CONSTRUCTION CONTRACT NO. E1J12

COMPONENTS OF CONTRACT PLANS SET

BRIDGE REPAIRS AND PAINTING PLANS

SIGNING AND PAVEMENT MARKING PLANS

INDEX OF BRIDGE REPAIR AND PAINTING PLANS

SEE INDEX OF SHEETS, SHEET NO. B-2

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

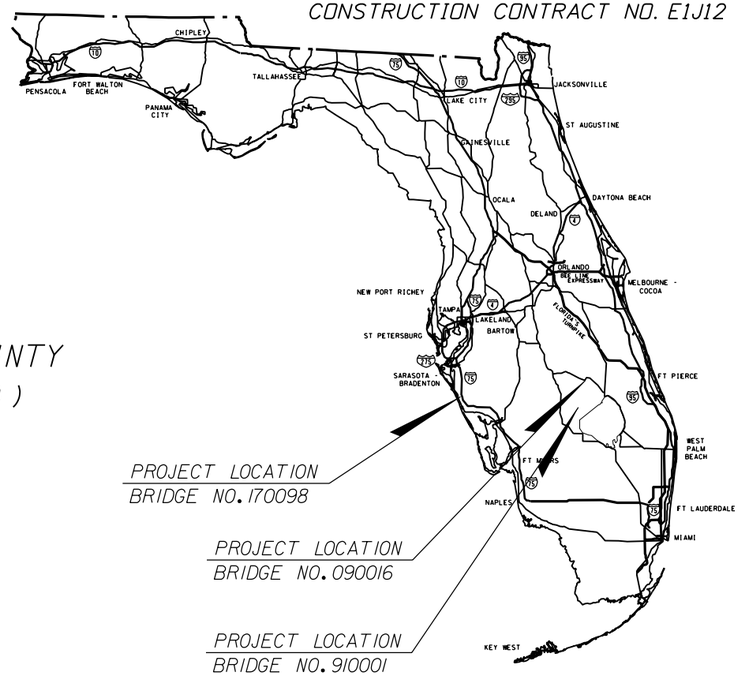
CONTRACT PLANS

FINANCIAL PROJECT ID 413817-1-52-01

HIGHLANDS COUNTY (09110000), SARASOTA COUNTY (17005101), OKEECHOBEE COUNTY (91070000)

STATE ROAD NOS. 700, 681, 70

BRIDGE REPAIRS AND PAINTING



SEE SHEET NOS. B-4, B-5 & B-6
FOR PROJECT LOCATION MAPS

GOVERNING STANDARDS & SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2010, AND STANDARD
SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
DATED 2010, AS AMENDED BY CONTRACT DOCUMENTS.

APPLICABLE DESIGN STANDARDS MODIFICATIONS: 01/01/11
For Design Standards Modifications go to the following Web site;
http://www.dot.state.fl.us/rddesign

LENGTH OF PROJECT

	09110000		17005101		91070000		TOTAL	
	LINEAR FT.	MILES	LINEAR FT.	MILES	LINEAR FT.	MILES	LINEAR FT.	MILES
ROADWAY	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
BRIDGES	665.28	0.126	554.40	0.105	422.40	0.080	1,642.08	0.311
NET LENGTH OF PROJ.	665.28	0.126	554.40	0.105	422.40	0.080	1,642.08	0.311
EXCEPTIONS	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
GROSS LENGTH OF PROJ.	665.28	0.126	554.40	0.105	422.40	0.080	1,642.08	0.311

FDOT PROJECT MANAGER : LUIS JUARBE, P.E.

STRUCTURE SHOP DRAWINGS
TO BE SUBMITTED TO:

TIMOTHY FARRELL, P.E.
E.C. DRIVER & ASSOCIATES, INC.
500 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FLORIDA 33609
(813) 282-9886

PLANS PREPARED BY:

ECDriver & Associates

500 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL 33609
(813) 282-9886
CONTRACT NUMBER C8W76
VENDOR NUMBER F59223757050004
CERTIFICATE NO. EB0003838

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED BY REPRODUCTION.

BRIDGE REPAIR AND PAINTING PLANS
ENGINEER OF RECORD: TIMOTHY J. FARRELL, P.E.

P.E. NO.: 37264

FISCAL YEAR	SHEET NO.
11	B-1

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INDEX OF BRIDGE REPAIR AND PAINTING PLANS

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

TIMOTHY J. FARRELL, P.E.
P.E. License No: 37264
E. C. DRIVER & ASSOCIATES, INC.
500 N. Westshore Blvd. Suite 500
Tampa, Florida 33609
Certificate of Authorization No. 3838

DRAWN BY,	LWM 03-10
CHECKED BY,	KSS 09-10
DESIGNED BY,	TJF 03-10
CHECKED BY,	KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
N/A	DISTRICTWIDE	413817-1-52-01

SHEET TITLE, INDEX OF SHEETS

REF. DWG. NO.

PROJECT NAME, BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO. B-2

E.C. DRIVER 1/4/2011 9:26:28 AM F:\Projects\413817152O1\struct\B1Index01.DGN

FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSAL SUMMARY OF PAY ITEMS — PAGE: 1 A0001

DATE: 12/29/10

PROPOSAL : E1J12 LEAD PROJECT : 4138171 5201 COUNTY : STATEWIDE , MANDIST: 01
PROJECT(S): 4138171 5201 COUNTY/SECTION: 09110000 ,

0001 SUMMARY OF STRUCTURES — PAY ITEMS

SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	4138171 5201 BR # 090016	4138171 5201 BR # 910001	4138171 5201 BR # 170098
		0101- 1-	MOBILIZATION (4138171 5201)	LS	0.000	1.000	0.000
		0101- 1-	MOBILIZATION (4138171 5201)	LS	1.000	0.000	0.000
		0101- 1-	MOBILIZATION (4138171 5201)	LS	0.000	0.000	1.000
		0102- 1-	MAINTENANCE OF TRAFFIC (4138171 5201)	LS	1.000	0.000	0.000
		0102- 1-	MAINTENANCE OF TRAFFIC (4138171 5201)	LS	0.000	1.000	0.000
		0102- 1-	MAINTENANCE OF TRAFFIC (4138171 5201)	LS	0.000	0.000	1.000
		0102- 60-	WORK ZONE SIGN	ED	2272.000	976.000	1270.000
		0102- 71- 14	BARRIER WALL, TEMPORARY, F&I, TYPE K	LF	300.000	300.000	0.000
		0102- 71- 24	BARRIER WALL, TEMPORARY, RELOCATE, TYPE K	LF	300.000	300.000	0.000
		0102- 73-	TEMPORARY GUARDRAIL	LF	48.000	48.000	0.000
		0102- 74- 1	BARRICADE, TEMPORARY, TYPES I, II, DI, VP & DRUM	ED	3692.000	1647.000	2921.000
		0102- 74- 2	BARRICADE, TEMPORARY, TYPE III, 6'	ED	284.000	122.000	0.000
		0102- 76-	ADVANCE WARNING ARROW PANEL	ED	0.000	0.000	127.000
		0102- 77-	HIGH INTENSITY FLASHING LIGHTS, TEMP, TYPE B	ED	568.000	244.000	508.000
		0102- 89- 7	TEMPORARY CRASH CUSHION, REDIRECTIVE OPTION	LO	2.000	2.000	0.000
		0102- 99-	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	284.000	122.000	127.000
		0102-104- 1	TEMPORARY TRAFFIC CONTROL, PORTABLE SIGNAL	ED	284.000	122.000	0.000
		0102-911- 2	PAVEMENT MARKING REMOVABLE TAPE, WHITE-BLACK, SOLID	LF	40.000	40.000	0.000
		0104- 11-	FLOATING TURBIDITY BARRIER	LF	720.000	680.000	0.000
		0110- 3-	REMOVAL OF EXISTING STRUCTURE (4138171 5201)	LS	0.000	1.000	0.000
		0110- 3-	REMOVAL OF EXISTING STRUCTURE (4138171 5201)	LS	1.000	0.000	0.000
		0110- 3-	REMOVAL OF EXISTING STRUCTURE (4138171 5201)	LS	0.000	0.000	1.000
T		0110- 8-	UNDERWATER DEBRIS REMOVAL	DA	30.000	0.000	0.000
T		0110- 71- 1	BRIDGE FENDER SYSTEM, REMOVAL & DISPOSAL	LF	0.000	216.000	0.000
T		0110- 86-	DELIVERY OF SALVAGEABLE MATERIAL TO FDOT (4138171 5201)	LS	0.000	1.000	0.000
T		0110- 86-	DELIVERY OF SALVAGEABLE MATERIAL TO FDOT (4138171 5201)	LS	1.000	0.000	0.000
		0400- 2- 5	CONCRETE CLASS II, SUBSTRUCTURE	CY	53.400	0.000	0.000
T		0400- 32-	CONCRETE FOR JOINT REPAIR	CY	0.000	0.000	1.600
		0400-143-	CLEANING & COATING CONCRETE SURFACE, CLASS 5	SF	0.000	0.000	10536.000
T		0401- 70- 1	RESTORE SPALLED AREAS, EPOXY	CF	10.000	0.000	0.000
T		0401- 70- 4	RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT	CF	10.000	0.000	0.000
		0415- 1- 5	REINFORCING STEEL- SUBSTRUCTURE	LB	4296.000	0.000	0.000
T		0455- 2-	TREATED TIMBER PILING	LF	0.000	350.000	0.000
		0455- 34- 6	PRESTRESSED CONCRETE PILING, 30" SQ	LF	1143.000	0.000	0.000
		0455- 76-	WRAP PILE CLUSTERS	EA	0.000	2.000	0.000
		0455-143- 6	TEST PILES-PRESTRESSED CONCRETE,30" SQ	LF	426.000	0.000	0.000
		0455-146-	EMBEDDED DATA COLLECTOR	EA	3.000	0.000	0.000
T		0457- 2- 11	CATHODIC PROTECTION INTEGRAL PILE JACKET, NON-STRUCTURAL, UP TO 16'	LF	88.000	0.000	0.000
		0458- 1- 21	BRIDGE DECK EXPANSION JOINT, REHABILITATION, POUREDJOINT WITH BACKER ROD	LF	348.000	210.000	80.000

FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSAL SUMMARY OF PAY ITEMS — PAGE: 2 A0001

DATE: 12/29/10

PROPOSAL : E1J12 LEAD PROJECT : 4138171 5201 COUNTY : STATEWIDE , MANDIST: 01
PROJECT(S): 4138171 5201 COUNTY/SECTION: 09110000 ,

0001 SUMMARY OF STRUCTURES — PAY ITEMS CONTINUED

SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	4138171 5201 BR # 090016	4138171 5201 BR # 910001	4138171 5201 BR # 170098
		0460- 1- 1	STRUCT STEEL- REHAB, CARBON	LB	78383.000	4528.000	0.000
		0460- 1- 3	STRUCT STEEL - REHABILITATION, SHOE ASSEMBLIES	LB	1011.000	0.000	0.000
		0460- 6-	LADDERS & PLATFORMS	LB	0.000	1407.000	0.000
T		0460- 81-	RIVETS - HIGH STRENGTH BOLTS, REPLACEMENT	EA	0.000	0.000	30.000
T		0460-112-	ANCHOR BOLT REPLACEMENT	EA	3.000	0.000	0.000
		0470- 1-	TREATED TIMBER, STRUCTURAL	MB	0.000	2.700	0.000
		0504- 1- 1	ROADWAY FLOOR, STEEL, 5" OPEN	SF	1171.000	1171.000	0.000
		0561- 1-	COATING EXISTING STRUCTURAL STEEL (4138171 5201)	LS	1.000	0.000	0.000
		0561- 1-	COATING EXISTING STRUCTURAL STEEL (4138171 5201)	LS	0.000	0.000	1.000
		0561- 1-	COATING EXISTING STRUCTURAL STEEL (4138171 5201)	LS	0.000	1.000	0.000
		0999- 25-	INITIAL CONTINGENCY AMOUNT, DO NOT BID (4138171 5201)	LS	1.000	0.000	0.000

FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSAL SUMMARY OF PAY ITEMS — PAGE: 1 B0001

DATE: 12/29/10

PROPOSAL : E1J12 LEAD PROJECT : 4138171 5201 COUNTY : STATEWIDE , MANDIST: 01
PROJECT(S): 4138171 5201 COUNTY/SECTION: 09110000 ,

0001 SUMMARY OF STRUCTURES — PAY ITEMS

SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY TOTAL
		0101- 1-	MOBILIZATION (4138171 5201)	LS	1.000
		0101- 1-	MOBILIZATION (4138171 5201)	LS	1.000
		0101- 1-	MOBILIZATION (4138171 5201)	LS	1.000
		0102- 1-	MAINTENANCE OF TRAFFIC (4138171 5201)	LS	1.000
		0102- 1-	MAINTENANCE OF TRAFFIC (4138171 5201)	LS	1.000
		0102- 1-	MAINTENANCE OF TRAFFIC (4138171 5201)	LS	1.000
		0102- 60-	WORK ZONE SIGN	ED	4518.000
		0102- 71- 14	BARRIER WALL, TEMPORARY, F&I, TYPE K	LF	600.000
		0102- 71- 24	BARRIER WALL, TEMPORARY, RELOCATE, TYPE K	LF	600.000
		0102- 73-	TEMPORARY GUARDRAIL	LF	96.000
		0102- 74- 1	BARRICADE, TEMPORARY, TYPES I, II, DI, VP & DRUM	ED	8260.000
		0102- 74- 2	BARRICADE, TEMPORARY, TYPE III, 6'	ED	406.000
		0102- 76-	ADVANCE WARNING ARROW PANEL	ED	127.000
		0102- 77-	HIGH INTENSITY FLASHING LIGHTS, TEMP, TYPE B	ED	1320.000
		0102- 89- 7	TEMPORARY CRASH CUSHION, REDIRECTIVE OPTION	LO	4.000
		0102- 99-	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	533.000
		0102-104- 1	TEMPORARY TRAFFIC CONTROL, PORTABLE SIGNAL	ED	406.000
		0102-911- 2	PAVEMENT MARKING REMOVABLE TAPE, WHITE-BLACK, SOLID	LF	80.000
		0104- 11-	FLOATING TURBIDITY BARRIER	LF	1400.000
		0110- 3-	REMOVAL OF EXISTING STRUCTURE (4138171 5201)	LS	1.000
		0110- 3-	REMOVAL OF EXISTING STRUCTURE (4138171 5201)	LS	1.000
		0110- 3-	REMOVAL OF EXISTING STRUCTURE (4138171 5201)	LS	1.000
T		0110- 8-	UNDERWATER DEBRIS REMOVAL	DA	30.000
T		0110- 71- 1	BRIDGE FENDER SYSTEM, REMOVAL & DISPOSAL	LF	216.000
T		0110- 86-	DELIVERY OF SALVAGEABLE MATERIAL TO FDOT (4138171 5201)	LS	1.000
T		0110- 86-	DELIVERY OF SALVAGEABLE MATERIAL TO FDOT (4138171 5201)	LS	1.000
		0400- 2- 5	CONCRETE CLASS II, SUBSTRUCTURE	CY	53.400
T		0400- 32-	CONCRETE FOR JOINT REPAIR	CY	1.600
		0400-143-	CLEANING & COATING CONCRETE SURFACE, CLASS 5	SF	10536.000
T		0401- 70- 1	RESTORE SPALLED AREAS, EPOXY	CF	10.000
T		0401- 70- 4	RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT	CF	10.000
		0415- 1- 5	REINFORCING STEEL- SUBSTRUCTURE	LB	4296.000
T		0455- 2-	TREATED TIMBER PILING	LF	350.000
		0455- 34- 6	PRESTRESSED CONCRETE PILING, 30" SQ	LF	1143.000
		0455- 76-	WRAP PILE CLUSTERS	EA	2.000
		0455-143- 6	TEST PILES-PRESTRESSED CONCRETE,30" SQ	LF	426.000
		0455-146-	EMBEDDED DATA COLLECTOR	EA	3.000
T		0457- 2- 11	CATHODIC PROTECTION INTEGRAL PILE JACKET, NON-STRUCTURAL, UP TO 16'	LF	88.000
		0458- 1- 21	BRIDGE DECK EXPANSION JOINT, REHABILITATION, POUREDJOINT WITH BACKER ROD	LF	638.000

FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSAL SUMMARY OF PAY ITEMS — PAGE: 2 B0001

DATE: 12/29/10

PROPOSAL : E1J12 LEAD PROJECT : 4138171 5201 COUNTY : STATEWIDE , MANDIST: 01
PROJECT(S): 4138171 5201 COUNTY/SECTION: 09110000 ,

0001 SUMMARY OF STRUCTURES — PAY ITEMS CONTINUED

SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY TOTAL
		0460- 1- 1	STRUCT STEEL- REHAB, CARBON	LB	82911.000
		0460- 1- 3	STRUCT STEEL - REHABILITATION, SHOE ASSEMBLIES	LB	1011.000
		0460- 6-	LADDERS & PLATFORMS	LB	1407.000
T		0460- 81-	RIVETS - HIGH STRENGTH BOLTS, REPLACEMENT	EA	30.000
T		0460-112-	ANCHOR BOLT REPLACEMENT	EA	3.000
		0470- 1-	TREATED TIMBER, STRUCTURAL	MB	2.700
		0504- 1- 1	ROADWAY FLOOR, STEEL, 5" OPEN	SF	2342.000
		0561- 1-	COATING EXISTING STRUCTURAL STEEL (4138171 5201)	LS	1.000
		0561- 1-	COATING EXISTING STRUCTURAL STEEL (4138171 5201)	LS	1.000
		0561- 1-	COATING EXISTING STRUCTURAL STEEL (4138171 5201)	LS	1.000
		0999- 25-	INITIAL CONTINGENCY AMOUNT, DO NOT BID (4138171 5201)	LS	1.000

FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSAL SUMMARY OF PAY ITEMS — PAGE: 3 A0002

DATE: 12/29/10

PROPOSAL : E1J12 LEAD PROJECT : 4138171 5201 COUNTY : STATEWIDE , MANDIST: 01
PROJECT(S): 4138171 5201 COUNTY/SECTION: 09110000 ,

0002 SUMMARY OF SIGNING — PAY ITEMS

SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	4138171 5201	QUANTITY TOTAL
		0706- 3-	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	58.000	58.000
		0710- 11-111	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6'	NM	0.032	0.032
		0710- 11-211	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6'	NM	0.032	0.032
		0711- 11-111	THERMOPLASTIC, STANDARD, WHITE, SOLID, 6'	NM	0.407	0.407
		0711- 11-211	THERMOPLASTIC, STANDARD,YELLOW, SOLID, 6'	NM	0.407	0.407

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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500 N. Westshore Blvd. Suite 500
Tampa, Florida 33609
Certificate of Authorization No. 3838

DRAWN BY: BDS 12-10
CHECKED BY: TJF 12-10
DESIGNED BY: BDS 12-10
CHECKED BY: TJF 12-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	DISTRICTWIDE	41381 7-1-52-01

SHEET TITLE: SUMMARY OF PAY ITEMS

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO. B-3

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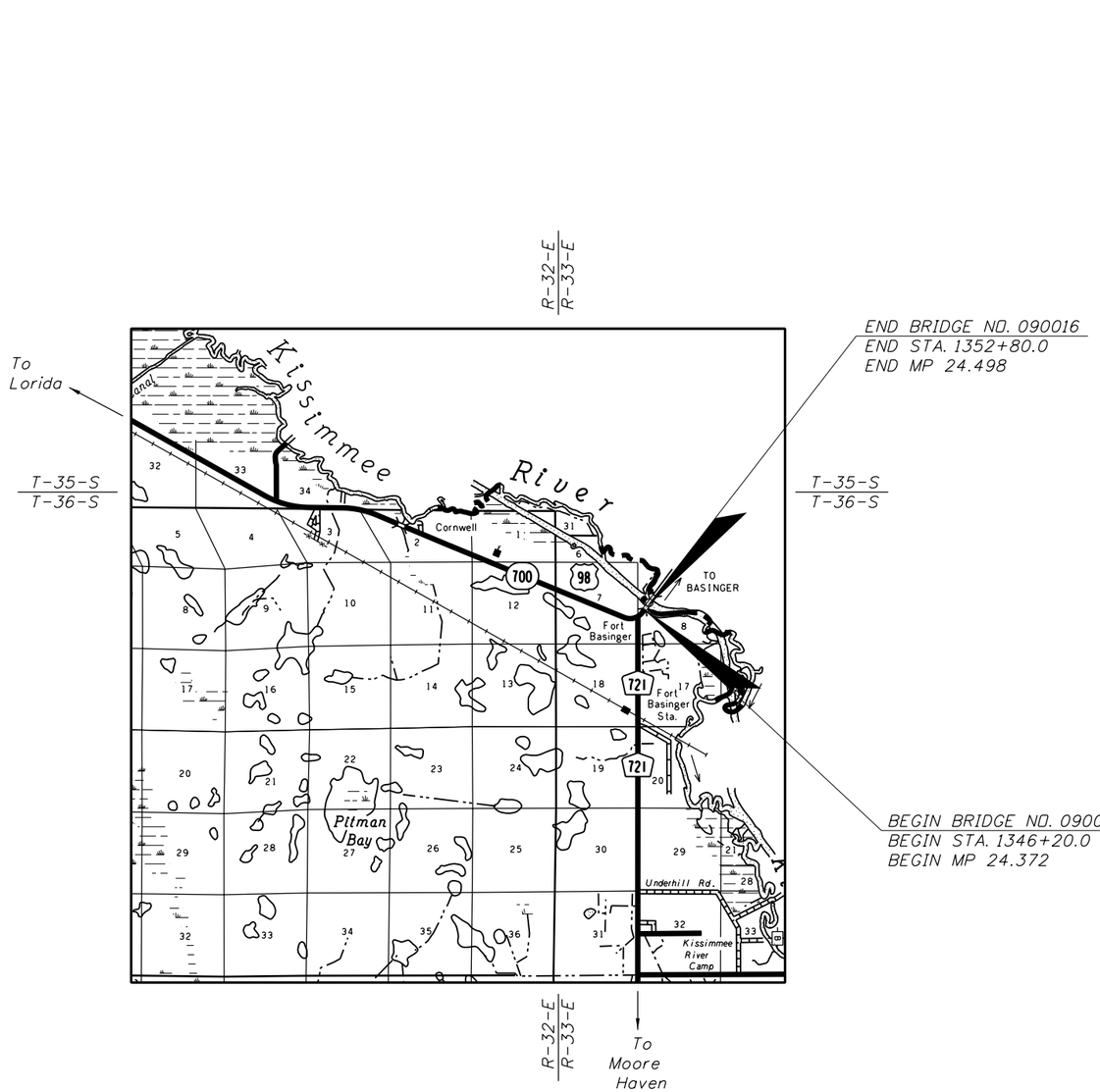

BRIDGE NUMBER 090016
HIGHLANDS COUNTY (09110)
STATE ROAD 700

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

TIMOTHY J. FARRELL, P.E.
P.E. License No: 37264
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500 N. Westshore Blvd. Suite 500
Tampa, Florida 33609
Certificate of Authorization No. 3838

DRAWN BY:	LMM 01-10
CHECKED BY:	KSS 09-10
DESIGNED BY:	TJF 01-10
CHECKED BY:	KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: LOCATION MAP - BRIDGE NO. 090016

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.: B-4

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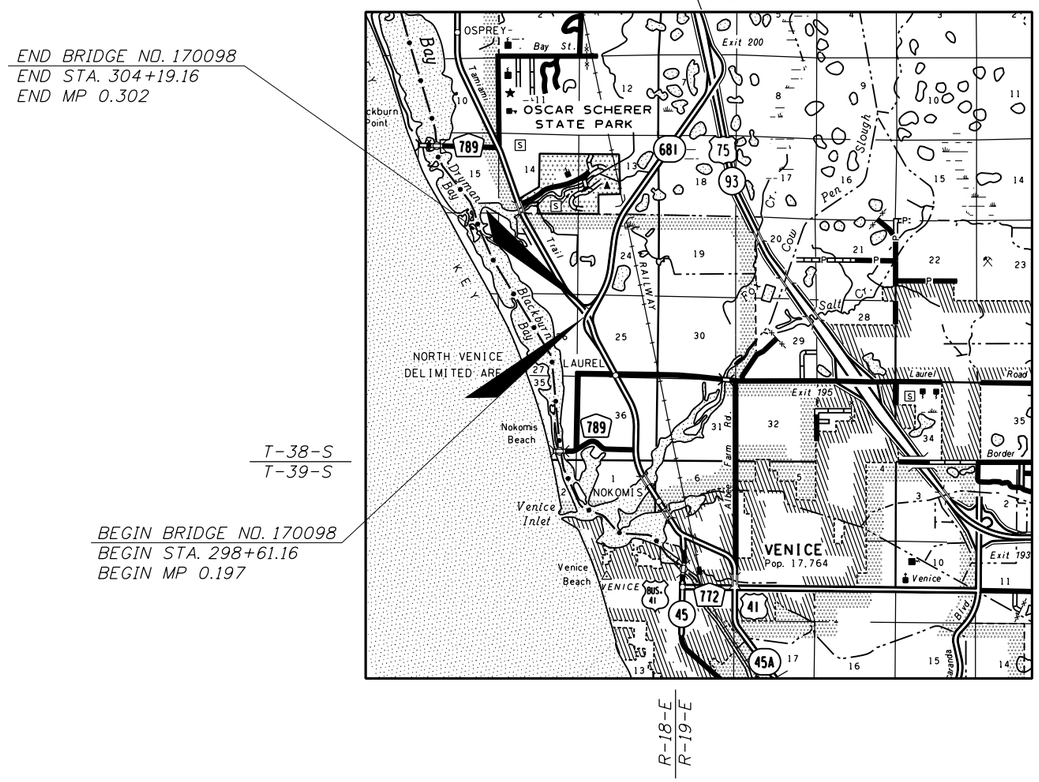
END MP 0.302

BEGIN BRIDGE NO. 170098
BEGIN STA. 298+61.16
BEGIN MP 0.197



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BRIDGE NUMBER 170098
SARASOTA COUNTY (17005 101)
STATE ROAD 681

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

TIMOTHY J. FARRELL, P.E.
P.E. License No: 37264
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500 N. Westshore Blvd. Suite 500
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Certificate of Authorization No. 3838

DRAWN BY:	LMM 01-10
CHECKED BY:	KSS 09-10
DESIGNED BY:	TJF 01-10
CHECKED BY:	KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
681	SARASOTA	413817-1-52-01

SHEET TITLE: LOCATION MAP - BRIDGE NO. 170098

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B-5

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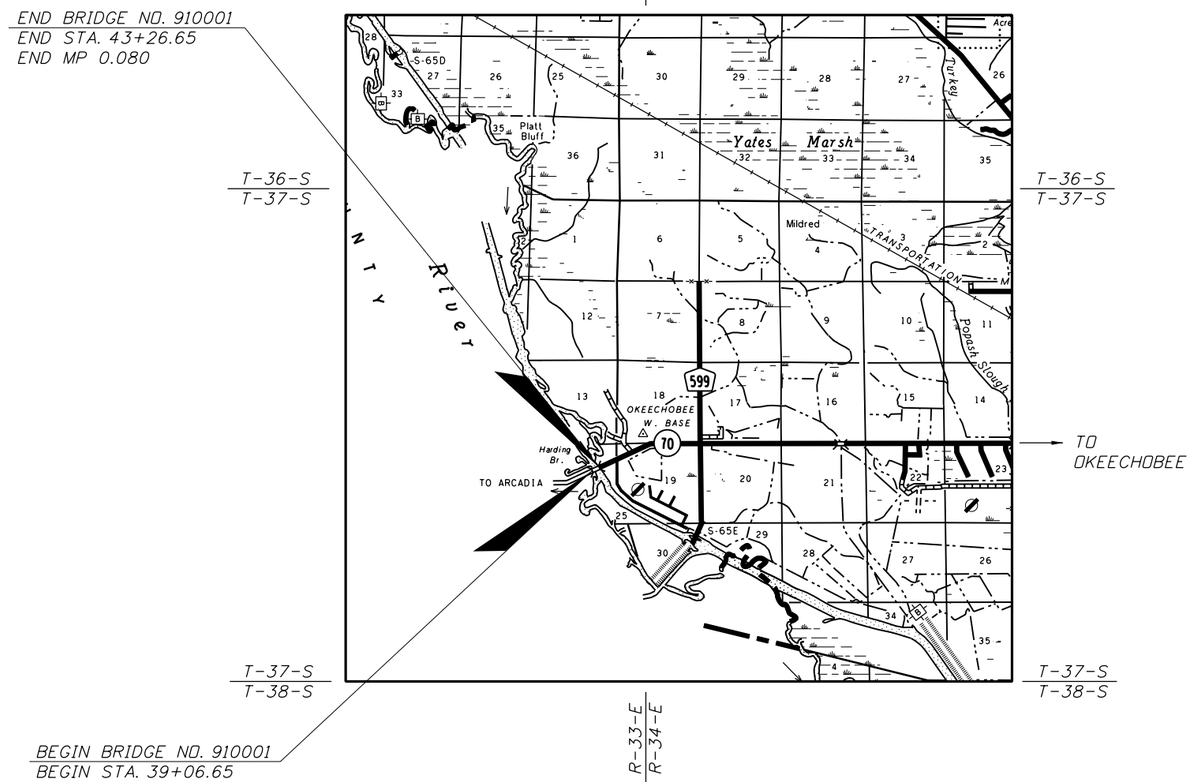

BRIDGE NUMBER 910001
OKEECHOBEE COUNTY (91070)
STATE ROAD 70

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

TIMOTHY J. FARRELL, P.E.
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Tampa, Florida 33609
Certificate of Authorization No. 3838

DRAWN BY:	LMW 01-10
CHECKED BY:	KSS 09-10
DESIGNED BY:	TJF 01-10
CHECKED BY:	KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE: LOCATION MAP - BRIDGE NO. 910001

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B-6

E.C. DRIVER 1/4/2011 9:27:17 AM F:\Projects\413817152O1\struct\B3KeySheet_910001.DGN

SCOPE OF WORK:

THIS PROJECT IS FOR REPAIRS AND MAINTENANCE COATING OF BRIDGE NOS. 090016, 170098 AND 910001 IN HIGHLANDS, SARASOTA AND OKEECHOBEE COUNTIES RESPECTIVELY. UNLESS OTHERWISE NOTED, NO ORIGINAL OR EXISTING COATINGS ARE TO BE LEFT IN PLACE. THE REPAIRS INCLUDE:

1. HIGHLANDS COUNTY, BRIDGE NO. 090016:
   a) REPAIR CONCRETE DEFICIENCIES.
   b) CONSTRUCT CRUTCH BENTS PIERS 5, 6 AND 9.
   c) INSTALL CATHODIC PROTECTION PILE JACKETS PIER 7.
   d) CLEAN AND SEAL BRIDGE DECK EXPANSION JOINTS.
   e) REPAIR CRUTCH BENT BEARING ASSEMBLY PIER 7.
   f) REPAIR BEARING ASSEMBLY PIERS 10 AND 11.
   g) REPLACE OPEN STEEL DECK GRATING SPAN 8.
2. SARASOTA COUNTY, BRIDGE NO. 170098:
   a) REPLACE ARMORED EXPANSION JOINTS AT END BENTS.
   b) CLEAN AND APPLY CLASS 5 FINISH TO EXPOSED CONCRETE SURFACES.
   c) TIGHTEN LOOSE DIAPHRAGM BRACING CONNECTION BOLTS.
3. OKEECHOBEE COUNTY, BRIDGE NO. 910001:
   a) CLEAN AND SEAL BRIDGE DECK EXPANSION JOINTS.
   b) PERFORM STRUCTURAL STEEL AND WELD REPAIRS SPAN 4.
   c) REPLACE OPEN STEEL GRID DECK SPAN 4.
   d) REPAIR FENDER SYSTEM.
   e) REPLACE FENDER SYSTEM ACCESS LADDERS.

GENERAL NOTES:

1. DESIGN SPECIFICATIONS:

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE DESIGN SPECIFICATIONS (2007 EDITION) AND APPROVED INTERIMS AS SPECIFIED IN THE STRUCTURES DESIGN GUIDELINES.

FDOT STRUCTURES DESIGN GUIDELINES (MARCH 2010).

2. MATERIALS:

A. STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

i. ASTM A709 GRADE 50 FOR MAIN LOAD CARRYING MEMBERS INCLUDING CRUTCH BEAMS AT BRIDGE 090016.

ii. ASTM A709 GRADE 36 FOR SECONDARY LOAD CARRYING, STIFFENING AND BRACING MEMBERS INCLUDING SUPPLEMENTAL STEEL AT BRIDGE 910001.

iii. ASTM A36 FOR ACCESS LADDERS, PLATFORMS AND OTHER SPECIFICALLY IDENTIFIED MISCELLANEOUS MEMBERS.

iv. ASTM A276 TYPE 304 OR 316 FOR STAINLESS STEEL PLATES AND SHAPES.

B. STEEL CONNECTIONS:

i. UNLESS NOTED OTHERWISE, BOLTED CONNECTIONS FOR STRUCTURAL STEEL (SHOP OR FIELD) SHALL BE MADE WITH $\frac{7}{8}$" Ø ASTM A325 (TYPE I) HIGH-STRENGTH (H.S.) BOLTS AND SHALL BE PLACED IN $1\frac{5}{16}$" DIA. HOLES. BOLTS AND CORRESPONDING NUTS AND WASHERS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695 CLASS 50. THE NUTS SHALL BE OVERTAPPED TO THE MINIMUM AMOUNT REQUIRED FOR THE FASTENER ASSEMBLY AND SHALL BE LUBRICATED WITH A LUBRICANT CONTAINING A VISIBLE DYE SO A VISUAL CHECK CAN BE MADE FOR THE LUBRICANT AT THE TIME OF INSTALLATION. ALLOWABLE LOADS SHALL BE BASED ON A CLASS A (SLIP COEFFICIENT 0.33) CONTACT SURFACE PER AASHTO.

ii. UNLESS NOTED OTHERWISE, WELDS SHALL BE $\frac{5}{16}$" CONTINUOUS FILLET WELDS, GROOVE WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) AND WELD ELECTRODES SHALL BE E70XX. FIELD WELDING SHALL NOT BE ALLOWED UNLESS NOTED OTHERWISE.

iii. UNLESS OTHERWISE NOTED, ANCHOR BOLTS SHALL BE HOT DIP GALVANIZED, ASTM A307. WHERE STAINLESS STEEL (S.S.) IS SPECIFIED, THE MATERIALS SHALL BE ASTM A276 TYPE 316.

iv. WHERE THE NUMBER OF BOLTS IN A CONNECTION ARE NOT SPECIFIED, THE NUMBER SHOWN IN THE DRAWING IS THE NUMBER REQUIRED.

C. STEEL GALVANIZING:

WHERE SPECIFIED, STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123 AND ANCHOR BOLTS INCLUDING NUTS AND WASHERS GALVANIZED PER ASTM A153.

D. CONCRETE:

CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 346. THE FOLLOWING CONCRETE SHALL BE USED:

LOCATION	CLASS	f'c (psi)
CRUTCH BENT CAP	II	3,400
DECK JOINT	II (BRIDGE DECK)	4,500
PILE JACKET FILL	IV	5,500
PRESTRESSED CONCRETE PILES	V (SPECIAL)	6,000

E. REINFORCING STEEL:

ASTM A615, GRADE 60 (UNCOATED).

3. DIMENSION VERIFICATION:

THE DIMENSIONS AND DETAILS SHOWN ARE BASED ON LIMITED INFORMATION FROM THE ORIGINAL CONSTRUCTION PLANS AND REHABILITATION PLANS OF THE EXISTING BRIDGES (UNLESS NOTED OTHERWISE), AND MAY NOT REPRESENT THE AS-BUILT CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS IN PREPARATION OF SHOP DRAWINGS AND PRIOR TO BEGINNING CONSTRUCTION. SHOP DRAWINGS FROM THE ORIGINAL BRIDGE CONSTRUCTION OR REHABILITATION ARE NOT AVAILABLE.

4. HAZARDOUS MATERIAL:

THE PAINT ON STEEL PORTIONS OF THE BRIDGES HAS BEEN IDENTIFIED AS CONTAINING HAZARDOUS METALS INCLUDING LEAD, CHROMIUM AND CADMIUM.

5. MAINTENANCE OF NAVIGATION CHANNEL, BRIDGE NOS. 090016, 910001:

NOTIFY MR. MIKE LIEBERUM OF THE U.S. COAST GUARD (USCG) IN MIAMI, FLORIDA AT (305) 415-6744. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, IN ADVANCE OF ACTIONS DURING BRIDGE CONSTRUCTION OR DEMOLITION WHICH POTENTIALLY AFFECT WATERWAY USERS AND PRIOR TO THE PLACEMENT OF ANY FLOATING CONSTRUCTION EQUIPMENT IN THE WATERWAY. NOTIFY THE USCG NO LESS THAN 60 DAYS IN ADVANCE OF ACTIONS WHICH COULD POTENTIALLY AFFECT THE WATERWAY.

6. STRUCTURAL STEEL COATINGS:

A. COATING MATERIALS:

COATING MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 975.

B. COATING SYSTEMS:

1. HIGHLANDS COUNTY, BRIDGE NO. 090016:
   a) 1ST COAT - ORGANIC ZINC-RICH EPOXY PRIMER
   b) 2ND COAT - POLYAMIDE EPOXY INTERMEDIATE COAT
   c) 3RD COAT - ALIPHATIC POLYURETHANE FINISH COAT. FINISH COAT COLOR SHALL BE FEDERAL STANDARD NO. 595B, TABLE VIII, SHADE NO. 36622 - GLOSS (LIGHT GRAY).
   d) 4TH COAT - ALIPHATIC POLYURETHANE CLEAR COAT, WITH DYE ADDITIVE (OUTER FASCIAS ONLY)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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500 N. Westshore Blvd. Suite 500
Tampa, Florida 33609
Certificate of Authorization No. 3838

DRAWN BY, LMM 02-10
CHECKED BY, KSS 09-10
DESIGNED BY, TJF 02-10
CHECKED BY, KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	DISTRICTWIDE	413817-1-52-01

SHEET TITLE:
SCOPE OF WORK, GENERAL NOTES AND PAY ITEM NOTES
SHEET 1 OF 2

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO.
B-7

GENERAL NOTES (CONT.):

2. SARASOTA COUNTY, BRIDGE NO. 170098:
   a) 1ST COAT - ORGANIC ZINC-RICH EPOXY PRIMER
   b) 2ND COAT - POLYAMIDE EPOXY INTERMEDIATE COAT
   c) 3RD COAT - ALIPHATIC POLYURETHANE FINISH COAT. FINISH COAT COLOR SHALL BE FEDERAL STANDARD NO. 595B, TABLE VI, SHADE NO. DC6650 - (GREEN)(GLOSS).
   d) 4TH COAT - ALIPHATIC POLYURETHANE CLEAR COAT, WITH DYE ADDITIVE (OUTER FASCIAS ONLY)

3. OKEECHOBEE COUNTY, BRIDGE NO. 910001:
   STRUCTURAL STEEL: (EXCLUDES OPEN STEEL DECK GRATING)
   a) 1ST COAT - ORGANIC ZINC-RICH EPOXY PRIMER
   b) 2ND COAT - POLYAMIDE EPOXY INTERMEDIATE COAT
   c) 3RD COAT - ALIPHATIC POLYURETHANE FINISH COAT. FINISH COAT COLOR SHALL BE FEDERAL STANDARD NO. 595B, TABLE VIII, SHADE NO. 36622 - GLOSS (LIGHT GRAY).
   d) 4TH COAT - ALIPHATIC POLYURETHANE CLEAR COAT, WITH DYE ADDITIVE (OUTER FASCIAS ONLY)

7. CLASS 5 APPLIED FINISH COATING, BRIDGE NO. 170098:

APPLY A CLASS 5 COATING TO ALL EXPOSED SURFACES (TOP, INSIDE, AND OUTSIDE) OF END BENT WINGWALLS, TRAFFIC BARRIERS, DECK SLAB COPING AND PIERS. SEE DETAIL THIS SHEET. REPLACE THE TRAFFIC BARRIER REFLECTIVE MARKERS IN ACCORDANCE WITH INDEX NO. 410.

8. UTILITIES:

THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED VV, VH AND WH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATION/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.

EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS OF ANY EXCAVATION OR DEMOLITION ACTIVITY THROUGH SUNSHINE ONE-CALL OF FLORIDA, INC (1-800-432-4770) AND SHALL ALSO NOTIFY THOSE UTILITY OWNERS/AGENCIES LISTED WITHIN OR IMPACTED BY THESE PLANS, NOT LESS THAN TWO (2) FULL BUSINESS DAYS IN ADVANCE OF THE BEGINNING OF CONSTRUCTION ON THE JOB SITE.

HIGHLANDS COUNTY BRIDGE NO. 090016:

COMPANY	CONTACT	TELEPHONE NUMBER
CENTURY LINK	KEN LUTZ	(863) 452-3185
GLADES ELECTRIC COOPERATIVE, INC.	JODY DOTSON	(800) 226-4025

SARASOTA COUNTY BRIDGE NO. 170098:

COMPANY	CONTACT	TELEPHONE NUMBER
COMCAST CABLEVISION OF WEST FLORIDA	GONZALO ROJAS	(941) 342-3578
FP&L DISTRIBUTION	GREG COKER	(941) 723-4430
SARASOTA COUNTY UTILITIES	ANN COLEMAN	(941) 861-0530
TECO-PEOPLE'S GAS	DANNY SHANAHAN	(941) 342-4006
VERIZON FLORIDA, LLC	DENISE HUTTON	(941) 906-6722

OKEECHOBEE COUNTY BRIDGE NO. 910001:

COMPANY	CONTACT	TELEPHONE NUMBER
CENTURY LINK	KEN LUTZ	(863) 452-3185
COMCAST CABLEVISION	BRIAN DELANEY	(863) 402-3036
FLORIDA GAS TRANSMISSION	JOSEPH SANCHEZ	(407) 838-7171
FP&L DISTRIBUTION	BILL HESTER	(772) 337-7063
FP&L TRANSMISSION	TAMEKA AUGUSTIN	(561) 694-4107

9. ENVIRONMENTAL PERMITS AND WATER QUALITY MONITORING, BRIDGE NOS. 090016, 910001:

MEET THE REQUIREMENTS OF THE ENVIRONMENTAL PERMITS, INCLUDING WATER QUALITY MONITORING AS FOLLOWS:

a) WATER QUALITY MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE SPECIAL CONDITIONS OF ANY ENVIRONMENTAL PERMIT OR BY THE CONTRACTOR UPON THE OBSERVATION THAT WATER QUALITY STANDARDS MAY BE VIOLATED BY THE CONTRACTOR'S ACTIVITIES. MONITORING LOCATIONS MAY BE SPECIFIED IN THE ENVIRONMENTAL PERMIT OR MAY BE DESIGNATED BY THE CONTRACTOR AND APPROVED BY THE PROJECT ADMINISTRATOR.

b) THE PROJECT ADMINISTRATOR WILL BE RESPONSIBLE FOR MONITORING ANY ACTIVITIES FOR VIOLATION OF WATER QUALITY STANDARDS AS THEY RELATE TO TURBIDITY (29 NTU'S ABOVE BACKGROUND OR 0 NTU'S ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OUTSTANDING FLORIDA WATERS).

c) IF WATER QUALITY STANDARDS ARE VIOLATED, CONSTRUCTION SHALL BE STOPPED IMMEDIATELY, THE ENVIRONMENTAL PERMIT CONDITIONS FOLLOWED AND EROSION AND SEDIMENT CONTROL DEVICES RE-EVALUATED AND APPROVED BY THE ENGINEER PRIOR TO ANY CONTINUATION OF ACTIVITY. MONITORING ACTIVITIES AND TURBIDITY READINGS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION REPORT AND CONTINUED UNTIL TURBIDITY READINGS FALL BELOW AN ACCEPTABLE LEVEL (29 NTU'S ABOVE BACKGROUND OR 0 NTU'S ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OUTSTANDING FLORIDA WATERS).

d) WATER QUALITY MONITORING MAY BE CONDUCTED DURING ANY PHASE OF CONSTRUCTION AS DIRECTED BY THE PROJECT ENGINEER.

10. SALVAGEABLE MATERIAL:

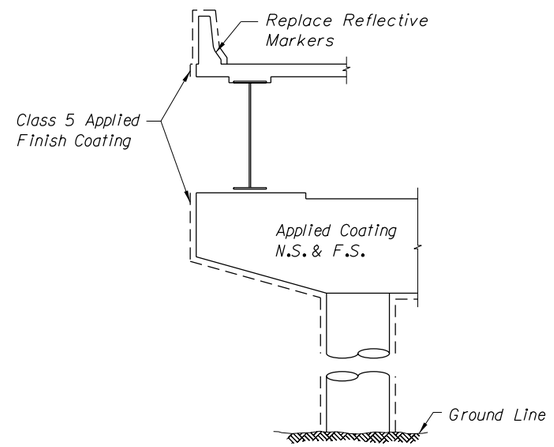
PORTIONS OF THE EXISTING OPEN STEEL GRID DECK AT BRIDGE NOS. 090016 AND 910001 SHALL BE SALVAGED AS DIRECTED BY THE ENGINEER. CARE SHALL BE TAKEN TO SEPARATE THE PANEL SECTIONS FROM THE SUPPORTING MEMBERS. WELDS SHALL BE REMOVED BY GRINDING ONLY. TORCH CUTTING IS PROHIBITED. TOUCH UP WITH PRIMER PAINT ALL AREAS OF GALVANIZING THAT HAVE BEEN COMPROMISED DURING THE REMOVAL PROCESS. DELIVER THE SALVAGED MATERIAL TO:

INFRASTRUCTURE CORPORATION OF AMERICA
8003 34th AVENUE EAST
BRADENTON, FLORIDA 34211

CONTACT TENIL MULLINS OF INFRASTRUCTURE CORPORATION OF AMERICA (ICA) AT 941-341-9300 TO COORDINATE DELIVERY OF THE SALVAGED MATERIAL.

PAY ITEM NOTES:

1. ITEM 561-1-1, COATING EXISTING STRUCTURAL STEEL, INCLUDES THE FOLLOWING ESTIMATED QUANTITIES OF STRUCTURAL STEEL AND STEEL BEARINGS TO BE PAINTED:
   BRIDGE 090016 - 214 TONS STRUCTURAL STEEL AND EXISTING CRUTCH BENT BEAMS, 84 STEEL BEARINGS
   BRIDGE 170098 - 497 TONS STRUCTURAL STEEL, 25 STEEL BEARINGS
   BRIDGE 910001 - 80 TONS STRUCTURAL STEEL, 32 STEEL BEARINGS
2. ITEM 400-143, CLEANING AND COATING CONCRETE SURFACE, CLASS 5 INCLUDES THE COST OF REMOVING THE EXISTING AND INSTALLING NEW BARRIER RAIL REFLECTIVE MARKERS ON BRIDGE NO. 170098.
3. ITEM 460-1-1, STRUCTURAL STEEL-REHABILITATION, CARBON INCLUDES THE COST OF NEOPRENE BEARING PADS AT BRIDGE NO. 090016.
4. ITEM 460-1-1, STRUCTURAL STEEL-REHABILITATION, CARBON INCLUDES THE COST OF WELD REPAIRS AND BEARING ASSEMBLY SHIMMING AT BRIDGE NO. 910001.
5. ITEM 504-1-1, ROADWAY FLOOR, STEEL, 5" OPEN, INCLUDES THE COST OF LIFTING LUG COVER PLATES AT BRIDGE NOS. 090016 AND 910001.
6. ITEM 102-73, TEMPORARY GUARDRAIL, INCLUDES THE COST FOR STEEL PLATE ASSEMBLIES AND TERMINAL CONNECTORS AT BRIDGE NOS. 090016 AND 910001. COST ALSO INCLUDES RELOCATING GUARDRAIL FROM ONE CONSTRUCTION PHASE TO ANOTHER.
7. ITEM 110-3, REMOVAL OF EXISTING STRUCTURES, INCLUDES REMOVING 1,171 SQUARE FEET OF OPEN STEEL GRID DECK AT BRIDGE NOS. 090016 AND 910001. SEE NOTE 10 THIS SHEET.
8. ITEM 460-112, ANCHOR BOLT REPLACEMENT, INCLUDES JACKING THE CRUTCH BEAMS AT BRIDGE NO. 090016.
9. ITEM 460-6, LADDERS AND PLATFORMS, INCLUDES THE COST OF REMOVING THE EXISTING FENDER SYSTEM ACCESS LADDERS AND PROVIDING THE CHAIN LINKS AND NO TRESPASSING SIGNS AT BRIDGE NO. 910001.



BRIDGE NO. 170098

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DESIGNED BY:	TJF 02-10
CHECKED BY:	KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	DISTRICTWIDE	413817-1-52-01

SHEET TITLE: SCOPE OF WORK, GENERAL NOTES AND PAY ITEM NOTES SHEET 2 OF 2

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B-8

GENERAL NOTES

1. SINGLE LANE CLOSURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THIS PLAN AND FDOT DESIGN STANDARD INDICES 600 AND 606. ALL LANE CLOSURES SHALL BE REPORTED TO THE LOCAL EMERGENCY AGENCIES, THE MEDIA AND THE DISTRICT 1 INFORMATION OFFICE.
2. LANE CLOSURE SHALL NOT BE PERMITTED DURING NON-WORKING PERIODS.
3. LANE CLOSURE SHALL BE PERMITTED DURING THE FOLLOWING TIMES:

   BRIDGE NO. 090016 / SR 700- (HIGHLANDS COUNTY)

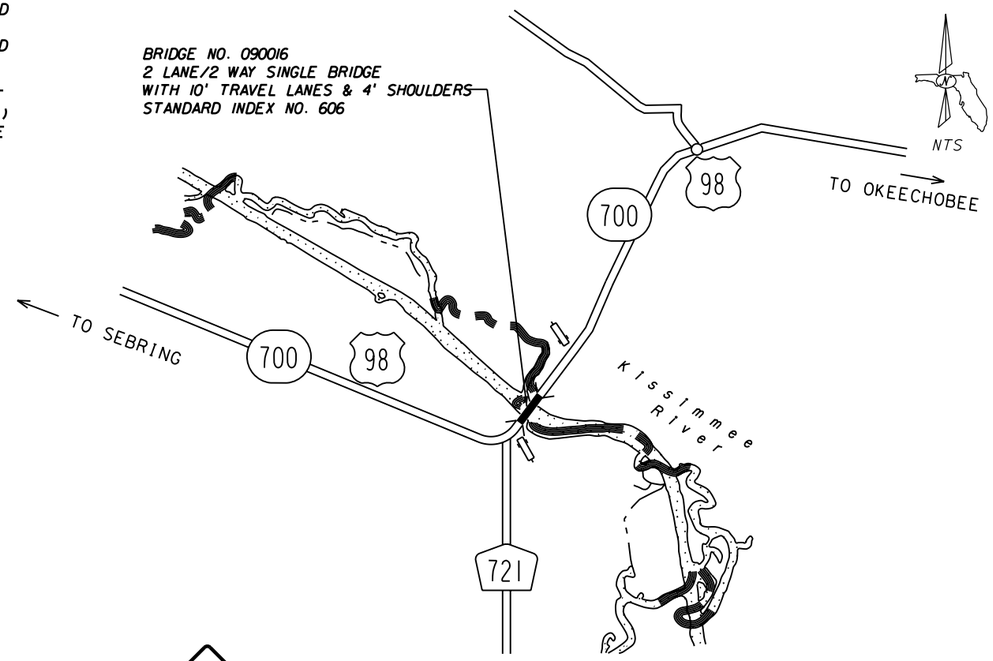
   NO LANE CLOSURE RESTRICTIONS
4. ALL LANES MUST BE OPEN FOR TRAFFIC IF DRIVER DELAYS ARE GREATER THAN 5 MINUTES.
5. EXISTING POSTED SPEED LIMIT IS 60 MPH AND SHALL BE MAINTAINED.
6. THE CONTRACTOR SHALL FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PER THIS SHEET. THESE SIGNS SHALL BE IN PLACE ONE WEEK PRIOR TO THE START OF AND DURING ANY CONSTRUCTION ACTIVITY. THE FOLLOWING MESSAGES SHALL BE DISPLAYED:

ONE (1) WEEK PRIOR TO LANE CLOSURE

(MSG 1)	ALTERNATING MESSAGES	(MSG 2)
BRIDGE LANE CLOSURE	⟷	XP MM/DD TO XA MM/DD

DURING LANE CLOSURE

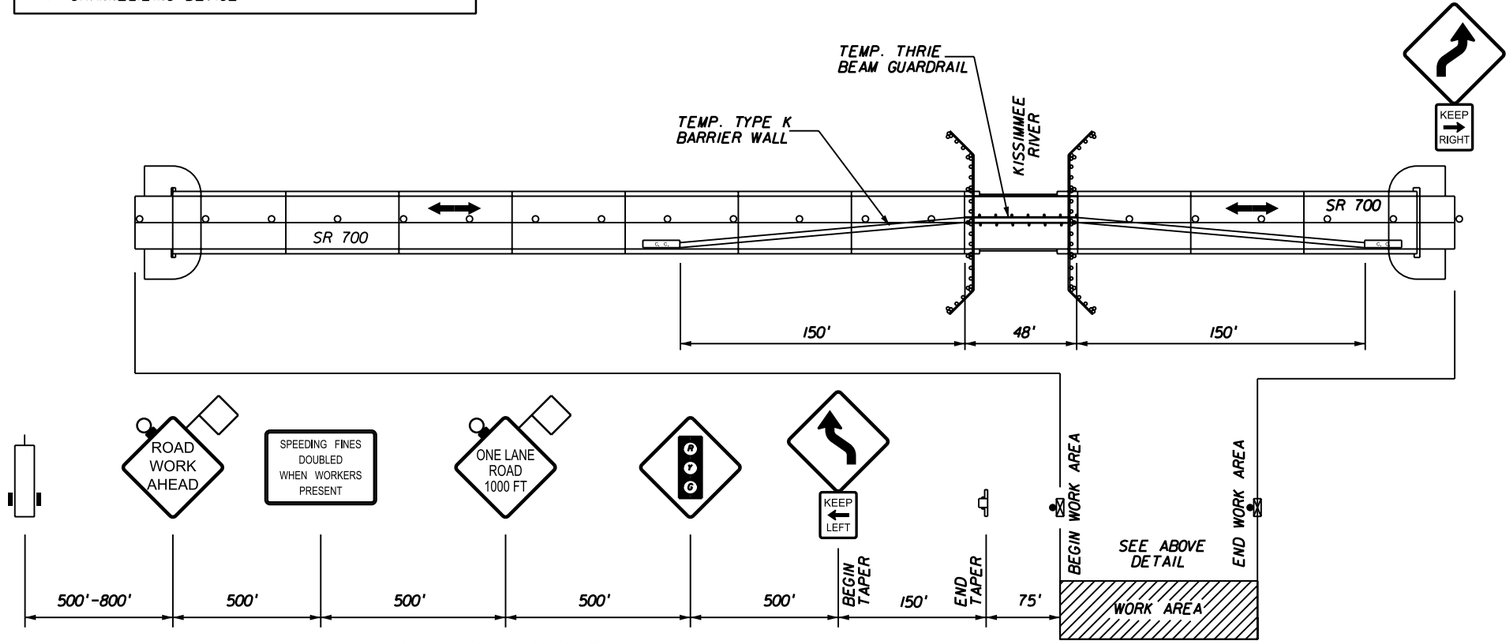
(MSG 1)	ALTERNATING MESSAGES	(MSG 2)
USE EXTREME CAUTION	⟷	ONE LANE ROAD AHEAD



SR 700 (U.S. 98) OVER KISSIMMEE RIVER
(HIGHLANDS COUNTY)

LEGEND

- TYPE III BARRICADE (WITH STEADY BURNING LIGHT)
- PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN
- PORTABLE SIGNAL
- CRASH CUSHION
- CHANNELIZING DEVICE



SEE STANDARD INDEX NO. 606

BRIDGE NO. 090016 (ONE DIRECTION SHOWN, MIRROR FOR OPPOSITE DIRECTION)

SR 700 - TEMPORARY SIGNAL

CONTROLLER TIMINGS					
TIMING FUNCTION					
MOVEMENT NUMBER		2	6		
TIMING FUNCTION	MINIMUM GREEN	21	21		
	EXTENSION				
	MAXIMUM GREEN 1	27	28		
	MAXIMUM GREEN 2				
	YELLOW CLEARANCE	4	4		
	ALL RED	1	1		
	PEDESTRIAN WALK				
	PED. CLEARANCE				
	RECALL				

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DESIGNED BY: JW 02-10
CHECKED BY: JSM 02-10

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: TRAFFIC CONTROL PLAN - BRIDGE NO. 090016

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B-9

GENERAL NOTES

1. SINGLE LANE CLOSURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THIS PLAN AND FDOT DESIGN STANDARD INDICES 600 AND 613. ALL LANE CLOSURES SHALL BE REPORTED TO THE LOCAL EMERGENCY AGENCIES, THE MEDIA AND THE DISTRICT 1 INFORMATION OFFICE.
2. LANE CLOSURE SHALL NOT BE PERMITTED DURING NON-WORKING PERIODS.
3. LANE CLOSURE SHALL BE PERMITTED DURING THE FOLLOWING TIMES:

   BRIDGE NO. 170098 / SR 681- (SARASOTA COUNTY)

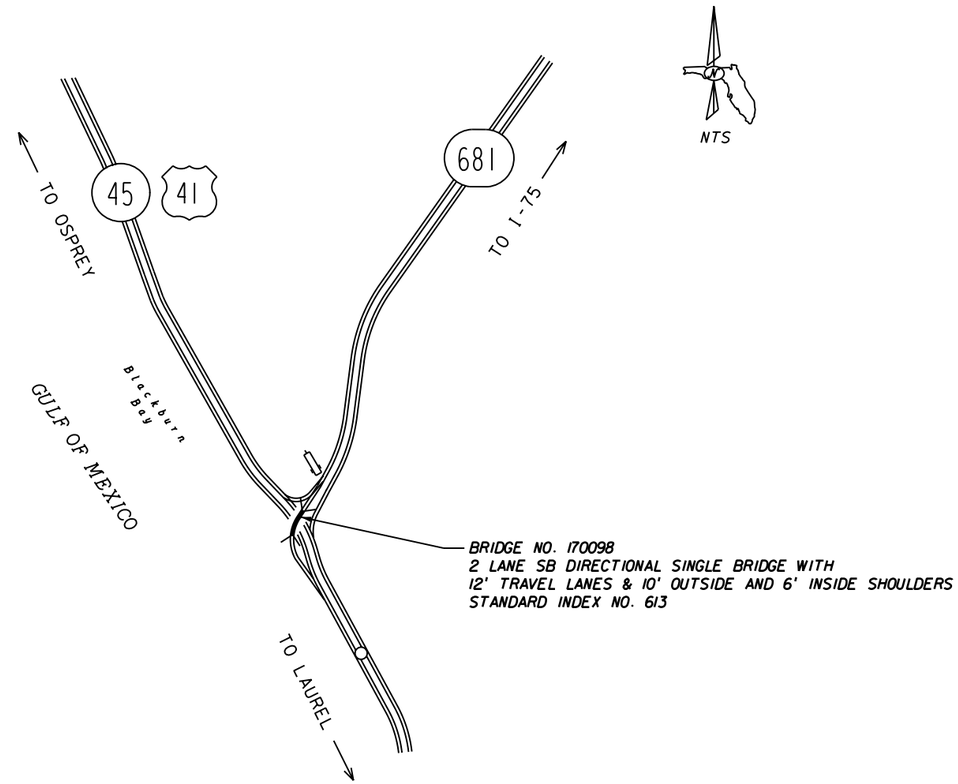
   NO LANE CLOSURE RESTRICTIONS
4. ALL LANES MUST BE OPEN FOR TRAFFIC IF DRIVER DELAYS ARE GREATER THAN 5 MINUTES.
5. EXISTING POSTED SPEED LIMIT IS 55 MPH AND SHALL BE MAINTAINED.
6. THE CONTRACTOR SHALL FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PER THIS SHEET. THESE SIGNS SHALL BE IN PLACE ONE WEEK PRIOR TO THE START OF AND DURING ANY CONSTRUCTION ACTIVITY. THE FOLLOWING MESSAGES SHALL BE DISPLAYED:

ONE (1) WEEK PRIOR TO LANE CLOSURE

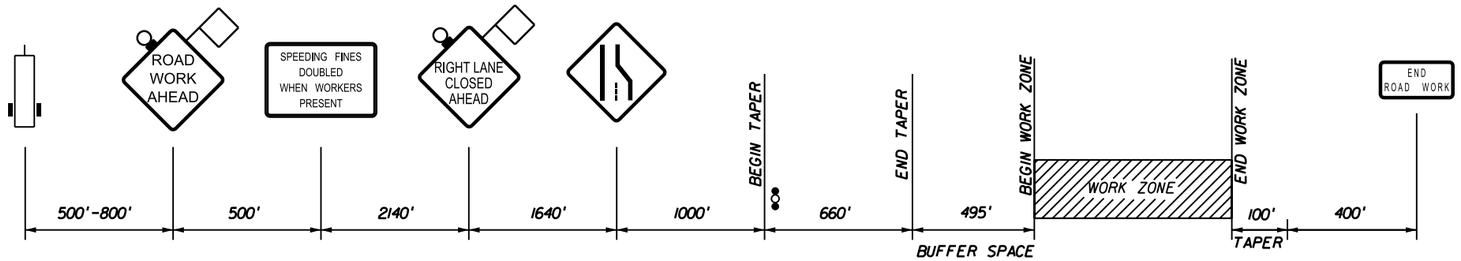
(MSG 1)		(MSG 2)
BRIDGE LANE CLOSURE	ALTERNATING MESSAGES	XP MM/DD TO XA MM/DD

DURING LANE CLOSURE

(MSG 1)		(MSG 2)
USE EXTREME CAUTION	ALTERNATING MESSAGES	ONE LANE ROAD AHEAD



SR 681 OVER SR 45 (U.S. 41)
(SARASOTA COUNTY)



