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\* SHT. 22 IS DELETED

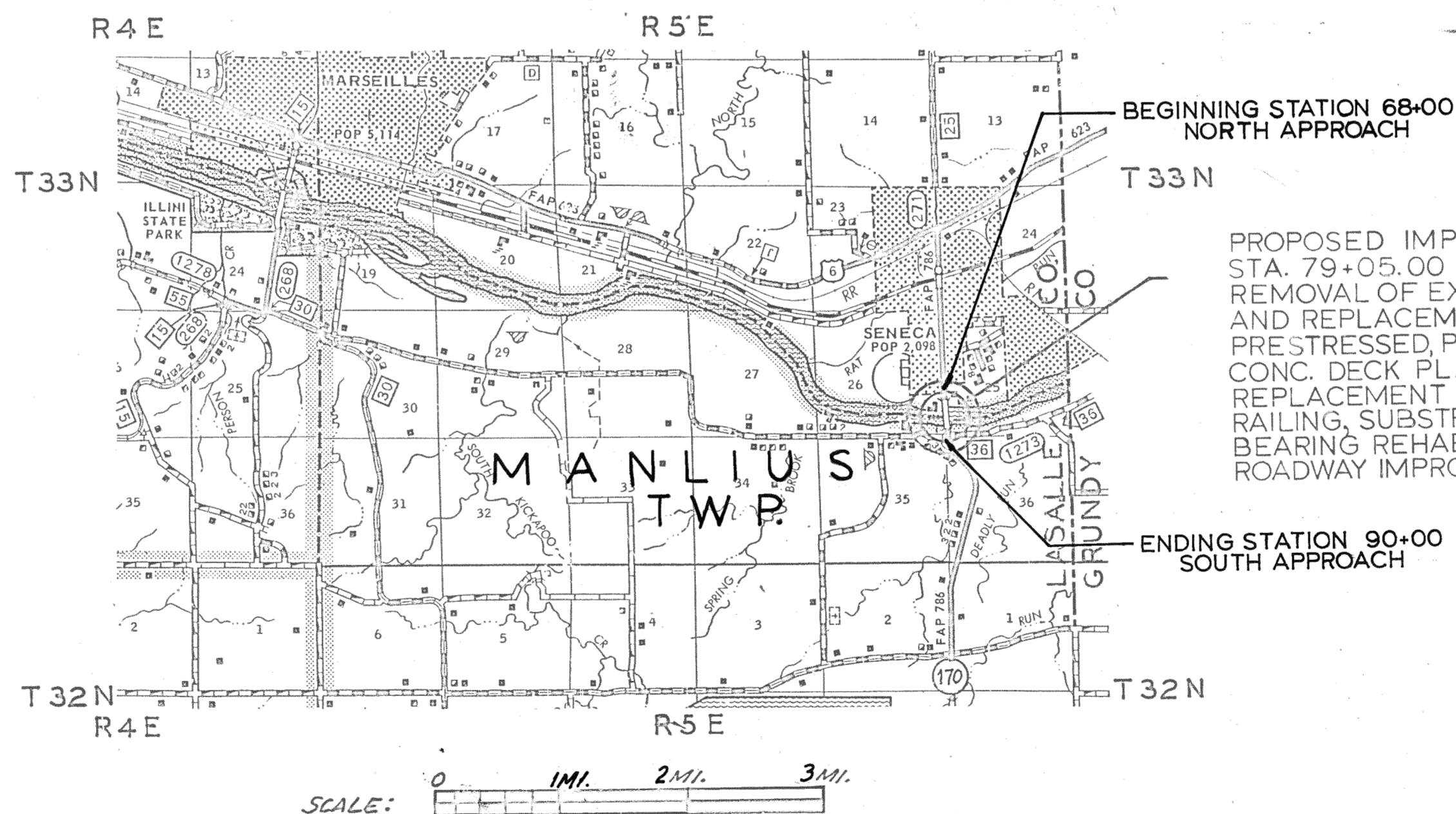
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

F. A. 786 (ILL.170)  
SECTION 109 B-D  
PROJECT BHF-786(1)  
LASALLE COUNTY

C-93-082-85



PROPOSED IMPROVEMENT STA. 79+05.00 INCLUDES:  
REMOVAL OF EXIST. CONC. DECK AND REPLACEMENT WITH PRECAST PRESTRESSED, POST-TENSIONED, CONC. DECK PLANKS, REMOVAL AND REPLACEMENT OF THE EXISTING RAILING, SUBSTRUCTURE REPAIRS, BEARING REHABILITATION, AND APPROACH ROADWAY IMPROVEMENTS.

GROSS LENGTH OF IMPROVEMENT = 2200 FT. = .416 MILES  
NET LENGTH OF IMPROVEMENT = 2200 FT. = .416 MILES

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 786	109B-D	LASALLE	68	1
FHWA REG 4	ILLINOIS	PROJECT BHF-786(1)		

P-93-032-78



LOCATION OF SECTION INDICATED THUS:—  
DESIGN DESIGNATION  
431(86) AREA SERVICE 0.273(B-20)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 12/19 19 85

EXAMINED P. H. Blum DISTRICT ENGINEER

PASSED [Signature] PLANS AND CONTRACTS

APPROVED [Signature] ENGINEER OF DESIGN

11-3 19 86

[Signature] DIRECTOR, DIVISION OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED \_\_\_\_\_

DIVISION ADMINISTRATOR DATE \_\_\_\_\_

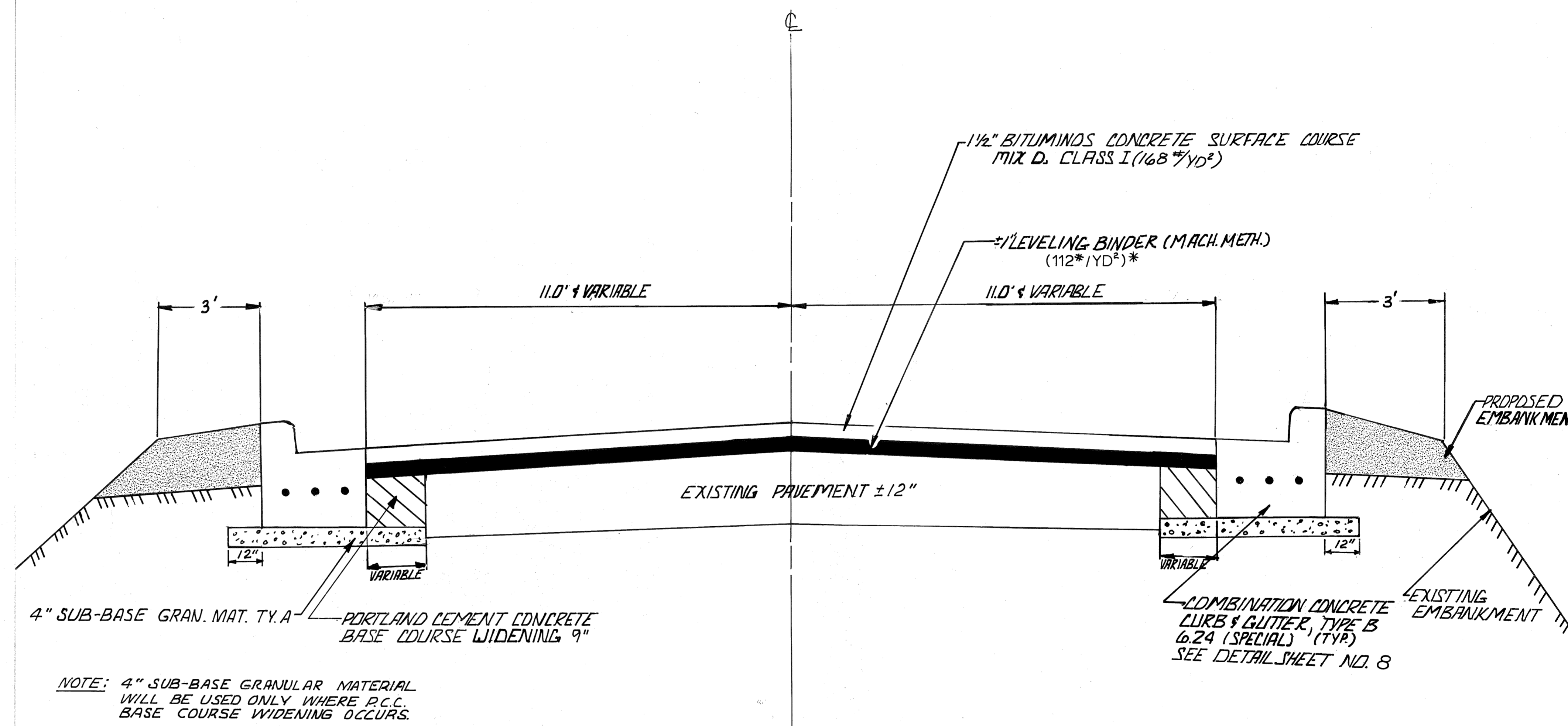
CONTRACT NO. 40561

PROJECT SUPERVISOR: ANDY ELIAS  
SQUAD LEADER: MARTIN HERMAN

UTILITY LOCATIONS: JULIE (TELEPHONE NUMBER 1-800-892-0123)

REVISED SET 3-19-86

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 786	109 BD	LASALLE	68	2
FINA RES. #		ILLINOIS FED. AID PROJ.		



### TYPICAL SECTION APPROACHES

Station 68+00 to Station 72+20.72  
Station 87+31.03 to Station 90+00

\* 46 TONS OF LEVELING BINDER (MACHINE METHOD)  
HAS BEEN INCLUDED IN THE QUANTITY FOR CROWN  
CORRECTION-NORTH APPROACH ONLY.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
F.A.P. 786	109 BD	LASALLE	68	3
F.H.W.A. REG. 4 ILLINOIS PROJECT				

### GENERAL NOTES

THE THICKNESS OF BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

SEEDING SHALL BE PLACED ON ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS. NUTRIENTS, MULCH, AND ASPHALT, IF REQUIRED, SHALL BE APPLIED TO ALL SEEDING AREAS. THE SEEDING SHALL BE DONE ACCORDING TO ARTICLES 642 AND 643 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

EXCEPT AS NOTED IN THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

ALL DITCHES HAVING SLOPES BETWEEN 2.0 PERCENT AND 3.0 PERCENT SHALL HAVE EXCELSIOR BLANKET AS SHOWN IN THE DETAILS UNLESS OTHER DITCH LININGS ARE GIVEN IN THE PLANS.

THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

FOR ALL TEMPORARY PAVEMENT MARKINGS ON FINAL SURFACES (I.E., MAINLINE PAVEMENT), ONLY TEMPORARY PAVEMENT MARKING TAPE SHALL BE USED.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

PROTECTIVE COAT SHALL BE APPLIED TO THE SURFACES OF NEW CONCRETE ACCORDING TO ARTICLES 4081.23 AND/OR 503.12 OF THE STANDARD SPECIFICATIONS.

FOR THE PURPOSE OF THIS CONTRACT, FALL SEEDING IS DEFINED AS THAT PERFORMED BETWEEN JUNE 1ST AND DECEMBER 31ST. SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. AREAS TO BE SEEDED SHALL BE DETERMINED BY THE ENGINEER.

ALL SAW CUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE MINIMUM SAW CUT DEPTH IN THE PAVEMENT SHALL BE 1.5 INCHES UNLESS OTHERWISE SPECIFIED IN A DETAIL IN THE PLANS. DO NOT INCLUDE MULCH OR EMULSIFIED ASPHALT IN EXCELSIOR BLANKET AREAS.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED. THE VEGETATION SUSTAINING SOIL REQUIRED SHALL NOT BE PAID SEPARATELY BUT SHALL BE INCIDENTAL TO BORROW EXCAVATION.

THE ENGINEER SHALL DETERMINE THE HEIGHT OF THE STEEL PLATE BEAM GUARDRAIL. NO S.P.B.G.R. ELEMENT SHALL BE BUILT BELOW THE MINIMUM HEIGHTS SHOWN IN STANDARD 2230. EXCEPT AT TERMINAL SECTIONS (TYPE 1 OR TYPE 1A), THE S.P.B.G.R. SHALL BE ALIGNED WITH NO HORIZONTAL OR VERTICAL CURVATURE ALLOWED EXCEPT AS DIRECTED BY THE ENGINEER.

THE EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION WILL BE REMOVED OR RELOCATED AS DIRECTED BY THE ENGINEER. AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL REPLACE THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO COMPENSATION WILL BE ALLOWED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.26 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. THE FOLLOWING UTILITIES LOCATED WITHIN THE LIMITS OF THIS IMPROVEMENT ARE MEMBERS OF JULIE:

ILLINOIS BELL TELEPHONE COMPANY  
SENECA CABLE COMPANY  
COMMONWEALTH EDISON

A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED FOR NONEMERGENCY WORK.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ON EXISTING PAVEMENT WHICH MAY BE SUPERELEVATED, THE NEW BITUMINOUS PAVEMENT SHALL BE BUILT WITH THE SAME SUPERELEVATION UNLESS NEW SUPERELEVATION RATES ARE GIVEN IN THE PLANS.

#### RATES OF APPLICATION

GRANULAR MATERIALS	2.05	TONS/CU YD
BITUMINOUS MATERIALS (PRIME COAT) (ON GRAVEL)	0.375	GALLON/SQ YD
BITUMINOUS MATERIALS (CLASS I PRIME COAT ON RIGID SURFACE)	0.08	GALLONS/SQ YD
AGGREGATE (PRIME COAT)	0.0015	TONS/SQ YD
MULCH	2.0	TONS/ACRE
LEVEL BINDER (HAND METHOD)	0.003	T/SQ YD
BITUMINOUS BINDER AND SURFACE COURSE	112.0	LBS/SQ YD/IN
PAVEMENT MARKING TAPE	4.0	FT/40'/LIFT
NITROGEN FERTILIZER NUTRIENTS	80.0	LBS/ACRE
PHOSPHORUS FERTILIZER NUTRIENTS	160.0	LBS/ACRE
POTASSIUM FERTILIZER NUTRIENTS	80.0	LBS/ACRE
EMULSIFIED ASPHALT	100.0	GALLONS/TON MULCH

#### ESTIMATED QUANTITIES

RIPRAP	50 CU YDS
PERM. SURVEY MARKERS	3.0 EACH
GRADING & SHAPING DITCHES	200 LIN FT
EXCELSIOR BLANKET	294 SQ YDS
SEEDING TYPE 1A	0.2 ACRES

State of Illinois  
Department of Transportation  
District Three

Prepared By: Benny L. Hynd  
M.J.H. District Engineer of Design

Date: 12-19-85

Examined By: Claude Reishuy  
District Engineer of Construction  
P. M. Gustine  
District Engineer of Maintenance

District Engineer of Materials  
Edmund R. Williams  
District Engineer of Traffic

John Biggott  
District Engineer of Planning

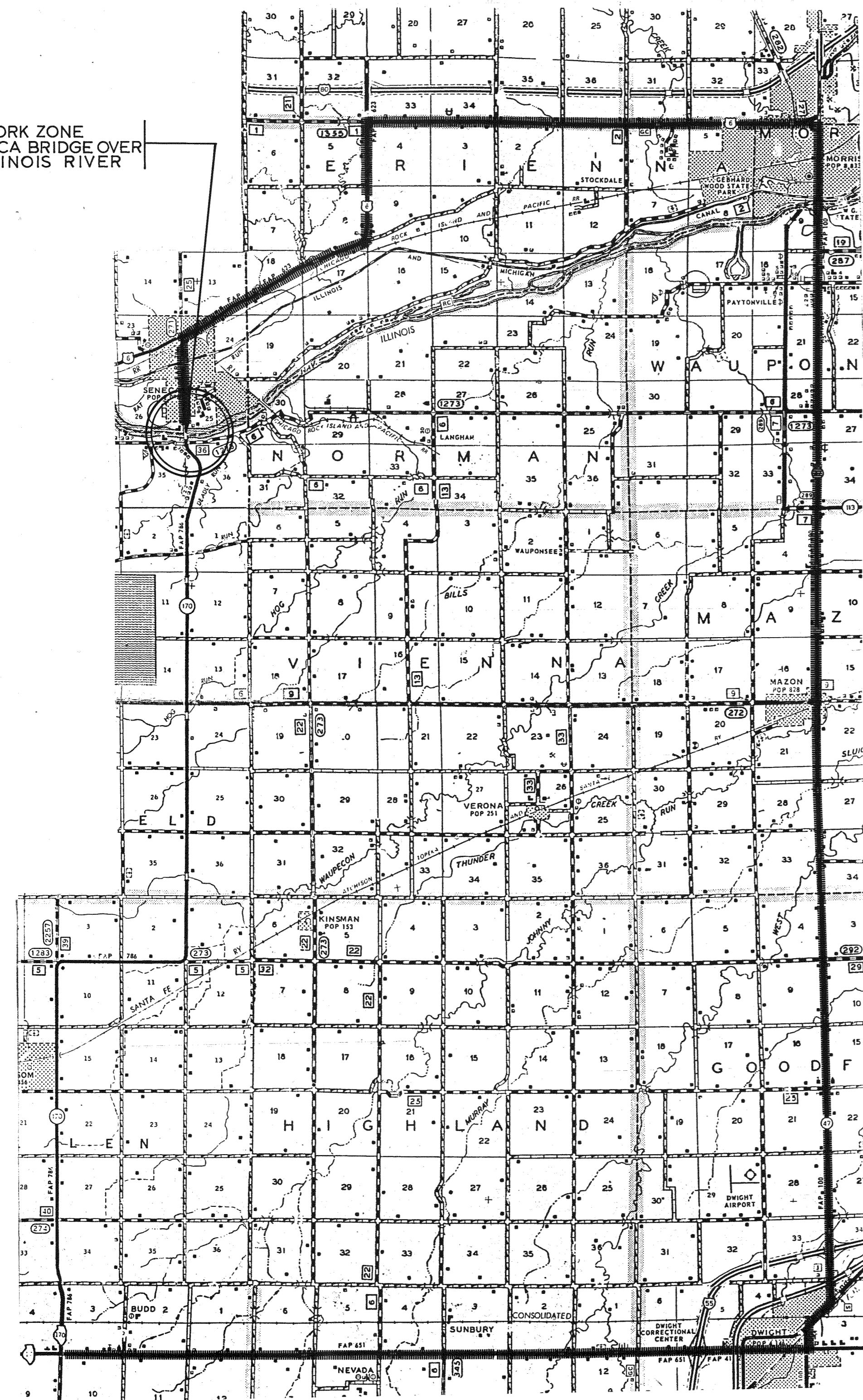
SUMMARY OF QUANTITIES					
CODE NO.	ITEM	UNIT	TOTAL	X032-2A	
				APPROACHES	SUPER STRUCTURE
202005	EARTH EXCAVATION (WIDENING)	CU YD	128	128	
202008	GRADING AND SHAPING DITCHES	LIN FT	200	200	
204001	BORROW EXCAVATION	CU YD	88	88	
210001	TRENCH BACKFILL	CU YD	11	11	
213001	SUB-BASE GRANULAR MATERIAL, TYPE A	TON	85	85	
215012	AGGREGATE SHOULDERS, TYPE B	TON	60	60	
219006	BITUMINOUS SHOULDERS 8"	SQ YD	56	56	
305004	PORTLAND CEMENT CONCRETE BASE COURSE MIXING 9"	SQ YD	296	296	
406001	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	454	454	
406003	AGGREGATE (PRIME COAT)	TON	9	9	
406005	LEVELING BINDER (MACHINE METHOD)	TON	348	348	
406006	LEVELING BINDER (HAND METHOD)	TON	12	12	
406013	BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I	TON	901	480	321
X40652	STRIP REFLECTIVE CRACK CONTROL TREATMENT	LIN FT	725	725	
408013	PROTECTIVE COAT	SQ YD	293	293	
501024	CONCRETE REMOVAL	CU YD	21.9		21.9
501041	BRIDGE HAND RAIL REMOVAL	LIN FT	1,940	1,940	
501048	REMOVAL OF EXISTING CONCRETE DECK	L.SUM	1.0	1.0	
502001	STRUCTURE EXCAVATION	CU YD	46		46
503001	FLOOR DRAINS	EACH	130	130	
X50312	PREFORMED JOINT SEAL 1 3/4"	LIN FT	389	389	
X50316	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	10	10	
504003	CLASS X CONCRETE	CU YD	22.4	0.6	21.8
505001	PRECAST CONCRETE BRIDGE SLAB	SQ FT	31,579	31,579	
507001	FURNISH AND ERECT STRUCTURAL STEEL	L.SUM	1.0	1.0	
507005	STUD SHEAR CONNECTORS	EACH	1,330	1,330	
X50719	STRUCTURAL STEEL REPAIR	POUND	48,640	48,640	
XX1374	STEEL RAILING, TYPE S1 (SPECIAL)	LIN FT	3,021	3,021	
509003	CLEANING AND PAINTING STEEL BRIDGE	L.SUM	1.0	1.0	
512001	REINFORCEMENT BARS	POUND	5,000		5,000
512002	REINFORCEMENT BARS, EPOXY COATED	POUND	15,900	15,900	
514001	NAME PLATES	EACH	1.0	1.0	
601001	STONE RIPRAP	SQ YD	50	50	
603007	STORM SEWERS, TYPE 1 15"	LIN FT	98	98	
612184	MANHOLE, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	
612389	INLETS, TYPE A, SPECIAL, TYPE 1 FRAME, OPEN LID	EACH	1	1	
612391	INLETS, TYPE A, SPECIAL, TYPE 3 FRAME AND GRATE	EACH	4	4	
612652	INLETS TO BE REMOVED	EACH	4	4	
616034	GUTTER OUTLET (SPECIAL)	EACH	4	4	
616054	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (SPECIAL)	LIN FT	706	706	
617001	PAVEMENT REMOVAL	SQ YD	45	45	
617004	GUTTER REMOVAL	LIN FT	135	135	
617010	BITUMINOUS CONCRETE SURFACE REMOVAL	SQ YD	629	629	
X62025	PAVEMENT REMOVAL AND PORTLAND CEMENT CONCRETE REPLACEMENT, TYPE I 12"	SQ YD	20		20
X62026	PAVEMENT REMOVAL AND PORTLAND CEMENT CONCRETE REPLACEMENT, TYPE II 12"	SQ YD	16		
X62837	STEEL PLATE BEAM GUARD RAIL, TYPE A	LIN FT	237.5	237.5	
X62838	STEEL PLATE BEAM GUARD RAIL, TYPE B	LIN FT	87.5	87.5	
X62835	TRAFFIC BARRIER TERMINAL, TYPE 1A	EACH	4	4	
X62843	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4	4	
633003	STEEL PLATE BEAM GUARD RAIL REMOVAL	LIN FT	528	528	
X64206	SEEDING, CLASS 1A	ACRE	0.2	0.2	
642004	NITROGEN FERTILIZER NUTRIENT	POUND	16	16	
642005	PHOSPHORUS FERTILIZER NUTRIENT	POUND	32	32	
642006	POTASSIUM FERTILIZER NUTRIENT	POUND	16	16	
X64307	MULCH, METHOD 1	TON	0.4	0.4	
643004	EXCELSIOR BLANKET	SQ YD	294	294	
646004	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	18	18	
X64701	TEMPORARY PAVEMENT MARKING	LIN FT	1,563	657	906
L06472	NAVIGATION LIGHTING	L.SUM	1	1	

SUMMARY OF QUANTITIES					
CODE NO.	ITEM	UNIT	TOTAL	X032-2A	
				APPROACHES	SUPER STRUCTURE
X64852	TRAFFIC CONTROL AND PROTECTION, STANDARD 2304	L.SUM	1.0		1.0
648005	TRAFFIC CONTROL AND PROTECTION, STANDARD 2311	L.SUM	1.0		1.0
650001	MOBILIZATION	L.SUM	1.0	0.2	0.7
210039	BRIDGE SEAT SEALER	L.SUM	1.0		1.0
**XZ1361	EPOXY CRACK SEALING	LIN FT	257		257
XZ1175	EPOXY MORTAR REPAIR	CU FT	34.6		34.6
Z10259	JACKING AND CRIBBING	EACH	8		8
Z10279	NEOPRENE EXPANSION JOINT 2"	LIN FT	69		69
Z10280	NEOPRENE EXPANSION JOINT 2 1/2"	LIN FT	23		23
Z10281	NEOPRENE EXPANSION JOINT 4"	LIN FT	46		46
Z10300	PERMANENT SURVEY MARKERS, TYPE 1	EACH	3	3	
**Z10375	REPAIR CONCRETE STRUCTURES	SQ FT	603		603
XZ1333	TEMPORARY SUPPORT SYSTEM	EACH	142		142
Z10530	WATERPROOFING MEMBRANE SYSTEM	SQ YD	3,800		3,800
T50102	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	LIN FT	4,539	1,519	3,020
T50104	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	LIN FT	3,959	939	3,020
T50107	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	LIN FT	34	34	
X07432	BIDIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	62		62
X06439	PRISMATIC CURB REFLECTOR	EACH	53	53	
XZ1516	GUARD RAIL REFLECTORS	EACH	12	12	
660301	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 12	LIN FT	1,248	240	1,008
660304	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	LIN FT	3,024		3,024
660502	BARE COPPER WIRE, 1/C NO. 6	LIN FT	1,770	286	1,484
660604	BARE COPPER WIRE, 1/C NO. 10	LIN FT	624	120	504
661003	UNIT DUCT, 2-600 VXL #6 1" POLYETHYLENE	LIN FT	266	266	
662001	TRENCH AND BACKFILL FOR ROADWAY LIGHTING	LIN FT	226	226	
663042	CONDUIT ATTACHED TO STRUCTURE, 3/4" DIA., GALVANIZED STEEL	LIN FT	279		279
663046	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	LIN FT	1,512		1,512
664002	CONTROL INSTALLATION, TYPE CB RCS 60-240	EACH	1		1
665001	LIGHT POLE FOUNDATION	EACH	4	4	
667121	LIGHT POLE, ALUMINUM, 30 FT, MH, TENON MOUNT	EACH	2	2	
667131	LIGHT POLE, ALUMINUM, 30 FT, MH, TENON MOUNT - TWIN	EACH	2	2	
L02208	POLE FOUNDATION, SPECIAL	EACH	9		9
X09863	COUPLER ASSEMBLY	EACH	2,120		2,120
X09942	POCKET FILLER	CU YD	33.6		33.6
X09864	FILLET GROUT	CU YD	12.8		12.8
X09865	REINFORCED NEOPRENE EXPANSION JOINT TREATMENT	LIN FT	23		23
X07667	ELASTOMERIC BEARING ASSEMBLY, TYPE I (MODIFIED)	EACH	110		110
X09867	ELASTOMERIC BEARING ASSEMBLY, TYPE II (SPECIAL)	EACH	8		8
X09866	CURB AND GUTTER OUTLET (SPECIAL)	CU YD	10.3	10.3	
**X09868	CLEAN EXISTING INLETS	L.SUM	1	1	
X66725	LIGHT POLE, ALUMINUM 25 FT, MH, TENON MOUNT	EACH	9		9
L05850	LUMINAIRE, HIGH PRESSURE SODIUM, UNDERPASS TYPE, 150 WATT	EACH	29	15	14
L05898	LUMINAIRE BRIDGE MOUNTING HARDWARE	EACH	14		14
X09943	TEMPORARY STEEL RAMPS	L.SUM	1		1
X04769	HIGH STRENGTH BOLTS (3/4" $\phi$ x 10")	EACH	12,150		12,150
504009	CLASS X CONCRETE (SPECIAL)	CU YD	63.6		63.6
Z10527	TRAINEE'S	HOUR	2,000		

\* CONSTRUCTION CODE - Y080  
 ( ) SPECIALTY ITEMS  
 \*\* NON-PARTICIPATING

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 106	109BD	IASALLE	68	5
F.H.W.A. REG. 4	ILLINOIS	PROJECT		

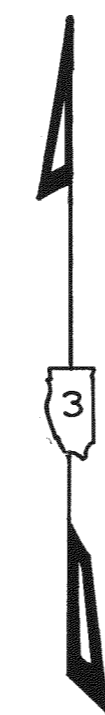
WORK ZONE  
SENECA BRIDGE OVER  
THE ILLINOIS RIVER



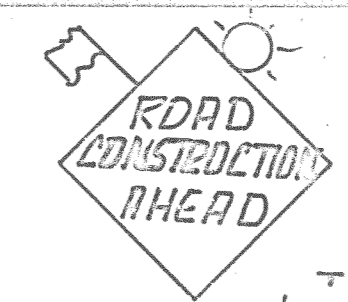
**NIGHTTIME CLOSURE DETOUR**

FOR INFORMATION ONLY

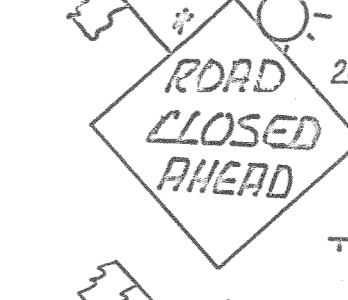
DETOUR ROUTE



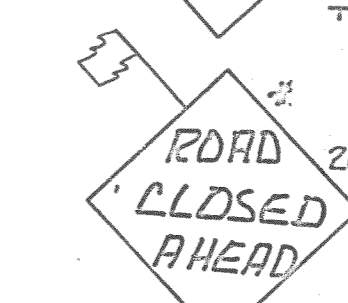
L24-14-4B



L24-13-4B



L24-12-4B



TYPE III BARRICADES (SEE STD. 229B)  
W/ ROAD CLOSED SIGN AND 4  
FLASHERS

STRUCTURE BEGINS

ILLINOIS

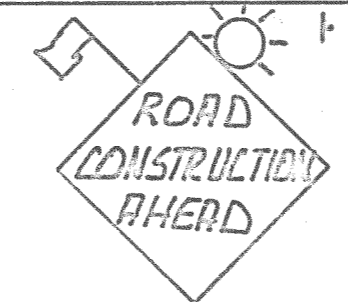
RIVER

STRUCTURE ENDS

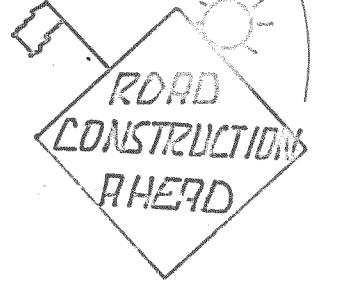
TYPE III BARRICADES (SEE STD. 229B)  
W/ ROAD CLOSED SIGN AND 4 FLASHERS

CH-36

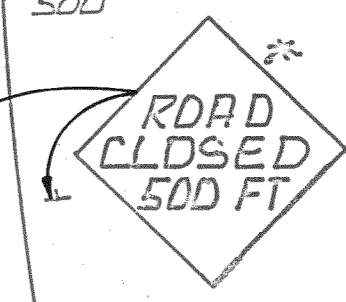
CH-36



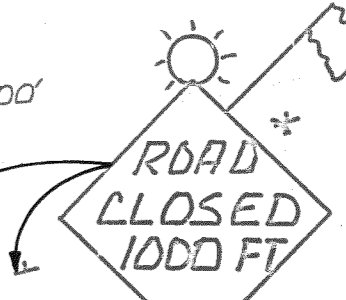
L20-11-4B



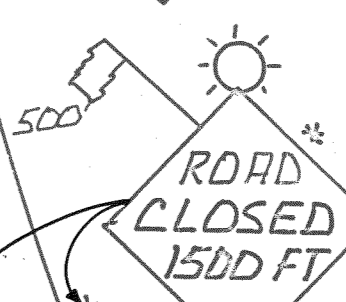
L20-11-4B



L24-12-4B



L24-13-4B



L24-14-4B

**NOTES**

- ALL SIGNS WILL BE POST MOUNTED
- ALL OF THE ABOVE WILL BE ERECTED AND MAINTAINED BY THE CONTRACTOR
- DURING NON-WORKING HOURS THOSE SIGNS INDICATING ROAD CLOSED ARE TO BE COVERED AND THE TYPE III BARRICADES REMOVED FROM THE ROADWAY
- THE USE OF STANDARD 2311 WILL BE REQUIRED WHEN THE DIFFERENCE IN ELEVATION BETWEEN THE E.O.P AND THE SHOULDER IS GREATER THAN 3"

INDICATES 18"x18" ORANGE FLAG  
 INDICATES FLASHING LIGHT

SIGNING DETAIL

	LENGTH FT.	WIDTH FT.	AREA SQ. YD.	BITUMINOUS MATERIALS (PRIME COAT)		AGGREGATE (PRIME COAT)	LEVELING CINDER MACH. METH.	LEVELING CINDER HAND METH.	BIT. CONCRETE SURFACE COURSE MIX. D, CL. I	PAVEMENT IMBING TAPE 10 FT. PER STATION PER LIFT	AGGREGATE SHOULDER TYPE "B"		
				0.08 GALLON PER SQ. YD. (ON RIGID SURFACE) GALLON	0.375 GALLON PER SQ. YD. (ON GRAVEL) GALLON	0.0015 TON PER SQ. YD. TON	112 LBS. PER SQ. YD. PER INCH TON	0.003 TON PER SQ. YD. TON				112 LBS. PER SQ. YD. PER INCH TON	10 FT. PER STATION PER LIFT LIN. FT.
<b>NORTH APPROACH</b>													
STA. 68+00 TO STA. 72+21	421	VAR.	1200			96	2	113	4	101	126	5	
<b>SIDE ROAD STA. 69+85 LT.</b>													
±1100 VAR. 2300						184	4	129	7	193	330	50	
<b>STRUCTURE OVER ILLINOIS RIVER</b>													
STA. 72+21 TO STA. 87+31	±1510	22.82	3829							321	906*		
<b>SOUTH APPROACH AND INTERSECTION</b>													
STA. 87+31 TO STA. 90+00	269	VAR.	1900			152	3	106	6	160	201	5	
<b>ENTRANCES</b>													
(1 RIGID, 2 GRAVEL)						18	4			26			
<b>TOTALS</b>													
						450	4	9	348	17	801	1563	60

\* DOUBLE YELLOW ACROSS STRUCTURE

PAVEMENT MARKING SCHEDULE				
LOCATION	DESCRIPTION	THERMOPLASTIC MARKING LINE 4" LIN. FT.	THERMOPLASTIC MARKING LINE 6" LIN. FT.	THERMOPLASTIC MARKING LINE 24" LIN. FT.
STA. 72+20 TO 90+00	NB YELLOW (N.P.Z.)		1,780.0	
STA. 68+00 TO 72+20	YELLOW (CENTERLINE)		105.0	
STA. 68+00 TO 87+31	SB YELLOW (N.P.Z.)		1,931.0	
STA. 87+31 TO 90+00	YELLOW (CENTERLINE)		68.0	
@ SIDE ROADS			75.0	
STA. 68+00 TO 69+45	LT WHITE (EDGE LINE)	145.0		
STA. 70+15 TO 87+31	LT WHITE (EDGE LINE)	1,716.0		
STA. 87+31 TO 88+37 N.E. QUAD - AROUND RADIUS	LT WHITE (EDGE LINE)	210.0		
STA. 88+37 TO 90+00 S.E. QUAD - AROUND RADIUS	LT WHITE (EDGE LINE)	265.0		
STA. 87+31 TO 88+37 N.W. QUAD - AROUND RADIUS	RT WHITE (EDGE LINE)	170.0		
STA. 88+37 TO 90+00 S.W. QUAD - AROUND RADIUS	RT WHITE (EDGE LINE)	270.0		
STA. 68+00 TO 68+15	RT WHITE (EDGE LINE)	15.0		
STA. 69+83 TO 87+31	RT WHITE (EDGE LINE)	1,748.0		
DUPONT ROAD	24" STOP BAR (WHITE)			17.0
CH 36	24" STOP BAR (WHITE)			17.0
TOTALS		4,539.0	3,959.0	34.0

INLET & GUTTER REMOVAL SCHEDULE		
LOCATION	INLET REMOVAL EACH	GUTTER REMOVAL LIN. FT.
STA. 71+95 TO 72+20 LT		25.0
STA. 71+95 TO 72+20 RT		25.0
STA. 71+96 LT	1.0	
STA. 71+96 RT	1.0	
STA. 87+56 LT	1.0	
STA. 87+56 RT	1.0	
STA. 87+31 TO 87+56 LT		25.0
STA. 87+31 TO 87+56 RT		25.0
STA. 88+77 TO 89+12 LT		35.0
TOTALS	4.0	135.0

LOCATION	CONC CURB & GUTTER TY-B 5.24 (SPECIAL) LIN. FT.	CURB & GUTTER OUTLET (SPECIAL) CU. YD.	GUTTER OUTLET (SPECIAL) EACH
NORTH APPROACH EAST SIDE			
STA. 70+20 TO STA. 72+20	170	3.42	
WEST SIDE			
STA. 70+20 TO STA. 72+20	170	3.42	
SOUTH APPROACH NW QUAD			
STA. 87+31 TO STA. 88+10 RT	116		1
NE QUAD			
STA. 87+31 TO STA. 88+25 LT	106	3.42	
SW QUAD			
STA. 88+35 TO STA. 88+90 RT	54		2
SE QUAD			
STA. 88+48 TO STA. 89+12 LT	90		1
TOTALS	706	10.3	4

EARTHWORK SCHEDULE				
LOCATION	CUT CU. YD.	FILL CU. YD.	BORROW EXCAVATION CU. YD.	REMARKS
NORTH APPROACH STA. 70+00 TO STA. 72+21	31	50	34	
SOUTH APPROACH STA. 87+31 TO STA. 89+25	97	116	54	INCLUDES WORK ON CH-36 AND DUPOND ROAD
TOTAL	128	166	88	

A SHRINKAGE FACTOR OF 1.3 HAS BEEN INCLUDED IN THE BORROW CALCULATIONS

PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 9" SCHEDULE	
LOCATION	AREA
STA. 70+85 TO 72+20 RT	46 YD <sup>2</sup>
STA. 71+40 TO 72+20 LT	15 YD <sup>2</sup>
INTERSECTION RT. 170 & CH 36	
NE QUAD	53 YD <sup>2</sup>
NW QUAD	100 YD <sup>2</sup>
SW QUAD	30 YD <sup>2</sup>
SE QUAD	52 YD <sup>2</sup>
TOTAL	296 YD <sup>2</sup>

PRISMATIC BARRIER & CURB REFLECTOR SCHEDULE			
LOCATION	SPACING	BIDIRECTIONAL BARRIER REFLECTORS EACH	BIDIRECTIONAL CURB REFLECTORS EACH
BRIDGE STRUCTURE	50'	62.0	
SOUTH APP. N.W. QUAD	10'		12.0**
SOUTH APP. N.E. QUAD	10'		11.0**
SOUTH APP. S.W. QUAD	10'		6.0**
SOUTH APP. S.E. QUAD	10'		10.0**
NORTH APPROACH LT	25'		7.0*
NORTH APPROACH RT	25'		7.0*
TOTALS		62.0	53.0

\* 25' CENTERS  
\*\* 10' CENTERS

DRAINAGE TABLE					
LOCATION	STORM SEWER TYPE 1, 15" LIN. FT.	INLET, TYPE A (SPECIAL) EACH	MANHOLE TYPE A, 4' DIA. EACH	INLETS, TYPE A SPECIAL, TY 3 FRAME & GRATE EACH	CLASS X CONCRETE CU. YD.
STA. 70+24 LT		1			
STA. 70+24 TO STA. 70+57 LT	33				
STA. 70+60 LT	12		1	1	
STA. 70+60 RT	16			1	0.2
STA. 70+60 TO STA. 70+67 LT	7				
STA. 88+00 LT	15			1	0.2
STA. 88+00 RT	15			1	0.2
TOTALS	98	1	1	4	0.6

STRIP REFLECTIVE CRACK CONTROL TREATMENT SCHEDULE		
LOCATION	LENGTH LIN. FT.	REMARKS
NORTH APPROACH STA. 70+70 TO 72+20 RT.	150	@ WIDENING JOINT
STA. 71+30 TO 72+20	90	@ WIDENING JOINT
SOUTH APPROACH @ C.H. 36		
NORTHWEST QUAD	130'	@ WIDENING JOINT
SOUTHWEST QUAD	115'	
NORTHEAST QUAD	115'	
SOUTHWEST QUAD	125'	
TOTAL	725 LIN. FT.	

BITUMINOUS CONCRETE SURFACE REMOVAL SCHEDULE	
LOCATION	QUANTITY SQ. YD.
STA. 67+40 TO 68+00	174
STA. 89+40 TO 90+00	174
STA. 7+90 TO 8+50 (DUPONT RD)	147
STA. 11+50 TO 12+10 (DUPONT RD)	134
TOTALS	629

GUARDRAIL REFLECTOR SCHEDULE		
LOCATION	SPACING	QUANTITY EACH
N. APPROACH N.W. QUAD	50'	4.0
N. APPROACH N.E. QUAD	50'	4.0
S. APPROACH S.W. QUAD	100'	2.0
S. APPROACH S.E. QUAD	100'	2.0
TOTALS		12.0

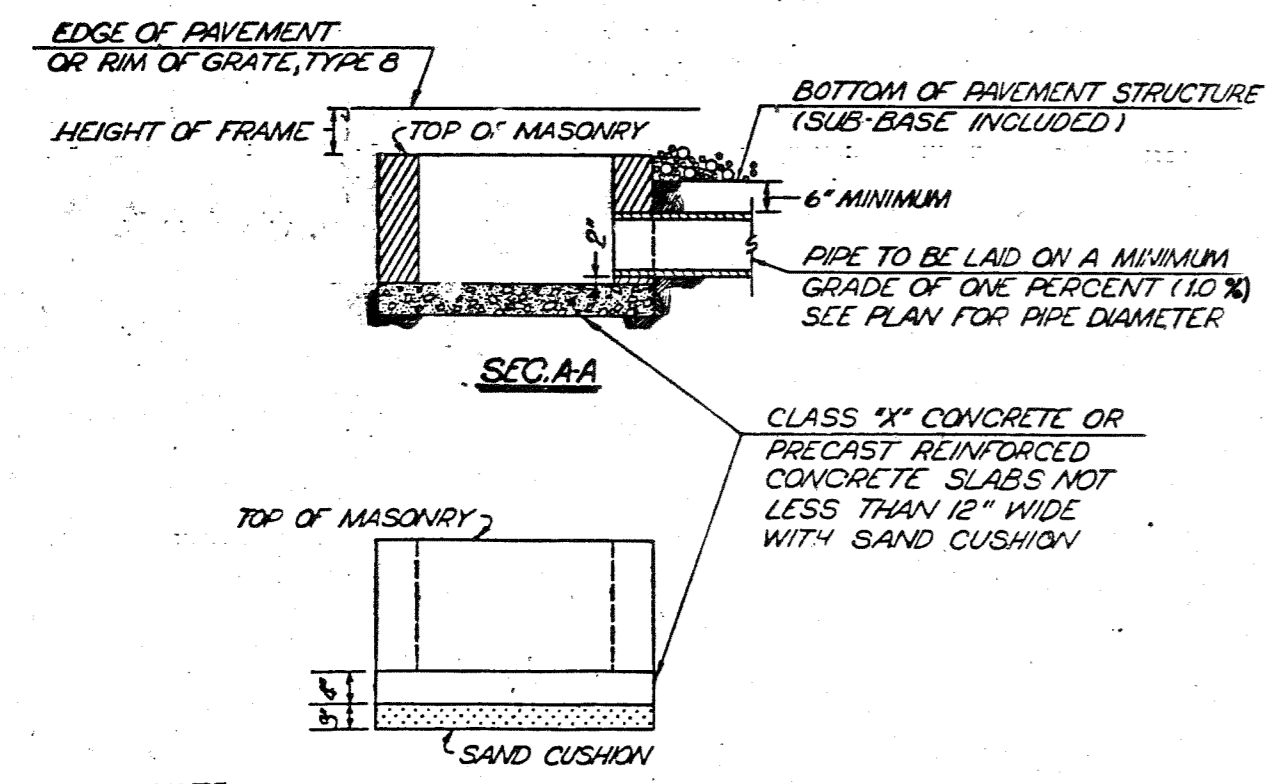
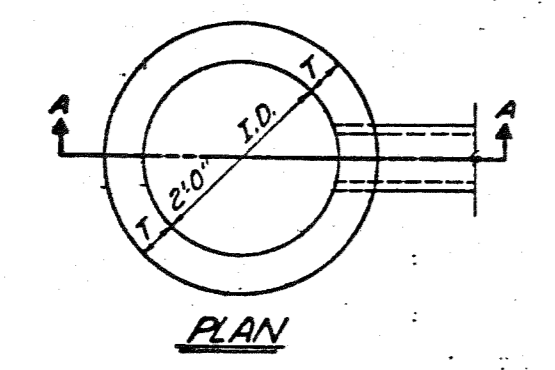
STEEL PLATE BEAM GUARDRAIL SCHEDULE							
STATION	SIDE	SPBGR REMOVAL	SPBGR (TY-A)	SPBGR (TY-B)	BIDIRECTIONAL GUARDRAIL REFLECTORS	TRAF. BAR. TERM (TY-1A)	TRAF. BAR. TERM (TY-5A)
		LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH
NORTH APPROACH							
70+45 TO 72+20	LT	200	112.5	25	4	1	1
70+45 TO 72+20	RT	200	112.5	25	4	1	1
SOUTH APPROACH							
87+31 TO 88+06	LT	64	12.5	25	2	1	1
87+31 TO 87+80	RT	64	12.5	25	2	1	1
TOTAL		528	237.5	87.5	12	4	4

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 786	109 BD	LASALLE	68	8
F.H.W.A., REG. 4 ILLINOIS PROJECT				

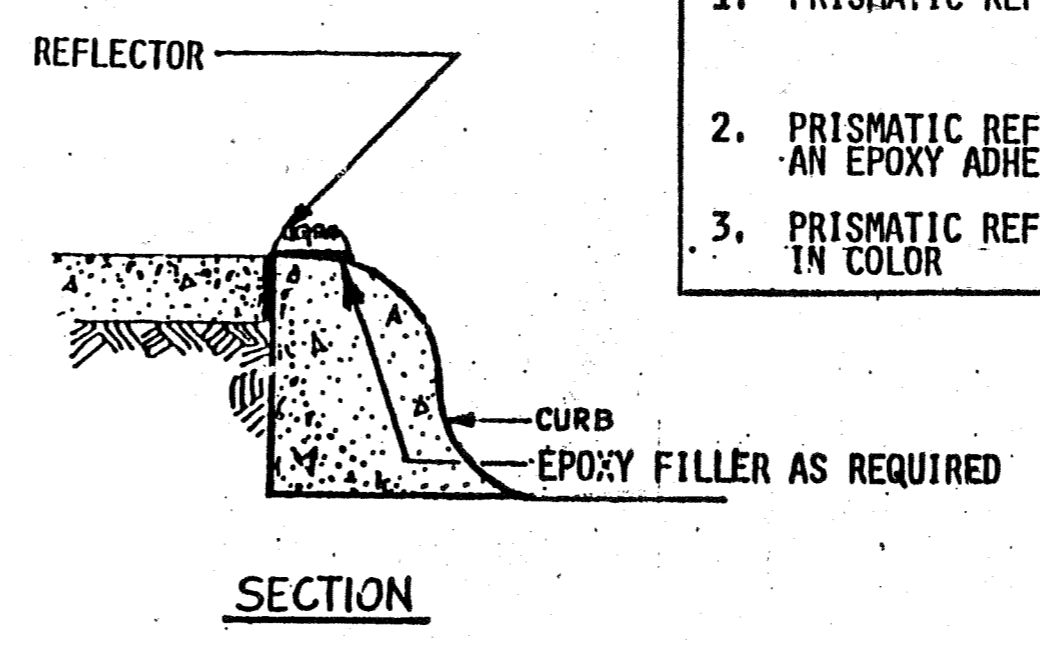
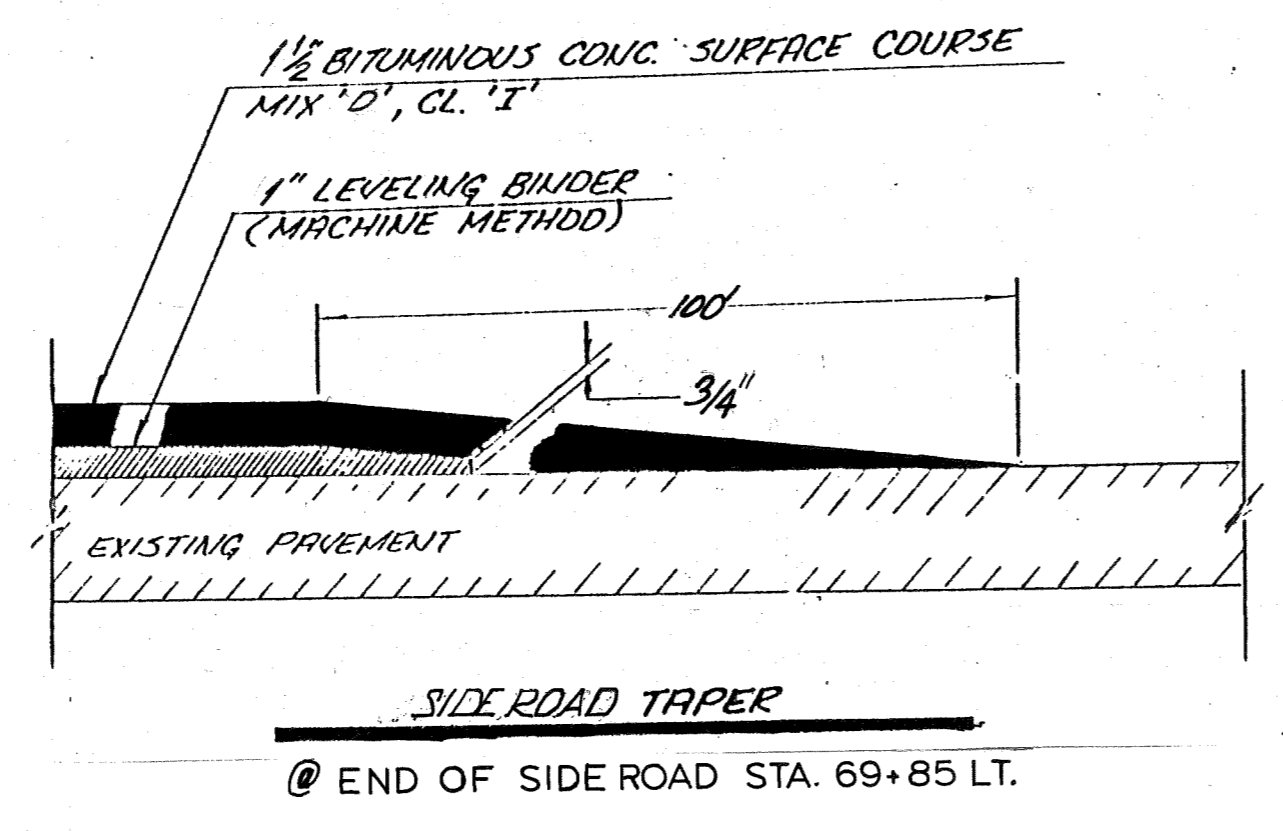
**CONSTRUCTION DRAWING FOR INLET TYPE-A (SPECIAL)**  
 (TO BE USED AT PAVED SECTION WITH CURB AND GUTTER)  
 NOT TO SCALE

TYPE A INLET TO BE PROVIDED WITH TYPE 1 FRAME & OPEN LID OR TYPE 3 FRAME OR TYPE 9 FRAME OR TYPE 5 FRAME OR TYPE 10 FRAME OR TYPE 11 FRAME OR TYPE 6 FRAME OR TYPE 12 FRAME OR TYPE 8 GRATE OR TYPE 13 FRAME

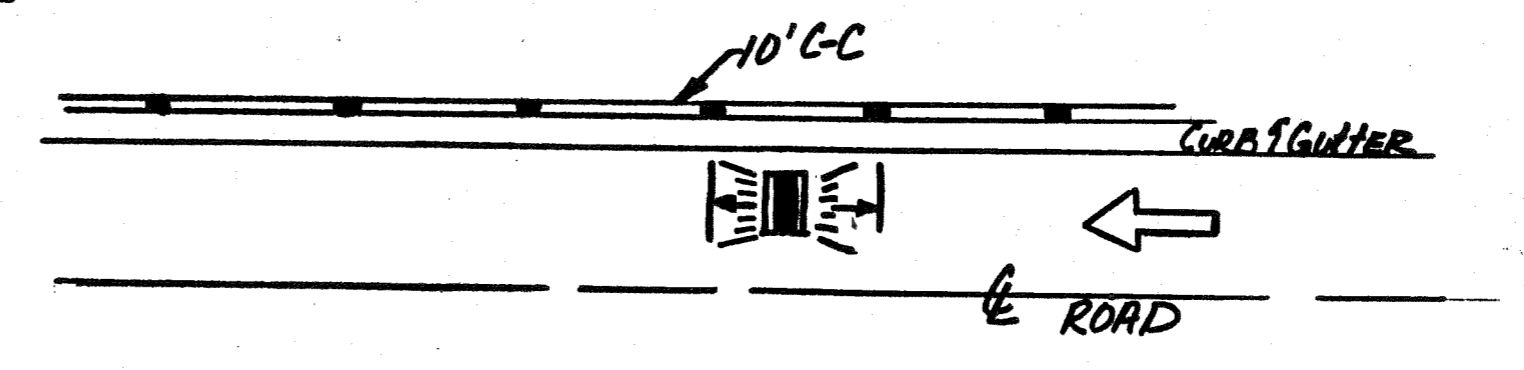
ALTERNATE MATERIALS FOR WALLS	7"
PRECAST REINFORCED CONCRETE RISERS	3"
CONCRETE MASONRY UNITS	5"
MONOLITHIC CONCRETE	6"
BUILDING BRICK, GRADE SW, FROM CLAY OR SHALE	8"
CONCRETE BUILDING BRICK, GRADE A	8"



NOTE:  
 1. THE CONTRACT UNIT PRICE FOR INLETS TYPE "A" (SPECIAL) SHALL INCLUDE THE FRAME AND LID OR GRATE SPECIFIED.  
 2. FURNISHING AND INSTALLING SAND CUSHION IS TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR TYPE "A" (SPECIAL) INLETS.  
 3. THE TYPE "A" INLET SHOULD NOT BE USED AS A RECEIVER OF STORM WATER FROM ANOTHER INLET.

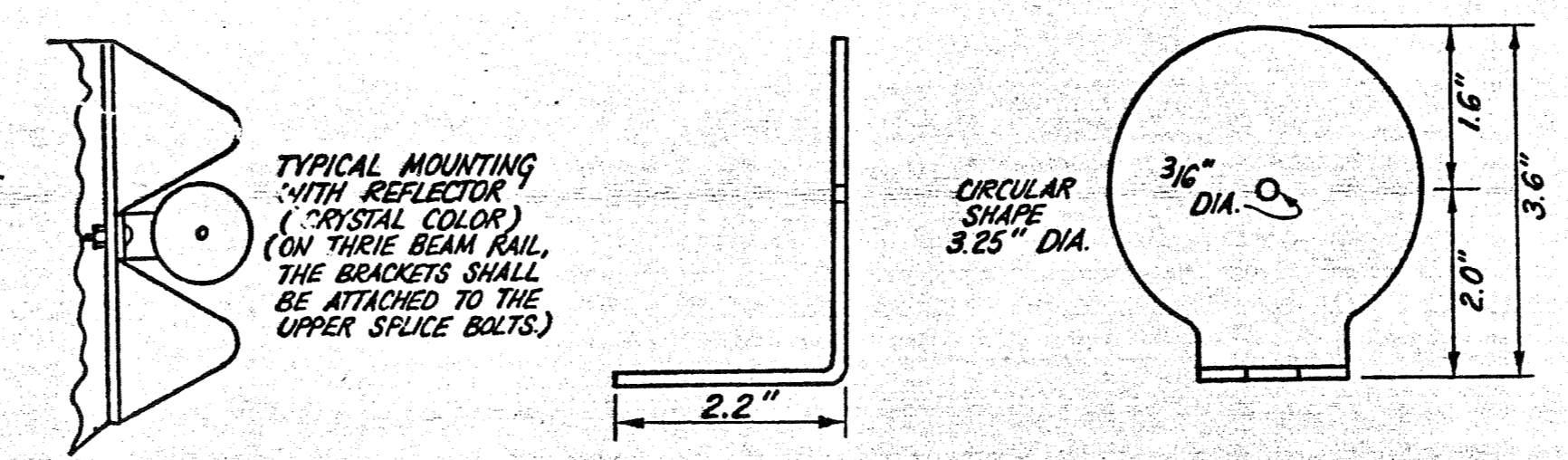


- NOTES:**
1. PRISMATIC REFLECTORS SHALL BE BI-DIRECTIONAL
  2. PRISMATIC REFLECTORS SHALL BE SECURED IN PLACE WITH AN EPOXY ADHESIVE.
  3. PRISMATIC REFLECTORS SHALL BE CRYSTAL IN COLOR

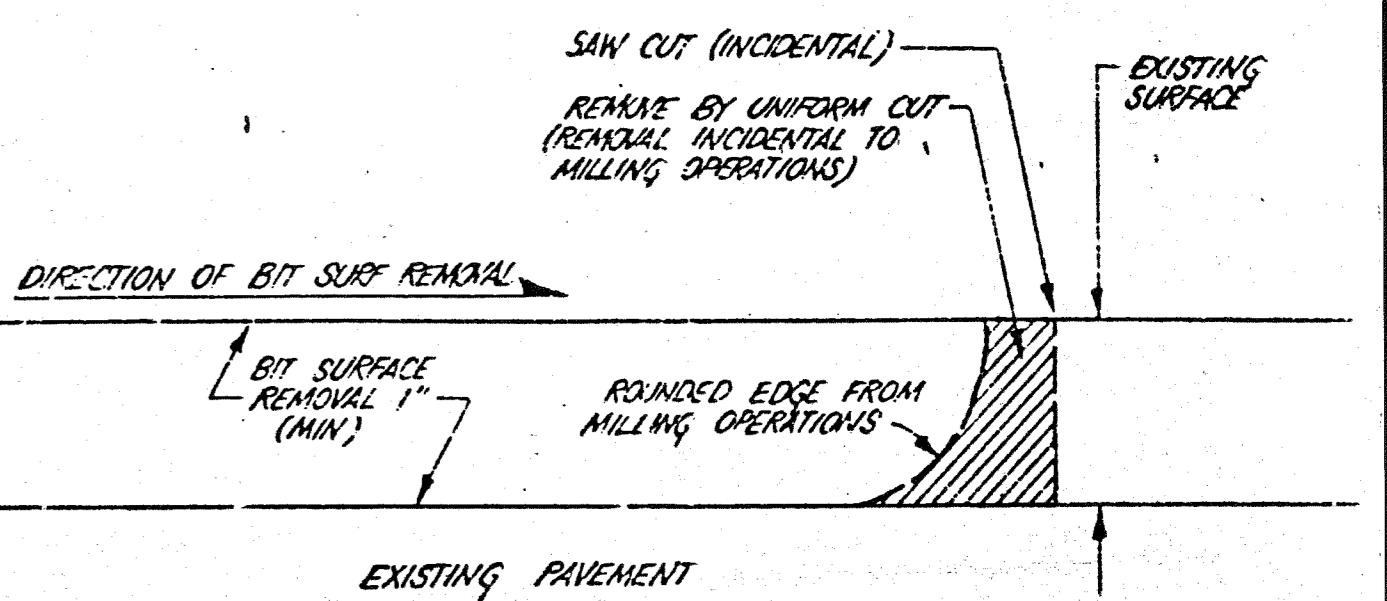
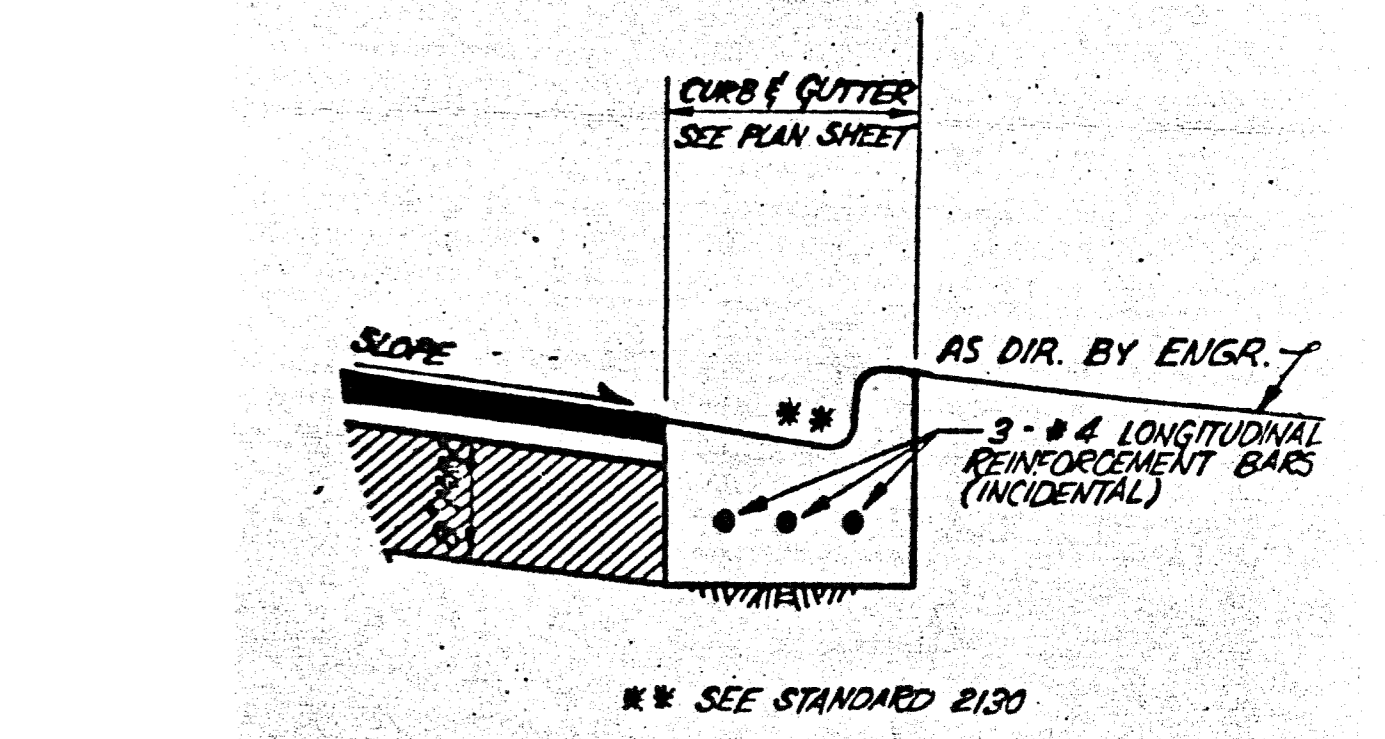


**TYPICAL PLACEMENT OF PRISMATIC REFLECTORS ON CURBS**

- NOTES:**
1. BRACKET IS TO BE FABRICATED FROM 12 GA. (MIN.) STEEL GALVANIZED IN ACCORDANCE WITH AASHTO M 111.
  2. INSTALL AT MAXIMUM 100' INTERVALS ON TANGENT, 50' INTERVALS ON CURVE, MINIMUM 3 REFLECTORS PER SIDE.
  3. BRACKET "FOOT" SHALL BE PLACED BETWEEN THE BOLT HEAD AND THE PLATE WASHER (IF PRESENT).
  4. BRACKETS SHALL NOT BE PLACED WITHIN 25' OF THE END OF A BREAK-AWAY CABLE TERMINAL (BCT) SECTION OR WITHIN AN EXPANSION SPICE.

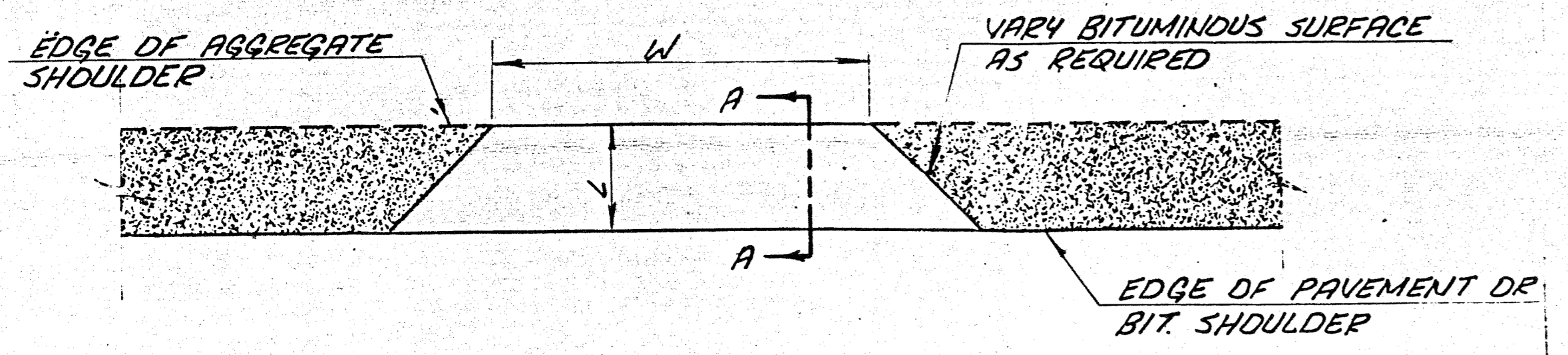


**GUARD RAIL REFLECTOR BRACKET**

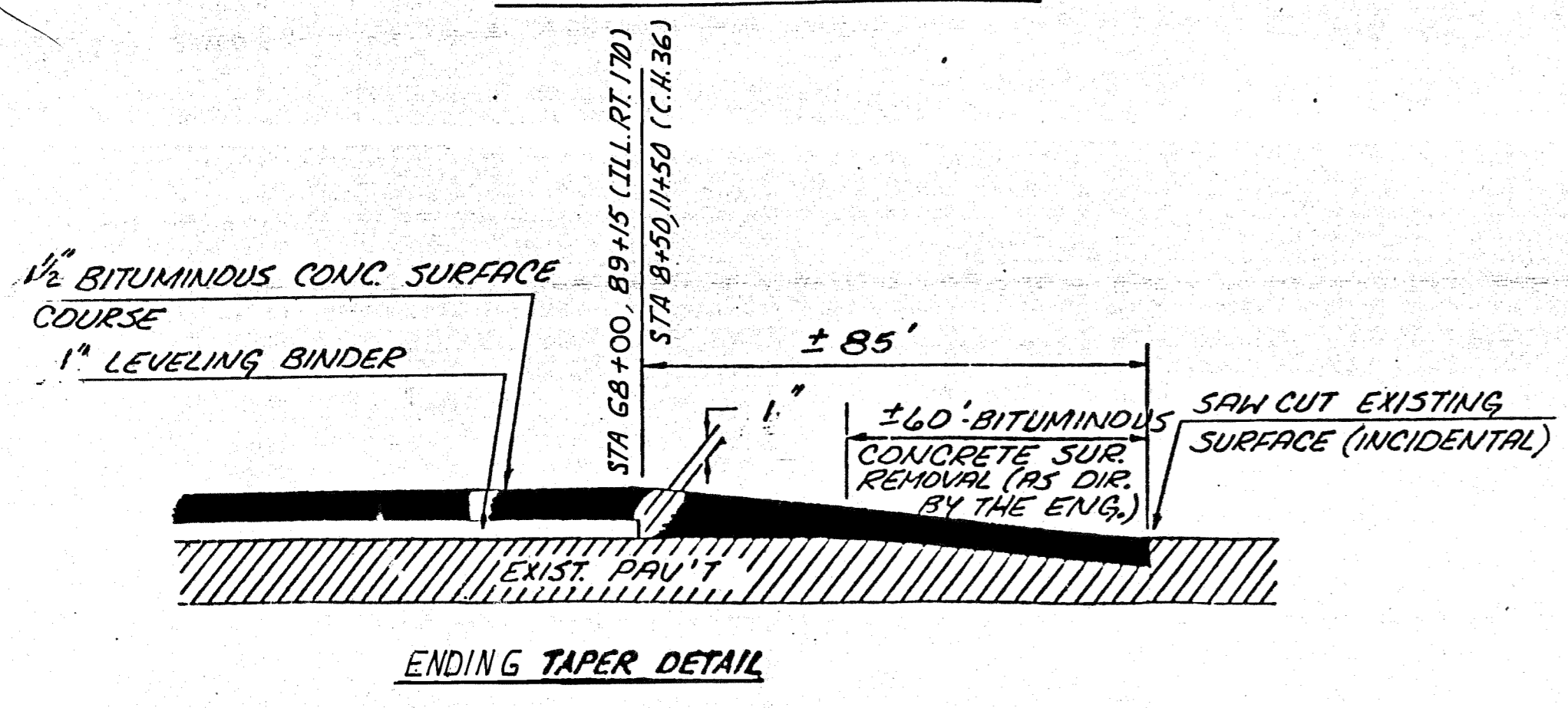


**BITUMINOUS DETAIL AT BUTT JOINTS**

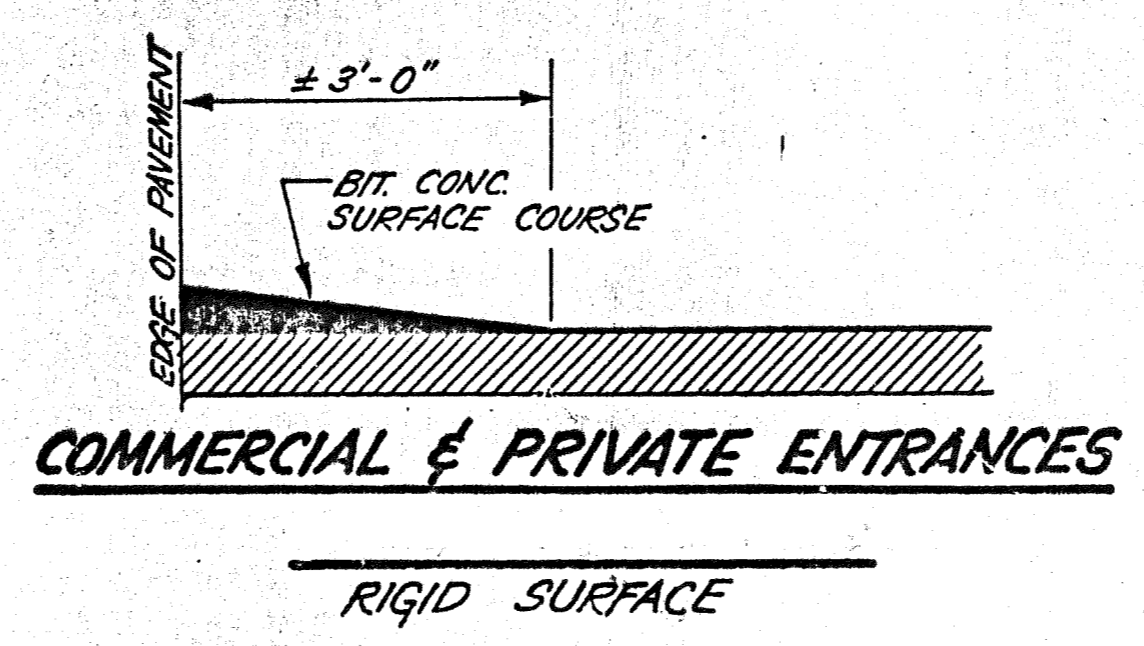
NOTE: WHERE MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.



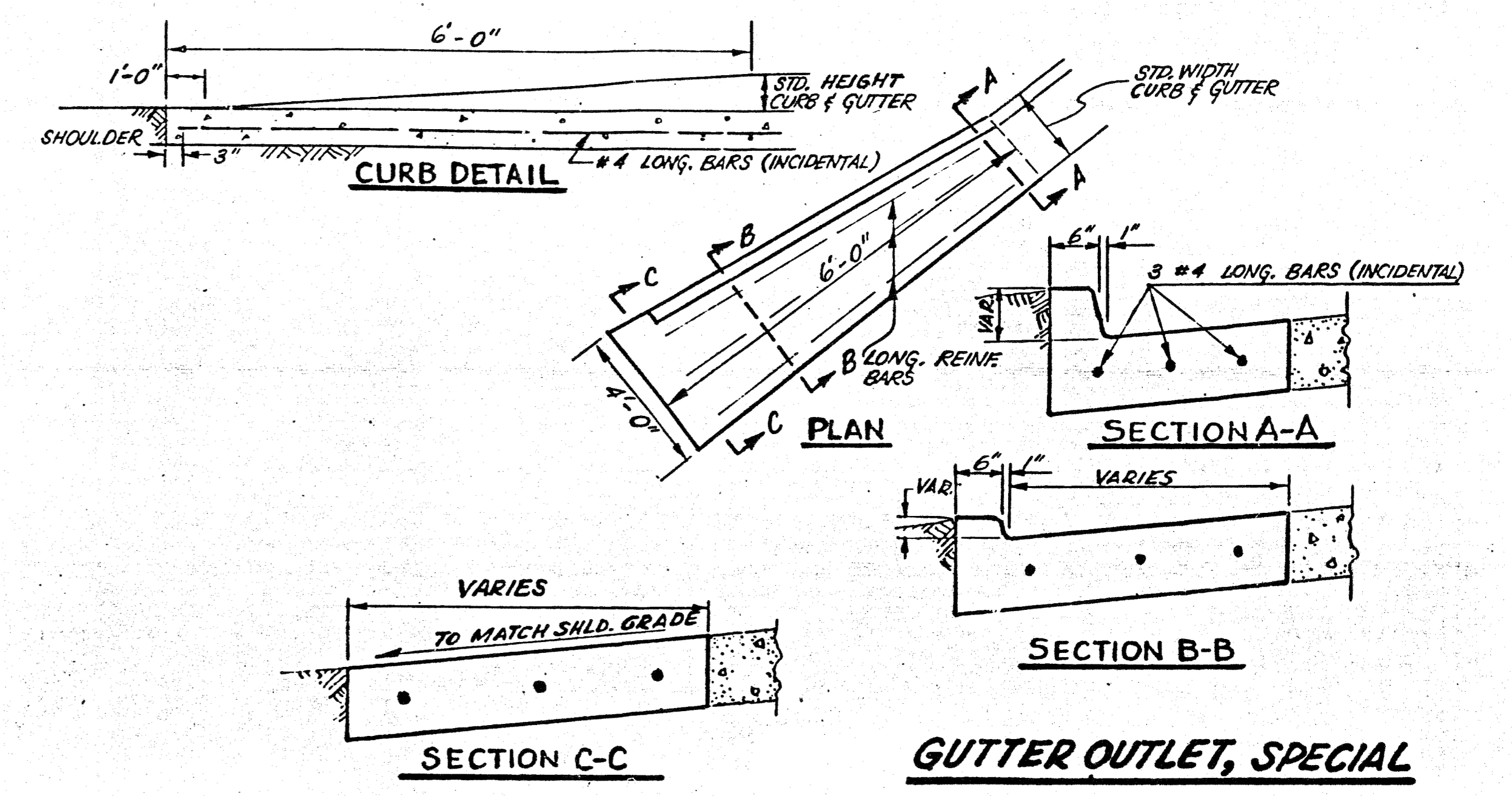
**PLAN AT ENTRANCES**



**ENDING TAPER DETAIL**



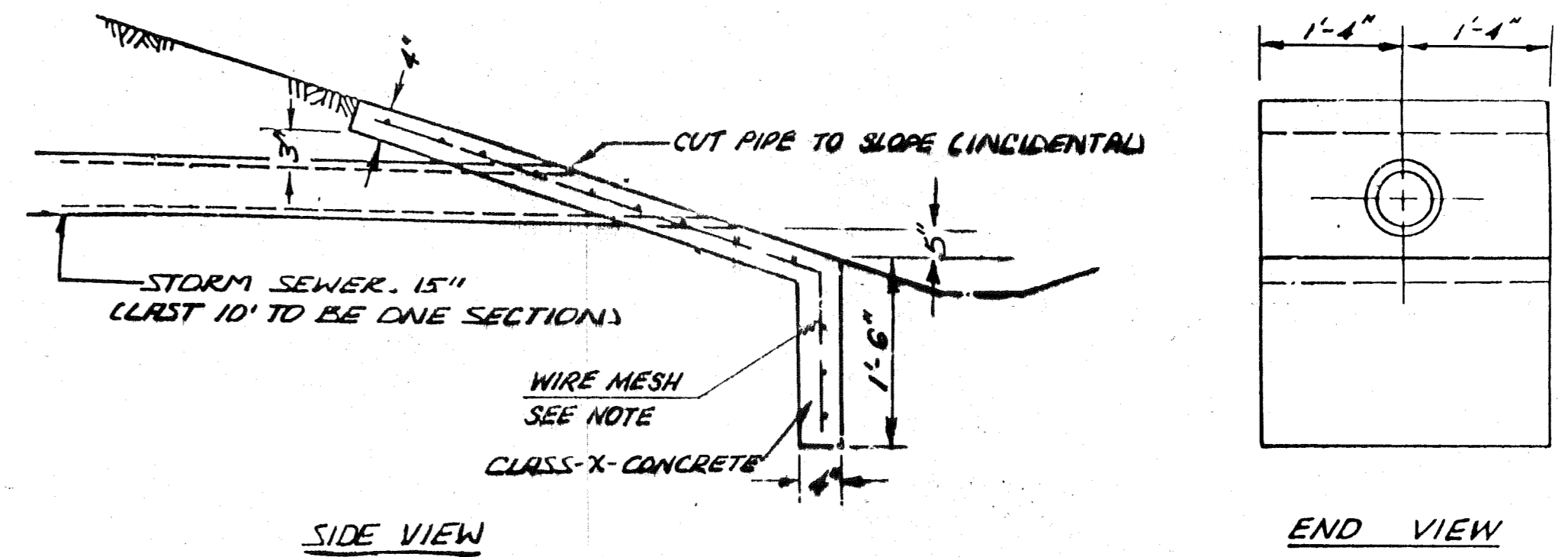
**COMMERCIAL & PRIVATE ENTRANCES**



**SECTION C-C**

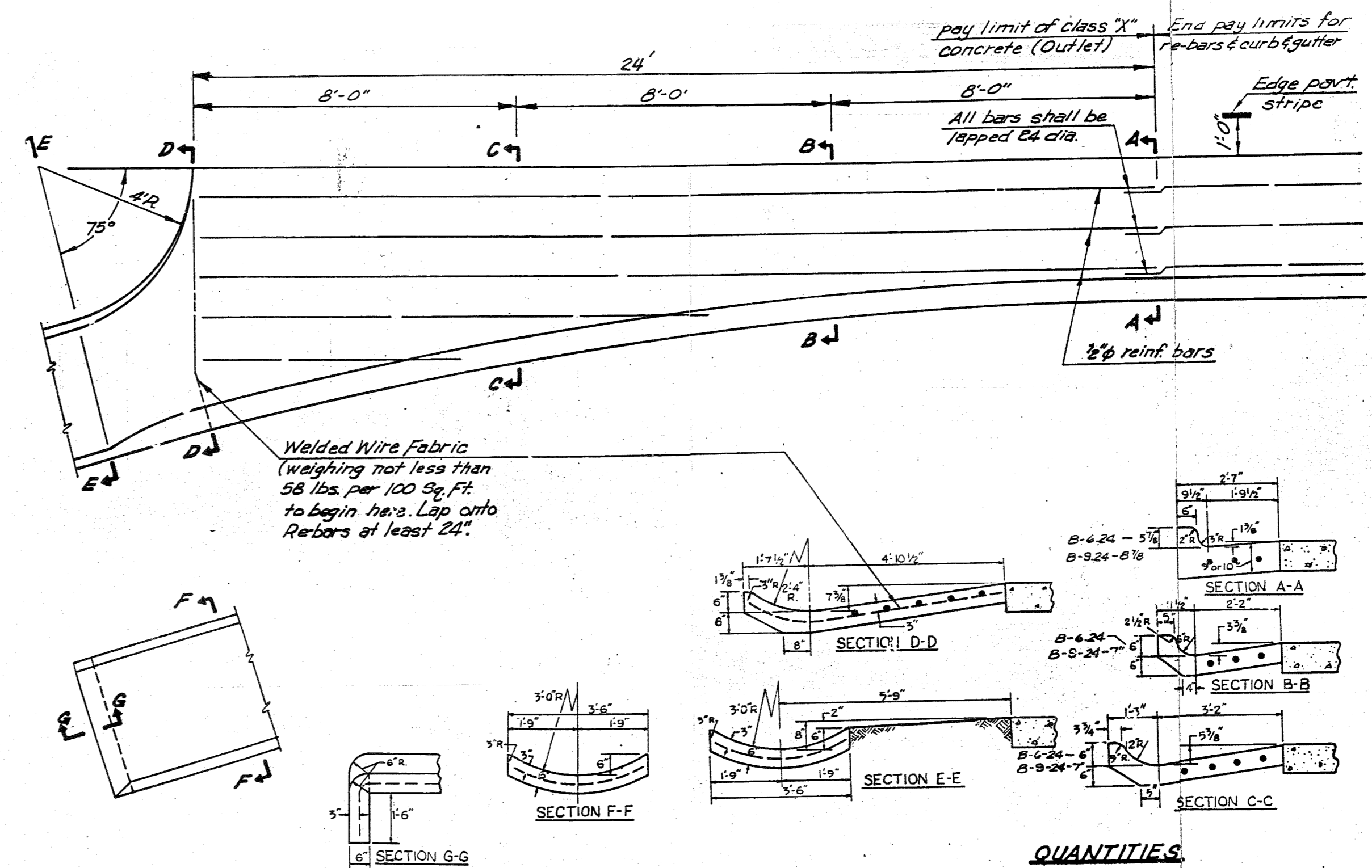
**GUTTER OUTLET, SPECIAL**





NOTE:  
WIRE IS INCIDENTAL TO  
CLASS-X-CONCRETE

DETAIL STORM SEWER OUTLET HEADWALL



NOTE:  
CLASS X CONCRETE  
TO BE USED THROUGHOUT

**QUANTITIES**  
for  
**Class X Concrete**

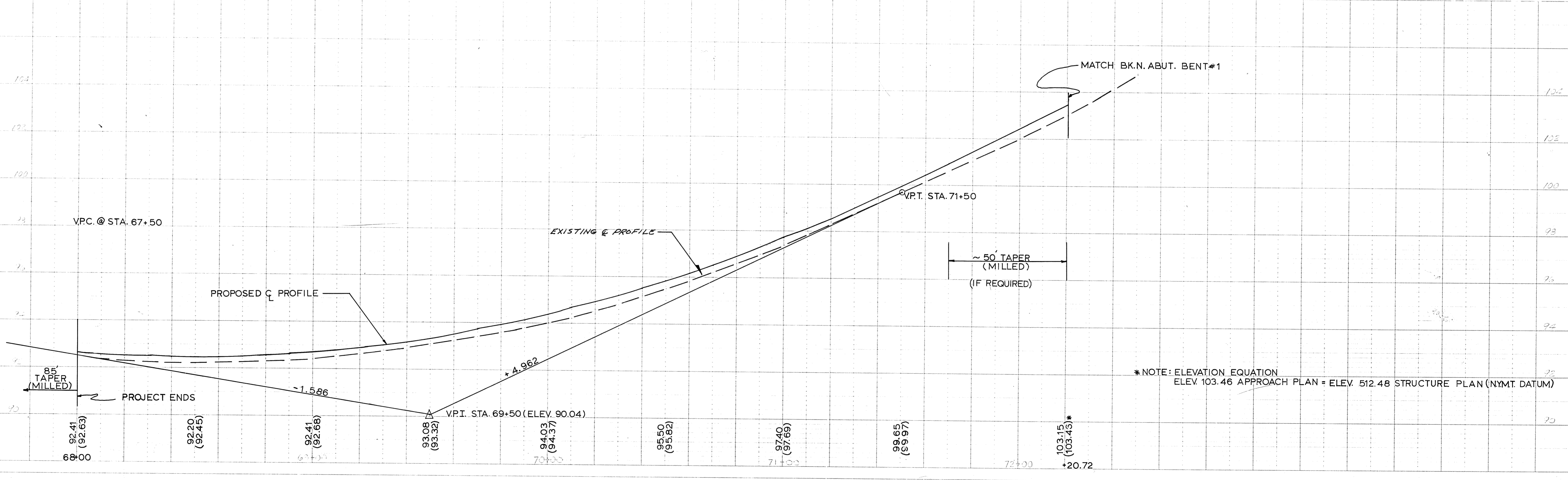
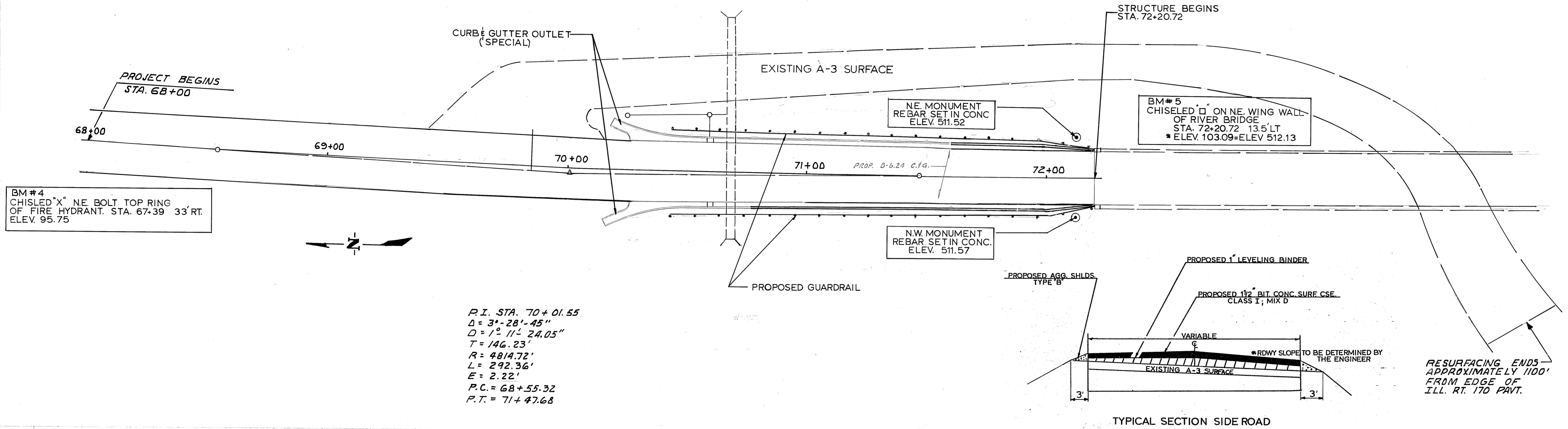
Section "A-A" to "E-E" & Curtain Wall	Cu. Yd.	2.38
Section "F-F"	Cu. Yd./Lin. Ft.	0.09

OUTLET FOR CURB AND GUTTER

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 786	BD	LA SALLE	68	10
FHWA REG. 4		ILLINOIS FED. AID PROJ.		

DATE	BY	CHKD
PLAN	SUPPLEMENTED	DATE
	PLOTTED	
	REVISIONS CHECKED	
	BY	
	NO.	

DATE	BY	CHKD
PROFILE	SUPPLEMENTED	DATE
	PLOTTED	
	REVISIONS CHECKED	
	BY	
	NO.	



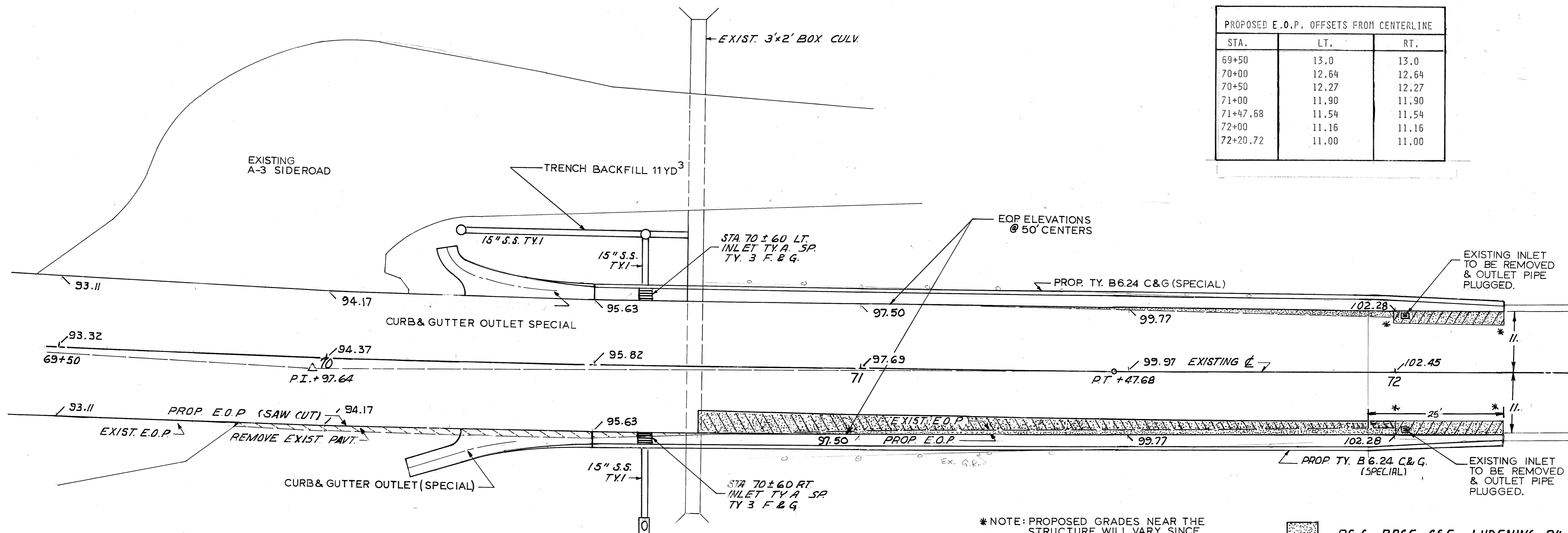
PLAN & PROFILE NORTH APPROACH



STA. 70 ± 24, ± 25' LT.  
INLET, TY A SPEC.  
TY. 1' FR., OPEN LID

STA. 70 ± 60, ± 25' LT.  
M.H. TY A, 4' DIA.  
TY. 1' FR., CLOSED LID

PROPOSED E.O.P. OFFSETS FROM CENTERLINE		
STA.	LT.	RT.
69+50	13.0	13.0
70+00	12.64	12.64
70+50	12.27	12.27
71+00	11.90	11.90
71+47.68	11.54	11.54
72+00	11.16	11.16
72+20.72	11.00	11.00



NOTE: INVERT ELEVATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.  
GRADES SHOWN ARE PROPOSED TOP OF SURFACE GRADES.

\* NOTE: PROPOSED GRADES NEAR THE STRUCTURE WILL VARY SINCE THE PROPOSED DECK PLANKS WILL VARY IN ELEVATION. IT WILL BE NECESSARY TO MATCH APPROACH GRADES AFTER DECK PLANKS HAVE BEEN PLACED.

- P.C.L. BASE C&G. WIDENING 9"
- GUTTER REMOVAL
- PAVEMENT REMOVAL

NOTE: GRADES SHOWN ARE PROPOSED TOP OF SURFACE GRADES.

DETAIL - NORTH APPROACH

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 784	109BD	LASALLE	68	12
F.H.W.A., REG. 4 ILLINOIS PROJECT				

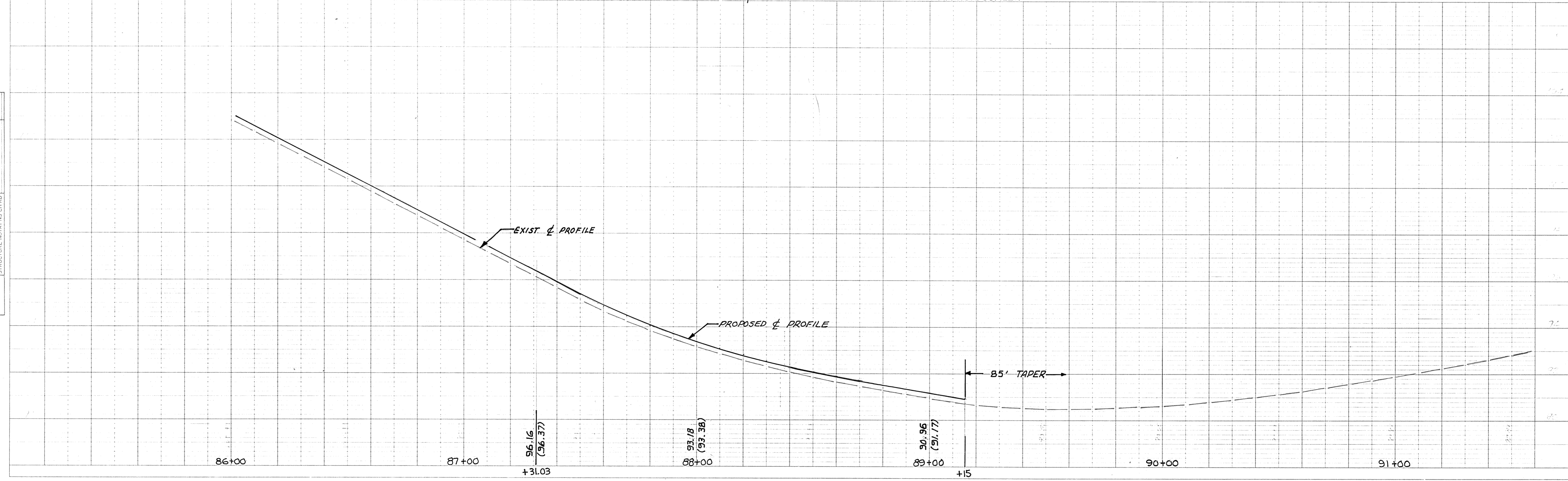
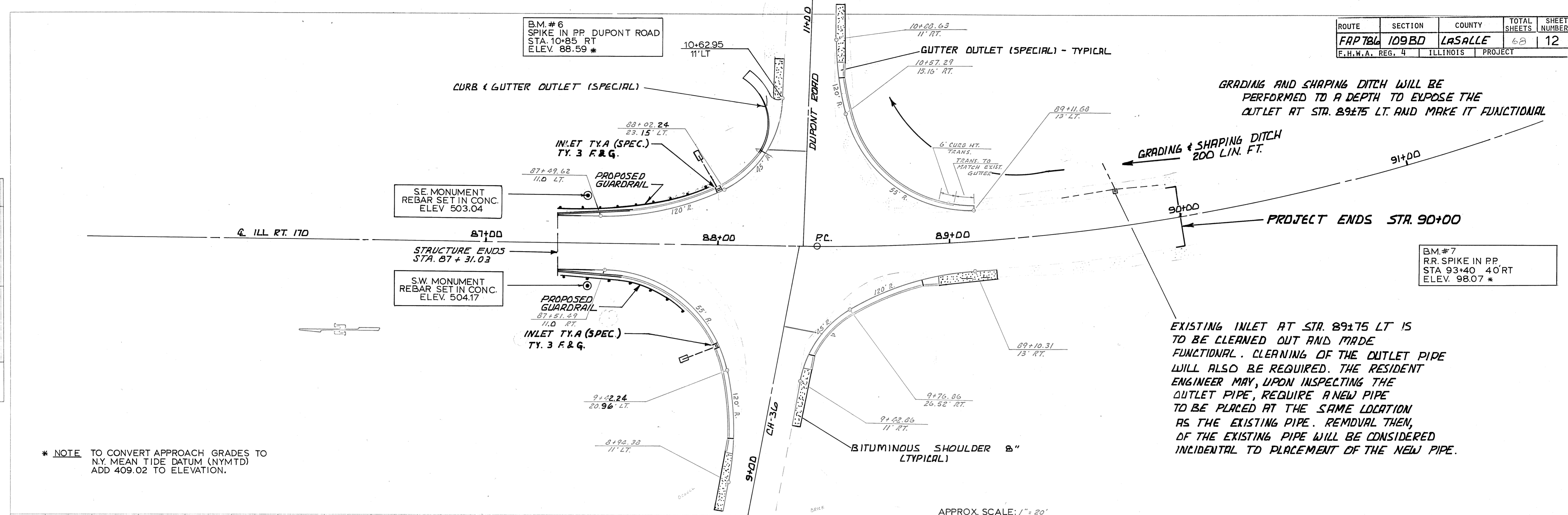
PLAN	SURVEYED	DATE
	PLOTTED	BY
NOTE BOOK NO.	CHECKED	DATE
	RT. OF WAY CHECKED	BY

PROFILE	SURVEYED	DATE
	PLOTTED	BY
NOTE BOOK NO.	CHECKED	DATE
	STRUCTURE NOTATIONS CHECKED	BY

\* NOTE TO CONVERT APPROACH GRADES TO N.Y. MEAN TIDE DATUM (NYMTD) ADD 409.02 TO ELEVATION.

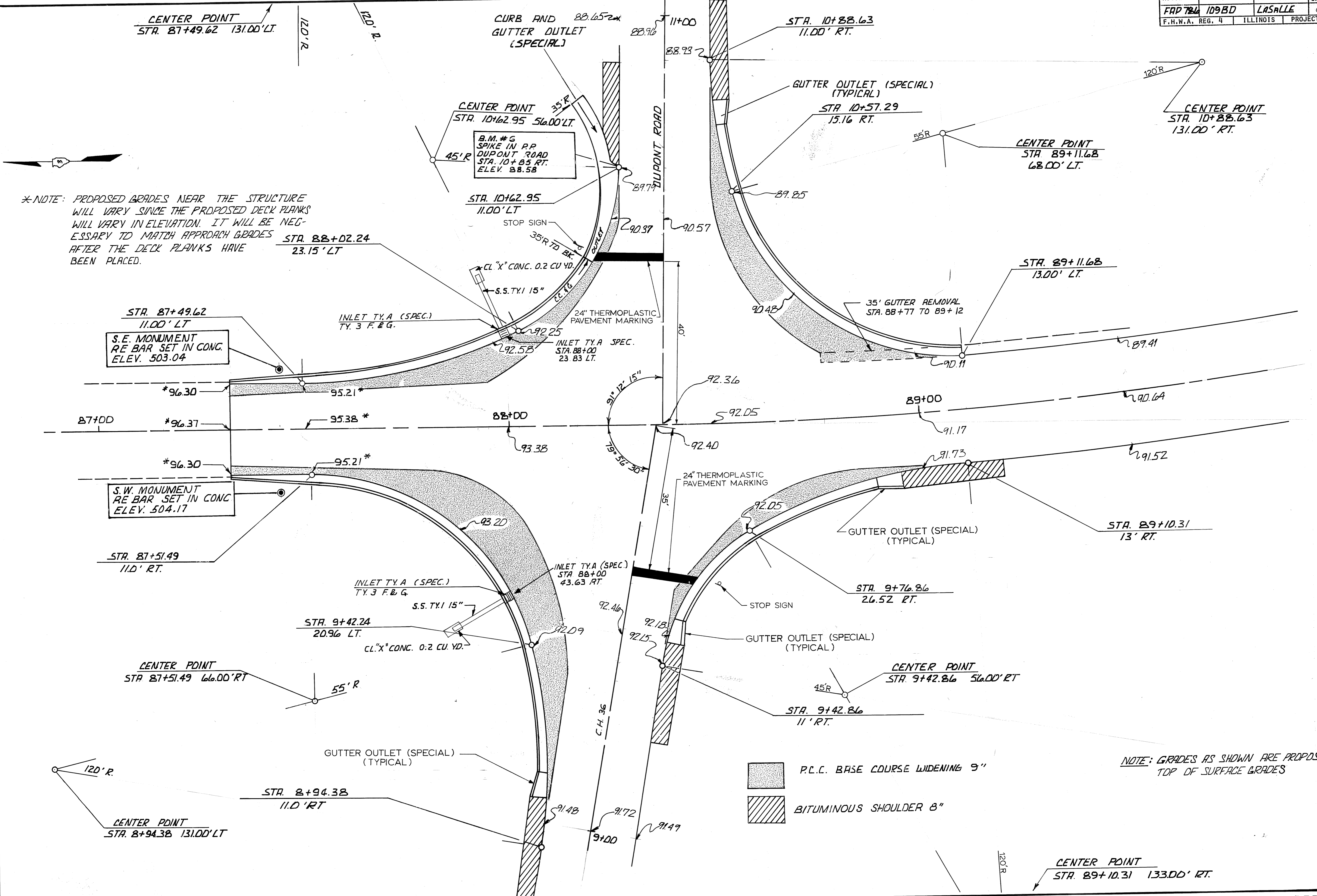
GRADING AND SHAPING DITCH WILL BE PERFORMED TO A DEPTH TO EXPOSE THE OUTLET AT STA. 89±75 LT. AND MAKE IT FUNCTIONAL

EXISTING INLET AT STA. 89±75 LT IS TO BE CLEANED OUT AND MADE FUNCTIONAL. CLEANING OF THE OUTLET PIPE WILL ALSO BE REQUIRED. THE RESIDENT ENGINEER MAY, UPON INSPECTING THE OUTLET PIPE, REQUIRE A NEW PIPE TO BE PLACED AT THE SAME LOCATION AS THE EXISTING PIPE. REMOVAL THEN, OF THE EXISTING PIPE WILL BE CONSIDERED INCIDENTAL TO PLACEMENT OF THE NEW PIPE.



PLAN AND PROFILE - SOUTH APPROACH

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 784	109BD	LASALLE	68	13
F.H.W.A. REG. 4		ILLINOIS	PROJECT	



\*NOTE: PROPOSED GRADES NEAR THE STRUCTURE WILL VARY SINCE THE PROPOSED DECK PLANKS WILL VARY IN ELEVATION. IT WILL BE NECESSARY TO MATCH APPROACH GRADES AFTER THE DECK PLANKS HAVE BEEN PLACED.

- P.C.C. BASE COURSE WIDENING 9"
- BITUMINOUS SHOULDER 8"

NOTE: GRADES AS SHOWN ARE PROPOSED TOP OF SURFACE GRADES

DETAILS - SOUTH APPROACH

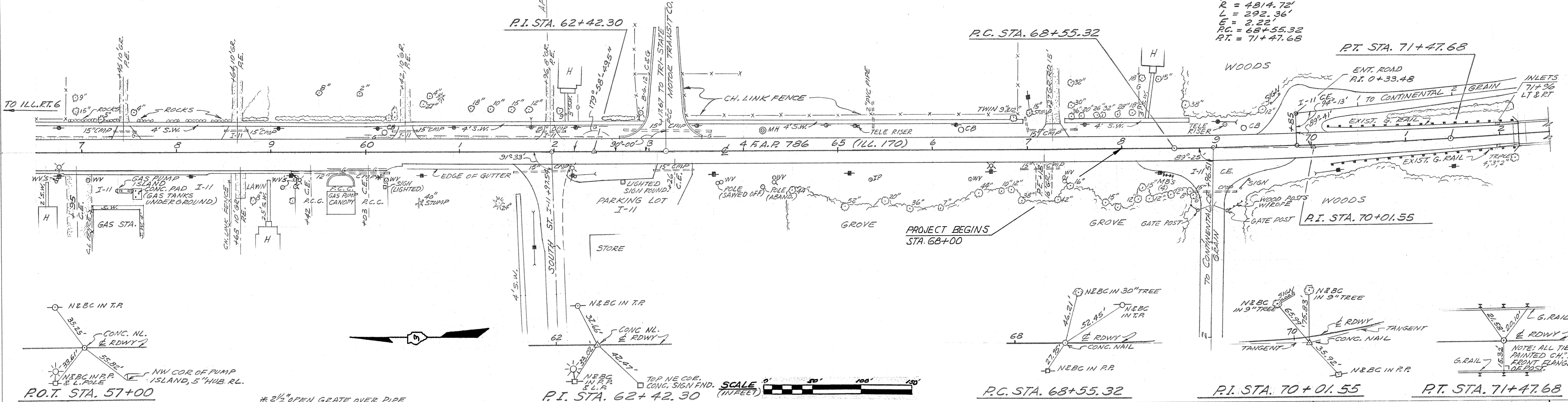
NW 1/4, SEC. 25, T. 33N., R. 5 E., 3<sup>RD</sup> P.M.

SW 1/4, SEC. 25, T. 33N., R. 5 E., 3<sup>RD</sup> P.M.

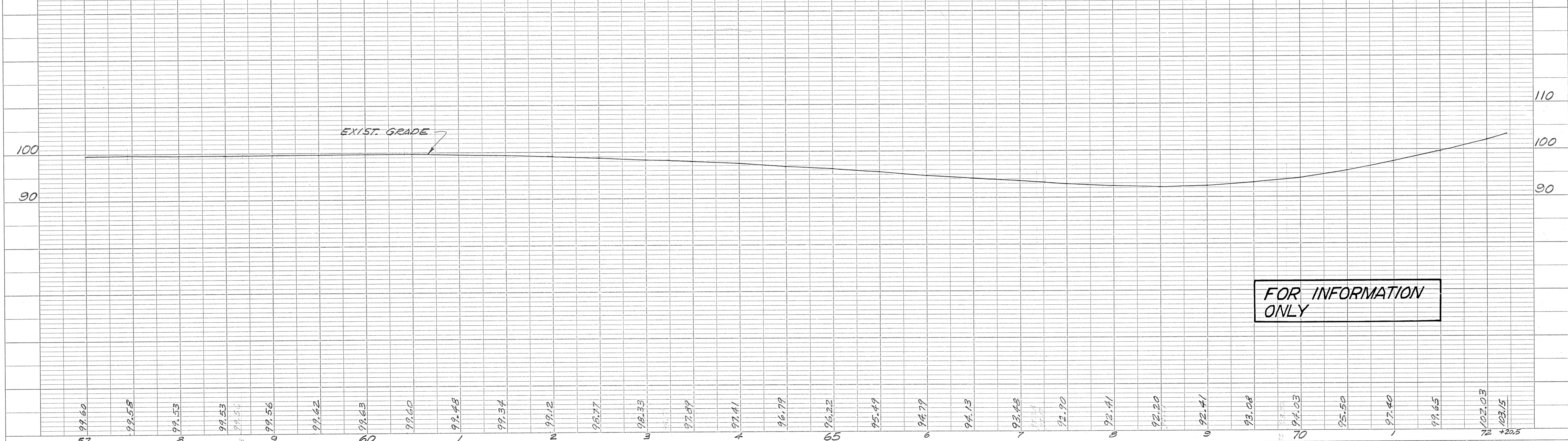
# SENECA

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
F.A.P. 786	109 B-D	LASALLE	68	14
F.H.W.A. REG. 4		ILLINOIS		PROJECT

**CURVE DATA**  
 P.I. STA. 70+01.55  
 $\Delta = 3^{\circ} 28' 45''$   
 $D = 12.11' 24.05''$   
 $T = 146.23'$   
 $R = 4814.72'$   
 $L = 292.36'$   
 $E = 2.22'$   
 $P.C. = 68+55.32$   
 $P.T. = 71+47.68$



P.O.T. STA. 57+00  
 BM #2, STA. 56+76, 25' RT. R. R. SPIKE IN R.P., EL. 100.96  
 P.I. STA. 62+42.30  
 BM #3, STA. 64+32, 32.5' RT. CHIS. "X" N.E. BOLT TOP RING FIRE HYD., EL. 100.59  
 P.C. STA. 68+55.32  
 BM #4, STA. 67+39, 33' RT. CHIS. "X" N.E. BOLT TOP RING FIRE HYD., EL. 95.75  
 P.I. STA. 70+01.55  
 BM #5, STA. 72+21, 13.5' LT. CHIS. "O" N.E. W. W.G. BR. EL. 103.09  
 P.T. STA. 71+47.68



**FOR INFORMATION ONLY**

PLAN & PROFILE STA. 57+00 TO STA. 72+20.72

DATE: 10/23/10  
 BY: R. M. BROWN  
 SURVEYED: [ ]  
 PLOTTED: [ ]  
 CALCULATED: [ ]  
 CHECKED: [ ]  
 PLAN NO. 109-B-D

DATE: 10/23/10  
 BY: R. M. BROWN  
 SURVEYED: [ ]  
 PLOTTED: [ ]  
 CALCULATED: [ ]  
 CHECKED: [ ]  
 PROFILE NO. 109-B-D

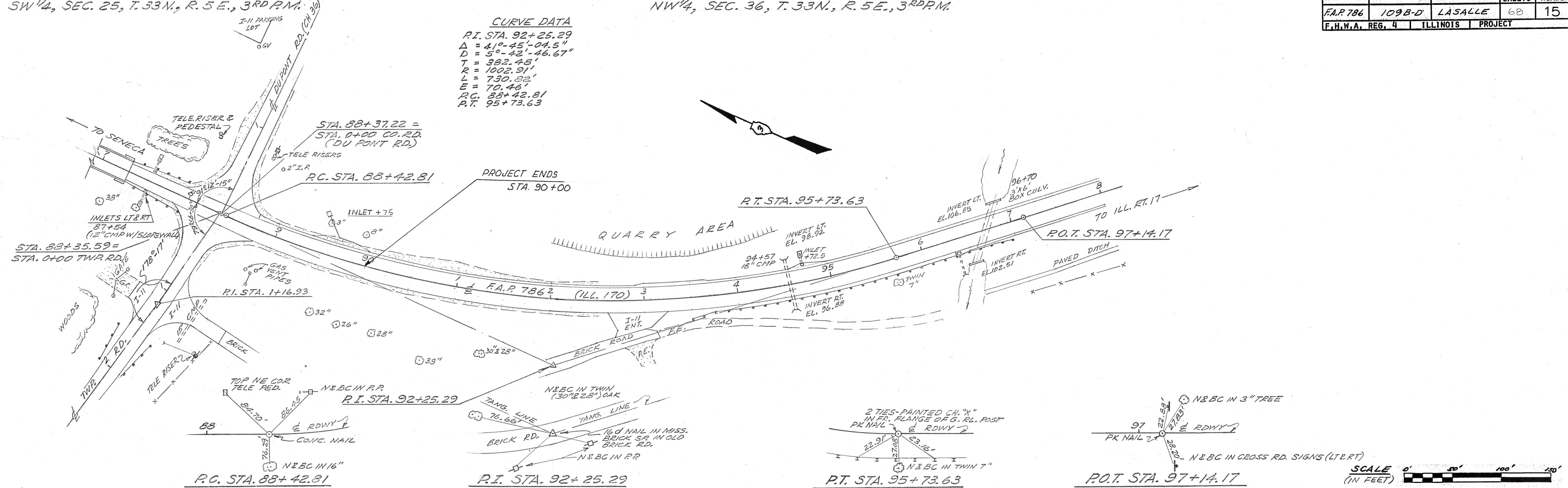
SW 1/4, SEC. 25, T. 33N., R. 5 E., 3RD P.M.

NW 1/4, SEC. 36, T. 33N., R. 5 E., 3RD P.M.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
F.A.P. 786	109B-D	LASALLE	68	15
F.H.W.A. REG. 4 ILLINOIS PROJECT				

**CURVE DATA**  
 P.I. STA. 92+25.29  
 $\Delta = 41^{\circ}-45'-04.5''$   
 $D = 5^{\circ}-42'-46.67''$   
 $T = 382.45'$   
 $L = 1002.91'$   
 $E = 730.82'$   
 $M = 70.48'$   
 P.C. STA. 88+42.81  
 P.T. STA. 95+73.63

DATE: 5-27-85  
 BY: R. ARONOVSKI  
 SURVEYED: [ ]  
 PLOTTED: [ ]  
 CHECKED: [ ]  
 DATE: 5-27-85  
 BY: R. ARONOVSKI  
 PLOTTED: [ ]  
 CHECKED: [ ]  
 DATE: 5-27-85  
 BY: R. ARONOVSKI



BM #6, STA. 10+85, 24' RT.  
 (DU PONT RD.) R.P. SPIKE IN P.P.  
 EL. 83.59

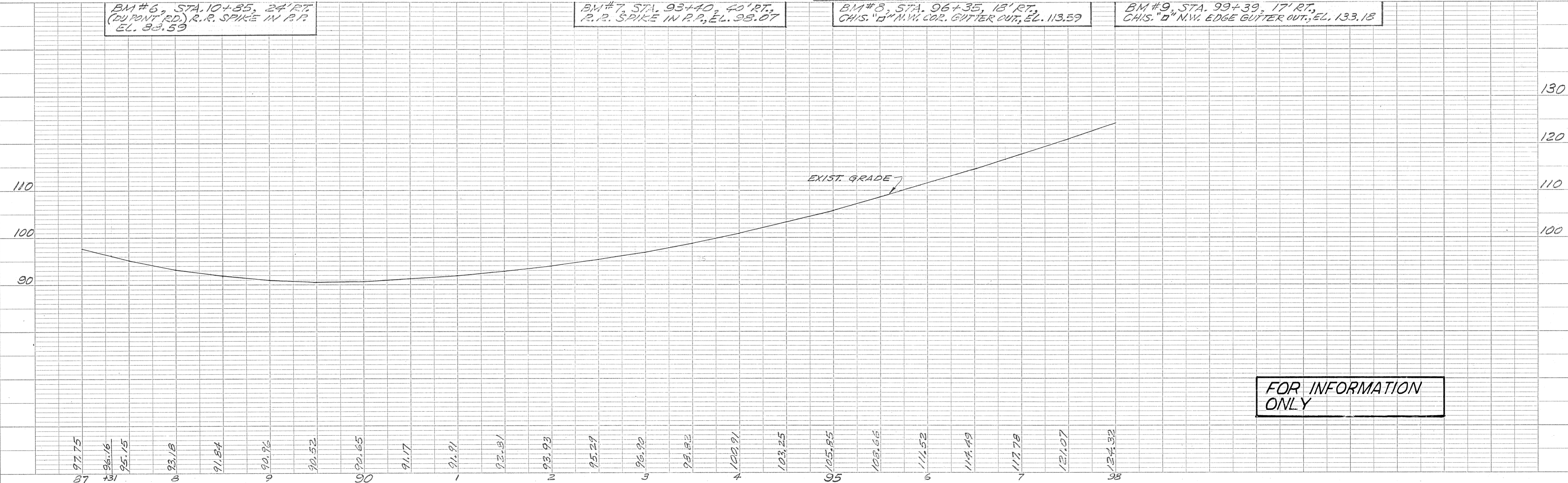
BM #7, STA. 93+40, 40' RT.  
 R.P. SPIKE IN P.P., EL. 93.07

BM #8, STA. 96+35, 15' RT.  
 CHIS. "D" N.W. COR. GUTTER OUT, EL. 113.59

BM #9, STA. 99+39, 17' RT.  
 CHIS. "D" N.W. EDGE GUTTER OUT, EL. 133.18

SCALE 0' 100' 200' 400'  
 (IN FEET)

DATE: 5-27-85  
 BY: R. ARONOVSKI  
 SURVEYED: [ ]  
 PLOTTED: [ ]  
 CHECKED: [ ]  
 DATE: 5-27-85  
 BY: R. ARONOVSKI  
 PLOTTED: [ ]  
 CHECKED: [ ]  
 DATE: 5-27-85  
 BY: R. ARONOVSKI

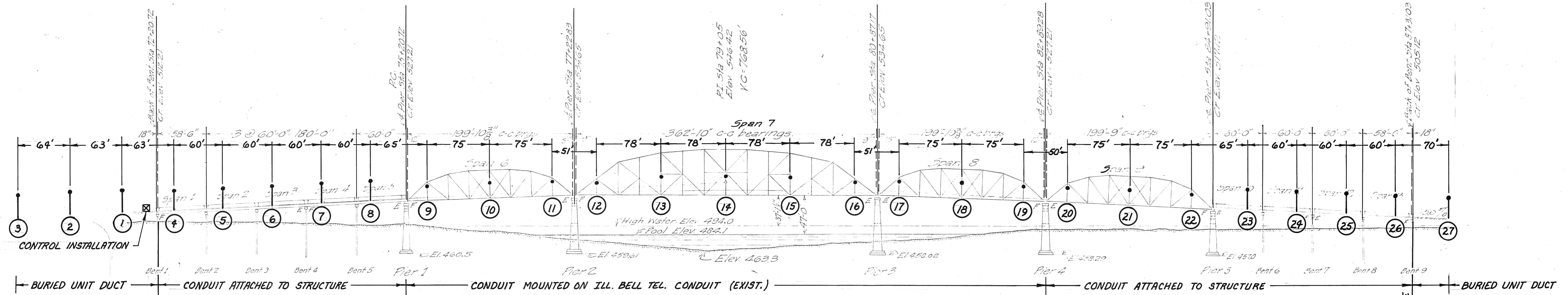


FOR INFORMATION ONLY

PLAN & PROFILE STA. 87+00 TO STA. 98+00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
F.A.R. 786	109 BD	LA SALLE	68	16
F.H.W.A. REG. 4 ILLINOIS PROJECT				

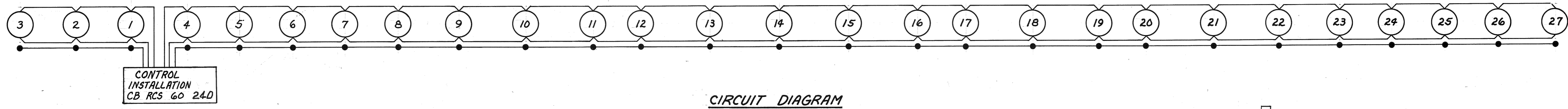
NOTE: ALL LIGHTS AND THE CONTROLLER ARE LOCATED ON EAST SIDE OF ROADWAY.



