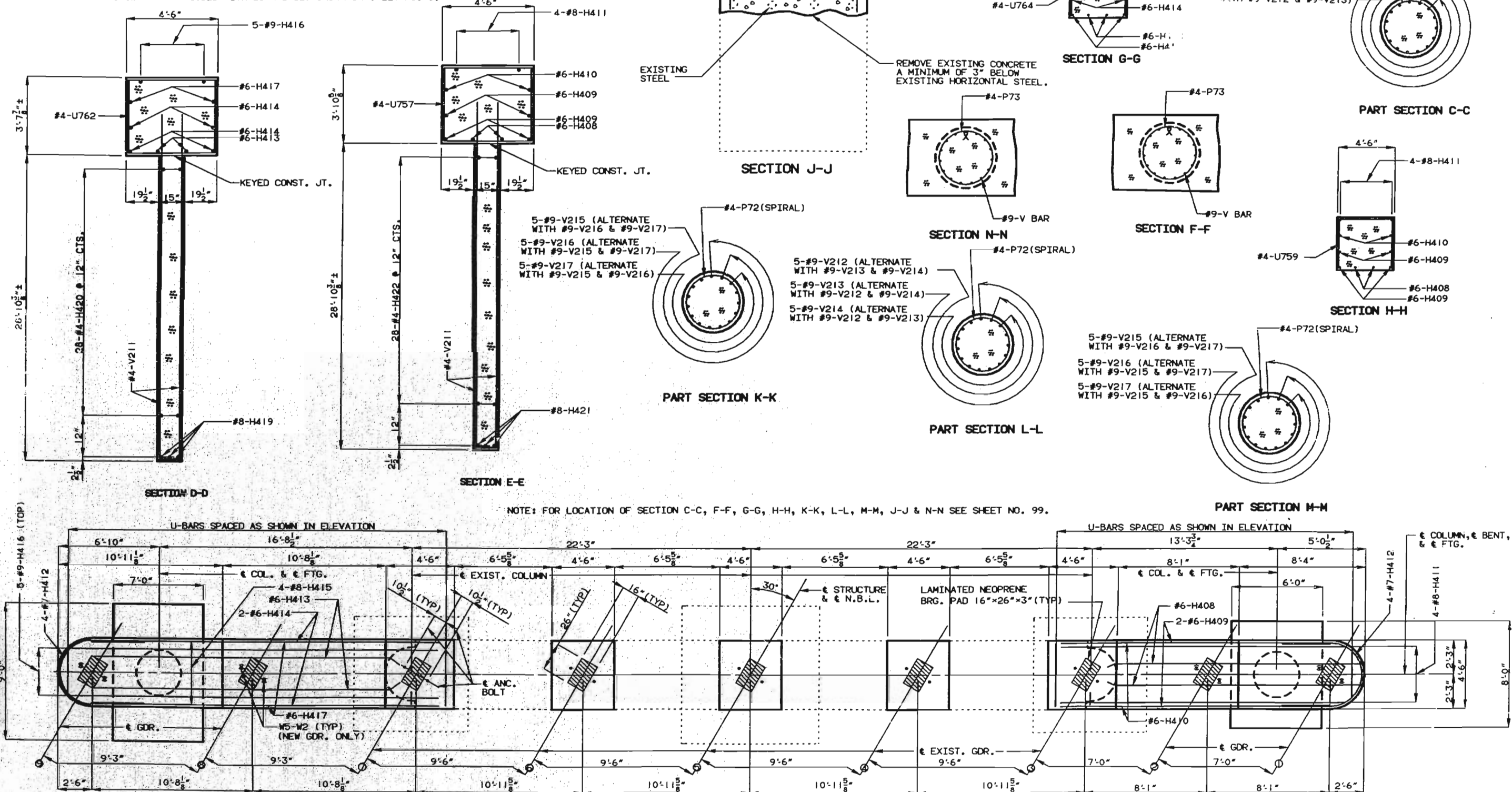
106

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 15		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	65
CLASS 2 EXCAVATION	CU. YDS.	25
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	103.3
REINFORCING STEEL (BRIDGES)	LBS.	13110

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.

\* SEAL TOP & SIDE OF BEAM CAP WITH PROTECTIVE COATING (DELFERIOUS AGENTS).(SEE SPECIAL PROVISIONS).

STATE	PROJ. NO.	SHEET NO.
MO.		102



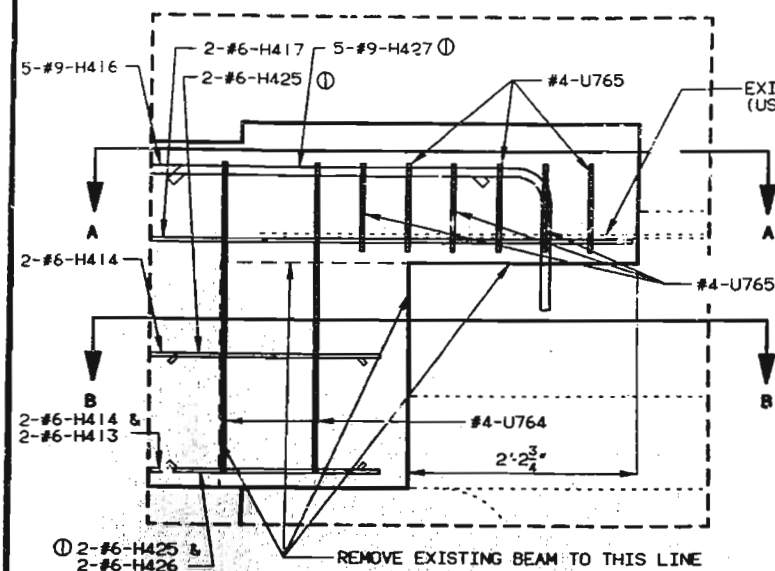
DETAILED JUNE 1992  
CHECKED OCT. 1992

DETAILS OF INT. BENT NO. 15 (NORTHBOUND LANE)

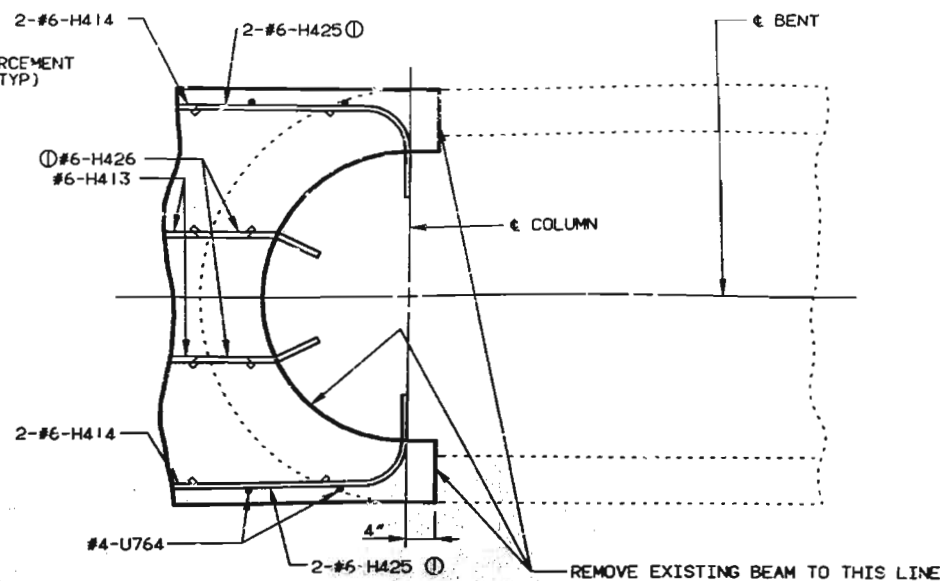
SHEET NO. 101 OF 238

ST. LOUIS--JEFFERSON COUNTIES A-609R

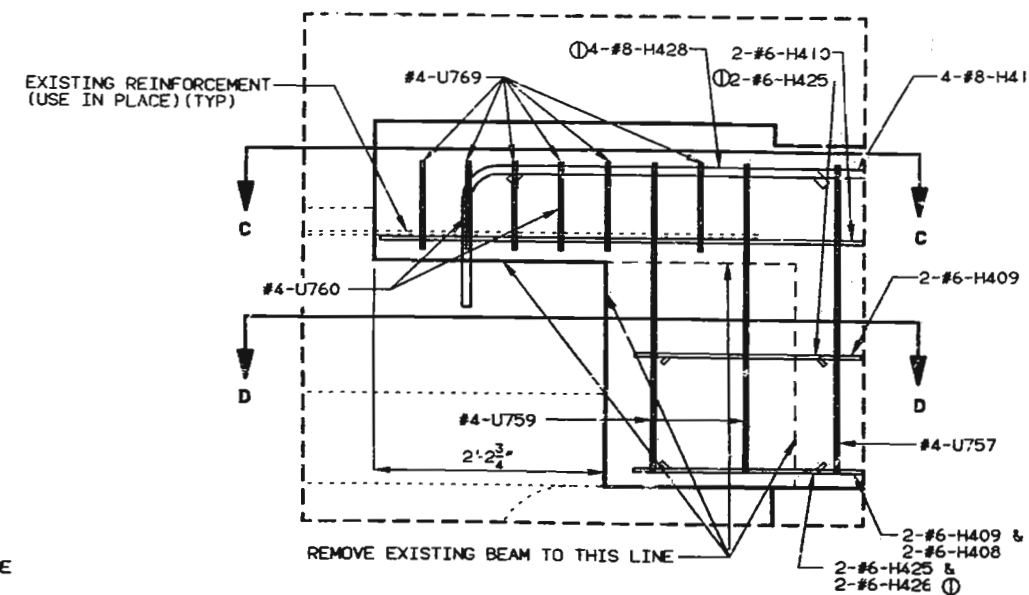




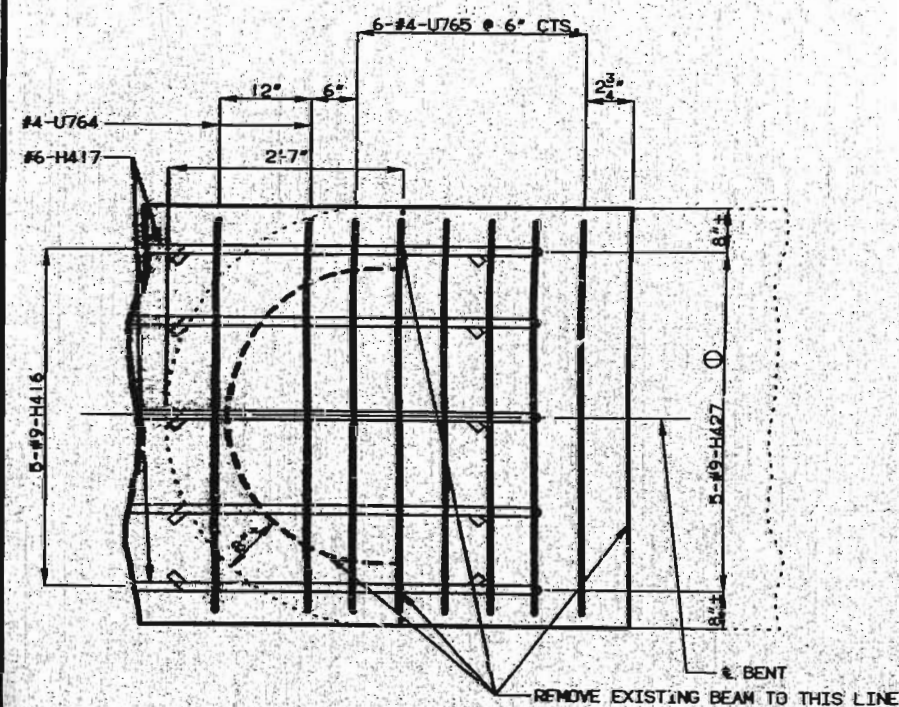
DETAIL "A"



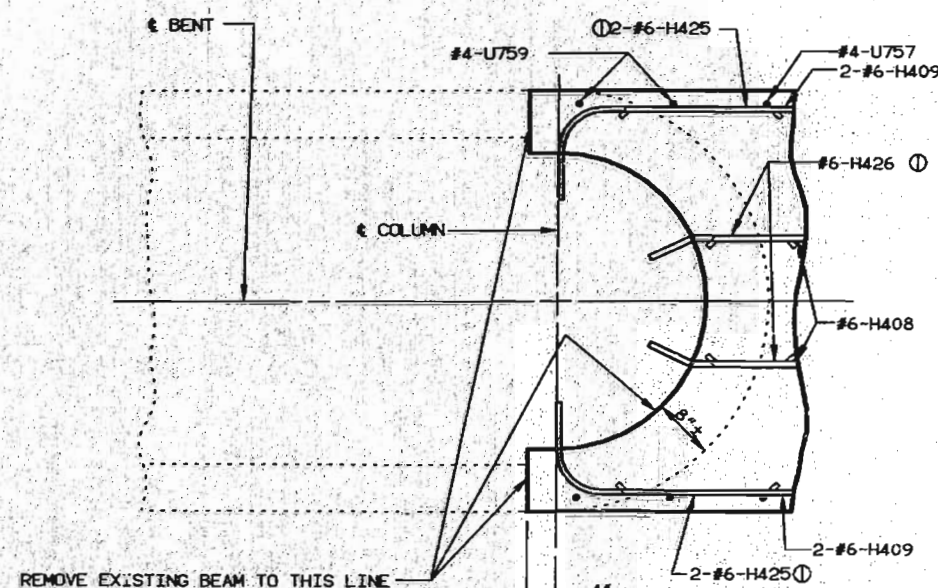
SECTION B-B



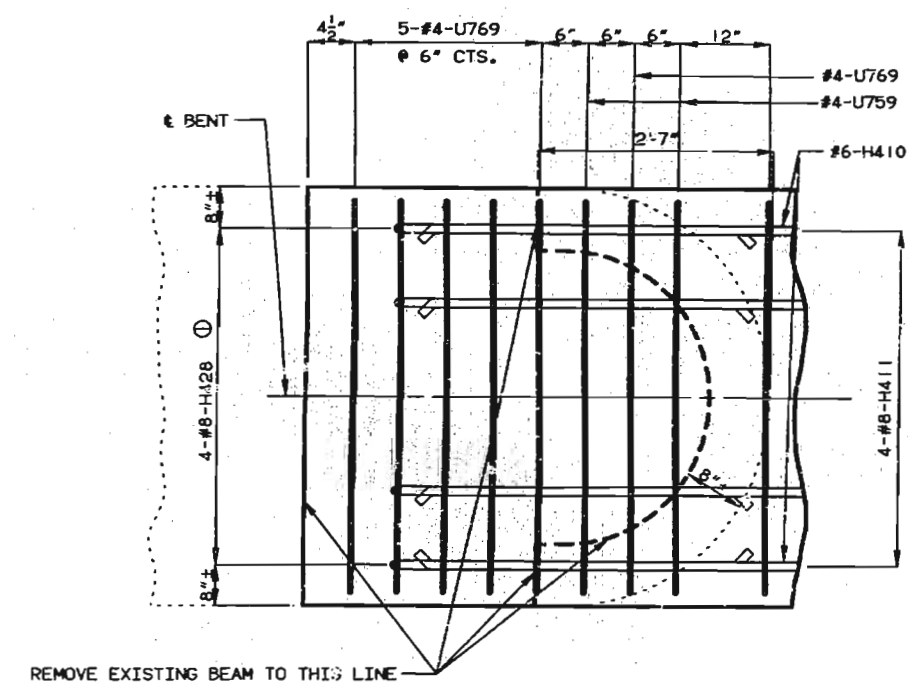
DETAIL "B"



SECTION A-A



SECTION D-D



SECTION C-C

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR LOCATION OF DETAIL "A" AND "B" SEE SHEET NO. 99.

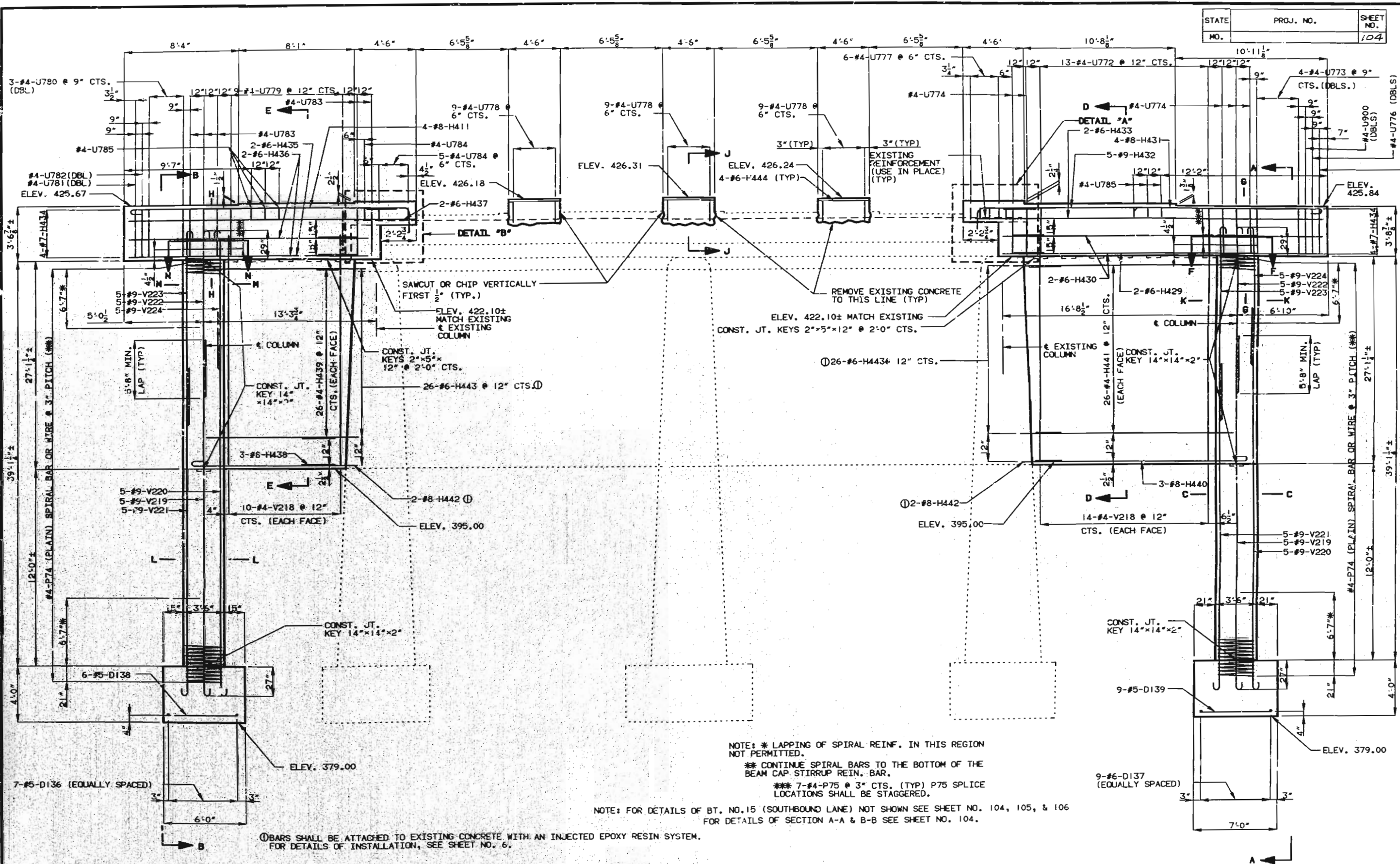
DETAILS OF INT. BENT NO. 15 (NORTHBOUND LANE)

DETAILED MAY 1992  
CHECKED OCT. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 102 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 7-#4-P75 @ 3\"/>

NOTE: FOR DETAILS OF BT. NO. 15 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NO. 104, 105, & 106  
 FOR DETAILS OF SECTION A-A & B-B SEE SHEET NO. 104.

① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

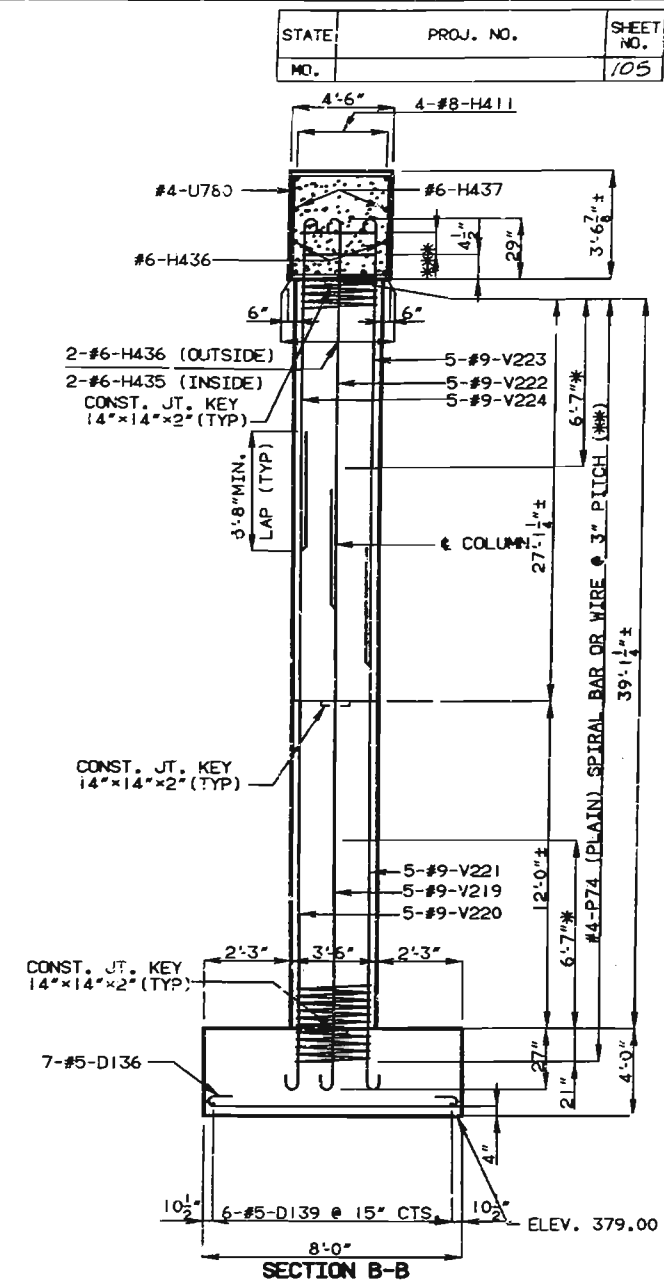
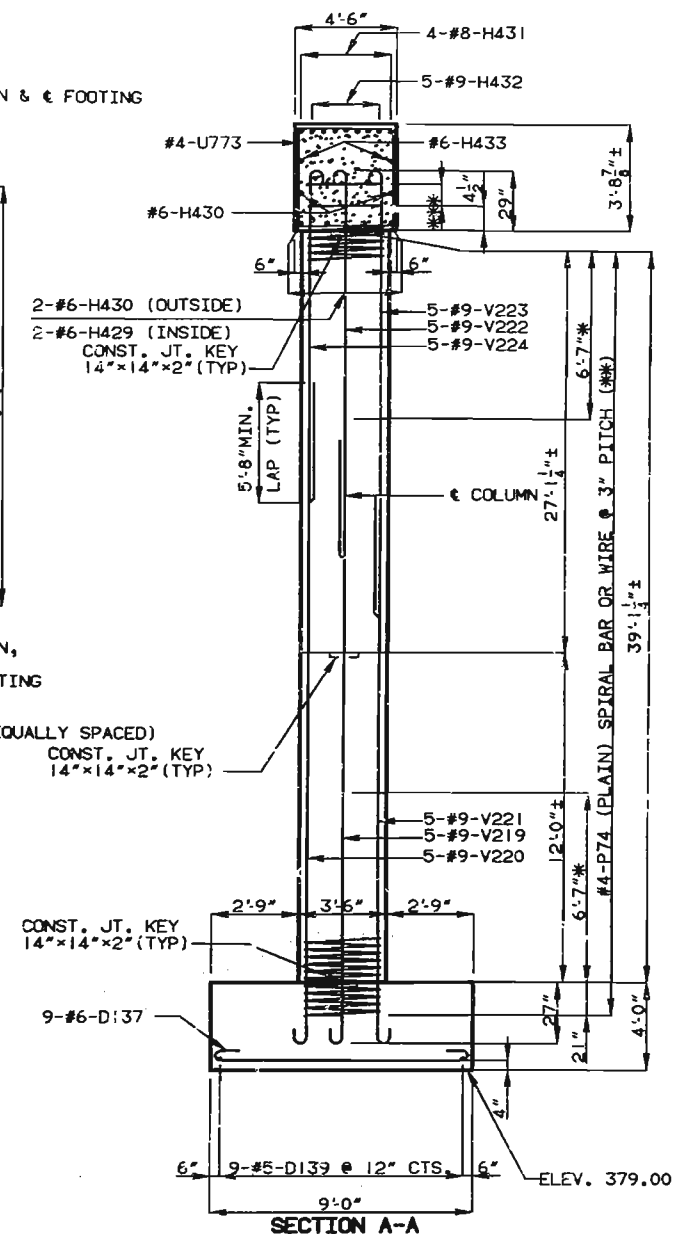
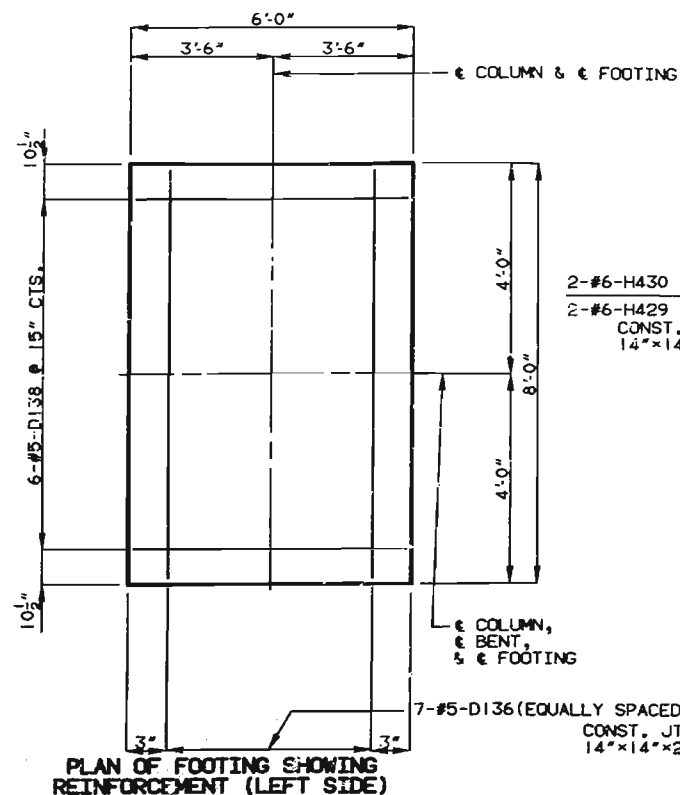
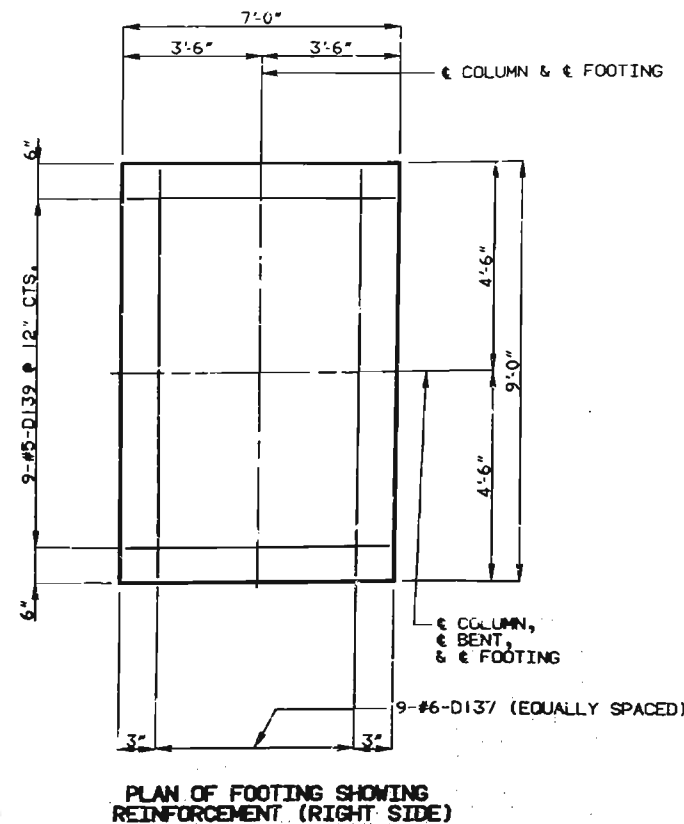
ELEVATION  
 DETAILS OF INT. BT. NO. 15 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

109

DETAILED JUNE 1992  
 CHECKED OCT. 1992





NOTE: \* LAPPING OF SPIRAL REINF. IN THIS REGION NOT PERMITTED.  
 \*\* CONTINUE SPIRAL BARS TO THE BOTTOM OF THE BEAM CAP STIRRUP REIN. BAR.  
 \*\*\* 7-#4-P @ 3' CTS. (TYP) P SPLICE LOCATIONS SHALL BE STAGGERED.

NOTE: FOR LOCATION OF SECTION A-A AND B-B SEE SHEET NO. 103.

DETAILS OF INT. BENT NO. 15 (SOUTHBOUND LANE)

DETAILED JUNE 1992  
 CHECKED OCT. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

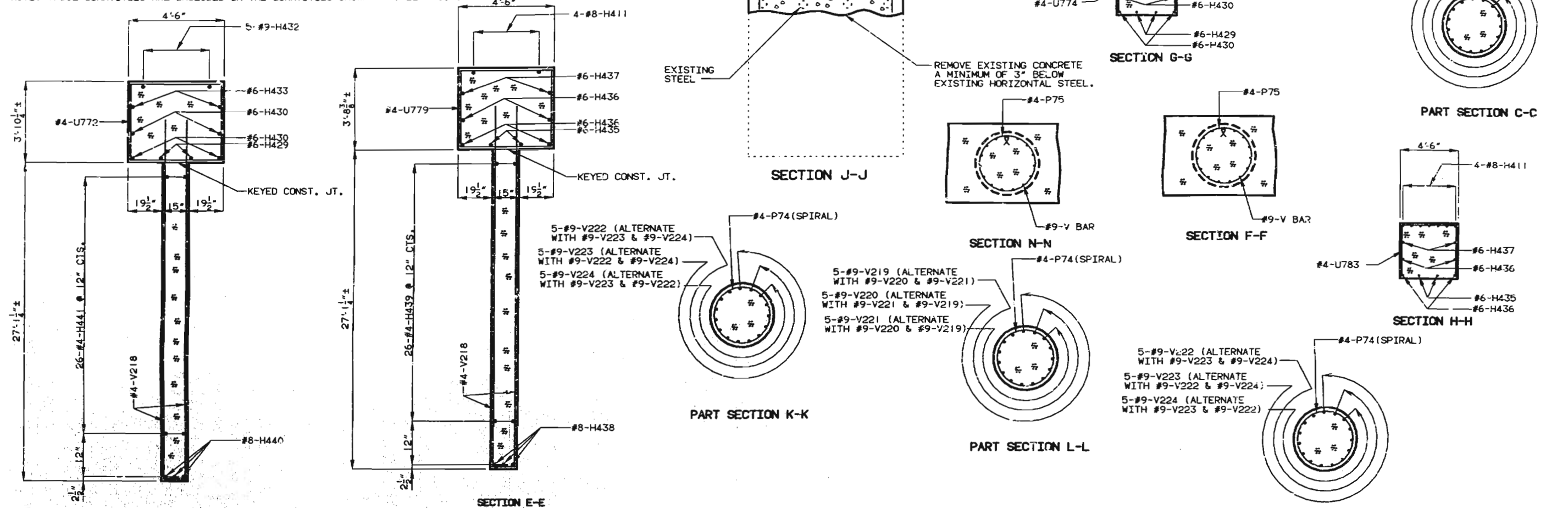
SHEET NO. 104 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

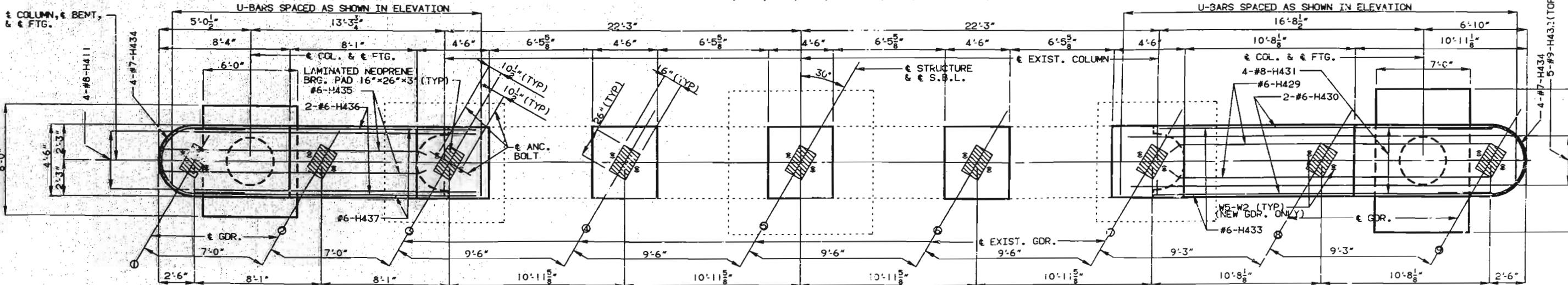
# SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 15

ITEM	QUANTITY
CLASS 1 EXCAVATION	CU. YDS. 90
CLASS 2 EXCAVATION	CU. YDS. 25
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS. 102.1
REINFORCING STEEL (BRIDGES)	LBS. 13430

NOTE: THESE QUANTITIES ARE INCLUDED IN THE QUANTITIES SHOWN ON SHEET NO. 6



NOTE: FOR LOCATION OF SECTION C-C, F-F, G-G, H-H, K-K L-L, M-M, N-N, & J-J, SEE SHEET NO. 103.

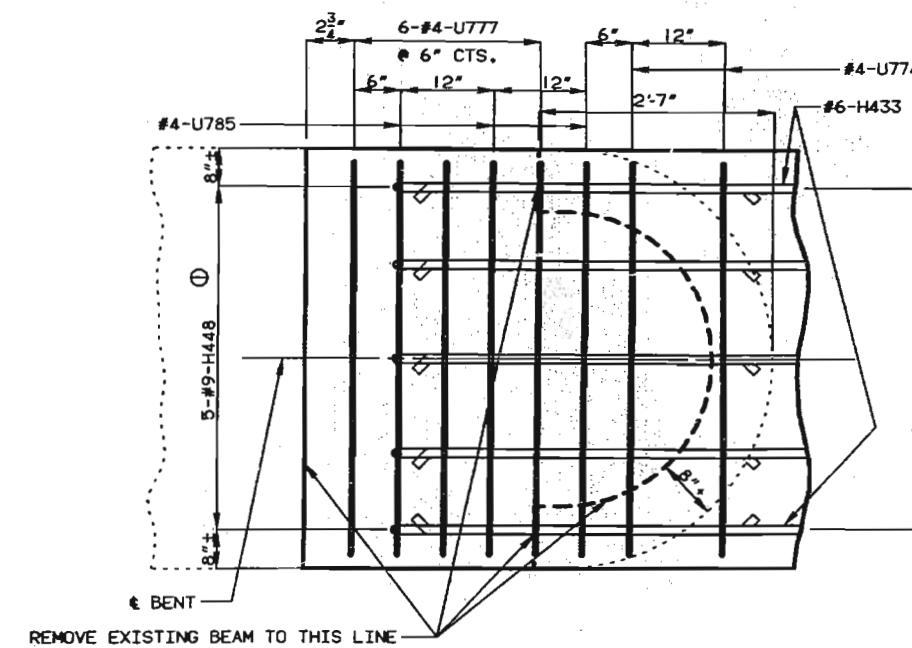
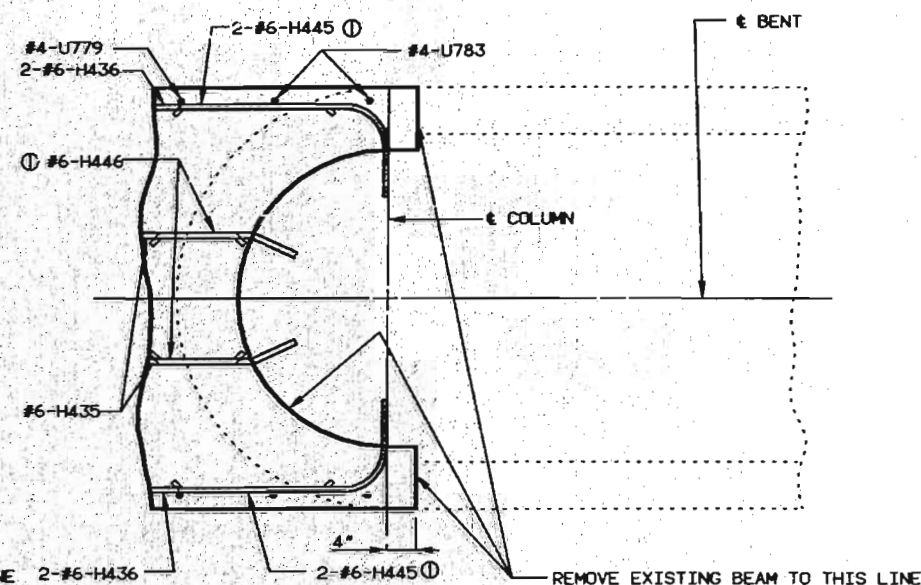
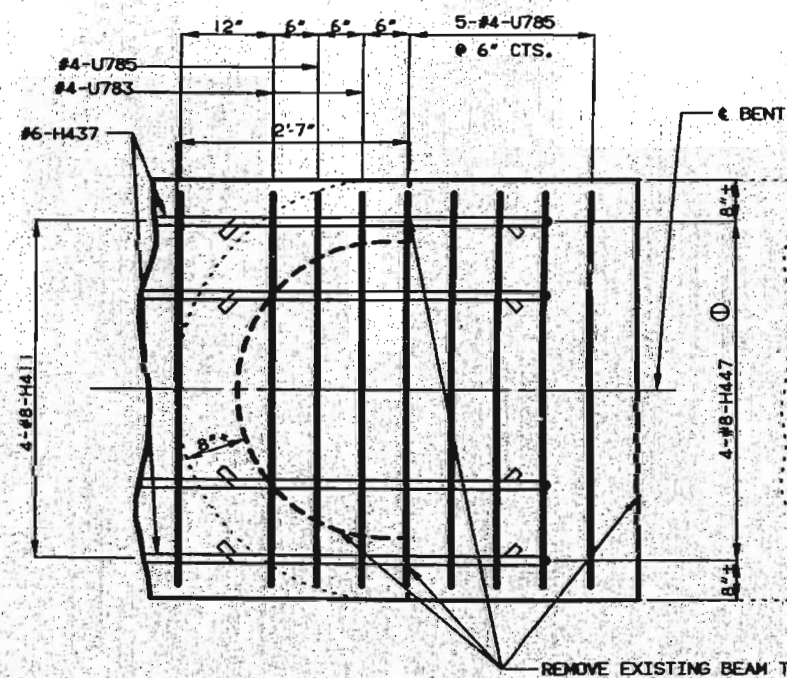
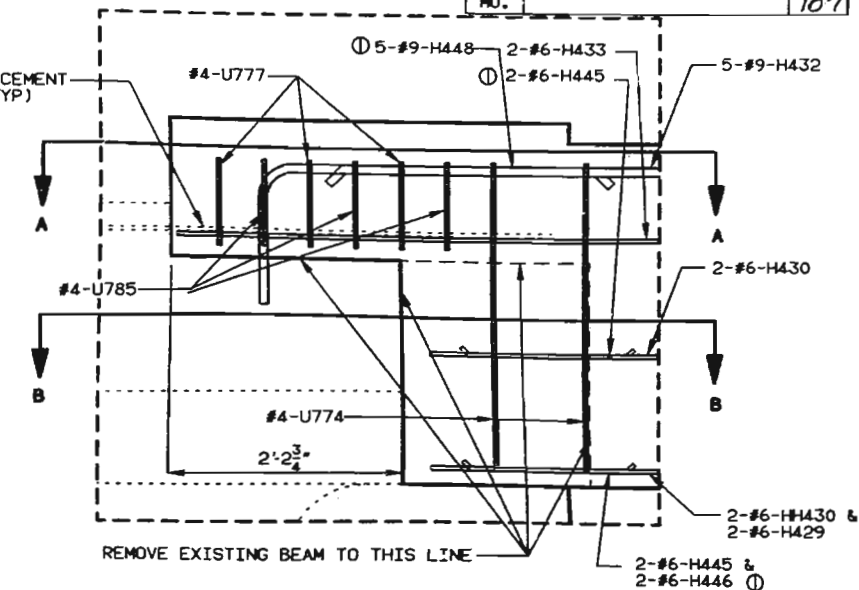
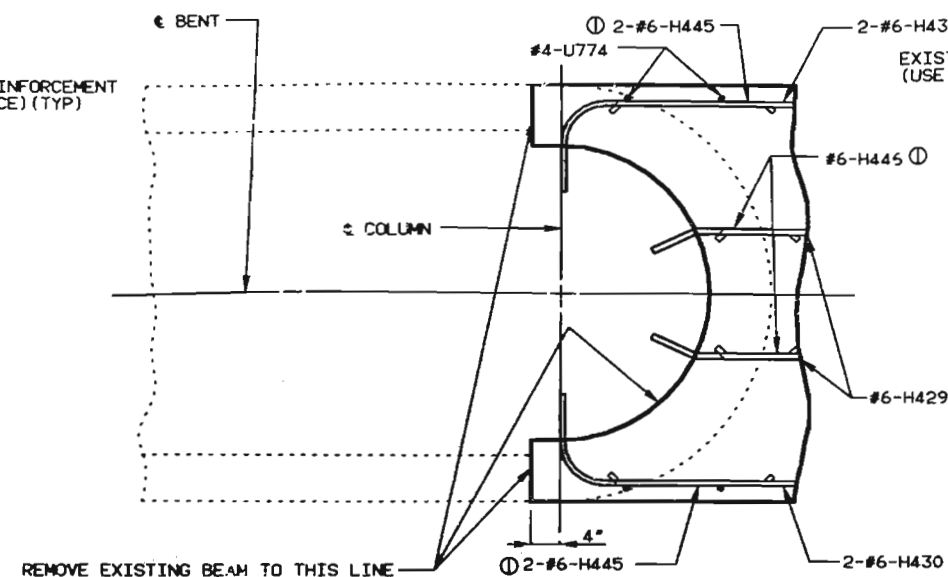
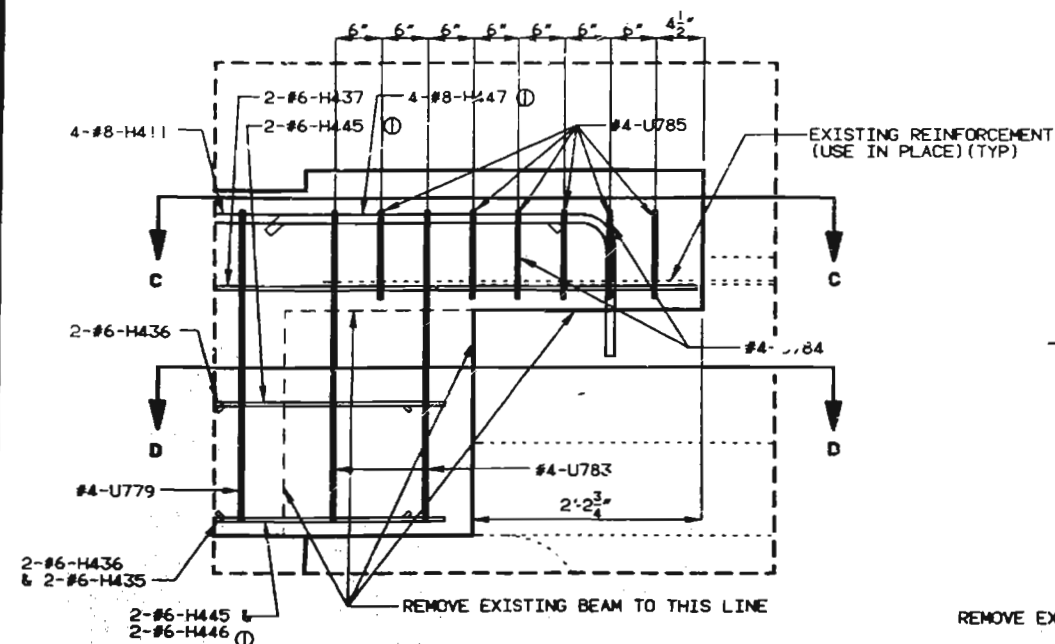


## DETAILS OF INT. BENT NO. 15 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 105 OF 236

ST. LOUIS-JEFFERSON COUNTIES A-609R



① BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM. FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: FOR LOCATION OF DETAIL "A" AND "B" SEE SHEET NO. 103.

# DETAILS OF INT. BENT NO. 15 (SOUTHBOUND LANE)

DETAILED MAY 1992  
CHECKED OCT. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

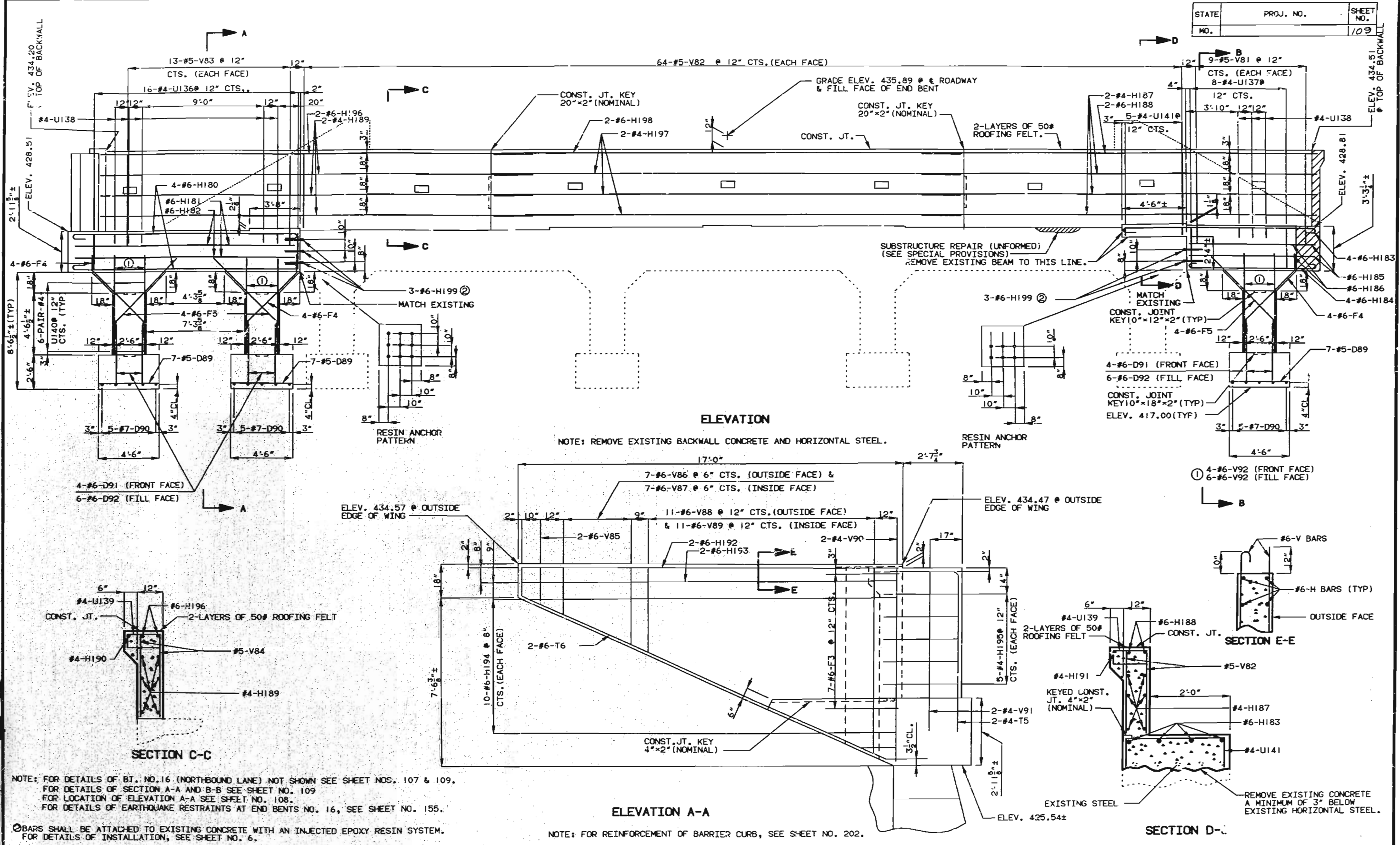
SHEET NO. 106 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R







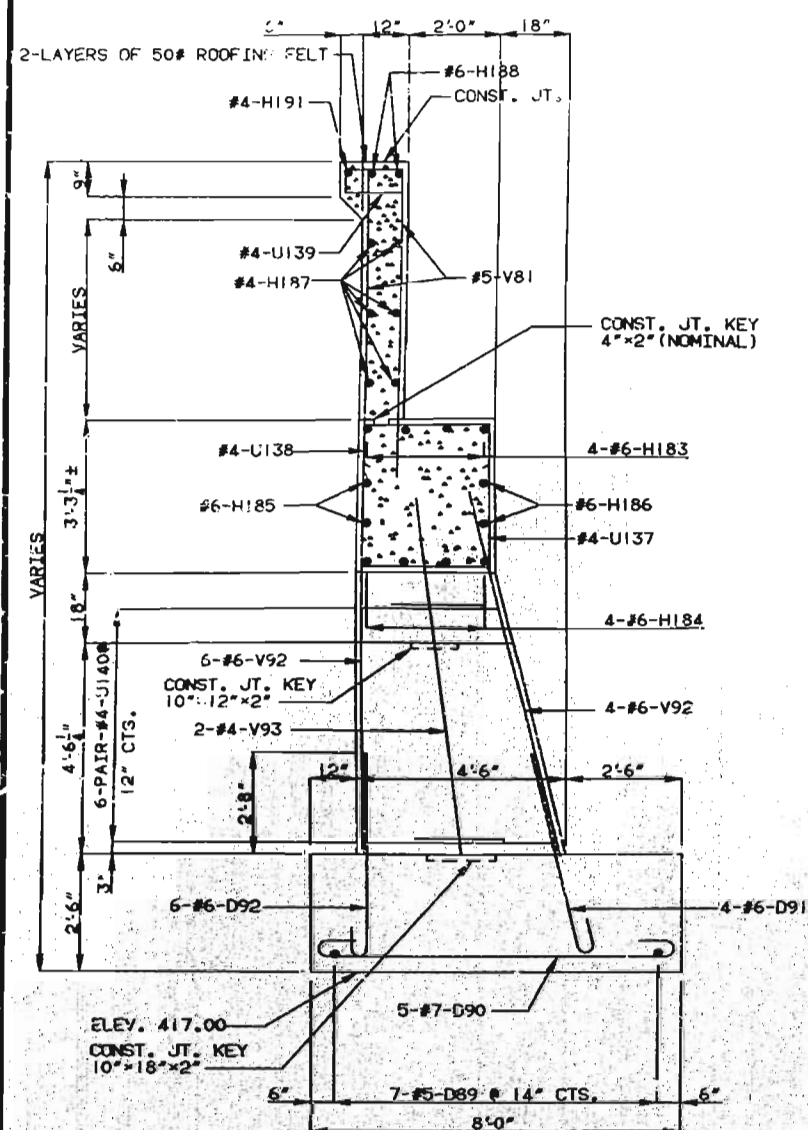


NOTE: FOR DETAILS OF BT. NO. 16 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 107 & 109.  
 FOR DETAILS OF SECTION A-A AND B-B SEE SHEET NO. 109  
 FOR LOCATION OF ELEVATION A-A SEE SHEET NO. 108.  
 FOR DETAILS OF EARTHQUAKE RESTRAINTS AT END BENTS NO. 16, SEE SHEET NO. 155.  
 BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM.  
 FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

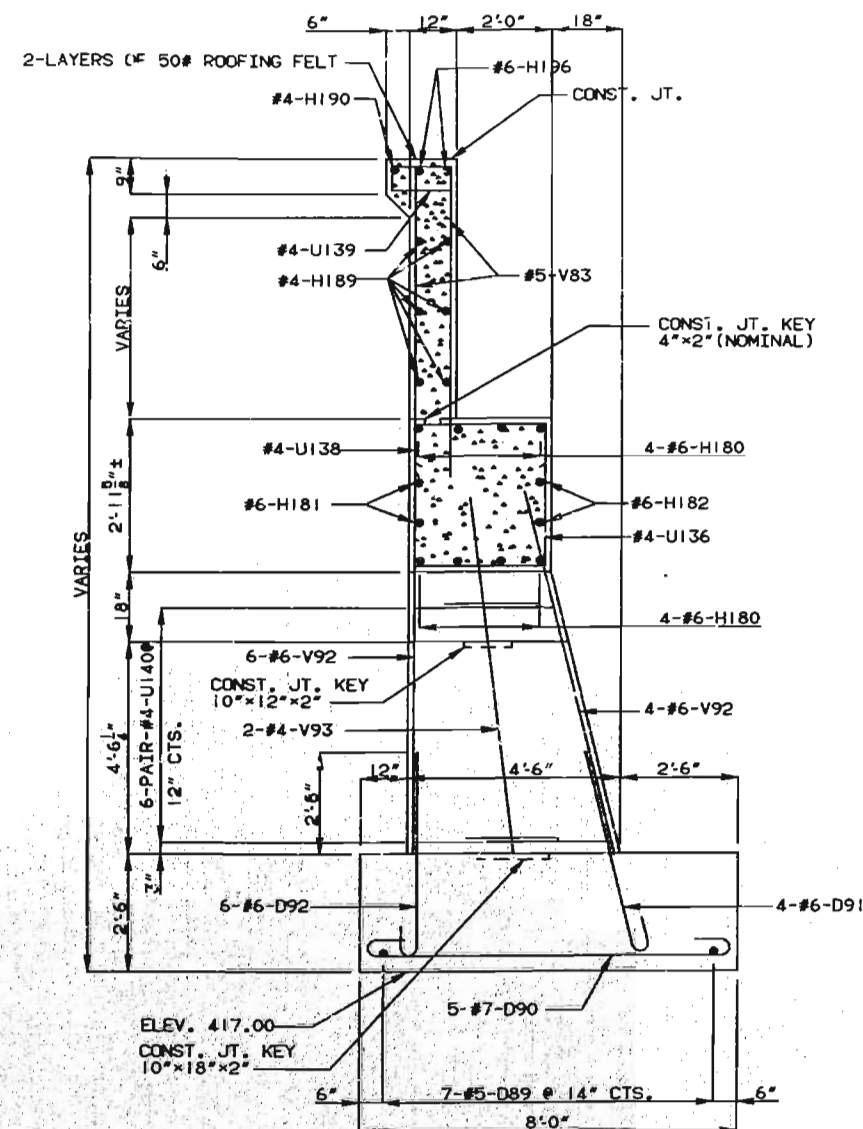
DETAILS OF END BT. NO. 16 (NORTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 108 OF 238



SECTION B-B



SECTION A-A

NOTE: FOR LOCATION OF SECTIONS A-A AND B-B SEE SHEET NO. 108.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 16 (NORTHBOUND LANE)		
ITEM		QUANTITY
CLASS I EXCAVATION	CU. YDS.	70
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	51.9
REINFORCING STEEL (BRIDGES)	LBS.	4620
REINFORCING STEEL (EPOXY COATED)	LBS.	380
SUBSTRUCTURE REPAIR (UNFORMED)	SQ. FT.	10

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.

NOTE: FOR DETAILS OF BT. NO. 16 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 107 & 108.

# DETAILS OF END BT. NO. 16 (NORTHBOUND LANE)

DETAILED JUNE 1992  
CHECKED JULY 1992

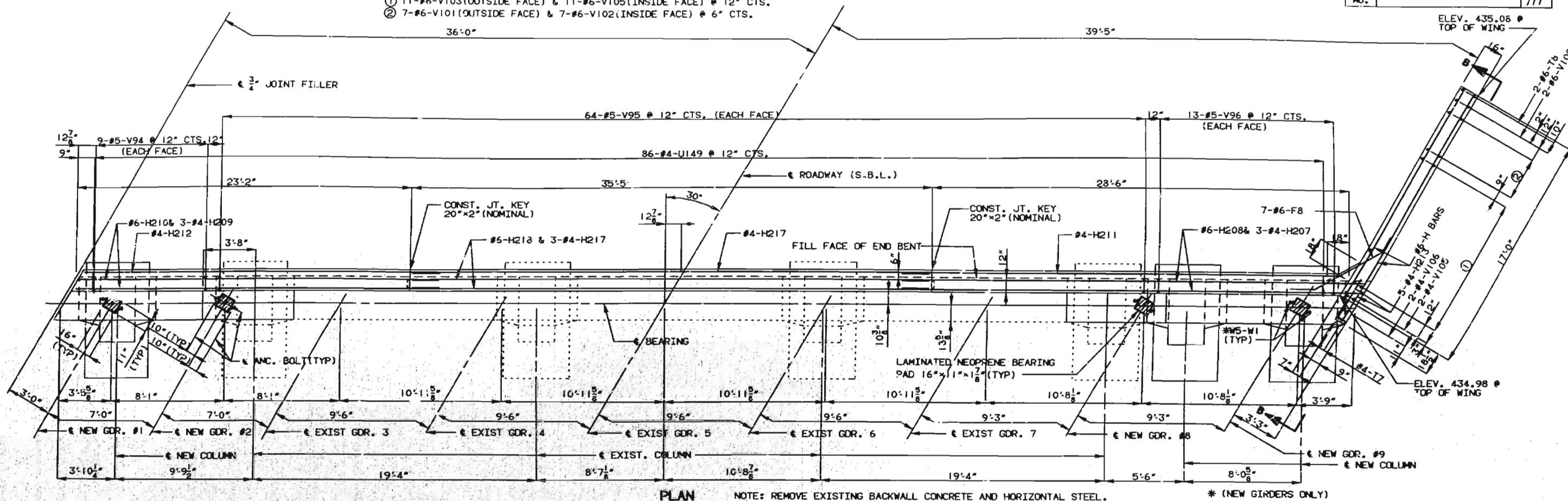
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 109 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



- ① 11-#6-V103(OUTSIDE FACE) & 11-#6-V105(INSIDE FACE) @ 12" CTS.  
 ② 7-#6-V101(OUTSIDE FACE) & 7-#6-V102(INSIDE FACE) @ 6" CTS.

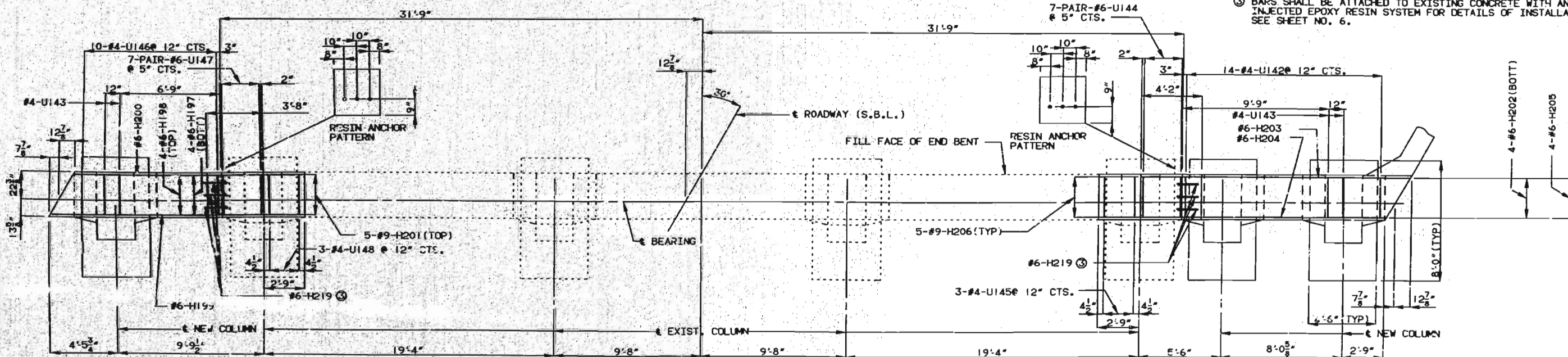


PLAN

NOTE: REMOVE EXISTING BACKWALL CONCRETE AND HORIZONTAL STEEL.

\*(NEW GIRDERS ONLY)

③ BARS SHALL BE ATTACHED TO EXISTING CONCRETE WITH AND INJECTED EPOXY RESIN SYSTEM FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.



NOTE: FOR DETAILS OF BT. NO. 16 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 111 & 112.  
 FOR DETAILS OF ELEVATION B-B, SEE SHEET NO. 111.  
 FOR DETAILS OF ANCHOR BOLT WELLS, SEE SHEET NO. 134.

NOTE: FOR REINFORCEMENT OF BARRIER CURB SEE SHEET NO. 202.  
 FIELD BENDING SHALL BE REQUIRED AT WINGS  
 FOR F8 BARS WHEN NECESSARY TO CONFORM TO SLOPE OF WINGS.

PLAN OF BEAM

DETAILS OF END BT. NO. 16 (SOUTHBOUND LANE)

SHEET NO. 110 OF 238

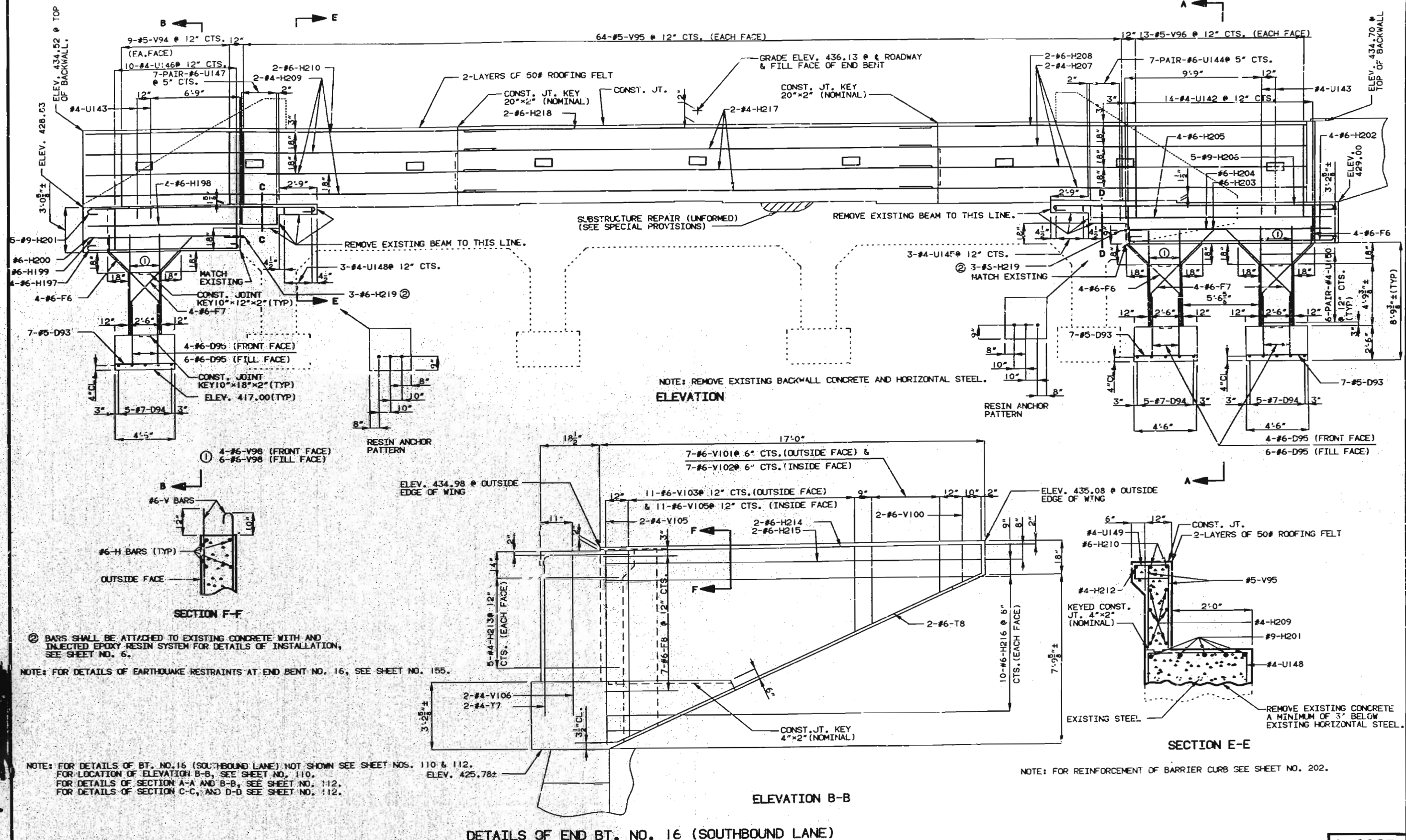
ST. LOUIS-JEFFERSON

COUNTIES

A-609R

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

1/16  
 DETAILED JUNE 1992  
 CHECKED JULY 1992

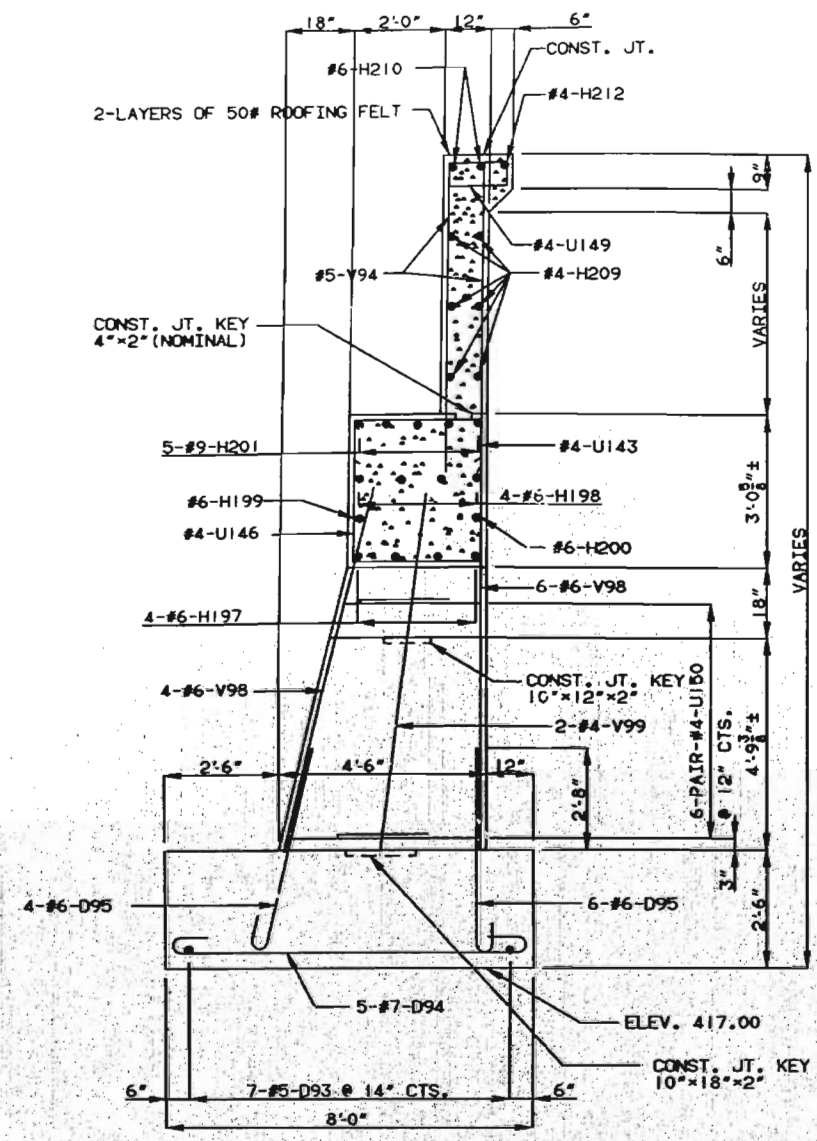


DETAILED JUNE 1992  
CHECKED JULY 1992

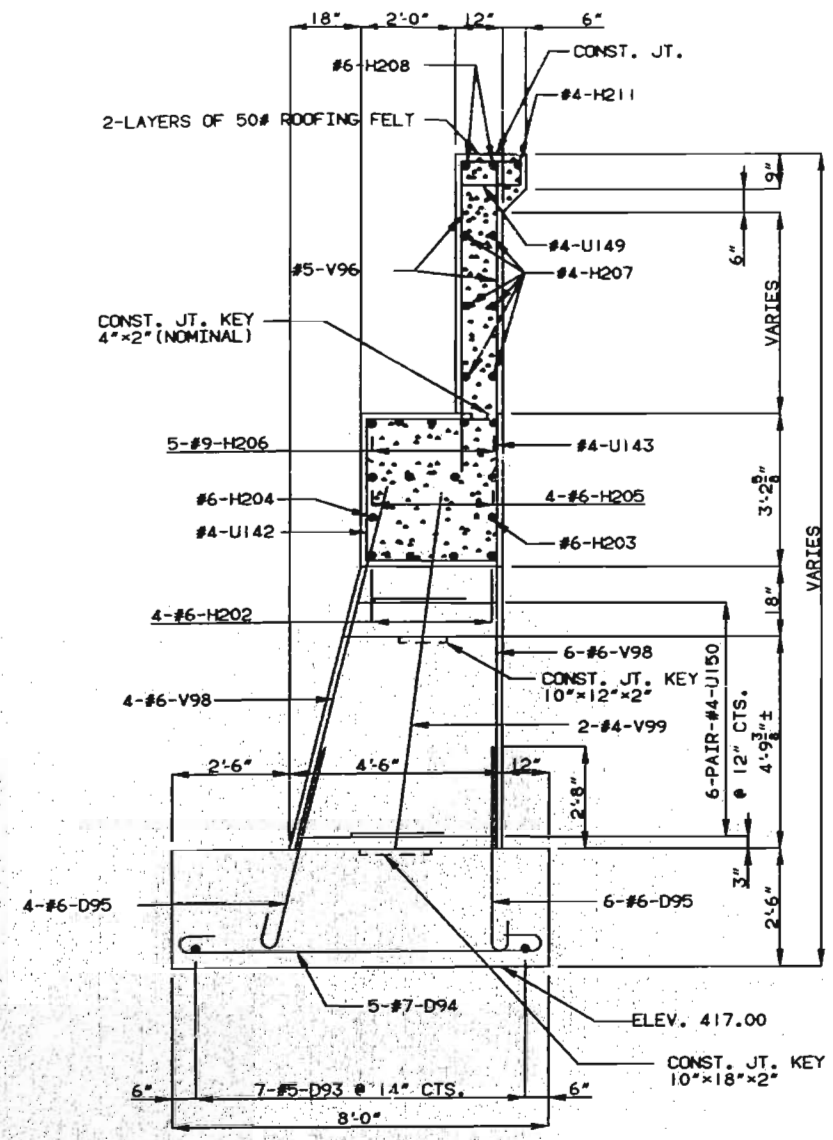
SHEET NO. 111 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R





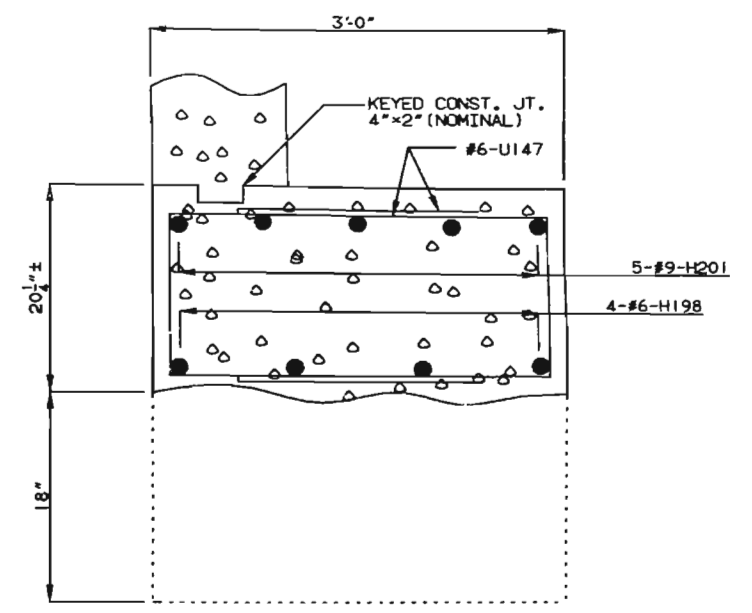
SECTION B-B



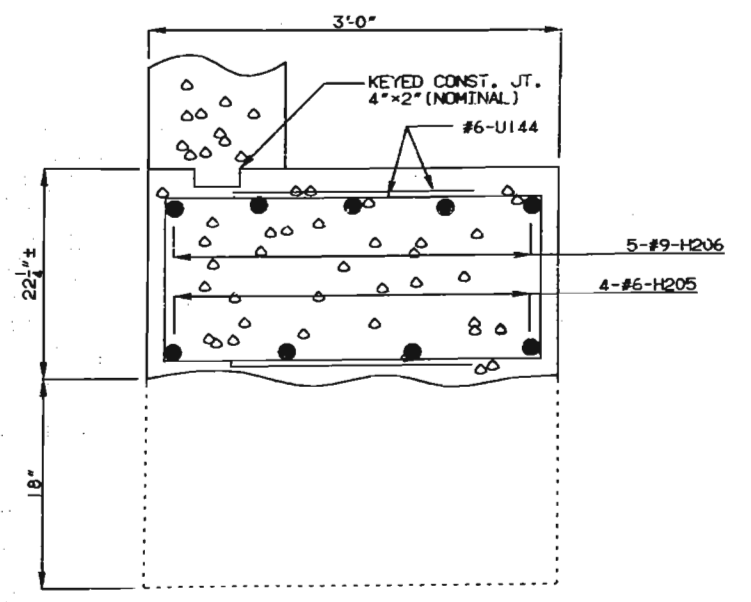
SECTION A-A

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 16 (SOUTHBOUND LANE)		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YDS.	70
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YDS.	54.5
REINFORCING STEEL (BRIDGES)	LBS.	5450
REINFORCING STEEL (EPOXY COATED)	LBS.	410
SUBSTRUCTURE REPAIR (UNFORMED) (SEE SPECIAL PROV.)	SQ. FT.	30

NOTE: THESE QUANTITIES ARE INCLUDED WITH QUANTITIES SHOWN ON SHEET NO. 6.



SECTION C-C



SECTION D-D

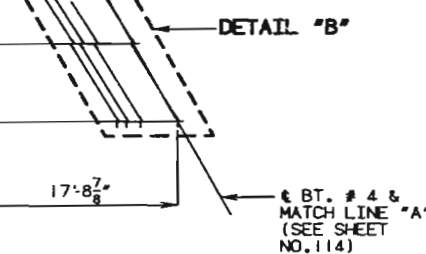
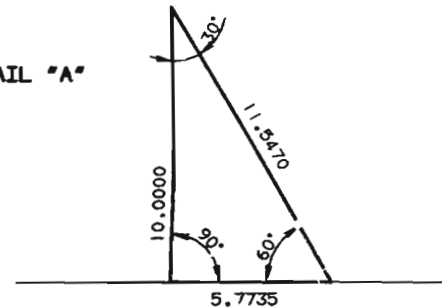
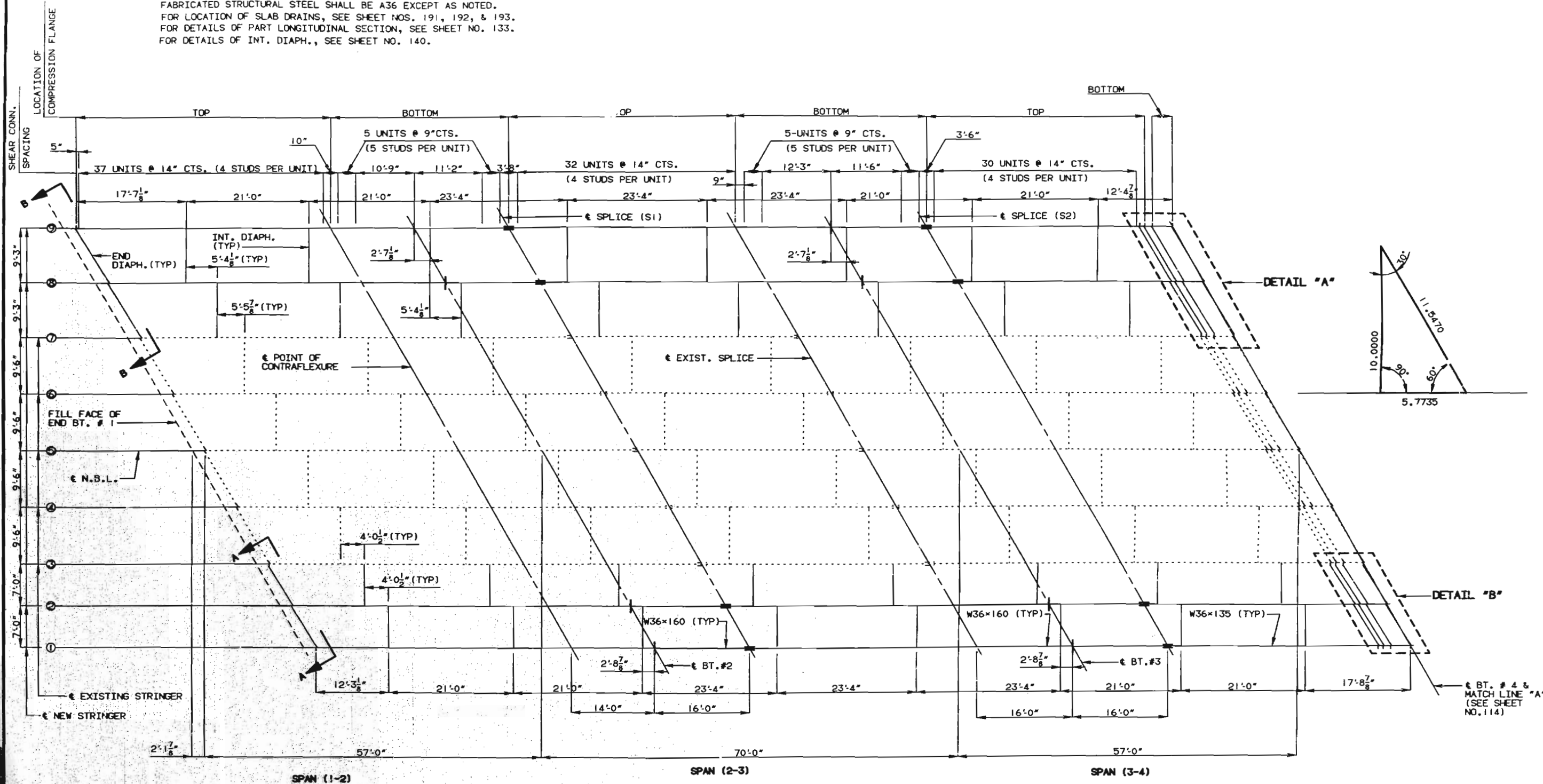
NOTE: FOR DETAILS OF BT. NO. 16 (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NOS. 110 & 111.  
FOR LOCATION OF SECTION A-A, B-B, C-C, AND D-D SEE SHEET NO. 111.

DETAILS OF END BT. NO. 16 (SOUTHBOUND LANE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM  $\epsilon$  BEARING TO  $\epsilon$  BEARING.  
 NOTCH TOUGHNESS IS REQUIRED FOR WIDE FLANGE BEAMS #1, #2, #8, & #9.  
 FOR DETAILS OF SHEAR CONNECTORS, SEE SHEET NO. 134.  
 SHEAR CONNECTOR SPACING SHOWN IS FOR NEW STRINGERS ONLY.  
 FABRICATED STRUCTURAL STEEL SHALL BE A36 EXCEPT AS NOTED.  
 FOR LOCATION OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS OF PART LONGITUDINAL SECTION, SEE SHEET NO. 133.  
 FOR DETAILS OF INT. DIAPH., SEE SHEET NO. 140.

STATE	PROJ. NO.	SHEET NO.
MO.		114



NOTE: FOR SECTION A-A & B-B SEE SHEET NO. 139.

NOTE: FOR DETAIL A & B SEE SHEET NOS. 137 & 138.

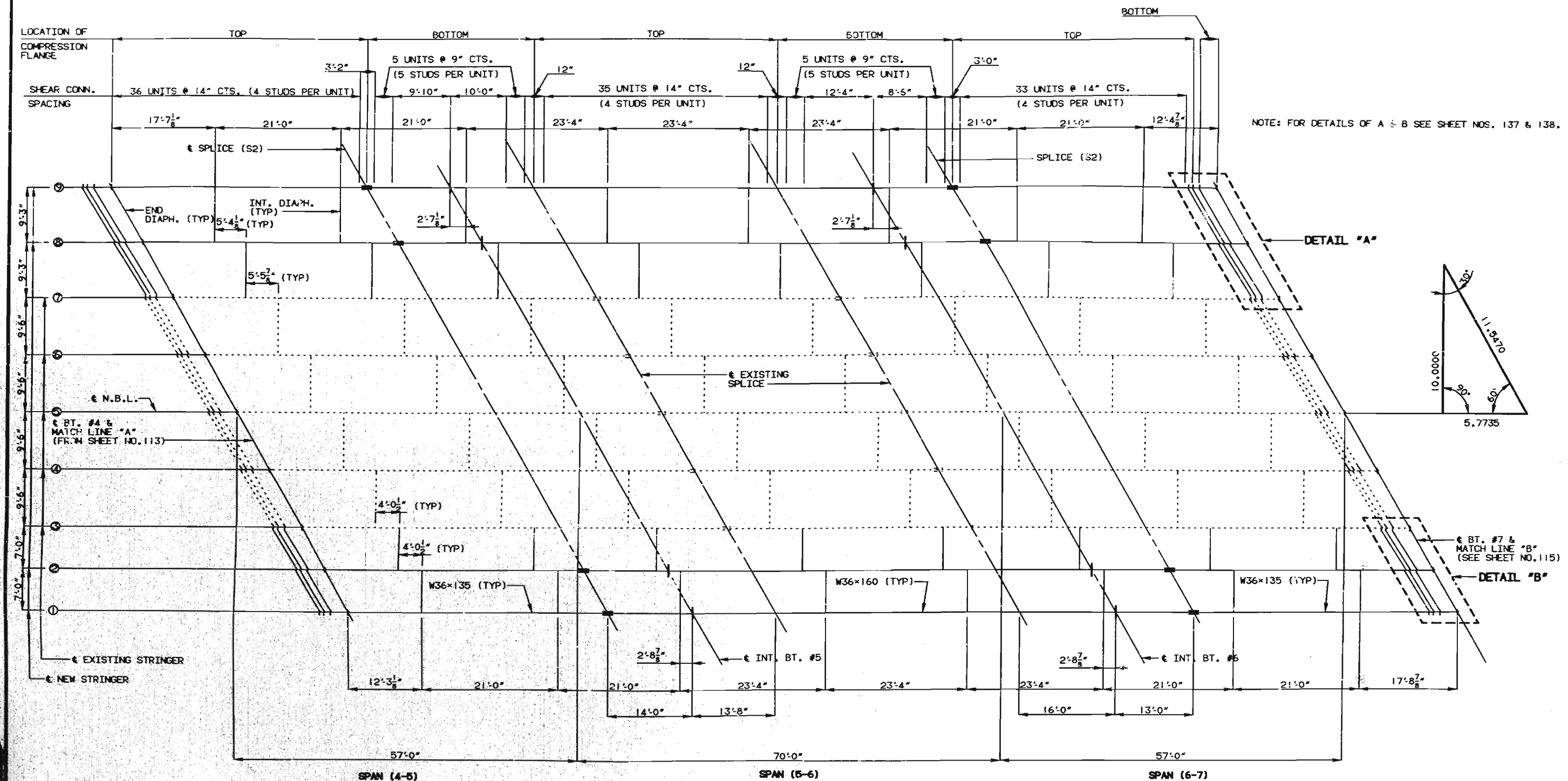
PART PLAN OF STRUCTURAL STEEL (NORTHBOUND LANE)

114  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM  $\epsilon$  BEARING TO  $\epsilon$  BEARING  
 NOTCH TOUGHNESS IS REQUIRED FOR WIDE FLANGE BEAMS #1, #2, #8, & #9.  
 FOR DETAILS OF SHEAR CONNECTORS, SEE SHEET NO. 134.  
 SHEAR CONNECTOR SPACING SHOWN IS FOR NEW STRINGERS ONLY.  
 FOR LOCATION OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS OF PART LONGITUDINAL SECTIONS, SEE SHEET NO. 133.  
 FOR DETAILS OF INT. DIAPH., SEE SHEET NO. 110.

STATE	PROJ. NO.	SHEET NO.
MO.		115



NOTE: FOR DETAILS OF A & B SEE SHEET NOS. 137 & 138.

PART PLAN OF STRUCTURAL STEEL (NORTHBOUND LANE)

1207

DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 114 OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609R



STATE	PROJ. NO.	SHEET NO.
MO.		116

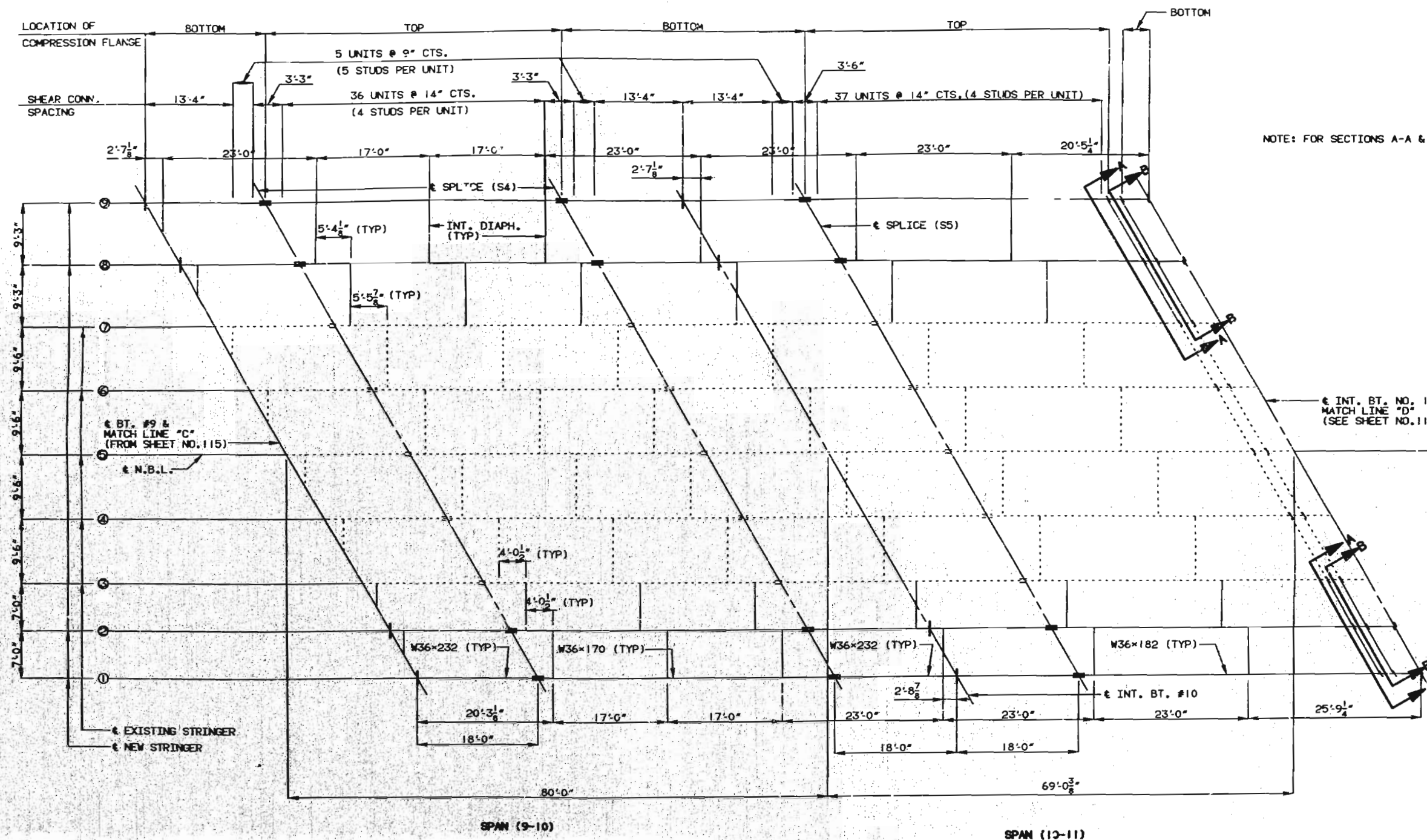


COUNTIES **A-609R**



NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM  $\epsilon$  BEARING TO  $\epsilon$  BEARING.  
 NOTCH TOUGHNESS IS REQUIRED FOR WIDE FLANGE BEAMS #1, #2, #8, & #9.  
 FOR DETAILS OF SHEAR CONNECTORS, SEE SHEET NO. 134.  
 SHEAR CONNECTOR SPACING SHOWN IS FOR NEW STRINGERS ONLY.  
 FOR LOCATION OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS OF PART LONGITUDINAL SECTIONS, SEE SHEET NO. 133.  
 FOR DETAILS OF INT. DIAPH., SEE SHEET NO. 140.

STATE	PRJ. NO.	SHEET NO.
MO.		117



PART PLAN OF STRUCTURAL STEEL (NORTHBOUND LANE)

122  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

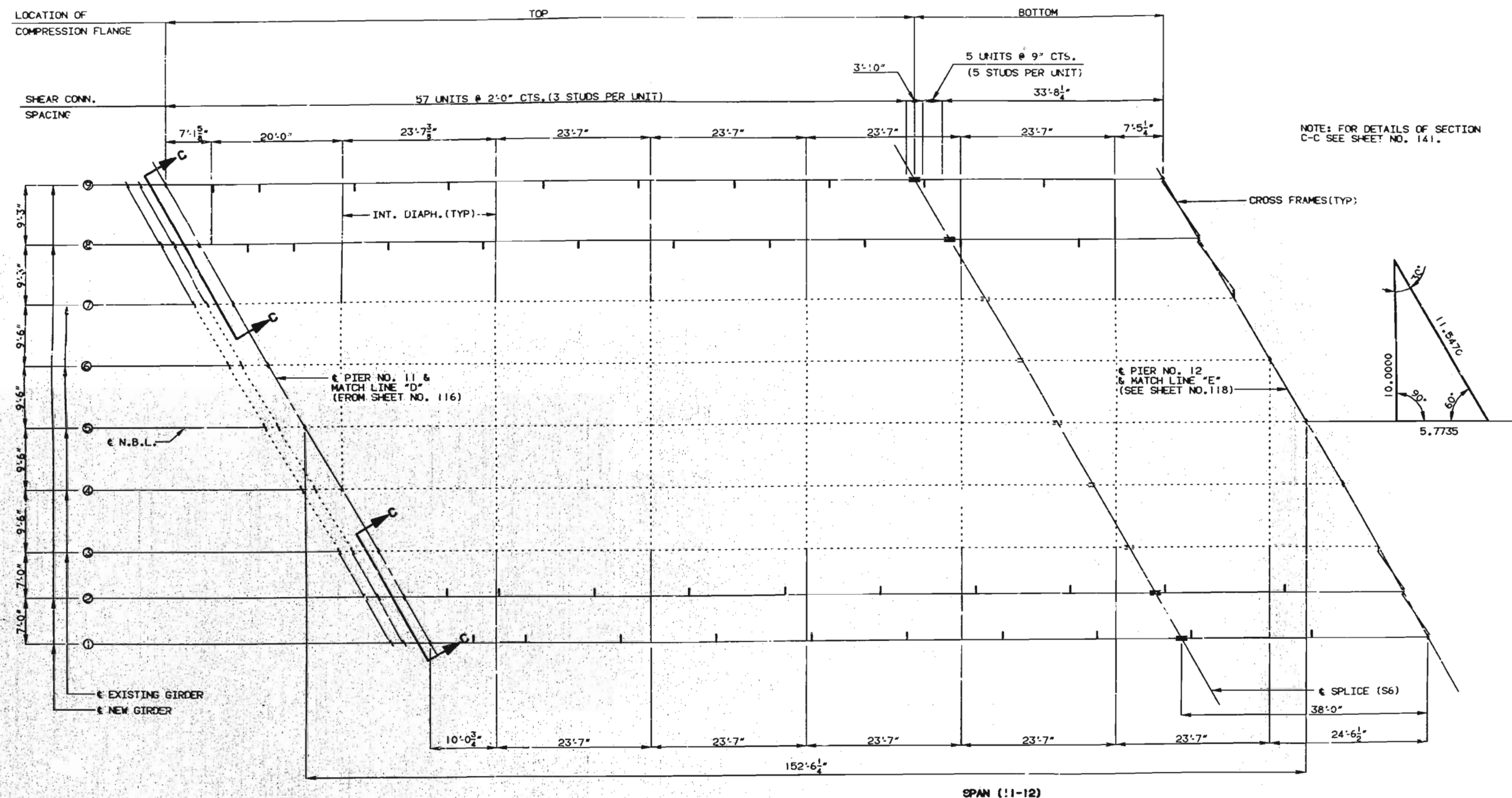
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 116 OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609R

FOR DETAILS OF SHEAR CONNECTORS, SEE SHEET NO. 134.  
SHEAR CONNECTOR SPACING SHOWN IS FOR NEW GIRDERS ONLY.  
FOR LOCATION OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
FOR ELEVATION OF GIRDER AND TRANSVERSE STIFFENER SPACING, SEE SHEET NOS. 131 & 132.  
FOR DETAILS OF PART LONGITUDINAL SECTIONS, SEE SHEET NO. 133.  
FOR DETAILS OF INT. DIAPH., SEE SHEET NO. 142.  
FOR DETAILS OF CROSS FRAMES AT PIER NO. 12, SEE SHEET NO. 143.

STATE	PROJ. NO.	SHEET NO.
MO.		118



PART PLAN OF STRUCTURAL STEEL (NORTHBOUND LANE)

DETAILED FEB. 1992  
CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 117 OF 238 **ST. LOUIS-JEFFERSON**

COUNTIES **A-609R**





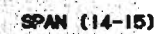
STATE	PROJ. NO.	SHEET NO.
MO.		120



COUNTIES **A-609R**



STATE	PROJ. NO.	SHEET NO.
MO.		121



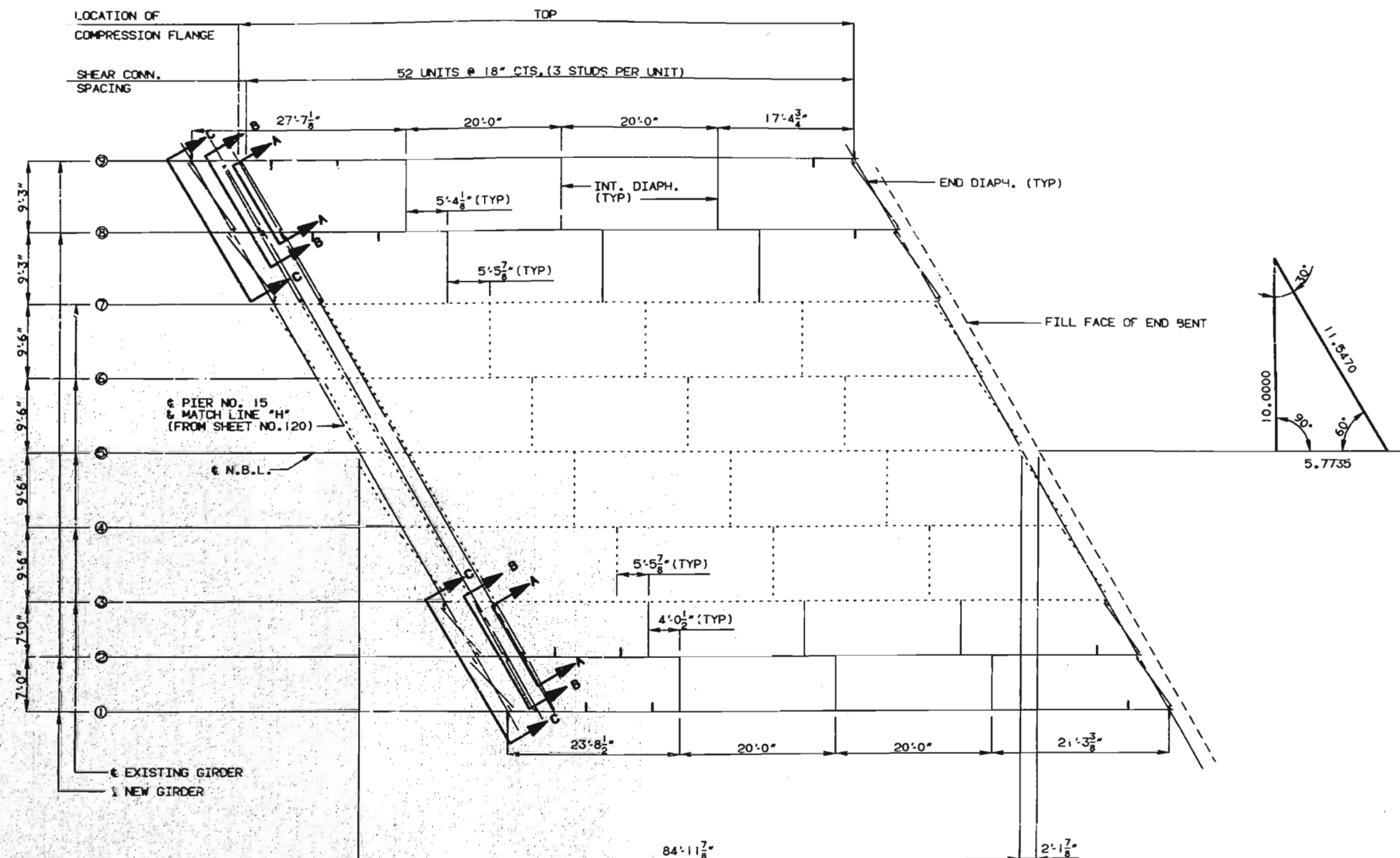
DETAILED FEB. 1992  
CHECKED MAY 1992

SHEET NO. 120 OF 238

COUNTIES **A-609R**

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM  $\epsilon$  BEARING TO  $\epsilon$  BEARING  
 FOR DETAILS OF SHEAR CONNECTORS, SEE SHEET NO. 134.  
 SHEAR CONNECTOR SPACING SHOWN IS FOR NEW GIRDERS ONLY.  
 FOR LOCATION OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR ELEVATION OF GIRDER AND TRANSVERSE STIFFENER SPACING, SEE SHEET NOS. 131 & 132.  
 FOR DETAILS OF PART LONGITUDINAL SECTIONS, SEE SHEET NO. 133.  
 FOR DETAILS OF SEC. A-A, B-B, AND C-C, SEE SHEET NO. 141  
 FOR DETAILS OF INT. DIAPH., SEE SHEET NO. 144.  
 FOR DETAILS OF END DIAPH., SEE SHEET NO. 145.

STATE	PROJ. NO.	SHEET NO.
MO.		122



SPAN (15-16)

PART PLAN OF STRUCTURAL STEEL (NORTHBOUND LANE)

1273

DETAILED FEB. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 121 OF 238

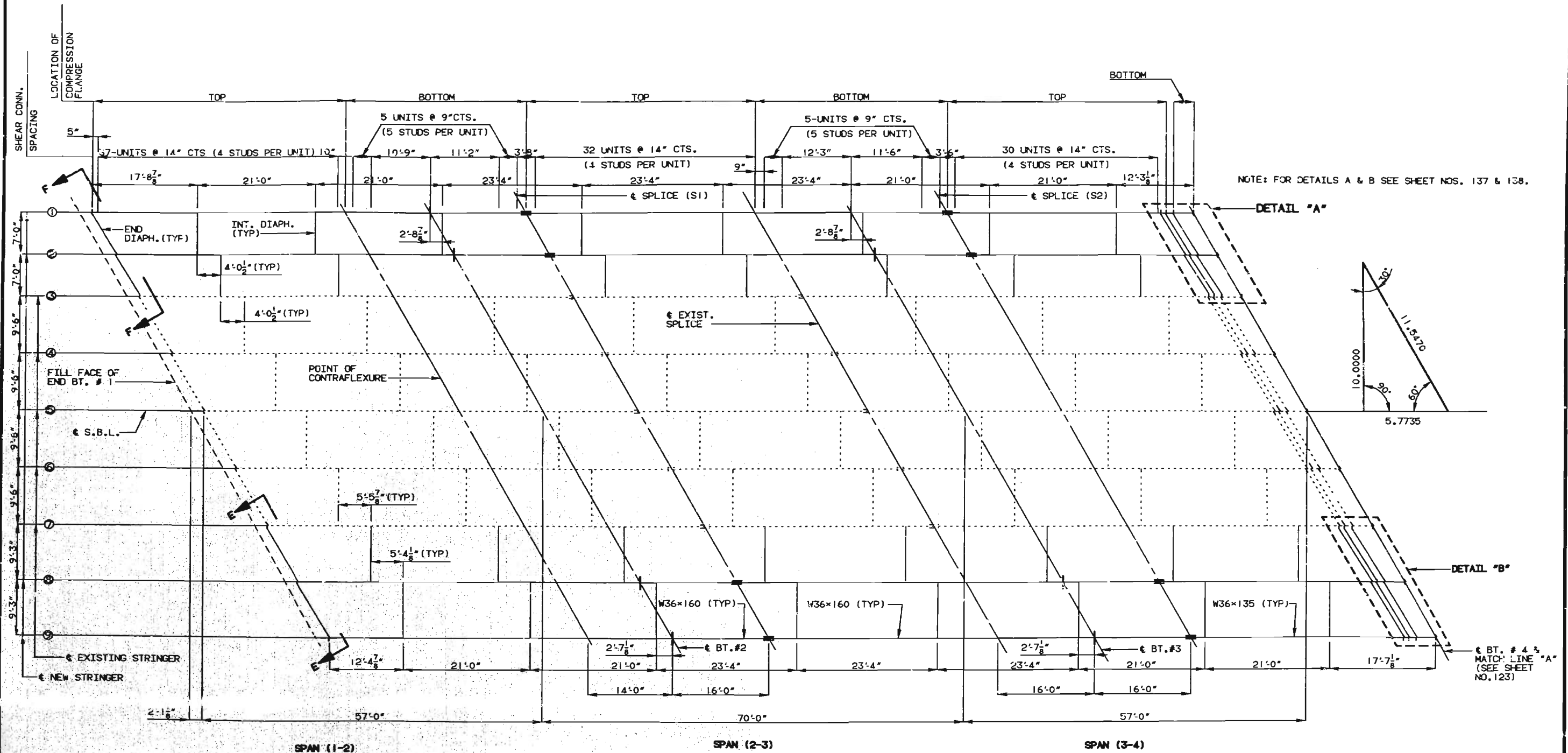
ST. LOUIS-JEFFERSON

COUNTIES

A-609R

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM  $\epsilon$  BEARING TO  $\epsilon$  BEARING.  
 NOTCH TOUGHNESS IS REQUIRED FOR WIDE FLANGE BEAMS #1, #2, #8, & #9.  
 FOR DETAILS OF SHEAR CONNECTORS, SEE SHEET NO. 134.  
 SHEAR CONNECTOR SPACING SHOWN IS FOR NEW STRINGERS ONLY.  
 FABRICATED STRUCTURAL STEEL SHALL BE A36 EXCEPT AS NOTED.  
 FOR LOCATION OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS OF PART LONGITUDINAL SECTIONS, SEE SHEET NO. 133.  
 FOR DETAILS OF INT. DIAPH., SEE SHEET NO. 140.

STATE	PROJ. NO.	SHEET NO.
MO.		123



PART PLAN OF STRUCTURAL STEEL (SOUTHBOUND LANE)

NOTE: FOR SECTION E-E & F-F SEE SHEET NO. 139.

128  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 122 OF 238

ST. LOUIS-JEFFERSON

COUNTIES

A-609R



129

JAN. 1992  
MAY 1992









STATE	PROJ. NO.	SHEET NO.
MC.		127



COUNTIES **A-609R**



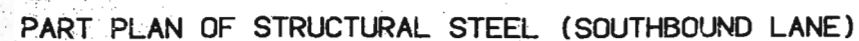
STATE	PROJ. NO.	SHEET NO.
MO.		12



COUNTIES A-609R



STATE	PROJ. NO.	SHEET NO.
MO.		129



COUNTIES **A-609R**

FOR DETAILS OF SHEAR CONNECTORS, SEE SHEET NO. 134.  
SHEAR CONNECTOR SPACING SHOWN IS FOR NEW GIRDERS ONLY.  
FOR LOCATION OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
FOR ELEVATION OF GIRDER AND TRANSVERSE STIFFENER SPACING, SEE SHEET NOS. 131 & 132.  
FOR DETAILS OF PART LONGITUDINAL SECTIONS, SEE SHEET NO. 133.  
FOR DETAILS OF CROSS FRAMES AT PIER NO. 15, SEE SHEET NO. 141  
FOR DETAILS OF INT. DIAPH., SEE SHEET NO. 142

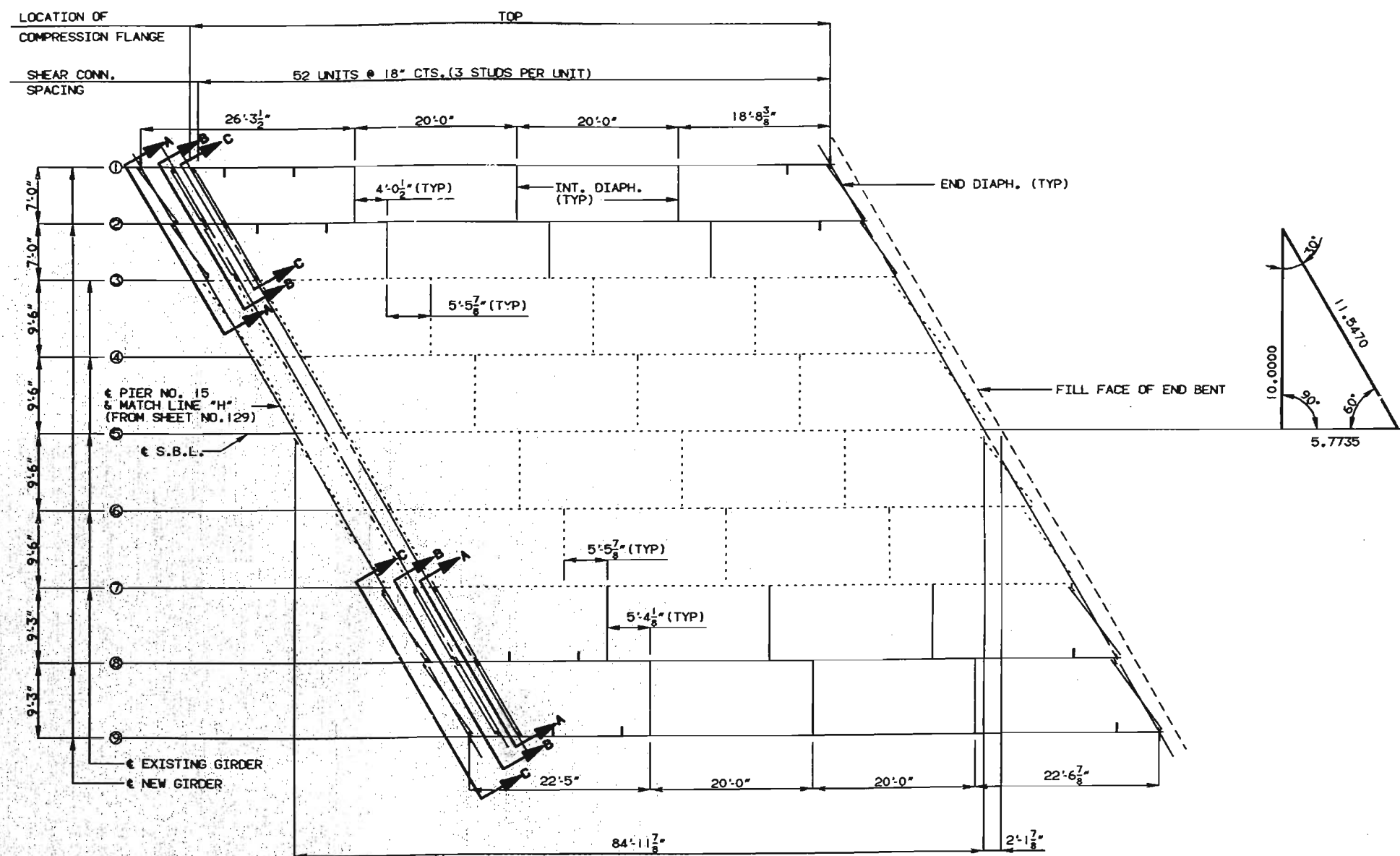
[illegible]

PART PLAN OF STRUCTURAL STEEL (SOUTHBOUND LANE)

COUNTIES **A-609R**

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM & BEARING TO & BEARING  
 FOR DETAILS OF SHEAR CONNECTORS, SEE SHEET NO. 134.  
 SHEAR CONNECTOR SPACING SHOWN IS FOR NEW GIRDERS ONLY.  
 FOR LOCATION OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR ELEVATION OF GIRDER AND TRANSVERSE STIFFENER SPACING, SEE SHEET NOS. 131 & 132.  
 FOR DETAILS OF PART LONGITUDINAL SECTIONS, SEE SHEET NO. 133.  
 FOR DETAILS OF SEC. A-A, B-B, & C-C, SEE SHEET NO. 141.  
 FOR DETAILS OF INT. DIAPH., SEE SHEET NO. 144.  
 FOR DETAILS OF END DIAPH., SEE SHEET NO. 145.

STATE	PROJ. NO.	SHEET NO.
MO.		131



PART PLAN OF STRUCTURAL STEEL (SOUTHBOUND LANE)

136  
 DETAILED FEB. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

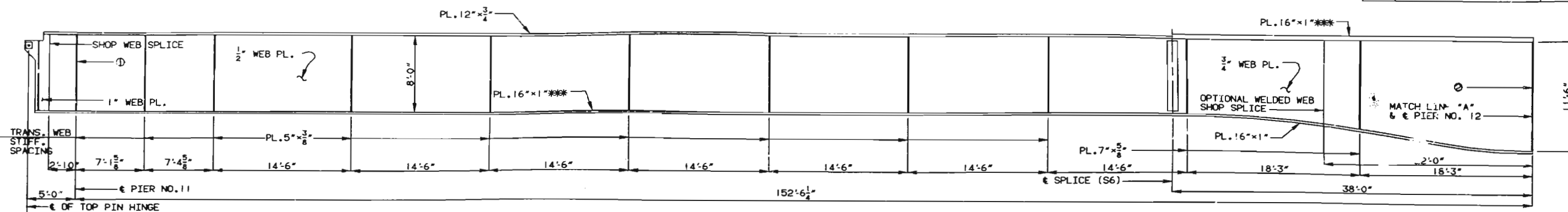
SHEET NO. 130 OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609R



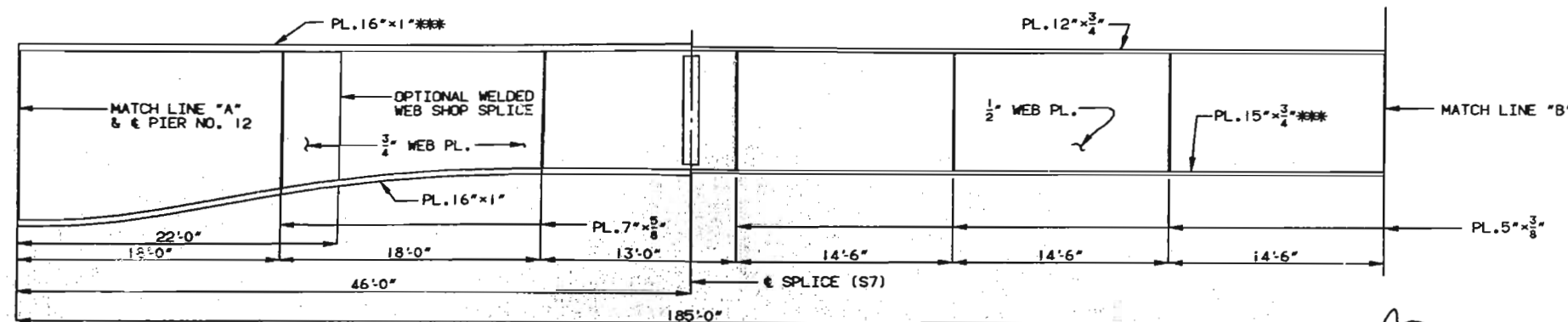
① PLATE  $7\frac{1}{2} \times \frac{7}{8}$  " OUTSIDE FACE OF EXT. GIRDER  
 PLATE  $8\frac{1}{2} \times \frac{7}{8}$  " INSIDE FACE OF EXT. GIRDER &  
 BOTH SIDES OF INT. GIRDER.

STATE	PROJ. NO.	SHEET NO.
MO.		132

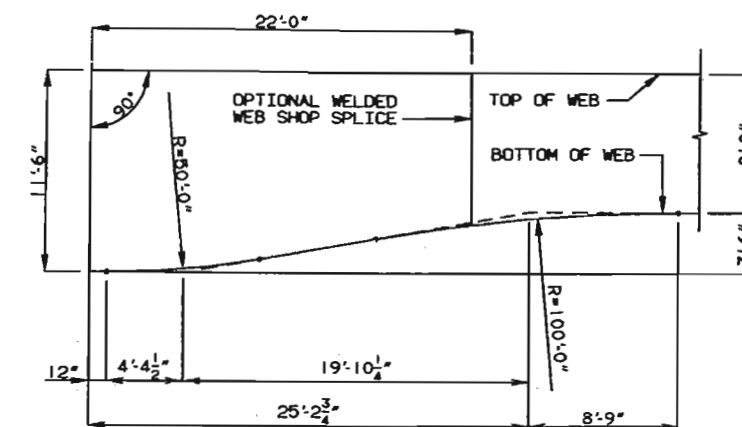


SPAN (11-12)  
 PART ELEVATION OF GIRDER

② PLATE  $7\frac{1}{2} \times \frac{1}{4}$  " OUTSIDE FACE OF EXT. GIRDER  
 PLATE  $8\frac{1}{2} \times \frac{1}{4}$  " INSIDE FACE OF EXT. GIRDER &  
 BOTH SIDES OF INT. GIRDER.

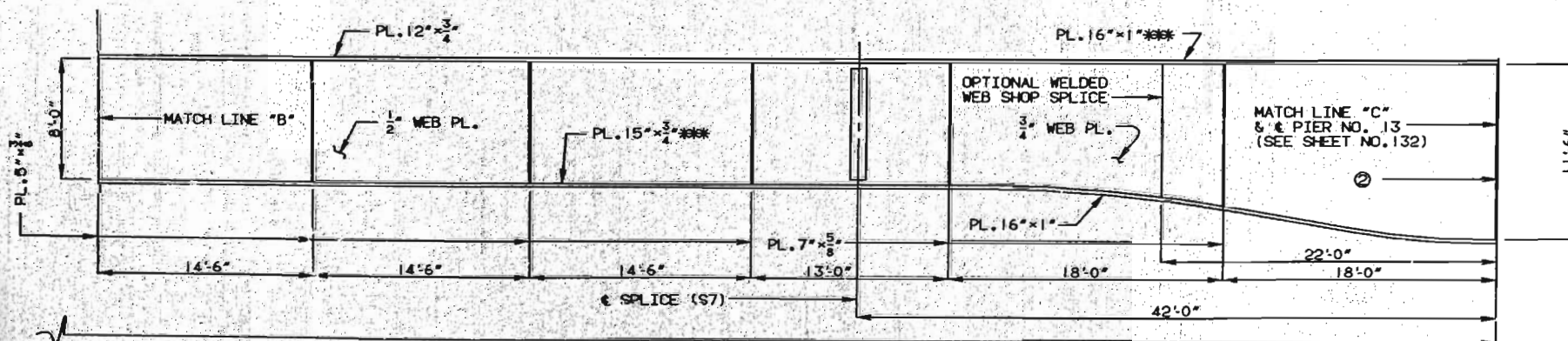


PART SPAN (12-13)  
 PART ELEVATION OF GIRDER



GIRDER HAUNCH DIMENSIONS

NOTE: (\*\*\*) INDICATES FLANGE PLATES SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS.  
 ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES SHALL BE  
 SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS.  
 LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM  $\epsilon$  BEARING TO  $\epsilon$  BEARING.  
 PLATE GIRDERS SHALL BE FABRICATED TO CONFORM WITH CAMBER DIAGRAM  
 SHOWN ON SHEET NO. 187.  
 FABRICATED STRUCTURAL STEEL SHALL BE A-36 EXCEPT AS NOTED.  
 INTERMEDIATE WEB STIFFENER PLATE AND DIAPHRAGM SPACING MAY VARY  
 FROM PLAN DIMENSIONS BY A MAXIMUM OF 3" FOR DIAPHRAGM TO CONNECT TO THE  
 INTERMEDIATE WEB STIFFENER PLATE.  
 TRANSVERSE WEB STIFFENERS SHALL BE ORIENTED AS SHOWN ON PLAN OF  
 STRUCTURAL STEEL.



PART SPAN (12-13)  
 PART ELEVATION OF GIRDER

137  
 DETAIL FEB. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

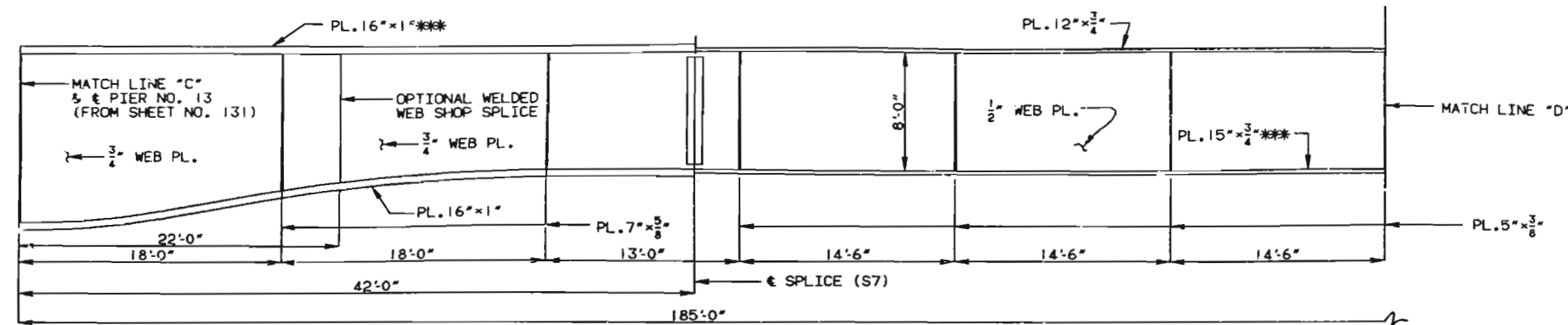
SHEET NO. 131 OF 238

ST. LOUIS-JEFFERSON

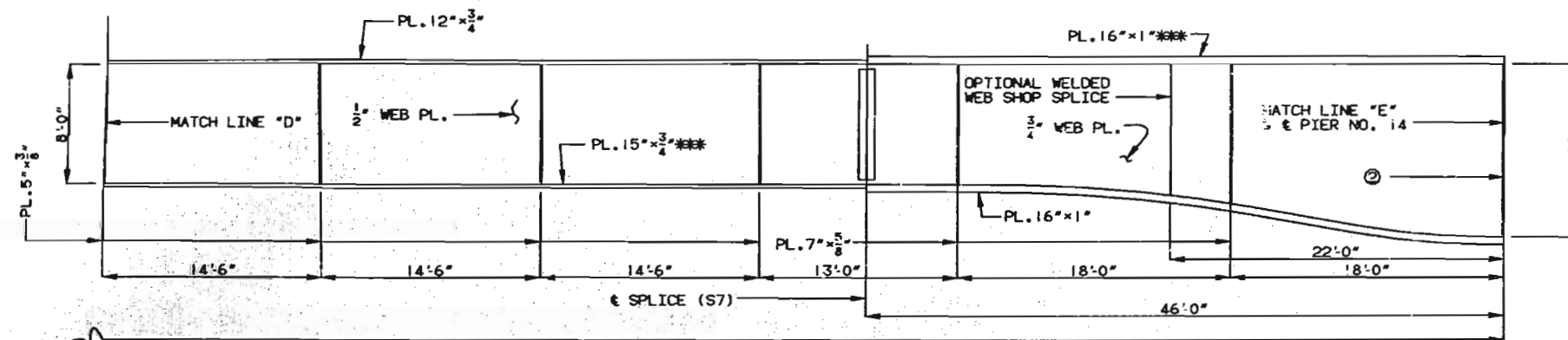
COUNTIES A-609R



STATE	PROJ. NO.	SHEET NO.
MO.		133



PART SPAN (13-14)  
PART ELEVATION OF GIRDER

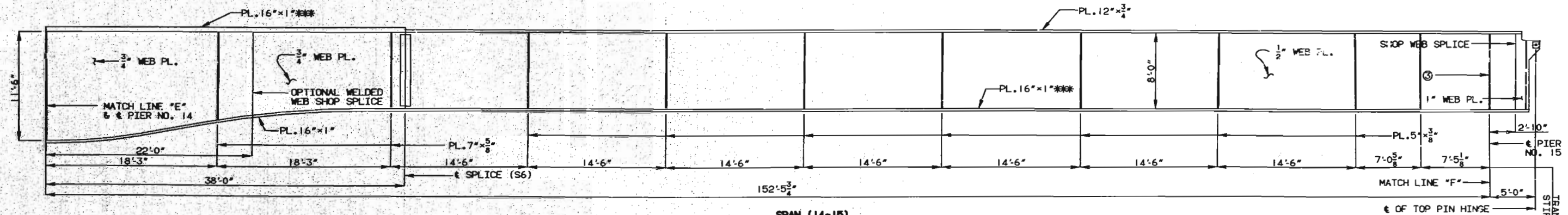


PART SPAN (13-14)  
PART ELEVATION OF GIRDER

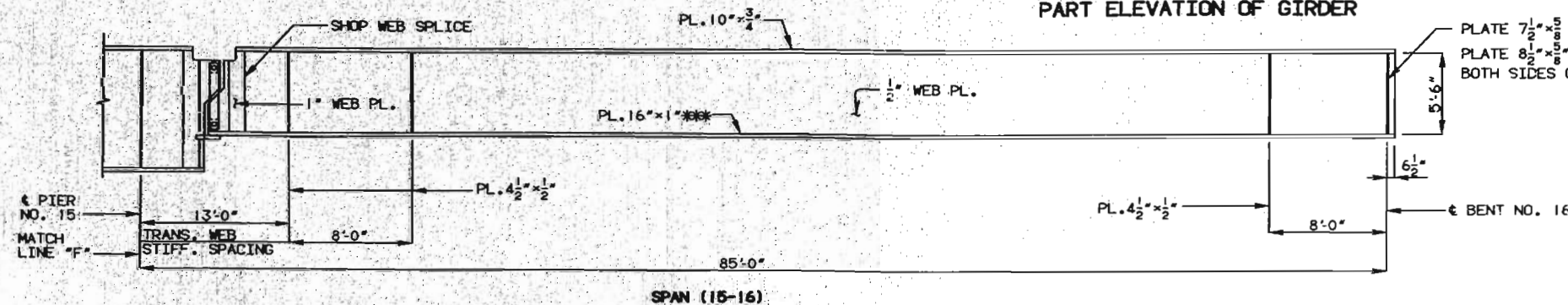
② PLATE 7 1/2" x 1 1/4" OUTSIDE FACE OF EXT. GIRDER  
PLATE 8 1/2" x 1 1/4" INSIDE FACE OF EXT. GIRDER &  
BOTH SIDES OF INT. GIRDER.

