

MINNESOTA DEPARTMENT OF TRANSPORTATION

RAMSEY COUNTY DEPARTMENT OF PUBLIC WORKS

ROSELAWN AVENUE (CSAH NO. 26)

OVER SOO LINE RAILROAD

BRIDGE NO. 62559

S.P. 62-626-03

INDEX OF SHEETS

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3.	WEST ABUTMENT PLAN AND ELEVATION
4.	WEST ABUTMENT REINFORCEMENT
5.	EAST ABUTMENT PLAN AND ELEVATION
6.	EAST ABUTMENT REINFORCEMENT
7.	ABUTMENT DETAILS
8.	WEST PIER PLAN AND ELEVATION
9.	EAST PIER PLAN AND ELEVATION
10.	FRAMING PLAN AND DETAILS
11.	PRESTRESSED BEAM DETAILS
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13.	SLAB PLAN
14.	DECK SECTIONS AND DETAILS
15.	RAILING ELEVATIONS/SIDEWALK REINFORCEMENT
16.	CONCRETE AND PIPE RAILING
17.	CONCRETE AND STEEL PIPE RAILING
18.	EXPANSION JOINT DEVICE
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20.	EXPANSION JOINT DEVICE
21.	BRIDGE APPROACH PANEL
22.	CONCRETE SLOPE PAVING
23.	BRIDGE NAMEPLATE/SOLE PLATE DETAILS
24.	BEARING ASSEMBLY DETAILS
25.	DIAPHRAGM DETAILS
26.	CONTRACTION JOINT DETAIL
27.	BRIDGE SURVEY
28.	BRIDGE SURVEY PLAN PROFILE

DESIGN SQUAD _____ DATE _____
DRAWN BY _____ DATE _____
CHECKED BY _____ DATE _____

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5-4-90 REG. NO. 17383 ENGR. *Jerry D. Petzsch*

RAMSEY COUNTY

RECOMMENDED FOR APPROVAL *DES* DATE 5-21-90
TRAFFIC ENGR.

RECOMMENDED FOR APPROVAL *James E. Smith* DATE 6-1-90
COUNTY ENGINEER

RECOMMENDED FOR APPROVAL *KHR* DATE 5-21-90
ENV. ENGR.

APPROVED _____ DATE _____
CHAIR, OF THE RAMSEY COUNTY BOARD

RECOMMENDED FOR APPROVAL *DJH* DATE 5-24-90
MAINT. ENGR.

APPROVED *James E. Smith* DATE 5/24/90
MAPLEWOOD CITY ENGINEER

RECOMMENDED FOR APPROVAL *LKF* DATE 5-22-90
CONST. ENGR.

APPROVED _____ DATE _____

RECOMMENDED FOR APPROVAL *DJR* DATE 5-21-90
DESIGN ENGR.

APPROVED _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DATE _____
ENGR.

RECOMMENDED FOR APPROVAL *Mark Smith* DATE 11-5-91
STATE AID PLANS ENGINEER

RECOM'D *Wendy Smith* DATE 5-21-90
DESIGN ENGR.

RECOMMENDED FOR APPROVAL *James E. Smith* DATE 4/21/90
DISTRICT STATE AID ENGINEER

RECOM'D *James E. Smith* DATE 6/1/90
ASSISTANT CO. ENGINEER

RECOMMENDED FOR APPROVAL *James E. Smith* DATE 11-4-91
STATE BRIDGE ENGINEER

DATE	SHEET NO.	BY

APPROVED *James E. Smith* DATE 11/5/91
STATE AID ENGINEER

28-119

PLANS SYMBOLS

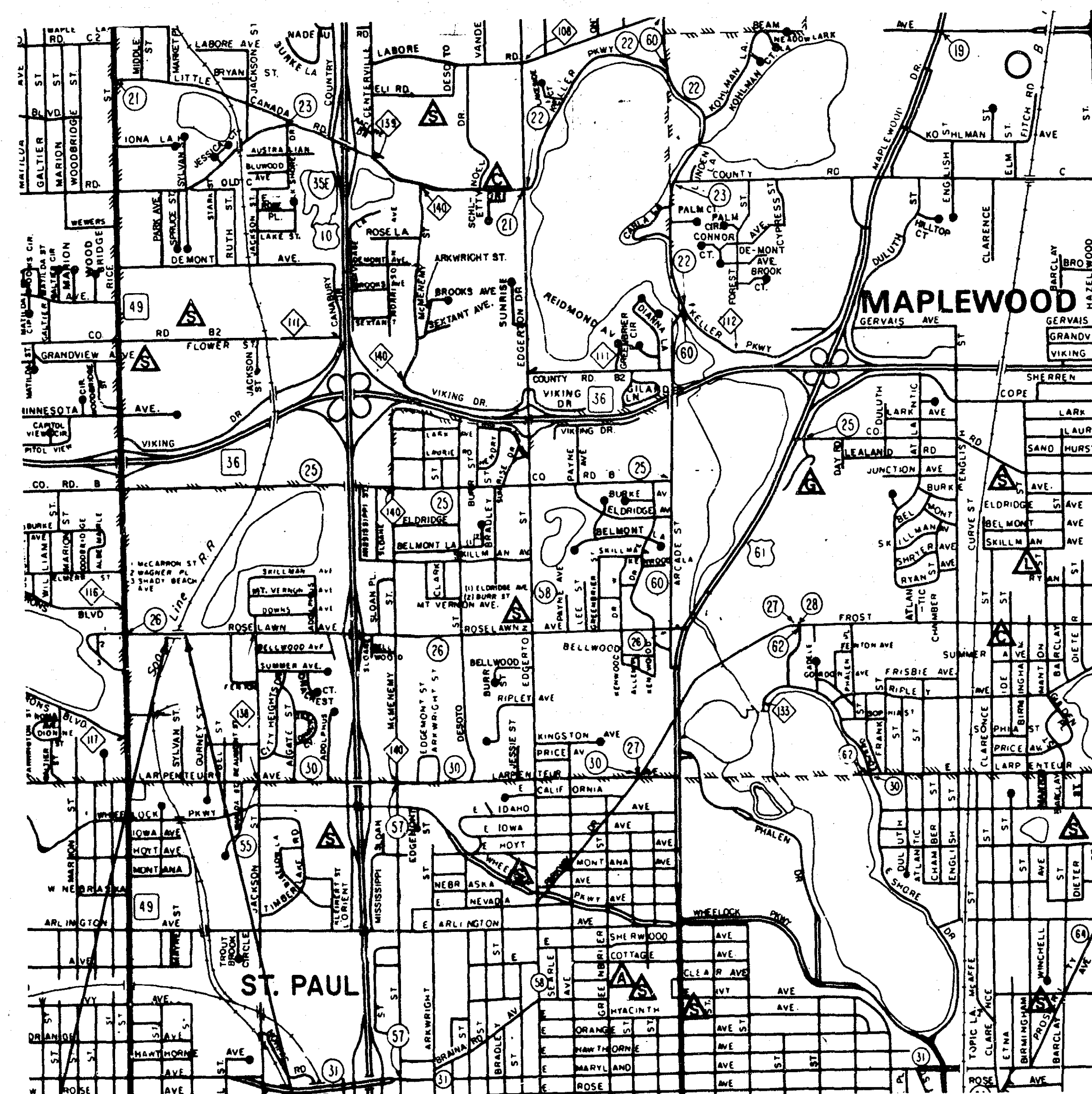
STATE LINE	SPRINGS
COUNTY LINE	MARSH
TOWNSHIP OR RANGE LINE	TIMBER
SECTION LINE	ORCHARD
QUARTER LINE	BRUSH
SIXTEENTH LINE	NURSERY
RIGHT OF WAY LINE	CATCH BASIN
PRESERVE RIGHT OF WAY LINE	FIRE HYDRANT
CONTROL OF ACCESS LINE	GAT'LE GUARD
PROPERTY LINE (Escap. Land Lines)	OVERPASS (Highway Over)
VACATED PLATTED PROPERTY	UNDERPASS (Highway Under)
CORPORATE OR CITY LIMITS	BRIDGE
TRUNK HIGHWAY CENTER LINE	BUILDING (One Story Frame)
RETAINING WALL	F FRAME C CONCRETE
RAILROAD	S STONE T TILE
RAILROAD RIGHT OF WAY LINE	B BRICK ST STUCCO
RIVER OR CREEK	IRON PIPE OR ROD
DRY RUN	MONUMENT (STONE, CONCRETE, OR METAL)
DRAINAGE DITCH	WOODEN HUB
DRAIN TILE	GRAVEL PIT
CULVERT	SAND PIT
DROP INLET	BORROW PIT
GUARD RAIL	ROCK QUARRY
BARBED WIRE FENCE	
WOVEN WIRE FENCE	
CHAIN LINK FENCE	
RAILROAD SNOW FENCE	
STONE WALL OR FENCE	
HEDGE	
RAILROAD CROSSING SIGN	
RAILROAD CROSSING BELL	
ELECTRIC WARNING SIGN	
CROSSING GATE	
MEANDER CORNER	
SLOPE EASEMENT (CONST. LIMITS)	

UTILITIES SYMBOLS

POWER POLE LINE	CONDUIT
TELEPHONE OR TELEGRAPH POLE LINE	TELEPHONE CABLE IN CONDUIT
JOINT TELEPHONE AND POWER ON POWER POLES	ELECTRIC CABLE IN CONDUIT
ON TELEPHONE POLES	TELEPHONE MANHOLE
ANCHOR	ELECTRIC MANHOLE
STEEL TOWER	BURIED TELEPHONE CABLE
STREET LIGHT	BURIED ELECTRIC CABLE
FIBER OPTIC TELEPHONE CABLE TERMINAL	AERIAL TELEPHONE CABLE
GAS MAIN	SEWER, (SANITARY OR STORM)
WATER MAIN	SEWER MANHOLE

NOTE SECTION NUMBERS REF. FROM THE SOUTH

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION AS AMENDED BY THE SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 12, 1991, SHALL GOVERN.



BEGIN PROJECT
STA 0+50.0

END PROJECT
STA 23+80.0

STREET DATA - RICE STREET TO JACKSON STREET

ADT 1991	3225
ADT 2011	4838
1, N 20 YEAR	325,000
DESIGN LOAD	10 TON
STABILOMETER "R" VALUE	17
DESIGN SPEED	40 MPH
HC ADT	350
FUNCTIONAL CLASSIFICATION	COLLECTOR-HIGH DENSITY
NO. OF TRAFFIC LANES	2
NO. OF PARKING LANES	0
BRIDGE DESIGN LOAD	HS25

DESIGN DATA

1989 (AND CURRENT INTERIM) AASHTO DESIGN SPECIFICATIONS.
DESIGN LOADING HS25 LIVE LOAD.
LOAD FACTOR DESIGN METHOD.
DEAD LOAD INCLUDES 17 P.S.F. ALLOWANCE FOR FUTURE WEARING COURSE MODIFICATIONS.
MAXIMUM ALLOWABLE DESIGN STRESSES:
REINFORCED CONCRETE
f'c = 4,000 P.S.I. n = 8
fy = 60,000 P.S.I. REINFORCEMENT.
PRESTRESSED CONCRETE
f'c = 6,530 P.S.I. n = 6
f's = 270,000 P.S.I. STRAND LOW LAX
DECK AREA = 8,514 SQ. FT.
5300 PROJECTED ADT FOR YEAR 2007
OPERATING RATING HS 43
DESIGN SPEED 40 MPH

CONSTRUCTION NOTES

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE JANUARY 2, 1991 SUPPLEMENTAL SPECIFICATION SHALL GOVERN.

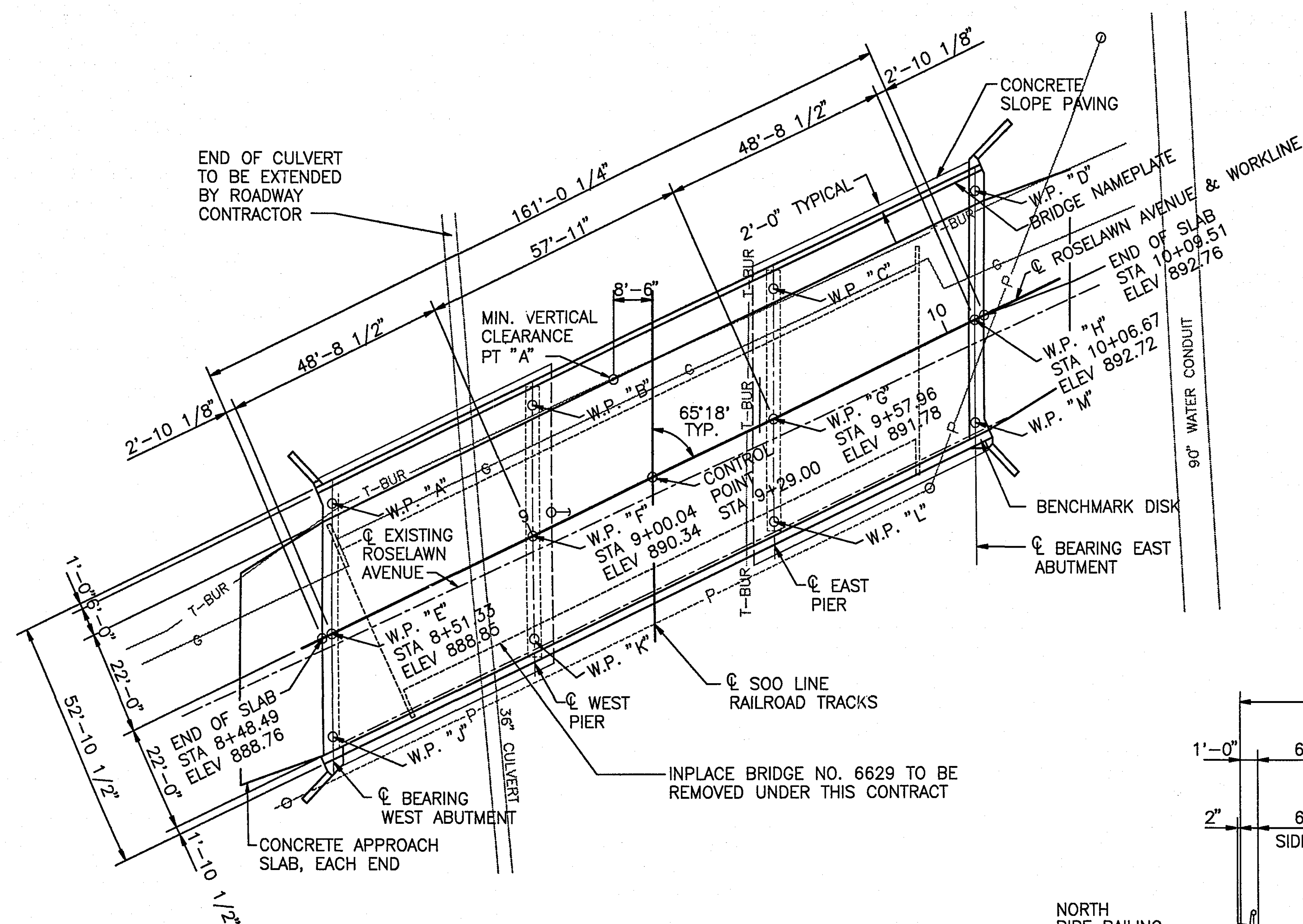
BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH DRILLING HOLES FOR ANCHOR RODS. THE SUPERSTRUCTURE BEAMS SHALL BE ERECTED IN FINAL POSITION PRIOR TO DRILLING HOLES FOR AND PLACING ANCHOR RODS.

THE FIRST DIGIT OR THE FIRST TWO DIGITS OF EACH BAR MARK INDICATE THE BAR SIZE.

BAR MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED IN ACCORDANCE WITH 3301.

RESTORE SIDE DITCHES AFTER PLACEMENT OF SLOPE PAVING TO PROVIDE DRAINAGE AS DIRECTED BY THE ENGINEER. RESTORATION COSTS SHALL BE INCLUDED IN PRICE BID FOR STRUCTURE EXCAVATION.

CONSTRUCTION OF EACH ABUTMENT SHALL NOT BE STARTED UNTIL THE APPROACH FILL AT THE ABUTMENT HAS BEEN CONSTRUCTED TO THE FULL HEIGHT AND CROSS SECTION.

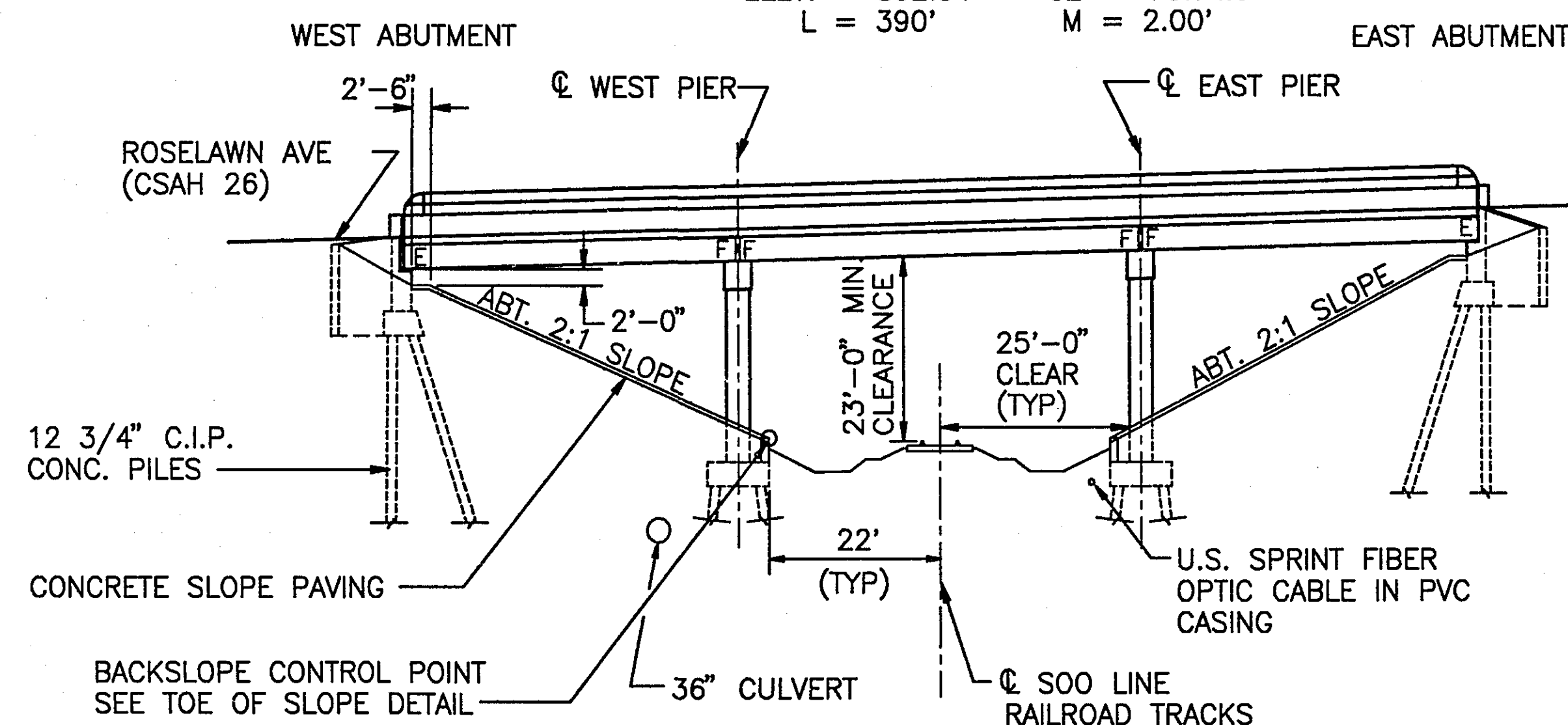


GENERAL PLAN

SCALE 0 20'

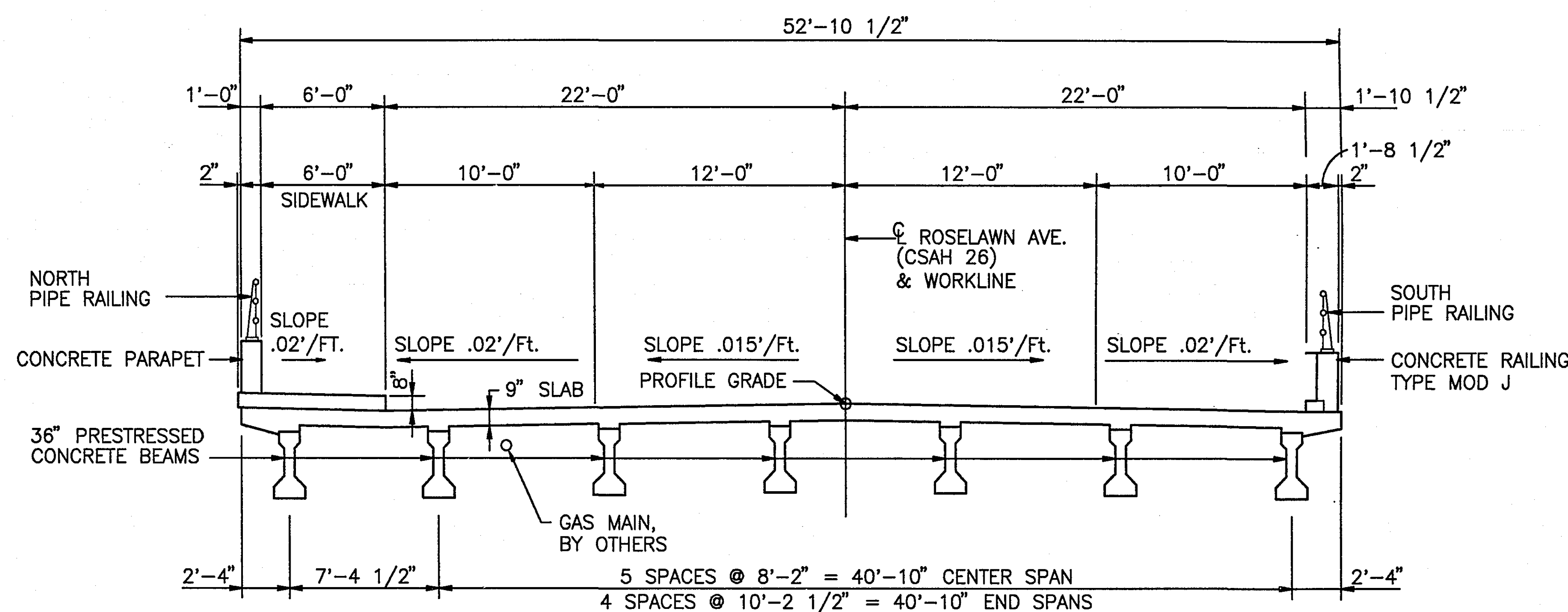
VERTICAL CURVE DATA

PVI = 9+00	G1 = +4.85%
ELEV. = 892.34	G2 = +0.74%
L = 390'	M = 2.00'



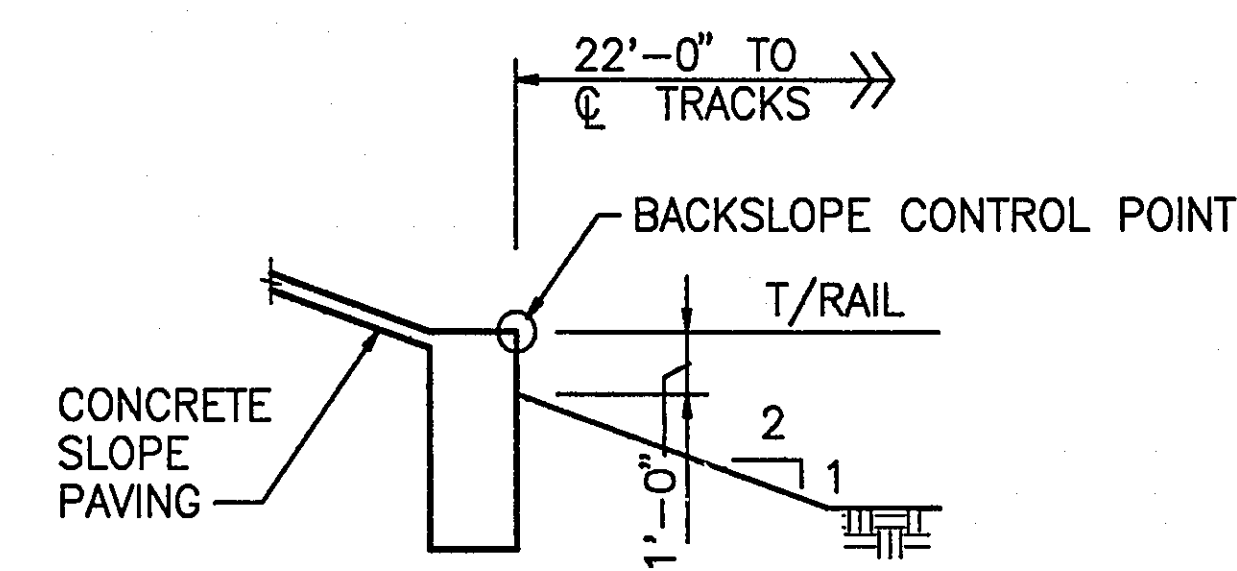
GENERAL ELEVATION

SCALE 0 20'



SECTION OF FINISHED BRIDGE DECK

SCALE 0 5'



TOE OF SLOPE DETAIL

NO SCALE

① NON-PARTICIPATING

0104.607	0505.601	0452.604	2452.507	2452.508	2452.519	2452.519
HAUL SALVAGED MATERIAL	GAS MAIN PROVISIONS	PRE-BORING (EARTH)	CAST-IN-PLACE CONC. PILING DELIVERED, 12"	CAST-IN-PLACE CONC. PILING DRIVEN, 12"	CAST-IN-PLACE CONC. TEST PILES, 70 FT. LONG, 12"	CAST-IN-PLACE CONC. TEST PILES, 50 FT. LONG, 12"
①	①					
LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH
1	1	760	2,560	2,560	2	2

SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE

ITEM NO.	2021.501	2401.501	2401.501	2401.512	2401.513	2401.513	2401.515	2401.541	2401.541	2401.543	2402.585	2402.591	2402.595	2405.502	2405.511	2442.501	2514.501	0301.601	0401.601
ITEM	MOBILIZATION	STRUCTURE CONCRETE (1A43)	STRUCTURE CONCRETE (3Y43)	BRIDGE SLAB CONCRETE (3Y33)	TYPE M RAILING CONCRETE (3Y46)	TYPE MOD J RAILING CONCRETE (3Y46)	SIWALK CONCRETE (3Y46)	REINFORCEMENT BARS	REINFORCEMENT BARS (EPOXY COATED)	SPIRAL REINFORC. (EPOXY COATED)	PIPE RAILING	EXPANSION JOINT DEVICES, TYPE 4	BEARING ASSEMBLY	PRESTRESSED CONCRETE BEAMS, TYPE 36	DIAPHRAGMS FOR TYPE 36 PRESTRESSED BEAMS	REMOVE OLD BRIDGE	CONCRETE SLOPE PAVING	BRIDGE APPROACH PANELS	STRUCTURE EXCAVATION
UNIT	LUMP SUM	CU. YD.	CU. YD.	SQ. FT.	LIN. FT.	LIN. FT.	SQ. FT.	POUND	POUND	POUND	LIN. FT.	LIN. FT.	EACH	LIN. FT.	LIN. FT.	LUMP SUM	SQ. YD.	LUMP SUM	LUMP SUM
QUANTITY	1	122 (P)	224 (P)	8,494 (P)	162 (P)	162 (P)	1,132 (P)	6,200 (P)	113,090 (P)	2,620 (P)	324 (P)	112 (P)	38	995 (P)	318 (P)	1	.662 (P)	1	1

BONESTROO, ROSENE, ANDERLIK & ASSOC., INC.
Engineers & Architects
St. Paul, Minnesota

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNED *James D. Putz*
DATE: MAY 4, 1990 REG. NO. 17383

B.M. ELEV. 866.00 (M.S.L. 1929 ADJ.)
SEE BRIDGE SURVEY SHEET No. 27

ROSELAWN AVENUE (CSAH 26)
MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE No. 62559

ROSELAWN AVE (CSAH 26) OVER SOO LINE RAILROAD. .2 MILES E. OF T.H. 49 (RICE ST.) IN MAPLEWOOD. PRESTRESSED CONCRETE BEAM SPANS 48'-8 1/2", 57'-11", 48'-8 1/2"; 44'-0" ROADWAY, 24.7' SKEW.

GENERAL PLAN AND ELEVATION

SEC. 18 T 29 N R 22 W
MAPLEWOOD CITY RAMSEY COUNTY

APPROVED: *Donald H. Plummer* 11-4-91
STATE BRIDGE ENGINEER

DES: JDP DR: JWM
CHK: GWM CHK: JDP

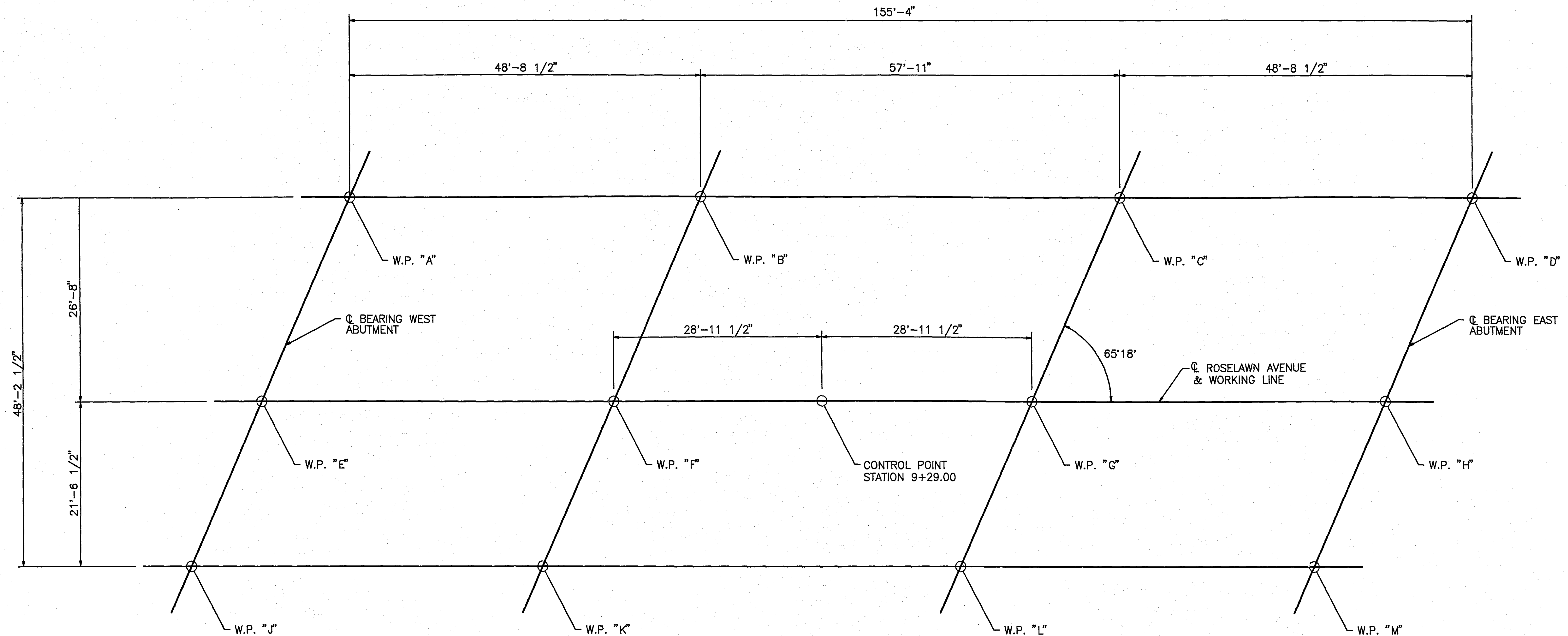
62559

Area No. . Job No. .

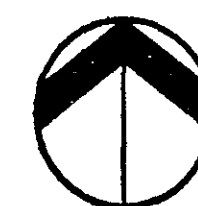
State Project No. 62-626-03

28-119

Sheet No. 1 of 28 Sheets



WORKING POINT LAYOUT
SCALE: 1/8" = 1'-0"



	DIMENSIONS BETWEEN WORKING POINTS															ELEVATIONS			
POINT	STATION	X-COORD.	Y-COORD.	A	B	C	D	E	F	G	H	J	K	L	M	TOP OF SLAB	TOP OF SLAB TO BR. SEAT	BRIDGE SEAT	POINT
A	8+63.60				48.71			29.35	45.16				55.03	97.25		888.96	4.23	884.73	A
B	9+12.31					57.92			29.35	52.87		85.72		60.02	97.24	890.38	4.25	886.13	B
C	9+70.22						48.71			29.35	45.16	137.52	93.48		55.03	891.75	4.24	887.51	C
D	10+18.93										29.35		137.52	85.72		892.63	4.23	888.40	D
E	8+51.33								48.71			23.71	44.38			888.85	—	—	E
F	9+00.04									57.92			23.71	52.63		890.34	—	—	F
G	9+57.96										48.71			23.71	44.38	891.78	—	—	G
H	10+06.67														23.71	892.72	—	—	H
J	8+41.43												48.71			888.14	4.23	883.91	J
K	8+90.13													57.92		889.68	4.25	885.43	K
L	9+48.05														48.71	891.19	4.25	886.94	L
M	9+96.76															892.17	4.23	887.94	M

TOP OF ROADWAY TO BRIDGE SEAT					
LOCATION	SLAB THICKNESS	STOOL HEIGHT	BEAM HEIGHT	BEARING HEIGHT	TOTAL
WEST ABUTMENT BEAMS NO. 1 - 6	9"	2"	3'-0"	3 3/4"	4'-2 3/4"
WEST PIER - END SPAN					
BEAMS NO. 1,2	9"	2"	3'-0"	3 3/4"	4'-2 3/4"
BEAM NO. 3	9"	2 3/4"	3'-0"	3 3/4"	4'-3 1/2"
BEAM NO. 4	9"	2 7/8"	3'-0"	3 3/4"	4'-3 5/8"
BEAM NO. 5	9"	2 3/8"	3'-0"	3 3/4"	4'-3 1/8"
BEAM NO. 6	9"	2"	3'-0"	3 3/4"	4'-2 3/4"
WEST PIER - MIDDLE SPAN					
BEAMS NO. 1,2	9"	2 1/2"	3'-0"	3 3/4"	4'-3 1/4"
BEAM NO. 3	9"	3 1/4"	3'-0"	3 3/4"	4'-4"
BEAMS NO. 4,5,6	9"	2"	3'-0"	3 3/4"	4'-2 3/4"
BEAM NO. 7	9"	2 1/2"	3'-0"	3 3/4"	4'-3 1/4"
EAST PIER - MIDDLE SPAN					
BEAMS NO. 1,2,3	9"	2"	3'-0"	3 3/4"	4'-2 3/4"
BEAM NO. 4	9"	2 1/2"	3'-0"	3 3/4"	4'-3 1/4"
BEAMS NO. 5,6,7	9"	2"	3'-0"	3 3/4"	4'-2 3/4"
EAST PIER - END SPAN					
BEAMS NO. 1,2	9"	2 3/8"	3'-0"	3 3/4"	4'-3 1/8"
BEAM NO. 3	9"	2 1/2"	3'-0"	3 3/4"	4'-3 1/4"
BEAM NO. 4	9"	3 5/8"	3'-0"	3 3/4"	4'-4 3/8"
BEAM NO. 5	9"	3 1/8"	3'-0"	3 3/4"	4'-3 7/8"
BEAM NO. 6	9"	2 3/8"	3'-0"	3 3/4"	4'-3 1/8"
EAST ABUTMENT BEAMS NO. 1 - 6	9"	2"	3'-0"	3 3/4"	4'-2 3/4"

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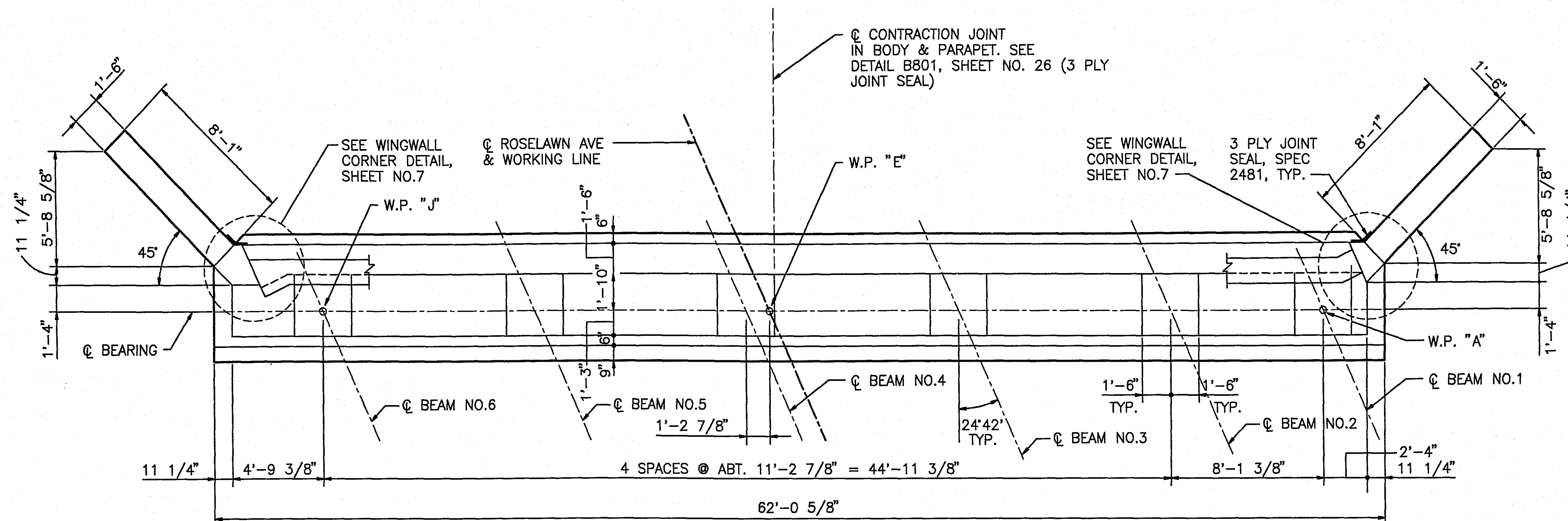
Title: BRIDGE LAYOUT

DES: MTR/JDP DR: JWM APPROVED: 11-4-91
CHK: GWM CHK: JDP

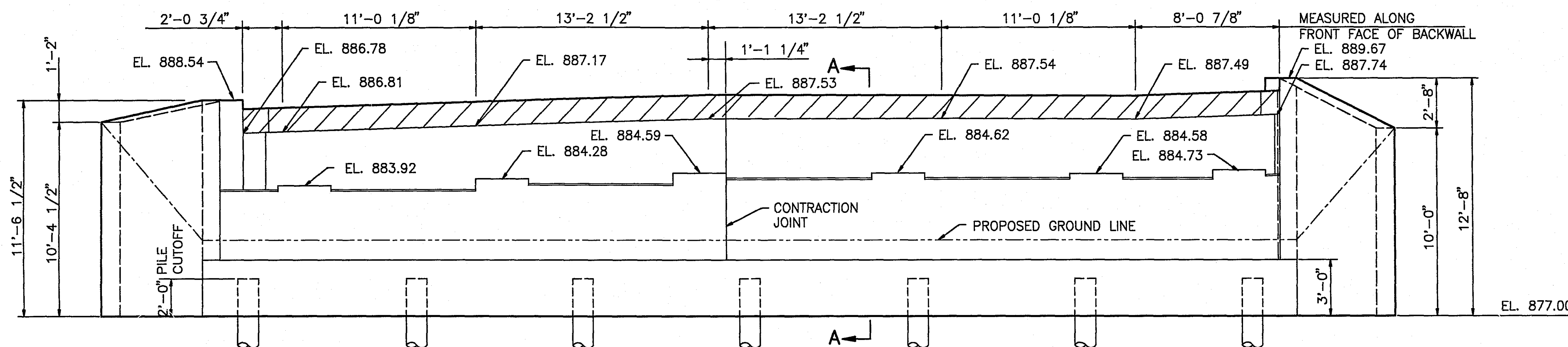
Bridge No.

Sheet No. 2 of 28 Sheets

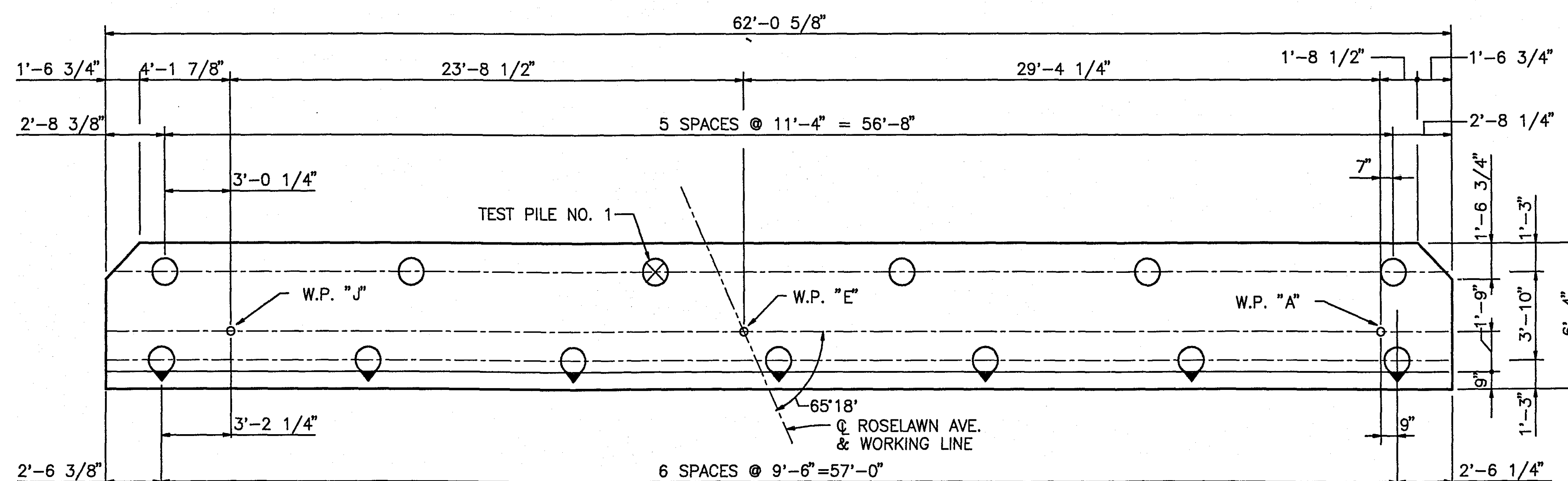
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WEST ABUTMENT PLAN
SCALE: 1/4"=1'-0"



WEST ABUTMENT ELEVATION
SCALE: 1/4"=1'-0"

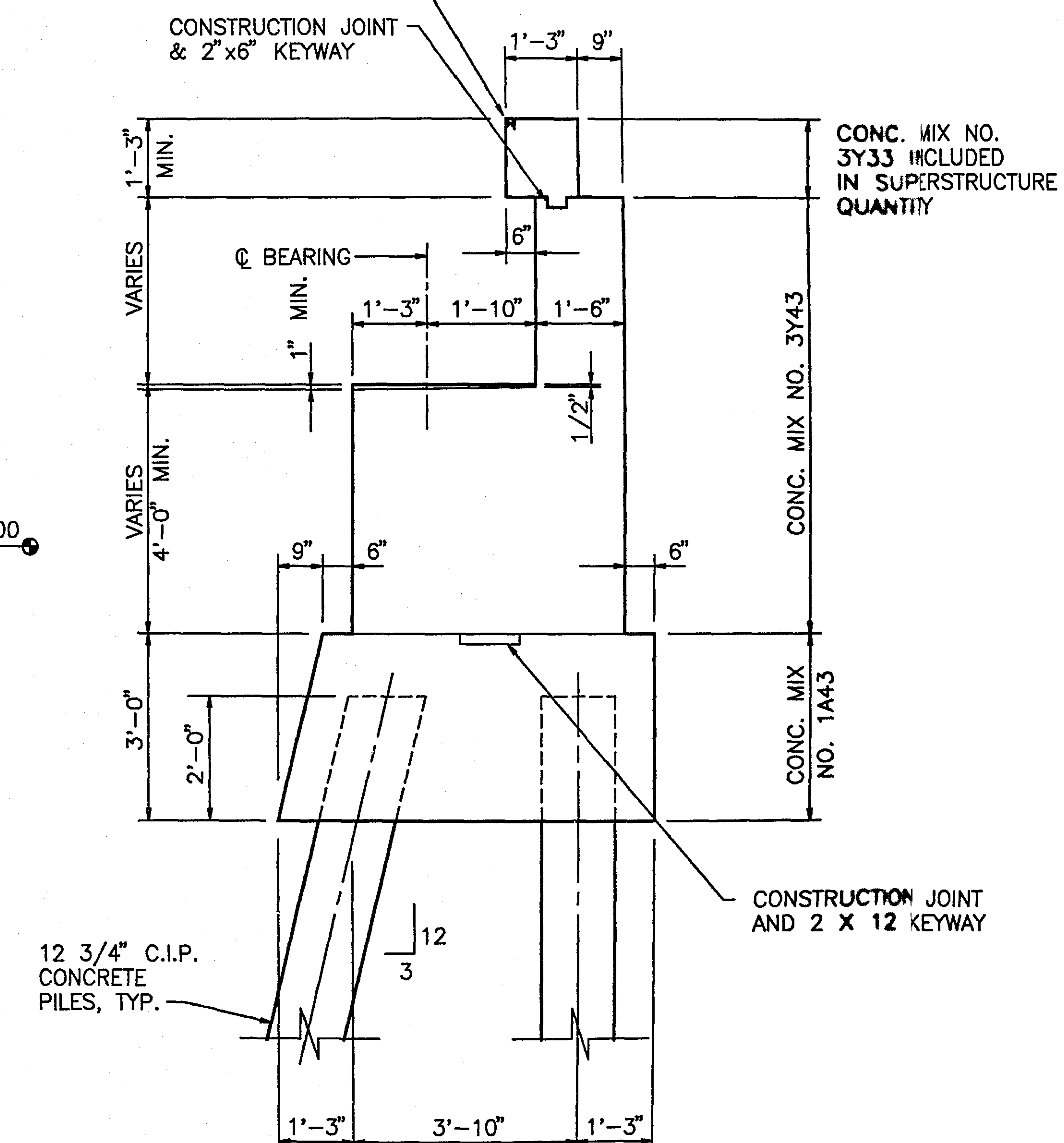


WEST ABUTMENT FOOTING PLAN
SCALE: 1/4"=1'-0"

SUMMARY OF QUANTITIES FOR TWO ABUTMENTS		
ITEM NO.	QUANTITY	UNIT
STRUCTURE CONCRETE MIX NO. 1A43	76	CU. YD.
STRUCTURE CONCRETE MIX NO. 3Y43	133	CU. YD.
REINFORCEMENT BARS	4,200	LB.
REINFORCEMENT BARS (EPOXY COATED)	13,720	LB.
① C.I.P. CONC. PILING, DELIVERED, 12 3/4"	1,440	LIN. FT.
① C.I.P. CONC. PILING, DRIVEN, 12 3/4"	1,440	LIN. FT.
C.I.P. TEST PILE, 70 FT. LG., 12 3/4"	2	EACH
② BENCH MARK DISK	1	EACH
③ 1" THICK CORK	73	SQ. FT.

- ① DOES NOT INCLUDE TEST PILES
- ② STATE WILL FURNISH DISK. PAYMENT FOR PLACING TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS. SEE STANDARD PLATE NO. 9301 FOR PLACING OF DISK IN CONCRETE.
- ③ TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS

WATERPROOF EXPANSION JOINT DEVICE. SEE DETAILS ON SHEETS 18, 19, & 20.



SECTION A-A
SCALE: 1/2"=1'-0"

- NOTE:
1. PILES MARKED ARE TO BE BATTERED 3" PER FOOT IN DIRECTION INDICATED.
2. INDICATES TEST PILE.
3. FOR LIMITS OF EXCAVATION, SEE SHEET NO. 5.

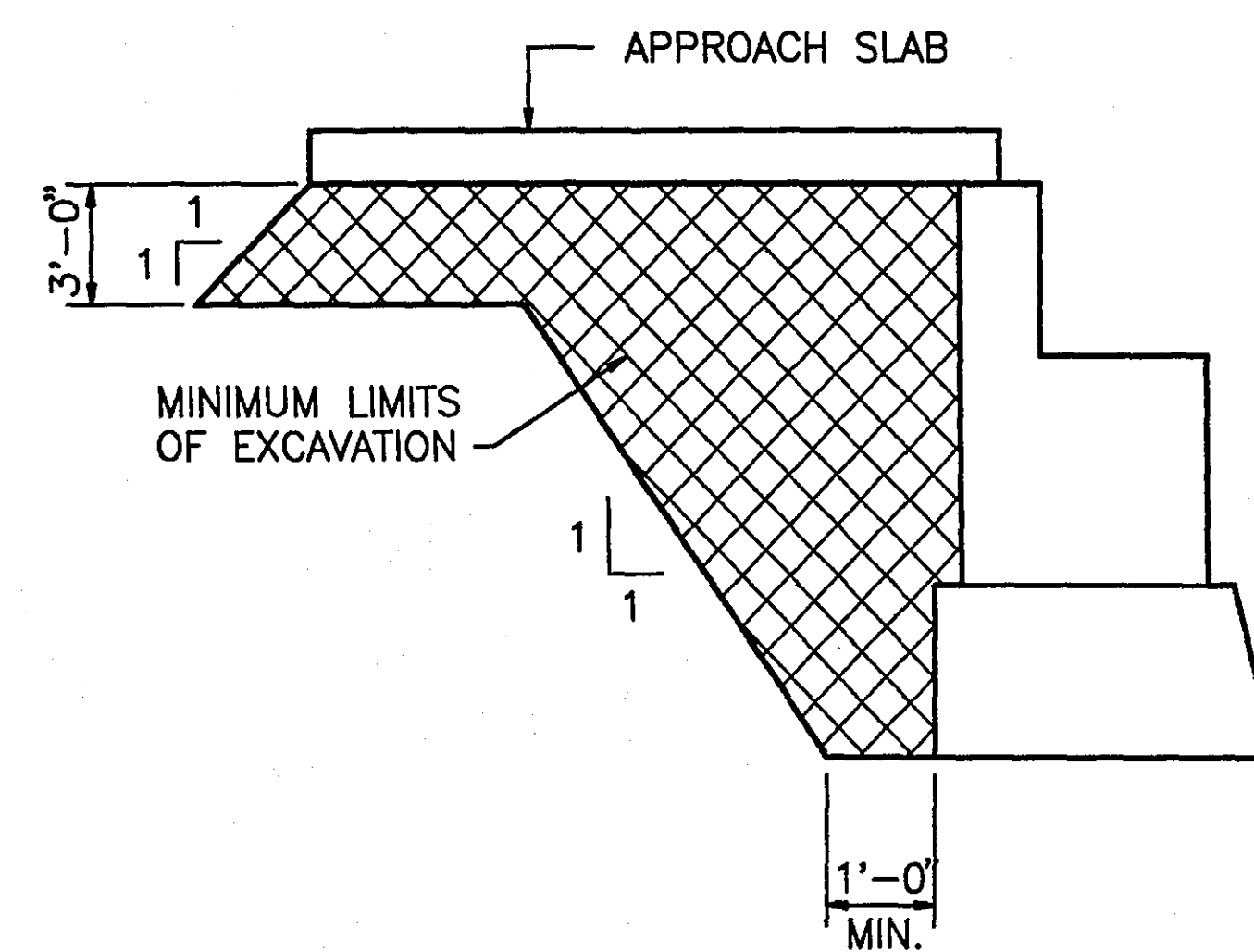
Title: **WEST ABUTMENT PLAN AND ELEVATION**

S.P. 62-626-03

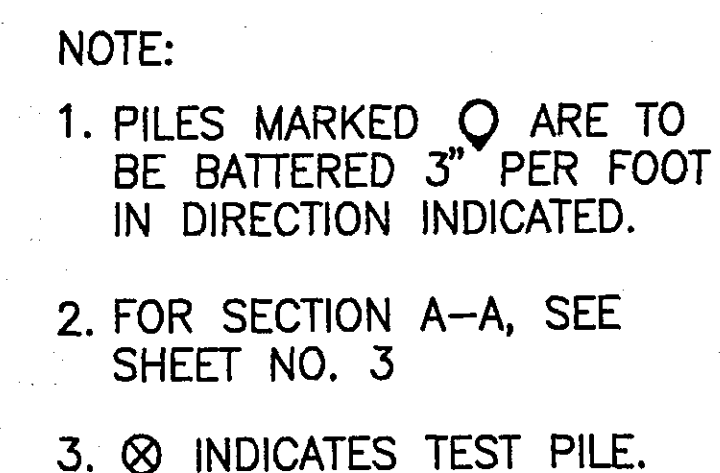
DES: JDP DR: JWM APPROVED: 11-4-91
CHK: GWM CHK: JDP
Sheet No. 3 of 28 Sheets

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Bridge No. 62559





LIMITS OF EXCAVATION

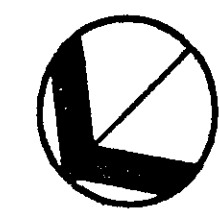


Title: EAST ABUTMENT PLAN
AND ELEVATION

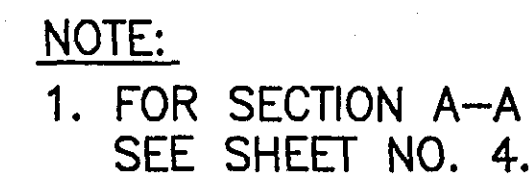
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Bridge No.

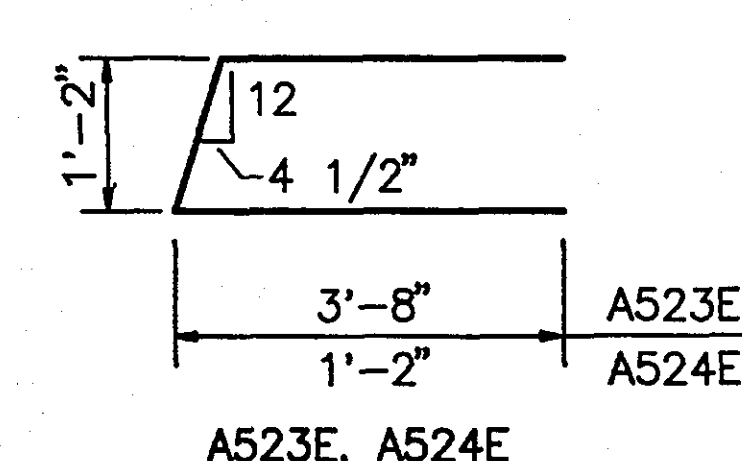
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SCALE: 1/4"=1'-0"