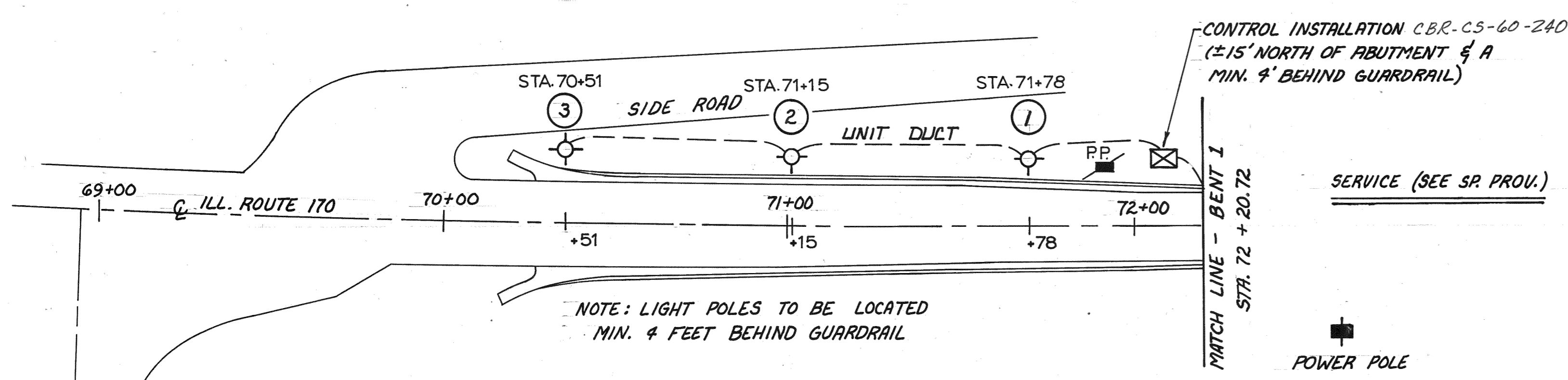
GENERAL ELEVATION (LOOKING EAST)

LIGHTS 1, 2: 30' MH, TENON MT.  
 LIGHTS 3 AND 27: 30' MH, TWIN TENON MT.  
 LIGHTS 4, 5, 6, 7, 8, 23, 24, 25 AND 26: 25' MH, TENON MT.  
 LIGHTS 9 THRU 22: UNDERPASS TYPE

LIGHT LOCATIONS



CIRCUIT DIAGRAM

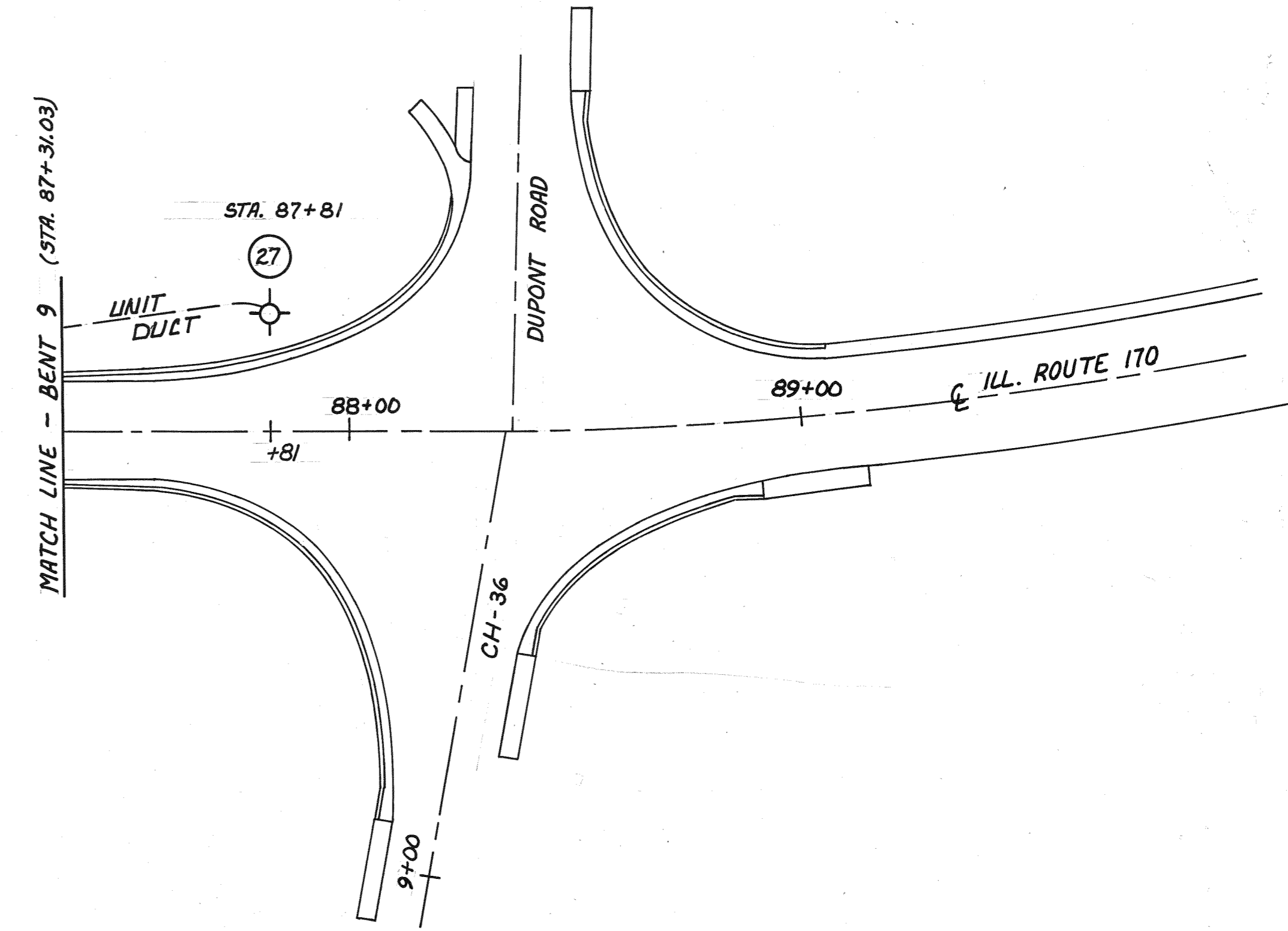


NOTE: LIGHT POLES TO BE LOCATED MIN. 4 FEET BEHIND GUARDRAIL

SERVICE (SEE SR PROV.)

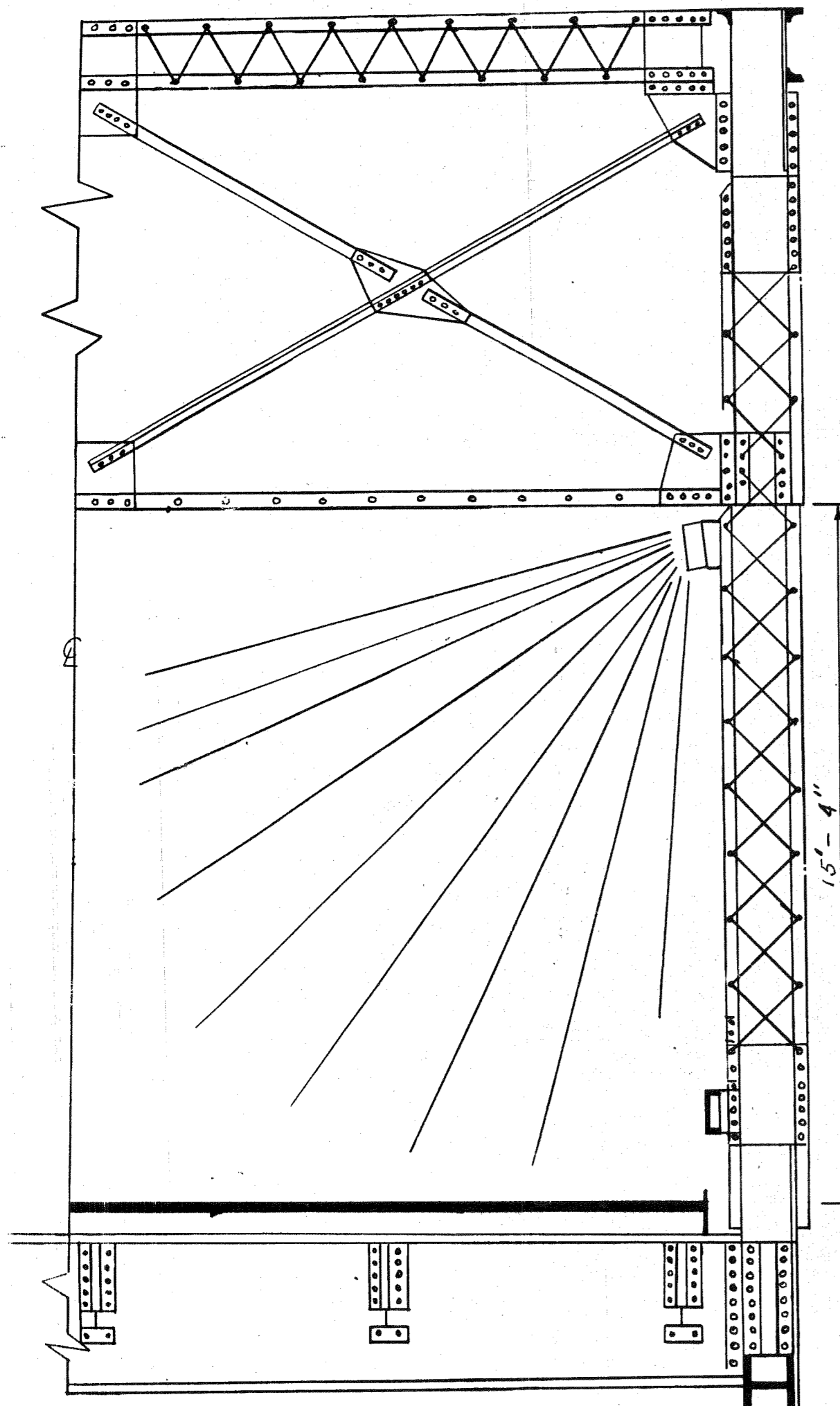
POWER POLE

⊙ LIGHT POLE WITH FOUNDATION LOCATION

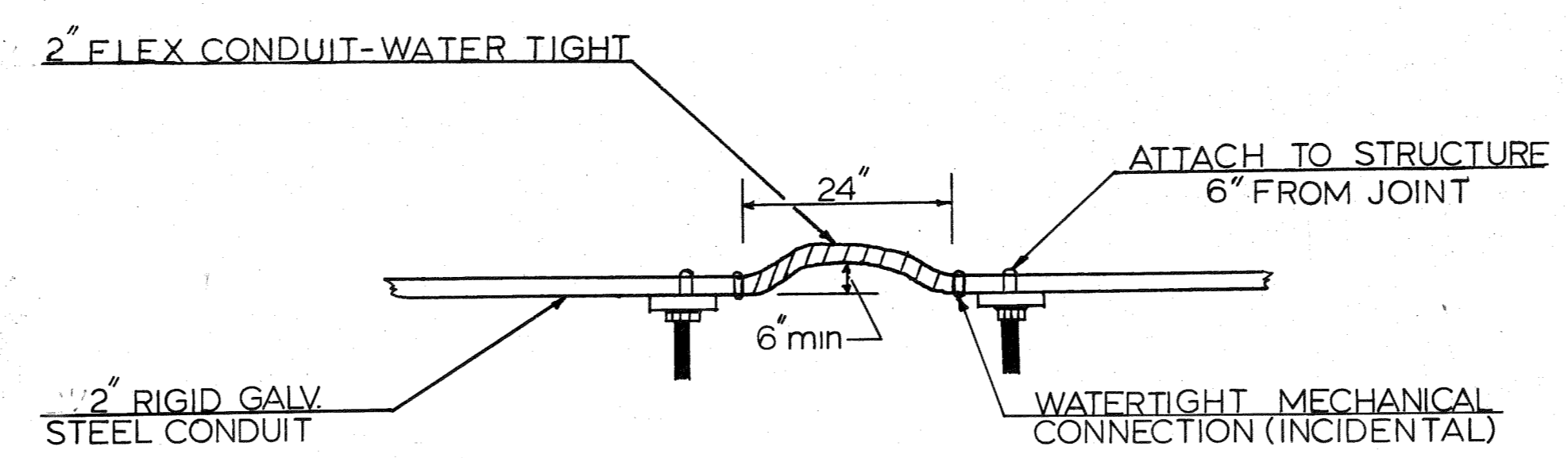


SENECA ILL. RIVER BRIDGE  
 - LIGHT LOCATIONS  
 - CIRCUIT DIAGRAM





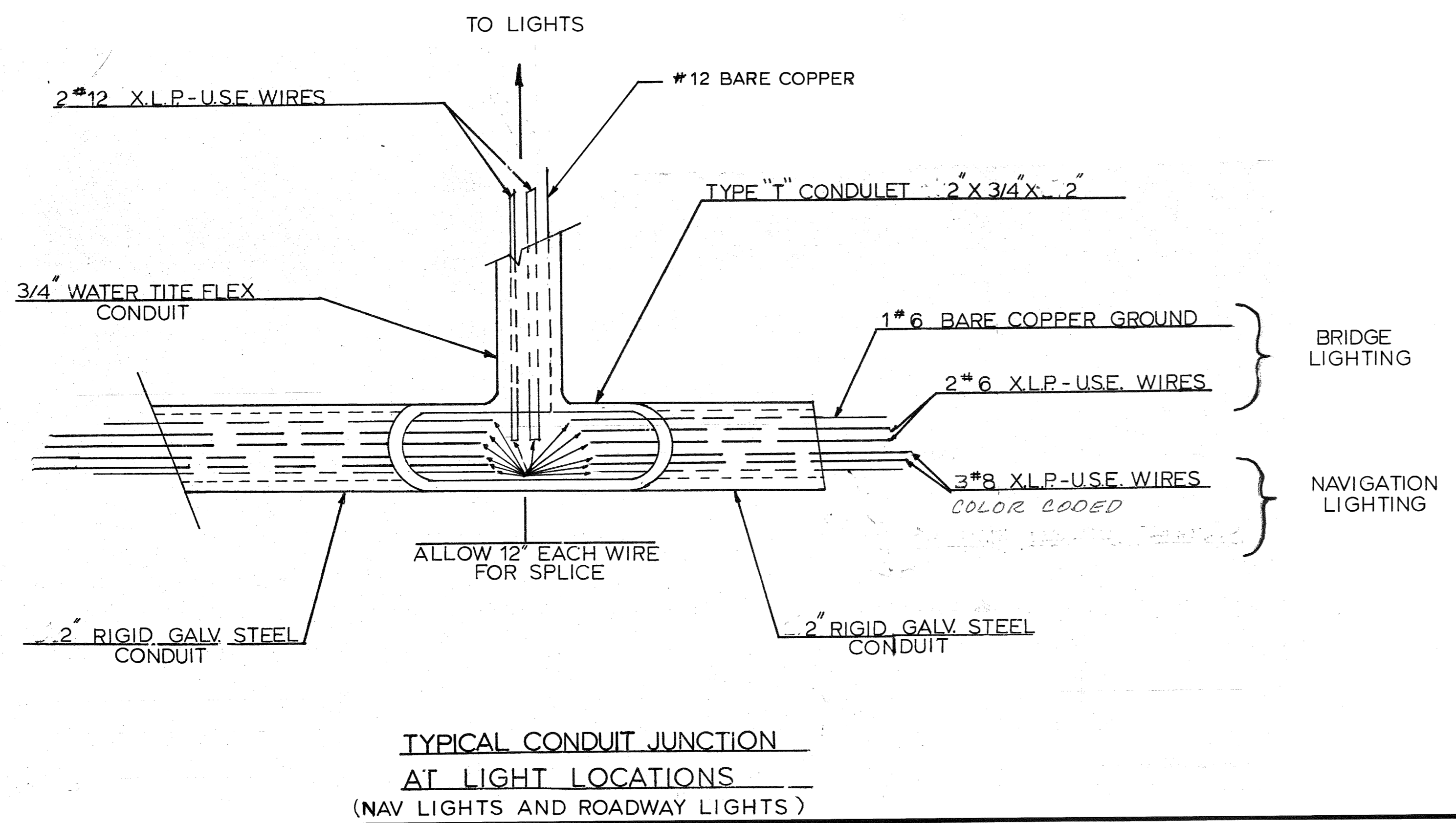
HALF CROSS-SECTION  
TRUSS LIGHTING LOCATION



CONDUIT AT EXPANSION JOINTS

BRIDGE LIGHTING SCHEDULE

LOCATION	1" UNIT DUCT 2-600V #6 LIN FT	BARE COPPER 1/C NO. 6 LIN FT	TRENCH & BACKFILL LIN FT	EL. CABLE IN COND. 1/C NO. 12 LIN FT	COND. ATT. TO STRUCT 2" " LIN FT	COND. ATT. TO STRUCT 3/4" " LIN FT	EL. CABLE IN COND. 1/C NO. 6 LIN FT	BARE COPPER 1/C NO. 10 LIN FT
CONTROL TO 1	40	40	30	60				30
1 TO 2	75	75	65	60				30
2 TO 3	76	76	66	60				30
CONTROL TO 4	20	40	15	56	24	3	48	28
4 TO 5		60		56	60	3	120	28
5 TO 6		60		56	60	3	120	28
6 TO 7		60		56	60	3	120	28
7 TO 8		60		56	60	3	120	28
8 TO 9		65		36	65	18	130	18
9 TO 10		75		36	75	18	150	18
10 TO 11		75		36	75	18	150	18
11 TO 12		51		36	51	18	102	18
12 TO 13		78		36	78	18	156	18
13 TO 14		78		36	78	18	156	18
14 TO 15		78		36	78	18	156	18
15 TO 16		78		36	78	18	156	18
16 TO 17		51		36	51	18	102	18
17 TO 18		75		36	75	18	150	18
18 TO 19		75		36	75	18	150	18
19 TO 20		50		36	50	18	100	18
20 TO 21		75		36	75	18	150	18
21 TO 22		75		36	75	18	150	18
22 TO 23		65		56	65	3	130	28
23 TO 24		60		56	60	3	120	28
24 TO 25		60		56	60	3	120	28
25 TO 26		60		56	60	3	120	28
26 TO 27	55	75	50	60	24		48	30
TOTALS	266	1770	226	1248	1512	279	3024	624



TYPICAL CONDUIT JUNCTION  
AT LIGHT LOCATIONS  
(NAV LIGHTS AND ROADWAY LIGHTS)

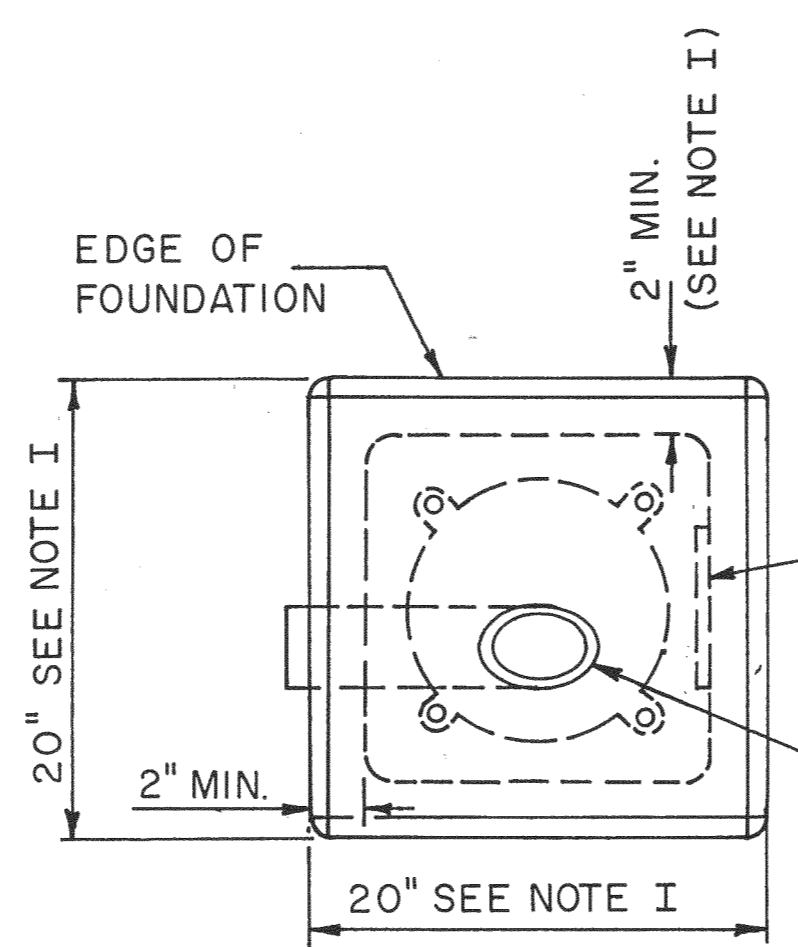
LIGHTING SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL QTY.	ROADWAY	STRUCTURE
ELECTRIC CABLE IN CONDUIT, 600V(XLP-TYPE USE) 1/C NO. 12	LIN FT	1248	240	1008
ELECTRIC CABLE IN CONDUIT, 600V(XLP-TYPE USE) 1/C NO. 6	LIN FT	3024	-	3024
BARE COPPER WIRE, 1/C NO. 6	LIN FT	1770	286	1484
UNIT DUCT, 2-600VXLP #6, 1" POLYETHYLENE	LIN FT	266	266	--
TRENCH AND BACKFILL FOR ROADWAY LIGHTING	LIN FT	226	226	--
CONDUIT ATTACHED TO STRUCTURE, 3/4" DIA., GALVANIZED STEEL	LIN FT	279	-	279
" " " " " " " "	LIN FT	1512	-	1512
CONTROL INSTALLATION (CBR CS-60-240)	EACH	1	1	--
LIGHT POLE FOUNDATION	EACH	4	4	--
LIGHT POLE, ALUMINUM 25 FT. M.H., TENON MOUNT	EACH	9	-	9
LIGHT POLE, ALUMINUM, 30 FT. M.H., TENON MOUNT	EACH	2	2	--
LIGHT POLE, ALUMINUM, 30 FT. M.H. TWIN TENON MOUNT	EACH	2	2	--
POLE FOUNDATION, SPECIAL	EACH	9	-	9
LUMINAIRE, HIGH PRESSURE SODIUM, UNDERPASS TYPE, 150 WATTS	EACH	29	15	14
LUMINAIRE BRIDGE MOUNTING HARDWARE	EACH	14	-	14
BARE COPPER WIRE 1/C NO. 10	LIN.FT.	624	120	504

ROUTE	SECTION	COUNTY	TOT. SHTS.	SHEET #
FAP 786	109 BD	LA SALLE	68	18

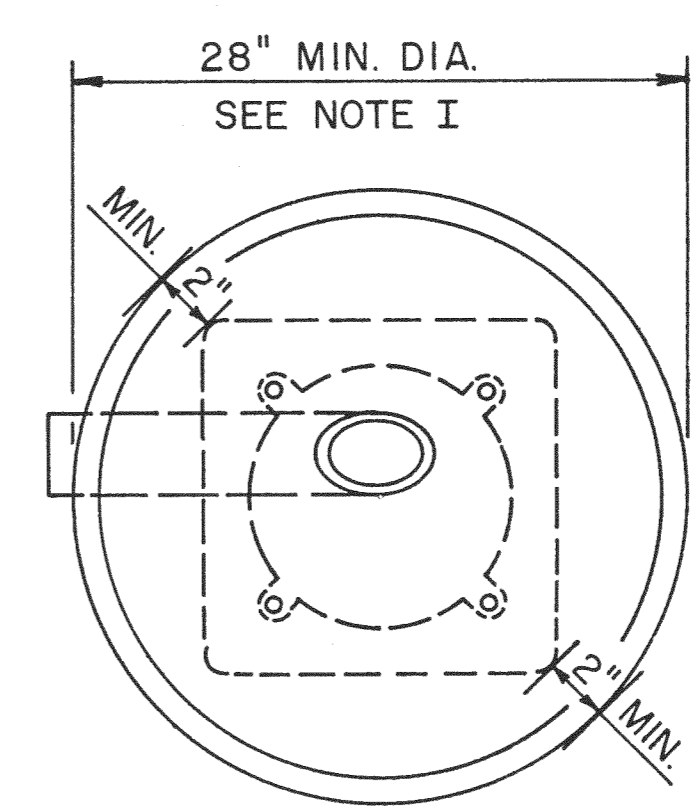
**LOW MOUNT DESIGN TABLE**

MOUNTING FOUNDATION HEIGHT	DEPTH	BOLT CIRCLE
30' OR LESS	5'-0"	11 1/2"
31' - 35'	6'-0"	11 1/2"
36' - 40'	7'-0"	15"
41' - 45'	7'-6"	15"
46' - 50'	8'-0"	15"

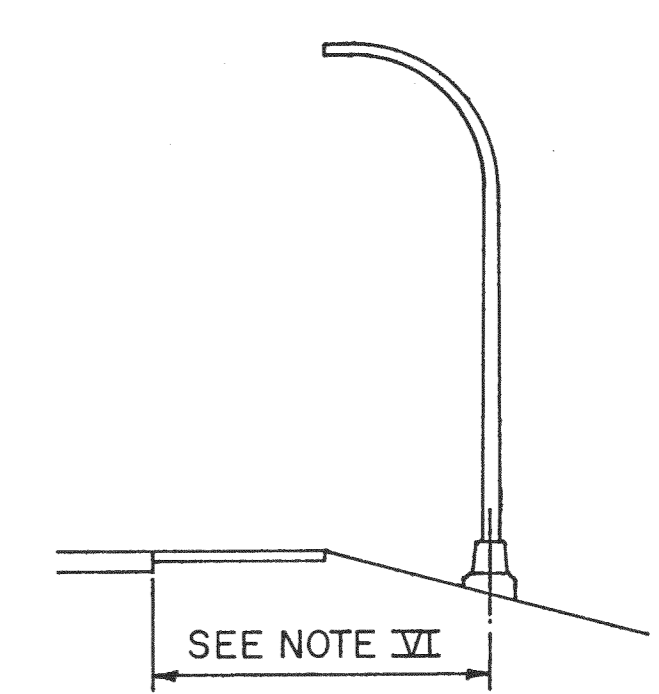


PLACE DOOR ON WIREWAY SIDE. WIREWAY MAY BE ON FRONT, BACK, OR SIDE OF FOUNDATION AS REQ'D. BY THE TRENCHING WHICH SHOULD PERMIT UNIT DUCT TO HAVE AS FEW BENDS AS ARE PRACTICAL.

TOP OF FIBER DUCT SHALL BE FLUSH WITH THE TOP OF FOUNDATION FOR DRAINAGE. 5" I.D. TYPE I FIBER OR POLYSTYRENE DUCT WIRING WINDOW.



**ALTERNATE FOUNDATION**



**NOTE VI:**  
LOW MOUNT POLE FOUNDATION SETBACK FROM EDGE OF PAVEMENT SHALL BE 20' MINIMUM FOR BREAKAWAY BASE POLES; 5' BEHIND GUARDRAIL OR OTHER PROTECTIVE BARRIERS UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ANCHOR BOLT SHALL EXTEND THROUGH NUT 3/8" TO 1". USE SELF-LOCKING NUT AND FLAT WASHER. DO NOT USE LOCK-WASHER. LENGTH ABOVE FOUNDATION SHALL BE ADJUSTED WHEN BREAKAWAY DEVICES ARE USED.

1"  $\phi$  STEEL ANCHOR BOLTS THREADED 4" + AND HOT DIP GALVANIZED 9"  $\pm$  1". 4"  $\pm$  1" HOOK ON THE OTHER END. SEE NOTE III.

**NOTE:**  
USE DIRT REMOVED FROM FOUNDATION TO FILL AROUND FOUNDATION TOP. MAKE TOP OF DIRT LEVEL WITH TOP OF CONCRETE. ANY EXCESS DIRT WILL BE DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.

**NOTE:**  
AFTER POURING CONCRETE, THE FORM SHALL REMAIN UNDISTURBED OVERNIGHT.

THE TOP 15" ONLY SHALL BE FORMED. CONCRETE BOUNDED BY UNDISTURBED EARTH ONLY SHALL FILL THE REMAINDER OF THE HOLE.

**NOTE I:**  
MINIMUM CLEARANCE FROM THE OUTSIDE EDGE OF FOUNDATION TO ANY PART OF THE POLE BASEPLATE SHALL BE 2".

**NOTE II:**  
THE DEPTH OF THE FOUNDATION MAY BE REDUCED 6" FOR EVERY FOOT OF ROCK ENCOUNTERED WITH A MINIMUM DEPTH OF 4'-6". WHEN THE DEPTH OF THE FOUNDATION IS DECREASED TO LESS THAN 6'-0" THE ANCHOR BOLTS SHALL BE CUT, THREADED, AND A STEEL PLATE 20"x20"x 1/4" SHALL BE INSTALLED ON THE ANCHOR BOLTS 6" ABOVE THE BOTTOM OF THE EXCAVATION. THE COST SHALL BE INCIDENTAL TO THE FOUNDATION.

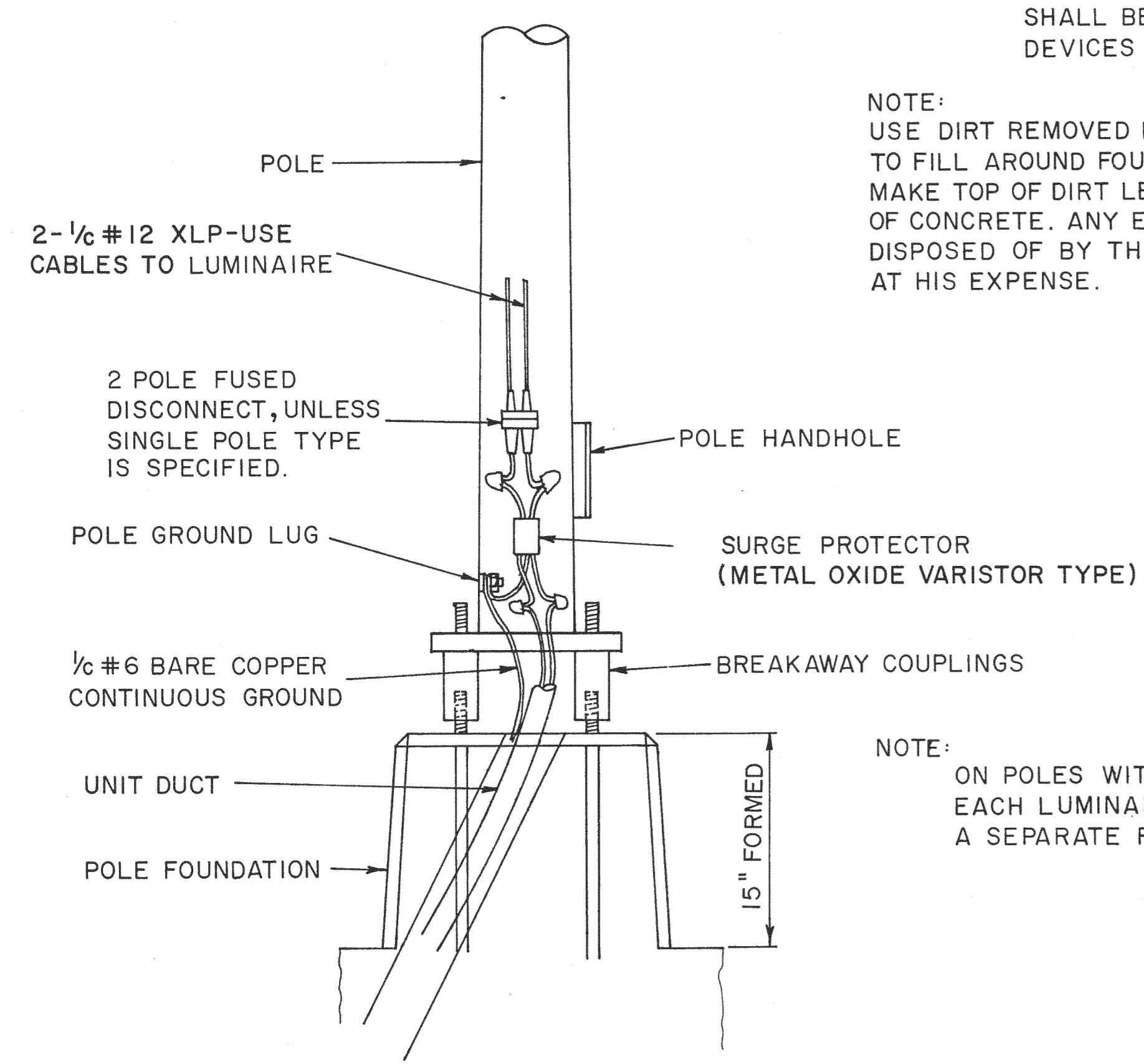
**NOTE III:**  
ON PARAPET WALLS USE 1/4"  $\phi$  ANCHOR BOLTS. USE SELF-LOCKING NUT AND FLAT WASHER. DO NOT USE LOCKWASHER. (FOR DETAILS SEE STANDARD III/2.35 OF BRIDGE DESIGN MANUAL.

**NOTE IV:**  
BEND RADIUS SHALL BE FOUR TIMES BOLT DIAMETER.

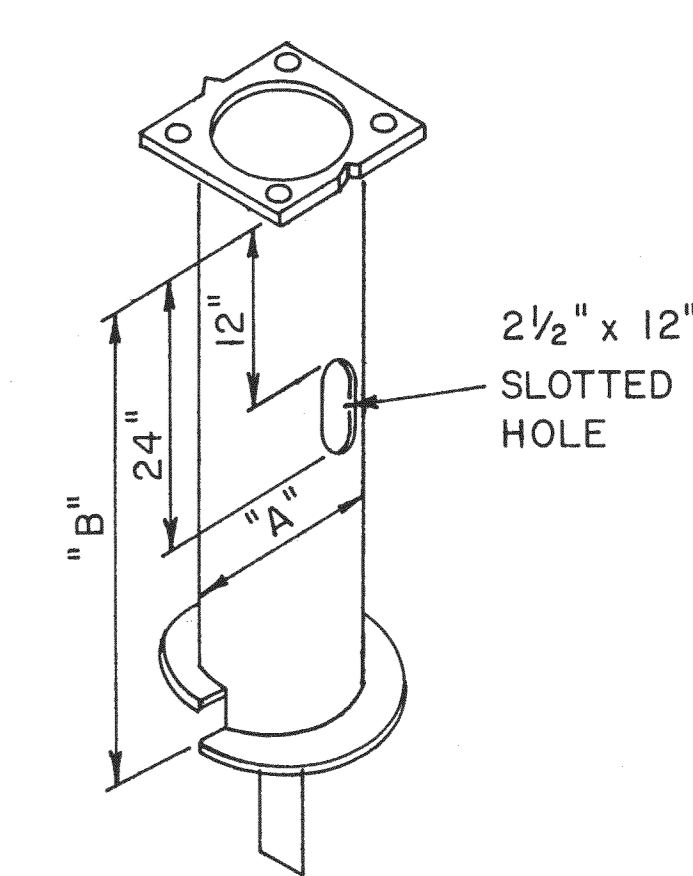
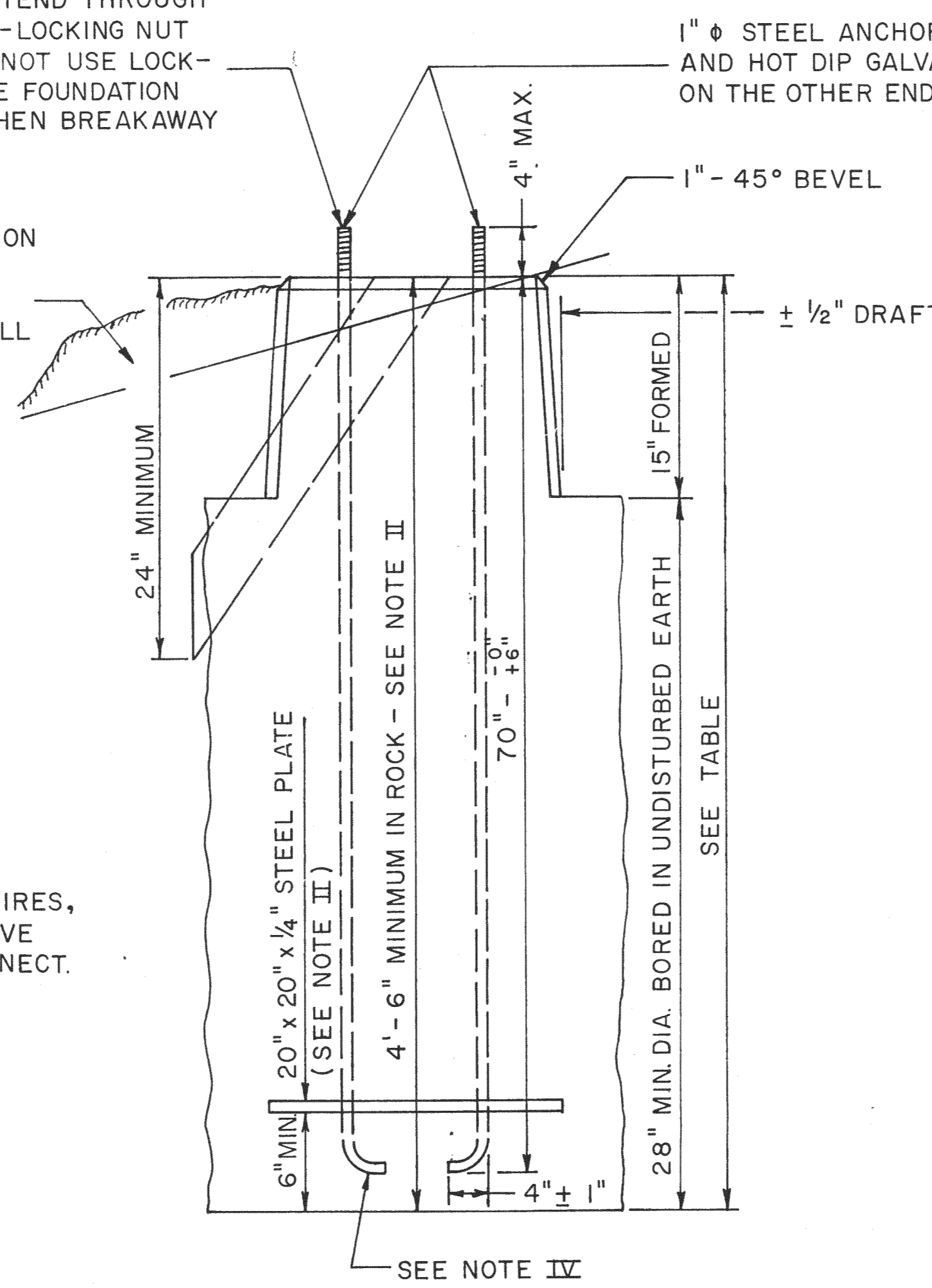
**NOTE V:**  
CONNECT GROUND WIRES TO POLE BASE GROUND LUG, NOT ANCHOR BOLTS OR TRANSFORMER BASE.

**DESIGN DATA, STEEL FOUNDATION**

BOLT CIRCLE	"A"	"B"	MOUNTING HEIGHT
15"	10"	72"	55'
15"	10"	60"	50'
15"	8"	60"	45'
11 1/2"	8"	60"	35'



**POLE BASE MOUNTING & WIRING**



**POLE FOUNDATION STEEL**

DRAWN FEB. 27, 1984	BY: J. L. PUTNAM
REV. BY J.L.P.	8-3-84
REV. BY J.L.P.	8-29-84
REV. BY J.L.P.	1-21-85
REV. BY J.L.P.	10-28-85

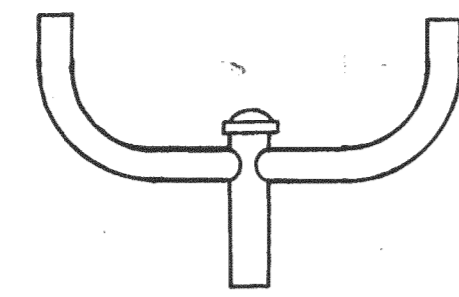
**LIGHT POLE FOUNDATION**

NOTE: SINGLE OR TWIN ARM  
ASSEMBLY SHALL BE  
TILTED 3° ABOVE HORIZONTAL

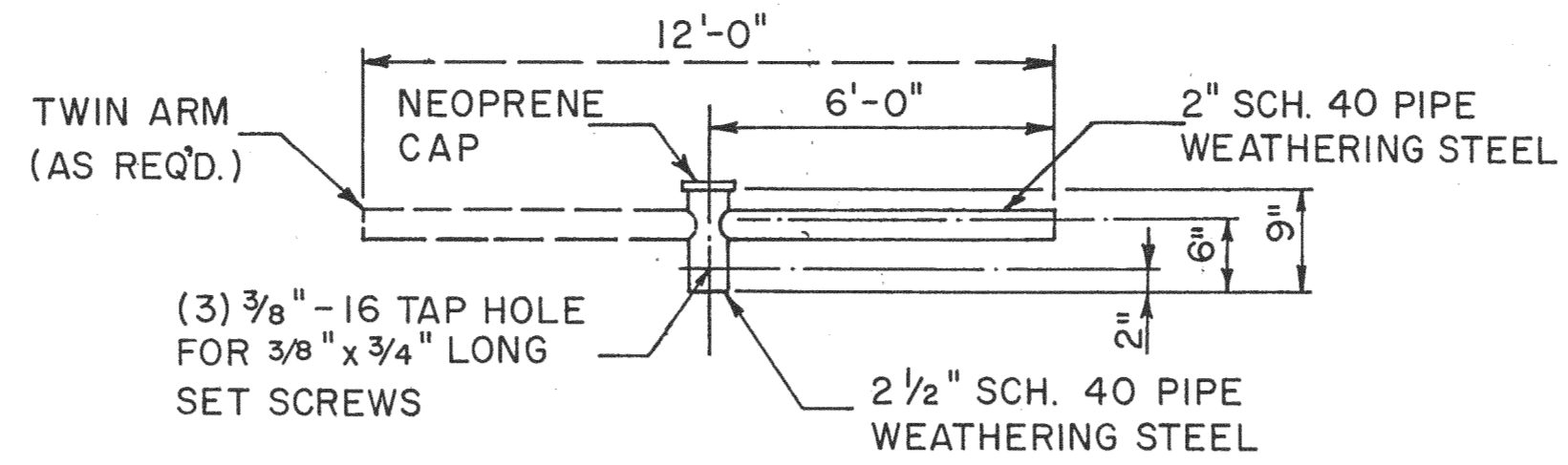
ROUTE	SECTION	COUNTY	TOT. SHTS.	SHEET #
FAP 786	109 BD	LA SALLE	68	19
FED. RD. DIST. #7	ILLINOIS	FED. AID PROJ.		

SHEET #  
SHEETS

"INSTALL AND ORIENT ARM BRACKET OVER  
POLE TENON AND FIRMLY HAND TIGHTEN  
THE TWO SET SCREWS. USE THIRD HOLE IN  
ARM BRACKET AS A GUIDE TO DRILL A 2 1/64"  
DIAMETER HOLE THROUGH TENON.  
INSTALL AND TIGHTEN SELF-TAPPING SCREW.  
TIGHTEN SET SCREWS AN ADDITIONAL 1/4 TO  
3/8 TURN WITH HEX KEY (NOT PROVIDED).  
INSTALL LOCKNUTS ON SET SCREWS IF  
THREADED PROJECTION ALLOWS."

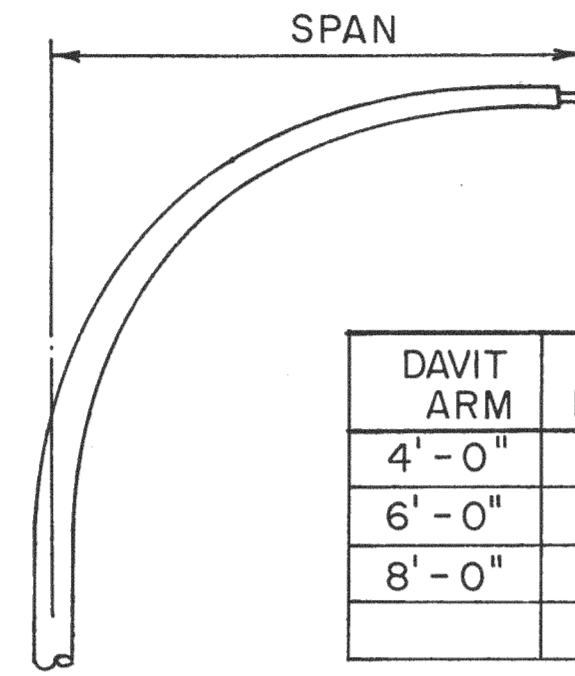


TWIN TENON



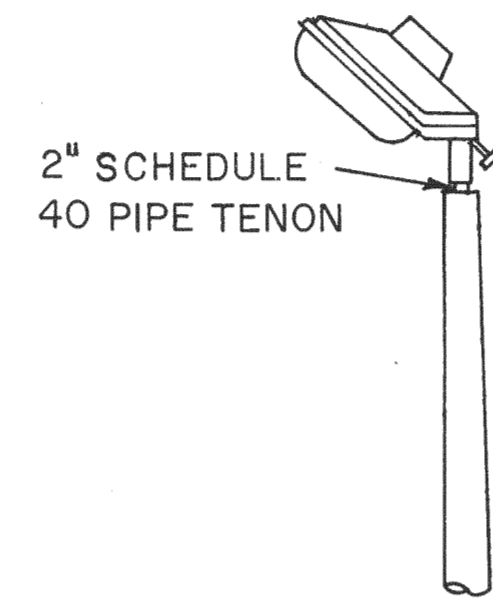
TENON MOUNTED BRACKET ARM

- ① LUMINAIRE
- ② WOOD POLE, CLASS 3 OR BETTER
- ③ 2 1/2" GALV. STEEL CONDUIT
- ④ SINGLE OFFSET POLE BAND
- ⑤ CONDUIT BUSHING
- ⑥ CABLE CLAMPS ON 2'-0" CENTERS
- ⑦ 3/8" #12 TYPE USE CABLE
- ⑧ 1" GALV. STEEL CONDUIT 10'-0" IN LENGTH
- ⑨ 5/8" φ HOT DIPPED GALVANIZED BOLT WITH FLAT WASHER & LOCKNUT (3 REQ'D.)
- ⑩ CONDUIT CLAMPS ON 3'-0" CENTERS
- ⑪ UNIT DUCT
- ⑫ THREADED REDUCER
- ⑬ "C" CONDULET, THREADED
- ⑭ 1 1/2" GALV. STEEL CONDUIT FOR 1 UNIT DUCT OR 3" GALV. STEEL CONDUIT FOR 2 OR 3 UNIT DUCTS.

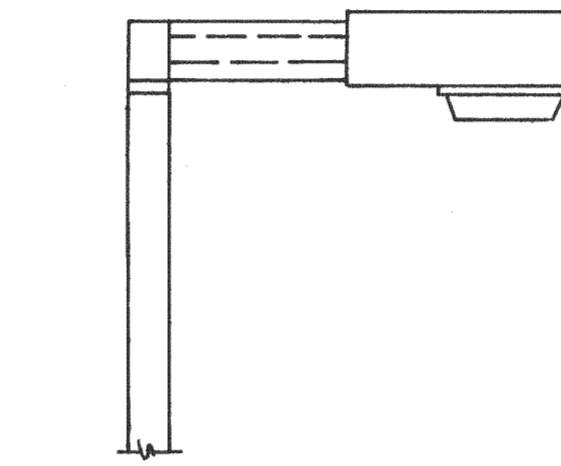


DAVIT ARM

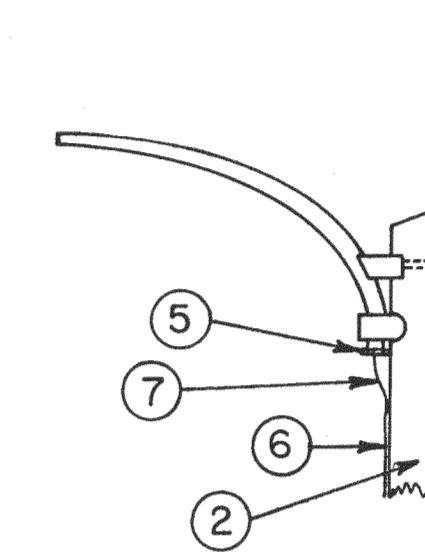
DAVIT ARM	POLE RADIUS
4'-0"	2'-6"
6'-0"	4'-0"
8'-0"	5'-6"



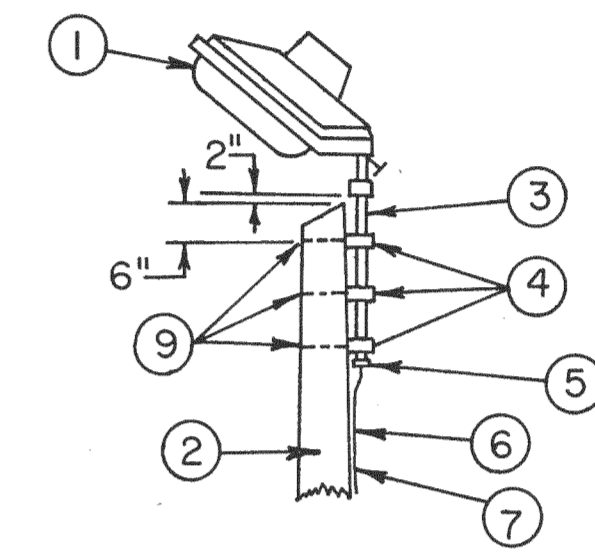
TENON



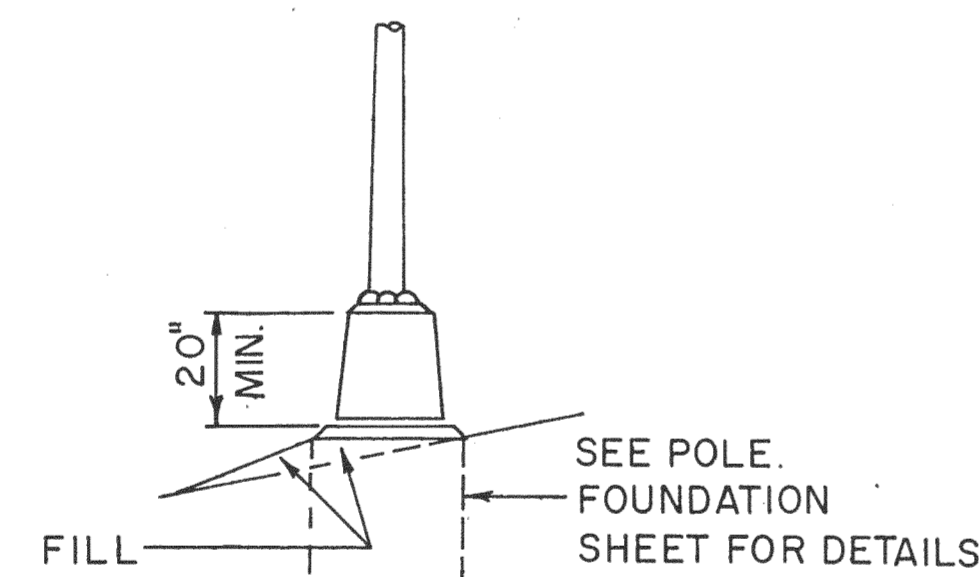
SHORT BRACKET



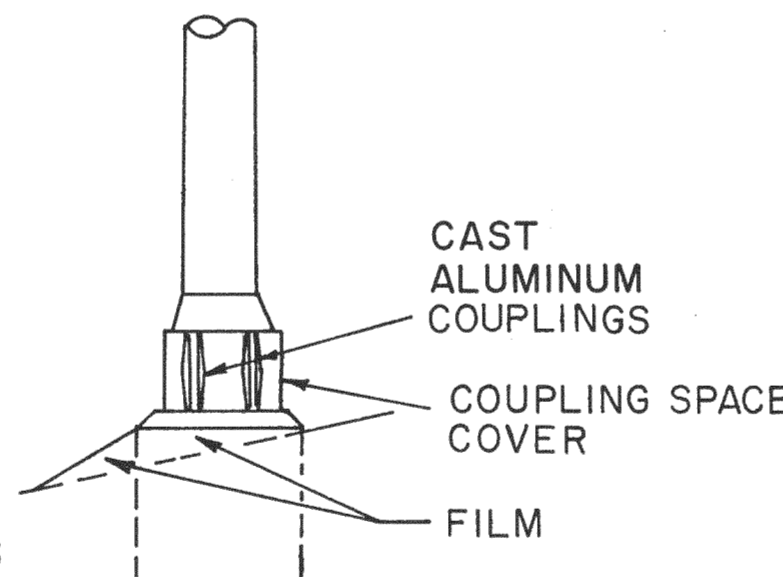
MAST ARM



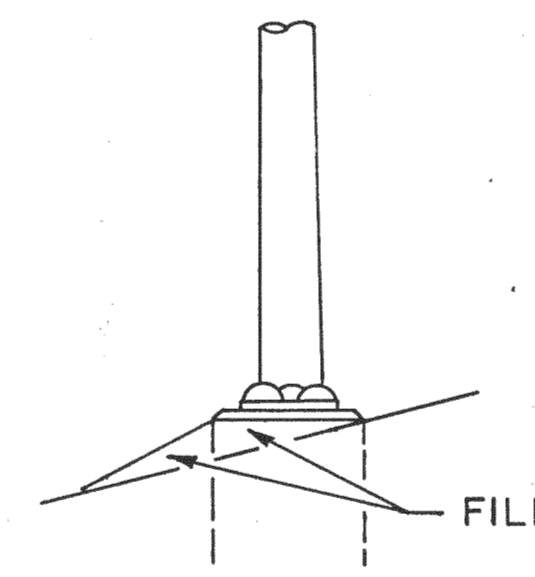
TENON



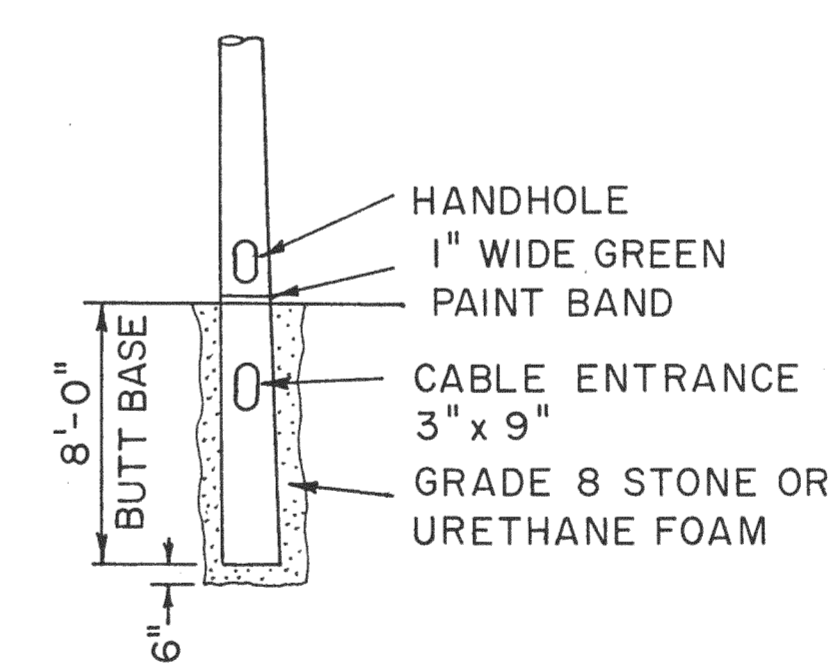
TRANSFORMER BASE



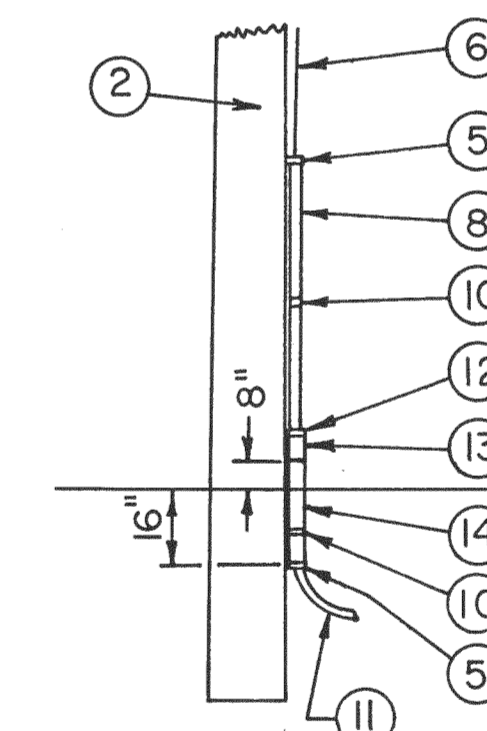
BREAKAWAY COUPLING



ANCHOR



BUTT BASE



POLE, WOOD

POLE LENGTH	DEPTH IN GROUND
65'	12'
60'	10'
55'	9'
50'	8'
45'	7'
40'	6.5'
35'	6'
30'	5.5'

FRANGIBLE

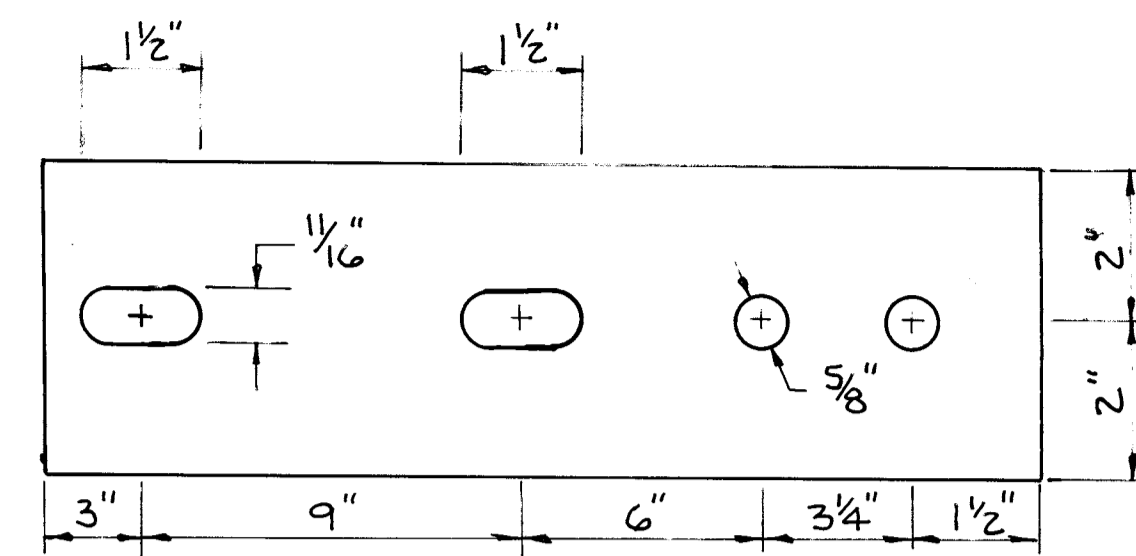
METAL

OR

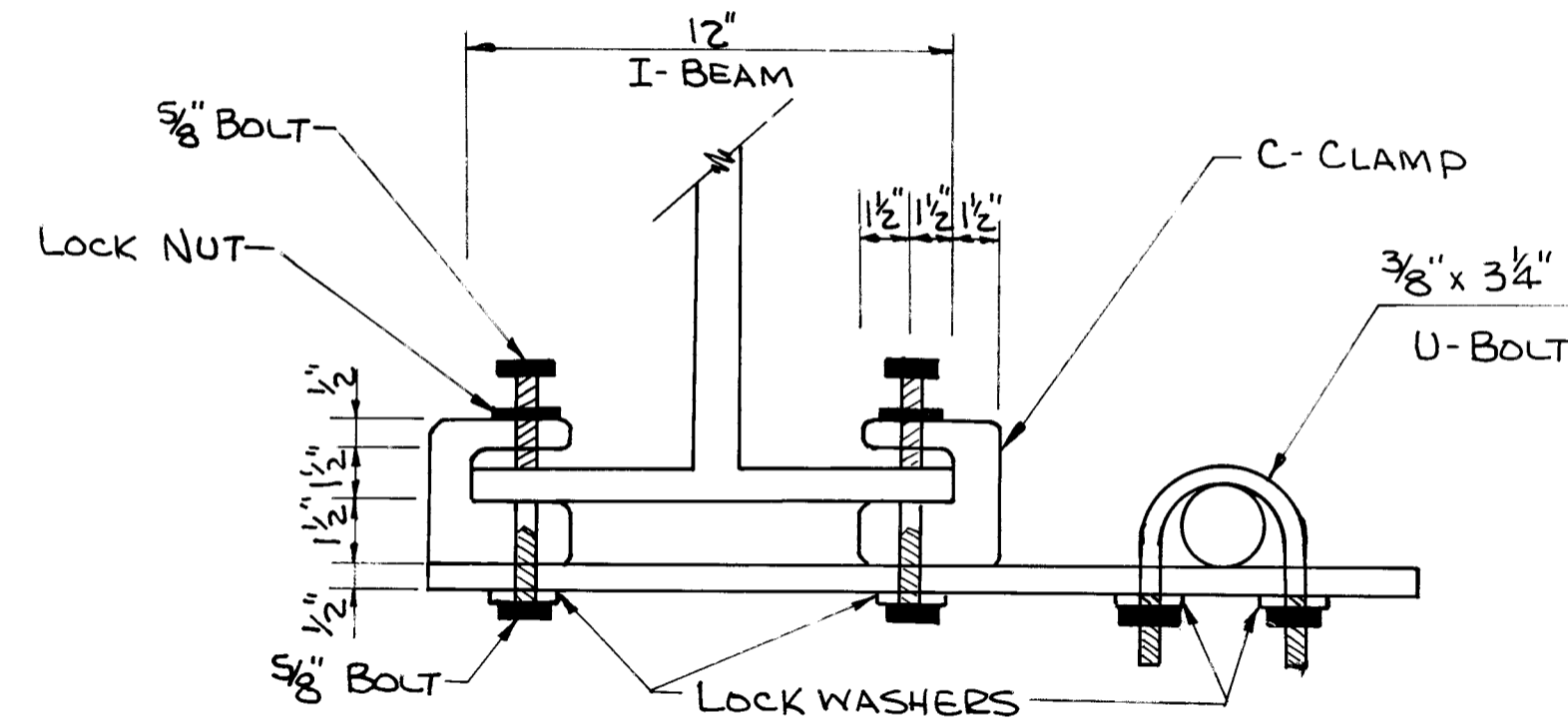
CONCRETE

DRAWN JUNE 1, 1984 BY J. L. PUTNAM	
REV. BY JLP	1-30-85
REV. BY JLP	4-24-85

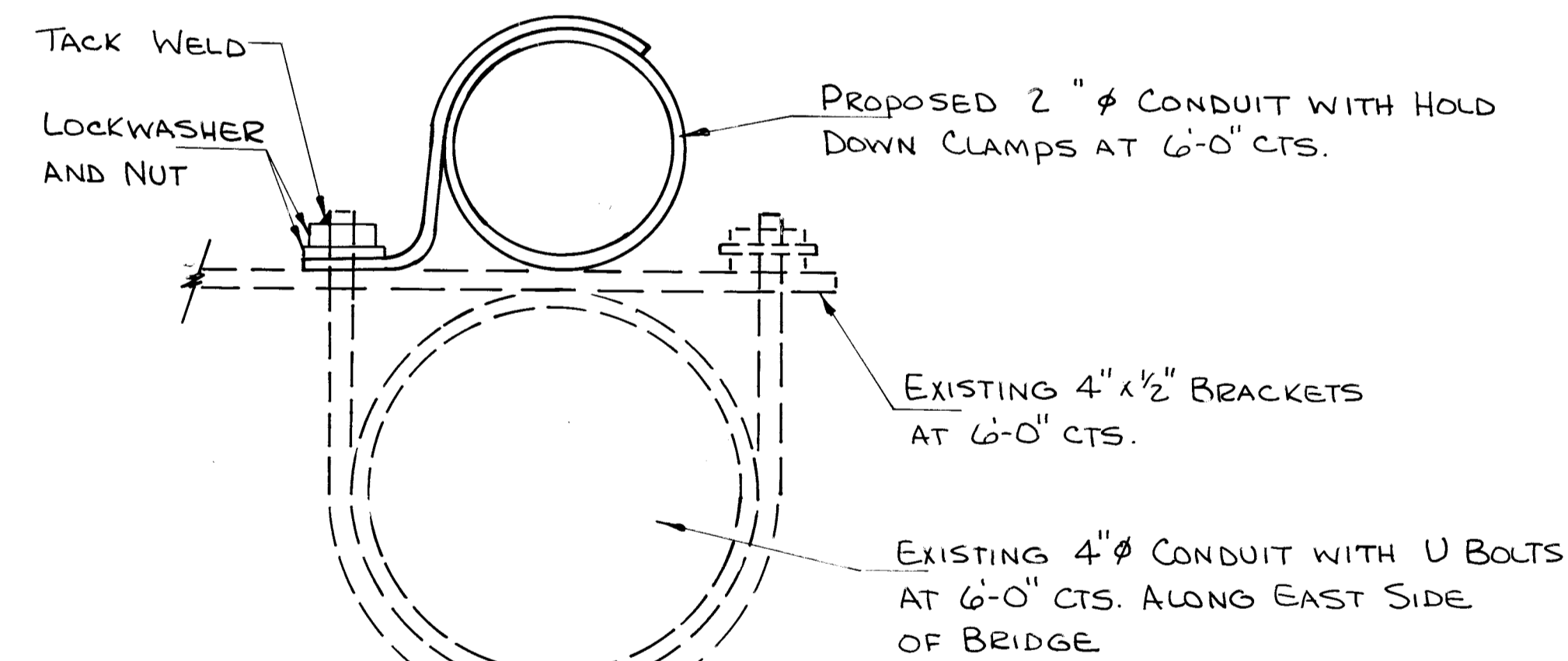
POLE STANDARDS



C-CLAMP SHALL BE DRILLED AND THREADED FOR 5/8" (STANDARD THREAD) BOLT TOP AND BOTTOM. C-CLAMP MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. BOLTS, LOCK NUTS, AND LOCK WASHERS ARE TO BE PROVIDED WITH C-CLAMPS.



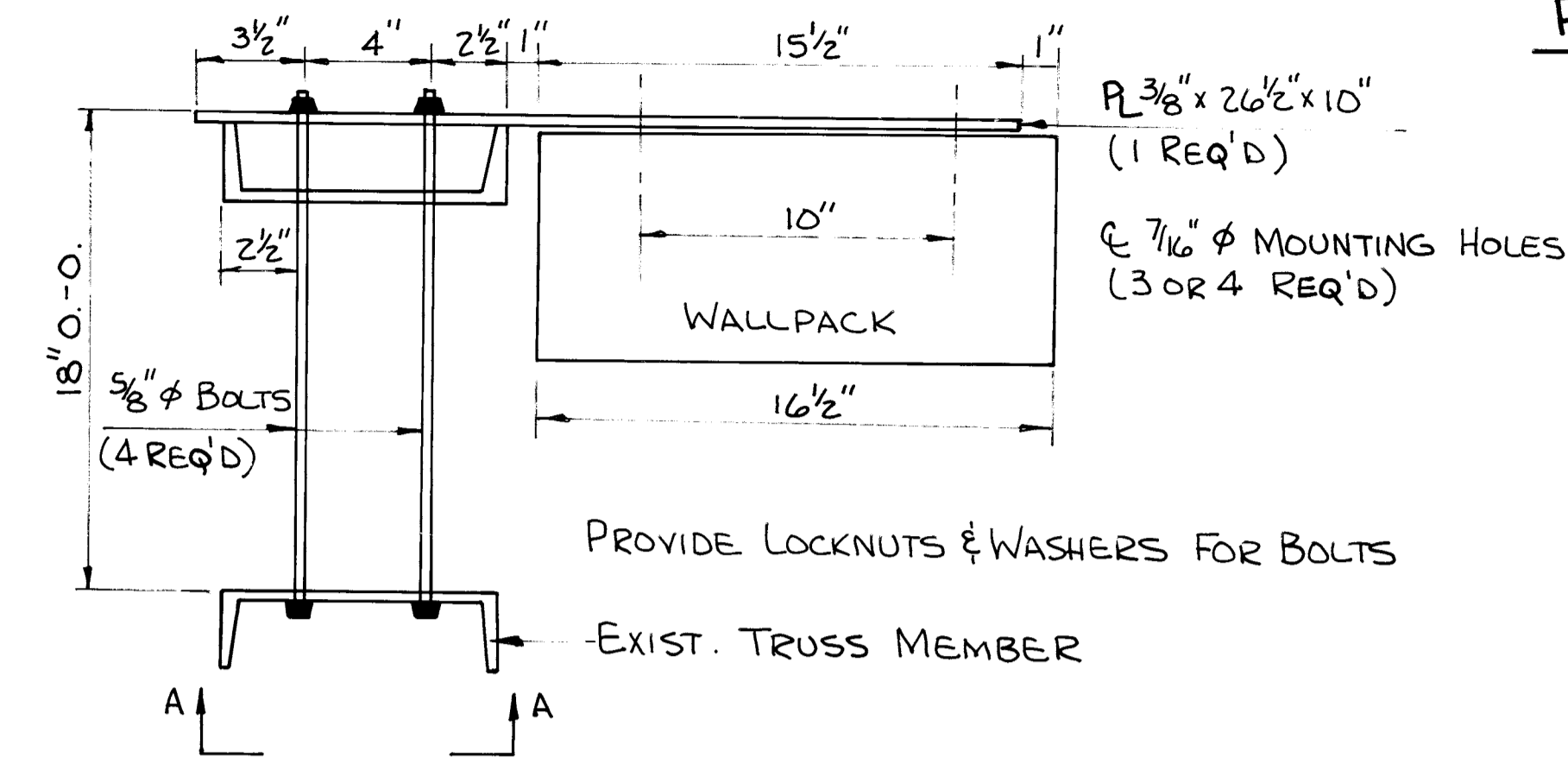
CONDUIT ATTACHED TO STRUCTURE  
SPANS 1, 2, 3, 4, 5, 9, 10, 11, 12 & 13



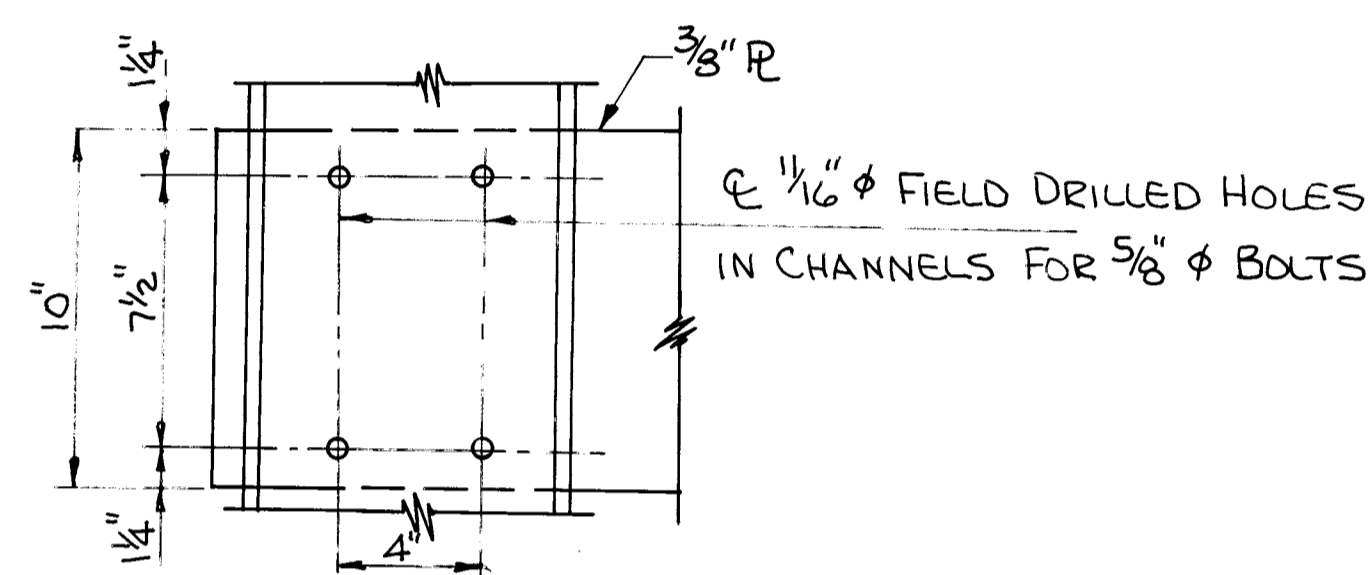
PROPOSED METHOD OF INSTALLING ELECTRICAL CONDUIT  
CONDUIT ATTACHED TO STRUCTURE SPANS 6, 7 & 8

**NOTES**

- 1) ALL MEASUREMENTS FOR ATTACHMENTS ARE APPROXIMATE CONTRACTOR TO TAKE MEASUREMENTS ON BRIDGE AND FABRICATE PIECES TO FIT.
- 2) ALL PIECES PLACED ON BRIDGE ARE TO BE GALVANIZED INCLUDING NUTS, BOLTS AND WASHERS
- 3) CONTRACTOR UNDER NO CIRCUMSTANCES TO DRILL INTO OR WELD ANY PIECES TO BRIDGE, EXCEPT LIGHT FIXTURE ATTACHMENTS TO APPROACH AND VERTICALS.
- 4) CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT EXCEEDING 5 FEET, EXCEPT THAT CONDUIT MOUNTED ON THE IBT CONDUIT SHALL MATCH IBT SUPPORTS.



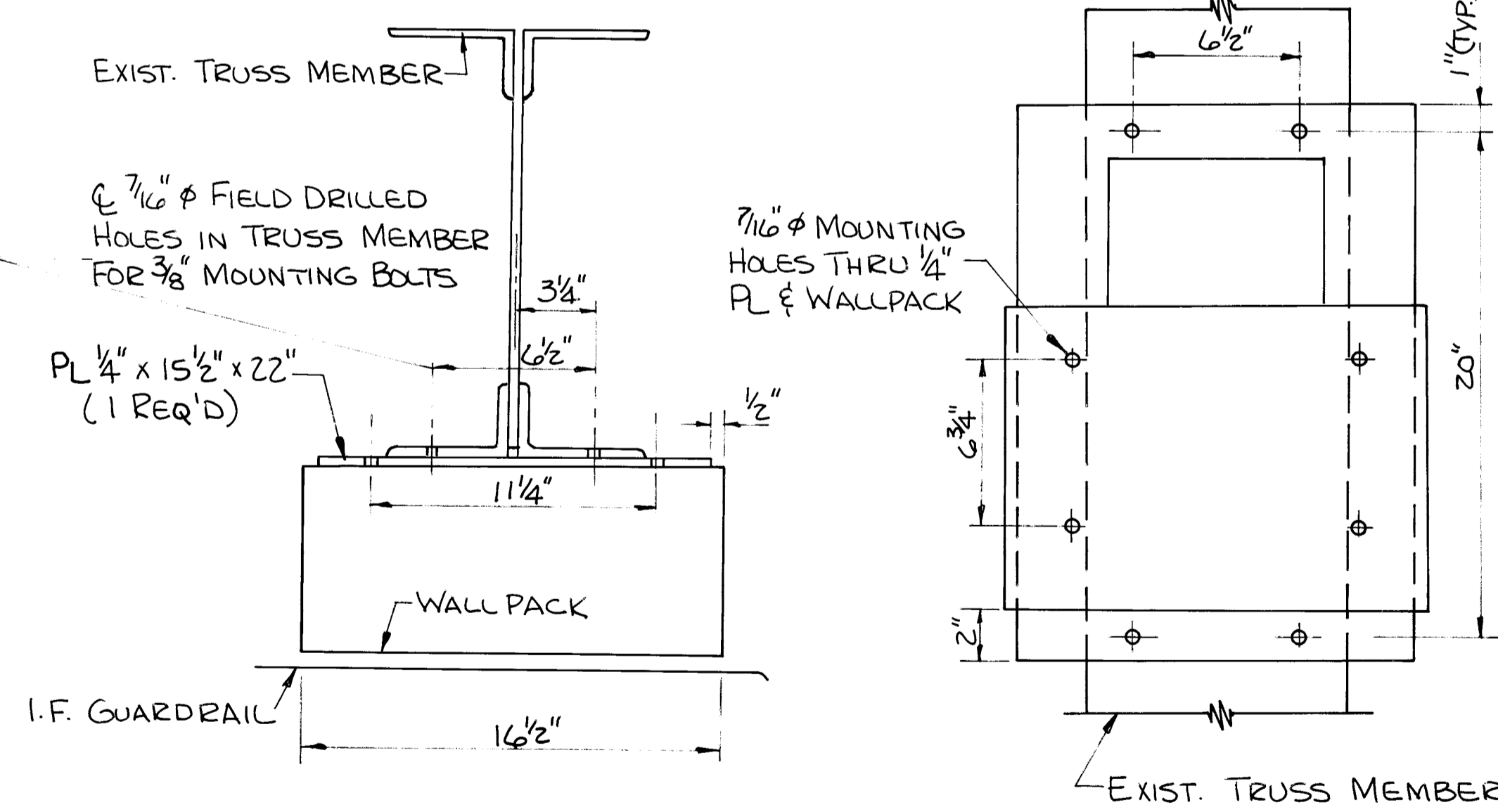
**PLAN**



**VIEW A-A**

WALLPACK AT 200' TRUSS CENTER VERTICALS  
(3 LOCATIONS)

**LUMINAIRE BRIDGE MOUNTING HARDWARE**

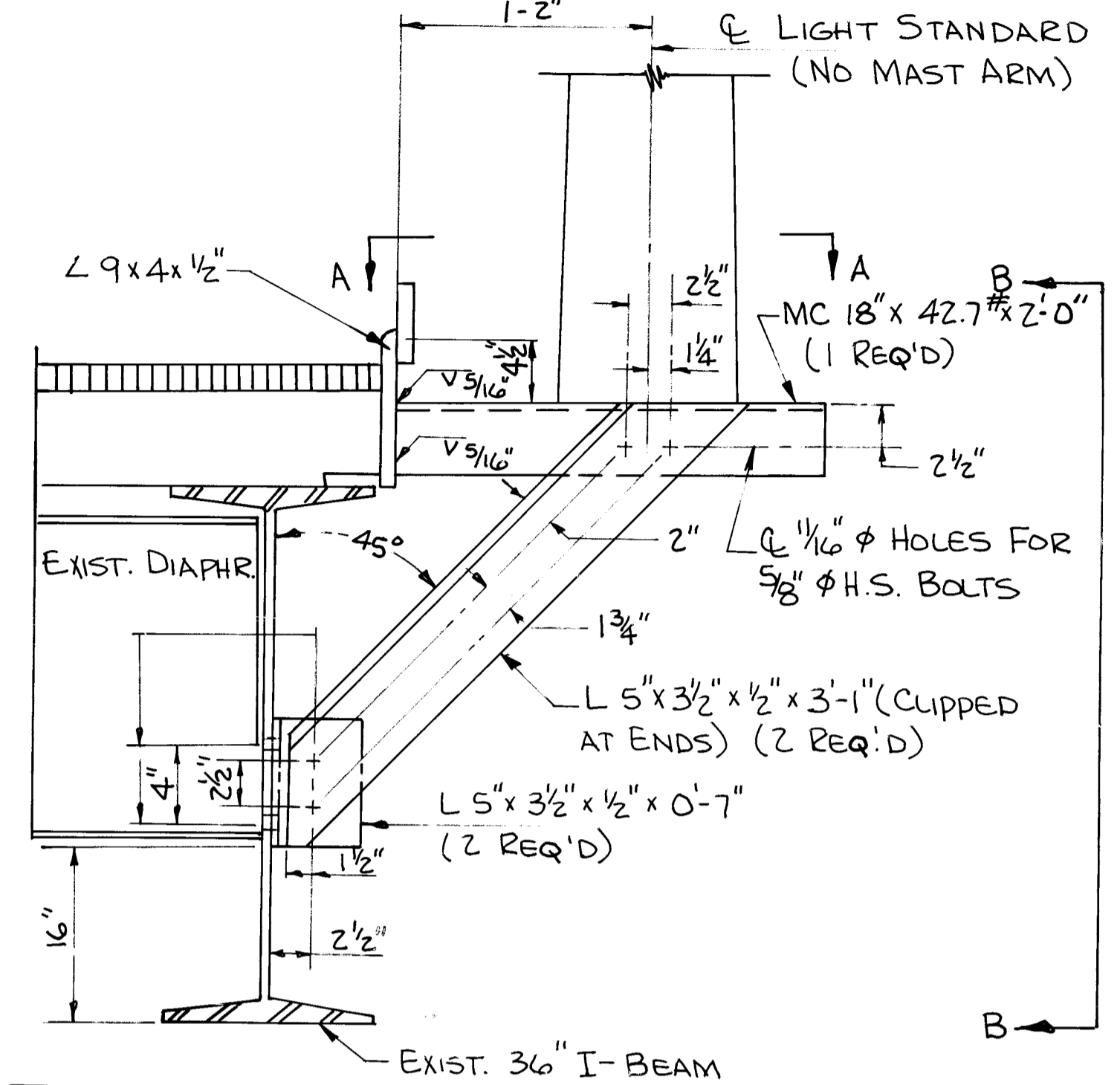


**PLAN**

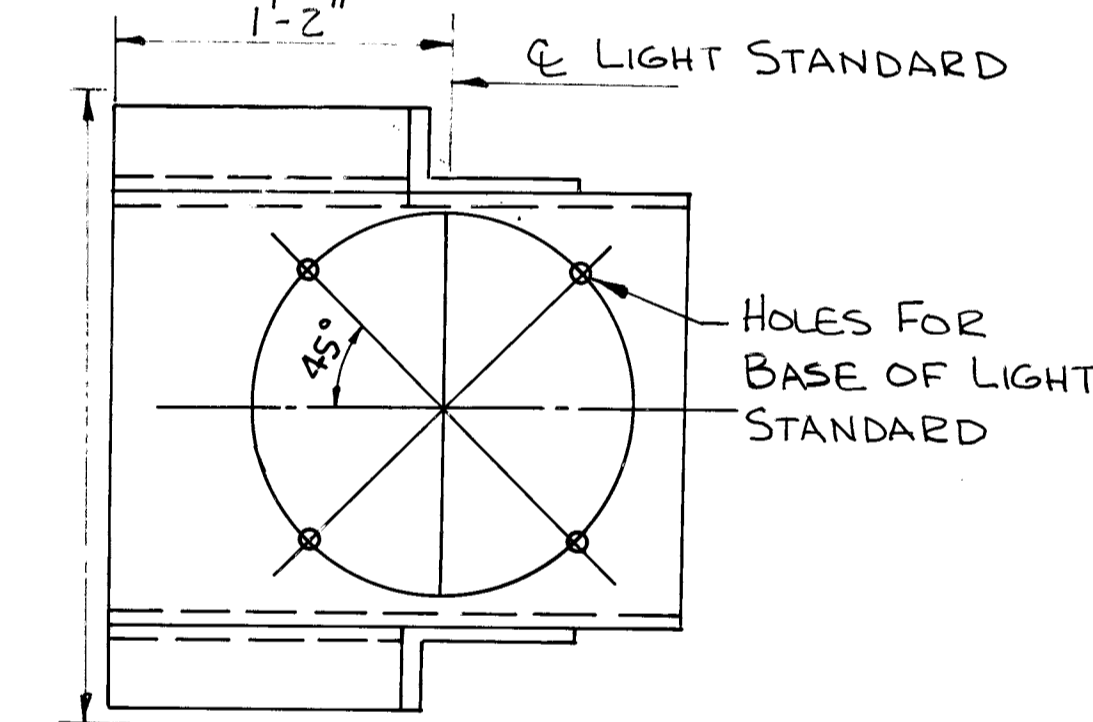
**ELEVATION**

WALLPACK ATTACHMENT AT END VERTICALS (L1 & L7) OF 200' TRUSSES (6 LOCATIONS) & AT ALL VERTICALS OF 363' TRUSS (5 LOCATIONS)

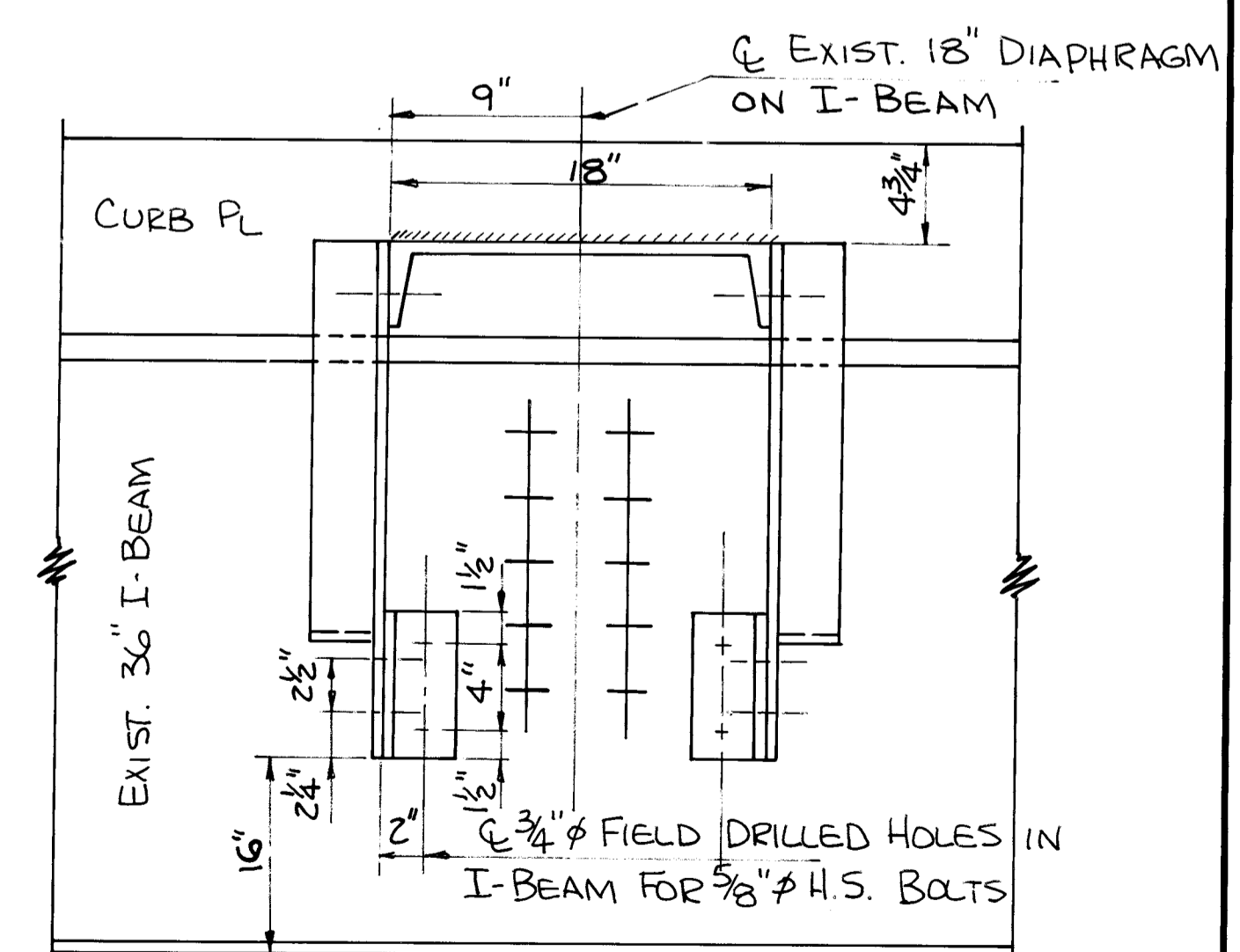
**POLE MOUNTING BRACKET FOR APPROACH BEAMS**



**POLE FOUNDATION SPECIAL**

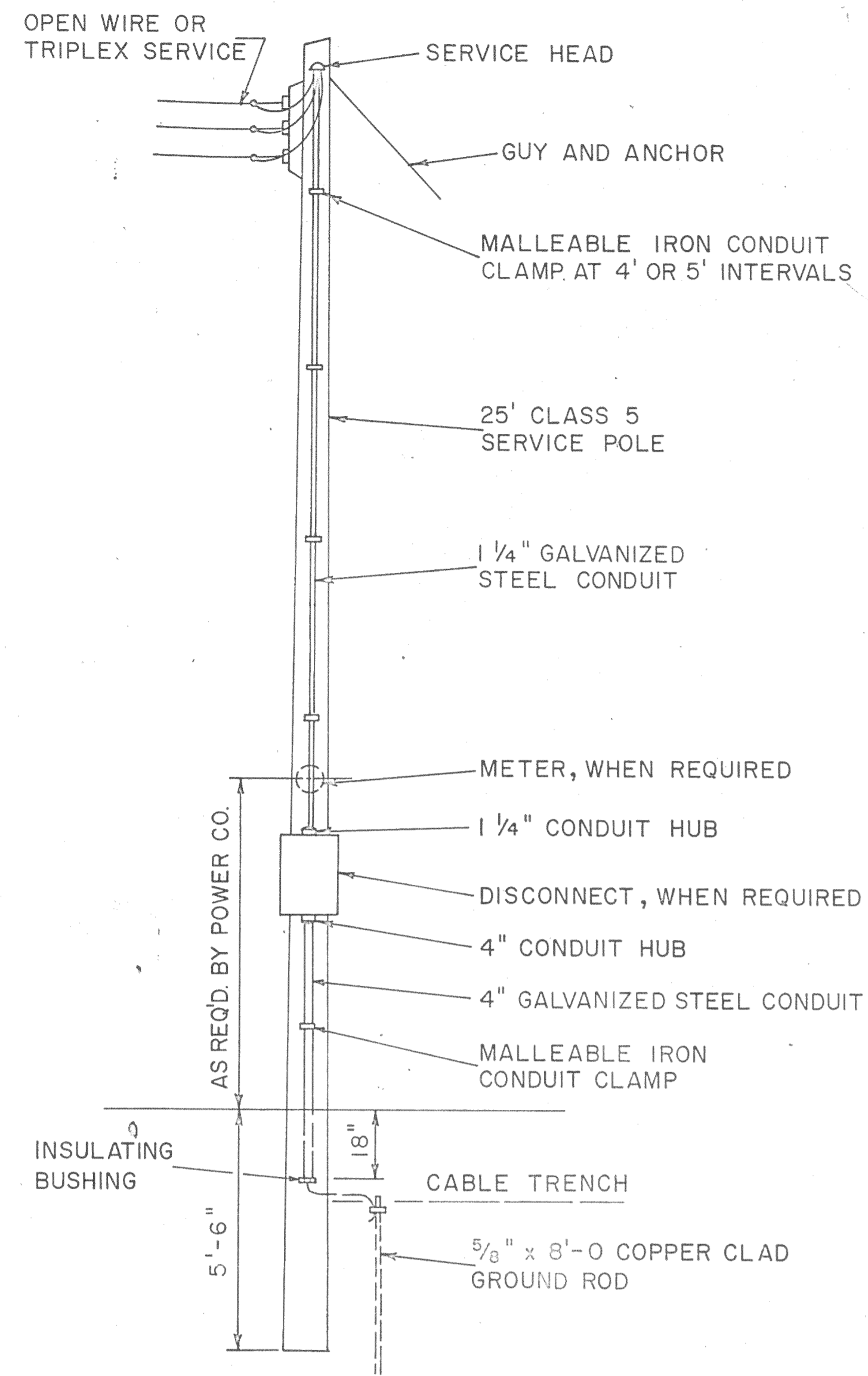


**VIEW A-A**

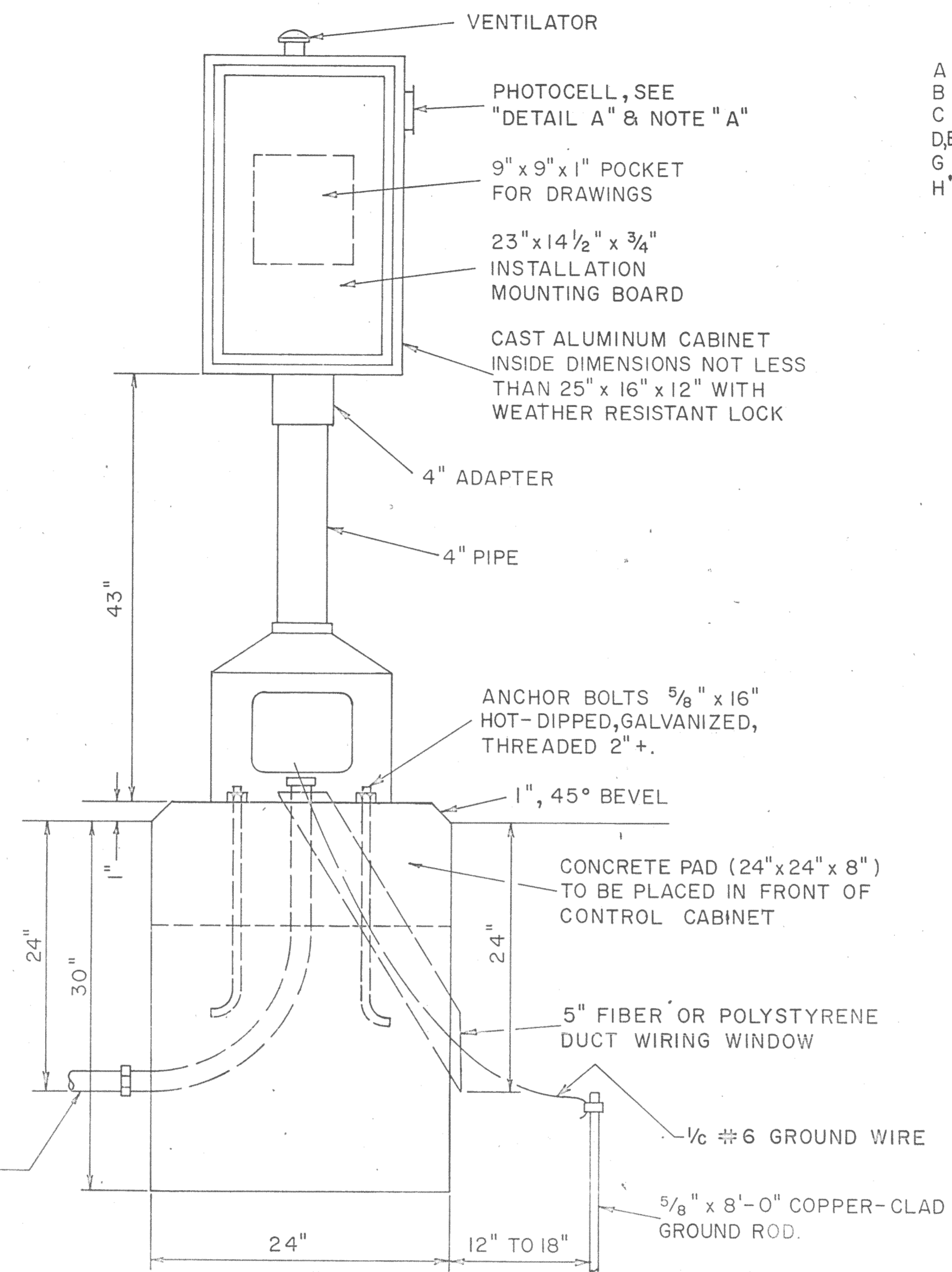


**VIEW B-B**

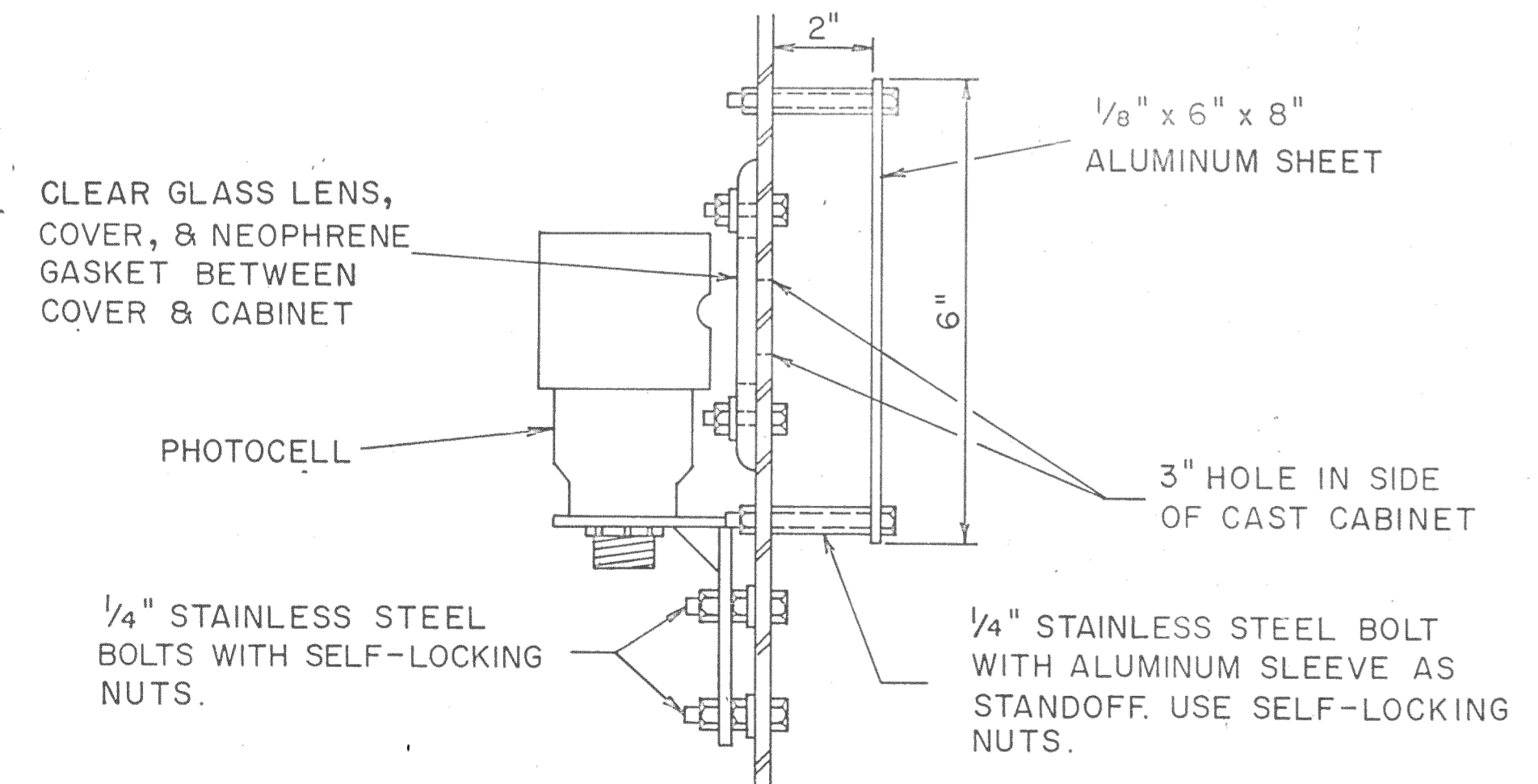
ROUTE	SECTION	COUNTY	TOT. SHTS	SHEET #	SHEET #
FA.P. 786	109 BD	LA SALLE	60	21	
					SHEETS



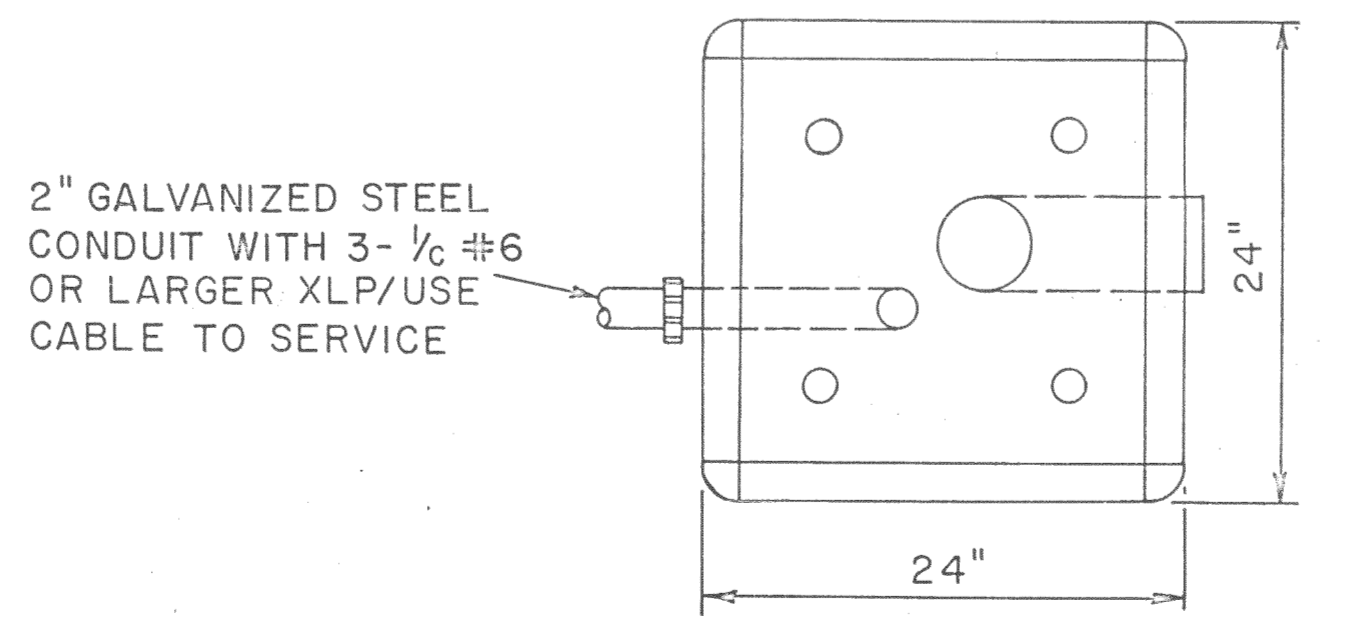
**SERVICE POLE (REQ'D)**  
LOCATE ADJACENT TO R.O.W. LINE



**CONTROL INSTALLATION**

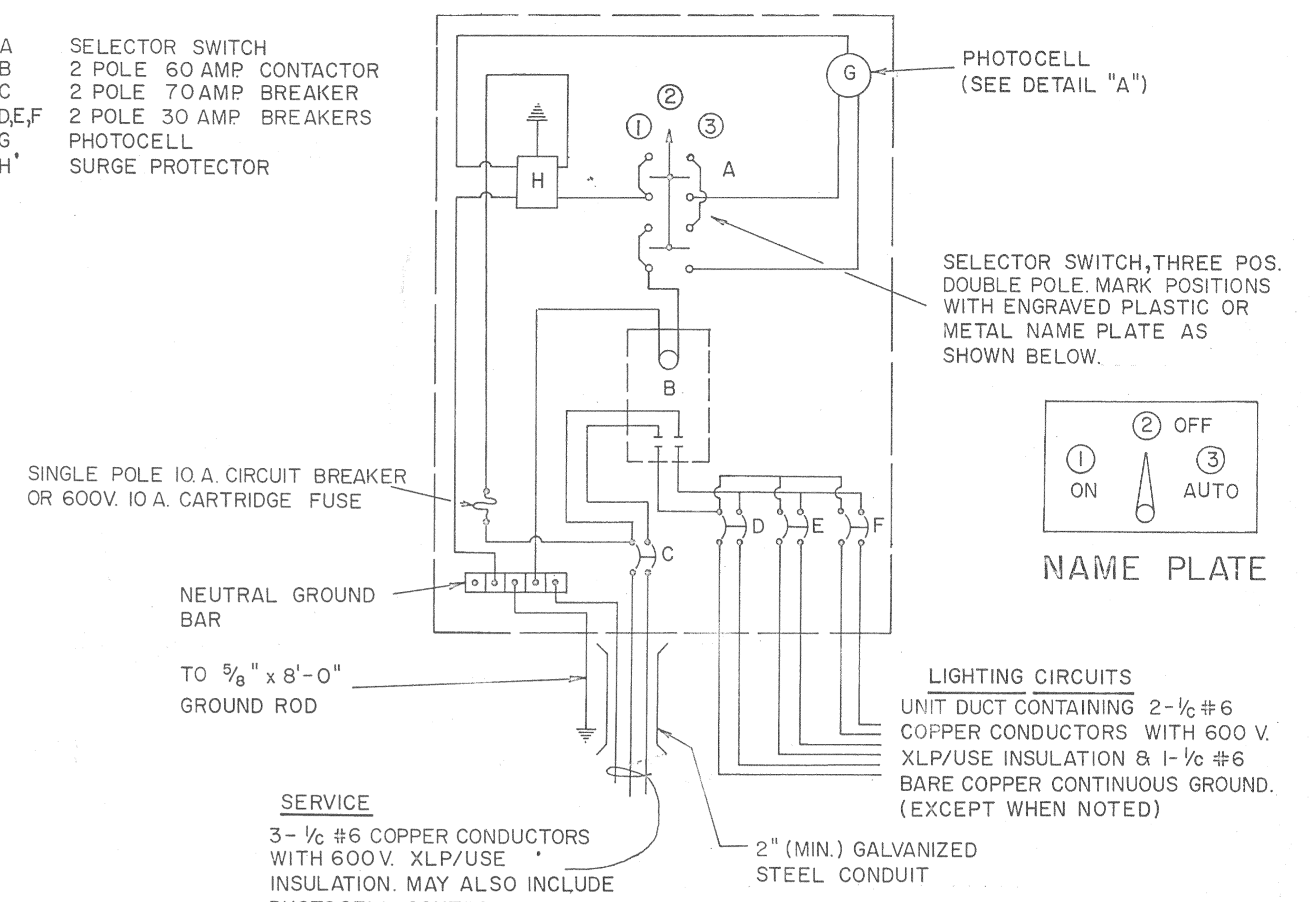


**DETAIL "A"**



**TOP OF FOUNDATION**

- A SELECTOR SWITCH
- B 2 POLE 60 AMP CONTACTOR
- C 2 POLE 70 AMP BREAKER
- D,E,F 2 POLE 30 AMP BREAKERS
- G PHOTOCELL
- H SURGE PROTECTOR



**WIRING DIAGRAM**

NOTE: WIRING SHALL BE PANEL BOARD FASHION. ALL BENDS SHALL BE RIGHT ANGLES. ALL RUNS SHALL BE VERTICAL OR PARALLEL TO PANEL BOARD. WIRES SHALL BE GROUPED OR LACED.

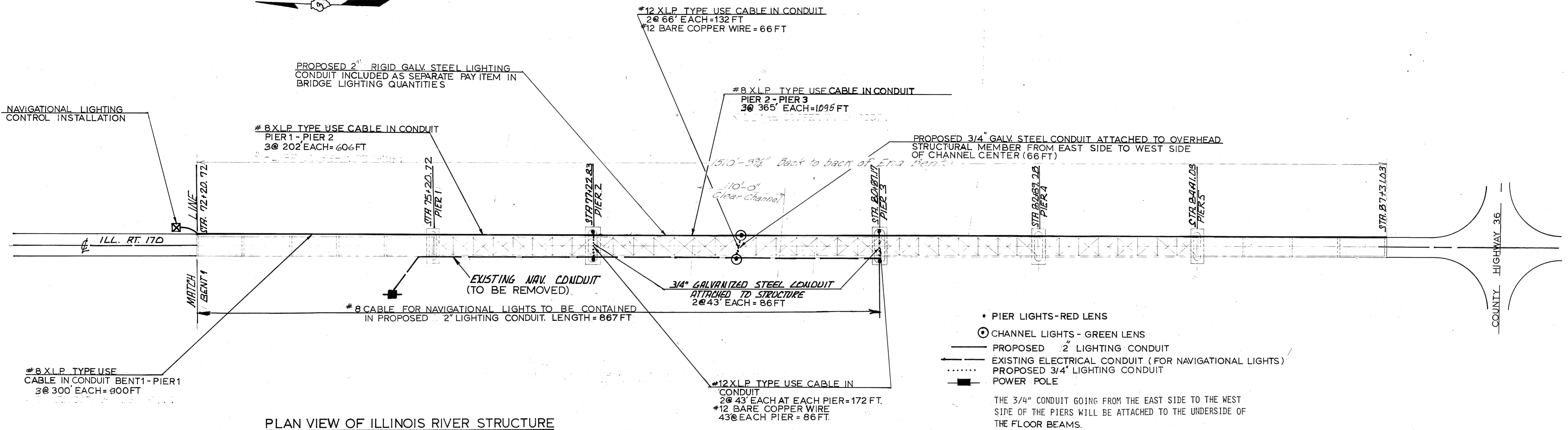
NOTE "A" WHERE UNMETERED SERVICE IS PROVIDED BY THE POWER COMPANY, THE PHOTOCELL, RECEPT, & WINDOW COVER MAY BE OMITTED. THE CONTRACTOR SHALL FURNISH AND INSTALL 2- 1/8" #12 AND AERIAL WIRE IF REQUIRED FROM THE CONTROL INSTALLATION TO THE POWER COMPANY'S PHOTOCELL CONTROL AND CONNECT PER WIRING DIAGRAM.

NOTE "B" THE UNDERGROUND SERVICE SHALL BE 30' MINIMUM AND 150' MAXIMUM. TOTAL AERIAL & UNDERGROUND SERVICE BETWEEN THE CONTROL INSTALLATION AND PRIMARY TRANSFORMER SHALL BE 250'.

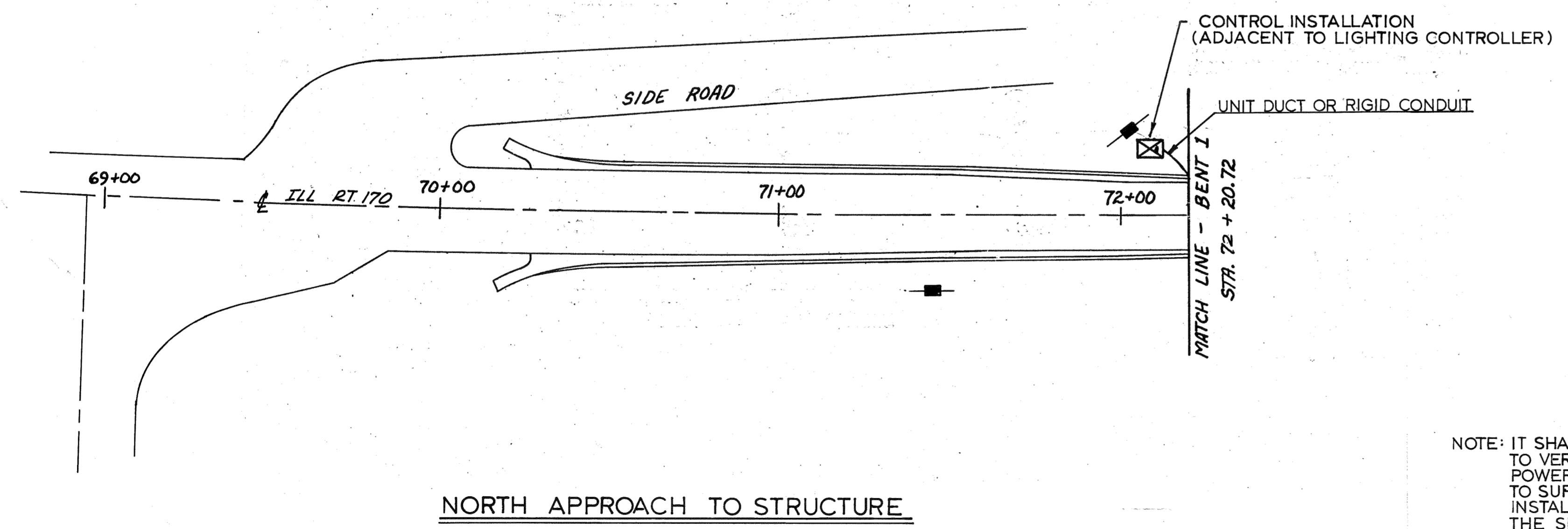
- 240 V. SERVICE
- 480 V. SERVICE

DRAWN FEB. 15, 1983	
BY J. L. PUTNAM	
J.L.P.	6-22-83

**CONTROL INSTALLATION**  
TYPE CB-RCS-60



**PLAN VIEW OF ILLINOIS RIVER STRUCTURE**



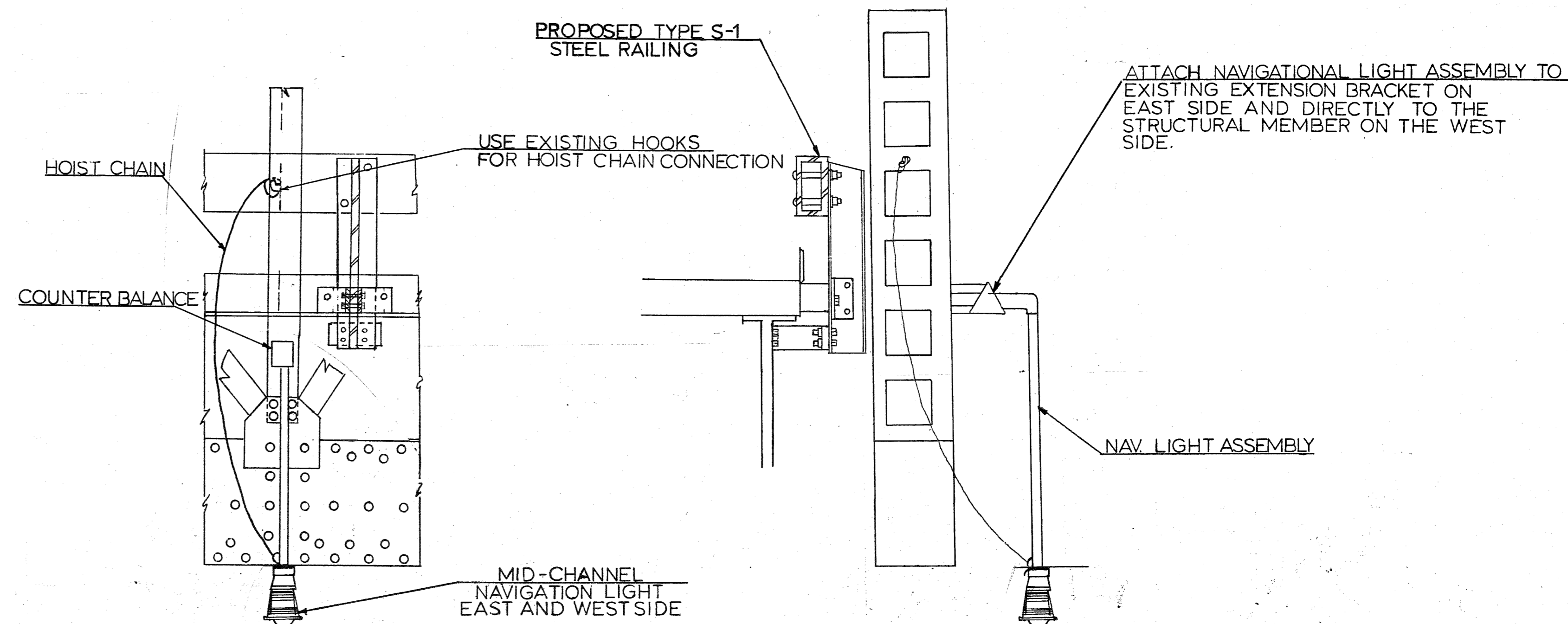
**NORTH APPROACH TO STRUCTURE**

NOTE: IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THE LOCATION OF THE NEAREST POWER SOURCE APPROVED BY THE UTILITY, TO SUPPLY SUFFICIENT POWER TO THE CONTROL INSTALLATION. THE SERVICE INSTALLATION WILL BE INCLUDED IN THE LUMP SUM PRICE FOR NAVIGATIONAL LIGHTING.