NOTE: (\*\*\*) INDICATES FLANGE PLATES SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS.  
ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES SHALL BE  
SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS.  
LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM & BEARING TO & BEARING.  
PLATE GIRDERS SHALL BE FABRICATED TO CONFORM WITH CAMBER DIAGRAM  
SHOWN ON SHEET NO. 187.  
FABRICATED STRUCTURAL STEEL SHALL BE A-36 EXCEPT AS NOTED.  
INTERMEDIATE WEB STIFFENER PLATE AND DIAPHRAGM SPACING MAY VARY  
FROM PLAN DIMENSIONS BY A MAXIMUM OF 3" FOR DIAPHRAGM TO CONNECT TO THE  
INTERMEDIATE WEB STIFFENER PLATE.  
TRANSVERSE WEB STIFFENERS SHALL BE ORIENTED AS SHOWN ON PLAN OF  
STRUCTURAL STEEL.

③ PLATE 7 1/2" x 1 1/8" OUTSIDE FACE OF EXT. GIRDER  
PLATE 8 1/2" x 1 1/8" INSIDE FACE OF EXT. GIRDER &  
BOTH SIDES OF INT. GIRDER.



SPAN (14-15)  
PART ELEVATION OF GIRDER



SPAN (15-16)  
PART ELEVATION OF GIRDER

PLATE 7 1/2" x 5/8" OUTSIDE FACE OF EXT. GIRDER  
PLATE 8 1/2" x 5/8" INSIDE FACE OF EXT. GIRDER &  
BOTH SIDES OF INT. GIRDER.

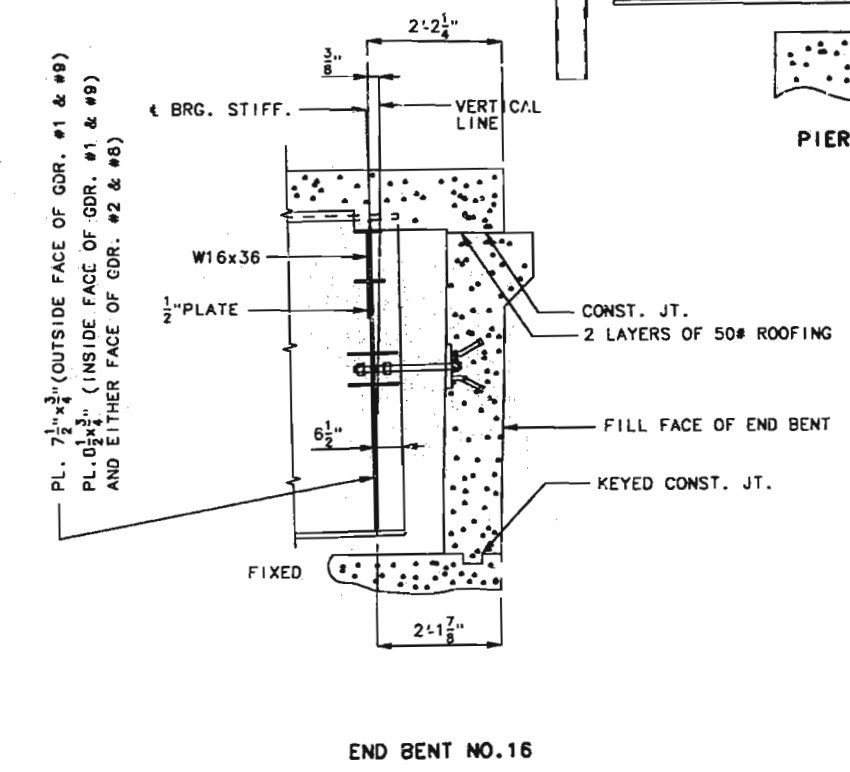
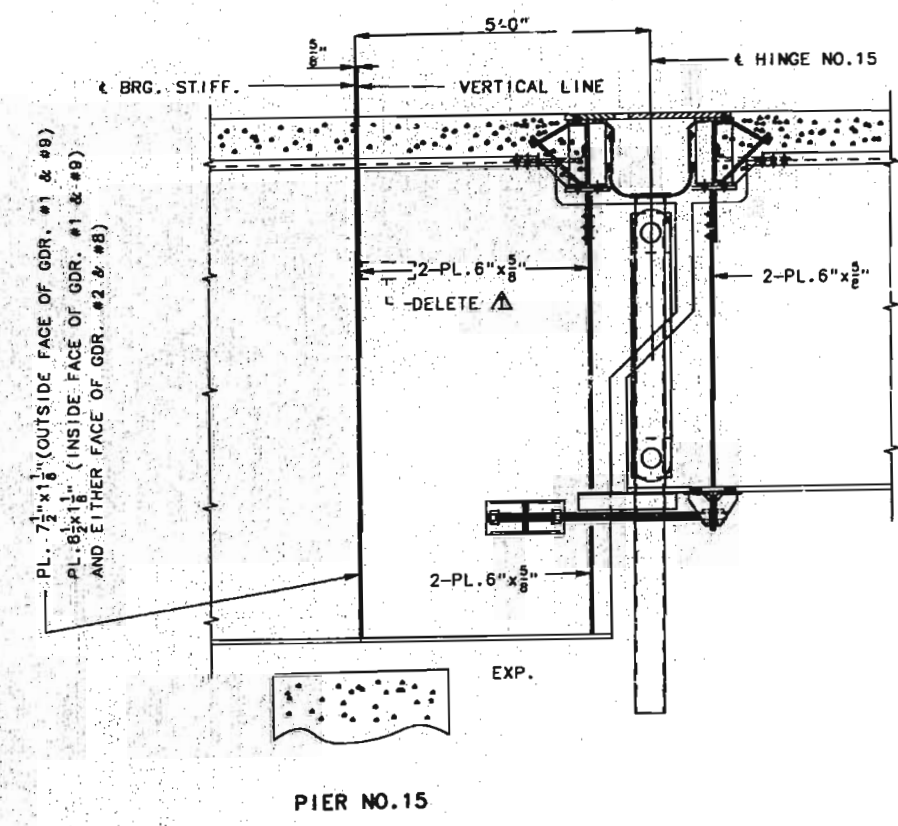
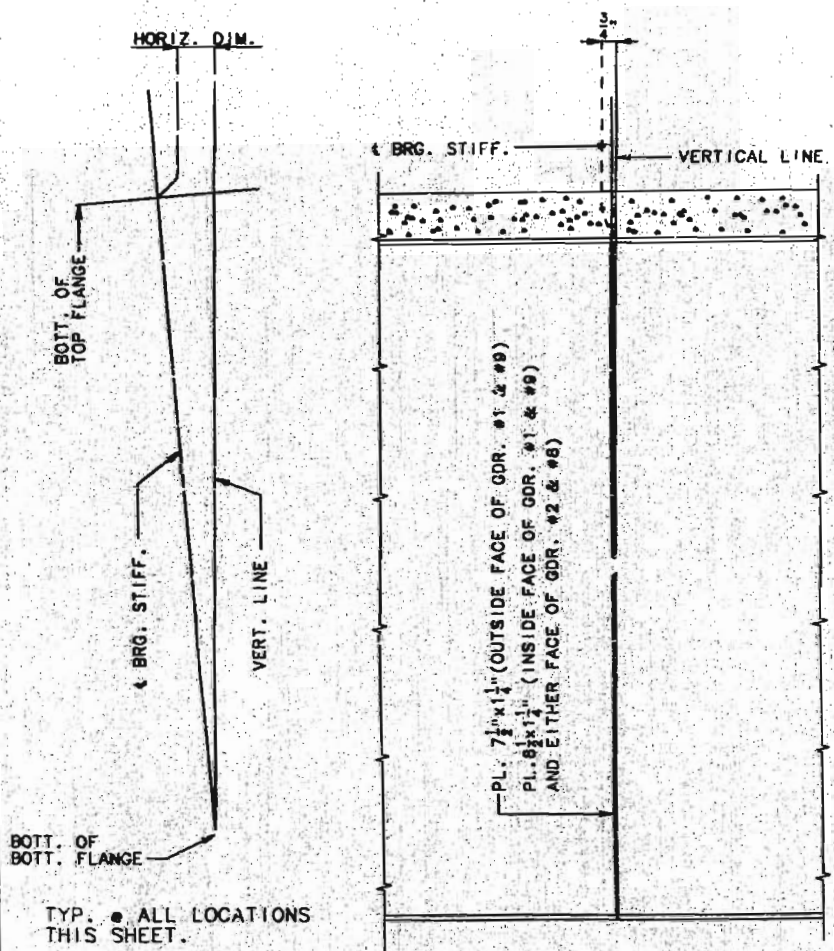
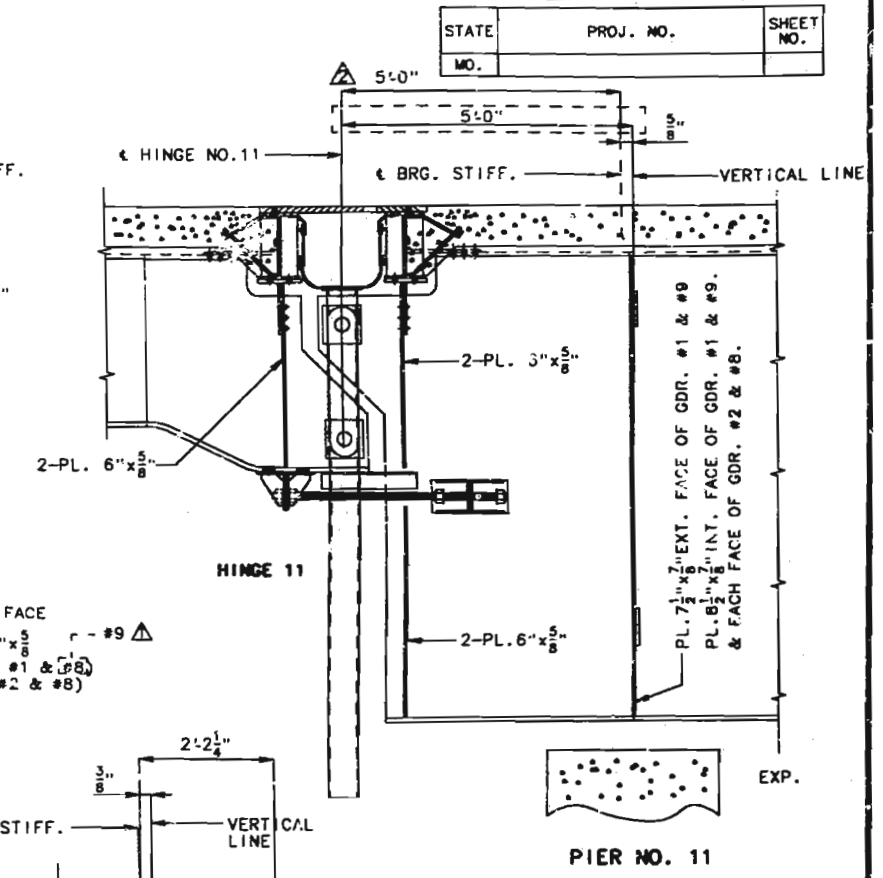
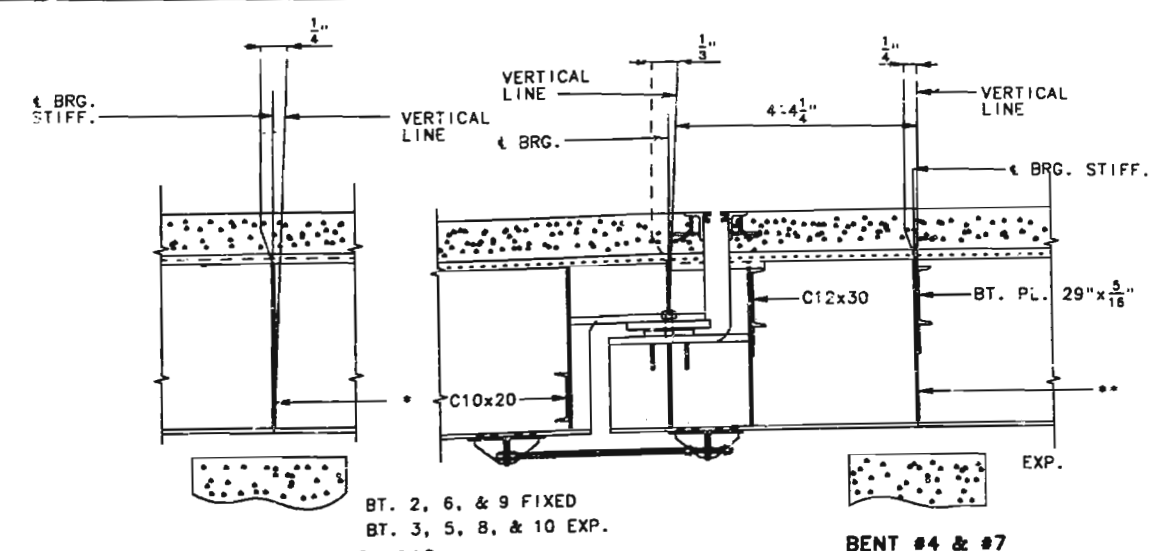
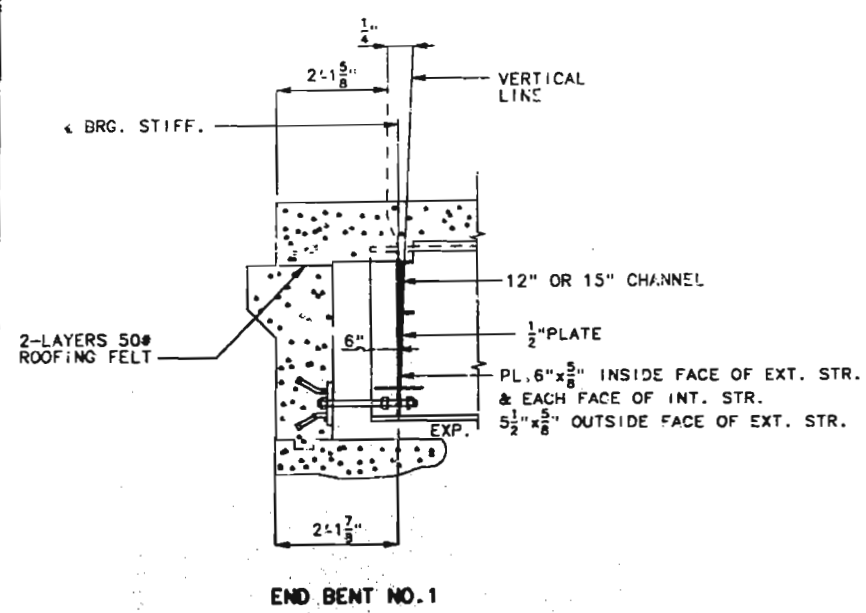
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 132 OF 238

ST. LOUIS-JEFFERSON

COUNTIES A-609R

DETAILED FEB. 1992  
CHECKED MAY 1992



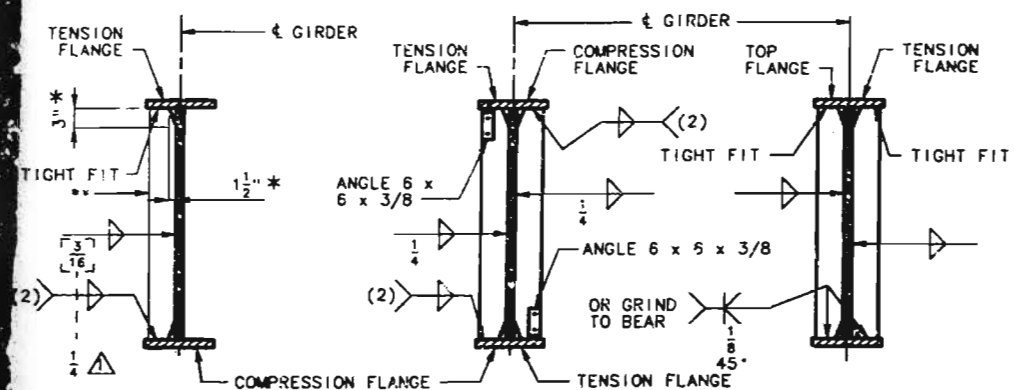
PART LONGITUDINAL SECTIONS

REVISED 1-20-1994  
REVISED 12-8-1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

139

DETAILED FEB. 1992  
CHECKED JULY 1992



INT. WEB STIFF.  
(ONE SIDE ONLY)

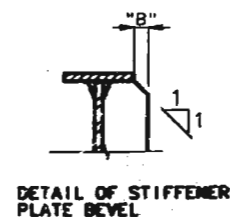
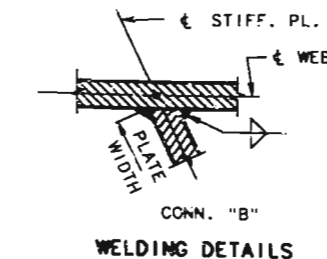
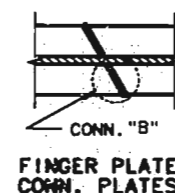
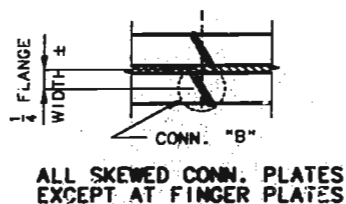
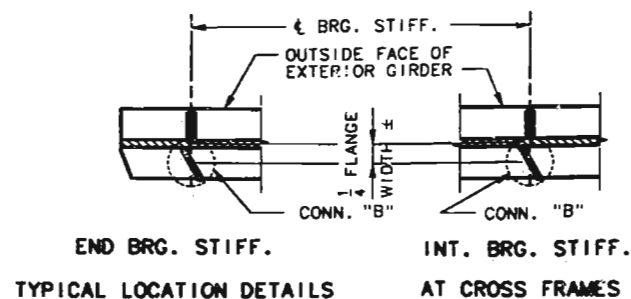
INT. DIAPH. CONN. PLATE

END BRG. STIFF.

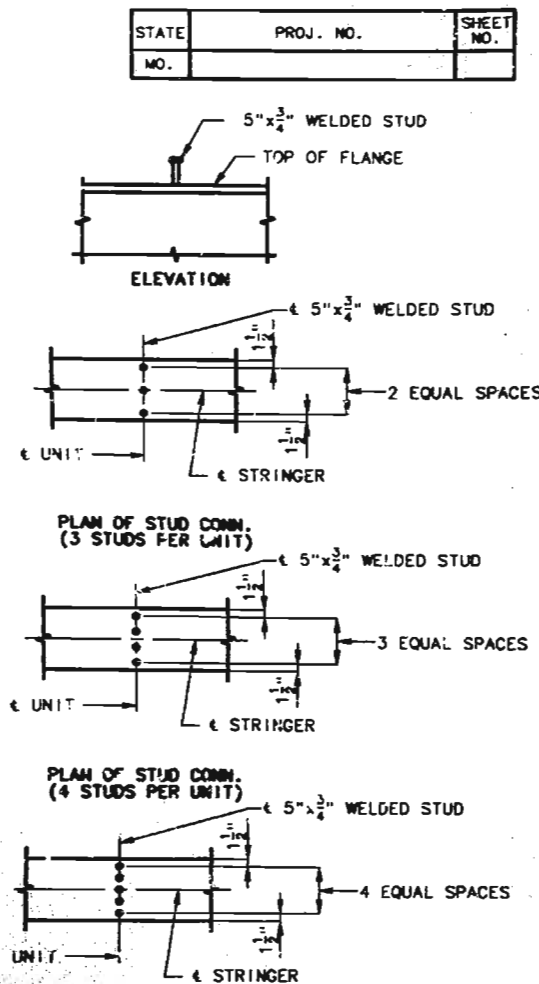
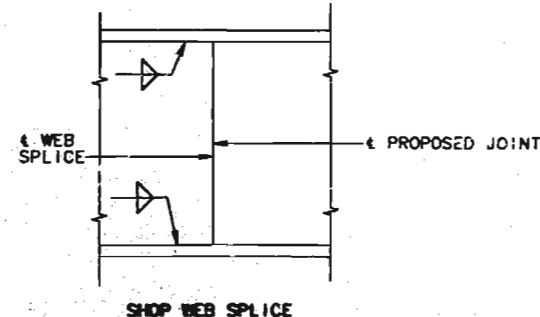
INT. BRG. STIFF.

- (2) WELD TO COMPRESSION FLANGE AS LOCATED ON ELEVATION OF GIRDER.  
 \* TYPICAL FOR ALL INT. WEB STIFF., INT. DIAPH. CONN. PL. AND BRG. STIFF..  
 \*\* FOR PLATE SIZES SEE ELEVATION OF GIRDERS.

WELDING DETAILS

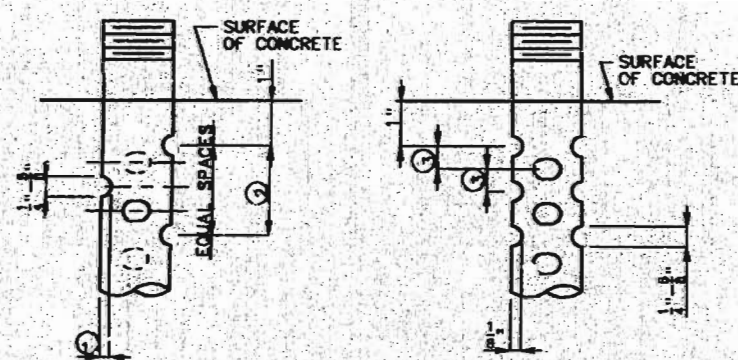


NOTE: WHEN "B" EXCEEDS 1/2"  
BEVEL STIFFENER PLATE.



DETAILS OF SHEAR CONNECTORS

NOTE: WEIGHT OF 2,972 LBS. OF SHEAR CONNECTORS IS INCLUDED IN WEIGHT OF FABRICATED STRUCTURAL CARBON STEEL (PL-JDR).  
 WEIGHT OF 5,297 LBS. OF SHEAR CONNECTORS IS INCLUDED IN WEIGHT OF FABRICATED STRUCTURAL CARBON STEEL (WF).

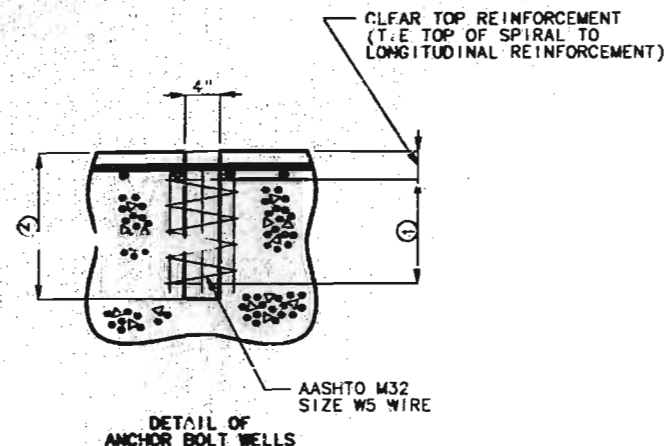


(1 1/8" Ø THRU 2 1/2" Ø ANCHOR BOLTS) (OPTIONAL DETAIL FOR 1 3/8" Ø THRU 2 1/2" Ø ANCHOR BOLTS)

① 1/8" : 1 1/8" Ø ANCHOR BOLTS  
 1/8" TO 1/4" : 1 3/8" Ø THRU 2 1/2" Ø ANCHOR BOLTS

② 2 1/2" TO 3 1/2"  
 ③ 5/8" TO 7/8"

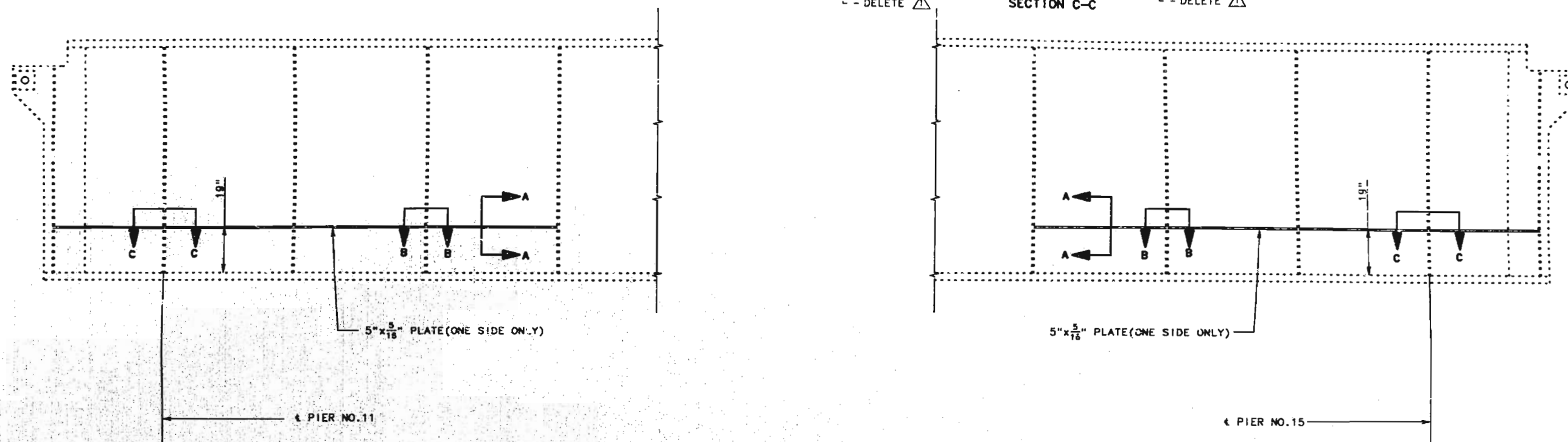
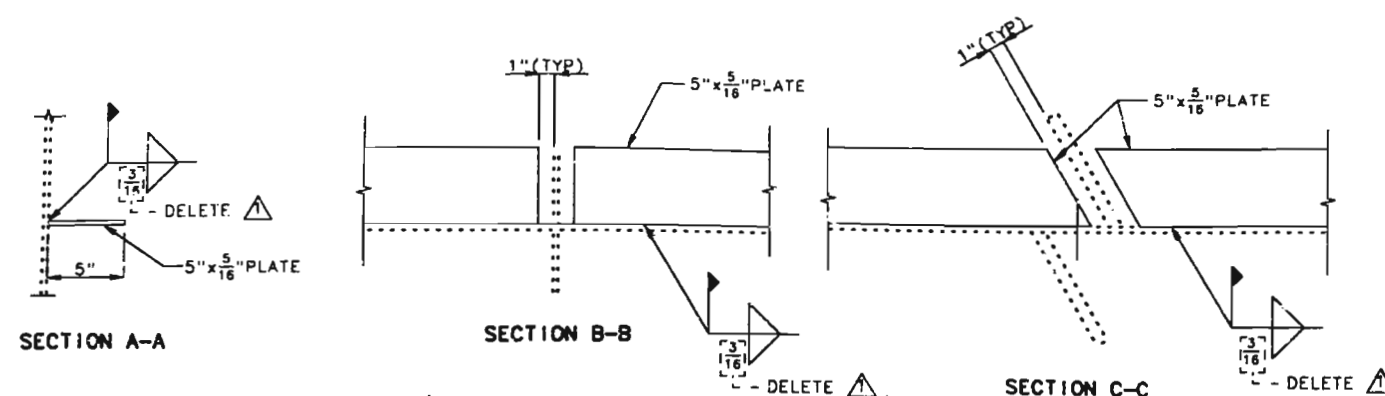
SWEDGE ANCHOR BOLT DETAIL



- ① 15" FOR BENT NO. 1, 2, 6, 11, & 16.  
 18" FOR BENT NO. 3, 4, 5, 7, 8, 9, 10, & 15.  
 25" FOR BENT NO. 12, 13, & 14  
 ② 18" FOR BENT NO. 1, 2, 6, 11, & 16.  
 21" FOR BENT NO. 3, 4, 5, 7, 8, 9, 10, & 15.  
 28" FOR BENT NO. 12, 13, & 14



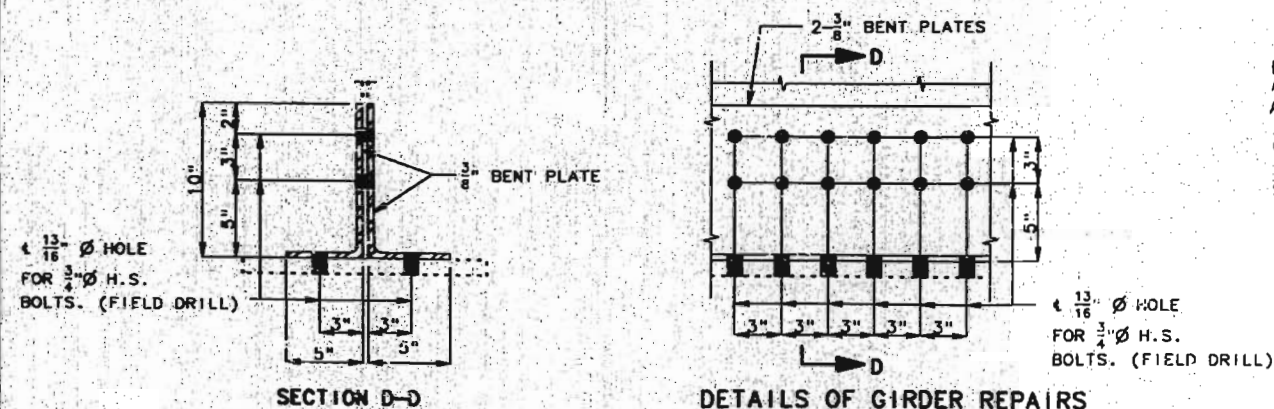
STATE	PROJ. NO.	SHEET NO.
MO.		



DETAILS OF LONGITUDINAL STIFF. ON EXISTING GIRDERS #3, #4, #5, #6, & #7.

NOTE: GIRDER REPAIR TO BE PERFORMED ON ALL EXISTING GIRDERS AT FINGER PLATE EXP. DEVICES AS NEEDED. ADD BENT PLATES TO 66" PLATE GIRDER (SPAN 15-16) FROM PIN HINGE TO 3RD STIFFENER (APPROX. 8'-3") AND TO 5" T. CANTILEVERED SECTIONS OF 4 SPAN CONTINUOUS PLATE GIRDER AT BENTS NO. 11 & 15. ALL REPAIRS SUBJECT TO DETERMINATION AND APPROVAL OF ENGINEER. REPAIR LENGTHS MAY BE MORE OR LESS THAN STATED ABOVE.

PAYMENT FOR REPAIRS TO EXISTING GIRDERS SHALL BE INCLUDED IN PAYMENT FOR FABRICATED STRUCTURAL CARBON STEEL (PLT GIR).



DETAILS OF GIRDER REPAIRS AT HINGE NO. 11 & 15.

NOTE: LENGTH OF REPAIR VARIES PER GIRDER.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

REVISD 12-8-1993

SHEET NO. 135 OF 238

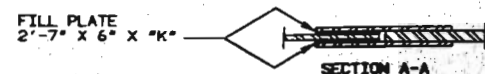
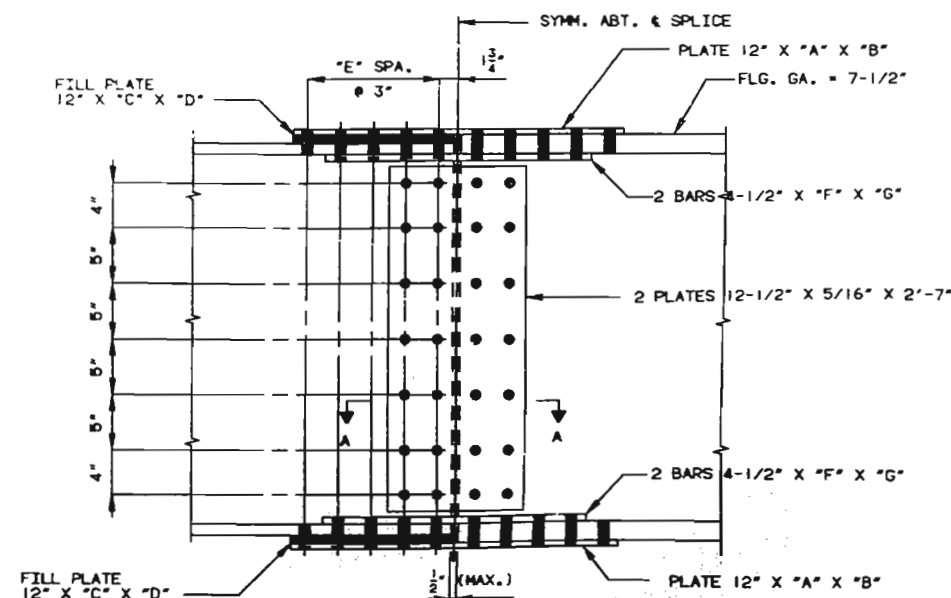
ST. LOUIS-JEFFERSON

COUNTIES

A-609R

141  
DETAILED JULY 1992  
CHECKED JULY 1992

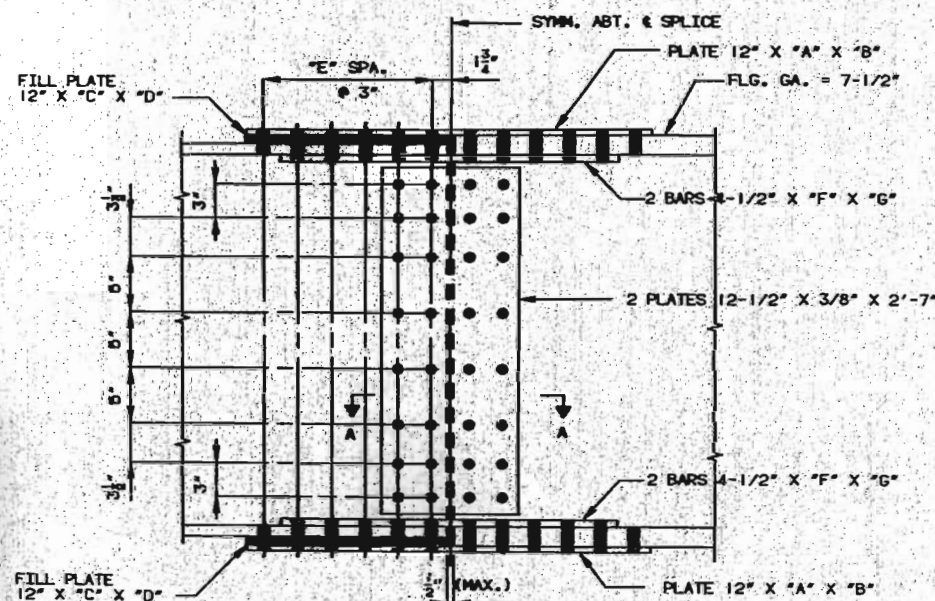




NOTE: 15/16" Ø HOLES FOR 7/8" Ø HIGH STRENGTH BOLTS.

	SIZE OF BEAMS	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"K"
S1	W36 X 160 TO 160	5/8"	2'-6 1/2"	—	—	4	3/4"	2'-0 1/2"	—
S2	W36 X 135 TO 160	1/2"	2'-1 1/2"	1/4"	12"	3	5/8"	2'-0 1/2"	—
S3	W36 X 170 TO 210	3/4"	3'-1 1/2"	1/4"	18"	5	3/4"	2'-6 1/2"	14 GA.
S4	W36 X 170 TO 232	3/4"	3'-1 1/2"	7/16"	18"	5	3/4"	2'-6 1/2"	12 GA.

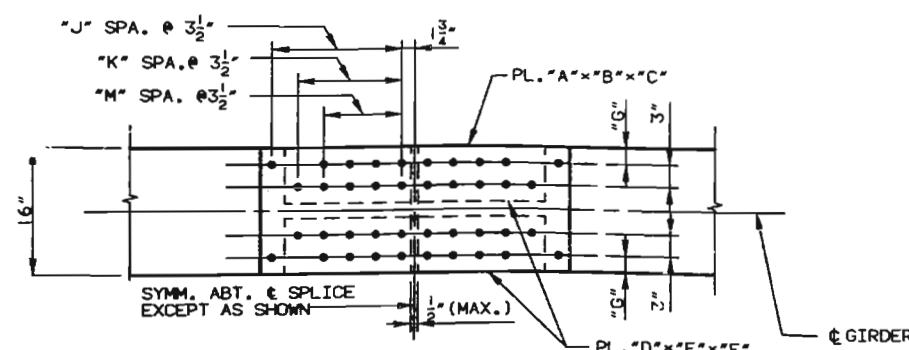
DETAIL OF BOLTED FIELD SPLICE S1, S2, S3, & S4



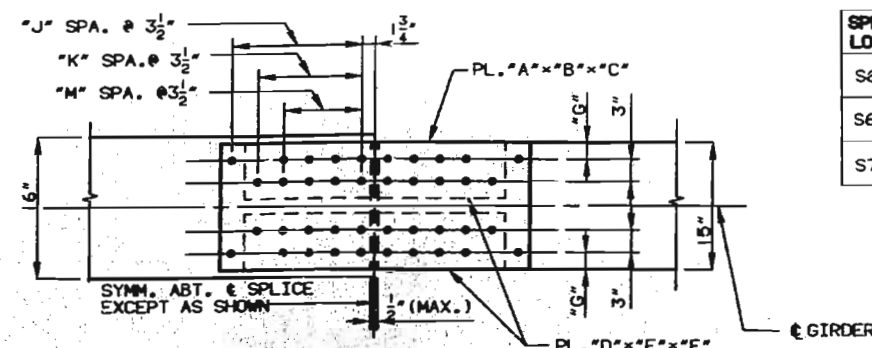
NOTE: 15/16" Ø HOLES FOR 7/8" Ø HIGH STRENGTH BOLTS.

	SIZE OF BEAMS	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"K"
S5	W36 X 182 TO 232	3/4"	3'-1 1/2"	3/8"	18"	5	3/4"	2'-6 1/2"	14 GA.

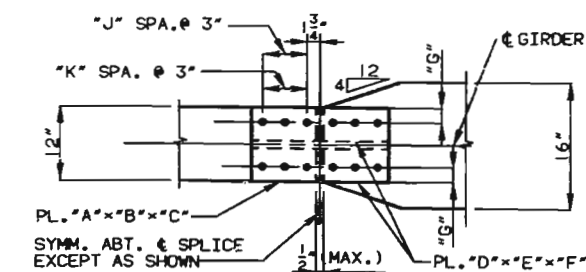
DETAILS OF BOLTED FIELD SPLICE-S5



S6 BOTTOM

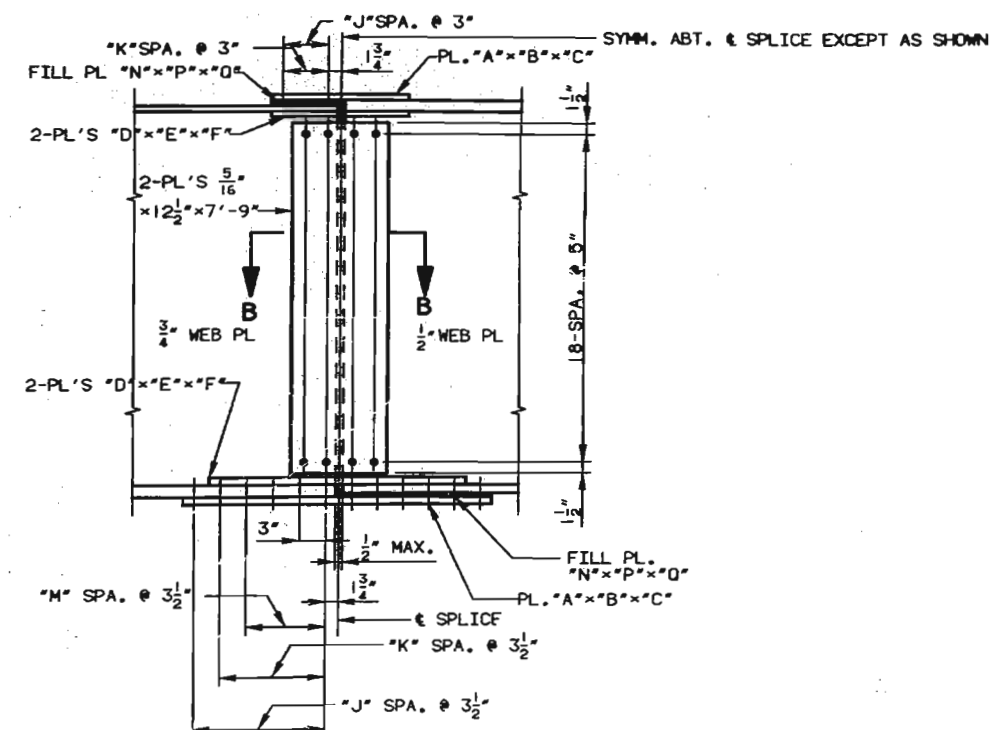


S7 BOTTOM



S6, & S7 (TOP)

SPLICE LOCATION	TABLE OF DIMENSIONS												
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"J"	"K"	"N"	"P"	"Q"	"M"
S6 & S7 TOP	12"	$\frac{3}{8}$ "	2'-0 $\frac{1}{2}$ "	5"	$\frac{1}{2}$ "	2'-0 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	3	3	12"	$\frac{1}{4}$ "	12"	-
S6 BOTTOM	16"	$\frac{5}{8}$ "	2'-3 $\frac{1}{2}$ "	7"	$\frac{3}{4}$ "	2'-3 $\frac{1}{2}$ "	2"	3	3	-	-	-	1
S7 BOTTOM	15"	$\frac{1}{2}$ "	20 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	$\frac{1}{2}$ "	20 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	2	2	15"	$\frac{1}{4}$ "	10"	1



DETAIL OF BOLTED FIELD SPLICE-S6 & S7

NOTE: USE 7/8" Ø HIGH STRENGTH BOLTS WITH 15/16" Ø HOLES.

142  
DETAILED FEB. 1992  
CHECKED JUNE 1992

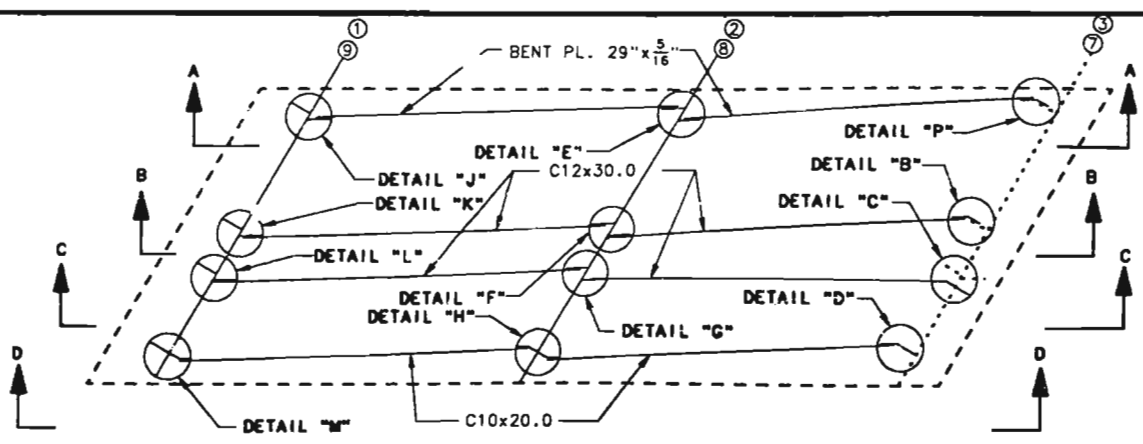
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 136 OF 238.

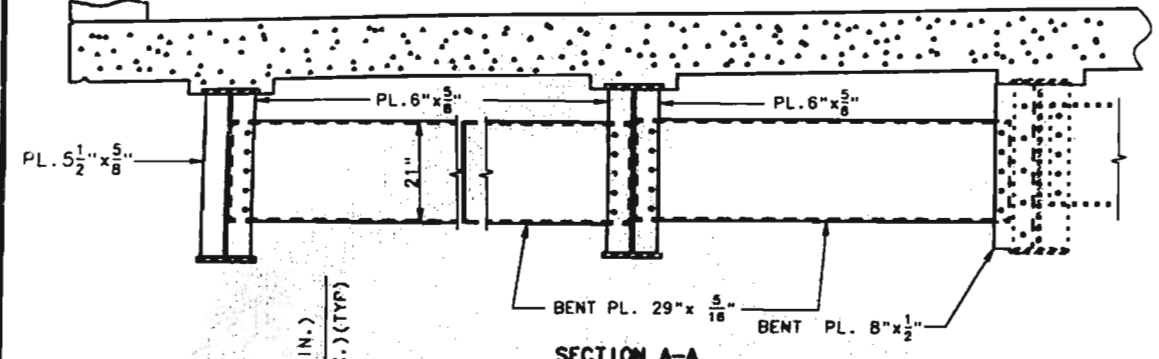
ST. LOUIS-JEFFERSON COUNTIES

A-609R

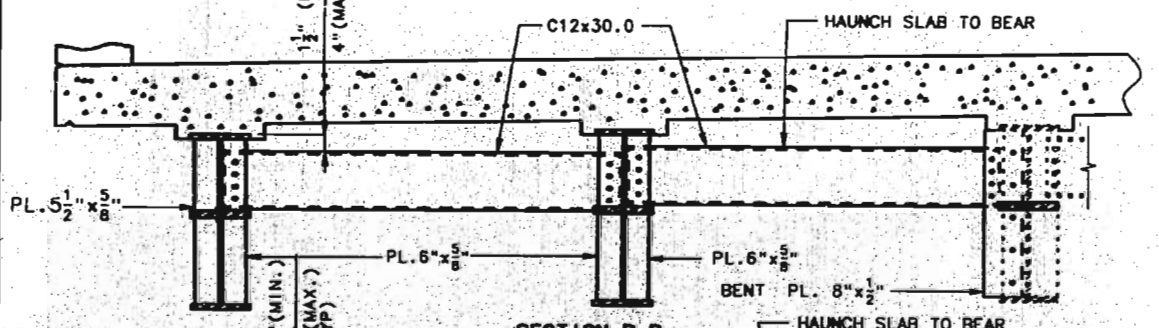
143



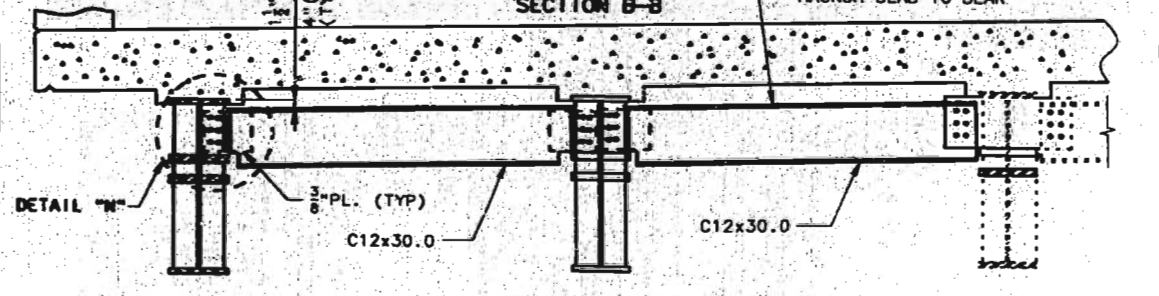
DETAIL "A"(9, 8, & 7 N.B.L.)(1, 2, & 3 S.B.L.)



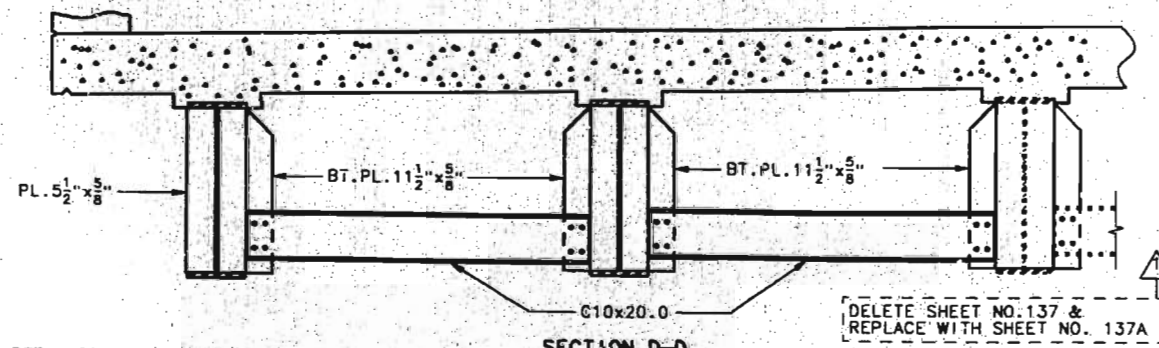
SECTION A-A



SECTION B-B

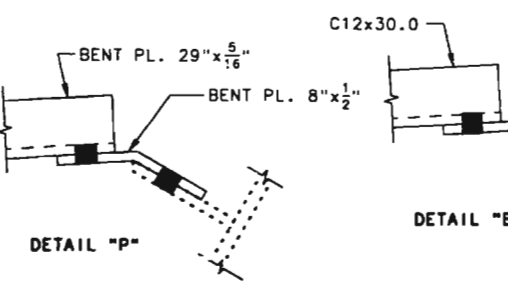


SECTION C-C

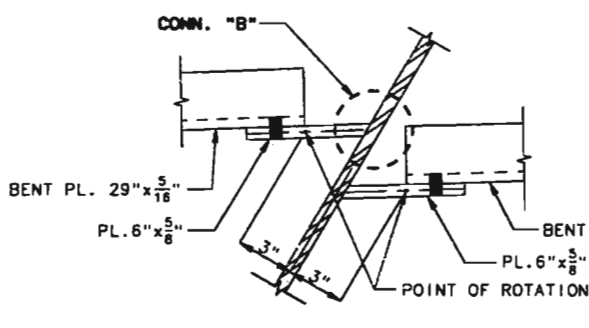


SECTION D-D

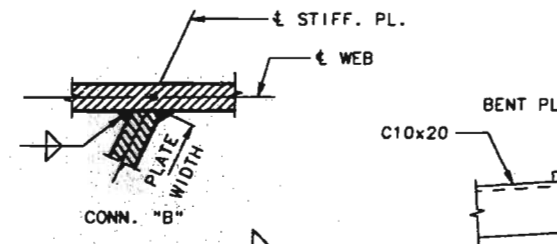
DELETE SHEET NO. 137 & REPLACE WITH SHEET NO. 137A



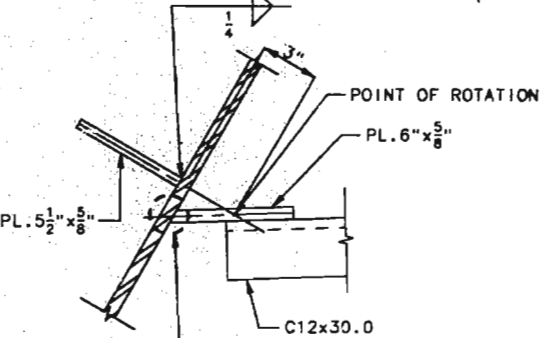
NOTE: FOR LOCATION OF DETAIL "A" SEE SHEET NOS. 113, 114, 122 & 123.



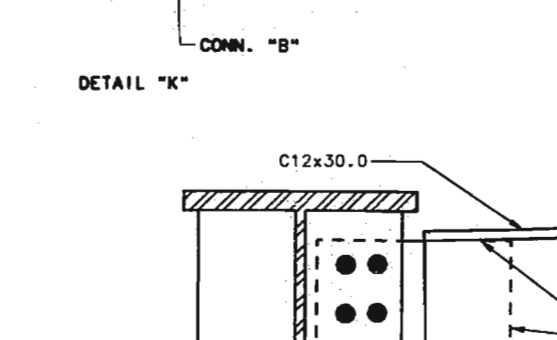
DETAIL "E"



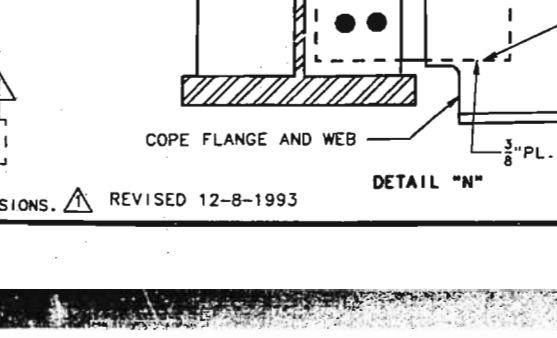
DETAIL "K"



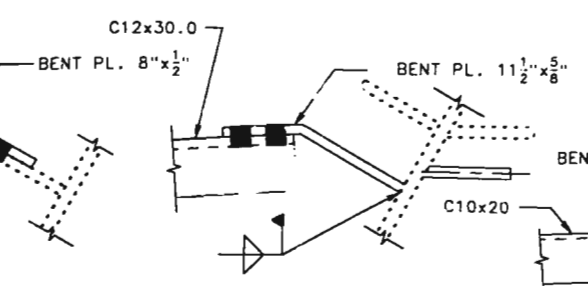
DETAIL "H"



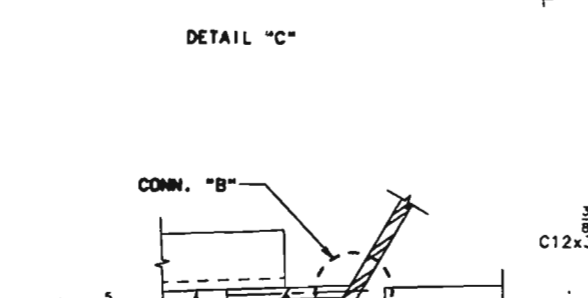
DETAIL "G"



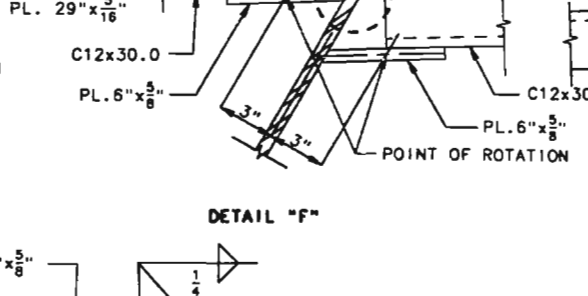
DETAIL "N"



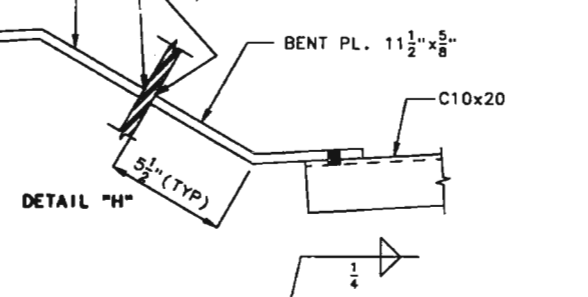
DETAIL "B"



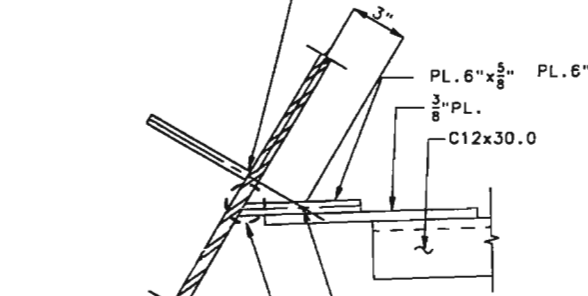
DETAIL "C"



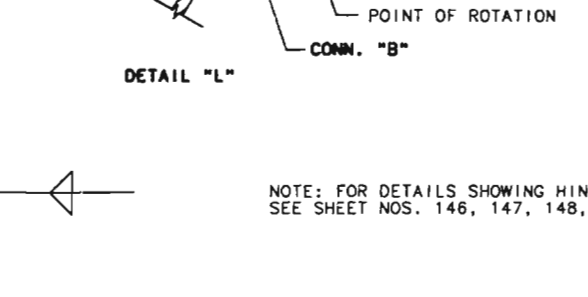
DETAIL "F"



DETAIL "H"

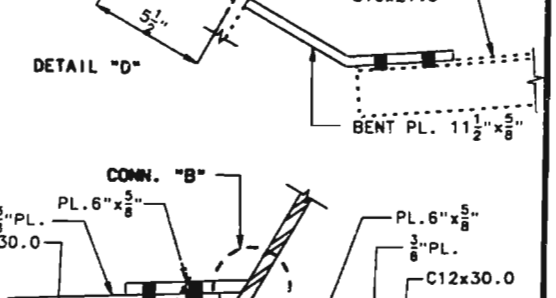


DETAIL "L"

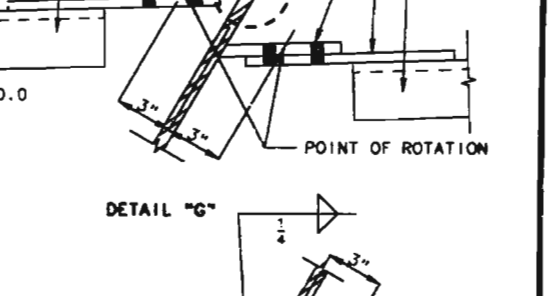


DETAIL "M"

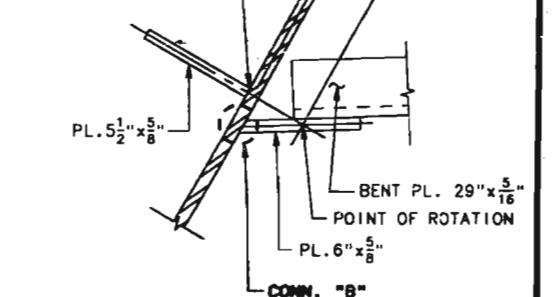
NOTE: FOR DETAILS SHOWING HINGE #4 CONNECTION, SEE SHEET NOS. 146, 147, 148, & 149.



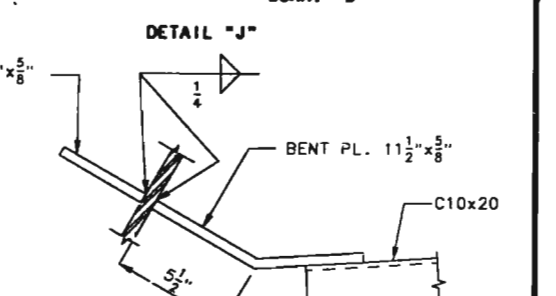
DETAIL "D"



DETAIL "G"



DETAIL "J"



DETAIL "M"

STATE	PROJ. NO.	SHEET NO.
MO.		

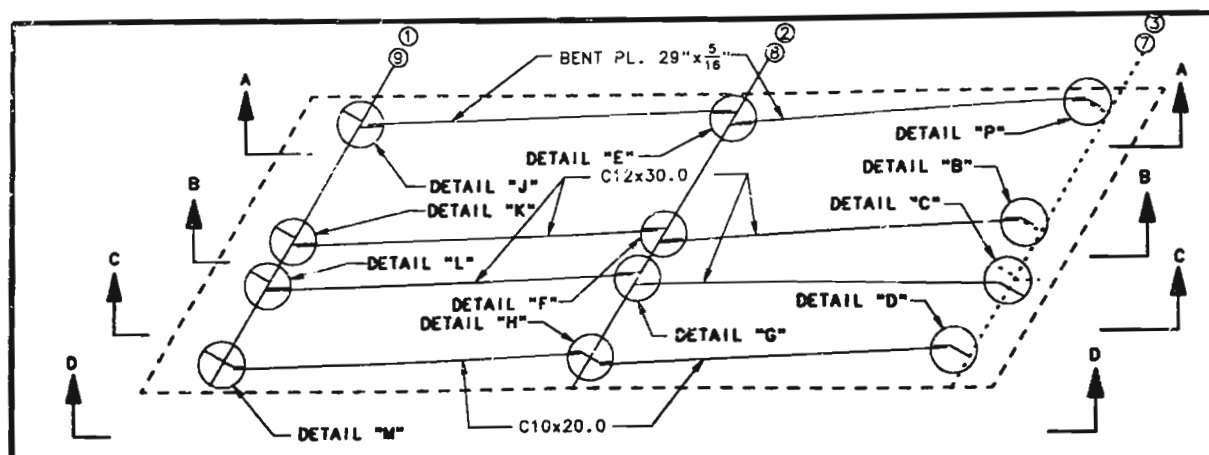
DETAILED FEB. 1992  
CHECKED JUNE 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS. REVISED 12-8-1993

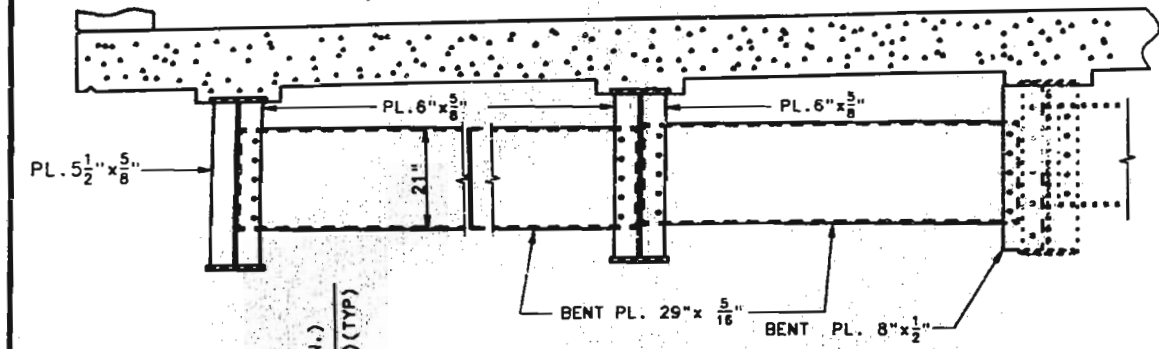
SHEET NO. 137 OF 238

ST. LOUIS-JEFFERSON

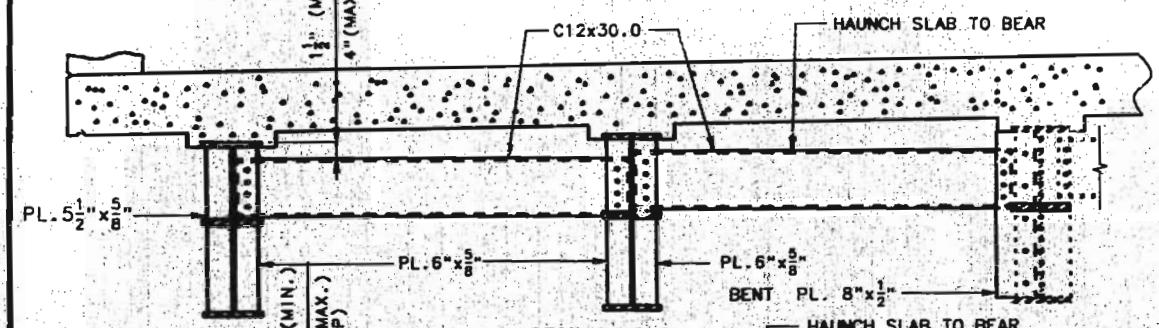
COUNTIES A-609R



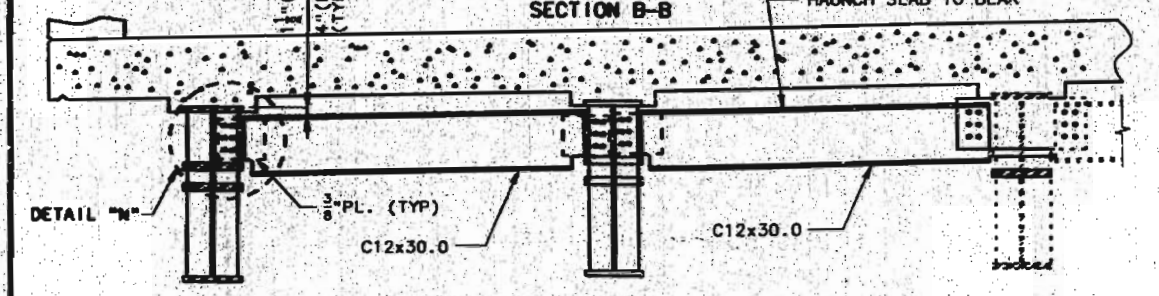
DETAIL "A" (9, 8, & 7 N.B.L.) (1, 2, & 3 S.B.L.)



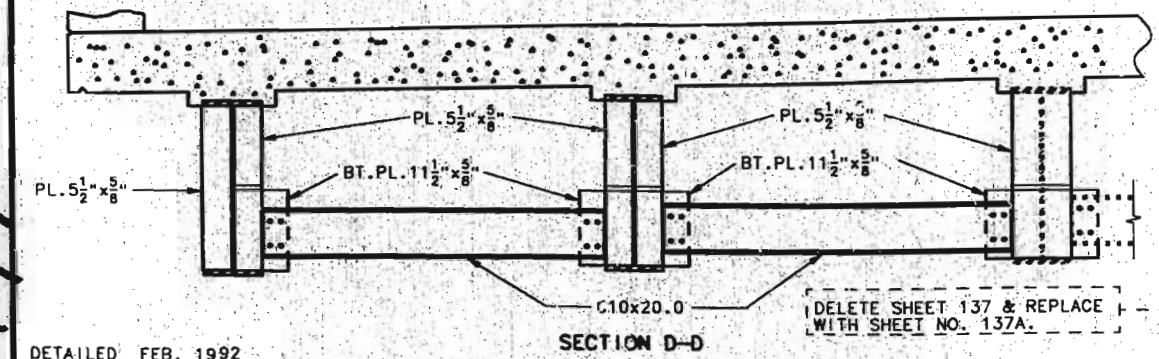
SECTION A-A



SECTION B-B



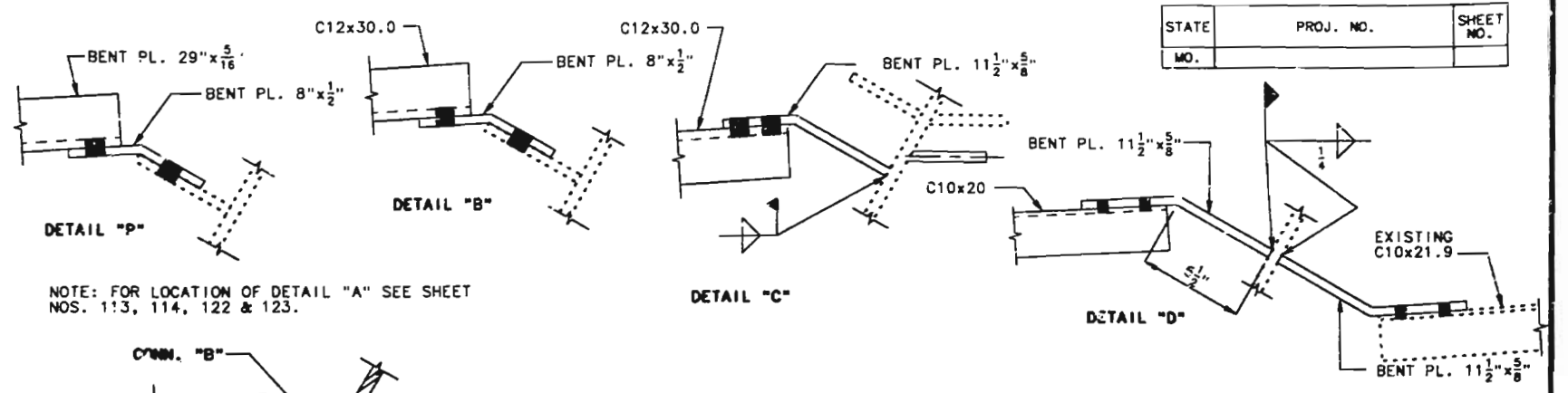
SECTION C-C



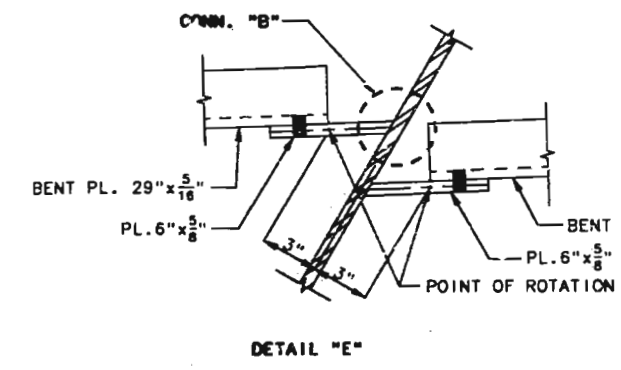
SECTION D-D

DELETE SHEET 137 & REPLACE WITH SHEET NO. 137A

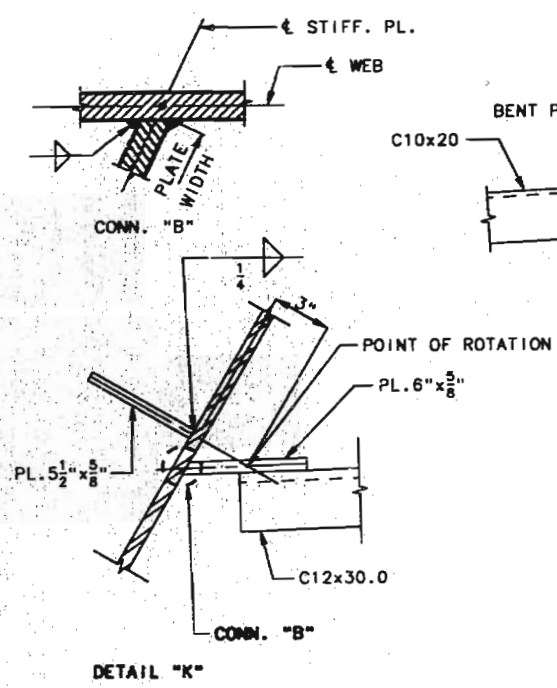
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.



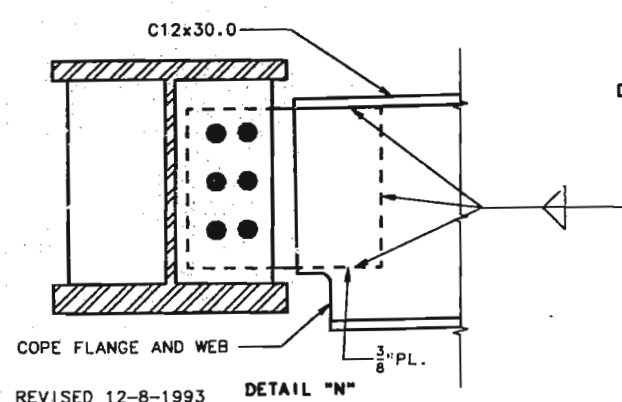
NOTE: FOR LOCATION OF DETAIL "A" SEE SHEET NOS. 113, 114, 122 & 123.



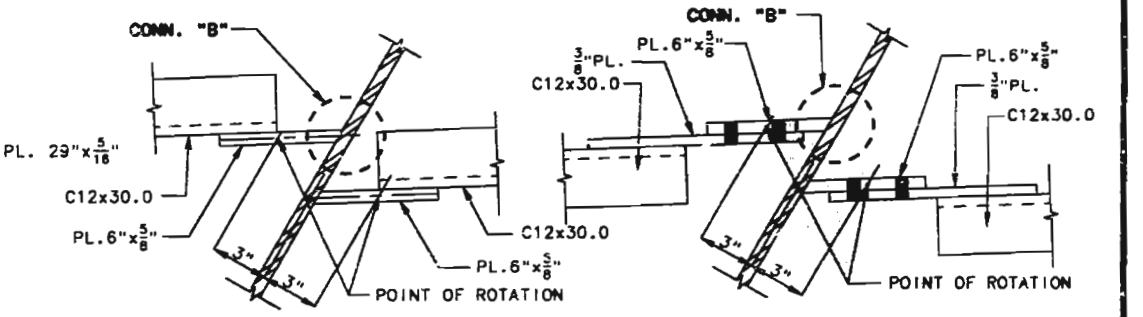
DETAIL "E"



DETAIL "K"

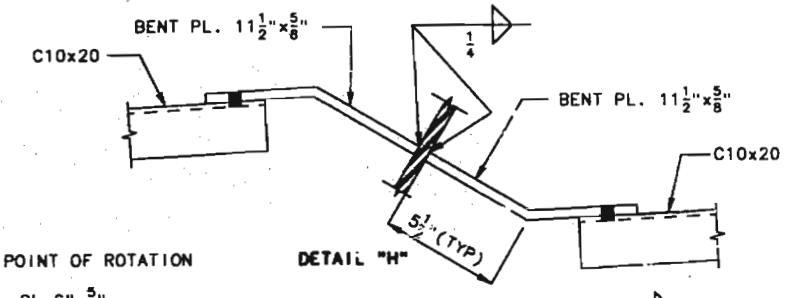


DETAIL "N"

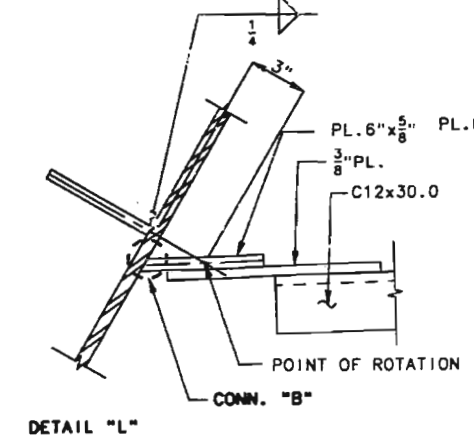


DETAIL "F"

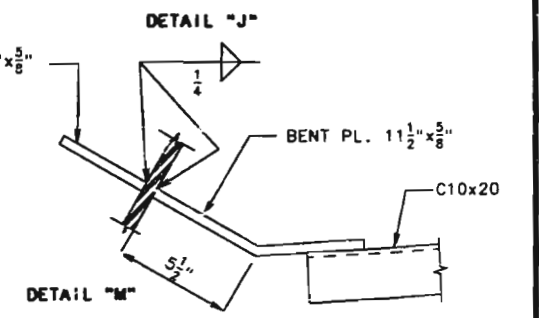
DETAIL "G"



DETAIL "H"



DETAIL "L"



DETAIL "J"

NOTE: FOR DETAILS SHOWING HINGE #4 CONNECTION, SEE SHEET NOS. 146, 147, 148, & 149.

DETAILED FEB. 1992  
CHECKED JUNE 1992

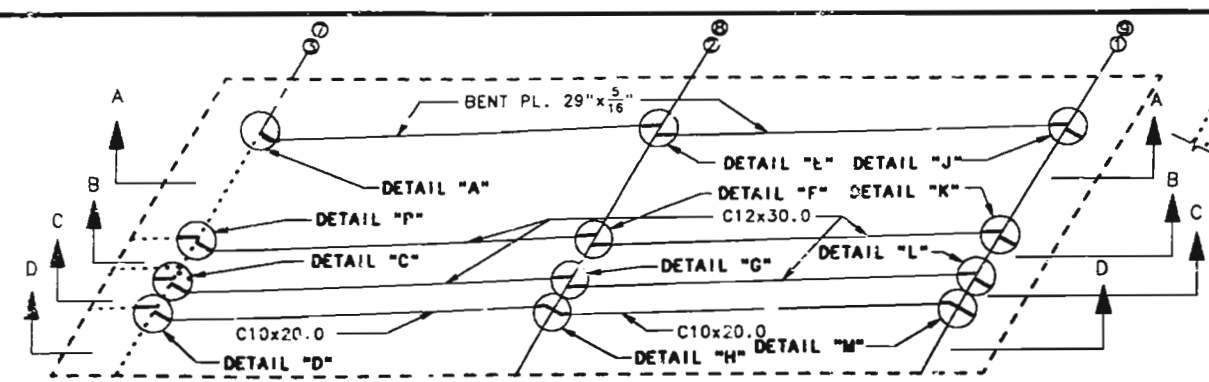
REVISED 12-8-1993

SHEET NO. 137A OF 238

ST. LOUIS-JEFFERSON

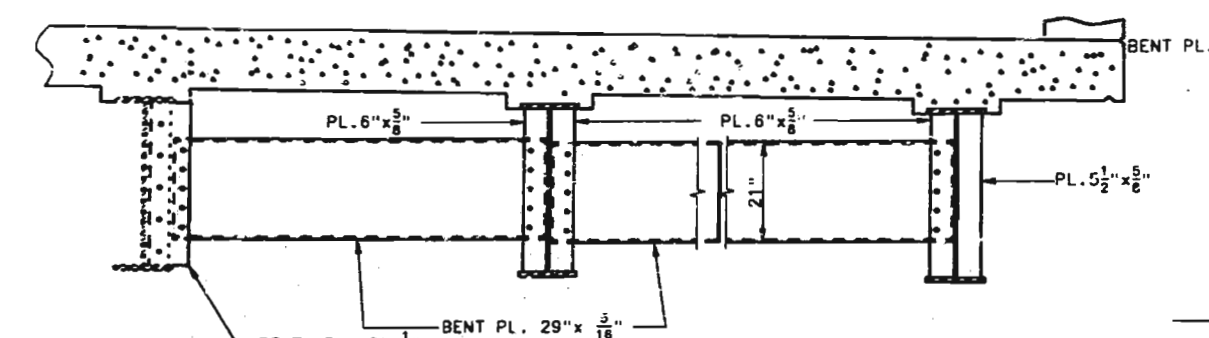
COUNTIES A-609R



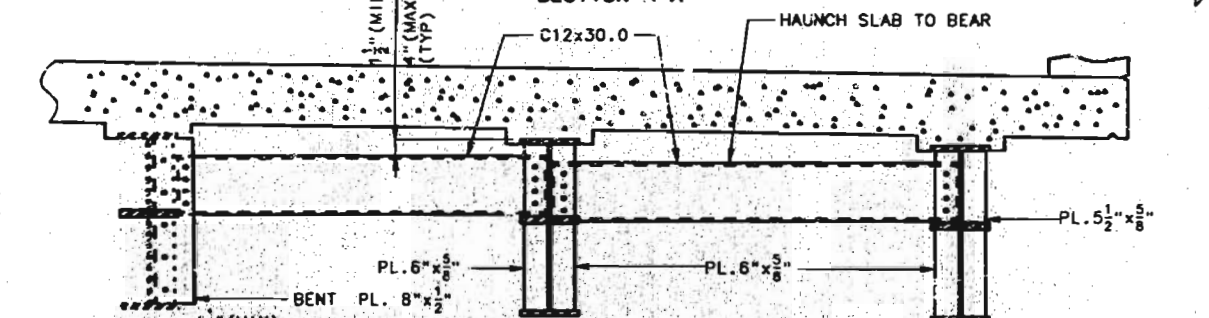


NOTE: FOR LOCATION OF DETAIL "B" SEE SHEET NOS. 113, 114, 122, & 123.

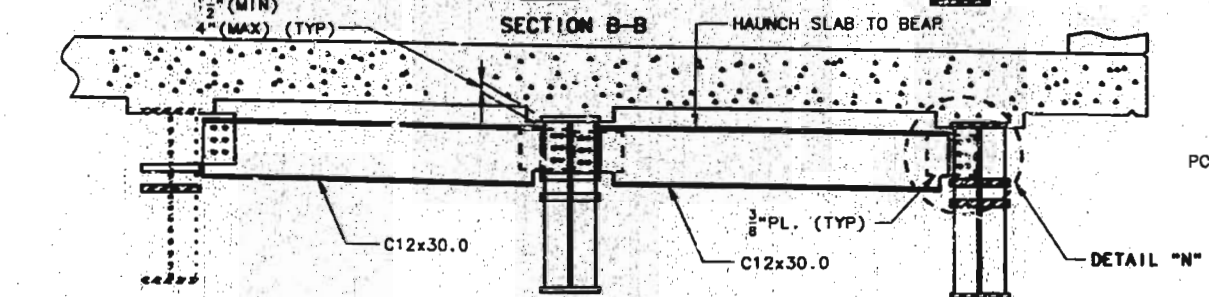
DETAIL "B" (3, 2, & 1 N.B.L.)(7, 8, & 9 S.B.L.)



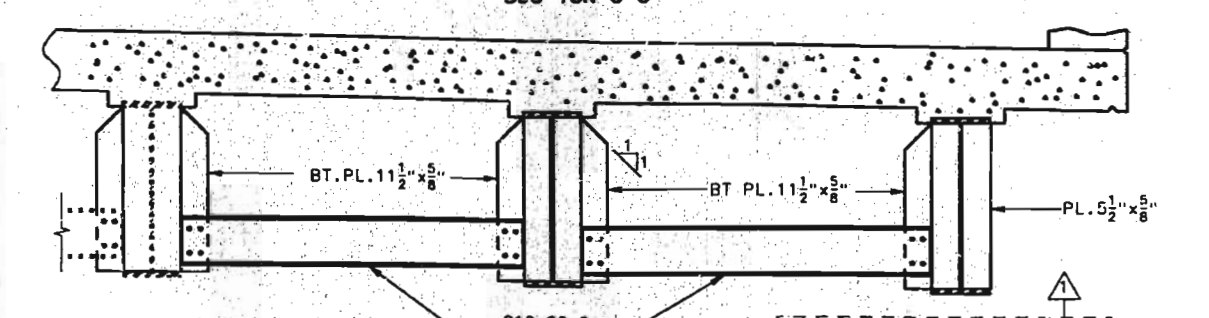
SECTION A-A



SECTION B-B



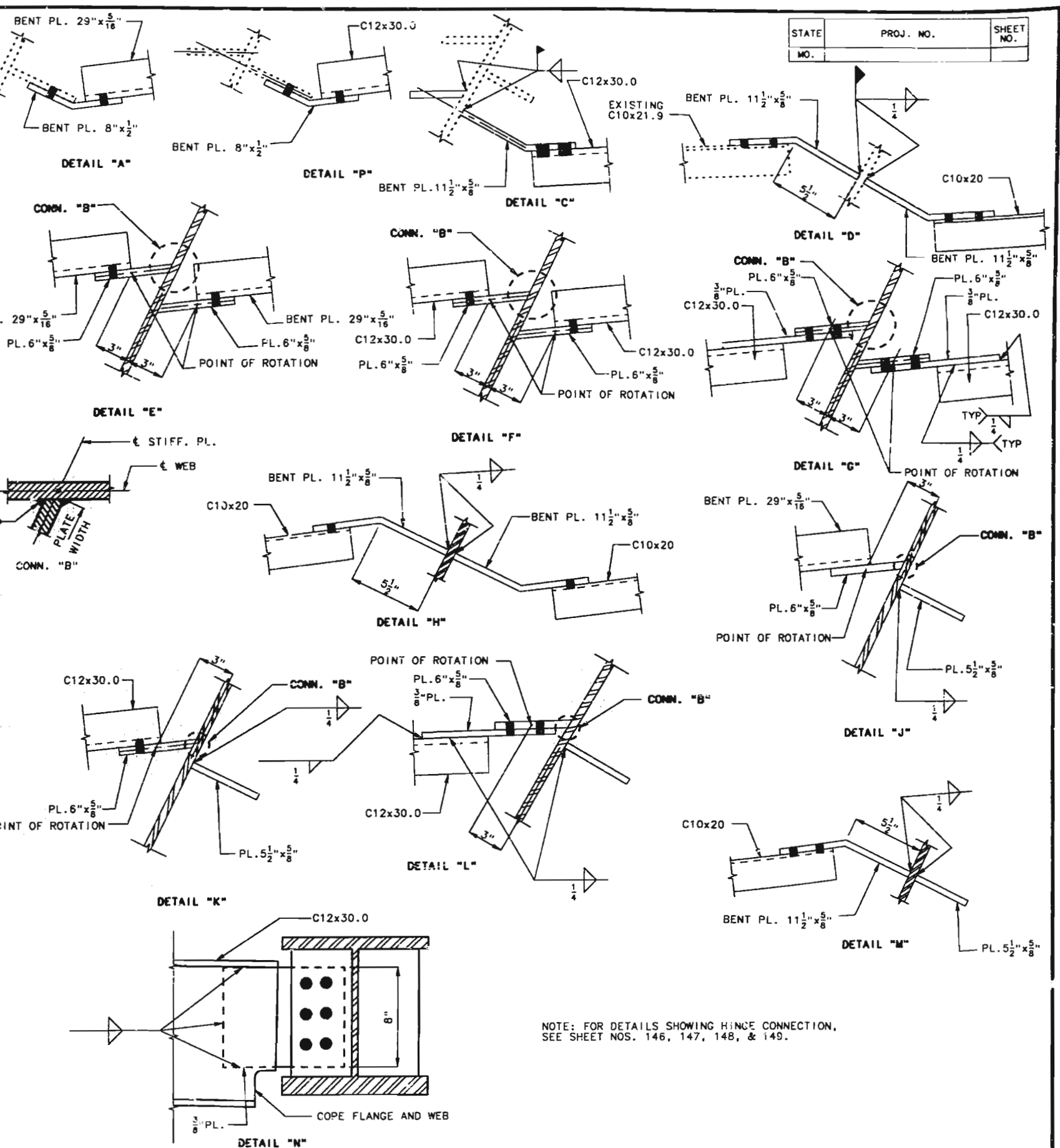
SECTION C-C



SECTION D-D

DELETE SHEET NO. 138 & REPLACE WITH SHEET NO. 138A

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.



NOTE: FOR DETAILS SHOWING HINGE CONNECTION, SEE SHEET NOS. 146, 147, 148, & 149.

DETAILED FEB. 1992  
CHECKED JUNE 1992

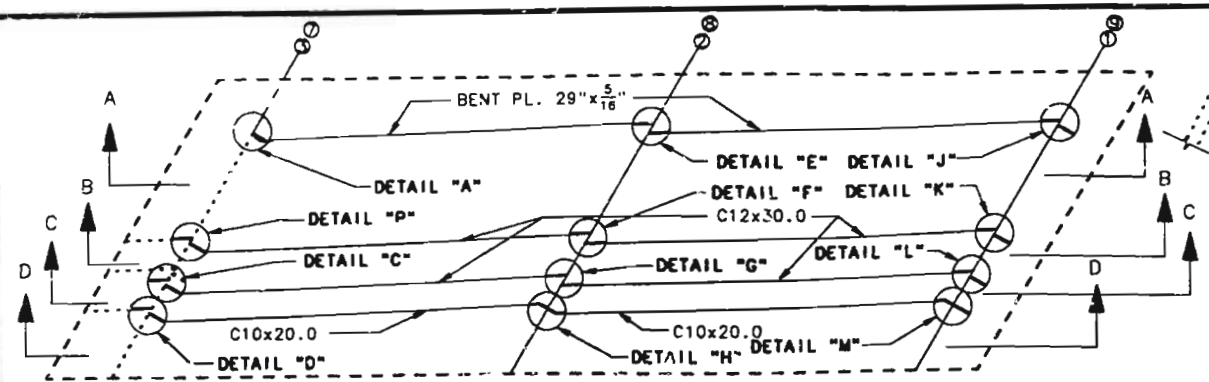
REVISD 12-8-1993

SHEET NO. 138 OF 238

ST. LOUIS-JEFFERSON

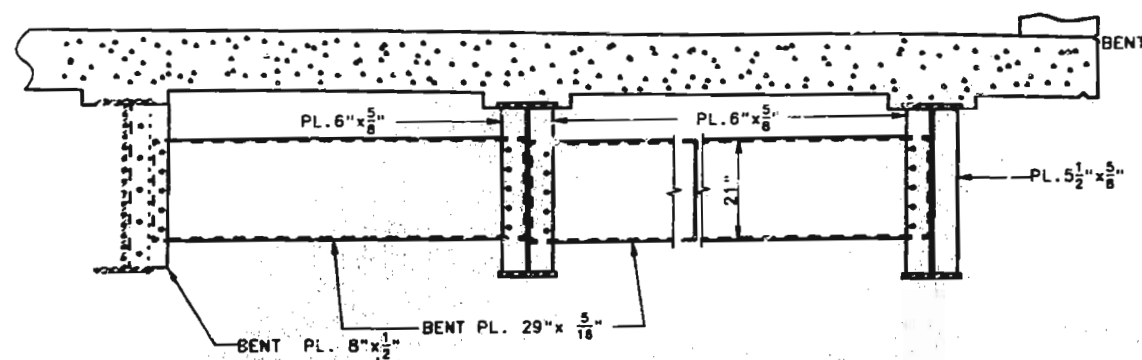
COUNTIES A-609R



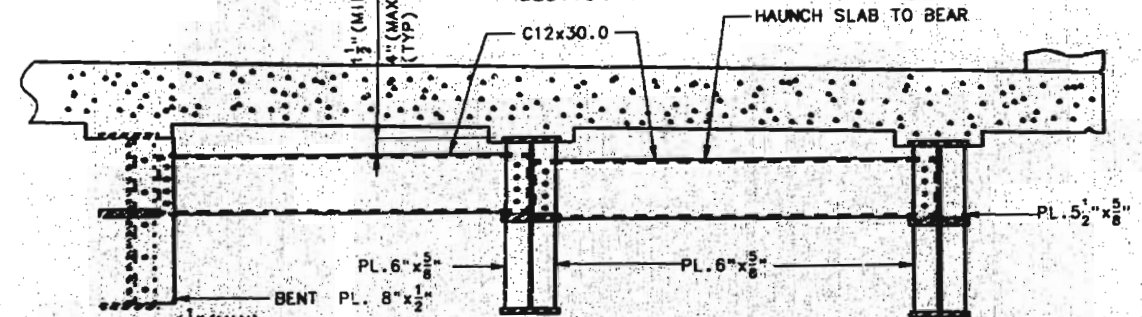


NOTE: FOR LOCATION OF DETAIL "B" SEE SHEET NOS. 113, 114, 122, & 123.

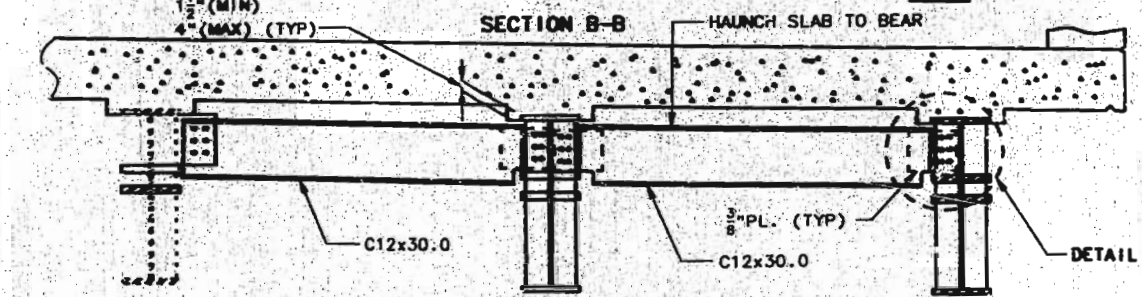
DETAIL "B" (3, 2, & 1 N.B.L.)(7, 8, & 9 S.B.L.)



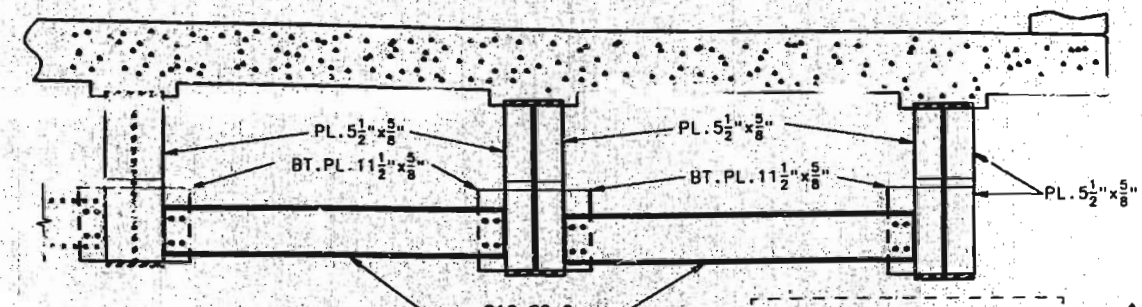
SECTION A-A



SECTION B-B



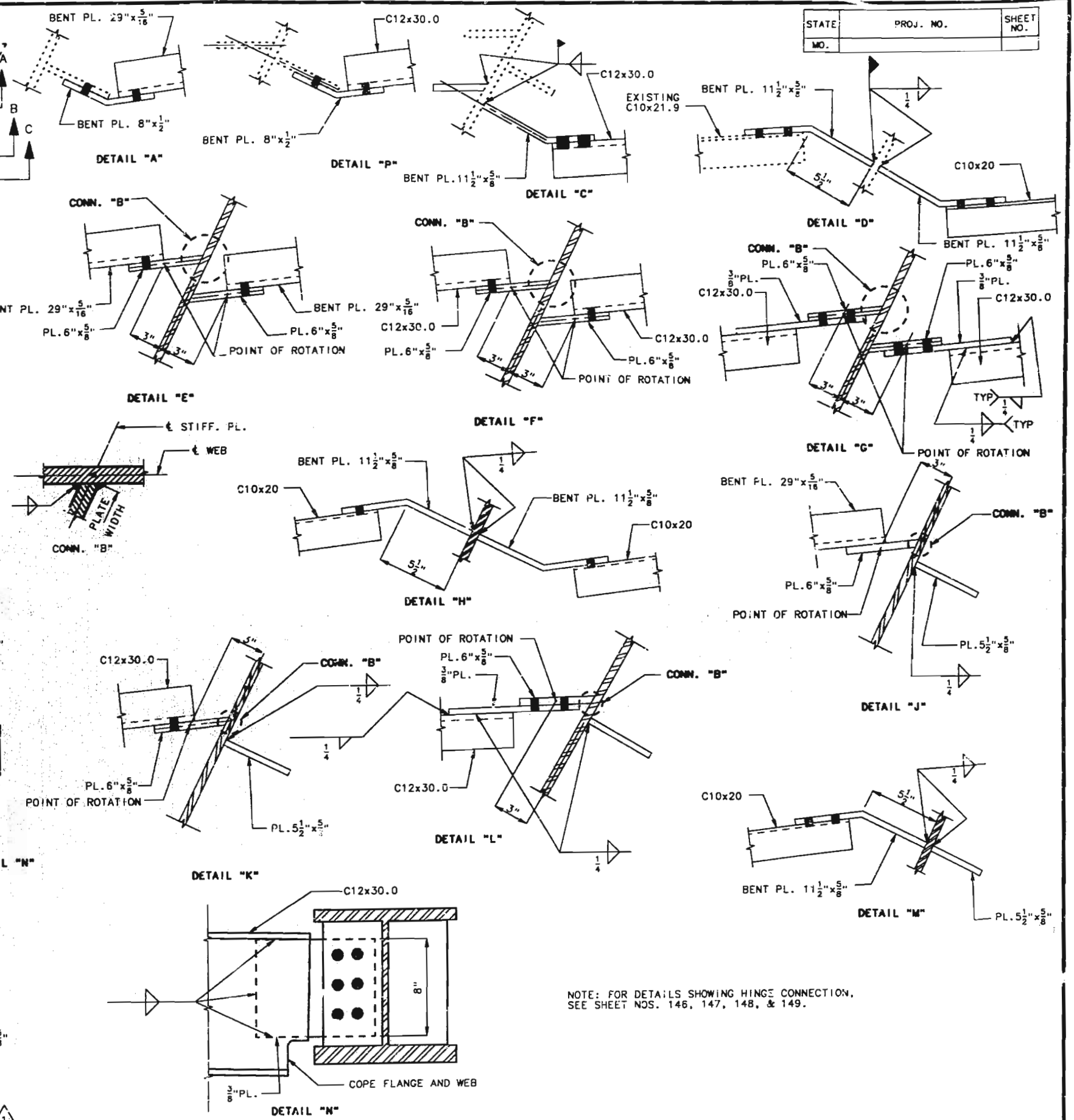
SECTION C-C



SECTION D-D

DELETE SHEET 138 & REPLACE WITH SHEET NO. 138A

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.



NOTE: FOR DETAILS SHOWING HINGE CONNECTION, SEE SHEET NOS. 146, 147, 148, & 149.

146

DETAILED FEB. 1992  
CHECKED JUNE 1992

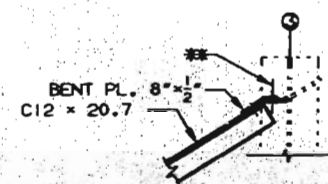
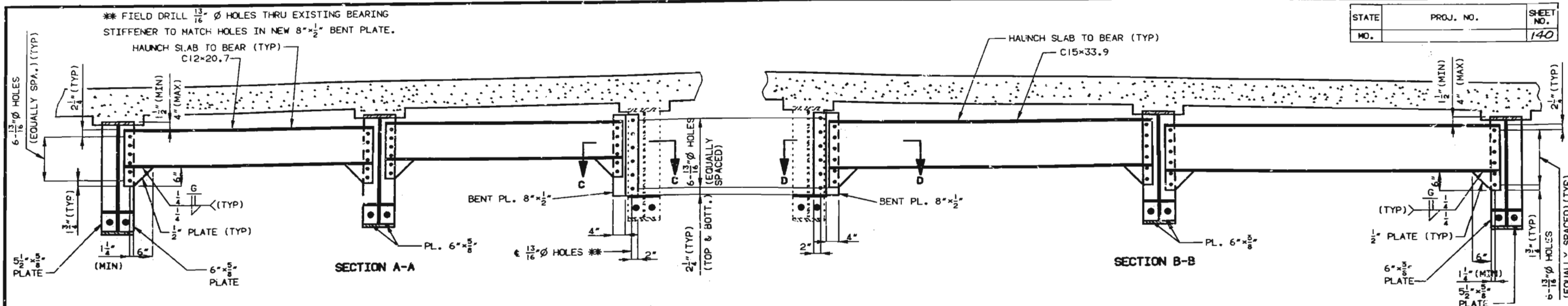
REVISED 12-8-1993

SHEET NO. 138A OF 238

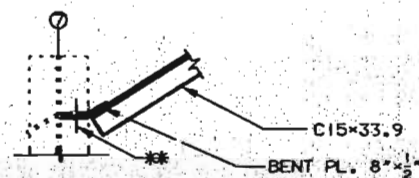
ST. LOUIS-JEFFERSON

COUNTIES A-609R

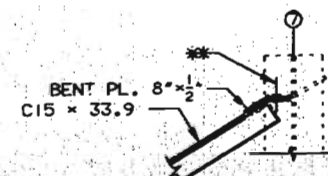
STATE	PROJ. NO.	SHEET NO.
MO.		140



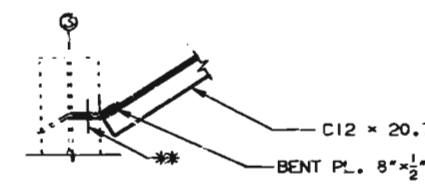
PART SECTION C-C



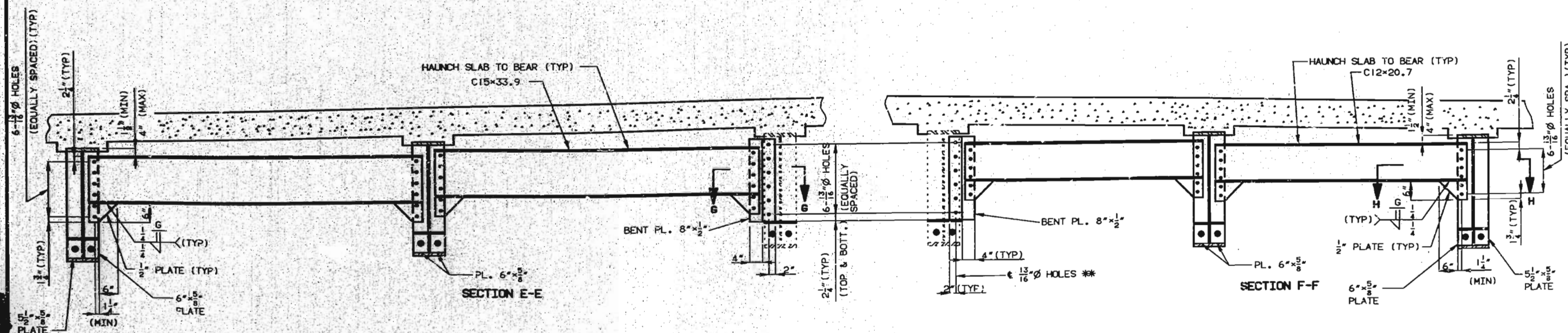
PART SECTION D-D



PART SECTION G-G



PART SECTION H-H



NOTE: FOR DETAILS OF EARTHQUAKE RESTRAINTS NOT SHOWN SEE SHEET NOS. 154 & 155.

DETAILS OF END DIAPHS.-END BENT NO. 1  
NORTHBOUND AND SOUTHBOUND LANES

NOTE: FOR LOCATION OF SECTIONS A-A & B-B SEE SHEET NO. 113.  
FOR LOCATION OF SECTIONS E-E & F-F SEE SHEET NO. 122.

DETAILED FEB. 1992  
CHECKED JUNE 1992

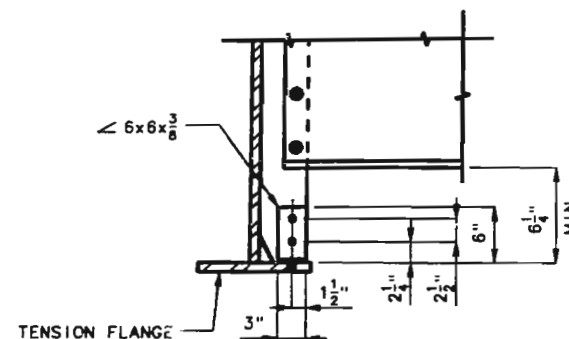
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 139 OF 238

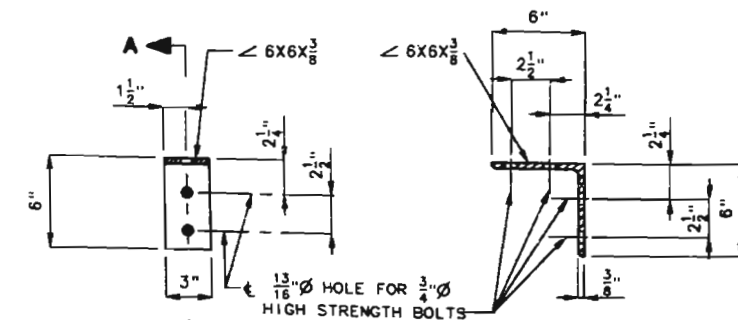
ST. LOUIS-JEFFERSON

COUNTIES A-609R

147



DETAIL "A"

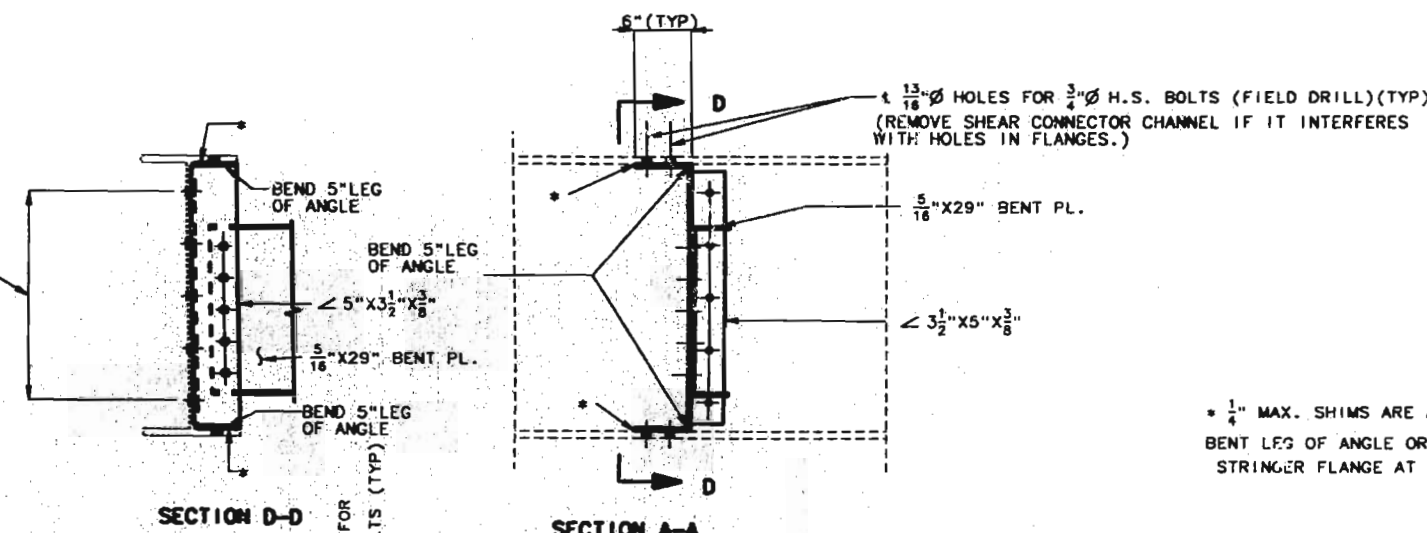


SECTION A-A

DETAIL OF FLANGE CONNECTION ANGLE

NOTE: THE 2-3/4" H.S. BOLTS THAT CONNECT THE 6x6x3/8 TO THE TOP FLANGE SHALL BE PLACED SO THE NUT IS ON THE INSIDE OF FLANGE TOWARD THE WEB.

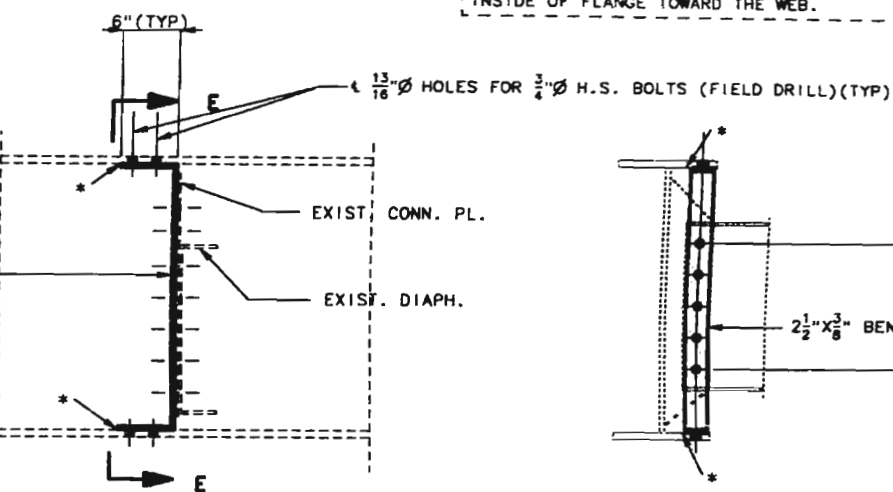
5-13/16" HOLES FOR 3/4" H.S. BOLTS (FIELD DRILL)



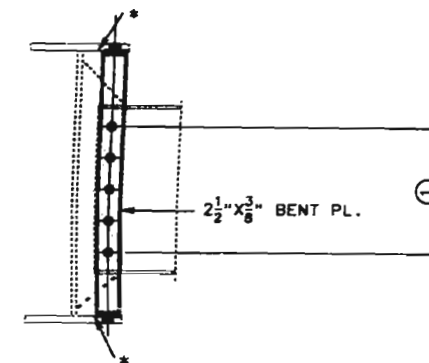
SECTION D-D

SECTION A-A

2 1/2" X 3/8" BENT PL.



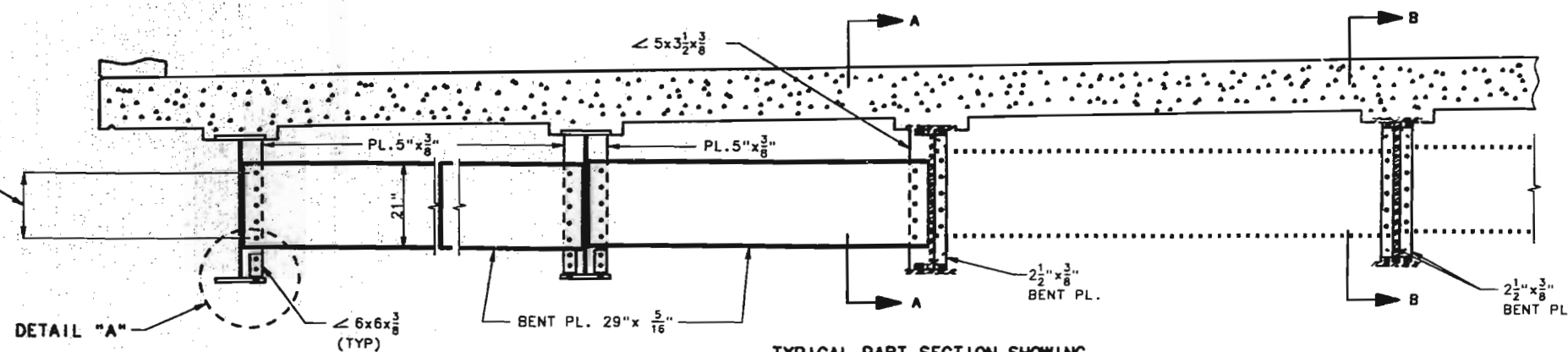
SECTION B-B



SECTION E-E

\* 1/4" MAX. SHIMS ARE ALLOWABLE BETWEEN BENT LEG OF ANGLE OR 3/8" BT. PL. AND THE STRINGER FLANGE AT THE CONTRACTOR'S OPTION.

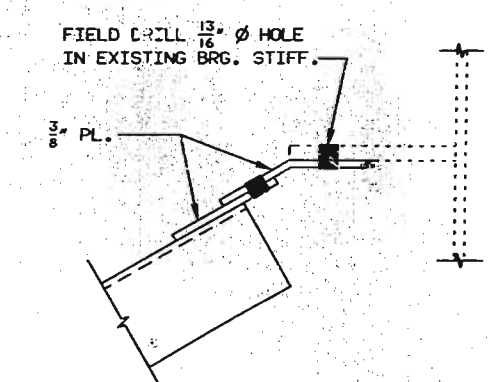
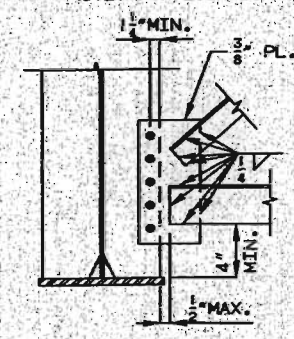
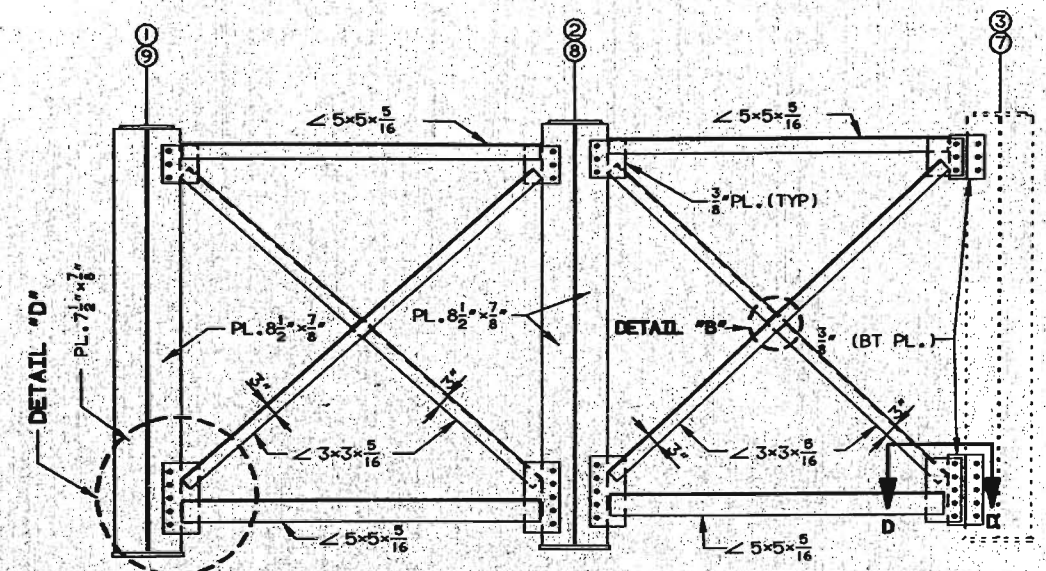
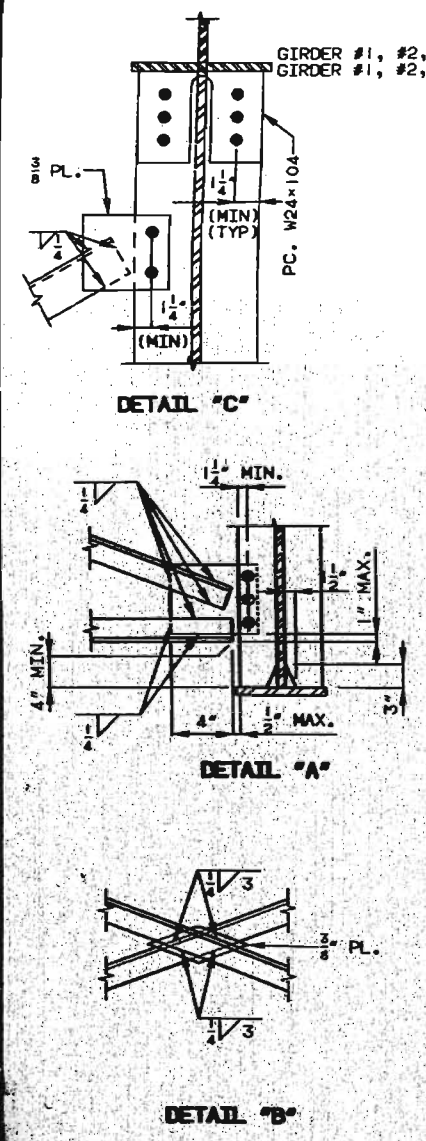
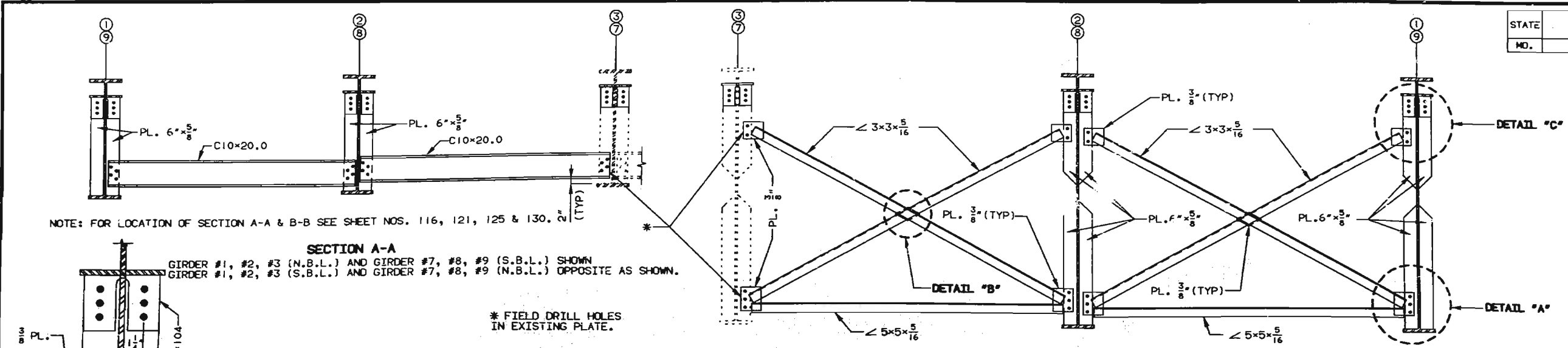
① FIELD DRILL 5-13/16" HOLES IN 3/8" BT. PL. FOR 3/4" H.S. BOLTS TO MATCH EXISTING HOLES IN DIAPH. CONN. PL.



TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS (WIDE FLANGE)

148



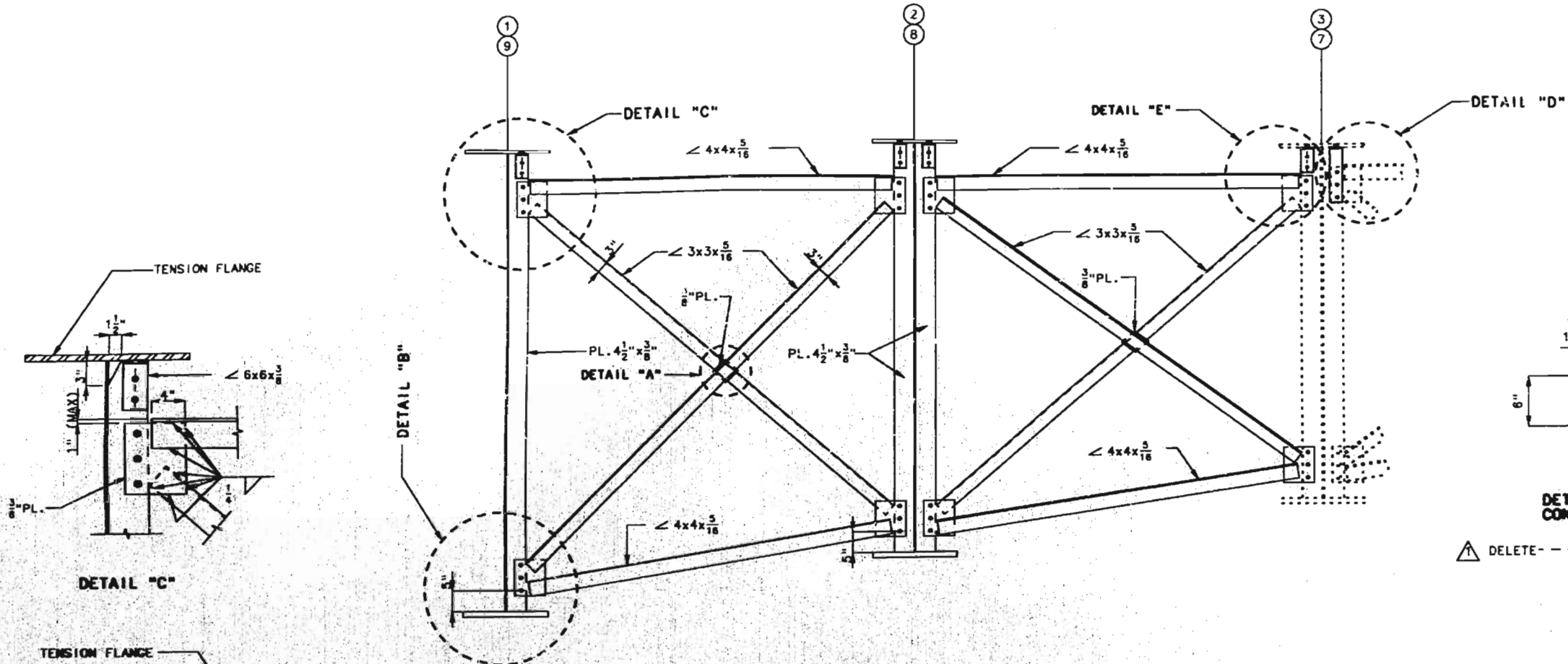


NOTE: FOR DETAILS SHOWING HINGE NO. 11 CONNECTION, SEE SHEET NOS. 150 & 151.  
FOR DETAILS SHOWING HINGE NO. 15 CONNECTION, SEE SHEET NOS. 152 & 153.