STANDARD INDEX NO. 613
BRIDGE NO. 170098

LEGEND

⇦ PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

ADVANCE WARNING ARROW PANEL

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHECKED BY: ALW 02-10
DESIGNED BY: JW 02-10
CHECKED BY: JSM 02-10

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
681	SARASOTA	413817-1-52-01

SHEET TITLE: TRAFFIC CONTROL PLAN - BRIDGE NO. 170098

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B-10

James_Newberry 12/29/2010 11:17:43 AM F:\Projects\413817152O1\roadway\TCPLRD01.dgn

GENERAL NOTES

1. SINGLE LANE CLOSURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THIS PLAN AND FDOT DESIGN STANDARD INDICES 600 AND 606. ALL LANE CLOSURES SHALL BE REPORTED TO THE LOCAL EMERGENCY AGENCIES, THE MEDIA AND THE DISTRICT 1 INFORMATION OFFICE.
2. LANE CLOSURE SHALL NOT BE PERMITTED DURING NON-WORKING PERIODS.
3. LANE CLOSURE SHALL BE PERMITTED DURING THE FOLLOWING TIMES:

   BRIDGE NO. 910001 / SR 70- (OKEECHOBEE COUNTY)

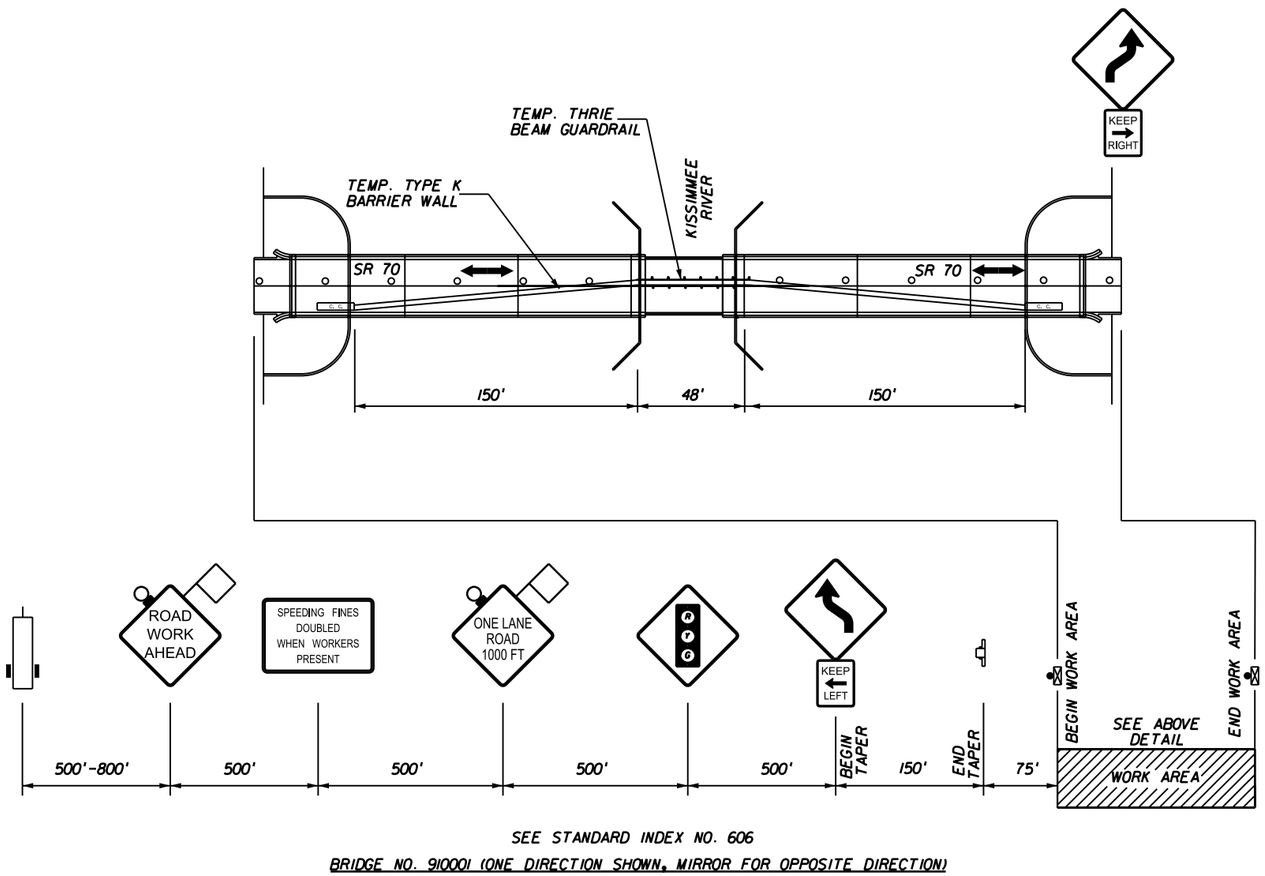
   NO LANE CLOSURE RESTRICTIONS
4. ALL LANES MUST BE OPEN FOR TRAFFIC IF DRIVER DELAYS ARE GREATER THAN 5 MINUTES.
5. EXISTING POSTED SPEED LIMIT IS 60 MPH AND SHALL BE MAINTAINED.
6. THE CONTRACTOR SHALL FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PER THIS SHEET. THESE SIGNS SHALL BE IN PLACE ONE WEEK PRIOR TO THE START OF AND DURING ANY CONSTRUCTION ACTIVITY. THE FOLLOWING MESSAGES SHALL BE DISPLAYED:

ONE (1) WEEK PRIOR TO LANE CLOSURE

(MSG 1)		(MSG 2)
BRIDGE LANE CLOSURE	ALTERNATING MESSAGES	XP MM/DD TO XA MM/DD

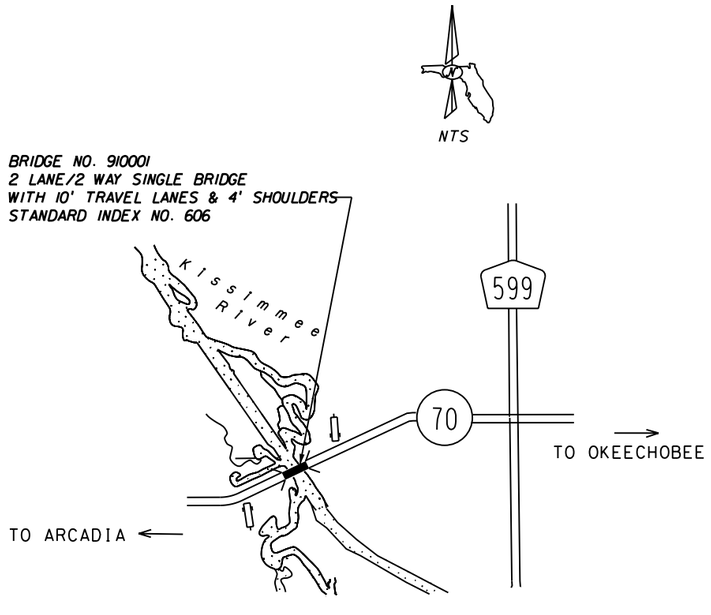
DURING LANE CLOSURE

(MSG 1)		(MSG 2)
USE EXTREME CAUTION	ALTERNATING MESSAGES	ONE LANE ROAD AHEAD



SEE STANDARD INDEX NO. 606

BRIDGE NO. 910001 (ONE DIRECTION SHOWN, MIRROR FOR OPPOSITE DIRECTION)



SR 70 OVER KISSIMMEE RIVER
(OKEECHOBEE COUNTY)

LEGEND

- TYPE III BARRICADE (WITH STEADY BURNING LIGHT)
- PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN
- PORTABLE SIGNAL
- CRASH CUSHION
- CHANNELIZING DEVICE

SR 70 - TEMPORARY SIGNAL

CONTROLLER TIMINGS					
TIMING FUNCTION					
MOVEMENT NUMBER		2	6		
TIMING FUNCTION	MINIMUM GREEN	21	21		
	EXTENSION				
	MAXIMUM GREEN 1	27	28		
	MAXIMUM GREEN 2				
	YELLOW CLEARANCE	4	4		
	ALL RED	1	1		
	PEDESTRIAN WALK				
	PED. CLEARANCE				
	RECALL				

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ASHLEY L. WILLIS, P.E.
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CHECKED BY: ALW 02-10
DESIGNED BY: JW 02-10
CHECKED BY: JSM 02-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE: TRAFFIC CONTROL PLAN - BRIDGE NO. 910001

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B-11

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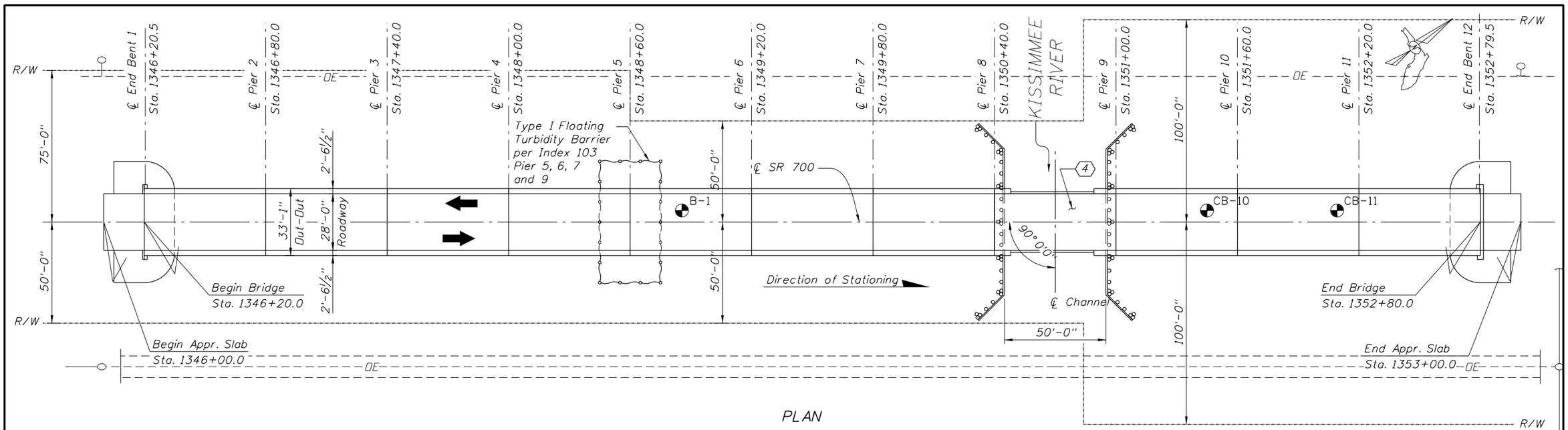
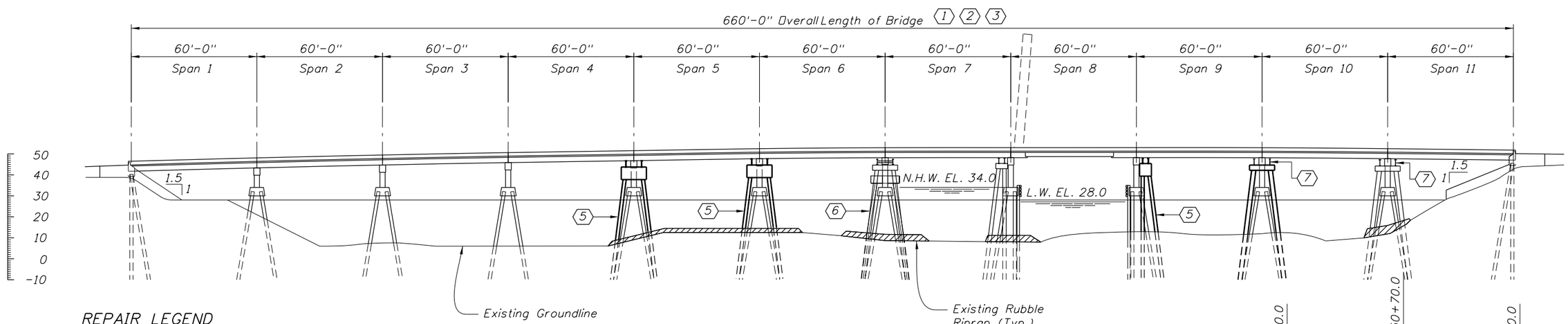


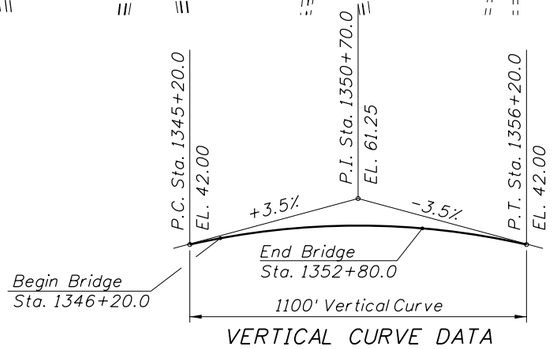
PLAN



ELEVATION

REPAIR LEGEND

1. Clean and Seal Deck Joints
2. Clean and Paint Structural Steel and Existing Crutch Bent Beams
3. Repair Concrete Superstructure and Substructure
4. Replace Open Steel Grid Deck
5. Install Crutch Bent Piers 5, 6, and 9
6. Install Pile Jackets and Repair Crutch Bent Pier 7
7. Repair Bearings Piers 10 and 11.



VERTICAL CURVE DATA

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHECKED BY:	KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 090016
GENERAL PLAN & ELEVATION

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO.
BI-1

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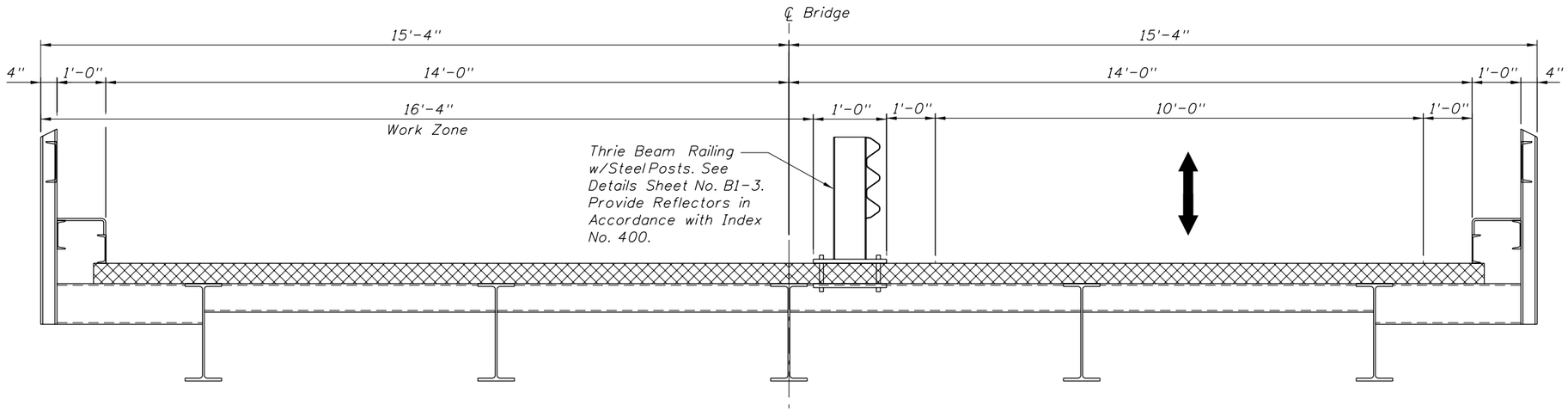
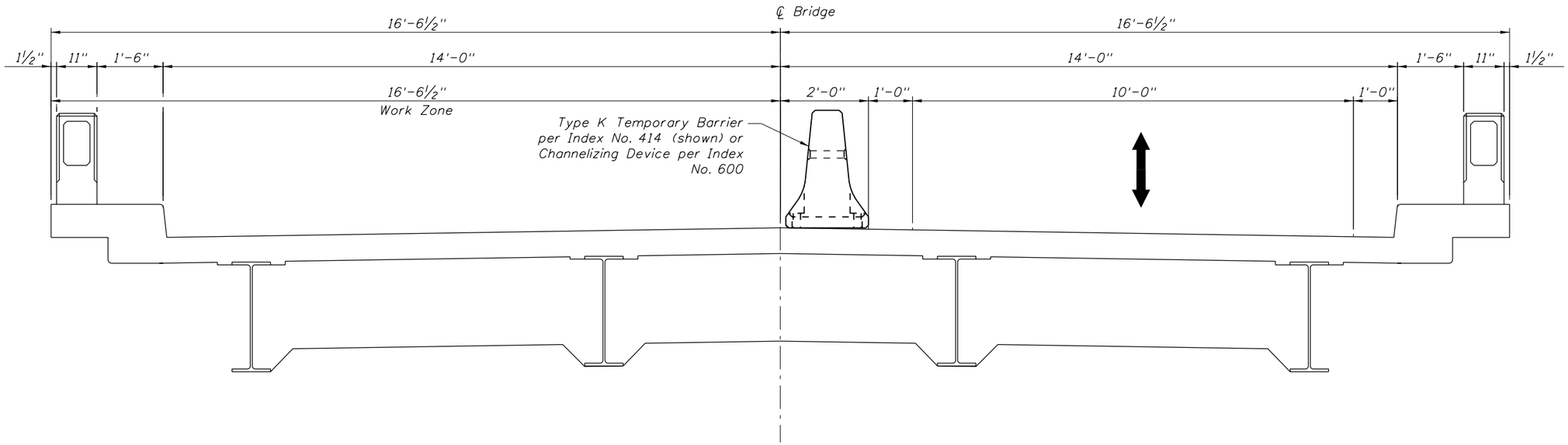


SECTION THRU MOVABLE SPAN



SECTION THRU APPROACH SPANS

NOTES:

1. View looking in direction of stationing showing westbound lane closure. Eastbound lane closure opposite hand.
2. See Traffic Control Plans for additional details.

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: BRIDGE NO. 090016
TEMPORARY BARRIER DETAILS - SHEET 1 OF 2

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.: B1-2

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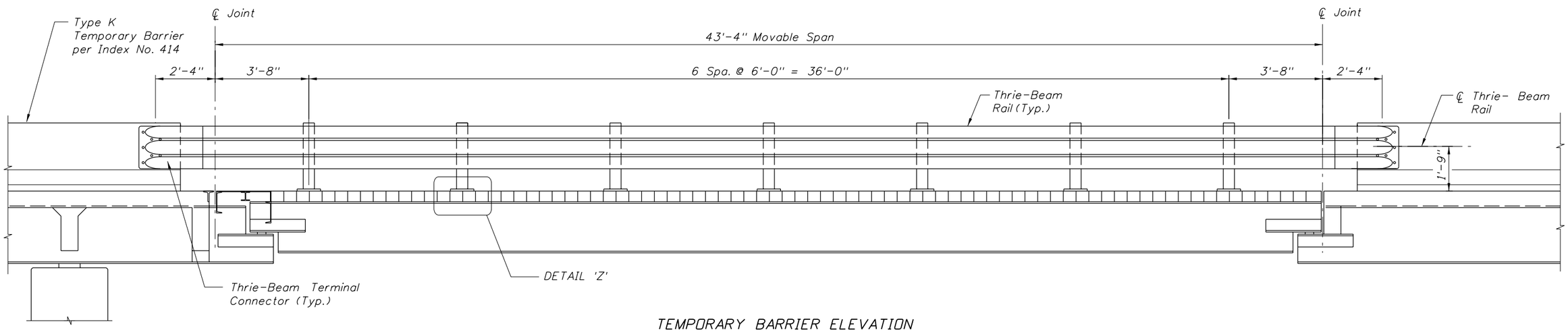
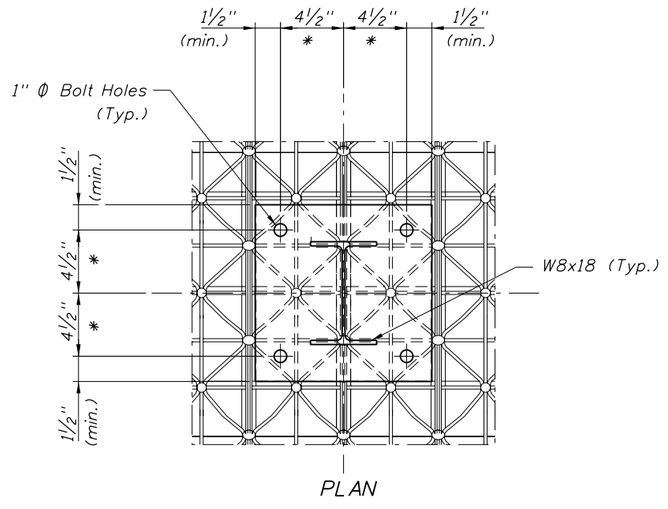
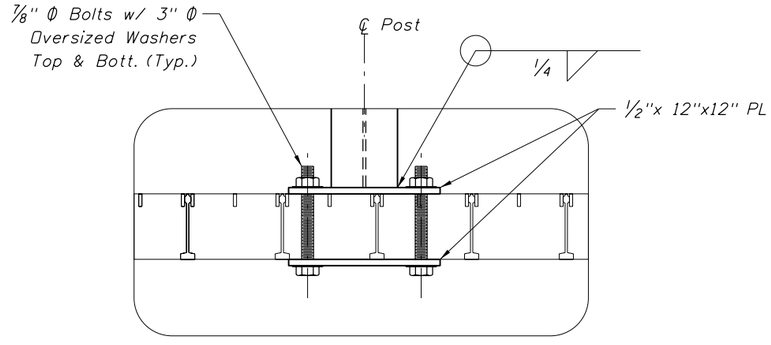


TEMPORARY BARRIER ELEVATION
(Showing Movable Span and Adjacent Spans)



PLAN



DETAIL "Z"

* Contractor shall field verify that location of anchor bolts for Temporary Barrier Post base plates do not interfere with grid deck bars. Adjust spacing as required.

NOTES:

1. For Details of Thrie-Beam Guardrail, see FDOT Design Standards Index No. 400.
2. Thrie-Beam Guardrail to be relocated from one phase to the other.

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

TIMOTHY J. FARRELL, P.E.
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E. C. DRIVER & ASSOCIATES, INC.
500 N. Westshore Blvd. Suite 500
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Certificate of Authorization No. 3838

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DESIGNED BY,	TJF 02-10
CHECKED BY,	KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

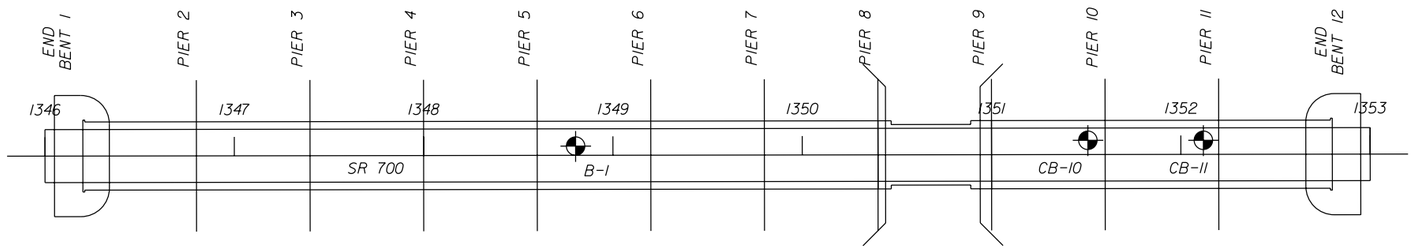
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE,
BRIDGE NO. 090016
TEMPORARY BARRIER DETAILS - SHEET 2 OF 2

PROJECT NAME,
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

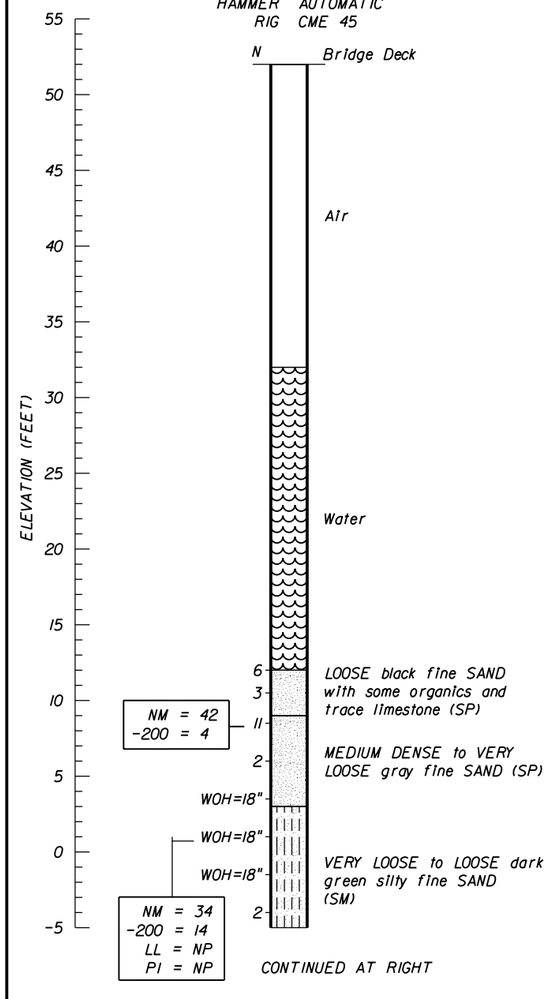
SHEET NO.
B1-3

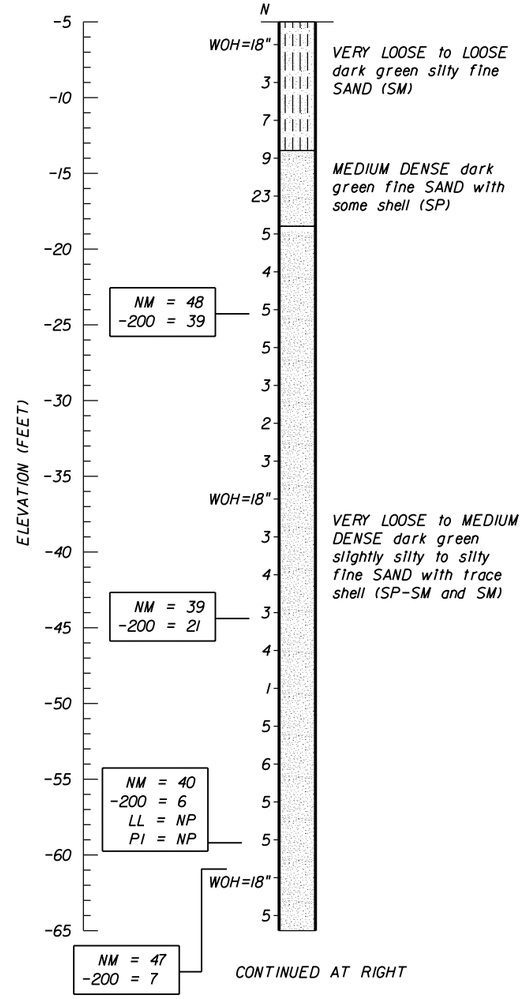


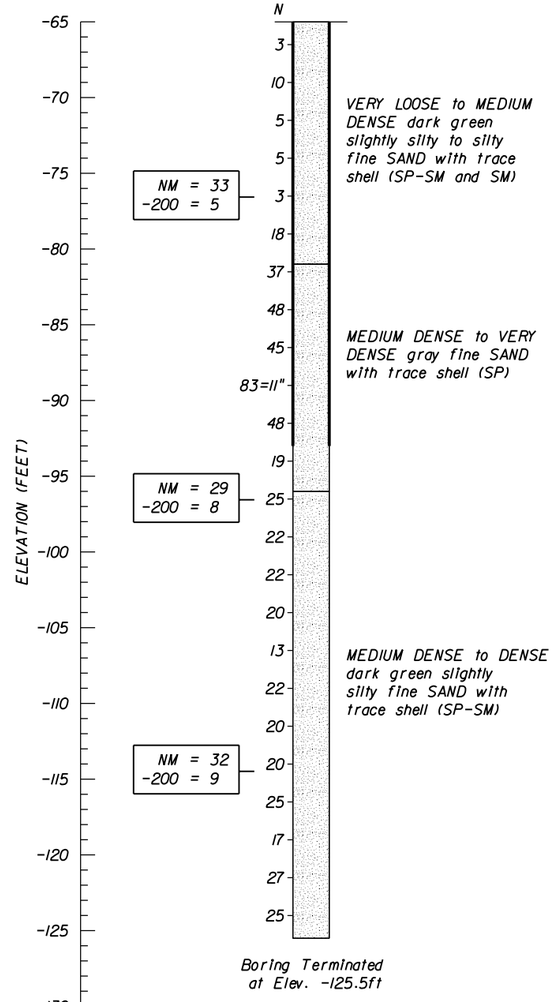
LEGEND

- SP and SP-SM, Fine sand and slightly silty fine sand
- SM, Silty Sand

BOR # B-1
LOCATION N 27.36512°, W 081.05136°
BRIDGE ELEV. 52' (EST)
MUDLINE ELEV. 12' (EST)
DATE 6/14/2010
DRILLER CARNEY
HAMMER AUTOMATIC
RIG CME 45







= Casing used

NM = Natural Moisture Content
-200 = % Passing #200 Sieve
LL = Liquid Limit
PI = Plasticity Index

ENVIRONMENTAL CLASSIFICATION

SUBSTRUCTURE: SLIGHTLY AGGRESSIVE

Sample Type	pH	Chlorides (ppm)	Sulphates (ppm)	Resistivity (Ohm-cm)
Soil	7.3	80	127	3600

GENERAL NOTES

DRILL AND PENETRATION TESTING WERE PERFORMED IN ACCORDANCE WITH ASTM D 1586. NUMBER TO THE LEFT OF BORING INDICATES BLOWS OF 1⅜" I.D., 2" O.D. SPLIT-SPOON FOR 12" PENETRATION (UNLESS OTHERWISE NOTED) WITH A 140 LB HAMMER DROPPED 30 INCHES.

THE BORING LOGS SHOWN REPRESENT SUBSURFACE CONDITIONS WITHIN THE BOREHOLE AT THE TIME OF DRILLING. NO WARRANTY AS TO THE SUBSURFACE CONDITION, STRATA DEPTH OR SOIL CONSISTENCY BETWEEN OR OUTSIDE BORING LOCATIONS IS EXPRESSED OR IMPLIED BY THIS DRAWING.

GRANULAR MATERIALS-

Relative Density	Safety Hammer SPT N-Value (Blow/Foot)	Automatic Hammer SPT N-Value (Blow/Foot)
Very Loose	Less than 4	Less than 3
Loose	4 - 10	3 - 8
Medium Dense	10 - 30	8 - 24
Dense	30 - 50	24 - 40
Very Dense	Greater than 50	Greater than 40

SILTS AND CLAYS-

Consistency	Safety Hammer SPT N-Value (Blow/Foot)	Automatic Hammer SPT N-Value (Blow/Foot)
Very Soft	Less than 2	Less than 1
Soft	2 - 4	1 - 3
Firm	4 - 8	3 - 6
Stiff	8 - 15	6 - 12
Very Stiff	15 - 30	12 - 24
Hard	Greater than 30	Greater than 24

BRIDGE NO. 090016

051879.301 BIBORING01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

GANNETT FLEMING, INC.
10600 Endeavour Way
Largo, Florida 33777 C.A. 5564
Engineer of Record:
KEITH D. BENNETT
P.E. NO. 33075

DRAWN BY, TEJ 06-10
CHECKED BY, JS 06-10
DESIGNED BY, JS 06-10
CHECKED BY, KDB 06-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: REPORT OF CORE BORINGS - SHEET 1 OF 3

REF. DWG. NO.

PROJECT NAME: US 98 KISSIMMEE RIVER BRIDGE

SHEET NO. BI-4

James_Newberry 12/29/2010 11:15:27 AM F:\Projects\413817152O1\geotech\BIBORINGO1.dgn

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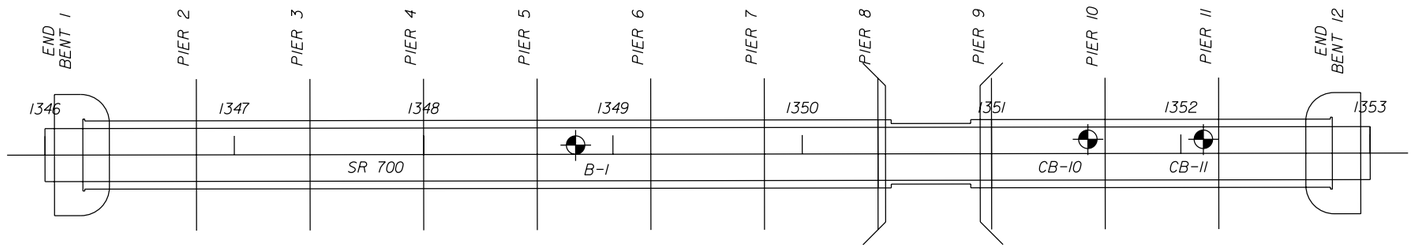
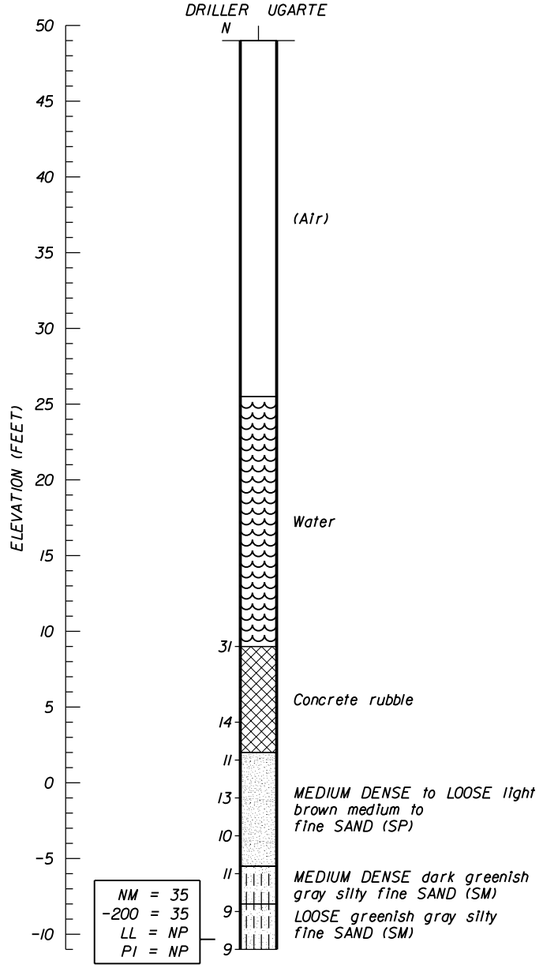


LEGEND

- Concrete rubble
- SP, Sand
- SM, Silty Sand
- ML, Sandy Silt

BOR # CB-10 *
ELEV. +49.0 (EST @ BRIDGE DECK)
DATE 11/3/1999
DRILLER UGARTE



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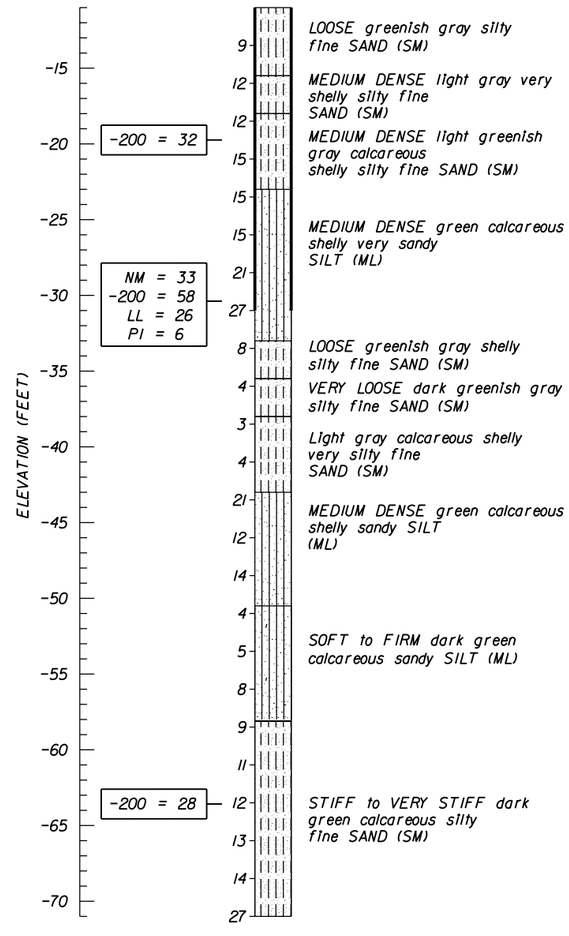
CONTINUED FROM LEFT



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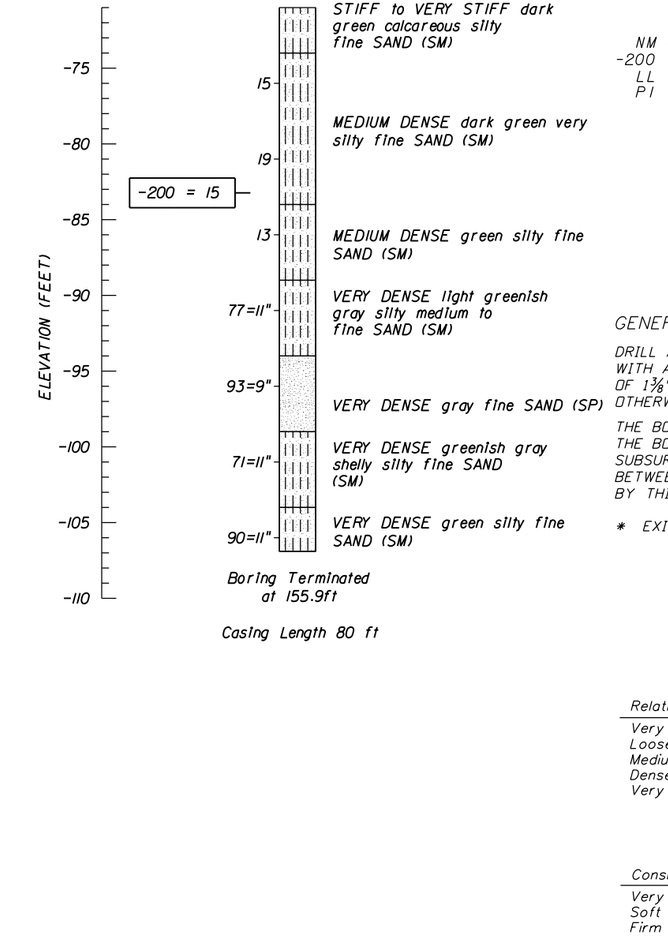

Boring Terminated at 155.9ft

Casing Length 80 ft

= Casing used

NM = Natural Moisture Content
-200 = % Passing #200 Sieve
LL = Liquid Limit
PI = Plasticity Index

GENERAL NOTES

DRILL AND PENETRATION TESTING WERE PERFORMED IN ACCORDANCE WITH ASTM D 1586. NUMBER TO THE LEFT OF BORING INDICATES BLOWS OF 1⅜" I.D., 2" O.D. SPLIT-SPOON FOR 12" PENETRATION (UNLESS OTHERWISE NOTED) WITH A 140 LB HAMMER DROPPED 30 INCHES.

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* EXISTING BORING - NO GPS LOCATIONS AVAILABLE.

GRANULAR MATERIALS-

Relative Density	Safety Hammer SPT N-Value (Blow/Foot)	Automatic Hammer SPT N-Value (Blow/Foot)
Very Loose	Less than 4	Less than 3
Loose	4 - 10	3 - 8
Medium Dense	10 - 30	8 - 24
Dense	30 - 50	24 - 40
Very Dense	Greater than 50	Greater than 40

SILTS AND CLAYS-

Consistency	Safety Hammer SPT N-Value (Blow/Foot)	Automatic Hammer SPT N-Value (Blow/Foot)
Very Soft	Less than 2	Less than 1
Soft	2 - 4	1 - 3
Firm	4 - 8	3 - 6
Stiff	8 - 15	6 - 12
Very Stiff	15 - 30	12 - 24
Hard	Greater than 30	Greater than 24

BRIDGE NO. 090016

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05I879.30I BIBORING02

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

GANNETT FLEMING, INC.
10600 Endeavour Way
Largo, Florida 33777 C.A. 5564
Engineer of Record:
KEITH D. BENNETT
P.E. NO. 33075

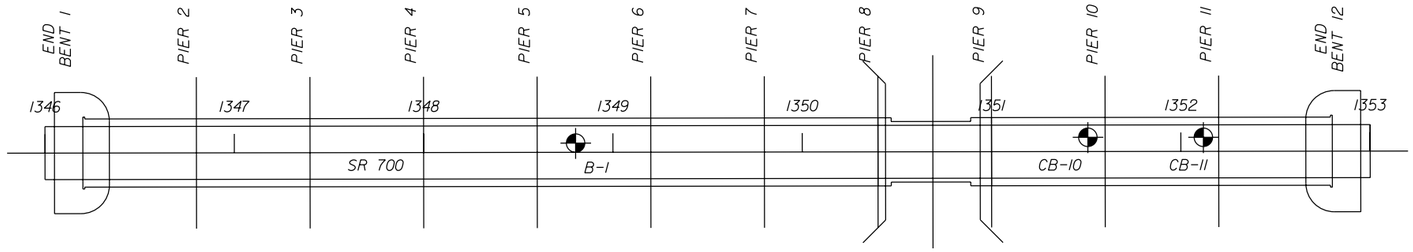
DRAWN BY, TEJ 06-10
CHECKED BY, JS 06-10
DESIGNED BY, JS 06-10
CHECKED BY, KDB 06-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE, REPORT OF CORE BORINGS - SHEET 2 OF 3
REF. DWG. NO.
PROJECT NAME, US 98 KISSIMMEE RIVER BRIDGE
SHEET NO. BI-5

James_Newberry 12/29/2010 11:15:29 AM F:\Projects\413817152O1\geotech\BIBORING02.dgn



LEGEND

- SP, Sand
- SM, Silty Sand
- ML, Sandy Silt
- Clayey Sand

BOR # CB-11 *
ELEV. +49.0' (EST @ BRIDGE DECK)
DATE 10/28/1999
DRILLER UGARTE

N

ELEVATION (FEET)

50 45 40 35 30 25 20 15 10 5 0 -5 -10

(Air)

Water

27 MEDIUM DENSE dark brown fine SAND with asphalt fragments (SP)

6 6 5 LOOSE gray fine SAND with minor limerock fragments (SP)

21 LOOSE to MEDIUM DENSE light grayish brown fine SAND (SP)

25 28 38 DENSE light grayish brown fine SAND (SP)

50 DENSE light grayish brown fine SAND with pockets of dark gray silty fine SAND (SP)

36 36 DENSE brown medium to fine SAND (SP)

-200 = 8

32 DENSE dark brown medium to fine SAND (SP)

35 DENSE dark brown slightly silty fine SAND (SP-SM)

CONTINUED AT RIGHT

CONTINUED FROM LEFT

ELEVATION (FEET)

-15 -20 -25 -30 -35 -40 -45 -50 -55 -60 -65 -70

28 DENSE dark brown slightly silty fine SAND (SP-SM)

26 MEDIUM DENSE greenish gray calcareous shelly silty fine SAND (SM)

19 MEDIUM DENSE light gray calcareous shelly silty fine SAND (SM)

16 15 MEDIUM DENSE greenish gray calcareous shelly silty fine SAND (SM)

-200 = 51

13 MEDIUM DENSE light greenish gray calcareous shelly very sandy SILT (ML)

15 MEDIUM DENSE greenish gray calcareous shelly silty fine SAND (SM)

18 MEDIUM DENSE greenish gray calcareous silty fine SAND (SM)

16 MEDIUM DENSE gray calcareous very silty fine SAND (SM)

16 MEDIUM DENSE dark gray slightly shelly very silty fine SAND (SM)

-200 = 27

13 MEDIUM DENSE light grayish brown shelly clayey fine SAND (SC)

13 MEDIUM DENSE light greenish gray calcareous silty fine SAND (SM)

75% Loss of Circulation 90.0 ft.

11 MEDIUM DENSE light gray calcareous shelly clayey fine SAND (SC)

11 MEDIUM DENSE light greenish gray calcareous silty fine SAND (SM)

10 14 LOOSE to MEDIUM DENSE green calcareous shelly very silty fine SAND (SM)

NM = 32
-200 = 21
LL = 30
PI = 6

12 9 11 MEDIUM DENSE to LOOSE green calcareous shelly silty fine SAND (SM)

8 11 12 9 13 MEDIUM DENSE greenish gray calcareous very silty fine SAND (SM)

CONTINUED AT RIGHT

CONTINUED FROM LEFT

ELEVATION (FEET)

-75 -80 -85 -90 -95 -100 -105 -110

12 28 DENSE greenish gray calcareous silty fine SAND (SM)

31 30 DENSE to MEDIUM DENSE green calcareous clayey silty medium to fine SAND (SM)

26 MEDIUM DENSE greenish gray calcareous silty fine SAND (SM)

65 50 VERY DENSE light greenish gray calcareous silty medium to fine SAND (SM)

94

Boring Terminated 151.5ft

Casing Length 75 ft

[ ] = Casing used

NM = Natural Moisture Content
-200 = % Passing #200 Sieve
LL = Liquid Limit
PI = Plasticity Index

GENERAL NOTES

DRILL AND PENETRATION TESTING WERE PERFORMED IN ACCORDANCE WITH ASTM D 1586. NUMBER TO THE LEFT OF BORING INDICATES BLOWS OF 1⅜" I.D., 2" O.D. SPLIT-SPOON FOR 12" PENETRATION (UNLESS OTHERWISE NOTED) WITH A 140 LB HAMMER DROPPED 30 INCHES.

THE BORING LOGS SHOWN REPRESENT SUBSURFACE CONDITIONS WITHIN THE BOREHOLE AT THE TIME OF DRILLING. NO WARRANTY AS TO THE SUBSURFACE CONDITION, STRATA DEPTH OR SOIL CONSISTENCY BETWEEN OR OUTSIDE BORING LOCATIONS IS EXPRESSED OR IMPLIED BY THIS DRAWING.

* EXISTING BORING - NO GPS LOCATIONS AVAILABLE.

GRANULAR MATERIALS-

Relative Density	Safety Hammer SPT N-Value (Blow/Foot)	Automatic Hammer SPT N-Value (Blow/Foot)
Very Loose	Less than 4	Less than 3
Loose	4 - 10	3 - 8
Medium Dense	10 - 30	8 - 24
Dense	30 - 50	24 - 40
Very Dense	Greater than 50	Greater than 40

SILTS AND CLAYS-

Consistency	Safety Hammer SPT N-Value (Blow/Foot)	Automatic Hammer SPT N-Value (Blow/Foot)
Very Soft	Less than 2	Less than 1
Soft	2 - 4	1 - 3
Firm	4 - 8	3 - 6
Stiff	8 - 15	6 - 12
Very Stiff	15 - 30	12 - 24
Hard	Greater than 30	Greater than 24

BRIDGE NO. 090016

051879.301 BIBORING03

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

GANNETT FLEMING, INC.
10600 Endeavour Way
Largo, Florida 33777 C.A. 5564
Engineer of Record:
KEITH D. BENNETT
P.E. NO. 33075

DRAWN BY: TEJ 06-10
CHECKED BY: JS 06-10
DESIGNED BY: JS 06-10
CHECKED BY: KDB 06-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: REPORT OF CORE BORINGS - SHEET 3 OF 3

REF. DWG. NO.

PROJECT NAME: US 98 KISSIMMEE RIVER BRIDGE

SHEET NO. B1-6

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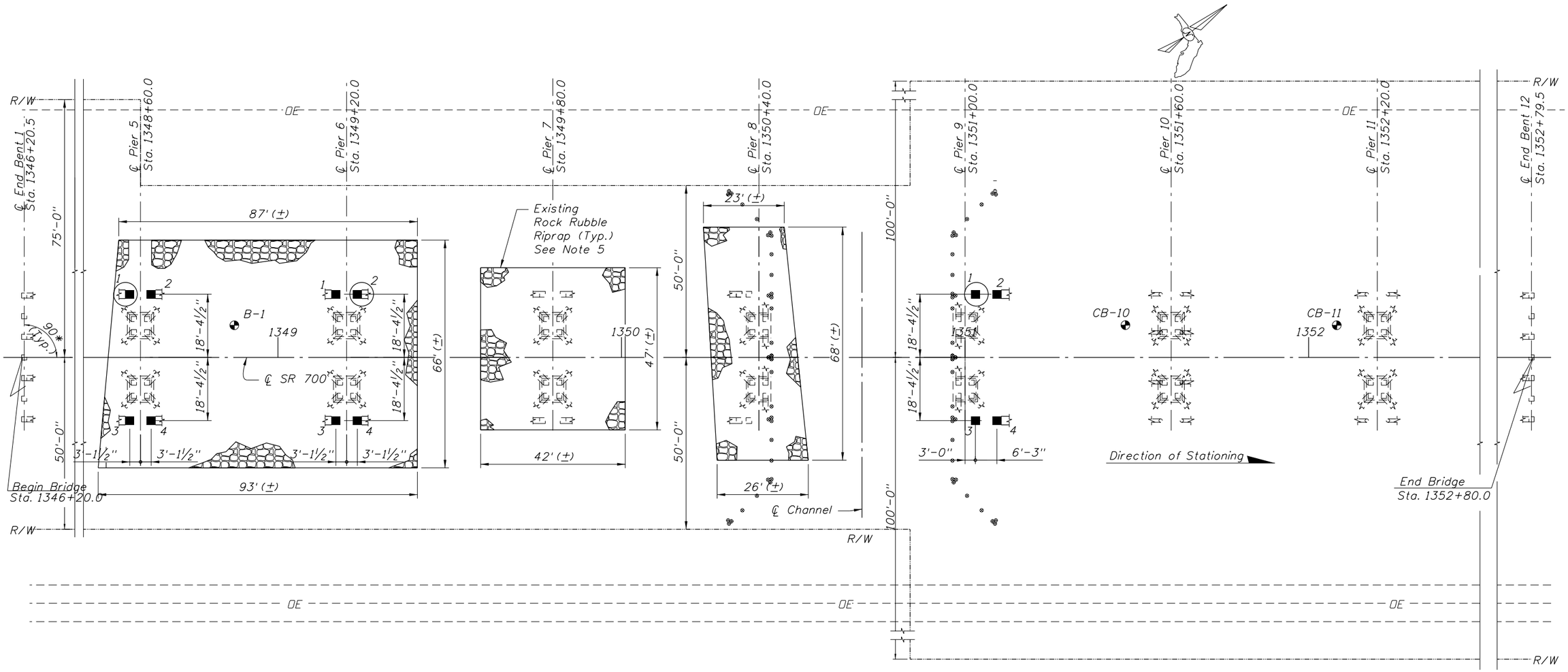

PLAN

LEGEND:

- Indicates Soil Boring Approx. Locations (see Sheets B1-4 thru B1-6 for Borings)
- Denotes Plumb Pile (30" Sq. Prestr. Conc.)
- Denotes Battered Pile (30" Sq. Prestr. Conc.)
- Denotes Existing Plumb Pile (Concrete)
- Denotes Existing Battered Pile (Concrete)
- Denotes Existing Fender Pile (Timber)
- Denotes Test Pile Location

NOTES:

1. For Pile Data Table, and Pile Installation Notes see Sheet No. B1-8.
2. For Crutch Bent Details, see Sheet Nos. B1-9, B1-10 & B1-11.
3. For 30" Prestressed Concrete Pile Details, see Standard Index Nos. 20600, 20601, & 20630.
4. For Existing Pile Spacing, see Existing Plans.
5. The contractor is advised of the presence of scour countermeasures around the piers. This consists of previously placed rock rubble riprap. Remove and replace any scour countermeasures as necessary to construct the crutch bents. Other drift debris may be located on the channel bottom, within the construction limits. Remove and dispose of this debris.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: BRIDGE NO. 090016 FOUNDATION LAYOUT

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B1-7

E.C. DRIVER 1/4/2011 9:26:23 AM F:\Projects\413817152O1\struct\B1FoundLayO1.dgn

PILE DATA TABLE

INSTALLATION CRITERIA								DESIGN CRITERIA						
PIER or BENT NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	TENSION RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	LONG TERM SCOUR ELEVATION (ft.)	RESISTANCE FACTOR-Ø
5	30	312	N/A	-40	142	N/A	N/A	118	N/A	85	85	-6	5	0.65
6	30	312	N/A	-40	142	N/A	N/A	118	N/A	85	85	-6	5	0.65
9	30	300	N/A	-65	142	N/A	N/A	110	N/A	85	85	-6	5	0.65

$$\frac{\text{Factored Design Load} + \text{Net Scour Resistance} + \text{Down Drag}}{\emptyset} * \text{Nominal Bearing Resistance}$$

TENSION RESISTANCE – The ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires tension capacity).

TOTAL SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the scourable soil.

NET SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.

100-YEAR SCOUR ELEVATION – Estimated elevation of scour due to the 100 year storm event.

LONG TERM SCOUR ELEVATION – Estimated elevation of scour used in design for extreme event loading.

PILE INSTALLATION NOTES:

1. Contractor shall verify location of all utilities prior to any pile driving.
2. Minimum Tip Elevation is required for lateral stability.
3. No jetting or preforming will be allowed without the approval of the Engineer.
4. Pile spacings are measured horizontally along the bottom of the crutch bent cap.
5. Test piles shall be driven in the position of a permanent pile as shown in the plans.
6. All test piles shall be dynamically monitored using the Pile Driving Analyzer (PDA or equivalent).
7. Pile cut-offs will be determined from the relative location of the bottom of the crutch bent cap to the top of coping at ℄ of the existing bent.

REVISIONS

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

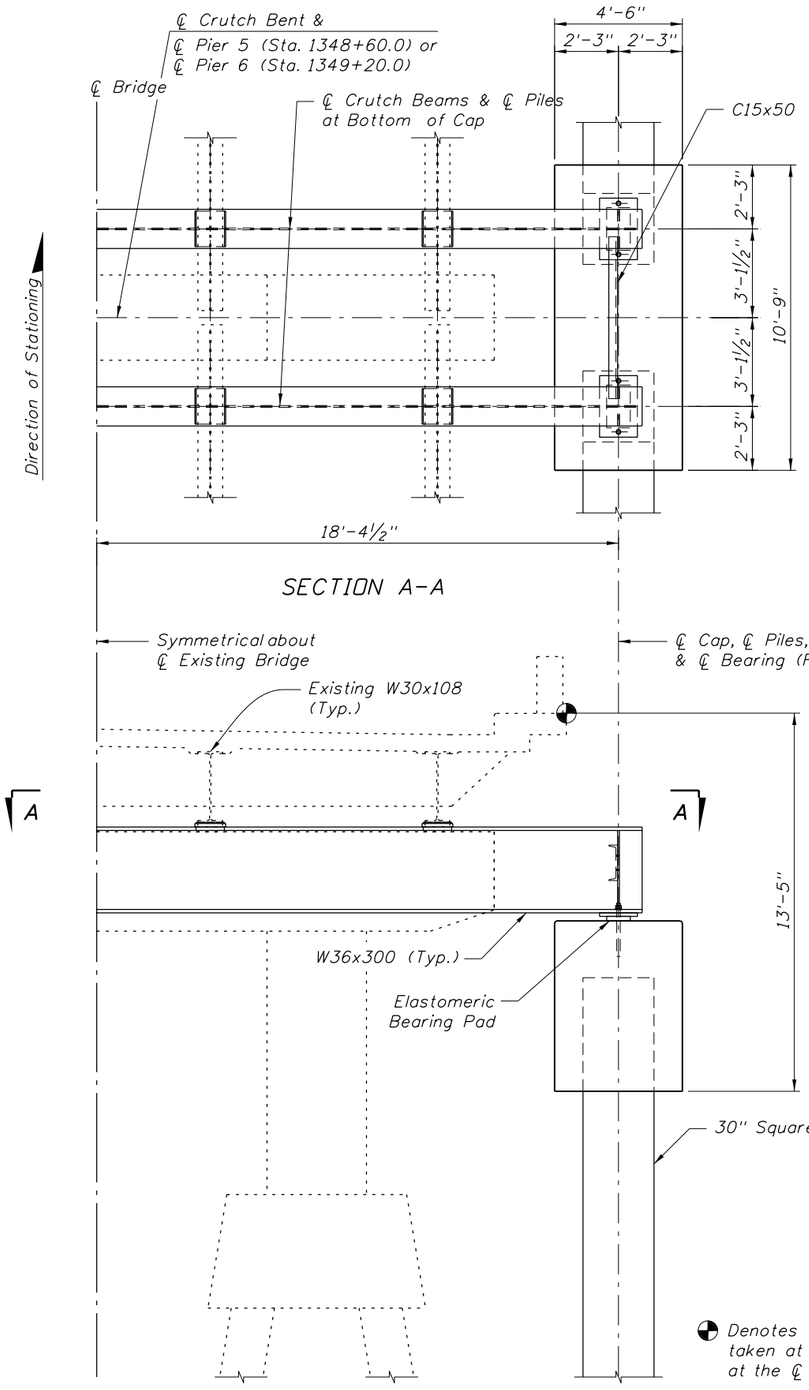
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

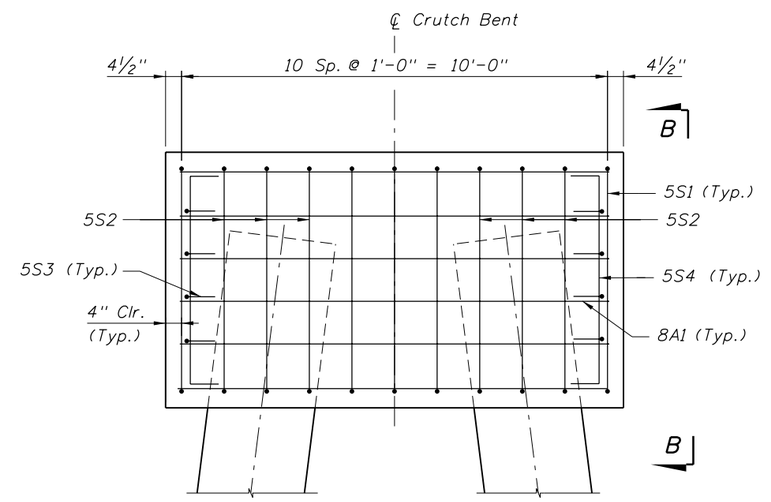
SHEET TITLE: BRIDGE NO. 090016 PILE DATA TABLE

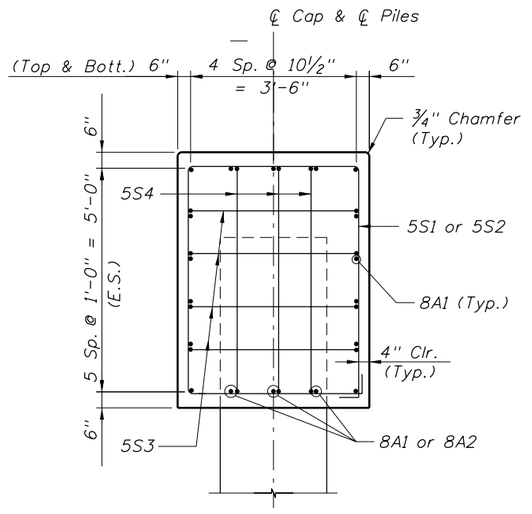
REF. DWG. NO.:

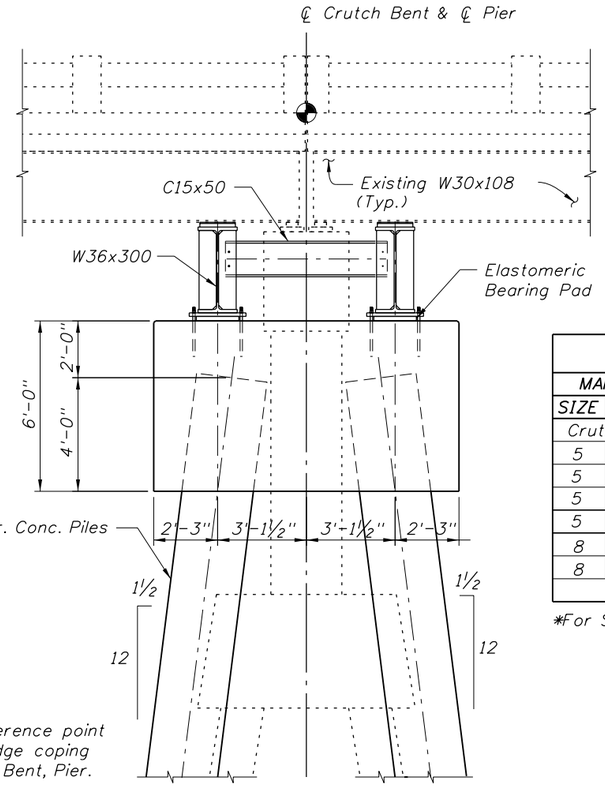
PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B1-8









ESTIMATED QUANTITIES ▲		
ITEM	UNIT	QUANTITY
Class II Concrete (Substructure)	CY	35.6
Reinforcing Steel (Substructure)	LB	2,864
Structural Steel	LB	51,774

▲ Quantities shown are for Piers 5 & 6.

REINFORCING BAR LIST*

MARK		LENGTH		NO	TYP	STY		B			C			D			E		
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR
Crutch Bent Reinf. for Piers 5 & 6 (No. Required = 4)																			
5	S1	19-	0	5	4	4	4	5-	3		3-	9							
5	S2	15-	3	6	5			5-	3		3-	9		0-	6		0-	6	
5	S3	5-	6	8	11			3-	6		1-	0		1-	0				
5	S4	7-	0	6	11			5-	0		1-	0		1-	0				
8	A1	10-	1	15	1			10-	1										
8	A2	3-	6	3	1			3-	6										
End of List																			

*For Standard Bar Bending Details, see Index No. 21300.