NAVIGATIONAL LIGHTING ITEM	QUANTITIES	
	UNIT	TOTAL
CONTROL INSTALLATION (CBCRS 60)	EACH	1
UNIT DUCT, 2-600 V XLP #8 1" POLYETHYLENE	LIN. FT.	25
PIER LIGHTS	EACH	4
CHANNEL LIGHTS	EACH	2
CONDUIT ATTACHED TO STRUCTURE, 3/4" DIA., GALVANIZED STEEL	LIN. FT.	152
ELECTRIC CABLE IN CONDUIT, 600 V (XLP-TYPE USE) 1/C NO. 12	LIN. FT.	304
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	LIN. FT.	2676
BARE COPPER WIRE, 1/C NO. 12	LIN. FT.	152

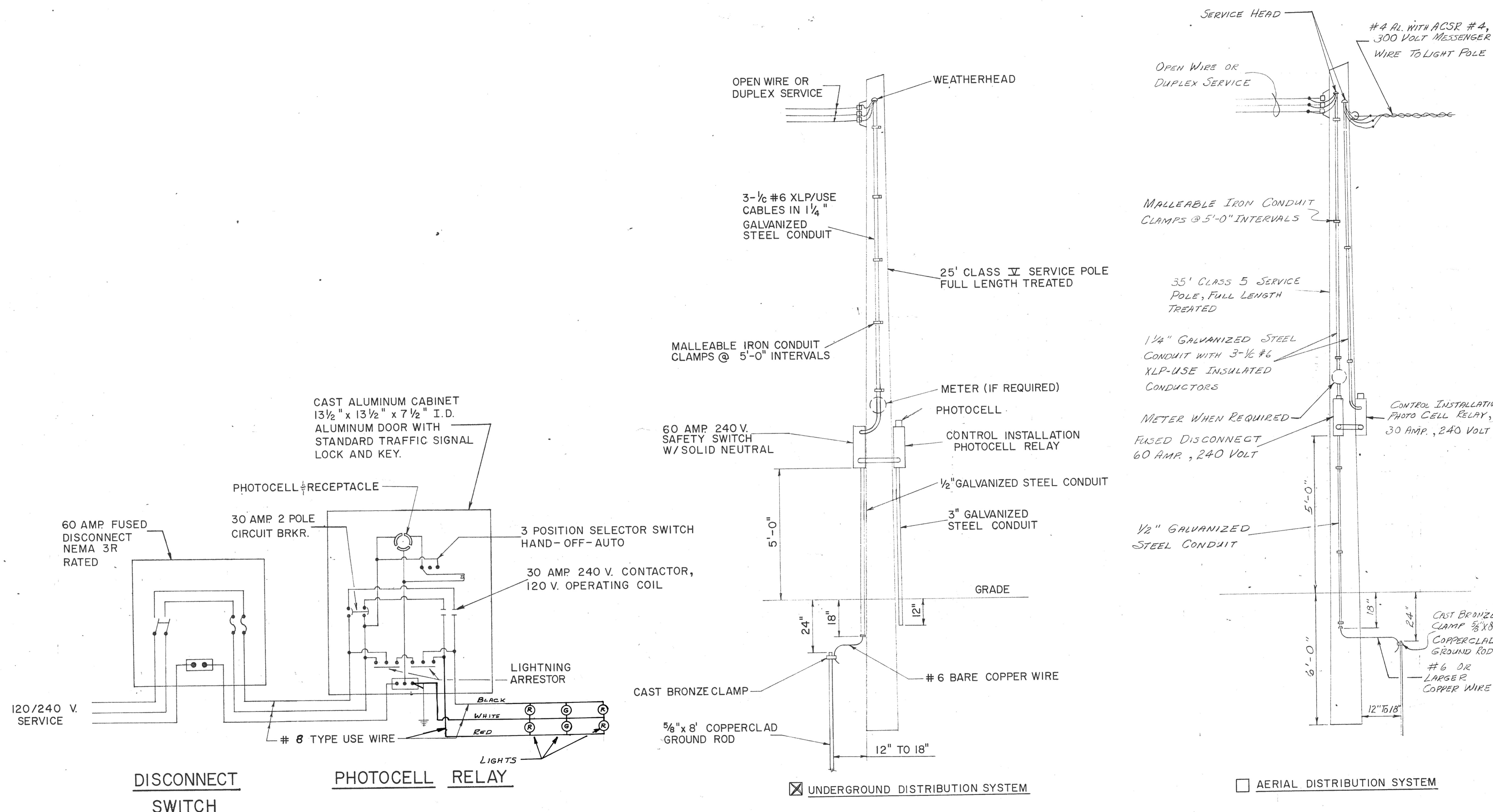
THE ABOVE BREAKDOWN OF ITEMS HAS BEEN INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE PAY ITEM IS NAVIGATION LIGHTING, LUMP SUM. THE ABOVE LIST IS ONLY AN ESTIMATE AND ADDITIONAL LENGTHS MAY BE REQUIRED TO COMPLETE THE WORK ITEM. ALSO, NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY ADDITIONAL MATERIAL REQUIRED.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 784	109 B-D	LASALLE	60	24
E.H.W.A. REG. 4		ILLINOIS		PROJECT



CHANNEL LIGHTING DETAIL

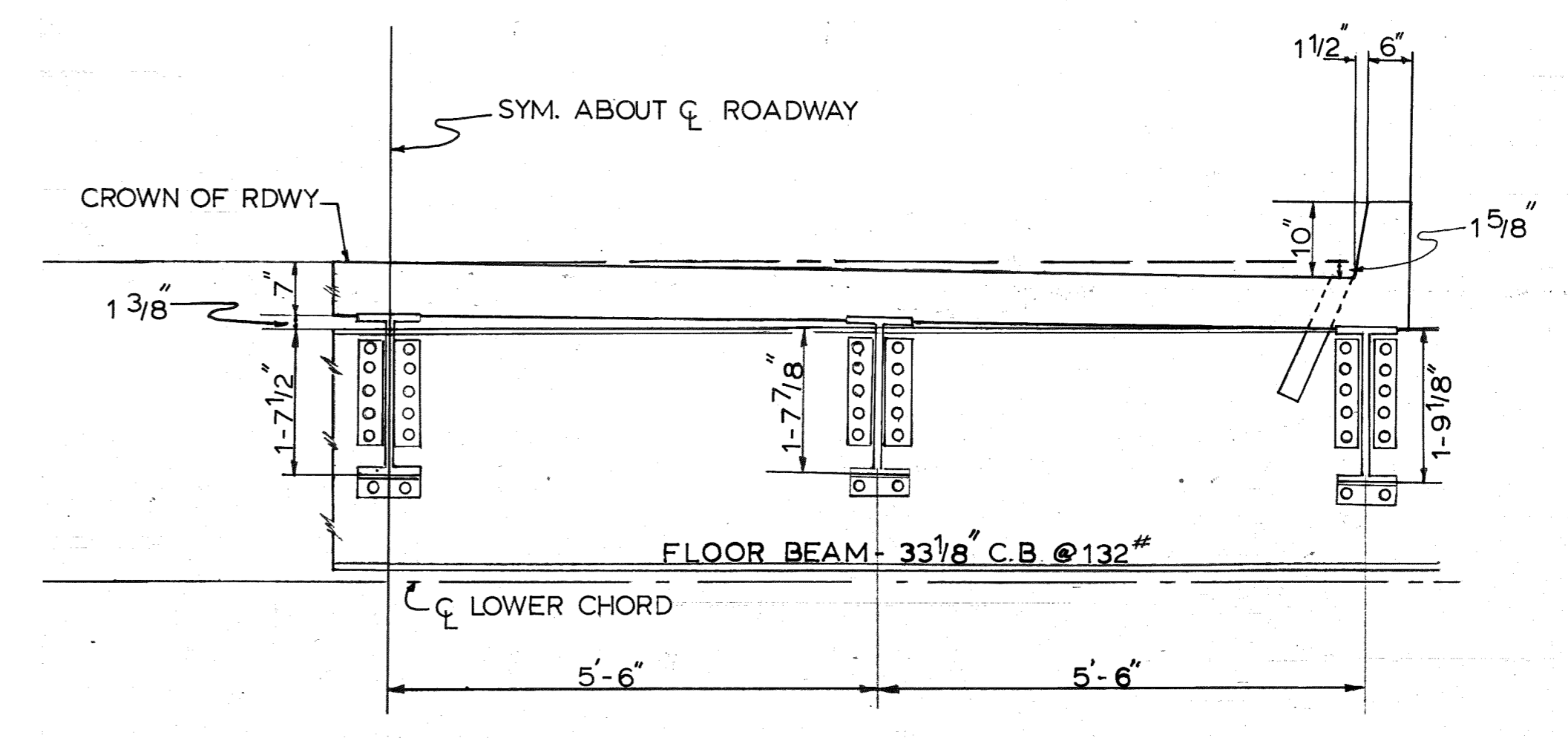
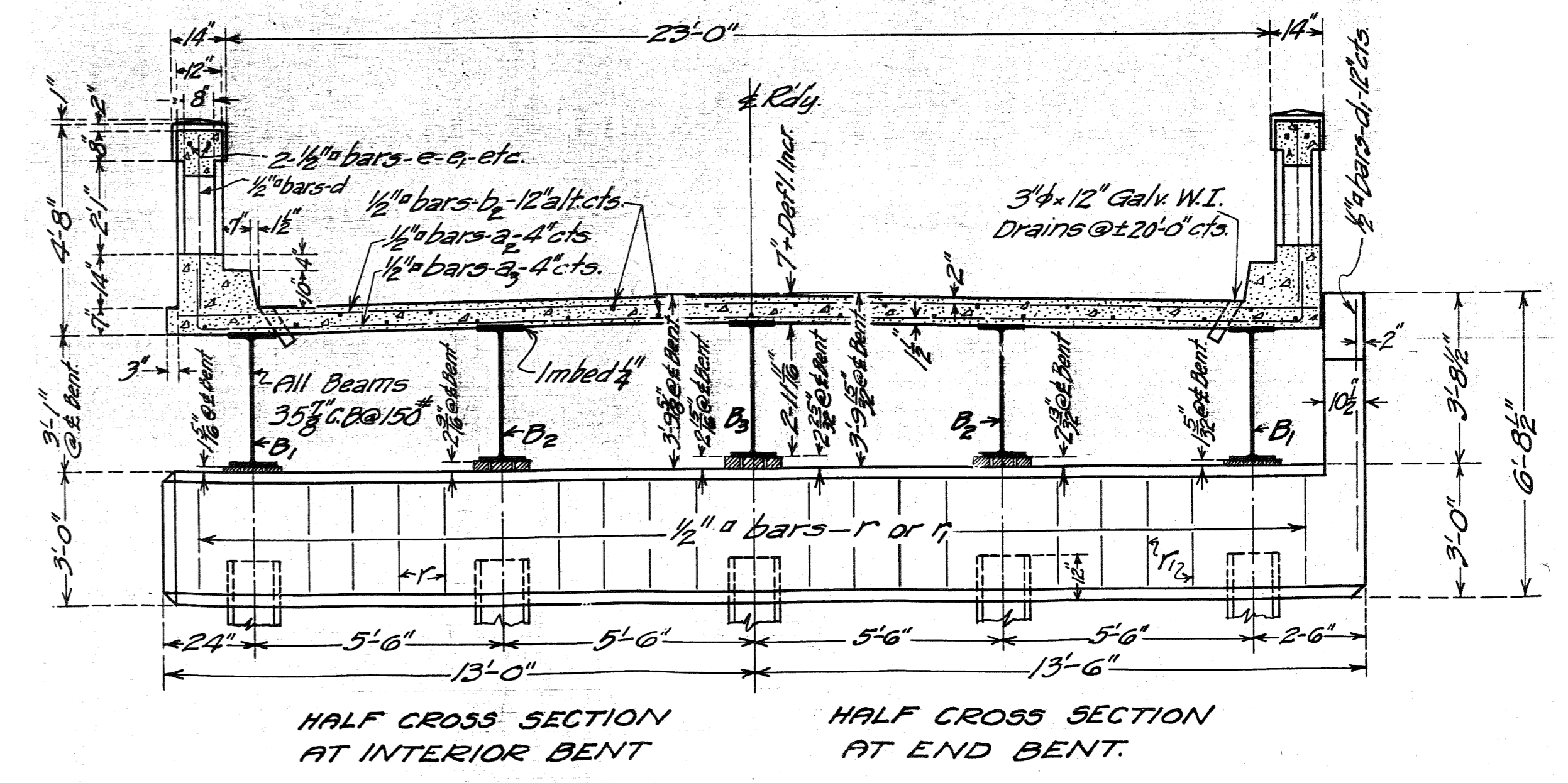
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP186	109 BD	LASALLE	68	25
FHWV REG 4		ILLINOIS FED. AID PROJ.		



DRAWN BY J.L.P.	MARCH 27, 1979
REV. BY J.L.P.	3-21-84
REV. BY J.L.P.	10-29-84

**CONTROL INSTALLATION  
PHOTOCELL RELAY  
NAVIGATION LIGHTING**





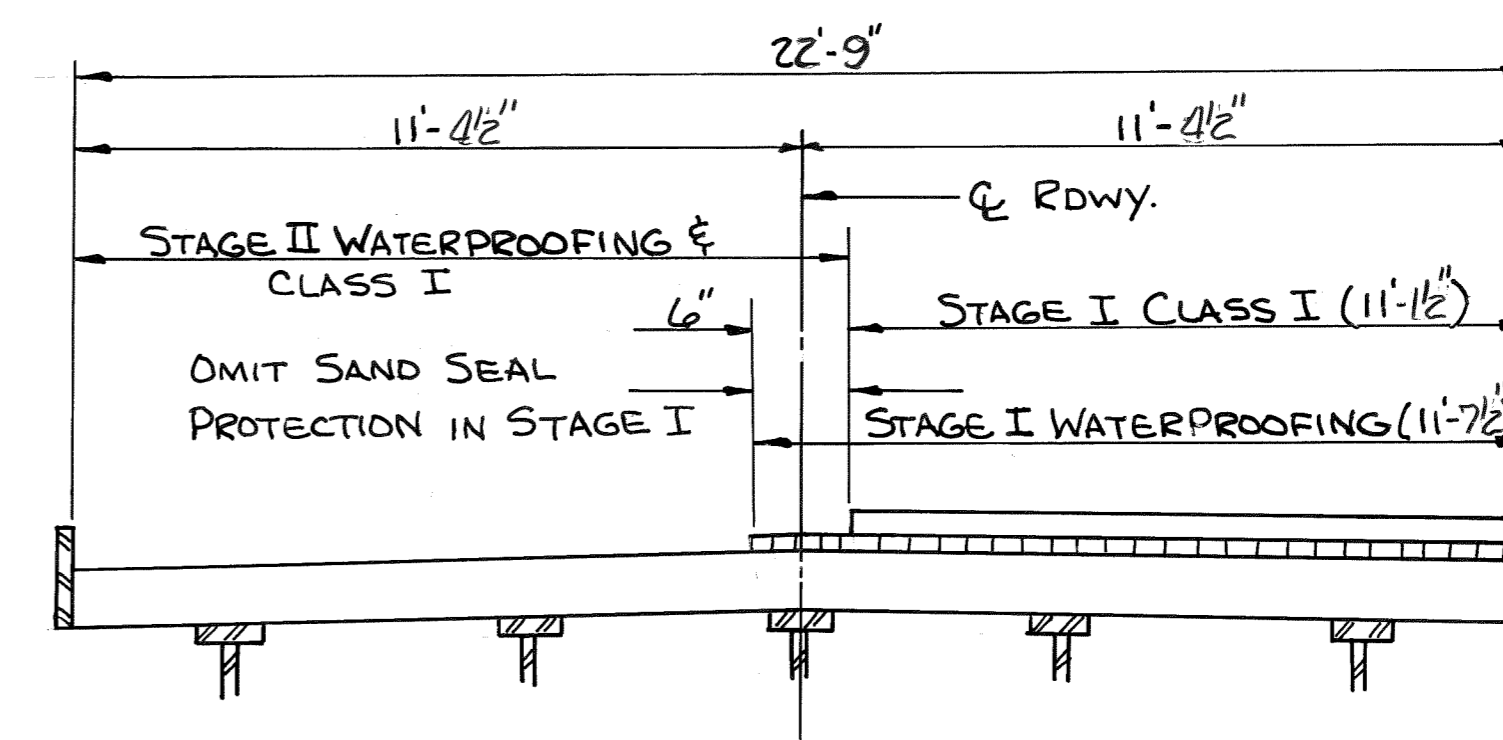
HALF CROSS SECTION OF EXISTING FLOOR BEAM AND DECK STRUCTURE FOR TRUSS SPANS 6,7,8 & 9

1458' = LENGTH OF STRUCTURE  
2 SHIFTS = 16 HRS. = 1 WORK DAY

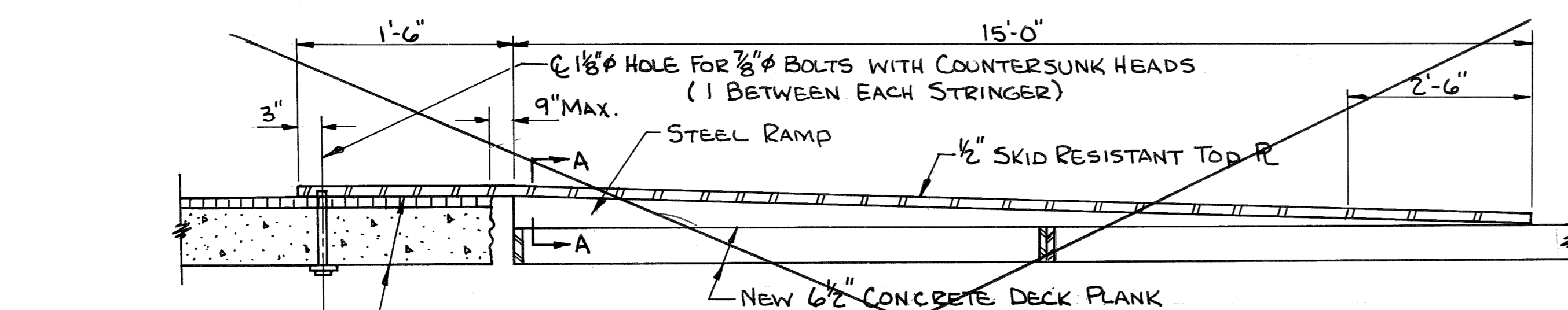
1	1ST SHIFT	→ PENETRATING PRIMER (24 HR. CURE)	APPLICATION 8 HOURS
	2ND SHIFT	NO WORK	CURE PERIOD CURE 16 HOURS
1	3RD SHIFT	→ COAL TAR EMULSION (4 HR. CURE)	4 HRS. (2 CREWS) →
		→ COAL TAR EMULSION & FABRIC (4 HR. CURE)	4 HRS. (2 CREWS) →
	4TH SHIFT	→ COAL TAR EMULSION & FABRIC (4 HR. CURE)	4 HRS. (2 CREWS) →
		→ COAL TAR EMULSION SLURRY (24 HR. CURE)	4 HRS. (2 CREWS) →
1	5TH SHIFT	NO WORK	CURE PERIOD CURE 20 HOURS
1	6TH SHIFT	ASPHALT SAND SEAL (NO CURE)	PLACING 8 HOURS
3/4	7TH SHIFT	CLASS I SURFACING	PLACING 8 HOURS

3 1/2 TOTAL WORKING DAYS EACH DIRECTION

**FLOW DIAGRAM FOR WATERPROOFING & SURFACING**



**CROSS SECTION DECK**  
(SHOWING WATERPROOFING & CLASS I TREATMENT)

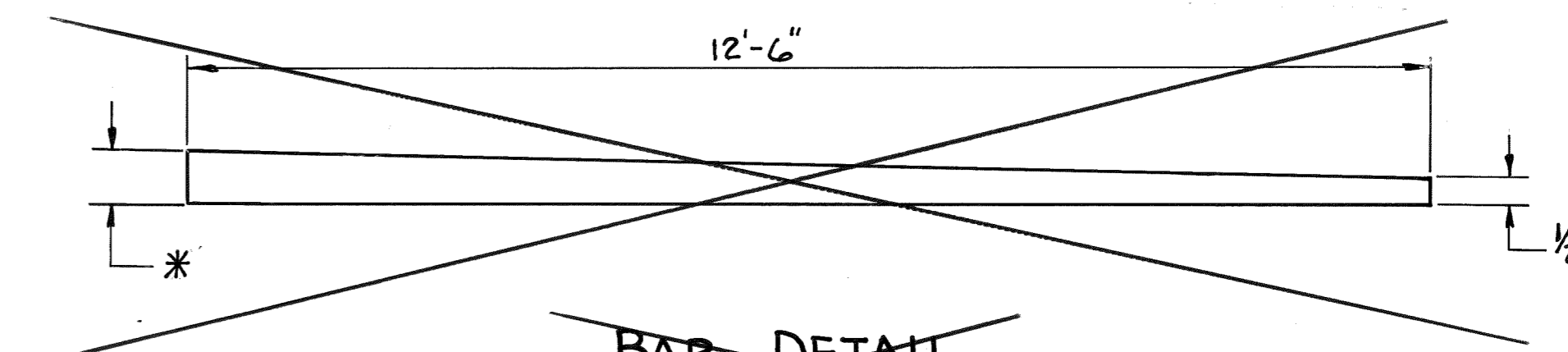


EXIST. ± 3/4" DECK ABOVE LONGITUDINAL STRINGERS \*

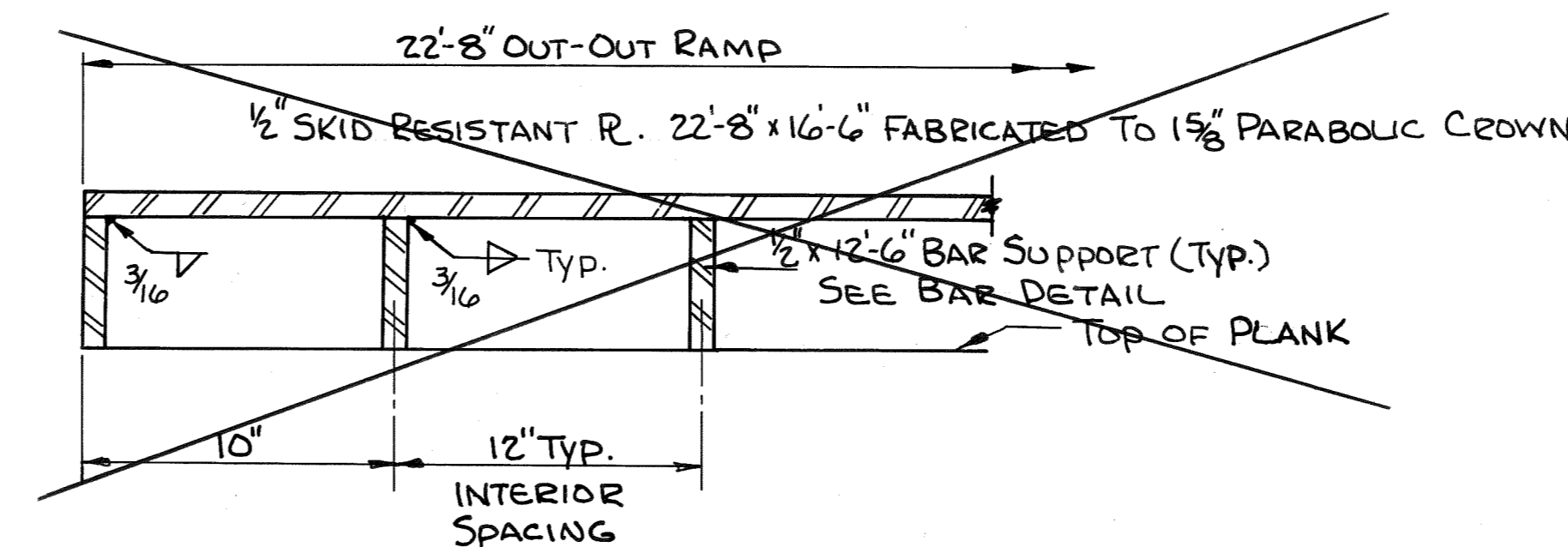
**TRAFFIC RAMP**

(FOR GRADE DIFFERENTIAL ONLY, NOT FOR BRIDGING GAPS., 1-REQUIRED, COST INCLUDED IN UNIT PRICE FOR FURNISH & ERECT STRUCTURAL STEEL)

\* NOTE: CONDITIONS OF EXISTING DECK MAY CAUSE STEEL RAMP (BAR DETAIL) HEIGHT TO VARY. SHIMS WELDED TO RAMP WILL BE REQUIRED TO TAKE UP ANY GAP. ALSO, IT IS POSSIBLE THAT THE RAMP WILL BE PLACED ON THE EXISTING DECK INSTEAD OF THE PROPOSED DECK. THE ENGINEER WILL DETERMINE THE RAMP THICKNESS PRIOR TO MANUFACTURING THE RAMP.



**BAR DETAIL**  
24 REQUIRED



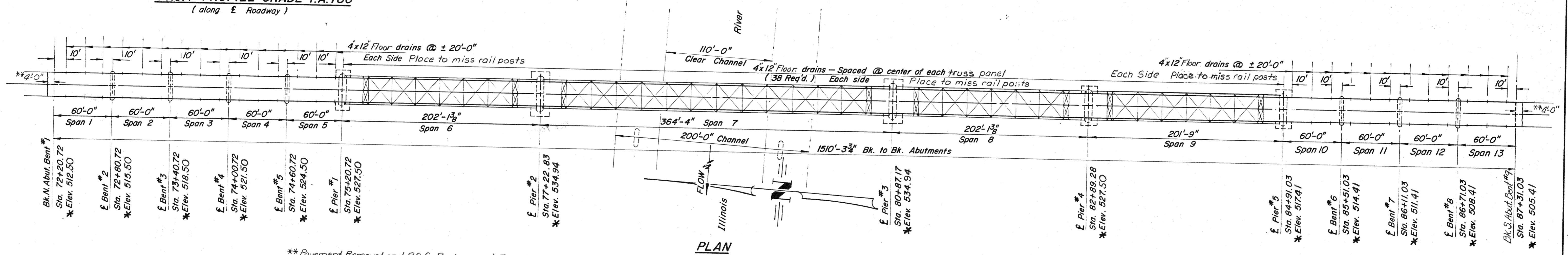
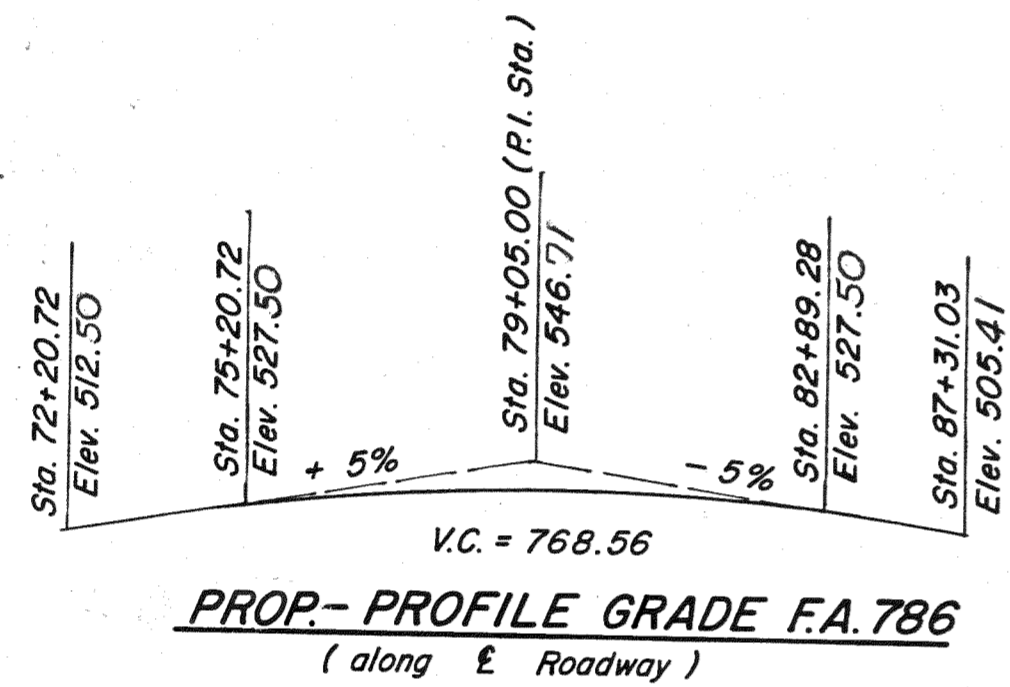
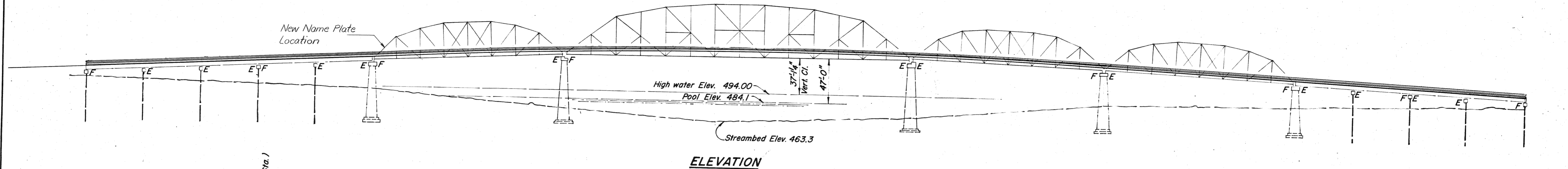
**SECTION A-A**

**TRAFFIC RAMP & FLOW DIAGRAM**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1 38 SHEETS
P.A. 786	109BD	LASALLE	68	27	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Existing structure #050-0070 Built as S.B.I. Rte. 70A, Sec. 109 B&C at Sta. 79+05 in 1932. The ±23'-0" width by ±1510'-3" Length existing 4 Truss spans and 9 C.B. Beams approach spans shall have the existing conc. deck removed and replaced with a 6' precast conc. slab deck. Full two way traffic will be maintained in accordance with the Special Provisions.  
No Salvage.



\*\* Pavement Removal and P.C.C. Replacement, Type I.

\*Elevations given at top of Class 1.

**DESIGN STRESSES**  
**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 36,000$  psi (Structural)

**PRECAST PRESTRESSED UNITS**

$f'_c = 5,000$  psi  
 $f'_{ci} = 4,000$  psi  
 $f'_s = 150,000$  psi (1" deformed)  
 $f'_{si} = 52,930$  psi (1" deformed)  
 $f'_s = 120,000$  psi (1" smooth)  
 $f'_{si} = 74,250$  psi (1" smooth)

Note: See Sheet #2 for Total Bill of Material and General Notes.

Design Specification: AASHTO (1983) and 1984 Interims  
**LOADING HS 20-44**

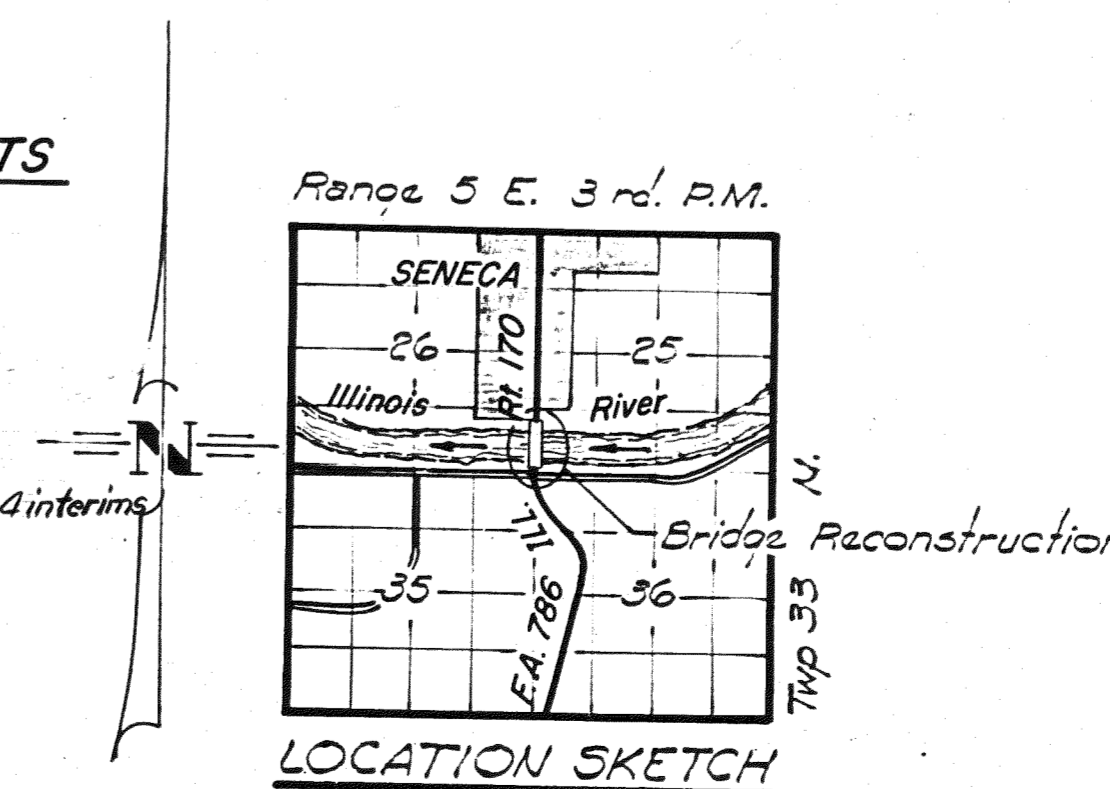
DESIGNED DB	LH
CHECKED DB	JRS
DRAWN	RA
CHECKED DB	RA

December 31, 1985

EXAMINED *John J. Kaspar*  
ENGINEER OF BRIDGE DESIGN

PASSED *John A. Kallstrom*  
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED  
DIRECTOR OF HIGHWAYS



**GENERAL PLAN**  
ILLINOIS Rte. 170 over ILLINOIS RIVER  
F.A. Rte. 786 Section 109B-D  
La SALLE COUNTY  
Station 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 786	109B-D	LASALLE	68	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2  
38 SHEETS

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts  $\frac{3}{8}$ "  $\phi$ , open holes  $\frac{15}{16}$ "  $\phi$ , unless otherwise noted.  
 Calculated weight of Structural Steel = 103,000 pounds.  
 Roadway expansion guards shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.  
 The roadway expansion plates shall be flame cut as provided in Article 507.04(1) of the Standard Specifications.  
 Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.07(c) of the Standard Specifications and are included in quantity of structural steel.  
 All contact surfaces of joints for the diaphragms and stringers shall be free of paint or lacquer.  
 Field welding of construction accessories will not be permitted to the truss members or to the bottom flange of the beams and stringers. Field welding in other areas will be permitted only when approved by the Engineer except as indicated on the plans.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.  
 Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.  
 The top surface of the planks shall be finished in accordance with Article 505.06 of the Standard Specification except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of  $\frac{1}{4}$ ".

See Special Provisions for painting of all structural steel.  
 For pavement removal details and quantities see Roadway Plans.  
 Bridge Seat Sealer shall be applied at Pier #3.  
 Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

All precast planks shall be match cast. The top surfaces on each side of the keyed joints shall be flush.  
 Structural steel and concrete repairs were prepared in accordance with the Bureau of Maintenance 1982 and District 3 March 1985 Inspection Reports. The Engineer may determine during construction that modifications or additions to these repairs may be necessary. Any modifications or additions shall be approved by the Engineer and shall be paid for at the same rate as the unit price bid for that particular item.  
 The Contractor shall remove and replace the existing deck in sections with planks. All openings in the planks shall be filled and cured before placing of Waterproofing Membrane System. Bridge closure is permitted in a 10 hour period Sunday thru Thursday from 7:00 P.M. to 5:00 A.M. Two lane traffic shall be maintained at all other times except as otherwise covered in the Special Provisions. Two steel ramps of adequate length and properly fastened shall be provided to maintain traffic between old and new decks. The steel ramps shall be not less than 2'-0" from the ends of the old and new decks. The ramps shall be used for bridging the gap between the existing deck and the new deck, and shall be designed for repetitive usage. The ramps shall be paid for as "Temporary Steel Ramps-Lump Sum". See Special Provisions. Closure between old & new rails shall also be provided.  
 The Contractor shall coordinate plank placement with other repair work on the structure.

The  $\frac{1}{4}$ " smooth prestressed bars shall conform to the requirements of ASTM A108, AISI 4140, quenched and tempered to a minimum yield strength of 90,000 p.s.i. and a maximum yield strength of 110,000 p.s.i.  
 The  $\frac{1}{4}$ " deformed prestressed bars shall conform to ASTM A-722, Grade 150.

Cost of all structural steel which is not designated as structural steel repair is included in the pay item for "Structural Steel."

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Bituminous Concrete Surface Course, Class I	Ton	321		321
Concrete Removal	Cu. Yd.		21.9	21.9
Bridge Handrail Removal	Lin. Ft.	1940		1940
Removal of Existing Concrete Deck	Lump Sum	1		1
Floor Drains	Each	130		130
Preformed Joint Seal (1- $\frac{3}{4}$ " )	Lin. Ft.	389		389
Elastomeric Bearing Assembly, Type II	Each	10		10
Class X Concrete	Cu. Yd.		21.8	21.8
* Precast Concrete Bridge Slab	Sq. Ft.	31,579		31,579
Structural Steel	Lump Sum	1		1
** Stud Shear Connectors	Each	1330		1330
Structural Steel Repair	Pound	48,640		48,640
Steel Railing, Type S-1 (Special)	Lin. Ft.	3021		3021
Cleaning and Painting Steel Bridge	Lump Sum	1		1
Reinforcement Bars	Pound		5000	5000
Reinforcement Bars (Epoxy Coated)	Pound	15,900		15,900
Name Plates	Each	1		1
Bridge Seat Sealer	Lump Sum		1	1
Epoxy Crack Sealing	Lin. Ft.		257	257
Epoxy Mortar Repair	Cu. Ft.		34.6	34.6
Jacking and Cribbing	Each	8		8
Neoprene Expansion Joint (2")	Lin. Ft.	69		69
Neoprene Expansion Joint (2 $\frac{1}{2}$ " )	Lin. Ft.	23		23
Neoprene Expansion Joint (4")	Lin. Ft.	46		46
Repair Concrete Structure	Sq. Ft.		603	603
Temporary Support System	Each	130	12	142
Waterproofing Membrane System	Sq. Yd.	3800		3800
Coupler Assembly	Each	2120		2120
Pocket Filler	Cu. Yd.	33.5	.1	33.6
Fillet Grout	Cu. Yd.	12.8		12.8
Reinforced Neoprene Expansion Joint Treatment	Lin. Ft.	23		23
Structure Excavation	Cu. Yd.		46	46
Elastomeric Bearing Assembly, Type II (Special)	Each	8		8
Pavement Removal and Portland Cement Concrete Replacement, Type I, II	Sq. Yd.	20		20
Elastomeric Bearing Assembly, Type I (Modified)	Each	110		110
Temporary Steel Ramps	Lump Sum	1		1
H.S. Bolts ( $\frac{3}{4}$ " $\phi$ x 10")	Each	12,150		12,150
Class X Concrete (Special)	Cu. Yd.	63.6		63.6

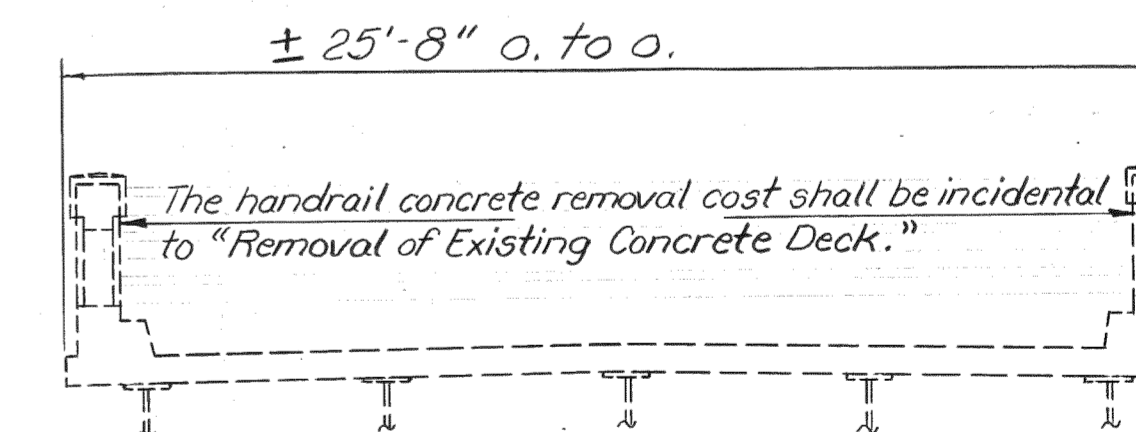
\* Bridge deck designated as deck planks shall be Precast Concrete Bridge Slab.  
 \*\* Stud Shear Connectors shall be used in cast in place deck areas as shown on plans.

STATION 79+05.00  
 BUILT 19 BY  
 STATE OF ILLINOIS  
 F.A. RT. 786 SEC. 109B-D  
 F.A. PROJ. BHF-786(1)  
 LOADING H520  
 STR. NO. 050-0070

NAME PLATE

See Std. 2113

The Existing Name Plate shall be cleaned (Cost incidental).



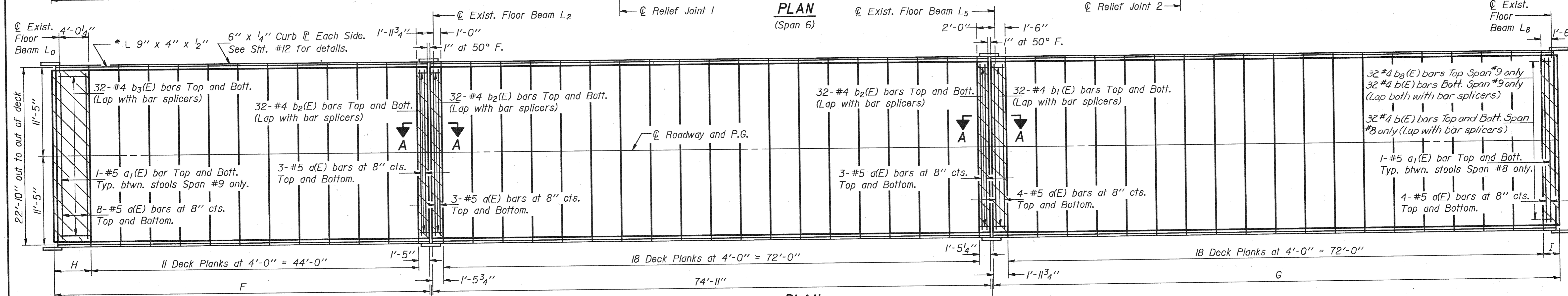
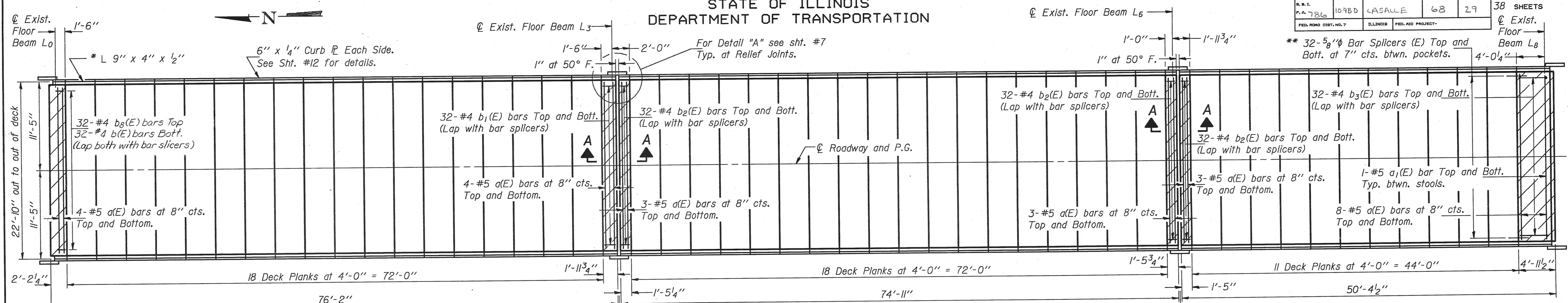
CROSS SECTION FOR EXISTING APPROACH SPANS ONLY

DESIGNED DB.	L.K.	EXAMINED	Dec. 31, 1985
CHECKED DB.	L.K.	PASSED	James J. Kauter
DRAWN	Joe Sutherland	APPROVED	James J. Kauter
CHECKED DB.	L.K.		DIRECTOR OF HIGHWAYS

GENERAL DATA  
 F.A. RT. 786 SEC. 109B-D  
 LaSALLE COUNTY  
 STATION 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
F.A. 786	109B-D	LASALLE	68	29	38 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			Exist. Floor Beam L <sub>6</sub>

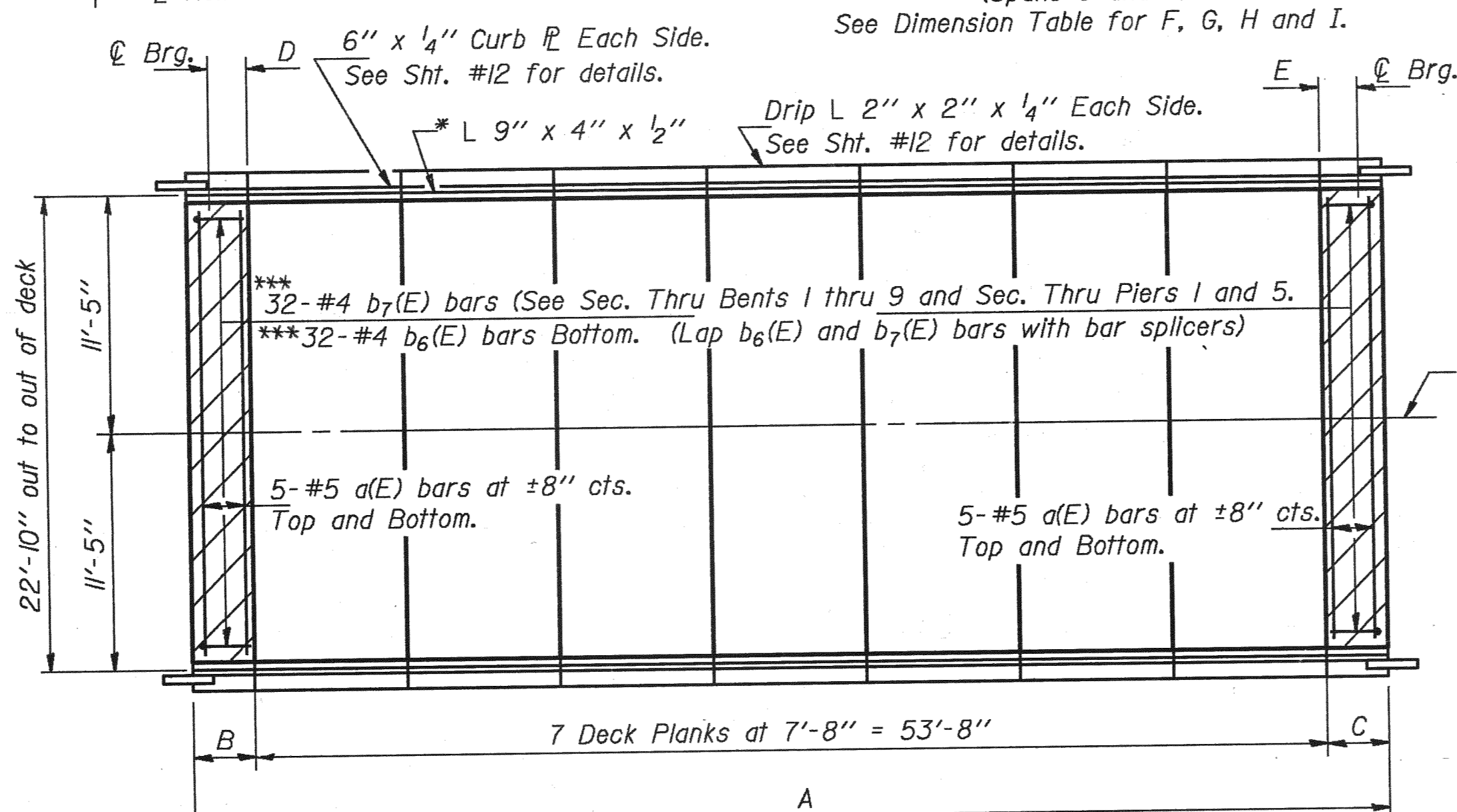


**DIMENSION TABLE**

Location	A	B	C	D	E
Span 1	59'-3 <sup>3</sup> / <sub>8</sub> "	2'-5"	3'-2 <sup>3</sup> / <sub>8</sub> "	1'-8"	2'-7 <sup>5</sup> / <sub>8</sub> "
Span 2	59'-11 <sup>1</sup> / <sub>8</sub> "	3'-1 <sup>1</sup> / <sub>2</sub> "	3'-2 <sup>3</sup> / <sub>8</sub> "	2'-6 <sup>3</sup> / <sub>4</sub> "	2'-7 <sup>5</sup> / <sub>8</sub> "
Span 3	59'-11 <sup>1</sup> / <sub>8</sub> "	3'-1 <sup>1</sup> / <sub>2</sub> "	3'-1 <sup>5</sup> / <sub>8</sub> "	2'-6 <sup>3</sup> / <sub>4</sub> "	2'-6 <sup>1</sup> / <sub>8</sub> "
Span 4	59'-11 <sup>1</sup> / <sub>8</sub> "	3'-1 <sup>5</sup> / <sub>8</sub> "	3'-1 <sup>1</sup> / <sub>2</sub> "	2'-10 <sup>1</sup> / <sub>8</sub> "	2'-6 <sup>3</sup> / <sub>4</sub> "
Span 5	60'-2 <sup>1</sup> / <sub>8</sub> "	3'-1 <sup>1</sup> / <sub>2</sub> "	3'-4 <sup>5</sup> / <sub>8</sub> "	2'-6 <sup>3</sup> / <sub>4</sub> "	1'-11 <sup>1</sup> / <sub>8</sub> "
Span 10	60'-2 <sup>1</sup> / <sub>8</sub> "	3'-4 <sup>5</sup> / <sub>8</sub> "	3'-1 <sup>1</sup> / <sub>2</sub> "	1'-11 <sup>1</sup> / <sub>8</sub> "	2'-6 <sup>3</sup> / <sub>4</sub> "
Span 11	59'-11 <sup>1</sup> / <sub>8</sub> "	3'-1 <sup>1</sup> / <sub>2</sub> "	3'-1 <sup>1</sup> / <sub>8</sub> "	2'-6 <sup>3</sup> / <sub>4</sub> "	2'-10 <sup>1</sup> / <sub>8</sub> "
Span 12	59'-11 <sup>1</sup> / <sub>8</sub> "	3'-1 <sup>1</sup> / <sub>8</sub> "	3'-1 <sup>1</sup> / <sub>2</sub> "	2'-6 <sup>1</sup> / <sub>8</sub> "	2'-6 <sup>3</sup> / <sub>4</sub> "
Span 13	59'-3 <sup>3</sup> / <sub>8</sub> "	3'-2 <sup>3</sup> / <sub>8</sub> "	2'-5"	2'-7 <sup>5</sup> / <sub>8</sub> "	1'-8"

**DIMENSION TABLE**

Location	F	G	H	I
Span 8	50'-4"	76'-4 <sup>1</sup> / <sub>2</sub> "	4'-11"	2'-4 <sup>3</sup> / <sub>4</sub> "
Span 9	50'-4"	76'-2"	4'-11"	2'-2 <sup>1</sup> / <sub>4</sub> "



**PLAN**

(Typ. for Spans 1 thru 5 and 10 thru 13)  
See Dimension Table for A, B, C, D and E.

Notes: Hatched areas indicate Class X Concrete (Special). See Note A sheet #8.  
Epoxy adhesive to be applied to plank joints after planks are placed on the bridge.  
The 9" x 4" x 1/2" Angle, 6" x 1/4" Curb plate and 2" x 2" x 1/4" Drip angle shall be groove welded at all butted joints.  
All bars designated (E) shall be epoxy coated.  
Dimensions are along grade.  
Bearing is perpendicular to grade.  
See sheet #8 for Section A-A.  
See sheet #8 and #9 for sections thru bents and piers.  
See sheet #5 thru #10 for superstructure details.  
See sheet #1 for floor drain spaces.  
See sheet #10 for Bill of Material for planks.  
For all "L" locations see sheet #22.  
See sheet #8 for Bill of Material for cast in place areas.  
Bridge deck designated as deck planks shall be Precast Concrete Bridge Slab.  
No overrun is considered in computing lengths of deck planks.  
\* Each Side, Each Plank. See sheet #12 for details.  
\*\* Typ. for all Deck Planks that are next to cast in place areas.

**SUPERSTRUCTURE**  
**SPANS 1 THRU 6 AND 8 THRU 13**  
**F.A. RT. 786 SEC. 109B-D**  
**LaSALLE COUNTY**  
**STATION 79+05.00**

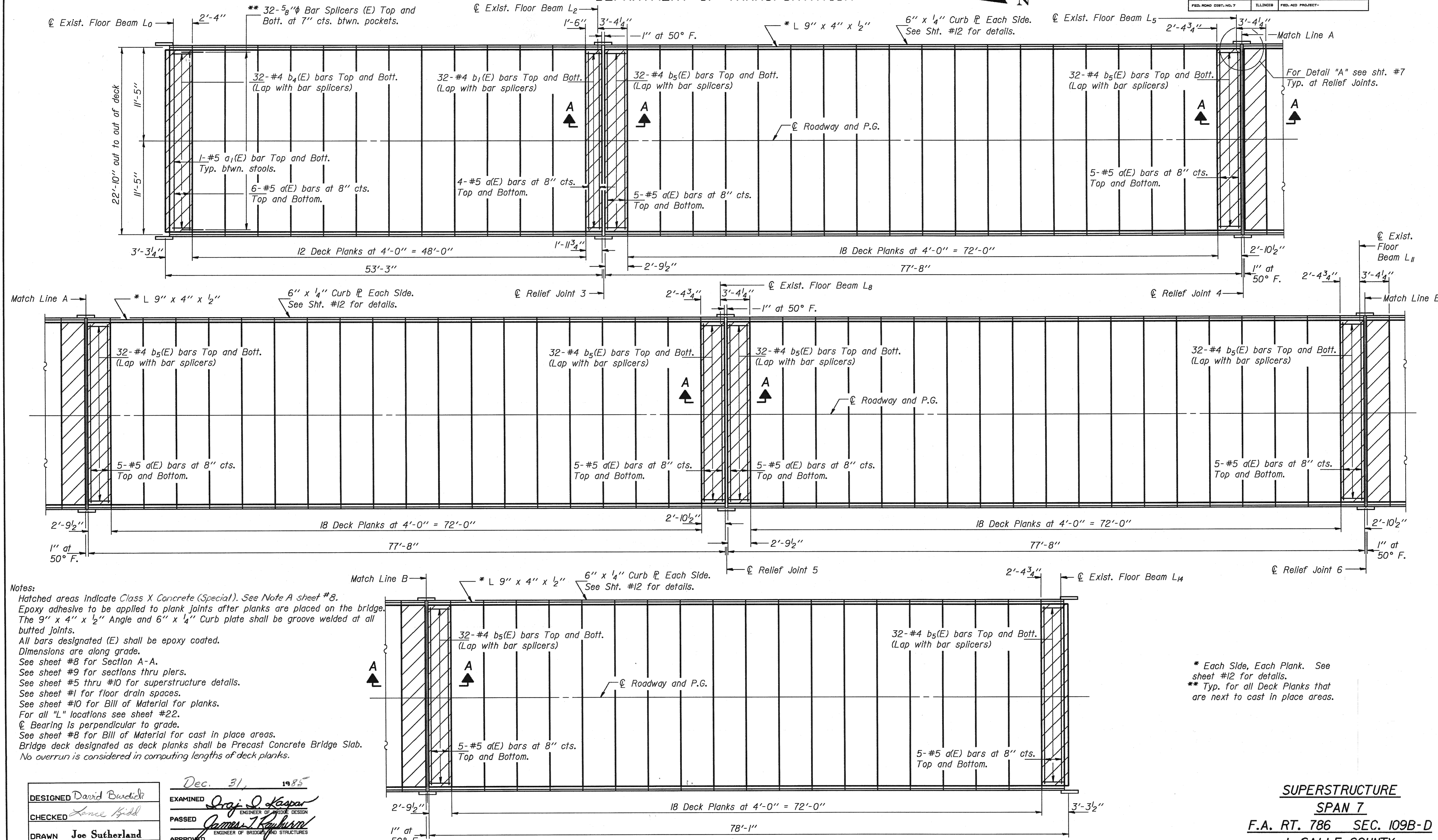
DESIGNED David Burdick  
CHECKED Lane Bidd  
DRAWN Joe Sutherland  
CHECKED L.H. D.B.

EXAMINED Craig J. Kaspar  
PASSED James J. Kasper  
APPROVED L.H. D.B.

Dec. 31 1985  
ENGINEER OF BRIDGE DESIGN  
ENGINEER OF BRIDGES AND STRUCTURES  
DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
F.A. 786	109B-D	LASALLE	68	30	38 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



Notes:  
 Hatched areas indicate Class X Concrete (Special). See Note A sheet #8.  
 Epoxy adhesive to be applied to plank joints after planks are placed on the bridge.  
 The 9" x 4" x 1/2" Angle and 6" x 1/4" Curb plate shall be groove welded at all butted joints.  
 All bars designated (E) shall be epoxy coated.  
 Dimensions are along grade.  
 See sheet #8 for Section A-A.  
 See sheet #9 for sections thru piers.  
 See sheet #5 thru #10 for superstructure details.  
 See sheet #1 for floor drain spaces.  
 See sheet #10 for Bill of Material for planks.  
 For all "L" locations see sheet #22.  
 Bearing is perpendicular to grade.  
 See sheet #8 for Bill of Material for cast in place areas.  
 Bridge deck designated as deck planks shall be Precast Concrete Bridge Slab.  
 No overrun is considered in computing lengths of deck planks.

\* Each Side, Each Plank. See sheet #12 for details.  
 \*\* Typ. For all Deck Planks that are next to cast in place areas.

DESIGNED David Burdick	EXAMINED Craig J. Kaspar
CHECKED Lance Kidd	PASSED James J. Kuybura
DRAWN Joe Sutherland	APPROVED
CHECKED L.H. D.B.	DIRECTOR OF HIGHWAYS

**SUPERSTRUCTURE**  
**SPAN 7**  
 F.A. RT. 786 SEC. 109B-D  
 LaSALLE COUNTY  
 STATION 79+05.00

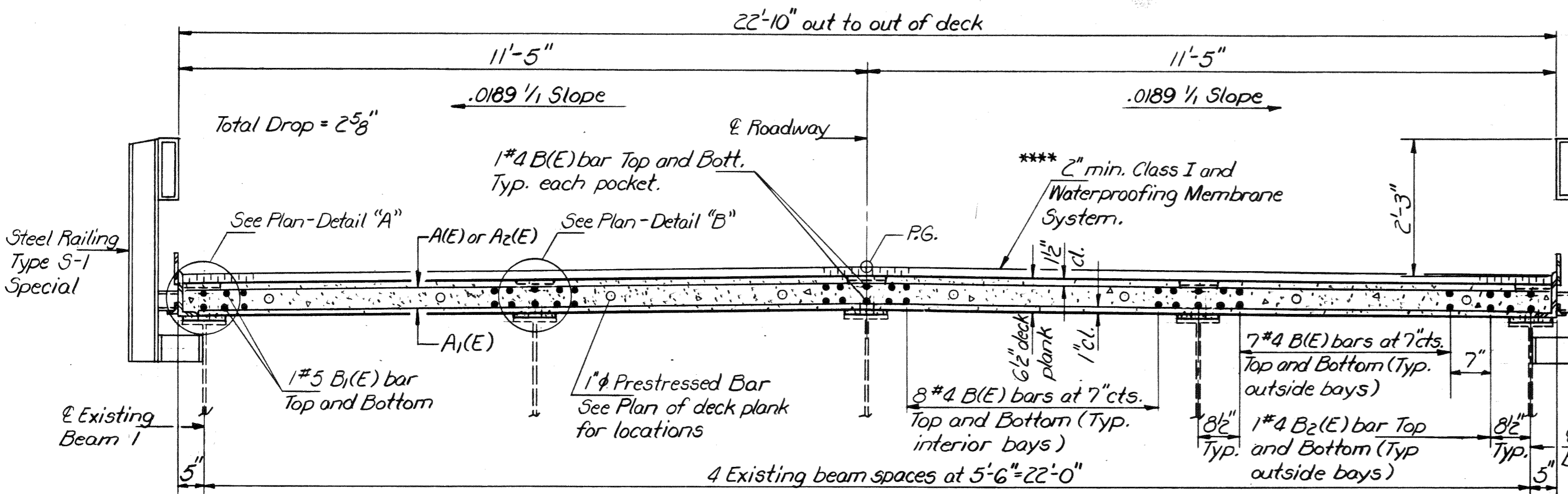
**PLAN**  
 (Span 7)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A. 786	109BD	LASALLE	68	31
PER. ROAD DIST. NO. 7		DESIGNED	PER. AID PROJECT	

SHEET NO. 5  
38 SHEETS

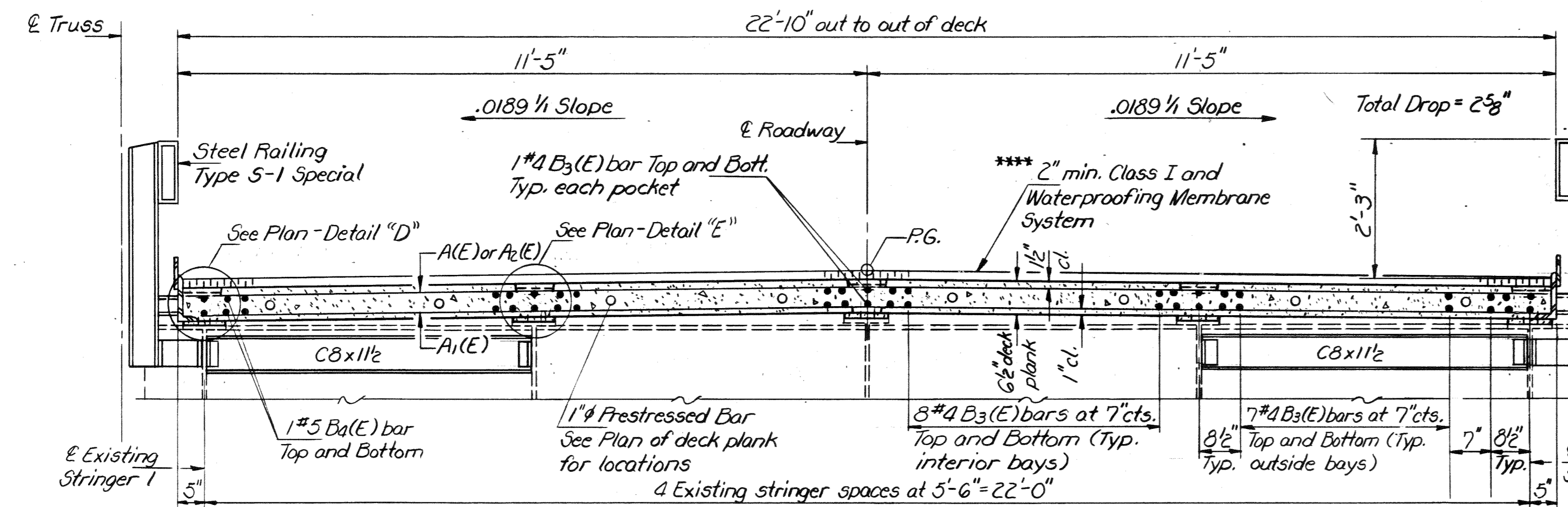
Note: Pockets for Coupler assembly shall be covered with steel plates until pocket filler is placed in the pockets. Steel plates are cost incidental to "Pocket Filler".



\*For reinforcement locations and spacing see sheet #6

\*CROSS SECTION  
(Showing deck planks for approach spans)  
(Looking South)

\*\*\*\* See Roadway Plans for Waterproofing and Class I treatment.



\*\*\* Coupler assembly consists of the coupler and two bushings and shall be called a turnbuckle.

\*CROSS SECTION  
(Showing deck planks for truss spans)  
(Looking South)

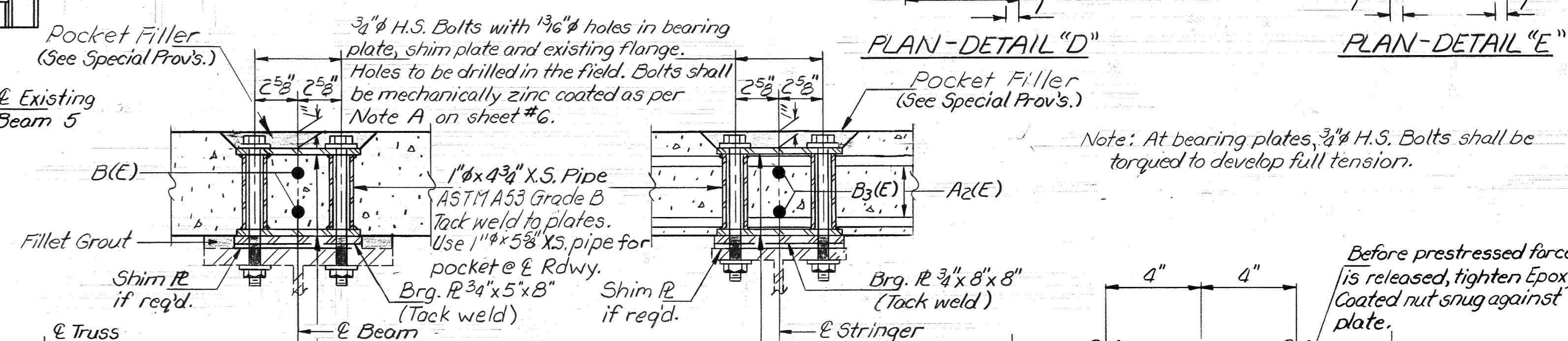
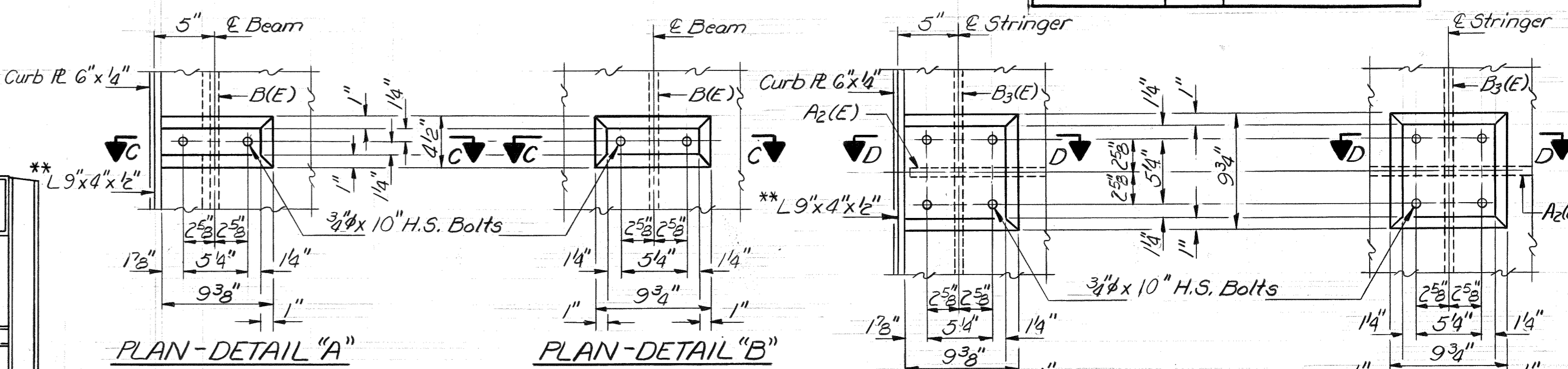
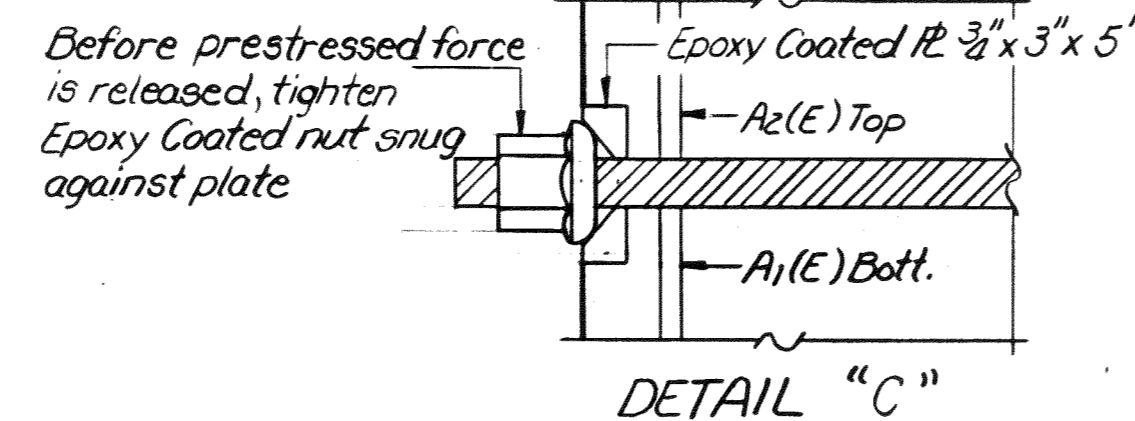
1#4 B5(E) bar Top and Bottom (Typ. outside bays)

COUPLER ASSEMBLY SEQUENCE

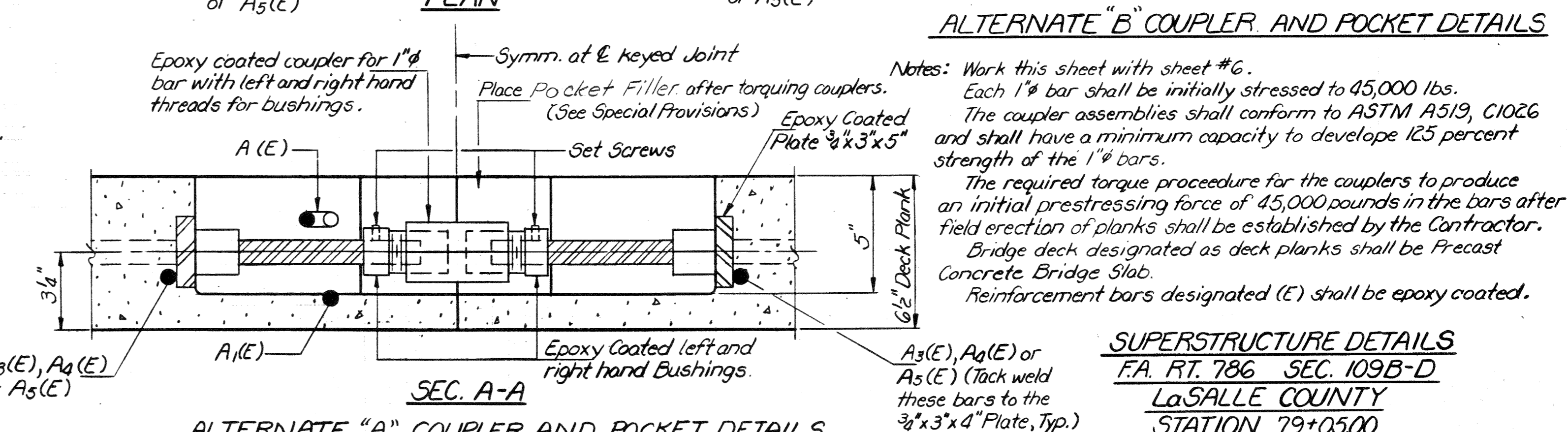
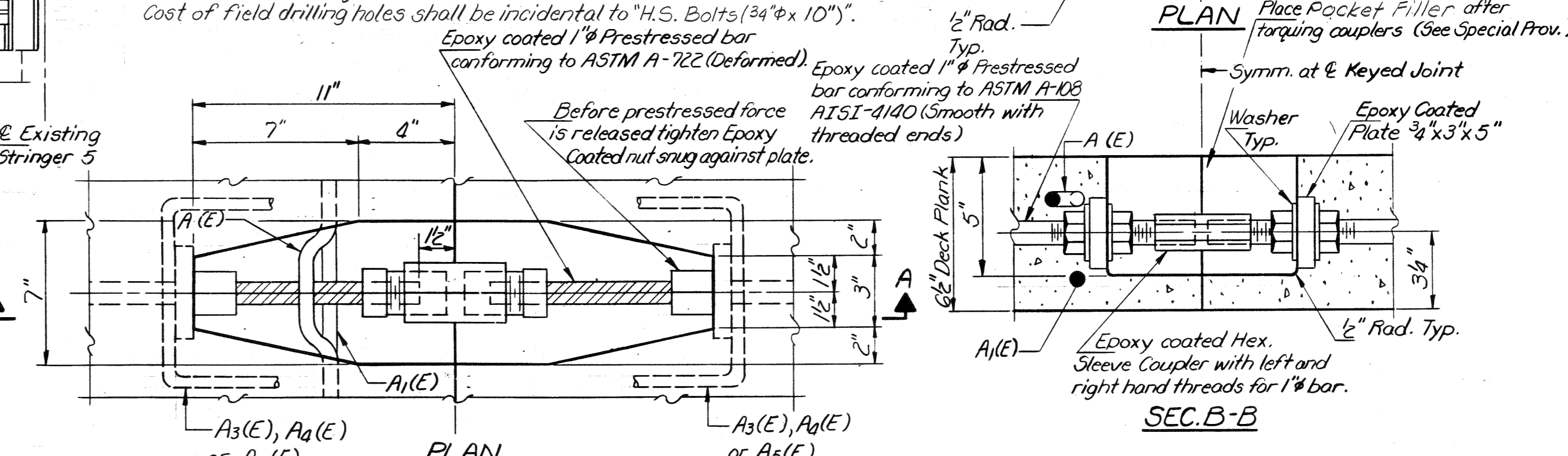
- \*\*\* Alternate "A" Sequence:
- 1) The turnbuckles shall be completely engaged on the 1" bars of one plank.
  - 2) Align this plank with the next plank by lining up the 1" bars in each plank.
  - 3) Thread turnbuckle toward opposite bar until one bushing is completely disengaged from the bar that the turnbuckle is on. Then turn this bushing until thread is aligned with thread of opposite bar.
  - 4) Thread turnbuckle onto opposite bar until the bushing is completely engaged on this bar. Then set set screws in bushings to fix them to their respective bars.
  - 5) Tension bars by turning coupler.
- Alternate "B" Sequence:
- 1) The couplers shall be engaged two full turns on the 1" bars of one plank.
  - 2) Align the couplers with the bars in the next plank.
  - 3) Move the second plank towards the first as the couplers are being threaded on to the bars in each plank.
  - 4) After the planks are together, continue turning the coupler for proper tension in the bars.
- All details are the same as in Sec. C-C except as noted.  
For Detail "F" only, if plate washers are used, 3/4" H.S. Bolts shall be torqued to develop full tension.  
If plate washers are not used, tighten to a snug fit plus 1/3 of a turn. After fillet grout is poured and cured, bolts shall be torqued to full tension.

DESIGNED	David Burdick	Dec. 31, 1985
CHECKED	James Byrd	
DRAWN	Joe Sutherland	
CHECKED	L.H. DB.	
EXAMINED	Dr. J. Kaspar	
PASSED	James T. Kuhn	
APPROVED		

DIRECTOR OF HIGHWAYS



Notes: Bolt assembly includes top and bottom plates and pipes. The assembly shall be galvanized in accordance with AASHTO M-111 and ASTM A-325.  
Cost of bearing plates, shim plates, plate washers & bolt assembly are incidental to "Precast Concrete Bridge Slab."  
Cost of field drilling holes shall be incidental to "H.S. Bolts (3/4" x 10)".

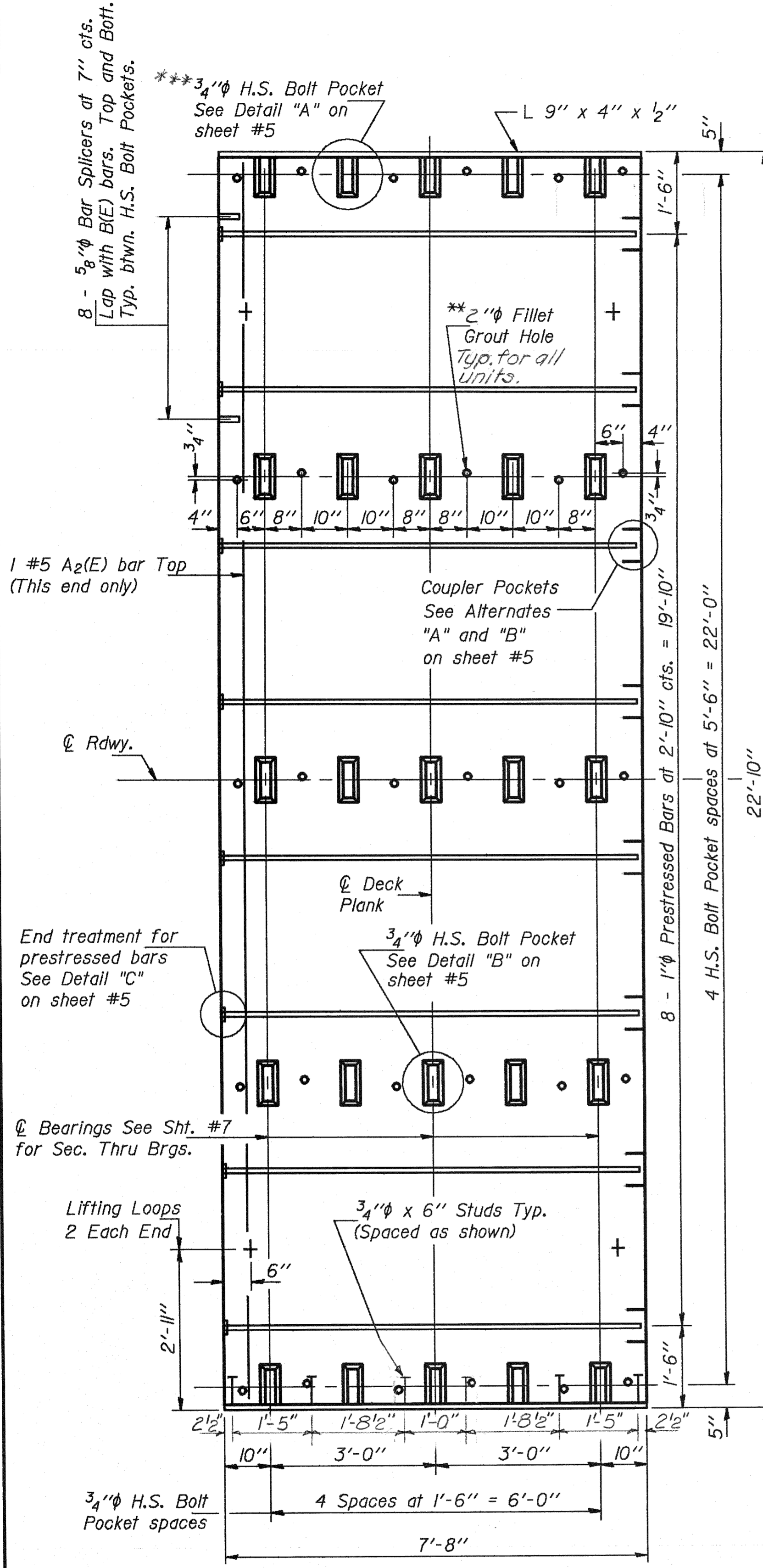


Notes: Work this sheet with sheet #6.  
Each 1" bar shall be initially stressed to 45,000 lbs.  
The coupler assemblies shall conform to ASTM A519, C1026 and shall have a minimum capacity to develop 125 percent strength of the 1" bars.  
The required torque procedure for the couplers to produce an initial prestressing force of 45,000 pounds in the bars after field erection of planks shall be established by the Contractor.  
Bridge deck designated as deck planks shall be Precast Concrete Bridge Slab.  
Reinforcement bars designated (E) shall be epoxy coated.

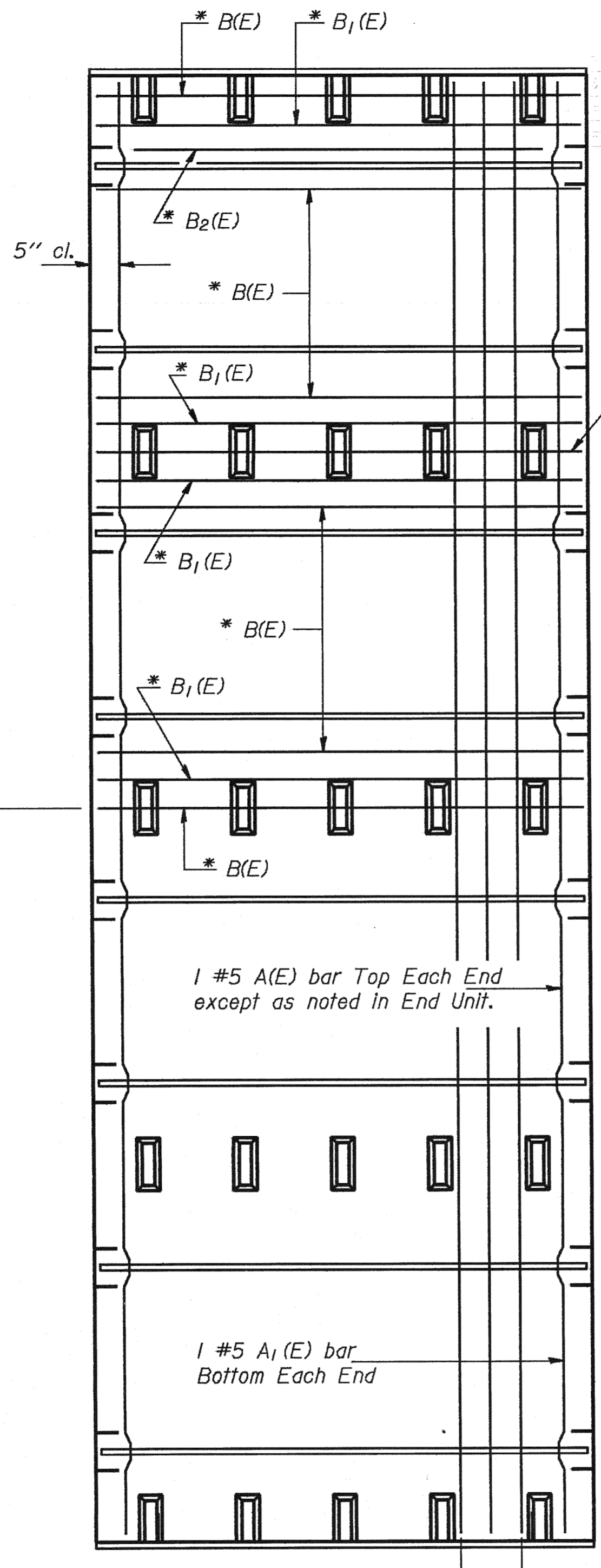
SUPERSTRUCTURE DETAILS  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

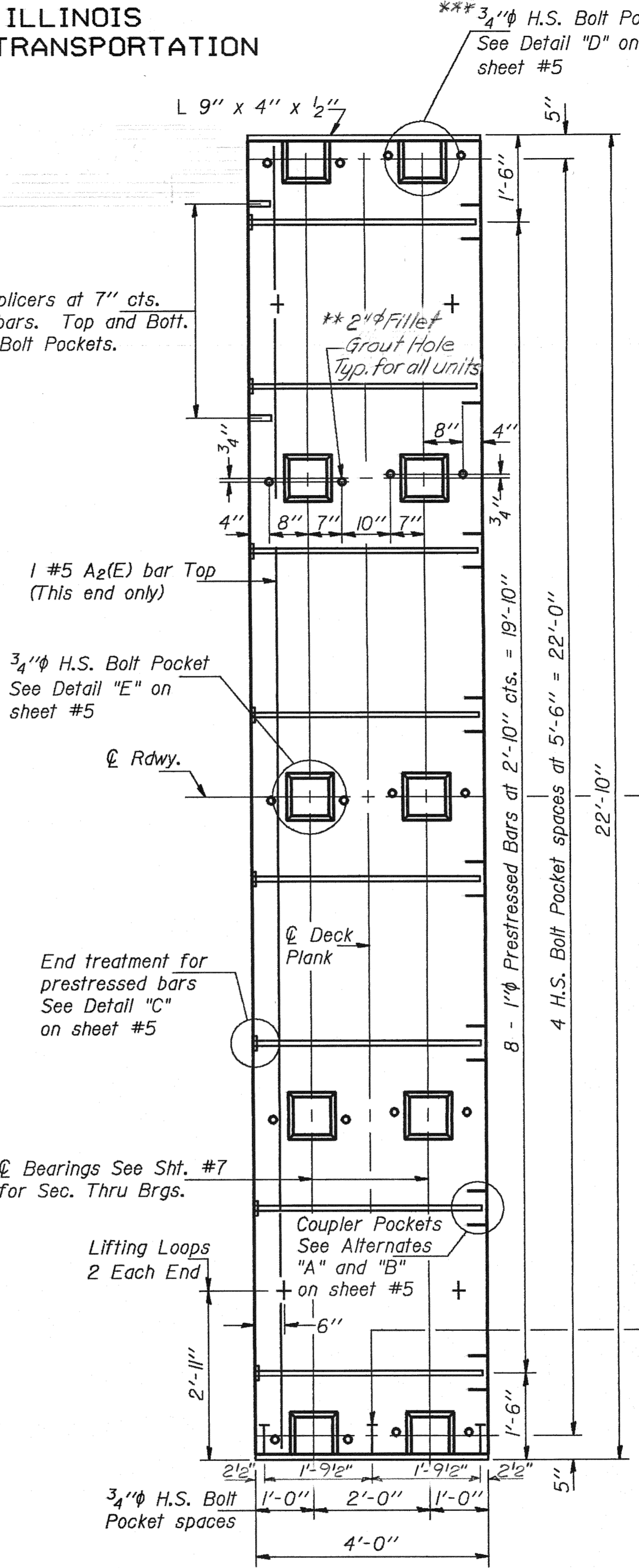
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 38 SHEETS
I.A. 786	109B-D	LASALLE	68	32	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



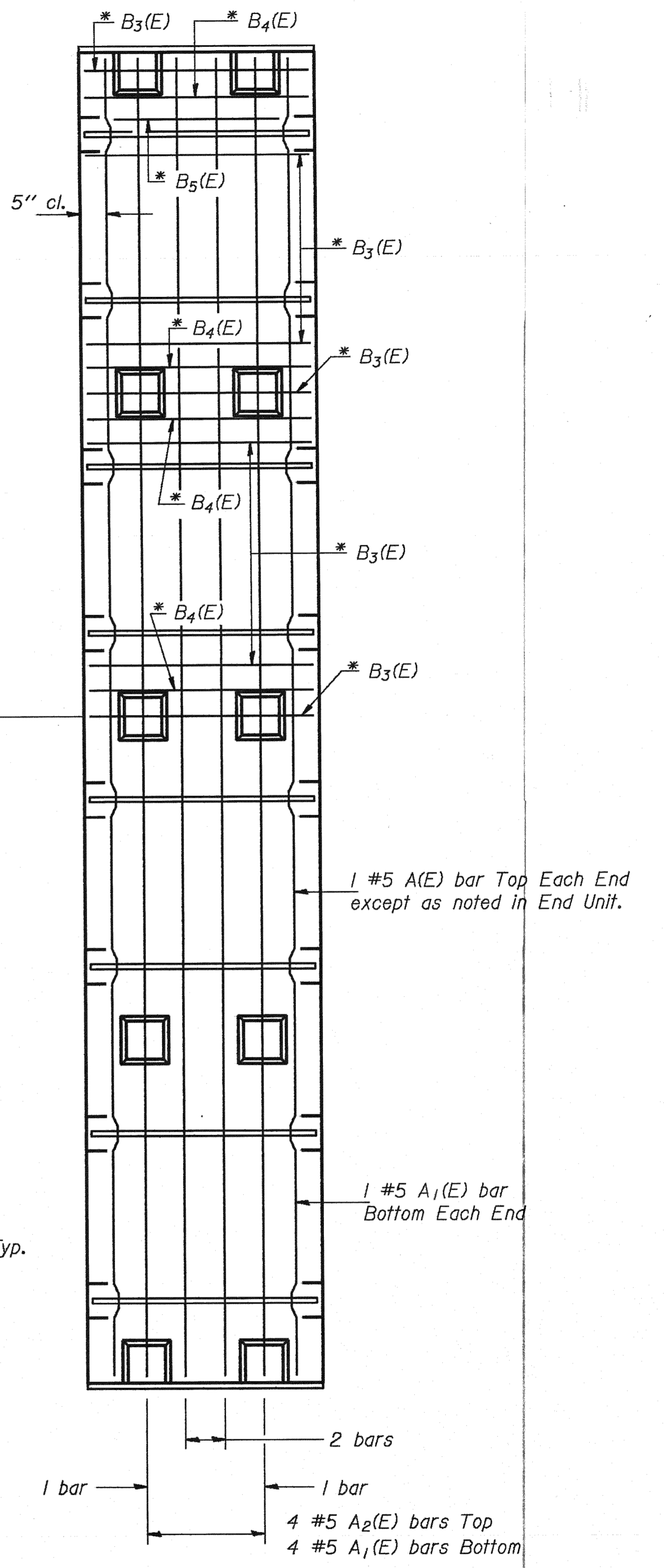
**PLAN APPROACH PLANK - END UNIT**  
(Showing dimensions) (18 Required)



**PLAN APPROACH PLANK - INTERIOR UNIT**  
(Showing reinforcement) (45 Required)



**PLAN TRUSS PLANK - END UNIT**  
(Showing dimensions) (28 Required)



**PLAN TRUSS PLANK - INTERIOR UNIT**  
(Showing reinforcement) (197 Required)

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN Joe Sutherland	APPROVED
CHECKED	

19  
\*\*\*Note A: High strength bolts, washers and nuts shall be zinc coated by the mechanical plating method conforming to ASTM B695, class 50. Zinc coated nuts shall be tapped oversized in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S1.1 thru S12.1 of the same specifications for lubricant and testing. Bridge deck designated as deck planks shall be Precast Concrete Bridge Slab. For rail post inserts, see sheet #12.

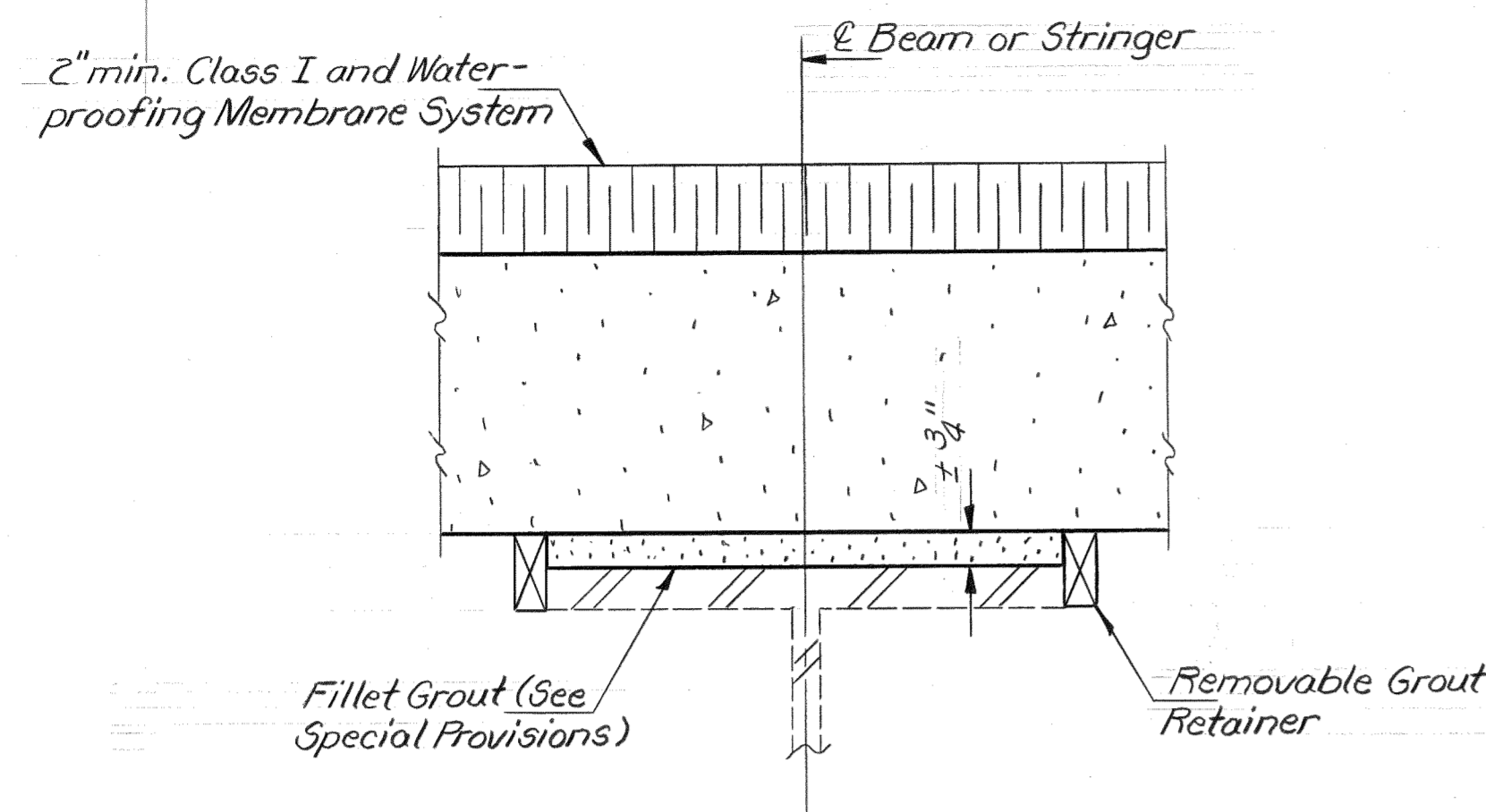
\* See cross sections on sheet #5 for spacing.  
\*\* Fill 2" holes with fillet grout.  
Note: Bend B(E) and B3(E) bars to fit around Coupler Pocket when required.  
Note: Reinforcement bars designated (E) shall be epoxy coated.  
Reinforcement in the End Units is the same as in the Interior Units except as shown.  
Work this sheet with sheet #3,4,5,7, and 10.

**SUPERSTRUCTURE DETAILS**  
**TRUSS AND APPROACH PLANKS**  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

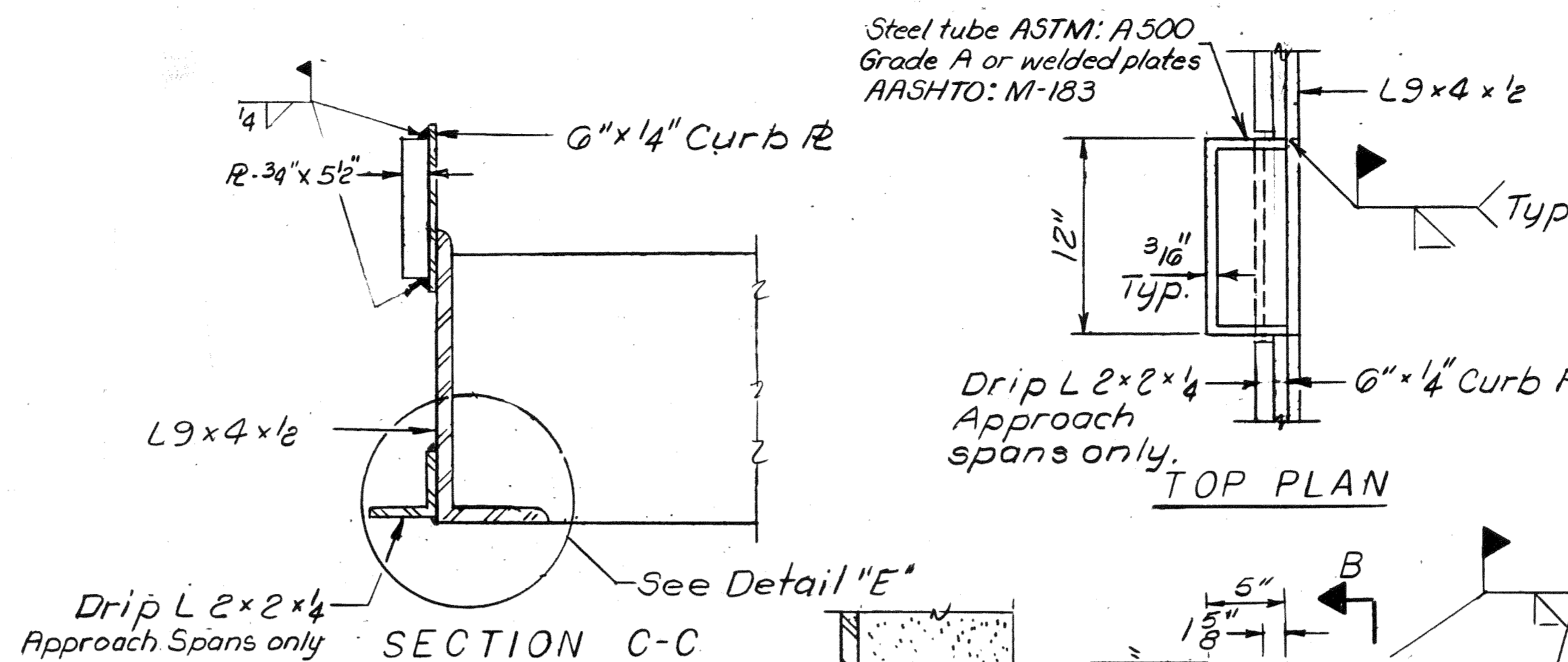


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 38 SHEETS
F.A. 786	109BD	LASALLE	68	33	
ILLINOIS FED. AID PROJECT					
REV. ROAD DIST. NO. 7					

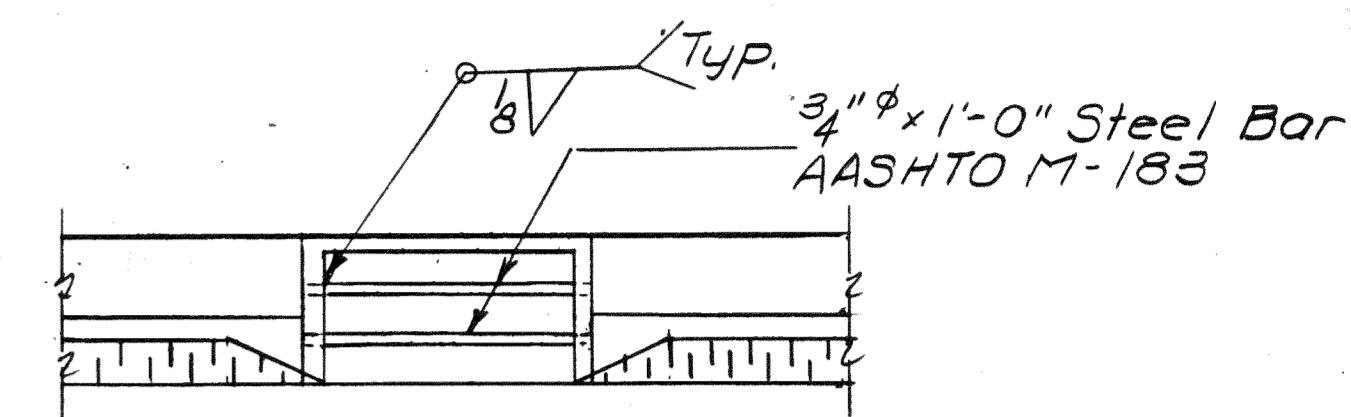


SECTION THRU FILLET BETWEEN BEARINGS  
(Typ. Approach Spans and Truss Spans)



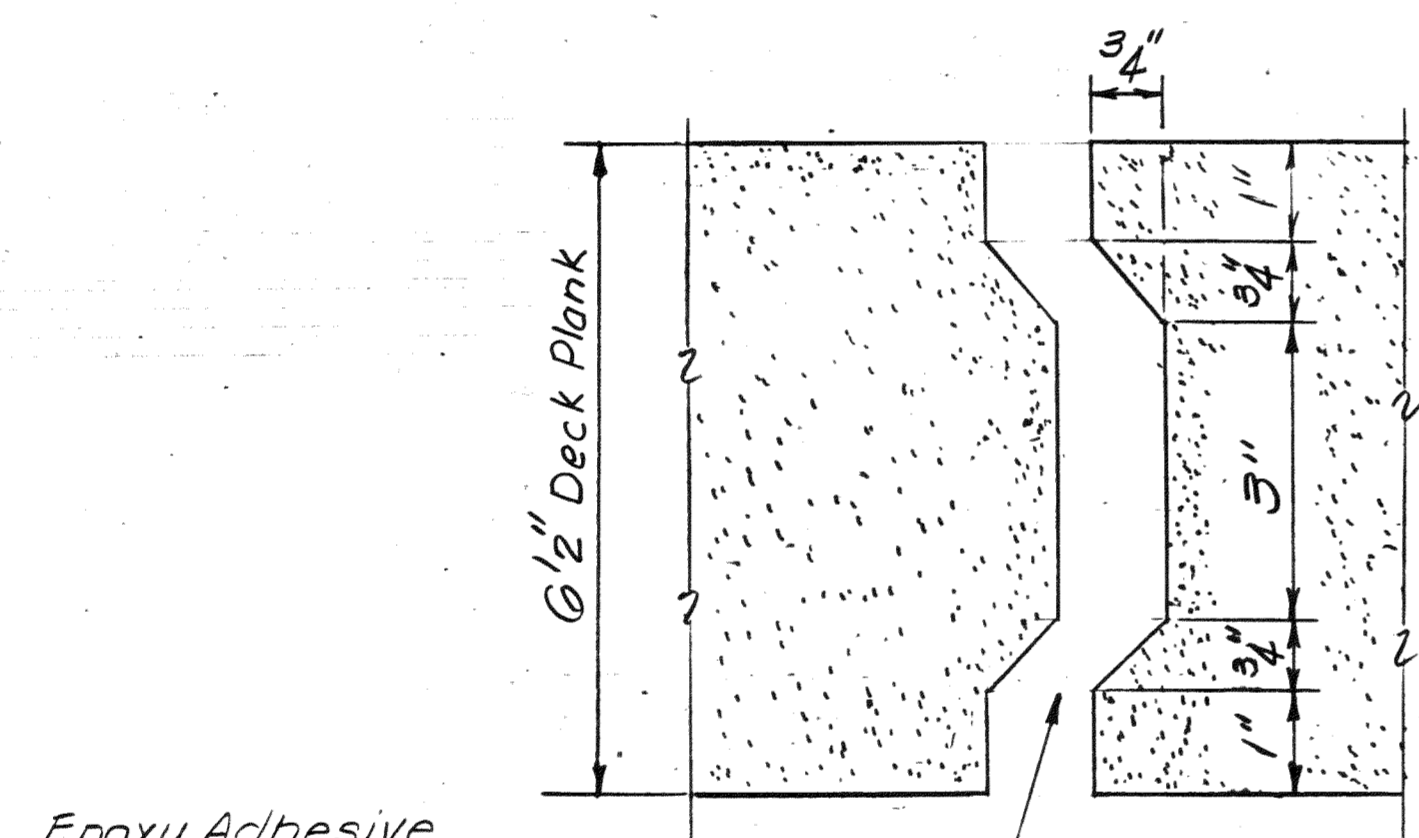
SECTION C-C

TOP PLAN

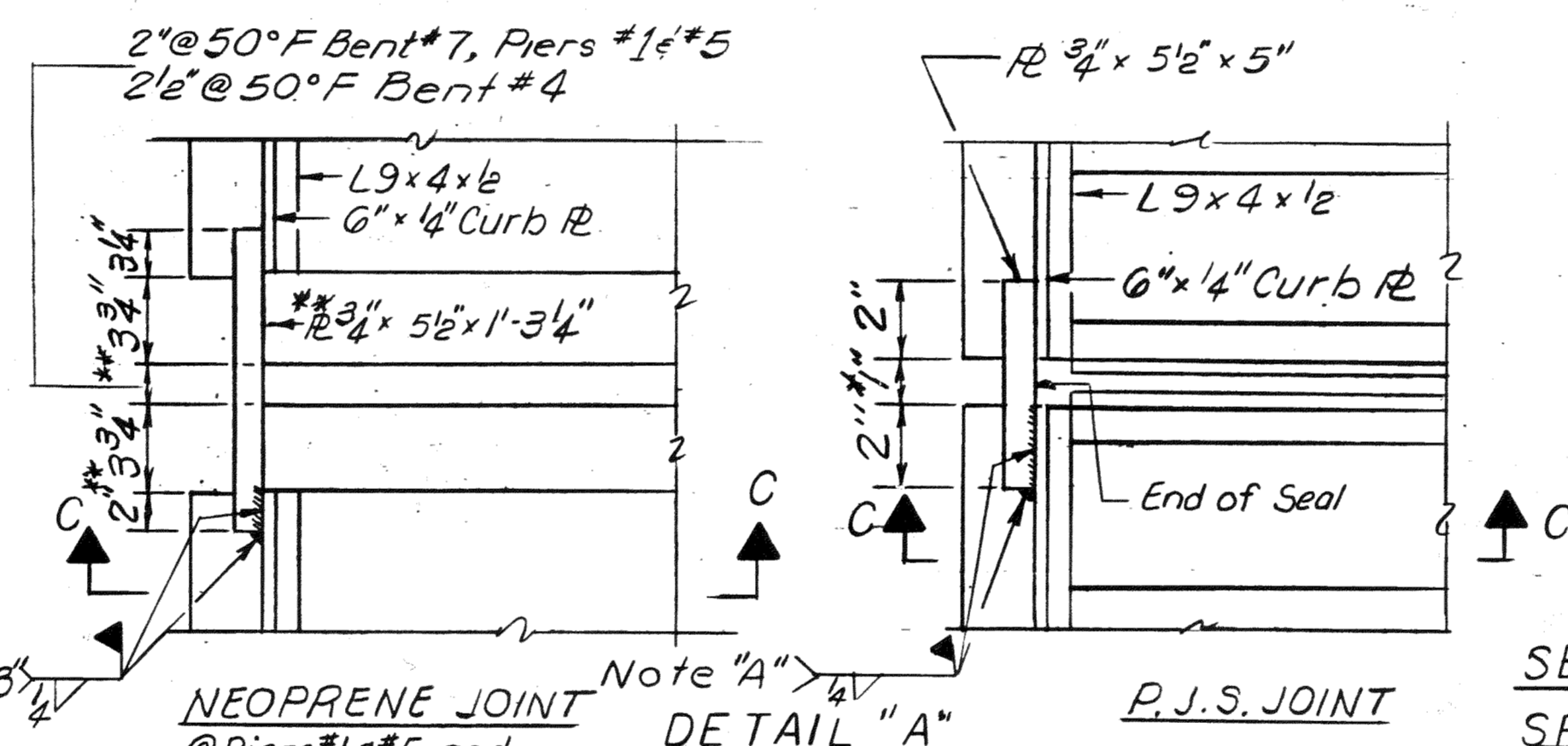


VIEW B-B

DETAIL "E"  
Showing Truss Spans



SECTION THRU JOINT BETWEEN PLANKS



NEOPRENE JOINT  
@ Piers #1 & #5 and Bents #4 & #7

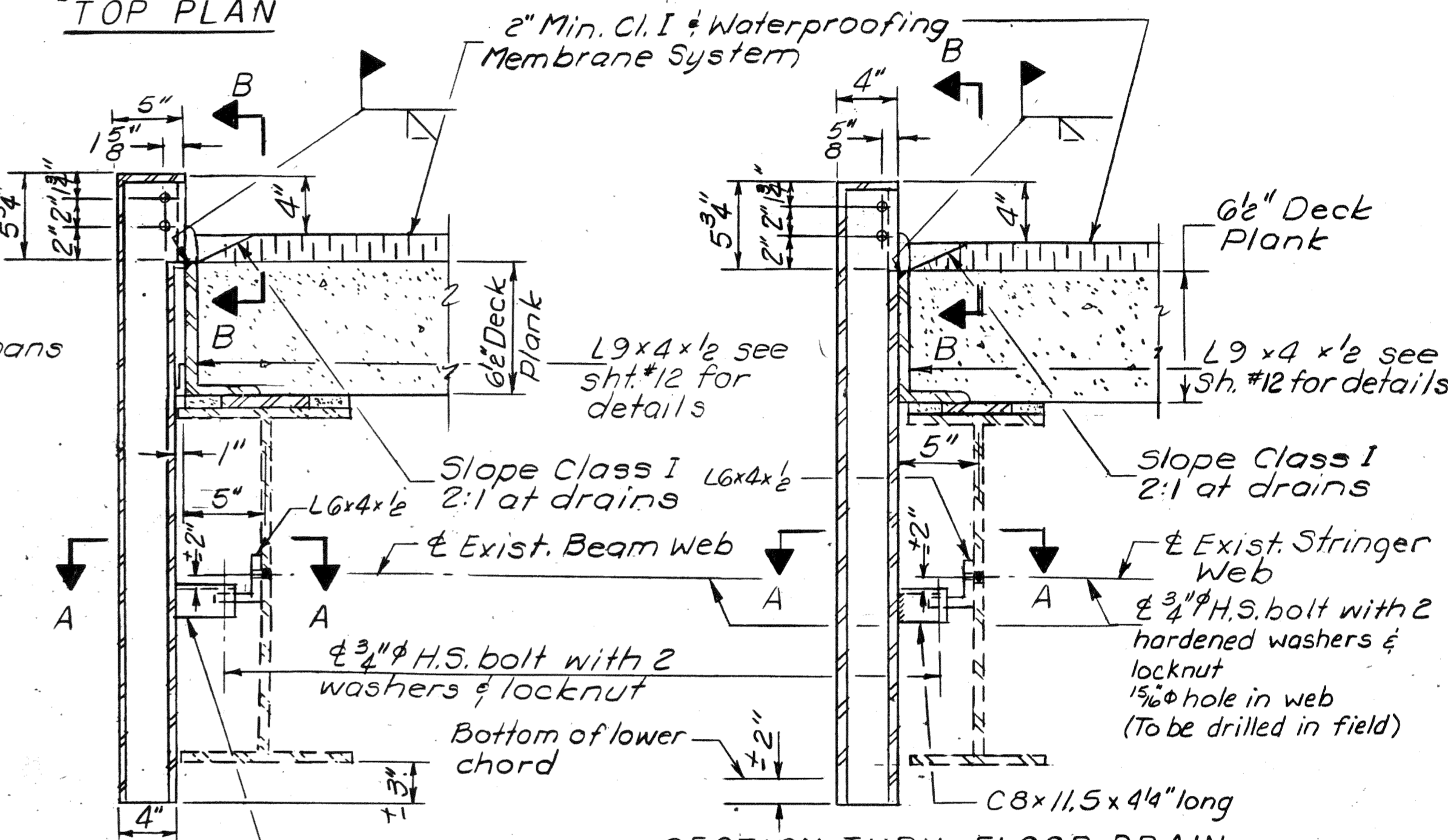
P.J.S. JOINT

Note "B" Weld before Neoprene is installed.

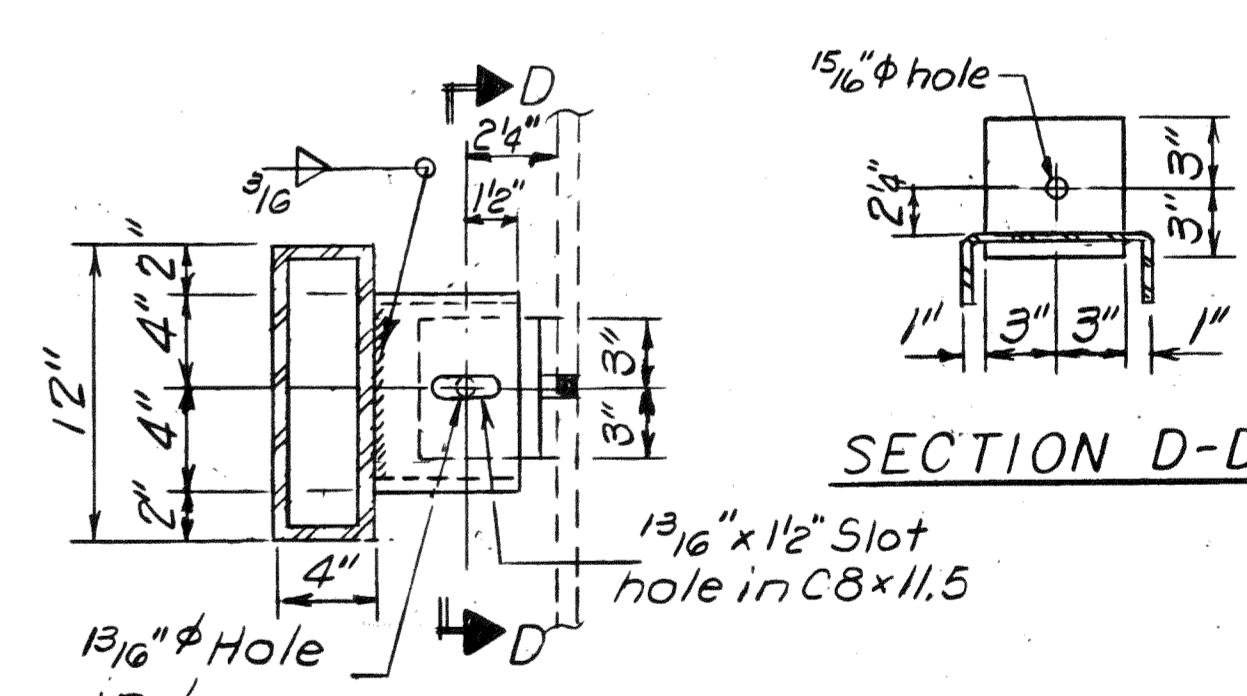
Note "A" Weld before P.J.S. is installed.

\*\*These are minimum dimensions. Dimensions are dependent on manufacture's product used.

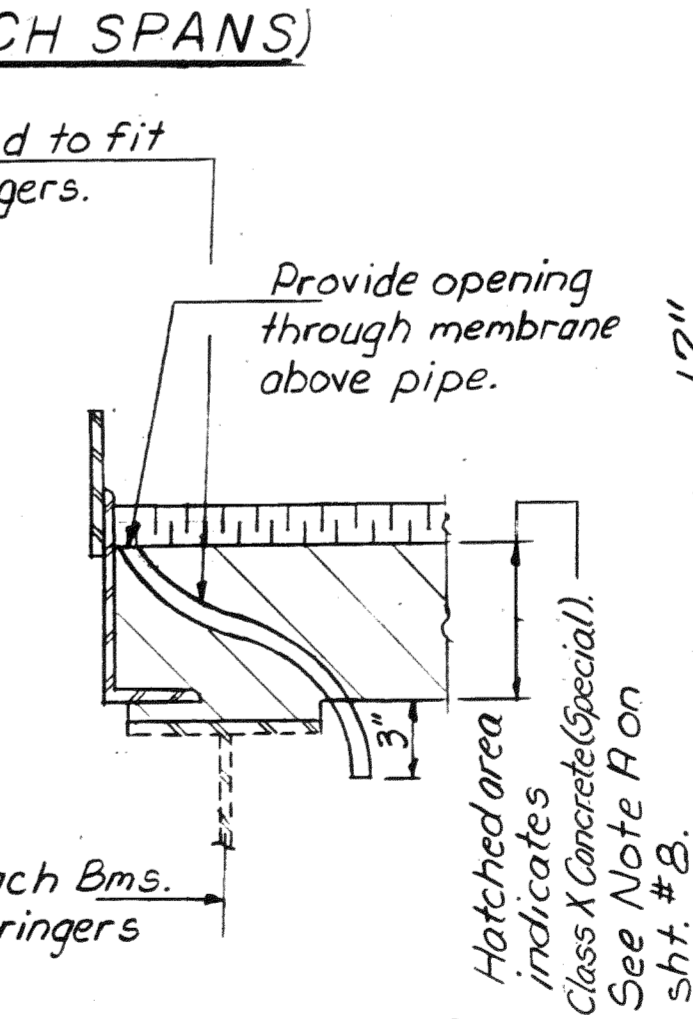
SECTION THRU FLOOR DRAIN SPECIAL (APPROACH SPANS)



SECTION THRU FLOOR DRAIN SPECIAL (TRUSS SPANS)

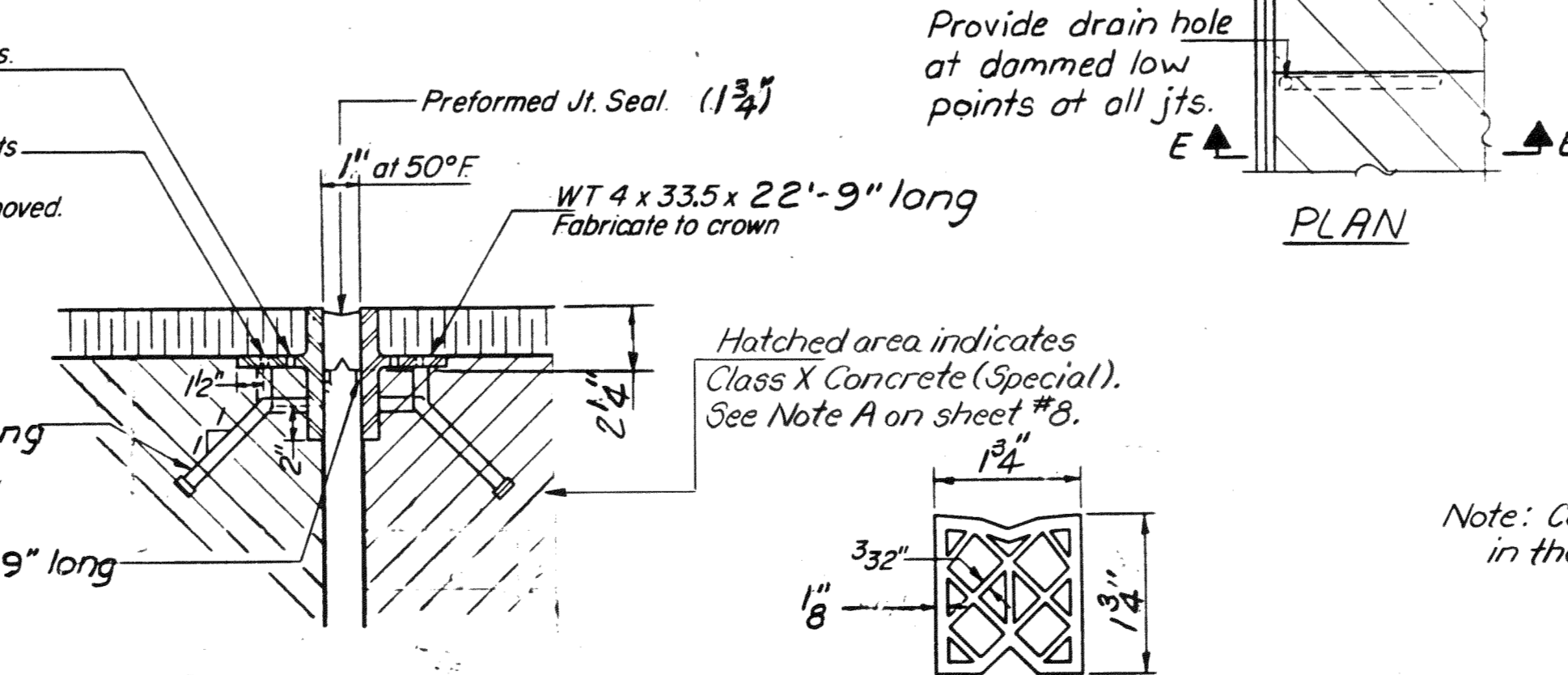


SECTION D-D



SECTION A-A

Note: The Floor Drains shall be painted in accordance with the paint system specified for Structural Steel. Bridge deck designated as Deck Planks shall be Precast Concrete Bridge Slab.