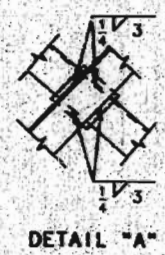
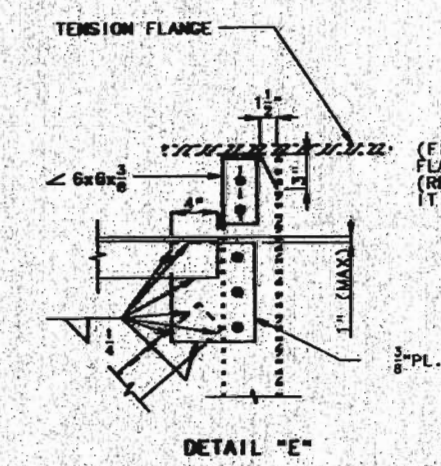
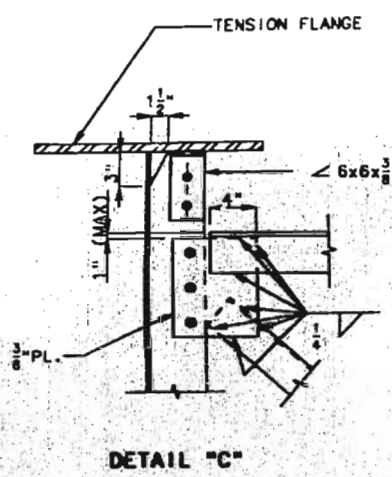
DETAILS OF DIAPHRAGMS AND CROSS FRAMES @ BENT NO. 11 & NO. 15.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

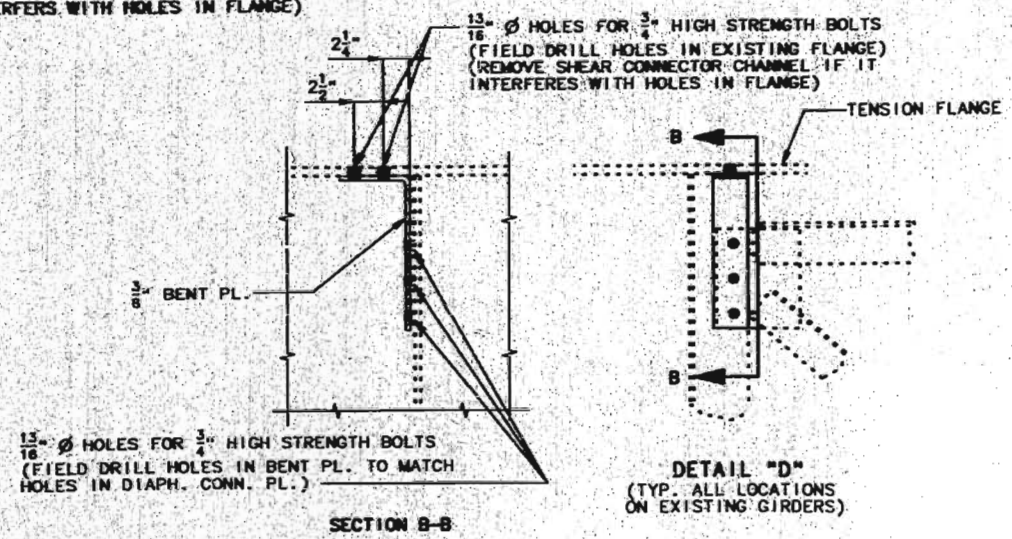
STATE	PROJ. NO.	SHEET NO.
MO.		



TYP. SECTION NEAR INT. DIAPH.  
SPANS(11-12)(12-13)(13-14)(14-15)



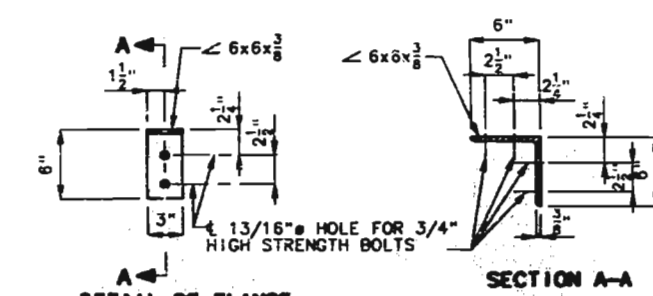
(FIELD DRILL HOLES IN EXISTING  
FLANGE AND STIFFENER PL.)  
(REMOVE SHEAR CONNECTOR CHANNEL IF  
IT INTERFERES WITH HOLES IN FLANGE)



13/16" Ø HOLES FOR 3/4" HIGH STRENGTH BOLTS  
(FIELD DRILL HOLES IN BENT PL. TO MATCH  
HOLES IN DIAPH. CONN. PL.)

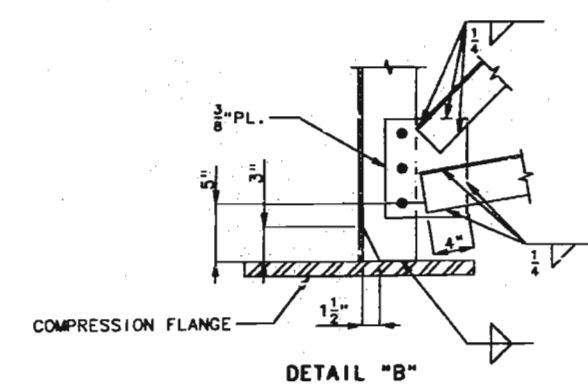
SECTION B-B

DETAIL "D"  
(TYP. ALL LOCATIONS  
ON EXISTING GIRDERS)



DETAIL OF FLANGE  
CONNECTION ANGLE

NOTE: THE 2-3/4" H.S. BOLTS THAT CONNECT THE 6x6x3/8  
TO THE TOP FLANGE SHALL BE PLACED SO THE NUT IS ON THE  
INSIDE OF FLANGE TOWARD THE WEB.



DETAIL "B"

NOTE: FOR WELDING DETAILS SEE SHEET NO. 134

DETAILS OF INT. DIAPH.  
SPAN (11-12)(12-13)(13-14)(14-15)

150

DETAILED MAR. 1992  
CHECKED JULY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

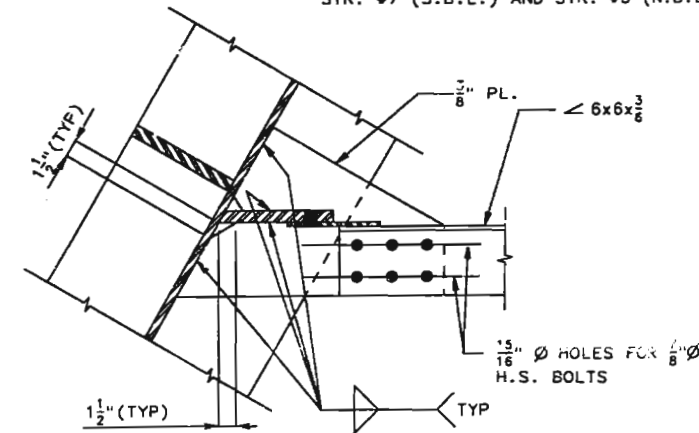
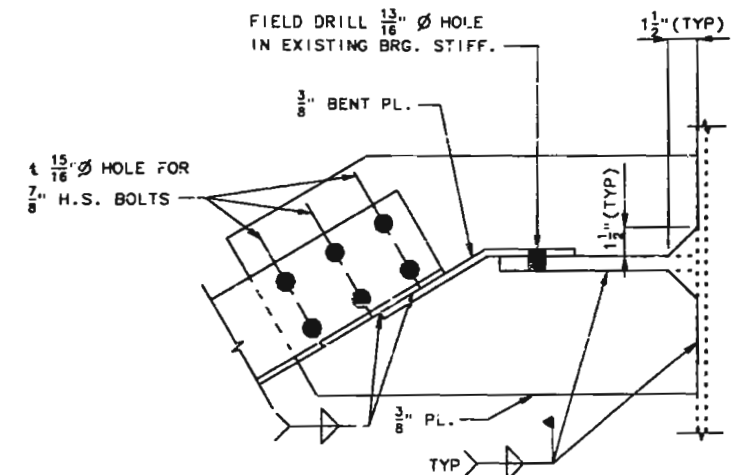
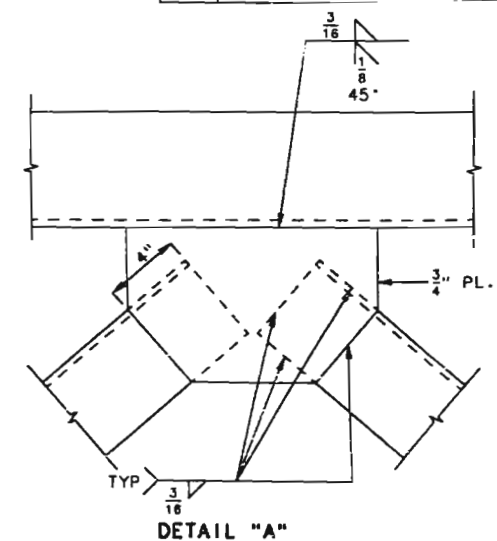
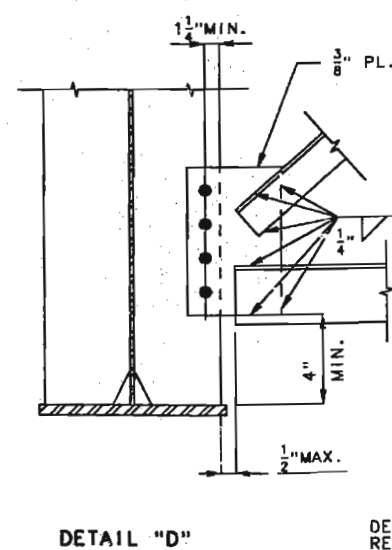
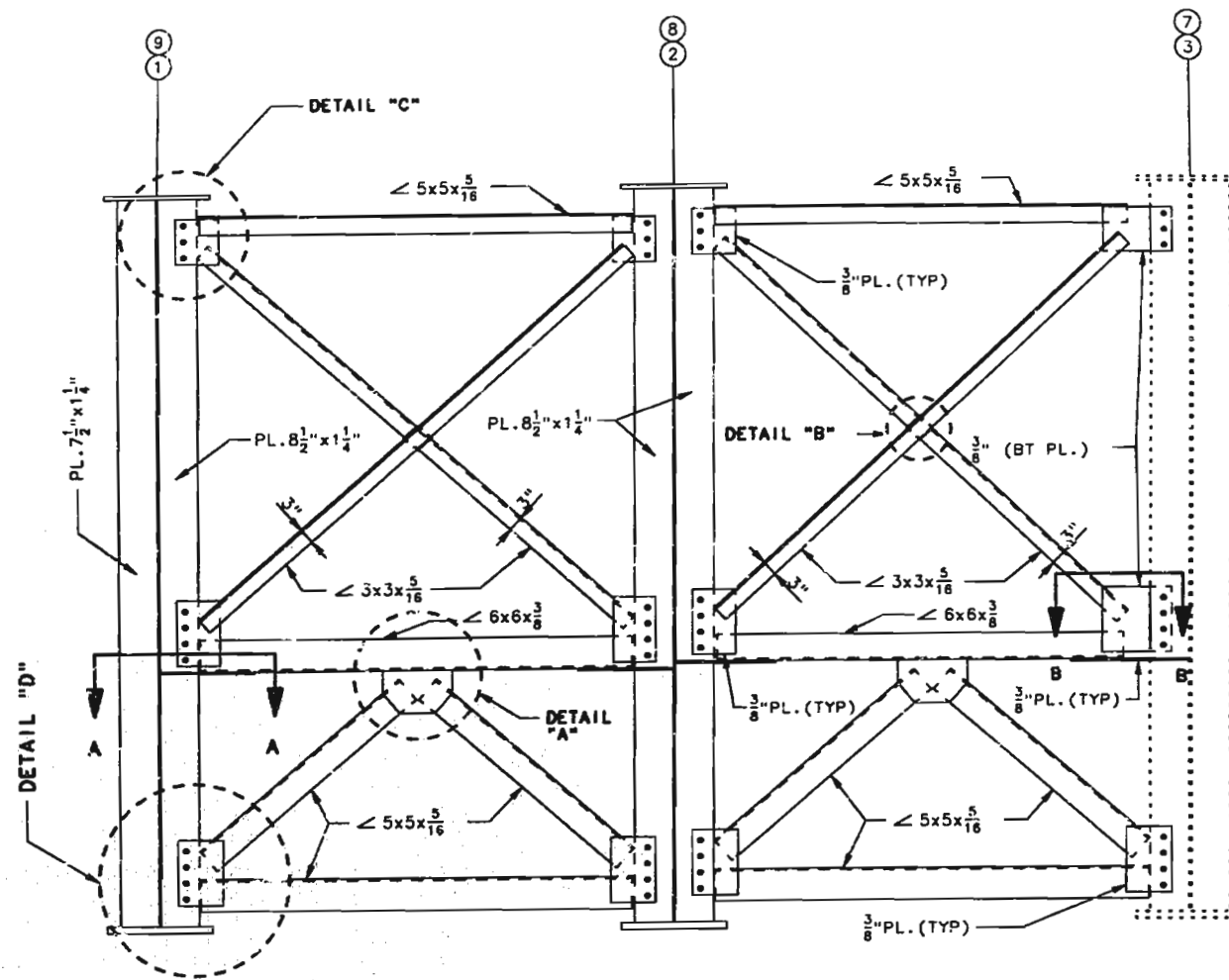
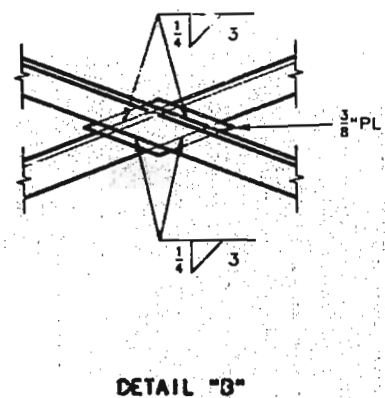
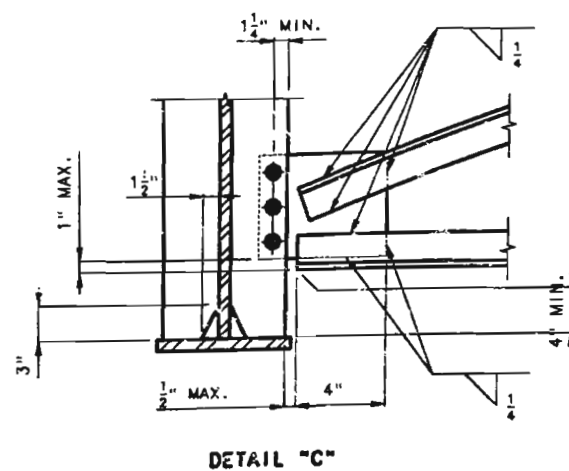
REVISED 12-8-1993

SHEET NO. 142 OF 238

ST. LOUIS-JEFFERSON

COUNTIES

A-609R



DETAILS OF CROSS FRAMES  
AT PIER #12, #13, & #14

STR. #3 (S.B.L.) AND STR. #7 (N.B.L.) SHOWN  
STR. #7 (S.B.L.) AND STR. #3 (N.B.L.) OPPOSITE AS SHOWN

DETAILED MAR. 1992  
CHECKED JULY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

DELETE THIS SHEET AND  
REPLACE WITH SHEET 143A  
REVISED 1-13-1994

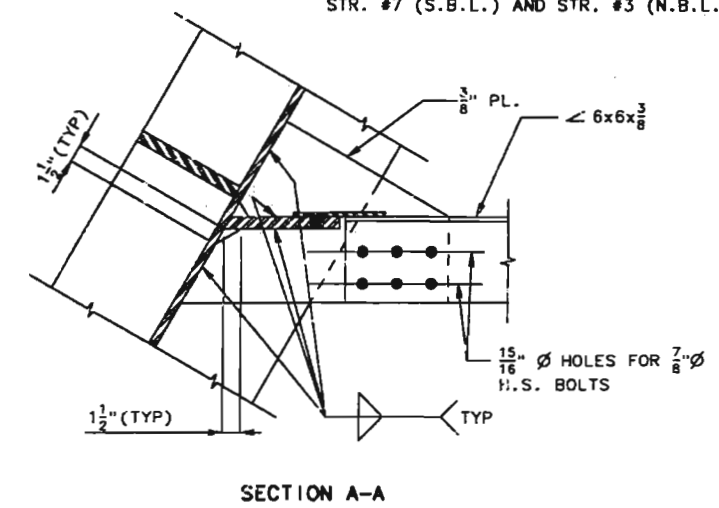
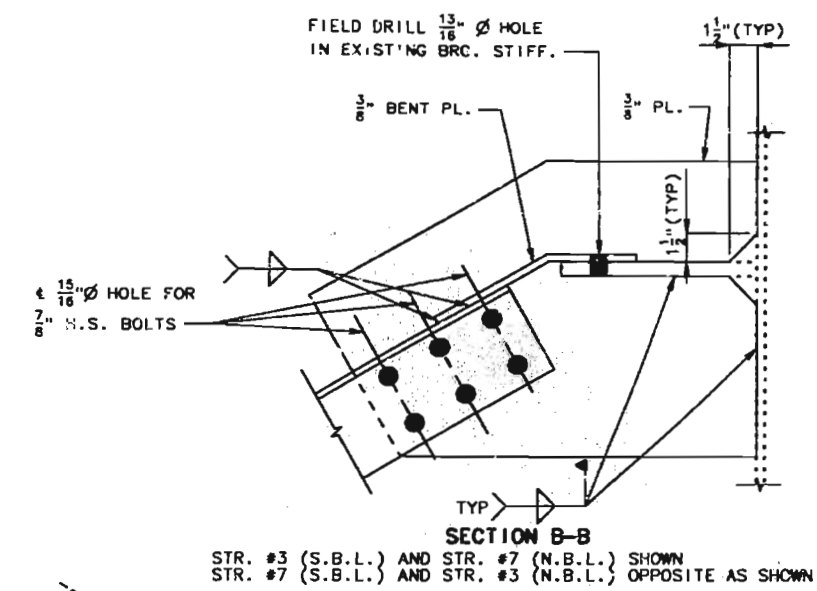
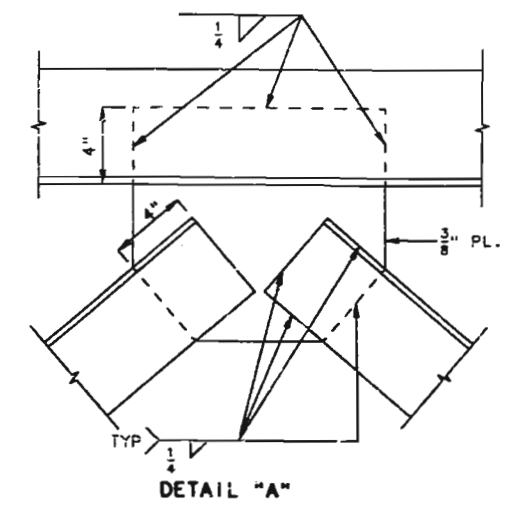
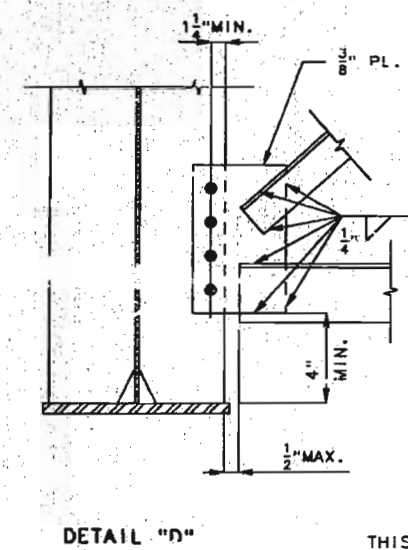
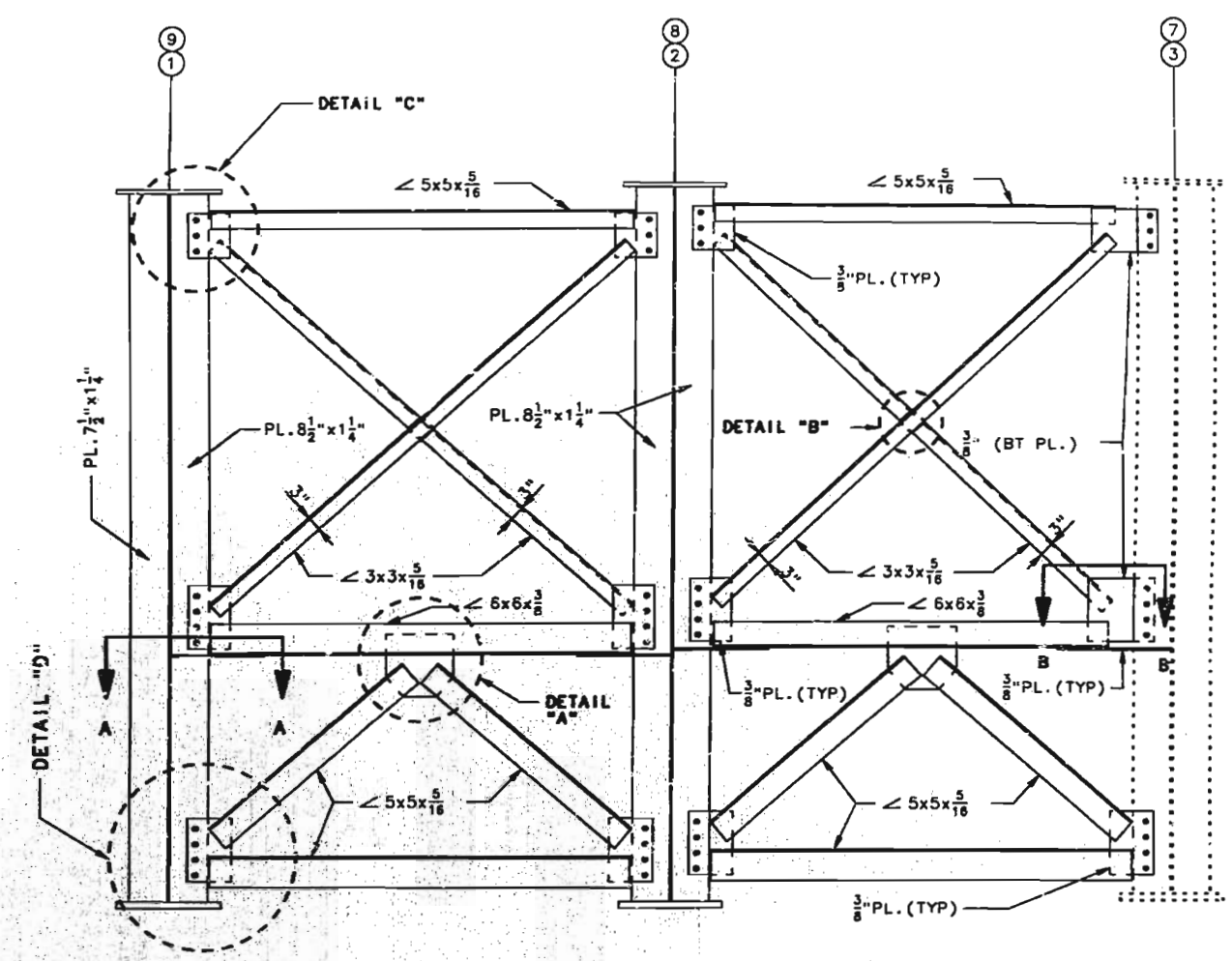
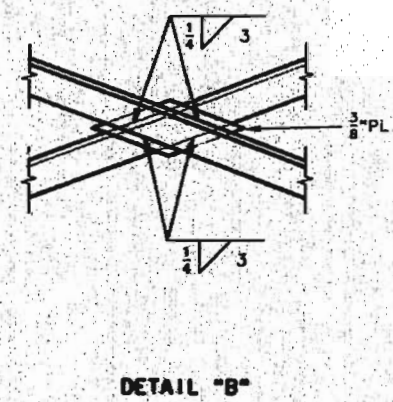
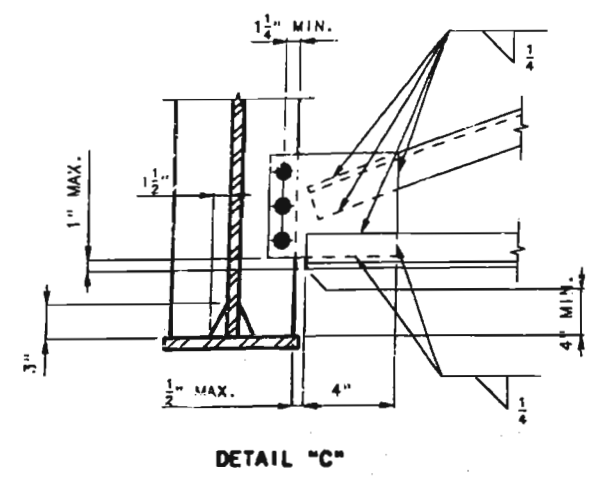
SHEET NO. 143 OF 238

ST. LOUIS-JEFFERSON

COUNTIES A-609R

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DETAILS OF CROSS FRAMES  
AT PIER #12, #13, & #14

THIS SHEET REPLACES SHEET 143  
REVISED 1-13-1994

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

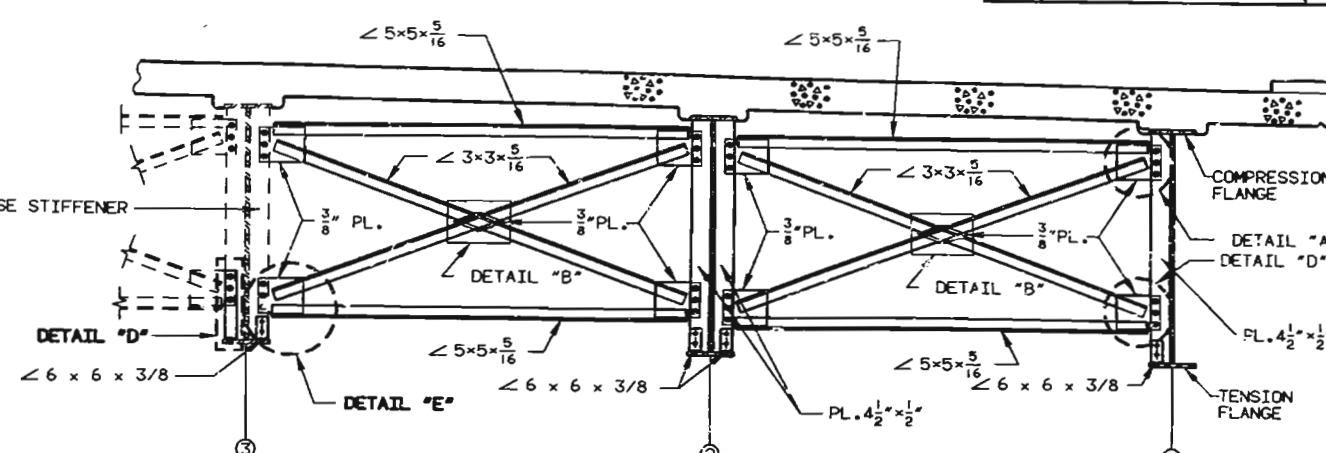
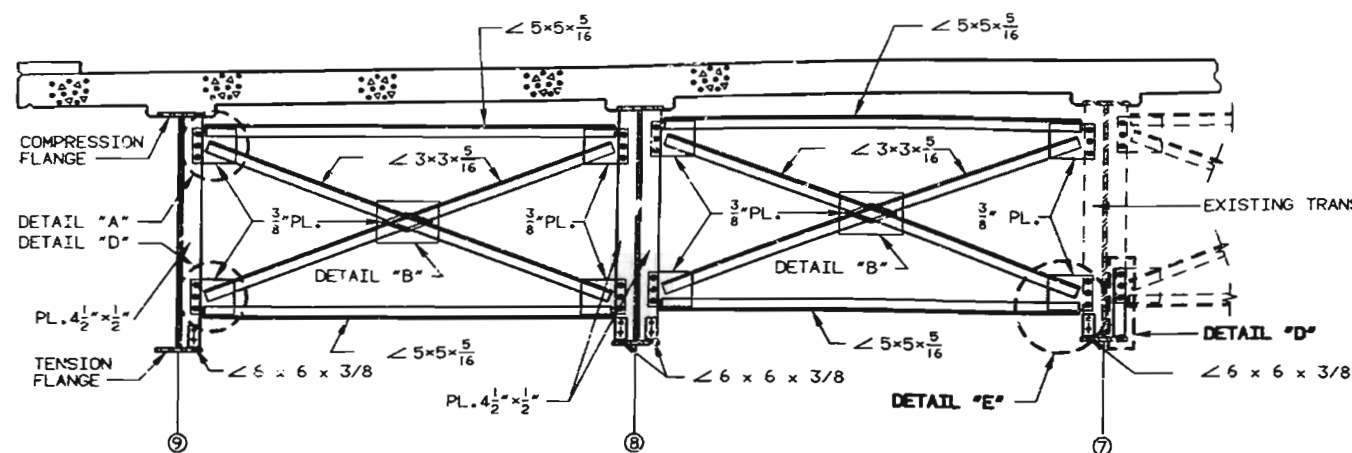
DETAILED MAR. 1992  
CHECKED JULY 1992

SHEET NO. 143A OF 238

ST. LOUIS-JEFFERSON

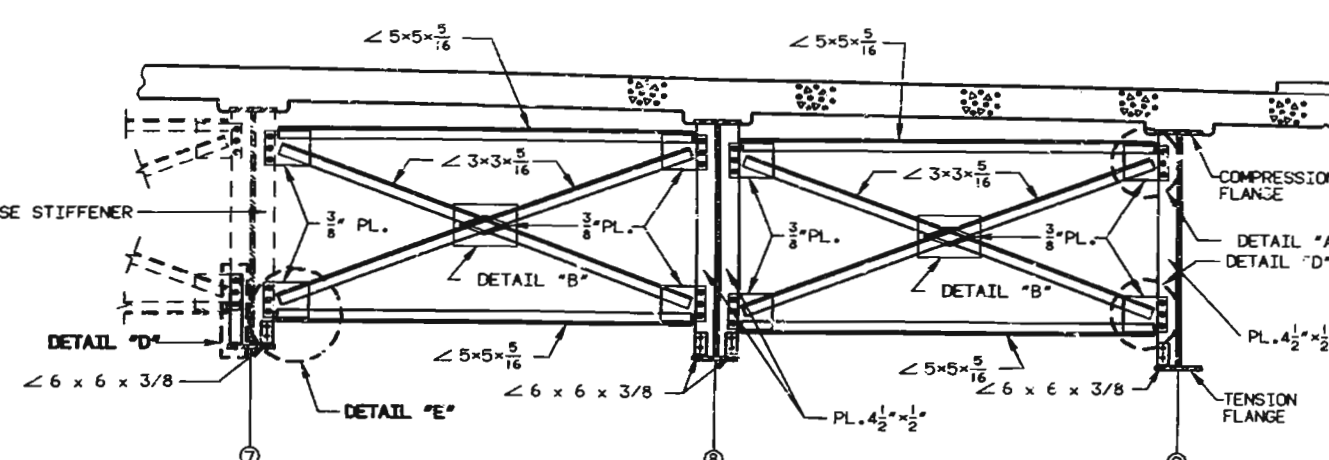
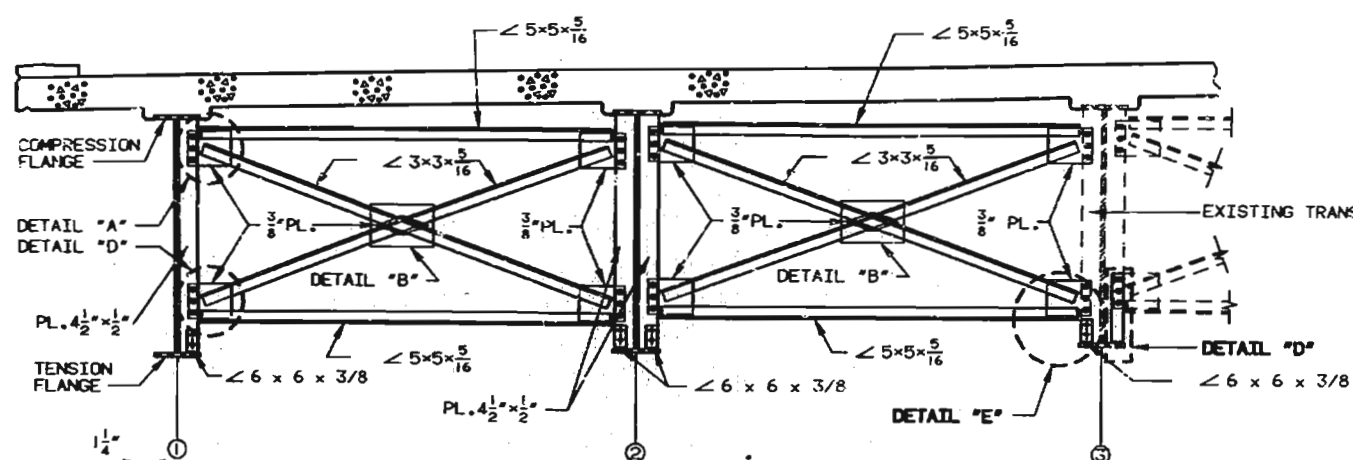
COUNTIES A-609R

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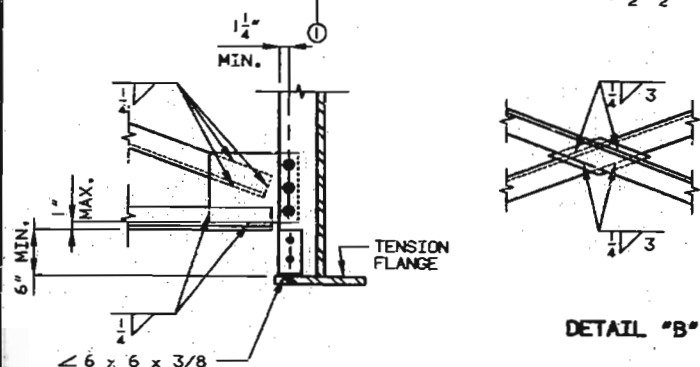


NOTE: THE TWO 3/4" Ø H.S. BOLTS THAT CONNECT THE 6 X 6 X 3/8 ANGLE TO THE TOP FLANGE SHALL BE PLACED SO THE NUT IS ON THE INSIDE OF FLANGE TOWARD THE WEB.

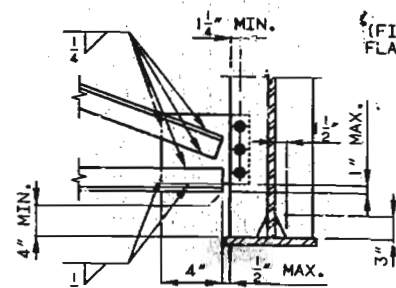
TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS (SPAN 15-16) (NORTHBOUND LANE)



TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS (SPAN 15-16) (SOUTHBOUND LANE)



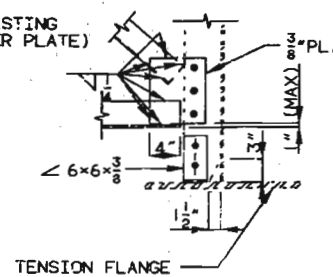
DETAIL "C"



DETAIL "A"

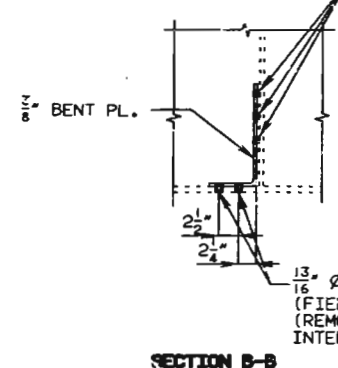
DETAIL "B"

(FIELD DRILL IN EXISTING FLANGE AND STIFFENER PLATE)

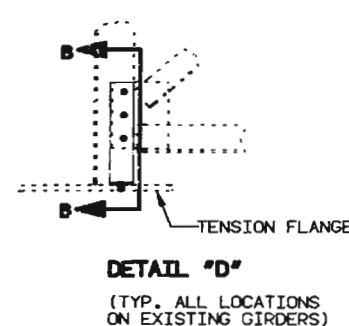


DETAIL "E"

13/16" Ø HOLES FOR 3/4" HIGH STRENGTH BOLTS  
(FIELD DRILL HOLES IN BENT PL. TO MATCH HOLES IN DIAPH. CONN. PL.)



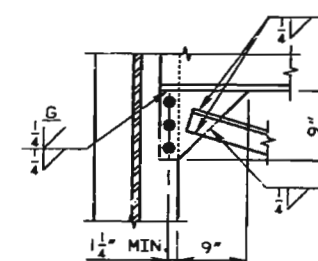
SECTION B-B



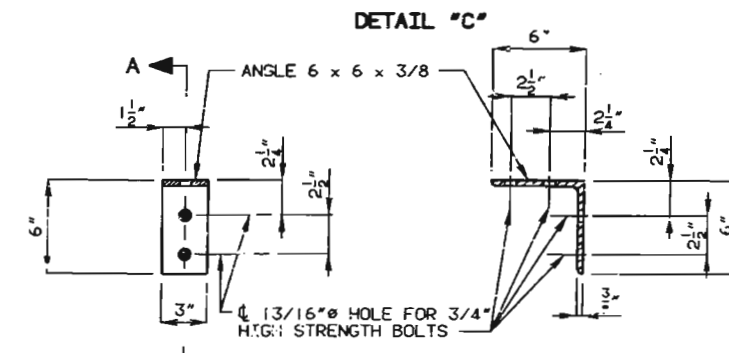
DETAIL "D"

(TYP. ALL LOCATIONS ON EXISTING GIRDERS)

13/16" Ø HOLES FOR 3/4" HIGH STRENGTH BOLTS  
(FIELD DRILL HOLES IN EXISTING FLANGE)  
(REMOVE SHEAR CONNECTOR CHANNEL IF IT INTERFERES WITH HOLES IN FLANGE)



DETAIL "C"



DETAIL OF FLANGE CONNECTION ANGLE

SECTION A-A

INT. DIAPH. DETAILS: SPAN (15-16)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

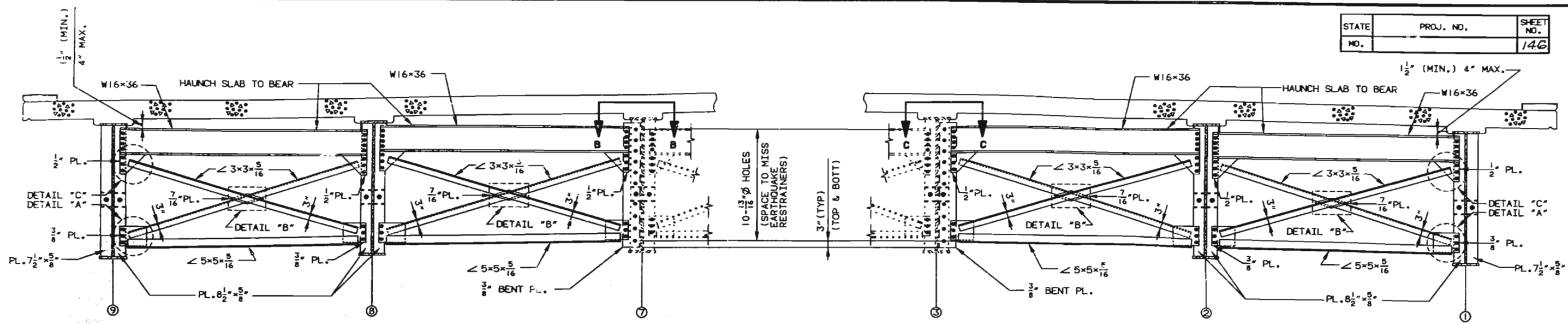
SHEET NO. 144 OF 238

ST. LOUIS-JEFFERSON COUNTIES

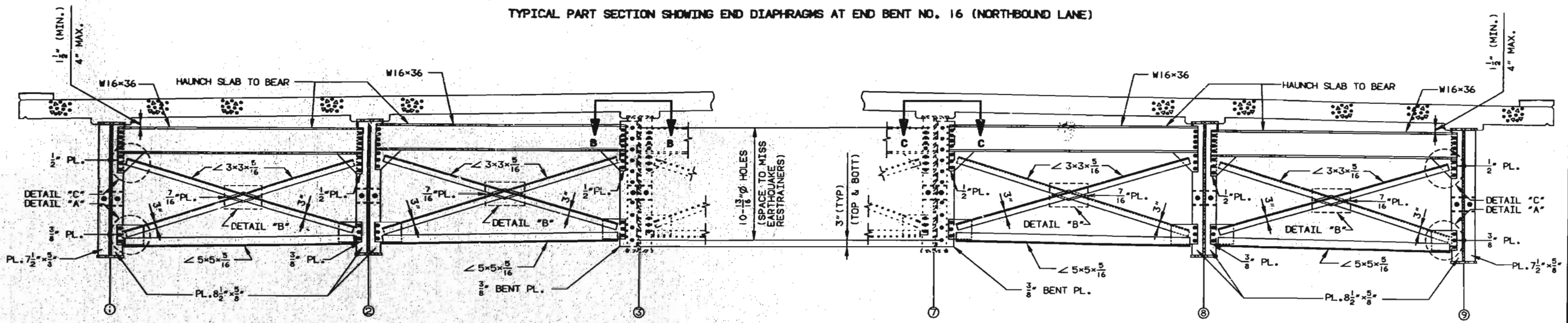
A-609R

DETAILED JULY 1992  
CHECKED JULY 1992

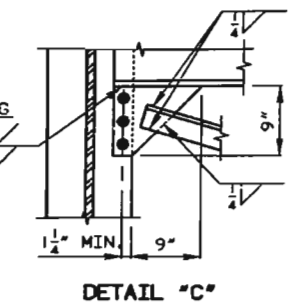
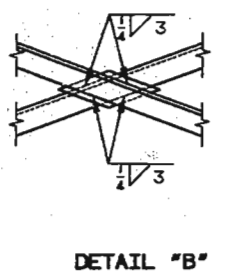
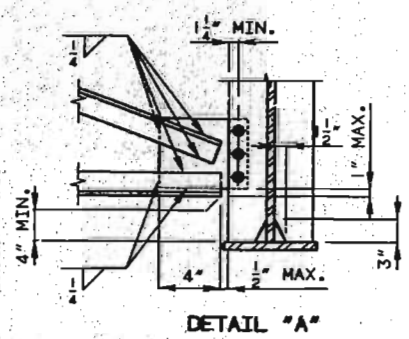
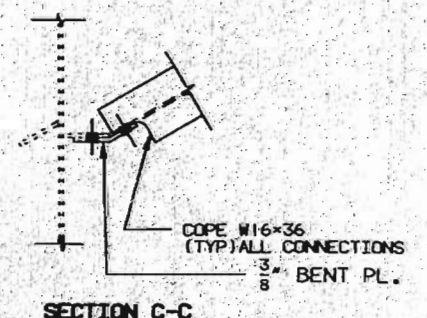
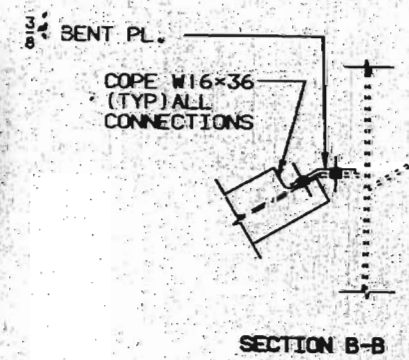
STATE	PROJ. NO.	SHEET NO.
MO.		146



TYPICAL PART SECTION SHOWING END DIAPHRAGMS AT END BENT NO. 16 (NORTHBOUND LANE)



TYPICAL PART SECTION SHOWING END DIAPHRAGMS AT END BENT NO. 16 (SOUTHBOUND LANE)



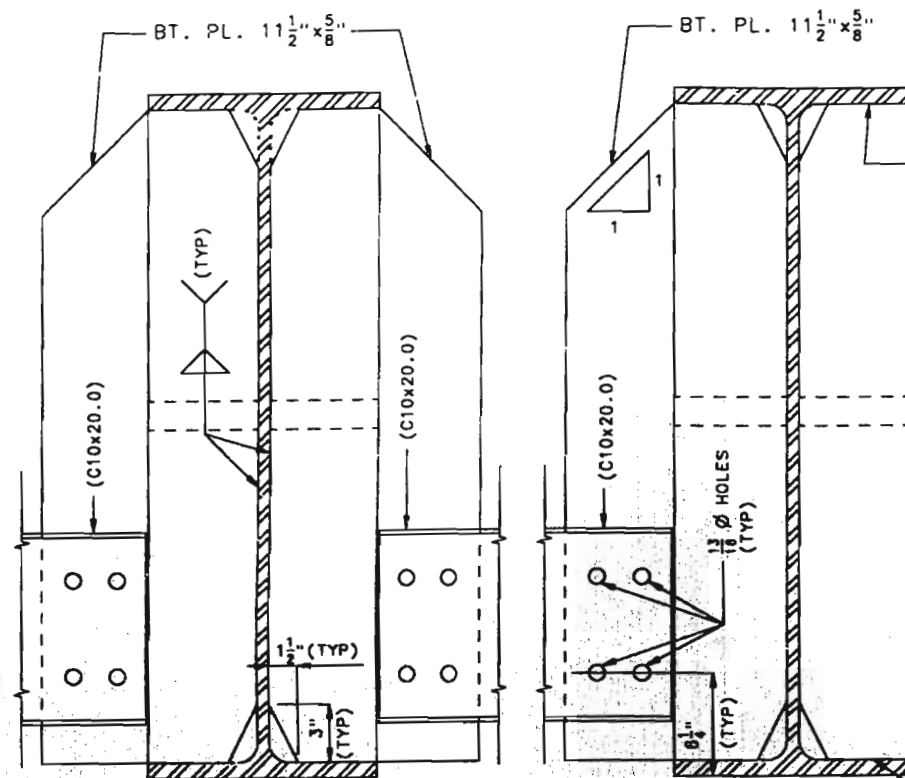
END DIAPH. DETAILS: BENT NO. 16

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

154

DETAILED APRIL 1993  
CHECKED APRIL 1993

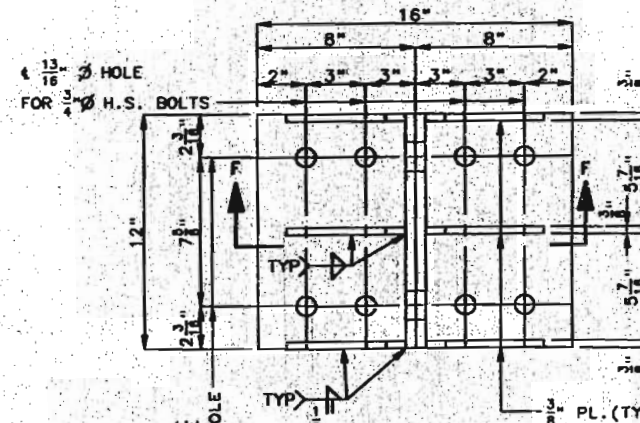




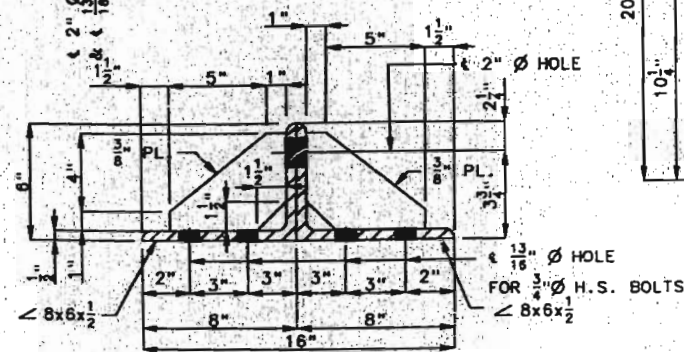
SECTION B-B  
(STR. #2 & #8)

SECTION B-B

STR. #1 (N.B.L.) AND STR. #9 (S.B.L.) (SHOWN)  
STR. #9 (N.B.L.) AND STR. #1 (S.B.L.) (OPPOSITE AS SHOWN)

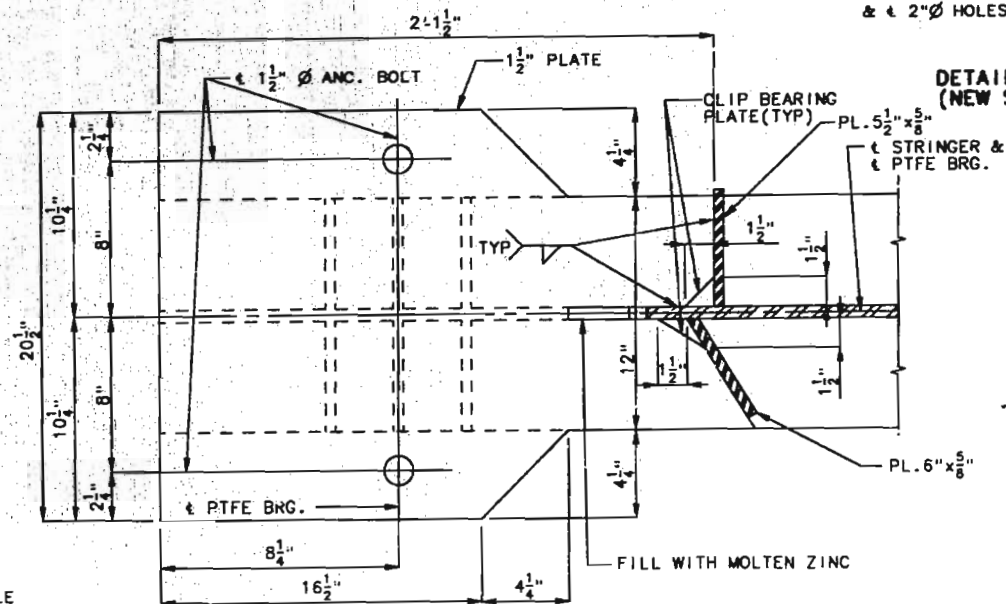


VIEW E-E



SECTION F-F

NOTE: FOR DETAILS OF SECTION C-C  
AND D-D, SEE SHEET NO. 147.



SECTION A-A (STR. #1 & #9)

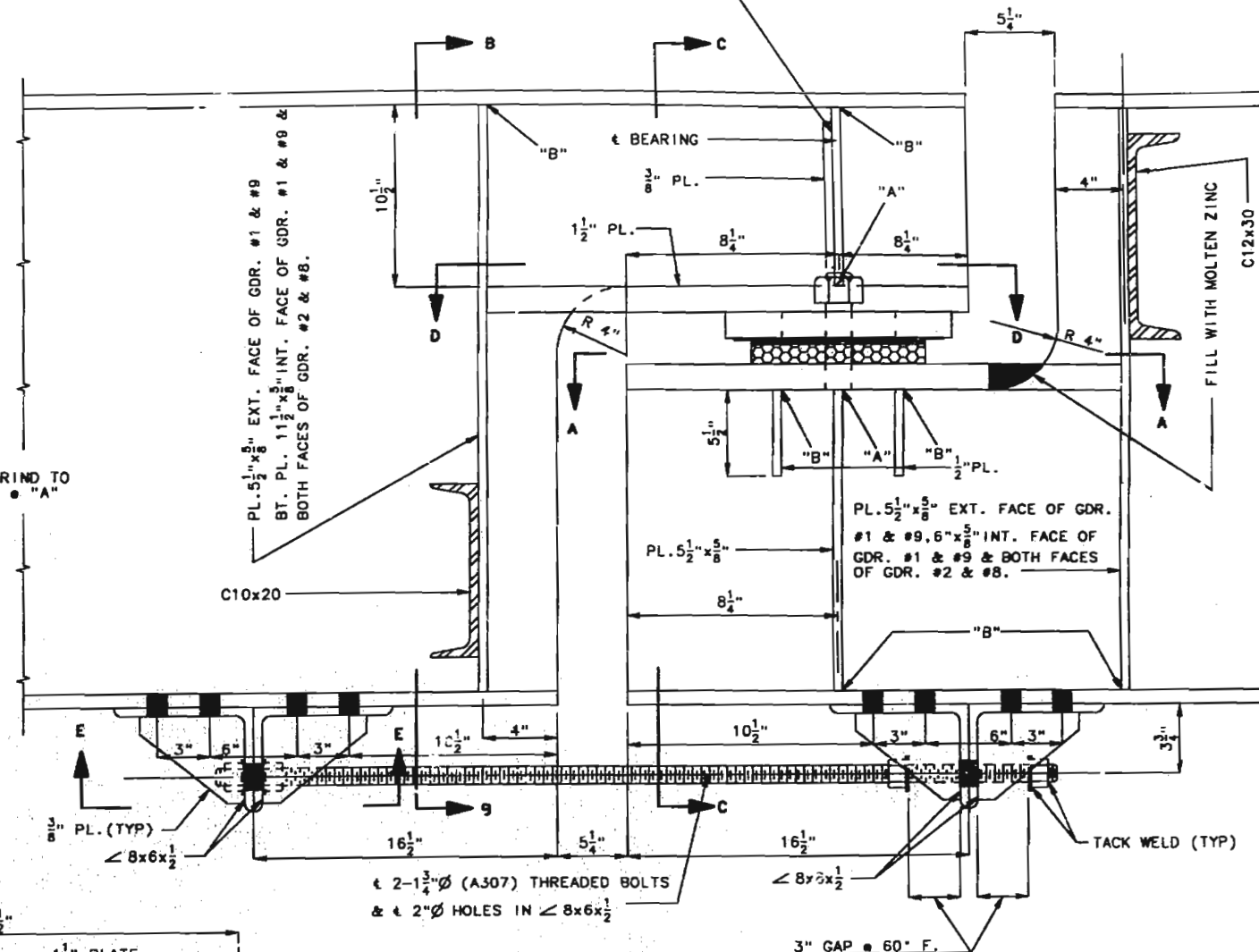
STR. #1 (S.B.L.) AND STR. #9 (N.B.L.) (SHOWN)  
STR. #9 (S.B.L.) AND STR. #1 (N.B.L.) (OPPOSITE AS SHOWN)

DETAILS SHOWING HINGE #4 & #7 CONNECTION  
STRINGERS NO. 1, 2, 8, & 9.

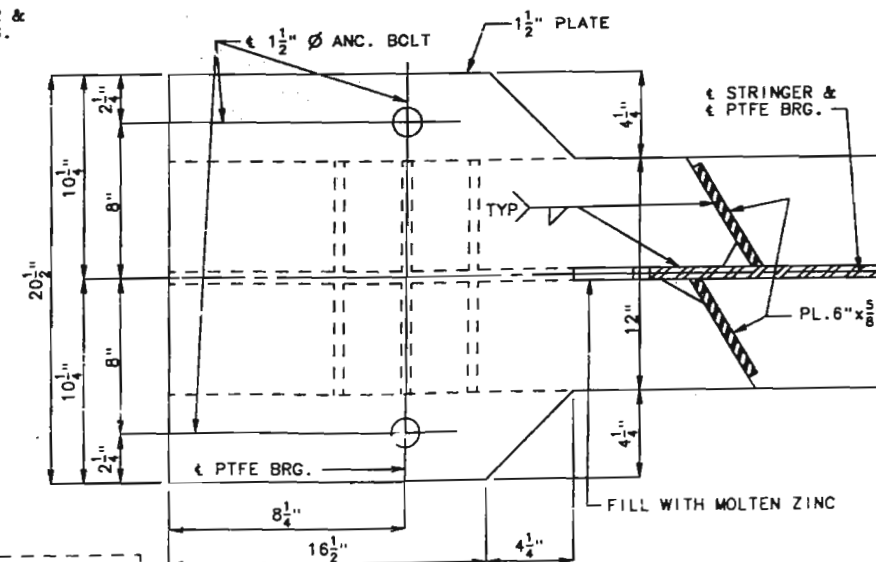
REVIS 12-8-1993 SHEET NO. 146 OF 238

PL. 5 1/2\"/>

STATE PROJ. NO. SHEET NO.  
MO.



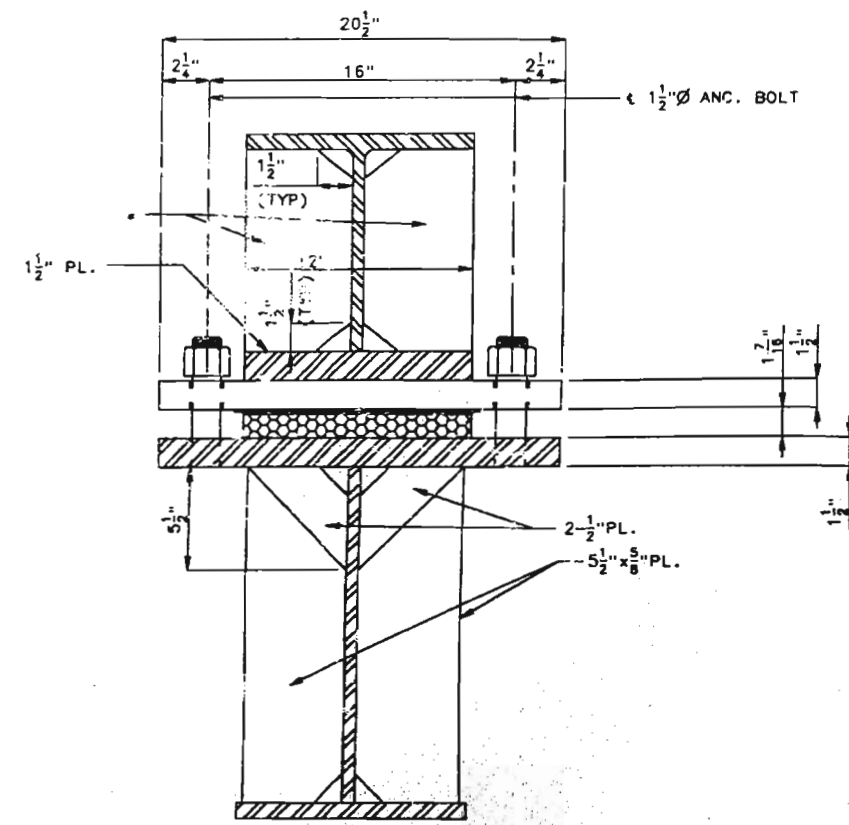
DETAILS SHOWING HINGE #4 & #7 CONNECTION  
(NEW STR. #1, #2, #8 & #9)



SECTION A-A (STR. #2 & #8)



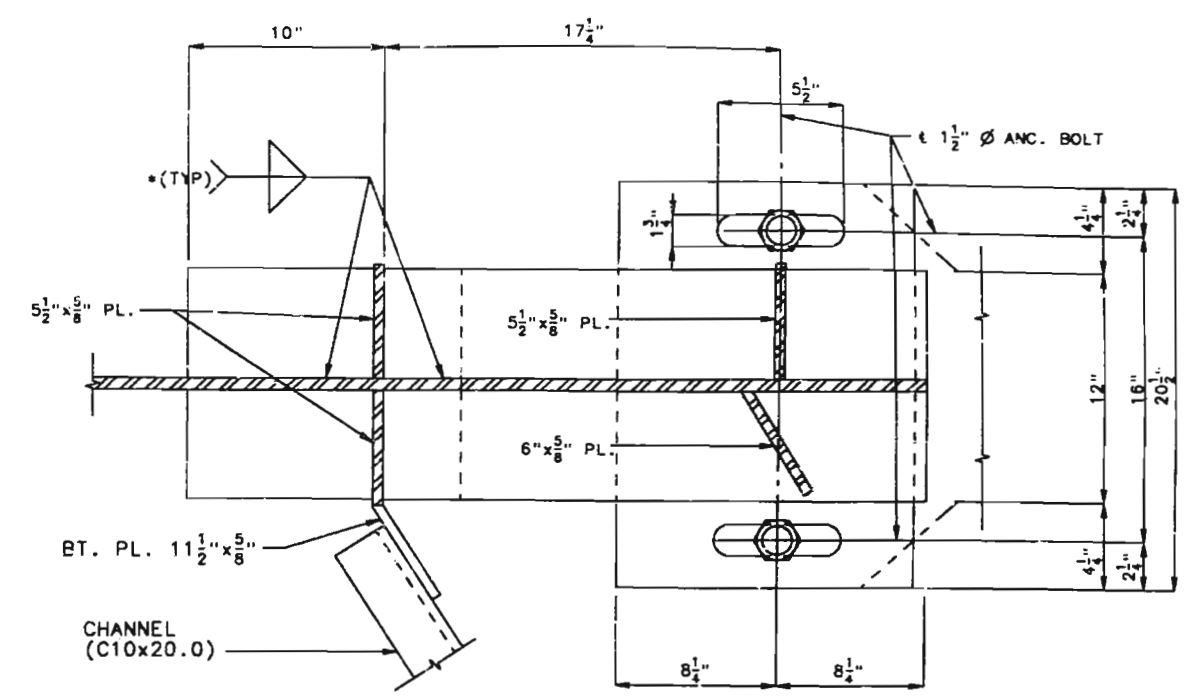
STATE	PROJ. NO.	SHEET NO.
MO.		



SECTION C-C

• PL. 5 1/2" x 5/8" EXT. FACE OF GDR. #1 & #9  
 PL. 6" x 5/8" INT. FACE OF GDR. #1 & #9 &  
 BOTH FACES OF GDR. #2 & #8.

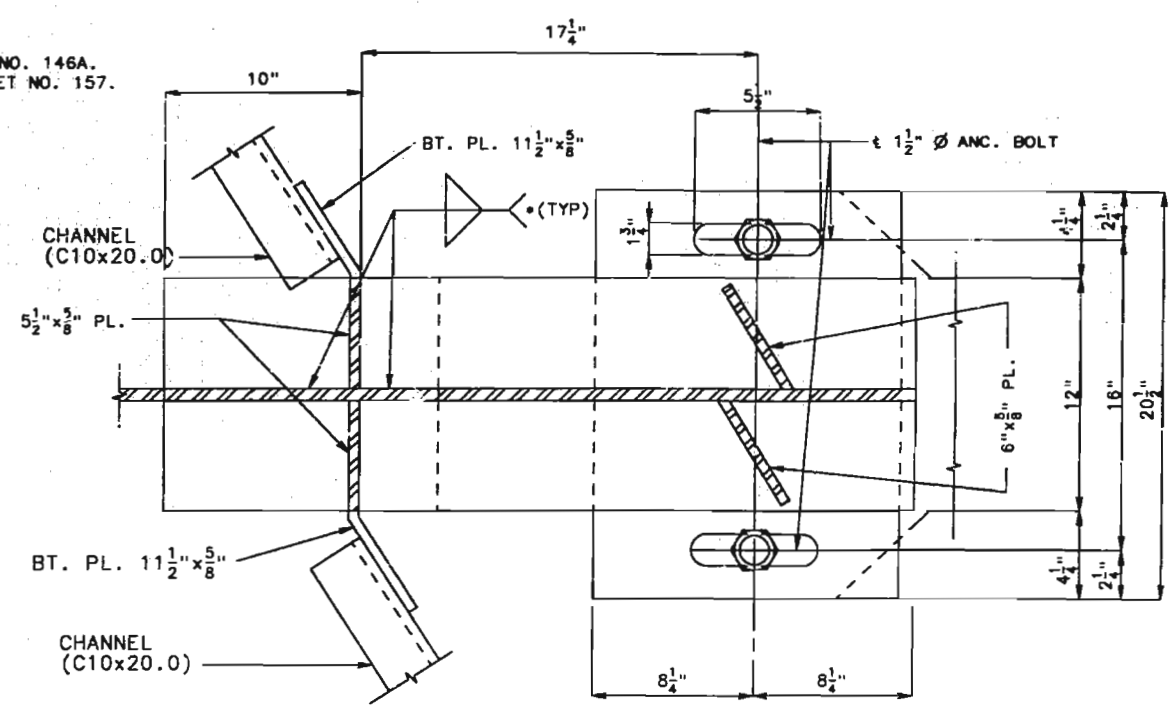
NOTE: FOR LOCATION OF SECTION C-C AND D-D SEE SHEET NO. 146A.  
 FOR DETAILS OF TYPE "N" PTFE BEARINGS, SEE SHEET NO. 157.



SECTION D-D

STR. #1 (S.B.L.) AND STR. #9 (N.B.L.) SHOWN  
 STR. #9 (S.B.L.) AND STR. #1 (N.B.L.) OPPOSITE AS SHOWN

• STOP WELD 1/2" FROM CORNER OF STIFFENER AND WEB CORNER.



SECTION D-D  
 (STR. #2 & #8)

DETAILS OF HINGE #4 & #7 CONNECTION  
 STRINGERS NO. 1, 2, 8, & 9.

DELETE SHEET NO. 147 &  
 REPLACE WITH SHEET NO. 147A

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS. REVISED 12-8-1993

SHEET NO. 147A OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609R

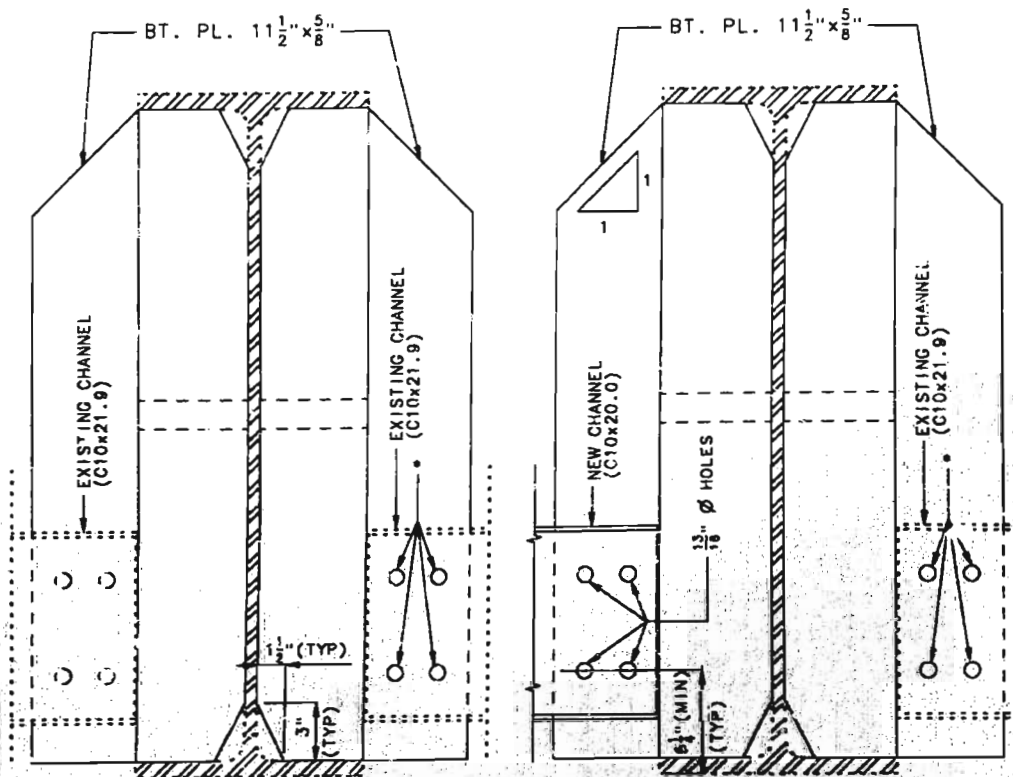
157

DETAILED FEB. 1992  
 CHECKED JUNE 1992



NOTE: PAYMENT FOR FABRICATION AND INSTALLATION OF BENT PLATES SHALL BE INCLUDED IN PAYMENT FOR FABRICATED STRUCTURAL CARBON STEEL (I-BEAM).

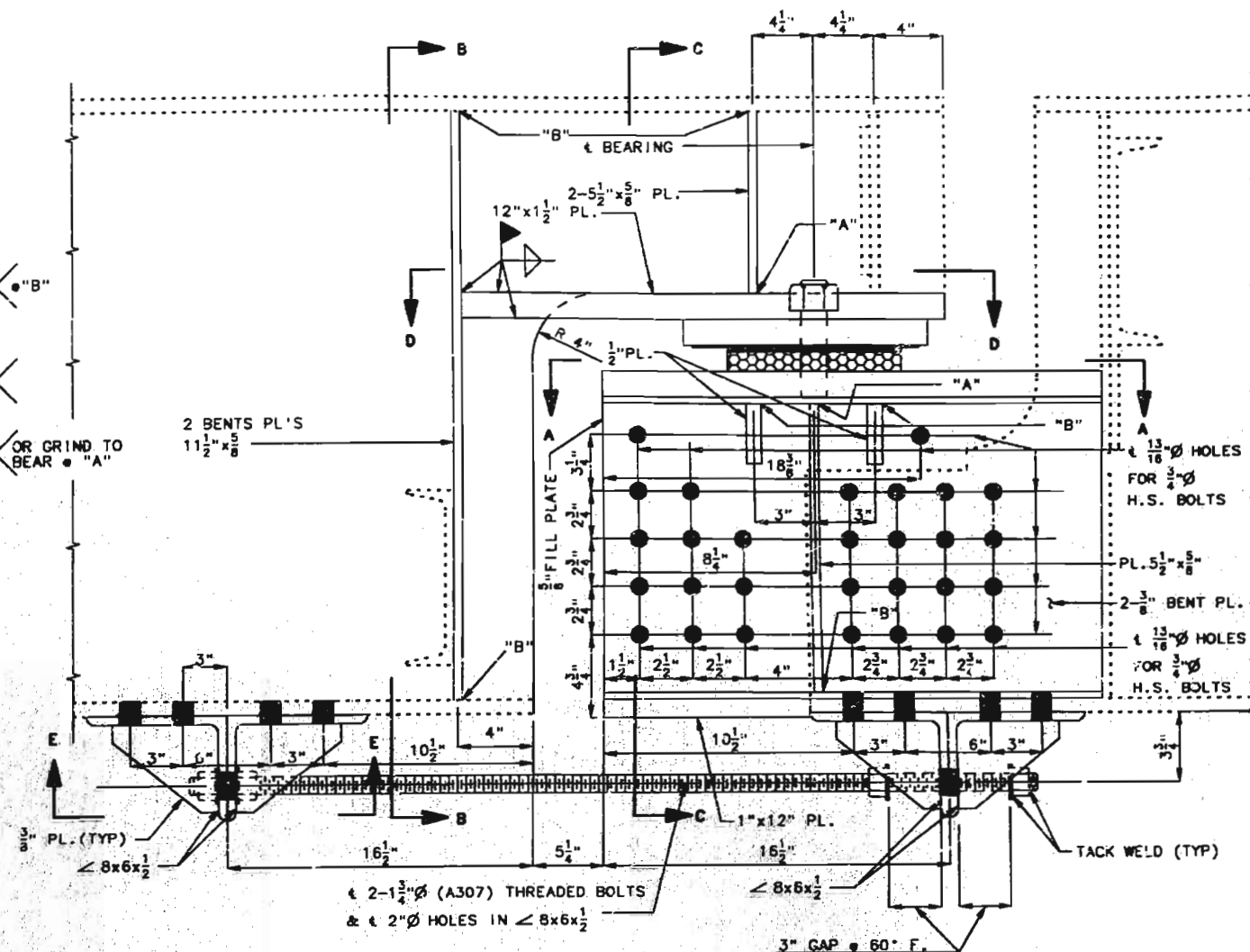
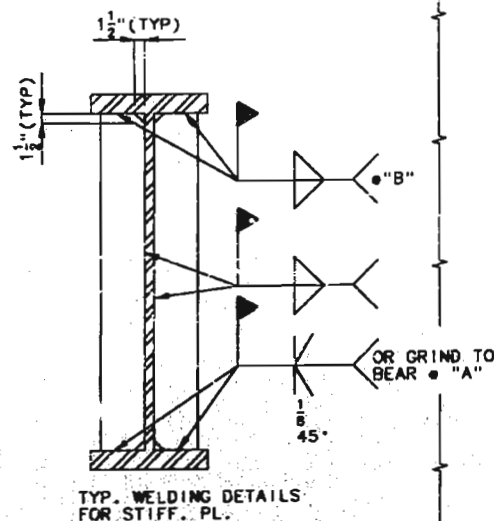
STATE	PROJ. NO.	SHEET NO.
MO.		



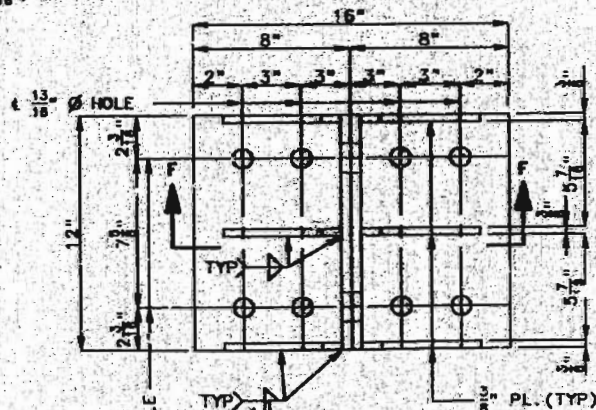
SECTION B-B  
(EXISTING STR. #4, #5, & #6)

SECTION B-B  
EXISTING STR. #3(S.B.L.) AND EXISTING STR. #7 (N.B.L.) SHOWN  
EXISTING STR. #7(S.B.L.) AND EXISTING STR. #3 (N.B.L.) OPPOSITE AS SHOWN

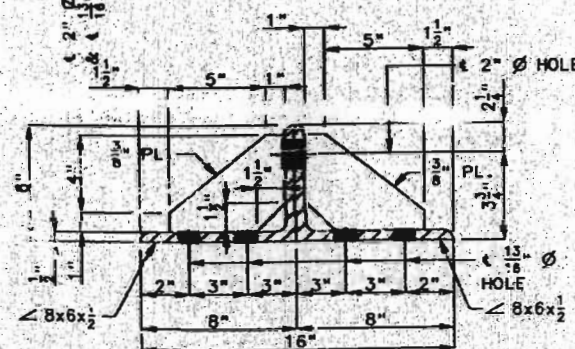
USE HOLES IN EXISTING CHANNEL AS TEMPLATE FOR NEW HOLES IN NEW BENT PL. (13/16\"/>



DETAILS SHOWING HINGE #4 & #7 CONNECTION  
(EXISTING STR. #3 THRU #7)

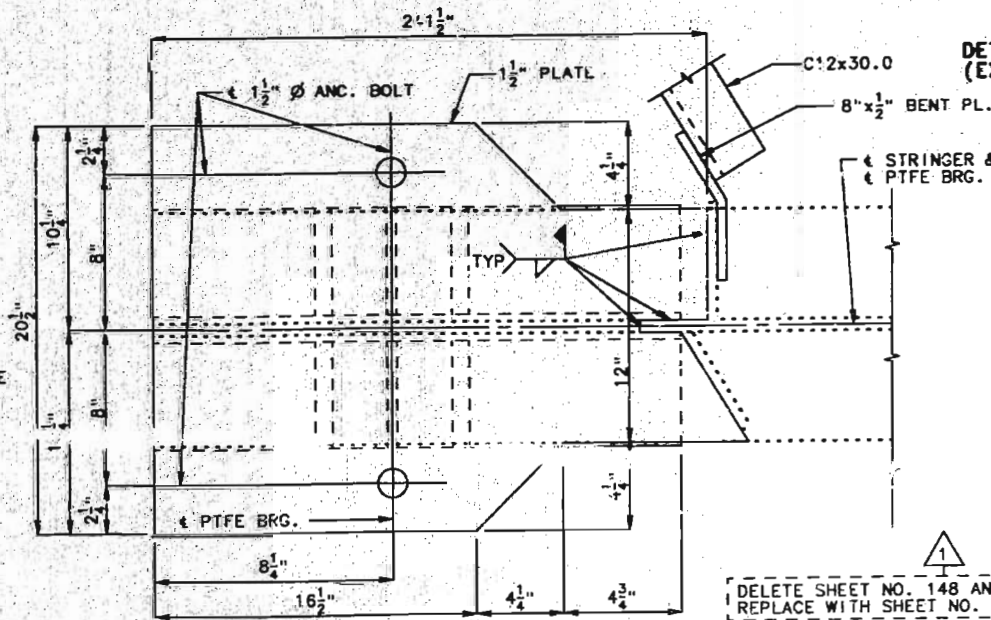


SECTION E-E



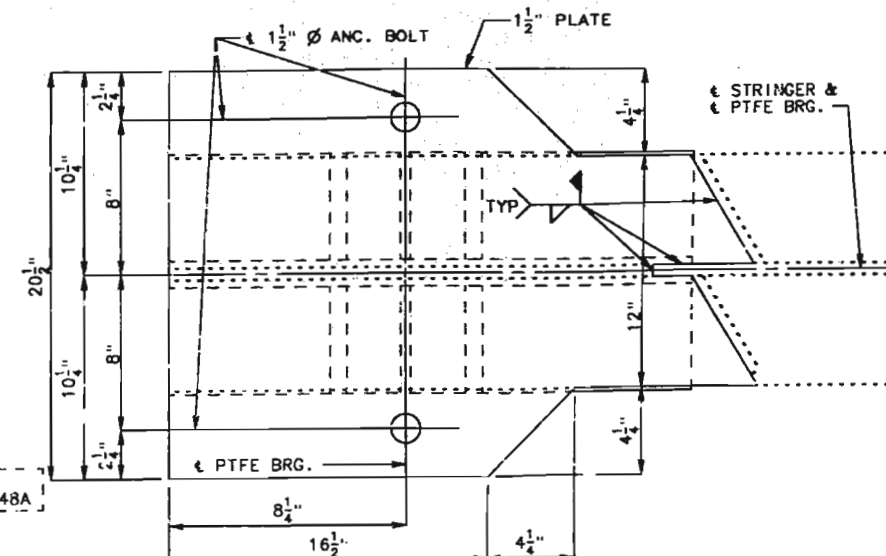
SECTION F-F

NOTE: FOR DETAILS OF SECTION C-C AND D-D, SEE SHEET NO. 149.



SECTION A-A

EXISTING STR. #3(S.B.L.) AND EXISTING STR. #7 (N.B.L.) SHOWN  
EXISTING STR. #7(S.B.L.) AND EXISTING STR. #3 (N.B.L.) OPPOSITE AS SHOWN  
DETAILS SHOWING HINGE #4 & #7 CONNECTION  
STRINGERS NO. 3, 4, 5, 6, & 7



SECTION A-A (EXISTING STR. #4, #5, & #6)

DELETE SHEET NO. 148 AND REPLACE WITH SHEET NO. 148A

DETAILED FEB. 1992  
CHECKED JUNE 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

REvised 12-8-1993

SHEET NO. 148 OF 238

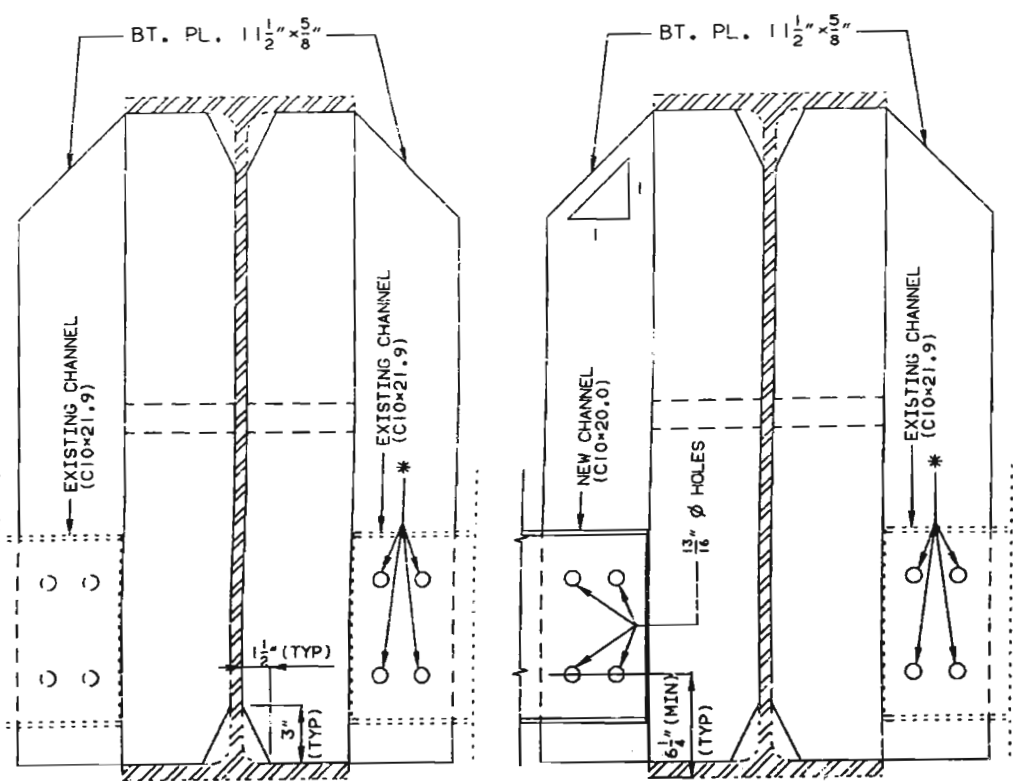
ST. LOUIS-JEFFERSON

COUNTIES

A-609R

158

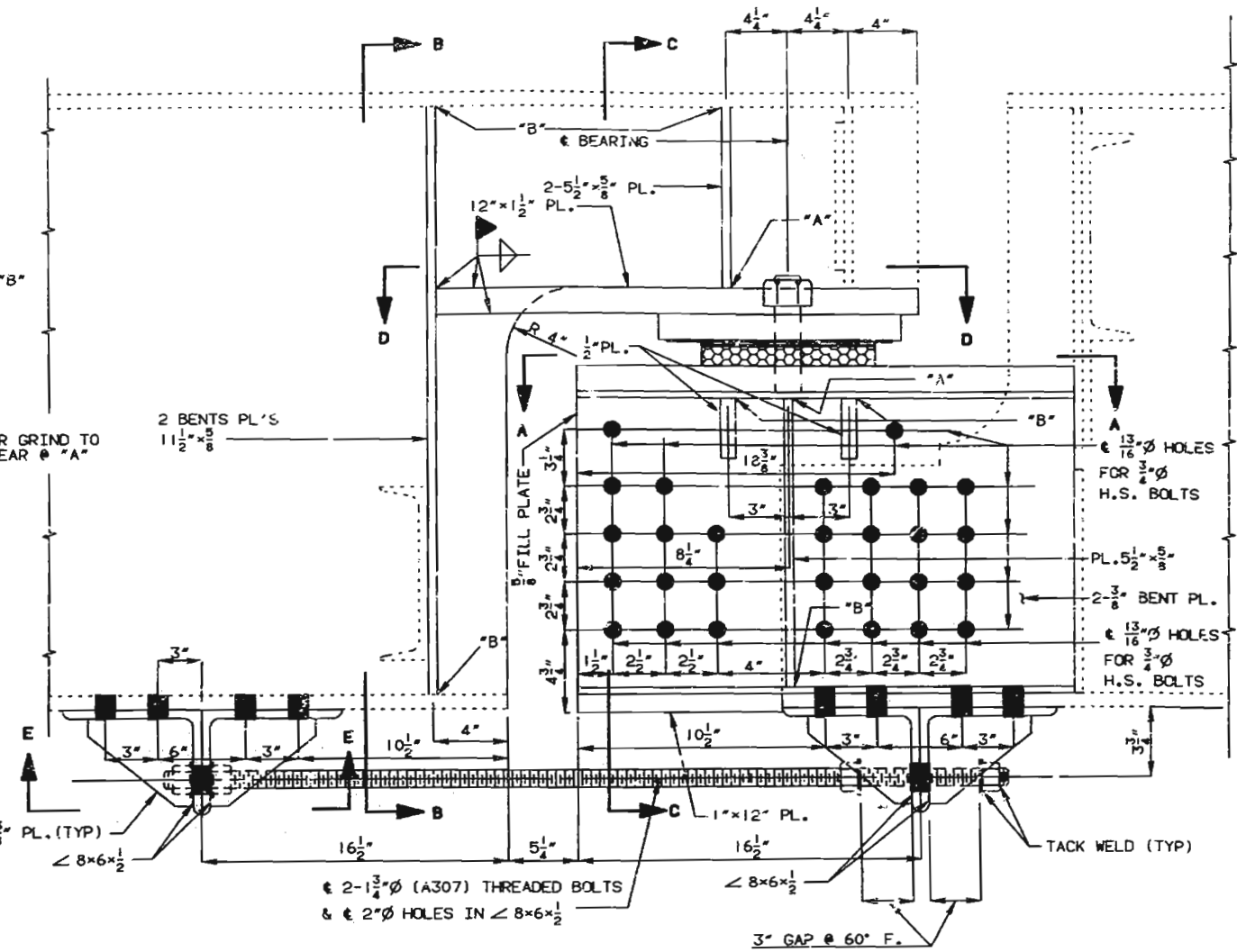
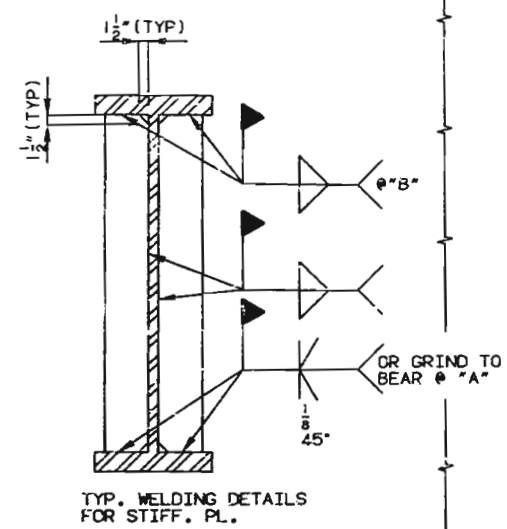
NOTE: PAYMENT FOR FABRICATION AND INSTALLATION OF BENT PLATES SHALL BE INCLUDED IN PAYMENT FOR FABRICATED STRUCTURAL CARBON STEEL (I-BEAM).



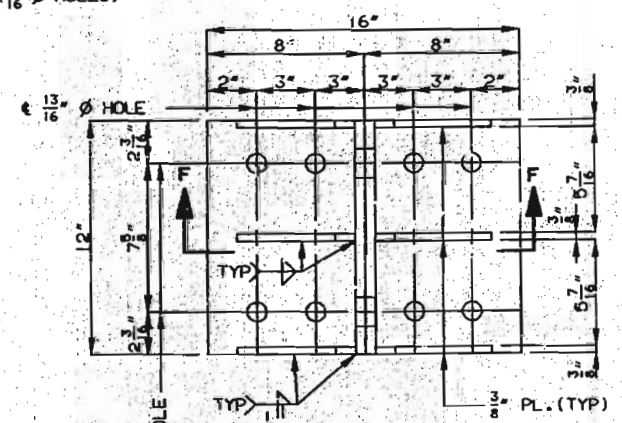
SECTION B-B  
(EXISTING STR. #4, #5, & #6)

SECTION B-B  
EXISTING STR. #3(S.B.L.) AND EXISTING STR. #7 (N.B.L.) SHOWN  
EXISTING STR. #7(S.B.L.) AND EXISTING STR. #3 (N.B.L.) OPPOSITE AS SHOWN

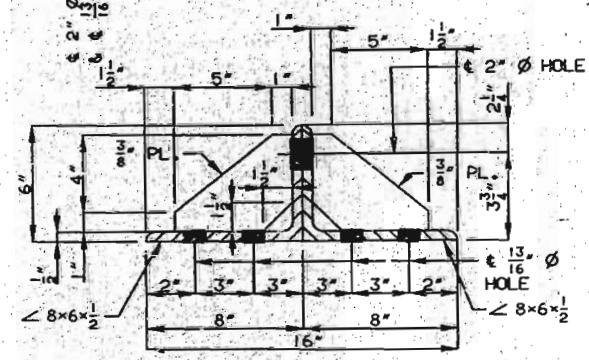
\* USE HOLES IN EXISTING CHANNEL AS TEMPLATE FOR NEW HOLES IN NEW BENT PL. (13/16\"/>



DETAILS SHOWING HINGE #4 & #7 CONNECTION  
(EXISTING STR. #3 THRU #7)

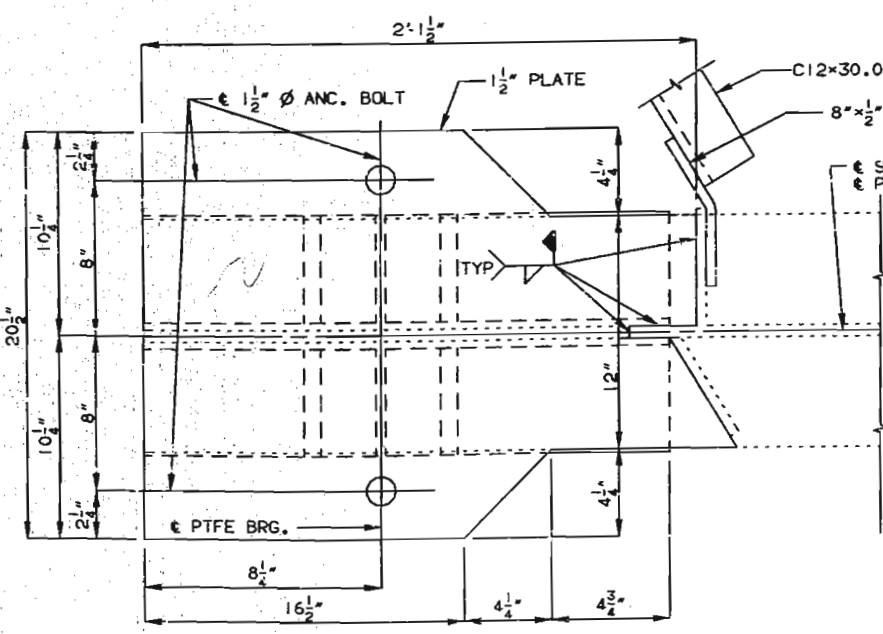


SECTION E-E

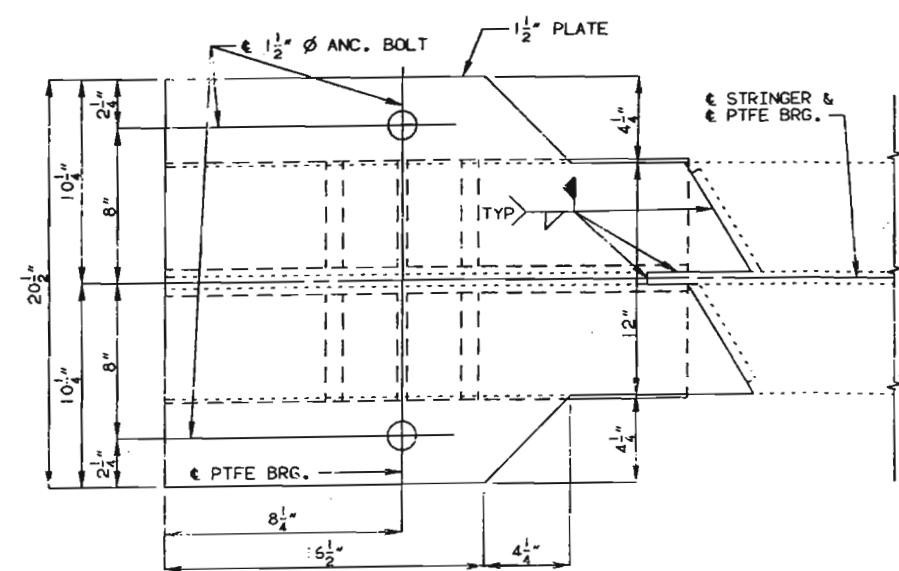


SECTION F-F

NOTE: FOR DETAILS OF SECTION C-C AND D-D, SEE SHEET NO. 149.



SECTION A-A  
EXISTING STR. #3(S.B.L.) AND EXISTING STR. #7 (N.B.L.) SHOWN  
EXISTING STR. #7(S.B.L.) AND EXISTING STR. #3 (N.B.L.) OPPOSITE AS SHOWN  
DETAILS SHOWING HINGE #4 & #7 CONNECTION  
STRINGERS NO. 3, 4, 5, 6, & 7



SECTION A-A (EXISTING STR. #4, #5, & #6)

159

DETAILED FEB. 1992  
CHECKED JUNE 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 148 OF 238

ST. LOUIS-JEFFERSON

COUNTIES A-609R



\* STOP WELD  $\frac{1}{2}$ " FROM WEB STIFFENER PLATE CORNERS.      \*\* STOP WELD  $\frac{1}{2}$ " FROM EDGE OF WEB PLATE.

The image contains two cross-sectional diagrams of a bridge structure, labeled SECTION B-B and SECTION B-B.

**SECTION B-B (Left):** This diagram shows a cross-section of a bridge with a central vertical channel. The top is labeled "BT. PL.  $5\frac{1}{2}'' \times \frac{5}{8}''$ ". The bottom is labeled "BT. PL.  $11\frac{1}{2}'' \times \frac{5}{8}''$ ". The central channel is labeled "EXISTING CHANNEL (C10x21.9)". The bottom of the central channel is labeled "1\frac{1}{2}'' (TYP)" and "3'' (TYP)".

**SECTION B-B (Right):** This diagram shows a cross-section of a bridge with a central vertical channel. The top is labeled "BT. PL.  $5\frac{1}{2}'' \times \frac{5}{8}''$ ". The bottom is labeled "BT. PL.  $11\frac{1}{2}'' \times \frac{5}{8}''$ ". The central channel is labeled "EXISTING CHANNEL (C10x21.9)". A new channel is labeled "NEW CHANNEL (C10x20.0)". The bottom of the new channel is labeled "6\frac{1}{4}'' (MIN) (TYP)". The bottom of the existing channel is labeled "1\frac{1}{2}'' (TYP)". The bottom of the existing channel is labeled "1\frac{1}{2}'' (TYP)".

[illegible]

SECTION F-F

20 1/2"

24 1/2"

10 1/2"

8"

8"

2 1/4"

2 1/4"

16 1/2"

8 1/4"

4 1/4"

4 3/4"

5"

1 1/2" PLATE

1 1/2" Ø ANC. BOLT

C12x30.0

8" x 1/2" BENT PL.

STRINGER & PTFE BRG.

PTFE BRG.

TYP.

1

DELETE SHEET NO. 148 AND

SECTION A-A

DELETE SHEET NO. 148 AND  
REPLACE WITH SHEET NO. 148A

^ REVISED 12-8-1993

This technical drawing illustrates the construction of a mechanical assembly, likely a bearing support or a structural joint. It includes a cross-sectional view at the top and a detailed top view below.

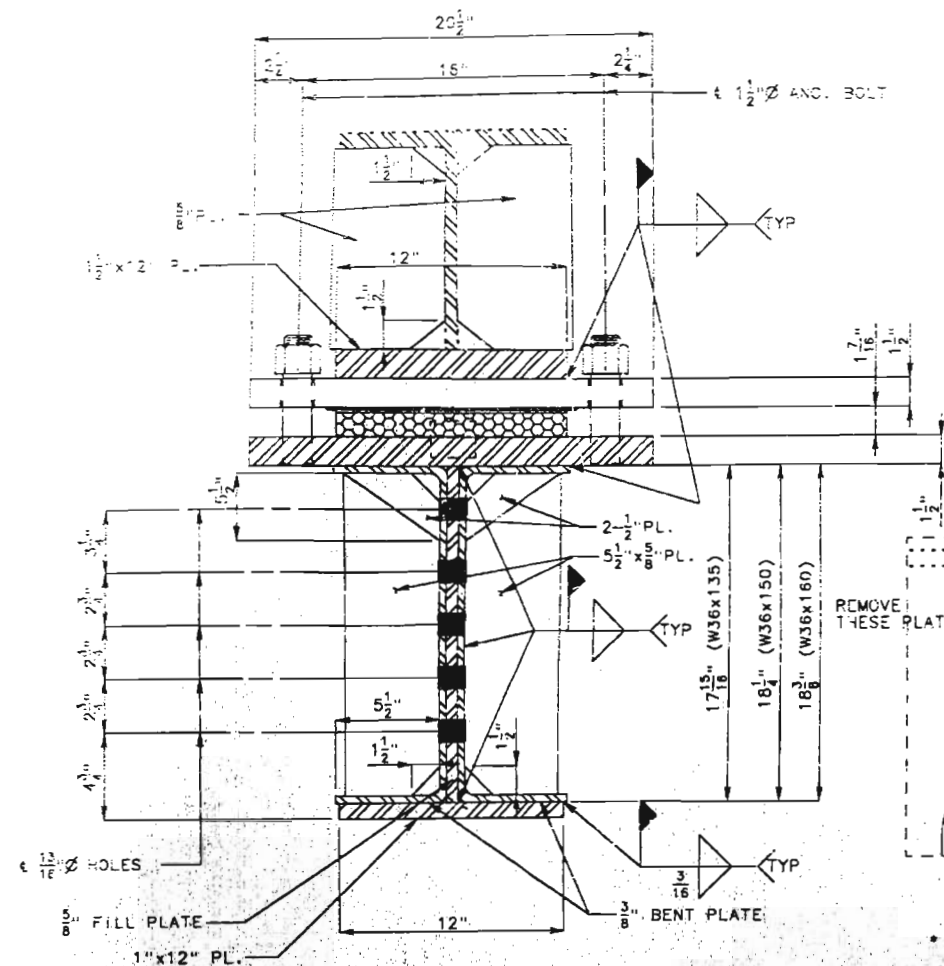
**Key Components and Dimensions:**

- Top View (Cross-section):** Shows a horizontal plate labeled "A" with a thickness of  $12 \times 1\frac{1}{2}$  PL. A vertical plate labeled "B" is shown with a thickness of  $2-5\frac{1}{2} \times \frac{5}{8}$  PL. A bearing is indicated between the plates. Dimensions include  $4\frac{1}{2}$ " and  $4$ ". A note specifies: "ADD A  $3 \times 3 \times \frac{3}{8}$ " FILL PL. ADD FILL PL. AROUND BENT PL. WITH AN APPROVED 25 YR. SILICONE CAULK COMPATIBLE WITH PAINT."
- Bottom View (Top View):** Shows a large rectangular plate labeled "A" with a grid of  $\frac{1}{2}$ " PL. holes. The grid is  $18\frac{3}{8}$ " wide and  $9\frac{1}{4}$ " high. The plate is supported by a base plate labeled "B" with a thickness of  $2-3\frac{3}{8}$  BENT PL. The base plate has  $\frac{13}{16}$ "  $\phi$  HOLES FOR  $\frac{3}{4}$ " H.S. BOLTS. The main plate "A" has  $\frac{13}{16}$ "  $\phi$  HOLES FOR  $\frac{3}{4}$ " H.S. BOLTS. Dimensions include  $11\frac{1}{2}$ ",  $10\frac{1}{4}$ ",  $10\frac{1}{2}$ ",  $16\frac{1}{2}$ ",  $3$ ",  $6$ ",  $3$ ",  $11\frac{1}{2}$ ",  $5\frac{1}{2}$ ",  $11\frac{1}{2}$ ",  $10\frac{1}{4}$ ",  $16\frac{1}{2}$ ",  $3$ ",  $6$ ",  $3$ ". A note specifies: "3" GAP @ 60° F."
- Other Details:**
  - Labels "A", "B", "C", "D", "E" identify different parts of the assembly.
  - Notes include: "OR GRIND TO BEAR @ 'A'", "TACK WELD (TYP)", and "3" PL. (TYP)".
  - Dimensions for holes and bolts are specified throughout the drawing.

COUNTIES **A-609R**



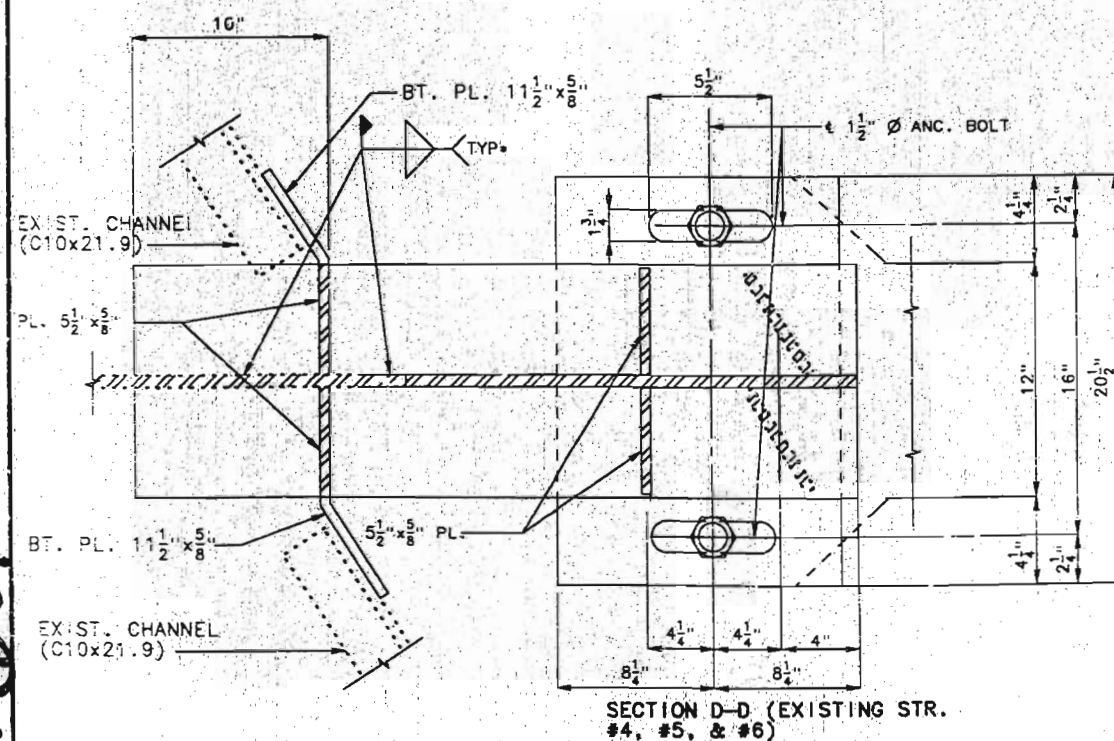




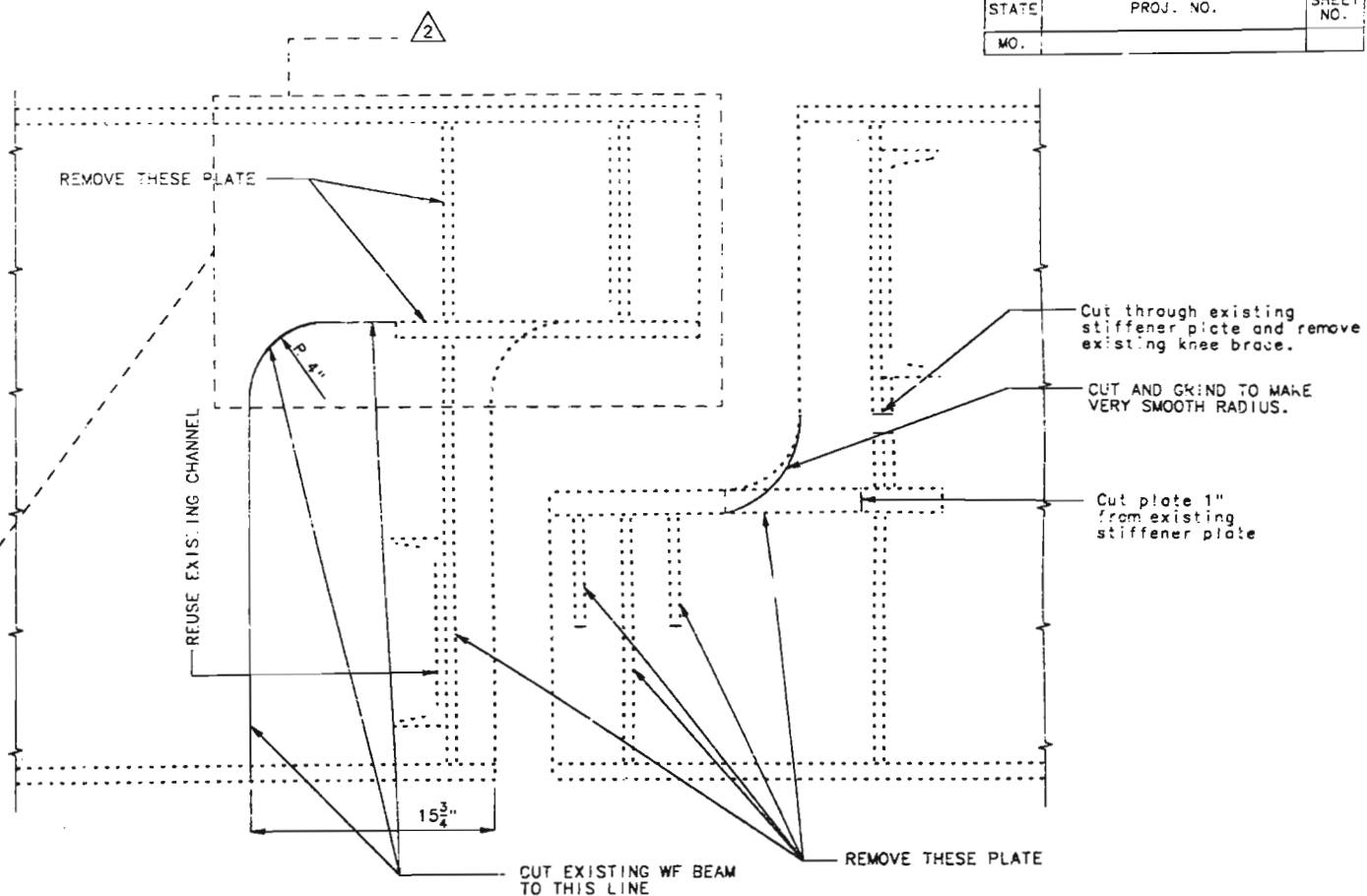
SECTION C-C

NOTE: FOR LOCATION OF SECTION C-C AND D-D SEE SHEET NO. 148.  
 PAYMENT FOR MODIFICATION OF WIDE FLANGE BEAMS SHALL BE INCLUDED IN PAYMENT FOR FABRICATED STRUCTURAL CARBON STEEL (I-BEAM).

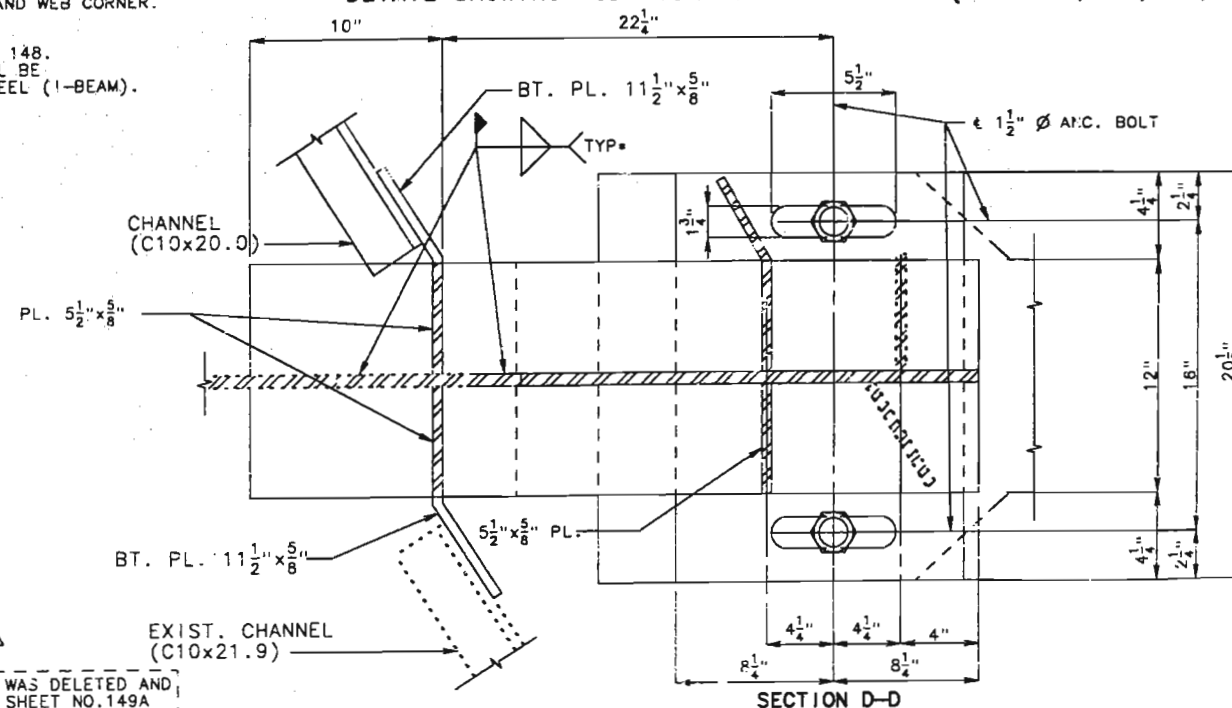
\* STOP WELD 1/2" FROM CORNER OF STIFFENER AND WEB CORNER.



SECTION D-D (EXISTING STR. #4, #5, & #6)



DETAIL SHOWING MODIFICATION TO WF BEAM (STR. #3, #4, #5, #6, & #7)



SECTION D-D

EXISTING STR. #3(S.B.L.) AND EXISTING STR. #7 (N.E.L.) SHOWN  
 EXISTING STR. #7(S.B.L.) AND EXISTING STR. #3 (N.B.L.) OPPOSITE AS SHOWN

DETAILS SHOWING HINGE #4 & #7 CONNECTION  
 STRINGERS NO. 3, 4, 5, 6 & 7.

SHEET NO. 149 WAS DELETED AND  
 REPLACED WITH SHEET NO. 149A

REVIS 12-8-1993 REVIS 3-15-1994

SHEET NO. 149A OF 238

ST. LOUIS-JEFFERSON

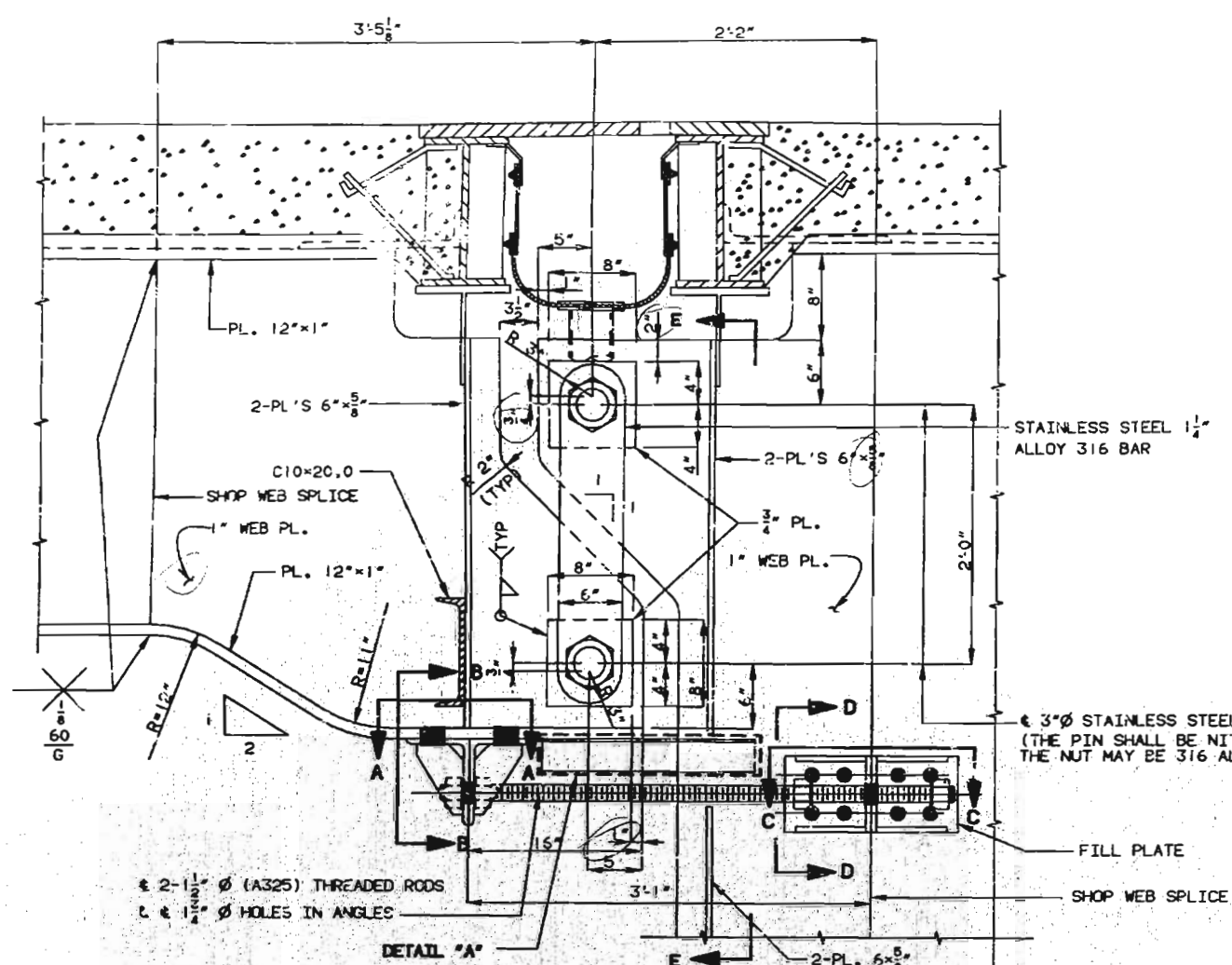
COUNTIES

A-609R

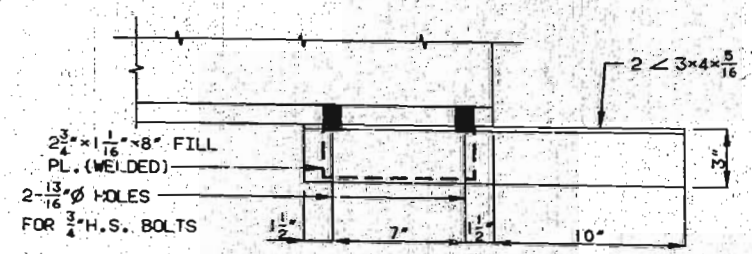
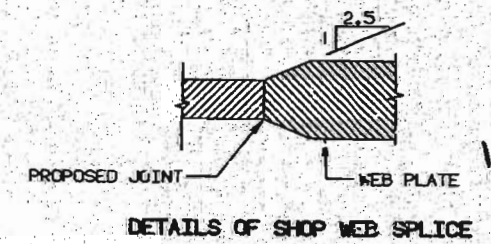
DETAILED FEB. 1992  
 CHECKED JULY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

1602

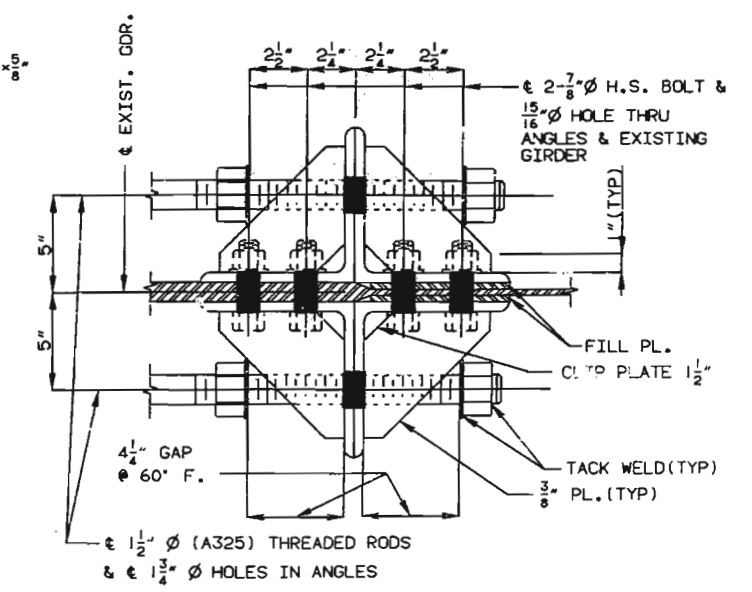
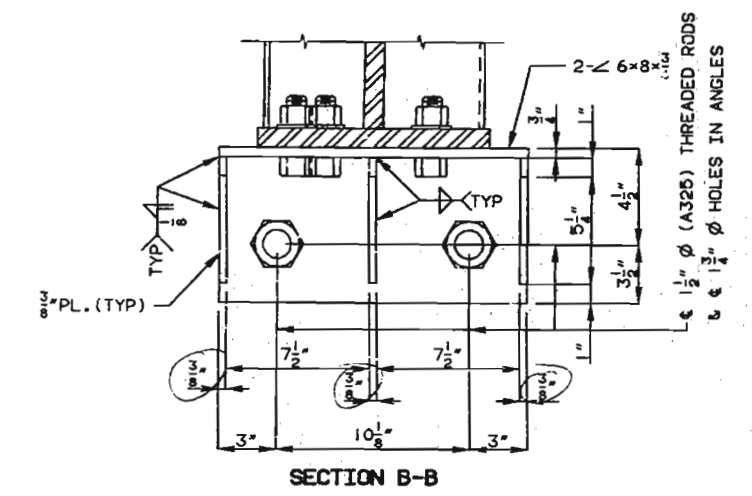
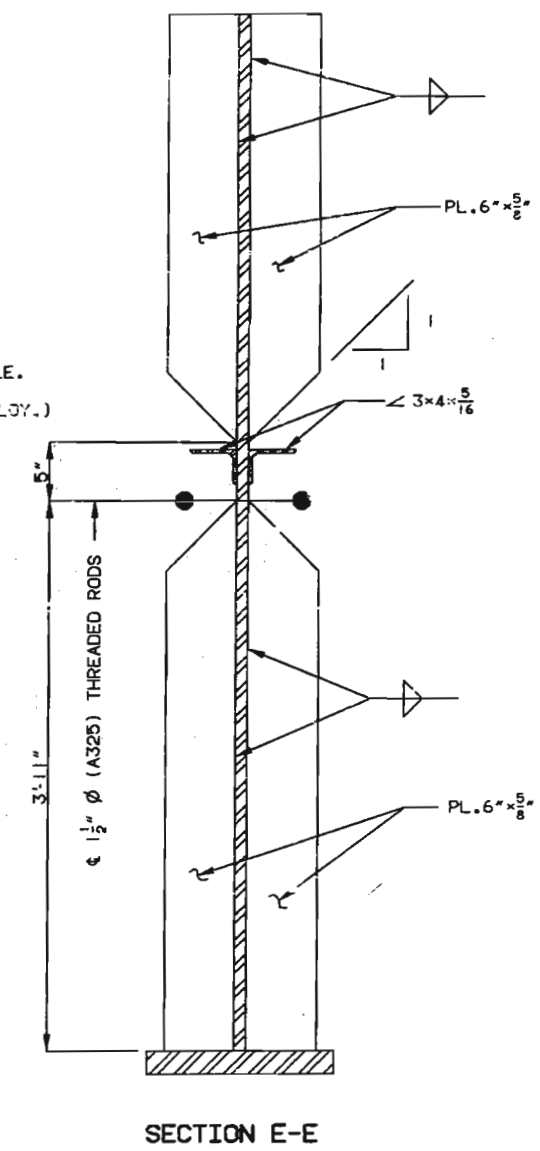
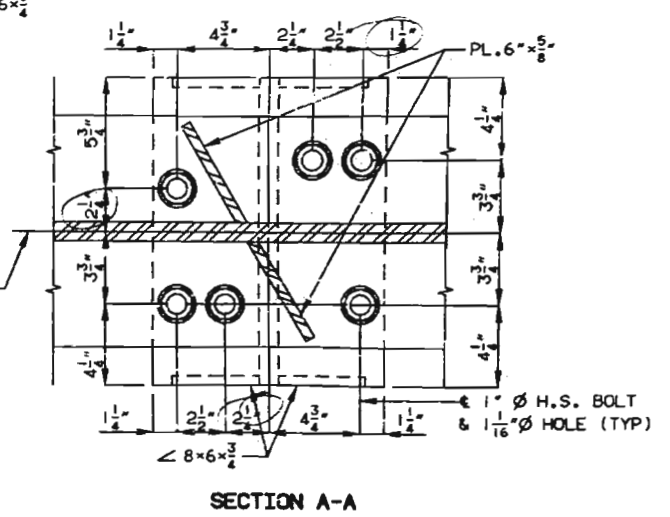
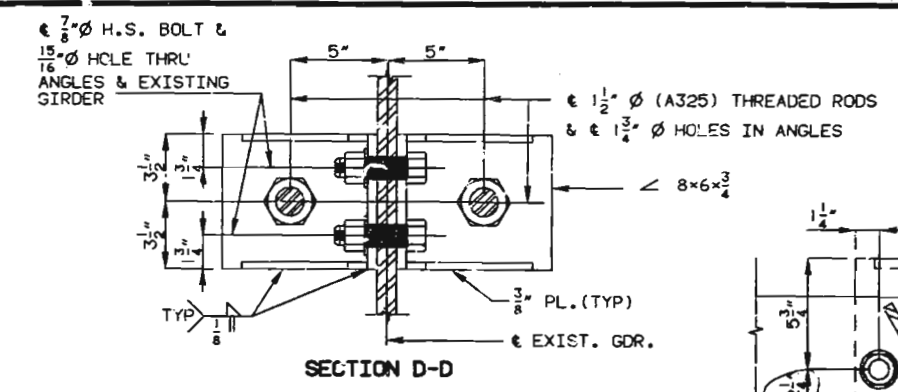


DETAIL "A"  
DETAIL SHOWING HINGE #11 CONNECTION  
(NEW STR. #1, #2, #8, & #9)

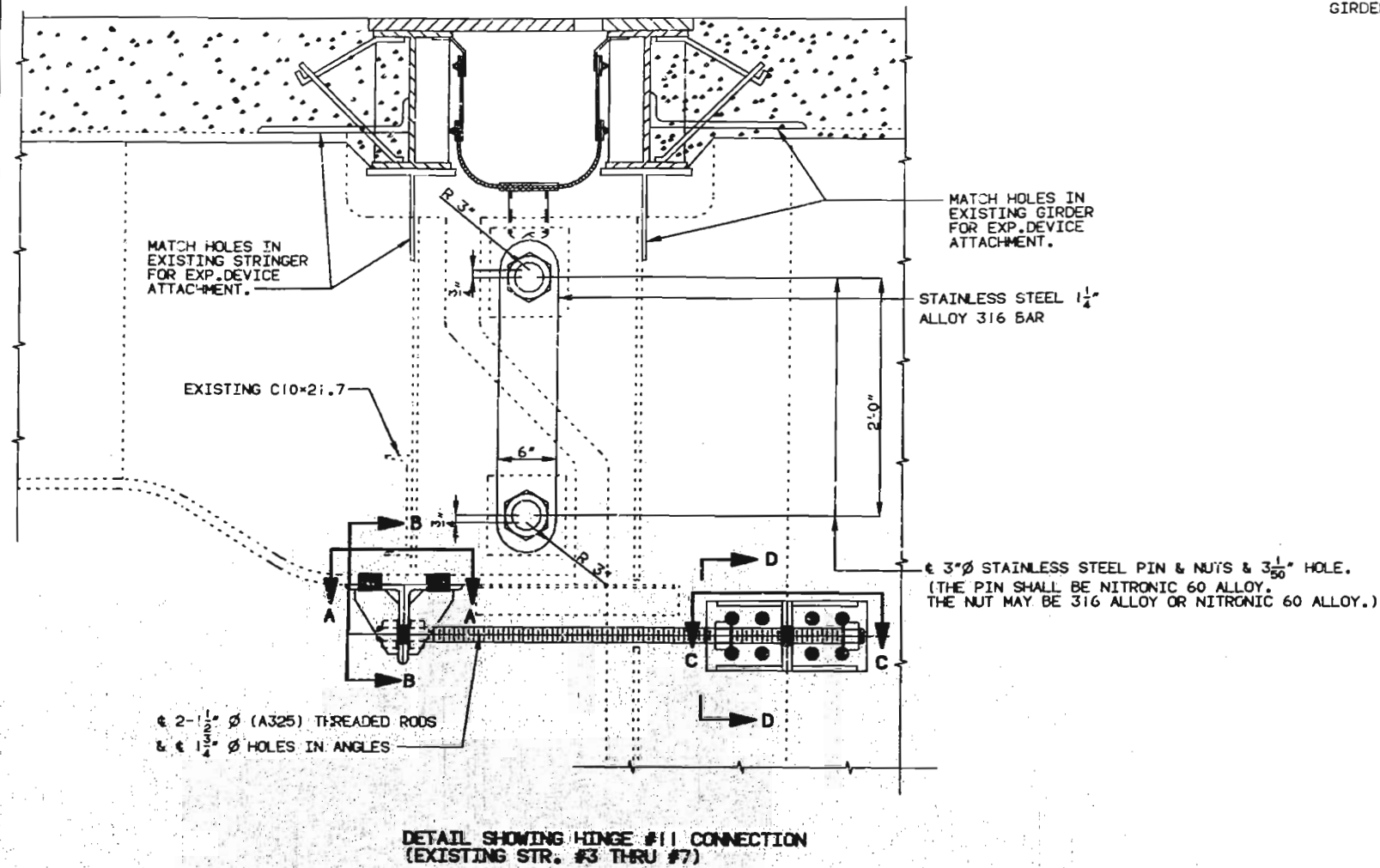


NOTE: PAYMENT FOR FURNISHING AND INSTALLING OF STAINLESS STEEL BARS, PINS AND NUTS IS INCLUDED IN FABRICATED STRUCTURAL CARBON STEEL PLATE GIRDER.