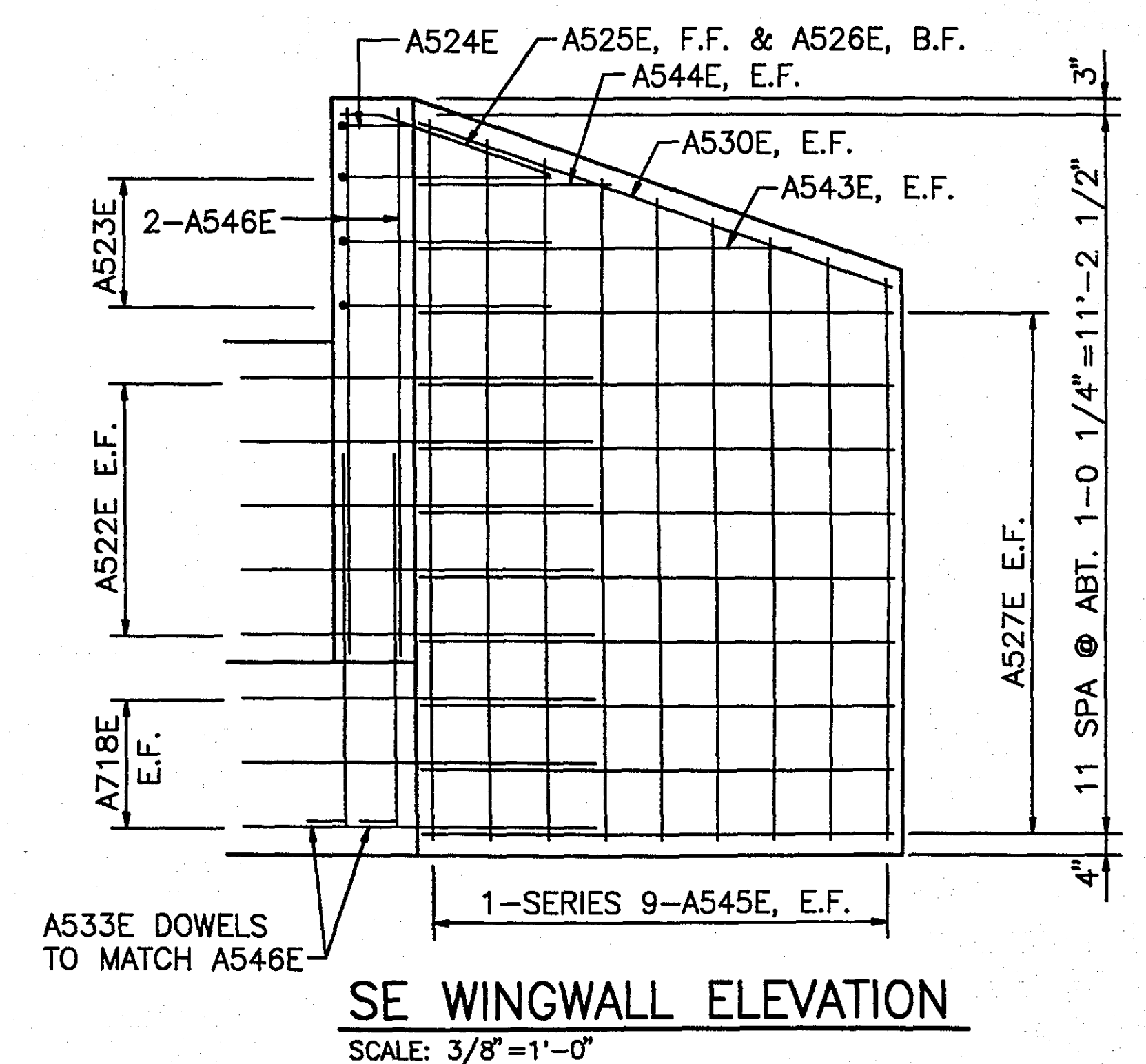
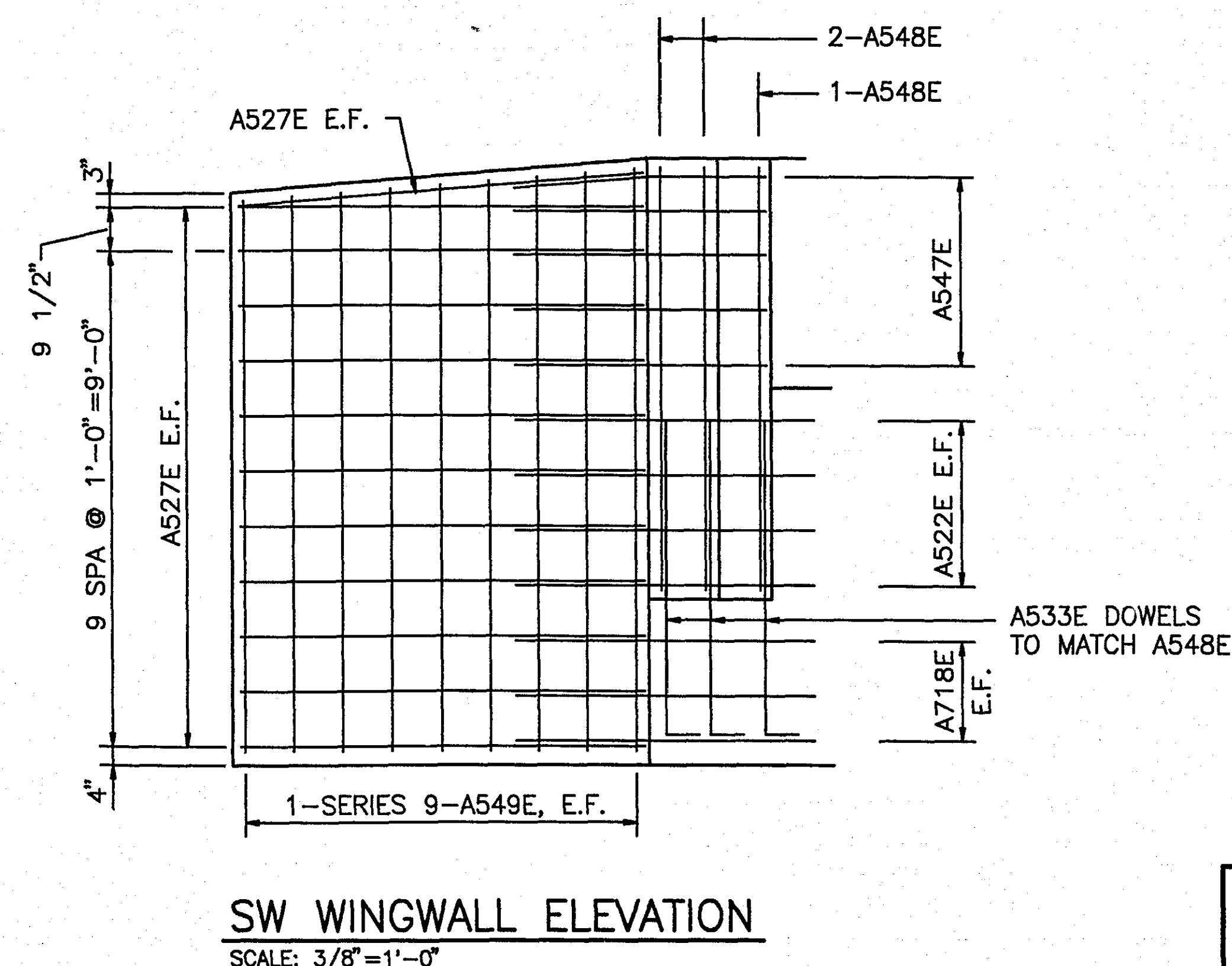
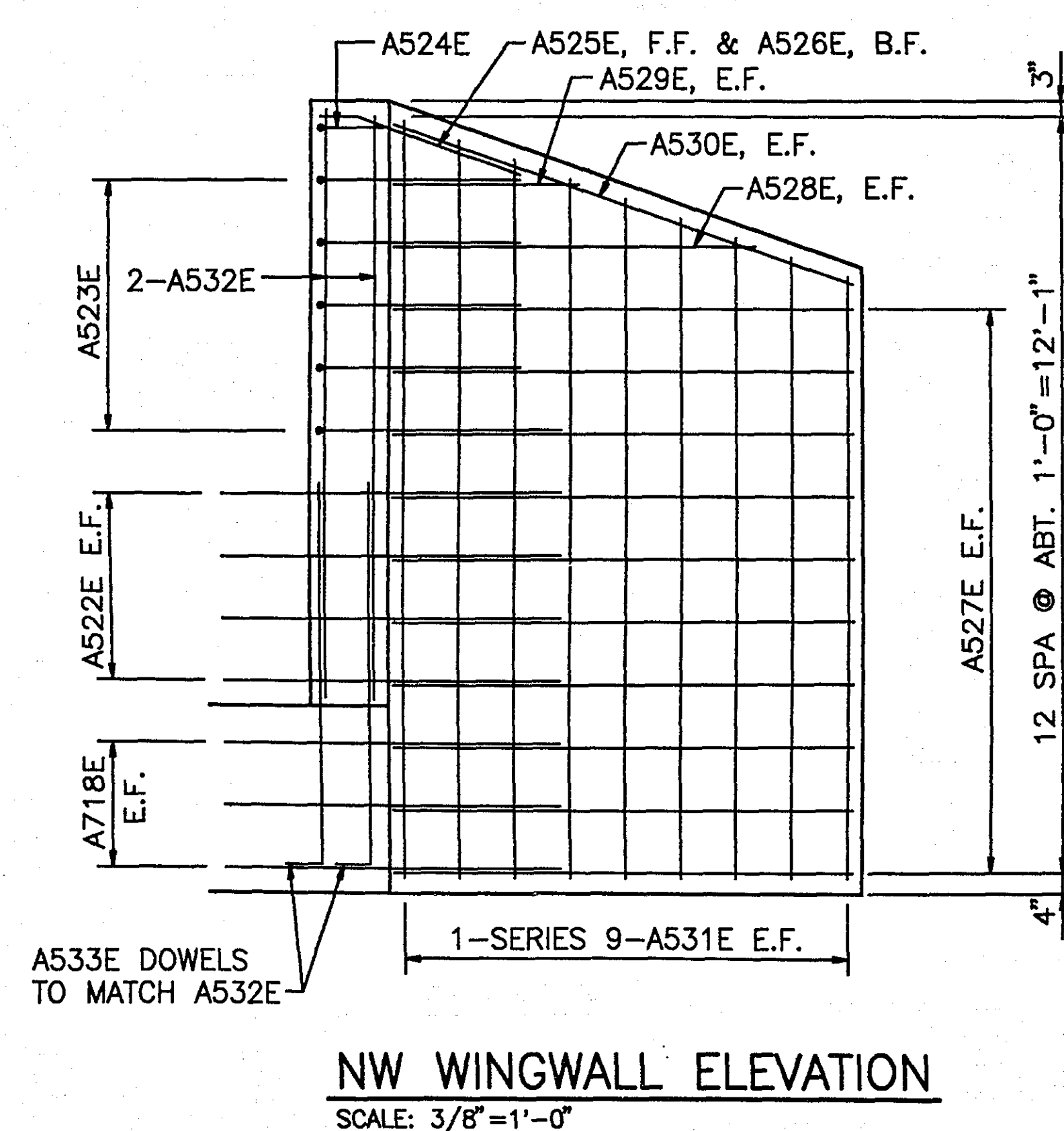
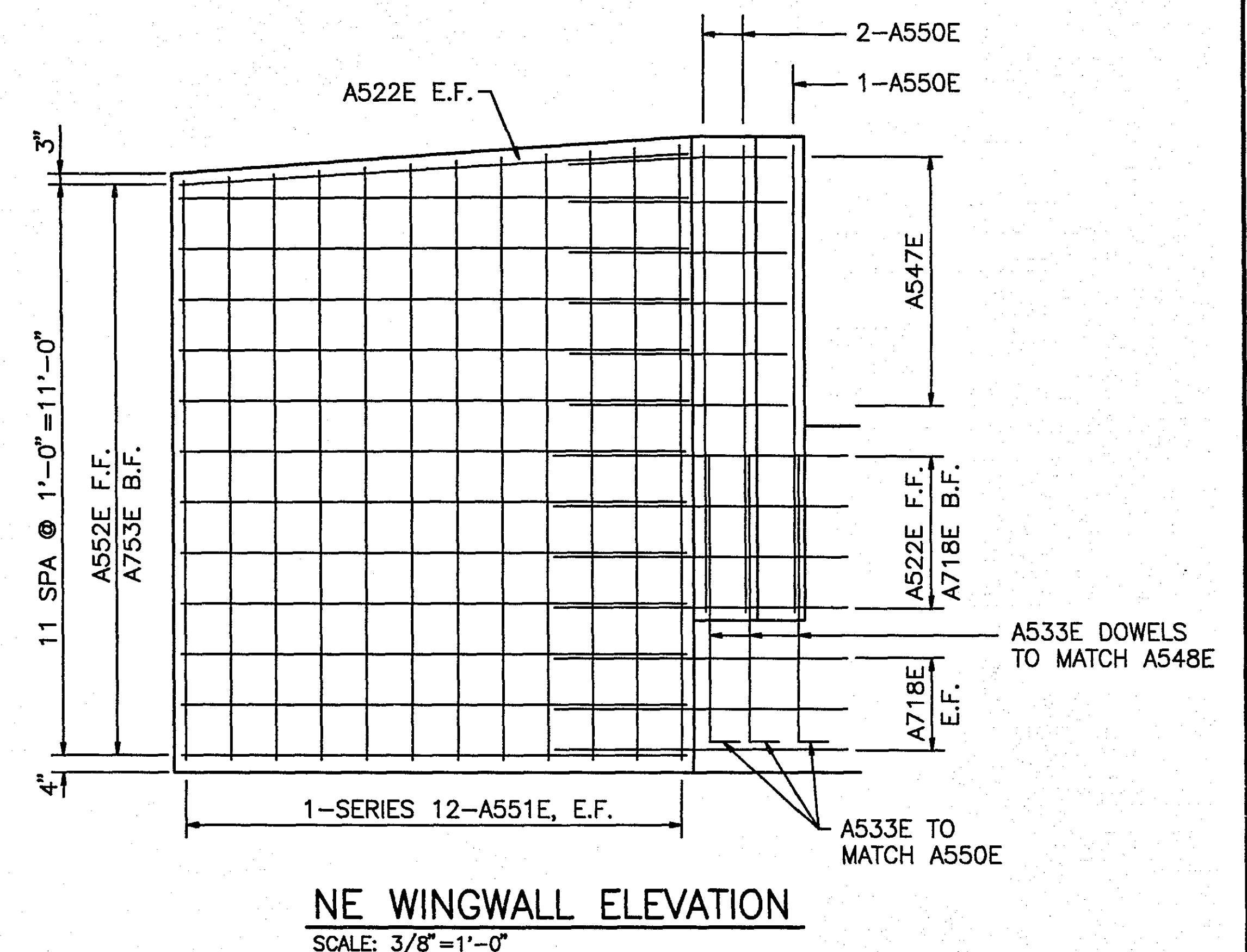
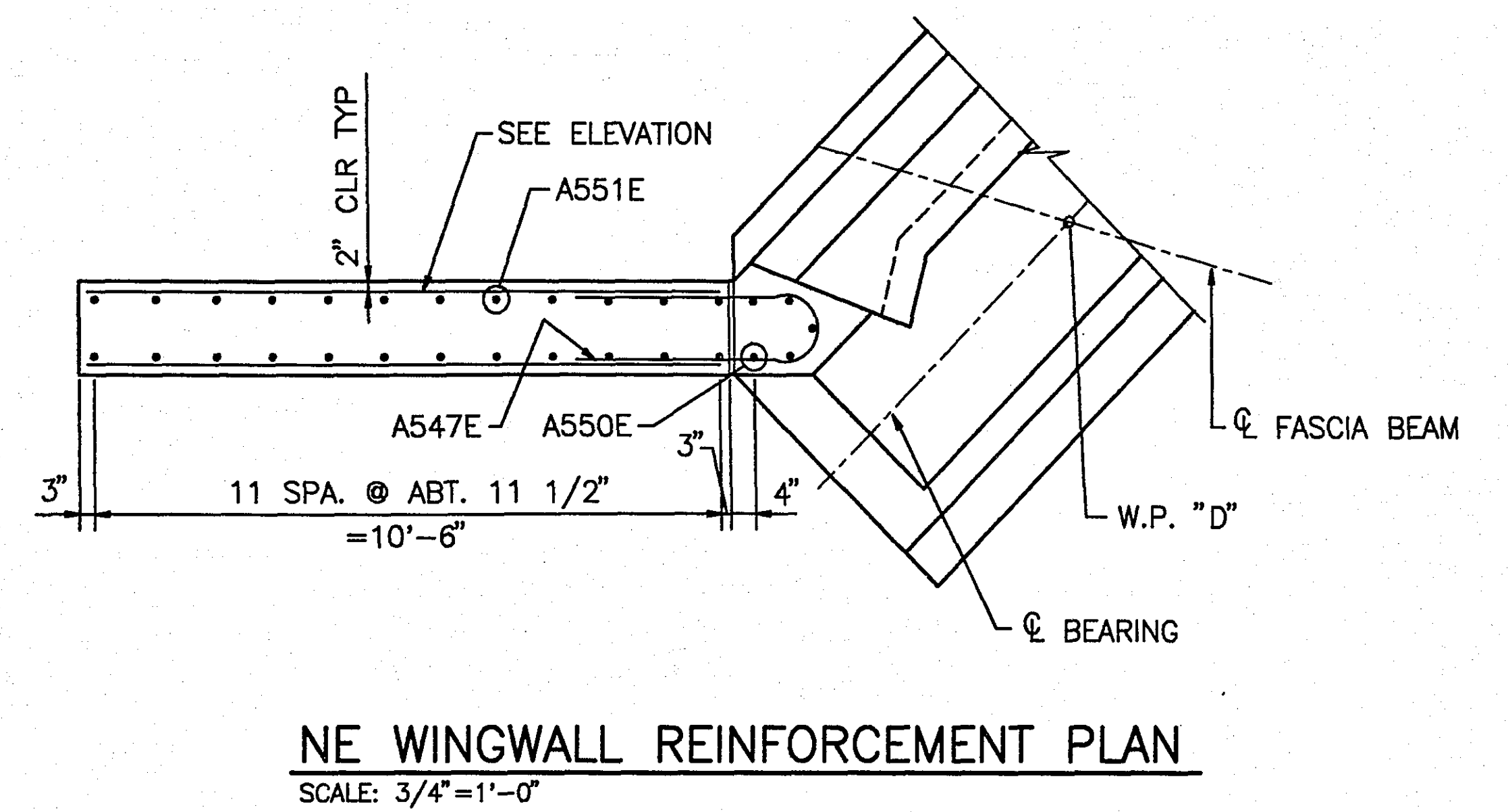
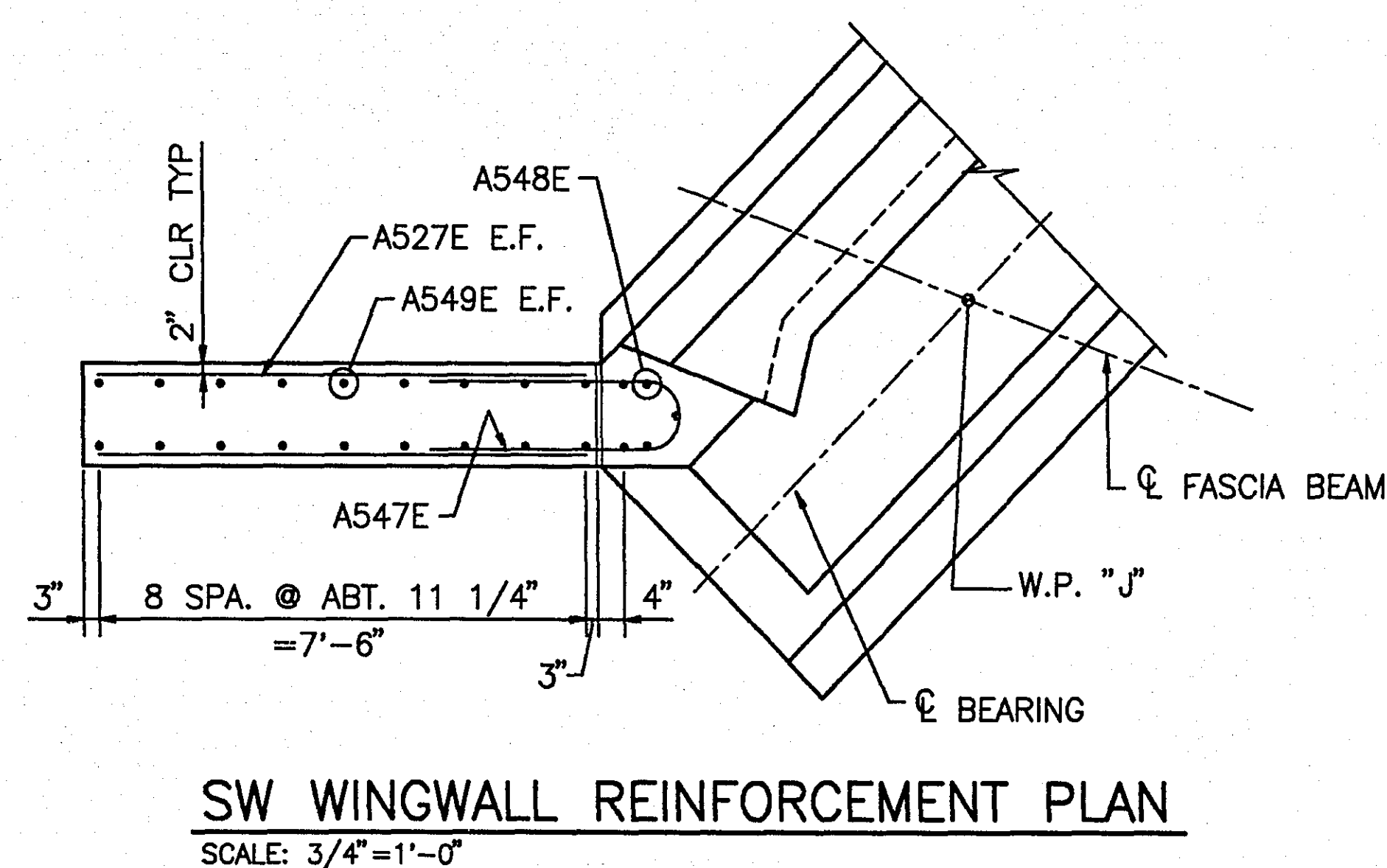
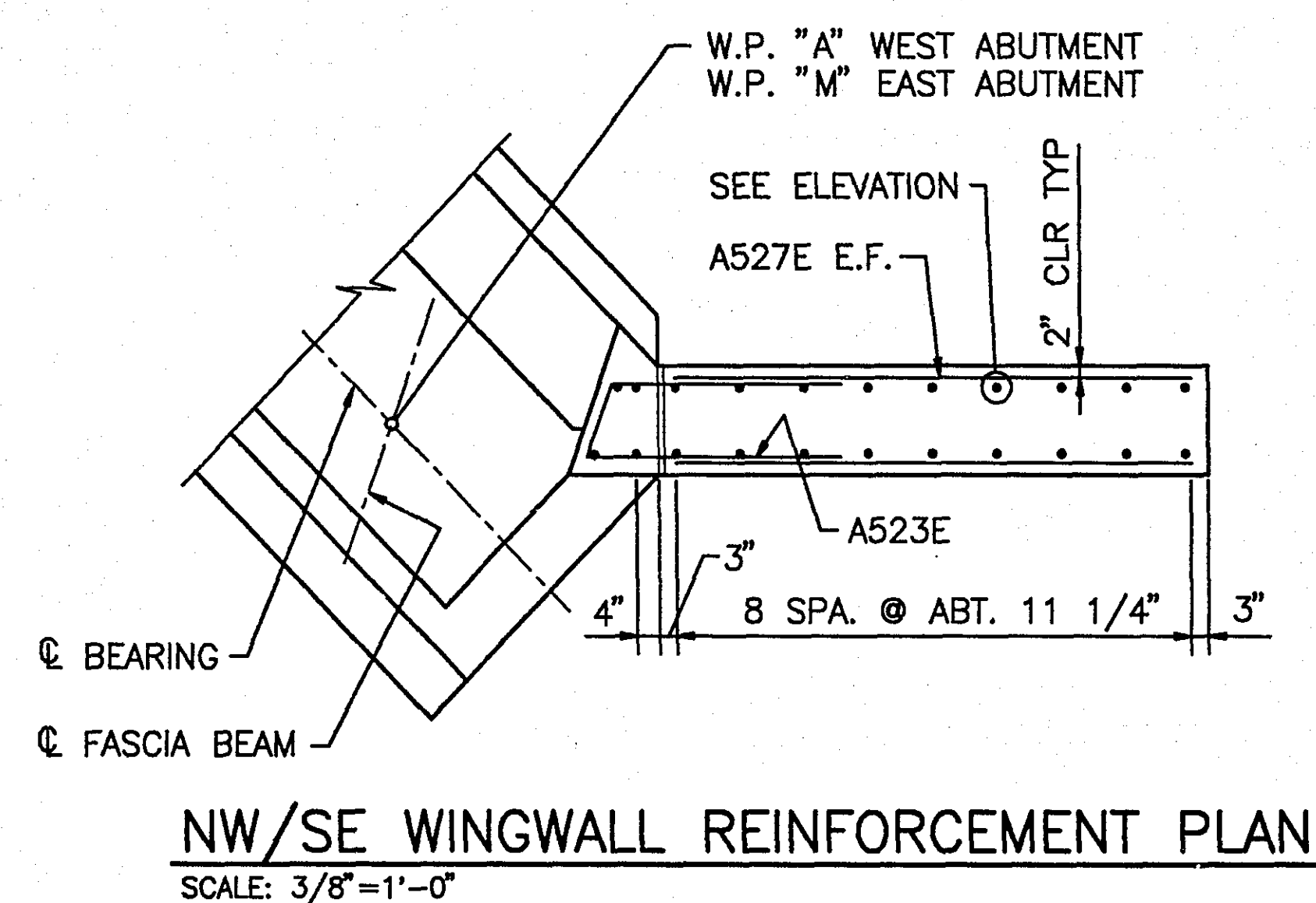
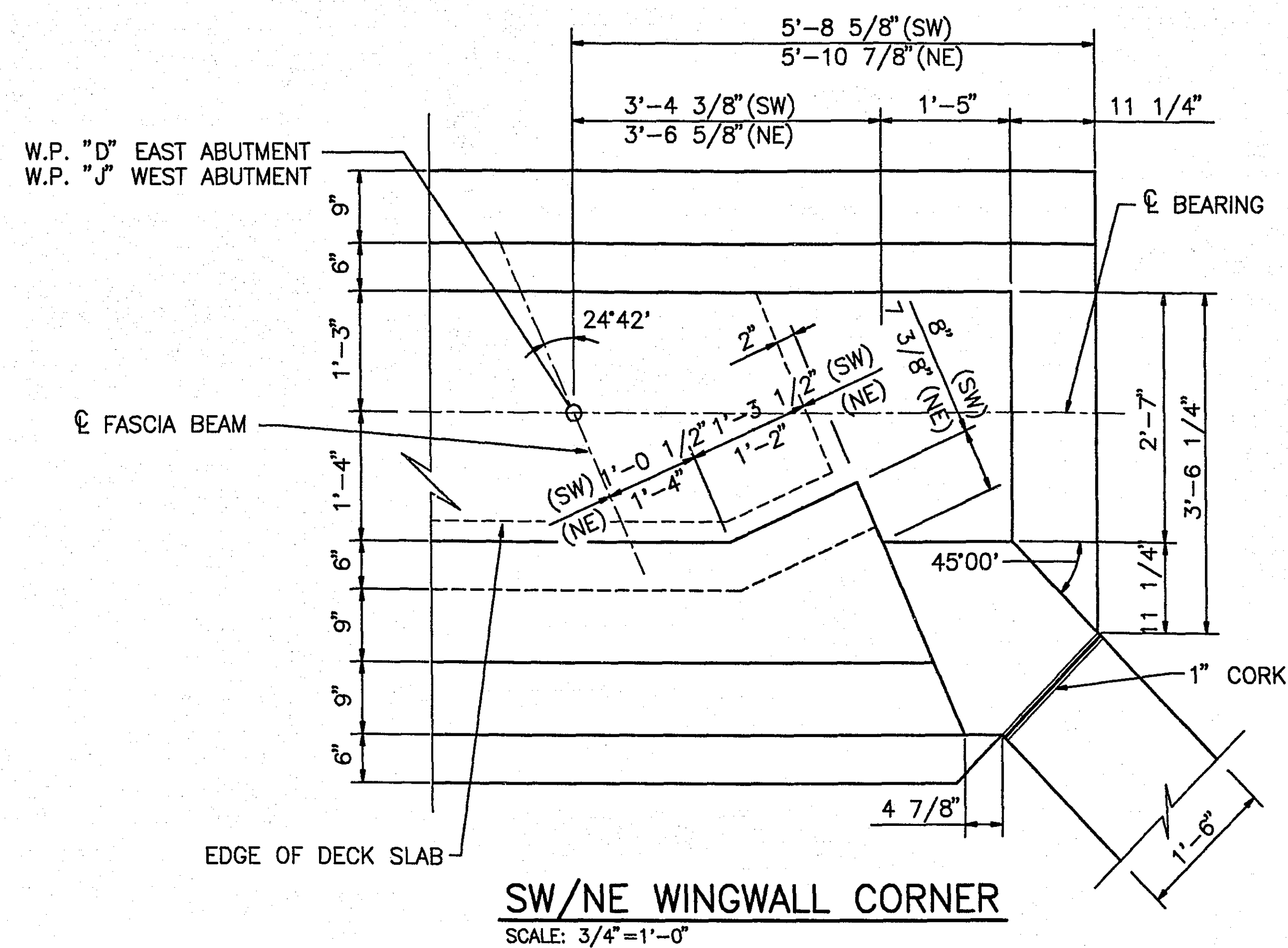
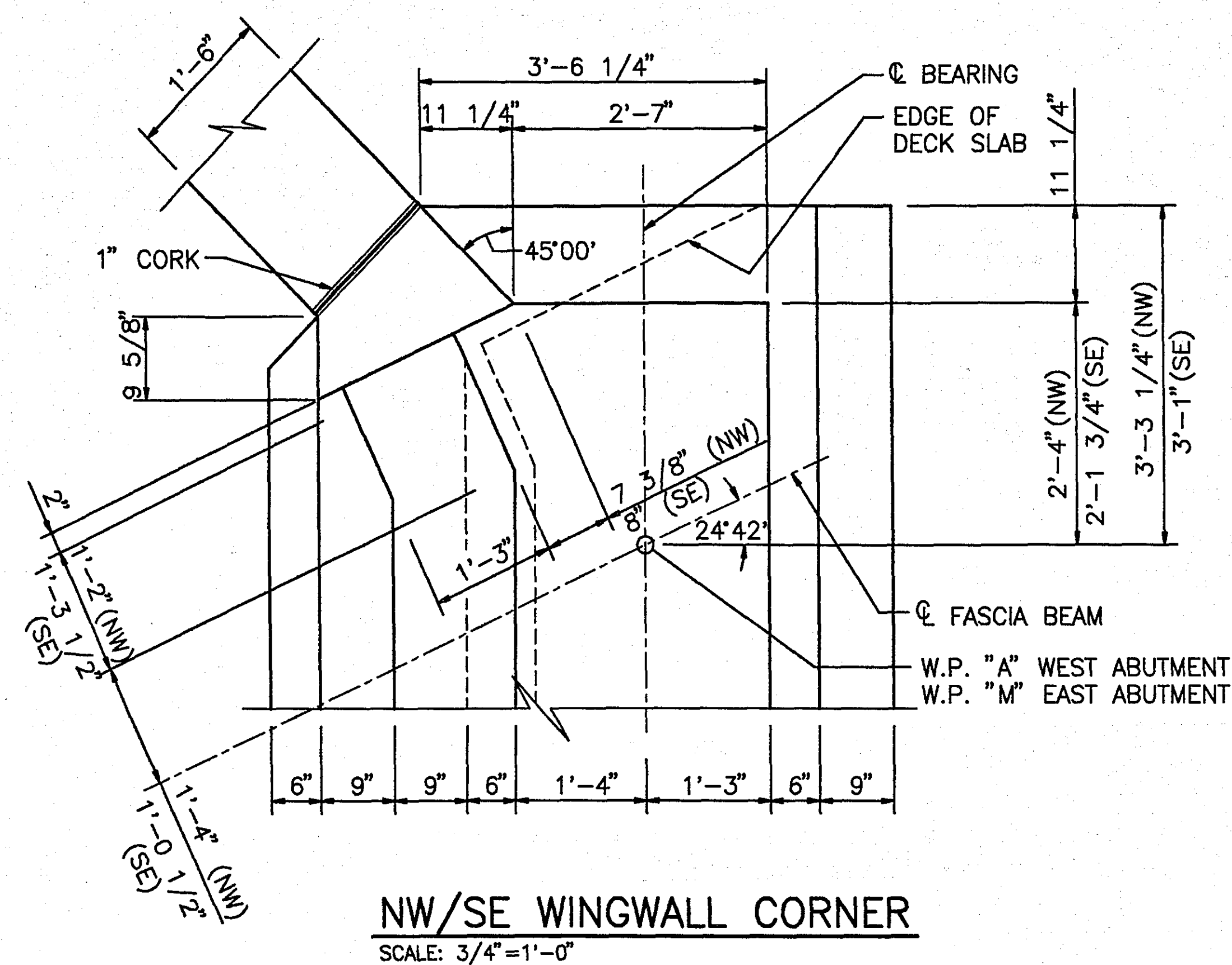


SCALE: $1/4" = 1'-0"$



MARK	NUMBER	LENGTH	SHAPE	LOCATION
A601	28	32'-3"	STR	FOOTING - LONGITUDINAL
A602	12	31'-0"	STR	FOOTING - LONGITUDINAL
A503	88	18'-3"	BENT	FOOTING TIES
A604E	176	6'-4"	STR	WALL DOWELS
A605	12	12'-3"	BENT	FOOTING - LONGITUDINAL
A606E	13	31'-2"	STR	BARREL - LONGITUDINAL
A607E	13	28'-6"	STR	BARREL - LONGITUDINAL
A508E	166	9'-8"	BENT	BARREL TIES
A509E	4	31'-11"	STR	PARAPET LONGITUDINAL
A510E	4	31'-2"	STR	PARAPET LONGITUDINAL
A511E	4	29'-4"	STR	PARAPET LONGITUDINAL
A512E	4	28'-5"	STR	PARAPET LONGITUDINAL
A513E	242	6'-7"	STR	PARAPET VERTICAL
A414E	121	5'-8"	BENT	PARAPET TIES
A515E	121	4'-6"	BENT	PAVING BLOCK TIES
A516E	121	3'-7"	BENT	PAVING BLOCK TIES
A517	4	16'-1"	BENT	FOOTING TIES
A718E	28	6'-0"	STR	WINGWALL DOWELS
A519E	72	5'-8"	BENT	PEDESTAL TIES
A1020E	4	14'-1"	BENT	RAILING END POST DOWEL
A1121E	12	9'-10"	STR	RAILING END POST DOWEL
A522E	28	6'-0"	STR	WINGWALL DOWELS
A523E	9	8'-2"	BENT	WINGWALL DOWELS
A524E	2	3'-2"	BENT	WINGWALL DOWELS
A525E	2	3'-1"	BENT	WINGWALL DOWELS
A526E	2	3'-7"	BENT	WINGWALL DOWELS
A527E	62	7'-8"	STR	WINGWALL - HORIZONTAL
A528E	2	6'-5"	STR	WINGWALL - HORIZONTAL
A529E	2	3'-5"	STR	WINGWALL - HORIZONTAL
A530E	4	8'-1"	STR	WINGWALL - HORIZONTAL
A531E	2 SER OF 9	8'-8" TO 12'-3"	STR	WINGWALL - VERTICAL
A532E	4	9'-6"	STR	WINGWALL - VERTICAL
A533E	18	6'-10"	BENT	WINGWALL DOWELS
A537E	4	34'-8"	STR	PARAPET LONGITUDINAL
A538E	4	33'-11"	STR	PARAPET LONGITUDINAL
A539E	4	26'-8"	STR	PARAPET LONGITUDINAL
A540E	4	25'-11"	STR	PARAPET LONGITUDINAL
A641E	13	33'-9"	STR	BARREL - LONGITUDINAL
A642E	13	25'-10"	STR	BARREL - LONGITUDINAL
A543E	2	6'-11"	STR	WINGWALL - HORIZONTAL
A544E	2	3'-8"	STR	WINGWALL - HORIZONTAL
A545E	2 SER OF 9	8'-11" TO 11'-5"	STR	WINGWALL - VERTICAL
A546E	4	8'-7"	STR	WINGWALL - VERTICAL
A547E	11	8'-8"	BENT	WINGWALL - DOWELS
A548E	5	7'-10"	STR	WINGWALL - VERTICAL
A549E	2 SER OF 9	10'-0" TO 10'-8"	STR	WINGWALL - VERTICAL
A550E	5	9'-5"	STR	WINGWALL - VERTICAL
A551E	2 SER OF 12	11'-3" TO 12'-3"	STR	WINGWALL - VERTICAL
A552E	13	10'-8"	STR	WINGWALL - HORIZONTAL
A753E	13	10'-8"	STR	WINGWALL - HORIZONTAL
A554E	8	4'-4"	BENT	PARAPET TIES

62559



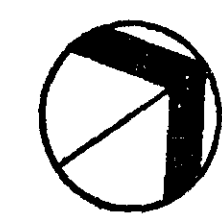
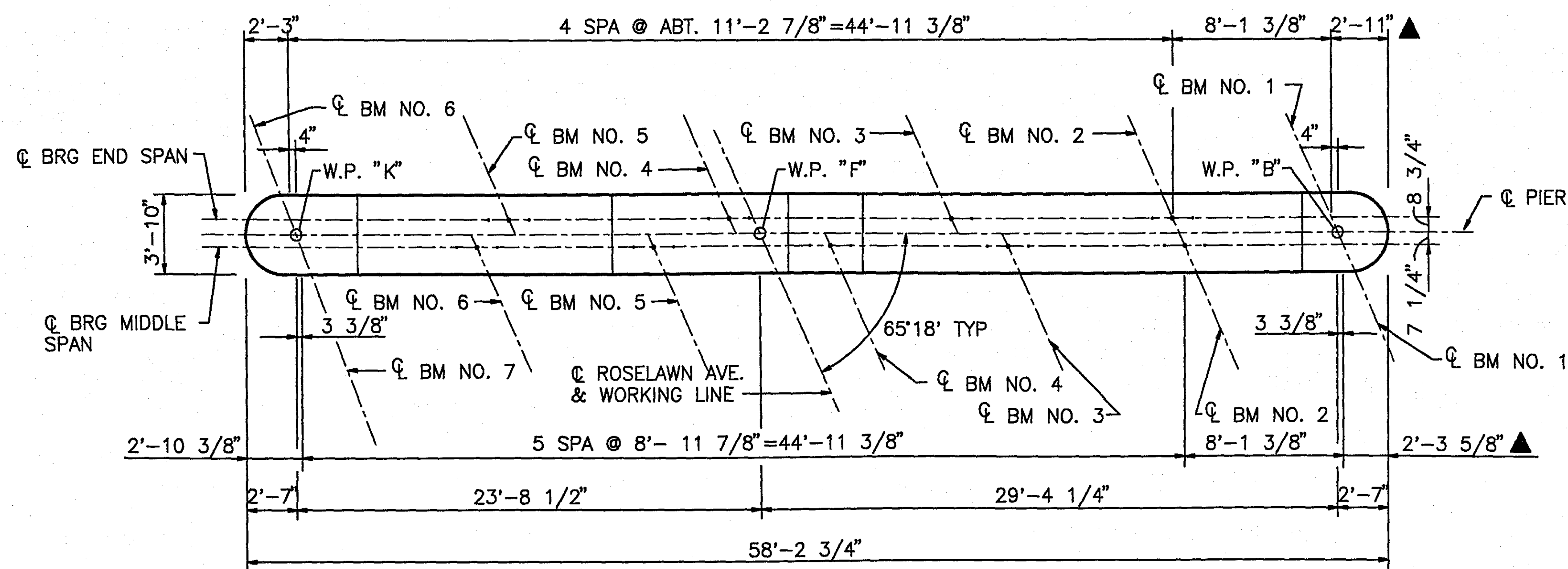
S.P. 62-626-03

Title: ABUTMENT DETAILS

DES: JDP	DR: LHK	APPROVED: 11-4-91
CHK: GWM	CHK: JDP	

Sheet No. 7 of 28 Sheets

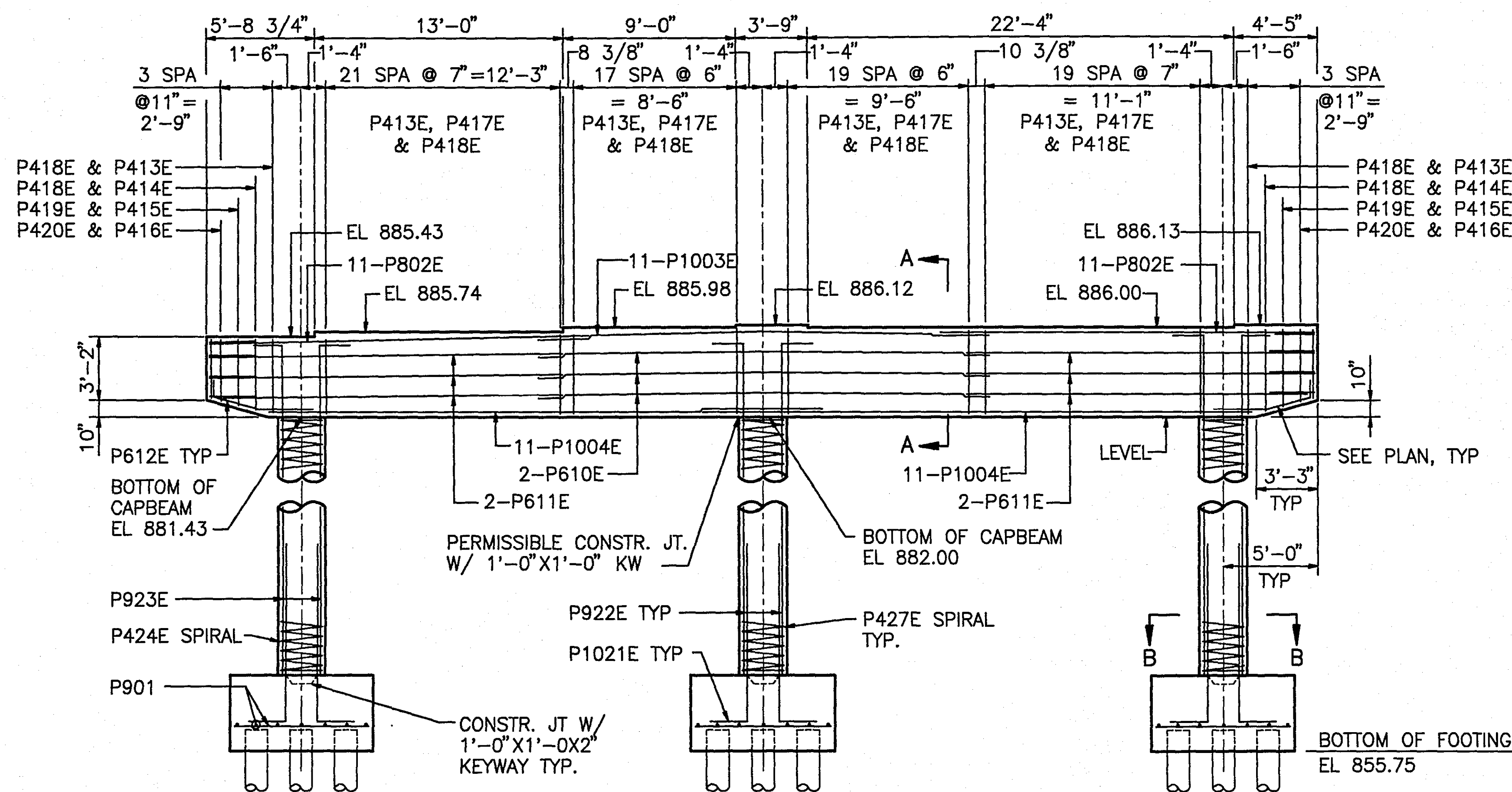
Bridge No.
62559



WEST PIER CAP PLAN

SCALE: 3/16"=1'-0"

▲ MEASURED ALONG CL BEARING

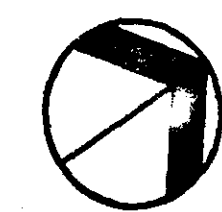
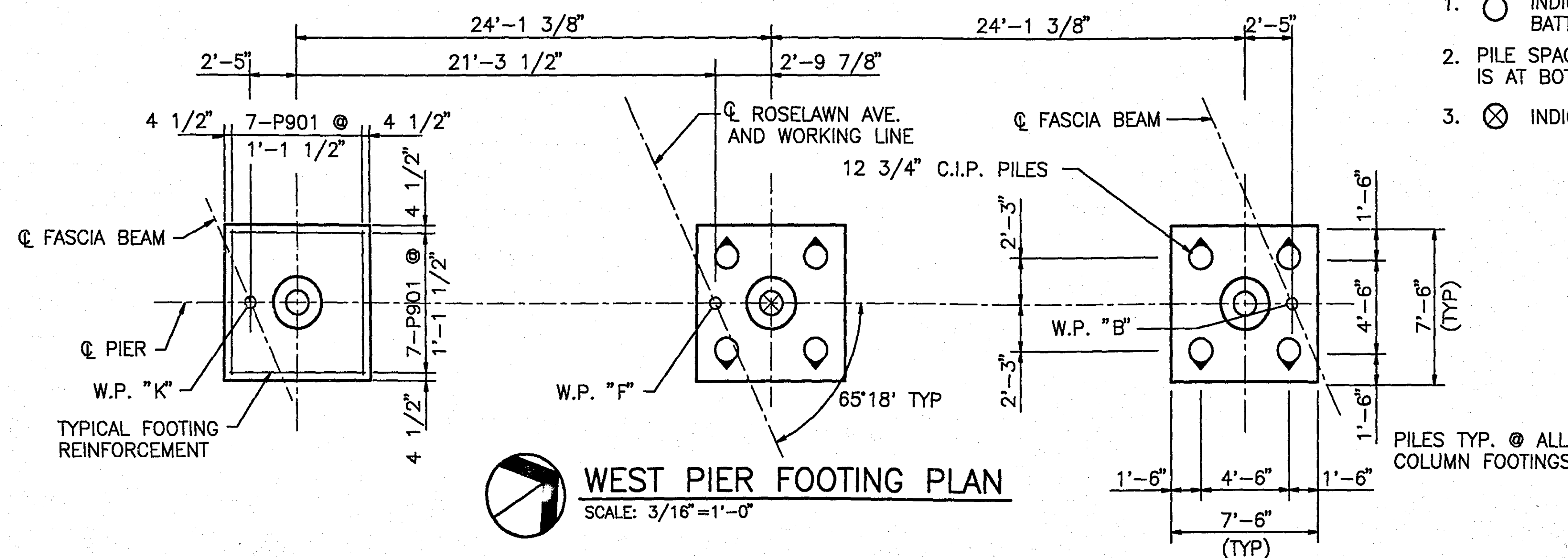


WEST PIER ELEVATION

SCALE: 3/16"=1'-0"

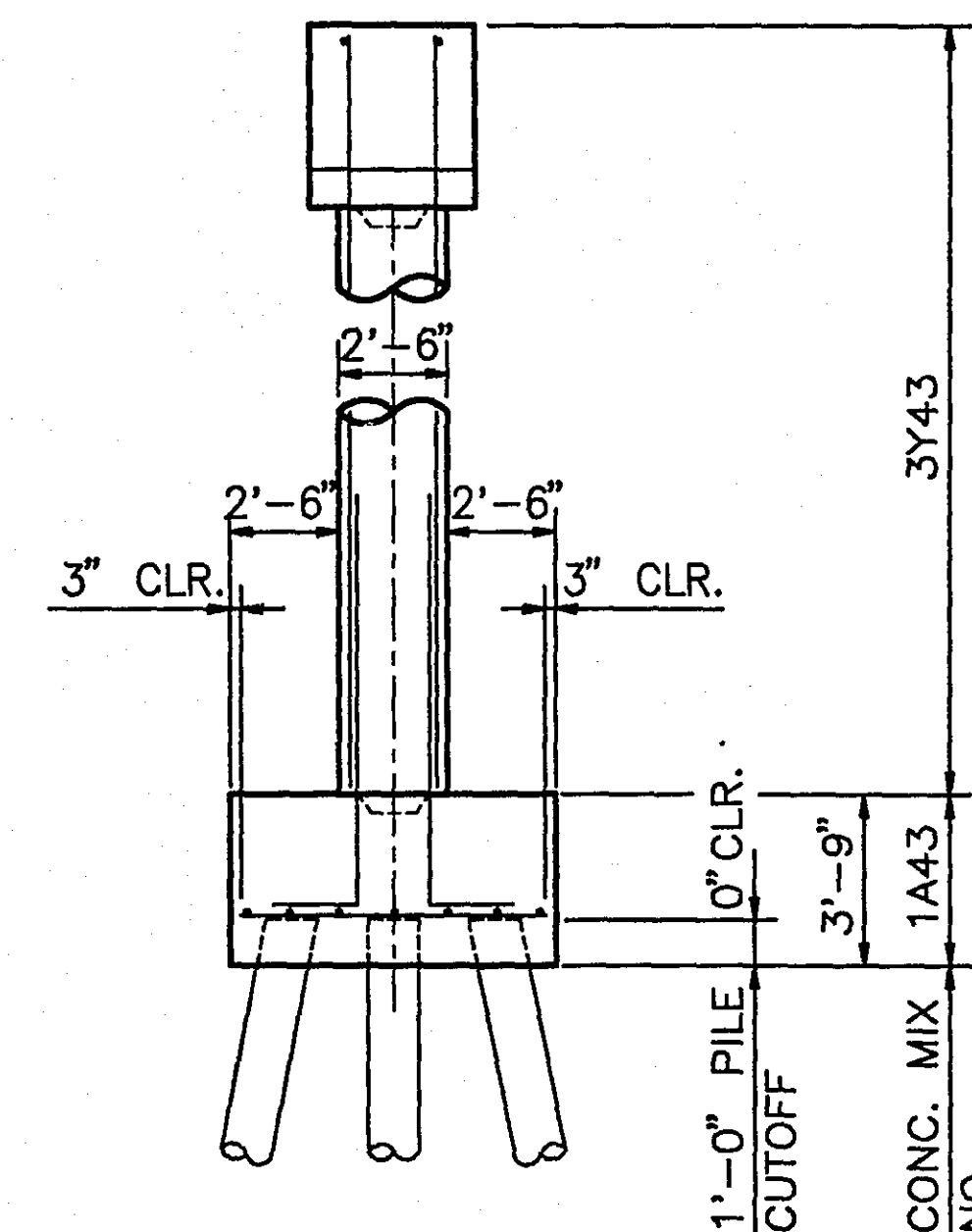
NOTES:

1. INDICATE PILE TO BE BATTERED 3"/FT.
2. PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
3. INDICATES TEST PILE



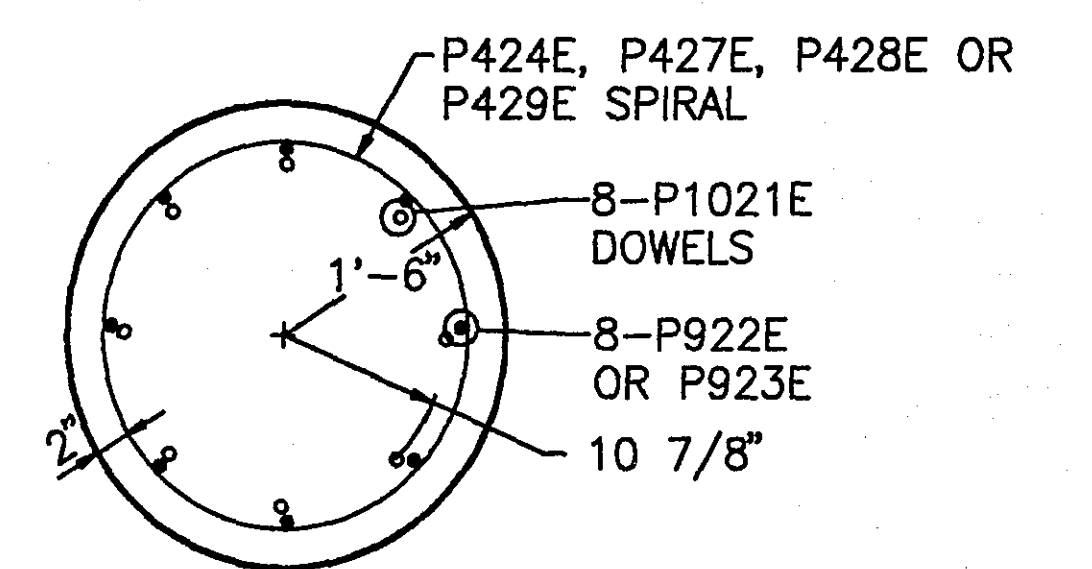
WEST PIER FOOTING PLAN

SCALE: 3/16"=1'-0"



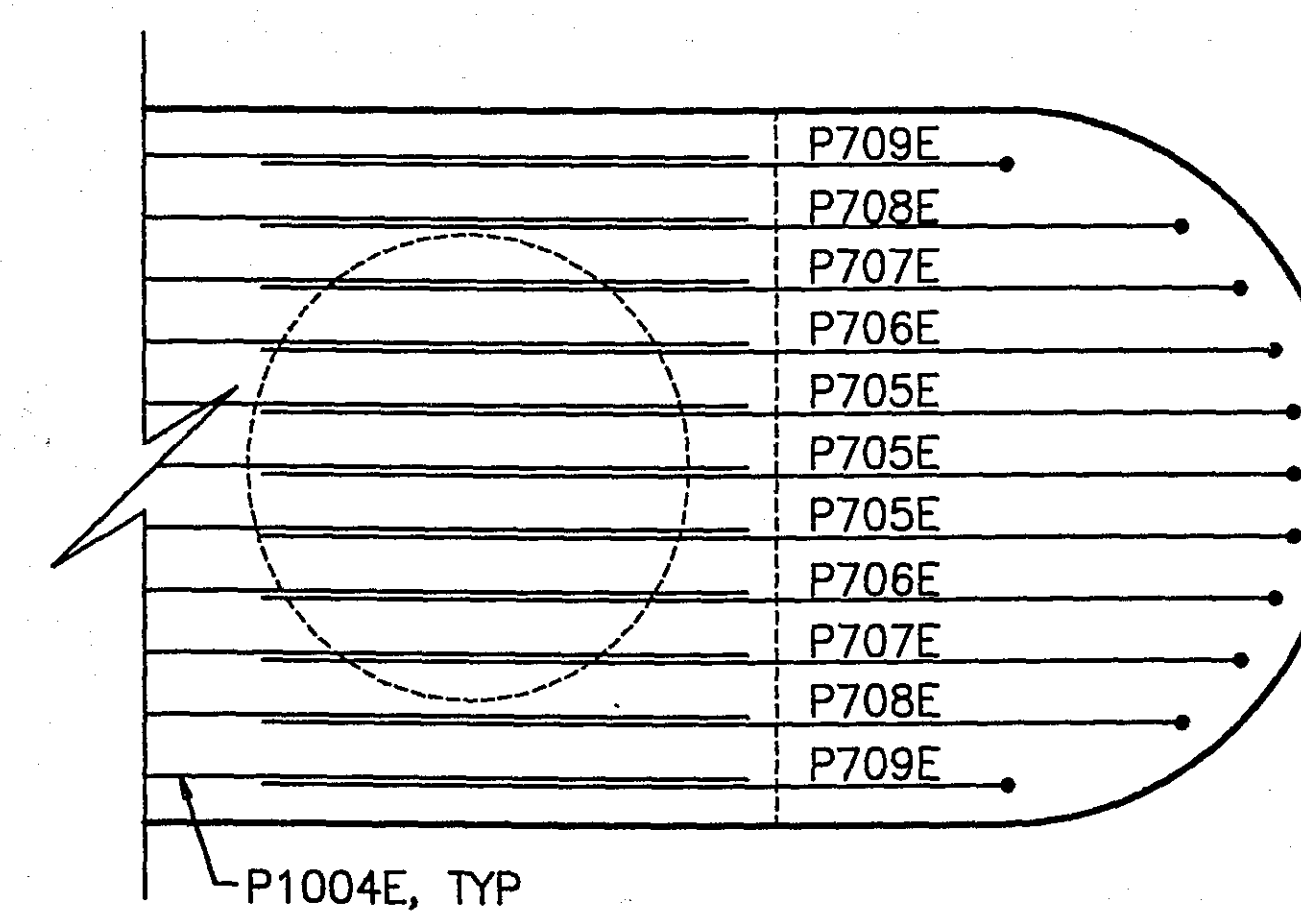
PIER ELEVATION

SCALE: 3/16"=1'-0"



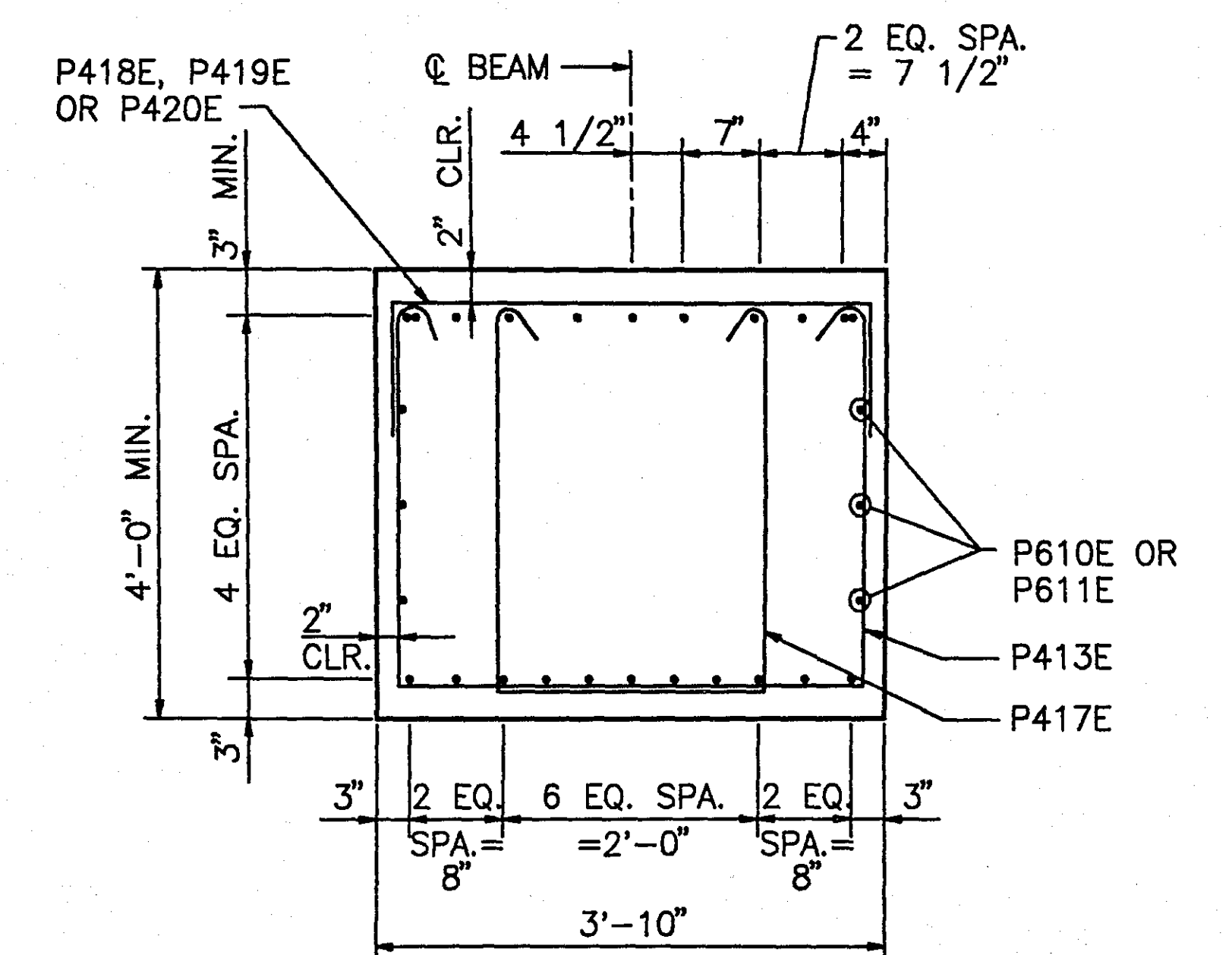
SECTION B-B

SCALE: 3/4"=1'-0"



BOTTOM REINFORCEMENT-PIER CAP END

SCALE: 3/4"=1'-0"



SECTION A-A

SCALE: 3/4"=1'-0"

S.P. 62-626-03

28-119

Title: WEST PIER PLAN
AND ELEVATION

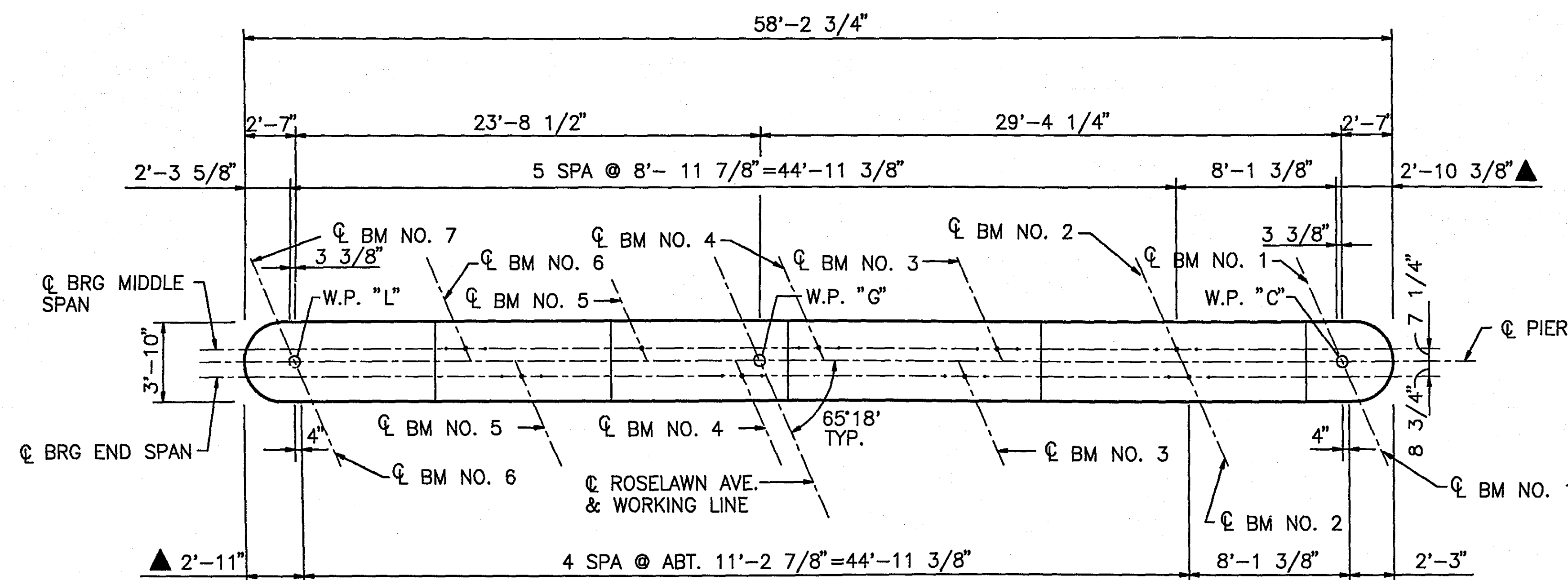
DES: JDP DR: AF
CHK: GWM CHK: JDP

APPROVED:
11-4-91

Bridge No.

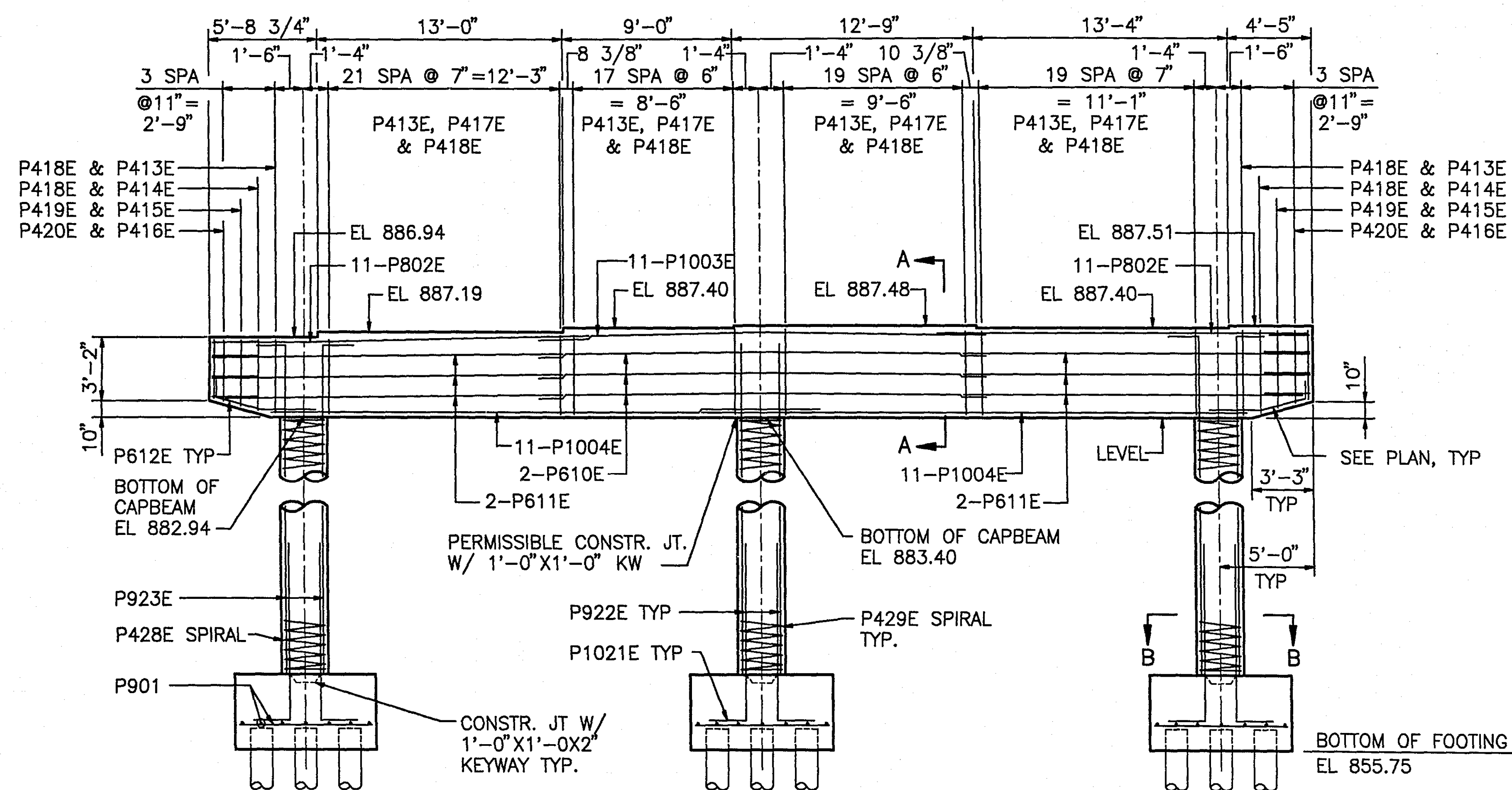
Sheet No. 8 of 28 Sheets

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EAST PIER CAP PLAN
SCALE: 3/16"=1'-0"

▲ MEASURED ALONG Q BEARING



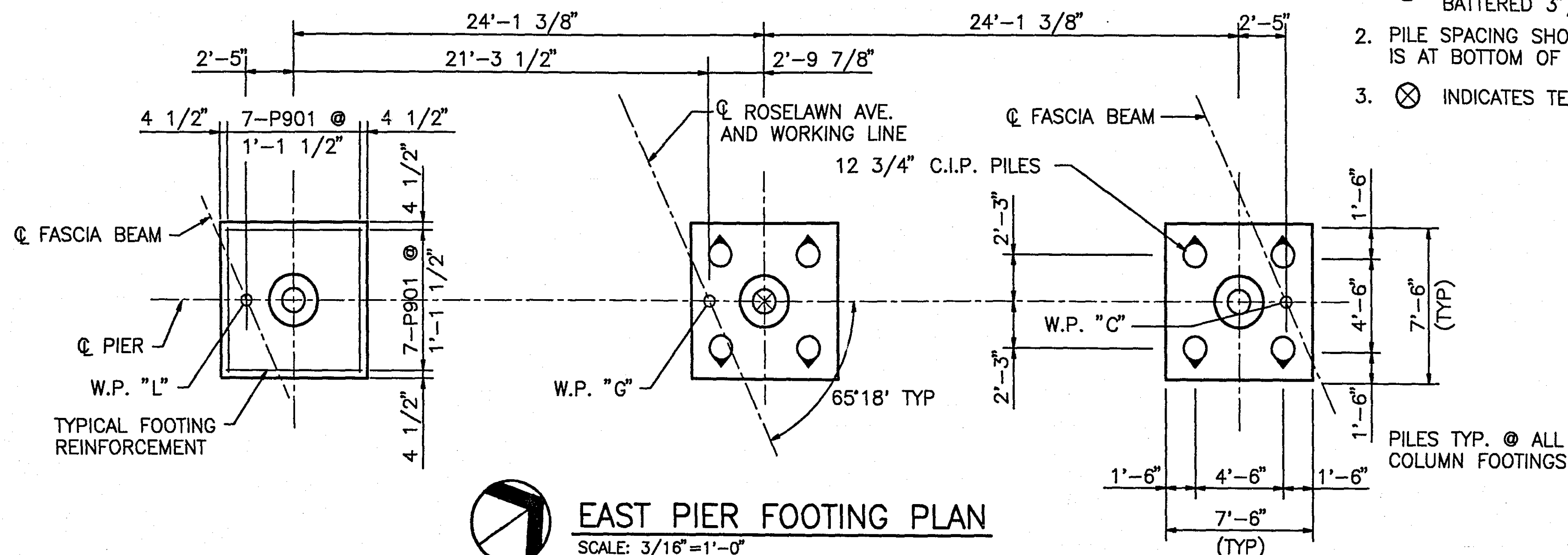
EAST PIER ELEVATION
SCALE: 3/16"=1'-0"

NOTE:

FOR PIER ELEVATION, BOTTOM REINFORCEMENT-PIER CAP END AND SECTIONS A-A, AND B-B, SEE SHEET NO. 8.

NOTES:

1. ○ INDICATE PILE TO BE BATTERED 3"/FT.
2. PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
3. ⊗ INDICATES TEST PILE



EAST PIER FOOTING PLAN
SCALE: 3/16"=1'-0"

PIER	
COMPUTED PILE LOADS - TONS/PILE	
DEAD LOAD	37.7 TONS/PILE
LIVE LOAD	17.7 TONS/PILE
DESIGN LOAD	55.4 TONS/PILE

PILE NOTES

- 1 C.I.P. CONC. TEST PILE, 12 3/4", FOR THE WEST PIER, 50 FT. LONG.
- 14 C.I.P. CONC. PILES, 12 3/4", FOR THE WEST PIER, ESTIMATED LENGTH 40 FT.
- 15 C.I.P. CONC. PILES FOR WEST PIER.
- 1 C.I.P. CONC. TEST PILE, 12 3/4", FOR THE EAST PIER, 50 FT. LONG.
- 14 C.I.P. CONC. PILES, 12 3/4", FOR THE EAST PIER, ESTIMATED LENGTH 40 FT.
- 15 C.I.P. CONC. PILES FOR EAST PIER.

PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.

ALL PILES TO C.I.P. CONC., 12 3/4" DIAMETER.

PILES MARKED ○ TO BE BATTERED 3" PER FOOT IN DIRECTION SHOWN.