SECTION THRU PREFORMED JOINT SEAL (1 3/4)

PREFORMED JOINT SEAL (1 3/4)

DESIGNED	Darrd Burdick
CHECKED	Lance Kidd
DRAWN	Mercado
CHECKED	L.K. D.B.

EXAMINED	Dec. 31, 1985	Jay Q. Kaspar
PASSED		James J. Korburn
APPROVED		

23-3/4" x 8" granular or solid flux filled headed studs conforming to Art. 710.38 of the Std. Specs. automatically end welded @ 12" Alt. cts.

4" x 2" Bars x 22'-9" long (2 1/4" from top). Tack weld at 6' cts.

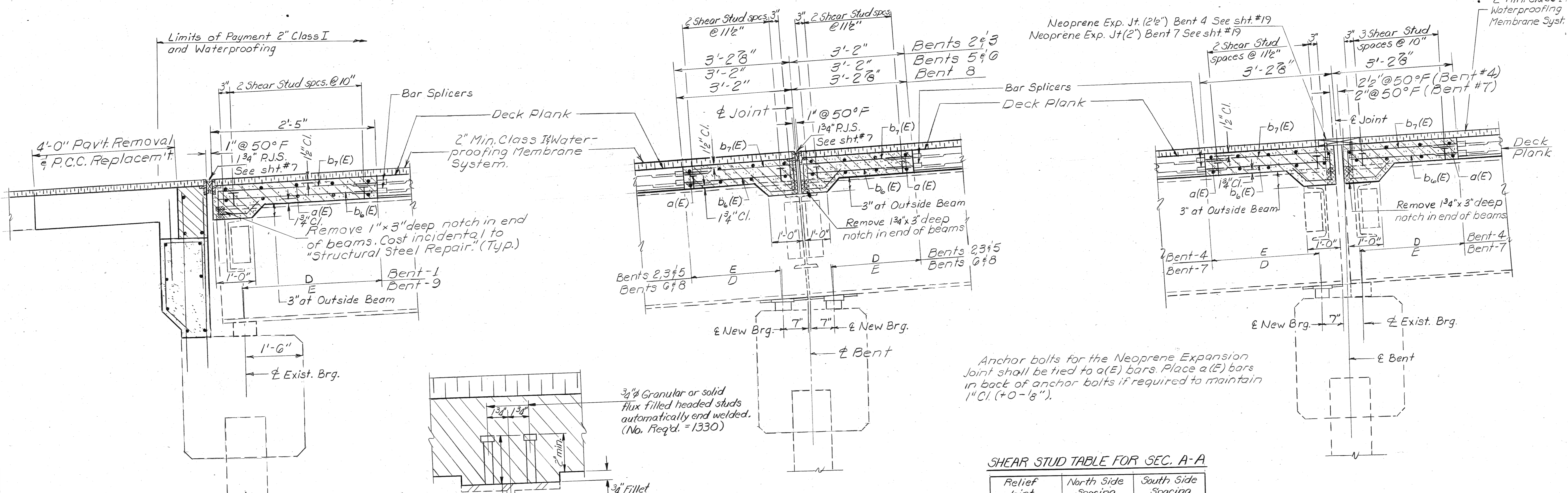
Note: Cost of field drilled holes are included in the pay item for "Floor Drains".

SUPERSTRUCTURE DETAILS  
F.A.R.T.E. 786 SEC. 109 B-D  
LA SALLE COUNTY  
STA. 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E. S. I. P. A. 786	109BD	LASALLE	68	34
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 8  
38 SHEETS



DETAIL AT BENTS 1 & 9  
Bent 1 - Looking East  
Bent 9 - Looking West

DETAIL AT BENTS 2, 3, 5, 6 & 8  
Bents 2, 3 & 5 - Looking East  
Bents 6 & 8 - Looking West

TYP. SEC. THRU SHEAR STUDS

3/4" ∅ Granular or solid flux filled headed studs automatically end welded. (No. Req'd. = 1330)

3/4" Fillet

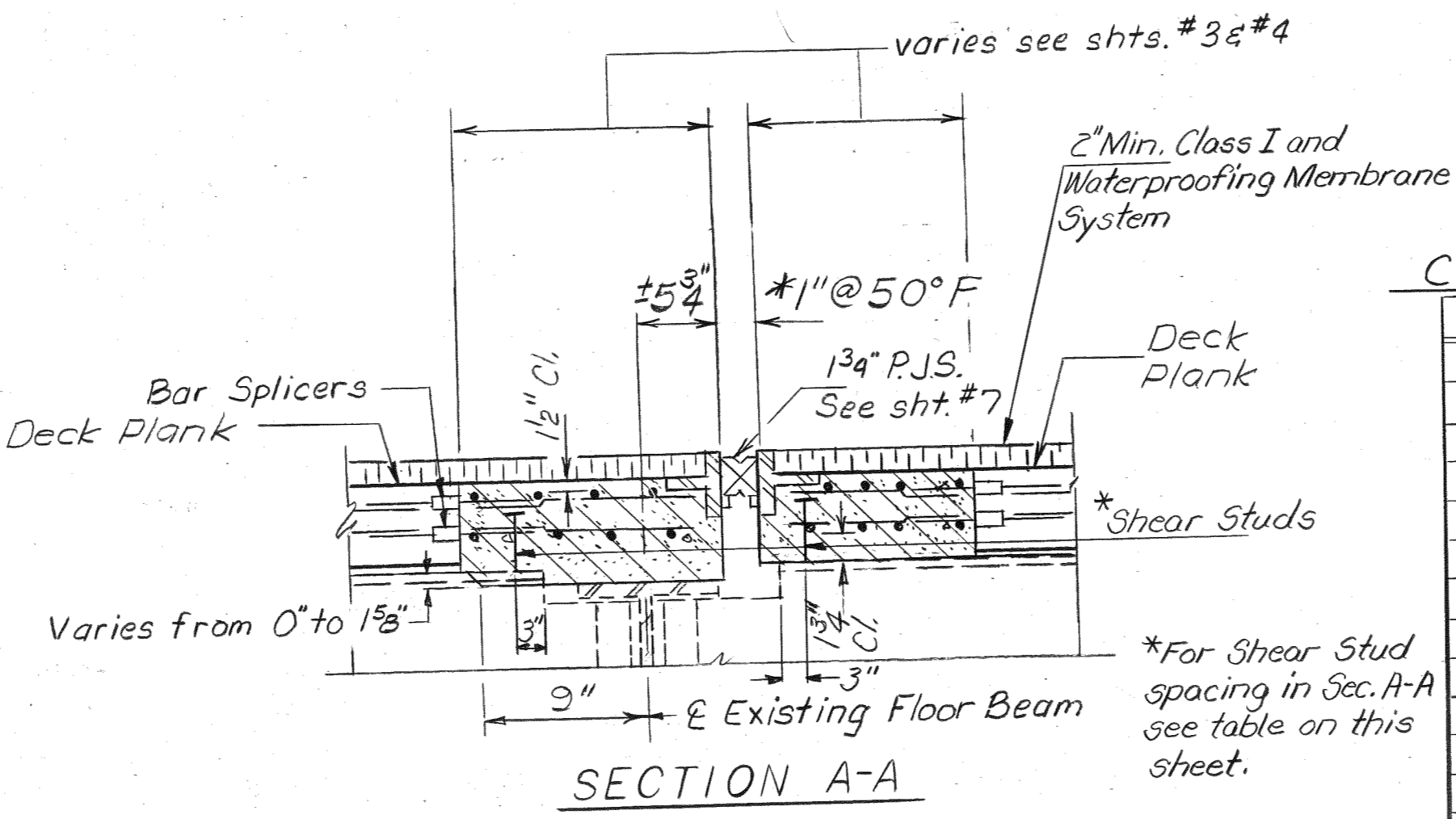
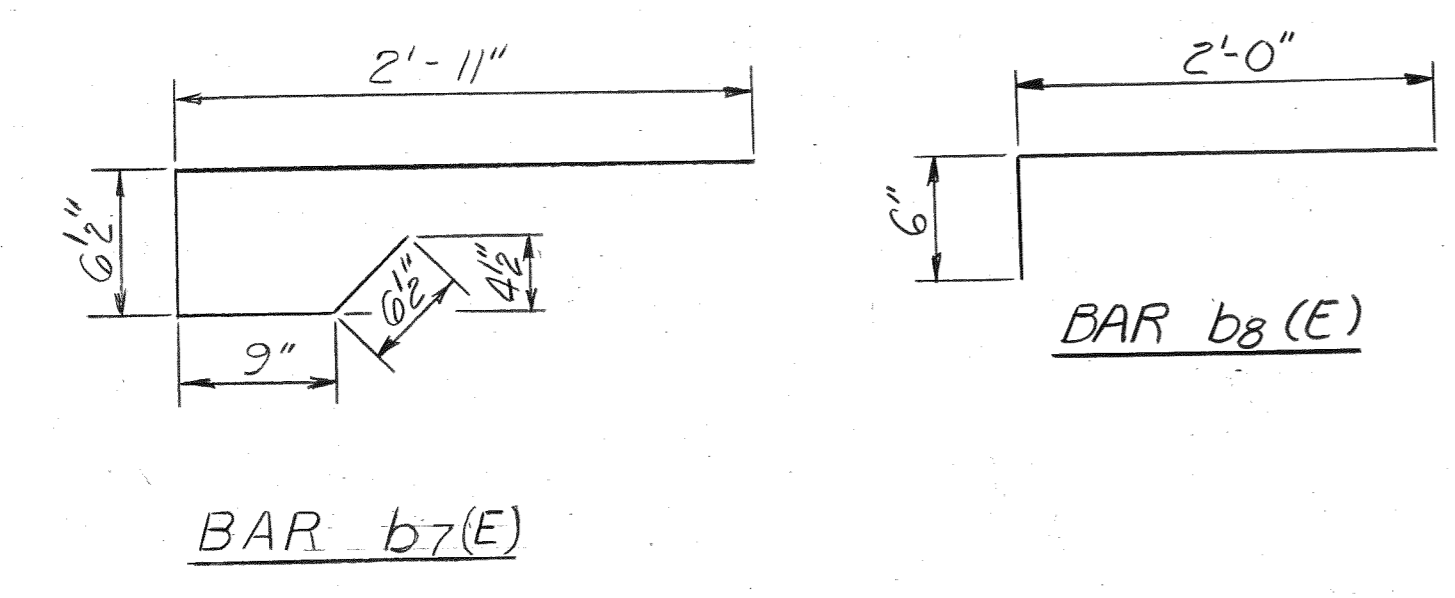
4" min.

∅ Beam or Stringer

SHEAR STUD TABLE FOR SEC. A-A

Relief Joint	North Side Spacing	South Side Spacing
1	1 spc. @ 8"	1 spc. @ 8"
2	1 row	1 spc. @ 8"
3	1 spc. @ 8"	3 spcs. @ 8"
4	2 spcs. @ 8"	3 spcs. @ 8"
5	2 spcs. @ 8"	3 spcs. @ 8"
6	2 spcs. @ 8"	3 spcs. @ 8"
7	1 spc. @ 8"	1 row
8	1 spc. @ 8"	1 spc. @ 8"
9	1 spc. @ 8"	1 row
10	1 spc. @ 8"	1 spc. @ 8"

DETAIL AT BENTS 4 & 7  
Bent 4 - Looking East  
Bent 7 - Looking West



BILL OF MATERIAL

CAST IN PLACE CONC. SUPERSTRUCTURE

Bar	No.	Size	Length	Shape
a(E)	450	#5	22'-6"	—
a <sub>1</sub> (E)	32	#5	5'-3"	—
b(E)	128	#4	2'-0"	—
b <sub>1</sub> (E)	256	#4	1'-9"	—
b <sub>2</sub> (E)	576	#4	1'-3"	—
b <sub>3</sub> (E)	192	#4	4'-9"	—
b <sub>4</sub> (E)	64	#4	3'-1"	—
b <sub>5</sub> (E)	512	#4	2'-7"	—
b <sub>6</sub> (E)	576	#4	2'-11"	—
b <sub>7</sub> (E)	576	#4	4'-9"	—
b <sub>8</sub> (E)	64	#4	2'-6"	—
Reinforcement Bars (Epoxy Coated)				Lbs. 15,900
Class X Concrete (Special)				Cu. Yd. 63.6

Note: See sht. #3 for E and D dimensions.  
See sht. #7 for End Treatment of Joints.

Bridge Deck designated as Deck Planks shall be Precast Concrete Bridge Slab.  
Hatched areas indicate Class X Concrete (Special).  
See Note A on this sheet.

SUPERSTRUCTURE DETAILS  
F.A. RTE. 786 SEC. 109 B-D  
LA SALLE COUNTY  
STA. 79+05.00

DESIGNED David Burdick  
CHECKED Lance Bild  
DRAWN Mercado  
CHECKED L.A. DB.

EXAMINED Craig J. Kaspar  
PASSED James T. Rayburn  
APPROVED

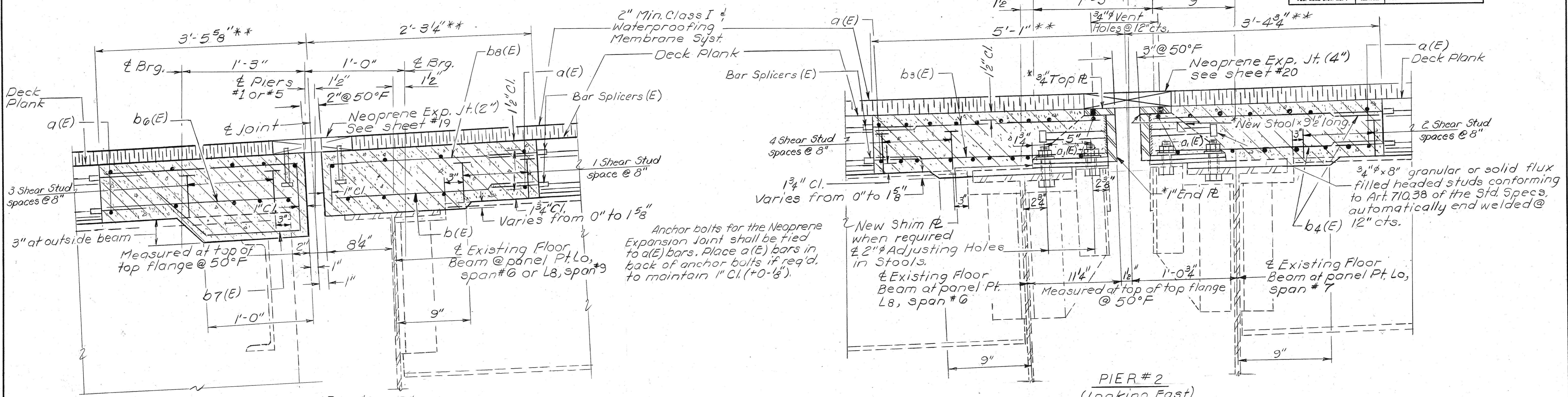
Dec. 31, 1975

ENGINEER OF BRIDGE DESIGN  
ENGINEER OF BRIDGES AND STRUCTURES  
DIRECTOR OF HIGHWAYS

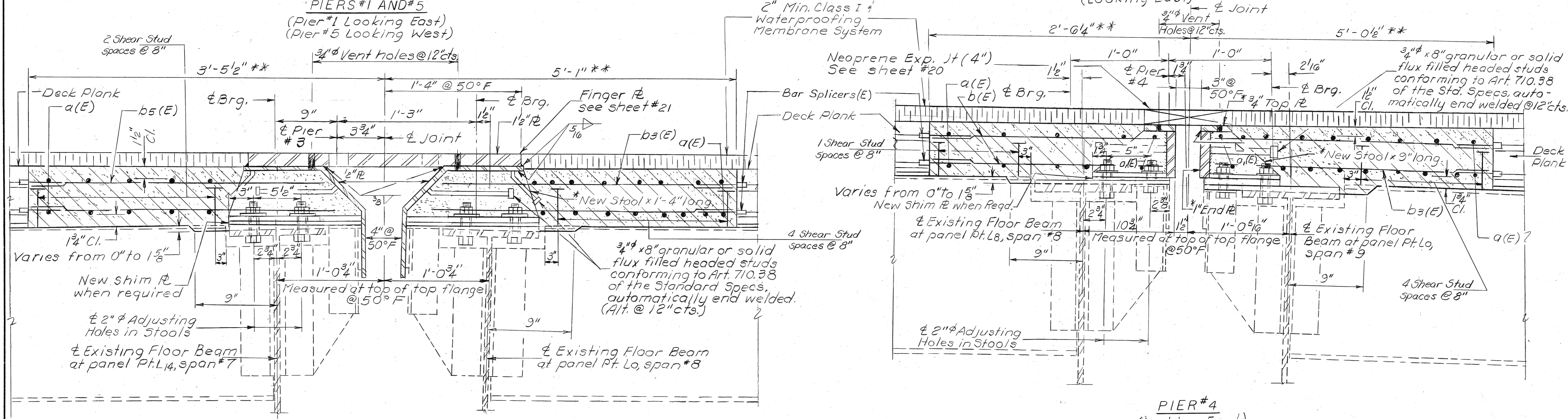
Note A:  
Class X Concrete (Special) should be poured at the start of the work period in order to have sufficient time for a permanent set in the concrete. Steel plate ramps approved by the Engineer shall be provided to protect the concrete from traffic and shall stay in place until concrete is cured. Cost of the steel plate ramps is incidental to "Precast Concrete Bridge Slab." See Special Provision for Class X Concrete (Special)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 38 SHEETS
R.A. 786	109BD	LA SALLE	68	35	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



PIERS #1 AND #5  
(Pier #1 Looking East)  
(Pier #5 Looking West)



PIER #2  
(Looking East)

PIER #4  
(Looking East)

DESIGNED	David Budick
CHECKED	Lame Kidd
DRAWN	Mercado
CHECKED	L. K. DB.

EXAMINED	Dray J. Kaspar	DEC. 31, 1985
PASSED	James L. Hartmann	
APPROVED		

Notes:  
See sht. #21 for End Treatment of Joints.  
See sht. #21 for Reinforced Neoprene Expansion Joint Treatment & Finger R details.  
For all "L" locations, see sht. #22.

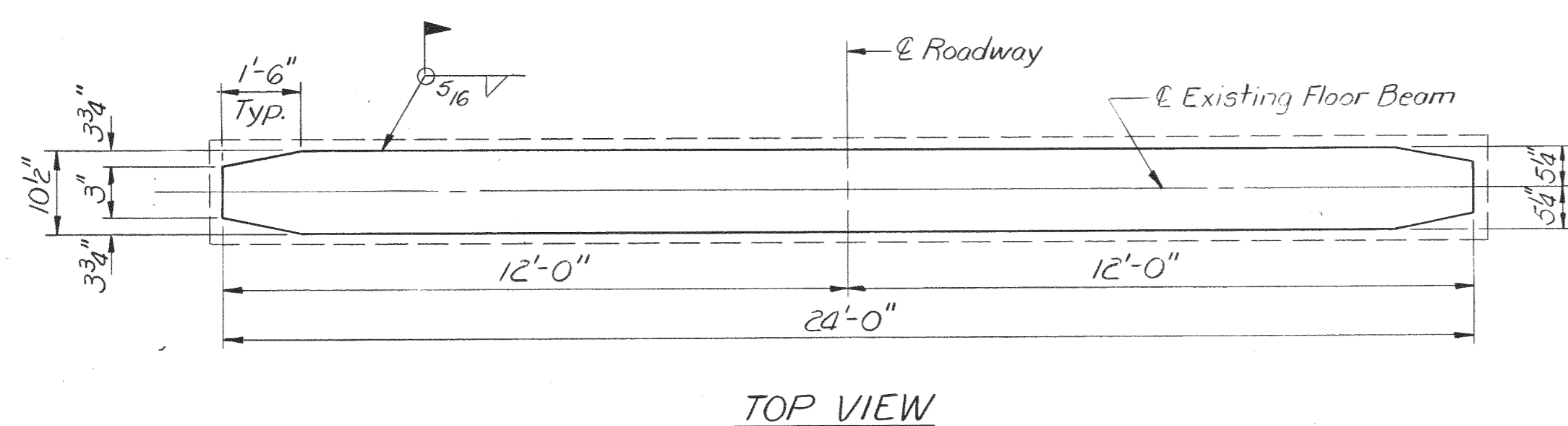
\* See sht. #21 for Details.  
\*\* Class X Concrete (Special). See Note A on sheet #8.

Notes:  
Bridge Deck designated as Deck Planks shall be Precast Concrete Bridge Slab.  
See sheet #8 for Section Thru Shear Studs.

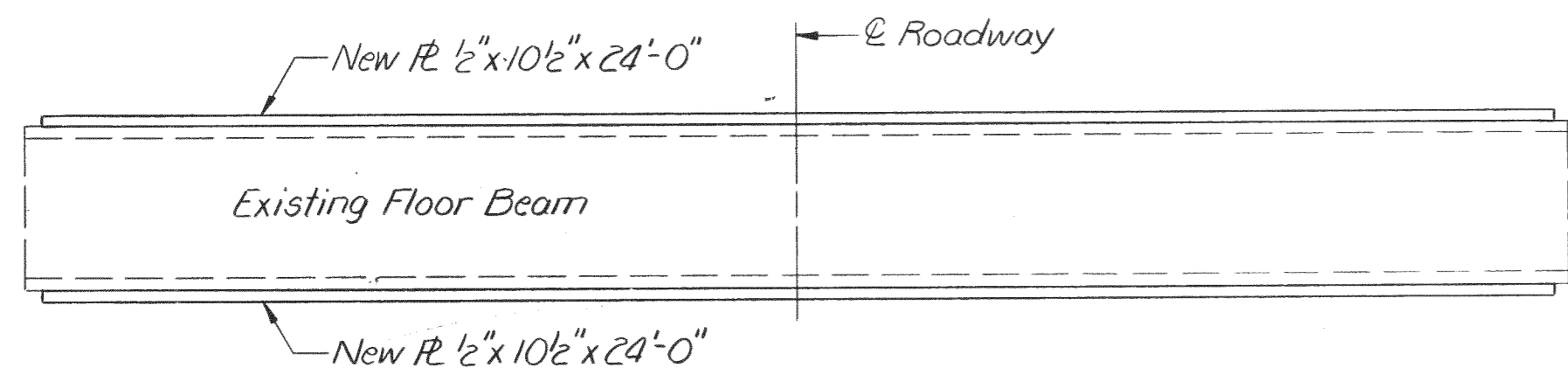
SUPERSTRUCTURE DETAILS  
F.A.R.T.E. 786 SEC. 109 B-D  
LA SALLE COUNTY  
STA. 79+05.00  
Rev. 2-27-86 F.M.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

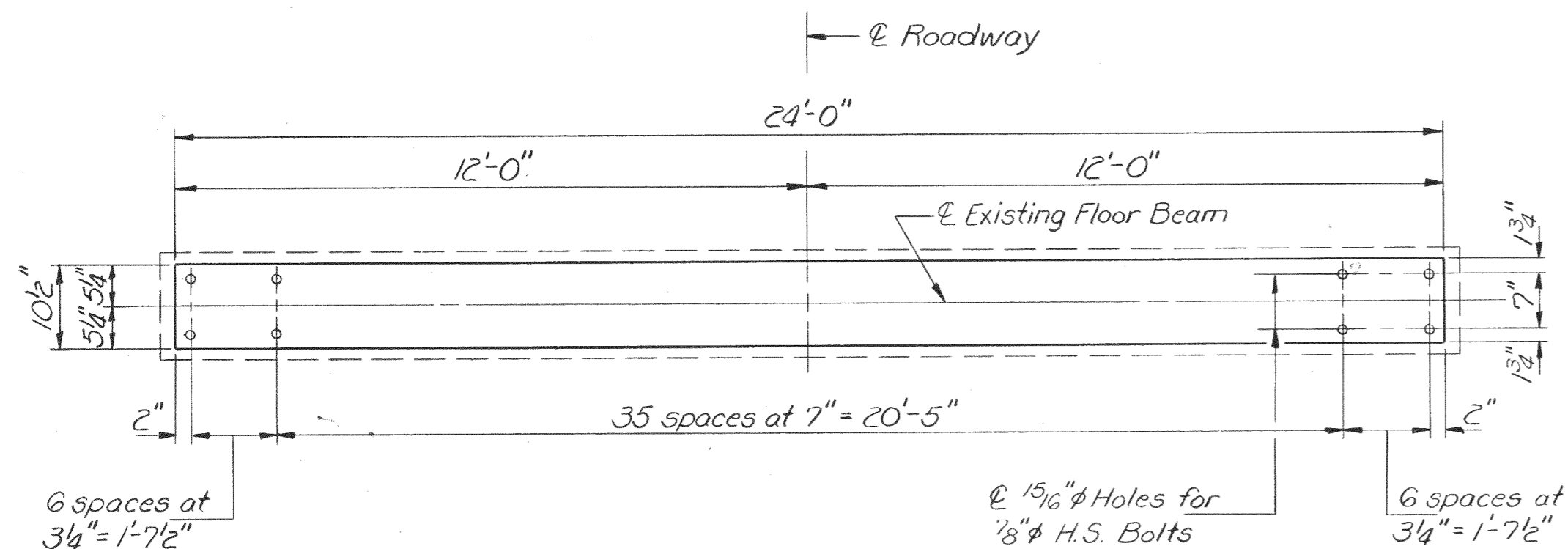
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 38 SHEETS
786	109B-D	LASALLE	68	36	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



TOP VIEW



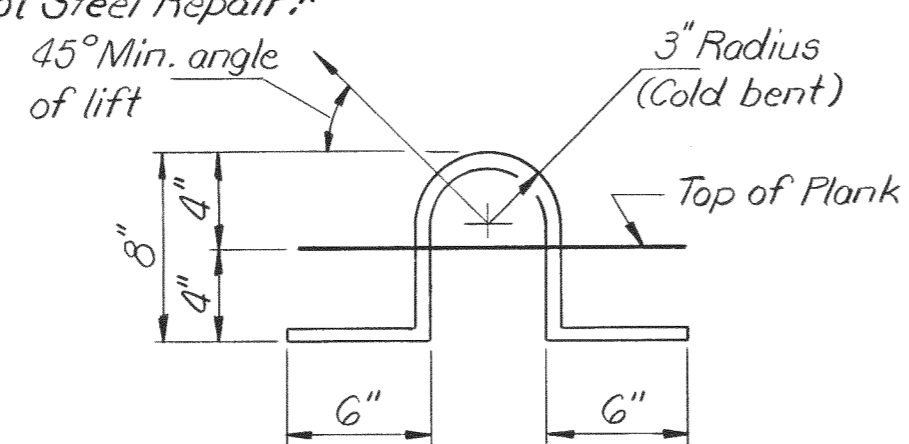
ELEVATION



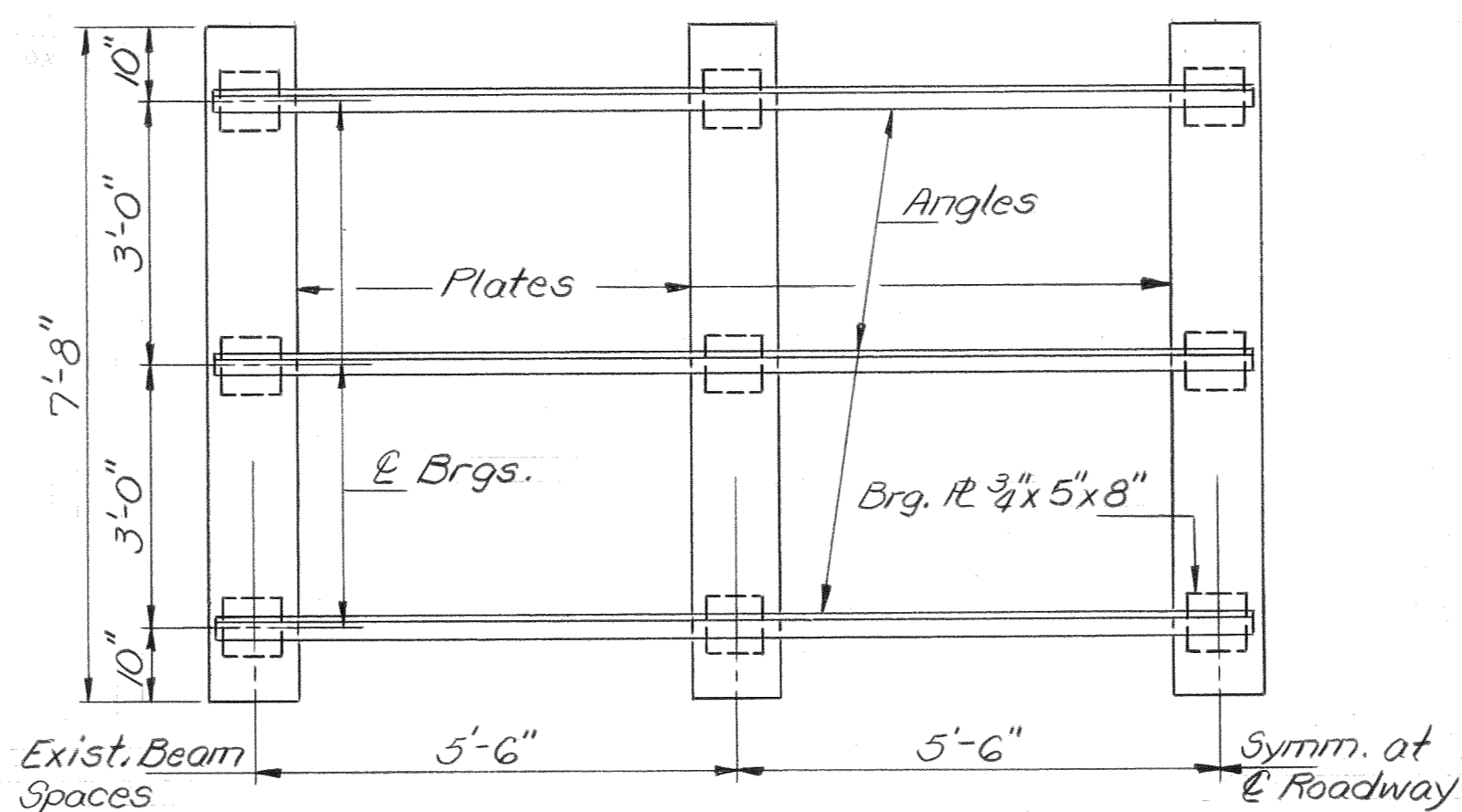
BOTTOM VIEW

COVER PLATE DETAILS FOR INTERIOR FLOOR BEAMS

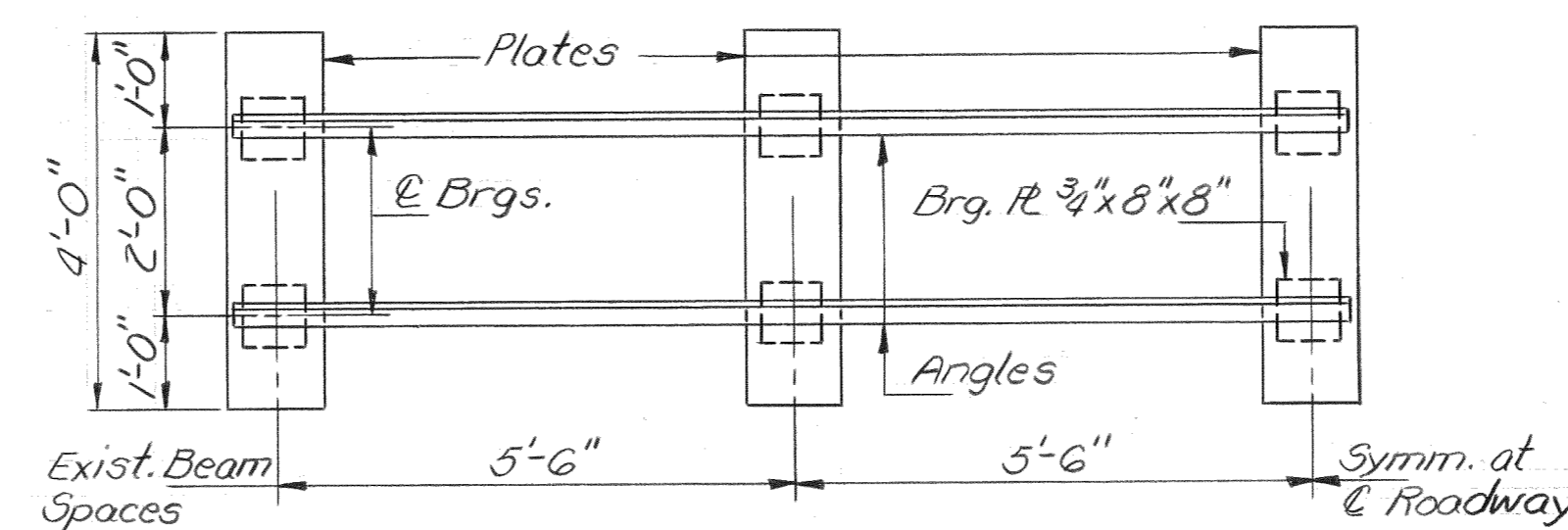
Notes: The existing flanges of the floor beams shall be cleaned in accordance with Method 1, Article 509.06(b) of the Special Provisions for Cleaning and Painting Steel Structures. The new cover plates shall then be clamped securely to the bottom flange of the existing floor beams so that they are centered on the centerline of roadway and the centerline of the existing floor beams. The new cover plates shall then be used as templates to drill 15/16" holes in the existing bottom flanges. Cost of cleaning existing floor beams shall be incidental to "Cleaning and Painting Steel Bridge." Cost of cover plates is included in the pay item for "Structural Steel Repair." Cost of drilling holes is incidental to "Structural Steel Repair."



LIFTING LOOP DETAIL

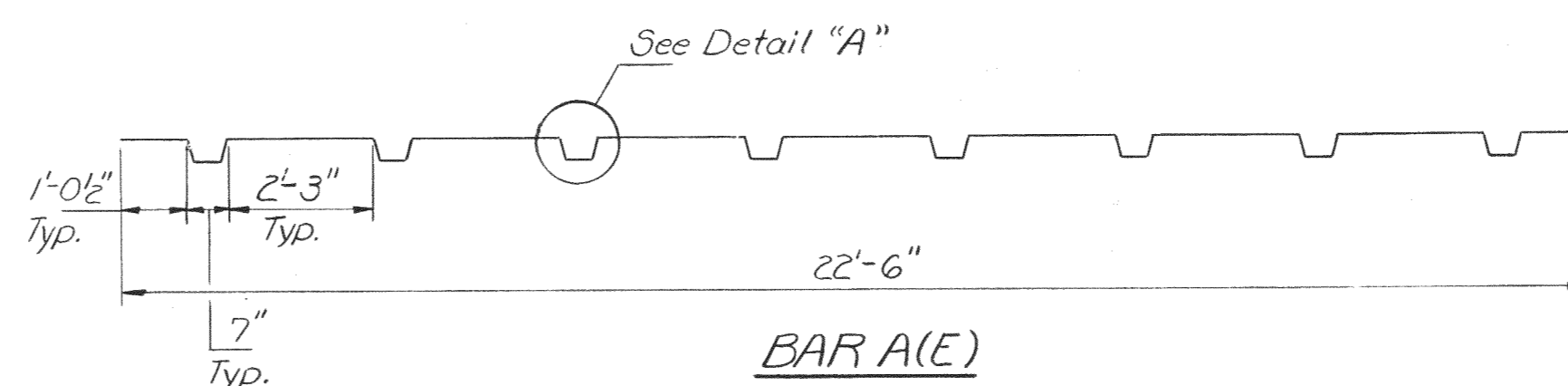


BEARING TEMPLATE FOR APPROACH SPANS

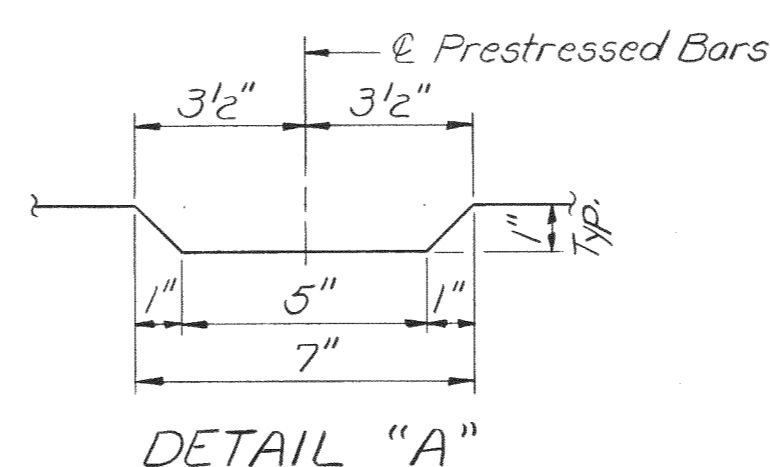


BEARING TEMPLATE FOR TRUSS SPANS

Notes: Template members shall follow roadway crown configuration and be of sufficient size to prevent deflection under its own weight. The template shall be used to determine the bearing locations and also if shim plates are required. Cost of shim plates and templates shall be incidental to "Precast Concrete Bridge Slab."

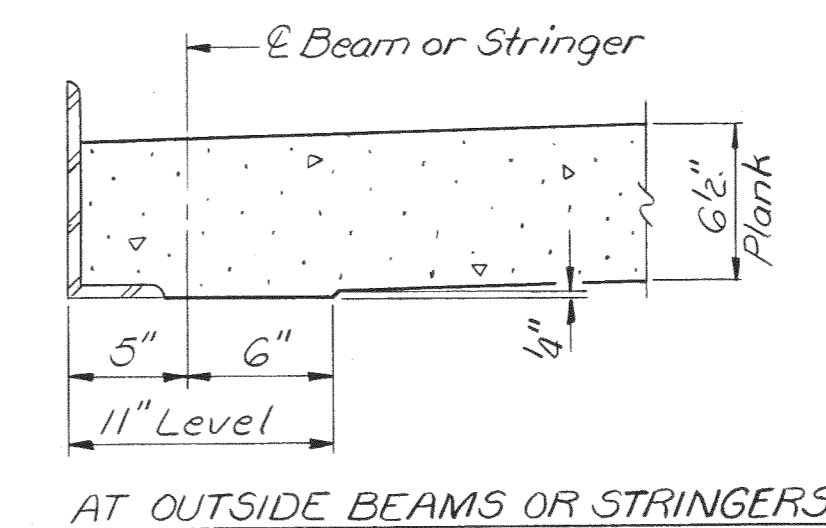


BAR A(E)

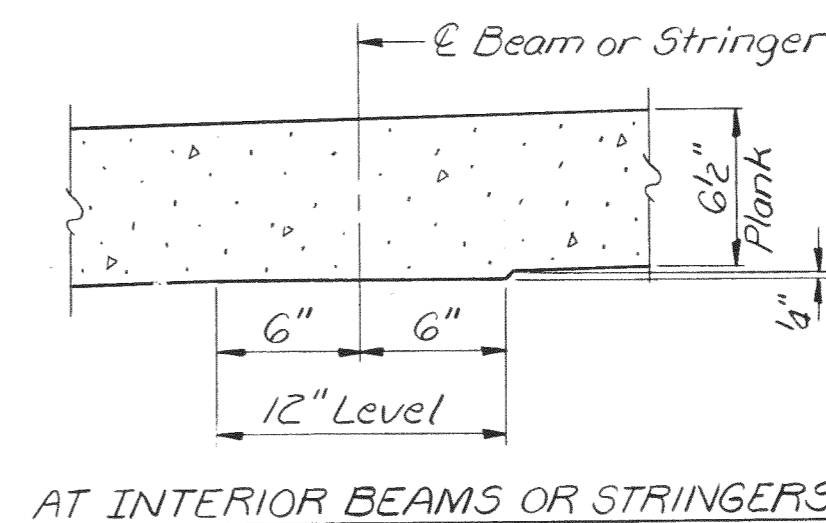


DETAIL "A"

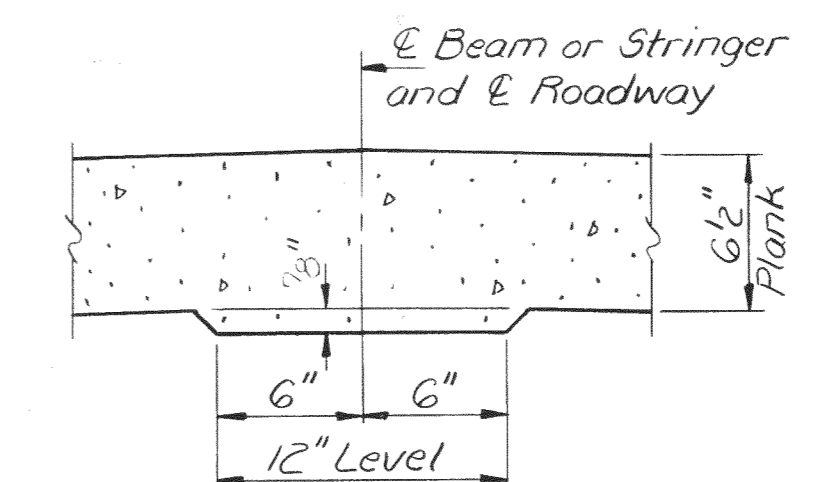
Notes: Lifting loops shall be 1/2" dia, 6x25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs. or 2-1/2" dia 270 ksi strands, as shown. Joint surfaces between planks shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting. Required Release Strength, f<sub>ei</sub>, shall be 4000 psi. The top surface shall be finished in accordance with Article 505.06 of the Standard Specifications except that the surface shall not be roughened by brooming. Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.



AT OUTSIDE BEAMS OR STRINGERS



AT INTERIOR BEAMS OR STRINGERS



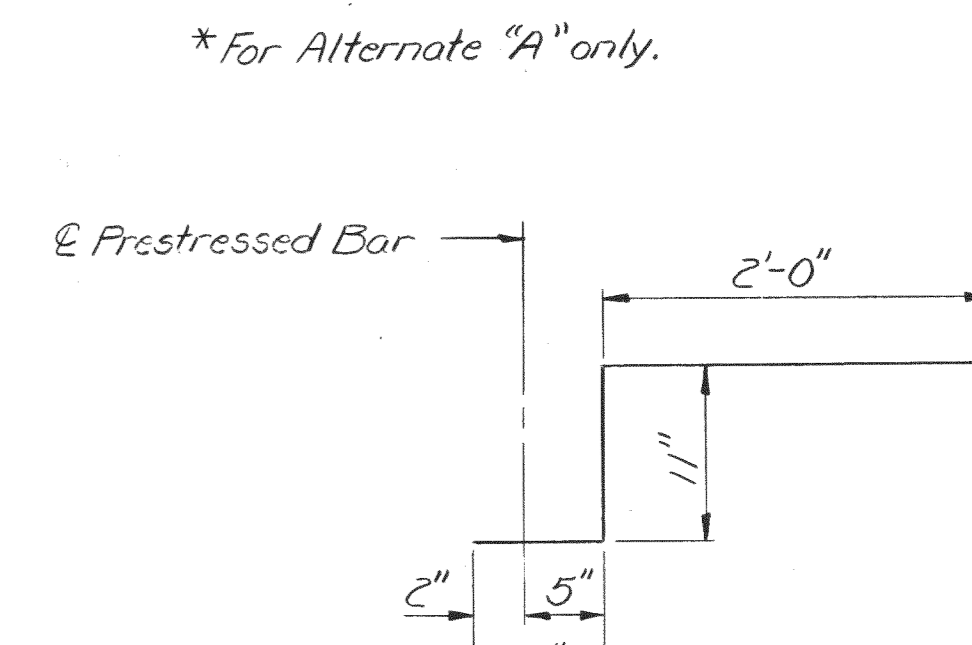
AT ROADWAY

PANEL DETAILS AT BEAMS OR STRINGERS

APPROACH PLANK BAR LIST FOR INFORMATION ONLY

Bar	No. Per Plank		Size	Length	Shape
	End	Interior			
A(E)	1	2	#5	23'-0"	~
A1(E)	14	14	#5	22'-2"	~
A2(E)	5	4	#5	22'-6"	~
* A3(E)	2	4	#4	3'-6"	J
* A4(E)	6	12	#4	6'-8"	~
B(E)	70	70	#4	7'-5"	~
B1(E)	16	16	#5	7'-5"	~
B2(E)	4	4	#4	6'-3"	~

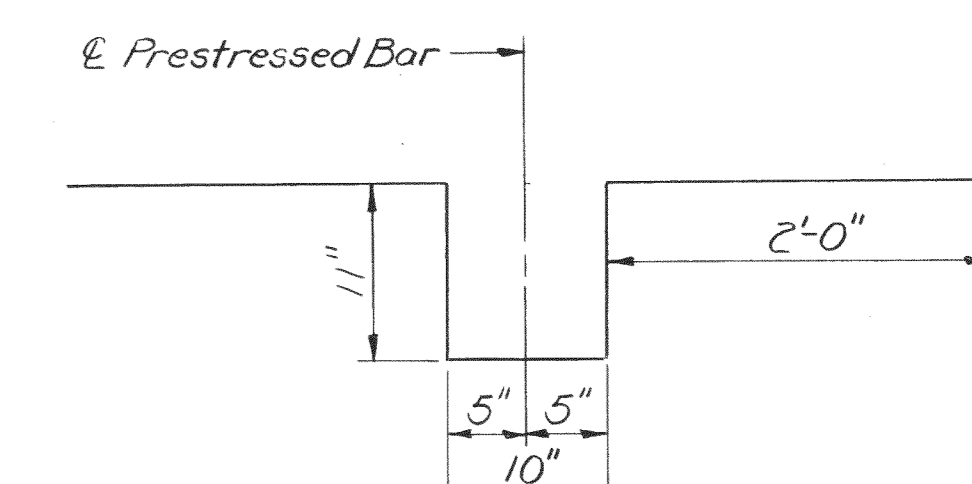
Bars designated (E) shall be epoxy coated



\* For Alternate "A" only.

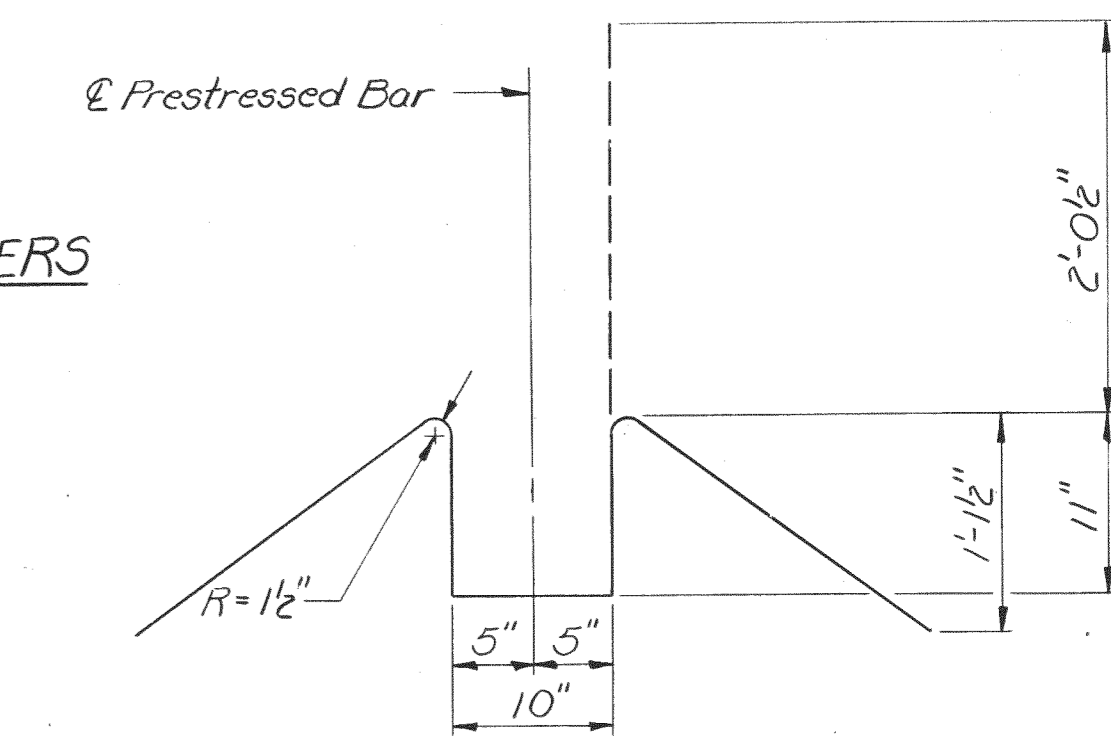
\* BAR A3(E)

At corner coupler pockets



\* BAR A4(E)

At interior coupler pockets



\* BAR A5(E)

At interior coupler pockets

TRUSS PLANK BAR LIST FOR INFORMATION ONLY

Bar	No. Per Plank		Size	Length	Shape
	End	Interior			
A(E)	1	2	#5	23'-0"	~
A1(E)	6	6	#5	22'-2"	~
A2(E)	5	4	#5	22'-6"	~
* A3(E)	2	4	#4	3'-6"	J
* A5(E)	6	12	#4	6'-9"	~
B3(E)	70	70	#4	3'-9"	~
B4(E)	16	16	#5	3'-9"	~
B5(E)	4	4	#4	2'-5"	~

Note: Work this sheet with sheet #5. Bridge deck designated as deck planks shall be Precast Concrete Bridge Slab.

SUPERSTRUCTURE DETAILS  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

DESIGNED	James Bidd
CHECKED	David Burdick
DRAWN	Joe Sutherland
CHECKED	DB.

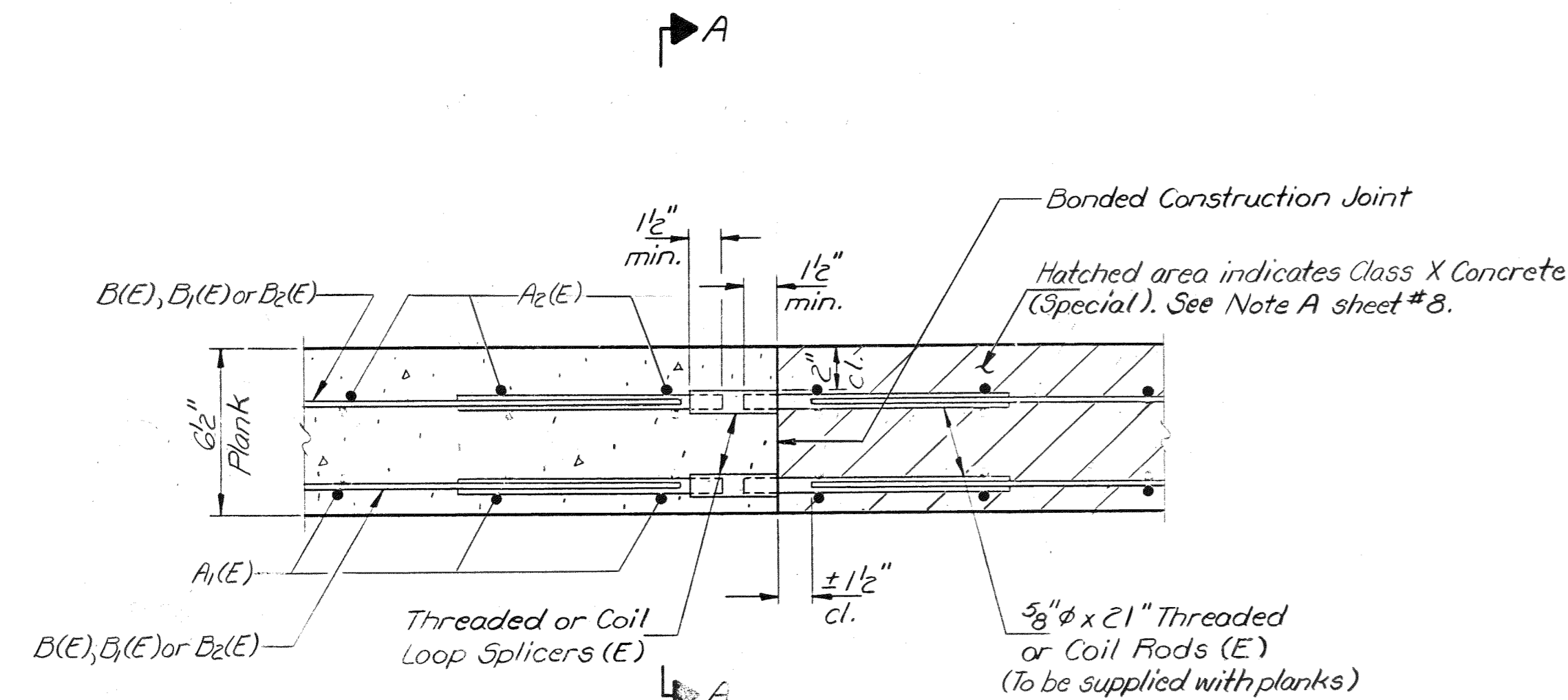
EXAMINED	Dec. 31, 1985	Jay J. Kappas
PASSED		James J. Kappas
APPROVED		

DIRECTOR OF HIGHWAYS

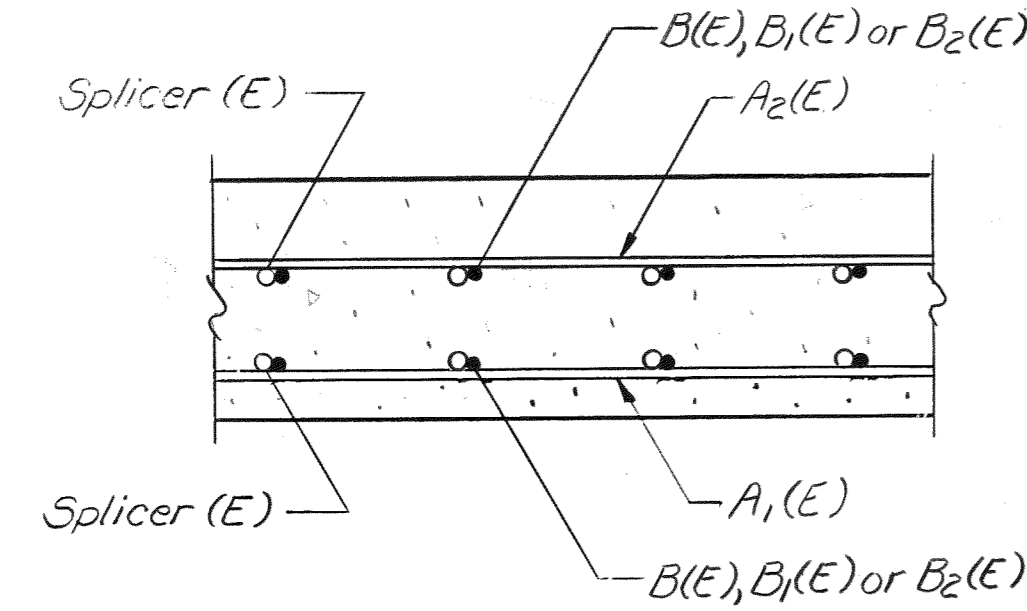
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
786	109B-D	LASALLE	68	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11  
38 SHEETS



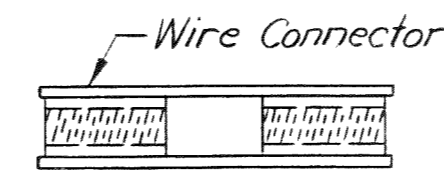
SECTION THRU END PLANK  
For reinforcement designations in hatched area see sheets #3 & #4.



Note: Splicers and rods shall be cast incidental to "Precast Concrete Bridge Slab."  
Cut rods in the field to fit as necessary.  
Bridge deck designated as deck planks shall be Precast Concrete Bridge Slab.

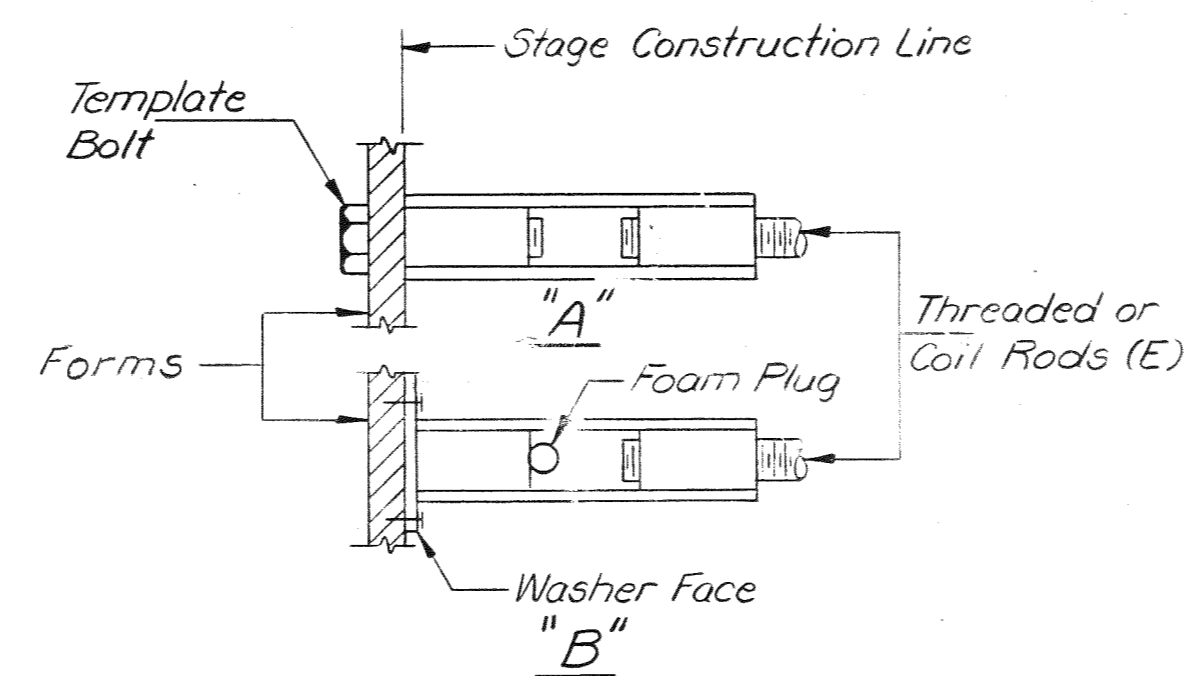


\*\* ONE PIECE



SPLICER ALTERNATIVES

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



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

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the lapped reinforcement bars.  
Splicer rods shall extend minimum 1/2 inches into the couplers.  
All reinforcement bars shall be lapped and tied to the splicer rods.  
Splicer (Coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.  
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (Coupler) assembly satisfies the following requirements:

- Minimum Capacity =  $1.25 \times f_y \times A_t$   
(Tension in kips)
- Minimum \*Pull-out Strength =  $1.25 \times f_s \text{ allow} \times A_t$   
(Tension in kips)

Where  $f_y$  = Yield strength of lapped reinforcement bars in k.s.i.  
 $f_s \text{ allow}$  = Allowable tensile stress in lapped reinforcement bars in k.s.i. (Service Load)  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
\* 28 day concrete

Typical Splicer (Coupler) Assembly Size:

#4 bar lap with 3/8" Splicer (Coupler) x 1'-9" Splicer Rods (1'-4" min. lap)	Minimum Capacity = 15.0 kips - tension
	Minimum Pull-out Strength = 5.9 kips - tension

DESIGNED	David Burdick
CHECKED	Lance Hill
DRAWN	Joe Sutherland
CHECKED	L.K. DB.

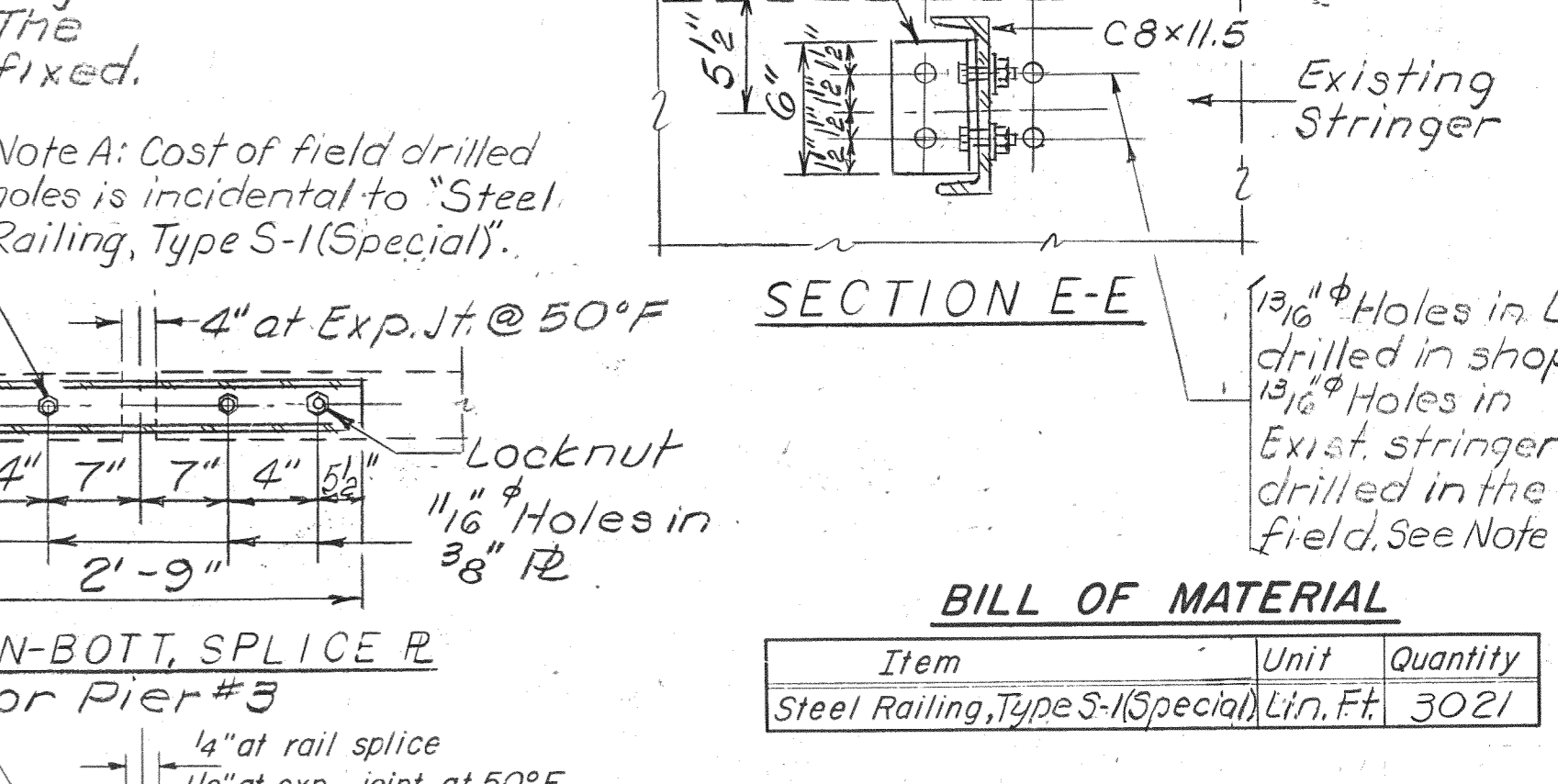
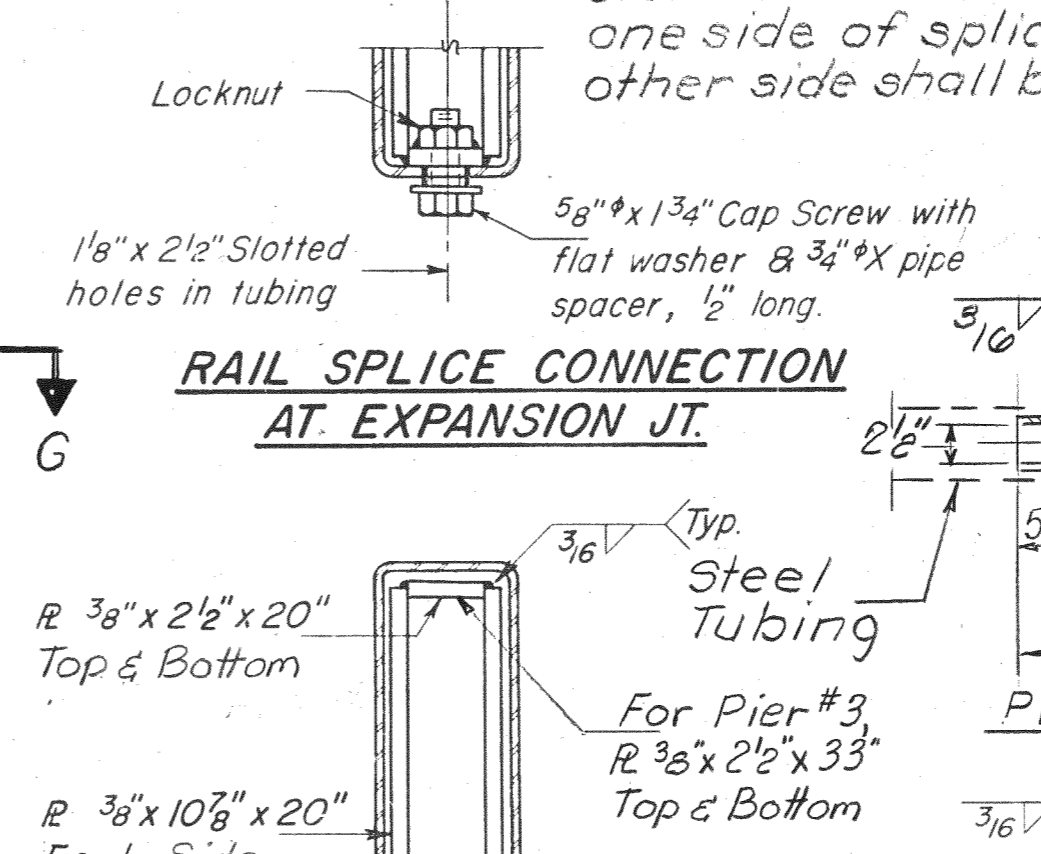
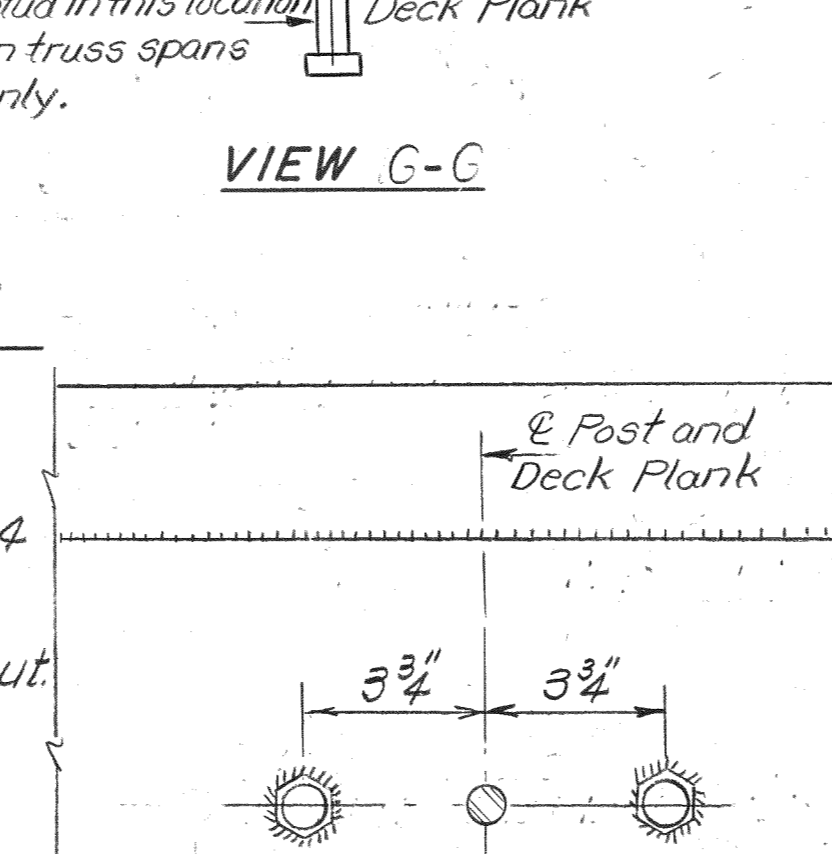
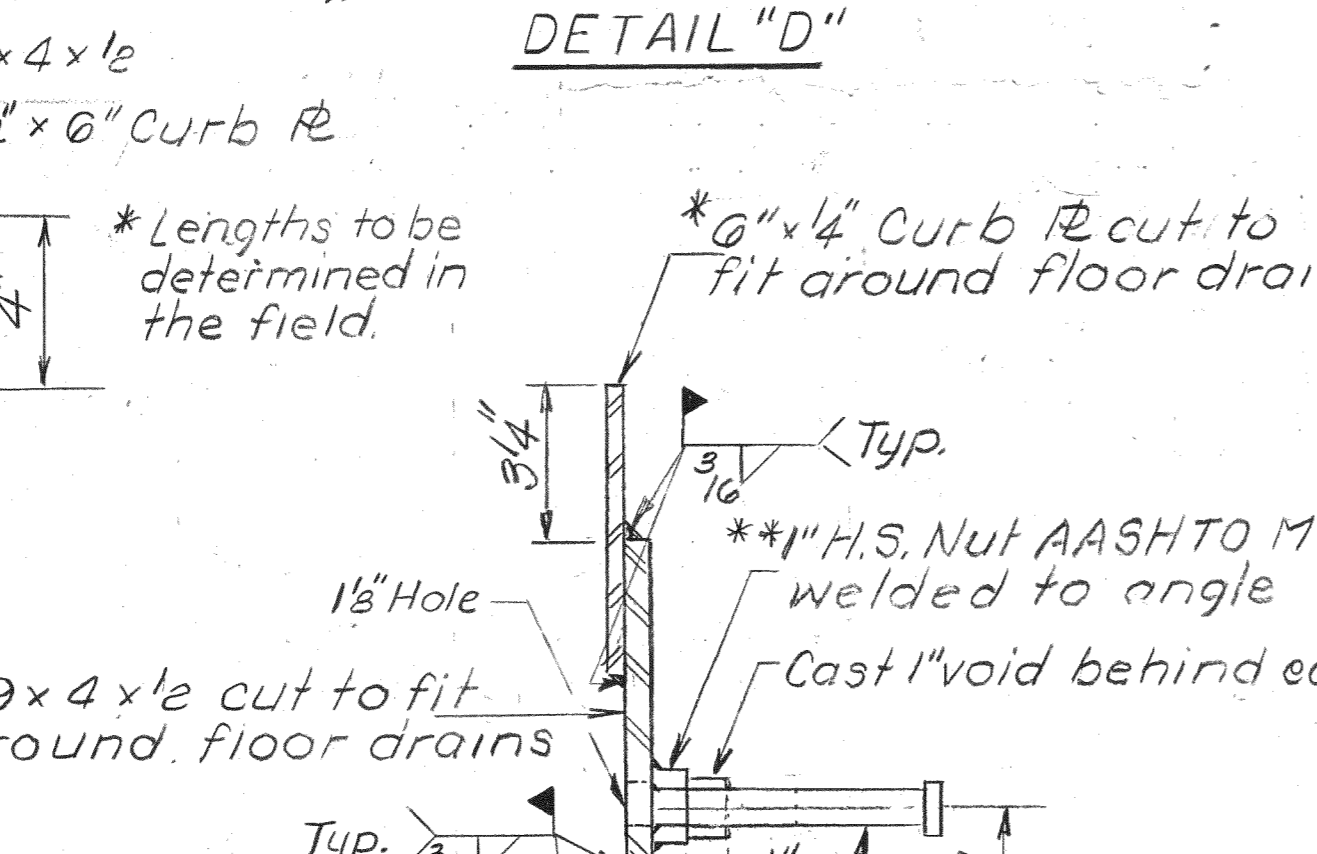
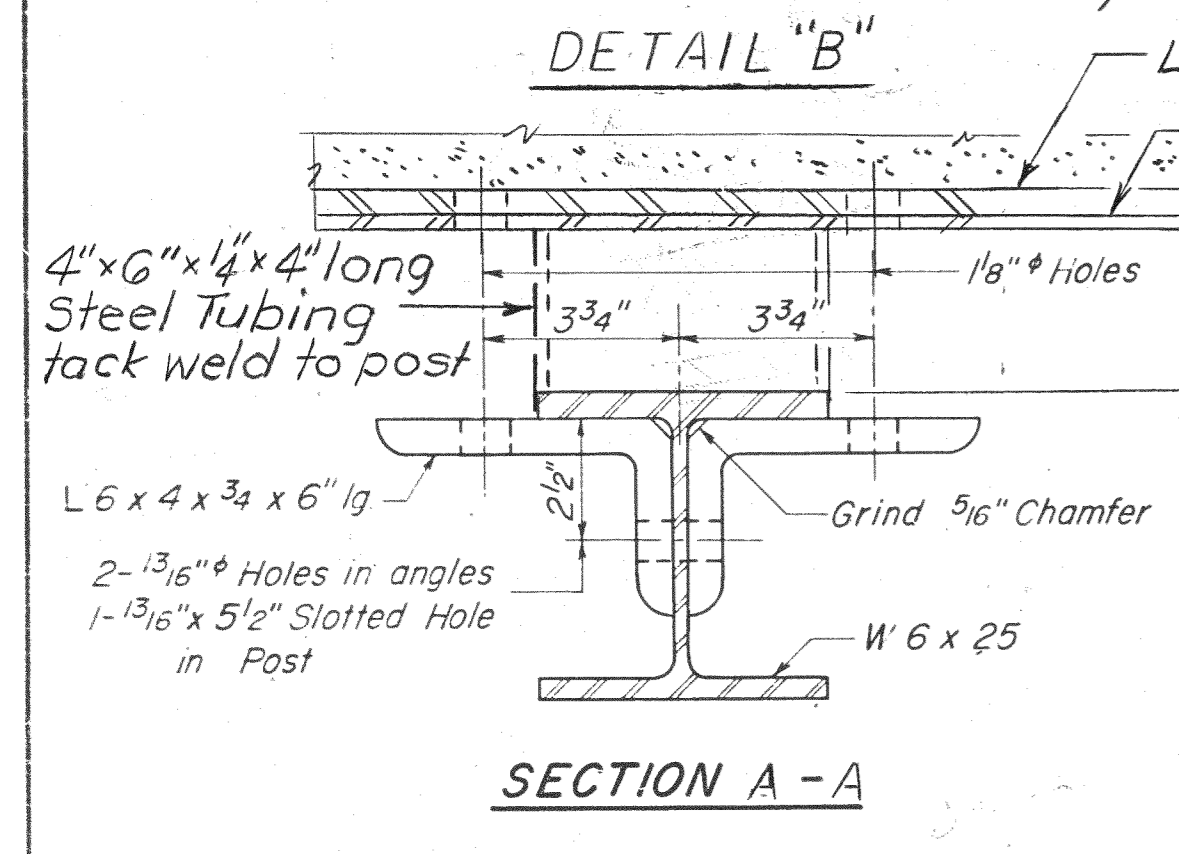
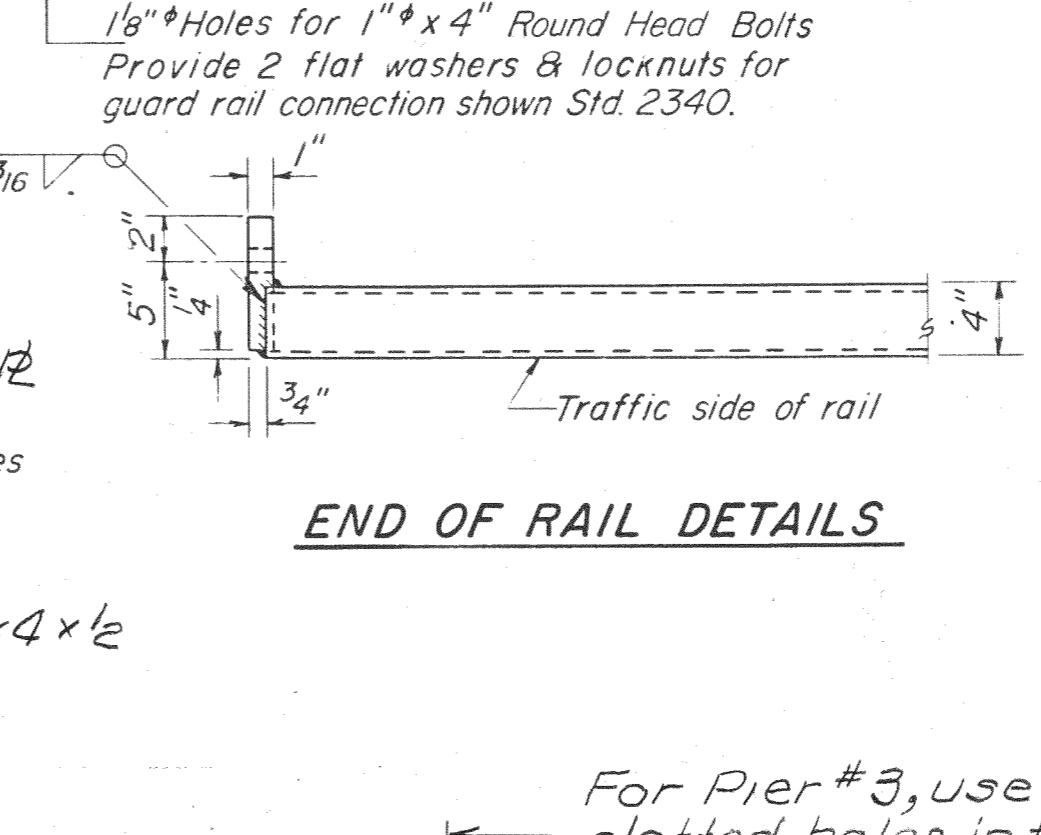
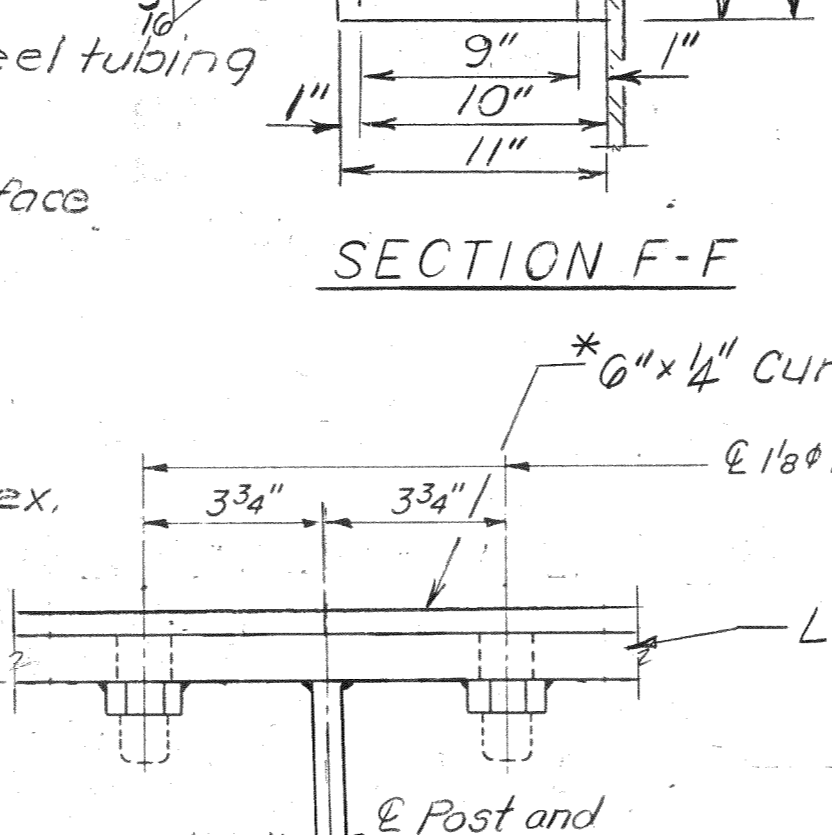
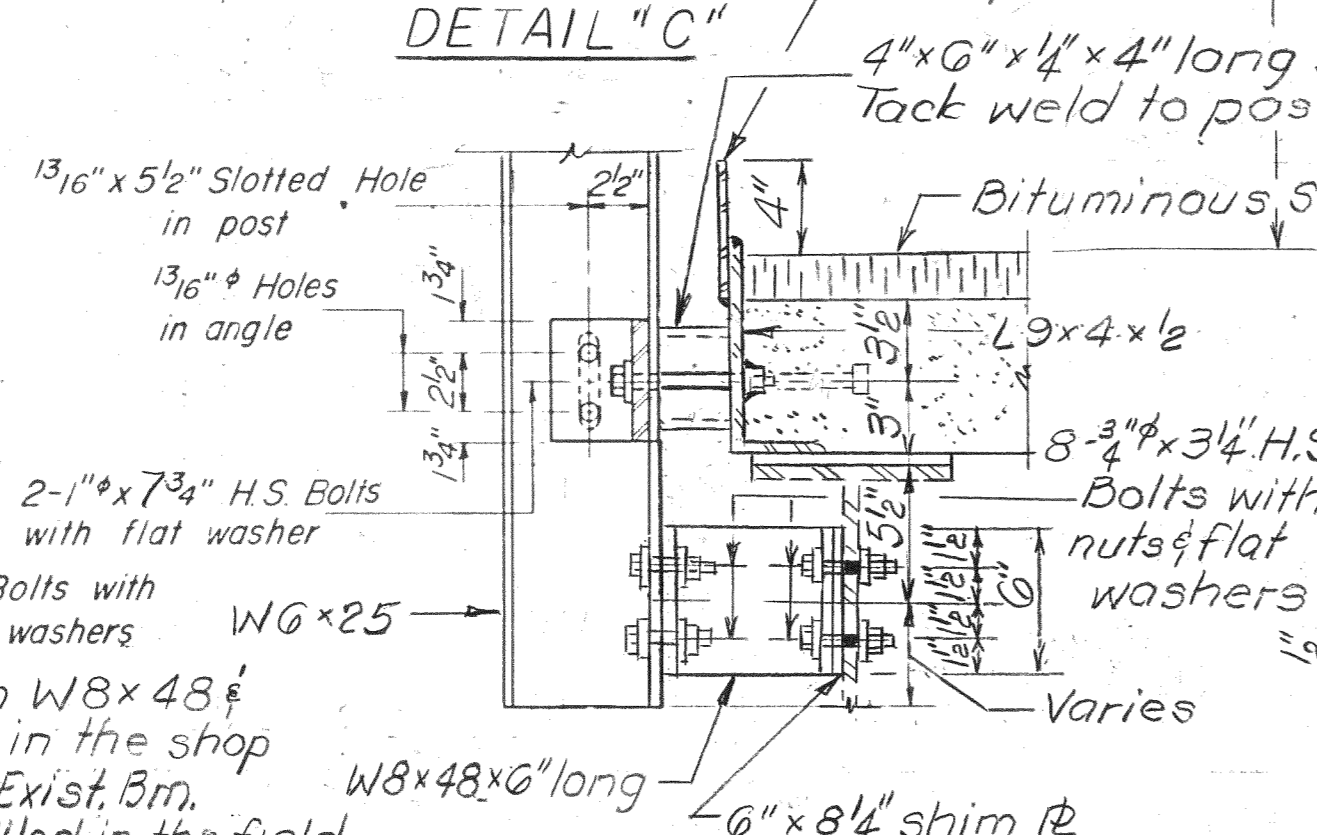
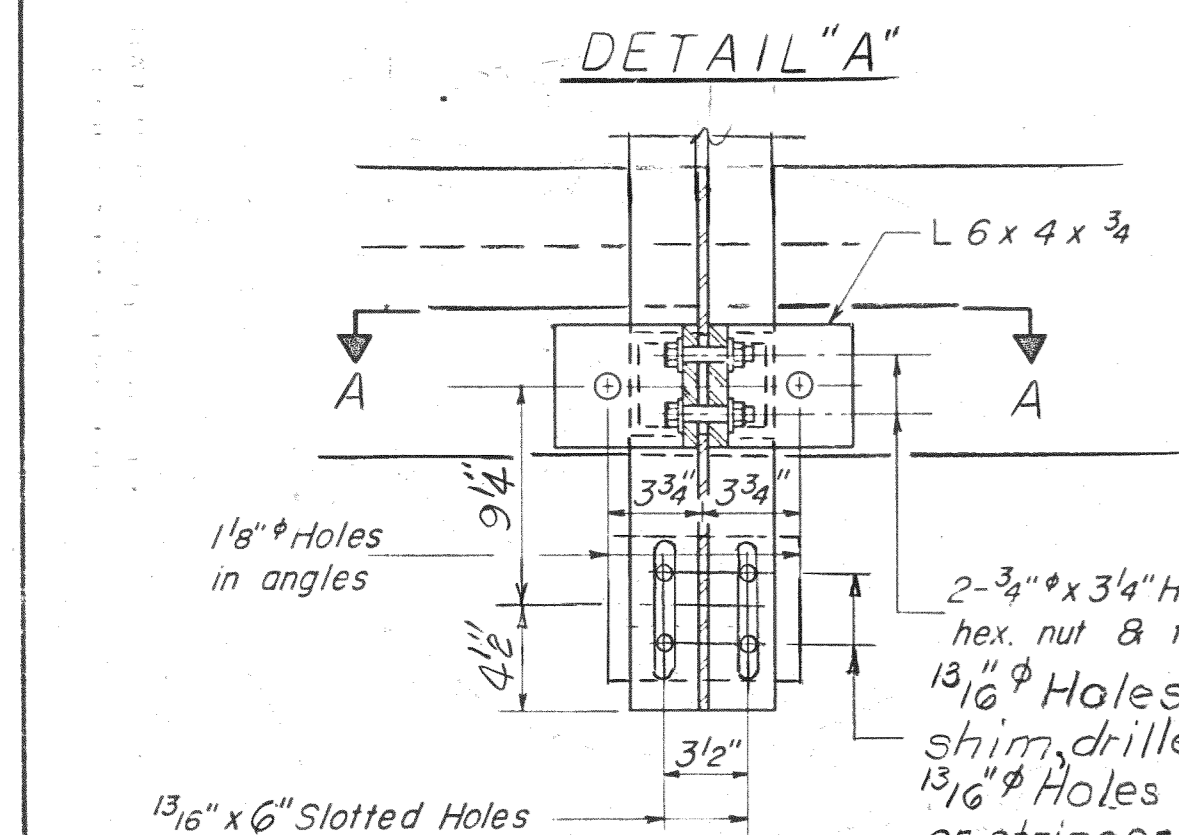
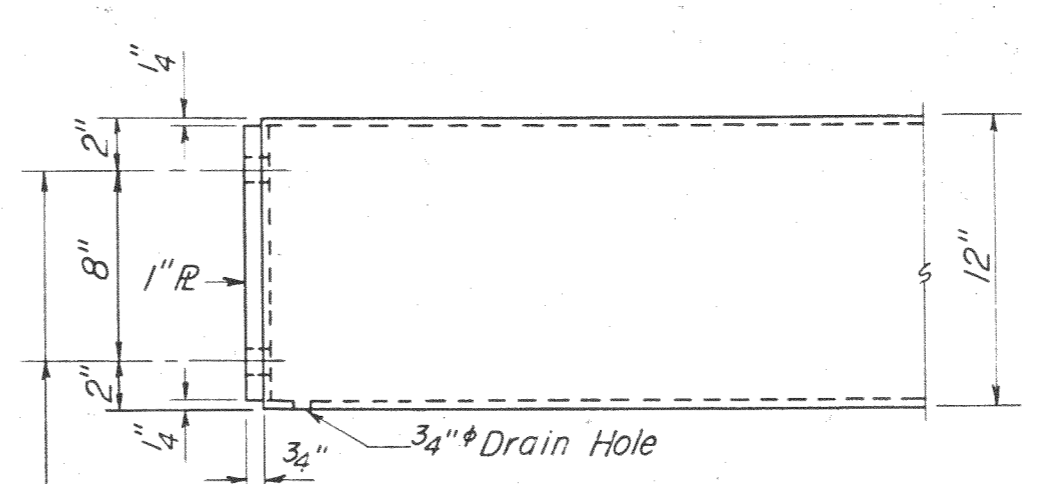
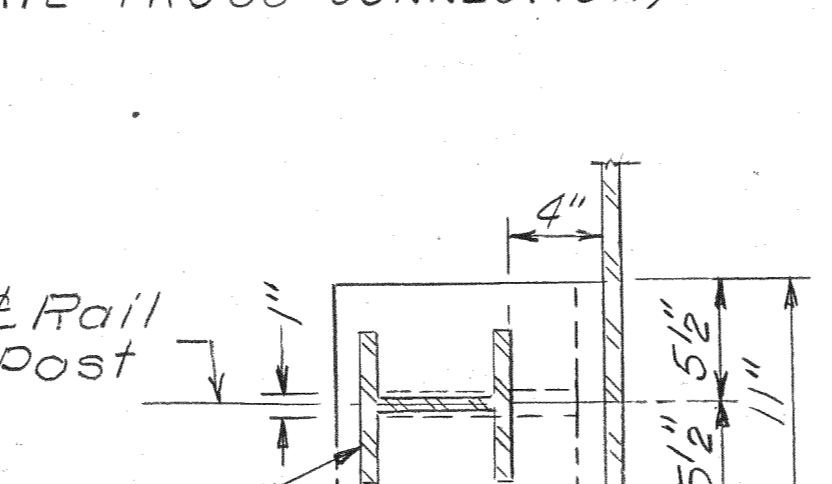
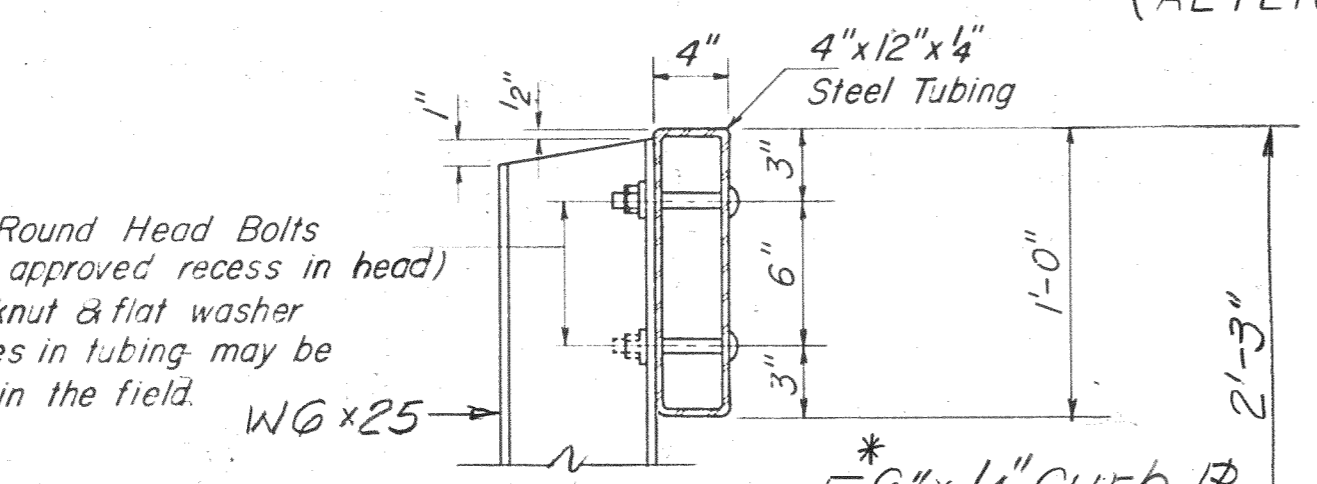
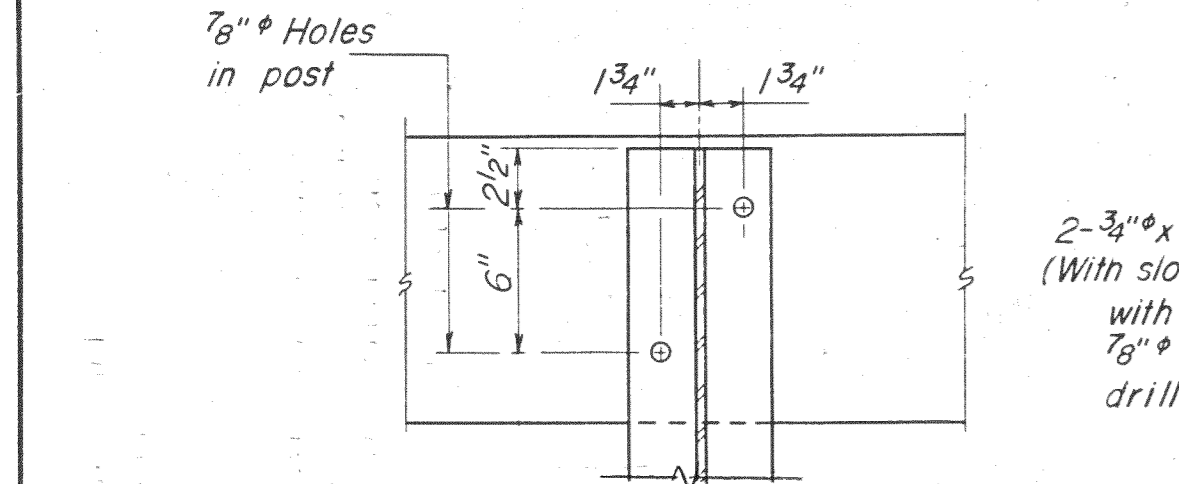
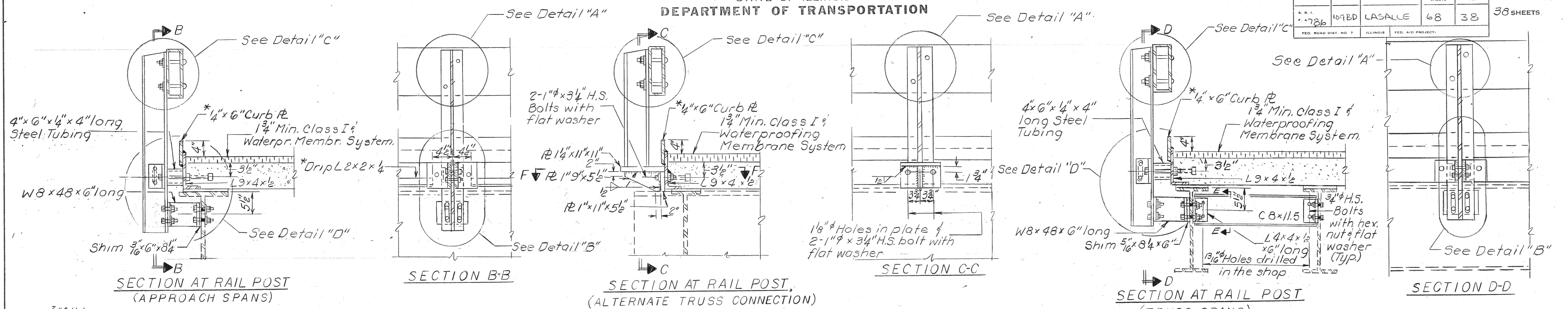
EXAMINED	Dec. 31, 1985	Jraj D. Kaspar
PASSED		James J. Kouben
APPROVED		

ENGINEER OF BRIDGE DESIGN  
ENGINEER OF BRIDGES AND STRUCTURES  
DIRECTOR OF HIGHWAYS

BAR SPLICER DETAILS  
FA. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
786	109 B-D	LASALLE	68	38	38 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT		



**NOTES**

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and angles shall conform to the requirements of A.A.S.H.T.O. M-183 except posts and angles shall conform to A.A.S.H.T.O. M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-III and ASTM A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE S-1 (Special).

All field drilled holes shall be coated with an approved zinc rich paint before erection.

Cost of 4" x 6" x 1/4" Steel Tubing, W8 x 48, bolts, shim plates, nuts & washers shall be incidental to "Steel Railing, Type S-1 (Special)".

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn.

See sheet #13 thru #18 for Post Locations.

Bridge deck designated as Deck Planks shall be Precast Concrete Bridge Slab.

L4 x 4 x 1/2 x 6" long

Existing Stringer

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1 (Special)	Lin. Ft.	3021

**TYPE S-1  
STEEL RAILING  
(SPECIAL)**

F.A.R.T.E. 786 SEC. 109 B-D  
LA SALLE COUNTY  
STA. 79+05.00

DESIGNED David Burdick  
CHECKED Lorne Field  
DRAWN Mercado  
CHECKED L. K. DB.

Dec. 31, 1988  
EXAMINED Craig J. Kaspar  
PASSED James T. Kauburn  
APPROVED

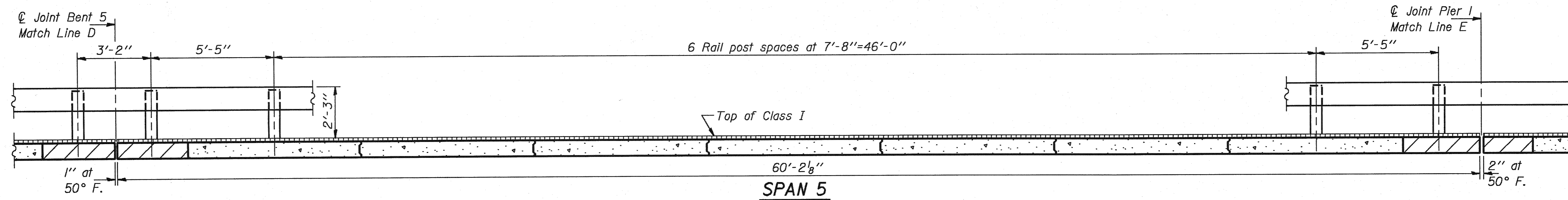
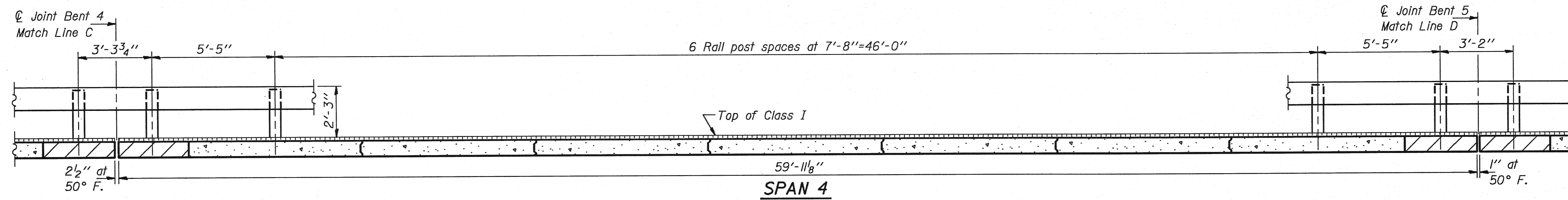
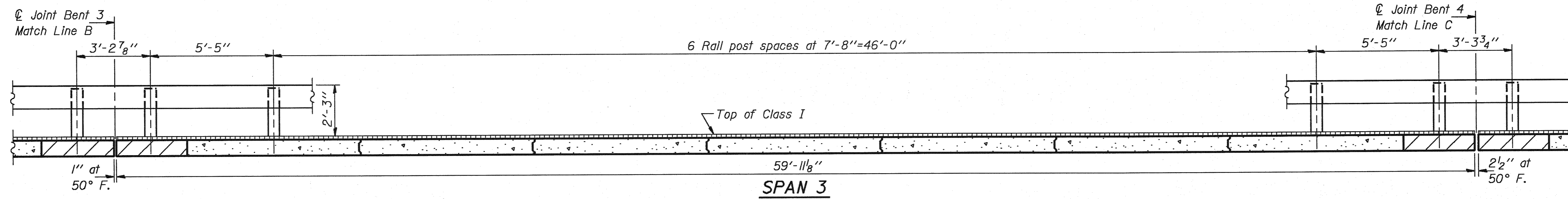
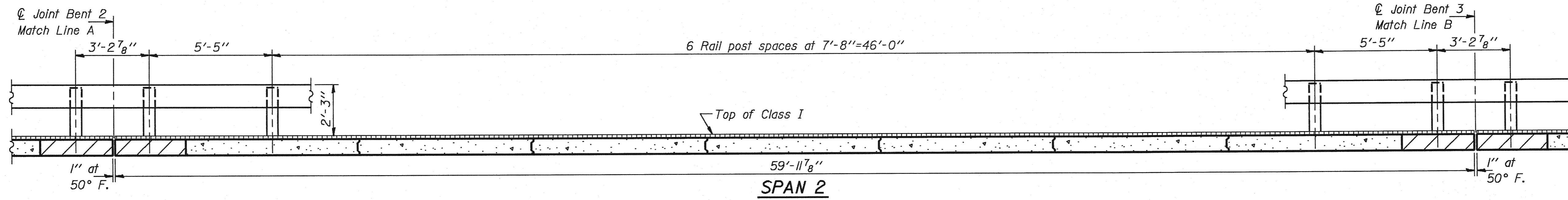
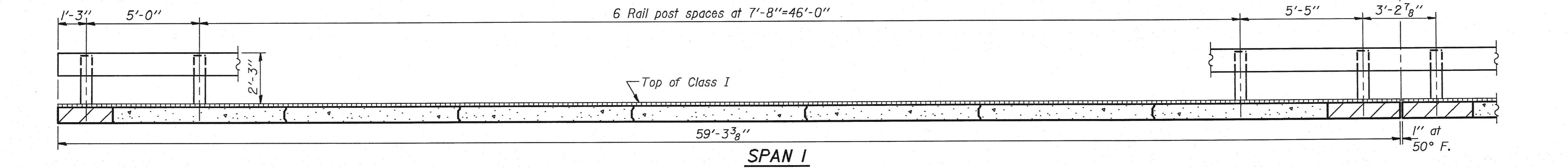
\* Drip L 2x2x4 cut to fit around Steel Tubing at Rail Posts & Floor Drains. For Appr. Spans only.

\*\* Threaded areas shall be plugged or blocked off during casting of beam.

3/4" x 6" Granular or solid flux filled headed studs conforming to Art. 710.38 of the Std. Specifications automatically end welded at 12" cts, except on planks as shown on sheet #6.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 38 SHEETS
F.A. 786	109B-D	LASALLE	68	39	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



DESIGNED David Burdick  
CHECKED *Lance Hill*  
DRAWN Joe Sutherland  
CHECKED *L.H. D.B.*

EXAMINED *Prof. J. Kaspar*  
PASSED *James J. Rabinow*  
APPROVED *L.H. D.B.*

Dec. 31, 1985  
ENGINEER OF BRIDGE DESIGN  
ENGINEER OF BRIDGES AND STRUCTURES  
DIRECTOR OF HIGHWAYS

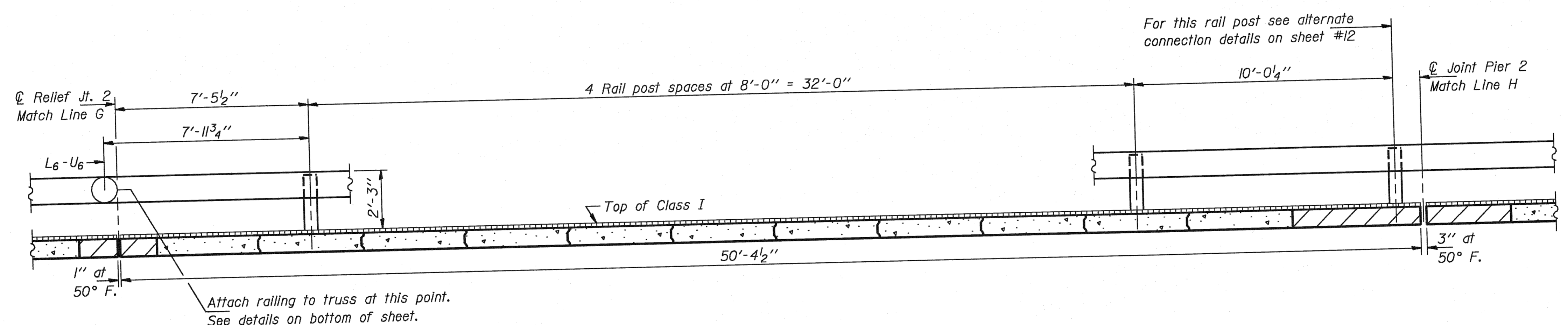
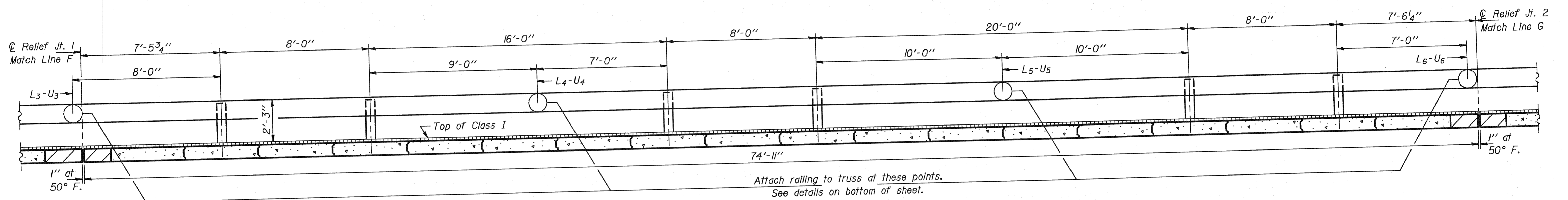
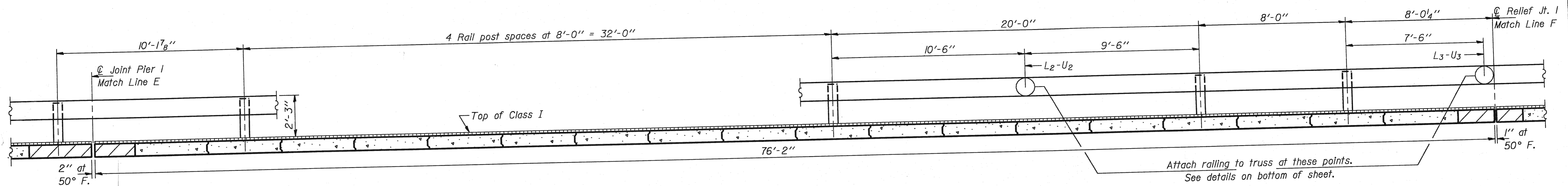
ELEVATIONS OF SPANS 1 THRU 5  
(Looking East)

Note: Work this sheet with sheet #14 thru #18.  
Hatched area indicates Class X Concrete (Special).

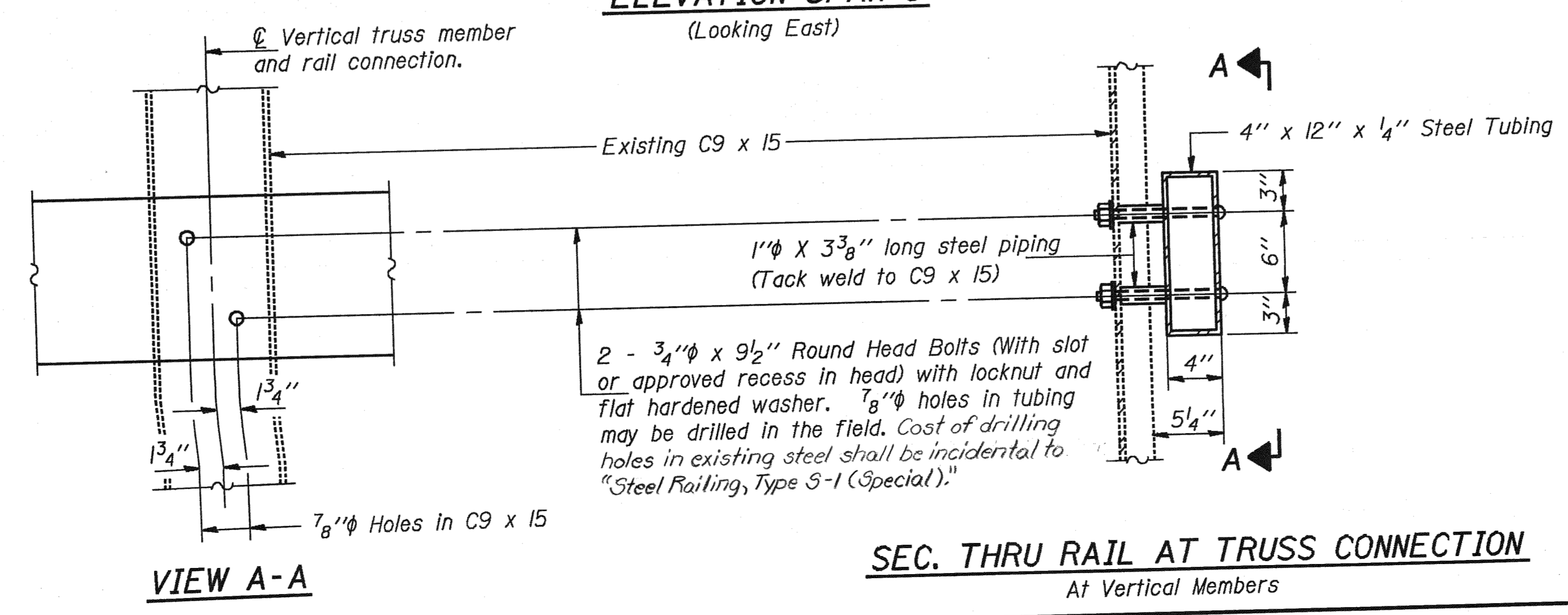
RAILING DETAILS  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14
F.A. 786	109B-D	LASALLE	68	40	38 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



**ELEVATION SPAN 6**  
(Looking East)



Note: Work this sheet with sheet #13 and #15 thru #18.  
Cost of steel piping and bolts are incidental to railing.  
Hatched area indicates Class X Concrete (Special)

DESIGNED David Bueckel  
CHECKED Lane Hill  
DRAWN Joe Sutherland  
CHECKED L.H. DB.

EXAMINED Craig J. Kaspar  
PASSED James J. Kuhn  
APPROVED  
DIRECTOR OF HIGHWAYS

Dec. 31, 1985

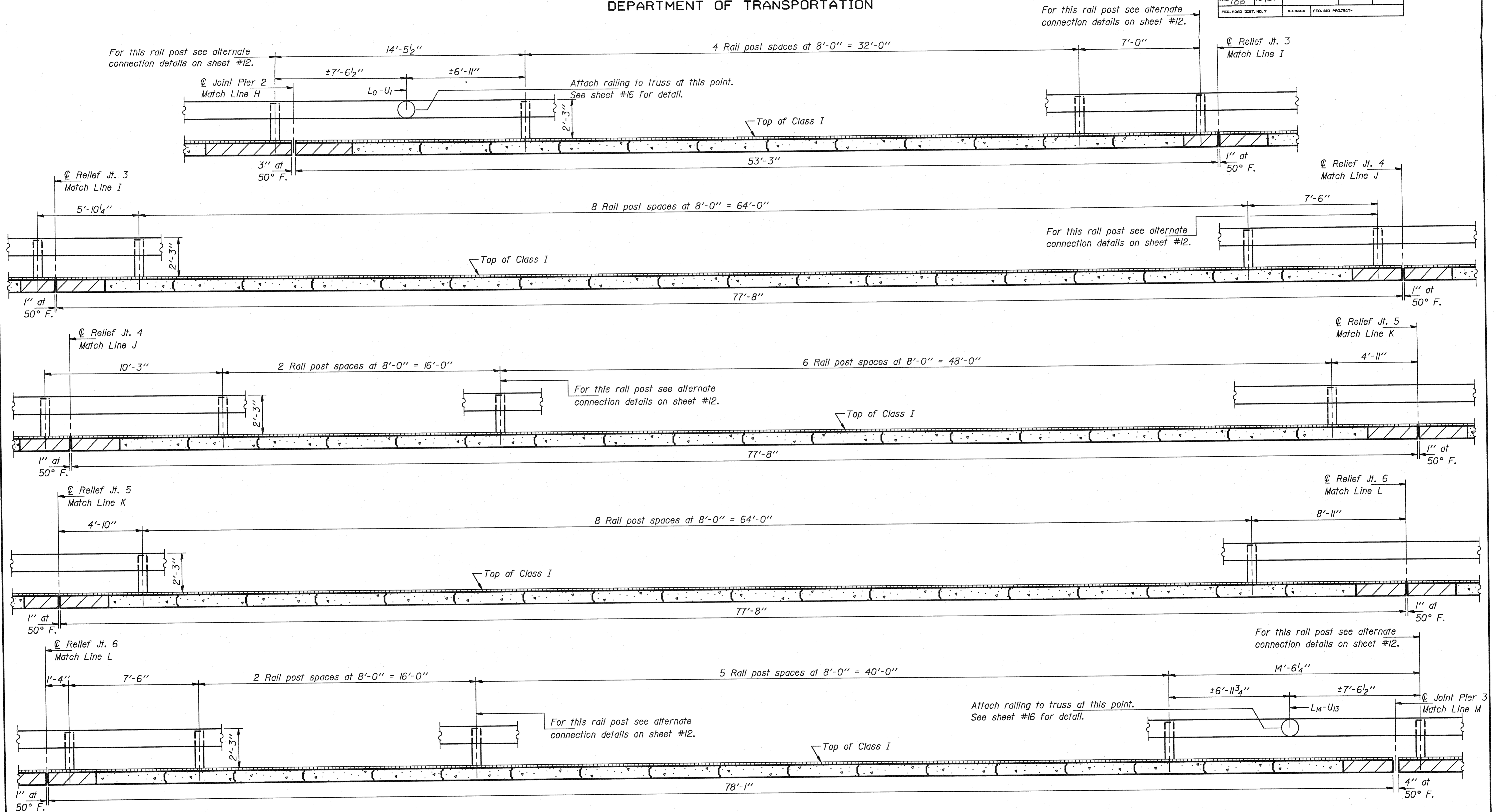
**RAILING DETAILS**  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

Revised 2/27/86 JRS



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 15 38 SHEETS
F.A. 786	109BD	LASALLE	68	41	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



ELEVATION SPAN 7  
(Looking East)

Note: Work this sheet with sheet #13, #14 and #16 thru #18.  
Hatched area indicates Class X Concrete (Special).

DESIGNED	David Burdick	EXAMINED	Greg J. Kaspar
CHECKED	Lance Bill	PASSED	James J. Robinson
DRAWN	Joe Sutherland	APPROVED	L.K. DB.
CHECKED	L.K. DB.		