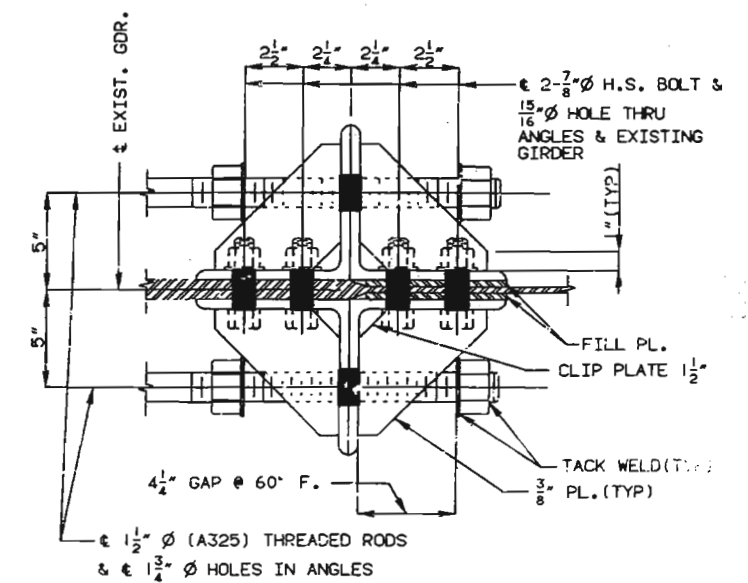
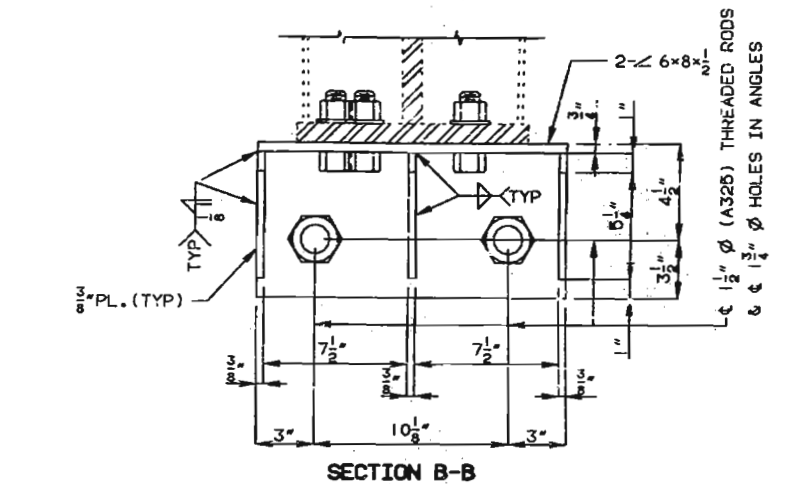
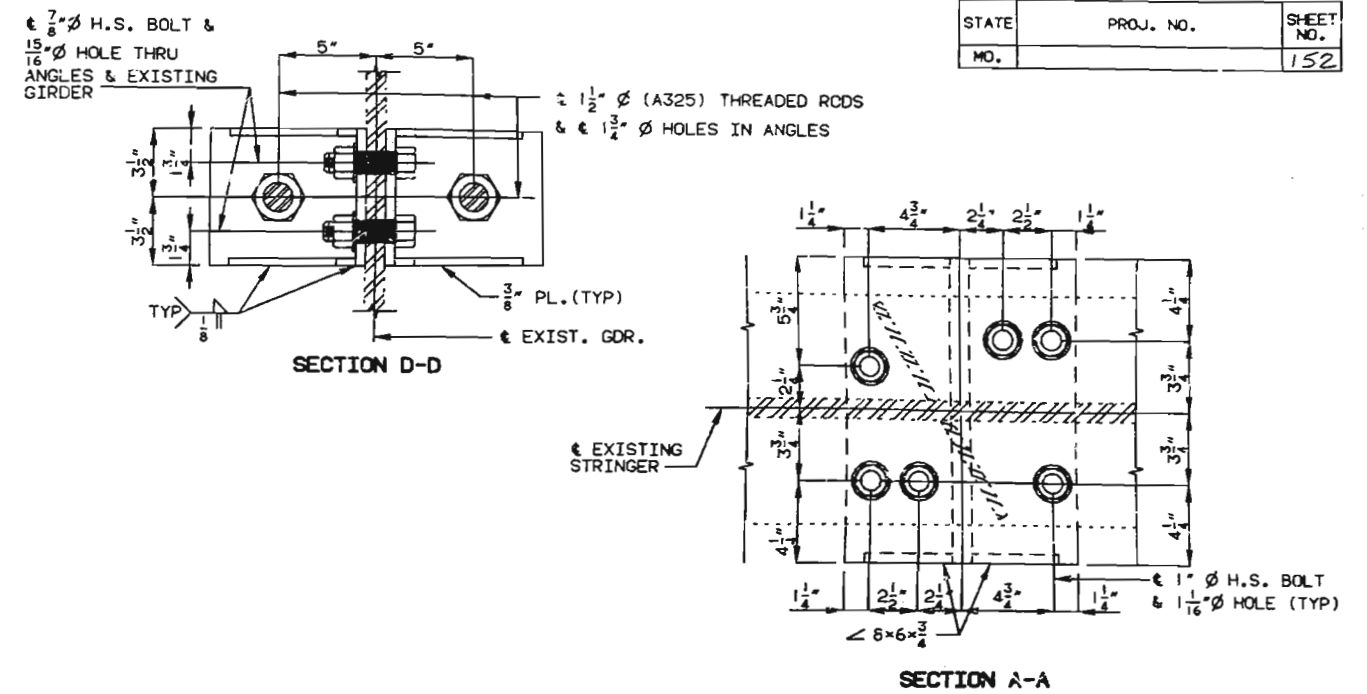
DETAILS SHOWING HINGE NO. 11 CONNECTION





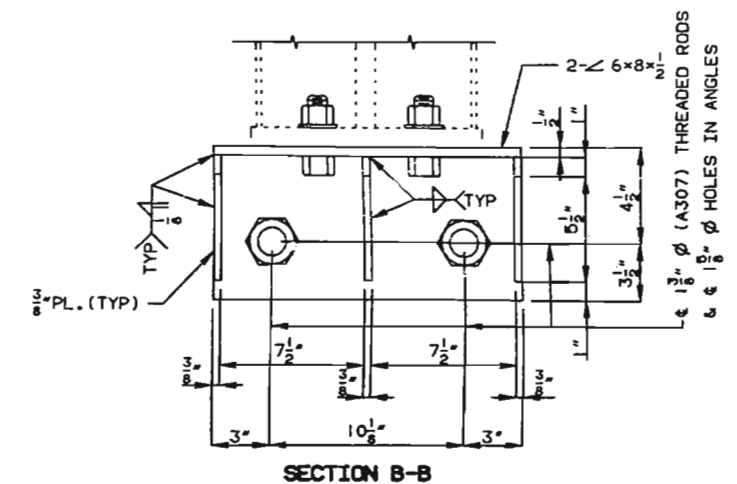
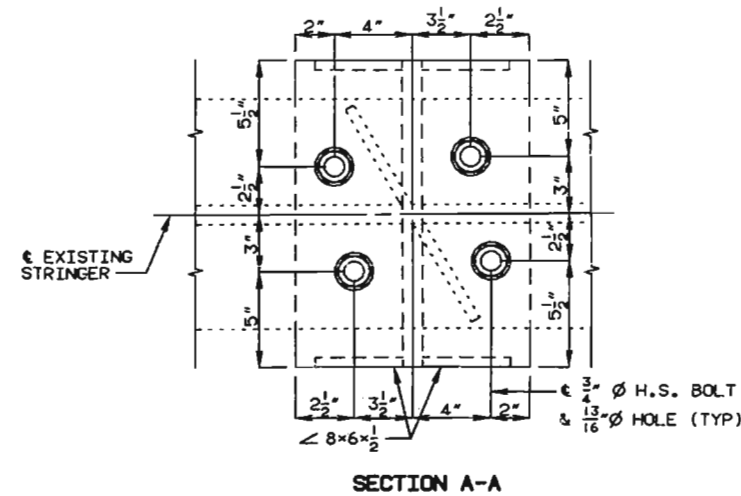
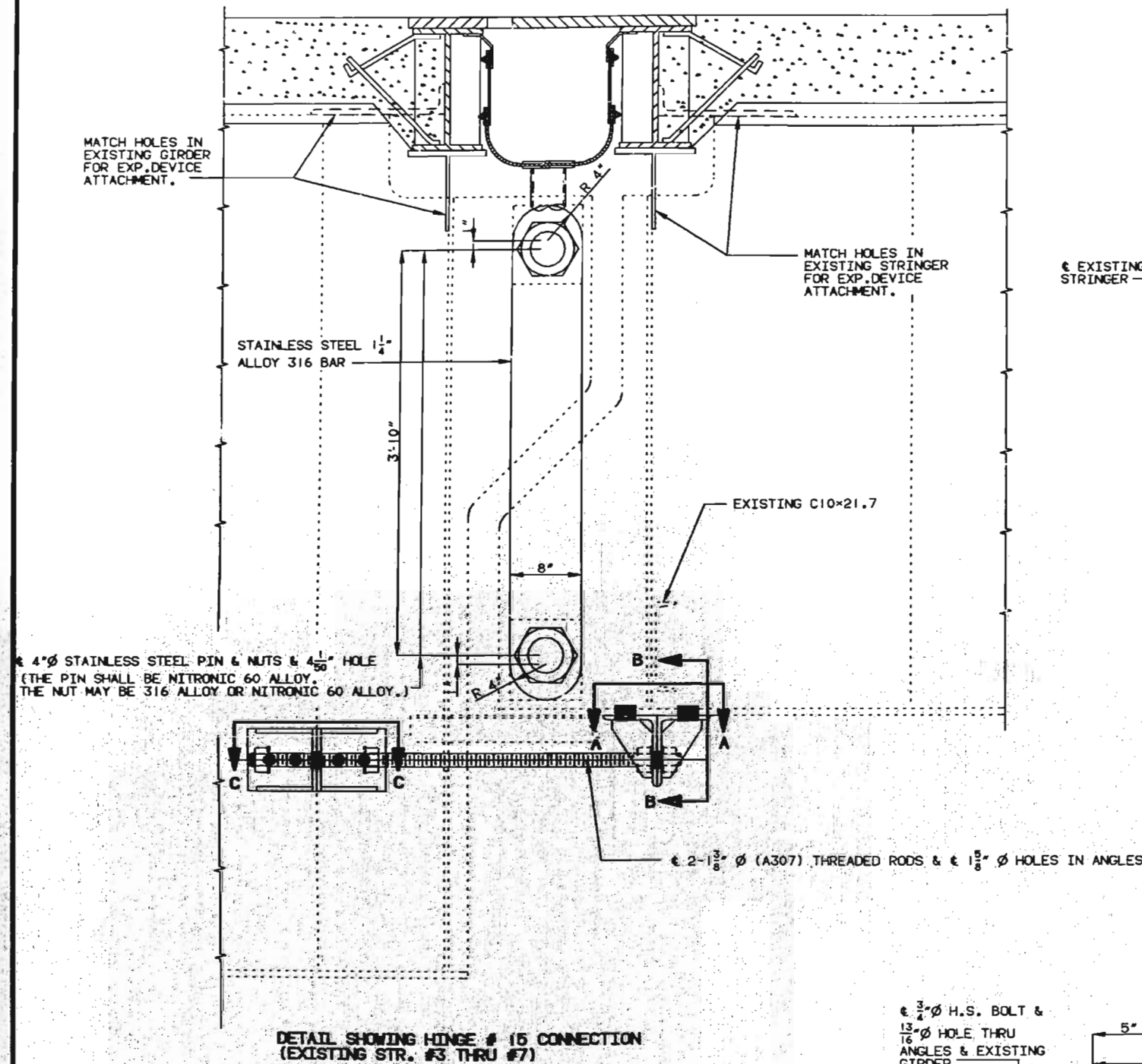


NOTE: PAYMENT FOR FURNISHING AND INSTALLING OF STAINLESS STEEL BARS, PINS AND NUTS IS INCLUDED IN FABRICATED STRUCTURAL CARBON STEEL PLATE GIRDER.

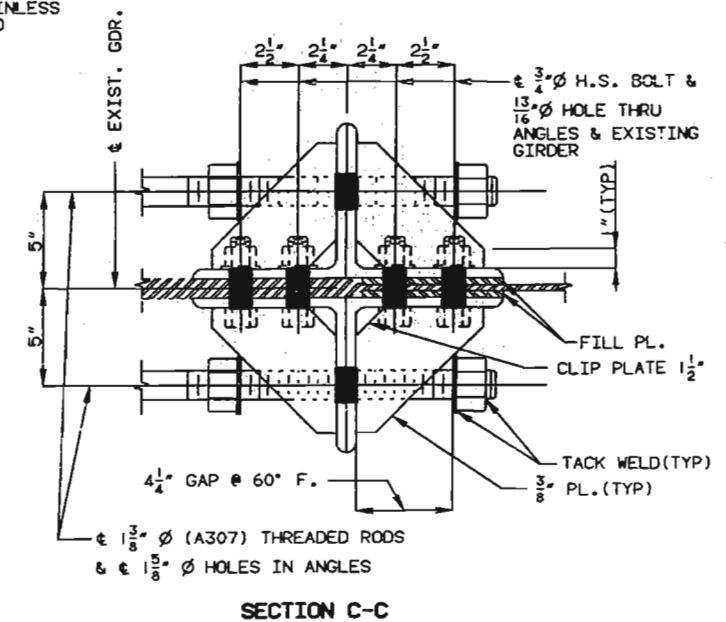
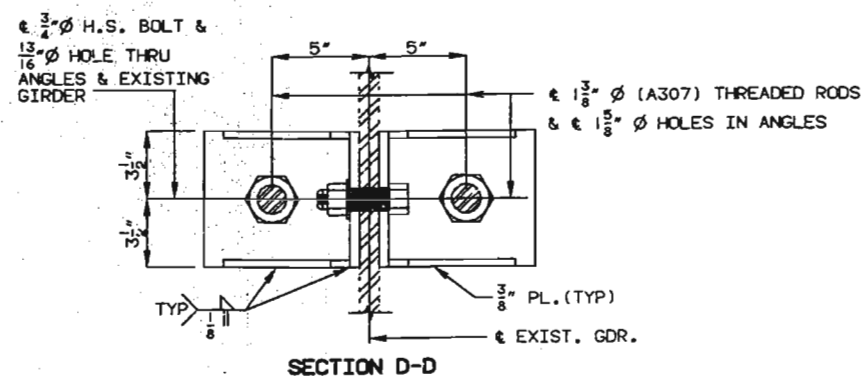


DETAILS SHOWING EXISTING HINGE NO. 11 CONNECTION





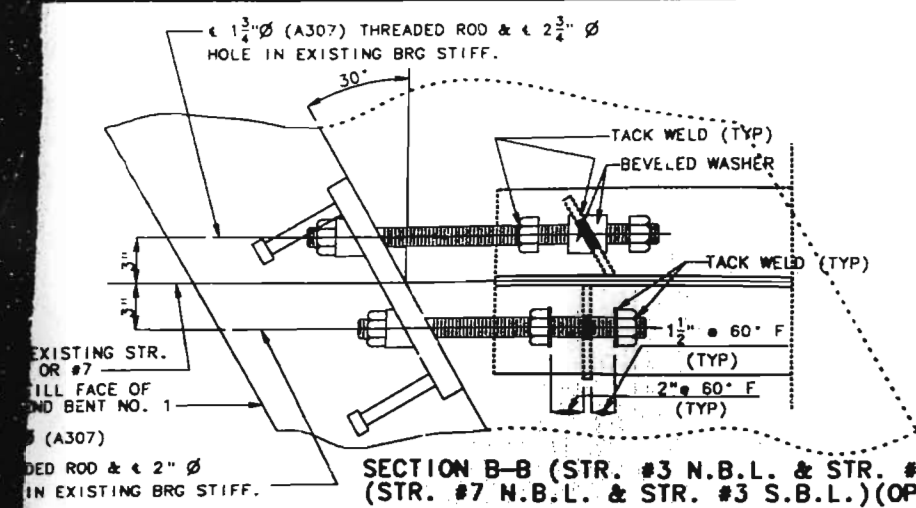
NOTE: PAYMENT FOR FURNISHING AND INSTALLING OF STAINLESS STEEL BARS, PINS AND NUTS IS INCLUDED IN FABRICATED STRUCTURAL CARBON STEEL PLATE GIRDER.



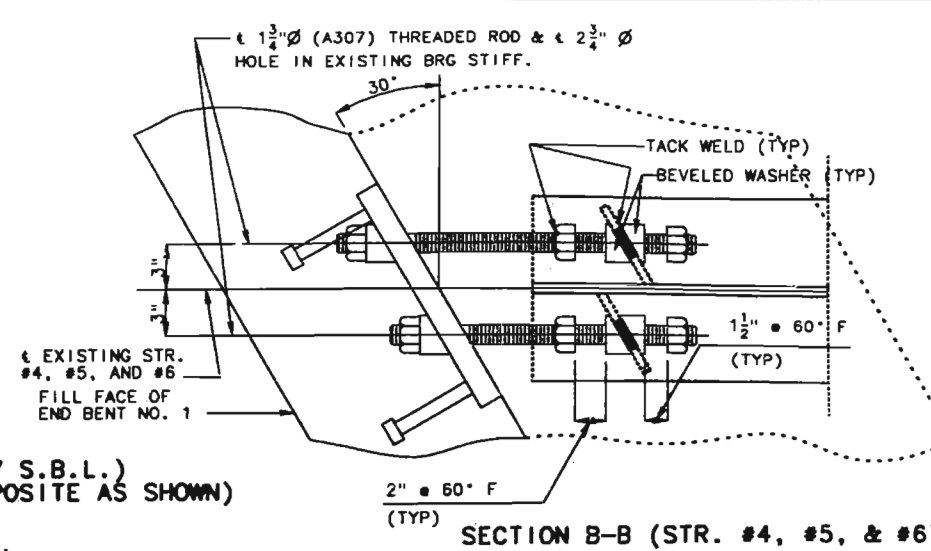
DETAILS SHOWING EXISTING HINGE NO. 15 CONNECTION



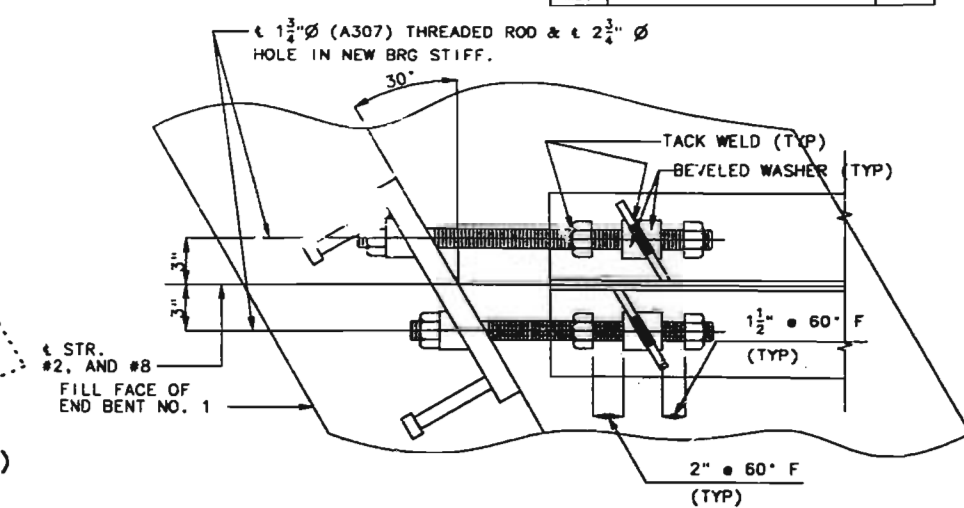
STATE	PROJ. NO.	SHEET NO.
MO.		



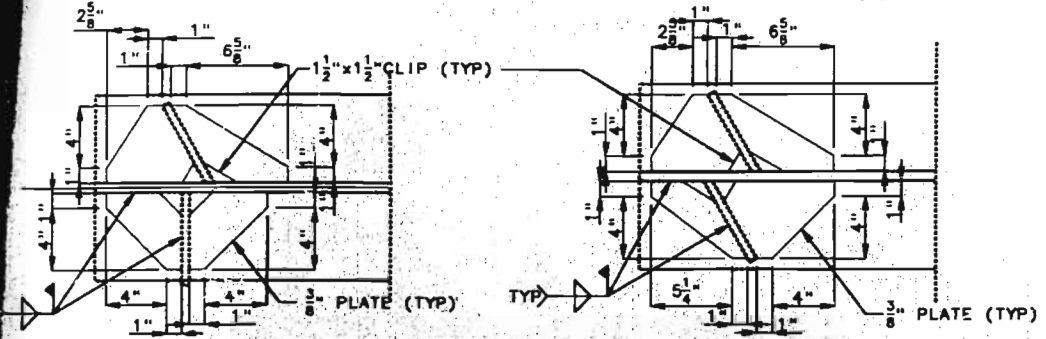
SECTION B-B (STR. #3 N.B.L. & STR. #7 S.B.L.)  
(STR. #7 N.B.L. & STR. #3 S.B.L.) (OPPOSITE AS SHOWN)



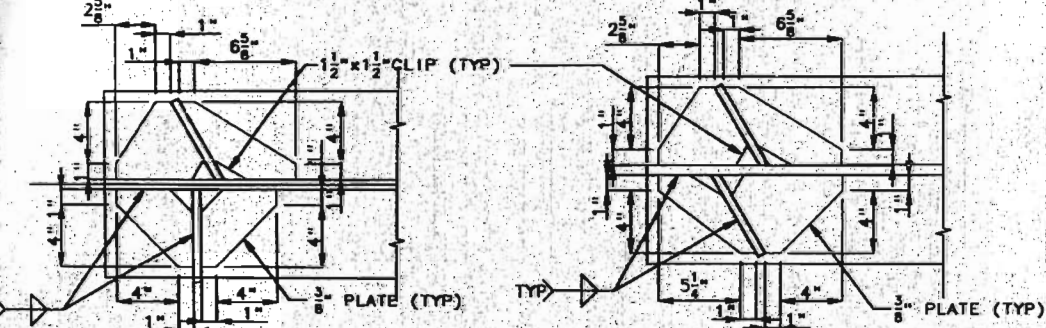
SECTION B-B (STR. #4, #5, & #6)



SECTION C-C (STR. #2, & #8)

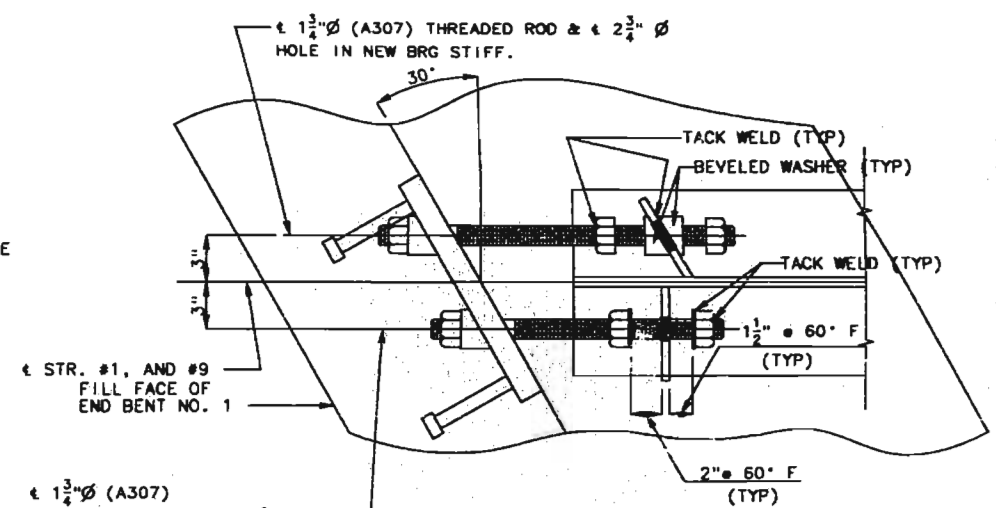


SECTION A-A (STR. #3 N.B.L. & #7 S.B.L.)  
(STR. #7 N.B.L. & STR. #3 S.B.L.) (OPPOSITE AS SHOWN)

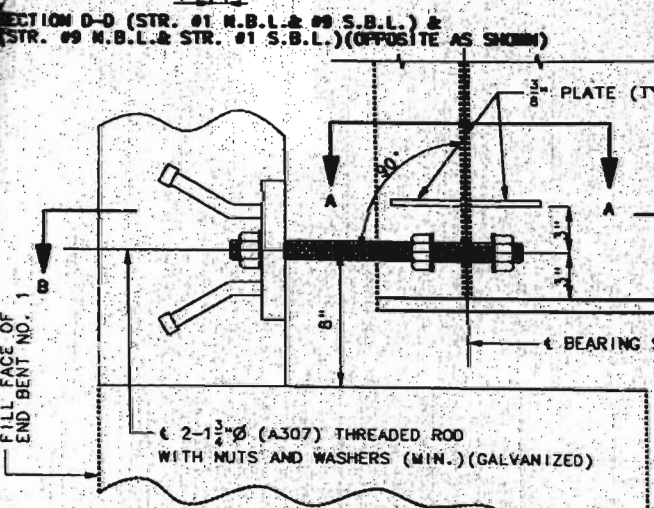


SECTION A-A (STR. #4, #5, & #6)

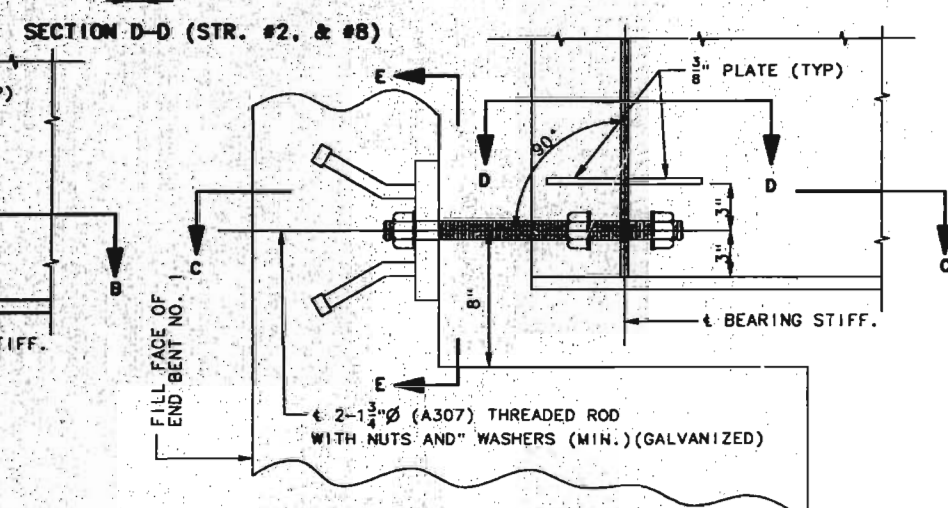
NOTE: A TEMPORARY THREADED PLUG SHALL BE INSERTED INTO EACH EMBEDDED HEX NUT IN THE BACKWALL AT STR. #1, #2, #8, & #9 BEFORE CONCRETE IS POURED. PLUGS SHALL EXTEND 1/8" INTO BACKWALL CONCRETE.  
USE BEVELED WASHERS AS REQUIRED TO ALLOW FOR SKEW, AND GRADE OF STRUCTURE.  
WEIGHT OF 3/8" PLATES, THREADED RODS, NUTS, WASHERS AND ANCHOR PLATES ARE INCLUDED IN WEIGHT OF FABRICATED STRUCTURAL CARBON STEEL.  
3/8" PLATES, ANCHOR PLATES, AND ANCHOR STUDS SHALL BE A-36 STEEL.



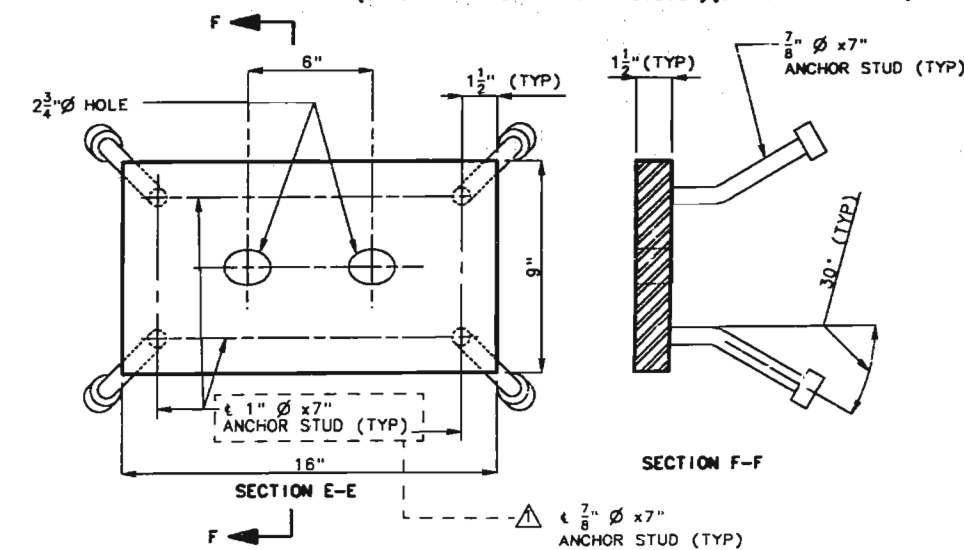
SECTION C-C (STR. #1 N.B.L. & #9 S.B.L.) &  
(STR. #9 N.B.L. & STR. #1 S.B.L.) (OPPOSITE AS SHOWN)



SECTION D-D (STR. #1 N.B.L. & #9 S.B.L.) &  
(STR. #9 N.B.L. & STR. #1 S.B.L.) (OPPOSITE AS SHOWN)



SECTION D-D (STR. #2, & #8)



SECTION E-E

SECTION F-F

PART SECTION THRU END BENT NO. 1  
SHOWING EARTHQUAKE RESTRAINER  
(STR. #1, #2, #8, & #9)

DETAILS OF EARTHQUAKE RESTRAINERS AT END BENT NO. 1

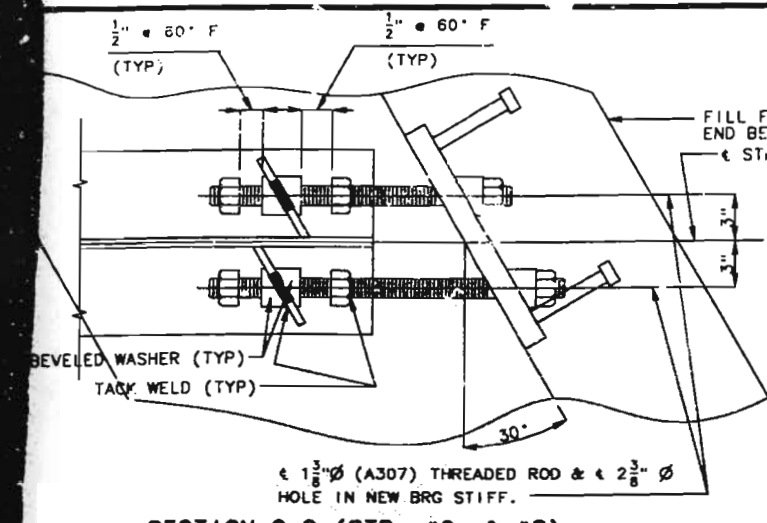
DETAILED JUNE 1992  
CHECKED JULY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS. REVISED 12-8-1993

SHEET NO. 154 OF 238

ST. LOUIS-JEFFERSON

COUNTIES A-609R

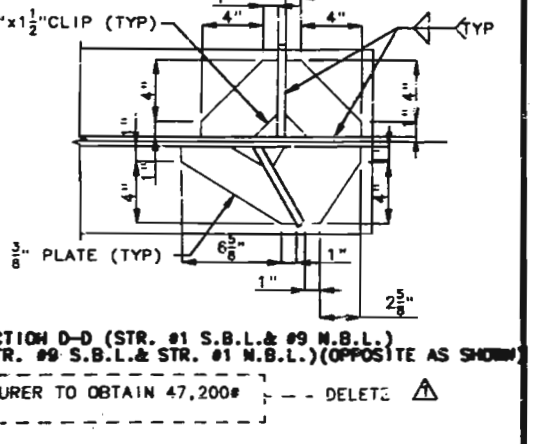
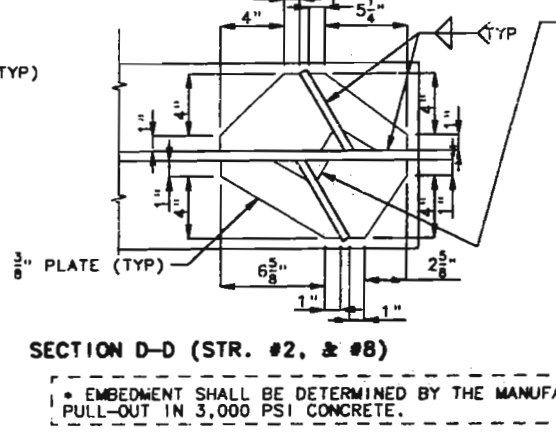
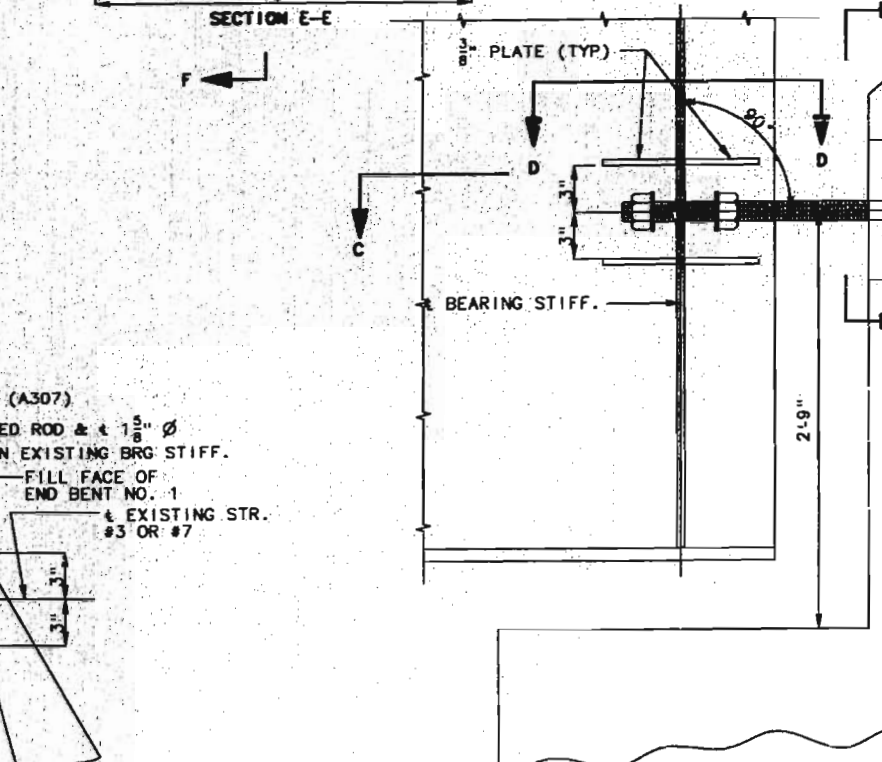
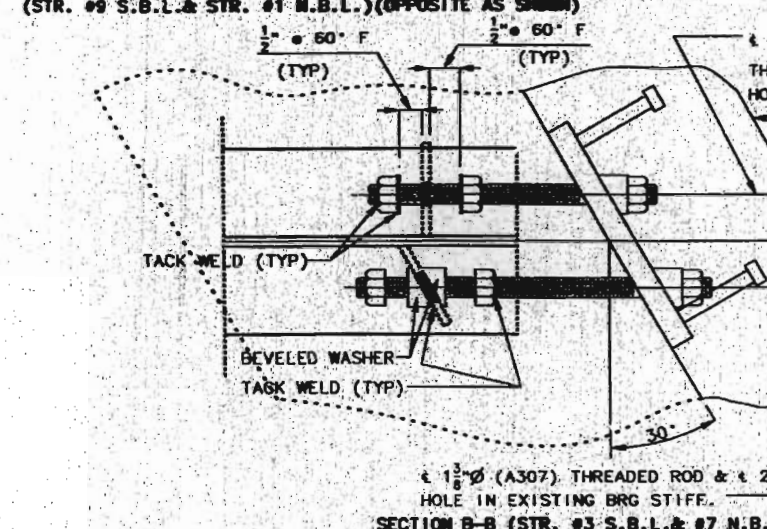
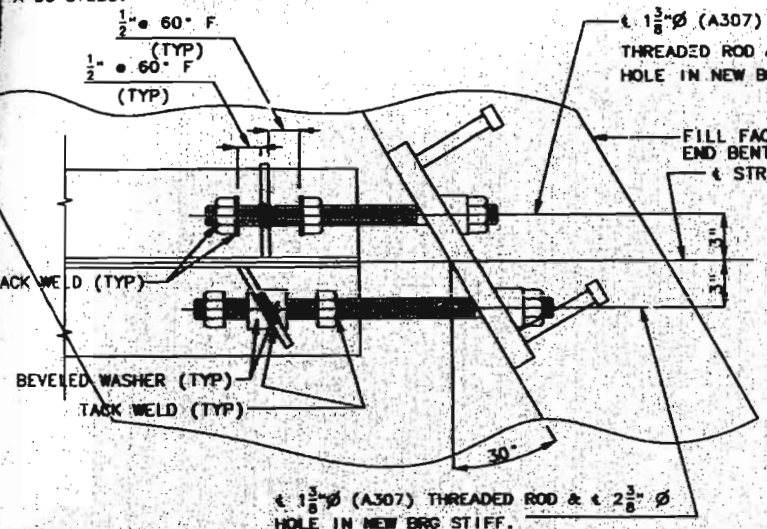
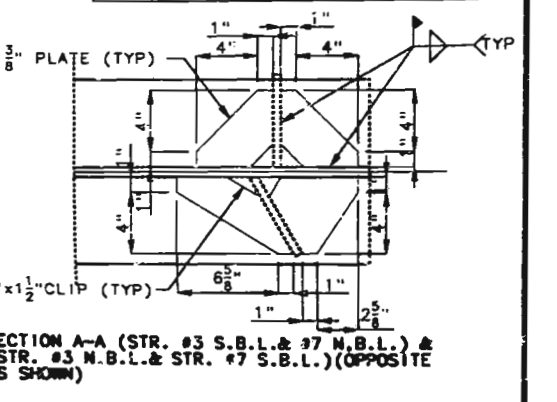
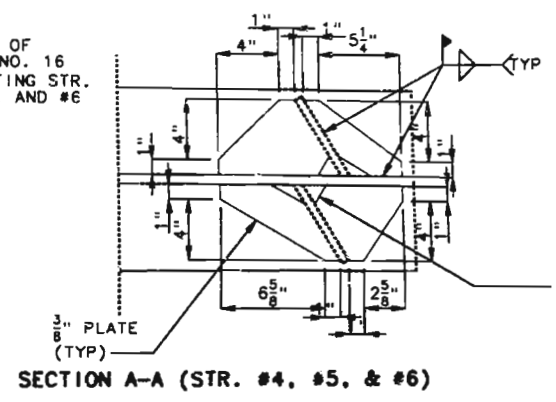
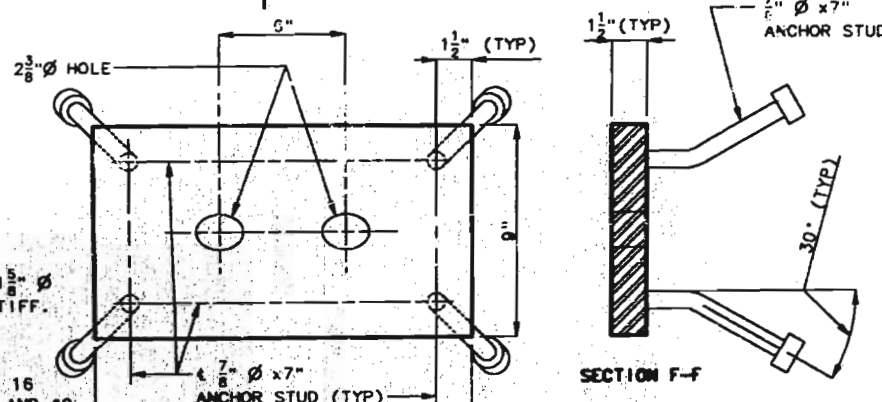
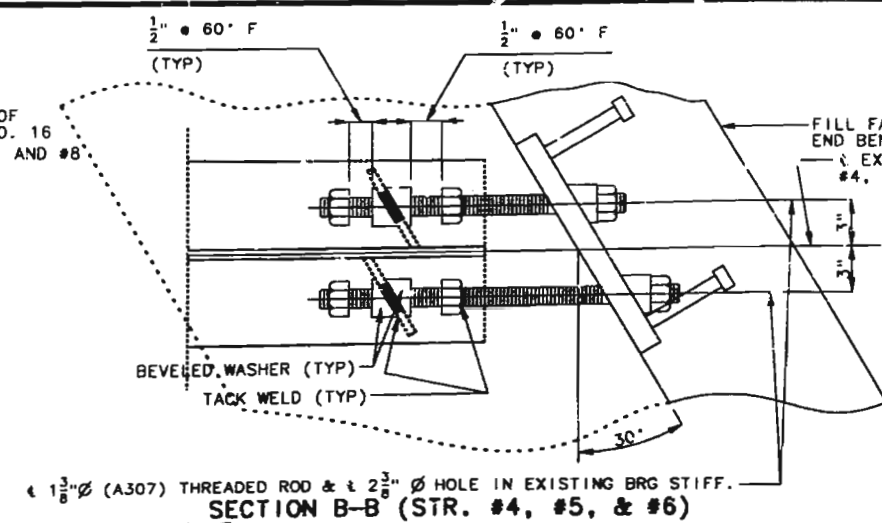


NOTE: A TEMPORARY THREADED PLUG SHALL BE INSERTED INTO EACH EMBEDDED HEX NUT IN THE BACKWALL AT STR. #1, #2, #8, & #9 BEFORE CONCRETE IS POURED. PLUGS SHALL EXTEND 1/8" INTO BACKWALL CONCRETE.

USE BEVELED WASHERS AS REQUIRED TO ALLOW FOR SKEW, AND GRADE OF STRUCTURE.

WEIGHT OF 3/8" PLATES, THREADED RODS, NUTS, WASHERS AND ANCHOR PLATES ARE INCLUDED IN WEIGHT OF FABRICATED STRUCTURAL CARBON STEEL.

3/8" PLATES, ANCHOR PLATES, AND ANCHOR STUDS SHALL BE A-36 STEEL.

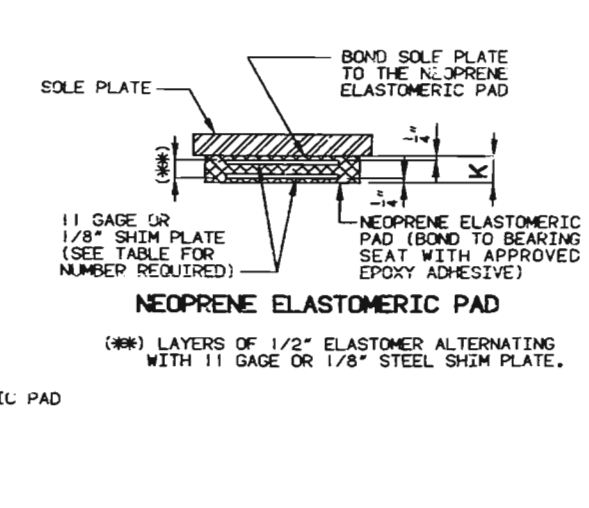
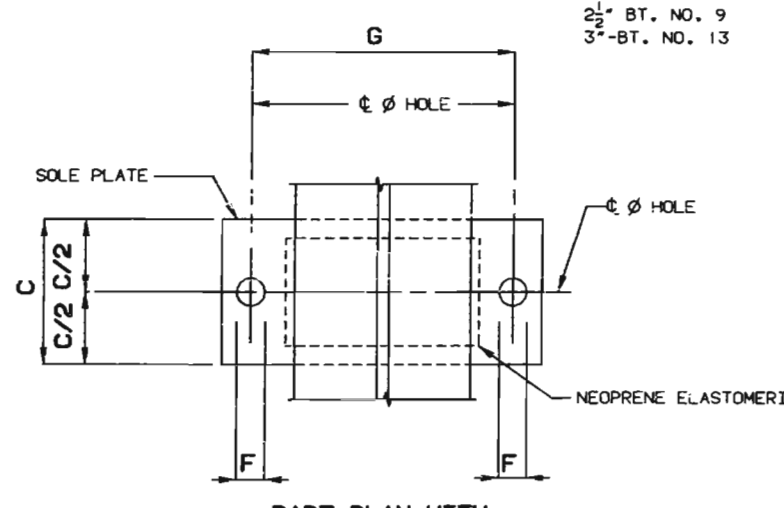
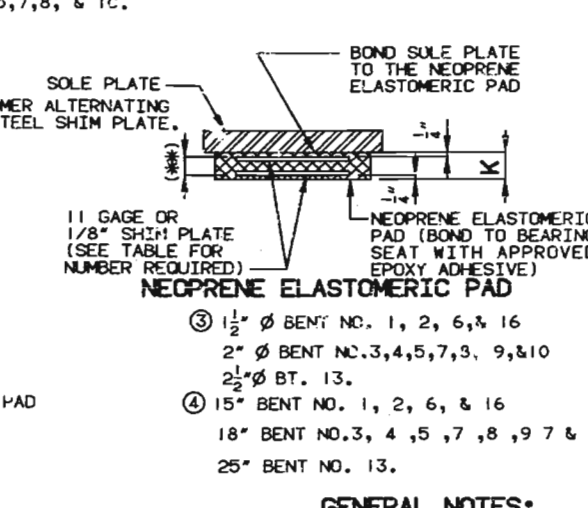
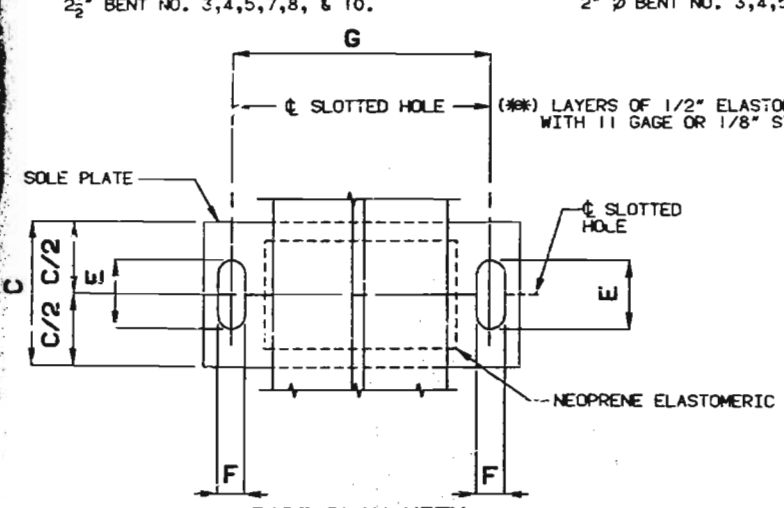
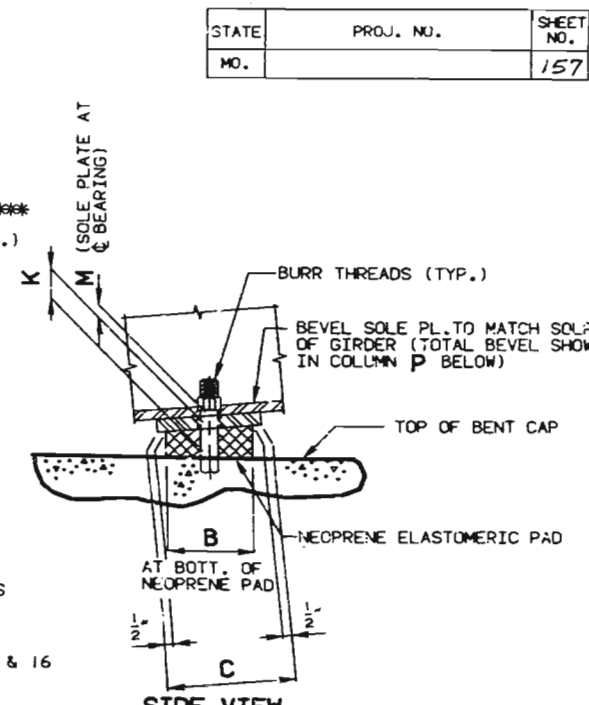
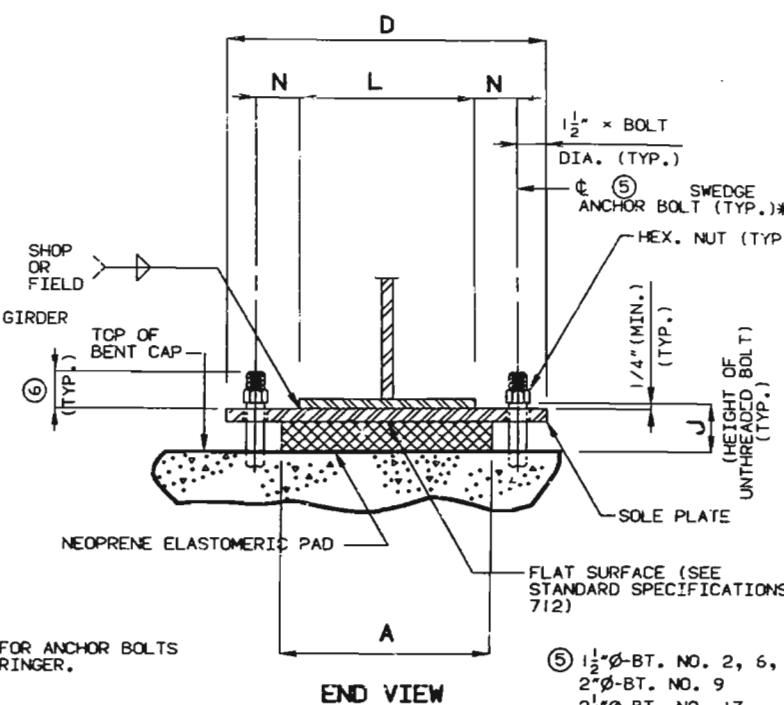
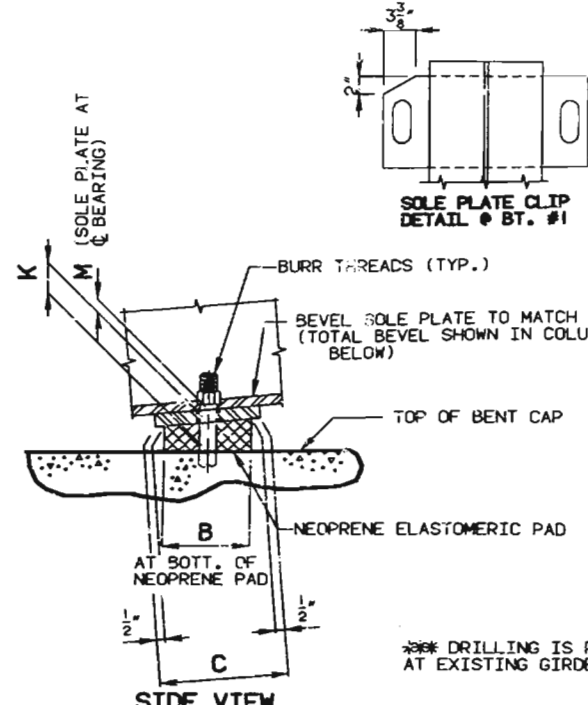
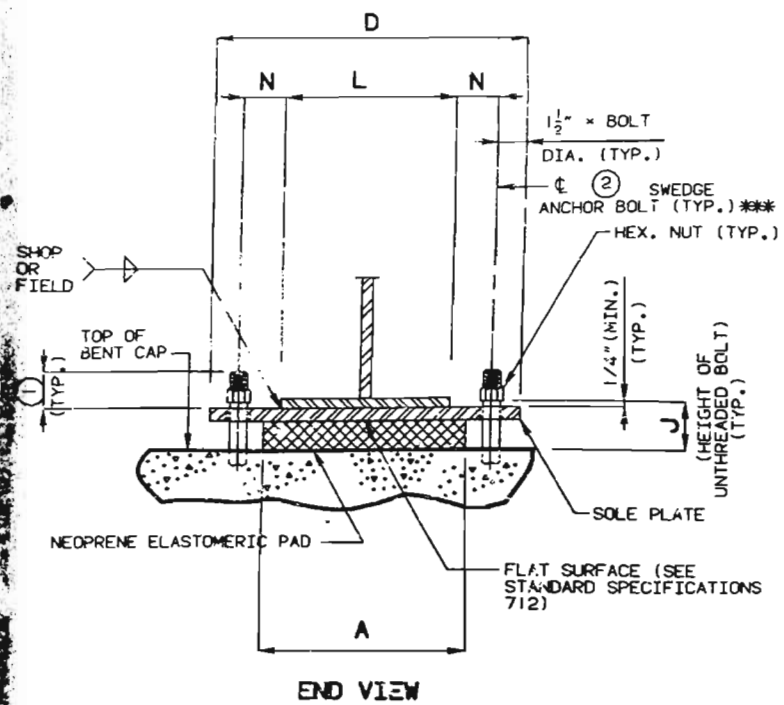


\* EMBEDMENT SHALL BE DETERMINED BY THE MANUFACTURER TO OBTAIN 47,200# PULL-OUT IN 3,000 PSI CONCRETE.

DETAILS OF EARTHQUAKE RESTRAINERS AT END BENT NO. 16

PART SECTION THRU END BENT NO. 16 SHOWING EARTHQUAKE RESTRAINER (STR. #3, #4, #5, #6, & #7)





### GENERAL NOTES:

ANCHOR BOLTS SHALL BE 3 A588 STEEL SWEDGED BOLTS AND SHALL EXTEND 4" INTO THE CONCRETE WITH A194-2, 2H OR A563-C, C3, D, DH, DH3 HEAVY HEXAGON NUTS. ACTUAL MANUFACTURER'S CERTIFIED MILL TEST REPORTS (CHEMICAL AND MECHANICAL) SHALL BE PROVIDED. (SWEDGING SHALL BE 1" LESS THAN THE EXTENSION INTO THE CONCRETE.)

ALL STRUCTURAL STEEL FOR THE SOLE PLATE, ANCHOR BOLTS AND THE HEAVY HEXAGON NUTS SHALL BE PAINTED WITH 2 COATS (MIN.) (5 MILS MIN.) OF SYSTEM E. WELD AREAS TO BE TOUCHED UP AFTER ASSEMBLY.

NEOPRENE ELASTOMERIC PADS SHALL BE 60 DUROMETER. THE NEOPRENE PAD SHALL BE BONDED TO THE BEARING SEAT WITH AN EPOXY ADHESIVE AS APPROVED BY THE BEARING MANUFACTURER FOR BONDING NEOPRENE TO CONCRETE.

THE SOLE PLATE SHALL BE FURNISHED WITH THE BEARING AND FIELD OR SHOP WELDED TO THE GIRDERS.

STRUCTURAL STEEL FOR THE SOLE PLATE SHALL BE A-36. PAYMENT FOR THE SOLE PLATE, ANCHOR BOLTS AND HEAVY HEXAGON NUTS SHALL BE INCLUDED IN THE COST OF THE BEARING ASSEMBLY. SEE SPECIAL PROVISIONS.

THE ACCEPTED QUANTITY OF THE ELASTOMERIC BEARING ASSEMBLIES, COMPLETE-IN-PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR LAMINATED NEOPRENE BEARING PADS (STEEL STRUCTURES), EACH.

\*\*\* 63 NORTHBOUND LANE & 63 SOUTHBOUND LANE.

### DETAILS OF LAMINATED NEOPRENE BEARINGS (STEEL STRUCTURES)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

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ST. LOUIS-JEFFERSON COUNTIES

A-609R

EXPANSION BEARINGS														
BENT NO.	GIRDER NO.	A	B	C	D	E	F	G	J	K	L	M	N	P
1	1	10"	10"	11"	20 1/2"	4"	13 3/4"	16"	5 1/2"	3 3/4"	12"	1 1/2"	2"	-
1	2, 3, 9	11"	10"	11"	20 1/2"	4"	13 3/4"	16"	5 1/2"	3 3/4"	12"	1 1/2"	2"	-
1	4, 5, 6, 7, 8	13"	10"	11"	20 1/2"	4"	13 3/4"	16"	5 1/2"	3 3/4"	12"	1 1/2"	2"	-
3	ALL	18"	12"	13"	27"	4"	21 1/4"	21"	4 1/4"	2 1/2"	12"	1 1/2"	4 1/2"	-
4	ALL	16"	11"	12"	25"	4 3/4"	21 1/4"	19"	5 1/2"	3 3/4"	12"	1 1/2"	3 1/2"	-
5	ALL	19"	13"	14"	28"	4"	21 1/4"	22"	4 1/4"	2 1/2"	12"	1 1/2"	5"	-
7	ALL	16"	11"	12"	25"	4 3/4"	21 1/4"	19"	6 1/8"	4 3/8"	12"	1 1/2"	3 1/2"	-
8	ALL	13"	20"	21"	23"	4"	21 1/4"	17"	4 1/4"	2 1/2"	12"	1 1/2"	2 1/2"	-
10	ALL	13"	20"	21"	23"	4"	21 1/4"	17"	4 1/4"	2 1/2"	12"	1 1/2"	2 1/2"	-
													TOTAL BEARINGS	126

(\*) THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYERS OF ELASTOMER AND MOLDED TOGETHER TO FORM AN INTEGRAL UNIT.

FIXED BEARINGS														
BENT NO.	A	B	C	D	F	G	J	K	L	M	N	P	NUMBER OF SHIM PLATES (#)	NUMBER REQUIRED
2	13"	20"	21"	20 1/2"	1 3/4"	16"	4 1/4"	2 1/2"	12"	1 1/2"	2"	-	4	8
6	12"	18"	19"	20 1/2"	1 3/4"	16"	3 5/8"	1 7/8"	12"	1 1/2"	2"	-	3	8
9	13"	20"	21"	23"	2 1/4"	16"	4 1/4"	2 1/2"	12"	1 1/2"	2 1/2"	-	4	8
13	18"	30"	31"	28 3/4"	2 3/4"	21 1/4"	4 7/8"	3 1/8"	16"	1 1/2"	2 5/8"	-	5	8
16	16"	11"	12"	24 1/2"	1 3/4"	20"	3"	1 1/4"	16"	1 1/2"	2"	-	2	8
													TOTAL BEARINGS	40

(\*) THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYERS OF ELASTOMER AND MOLDED TOGETHER TO FORM AN INTEGRAL UNIT.

\*\*\*\*\* 20 NORTHBOUND LANE & 20 SOUTHBOUND LANE.

DETAILED MAR. 1992  
CHECKED MAY 1992



ANCHOR BOLTS SHALL BE 1-1/2"Ø A568 STEEL BOLTS WITH A194-2, 2H OR A563-C, C3, D, DH, DH3 HEAVY HEXAGON NUTS. ACTUAL MANUFACTURER'S CERTIFIED MILL TEST REPORTS (CHEMICAL AND MECHANICAL) SHALL BE PROVIDED.

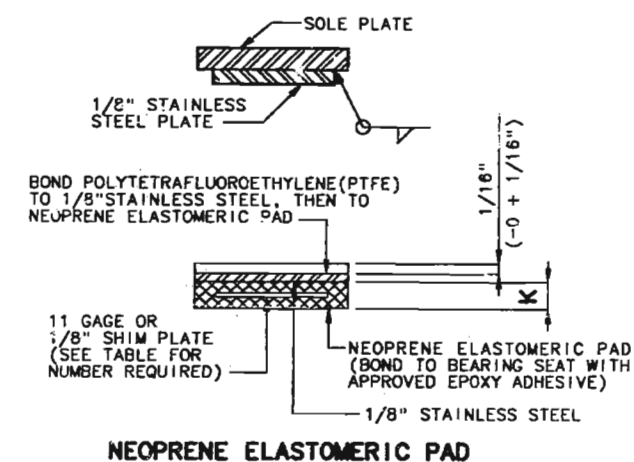
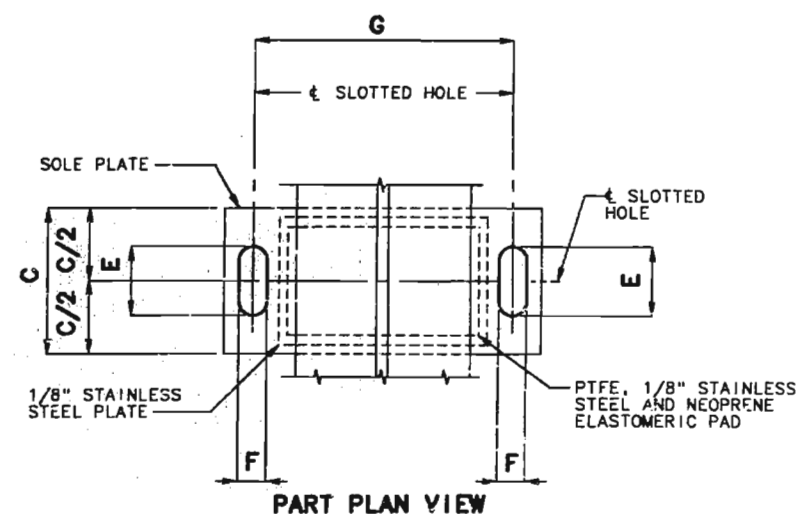
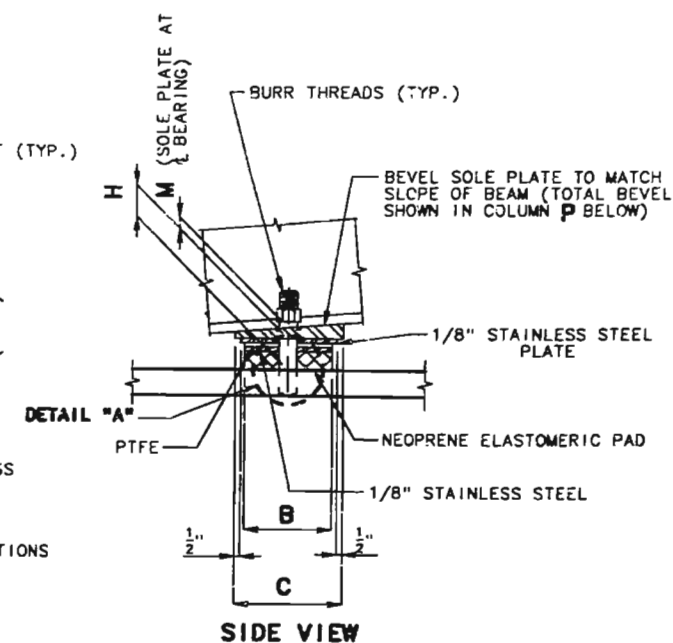
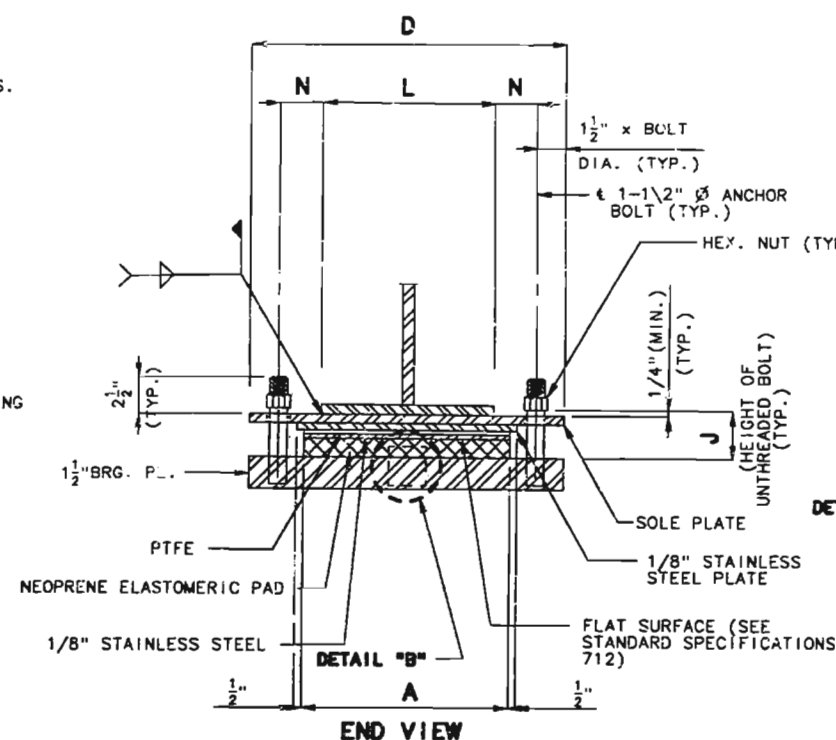
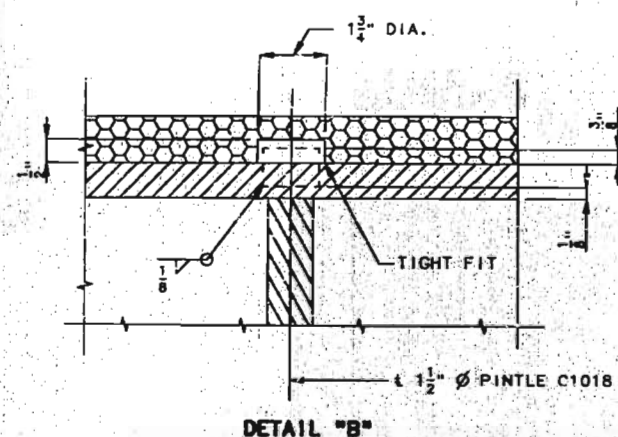
ALL STRUCTURAL STEEL FOR THE SOLE PLATE, ANCHOR BOLTS AND THE HEAVY HEXAGON NUTS SHALL BE PAINTED WITH 2 COATS (MIN.) (5 MILS MIN.) OF SYSTEM E. WELD AREAS TO BE TOUCHED UP AFTER ASSEMBLY.

THE NEOPRENE ELASTOMERIC PADS SHALL BE 70 DUROMETER.

THE SOLE PLATE SHALL BE FURNISHED WITH THE BEARING AND FIELD OR SHOP WELDED TO GIRDERS #1,2,8, & 9 AND FIELD WELDED TO STRINGERS #3,4,5,6, & 7. STRUCTURAL STEEL FOR THE SOLE PLATE SHALL BE A-36.

PAYMENT FOR THE SOLE PLATE, ANCHOR BOLTS AND HEAVY HEXAGON NUTS SHALL BE INCLUDED IN THE COST OF THE BEARING ASSEMBLY. SEE SPECIAL PROVISIONS.

THE ACCEPTED QUANTITY OF THE ELASTOMERIC BEARING ASSEMBLIES, COMPLETE-IN-PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR TYPE "N" PTFE BEARINGS, EACH. AND LAMINATED NEOPRENE BEARING PADS (STEEL STRUCTURES), EACH.



PTFE SLIDING BEARINGS															NUMBER OF SHIM PLATES(*)	NUMBER REQUIRED	
	A	B	C	D	E	F	G	H	J	K	L	M	N	P			
HINGE #4 & #7	12"	8"	13 $\frac{1}{2}$ "	20 $\frac{1}{2}$ "	5 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	16"	1 $\frac{7}{16}$ "	3 $\frac{3}{16}$ "	1 $\frac{1}{8}$ "	12"	1 $\frac{1}{2}$ "	2"	-	1	12	[STR. #1, #2, & #9] + [STR. #1, #2, #8 & #9]
HINGE #4 & #7	12"	10"	15 $\frac{1}{2}$ "	20 $\frac{1}{2}$ "	5 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	16"	1 $\frac{7}{16}$ "	3 $\frac{3}{16}$ "	1 $\frac{1}{8}$ "	12"	1 $\frac{1}{2}$ "	2"	-	1	24	[STR. #3, #4, #5, #6, #7 & #8] + [STR. #3, #4, #5, #6, & #7]
(*) THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LOWER TOWER AND MOORING TOGETHER TO FORM AN INTEGRAL UNIT.															TOTAL BEARINGS	36	

(\*) THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYER 1 AND LAYER 2 TO FORM AN INTEGRAL UNIT.

TOTAL BEARINGS	36 + + +
----------------	-------------

\*\*\* 18 NORTHBOUND LANE & 18 SOUTHBOUND LANE.

DETAILS OF TYPE 'N' PTFE BEARINGS AT HINGE #4 & #7.

REVISÉD 3-30-1994

REVISÉD 3-24-1994

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 157 OF 1238

ST. LOUIS-JEFFERSON

COUNTIES

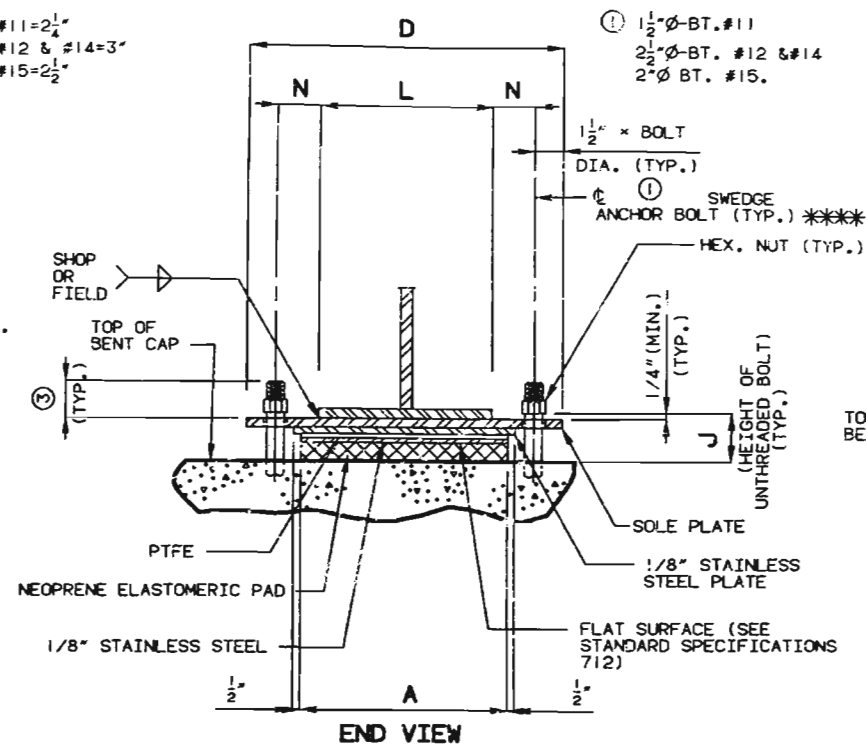
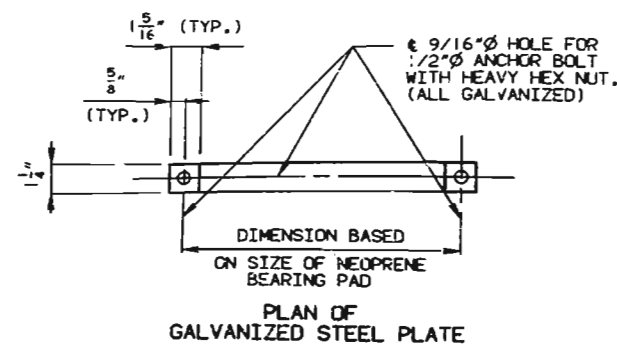
A-609R

BRG 'N' , BRG3.31, STL, E.  
STL 'N' BRG REVISED

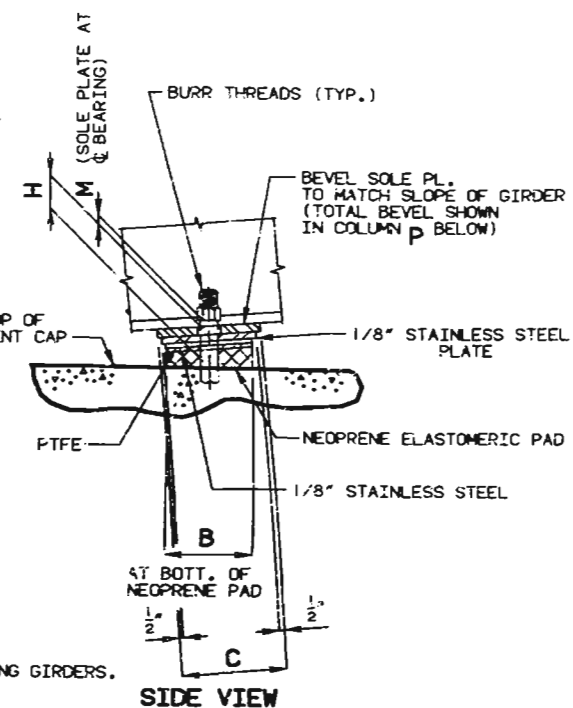
STILLIN' BRO REVISSED

DET MAR 19 92

CHEM JUNE 1992

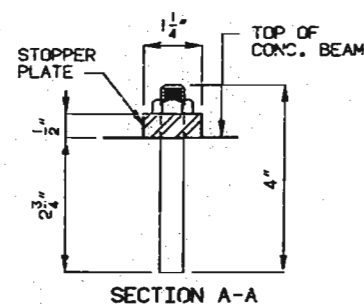
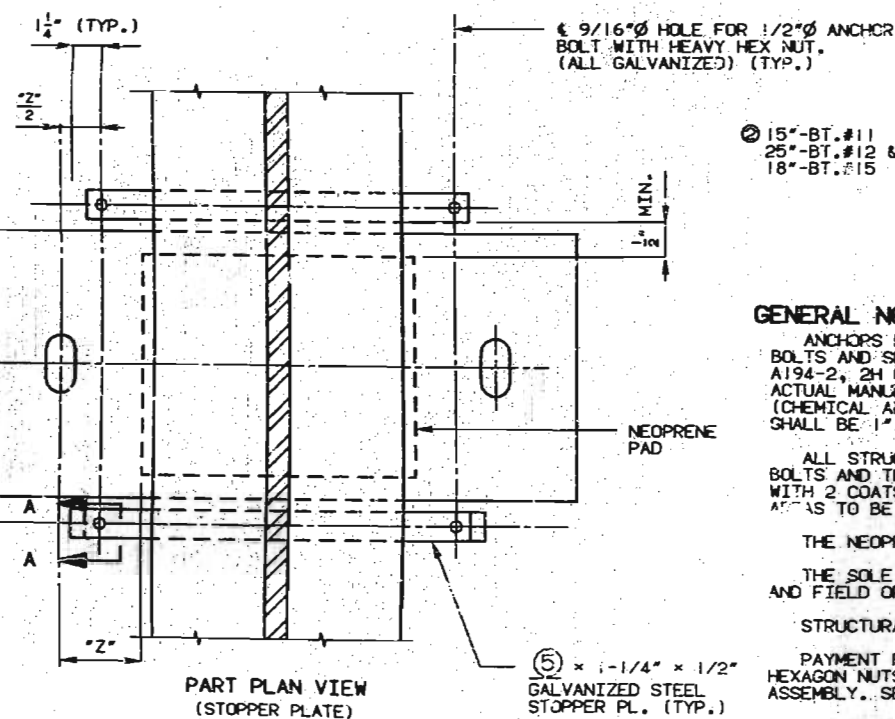
ELEVATION OF  
GALVANIZED STEEL PLATE

\*\*\* DRILLING IS REQUIRED FOR ANCHOR BOLTS AT EXISTING GIRDERS.



**NOTE:**

PAYMENT FOR ALL GALVANIZED MATERIAL SHALL BE INCLUDED IN THE COST OF PTFE BEARINGS PER EACH.  
PROVIDE A LIGHT COATING OF SILICONE GREASE (DOW-CORNING SILICONE OR EQUIVALENT), AT TOP OF BEARING, AT INSTALLATION TO PERMIT INITIAL MOVEMENT.



GENERAL NOTES:

ANCHORS BOLTS SHALL BE ① A588 STEEL SWEDGED BOLTS AND SHALL EXTEND ② INTO THE CONCRETE WITH A194-2, 2H OR A563-C, C3, D, DH, DH3 HEAVY HEXAGON NUTS. ACTUAL MANUFACTURER'S CERTIFIED MILL TEST REPORTS (CHEMICAL AND MECHANICAL) SHALL BE PROVIDED. (SWEDGING SHALL BE 1" LESS THAN THE EXTENSION INTO THE CONCRETE.)

ALL STRUCTURAL STEEL FOR THE SOLE PLATE, ANCHOR BOLTS AND THE HEAVY HEXAGON NUTS SHALL BE PAINTED WITH 2 COATS (MIN.) (5 MILS MIN.) OF SYSTEM E. WELD AREAS TO BE TOUCHED UP AFTER ASSEMBLY.

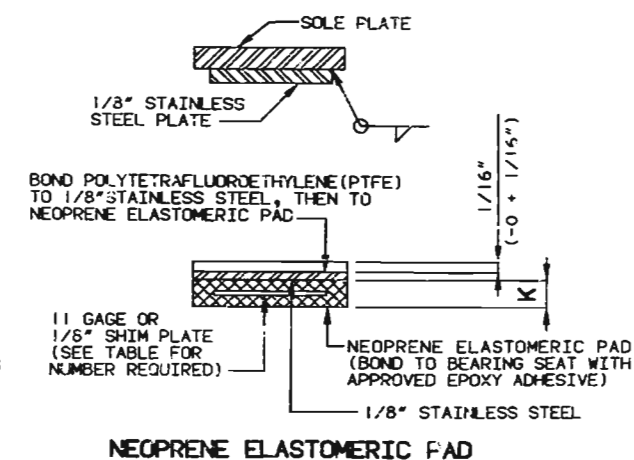
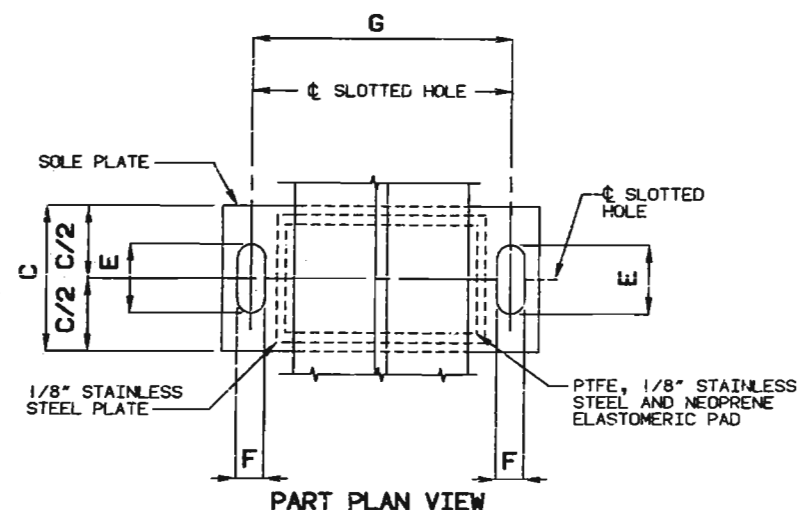
THE NEOPRENE ELASTOMERIC PADS SHALL BE 70 DUREOMETER.

THE SOLE PLATE SHALL BE FURNISHED WITH THE BEARING AND FIELD OR SHOP WELDED TO THE GIRDERS.

STRUCTURAL STEEL FOR THE SOLE PLATE SHALL BE A-36.

PAYMENT FOR THE SOLE PLATE, ANCHOR BOLTS AND HEAVY HEXAGON NUTS SHALL BE INCLUDED IN THE COST OF THE BEARING ASSEMBLY. SEE SPECIAL PROVISIONS.

THE ACCEPTED QUANTITY OF THE ELASTOMERIC BEARING ASSEMBLIES, COMPLETE-IN-PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR TYPE "N" PTFE BEARINGS, EACH, AND LAMINATED NEOPRENE BEARING PADS (STEEL STRUCTURES), EACH.



BENT NO.	GIRDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	NUMBER OF SHIM PLATES(4)	NUMBER REQUIRED
11	1,2,4,5,6,8,&9	20"	13"	15"	28 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	13 $\frac{3}{4}$ "	24"	21 $\frac{1}{16}$ "	313 $\frac{13}{16}$ "	13 $\frac{3}{4}$ "	16"	11 $\frac{1}{2}$ "	4"	-	2	14
11	3 & 7	20"	13"	15"	28 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	13 $\frac{3}{4}$ "	24"	21 $\frac{1}{16}$ "	313 $\frac{13}{16}$ "	13 $\frac{3}{4}$ "	15"	11 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "	-	2	4
12&14	1,2,8,&9	20"	34"	36"	32 $\frac{3}{4}$ "	5 $\frac{3}{4}$ "	23 $\frac{3}{4}$ "	25 $\frac{1}{4}$ "	315 $\frac{15}{16}$ "	511 $\frac{11}{16}$ "	35 $\frac{5}{8}$ "	16"	11 $\frac{1}{2}$ "	45 $\frac{5}{8}$ "	-	5	16
12&14	3 & 7	20"	34"	36"	32 $\frac{3}{4}$ "	5 $\frac{3}{4}$ "	23 $\frac{3}{4}$ "	25 $\frac{1}{4}$ "	315 $\frac{15}{16}$ "	511 $\frac{11}{16}$ "	35 $\frac{5}{8}$ "	19"	11 $\frac{1}{2}$ "	31 $\frac{1}{8}$ "	-	5	8
12&14	4,5, & 6	20"	34"	36"	32 $\frac{3}{4}$ "	5 $\frac{3}{4}$ "	23 $\frac{3}{4}$ "	25 $\frac{1}{4}$ "	315 $\frac{15}{16}$ "	511 $\frac{11}{16}$ "	35 $\frac{5}{8}$ "	20"	11 $\frac{1}{2}$ "	25 $\frac{5}{8}$ "	-	5	12
15	1,2,4,5,6,8,&9	16"	26"	28"	26 $\frac{3}{4}$ "	6 $\frac{3}{8}$ "	21 $\frac{1}{4}$ "	20 $\frac{3}{4}$ "	315 $\frac{15}{16}$ "	511 $\frac{11}{16}$ "	3"	16"	11 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	-	4	14
15	3 & 7	16"	26"	28"	26 $\frac{3}{4}$ "	6 $\frac{3}{8}$ "	21 $\frac{1}{4}$ "	20 $\frac{3}{4}$ "	315 $\frac{15}{16}$ "	511 $\frac{11}{16}$ "	3"	15"	11 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	-	4	4

(\*) THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYERS OF ELASTOMER AND MOLDED BEARINGS

TOTAL BEARINGS 72

(\*) THE REQUIRED SHIM PLATE SHALL BE PLACED BETWEEN LAYERS OF ELASTOMER AND MOLDED TOGETHER TO FORM AN INTEGRAL UNIT.

~~\*\*\*~~ 36 NORTHBOUND LANE & 36 SOUTHBOUND LANE.

DETAILS OF TYPE 'N' PTFE BEARINGS  
BENT NO. 11,12,14,&15

ST. LOUIS-JEFFERSON COUNTIES

A-609R

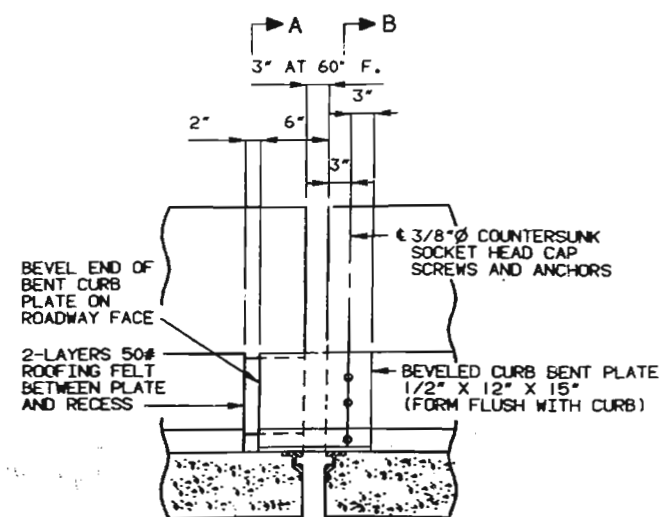
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS

SHEET NO. 158 OF 238

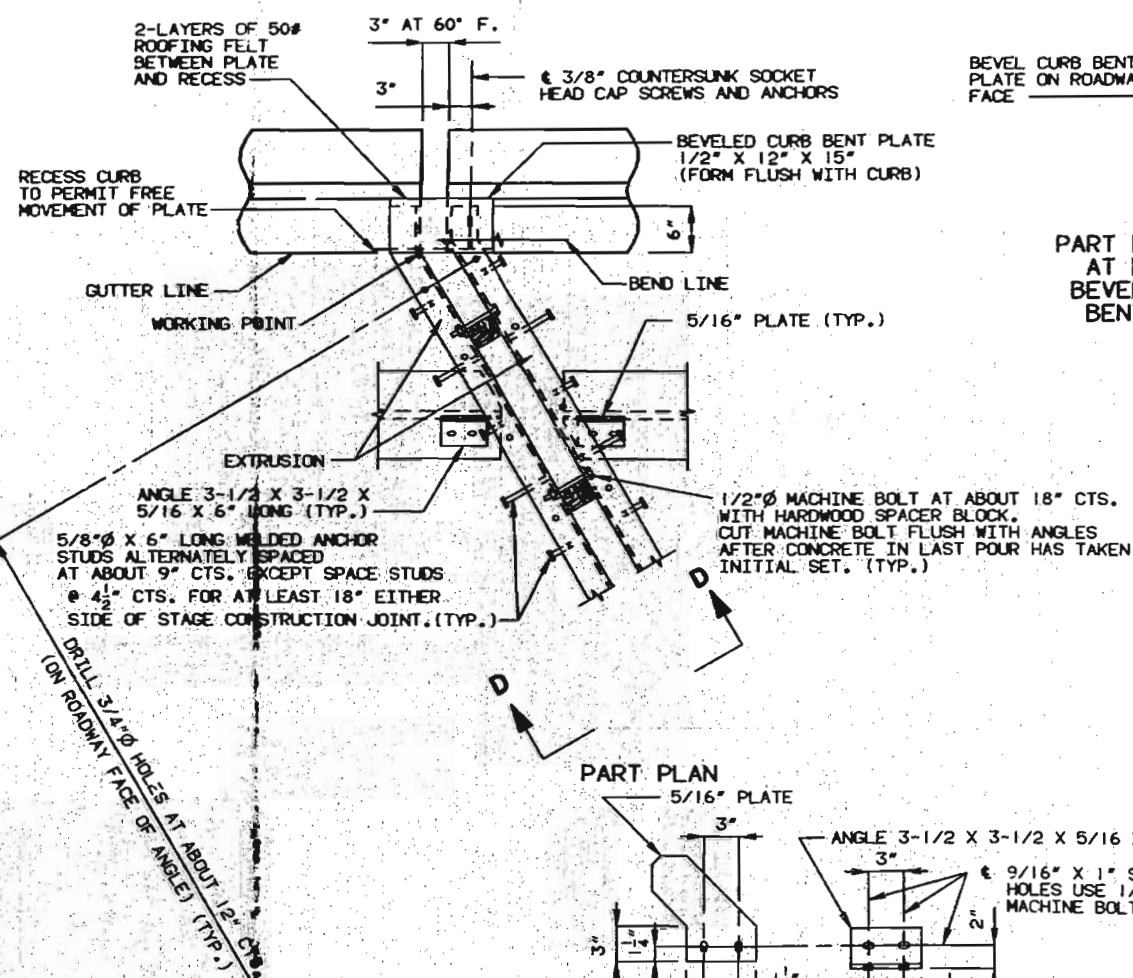
BRG 'N' , BRG3.31, STL, F, A	
STL 'N' BRG	REVISED
JAN. 1980	JAN. 1992

DETAILED MAR 19 92  
CHECKED JUNE 19 92

STATE	PRCJ. NO.	SHEET NO.
MO.		160

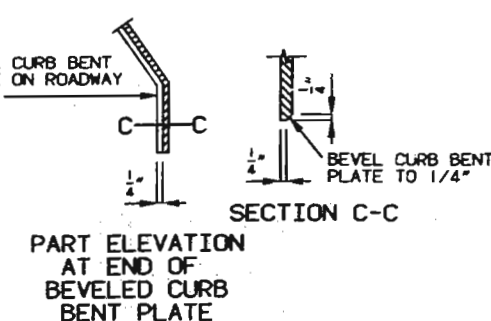


PART ELEVATION OF BARRIER CURB



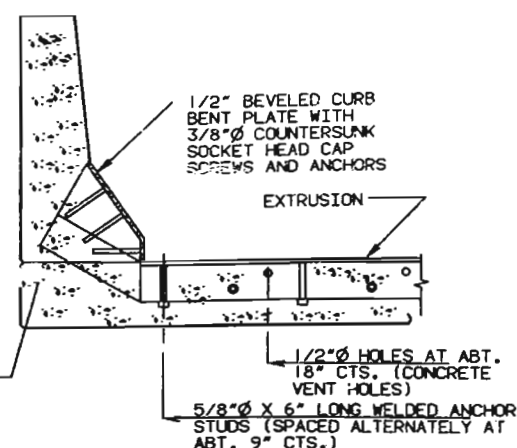
DETAIL "B"

DETAILS OF STRIP SEAL NEAR BENT NO. 4 & 7



PART SECTION B-B

SECTION C-C



PART SECTION A-A

# GENERAL NOTES:

STRUCTURAL STEEL FOR EXPANSION DEVICE SHALL BE FABRICATED IN ONE SECTION, PER CONST. STAGE.

THE EXPANSION DEVICE SHALL BE BENT TO CONFORM TO CROWN AND GRADE OF ROADWAY.

STRUCTURAL STEEL FOR THE ARMORED JOINT SHALL BE GRADE A36.

ANCHORS FOR SEAL ARMOR SHALL BE APPROVED STUD WELDED ANCHORS (C1010 THRU C1020).

PLAN DIMENSIONS ARE BASED ON INSTALLATION AT 60°F.

DIMENSION ① SHALL BE INCREASED  $\frac{3}{16}$ " FOR EACH 10° FALL IN TEMPERATURE AND DECREASED  $\frac{3}{16}$ " FOR EACH 10° RISE IN TEMPERATURE AT INSTALLATION.

## NOTES FOR STRIP SEAL:

THE EXPANSION DEVICE SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER AND AS SET FORTH IN THE SPECIAL PROVISIONS.

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO FABRICATIONS.

ALL WELDS SHALL CONFORM TO SECTION 712 OF THE STANDARD SPECIFICATIONS.

ALL STEEL SHALL BE A-36 EXCEPT STEEL EXTRUSIONS SHALL BE A.S.T.M. A-588 OR A-36.

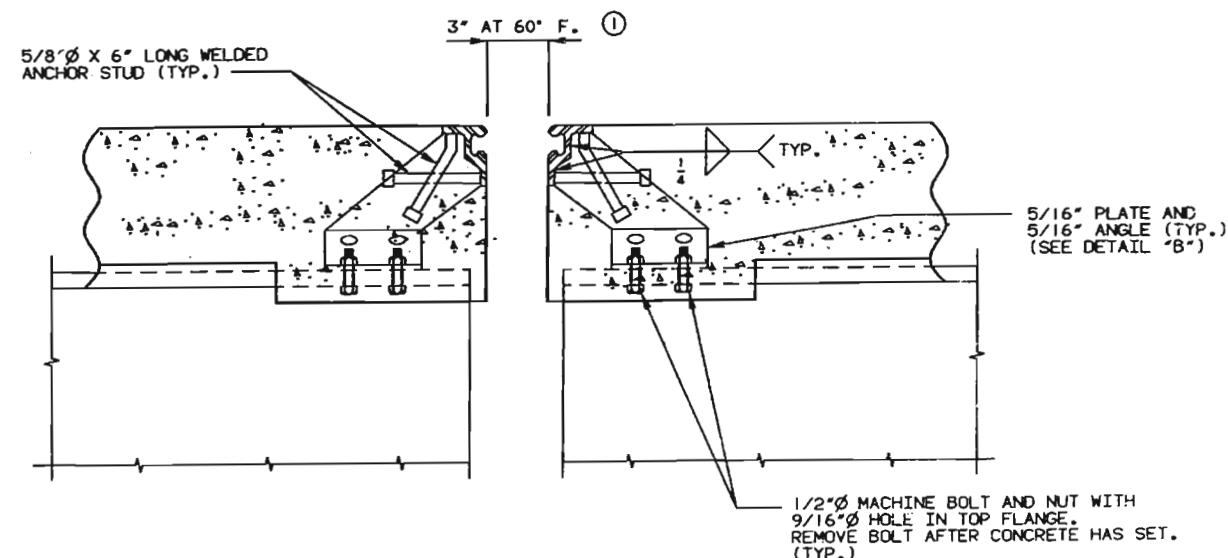
NEOPRENE EXTRUSION SHALL MEET A.S.T.M. D-2628.

PAYMENT FOR STEEL EXTRUSIONS AND NEOPRENE EXTRUSIONS SHALL BE MADE UNDER CONTRACT UNIT PRICE FOR "STRIP SEAL EXPANSION DEVICE".

PAYMENT FOR FURNISHING, PAINTING, AND PLACING STRUCTURAL STEEL PLATES AND ANGLES SHALL BE INCLUDED IN CONTRACT UNIT PRICE FOR "STRIP SEAL EXPANSION DEVICE".

SPLICES OF STEEL EXTRUSION SHALL DEVELOP FULL STRENGTH.

ANCHORS FOR THE EXTRUSIONS OF ARMOR SHALL BE APPROVED WELDED STUDS (C1010 THRU C1020).



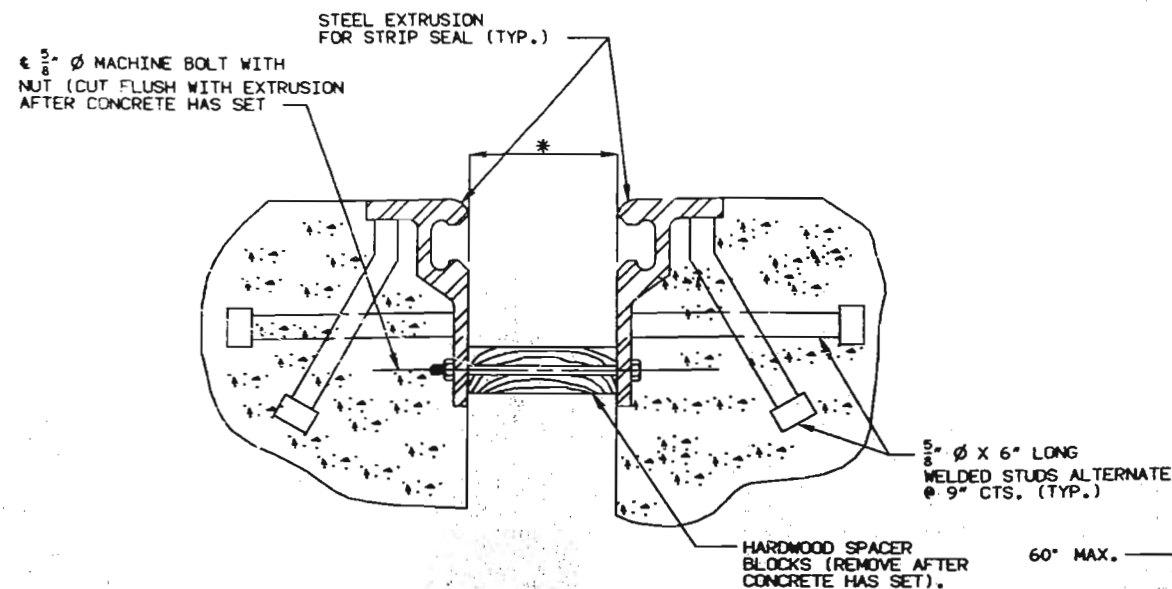
PART SECTION D-D

FIELD DRILL HOLES AT EXISTING STRINGERS.

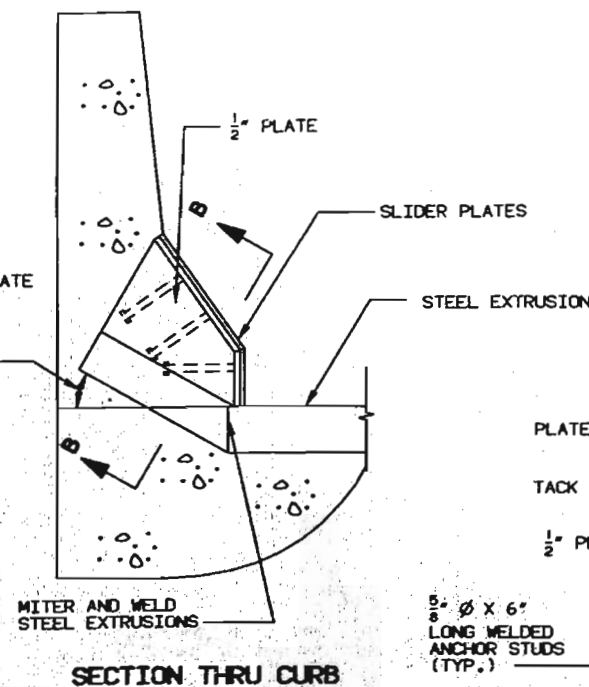


STATE	PROJ. NO.	SHEET NO.
MO.		161

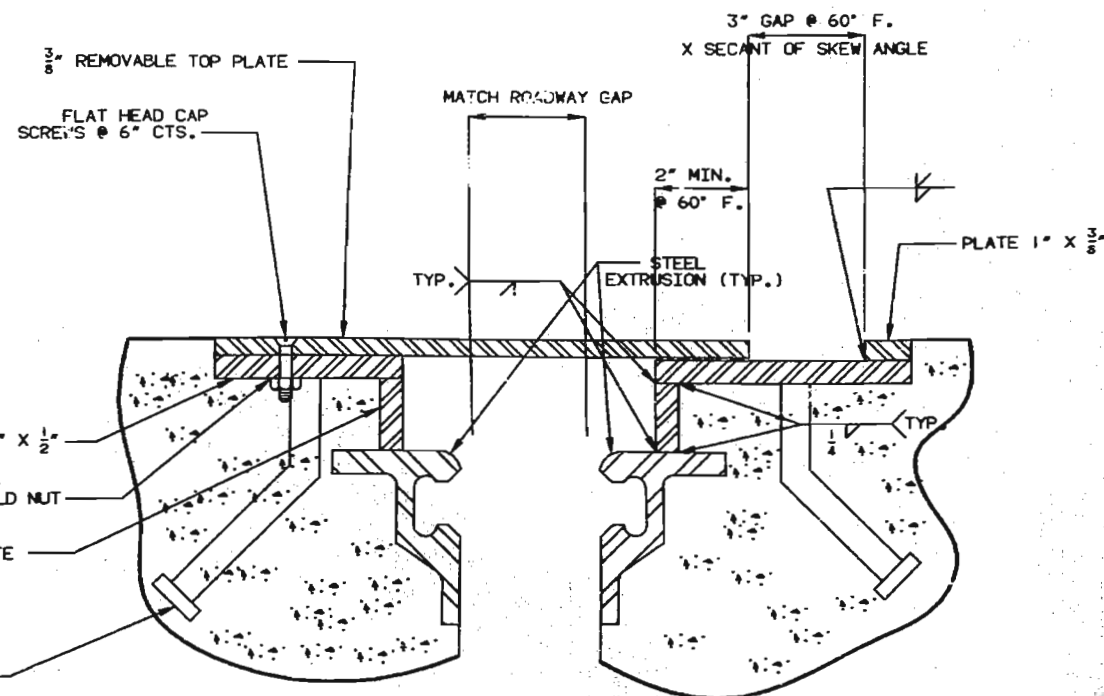
NOTE:  
\* 3" GAP @ 60° F. REQUIRED MOVEMENT SHALL BE 3".



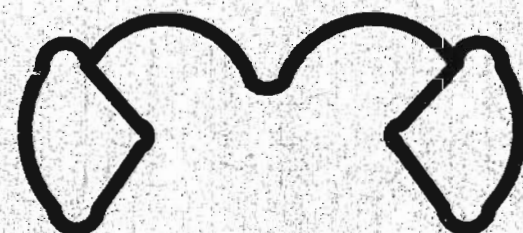
PART SECTION THRU  
EXPANSION DEVICE



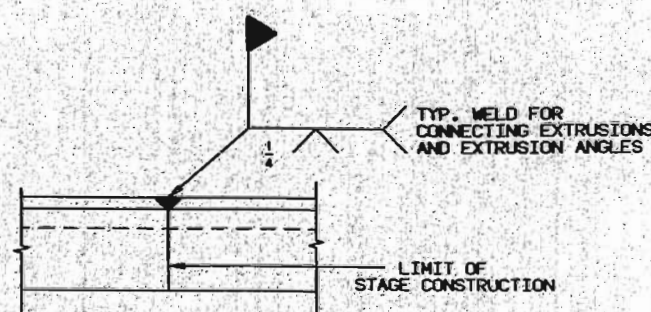
SECTION THRU CURB



SECTION B-B



STRIP SEAL GLAND  
MOVEMENT RATING 3"



SECTION A-A

DETAILS OF STRIP SEAL  
NEAR BENTS NO. 4 & 7

NOTE:  
WORK THIS SHEET WITH SHEET NO. 159.

NOTES FOR STRIP SEAL:  
THE EXPANSION DEVICE SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER AND AS SET FORTH IN THE SPECIAL PROVISIONS. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO FABRICATIONS. ALL WELDS SHALL CONFORM TO SECTION 712 OF THE STANDARD SPECIFICATIONS. ALL STEEL SHALL BE A-36 EXCEPT STEEL EXTRUSIONS SHALL BE A.S.T.M. A-588 OR A-36. NEOPRENE EXTRUSION SHALL MEET A.S.T.M. D-2628. PAYMENT FOR STEEL EXTRUSIONS AND NEOPRENE EXTRUSIONS SHALL BE MADE UNDER CONTRACT UNIT PRICE FOR "STRIP SEAL EXPANSION DEVICE". PAYMENT FOR FURNISHING, PAINTING, AND PLACING STRUCTURAL STEEL PLATES AND ANGLES SHALL BE INCLUDED IN CONTRACT UNIT PRICE FOR "STRIP SEAL EXPANSION DEVICE".

SPLICES OF STEEL EXTRUSION SHALL DEVELOP FULL STRENGTH.

ANCHORS FOR THE EXTRUSIONS OR ARMOR SHALL BE APPROVED WELDED STUDS (C1010 THRU C1020).

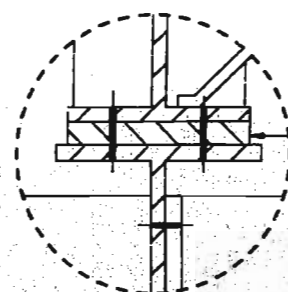
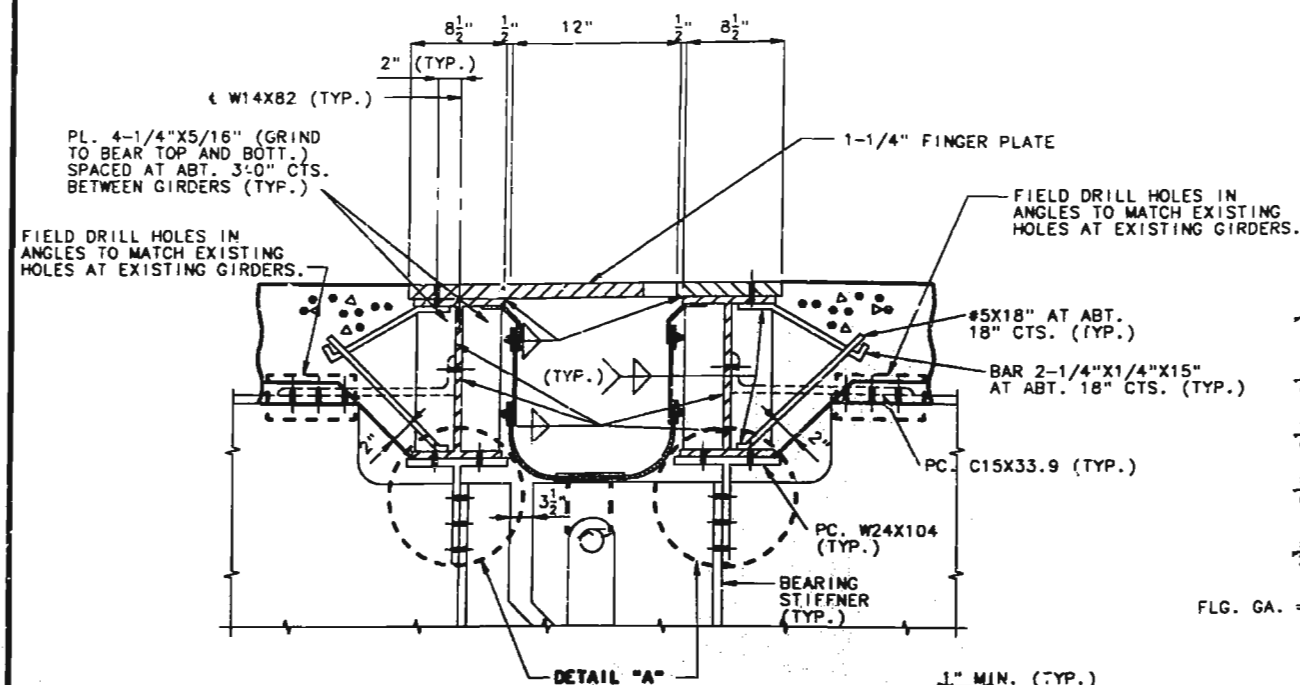
173  
DETAILED APRIL 1993  
CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 160 OF 238.

ST. LOUIS-JEFFERSON COUNTIES A-609R

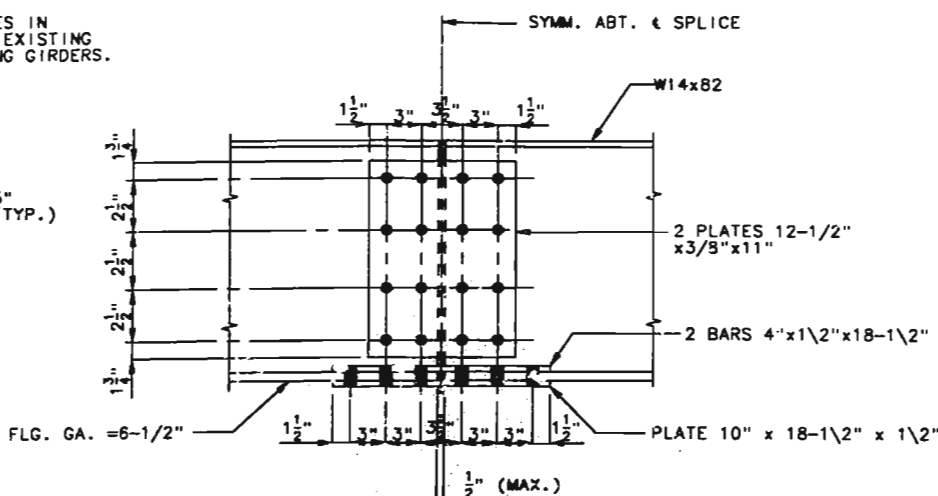
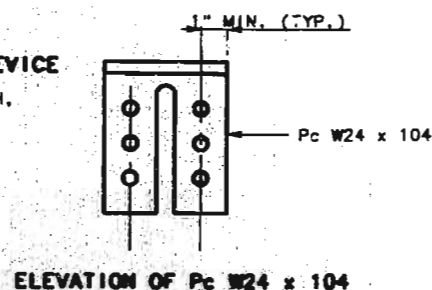
STATE	PROJ. NO.	SHEET NO.
MO.		



PART SECTION THRU EXPANSION DEVICE

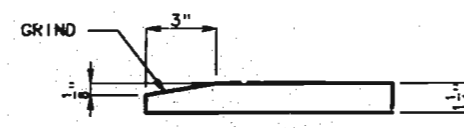
NOTE: FOR DETAILS OF DRAINAGE TROUGH, SEE SHEET NOS. 162 & 163.

OPTIONAL:  
ONE FULL SIZE SHIM PLATE  
THICKNESS = 1/2" MIN.  
1" MAX.

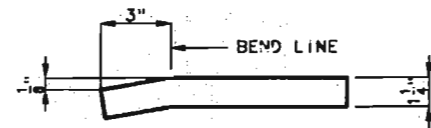


NOTE: 13/16" Ø HOLES FOR 3/4" Ø HIGH STRENGTH BOLTS

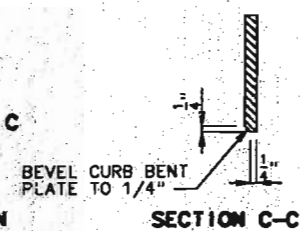
EXP. DEVICE SPLICE & STAGE CONSTRUCTION LOCATIONS



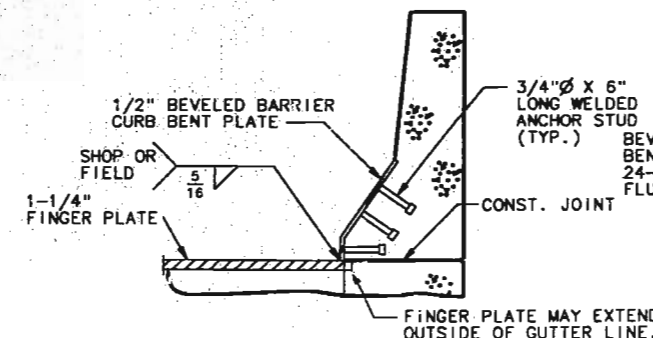
FINGER DETAIL



ALT. FINGER DETAIL



PART SECTION A-A



GENERAL NOTES:  
FINGER PLATES SHALL BE CUT WITH A MACHINE GUIDED GAS TORCH FROM ONE PLATE 26 3/8" X 1-1/4". THE SURFACE OF CUT SHALL BE PERPENDICULAR TO THE SURFACE OF THE PLATE. THE CUT SHALL NOT EXCEED 1/8" IN WIDTH. THE CENTERLINE OF CUT SHALL NOT DEVIATE MORE THAN 1/16" FROM THE POSITION OF CENTERLINE OF CUT SHOWN.

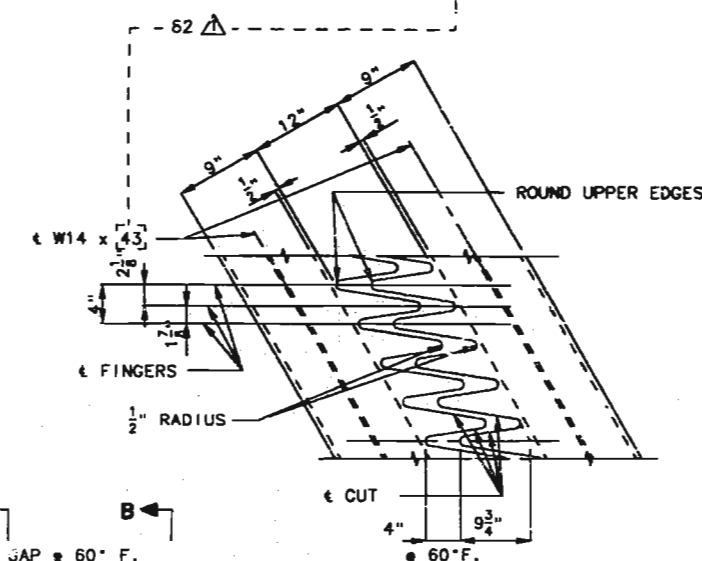
PLAN DIMENSIONS ARE BASED ON INSTALLATION AT 60°F. THE EXPANSION GAP AND OTHER DIMENSIONS SHALL BE ADJUSTED DURING INSTALLATION FOR COMPLIANCE WITH ANY TEMPERATURE CHANGE.  
NO. 5 REINFORCING BARS SHALL BE STRUCTURAL GRADE DEFORMED BARS. THE FINGER PLATE AND CURB PLATE SHALL BE PAINTED IN THE SHOP WITH TWO COATS OF AN INORGANIC ZINC PRIMER AS SPECIFIED FOR SYSTEM E TO PRODUCE A DRY FILM THICKNESS OF NOT LESS THAN 5.0 MILS. NO FINISH COAT SHALL BE APPLIED TO THE ROADWAY PLATE AND CURB PLATE.  
PAYMENT FOR FURNISHING, PAINTING AND INSTALLING STRUCTURAL STEEL FOR THE EXPANSION DEVICE AND THE EXP. DEVICE SPLICE WILL BE MADE AT THE CONTRACT UNIT PRICE FOR EXPANSION DEVICE (FINGER PLATE) PER LIN. FT.

ALL HOLES SHOWN FOR CONNECTIONS TO BE SUBPUNCHED 11/16" Ø AND REAMED TO 13/16" Ø IN FIELD.

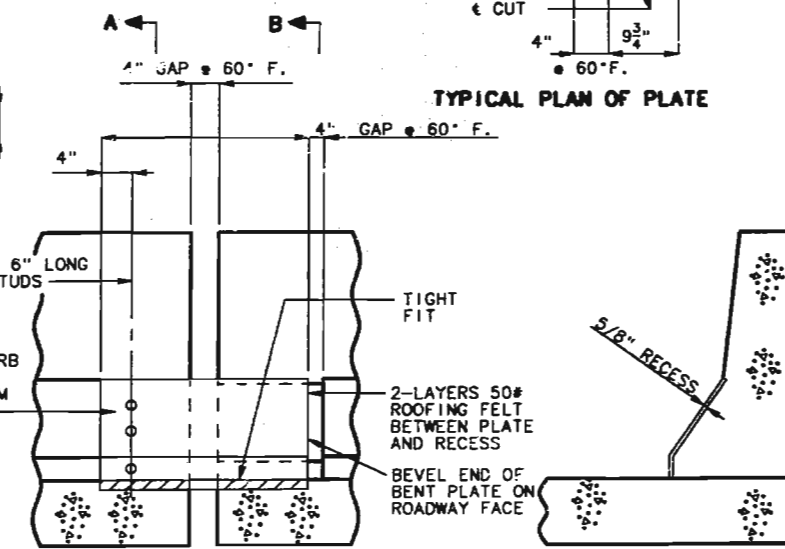
1-1/4" FINGER PLATE AND W14x43 SHALL BE BENT TO CONFORM TO CROWN OF ROADWAY.

LONGITUDINAL REINFORCING STEEL SHALL BE PLACED SO THAT ENDS SHALL NOT BE MORE THAN 1" ± FROM WEB OF W14x43 AT EXPANSION DEVICE.

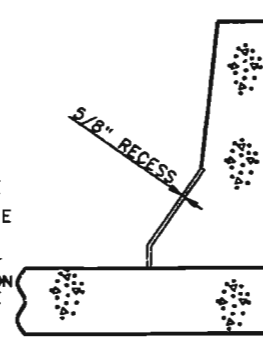
MATERIAL FOR THE EXPANSION DEVICE AND THE SPLICE SHALL BE A36 STRUCTURAL GRADE STEEL, FABRICATED AND INSTALLED IN ACCORDANCE WITH SECTION 712 OF STANDARD SPECIFICATION.



TYPICAL PLAN OF PLATE



ELEVATION OF BARRIER CURB



PART SECTION B-B

DETAILS OF FINGER PLATE EXPANSION DEVICE AT BENT NO. 11 & 15.

174  
DETAILED JAN 1992  
CHECKED JUNE 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS. Δ REVISED 12-8-1993

SHEET NO. 161 OF 238.