SUMMARY OF QUANTITIES FOR TWO PIERS

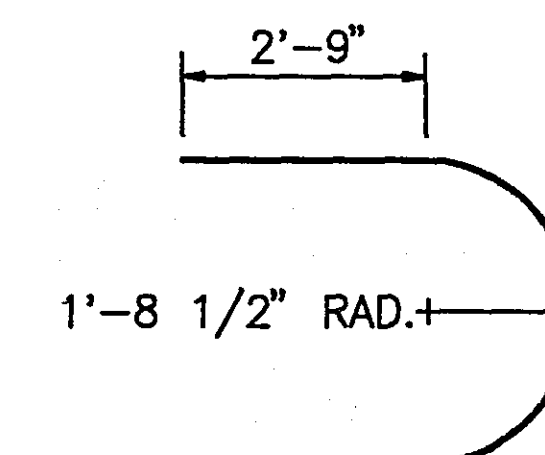
ITEM	QUANTITY	UNIT
CONCRETE MIX NO. 1A43	46	CU. YD.
CONCRETE MIX NO. 3Y43	91	CU. YD.
REINFORCEMENT BARS (EPOXY COATED)	2,000	LBS.
SPIRAL REINFORCEMENT (EPOXY COATED)	2,620	LBS.
C.I.P. CONC. PILES, DELIVERED, 12 3/4"	1,120	LIN. FT.
C.I.P. CONC. PILES, DRIVEN, 12 3/4"	1,120	LIN. FT.
C.I.P. CONC. TEST PILES, 50 FT. LONG, 12 3/4"	2	EACH

SPIRAL DATA

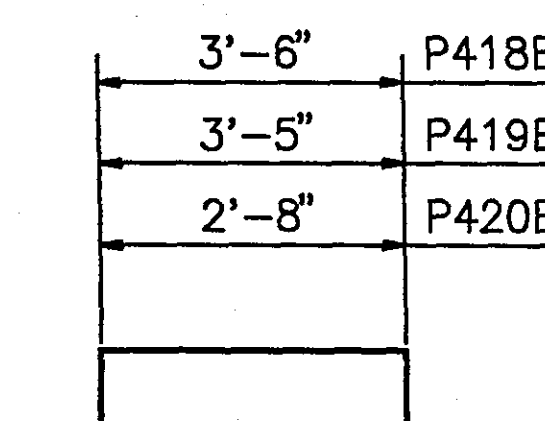
BAR MARK	P424E	P427E	P428E	P429E
OUTSIDE DIAMETER	2'-2"	2'-2"	2'-2"	2'-2"
HEIGHT	22'-2"	22'-8"	23'-8"	24'-1"
PITCH	3"	3"	3"	3"
SPIRAL ROD SIZE, PLAIN ROUND	1/2" φ	1/2" φ	1/2" φ	1/2" φ
WEIGHT, EACH (LBS.)	417	426	444	452

BILL OF REINFORCEMENT FOR TWO PIERS

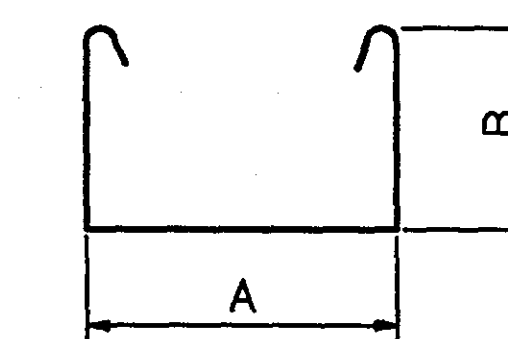
BAR	NUMBER	LENGTH	SHAPE	LOCATION
P901	84	7'-0"	STR	PIER FOOTINGS
P802E	44	22'-5"	BENT	PIER CAP - LONGITUDINAL TOP
P1003E	22	30'-6"	STR	PIER CAP - LONGITUDINAL TOP
P1004E	44	29'-3"	STR	PIER CAP - LONGITUDINAL BOTTOM
P705E	12	7'-3"	BENT	PIER CAP - LONGITUDINAL BOTTOM
P706E	8	7'-1"	BENT	PIER CAP - LONGITUDINAL BOTTOM
P707E	8	6'-11"	BENT	PIER CAP - LONGITUDINAL BOTTOM
P708E	8	6'-7"	BENT	PIER CAP - LONGITUDINAL BOTTOM
P709E	8	5'-11"	BENT	PIER CAP - LONGITUDINAL BOTTOM
P610E	12	27'-6"	STR	PIER CAP - SIDES
P611E	24	16'-9"	STR	PIER CAP - SIDES
P612E	12	11'-2"	BENT	PIER CAP - ENDS
P413E	164	11'-7"	BENT	CAPBEAM STIRRUPS
P414E	4	11'-3"	BENT	CAPBEAM STIRRUPS
P415E	4	10'-8"	BENT	CAPBEAM STIRRUPS
P416E	4	9'-5"	BENT	CAPBEAM STIRRUPS
P417E	160	10'-3"	BENT	CAPBEAM STIRRUPS
P418E	168	5'-6"	BENT	CAPBEAM STIRRUPS
P419E	4	5'-5"	BENT	CAPBEAM STIRRUPS
P420E	4	4'-8"	BENT	CAPBEAM STIRRUPS
P1021E	48	11'-1"	BENT	COLUMN DOWELS
P922E	16	27'-7"	BENT	COLUMN VERTICALS
P923E	8	27'-0"	BENT	COLUMN VERTICALS
P424E	1	SEE SPIRAL DATA	COLUMN SPIRAL	
P925E	16	29'-0"	BENT	COLUMN VERTICALS
P926E	8	28'-6"	BENT	COLUMN VERTICALS
P427E	2	SEE SPIRAL DATA	COLUMN SPIRAL	
P428E	1	SEE SPIRAL DATA	COLUMN SPIRAL	
P429E	2	SEE SPIRAL DATA	COLUMN SPIRAL	



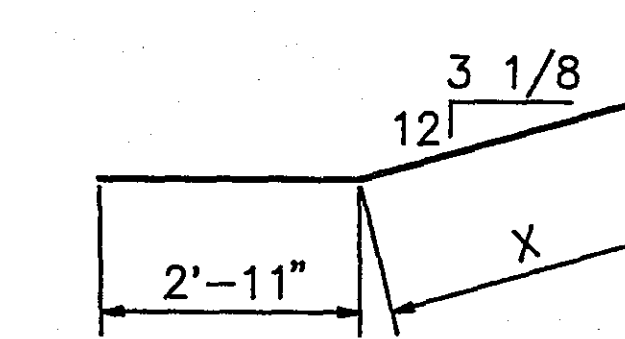
P612E



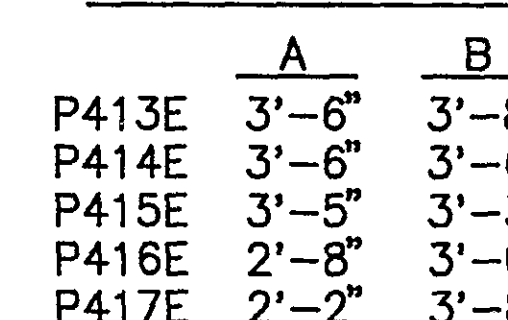
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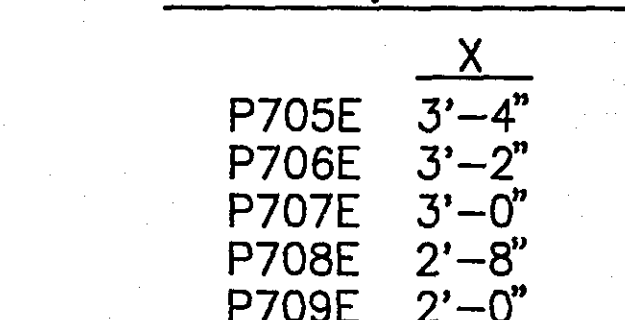
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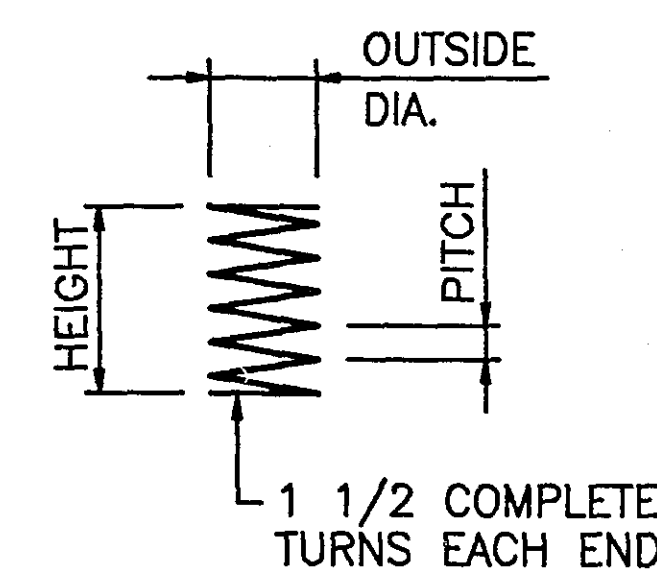
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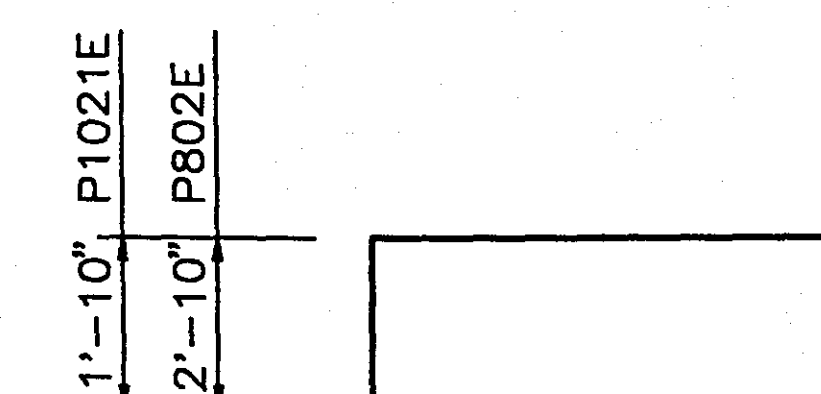
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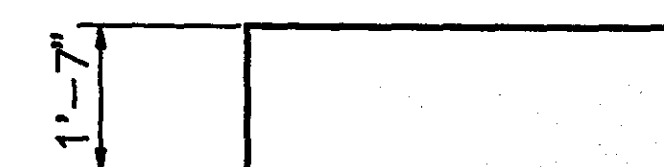
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P424E, P427E, P428E, P429E



P802E, P1021E



P922E, P923E, P925E, P926E

Title: EAST PIER PLAN AND ELEVATION

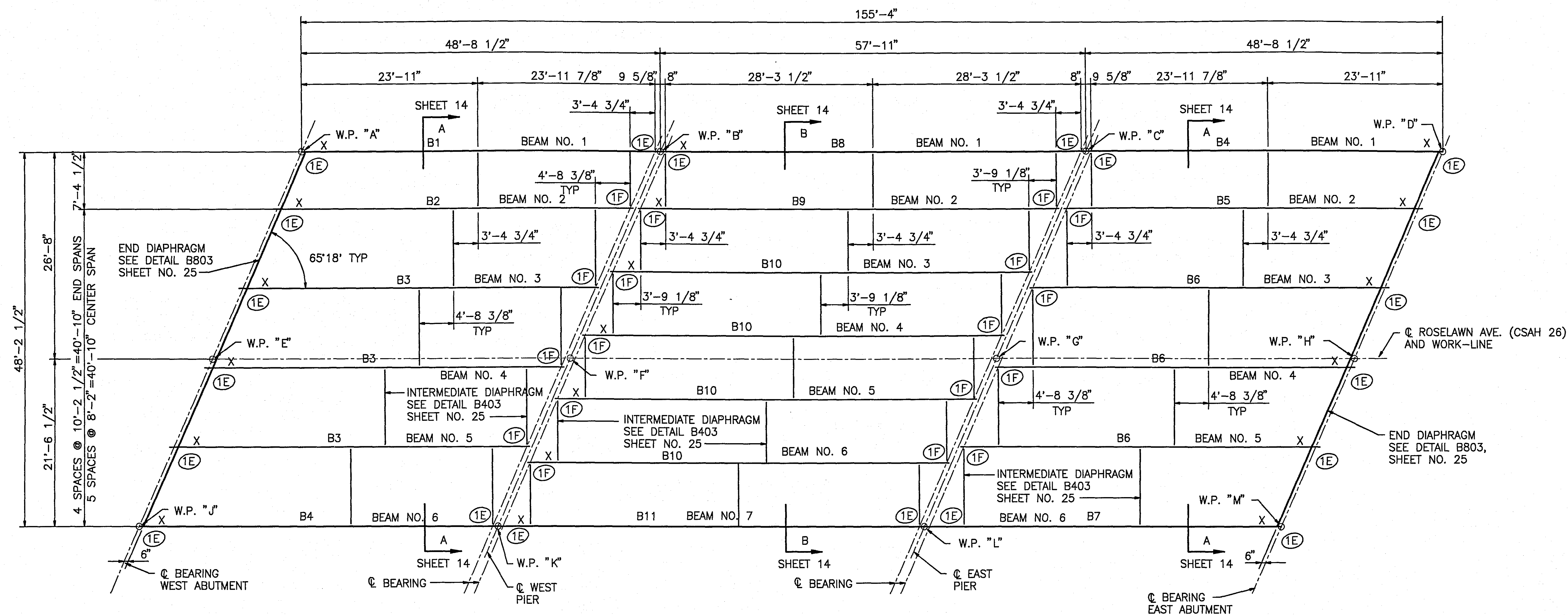
S.P. 62-626-03

DES: JDP DR: AF APPROVED: 11-4-91

CHK: GWM CHK: JDP

Bridge No.

62559



FRAMING PLAN
SCALE: 1/8"=1'-0"

SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE

ITEM	QUANTITY	UNIT
① STRUCTURE CONCRETE MIX NO. 3Y43	10	CU. YD.
② BRIDGE SLAB CONCRETE MIY NO. 3Y33	8,494	SQ. FT.
③ TYPE MOD J RAILING CONCRETE, MIY NO. 3Y46	162	LIN. FT.
⑦ TYPE M RAILING CONCRETE, MIY NO. 3Y46	162	LIN. FT.
PIPE RAILING	324	LIN. FT.
④ SIDEWALK CONCRETE, MIY NO. 3Y46	1,132	SQ. FT.
⑤ REINFORCEMENT BARS (EPOXY COATED)	76,520	LB.
EXPANSION JOINT DEVICE, TYPE 4	112	LIN. FT.
⑥ PRESTRESSED CONCRETE BEAMS, TYPE 36-50	590	LIN. FT.
⑥ PRESTRESSED CONCRETE BEAMS, TYPE 36-58	405	LIN. FT.
DIAPHRAGMS FOR 36" PRESTRESSED BEAMS	318	LIN. FT.
⑧ FIXED CURVED PLATE BRG. ASSEMBLY TYPE 1	18	EACH
⑧ EXP. CURVED PLATE BRG. ASSEMBLY TYPE 1	20	EACH
⑨ BRIDGE NAMEPLATE	1	EACH
⑨ 1" THICK CORK	24	SQ. FT.

- ① END DIAPHRAGM CONCRETE
- ② BRIDGE SLAB CONCRETE MIX NO. 3Y33 VOLUME IS APPROXIMATELY 245 CU. YD. DECK SLAB CONCRETE VOLUME IS CALCULATED USING A 9" STRUCTURAL SLAB THICKNESS, AND AN AVERAGE STOOL HEIGHT OF 2".
- ③ TYPE J RAILING CONCRETE MIX 3Y46 VOLUME IS APPROXIMATELY 21 CU. YD.
- ④ SIDEWALK CONCRETE MIX NO. 3Y46. VOLUME IS APPROXIMATELY 28 CU. YD.
- ⑤ INCLUDES RAILING QUANTITY
- ⑥ PAYMENT FOR BEAMS INCLUDED IN ITEM PRESTRESSED CONCRETE BEAMS, TYPE 36"
- ⑦ TYPE M RAILING CONCRETE MIX 3Y46 VOLUME IS APPROXIMATELY 9 CU. YD.
- ⑧ PAYMENT FOR BEARINGS INCLUDED IN ITEM BEARING ASSEMBLIES PER EACH.
- ⑨ TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.

NOTES:

1. SEE SHEET NUMBERS 11 AND 12 FOR PRECAST BEAM ELEVATIONS AND DETAILS.
2. ①E INDICATES BEARING ASSEMBLY TYPE. SEE SHEET NO. 24 FOR BEARING ASSEMBLY DETAILS.

Title: **FRAMING PLAN
AND DETAILS**

S.P. 62-626-03

DES: JDP DR: JWM
CHK: GWM CHK: JDP

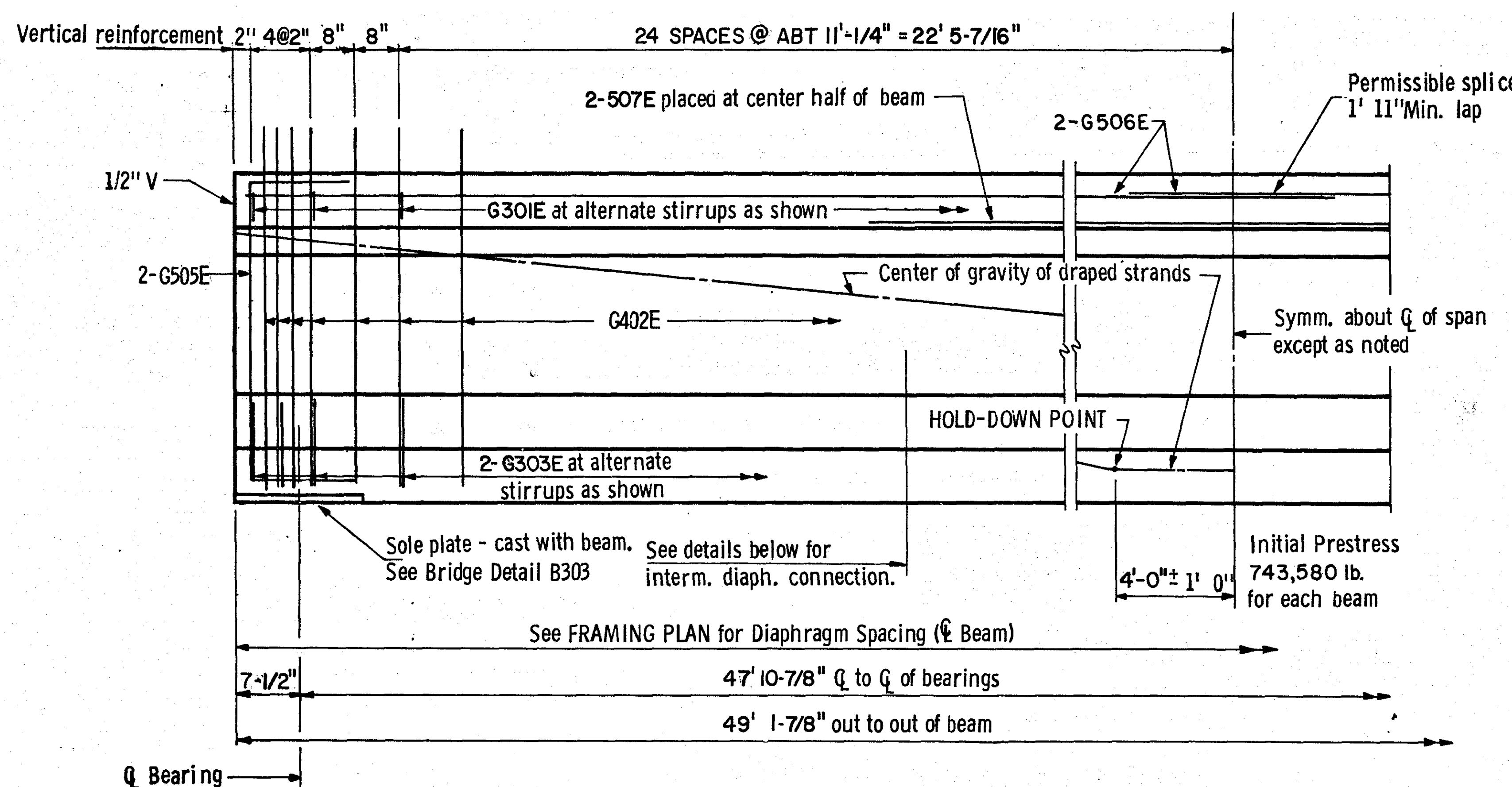
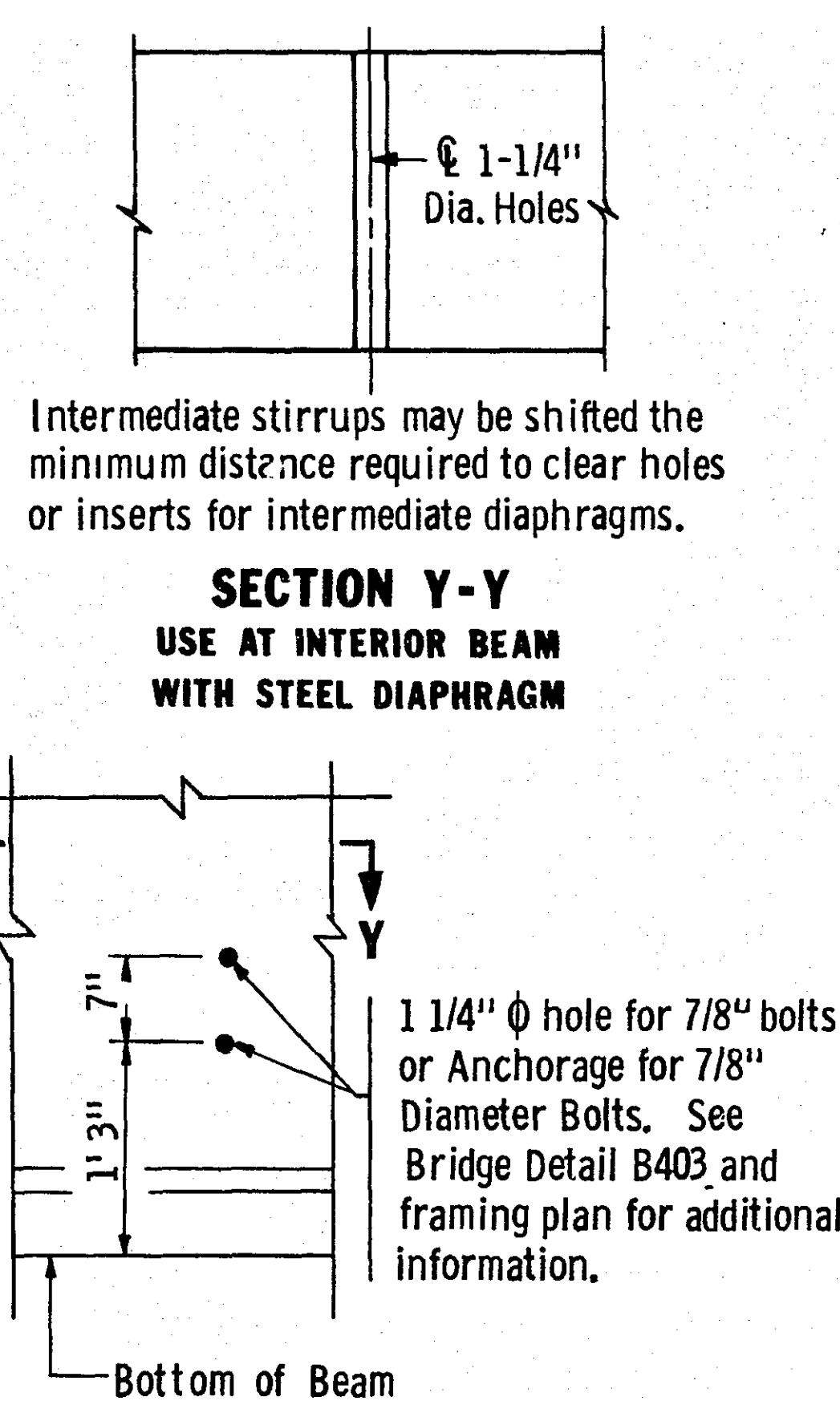
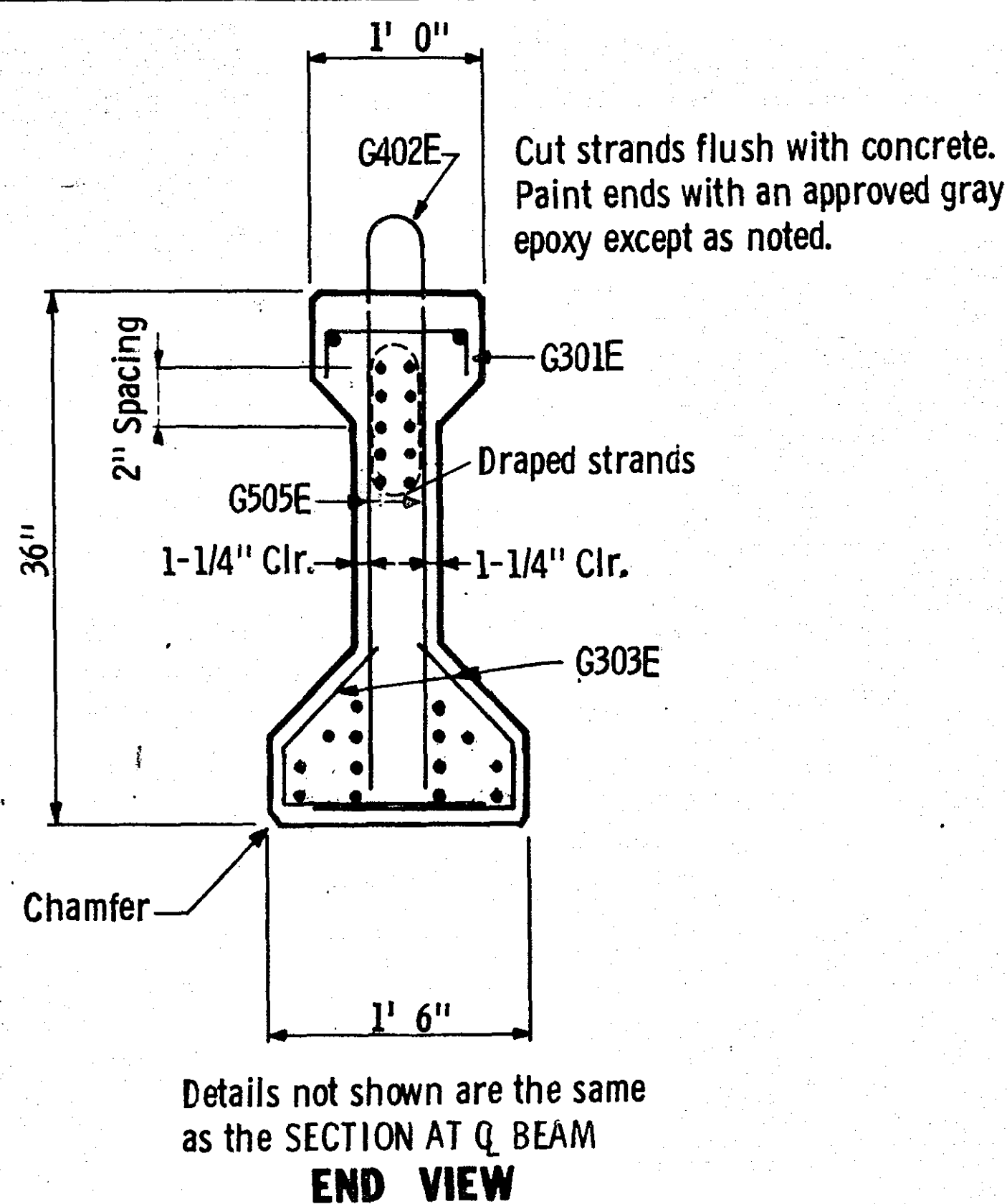
APPROVED:
11-4-91

Sheet No. 10 of 28 Sheets

28-119

Bridge No.

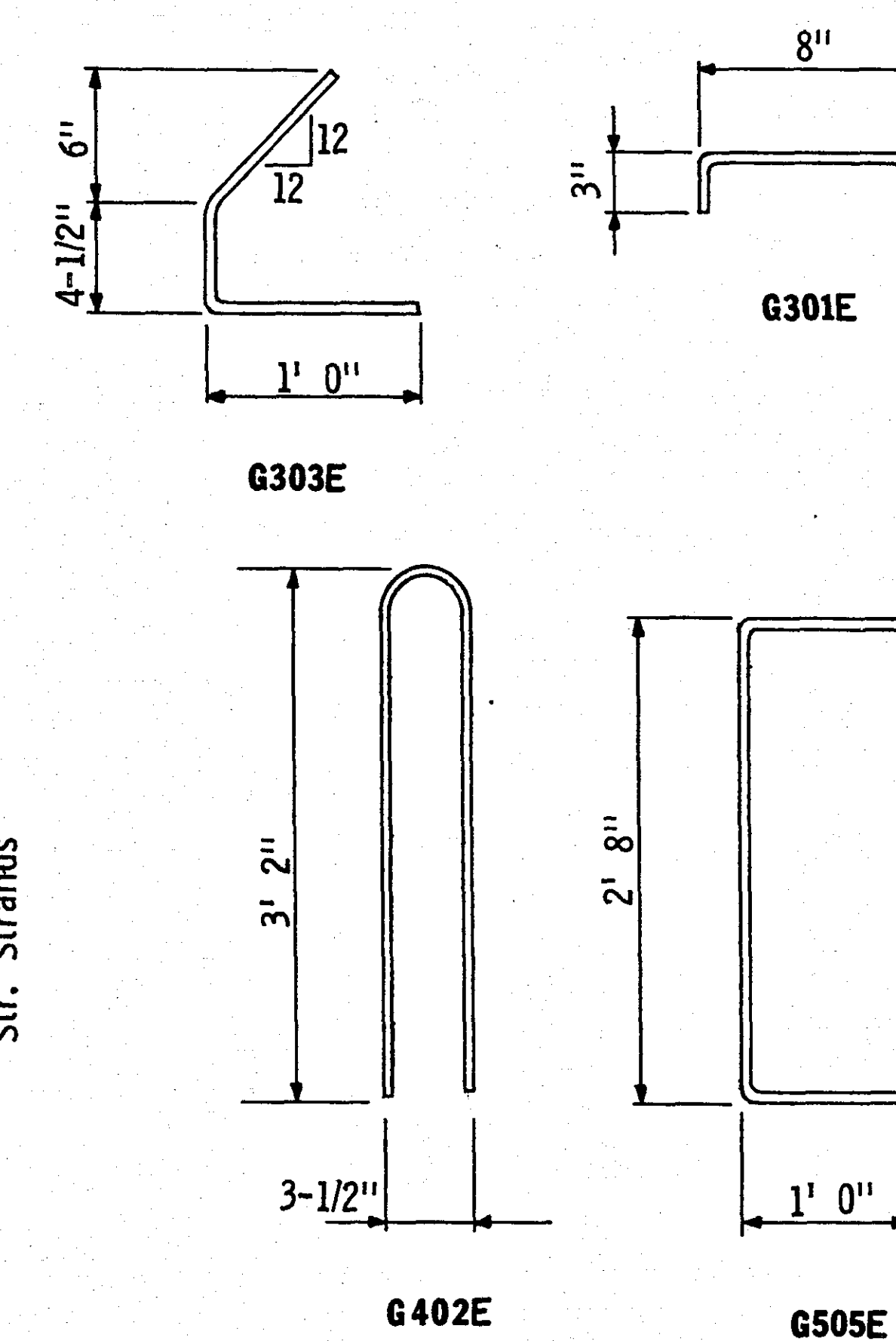
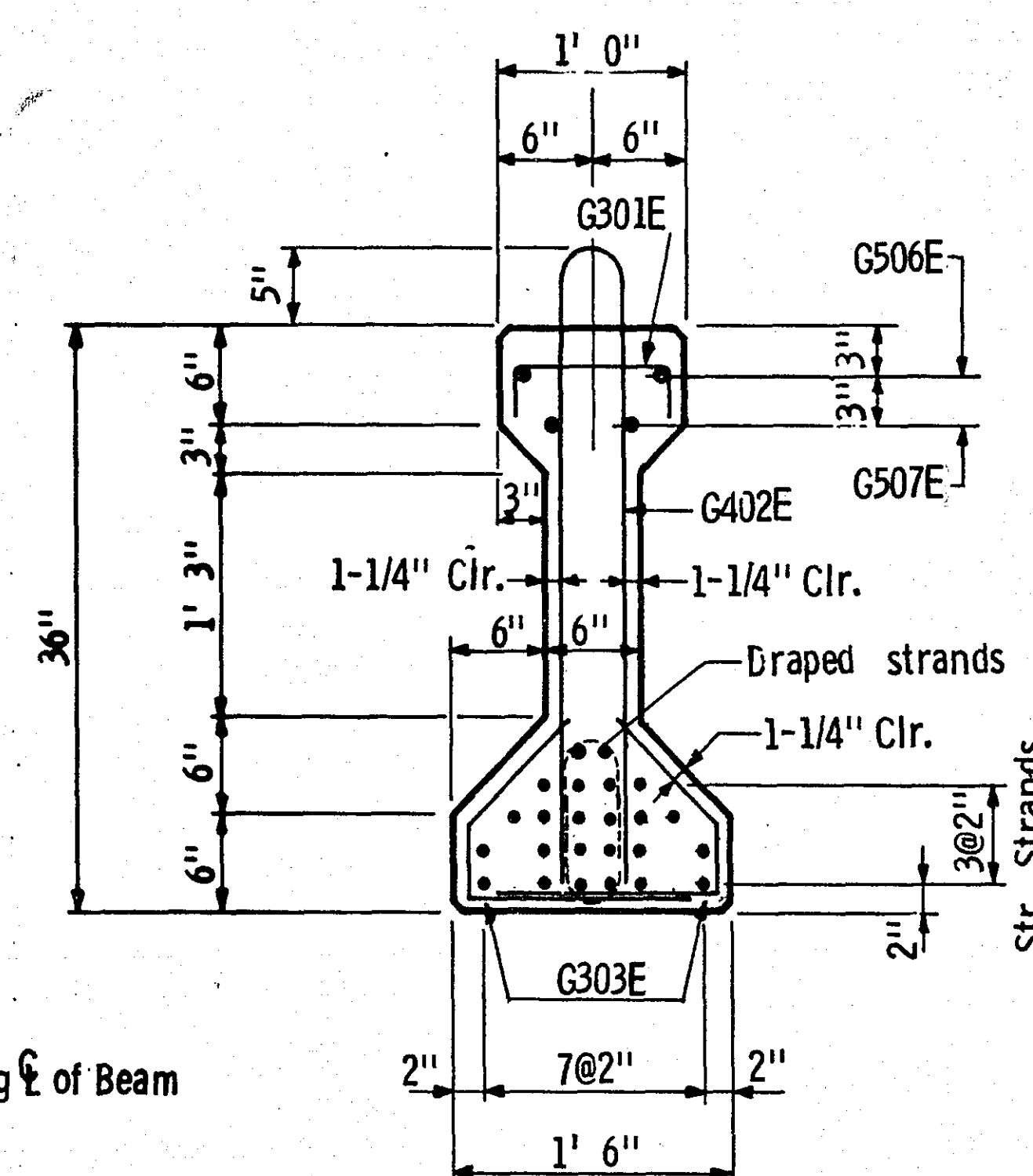
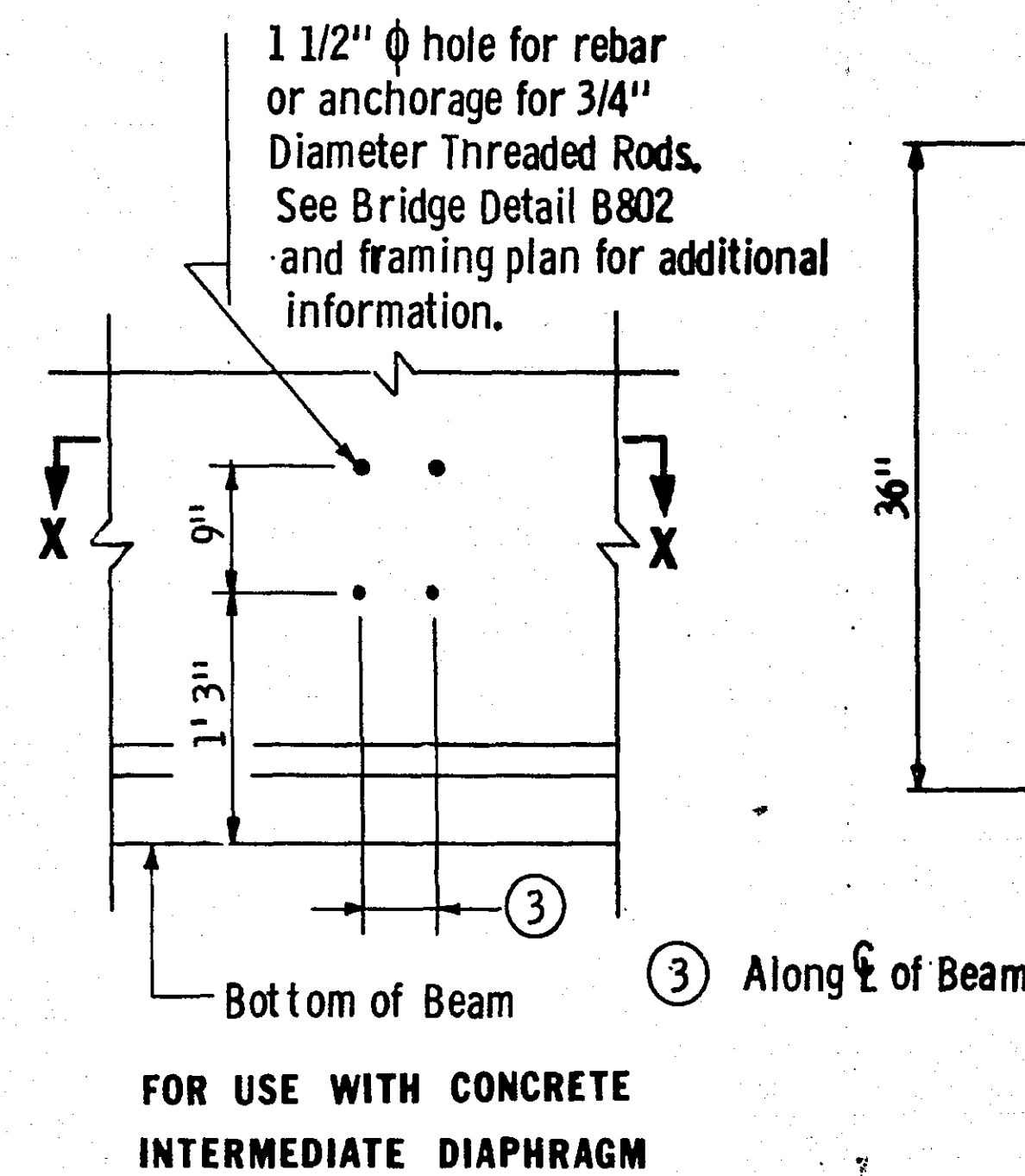
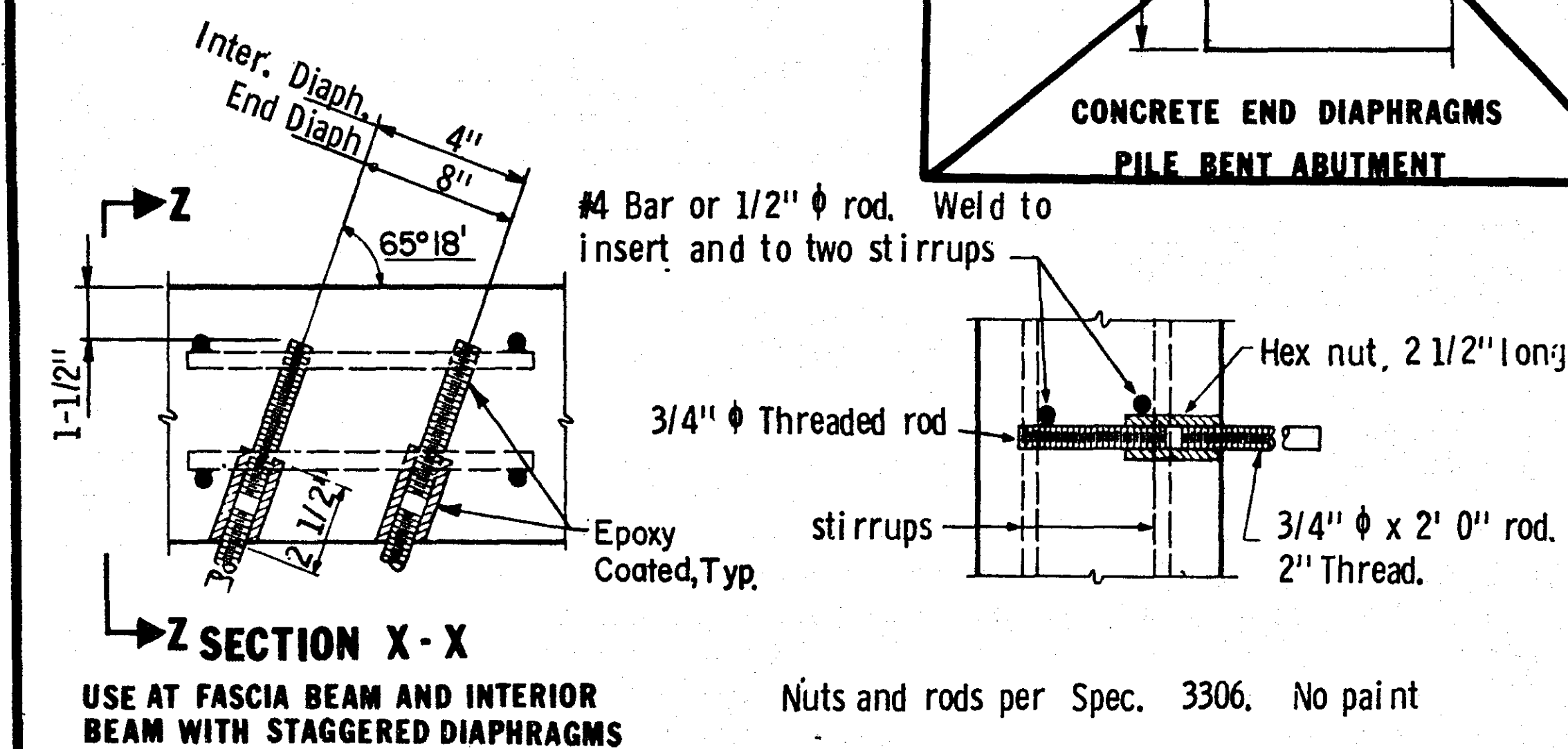
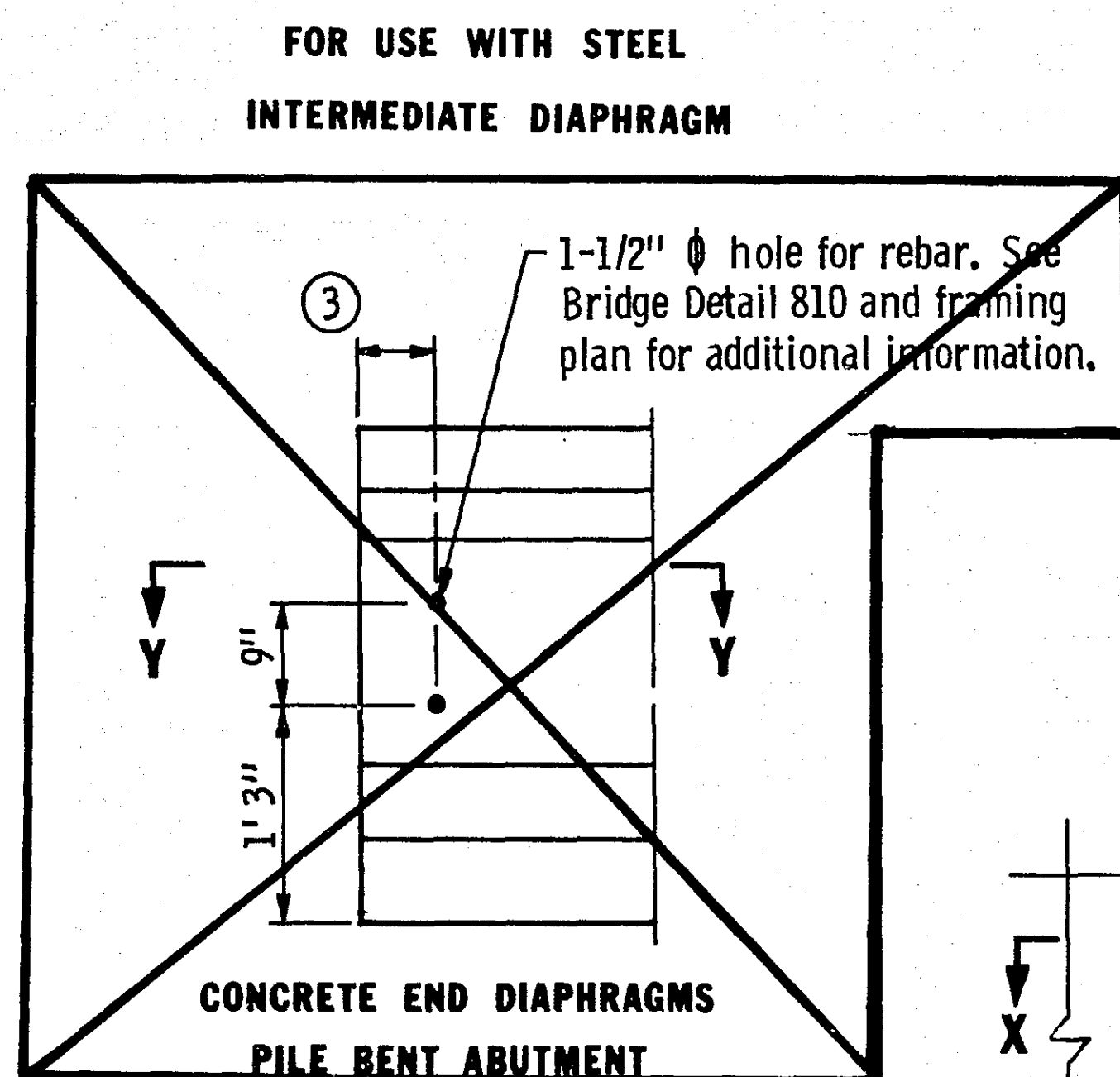
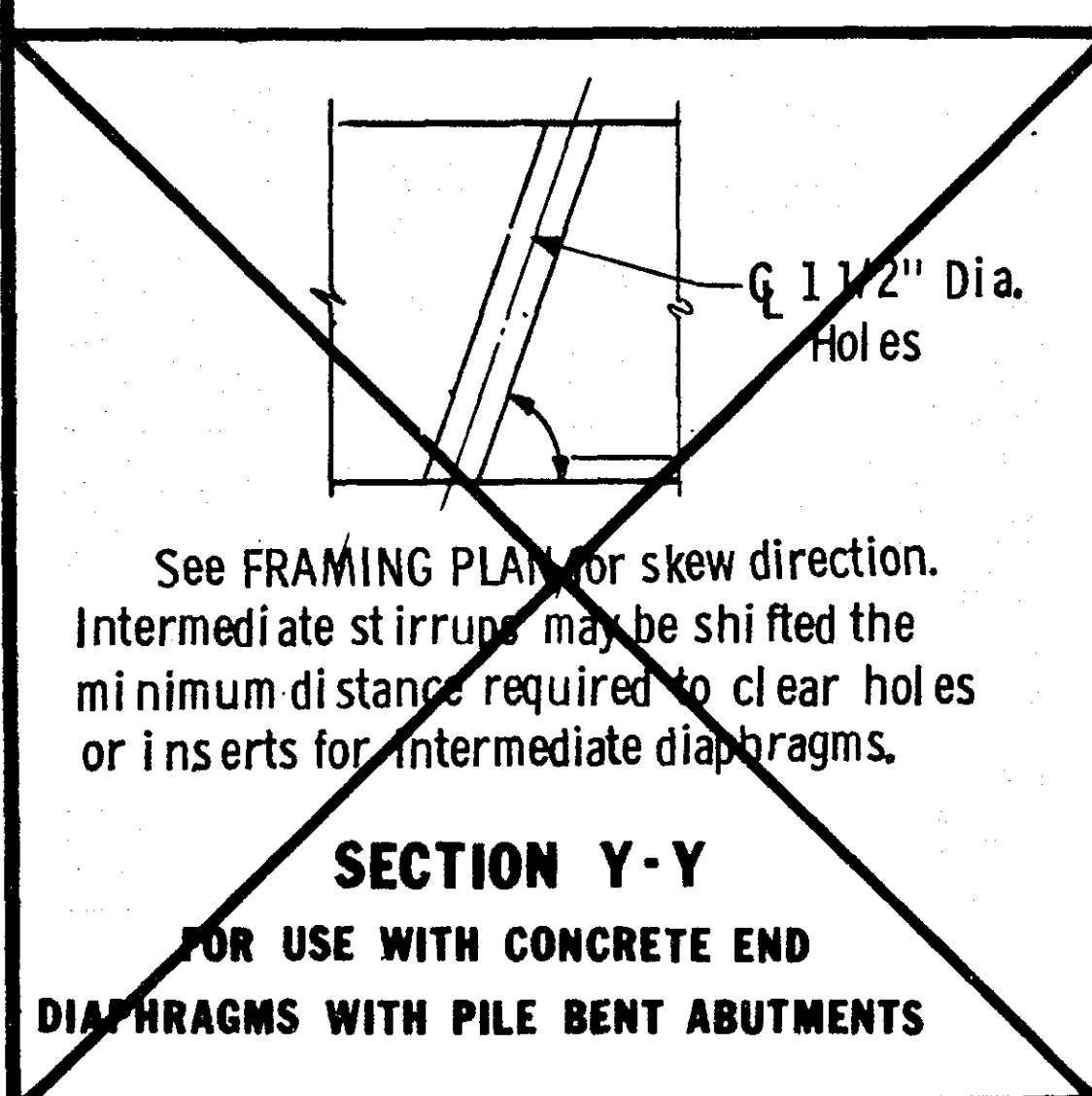
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Bar	Wt.
G 301	.44 lb.
G 402	4.34 lb.
G 303	.78 lb.
G 505	4.87 lb.
G 506	26.5 lb.
G 507	26.1 lb.

Girder Section Data	
Wt./Ft. = 385 lbs.	
Cross sec. area at Q of span = 369 in. ²	
C. G. (from bottom) = 15.83 in.	
I = 50,930 in. ⁴	
S _B = 3,221 in. ³	
1/2" Ø 270k strand wt./ft. = .525 lb.	
1/2" Ø 270k strand area = .1531 sq. in.	

④ All Regular Reinforcement Shall Be Epoxy Coated.



GENERAL NOTES:

Tops of beams shall be rough floated and broomed transversely for bond. Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of beam. A modified strand pattern or a bundled strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval. Use Low Relaxation Strands.

Each beam shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the beam, near the end, so located that they will be exposed after the end diaphragms have been cast. Fascia beams shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of beams, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete beams. See Spec. 2405.

See framing plan for beam ends marked "X".

Approximate weight of beam 9.5 tons.

As an alternate to the diaphragm anchorages shown, the contractor may submit details of a cast-in-place anchorage to the engineer for approval. Anchorage must provide an ultimate pull out strength of 15 kips per anchorage.

Y DISTANCES (IN INCHES)			
	NQ.	Q SPAN	END
Straight strands	14	4.57	
Draped strands	10	7.00	27.00 ^a
Total strands	24	5.58	

Y = distance of Center of Gravity of strands from bottom of beam. All strands spaced 2" c-c, horizontally and vertically except as noted.

All strands 1/2" Ø 270 kip, ultimate strength.

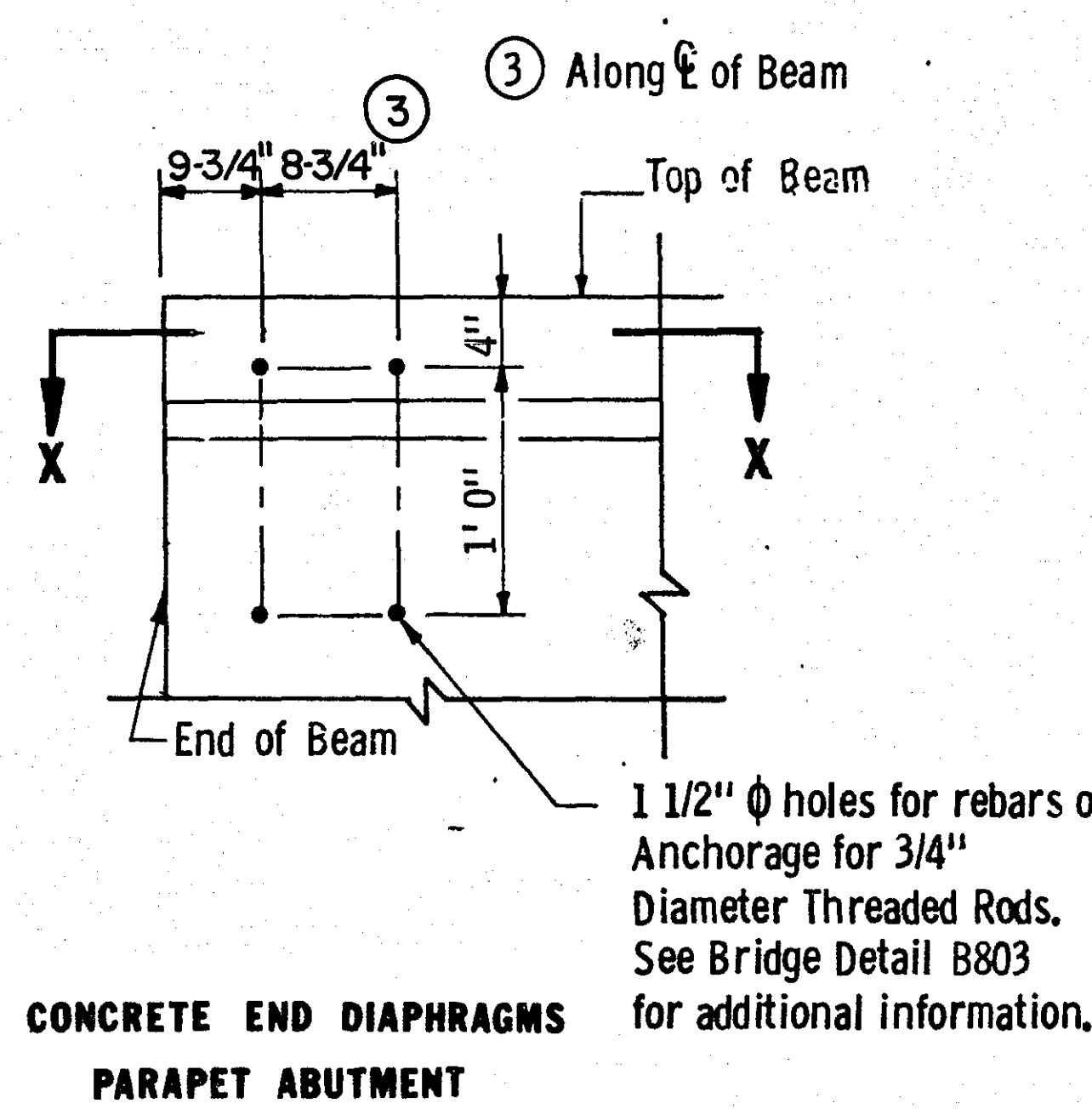
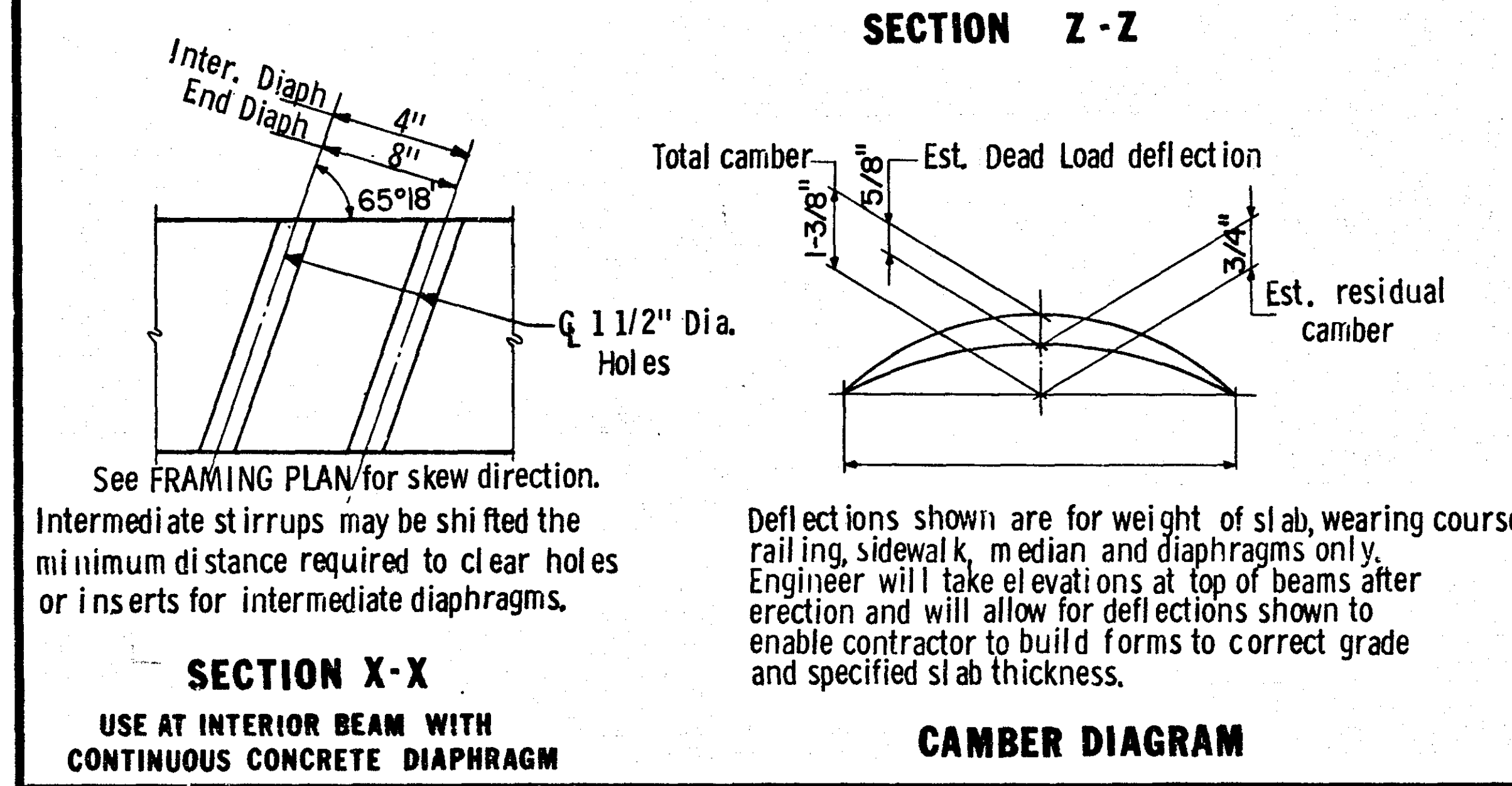
^a A tolerance of ± 2" will be permitted in this dimension. S.P. 62-626-03.

MINIMUM CONCRETE STRENGTH - P.S.I.		
	① f'ci	② f'c
Required min. Concrete Strength	6000	6000

① Minimum concrete strength at time of prestress transfer.
② Minimum concrete strength when curing can be discontinued and beam transported and installed.