Dec. 31, 1985

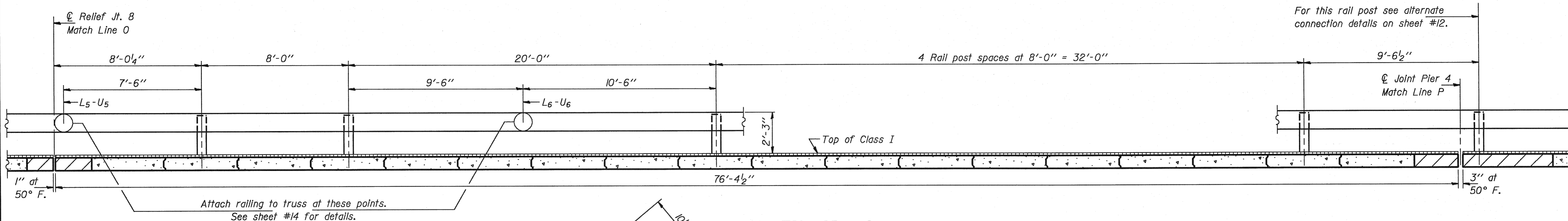
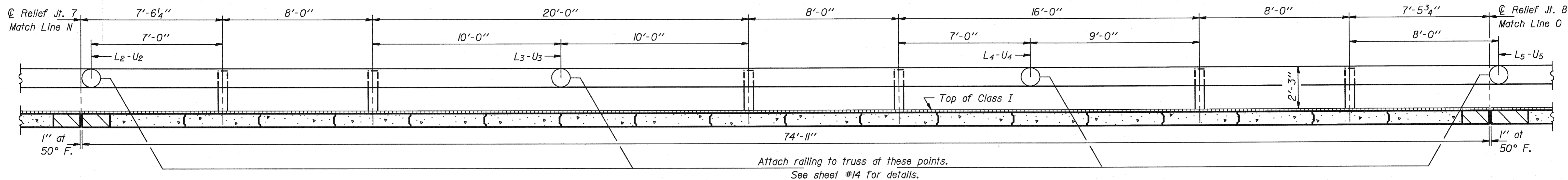
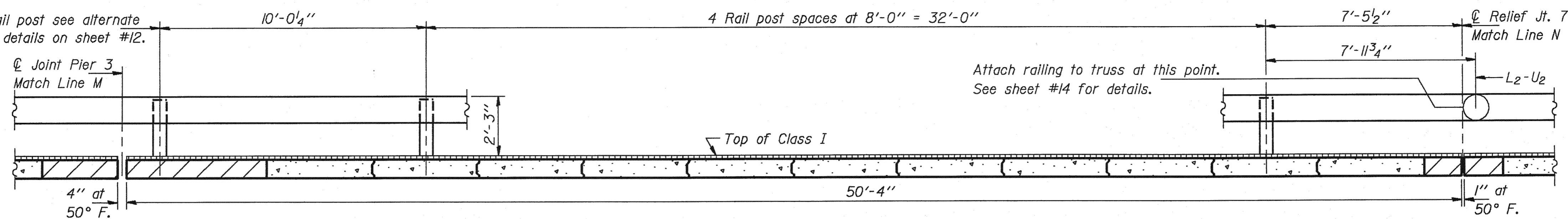
DIRECTOR OF HIGHWAYS

RAILING DETAILS  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

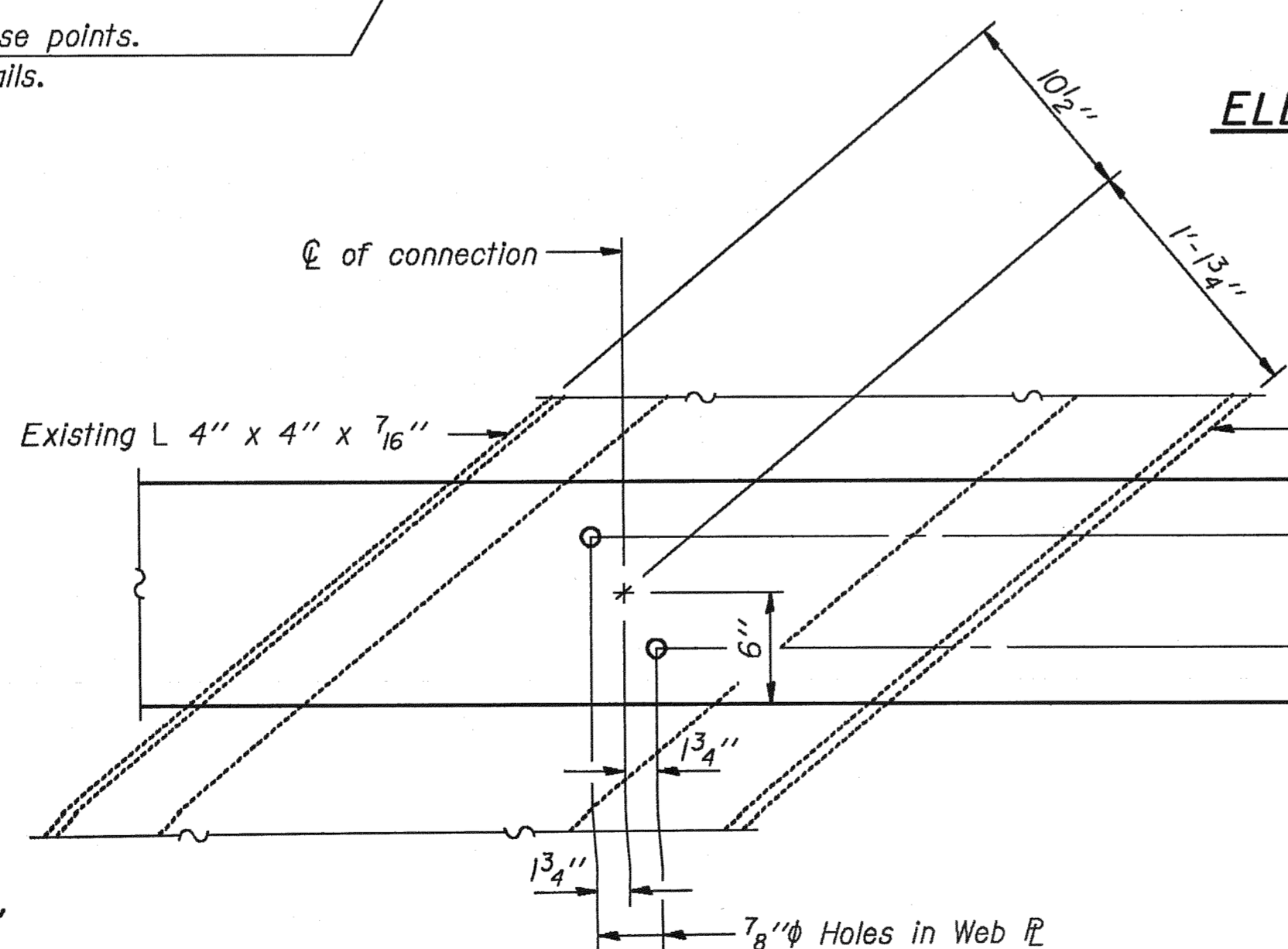
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 16
F.A. 786	1098D	LaSALLE	68	42	38 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

For this rail post see alternate connection details on sheet #12.



**ELEVATION SPAN 8**  
(Looking East)

Note: Work this sheet with sheet #13 thru #15, #17 and #18.  
Cost of steel piping and bolts are incidental to railing.  
Hatched area indicates Class X Concrete (Special).



2 - 3/4" φ x 12" Round Head Bolts (With slot or approved recess in head) with locknut and flat hardened washer. 7/8" φ holes in tubing may be drilled in the field. Cost of drilling holes in existing steel shall be incidental to "Steel Railing, Type S-1 (Special)."

**SEC. THRU RAIL AT TRUSS CONNECTION**  
At End Posts

**RAILING DETAILS**  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

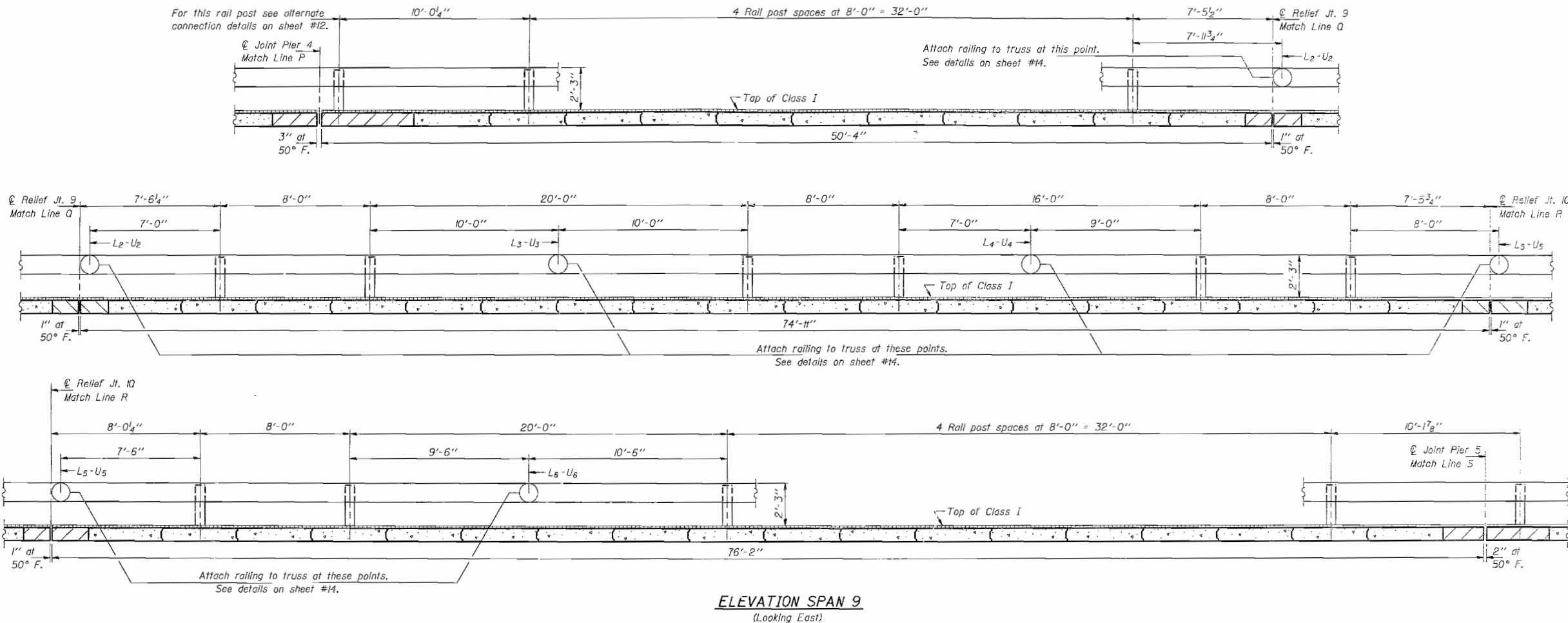
DESIGNED David Burdick  
CHECKED Lance Kidd  
DRAWN Joe Sutherland  
CHECKED L.S. DB.

EXAMINED Craig J. Kaspar  
PASSED James J. Kaspar  
APPROVED  
DIRECTOR OF HIGHWAYS

Dec. 31, 1985

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	OF	SHEET NO. 17
F.A.					38 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



**ELEVATION SPAN 9**  
(Looking East)

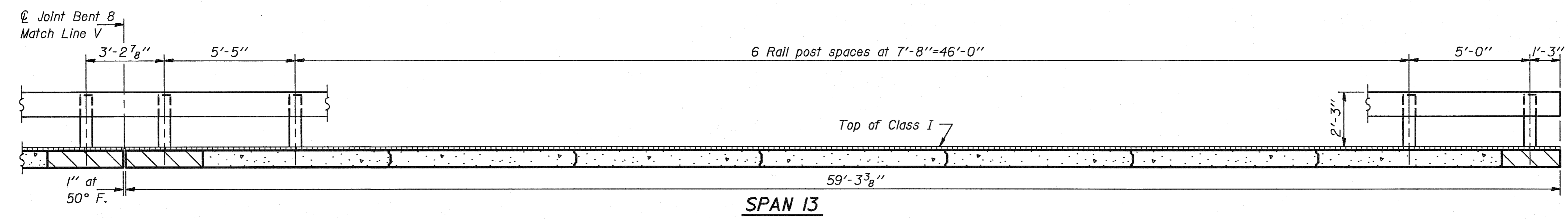
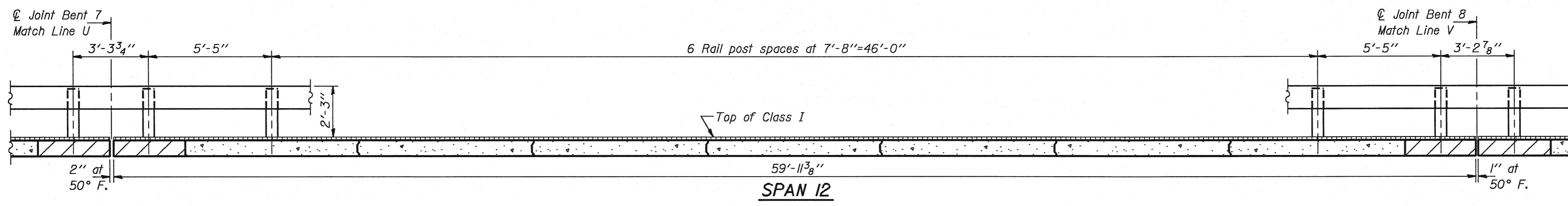
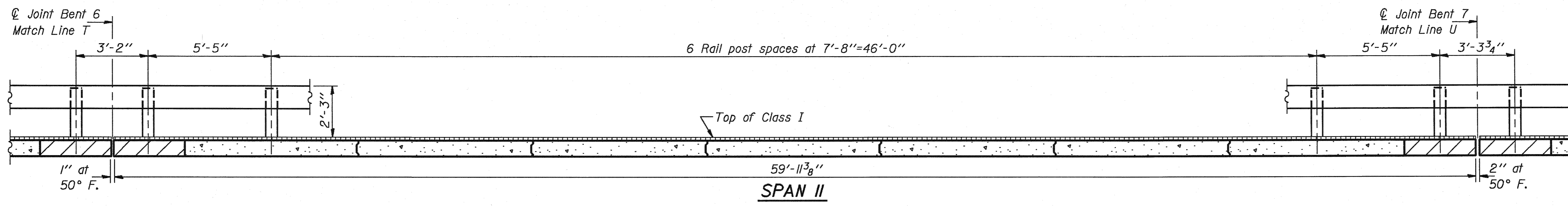
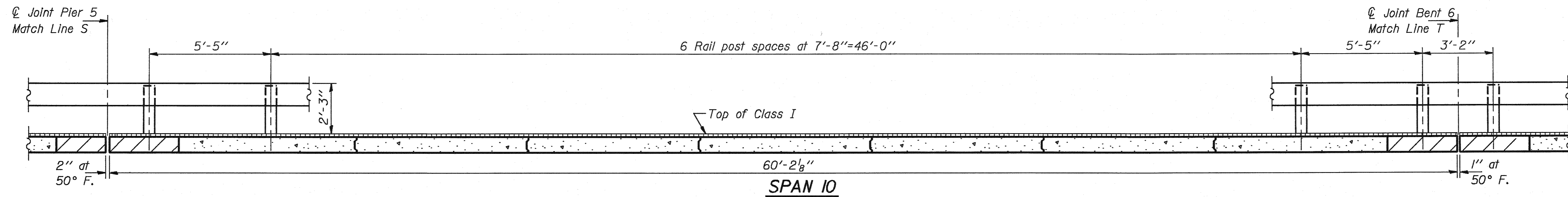
Note: Work this sheet with sheet #13 thru #16 and #18.  
Hatched area is concrete (Special).

DESIGNED	David Boudrie	11. 51	19 11
CHECKED	<i>[Signature]</i>	EXAMINED	<i>[Signature]</i>
DRAWN	Joe Sutherland	PASSED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i> D.B.	APPROVED	<i>[Signature]</i>
			DIRECTOR OF HIGHWAYS

**RAILING DETAILS**  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 18
S.A.L. F.A. 786	109BD	LASALLE	68	44	38 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



ELEVATIONS OF SPANS 10 THRU 13  
(Looking East)

Note: Work this sheet with sheet #13 thru #17.  
Hatched area indicates Class X Concrete (Special).

DESIGNED <i>David Burdick</i>	EXAMINED <i>Dr. J. O. Kaspar</i> ENGINEER OF BRIDGE DESIGN
CHECKED <i>Louise Bidd</i>	PASSED <i>James I. Robinson</i> ENGINEER OF BRIDGES AND STRUCTURES
DRAWN <i>Joe Sutherland</i>	APPROVED _____ DIRECTOR OF HIGHWAYS
CHECKED <i>L.K. DB.</i>	

Dec. 31, 1985

RAILING DETAILS  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

Revised 2-27-86 DB

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

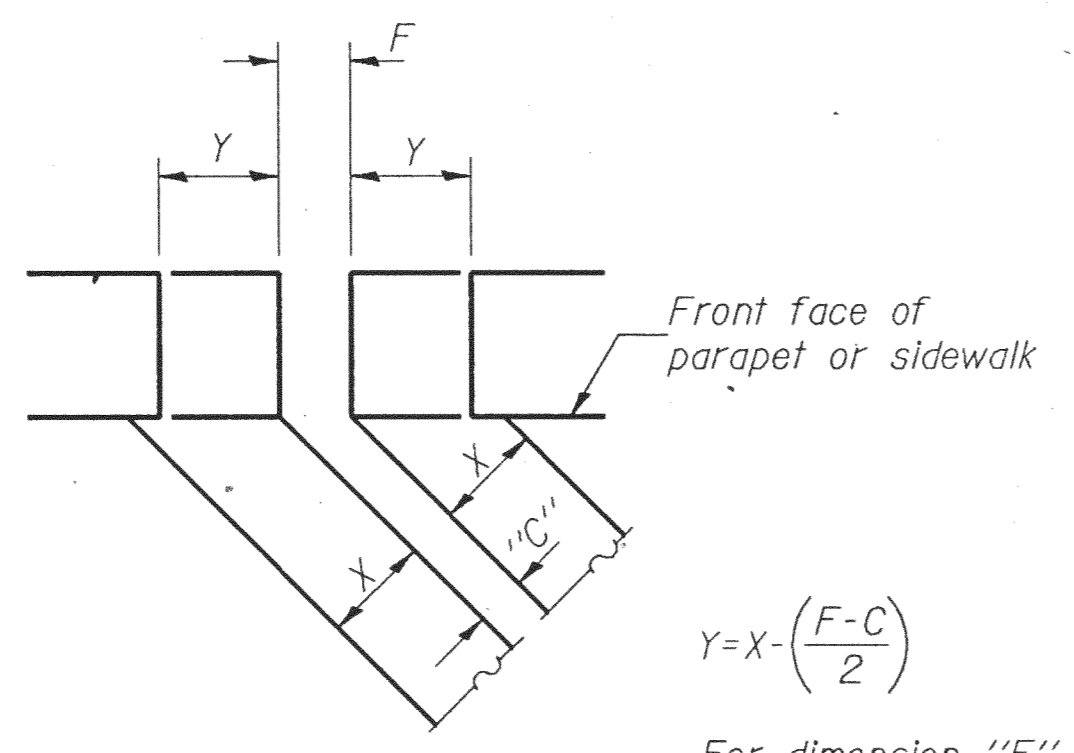
**INSTALLATION NOTES**

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

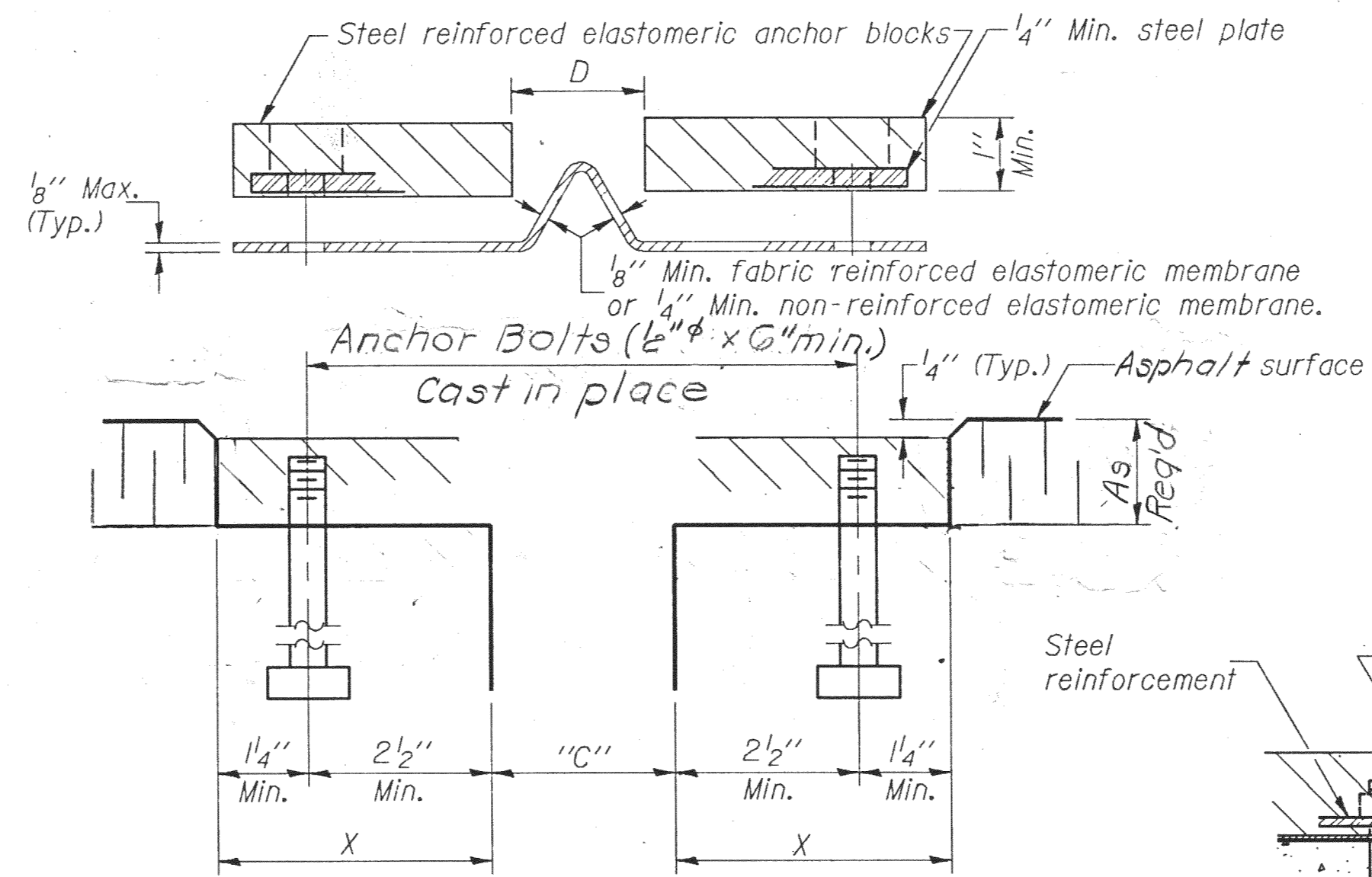
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

**SKEW LIMITATIONS**

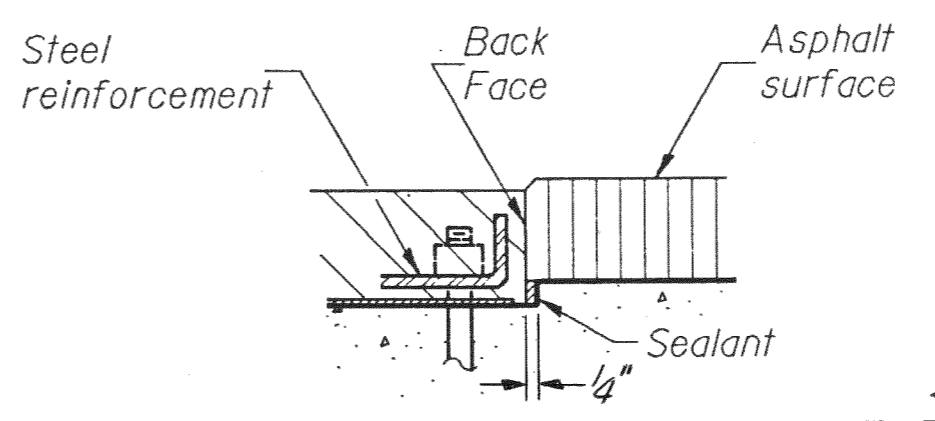
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from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



**FORMING BLOCKOUT SKETCH**



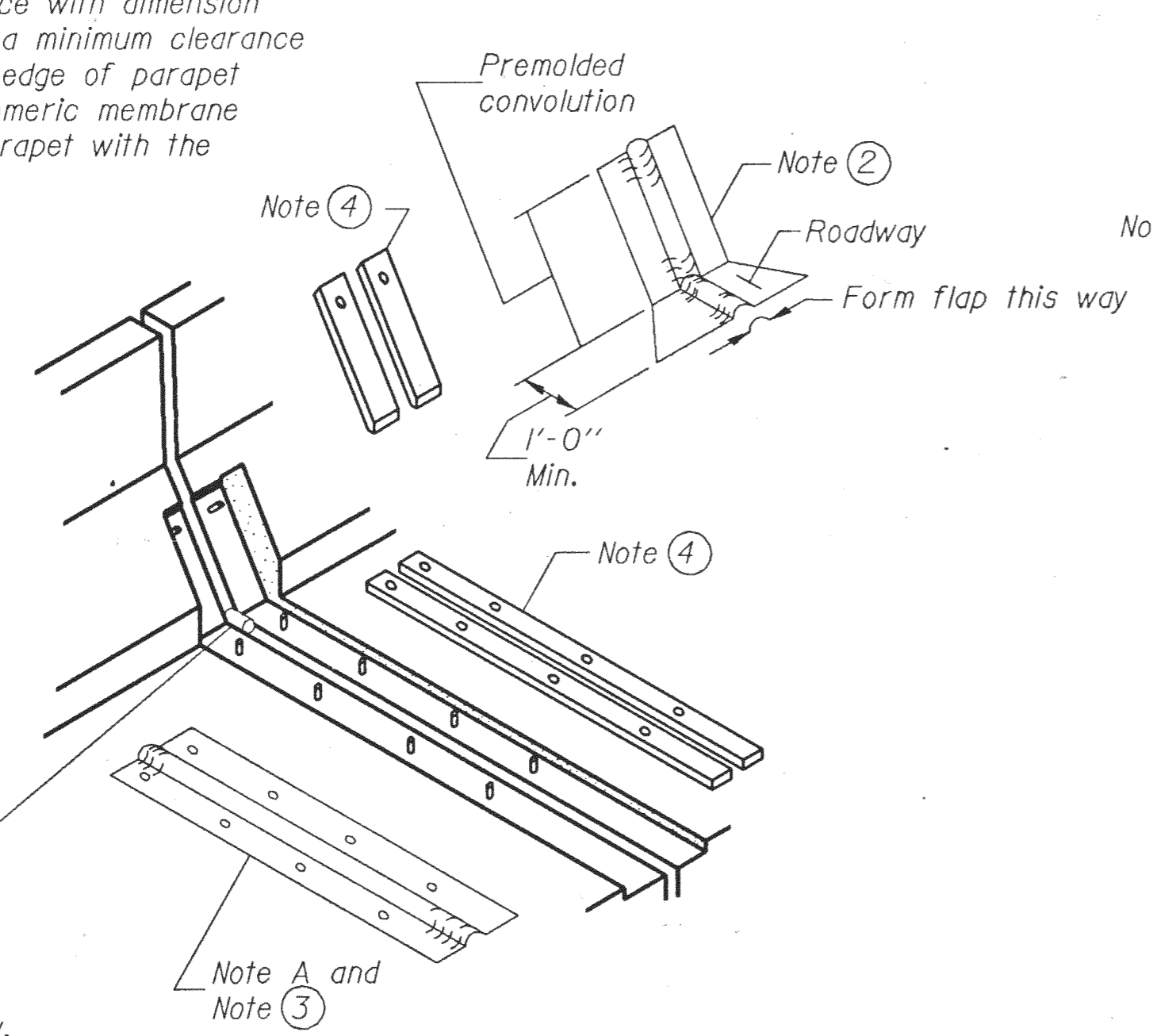
**CROSS SECTION**  
At Piers #1 & #5  
and Bents #4 & #7



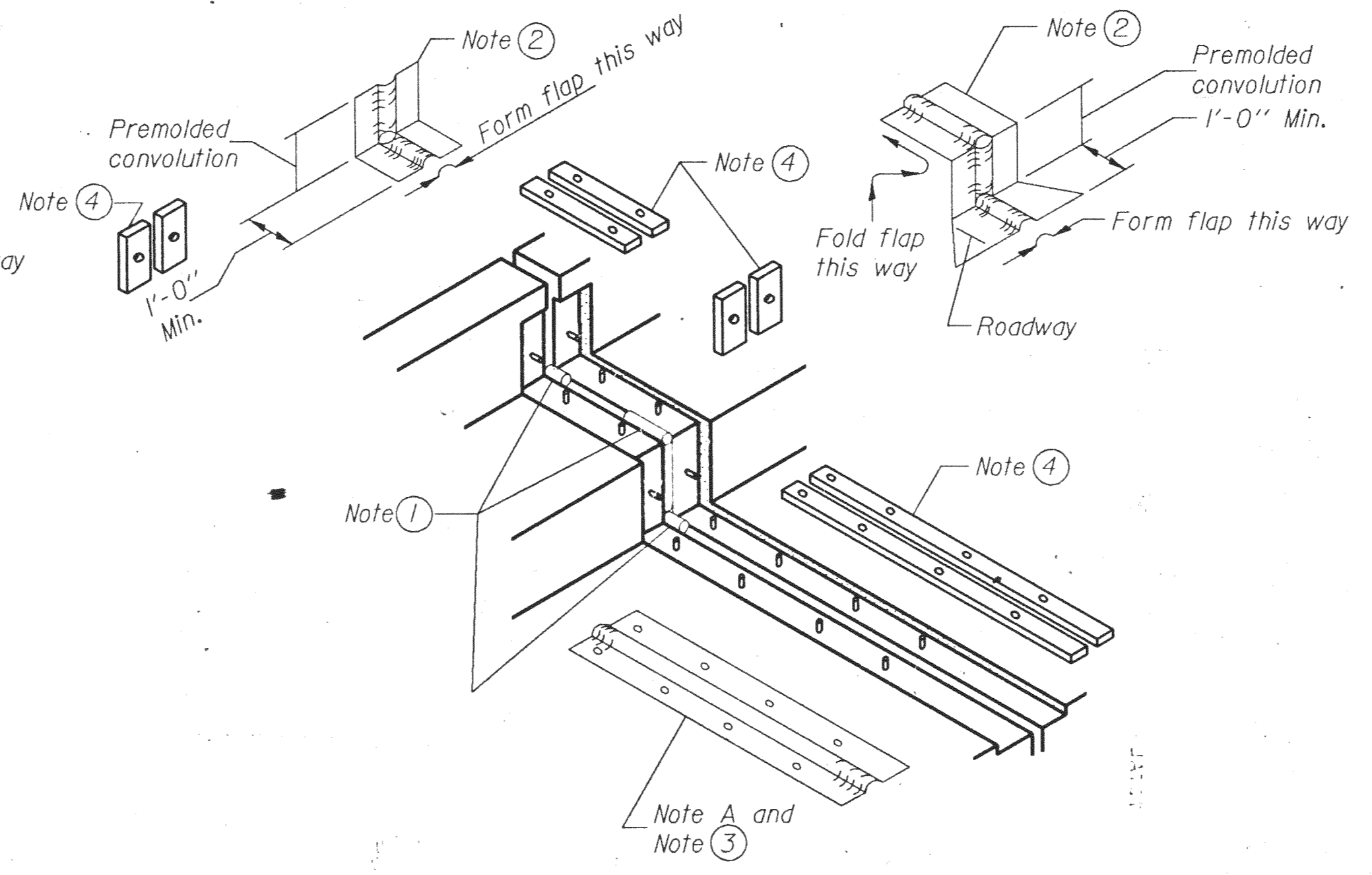
**ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE**

**GENERAL NOTES**

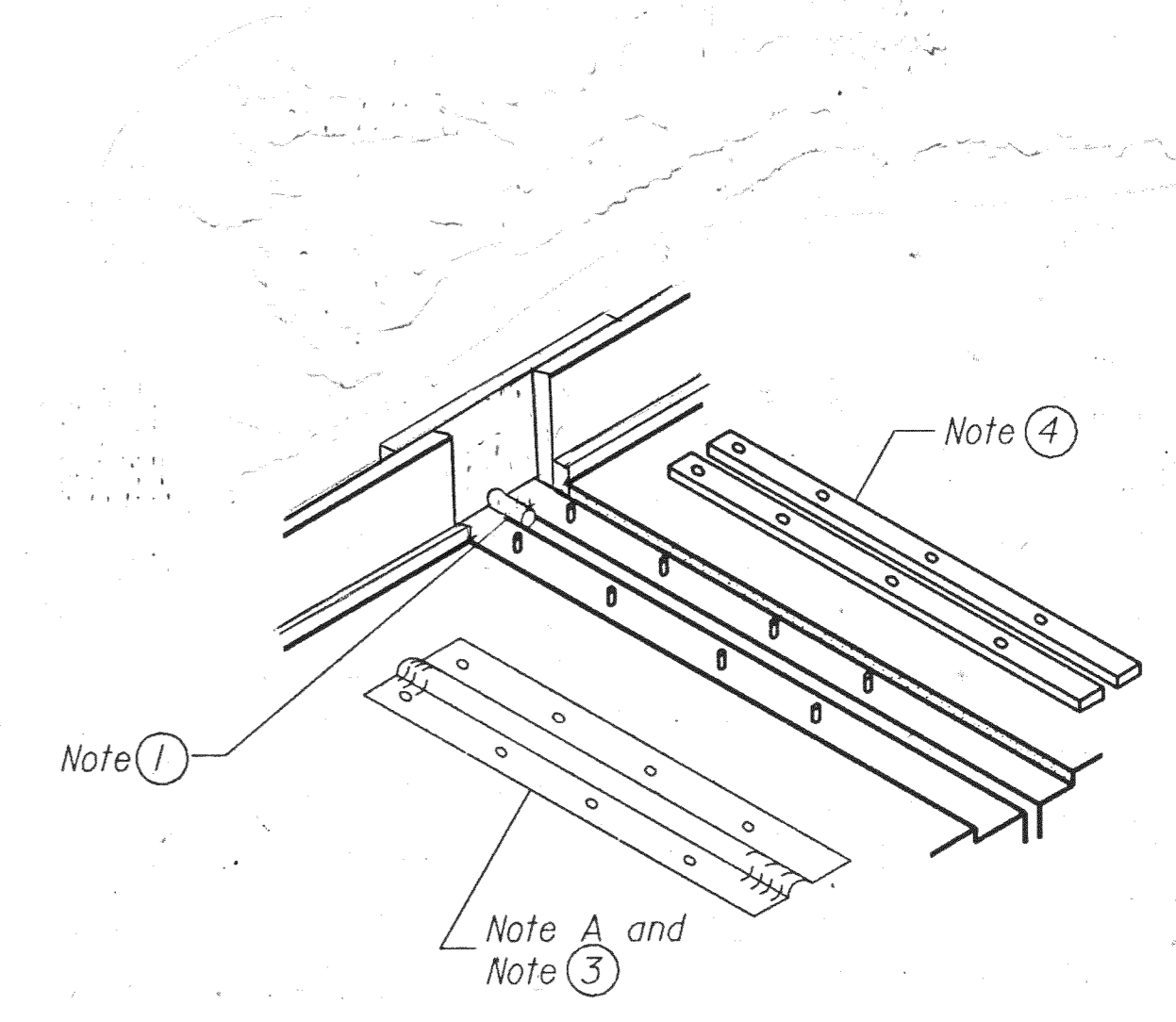
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.  
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.  
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete breakout.  
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.  
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.  
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.  
Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B695, class 50. Zinc-coated nuts shall be tapped oversize in accordance with the requirements of AASHTO M 291 and shall meet the supplementary requirements S1.1 thru S1.2.1 of the same specifications for lubricant and testing.



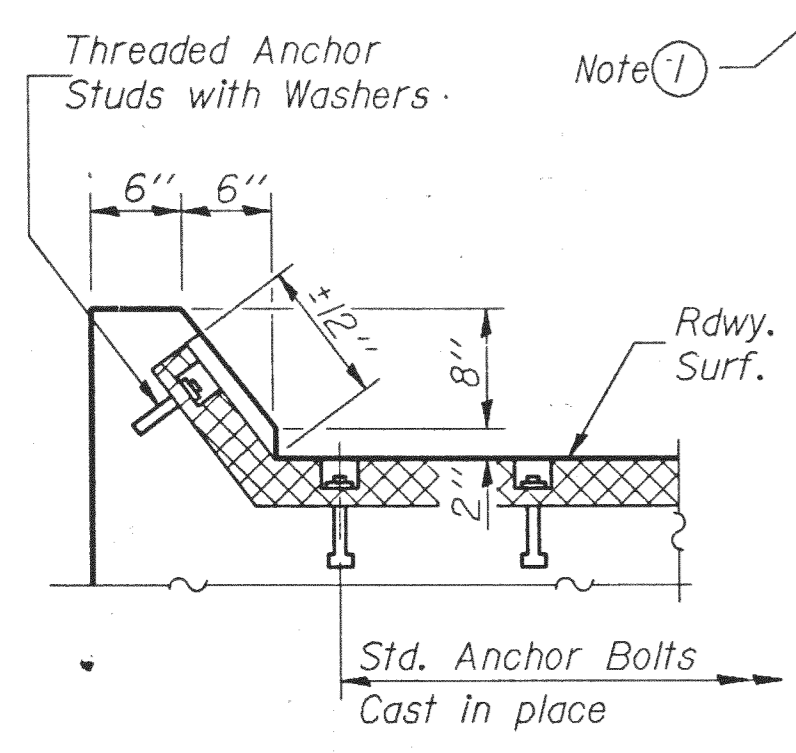
**AT PARAPET**



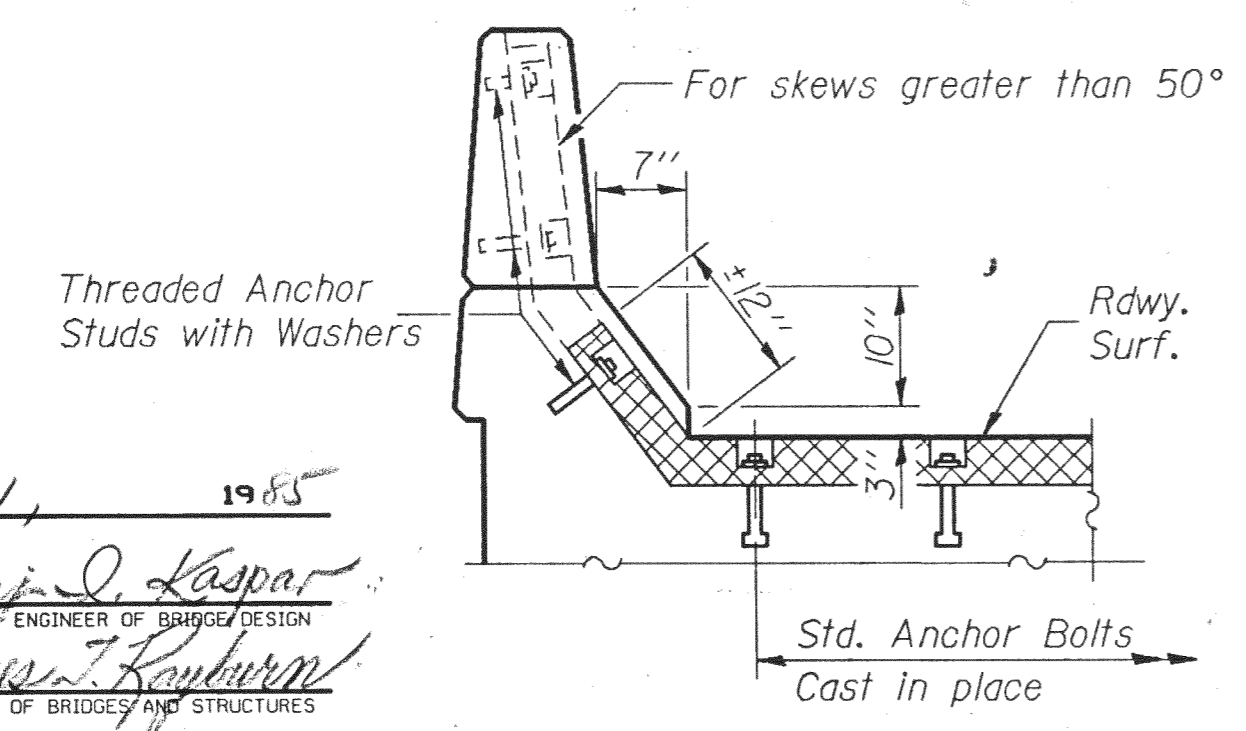
**AT SIDEWALK OR MEDIAN**



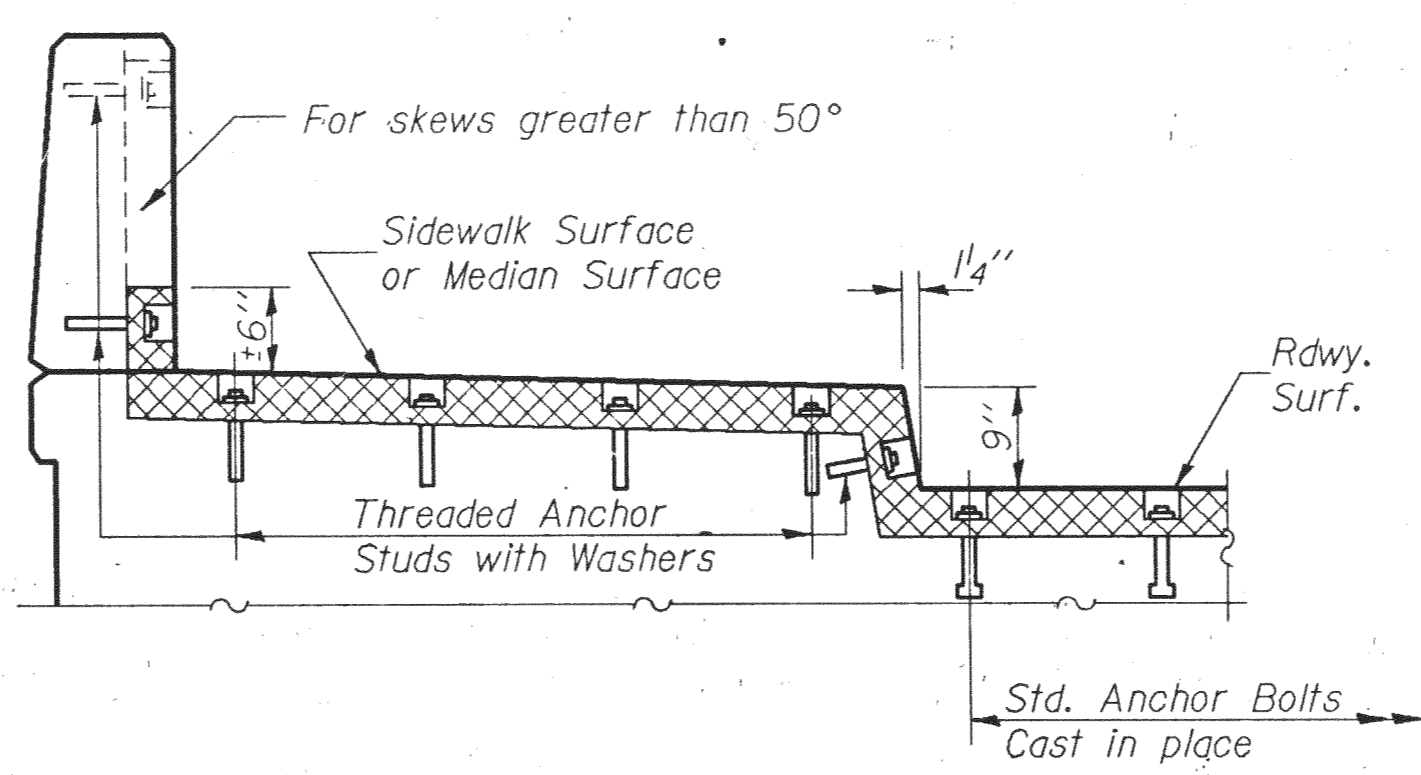
**AT EDGE OF DECK**



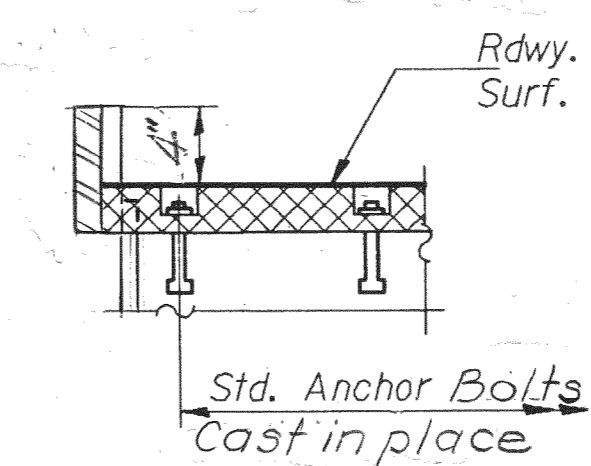
**AT CURB**



**AT PARAPET**



**AT SIDEWALK OR MEDIAN**  
TYPICAL END TREATMENTS



**AT EDGE OF DECK**

DESIGNED	David Burdick
CHECKED	Lone Field
DRAWN	F.M.
CHECKED	L.H. DB

Dec. 31, 1985  
 EXAMINED Craig O. Kaspar  
 ENGINEER OF BRIDGE DESIGN  
 PASSED James T. Kouborn  
 ENGINEER OF BRIDGES AND STRUCTURES  
 APPROVED  
 DIRECTOR OF HIGHWAYS

EJ-CS 12-1-83

CONTINUOUS SEAL TYPE  
NEOPRENE EXPANSION JOINTS  
FOR 2" AND 2 1/2" MOVEMENT  
F.A. RTE. 786 SEC. 109 B-D  
LA SALLE COUNTY  
STA. 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

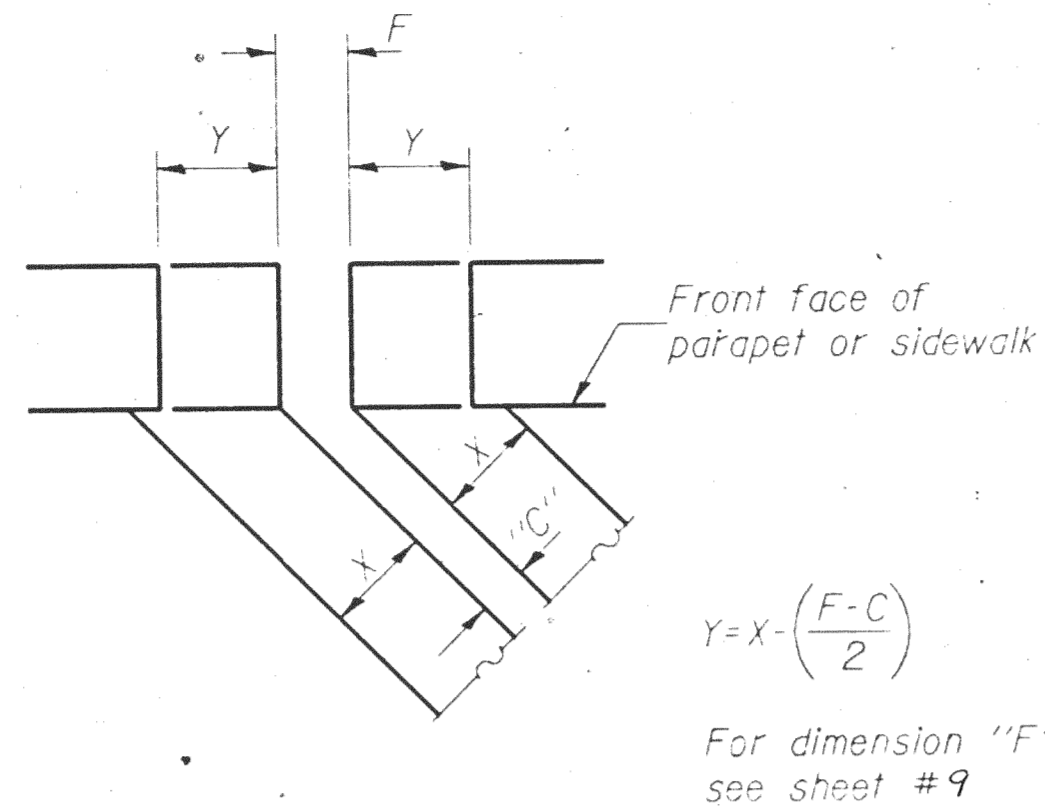
**INSTALLATION NOTES**

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

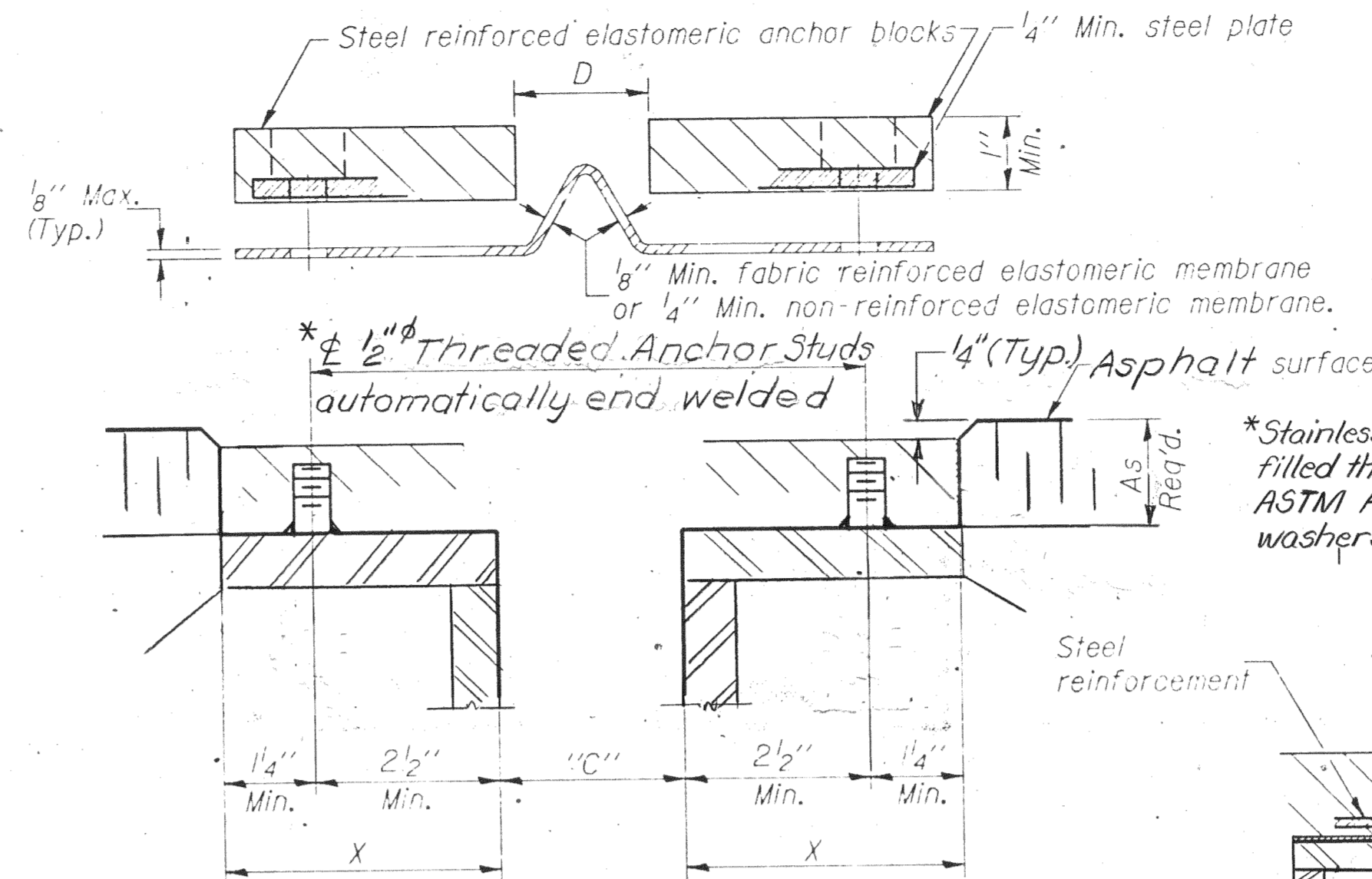
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

**SKREW LIMITATIONS**

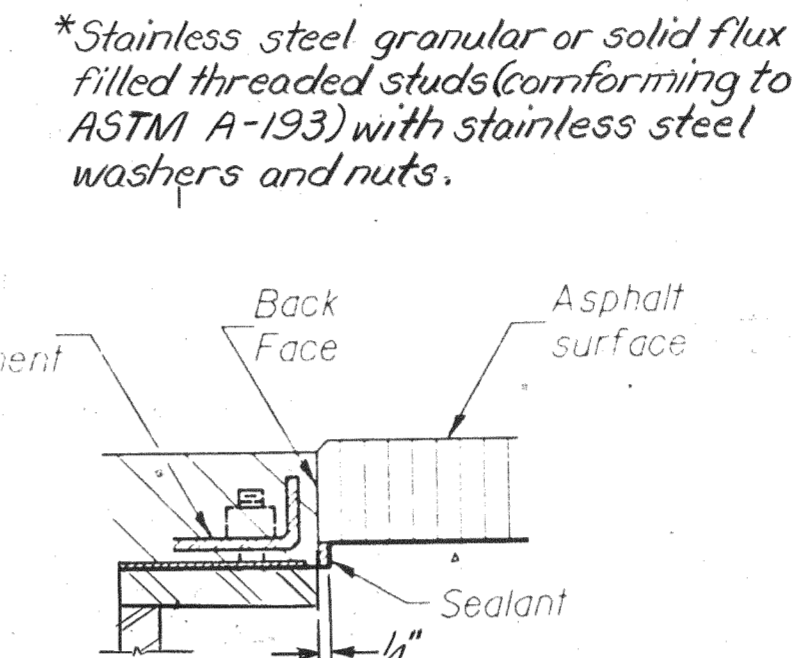
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from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



**FORMING BLOCKOUT SKETCH**



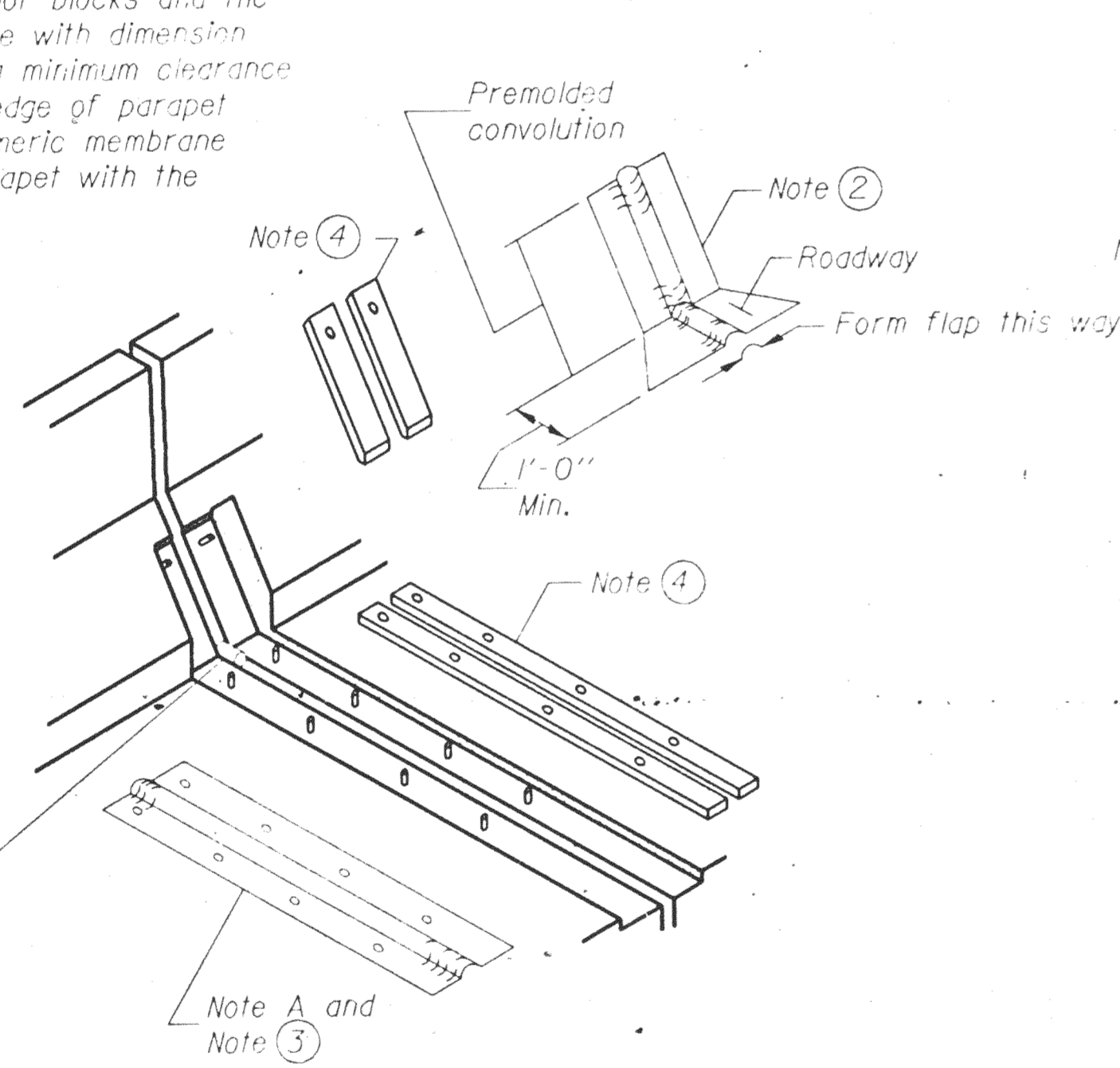
**CROSS SECTION AT PIERS #2 & #4**



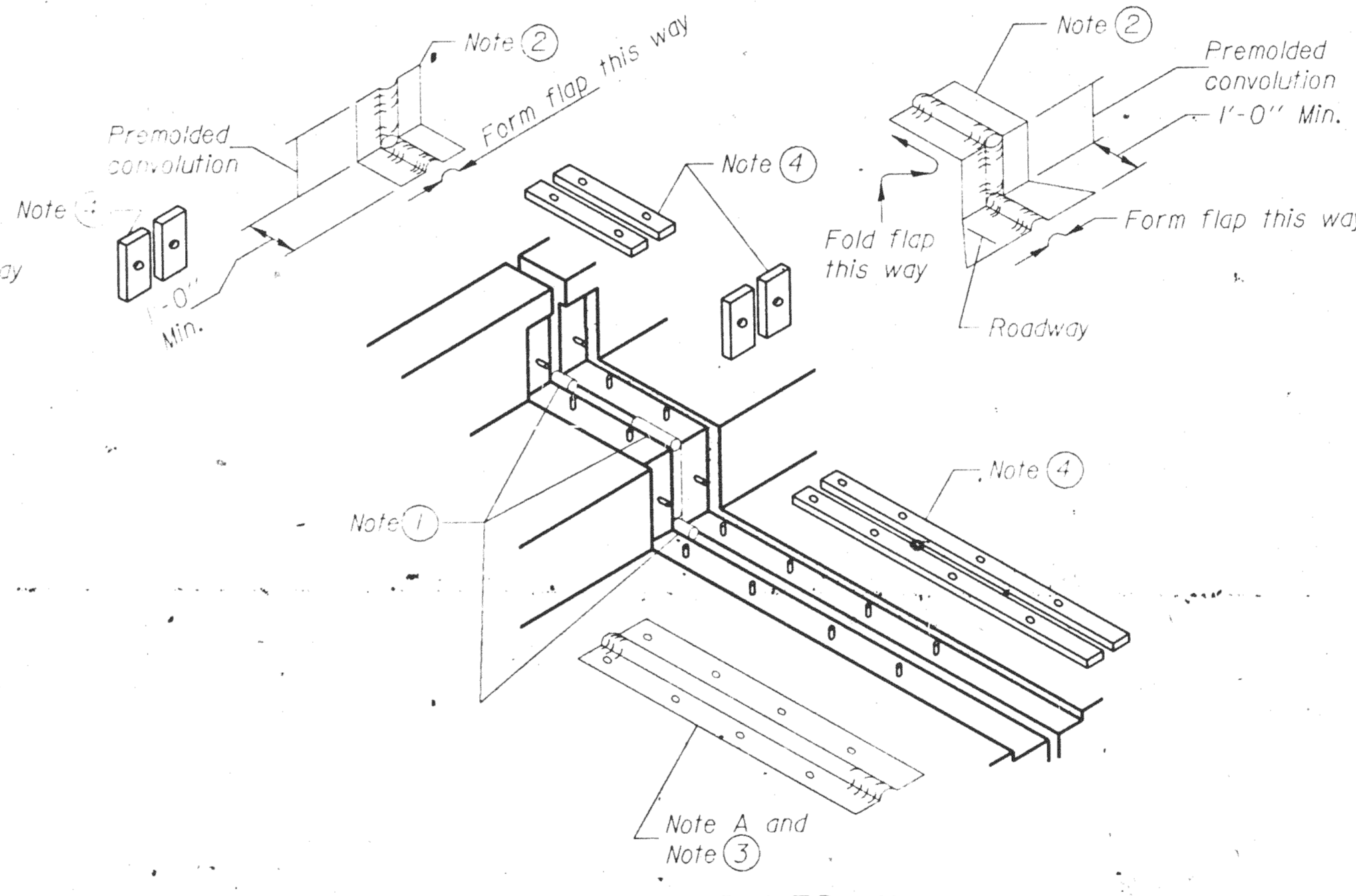
**ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE**

**GENERAL NOTES**

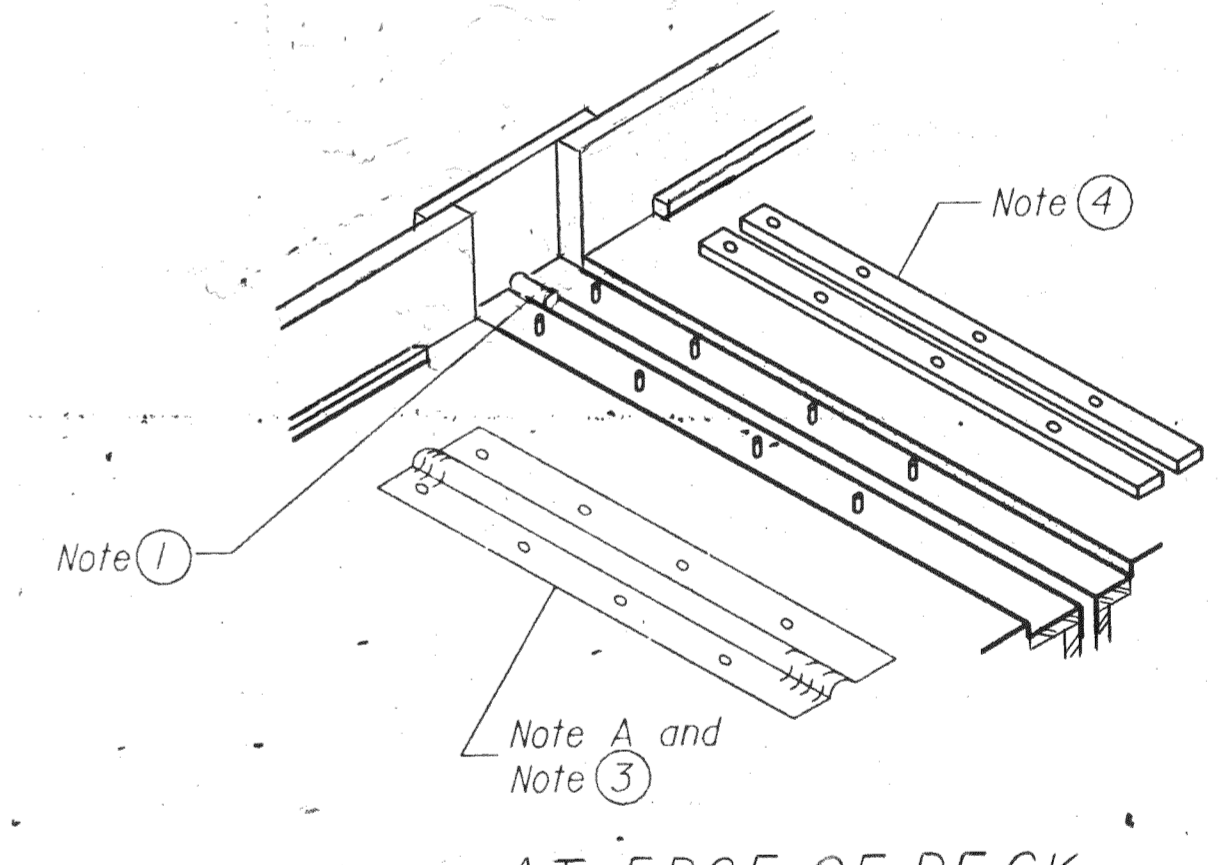
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions. The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure. The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete breakout. The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed. Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F. The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



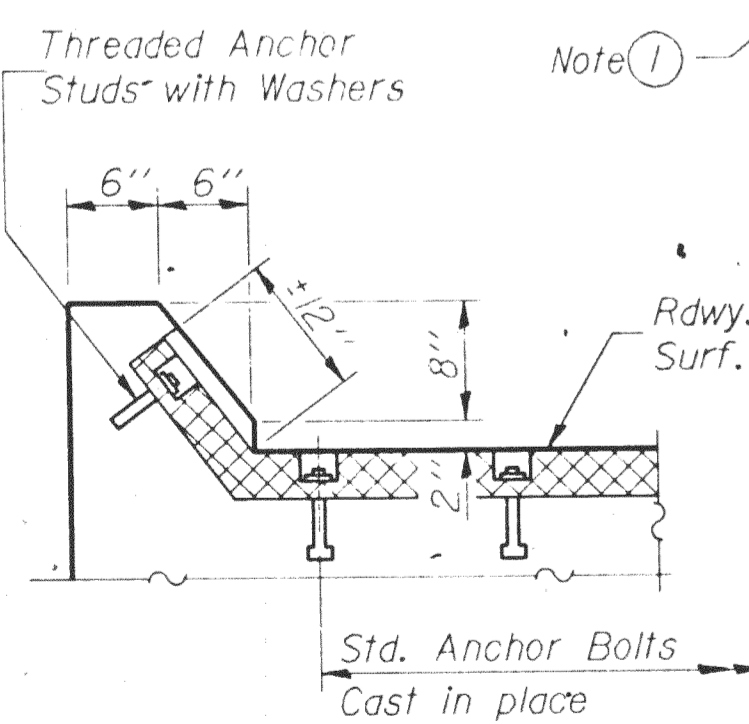
**AT PARAPET**



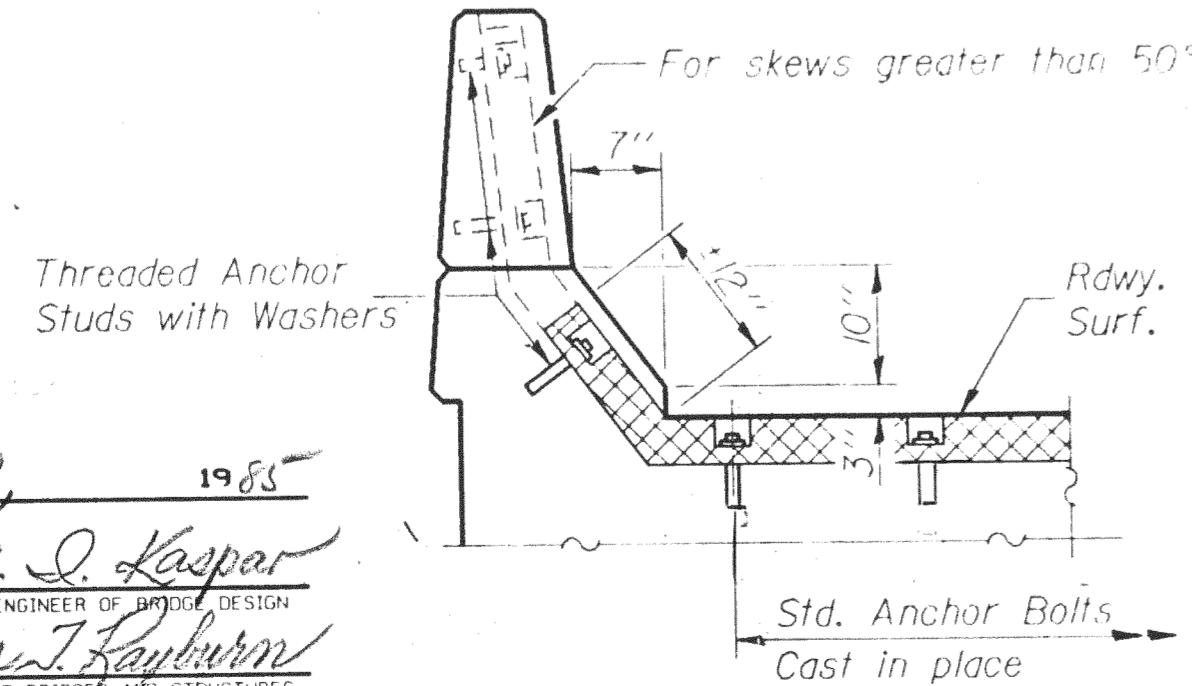
**AT SIDEWALK OR MEDIAN**



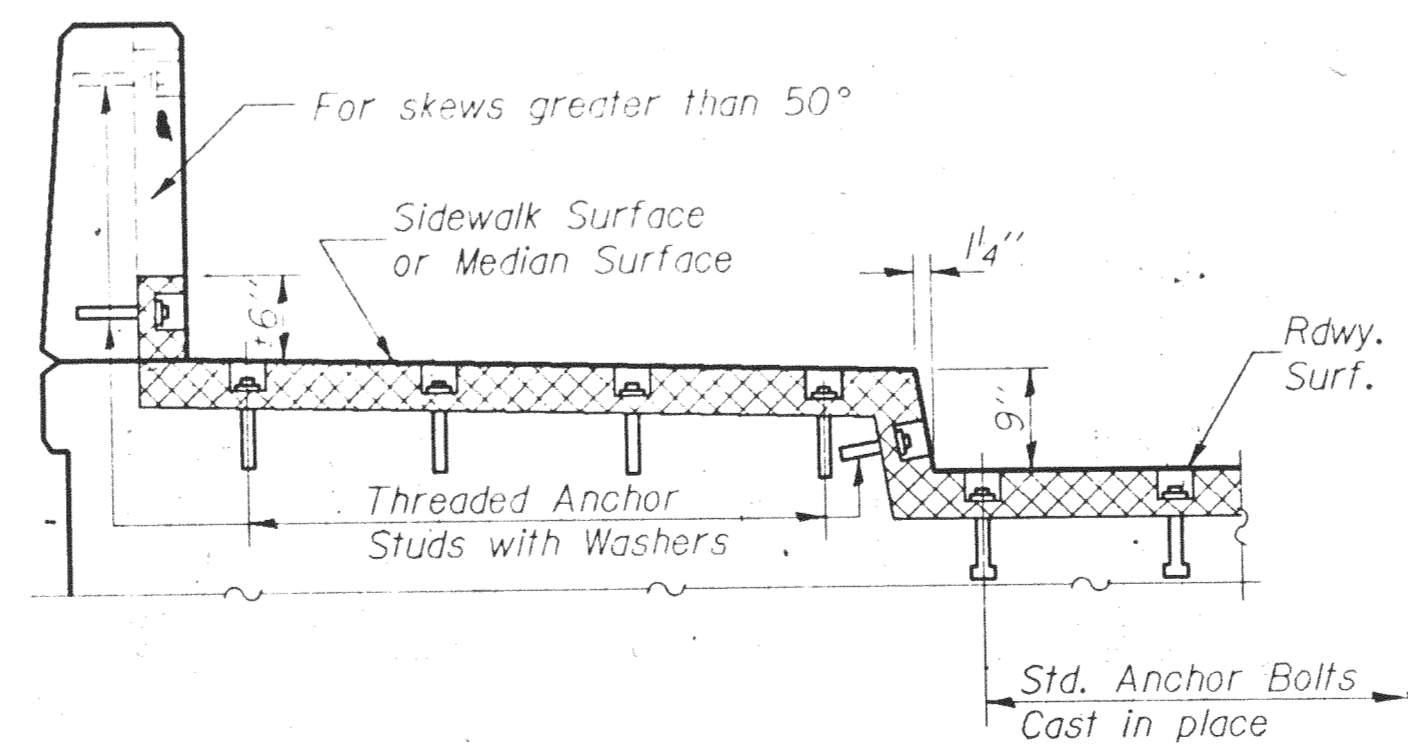
**AT EDGE OF DECK**



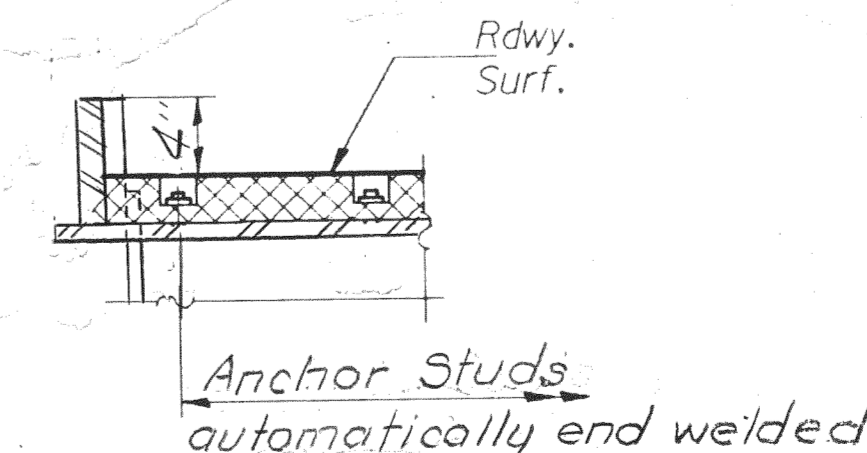
**AT CURB**



**AT PARAPET**



**AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS**



**AT EDGE OF DECK**

DESIGNED	David Bardick
CHECKED	Louise Bidd
DRAWN	F. M.
CHECKED	L. H. DB.

Dec. 31, 1985  
 EXAMINED *Greg J. Kaspar*  
 ENGINEER OF PUBLIC DESIGN  
 PASSED *James J. Fairburn*  
 ENGINEER OF BRIDGES AND STRUCTURES  
 APPROVED  
 DIRECTOR OF HIGHWAYS

CONTINUOUS SEAL TYPE  
NEOPRENE EXPANSION JOINTS  
FOR 4" MOVEMENT

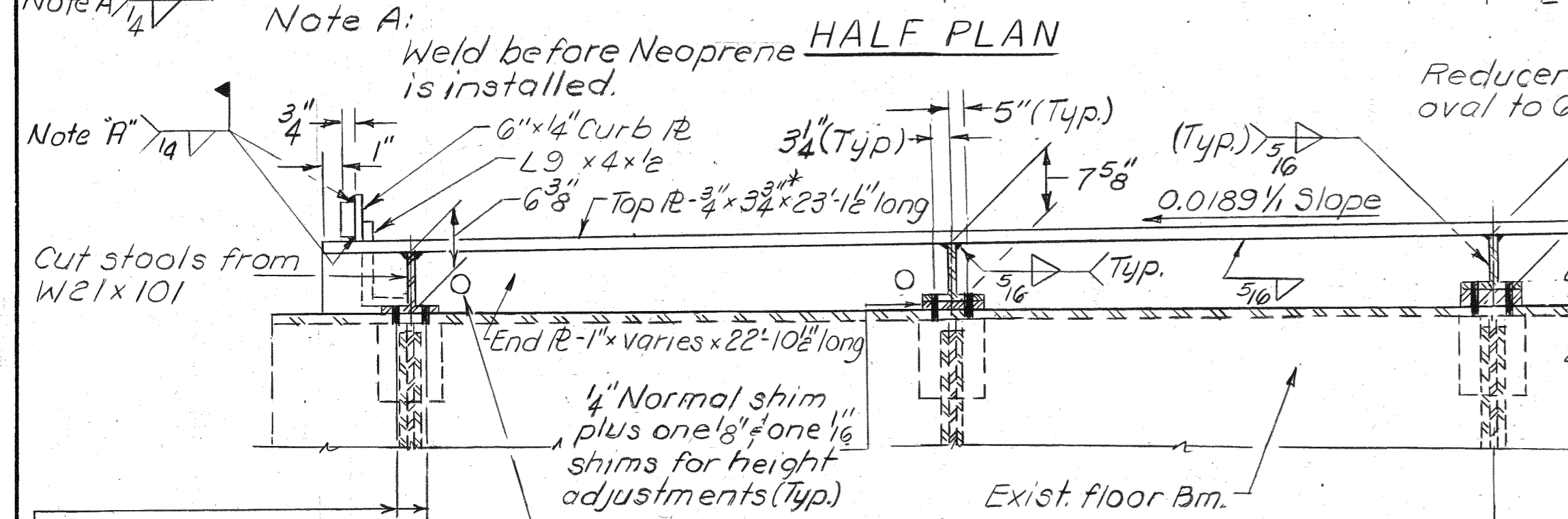
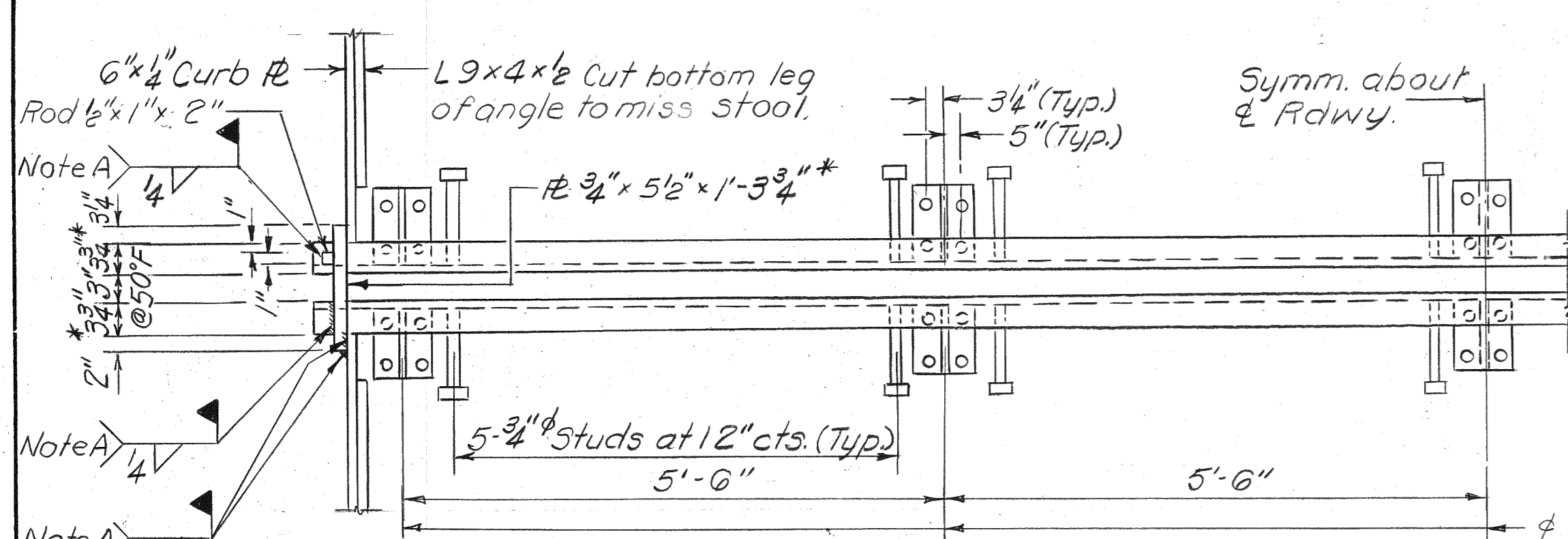
F.A. RTE. 786 SEC. 109 B-D  
LA SALLE COUNTY  
STA. 79+05.00

\*These are minimum dimensions. Dimensions are dependent on manufacturer's product used.

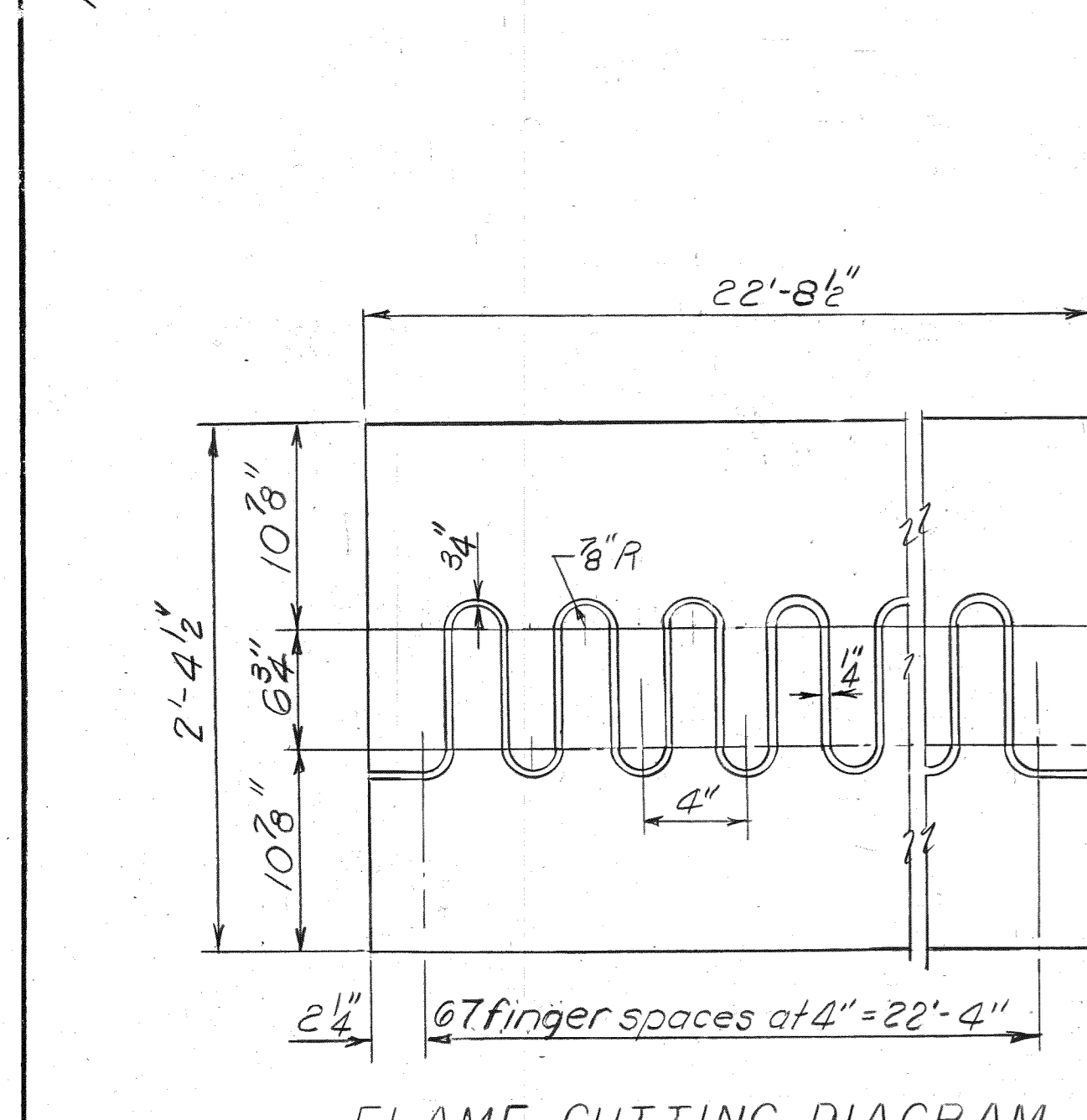
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
786	109B-D	LASALLE	68	47
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	SHEET NO. 21

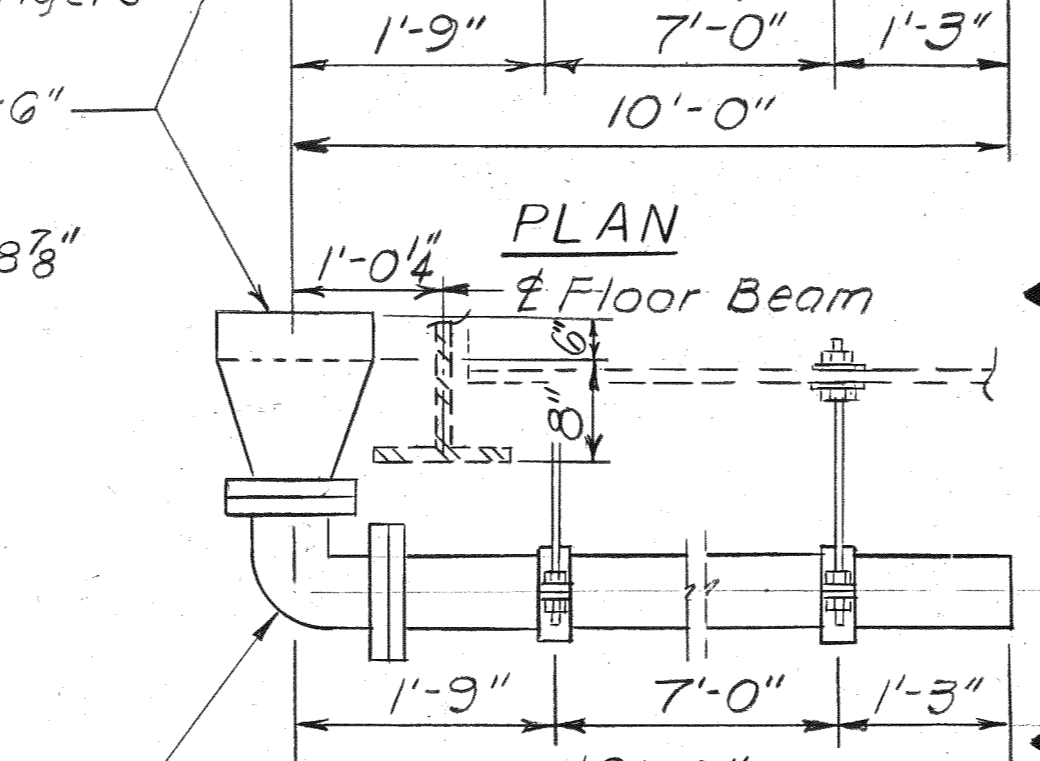
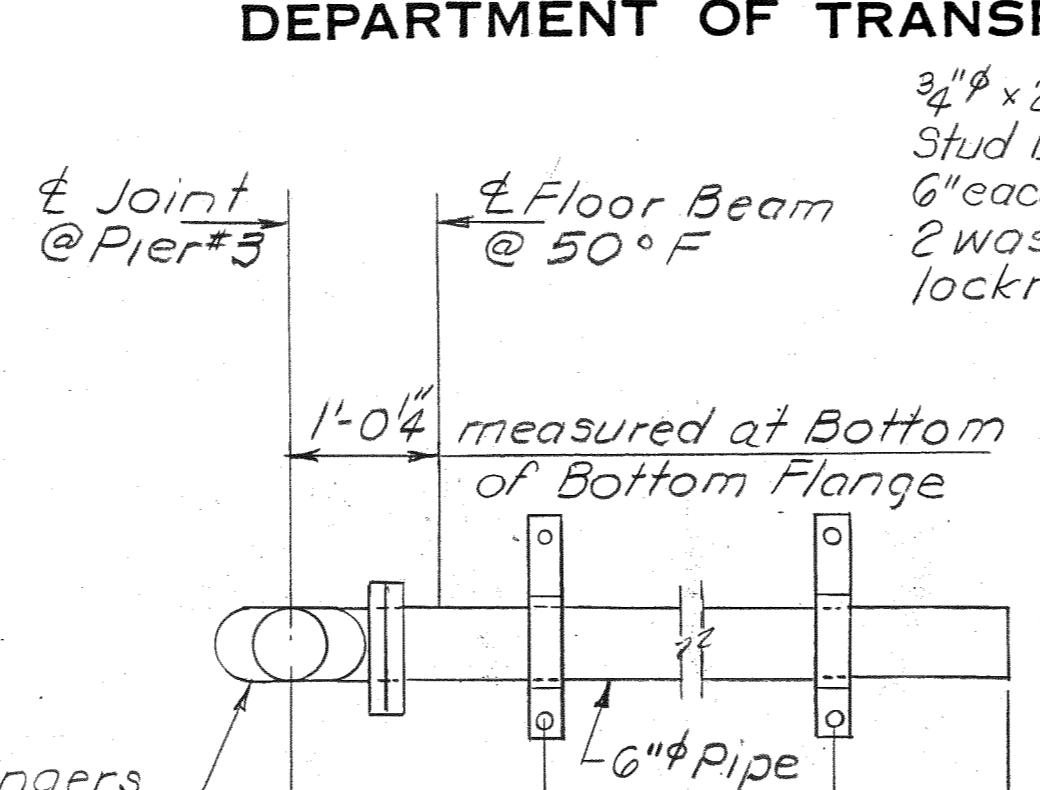
38 SHEETS



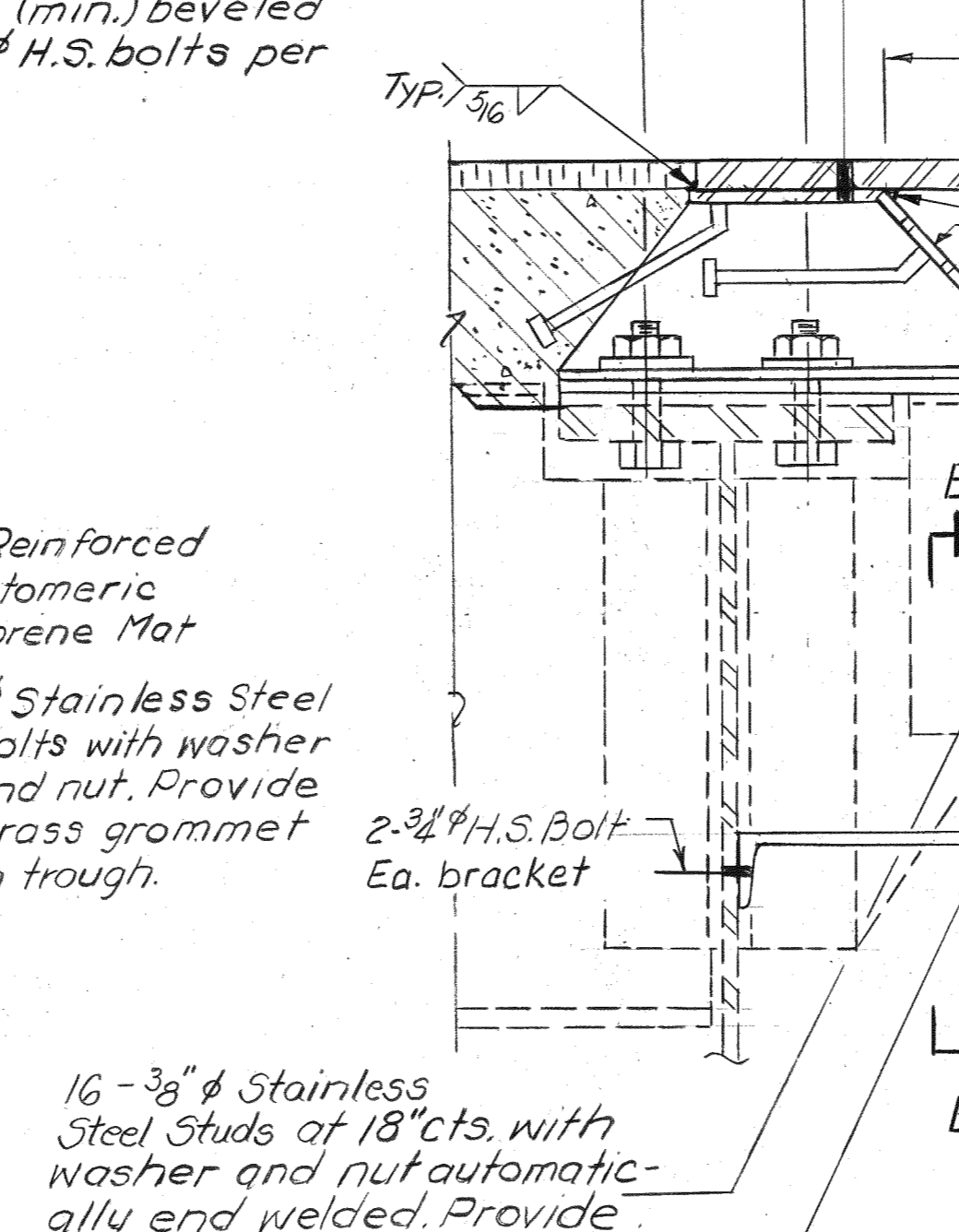
Weld before Neoprene is installed.  
End R-1x varies x 22-10 1/2 long  
1/4 Normal shim plus one 1/8 and one 1/16 shims for height adjustments (Typ.)  
Exist. floor Bm.



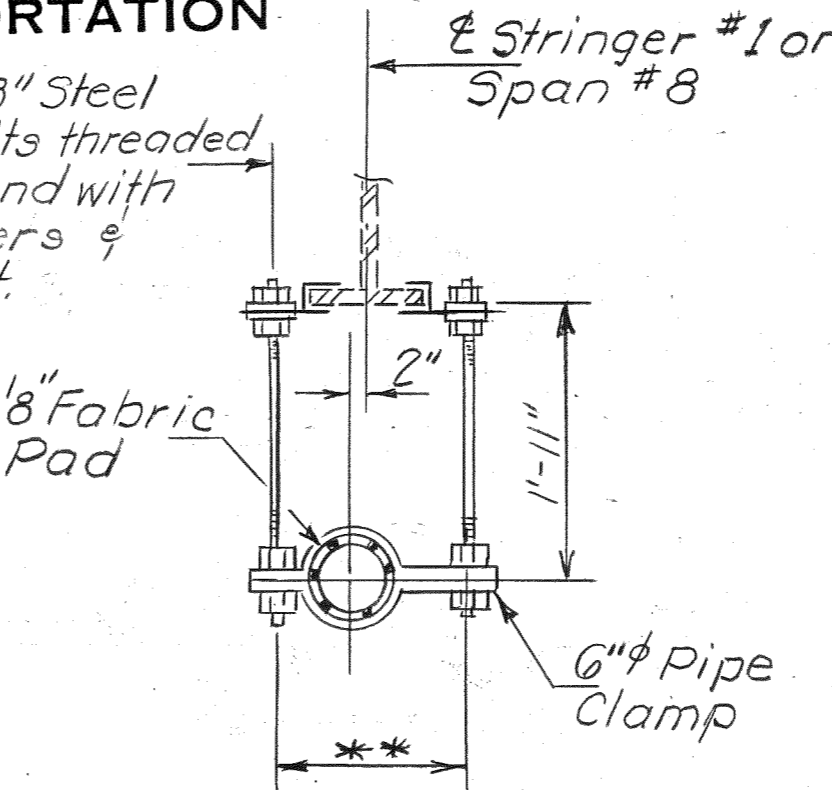
DESIGNED	David Burdick	Dec. 31, 1985
CHECKED	James J. Kaspar	ENGINEER OF BRIDGE DESIGN
DRAWN	mercado	JRS
CHECKED	DB	AS PROVED



3/4 x 2-3 Steel Stud Bolts threaded 6 inch each end with 2 washers & locknut.  
1/8 Fabric Pad  
6 inch Pipe Clamp  
1-9 7-0 1-3  
10-0  
1-0 1/4 measured at Bottom of Bottom Flange

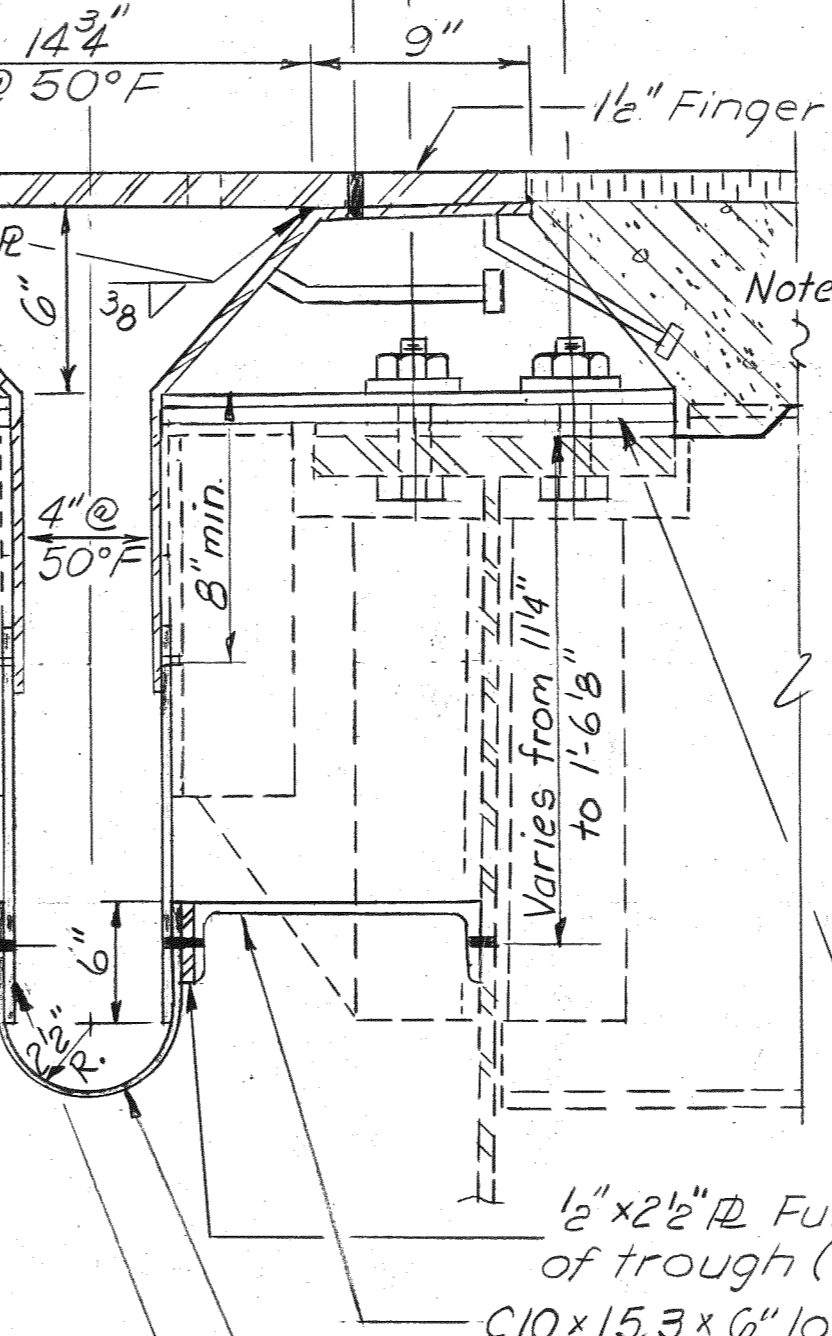


16 Pairs - 3/8 Stainless Steel bolts with washer and nut. Provide brass grommet in trough.  
1/2 x 2 1/2 Full length of trough (Typ.)  
C10 x 15.3 x 6 long (Typ.)  
1/8 Reinforced Elastomeric Neoprene Trough  
1/8 Reinforced Elastomeric Neoprene Mat

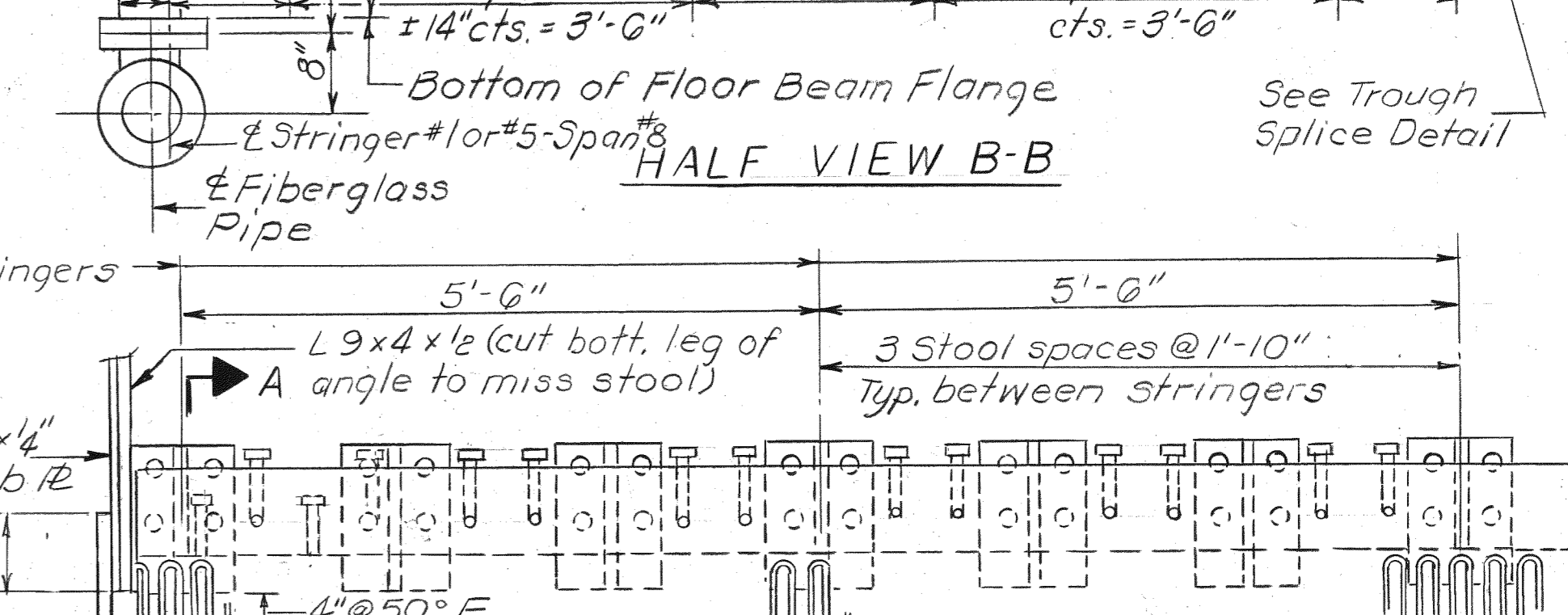
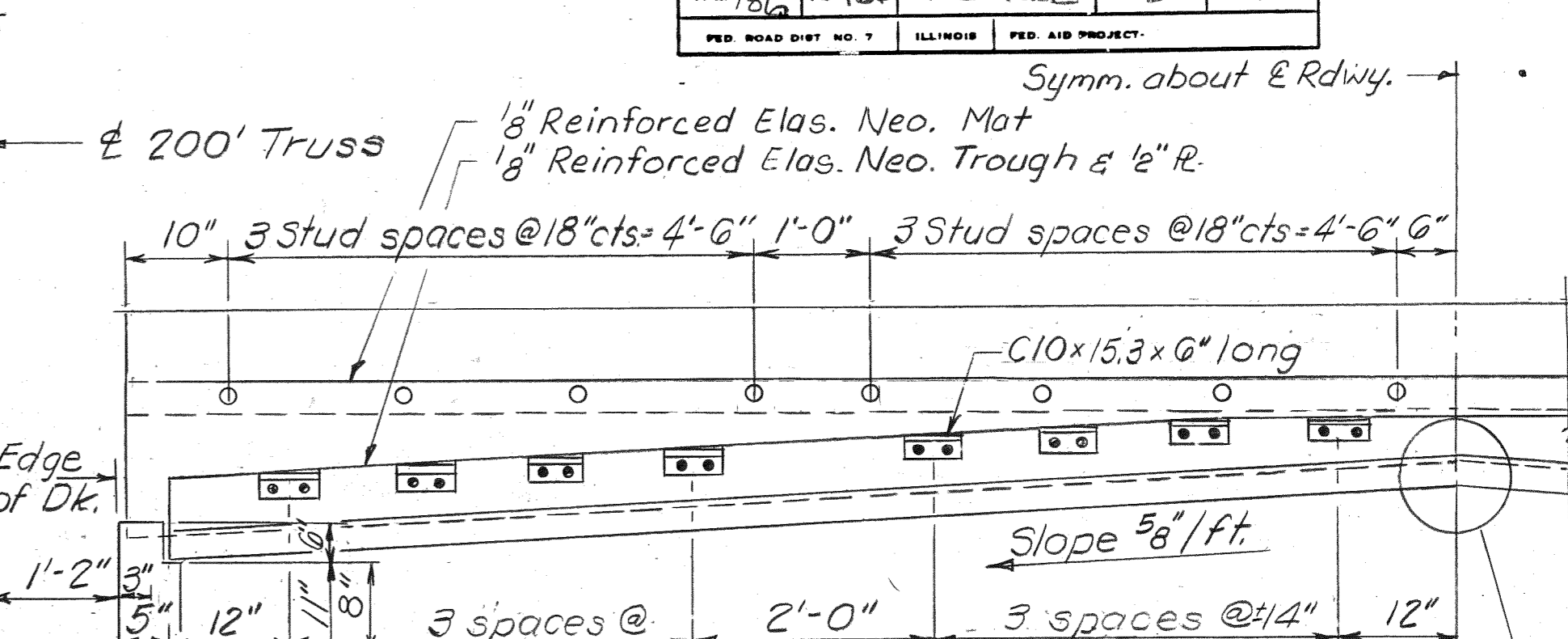


6 Stringer #1 or #5 Span #8  
6 inch Pipe Clamp  
1/8 Fabric Pad  
6 inch Pipe Clamp  
\*\* Dimension as Req'd. by Stringer

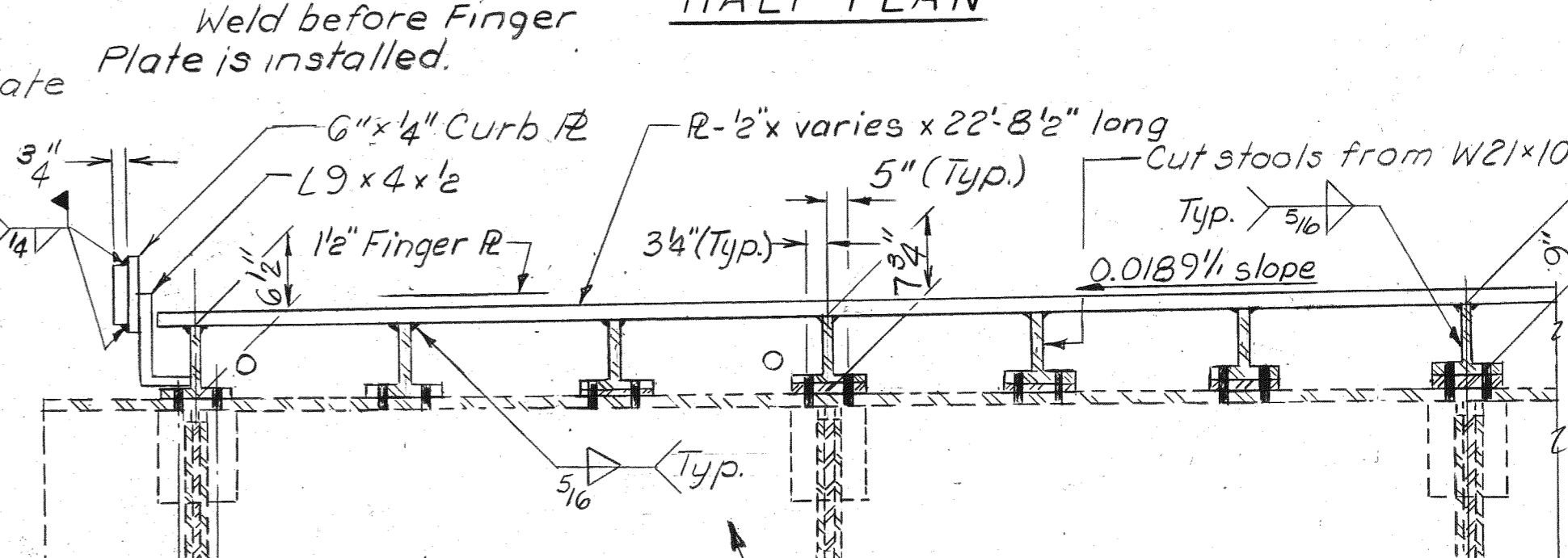
Note: Fiberglass pipe shall conform to ASTM: D 2996, with short time rupture strength hoop tensile stress of 30,000 psi. minimum.  
The exterior surface of the Floor Drains shall be painted in accordance with the paint system specified for Structural Steel.  
Cost of the Floor Drains shall be incidental to Reinforced Neoprene Expansion Joint Treatment.