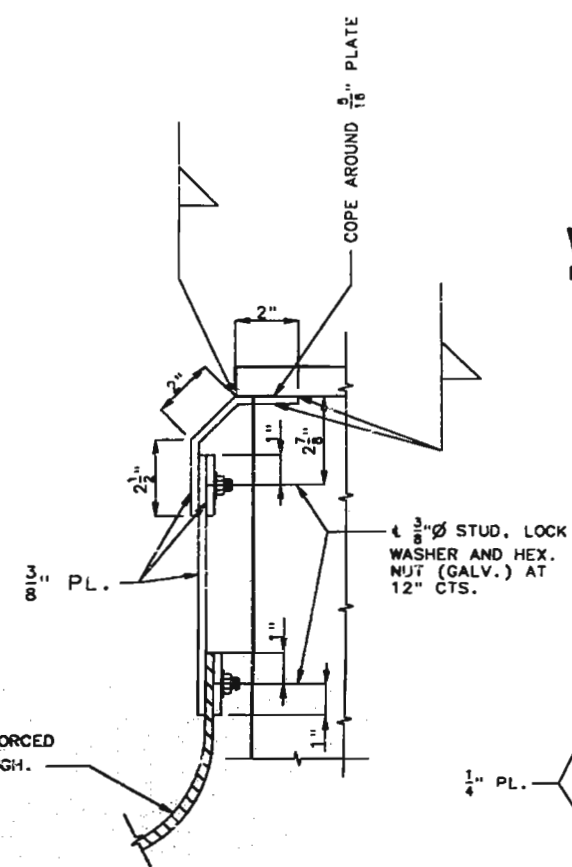
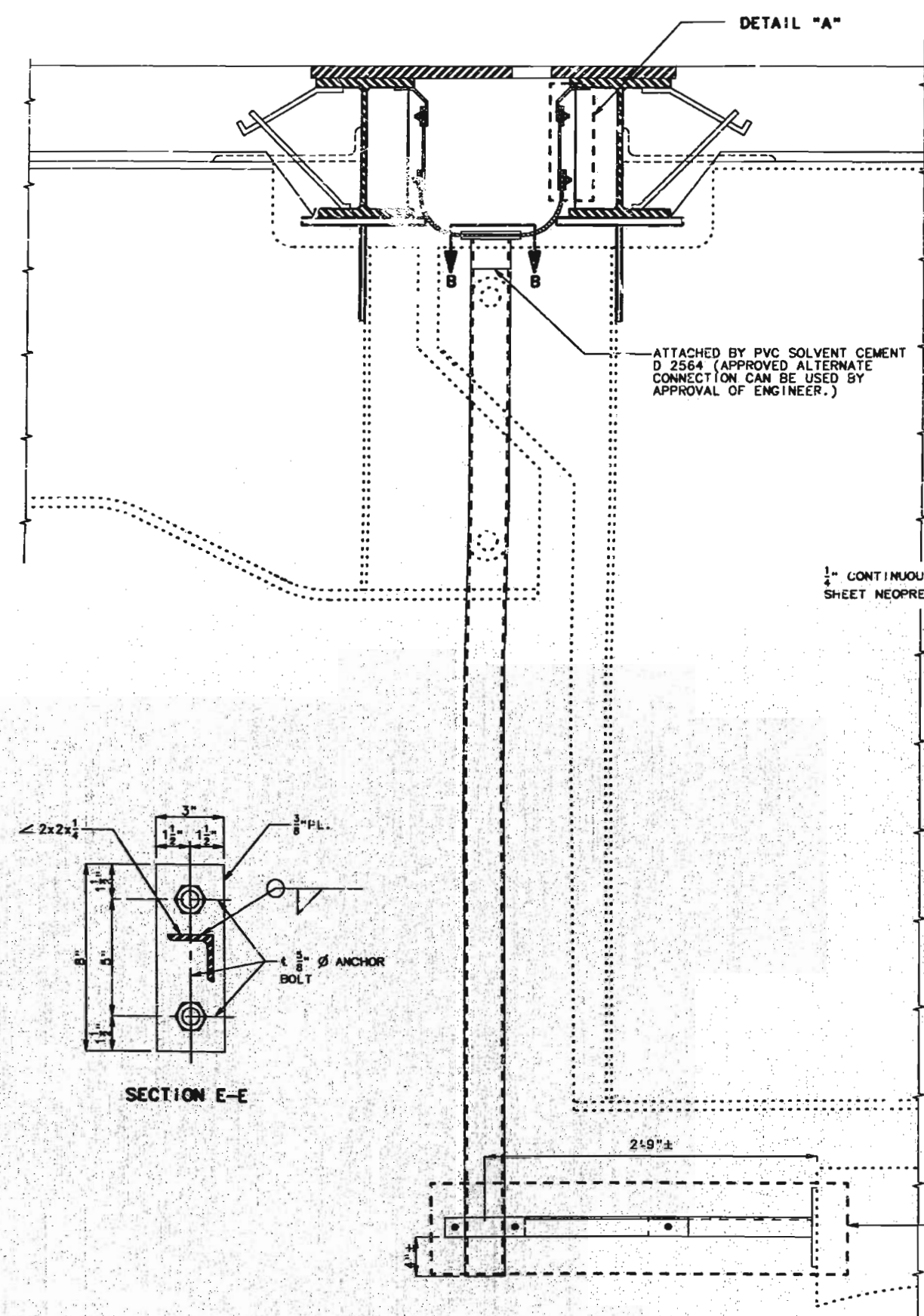
ST. LOUIS-JEFFERSON

COUNTIES

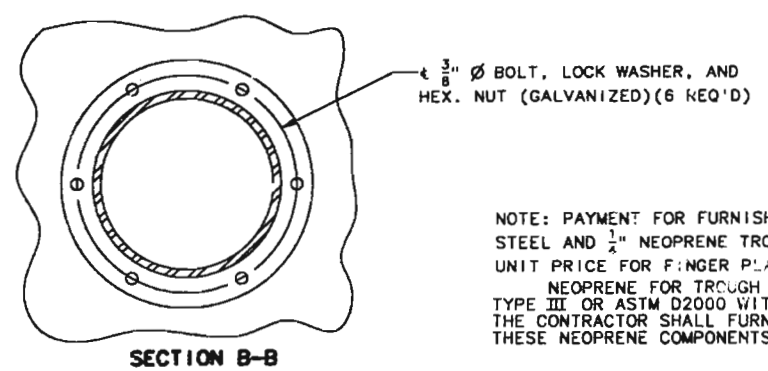
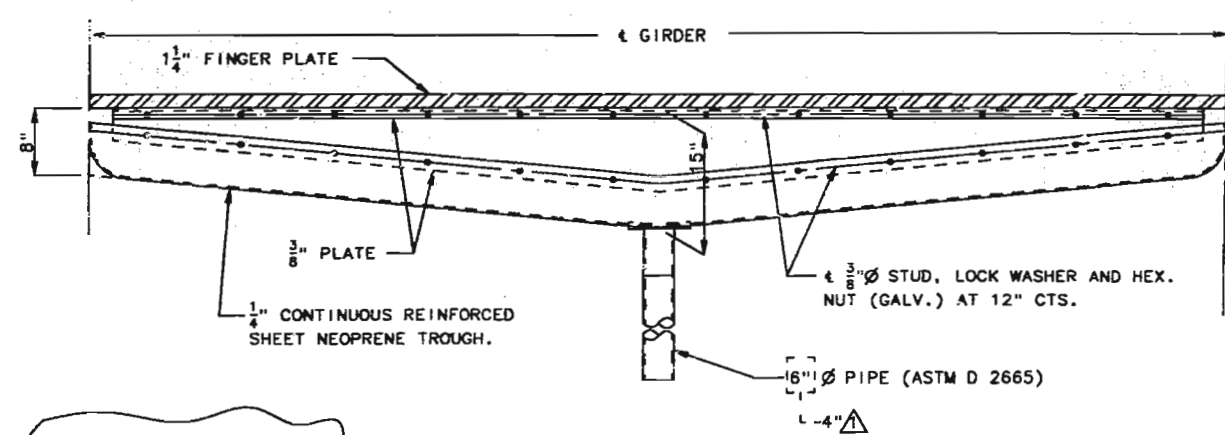
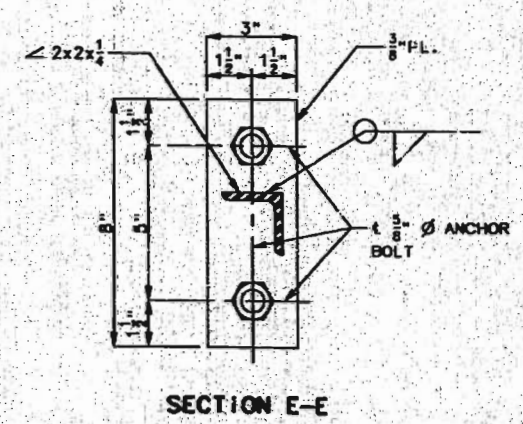
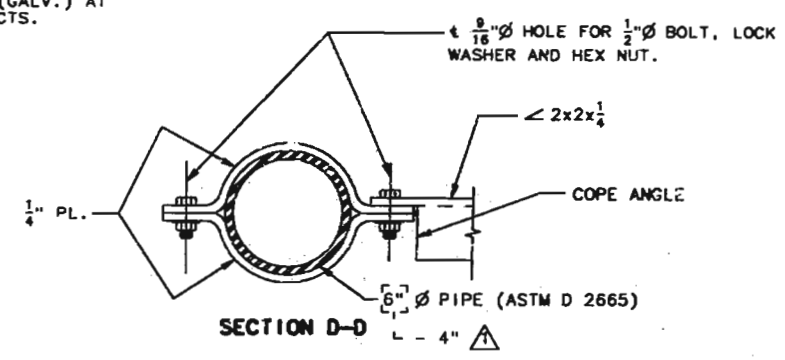
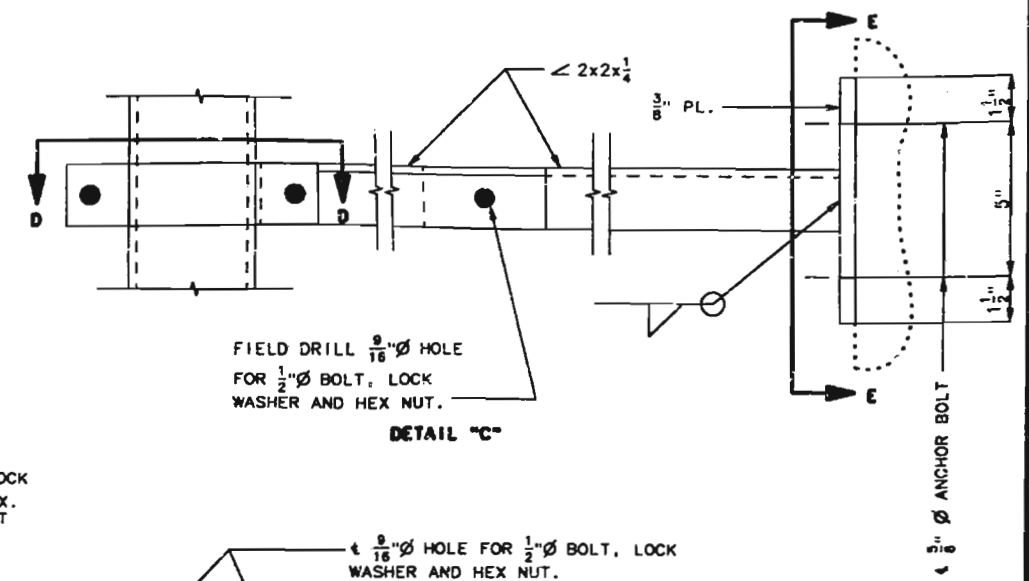
A-609R



STATE	PROJ. NO.	SHEET NO.
MO.		



DETAIL "A"



NOTE: PAYMENT FOR FURNISHING AND INSTALLING THE STRUCTURAL STEEL AND 1/2" NEOPRENE TROUGH WILL BE MADE AT THE CONTRACT UNIT PRICE FOR FINGER PLATE EXPANSION DEVICE PER LINEAR FOOT. NEOPRENE FOR TROUGH SHALL MEET THE REQUIREMENTS OF ASTM D3253 TYPE III OR ASTM D2000 WITH A CALL OUT OF 2 BC 615 A14 B14 C12 F17. THE CONTRACTOR SHALL FURNISH MANUFACTURER'S CERTIFICATIONS FOR THESE NEOPRENE COMPONENTS.

DRAINAGE DETAILS AT PIER NO. 11

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

REVISD 1-12-1994

SHEET NO. 162 OF 238.

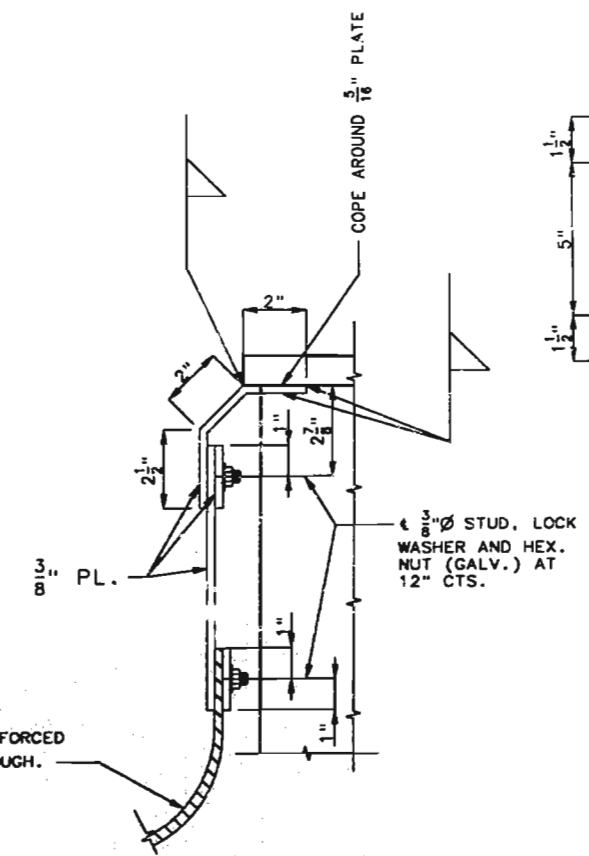
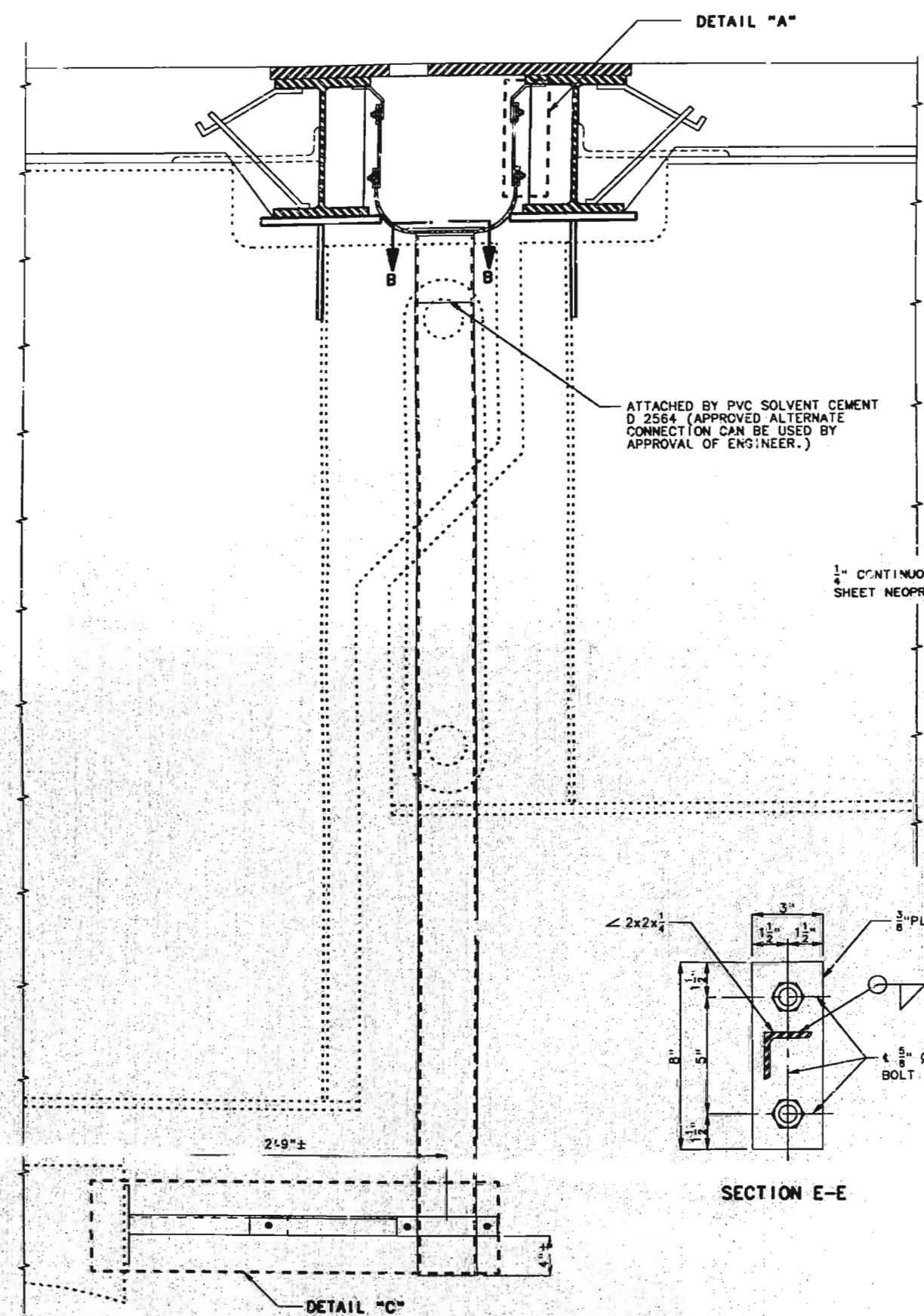
ST. LOUIS-JEFFERSON COUNTIES A-609R

175

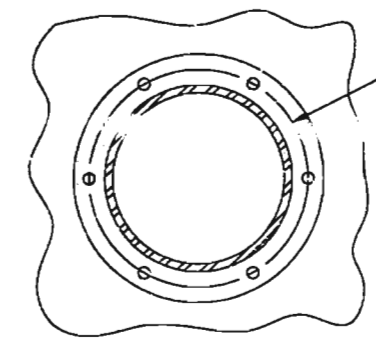
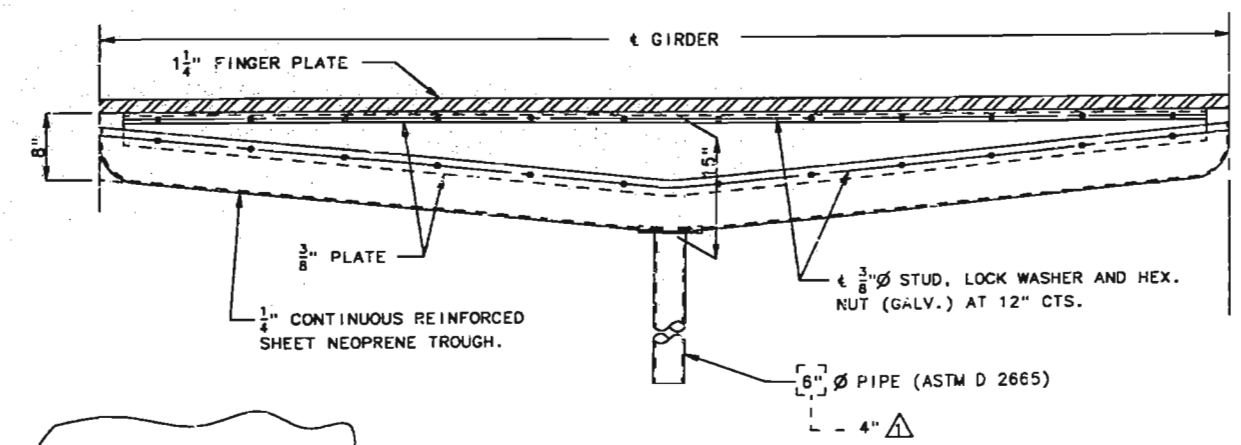
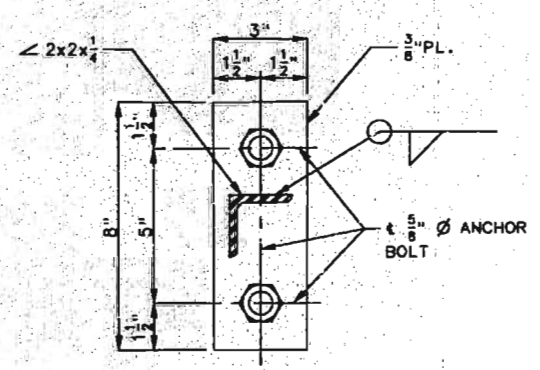
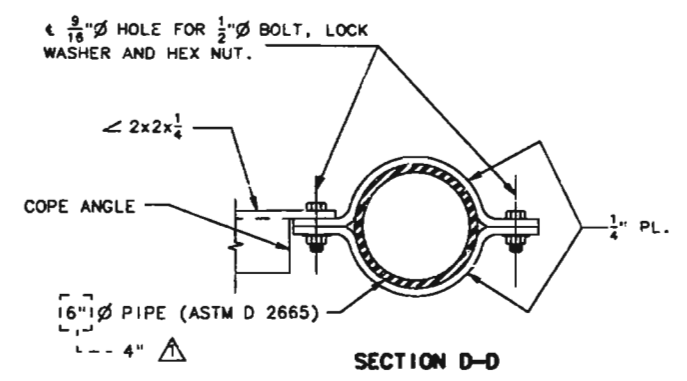
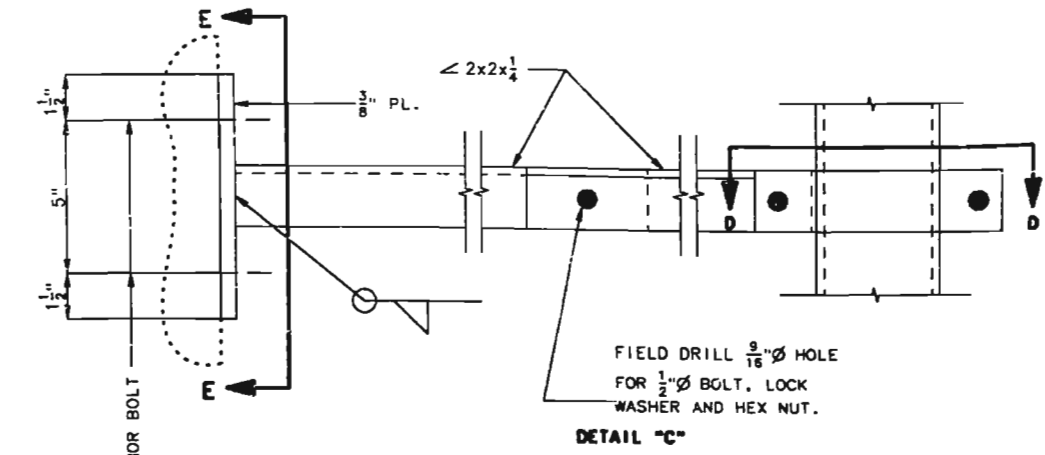
DETAILED APRIL 1993  
CHECKED APRIL 1993



STATE	PROJ. NO.	SHEET NO.
MO.		



DETAIL "A"



NOTE: PAYMENT FOR FURNISHING AND INSTALLING THE STRUCTURAL STEEL AND  $\frac{1}{4}$ " NEOPRENE TROUGH WILL BE MADE AT THE CONTRACT UNIT PRICE FOR FINGER PLATE EXPANSION DEVICE PER LINEAR FOOT. NEOPRENE FOR TROUGH SHALL MEET THE REQUIREMENTS OF ASTM D3253 TYPE III OR ASTM D2000 WITH A CALL OUT OF 2 BC 615 A14 B14 C12 F17. THE CONTRACTOR SHALL FURNISH MANUFACTURER'S CERTIFICATIONS FOR THESE NEOPRENE COMPONENTS.

DRAINAGE DETAILS AT PIER NO. 15

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

REVISED 1-12-1994

SHEET NO. 163 OF 238.

ST. LOUIS-JEFFERSON

COUNTIES

A-609R

176

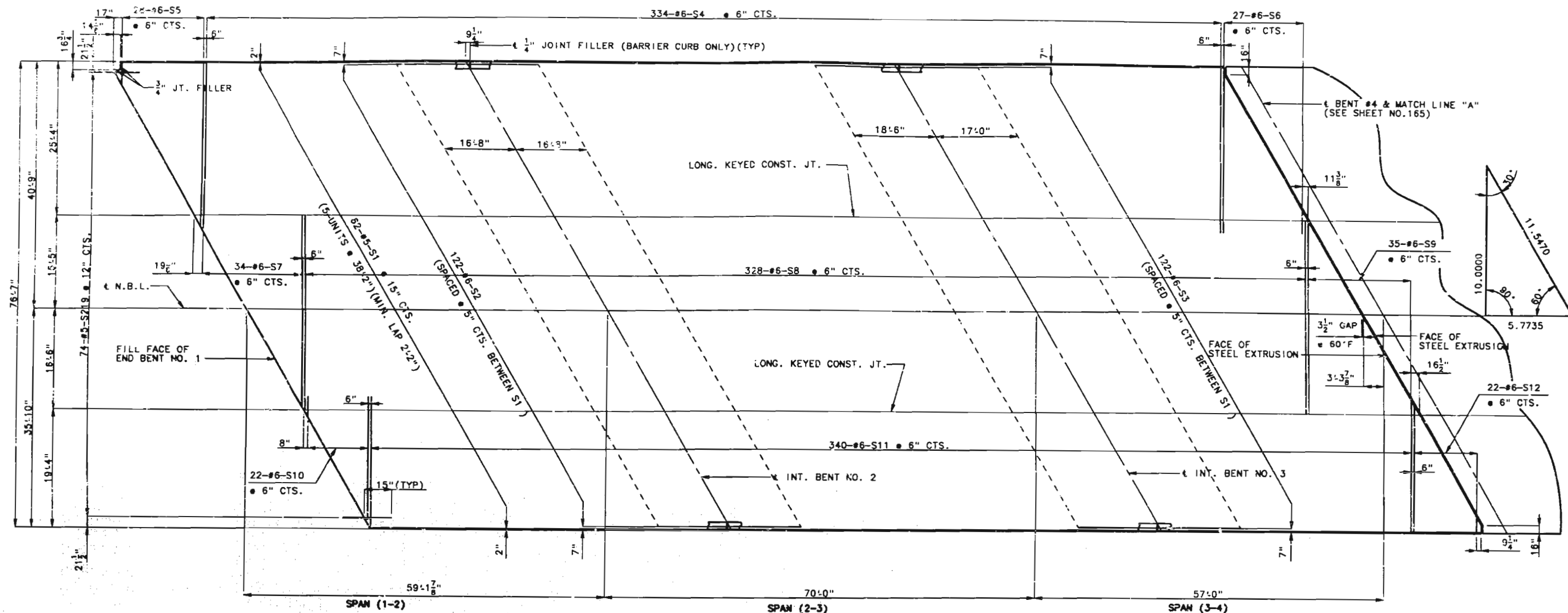
DETAILED APRIL 19 93  
CHECKED APRIL 19 93

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191,  
192, & 193.  
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER  
CURB NOT SHOWN SEE SHEETS NOS. 194, 195, 196, & 197.

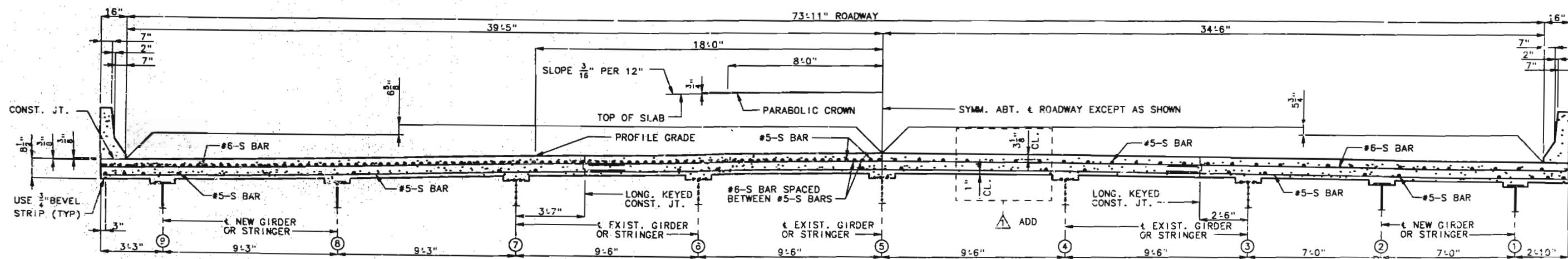
NOTE: FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159 & 160.  
FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING  
DIAGRAM SEE SHEET NOS. 187 & 189.  
FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.

NOTE: FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7  
FOR DETAILS OF BRIDGE APPROACH SLAB, SEE SHEET NO. 205.

STATE	PROJ. NO.	SHEET NO.
MO.		



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF NORTHBOUND LANE



HALF SECTION NEAR INT. BENTS

TYPICAL SECTION THRU SLAB (N.B.L.)

HALF SECTION NEAR CENTER OF SPANS

177  
DETAILED JAN. 1992  
CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.  $\Delta$  REVISED 12-8-1993

SHEET NO. 134 OF 238

ST. LOUIS-JEFFERSON

COUNTIES

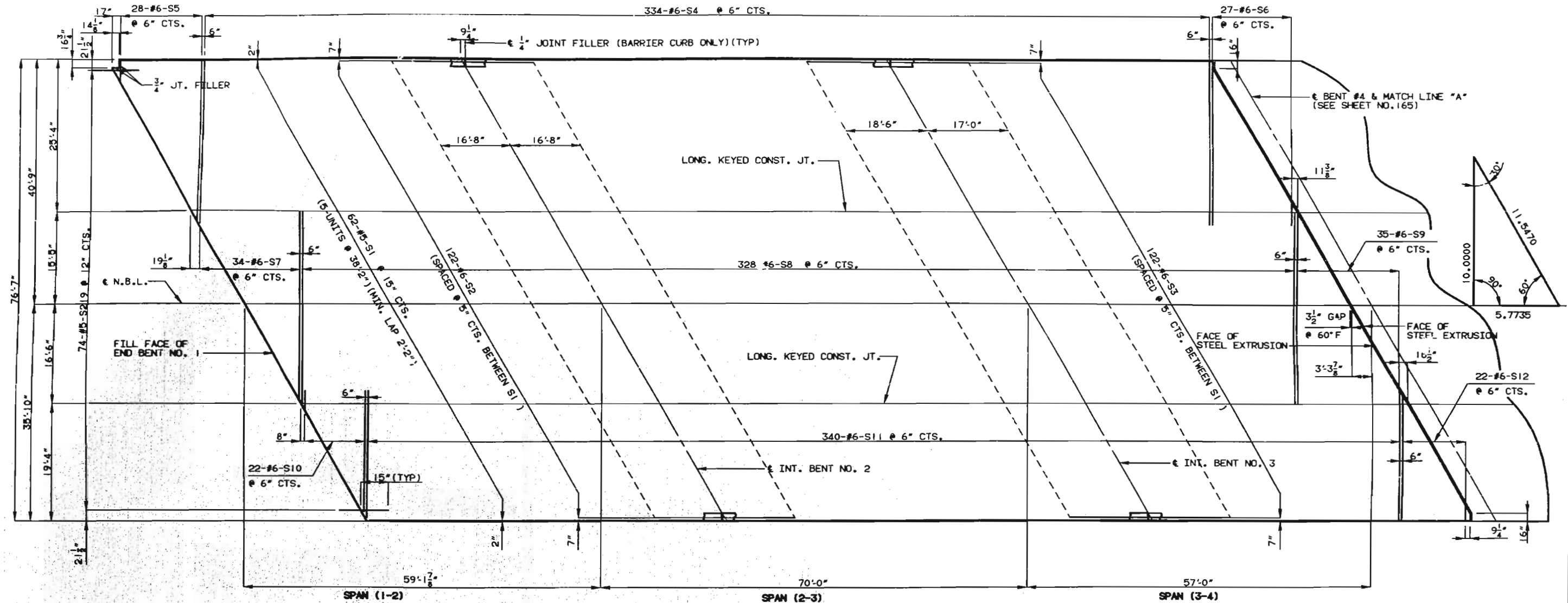
A-609R

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191,  
192, & 193.  
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER  
CURB NOT SHOWN SEE SHEETS NOS. 194, 195, 196, & 197.

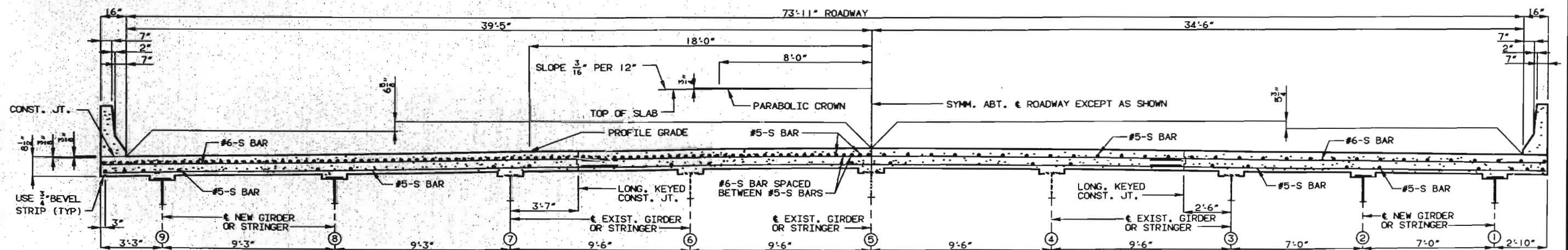
NOTE: FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159 & 160.  
FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING  
DIAGRAM SEE SHEET NOS. 187 & 189.  
FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.

NOTE: FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7  
FOR DETAILS OF BRIDGE APPROACH SLAB, SEE SHEET NO. 205.

STATE	PROJ. NO.	SHEET NO.
MO.		165



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF NORTHBOUND LANE



HALF SECTION NEAR INT. BENTS

TYPICAL SECTION THRU SLAB (N.B.L.)

HALF SECTION NEAR CENTER OF SPANS

178  
DETAILED JAN. 1992  
CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 164 OF 238

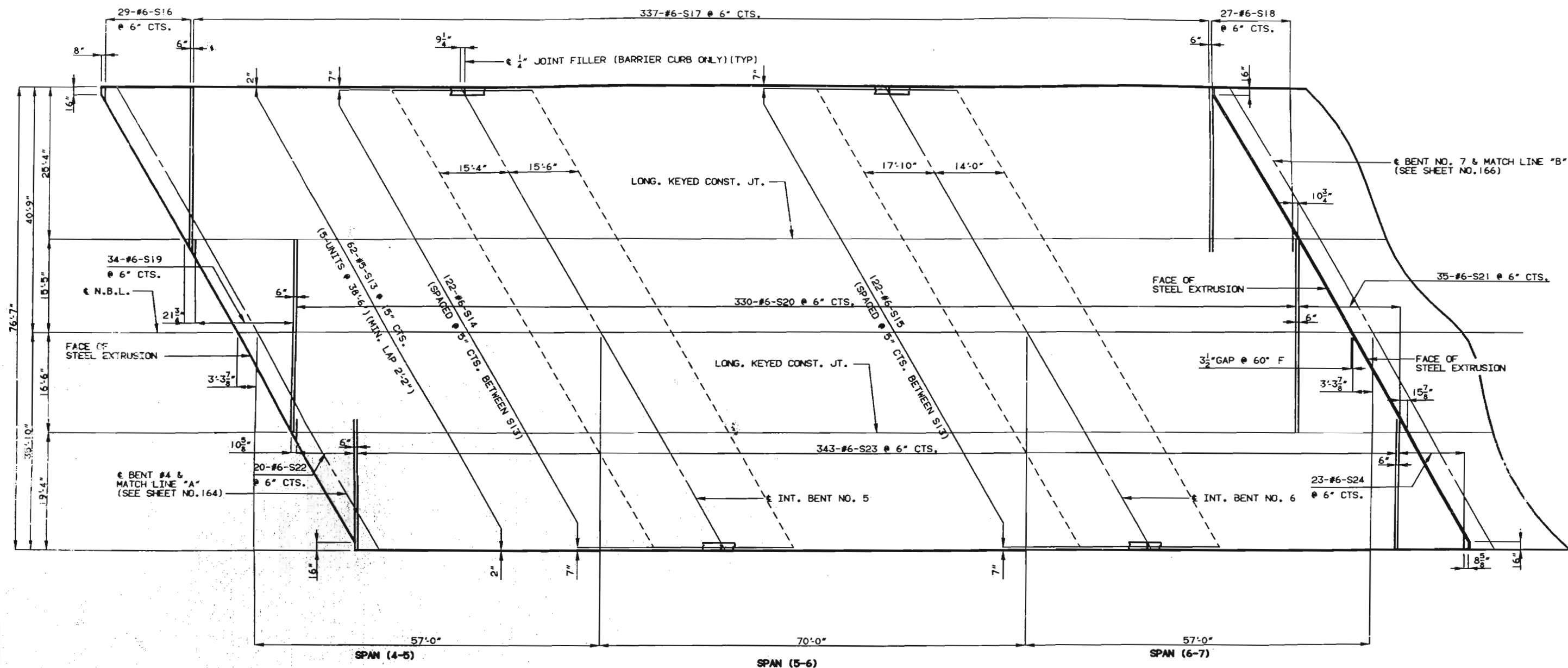
ST. LOUIS-JEFFERSON

COUNTIES

A-609R



STATE	PROJ. NO.	SHEET NO.
MO.		166



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF NORTHBOUND LANE

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER  
 CURB NOT SHOWN SEE SHEETS NOS. 194, 195, 196, & 197.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159 & 160.  
 FOR SECTION THRU SLAB SEE SHEET NO. 164.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING  
 DIAGRAM SEE SHEET NOS. 187 & 189.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.  
 FOR DETAILS OF STAGE CONSTRUCTION AND  
 TRAFFIC HANDLING SEE SHEET NO. 7.

179  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

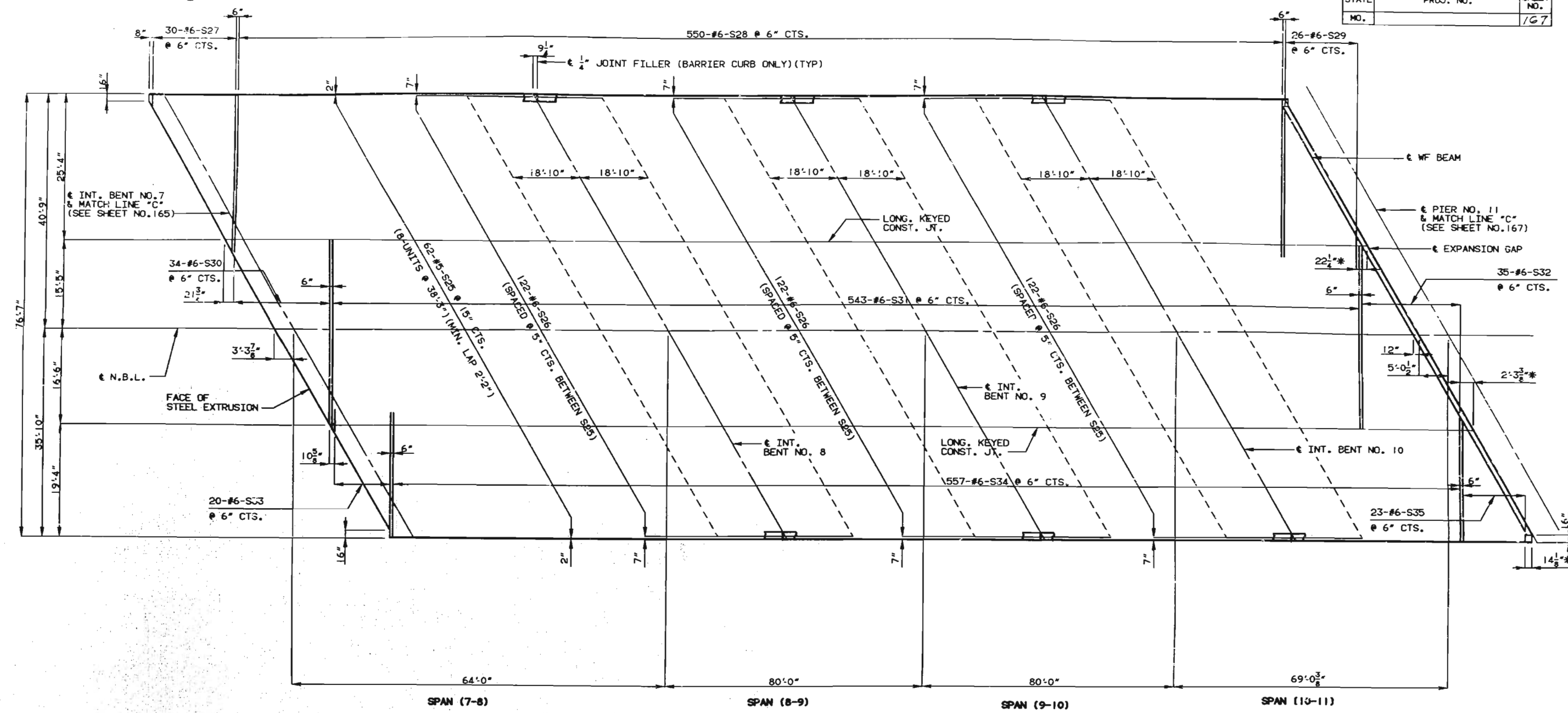
SHEET NO. 165 OF 238

ST. LOUIS-JEFFERSON

COUNTIES

A-609R

STATE	PROJ. NO.	SHEET NO.
MO.		167



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF NORTHBOUND LANE

\* DIMENSION IS FROM EDGE OF EXPANSION GAP TO C OF REINFORCING BAR.

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
 NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NOS. 194, 195, 196, & 197.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159, 160, & 161.  
 FOR SECTION THRU SLAB SEE SHEET NO. 164.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NOS. 187, & 189.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

180-081

DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

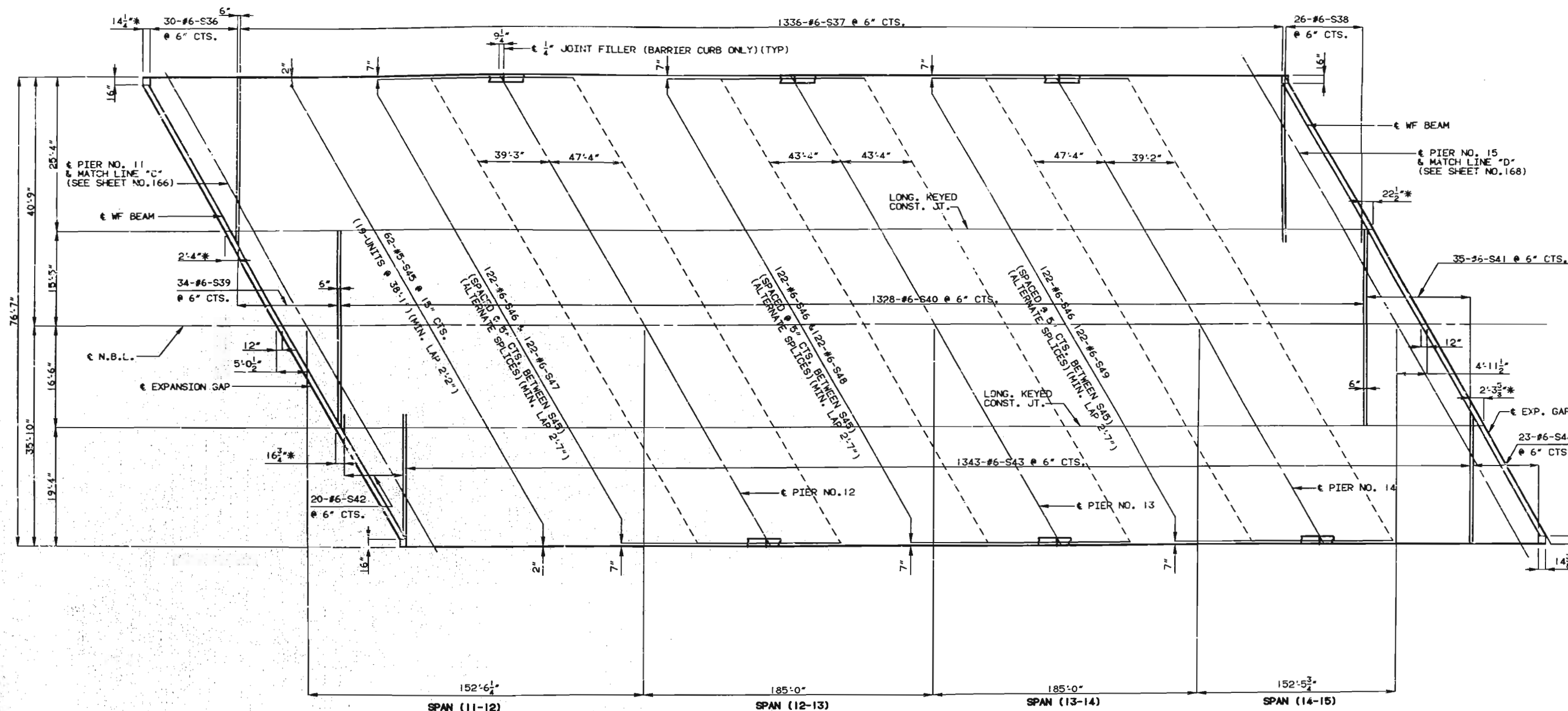
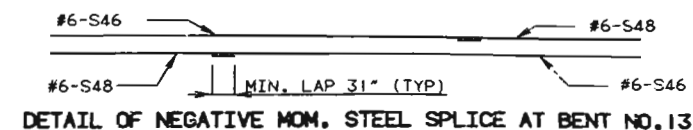
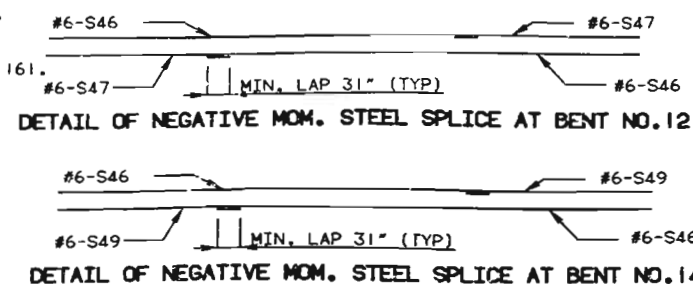
SHEET NO. 166 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NOS. 194, 195, 196, & 197.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159, 160, & 161.  
 FOR SECTION THRU SLAB SEE SHEET NO. 164.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NOS. 187, & 189.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

STATE	PROJ. NO.	SHEET NO.
MO.		168



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF NORTHBOUND LANE.  
 \* DIMENSION IS FROM EDGE OF EXPANSION GAP TO C OF REINFORCING STEEL.

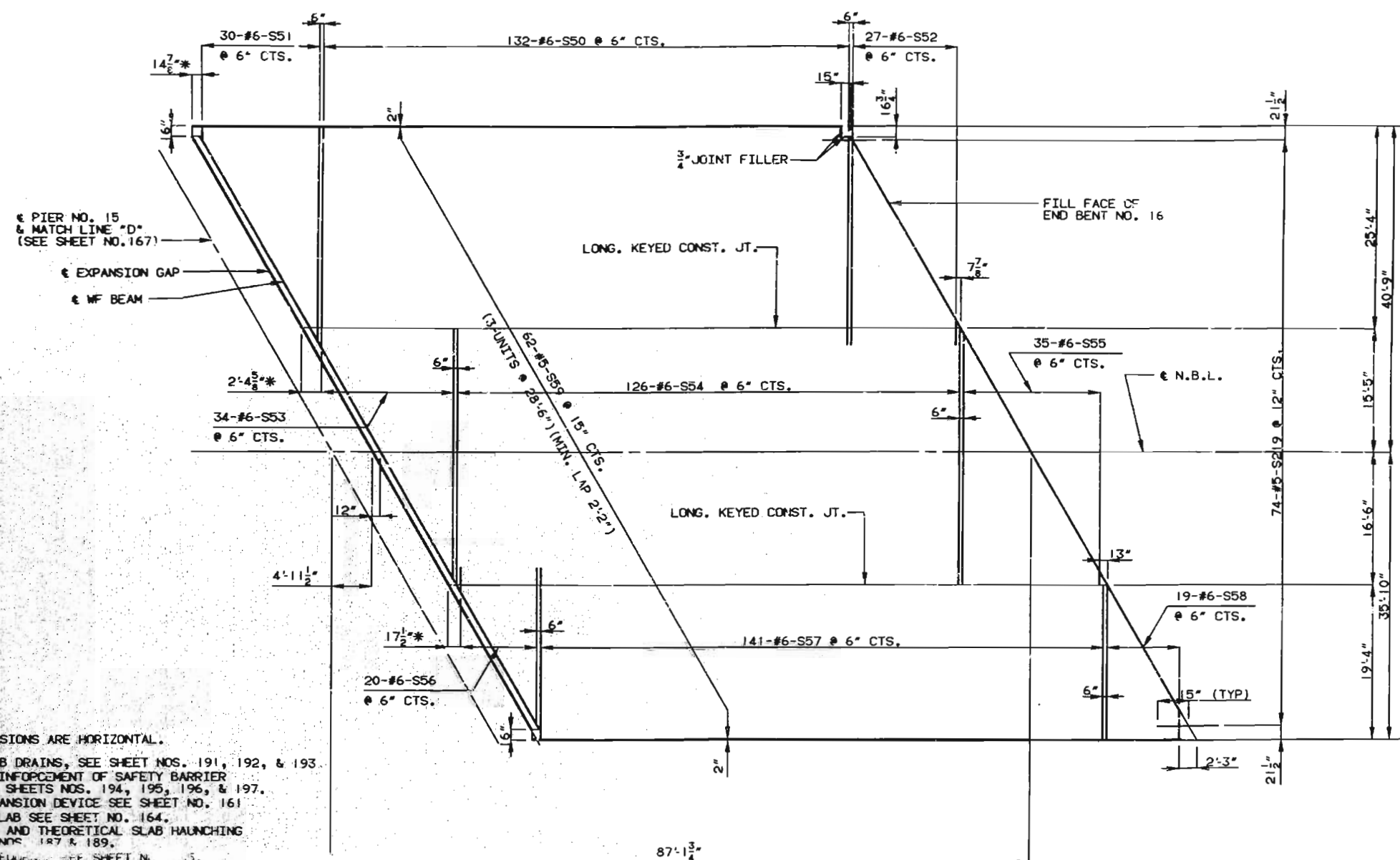
DETAILED JAN 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 167 OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609R





NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.

FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER

CURB NOT SHOWN SEE SHEETS NOS. 194, 195, 196, & 197.

FOR DETAILS OF EXPANSION DEVICE SEE SHEET NO. 161

FOR SECTION THRU SLAB SEE SHEET NO. 164.

FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING

SEE SHEET NOS. 187 & 189.

FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.

FOR DETAILS OF STAGE CONSTRUCTION AND

TRAFFIC HANDLING SEE SHEET NO. 7.

\* DIMENSION IS FROM EDGE OF EXPANSION

GAP TO C OF REINFORCING BAR.

FOR DETAILS OF BRIDGE APPROACH SLAB SEE SHEET NO. 205

SPAN (15-16)

PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF NORTHBOUND LANE

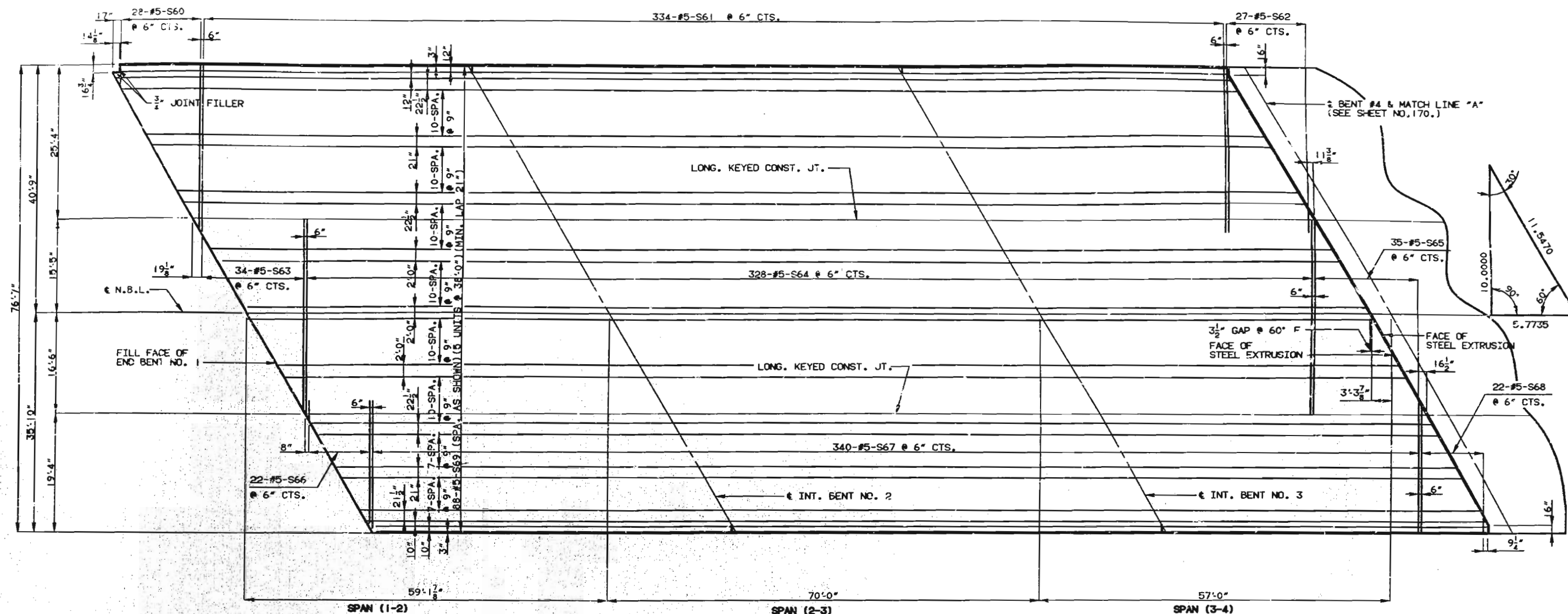
182  
 DETAILED JAN 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 168 OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609R

STATE	PROJ. NO.	SHEET NO.
MO.		170



PART PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT OF NORTHBOUND LANE

NOTE: SHIFT LONGITUDINAL STEEL WHERE NECESSARY TO CLEAR LONG. CONST. JOINTS BY 1 1/2".

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NOS. 194, 195, 196, & 197.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159 & 160.  
 FOR SECTION THRU SLAB SEE SHEET NO. 164.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NOS. 187 & 189.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

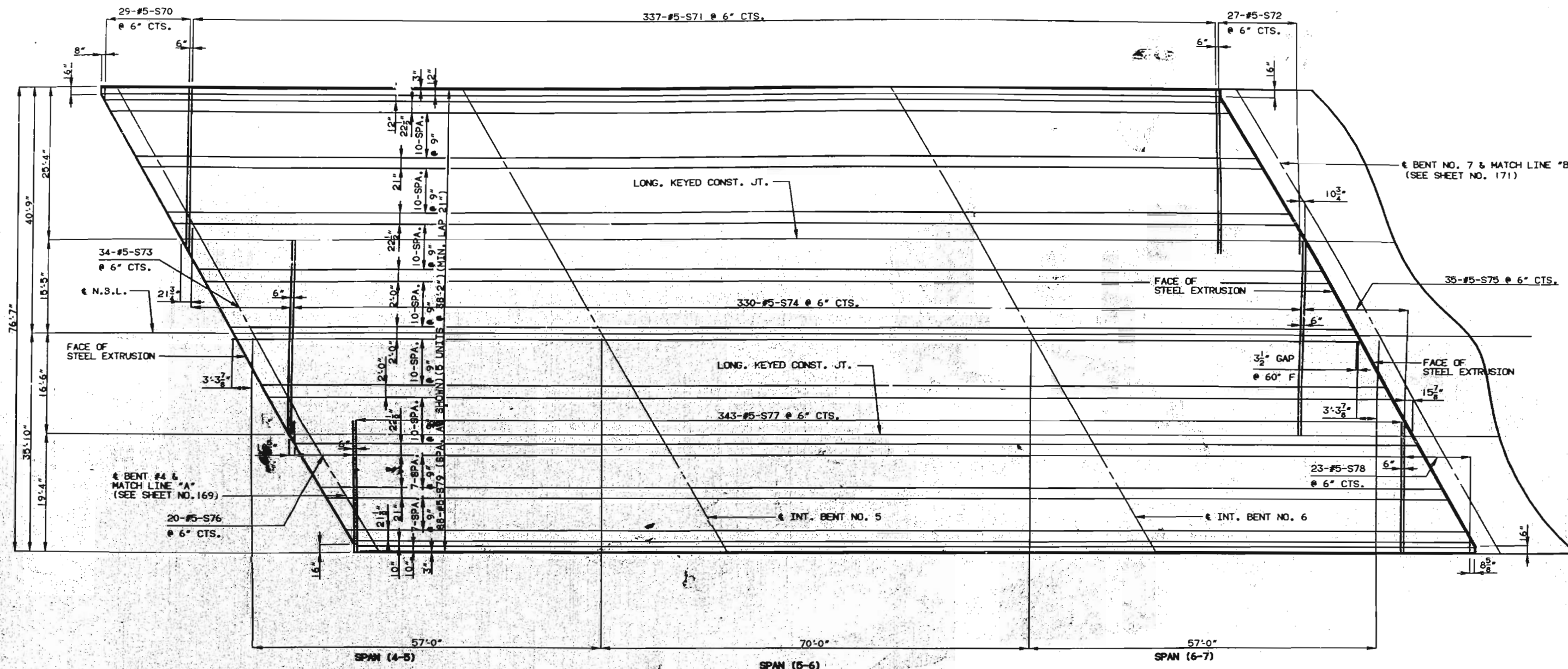
DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 169 OF 238

ST. LOUIS-JEFFERSON

COUNTIES A-609R



PART PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT OF NORTHBOUND LANE

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
 NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NOS. 194, 195, 196, & 197.  
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 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

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SHEET NO. 170 OF 238

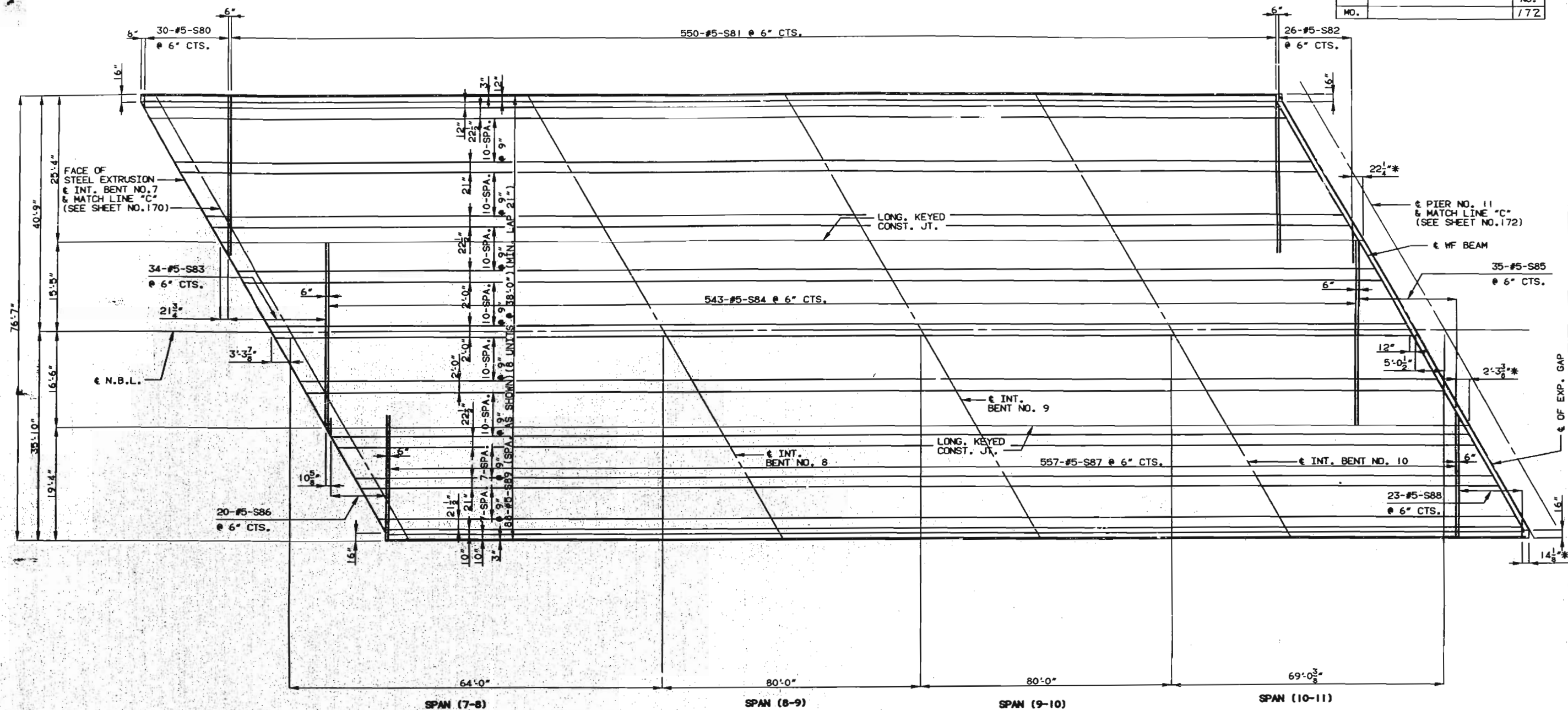
ST. LOUIS-JEFFERSON

COUNTIES

A-609R



STATE	PROJ. NO.	SHEET NO.
MO.		172



# PART PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT OF NORTHBOUND LANE

\* DIMENSION IS FROM EDGE OF EXPANSION GAP TO  $\epsilon$  OF REINFORCING BAR.

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NOS. 194, 195, 196, & 197.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159, 160 & 161.  
 FOR SECTION THRU SLAB SEE SHEET NO. 164.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NOS. 187 & 189.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

185  
 581  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 171 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER  
CURB NOT SHOWN SEE SHEET NOS. 194, 195, 196, & 197.  
FOR DETAILS OF EXPANSION DEVICE SEE SHEET NO. 161.  
FOR SECTION THRU SLAB SEE SHEET NO. 164.  
FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING  
DIAGRAM SEE SHEET NOS. 187 & 189.  
FOR SLAB POURING SEQUENCE SEE SHEET NO. 185.  
FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

[illegible]

\* DIMENSION IS FROM EDGE OF EXPANSION GAP TO  $\epsilon$  OF REINFORCING BAR.

SHEET NO. 172 OF 238

## COUNTIES

**A-609R**

DETAILED JAN 19 92  
CHECKED MAY 19 92



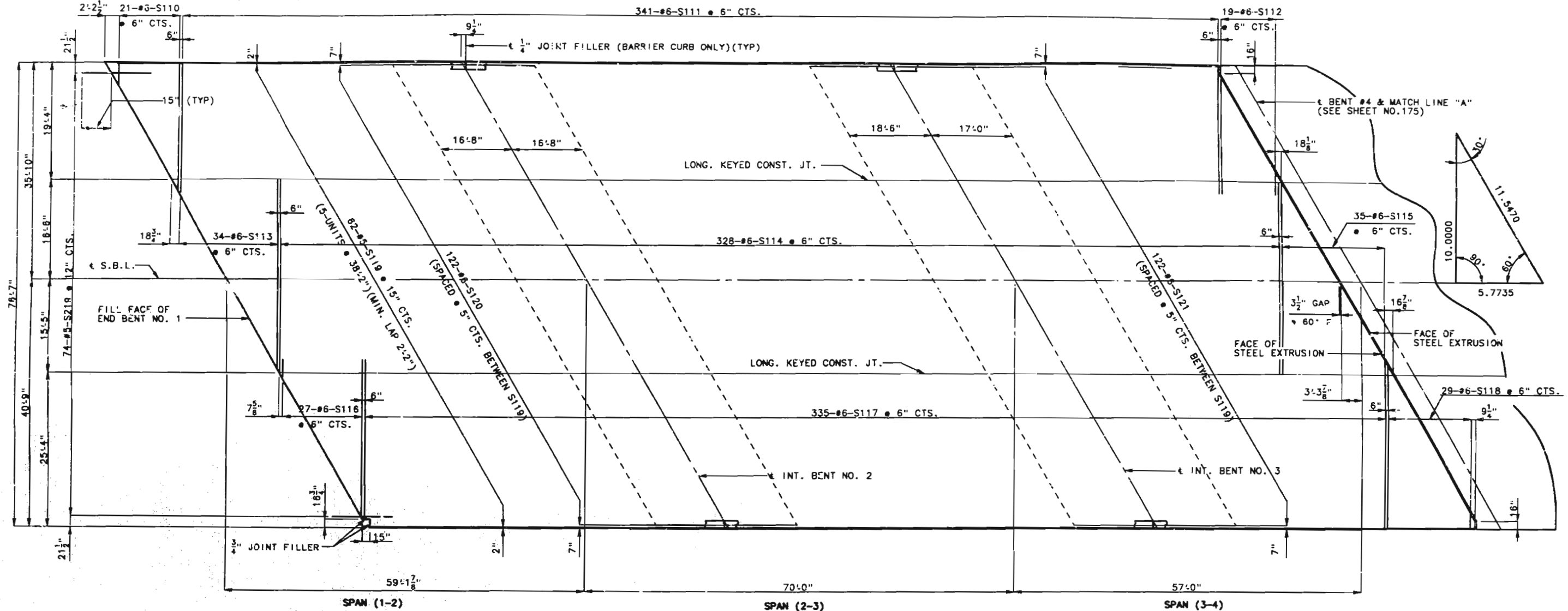


NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
 NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER  
 CURB NOT SHOWN SEE SHEET NOS. 198, 199, 200, & 201.

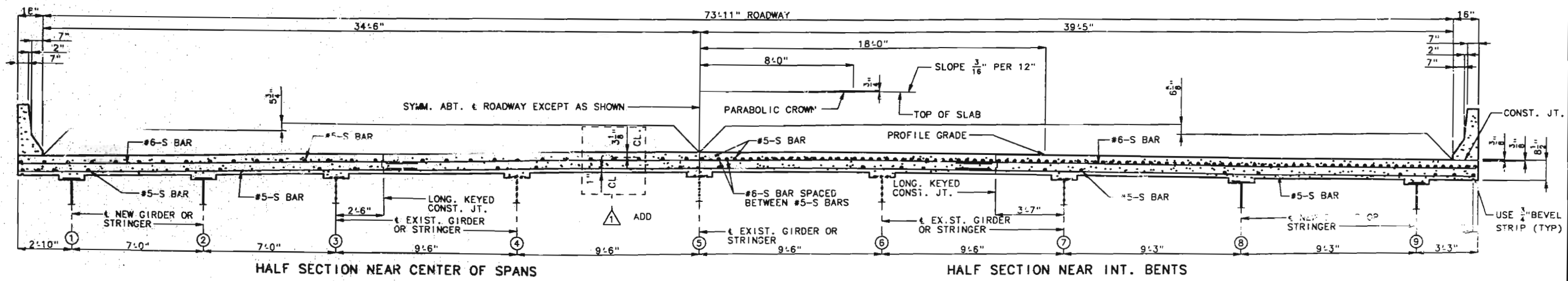
NOTE: FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159 & 160.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING  
 DIAGRAM SEE SHEET NOS. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.

NOTE: FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.  
 FOR DETAILS OF BRIDGE APPROACH SLAB, SEE SHEET NO. 205.

STATE	PROJ. NO.	SHEET NO.
MO.		



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF SOUTHBOUND LANE



HALF SECTION NEAR CENTER OF SPANS

HALF SECTION NEAR INT. BENTS

TYPICAL SECTION THRU SLAB (S.B.L.)

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NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.  $\Delta$  REVISED 12-8-1993

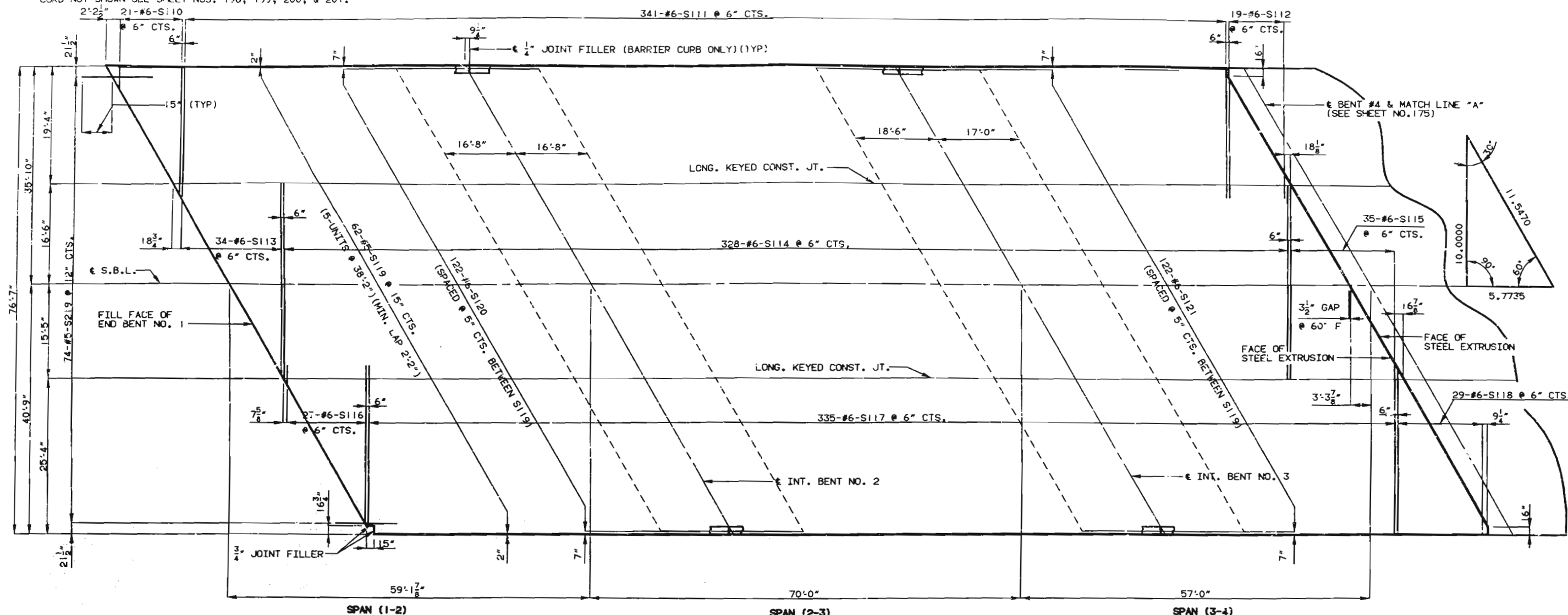
SHEET NO. 174 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

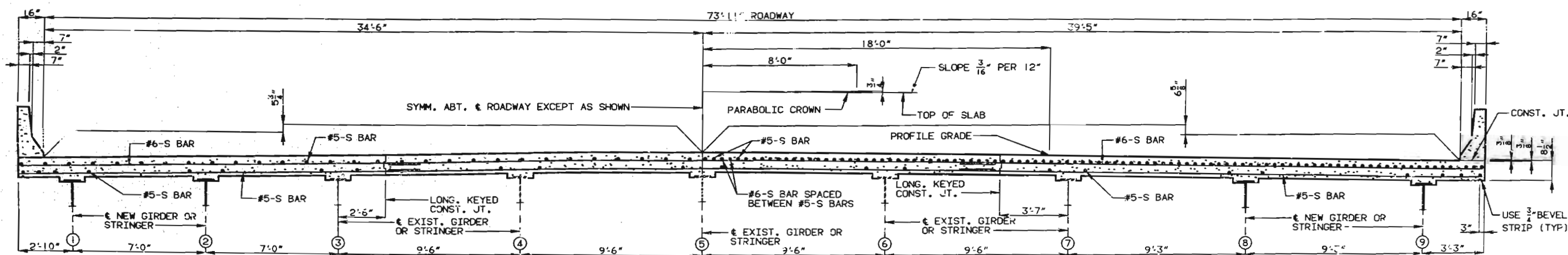
NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NOS. 198, 199, 200, & 201.

NOTE: FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159 & 160.  
FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NOS. 187 & 190.  
FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.

STATE	PROJ. NO.	SHEET NO.
MO.		175



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF SOUTHBOUND LANE



HALF SECTION NEAR CENTER OF SPANS

HALF SECTION NEAR INT. BENTS

TYPICAL SECTION THRU SLAB (S.B.L.)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 174 OF 235

ST. LOUIS-JEFFERSON

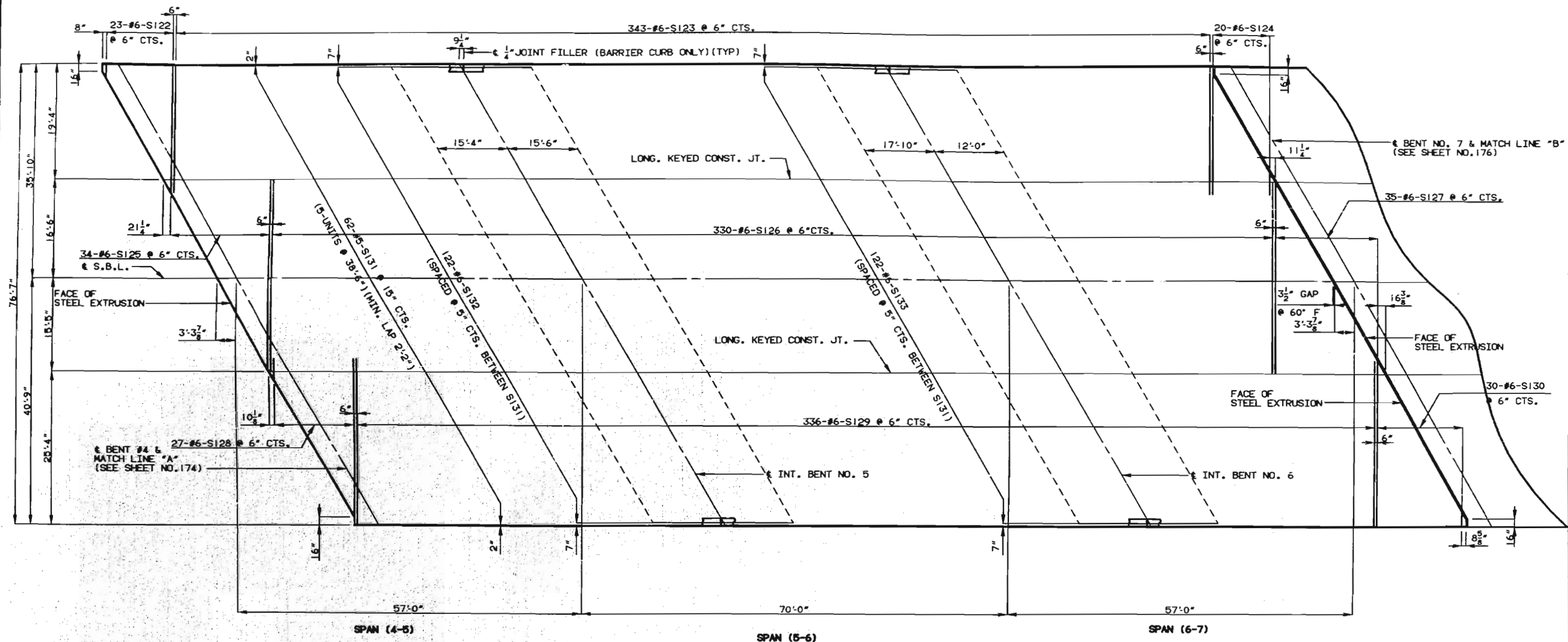
COUNTIES

A-609R

189

DETAILED JAN. 1992  
CHECKED MAY 1992

STATE	PROJ. NO.	SHEET NO.
MO.		176



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF SOUTHBOUND LANE

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NOS. 198, 199, 200, & 201.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159 & 160.  
 FOR SECTION THRU SLAB SEE SHEET NO. 174.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NOS. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

190  
 061  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 175 OF 238

ST. LOUIS-JEFFERSON

COUNTIES

A-609R

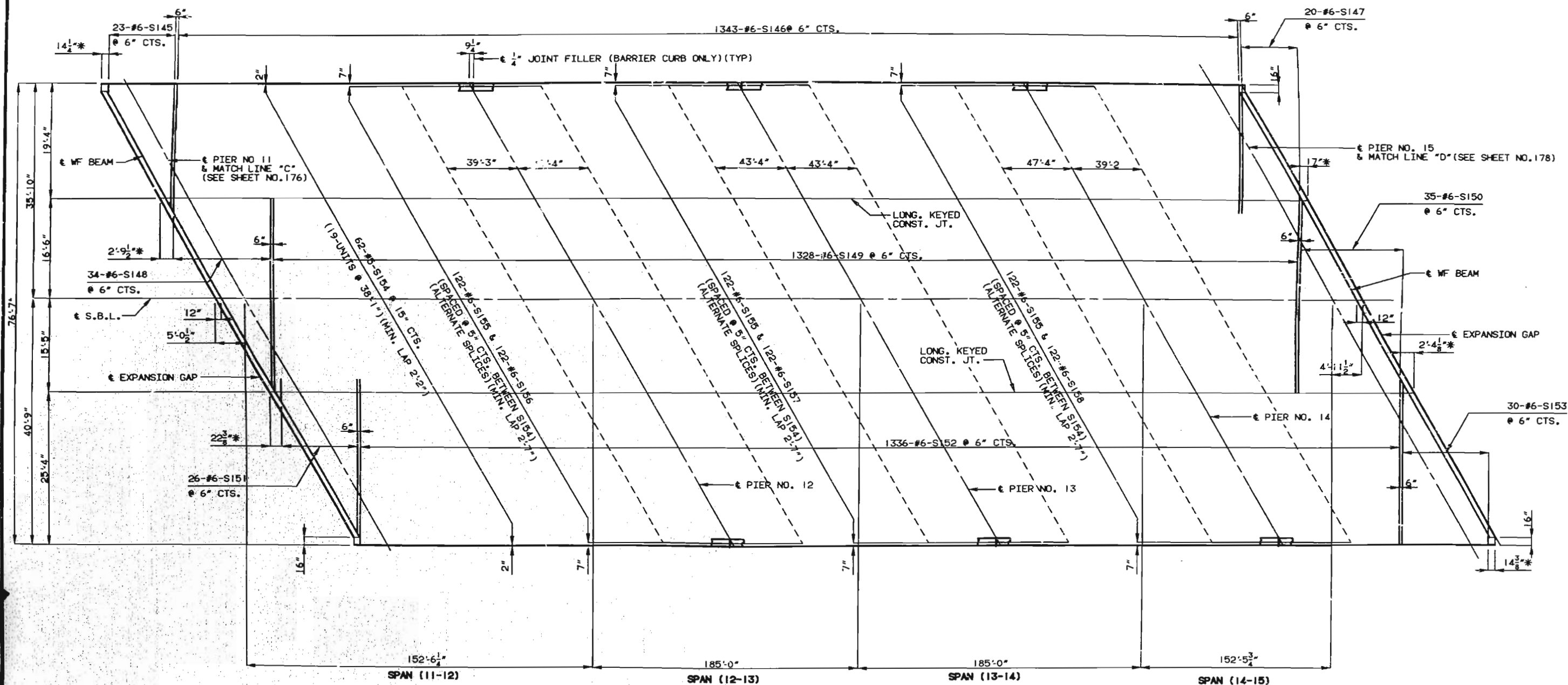
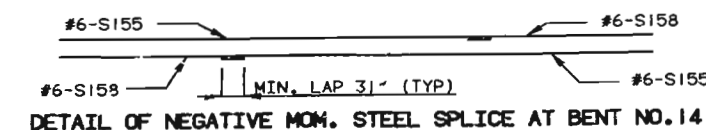
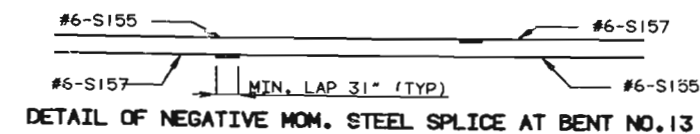
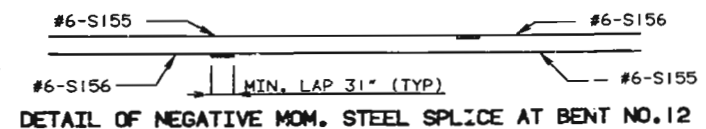




STATE	PROJ. NO.	SHEET NO.
MO.		178

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NOS. 198, 199, 200, & 201.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NO. 161.  
 FOR SECTION THRU SLAB SEE SHEET NO. 174.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.



PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF SOUTHBOUND LANE.

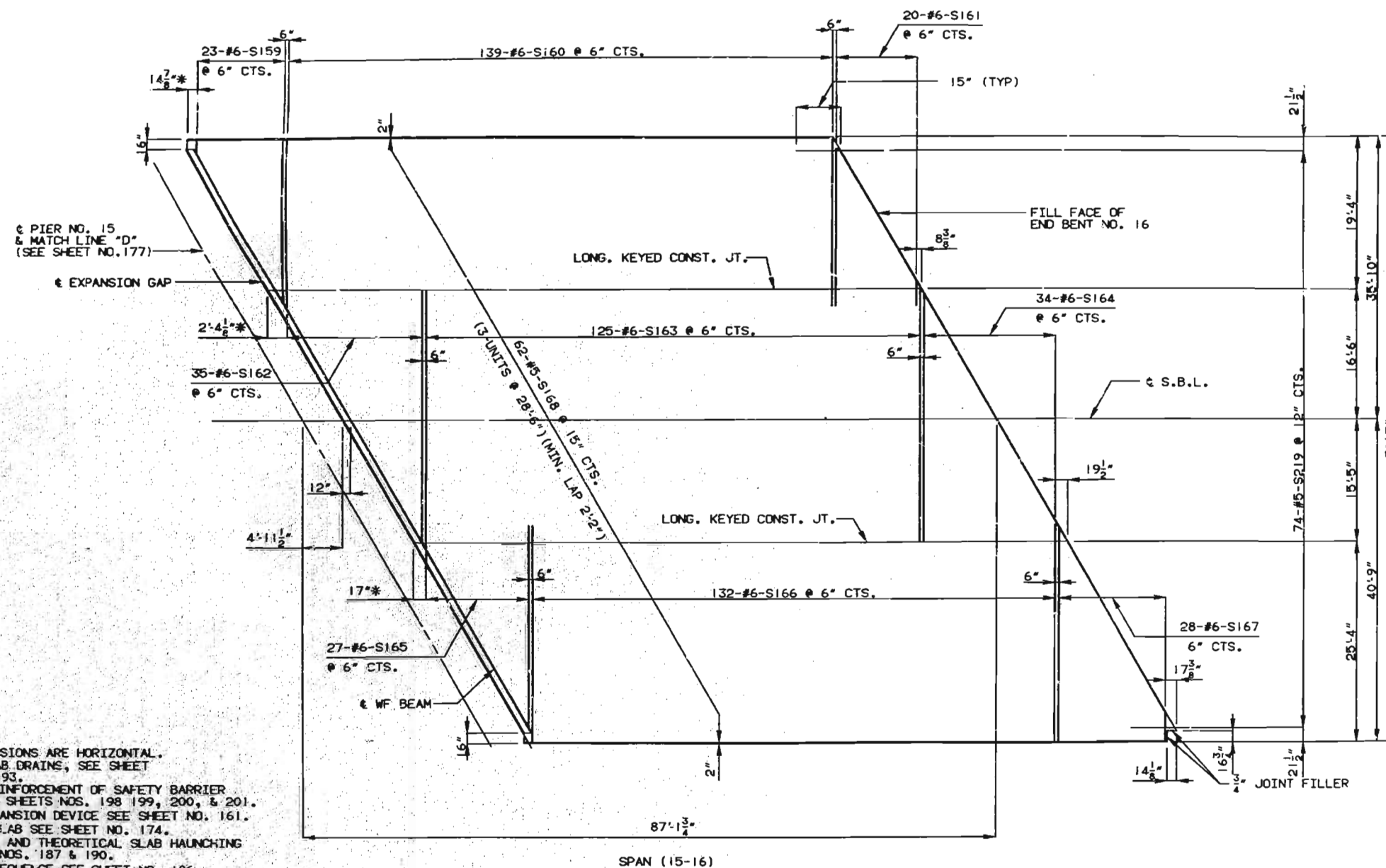
\* DIMENSION IS FROM EDGE OF EXPANSION GAP TO  $\epsilon$  OF REINFORCING BAR.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 177 OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609D

192  
 DETAILED JAN 1992  
 CHECKED MAY 1992



NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
 NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEETS NOS. 198, 199, 200, & 201.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NO. 161.  
 FOR SECTION THRU SLAB SEE SHEET NO. 174.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NOS. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.  
 FOR DETAILS OF BRIDGE APPROACH SLAB, SEE SHEET NO. 205.

**PART PLAN OF SLAB SHOWING TOP REINFORCEMENT OF SOUTHBOUND LANE**  
 \* DIMENSION IS FROM EDGE OF EXPANSION GAP TO C OF REINFORCING BAR.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

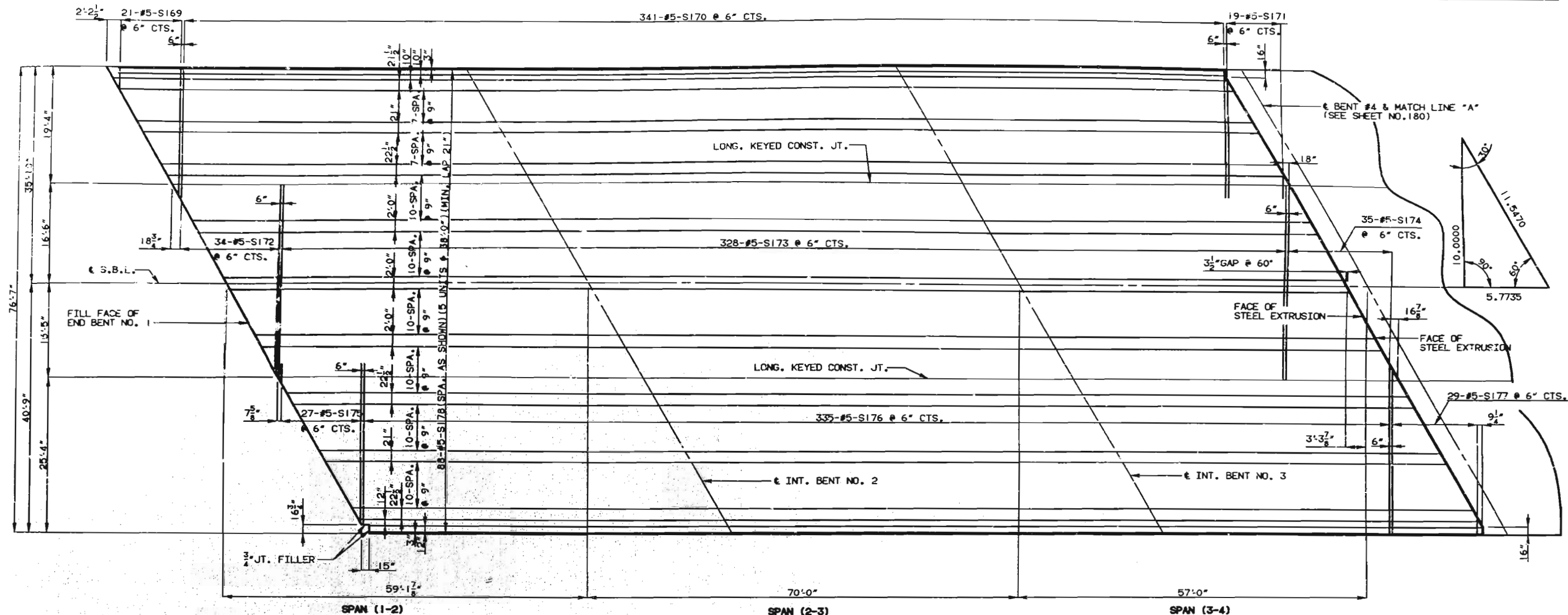
SHEET NO. 178 OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609R

193  
 DETAILED JAN 1992  
 CHECKED MAY 1992



STATE	PRGJ. NO.	SHEET NO.
MO.		180



PART PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT OF SOUTHBOUND LANE

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NOS. 193, 199, 200, & 201.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NO. 159 & 160.  
 FOR SECTION THRU SLAB SEE SHEET NO. 174.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 188.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

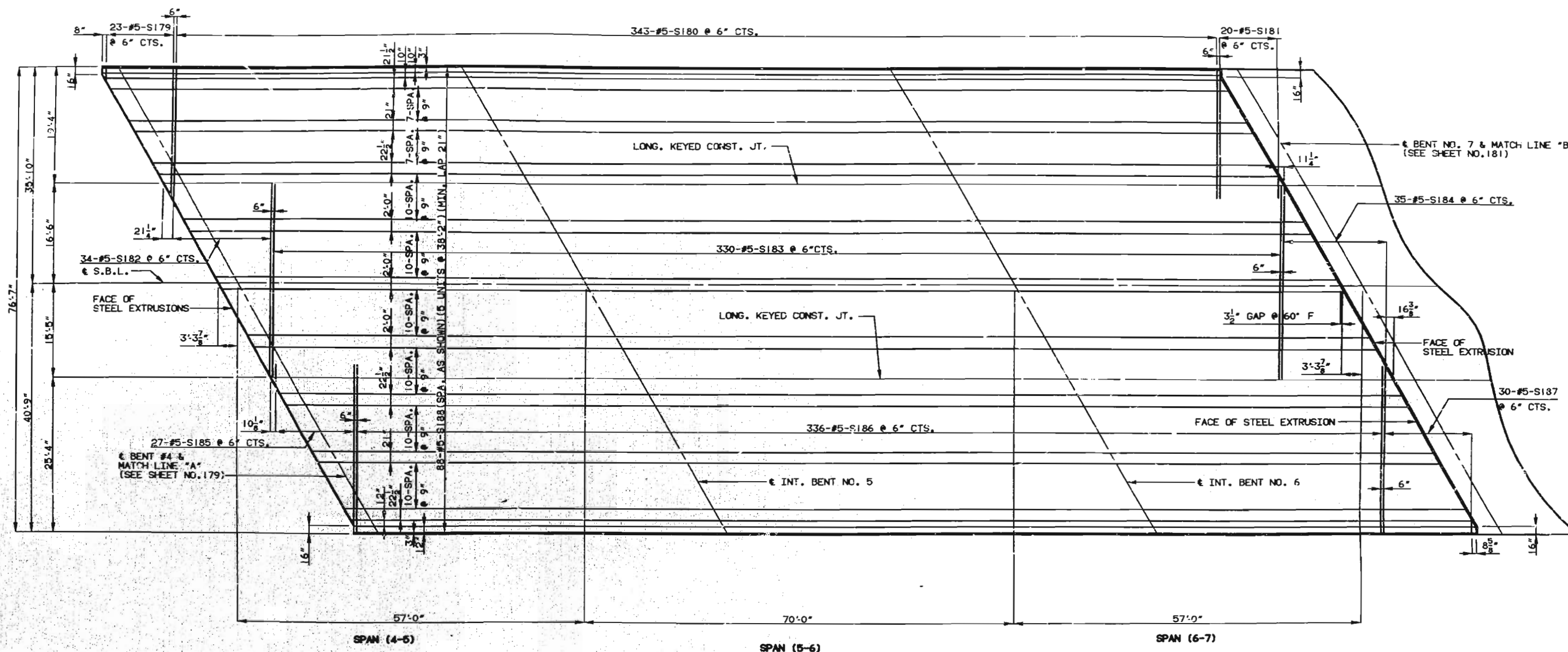
SHEET NO. 179 OF 238

ST. LOUIS-JEFFERSON

COUNTIES

A-609R

194 461



PART PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT OF SOUTHBOUND LANE

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192 & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NOS. 198, 199, 200 & 201.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NO. 159 & 160.  
 FOR SECTION THRU SLAB SEE SHEET NO. 174.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 180 OF 238

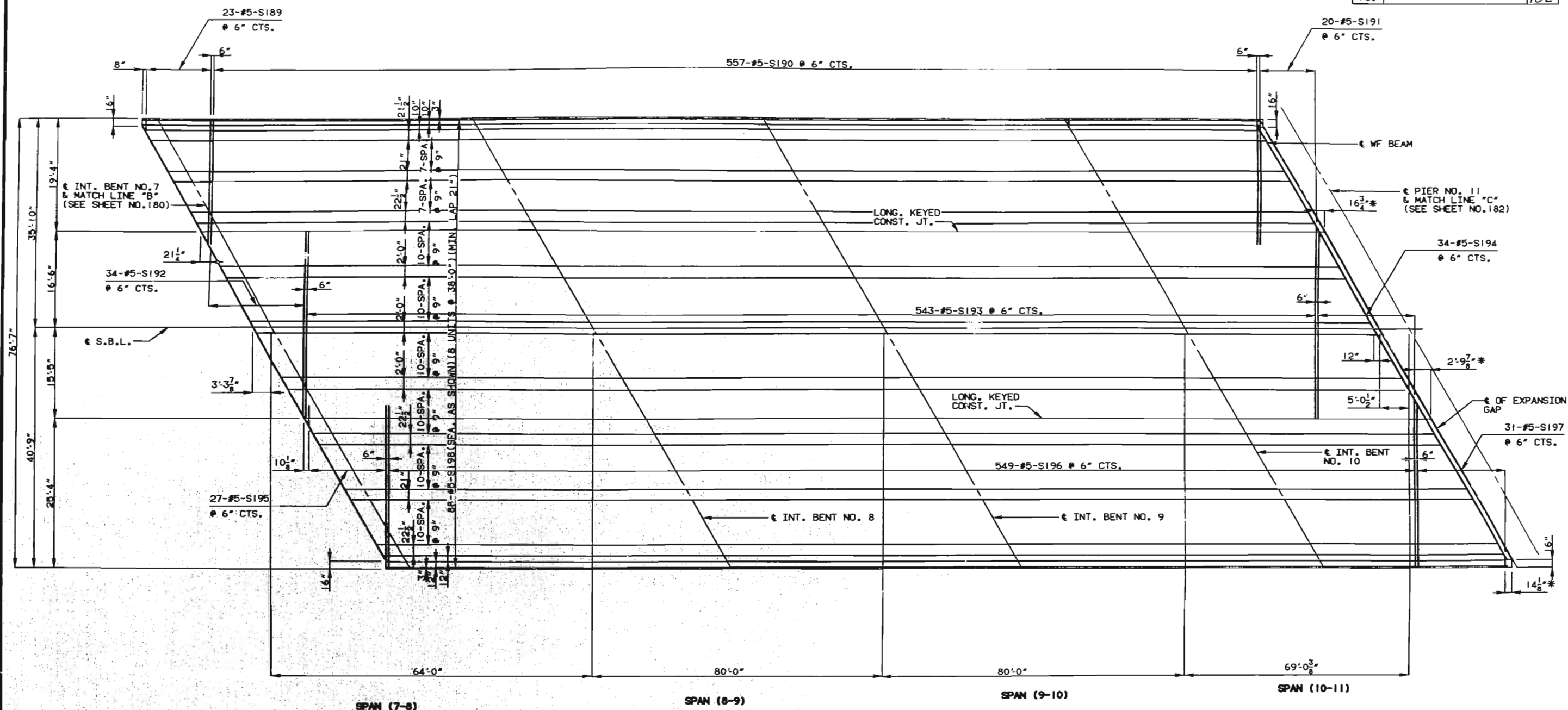
ST. LOUIS-JEFFERSON

COUNTIES

A-609R

195-3-13  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

STATE	PROJ. NO.	SHEET NO.
MO.		182



PART PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT OF SOUTHBOUND LANE

\* DIMENSION IS FROM EDGE AT EXPANSION GAP TO  $\epsilon$  OF REINFORCING BAR.

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192 & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NOS. 198, 199, 200 & 201.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NOS. 159, 160 & 161.  
 FOR SECTION THRU SLAB SEE SHEET NO. 174.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NOS. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

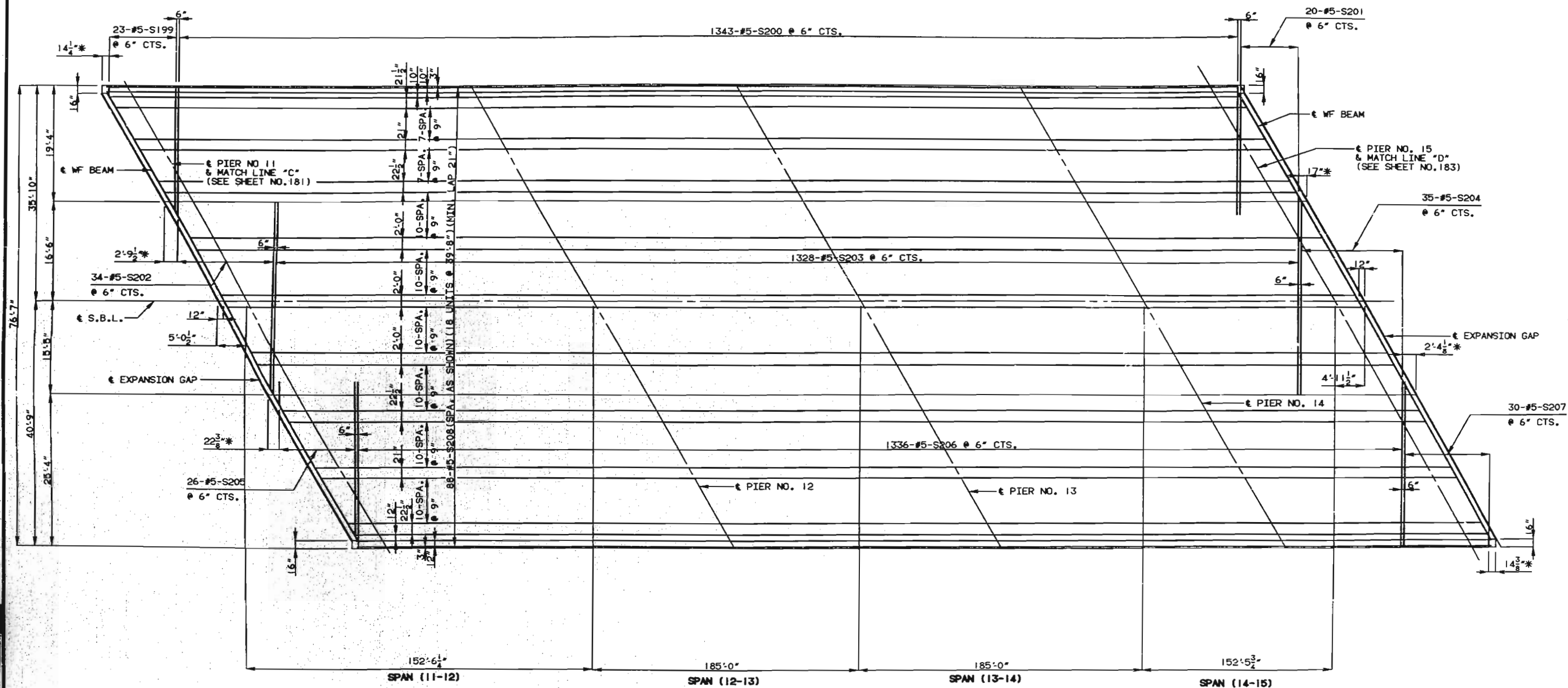
196



STATE	PROJ. NO.	SHEET NO.
MO.		183

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192 & 193.  
 F.R. DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NOS. 198, 199, 200 & 201.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NO. 161.  
 FOR SECTION THRU SLAB SEE SHEET NO. 174.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.  
 FOR DETAILS OF HAIRPIN BARS AT GIRDERS 3, 4, 5, 6, & 7, SEE SHEET NO. 184.



PART PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT OF SOUTHBOUND LANE.

\* DIMENSION IS FROM EDGE OF EXPANSION GAP TO  $\epsilon$  OF REINFORCING BAR.

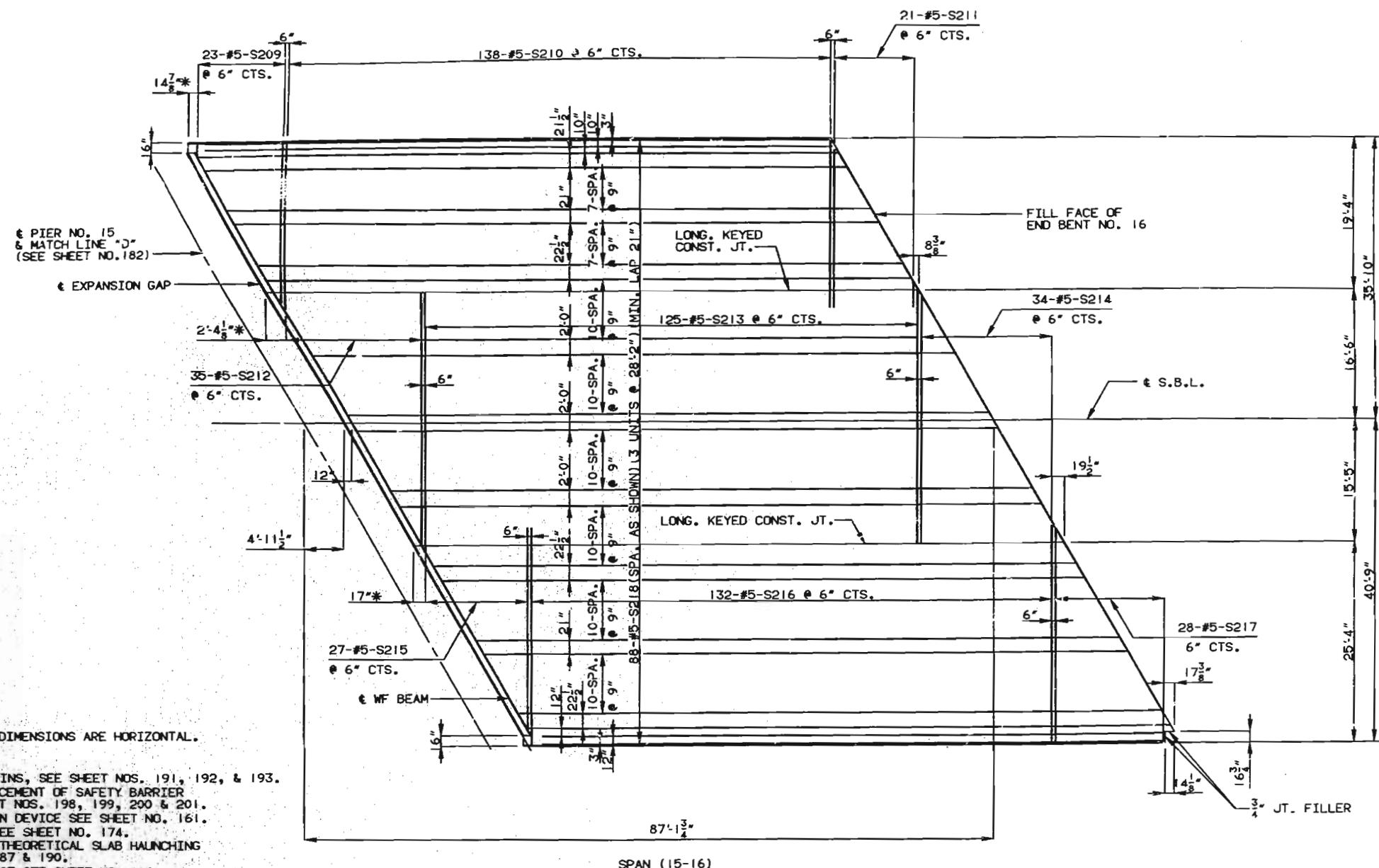
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 182 OF 238 ST. LOUIS-JEFFERSON

COUNTIES A-609R

DETAILED JAN 1992  
 CHECKED MAY 1992

197



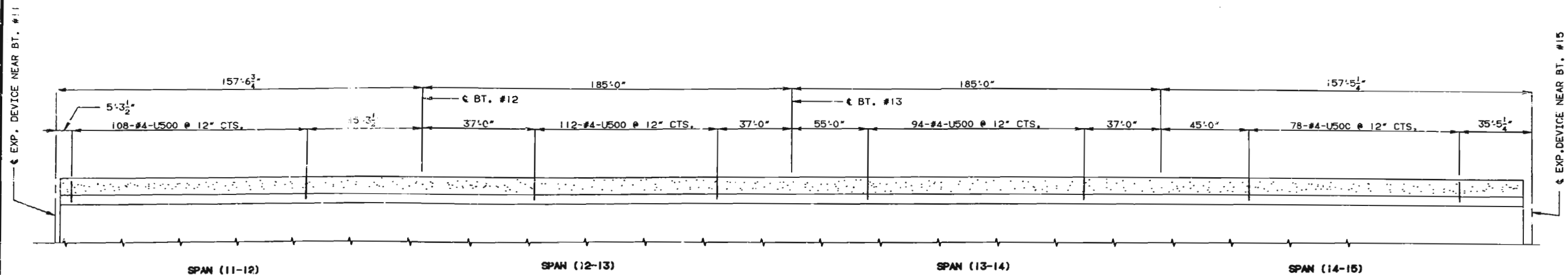
NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: FOR DETAILS OF SLAB DRAINS, SEE SHEET NOS. 191, 192, & 193.  
 FOR DETAILS AND REINFORCEMENT OF SAFETY BARRIER CURB NOT SHOWN SEE SHEET NOS. 198, 199, 200 & 201.  
 FOR DETAILS OF EXPANSION DEVICE SEE SHEET NO. 161.  
 FOR SECTION THRU SLAB SEE SHEET NO. 174.  
 FOR CAMBER DIAGRAM AND THEORETICAL SLAB HAUNCHING DIAGRAM SEE SHEET NO. 187 & 190.  
 FOR SLAB POURING SEQUENCE SEE SHEET NO. 186.  
 FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING SEE SHEET NO. 7.  
 FOR DETAILS OF HAIRPIN BARS AT GIRDERS 3, 4, 5, 6, & 7, SEE SHEET NO. 184.

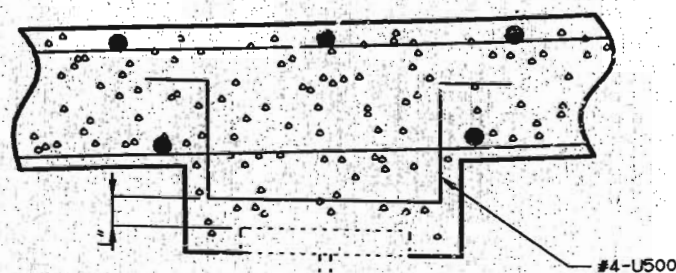
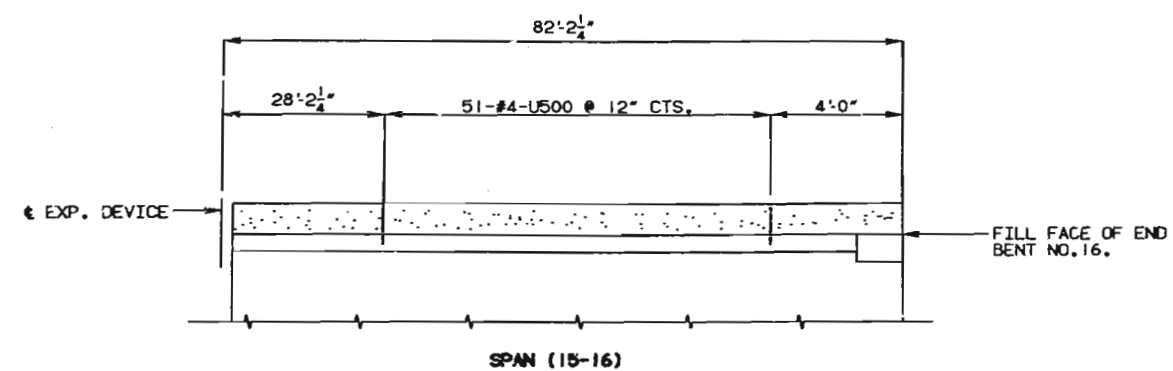
# PART PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT OF SOUTHBOUND LANE

\* DIMENSIONS IS FROM EDGE OF EXPANSION GAP TO C OF REINFORCING BAR.

STATE	PROJ. NO.	SHEET NO.
MO.		185



GIRDER NO. 3, 4, 5, 6, & 7



SECTION THRU HAUNCH  
(EXISTING GIRDER)

DETAILS OF HAIRPIN BARS FOR NORTHBOUND AND SOUTHBOUND LANE

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

DETAILED FEB. 1992  
CHECKED MAY 1992

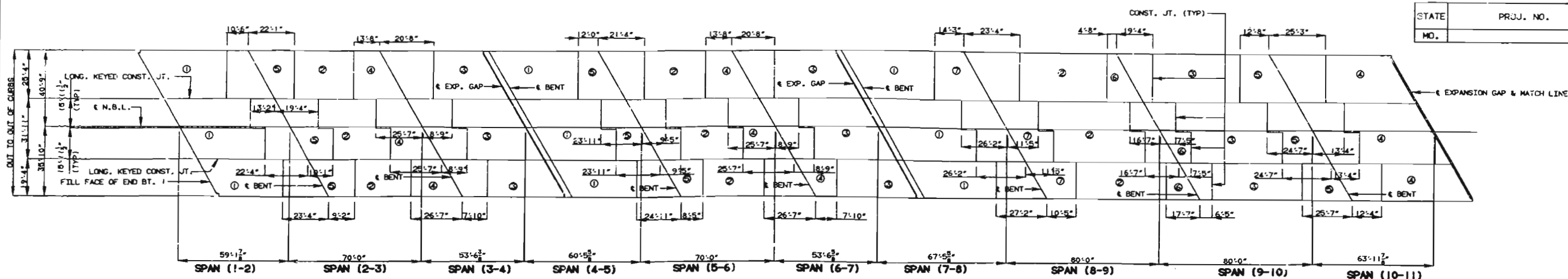
SHEET NO. 184 OF 238

ST. LOUIS-JEFFERSON

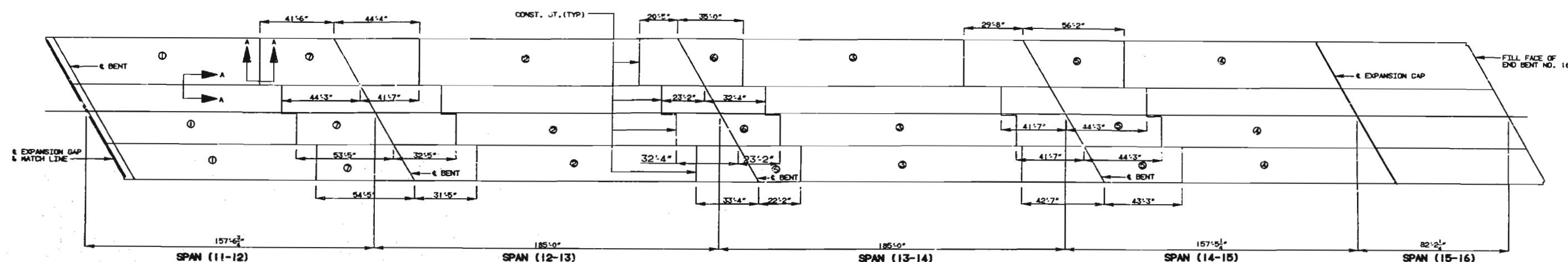
COUNTIES A-609R

199





PART SLAB POURING SEQUENCE (NORTHBOUND LANE)



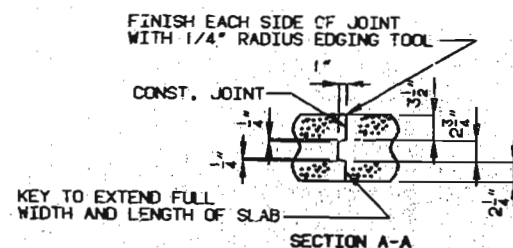
PART SLAB POURING SEQUENCE (NORTHBOUND LANE)

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: SPAN (15-16) TO BE POURED UP GRADE FROM END TO END AT A MINIMUM RATE OF 25 CU. YD./HR.

NOTE: FOR DETAILS OF STAGE CONST. AND TRAFFIC HANDLING, SEE SHEET NO. 7

THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE SLAB POURS AT THE RATE GIVEN. RETARDER, IF USED, SHALL BE AND APPROVED TYPE AND RETARD THE SET OF CONCRETE TO 2 1/2 HOURS.



SPAN 1 THRU 3 & SPAN 4 THRU 6								
BASIC SEQUENCE	SEQUENCE OF POURS					MIN. RATE OF POUR CU. YDS./HR.		
	DIRECTION					WITH RETARDER	NO RETARDER	
	1	2	3	4	5	25	25	
EITHER DIRECTION								
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.								
ALTERNATE "A" POURS	1		5 + 2		4 + 3		25	30
	END TO 5		1 TO 4		2 TO END			
ALTERNATE "B" POURS	1 + 5 + 2		4 + 3				25	30
	END TO 4		2 TO END					
ALTERNATE "C" POURS	1 + 5 + 2 + 4 + 3					25	30	
	END TO END							

SLAB POURING SEQUENCE

SPAN 7 THRU 10						
BASIC SEQUENCE	SEQUENCE OF POURS					
	DIRECTION					
	1	2	3	4	5	6
	EITHER DIRECTION					
						25
						25
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.						
ALTERNATE "A" POURS	1	1 + 2	6 + 3	5		
	END TO 7	1 TO 6	2 TO 5	3 TO END		25
ALTERNATE "B" POURS	1 + 7 + 2	6 + 3	5 + 4			
	END TO 6	2 TO 5	3 TO END			25
ALTERNATE "C" POURS	1 + 7 + 2	6 + 3 + 5 + 4				
	END TO 6	2 TO END				25
ALTERNATE "D" POURS	1 + 7 + 2 + 6 + 3 + 5 + 4					
	END TO END					25

SLAB POURING SEQUENCE

SPAN 11 THRU 14						
BASIC SEQUENCE	SEQUENCE OF POURS					
	DIRECTION					
	1	2	3	4	5	6
	EITHER DIRECTION					
						25
						25
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.						
ALTERNATE "A" POURS	1	7 + 2	6 + 3	5 + 4		
	END TO 7	1 TO 6	2 TO 5	3 TO END		47
ALTERNATE "B" POURS	1 + 7 + 2	6 + 3	5 + 4			
	END TO 6	2 TO 5	3 TO END			47
ALTERNATE "C" POURS	1 + 7 + 2	6 + 3 + 5 + 4				
	END TO 6	2 TO END				47
ALTERNATE "D" POURS	1 + 7 + 2 + 6 + 3 + 5 + 4					
	END TO END					47

SLAB POURING SEQUENCE

DETAILED MAR. 19 92  
CHECKED JUNE 19 92

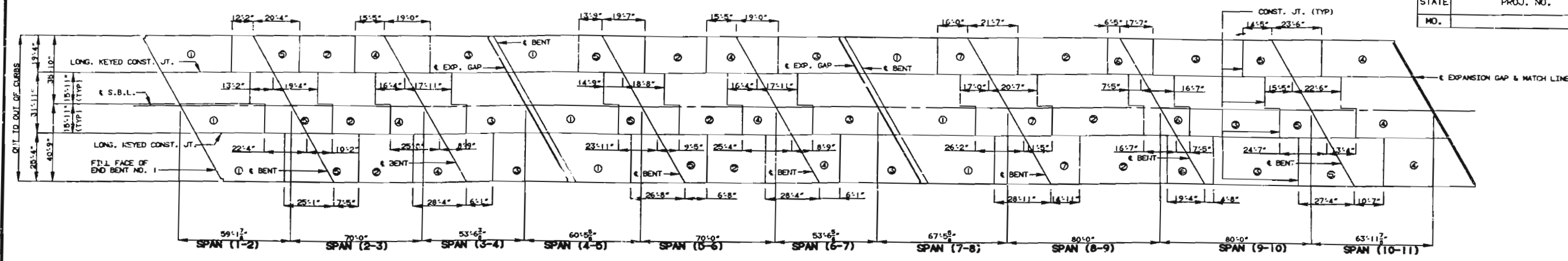
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 185 OF 238

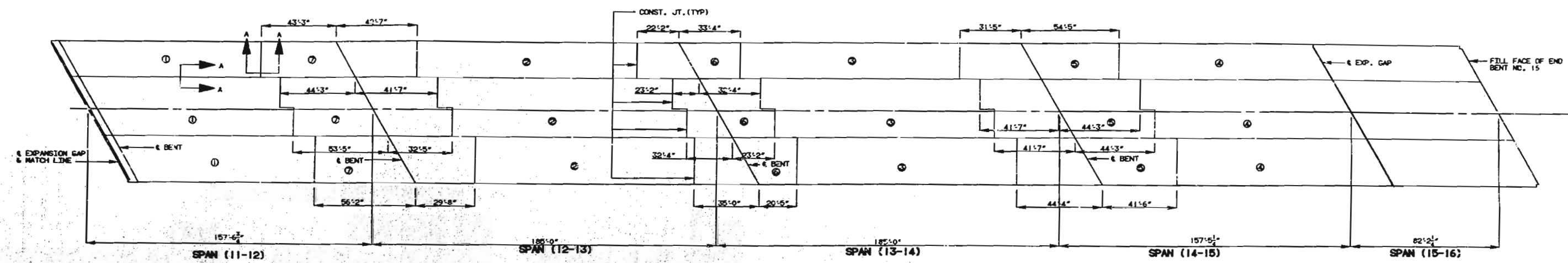
ST. LOUIS-JEFFERSON

COUNTIES

A-609R



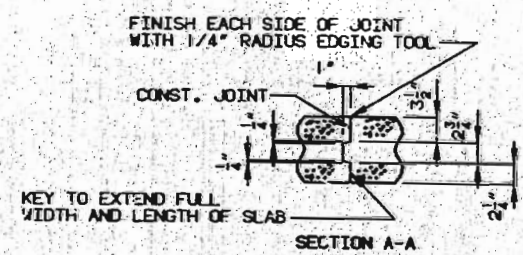
PART SLAB POURING SEQUENCE (SOUTHBOUND LANE)



PART SLAB POURING SEQUENCE (SOUTHBOUND LANE)

NOTE: SPAN (15-16) TO BE POURED UP GRADE FROM END TO END AT A MINIMUM RATE OF 25 CU. YD./HR.

NOTE: FOR DETAILS OF STAGE CONSTRUCTION AND TRAFFIC HANDLING, SEE SHEET NO. 7. THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE SLAB POUR AT THE RATE GIVEN. RETARDER, IF USED, SHALL BE AN APPROVED TYPE AND RETARD THE SET OF CONCRETE TO 2 1/2 HOURS.



SPAN 1 THRU 3 & SPAN 4 THRU 6							
BASIC SEQUENCE	SEQUENCE OF POURS					MIN. RATE OF POUR CU. YDS./HR.	
	DIRECTION					WITH RETARDER	NO RETARDER
	1	2	3	4	5	25	25
EITHER DIRECTION							
ALTERNATE POURS TO THE BASIC SKIP SEQUENCE ARE SUBJECT TO THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 703.3.12.4 OF MISSOURI STANDARD SPECIFICATIONS.							
ALTERNATE POURS "A"	1	5 + 2		4 + 3		25	30
	END TO 5	1 TO 4		2 TO END			
ALTERNATE POURS "B"	1 + 5 + 2			4 + 3		25	30
	END TO 4			2 TO END			
ALTERNATE POURS "C"	1 + 5 + 2 + 4 + 3					25	30
	END TO END						

SLAB POURING SEQUENCE

SPAN 7 THRU 10						
BASIC SEQUENCE	SEQUENCE OF POURS					
	DIRECTION					
	1	2	3	4	5	6
	EITHER DIRECTION					
ALTERNATE "A" POURS	1	7 + 2	6 + 3	5 + 4		
ALTERNATE "B" POURS	1 + 7 + 2	6 + 3	5 + 4			
ALTERNATE "C" POURS	1 + 7 + 2	6 + 3 + 5 + 4				
ALTERNATE "D" POURS	1 + 7 + 2 + 6 + 3 + 5 + 4					

SLAB POURING SEQUENCE

SPAN 11 THRU 14						
BASIC SEQUENCE	SEQUENCE OF POURS					
	DIRECTION					
	1	2	3	4	5	6
	EITHER DIRECTION					
ALTERNATE "A" POURS	1	7 + 2	6 + 3	5 + 4		
ALTERNATE "B" POURS	1 + 7 + 2	6 + 3	5 + 4			
ALTERNATE "C" POURS	1 + 7 + 2	6 + 3 + 5 + 4				
ALTERNATE "D" POURS	1 + 7 + 2 + 6 + 3 + 5 + 4					

SLAB POURING SEQUENCE

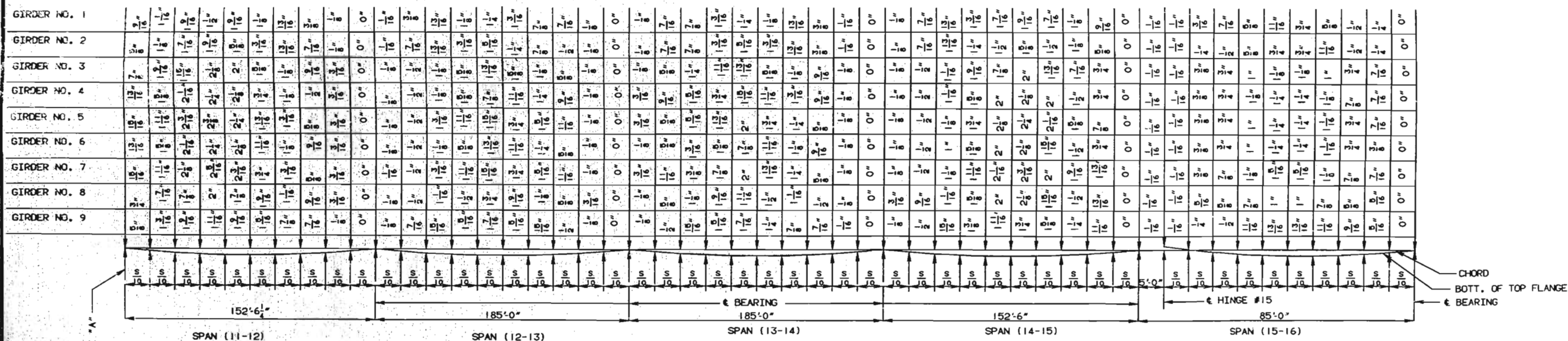
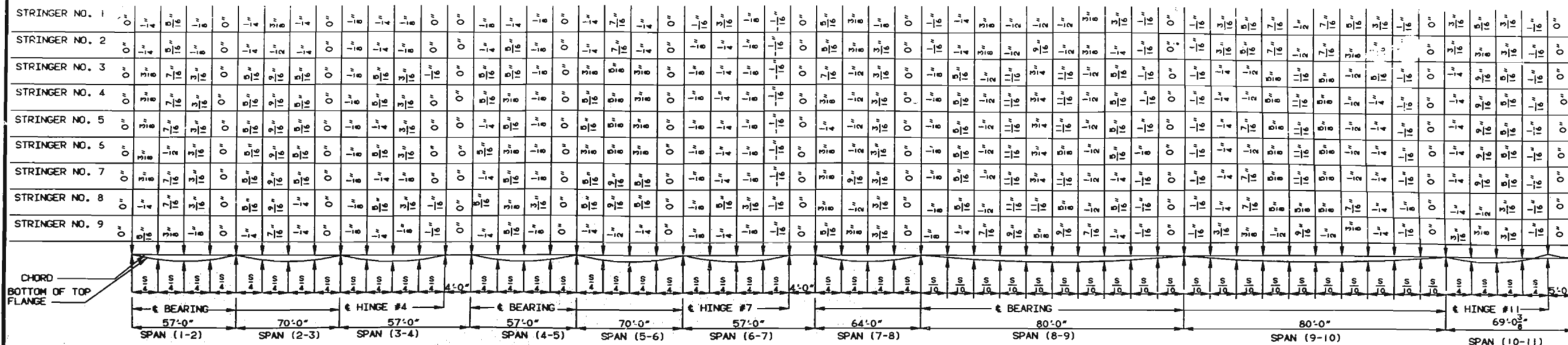
DETAILED MAR. 19 92  
CHECKED JUNE 19 92

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 186 OF 238







DEAD LOAD DEFLECTION DIAGRAM (NORTHBOUND LANE & SOUTHBOUND LANE)  
NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FROM  $\epsilon$  BEARING TO  $\epsilon$  BEARING.