NOTES:

1. For Crutch Beam Details, see Sheet No. B1-11.
2. For Bearing Pad Data Table, see Sheet No. B1-10.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: BRIDGE NO. 090016
CRUTCH BENT DETAILS PIERS 5 AND 6

PROJECT NAME: BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO. B1-9

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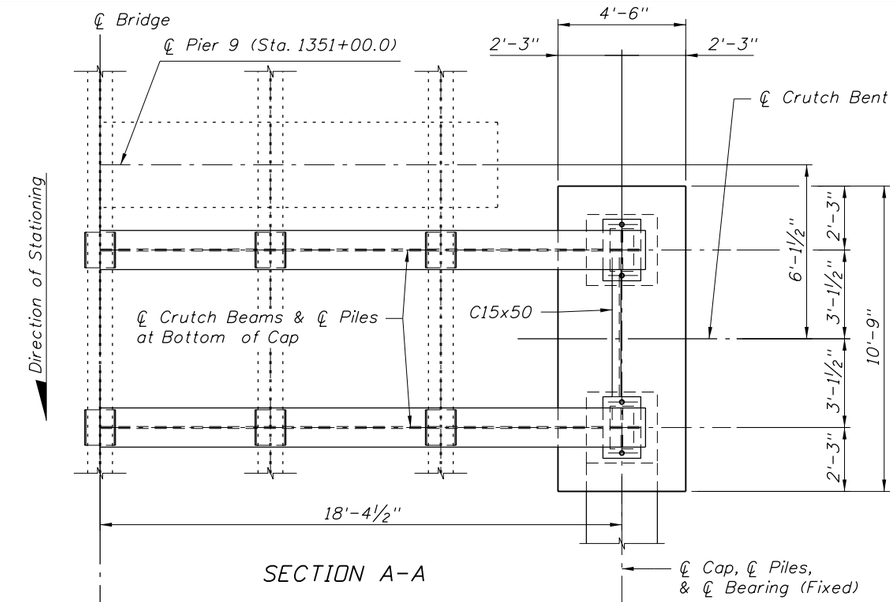
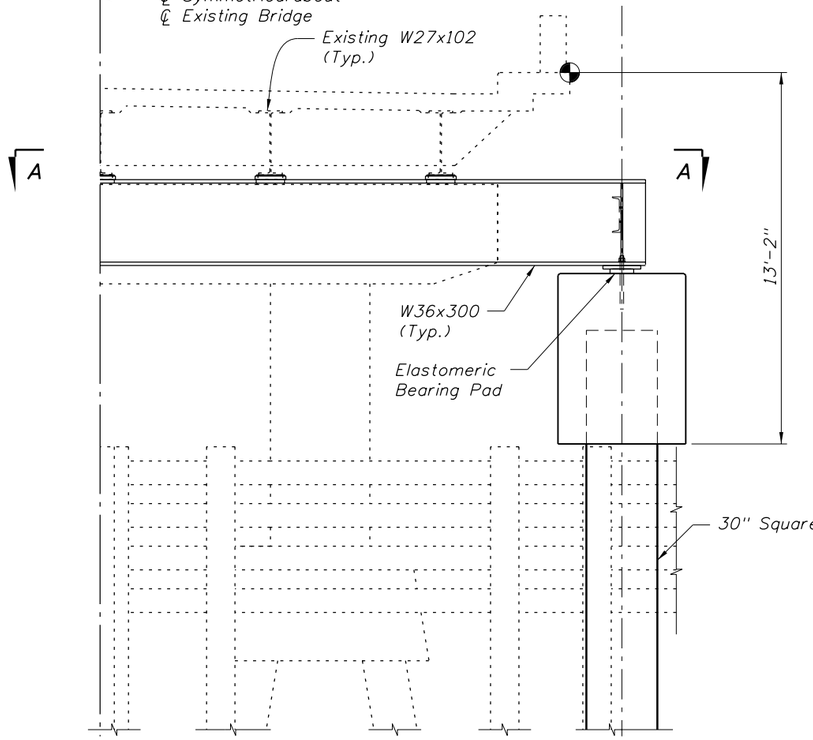
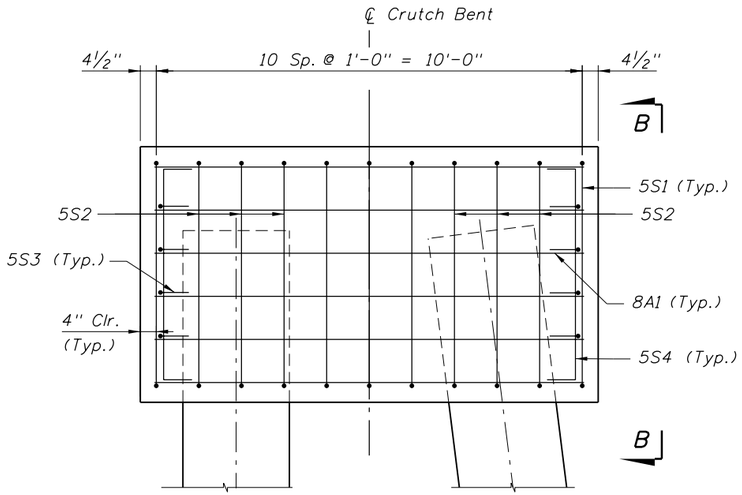


SECTION A-A

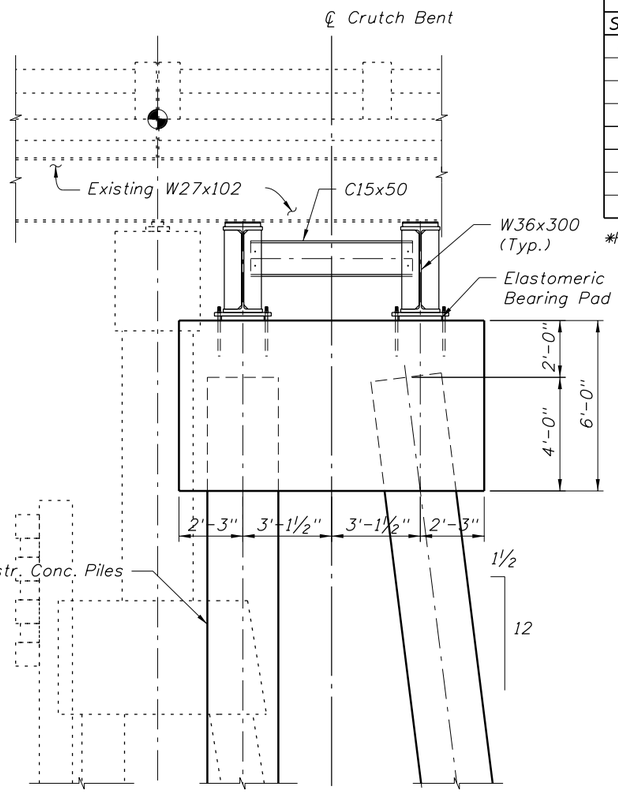


HALF ELEVATION

℄ Denotes the reference point taken at the bridge coping at the ℄ Crutch Bent, Pier.



CAP ELEVATION



END ELEVATION

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Class II Concrete (Substructure)	CY	17.8
Reinforcing Steel (Substructure)	LB	1,432
Structural Steel	LB	26,062

REINFORCING BAR LIST*

MARK		LENGTH		NO	TYP	STY		B			C			D			E		
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR
Crutch Bent Reinf. for Pier 9 (No. Required = 2)																			
5	S1	19-	0	5	4	4	4	5-	3		3-	9							
5	S2	15-	3	6	5			5-	3		3-	9		0-	6		0-	6	
5	S3	5-	6	8	11			3-	6		1-	0		1-	0				
5	S4	7-	0	6	11			5-	0		1-	0		1-	0				
8	A1	10-	1	15	1			10-	1										
8	A2	3-	6	3	1			3-	6										
End of List																			

*For Standard Bar Bending Details, see Index No. 21300.

BEARING PAD DATA TABLE ▲

PIER NO(s).	CRUTCH BEAM NO(s).	PAD TYPE	BEAM TYPE
5; 6	1-2	A	III (AASHTO)
9	1-2	A	III (AASHTO)
.	.	.	.

▲ Work this table with Index No. 20500 for Pad Types A, B & C and/or any project specific bearing pads.

NOTES:

1. For Crutch Beam Details, see Sheet No. B1-11.
2. For View B-B, see Sheet No. B1-9.

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REVISIONS					
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE,
BRIDGE NO. 090016
CRUTCH BENT DETAILS PIER 9

REF. DWG. NO.

PROJECT NAME,
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B1-10

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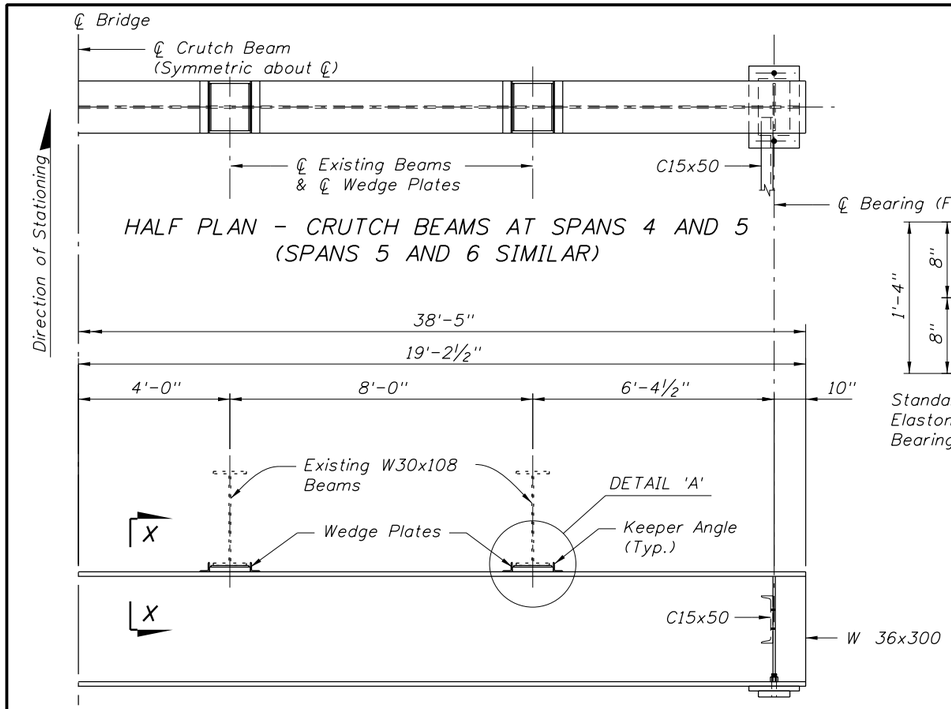
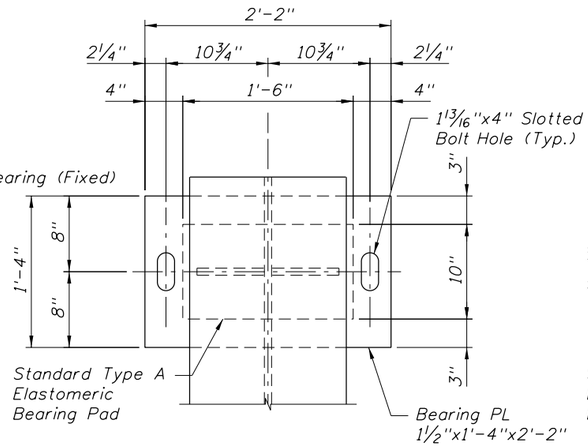
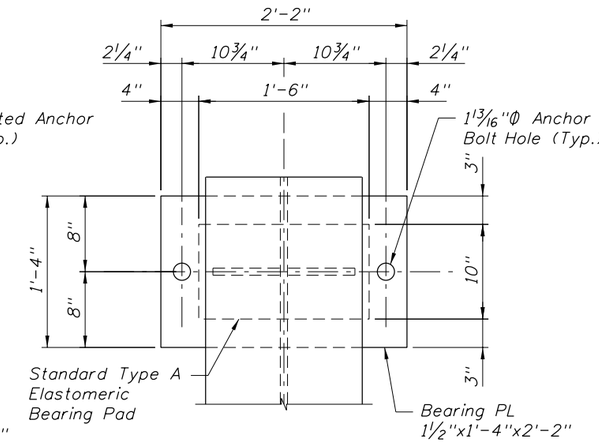


HALF PLAN - CRUTCH BEAMS AT SPANS 4 AND 5
(SPANS 5 AND 6 SIMILAR)

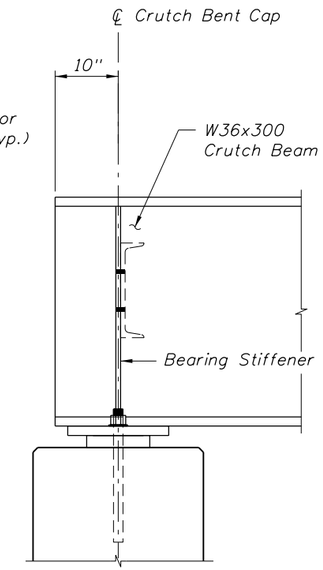
HALF ELEVATION - CRUTCH BEAMS AT SPANS 4 AND 5
(SPANS 5 AND 6 SIMILAR)



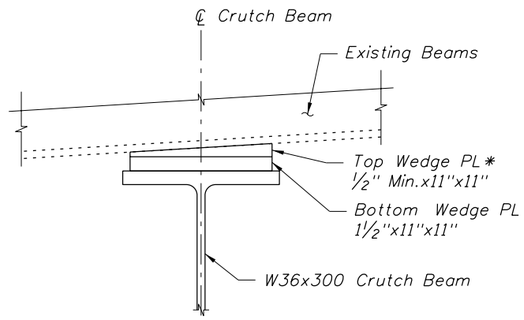
PLAN OF EXPANSION BEARING
(C15x50 & Bolts Not Shown for Clarity)



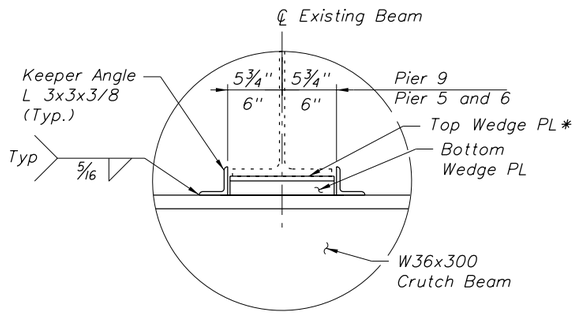
PLAN OF FIXED BEARING
(C15x50 & Bolts Not Shown for Clarity)



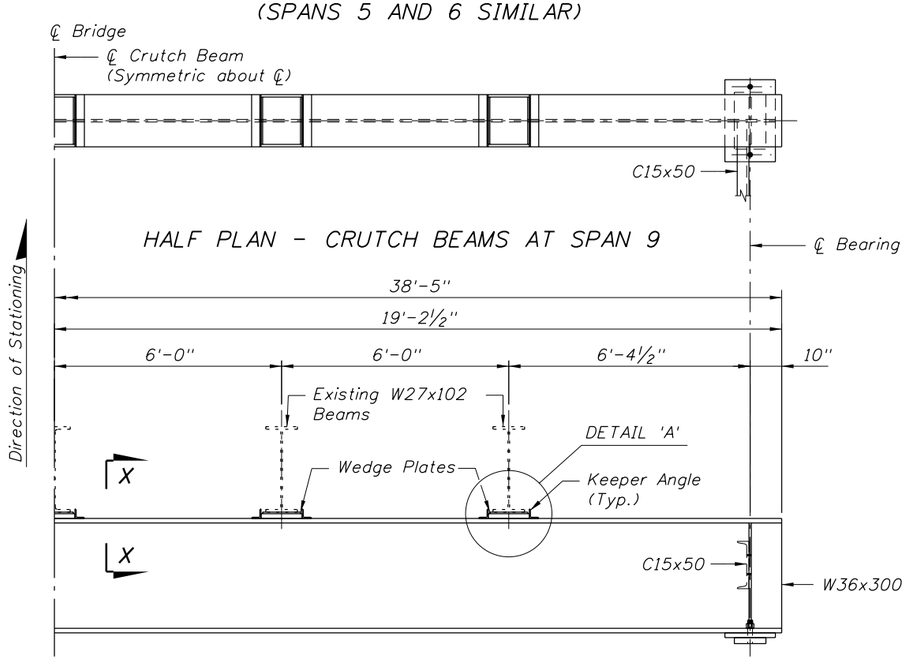
ELEVATION OF BEARING
FOR ALL CRUTCH BEAMS



SECTION X-X
(Keeper Angles Not Shown for Clarity)

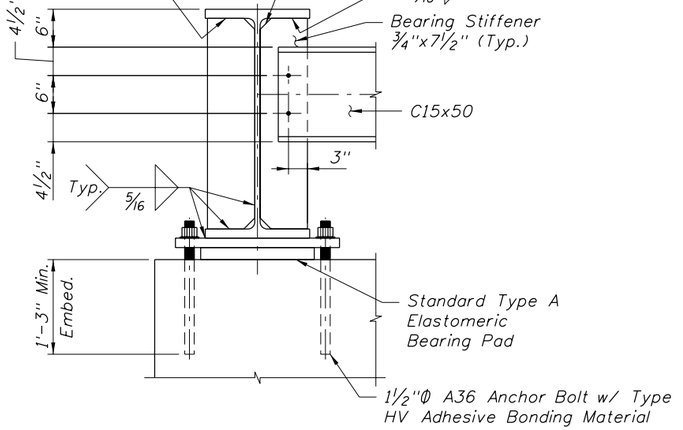


DETAIL 'A'



HALF PLAN - CRUTCH BEAMS AT SPAN 9

HALF ELEVATION - CRUTCH BEAMS AT SPAN 9



END VIEW OF BEARING FOR
ALL CRUTCH BEAMS

* The Contractor shall determine the thickness of the top wedge plate required to produce full bearing of the existing beams onto the proposed crutch beams.

NOTES:

1. For concrete, structural steel, and reinf. steel quantities, see Sheet No.s B1-9 & B1-10.
2. For Bearing Pad Data Table and quantities, see Sheet No. B1-10.

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE,
BRIDGE NO. 090016
CRUTCH BEAM DETAILS PIERS 5, 6 AND 9

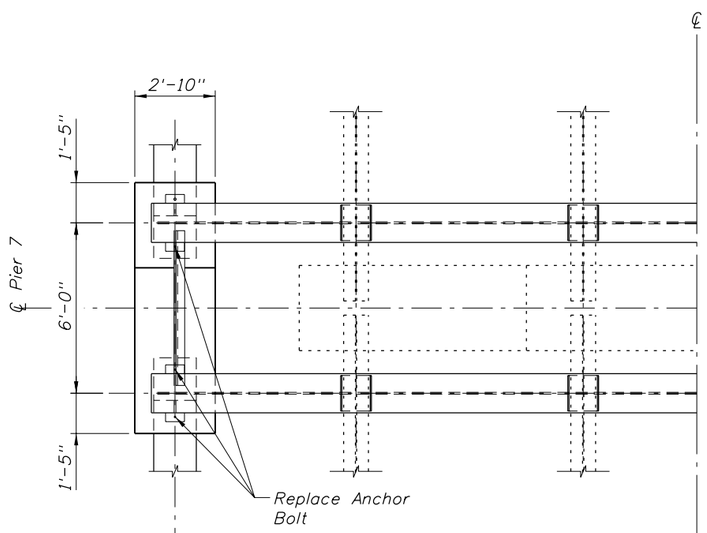
REF. DWG. NO.

PROJECT NAME,
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

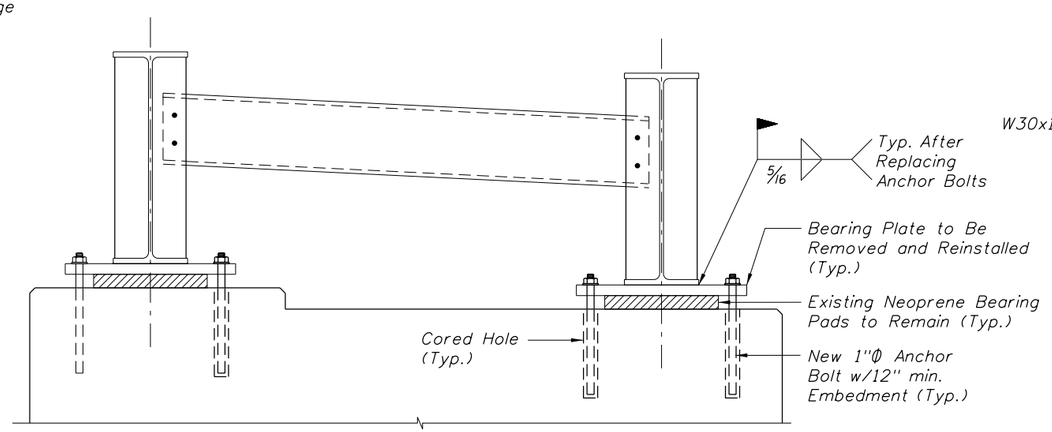
SHEET NO.
B1-11

E.C. DRIVER 1/4/2011 9:26:38 AM F:\Projects\413817152O1\struct\BMIscStr03.dgn

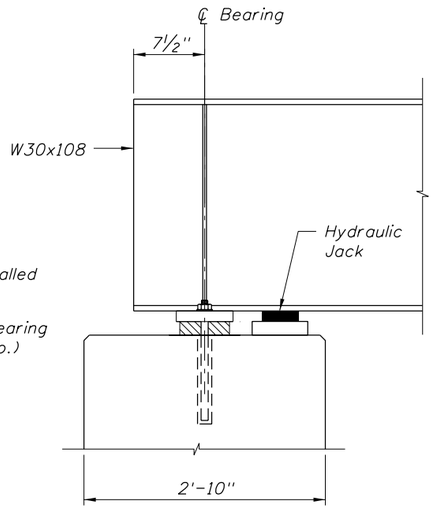
Direction of Stationing



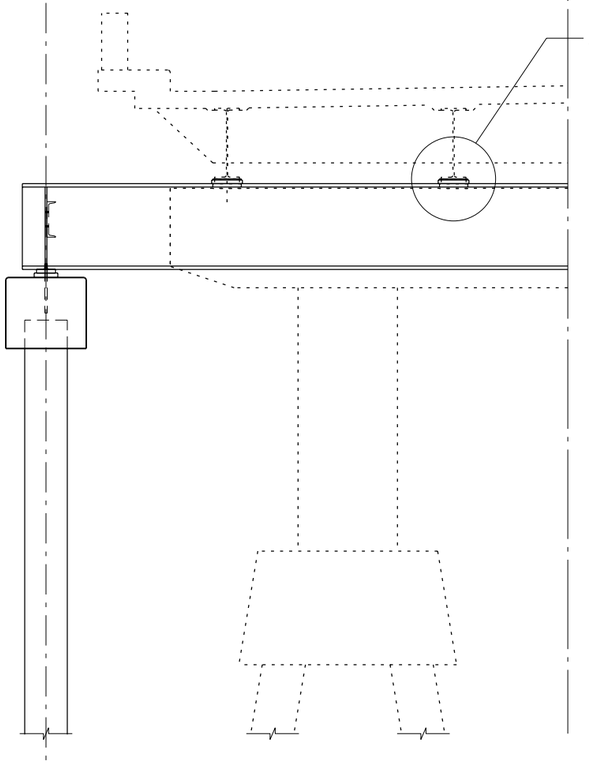
HALF PLAN



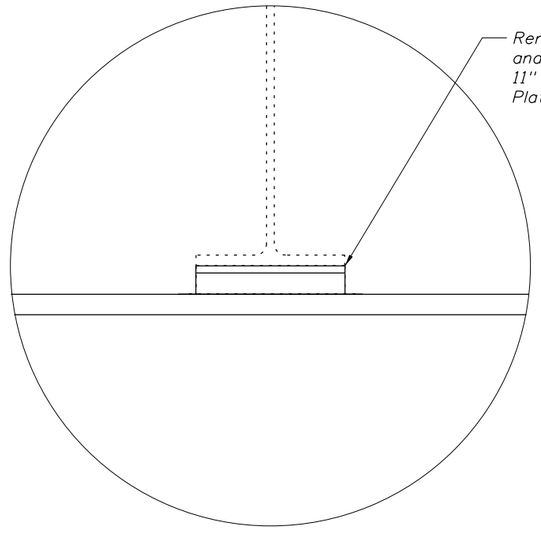
SIDE VIEW



ELEVATION



HALF ELEVATION



DETAIL 'A'

MAXIMUM SERVICE LOAD PER JACK (TONS)		
DEAD LOAD	LIVE LOAD + IMPACT	TOTAL
35	40	75

ANCHOR BOLT REPLACEMENT NOTES:

1. Replace the anchor bolts identified on this sheet.
2. Jack the north end of the crutch beams just enough to relieve the load on the bearings. Perform the jacking operation such that both of the crutch beams are lifted simultaneously.
3. Remove the existing bearing plates. Take care not to damage the bearing plates or crutch beams. Install shims underneath the crutch beams to provide bearing while the plates are removed.
4. Core drill and remove the existing anchor bolts.
5. Remove the temporary shims and reinstall the existing bearing plates. Field welding shall be of the size and details shown using E70XX weld electrodes.
6. Install the new anchor bolts. Anchor bolts shall be ASTM A36. The anchor bolt assembly shall be galvanized in accordance with ASTM A123. Use a type HV adhesive bonding material in accordance with the Standard Specifications.
7. Shim the bearing pads to provide full contact between the bearing plates and concrete cap.
8. Remove the jacks.
9. Remove the existing shims where the crutch beams support the bridge superstructure and install new shims.

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

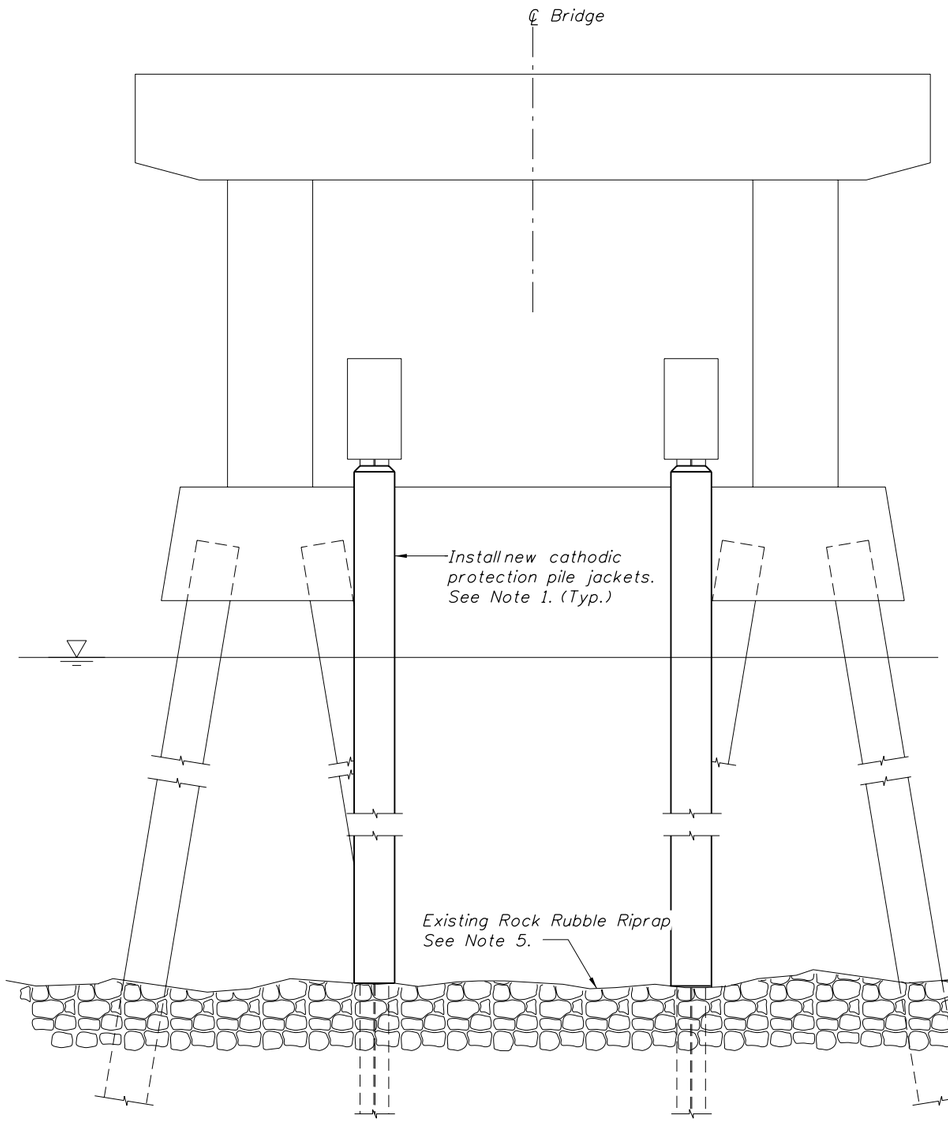
SHEET TITLE,
BRIDGE NO. 090016
REPAIR DETAILS PIER 7 - SHEET 1 OF 2

REF. DWG. NO.

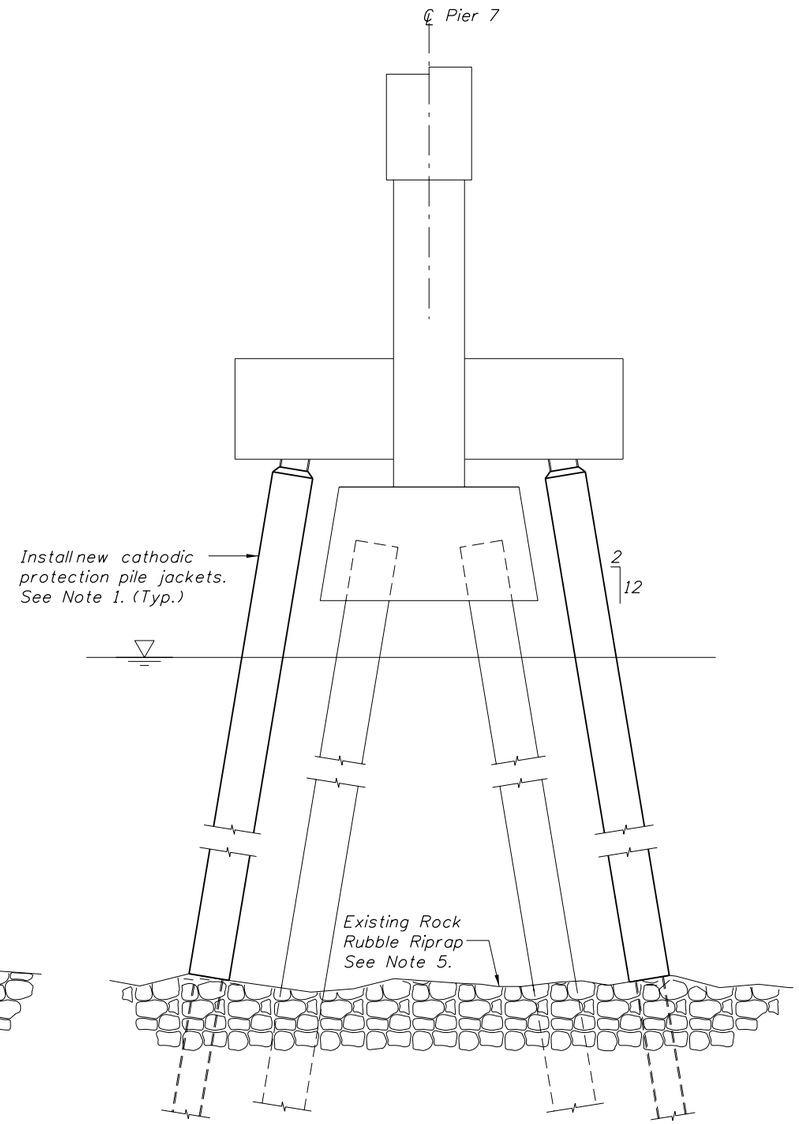
PROJECT NAME,
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B1-12

E.C. DRIVER 1/4/2011 9:26:42 AM F:\Projects\413817152O1\struct\BIPier7Repairs01.DGN



FRONT ELEVATION



SIDE VIEW

NOTES:

1. Remove existing helper pile jackets. Take care not to damage the piles when the jackets are removed.
2. New integral pile jackets shall include cathodic protection.
3. For integral pile jacket details see Sheet No. B1-14.
4. For cathodic protection details see Sheet No. B1-15.
5. The Contractor is advised of the presence of scour countermeasures around the pier. This consists of previously placed rock rubble riprap. Remove and replace any scour countermeasures as necessary to construct the pile jackets. Other drift debris or scour countermeasure material other than rock rubble riprap may be located on the channel bottom within the construction limits. Remove and dispose of this debris.

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DESIGNED BY: TJF 02-10
CHECKED BY: KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

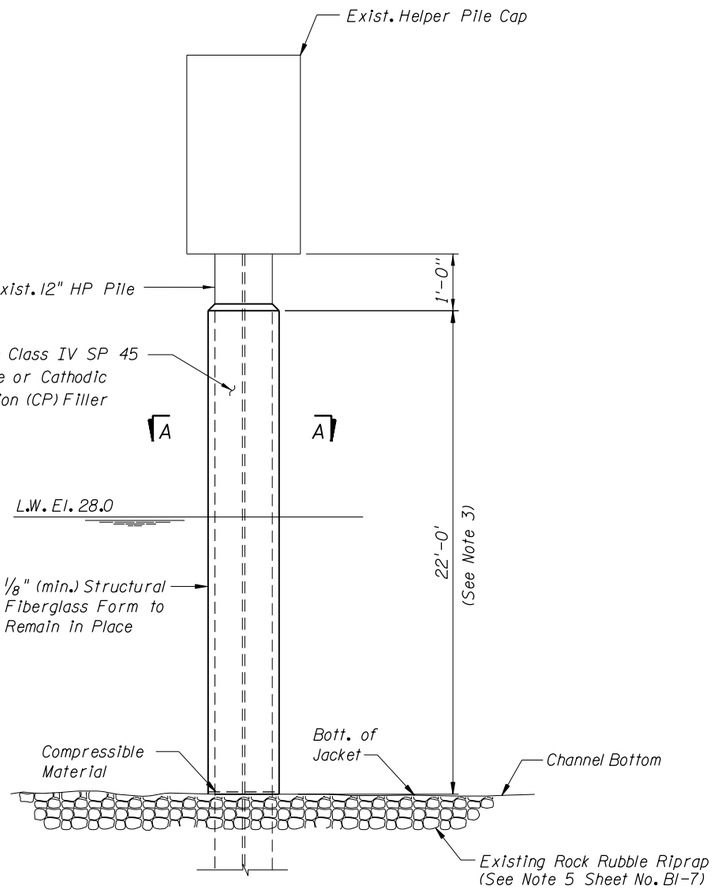
SHEET TITLE: BRIDGE NO. 090016
REPAIR DETAILS PIER 7 - SHEET 2 OF 2

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

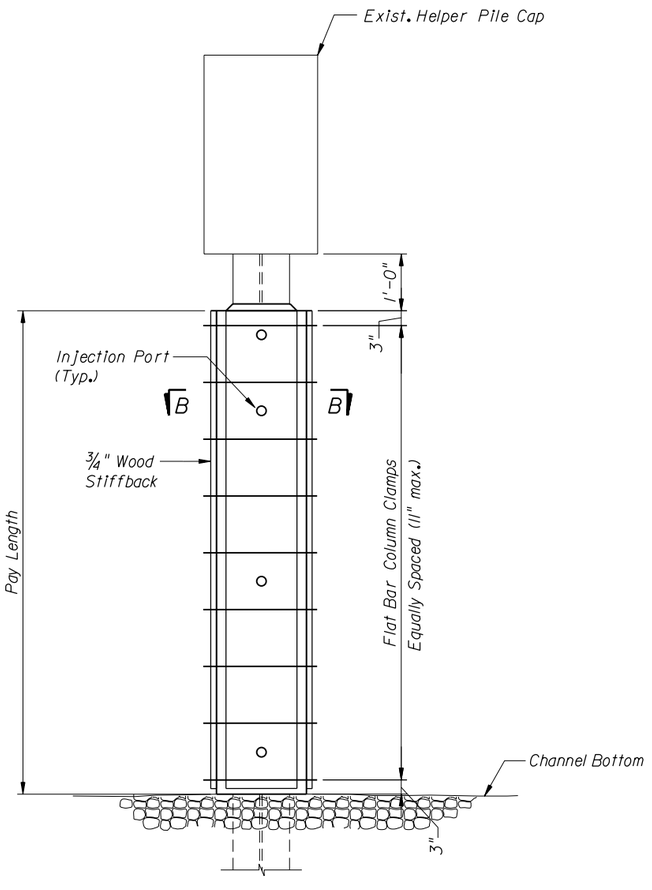
SHEET NO.: B1-13

E.C. DRIVER 1/4/2011 9:26:43 AM F:\Projects\413817152O1\struct\BIPier7Repairs02.DGN



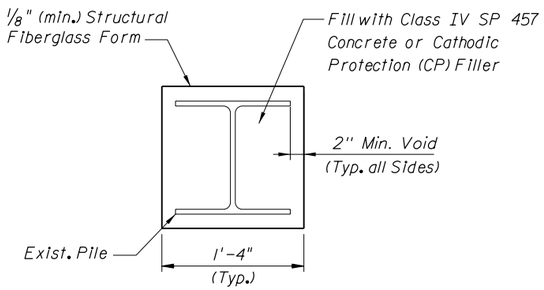
INTEGRAL PILE JACKET DETAIL

NTS



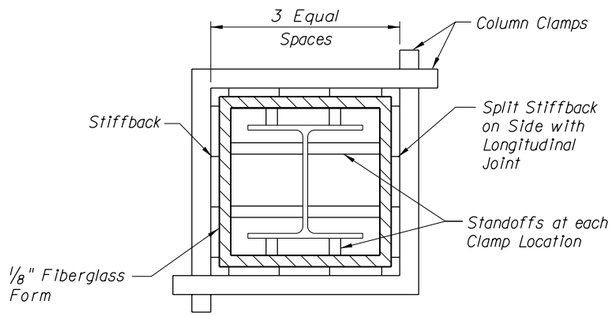
CONSTRUCTION METHOD DETAIL

NTS



SECTION A-A

(Scale Increased For Clarity)



SECTION B-B

(Scale Increased For Clarity)

NOTES:

1. See Sheet No. BI-15 for Cathodic Protection Details.
2. See Sheet No. BI-13 for jacket locations.
3. Verify pile size, batter, and jacket lengths in the field before ordering materials.
4. A Type I turbidity barrier will be required around Pier 7 during the pile jacket repair work.

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 090016
INTEGRAL PILE JACKET DETAILS - PIER 7

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
BI-14

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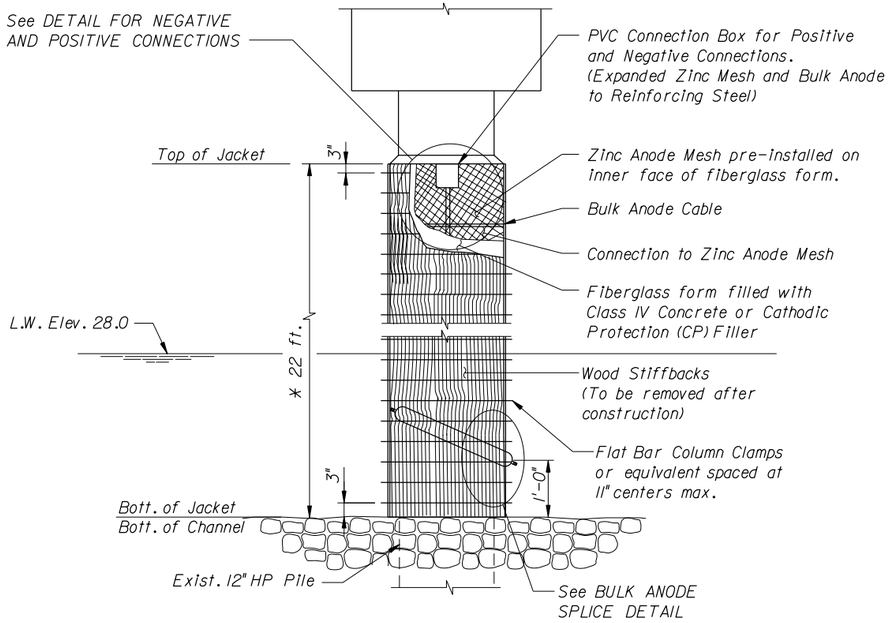
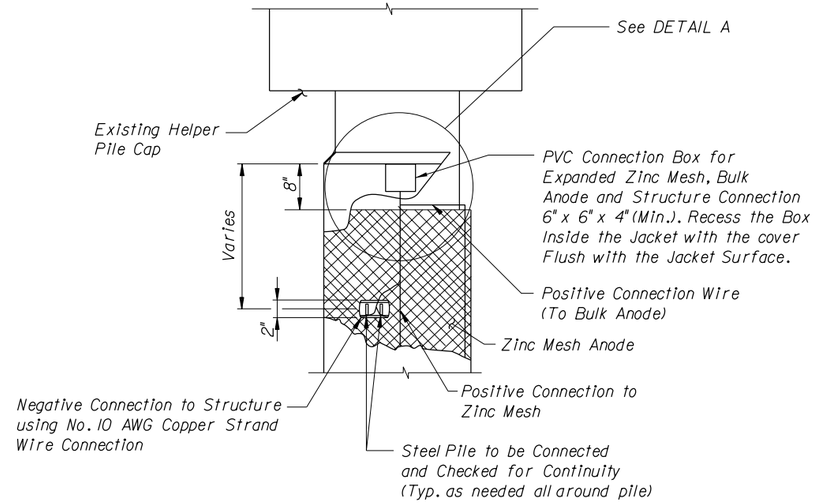


SACRIFICIAL CATHODIC PROTECTION/STRUCTURAL INTEGRAL PILE JACKET

NTS

* Verify actual Jacket Lengths before ordering jackets.



DETAIL FOR NEGATIVE AND POSITIVE CONNECTIONS

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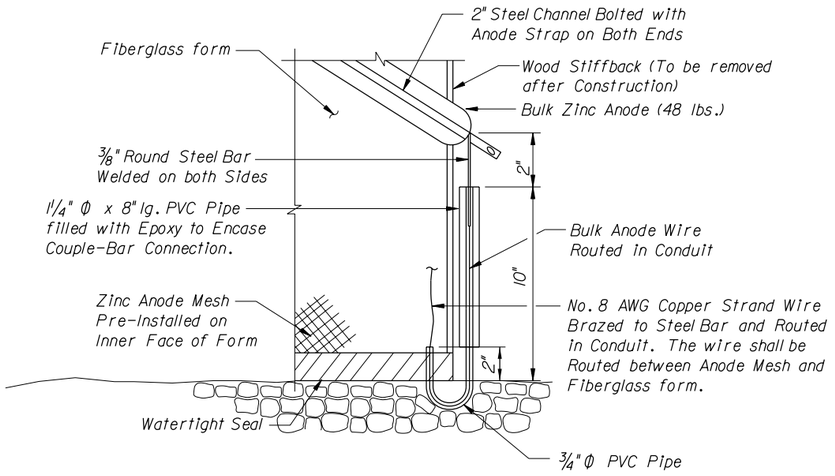

BULK ANODE SPLICE DETAIL

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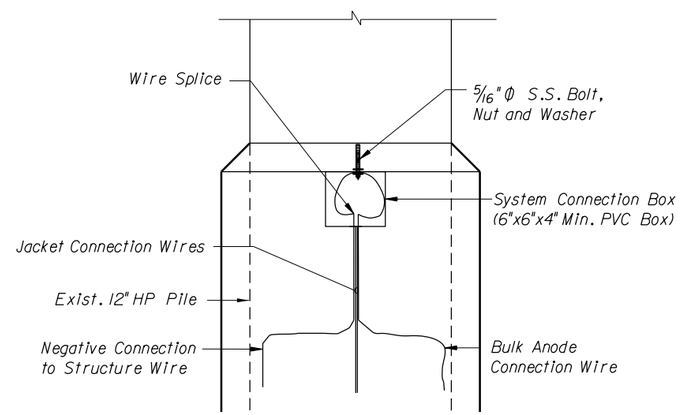

DETAIL A

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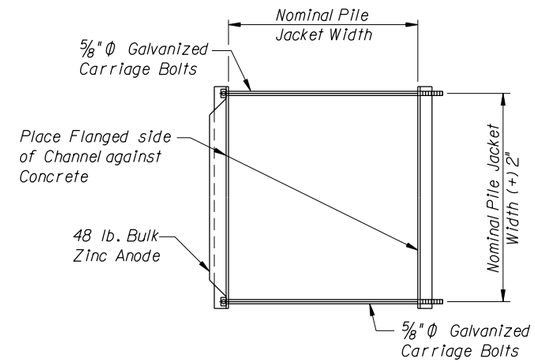

BULK ANODE ASSEMBLY

NTS

NOTE: Punch square holes for bolts in 2" Channels prior to Hot Dip Galvanizing

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE,
BRIDGE NO. 090016
CATHODIC PROTECTION DETAILS - PIER 7

REF. DWG. NO.

PROJECT NAME,
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B1-15

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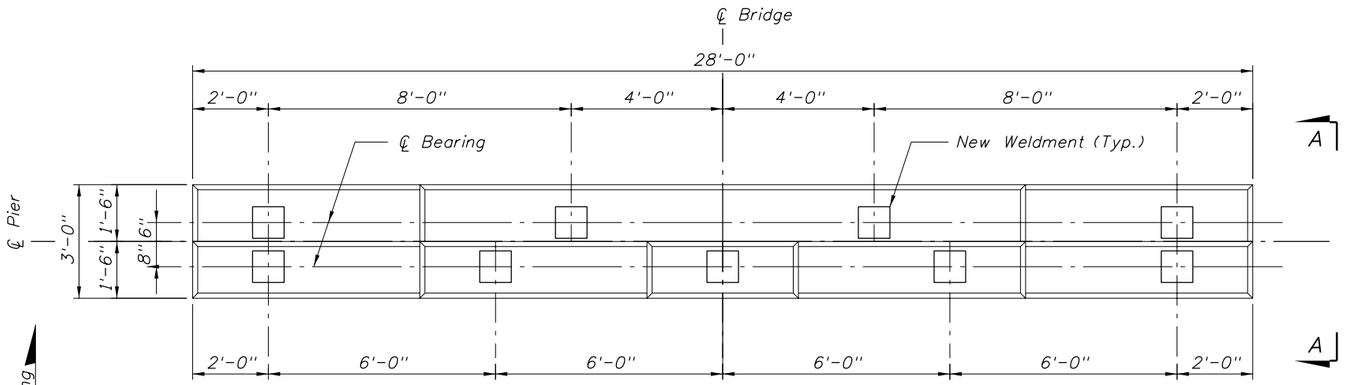
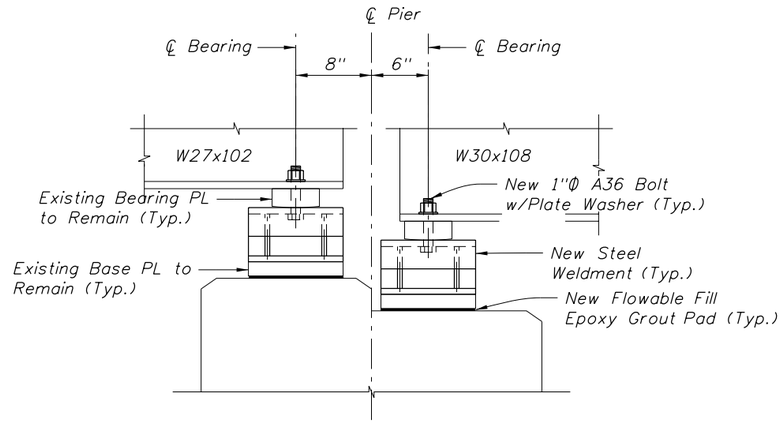


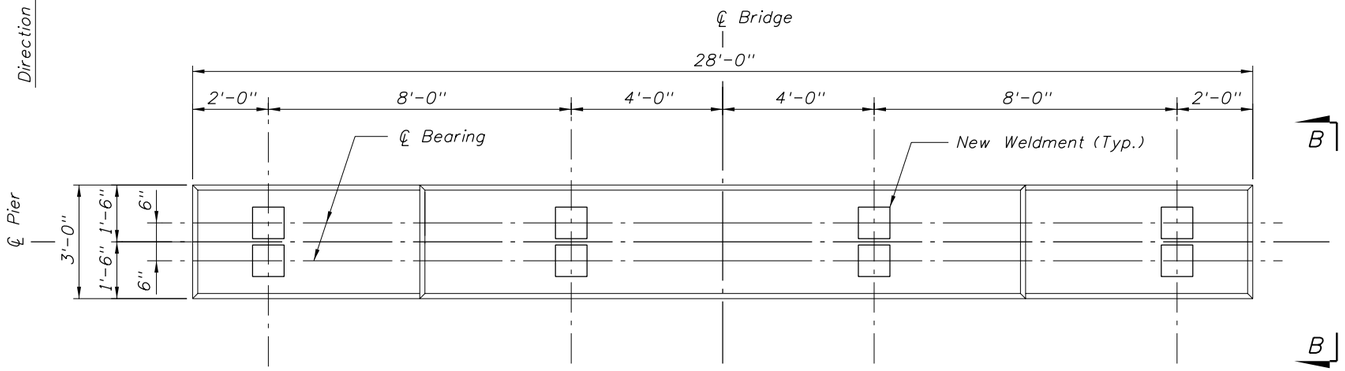
PLAN - PIER CAP 10

(Crutch Bent Not Shown for Clarity)



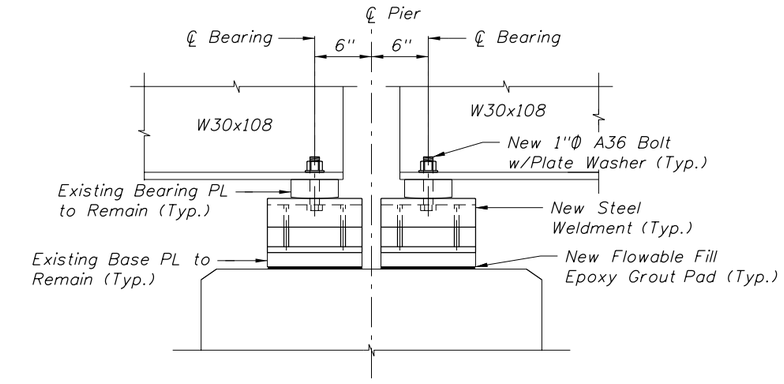
VIEW A-A

Direction of Stationing

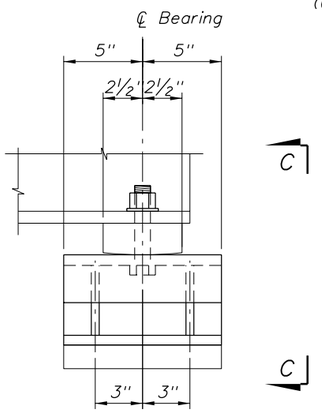


PLAN - PIER CAP 11

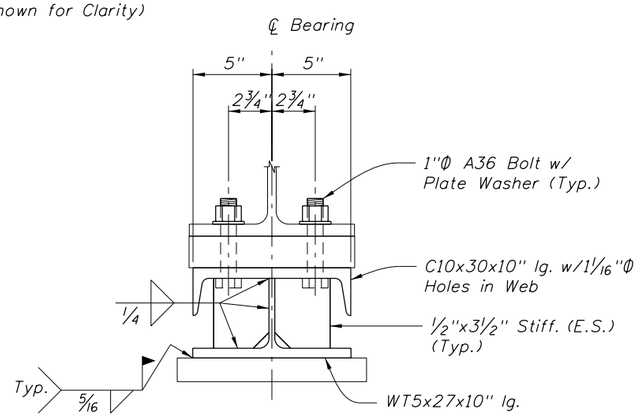
(Crutch Bent Not Shown for Clarity)



VIEW B-B



SIDE ELEVATION



VIEW C-C

WELDMENT DETAIL

(17 Required - 60 lbs. each)

PROPOSED SEQUENCE FOR BEARING REPAIRS:

1. Align the existing bearing plate, new weldment, and existing baseplate on the pier cap.
2. Loosely bolt the existing bearing plate to the weldment. Align the bolts in the center of the slotted bearing plate holes.
3. Field weld the existing baseplate to the weldment.
4. Tighten the bolted connection to a snug tight condition to bring the weldment/baseplate assembly into full contact with the bearing plate.
5. Place a flowable fill epoxy grout between the baseplate and pier cap to provide full bearing contact.

NOTE:

1. At bearing locations where there is insufficient room to install a weldment, bolt the existing bearing plate to the existing base plate and use an epoxy grout underneath the baseplate to provide full bearing contact with the pier cap.

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 090016
REPAIR DETAILS PIERS 10 AND 11

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B1-16

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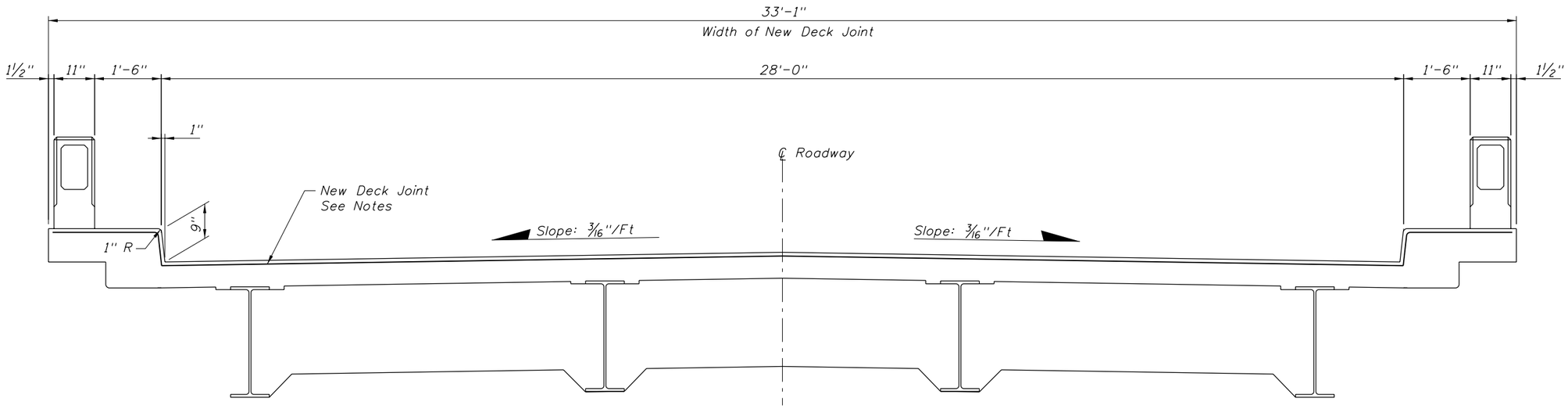

EXPANSION DECK JOINT DETAIL

JOINT REPAIR NOTES:

1. Install the new deck joints in accordance with Index No. 21110.
2. Dimension "A" as shown on Sheet No. 1 of 2 of the Index shall be taken as the width of the existing joint at the time the material is installed. The existing expansion joint widths vary from approximately 1" to approximately 2". This dimension shall be field verified by the Contractor.
3. Adjustments to the joint at temperatures other than 70° are not required.
4. Remove existing seal and clean concrete surface before placing the new deck joints. Thoroughly clean joint surfaces which will contact backer rod and joint by abrasive blasting. Ensure all old joint sealers, adhesives, grease and contaminants are removed. Blow down cleaned areas with clean, compressed air. Apply sealer to concrete surfaces in accordance with sealer manufacture's requirements before installing backing rod.

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: BRIDGE NO. 090016
DECK JOINT REPAIR DETAILS

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.: B1-17

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CONCRETE REPAIR TABLE - SUPERSTRUCTURE

SPAN NO.	DEFECT	LOCATION	SIZE
1	Spall with Exposed Steel	Underside Left Overhang, Near Scupper at 2/3 Span Length	4" L x 4" W x 1" D
5	2 Spalls	Underside Left Overhang, Near Pier 5	6" L x 4" W x 1" D
6	Delamination Patch with Exposed Steel	Underside of Deck, Bay 3, Over Pier 7	24" L x 38" W x 2" D
3	Spall with Exposed Steel	Diaphragm at Beam 2, Over Pier 4	6" L x 5" W x 3" D
5	Honeycombing with Exposed Steel	North Diaphragm, Over Pier 5	72" L x 8" W x 1" D

CONCRETE REPAIR TABLE - BULKHEAD

END BENT NO.	DEFECT	LOCATION	SIZE
12	Spall with Exposed Steel	Cap, Under Beam 4	15" L x 8" W x 6" D
12	Honeycombing	East Face of Wall, South Side of Bridge	24" L x 24" W x 2" D

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE: BRIDGE NO. 090016 CONCRETE REPAIR LOCATIONS

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

REF. DWG. NO.:

SHEET NO.: BI-18

CONCRETE SPALL REPAIR GENERAL NOTES

The details on this sheet apply to the repair of all spalled and unsound concrete noted on the "Concrete Repair Locations" sheet for Bridge No. 090016.

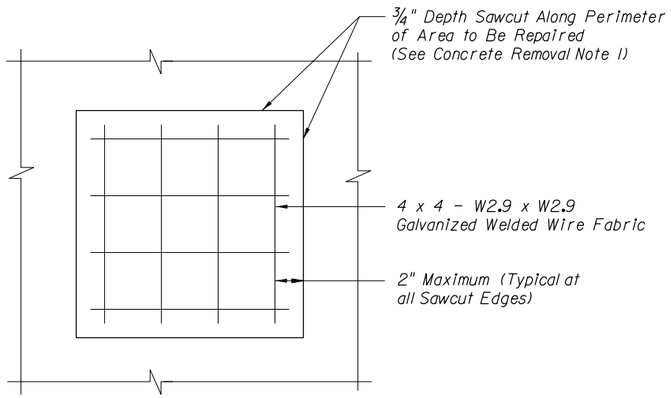
The Contractor shall sound all concrete surfaces to determine the limits of unsound concrete to be removed and repaired. Limits shall be marked on the surfaces for review and approval by the Engineer before concrete removal. The depth of removal shall be per the notes and details on this sheet and as approved by the Engineer.

EXPOSED REINFORCING STEEL NOTES

1. Remove rust from exposed reinforcing steel by abrading to "near white metal condition" and prepare surfaces in accordance with ICRI Technical Guide 03730 "Guide for Surface Preparation of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion".
2. Where existing reinforcing steel has greater than 40% loss in cross-sectional area due to corrosive deterioration or damage, supplement reinforcing with additional reinforcing as shown.

WELDED WIRE FABRIC (WWF) NOTES

1. Where depth of concrete cover exceeds 2", install galvanized welded wire fabric.
2. Field bend Welded Wire Fabric to conform with any changes in the concrete surface profile.
3. Tie Welded Wire Fabric to existing reinforcement with galvanized wire. Ties shall be spaced at 8" maximum.
4. Welded Wire Fabric shall conform to ASTM A185.



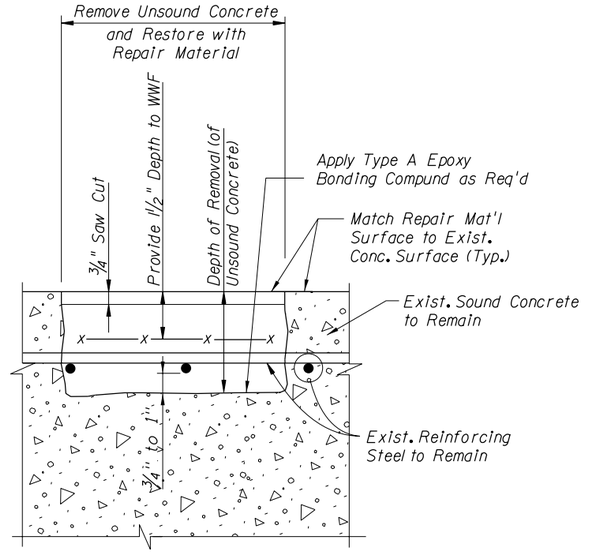
WELDED WIRE FABRIC DETAIL

CONCRETE REMOVAL AND SURFACE PREPARATION NOTES

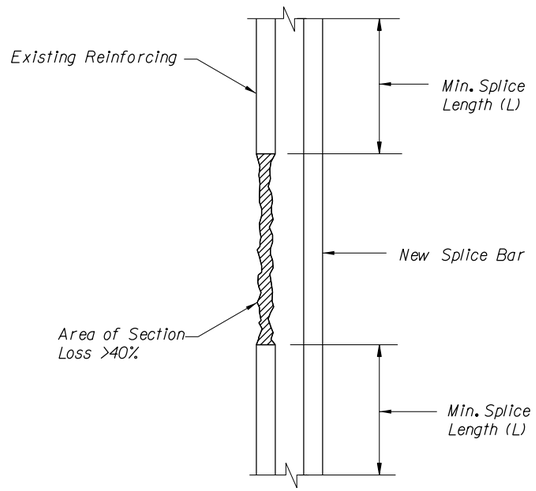
1. Remove all unsound concrete to clean, well bonded reinforcement and prepare surfaces for repair in accordance with ICRI Technical Guidelines 03730 "Guide for Surface Preparation of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion".
2. All repair areas shall have square edges around the perimeter of the spall defined by 3/4" deep saw cut lines. Chip the repair edges clean to form 45 to 90 degree corners along the edges and corners of the repair area. The depth of the chipped edge shall be 3/4" or greater. Feathered edges will not be acceptable.
3. Remove unsound concrete using mechanical abrasion, but do not use excessive force, which may cause micro-fracturing of the sound concrete. Remove concrete behind bars 3/4" to 1". Phased repairs may be necessary.
4. Care shall be taken to avoid damaging the existing reinforcement.
5. Prepared surfaces shall be intentionally roughened to a minimum profile of 1/4" to provide mechanical lock for the repair.
6. Concrete surfaces shall be structurally sound and free of bond inhibiting substances.
7. Where the bond between existing concrete and reinforcement has been destroyed or where more than half the bar circumference is exposed, remove the concrete adjacent to the bar to a depth that will permit the concrete repair mortar to bond to the entire periphery of the bar. Provide a minimum depth behind the reinforcement of 3/4" to 1" for this purpose.
8. Apply a Type A epoxy compound in accordance with Section 926 of the Specification to the existing concrete surfaces prior to placing the fresh repair material.