1/8 Reinforced Elastomeric Neoprene Mat  
3/8 Stainless Steel bolts with washer and nut. Provide brass grommet in trough.  
2-3/4 H.S. Bolt Ea. bracket



200 Truss  
10 Stringer #1 or #5 Span #8  
1/8 Reinforced Elast. Neo. Mat  
1/8 Reinforced Elast. Neo. Trough & 1/2 R.  
10 Stud spaces @ 18 cts = 4-6 1-0  
3 Stud spaces @ 18 cts = 4-6 6  
C10 x 15.3 x 6 long  
Slope 5/8 ft.  
3 spaces @ 14 cts = 3-6  
Bottom of Floor Beam Flange  
3 Stringer #1 or #5 Span #8  
Fiberglass Pipe  
See Trough Splice Detail



5-6  
L9 x 4 x 1/2 (cut bott. leg of angle to miss stool)  
3 Stool spaces @ 1-10 Typ. between stringers  
6 x 4 Curb R  
L9 x 4 x 1/2  
1/2 Finger R  
3/4 Stud @ 6" Alt. Typ. Btwn. stools cts. Ea. end.  
Weld before Finger Plate is installed.  
Exist. Floor Beam & Rdwy.  
2 inch Adjusting holes in stools  
1/4 Normal shim plus one 1/8 and one 1/16 shims for height adjustment

Note: Cost of field drilled holes are included in the pay item for "Structural Steel"

EXPANSION JOINTS AT PIERS #2, 3 & 4  
F.A. RTE. 786 SEC. 109B-D  
LA SALLE COUNTY  
STA. 79+05.00

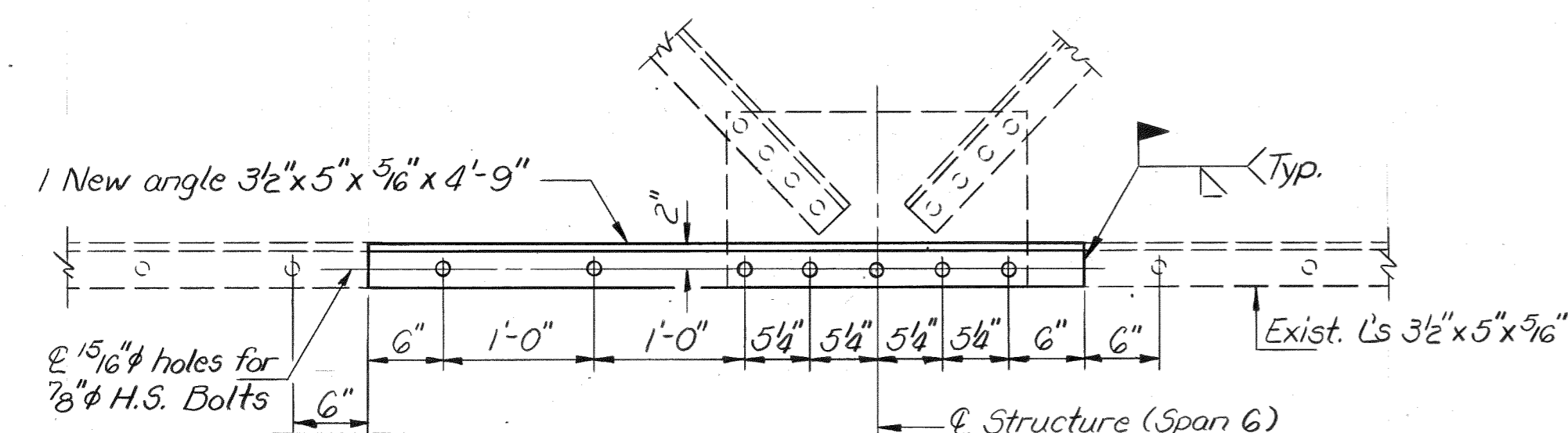
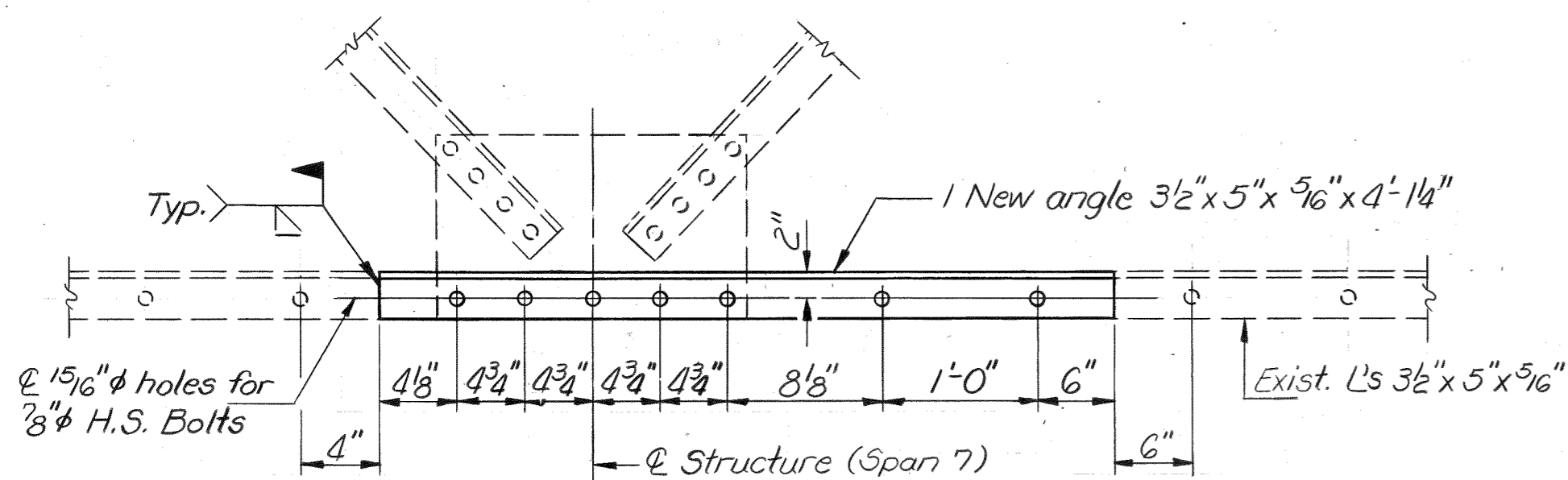
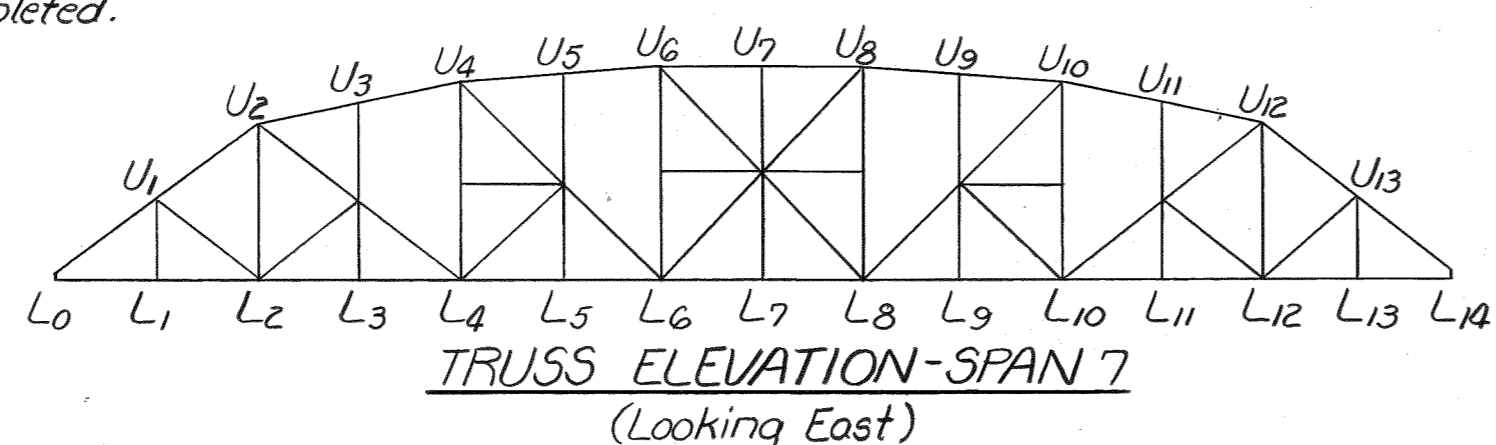
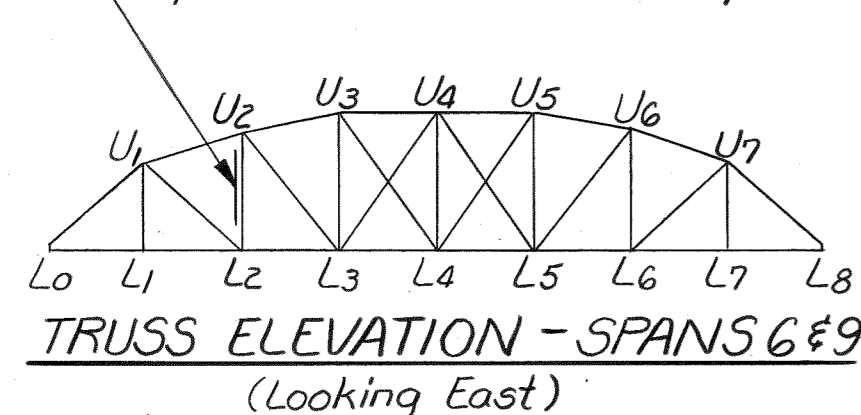
Revised 2-27-86 JRS  
REVISED 1-21-86 D.B.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

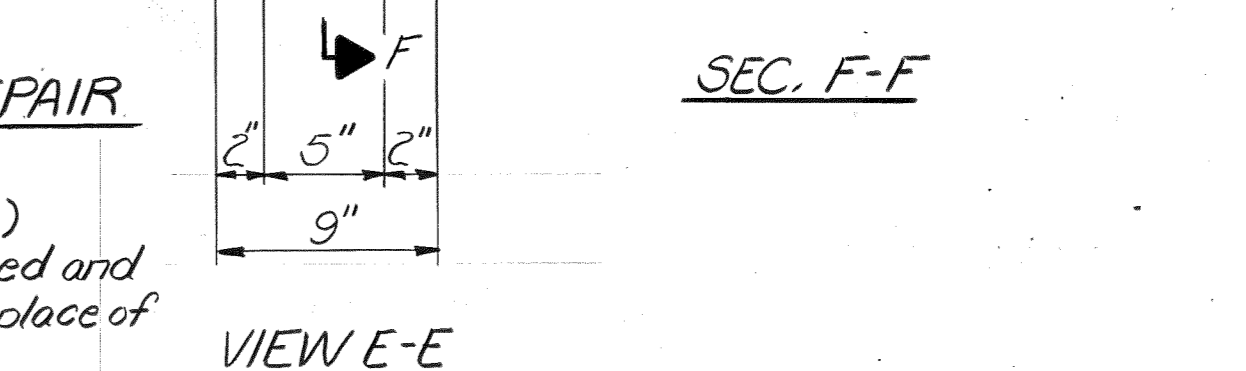
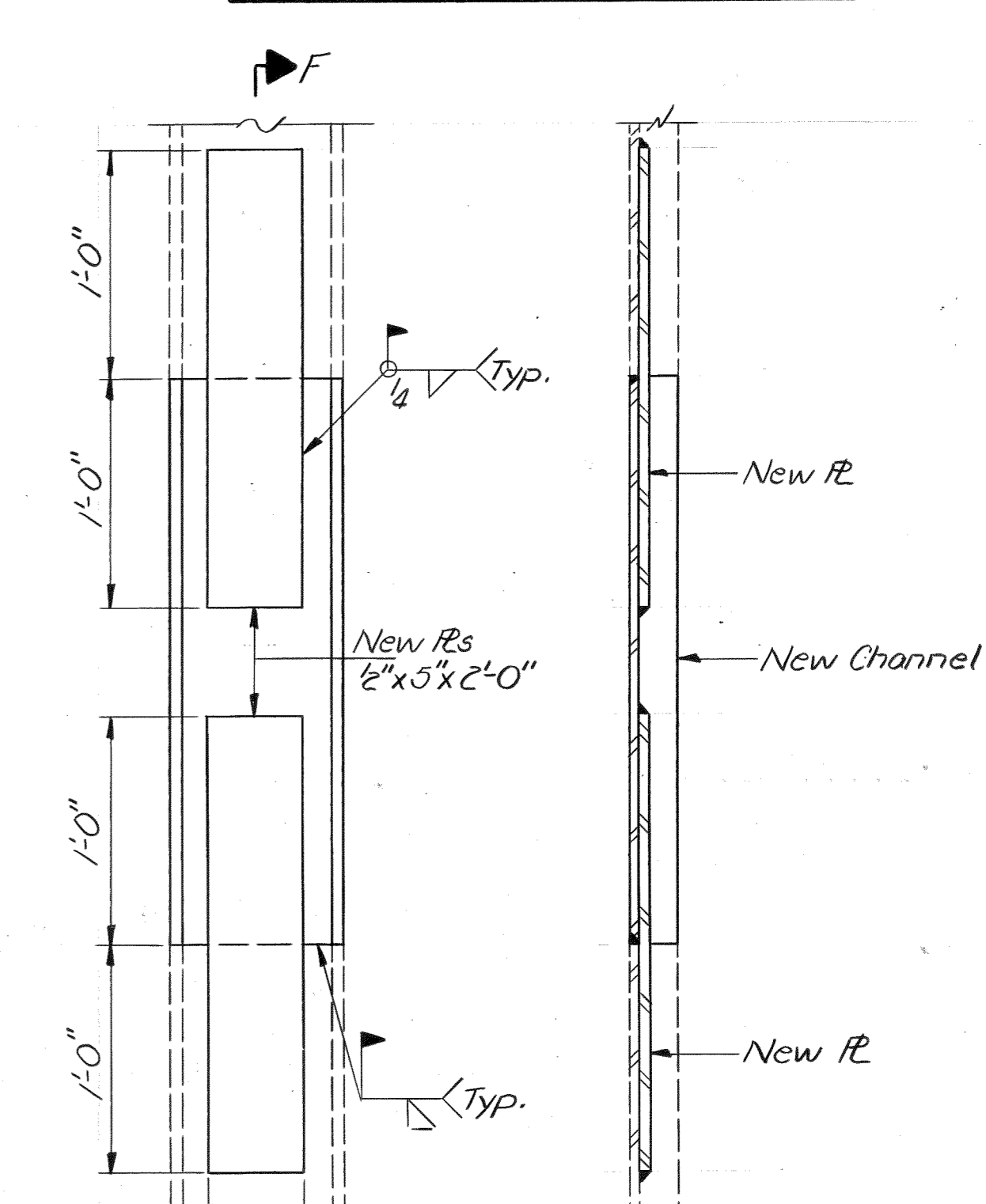
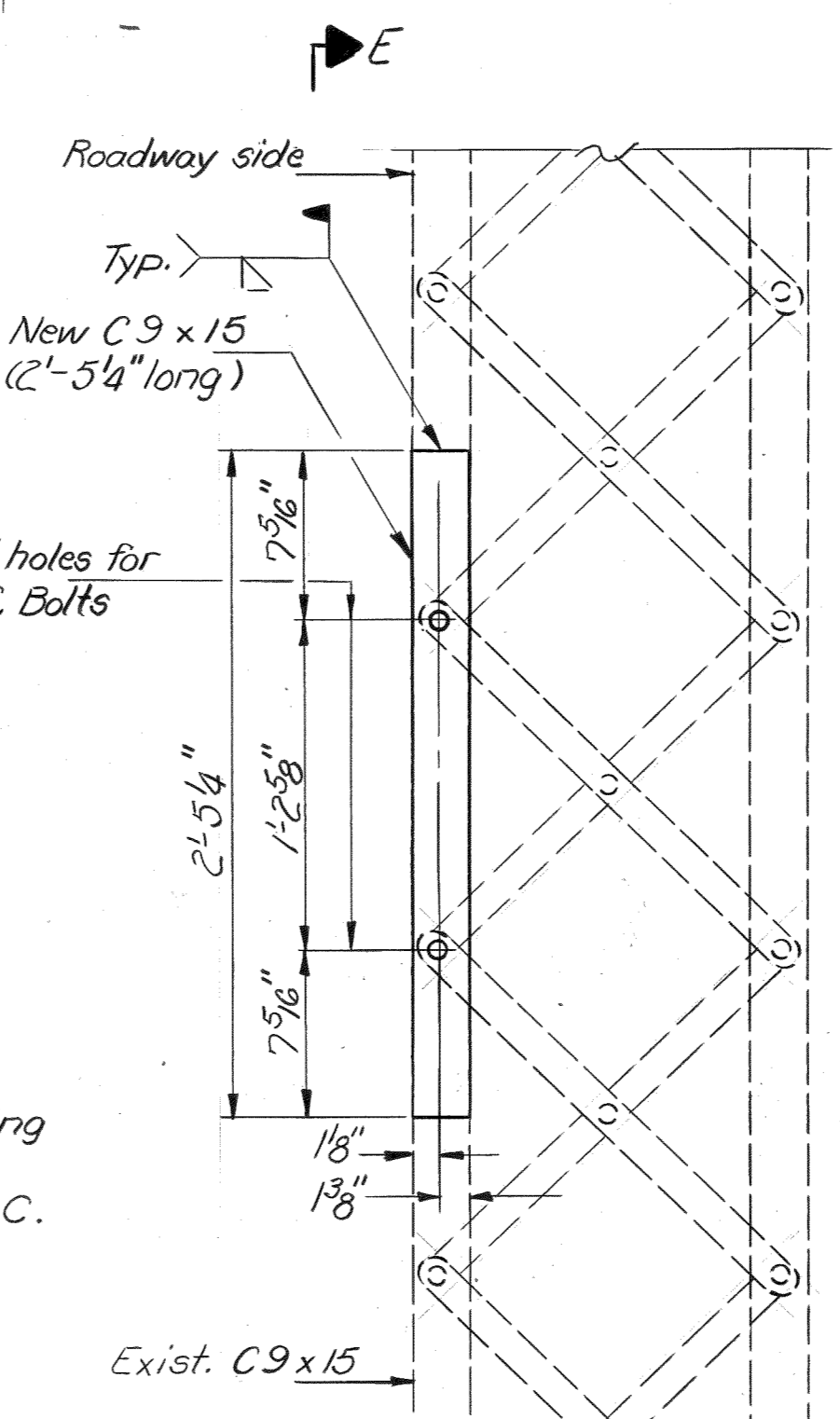
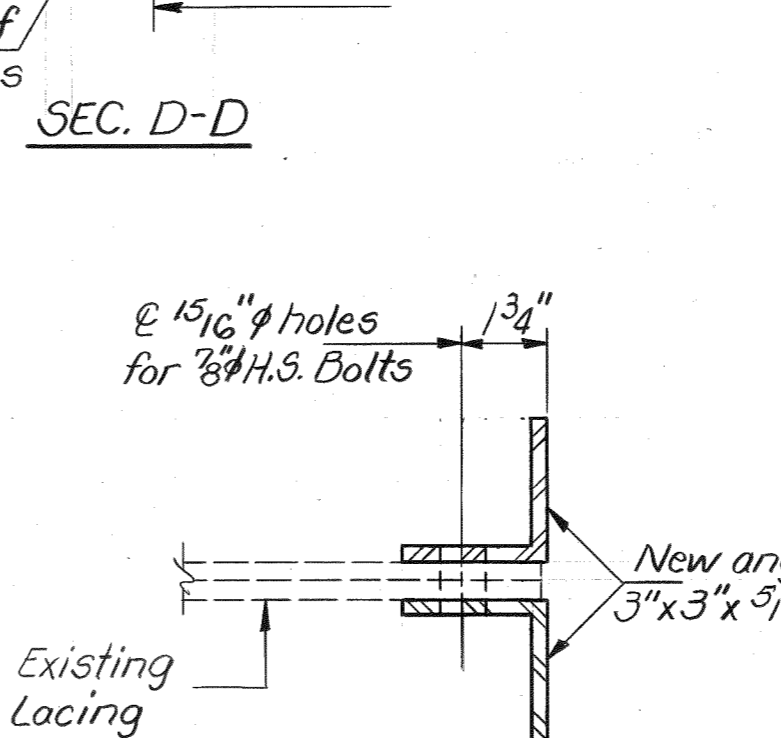
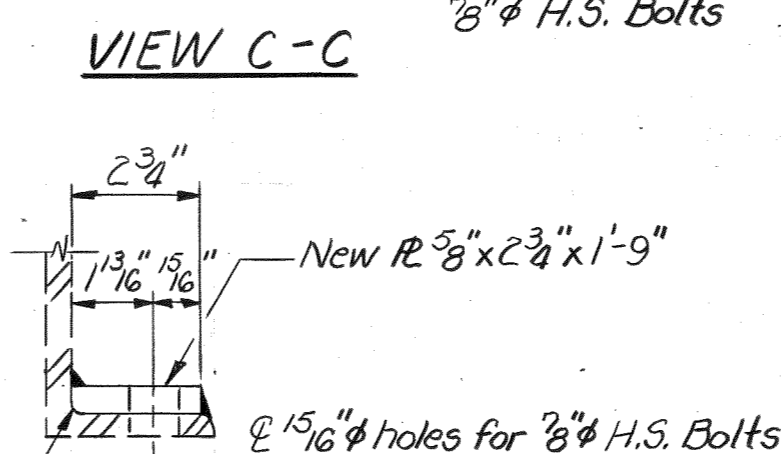
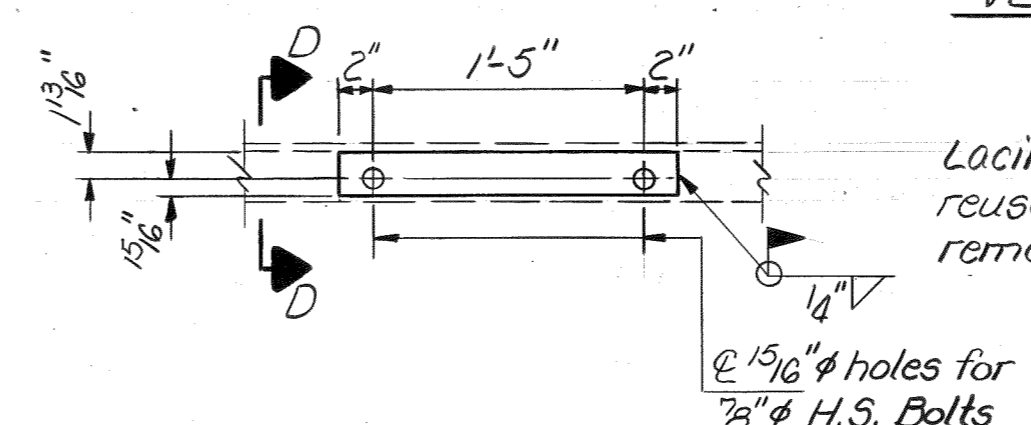
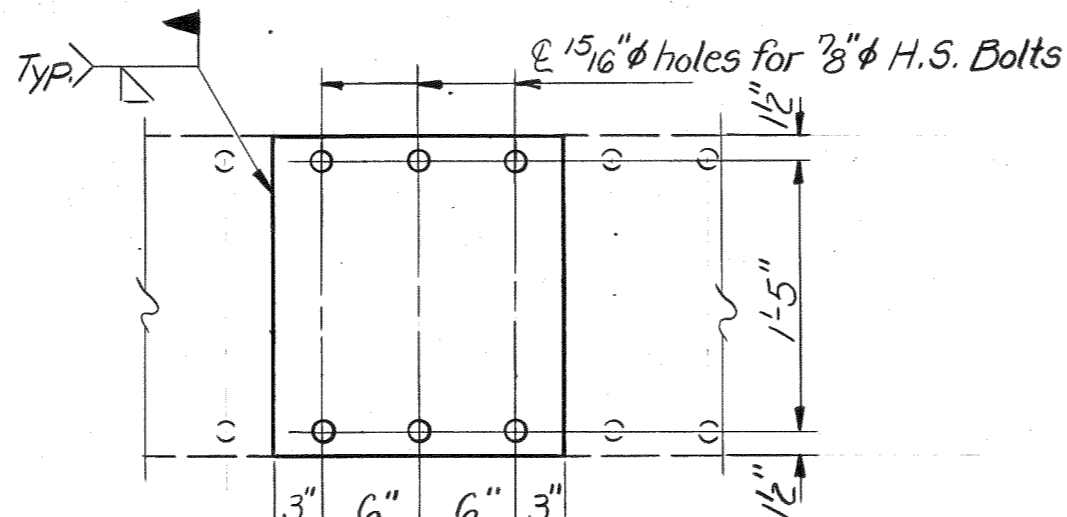
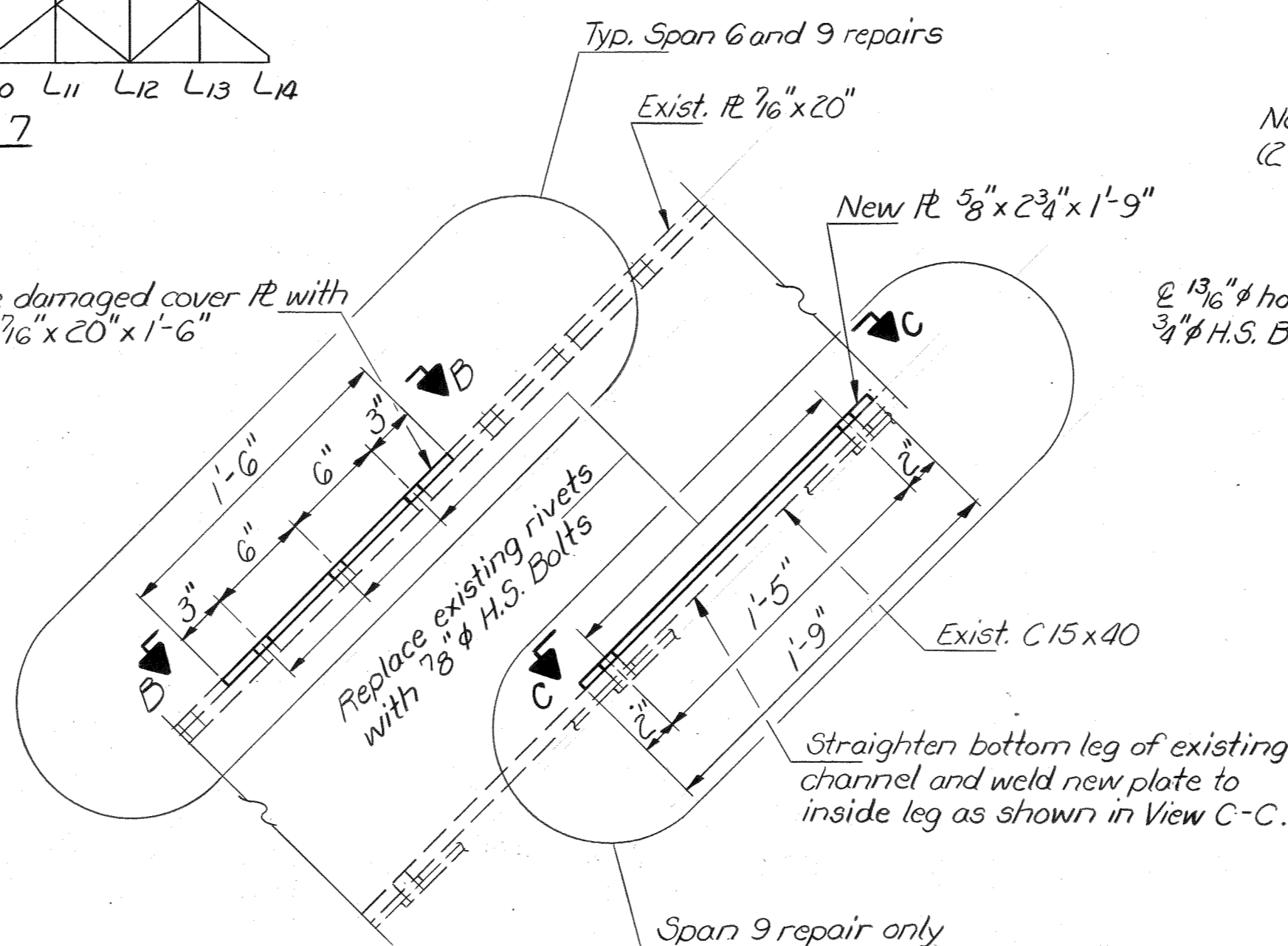
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
786	109B-D	LaSALLE	68	48
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 22  
38 SHEETS

Install temporary support for vertical support on east truss Span 9. Locate as close to vertical as practical. Remove after repairs are completed.



Note: Straighten existing angle on sway frame in span 6 at L2, U2. Location is about in the same area as the above repairs.



\* See Truss Elevation - Spans 6 & 9.

Note: Cost of straightening or cutting existing structural steel is incidental to "Structural Steel Repairs."  
Drill holes in field when matching existing holes.  
Cost of drilling holes, removing rivets and replacing rivets to make structural steel repairs are included in the pay item for "Structural Steel Repairs."

BILL OF MATERIAL

Item	Unit	Total
Temporary Support System	Each	1

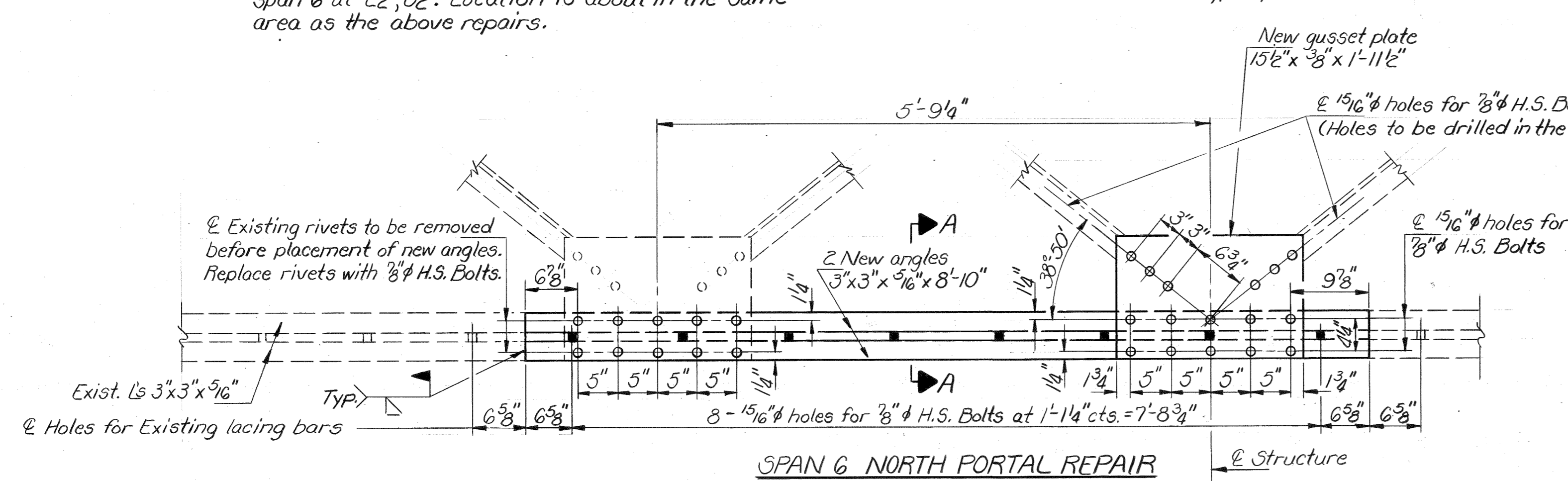
\*\* Maximum Tension in Member is 55 kips.

STRUCTURAL STEEL REPAIR  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

Revised 1/15/86 JRS

DESIGNED	Lance Field	Dec. 31, 1985
CHECKED	David Burdick	EXAMINED
DRAWN	Joe Sutherland	PASSED
CHECKED	DB.	APPROVED

Note: Straighten and reuse lacing in portal as required.

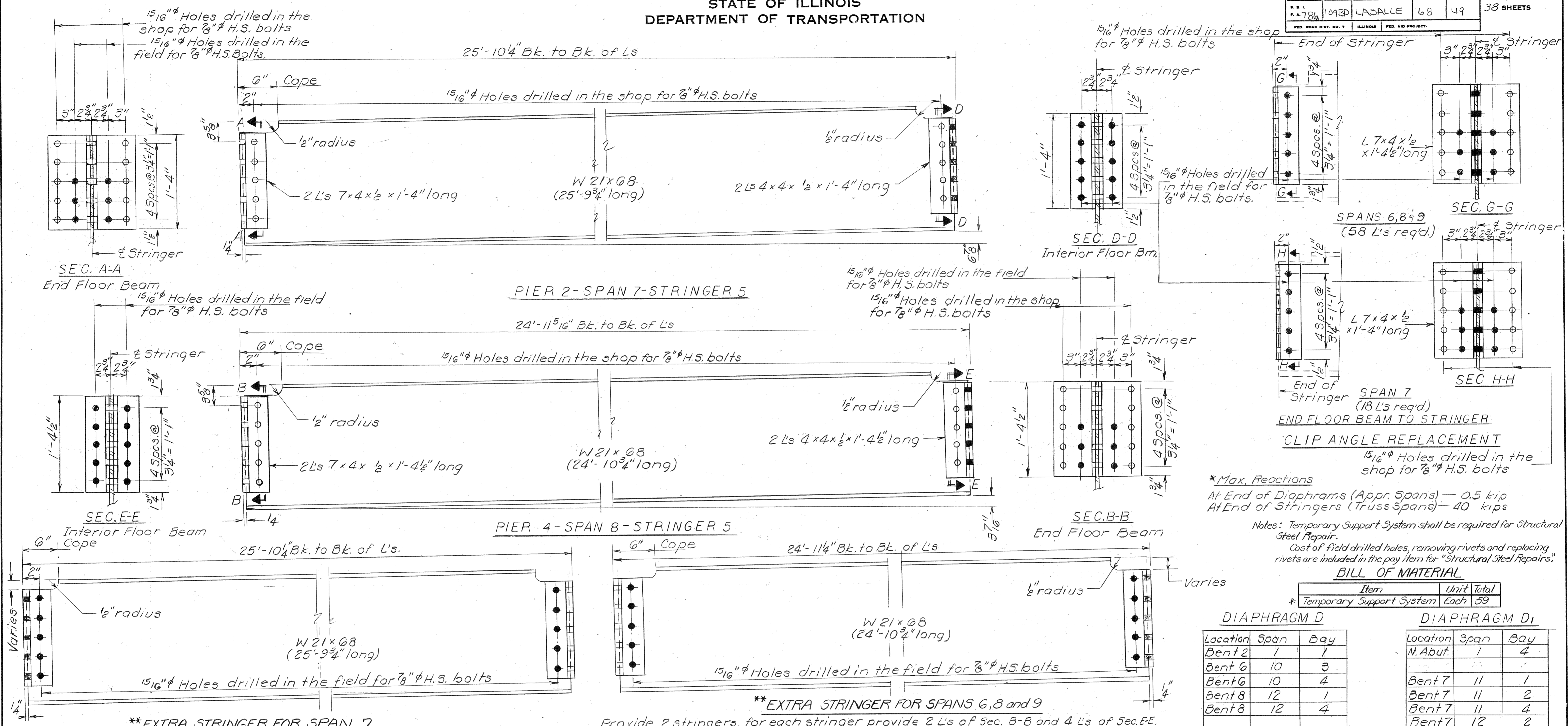




STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.R.T.E. 786	109B	LASALLE	68	49
ILLINOIS			FED. AID PROJECT	

SHEET NO. 23  
38 SHEETS



\*Max. Reactions  
At End of Diaphragms (Appr. Spans) — 0.5 kip  
At End of Stringers (Truss Spans) — 40 kips

Notes: Temporary Support System shall be required for Structural Steel Repair.  
Cost of field drilled holes, removing rivets and replacing rivets are included in the pay item for "Structural Steel Repairs".

**BILL OF MATERIAL**

Item	Unit	Total
* Temporary Support System	Each	59

**DIAPHRAGM D**

Location	Span	Bay
Bent 2	1	1
Bent 6	10	3
Bent 6	10	4
Bent 8	12	1
Bent 8	12	4

**DIAPHRAGM D1**

Location	Span	Bay
N. Abut.	1	4
Bent 7	11	1
Bent 7	11	2
Bent 7	11	4
Bent 7	12	2

Notes:  
Fasteners shall be H.S. bolts. Use bolts 3/8\"/>

**STRUCTURAL STEEL REPAIRS**

F.A.R.T.E. 786 SEC. 109B-D  
LA SALLE COUNTY  
STA. 79+05.00

DESIGNED *Louise Hill*  
CHECKED David Burdick  
DRAWN Mercado  
CHECKED D.B.

EXAMINED *Craig J. Kaspar*  
PASSED *James J. Kamborn*  
APPROVED

Dec. 31, 1985  
ENGINEER OF BRIDGE DESIGN  
ENGINEER OF BRIDGES AND STRUCTURES  
DIRECTOR OF HIGHWAYS

\*\* The contractor may have to replace these additional stringers provided for replacement of unforeseen damaged stringers. Weight of these stringers is included in the Bill of Material. If not used these stringers are salvage and become the property of the State of Illinois.

**\*\*EXTRA STRINGER FOR SPAN 7**

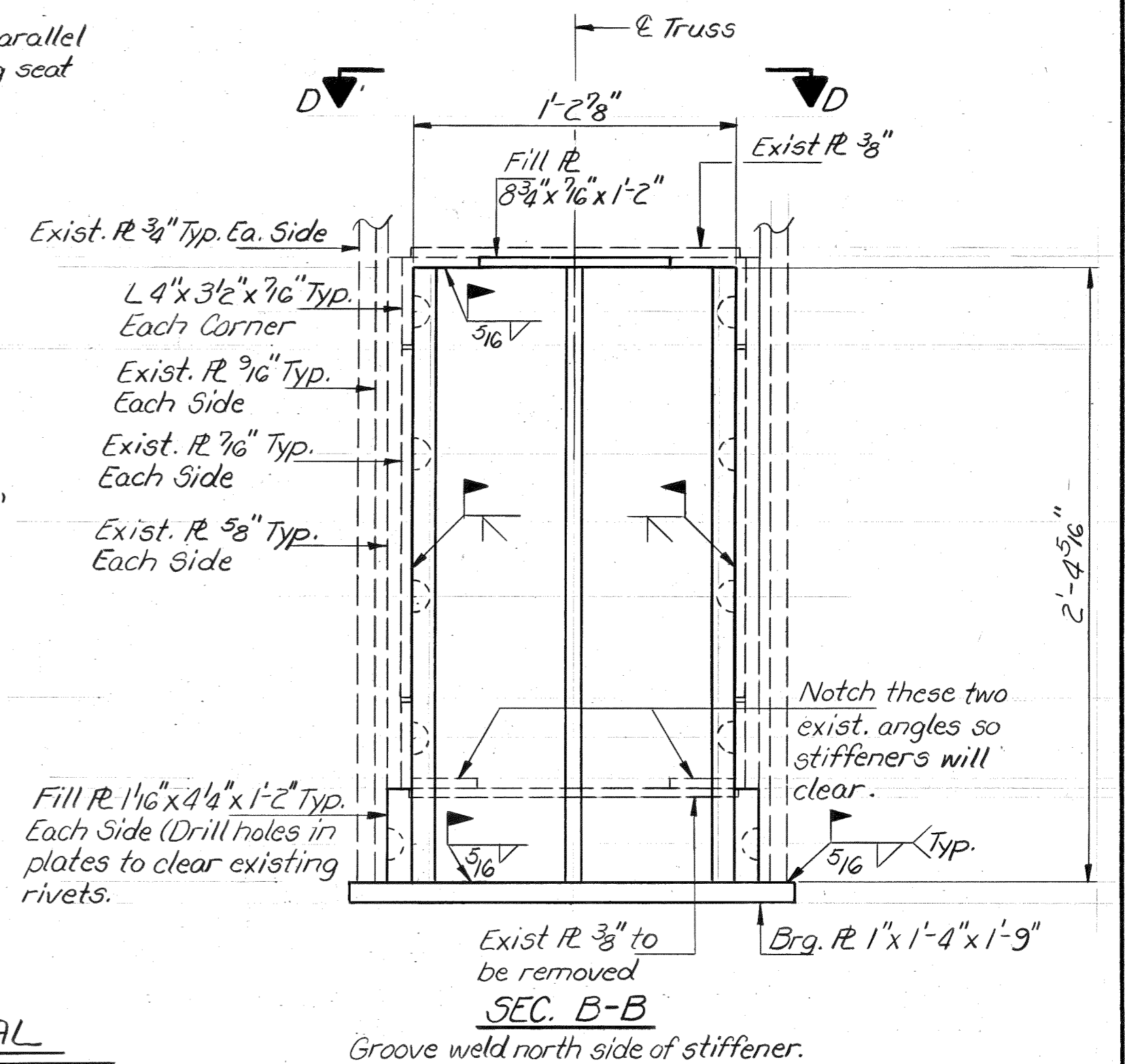
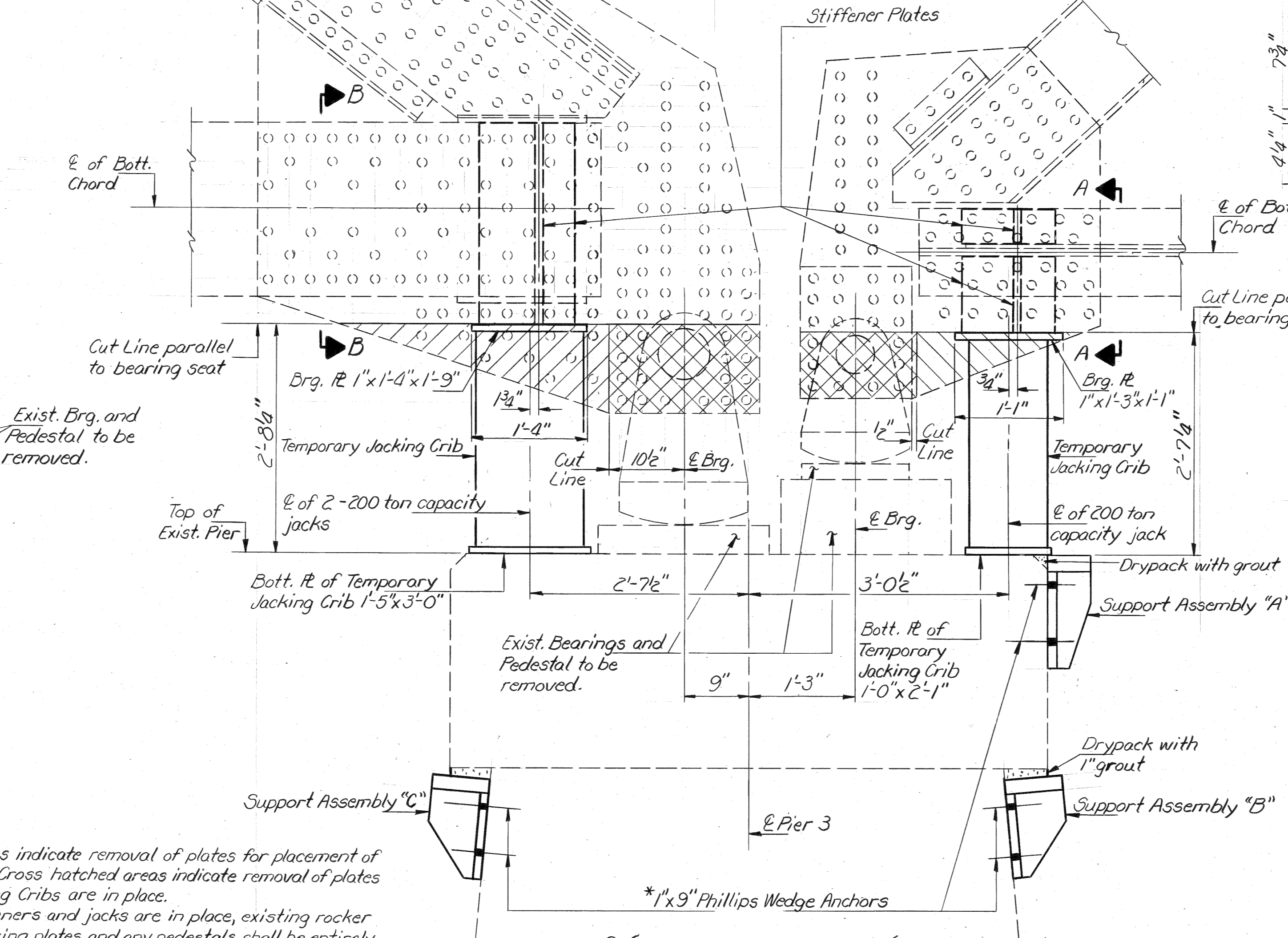
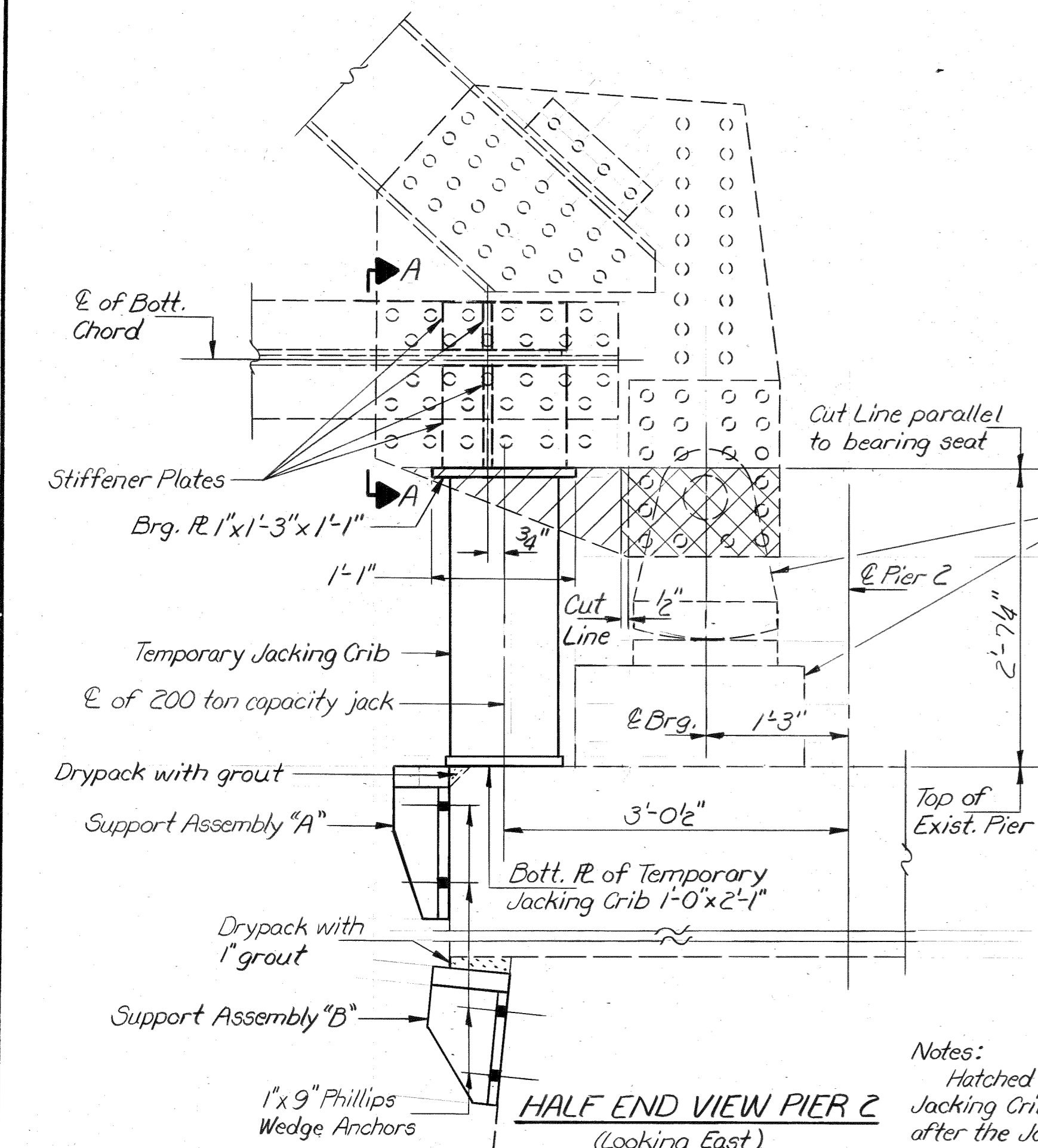
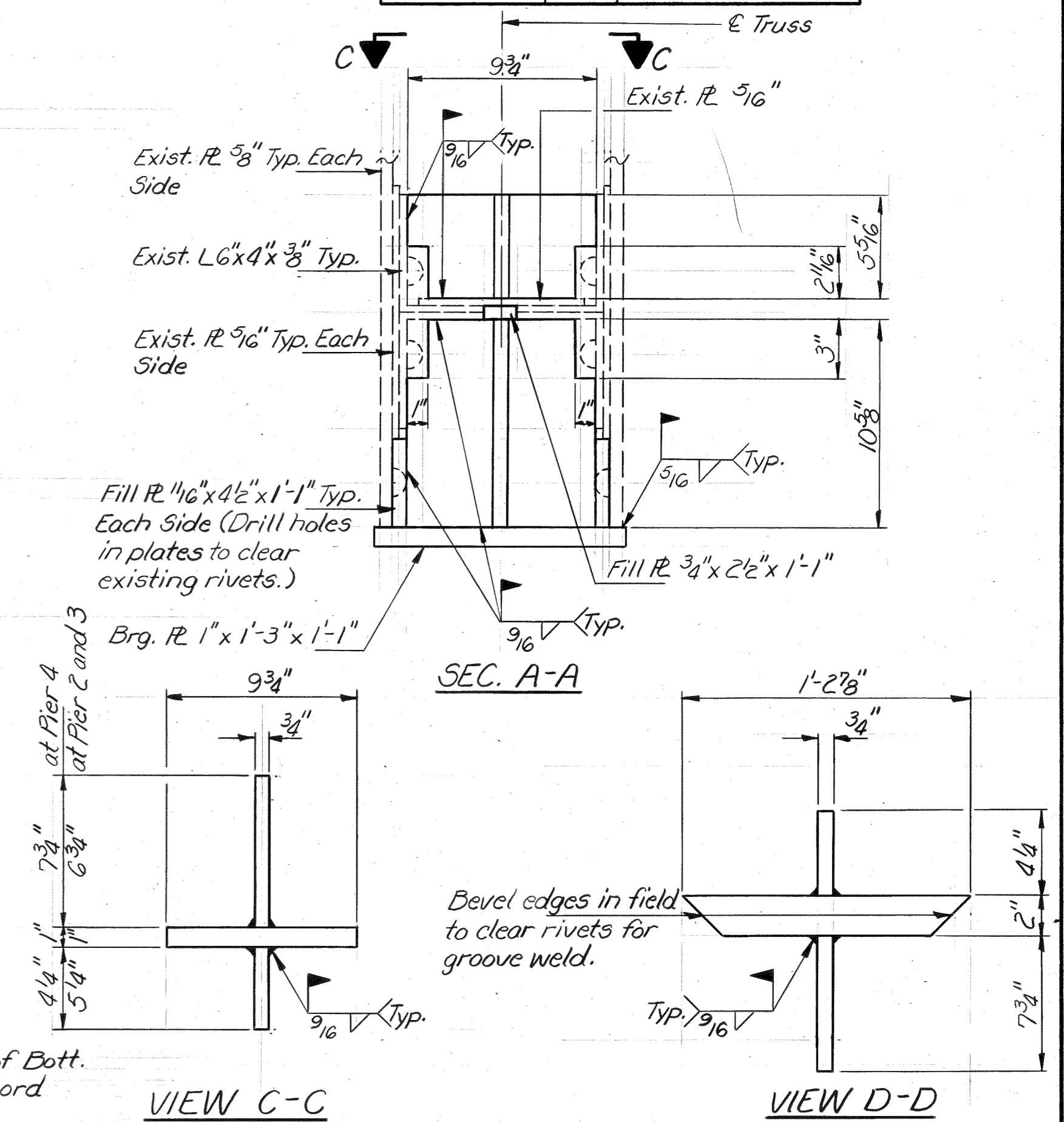
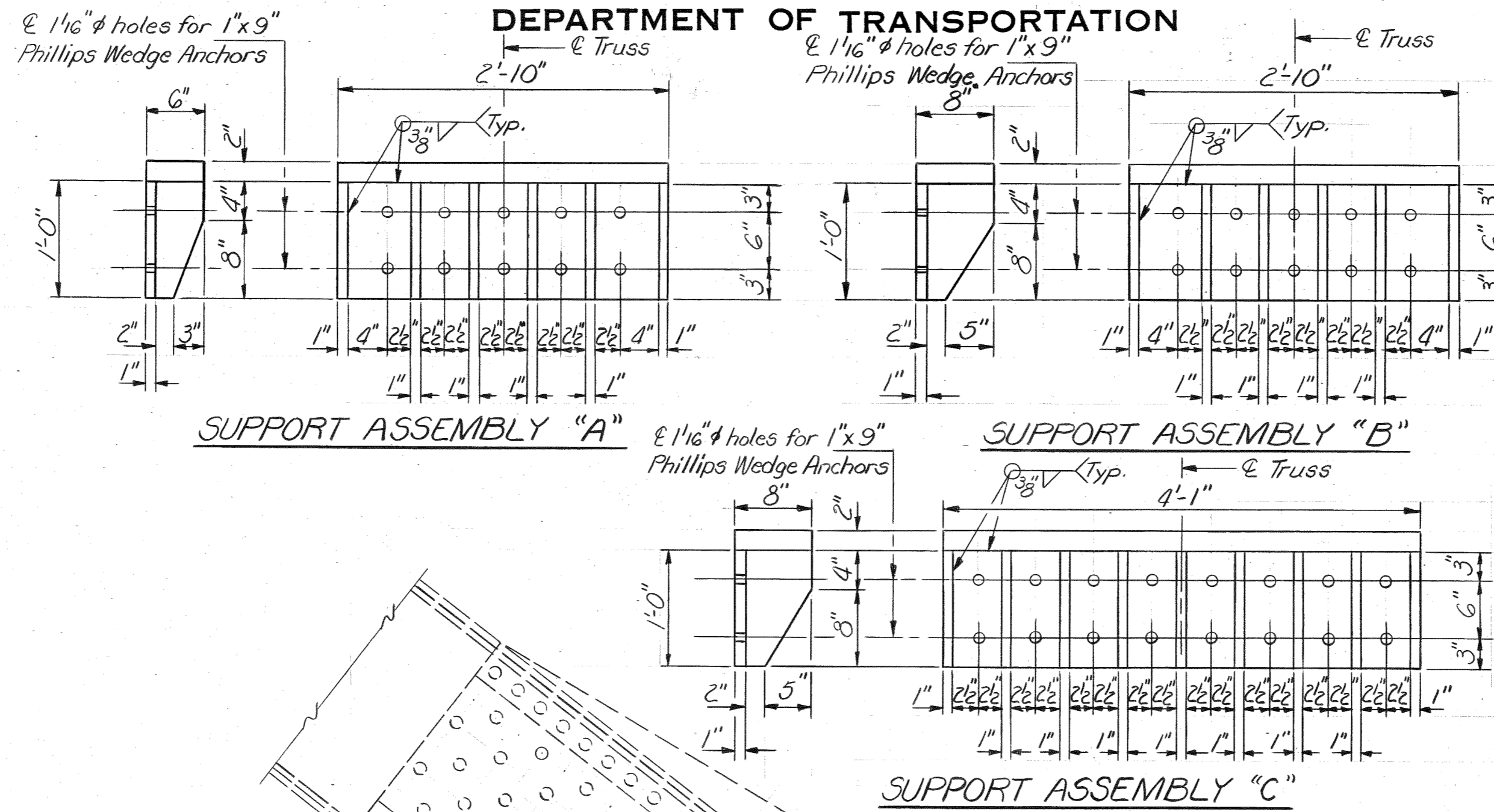
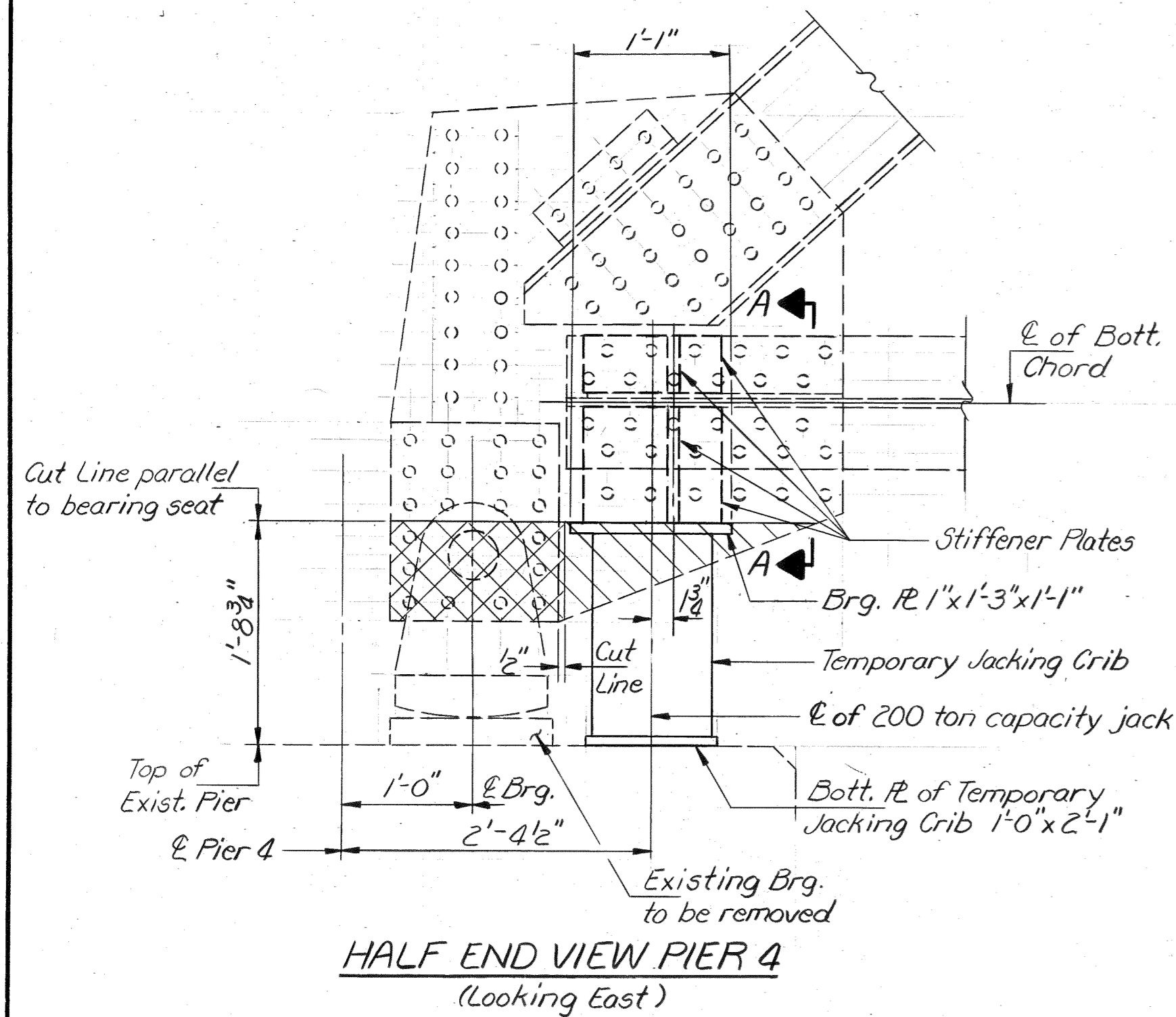
Provide 1 stringer, provide 2 L's of Sec. A-A and 4 L's of Sec. D-D. Trim ends to match slope of other stringers also adjust the depth of cope in the field. All holes for L's shall be field drilled.

**\*\*EXTRA STRINGER FOR SPANS 6, 8 and 9**  
Provide 2 stringers, for each stringer provide 2 L's of Sec. B-B and 4 L's of Sec. E-E. Trim ends to match slope of other stringers also adjust depth of cope in the field. All holes for L's shall be field drilled.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
786	109B-D	LASALLE	68	50
F.A. RT. 786		ILLINOIS		FED. AID PROJECT

SHEET NO. 24  
38 SHEETS



Notes:  
Hatched areas indicate removal of plates for placement of Jacking Cribs. Cross hatched areas indicate removal of plates after the Jacking Cribs are in place.  
After stiffeners and jacks are in place, existing rocker bearings, bearing plates and any pedestals shall be entirely removed and existing anchor bolts shall be cut off 1" below top of pier and covered with pocket filler.  
Pier caps shall be repaired before jacking begins.  
Cost of stiffeners, bearing plates, support assemblies, removal of existing bearings, cutting and removing part of the plates is incidental to "Jacking and Cribbing".

BILL OF MATERIAL

Jacking and Cribbing	Unit	Total
Pier 2	Each	2
Pier 3	Each	4
Pier 4	Each	2

DESIGNED *Lorne Hidd*  
CHECKED *David Burdick*  
DRAWN *Joe Sutherland*  
CHECKED *D.B.*

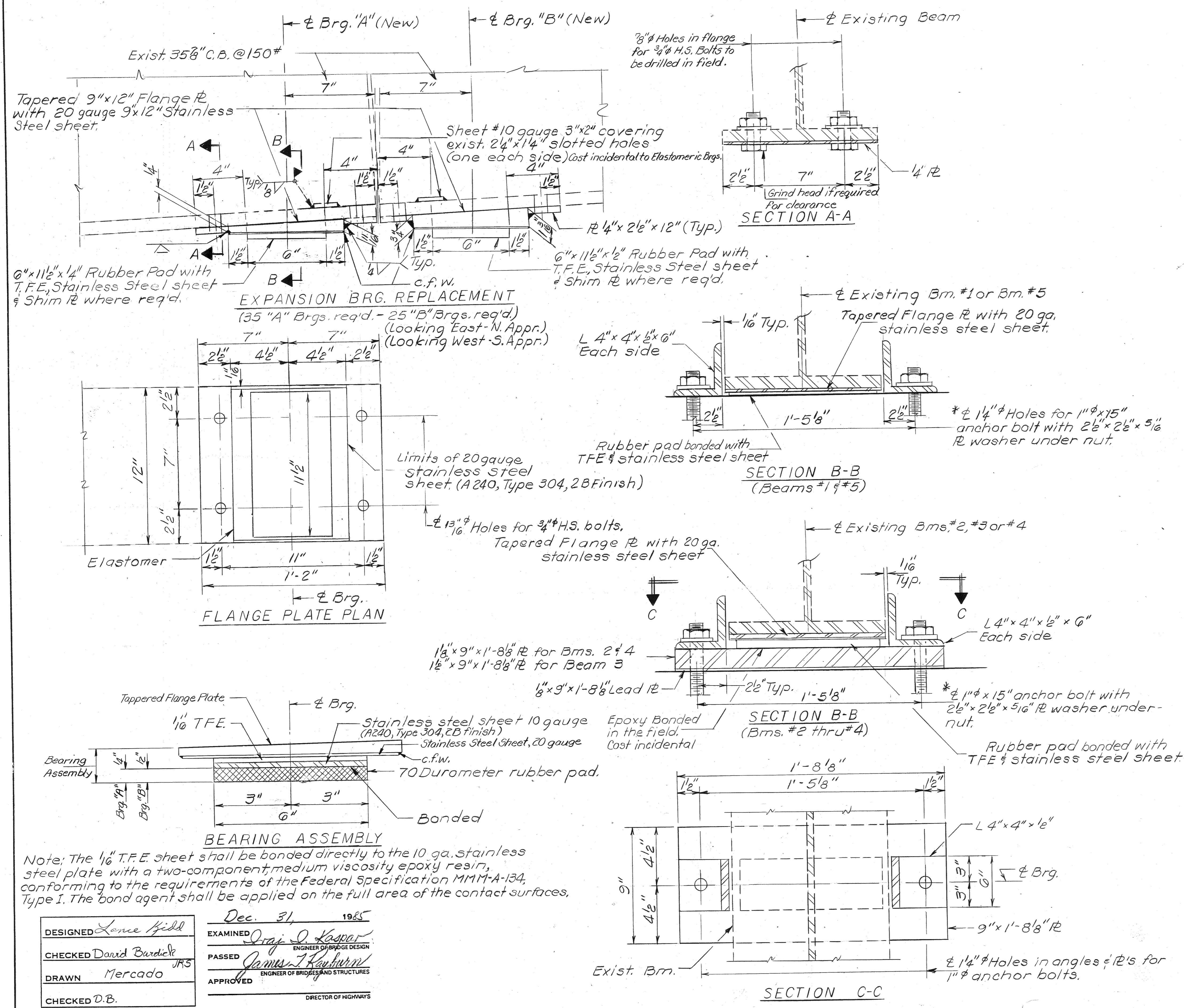
Dec. 31, 1985  
EXAMINED *Jraj J. Kaspar*  
PASSED *James J. Kayburn*  
APPROVED *James J. Kayburn*  
DIRECTOR OF HIGHWAYS

\*After removal of Phillips Wedge Anchors fill holes with grout. Cost incidental to "Jacking and Cribbing".

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 786	109B-D	LASALLE	68	51
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 25  
38 SHEETS



**BEARING REPLACEMENT PROCEDURE**

- Existing Expansion Bearing Plates shall be removed. At an Expansion & Fixed Bent (i.e. Bent #4 & 7), cut existing bearing plate at end of fixed beam, remove expansion section of plate, and leave fixed section of plate in place. See Detail "Bearing Removal."
- Existing anchor bolts shall be cut off flush, and concrete under new bearings shall be repaired as required as shown on sheets #33 thru #36
- Ends of beams at expansion joints shall be cut off as required to maintain a 1" joint at 50°F between beam ends.
- After steel has been cleaned and beams realigned, if necessary, new bearings shall be placed and new holes in bents shall be drilled & anchor bolts grouted in place.

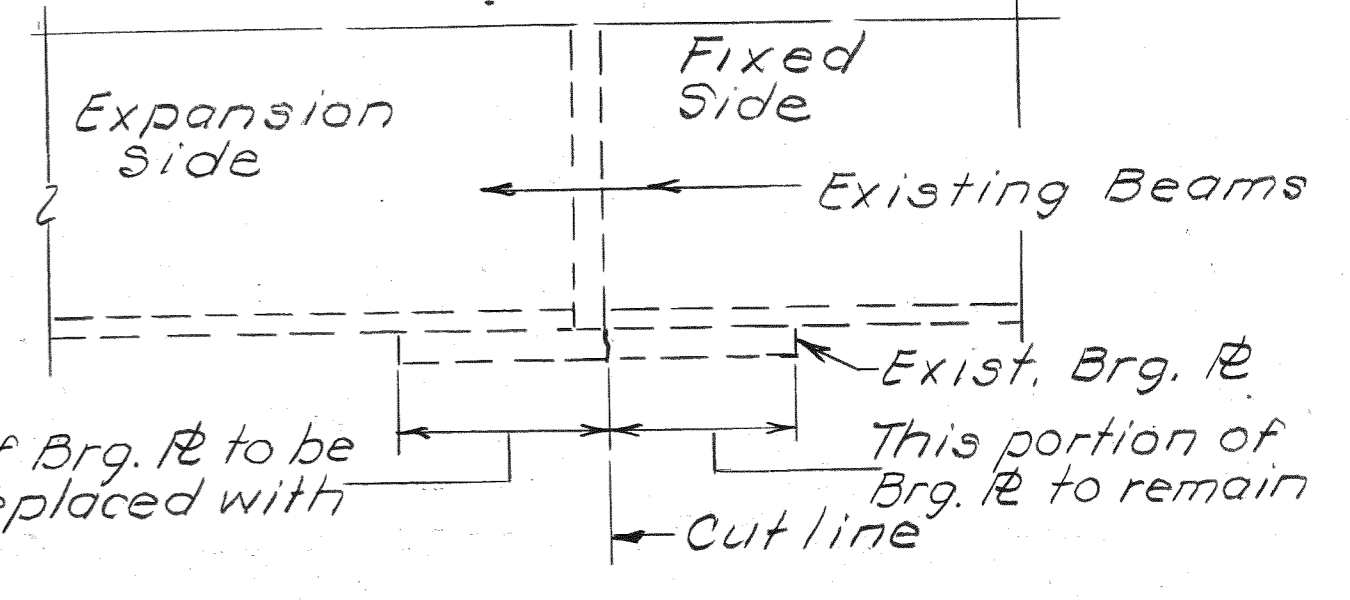
**BEARING REPLACEMENT NOTES**

- Temporary support system shall be required for bearing removal and replacement.
- Cost of removing existing bearings shall be incidental to "Elastomeric Bearing Assembly - Type I (Modified)".
- \* See sheet #29 for Anchor Bolt installation.
- See sheet #26 for setting of anchor bolts according to temperature.
- Cost of field drilled holes are included in the pay item for "Elastomeric Bearing Assembly Type I (Modified)".
- \*\* Max. Reaction at each bearing is 63 kips.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly - Type I (Modified)	Each	60
Temporary Support System	Each	60

\* 1" x 18" Anchor Bolts with 2 1/2" x 2 1/2" x 5/16" R washer under nut shall be installed at Bent #1 (N. Abut.) at Bms. #3 and #5 (one bolt at each beam) and at Bent #4 - Span #4 at all beams. (12 anchor bolts required) See Sht. #29 for details.



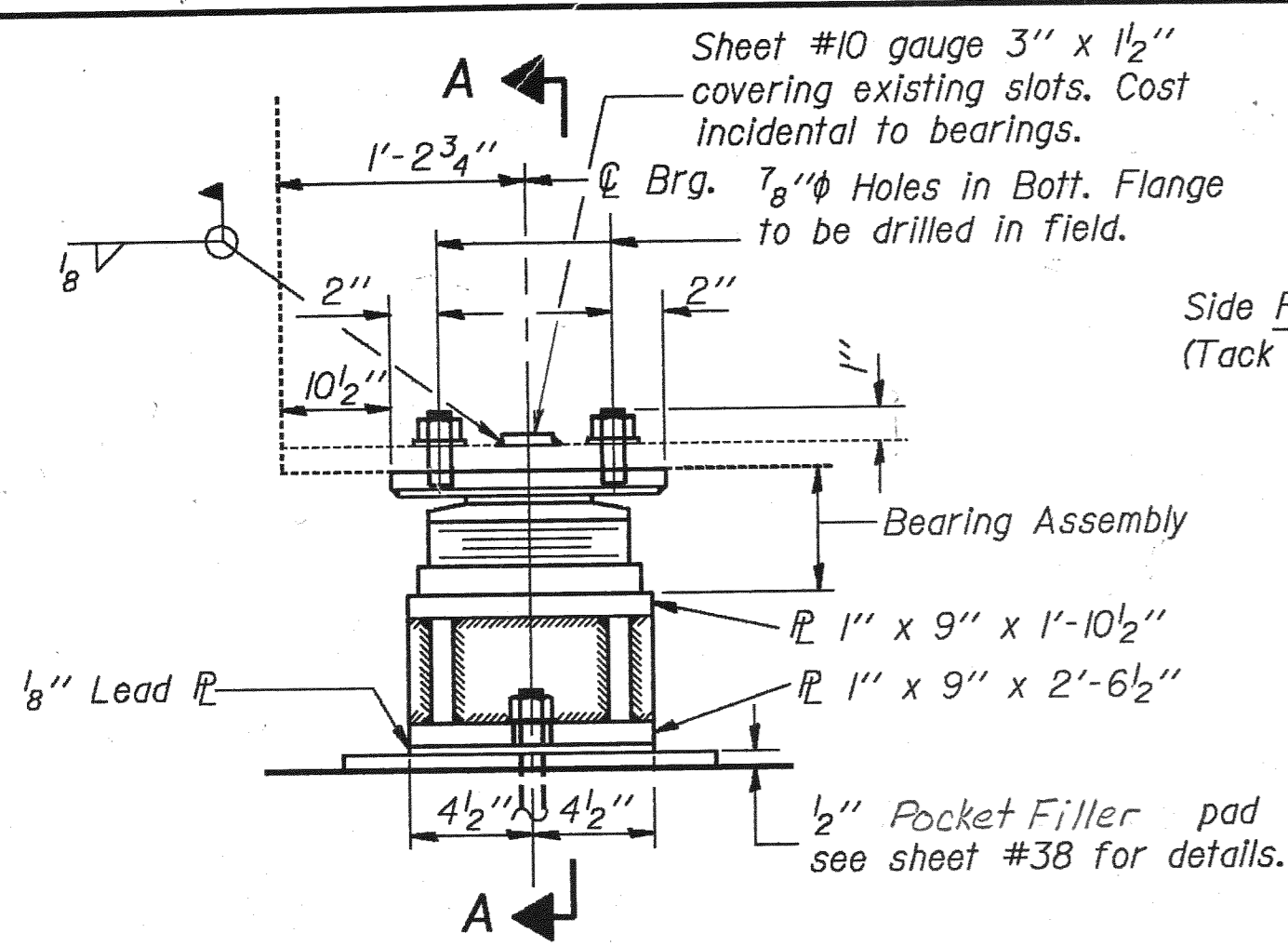
**APPROACH BEARING DETAILS**  
F.A. RTE. 786 SEC. 109 B-D

L.A. SALLE COUNTY  
STA. 79+05.00

DESIGNED <i>Lance Field</i>	Dec. 31, 1985
CHECKED <i>David Burdick</i>	EXAMINED <i>Oray J. Kaspar</i>
DRAWN <i>Mercado</i>	PASSED <i>James T. Kucherm</i>
CHECKED <i>D.B.</i>	APPROVED _____

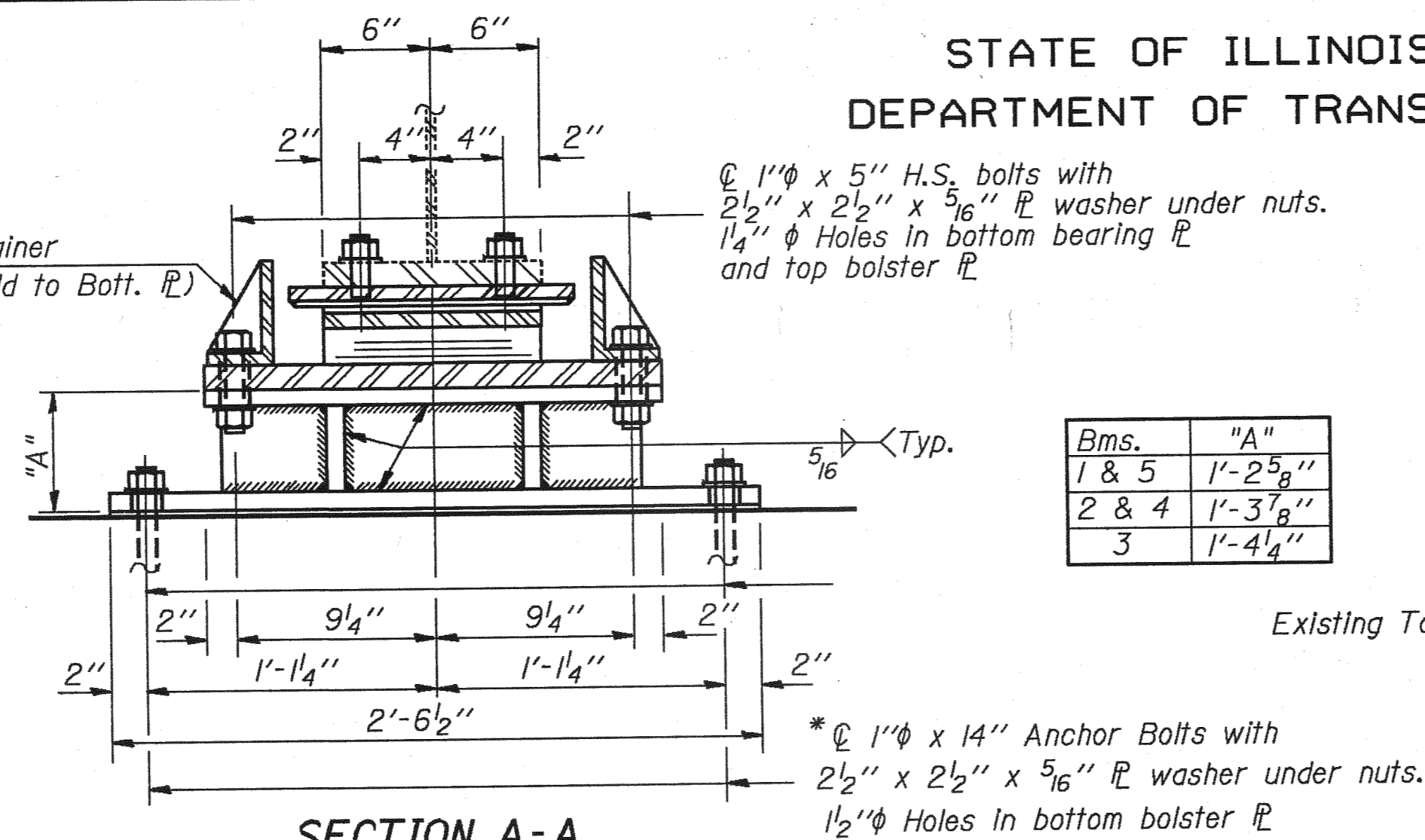
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 786	109B-D	LASALLE	63	52
SHEET NO. 26 38 SHEETS				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



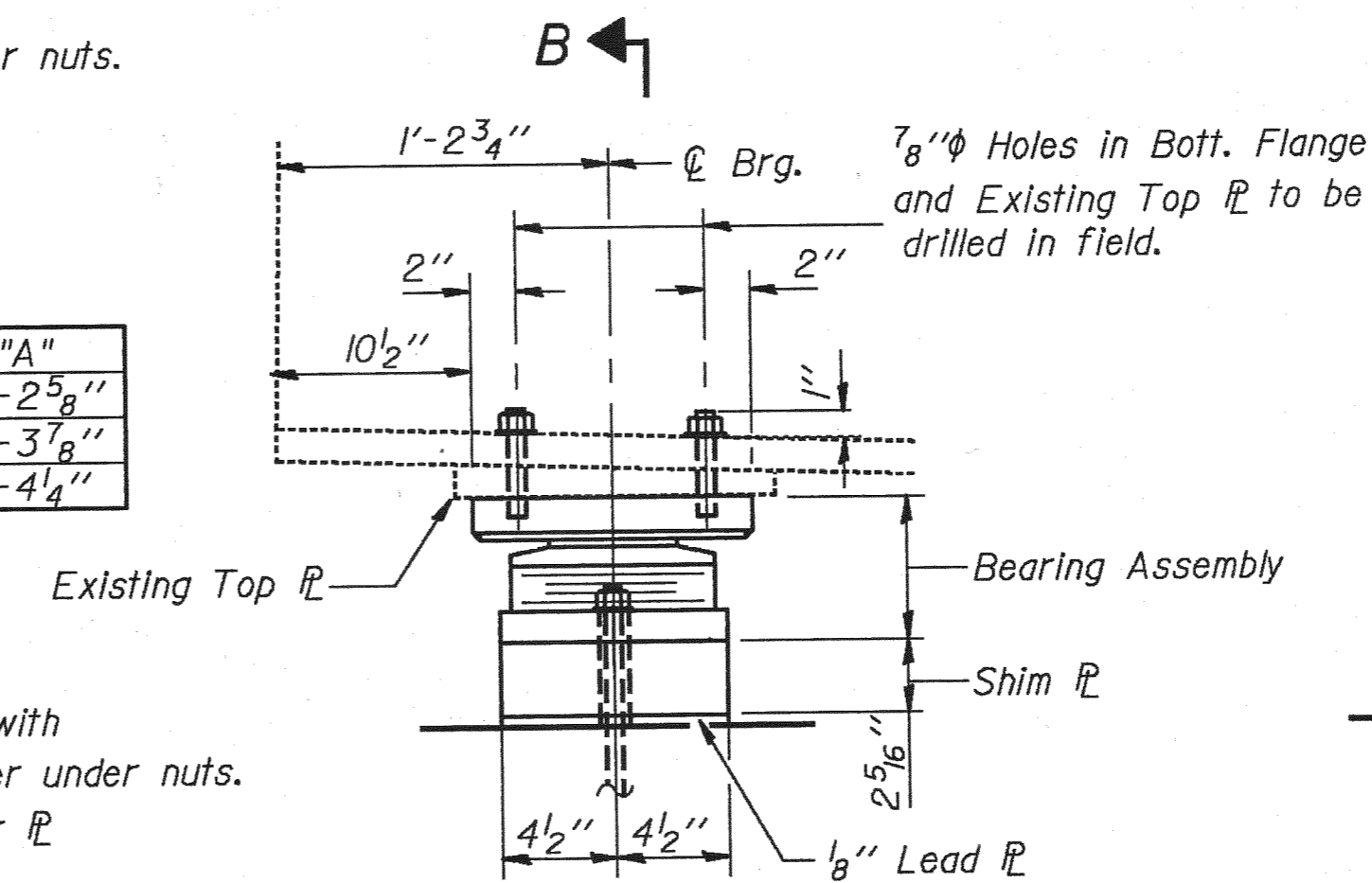
ELEVATION AT PIER 5 SPAN 10  
(Looking East)

TYPE II TFE ELASTOMERIC EXP. BRG.

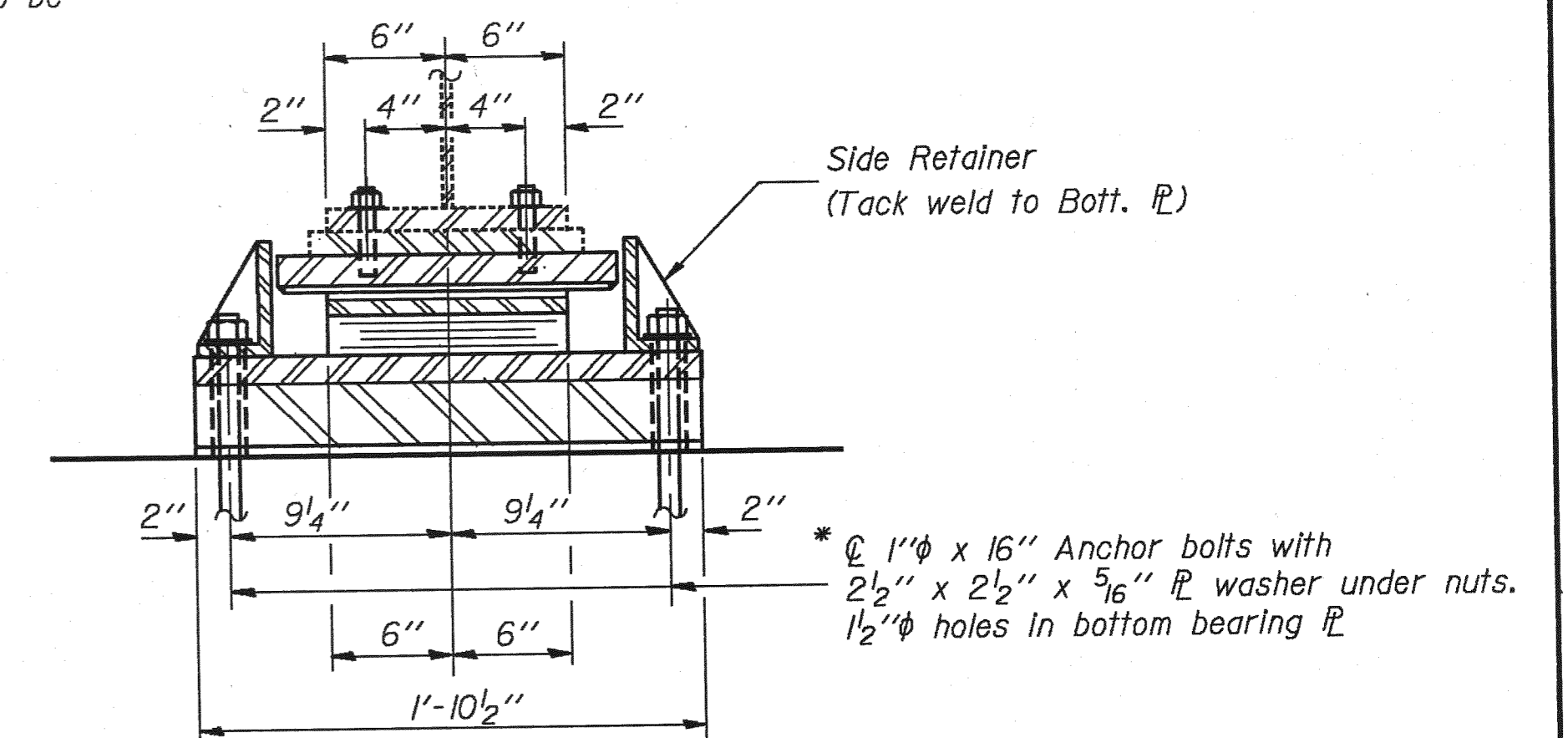


SECTION A-A

Bms.	"A"
1 & 5	1'-2 5/8"
2 & 4	1'-3 7/8"
3	1'-4 1/4"

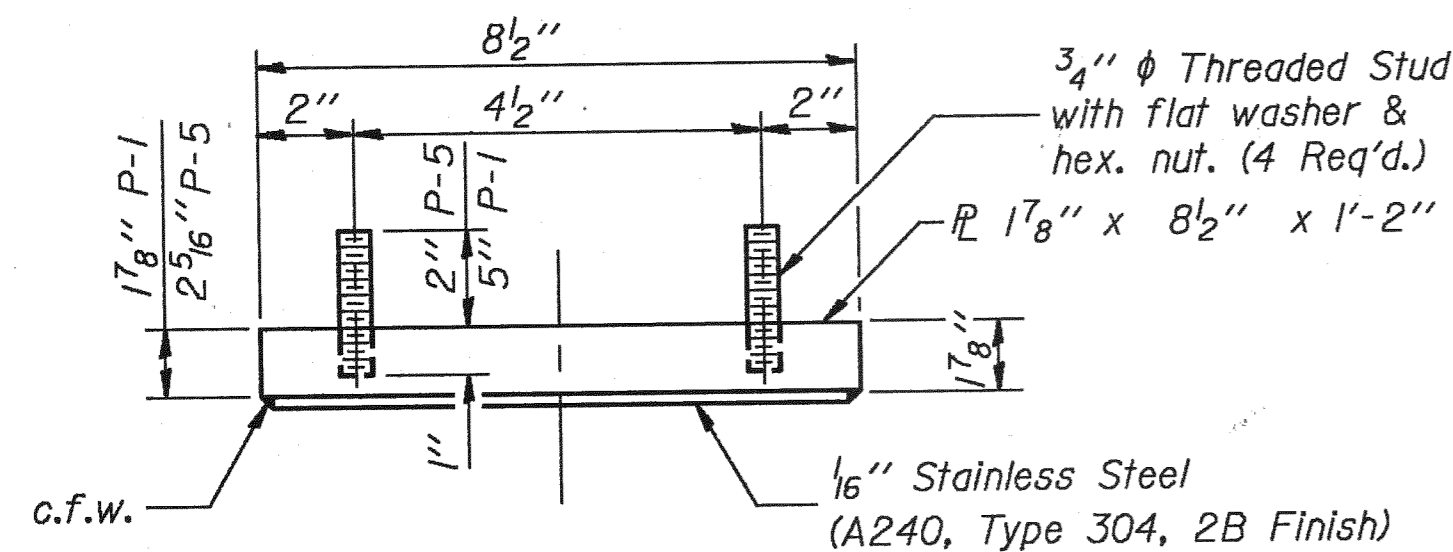


ELEVATION AT PIER 1  
SPAN 5  
(Looking West)

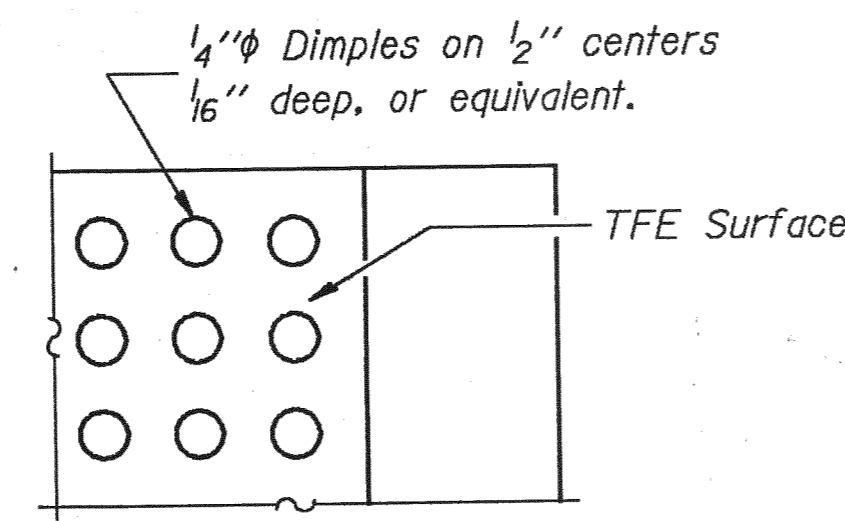


SECTION B-B

TYPE II TFE ELASTOMERIC EXP. BRG.

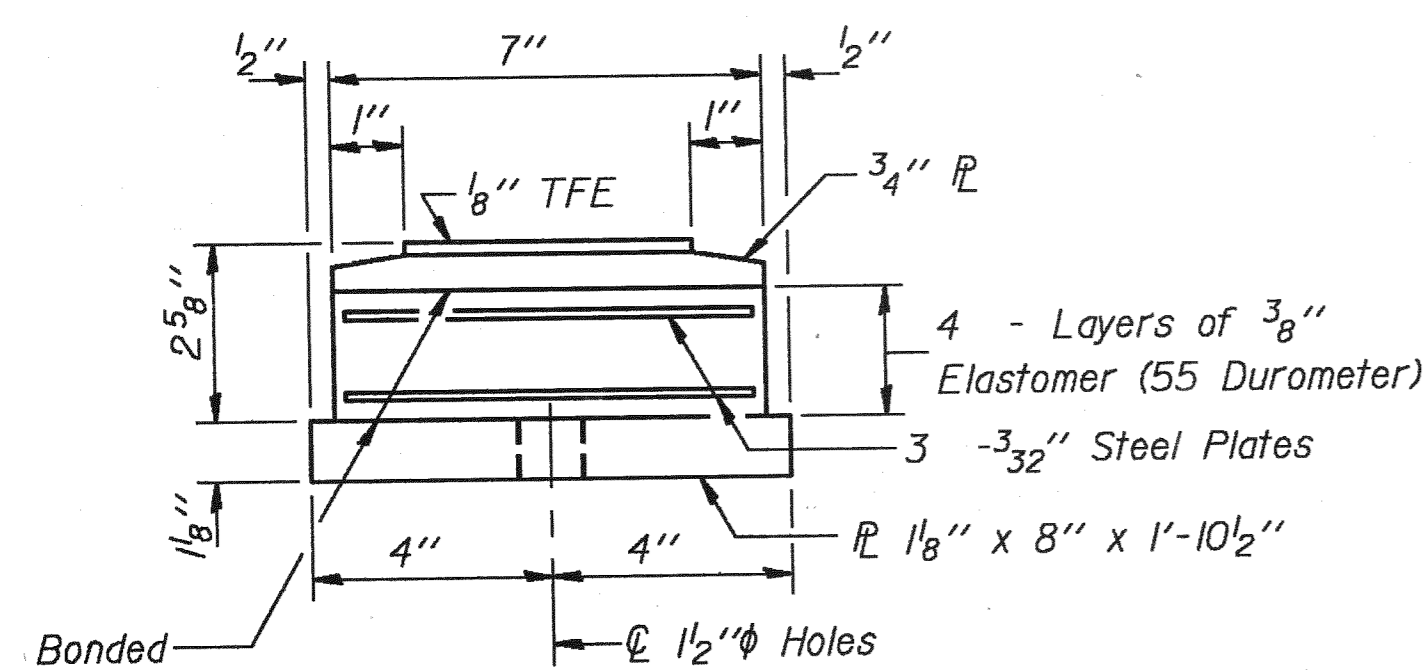


TOP BEARING ASSEMBLY

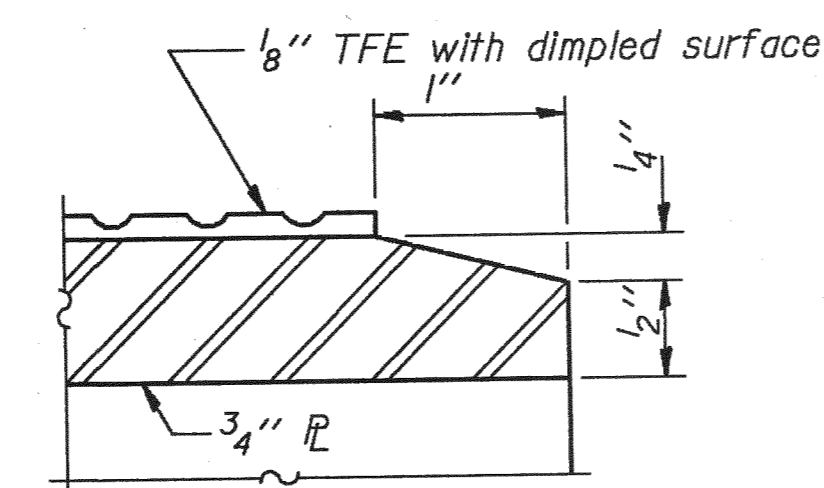


PLAN-TFE SURFACE

\* See sheet #29 for Anchor Bolt installation.



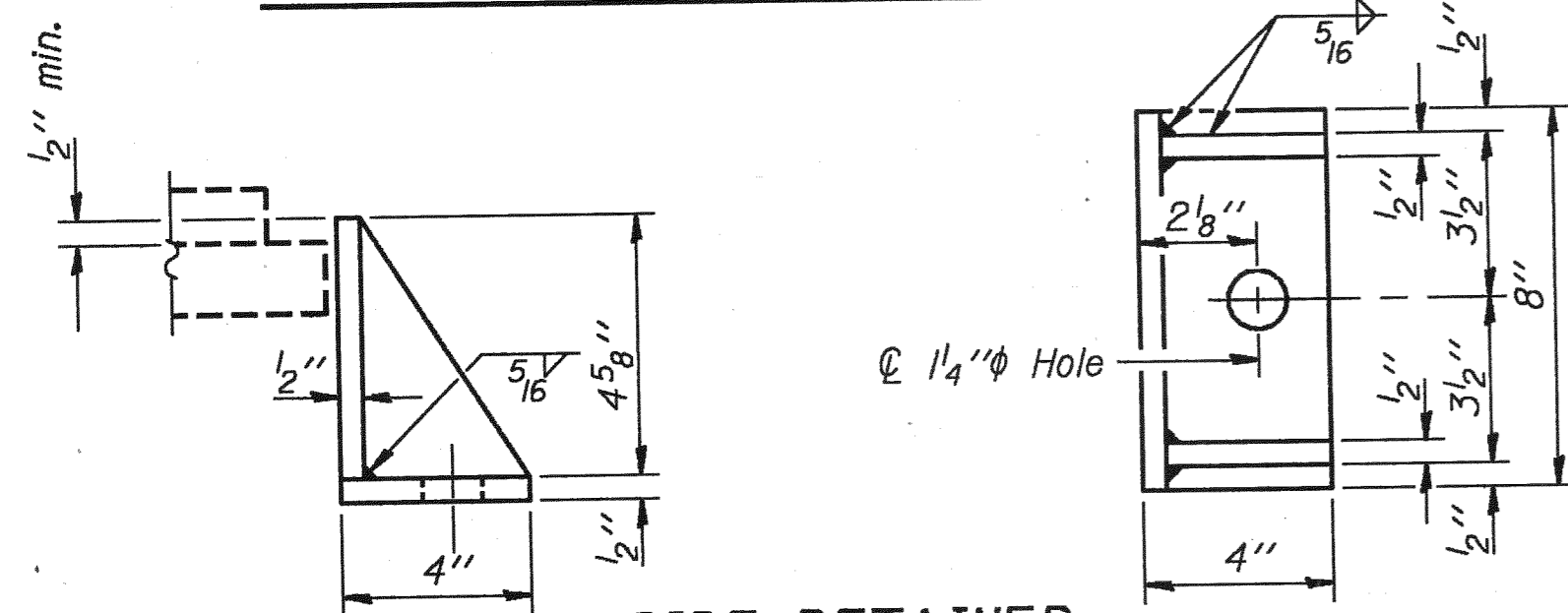
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

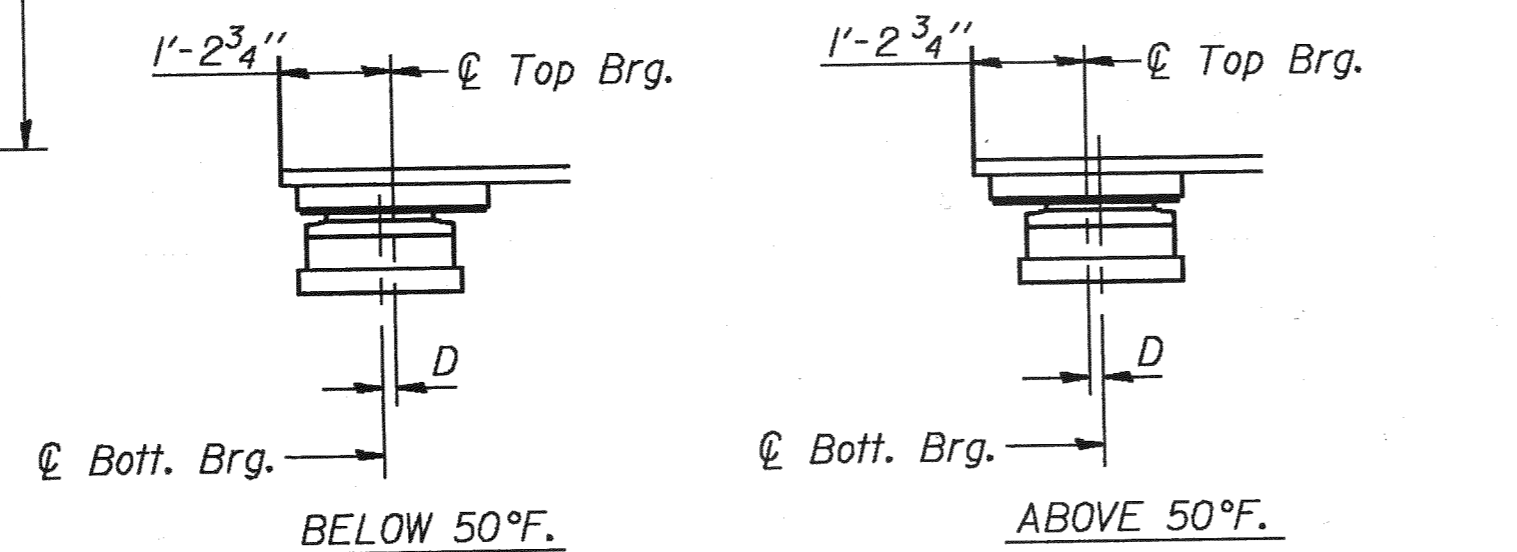
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



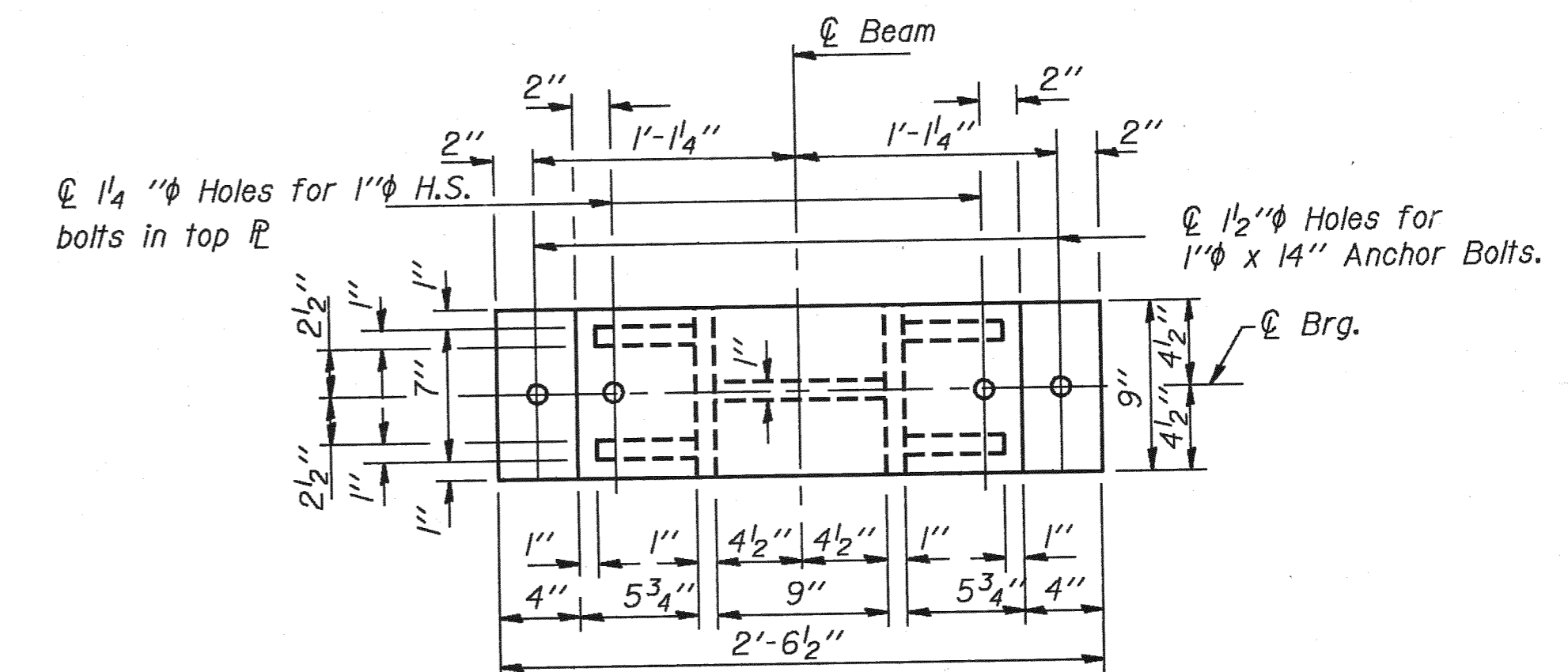
SIDE RETAINER

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



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



BOLSTER PLAN  
AT PIER 5

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	10
Temporary Supports	Each	10

\*\* Max. Reaction at each bearing is 63 kips.

Notes:  
Temporary Support Systems shall be required for bearing removal and replacement.  
Cost of removing bearings shall be incidental to "Elastomeric Bearing Assembly Type II".  
Existing anchor bolts shall be cut off flush.  
After steel has been cleaned and beams realigned, if necessary, new bearings shall be placed and new holes in piers shall be drilled and anchor bolts grouted in place.  
Cost of field drilled holes are included in the pay item for "Elastomeric Bearing Assembly Type II".

BEARING REPLACEMENT AT PIER 5  
(SPAN 10) AND PIER 1 (SPAN 5)

F.A. RTE. 786 SEC. 109B-D  
LA SALLE COUNTY  
STA. 79+05.00

DESIGNED	Lance Hill
CHECKED	David Budick
DRAWN	Mercado
CHECKED	D.B.

EXAMINED	Dec 31, 1985
APPROVED	James J. Ryburn

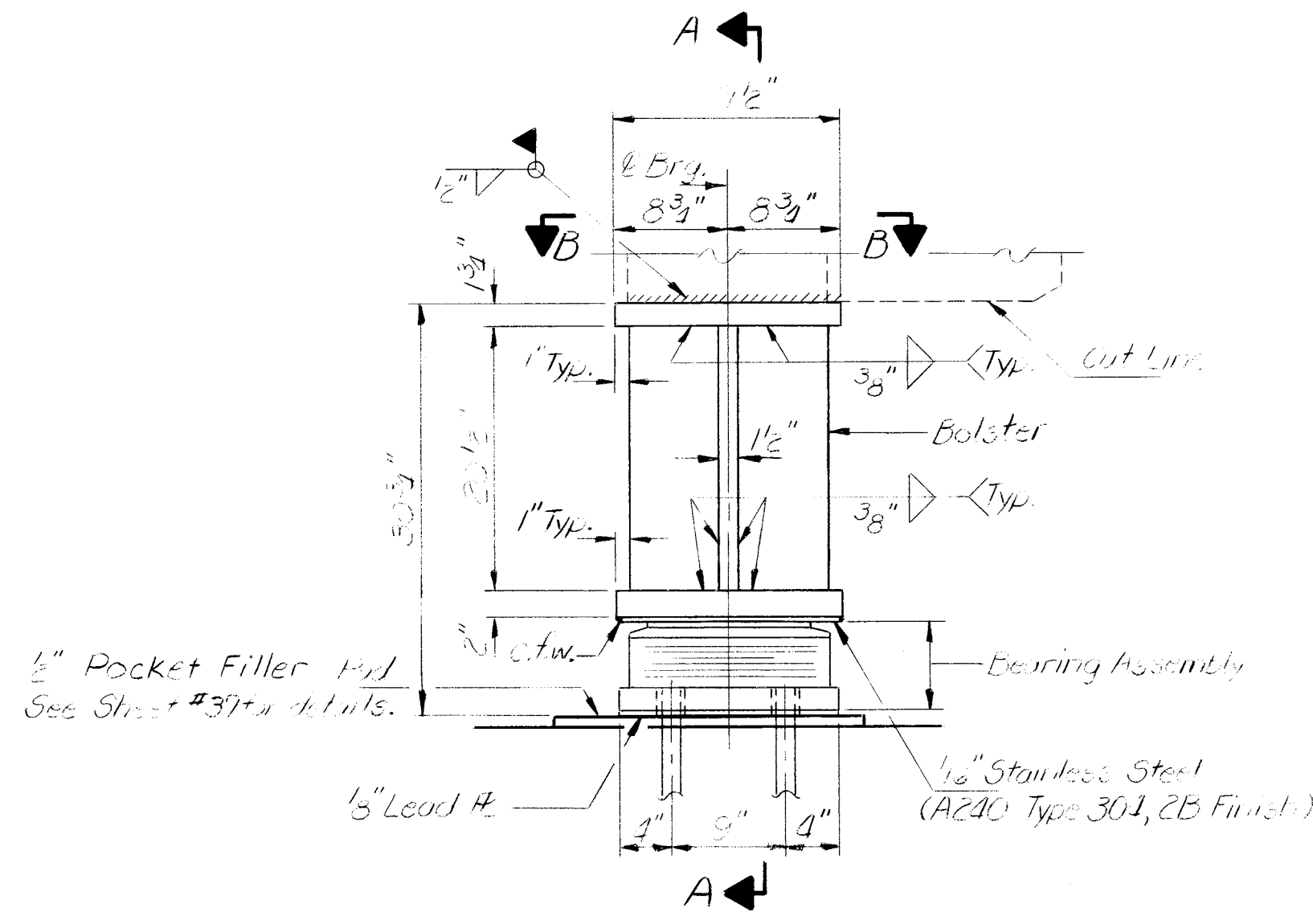
I-2-E2 12-1-83

Rev. 2-27-83 F.M.

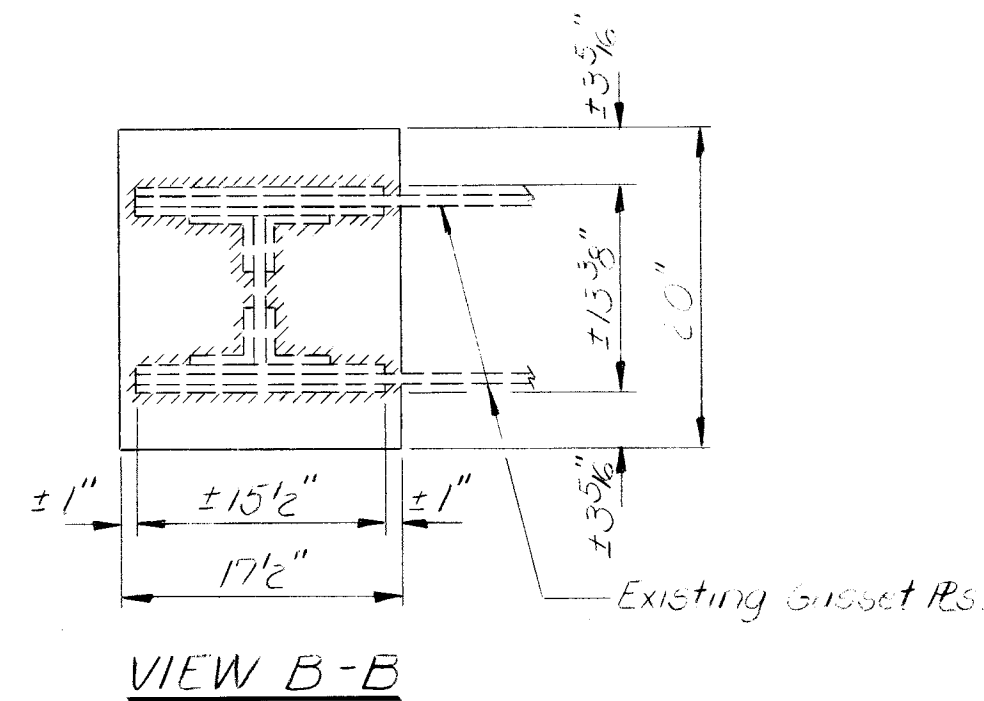
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
79	109B-D	LaSalle	6	27
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

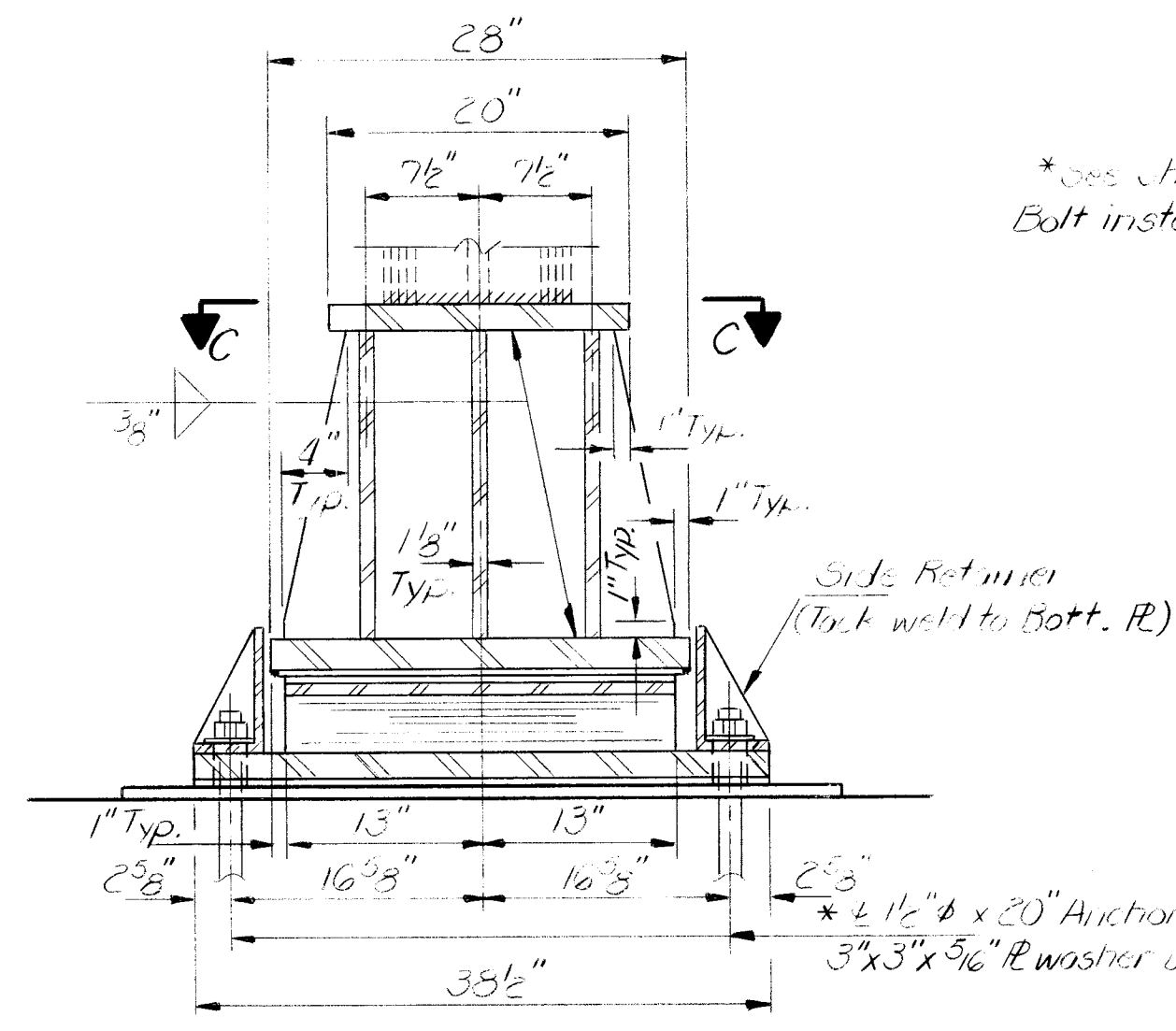
SHEET NO. 27  
38 SHEETS



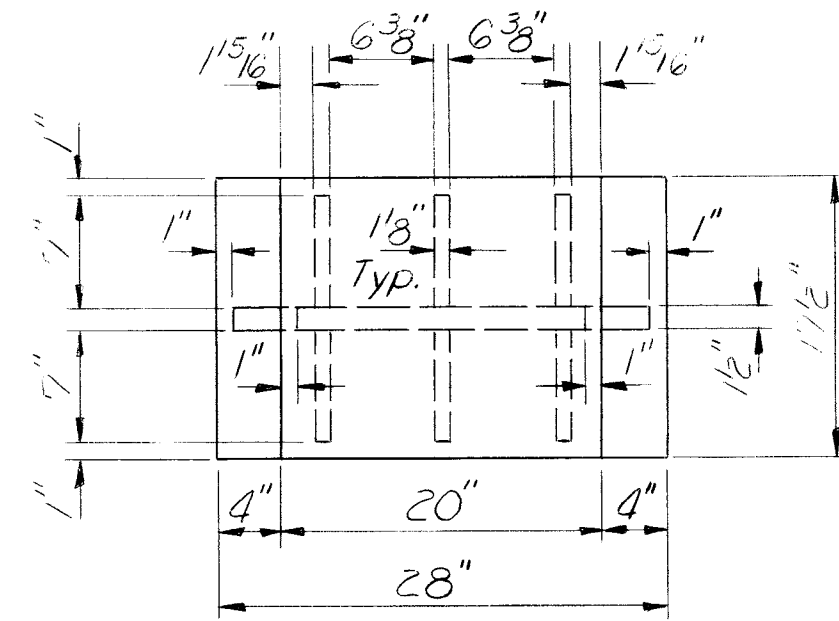
ELEVATION AT PIERS 2 & 3  
(For Spans 6 & 8)



VIEW B-B

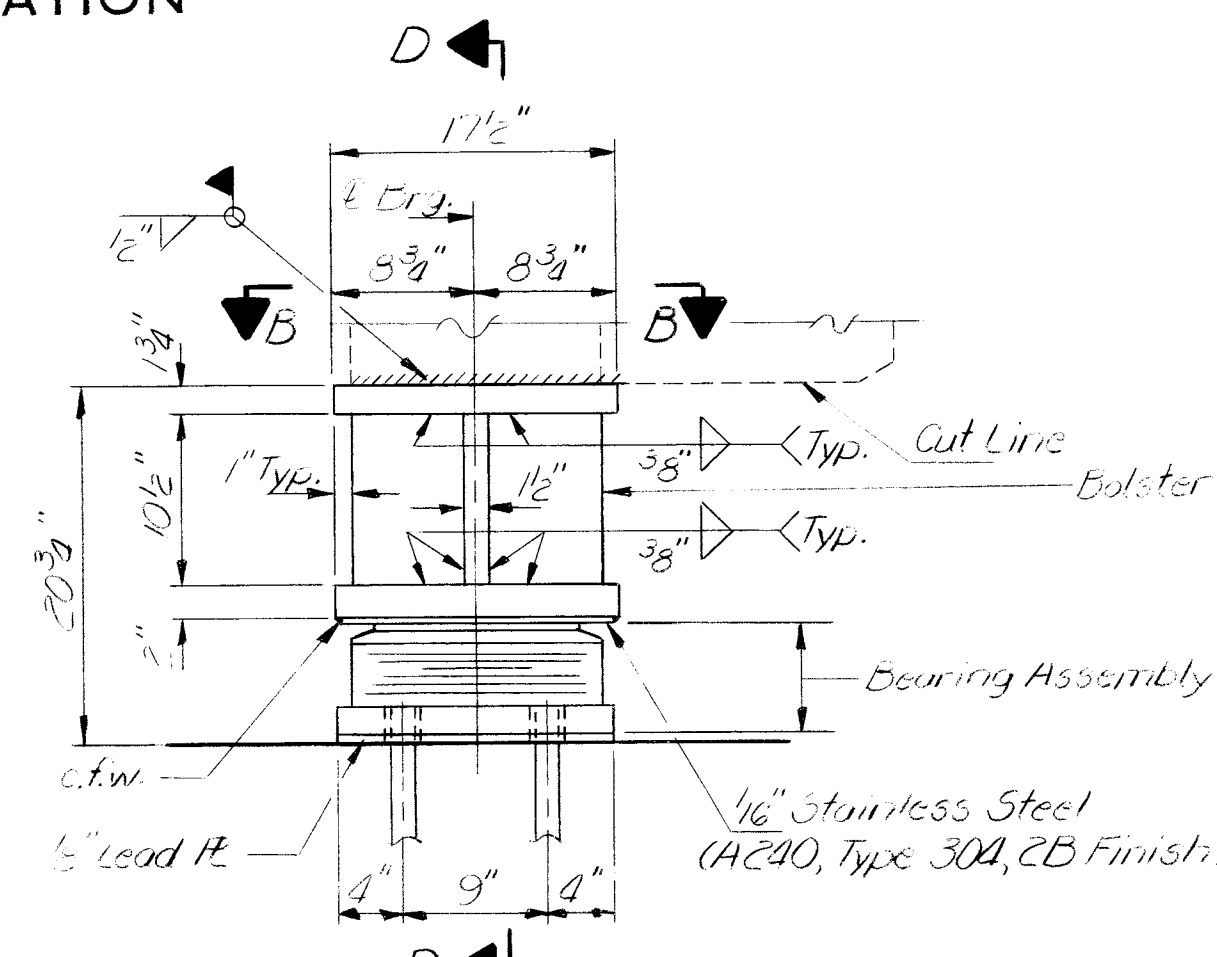


SECTION A-A

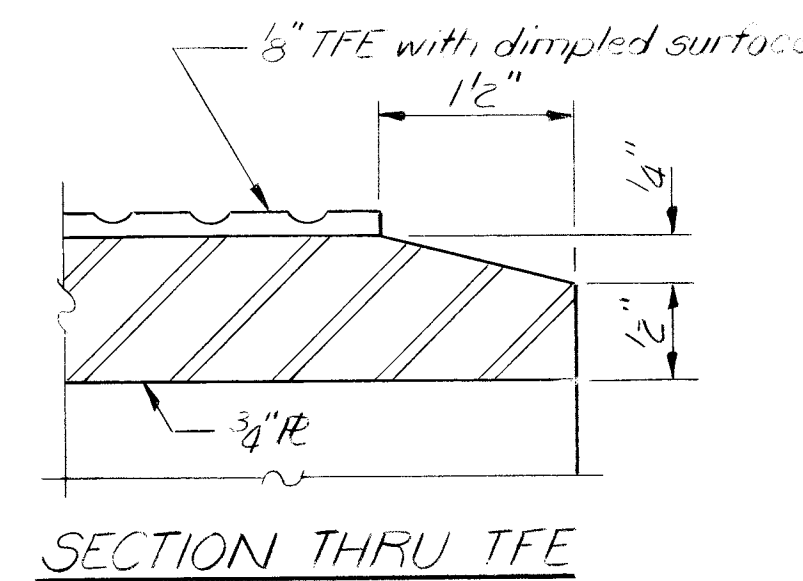


VIEW C-C

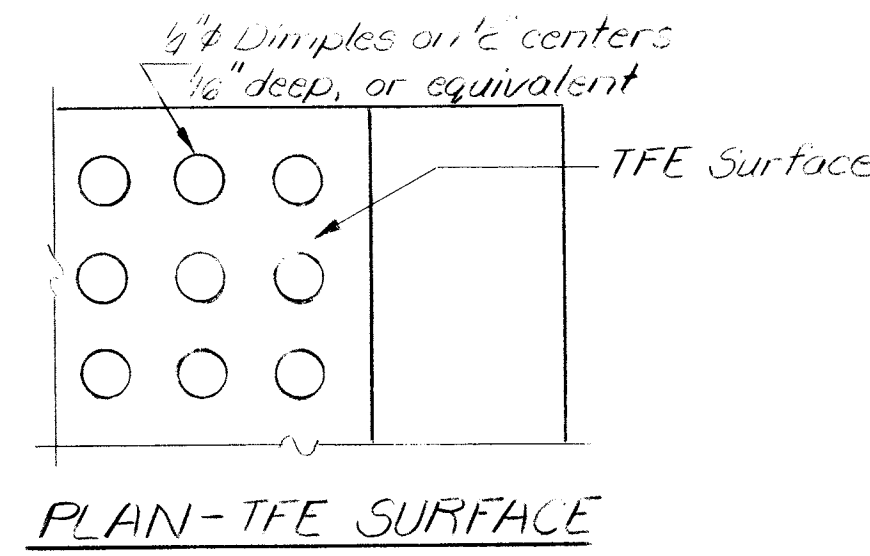
\*See Sheet #29 for Anchor Bolt installation.