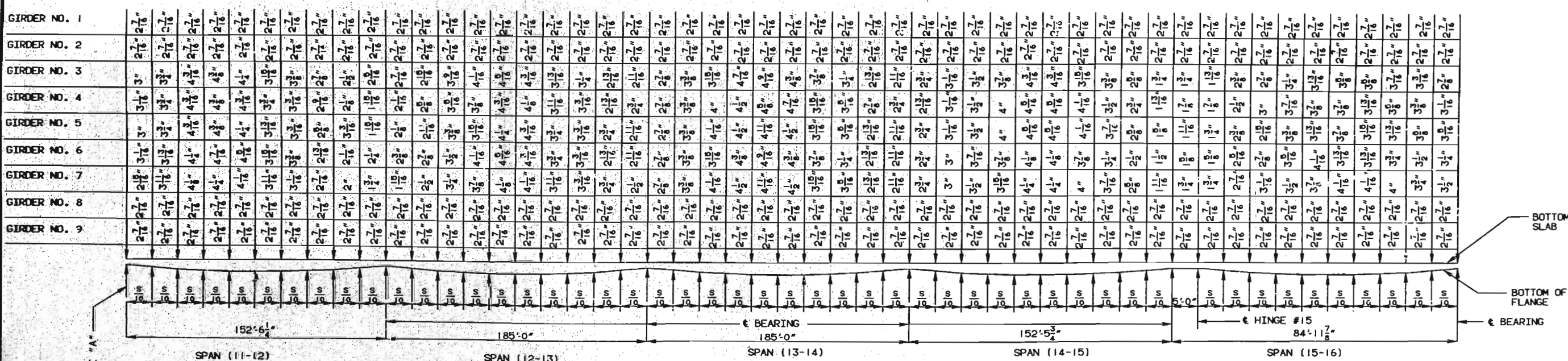
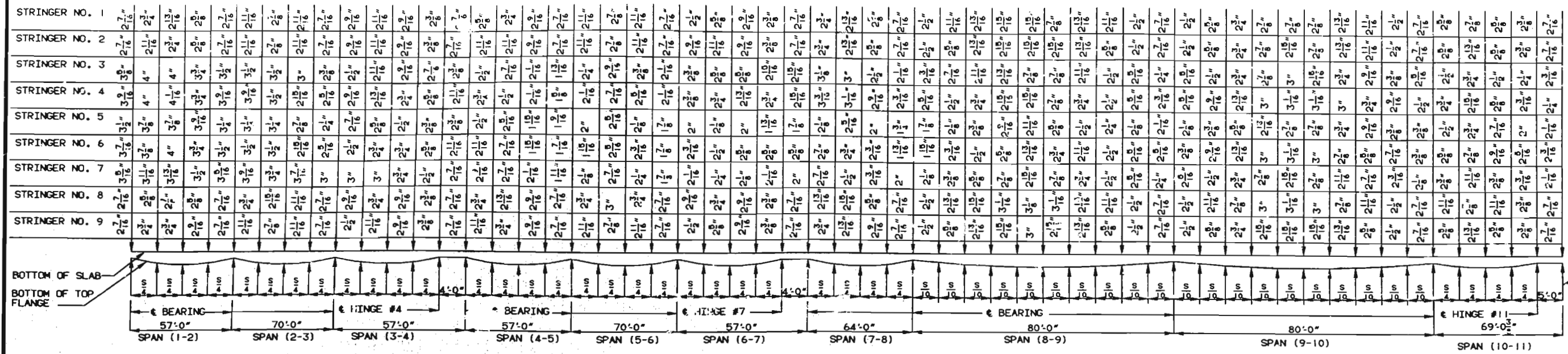
DETAILED FEB. 1992  
CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 188 OF 238

ST. LOUIS-JEFFERSON

COUNTIES A-609R



SLAB HAUNCHING DIAGRAM (NORTHBOUND LANE)

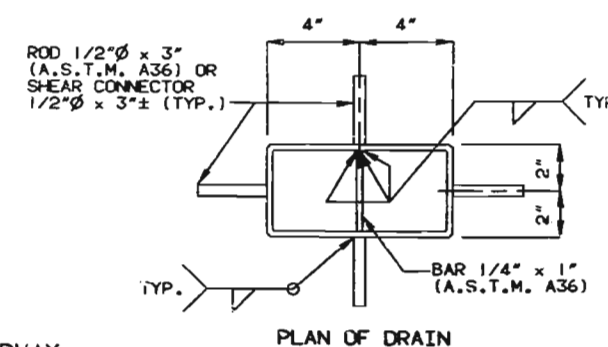
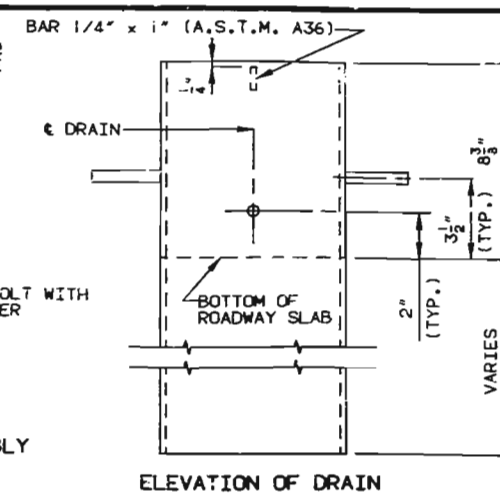
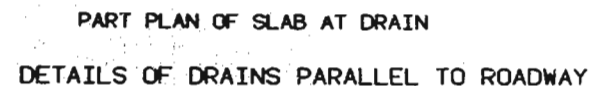
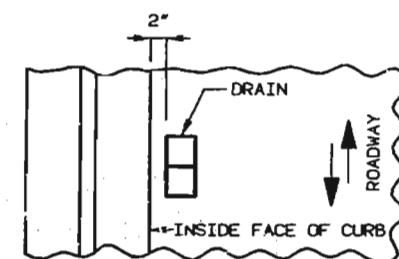
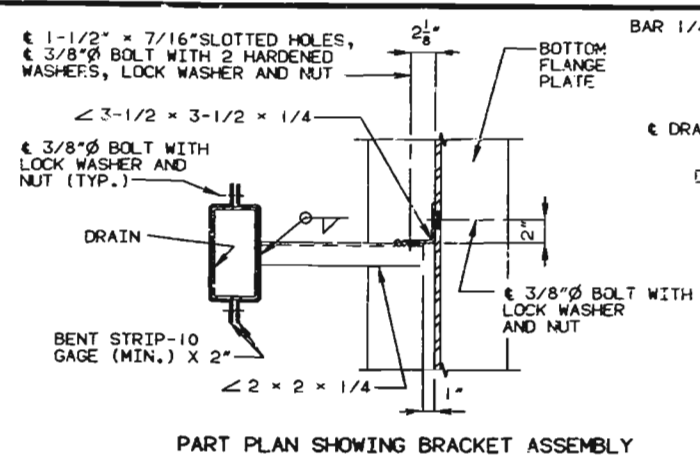
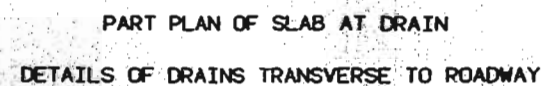
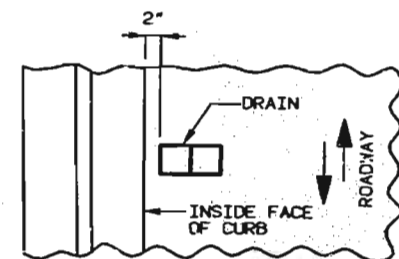
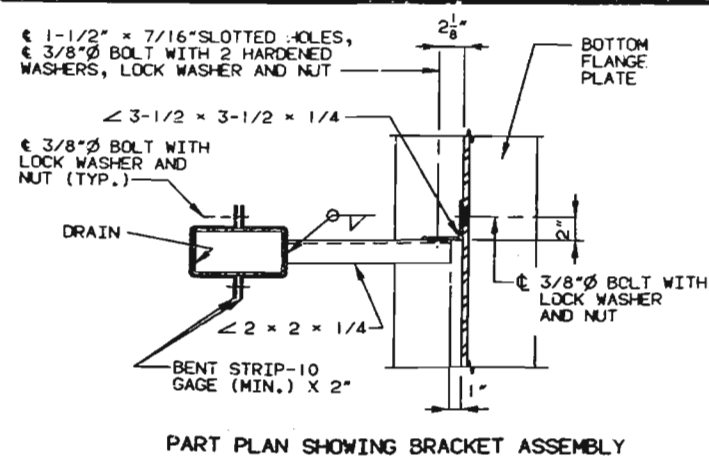
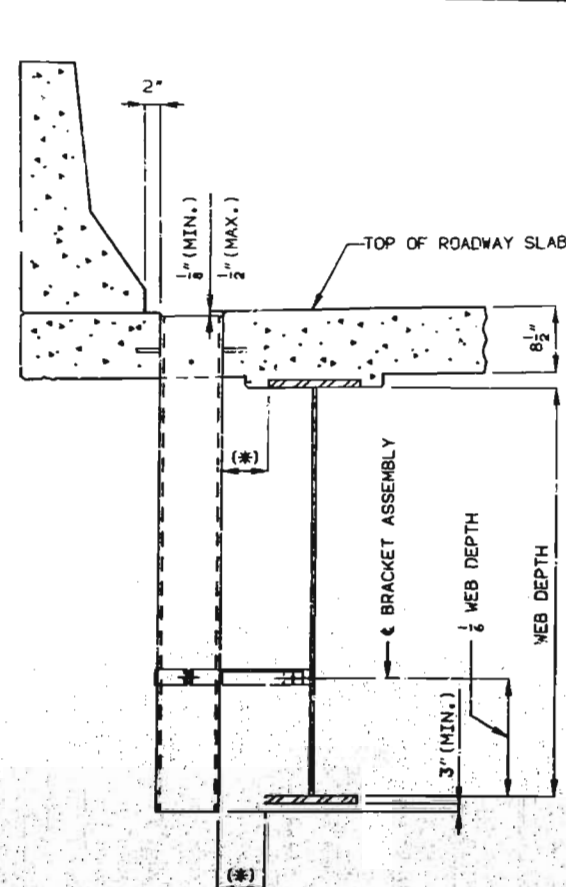
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

204

DETAILED FEB. 1992  
CHECKED MAY 1992







STATE	PROJ. NO.	SHEET NO.
MO.		192

GENERAL NOTES:

SLAB DRAINS MAY BE FABRICATED OF EITHER 1/4" WELDED SHEETS OF A.S.T.M. A36 STEEL OR FROM 1/4" STRUCTURAL STEEL TUBING A.S.T.M. A500 OR A501.

OUTSIDE DIMENSIONS OF DRAINS ARE 8" x 4".

LOCATE DRAINS IN THE SLAB BY DIMENSIONS SHOWN IN THE PART ELEVATION.

SHIFT REINFORCING IN FIELD WHERE  
NECESSARY TO CLEAR DRAINS.

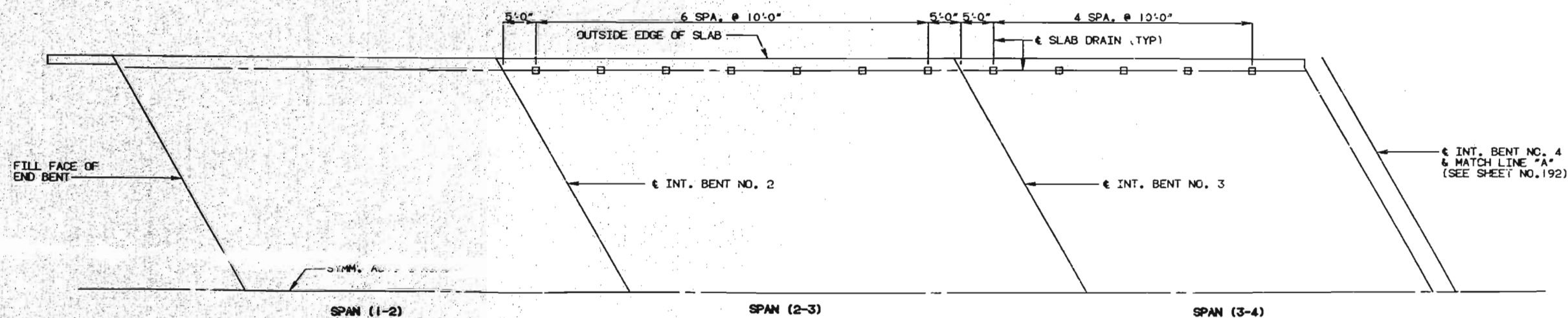
THE DRAINS AND BRACKET ASSEMBLY SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A123.

ALL BOLTS, HARDENED WASHERS, LOCK WASHERS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153.

THE BOLT HOLE FOR THE BRACKET  
ASSEMBLY ATTACHMENT SHALL BE LOCATED  
ON THE PLATE GIRDER SHOP DRAWINGS.

SHOP DRAWINGS WILL NOT BE REQUIRED  
FOR SLAB DRAINS AND THE BRACKET  
ASSEMBLY.

## SLAB DRAIN DETAILS



PART PLAN OF SLAB SHOWING SLAB DRAIN SPACING (N.B.L. SHOWN, S.B.L. SIMILAR)

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 191 OF 238.

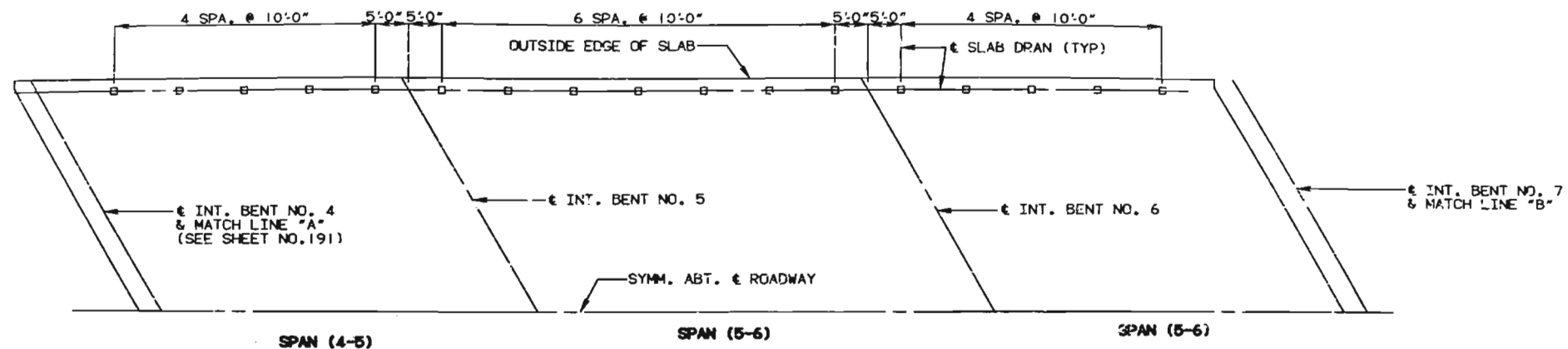
ST. LOUIS-JEFFERSON

COUNTIES

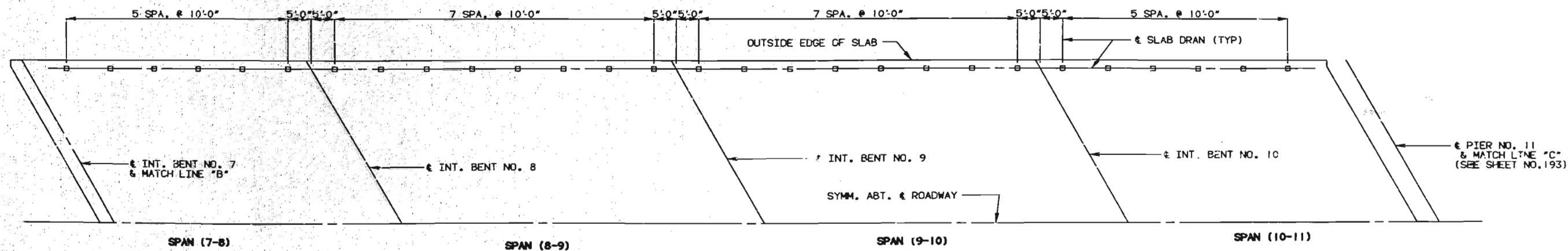
A-609R

DETAILED FEB. 1992  
CHECKED MAY 1992

DRAIN	OS 3.30, STL, A
STEEL QDR DRAIN	REVISE(
FEB. 1975	OCT. 1978



PART PLAN OF SLAB SHOWING SLAB DRAIN SPACING



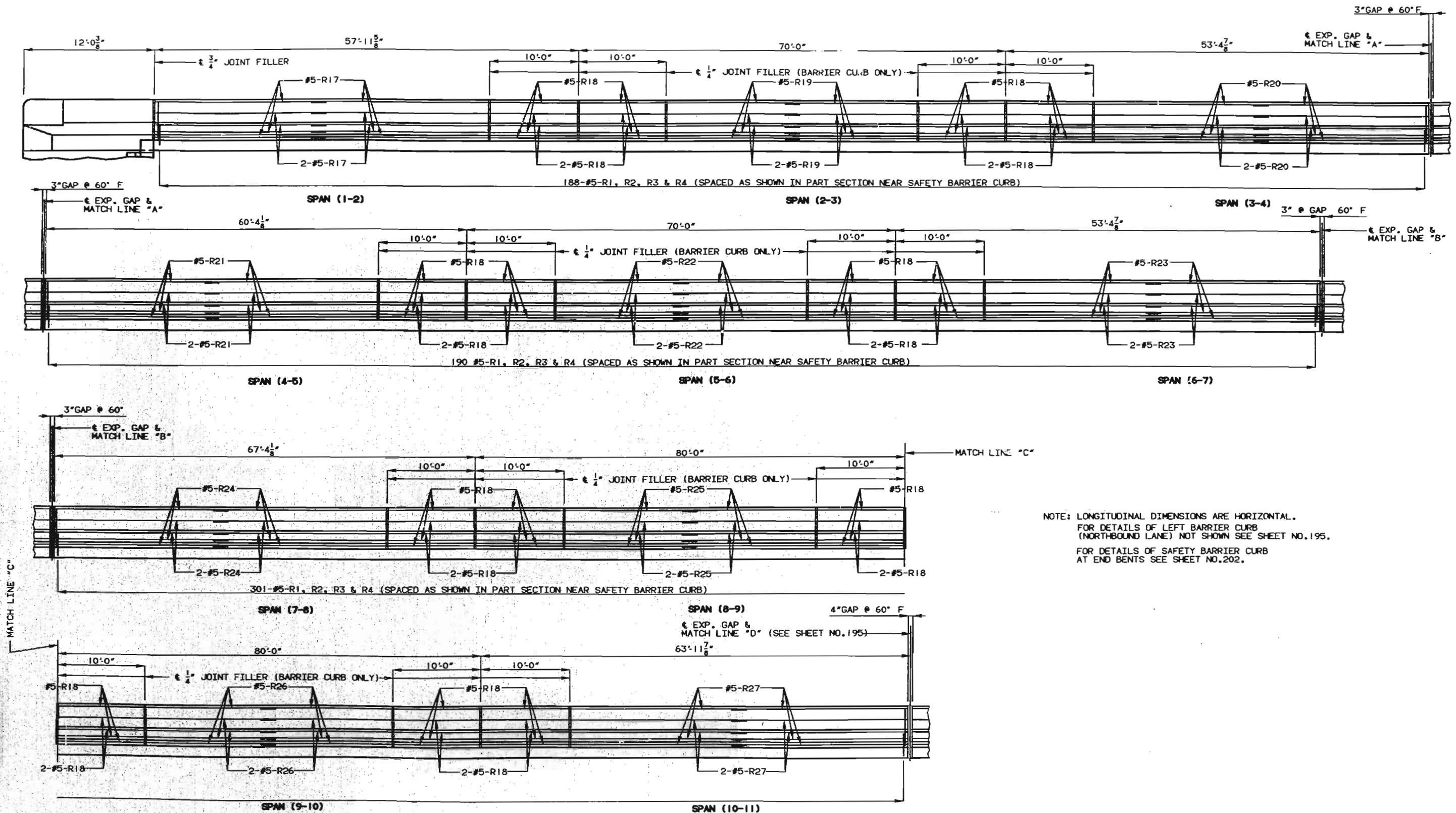
PART PLAN OF SLAB SHOWING SLAB DRAIN SPACING (N.B.L. SHOWN, S.B.L. SIMILAR)

NOTE: FOR DETAILS OF SLAB DRAINS NOT SHOWN SEE SHEET NO. 191.

NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.







NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
 FOR DETAILS OF LEFT BARRIER CURB  
 (NORTHBOUND LANE) NOT SHOWN SEE SHEET NO.195.  
 FOR DETAILS OF SAFETY BARRIER CURB  
 AT END BENTS SEE SHEET NO.202.

PART SECTION NEAR LEFT BARRIER CURB (NORTHBOUND LANE)

209  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

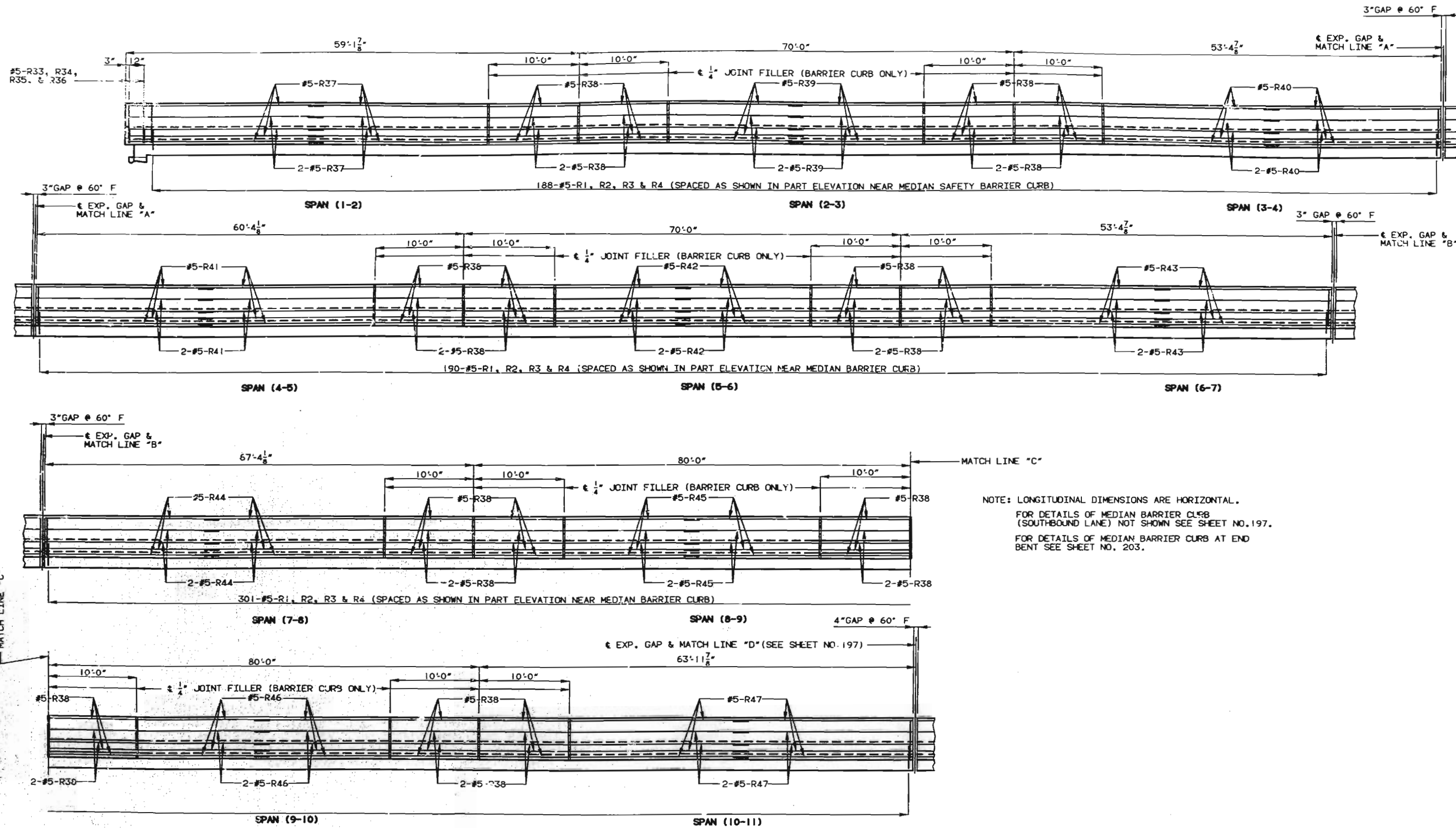
SHEET NO. 194 OF 238.

ST. LOUIS-JEFFERSON

COUNTIES

A-609R





NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
 FOR DETAILS OF MEDIAN BARRIER CURB (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NO. 197.  
 FOR DETAILS OF MEDIAN BARRIER CURB AT END BENT SEE SHEET NO. 203.

PART ELEVATION NEAR MEDIAN BARRIER CURB (NORTHBOUND LANE)

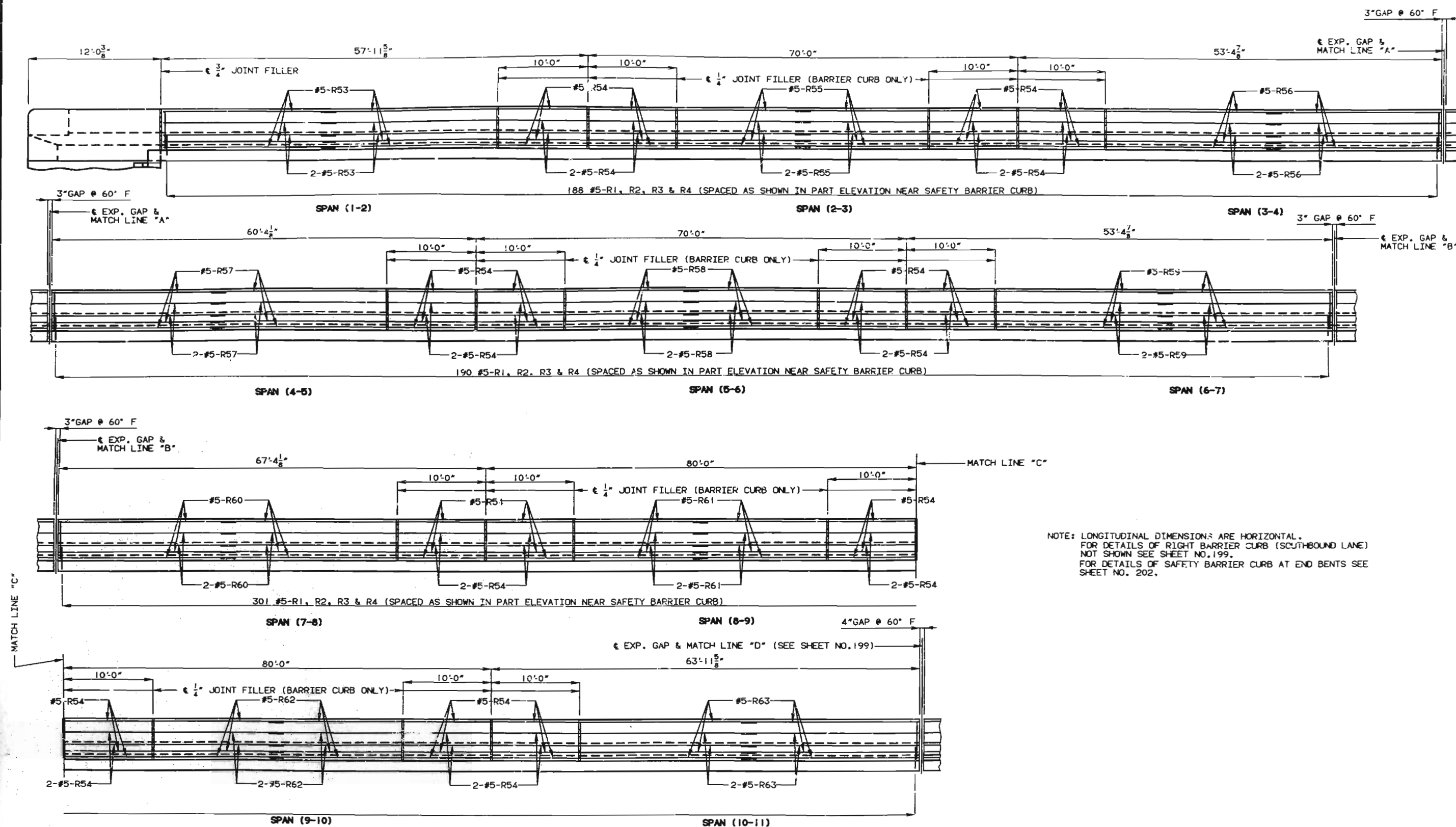
211

DETAILED APRIL 1992  
 CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.







NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL.  
FOR DETAILS OF RIGHT BARRIER CURB (SOUTHBOUND LANE) NOT SHOWN SEE SHEET NO. 199.  
FOR DETAILS OF SAFETY BARRIER CURB AT END BENTS SEE SHEET NO. 202.

PART ELEVATION NEAR RIGHT BARRIER CURB (SOUTHBOUND LANE)

213

DETAILED JAN. 1992  
CHECKED MAY 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

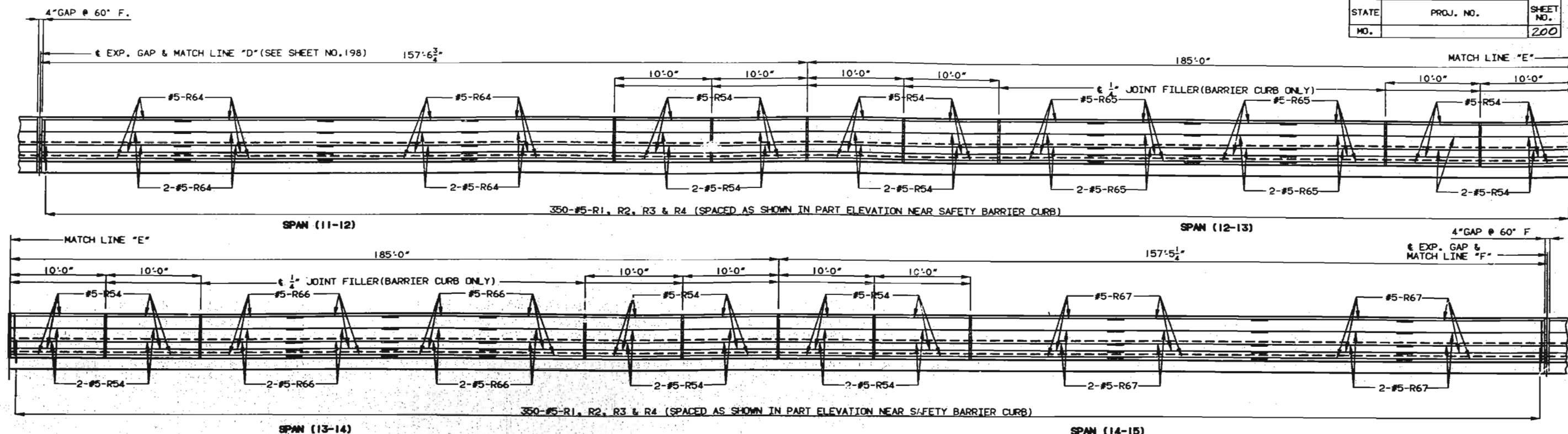
SHEET NO. 198 OF 238.

ST. LOUIS-JEFFERSON

COUNTIES

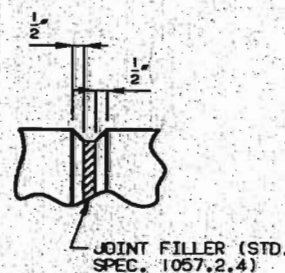
A-609R

STATE	PROJ. NO.	SHEET NO.
MO.		200

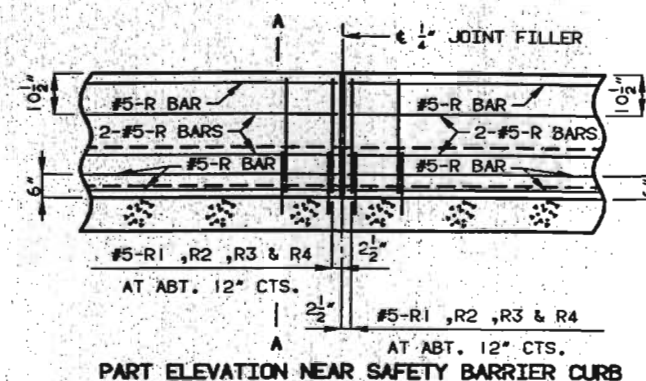


### PART ELEVATION NEAR RIGHT BARRIER CURB (SOUTHBOUND LANE)

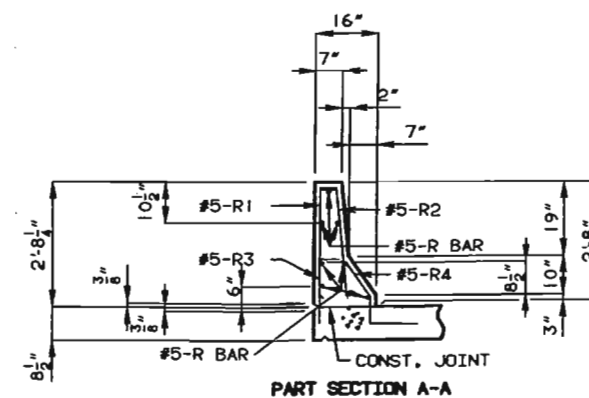
NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FOR DETAILS OF SAFETY BARRIER CURB AT END BENTS SEE SHEET NO. 202.



FILLED JOINT DETAIL



NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.



NOTE: USE A MINIMUM LAP OF 17" FOR #5 HORIZONTAL SAFETY BARRIER CURB BARS. THE CROSS-SECTIONAL AREA ABOVE THE SLAB = 2.27 SQ. FT.

### NOTE:

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS OTHERWISE NOTED.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

2.14  
 DETAILED JAN. 1992  
 CHECKED MAY 1992

SHEET NO. 199 OF 238.

ST. LOUIS-JEFFERSON

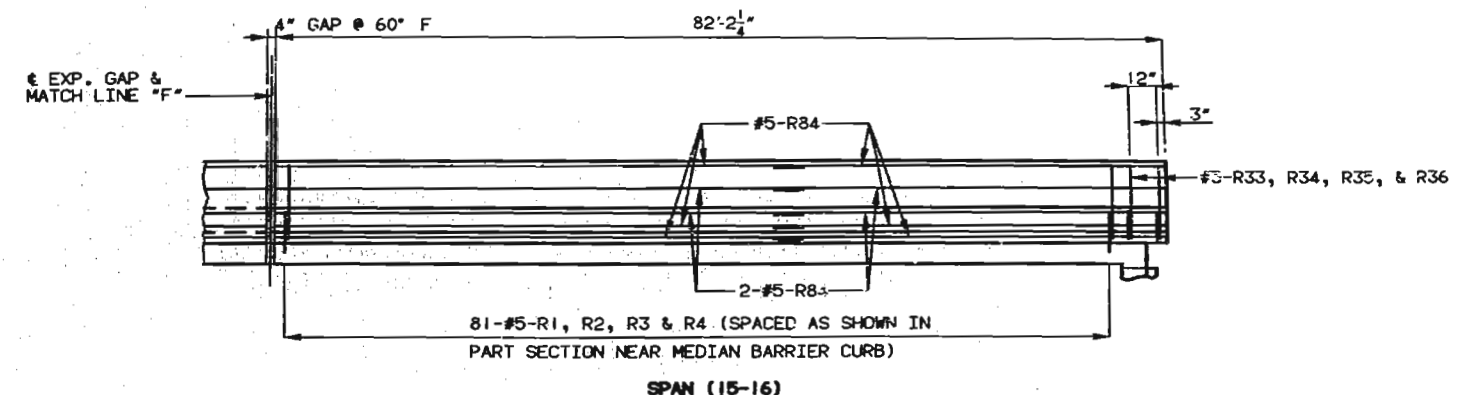
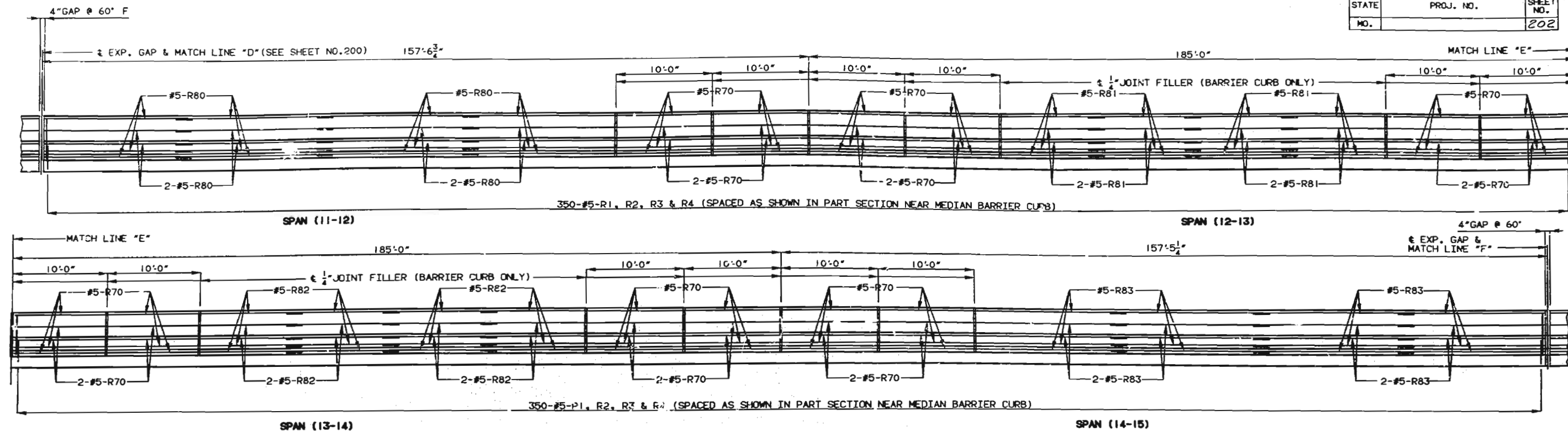
COUNTIES

A-609R



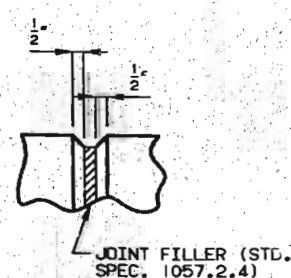


STATE	PROJ. NO.	SHEET NO.
MO.		202

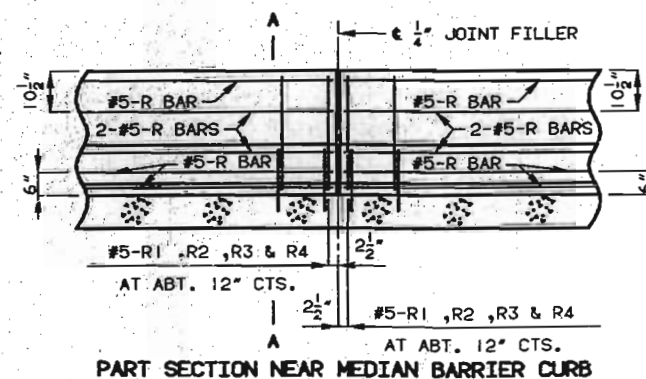


PART SECTION NEAR MEDIAN BARRIER CURB (SOUTHBOUND LANE)

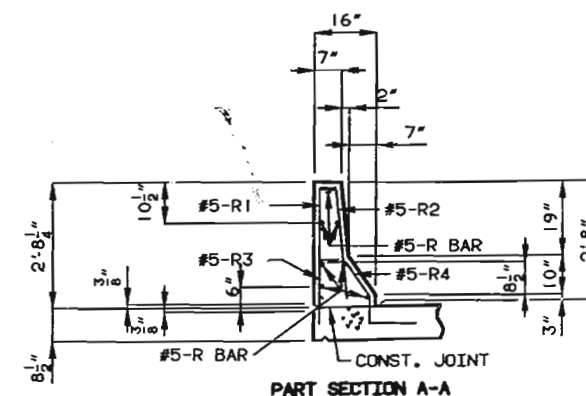
NOTE: LONGITUDINAL DIMENSIONS ARE HORIZONTAL FOR DETAILS OF MEDIAN BARRIER CURB AT END BENTS SEE SHEET NO.203.



FILLED JOINT DETAIL



PART SECTION NEAR MEDIAN BARRIER CURB



NOTE: USE A MINIMUM LAP OF 17\"/>

#### NOTE:

BARRIER CURB ALONG MEDIAN IS INCLUDED IN SAFETY BARRIER CURB

TOP OF MEDIAN BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH MEDIAN BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

ALL EXPOSED EDGES OF SAFETY BARRIER CURB SHALL HAVE EITHER A 1/2\"/>

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM FILL FACE TO FILL FACE.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

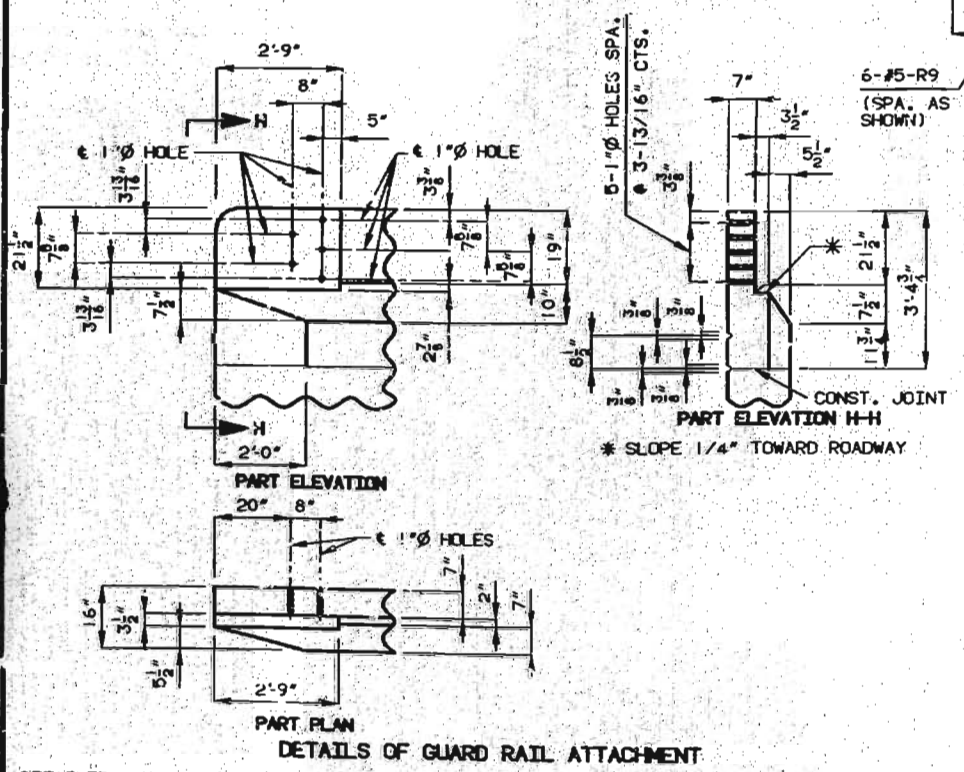
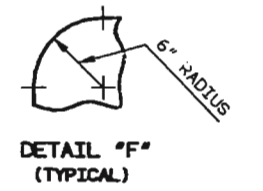
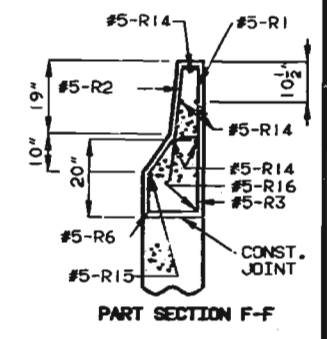
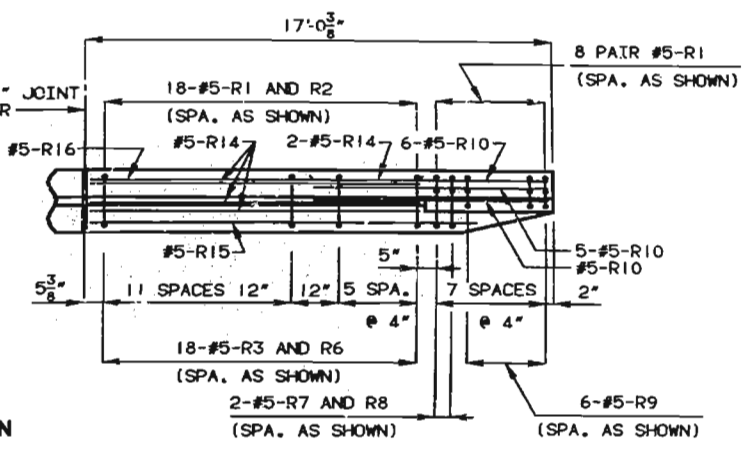
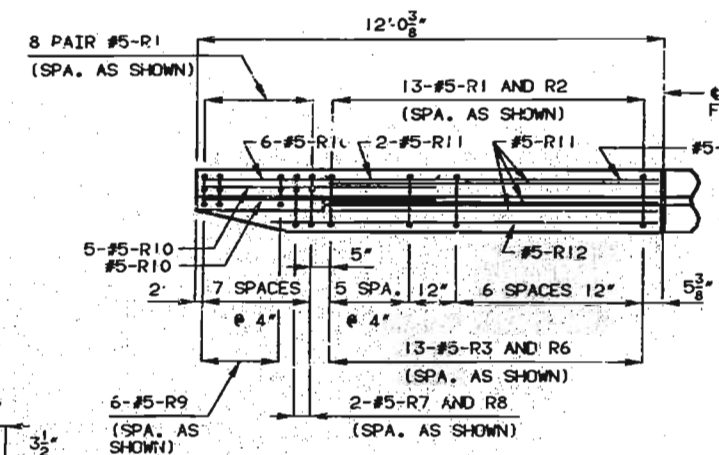
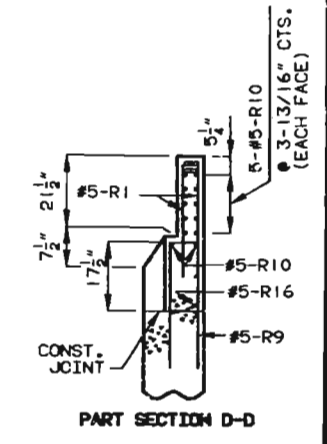
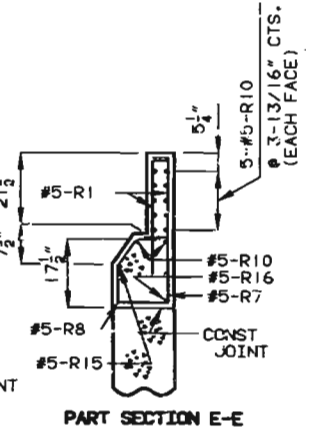
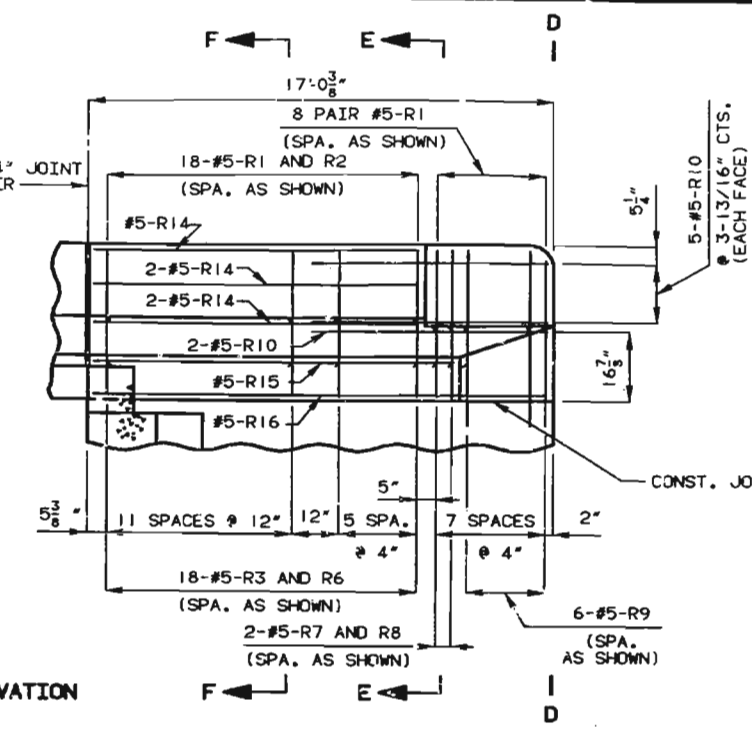
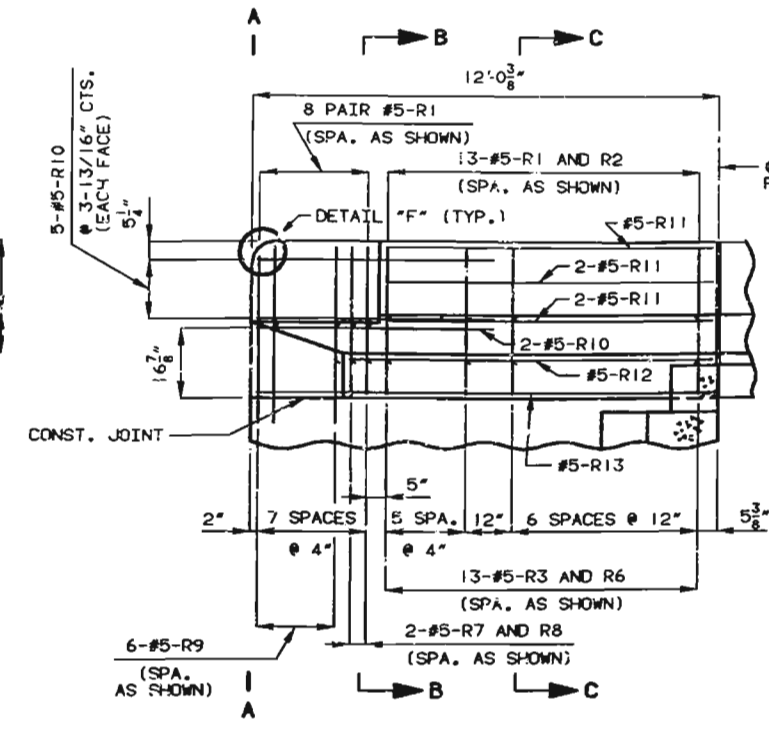
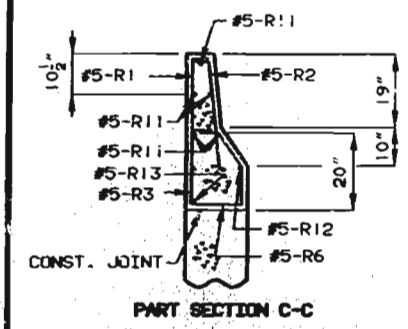
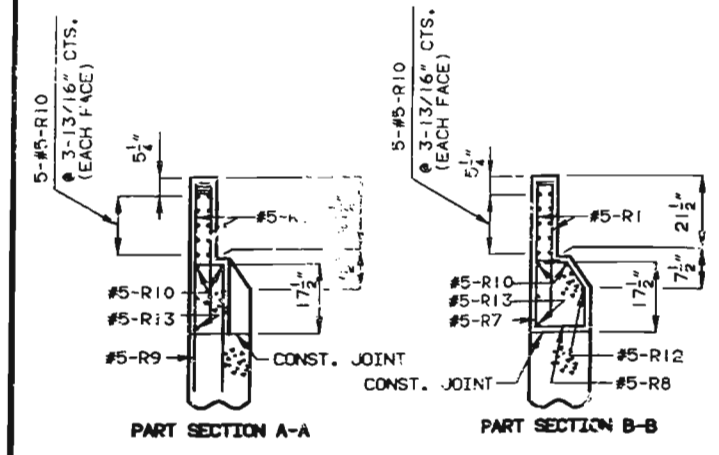
SHEET NO. 201 OF 238.

ST. LOUIS-JEFFERSON

COUNTIES

A-609R

216  
DETAILED APRIL 1992  
CHECKED MAY 1992



# DETAILS OF SAFETY BARRIER CURB AT END BENTS

DETAILED JAN. 15 92  
CHECKED MAY 19 92

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 202 OF 238

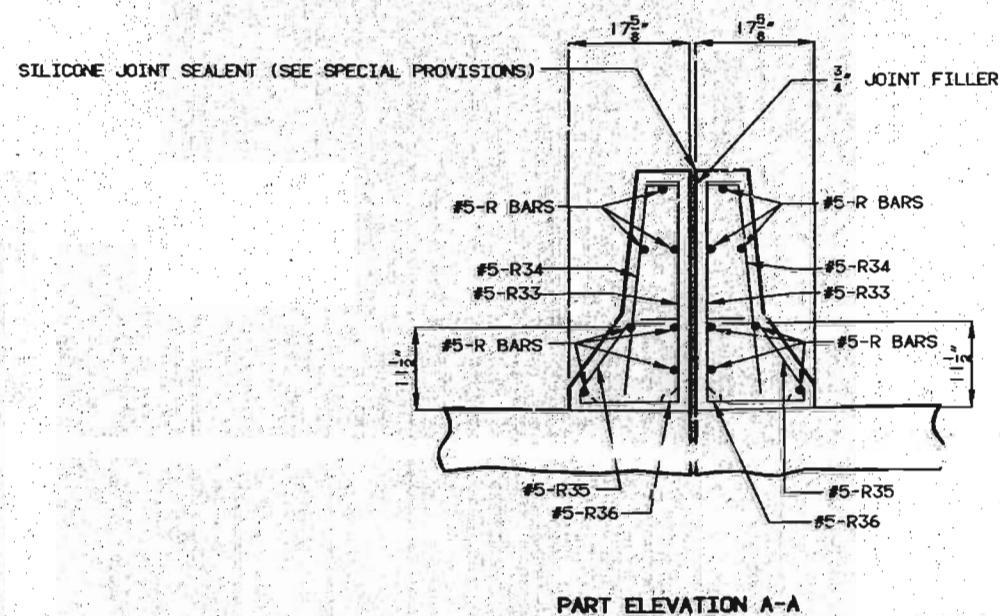
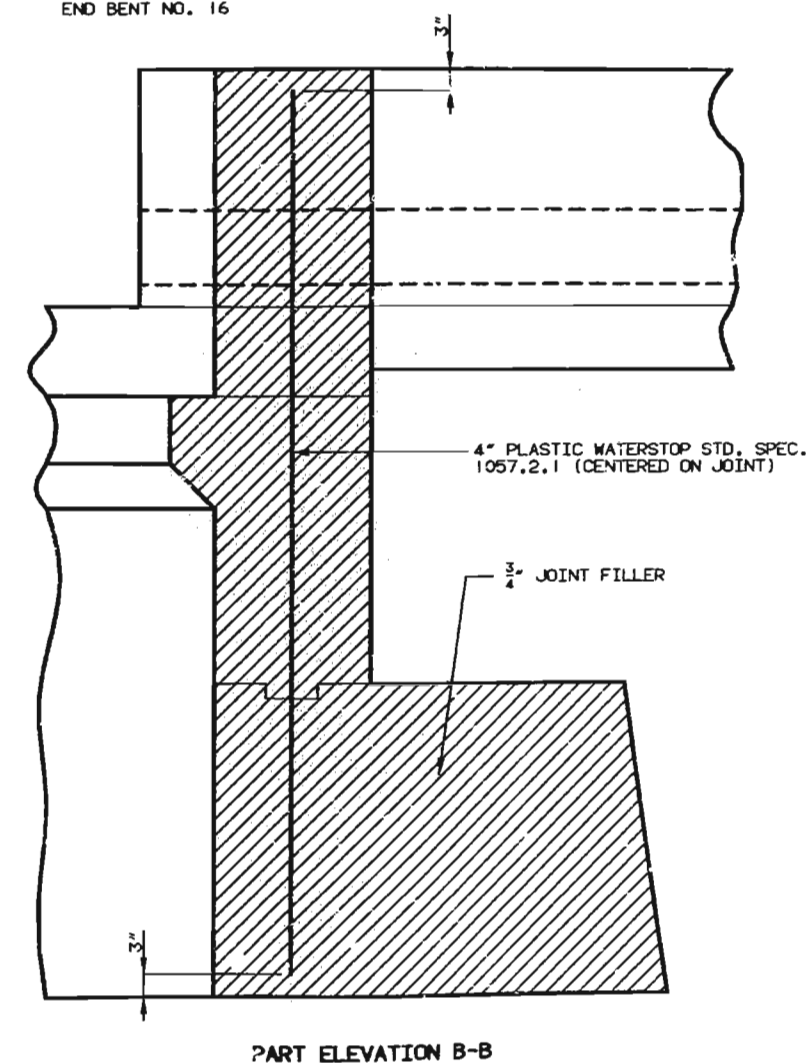
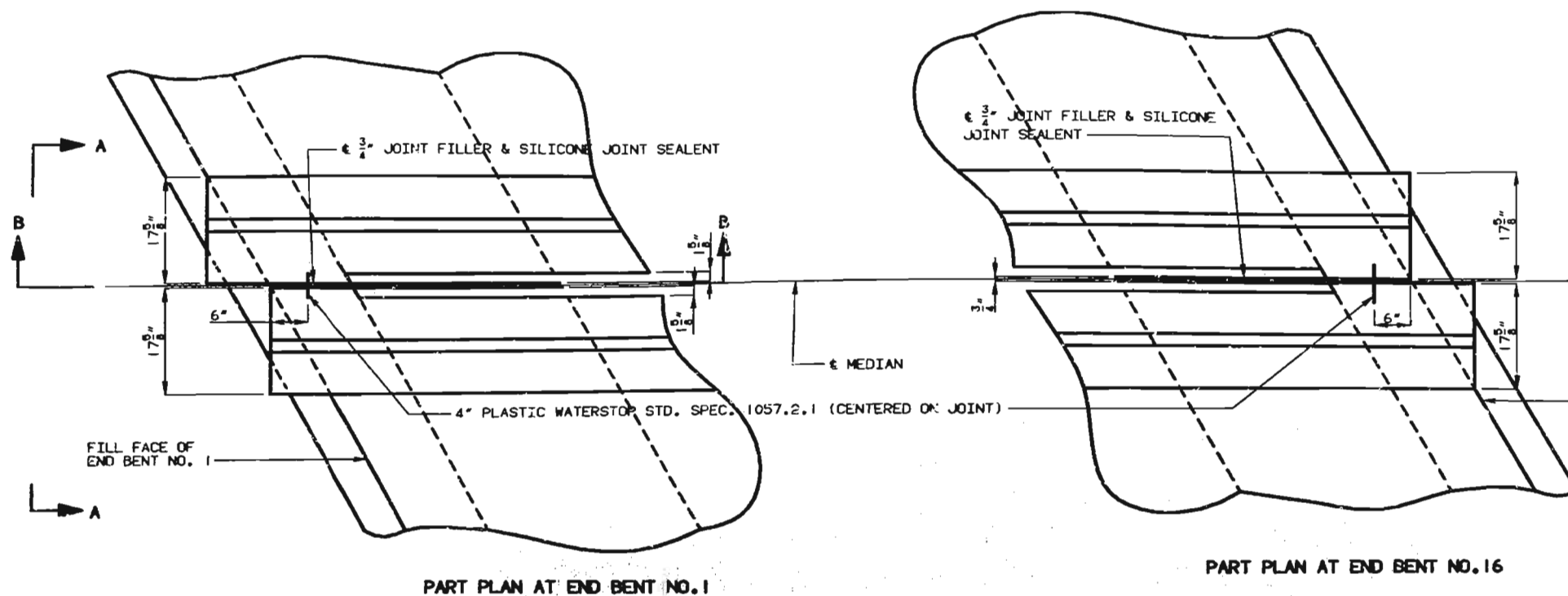
ST. LOUIS-JEFFERSON

COUNTIES A-609R

217



NOTE: FOR DETAILS OF MEDIAN BARRIER CURB NOT SHOWN, SEE SHEET NO. 196, 197, 200, & 201.  
 PLASTIC WATERSTOP SHALL BE PLACED IN THE FILLED JOINTS.  
 COST OF PLASTIC WATERSTOP COMPLETE IN PLACE TO BE INCLUDED IN CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.



# DETAILS OF MEDIAN BARRIER CURB AT END BENTS

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 203 OF 238

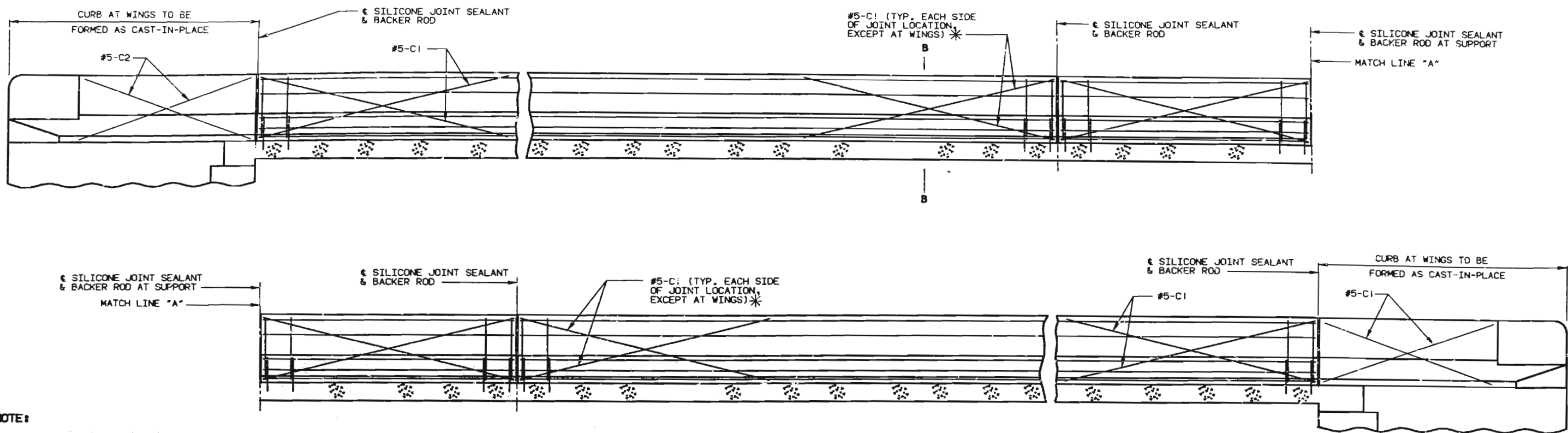
ST. LOUIS-JEFFERSON

COUNTIES

A-609R

DETAILED APRIL 1992  
 CHECKED MAY 1992

218



**NOTE:**

TOP OF SAFETY BARRIER CURB SHALL BE BUILT PARALLEL TO GRADE WITH SAFETY BARRIER CURB JOINTS (EXCEPT AT END BENTS) NORMAL TO GRADE.

WHEN THE SAFETY BARRIER CURB IS BID BY LINEAR FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE SAFETY BARRIER CURB SHALL BE CLASS B1.

MEASUREMENT OF SAFETY BARRIER CURB IS TO THE NEAREST LINEAR FOOT FOR EACH STRUCTURE, MEASURED ALONG THE OUTSIDE TOP OF SLAB FROM END OF WING TO END OF WING.

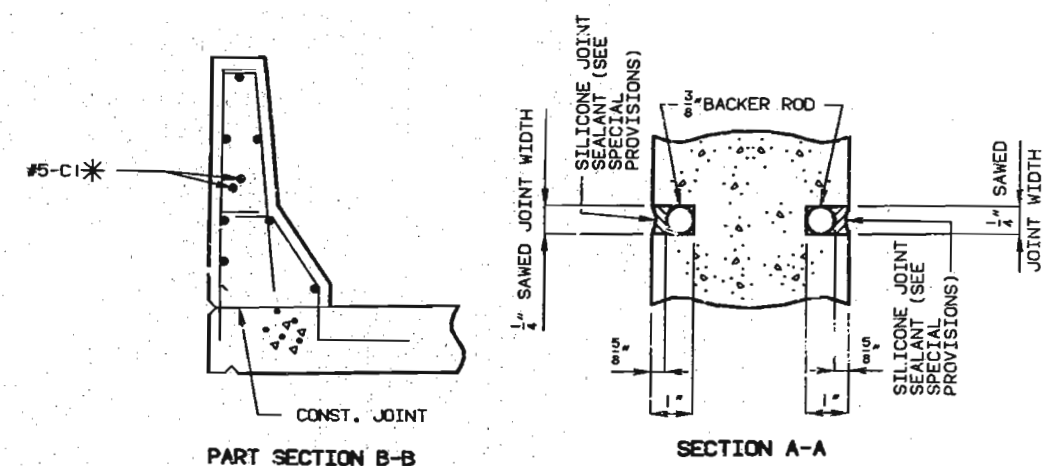
**TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB (N.B.L.) AT SUPPORT LOCATIONS (RIGHT SAFETY BARRIER CURB (S.B.L.) SIMILAR) (OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB) SLIP FORM OPTION SHALL BE USED ON OUTSIDE BARRIER CURB ONLY.**

**NOTE:**

JOINT SEALANT AND BACKER RODS SHALL BE USED ON ALL SLIP-FORM BRIDGE SAFETY BARRIER CURBS INSTEAD OF JOINT FILLER.

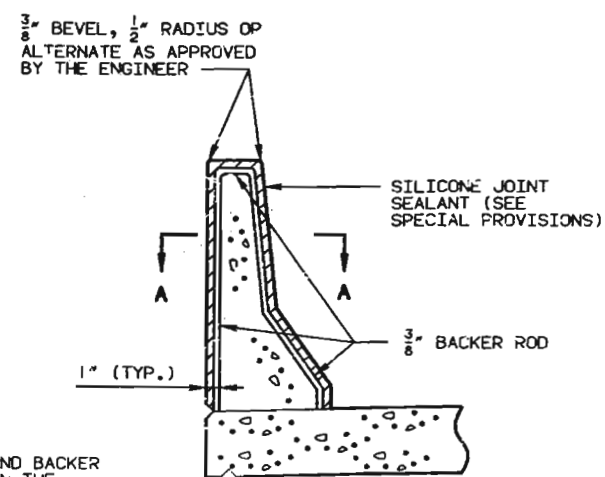
PLASTIC WATERSTOP SHALL NOT BE USED WITH SLIP-FORM OPTION.

C BARS (SLIP-FORM OPTION ONLY) SHALL BE USED IN ADDITION TO CAST-IN-PLACE CONVENTIONAL FORMING REINFORCEMENT FOR BRIDGE SAFETY BARRIER CURB.



NOTE: \* EACH SIDE OF JOINT LOCATION, EXCEPT SPAN SIDE ONLY AT END BENTS.

NOTE: COST OF SILICONE JOINT SEALANT AND BACKER ROD COMPLETE IN PLACE TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SAFETY BARRIER CURB.



**SECTION THRU JOINT**

**OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB**

DETAILED JULY 1992  
CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

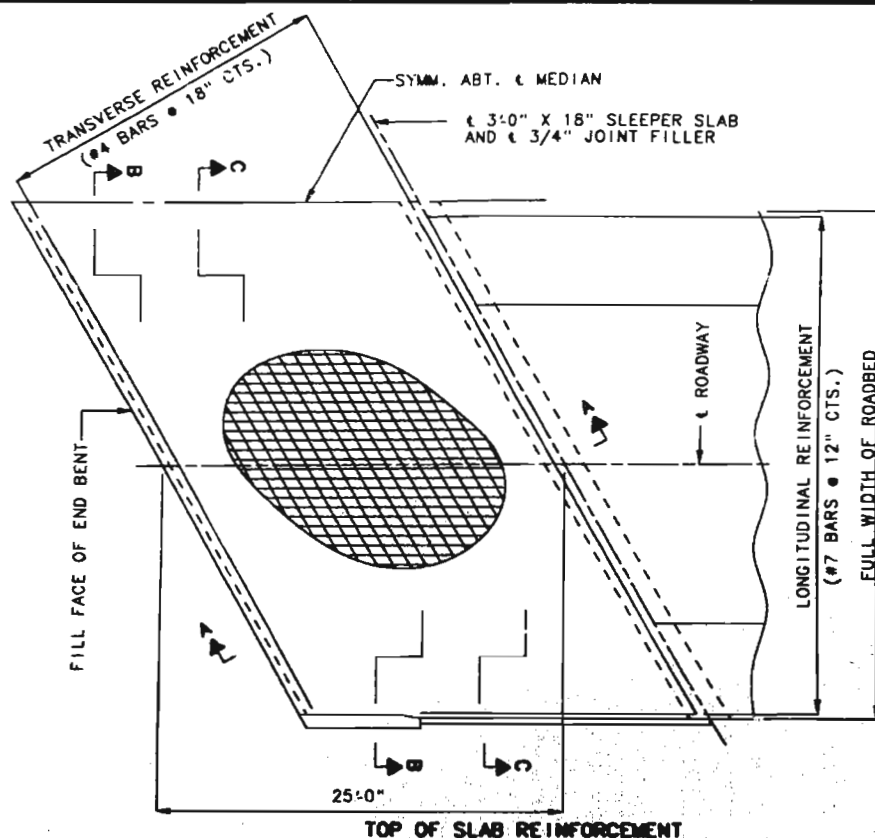
SHEET NO. 204 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

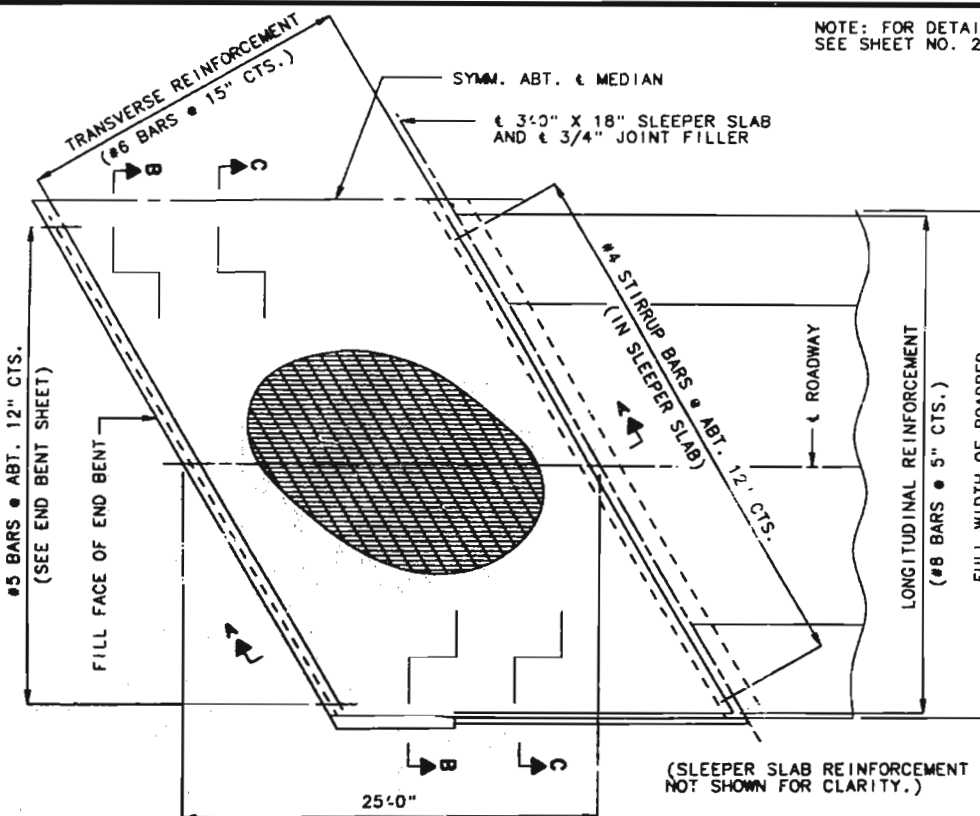
219

NOTE: FOR DETAILS OF CONCRETE TRAFFIC BARRIER ON APPROACH SLAB, SEE SHEET NO. 206.

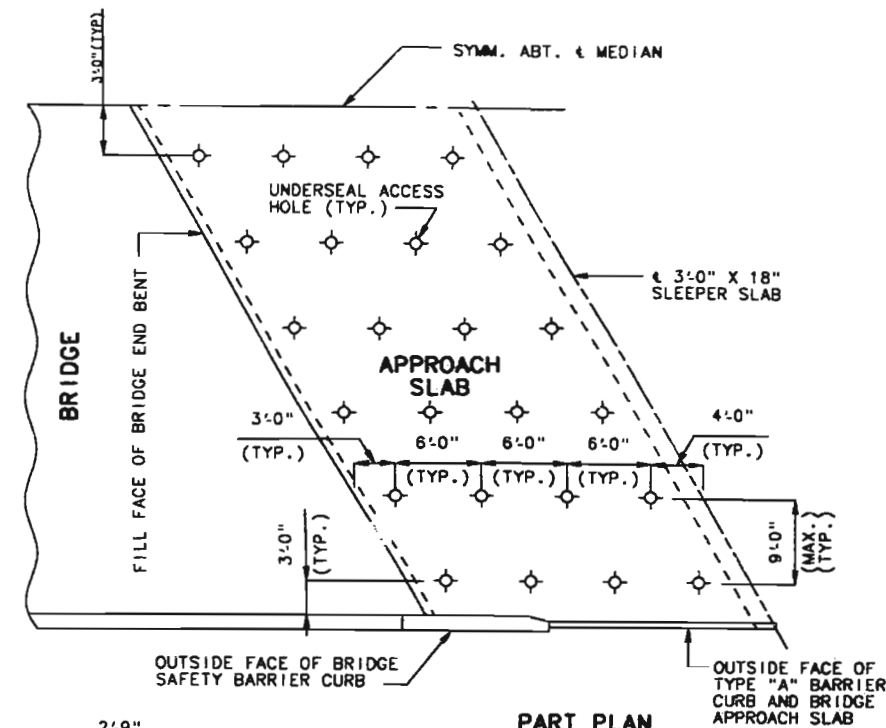
STATE	PROJ. NO.	SHEET NO.
MO.		



TOP OF SLAB REINFORCEMENT

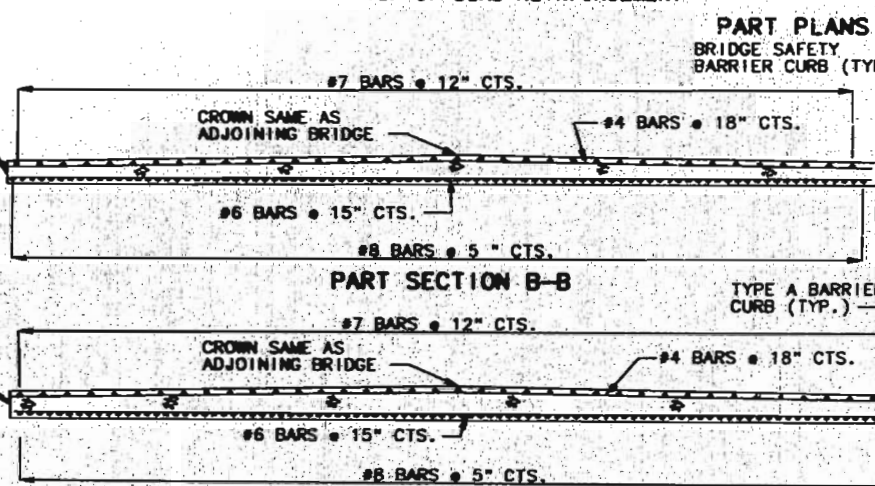


BOTTOM OF SLAB REINFORCEMENT

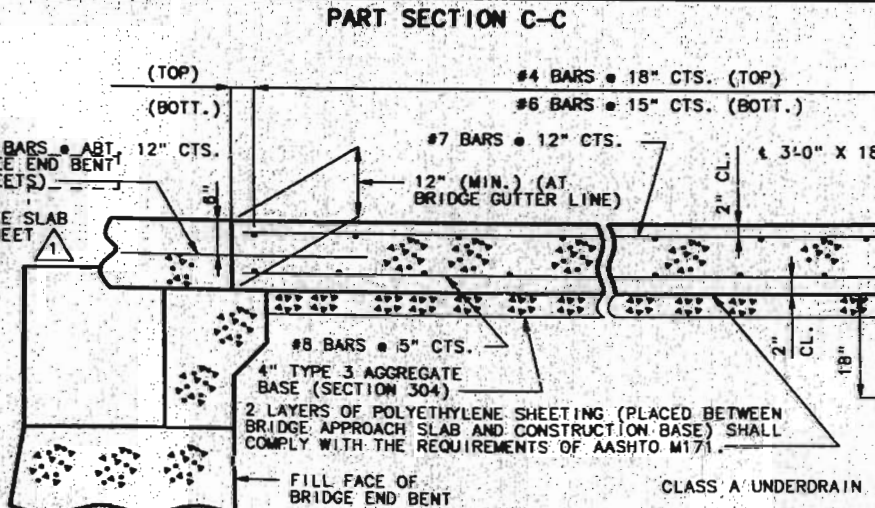


PART PLAN

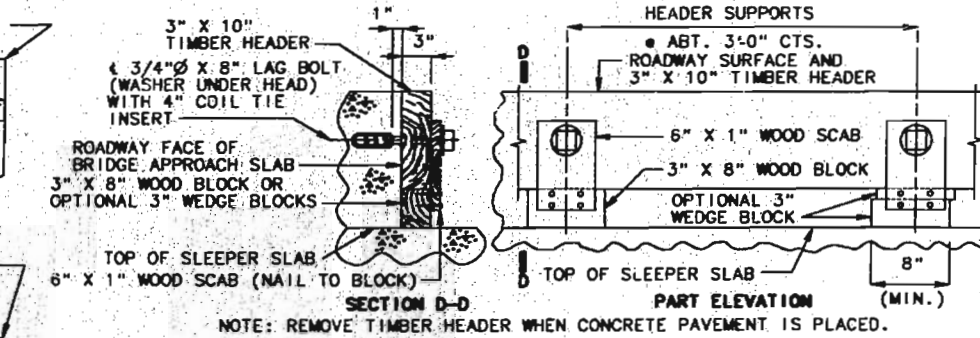
(SHOWING TYPICAL UNDERSEAL ACCESS HOLE LOCATIONS)



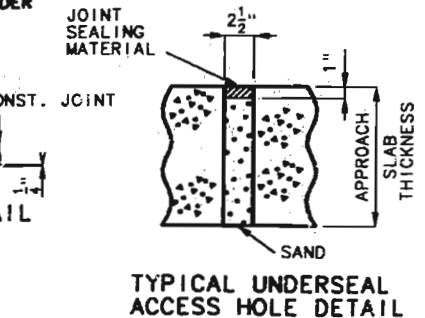
PART SECTION B-B



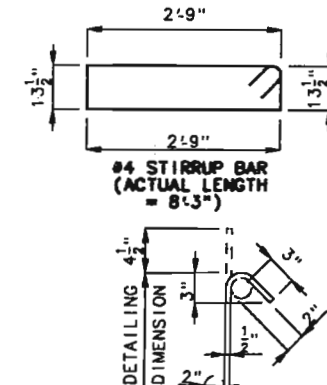
PART SECTION C-C



DETAILS OF TIMBER HEADER



TYPICAL UNDERSEAL ACCESS HOLE DETAIL



TYPICAL 135° STIRRUP HOOK DIMENSIONS BENDING DIAGRAM

# GENERAL NOTES:

- ALL CONCRETE FOR THE BRIDGE APPROACH SLAB AND SLEEPER SLAB SHALL BE IN ACCORDANCE WITH SECTION 503 (f'c = 4,000 PSI).
- ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF SECTION 1057.2.5, EXCEPT AS NOTED.
- THE REINFORCING STEEL IN THE BRIDGE APPROACH SLAB AND THE SLEEPER SLAB SHALL BE EPOXY COATED GRADE 60 WITH FY = 60,000 PSI.
- MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2", UNLESS OTHERWISE SHOWN.
- THE REINFORCING STEEL IN THE BRIDGE APPROACH SLAB AND THE SLEEPER SLAB SHALL BE CONTINUOUS. THE TRANSVERSE REINFORCING STEEL MAY BE MADE CONTINUOUS BY LAP SPLICING THE #4 & #6 BARS 22" AND 34" RESPECTIVELY.
- MECHANICAL BAR SPLICES WILL BE PERMITTED AND SHALL DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCING BARS BEING SPLICED. THE CONTRACTOR SHALL FURNISH THE ENGINEER THE MANUFACTURER'S CERTIFICATION THAT THIS REQUIREMENT IS MET AND IS REQUIRED TO FOLLOW THE MANUFACTURER'S RECOMMENDATION FOR INSTALLATION.
- MECHANICAL BAR SPLICES SHALL BE EPOXY COATED.
- HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE C.R.S.I. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, STIRRUP AND TIE DIMENSIONS.
- PLACE CLASS A UNDERDRAIN AT FACE OF SLEEPER SLAB UNDER BRIDGE APPROACH SLAB.
- THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE BRIDGE SLAB BEFORE POURING THE BRIDGE APPROACH SLABS.
- LONGITUDINAL CONSTRUCTION JOINTS IN APPROACH SLAB AND SLEEPER SLAB SHALL BE ALIGNED WITH LONGITUDINAL CONSTRUCTION JOINTS IN BRIDGE SLAB.
- PAYMENT FOR FURNISHING ALL MATERIALS AND LABOR NECESSARY TO CONSTRUCT THE APPROACH SLAB AND TIMBER HEADER, COMPLETE IN PLACE, AS SHOWN ON THIS SHEET, SHALL BE CONSIDERED AS COMPLETELY COVERED UNDER THE CONTRACT UNIT PRICE FOR "BRIDGE APPROACH SLAB (BRIDGE)", PER SQ. YD.

# GENERAL NOTES (CONT.):

- SEE MISSOURI STANDARD PLANS DRAWING 504.00 FOR DETAILS OF CONCRETE APPROACH PAVEMENT.
- SEE MISSOURI STANDARD PLANS DRAWING 605.10 FOR DETAILS OF CLASS A UNDERDRAIN.
- SEE MISSOURI STANDARD PLANS DRAWING 609.00 FOR DETAILS OF TYPE A BARRIER CURB.
- STAGE CONST. JOINT IN APPROACH SLAB ARE SAME AS BRIDGE SLAB.

REVISED 12-8-1993

SHEET NO. 205 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

APP. SLAB, CS. 3.30, RAIN, A. REVISED FEB. 1993  
DECEMBER 1992

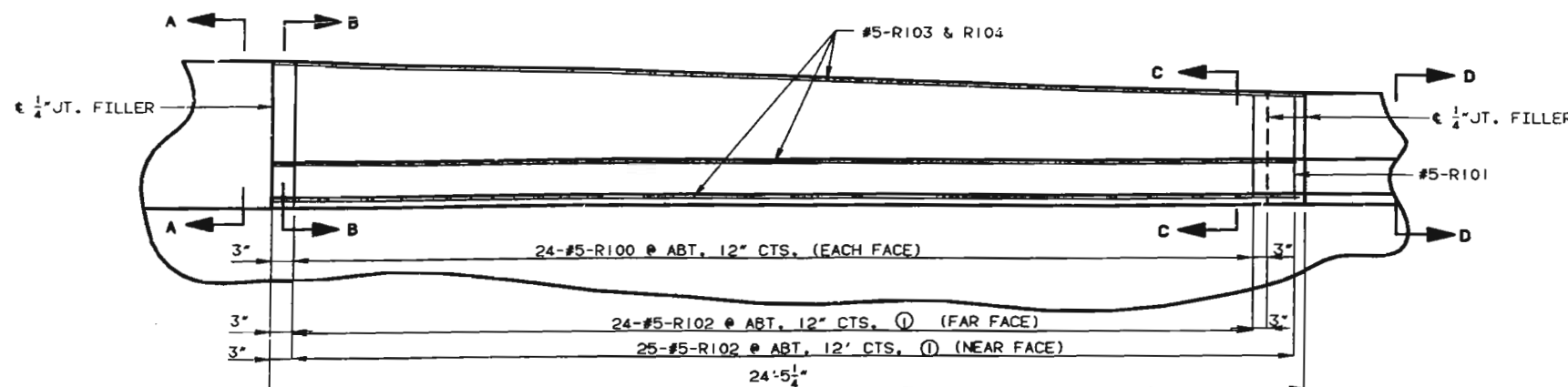
DETAILED APRIL 1993  
CHECKED APRIL 1993

PART LONGITUDINAL SECTION A-A

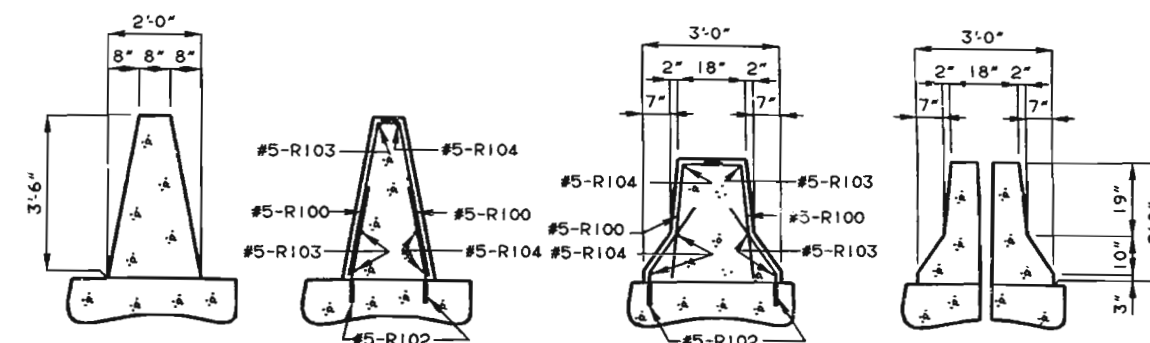
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

BRIDGE APPROACH SLAB





**ELEVATION NEAR END BENT NO. 1**  
NOTE: ELEVATION NEAR END BENT NO. 1 SHOWN  
END BENT NO. 16 SIMILAR BY ROTATION.



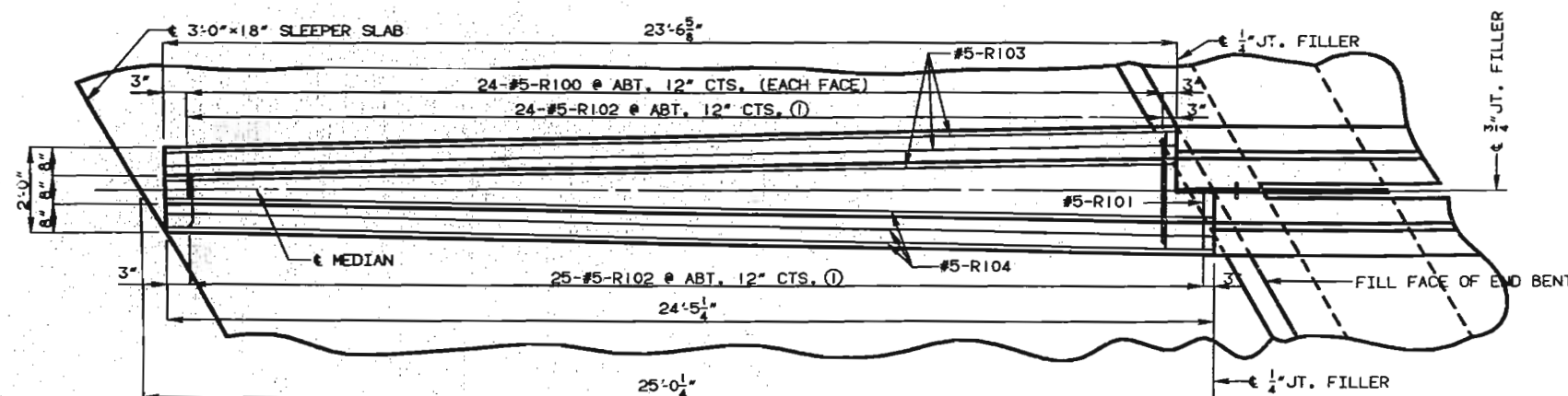
**SECTION A-A**

**SECTION B-B**

**SECTION C-C**

**SECTION D-D**

NOTE: THE #5 REINFORCING BAR SHALL BE BENT IN FIELD.



**PLAN**

(END BENT #1 SHOWN END BENT #16 SIMILAR)

# **DETAILS OF CONCRETE TRAFFIC BARRIER ON APPROACH SLAB**

Ø BARS SHALL BE ATTACHED TO CONCRETE WITH AN INJECTED EPOXY RESIN SYSTEM  
FOR DETAILS OF INSTALLATION, SEE SHEET NO. 6.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

## **NOTE:**

TOP OF CONCRETE TRAFFIC BARRIER SHALL BE BUILT  
PARALLEL TO GRADE.

ALL EXPOSED EDGES OF CONCRETE TRAFFIC BARRIER SHALL  
HAVE EITHER A 1/2" RADIUS OR A 3/8" BEVEL, UNLESS  
OTHERWISE NOTED.

WHEN THE CONCRETE TRAFFIC BARRIER IS BID BY LINEAR  
FEET, THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST  
OF ALL CONCRETE AND REINFORCEMENT, COMPLETE-IN-PLACE.

CONCRETE IN THE CONCRETE TRAFFIC BARRIER SHALL BE  
CLASS B1.

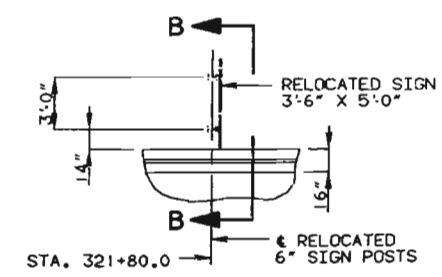
MEASUREMENT OF CONCRETE TRAFFIC BARRIER IS TO THE NEAR-  
EST LINEAR FOOT AND INCLUDED IN N.B. LANE QUANTITIES.

DETAILED APRIL 1993  
CHECKED APRIL 1993

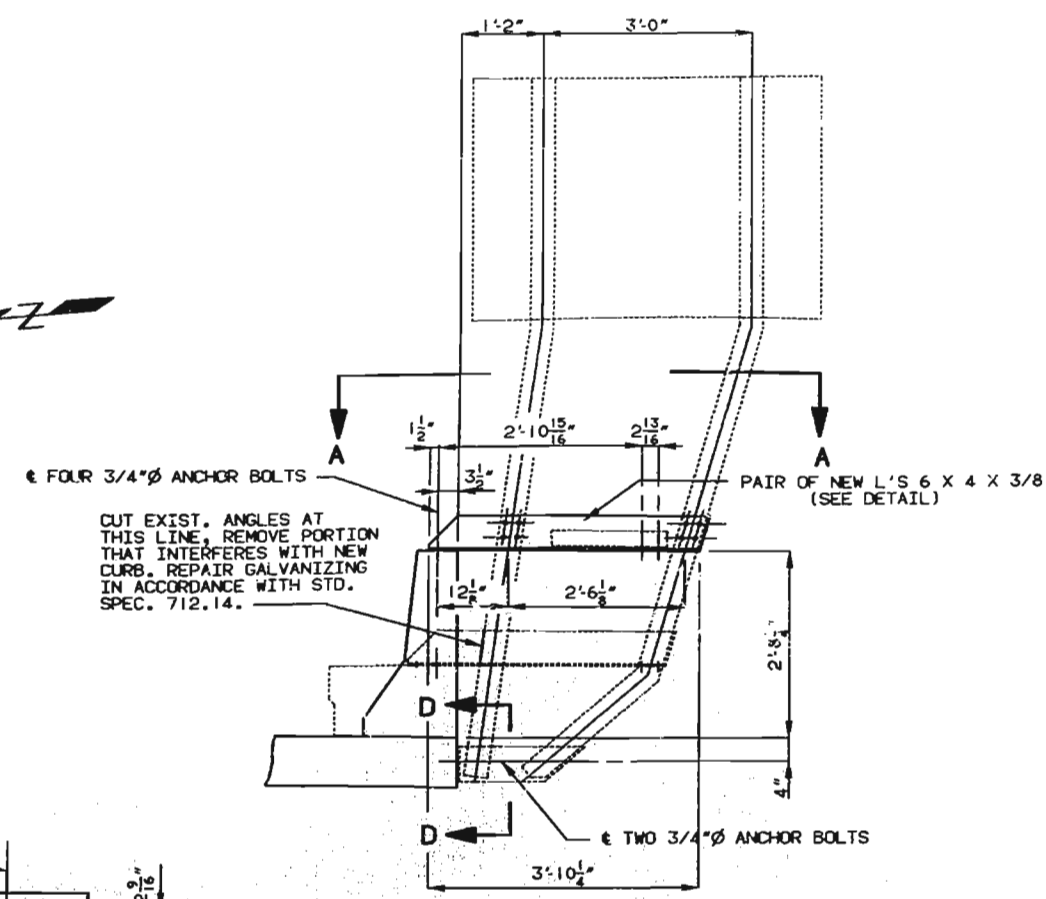
SHEET NO. 206 OF 238

ST. LOUIS-JEFFERSON COUNTIES **A-609R**

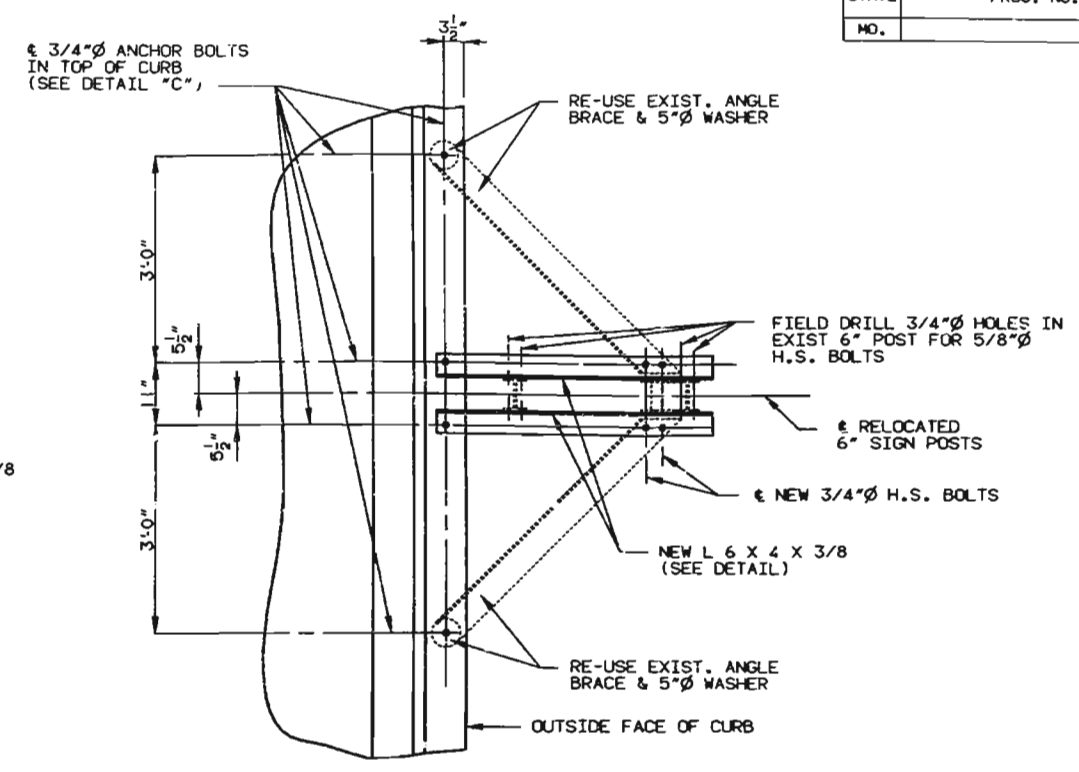
221



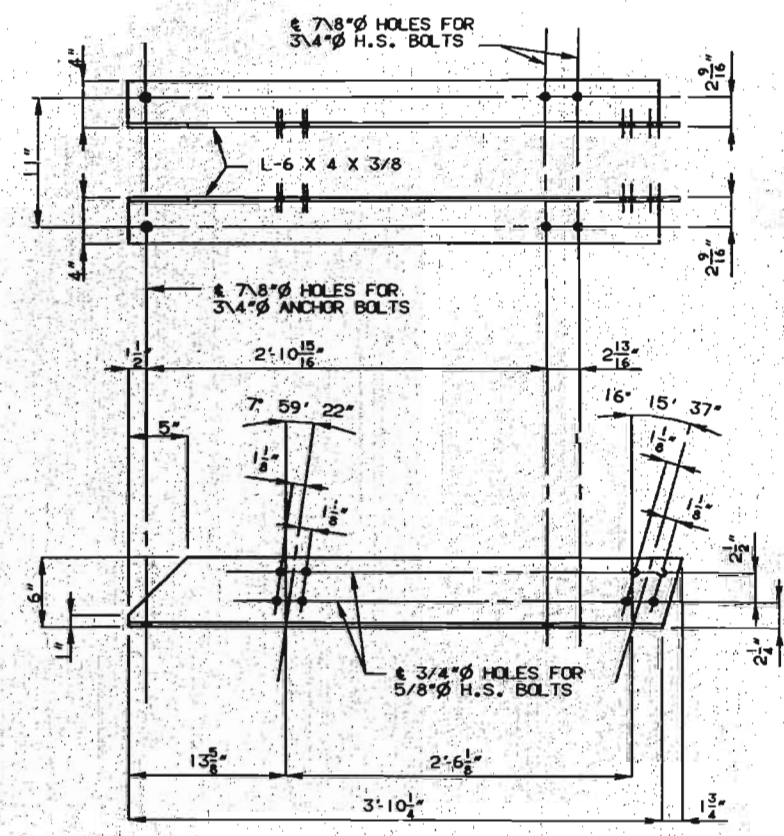
PART PLAN SHOWING  
SIGN LOCATION



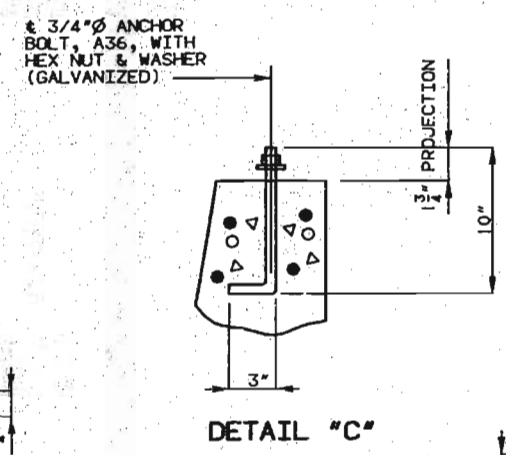
PART ELEVATION B-B



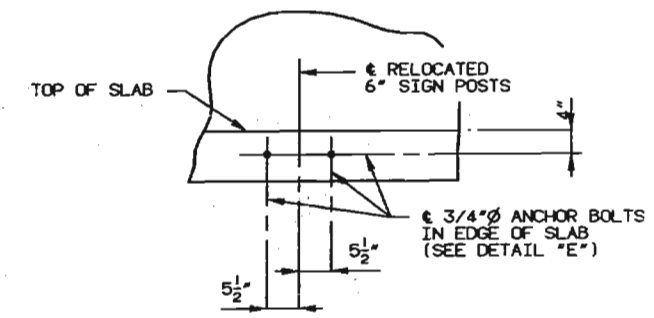
PART SECTION A-A



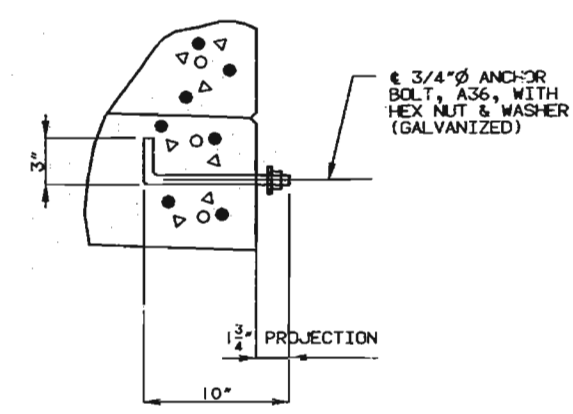
DETAIL OF NEW PAIR OF L'S 6 X 4 X 3/8



DETAIL "C"



PART SECTION D-D



DETAIL "E"

GENERAL NOTES:  
 CENTER AND LEVEL SIGN ON BRACKETS.  
 ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.  
 ALL STRUCTURAL STEEL SHALL BE A.S.T.M. A36, GALVANIZED.  
 OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES.  
 HEAVY LINES INDICATE NEW WORK.  
 THE COST OF FURNISHING AND ERECTING THE SIGN SUPPORTS, INCLUDING THE 3/4" ANCHOR BOLTS, COMPLETE-IN-PLACE, SHALL BE PAID FOR AS MODIFICATION OF EXISTING SIGN SUPPORT BRACKETS, LUMP SUM.

MODIFICATION TO  
 SIGN SUPPORT BRACKET (NBL)  
 STA. 321+80.0

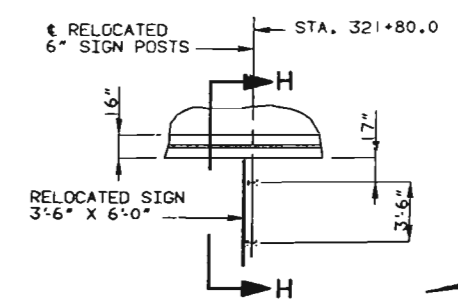
DETAILED APR. 1992  
 CHECKED MAY. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

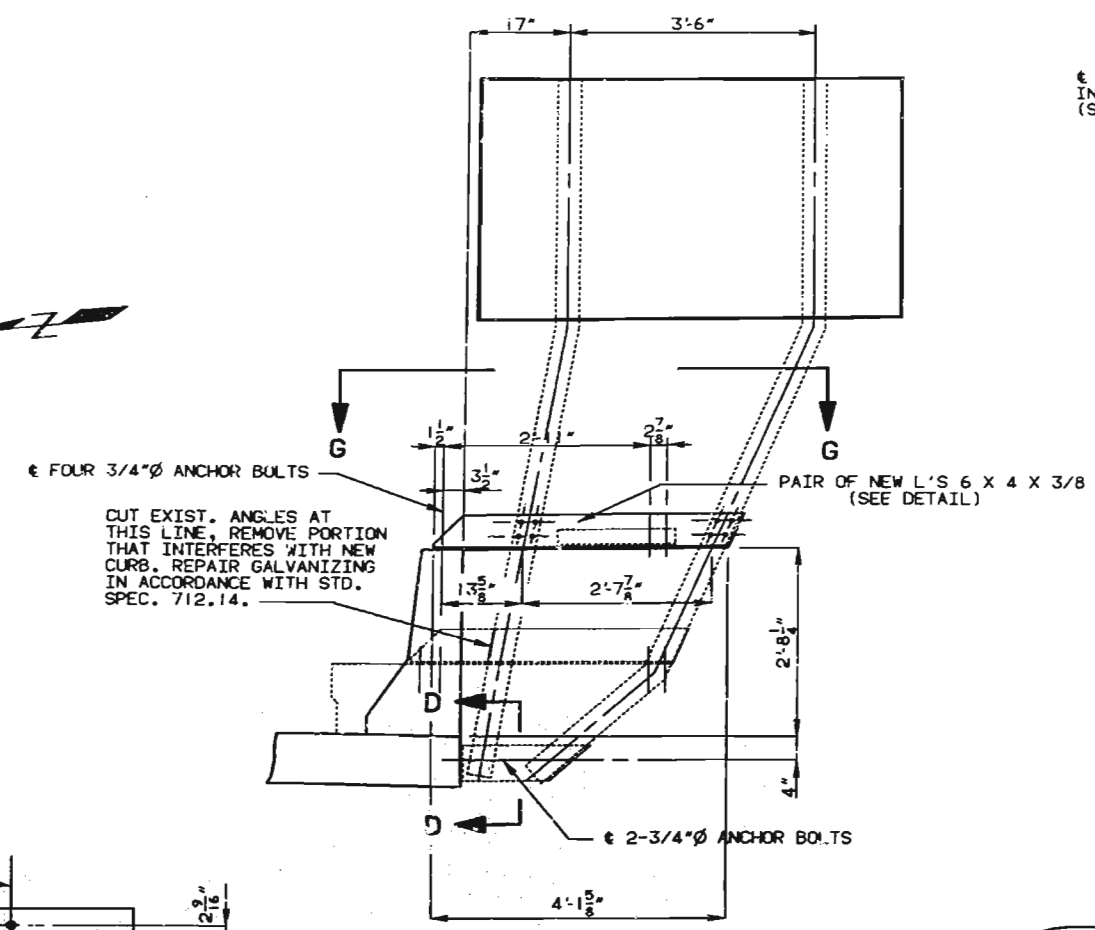
SHEET NO. 207 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

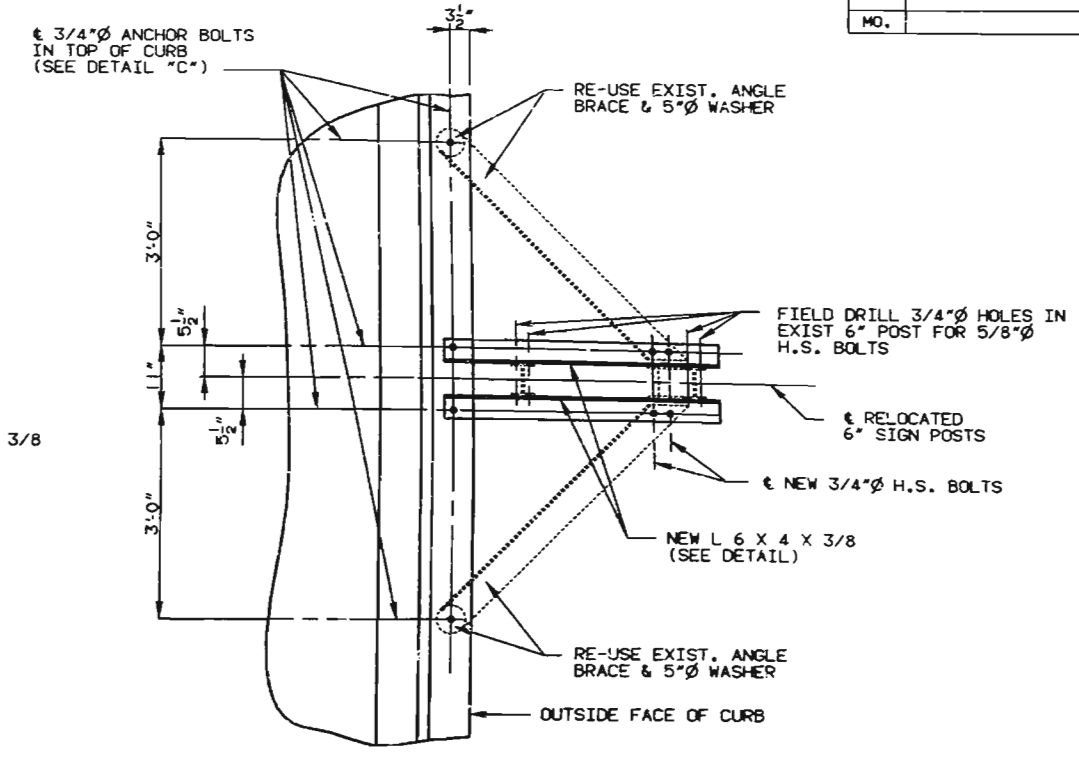
222



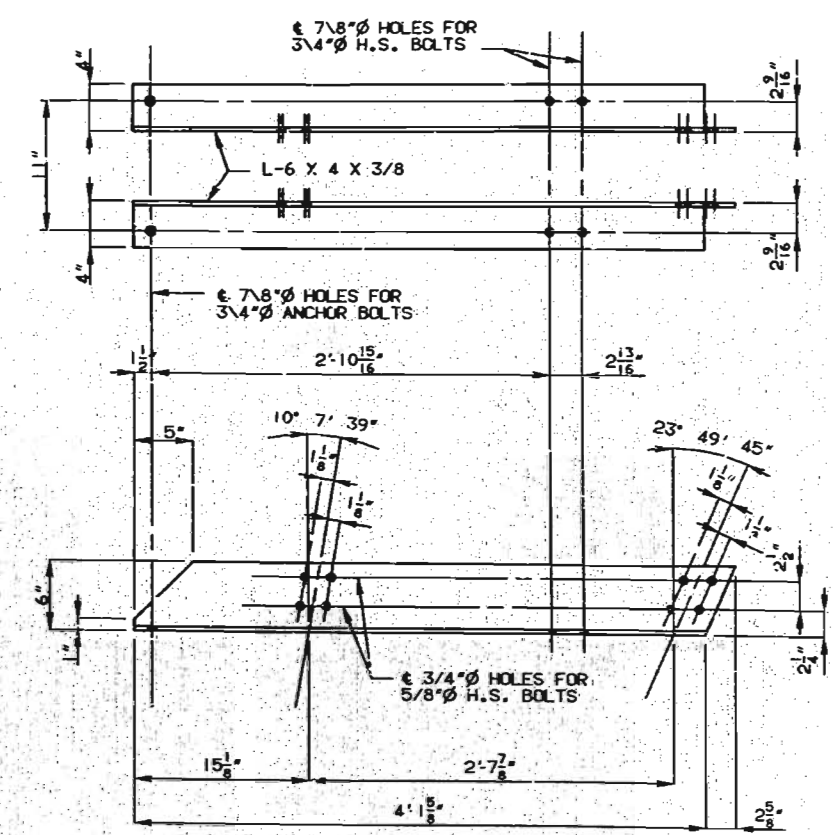
PART PLAN SHOWING  
SIGN LOCATION



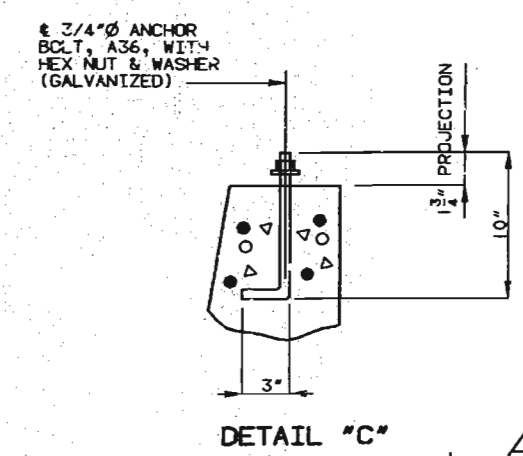
PART ELEVATION H-H



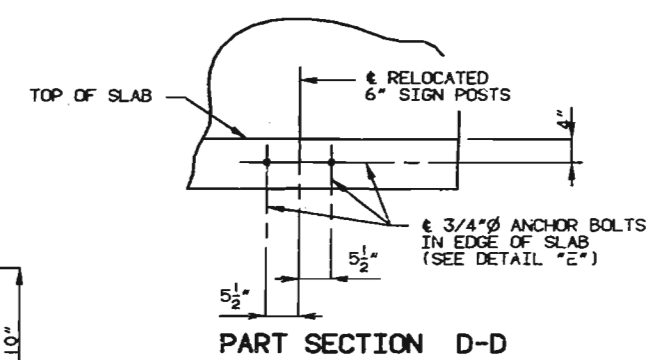
PART SECTION G-G



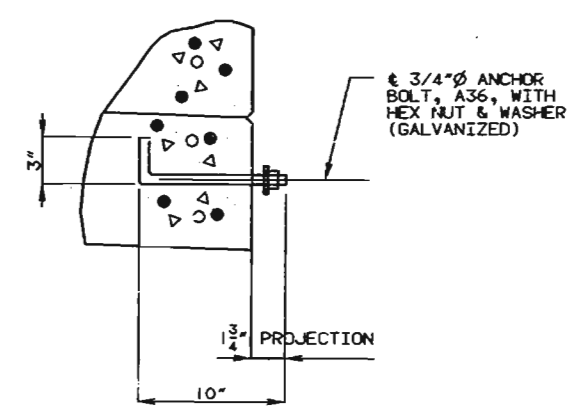
DETAIL OF NEW PAIR OF L'S 6 X 4 X 3/8



DETAIL "C"



PART SECTION D-D



DETAIL "E"

**GENERAL NOTES:**

- CENTER AND LEVEL SIGN ON BRACKETS.
- ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
- ALL STRUCTURAL STEEL SHALL BE A.S.T.M. A36, GALVANIZED.
- OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES.
- HEAVY LINES INDICATE NEW WORK.
- THE COST OF FURNISHING AND ERECTING THE SIGN SUPPORTS, INCLUDING THE 3/4" ANCHOR BOLTS, COMPLETE-IN-PLACE, SHALL BE PAID FOR AS MODIFICATION OF EXISTING SIGN SUPPORT BRACKETS, LUMP SUM.