CONCRETE SPALL REPAIR NOTES

1. Restore concrete surfaces using approved materials in accordance with Section 926 or Section 930 of the Specifications.
2. For spalls with an average depth of 1" or less, repair using a Type F-1 or Type F-2 epoxy repair mortar. For spalls with an average depth greater than 1", repair using a material meeting the requirements of Section 930 of the Standard Specificatons.
3. Select materials suitable for application including orientation (e.g. horizontal, vertical or overhead application) and thickness.
4. Mix, place and cure repair materials in accordance with Manufacturer's recommendations.
5. Finish repair materials flush with the original concrete surface (U.N.O.) The surface finish shall meet the requirements for a General Surface Finish per Section 400 of the Specifications.
6. Cure repair materials as necessary to prevent shrinkage cracks. Cracked repairs will not be considered satisfactory and shall be removed and replaced.



CONCRETE SPALL REPAIR DETAILS



EXISTING BAR SIZE	SPLICE BAR SIZE	LENGTH, L
#4 Bar	#4 Bar	14"
#5 Bar	#5 Bar	16"

NEW BAR PLACEMENT DETAIL

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 090016
CONCRETE REPAIR NOTES AND DETAILS

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B1-19

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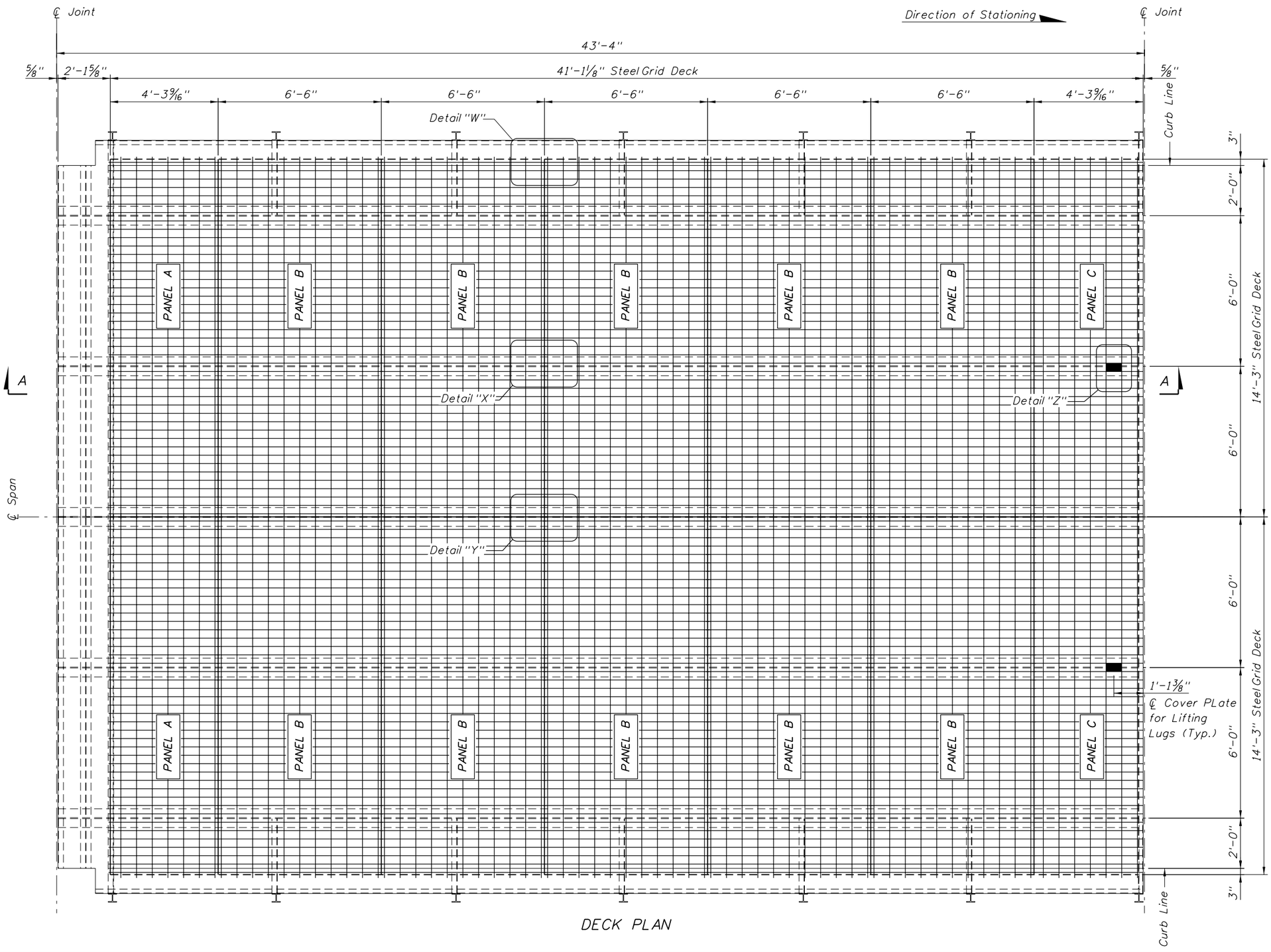

DECK PLAN

NOTES:

1. For Section A-A see Sheet No. B1-21.
2. For Detail "W", Detail "X", Detail "Y", and Detail "Z" see Sheet No. B1-22.

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STATE OF FLORIDA
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 090016
MOVABLE SPAN DECK PLAN

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B1-20

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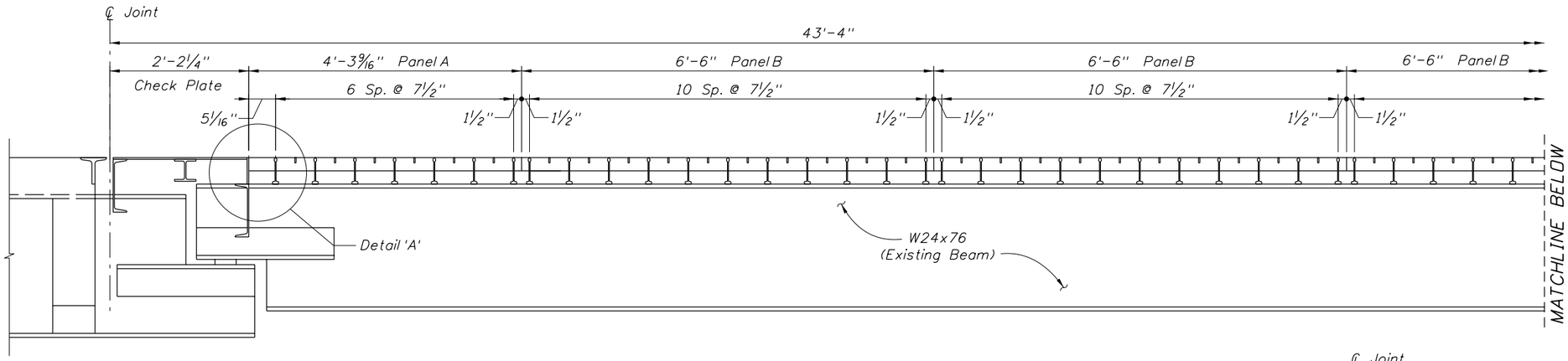
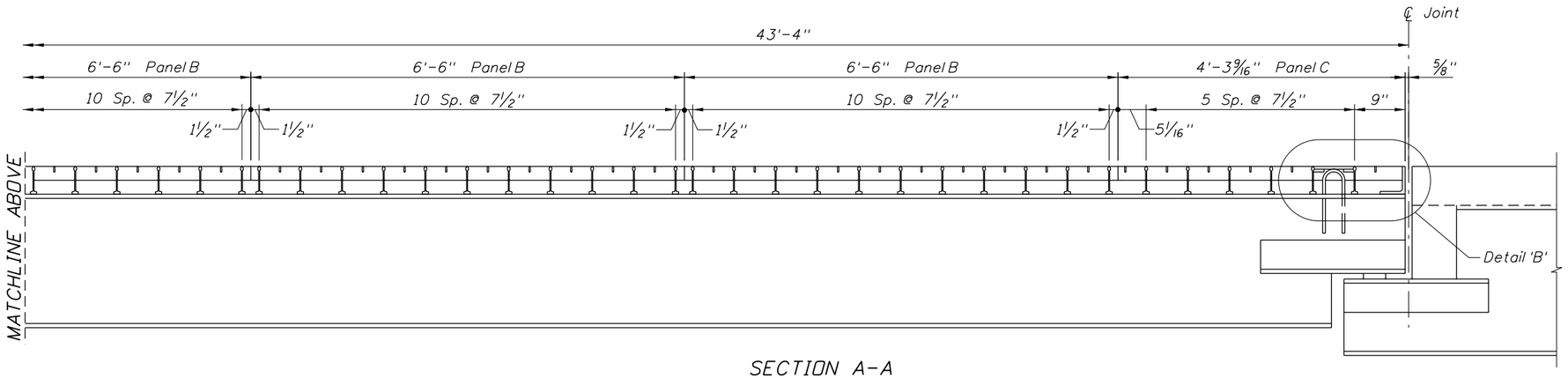


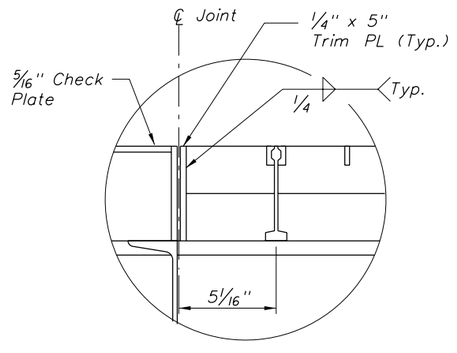


SECTION A-A

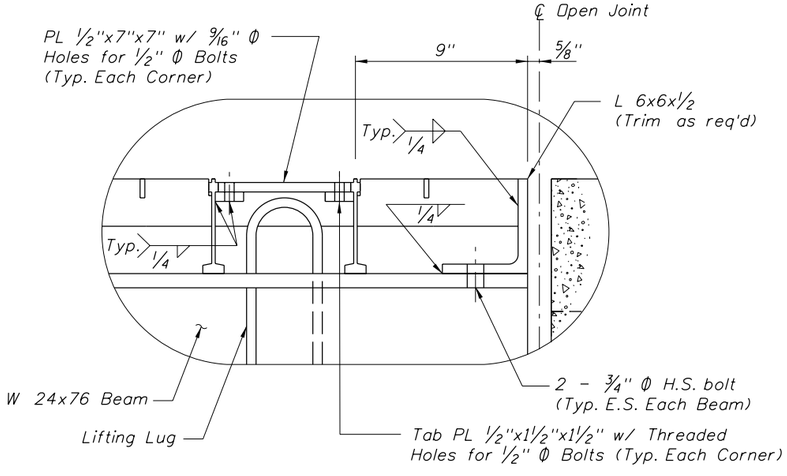
5⅜" STEEL OPEN GRID DECK:

- 5⅜" deep x 5.6 lb. per ft. Main Bars at 7½" o.c.
- One ¼" x 1" Supplemental Bar between the Main Bars.
- ¼" x 2½" Cross Bars at 4" o.c.
- ¼" x 1" Diaganol Bars connected alternately to the Main Bars and Supplemental Bars
- ¼" x 5" End Trim Bars.
- 3/16" deep x ⅜" wide serrations at ¾" o.c. on Supplemental Bars, Cross Bars and Diagonal Bars.
- 3/16" deep x ⅜" wide serrations at 1¼" o.c. on Main Bars.
- Mat'l: ASTM A709 Grade 36 Steel.
- Hot dip galvanize Panels per ASTM A123 after fabrication.
- Main Bars, Supplemental Bars, Cross Bars and Diagonal Bars interconnected by welding per Manufacturer's standards.
- Unit weight of 21 lb/sq. ft. ± 1.5 lbs/sq. ft. after fabrication and galvanizing.

STEEL GRID PANEL TOLERANCES	
Panel Width	+0, -⅛"
Panel Length	± ¼"
Bar Offset	± 1/16"
Squareness	± ½" Measured diagonally
Camber - Width	0.005 x Width
Camber - Length	0.003 x Length
Sweep	± ⅛"
Main Bar Vertically	± 1/16"
Form Pan Location	± ⅛"



DETAIL 'A'



DETAIL 'B'

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 090016
MOVABLE SPAN DECK DETAILS - SHEET 1 OF 2

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO.
B1-21

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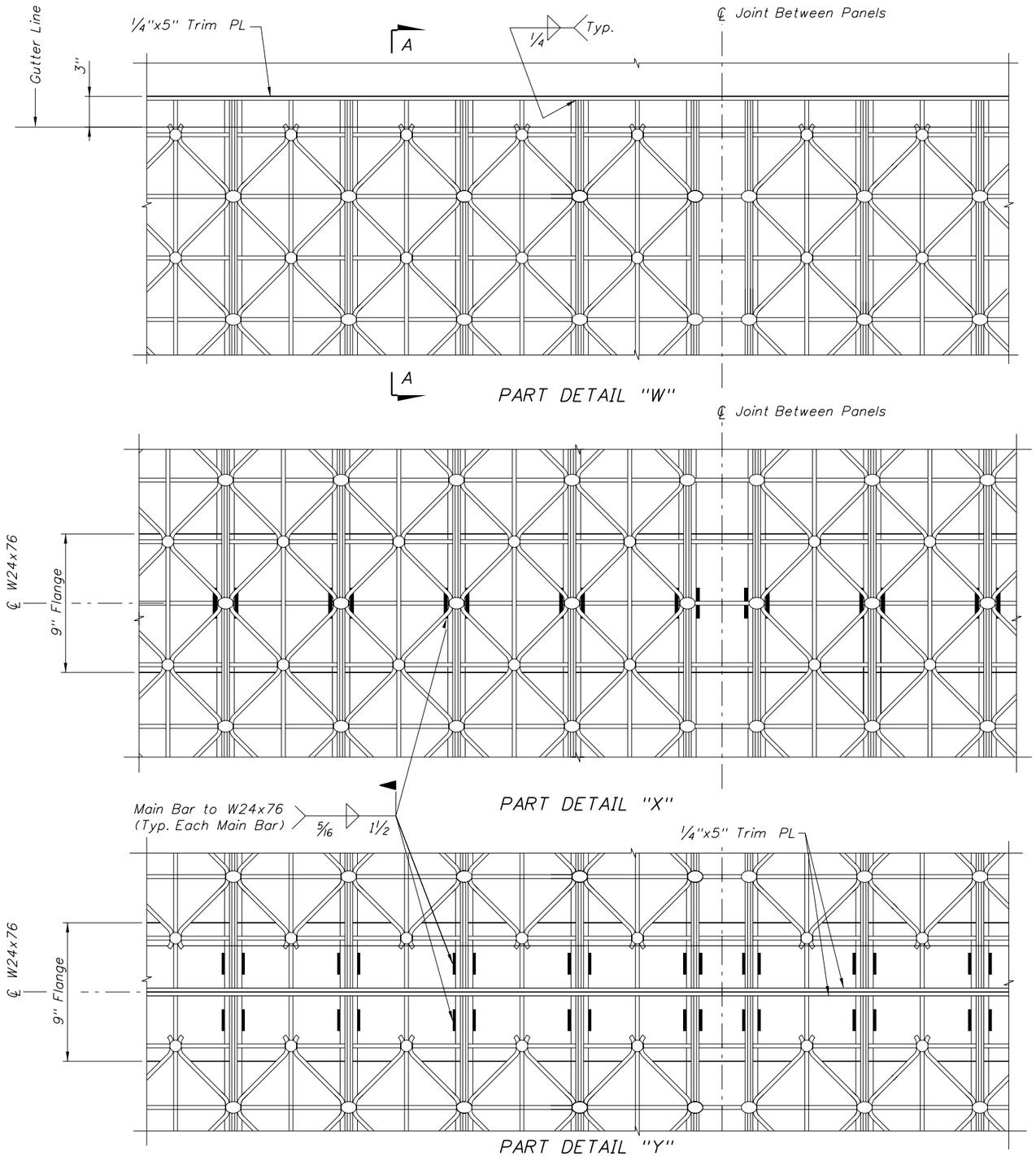
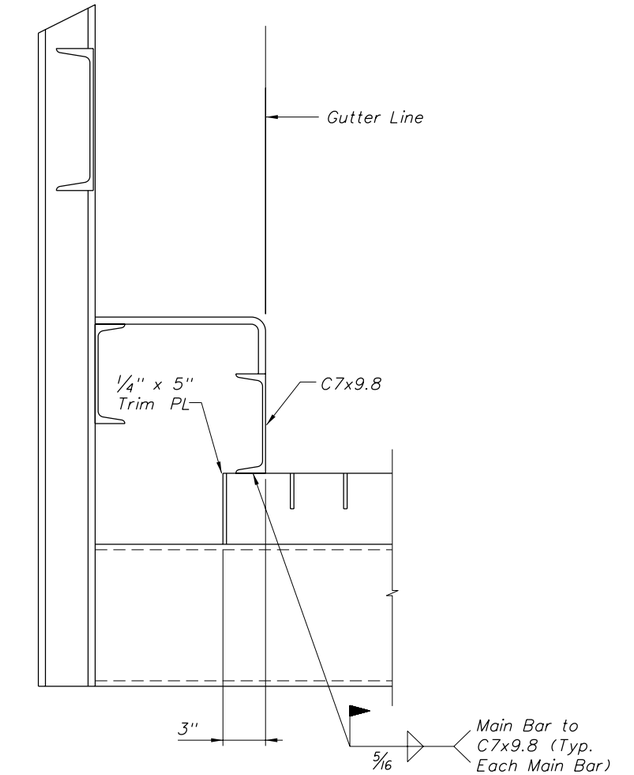
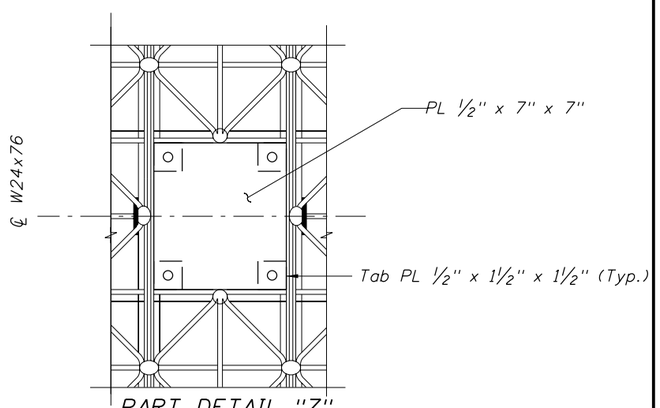




SECTION A-A



PART DETAIL "Z"

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 090016
MOVABLE SPAN DECK DETAILS - SHEET 2 OF 2

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B1-22

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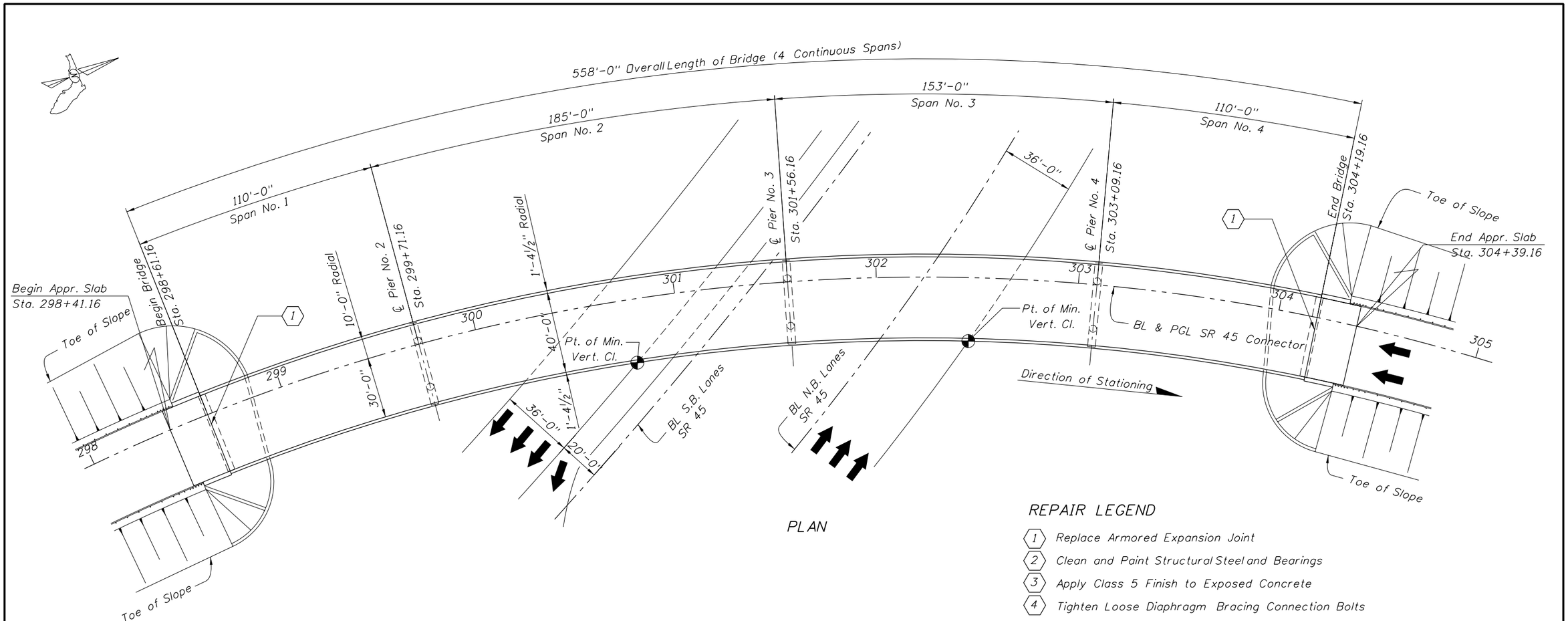
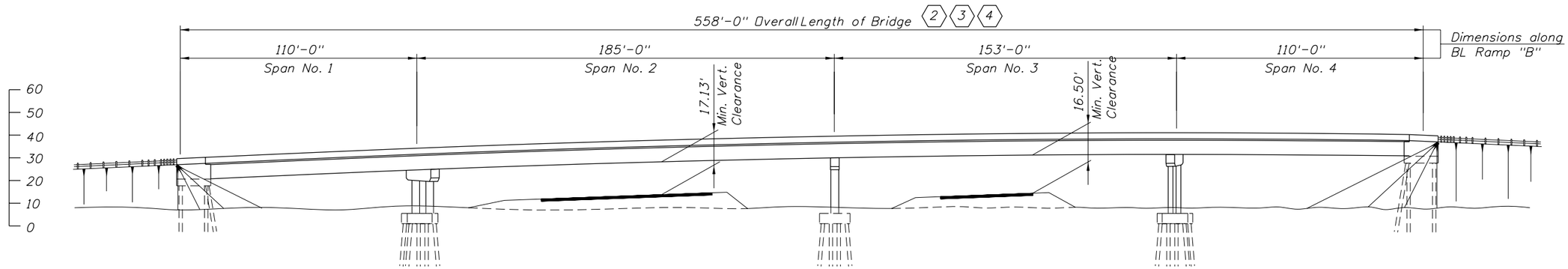


PLAN

REPAIR LEGEND

1. Replace Armored Expansion Joint
2. Clean and Paint Structural Steel and Bearings
3. Apply Class 5 Finish to Exposed Concrete
4. Tighten Loose Diaphragm Bracing Connection Bolts



ELEVATION

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
681	SARASOTA	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 170098
GENERAL PLAN & ELEVATION

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B2-1

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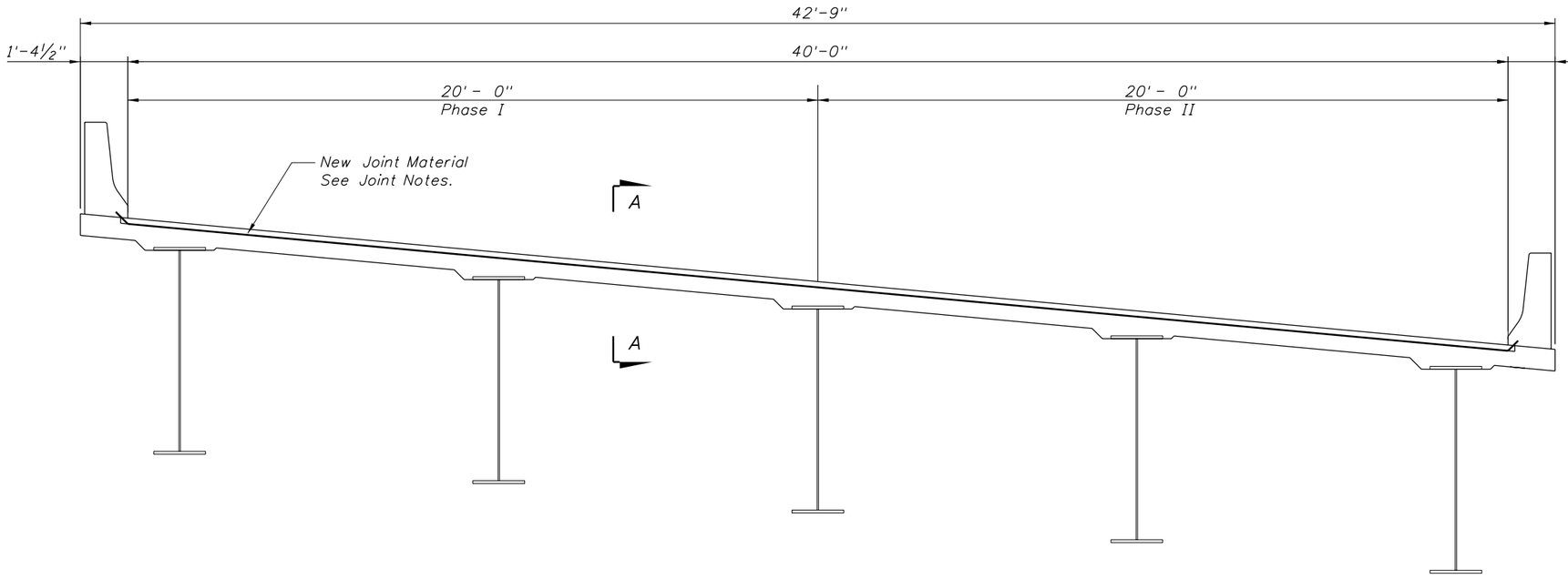
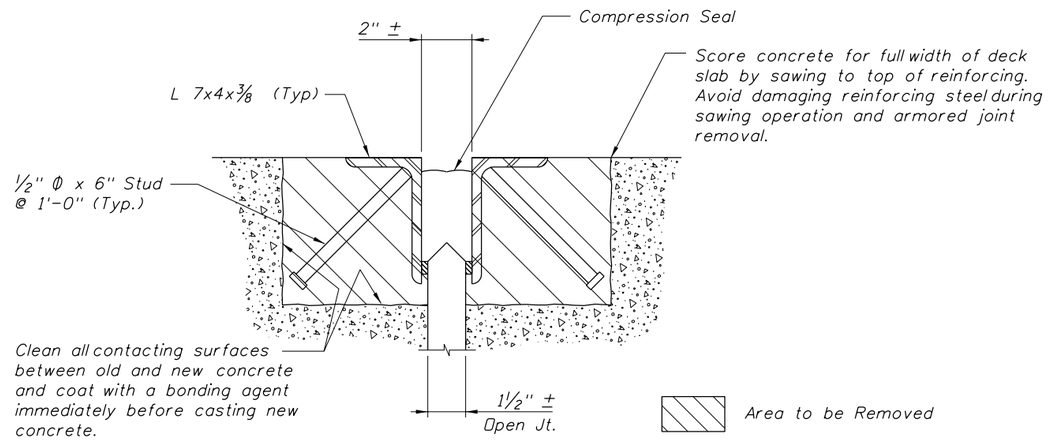


SECTION THRU BRIDGE

(Looking in Direction of Stationing)

JOINT REPAIR NOTES:

1. Install new deck joints in accordance with Index No. 21110.
2. Dimension "A" as shown on Sheet No. 1 of 2 of the Index shall be taken as the width of the existing joint at the time the material is installed. The existing Expansion Joint width is approximately 1½". This dimension shall be field verified by the Contractor.
3. Adjustments to the joint at temperatures other than 70° are not required.
4. Construct the joint repair in a phased sequence in accordance with the maintenance of traffic plans.
5. Use Class II (Bridge Deck) concrete (fc' = 4,500 psi).



SECTION A-A

ESTIMATED QUANTITIES				
ITEM	UNIT	QUANTITY		
		Phase I	Phase II	Total
Concrete for Joint Repair - Class II (Bridge Deck)	CY	0.8	0.8	1.6
Bridge Deck Poured Joint with Backer Rod	LF	40	40	80

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DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
681	SARASOTA	413817-1-52-01

SHEET TITLE: BRIDGE NO. 170098
DECK JOINT REPAIR DETAILS

PROJECT NAME: BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO. B2-2

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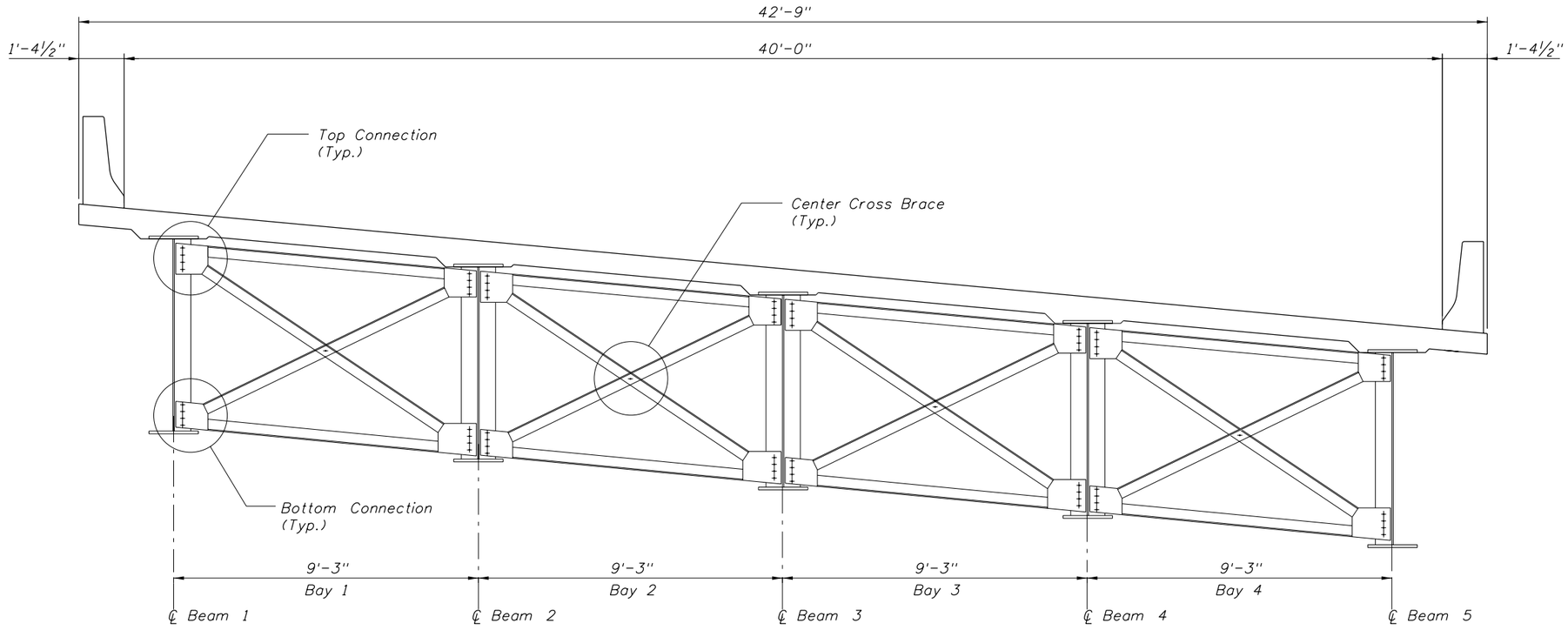

SECTION THRU BRIDGE
(Looking in Direction of Stationing)

STEEL REPAIR TABLE			
Span Number	Bay Number	Beam Number	Loose Bolt Location/Number of Loose Bolts
1	1	2	Top Connection/2 of 4
1	1	2	Bottom Connection/1 of 4
1	2	3	Top Connection/2 of 4
1	3	3	Top Connection/4 of 4
2	1	2	Bottom Connection/2 of 4
2	4	5	Bottom Connection/2 of 4
3	1	2	Bottom Connection/1 of 4
3	2	2	Top Connection/3 of 4 and Bottom Connection/1 of 4
3	2	3	Top Connection/3 of 4 and Bottom Connection/3 of 4
3	4	5	Bottom Connection/2 of 4
4	1	1	Bottom Connection/2 of 4
4	3	–	Center Cross Brace/1 of 1
4	4	–	Center Cross Brace/1 of 1

NOTES:

1. Tighten the loose bolts identified in the table prior to painting.
2. If the bolt cannot be tightened replace it with a new bolt of the same size. The new bolt shall be ASTM A325 (Type 1) high-strength. The bolt and corresponding nut and washer shall be mechanically galvanized in accordance with ASTM B695 Class 50.

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DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
681	SARASOTA	413817-1-52-01

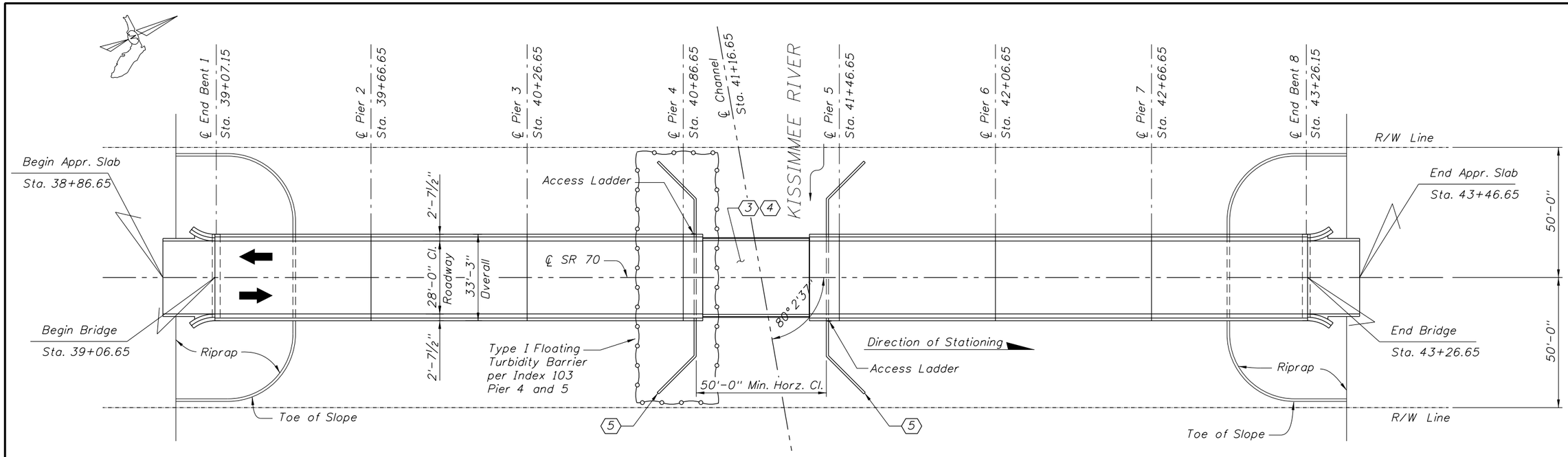
SHEET TITLE: BRIDGE NO. 170098
STEEL REPAIR DETAILS

REF. DWG. NO.:

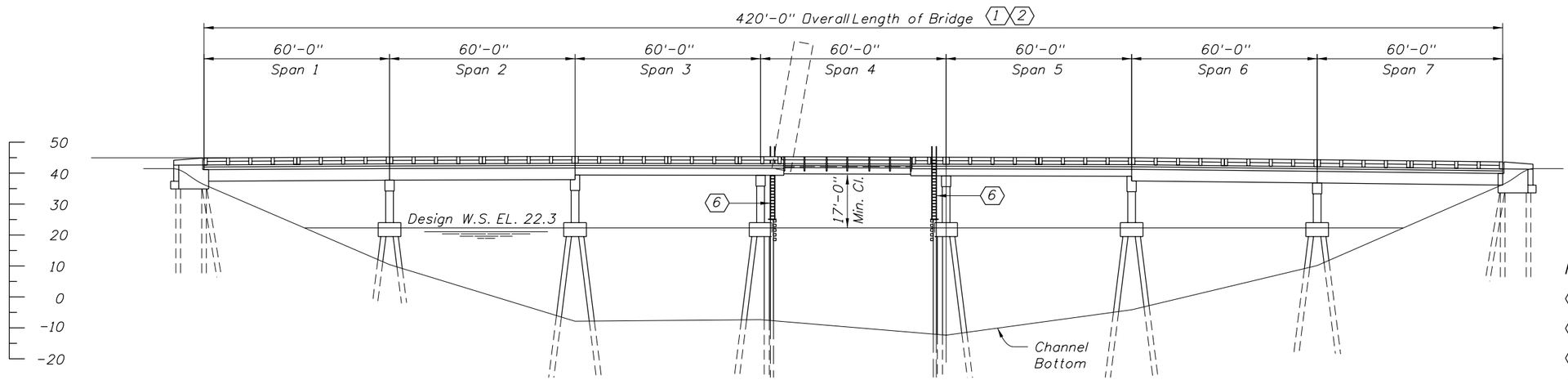
PROJECT NAME: BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.: B2-3

E.C. DRIVER 1/4/2011 9:27:05 AM F:\Projects\413817152O1\struct\B2SteelDet01.DGN



PLAN



ELEVATION

REPAIR LEGEND

1. Clean and Seal Open Deck Joints
2. Clean and Paint Structural Steel
3. Replace Open Steel Grid Deck
4. Repair Structural Steel
5. Repair Fender System
6. Replace Fender Access Ladder

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 910001
GENERAL PLAN & ELEVATION

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B3-1

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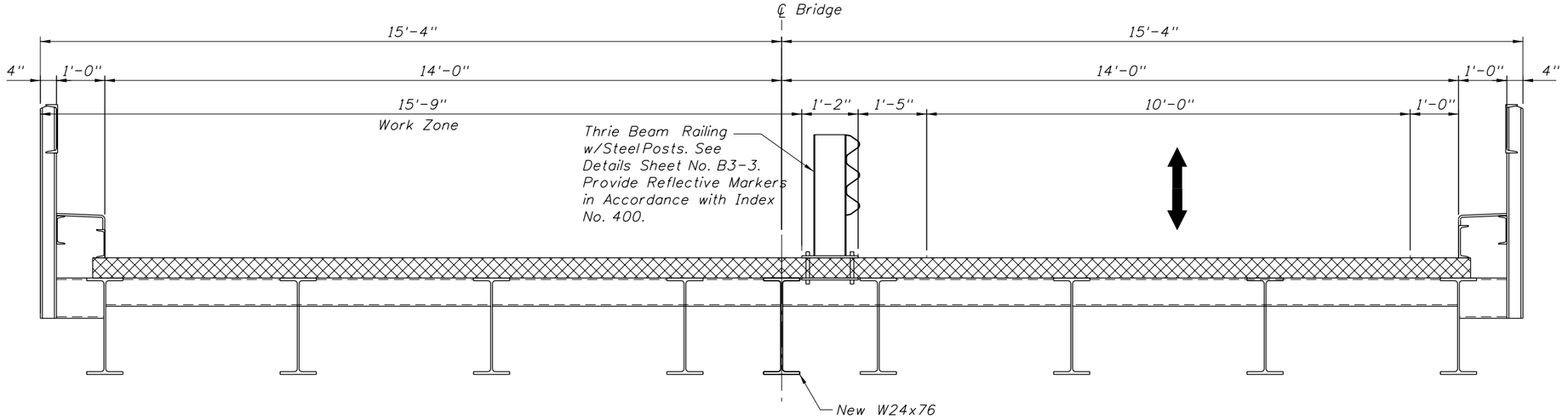
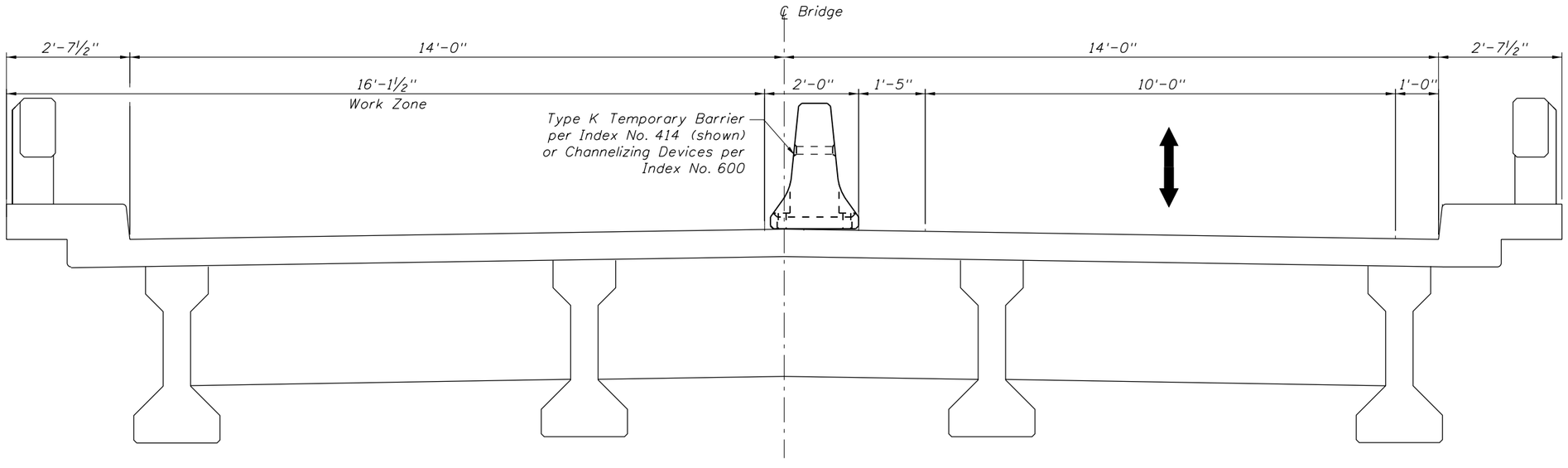


SECTION THRU MOVABLE SPAN



SECTION THRU APPROACH SPANS

NOTES:

1. View looking in direction of stationing showing westbound lane closure. Eastbound lane closure opposite hand.

2. See Traffic Control Plans for additional details.

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE: BRIDGE NO. 910001 TEMPORARY BARRIER DETAILS - SHEET 1 OF 2

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B3-2

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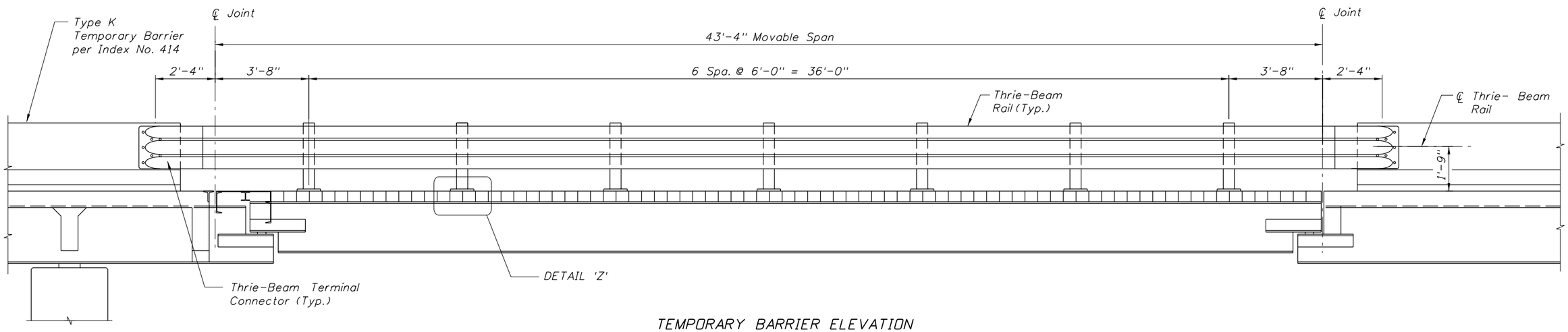
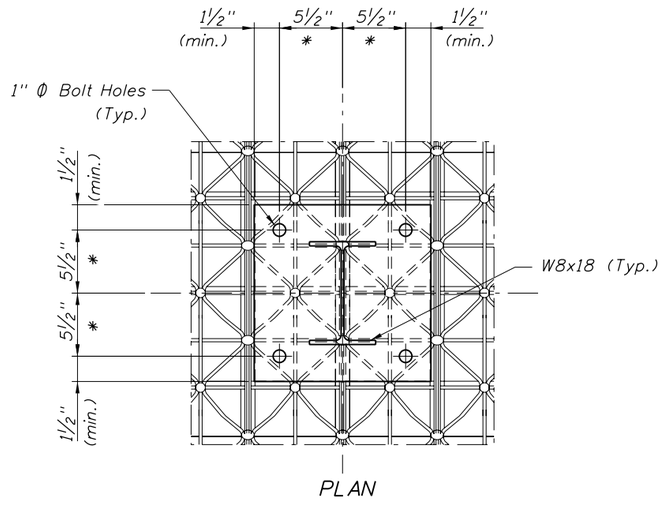
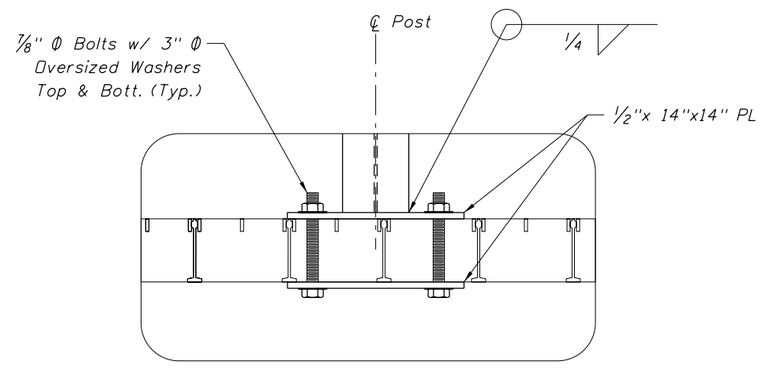


TEMPORARY BARRIER ELEVATION
(Showing Movable Span and Adjacent Spans)



PLAN



DETAIL "Z"

* Contractor shall field verify that location of anchor bolts for Temporary Barrier Post base plates do not interfere with grid deck bars. Adjust spacing as required.

NOTES:

1. For Details of Thrie-Beam Guardrail, see FDOT Design Standards Index No. 400.
2. Thrie-Beam Guardrail to be relocated from one phase to the other.

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 910001
TEMPORARY BARRIER DETAILS - SHEET 2 OF 2

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B3-3

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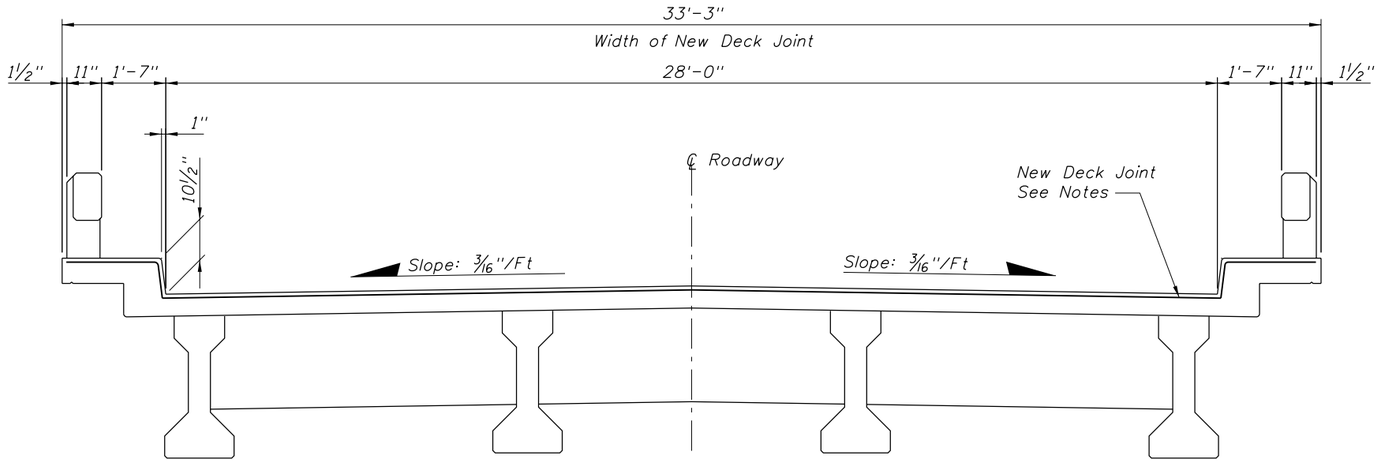

EXPANSION DECK JOINT DETAIL

JOINT REPAIR NOTES:

1. Install the new deck joints in accordance with Index No. 21110.
2. Dimension "A" as shown on Sheet No. 1 of 2 of the Index shall be taken as the width of the existing joint at the time the material is installed. The existing Expansion Joint widths vary from approximately 1" to approximately 2". This dimension shall be field verified by the Contractor.
3. Adjustments to the joint at temperatures other than 70° are not required.
4. Remove existing seal and clean concrete surface before placing the new deck joints. Thoroughly clean joint surfaces which will contact backer rod and joint by abrasive blasting. Ensure all old joint sealers, adhesives, grease and contaminants are removed. Blow down cleaned areas with clean, compressed air. Apply sealer to concrete surfaces in accordance with sealer manufacturer's requirements before installing backing rod.

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DEPARTMENT OF TRANSPORTATION

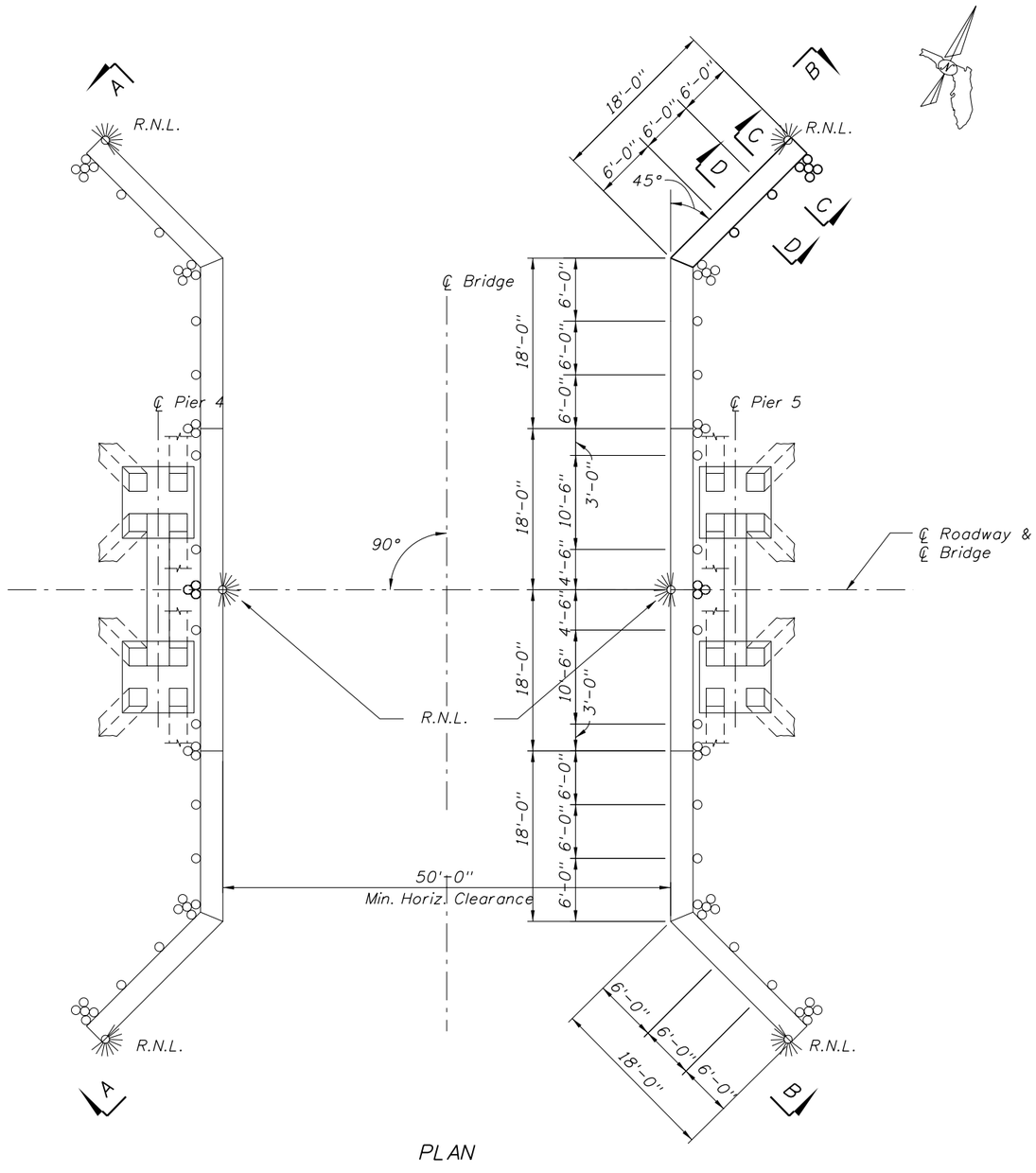
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 910001
DECK JOINT REPAIR DETAILS

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO.
B3-4



PLAN

BILL OF TREATED STRUCTURAL TIMBER FOR TWO FENDERS

MARK	SIZE	LENGTH	NO. REQ'D.	F.B.M.	CUTTING DIAGRAMS
A	10"x10"	18'-0"	13	1,950	22° 30' 18'-0"
B	10"x10"	18'-0"	4	600	18'-0"
C	8"x8"	1'-0"	8	43	1'-0"
D	3"x8"	18'-0"	1	36	18'-0"
E	2"x6"	2'-6"	31	78	2'-6"
TOTAL				2,707	

* ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Treated Structural Timber	M.B.	2.7
Treated Timber Piling	LF	350
Wrap Pile Clusters	EA.	2

* Estimated Quantities are for Two Fenders

NOTES:

1. Replace northeast flared end and deteriorated wales as noted.
2. Catwalk not shown for clarity.
3. R.N.L. denotes Red Navigation Light.
4. For View A-A and B-B see Sheet No. B3-6.
5. For Sections C-C and D-D, see Sheet No. B3-6.
6. Replace fender access ladder. See Sheet No. B3-7.