Fig. 5-397.502

Revised: Sept. 11, 1981 Approved: May 18, 1977

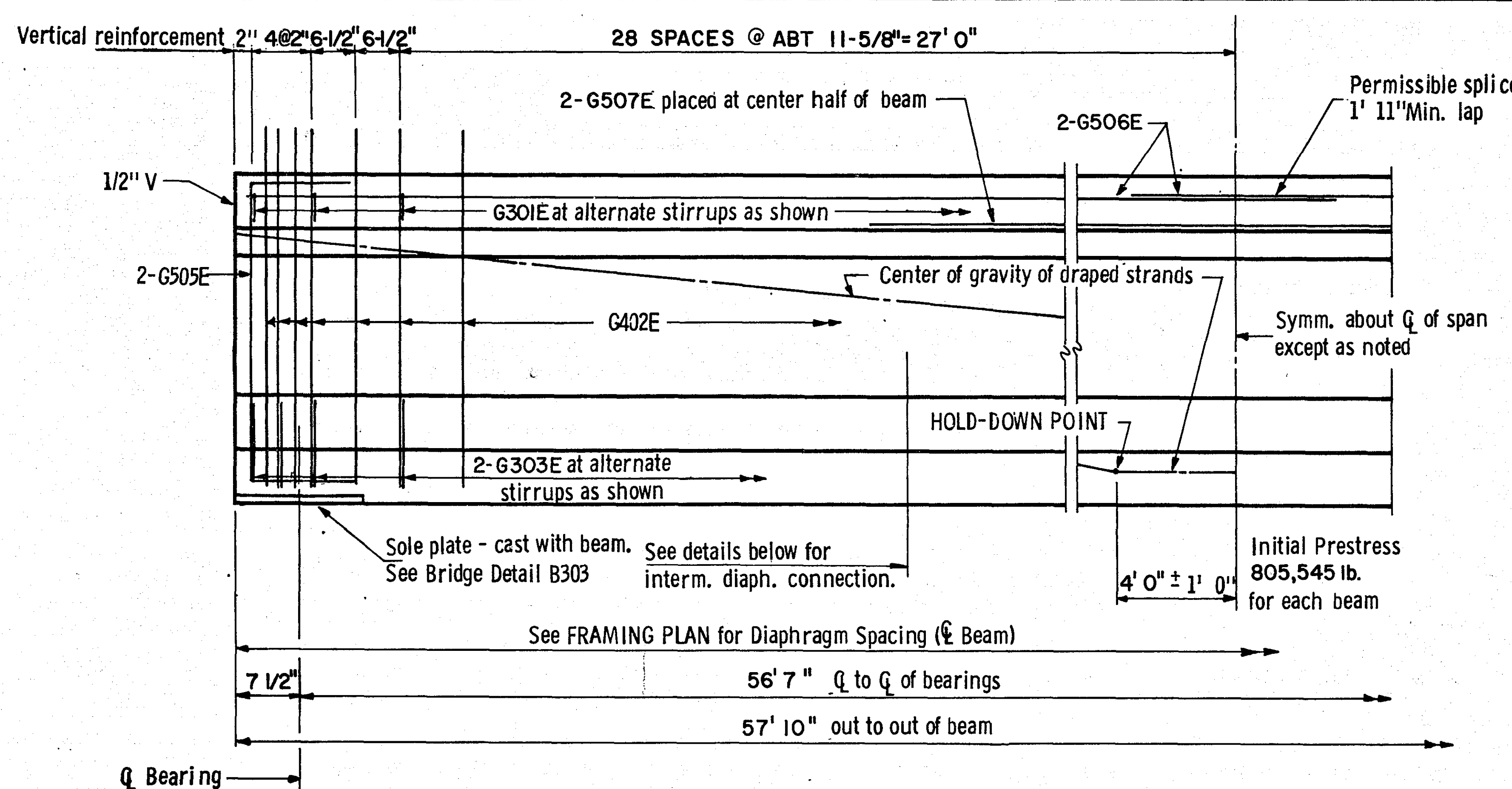
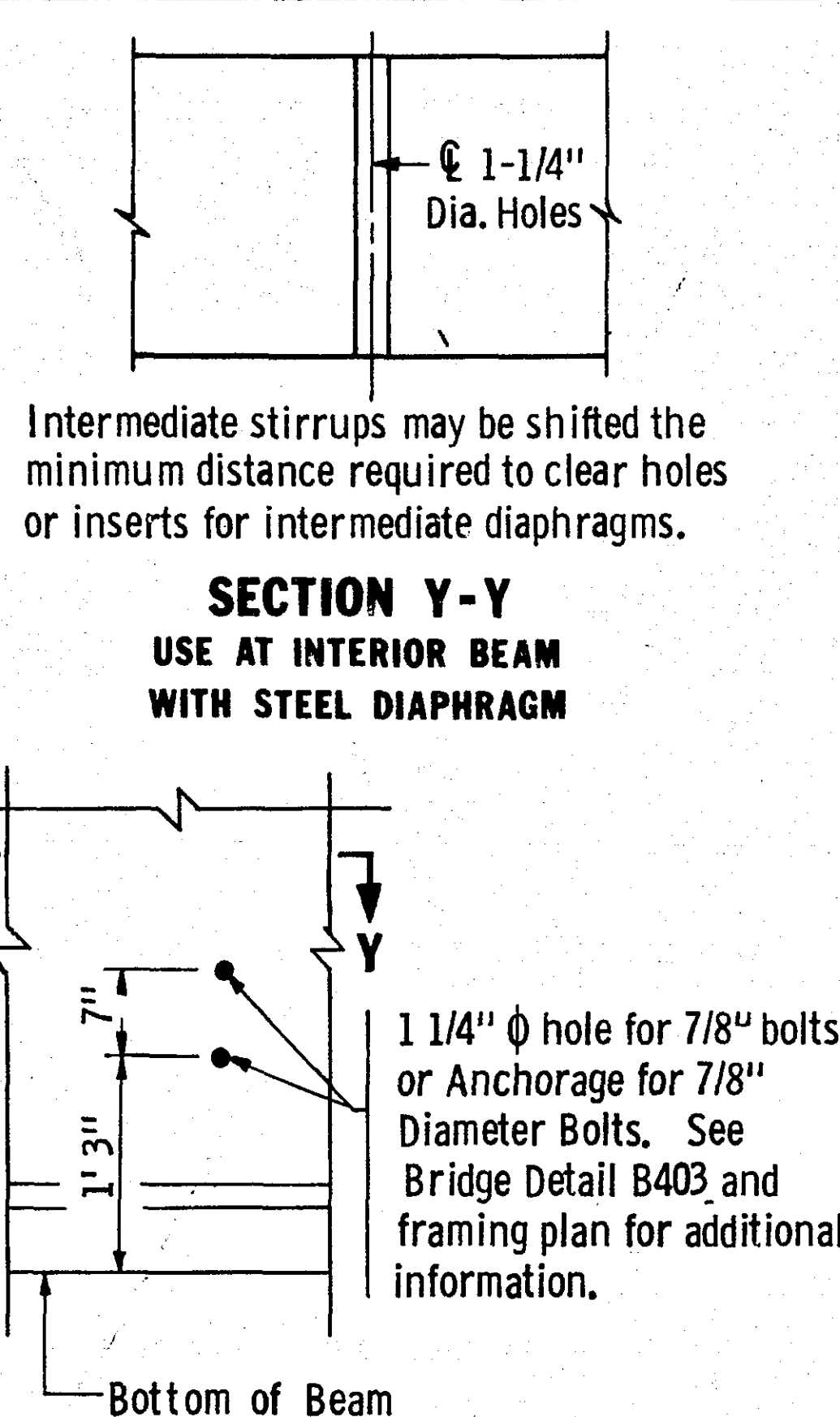
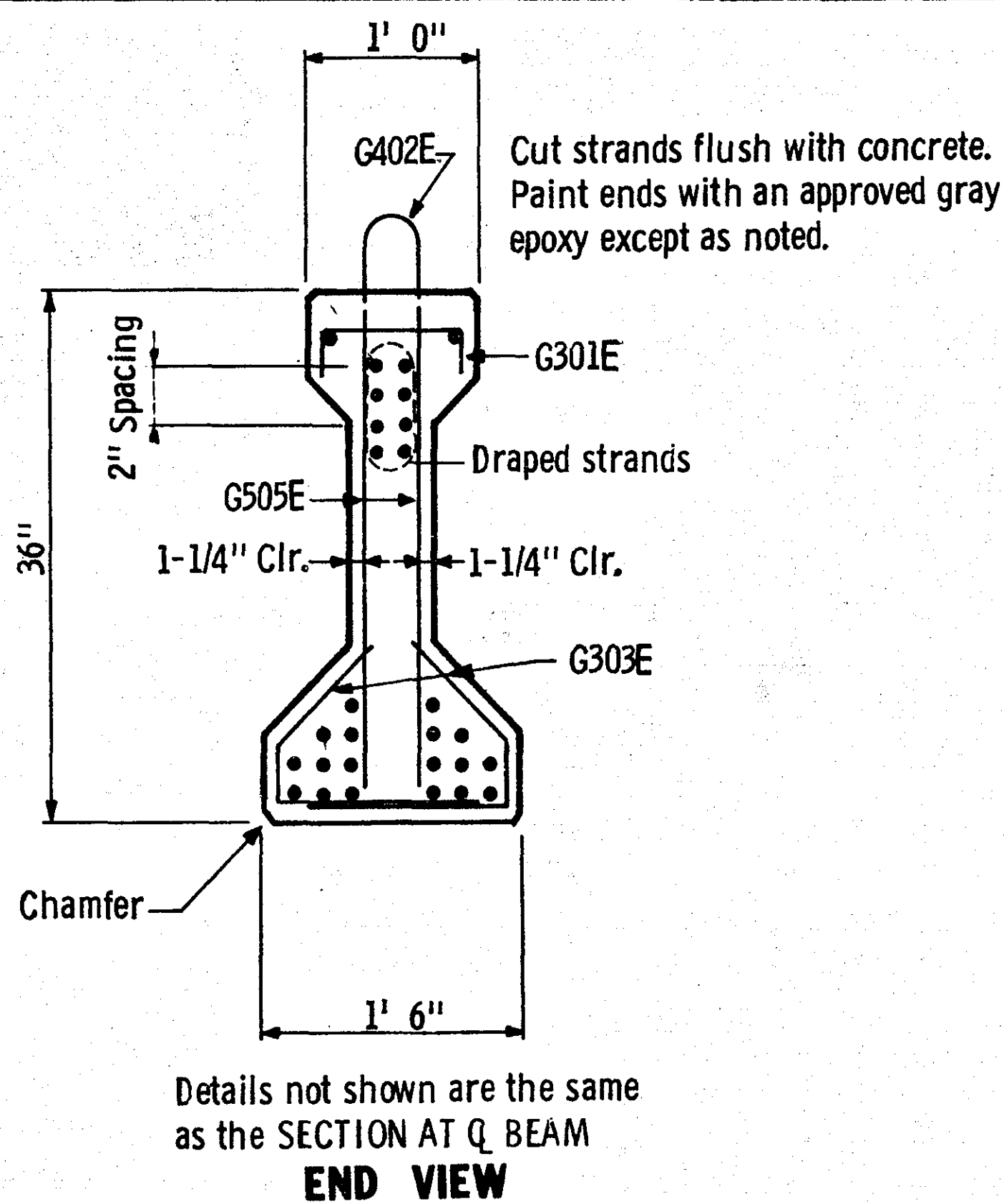


SECTION AT Q BEAM

BEAMS B1,B2,B3,B4, B5,B6,B7

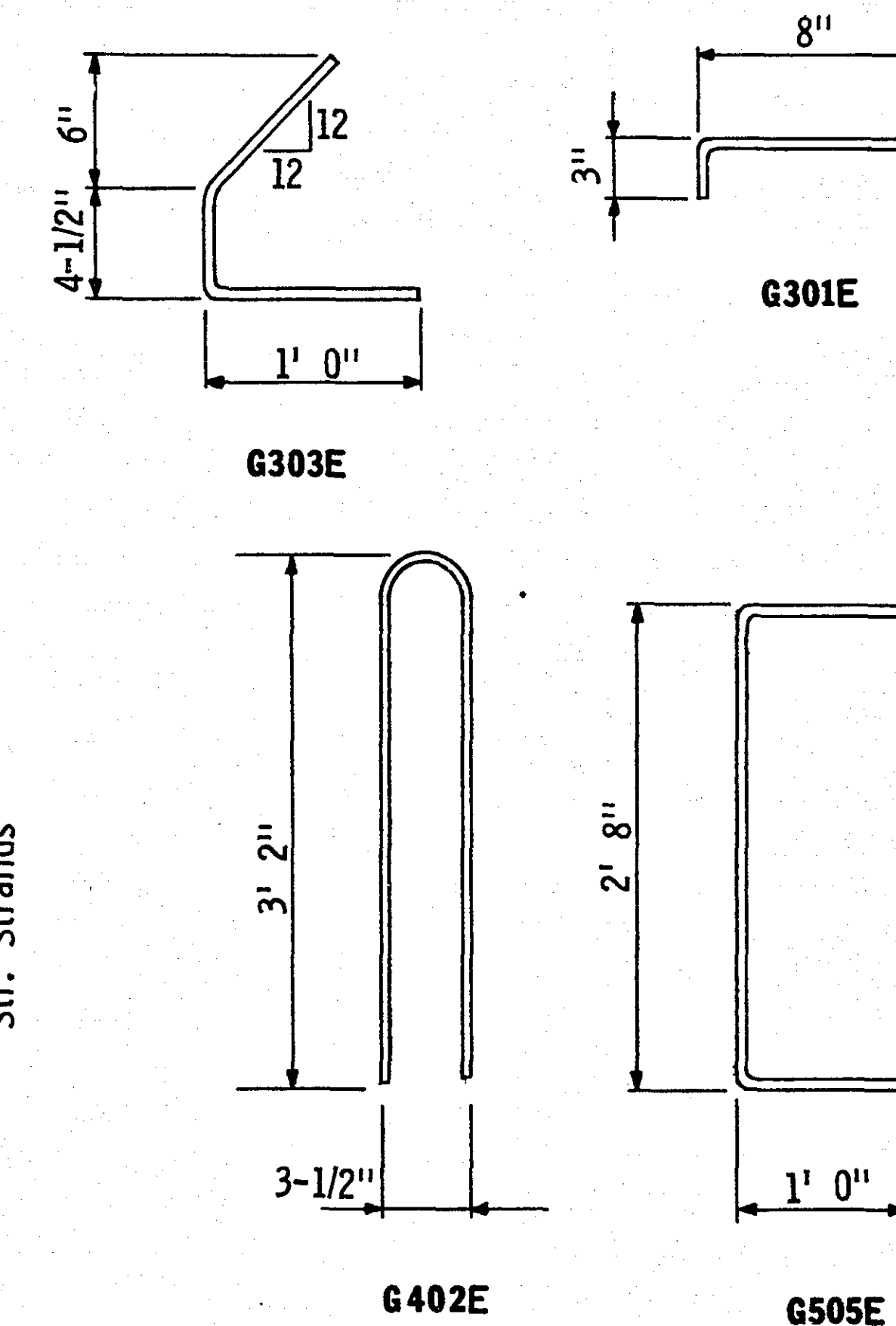
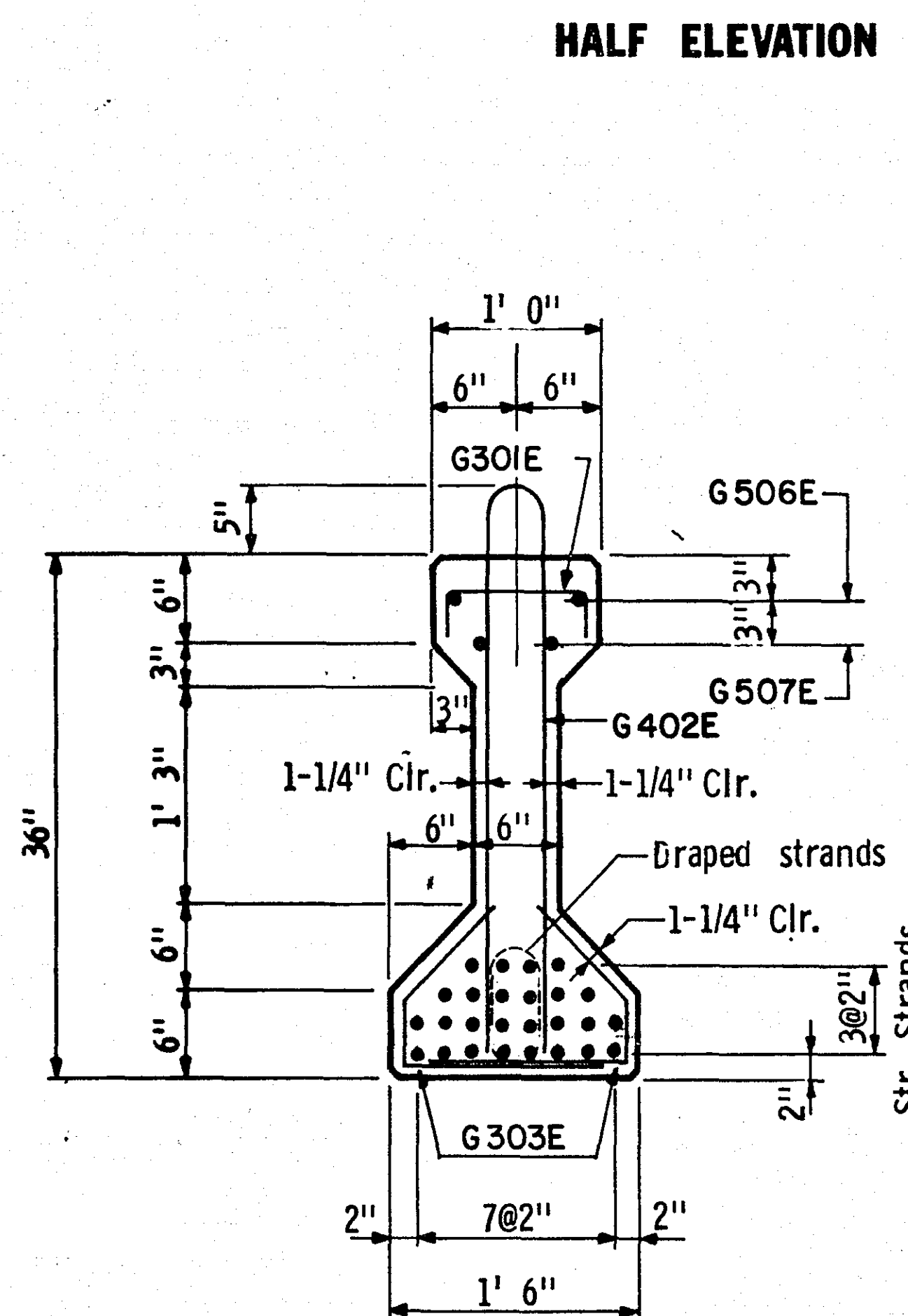
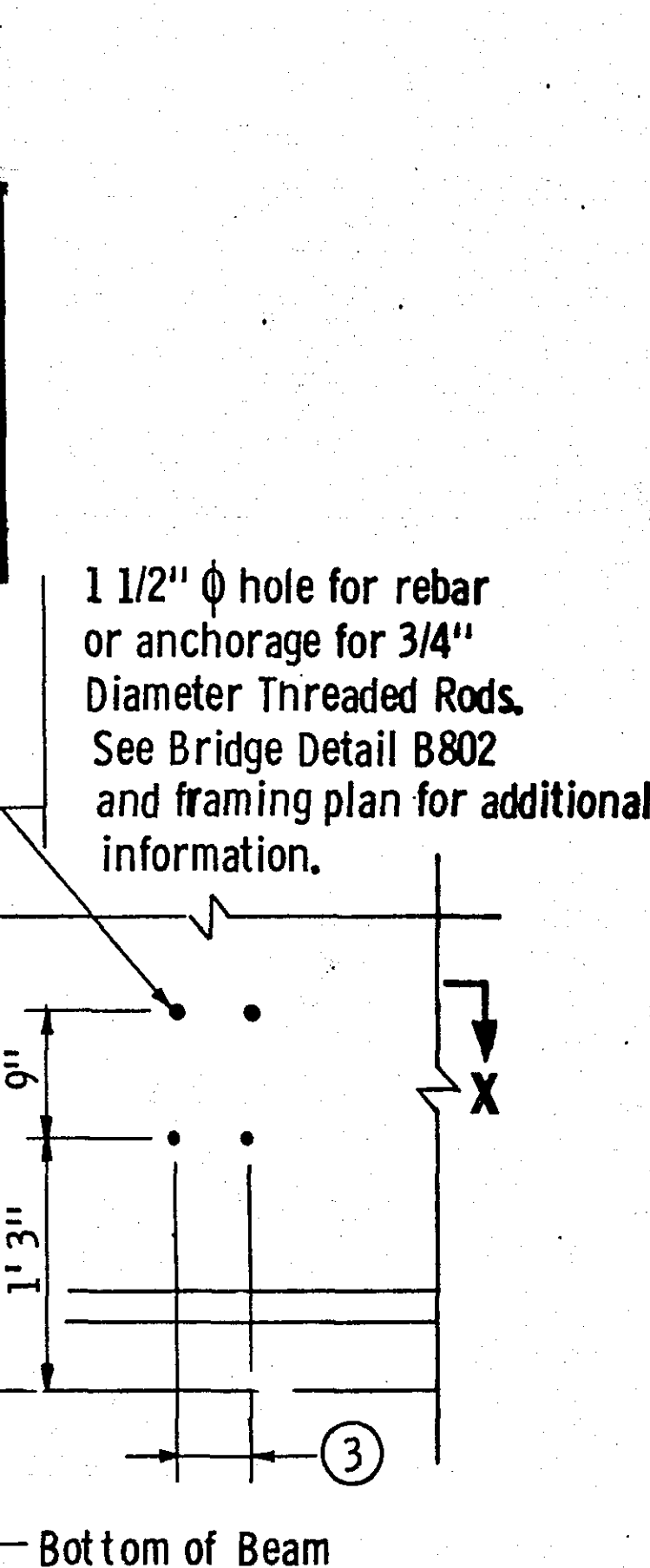
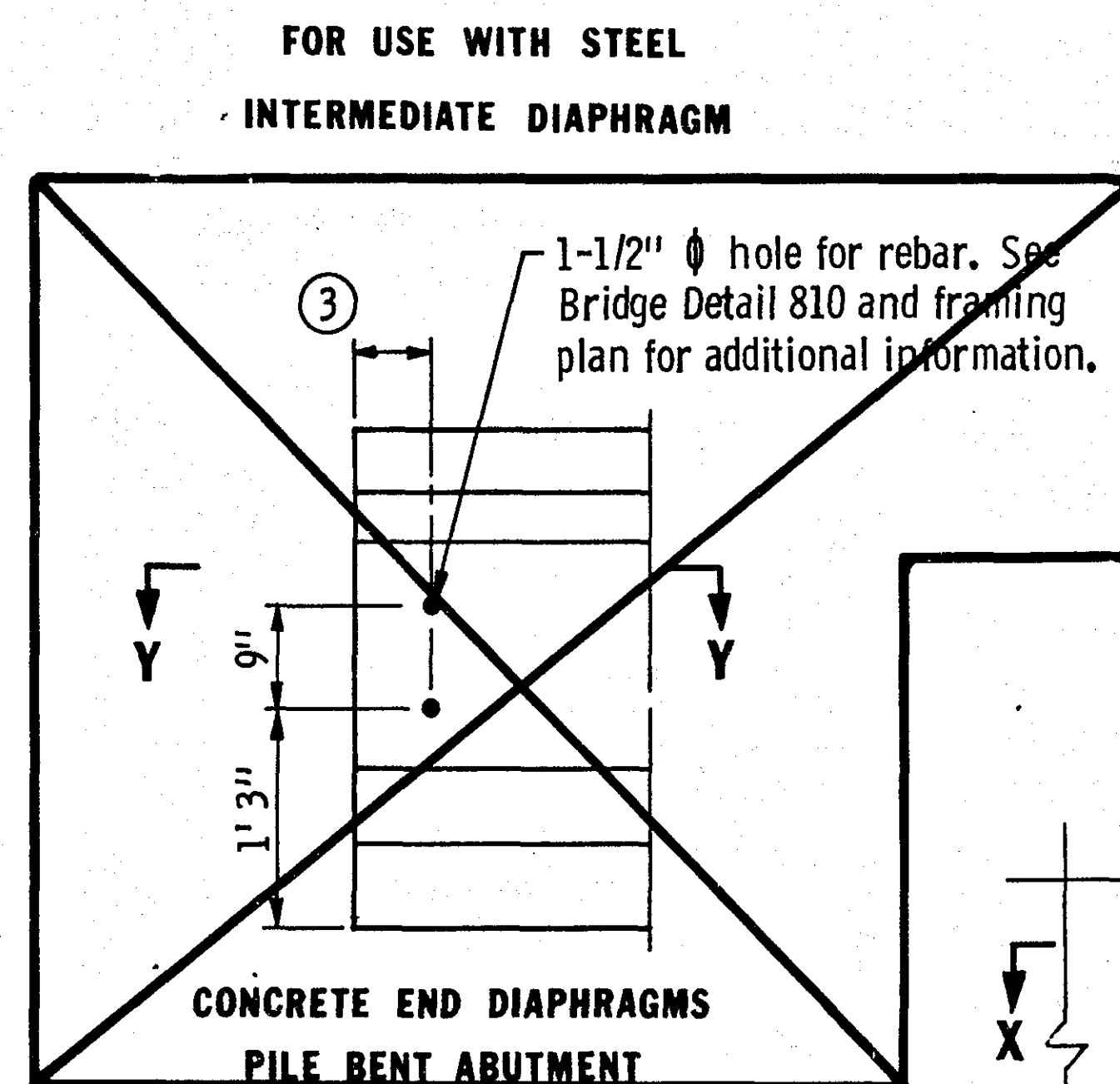
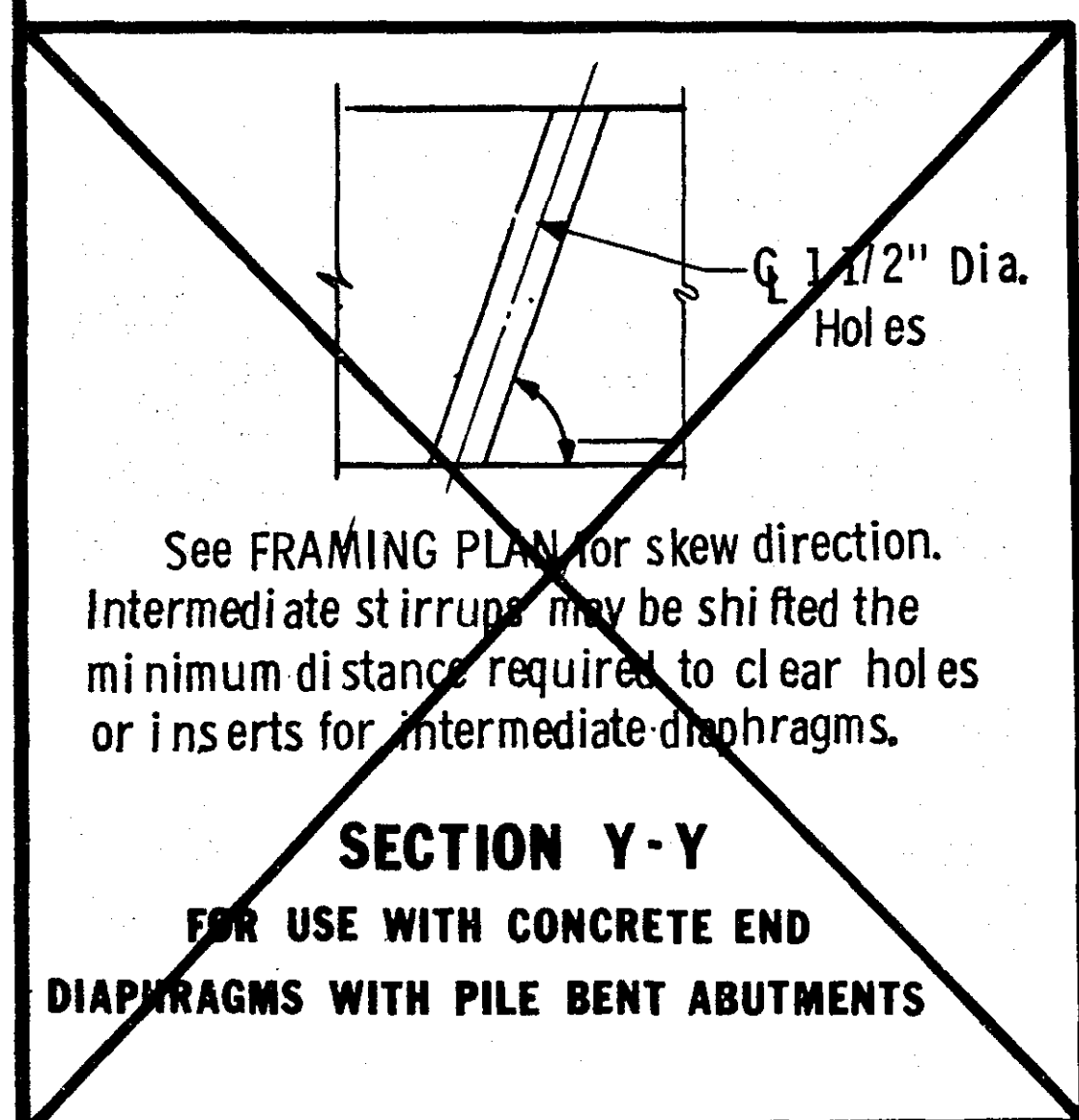
TITLE: 36" PRESTRESSED CONCRETE BEAM (PRETENSIONED) TYPE 36-50

DES: JDP DR: AF APPROVED: 11-4-91
CHK: GWM CHK: JDP
Sheet No. 11 of 28 Sheets Bridge No. 62559



Bar	Wt.	Girder Section Data
G 301	44 lb.	Wt./Ft. = 385 lbs.
G 402	4.34 lb.	Cross sec. area at Q of span = 369 in. ²
G 303	.78 lb.	C. G. (from bottom) = 15.83 in.
G 505	4.87 lb.	I = 50,980 in. ⁴
G 506	31.0	S _x = 3,221 in. ³
G 507	30.2	1/2" @ 270k strand wt./ft. = .525 lb.
		1/2" @ 270k strand area = .1531 sq. in.

④ All Regular Reinforcement Shall Be Epoxy Coated.



GENERAL NOTES:

Tops of beams shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of beam.

A modified strand pattern or a bundled strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

Use Low Relaxation Strands.

Each beam shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the beam, near the end, so located that they will be exposed after the end diaphragms have been cast. Fascia beams shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of beams, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete beams. See Spec. 2405.

See framing plan for beam ends marked "X".

Approximate weight of beam 11.2 tons.

As an alternate to the diaphragm anchorages shown, the contractor may submit details of a cast-in-place anchorage to the engineer for approval. Anchorage must provide an ultimate pull out strength of 15 kips per anchorage.

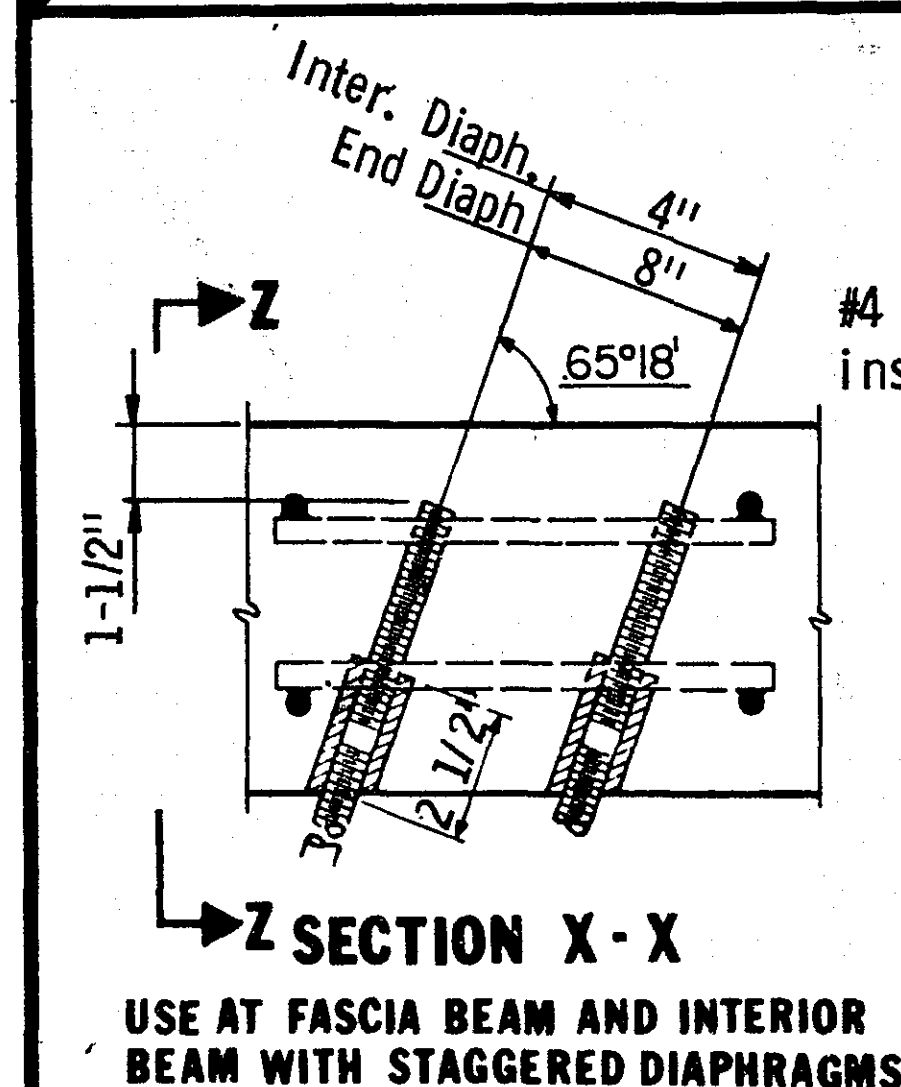
MINIMUM CONCRETE STRENGTH - P.S.I.		
	① f'ci	② f'c
Required min. Concrete Strength	6530	6530

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and beam transported and installed.

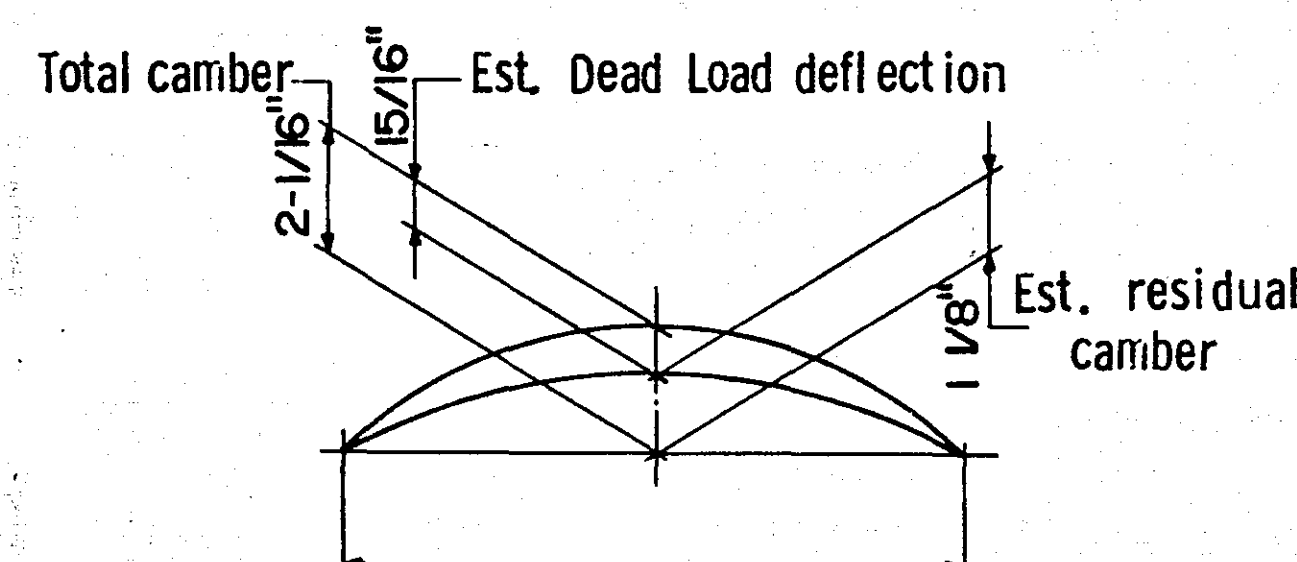
Fig. 5-397.502

Revised: Sept. 11, 1981 Approved: May 18, 1977

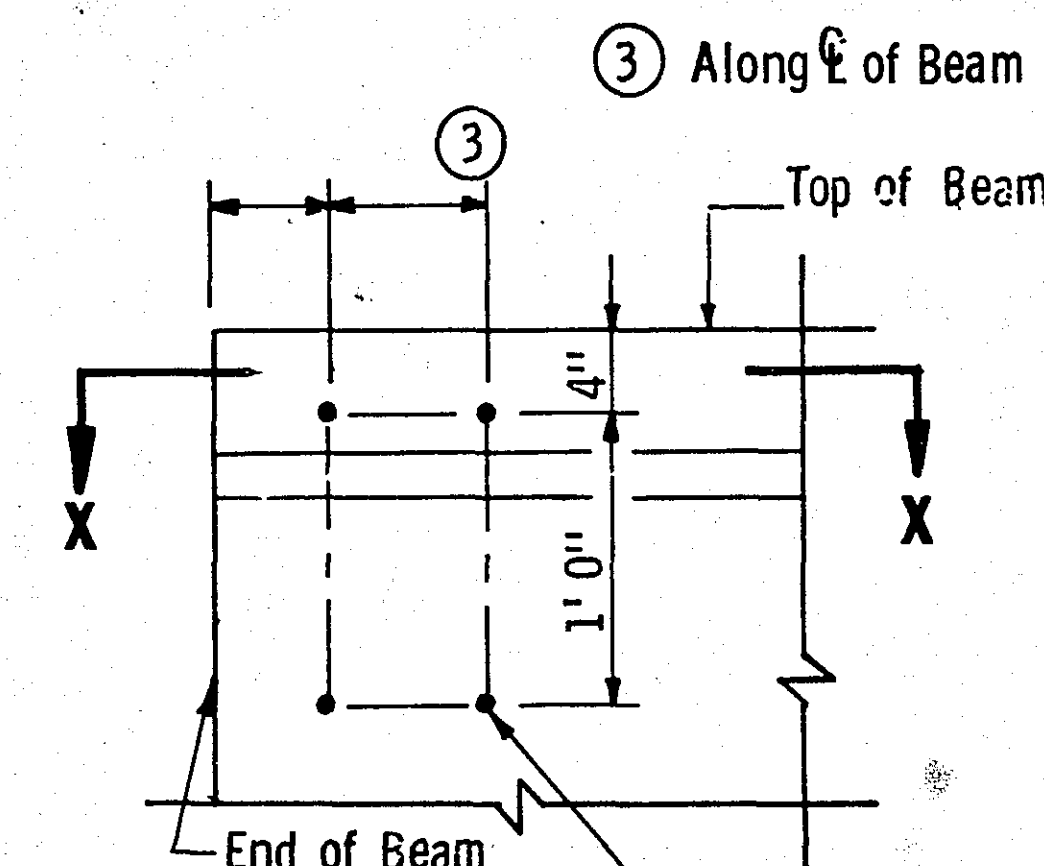


Nuts and rods per Spec. 3306. No paint

SECTION Z-Z



Deflections shown are for weight of slab, wearing course, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of beams after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.



CONCRETE END DIAPHRAGMS
PARAPET ABUTMENT

SECTION AT Q BEAM

First digit of bar mark indicates bar size. All bar dimensions are out-to-out.

Y DISTANCES (IN INCHES)			
	NO.	Q SPAN	END
Straight strands	18	4.22	
Draped strands	8	6.00	28.00 ^a
Total strands	26	4.77	

Y = distance of Center of Gravity of strands from bottom of beam. All strands spaced 2" c-c, horizontally and vertically except as noted.

All strands 1/2" @ 270 kip, ultimate strength.

^a A tolerance of ± 2" will be permitted in this dimension. S.P. 62-626-03

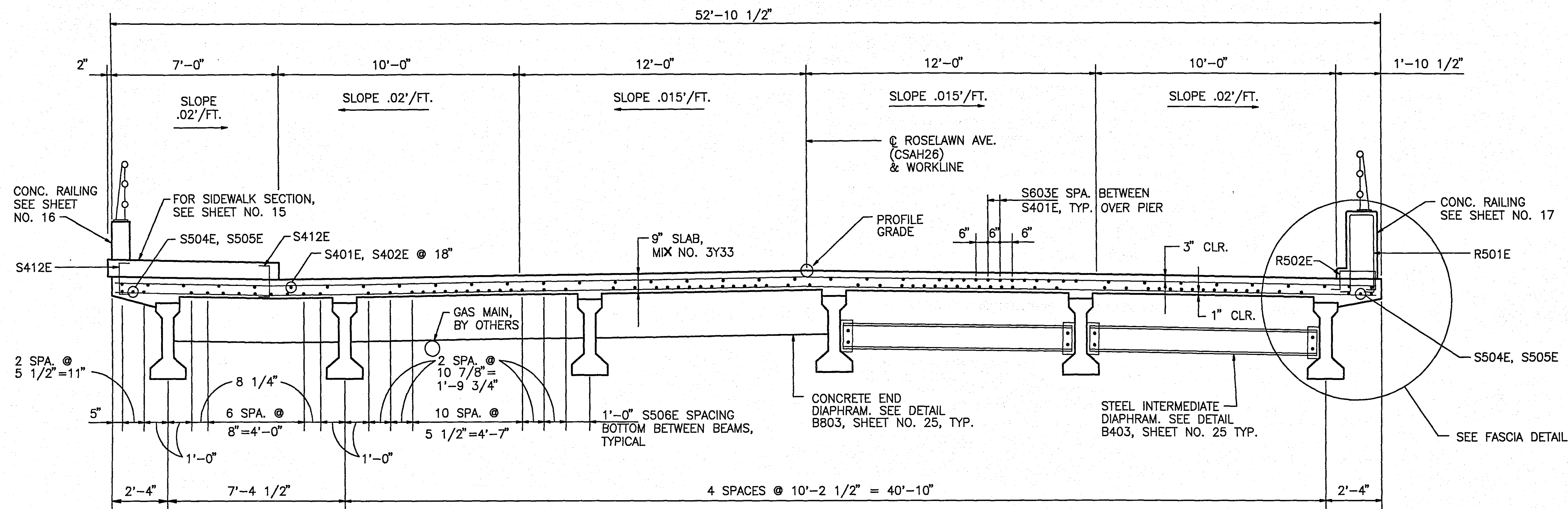
BEAMS B8,B9,B10,B11

TITLE:
**36" PRESTRESSED CONCRETE BEAM
(PRETENSIONED) TYPE 36-58**

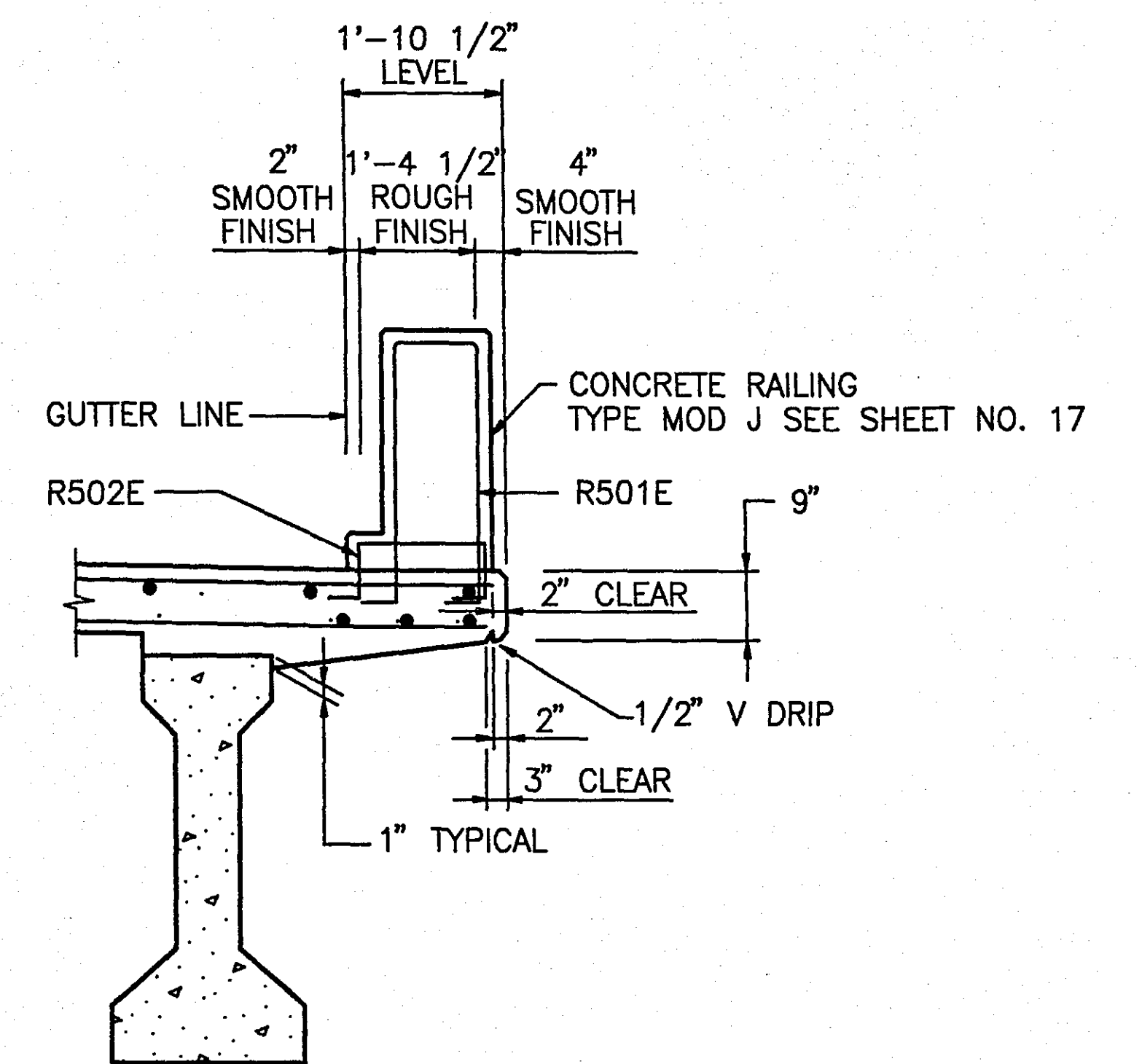
DES: JDP DR: AF
CHK: GWM CHK: JDP
APPROVED: 11-4-91

Bridge No.
62559

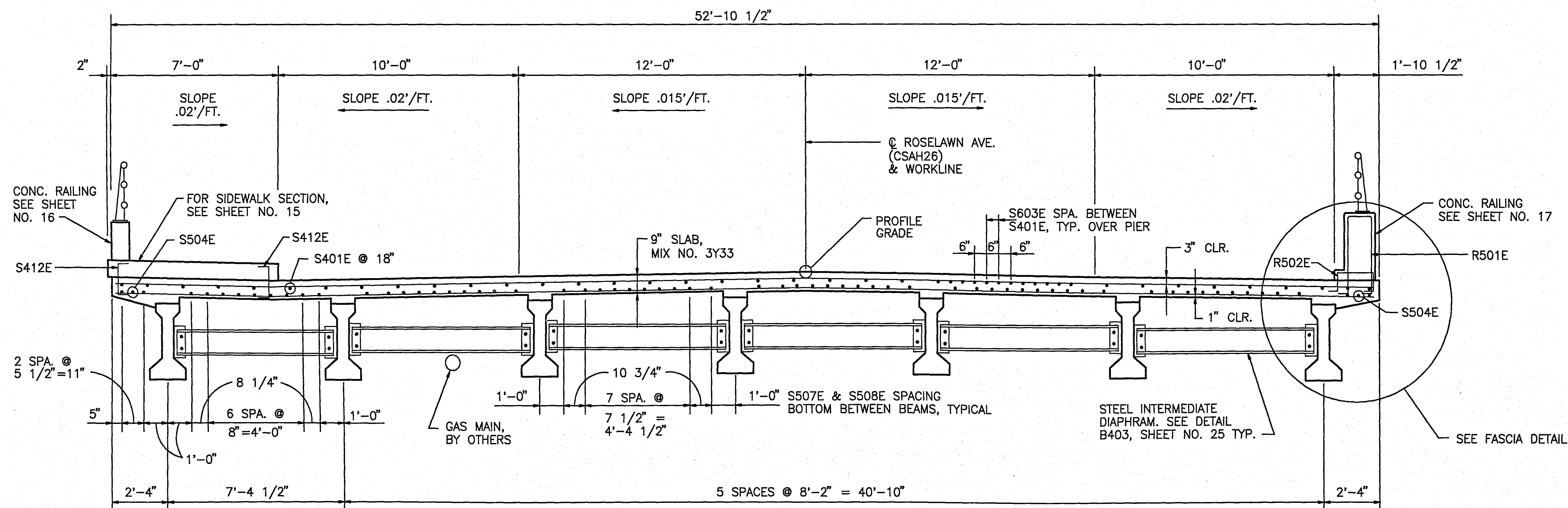
Sheet No.12 of 28 Sheets



TRANSVERSE SECTION A-A
SCALE: 3/8"=1'-0"



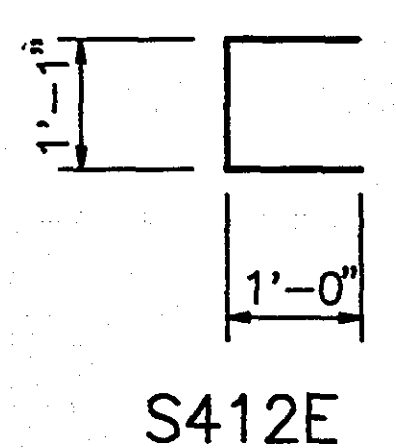
FASCIA DETAIL
SCALE: 1/2"=1'-0"



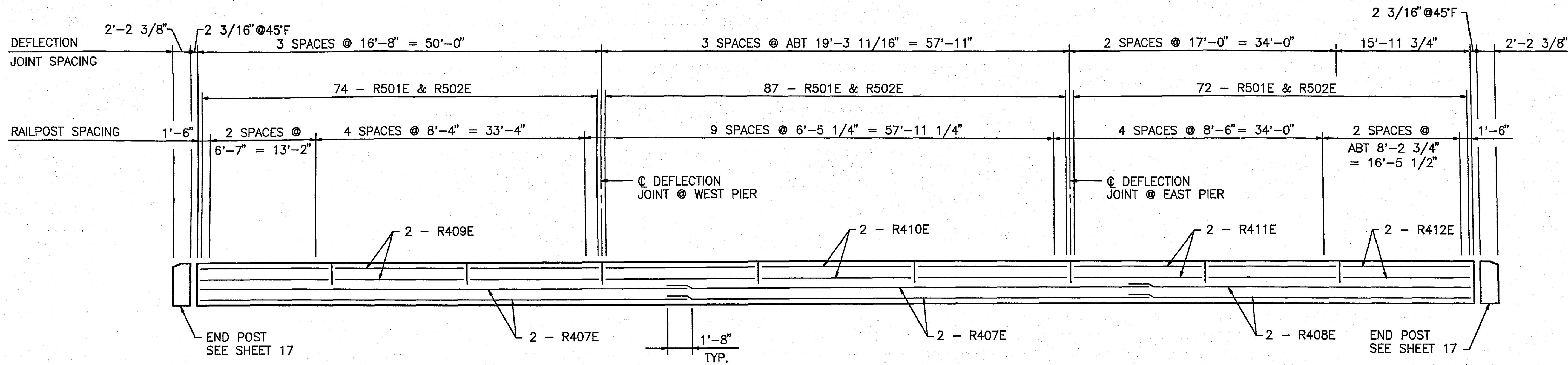
TRANSVERSE SECTION B-B
SCALE: 3/8"=1'-0"

BILL OF REINFORCEMENT				
MARK	NUMBER	LENGTH	SHAPE	LOCATION
S401E	88	60'-0"	STR	SLAB - TOP LONGITUDINAL
S402E	44	41'-0"	STR	SLAB - TOP LONGITUDINAL
S603E	140	15'-0"	STR	TOP LONGITUDINAL AT PIER
S504E	12	60'-0"	STR	SLAB - BOTTOM LONGITUDINAL
S505E	6	42'-8"	STR	SLAB - BOTTOM LONGITUDINAL
S506E	138	51'-4"	STR	SLAB - BOTTOM LONGITUDINAL
S507E	59	40'-0"	STR	SLAB - BOTTOM LONGITUDINAL
S508E	59	23'-5"	STR	SLAB - BOTTOM LONGITUDINAL
S609E	406	52'-4"	STR	TRANSVERSE - TOP AND BOTTOM
S510E	144	52'-4"	STR	TRANSVERSE - TOP AND BOTTOM
S611E	24	5'-10"	STR	TRANSVERSE - TOP AND BOTTOM
S412E	216	3'-1"	BENT	SIDEWALK - TRANSVERSE TIES
S413E	102	6'-6"	STR	SIDEWALK - TRANSVERSE
S414E	2	6'-7"	STR	SIDEWALK - TRANSVERSE
S415E	2	6'-8"	STR	SIDEWALK - TRANSVERSE
S416E	2	6'-11"	STR	SIDEWALK - TRANSVERSE
① S417E	76	6'-2"	BENT	END DIAPHRAGM TIES
① S418E	4	6'-8"	STR	END DIAPHRAGM - HORIZONTAL
① S419E	16	9'-10"	STR	END DIAPHRAGM - HORIZONTAL
① S720E	4	7'-2"	STR	END DIAPHRAGM - HORIZONTAL
① S821E	16	10'-4"	STR	END DIAPHRAGM - HORIZONTAL
① S722E	16	5'-0"	STR	END DIAPHRAGM - HORIZONTAL
① S623E	2	15'-5"	BENT	END DIAPHRAGM - HORIZONTAL
① S824E	8	18'-7"	BENT	END DIAPHRAGM - HORIZONTAL
S425E	32	29'-10"	STR	PAVING BLOCK - TRANSVERSE
S626E	4 SER OF 41	6'-11" TO 50'-4"	STR	TRANSVERSE - TOP AND BOTTOM

① SEE DETAIL B803, SHEET NO. 25



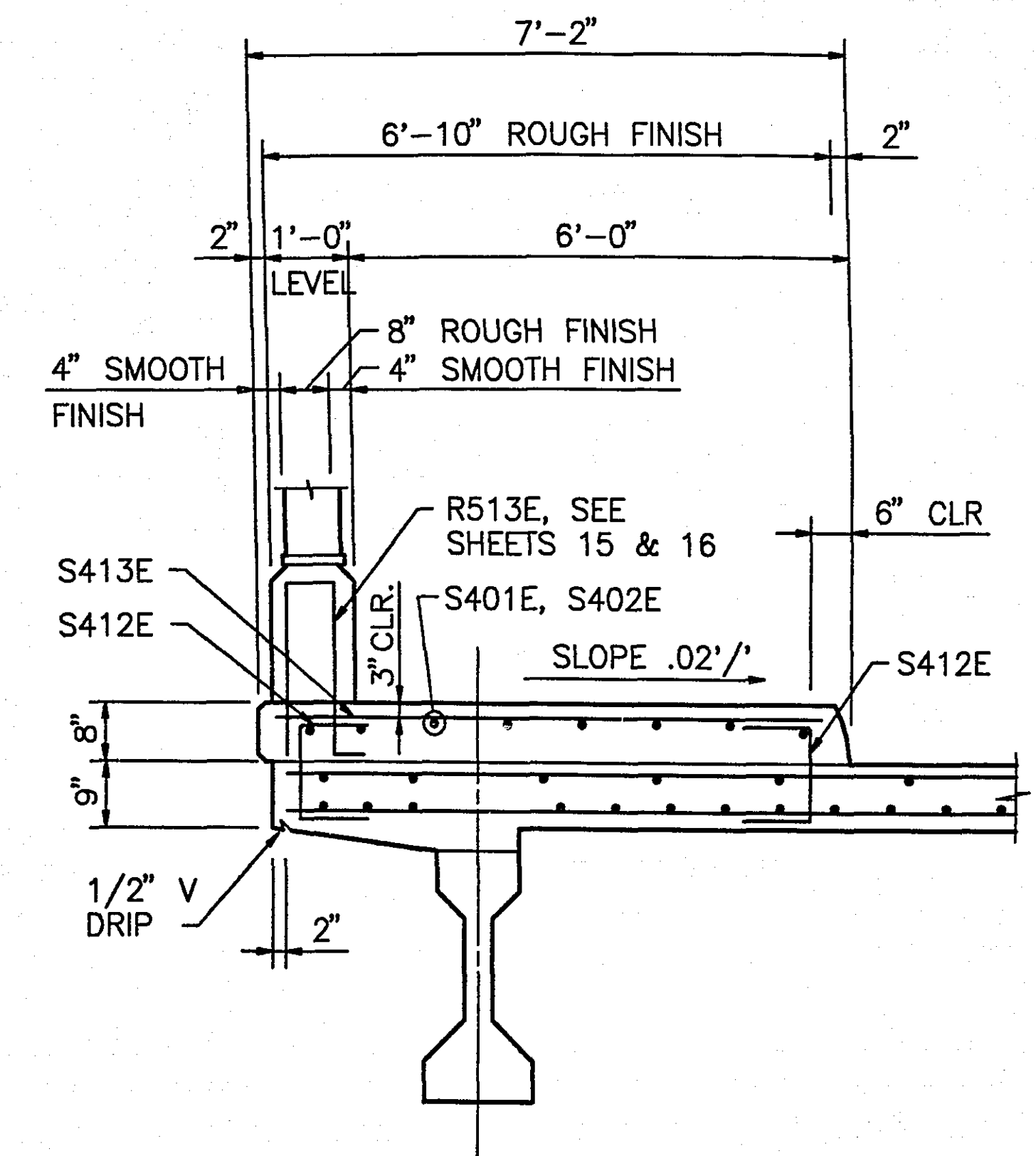
S412E



- NOTE:
1. FOR RAILING SECTIONS AND DETAILS, SEE SHEET No. 17.
 2. PIPE RAILING NOT SHOWN.

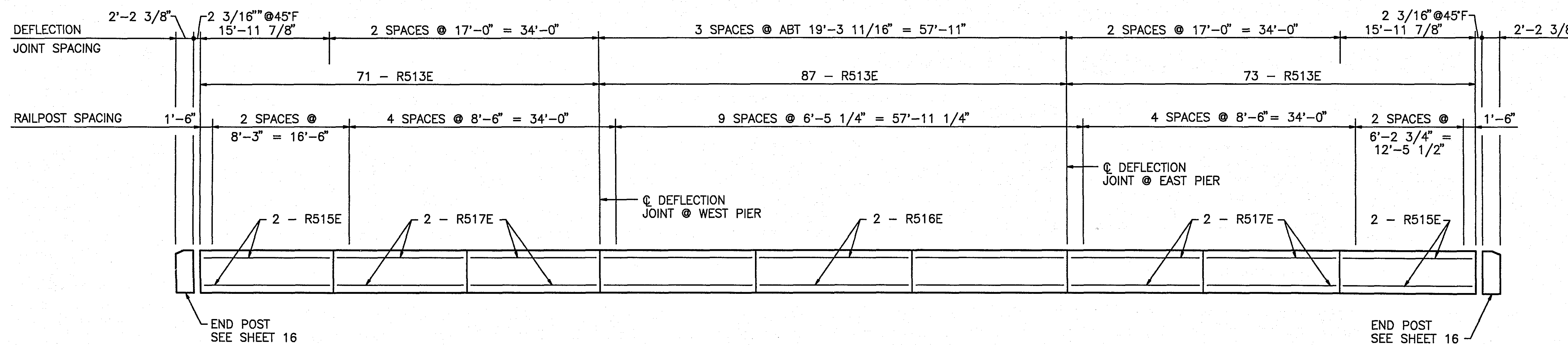
SOUTH RAILING ELEVATION

NO SCALE, LOOKING NORTH



SIDEWALK SECTION

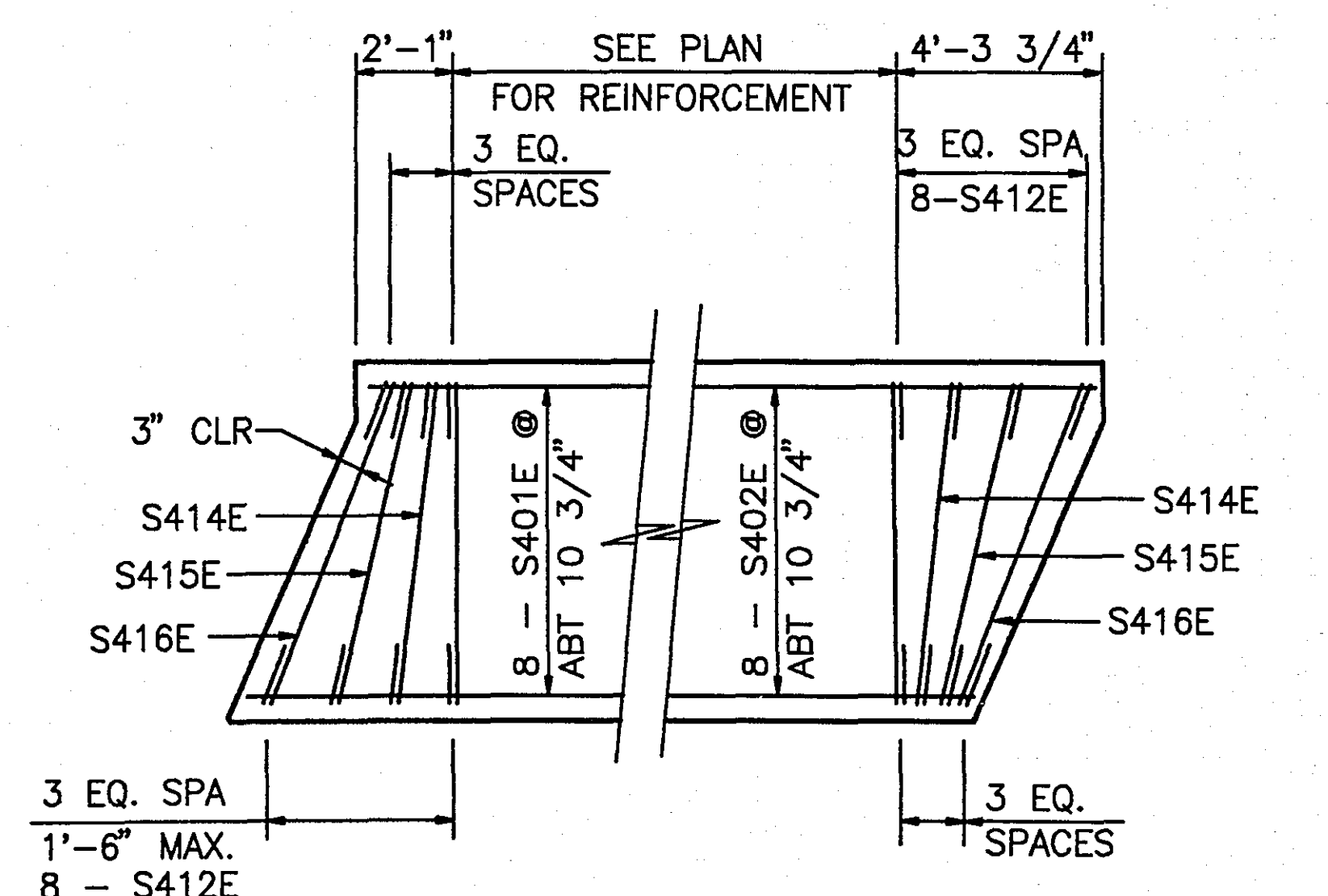
SCALE: 1/2"=1'-0"



- NOTE:
1. FOR RAILING SECTIONS AND DETAILS, SEE SHEET No. 16.
 2. PIPE RAILING NOT SHOWN.

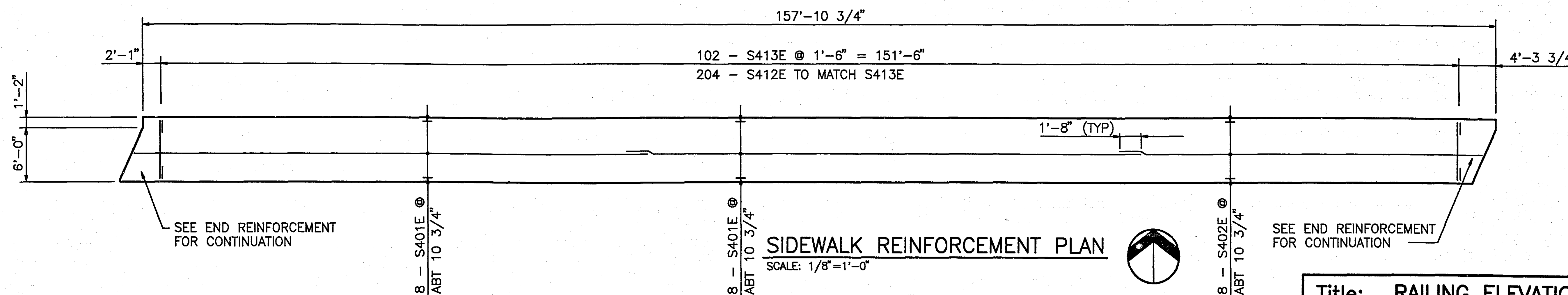
NORTH RAILING ELEVATION

NO SCALE, LOOKING NORTH



SIDEWALK END REINFORCEMENT PLAN

SCALE: 1/4"=1'-0"



SIDEWALK REINFORCEMENT PLAN

SCALE: 1/8"=1'-0"

Title: RAILING ELEVATIONS/
SIDEWALK REINFORCEMENT

S.P. 62-626-03

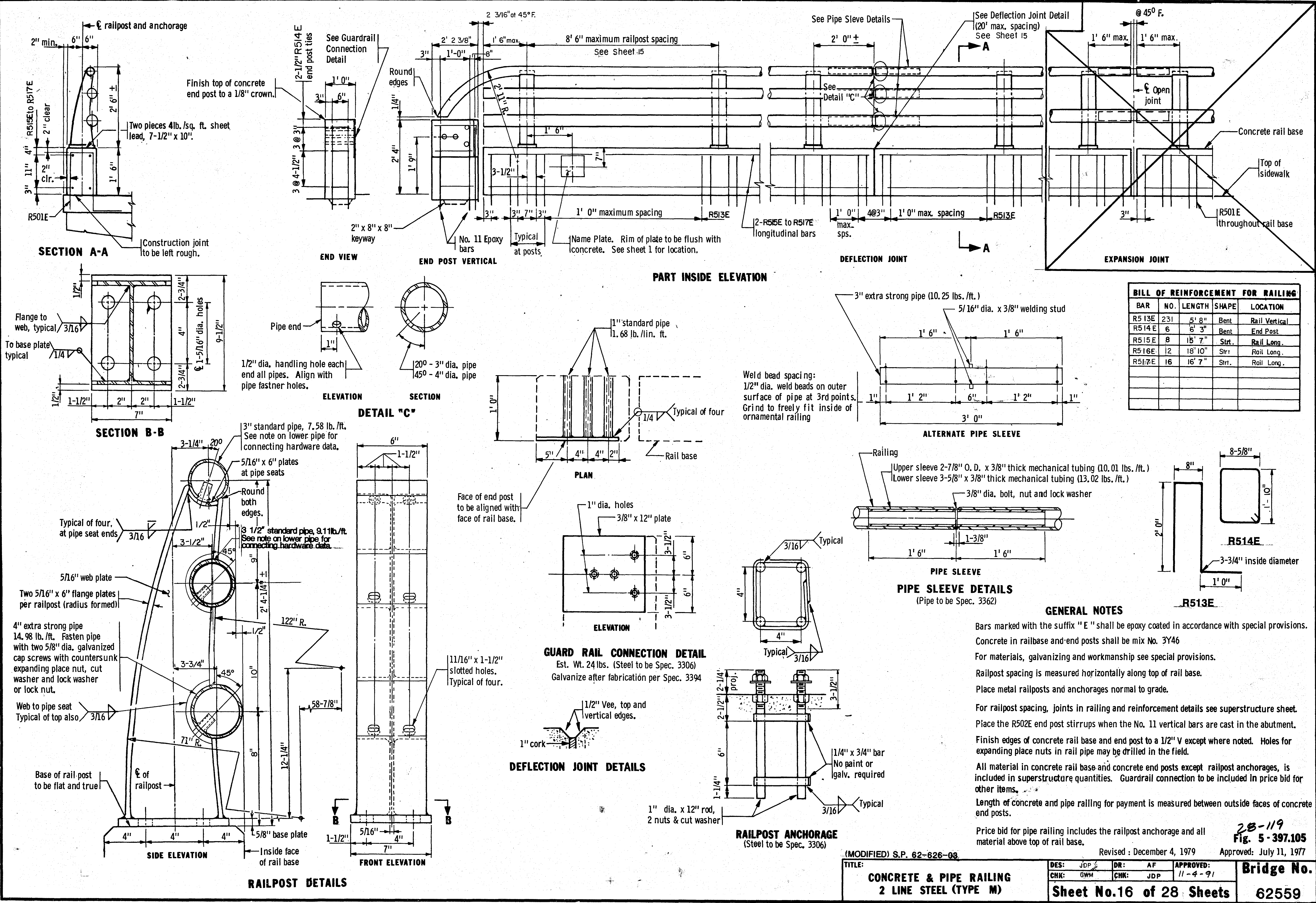
DES: JDP DR: JWM APPROVED: 11-4-91

CHK: GWM CHK: JDP

Sheet No. 15 of 28 Sheets

Bridge No.
62559

28-119



GENERAL NOTES

Bars marked with the suffix "E" shall be epoxy coated in accordance with special provisions.