**MODIFICATION TO  
SIGN SUPPORT BRACKET (SBL)**  
STA. 321+80.0

223  
DETAILED APR. 1992  
CHECKED MAY. 1992

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 208 OF 238

ST. LOUIS-JEFFERSON COUNTIES **A-609R**



BILL OF REINFORCING STEEL																			
NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
										B	C	D	E	F	H	K			
										FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
			N.B. LANE																
			SUBSTRUCTURE																
			END BT. NO. 1																
3	6F2		WING BRACE	15	S	X				14.000	6 1.000	14.000	7.000	12.125	7.000	12.125	8 5	8 5	38
4	8H161		BEAM	18	X	V				17 1.000							18 11	18 11	
			INCREMENT =							15 6.000							17 4	17 4	194
			6.375 INCH																
4	8H162		BEAM	18	X	V				17 1.000							18 11	18 11	
			INCREMENT =							15 2.000							17 0	17 0	192
			7.625 INCH																
1	6H163		BEAM	20	X					17 1.000							17 1	17 1	26
1	6H164		BEAM	20	X					15 3.000							15 3	15 3	23
4	8H165		BEAM	18	X	V				13 7.000							15 5	15 5	
			INCREMENT =							11 10.000							13 8	13 8	155
			7.000 INCH																
4	8H166		BEAM	18	X	V				13 10.000							15 8	15 8	
			INCREMENT =							11 10.000							13 8	13 8	157
			8.000 INCH																
1	6H167		BEAM	20	X					13 9.000							13 9	13 9	21
1	6H168		BEAM	20	X					11 10.000							11 10	11 10	18
20	6H169		BEAM	20	X					2 7.000							2 7	2 7	78
4	4H170		BACKWALL	20	X					25 6.000							25 6	25 6	68
2	6H171		BACKWALL	20	X					26 9.000							26 9	26 9	80
2	6H172		BACKWALL	20	X					33 0.000							33 0	33 0	99
4	4H173		BACKWALL	20	X					31 9.000							31 9	31 9	85
1	4H174		APPR. HAUNCH	20	X					25 0.000							25 0	25 0	17
1	4H175		APPR. HAUNCH	20	X					30 4.000							30 4	30 4	20
6	4H176		CURTAIN WALL	20	X					2 5.000							2 5	2 5	10
2	6H177		WING	20	X					11 9.000							11 9	11 9	35
2	6H178		WING	20	X					11 9.000							11 9	11 9	35
6	6H179		WING	20	X	V				11 0.000							11 0	11 0	
			INCREMENT =							4 11.000							4 11	4 11	72
			36.500 INCH																
5	4H500		BACKWALL	20	X					35 2.000							35 2	35 2	117
2	6H501		BACKWALL	20	X					35 2.000							35 2	35 2	106
18	6H502		BEAM	20	X					3 10.000							3 10	3 10	104
2	4T3		CURTAIN WALL	15	S	X				5.000	2 11.000						7 4	7 3	10
2	6T4		WING	25	S	X				15.500	6 11.125	2 4.000			20.000	6 8.625	10 7	10 5	31
12	6U128		BEAM	13	S	X				2 9.000	3 4.000	3 3.000	3 3.500				14 0	13 6	243
1	6U129		BEAM	13	S	X				2 3.750	3 4.000	2 9.750	3 3.500				13 1	12 7	19
10	4U130		BEAM	10	S	X					6.000	2 9.000					3 9	3 7	24
15	6U131		BEAM	13	S	X				2 9.000	3 0.375	3 3.000	2 11.875				13 4	12 10	289
11	6U132		BEAM	10	S	X				2 0.000	2 11.875						7 0	6 8	110
5	7U133		BEAM	10	X					5 7.000	2 7.500						13 10	13 5	137
30	6U134		BEAM	10	S	X				12.000	21.000						3 9	3 5	154
86	4U135		APPR. HAUNCH	10	S	X				15.000	6.000						3 0	2 10	163

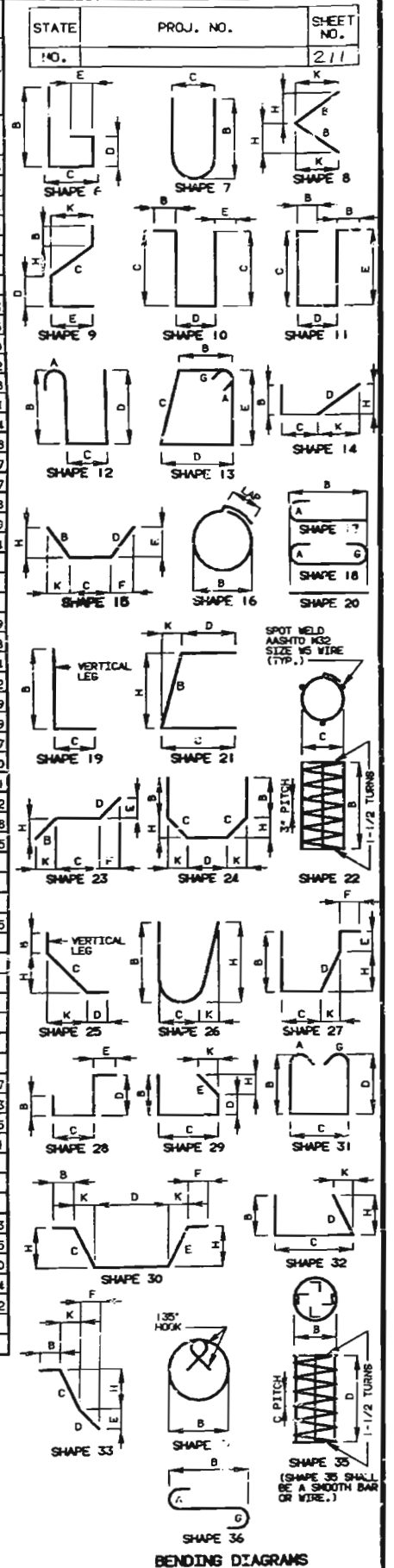
BILL OF REINFORCING STEEL																				
NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT	
										B	C	D	E	F	H	K				
										FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
24	6V71		BACKWALL		20	X				4	4.000						4	4	156	
116	6V72		BACKWALL		20	X				3	3.000						3	3	566	
32	6V73		BACKWALL		20	X				4	5.000						4	5	212	
2	6V75		BEAM		20	X				2	11.000						2	11	9	
2	4V76		CURTAIN WALL		20	X				4	2.000						4	2	6	
5	6V77		WING	E	20	X				5	6.000						5	6	41	
5	6V78		WING	E	17	X				5	4.000						6	0	45	
12	6V79		WING	E	20	X	V		1	4	3.000						4	3		
			INCREMENT =							2	10.000						2	10	64	
			1.500 INCH																	
12	6V80		WING	E	17	X	V		1	4	1.000						4	9		
			INCREMENT =							2	8.000						3	4	7	
			1.500 INCH																	
59	6V300		BACKWALL		20	X				3	10.000						3	10	340	
			INT. BT. NO. 2																	
10	6D1		FOOTINGS		20	X				6	8.000						6	8	100	
16	5D2		FOOTINGS		20	X				5	8.000						5	8	95	
4	6D3		FOOTINGS		10	S	X					3	10.000	6	0.000		13	8	80	
6	7D4		FOOTINGS		20	X				7	11.000						7	11	97	
2	6D5		FOOTINGS		10	S	X					3	10.000	7	3.000		14	11	44	
4	6H1		BEAM		20	X				20	5.000						20	5	123	
2	6H2		BEAM		18	X				20	5.000						21	9	65	
2	6H3		BEAM		18	X				21	10.000						23	2	70	
8	7H4		BEAM		7	X				4	2.000	3	2.000				10	0	164	
6	7H5		BEAM		17	X				15	3.000						15	1	197	
4	6H6		BEAM		20	X				15	3.000						15	3	92	
4	8H7		BEAM		18	X				15	3.000						17	1	182	
3	8H8		BEAM		18	X				16	9.000						18	7	149	
5	6H506		BEAM		17	X				20	5.000						21	1	158	
10	6H507		BEAM		20	X				3	10.000						3	10	58	
3	4P1		COLUMNS		35	X				2	9.000	3.000	27	4.125			956	7	1917	
18	4P2		BEAM		34	S	X			2	9.000						9	6	114	
15	4U1		BEAM		13	S	X			3	3.000	3	2.250	3	3.000	3	2.250	13	8	134
1	4U2		BEAM		13	S	X			2	7.000	3	2.250	2	7.000	3	2.250	12	4	8
5	4U3		BEAM		10	S	X					6.000	3	3.000			4	3	14	
26	4U4		BEAM		13	S	X			3	3.000	3	6.000	3	3.000	3	6.000	14	3	243
1	4U5		BEAM		13	S	X			3	1.000	3	6.000	3	1.000	3	6.000	13	11	9
1	4U6		BEAM		13	S	X			2	7.000	3	6.000	2	7.000	3	6.000	12	11	8
6	4U600		BEAM		10	S	X					3	2.250	3	3.000		9	8	38	
3	4U601		BEAM		10	S	X					3	6.000	3	3.000		10	3	20	
24	9V1		COLUMNS		17	X				18	0.000						19	3	1571	
24	9V2		COLUMNS		17	X				16	0.000						17	3	1408	
24	9V3		COLUMNS		17	X				20	0.000						21	3	1733	

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K				
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
8	WSW1	A.B.WELL		22	X				15.000	9.125						23 0	23 0	31	
		INT.BT. NO.3																	
24	7D6	FOOTINGS		20	X				8 2.000							8 2	8 2	401	
4	6D7	FOOTINGS		10	S	X			5 1.000	7 6.000						17 8	17 4	104	
6	7D8	FOOTINGS		20	X				6 11.000							6 11	6 11	85	
6	8D9	FOOTINGS		20	X				8 2.000							8 2	8 2	131	
2	6D10	FOOTINGS		10	S	X			4 6.000	7 6.000						16 6	16 2	49	
4	6H9	BEAM		20	X				20 5.000							20 5	20 5	123	
2	6H10	BEAM		18	X				20 5.000							21 9	21 9	65	
2	6H11	BEAM		18	X				21 10.000							23 2	23 2	70	
4	6H12	BEAM		20	X				15 3.000							15 3	15 3	92	
4	8H13	BEAM		18	X				15 3.000							17 1	17 1	182	
3	8H14	BEAM		18	X				16 9.000							18 7	18 7	143	
8	4N15	BEAM		7	X				4 2.000	3 2.000						10 1	10 1	54	
20	6H16	BEAM		20	X				3 3.000							3 3	3 3	98	
5	6H508	BEAM		17	X				20 5.000							21 1	21 1	158	
7	6H509	BEAM		17	X				15 3.000							15 11	15 11	167	
10	6H510	BEAM		20	X				3 10.000							3 10	3 10	58	
2	4P3	COLUMN		35	X				2 9.000	3.000	27 2.375					951 7	951 7	1271	
1	4P4	COLUMN		35	X				2 9.000	3.000	36 2.375					1258 0	1258 0	840	
18	4P5	BEAM		34	S	X			2 9.000							9 6	9 6	114	
15	4U7	BEAM		13	S	X			3 3.000	3 9.000	3 3.000	3 9.000				14 9	14 6	145	
1	4U8	BEAM		13	S	X			2 7.000	3 9.000	2 7.000	3 9.000				13 5	13 2	9	
5	4U9	BEAM		10	S	X			6.000	3 3.000						4 3	4 1	14	
26	4U10	BEAM		13	S	X			3 3.000	4 0.625	3 3.000	4 0.625				15 4	15 1	262	
1	4U11	BEAM		13	S	X			3 1.000	4 0.625	3 1.000	4 0.625				15 0	14 9	10	
1	4U12	BEAM		13	S	X			2 7.000	4 0.625	2 7.000	4 0.625				14 0	13 9	9	
35	4U13	BEAM		10	S	X			16.000	2 9.000						5 5	5 3	123	
6	4U603	BEAM		10	S	X			3 9.000	3 3.000						10 9	10 7	42	
3	4U604			10	S	X			4 0.625	3 3.000						11 4	11 2	22	
16	9V4	COLUMNS		17	X				17 11.000							19 2	19 2	1043	
16	9V5	COLUMNS		17	X				19 11.000							21 2	21 2	1151	
16	9V6	COLUMNS		17	X				15 11.000							17 2	17 2	934	
8	9V7	COLUMNS		17	X				22 5.000							23 8	23 8	644	
8	9V8	COLUMNS		17	X				20 5.000							21 8	21 8	589	
8	9V9	COLUMNS		17	X				24 5.000							25 8	25 8	698	
8	WSW2	A.B.WELL		22	X				18.000	9.125						26 1	26 1	35	
		INT.BT. NO.4																	

# BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
										B	C	D	E	F	H	K				
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.
17		5D11	FOOTINGS		20	X				5	11.000							5	11	105
14		6D12	FOOTINGS		20	X				7	11.000							7	11	166
6		6D13	FOOTINGS		10	S	X				4	0.000	7	3.000				15	3	134
5		8D14	FOOTINGS		20	X				7	11.000							7	11	106
4		6H17	BEAM		20	X				20	5.000							20	5	123
2		6H18	BEAM		18	X				20	5.000							21	9	65
2		6H19	BEAM		18	X				21	10.000							23	2	70
4		6H20	BEAM		20	X				15	3.000							15	3	92
4		8H21	BEAM		18	X				16	9.000							18	7	198
2		8H22	BEAM		18	X				15	3.000							17	1	91
8		7H23	BEAM		7	X				4	2.000	3	2.000					10	0	164
20		6H24	BEAM		20	X				3	3.000							3	3	98
4		6H511	BEAM		17	X				20	5.000							21	1	127
7		6H512	BEAM		17	X				15	3.000							15	11	167
10		6H513	BEAM		20	X				3	10.000							3	10	58
3		4P6	COLUMN		35	X				2	9.000	3.000	36	9.000				1276	10	2559
18		4P7	BEAM		34	S	X			2	9.000							9	6	114
15		4U14	BEAM		13	S	X			3	3.000	3	5.250	3	3.000	3	5.250			139
1		4U15	BEAM		13	S	X			2	7.000	3	5.250	2	7.000	3	5.250			8
5		4U16	BEAM		10	S	X				6.000	3	3.000					4	3	14
26		4U17	BEAM		13	S	X			3	3.000	3	9.000	3	3.000	3	9.000			252
1		4U18	BEAM		13	S	X			3	1.000	3	9.000	3	1.000	3	9.000			9
1		4U19	BEAM		13	S	X			2	7.000	3	9.000	2	7.000	3	9.000			9
35		4U20	BEAM		10	S	X				12.000	2	9.000					4	9	107
6		4U605	BEAM		10	S	X				3	5.250	3	3.000				10	2	40
3		4U606	BEAM		10	S	X				3	9.000	3	3.000				10	9	21
24		9V10	COLUMNS		17	X				22	8.000							23	11	1962
24		9V11	COLUMNS		17	X				20	8.000							21	11	1788
24		9V12	COLUMNS		17	X				24	8.000							25	11	2115
8		WSW2	A.B.WELL		22	X				18.000	9.125							26	1	35
			INT.BT. NO.5																	
6		7D30	FOOTINGS		20	X				7	11.000							7	11	97
12		6D31	FOOTINGS		20	X				7	11.000							7	11	143
16		5D32	FOOTINGS		20	X				8.000								5	8	95
6		6D33	FOOTINGS		10	S	X				3	10.000	7	3.000				14	11	131
4		6H49	BEAM		20	X				20	5.000							20	5	123
2		6H50	BEAM		18	X				20	5.000							21	9	65
2		6H51	BEAM		18	X				21	10.000							23	2	70
8		7H52	BEAM		7	X				4	2.000	3	2.000					10	0	164
4		6H53	BEAM		20	X				15	3.000							15	3	92



## TWO ADDITIONAL

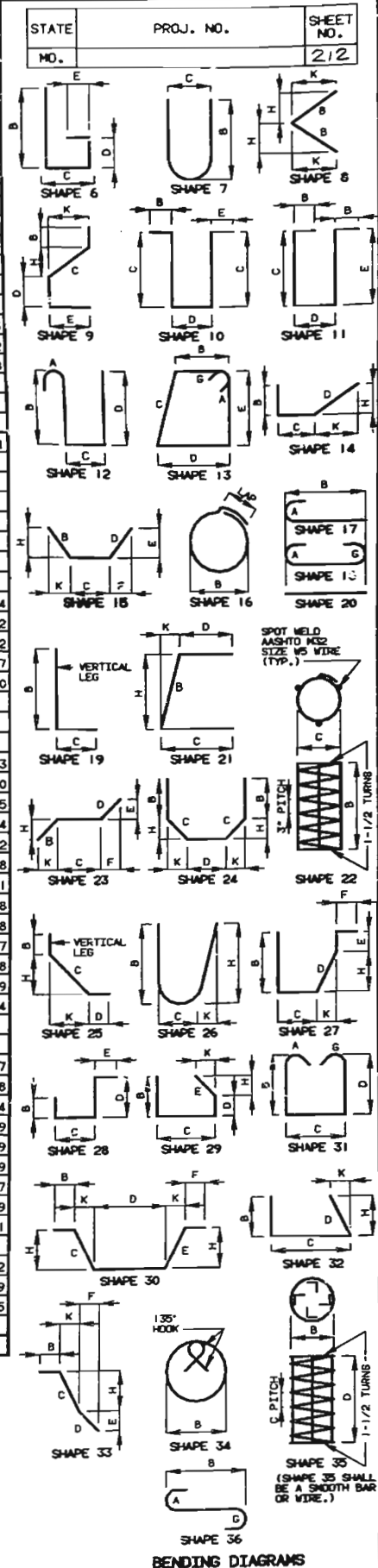


# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.			
4	8H54	BEAM		18	X			15	3.000						17 1	17 1	182	
3	8H55	BEAM		18	X			16	9.000						18 7	18 7	149	
20	6H56	BEAM		20	X			3	3.000						3 3	3 3	98	
5	6H522	BEAM		17	X			20	5.000						21 1	21 1	158	
7	6H523	BEAM		17	X			15	3.000						15 11	15 11	167	
10	6H524	BEAM		20	X			3	10.000						3 10	3 10	58	
3	4P15	COLUMNS		35	X			2	9.000	3.000	36	9.250			1277 6	1277 6	2560	
18	4P15	BEAM		34	S	X		2	9.000						9 6	9 6	114	
26	4U41	BEAM		13	S	X		3	3.000	4	1.500	3	3.000	4	1.500	15 6	15 3	265
1	4U42	BEAM		13	S	X		3	1.000	4	1.500	3	1.000	4	1.500	15 2	14 11	10
1	4U43	BEAM		13	S	X		2	7.000	4	1.500	2	7.000	4	1.500	14 2	13 11	9
15	4U44	BEAM		13	S	X		3	3.000	3	10.000	3	3.000	3	10.000	14 11	14 8	147
1	4U45	BEAM		13	S	X		2	7.000	3	10.000	2	7.000	3	10.000	13 7	13 4	9
5	4U46	BEAM		10	S	X				6.000	3	3.000			4 3	4 1	14	
35	4U47	BEAM		10	S	X				18.000	2	9.000			5 9	5 7	131	
6	4U607	BEAM		10	S	X				3	10.000	3	3.000			10 11	10 9	43
3	4U608	BEAM		10	S	X				4	1.500	3	3.000			11 6	11 4	23
24	9V22	COLUMNS		17	X			22	8.000						23 11	23 11	1952	
24	9V23	COLUMNS		17	X			24	8.000						25 11	25 11	2115	
24	9V24	COLUMNS		17	X			20	8.000						21 11	21 11	1788	
8	WSW2	A.B.WELL		22	X			18.000	9.125						26 1	26 1	35	

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT	
									B	C	D	E	F	H	K				
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.				
1	4U49	BEAM		13	S	X			2 7.000	3 3.125	2 7.000	3 3.125					12 5	12 2	8
5	4U50	BEAM		10	S	X				6.000	3 3.000						4 3	4 1	14
26	4U51	BEAM		13	S	X			3 3.000	3 6.750	3 3.000	3 6.750					14 5	14 2	246
1	4U52	BEAM		13	S	X			3 1.000	3 6.750	3 1.000	3 6.750					14 1	13 10	9
1	4U53	BEAM		13	S	X			2 7.000	3 6.750	2 7.000	3 6.750					13 1	12 10	9
6	4U609	BEAM		10	S	X				3 3.125	3 3.000						9 9	9 7	38
3	4U610			10	S	X				3 6.750	3 3.000						10 5	10 3	21
24	9V25	COLUMNS		17	X				18 8.000								19 11	19 11	1625
24	9V26	COLUMNS		17	X				16 8.000								17 11	17 11	1462
24	9V27	COLUMNS		17	X				20 8.000								21 11	21 11	1788
8	WSW1	A.B. WELL		22	X				15.000	9.125							23 0	23 0	3
INT.BT. NO.7																			
7	7D40	FOOTINGS		20	X				8 8.000								8 8	8 8	12
8	6D41	FOOTINGS		20	X				7 8.000								7 8	7 8	9
2	6D42	FOOTINGS		10	S	X				4 10.000	8 3.000						17 8	17 4	5
32	6D43	FOOTINGS		20	X				8 8.000								8 8	8 8	41
4	6D44	FOOTINGS		10	S	X				5 4.000	8 0.000						18 8	18 4	11
4	6H64	BEAM		20	X				20 5.000								20 5	20 5	12
2	6H65	BEAM		18	X				21 10.000								23 2	23 2	7
2	6H66	BEAM		18	X				20 5.000								21 9	21 9	6
8	7H67	BEAM		7	X				4 2.000	3 2.000							10 0	10 0	16
4	6H68	BEAM		20	X				15 3.000								15 3	15 3	9
4	8H69	BEAM		18	X				16 9.000								18 7	18 7	19
2	8H70	BEAM		18	X				15 3.000								17 1	17 1	9
20	6H71	BEAM		20	X				3 3.000								3 3	3 3	9
5	6H528	BEAM		17	X				20 5.000								21 1	21 1	15
7	6H529	BEAM		17	X				15 3.000								15 11	15 11	16
10	6H530	BEAM		20	X				3 10.000								3 10	3 10	5
3	4P18	COLUMNS		35	X				2 9.000	3.000	28 10.000						1007 3	1007 3	201
18	4P19	BEAM		34	S	X			2 9.000								9 6	9 6	11
15	4U54	BEAM		13	S	X			3 3.000	3 4.125	3 3.000	3 4.125					13 11	13 8	13
1	4U55	BEAM		13	S	X			2 7.000	3 4.125	2 7.000	3 4.125					12 7	12 4	8
5	4U56	BEAM		10	S	X				6.000	3 3.000						4 3	4 1	1
26	4U57	BEAM		13	S	X			3 3.000	3 7.750	3 3.000	3 7.750					14 7	14 4	24
1	4U58	BEAM		13	S	X			3 1.000	3 7.750	3 1.000	3 7.750					14 3	14 0	9
1	4U59	BEAM		13	S	X			2 7.000	3 7.750	2 7.000	3 7.750					13 3	13 0	9
35	4U60	BEAM		10	S	X				12.000	2 9.000						4 9	4 7	10
6	4U611	BEAM		10	S	X				3 4.000	3 3.000						9 11	9 9	3
3	4U612	BEAM		10	S	X				3 7.750	3 3.000						10 7	10 5	2
24	9V28	COLUMNS		17	X				18 9.000								20 0	20 0	163
24	9V29	COLUMNS		17	X				16 9.000								18 0	18 0	146
24	9V30	COLUMNS		17	X				20 9.000								22 0	22 0	179



## TWO ADDITIONAL

BAR SIZE	D (IN.)	END HOOK DIMENSIONS			
		ALL GRADES	180° HOOKS	90° HOOKS	NO. HOOKS
#3	2-1/4"	5"	3"	6"	6"
#4	3"	6"	4"	8"	8"
#5	3-3/4"	7"	5"	10"	10"
#6	4-1/2"	8"	6"	12"	12"
#7	5-1/4"	10"	7"	14"	14"



BILL OF REINFORCING STEEL																		
NO. RED'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE (S)	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.			
8	W5W2	A.B.WELLS	22	X					13.000	9.125						26 1	26 1	35
		INT.BT. NO.8																
6	8060	FOOTINGS	20	X					8 8.000							8 8	8 8	139
6	6061	FOOTINGS	20	X					6 8.000							6 8	6 8	60
2	6062	FOOTINGS	10	S	X					4 4.000	8 0.000					16 8	16 4	49
16	6063	FOOTINGS	20	X					8 8.000							8 8	8 8	208
14	5064	FOOTINGS	20	X					6 8.000							6 8	6 8	97
4	6065	FOOTINGS	10	S	X					4 4.000	8 0.000					16 8	16 4	98
4	6H95	BEAM	20	X					15 3.000							15 3	15 3	92
2	9H96	BEAM	18	X					15 3.000							17 9	17 9	121
4	9H97	BEAM	18	X					16 9.000							19 3	19 3	262
8	7H98	BEAM	7	X					4 2.000	3 2.000						10 0	10 0	164
4	6H99	BEAM	20	X					20 5.000							20 5	20 5	123
2	6H100	BEAM	18	X					20 5.000							21 9	21 9	65
2	6H101	BEAM	18	X					21 10.000							23 2	23 2	70
20	6H102	BEAM	20	X					3 3.000							3 3	3 3	98
7	6H531	BEAM	17	X					15 3.000							15 11	15 11	167
5	6H532	BEAM	17	X					20 5.000							21 1	21 1	158
10	6H533	BEAM	20	X					3 10.000							3 10	3 10	56
3	4P27	COLUMNS	35	X					2 9.000	3.000	28 9.750					1006 7	1006 7	2017
18	4P28	BEAM	34	S	X				2 9.000							9 6	9 6	114
26	4U81	BEAM	13	S	X				3 3.000	4 2.000	3 3.000	4 2.000				15 7	15 4	266
1	4U82	BEAM	13	S	X				3 1.000	4 2.000	3 1.000	4 2.000				15 3	15 0	10
1	4U83	BEAM	13	S	X				2 7.000	4 2.000	2 7.000	4 2.000				14 3	14 0	9
15	4U84	BEAM	13	S	X				3 3.000	3 10.500	3 3.000	3 10.500				15 0	14 9	148
1	4U85	BEAM	13	S	X				2 7.000	3 10.500	2 7.000	3 10.500				13 8	13 5	9
5	4U86	BEAM	10	S	X				6.000	3 3.000						4 3	4 1	14
35	4U87	BEAM	10	S	X					18.000	2 9.000					5 9	5 7	131
6	4U813	BEAM	10	S	X					3 10.500	3 3.000					11 0	10 10	43
3	4U614	BEAM	10	S	X					4 2.000	3 3.000					11 7	11 5	23
26	9V43	COLUMNS	17	X					18 8.000							19 11	19 11	1761
26	9V44	COLUMNS	17	X					16 8.000							17 11	17 11	1584
26	9V45	COLUMNS	17	X					20 8.000							21 11	21 11	1937
8	W5W2	A.B.WELLS	22	X					18.000	9.125						26 1	26 1	35
		INT.BT. NO.9																
16	5066	FOOTINGS	20	X					7 8.000							7 8	7 8	128
16	5067	FOOTINGS	20	X					6 8.000							6 8	6 8	111

BILL OF REINFORCING STEEL																						
NO. RED'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT				
									B	C	D	E	F	H	K							
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.				FT. IN.	FT. IN.	LBS.	
6	6068	FOOTINGS		10	S	X				4	4.000	7	3.000				15	8	15	4	138	
4	6H103	BEAM		20		X			15	3.000							15	3	15	3	92	
2	9H104	BEAM		18		X			15	3.000							17	9	17	9	121	
4	9H105	BEAM		18		X			16	9.000							19	3	19	3	262	
8	7H106	BEAM		7		X			4	2.000	3	2.000					10	0	10	0	164	
4	6H107	BEAM		20		X			20	5.000							20	5	20	5	123	
2	6H108	BEAM		18		X			20	5.000							21	9	21	9	65	
2	6H109	BEAM		18		X			21	10.000							23	2	23	2	70	
7	6H534	BEAM		17		X			15	3.000							15	11	15	11	167	
6	6H535	BEAM		17		X			20	5.000							21	1	21	1	190	
10	6H536	BEAM		20		X			3	10.000							3	10	3	10	58	
3	4P29	COLUMNS		35		X			2	9.000	3.000	29	11.875				1046	8	1046	8	2098	
18	4P30	BEAM		34	S	X			2	9.000							9	6	9	6	114	
26	5U88	BEAM		13	S	X			3	3.000	3	5.375	3	3.000	3	5.375		14	4	14	0	380
1	5U89	BEAM		13	S	X			3	1.000	3	5.375	3	1.000	3	5.375		14	0	13	8	14
1	5U90	BEAM		13	S	X			2	7.000	3	5.375	2	7.000	3	5.375		13	0	12	8	13
15	5U91	BEAM		13	S	X			3	3.000	3	1.625	3	3.000	3	1.625		13	8	13	5	210
1	5U92	BEAM		13	S	X			2	7.000	3	1.625	2	7.000	3	1.625		12	4	12	1	13
5	4U93	BEAM		10	S	X				6.000	3	3.000					4	3	4	1	14	
6	4U615	BEAM		10	S	X				3	5.375	3	3.000				10	2	10	0	40	
3	4U616	BEAM		10	S	X				3	1.625	3	3.000				9	6	9	4	19	
26	9V46	COLUMNS		17		X			19	3.000							20	6	20	6	1812	
26	9V47	COLUMNS		17		X			21	3.000							22	6	22	6	1989	
26	9V48	COLUMNS		17		X			17	3.000							18	6	18	6	1635	
8	WSW2	A.B.WELLS		22		X			18.000	9.125							26	1	26	1	35	
INT.BT.NO.10																						
16	7D83	FOOTINGS		20		X			8	8.000							8	8	8	8	283	
18	6084	FOOTINGS		20		X			8	2.000							8	2	8	2	221	
4	6085	FOOTINGS		10	S	X				5	1.000	8	0.000				18	2	17	10	107	
8	8086	FOOTINGS		20		X			9	8.000							9	8	9	8	206	
6	8087	FOOTINGS		20		X			7	8.000							7	8	7	8	123	
2	6088	FOOTINGS		10	S	X				4	10.000	9	0.000				18	8	18	4	55	
6	7H134	BEAM		17		X			15	3.000							16	1	16	1	197	
4	6H135	BEAM		20		X			15	3.000							15	3	15	3	92	
2	9H136	BEAM		18		X			15	3.000							17	9	17	9	121	
4	9H137	BEAM		18		X			16	9.000							19	3	19	3	262	
8	7H138	BEAM		7		X			4	2.000	3	2.000					10	0	10	0	164	
4	6H139	BEAM		20		X			20	5.000							20	5	20	5	123	
2	6H140	BEAM		18		X			20	5.000							21	5	21	9	65	
2	6H141	BEAM		18		X			21	10.000							23	2	23	2	70	
20	6H142	BEAM		20		X			3	3.000							3	3	3	3	98	

STATE: \_\_\_\_\_ PROJ. NO.: \_\_\_\_\_ SHEET NO.: 213

SHAPE 6, SHAPE 7, SHAPE 8, SHAPE 9, SHAPE 10, SHAPE 11, SHAPE 12, SHAPE 13, SHAPE 14, SHAPE 15, SHAPE 16, SHAPE 17, SHAPE 18, SHAPE 19, SHAPE 20, SHAPE 21, SHAPE 22, SHAPE 23, SHAPE 24, SHAPE 25, SHAPE 26, SHAPE 27, SHAPE 28, SHAPE 29, SHAPE 30, SHAPE 31, SHAPE 32, SHAPE 33, SHAPE 34, SHAPE 35, SHAPE 36

SPOT WELD AASHTO M32 SIZE #5 WIRE (TYP.)

3" PITCH 1-1/2" TURNS

135° HOOK

SHAPE 35 SHALL BE A SMOOTH BAR (TYP.)

BENDING DIAGRAMS

90° STIRRUP, 135° STIRRUP

STIRRUP HOOK DIMENSIONS  
GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK A OR B	135° HOOK A OR B	APPROX. H
#4	2"	4-1/2"	4-1/2"	3"
#5	2-1/2"	6"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	4-1/2"

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.

90°, 180°

4d OR 2-1/2" MIN.

DETAILING DIMENSION

227

STANDARD MAY 1993  
CHECKED MAY 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

TWO ADDITIONAL

END HOOK DIMENSIONS

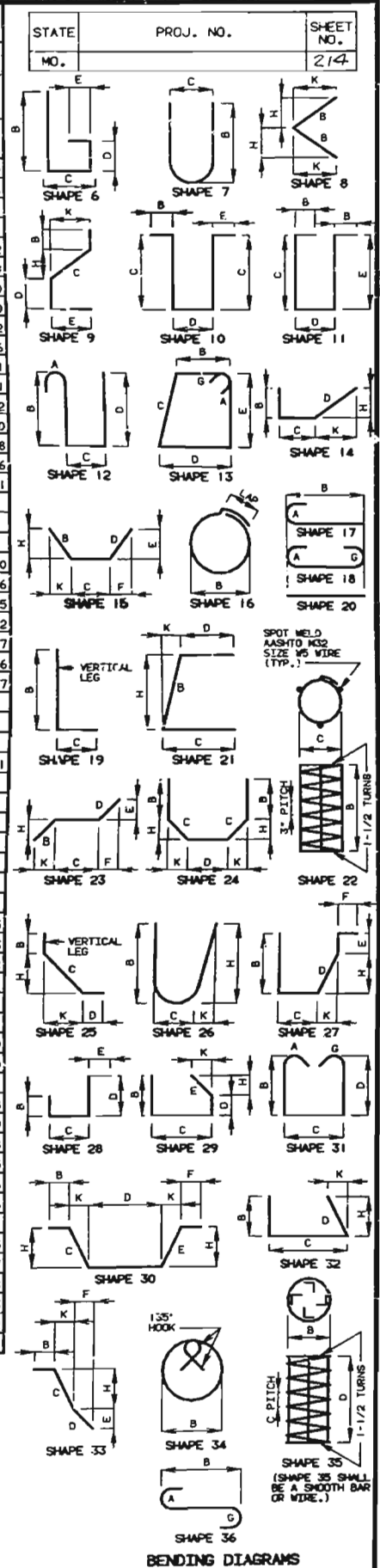
BAR SIZE	D (IN.)	180° HOOKS A OR B	90° HOOKS A OR B
#3	2-1/4"		

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
5	6H37	BEAM		17	X				20 5,000							21 1	21 1	158
10	6H5	BEAM		20	X				3 10,000							3 10	3 10	58
3	4P37	COLUMNS		35	X				2 9,000	3,000	29 9,125					1038 10	1038 10	2062
18	3P38	BEAM		34	S	X			2 9,000							9 6	9 6	114
26	4U114	BEAM		13	S	X			3 3,000	4 1,500	3 3,000	4 1,500				15 6	15 3	265
1	4U115	BEAM		13	S	X			3 1,000	4 1,500	3 1,000	4 1,500				15 2	14 11	10
1	4U116	BEAM		13	S	X			2 7,000	4 1,500	2 7,000	4 1,500				14 2	13 11	9
15	4U117	BEAM		13	S	X			3 3,000	3 10,000	3 3,000	3 10,000				14 11	14 8	147
1	4U118	BEAM		13	S	X			2 7,000	3 10,000	2 7,000	3 10,000				13 7	13 4	9
5	4U119	BEAM		10	S	X				6,000	3 3,000					4 3	4 1	14
35	4U120	BEAM		10	S	X				17,000	2 9,000					5 7	5 5	127
6	4U617	BEAM		10	S	X				3 10,000	3 3,000					10 11	10 1	43
3	4U618	BEAM		10	S	X				4 1,500	3 3,000					11 6	11 4	23
30	9V58	COLUMNS		17	X				19 2,000							20 5	20 5	2082
30	9V59	COLUMNS		17	X				21 2,000							22 5	22 5	2286
30	9V60	COLUMNS		17	X				17 2,000							18 5	18 5	1878
8	W5W2	A.B.WELLS		22	X				18,000	9,125						26 1	26 1	35
INT. ET. NO. 11																		
12	7D100	FOOTING		20	X				8 8,000							8 8	8 8	213
12	5D101	FOOTING		20	X				5 8,000							5 8	5 8	71
4	6D102	FOOTING		10	S	X				3 10,000	8 0,000					15 8	15 4	92
4	6H250	BEAM		20	X				21 6,000							21 6	21 6	129
2	6H251	BEAM		20	X				20 0,000							20 0	20 0	60
2	6H252	BEAM		20	X				23 8,000							23 8	23 8	71
5	9H253	BEAM		17	X				23 8,000							24 11	24 11	424
8	7H254	BEAM		7	X				4 8,000	4 2,000						11 7	11 7	189
4	9H255	BEAM		17	X				18 6,000							19 9	19 9	269
2	6H256	BEAM		20	X				18 6,000							18 6	18 6	56
2	6H257	BEAM		20	X				14 10,000							14 10	14 10	45
4	6H258	BEAM		20	X				16 3,000							16 3	16 3	98
12	6H259	BEAM		20	X				4 3,000							4 3	4 3	77
3	8H260	WALL		17	X				11 8,000							12 7	12 7	101
28	4H261	WALL		20	X				11 3,000							11 3	11 3	210
3	8H262	WALL		17	X				15 1,000							16 0	16 0	128
28	4H263	WALL		20	X				14 7,000							14 7	14 7	273
4	8H264	WALL		20	X				5 10,000							5 10	5 10	62
28	6H265	WALL		20	X				3 10,000							3 10	3 10	161
8	6H266	BEAM		19	S	X			3 2,500	15,000						4 6	4 4	52
4	6H267	BEAM		23	S	X			9,000	3 2,500			4,000	8,125		4 0	3 11	24
9	9H268	BEAM		19	X				2 0,000	9 2,000						11 2	10 11	334

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
2	4P50	COLUMNS		35	X				2 9,000	3,000	30 6,000					1064 0	1064 0	1422
12	4P51	BEAM		34	S	X			2 9,000							9 6	9 6	76
20	4U650	BEAM		13	S	X			4 3,000	3 4,750	4 3,000	3 4,750				16 1	15 10	212
1	4U651	BEAM		13	S	X			3 2,875	3 4,750	3 2,875	3 4,750				14 0	13 9	9
1	4U652	BEAM		13	S	X			3 10,500	3 4,750	3 10,500	3 4,750				15 4	15 1	10
1	4U653	BEAM		13	S	X			4 2,250	3 4,750	4 2,250	3 4,750				15 11	15 8	10
3	4U654	BEAM		10	S	X				10,750	4 3,000					6 1	5 11	12
5	4U655	BEAM		10	S	X				3 4,750	4 3,000					11 1	10 11	36
12	4U656	BEAM		10	S	X				6,000	4 3,000					5 3	5 1	41
11	4U657	BEAM		13	S	X			4 3,000	3 8,500	4 3,000	3 8,500				16 8	16 5	121
5	4U658	BEAM		10	S	X				14,500	4 3,000					6 8	6 6	22
1	4U659	BEAM		13	S	X			3 2,875	3 8,500	3 2,875	3 8,500				14 8	14 5	19
5	4U660	BEAM		10	S	X				3 8,500	4 3,000					11 8	11 6	38
2	4U661	BEAM		10	S	X				17,500	4 3,000					7 2	7 0	126
1	4U676	BEAM		13	S	X			4 2,250	3 8,500	4 2,250	3 8,500				16 7	16 4	11
8	9V150	COLUMNS		17	X				26 4,000							27 7	27 7	750
8	9V151	COLUMNS		17	X				24 4,000							25 7	25 7	696
8	9V152	COLUMNS		17	X				28 4,000							29 7	29 7	805
8	9V153	COLUMNS		17	X				12 5,000							13 8	13 8	372
8	9V154	COLUMNS		17	X				10 5,000							11 8	11 8	317
8	9V155	COLUMNS		17	X				14 5,000							15 8	15 8	426
46	4V156	WALL		19	S	X			15 11,000	12,000						16 11	16 10	517
8	W5W1	A.B.WELLS		22	X				15,000	9,125						23 0	23 0	31
INT. BT. NO. 12																		
22	8D106	FOOTING		20	X				11 8,000							11 8	11 8	685
21	6D107	FOOTING		20	X				8 8,000							8 8	8 8	273
4	6D109	FOOTING		10	S	X				5 4,000	11 0,000					21 8	21 4	128
4	6H268	BEAM		20	X				21 6,000							21 6	21 6	129
2	6H289	BEAM		20	X				20 0,000							20 0	20 0	60
2	6H290	BEAM		20	X				23 8,000							23 8	23 8	71
5	9H291	BEAM		17	X				15 8,000							16 11	16 11	288
8	7H292	BEAM		7	X				4 8,000	4 1,750						11 7	11 7	189
4	6H293	BEAM		20	X				16 3,000							16 3	16 3	98
2	6H294	BEAM		20	X				14 10,000							14 10	14 10	45
5	9H295	BEAM		17	X				18 6,000							19 9	19 9	336
2	6H296	BEAM		20	X				18 6,000							18 6	18 6	56
3	8H297	WALL		17	X				11 8,000							12 7	12 7	101
30	4H298	WALL		20	X				11 3,000							11 3	11 3	225
12	6H299	BEAM		20	X				4 3,000							4 3	4 3	77
6	9H300	BEAM		17	X				23 8,000							24 11	24 11	508
3	8H301	WALL		17	X				14 6,000							15 5	15 5	123
30	4H302	WALL		20	X				14 7,000							14 7	14 7	292



## TWO ADDITIONAL

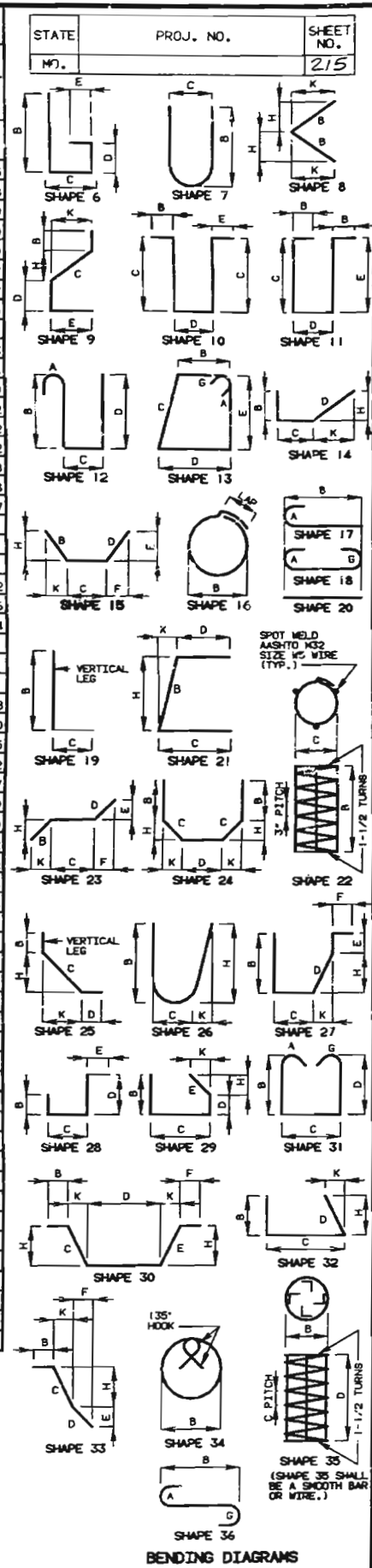
END HOOK DIMENSIONS		ALL GRADES	
BAR SIZE	D (IN.)	180° HOOKS	90° HOOKS
#3	2-1/4"	5"	3"
#4	3"	6"	4"
#5	3-3/4"	7"	5"
#6	4-1/2"	8"	6"
#7	5-1/4"	10"	7"
#8	6"	11"	8"
#9	9-1/2"	15"	11-3/4"
#10	10-3/4"	17"	13-1/4"

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K						
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.				FT. IN.	FT. IN.	FT. IN.
4	8H303	WALL		20	X				5	10.000						5	10	52			
30	6H304	WALL		20	X				3	10.000						3	10	173			
8	6H305	BEAM		19	S	X			3	2.500	15.000					4	6	52			
4	6H306	BEAM		23	S	X			9	0.000	3 2.500				4.000	8.125	4	0	3 11	24	
11	9H307	BEAM		19	X				2	0.000	9 2.063						11	2	10 11	408	
2	4P54	COLUMNS		35	X				2	9.000	3.000	17 9.000					629	11	629	11	842
12	4P55	BEAM		34	S	X			2	9.000							9	6	9	6	76
2	4P100	COLUMNS		35	X				3	9.000	3.000	22 6.000					1083	8	1083	8	1448
10	5U677	BEAM		13	S	X			4	3.000	3 8.250	4 3.000	3 8.250				16	10	16	6	172
6	5U678	BEAM		13	S	X			3	2.250	3 8.250	3 2.250	3 8.250				14	8	14	4	90
5	5U679	BEAM		10	S	X				3 8.250	4 3.000						11	8	11	5	60
2	5U680	BEAM		13	S	X			22	750	3 8.250	22 750	3 8.250				12	1	11	9	25
2	5U681	BEAM		13	S	X			2	7.500	3 8.250	2 7.500	3 8.250				13	7	13	3	28
2	5U682	BEAM		13	S	X			3	0.000	3 8.250	3 0.000	3 8.250				14	4	14	0	29
2	5U683	BEAM		13	S	X			3	2.125	3 8.250	3 2.125	3 8.250				14	8	14	4	30
2	5U684	BEAM		10	S	X				15.000	4 3.000						6	3	6	7	14
13	4U685	BEAM		10	S	X				6.000	4 3.000						5	3	5	1	44
27	4U686	BEAM		10	S	X				18.000	4 3.000						7	3	7	1	128
13	5U687	BEAM		13	S	X			4	3.000	3 4.500	4 3.000	3 4.500				16	2	15	10	215
14	5U688	BEAM		13	S	X			3	2.250	3 4.500	3 2.250	3 4.500				14	1	13	9	201
5	5U689	BEAM		10	S	X				3 4.500	4 3.000						11	0	10	10	56
2	5U690	BEAM		13	S	X			2	4.500	3 4.500	2 4.500	3 4.500				12	5	12	1	25
2	5U691	BEAM		13	S	X			2	10.500	3 4.500	2 10.500	3 4.500				13	5	13	1	27
2	5U692	BEAM		13	S	X			4	2.000	3 4.500	4 2.000	3 4.500				16	3	15	8	33
3	5U693	BEAM		10	S	X				12.000	4 3.000						6	3	6	1	19
46	4V164	WALL		19	S	X			17	0.000	12.000						18	0	17	11	551
10	9V165	COLUMNS		20	X				16	7.000							16	7	16	7	564
10	9V166	COLUMNS		20	X				14	7.000							14	7	14	7	496
10	9V167	COLUMNS		20	X				18	7.000							18	7	18	7	632
10	9V168	COLUMNS		17	X				13	1.000							14	4	14	4	487
10	9V169	COLUMNS		17	X				15	1.000							16	4	16	4	555
10	9V170	COLUMNS		17	X				11	1.000							12	4	12	4	419
54	9V500	COLUMNS		17	X				22	6.000							23	9	23	9	4361
8	W5W3	A.B. WELLS		22	X				2	1.000	9.125						33	2	33	2	44
		INT.BT.NO.13																			
20	8D116	FOOTINGS		20	X				10	8.000							10	8	10	8	570
20	5D117	FOOTINGS		20	X				8	8.000							8	8	8	8	181
4	6D118	FOOTINGS		10	S	X				5	4.000	10 0.000					20	8	20	4	122
4	6H327	BEAM		20	X				16	3.000							16	3	16	3	98

# BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY	(E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT		
											B	C	D	E	F	H	K						
											FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.				FT.	IN.
2	6H328	BEAM		20	X						14	10.000						14	10	14	10	45	
4	9H329	BEAM		17	X						16	3.000						17	6	17	6	238	
8	7H330	BEAM		7	X						4	8.000	4	1.500				11	7	11	7	189	
2	6H331	BEAM		20	X						20	0.000						20	0	20	0	60	
4	6H332	BEAM		20	X						21	6.000						21	6	21	6	129	
5	9H333	BEAM		17	X						21	6.000						22	9	22	9	387	
8	9H334	BEAM		17	X						14	1.000						15	4	15	4	417	
3	9H335	WALL		17	X						14	4.000						15	7	15	7	159	
3	8H336	WALL		17	X						10	5.000						11	4	11	4	91	
52	4H337	WALL		20	X						10	9.000						10	9	10	9	373	
52	4H338	WALL		20	X						14	6.000						12	6	14	6	504	
52	6H339	WALL		20	X						3	10.000						3	10	3	10	299	
4	8H340	WALL		20	X						5	10.000						5	10	5	10	62	
8	6H341	BEAM		19	S	X					3	2.500	15.000					4	6	4	4	52	
2	6H342	BEAM		23	S	X					9.000	3	2.500			4.000	8.125	4	0	3	11	12	
4	9H343	BEAM		19	X						2	0.000	9	2.000				11	2	10	11	148	
4	9H344	BEAM		23	X						13.000	6	11.000			8.500	9.875	8	0	7	11	108	
1	9H345	BEAM		20	X						8	0.000						8	0	8	0	27	
2	4P58	COLUMNS		35	X						3	3.000	5.000	28	9.625			119	10	119	10	1592	
2	4P60	COLUMNS		35	X						4	3.000	5.000	22	1.500			120	11	120	11	1616	
14	4P61	BEAM		34	S	X					3	3.000						11	1	11	1	104	
9	6U711	BEAM		13	S	X					4	3.000	3	0.375	4	3.000	3	0.375	15	1	15	5	208
8	6U712	BEAM		13	S	X					3	2.250	3	0.375	3	2.250	3	0.375	13	9	13	4	160
3	6U713	BEAM		10	S	X					3	0.375	4	3.000				10	4	10	0	45	
2	6U714	BEAM		13	S	X					22	750	3	0.375	22	750	3	0.375	11	2	10	9	32
2	6U715	BEAM		13	S	X					2	7.500	3	0.375	2	7.500	3	0.375	12	8	12	2	37
2	6U716	BEAM		13	S	X					3	0.000	3	0.375	3	0.000	3	0.375	13	5	12	11	39
2	6U717	BEAM		13	S	X					3	2.125	3	0.375	3	2.125	3	0.375	13	9	13	3	40
14	6U718	BEAM		13	S	X					4	3.000	2	8.625	4	3.000	2	8.625	15	3	14	10	312
10	6U719	BEAM		13	S	X					3	2.250	2	8.625	3	2.250	2	8.625	13	2	12	8	190
2	6U720	BEAM		13	S	X					2	4.500	2	8.625	2	4.500	2	8.625	11	6	11	1	33
2	6U721	BEAM		13	S	X					2	10.500	2	8.625	2	10.500	2	8.625	12	6	12	1	36
2	6U722	BEAM		13	S	X					3	1.500	2	8.625	3	1.500	2	8.625	13	0	12	7	38
2	6U723	BEAM		13	S	X					3	2.250	2	8.625	3	2.250	2	8.625	13	2	12	8	38
4	6U724	BEAM		10	S	X					2	8.625	4	3.000				9	8	9	5	57	
6	4U725	BEAM		10	S	X					6.000	4	3.000					5	3	5	1	20	
44	6V178	WALL		19	S	X					28	1.000	12.000					29	1	28	11	1911	
30	9V179	COLUMN		17	X						22	7.000						23	10	23	10	2431	
11	9V181	COLUMN		20	X						22	0.000						22	0	22	0	823	
11	9V182	COLUMN		20	X						24	0.000						24	0	24	0	898	
11	9V183	COLUMN		20	X						20	0.000						20	0	20	0	748	
11	9V184	COLUMN		17	X						18	9.000						20	0	20	0	748	
11	9V185	COLUMN		17	X						20	9.000						22	0	22	0	823	
11	9V186	COLUMN		17	X						16	9.000						18	0	18	0	573	
30	10V188	COLUMN		17	X						22	8.500						24	2	24	2	3120	
8	W5W3	A.B. WELLS		22	X						2	1.000	9.125					33	2	33	2	44	



ARE INCLUDED IN THE BAR BILL FOR TESTING.

NOTE: ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS. HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET. E = EPOXY COATED REINFORCEMENT. S = STIRRUP. X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES. V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE. NO. EA. = NUMBER OF BARS OF EACH LENGTH. NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH) ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH. PAYMENTS ARE BASED ON ACTUAL LENGTHS. FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS. REINFORCING STEEL (GRADE 60) = FY 60,000 PSI.

SHEET NO. 214 OF 238

ST. LOUIS-JEFFERSON COUNTY

A-609R

STIRRUP HOOK DIMENSIONS  
GRADES 40 - 70 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK	135° HOOK	APPROX. H
#4	2"	4'-1/2"	4'-1/2"	3"
#5	2-1/2"	6"	5'-1/2"	3-3/4"
#6	4'-1/2"	12"	8"	4'-1/2"

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A



# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K						
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.						
INT.BT.NO. 14																					
24	6D122	FOOTING	20						8	8.000						8	8	312			
8	8D123	FOOTING	20						9	8.000						9	8	206			
2	6D124	FOOTING	10	S	X				5	4.000	8	0.000				18	8	55			
2	6D125	FOOTING	10	S	X				5	4.000	9	0.000				19	8	58			
2	6H365	BEAM	20	X					14	10.000						14	10	45			
4	6H366	BEAM	20	X					16	3.000						16	3	98			
2	6H367	BEAM	20	X					18	6.000						18	6	56			
3	7H368	BEAM	17	X					12	3.000						13	1	80			
8	7H369	BEAM	7	X					4	8.000	4	1.750				11	7	189			
12	6H370	BEAM	20	X					4	3.000						4	3	77			
2	6H371	BEAM	20	X					20	0.000						20	0	60			
4	6H372	BEAM	20	X					21	6.000						21	6	129			
2	6H373	BEAM	20	X					23	8.000						23	8	71			
5	10H374	BEAM	17	X					14	9.000						16	2	348			
4	9H375	BEAM	17	X					23	8.000						24	11	339			
3	8H376	WALL	17	X					10	9.000						11	8	93			
52	4H377	WALL	20	X					11	0.000						11	0	382			
3	8H378	WALL	17	X					14	2.000						15	1	121			
52	4H379	WALL	20	X					14	4.000						14	4	498			
8	6H380	BEAM	19	S	X				3	2.500	15	0.000				4	6	4	52		
4	6H381	BEAM	23	S	X				9	0.000	3	2.500			4.000	8.125	4	0	3	11	24
4	9H382	BEAM	19	X					2	0.000	9	2.000				11	2	10	11	148	
4	7H383	BEAM	19	X					2	0.000	6	6.000				8	6	8	4	68	
4	8H384	WALL	20	X					5	10.000						5	10	5	10	62	
52	6H385	WALL	20	X					3	10.000						3	10	3	10	299	
4	7H449	BEAM	17	X					18	6.000						19	4	19	4	158	
2	4P66	COLUMNS	35	X					4	3.000	3	0.000	22	1.500		1209	11	1209	11	1616	
2	4P67	COLUMNS	35	X					3	3.000	3	0.000	29	0.875		1202	9	1202	9	1607	
14	4P68	BEAM	34	S	X				3	3.000						11	1	11	1	104	
10	5U726	BEAM	13	S	X				4	3.000	3	9.125	4	3.000	3	9.125	16	11	16	8	174
6	5U727	BEAM	13	S	X				3	2.250	3	9.125	3	2.250	3	9.125	14	10	14	6	91
2	5U728	BEAM	13	S	X				2	10.375	3	9.125	2	10.375	3	9.125	14	2	13	10	29
2	5U729	BEAM	13	S	X				3	0.500	3	9.125	3	0.500	3	9.125	14	6	14	3	30
2	5U730	BEAM	13	S	X				3	2.125	3	9.125	3	2.125	3	9.125	14	10	14	6	30
5	5U731	BEAM	10	S	X				3	9.125	4	3.000				11	9	11	7	60	
2	5U732	BEAM	10	S	X				13	0.000	4	3.000				6	5	6	3	13	
13	5U733	BEAM	13	S	X				4	3.000	3	5.500	4	3.000	3	5.500	16	4	16	0	217
14	5U734	BEAM	13	S	X				3	2.250	3	5.500	3	2.250	3	5.500	14	3	13	11	203
2	5U735	BEAM	13	S	X				2	5.125	3	5.500	2	5.125	3	5.500	12	8	12	5	26
2	5U736	BEAM	13	S	X				3	1.125	3	5.500	3	1.125	3	5.500	14	0	13	9	29
2	5U737	BEAM	13	S	X				3	2.250	3	5.500	3	2.250	3	5.500	14	3	13	11	29
5	5U738	BEAM	10	S	X				3	5.500	4	3.000				11	2	11	0	57	
3	5U739	BEAM	10	S	X				11	5.000	4	3.000				6	2	6	0	19	
1	5U740	BEAM	10	S	X				6	0.000	4	3.000				5	3	5	1	44	

# BILL OF REINFORCING STEEL

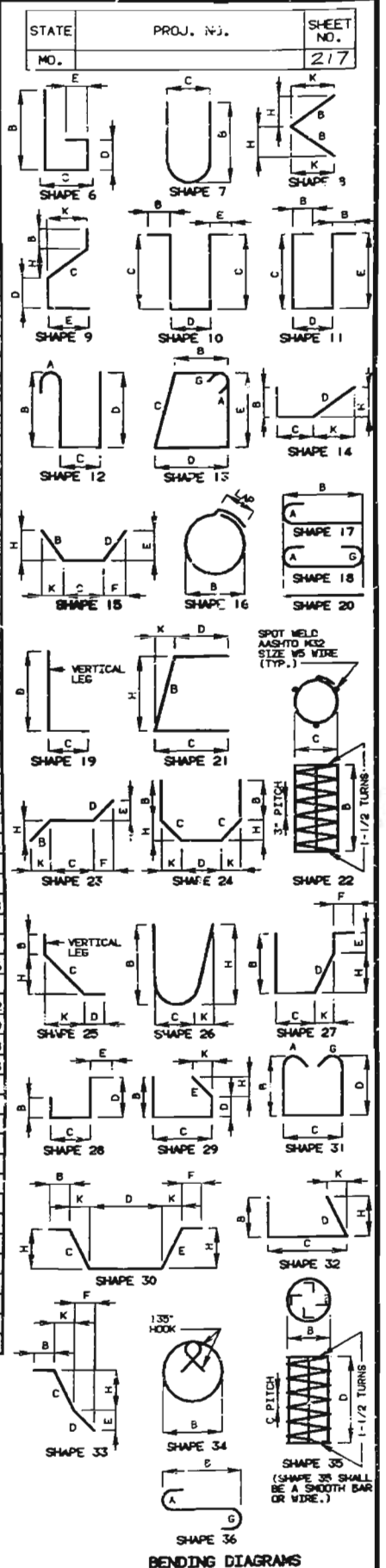
NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT		
									B	C	D	E	F	H	K					
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.					
44	5V195	WALL		19	S	X			28	4.000	12.000					29	4	29	3	1342
48	9V196	COLUMN		17		X			22	7.000						23	10	23	10	3890
10	9V197	COLUMN		20		X			22	2.000						22	2	22	2	754
10	9V198	COLUMN		20		X			24	2.000						24	2	24	2	822
10	9V199	COLUMN		20		X			20	2.000						20	2	20	2	686
10	9V200	COLUMN		17		X			18	9.000						20	0	20	0	680
10	9V201	COLUMN		17		X			16	9.000						18	0	18	0	612
10	9V202	COLUMN		17		X			20	9.000						22	0	22	0	748
8	W5W3	A.B.WELL		22		X			2	1.000	9.125					33	2	33	2	44

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
13	4U762	BEAM		13	S	X			4 3.000	3 2.750	4 3.000	3 2.750				15 9	15 6	135
8	4U763	BEAM		13	S	X			3 2.250	3 2.750	3 2.250	3 2.750				13 7	13 4	71
5	4U764	BEAM		10	S	X				3 2.750	4 3.000					10 9	10 7	35
6	4U765	BEAM		10	S	X				10.000	4 3.000					5 11	5 9	23
2	4U766	BEAM		13	S	X			2 0.625	3 2.750	2 0.625	3 2.750				11 4	11 1	15
2	4U767	BEAM		13	S	X			2 10.875	3 2.750	2 10.875	3 2.750				13 0	12 9	17
6	4U769	BEAM		10	S	X				6.000	4 3.000					5 3	5 1	20
2	4U770	BEAM		13	S	X			14.875	3 6.500	14.875	3 6.500				10 4	10 1	13
2	4U771	BEAM		13	S	X			2 7.375	3 6.500	2 7.375	3 6.500				13 1	12 10	17
48	4V211	WALL		19	S	X			29 9.000	12.000						30 9	30 8	983
10	9V212	COLUMNS		17	X				29 10.000							31 1	31 1	1057
10	9V213	COLUMNS		17	X				31 10.000							33 1	33 1	1125
10	9V214	COLUMNS		17	X				27 10.000							29 1	29 1	989
10	9V215	COLUMNS		17	X				19 10.000							21 1	21 1	717
10	9V216	COLUMNS		17	X				21 10.000							23 1	23 1	785
10	9V217	COLUMNS		17	X				17 10.000							19 1	19 1	649
8	WSW2	A.B. WELLS		22	X				18.000	9.125						26 1	26 1	35
END BT. NO. 16																		
21	5089	FOOTINGS		20	X				4 2.000							4 2	4 2	91
15	7090	FOOTINGS		18	X				7 8.000							9 4	9 4	286
12	6091	FOOTINGS		17	X				4 10.000							5 6	5 6	99
18	6092	FOOTINGS		17	X				4 10.000							5 6	5 6	149
7	6F3	WING BRACE		15	S	X			14.000	3 7.375	14.000	12.125	7.000	12.125	7.000	5 11	5 10	61
12	6F4	COLUMNS		23	S	X			15.000	5 2.750	14.000	9.875	9.875	10.625	10.625	7 8	7 7	137
12	6F5	COLUMNS		23	S	X			14.000	6 5.750				9.875	9.875	7 8	7 7	137
8	6H180	BEAM		18	X	V			2 15 7.000							16 11	16 11	45
		INCREMENT =							14 11.000							16 3	16 3	199
		2.625 INCH																
2	6H181	BEAM		20	X				14 11.000							14 11	14 11	45
2	6H182	BEAM		20	X				15 7.000							15 7	15 7	47
4	6H183	BEAM		18	X	V			13 10.000							15 2	15 2	86
		INCREMENT =							12 3.000							13 7	13 7	86
		6.375 INCH																
4	6H184	BEAM		18	X	V			9 4.000							10 8	10 8	59
		INCREMENT =							7 9.000							9 1	9 1	59
		6.375 INCH																
2	6H185	BEAM		20	X				9 4.000							9 4	9 4	28
2	6H186	BEAM		20	X				7 9.000							7 9	7 9	23
6	4H187	BACKWALL		20	X				25 6.000							25 6	25 6	100
2	6H188	BACKWALL		20	X				26 9.000							26 9	26 9	50
6	4H189	BACKWALL		20	X				32 1.000							32 1	32 1	125
1	4H190	APPR. HAUNCH		20	X				30 4.000							30 4	30 4	20

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
1	4H191	APPR. HAUNCH		20	X				25 0.000							25 0	25 0	17
2	6H192	WING		20	X				16 9.000							16 9	16 9	50
2	6H193	WING		20	X				16 9.000							16 9	16 9	50
20	6H194	WING		20	X	V			2 16 4.000							16 4	16 4	23
		INCREMENT =							3 1.000							3 1	3 1	292
		17.625 INCH																
10	4H195	CURTAIN WALL		20	X				3 6.000							3 6	3 6	23
2	6H196	BACKWALL		20	X				33 4.000							33 4	33 4	100
7	4H197	BACKWALL		20	X				35 2.000							35 2	35 2	164
2	6H198	BACKWALL		20	X				35 2.000							35 2	35 2	106
15	6H199	BACKWALL		20	X				3 10.000							3 10	3 10	86
2	4T5	CURTAIN WALL		19	S	X			7 2.000	4 0.000						11 2	11 1	15
2	6T6	WING		25	S	X			15.750	17 8.250	22.125			7 3.625	16 1.250	20 10	20 9	62
16	4U136	BEAM		13	S	X			2 9.000	2 8.625	2 9.000	2 8.625				11 8	11 5	122
8	4U137	BEAM		13	S	X			2 9.000	3 0.250	2 9.000	3 0.250				12 4	12 1	65
8	4U138	BEAM		10	S	X				6.000	2 9.000					3 9	3 7	19
86	4U139	APPR. HAUNCH		10	S	X				15.000	6.000					3 0	2 10	163
36	4U140	COLUMNS		10	S	X	V	6		20.800	2 3.000					5 9	5 7	97
		INCREMENT =								2.300	2 3.000					2 8	2 6	97
		7.375 INCH																
5	4U141	BEAM		10	S	X				6.000	2 9.000					3 9	3 7	12
18	5V81	BACKWALL		20	X				6 9.000							6 10	6 10	128
128	5V82	BACKWALL		20	X				5 4.000							5 4	5 4	712
26	5V83	BACKWALL		20	X				6 10.000							6 10	6 10	185
2	6V85	WING		20	X				20.000							20	20	5
7	6V86	WING		20	X	V			4 7.000							4 7	4 7	41
		INCREMENT =							3 3.000							3 3	3 3	41
		2.625 INCH																
7	6V87	WING		17	X	V			4 5.000							5 1	5 1	46
		INCREMENT =							3 1.000							3 9	3 9	46
		2.625 INCH																
11	6V88	WING		20	X	V			9 4.000							9 4	9 4	118
		INCREMENT =							4 11.000							4 11	4 11	118
		5.250 INCH																
11	6V89	WING		17	X	V			9 2.000							9 10	9 10	126
		INCREMENT =							4 9.000							5 5	5 5	126
		5.250 INCH																
2	4V90	WING		20	X				8 8.000							8 8	8 8	12
2	4V91	WING		20	X				6 8.000							6 8	6 8	9
30	6V92	COLUMNS		20	X				7 6.000							7 6	7 6	338
6	4V93	COLUMNS		20	X				7 0.000							7 0	7 0	28
8	WSW1	A.B. WELLS		22	X				15.000	9.125						23 0	23 0	31
SUPERSTP. N.B. LANE																		
310	5S1	SLAB		20					38 2.000							38 2	38 2	12340
22	6S2	SLAB		20					33 4.000							33 4	33 4	6108
122	6S3	SLAB		20					35 6.000							35 6	35 6	6505
334	6S4	SLAB		20					27 5.000							27 5	27 5	13754



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# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
								B	C	D	E	F	H	K			
								FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.			
28	6S5	SLAB	E 20					26 11.000							26 11	26 11	
		INCREMENT =						3 6.000							3 6	3 6	640
		10.375 INCH															
27	6S6	SLAB	E 20					26 2.000							26 2	26 2	
		INCREMENT =						3 8.000							3 8	3 8	605
		10.375 INCH															
34	6S7	SLAB	E 20					30 11.000							30 11	30 11	
		INCREMENT =						2 4.000							2 4	2 4	849
		10.375 INCH															
328	6S8	SLAB	E 20					31 8.000							31 8	31 8	15601
35	6S9	SLAB	E 20					31 5.000							31 5	31 5	
		INCREMENT =						2 0.000							2 0	2 0	878
		10.375 INCH															
22	6S10	SLAB	E 20					21 3.000							21 3	21 3	
		INCREMENT =						3 2.000							3 2	3 2	403
		10.375 INCH															
340	6S11	SLAB	E 20					21 5.000							21 5	21 5	10937
22	6S12	SLAB	E 20					20 5.000							20 5	20 5	
		INCREMENT =						2 3.000							2 3	2 3	374
		10.375 INCH															
310	6S13	SLAB	E 20					38 6.000							38 6	38 6	12448
122	6S14	SLAB	E 20					30 10.000							30 10	30 10	5650
122	6S15	SLAB	E 20					31 10.000							31 10	31 10	5833
29	6S16	SLAB	E 20					26 4.000							26 4	26 4	
		INCREMENT =						2 1.000							2 1	2 1	619
		10.375 INCH															
337	6S17	SLAB	E 20					27 5.000							27 5	27 5	13878
27	6S18	SLAB	E 20					25 11.000							25 11	25 11	
		INCREMENT =						3 4.000							3 4	3 4	593
		10.375 INCH															
34	6S19	SLAB	E 20					31 4.000							31 4	31 4	
		INCREMENT =						2 9.000							2 9	2 9	870
		10.375 INCH															
330	6S20	SLAB	E 20					31 8.000							31 8	31 8	15696
35	6S21	SLAB	E 20					31 4.000							31 4	31 4	
		INCREMENT =						2 0.000							2 0	2 0	876
		10.375 INCH															
20	6S22	SLAB	E 20					20 0.000							20 0	20 0	
		INCREMENT =						3 6.000							3 6	3 6	353
		10.375 INCH															
343	6S23	SLAB	E 20					21 5.000							21 5	21 5	11034
23	6S24	SLAB	E 20					21 3.000							21 3	21 3	
		INCREMENT =						2 2.000							2 2	2 2	404
		10.375 INCH															
496	6S25	SLAB	E 20					38 3.000							38 3	38 3	19788
366	6S26	SLAB	E 20					37 8.000							37 8	37 8	20707
30	6S27	SLAB	E 20					27 2.000							27 2	27 2	
		INCREMENT =						2 1.000							2 1	2 1	659
		10.375 INCH															
550	6S28	SLAB	E 20					27 5.000							27 5	27 5	22649
26	6S29	SLAB	E 20					25 5.000							25 5	25 5	
		INCREMENT =						5 0.000							5 0	5 0	594
		9.750 INCH															
34	6S30	SLAB	E 20					31 4.000							31 4	31 4	
		INCREMENT =						2 9.000							2 9	2 9	870
		10.375 INCH															
543	6S31	SLAB	E 20					31 8.000							31 8	31 8	25827

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.			
35	6S32	SLAB	E 20						31 8.000						31 8	31 8		
		INCREMENT =							2 1.000						2 1	2 1	887	
		10.500 INCH																
20	6S33	SLAB	E 20						19 10.000						19 10	19 10		
		INCREMENT =							3 4.000						3 4	3 4	348	
		10.375 INCH																
557	6S34	SLAB	E 20						21 4.000						21 4	21 4	17848	
23	6S35	SLAB	E 20						20 8.000						20 8	20 8		
		INCREMENT =							20.000						20	20	386	
		10.375 INCH																
30	6S36	SLAB	E 20						26 9.000						26 9	26 9		
		INCREMENT =							20.000						20	20	640	
		10.375 INCH																
1336	6S37	SLAB	E 20						27 5.000						27 5	27 5	55016	
26	6S38	SLAB	E 20						25 5.000						25 5	25 5		
		INCREMENT =							3 9.000						3 9	3 9	570	
		10.375 INCH																
34	6S39	SLAB	E 20						30 11.000						30 11	30 11		
		INCREMENT =							2 3.000						2 3	2 3	847	
		10.375 INCH																
1328	6S40	SLAB	E 20						31 8.000						31 8	31 8	63164	
35	6S41	SLAB	E 20						31 9.000						31 9	31 9		
		INCREMENT =							2 3.000						2 3	2 3	894	
		10.375 INCH																
20	6S42	SLAB	E 20						19 3.000						19 3	19 3		
		INCREMENT =							3 0.000						3 0	3 0	334	
		10.250 INCH																
1343	6S43	SLAB	E 20						21 4.000						21 4	21 4	43033	
23	6S44	SLAB	E 20						20 8.000						20 8	20 8		
		INCREMENT =							20.000						20	20	386	
		10.375 INCH																
1178	6S45	SLAB	E 20						38 1.000						38 1	38 1	46791	
366	6S46	SLAB	E 20						60 0.000						60 0	60 0	32984	
122	6S47	SLAB	E 20						29 2.000						29 2	29 2	5345	
122	6S48	SLAB	E 20						29 3.000						29 3	29 3	5360	
122	6S49	SLAB	E 20						29 1.000						29 1	29 1	5329	
132	6S50	SLAB	E 20						27 5.000						27 5	27 5	5436	
30	6S51	SLAB	E 20						26 10.000						26 10	26 10		
		INCREMENT =							20.000						20	20	642	
		10.375 INCH																
27	6S52	SLAB	E 20						25 6.000						25 6	25 6		
		INCREMENT =							3 0.000						3 0	3 0	578	
		10.375 INCH																
34	6S53	SLAB	E 20						31 0.000						31 0	31 0		
		INCREMENT =							2 3.000						2 3	2 3	849	
		10.500 INCH																
126	6S54	SLAB	E 20						31 8.000						31 8	31 8	5993	
35	6S55	SLAB	E 20						30 11.000						30 11	30 11		
		INCREMENT =							18.000						18	18	852	
		10.375 INCH																
20	6S56	SLAB	E 20						19 6.000						19 6	19 6		
		INCREMENT =							3 0.000						3 0	3 0	338	
		10.375 INCH																
141	6S57	SLAB	E 20						21 4.000						21 4	21 4	4518	
19	6S58	SLAB	E 20						19 1.000						19 1	19 1		
		INCREMENT =							3 6.000						3 6	3 6	322	
		10.375 INCH																
186	6S59	SLAB	E 20						28 6.000						28 6	28 6	5529	



## BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
										B	C	D	E	F	H	K						
										FT.	IN.	FT.	IN.	FT.	IN.	FT.				IN.	FT.	IN.
20	5S86	SLAB	E 20						1	19	8.000						19	8	19	8		
		INCREMENT =								3	3.000						3	3	3	3	23	
		10.375 INCH																				
557	5S87	SLAB	E 20							21	1.000						21	1	21	1	1224	
23	5S88	SLAB	E 20						V 1	20	8.000						20	8	20	8		
		INCREMENT =									19.000						19		19		26	
		10.375 INCH																				
704	5S89	SLAB	E 20							38	0.000						38	0	38	0	2790	
30	5S90	SLAB	E 20						V 1	26	9.000						26	9	26	9		
		INCREMENT =									19.000						19		19		44	
		10.375 INCH																				
1336	5S91	SLAB	E 20							27	1.000						27	1	27	1	377	
26	5S92	SLAB	E 20						V 1	25	2.000						25	2	25	2		
		INCREMENT =								3	6.000						3	6	3	6	34	
		10.375 INCH																				
34	5S93	SLAB	E 20						V 1	30	10.000						30	10	30	10		
		INCREMENT =								2	3.000						2	3	2	3	58	
		10.375 INCH																				
1328	5S94	SLAB	E 20							31	8.000						31	8	31	8	4384	
35	5S95	SLAB	E 20						V 1	31	8.000						31	8	31	8		
		INCREMENT =								2	2.000						2	2	2	2	6	
		10.375 INCH																				
20	5S96	SLAB	E 20						V 1	19	2.000						19	2	19	2		
		INCREMENT =								2	8.000						2	8	2	8	2	
		10.375 INCH																				
1343	5S97	SLAB	E 20							21	1.000						21	1	21	1	295	
23	5S98	SLAB	E 20						V 1	20	8.000						20	8	20	8		
		INCREMENT =									19.000						19		19		2	
		10.375 INCH																				
1584	5S99	SLAB	E 20							39	8.000						39	8	39	8	655	
30	5S100	BEAM	E 20						V 1	26	9.000						26	9	26	9		
		INCREMENT =									20.000						20		20		4	
		10.375 INCH																				
132	5S101	BEAM	E 20							27	1.000						27	1	27	1	37	
27	5S102	BEAM	E 20						V 1	25	3.000						25	3	25	3		
		INCREMENT =								2	8.000						2	8	2	8	3	
		10.375 INCH																				
34	5S103	BEAM	E 20						V 1	30	10.000						30	10	30	10		
		INCREMENT =								2	3.000						2	3	2	3	58	
		10.375 INCH																				
126	5S104	BEAM	E 20							31	8.000						31	8	31	8	418	
35	5S105	BEAM	E 20						V 1	30	11.000						30	11	30	11		
		INCREMENT =									18.000						18		18		59	
		10.375 INCH																				
20	5S106	BEAM	E 20						V 1	19	2.000						19	2	19	2		
		INCREMENT =								2	9.000						2	9	2	9	22	
		10.375 INCH																				
141	5S107	BEAM	E 20							21	1.000						21	1	21	1	310	
19	5S108	SLAB	E 20						V 1	19	1.000						19	1	19	1		
		INCREMENT =								3	6.000						3	6	3	6	22	
		10.375 INCH																				
264	5S109	SLAB	E 20							28	2.000						28	2	28	2	775	
148	5S219	SLAB	E 20							2	6.000						2	6	2	6	38	
2215	44500	HAUNCH	E 10 S							6.000		7.375		13.000		6.000		3	4	3	0	443

STATE	PROJ. NO.	SHEET NO.
MO.		219

SHAPE 6

SHAPE 7

SHAPE 8

SHAPE 9

SHAPE 10

SHAPE 11

SHAPE 12

SHAPE 13

SHAPE 14

SHAPE 15

SHAPE 16

SHAPE 17

SHAPE 18

SHAPE 19

SHAPE 20

SHAPE 21

SPOT WELD  
AASHTO M302  
SIZE #6 WIRE  
(TYP.)

SHAPE 22

SHAPE 23

SHAPE 24

SHAPE 25

SHAPE 26

SHAPE 27

SHAPE 28

SHAPE 29

SHAPE 30

SHAPE 31

SHAPE 32

SHAPE 33

SHAPE 34

SHAPE 35

SHAPE 36

ARE INCLUDED IN THE BAR BILL FOR TESTING.

**NOTE:**  
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS.  
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.  
E = EPOXY COATED REINFORCEMENT.  
S = STIRRUP.  
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.  
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.  
NO. EA. = NUMBER OF BARS OF EACH LENGTH.  
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)  
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.  
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.  
SPACERS OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.  
REINFORCING STEEL (GRADE 60) = FY 60,000 PSI.

SHEET NO. 218 OF 238

ST. LOUIS-JEFFERSON COUNTY

A-609R

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

STD 90-0	REVISED
MAY 1974	OCT. 1991

6d FOR #4  
AND 12d FOR #5  
12d FOR #6

HOOK  
A OR G

DETAILING DIMENSION

90° STIRRUP

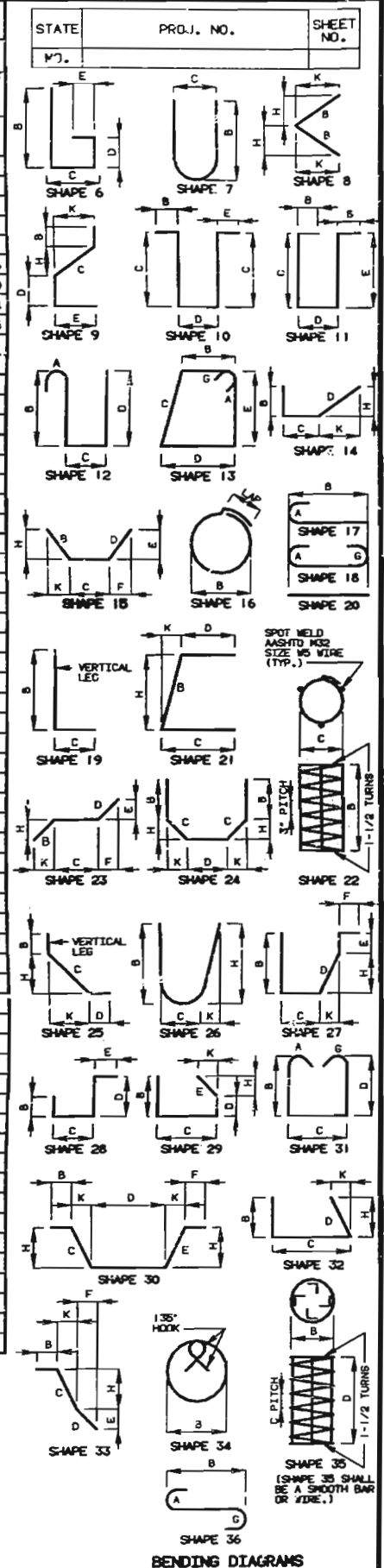
DETAILED MAY 1993  
CHECKED MAY 1993

# BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT	
										B	C	D	E	F	H	K				
										FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
524	SR1	BARRIER CURB	E	19	S					2 6.000	3.500							2 10	2 8	4239
1492	SR2	BARRIER CURB	E	15	S					2 6.125	3.500					2 6.000	3.000	2 10	2 9	4279
1492	SR3	BARRIER CURB	E	19	S					17.000	6.000							23	22	2853
1461	SR4	BARRIER CURB	E	27	S						6.000	11.125	7.000	12.000	9.125	6.375	3 0	2 10	4317	
31	SR6	BARRIER CURB	E	27	S					12.000	9.500	10.625	6.000		6.125	8.750	3 2	3 0	97	
4	SR7	BARRIER CURB	E	19	S					16.000	6.000						22	21	7	
4	SR8	BARRIER CURB	E	27	S					12.000	9.500	7.750	6.000		4.625	6.250	2 11	2 9	11	
12	SR9	BARRIER CURB	E	10	S						2 8.500	7.500					6 1	5 10	73	
24	SR10	BARRIER CURB	E	20						5 0.000							5 0	5 0	125	
5	SR11	BARRIER CURB	E	20						9 0.000							9 0	9 0	47	
1	SR12	BARRIER CURB	E	20						9 9.000							9 9	9 9	10	
1	SR13	BARRIER CURB	E	20						11 9.000							11 9	11 9	12	
5	SR14	BARRIER CURB	E	20						14 0.000							14 0	14 0	73	
1	SR15	BARRIER CURB	E	20						14 9.000							14 9	14 9	15	
1	SR16	BARRIER CURB	E	20						16 9.000							16 9	16 9	17	
14	SR17	BARRIER CURB	E	20						24 7.000							24 7	24 7	359	
182	SR18	BARRIER CURB	E	20						9 9.000							9 9	9 9	1851	
14	SR19	BARRIER CURB	E	20						25 7.000							25 7	25 7	374	
14	SR20	BARRIER CURB	E	20						22 4.000							22 4	22 4	326	
14	SR21	BARRIER CURB	E	20						25 9.000							25 9	25 9	376	
14	SR22	BARRIER CURB	E	20						25 7.000							25 7	25 7	374	
14	SR23	BARRIER CURB	E	20						22 4.000							22 4	22 4	326	
14	SR24	BARRIER CURB	E	20						29 3.000							29 3	29 3	427	
14	SR25	BARRIER CURB	E	20						30 7.000							30 7	30 7	447	
14	SR26	BARRIER CURB	E	20						30 7.000							30 7	30 7	447	
14	SR27	BARRIER CURB	E	20						27 6.000							27 6	27 6	402	
28	SR28	BARRIER CURB	E	20						35 4.000							35 4	35 4	1032	
28	SR29	BARRIER CURB	E	20						37 3.000							37 3	37 3	1088	
28	SR30	BARRIER CURB	E	20						37 3.000							37 3	37 3	1088	
28	SR31	BARRIER CURB	E	20						35 4.000							35 4	35 4	1032	
14	SR32	BARRIER CURB	E	20						41 0.000							41 0	41 0	599	
114	SC1	S/F CURB	E	20						10 0.000							10 0	10 0	1189	
2	SC2	S/F CURB	E	20						9 0.000							9 0	9 0	19	
1461	SR1	MEDIAN CURB	E	19	S					2 6.000	3.500						2 10	2 8	4063	
1461	SR2	MEDIAN CURB	E	15	S					2 6.125	3.500				2 6.000	3.000	2 10	2 9	4191	
1461	SR3	MEDIAN CURB	E	19	S					17.000	6.000						23	22	2794	
1461	SR4	MEDIAN CURB	E	27	S						6.000	11.125	7.000	12.000	9.125	6.375	3 0	2 10	4317	
4	SR33	MEDIAN CURB	E	19	S					2 6.000	5.125						2 11	2 10	12	
4	SR34	MEDIAN CURB	E	15	S					2 6.125	5.125				2 6.000	3.000	2 11	2 10	12	
4	SR35	MEDIAN CURB	E	21	S					11.125	14.625		7.000		9.125	6.375	2 2	22	8	
4	SR36	MEDIAN CURB	E	19	S					8.500	6.875						15	14	5	
14	SR37	MEDIAN CURB	E	20						25 2.000							25 2	25 2	367	
182	SR38	MEDIAN CURB	E	20						9 9.000							9 9	9 9	1851	
14	SR39	MEDIAN CURB	E	20						25 7.000							25 7	25 7	374	
14	SR40	MEDIAN CURB	E	20						22 4.000							22 4	22 4	326	
14	SR41	MEDIAN CURB	E	20						25 9.000							25 9	25 9	376	
14	SR42	MEDIAN CURB	E	20						25 7.000							25 7	25 7	374	
14	SR43	MEDIAN CURB	E	20						22 4.000							22 4	22 4	326	
14	SR44	MEDIAN CURB	E	20						29 3.000							29 3	29 3	427	
14	SR45	MEDIAN CURB	E	20						30 7.000							30 7	30 7	447	
14	SR46	MEDIAN CURB	E	20						30 7.000							30 7	30 7	447	
14	SR47	MEDIAN CURB	E	20						27 10.000							27 10	27 10	406	
28	SR48	MEDIAN CURB	E	20						35 4.000							35 4	35 4	1032	
28	SR49	MEDIAN CURB	E	20						37 3.000							37 3	37 3	1088	
28	SR50	MEDIAN CURB	E	20						37 3.000							37 3	37 3	1088	
28	SR51	MEDIAN CURB	E	20						35 4.000							35 4	35 4	1032	
14	SR52	MEDIAN CURB	E	20						42 0.000							42 0	42 0	613	

# BILL OF REINFORCING STEEL

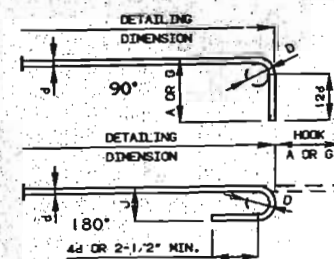
NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
96	SR100	TRAFFIC BARRIER CURB	E	15	S				2 5.375	10.000				2 5.250	3.000	3 3	3 2	
		INCREMENT=							3 3.000	5.000				3 2.750	7.375	3 9	3 8	342
		0.250 INCH																
2	SR101	CURB	E	33	S				6.125	18.125	12.625	10.375	7.250	18.000	1.875	3 1	3 0	6
98	SR102	CURB	E	20					20.000							20	20	170
6	SR103	CURB	E	20					23 0.000							23 0	23 0	144
6	SR104	CURB	E	20					24 9.000							24 9	24 9	135



STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK	135° HOOK	APPROX. H
#4	2"	4-1/2"	4-1/2"	3"
#5	2-1/2"	6"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	4-1/2"



## TWO ADDITIONAL

END HOOK DIMENSIONS

ALL GRADES

BAR SIZE	D (IN.)	180° HOOK	90° HOOK	A OR B
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	12"
#7	5-1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9-1/2"	15"	11-3/4"	19"
#10	10-3/4"	17"	13-1/4"	22"
#11	12"	19"	14-3/4"	2'-0"
#14	18-1/4"	2'-3"	21-3/4"	2'-7"

## ARE INCLUDED IN THE BAR BILL FOR TESTING.

NOTE: ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS. HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET. E = EPOXY COATED REINFORCEMENT. S = STIRRUP. X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES. V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE. NO. EA. = NUMBER OF BARS OF EACH LENGTH. NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH) ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH. PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS. FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS. REINFORCING STEEL (GRADE 60) = FY 60,000 PSI.

SHEET NO. 219 OF 238

ST. LOUIS-JEFFERSON COUNTY

A-609R

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

STANDARD MAY 1993  
CHECKED MAY 1993

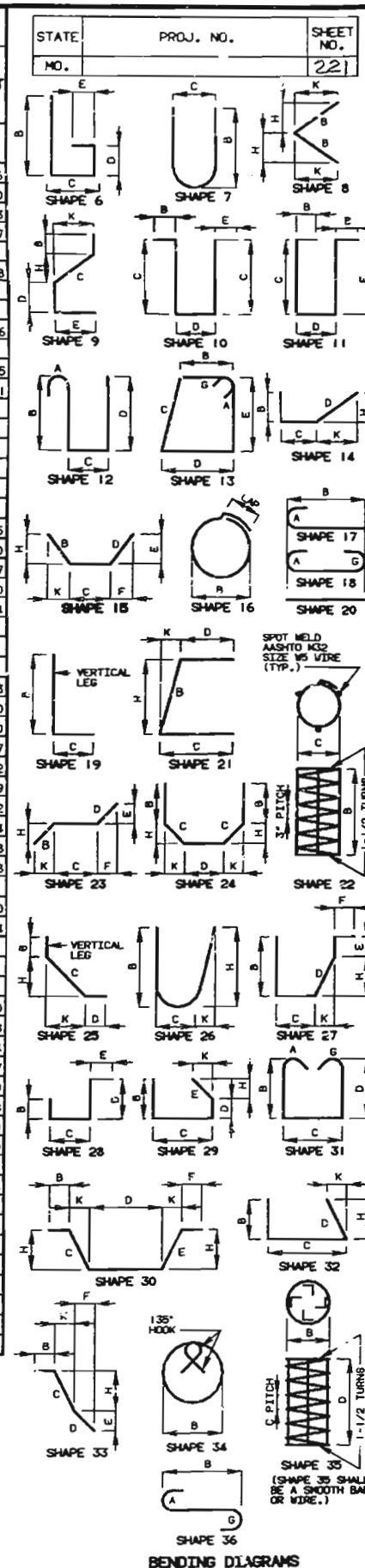


# BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT		
										B	C	D	E	F	H	K					
										FT.	IN.	FT.	IN.	FT.	IN.	FT.				IN.	FT.
			S.B. LANE																		
			SUBSTRUCTURE																		
			END BT. NO.																		
3	6F1		WING BRACE	15	S	X				14.000	3	7.375	14.000	12.125	7.000	12.125	7.000	5 11	5 10	26	
8	8H143		BEAM	18	X	V	2	18	4.000									20 2	20 2		
			INCREMENT =						17	6.000								19 4	19 4	422	
			3.375 INCH																		
1	6H144		BEAM	20	X				17	6.000								17 6	17 6	26	
1	6H145		BEAM	20	X				18	4.000								18 4	18 4	28	
4	8H146		BEAM	18	X	V	1	16	10.000									18 8	18 8		
			INCREMENT =						15	3.000								17 1	17 1	191	
			6.375 INCH																		
4	8H147		BEAM	18	X	V	1	16	10.000									18 8	18 8		
			INCREMENT =						15	0.000								16 10	16 10	190	
			7.375 INCH																		
1	6H148		BEAM	20	X				16	10.000								16 10	16 10	25	
1	6H149		BEAM	20	X				15	2.000								15 2	15 2	23	
20	6H150		BEAM	20	X				2	7.000								2 7	2 7	78	
4	4H151		BACKWALL	20	X				31	9.000								31 9	31 9	85	
2	6H152		BACKWALL	20	X				33	0.000								33 0	33 0	99	
4	4H153		BACKWALL	20	X				25	6.000								25 6	25 6	68	
2	6H154		BACKWALL	20	X				26	9.000								26 9	26 9	80	
6	4H155		CURTAIN WALL	20	X				3	6.000								3 6	3 6	14	
1	4H156		APPR. HAUNCH	20	X				30	4.000								30 4	30 4	20	
1	4H157		APPR. HAUNCH	20	X				25	0.000								25 0	25 0	17	
2	6H158		WING	20	X				11	9.000								11 9	11 9	35	
2	6H159		WING	20	X				11	9.000								11 9	11 9	35	
6	6H160		WING	20	X	V	2	11	0.000									11 0	11 0		
			INCREMENT =						5	2.000								5 2	5 2	73	
			35.000 INCH																		
5	4H503		BACKWALL	20	X				35	2.000								35 2	35 2	117	
2	6H504		BACKWALL	20	X				35	2.000								35 2	35 2	106	
9	6H505		BEAM	20	X				3	10.000								3 10	3 10	52	
2	6T1		WING	25	S	X			15.375	6	9.625	2	4.000			20.250	6	7.125	10 5	10 4	31
2	4T2		CURTAIN WALL	19	S	X			4	8.000	4	0.000						8 8	8 7	11	
16	6U121		BEAM	13	S	X			2	9.000	3	3.625	3	3.000	3	3.125		13 11	13 5	322	
1	6U122		BEAM	13	S	X			2	2.000	3	3.625	2	8.000	3	3.125		12 9	12 3	18	
10	4U123		BEAM	10	S	X					5.000	2	9.000					3 9	3 7	24	
15	6U124		BEAM	13	S	X			2	9.000	3	1.625	3	3.000	3	1.125		13 7	13 1	295	
5	7U125		BEAM	14	X				5	4.875	2	9.625	3	5.750		3	0.125	20.875	11 3	11 5	117
30	4U126		BEAM	10	S	X				12.000	21.000							3 9	3 7	72	
86	4U127		APPR. HAUNCH	10	S	X				15.000	6.000							3 0	2 10	163	
32	5V61		BACKWALL	20	X				4	0.000								4 0	4 0	134	
108	5V62		BACKWALL	20	X				3	0.000								3 0	3 0	338	
34	5V63		BACKWALL	20	X				4	5.000								4 5	4 5	157	

# BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
										B	C	D	E	F	H	K						
										FT.	IN.	FT.	IN.	FT.	IN.	FT.				IN.	FT.	IN.
2	4V64	CURTAIN WALL	20	X						4	3.000							4	3	4	3	6
2	6V65	BEAM	20	X						3	3.000							3	3	3	3	10
5	6V66	WING	E 20	X						5	9.000							5	9	5	9	43
5	6V67	WING	E 17	X						5	7.000							6	3	6	3	47
11	6V68	WING	E 20	X	V				1	4	2.000							4	2	4	2	58
		INCREMENT =								2	10.000							2	10	2	10	58
		1.625 INCH																				
11	6V69	WING	E 17	X	V				1	4	0.000							4	8	4	8	66
		INCREMENT =								2	8.000							3	4	3	4	66
		1.625 INCH																				
2	6V70	WING	E 20	X						18.000								18	18			5
54	6V301	BACKWALL	20	X						3	10.000							3	10	3	10	311
		INT. BT. NO. 2																				
16	5D15	FOOTINGS	20	X						5	8.000							5	8	5	8	95
10	6D16	FOOTINGS	20	X						6	8.000							6	8	6	8	100
6	7D17	FOOTINGS	20	X						7	11.000							7	11	7	11	97
4	6D18	FOOTINGS	10	S	X						3	10.000	6	0.000				13	8	13	4	80
2	6D19	FOOTINGS	10	S	X						3	10.000	7	3.000				14	11	14	7	44
4	6H25	BEAM	20	X						2	0.500							2	1	2	1	13
2	6H26	BEAM	18	X						2	0.500							3	5	3	5	10
2	6H27	BEAM	18	X						21	10.000							23	2	23	2	70
6	7H28	BEAM	17	X						15	3.000							16	1	16	1	197
4	6H29	BEAM	20	X						15	3.000							15	3	15	3	92
3	8H30	BEAM	18	X						16	9.000							18	7	18	7	149
4	8H31	BEAM	18	X						15	3.000							17	1	17	1	182
2	7H32	BEAM	7	X						4	2.000	3	2.000					10	0	10	0	164
5	6H514	BEAM	17	X						20	5.000							21	1	21	1	158
10	6H515	BEAM	20	X						3	10.000							3	10	3	10	58
3	4P8	COLUMNS	35	X						2	2.000	3.000	27	6.375				962	11	962	11	1930
18	4P9	COLUMNS	34	S	X					2	9.000							9	6	9	6	114
15	4U21	BEAM	13	S	X					3	3.000	3	5.875	3	3.000	3	5.875	14	3	14	0	140
1	4U22	BEAM	13	S	X					2	7.000	3	5.875	2	7.000	3	5.875	12	11	12	8	8
5	4U23	BEAM	10	S	X					6.000	3	3.000						4	3	4	1	14
26	4U24	BEAM	13	S	X					3	3.000	3	4.000	3	3.000	3	4.000	13	11	13	8	237
1	4U25	BEAM	13	S	X					3	1.000	3	4.000	3	1.000	3	4.000	13	7	13	4	9
1	4U26	BEAM	13	S	X					2	7.000	3	4.000	2	7.000	3	4.000	12	7	12	4	8
3	4U619	BEAM	10	S	X					3	4.000	3	3.000					9	11	9	9	20
6	4U620	BEAM	10	S	X					3	5.875	3	3.000					10	3	10	1	40
24	9V13	COLUMNS	17	X						18	1.000							19	4	19	4	1578
24	9V14	COLUMNS	17	X						20	1.000							21	4	21	4	1741
24	9V15	COLUMNS	17	X						16	1.000							17	4	17	4	1414
8	W5W1	A. B. WELL	22	X						15.000	9.125							23	0	23	0	31



TWO ADDITIONAL

END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL OTHERS			
		180° HOOKS		90° HOOKS	
		A OR G	J	A OR G	J
#3	2-1/4"	5"	3"	6"	6"
#4	3"	6"	4"	8"	8"
#5	3-3/4"	7"	5"	10"	10"
#6	4-1/2"	8"	6"	12"	12"
#7	5-1/4"	10"	7"	14"	14"
#8	6"	11"	8"	16"	16"
#9	5-1/2"	15"	11-3/4"	19"	19"
#10	10-3/4"	17"	13-1/4"	22"	22"
#11	12"	19"	14-3/4"	2'-0"	2'-0"
#14	18-1/4"	2'-3"	21-3/4"	2'-7"	2'-7"



# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K						
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.				FT. IN.	FT. IN.	FT. IN.
		INT. BT. NO. 3																			
24	7020	FOOTINGS		20	X				8	2,000							8	2	8	2	401
4	6022	FOOTINGS		10	S	X					5	1,000	7	6,000			17	8	17	4	104
6	8023	FOOTINGS		20	X				8	2,000							8	2	8	2	131
6	7024	FOOTINGS		20	X				6	11,000							6	11	6	11	95
2	6025	FOOTINGS		10	S	X					4	6,000	7	6,000			15	5	16	2	49
4	6H33	BEAM		20	X				15	3,000							15	3	15	3	92
4	8H34	BEAM		18	X				15	3,000							17	1	17	1	182
3	8H35	BEAM		18	X				16	9,000							18	7	18	7	149
4	6H36	BEAM		20	X				20	5,000							20	5	20	5	123
2	6H37	BEAM		18	X				20	5,000							21	9	21	9	65
2	6H38	BEAM		18	X				21	10,000							23	2	23	2	70
8	7H39	BEAM		7	X				4	2,000	3	2,000					10	0	10	0	164
20	6H40	BEAM		20	X				3	3,000							3	3	3	3	98
7	6H516	BEAM		17	X				15	3,000							15	11	15	11	167
5	6H517	BEAM		17	X				20	5,000							21	1	21	1	158
10	6H518	BEAM		20	X				3	10,000							3	10	3	10	58
3	4P10	COLUMNS		35	X				2	9,000	3	000	36	4,375			1263	8	1263	8	2532
18	4P11	COLUMNS		34	S	X			2	9,000							9	6	9	6	114
15	4U27	BEAM		13	S	X			3	3,000	4	0.875	3	3,000	4	0.875	15	5	15	2	152
1	4U28	BEAM		13	S	X			2	7,000	4	0.875	2	7,000	4	0.875	14	1	13	10	9
5	4U29	BEAM		10	S	X					6,000	3	3,000				4	3	4	1	14
26	4U30	BEAM		13	S	X			3	3,000	3	10,750	3	3,000	3	10,750	15	1	14	10	258
1	4U31	BEAM		13	S	X			3	1,000	3	10,750	3	1,000	3	10,750	14	9	14	6	10
1	4U32	BEAM		13	S	X			2	7,000	3	10,750	2	7,000	3	10,750	13	9	13	6	9
35	4U33	BEAM		10	S	X					16,000	2	9,000				5	5	5	3	123
3	4U621	BEAM		10	S	X					3	10,750	3	3,000			11	1	10	11	22
6	4U622	BEAM		10	S	X					4	0.875	3	3,000			11	5	11	3	45
24	9V16	COLUMNS		17	X				22	6,000							23	9	23	9	1938
24	9V17	COLUMNS		17	X				20	6,000							21	9	21	9	1775
24	9V18	COLUMNS		17	X				24	6,000							25	9	25	9	2101
8	W5W2	A. B. WELLS		22	X				18,000	9,125							26	1	26	1	35
		INT. BT. NO. 4																			
14	6026	FOOTINGS		20	X				7	11,000							7	11	7	11	166
17	5027	FOOTINGS		20	X				5	11,000							5	11	5	11	105
5	8028	FOOTINGS		20	X				7	11,000							7	11	7	11	106
6	6029	FOOTINGS		10	S	X					4	0,000	7	3,000			15	3	14	11	134
4	6H41	BEAM		20	X				15	3,000							15	3	15	3	92

# BILL OF REINFORCING STEEL

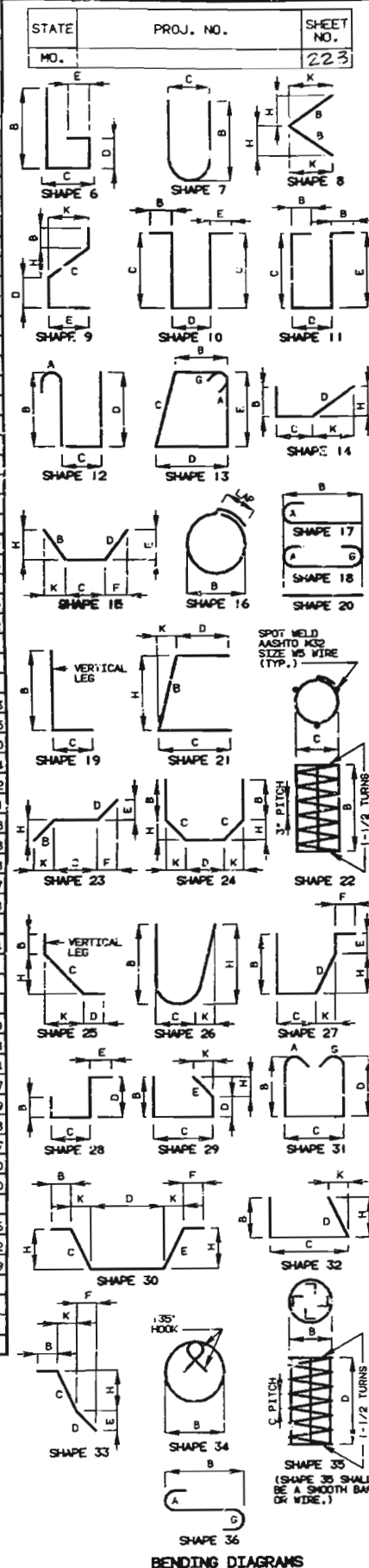
NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT		
									B	C	D	E	F	H	K						
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
4	8H42	BEAM		18	X				16	9.000							15	7	18	7	198
2	8H43	BEAM		18	X				15	3.000							17	1	17	1	91
4	6H44	BEAM		20	X				20	5.000							20	5	20	5	123
2	6H45	BEAM		18	X				20	5.000							21	9	21	9	65
2	6H46	BEAM		18	X				21	10.000							23	2	23	2	70
8	7H47	BEAM		7	X				4	2.000	3	2.000					10	0	10	0	164
20	6H48	BEAM		20	X				3	3.000							3	3	3	3	98
7	6H519	BEAM		17	X				15	3.000							15	11	15	11	167
4	6H520	BEAM		17	X				20	5.000							21	1	21	1	127
10	6H521	BEAM		20	X				3	10.000							3	10	3	10	58
3	4P12	COLUMNS		35	X				2	9.000	3	0.000	37	0.250			1286	0	1286	0	2577
18	4P13	COLUMNS		34	S	X			2	9.000							9	6	9	6	114
15	4U34	BEAM		13	S	X			3	3.000	3	7.750	3	3.000	3	7.750	14	7	14	4	144
1	4U35	BEAM		13	S	X			2	7.000	3	7.750	2	7.000	3	7.750	13	3	13	0	9
5	4U36	BEAM		10	S	X											4	3	4	1	14
26	4U37	BEAM		13	S	X			3	3.000	3	5.875	3	3.000	3	5.875	14	3	14	0	243
1	4U38	BEAM		13	S	X			3	1.000	3	5.875	3	1.000	3	5.875	13	11	13	8	9
1	4U39	BEAM		13	S	X			2	7.000	3	5.875	2	7.000	3	5.875	12	11	12	8	8
35	4P140	BEAM		10	S	X											4	9	4	7	107
3	4U621	BEAM		10	S	X			3	5.875	3	3.000					10	3	10	1	20
6	4U622	BEAM		10	S	X											10	7	10	5	42
24	9V19	COLUMNS		17	X				22	10.000							24	1	24	1	1965
24	9V20	COLUMNS		17	X				20	10.000							22	1	22	1	1802
24	9V21	COLUMNS		17	X				24	10.000							26	1	26	1	2128
8	W5W2	A.B. WELLS		22	X				18.000	9.125							26	1	26	1	35
INT. BT. NO. 5																					
6	7D45	FOOTINGS		20	X				7	11.000							7	11	7	11	97
16	5D46	FOOTINGS		20	X				5	8.000							5	8	5	8	95
12	6D47	FOOTINGS		20	X				7	11.000							7	11	7	11	143
6	6D48	FOOTINGS		10	S	X					3	10.000	7	3.000			14	11	14	7	131
4	6H72	BEAM		20	X				20	5.000							20	5	20	5	123
2	6H73	BEAM		18	X				20	5.000							21	9	21	9	65
2	6H74	BEAM		18	X				21	10.000							23	2	23	2	70
4	6H75	BEAM		20	X				15	3.000							15	3	15	3	92
4	8H76	BEAM		18	X				15	3.000							17	1	17	1	182
3	8H77	BEAM		18	X				16	3.000							18	7	18	7	149
8	7H78	BEAM		7	X				4	2.000	3	2.000					10	0	10	0	164
20	6H79	BEAM		20	X				3	3.000							3	3	3	3	98
5	6H539	BEAM		17	X				20	5.000							21	1	21	1	158
7	6H540	BEAM		17	X				15	3.000							15	11	15	11	167
10	6H541	BEAM		20	X				3	10.000							3	10	3	10	58
2	4P20	COLUMNS		35	X				2	9.000	3	0.000	28	1.000			981	9	981	9	1312
1	4P21	COLUMNS		35	X				2	9.000	3	0.000	37	1.000			1288	2	1288	2	860

# BILL OF REINFORCING STEEL

NO. REC'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
18	4P22	COLUMNS		34	S X				2 9.000							9 6	9 6	114
15	4U61	BEAM		13	S X				3 3.000	4 0.125	3 3.000	4 0.125				15 3	15 4	150
1	4U62	BEAM		13	S X				2 7.000	4 0.125	2 7.000	4 0.125				13 11	13 8	9
5	4U67	BEAM		10	S X					6.000	3 3.000					4 3	4 1	14
26	4U64	BEAM		13	S X				3 3.000	3 10.125	3 3.000	3 10.125				14 11	14 8	255
1	4U65	BEAM		13	S X				3 1.000	3 10.125	3 1.000	3 10.125				14 7	14 4	10
1	4U66	BEAM		13	S X				2 7.000	3 10.125	2 7.000	3 10.125				13 7	13 4	9
35	4U67	BEAM		10	S X					17.000	2 9.000					5 7	5 5	127
3	4U623	BEAM		10	S X					3 10.125	3 3.000					10 11	10 9	22
6	4U624	BEAM		10	S X					4 0.125	3 3.000					11 3	11 1	44
8	9V31	COLUMN		17	X				22 10.000							24 1	24 1	655
8	9V32	COLUMN		17	X				20 10.000							22 1	22 1	601
8	9V33	COLUMN		17	X				24 10.000							26 1	26 1	709
16	9V34	COLUMN		17	X				18 4.000							19 7	19 7	1065
16	9V35	COLUMN		17	X				20 4.000							21 7	21 7	1174
16	9V36	COLUMN		17	X				16 4.000							17 7	17 7	957
8	WSV2	A.B. WELLS		22	X				18.000	9.125						26 1	26 1	35
INT. BT. NO. 6																		
16	6D49	FOOTINGS		20	X				8 8.000							8 8	8 8	208
18	5D50	FOOTINGS		20	X				7 11.000							7 11	7 11	149
4	6D51	FOOTINGS		10	S X					5 0.000	8 0.000					18 0	17 8	106
7	6D52	FOOTINGS		20	X				6 8.000							6 8	6 8	70
6	8D53	FOOTINGS		20	X				8 2.000							8 2	8 2	131
2	6D54	FOOTINGS		10	S X					4 4.000	7 6.000					16 2	15 10	48
4	6H80	BEAM		20	X				20 5.000							20 5	20 5	123
2	6H81	BEAM		18	X				20 5.000							21 9	21 9	65
2	6H82	BEAM		18	X				21 10.000							23 2	23 2	70
8	7H83	BEAM		7	X				4 2.000	3 2.000						10 0	10 0	134
4	6H84	BEAM		20	X				15 3.000							15 3	15 3	92
4	8H85	BEAM		18	X				15 3.000							17 1	17 1	182
3	8H86	BEAM		18	X				16 9.000							18 7	18 7	149
5	6H542	BEAM		17	X				20 5.000							21 1	21 1	158
7	6H543	BEAM		17	X				15 3.000							15 11	15 11	167
10	6H544	BEAM		20	X				3 10.000							3 10	3 10	58
3	4P27	COLUMNS		35	X				2 9.000	3.000	29 1.250					10 16	10 16	2037
18	4P24	BEAM		34	S X				2 9.000							9 6	9 6	114
15	4U68	BEAM		13	S X				3 3.000	3 5.375	3 3.000	3 5.375				14 2	11	139
1	4U69	BEAM		13	S X				2 7.000	3 5.375	2 7.000	3 5.375				12 10	12 7	8
5	4U70	BEAM		10	S X					6.000	3 3.000					4 3	4 1	14
26	4U71	BEAM		13	S X				3 3.000	3 3.375	3 3.000	3 3.375				13 10	13 7	236

# BILL OF REINFORCING STEEL

NO. REC'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
1	4U72	BEAM		13	S X				3 1.000	3 3.375	3 1.000	3 3.375				13 6	13 3	9
1	4U73	BEAM		13	S X				2 7.000	3 3.375	2 7.000	3 3.375				12 6	12 3	8
3	4U625	BEAM		10	S X					3 3.375	3 3.000					9 10	9 8	19
6	4U626	BEAM		10	S X					3 5.375	3 3.000					10 2	10 0	40
24	9V37	COLUMNS		17	X				18 10.000							20 1	20 1	1639
24	9V38	COLUMNS		17	X				20 10.000							22 1	22 1	1802
24	9V39	COLUMNS		17	X				16 10.000							18 1	18 1	1476
8	WSV1	A.B. WELLS		22	X				15.000	9.125						23 0	23 0	31
INT. BT. NO. 7																		
32	6D55	FOOTINGS		20	X				8 8.000							8 8	8 8	417
4	6D56	FOOTINGS		10	S X					5 4.000	8 0.000					12 8	18 4	110
7	7D57	FOOTINGS		20	X				8 8.000							8 8	8 8	124
8	6D58	FOOTINGS		20	X				7 8.000							7 8	7 8	92
2	6D59	FOOTINGS		10	S X					4 10.000	8 0.000					17 8	17 4	52
4	6H37	BEAM		20	X				20 5.000							20 5	20 5	123
2	6H88	BEAM		18	X				20 5.000							21 9	21 9	65
2	6H89	BEAM		18	X				21 10.000							23 2	23 2	70
8	7H90	BEAM		7	X				4 2.000	3 2.000						10 0	10 0	164
4	6H91	BEAM		20	X				15 3.000							15 3	15 3	92
2	8H92	BEAM		18	X				15 3.000							17 1	17 1	91
4	8H93	BEAM		18	X				16 9.000							18 7	18 7	198
20	6H94	BEAM		20	X				3 3.000							3 3	3 3	98
5	6H545	BEAM		17	X				20 5.000							21 1	21 1	158
7	6H546	BEAM		17	X				15 3.000							15 11	15 11	167
10	6H547	BEAM		20	X				3 10.000							3 10	3 10	58
3	4P25	COLUMNS		35	X				2 9.000	3.000	29 2.000					10 18	10 18	2041
18	4P26	BEAM		34	S X				2 9.000							9 6	9 6	114
15	4U74	BEAM		13	S X				3 3.000	3 6.000	3 3.000	3 6.000				14 3	14 0	140
1	4U75	BEAM		13	S X				2 7.000	3 6.000	2 7.000	3 6.000				12 11	12 8	8
5	4U76	BEAM		10	S X					6.000	3 3.000					4 4	4 1	14
26	4U77	BEAM		13	S X				3 3.000	3 4.125	3 3.000	3 4.125				13 8	13 8	237
1	4U78	BEAM		13	S X				3 1.000	3 4.125	3 1.000	3 4.125				13 7	13 4	9
1	4U79	BEAM		13	S X				2 7.000	3 4.125	2 7.000	3 4.125				12 7	12 4	8
35	4U80	BEAM		10	S X					12.000	2 9.000					4 9	4 7	107
3	4U627	BEAM		10	S X					3 4.125	3 3.000					9 11	9 9	20
6	4U628	BEAM		10	S X					3 6.000	3 3.000					10 3	10 1	40
24	9V40	COLUMNS		17	X				18 11.000							20 2	20 2	1646
24	9V41	COLUMNS		17	X				16 11.000							18 2	18 2	1482
24	9V42	COLUMNS		17	X				20 11.000							22 2	22 2	1809



TWO ADDITIONAL

END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL DIMENSIONS			
		180 HOOKS		90 HOOKS	
		A OR G	J	A OR G	
#3	2-1/4"	5"	3"	6"	
#4	3"	6"	4"	8"	
#5	3-3/4"	7"	5"	10"	
#6	4-1/2"	8"	6"	12"	
#7	5-1/4"	10"	7"	14"	
#8	6"	11"	8"	16"	
#9	7-1/2"	15"	11-3/4"	19"	
#10	10-3/4"	17"	13-1/4"	22"	
#11	12"	19"	14-3/4"	24"	
#14	18-1/4"	2-3/4"	1-1/4"	2'-0"	



BILL OF REINFORCING STEEL																					
NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	W/ASSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K						
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.						
8	W5W2	A.B.WELLS	22	X					18.000	9.125						26	1	26	1	35	
		INT.BT. NO.8																			
16	6D69	FOOTINGS	20	X					8	8.000						8	8	8	8	208	
6	8E70	FOOTINGS	20	X					8	8.000						8	8	8	8	139	
14	5D71	FOOTINGS	20	X					6	8.000						6	8	6	8	97	
6	6D72	FOOTINGS	20	X					6	8.000						6	8	6	8	60	
6	6D73	FOOTINGS	10	S	X					4	4.000	8	0.000			16	8	16	4	147	
4	6H110	BEAM	20	X					20	5.000						20	5	20	5	123	
2	6H111	BEAM	18	X					20	5.000						21	9	21	9	65	
2	6H112	BEAM	18	X					21	10.000						23	2	23	2	70	
8	7H113	BEAM	7	X					4	2.000	3	2.000				10	0	10	0	164	
4	6H114	BEAM	20	X					15	3.000						15	3	15	3	92	
2	9H115	BEAM	18	X					15	3.000						17	9	17	9	121	
4	9H116	BEAM	18	X					16	9.000						19	3	19	3	262	
20	6H117	BEAM	20	X					3	3.000						3	3	3	3	98	
5	6H548	BEAM	17	X					20	5.000						21	1	21	1	158	
7	6H549	BEAM	17	X					15	3.000						15	11	15	11	167	
10	6H550	BEAM	20	X					3	10.000						3	10	3	10	58	
3	4P31	COLUMNS	35	X					2	9.000	3.000	29	1.500			1017	2	1017	2	2038	
18	4P32	BEAM	34	S	X				2	9.000						9	6	9	6	114	
15	4U94	BEAM	13	S	X				3	3.000	4	0.625	3	3.000	4	0.625	15	4	15	1	151
1	4U95	BEAM	13	S	X				2	7.000	4	0.625	2	7.000	4	0.625	14	0			

STD 90-8	REVISED	
MAY 1974		OCT. 1981

6d FOR #4  
AND #5,  
12d FOR #6

HOOK  
A OR G

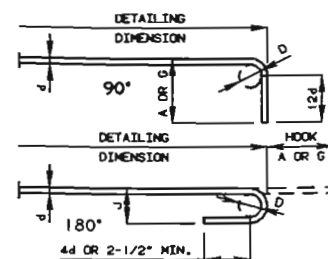
DETAILING DIMENSION

90° STIRRUP

135° STIRRUP

STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK		135° HOOK
		HOOK A OR B	HOOK A OR B	APPROX. H
#4	2"	4-1/2"	4-1/2"	3"
#5	2-1/2"	5"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	4-1/2"

NOTE: UNLESS OTHERWISE NOTED DIAMETER  
"D" IS THE SAME FOR ALL BENDS AND HOOKS  
ON A BAR.



NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

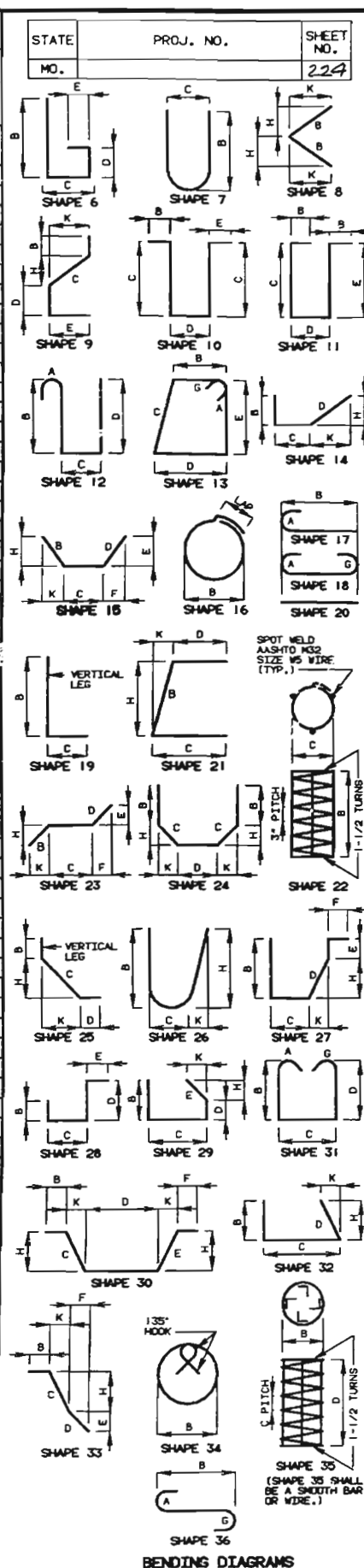
BILL OF REINFORCING STEEL																					
NO. REQ'D.	MARK NO.	LOCATION	EPOXY	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K						
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.						
4	6H118	BEAM		20	X			20	5.000								20	5	20	5	123
2	6H119	BEAM		18	X			20	5.000								21	9	21	9	65
2	6H120	BEAM		18	X			21	10.000								23	2	23	2	70
8	7H121	BEAM		7	X			4	2.000	3	2.000						10	0	10	0	164
4	6H122	BEAM		20	X			15	3.000								15	3	15	3	92
2	9H123	BEAM		18	X			15	3.000								17	9	17	9	121
4	9H124	BEAM		18	X			16	9.000								19	3	19	3	262
6	6H551	BEAM		17	X			20	5.000								21	1	21	1	190
7	6H552	BEAM		17	X			15	3.000								15	11	15	11	167
10	6H553	BEAM		20	X			3	10.000								3	10	3	10	58
3	4P33	COLUMNS		35	X			2	9.000	3.000	30	2.625					1054	5	1054	5	2113
18	4P34	BEAM		34	S X			2	9.000								9	6	9	6	114
15	5U101	BEAM		13	S X			3	3.000	3	4.750	3	3.000	3	4.750		14	3	13	11	218
1	5U102	BEAM		13	S X			2	7.000	3	4.750	2	7.000	3	4.750		12	11	12	7	13
5	4U103	BEAM		10	S X				6.000	3	3.000						4	3	4	1	14
26	5U104	BEAM		13	S X			3	3.000	3	2.875	3	3.000	3	2.875		13	11	13	7	368
1	5U105	BEAM		13	S X			3	1.000	3	2.875	3	1.000	3	2.875		13	7	13	3	14
1	5U106	BEAM		13	S X			2	7.000	3	2.875	2	7.000	3	2.875		12	7	12	3	13
3	4U631	BEAM		10	S X				3	2.875	3	3.000					9	9	9	7	19
6	4U632			10	S X				3	4.750	3	3.000					10	1	9	11	4
26	9V52	COLUMNS		17	X			19	5.000								20	8	20	8	1827
26	9V53	COLUMNS		17	X			17	5.000								18	8	18	8	1650
26	9V54	COLUMNS		17	X			21	5.000								22	8	22	8	2004
8	W5W2	A.B. WELLS		22	X				18.000	9.125							25	1	26	1	35
16	7D77	FOOTINGS		20	X			8	8.000								8	8	8	8	283
18	6D78	FOOTINGS		20	X			8	2.000								8	2	8	2	221
4	6D79	FOOTINGS		10	S X					5	1.000	8	0.000				18	2	17	10	107
8	8D80	FOOTINGS		20	X			9	8.000												

TWO ADDITIONAL					
END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL GRIDES			
		180° HOOKS		90° HOOKS	
		A OR G	J	A OR G	J
#3	2-1/4"	5"	3"	6"	
#4	3"	6"	4"	8"	
#5	3-3/4"	7"	5"	10"	
#6	4-1/2"	8"	6"	12"	
#7	5-1/4"	10"	7"	14"	
#8	6"	11"	8"	16"	
#9	9-1/2"	15"	11-3/4"	19"	
#10	10-3/4"	17"	13-1/4"	22"	
#11	12"	19"	14-3/4"	24"	2'-0"
#14	18-1/4"	2'-3"	21-3/4"	2'-7"	

ARE INCLUDED IN THE BAR BILL FOR TESTING.

**NOTE:**  
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS.  
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.  
E = EPOXY COATED REINFORCEMENT.  
S = STIRRUP.  
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.  
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.  
NO. EA. = NUMBER OF BARS OF EACH LENGTH.  
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)  
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.  
PWTWEIGHTS ARE BASED ON ACTUAL LENGTHS.  
FOR DOUBLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.  
REINFORCING STEEL (GRADE 60) = FY 60,000 PSI.

SHEET NO. 223 OF 238



### BENDING DIAGRAMS

ST. LOUIS-JEFFERSON COUNTY

A-609R

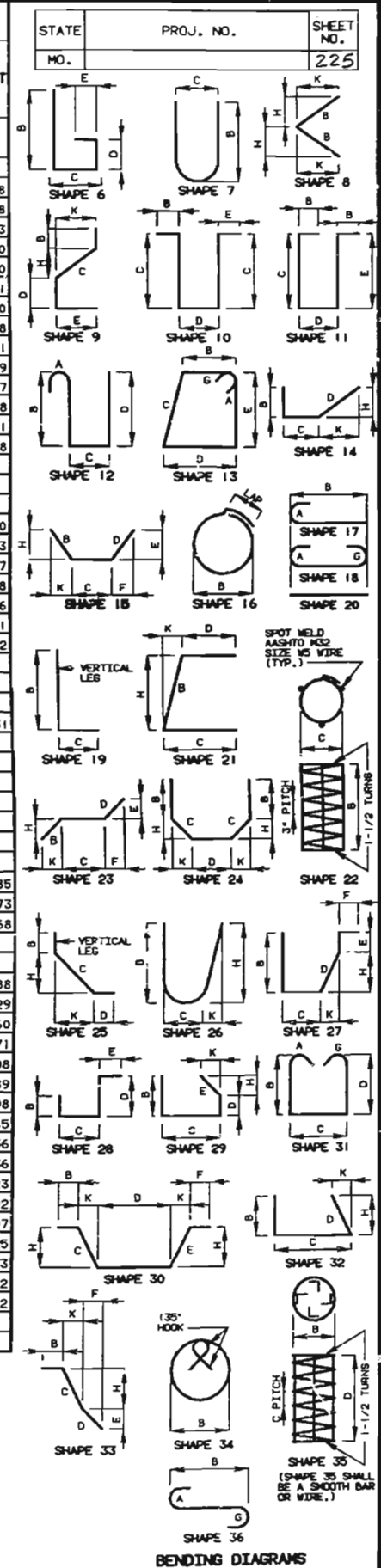


# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.			
3	4P35	COLUMNS		35	X				2 9.000	3.000	3.000	30 0.000				34 0	34 0	68
18	4P36	BEAM		34	S X				2 9.000							9 6	9 6	114
15	4U107	BEAM		13	S X				3 3.000	4 1.125	3 3.000	4 1.125				15 5	15 2	152
1	4U108	BEAM		13	S X				2 7.000	4 1.125	2 7.000	4 1.125				14 1	13 10	9
5	4U109	BEAM		10	S X					6.000	3 3.000					4 3	4 1	14
26	4U110	BEAM		13	S X				3 3.000	3 11.000	3 3.000	3 11.000				15 1	14 10	258
1	4U111	BEAM		13	S X				3 1.000	3 11.000	3 1.000	3 11.000				14 9	14 6	10
1	4U112	BEAM		13	S X				2 7.000	3 11.000	2 7.000	3 11.000				13 9	13 6	9
35	4U113	BEAM		10	S X					17.000	2 9.000					5 7	5 5	127
3	4U633	BEAM		10	S X					3 11.000	3 3.000					11 1	10 11	22
6	4U634	BEAM		10	S X					4 1.125	3 3.000					11 5	11 3	45
30	9V55	COLUMNS		17	X				19 4.000							20 7	20 7	2099
30	9V56	COLUMNS		17	X				21 4.000							22 7	22 7	2303
30	9V57	COLUMNS		17	X				17 4.000							18 7	18 7	1895
8	W5W2	A.B.WELLS		22	X				18.000	9.125						26 1	26 1	35
12	5D103	FOOTINGS		20	X				5 8.000							5 8	5 8	71
12	7D104	FOOTINGS		20	X				8 8.000							8 8	8 8	213
4	6D105	FOOTINGS		10	S X					3 10.000	8 0.000					15 8	15 4	92
4	6H269	BEAM		20	X				21 5.000							21 6	21 6	129
2	6H270	BEAM		20	X				20 0.000							20 0	20 0	60
2	6H271	BEAM		20	X				23 8.000							23 8	23 8	71
5	9H272	BEAM		17	X				23 8.000							24 11	24 11	424
9	7H273	BEAM		7	X				4 8.000	4 2.000						11 7	11 7	189
12	6H274	BEAM		20	X				4 3.000							4 3	4 3	77
4	6H275	BEAM		20	X				16 3.000							16 3	16 3	98
2	6H276	BEAM		20	X				14 10.000							14 10	14 10	45
2	6H277	BEAM		20	X				18 6.000							18 6	18 6	56
4	9H278	BEAM		17	X				18 6.000							19 9	19 9	269
3	8H279	BEAM		17	X				14 9.000							15 8	15 8	125
28	4H280	BEAM		20	X				14 7.000							14 7	14 7	273
3	8H281	BEAM		20	X				11 6.000							11 6	11 6	92
28	4H282	BEAM		20	X				11 3.000							11 3	11 3	210
4	8H283	BEAM		20	X				5 10.000							5 10	5 10	62
28	6H284	BEAM		20	X				3 10.000							3 10	3 10	161
8	6H285	BEAM		19	S X				3 2.500	15.000						4 6	4 4	52
4	6H286	BEAM		23	S X				9.000	3 2.500			4.000	8.125		4 0	3 11	24
9	9H287	BEAM		19	X				2 0.000	9 2.000						11 2	10 11	334
2	4P52	COLUMNS		35	X				2 9.000	3.000	30 9.000					1072 6	1072 6	1433
2	4P53	BEAM		34	S X				2 9.000							9 6	9 6	76

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.			
20	4U662	BEAM		13	S X				4 3.000	3 7.750	4 3.000	3 7.750				16 7	16 4	218
5	4U663	BEAM		10	S X					3 7.750	4 3.000					11 7	11 5	38
3	4U664	BEAM		10	S X					13.750	4 3.000					6 7	6 5	13
1	4U665	BEAM		13	S X				3 2.875	3 7.750	3 2.875	3 7.750				14 6	14 3	10
1	4U666	BEAM		13	S X				3 10.500	3 7.750	3 10.500	3 7.750				15		10
1	4U667	BEAM		13	S X				4 2.250	3 7.750	4 2.250	3 7.750				16	2	11
6	4U668	BEAM		10	S X					6.000	4 3.000					5 3	5 1	20
11	4U669	BEAM		13	S X				4 3.000	3 5.750	4 3.000	3 5.750				16 3	16 0	118
1	4U670	BEAM		13	S X				4 2.250	3 5.750	4 2.250	3 5.750				16 1	15 10	11
1	4U671	BEAM		13	S X				3 2.875	3 5.750	3 2.875	3 5.750				14 2	13 11	9
5	4U672	BEAM		10	S X					3 5.750	4 3.000					11 3	11 1	37
2	4U673	BEAM		10	S X					12.000	4 3.000					6 3	6 1	8
9	4U674	BEAM		10	S X					6.000	4 3.000					5 3	5 1	31
27	4U675	BEAM		10	S X					18.000	4 3.000					7 3	7 1	128
46	4Y157	WALL		19	S X				16 0.000	12.000						17 0	16 11	520
8	9V158	COLUMNS		17	X				26 5.000							27 8	27 8	753
8	9V159	COLUMNS		17	X				28 5.000							29 8	29 8	807
8	9V160	COLUMNS		17	X				24 5.000							25 8	25 8	698
8	9V161	COLUMNS		17	X				12 7.000							13 10	13 10	376
8	9V162	COLUMNS		17	X				14 7.000							15 10	15 10	431
8	9V163	COLUMNS		17	X				10 7.000							11 10	11 10	322
8	W5W1	A.B.WELLS		22	X				15.000	9.125						23 0	23 0	31
22	8D111	FOOTING		20	X				11 8.000							11 8	11 8	685
21	6D113	FOOTING		20	X				8 8.000							8 8	8 8	273
4	6D115	FOOTING		10	X					5 4.000	11.000					11 7	11 3	68
5	9H291	BEAM		17	X				15 8.000							16 11	16 11	288
4	6H308	BEAM		20	X				21 6.000							21 6	21 6	129
2	6H309	BEAM		20	X				20 0.000							20 0	20 0	60
2	6H310	BEAM		20	X				23 8.000							23 8	23 8	71
6	9H311	BEAM		17	X				23 8.000							24 11	24 11	508
8	7H312	BEAM		7	X				4 8.000	4 1.750						11 7	11 7	189
4	6H313	BEAM		20	X				16 3.000							16 3	16 3	98
2	6H314	BEAM		20	X				14 10.000							14 10	14 10	45
2	6H315	BEAM		20	X				18 6.000							18 6	18 6	56
5	9H316	BEAM		17	X				18 6.000							19 9	19 9	336
3	8H317	WALL		17	X				14 6.000							15 5	15 5	123
30	4H318	WALL		20	X				14 7.000							14 7	14 7	292
3	8H319	WALL		17	X				11 2.000							12 1	12 1	97
30	4H320	WALL		20	X				11 3.000							11 3	11 3	225
30	6H321	WALL		20	X				3 10.000							3 10	3 10	173
4	8H322	WALL		20	X				5 10.000							5 10	5 10	62
8	6H323	BEAM		19	S X				3 2.500	15.000						4 6	4 4	52



STIRRUP HOOK DIMENSIONS  
GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK	135° HOOK	APPROX. H
#4	2"	4-1/2"	4-1/2"	3"
#5	2-1/2"	6"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	4-1/2"

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.