REVISIONS

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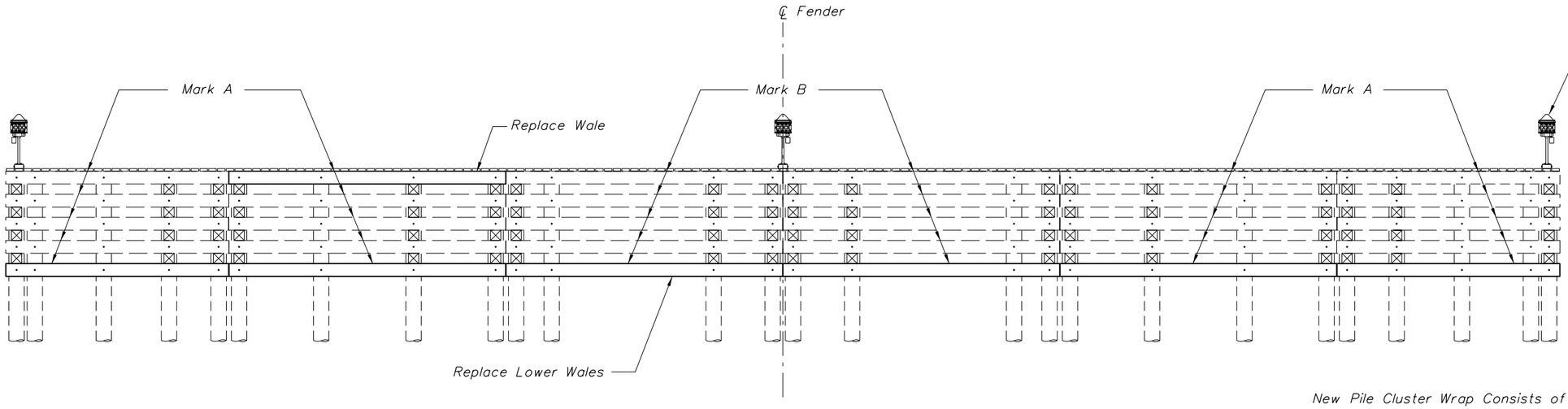
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE: BRIDGE NO. 910001 FENDER SYSTEM PLAN

REF. DWG. NO.:

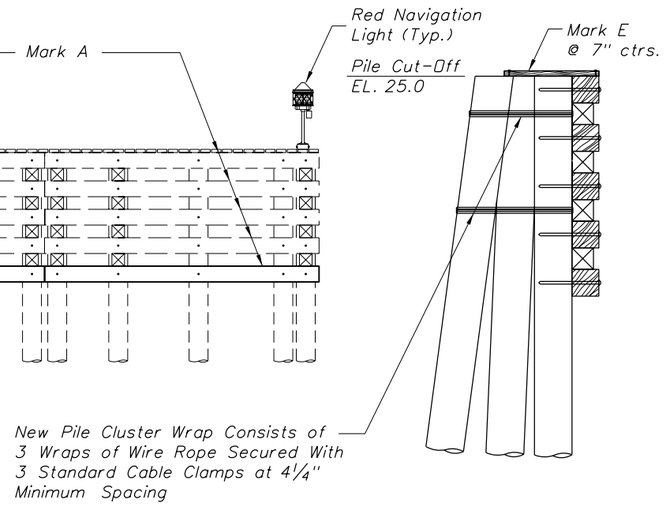
PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B3-5

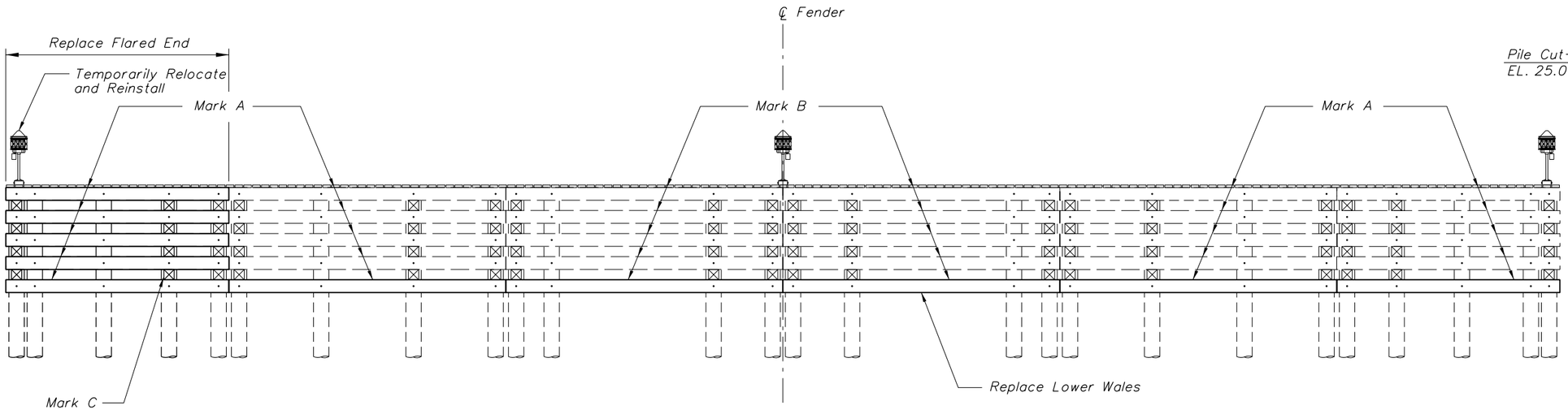


VIEW A-A

Developed West Fender System

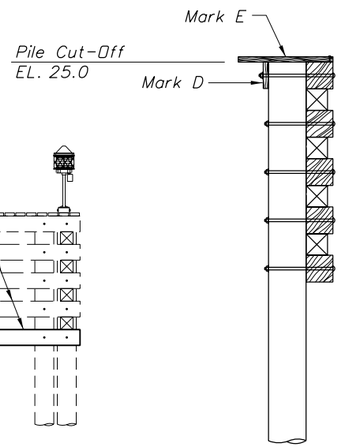


SECTION C-C



VIEW B-B

Developed East Fender System



SECTION D-D

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DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 910001
FENDER SYSTEM ELEVATIONS AND DETAILS

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO.
B3-6

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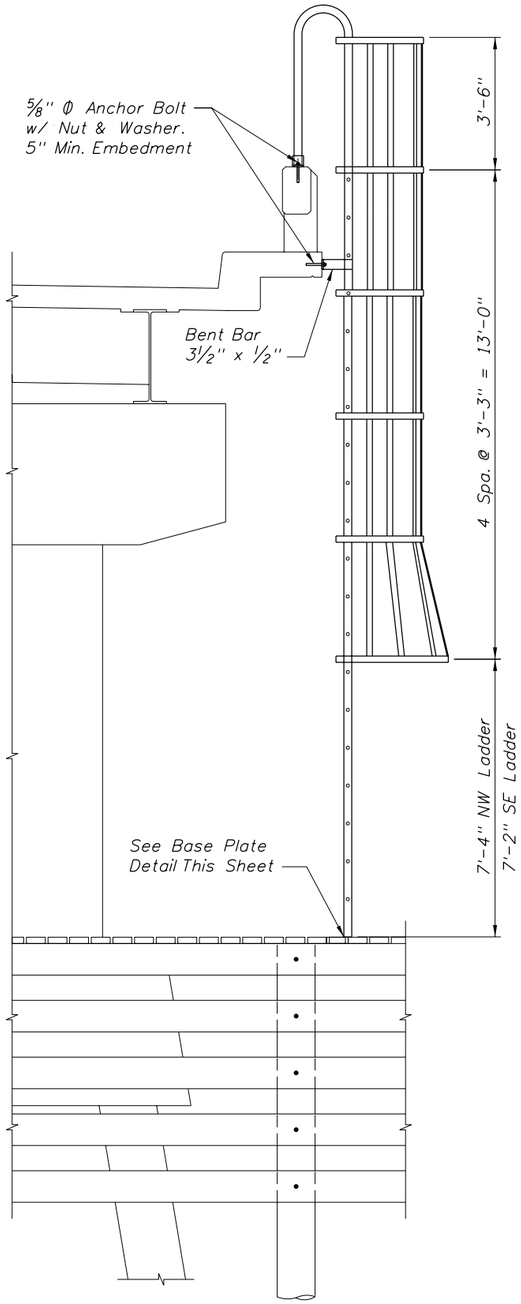
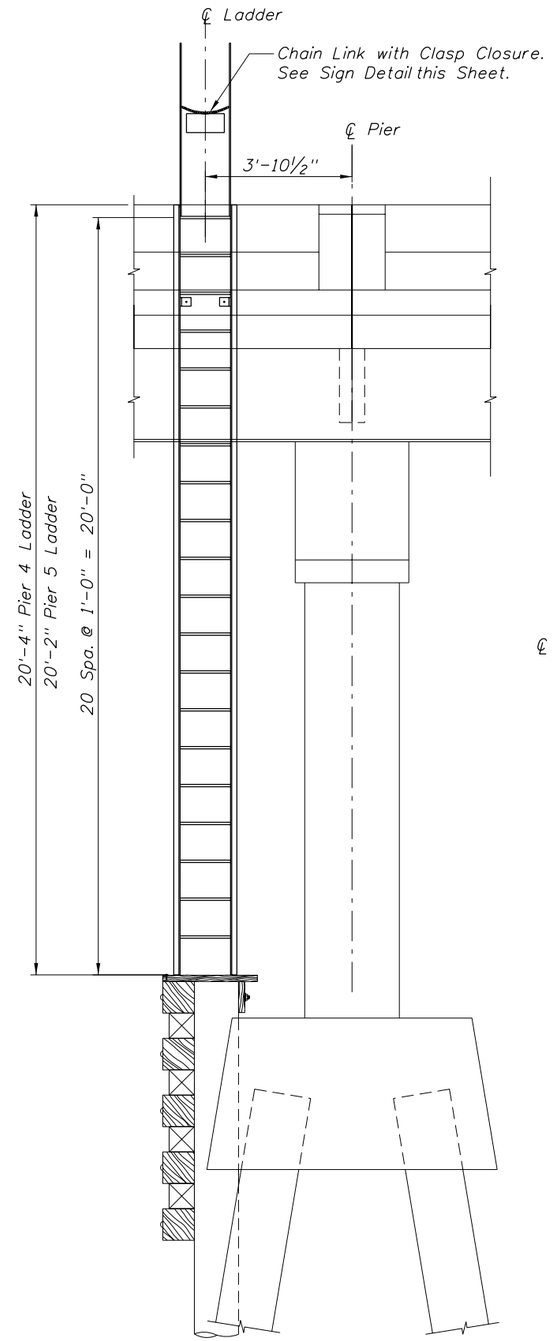
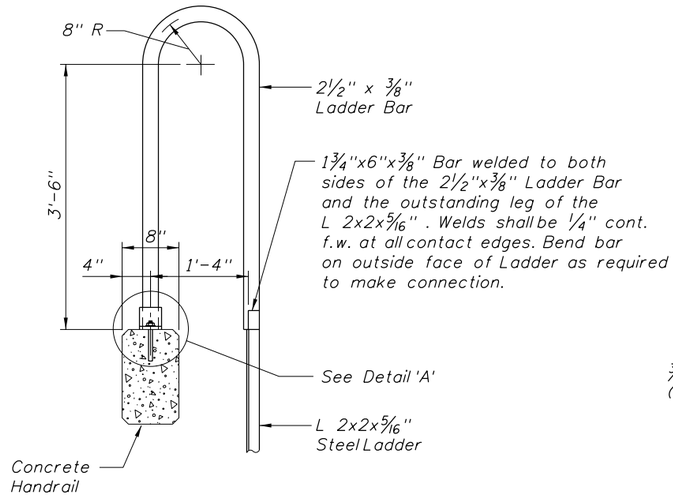


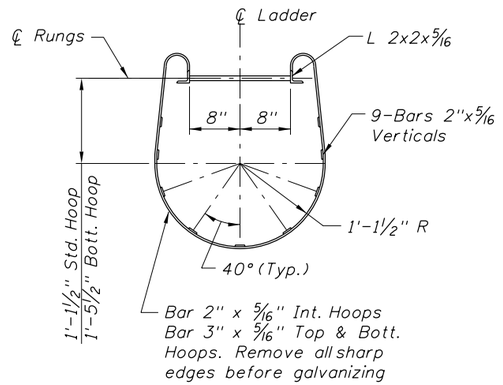
FRONT ELEVATION



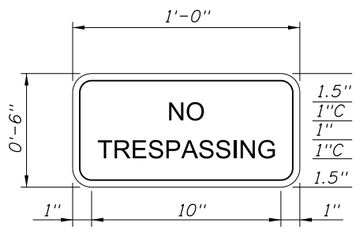
SIDE ELEVATION
(Ladder Cage Not Shown for Clarity)



DETAIL AT TOP OF LADDER

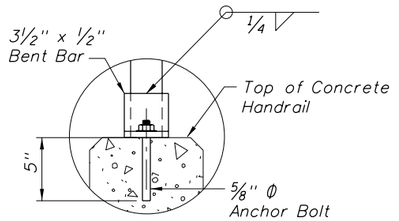


SECTION THRU LADDER CAGE

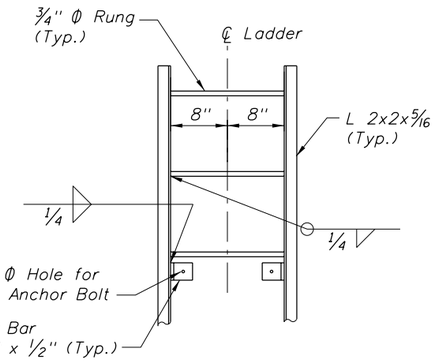


1'x6"
1" Radii ⅜" Border
1" Series C Legend
White Background
Black Legend and Border

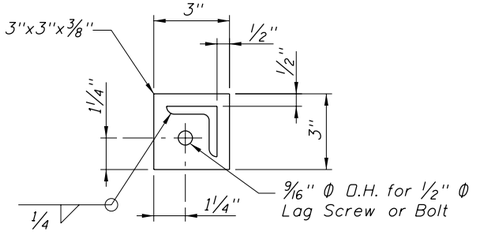
SIGN DETAIL
(2 Required)



DETAIL 'A'



LADDER DETAIL



BASE PLATE DETAIL

*ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Ladders and Platforms	LB	1,407

*Estimated Quantities Include Ladders at Piers 4 and 5.

NOTE:
All steel for ladders including plates, shapes, bars, nuts and washers shall be hot dip galvanized in accordance with requirements of A.S.T.M. A-123. Welding of parts shall be done prior to galvanizing.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

TIMOTHY J. FARRELL, P.E.
P.E. License No: 37264
E. C. DRIVER & ASSOCIATES, INC.
500 N. Westshore Blvd. Suite 500
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Certificate of Authorization No. 3838

DRAWN BY: LMM 03-10
CHECKED BY: KSS 09-10
DESIGNED BY: TJF 03-10
CHECKED BY: KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE: BRIDGE NO. 910001
FENDER ACCESS LADDER DETAILS

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.: B3-7

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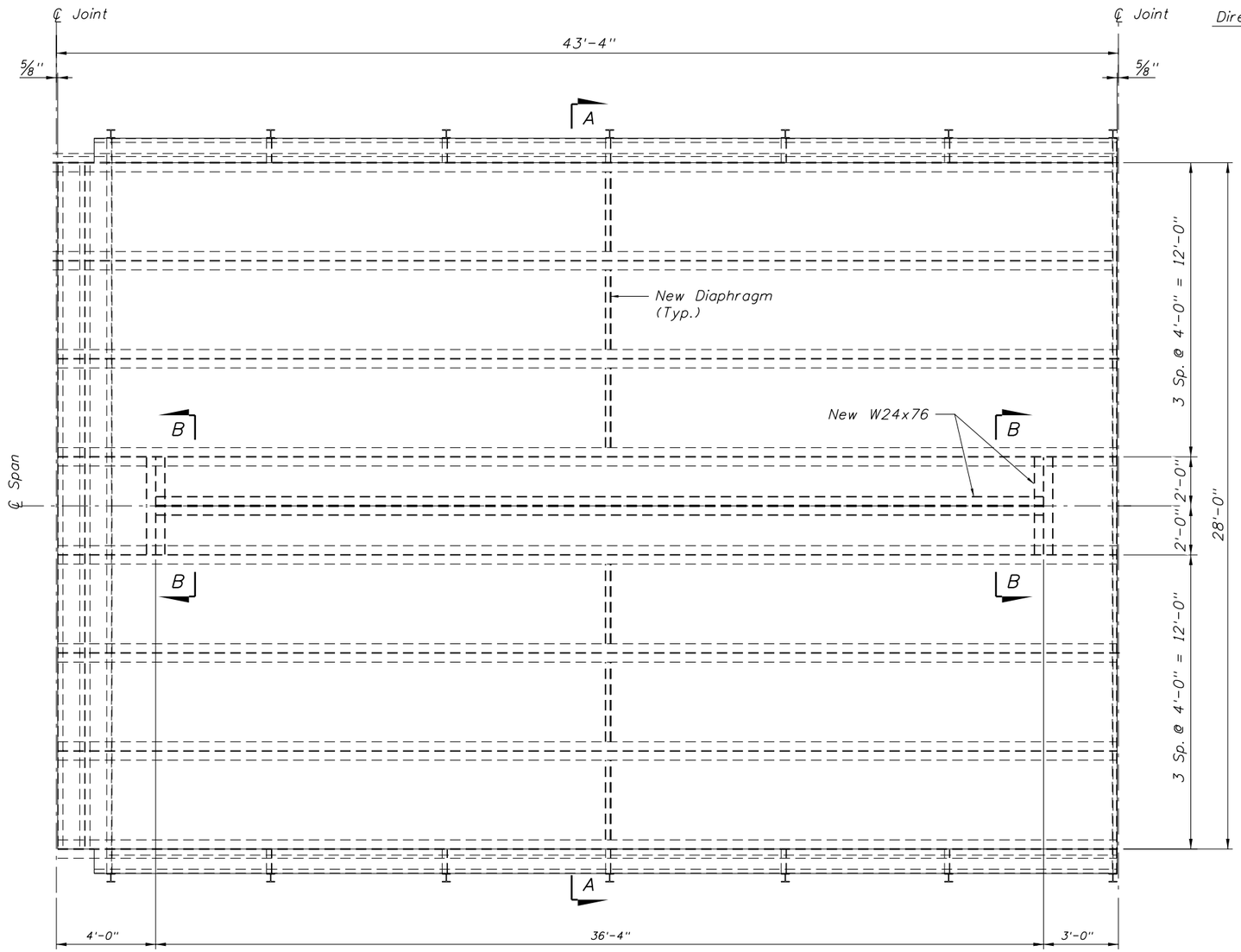
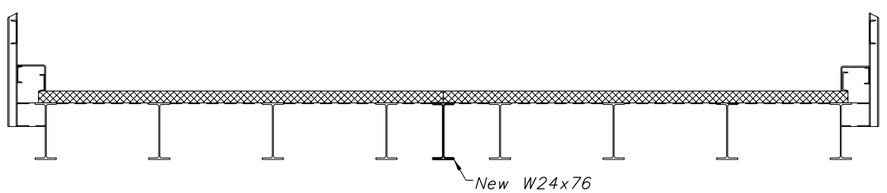
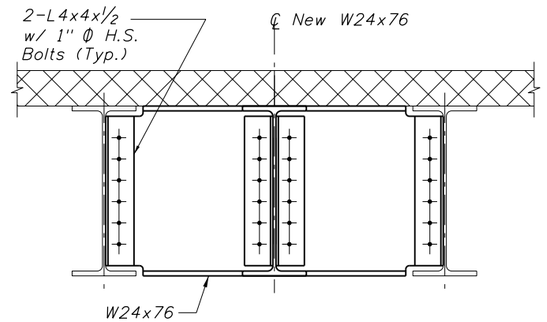


FRAMING PLAN



SECTION THRU MOVABLE SPAN



SECTION B-B

*ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Structural Steel	LB	4,528

*Quantity Includes Framing Steel this Sheet and Repair Steel Sheet No. B3-9.

NOTES:

1. For Section A-A see Sheet No. B3-9.

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REVISIONS					
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE: BRIDGE NO. 910001 FRAMING PLAN

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B3-8

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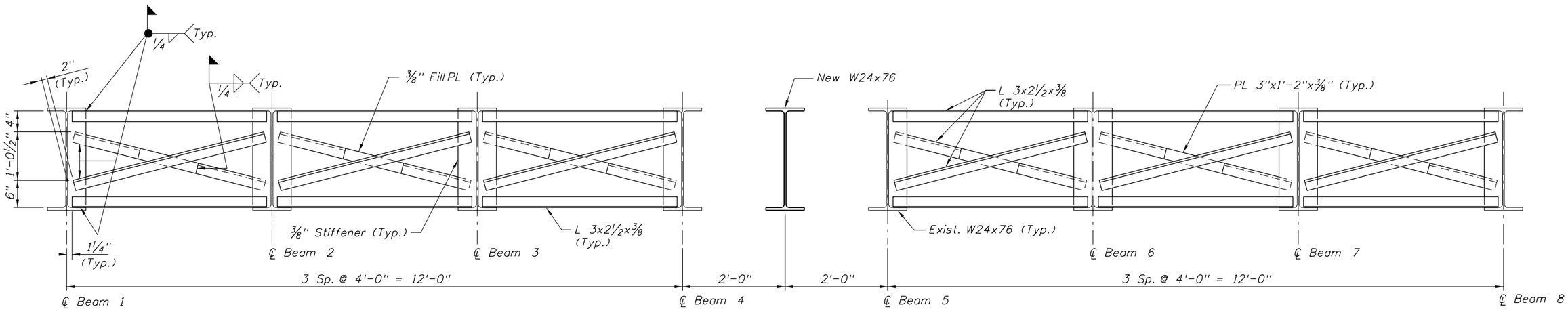
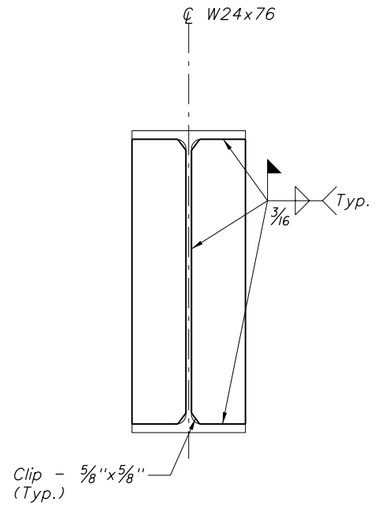


SECTION A-A

(Steel Grid Deck Not Shown for Clarity)



STIFFENER DETAIL

MOVABLE SPAN REPAIRS:

1. Replace the existing diaphragms including bracing and stiffeners except as noted. See details this sheet.
2. Shim bearing at east end of span for Beam No. 2, 4, 5, and 6.
3. Repair 8 cracked fillet welds underneath the traffic plate at the west end of the span.

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REVISIONS					
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE: BRIDGE NO. 910001 MOVABLE SPAN REPAIRS

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: B3-9

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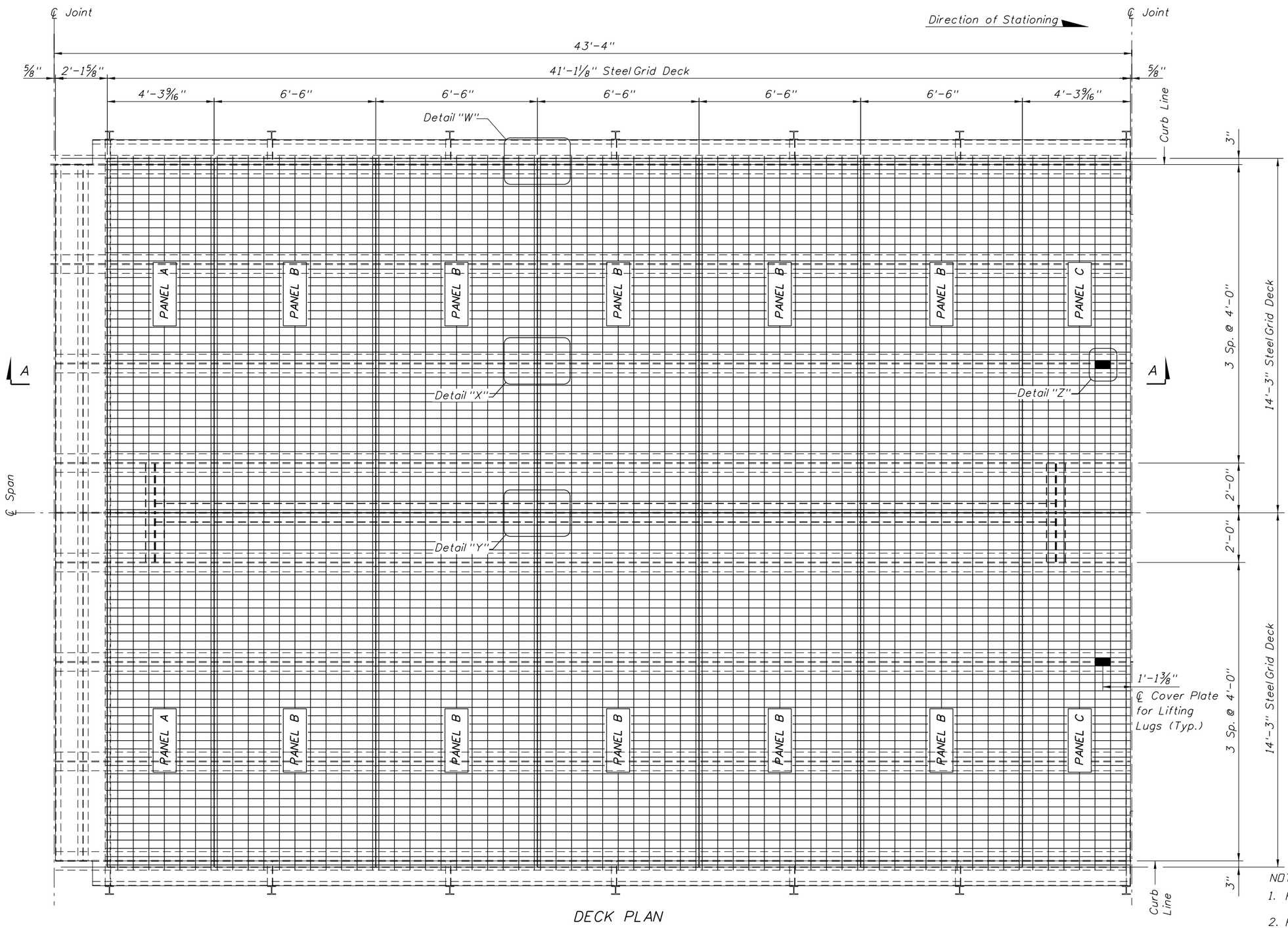

DECK PLAN

NOTES:

1. For Section A-A see Sheet No. B3-11.
2. For Detail "W", Detail "X", Detail "Y" and Detail "Z" see Sheet No. B3-12.

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REVISIONS					
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DESIGNED BY:	TJF 02-10
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

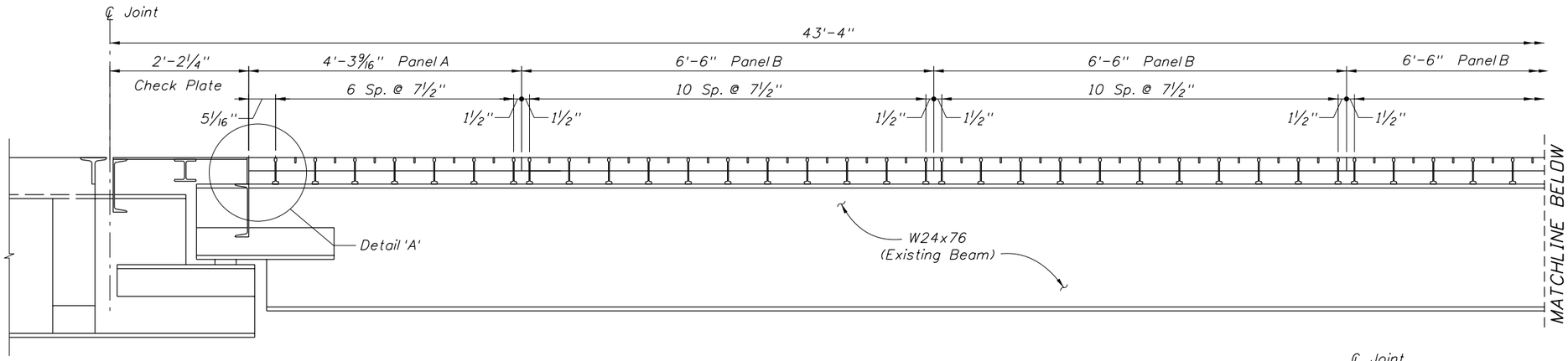
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

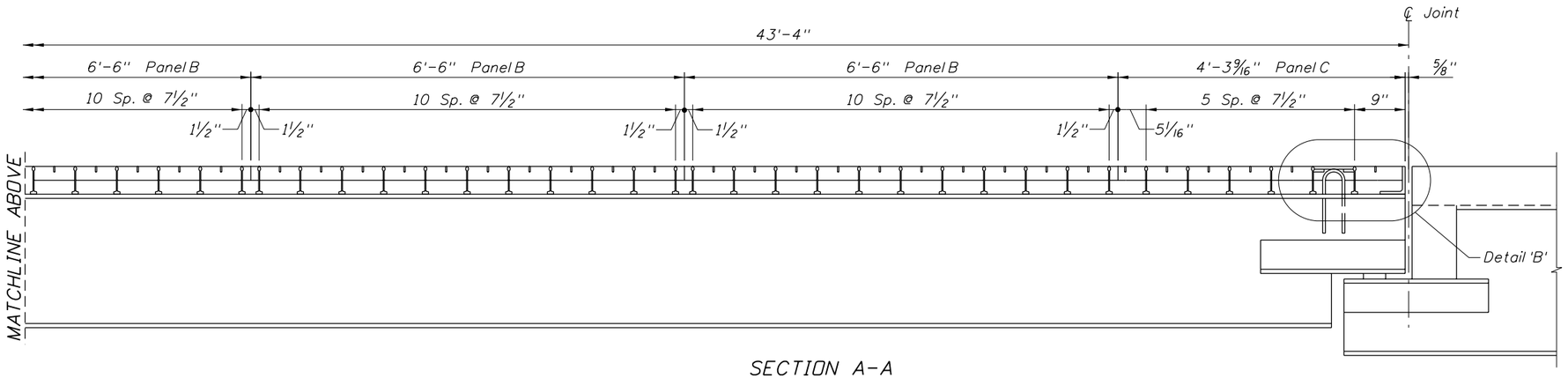
SHEET TITLE:
BRIDGE NO. 910001
MOVABLE SPAN DECK PLAN

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B3-10



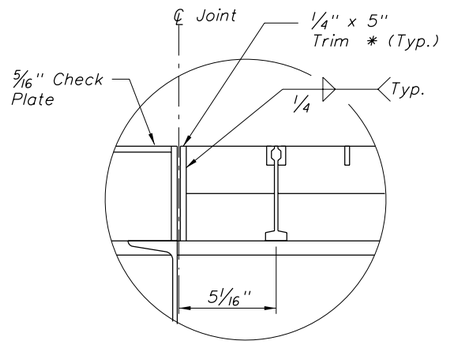


SECTION A-A

5⅜" STEEL OPEN GRID DECK:

- *5⅜" deep x 5.6 lb. per ft. Main Bars at 7½" o.c.*
- *One ¼" x 1" Supplemental Bar between the Main Bars.*
- *¼" x 2½" Cross Bars at 4" o.c.*
- *¼" x 1" Diaganol Bars connected alternately to the Main Bars and Supplemental Bars.*
- *¼" x 5" End Trim Bars.*
- *⅜" deep x ⅜" wide serrations at ¾" o.c. on Supplemental Bars, Cross Bars and Diagonal Bars.*
- *⅜" deep x ⅜" wide serrations at 1¼" o.c. on Main Bars.*
- *Mat'l: ASTM A709 Grade 36 Steel.*
- *Hot dip galvanize Panels per ASTM A123 after fabrication.*
- *Main Bars, Supplemental Bars, Cross Bars and Diagonal Bars interconnected by welding per Manufacturer's standards.*
- *Unit weight of 21 lb/sq. ft. ± 1.5 lbs/sq. ft. after fabrication and galvanizing.*

STEEL GRID PANEL TOLERANCES	
Panel Width	+0, -⅛"
Panel Length	± ¼"
Bar Offset	± 1/16"
Squareness	± ½" Measured diagonally
Camber - Width	0.005 x Width
Camber - Length	0.003 x Length
Sweep	± ⅛"
Main Bar Vertically	± 1/16"
Form Pan Location	± ⅛"



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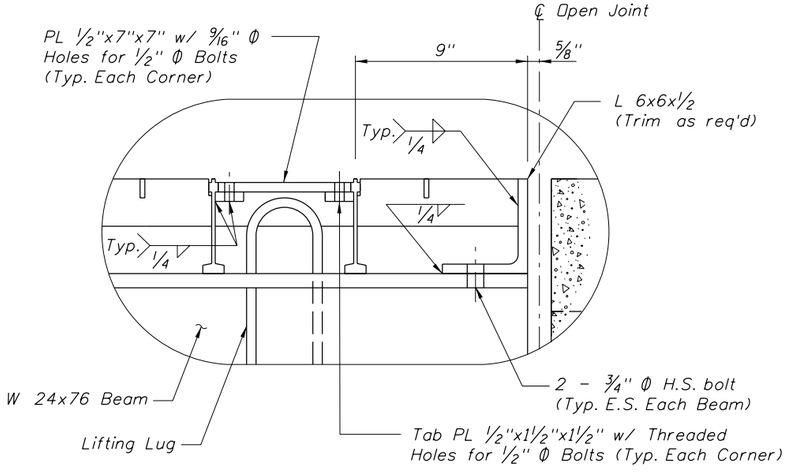

DETAIL 'B'

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REVISIONS

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Certificate of Authorization No. 3838

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DESIGNED BY: TJF 02-10
CHECKED BY: KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 910001
MOVABLE SPAN DECK DETAILS - SHEET 1 OF 2

REF. DWG. NO.

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

SHEET NO.
B3-11

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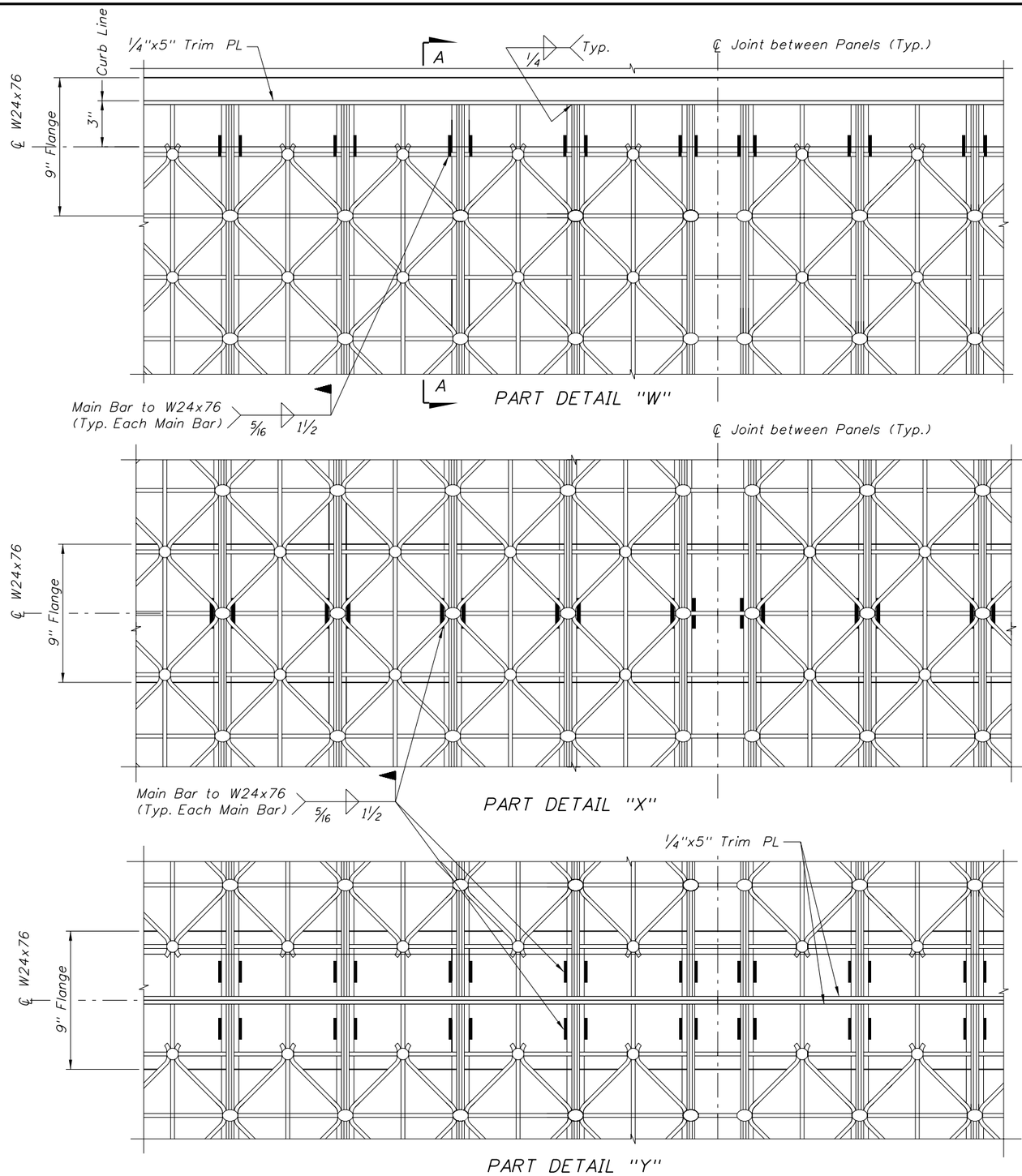
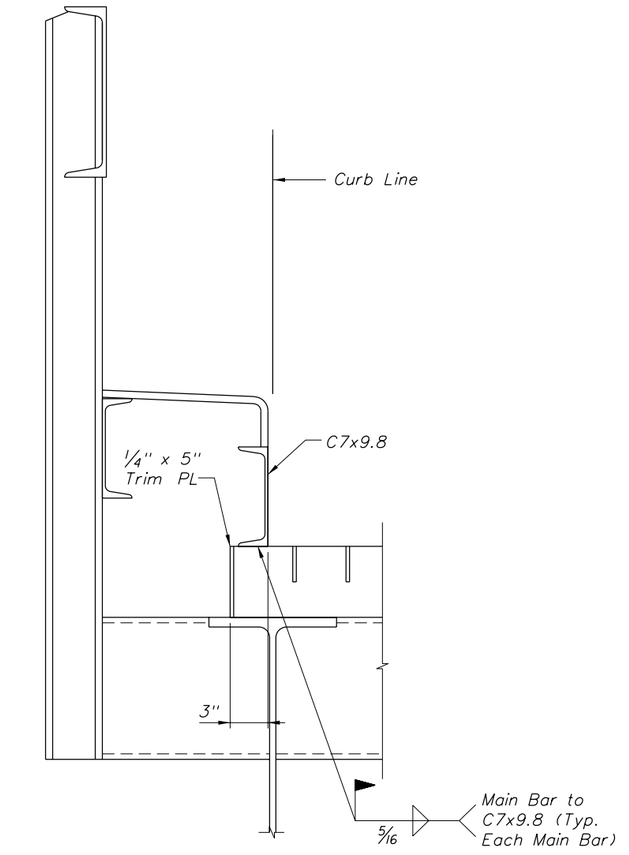
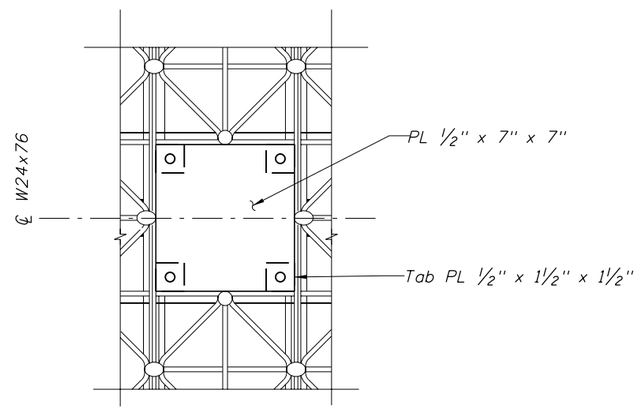




SECTION A-A



PART DETAIL "Z"

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DESIGNED BY:	TJF 02-10
CHECKED BY:	KSS 09-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE:
BRIDGE NO. 910001
MOVABLE SPAN DECK DETAILS - SHEET 2 OF 2

PROJECT NAME:
BRIDGE REPAIRS AND PAINTING
NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO.
B3-12

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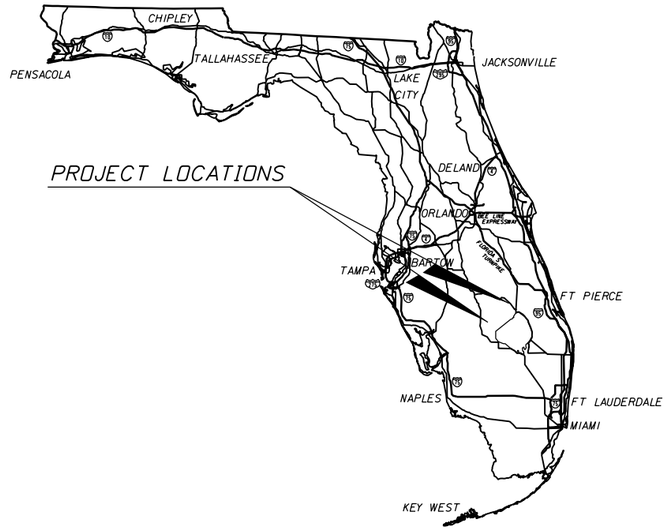
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 413817-1-52-01
HIGHLANDS COUNTY (09110000) & OKEECHOBEE COUNTY (91070000)
STATE ROAD NO. 700 & 70

SIGNING AND PAVEMENT MARKING PLANS



INDEX OF SIGNING AND PAVEMENT MARKING PLANS

SIGNING AND PAVEMENT MARKING SHOP DRAWINGS TO BE SUBMITTED TO:

ASHLEY L. WILLIS, P.E.
500 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL 33609
(813) 282.9886

PLANS PREPARED BY:

EC Driver & Associates

500 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL 33609
(813) 282.9886
CONTRACT NUMBER C8W76
CERT. OF AUTHORIZATION EB0003838
VENDOR NUMBER F5922375705004

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

KEY SHEET REVISIONS	
DATE	DESCRIPTION

SIGNING AND PAVEMENT MARKING PLANS ENGINEER OF RECORD: ASHLEY L. WILLIS, P.E.

P.E. NO.: 64600

FISCAL YEAR	SHEET NO.
11	S-1

FDOT PROJECT MANAGER : LUIS JUARBE, P.E.

E.C. DRIVER 1/4/2011 9:35:39 AM F:\Projects\413817152011\signing\KEYSSP01.dgn

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TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS S-3 PLAN	S-3 FINAL	S-4 PLAN	S-4 FINAL	TOTAL THIS SHEET PLAN	TOTAL THIS SHEET FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL	REF. SHEET
706-3	RETRO-REFLECTIVE PAVEMENT MARKER	EA	35		23		58		58		
710-11-111	TRAFFIC STRIPE SOLID (WHITE) (6")	LF	87		87		174		174		
710-11-211	TRAFFIC STRIPE SOLID (YELLOW) (6")	LF	87		87		174		174		
711-11-111	TRAFFIC STRIPE SOLID (WHITE) (6")	LF	1314		834		2148		2148		
711-11-211	TRAFFIC STRIPE SOLID (YELLOW) (6")	LF	1314		834		2148		2148		

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ASHLEY L. WILLIS, P.E.
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Certificate of Authorization No. 3838

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DESIGNED BY: JW 02-10
CHECKED BY: JSM 02-10

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

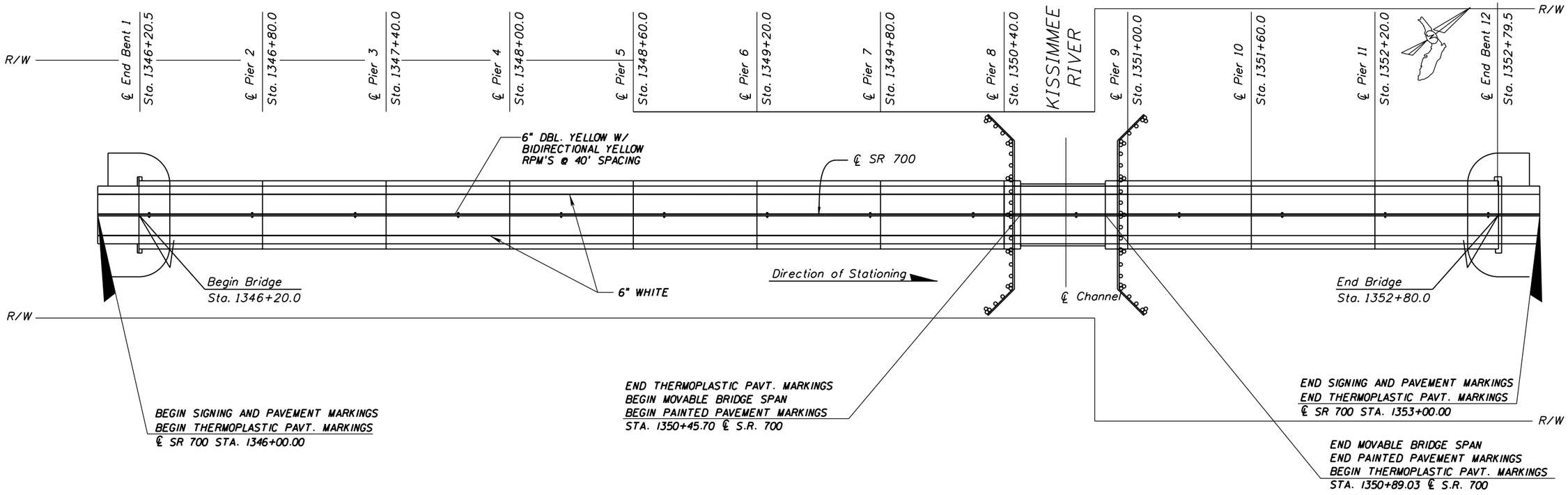
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01
700	HIGHLANDS	

SHEET TITLE: TABULATION OF QUANTITIES

REF. DWG. NO.:

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: S-2



SIGNING AND PAVEMENT MARKING NOTES

1. PAVEMENT MARKINGS SHALL BE PLACED AS SHOWN IN THE PLANS AND FDOT DESIGN STANDARDS INDEXES 17346 & 17352.

2. EXISTING PAVEMENT MARKINGS TO BE REMOVED USING WATERBLASTING OR ANY METHOD AS APPROVED BY THE ENGINEER.

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DESIGNED BY: JW 02-10
CHECKED BY: JSM 02-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
700	HIGHLANDS	413817-1-52-01

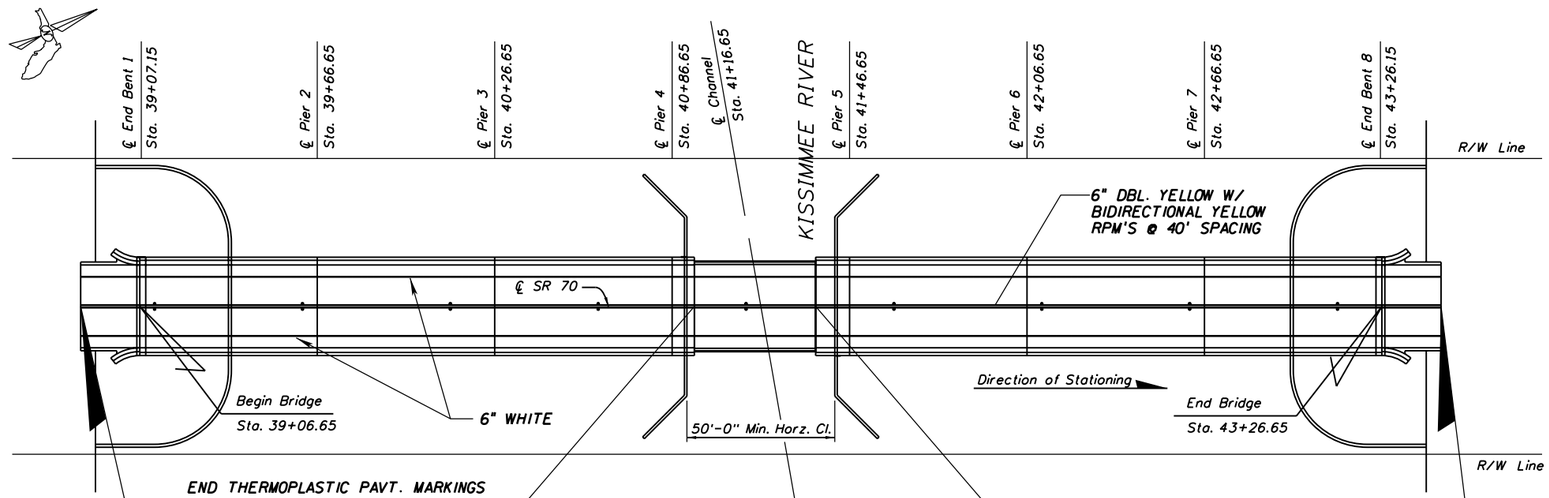
SHEET TITLE: SIGNING AND PAVEMENT MARKINGS - BRIDGE NO. 090016

PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

REF. DWG. NO.

SHEET NO. S-3

James_Newberry 12/29/2010 11:18:01 AM F:\Projects\413817152O1\signing\PLANSP01.dgn



SIGNING AND PAVEMENT MARKING NOTES

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ASHLEY L. WILLIS, P.E.
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Tampa, Florida 33609
Certificate of Authorization No. 3838

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DESIGNED BY: JW 02-10
CHECKED BY: JSM 02-10

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	OKEECHOBEE	413817-1-52-01

SHEET TITLE: SIGNING AND PAVEMENT MARKINGS - BRIDGE NO. 910001

REF. DWG. NO.:

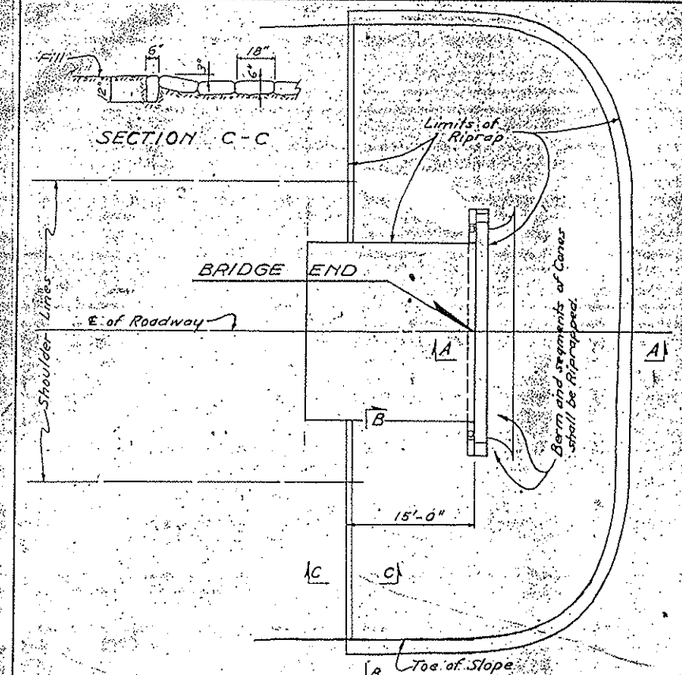
PROJECT NAME: BRIDGE REPAIRS AND PAINTING NOS. 090016, 170098 AND 910001

SHEET NO.: S-4

James_Newberry 12/29/2010 11:18:01 AM F:\Projects\413817152O1\signing\PLANSP01.dgn

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-1

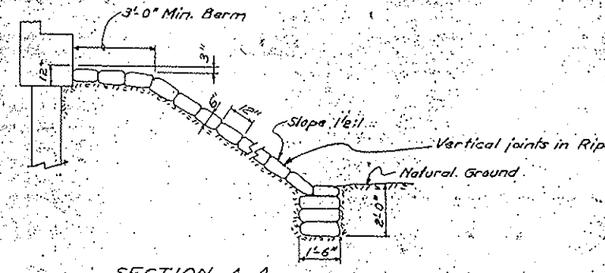
FED. ROAD DIV. No.	STATE	PROJECT NO.	PREFIX	YEAR	SH.
3	FLA.				B-1



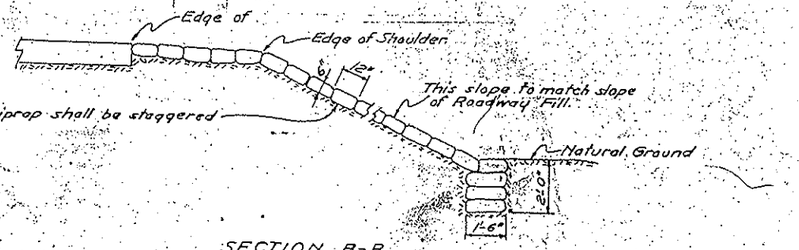
PLAN

For actual Riprap Layout at Bridge Ends see Plan and Elevation, Sheet No. B-2.

ELEVATION



SECTION A-A



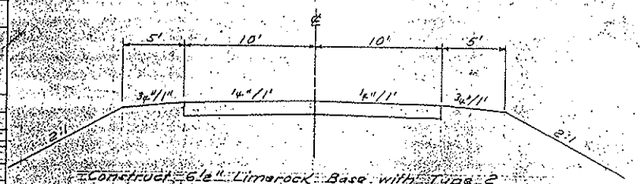
SECTION B-B

RIPRAP DETAILS

SUMMARY OF ESTIMATED BRIDGE QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
105-30	Construction, Maintenance and Removal of Detour	Lump Sum	1
③ 120-1	Removal of Existing Structure (Partial)	Lump Sum	1
140-32	Channel Excavation	Cu. Yd.	62,000
300-1-3	Class A Concrete (Bridge)	Cu. Yd.	391
300-71	Concrete Handrail (Safety Curb)	Lin. Ft.	548
310-1-2	Reinforcing Steel (Bridge)	Lb.	53,370
405-3-2	Precast Concrete Piling, Furnished (18") (Prestressed)	Lin. Ft.	1,880
405-4-2	Precast Concrete Piling, Driven (18") (Prestressed)	Lin. Ft.	1,880
405-9-12	Unloaded Test Piles (18") (Prestressed)	Lin. Ft.	170
① 405-10-80	Test Loads (80 Tons)	Each	1
② 410-2-1	Structural Steel (Carbon)	Lump Sum	1
502-1	Shear Connectors	Lb.	3,560
547-30	Stone Filter Blanket (12" thick)	Cu. Yd.	760
550-1	Riprap (Sand Cement)	Cu. Yd.	85
558-5	Riprap (Rubble)	Ton	2,583

Payment for Incidental Items not Specifically covered in the Individual Bid Items shall be included in the Contract Prices for Bid Items.
① The Number of Test Loads may be increased or omitted as directed by the Engineer.
② Item No. 410-2-1 includes approximately 123,084 Lbs.
③ Item No. 120-1 includes the cost of removing the Existing South End Bent and the Concrete Handrail on the West side of the Southernmost Span.



Construct 6 1/2" Limerock Base with Type 2 Bituminous Surface Treatment

TYPICAL SECTION FOR DETOUR ROAD

INDEX OF BRIDGE SHEETS

GENERAL NOTES

DESIGN SPECIFICATIONS: A.A.S.H.O. 1961 with Approved Revisions.
LOADING: H-15-44
SURFACE FINISH: All exposed surfaces as specified in Section 300-21 of the Specifications shall be given Class 1 Surface Finish.
REINFORCING STEEL: Intermediate or Hard Grade
CONCRETE STRESSES: f'c = 1200 p.s.i. for Class A
CONSTRUCTION NOTE: Temporary support for Existing End Span for the South End of the Existing Bridge will be required. It will be necessary for this support to be able to raise the end of the Existing Span a sufficient distance to provide for complete removal of the Existing End Bent and reconstruct the Proposed Pier No. 4. It will be necessary for this support to maintain the Existing Relative Bearing Elevation in order to allow for cracking of the Span. The design and plans for the Temporary support shall be submitted to the Engineer for approval before work commences. Cost of Temporary Support to be included in the Contract Lump Sum Price for Item No. 105-30.

BEST AVAILABLE ORIGINAL

FDOT MAR 22 2007 RMS SCANNED

SUMMARY OF ESTIMATED BRIDGE QUANTITIES, RIPRAP DETAILS AND GENERAL NOTES.

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

EXTENSION OF BRIDGE OVER KISSIMMEE RIVER (CANAL C-38)

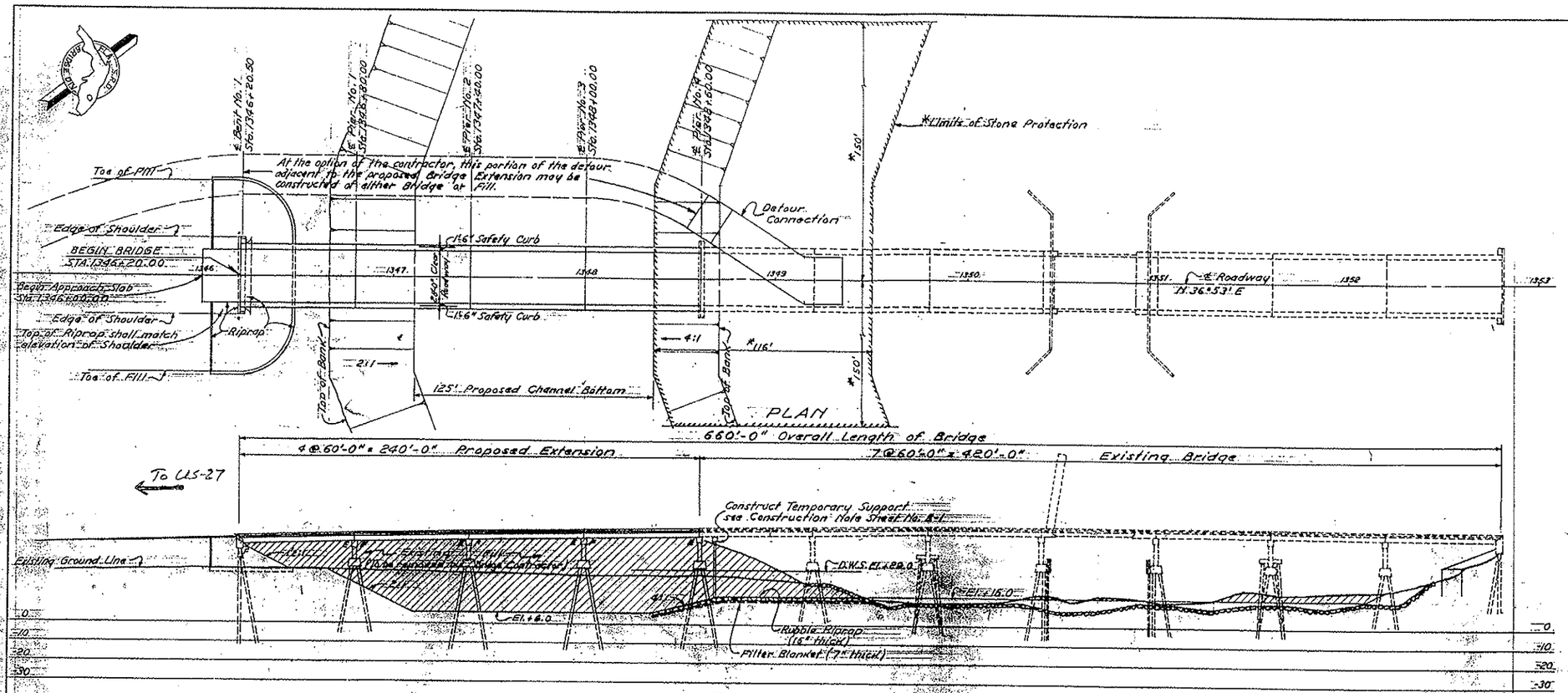
REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	700	HIGHLANDS	09110-3503

	Names	Dates	APPROVED BY
Detailed by	C.E.S.	10-65	T. W. Hammond
Checked by	R.C.B.	10-65	
Quantities by	R.C.B.	10-65	
Checked by			
Traced by	C.E.S.	10-65	

Drawing No. 1-B-25 Index No. 2933

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-2

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.		65	B-2



BEST AVAILABLE ORIGINAL

FDOT MAR 22 2007 SMS SCANNED

PLAN AND ELEVATION

STATE ROAD DEPARTMENT OF FLORIDA
STRUCTURES DIVISION

EXTENSION OF BRIDGE OVER KISSIMMEE RIVER (CANAL C-38)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	700.	HIGHLANDS	0911.0-3503

	Names	Dates
Detailed by	C.E.S.	9-65
Checked by	R.C.B.	10-65
Quantities by		
Checked by		
Traced by	C.E.S.	9-65

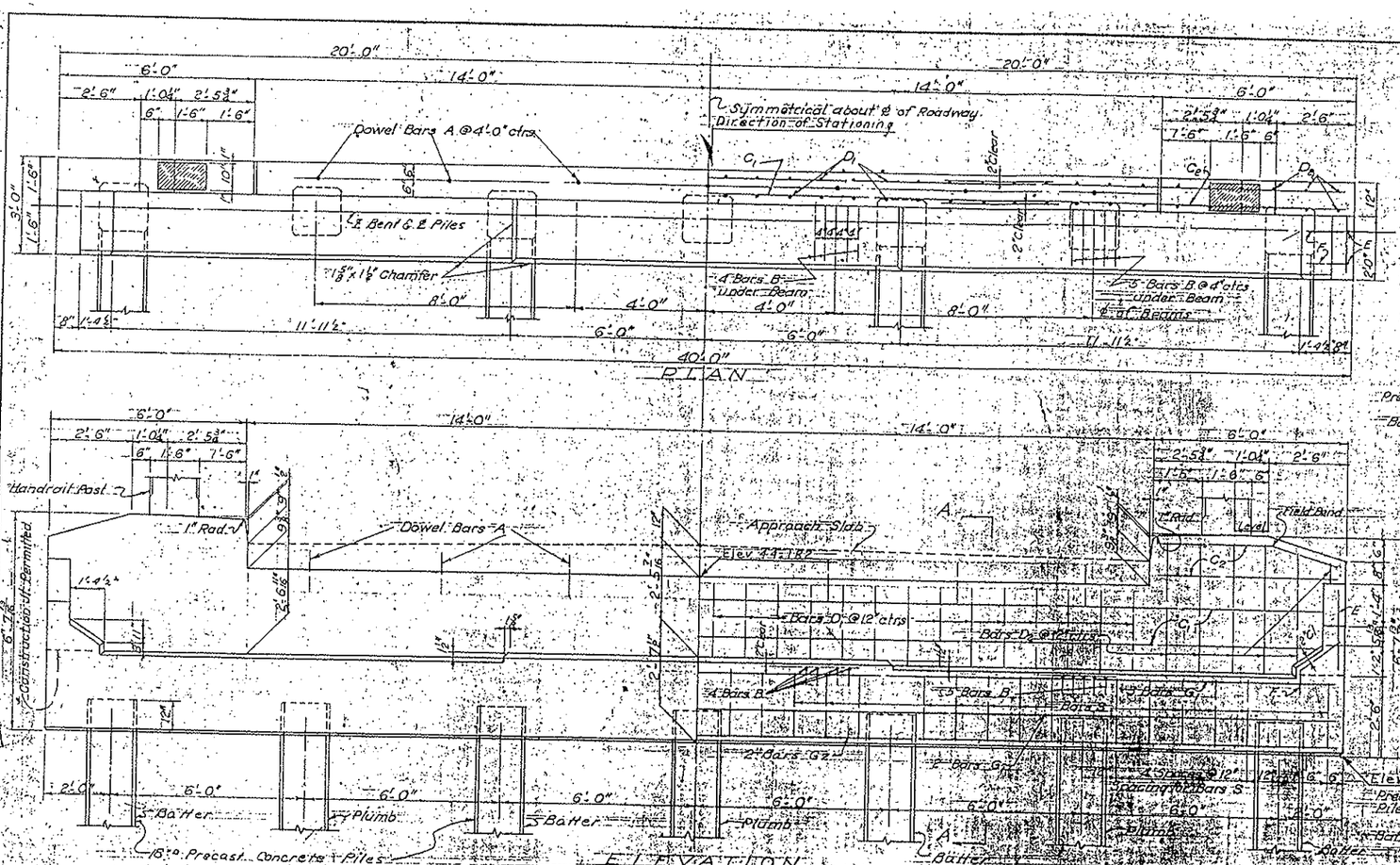
APPROVED BY: T.W. Lemmon, Assistant State Highway Engineer

Drawing No. 2 of 5

Index No. 9022

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-3

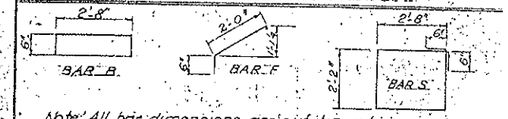
FED. ROAD DIV. No.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.		65	B-4



BILL OF REINFORCING STEEL

MARK	SIZE	No. Req'd	LENGTH	LOCATION	BENDING
A	6	7	1'-3"	Back Wall	Straight
B	4	18	3'-6"	Cap	See Diagram
C₁	4	4	39'-6"	Back Wall	Straight
C₂	4	8	5'-8"	Wing Wall	Field Bend
D₁	4	56	3'-10"	Back Wall	Straight
D₂	4	24	5'-5"	Wing Wall	"
E	4	6	9'-0"	End Wall	"
F	4	4	2'-5"	" "	See Diagram
G₁	8	5	39'-6"	Cap	Straight
S	4	32	10'-3"	"	See Diagram
G₂	9	2	39'-6"	Cap	Straight

BENDING DIAGRAMS



Note: All bar dimensions are out to out.