Concrete in railbase and end posts shall be mix No. 3Y46

For materials, galvanizing and workmanship see special provisions.

Railpost spacing is measured horizontally along top of rail base.

Place metal railposts and anchorages normal to grade.

For railpost spacing, joints in railing and reinforcement details see superstructure sheet.

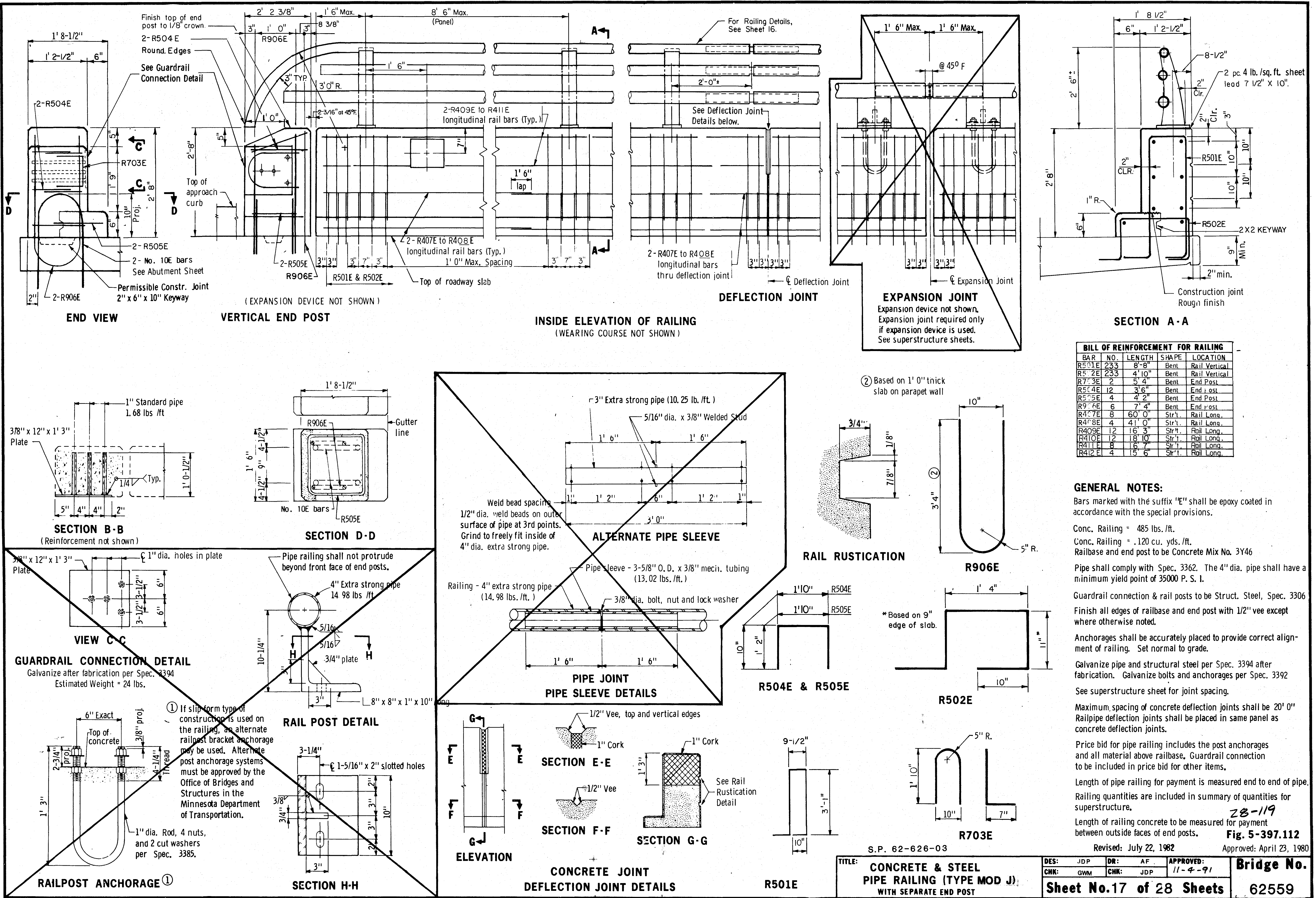
Place the R502E end post stirrups when the No. 11 vertical bars are cast in the abutment.

Finish edges of concrete rail base and end post to a 1/2" V except where noted. Holes for expanding place nuts in rail pipe may be drilled in the field.

All material in concrete rail base and concrete end posts except railpost anchorages, is included in superstructure quantities. Guardrail connection to be included in price bid for other items.

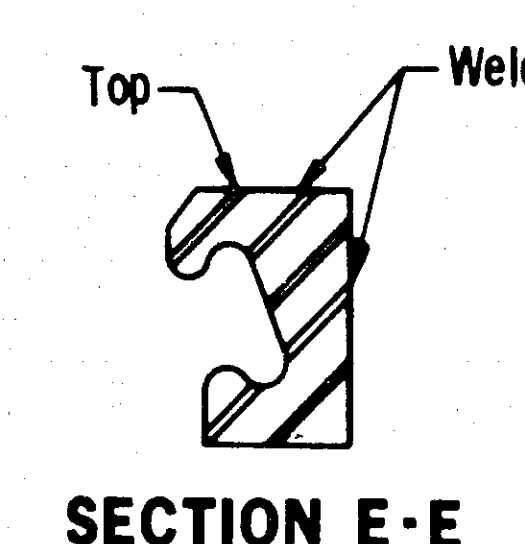
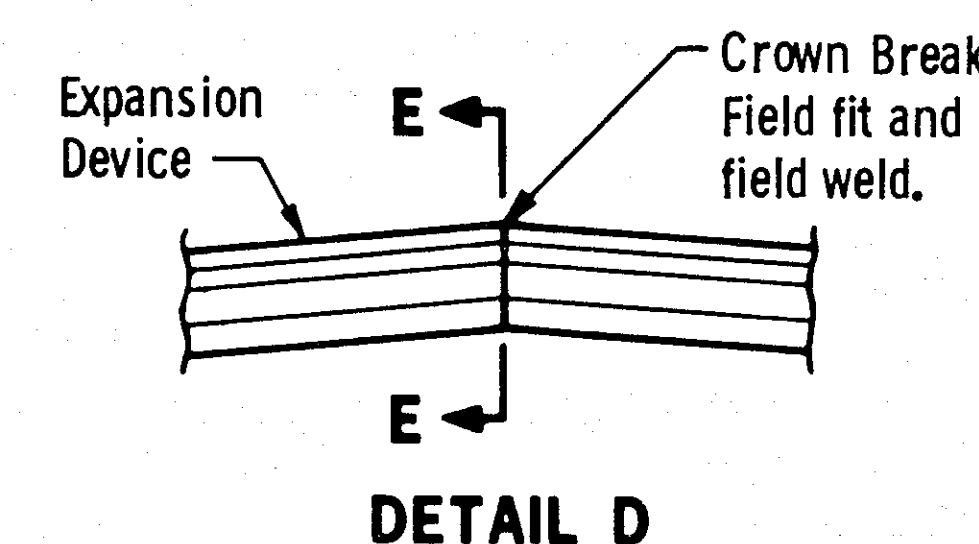
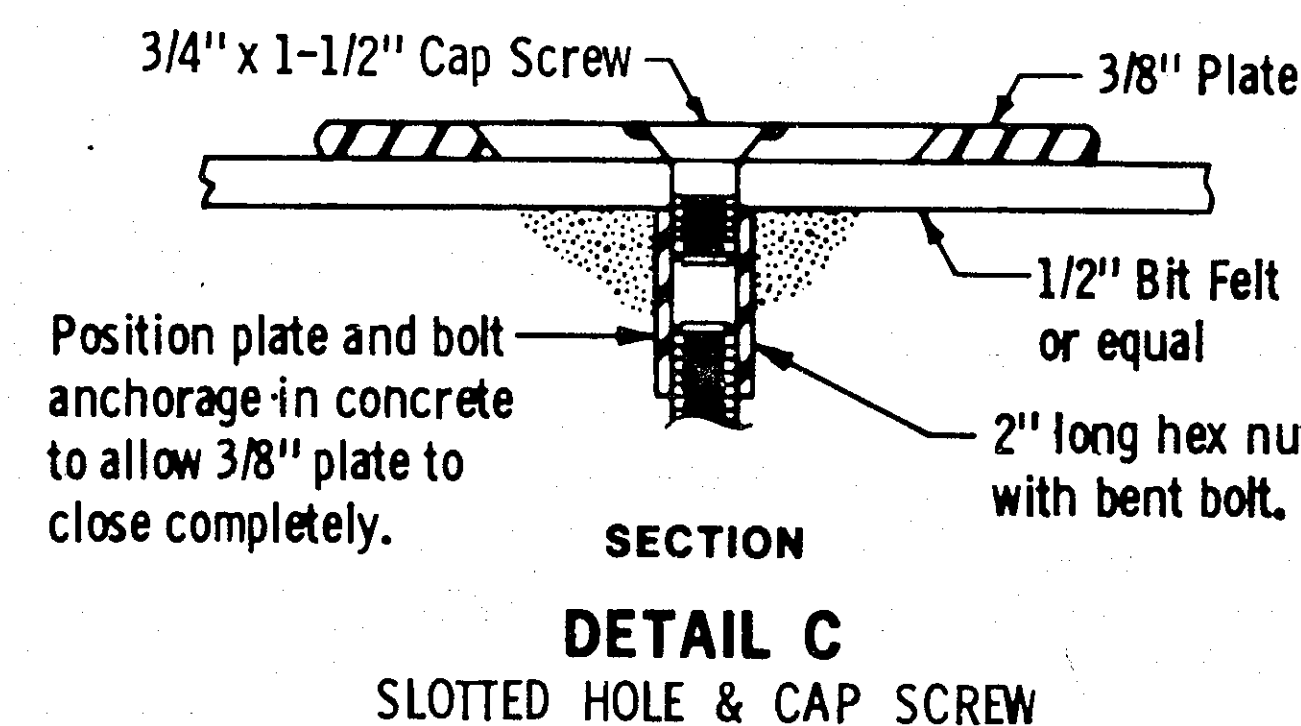
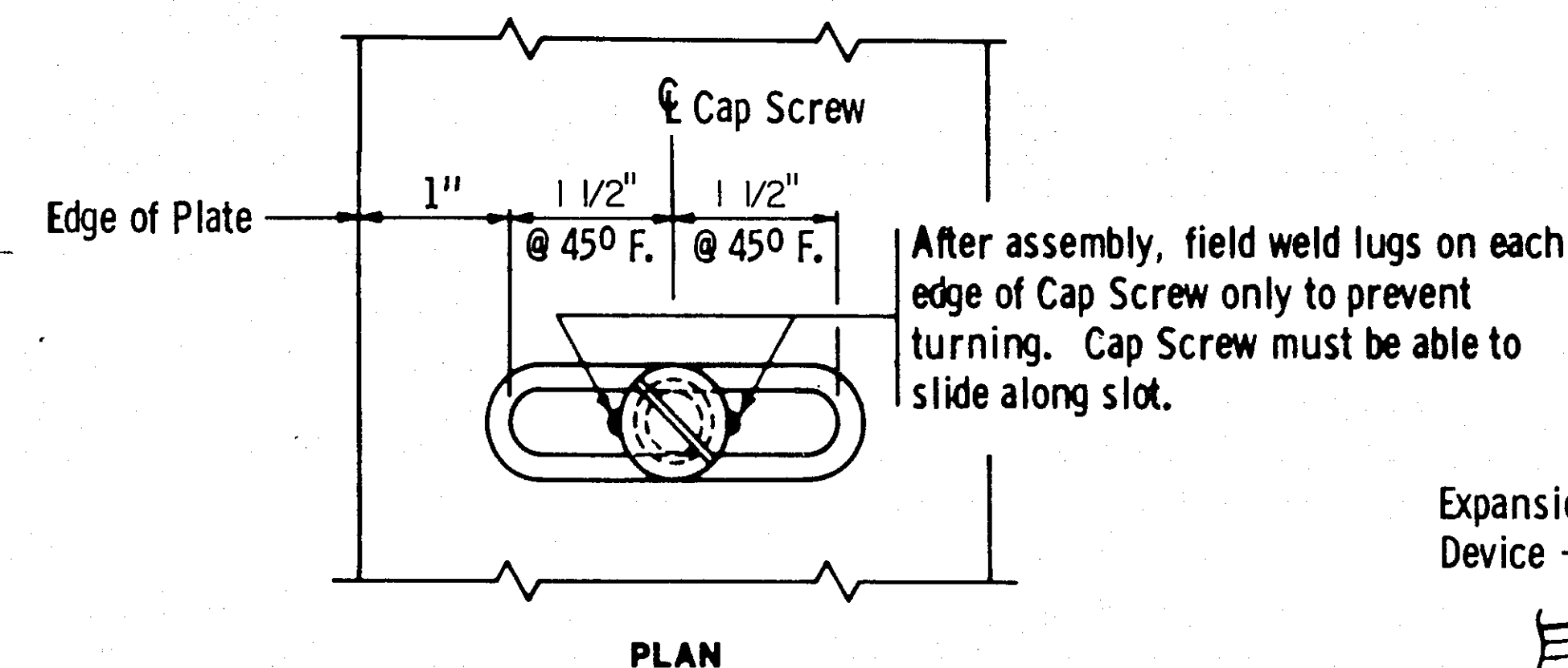
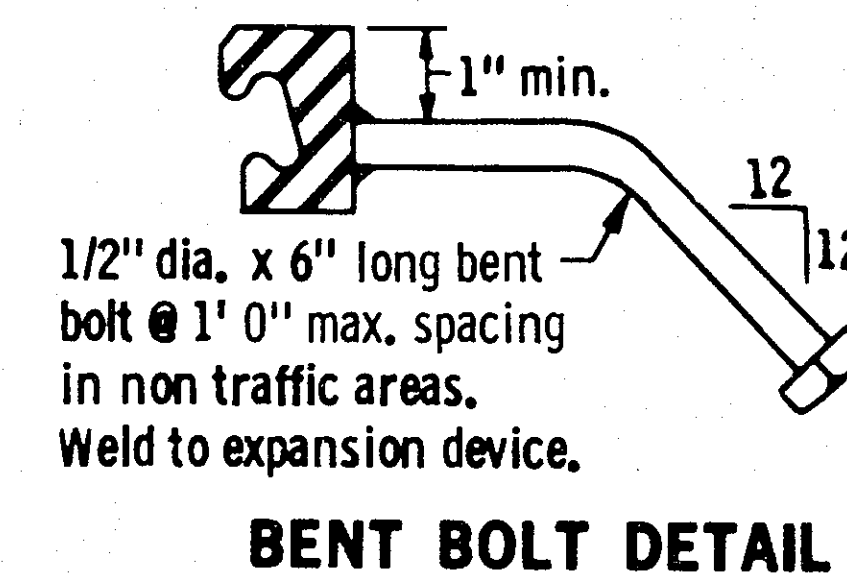
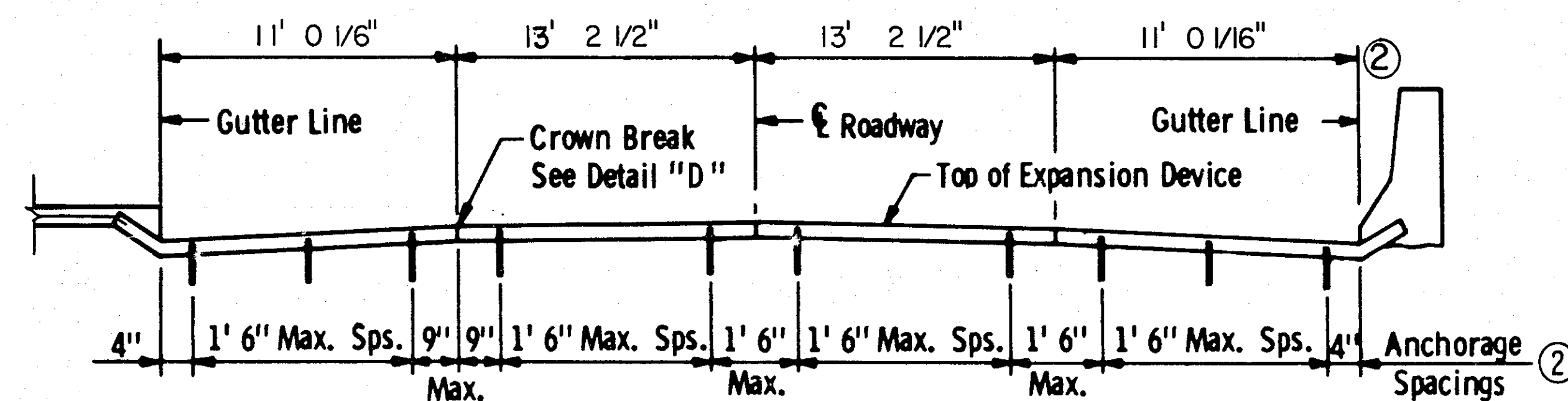
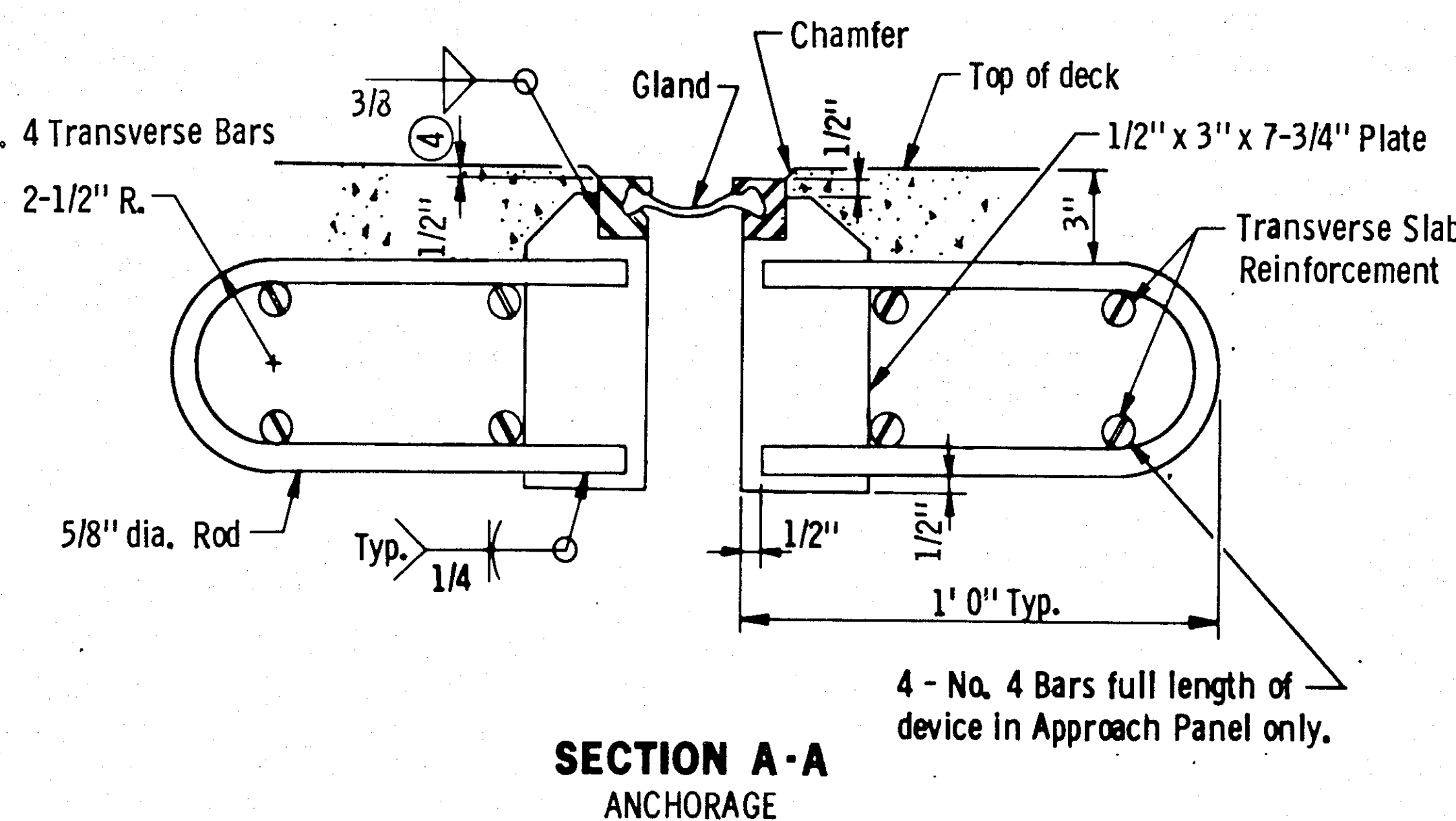
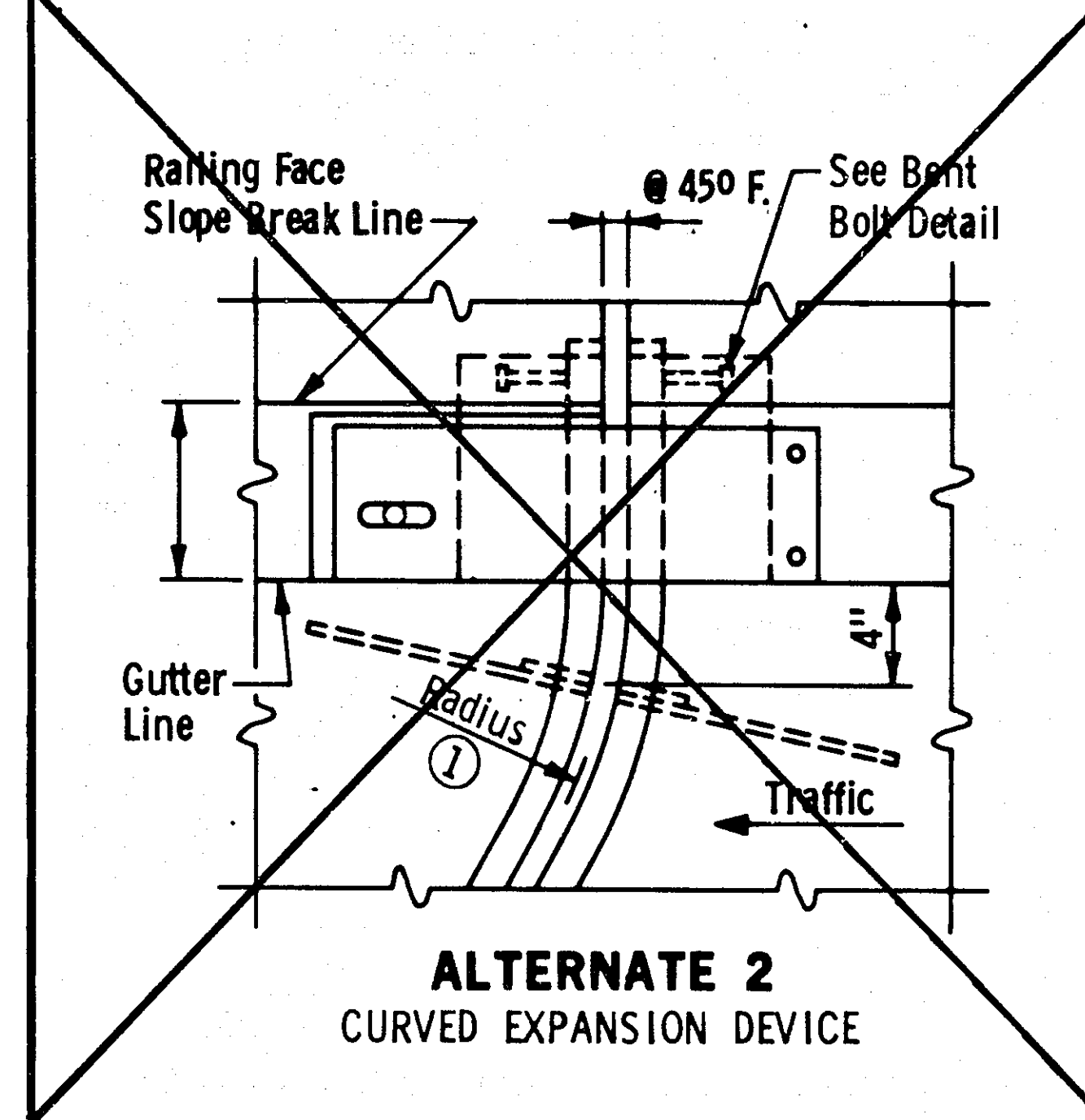
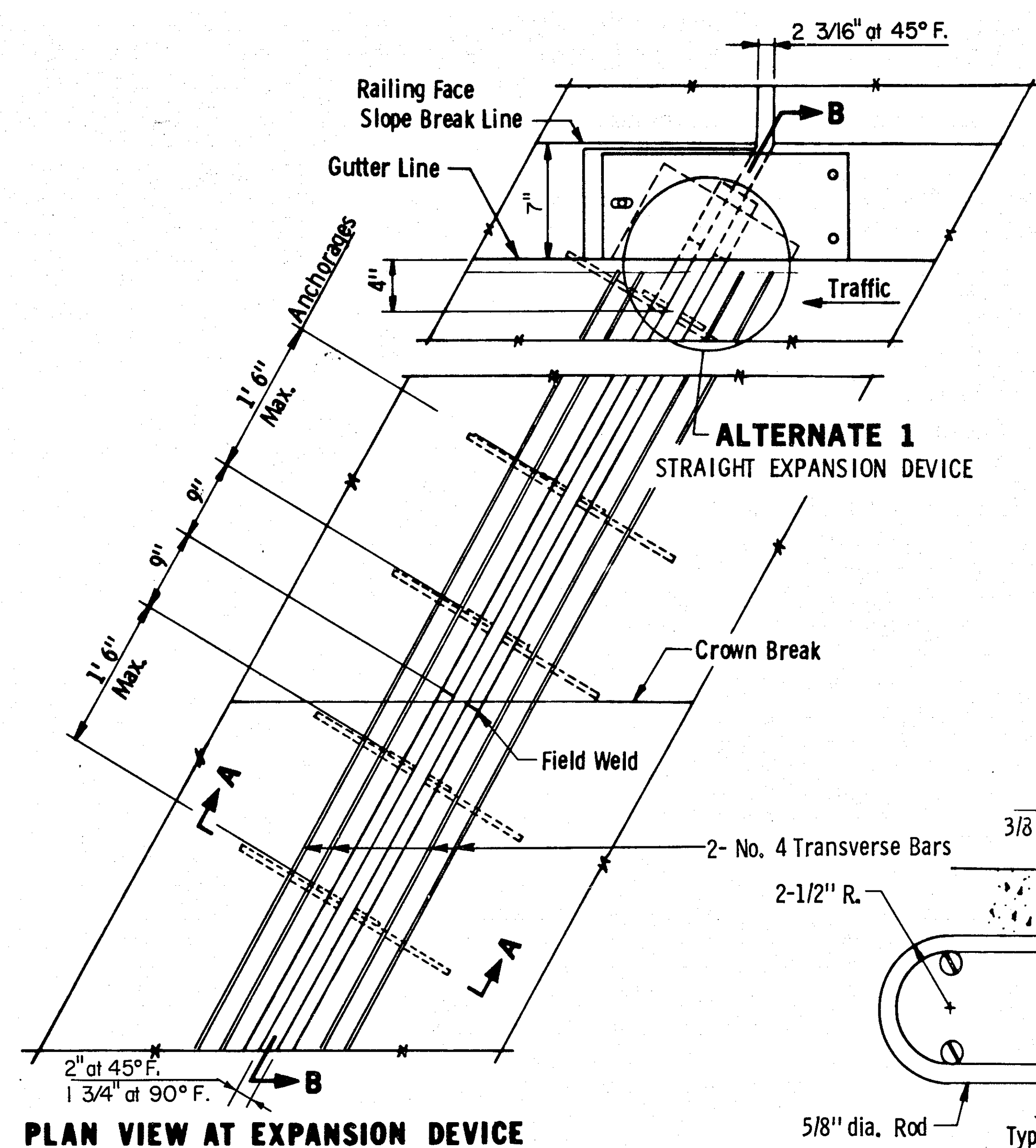
Length of concrete and pipe railing for payment is measured between outside faces of concrete end posts.

Price bid for pipe railing includes the railpost anchorage and all material above top of rail base.

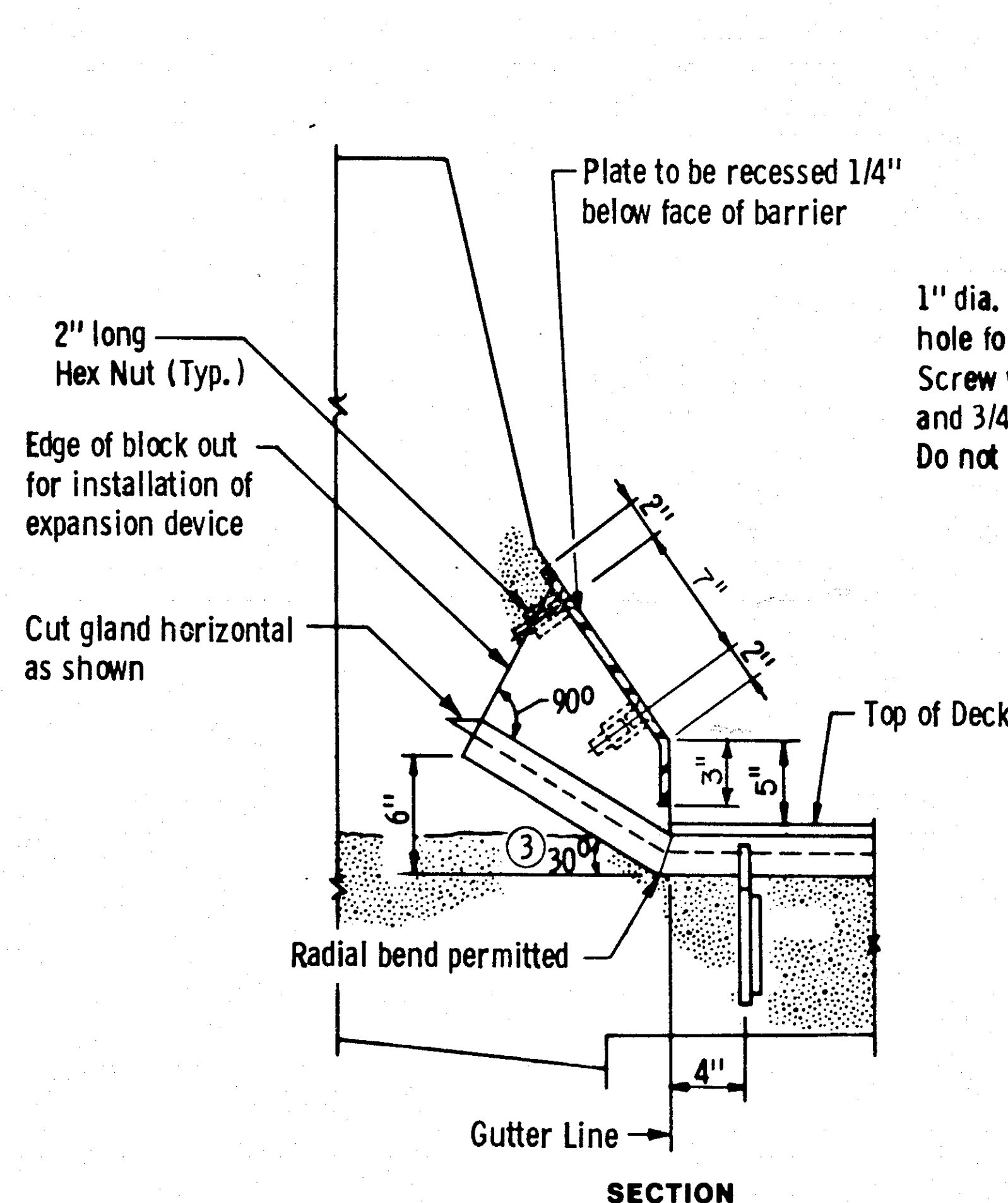


BAR	NO.	LENGTH	SHAPE	LOCATION
R501E	233	8'-8"	Bent	Rail Vertical
R502E	233	4'-10"	Bent	Rail Vertical
R703E	2	5'-4"	Bent	End Post
R504E	12	3'-6"	Bent	End Post
R505E	4	4'-2"	Bent	End Post
R906E	6	7'-4"	Bent	End Post
R407E	8	60'-0"	Strt.	Rail Long.
R408E	4	41'-0"	Strt.	Rail Long.
R409E	12	16'-3"	Strt.	Rail Long.
R410E	12	18'-10"	Strt.	Rail Long.
R411E	8	16'-7"	Strt.	Rail Long.
R412E	4	15'-6"	Strt.	Rail Long.

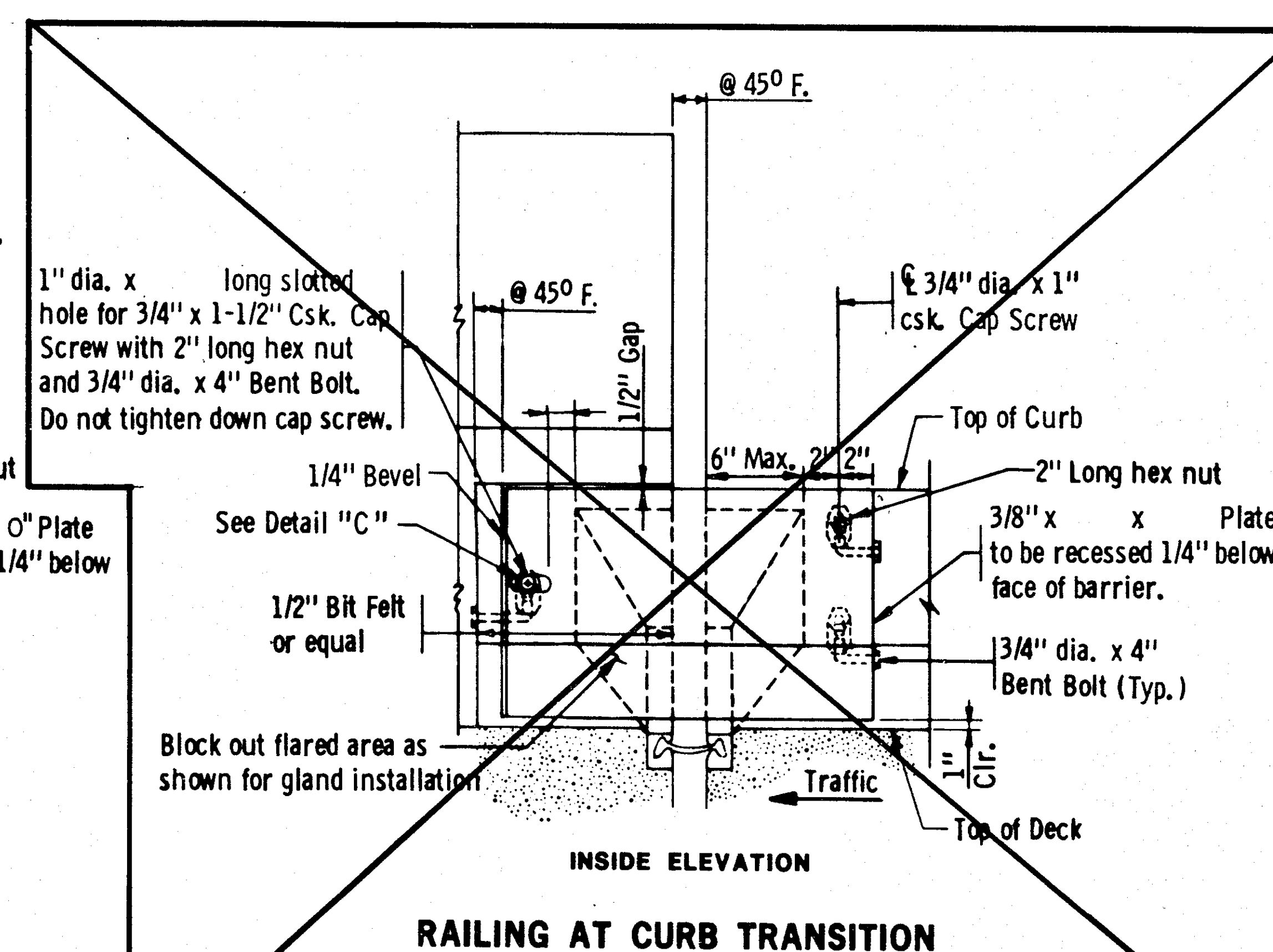
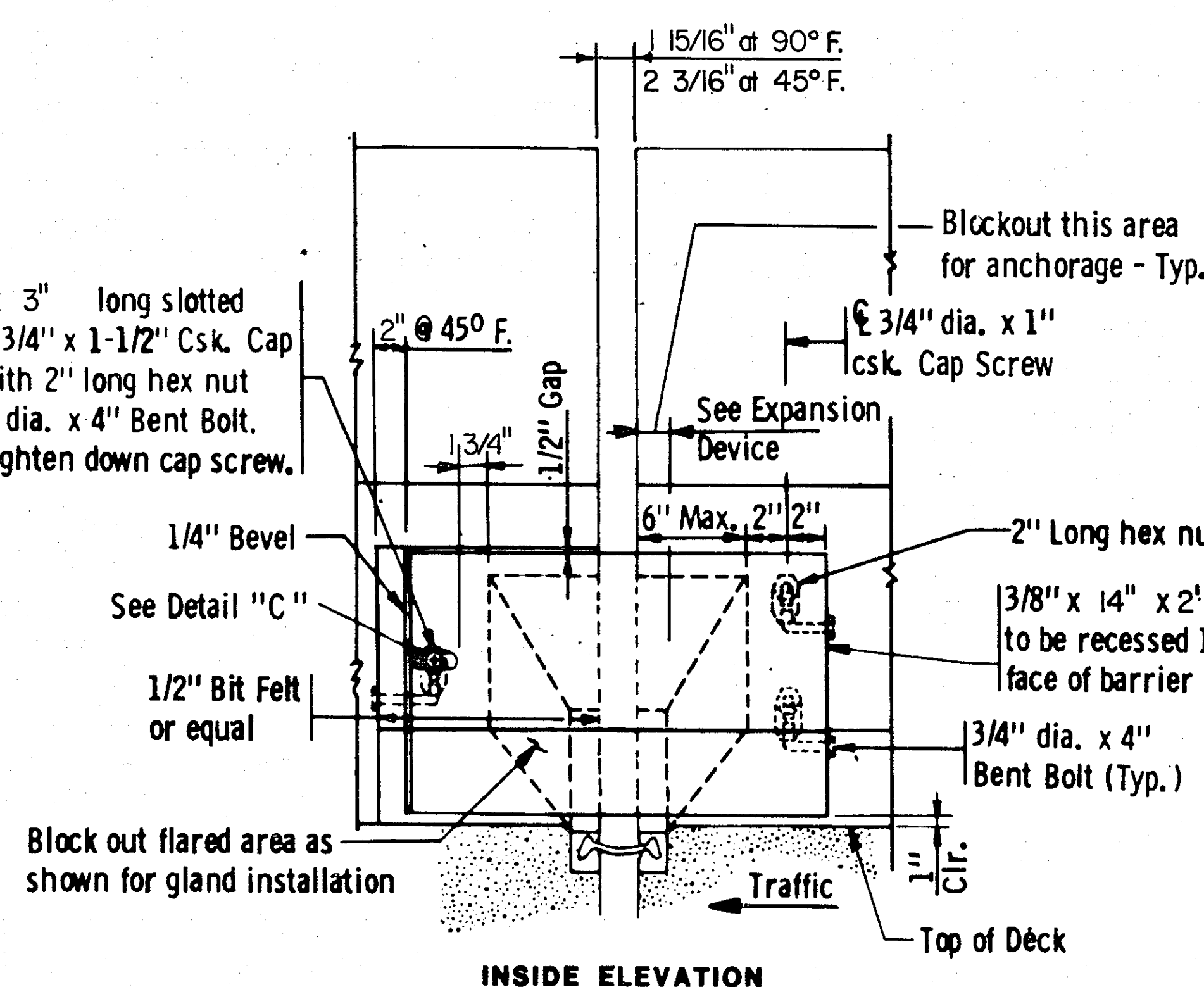
GENERAL NOTES:
 Bars marked with the suffix "E" shall be epoxy coated in accordance with the special provisions.
 Conc. Railing = 485 lbs./ft.
 Conc. Railing = .120 cu. yds./ft.
 Railbase and end post to be Concrete Mix No. 3Y46
 Pipe shall comply with Spec. 3362. The 4" dia. pipe shall have a minimum yield point of 35000 P. S. I.
 Guardrail connection & rail posts to be Struct. Steel, Spec. 3306
 Finish all edges of railbase and end post with 1/2" vee except where otherwise noted.
 Anchorages shall be accurately placed to provide correct alignment of railing. Set normal to grade.
 Galvanize pipe and structural steel per Spec. 3394 after fabrication. Galvanize bolts and anchorages per Spec. 3392
 See superstructure sheet for joint spacing.
 Maximum spacing of concrete deflection joints shall be 20' 0"
 Railpipe deflection joints shall be placed in same panel as concrete deflection joints.
 Price bid for pipe railing includes the post anchorages and all material above railbase. Guardrail connection to be included in price bid for other items.
 Length of pipe railing for payment is measured end to end of pipe.
 Railing quantities are included in summary of quantities for superstructure.
 Length of railing concrete to be measured for payment between outside faces of end posts.



NOTES:
 Galvanize structural steel after fabrication as per Spec. 3394.
 Joints in roadway plate or extrusion shall be located at breaks in transverse profile and as otherwise required. Joints shall be close fit and welded. Repair after welding as per Spec. 2471.3L.
 Structural steel shall comply with Spec. 3306, Spec. 3307 & Spec. 3309.
 Expansion device shall be straightened to a tolerance of 1/8" in 10 ft.
 Cap screws shall be countersunk 1/16" below top of plate.
 Galvanize screws and nuts as per Spec. 3392.
 For joint details at sidewalk, see sheet I9.



RAILING OR MEDIAN
SQUARE BRIDGE APPLICATION



RAILING AT CURB TRANSITION

S.P. 62-626-03

TITLE:
WATERPROOF EXPANSION DEVICE
WITH TYPE J BARRIER

DES: JDP DE: AF
CHK: GWM CHK: JDP
APPROVED: 11-4-91
Sheet No. 18 of 28 Sheets

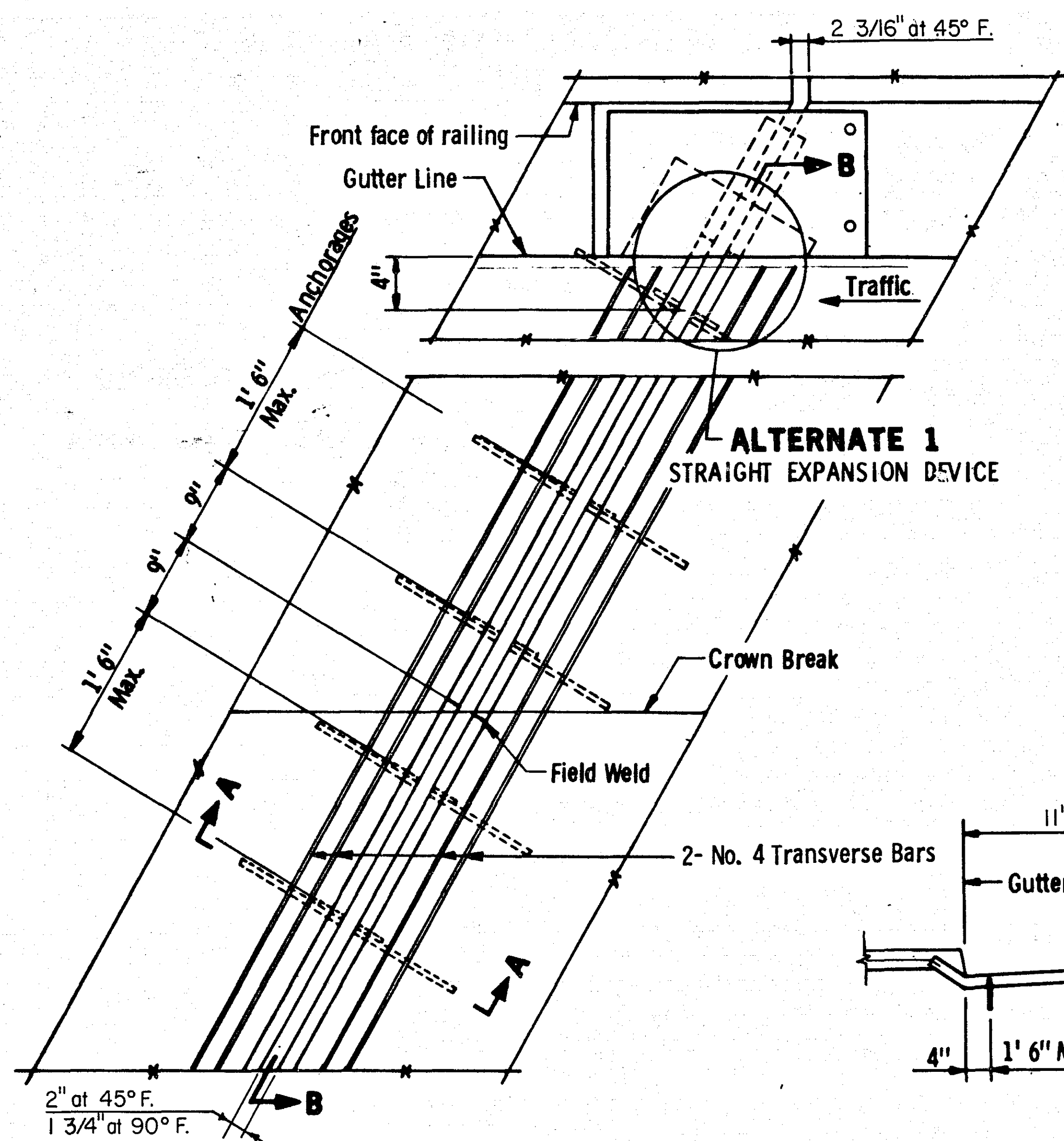
Bridge No.
62559

Revised: October 15, 1982 Approved: July 16, 1982

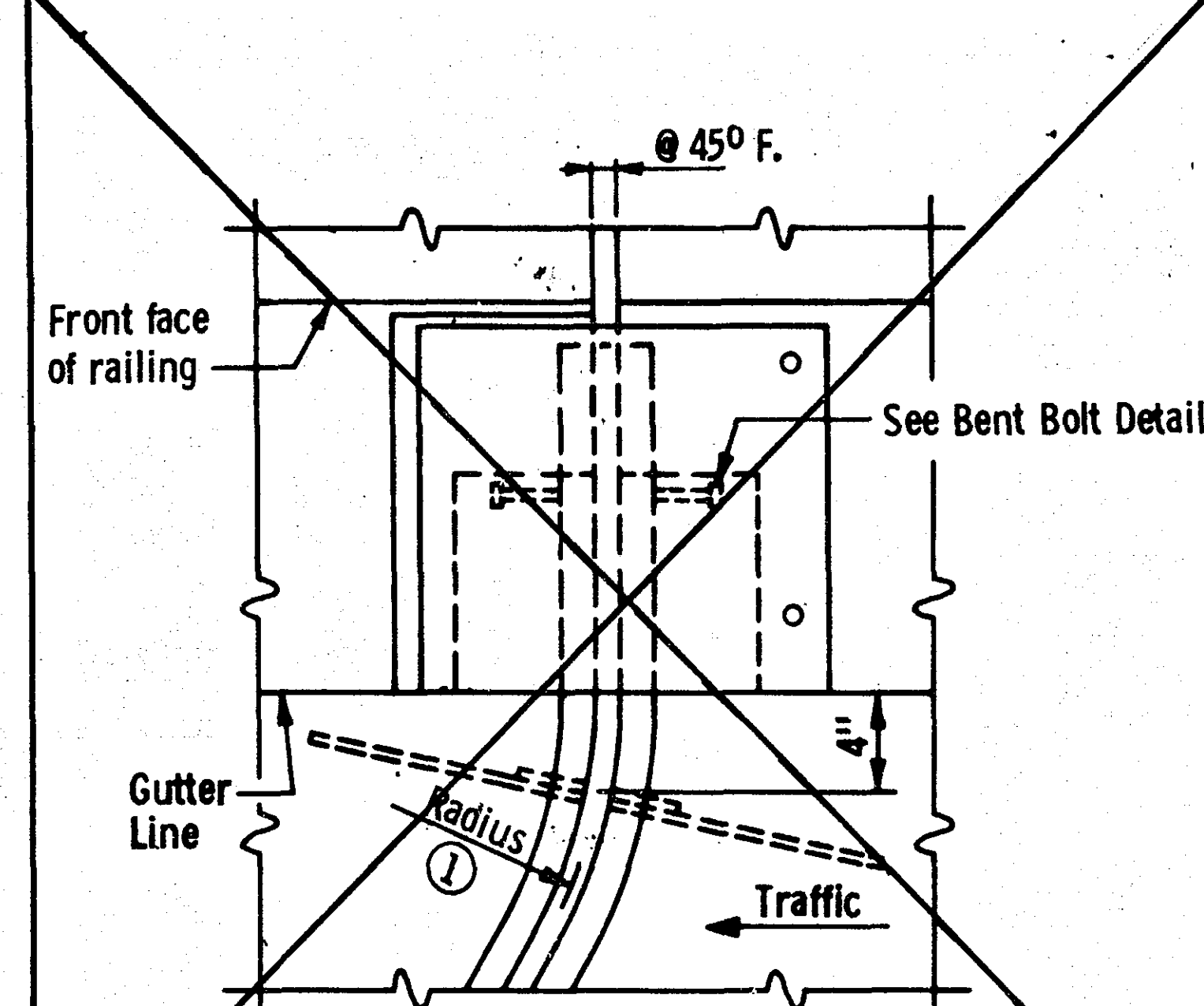
FIG. 5-397.627

② Dimension along centerline of joint.

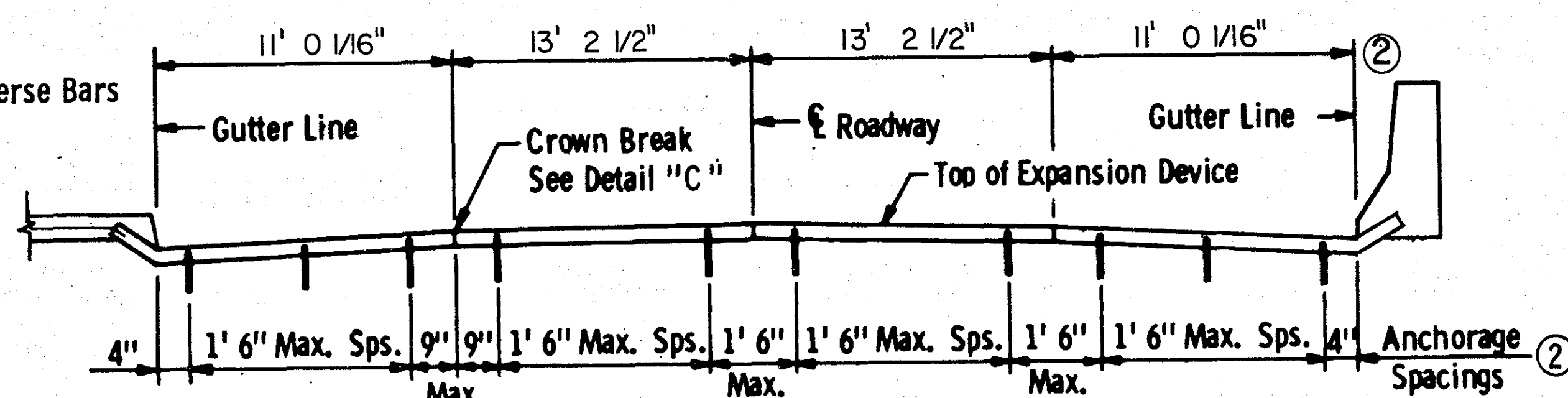
④ 5/8" max. when Snowplow Fingers are used. Use 1/8" (with 1/4" max.) when Snowplow Fingers are not used.



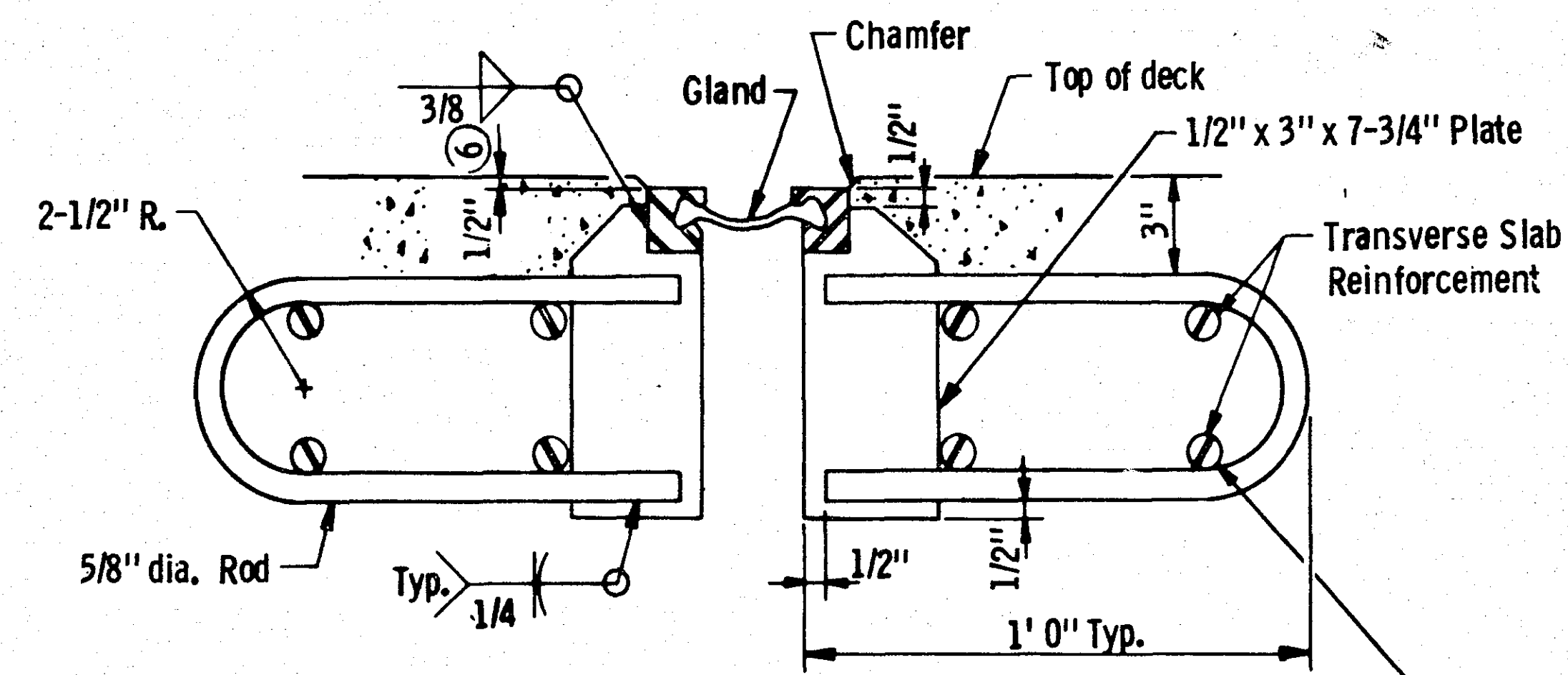
PLAN VIEW AT EXPANSION DEVICE



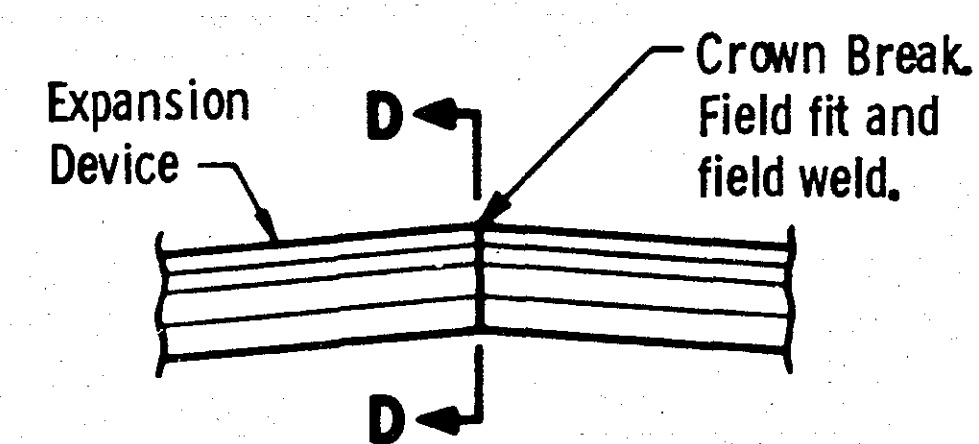
ALTERNATE 2
CURVED EXPANSION DEVICE



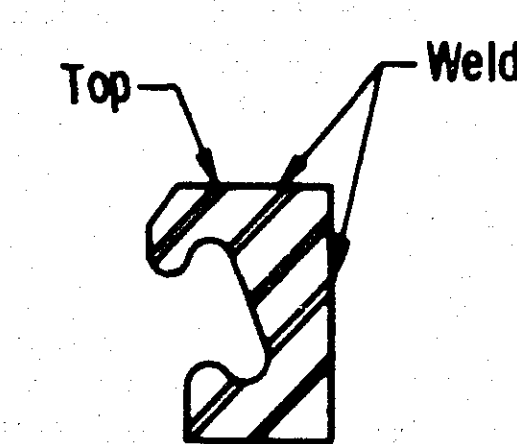
SECTION B-B



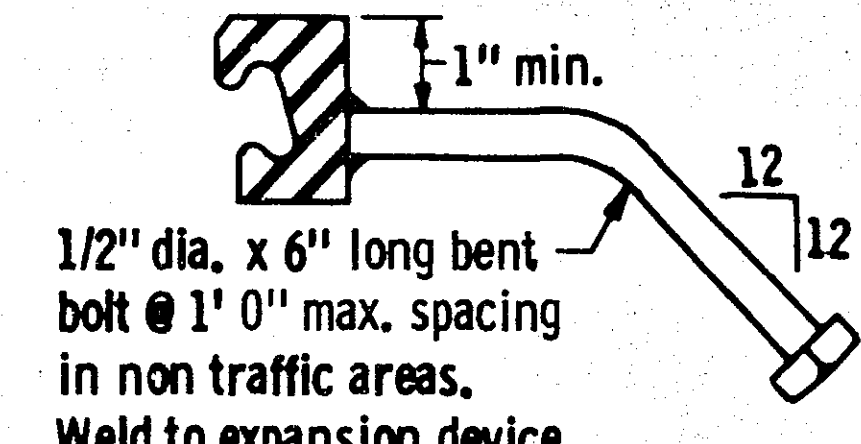
SECTION A-A
ANCHORAGE



DETAIL C



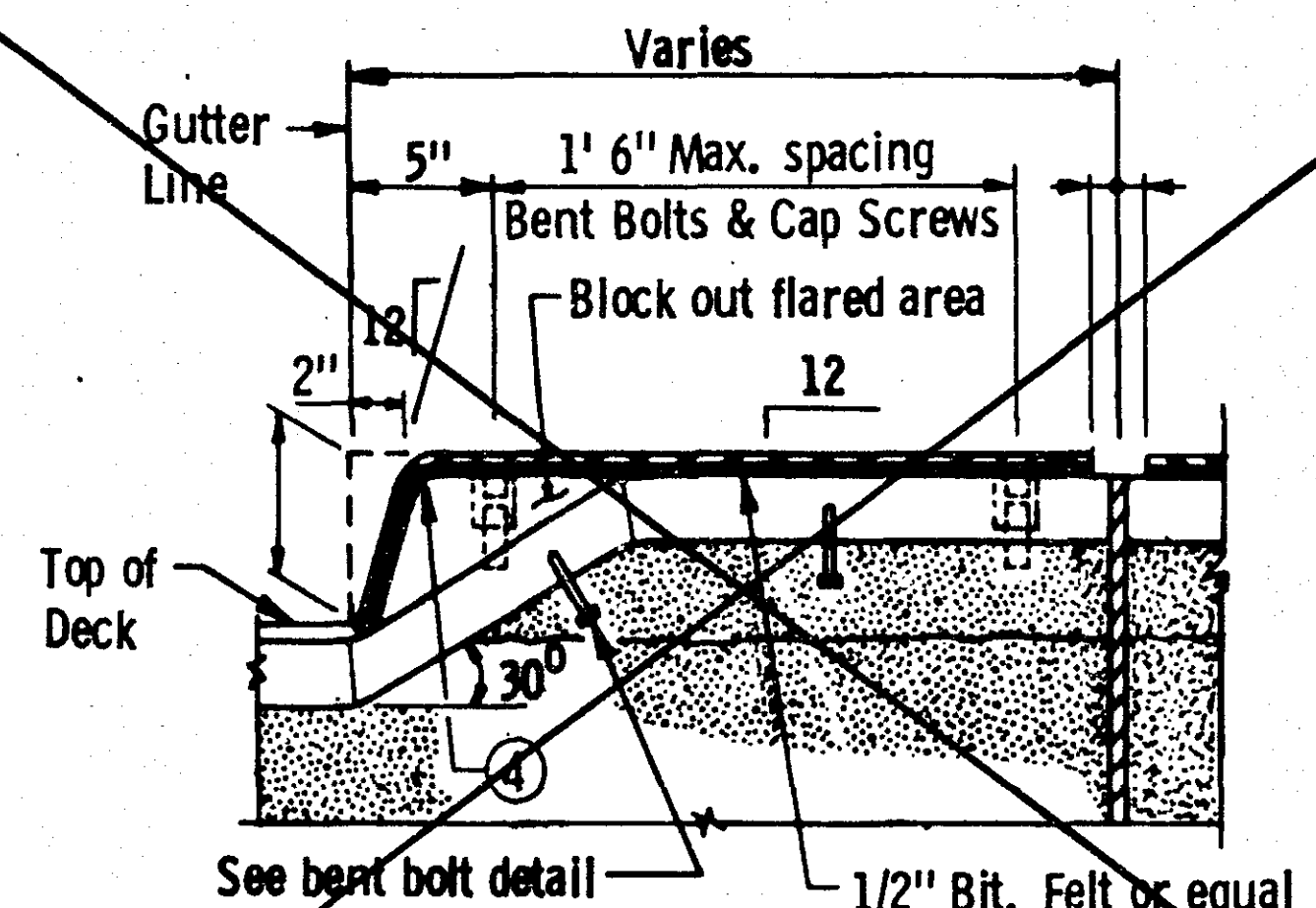
SECTION D-D



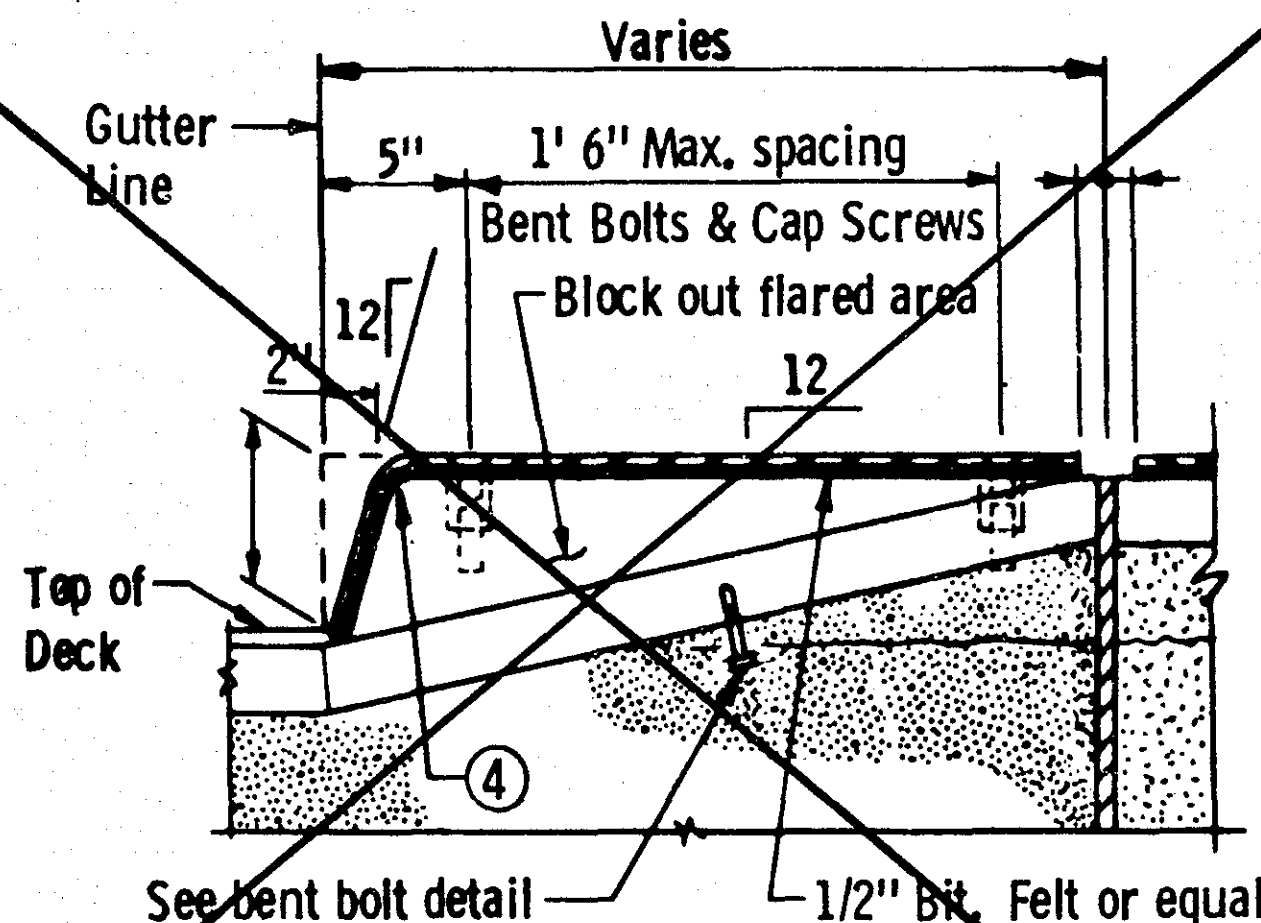
BENT BOLT DETAIL

NOTES:

- Galvanize structural steel after fabrication as per Spec. 3394.
- Joints in roadway plate or extrusion shall be located at breaks in transverse profile and as otherwise required. Joints shall be close fit and welded. Repair after welding as per Spec. 2471.3L.
- Structural steel shall comply with Spec. 3306, Spec. 3307 & Spec. 3309.
- Expansion device shall be straightened to a tolerance of 1/8" in 10 ft.
- Cap screws shall be countersunk 1/16" below top of plate.
- Galvanize screws and nuts as per Spec. 3392.
- For joint details at parapet, see sheet 18.