ELEVATION AT PIER 4  
(For Span 9)

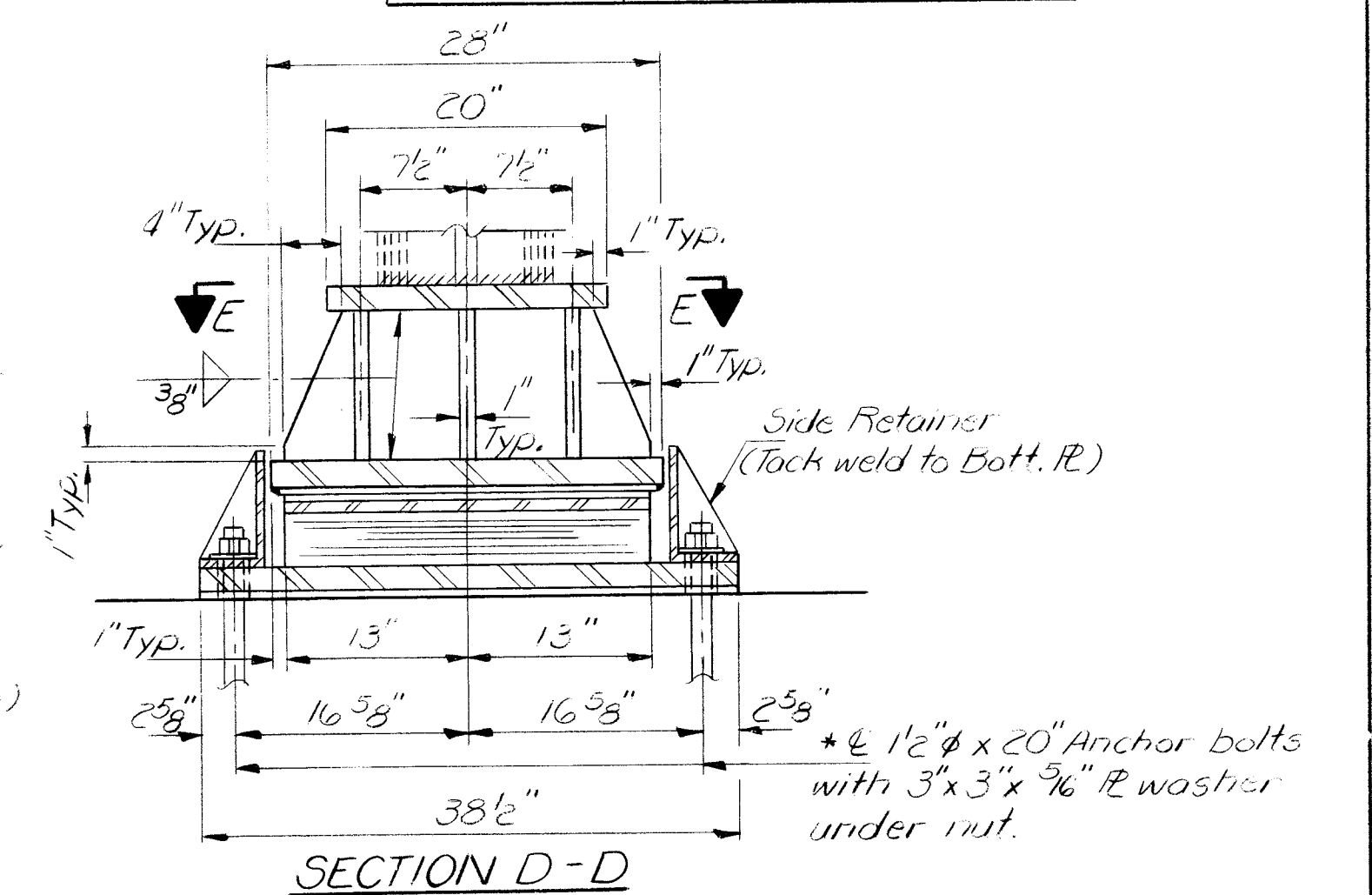


SECTION THRU TFE

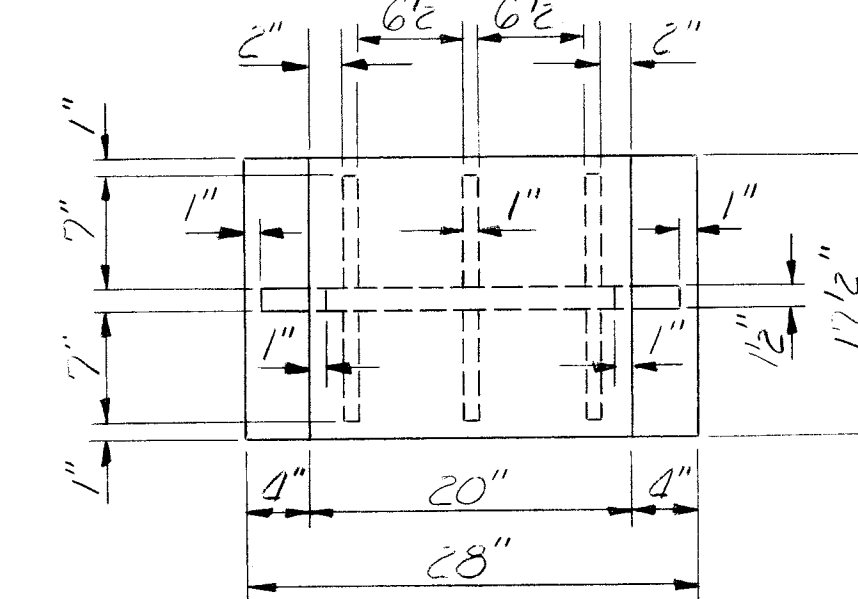


PLAN-TFE SURFACE

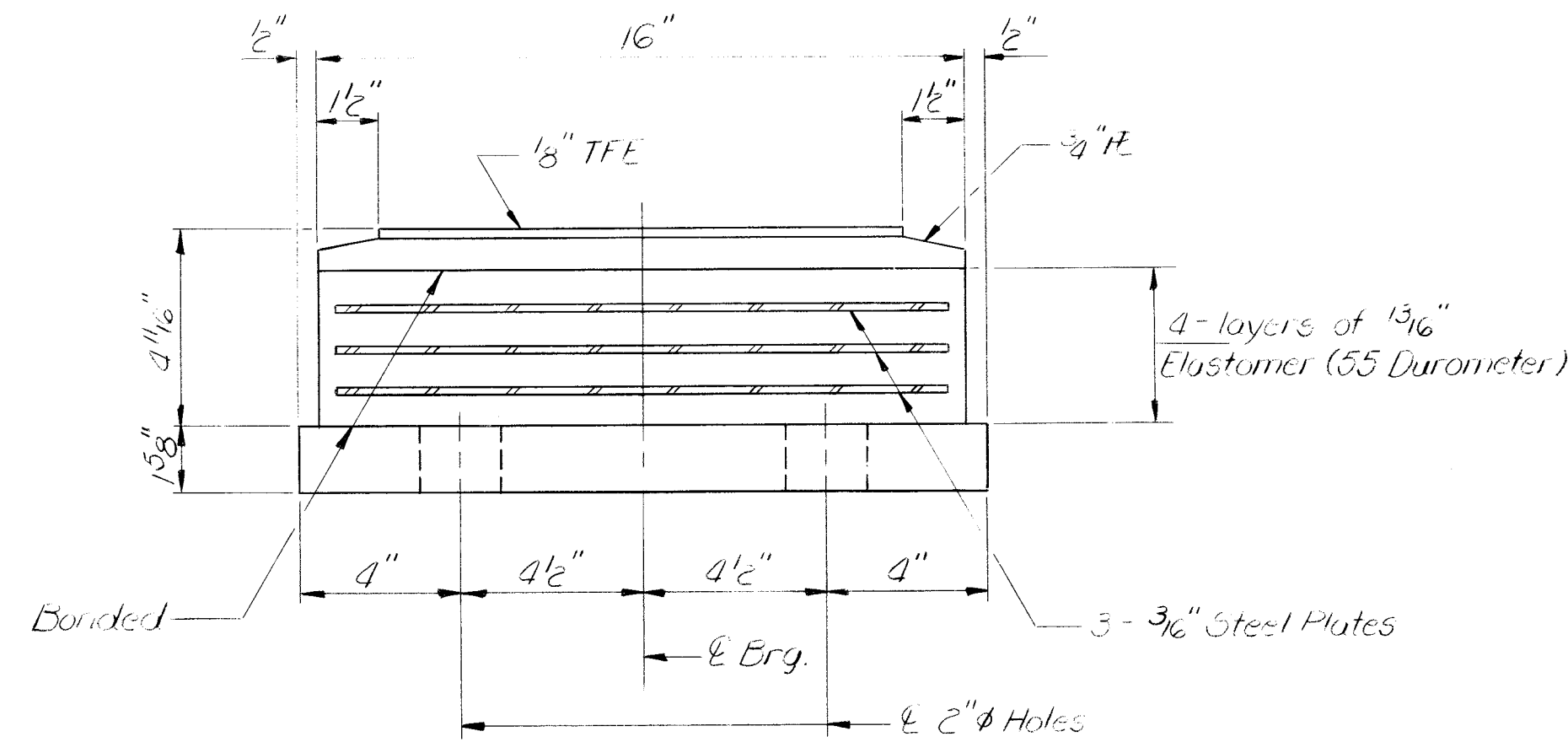
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification, MMM-A-134 Type 1. The bond agent shall be applied on the full area of the contact surfaces. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



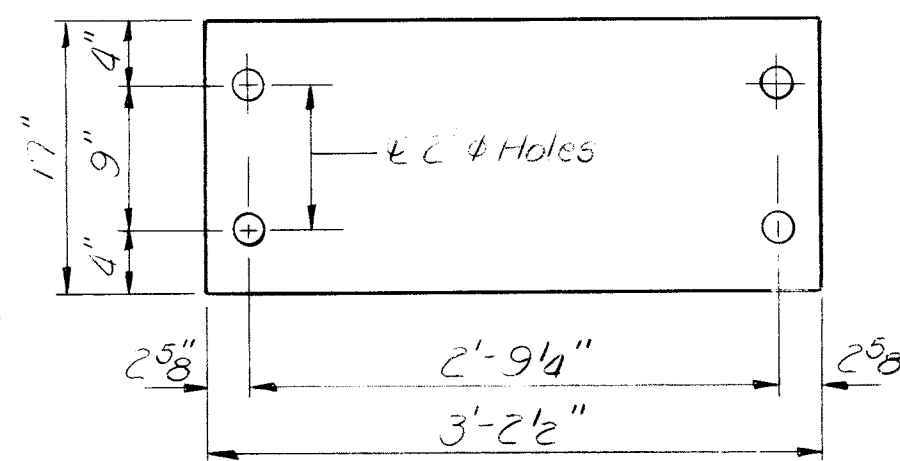
SECTION D-D



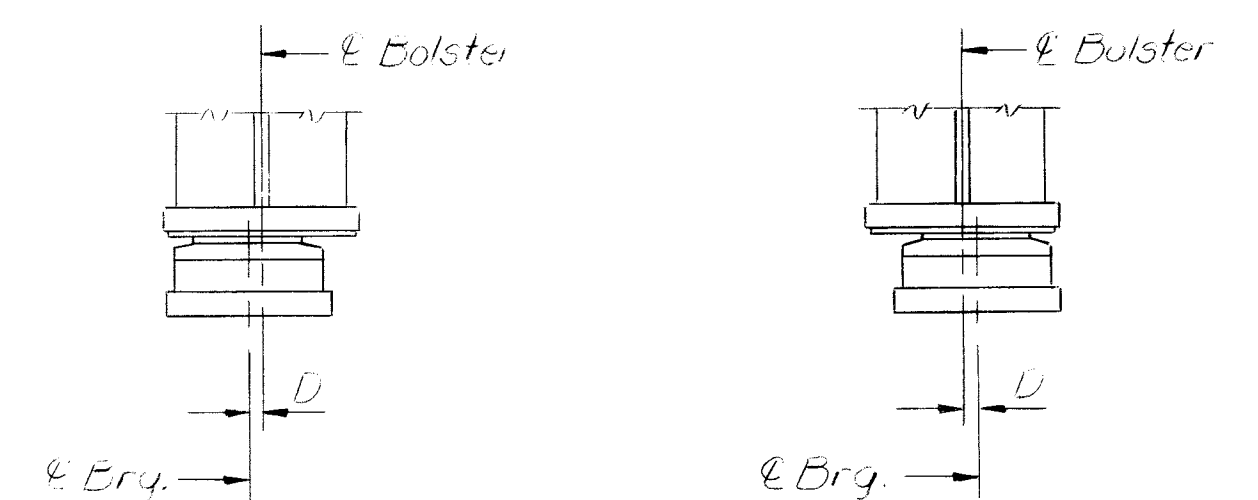
VIEW E-E



BEARING ASSEMBLY  
(Typ. at Piers 2, 3 & 4 for Spans 6, 8 & 9)

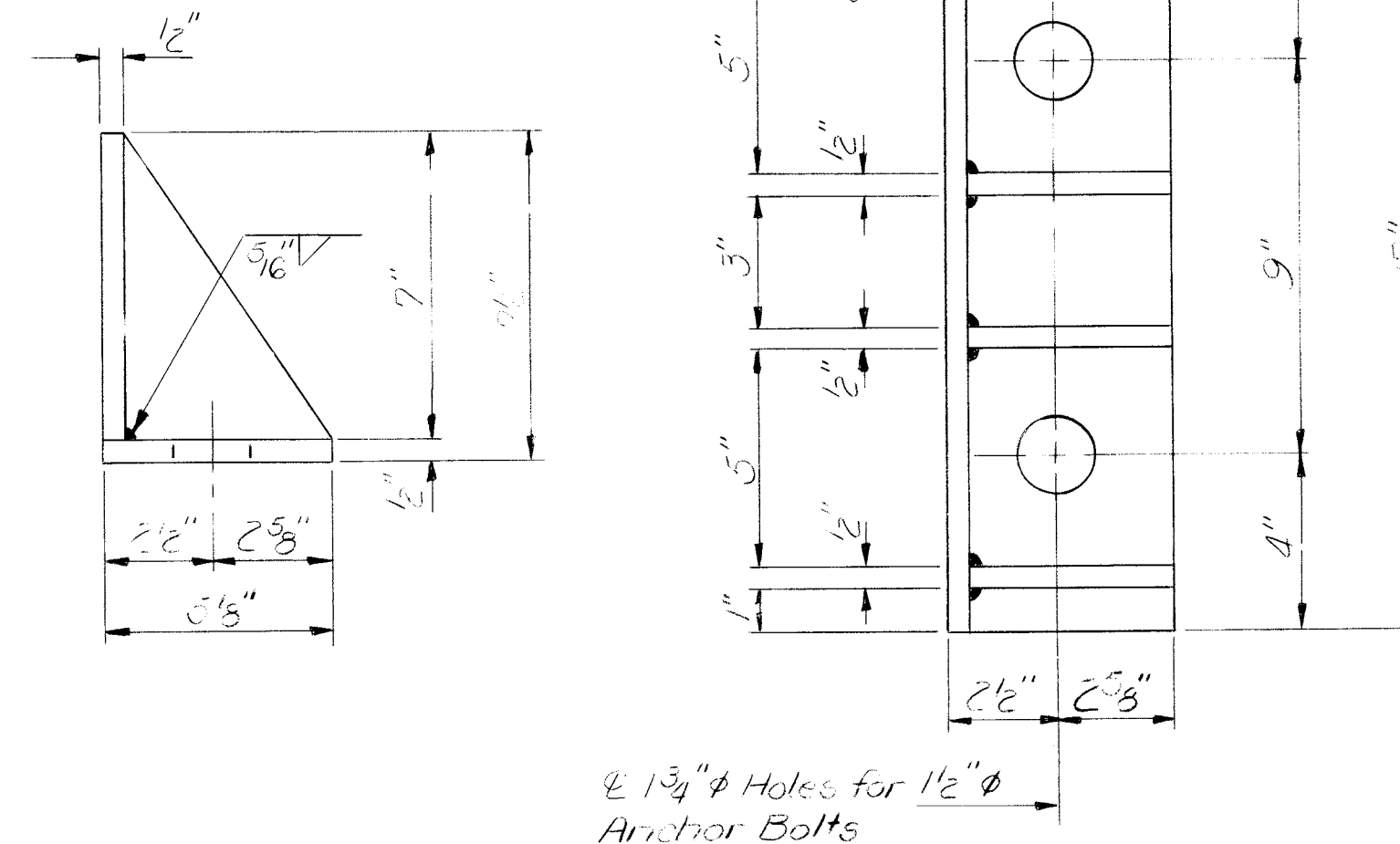


PLAN - BOTTOM PLATE OF BRG.  
(Typ. at Piers 2, 3 & 4 for Spans 6, 8 & 9)



SETTING ANCHOR BOLTS AT EXP. BRG.  
BELOW 50° F. (Move brg. away from fixed brg.)  
ABOVE 50° F. (Move brg. toward fixed brg.)

Setting Anchor Bolts at Exp. Brg.  
D = 8" per inch 100' of expansion for every 15° temp. change from the normal temp. of 50° F.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (12 Required)

BILL OF MATERIAL

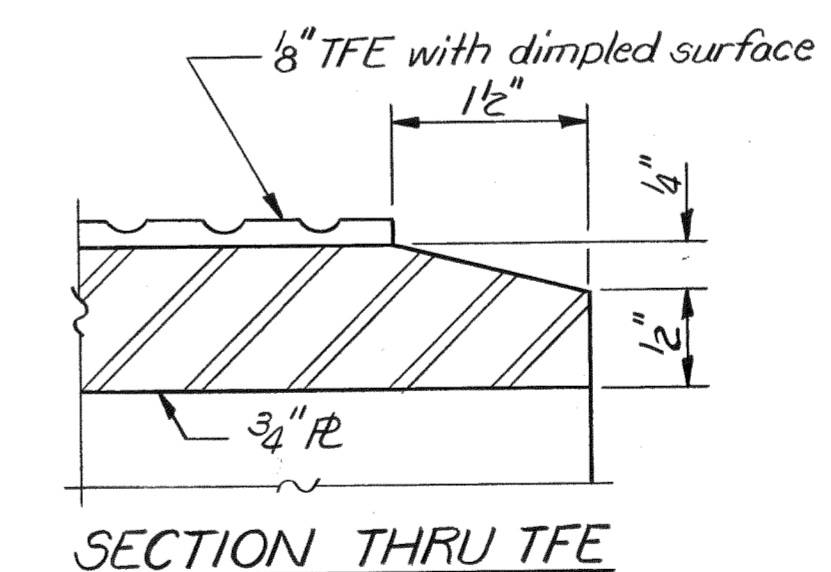
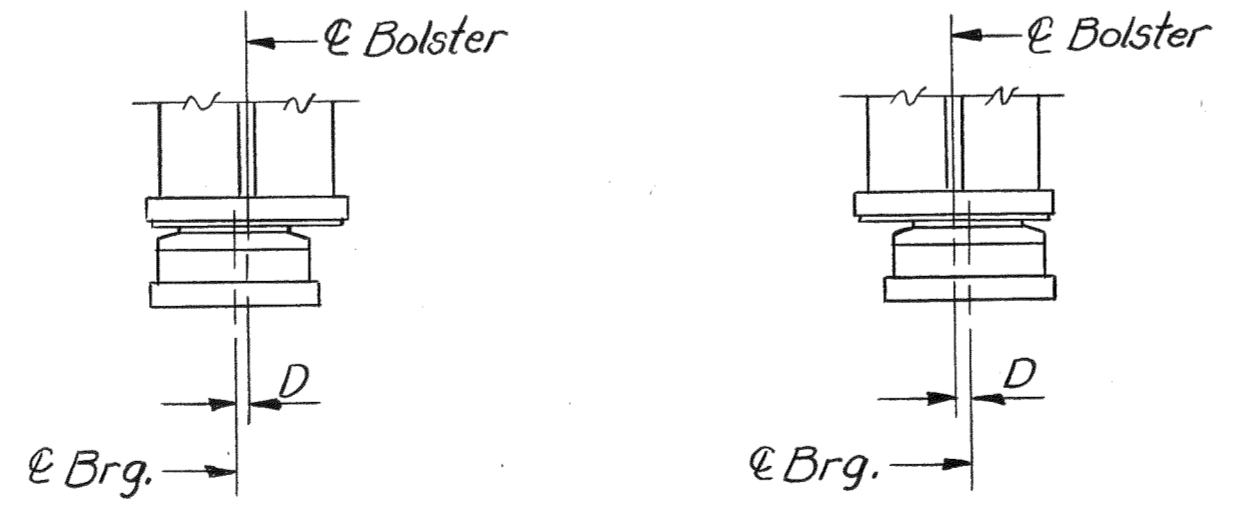
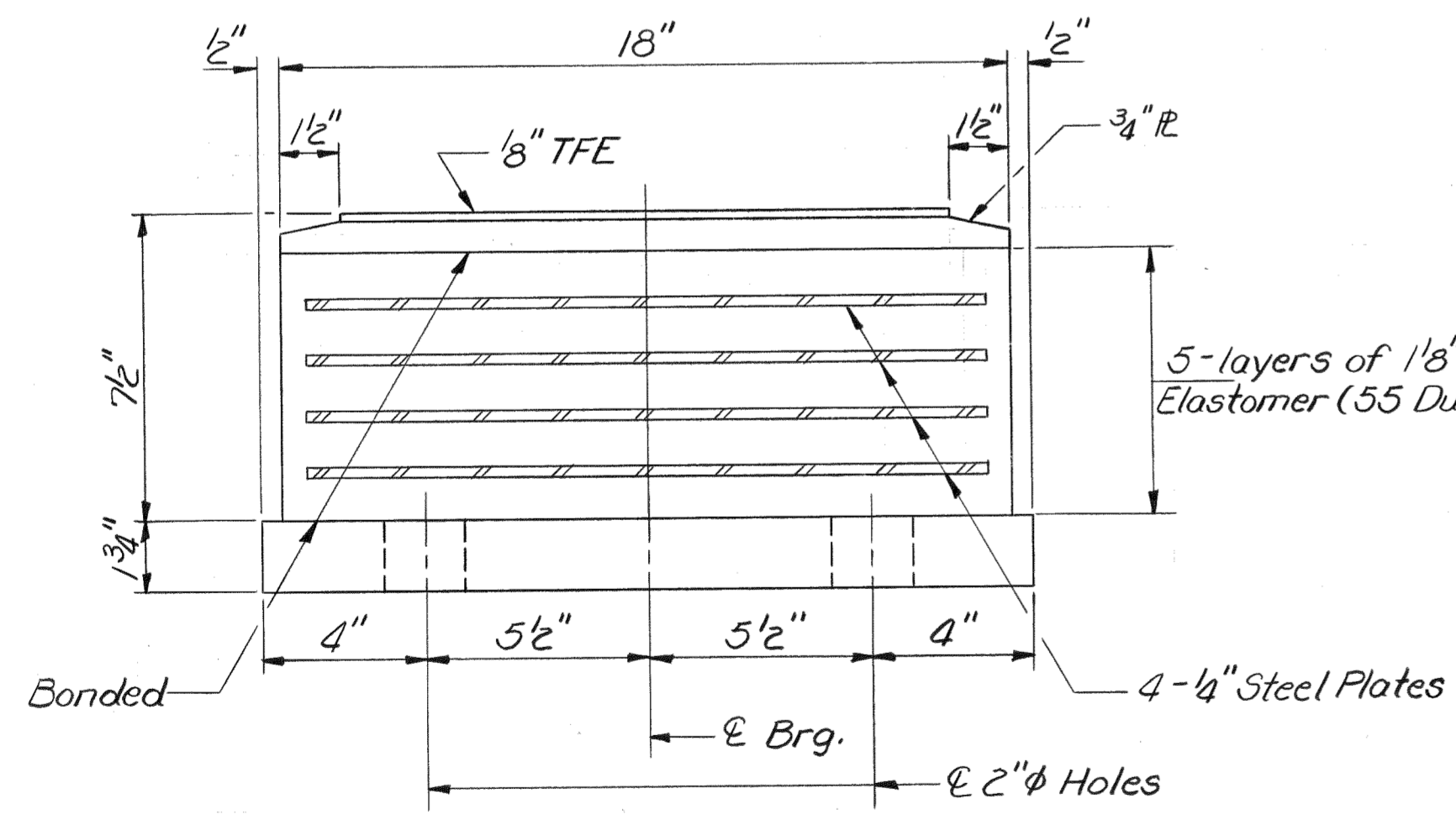
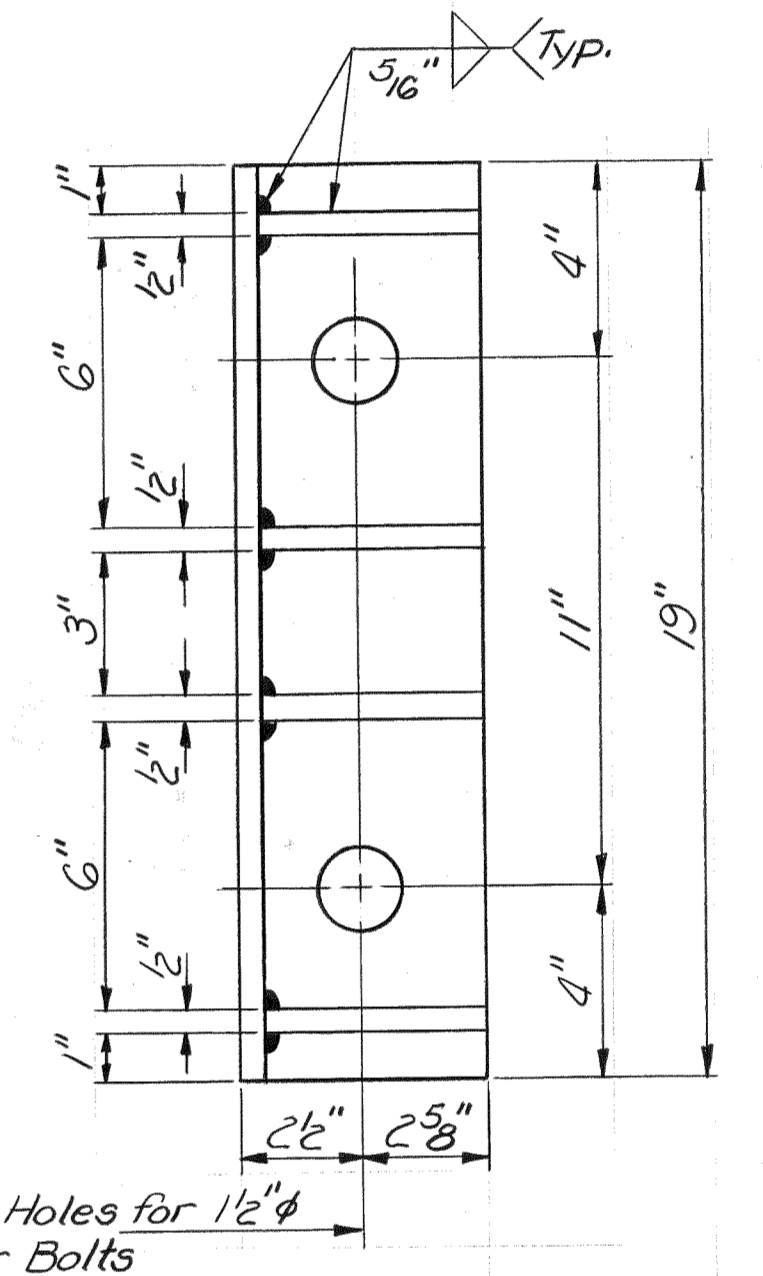
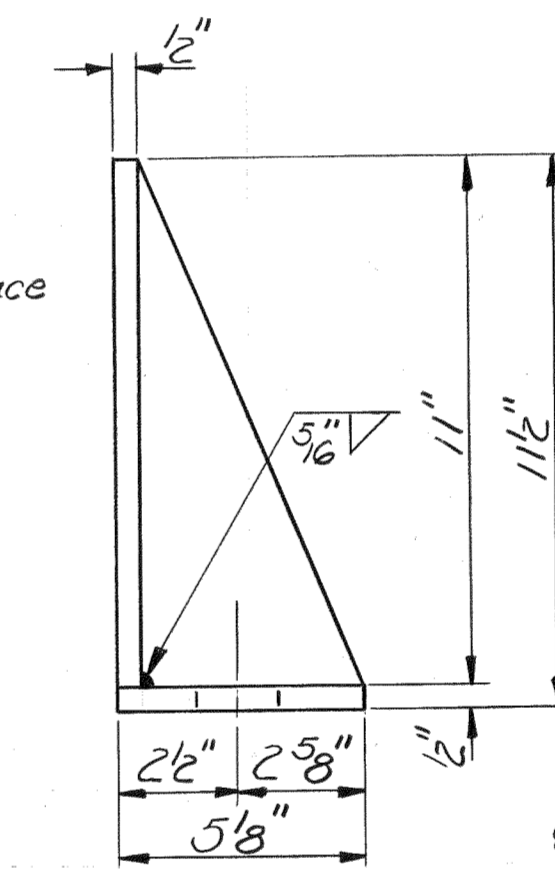
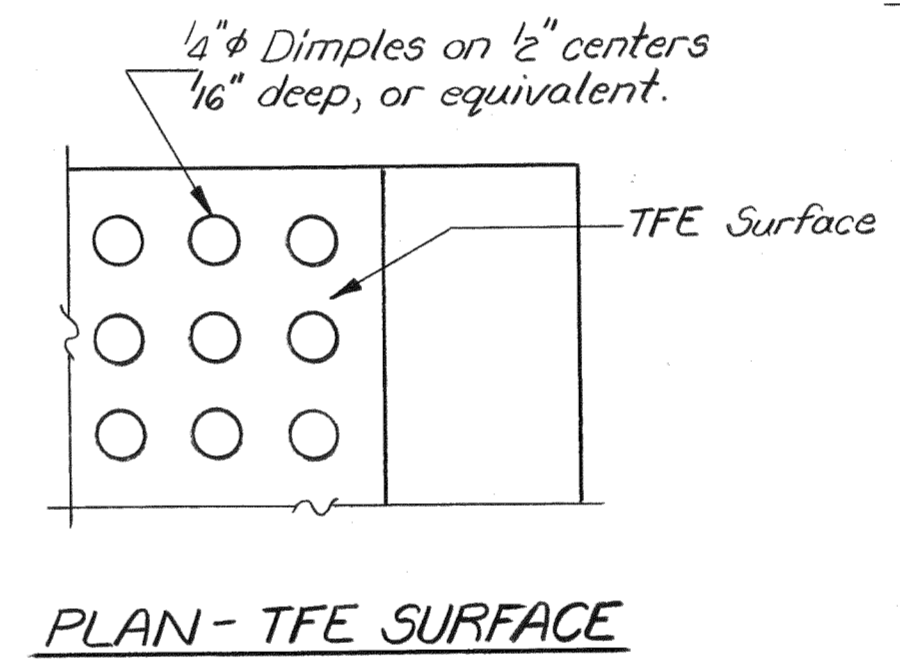
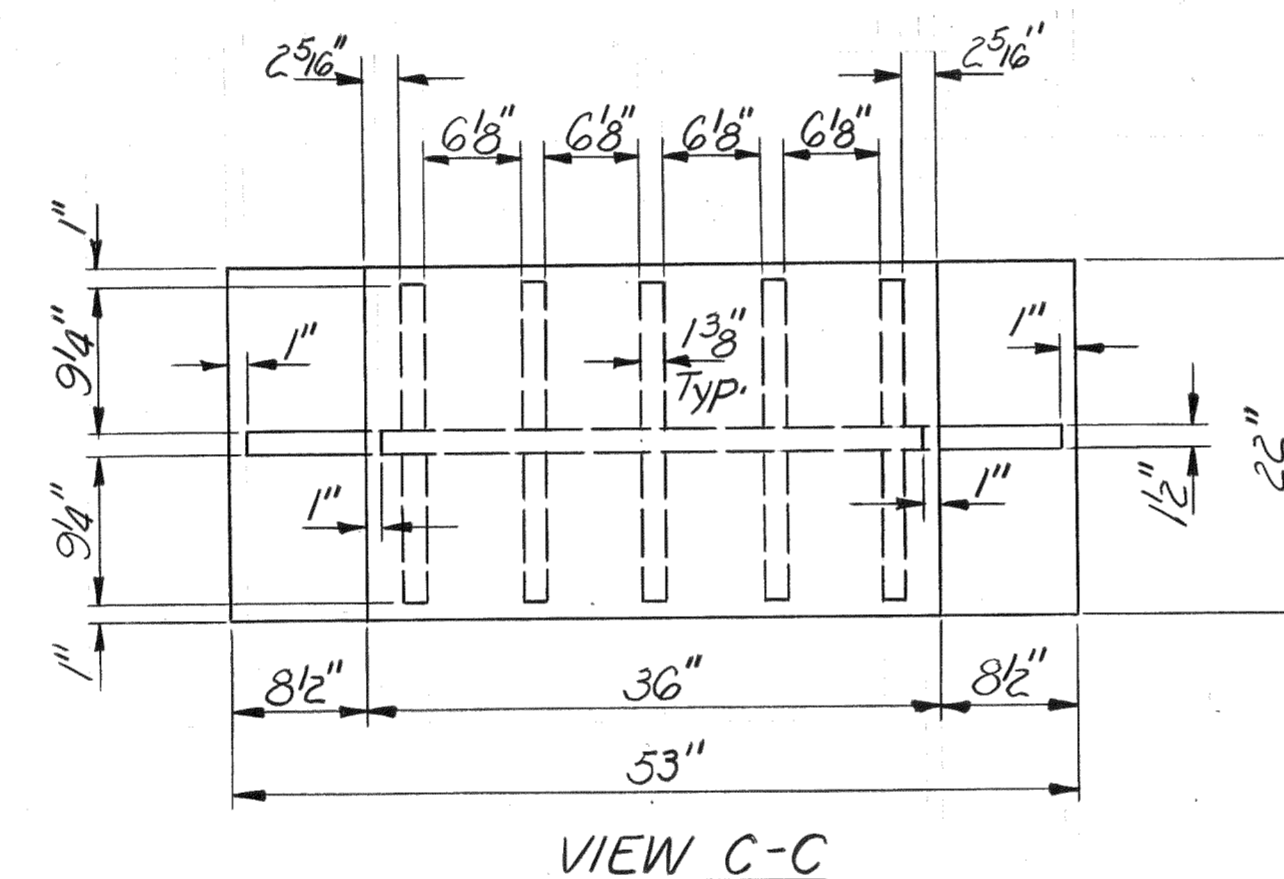
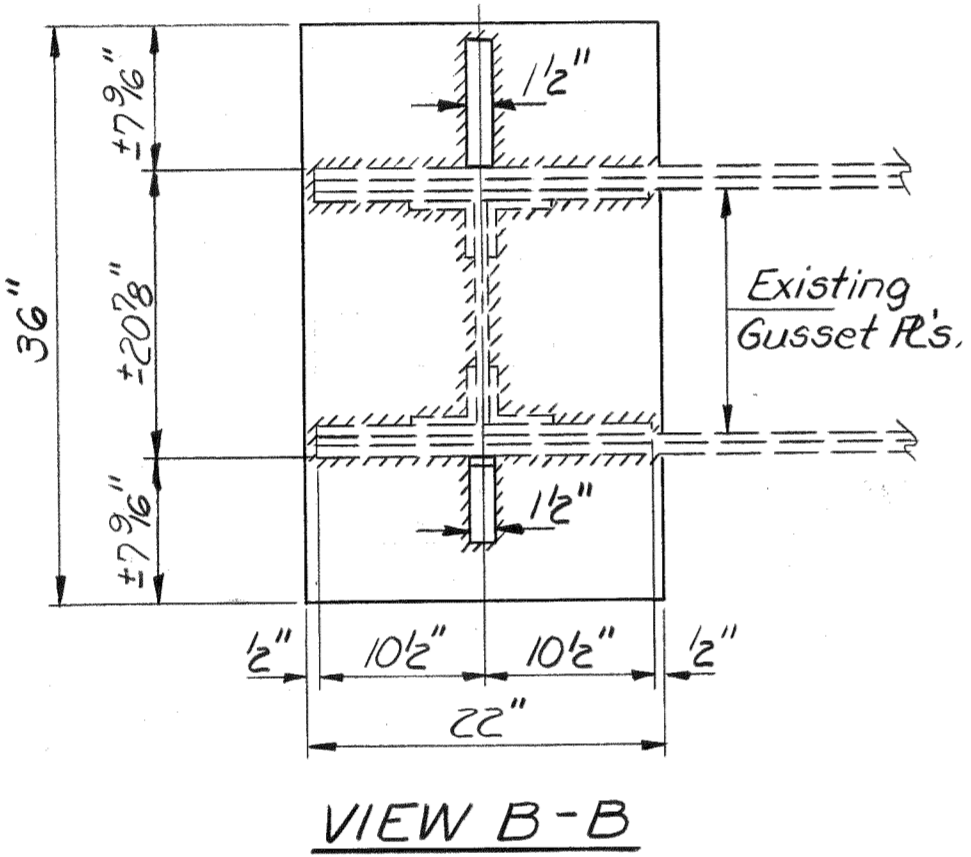
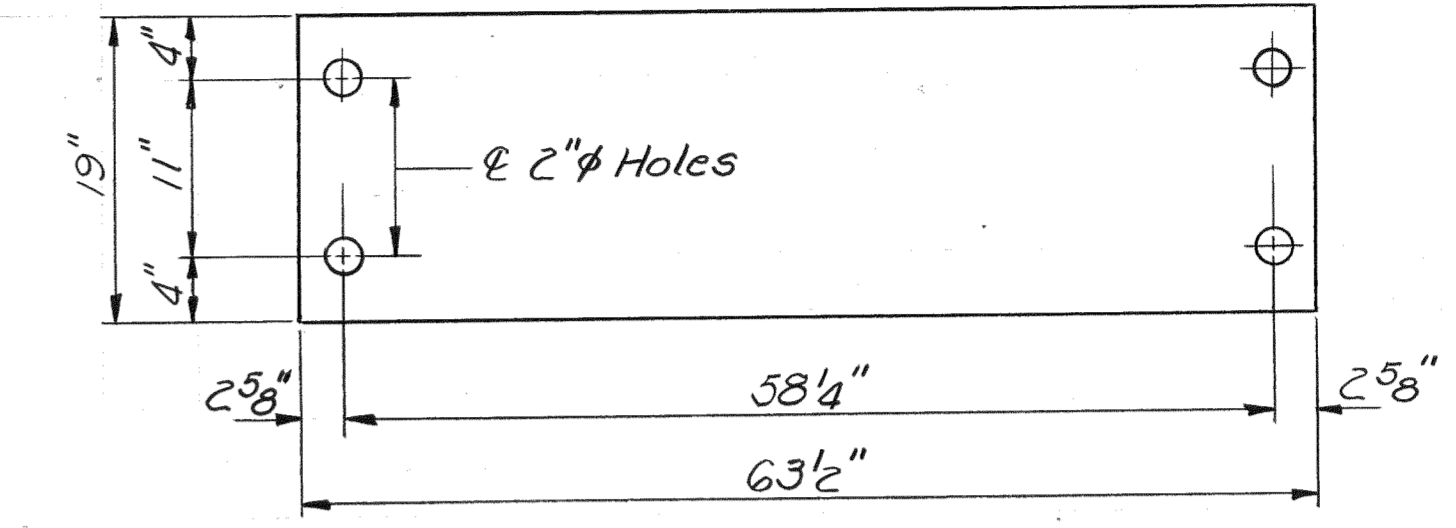
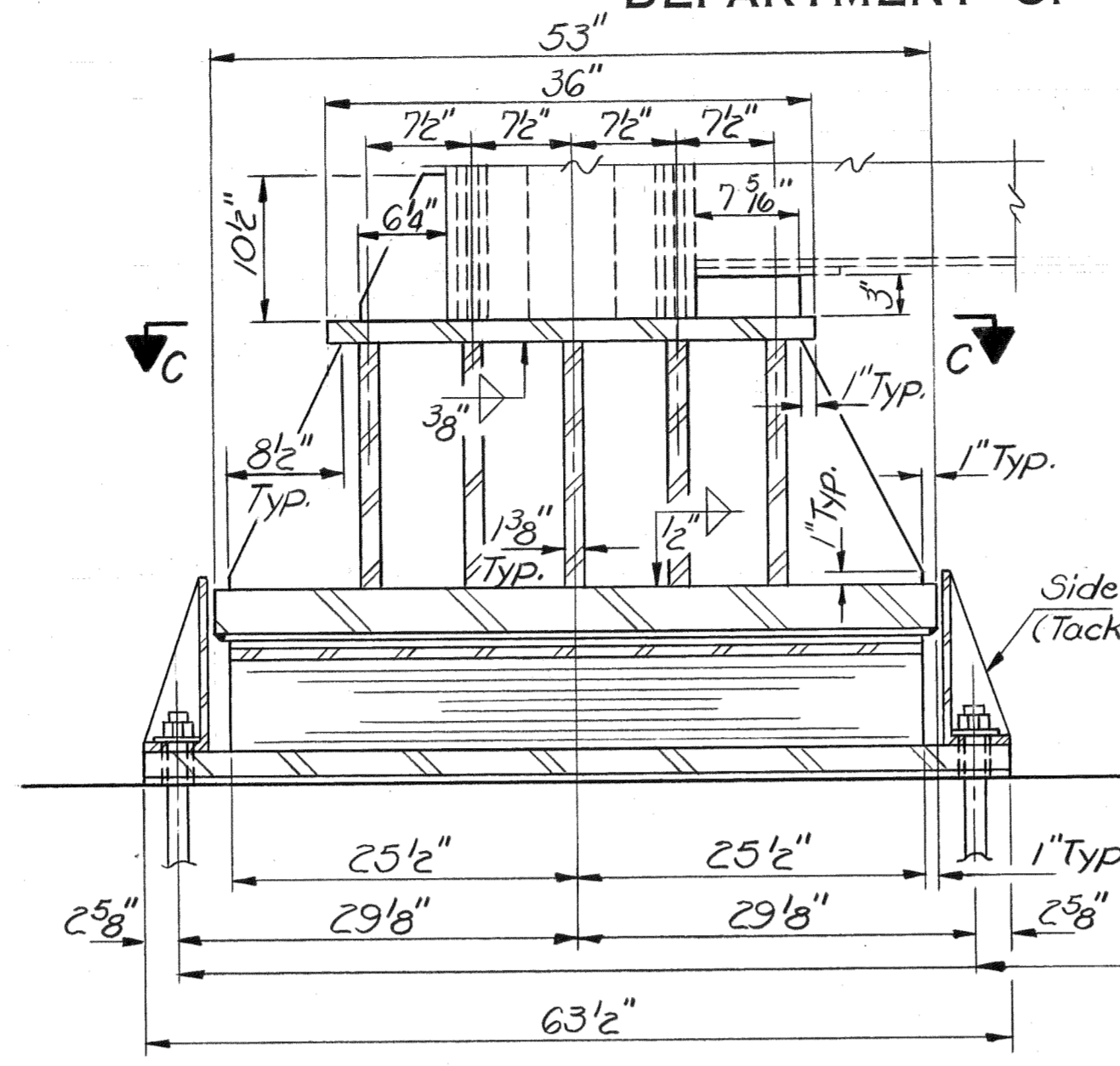
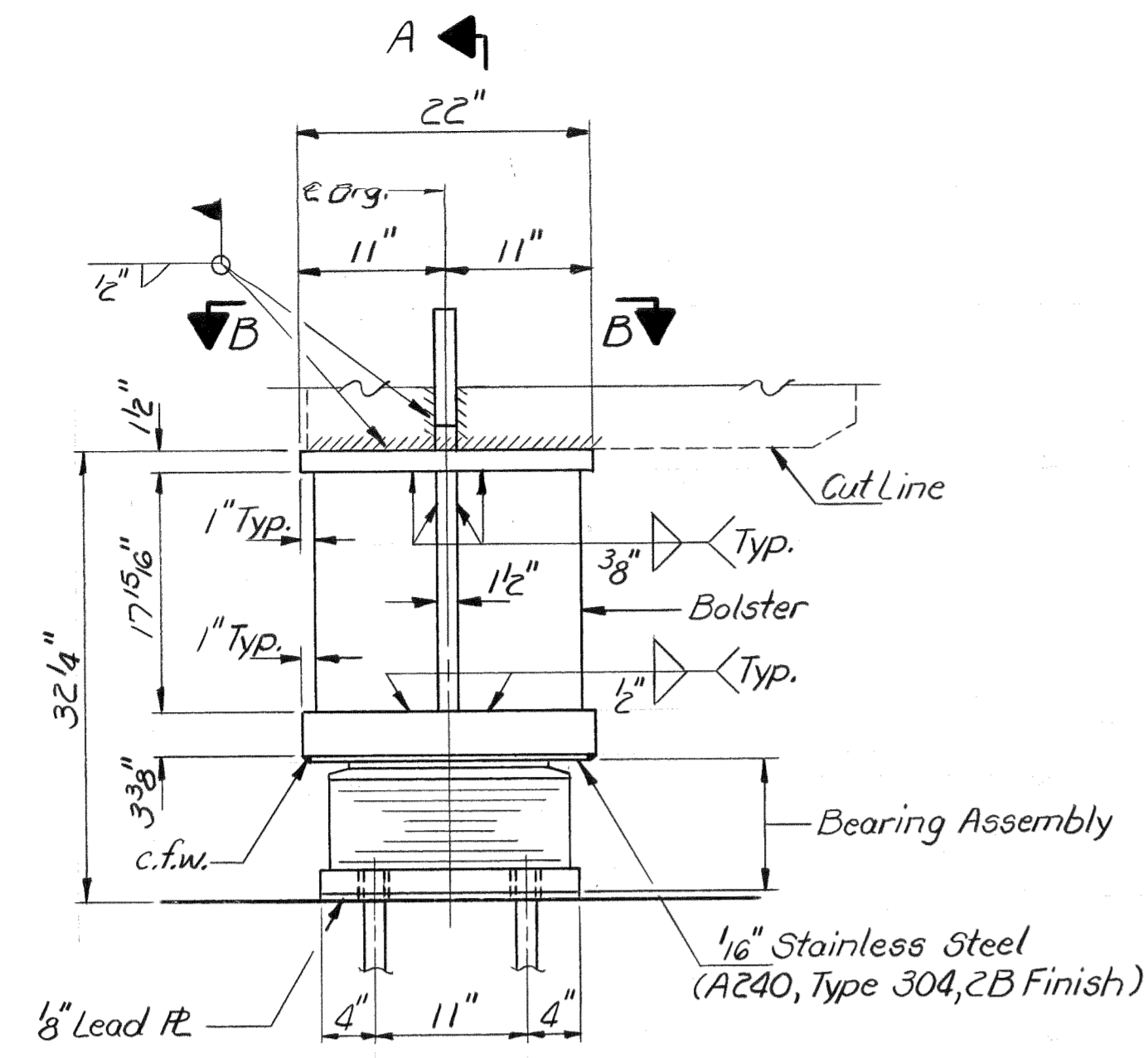
Item	Unit	Total
Elastomer Bearing Assembly - Typ. II (Spans 6, 8 & 9)	Each	6

EXPANSION BEARING DETAILS  
SPANS 6, 8 & 9  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

DESIGNED	3/1	1985
CHECKED	D. B.	ENGINEER OF BRIDGE DESIGN
DRAWN	D. B.	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	D. B.	DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 28
P.A. 786	109B-D	LASALLE	68	54	38 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly-Type II (Special)	Each	2

DESIGNED James Bill	EXAMINED <i>Dr. J. Kaspar</i>
CHECKED David Bardich	PASSED <i>James J. Kowarski</i>
DRAWN Joe Sutherland	APPROVED
CHECKED D.B.	DIRECTOR OF HIGHWAYS

EXPANSION  
BEARING DETAILS  
SPAN 7  
F.A.R.T. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

Dec. 31, 1985

BELOW 50° F. ABOVE 50° F.

(Move brg. away from fixed brg.) (Move brg. toward fixed brg.)

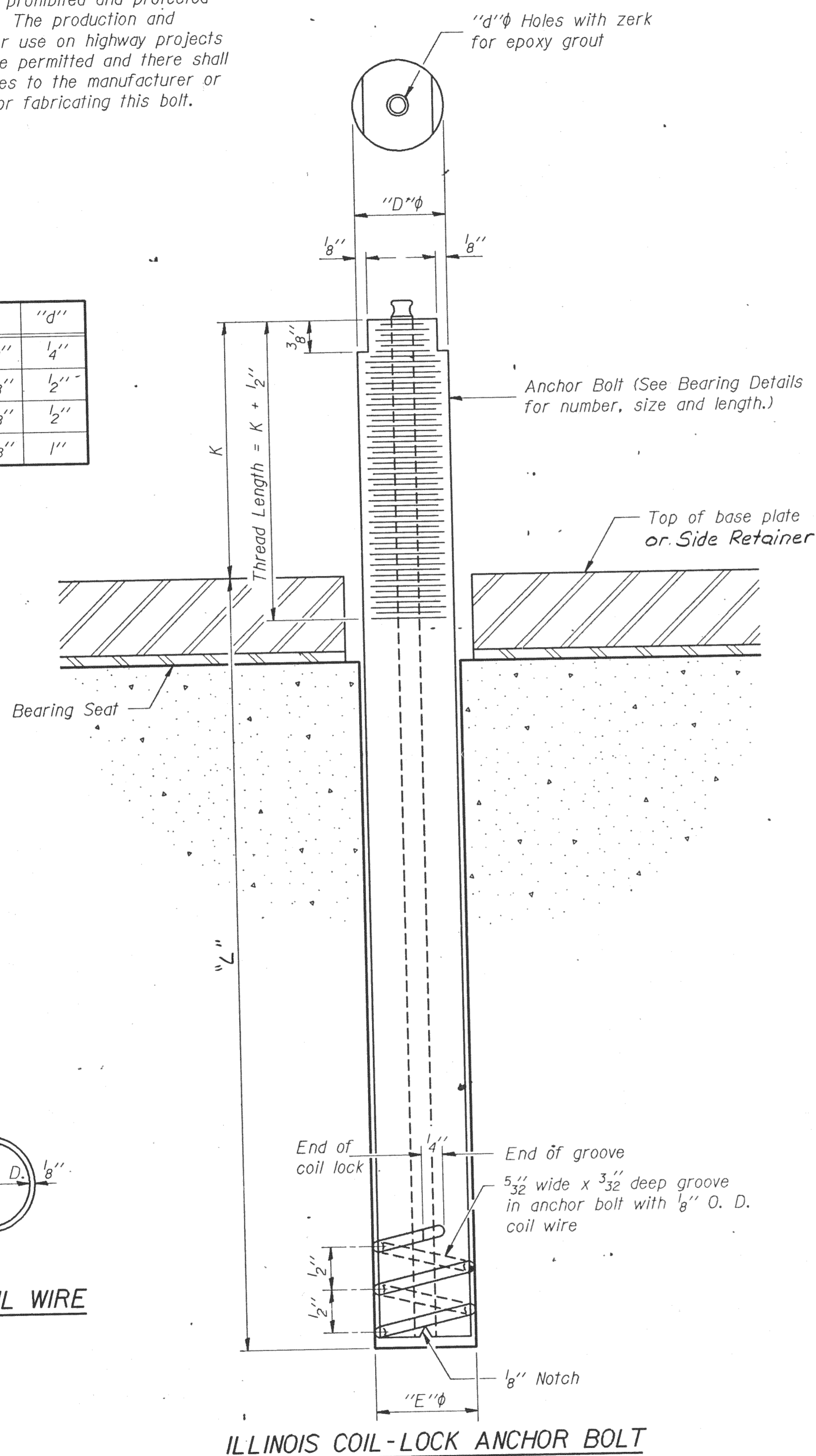
SETTING ANCHOR BOLTS AT EXP. BRG.  
D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"

Location	"L"
Pier 1 - Span 5	12 1/4"
Pier 2 - Span 6	17 7/8"
Pier 3 - Span 7	17 7/8"
Pier 3 - Span 8	17 7/8"
Pier 4 - Span 9	17 7/8"
Pier 5 - Span 10	14 1/4"
Bents - Exp. Brqs	13 1/4"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.  
The coil wire shall be made of any suitable soft steel wire.  
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.  
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.  
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:  
1. A threaded rod stud with nut and washer conforming to ASTM A307.  
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.  
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.  
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

ANCHOR BOLT DETAILS FOR BEARINGS  
E.A. RTE. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

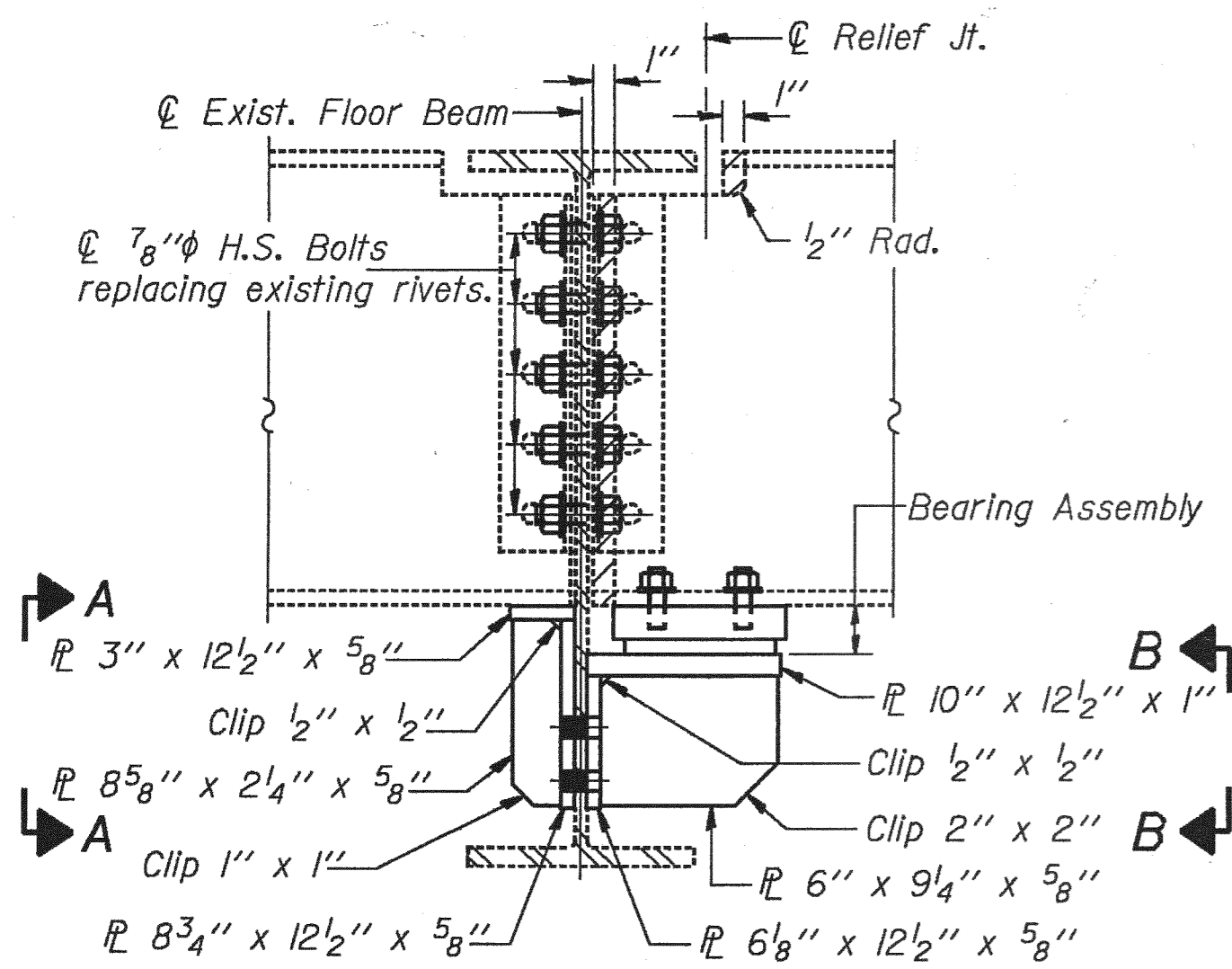
DESIGNED *Lance Hill*  
CHECKED *David Burdick*  
DRAWN *D. Burdick*  
CHECKED *L. B.*  
Dec. 31, 1985  
EXAMINED *Oray O. Kaspar*  
PASSED *James T. Kuhlmann*  
APPROVED \_\_\_\_\_  
DIRECTOR OF HIGHWAYS  
ABB-1 12-1-83

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

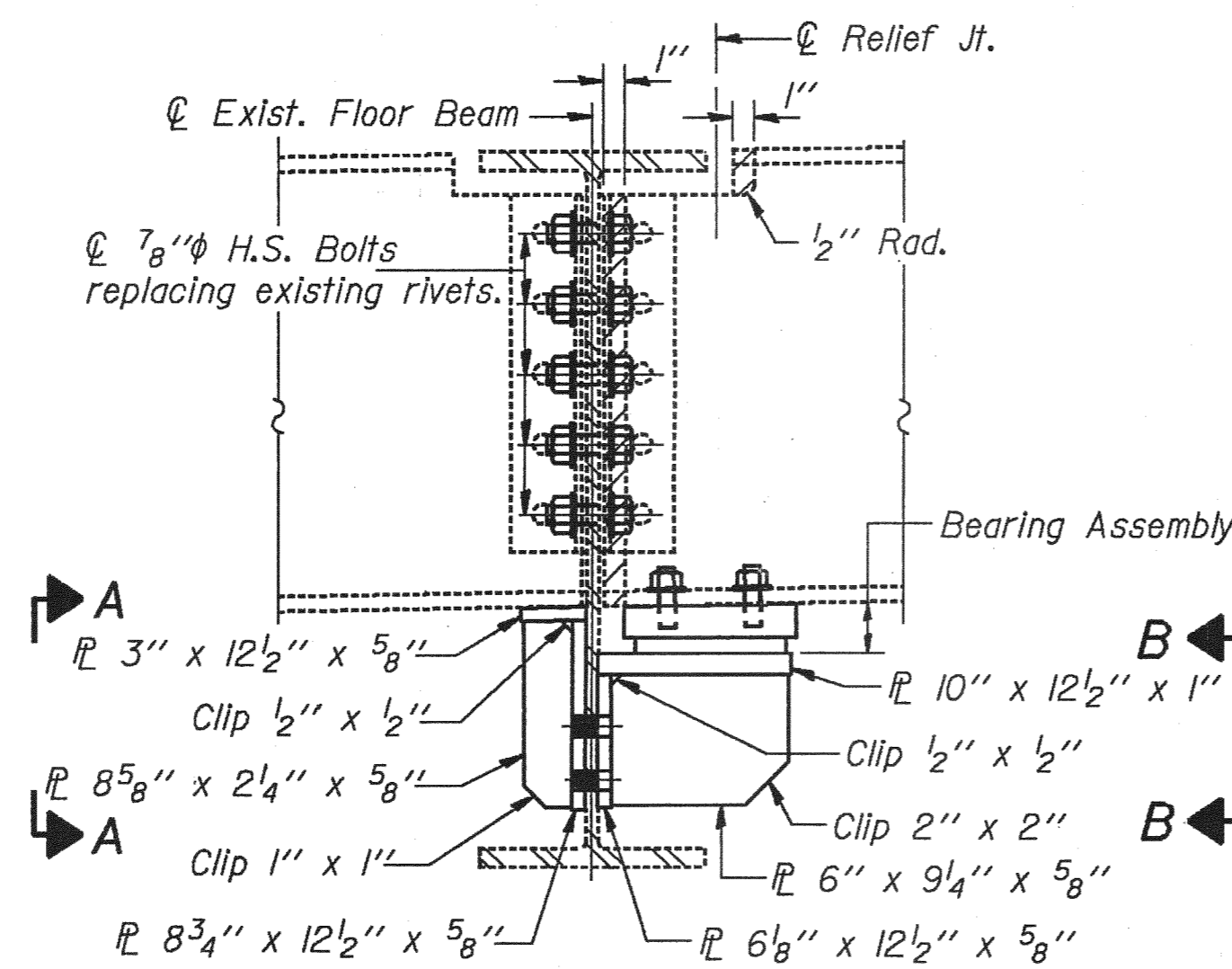
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
786	109B	LASALLE	68	56

SHEET NO. 30  
38 SHEETS

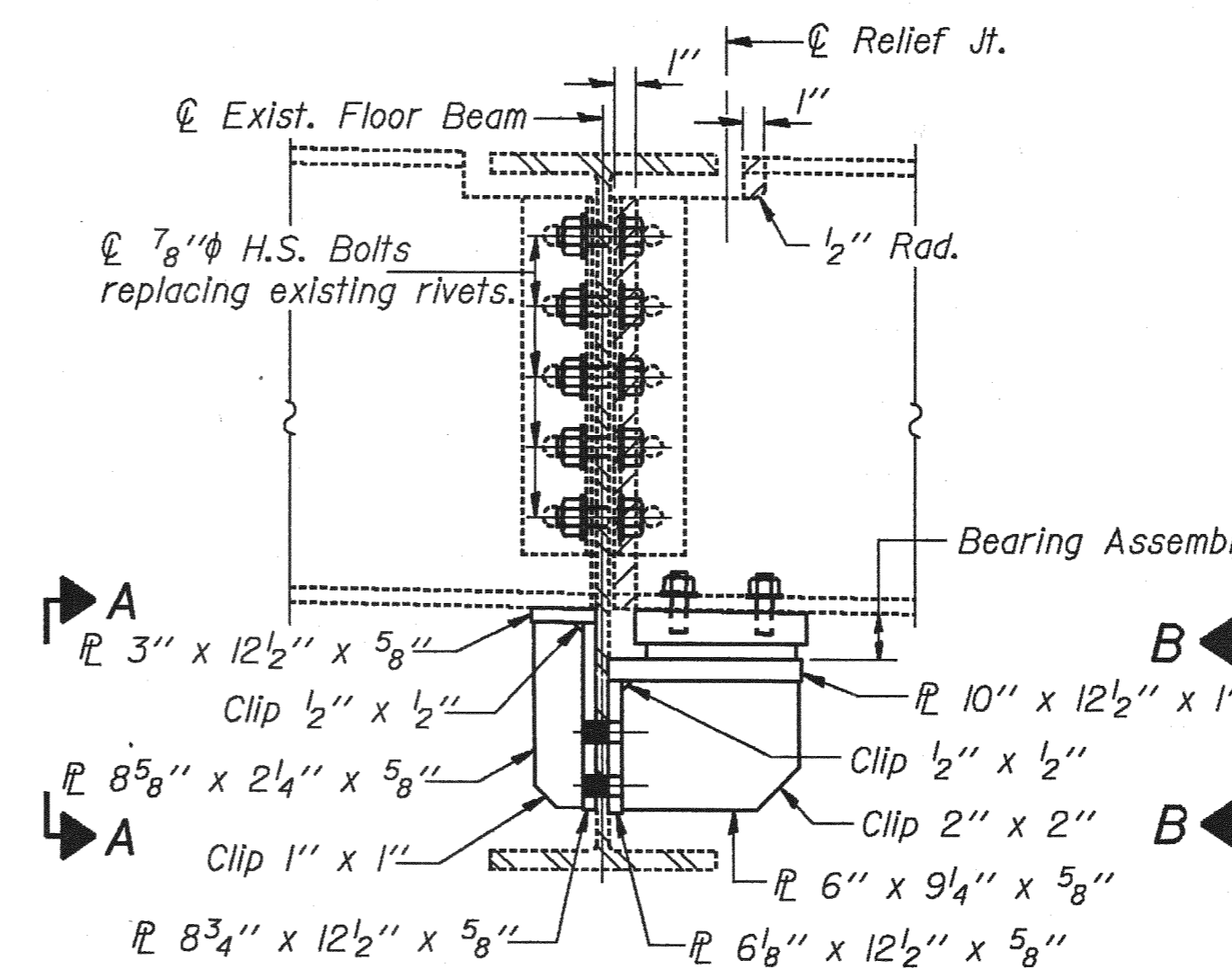
\* Holes in new beam seats and web of existing floor beam shall be field drilled to match fabricated holes in new bearing support. See View A-A and View B-B.



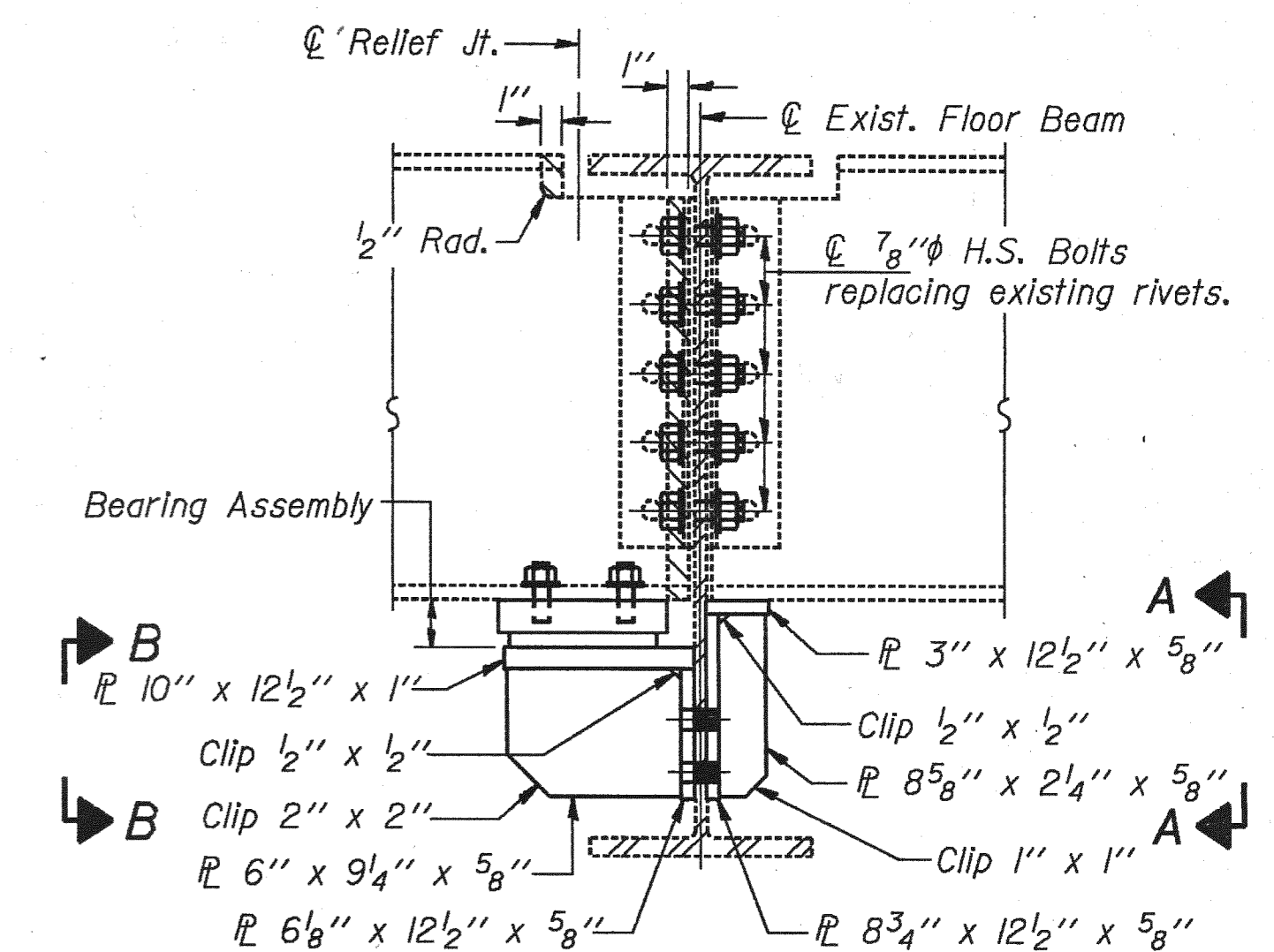
\* SEC. THRU RELIEF JOINTS 1, 4 AND 5  
Looking East



\* SEC. THRU RELIEF JOINT 3  
Looking East



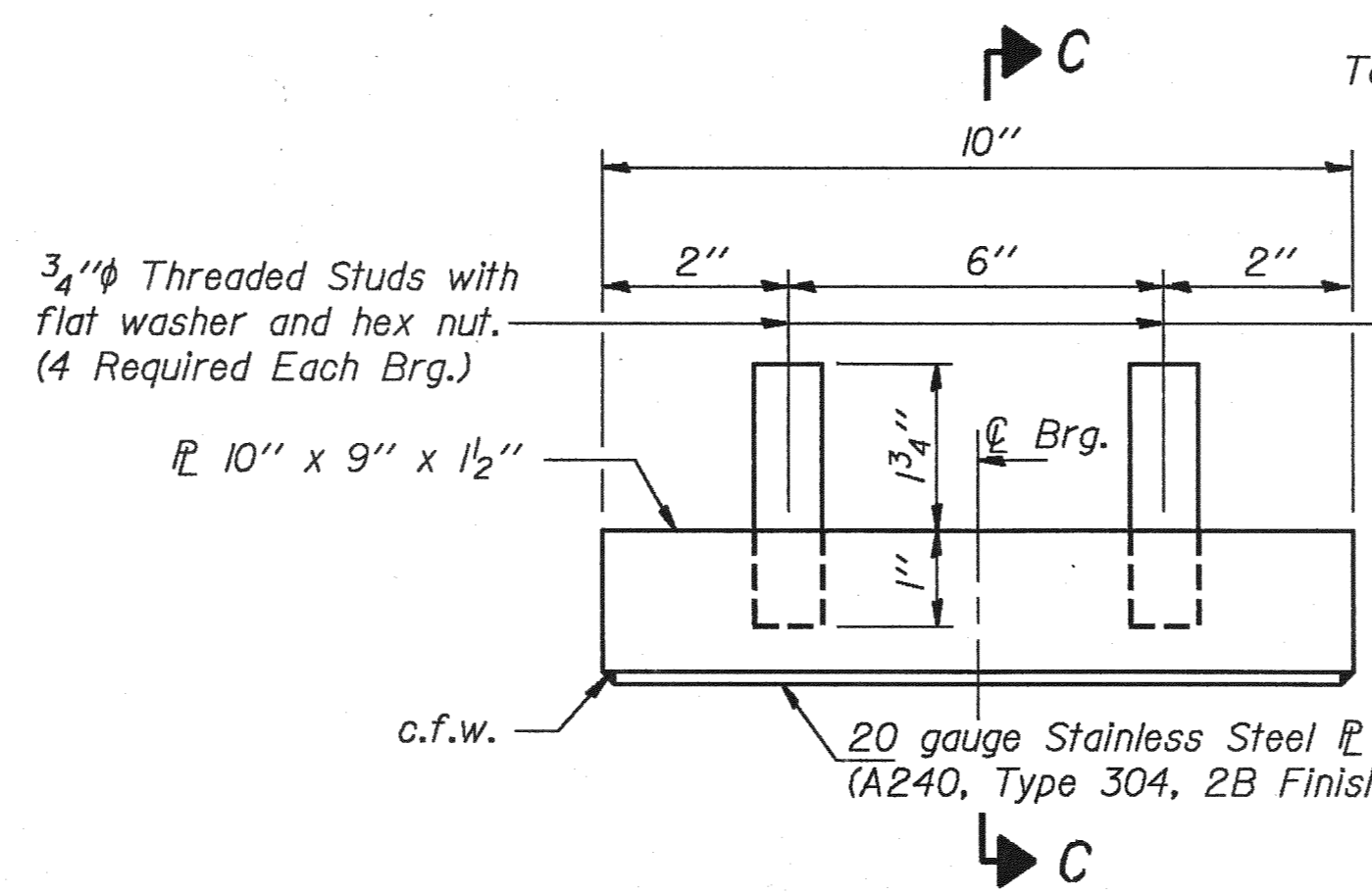
\* SEC. THRU RELIEF JOINTS 2 AND 6  
Looking East



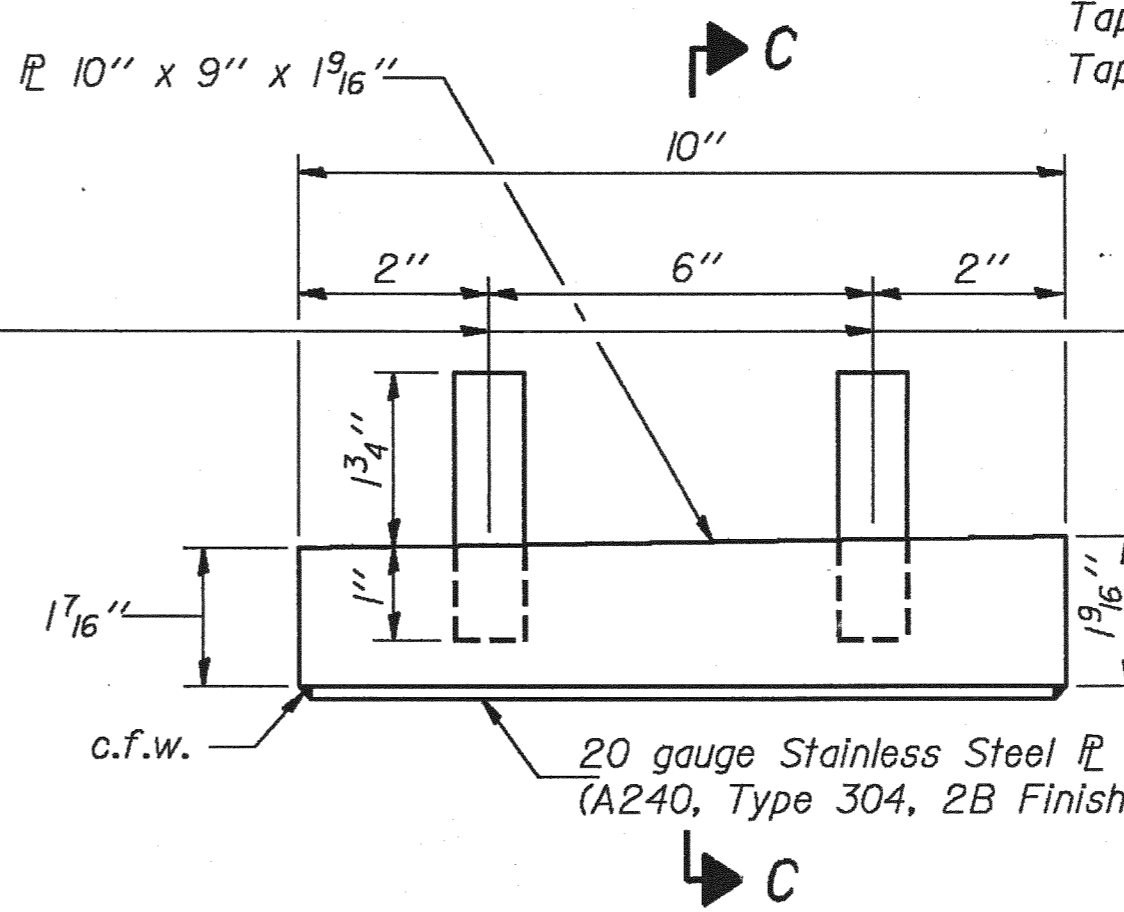
\* SEC. THRU RELIEF JOINT 7, 8, 9 AND 10  
Looking East

RELIEF JOINT INSTALLATION PROCEDURES

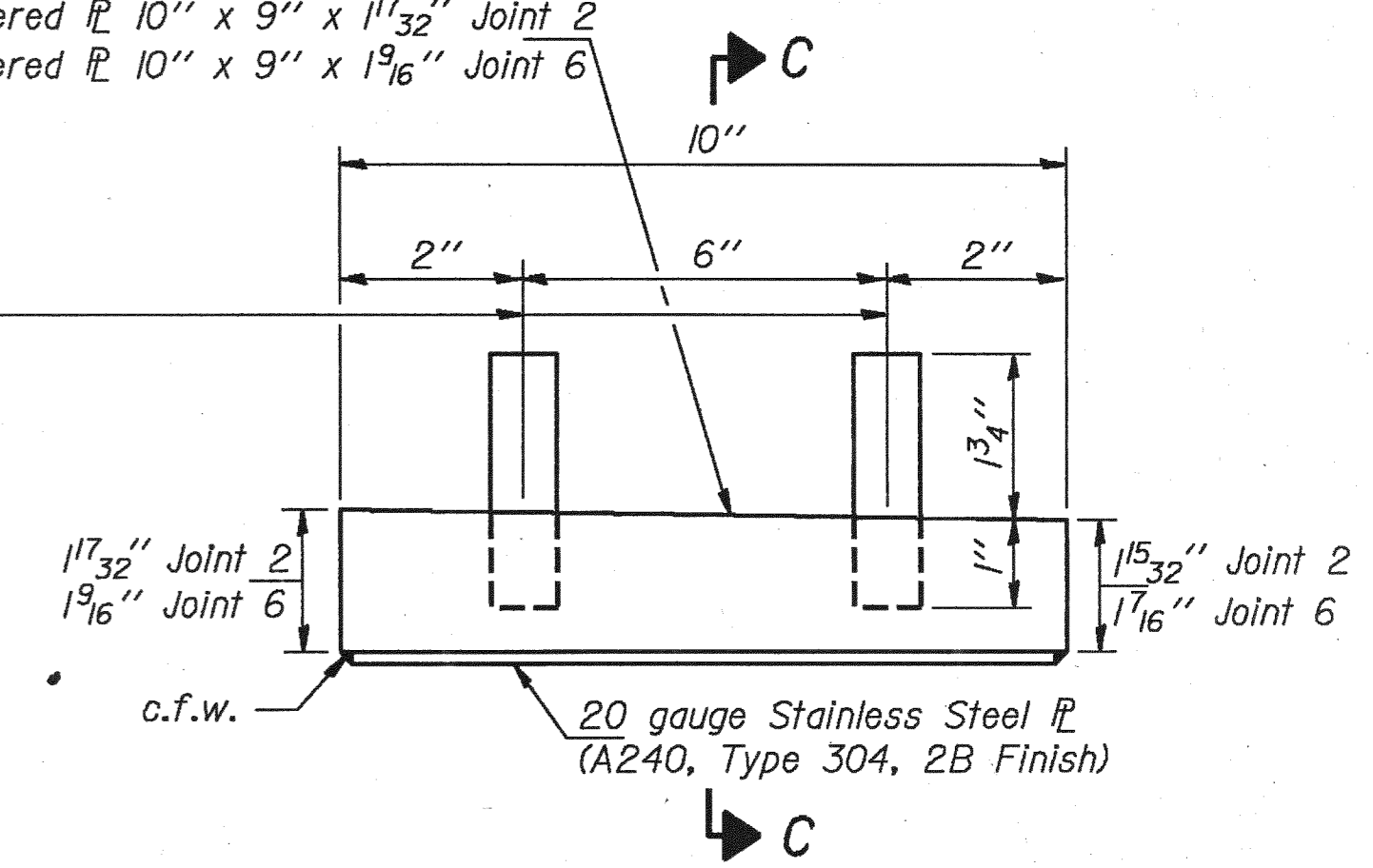
- 1) Remove existing beam seat angles (existing holes will not be reused).
- 2) Field drill holes for the new beam seat and bearing support.
- 3) Install new top bearing plate to bottom of stringer.
- 4) Attach new beam seat, bearing support and bearing using 7/8" H.S. Bolts.
- 5) Remove rivets from web of floor beam and web of stringer on the relief joint side of the floor beam. Remove angles from relief joint side and save them.
- 6) Remove 1" of existing stringer as shown by the hatched areas in drawings. Adequate protection must be provided for floor beams during cutting of stringers. Cost incidental to "Structural Steel".
- 7) Reattach angles to floor beams using 7/8" H.S. Bolts, leave the holes in existing stringers empty.



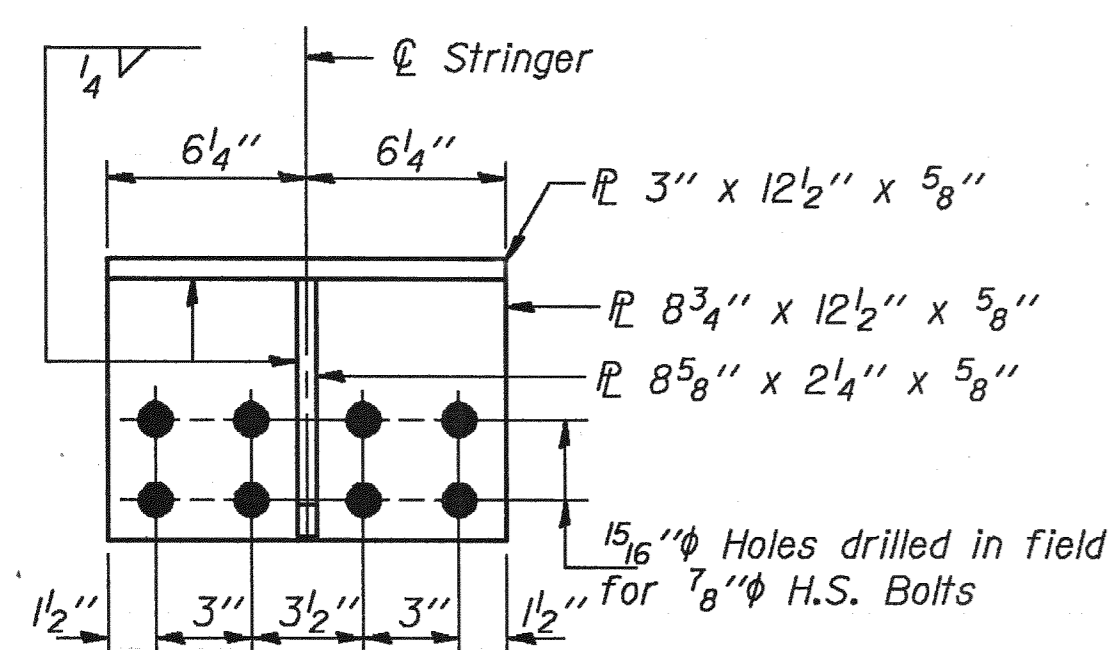
TOP BEARING ASSEMBLY  
Looking East  
(Showing Relief Joints 1,4,5, & 7 thru 10)



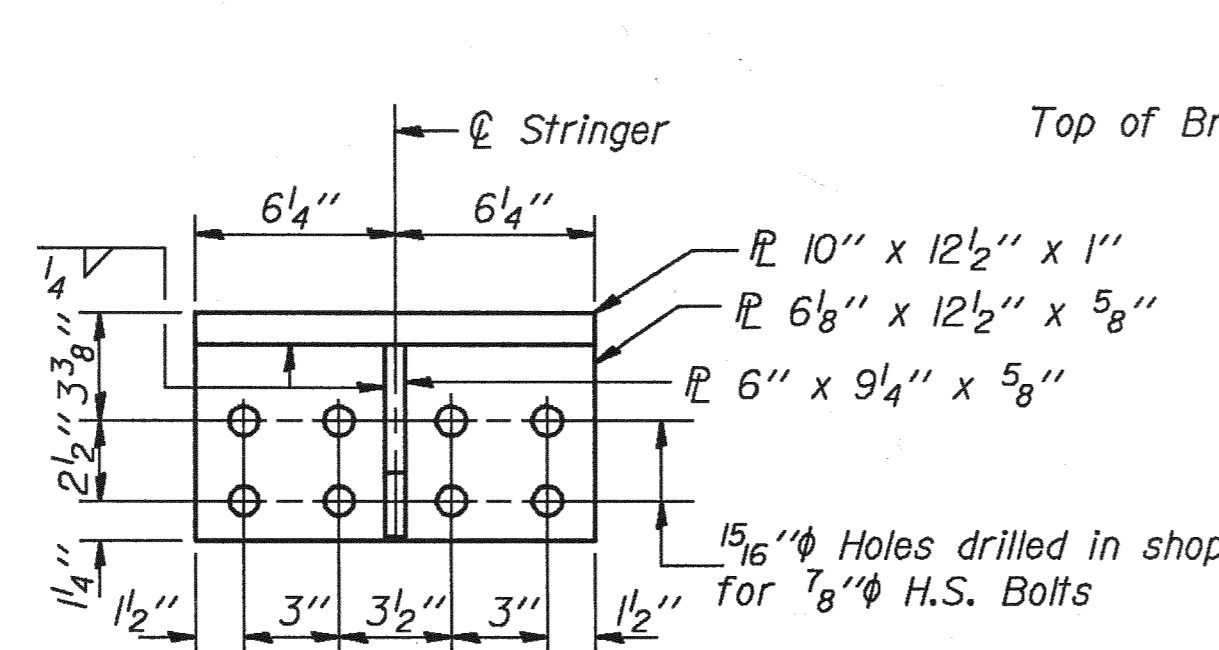
TOP BEARING ASSEMBLY  
Looking East  
(Showing Relief Joint 3)



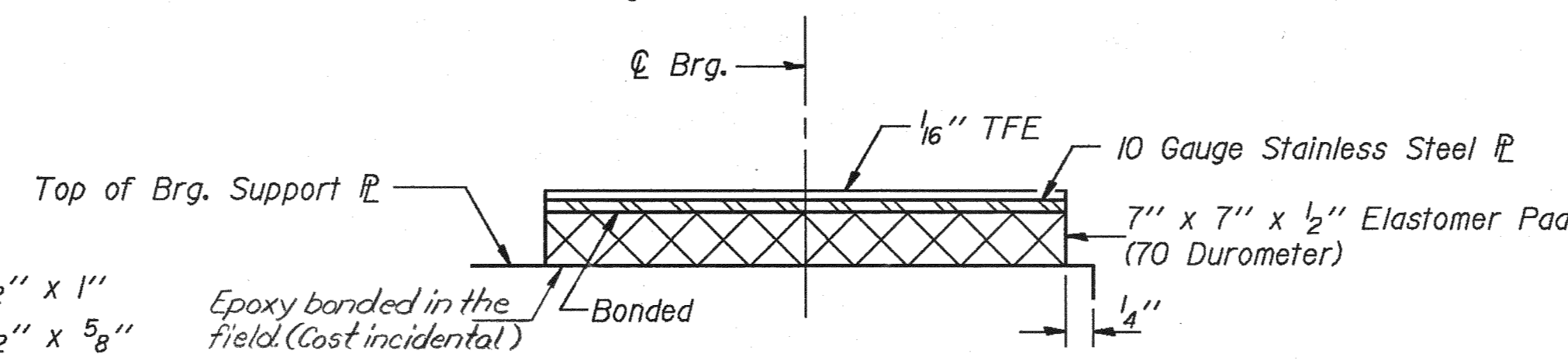
TOP BEARING ASSEMBLY  
Looking East  
(Showing Relief Joints 2 and 6)



VIEW A-A

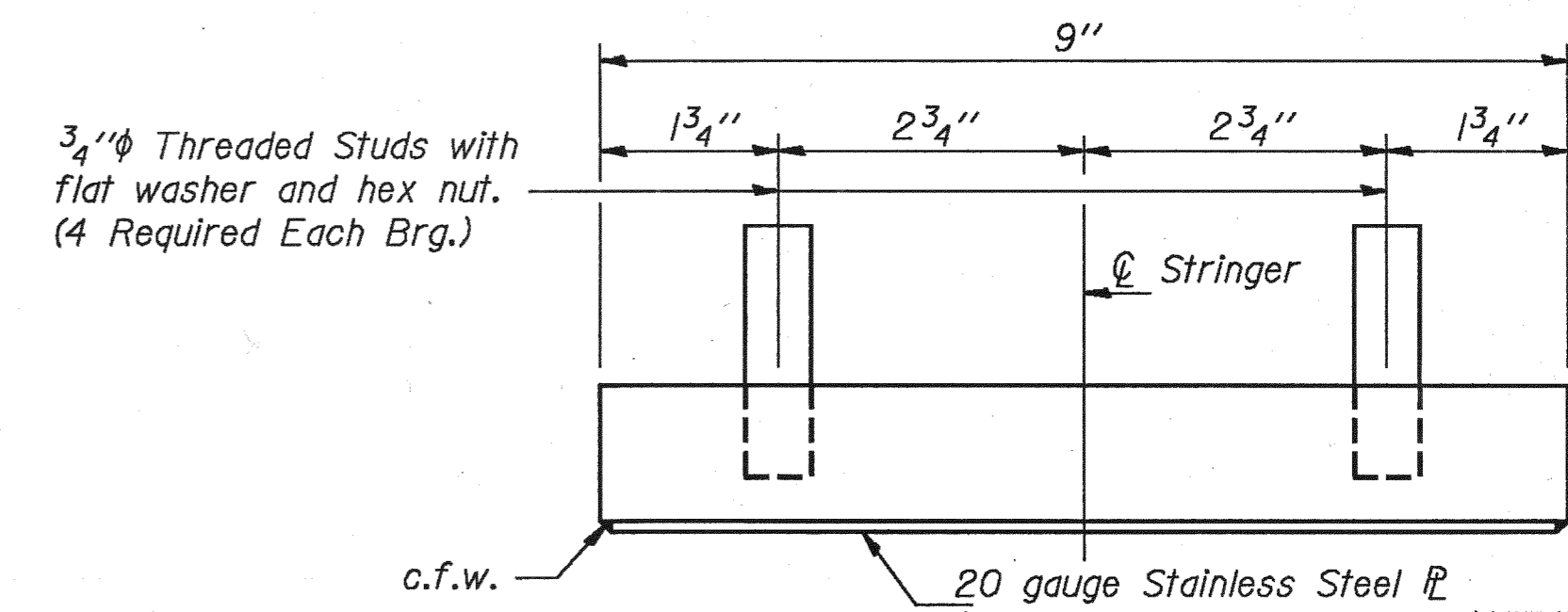


VIEW B-B



BOTTOM BEARING ASSEMBLY  
Typ. all Relief Joints

The 1/16" TFE sheet shall be bonded directly to the 10 gauge stainless steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.



SEC. C-C  
Typ. all Relief Joints

Note: Cost of field drilled holes, removing rivets and replacing rivets are included in the pay item for "Elastomeric Bearing Assembly Type I (Modified)".

Estimated number of rivets to be removed = 850 each.  
Estimated number of rivets to be replaced = 500 each.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I (Modified)	Each	50

RELIEF JOINT DETAILS  
F.A. RT. 786 SEC. 109B-D  
LaSALLE COUNTY  
STATION 79+05.00

Revised 1/15/86 JRS

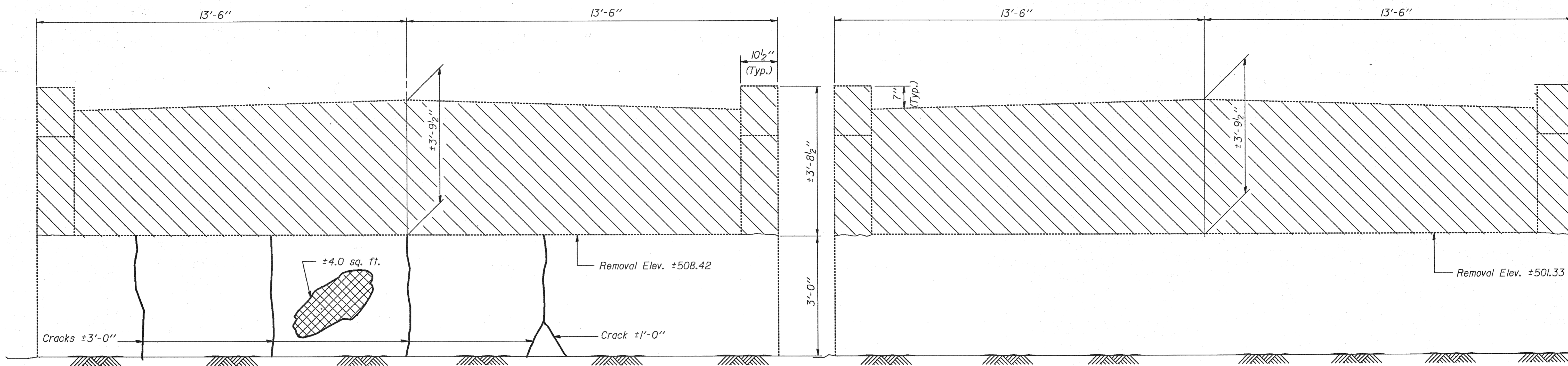
DESIGNED	Lance Field	EXAMINED	Draj J. Kaspar
CHECKED	David Buxdick	PASSED	James J. Rasmussen
DRAWN	Joe Sutherland	APPROVED	
CHECKED	DB.		

Dec. 31, 1985  
DIRECTOR OF HIGHWAYS



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.	SHEET NO.
F.A. 786	1088D	LASALLE	68	57	38 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

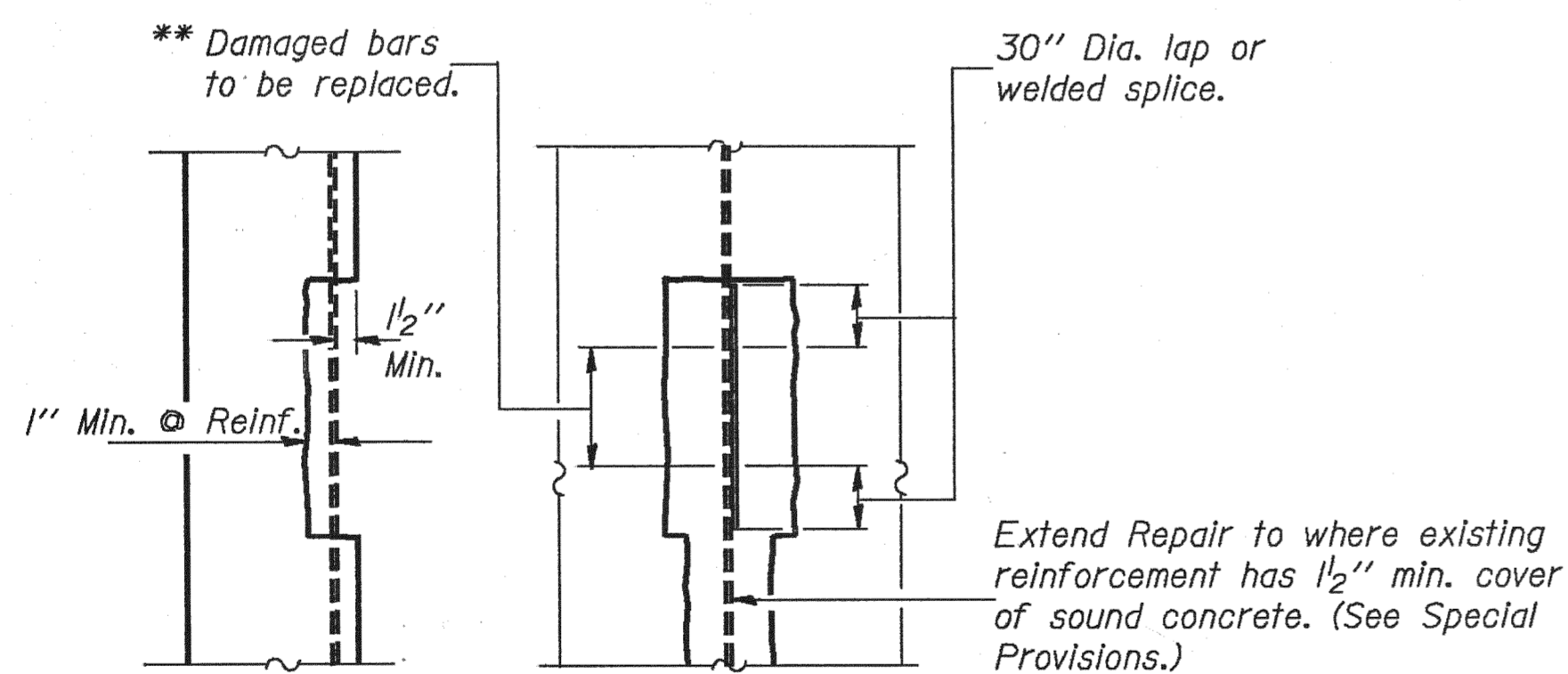


**NORTH ABUTMENT**

"Repair Concrete Structures" = ±4.0 Sq. Ft.  
"Epoxy Crack Sealing" = ±13.0 Lin. Ft.  
"Concrete Removal" = 2.9 Cu. Yds.

**SOUTH ABUTMENT**

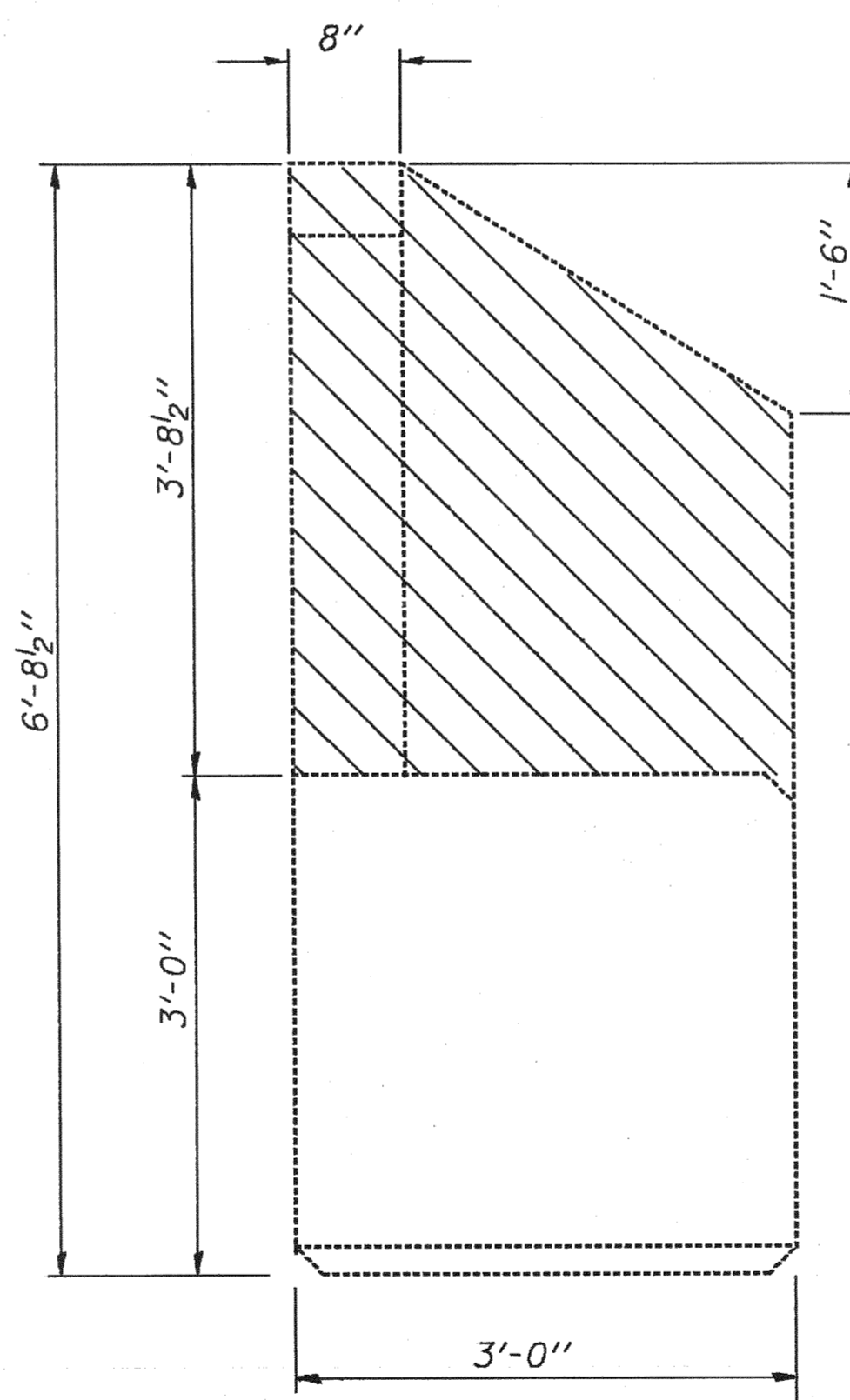
"Concrete Removal" = 2.9 Cu. Yds.



**\* REPAIR DETAIL**

Note: Existing Reinforcement having 10% or more of Cross Sectional Area lost due to Corrosion or Damaged during Concrete Removal shall be lapped with New Reinforcement as shown or noted.

\* Applicable to "Repair Concrete Structures", "Epoxy Mortar Repairs" and "Class X Concrete" repair.



END VIEW AT ABUTS.

- "Concrete Removal"
- "Epoxy Crack Sealing"
- "Repair Concrete Structures"

Work this sheet with sheet #32

**BILL OF MATERIAL  
FOR BOTH ABUTMENTS**

Item	Unit	Quantity
Concrete Removal	Cu. Yds.	5.8
Repair Concrete Structures	Sq. Ft.	4.0
Epoxy Crack Sealing	Lin. Ft.	13.0

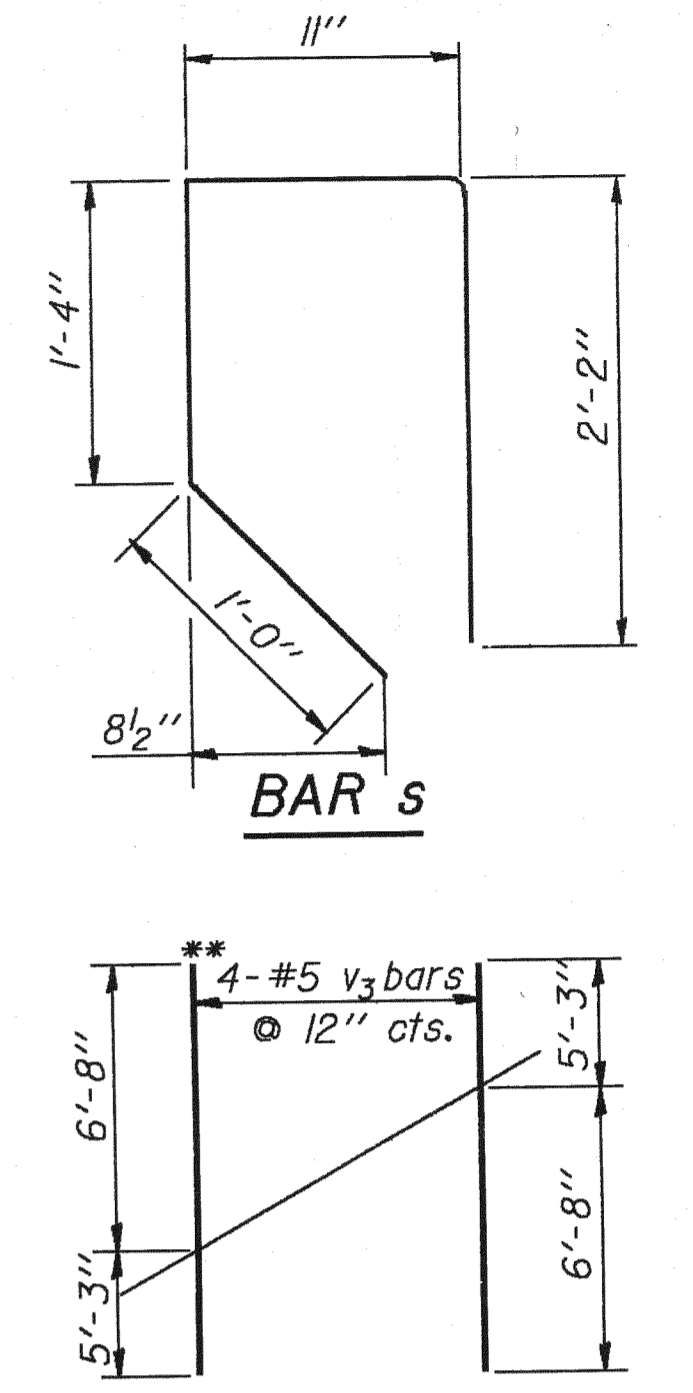
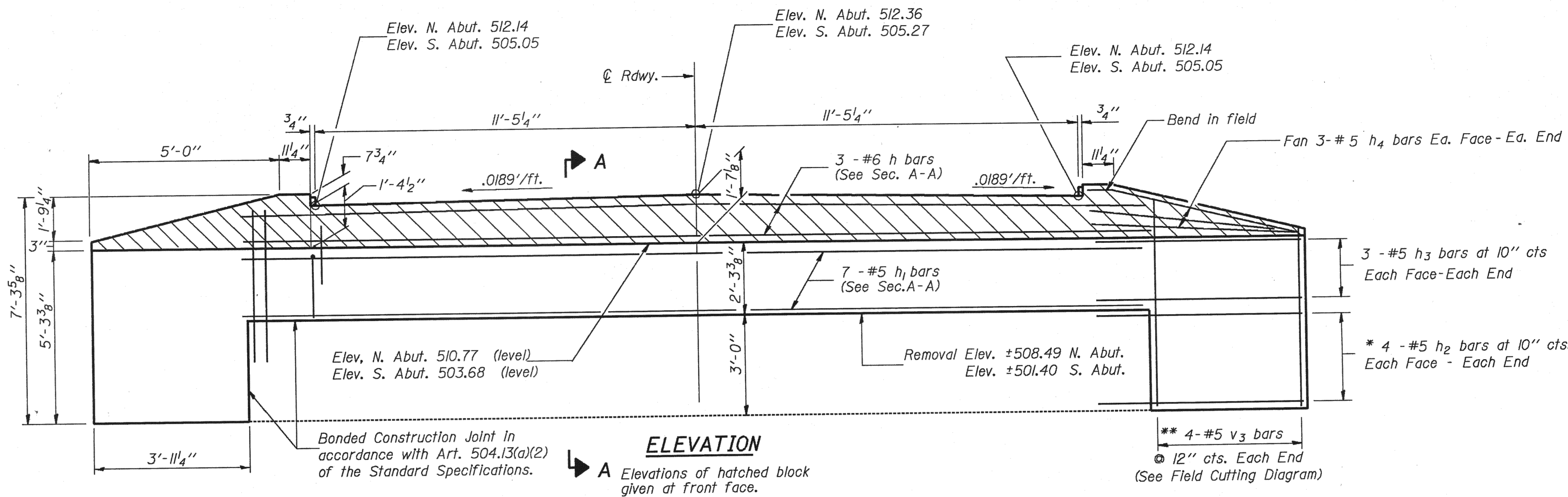
DESIGNED	
CHECKED	JRS
DRAWN	Mercado
CHECKED	

EXAMINED	<i>Craig J. Kaspar</i> ENGINEER OF BRIDGE DESIGN
PASSED	<i>James J. Robinson</i> ENGINEER OF BRIDGES AND STRUCTURES
APPROVED	DIRECTOR OF HIGHWAYS

ABUTMENT REMOVAL AND REPAIRS  
F.A. RTE. 786 SEC. 109B-D  
LA SALLE COUNTY  
STA. 79+05.00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 32 38 SHEETS
S. B. I.	109BD	LASALLE	68	58	
PLAN					
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

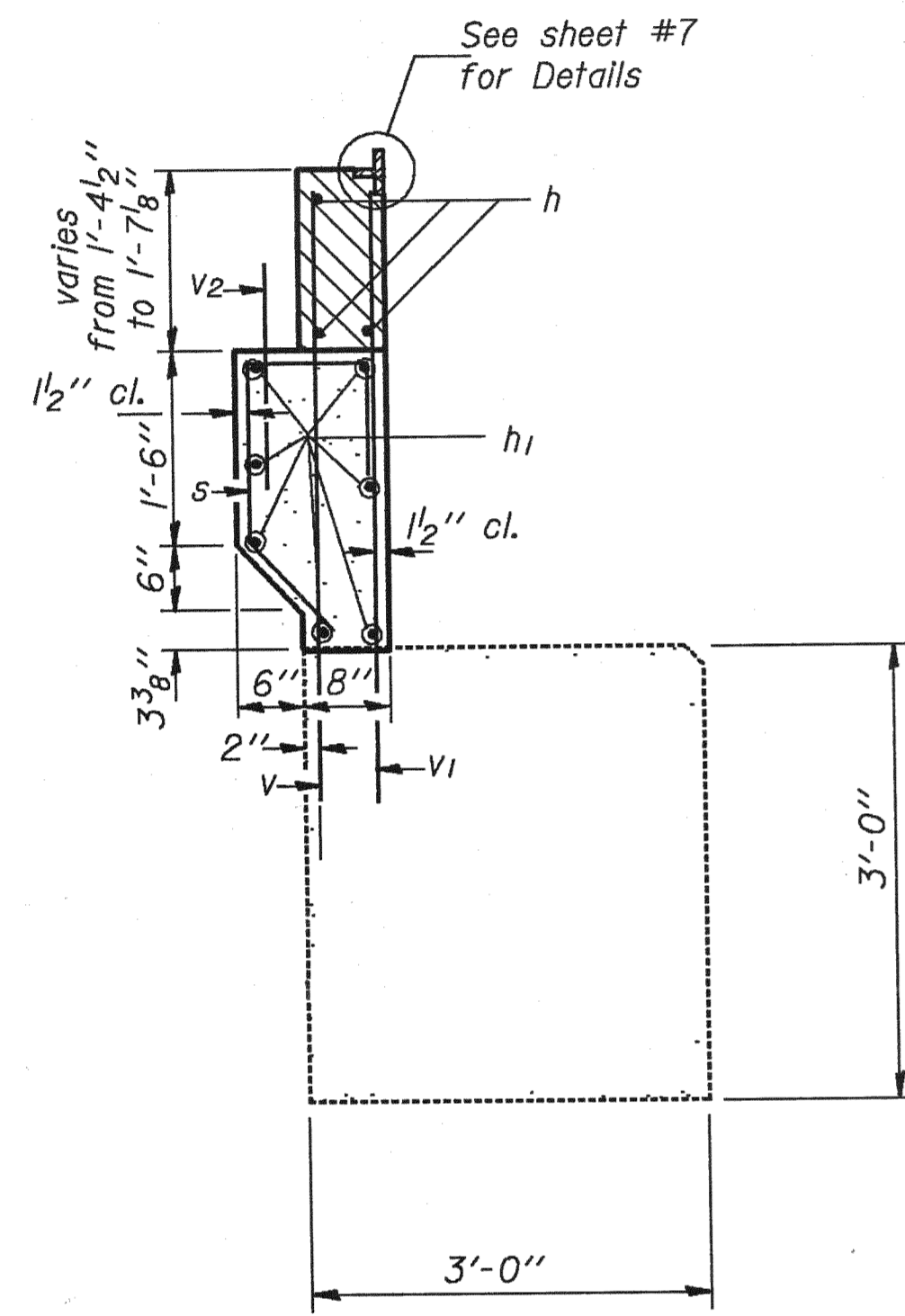


**FIELD CUTTING DIAGRAM**

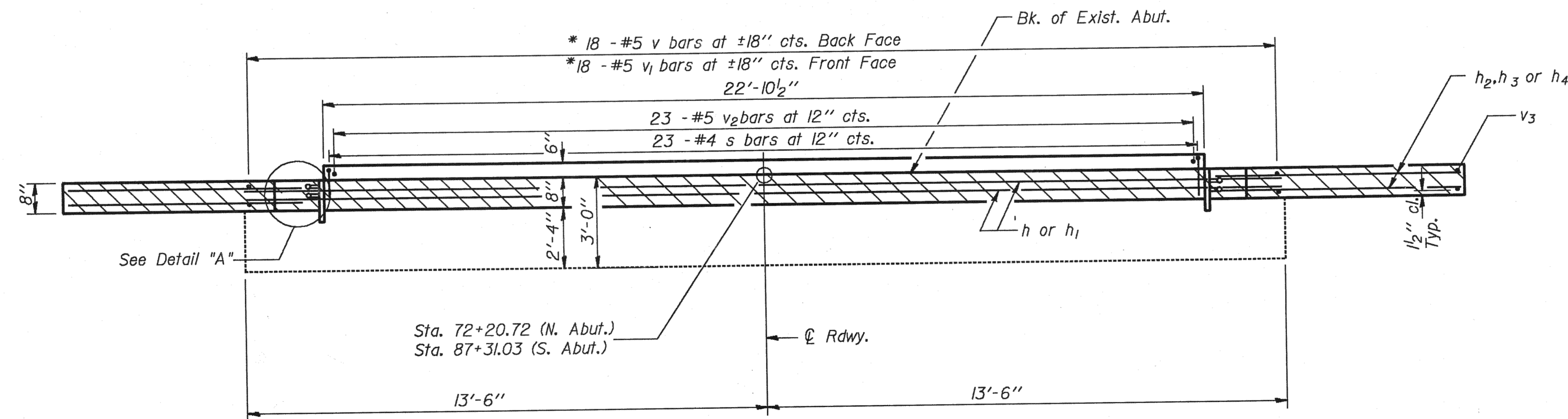
\*\* Order v<sub>3</sub> bars full length. Cut to fit as shown and use remainder in opposite face

**ONE ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h	3	#6	26'-9"	—
h <sub>1</sub>	7	#5	26'-9"	—
h <sub>2</sub>	16	#5	4'-9"	—
h <sub>3</sub>	12	#5	6'-2"	—
h <sub>4</sub>	12	#5	5'-8"	—
s	23	#4	5'-5"	□
v	18	#5	4'-6"	—
v <sub>1</sub>	18	#5	4'-3"	—
v <sub>2</sub>	23	#5	2'-3"	—
v <sub>3</sub>	8	#5	11'-11"	—
Class X Concrete			Cu.Yds.	4.5
Reinforcement Bars			Lbs.	940

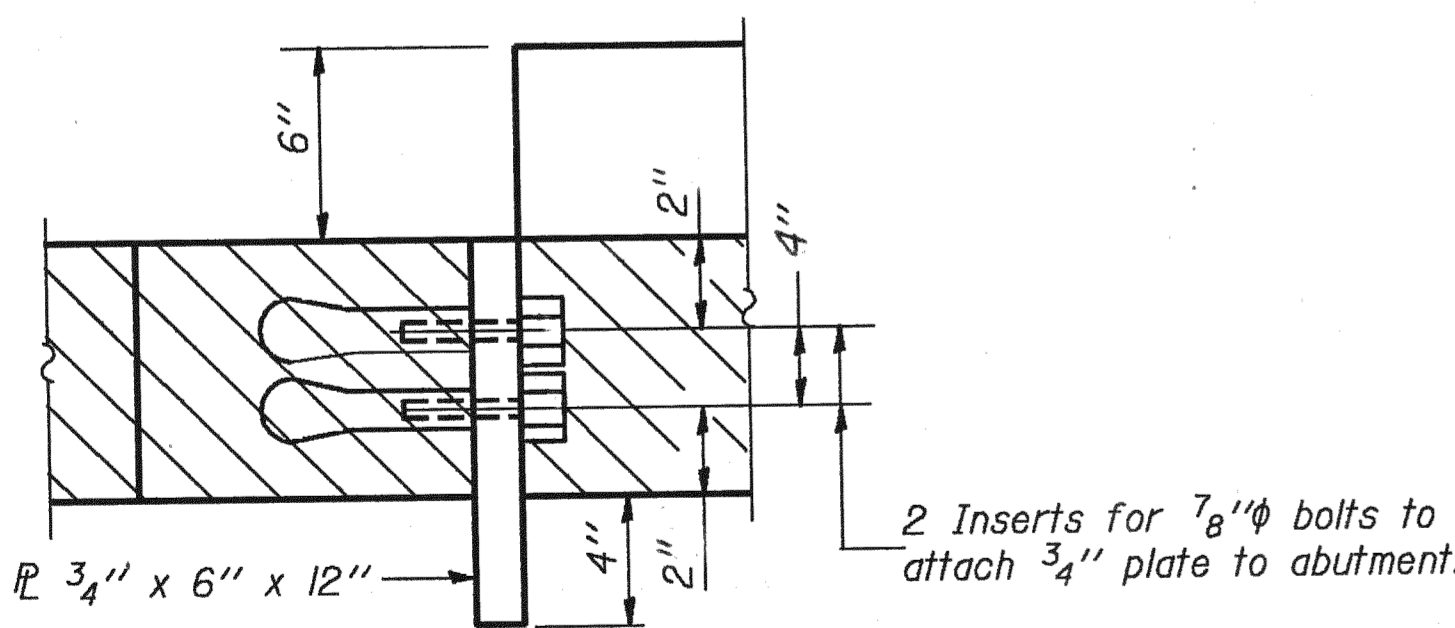


**SEC. A-A**



**PLAN**

Notes:  
 3/4" plates shall be AASHTO M-183.  
 3/4" plates are included in quantity "Structural Steel".  
 Cost of concrete inserts is incidental to "Class X Concrete".  
 Hatched area to be poured after Super-structure is in place.  
 Steel Ramp shall be required while working on Abutment backwall. See Note A on sheet #B for details.