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Class A Concrete	cu. yd.	15.95
Reinforcing Steel	Lb.	1455
Precast Concrete Piling (18"ø)	Lin. Ft.	X

X See Estimated Bridge Quantities

~GENERAL NOTES~

DESIGN SPECIFICATIONS: A.A.S.H.T.O. 1961 with approved Revisions.
LOADING: H-15-44
DESIGN LOAD FOR PILES: 35 Tons
CHAMFER: All exposed edges to be chamfered 2" unless otherwise noted.
DOWELS: Set dowels for Approach Slab
ANCHOR BOLTS AND HANDRAIL BARS: Set Anchor Bolts shown on Superstructure Dwg. Set Vertical Post Bars shown on Handrail Drawing
REINFORCEMENT: Unless otherwise shown reinforcing steel shall be 2" clear from face of concrete

BEST AVAILABLE ORIGINAL

FDOT MAR 22 2007 SCANNED

REVISIONS			
Date	By	Descriptions	

	Name	Date
Detailed by	H.L.E.	5-51
Checked by	R.G.F.	6-51
Quantities by	H.L.E.	5-51
Checked by	R.G.F.	6-51

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

CONCRETE PILE END BENT
60FT. SPAN - 28FT. ROADWAY

ROAD NO.	COUNTY	PROJECT NO.
700	HIGHLANDS	05010-3502

T.W. Lemmon

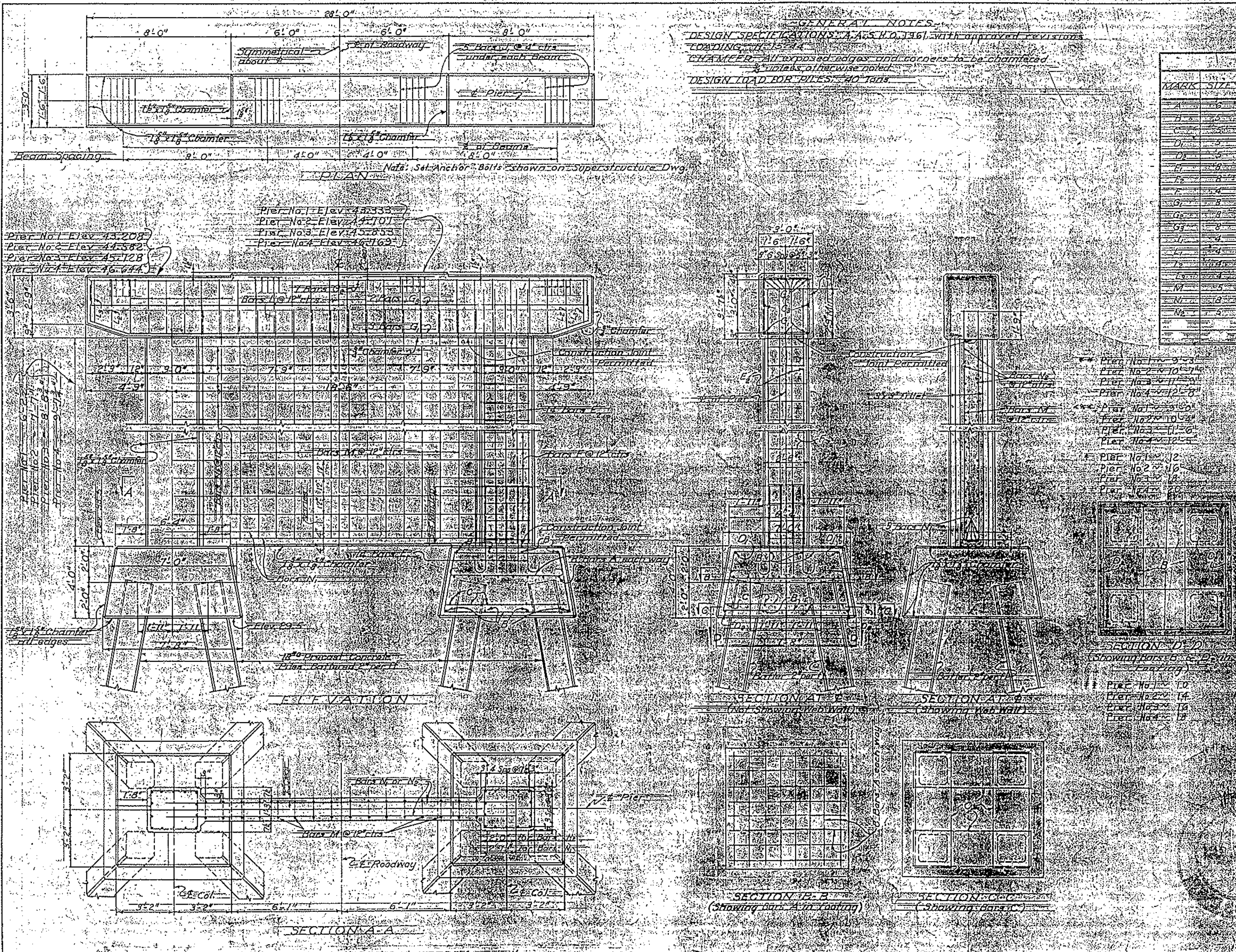
Drawing No. BX1-3

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-4

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.		65	B-5

GENERAL NOTES

DESIGN SPECIFICATIONS: A.A.S.H.O. 1961 with approved revisions
LOADING: H 15-44
CHAMFER: All exposed edges and corners to be chamfered ¾" unless otherwise noted.
DESIGN LOAD FOR PILES: 40 Tons



BILL OF REINFORCING STEEL

MARK	SIZE	No. Reqd.	Length	LOCATION	BENDING
A	6	32	8'-2"	Footing	See Diagram
B	5	12	20'-7"	"	"
C	5	8	17'-5"	"	"
D_1	5	4	7'-10"	"	"
D_2	5	4	8'-1"	"	"
E_1	8	28	6'-3"	Footg. & Column	"
E_2	8	28	Varies*	Column	Straight
F	4	Varies†	10'-3"	"	See Diagram
G_1	8	9	30'-5"	Cap	"
G_2	8	7	30'-2"	"	"
G_3	8	2	27'-6"	"	Straight
J_1	4	20	4'-0"	"	See Diagram
L_1	4	24	12'-3"	"	"
L_2	4	2	11'-9"	"	"
L_3	4	2	11'-1"	"	"
M	5	32	Varies**	Web Wall	"
N_1	8	5	20'-9"	"	Straight
N_2	5	Varies††	19'-6"	"	"

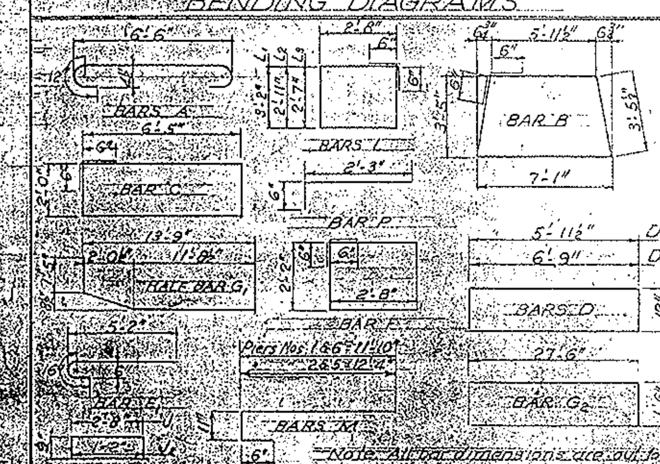
** Pier No. 1 ~ 9'-3"
Pier No. 2 ~ 10'-7"
Pier No. 3 ~ 11'-9"
Pier No. 4 ~ 12'-8"

** Pier No. 1 ~ 9'-0"
Pier No. 2 ~ 10'-4"
Pier No. 3 ~ 11'-6"
Pier No. 4 ~ 12'-5"

† Pier No. 1 ~ 12
Pier No. 2 ~ 16
Pier No. 3 ~ 18
Pier No. 4 ~ 20

†† Pier No. 1 ~ 10
Pier No. 2 ~ 14
Pier No. 3 ~ 16
Pier No. 4 ~ 18

BENDING DIAGRAMS



ESTIMATED QUANTITIES

ITEM	UNIT	PIER NO. 1	PIER NO. 2	PIER NO. 3	PIER NO. 4
Class A Concrete	Cu. Yd.	32.04	33.80	35.26	36.41
Reinforcing Steel	Lb.	4120	4373	4554	4707
Precast Concrete Piling (18" Ø)	Lin. Ft.	*	*	*	*

* Note: See Estimated Bridge Quantities

Note: Estimated Quantities and Bill of Reinforcing Steel are for one Pier only

BEST AVAILABLE ORIGINAL

DETAILS OF PIERS NOS. 1, 2, 3 & 4

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

EXTENSION OF BRIDGE OVER KISSIMMEE RIVER AT FORT BASSINGER

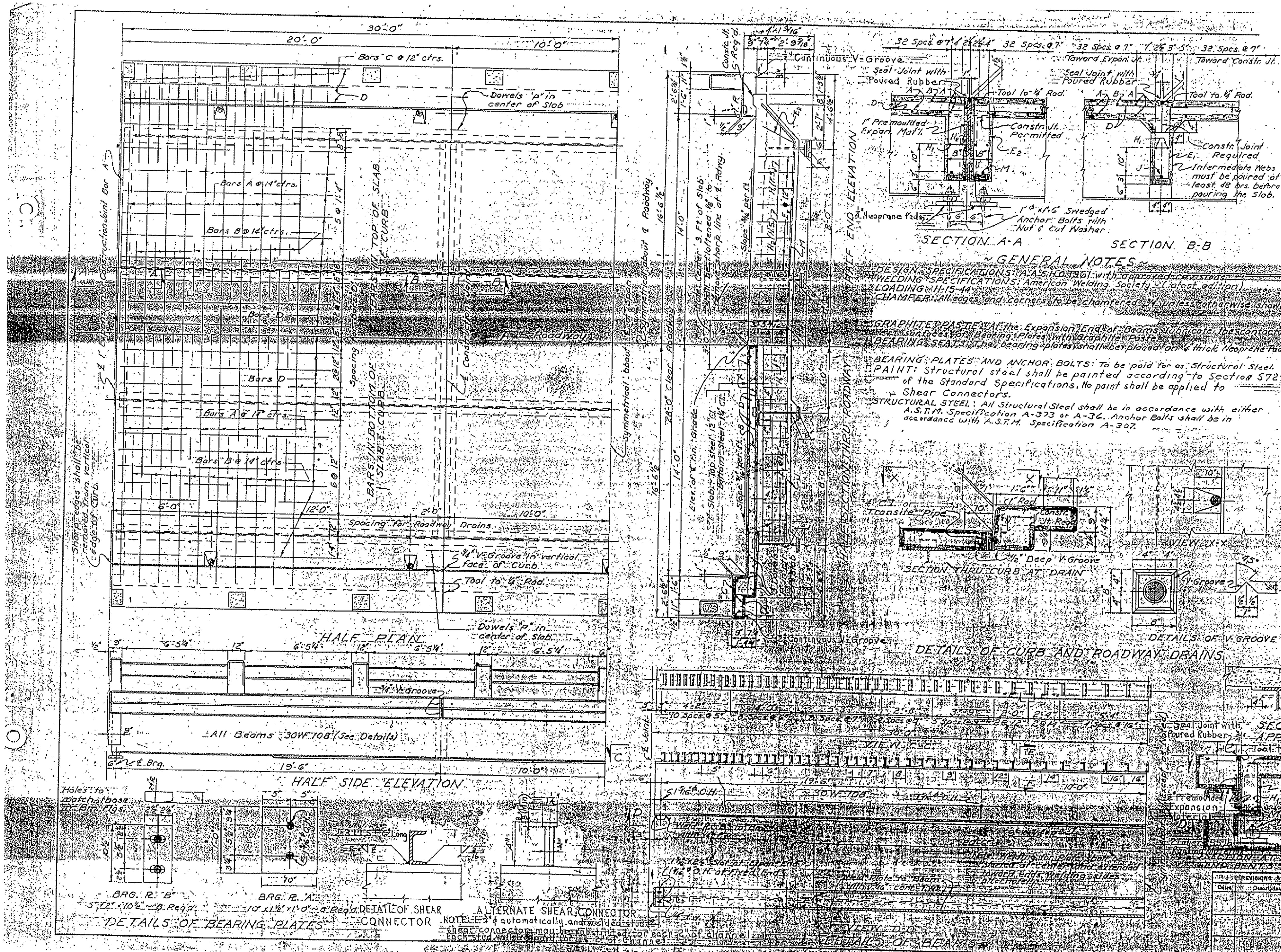
ROAD NO.	COUNTY	PROJECT NO.
700	Highlands	09110-3503

REVISIONS: Dates	Descriptions

	Names	Dates
Detailed by	A.G.M.	9-65
Checked by	R.C.B.	9-65
Quantities by	A.G.M.	9-65
Checked by	R.C.B.	9-65
Traced by	H.L.E.	5-51

Drawing No. 3 of 5
Index No. 3022

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-5



~ GENERAL NOTES ~

DESIGN SPECIFICATIONS: A.A.S.H.O. 1961 with approved revisions.
WELDING SPECIFICATIONS: American Welding Society - (latest edition)
LOADING: H-15-44
CHAMFER: All edges and corners to be chamfered 3/4" unless otherwise shown.
GRAPHITE PASTE: At the Expansion End of Beams lubricate the contact surfaces of Bearing Plates with Graphite Paste.
BEARING SEATS: The bearing plates shall be placed on 1/4" thick Neoprene Pads.
BEARING PLATES AND ANCHOR BOLTS: To be paid for as Structural Steel.
PAINT: Structural steel shall be painted according to Section 572 of the Standard Specifications. No paint shall be applied to Shear Connectors.
STRUCTURAL STEEL: All Structural Steel shall be in accordance with either A.S.T.M. Specification A-373 or A-36. Anchor Bolts shall be in accordance with A.S.T.M. Specification A-307.

NOTE: 3/4"φ automatically and welded stud shear connector may be substituted for each 2" of channel. Each stud will be paid for as ... of channel.

BILL OF REINFORCING STEEL

MARK	BAR NO.	NO. REQ'D.	LENGTH	LOCATION	BENDING
A	5	108	30'-2"	Slab	Straight
B	5	48	31'-1"	"	Bend
C	4	120	6'-10"	Curb	"
D	4	165	19'-7"	Slab & Curb	Straight
E1	4	48	5'-8"	Int. Webs	Bend
E2	4	52	5'-6"	End Webs	"
H1	4	18	7'-8"	End & Int. Webs	Straight
H2	4	2	26'-2"	End Webs	"
J	8	2	24'-5"	Int. Webs	See Diagram
M	8	2	34'-5"	End Webs	"
P	8	12	2'-0"	Slab	Straight

BENDING DIAGRAMS

BAR B, BAR C, BAR E2, BAR E1, BAR M, BAR J

Note: All bar dimensions are out to out.

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Class A Concrete*	Cu. Yd.	57.0
Reinforcing Steel	Lb.	8,541
Structural Steel	Lb.	30,771
Shear Connectors +	Lb.	890

*Concrete Quantity estimated on the basis of a 7" Roadway Slab with 2.4 Cu. Yds. allowed for lugs and Dead Load Deflection haunches over bearings.

+360 ~ 3⊔5 - 6" Long

WELDING REQUIRED PER SPAN
5/16" fillet weld 449 Lin. Ft.
1/4" fillet weld 14 Lin. Ft.

60 FT. SPAN SUPERSTRUCTURE

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

EXTENSION OF BRIDGE OVER KISSIMMEE RIVER (CANAL C-38)

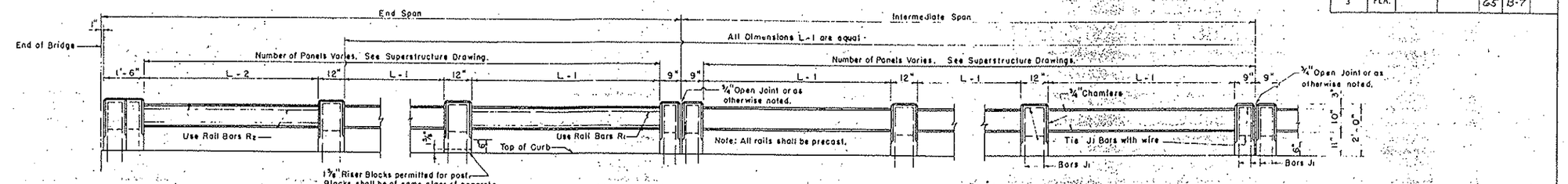
ROAD NO.	COUNTY	PROJECT NO.
700	HIGHLANDS	09110-3503

	Names	Dates
Detailed by	A G M	9-65
Checked by	R C B	9-65
Quantities by	W M G	5-56
Checked by	R C B	9-65

APPROVED BY
Assistant State Highway Engineer

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-6

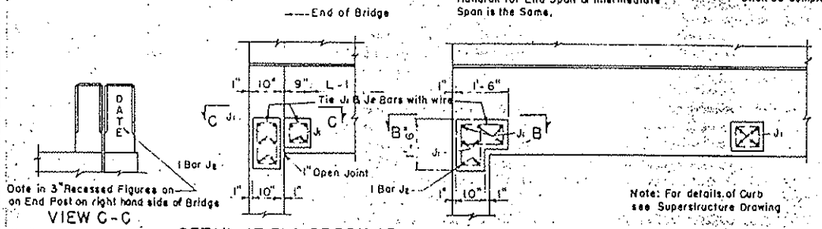
FED. ROAD DIST. NO.	STATE	SECTION	I.M. NO.	SHEET NO.	TOTAL SHEETS
3	FLA.			65	B-7



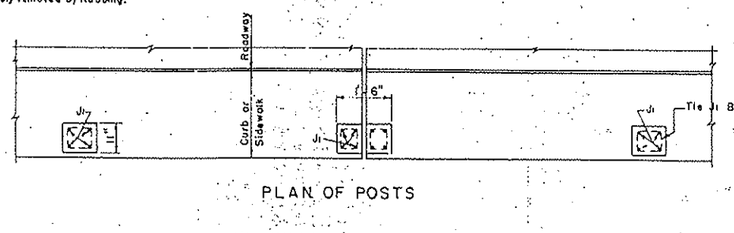
SIDE ELEVATION

Note: When End Post rests on Substructure Handrail for End Span B Intermediate Span is the Same.

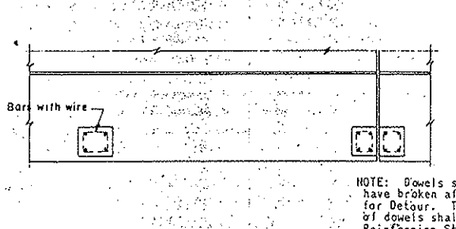
1⅜" Riser Blocks permitted for post. Blocks shall be of same class of concrete as Handrail. Lines formed by Joints shall be completely removed by Rubbing.

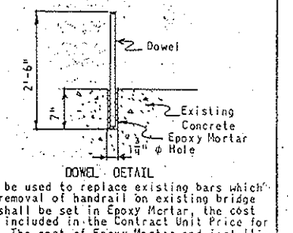


Note: For details of Curb see Superstructure Drawing



PLAN OF POSTS





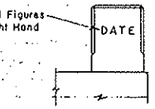
DOWEL DETAIL

NOTE: Dowels shall be used to replace existing bars which have broken after removal of handrail on existing bridge for Detour. They shall be set in Epoxy Mortar, the cost of dowels shall be included in the Contract Unit Price for Reinforcing Steel. The cost of Epoxy Mortar and installing Dowels shall be included in the Contract Unit Price for Class A Concrete.

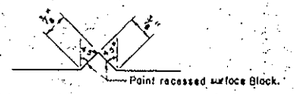
DETAIL AT END OF BRIDGE
WHEN 1'-6" POST RESTS ON SUBSTRUCTURE

Estimated Quantities For Four 1'-6" End Posts: Concrete: 0.37 Cu.Yd. Reinf. Steel: 81 Lb.

Date in 3" Recessed Figures on End Post on Right Hand side of Bridge.

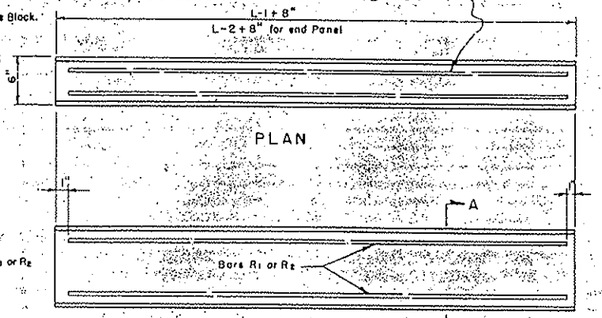


VIEW B-B



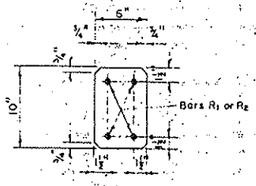
CROSS-SECTION OF RECESSED "V" USED TO FORM INSCRIBED FIGURES

Note: At the option of the Contractor 4-7/16" ϕ S.R. Cables @ 14,000 Lbs. each may be substituted for the ⅜" ϕ Bars.



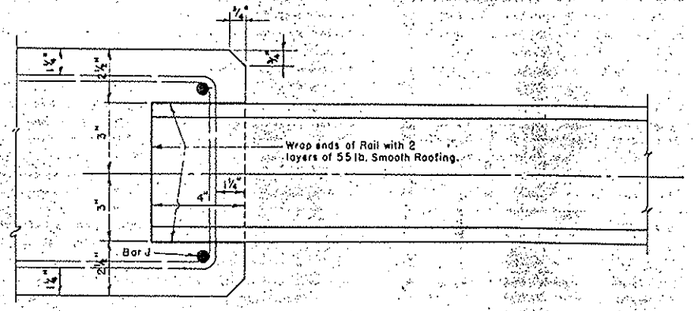
PLAN

ELEVATION



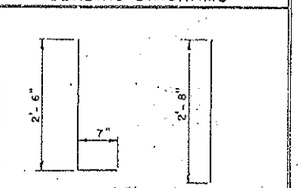
SECTION A-A

RAIL DETAILS



DETAIL AT POST

SPAN LENGTH FT.	ESTIMATED QUANTITIES CONCRETE END SPAN CU. YD.	CONCRETE INTERM. SPAN CU. YD.	REINF. STEEL END SPAN LB.	REINF. STEEL INTERM. SPAN LB.	NO. of PANELS PER SPAN	BILL OF REINFORCING STEEL END SPAN J1 3'-1"	J2 2'-8"	R1 L+6"	R2 L+6"	INTERMEDIATE SPAN J1 3'-1"	R1 L+6"	BENDING DIAGRAMS
15	0.87	0.72	207	190	2	28	4	8	8	24	16	
17.5	0.95	0.79	228	211	2	28	4	8	8	24	16	
20	1.13	0.98	271	253	3	36	4	16	8	32	24	
25	1.28	1.13	312	295	3	36	4	16	8	32	24	
30	1.54	1.39	375	358	4	44	4	24	8	40	32	
35	1.82	1.65	442	425	5	52	4	32	8	48	40	
40	1.97	1.80	480	464	5	52	4	32	8	48	40	
50												
60												



Note: All bar dimensions are out to out.

GENERAL NOTES

CONCRETE: Class "A" Concrete shall be used in Handrail.

PAYMENT: Handrail shall be paid for per linear foot, which shall include all Concrete and Reinforcing Steel. Handrail shall be measured along center line of Rail and End Post with no deduction for open joints.

Note: Markers recording the Elevation shall be placed on top of the Wings of End Bents or End Spans. On Bridges longer than 100 Ft. one marker shall be placed at each end of the Bridge. On Bridges less than 100 Ft. long one marker shall be placed at one end of the Bridge only. Markers are to be furnished by the S.R.D. and installed by the Contractor. Cost of installing the Markers shall be included in the Contract Unit Price for Concrete Handrail.

STATE OF FLORIDA
STATE ROAD DEPARTMENT

STANDARD CONCRETE HANDRAIL

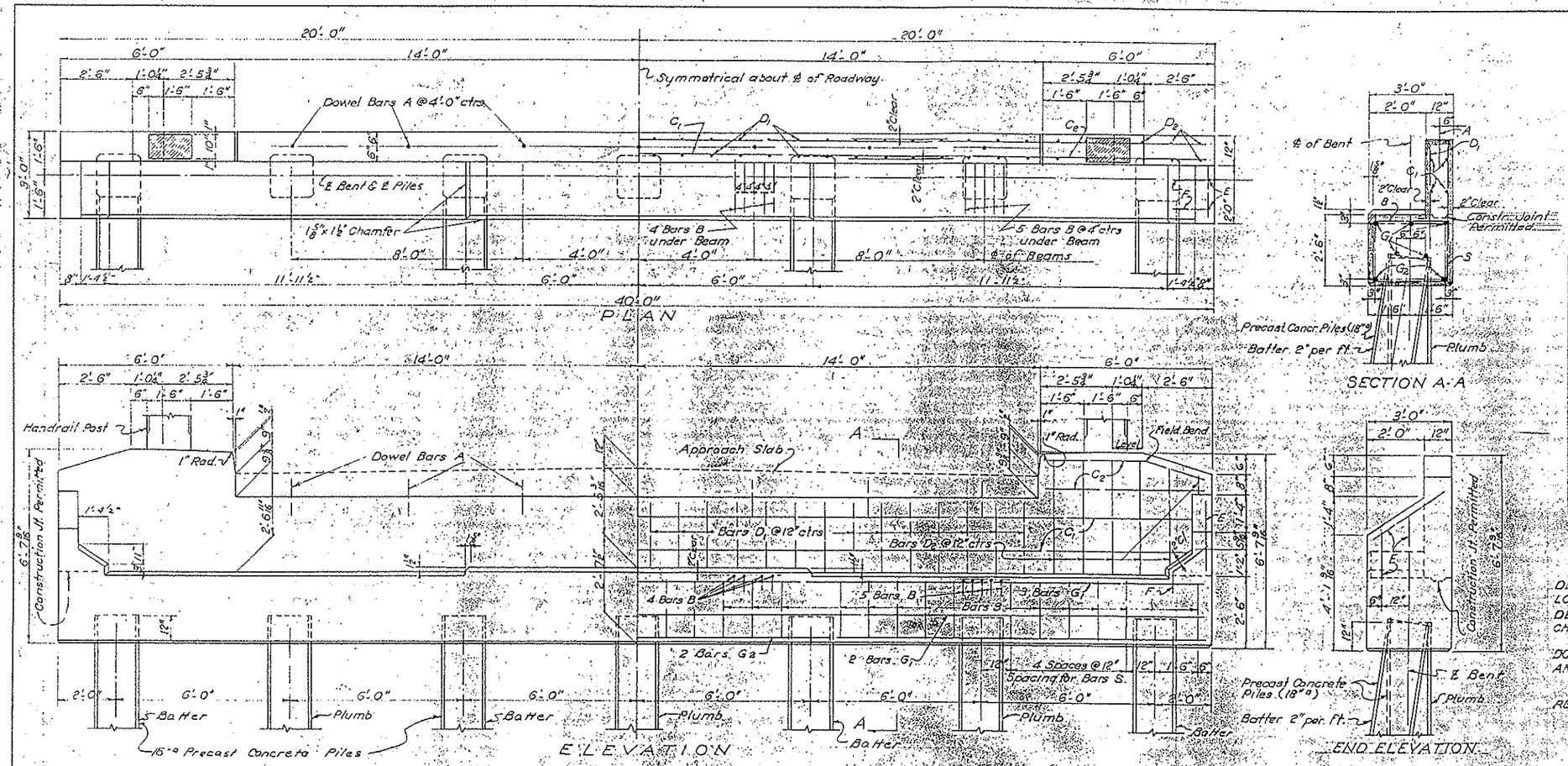
ROAD NO.	COUNTY	PROJECT NO.
700	HIGHLANDS	0911.0-3503

REVISIONS				Name	Date
Name	Date	Description	Designed by	AGM	9-65
AGM	9-65	Dowel Detail added. Reflection Plates deleted.	Checked by	RCB	9-65
			Drawn by		
			Checked by		
			Quantities by		
			Checked by		

T.W. Jennings

Drawing No. 1 of 1 | Index No. 3497

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-7



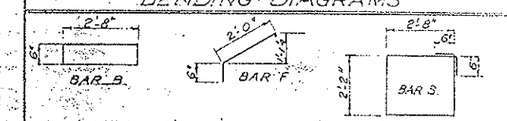
FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.	~~0911-108~~	~~51~~	~~B-4~~

Sheet No. B-11

BILL OF REINFORCING STEEL

MARK	SIZE	No. Req'd	LENGTH	LOCATION	BENDING
A	6	7	1'-3"	Back Wall	Straight
B	4	18	3'-6"	Cap	See Diagram
C_1	4	4	39'-6"	Back Wall	Straight
C_2	4	8	5'-8"	Wing Wall	Field Bend
D_1	4	56	3'-10"	Back Wall	Straight
D_2	4	24	5'-5"	Wing Wall	"
E	4	6	3'-0"	End Wall	"
F	4	4	2'-5"	" "	See Diagram
G_1	8	5	39'-6"	Cap	Straight
S	4	32	10'-3"	"	See Diagram
G_2	9	2	39'-6"	Cap	Straight

BENDING DIAGRAMS



Note: All bar dimensions are out-to-out

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Concrete Class A	cu. Yd	15.95
Reinforcing Steel	Lb.	1455
Precast Concrete Piling (18"ø)	Lin. Ft	X

X See Estimated Bridge Quantities.

~GENERAL NOTES~

DESIGN SPECIFICATIONS: A. A. S. H. O., 1949.
LOADING: H.15.44.
DESIGN LOAD FOR PILES: 35 Tons.
CHAMFER: All exposed edges to be chamfered ¾" unless otherwise noted.
DOWELS: Set dowels for Approach Slab.
ANCHOR BOLTS AND HANDRAIL BARS: Set Anchor Bolts shown on Superstructure Dwg. Set Vertical Post Bars shown on Handrail Drawing.
REINFORCEMENT: Unless otherwise shown reinforcing steel shall be 2" clear from face of concrete.

APPROVED S. H. Brumbell
State Highway Engineer

EXISTING STRUCTURE

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

CONCRETE PILE END BENT
60 FT. SPAN - 28 FT. ROADWAY

REVISIONS Dates	Descriptions

ROAD NO.	COUNTY	PROJECT NO.
700	HIGHLANDS	0911-108

	Names	Dates
Detailed by	H. L. F.	5-51
Checked by	R.G.L.	6-51
Quantities by	H. L. F.	5-51
Checked by	R.G.L.	6-51
Traced by	H. L. F.	5-51

T. W. Jennings Jr. State Bridge Engr.

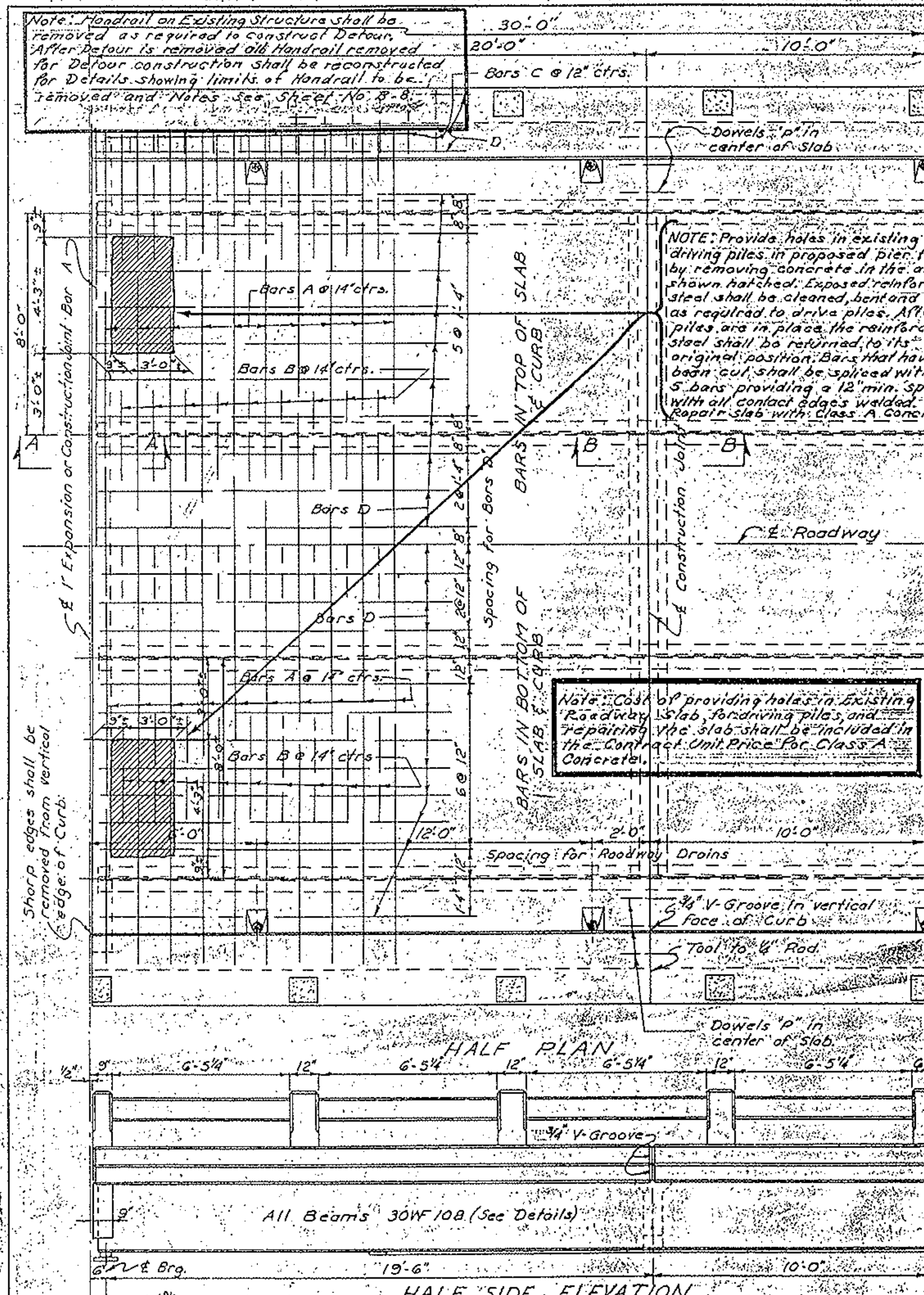
Drawing No. CP 28 | Index No. 27

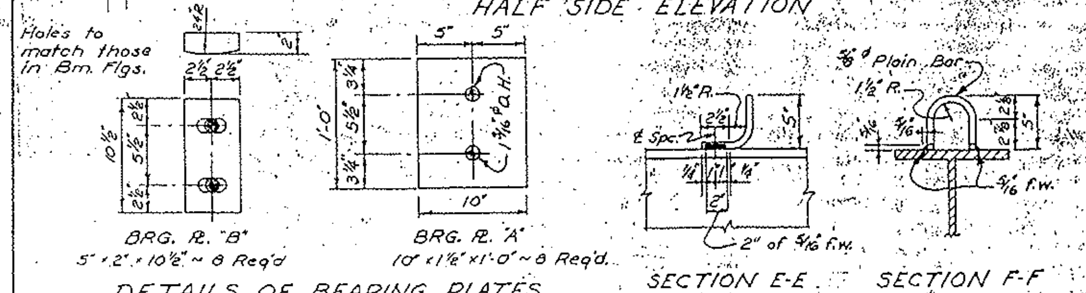
EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-8

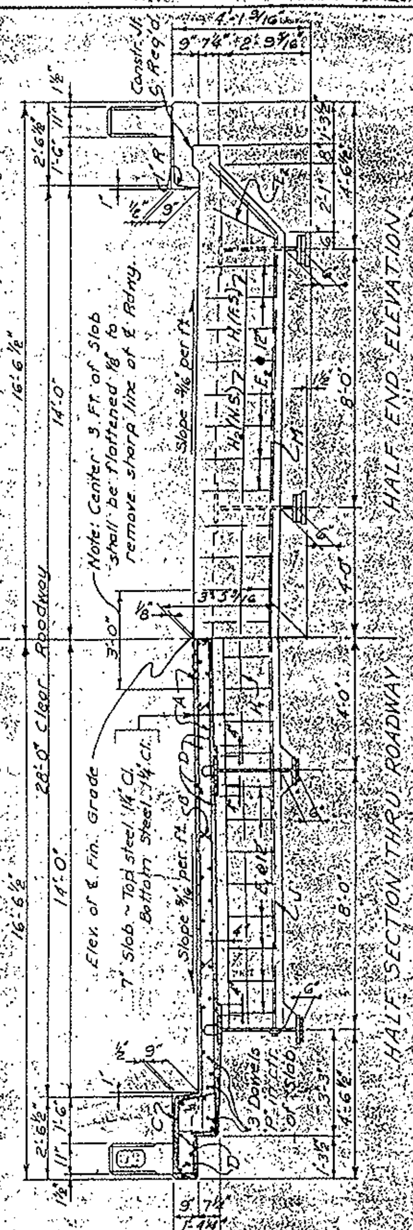
Note: Handrail on Existing Structure shall be removed as required to construct Detour. After Detour is removed all Handrail removed for Detour construction shall be reconstructed for Details showing limits of Handrail to be removed and Notes See Sheet No. B-8.

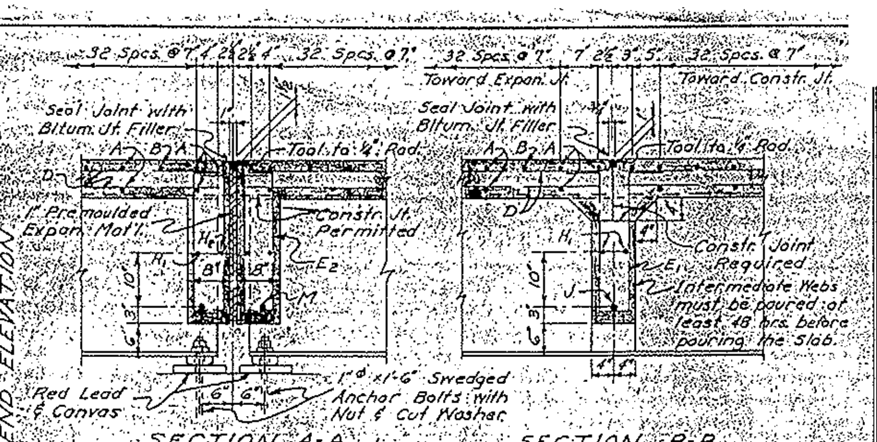
NOTE: Provide holes in existing slab, for driving piles in proposed pier footing, by removing concrete in the area shown hatched. Exposed reinforcing steel shall be cleaned, bent and cut as required to drive piles. After the piles are in place the reinforcing steel shall be returned to its original position. Bars that have been cut shall be spliced with No. 5 bars providing a 12" min. splice with all contact edges welded. Repair Slab with Class A Concrete.

Note: Cost of providing holes in Existing Roadway Slab, for driving piles, and repairing the slab shall be included in the Contract Unit Price For Class A Concrete.



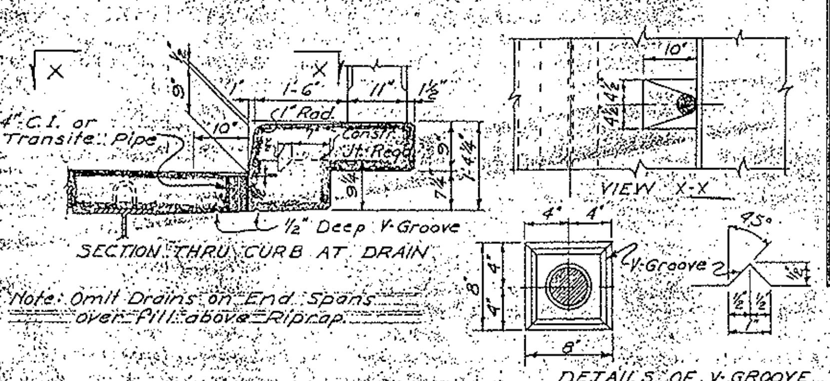






~ GENERAL NOTES ~

DESIGN SPECIFICATIONS: A.A.S.H.O. 1949
WELDING SPECIFICATIONS: American Welding Society - (latest edition)
LOADING: H-15-44
CHAMFER: All edges and corners to be chamfered 3/4" unless otherwise shown.
USE OF SLAB: See Specifications, Art. 209.21.
REMOVAL OF FORMS: See Specifications, Art. 209.20.
GRAPHITE PASTE: At the Expansion End of Beams, lubricate the contact surfaces of Bearing Plates with Graphite Paste.
BEARING SEATS: The bearing plates shall be placed on Red Lead and Canvass, as specified in Art. 212.33 of the Specifications.
BEARING PLATES AND ANCHOR BOLTS: To be paid for as Structural Steel.
PAYMENT FOR SHEAR CONNECTORS: Shear Connectors shall be paid for at the Contract Unit Price for Shear Connectors.
PAYMENT FOR WELDS: Cost of Welds shall be included in the Contract Unit Prices for Structural Steel and Shear Connectors.
PAY QUANTITY FOR STRUCTURAL STEEL: In calculating pay quantity for Structural Steel, no deductions shall be made for holes and no allowances shall be made for welds.
PAINT: For Painting Structural Steel see Sheet No. B-2.



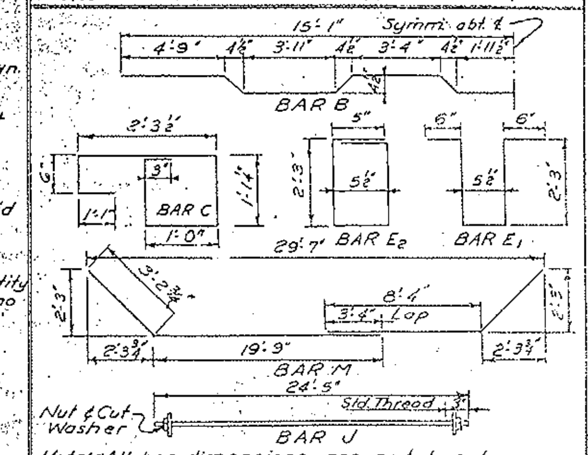
Note: Omit Drains on End Spans over fill above Riprap.

DETAILS OF CURB AND ROADWAY DRAINS

BILL OF REINFORCING STEEL

MARK	BAR NO.	NO. REQ'D	LENGTH	LOCATION	BENDING
A	5	108	30'-2"	Slab	Straight
B	5	48	31'-1"	"	Bend
C	4	120	6'-10"	Curb	"
D	4	165	19'-7"	Slab & Curb	Straight
E_1	4	48	5'-8"	Int. Webs	Bend
E_2	4	52	5'-6"	End Webs	"
H_1	4	18	7'-8"	End & Int. Webs	Straight
H_2	4	2	26'-2"	End Webs	"
J	8	2	24'-5"	Int. Webs	See Diagram
M	8	2	34'-5"	End Webs	" "
P	8	12	2'-0"	Slab	Straight

BENDING DIAGRAMS

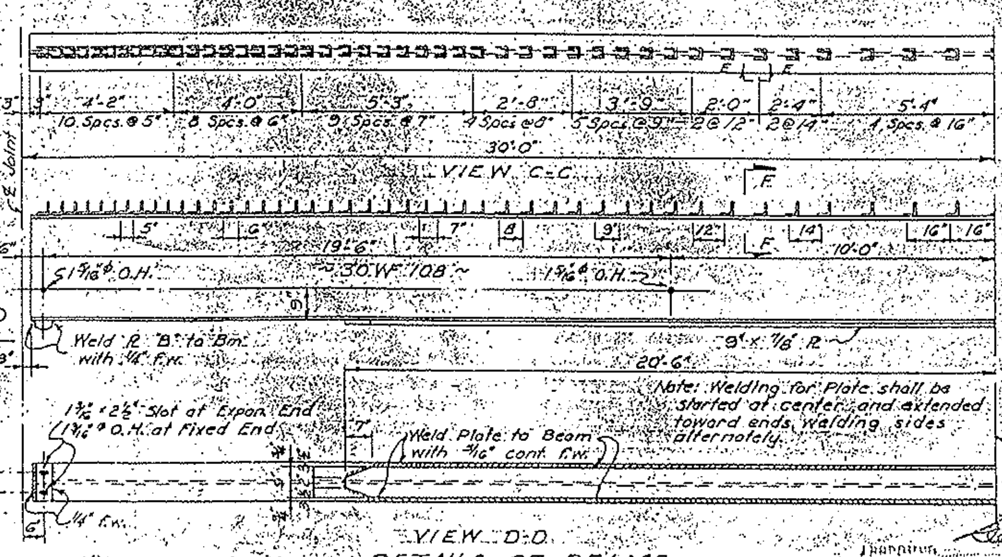


Note: All bar dimensions are out to out.

ESTIMATED QUANTITIES

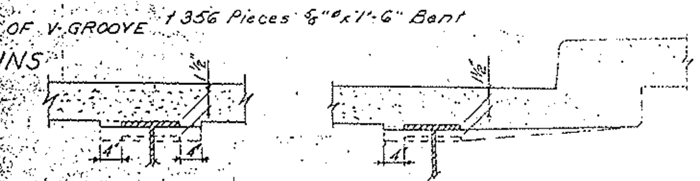
ITEM	UNIT	QUANTITY
Concrete, Class A ×	Cu. Yd.	57.1
Reinforcing Steel	Lb.	8,541
Structural Steel (Approach Spans)	Lb.	30,771
Shear Connectors +	Lb.	557

× Concrete Quantity estimated on the basis of a 7" Roadway Slab with 2.5 Cu. Yds. allowed for lugs and Dead Load Deflection haunches over beams.
+ 356 Pieces 5/8" ø x 1'-6" Bent

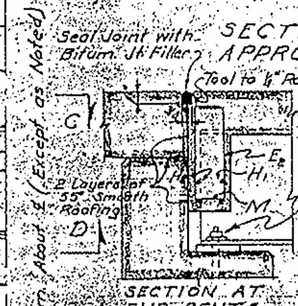


Note: Welding for Plate shall be started at center and extended toward ends, welding sides alternately.

DETAILS OF BEAMS



SECTIONS THRU BEAMS SHOWING APPROX. D.L. DEFL. AT ℄ OF SPAN



SECTION AT END BENTS

WELDING REQUIRED PER SPAN

5/16" fillet weld 449 Lin. Ft.
1/4" fillet weld 14 Lin. Ft.

EXISTING STRUCTURE

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

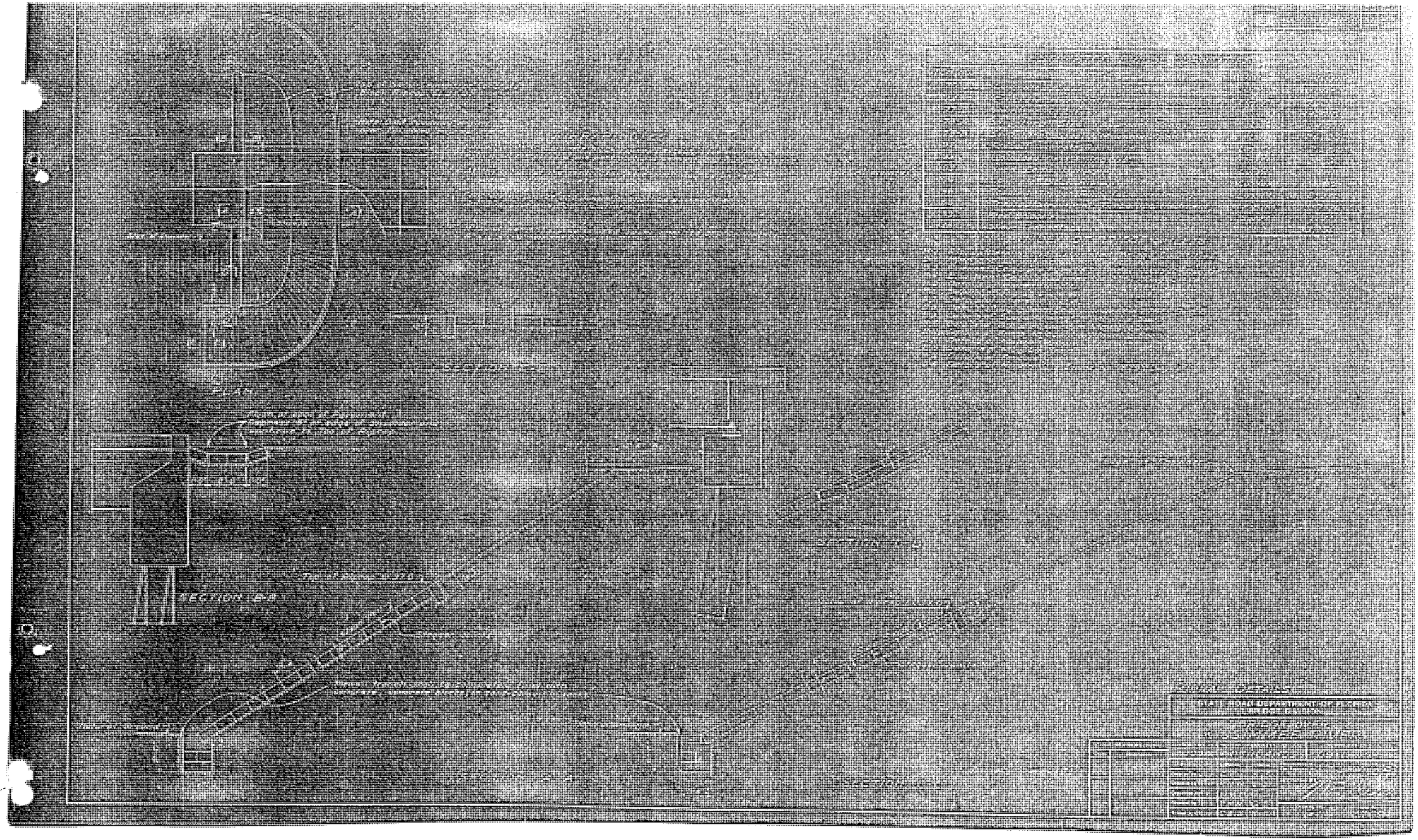
COMPOSITE I-BEAM SUPERSTRUCTURE
60 FT. SPAN 28 FT. ROADWAY

ROAD NO.	COUNTY	PROJECT NO.
700	HIGHLANDS	0911-108

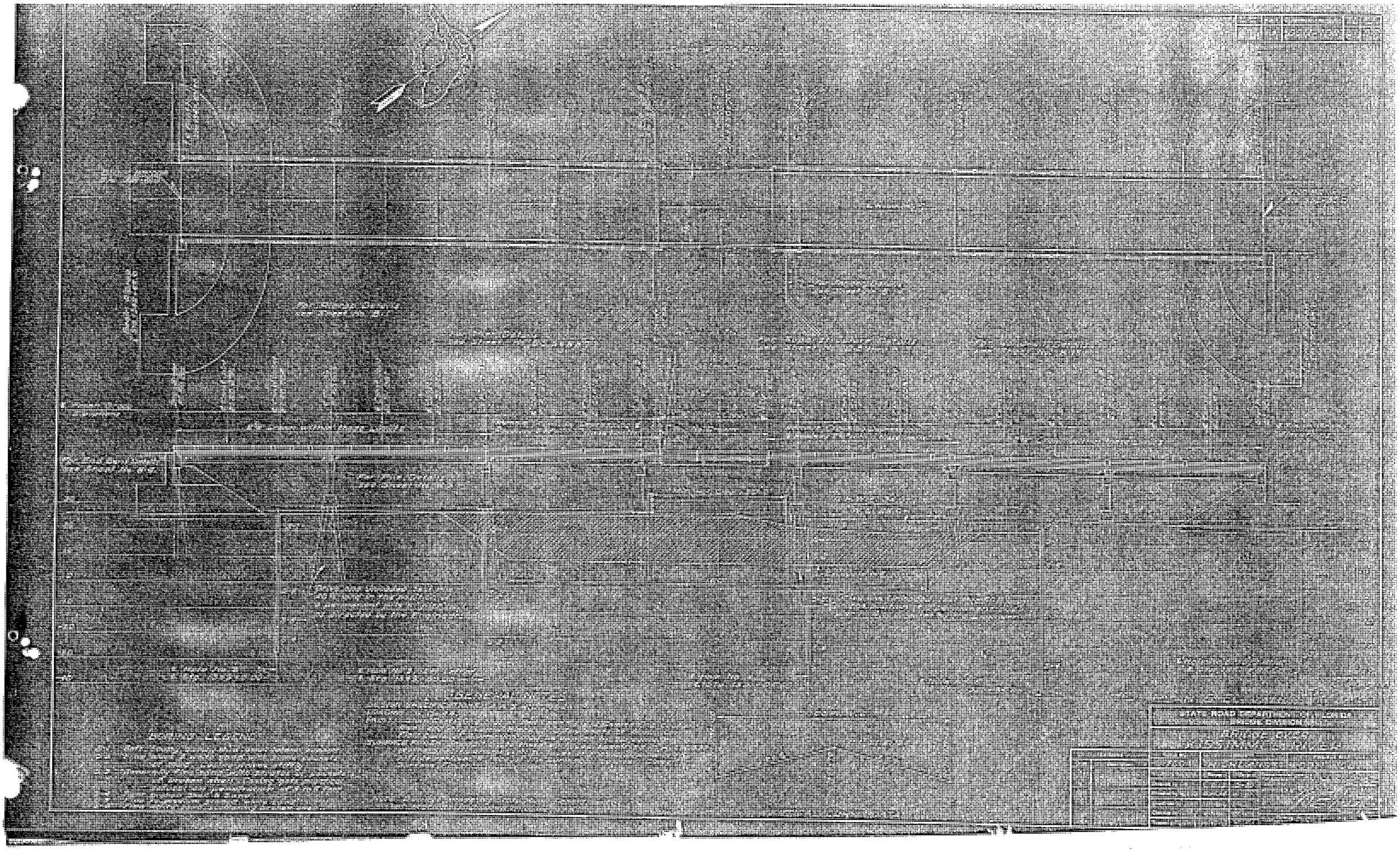
	Names	Dates
Detailed by	R.G.L.	5-51
Checked by	R.M.M.	6-51
Quantities by	R.G.L.	5-51
Checked by	R.M.M.	6-51
Traced by	W.M.G.	5-51

REVISIONS — Dates | Descriptions

Drawing No. S — Index No. 2752



EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-9



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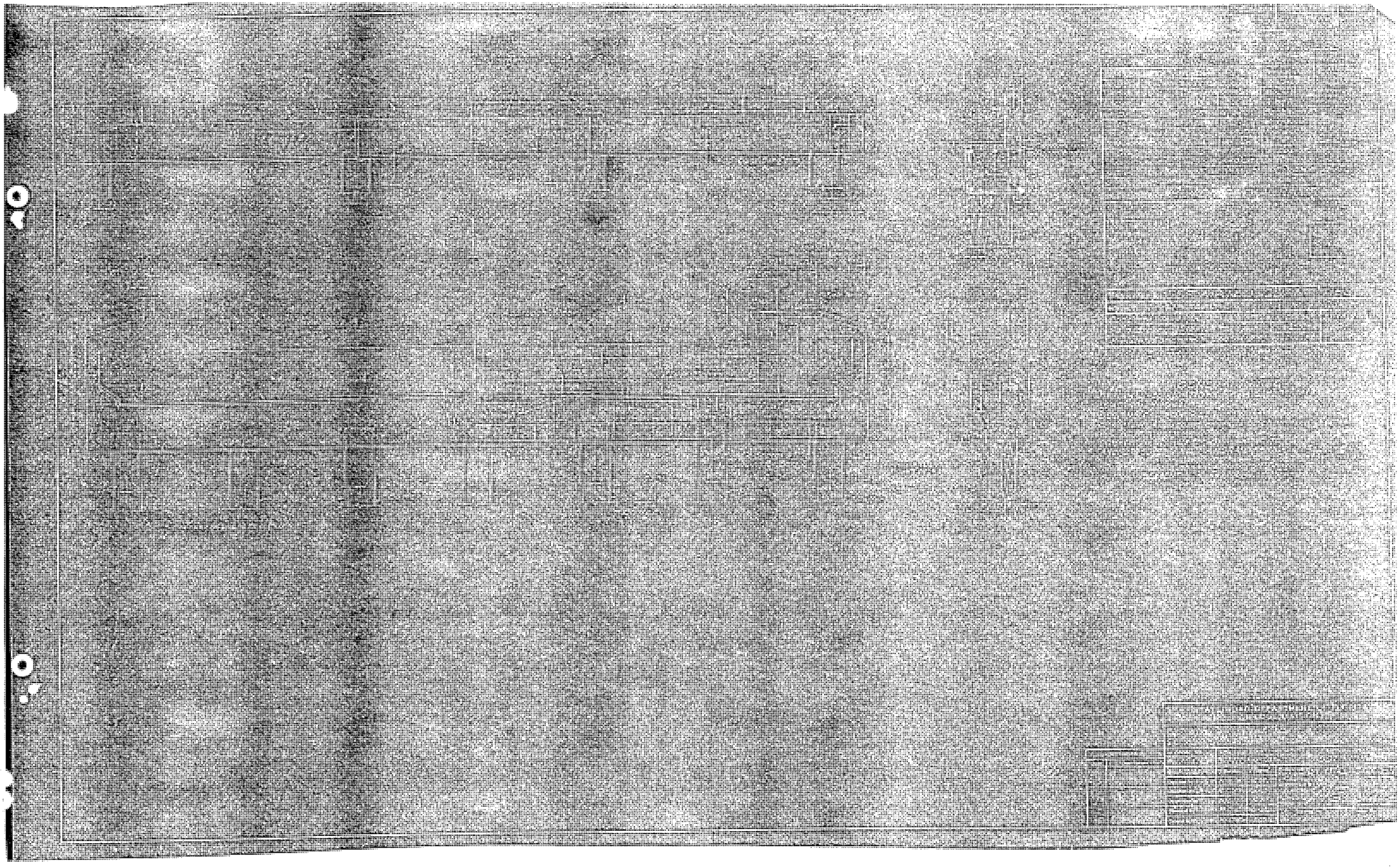
FPID 413817-1-52-01
DRAWING NO. BX1-10



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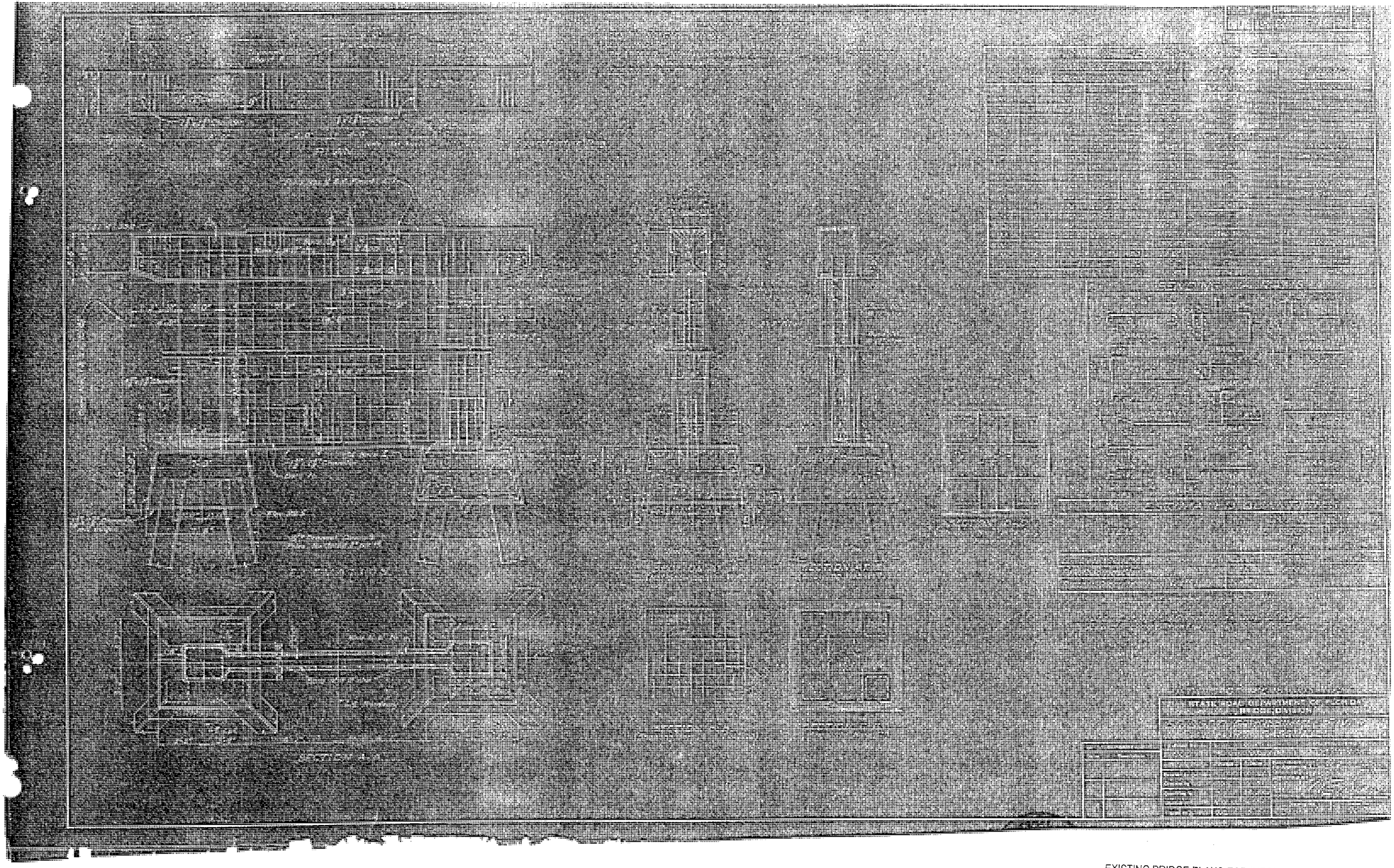
FPID 413817-1-52-01
DRAWING NO. BX1-11



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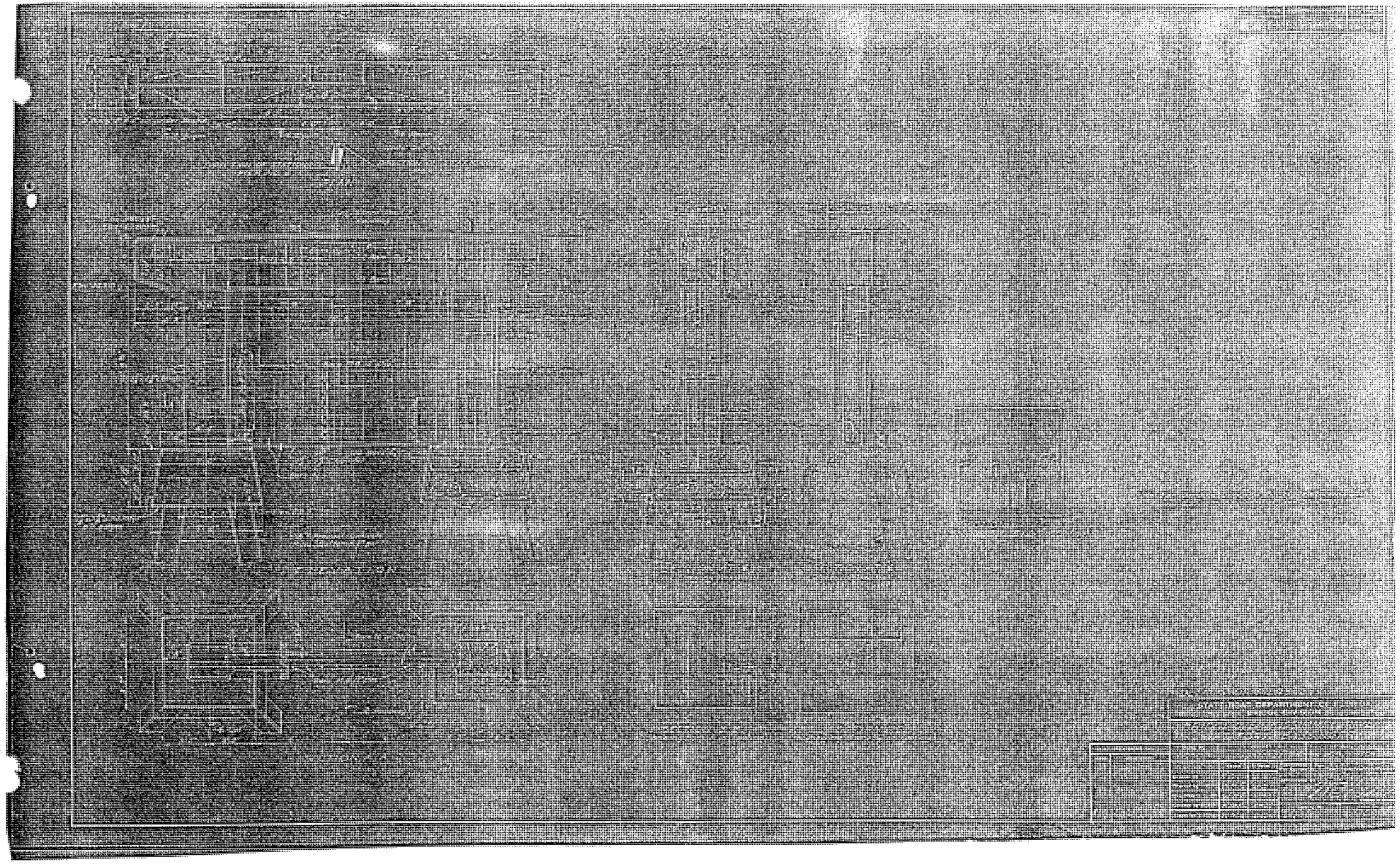
FPID 413817-1-52-01
DRAWING NO. BX1-12