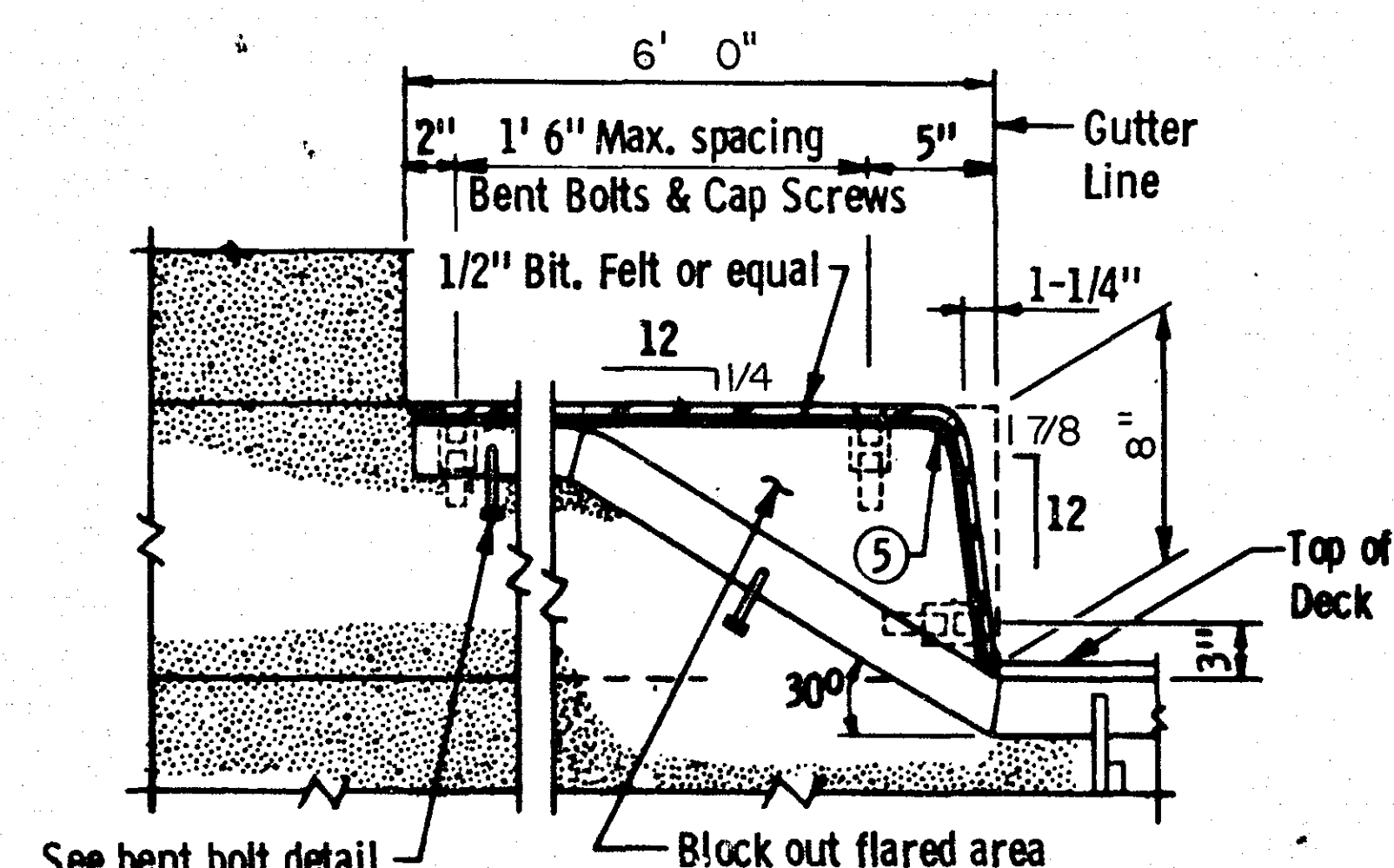


SECTION
ALTERNATE X

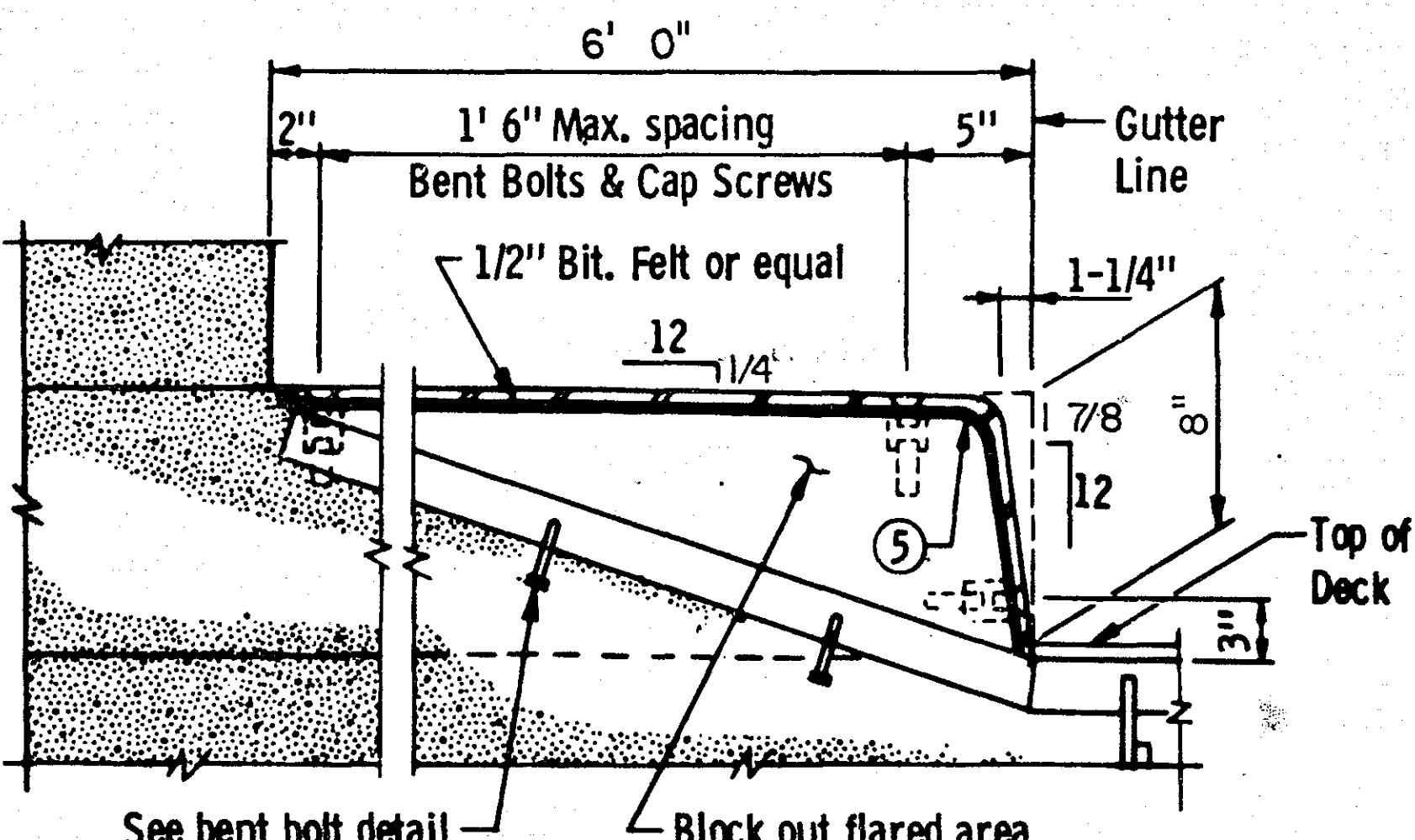


SECTION
ALTERNATE Y

RAISED MEDIAN DETAILS

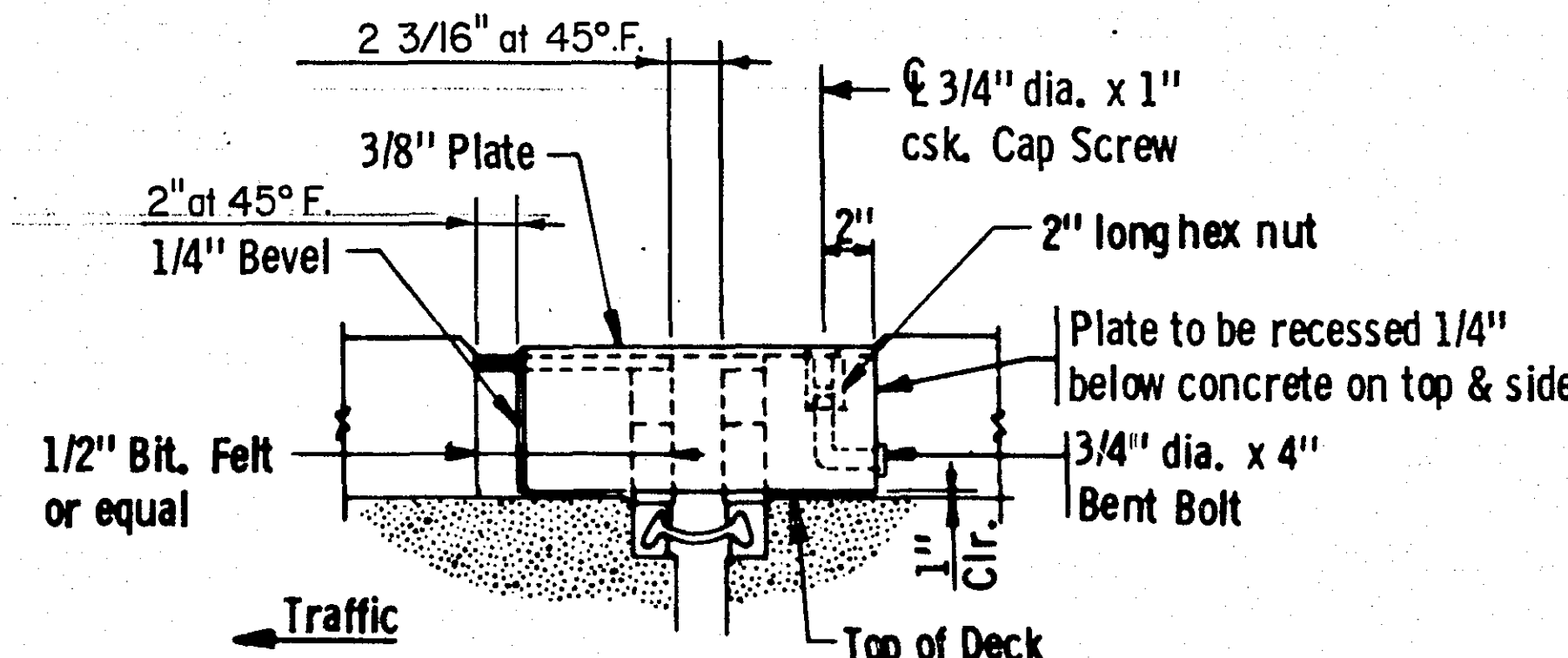


SECTION
ALTERNATE X

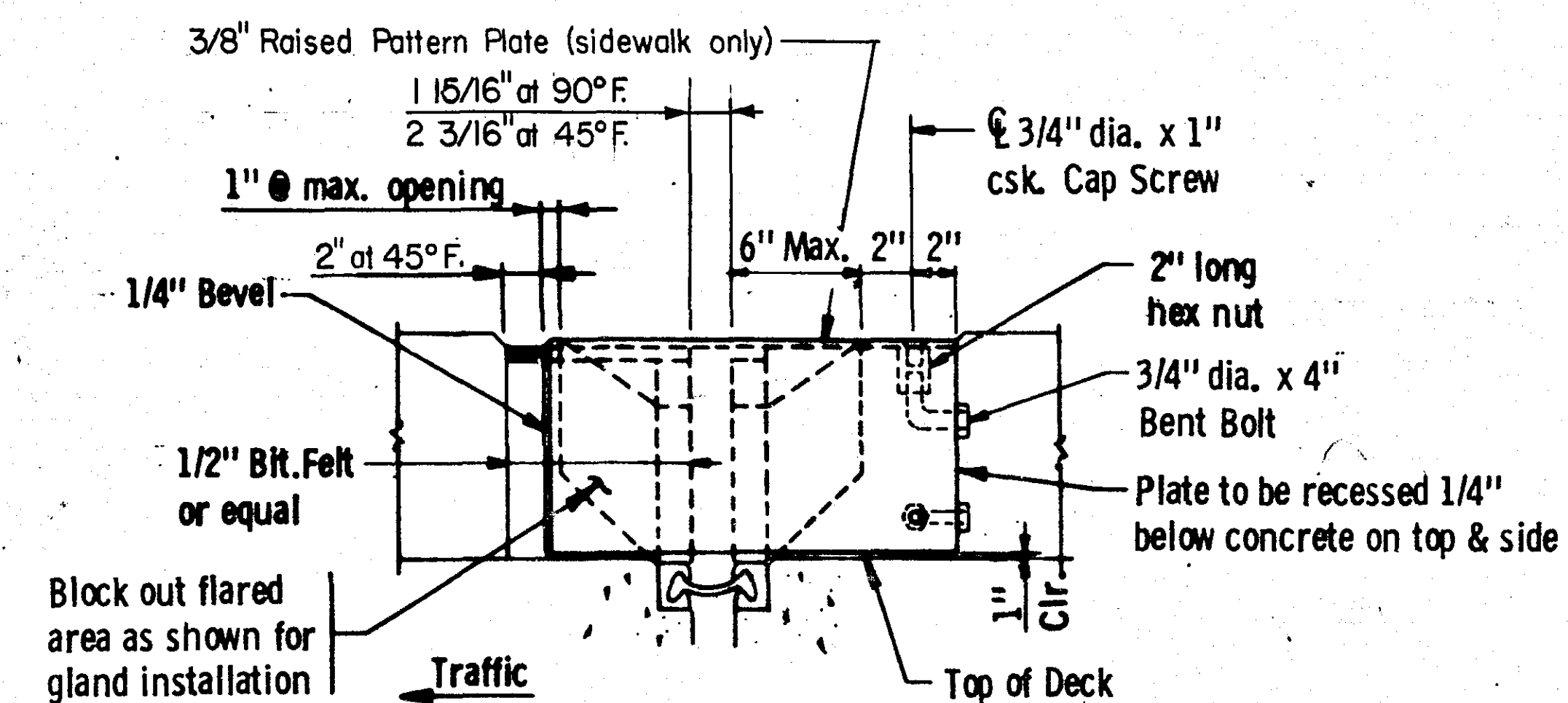


SECTION
ALTERNATE Y

SIDEWALK DETAILS



ELEVATION



INSIDE ELEVATION

S.P. 62-626-03

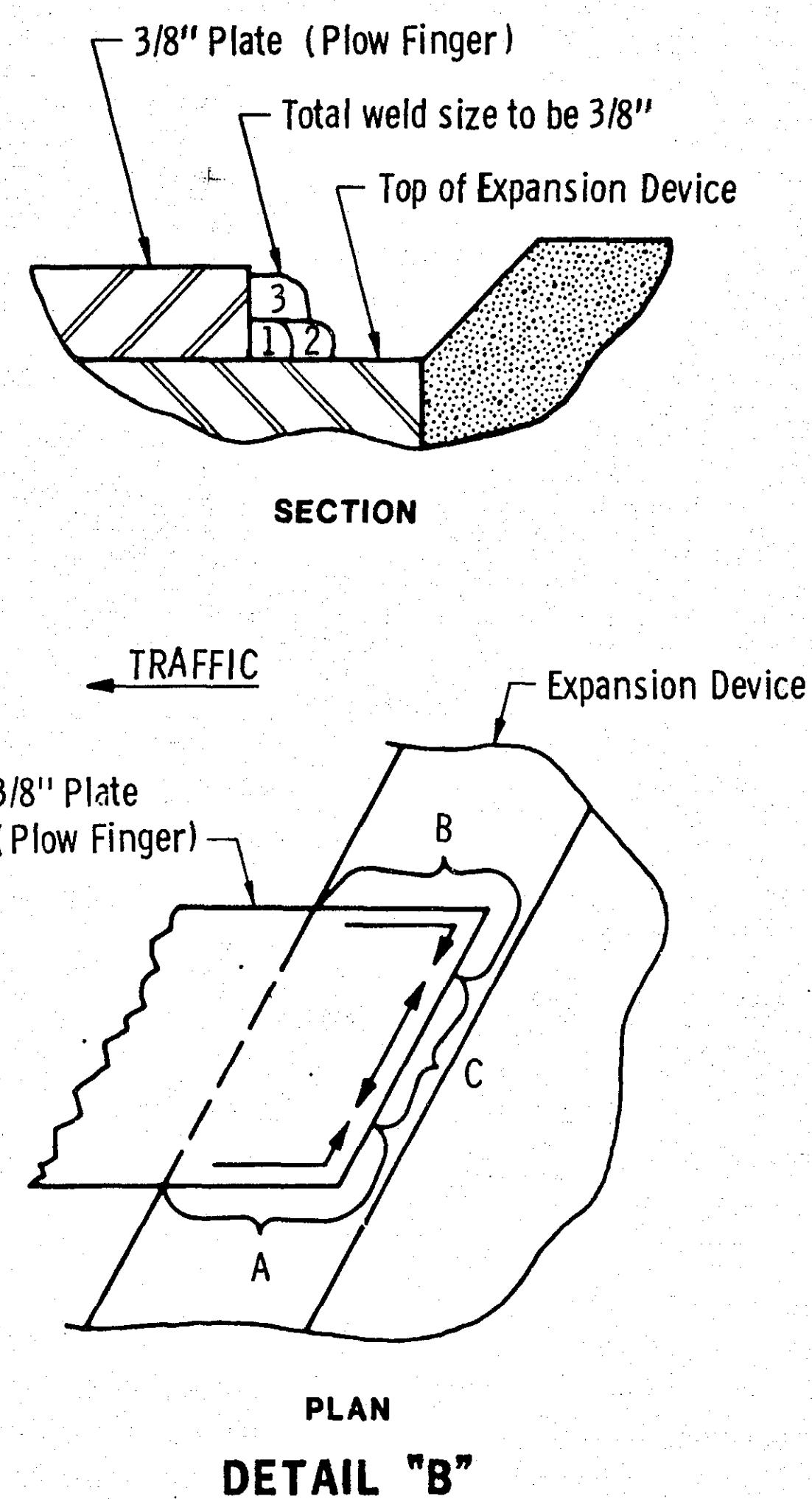
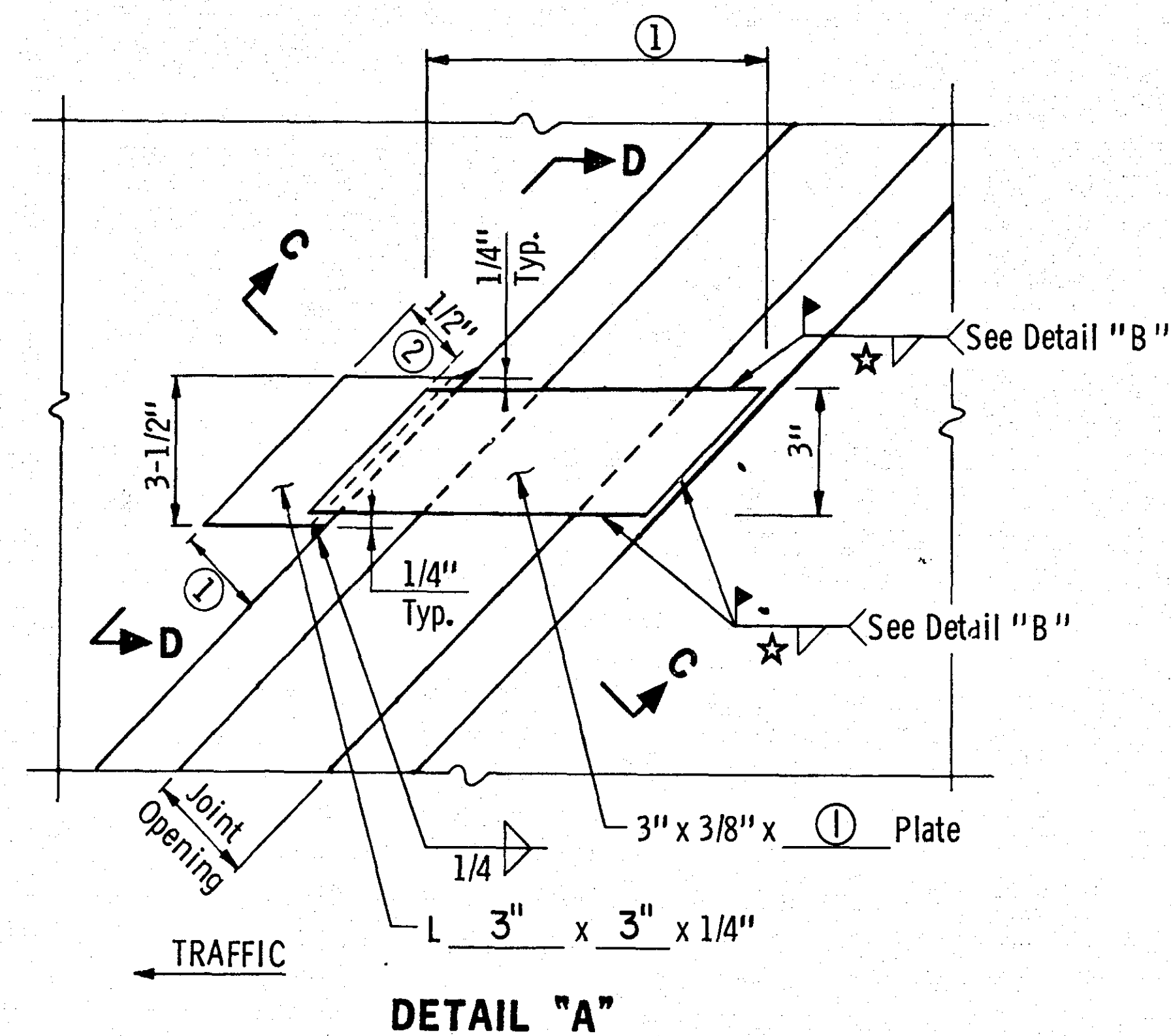
TITLE:
WATERPROOF EXPANSION DEVICE
WITH SIDEWALK OR RAISED MEDIAN

DES: JDP
CHK: GWM
BR: AF
CHK: JDP
APPROVED: 11-4-91
Revised: October 15, 1982
Approved: July 16, 1982

Sheet No. 19 of 28 Sheets

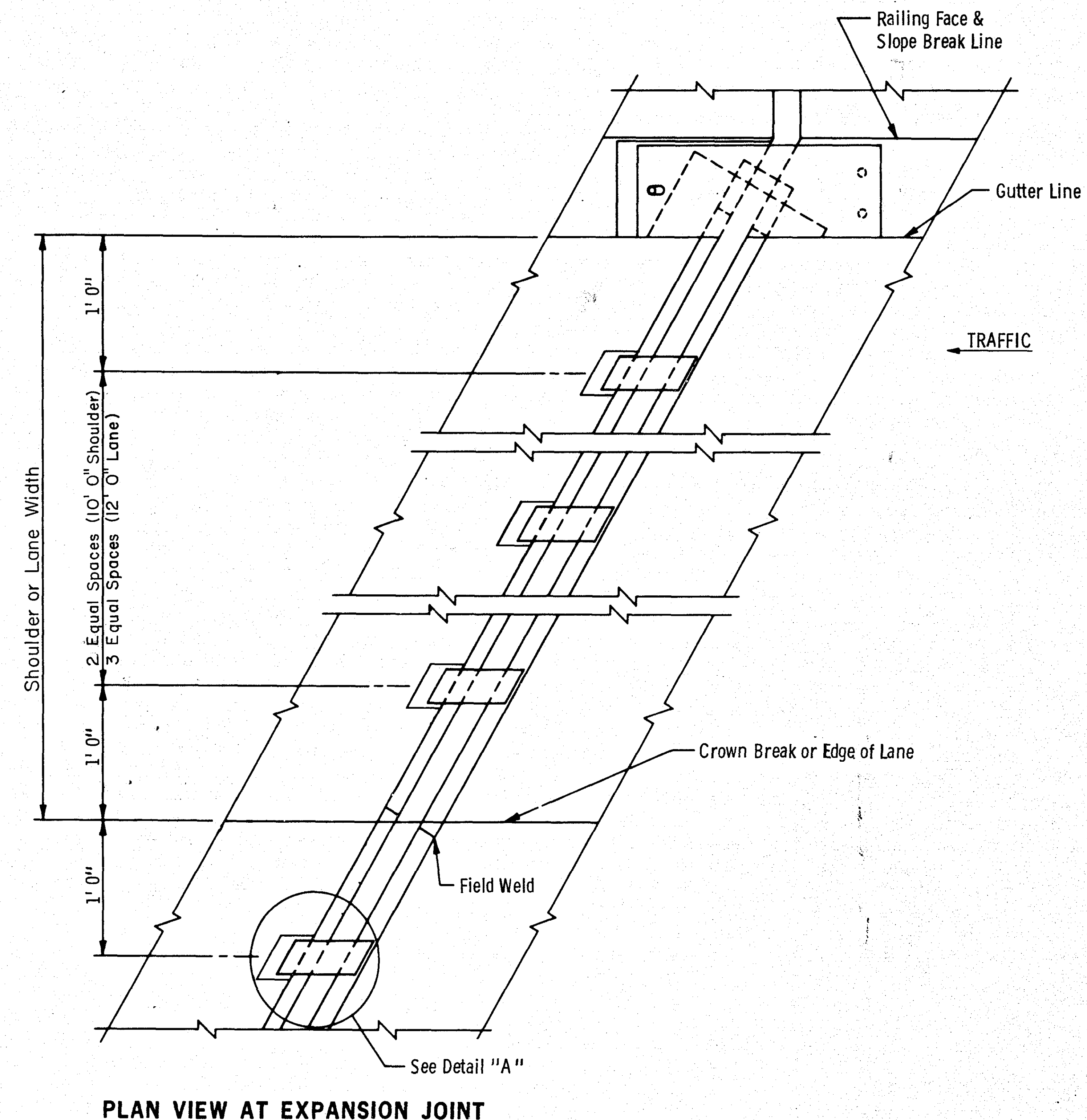
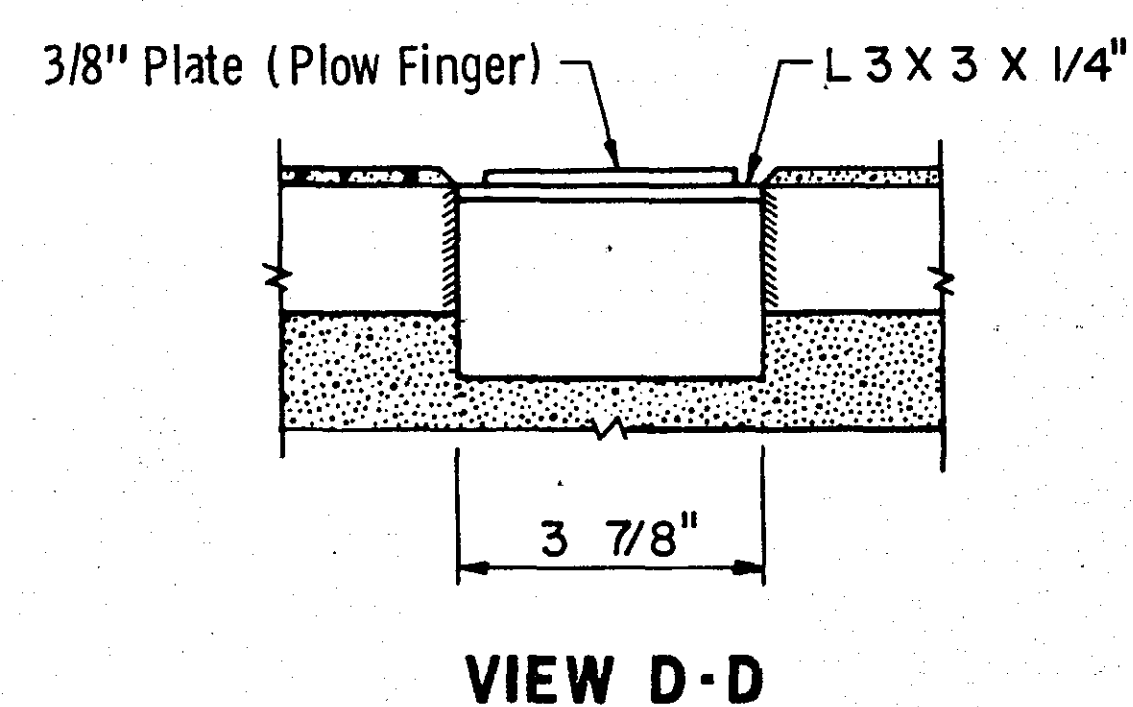
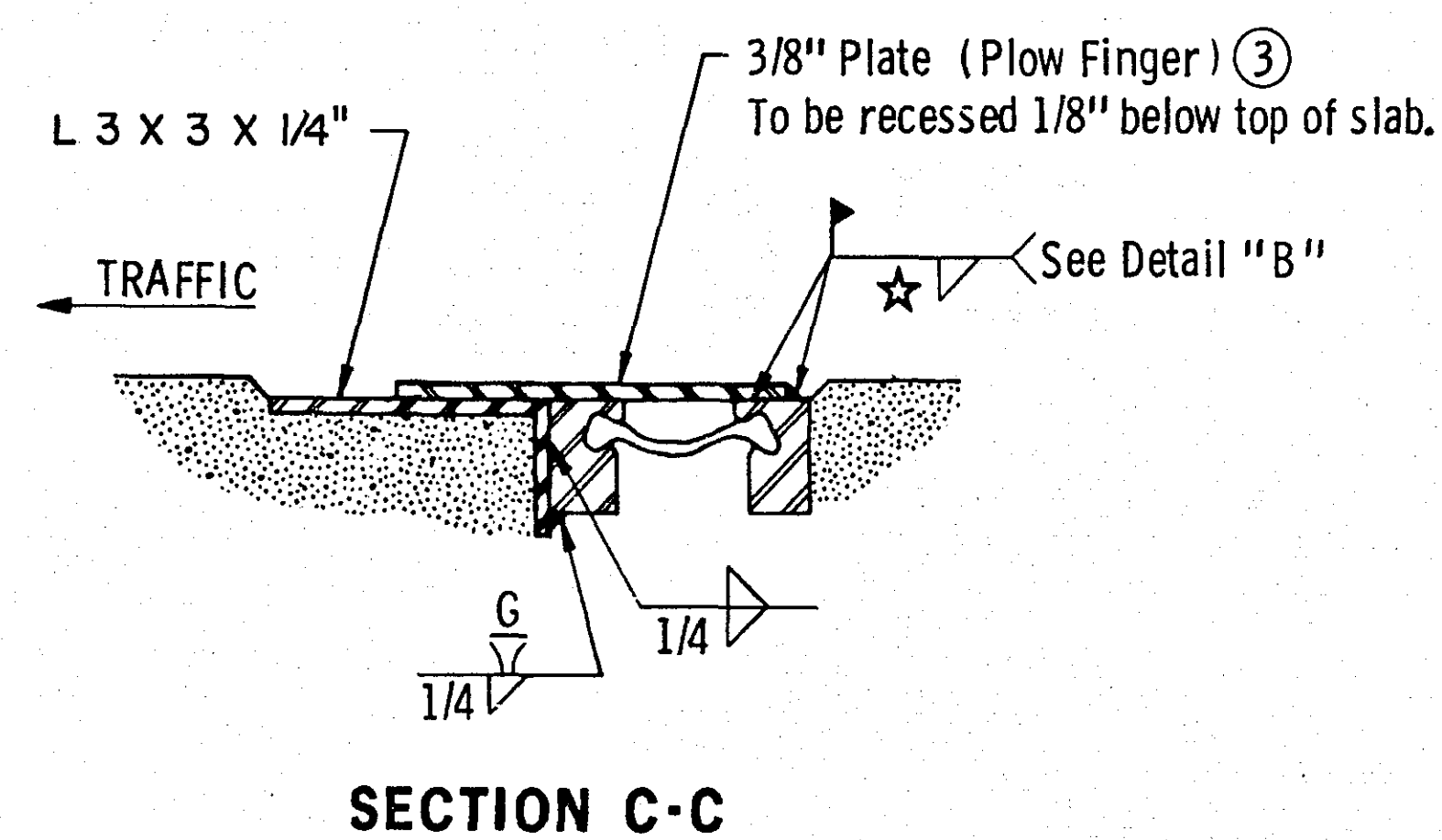
Bridge No.
62559

28-119
FIG. 5-397.630



★ **WELDING PROCEDURE FOR PLOW FINGERS**

- All welding shall be done with 1/8 inch AWS Spec. 5.1 Type E7016 or E7018 electrode.
- Weld pass 1 in areas A and B first, then area C, follow with passes 2 and 3 in same order as shown in Detail "B".
- Remove all weld slag and other residue between passes.
- Allow at least 5 minutes cooling time between each of nine weld passes.
- Repair all galvanizing damaged by removal and welding, in accordance with Spec. 2471.3L



NOTES:

- Do not galvanize plow fingers.
- Varies with skew and expansion opening.
- Minimum in closed position.
- Every Snow Plow Finger shall have full and direct bearing on the plate that is located under the movement side of the finger. (No clicking noise will be allowed.)

For expansion device details, see sheets 18 and 19.

S.P. 62-626-03

Revised: June 7, 1983

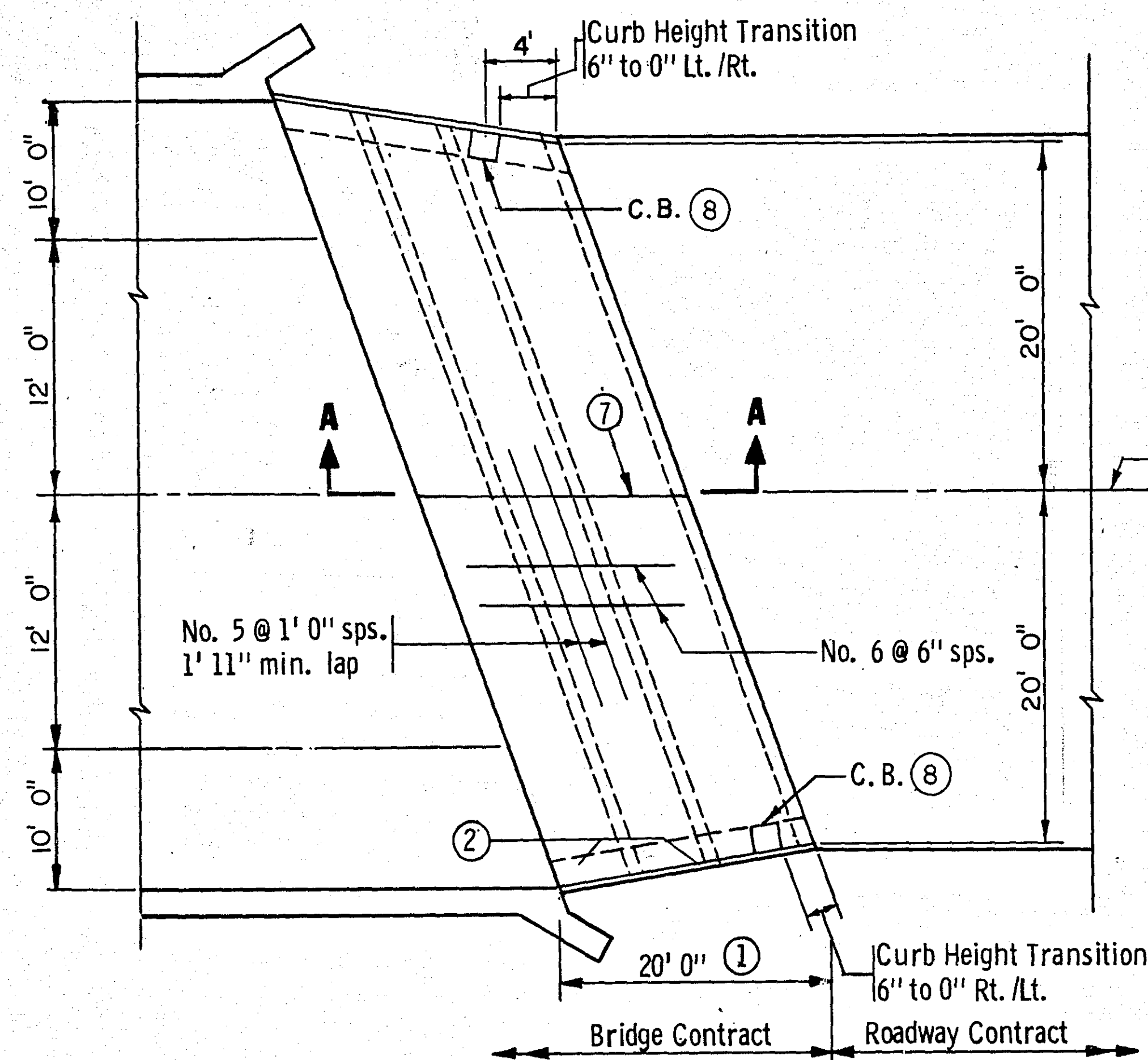
28-119
Fig. 5-397.628
Approved: July 16, 1982

WATERPROOF EXPANSION DEVICE
SNOW PLOW PROTECTION
(Use on skews over 20° and less than 45°)

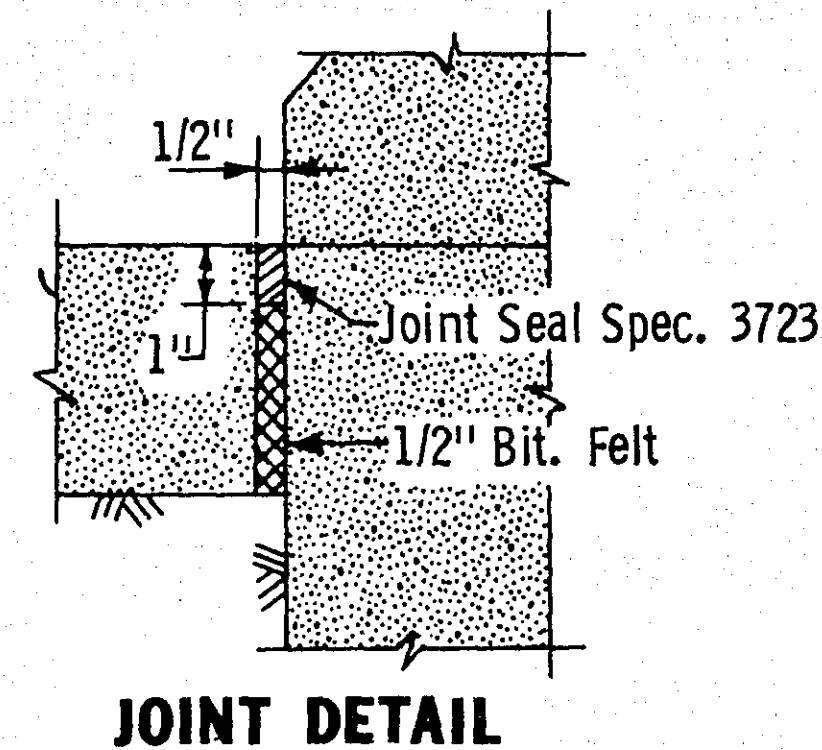
DES:	JDP	DE:	AF	APPROVED:
CNL:	GWM	CNL:	JDP	11-4-91

Sheet No. 20 of 28 Sheets

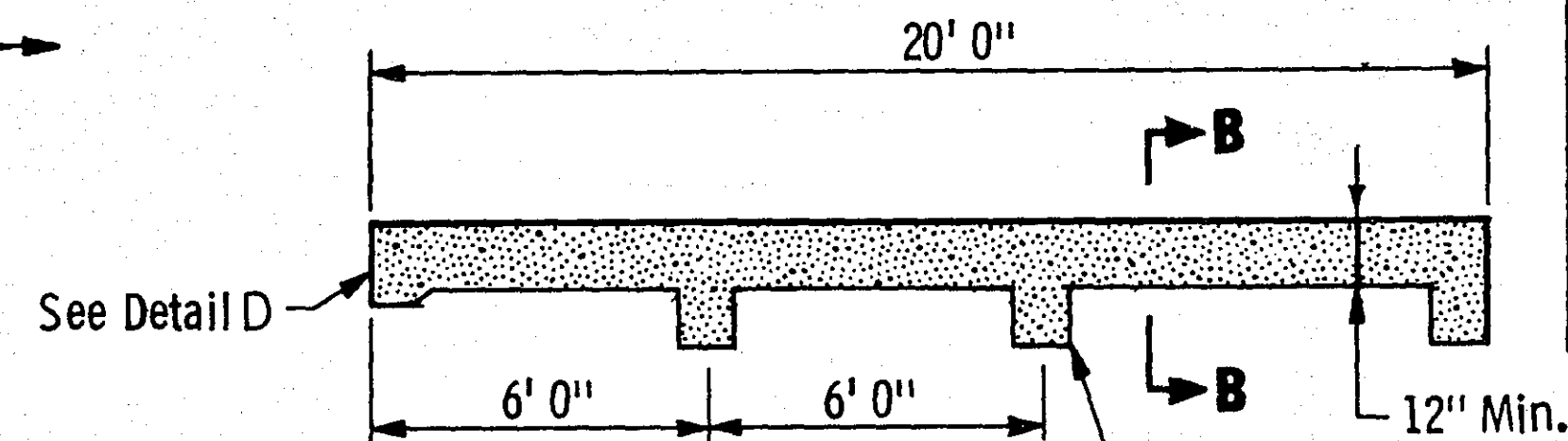
Bridge No.
62559



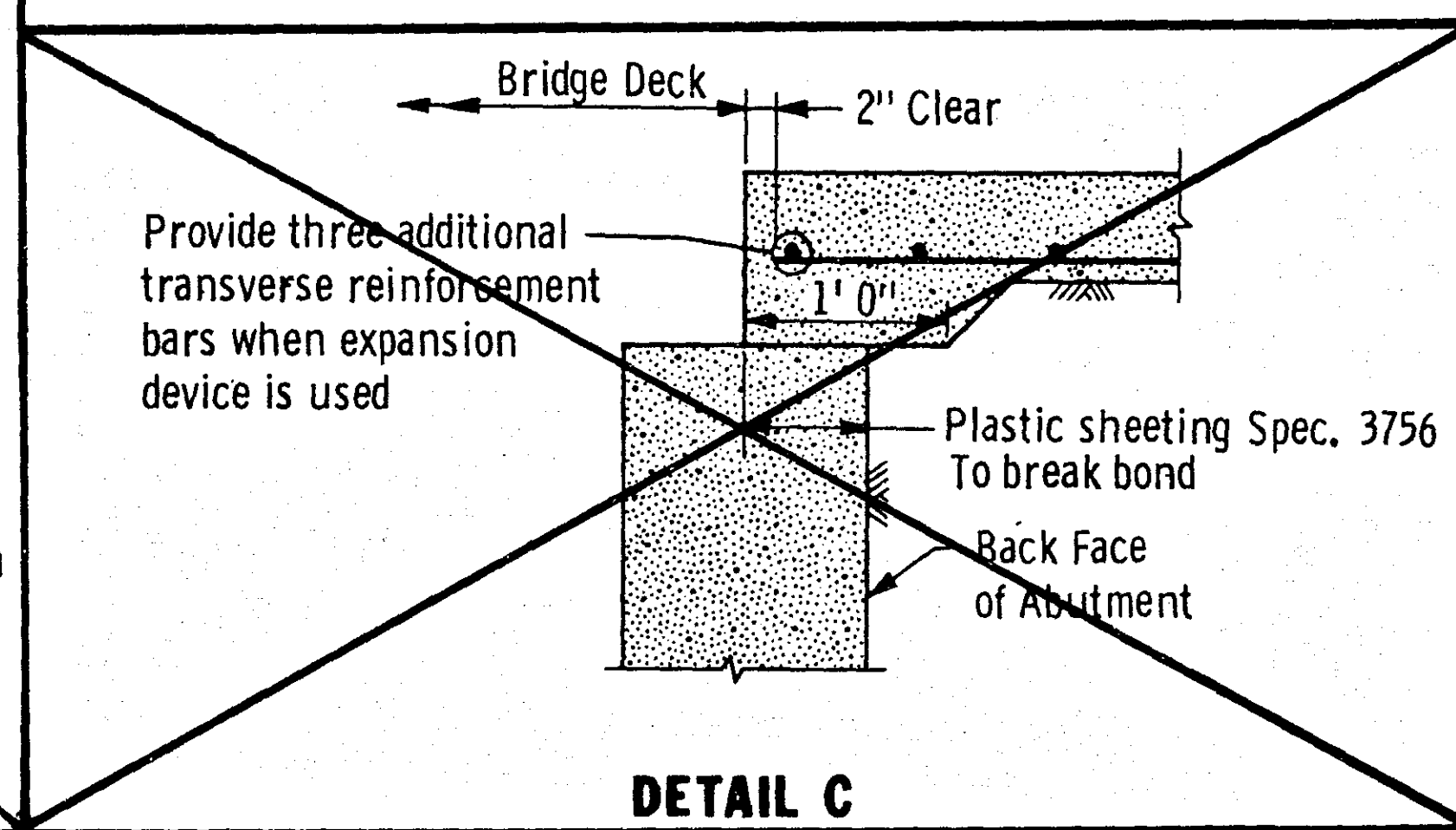
- ① Use No. 6 @ 6" longitudinal and No. 5 @ 1' 0" transverse reinforcement. All reinforcement shall be epoxy coated.
- ② See Joint Detail
- ③ Supplied by others.



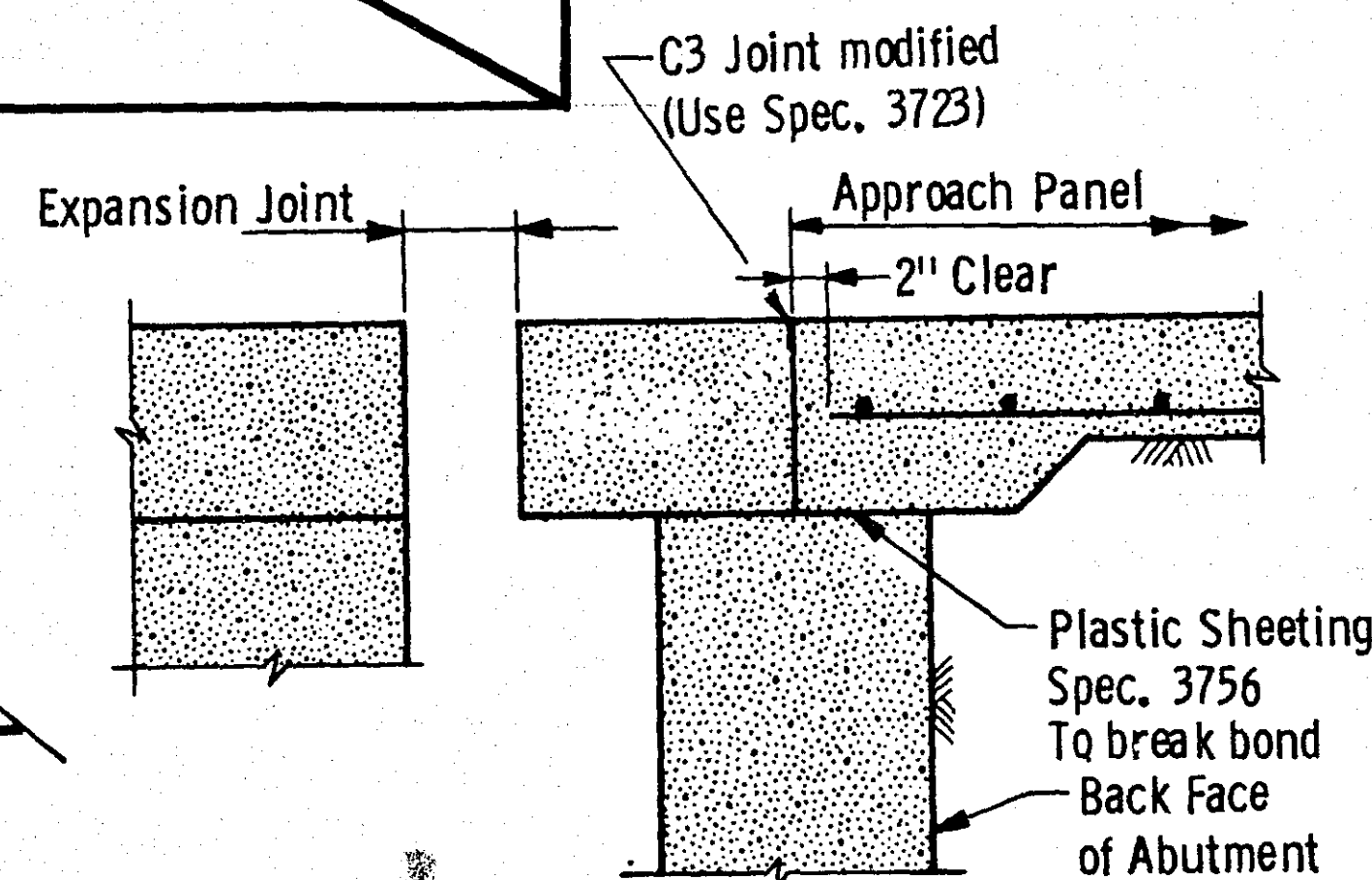
JOINT DETAIL



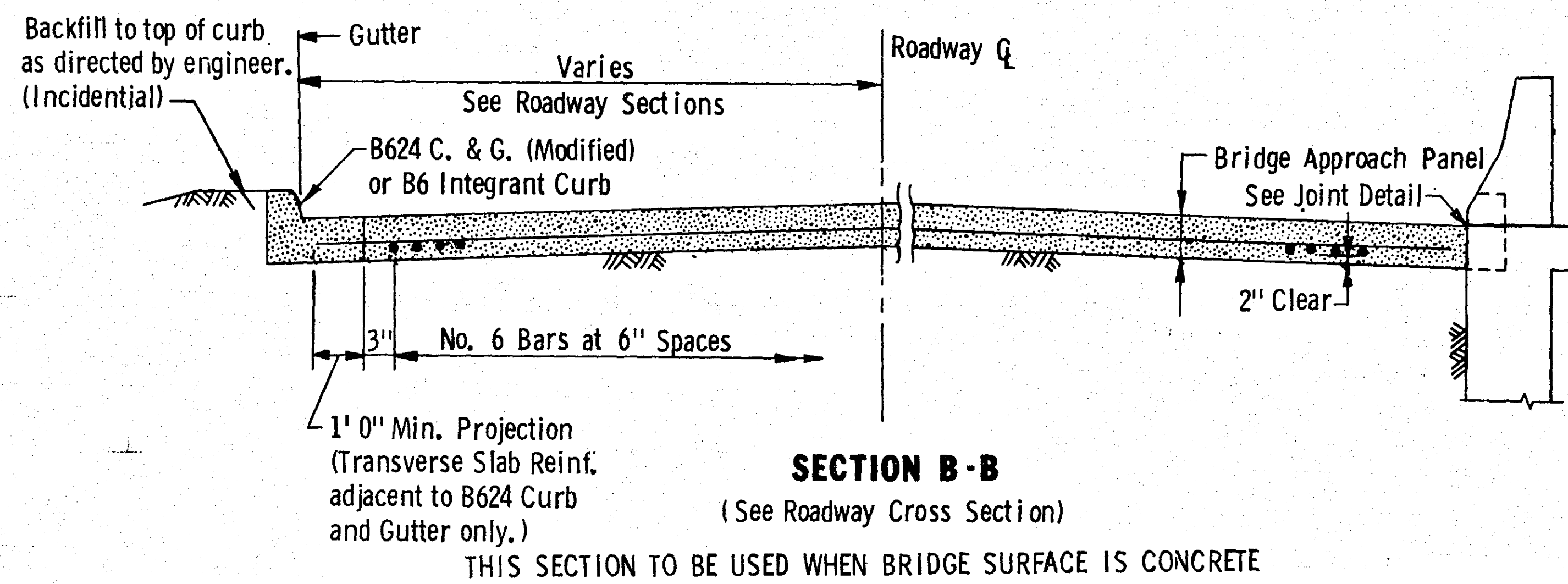
SECTION A-A



DETAIL C



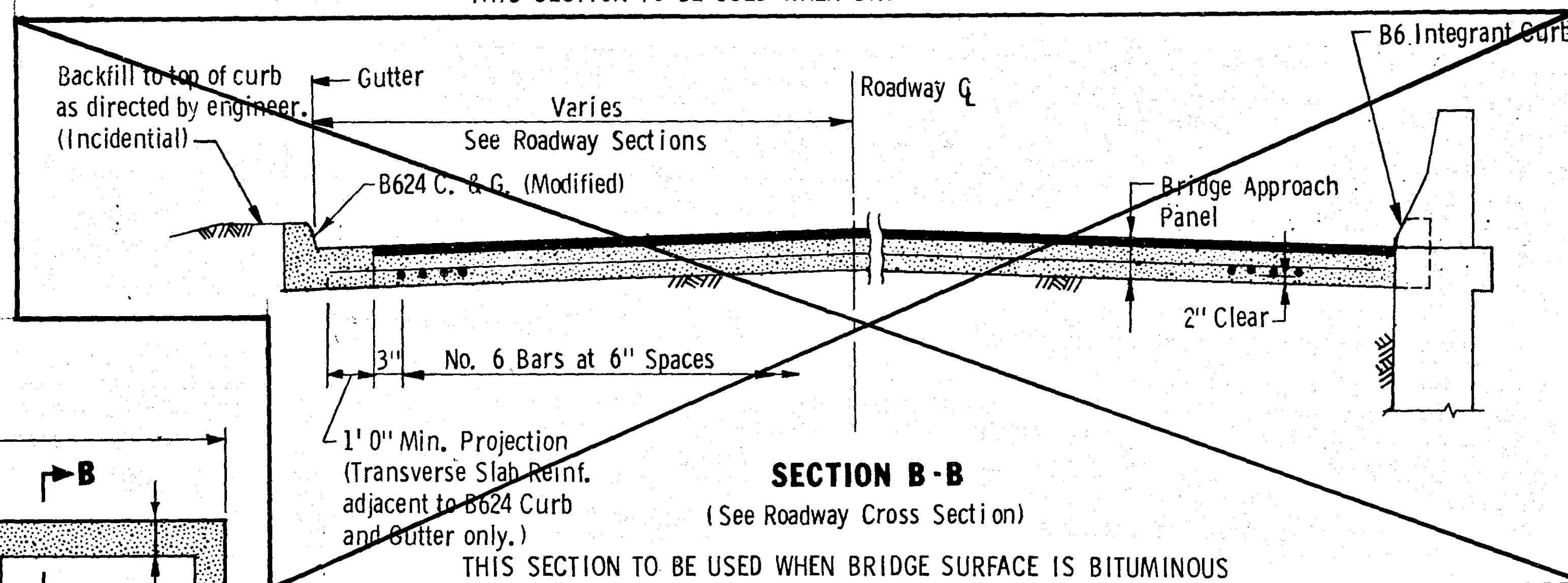
DETAIL D



SECTION B-B

(See Roadway Cross Section)

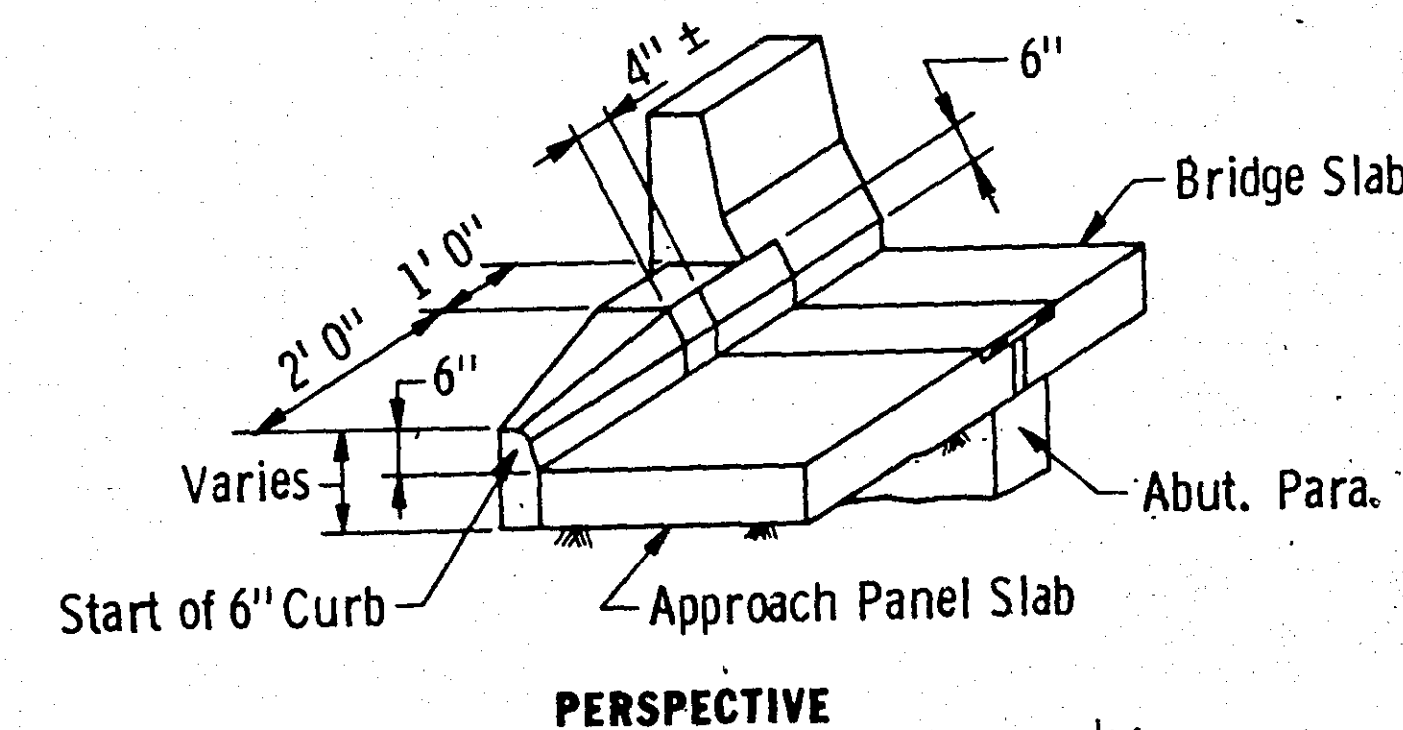
THIS SECTION TO BE USED WHEN BRIDGE SURFACE IS CONCRETE



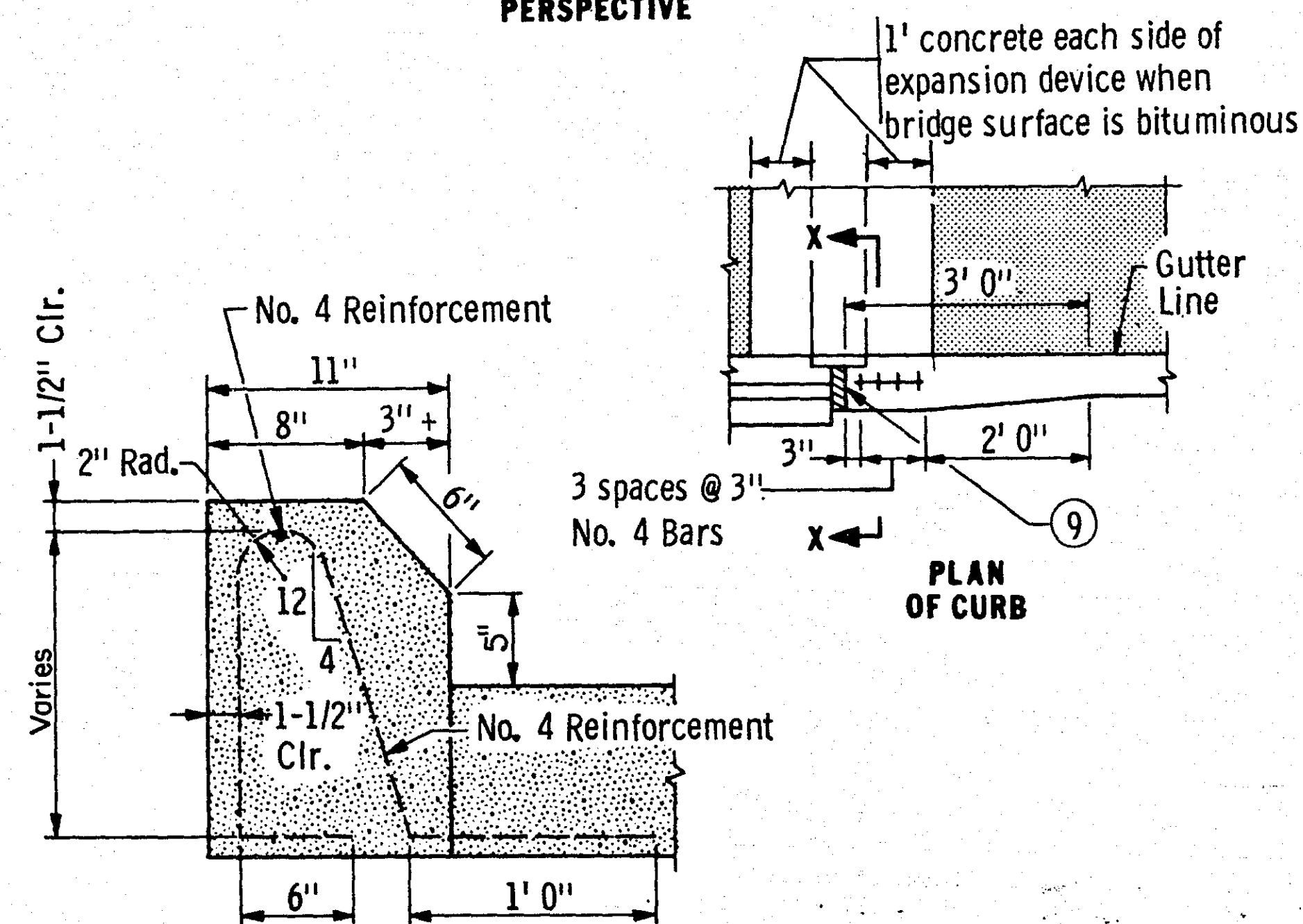
SECTION B-B

(See Roadway Cross Section)

THIS SECTION TO BE USED WHEN BRIDGE SURFACE IS BITUMINOUS



PERSPECTIVE



PLAN OF CURB

SECTION X-X

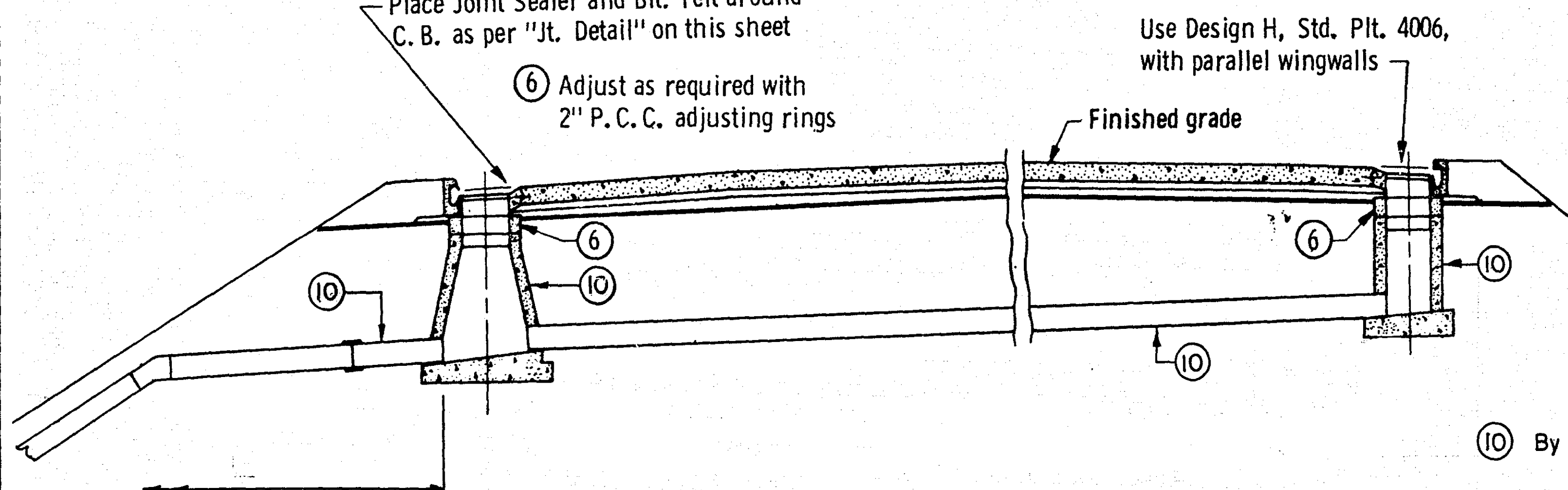
CURB TRANSITION DETAILS

FOR USE WHEN BRIDGE EXPANSION JOINT IS BETWEEN END OF APPROACH PANEL AND BRIDGE SLAB

**MULTI-LANE AND TWO LANE ROADWAYS
BITUMINOUS PAVEMENT**

Place Joint Sealer and Bit. Felt around C. B. as per "Jt. Detail" on this sheet

- ⑥ Adjust as required with 2" P.C.C. adjusting rings



CROSS SECTION AT CATCH BASINS

The summary of quantities for approach panel is as shown below. Any additional minor items and slight changes of quantities required shall be furnished by the contractor with no additional compensation, except as noted.