**DETAIL "A"**

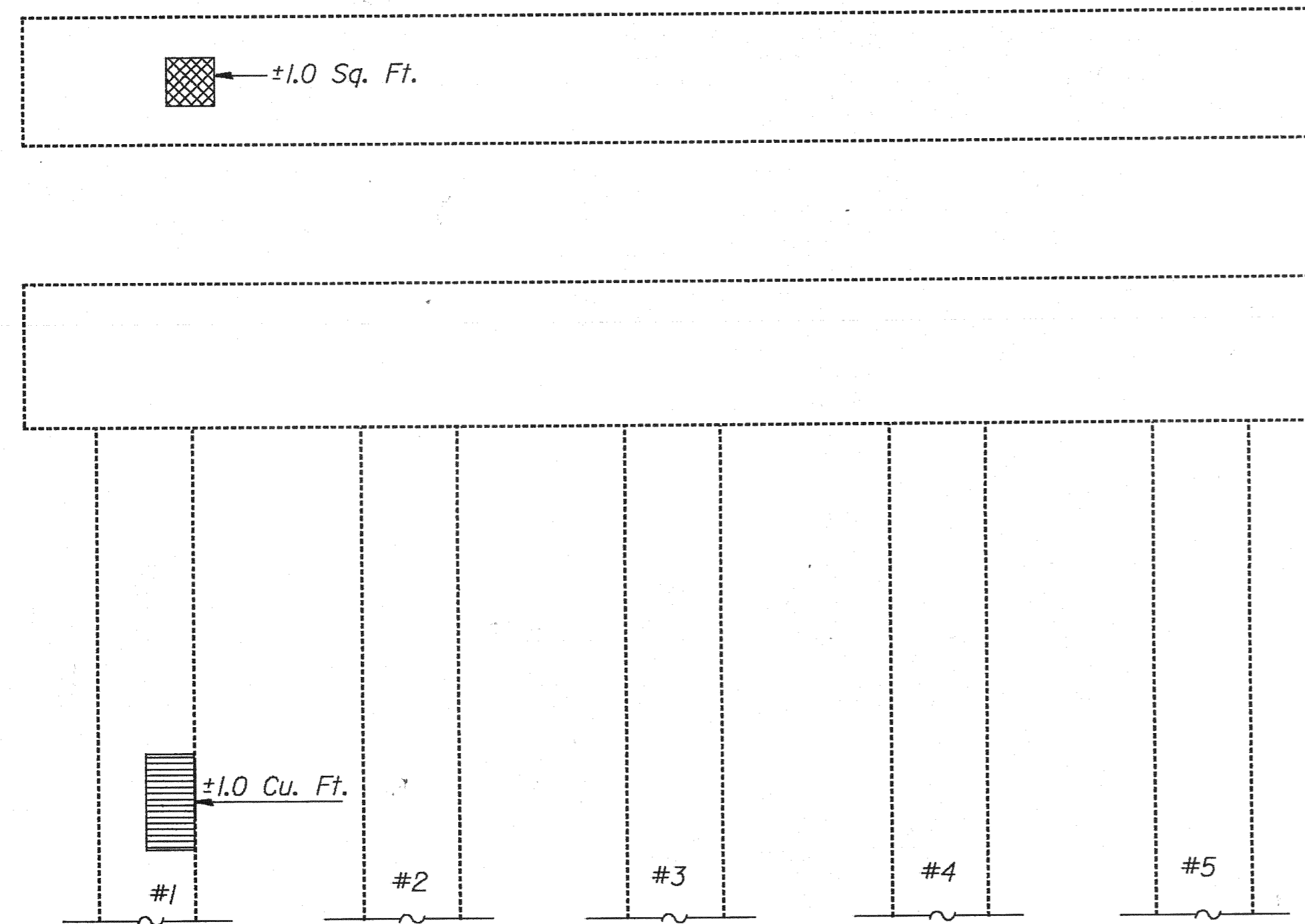
DESIGNED <i>Lance Hild</i>	EXAMINED <i>Greg J. Kaspar</i>
CHECKED <i>David Burdick</i>	PASSED <i>James J. Reynolds</i>
DRAWN <i>Mercado</i>	APPROVED _____
CHECKED <i>DB.</i>	DIRECTOR OF HIGHWAYS

Dec. 31, 1985

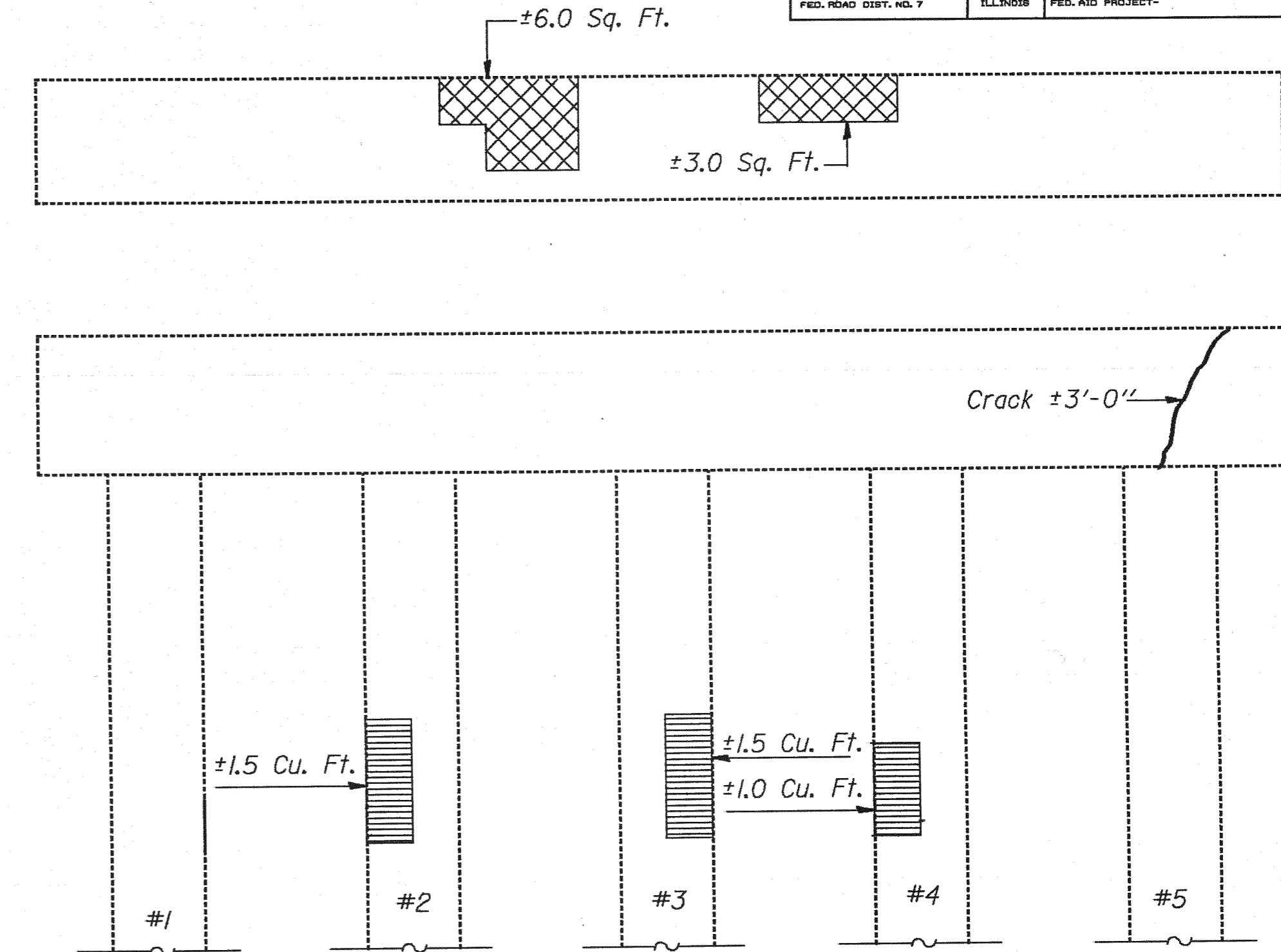
**NORTH AND SOUTH ABUTMENTS  
F.A. RTE. 786 SEC. 109B-D  
LA SALLE COUNTY  
STA. 79+05.00**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

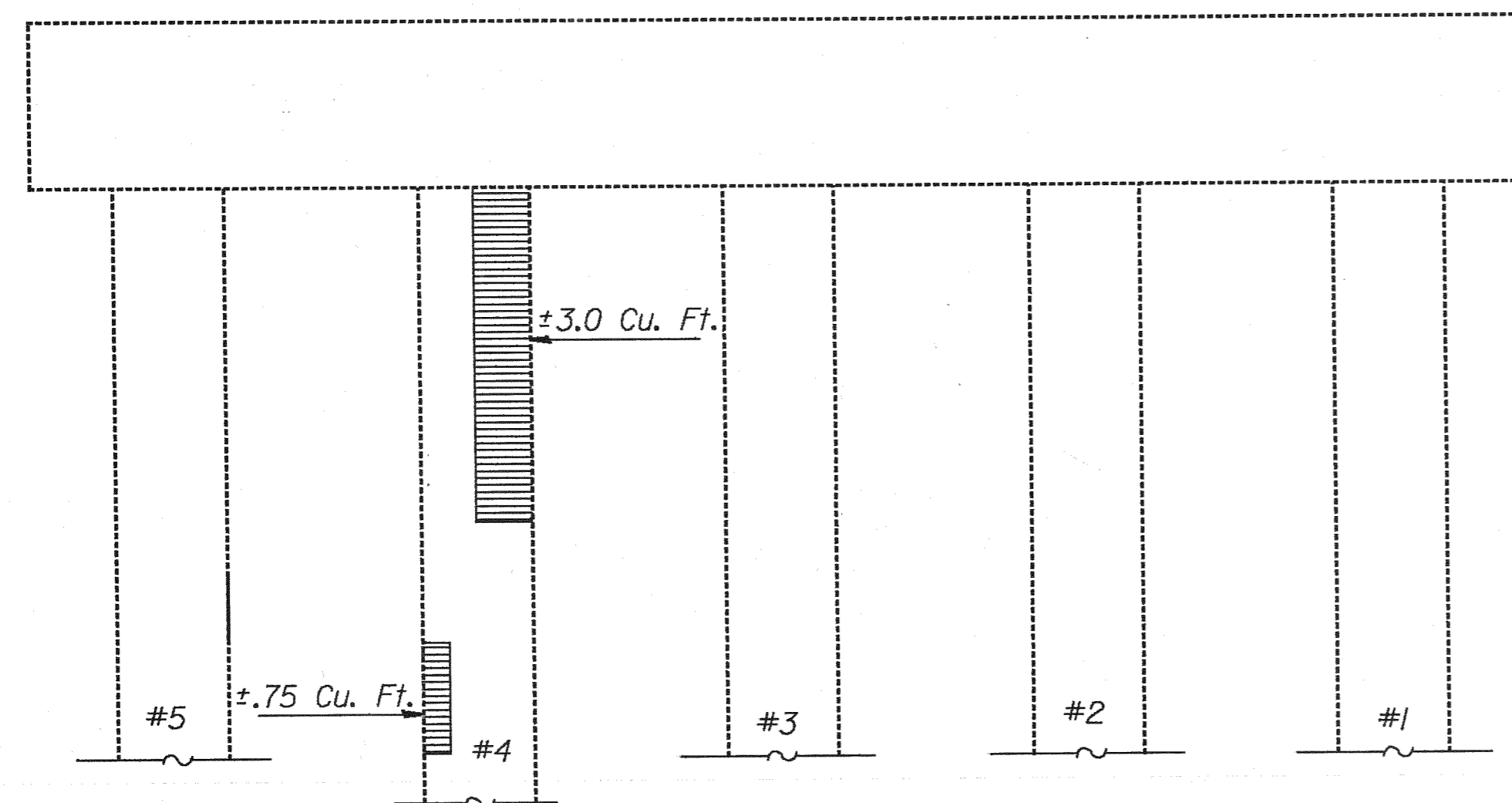
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 33 38 SHEETS
R.S.L. F.A. 786	109BD	LASALLE	68	59	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



**BENT #2 NORTH SIDE**  
(Looking South)



**BENT #3 NORTH SIDE**  
(Looking South)

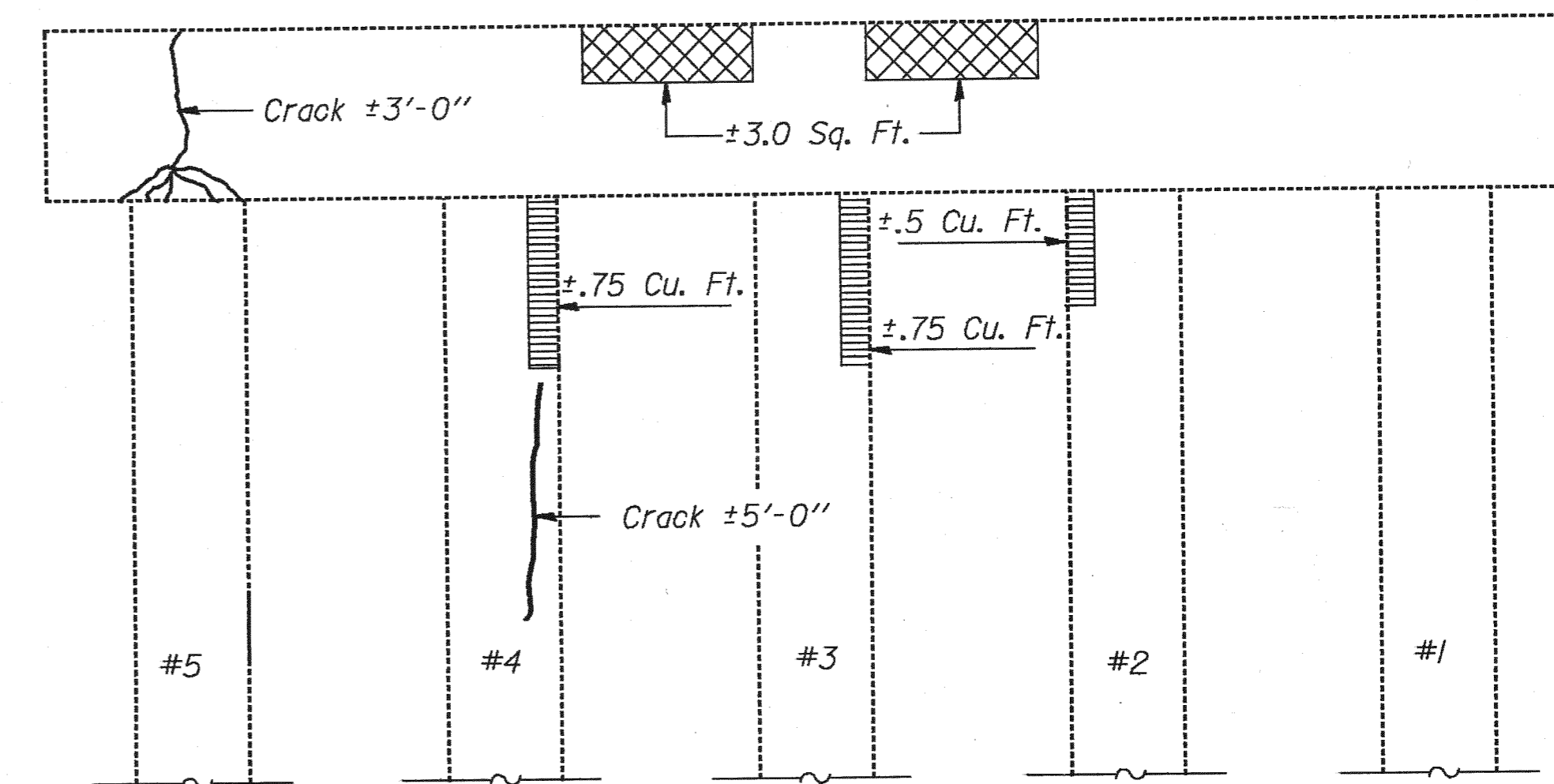


**BENT #2 SOUTH SIDE**  
(Looking North)

**BILL OF MATERIAL  
FOR BOTH BENTS**

Item	Unit	Quantity
Epoxy Mortar Repairs	Cu. Ft.	10.75
Repair Concrete Structures	Sq. Ft.	16.0
Epoxy Crack Sealing	Lin. Ft.	11.0

For Repair Detail see sheet #31



**BENT #3 SOUTH SIDE**  
(Looking North)

▬ "Epoxy Crack Sealing"

▬ "Epoxy Mortar Repairs"  
Quantity based on 3" average depth.

▬ "Repair Concrete Structures"

"Epoxy Mortar Repairs" = ±6.0 Cu. Ft.  
"Repair Concrete Structures" = ±15.0 Sq. Ft.  
"Epoxy Crack Sealing" = ±11.0 Lin. Ft.

**REPAIRS AT BENTS #2 AND #3**  
**F.A. RTE. 786 SEC. 109B-D**  
**LA SALLE COUNTY**  
**STA. 79+05.00**

DESIGNED	
CHECKED	
DRAWN	Mercado JRS
CHECKED	

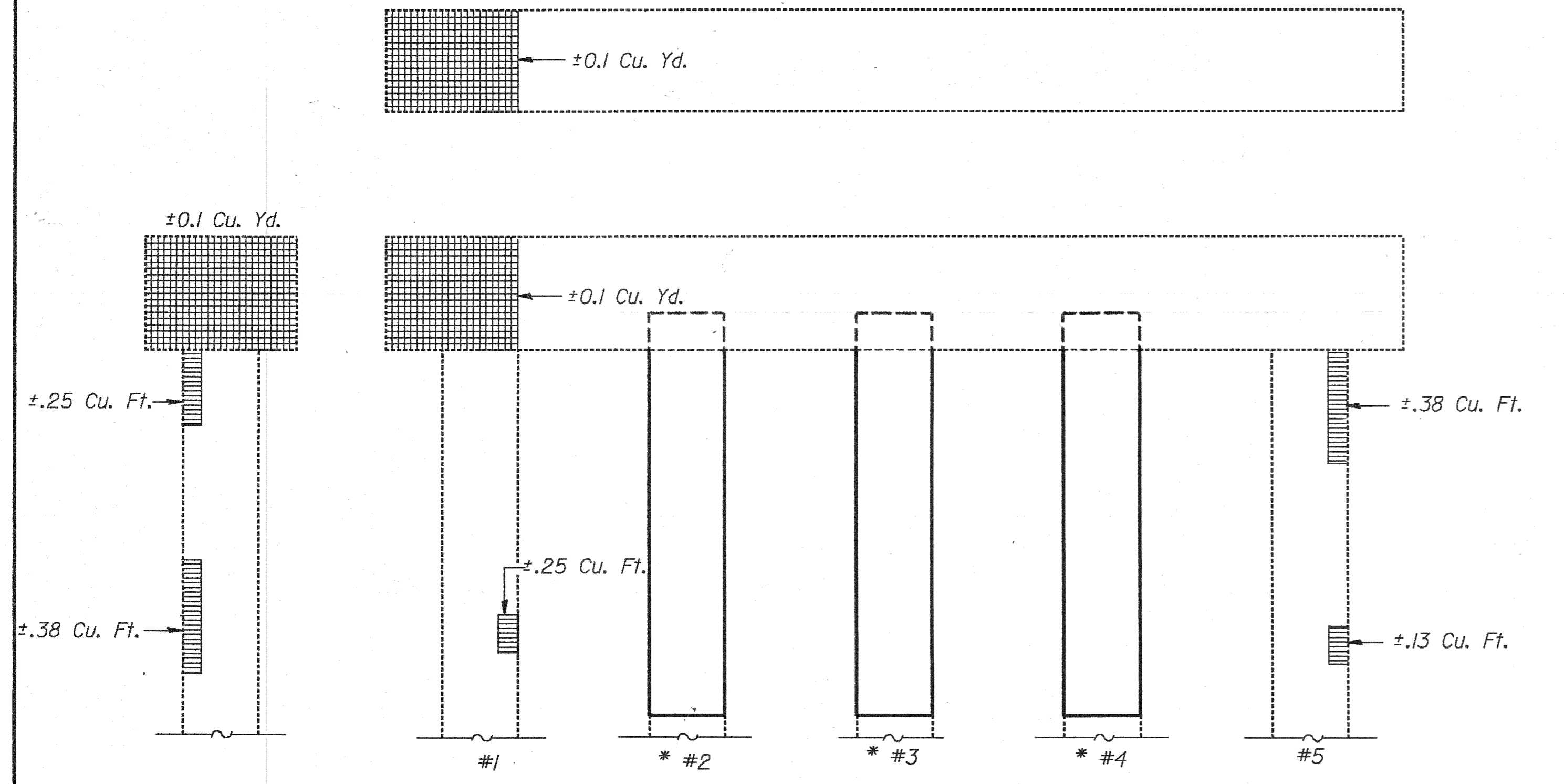
EXAMINED	<i>Draj O. Kaspar</i> ENGINEER OF BRIDGE DESIGN
PASSED	<i>James J. Kuyburt</i> ENGINEER OF BRIDGES AND STRUCTURES
APPROVED	DIRECTOR OF HIGHWAYS

"Epoxy Mortar Repairs" = ±4.75 Cu. Ft.  
"Repair Concrete Structures" = ±1.0 Sq. Ft.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A. 786	109B-D	LASALLE	68	60
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

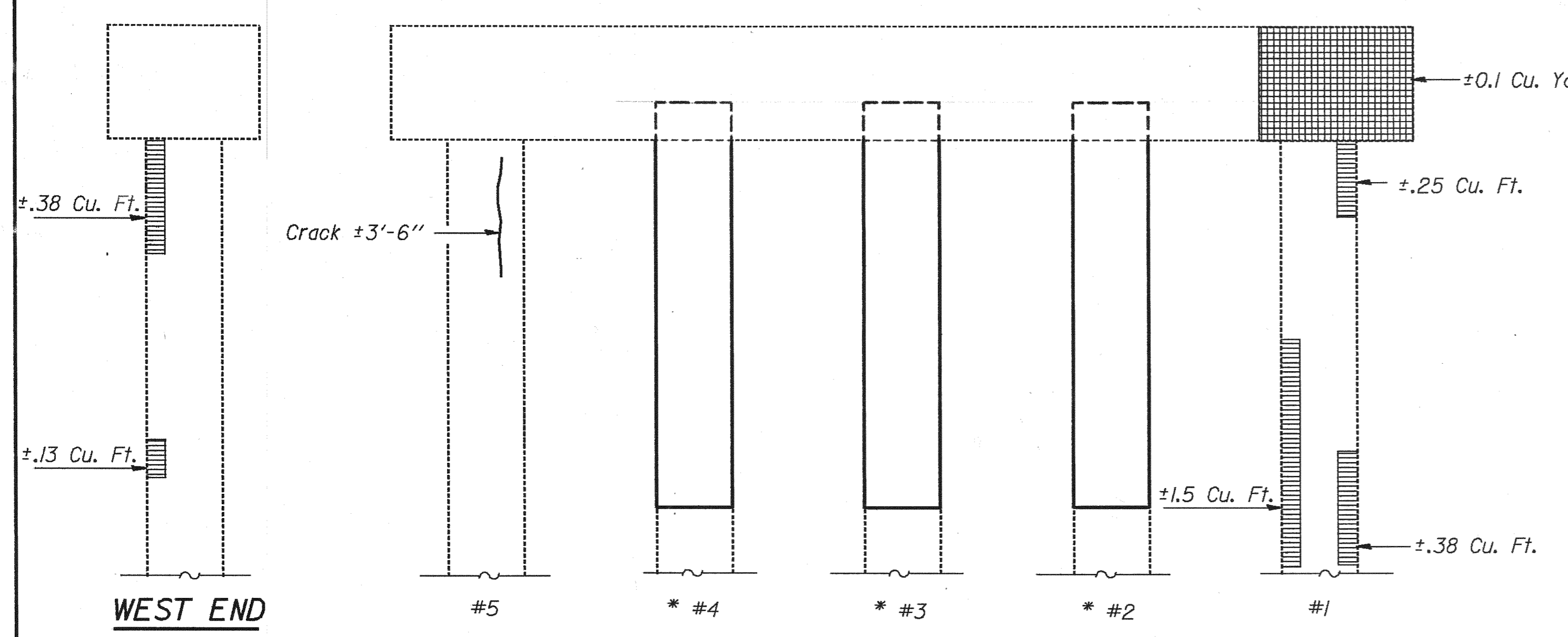
SHEET NO. 34  
38 SHEETS



EAST END

**BENT #4 NORTH SIDE**  
(Looking South)

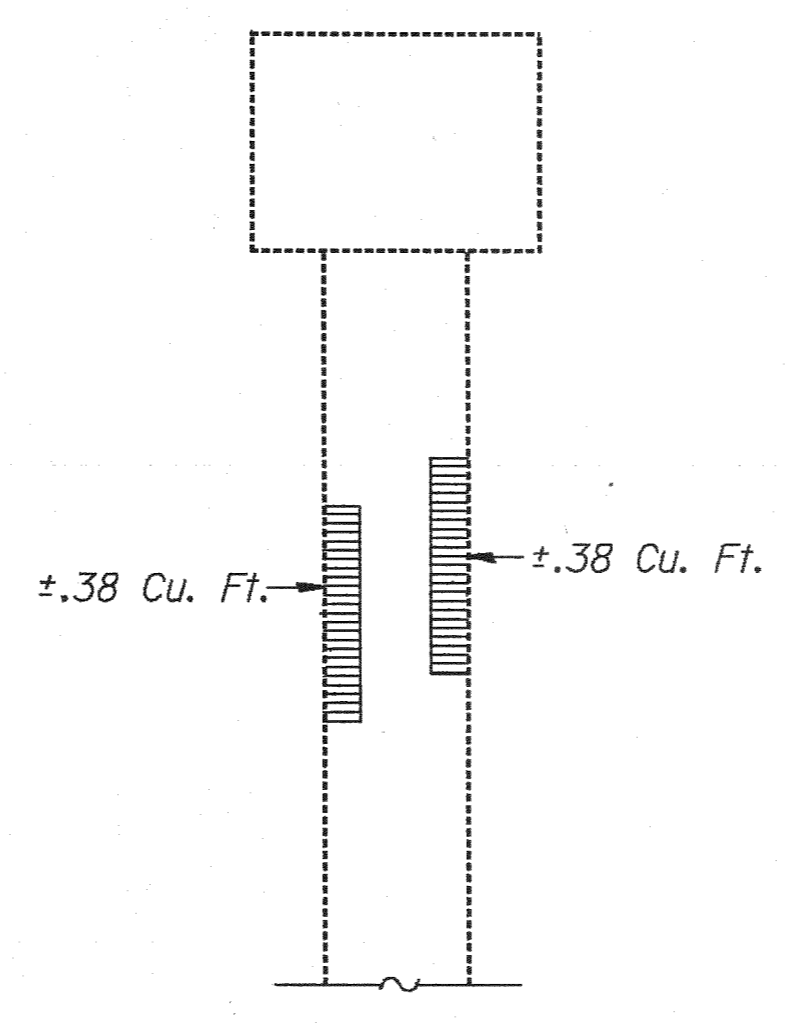
\* For details of concrete pile replacement see sheet #36.



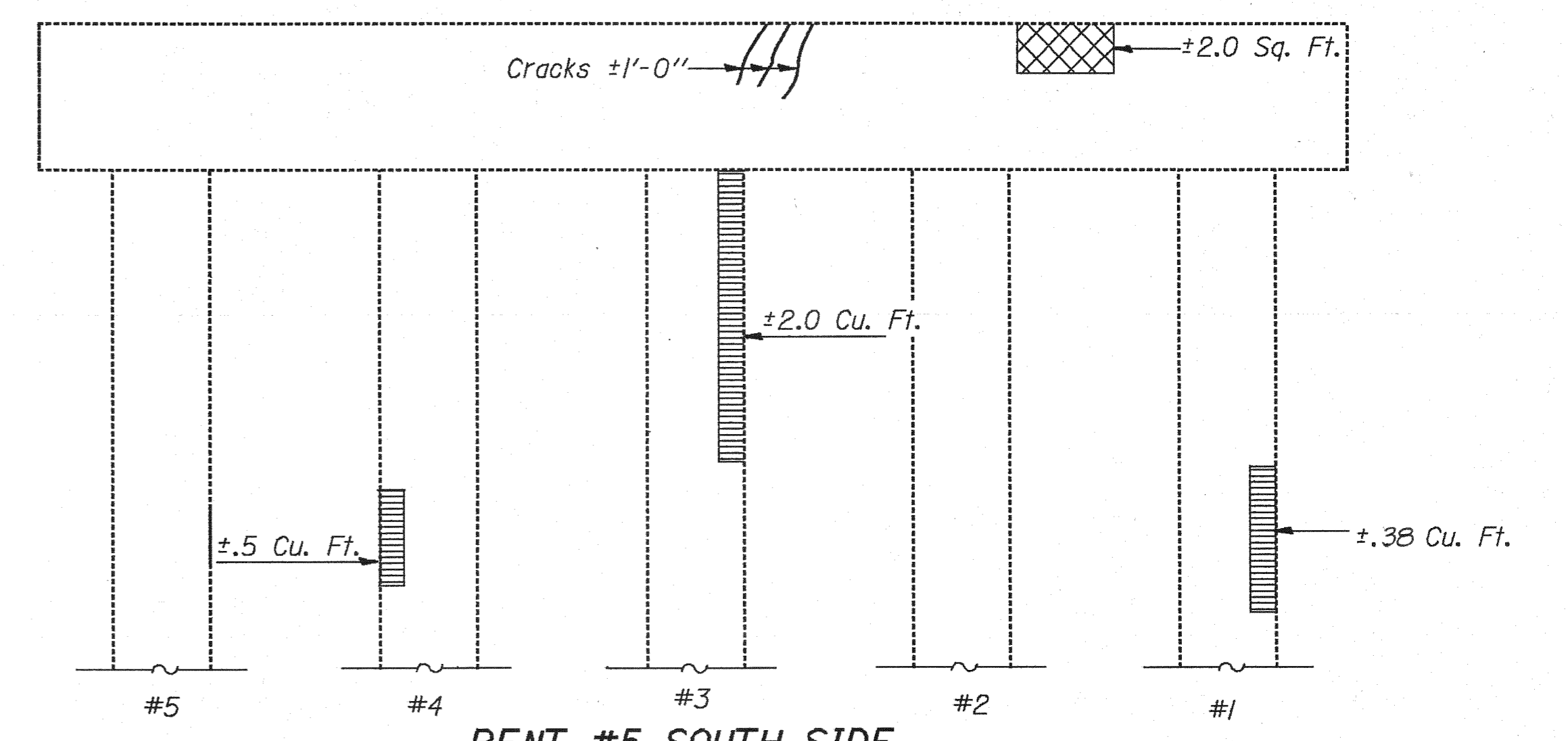
WEST END

**BENT #4 SOUTH SIDE**  
(Looking North)

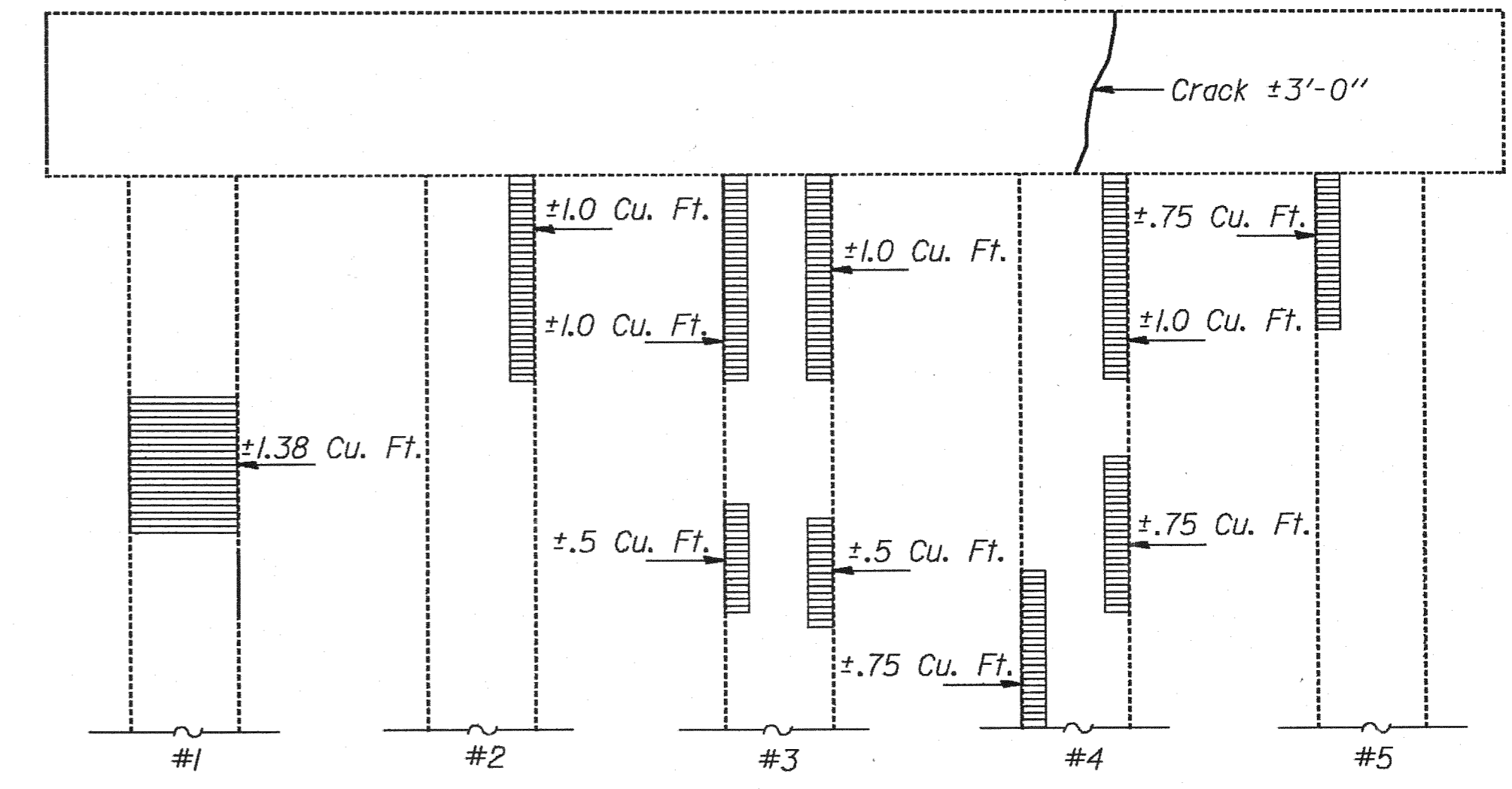
"Epoxy Mortar Repairs" = ±4.03 Cu. Ft.  
"Class X Concrete" = ±2.6 Cu. Yd.  
"Epoxy Crack Sealing" = ±3.5 Lin. Ft.  
"Concrete Removal" = ±2.6 Cu. Yd.  
"Reinforcement Bars" = ±780 Pounds  
"Temporary Support System" = 3 Each



EAST END



**BENT #5 SOUTH SIDE**  
(Looking North)



**BENT #5 NORTH SIDE**  
(Looking South)

"Epoxy Mortar Repairs" = ±12.27 Cu. Ft.  
"Repair Concrete Structures" = ±2.0 Sq. Ft.  
"Epoxy Crack Sealing" = ±6.0 Lin. Ft.

**BILL OF MATERIAL  
FOR BOTH BENTS**

Item	Unit	Quantity
Epoxy Mortar Repairs	Cu. Ft.	16.3
Repair Concrete Structures	Sq. Ft.	2.0
Epoxy Crack Sealing	Lin. Ft.	9.5
Class X Concrete	Cu. Yd.	2.6
Concrete Removal	Cu. Yd.	2.6
Reinforcement Bars	Pound	780
Temporary Support System	Each	3

For Repair Detail see sheet #31.

**REPAIRS AT BENTS #4 AND #5**  
**F.A. RTE. 786 SEC. 109B-D**  
**LA SALLE COUNTY**  
**STA. 79+05.00**

DESIGNED	
CHECKED	
DRAWN	Mercado JRS
CHECKED	

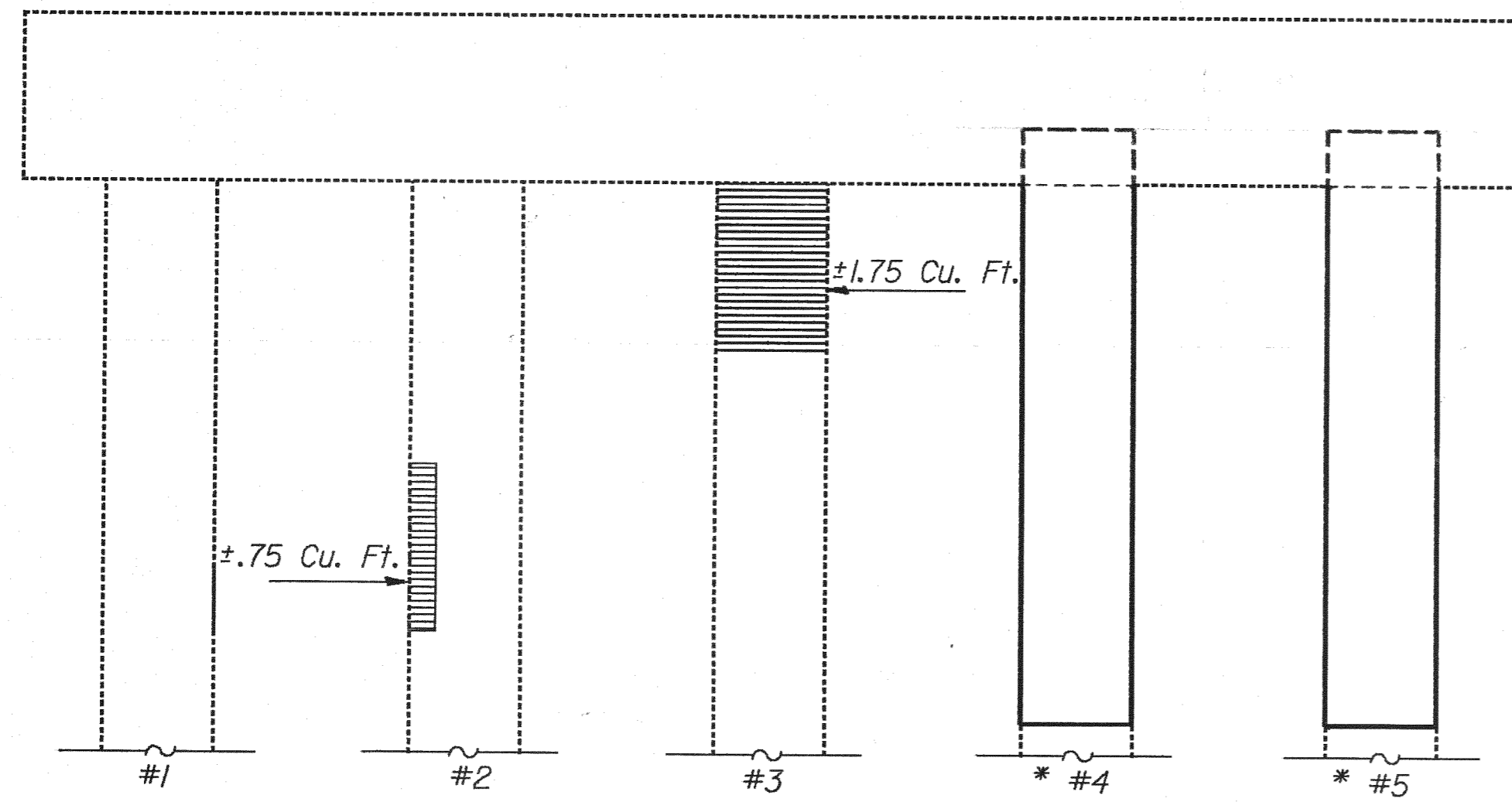
EXAMINED	<i>Draj D. Kaspar</i> ENGINEER OF PORTAGE DESIGN
PASSED	<i>James J. Kuhn</i> ENGINEER OF BRIDGE AND STRUCTURES
APPROVED	DIRECTOR OF HIGHWAYS

- "Epoxy Crack Sealing"
- "Epoxy Mortar Repairs"  
Quantity based on 3" average depth.
- "Repair Concrete Structures"
- "Concrete Removal" and "Class X Concrete" replacement. Quantity based on 4" average depth.

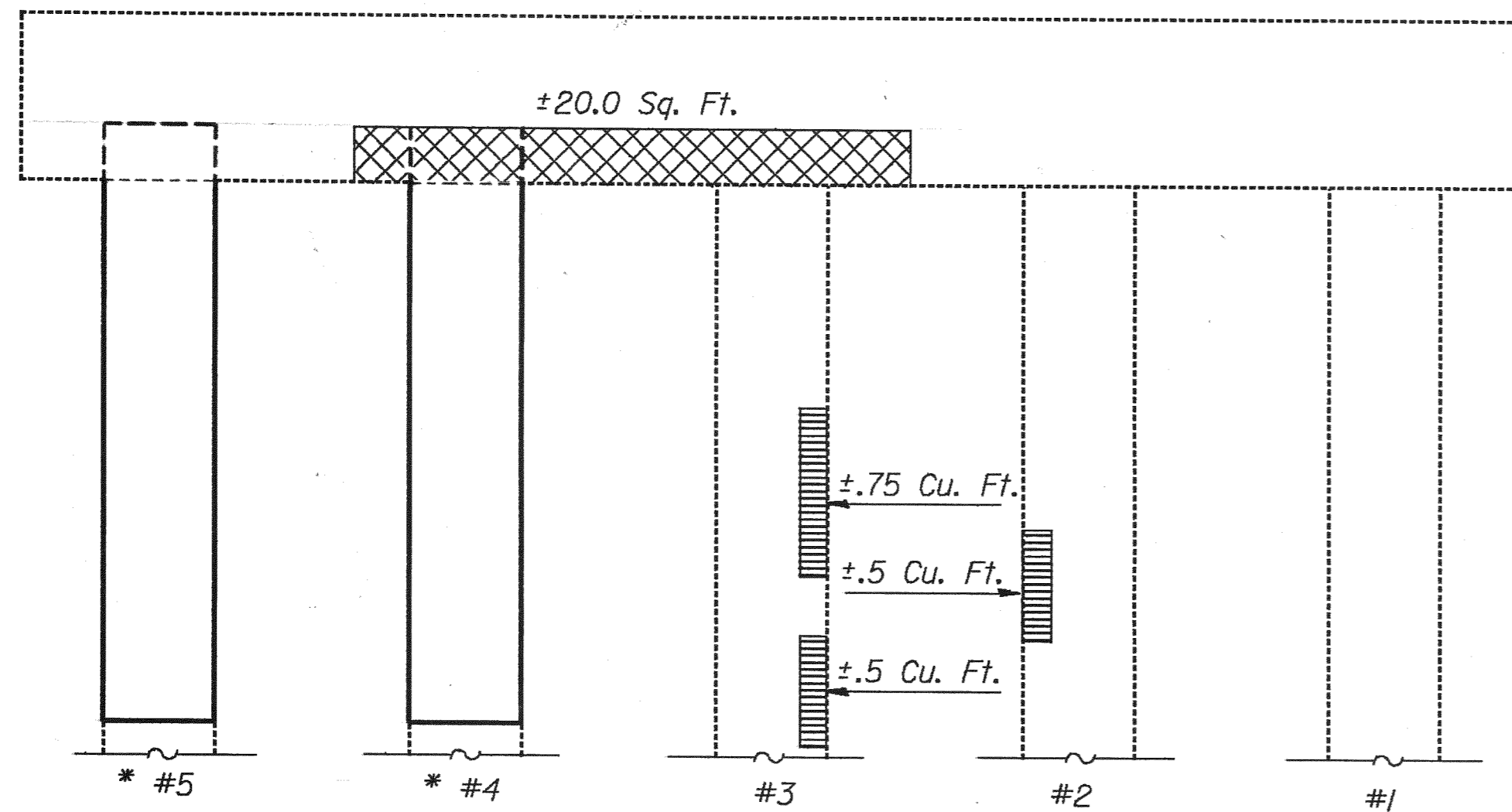
\* For details of concrete pile replacement see sheet #36.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STREET	SHEET NO.	SHEET NO. 35 38 SHEETS
F.A. 786	109B-D	LASALLE	68	61	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



**BENT # 6 NORTH SIDE**  
(Looking South)



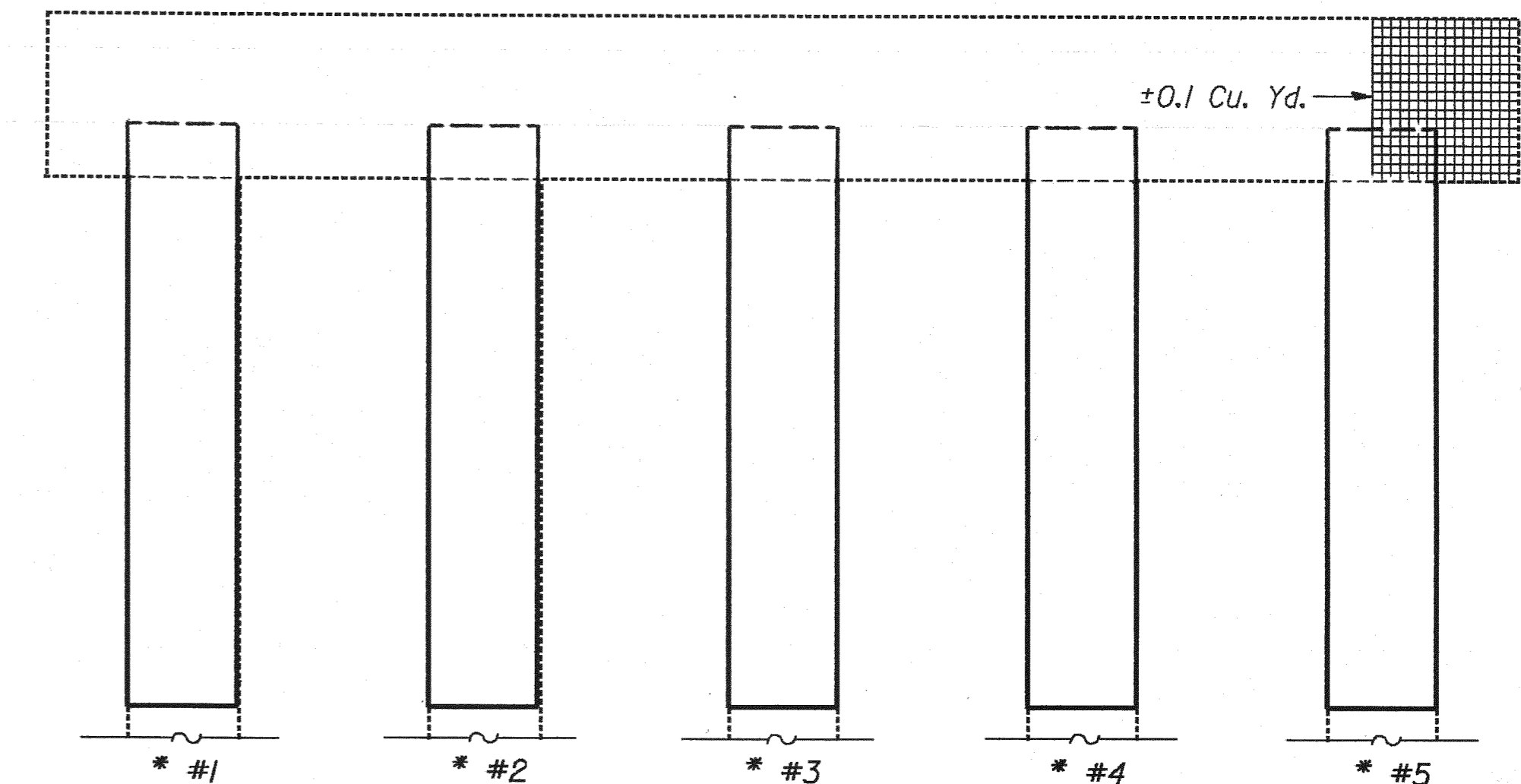
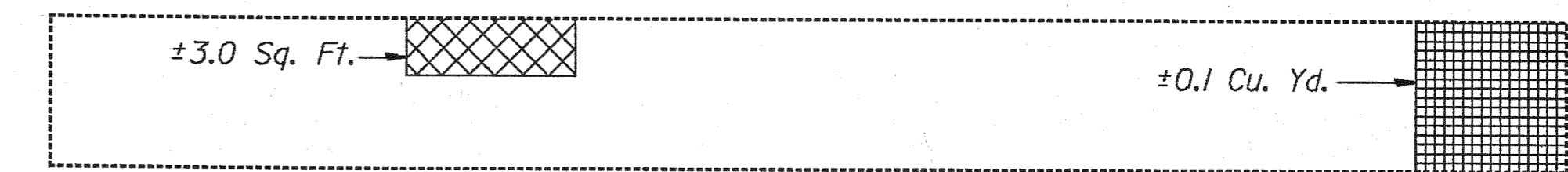
**BENT # 6 SOUTH SIDE**  
(Looking North)

"Epoxy Mortar Repairs" = ±4.25 Cu. Ft.  
"Class X Concrete" = ±1.4 Cu. Yd.  
"Repair Concrete Structure" = ±20.0 Sq. Ft.  
"Concrete Removal" = ±1.4 Cu. Yd.  
"Reinforcement Bars" = ±520 Pounds  
"Temporary Support System" = 2 Each

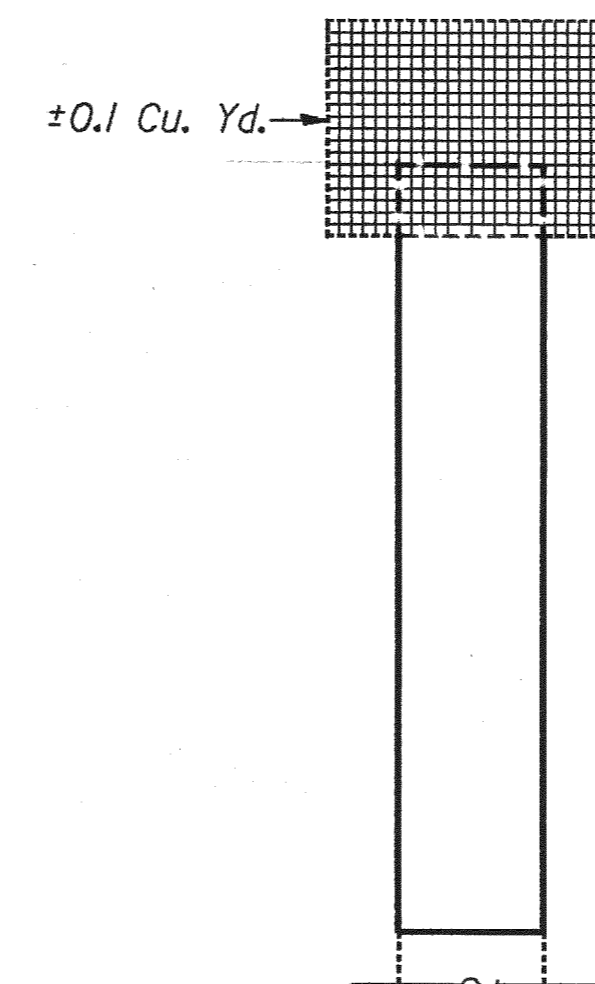
"Epoxy Mortar Repairs"  
Quantity based on 3" average depth.

"Repair Concrete Structures"

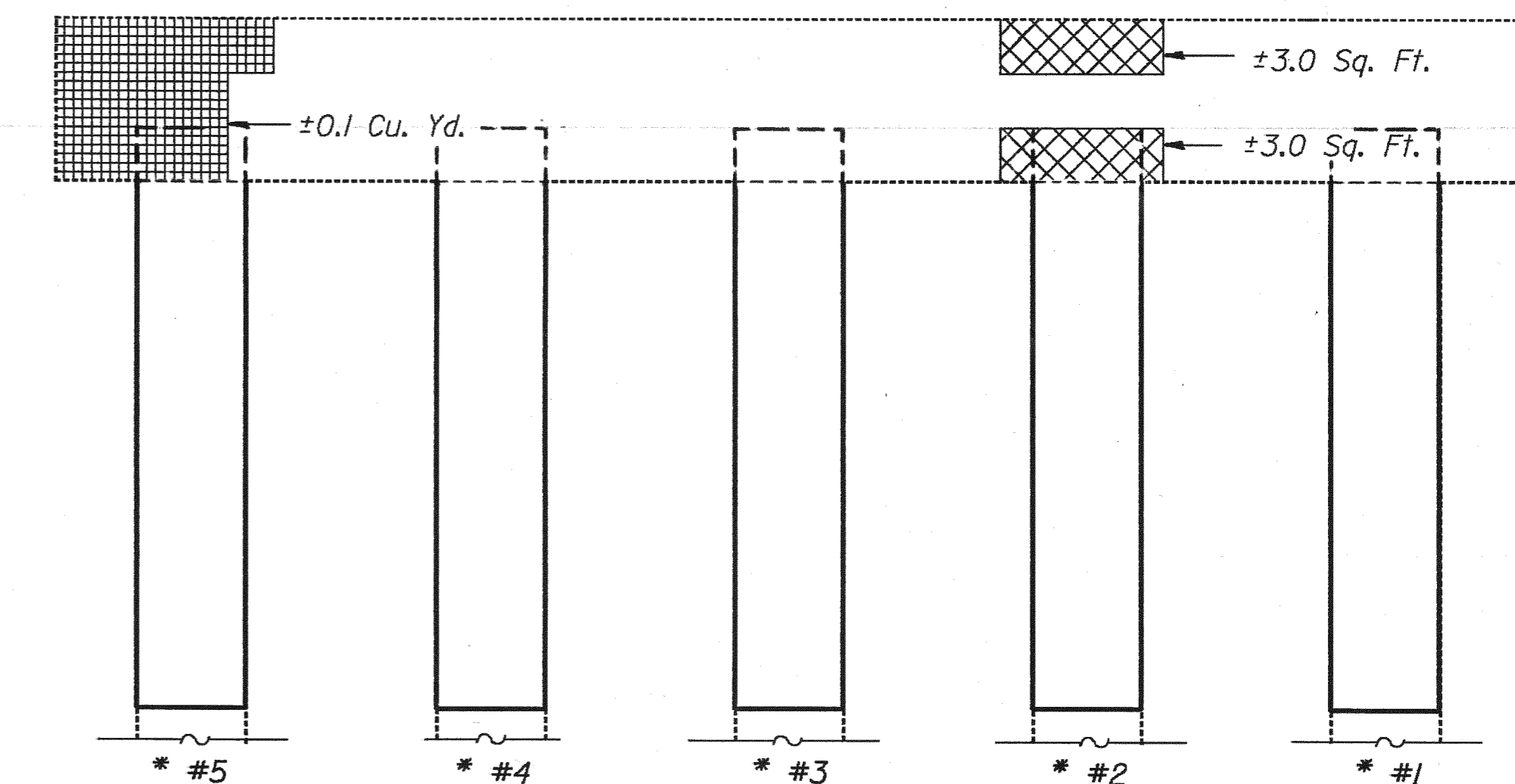
"Concrete Removal" and "Class X Concrete" replacement. Quantity based on 4" average depth.



**BENT # 7 NORTH SIDE**  
(Looking South)



**WEST END**



**BENT # 7 SOUTH SIDE**  
(Looking North)

"Class X Concrete" = ±3.9 Cu. Yd.  
"Repair Concrete Structure" = ±9.0 Sq. Ft.  
"Concrete Removal" = ±3.9 Cu. Yd.  
"Reinforcement Bars" = ±1500 Pounds  
"Temporary Support System" = 5 Each  
"Expansion Bolts" = 20 Each

**BILL OF MATERIAL  
FOR BOTH BENTS**

Item	Unit	Quantity
Epoxy Mortar Repairs	Cu. Ft.	4.3
Repair Concrete Structures	Sq. Ft.	29.0
Class X Concrete	Cu. Yd.	5.3
Concrete Removal	Cu. Yd.	5.3
Reinforcement Bars	Pound	1820
Temporary Support System	Each	7

For Repair Detail see sheet #31.

DESIGNED	
CHECKED	
DRAWN	Mercado JRS
CHECKED	

EXAMINED	<i>Draj J. Kaspar</i> ENGINEER OF BRIDGE DESIGN
PASSED	<i>James J. Rayburn</i> ENGINEER OF BRIDGE AND STRUCTURES
APPROVED	

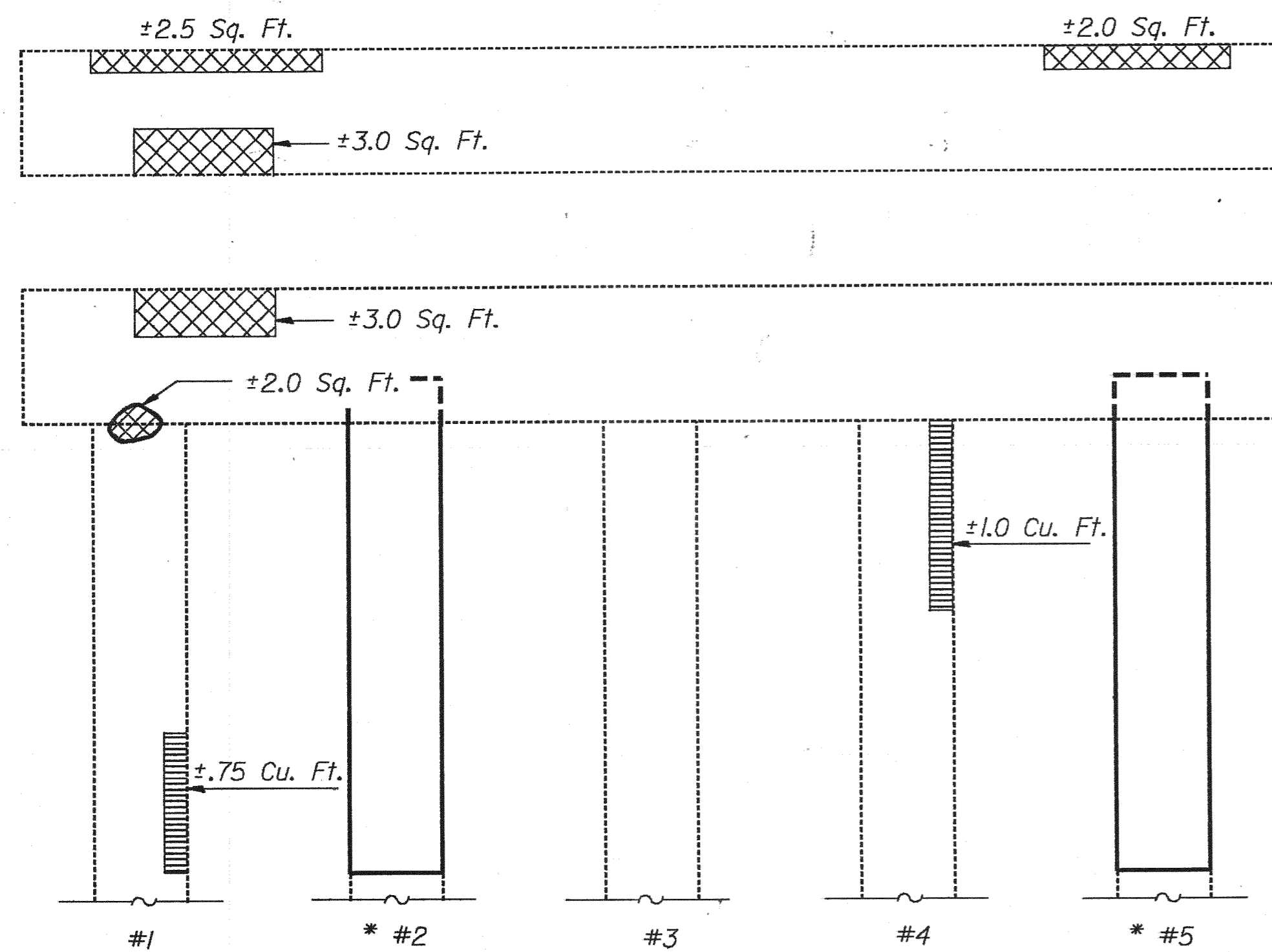
19

DIRECTOR OF HIGHWAYS

**REPAIRS AT BENT # 6 AND BENT # 7**  
**F.A. RTE. 786 SEC. 109B-D**  
**LA SALLE COUNTY**  
**STA. 79+05.00**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

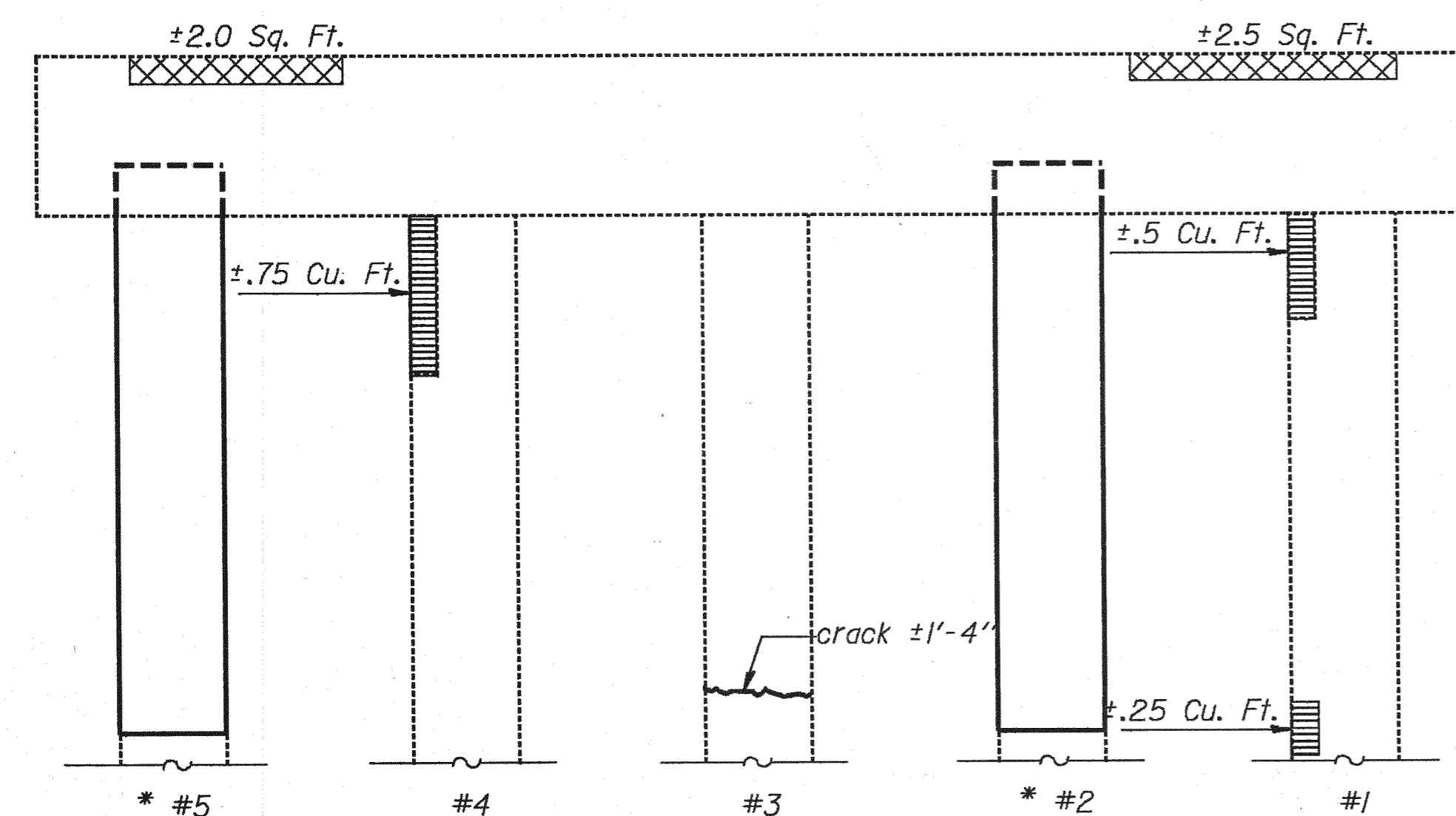
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 36 38 SHEETS
S. R. I.	F. A.				
786	109BD	LASALLE	68	62	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



**BENT # 8 NORTH SIDE**

(Looking South)

\* For concrete pile replacement see details this sheet.



**BENT # 8 SOUTH SIDE**

(Looking North)

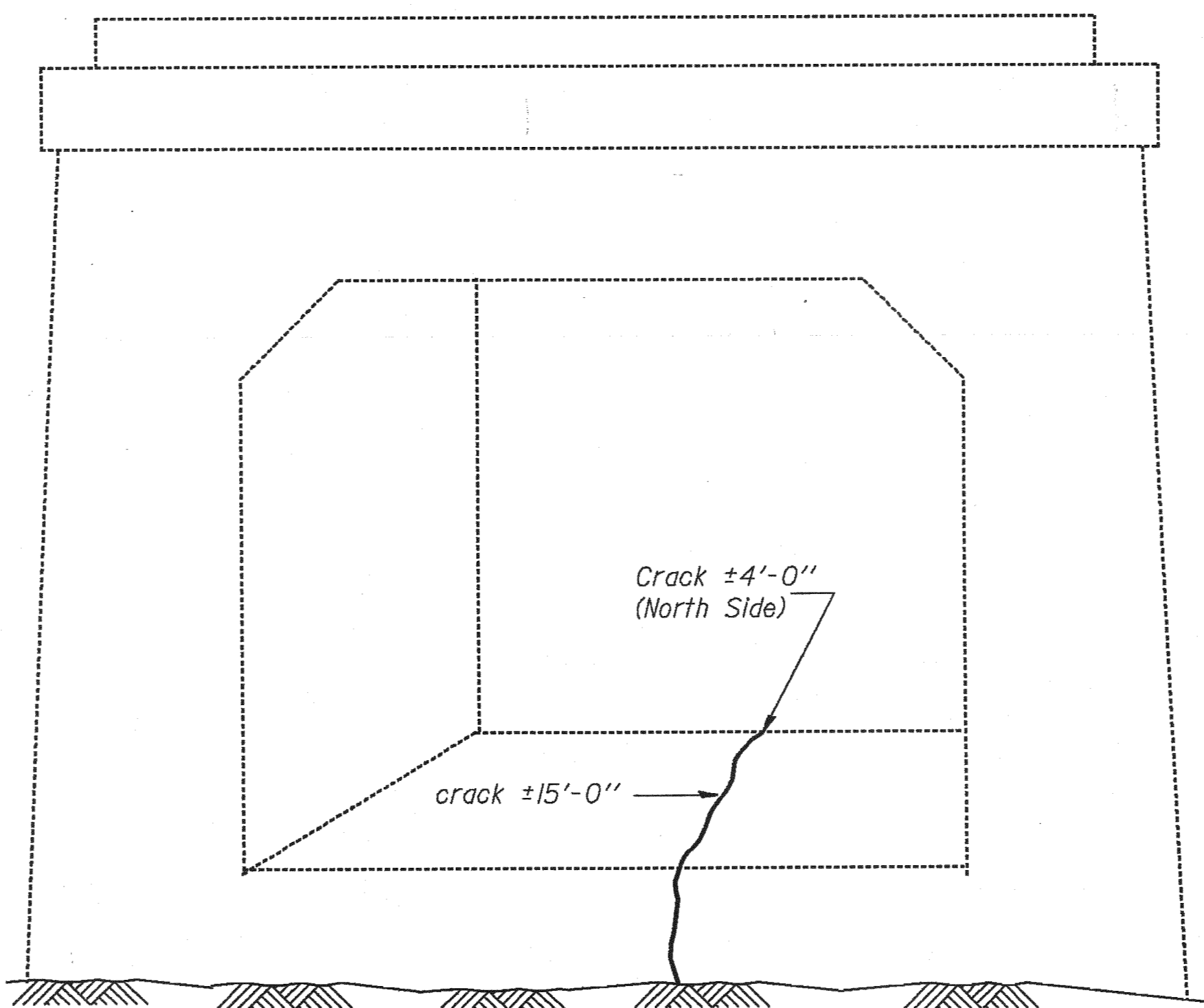
"Epoxy Mortar Repairs" = ±3.25 Cu. Ft.  
 "Class X Concrete" = ±1.4 Cu. Yd.  
 "Epoxy Crack Sealing" = ±1.3 Lin. Ft.  
 "Concrete Removal" = ±1.4 Cu. Yd.  
 "Reinforcement Bars" = ±520 Pounds  
 "Temporary Support System" = 2 Each

"Repair Concrete Structure" = ±17.0 Sq. Ft.

DESIGNED	
CHECKED	
DRAWN	Mercado JRS
CHECKED	

EXAMINED	<i>Dragi O. Kaspar</i>	ENGINEER OF BRIDGE DESIGN
PASSED	<i>James J. Spitzer</i>	ENGINEER OF BRIDGES AND STRUCTURES
APPROVED		DIRECTOR OF HIGHWAYS

- "Epoxy Crack Sealing"
- "Epoxy Mortar Repairs"  
Quantity based on 3" average depth.
- "Repair Concrete Structures"
- "Concrete Removal" and "Class X Concrete" replacement.  
Quantity based on 4" average depth.



**PIER # 1 SOUTH SIDE**

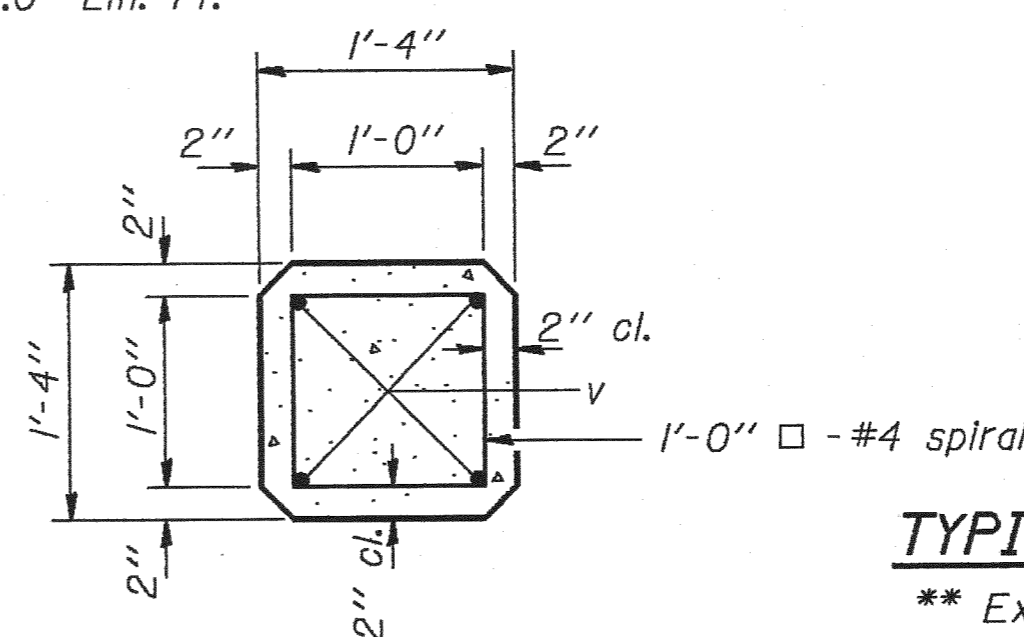
(Looking North)

"Epoxy Crack Sealing" = ±19.0 Lin. Ft.

**BILL OF MATERIAL  
FOR BENT 8 AND PIER 1**

Item	Unit	Quantity
Epoxy Mortar Repairs	Cu. Ft.	3.25
Repair Concrete Structures	Sq. Ft.	17.0
Epoxy Crack Sealing	Lin. Ft.	20.3
Class X Concrete	Cu. Yd.	1.4
Concrete Removal	Cu. Yd.	1.4
Reinforcement Bars	Pound	520
Temporary Support System	Each	2

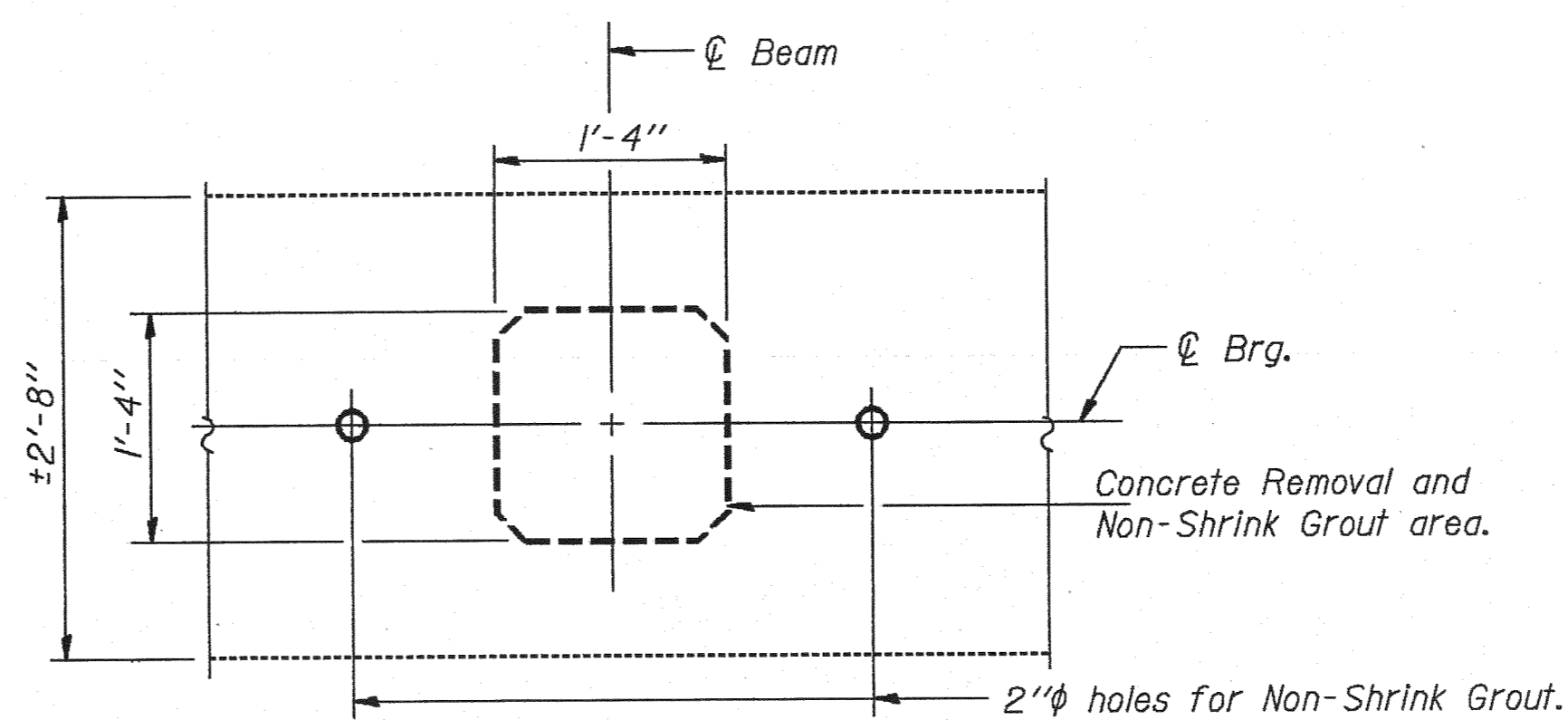
For Repair Detail see sheet #31.



**SECTION A-A**

**TYPICAL CONCRETE PILE REPLACEMENT DETAIL**

\*\* Extend Concrete Removal and Class X Concrete replacement of pile to where existing reinforcement has less than 10% cross sectional loss.  
 No more than one pile at a time shall be replaced on any one pile bent.



**VIEW B-B**

**\*\*\* TYP. BILL OF MATERIAL  
FOR ONE PILE REPLACEMENT**

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	0.7
Class X Concrete	Cu. Yd.	0.7
Reinforcement Bars	Pound	260
Temporary Support System	Each	1

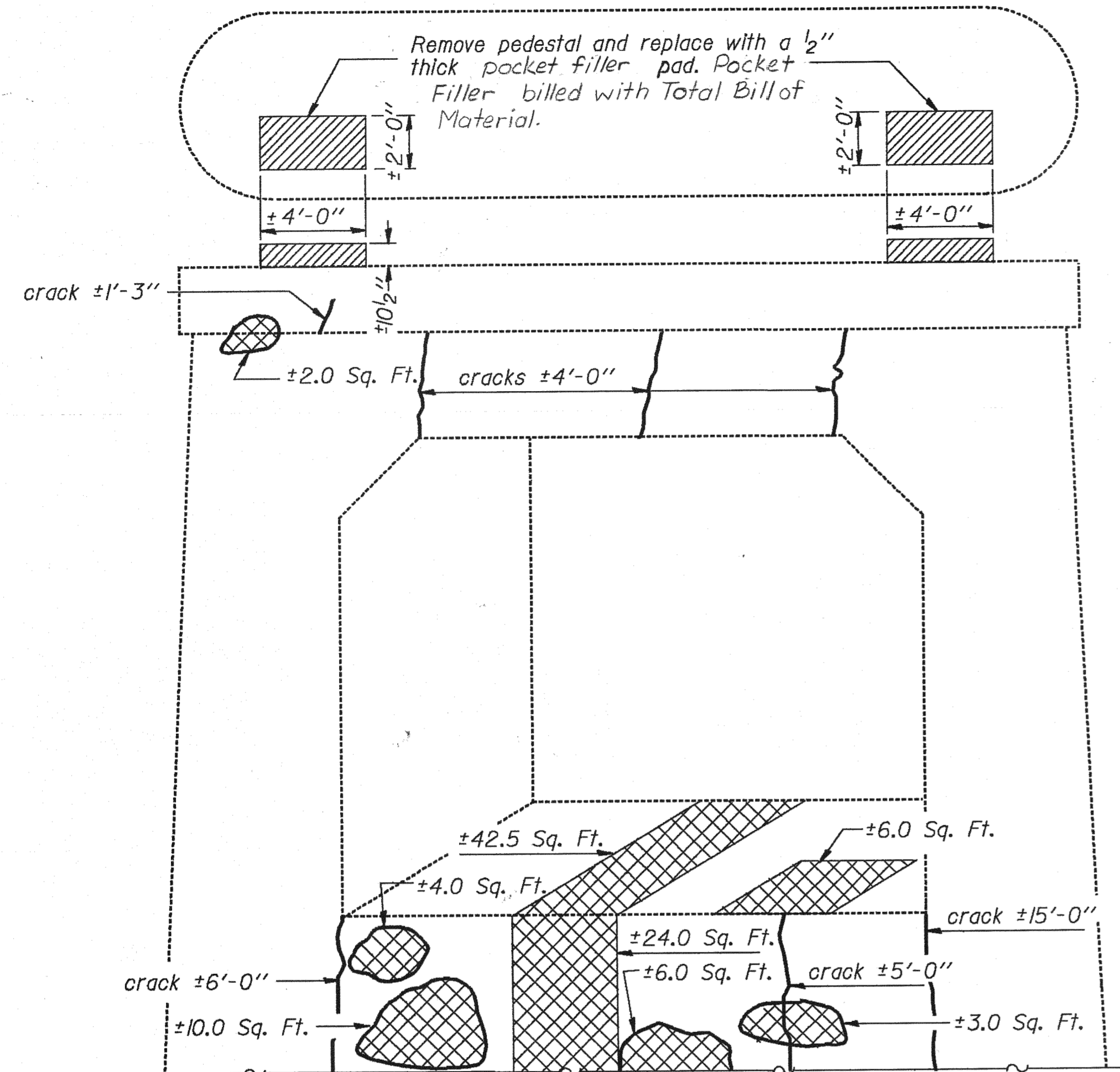
\*\*\* Total of these quantities are included in the Bill of Materials for Bents 4, 6, 7 and 8.

\*\*\*\* Weight includes spacers for spiral.  
 \*\*\*\*\* Pile cap shall be supported by use of Temporary Support System. Locate support as close as possible to the pile. Maximum Reaction at each pile is 133 kips.

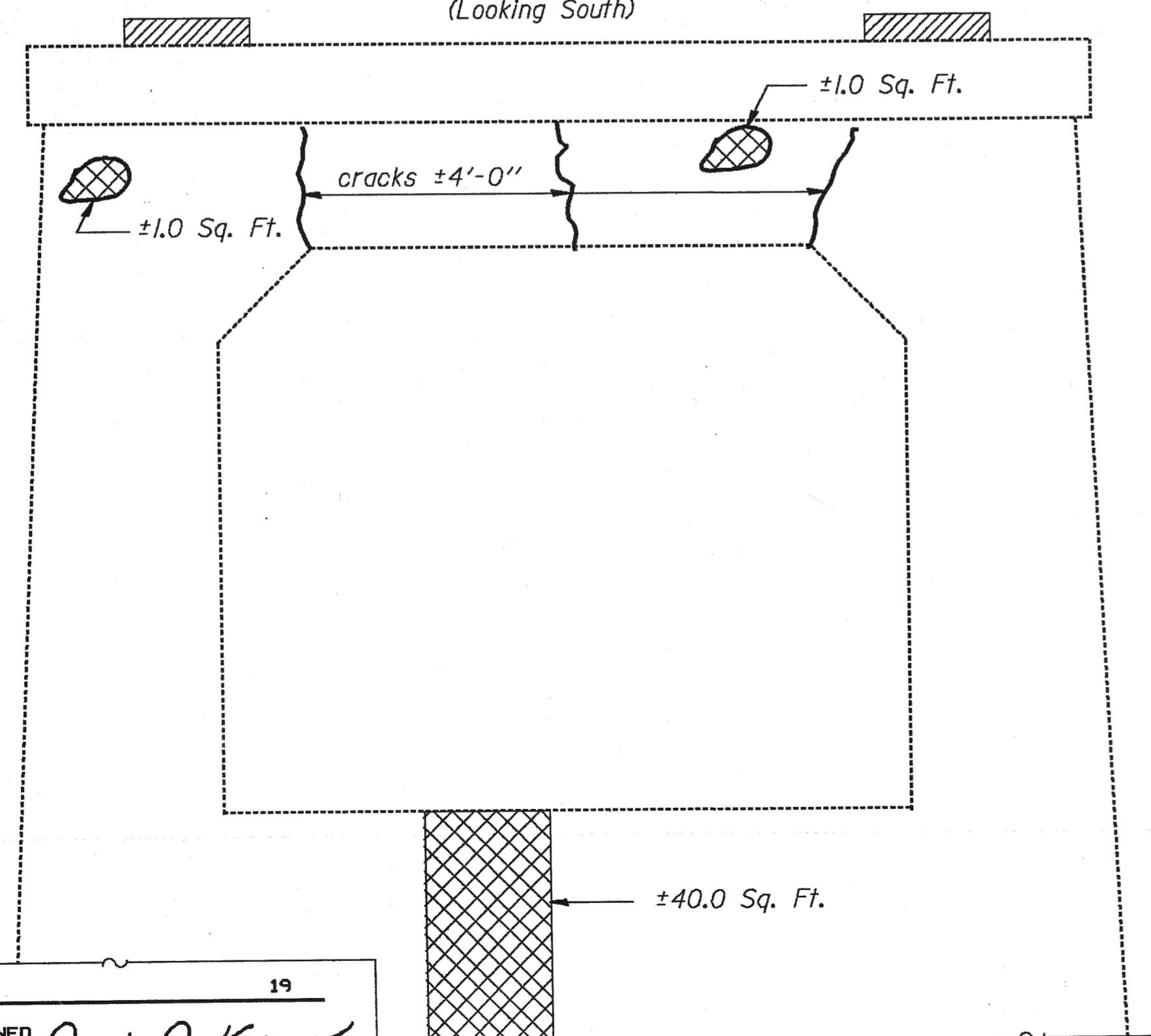
**REPAIRS AT BENT # 8 AND PIER # 1**  
**F.A. RTE. 786 SEC. 109B-D**  
**LA SALLE COUNTY**  
**STA. 79+05.00**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 37
F.A. 786	109BD	LABALLE	68	63	38 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

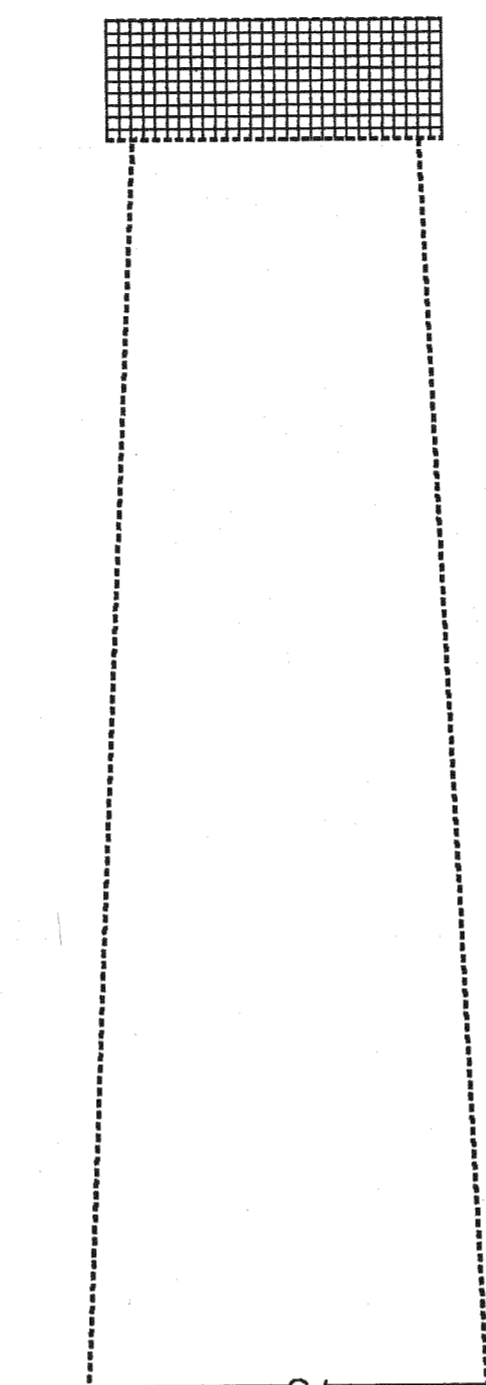


**PIER # 2 NORTH SIDE**  
(Looking South)

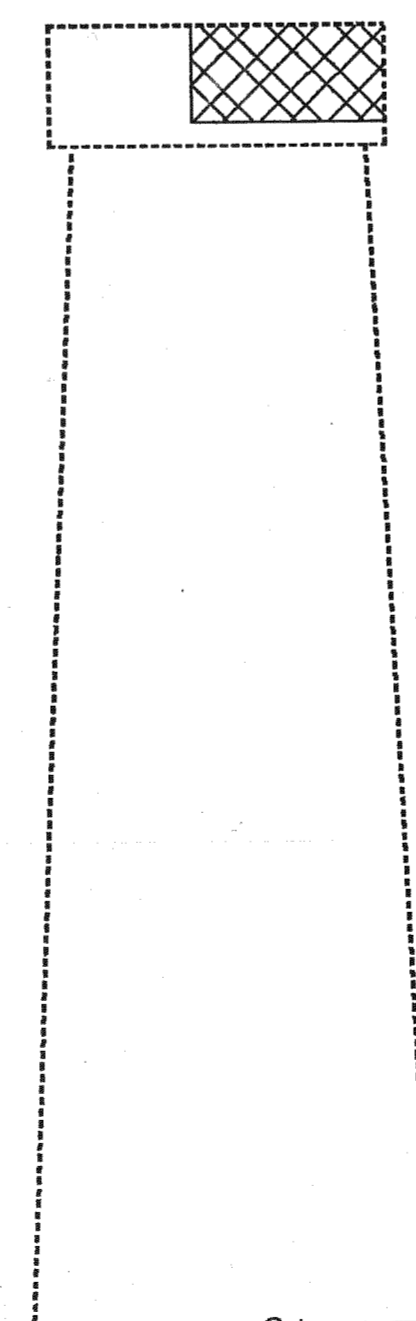


**PIER # 2 SOUTH SIDE**  
(Looking North)

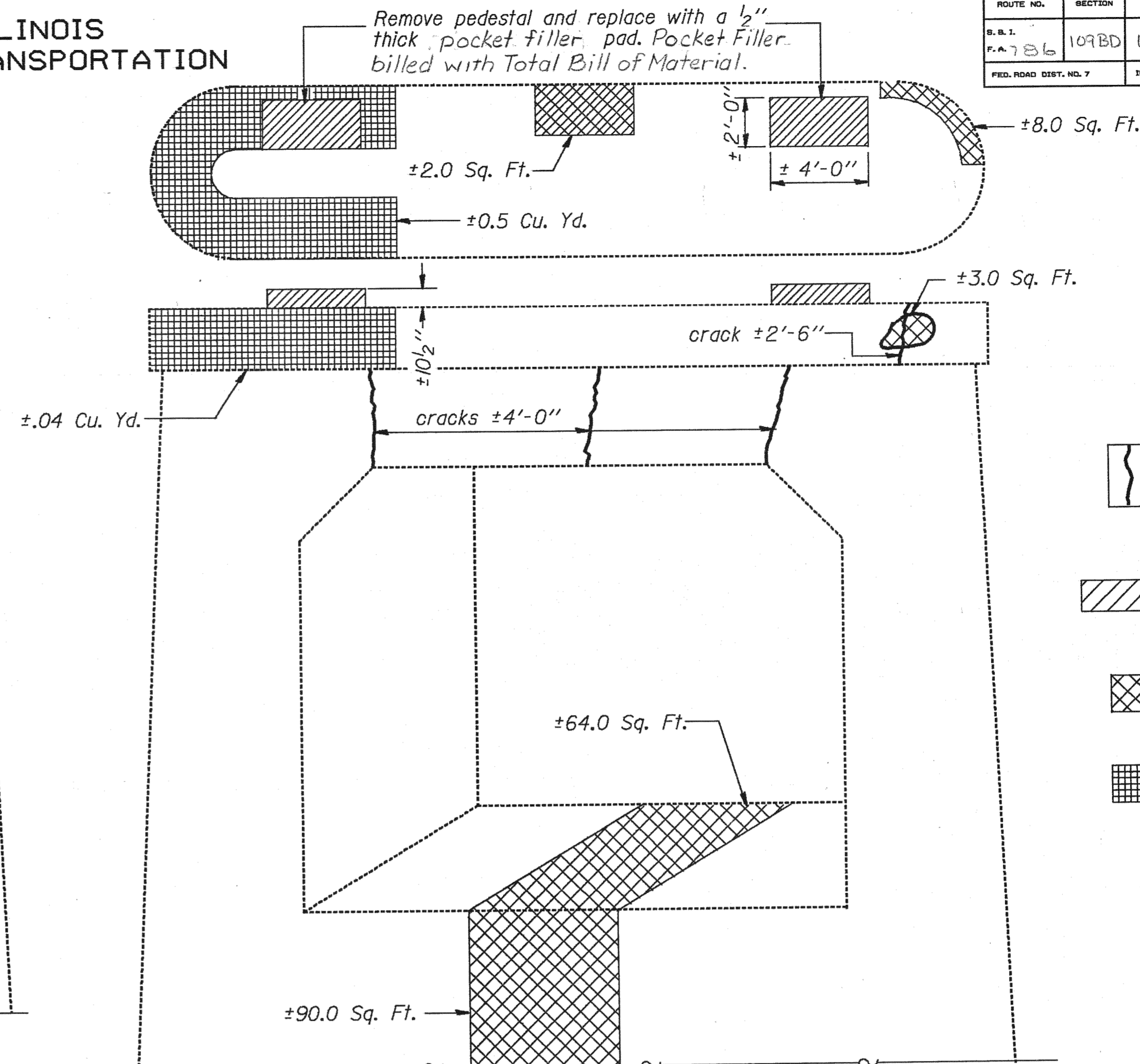
"Repair Concrete Structures" = ±139.5 Sq. Ft.  
"Epoxy Crack Sealing" = ±51.25 Lin. Ft.  
"Concrete Removal" = 0.5 Cu. Yds.



**EAST END**

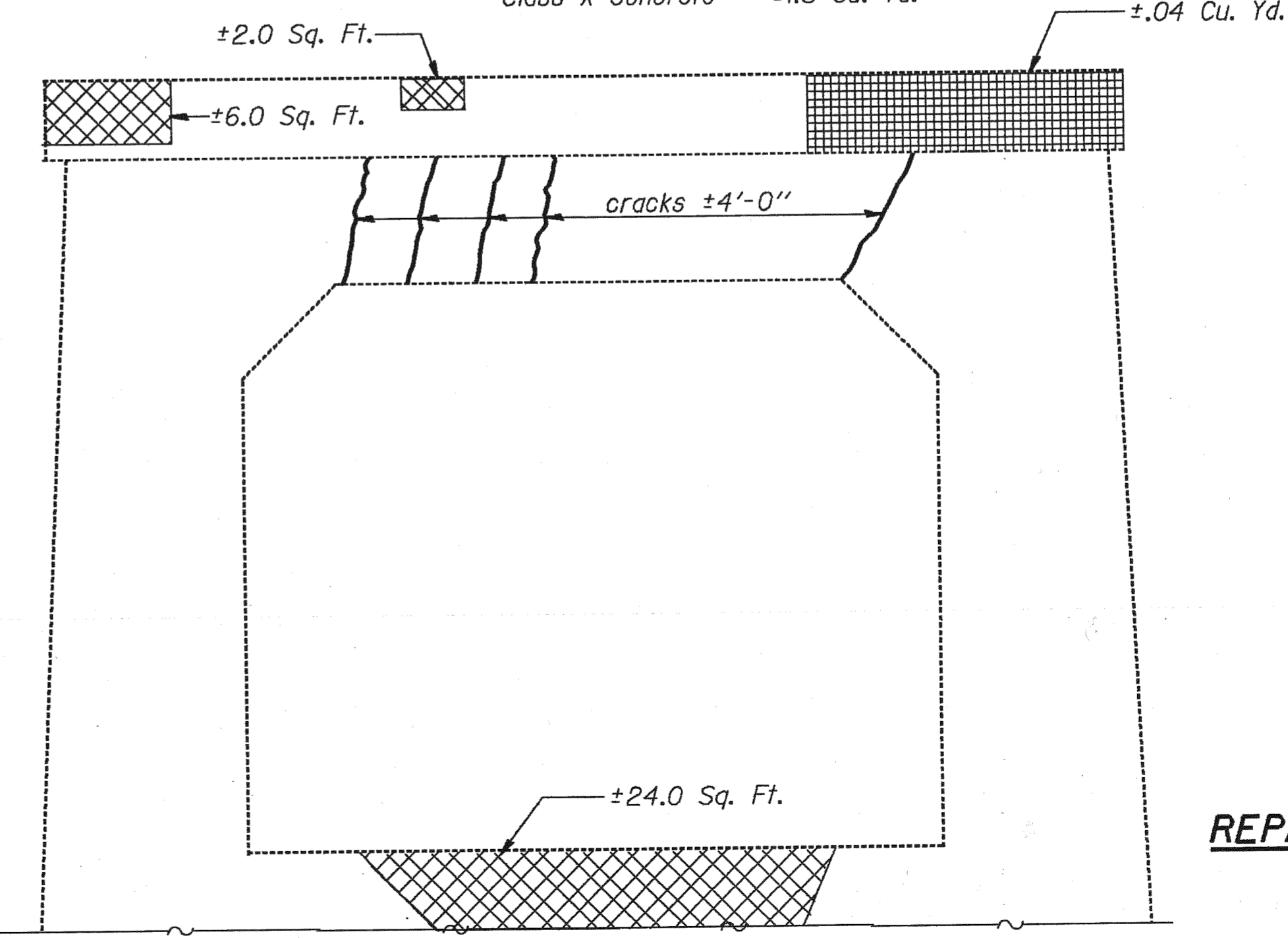


**WEST END**



**PIER # 3 NORTH SIDE**  
(Looking South)

"Repair Concrete Structures" = ±199.0 Sq. Ft.  
"Epoxy Crack Sealing" = ±34.5 Lin. Ft.  
"Concrete Removal" = ±1.8 Cu. Yds.  
"Class X Concrete" = ±1.3 Cu. Yd.



**PIER # 3 SOUTH SIDE**  
(Looking North)

- "Epoxy Crack Sealing"
- "Concrete Removal"
- "Repair Concrete Structures"
- "Concrete Removal" and "Class X Concrete" replacement. Quantity based on 4" average depth.

**BILL OF MATERIAL  
FOR PIERS 2 AND 3**

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	2.3
Repair Concrete Structures	Sq. Ft.	338.5
Epoxy Crack Sealing	Lin. Ft.	86.0
Class X Concrete	Cu. Yd.	1.3

For Repair Detail see sheet #31.

**REPAIRS AT PIER # 2 AND PIER # 3**  
F.A. RTE. 786 SEC. 109B-D  
LA SALLE COUNTY  
STA. 79+05.00

DESIGNED	
CHECKED	
DRAWN	Mercado JRS
CHECKED	

EXAMINED	<i>Craig J. Kaspar</i> ENGINEER OF BRIDGE DESIGN
PASSED	<i>James J. Robinson</i> ENGINEER OF BRIDGES AND STRUCTURES
APPROVED	DIRECTOR OF HIGHWAYS

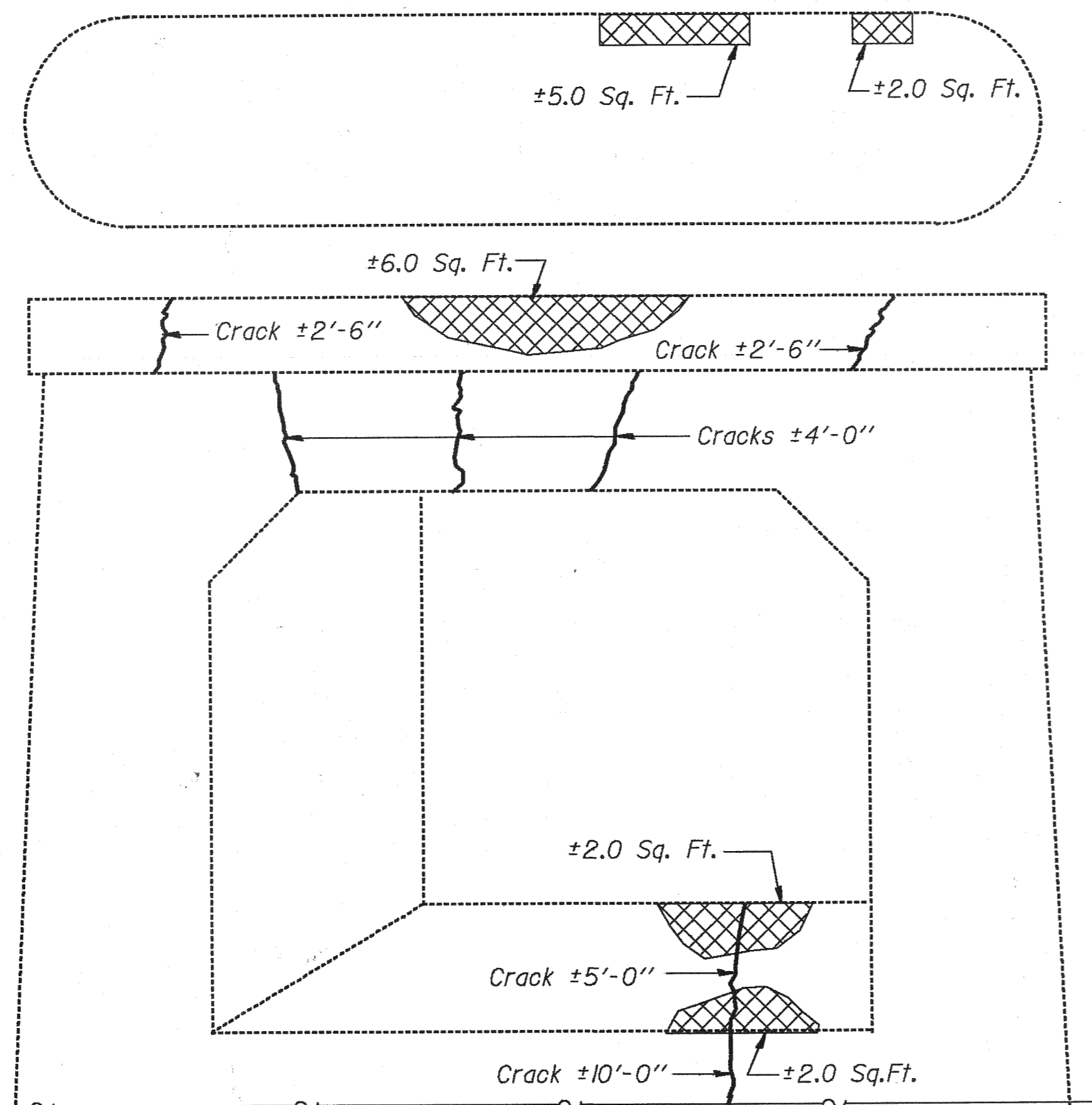
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 38 38 SHEETS
F.A. 786	109BD	LASALLE	68	64	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

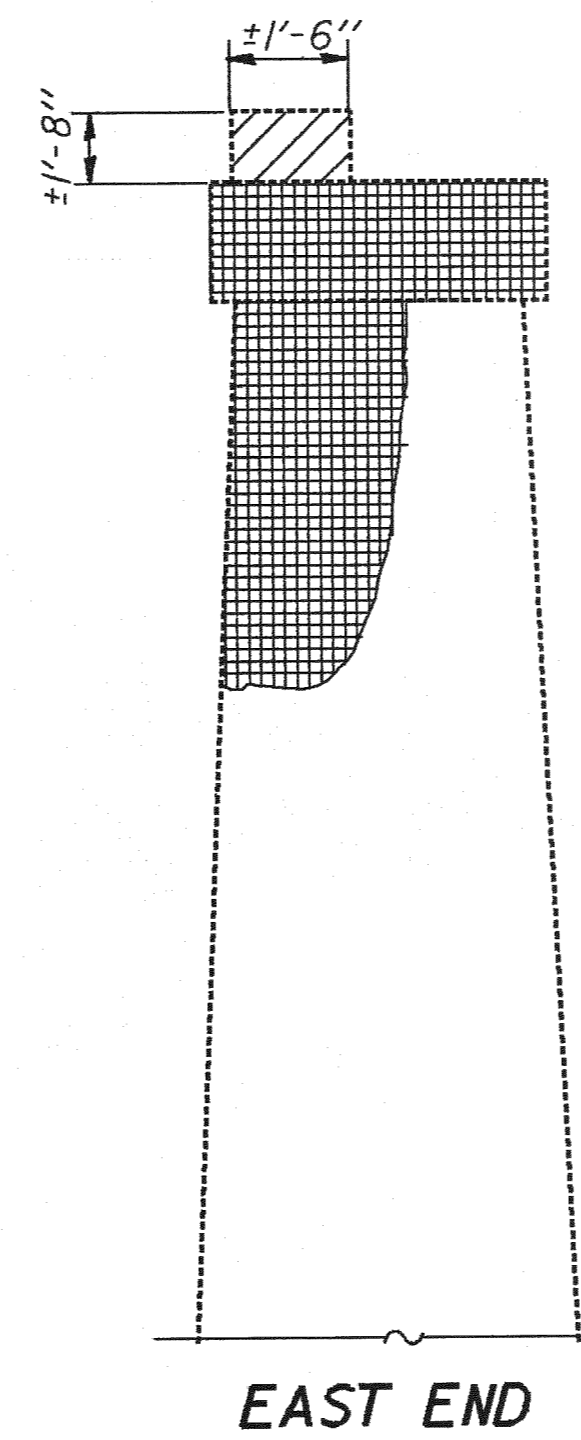
**BILL OF MATERIAL  
FOR PIERS 4 AND 5**

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	4.5
Repair Concrete Structures	Sq. Ft.	196.5
Epoxy Crack Sealing	Lin. Ft.	117.0
Class X Concrete	Cu. Yd.	2.2

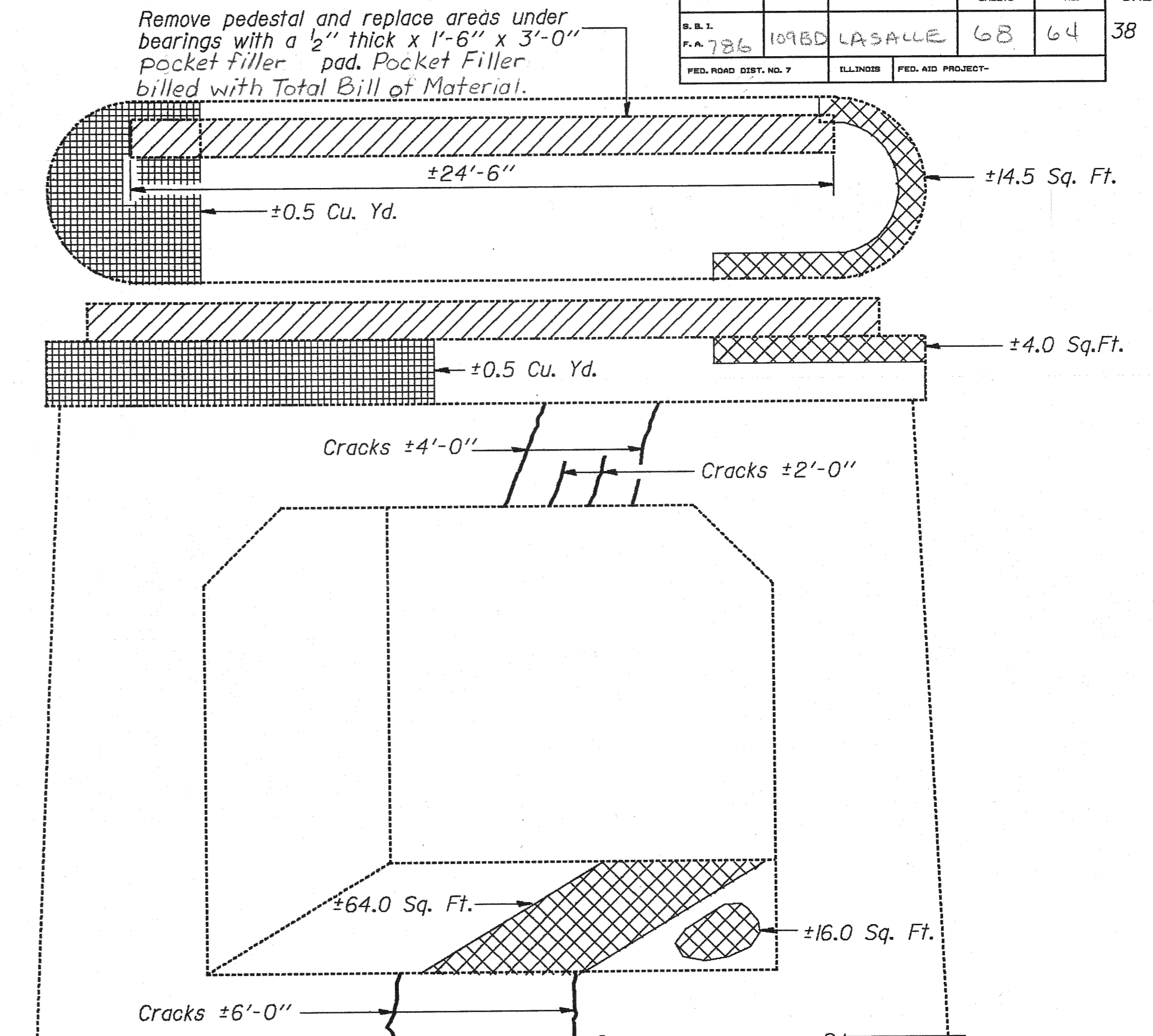
For Repair Detail see sheet #31.



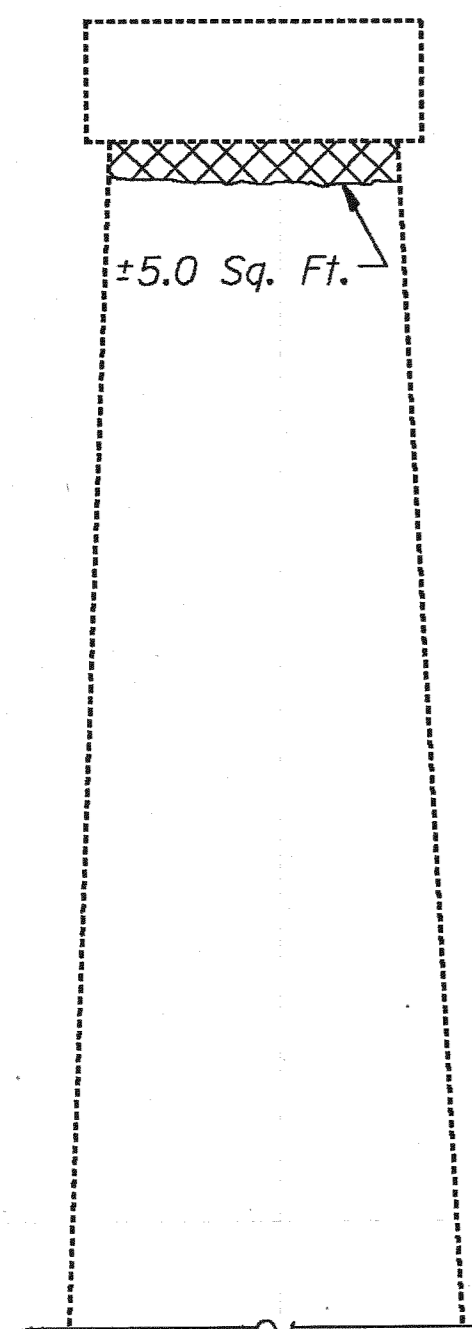
**PIER # 4 NORTH SIDE**  
(Looking South)



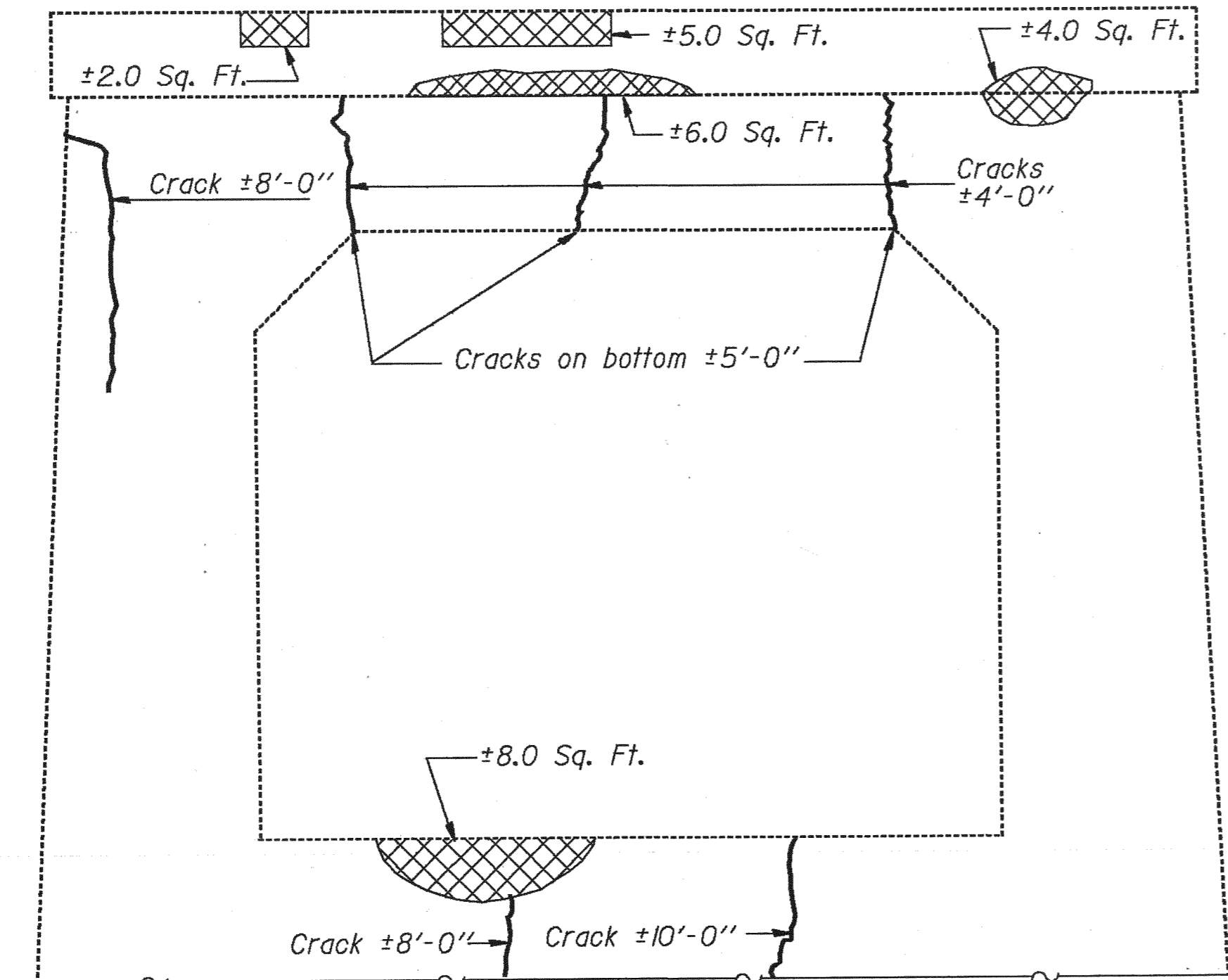
**EAST END**



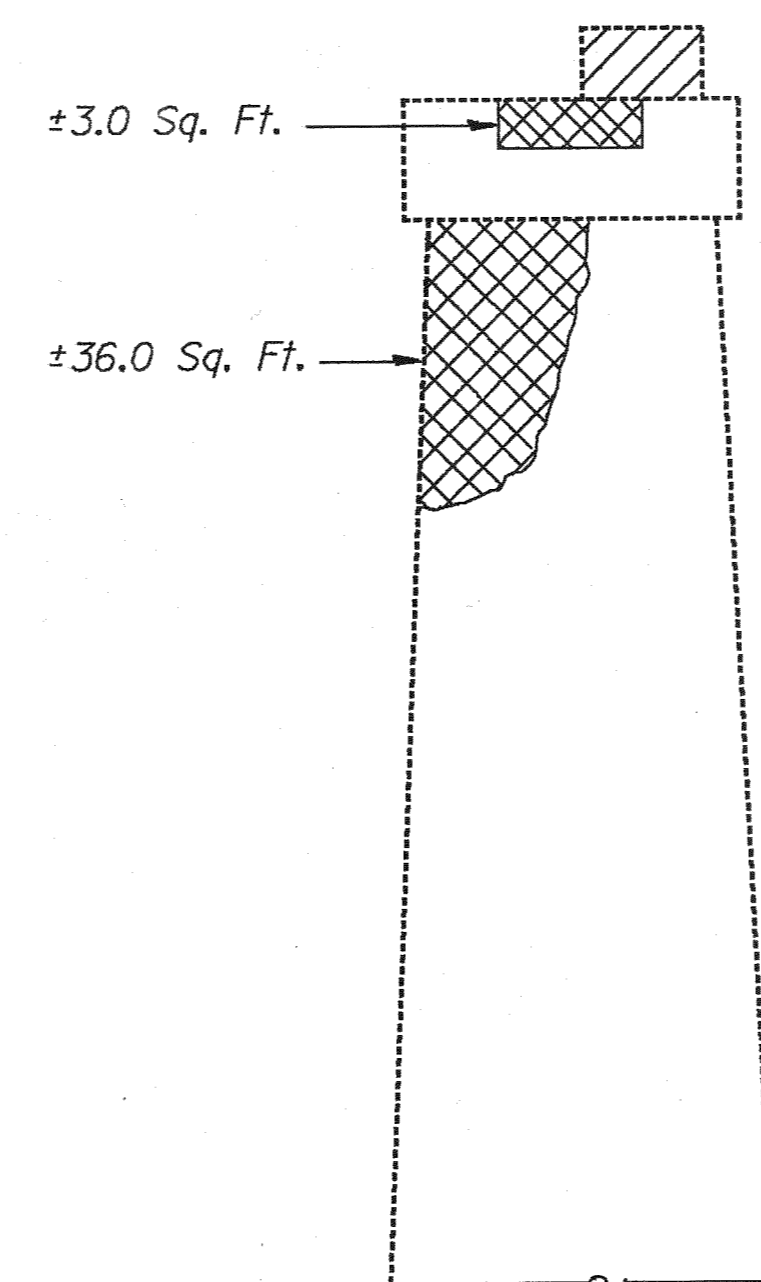
**PIER # 5 NORTH SIDE** (Looking South)



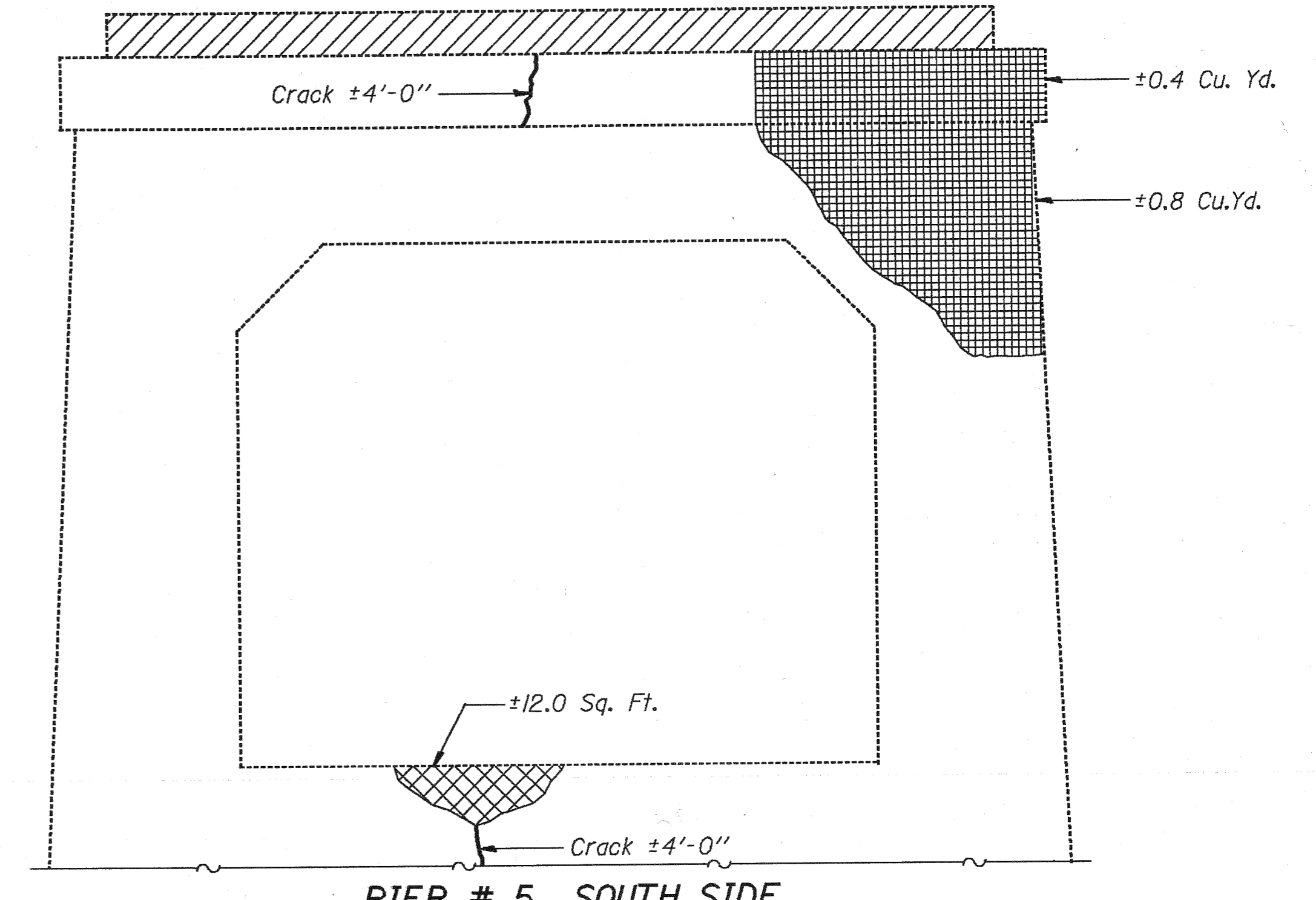
**WEST END**



**PIER # 4 SOUTH SIDE**  
(Looking North)



**WEST END**



**PIER # 5 SOUTH SIDE**  
(Looking North)

- "Epoxy Crack Sealing"
- "Concrete Removal"
- "Repair Concrete Structures"
- "Concrete Removal" and "Class X Concrete" replacement. Quantity based on 4" average depth.

"Repair Concrete Structures" = ±149.5 Sq. Ft.  
"Epoxy Crack Sealing" = ±32.0 Lin. Ft.  
"Concrete Removal" = ±4.5 Cu. Yds.  
"Class X Concrete" = ±2.2 Cu. Yd.

**REPAIRS AT PIER # 4 AND PIER # 5**  
**F.A. RTE. 786 SEC. 109B-D**  
**LA SALLE COUNTY**  
**STA. 79+05.00**

DESIGNED	
CHECKED	JRS
DRAWN	Mercado
CHECKED	

EXAMINED	<i>Greg J. Kaspar</i>	ENGINEER OF BRIDGE DESIGN
PASSED	<i>James J. Reburn</i>	ENGINEER OF BRIDGES AND STRUCTURES
APPROVED		DIRECTOR OF HIGHWAYS

"Repair Concrete Structures" = ±47.0 Sq. Ft.  
"Epoxy Crack Sealing" = ±85.0 Lin. Ft.