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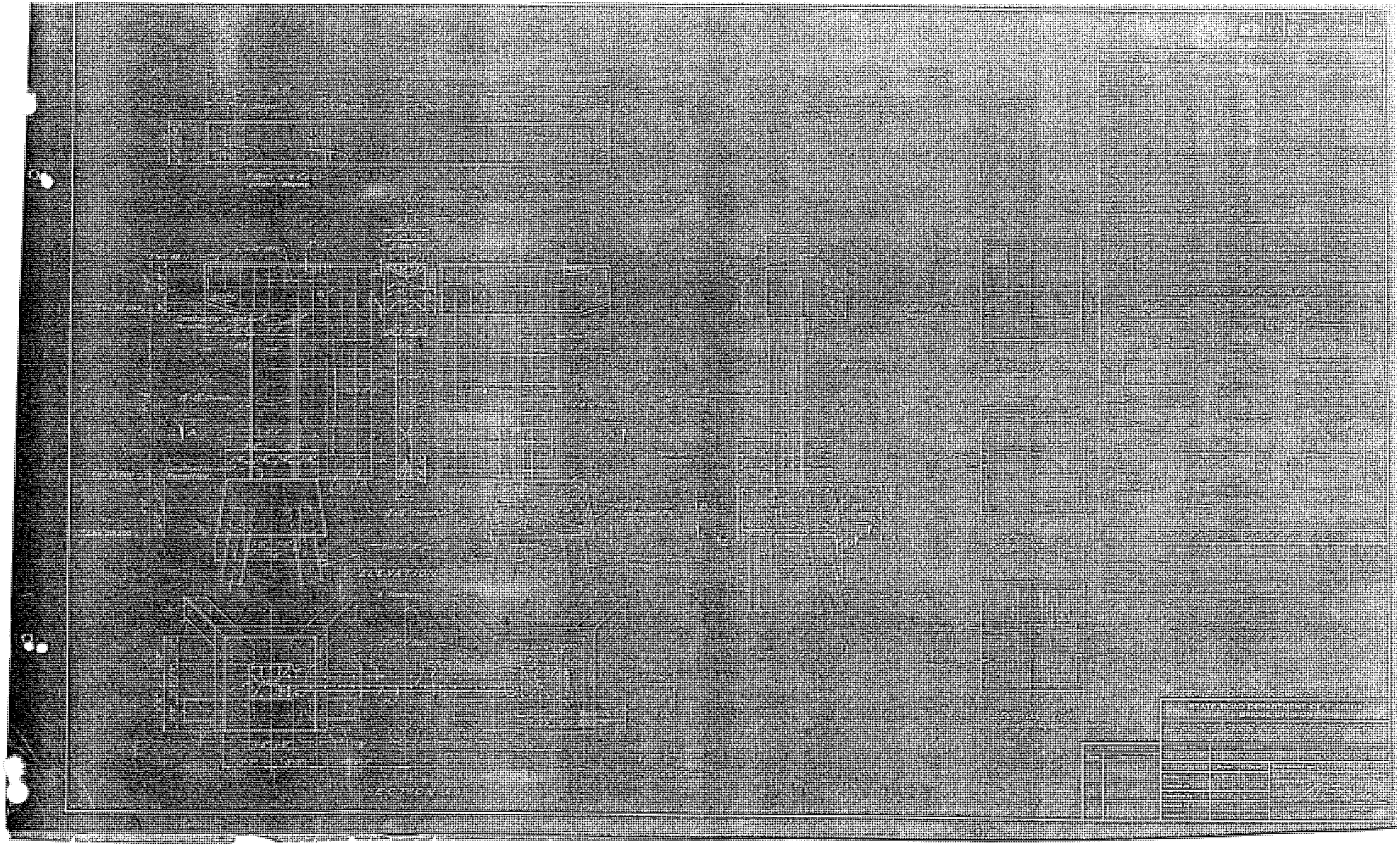

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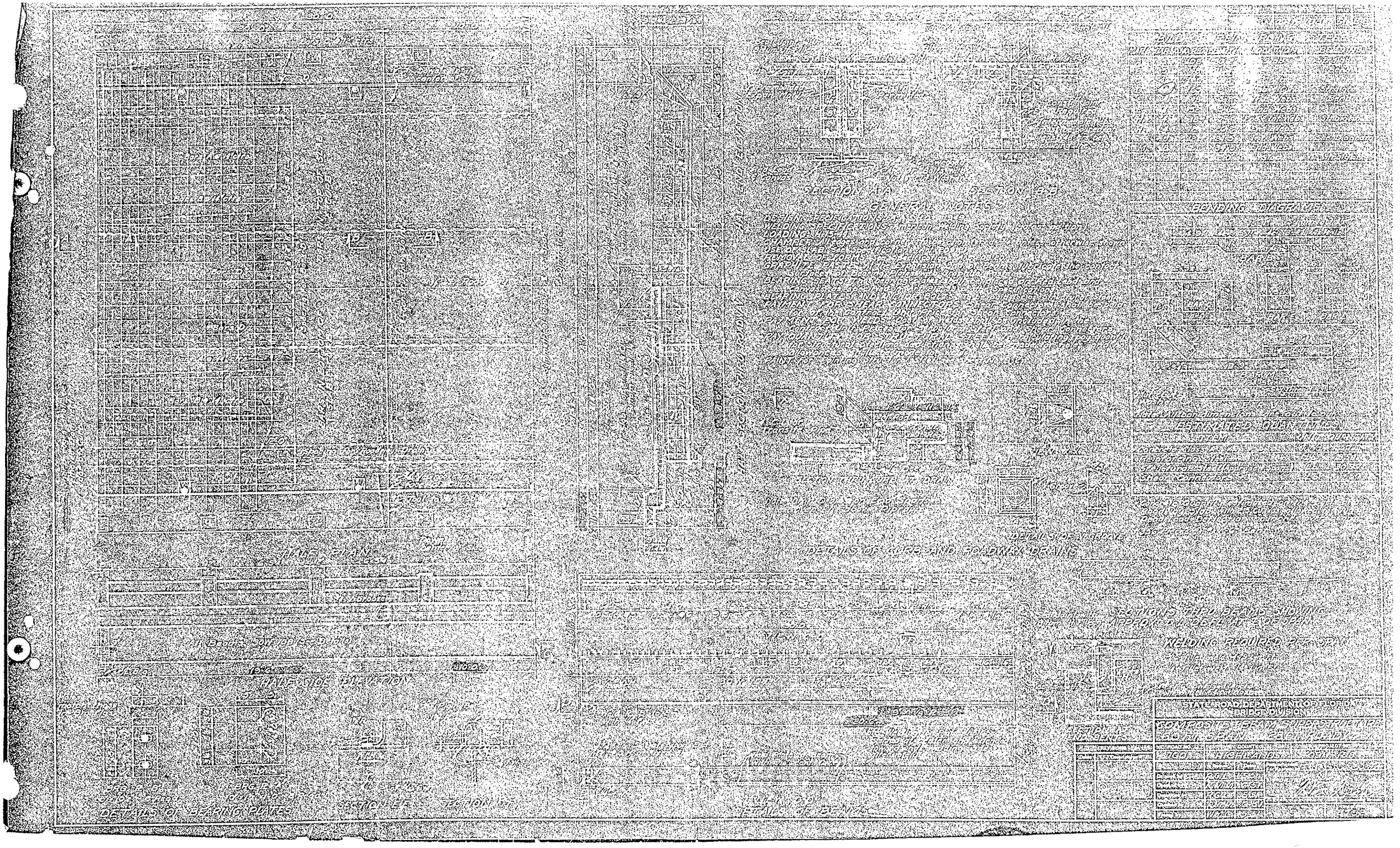
DRAWING NO. BX1-14



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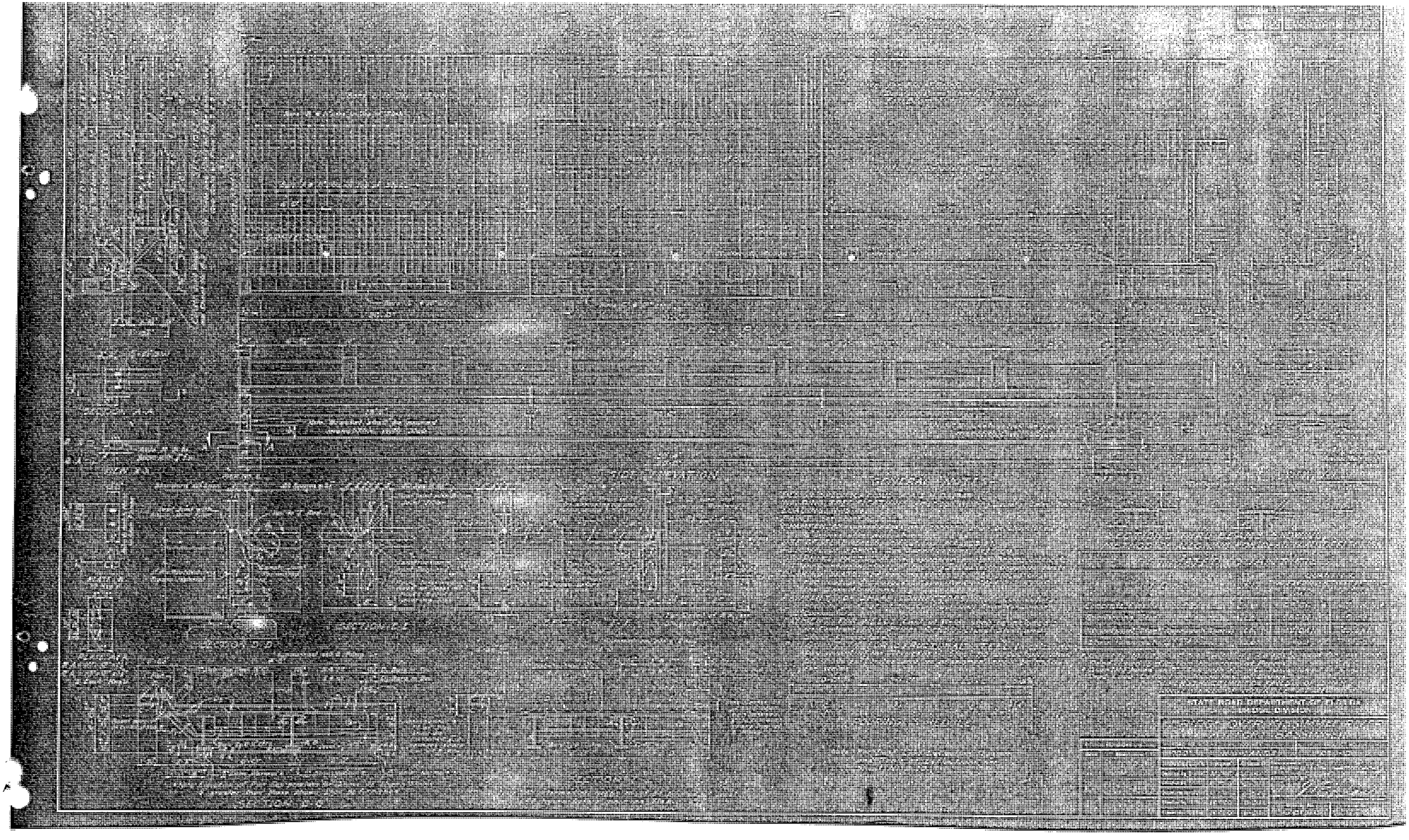

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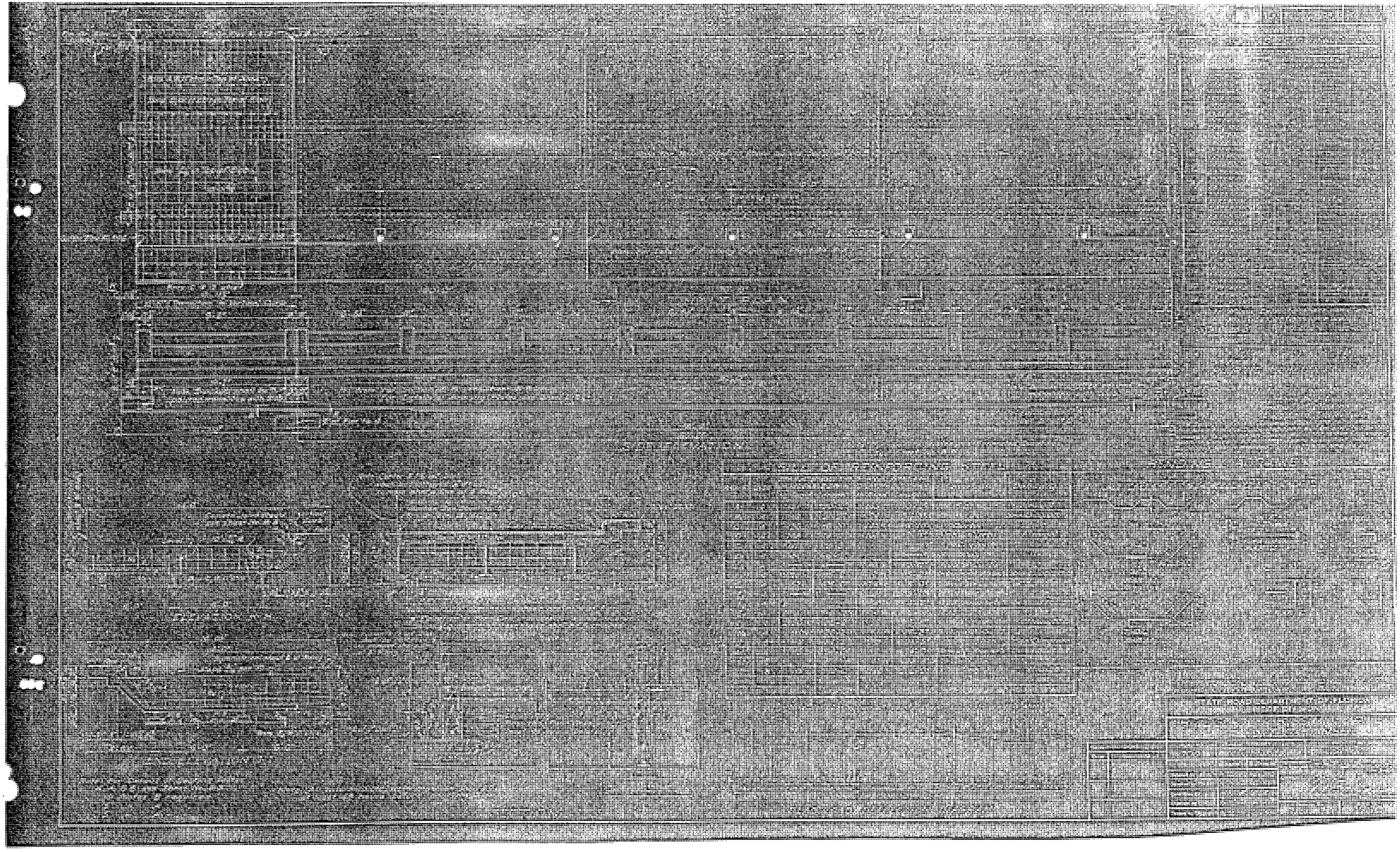

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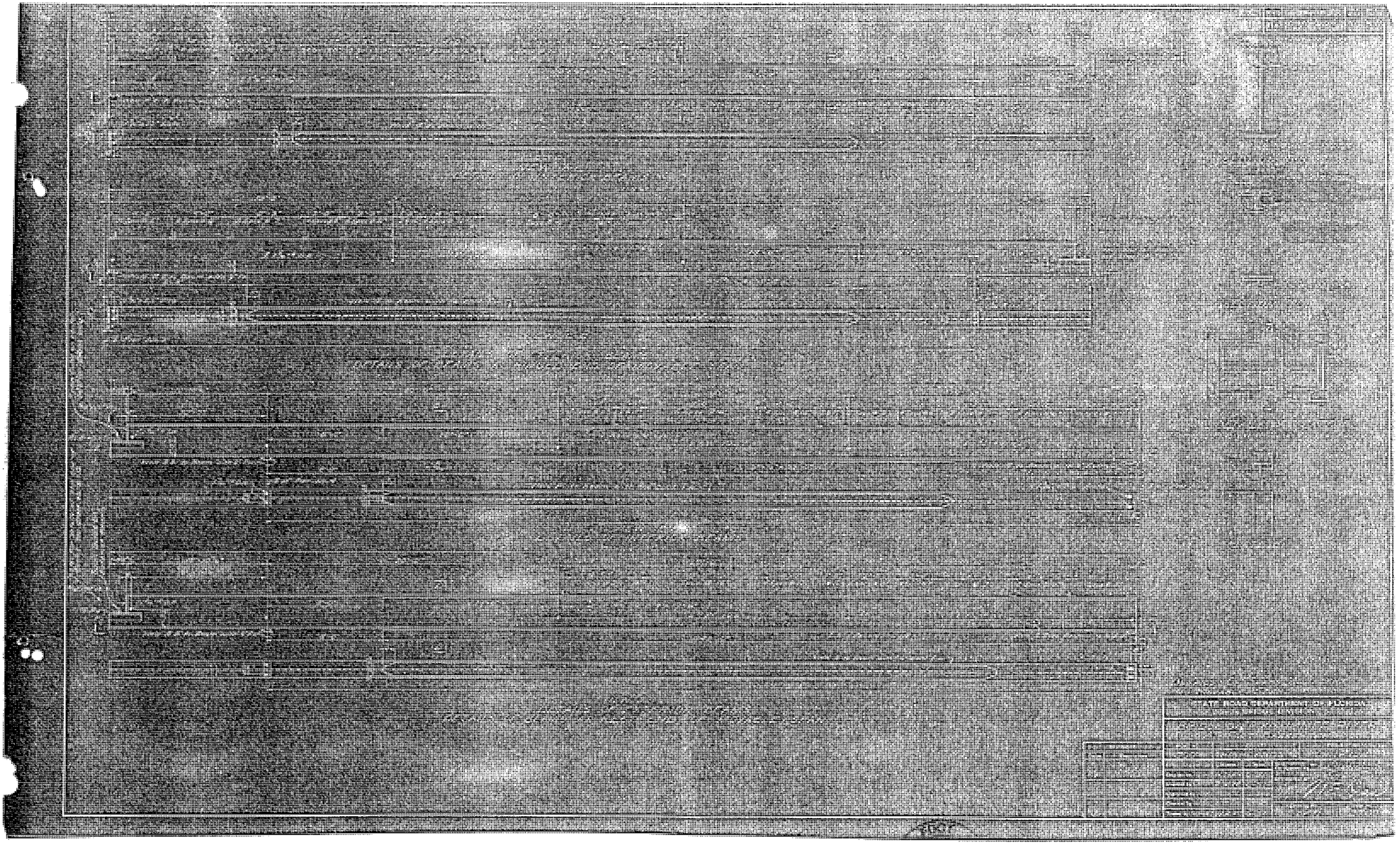

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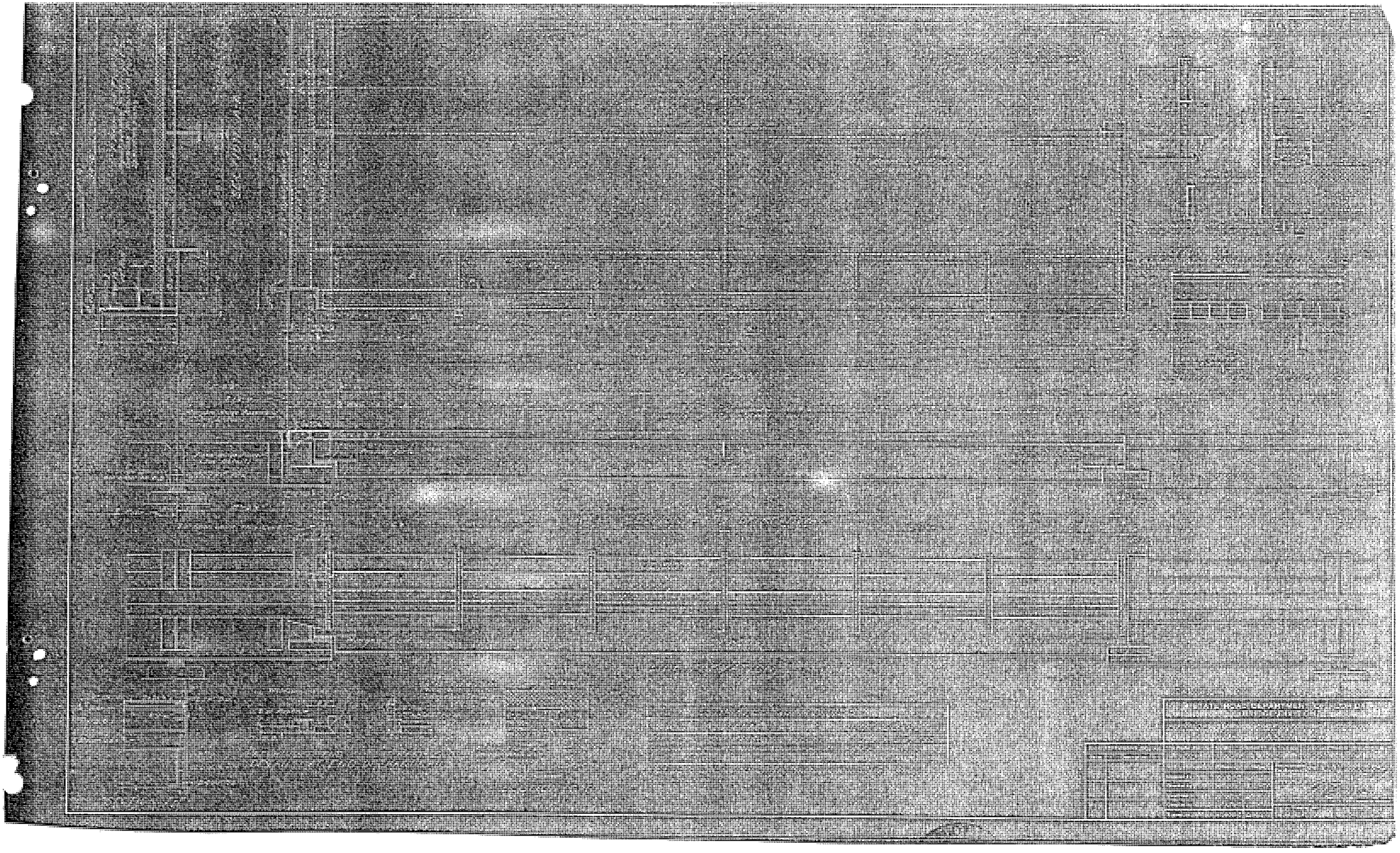

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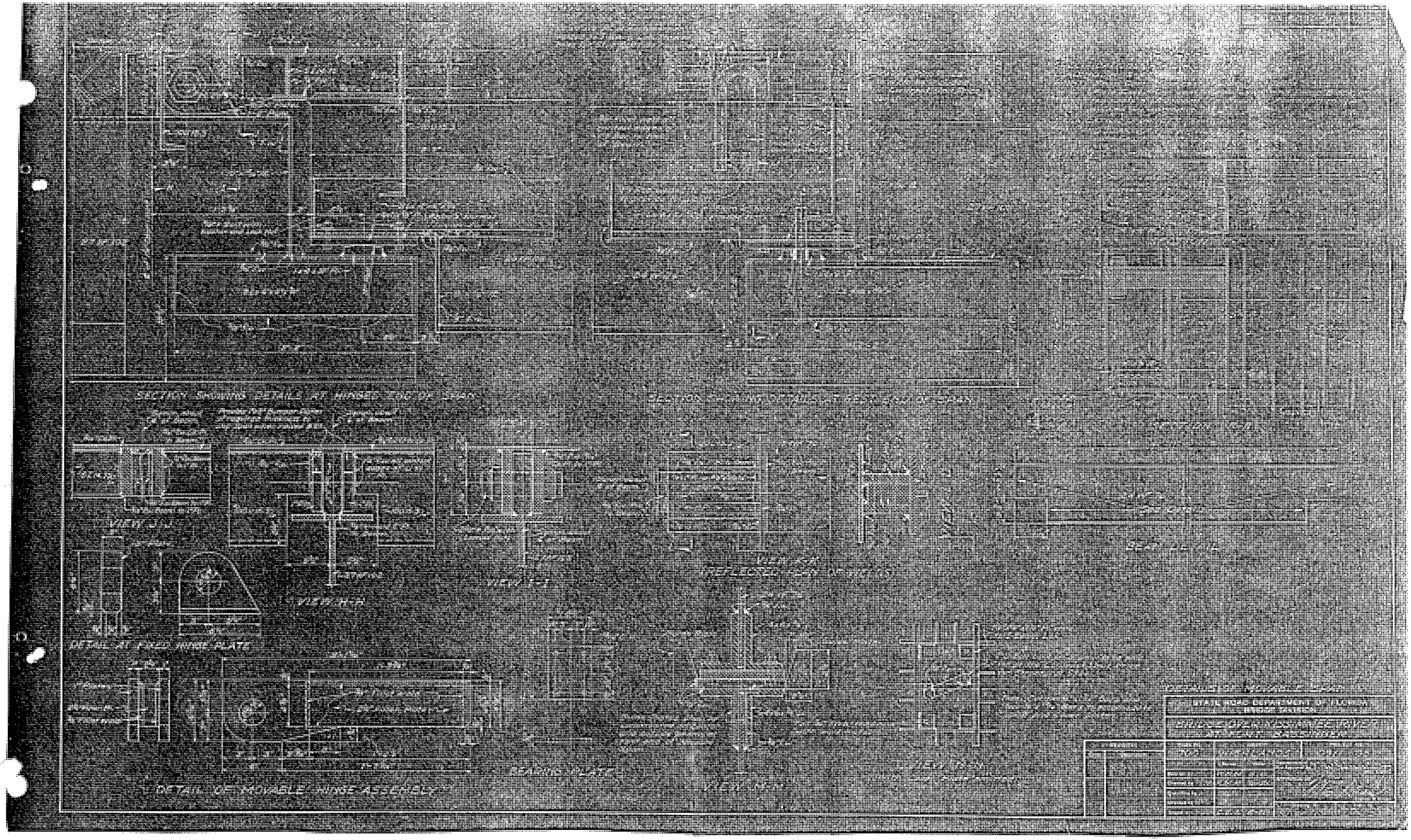

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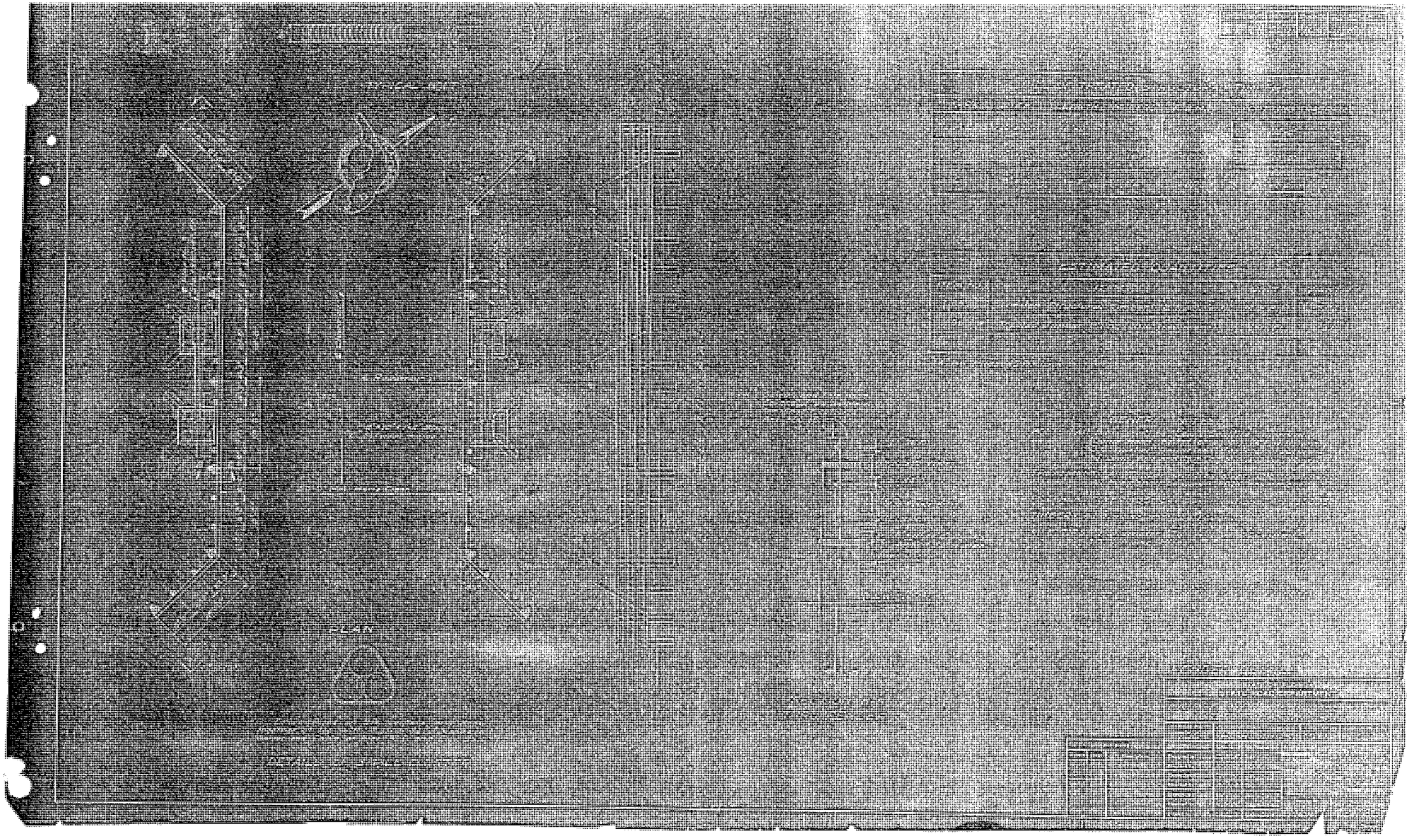


EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-21

ELEVATION OF END POST

DETAIL AT END OF BRIDGE
WHEN 1'-6" POST RESTS ON SUBSTRUCTURE

VIEW C-C

CROSS SECTION OF RECESSED "V"
USED TO FORM INSCRIBED FIGURES

PLAN

ELEVATION

SECTION A-A

RAIL DETAILS

DETAIL AT POST

SIDE ELEVATION

VIEW B-B

PLAN OF POSTS

SPAN LENGTH	ESTIMATED QUANTITIES: CONCRETE	REINF. STEEL	BILL OF REINFORCING STEEL: END SPAN WEIGHT	INTERMEDIATE SPAN WEIGHT	BENDING DIAGRAMS
20'					
30'					
40'					
50'					
60'					

GENERAL NOTES

STANDARD CONCRETE HANDRAIL

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX1-22

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-1

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.			A-1

INDEX OF BRIDGE SHEETS

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
400-2-4	Class II Concrete (Superstructure) (f'c-3,400 psi)	CY	609
400-2-5	Class II Concrete (Substructure) (f'c-3,400 psi)	CY	365
400-5-4	Concrete Handrail (Barrier)	LF	1,105
415-1-4	Reinforcing Steel (Superstructure)	LB	138,900
415-1-5	Reinforcing Steel (Substructure)	LB	71,800
455-3-2	Prestressed Concrete Piling Furnished (18" Sq.)	LF	4,365
455-4-2	Prestressed Concrete Piling Driven (18" Sq.)	LF	4,365
455-9-12	Unloaded Test Piles(Prestressed Conc.)(18" Sq.)	LF	210
455-15	Preformed Pile Holes	EA	82
455-17-2	Pile Splices (18" Sq.)	EA	8
460-2-1	Structural Steel (Carbon)	LS	1 ①
460-2-2	Structural Steel (Low Alloy)	LS	1 ①
460-2-3	Structural Steel (Shoe Assemblies)	LS	1 ①
460-91-2	Expansion Joint Seal (Compression Elastic.)	LF	81
524-2-2	Concrete Slope Pavement (4")	SY	1,110

NOTES: Payment for incidental items not specifically covered in the individual bid items, shall be included in the unit contract prices for bid items.

① Estimated weight of item
No. 460-2-1 = 635,300 LB.
No. 460-2-2 = 158,100 LB.
No. 460-2-3 = 19,400 LB.

INDEX & ESTIMATED BRIDGE QUANTITIES

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R.45 CONNECTOR
OVER S.R.45 (U.S.41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	S.R.681	SARASOTA	17005-3501

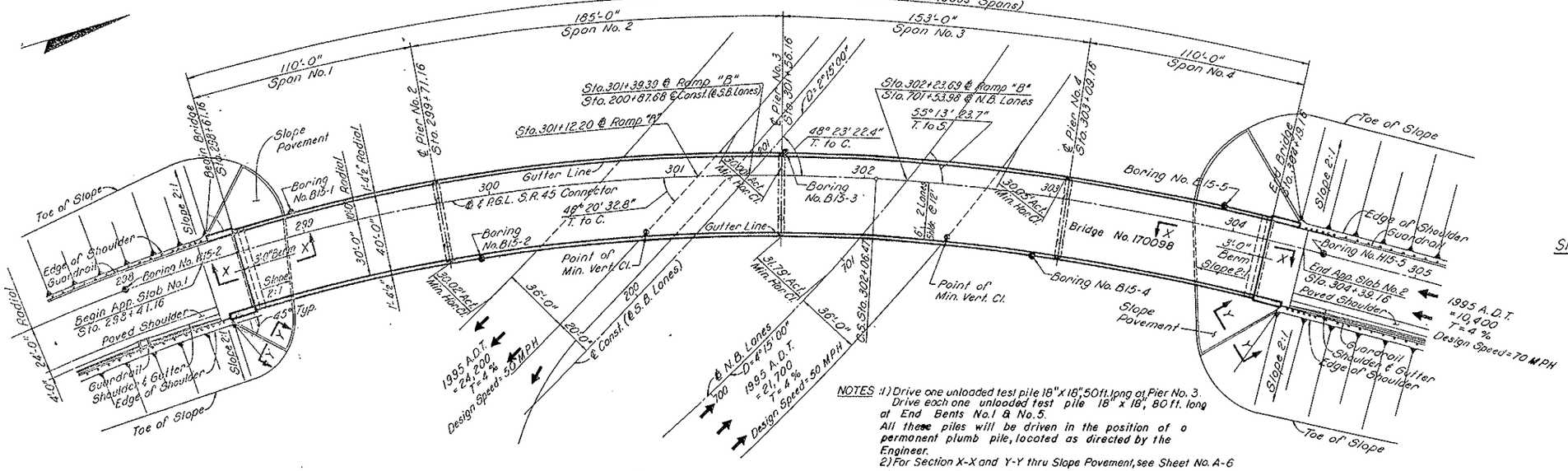
	Name	Date
Designed by	M.R.S.	2-78
Checked by	S.H.W.	8-78
Quantities by	M.R.S.	8-78
Checked by	R.A.	8-78
Supervised by	S.H.W.	

APPROVED BY
Deputy Design Engineer, Structures
Drawing No. 1 of 42
Index No. 17005

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-2

FED. ROAD DIV. NO.	STATE	PROJECT NO	FISCAL YEAR	SHEET NO.
3	FLA.			A-2



PLAN

NOTES 1) Drive one unloaded test pile 18"x18",50ft.long at Pier No. 3. Drive each one unloaded test pile 18" x 18", 80 ft. long at End Bents No.1 & No.5. All these piles will be driven in the position of a permanent plumb pile, located as directed by the Engineer.
2) For Section X-X and Y-Y thru Slope Pavement, see Sheet No. A-6
3) For Boring Data, see Boring Sheets No. A-3 & No. A-4
4) Pre-coring may be necessary due to the very dense layer of partially cemented limestone in order to facilitate driving of the piles to the required depth.

CURVE DATA - ℄ RAMP "B"

PI = Sta 298 + 35.55
Δ = 47°24'54.0"
D = 6°00'00"
R = 954.930'
T = 419.334'
L = 790.25'
P.C. Sta.294 + 16.22
C.S. Sta.302+06.470
e = 0.092 ft/ft.

SPIRAL CURVE DATA - ℄ RAMP "B"

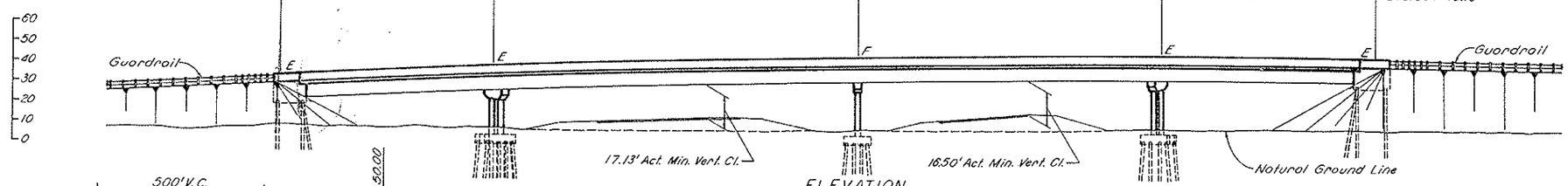
P.I = Sta. 303 + 57.27
Ls = 450.000'
θs = 13°30'00"
Dc = 6°00'00"
P = 8.820'
K = 224.586'
X = 447.507'
Y = 35.204'
L.T. = 300.879'
S.T. = 150.600'

CURVE DATA - ℄ S. B. LANES

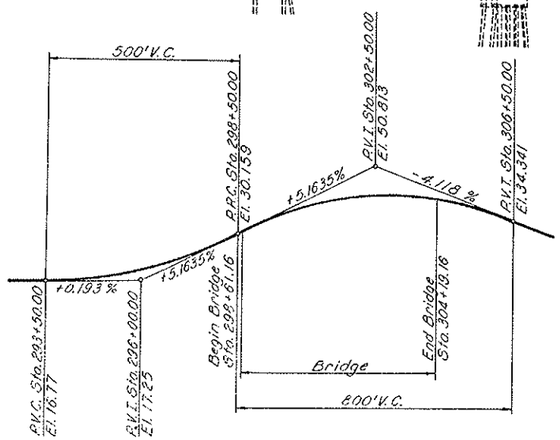
P.I. = Sta.200 + 29.68
Δ = 26°56' 34" Lt.
D = 2° 15' 00"
R = 2546.479'
T = 610.011'
L = 1197.457'
P.C.= Sta.194 + 19.67
P.T. = Sta.206 + 17.12
e = 0.0635 ft/ft.

CURVE DATA - ℄ N. B. LANES

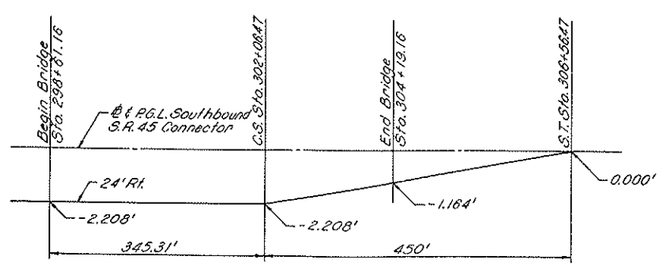
P.I. = Sta.700 + 91.83
Δ = 27°48' 31.31" Lt.
D = 4° 15' 00"
R = 1348.136'
T = 333.739'
L = 654.322'
P.C.= Sta. 697 + 58.09
P.T. = Sta. 704 + 12.42
e = 0.0945 ft/ft.



ELEVATION



PROFILE GRADE SOUTHBOUND S.R. 45 CONNECTOR



SUPERELEVATION TRANSITION DIAGRAM

0.00 % El. 12.40

PROFILE GRADE SOUTHBOUND & NORTHBOUND S.R. 45

170098

PLAN, ELEVATION & PROFILE

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

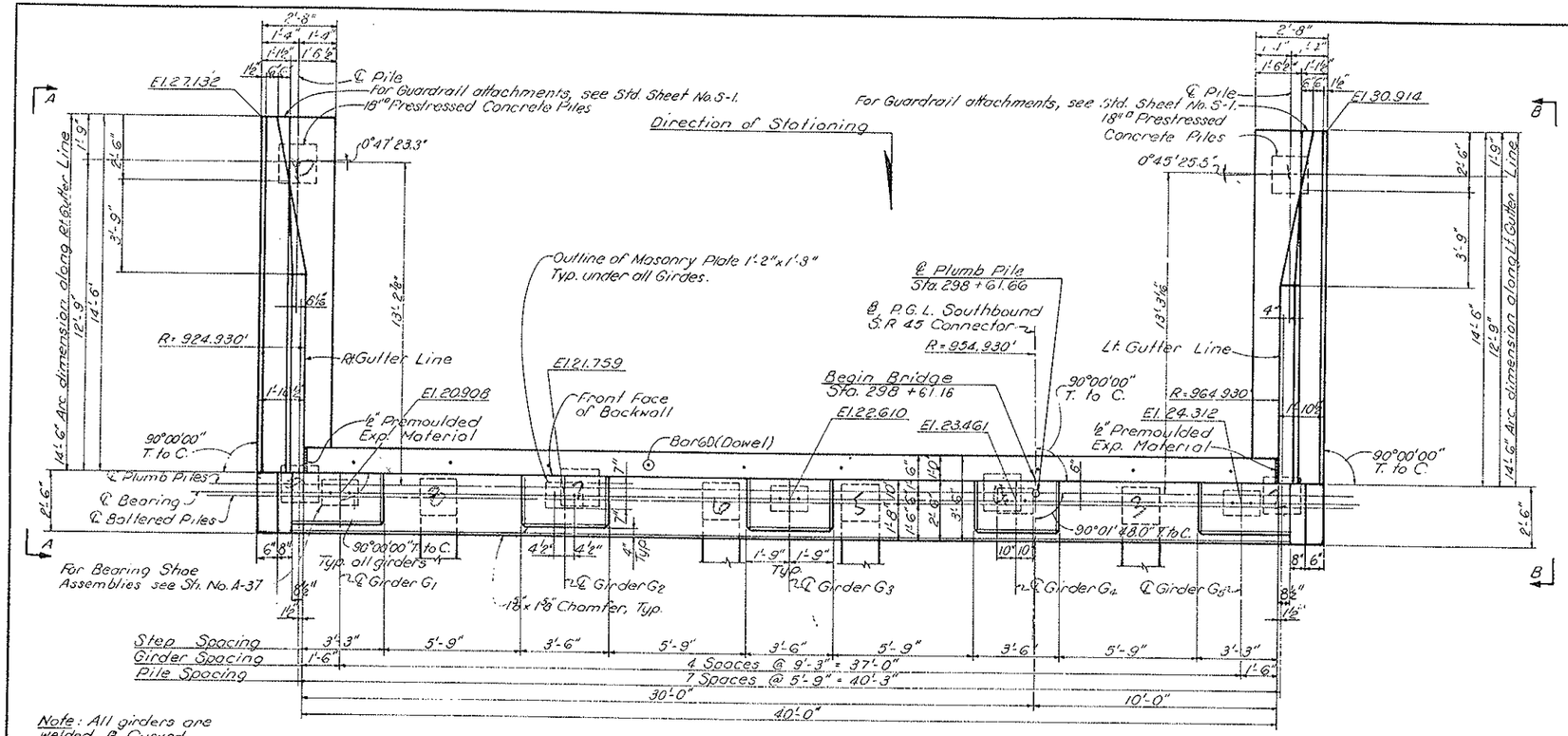
SOUTHBOUND S.R. 45 CONNECTOR OVER S.R. 45 (U.S. 41) - BRIDGE NO. 170098

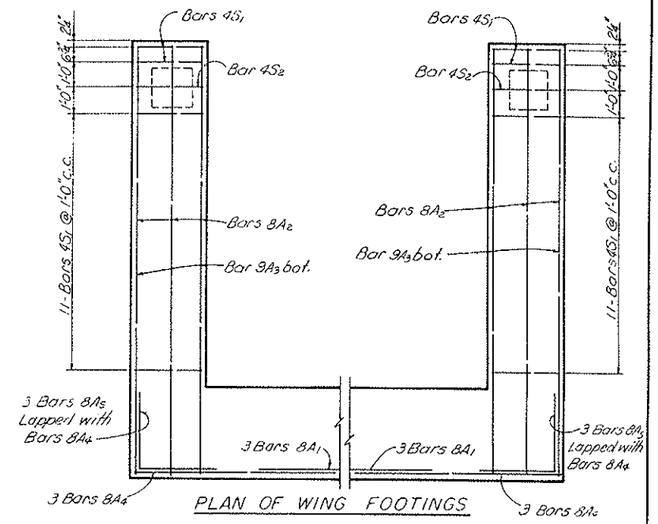
REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	S.R.681	SARASOTA	17005-3501

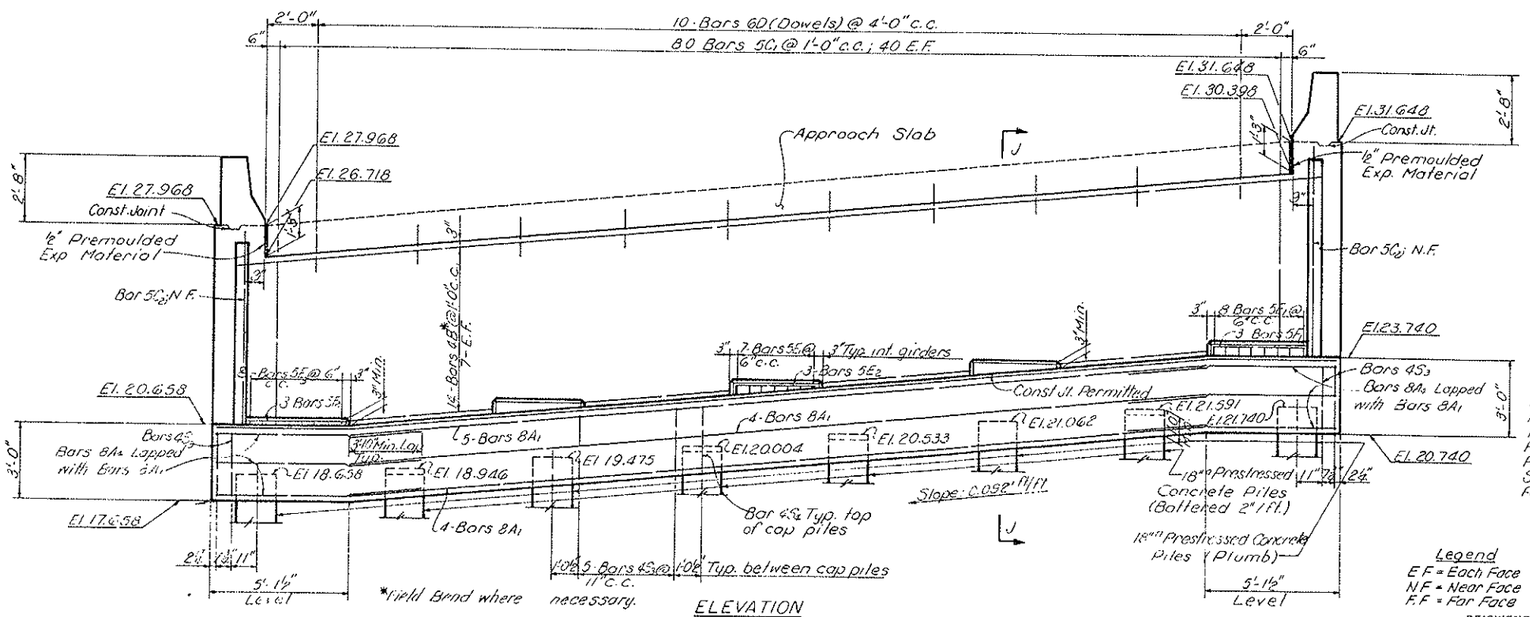
	Name	Date	APPROVED BY
Designed by	M.R.S.	2-78	
Checked by	S.H.W.	2-78	
Quantities by			Deputy Dvelpt. Engineer, Structures
Checked by			
Supervised by	S.H.W.		Drawing No. 22 of 40 — Index No.

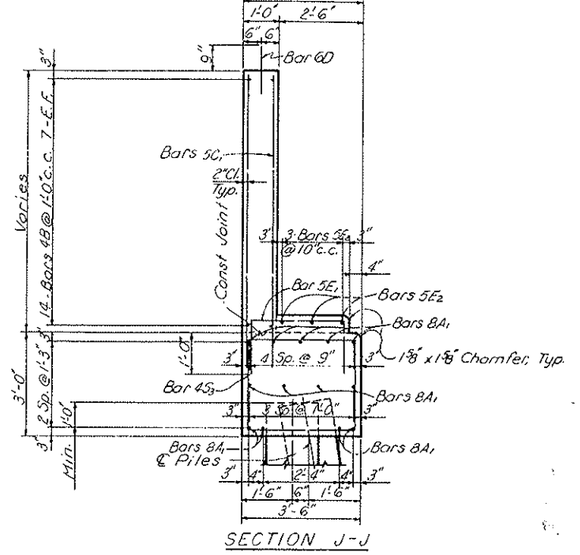
EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-3

FED. ROAD DIV. NO.	STATE	PROJECT NO	FISCAL YEAR	SHEET NO.
3	FLA.			A-10









Legend
E.F. = Each Face
N.F. = Near Face
F.F. = Far Face

Notes:
For Notes for End Bents see Sheet No. A-13.
For Views A-A & B-B, see Sheet No. A-12.
For Bill of Reinforcing Steel, see Sheet No. A-40.
For Bending Diagrams, see Sheet No. A-42.

END BENT NO. 1

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

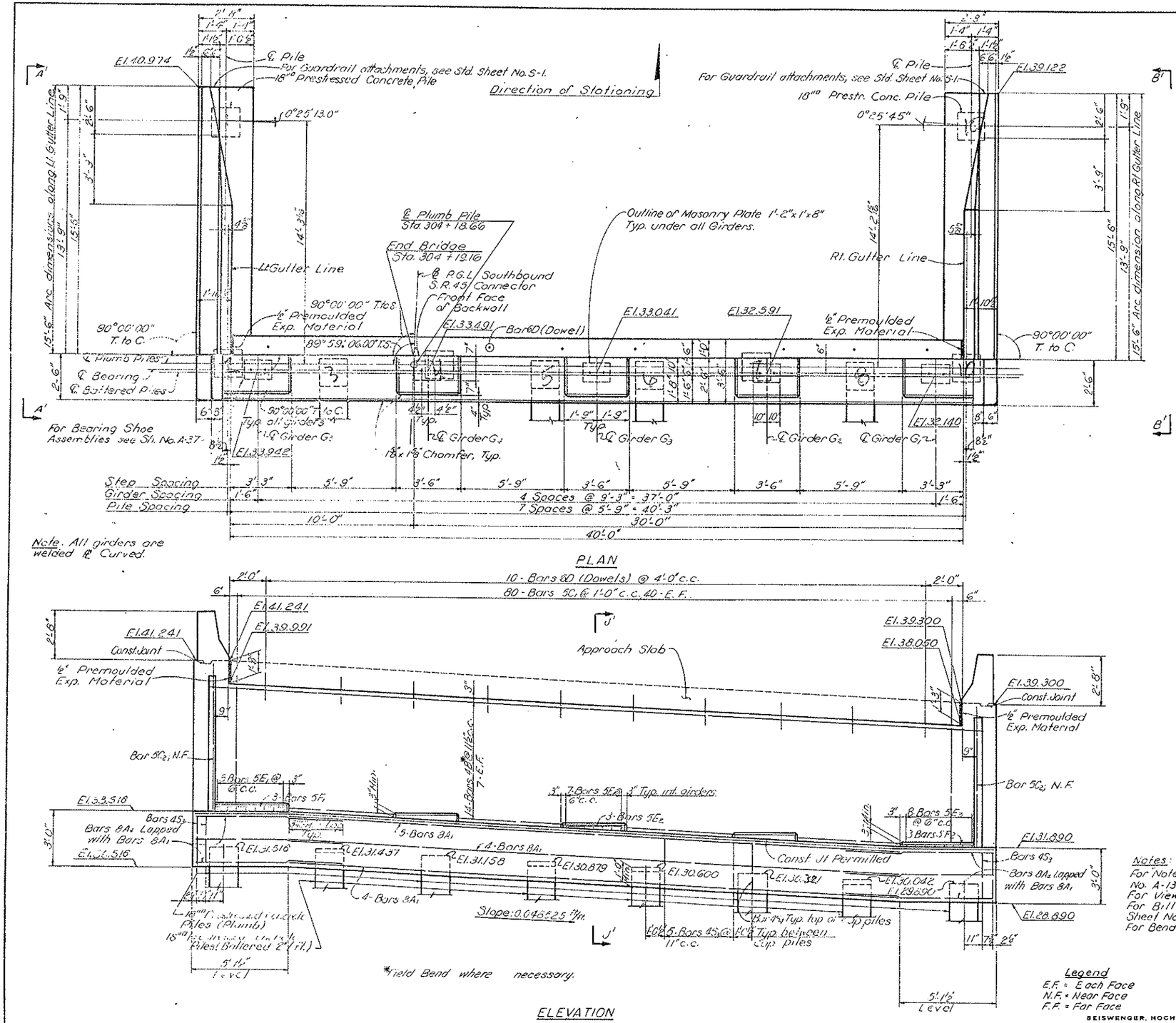
SOUTHBOUND S.R.45 CONNECTOR
OVER S.R.45 (U.S.41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Descriptions	S.R.681	SARASOTA	17005-3501

	Names	Dates	APPROVED BY
Designed by	M.R.S.	4-78	
Checked by	P.P.H	6-78	
Quantities by			Deputy Design Engineer, Structures
Checked by			Drawing No. / Total No.
Supervised by			10 of 42

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-4

FED. ROAD DIV. NO.	STATE	PROJECT NO	FISCAL YEAR	SHEET NO.
3	FLA.			A-11



Notes:
For Notes for End Bent, see Sheet No. A-13.
For Views A'-A' & B'-B', see Sheet No. A-12.
For Bill of Reinforcing Steel, see Sheet No. A-40
For Bending Diagrams, see Sheet No. A-42

Legend
E.F. = Each Face
N.F. = Near Face
F.F. = Far Face

SEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

END BENT NO. 5

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

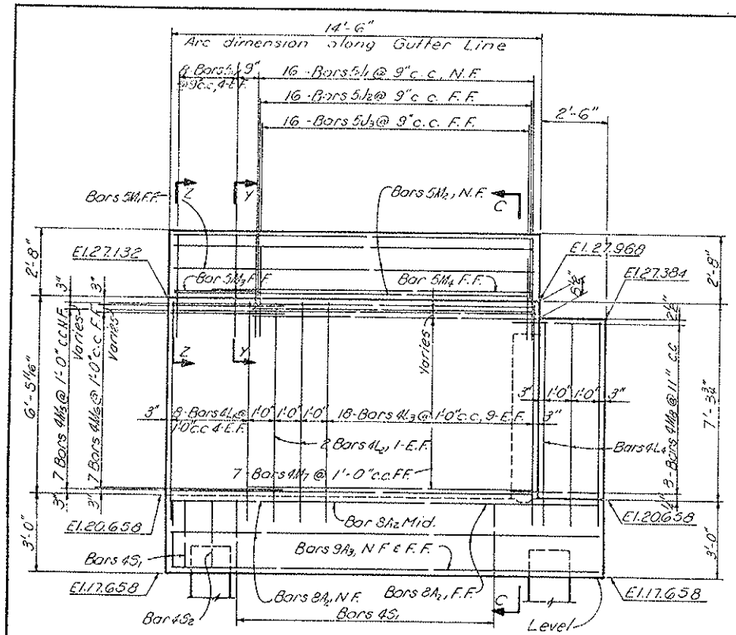
SOUTHBOUND S.R.45 CONNECTOR OVER S.R.45 (U.S.41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	S.R.681	SARASOTA	17005 3501

	Name	Date	APPROVED BY
Designed by	M.R.S.	4-78	
Checked by	P.F.H.	8-76	
Quantities by	--	--	Deputy Design Engineer, Structures
Checked by			Drawing No. 42
Supervised by	H.W.		Index No.

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-5

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.			A-12



NOTES: 1) For location of Views A-A & B-B, see Sh. No. A-10.
2) For location of Views A'-A' & B'-B', see Sh. No. A-11.
3) For Sections Y-Y & Z-Z, see Sheet No. A-13.
4) For Barrier Dimensions (End View) and Key between Wingwall & Barrier, see Sheet No. A-13
5) For "Notes for End Bents", see Sheet No. A-13
6) For Bill of Reinforcing Steel, see Sheet No. A-40
7) For Standard Bar Bending Details, see Sheet No. A-42

END BENT DETAILS (1)

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

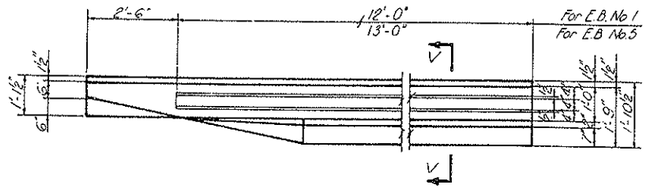
SOUTHBOUND S.R.45 CONNECTOR
OVER S.R. 45 (U.S.41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	S-8681	SARASOTA	17005-3[illegible]

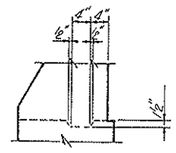
	Name	Date
Designed by	M.R.S.	4-78
Checked by	P.P.H.	5-78
Quantities by	---	---
Checked by	---	---
Supervised by	S.H.W.	

APPROVED BY
Deputy Design Engineer, Structures
Drawing No. 12 of 42
Index No. [illegible]

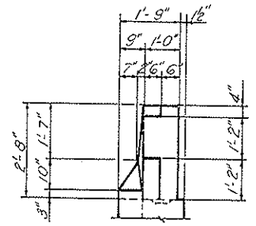
FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.			1.13



KEY BETWEEN WINGWALL & BARRIER



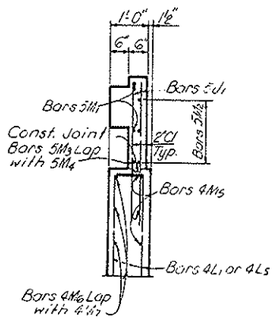
SECTION V-V



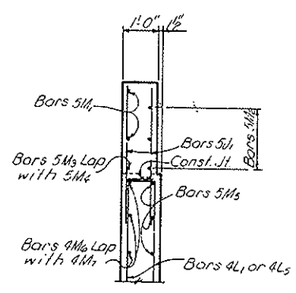
BARRIER DIMENSIONS

(END VIEW)

NOTES: 1) The name "S.R. 45" and Bridge No. 170098 shall be placed on the west wingwall of End Bent No. 5.
2) The Date of Construction shall be placed on the East wingwall of End Bent No. 5.
3) For Guardrail attachment, see standard Sh. No. 5-1



SECTION Z-Z



SECTION Y-Y

NOTES FOR END BENTS

DESIGN LOAD PER END BENT PILE: Driven to 40 Tons/Pile
DESIGN LOAD PER WING PILE: Driven to 20 Tons /Pile.
BEARING SURFACES: All bearing surfaces for Steel Shoes, shall be finished level.
ANCHOR BOLTS: Shall conform to A.S.T.M. designation A-307 or A-36. Set anchor bolts as shown in Bearing Details Sheets No. A-37 & No. A-38.
CONCRETE HANDRAIL: For details and Reinforcing Steel of Concrete Handrail and Guardrail Attachments, see Std. Sheet No. S-1.
PAYMENT OF CONCRETE HANDRAIL BARRIER: Concrete handrail barrier on wing shall be paid for at the contract unit prices for Class II Concrete and for Reinforcing Steel and it has been included in the quantities shown for End Bents.

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY			
		E.B. NO. 1		E.B. NO. 5	
Class II Concrete (Substr.) [f'c = 3400psi], Pile Cap & Wing Cap	Cu. Yd.	29.79		25.27	
Class II Concrete (Subst.) [f'c = 3,900psi], Rock w. Wing w. & Sidewall	Cu. Yd.	23.12	51.21	29.47	53.29
Class II Concrete, Subst.) [f'c = 3400psi.], Barrier	Cu. Yd.	3.30		3.55	
Reinforcing Steel (Substructure) (Grade 60)	Lb.	5,850		5,930	
Prestressed Concrete Piling (18"ø)	Lin. Ft.	*		*	

* See Estimated Bridge Quantities, Sheet No. A-1.

DEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

END BENT DETAILS (2)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R. 45 CONNECTOR
OVER S.R. 45 (U.S. 41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Descriptions	S.R.45	SARASOTA	170098 45-1

	Names	Date
Designed by	M.E.	4-76
Checked by	P.T.H.	4-76
Quantities by	M.R.C.	4-76
Checked by	J.A.	5-76
Supervised by	P.T.H.	