ITEM	*MANUAL REFERENCE
Curb and Gutter	Std. Plt. 7100
Catch Basin Installation	Std. Plt. 7111
Longitudinal Joints	Std. Plt. 1140
Integrant Curbs	Std. Plt. 7000
Contraction Joint	Std. Plt. 1120
Conc. Short Cone & Adj. Ring	Std. Plt. 4010

*Specification Ref. Std. Plts. 0001 & 0002
Reinforcement shall be lapped as per Spec. 2472.3D

**③ SUMMARY OF QUANTITIES
FOR BRIDGE APPROACH PANELS**

④ Concrete Mix No. 3Y42	72 Cu. Yd.
⑤ Catch Basins	2 Req'd
Reinforcement Bars, Epoxy Coated 6975	Lbs.
Curb Design, B624	80 Lin. Ft.

- ③ Quantities listed are for approach panels at both ends of bridge

Payment will be included in the single lump sum price for "Item 301.601 Bridge Approach Panels."

- ④ The Volume of concrete shown is based on an average slab depth of 12" plus the volume of keys and sills as dimensioned. (Concrete for Curb Design B624 is not included in this quantity.)

- ⑤ Includes settings castings supplied by others.

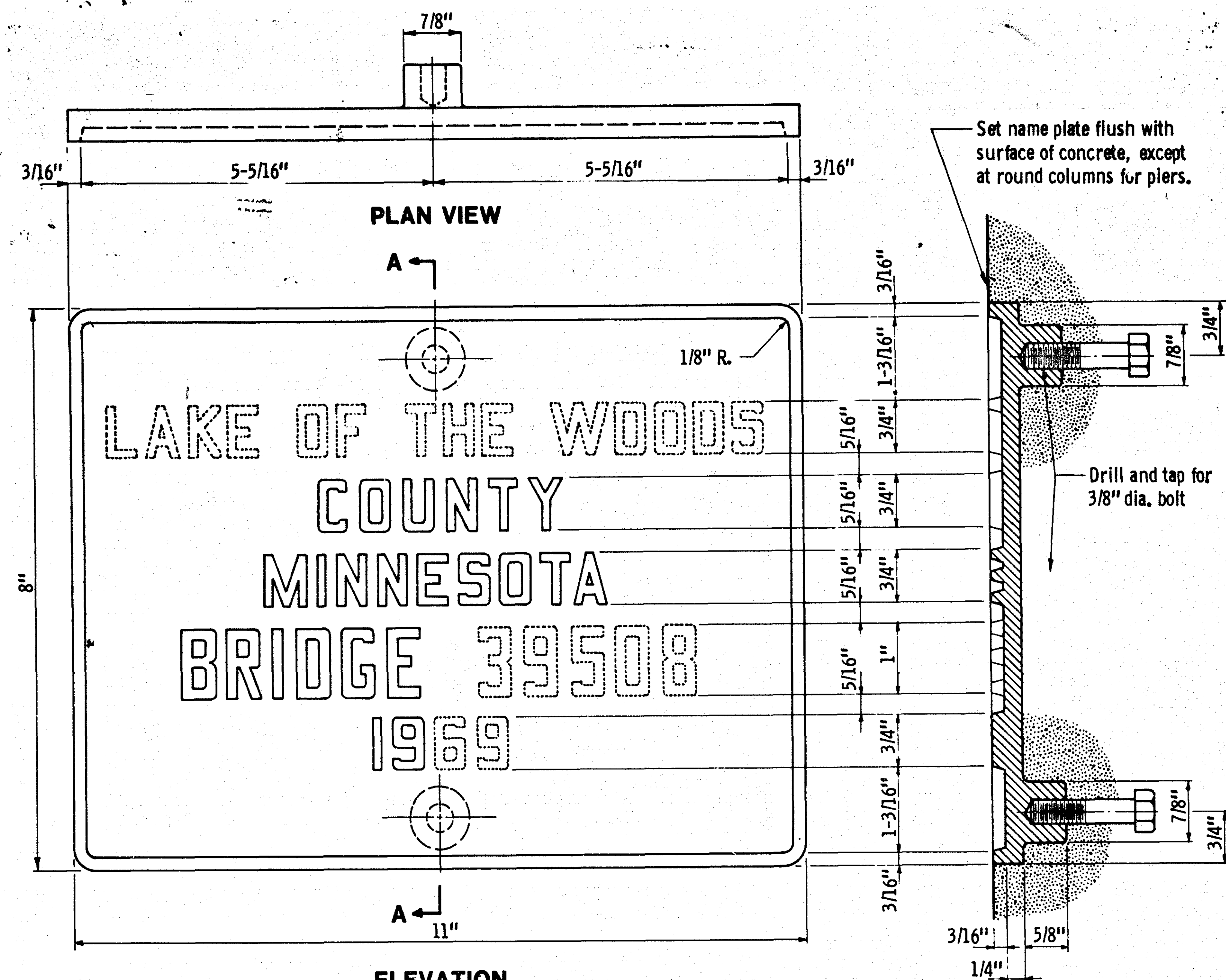
- ⑦ Permissible L2KT longitudinal joint. See Standard Plan Sheet 5-297.221.

- ⑨ Leave a void between junction of bridge railing and curb (1" min.). Fill void with polystyrene.

28-119
Fig. 5-397.308
Approved: June 13, 1978

S.P. 62-626-03

TITLE:	DES:	DR:	AF	APPROVED:	BRIDGE No.
BRIDGE APPROACH PANEL	JDP	GWM	JDP	11-4-91	62559
ALL SKEWS					
(BITUMINOUS PAVEMENT)					
Sheet No. 21 of 28 Sheets					



ELEVATION

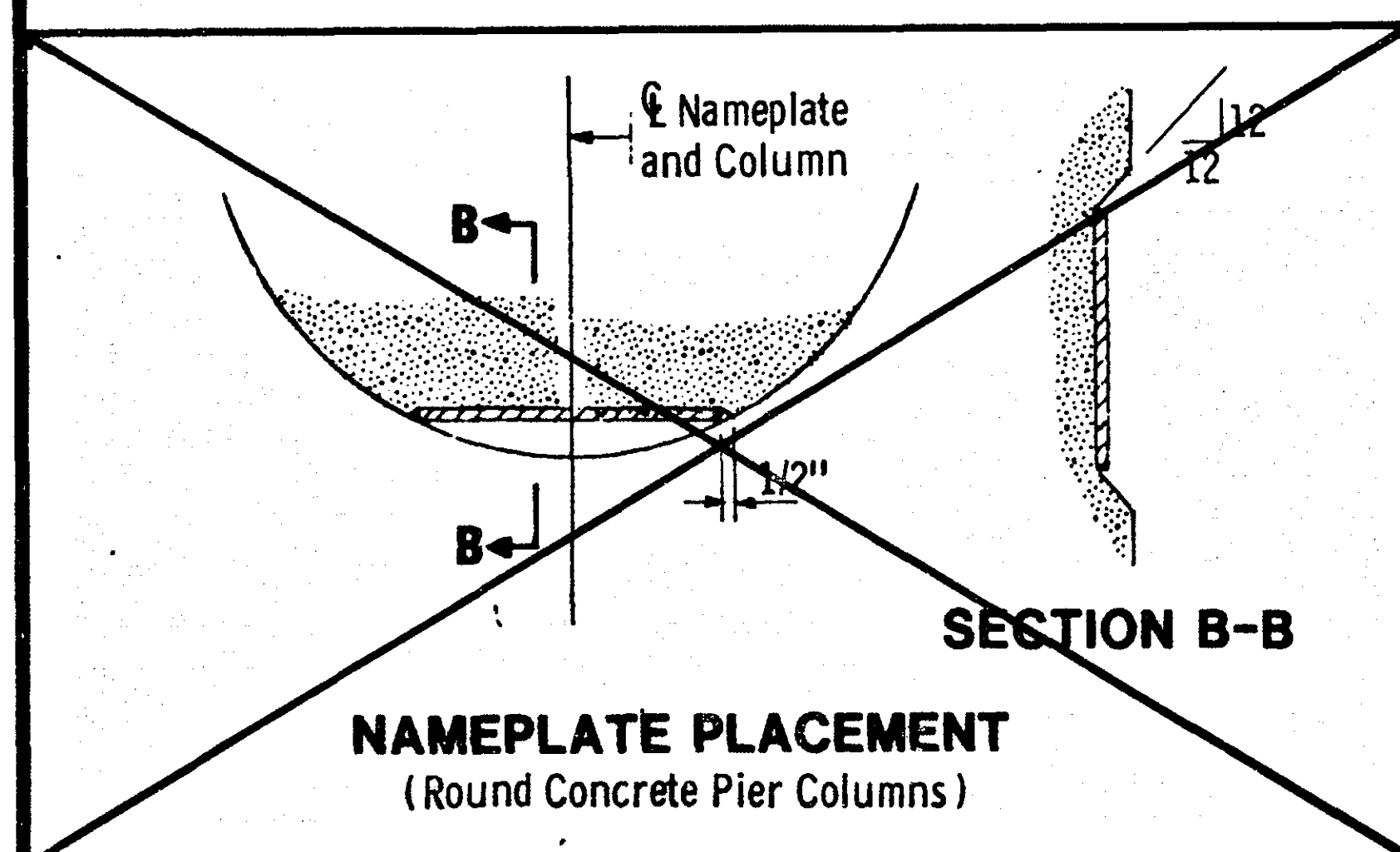
The dotted letters & numbers shown above are for illustration. Data to be shown on name plate is as follows:

COUNTY RAMSEY
BRIDGE 62559
YEAR 1992

1234567890

ABCDEFGHIJKLMNOPQRSTUVWXYZ

LETTERS & NUMBERS FOR NAMEPLATES



NAMEPLATE PLACEMENT
(Round Concrete Pier Columns)

NOTES:

No shop drawing required.
Material shall comply with Spec. 3327.
Letters and numbers shall conform to those shown.
Draft on letters and numbers shall not be more than 3" in 12".
Horizontal spacing of letters and numbers shall produce a balanced layout in proportion to spacing shown.
Top surface of letters, numbers and frames shall be burnished.
Furnish 2 steel bolts 3/8" dia. x 3" long with each plate.
All dimensions for 3/4" high letters and numbers shall be in direct proportion to those shown for the 1" high letters and numbers.

APPROVED: May 1, 1985
Developed by: ENGINEERING STANDARDS
& BRIDGES AND STRUCTURES
OFFICES
Issued by: OFFICE OF ENGINEERING
STANDARDS

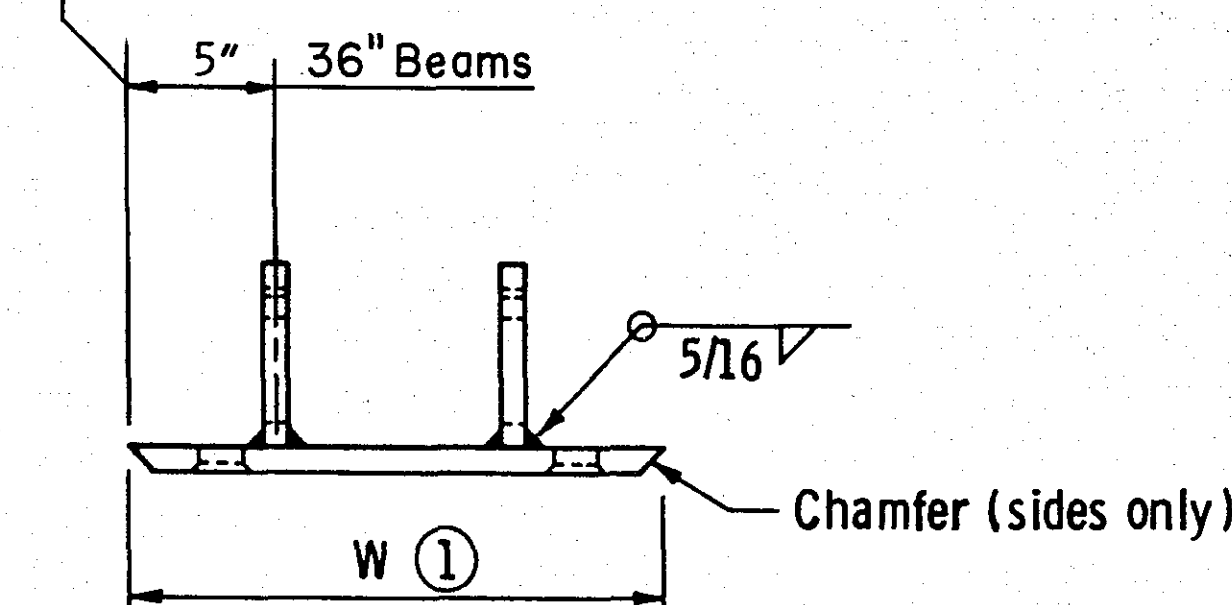
STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
BRIDGE NAMEPLATE
COUNTY BRIDGES

REVISION

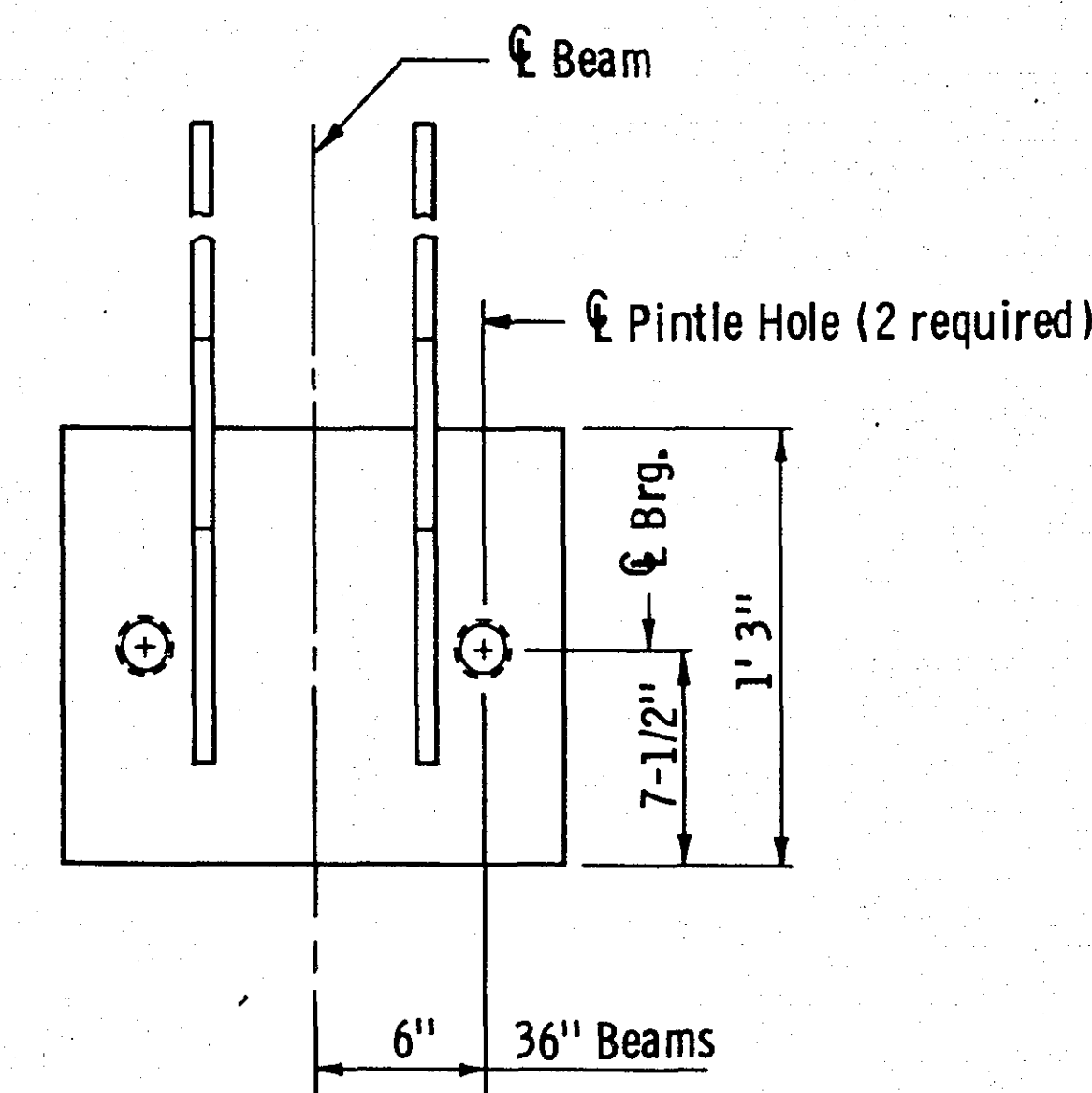
DETAIL NO.

B103

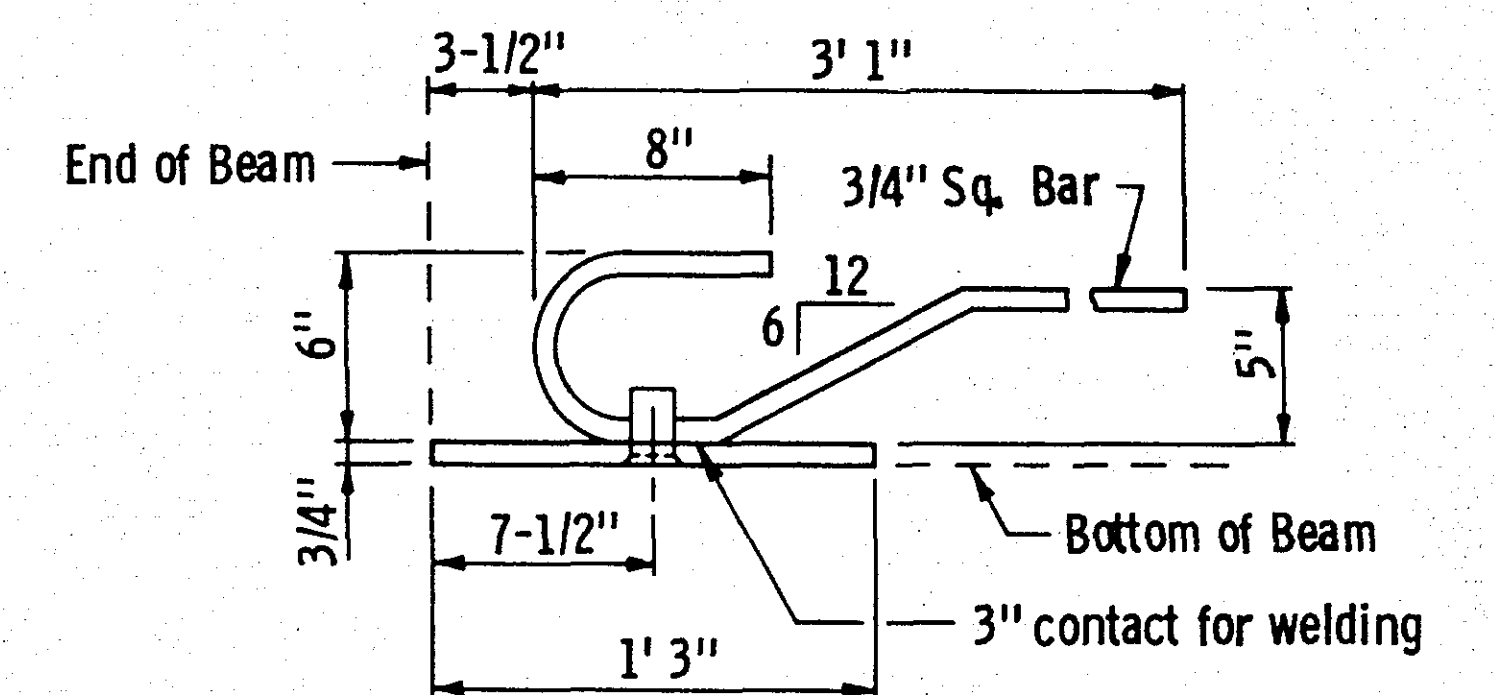
These dimensions may be modified to clear prestressed strands. However, changes must be approved by the Engineer.



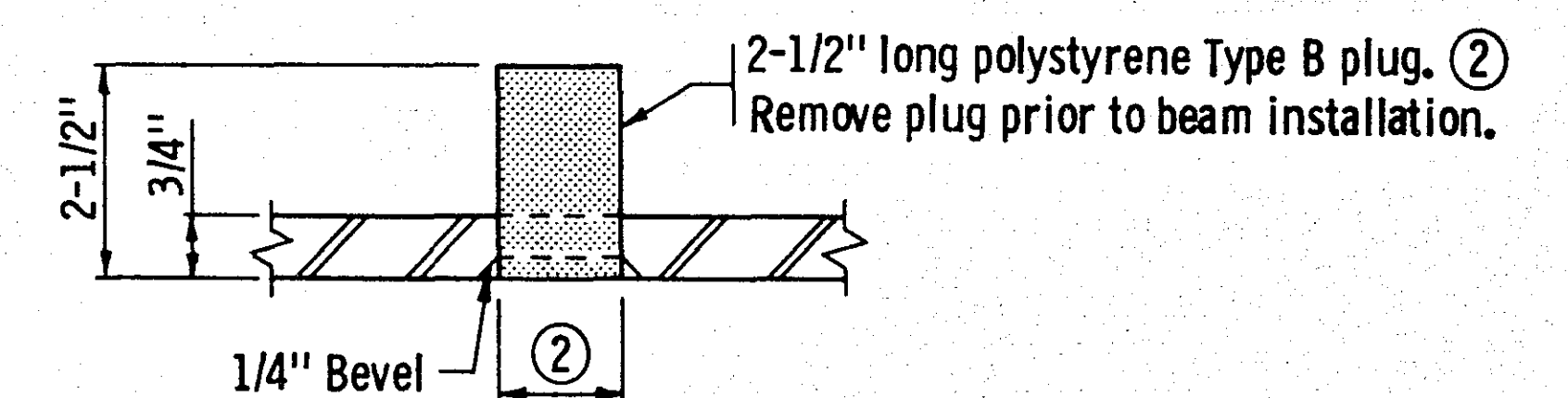
FRONT VIEW



TOP VIEW



SIDE VIEW



PINTLE HOLE DETAIL

NOTES:

Material to be structural steel per Spec. 3306
Sole plate for Bearing Assembly to be hot dipped galvanized per Spec. 3394 after fabrication.
Pintle holes shall be free of zinc build up from galvanizing.
Payment for sole plates to be included in price bid for Prestressed Concrete Beams.

- ① Dimension "W" to be the width at the bottom flange of the beam minus 1/4".
- ② 1-1/2" dia. for 1-1/4" dia. pintles.
1-3/4" dia. for 1-1/2" dia. pintles.
Check bearing assemblies for pintle size used.

APPROVED: March 12, 1987
Developed by: ENGINEERING STANDARDS
and BRIDGES & STRUCTURES
Issued by: ENGINEERING STANDARDS

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
SOLE PLATE
PRESTRESSED CONCRETE BEAMS
(FOR BEARINGS WITH PINTLES)

REVISION

DETAIL NO.

B303

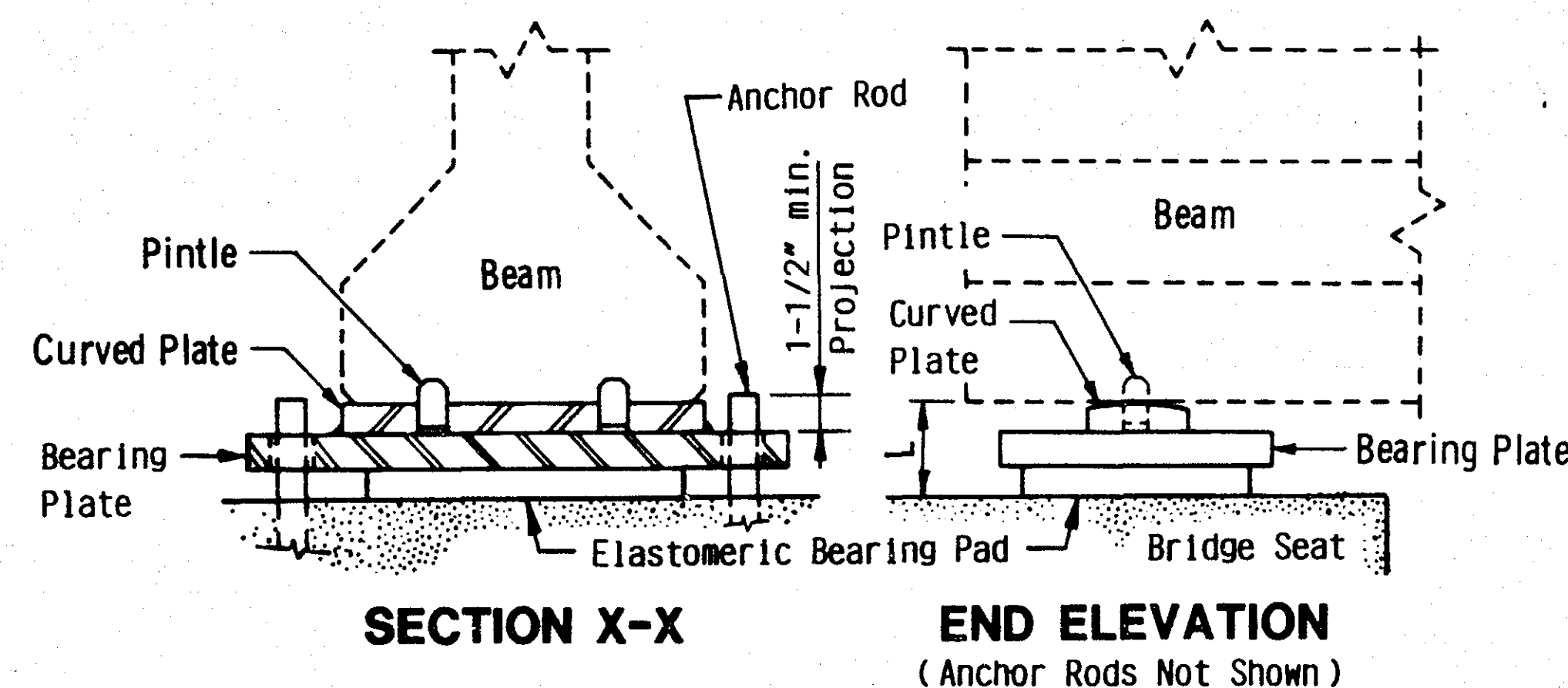
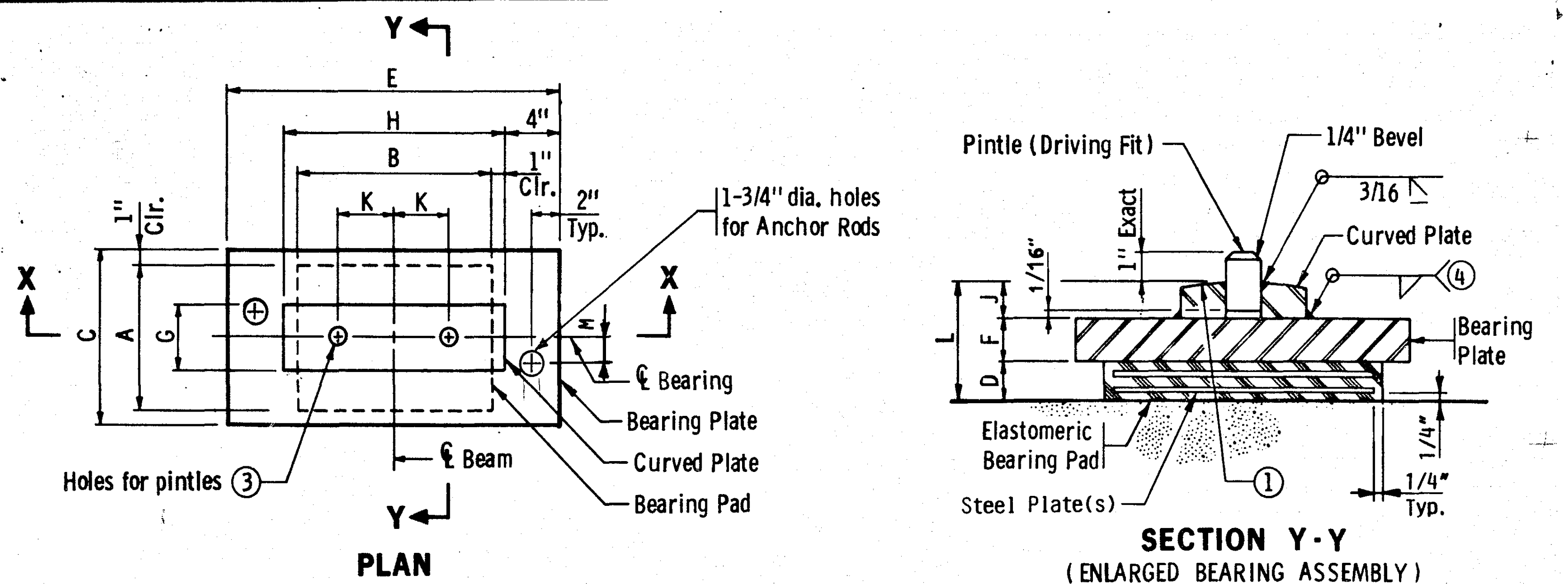
S.P. 62-626-03

TITLE:

DETAILS

DES: JDP DR: AF
CHK: GWM CHK: JDP
APPROVED: 11-4-91
Sheet No. 23 of 28 Sheets

Bridge No.
62559



PINTLE SPACING TABLE	
BEAM SIZE	K
36"	6"

TABLE ②																
Beam Size	Bearing Pad Size			Steel Plates		Laminates		Shape Factor	Bearing Plate Size			Curved Plate Size			Pintle Dia.	Pintle Spacing
	A	B	D	No.	Thick.	No.	Thick.		C	E	F	G	H	J		
36"	12"	16"	1 1/4"	2	1/8"	1	1/2"	6.9	14	26"	1 1/4"	4 1/2"	18"	1 1/4"	1 1/2"	6"

NOTES:

For elastomeric materials & pad construction, see Spec. 3741 and special provisions, except as noted.

All steel plates & anchor rods shall comply with Spec. 3306, except as noted.

All plates shall be flat after fabrication and galvanizing. Welding distortion of bearing plates shall be straightened to within 1/16" of flatness by mechanical means without damage to the zinc coating.

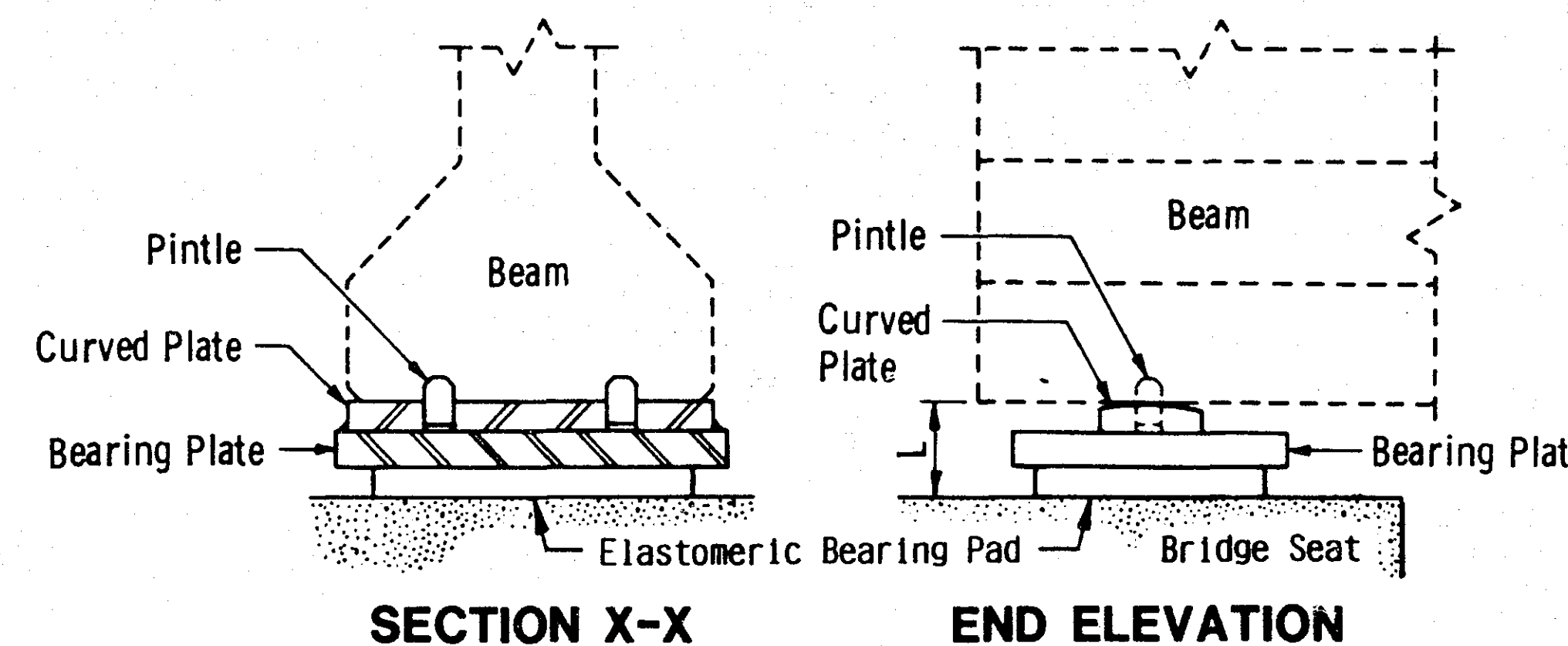
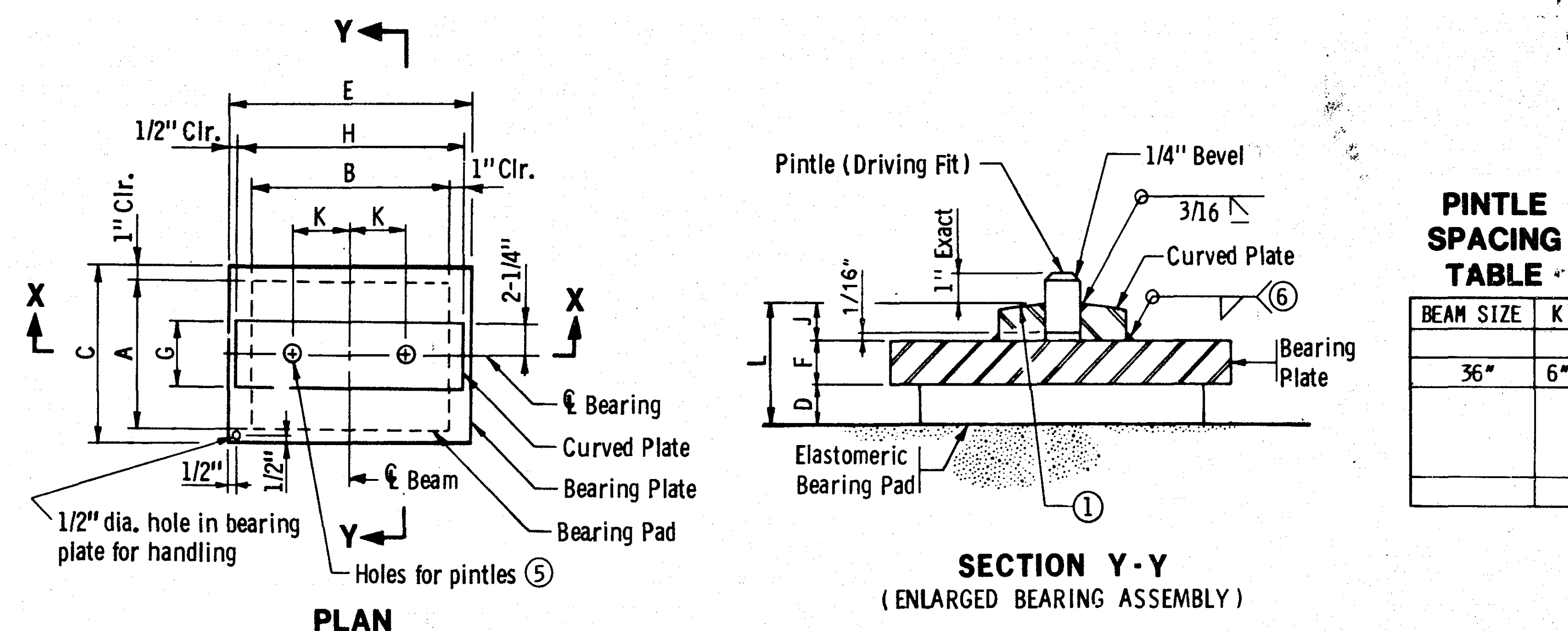
Pintles shall comply with Spec. 3314, Type II

Galvanize anchor rods and structural steel bearing assembly after fabrication per Spec. 3394, except as noted.

Payment for bearing assembly shall include all material on this detail.

- The radius of the curved plate shall be 1' 0" min. & 1' 6" max. Finish to 250 Micro. The finished thickness of the plate may be 1/16" less than shown.
- See Bridge Design Manual for design requirements.
- 1-1/4" dia. pintle for total loads to 200 Kips.
1-1/2" dia. pintle for total loads over 200 Kips.
- For bearing plate thicknesses up to 1-1/2" use 5/16" fillet welds; for thicknesses over 1-1/2" to 2-1/4" use 3/8" fillet welds; for thicknesses over 2-1/4" use 1/2" fillet welds with minimum preheat of 300°.

APPROVED: August 4, 1987	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Developed by: ENGINEERING STANDARDS and BRIDGES & STRUCTURES	CURVED PLATE BEARING ASSEMBLY PRESTRESSED CONCRETE BEAMS (FIXED)		B310
Issued by: ENGINEERING STANDARDS			



PINTLE SPACING TABLE	
BEAM SIZE	K
36"	6"

TABLE ④																
Beam Size	Bearing Pad Size			Steel Plates		Laminates		Shape Factor	Bearing Plate Size			Curved Plate Size			Pintle Dia.	Pintle Spacing
	A	B	D	No.	Thick.	No.	Thick.		C	E	F	G	H	J		
36"	12"	16"	1 1/4"	2	1/8"	1	1/2"	6.9	14"	19"	1 1/4"	4 1/2"	18"	1 1/4"	1 1/2"	6"

NOTES:

For elastomeric materials & pad construction, see Spec. 3741 and special provisions, except as noted.

All steel plates shall comply with Spec. 3306, except as noted.

All plates shall be flat after fabrication and galvanizing. Welding distortion of bearing plates shall be straightened to within 1/16" of flatness by mechanical means without damage to the zinc coating.

Pintles shall comply with Spec. 3314, Type II

Galvanize structural steel bearing assembly after fabrication per Spec. 3394, except as noted.

Payment for bearing assembly shall include all material on this detail.

- The radius of the curved plate shall be 1' 0" min. & 1' 6" max. Finish to 250 Micro. The finished thickness of the plate may be 1/16" less than shown.
- Do not galvanize these plates.
- The total thickness shown includes the steel plates.
- See Bridge Design Manual for design requirements.
- 1-1/4" dia. pintle for total loads to 200 Kips.
1-1/2" dia. pintle for total loads over 200 Kips.
- For bearing plate thicknesses up to 1-1/2" use 5/16" fillet welds; for thicknesses over 1-1/2" to 2-1/4" use 3/8" fillet welds; for thicknesses over 2-1/4" use 1/2" fillet welds with minimum preheat of 300°.

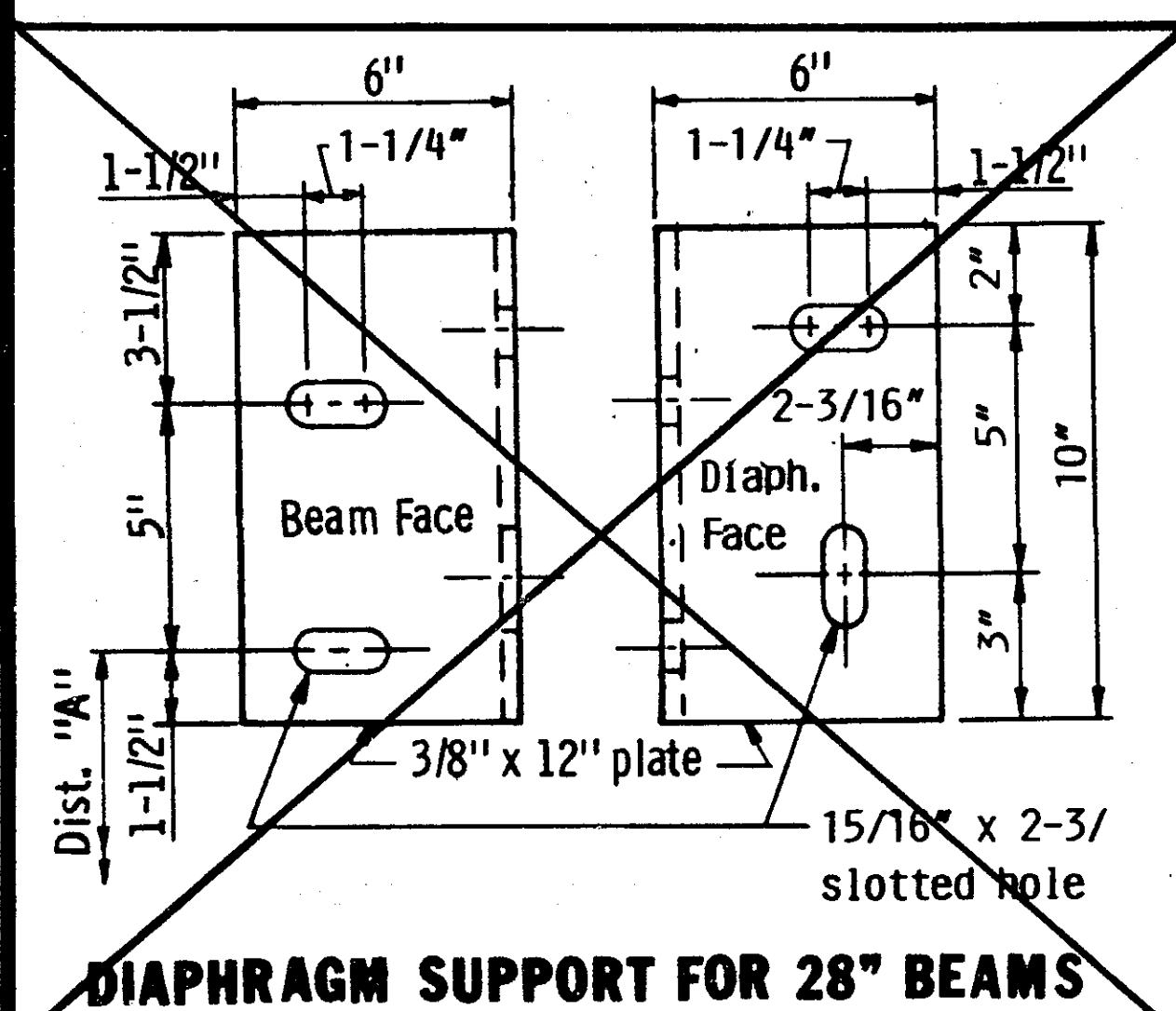
APPROVED: August 4, 1987	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Developed by: ENGINEERING STANDARDS and BRIDGES & STRUCTURES	CURVED PLATE BEARING ASSEMBLY PRESTRESSED CONCRETE BEAMS (EXPANSION)		B311
Issued by: ENGINEERING STANDARDS			

S.P. 62-626-03

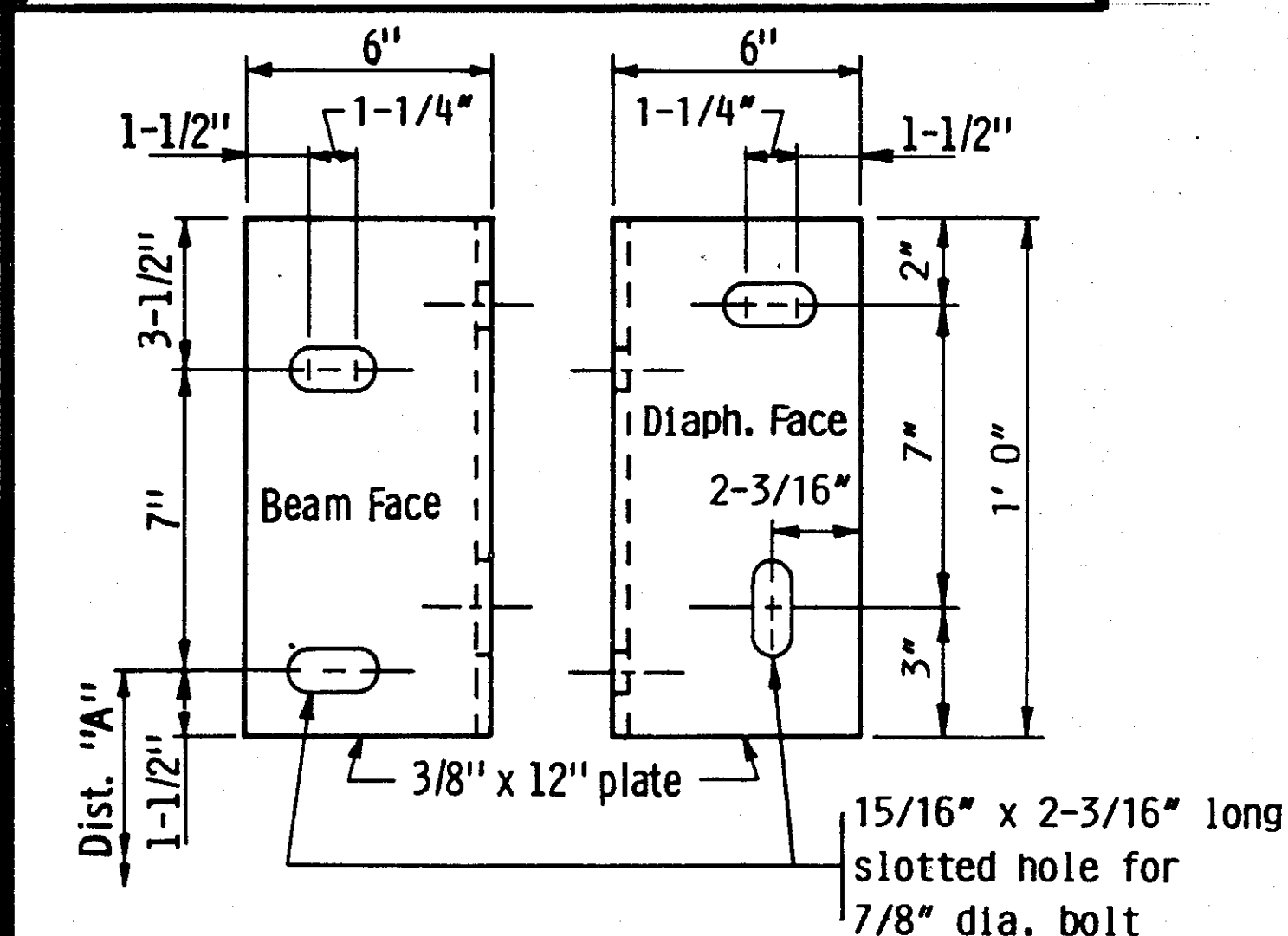
TITLE:	DES: JDP	DR: AF	APPROVED: 11-4-91	Bridge No.
DETAILS	CHK: GWM	CHK: JDP		62559
	Sheet No. 24 of 28 Sheets			

TABLE

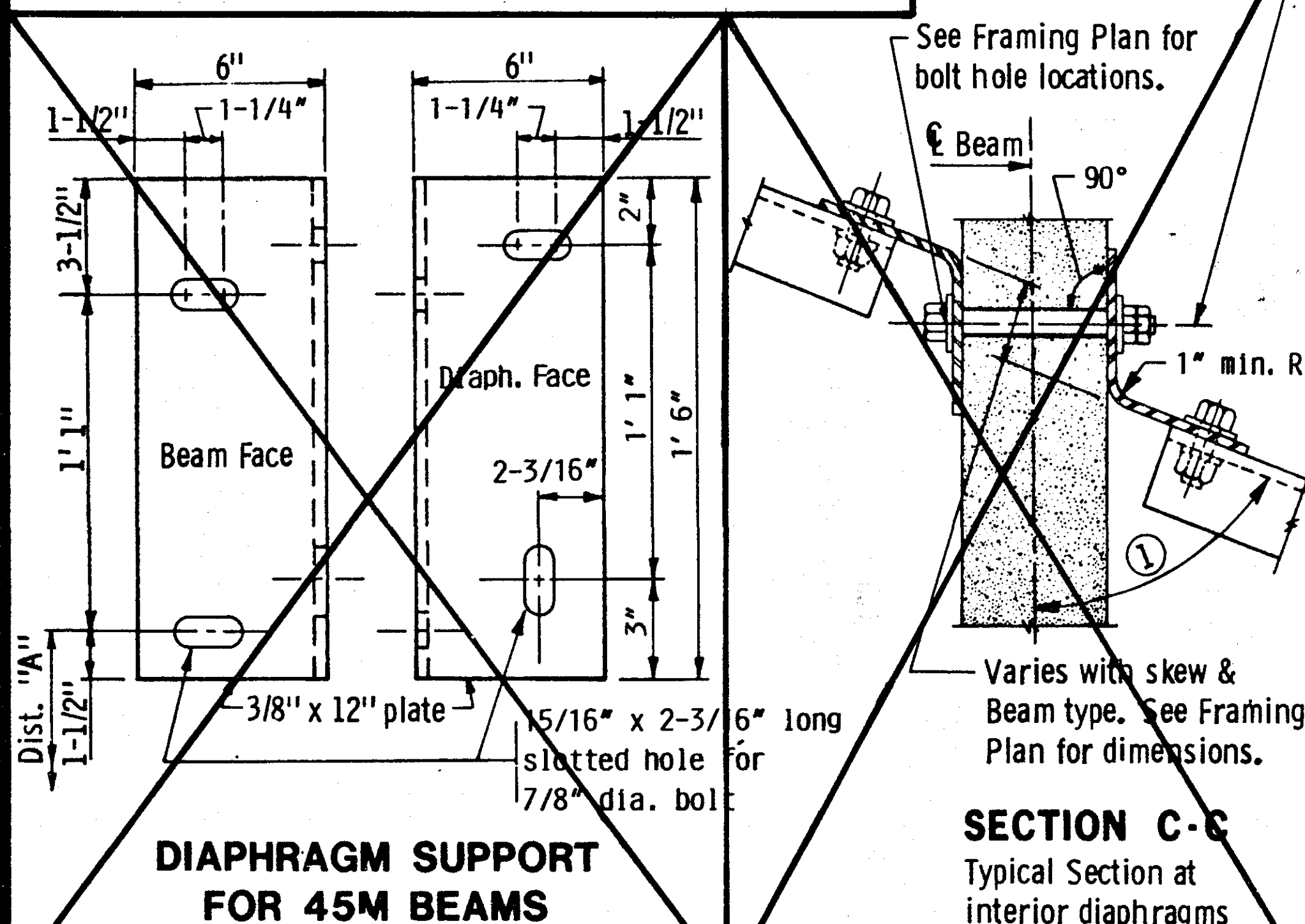
Beam ft.	Distance "A"
36"	1' 3"



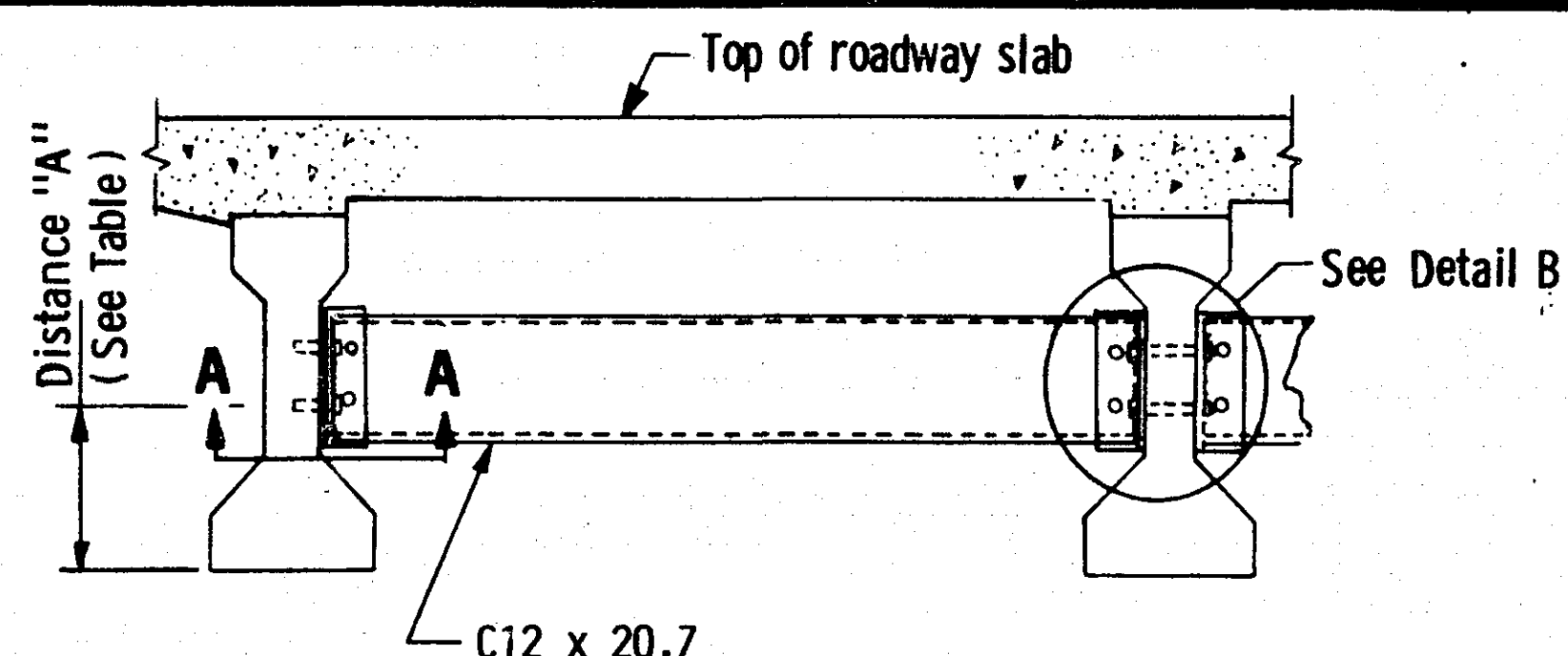
DIAPHRAGM SUPPORT FOR 28" BEAMS



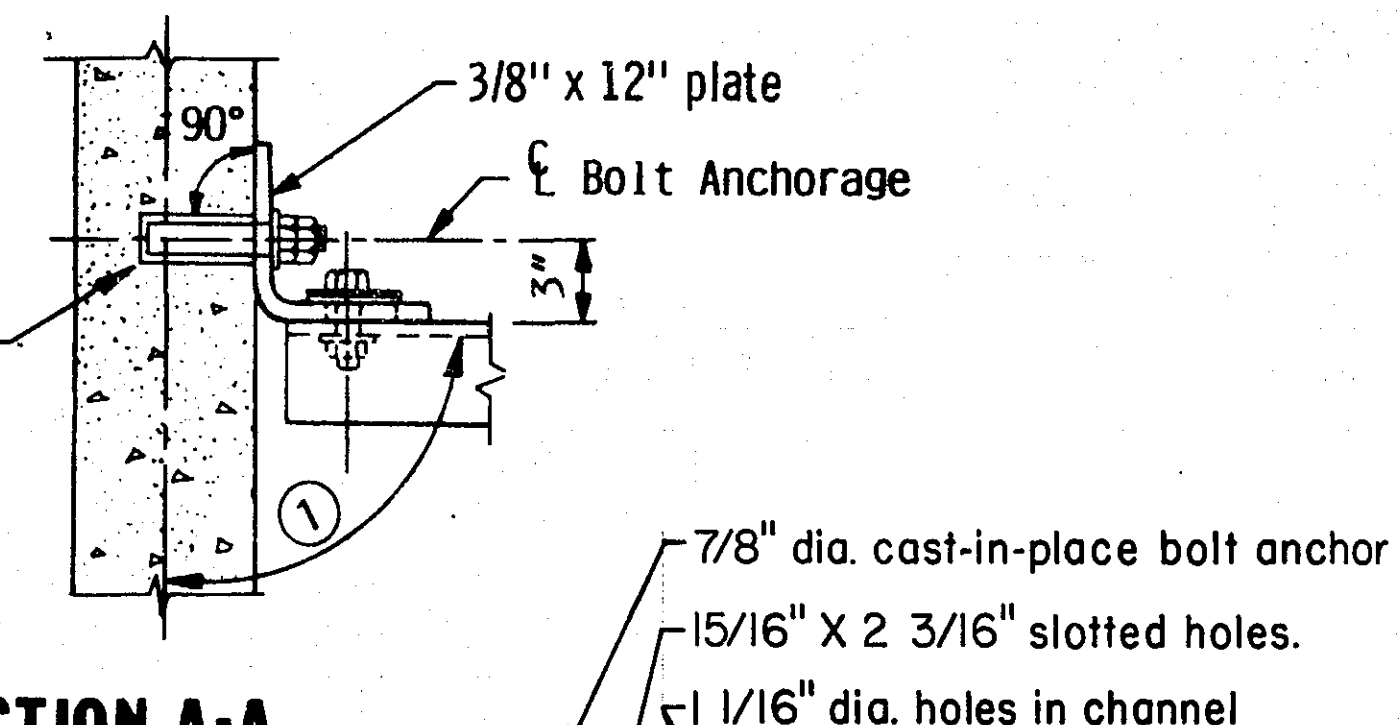
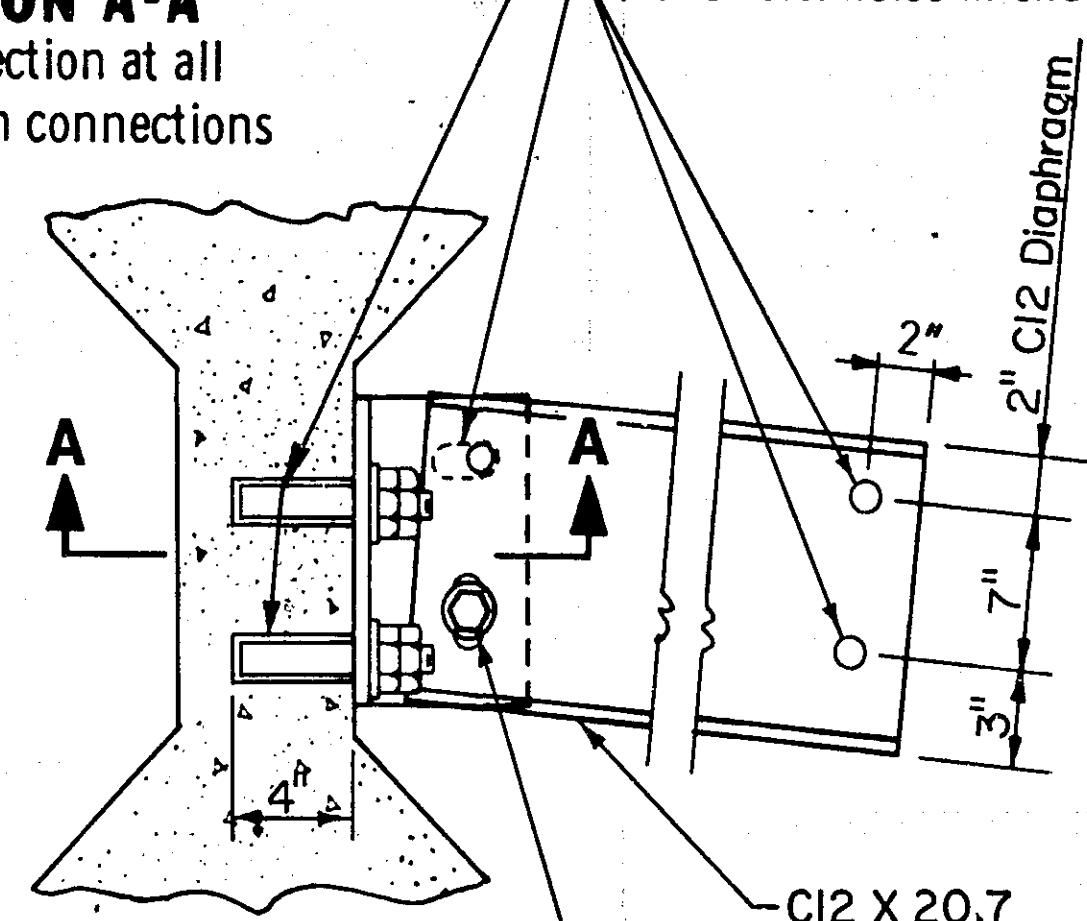
DIAPHRAGM SUPPORT FOR 36" BEAMS



DIAPHRAGM SUPPORT FOR 45M BEAMS



PART TRANSVERSE SECTION AT DIAPHRAGM

SECTION A-A
Typical Section at all
facia beam connections

DETAIL B

Beams with non-continuous line of diaphragms

7/8" dia. high strength bolts with hex. nut and one 3" sq. x 5/16" plate washer on slotted side and hardened washer on diaphragm side.