TWO ADDITIONAL

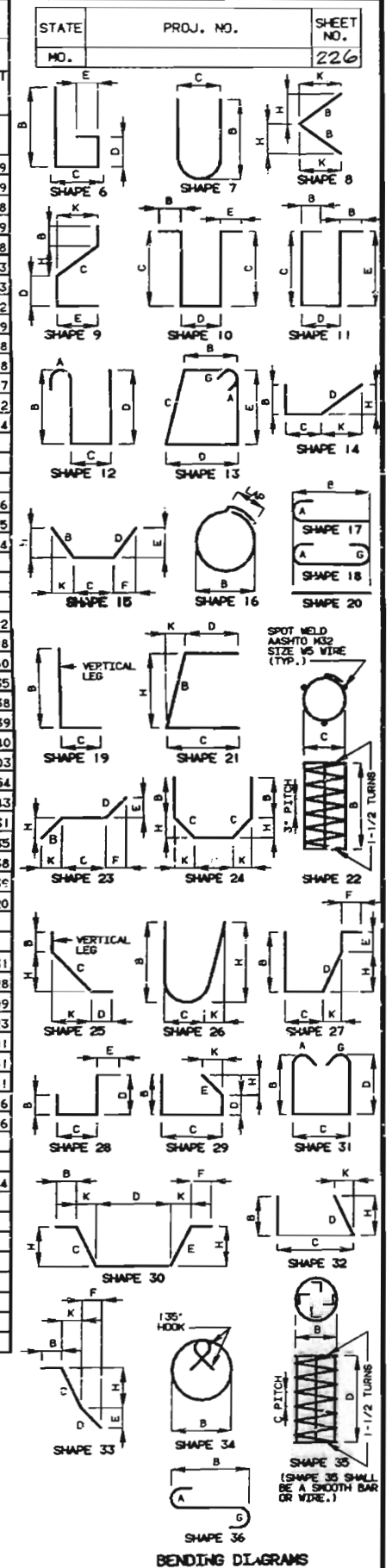
END HOOK DIMENSIONS					
BAR SIZE	D (IN.)	ALL GRADES			
		180° HOOKS		90° HOOKS	
		A OR C	J	A OR C	J
#3	2-1/4"	5"	3"	5"	6"
#4	3"	6"	4"	8"	8"
#5	3-3/4"	7"	5"	5"	10"
#6	4-1/2"	8"	6"	6"	12"
#7	5-1/4"	10"	7"	7"	14"
#8	6"	11"	8"	8"	16"
#9	9-1/2"	15"	11-3/4"	15"	19"
#10	10-3/4"	17"	13-1/4"	18"	22"
#11	12"	19"	14-3/4"	20"	2'-0"
#14	18-1/4"	2'-3"	21-3/4"	2'-7"	

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
4	6H324	BEAM		23	S	X			9.000	3 2.500				4.000	3.125	4 0	3 11	24
11	9H325	BEAM		19		X			2 0.000	9 2.000						11 2	10 11	408
12	6H326	BEAM		20		X			4 3.000							4 3	4 3	77
2	4P56	COLUMNS		35		X			2 9.000	3.000	17 10.375					633 9	633 9	847
12	4P57	BEAM		34	S	X			2 9.000							9 6	9 6	76
2	4P101	COLUMNS		35		X			3 9.000	3.000	22 0.000					1060 5	1060 5	1417
13	5U694	BEAM		13	S	X			4 3.000	3 8.125	4 3.000	3 8.125				16 9	16 6	224
14	5U695	BEAM		13	S	X			3 2.250	3 8.125	3 2.250	3 8.125				14 8	14 4	209
2	5U696	BEAM		13	S	X			2 4.500	3 8.125	2 4.500	3 8.125				13 0	12 9	27
2	5U697	BEAM		13	S	X			2 10.500	3 8.125	2 10.500	3 8.125				14 0	13 9	29
2	5U698	BEAM		13	S	X			3 1.500	3 8.125	3 1.500	3 8.125				14 6	14 3	30
5	5U699	BEAM		10	S	X				3 8.125	4 3.000					11 7	11 5	60
3	5U700	BEAM		10	S	X				13.500	4 3.000					6 6	6 4	20
27	4U701	BEAM		10	S	X				16.625	4 3.000					7 0	6 10	123
10	5U702	BEAM		13	S	X			4 3.000	3 6.125	4 3.000	3 6.125				16 5	16 2	169
6	5U703	BEAM		13	S	X			3 2.250	3 6.125	3 2.250	3 6.125				14 4	14 0	88
5	5U704	BEAM		10	S	X				3 6.125	4 3.000					11 3	11 1	58
2	5U705	BEAM		10	S	X				11.500	4 3.000					6 2	6 0	13
13	4U706	BEAM		10	S	X				6.000	4 3.000					3 5	3 1	44
2	5U707	BEAM		13	S	X			22.750	3 6.125	22.750	3 6.125				11 5	11 5	24
2	5U708	BEAM		13	S	X			2 7.500	3 6.125	2 7.500	3 6.125				13 2	12 11	27
2	5U709	BEAM		13	S	X			3 0.000	3 6.125	3 0.000	3 6.125				13 11	13 8	29
2	5U710	BEAM		13	S	X			3 2.125	3 6.125	3 2.125	3 6.125				14 4	14 0	29
46	4V171	WALL		19	S	X			17 2.000	12.000						18 2	18 1	556
10	9V172	COLUMNS		20		X			16 8.000							16 8	16 8	567
10	9V173	COLUMNS		20		X			14 8.000							14 8	14 8	499
10	9V174	COLUMNS		20		X			18 8.000							18 8	18 8	635
10	9V175	COLUMNS		17		X			13 2.000							14 5	14 5	490
10	9V176	COLUMNS		17		X			15 2.000							16 5	16 5	558
10	9V177	COLUMNS		17		X			11 2.000							12 5	12 5	422
54	9V504	COLUMNS		17		X			22 4.000							23 7	23 7	4330
8	W5W3	A.B. WELLS		22		X			2 1.000	9.125						33 2	33 2	44
		INT. BT. NO. 13																
20	8D119	FOOTINGS		20		X			10 8.000							10 8	10 8	570
20	5D120	FOOTINGS		20		X			8 8.000							8 8	8 8	181
4	6D121	FOOTINGS		10	S	X				5 4.000	10 0.000					20 8	20 4	122
2	6H346	BEAM		20		X			20 0.000							20 0	20 0	60
4	6H347	BEAM		20		X			21 6.000							21 6	21 6	129
5	9H348	BEAM		17		X			21 6.000							22 9	22 9	387
8	9H349	BEAM		17		X			14 1.000							15 4	15 4	417
8	7H350	BEAM		7		X			4 8.000	4 1.500						11 7	11 7	189

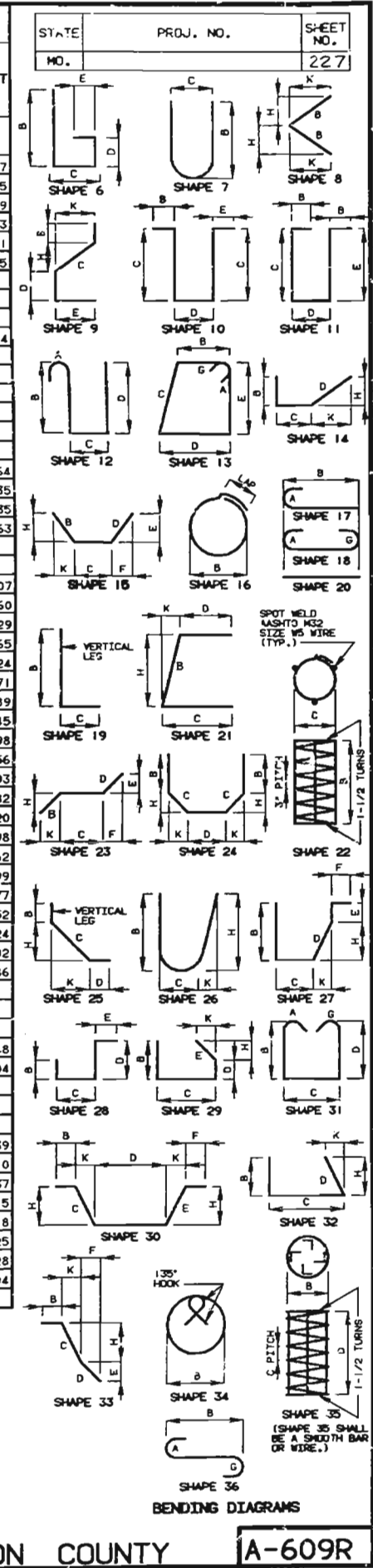
# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT	
									B	C	D	E	F	H	K				
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
2	6H351	BEAM		20	X				16 3.000								16 3	16 3	49
4	6H352	BEAM		20	X				14 10.000								14 10	14 10	89
4	9H353	BEAM		17	X				16 3.000								17 6	17 6	238
3	9H354	WALL		17	X				14 4.000								15 7	15 7	159
52	4H355	WALL		20	X				14 4.000								14 4	14 4	498
3	8H356	WALL		17	X				10 8.000								11 7	11 7	93
52	4H357	WALL		20	X				10 9.000								10 9	10 9	373
4	8H358	WALL		20	X				5 10.000								5 10	5 10	62
52	6H359	WALL		20	X				3 10.000								3 10	3 10	299
4	9H360	BEAM		19	X				2 0.000	9 2.000							11 2	10 11	148
4	9H361	BEAM		23	X				13.000	6 11.000				8.500	9.875		8 0	7 11	108
1	9H362	BEAM		20	X				8 0.000								8 0	8 0	27
8	6H363	BEAM		19	S	X			3 2.500	15.000							4 6	4 4	52
4	6H364	BEAM		23	S	X			9.000	3 2.500				4.000	8.125		4 0	3 11	24
2	4P63	COLUMNS		35	X				4 3.000	3.000	22 1.500						1209 11	1209 11	1616
2	4P64	COLUMNS		35	X				3 0.000	3.000	29 0.500						1201 6	1201 6	1605
14	4P65	BEAM		34	S	X			3 3.000								11 1	11 1	104
14	6U726	BEAM		13	S	X			4 3.000	2 11.625	4 3.000	2 11.625					15 9	15 4	322
10	6U727	BEAM		13	S	X			3 2.250	2 11.625	3 2.250	2 11.625					13 8	13 2	198
4	6U728	BEAM		10	S	X			2 11.625	4 3.000							10 2	9 11	60
2	6U729	BEAM		13	S	X			2 4.500	2 11.625	2 4.500	2 11.625					12 0	11 7	35
2	6U730	BEAM		13	S	X			2 10.500	2 11.625	2 10.500	2 11.625					13 0	12 7	38
2	6U731	BEAM		13	S	X			3 1.500	2 11.625	3 1.500	2 11.625					13 6	13 1	39
2	6U732	BEAM		13	S	X			3 2.250	2 11.625	3 2.250	2 11.625					13 8	13 2	40
9	6U733	BEAM		13	S	X			4 3.000	2 9.750	4 3.000	2 9.750					15 6	15 0	203
8	6U734	BEAM		13	S	X			3 2.250	2 9.750	3 2.250	2 9.750					13 4	12 10	154
3	6U735	BEAM		10	S	X			2 9.750	4 3.000							9 11	9 7	43
2	6U736	BEAM		13	S	X			22.750	2 9.750	22.750	2 9.750					10 9	10 3	31
2	6U737	BEAM		13	S	X			2 7.500	2 9.750	2 7.500	2 9.750					12 3	11 9	35
2	6U738	BEAM		13	S	X			3 0.000	2 9.750	3 0.000	2 9.750					13 0	12 6	38
2	6U739	BEAM		13	S	X			3 2.125	2 9.750	3 2.125	2 9.750					13 4	12 10	35
6	4U740	BEAM		10	S	X				6.000	4 3.000						5 3	5 1	20
30	9V179	COLUMN		17	X				22 7.000								23 10	23 10	2431
44	6V187	WALL		19	S	X			28 4.000	12.000							29 4	29 2	1928
30	10V188	COLUMNS		17	X				22 8.000								24 1	24 1	3109
11	9V189	COLUMNS		20	X				22 0.000								22 0	22 0	823
11	9V190	COLUMNS		20	X				24 1.000								24 1	24 1	901
11	9V191	COLUMNS		20	X				20 1.000								20 1	20 1	751
11	9V192	COLUMNS		17	X				18 10.000								20 1	20 1	751
11	9V193	COLUMNS		17	X				20 10.000								22 1	22 1	826
11	9V194	COLUMNS		17	X				16 10.000								18 1	18 1	676
8	W5W3	A.B. WELLS		22	X				2 1.000	9.125							33 2	33 2	44



BILL OF REINFORCING STEEL																						
NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K							
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.							
24	6D126	FOOTING		20	X				8	8.000						8	8	312				
8	8D127	FOOTING		20	X				9	8.000						9	8	206				
2	6D128	FOOTING		10	S	X				5	4.000	9	0.000			19	8	58				
2	6D129	FOOTING		10	S	X				5	4.000	8	0.000			18	8	55				
2	6H386	BEAM		20	X											20	0	60				
4	6H387	BEAM		20	X				21	6.000						21	6	129				
2	6H388	BEAM		20	X				23	8.000						23	8	71				
5	10H389	BEAM		17	X				14	8.000						16	1	346				
4	9H390	BEAM		17	X				23	8.000						24	11	339				
6	7H391	BEAM		7	X				4	8.000	4	1.750				11	7	189				
12	6H392	BEAM		20	X				4	3.000						4	3	77				
2	6H393	BEAM		20	X				14	10.000						14	10	45				
4	6H394	BEAM		20	X				16	3.000						16	3	98				
2	6H395	BEAM		20	X				18	6.000						18	6	56				
4	7H396	BEAM		17	X				18	6.000						19	4	158				
3	7H397	BEAM		17	X				12	2.000						13	0	80				
3	8H398	WALL		17	X				10	9.000						11	8	93				
52	4H399	WALL		20	X				11	0.000						11	0	382				
3	8H400	WALL		17	X				14	2.000						15	1	121				
52	4H401	WALL		20	X				14	4.000						14	4	498				
4	8H402	WALL		20	X				5	10.000						5	10	62				
54	6H403	WALL		20	X				3	10.000						3	10	311				
8	6H404	BEAM		19	S	X			3	2.500	15	0.000				4	6	52				
4	6H405	BEAM		23	S	X			9	0.000	3	2.500		4.000	8.125	4	0	24				
4	7H406	BEAM		19	X				2	0.000	6	6.000				5	6	68				
4	9H407	BEAM		19	X				2	0.000	9	2.000				11	2	148				
2	4P69	COLUMNS		35	X				4	3.000	3	0.000	22	7.500		1236	4	1652				
2	4P70	COLUMNS		35	X				3	3.000	3	0.000	29	3.750		1212	5	1620				
14	4P71	BEAM		34	S	X			3	3.000						11	1	104				
13	5U741	BEAM		13	S	X			4	3.000	3	8.500	4	3.000	3	8.500		16	10	224		
14	5U742	BEAM		13	S	X			3	2.250	3	8.500	3	2.250	3	8.500		14	9	211		
2	5U743	BEAM		13	S	X			2	5.125	3	8.500	2	5.125	3	8.500		13	2	27		
2	5U744	BEAM		13	S	X			3	1.125	3	8.500	3	1.125	3	8.500		14	6	30		
2	5U745	BEAM		13	S	X			3	2.250	3	8.500	3	2.250	3	8.500		14	9	30		
5	5U746	BEAM		10	S	X					3	8.500	4	3.000		11	8	11	6	60		
3	5U747	BEAM		10	S	X					14	5.000	4	3.000		6	8	6	6	20		
10	5U748	BEAM		13	S	X			4	3.000	3	6.500	4	3.000	3	6.500		16	6	16	2	169
6	5U749	BEAM		13	S	X			3	2.250	3	6.500	3	2.250	3	6.500		14	5	14	1	88
2	5U750	BEAM		13	S	X			2	8.250	3	6.500	2	8.250	3	6.500		13	5	13	1	27
2	5U751	BEAM		13	S	X			3	0.500	3	6.500	3	0.500	3	6.500		14	1	13	9	29
2	5U752	BEAM		13	S	X			3	2.125	3	6.500	3	2.125	3	6.500		14	4	14	1	29
5	5U753	BEAM		10	S	X					3	6.500	4	3.000		11	4	11	2	58		
2	5U754	BEAM		10	S	X					12	5.000	4	3.000		6	4	6	2	13		
27	4U755	BEAM		10	S	X					17	2.500	4	3.000		7	2	7	0	126		
13	4U756	BEAM		10	S	X					6	0.000	4	3.000		5	3	5	1	44		
44	5V203	WALL		19	S	X			23	7.000	12	0.000				29	7	29	6	1354		
48	9V204	COLUMNS		17	X				22	7.000						23	10	23	10	3890		

BILL OF REINFORCING STEEL																			
NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT	
									B	C	D	E	F	H	K				
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.
10	9V205	COLUMNS		20	X				22	3.000							22	3	75
10	9V206	COLUMNS		20	X				24	3.000							24	3	82
10	9V207	COLUMNS		20	X				20	3.000							20	3	68
10	9V208	COLUMNS		17	X				18	10.000							20	1	63
10	9V209	COLUMNS		17	X				20	10.000							22	1	75
10	9V210	COLUMNS		17	X				15	10.000							18	1	61



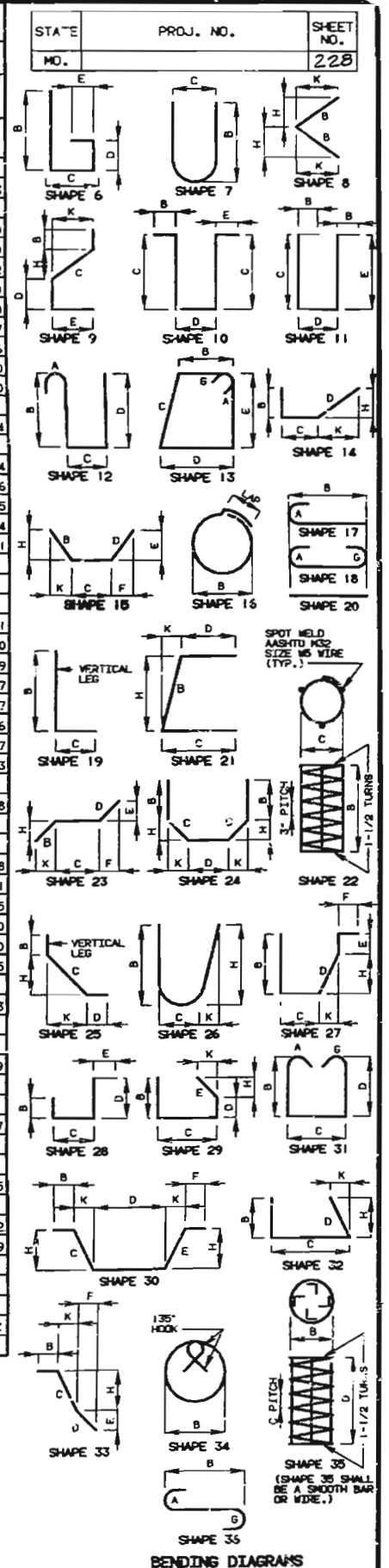


# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
6	4U780	BEAM		13	S	X			3 2.250	3 3.875	3 2.250	3 3.875				13 9	13 6	54
2	4U781	BEAM		13	S	X			5 0.750	33 2.750	5 0.750	33 2.750				77 4	77 1	103
2	4U782	BEAM		13	S	X			2 7.500	3 3.875	2 7.500	3 3.875				12 8	12 5	17
5	4U783	BEAM		10	S	X				3 3.875	4 3.000					10 11	10 9	36
6	4U764	BEAM		10	S	X				10.500	4 3.000					6 0	5 10	23
6	4U785	BEAM		10	S	X				6.000	4 3.000					5 3	5 1	20
2	4U900	BEAM		13	S	X			3 10.000	3 5.875	3 10.000	3 5.875				15 5	15 2	20
48	4V218	WALL		19	S	X			23 0.000	12.000						29 0	28 11	927
10	9V219	COLUMNS		17	X				30 11.000							32 2	32 2	1094
10	9V220	COLUMNS		17	X				32 11.000							34 2	34 2	1162
10	9V221	COLUMNS		17	X				28 11.000							30 2	30 2	1026
10	9V222	COLUMNS		17	X				18 11.000							20 2	20 2	686
10	9V223	COLUMNS		17	X				20 11.000							22 2	22 2	754
10	9V224	COLUMNS		17	X				16 11.000							18 2	18 2	618
8	WSV2	A.B. WELLS		22	X				18.000	9.125						26 1	26 1	35
END BT. NO. 16																		
21	5D93	FOOTINGS		20	X				4 2.000							4 2	4 2	91
15	7D94	FOOTINGS		18	X				7 8.000							9 4	9 4	286
30	6D95	FOOTINGS		17	X				4 10.000							5 6	5 6	248
12	6F6	COLUMNS		23	S	X			14.000	5 2.750	14.000	12.125	7.000	12.125	7.000	7 7	7 5	134
12	6F7	COLUMNS		23	S	X			14.000	6 5.750				9.875	9.875	7 8	7 7	137
7	6F8	WING BRACE		15	S	X			16.000	6 1.000	14.000	7.000	12.125			8 5	8 5	88
4	6H197	BEAM		18	X	V	I		11 2.000							12 6	12 6	
	INCREMENT =								9 6.000							10 10	10 10	70
	6.625 INCH																	
4	6H198	BEAM		20	X	V	I		13 10.000							13 10	13 10	
	INCREMENT =								12 3.000							12 3	12 3	78
	6.375 INCH																	
1	6H199	BEAM		20	X				11 1.000							11 1	11 1	17
1	6H200	BEAM		20	X				9 6.000							9 6	9 6	14
5	9H201	BEAM		18	X	V	I		16 7.000							19 1	19 1	
	INCREMENT =								15 0.000							17 6	17 6	311
	4.750 INCH																	
4	6H202	BEAM		18	X	V	I		14 9.000							16 1	16 1	
	INCREMENT =								13 2.000							14 6	14 6	92
	6.375 INCH																	
1	6H203	BEAM		20	X				14 9.000							14 9	14 9	22
1	6H204	BEAM		20	X				13 2.000							13 2	13 2	20
4	6H205	BEAM		20	X	V	I		17 6.000							17 6	17 6	
	INCREMENT =								15 11.000							15 11	15 11	100
	6.375 INCH																	

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
5	9H206	BEAM		18	X	V	I		20 3.000							22 9	22 9	
	INCREMENT =								18 8.000							21 2	21 2	373
	4.750 INCH																	
6	4H207	BACKWALL		20	X				32 4.000							32 4	32 4	130
2	6H208	BACKWALL		20	X				33 5.000							33 5	33 5	100
6	4H209	BACKWALL		20	X				25 6.000							25 6	25 6	102
2	6H210	BACKWALL		20	X				26 9.000							26 9	26 9	80
1	4H211	APPR. HAUNCH		20	X				30 4.000							30 4	30 4	20
1	4H212	APPR. HAUNCH		20	X				25 0.000							25 0	25 0	17
10	4H213	CURTAIN WALL		20	X				2 5.000							2 5	2 5	16
2	6H214	WING		20	X				16 9.000							16 9	16 9	50
2	6H215	WING		20	X				16 9.000							16 9	16 9	50
20	6H216	WING		20	X	V	I		16 3.000							16 3	16 3	
	INCREMENT =								4 8.000							4 8	4 8	314
	15.500 INCH																	
7	4H217	BACKWALL		20	X				35 2.000							35 2	35 2	164
2	6H218	BACKWALL		20	X				35 2.000							35 2	35 2	106
6	6H219	BACKWALL		20	X				3 10.000							3 10	3 10	35
2	4T7	CURTAIN WALL		19	S	X			7 3.000	3 6.000						10 9	10 8	14
2	6T8	WING		25	S				15.875	16 5.500	2 8.500			7 6.750	14 7.375	20 6	20 5	61
14	4U142	BEAM		13	S	X			2 9.000	2 11.625	2 9.000	2 11.625				12 2	11 11	111
4	4U143	BEAM		10	S	X				6.000	2 9.000					3 9	3 7	10
14	6U144	BEAM		10	S	X			2 2.000	19.250						5 11	5 8	119
3	4U145	BEAM		10	S	X				6.000	2 9.000					3 9	3 7	7
10	4U146	BEAM		13	S	X			2 9.000	2 9.625	2 9.000	2 9.625				11 10	11 7	77
14	6U147	BEAM		10	S	X				2 2.000	17.250					5 9	5 6	116
3	4U148	BEAM		10	S	X				6.000	2 9.000					3 9	3 7	7
86	4U149	APPR. HAUNCH		10	S	X				15.000	6.000					3 0	2 10	163
36	4U150	COLUMN		10	S	X	V	I		2 8.000	2 3.000					7 7	7 5	
	INCREMENT =								22.000	2 3.000						5 11	5 9	158
	0.625 INCH																	
18	5V94	BACKWALL		20	X				6 10.000							6 10	6 10	128
128	5V95	BACKWALL		20	X				5 3.000							5 3	5 3	701
26	5V96	BACKWALL		20	X				6 10.000							6 10	6 10	185
30	6V98	COLUMNS		20	X				8 0.000							8 0	8 0	360
6	4V99	COLUMNS		20	X				7 6.000							7 6	7 6	30
2	6V100	WING		20	X				21.000							21	21	5
7	6V101	WING		20	X	V	I		4 11.000							4 11	4 11	
	INCREMENT =								3 4.000							3 4	3 4	43
	3.125 INCH																	
7	6V102	WING		17	X	V	I		4 9.000							5 5	5 5	
	INCREMENT =								3 2.000							3 10	3 10	49
	3.125 INCH																	
11	6V103	WING		20	X	V	I		10 1.000							10 1	10 1	
	INCREMENT =								5 3.000							5 3	5 3	127
	5.750 INCH																	
11	6V104	WING		17	X	V	I		3 11.000							10 7	10 7	
	INCREMENT =								5 1.000							5 9	5 9	135
	5.750 INCH																	
2	4V105	WING		20	X				9 0.000							9 0	9 0	12
2	4V106	CURTAIN WALL		20	X				6 7.000							6 7	6 7	9
8	WSV1	A.B. WELLS		22	X				15.000	9.125						23 0	23 0	31



# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.			
		SUPERSTR.																
		S.B. LANE																
21	6S110	SLAB	E 20		Y			1	20	9.000						20	9	381
		INCREMENT =							3	5.000						3	5	
		10.375 INCH																
343	6S111	SLAB	E 20						21	4.000						21	4	10991
19	6S112	SLAB	E 20		Y			1	20	1.000						20	1	351
		INCREMENT =							4	6.000						4	6	
		10.375 INCH																
34	6S113	SLAB	E 20		V			1	30	10.000						30	10	847
		INCREMENT =							2	4.000						2	4	
		10.375 INCH																
328	6S114	SLAB	E 20						31	8.000						31	8	15601
35	6S115	SLAB	E 20		V			1	31	6.000						31	6	881
		INCREMENT =							2	0.000						2	0	
		10.375 INCH																
27	6S116	SLAB	E 20		Y			1	25	6.000						25	6	578
		INCREMENT =							3	0.000						3	0	
		10.375 INCH																
335	6S117	SLAB	E 20						27	4.000						27	4	13793
29	6S118	SLAB	E 20		Y			1	26	6.000						26	6	626
		INCREMENT =							2	3.000						2	3	
		10.375 INCH																
310	6S119	SLAB	E 20						38	2.000						38	2	12340
122	6S120	SLAB	E 20						33	4.000						33	4	6108
122	6S121	SLAB	E 20						35	6.000						35	6	6505
23	6S122	SLAB	E 20		Y			1	21	2.000						21	2	402
		INCREMENT =							2	1.000						2	1	
		10.375 INCH																
343	6S123	SLAB	E 20						21	4.000						21	4	10991
20	6S124	SLAB	E 20		Y			1	20	0.000						20	0	353
		INCREMENT =							3	6.000						3	6	
		10.375 INCH																
34	6S125	SLAB	E 20		V			1	31	3.000						31	3	866
		INCREMENT =							2	8.000						2	8	
		10.375 INCH																
330	6S126	SLAB	E 20						31	8.000						31	8	15696
35	6S127	SLAB	E 20		Y			1	31	5.000						31	5	876
		INCREMENT =							2	0.000						2	0	
		10.375 INCH																
27	6S128	SLAB	E 20		Y			1	25	11.000						25	11	593
		INCREMENT =							3	4.000						3	4	
		10.375 INCH																
336	6S129	SLAB	E 20						27	4.000						27	4	13794
30	6S130	SLAB	E 20		V			1	27	3.000						27	3	663
		INCREMENT =							2	2.000						2	2	
		10.375 INCH																
310	6S131	SLAB	E 20						38	5.000						38	5	12448
122	6S132	SLAB	E 20						30	10.000						30	10	5650
122	6S133	SLAB	E 20						31	10.000						31	10	5833
23	6S134	SLAB	E 20		V			1	21	2.000						21	2	402
		INCREMENT =							2	1.000						2	1	
		10.375 INCH																
557	6S135	SLAB	E 20						21	4.000						21	4	17848

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K						
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.						
20	6S136	SLAB	E 20					Y	1	19	4.000						19	4	19	4	
		INCREMENT =								2	11.000						2	11	2	11	334
		10.375 INCH																			
34	6S137	SLAB	E 20					Y	1	31	3.000						31	3	31	3	
		INCREMENT =								2	8.000						2	8	2	8	866
		10.375 INCH																			
543	6S138	SLAB	E 20							31	8.000						31	8	31	8	25827
34	6S139	SLAB	E 20					Y	1	31	8.000						31	8	31	8	
		INCREMENT =								3	1.000						3	1	3	1	887
		10.375 INCH																			
27	6S140	SLAB	E 20					Y	1	25	11.000						25	11	25	11	
		INCREMENT =								3	4.000						3	4	3	4	593
		10.375 INCH																			
549	6S141	SLAB	E 20							27	4.000						27	4	27	4	22539
31	6S142	SLAB	E 20					Y	1	27	7.000						27	7	27	7	
		INCREMENT =								20	0.000						20		20		681
		10.375 INCH																			
496	6S143	SLAB	E 20							38	3.200						38	3	38	3	19788
366	6S144	SLAB	E 20							37	8.000						37	8	37	8	20707
23	6S145	SLAB	E 20					Y	1	20	8.000						20	8	20	8	
		INCREMENT =								19	0.000						19		19		384
		10.375 INCH																			
1343	6S146	SLAB	E 20							21	4.000						21	4	21	4	43039
20	6S147	SLAB	E 20					Y	1	19	4.000						19	4	19	4	
		INCREMENT =								2	11.000						2	11	2	11	334
		10.375 INCH																			
34	6S148	SLAB	E 20					Y	1	31	7.000						31	7	31	7	
		INCREMENT =								3	0.000						3	0	3	0	883
		10.375 INCH																			
1328	6S149	SLAB	E 20							31	8.000						31	8	31	8	63164
35	6S150	SLAB	E 20					Y	1	31	8.000						31	8	31	8	
		INCREMENT =								2	3.000						2	3	2	3	891
		10.375 INCH																			
26	6S151	SLAB	E 20					Y	1	25	4.000						25	4	25	4	
		INCREMENT =								3	8.000						3	8	3	8	566
		10.375 INCH																			
1336	6S152	SLAB	E 20							27	4.000						27	4	27	4	54849
30	6S153	SLAB	E 20					Y	1	26	9.000						26	9	26	9	
		INCREMENT =								19	0.000						19		19		636
		10.375 INCH																			
1178	6S154	SLAB	E 20							38	1.000						38	1	38	1	46791
366	6S155	SLAB	E 20							60	0.000						60	0	60	0	32984
122	6S156	SLAB	E 20							29	2.000						29	2	29	2	5345
122	6S157	SLAB	E 20							29	3.000						29	3	29	3	5360
122	6S158	SLAB	E 20							29	1.000						29	1	29	1	5329
23	6S159	SLAB	E 20					Y	1	20	9.000						20	9	20	9	
		INCREMENT =								20	0.000						20		20		387
		10.375 INCH																			
139	6S160	SLAB	E 20							21	4.000						21	4	21	4	4454
20	6S161	SLAB	E 20					Y	1	19	7.000						19	7	19	7	
		INCREMENT =								3	1.000						3	1	3	1	340
		10.375 INCH																			
35	6S162	SLAB	E 20					Y	1	31	9.000						31	9	31	9	
		INCREMENT =								2	3.000						2	3	2	3	894
		10.375 INCH																			
125	6S163	SLAB	E 20							31	8.000						31	8	31	8	5945
34	6S164	SLAB	E 20					Y	1	31	0.000						31	0	31	0	
		INCREMENT =								2	5.000						2	5	2	5	853
		10.375 INCH																			



# BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	BARS (B)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
										B	C	D	E	F	H	K			
										FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
27	65165	SLAB	E 20						1	25 5.000							25 5	25 5	
		INCREMENT =								3 0.000							3 0	3 0	576
		10.375 INCH																	
132	65166	SLAB	E 20						1	27 4.000							27 4	27 4	5419
28	65167	SLAB	E 20						1	26 10.000							26 10	26 10	
		INCREMENT =								3 6.000							3 6	3 6	638
		10.375 INCH																	
186	55168	SLAB	E 20						1	28 6.000							28 6	28 6	5529
21	55169	SLAB	E 20						1	20 9.000							20 9	20 9	
		INCREMENT =								3 5.000							3 5	3 5	265
		10.375 INCH																	
341	55170	SLAB	E 20						1	21 1.000							21 1	21 1	7499
19	55171	SLAB	E 20						1	19 9.000							19 9	19 9	
		INCREMENT =								4 3.000							4 3	4 3	238
		10.375 INCH																	
34	55172	SLAB	E 20						1	30 10.000							30 10	30 10	
		INCREMENT =								2 4.000							2 4	2 4	588
		10.375 INCH																	
328	55173	SLAB	E 20						1	31 8.000							31 8	31 8	10833
35	55174	SLAB	E 20						1	31 6.000							31 6	31 6	
		INCREMENT =								2 0.000							2 0	2 0	611
		10.375 INCH																	
27	55175	SLAB	E 20						1	25 3.000							25 3	25 3	
		INCREMENT =								2 9.000							2 9	2 9	394
		10.375 INCH																	
335	55176	SLAB	E 20						1	27 1.000							27 1	27 1	9463
29	55177	SLAB	E 20						1	26 6.000							26 6	26 6	
		INCREMENT =								2 3.000							2 3	2 3	435
		10.375 INCH																	
440	55178	SLAB	E 20						1	38 0.000							38 0	38 0	17439
23	55179	SLAB	E 20						1	21 2.000							21 2	21 2	
		INCREMENT =								2 1.000							2 1	2 1	279
		10.375 INCH																	
343	55180	SLAB	E 20						1	21 1.000							21 1	21 1	7543
20	55181	SLAB	E 20						1	19 9.000							19 9	19 9	
		INCREMENT =								3 3.000							3 3	3 3	240
		10.375 INCH																	
34	55182	SLAB	E 20						1	31 3.000							31 3	31 3	
		INCREMENT =								2 8.000							2 8	2 8	601
		10.375 INCH																	
330	55183	SLAB	E 20						1	31 8.000							31 8	31 8	10899
35	55184	SLAB	E 20						1	31 6.000							31 6	31 6	
		INCREMENT =								2 0.000							2 0	2 0	611
		10.375 INCH																	
27	55185	SLAB	E 20						1	25 8.000							25 8	25 8	
		INCREMENT =								3 1.000							3 1	3 1	405
		10.375 INCH																	
336	55186	SLAB	E 20						1	27 1.000							27 1	27 1	9491
30	55187	SLAB	E 20						1	27 3.000							27 3	27 3	
		INCREMENT =								2 2.000							2 2	2 2	460
		10.375 INCH																	
440	55188	SLAB	E 20						1	38 2.000							38 2	38 2	17515
23	55189	SLAB	E 20						1	21 2.000							21 2	21 2	
		INCREMENT =								2 1.000							2 1	2 1	279
		10.375 INCH																	
557	55190	SLAB	E 20						1	21 1.000							21 1	21 1	12248
20	55191	SLAB	E 20						1	19 2.000							19 2	19 2	
		INCREMENT =								2 8.000							2 8	2 8	228
		10.375 INCH																	

# BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT						
										B	C	D	E	F	H	K									
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.
34	5S192	SLAB	E 20						V	I	31	3.000							31	3	31	3			
		INCREMENT =										2	8.000							2	8	2	8	60	
		10.375 INCH																							
543	5S193	SLAB	E 20									31	8.000							31	8	31	8	1793	
34	5S194	SLAB	E 20								V	I	31	9.000						31	9	31	9		
		INCREMENT =											3	1.000							3	1	3	1	61
		10.375 INCH																							
27	5S195	SLAB	E 20							V	I	25	8.000							25	8	25	8		
		INCREMENT =											3	1.000							3	1	3	1	40
		10.375 INCH																							
549	5S196	SLAB	E 20									27	1.000							27	1	27	1	1550	
31	5S197	SLAB	E 20							V	I	27	7.000							27	7	27	7		
		INCREMENT =											19.000								19	19	19	47	
		10.375 INCH																							
704	5S198	SLAB	E 20									38	0.000							38	0	38	0	2790	
23	5S199	SLAB	E 20							V	I	20	8.000							20	8	20	8		
		INCREMENT =											19.000								19	19	19	26	
		10.375 INCH																							
1343	5S200	SLAB	E 20									21	1.000							21	1	21	1	2953	
20	5S201	SLAB	E 20							V	I	19	2.000							19	2	19	2		
		INCREMENT =											2	8.000							2	8	2	8	22
		10.375 INCH																							
34	5S202	SLAB	E 20							V	I	31	9.000							31	9	31	9		
		INCREMENT =											3	2.000							3	2	3	2	61
		10.375 INCH																							
1328	5S203	SLAB	E 20									31	8.000							31	8	31	8	4386	
35	5S204	SLAB	E 20							V	I	31	7.000							31	7	31	7		
		INCREMENT =											2	3.000							2	3	2	3	61
		10.375 INCH																							
26	5S205	SLAB	E 20							V	I	25	2.000							25	2	25	2		
		INCREMENT =											3	6.000							3	6	3	6	38
		10.375 INCH																							
1336	5S206	SLAB	E 20									27	1.000							27	1	27	1	3773	
30	5S207	SLAB	E 20							V	I	26	9.000							26	9	26	9		
		INCREMENT =											19.000								19	19	19	44	
		10.375 INCH																							
1584	5S208	SLAB	E 20									39	8.000							39	8	39	8	6553	
23	5S209	SLAB	E 20							V	I	20	9.000							20	9	20	9		
		INCREMENT =											20.000								20	20	20	26	
		10.375 INCH																							
138	5S210	SLAB	E 20									21	1.000							21	1	21	1	303	
21	5S211	SLAB	E 20							V	I	20	3.000							20	3	20	3		
		INCREMENT =											2	10.000							2	10	2	10	25
		10.500 INCH																							
35	5S212	SLAB	E 20							V	I	31	9.000							31	9	31	9		
		INCREMENT =											2	5.000							2	5	2	5	62
		10.375 INCH																							
125	5S213	SLAB	E 20									31	8.000							31	8	31	8	412	
34	5S214	SLAB	E 20							V	I	31	0.000							31	0	31	0		
		INCREMENT =											2	5.000							2	5	2	5	59
		10.375 INCH																							
27	5S215	SLAB	E 20							V	I	25	2.000							25	2	25	2		
		INCREMENT =											2	8.000							2	8	2	8	39
		10.375 INCH																							
132	5S216	SLAB	E 20									27	1.000							27	1	27	1	372	
28	5S217	SLAB	E 20							V	I	26	10.000							26	10	26	10		
		INCREMENT =											3	6.000							3	6	3	6	44
		10.375 INCH																							
264	5S218	SLAB	E 20									28	2.000							28	2	28	2	775	

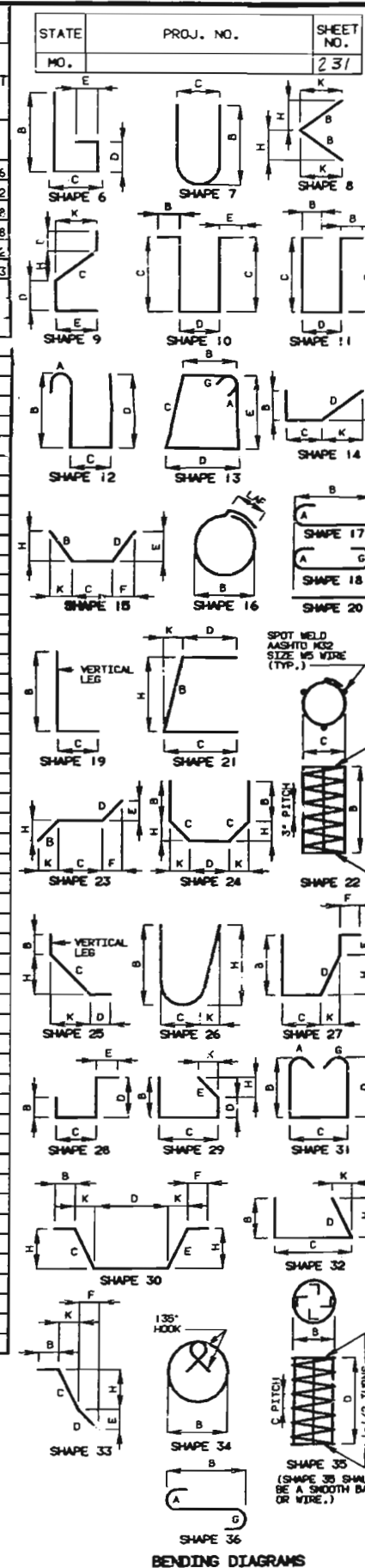


# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT	
									B	C	D	E	F	H	K				
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.				
148	5S219	SLAB	E 20						2 6.000						2 6	2 6	386		
2217	4U500	HAUNCH	E 10 S						6.000	7.375	13.000	6.000			3 4	3 0	4443		
524	5R1	BARRIER CURB	E 19 S						2 6.000	3.500					2 10	2 8	4239		
492	5R2	BARRIER CURB	E 15 S						2 6.125	3.500			2 6.000	3.000	2 10	2 9	4279		
492	5R3	BARRIER CURB	E 19 S						17.000	6.000					23	22	2853		
461	5R4	BARRIER CURB	E 27 S						6.000		11.125	7.000	12.000	9.125	6.375	3 0	2 10	4317	
31	5R6	BARRIER CURB	E 27 S						12.000	9.500	10.625	6.000		6.125	8.750	3 2	3 0	97	
4	5R7	BARRIER CURB	E 19 S						16.000	6.000						22	21	7	
4	5R8	BARRIER CURB	E 27 S						12.000	9.500	7.750	6.000		4.625	6.250	2 11	2 9	11	
12	5R9	BARRIER CURB	E 10 S						2 8.500	7.500						6 1	5 10	73	
24	5R10	BARRIER CURB	E 20						5 0.000							5 0	5 0	125	
5	5R11	BARRIER CURB	E 20						9 0.000							9 0	9 0	47	
3	5R12	BARRIER CURB	E 20						9 9.000							9 9	9 9	31	
1	5R13	BARRIER CURB	E 20						11 9.000							11 9	11 9	12	
5	5R14	BARRIER CURB	E 20						14 0.000							14 0	14 0	73	
1	5R15	BARRIER CURB	E 20						14 9.000							14 9	14 9	15	
1	5R16	BARRIER CURB	E 20						16 9.000							16 9	16 9	17	
14	5R53	BARRIER CURB	E 20						24 7.000							24 7	24 7	359	
182	5R54	BARRIER CURB	E 20						9 9.000							9 9	9 9	1851	
14	5R55	BARRIER CURB	E 20						25 7.000							25 7	25 7	374	
14	5R56	BARRIER CURB	E 20						22 4.000							22 4	22 4	326	
14	5R57	BARRIER CURB	E 20						25 9.000							25 9	25 9	376	
14	5R58	BARRIER CURB	E 20						25 7.000							25 7	25 7	374	
14	5R59	BARRIER CURB	E 20						22 4.000							22 4	22 4	326	
14	5R60	BARRIER CURB	E 20						29 3.000							29 3	29 3	427	
14	5R61	BARRIER CURB	E 20						30 7.000							30 7	30 7	447	
14	5R62	BARRIER CURB	E 20						30 7.000							30 7	30 7	447	
14	5R63	BARRIER CURB	E 20						27 6.000							27 6	27 6	402	
28	5R64	BARRIER CURB	E 20						35 4.000							35 4	35 4	1032	
28	5R65	BARRIER CURB	E 20						37 3.000							37 3	37 3	1088	
28	5R66	BARRIER CURB	E 20						37 3.000							37 3	37 3	1088	
28	5R67	BARRIER CURB	E 20						35 4.000							35 4	35 4	1032	
14	5R68	BARRIER CURB	E 20						41 0.000							41 0	41 0	599	
114	5C1	S/F CURB	E 20						10 0.000							10 0	10 0	1189	
2	5C2	S/F CURB	E 20						9 0.000							9 0	9 0	19	
461	5R1	MEDIAN CURB	E 19 S						2 6.000	3.500						2 10	2 8	4063	
461	5R2	MEDIAN CURB	E 15 S						2 6.125	3.500				2 6.000	3.000	2 10	2 9	4191	
461	5R3	MEDIAN CURB	E 19 S						17.000	6.000						23	22	2794	
461	5R4	MEDIAN CURB	E 27 S						6.000		11.125	7.000	12.000	9.125	6.375	3 0	2 10	4317	
4	5R33	MEDIAN CURB	E 19 S						2 6.000	5.125						2 11	2 10	12	
4	5R34	MEDIAN CURB	E 15 S						2 6.125	5.125				2 6.000	3.000	2 11	2 10	12	
4	5R35	MEDIAN CURB	E 21 S						11.125	14.625		7.000			9.125	6.375	2 2	22	8
4	5R36	MEDIAN CURB	E 19 S						8.500	6.875						15	14	5	
14	5R43	MEDIAN CURB	E 20						25 2.000							25 2	25 2	367	
182	5R70	MEDIAN CURB	E 20						9 9.000							9 9	9 9	1851	
14	5R71	MEDIAN CURB	E 20						25 7.000							25 7	25 7	374	
14	5R72	MEDIAN CURB	E 20						22 4.000							22 4	22 4	326	
14	5R73	MEDIAN CURB	E 20						25 9.000							25 9	25 9	376	
14	5R74	MEDIAN CURB	E 20						25 7.000							25 7	25 7	374	
14	5R75	MEDIAN CURB	E 20						22 4.000							22 4	22 4	326	
14	5R76	MEDIAN CURB	E 20						29 3.000							29 3	29 3	427	
14	5R77	MEDIAN CURB	E 20						30 7.000							30 7	30 7	447	
4	5R78	MEDIAN CURB	E 20						30 7.000							30 7	30 7	447	

# BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS							NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									B	C	D	E	F	H	K			
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.			
14	5R79	MEDIAN CURB	E	20					27 10.000							27 10	27 10	406
28	5R80	MEDIAN CURB	E	20					35 4.000							35 4	35 4	1032
28	5R81	MEDIAN CURB	E	20					37 3.000							37 3	37 3	1088
28	5R82	MEDIAN CURB	E	20					37 3.000							37 3	37 3	1088
28	5R83	MEDIAN CURB	E	20					35 4.000							35 4	35 4	1032
14	5R84	MEDIAN CURB	E	20					42 0.000							42 0	42 0	613



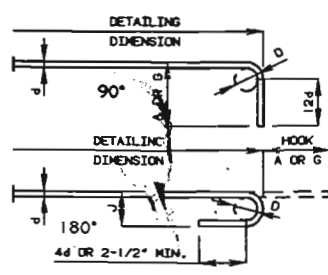
TWO ADDITIONAL #4-U500 & #5-R12 ARE INCLUDED IN THE BAR BILL FOR TESTING.

BAR SIZE	D (IN.)	ALL OTHERS			
		180° HOOKS	90° HOOKS	90° HOOKS	90° HOOKS
#3	2-1/4"	5"	3"	5"	5"
#4	3"	6"	4"	6"	6"
#5	3-3/4"	7"	5"	7"	7"
#6	4-1/2"	8"	6"	8"	8"
#7	5-1/4"	10"	7"	10"	10"
#8	6"	11"	8"	11"	11"
#9	6-1/2"	12"	9"	12"	12"
#10	7-1/4"	13"	10"	13"	13"
#11	8"	14"	11"	14"	14"
#12	8-1/2"	15"	12"	15"	15"
#14	10-1/4"	17"	14"	17"	17"
#16	12-1/4"	19"	16"	19"	19"
#18	14-1/4"	21"	18"	21"	21"

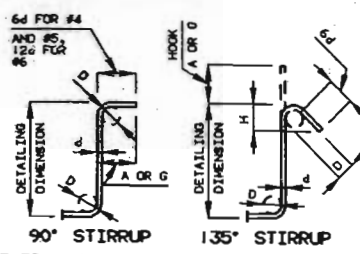
NOTE: ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS. HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET. E = EPOXY COATED REINFORCEMENT. S = STIRRUP. X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES. V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE. NO. EA. = NUMBER OF BARS OF EACH LENGTH. PAYMENTS ARE BASED ON ACTUAL LENGTHS. FOR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS. REINFORCING STEEL (GRADE 60) = FY 60,000 PSI.

STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	APPROX. H
#4	2"	4-1/2"	4-1/2"	3"
#5	2-1/2"	6"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	4-1/2"

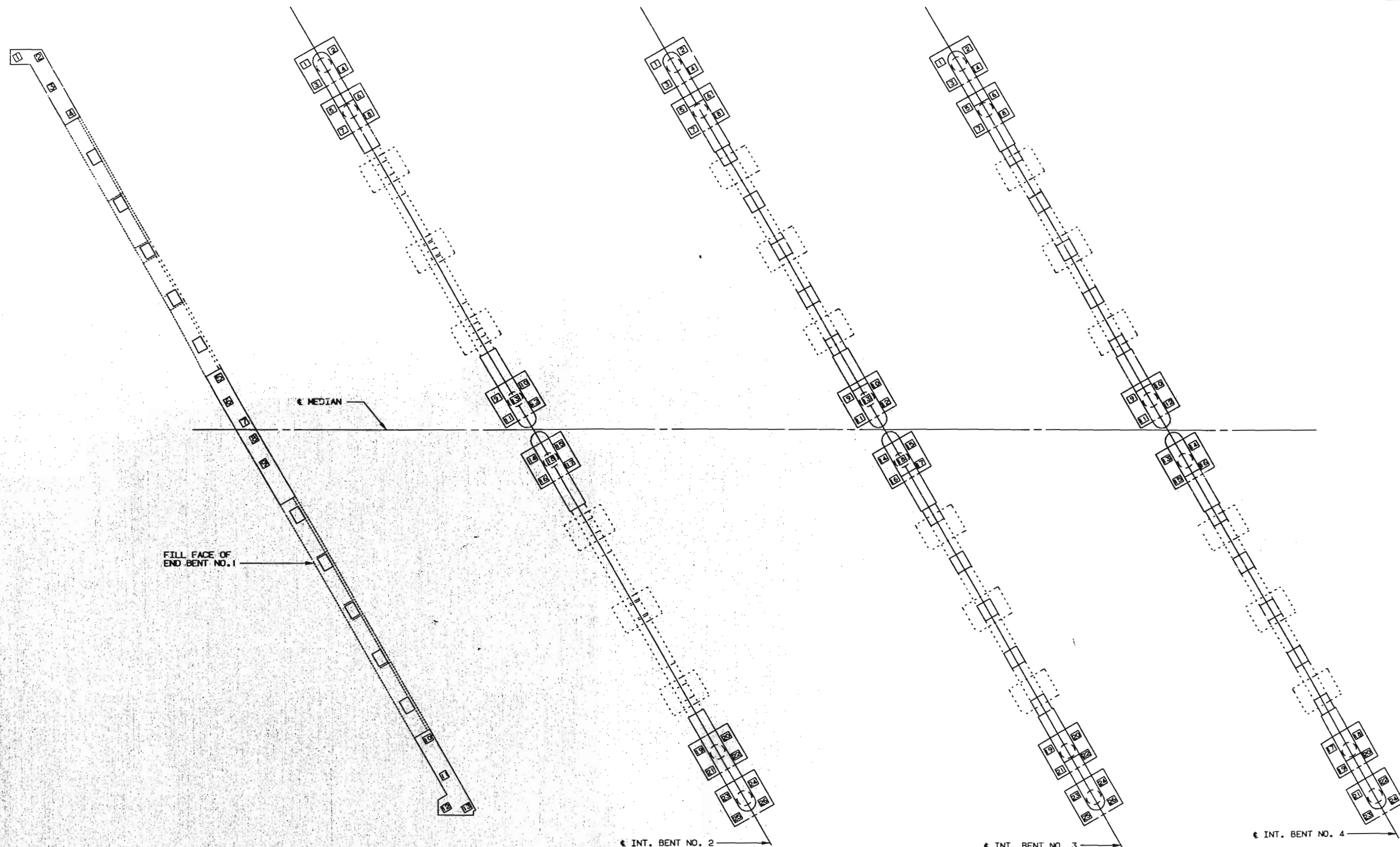
NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.



STANDARD REVISIONS  
MAY 1973, OCT. 1991  
MAY 1993  
CHECKED: MAY 1993



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 231 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

DETAILED AUG. 1992  
CHECKED APRIL 1993

246

247

MISC. PILES IN PLACE, 1A  
REVISED  
MAY 1992

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
END BENT NO. 1 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
INT. BENT NO. 2 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
INT. BENT NO. 3 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
INT. BENT NO. 4 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
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23			
24			

STATE	PROJ. NO.	SHEET NO.
MO.		233

NOTE: INDICATE IN REMARK COLUMN:  
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.  
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.  
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

DETAILED AUG. 1992  
CHECKED APRIL 1993

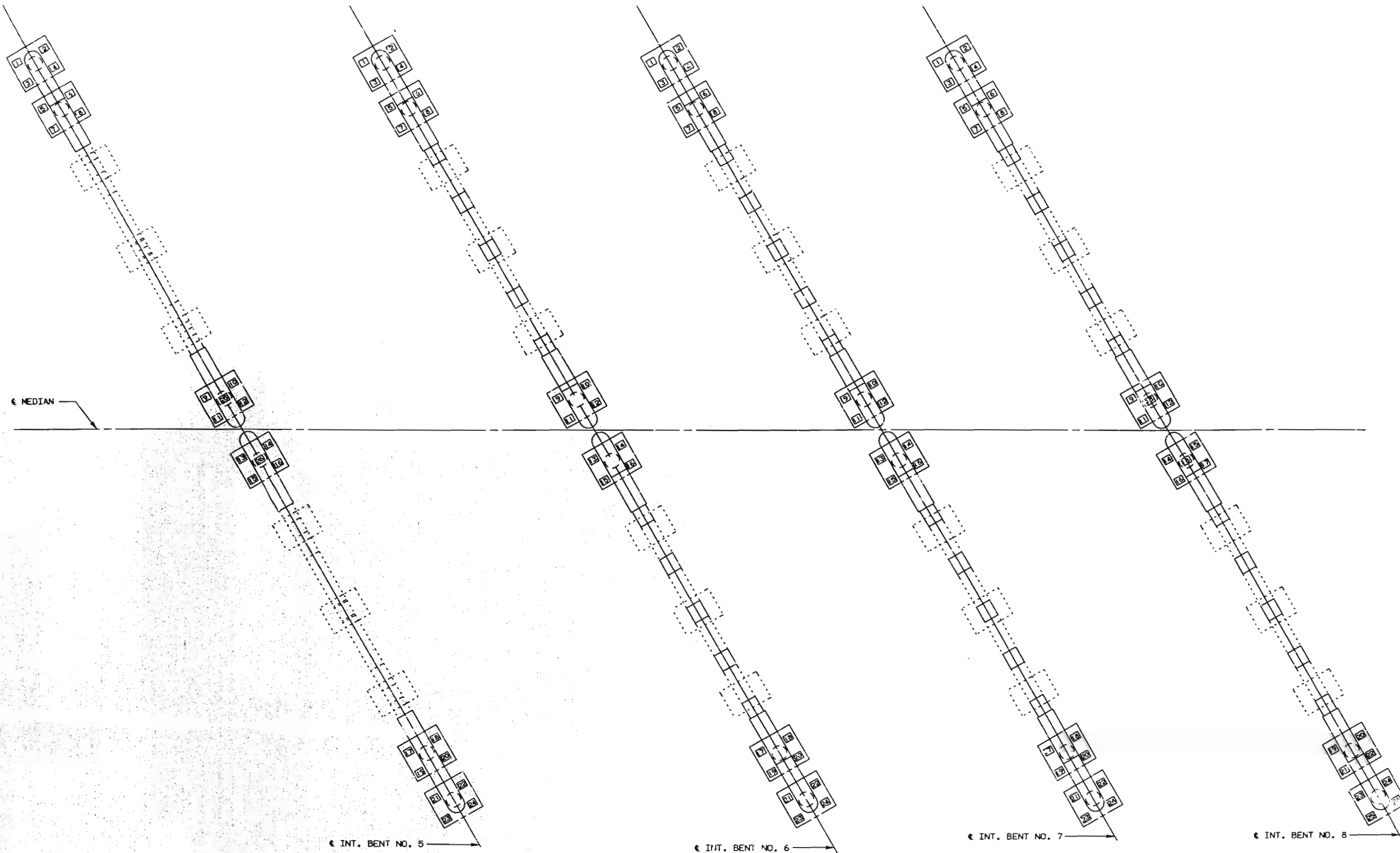
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 232 OF 238.

ST. LOUIS-JEFFERSON COUNTIES A-609R

SEE FINAL PLANS





PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 233 OF 238

ST. LOUIS-JEFFERSON COUNTIES

A-609R

SEE FINAL PLANS

248  
 DETAILED AUG. 1992  
 CHECKED APRIL 1993

# "AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
INT. BENT NO. 5 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
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16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
INT. BENT NO. 6 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

# "AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
INT. BENT NO. 7 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
INT. BENT NO. 8 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			

NOTE: INDICATE IN REMARK COLUMN:  
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.  
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.  
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

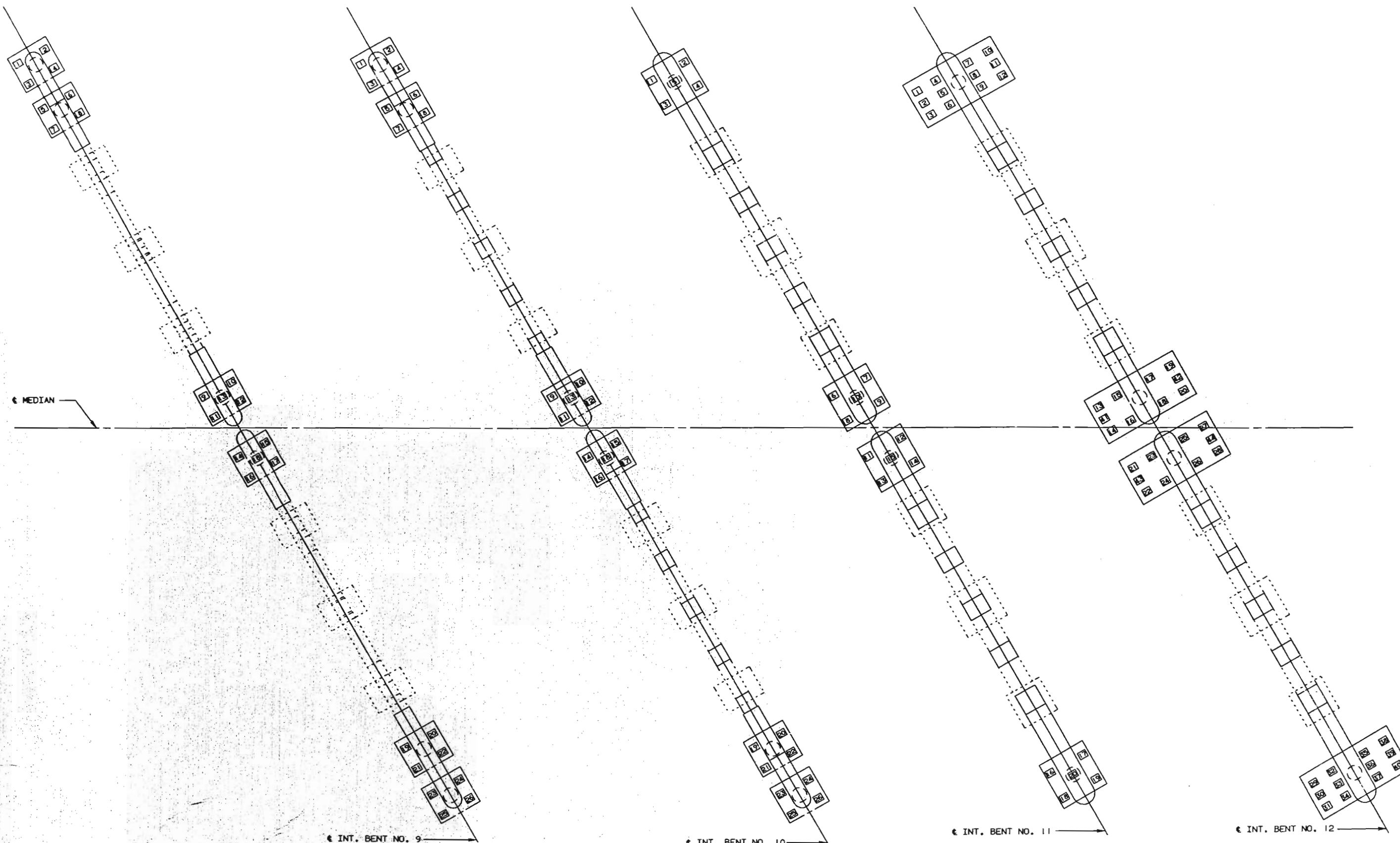
SHEET NO. 234 OF 238.

ST. LOUIS-JEFFERSON COUNTIES A-609R

SEE FINAL PLANS

249  
MISC. PILES IN PLACE  
MAY 1992  
REVISION  
MAY 1992

DETAILED AUG. 1992  
CHECKED APRIL 1992



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 235 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

SEE FINAL PLANS

250-  
 DETAILED AUG. 19 92  
 CHECKED APRIL 19 93



251

MISC. PILES IN PLACE  
 PILES IN PLACE  
 MAY 1992

DETAILED AUG. 1992  
 CHECKED APRIL 1993

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
INT. BENT NO. 9 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
INT. BENT NO. 10 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
INT. BENT NO. 11 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
INT. BENT NO. 12 (NORTHBOUND AND SOUTHBOUND LANE)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			

STATE	PROJ. NO.	SHEET NO.
MO.		237

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			

NOTE: INDICATE IN REMARK COLUMN:  
 A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.  
 B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.  
 C.) TYPE OF PILING USED.

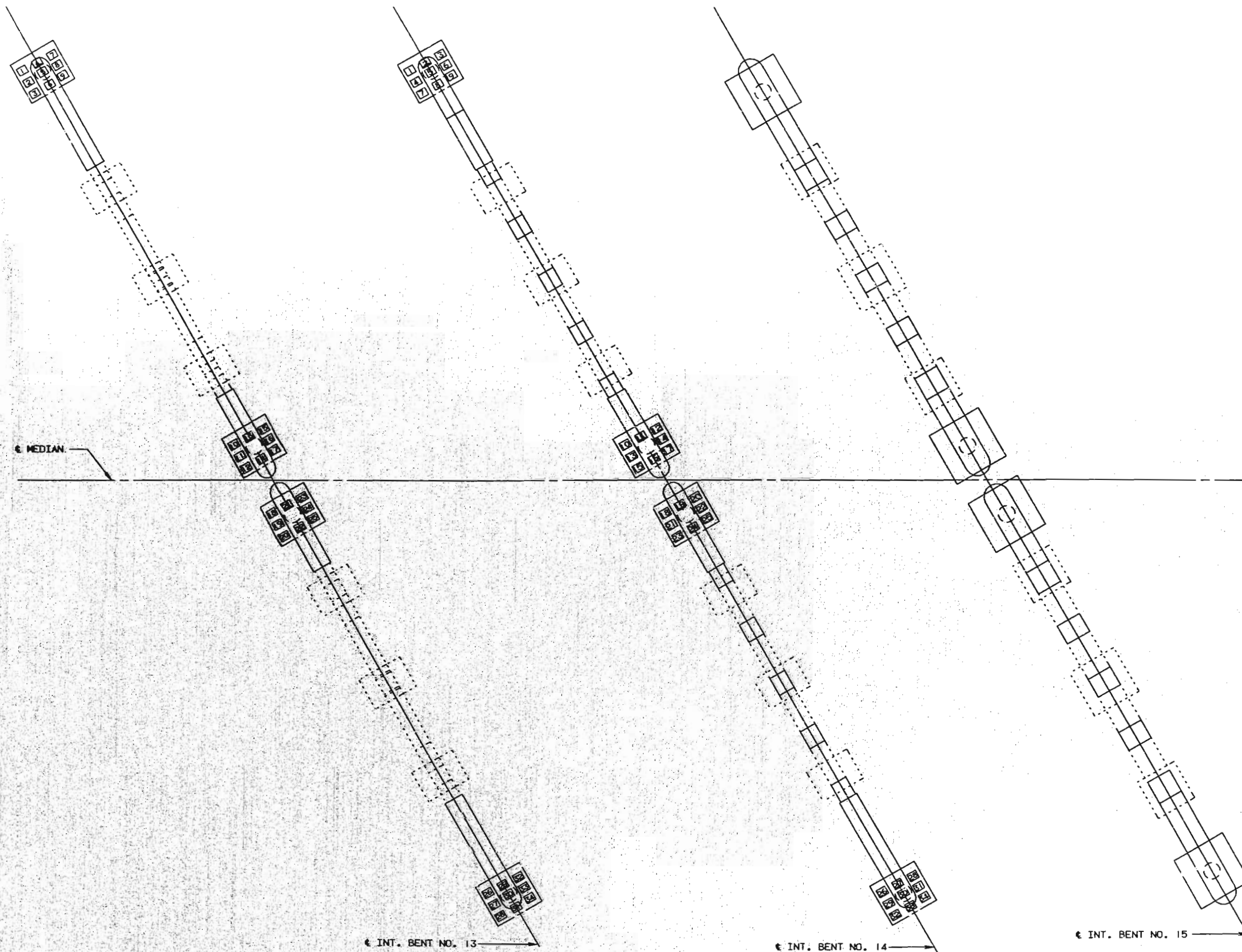
NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 236 OF 238.

ST. LOUIS-JEFFERSON COUNTIES A-609R

STATE	PROJ. NO.	SHEET NO.
MO.		238



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

252  
 DETAILED AUG. 1992  
 CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 237 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

SEE FINAL PLAN

STATE	PROJ. NO.	SHEET NO.
MO.		239

[illegible][illegible]

NOTE: INDICATE IN REMARK COLUMN:  
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.  
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.  
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

MISC. FILES IN PLACE IN  
MAY 1992

DETAILED AUG. 1992  
CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 238 OF 238.

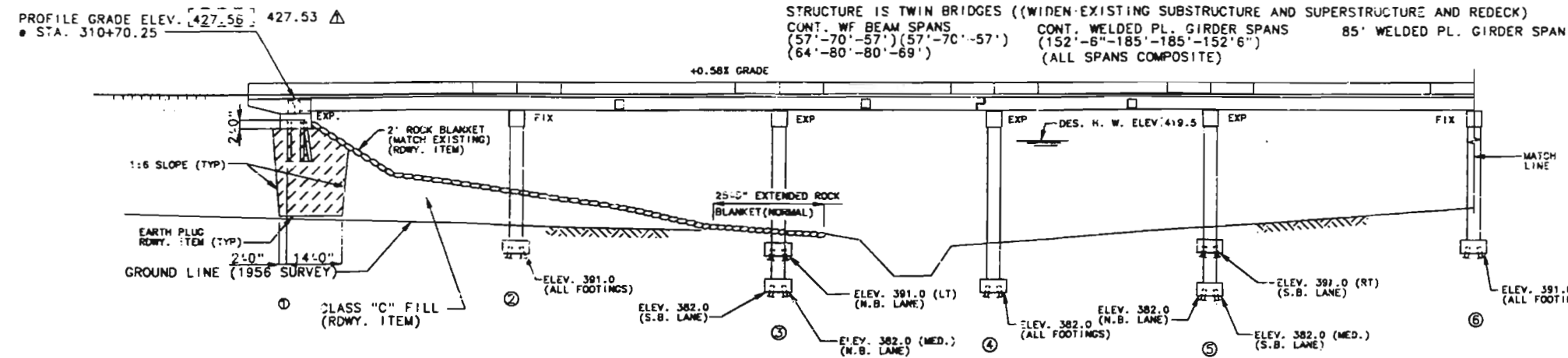
SEE FINAL PLANS

ST. LOUIS-JEFFERSON

## COUNTIES

**A--609R**

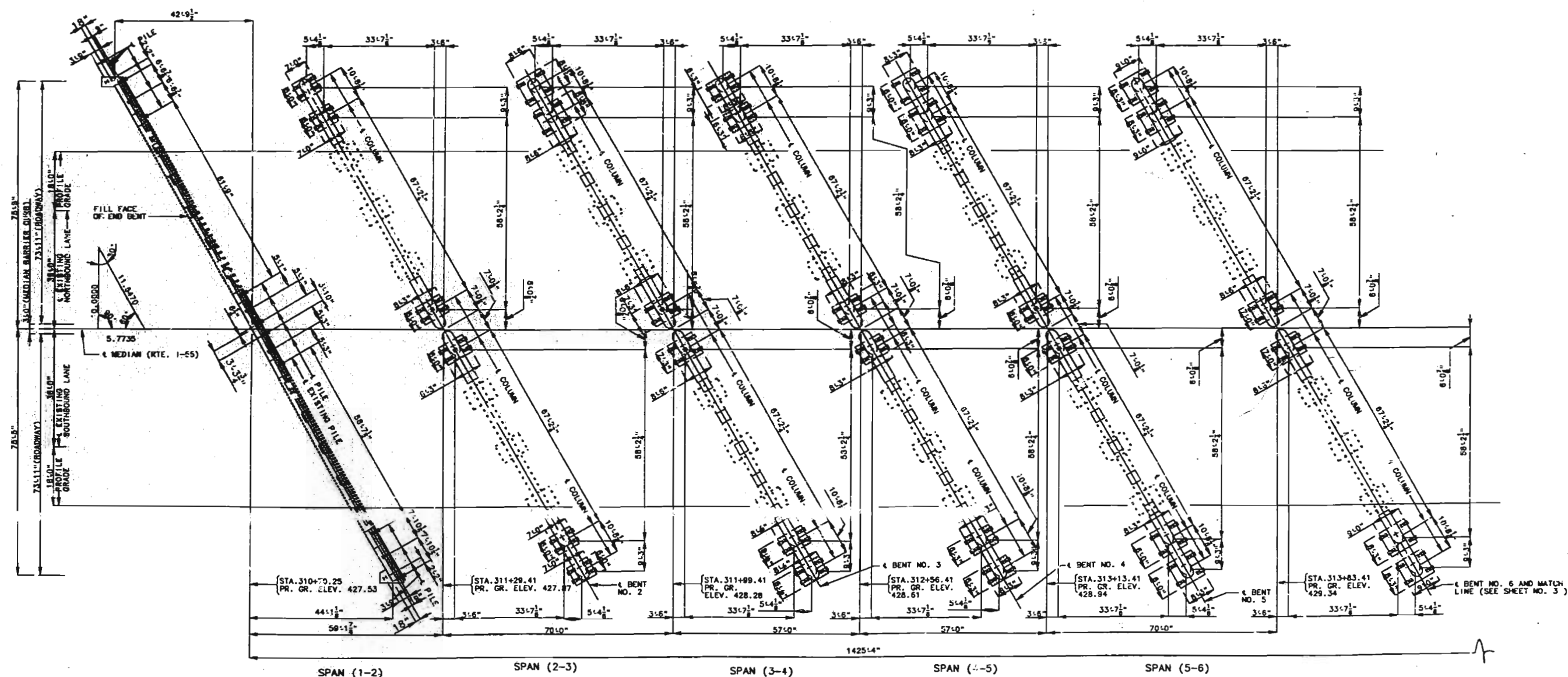




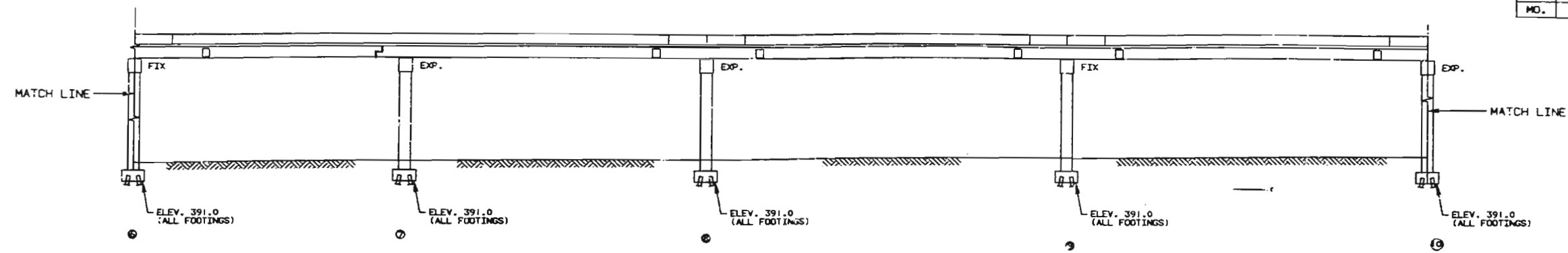
NOTE:

ROADWAY FILL SHALL BE COMPLETED TO THE FINAL ROADWAY SECTION AND UP TO THE ELEVATION OF THE BOTTOM OF THE CONCRETE BEAM WITHIN THE LIMITS OF THE STRUCTURE AND FOR NOT LESS THAN 25' IN BACK OF THE FILL FACE OF THE END BENTS BEFORE PILES ARE DRIVEN FOR ANY BENTS FALLING WITHIN THE EMBANKMENT SECTION.

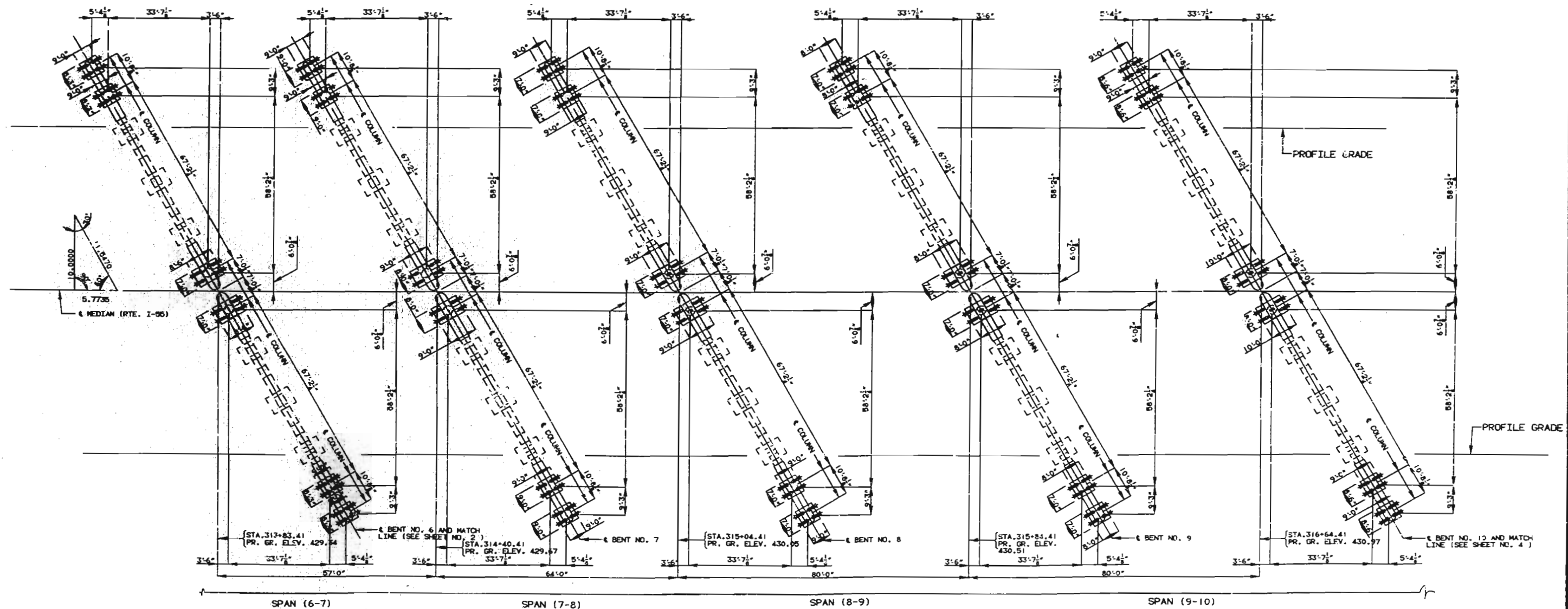
## PART ELEVATION



STATE	PROJ. NO.	SHEET NO.
MO.		4



PART ELEVATION



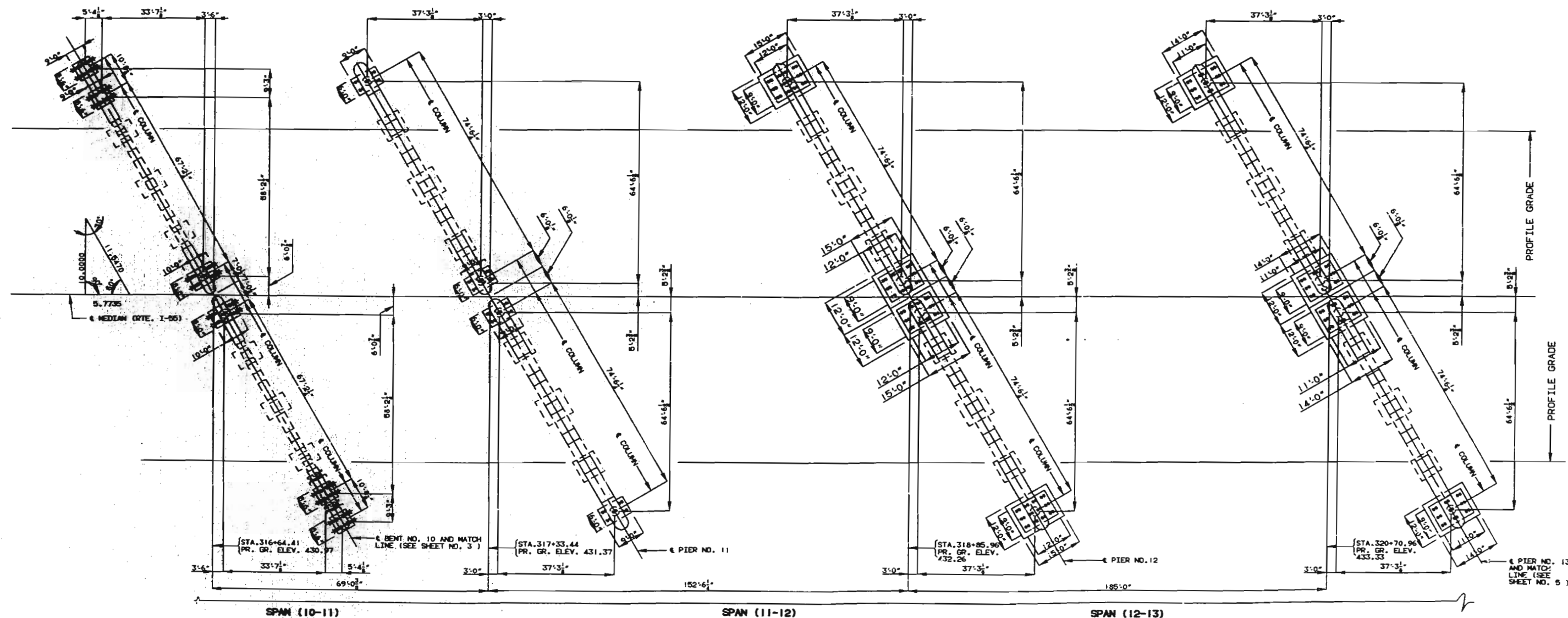
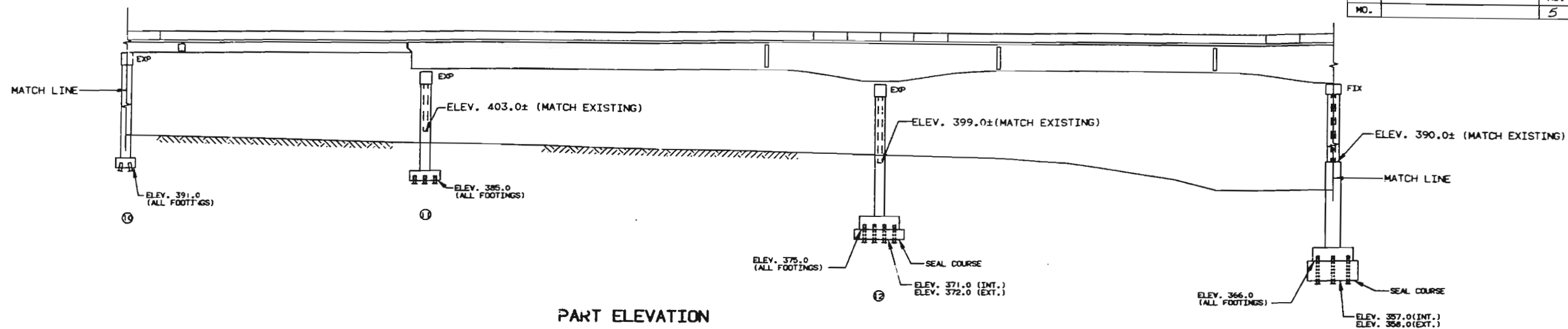
255  
 DETAILED APRIL 1993  
 CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

PART PLAN

SHEET NO. 3 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R



256

DETAILED APRIL 1993  
CHECKED APRIL 1993





## GENERAL NOTES:

DESIGN SPECIFICATIONS: A.A.S.H.T.O.-1989 & INTERIM 1990 LOAD FACTOR DESIGN  
A.A.S.H.T.O.-1983 GUIDE SPECIFICATIONS FOR  
SEISMIC DESIGN  
SEISMIC PERFORMANCE CATEGORY E

## DESIGN LOADING:

HS20-44 MODIFIED 24,000# TANDEM AXLE  
NO FUTURE WEARING SURFACE  
EARTH 120#/CU. FT., EQUIVALENT FLUID PRESSURE 45#/CU. FT.  
FATIGUE STRESS - CASE I

## DESIGN UNIT STRESSES:

CLASS B CONCRETE (SUBSTRUCTURE) F'C=3,000 PSI.  
CLASS B1 CONCRETE (SAFETY BARRIER CURB) F'C=4,000 PSI.  
CLASS B2 CONCRETE (SUPERSTRUCTURE EXCEPT SAFETY BARRIER CURB) F'C=4,000 PSI.  
REINFORCING STEEL (GRADE 60) F<sub>y</sub>=60,000 PSI.  
STRUCTURAL CARBON STEEL F<sub>y</sub>=36,000 PSI.  
STEEL PILE F<sub>y</sub>=9,000 PSI

## FABRICATED STEEL CONNECTIONS:

FIELD CONNECTIONS, HIGH STRENGTH BOLTS 3/4"Ø, HOLES 13/16"Ø,  
EXCEPT AS NOTED.

HIGH STRENGTH BOLTS, NUTS AND WASHERS WILL BE SAMPLED FOR  
QUALITY ASSURANCE AS SPECIFIED IN STANDARD SPECIFICATION 106.

## JOINT FILLER:

ALL JOINT FILLER SHALL MEET THE REQUIREMENTS OF STD. SPEC.  
1057.2.4, EXCEPT AS NOTED.

## REINFORCING STEEL:

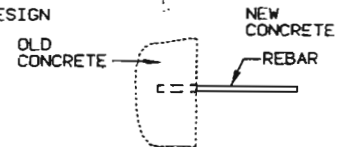
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2",  
UNLESS OTHERWISE SHOWN.  
ALL REINFORCING BARS IN TOPS OF SUBSTRUCTURE BEAMS OR CAPS  
SHALL BE SPACED TO CLEAR ANCHOR BOLTS FOR BEARINGS BY AT LEAST 1/2".  
BARS BONDED IN OLD CONCRETE NOT REMOVED SHALL BE CLEANLY  
STRIPPED AND EMBEDDED INTO NEW CONCRETE WHERE POSSIBLE. IF LENGTH  
IS AVAILABLE, OLD BARS SHALL EXTEND INTO NEW CONCRETE AT LEAST 40  
DIAMETERS FOR SMOOTH BARS AND 30 DIAMETERS FOR DEFORMED BARS,  
UNLESS OTHERWISE NOTED.

SYSTEM F SHOP COAT (GRAY) IN ACCORDANCE WITH THE SPECIAL PROVISIONS.  
NO FIELD PAINTING OF NEW STEEL EXCEPT FOR TOUCH UP.

COST OF PAINTING NEW STRUCTURAL STEEL SHALL BE INCLUDED  
IN PRICE BID FOR FABRICATED STRUCTURAL STEEL. SEE SPECIAL PROVISIONS.  
NOTE: OUTLINE OF OLD WORK IS INDICATED BY LIGHT DASHED LINES. HEAVY  
LINES INDICATE NEW WORK.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE  
ORDERING NEW STEEL.

TRAFFIC OVER STRUCTURE TO BE MAINTAINED DURING CONSTRUCTION.  
SEE SHEET NO. 7 FOR STAGED CONST. DETAILS.



## DETAIL OF INJECTED EPOXY RESIN SYSTEMS

NOTE: COST OF FURNISHING AND INSTALLING INJECTED  
EPOXY RESIN SHALL BE INCLUDED IN CONTRACT  
UNIT PRICE BID FOR CONCRETE.  
SEE SPECIAL PROVISIONS FOR ACCEPTABLE INJECTED  
EPOXY RESIN.

THE CONTRACTOR SHALL USE ONE OF THE INJECTED EPOXY  
RESINS LISTED IN THE JOB SPECIAL PROVISIONS.

THESE INJECTED EPOXY RESIN SYSTEMS SHALL BE INSTALLED  
ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS, EXCEPT  
AS MODIFIED BY THE JOB SPECIAL PROVISIONS. SEE CHART  
BELOW AND BAR BILL FOR EMBEDMENT LENGTH, PULLOUT  
STRENGTH, SIZE, LENGTH, AND SHAPE OF BAR.

\* THE BARRIER CURB WAS SIZP FORMED

BAR SIZE	f <sub>y</sub>	EMBEDMENT LENGTH	PULLOUT STRENGTH
4	60,000	6 INCH	10,000
5	60,000	8 INCH	15,500
6	60,000	9 INCH	20,000
7	60,000	11 INCH	27,000
8	60,000	12 INCH	33,500
9	60,000	13 INCH	44,000
10	60,000	15 INCH	56,000

② 2 1/2" NEW STRINGERS AND GIRDERS

3 1/2" OLD STRINGERS AND GIRDERS.

\* SBL BRIDGE DECK WAS FORMED WITH  
SIZP METAL FORMS

## QUANTITIES

ITEM	LUMP SUM	NORTHBOUND LANE		SOUTHBOUND LANE		TOTAL N.B.L. & S.B.L.
		SUBSTR.	SUPERSTR.	SUBSTR.	SUPERSTR.	
<b>MOBILIZATION</b>						
PARTIAL REMOVAL OF SUBSTRUCTURE CONCRETE	LUMP SUM					1
REMOVAL OF EXISTING BRIDGE DECK	SO. FT.		65090		65090	130,180
CLASS 1 EXCAVATION	CU. YD.					3522
CLASS 2 EXCAVATION	CU. YD.					1157
BRIDGE APPROACH SLAB (BRIDGE)	SO. YD.		422		422	844
STRUCTURAL STEEL PILES (10IN.)	LIN. FT.					23,527
PRE-BORE FOR PILING	LIN. FT.	150		130		280
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YD.	1202.7		1214.4		2417.1
SUBSTRUCTURE REPAIR (UNFORMED)	SO. FT.					127.3
SEAL CONCRETE	CU. YD.	235.6		235.6		471.2
PROTECTIVE COATING-CONCRETE BENTS(DELETERIOUS AGENTS)	LUMP SUM					1
CLASS B-2 CONCRETE (SUPSTR ON STEEL)	CU. YD.		3007.4		3007.4	6,014.8
* SAFETY BARRIER CURB	LIN. FT.		2876		2876	5752
LAMINATED NEOPRENE BRG. PAD (STEEL STRUCTURE)	EACH		83		83	166
TYPE N.PTFE BEARINGS	EACH		54		54	108
REINFORCING STEEL (BRIDGES)	LB.	177,500	520	177,290	60	355,370
REINFORCING STEEL (EPOXY COATED)	LB.					1822,420
STRIP SEAL EXPANSION DEVICE	LIN. FT.		171		171	342
EXPANSION DEVICE (FINGER PLATE)	LIN. FT.		171		171	342
MODIFICATION TO EXISTING SIGN SUPPORT BRACKET	LUMP SUM					1
FABRICATED STRUCTURAL CARBON STEEL (I-BEAM)	LB.		537,960		537,960	1,075,920
FABRICATED STRUCTURAL CARBON STEEL (PLT GIR)	LB.		990,360		990,360	1,980,720
SLAB DRAINS	EACH		246		246	492
VERTICAL DRAINS AT END BENTS	EACH		2		2	4
REPAINTING (SYSTEM F) GRAY	LUMP SUM					1
NON-DESTRUCTIVE TESTING	LIN. FT.		163		163	326
CONCRETE TRAFFIC BARRIER ON APP. SLAB	LIN. FT.		50			50
TRANSPORTING SANDBLAST RESIDUE	LUMP SUM					0
<b>C.O.E. REGULATORY MOD. (CONTINGENT ITEMS)</b>						414,357.64
REMOVAL OF EXISTING BRIDGE DECK	LUMP SUM					23,407
REMOVAL OF EXISTING BRIDGE DECK	LUMP SUM					1
REMOVAL OF EXISTING BRIDGE DECK	LUMP SUM					48
REMOVAL OF EXISTING BRIDGE DECK	LUMP SUM					25,494.76
REMOVAL OF EXISTING BRIDGE DECK	LUMP SUM					10
REMOVAL OF EXISTING BRIDGE DECK	LUMP SUM					10
REMOVAL OF EXISTING BRIDGE DECK	LUMP SUM					10
REMOVAL OF EXISTING BRIDGE DECK	LUMP SUM					1

## PILE &amp; FOOTING DATA (NORTHBOUND LANE)

BENT NO.		BENT NO. 1	BENT NO. 2	BENT NO. 3	BENT NO. 4	BENT NO. 5	BENT NO. 6	BENT NO. 7	BENT NO. 8	BENT NO. 9	BENT NO. 10	PIER NO. 11	PIER NO. 12	PIER NO. 13	PIER NO. 14	PIER NO. 15	PIER NO. 16
BEARING PILE	PILE TYPE AND SIZE	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42		
	NUMBER	7	13	13	12	13	12	12	13	13	13	10	22	17	17		
	APPROXIMATE LENGTH FT.	105	78	①	71	72	77	76	76	76	75	62	47	34	23		
	DESIGN BEARING TONS	56	49	53	51	52	54	48	51	51	55	55	52	56	55		
SPREAD FOOTINGS	HAMMER ENERGY REQUIRED FT.-LBS.	13,800	11,800	12,400	12,000	12,200	12,600	11,200	12,000	12,000	13,000	12,200	11,500	12,400	12,200		
	FOUNDATION MATERIAL															ROCK	ROCK
	DESIGN BEARING TONS/SQ. FT.															6.0	4.0

① 68 FT. LEFT & 68 FT. MEDIAN

## PILE &amp; FOOTING DATA (SOUTHBOUND LANE)

BENT NO.		BENT NO. 1	BENT NO. 2	BENT NO. 3	BENT NO. 4	BENT NO. 5	BENT NO. 6	BENT NO. 7	BENT NO. 8	BENT NO. 9	BENT NO. 10	PIER NO. 11	PIER NO. 12	PIER NO. 13	PIER NO. 14	PIER NO. 15	PIER NO. 16
BEARING PILE	PILE TYPE AND SIZE	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42	HP10x42		
	NUMBER	6	13	13	12	13	12	12	13	13	13	10	22	17	17		
	APPROXIMATE LENGTH FT.	105	77	69	68	②	76	75	75	75	73	64	46	35	23		
	DESIGN BEARING TONS	56	49	53	51	52	54	48	51	51	55	55	52	56	55		
SPREAD FOOTINGS	HAMMER ENERGY REQUIRED FT.-LBS.	13,800	11,800	12,400	12,000	12,200	12,600	11,200	12,000	12,000	13,000	12,200	11,500	12,400	12,200		
	FOUNDATION MATERIAL															ROCK	ROCK
	DESIGN BEARING TONS/SQ. FT.															6.0	4.0

② 68 FT. MED. & 77 FT. RT.

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING  
VALUE OF PILES.

ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.  
PREBORE FOR PILES AT BENT NO. 1 TO ELEVATION 398.0.

258  
DETAILED FEB. 1992  
CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

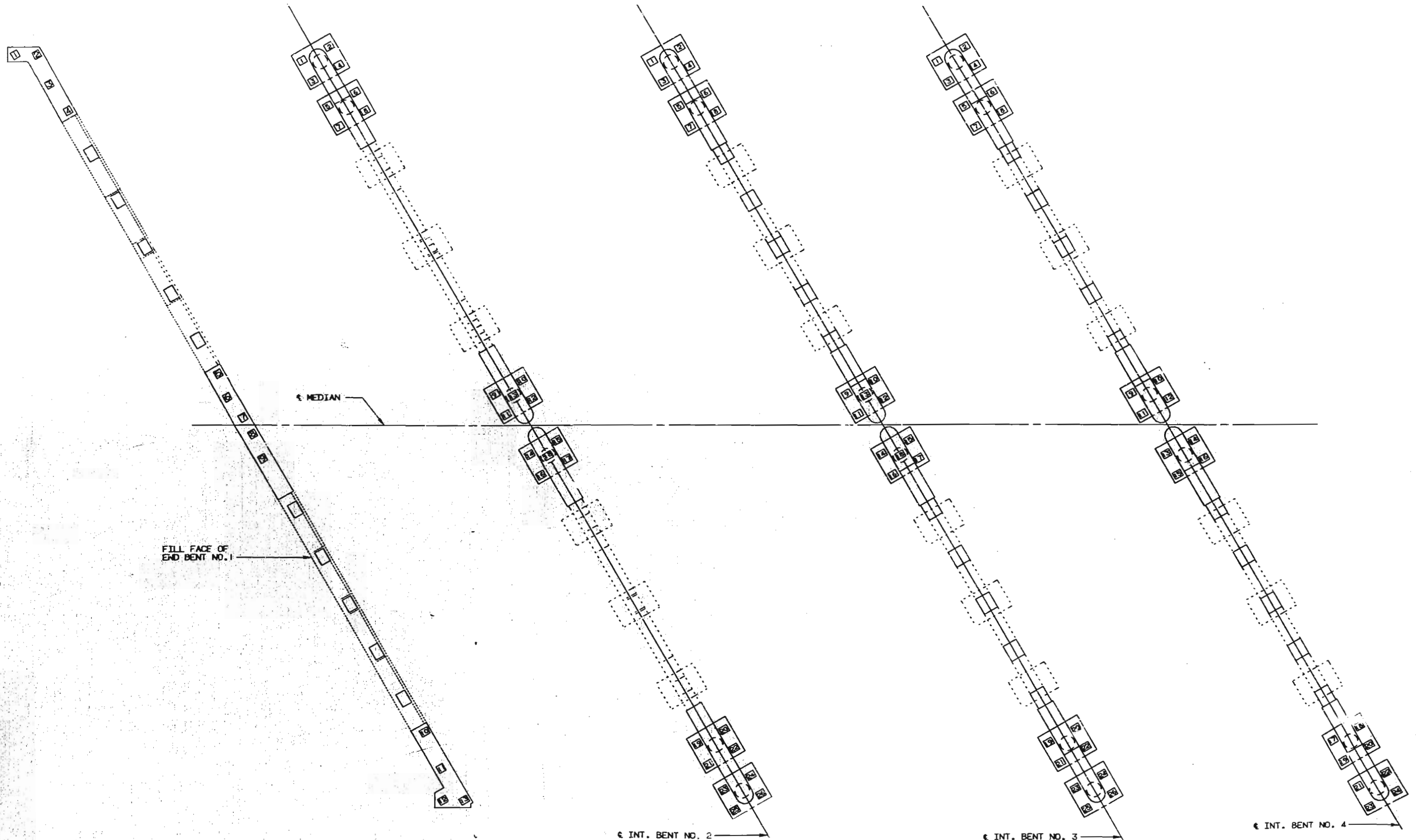
SHEET NO. 64 OF 238.

ST. LOUIS-JEFFERSON

COUNTIES

A-609R

STATE	JOB NO.	SHEET NO.
MO.	IG10626F	232



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 231A OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

259  
 DETAILED AUG. 1992  
 CHECKED APRIL 1993



DATE	JOB NO.	SHEET NO.
10/10/92	J610626F	233

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
END BENT NO. 1 (NORTHBOUND AND SOUTHBOUND LANE)			
1	105	186.8	Batter 0 1/2" Driven to Practical Refusal
2	107	180.6	3 1/2"
3	104	224.9	0 1/2"
4	111	169.9	3 1/2"
5	105	180.6	3 1/2"
6	105	196.8	0 1/2"
7	107	180.6	3 1/2"
8	108	150.6	3 1/2"
9	95	196.8	0 1/2"
10	107	204.4	3 1/2"
11	104	204.9	0 1/2"
12	105	208.9	0 1/2"
13	108	204.4	3 1/2"
1371			Sub total
INT. BENT NO. 2 (NORTHBOUND AND SOUTHBOUND LANE)			
1	78	180.1	Batter 2 1/2" Driven to Practical Refusal
2	77	191.4	
3	77	180.1	
4	78	180.1	
5	77	180.1	
6	78	180.1	
7	79	191.4	
8	79	204.1	
9	77	139.3	
10	77	126.7	
11	77	126.7	
12	77	126.7	
13	77	132.4	0 1/2"
14	77	126.7	2 1/2"
15	77	126.7	2 1/2"
16	77	126.7	2 1/2"
17	78	126.7	2 1/2"
18	77	132.4	0 1/2"
19	77	139.3	2 1/2"
20	77	139.3	
21	77	139.3	
22	78	139.3	
23	77	139.3	
24	77	139.3	
25	77	139.3	
26	77	139.3	
2011			Sub total
INT. BENT NO. 3 (NORTHBOUND AND SOUTHBOUND LANE)			
1	78	180.1	Batter 2 1/2" Driven to Practical Refusal
2	79	191.4	
3	79	180.1	
4	79	191.4	
5	79	191.4	
6	78	191.4	
7	78	204.1	
8	79	204.1	
9	67	139.3	
10	68	139.3	
11	67	139.3	
12	69	139.3	

"AS BUILT PILE" DATA

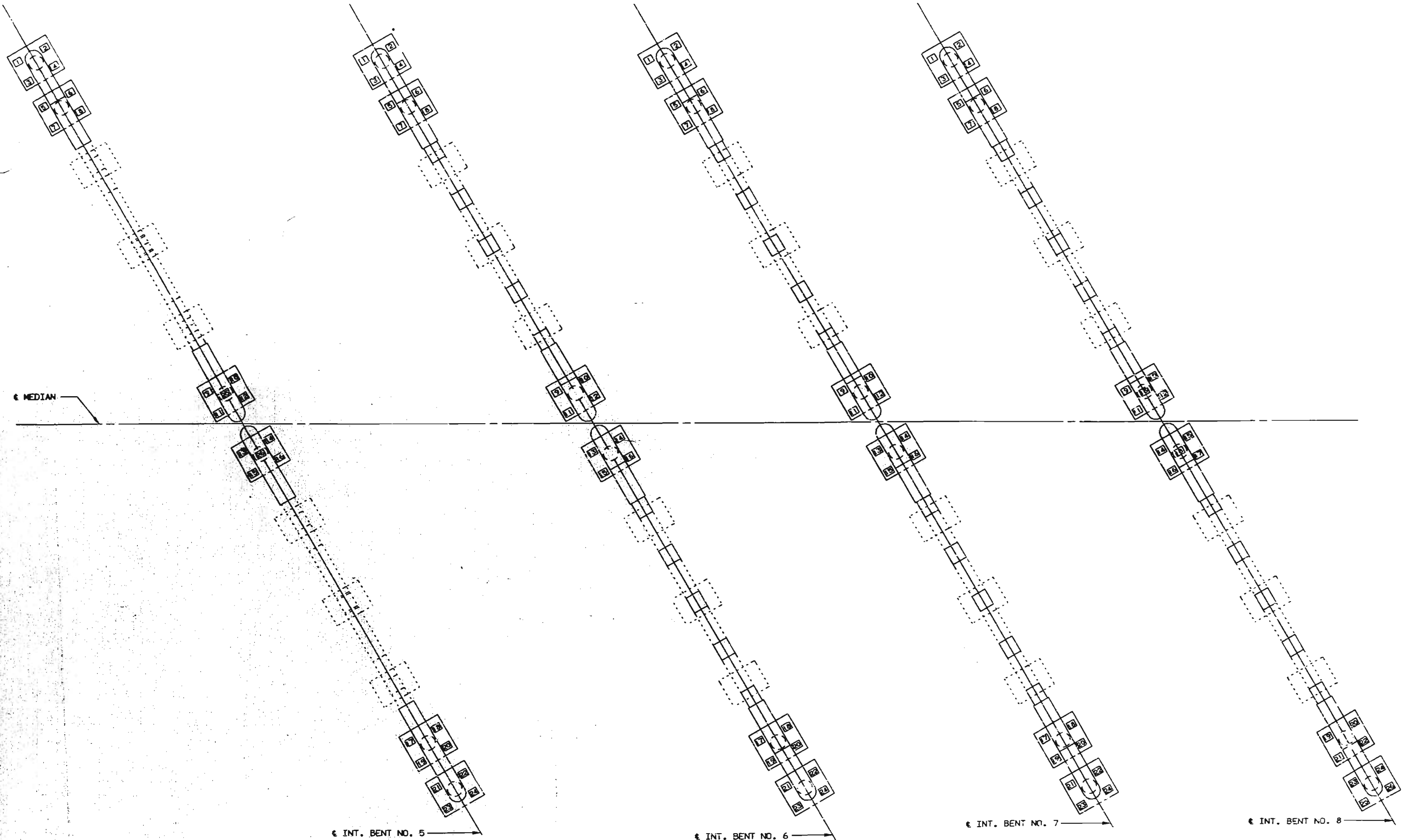
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
#13	67	145.6	Batter 0 1/2" Driven to Practical Refusal
#14	69	139.3	2 1/2"
#15	67	139.3	2 1/2"
#16	69	139.3	2 1/2"
#17	69	∞	2 1/2" REFUSAL ON ROCK
#18	68	145.6	0 1/2" Driven to Practical Refusal
#19	67	139.3	2 1/2"
#20	70	139.3	
#21	67	139.3	
#22	71	139.3	
#23	68	139.3	
#24	72	154.7	
#25	69	139.3	
#26	69	139.3	
1864			Sub total
INT. BENT NO. 4 (NORTHBOUND AND SOUTHBOUND LANE)			
#1	72	116.0	Batter 2 1/2" Driven to Practical Refusal
#2	71	255.2	
#3	72	116.0	
#4	70	139.2	
#5	72	116.0	
#6	70	153.1	
#7	72	191.4	
#8	70	170.1	
#9	70	139.3	
#10	70	139.3	
#11	70	139.3	
#12	69	139.3	
#13	70	139.3	
#14	68	139.3	
#15	70	139.3	
#16	68	139.3	
#17	68	139.3	
#18	66	139.3	
#19	69	139.3	
#20	68	139.3	
#21	67	139.3	
#22	67	139.3	
#23	68	139.3	
#24	66	139.3	
1663			Sub total

\* Note: Used 440 Hammer, otherwise 640 Hammer

NOTE: INDICATE IN REMARK COLUMN:  
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.  
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.  
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHD CONSTRUCTION PERSONNEL.

STATE	PROJ. NO.	SHEET NO.
MO.		234



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 233 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

261  
 DETAILED AUG. 1992  
 CHECKED APR. 1993

STATE	PROJ. NO.	SHEET NO.
NO.	J610426F	235

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
*INT. BENT NO. 5 (NORTHBOUND AND SOUTHBOUND LANE)			
1	70	218.7	Batter 2 1/2" Driven to Practical Refusal
2	70	191.4	
3	70	∞	Driven to Refusal
4	70	218.7	Driven to Practical Refusal
5	69	191.4	
6	69	191.4	
7	77	191.4	
8	69	191.4	
9	69	255.2	
10	69	218.7	
11	69	218.7	
12	68	218.7	
13	69	∞	Driven to Refusal
14	68	255.2	Driven to Practical Refusal
15	68	191.4	Driven to Practical Refusal
16	67	∞	Driven to Refusal
17	77	235.6	Driven to Practical Refusal
18	78	255.2	
19	77	235.6	
20	79	235.6	
21	77	235.6	
22	77	218.7	
23	77	218.7	
24	77	235.6	
25	67	∞	Batter 0 1/2" Refusal on Rock
26	67	218.7	Batter 0 1/2" Driven to Practical Refusal
1864			Sub total
*INT. BENT NO. 6 (NORTHBOUND AND SOUTHBOUND LANE)			
1	78	191.4	Batter 2 1/2" Driven to Practical Refusal
2	78	191.4	
3	77	191.4	
4	77	191.4	
5	79	191.4	
6	77	191.4	
7	78	191.4	
8	77	191.4	
9	74	∞	Driven to Refusal
10	77	191.4	Driven to Practical Refusal
11	75	191.4	
12	76	191.4	
13	79	191.4	
14	76	191.4	
15	77	218.7	
16	76	191.4	
17	76	218.7	
18	76	218.7	
19	76	218.7	
20	76	218.7	
21	76	218.7	
22	76	218.7	
23	76	218.7	
24	75	218.7	
1838			Sub total

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
*INT. BENT NO. 7 (NORTHBOUND AND SOUTHBOUND LANE)			
1	77	191.4	Batter 2 1/2" Driven to Practical Refusal
2	77	191.4	
3	76	191.4	
4	76	191.4	
5	77	∞	Driven to Refusal
6	77	191.4	Driven to Practical Refusal
7	76	204.1	
8	77	191.4	
9	75	191.4	
10	75	218.7	
11	76	170.1	
12	75	170.1	
13	76	191.4	
14	75	191.4	
15	76	170.1	
16	76	191.4	
17	76	218.7	
18	75	218.7	
19	75	218.7	
20	75	218.7	
21	75	235.6	
22	75	218.7	
23	76	218.7	
24	75	235.6	
1819			Sub total
*INT. BENT NO. 8 (NORTHBOUND AND SOUTHBOUND LANE)			
1	75	191.4	Batter 2 1/2" Driven to Practical Refusal
2	76	191.4	
3	75	218.7	
4	76	191.4	
5	76	191.4	
6	75	191.4	
7	76	191.4	
8	79	191.4	
9	75	191.4	
10	76	191.4	
11	75	191.4	
12	76	191.4	
13	75	200.0	Batter 0 1/2"
14	76	191.4	Batter 2 1/2"
15	75	191.4	
16	75	191.4	
17	75	191.4	
18	74	200.0	Batter 0 1/2"
19	75	204.1	Batter 2 1/2"
20	74	218.7	
21	75	204.1	
22	74	218.7	
23	75	218.7	
24	74	204.1	
25	75	235.6	
26	75	235.6	
1957			Sub total

\* Note: Used 640 Hammer

NOTE: INDICATE IN REMARK COLUMN:  
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.  
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.  
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

MISC. PILES IN PLACE  
PILES IN PLACE  
MAY 1992

DETAILED AUG. 1992  
CHECKED APRIL 1993

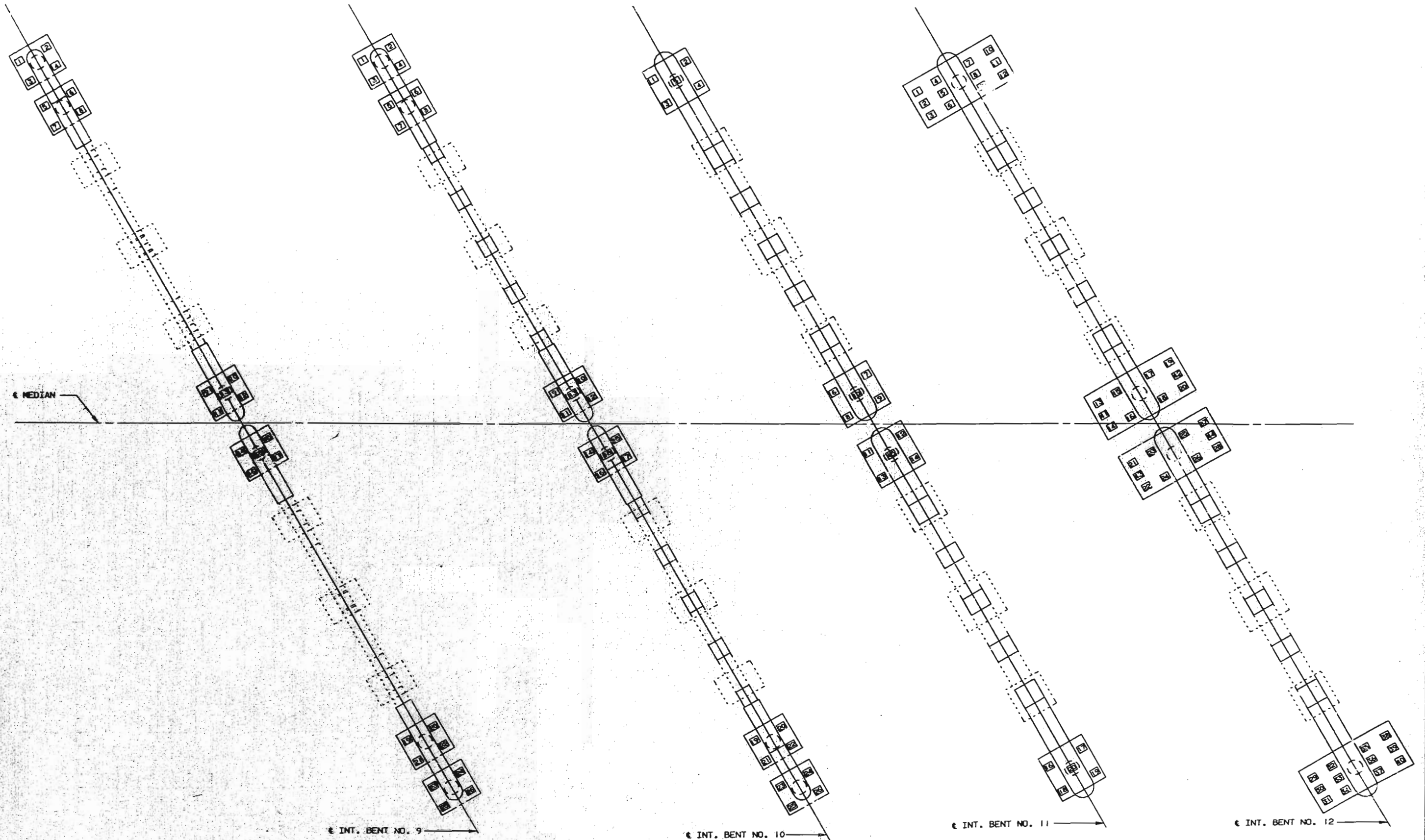
NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 234 OF 238.

ST. LOUIS-JEFFERSON COUNTIES A-609R



STATE	PROJ. NO.	SHEET NO.
MO.	J610626F	236



PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 2354 OF 238

ST. LOUIS-JEFFERSON COUNTIES A-609R

263  
 DETAILED AUG. 1992  
 CHECKED APRIL 1993

"AS BUILT PILE" DATA

FILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
INT. BENT NO. 9 (NORTHBOUND AND SOUTHBOUND LANE)			
1	76	180.1	Batter 2 1/2" Driven to Practical Refusal
2	76	191.4	
3	75	191.4	
4	76	204.1	
5	76	191.4	
6	76	218.7	
7	76	191.4	
8	76	191.4	
9	75	255.2	
10	76	218.7	
11	76	255.2	
12	75	204.1	
13	75	228.6	Batter 0 1/2"
14	75	218.7	Batter 2 1/2"
15	75	191.4	
16	75	218.7	
17	76	191.4	
18	74	228.6	Batter 0 1/2"
19	76	255.2	Batter 2 1/2"
20	75	218.7	
21	75	218.7	
22	75	255.2	
23	75	218.7	
24	75	218.7	
25	74	255.2	
26	75	255.2	
1959			Sub total
INT. BENT NO. 10 (NORTHBOUND AND SOUTHBOUND LANE)			
1	75	180.1	Batter 2 1/2" Driven to Practical Refusal
2	71	191.4	
3	76	191.4	
4	72	218.7	
5	75	180.1	
6	71	191.4	
7	76	170.1	
8	70	191.4	
9	74	191.4	
10	71	218.7	
11	74	218.7	
12	70	191.4	
13	72	200.0	Batter 0 1/2"
14	74	191.4	Batter 2 1/2"
15	71	191.4	
16	74	191.4	
17	70	204.1	
18	73	200.0	Batter 0 1/2"
19	75	235.6	Batter 2 1/2"
20	73	218.7	
21	74	278.3	
22	73	255.2	
23	74	218.7	
24	73	218.7	
25	74	218.7	
26	73	235.6	
1898			Sub total

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
INT. BENT NO. 11 (NORTHBOUND AND SOUTHBOUND LANE)			
#1	62	145.6	Batter 0 1/2" Driven to Practical Refusal
#2	61	145.6	
#3	61	145.6	
#4	61	132.4	
#5	61	145.6	
#6	63	145.6	
#7	63	145.6	
#8	62	145.6	
#9	62	145.6	
#10	65	145.6	
#11	65	145.6	
#12	65	145.6	
#13	62	145.6	
#14	65	145.6	
#15	62	145.6	
#16	65	145.6	
#17	64	145.6	
#18	63	145.6	
#19	65	145.6	
#20	65	145.6	
1262			Sub total
INT. BENT NO. 12 (NORTHBOUND AND SOUTHBOUND LANE)			
#1	47	145.6	Batter 0 1/2" Driven to Practical Refusal
#2	47	145.6	
#3	47	145.6	
#4	47	145.6	
#5	47	145.6	
#6	47	145.6	
#7	47	145.6	
#8	47	161.7	
#9	47	145.6	
#10	47	145.6	
#11	47	145.6	
#12	47	161.7	
#13	46	145.6	
#14	47	145.6	
#15	47	145.6	
#16	46	145.6	
#17	47	145.6	
#18	46	145.6	
#19	46	145.6	
#20	46	145.6	
#21	46	145.6	
#22	46	145.6	
#23	46	145.6	
#24	46	145.6	
#25	46	145.6	
#26	46	145.6	
#27	46	145.6	
#28	46	145.6	

"AS BUILT PILE" DATA

PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
#29	47	145.6	Batter 0 1/2" Driven to Practical Refusal
#30	47	145.6	
#31	47	145.6	
#32	46	145.6	
#33	46	145.6	
#34	46	145.6	
#35	46	145.6	
#36	47	145.6	
#37	47	145.6	
#38	46	145.6	
#39	46	145.6	
#40	46	145.6	
#41	47	145.6	
#42	46	145.6	
#43	46	145.6	
#44	47	145.6	
2046			Sub total

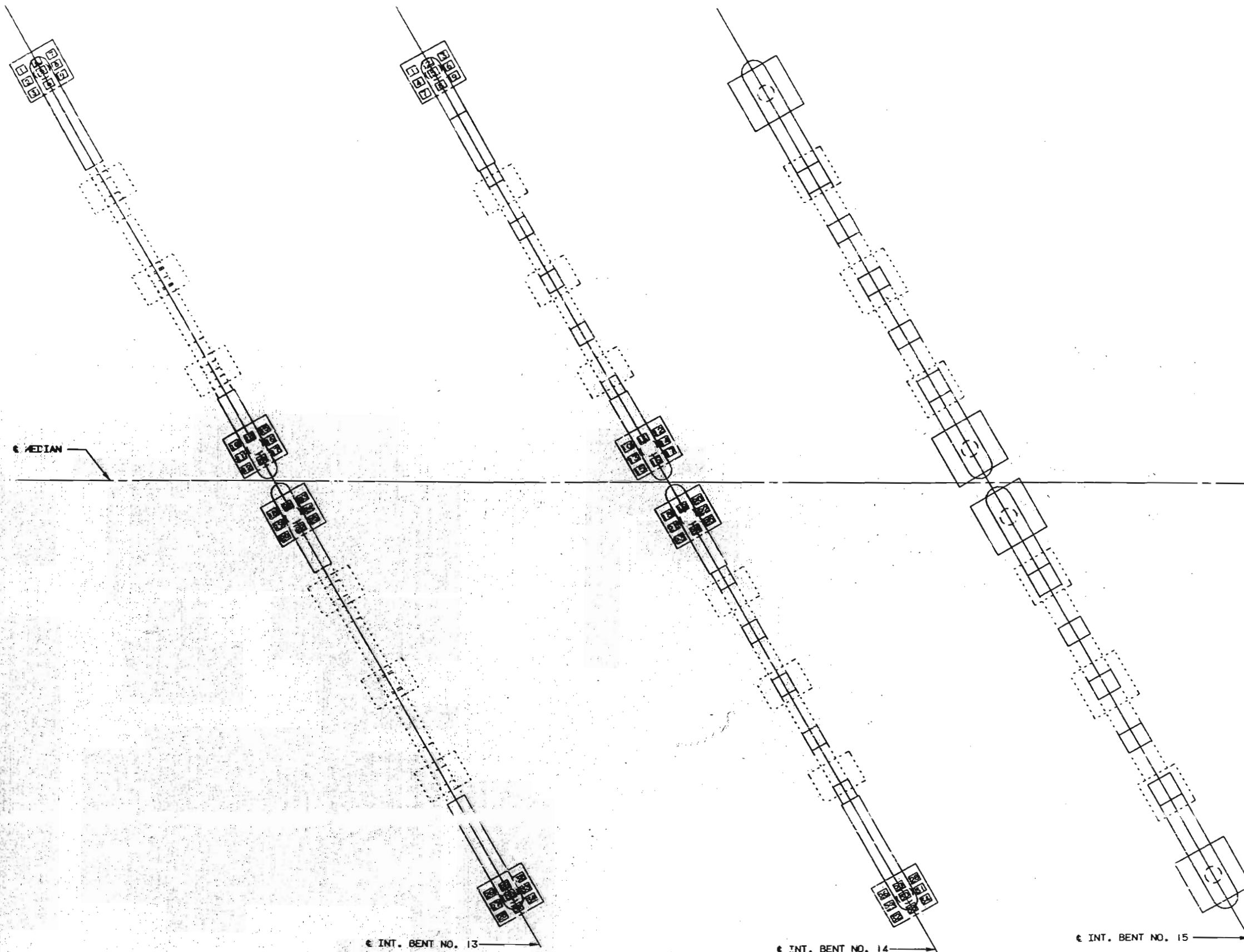
\* Note: Used 440 Hammer, Otherwise use 640 Hammer.

NOTE: INDICATE IN REMARK COLUMN:  
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.  
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.  
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

2604  
MISC. PILES IN PLACE  
REVISED  
MAY 1992

STATE	PROJ. NO.	SHEET NO.
MO.	J630426F	238



INT. BENT NO. 13

INT. BENT NO. 14

INT. BENT NO. 15

PART PLAN SHOWING PILE NUMBERING FOR RECORDING "AS BUILT PILE" DATA

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 237 OF 238

ST. LOUIS-JEFFERSON COUNTIES

A-609R

265  
 DETAILED AUG. 19 92  
 CHECKED APRIL 19 93



STATE	PROJ. NO.	SHEET NO.
MO.	3610626F	239

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
INT. BENT NO. 13 (NORTHBOUND AND SOUTHBOUND LANE)			
1	34	145.6	Batter 0°12' Driven to Practical Refusal
2	34	145.6	
3	34	145.6	
4	34	145.6	
5	34	145.6	
6	34	145.6	
7	34	145.6	
8	34	145.6	
9	34	145.6	
10	35	145.6	
11	35	161.7	
12	35	161.7	
13	35	145.6	
14	35	145.6	
15	35	145.6	
16	35	145.6	
17	35	145.6	
18	35	145.6	
19	35	145.6	
20	36	145.6	
21	35	145.6	
22	36	145.6	
23	35	145.6	
24	36	161.7	
25	36	145.6	
26	35	145.6	
27	35	161.7	
28	35	161.7	
29	35	161.7	
30	35	161.7	
31	35	161.7	
32	35	161.7	
33	35	161.7	
34	35	161.7	
1188			Sub. total

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
INT. BENT NO. 14 (NORTHBOUND AND SOUTHBOUND LANE)			
1	23	∞	Batter 0°12' Driven to Refusal
2	23	145.6	Driven to Practical Refusal
3	23	145.6	
4	23	∞	Driven to Refusal
5	23	145.6	Driven to Practical Refusal
6	23	145.6	
7	23	∞	Driven to Refusal
8	23	145.6	Driven to Practical Refusal
9	23	145.6	
10	23	266.7	
11	23	266.7	
12	23	266.7	
13	23	266.7	
14	23	266.7	
15	23	266.7	
16	23	∞	Driven to Refusal
17	23	266.7	Driven to Practical Refusal
18	23	320.0	
19	23	266.7	
20	23	266.7	
21	23	266.7	
22	23	266.7	
23	23	266.7	
24	23	266.7	
25	23	266.7	
26	23	161.7	
27	23	161.7	
28	23	161.7	
29	23	161.7	
30	23	161.7	
31	23	161.7	
32	23	161.7	
33	23	161.7	
34	23	161.7	
782			Sub. total
8	Splice	281.5 P.L. #7	
23527			Grand total

\* Note: Used 640 Hammer, otherwise used 440 Hammer.

NOTE: INDICATE IN REMARK COLUMN:  
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.  
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.  
C.) TYPE OF PILING USED.

HP10x42

NOTE: THIS SHEET TO BE COMPLETED BY MHTD CONSTRUCTION PERSONNEL.

DETAILED AUG. 1992  
CHECKED APRIL 1993

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SHEET NO. 238A OF 238.

ST. LOUIS-JEFFERSON COUNTIES A-609R

2600  
MISC. FILES IN P.L.A. 1A  
REVISED  
MAY 1992