① For skew angles under 20°, use 90° less the skew angle. For skew angles over 20°, use 90°.

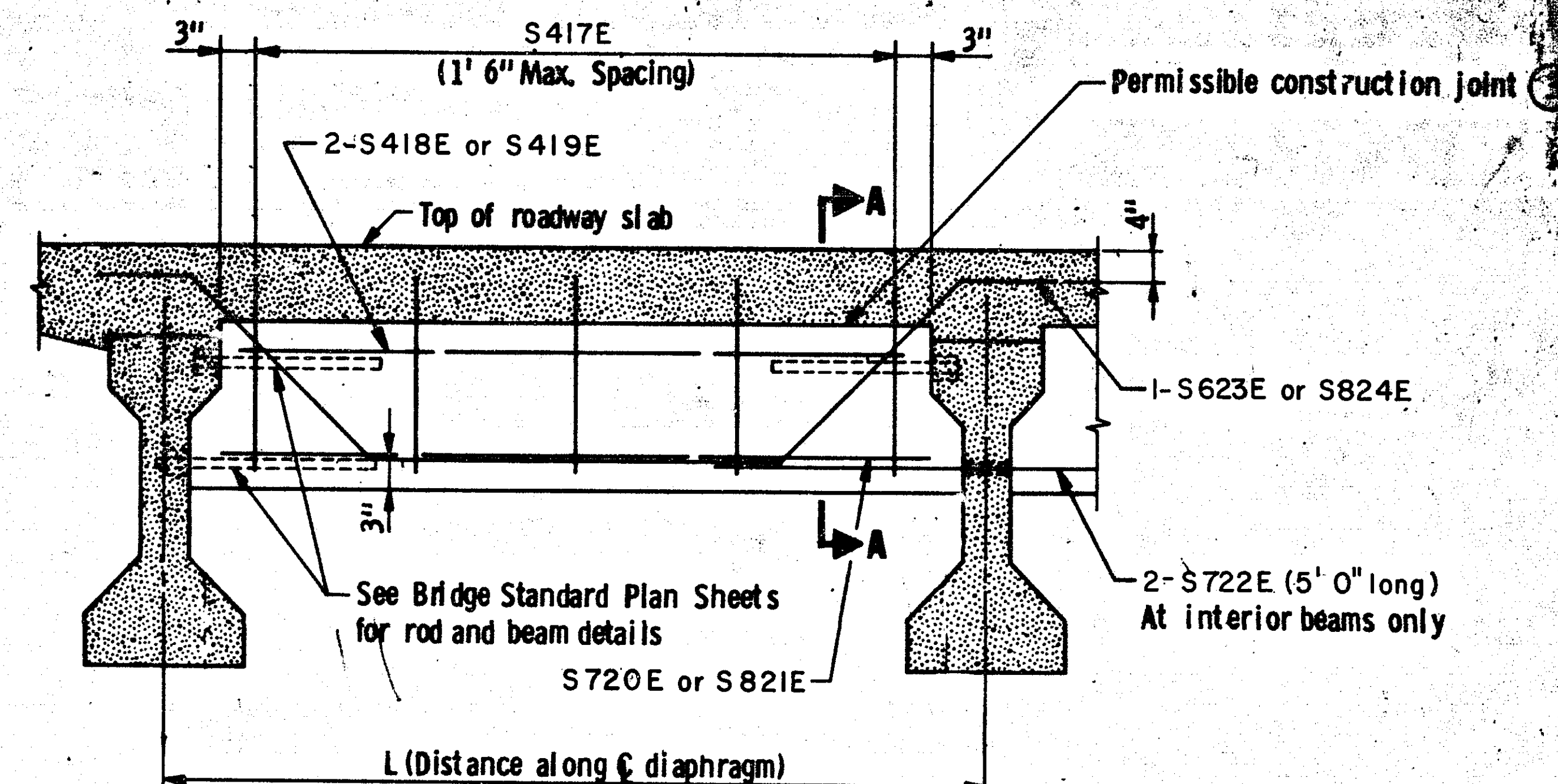
GENERAL NOTES:

See Spec. 2405.3M for installation.

The leg of the 12" plate shall be shop bent to conform to the diaphragm. A 3/8" x 6" x 6" angle may be used for diaphragms perpendicular to beams.

All structural steel shown on this detail, including bolts and washers, shall be included in the payment for diaphragms for prestressed beams.

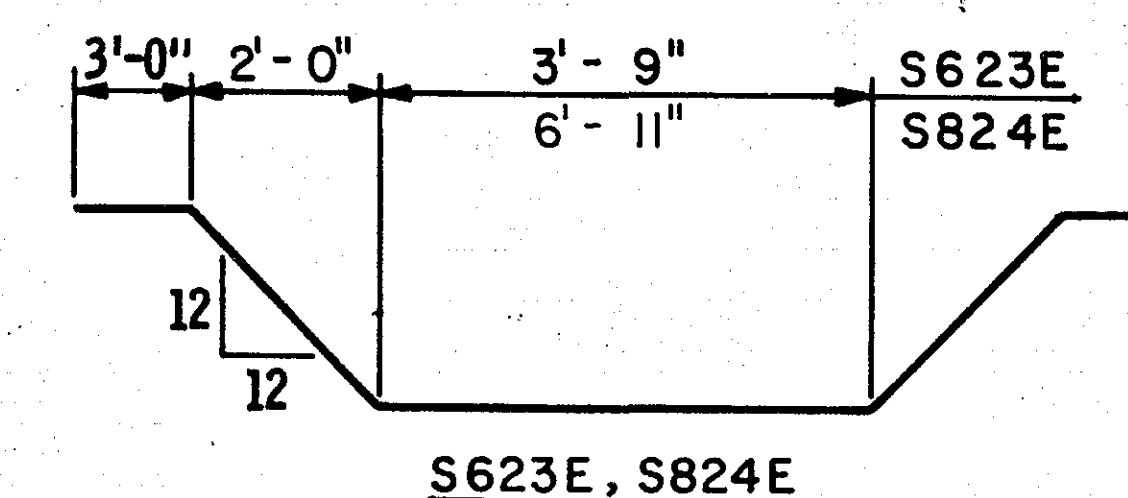
Diaphragms over the piers are considered to be intermediate if the slab is continuous.



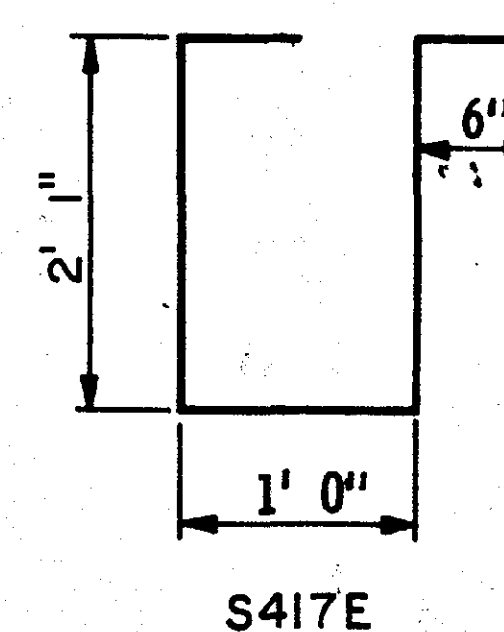
PART TRANSVERSE SECTION AT END DIAPHRAGM

LONGITUDINAL REINFORCEMENT
IN BOTTOM OF DIAPHRAGM

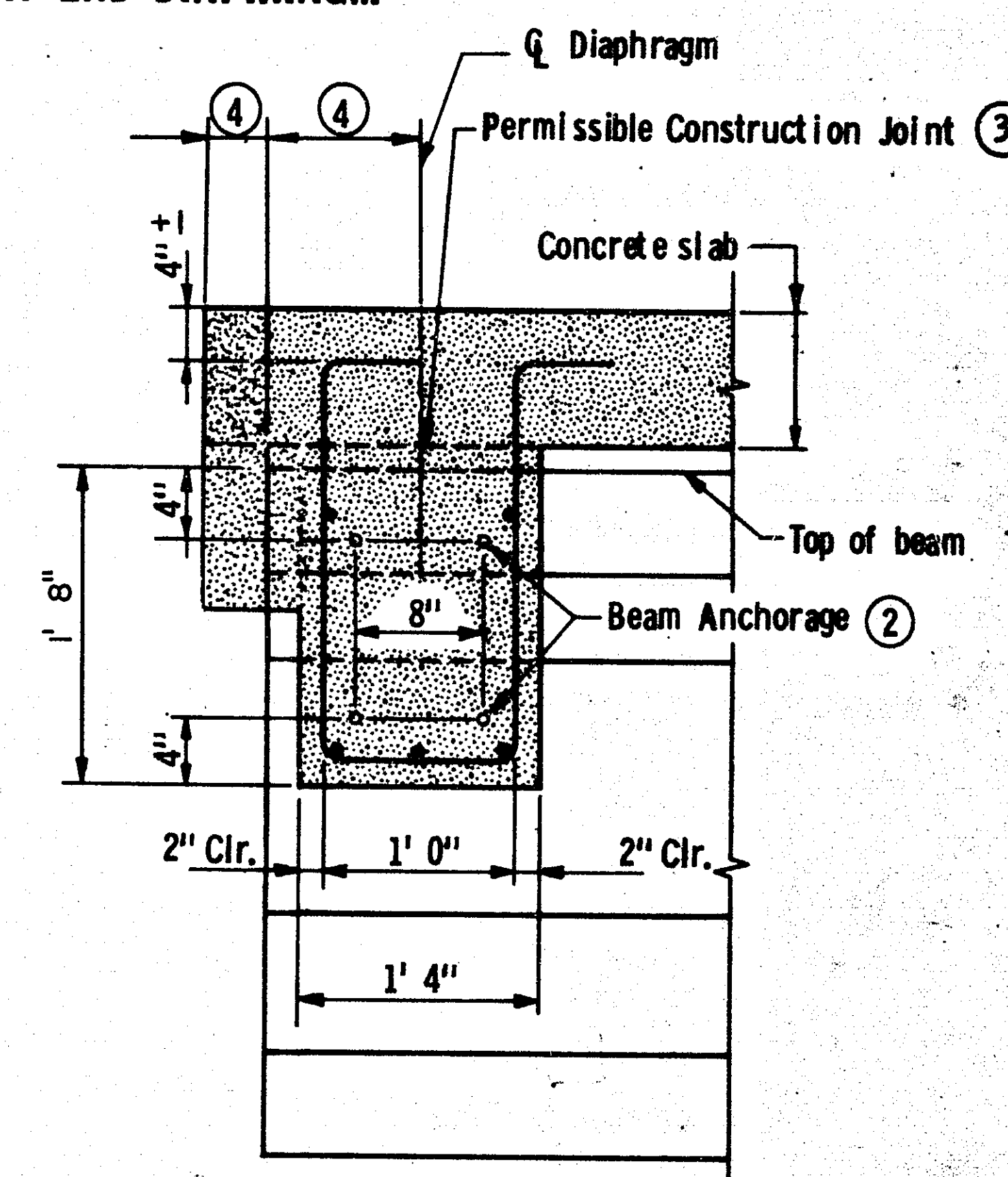
BEAM SPACING ¢ TO ¢ ①	BARS REQUIRED			
	STRAIGHT NO.	SIZE	BENT NO.	SIZE
Over 8' to 11'	2	7	1	6
Over 11' to 13'	2	8	1	8



S623E, S824E



S417E



SECTION A-A

NOTES:

- ① Distance measured along ¢ of diaphragm.
- ② BEAM ANCHORAGES
Fascia beams only: four 3/4" dia. threaded rods.
Interior beams: Two 3/4" dia. threaded rods on top two No. 7 bars on bottom.
- ③ When a construction joint is used at this location, diaphragm falsework shall remain in place until the diaphragm concrete has obtained the required strength.
- ④ See plans for dimensions.
- ⑤ All diaphragm bars shown are listed with the superstructure reinforcement. Diaphragm concrete and reinforcement quantities are included in superstructure quantities (except threaded rods are included in payment for prestressed beams).

APPROVED: September 24, 1987

Developed by: ENGINEERING STANDARDS
& BRIDGES AND STRUCTURES
OFFICESIssued by: OFFICE OF ENGINEERING
STANDARDSSTATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATIONSTEEL INTERMEDIATE DIAPHRAGM
(FOR 28"-45M PRESTRESSED CONC. BEAM SPANS
AND 30" BULB TEE BEAMS)

REVISION

DETAIL NO.

B403

APPROVED: March 3, 1977

Developed by: ENGINEERING STANDARDS
AND BRIDGES AND STRUCTURES
Issued by: ENGINEERING STANDARDSSTATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATIONCONCRETE END DIAPHRAGM
28"-40" PRESTRESSED CONCRETE BEAMS
(PARAPET ABUTMENTS)

REVISIONS

Dec. 3, 1986

DETAIL NO.

B803

S.P. 62-626-03

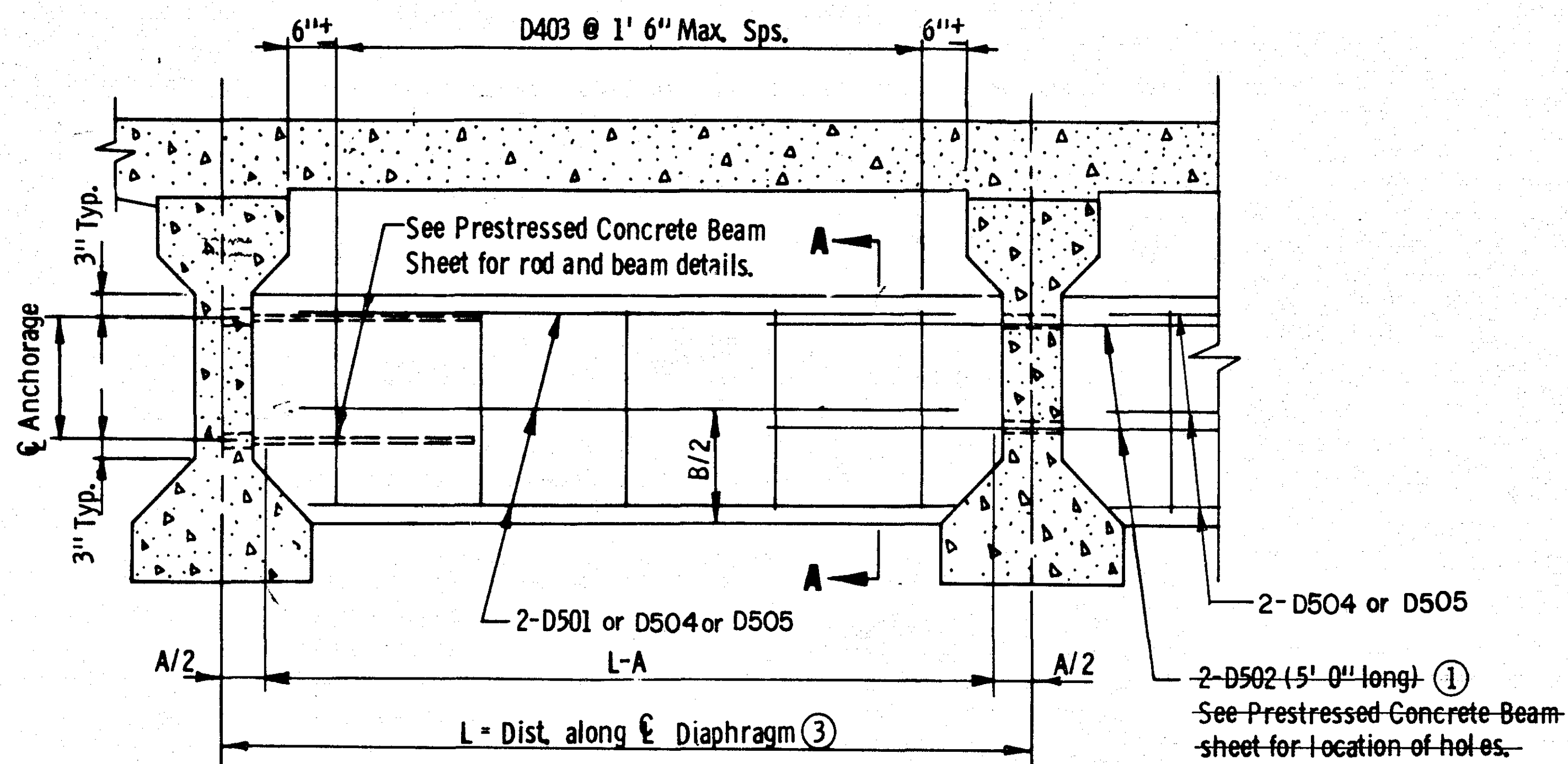
TITLE:

DETAILS

DES: JDP DR: AF
CHK: GWM CHK: JDP
APPROVED: 11-4-91
Sheet No. 25 of 28 Sheets

Bridge No.

62559



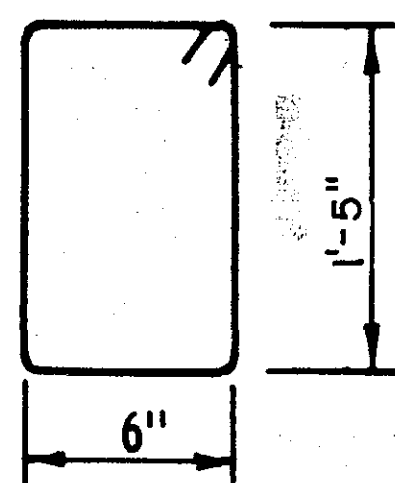
PART TRANSVERSE SECTION

Beam Height	Dim. "A" for comp. volume	Diaph. Dim. "B"	Bar D403 Length
28"	7-1/2"	1'-4"	3'-9"
36"	7-3/4"	1'-9"	4'-7"
40"	8-3/4"	1'-11"	4'-11"
45"	9"	2'-2 1/2"	5'-6"
54"	10-1/2"	2'-8"	6'-5"

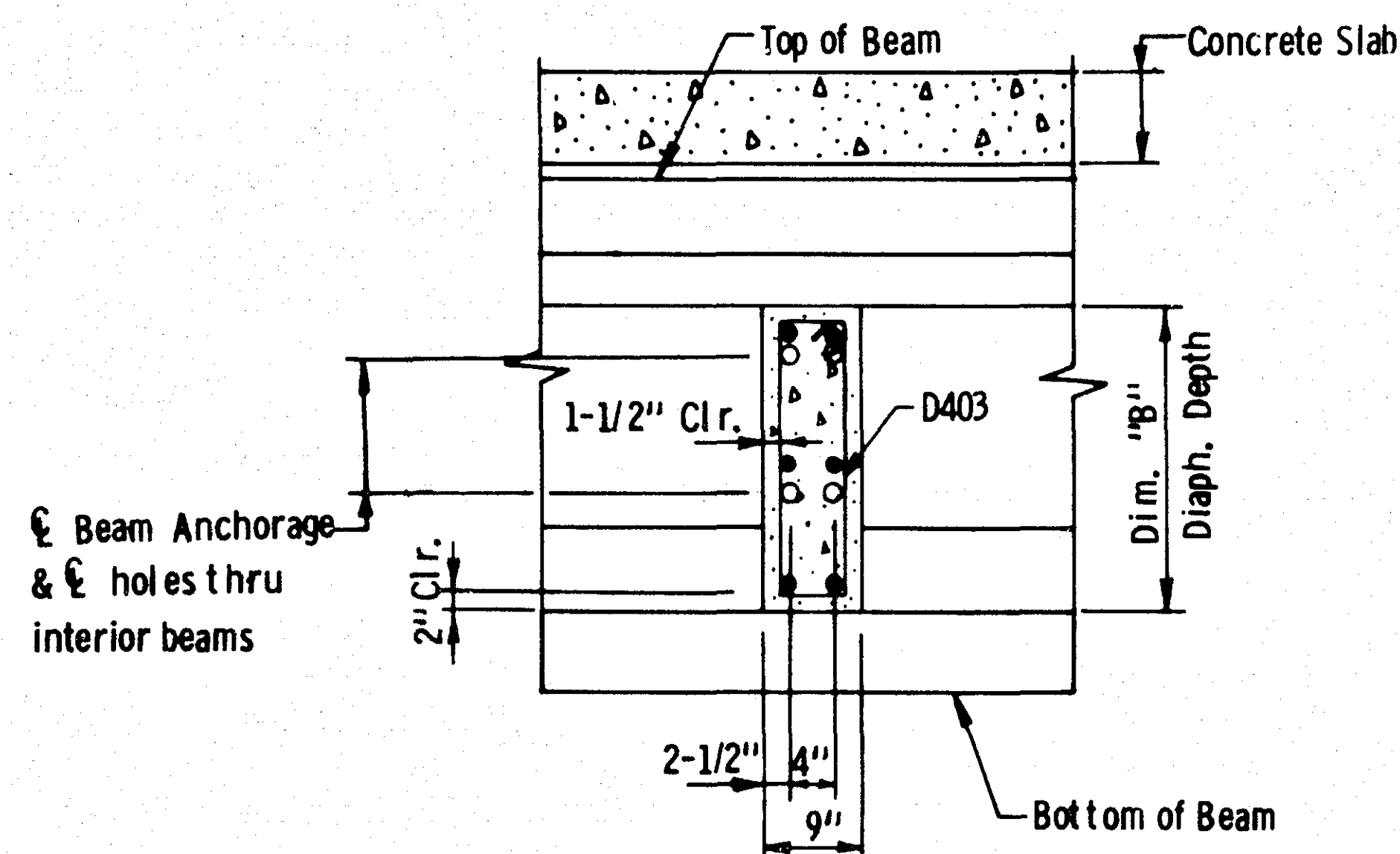
Concrete volume per diaphragm

$$\frac{(L - A) \times B \times .75}{27} = (\text{Cu. yd.})$$

BAR	NO.	LENGTH	SHAPE	LOCATION
D501	42	6'-4"	Str.	Diaph. Horiz.
D502	—	—	Str.	Diaph. Horiz.
D403	237	4'-7"	Bent	Diaph. Vert.
D504	96	9'-2"	Str.	Diaph. Horiz.
D505	90	7'-2"	Str.	Diaph. Horiz.



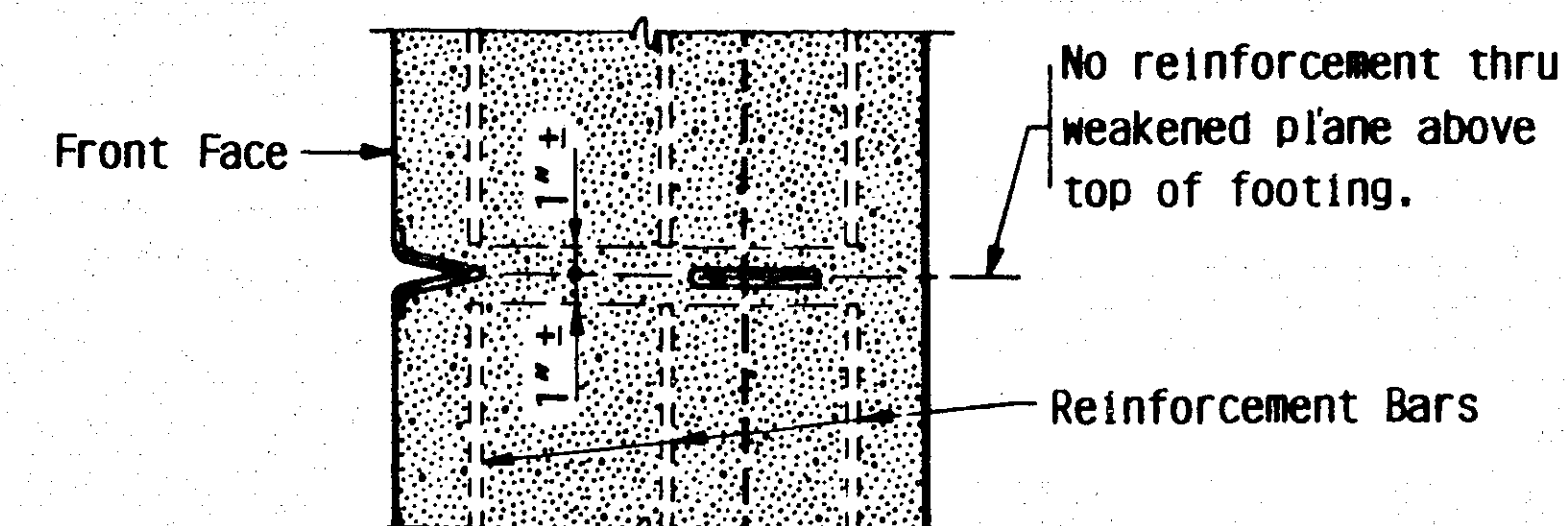
D403



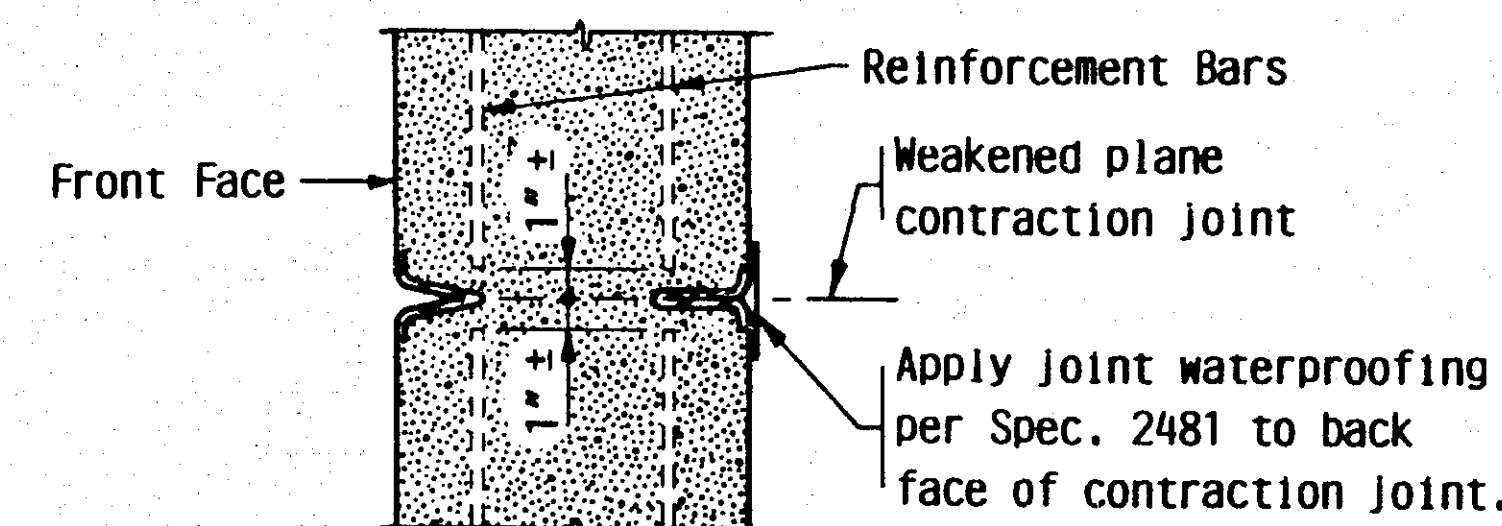
SECTION A-A

GENERAL NOTES

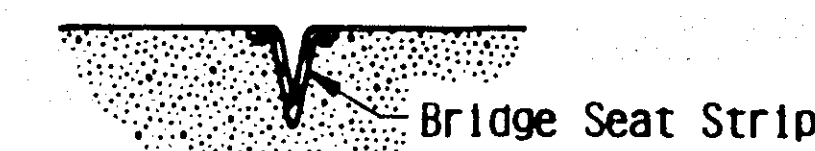
- For Diaphragms 20' and over, use threaded rods as shown on standard prestressed concrete beam sheet.
- All diaphragm concrete and reinforcement bars shown on this detail to be included in payment for diaphragms for prestressed beams. Threaded rods are included in payment for prestressed concrete beams.
- Payment length for diaphragms.



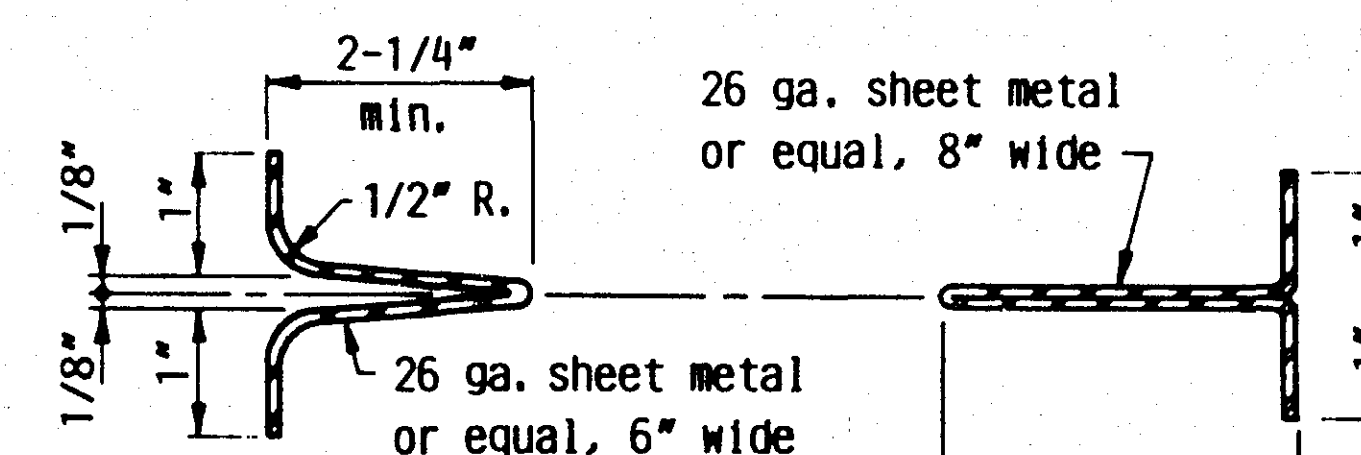
SECTION A-A



SECTION B-B

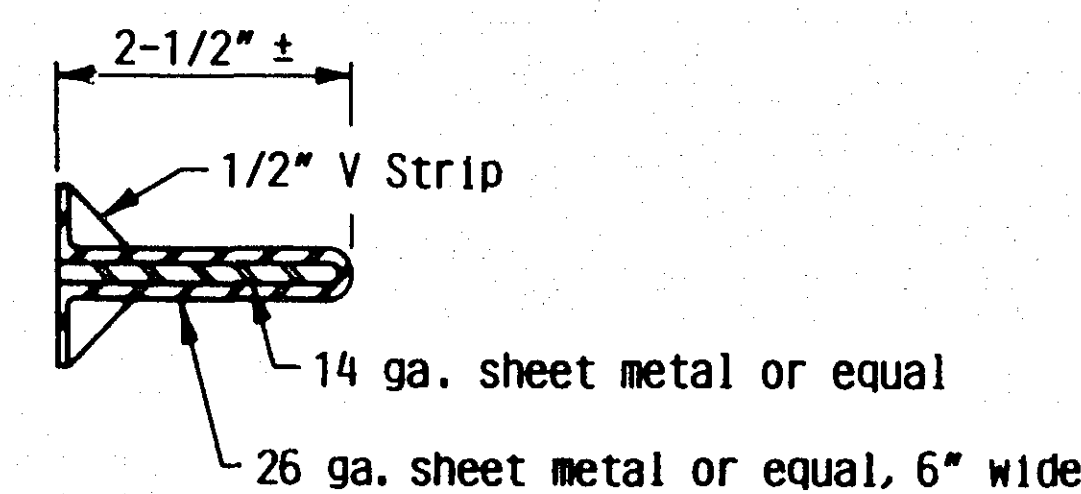


SECTION C-C

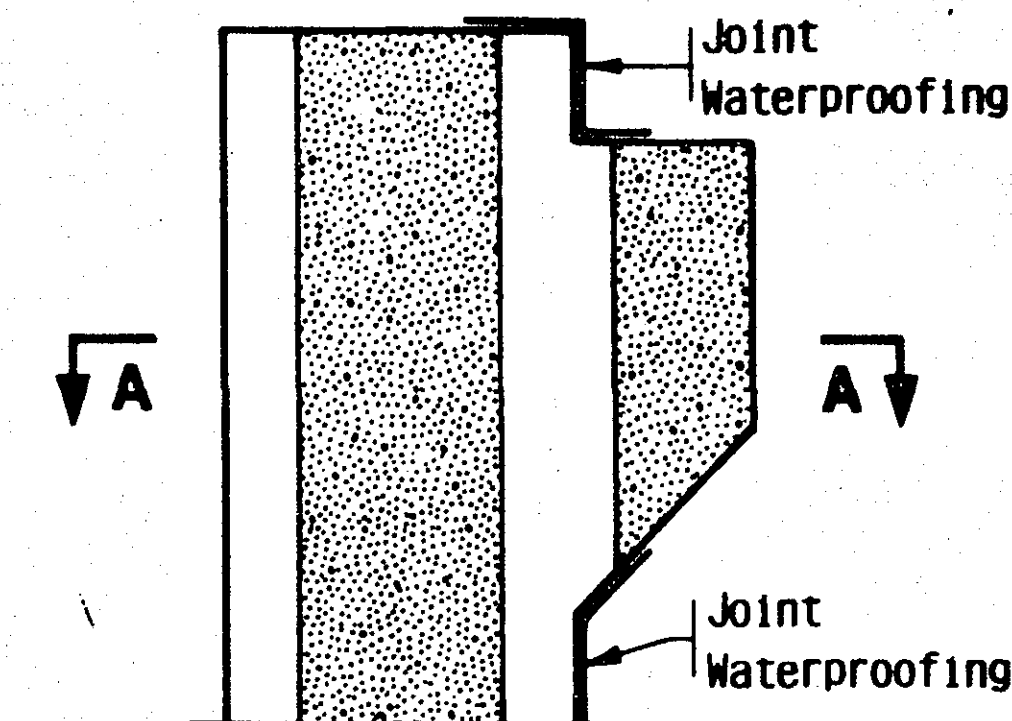


BRIDGE SEAT and FRONT STRIP

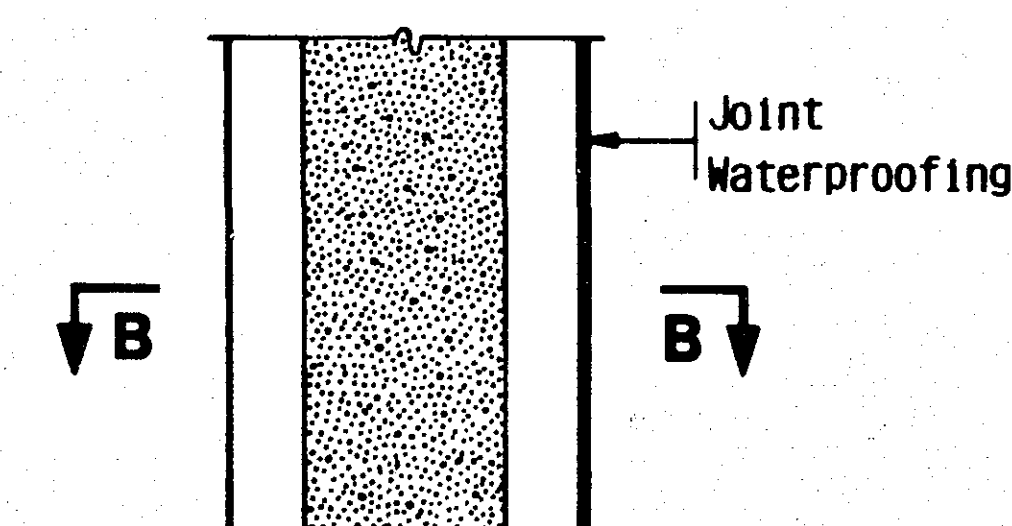
BACK STRIP



ALTERNATE BRIDGE SEAT and FRONT STRIP

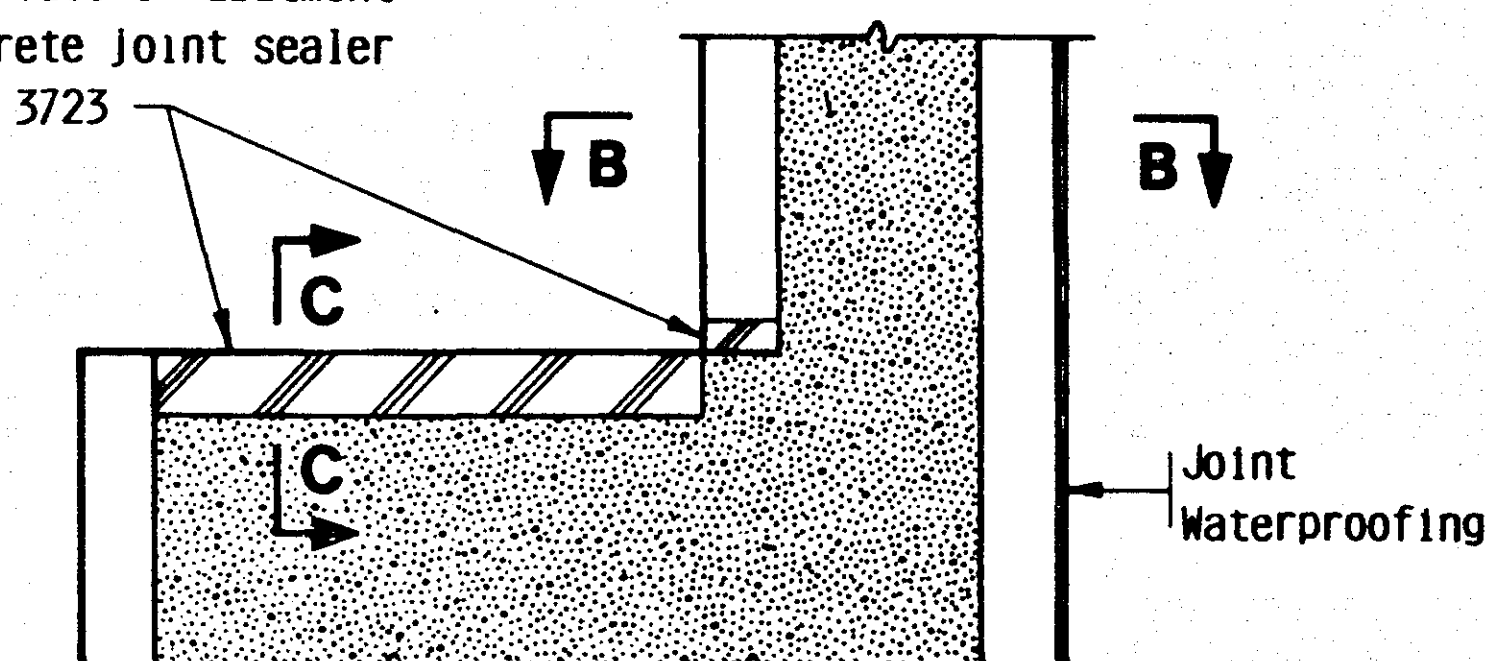


SECTION THRU PAVING BRACKET



SECTION THRU WALL

Seal across bridge seat and 1" up face of abutment with concrete joint sealer per Spec. 3723



SECTION THRU BRIDGE SEAT

PART SECTION THRU ABUTMENT AT JOINT

NOTES:

The methods and materials indicated on this sheet shall be considered as suggested only. Variations will be permitted, subject to approval by the Engineer, but must provide dummy joints of a depth not less than the depth shown, and a width at the front face of the abutment of not greater than 5/16". The separation of the horizontal reinforcement bars shall be not less than 1-1/2" nor more than 3", centered as shown, regardless of the procedure used for forming the dummy joint.

If the front and bridge seat strips are galvanized metal, they shall be securely fastened to the forms so that they will be removed with the forms. If a suitable plastic or other durable material, satisfactory to the Engineer, is used, the material may be left in place.

The back strip may be galvanized metal, a suitable plastic, or other durable material satisfactory to the Engineer. The back strip shall remain in place after the forms are removed.

The cost of forming the joint shall be included in the price bid for other items.

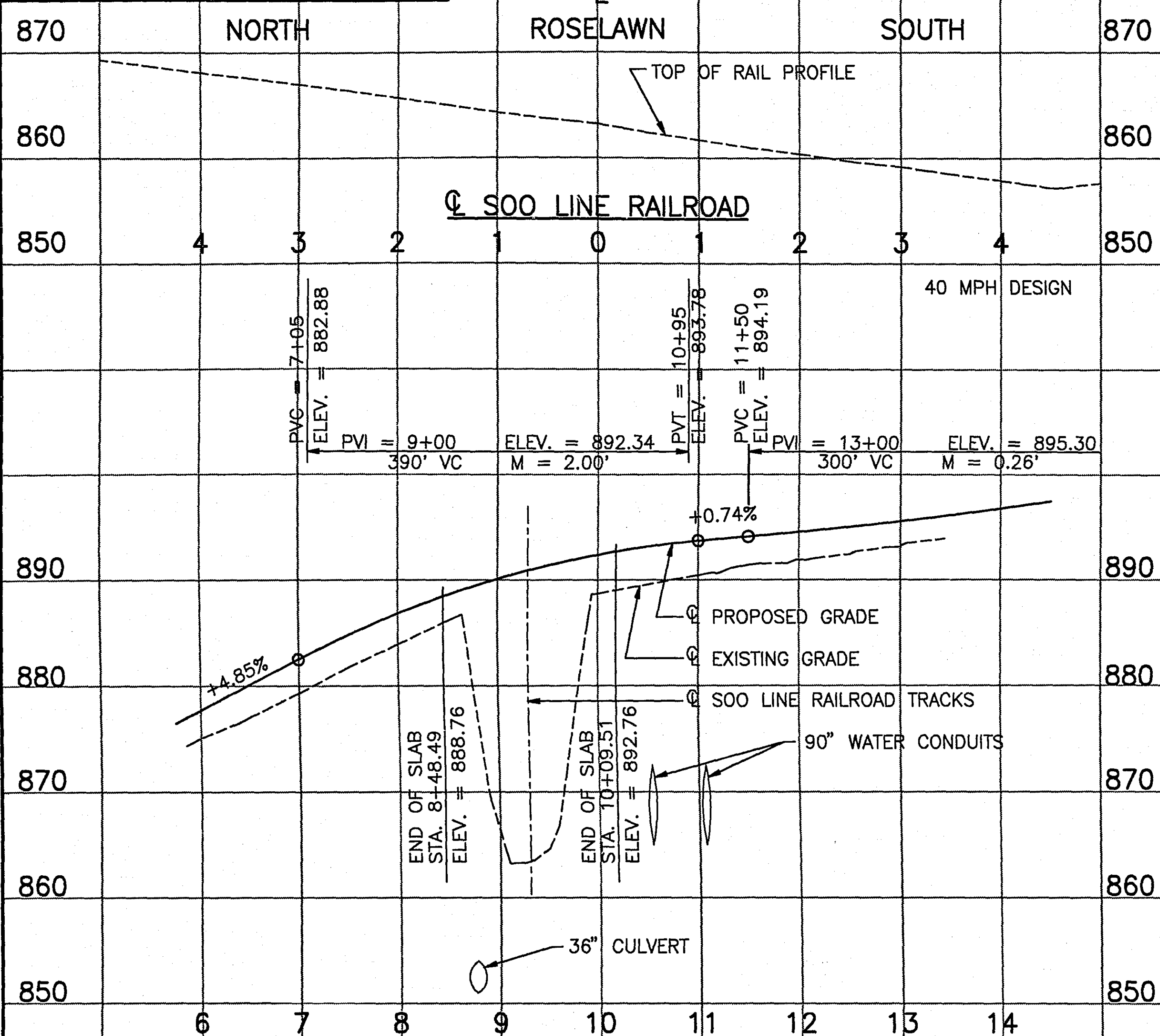
APPROVED: March 27, 1979	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Developed by: OFFICE OF ENGINEERING STANDARDS AND BRIDGE DESIGN	CONCRETE INTERMEDIATE DIAPHRAGM (FOR 28" - 54" PRESTRESSED CONCRETE BEAM SPANS)		B802
Issued by: OFFICE OF ENGINEERING STANDARDS			

APPROVED: February 20, 1987	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Developed by: ENGINEERING STANDARDS and BRIDGES & STRUCTURES	CONTRACTION JOINT		B801
Issued by: ENGINEERING STANDARDS		28-119	

TITTLE:	S.P. 62-626-63			Bridge No. 62559
	DES: JDP	DR: AF	APPROVED: 11-4-91	
	CHK: GWM	CHK: JDP		
DETAILS		Sheet No. 26 of 28 Sheets		

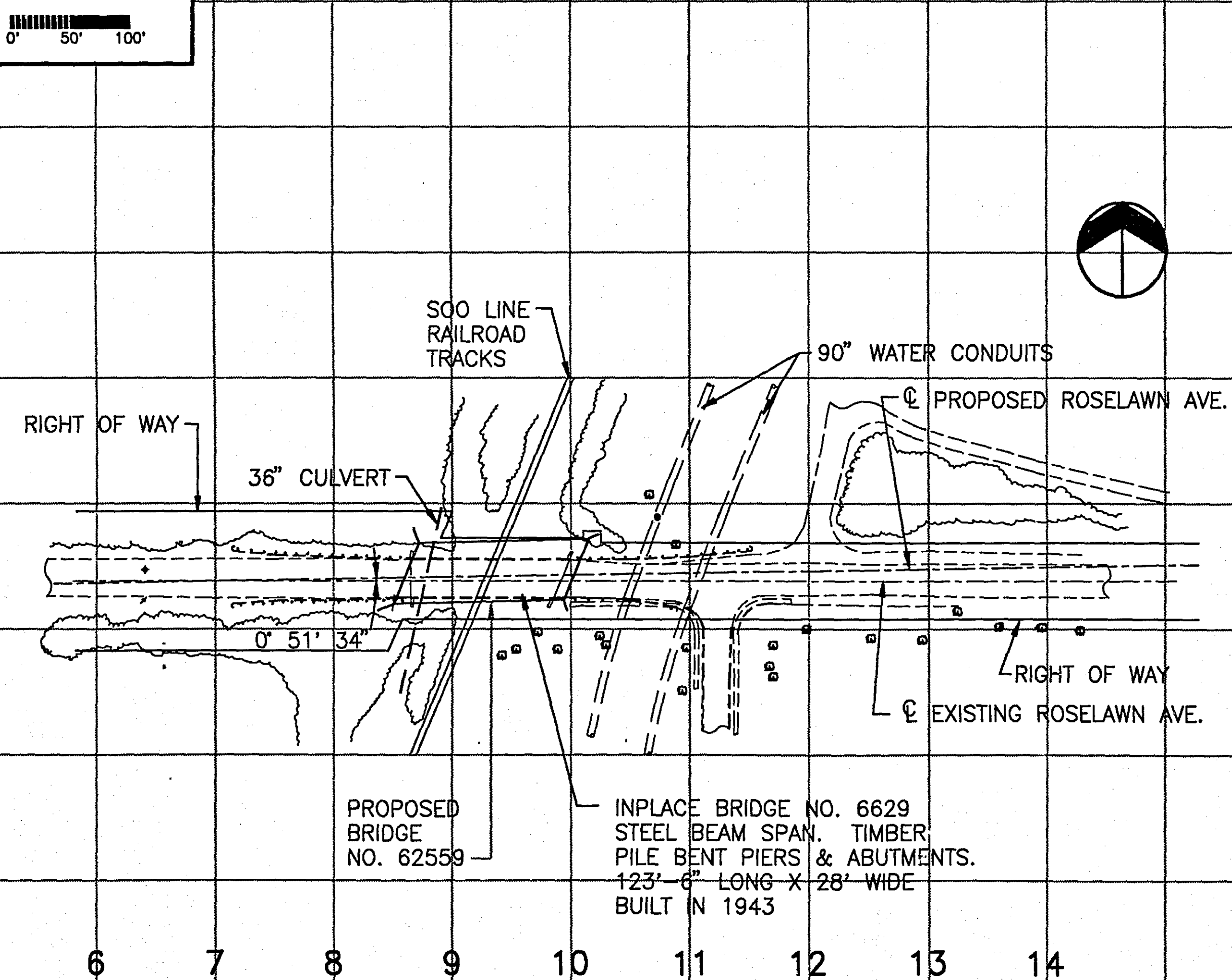
CONTRACTED PROFILE

SCALE: HOR. 0' 50' 100' VER. 0' 5' 10'



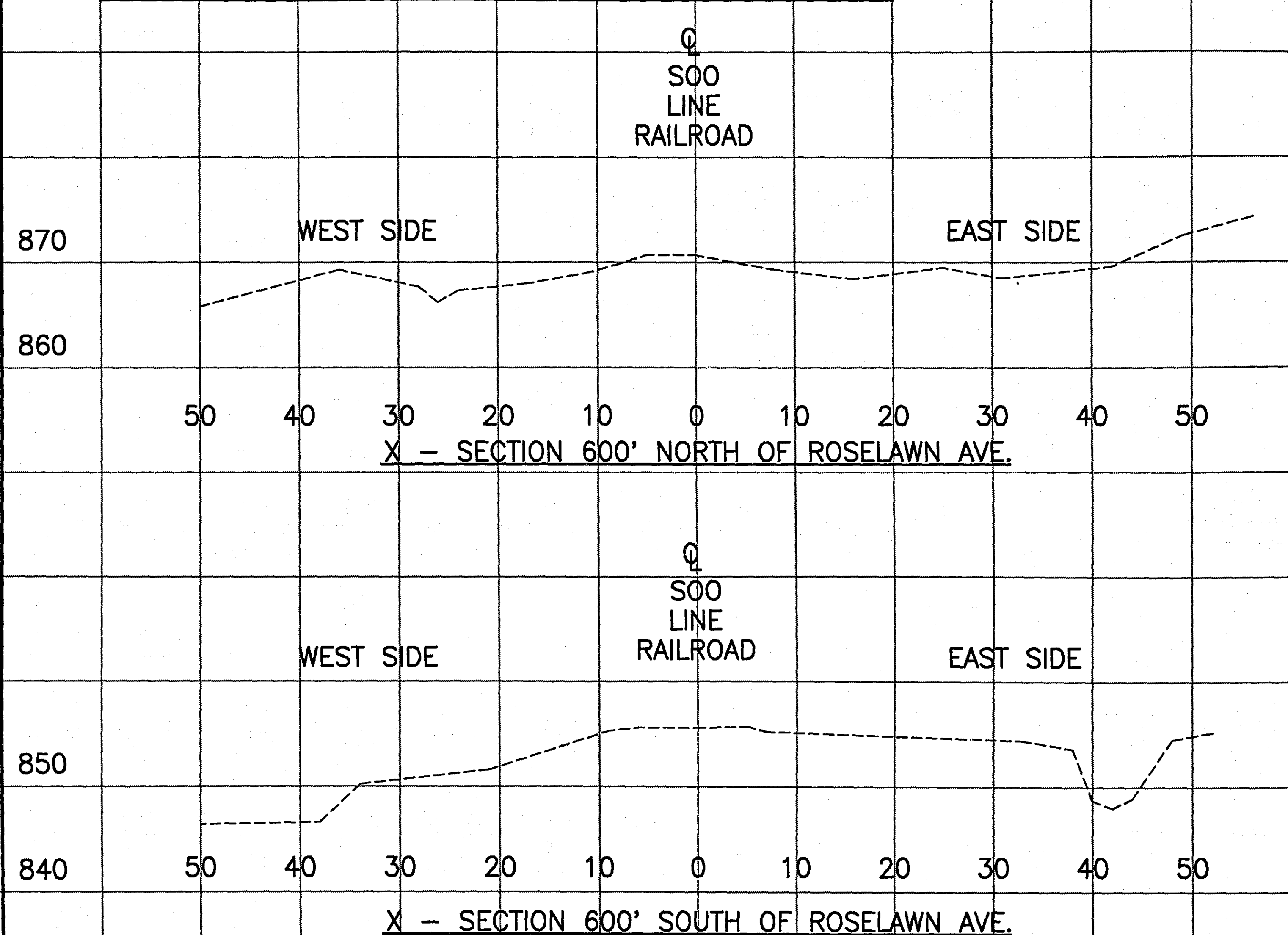
PLAT

SCALE: 0' 50' 100'



TYPICAL SECTIONS & PERTINENT DATA

SCALE: HOR. 0' 50' 100' VER. 0' 5' 10'



Fed. Proj. No.

LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE
Special Features: Waterfalls, dams, floods, ice, debris, sliding banks, recreational boating.

Other bridges or culverts over the same stream (particularly, structures which carry high water without overflow of roadway) Given location, type length, height above high water, cross-sectional area etc.

Apparent highwater elevation Obtained from

Other data: Approx. velocity of water at time of survey

HYDRAULIC ENGINEERS RECOMMENDATION

DATE

Stream or ditch designation
Drainage area
Max. flood on record Design flood (. . . yr. freq.) . . . C.F.S.
Max. observed highwater elevation Design highwater elev.
Design mean velocity through structure F.P.S.
Low superstructure at or above elevation
Flowline elevation skew angle
Waterway area req'd. below elev. Sq. Ft. at RT. angles to channel
In the interest of flood plain zoning the regional flood (100 yr. freq.) is C.F.S. at stage and mean velocity of . . . F.P.S. with Ft. swellhead.

The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Dept. of Natural Resources.

FOUNDATION ENGINEERS RECOMMENDATION

DATE

12 3/4" Ø CAST-IN-PLACE CONCRETE PILES X 60' DEEP, 60 TON CAPACITY

Bridge survey sheets made from SURVEY BY BONESTROO, ROSENE, ANDERLIK AND ASSOCIATES, DECEMBER, 1988.

Bench mark elevation . 866.00 (M.S.L. 1929 Adj.)
Location: U.S.G.S. MONUMENT, APPROXIMATELY 250' EAST OF RICE STREET

MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT ON C.S.A.H. 26
PROPOSED BRIDGE LOCATED . 2 . MILES EAST OF
JCT OF TH 49
SEC. . 18 . TWP . 029 . R 22W
CITY . MAPLEWOOD . CITY . RAMSEY .

BRIDGE NO. 62559

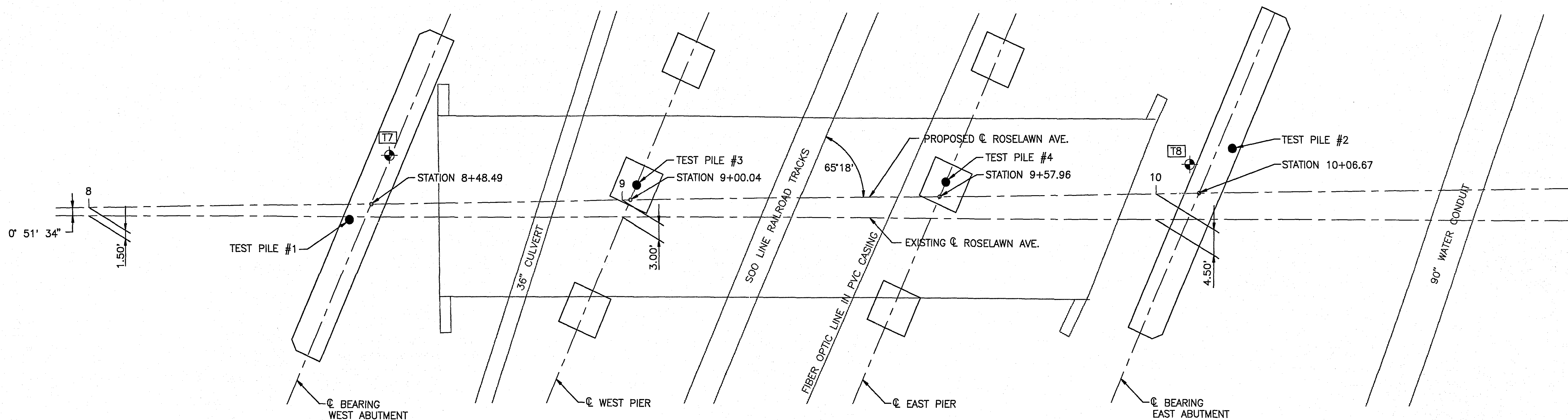
11-4-91 23-119

Area No.

Job No.

State Proj. No. 62-626-03

Sheet No. 27 of 28 Sheets



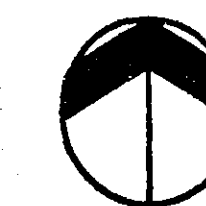
BVC STA = 7+05
BVC ELEV = 882.88

PVI STA = 9+00
PVI ELEV = 892.34

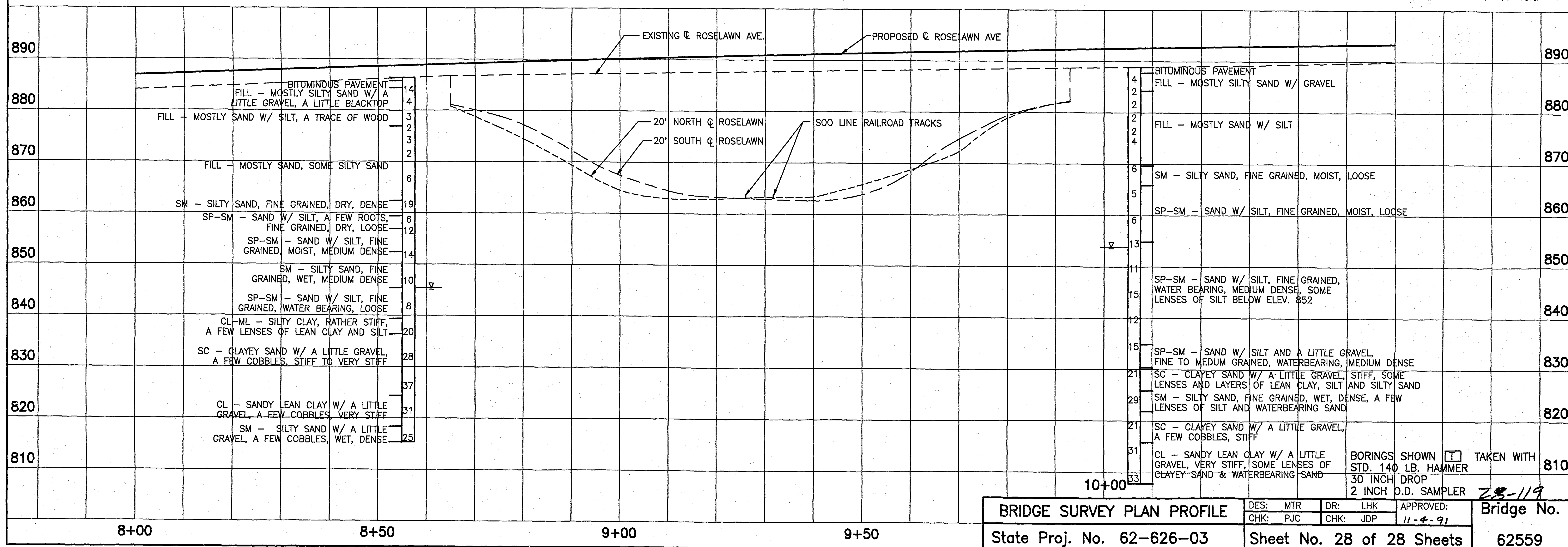
G1 = +4.85%
G2 = +0.74%
L = 390'

GRADING PORTION
BY SEPARATE CONTRACT
LET BY RAMSEY COUNTY

EVC STA = 10+95
EVC ELEV = 893.78



Scale: 1"=10' Horz.
1"=10' Vert.



BRIDGE SURVEY PLAN PROFILE

State Proj. No. 62-626-03

DES: MTR
CHK: PJC

DR: LHK
CHK: JDP

APPROVED: 11-4-91

Bridge No. 62559

Sheet No. 28 of 28 Sheets

62559