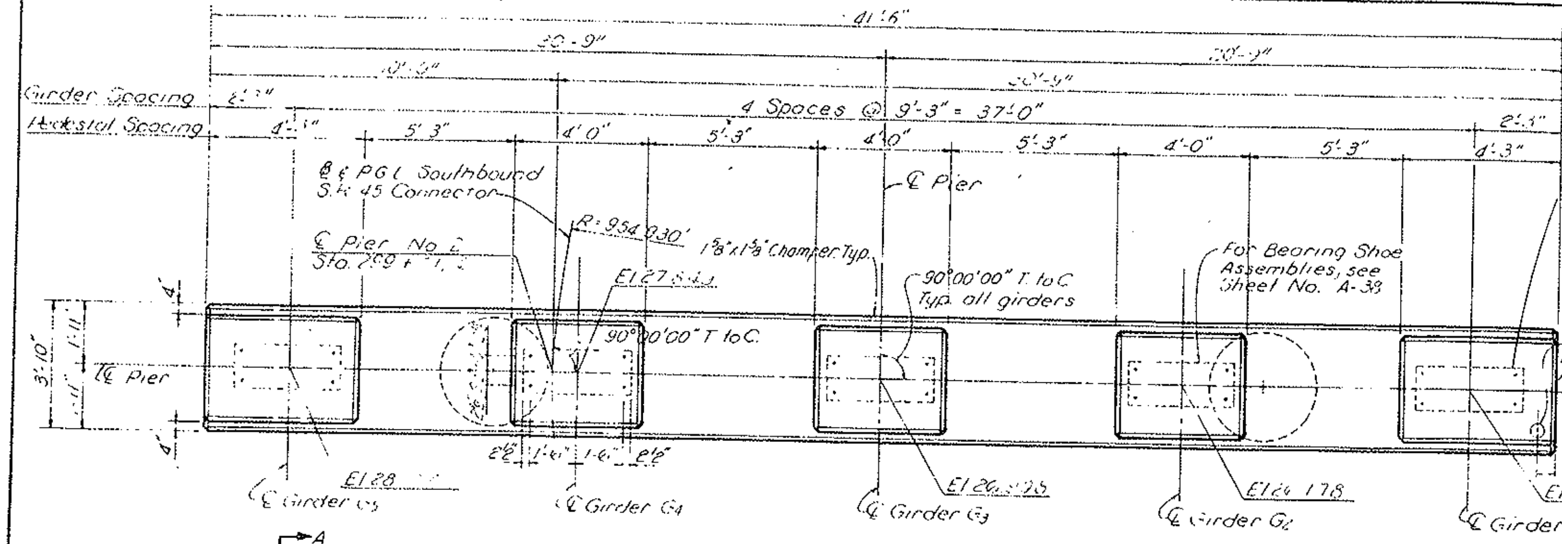
APPROVED BY

County Design Engineer, Structures

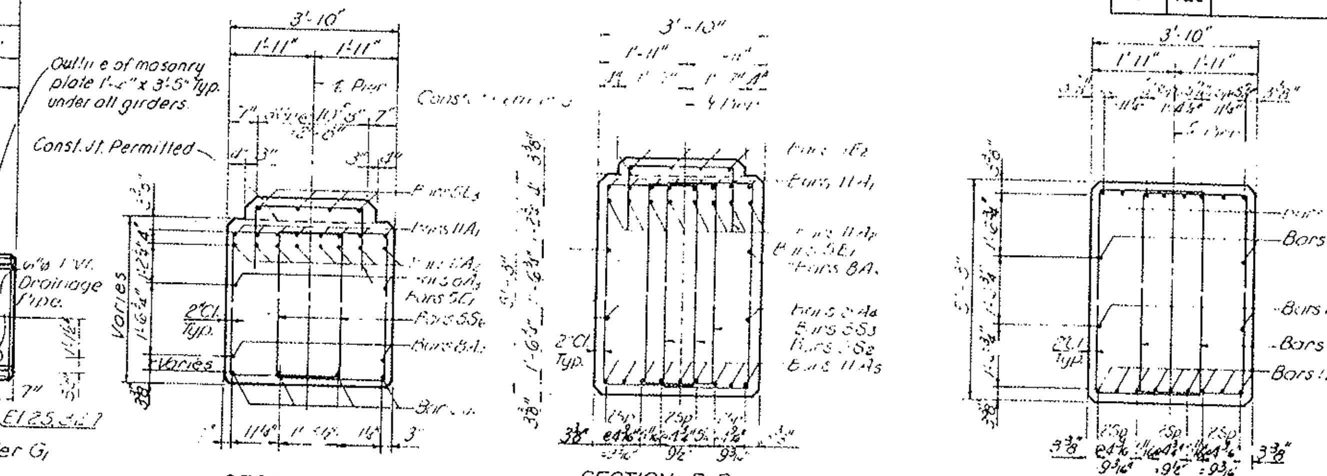
Drawing No. 42-1 | Index No.

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.			A 14

NOTE: Reinforcing steel bars in cap may be moved if they interfere with anchor bolts.



PLAN



SECTION A-A

SECTION B-B

SECTION C-C

NOTES FOR PIERS

DESIGN LOAD PER PILE: Driven to 75 Tons/Pile.

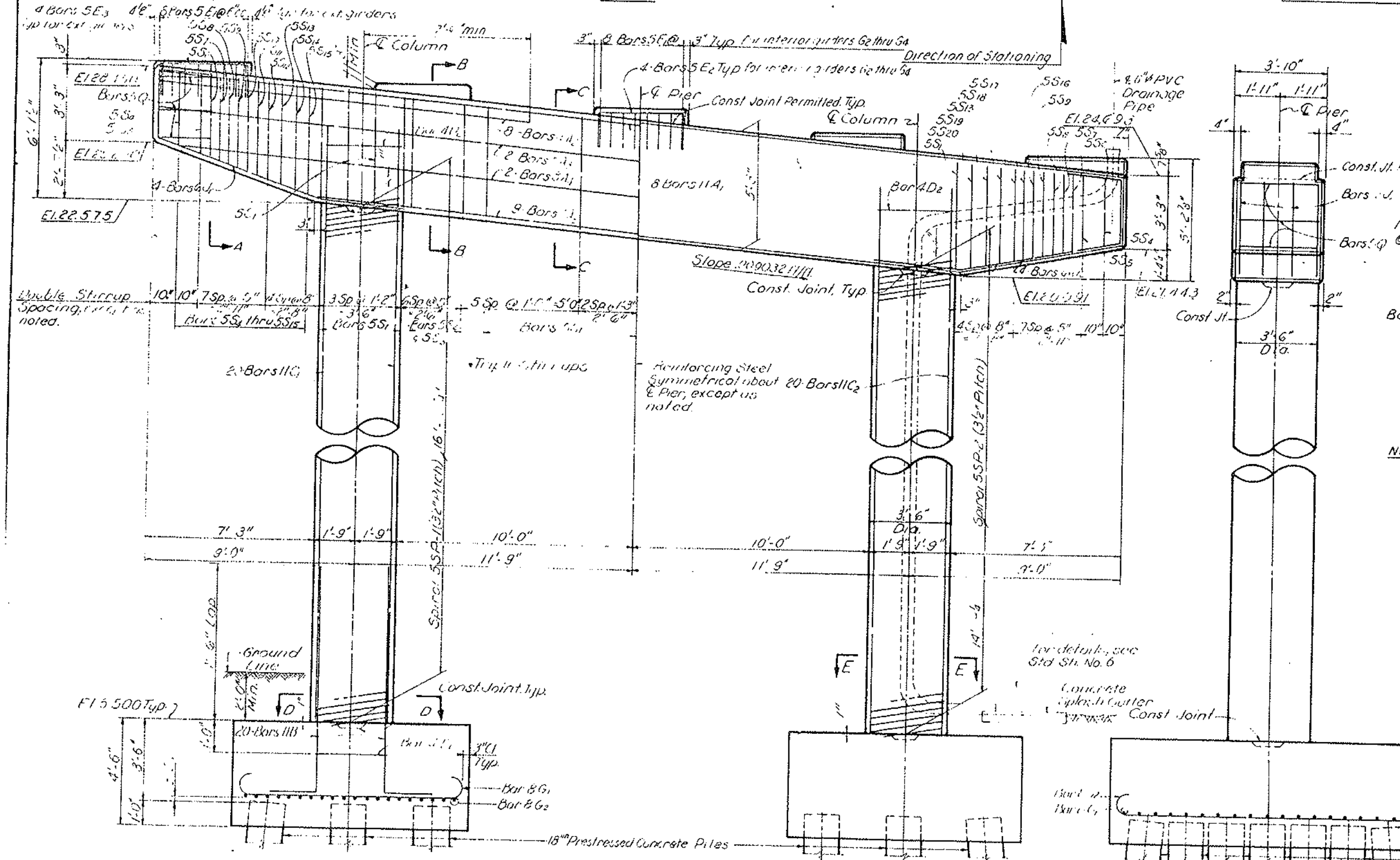
BEARING SURFACES: All bearing surfaces for Steel Shoes shall be finished level.

ANCHOR BOLTS: Set anchor bolts as shown in Bearing Details Sheets No. A-37 and No. A-38. All anchor bolts shall conform to A.S.T.M. A-307 or A-36.

CHAMFERS: All exposed concrete edges shall be chamfered 1⅝" x 1⅝".

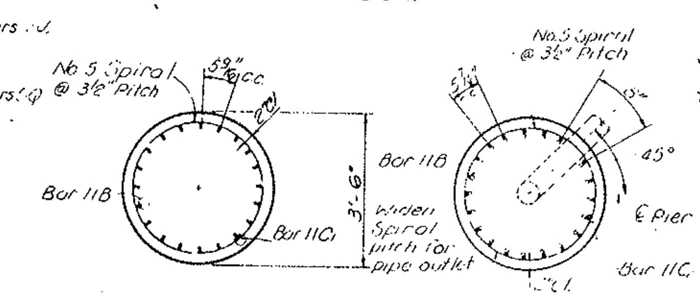
BRIDGE DRAINAGE: For details, see Standard Sheet No. S-6

PILES: All Piles shall be 18"□ Prestressed Concrete Piles. For Details, see Standard Sheet No. S-4.



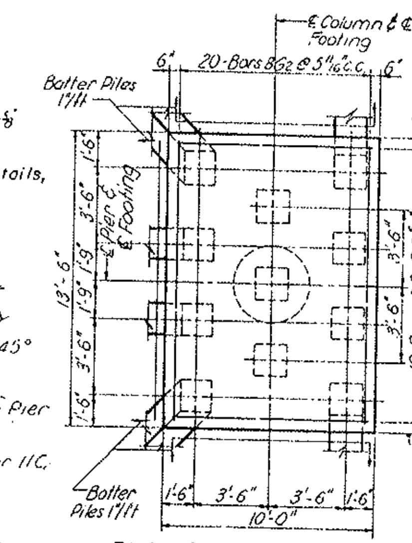
ELEVATION

END ELEVATION



SECTION D-D

SECTION E-E (Showing direction of drainage pipe outlet)



PLAN OF LEFT FOOTING
(Right Footing opposite hand)

NOTE: All reinforcing steel shall be Grade 60.
For Standard Bar Bending Details, see Sheet No. A-42
For Bill of Reinforcing Steel, see Sheet No. A-42.

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY	
Class II Concrete (Substr) [f'c = 3,400psi], Footings	Cu. Yd.	43.17	84.43
Class II Concrete (Substr) [f'c = 3,400psi], Columns	Cu. Yd.	11.28	
Class II Concrete (Substr) [f'c = 3,400psi], Cap	Cu. Yd.	29.98	
Reinforcing Steel (Substructure) (Grade 60)	Lb.	18,500	
Prestressed Concrete Piling (18"□)	L.F.	*	

*For Estimated Bridge Quantities, see Sheet No. A-1

PIER NO. 2

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R. 45 CONNECTOR
OVER S.R. 45 (U.S. 41)

ROAD NO.	COUNTY	PROJECT NO.
SR 681	SARASOTA	17005-3511

	Names	Dates
Designed by	M.R.S.	3-78
Checked by	M.F.V.	4-78
Quantities by	M.R.S.	5-78
Checked by	A.G.A.	5-78

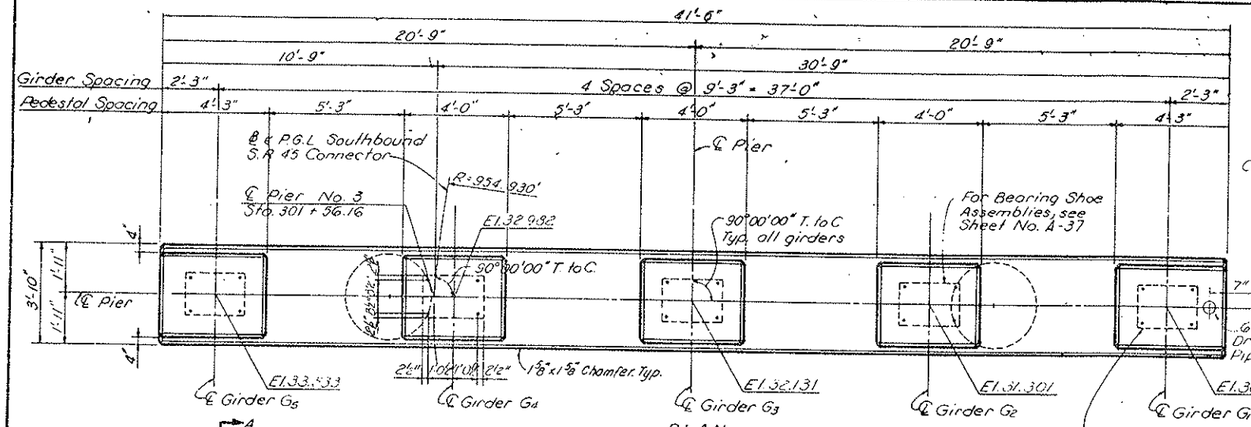
REVISIONS — Dates | Descriptions

APPROVED BY: Deputy Design Engineer, Structures

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

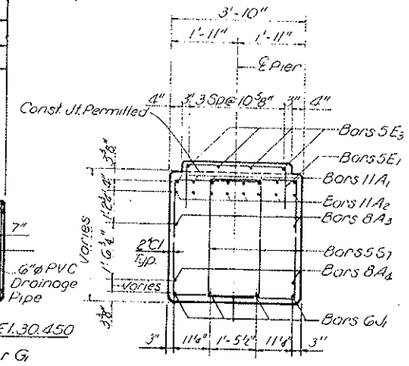
EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-8

FED. ROAD DIV. NO.	STATE	PROJECT NO.	SHEET TOTAL	SHEET NO.
3	FLA.			A-15

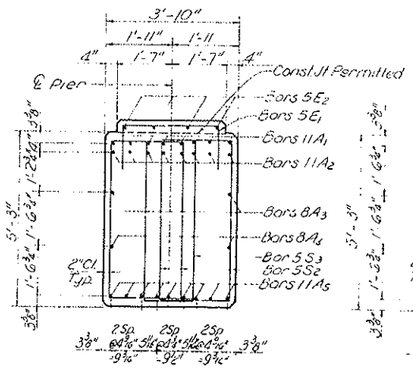


PLAN

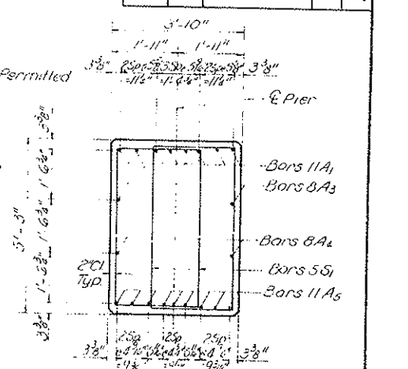
NOTE: Reinforcing steel bars in cap may be moved if they interfere with anchor bolts.



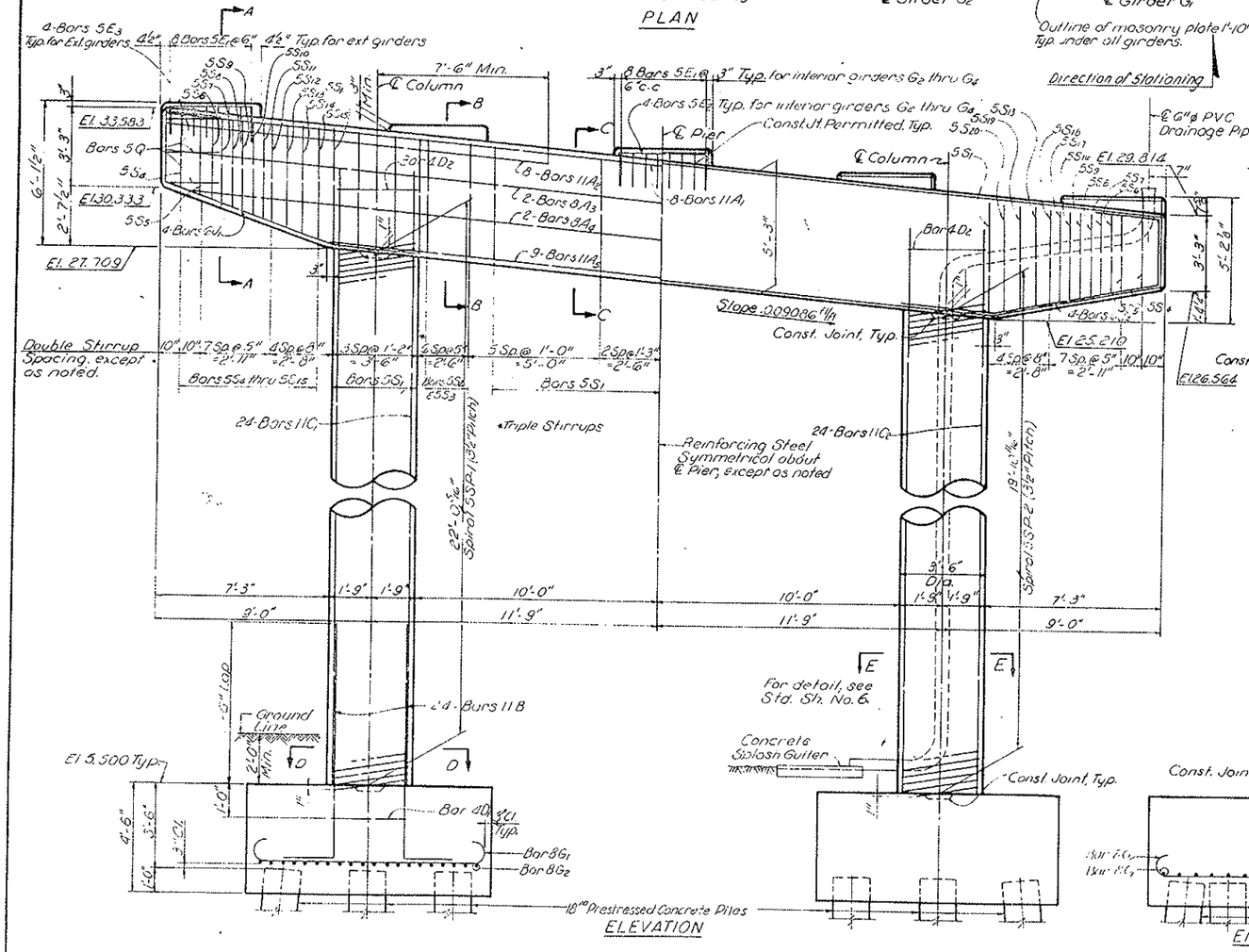
SECTION A-A



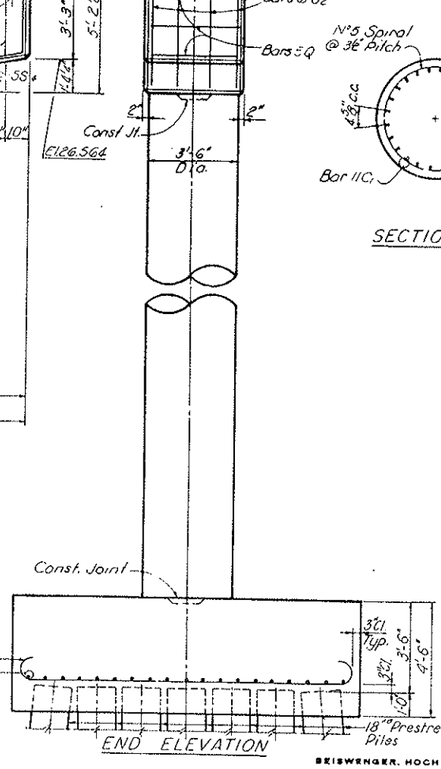
SECTION B-B



SECTION C-C

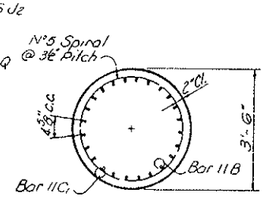


ELEVATION

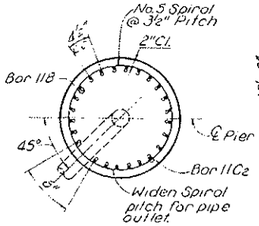


END ELEVATION

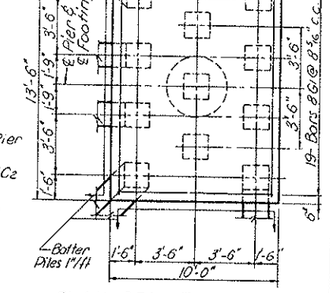
NOTES: For "Notes for Piers," see Sheet No. A-14.
All reinforcing steel shall be Grade 60.
For Standard Bar Bending Details, see Sheet No. A-42.
For Bill of Reinforcing Steel, see Sheet No. A-41



SECTION D-D



SECTION E-E
(Showing direction of drainage pipe outlet)



PLAN OF LEFT FOOTING
(Right Footing opposite hand)

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY	
Class II Concrete (Substr.) [f'c = 3,400 psi], Footings	Cu. Yd.	43.17	
Class II Concrete (Substr.) [f'c = 3,400 psi], Columns	Cu. Yd.	14.94	88.09
Class II Concrete (Substr.) [f'c = 3,400 psi], Cap	Cu. Yd.	29.98	
Reinforcing Steel (Substructure) (Grade 60)	Lb.	21,600	
Prestressed Concrete Piling (18"ø)	LF	*	

*For Estimated Bridge Quantities, see Sheet No. A-1.

PIER NO. 3

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R. 45 CONNECTOR
OVER S.R. 45 (U.S. 41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Descriptions	S.R.681	SARASOTA	17005 35-1

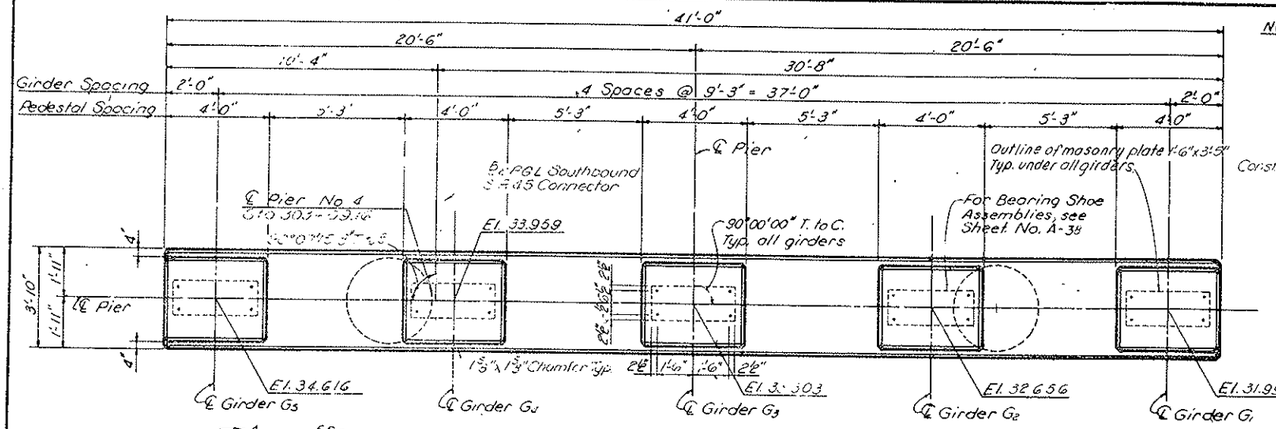
	Name	Date
Designed by	M.R.S.	3-78
Checked by	M.F.V.	4-78
Quantities by	M.R.S.	9-78
Checked by	A.G.A.	9-78
Supervised by	S.H.W.	

APPROVED BY
County Design Engineer, Structures
Drawing No. 15 of 42
Index No. 7.3.6

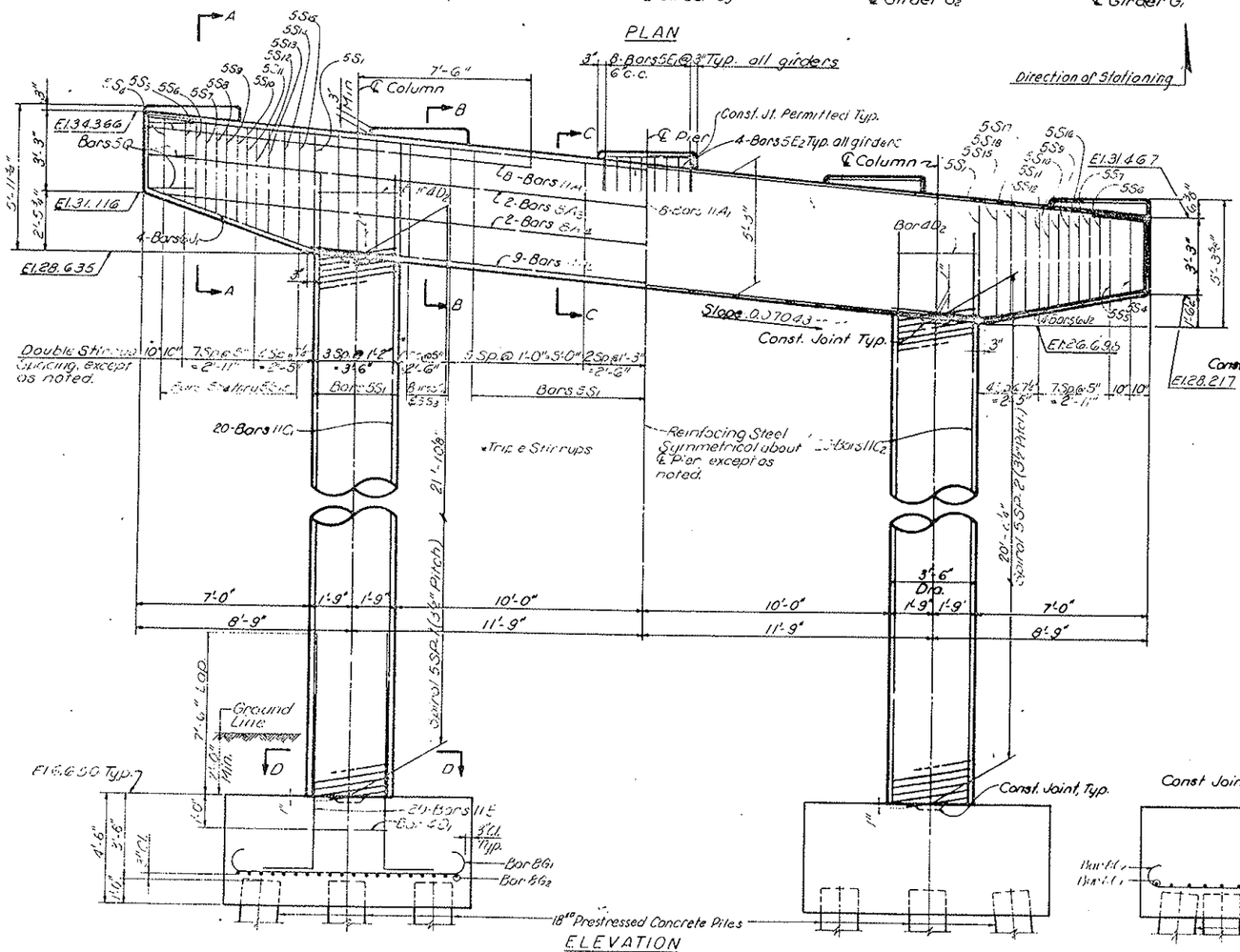
BRISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-9

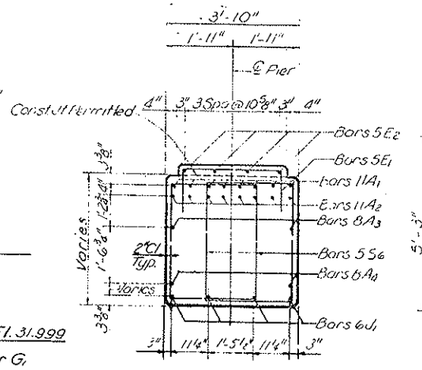
FED. ROAD DIST. NO.	STATE	PROJECT NO.	FEDERAL AID PROJ. NO.	SHEET NO.
3	FLA.			A-16



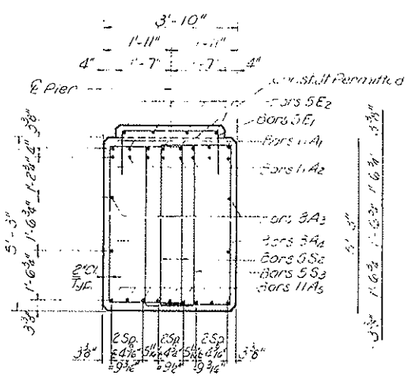
PLAN



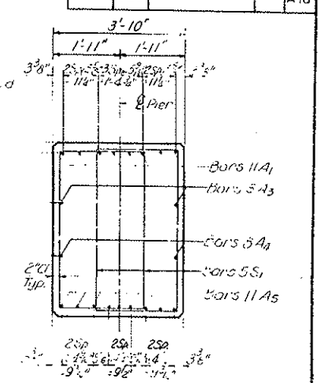
NOTE: Reinforcing steel bars in cap may be moved if they interfere with anchor bolts.



SECTION A-A

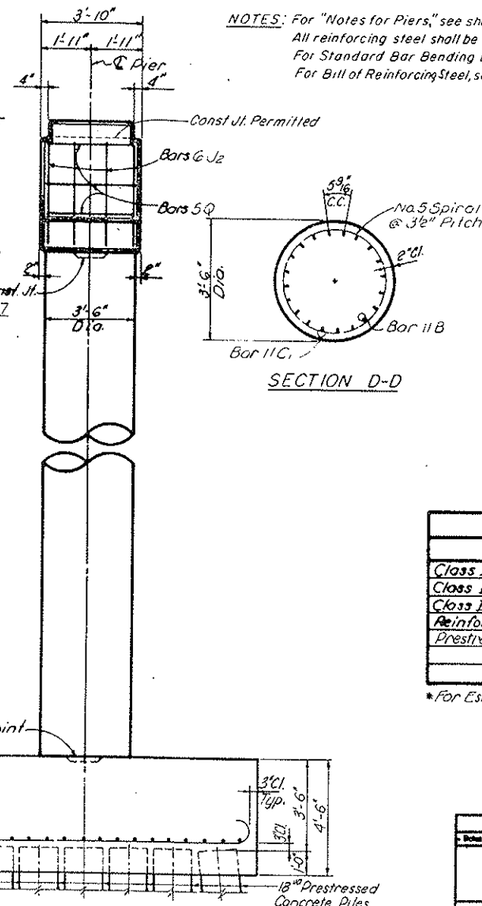


SECTION B-B

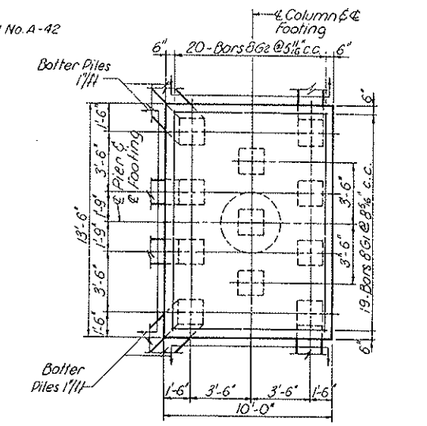


SECTION C-C

NOTES: For "Notes for Piers," see sheet No. A-14
All reinforcing steel shall be Grade 60
For Standard Bar Bending Details, see Sheet No. A-42
For Bill of Reinforcing Steel, see Sheet No. A-41



SECTION D-D



PLAN OF LEFT FOOTING
(Right Footing opposite hand)

Const. Joint
Bar 11C1
Bar 11C2
18" Prestressed Concrete Piles

END ELEVATION

STEISWENGER, KOCH & ASSOCIATES
CONSULTING ENGINEERS

ESTIMATED QUANTITIES			
ITEM	UNIT	QUANTITY	
Class II Concrete (Substr.)[f'c = 3,400 psi], Footings	Cu. Yd.	431.7	87.71
Class II Concrete (Substr.)[f'c = 3,400 psi], Columns	Cu. Yd.	14.98	
Class II Concrete (Substr.)[f'c = 3,400 psi], Cap	Cu. Yd.	29.56	
Reinforcing Steel (Substructure) [Grade 60]	Lb.	19,900	
Prestressed Concrete Piling (18")	L.F.	*	

*For Estimated Bridge Quantities, see Sheet No. A-1

PIER NO. 4

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

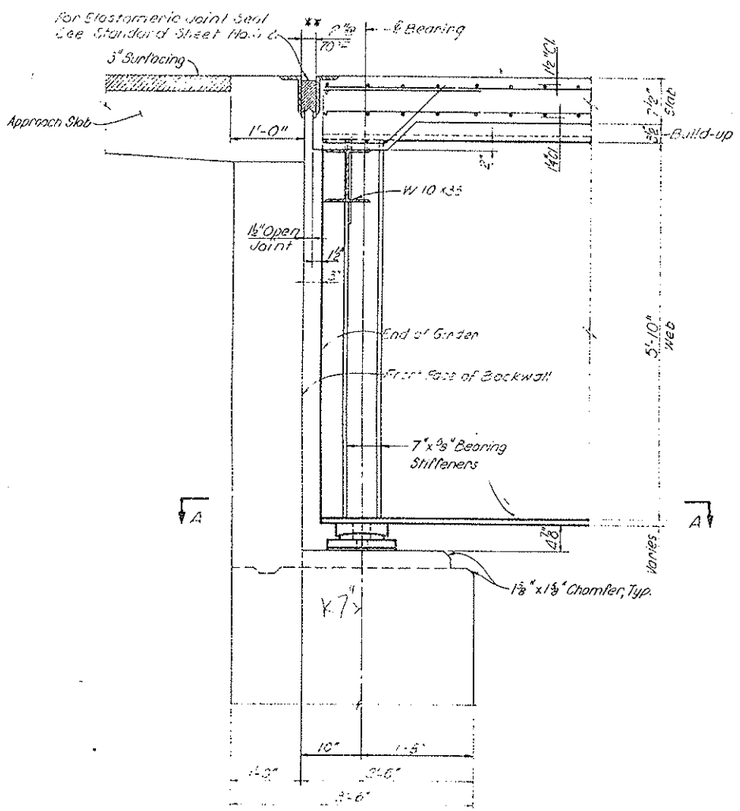
SOUTHBOUND S.R.45 CONNECTOR
OVER S.R.45 (U.S.41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
No.	Description	S.R.681	SARASOTA	17005-3501

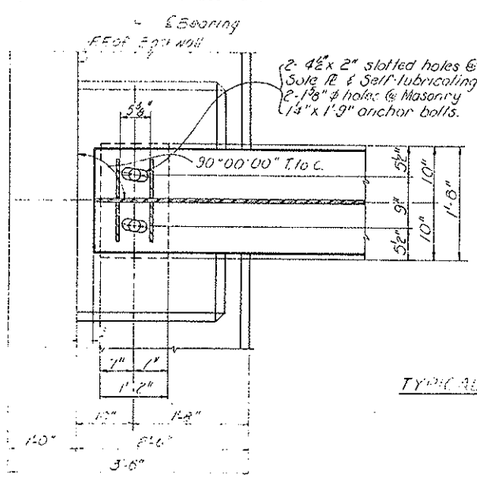
	Name	Date
Designed by	M.R.S.	3-78
Checked by	M.F.V.	4-78
Quantities by	M.R.S.	6-78
Checked by	A.G.A.	8-78
Submitted by	S.H.W.	

APPROVED BY
Deputy Design Engineer, Structures
Drawing No. 16 of 42
Index No.

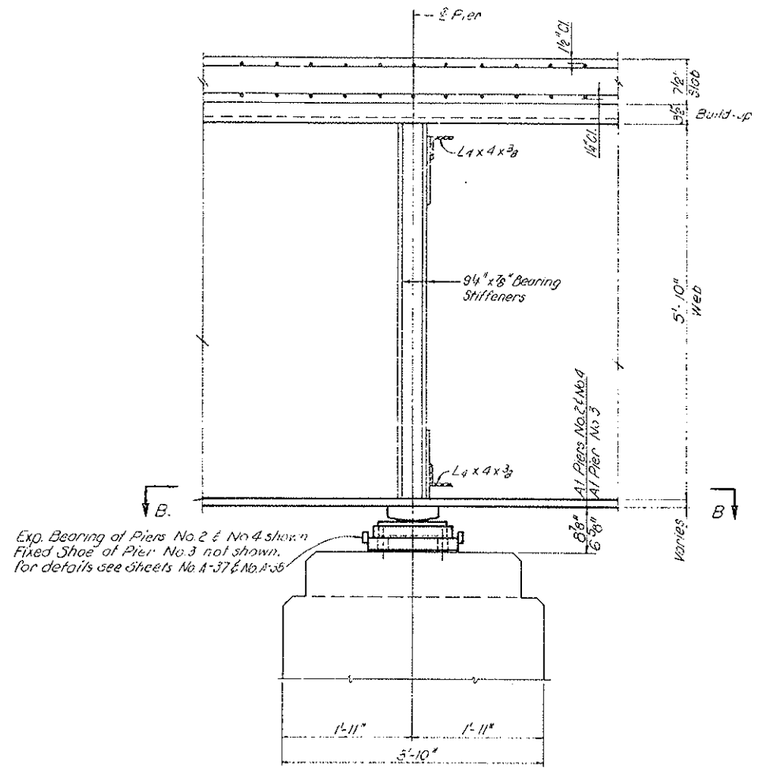
FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.			22



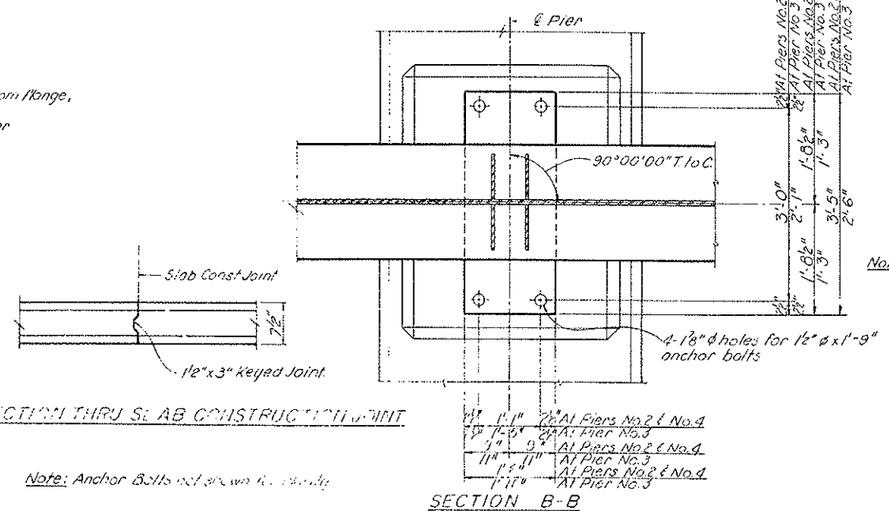
SECTION AT END BENTS
(Perpendicular to Front Face of Backwall)



SECTION A-A



SECTION AT PIER No. 2 & 4 (SHOWN)
(Section at Pier # 3 similar except as noted)



TYPICAL SECTION THRU SLAB CONSTRUCTION JOINT

Note: Anchor Bolts not shown for clarity

1'-1"	7½"	At Piers No.2 & No.4
1'-6"	9"	At Pier No.3
1'-1"	9"	At Piers No.2 & No.4
11"	11"	At Pier No.3
1'-1"	9"	At Piers No.2 & No.4
1'-11"		At Pier No.3

SECTION B-B

** For temperatures other than 70° F adjust opening. See table on Standard Sheet No. S-2.

Notes: For Shoe details, see Shts. No. A-37 & A-38
For location of Fixed & Expansion Ends, see Plan & Elevation Sh. No. A-2
For Elastomeric Joint Seal see Standard Sheet No. S-2.

SUPERSTRUCTURE DETAILS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R.45 CONNECTOR OVER SR.45 (U.S.41)

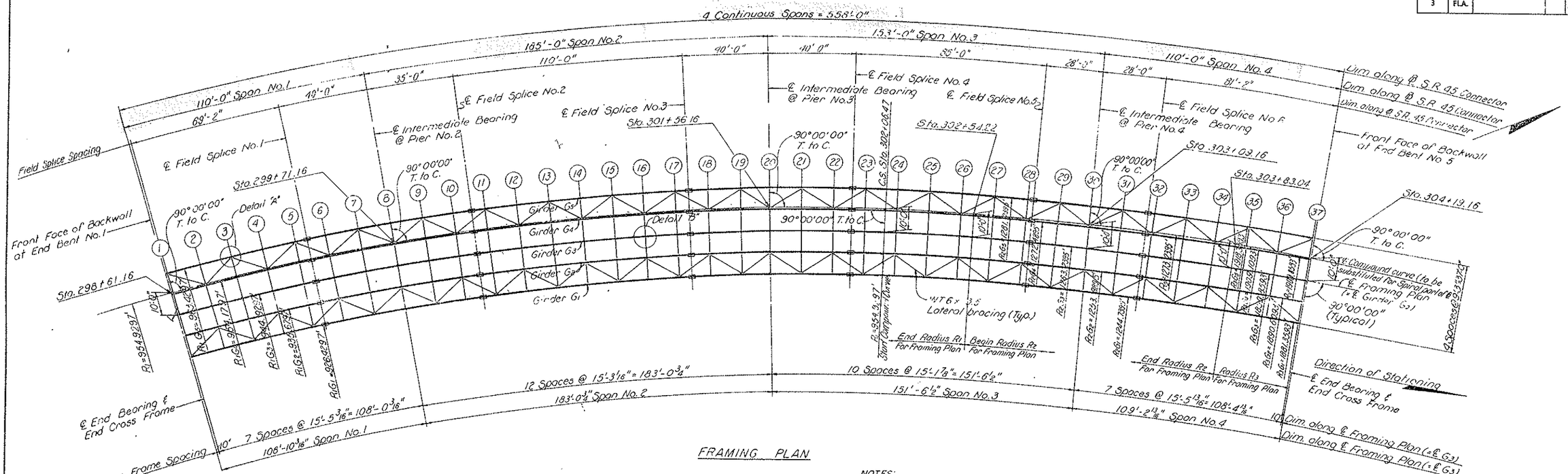
REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	SR681	SARASOTA	17005-3504

	Name	Date	APPROVED BY
Designed by	R.A.	1-75	
Checked by	S.H.W.	1-75	
Quantities by			
Checked by			
Supervised by	S.H.W.		

District Design Engineer — Structures
Drawing No. 2 of 42
Index No.

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

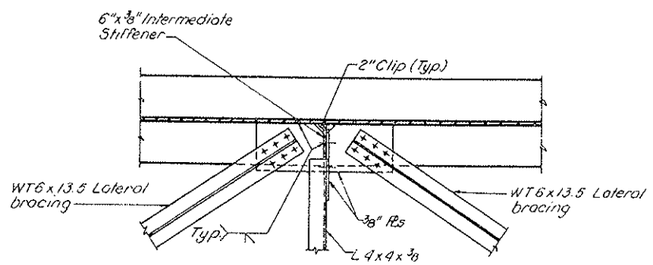
FED. ROAD DIST. NO.	STATE	PROJECT NO	FISCAL YEAR	SHEET NO.
3	FLA.			A-23



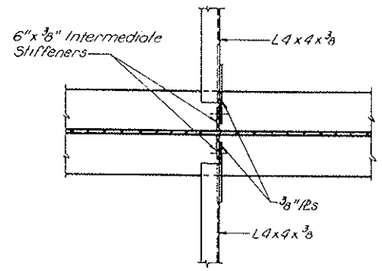
FRAMING PLAN

NOTES:

○ Denotes Cross Frame number.
All Girders shall be fabricated on three compound curves as shown on Framing Plan above For Relationship between ℄ Framing Plan, ℄ S.R.45, Connector and Compound Curves, see Detail on Sheet No. A-9.



DETAIL "A"



DETAIL "B"

GENERAL NOTES FOR STRUCTURAL STEEL

MATERIAL: All structural steel for superstructure shall conform to A.S.T.M. Specification A-36 or A-588 as noted. High strength bolts, nuts & washers shall meet all the mechanical properties of A.S.T.M. A-325 and be galvanized.
CONNECTIONS: All shop connections shall be welded. All field connections shall be made with 1"ø & 1 1/16"ø high strength bolts, friction type, open holes 1 1/16"ø & 1 3/16"ø, except as noted.
WELDING: The proportioning of weld details and the operation of welding shall be in accordance with the current edition of the AASHTO Standard Specifications for Welding of Structural Steel Highway Bridges, and the referenced American Welding Society Structural Welding Code.
PAINTING: All structural steel shall be painted in accordance with the Specifications. No paint shall be applied to surfaces that are to be encased in concrete.
BEARING ASSEMBLIES (SHOES): Shall be hot-dip galvanized in accordance with the requirements of A.S.T.M. Specification A-123.
PAYMENT: Shoe assemblies, including sole plates and anchor bolts will be paid for at the contract lump sum price for "Structural Steel (Shoe Assemblies)". The cost of resilient pads for these bearings shall be included in the contract lump sum price for this item. The cost of high strength bolts & Shear Connector Studs shall be included in the contract lump sum price for "Structural Steel (Carbon)".
ENVIRONMENT: Non-Coastal.

FRAMING PLAN

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R.45 CONNECTOR
OVER S.R.45 (U.S.41)

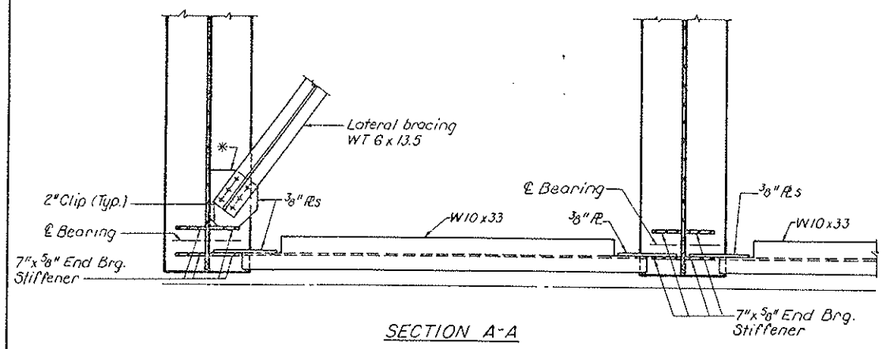
REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	S.R.681	SARASOTA	17005-3501

	Name	Date
Designed by	R. A.	2-76
Checked by	S. H. W.	3-76
Quantities by	—	—
Checked by	—	—
Supervised by	S. H. W.	

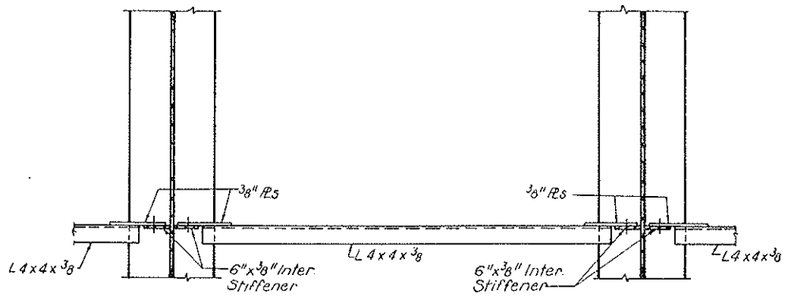
APPROVED BY
Deputy Design Engineer, Structures
Drawing No. 42 Index No.

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

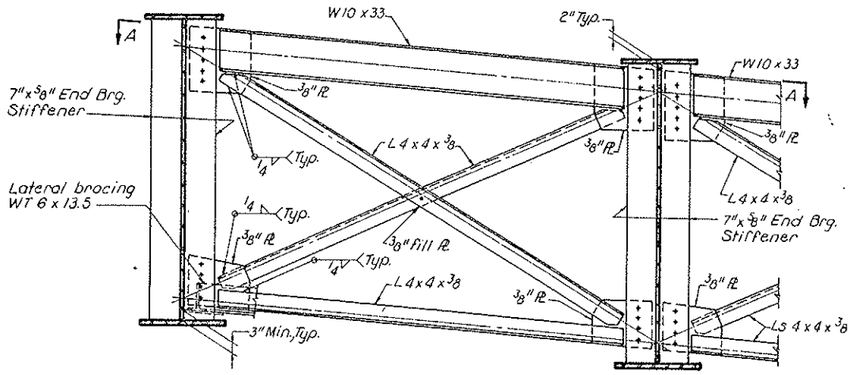
FED. ROAD DIV. NO.	STATE	PROJECT NO	FISCAL YEAR	SHEET NO.
3	FLA.			A-34



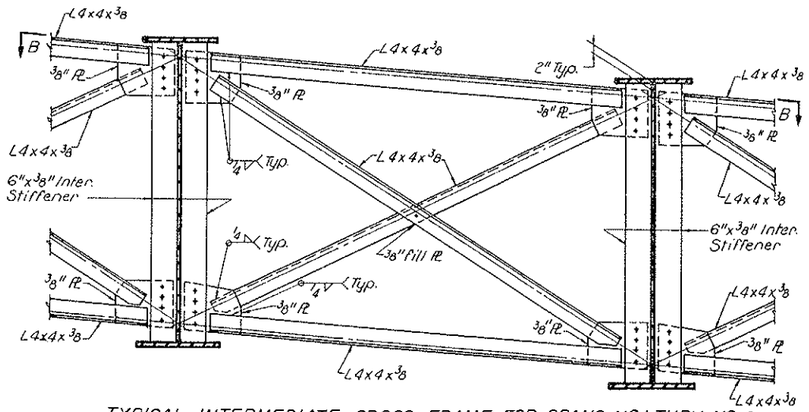
SECTION A-A



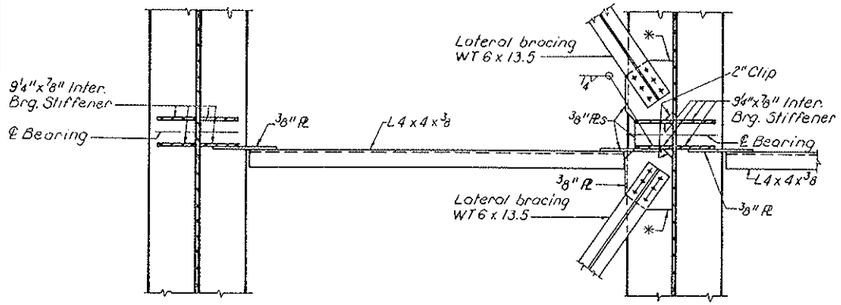
SECTION B-B



TYPICAL END CROSS FRAME AT END BENTS NO.1 & NO.5

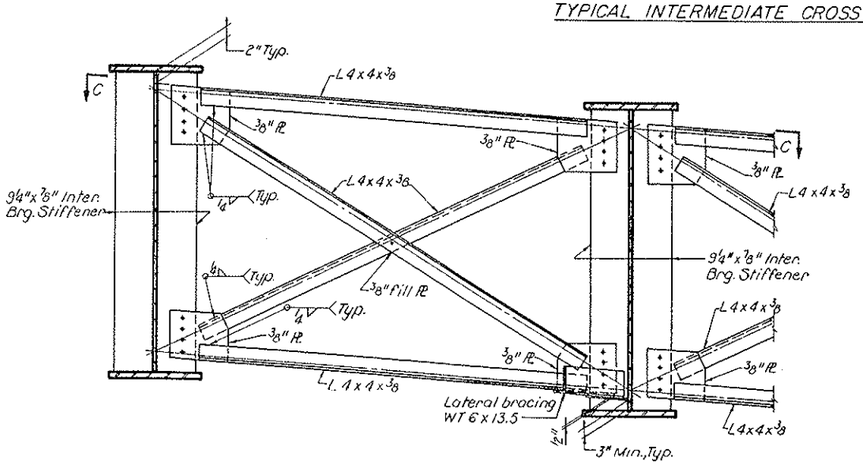


TYPICAL INTERMEDIATE CROSS FRAME FOR SPANS NO.1 THRU NO.4



SECTION C-C

* Connection of lateral plates to girder webs to be beveled so as to be perpendicular to the plane of the laterals.



TYPICAL INTERMEDIATE CROSS FRAME AT PIERS NO.2 THRU NO.4

Note: 7/8" ø H.S. Bolts A-325 for Cross Frame connection plates to girder stiffeners.

STEEL GIRDER DETAILS - (1)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R. 45 CONNECTOR
OVER S.R. 45 (U.S. 41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R. 681	SARASOTA	17005-3501

	Name	Date
Designed by	R. A.	2-78
Checked by	S. H.W.	4-78
Quantities by		
Checked by		
Supervised by	S.H.W.	

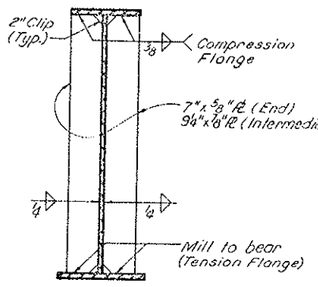
APPROVED BY

Deputy Design Engineer, Structures

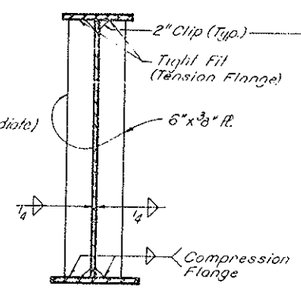
Drawing No. 34 of 42 | Index No. 11735

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

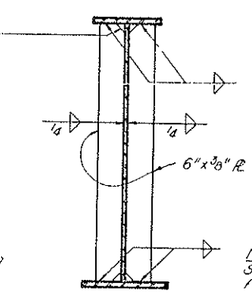
FED. ROAD DIV. NO.	STATE	PROJECT NO	FISCAL YEAR	SHEET NO.
3	FLA.			A 35



BEARING

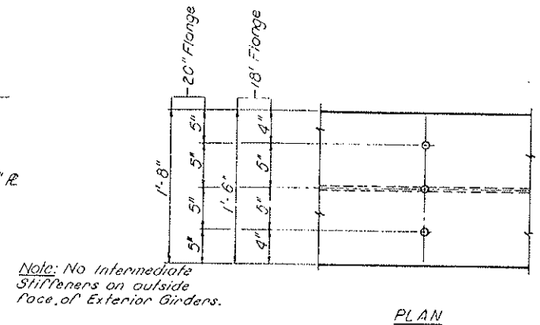


INTERMEDIATE



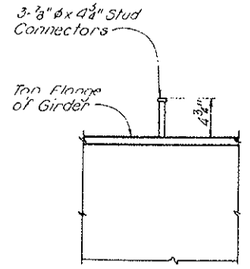
INTERMEDIATE STIFFENERS AT CROSS FRAME

STIFFENERS DETAILS



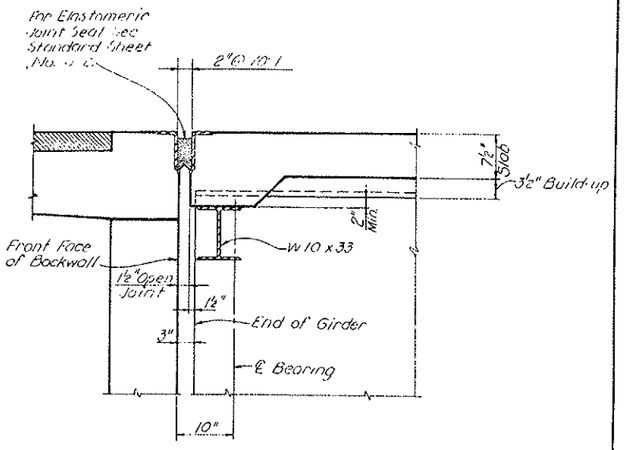
Note: No intermediate Stiffeners on outside face of Exterior Girders.

PLAN

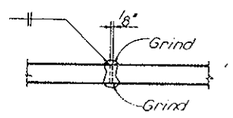


ELEVATION

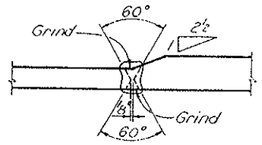
STUD SHEAR CONNECTOR



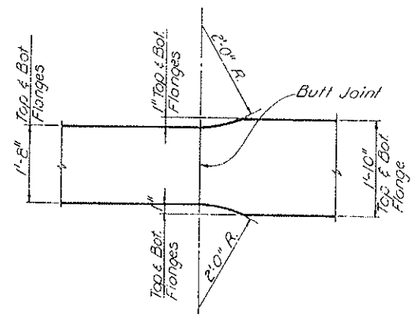
SECTION AT END BENTS NO. 1 & NO. 5



WEB SHOP SPLICE
(OPTION)



FLANGE BUTT WELDS



WIDTH TRANSITION OF TOP & BOTTOM FLANGE

STEEL GIRDER DETAILS - (2)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

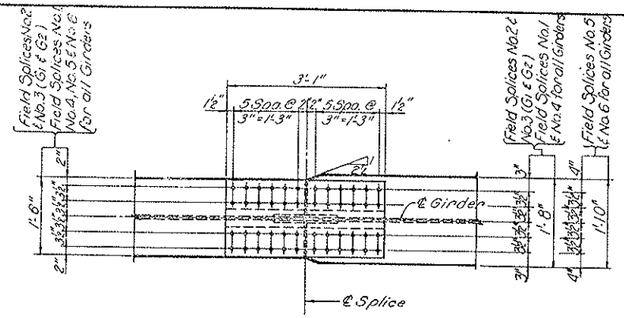
SOUTHBOUND S.R. 45 CONNECTOR
OVER S.R. 45 (U.S. 41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	SR 681	SARASOTA	17005-3501

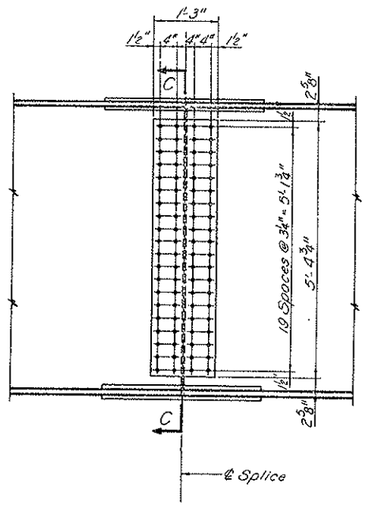
	Name	Date	APPROVED BY
Designed by	R. A.	2-78	
Checked by	S. H. W.	4-78	
Quantities by	-	-	Deputy Design Engineer, Structures
Checked by	-		Drawing No. 35 of 42
Supervised by	S. H. W.		Index No. 17355

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

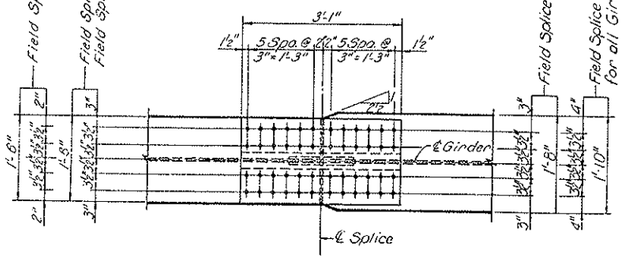
FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.			A-36



VIEW A-A
(Different width of Top Flanges)

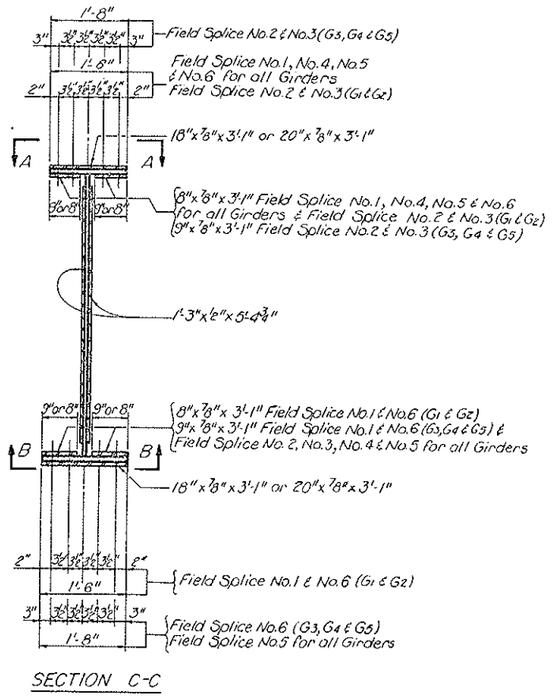


ELEVATION
(Same flange thickness shown)



VIEW B-B
(Different width of Bottom Flanges)

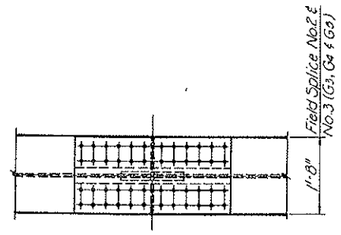
TABLE OF FILL PLATES AT FIELD SPLICES							
	LOCATION	FIELD SPLICE NO.1	FIELD SPLICE NO.2	FIELD SPLICE NO.3	FIELD SPLICE NO.4	FIELD SPLICE NO.5	FIELD SPLICE NO.6
Girder G1	Top Flange	18"x ⅜"x 1'-6½"	18"x ⅜"x 1'-6½"	18"x ⅜"x 1'-6½"	18"x ⅜"x 1'-6½"	18"x ⅝"x 1'-6½"	18"x ⅝"x 1'-6½"
	Bot. Flange	———	———	———	———	20"x ½"x 1'-6½"	18"x ½"x 1'-6½"
Girder G2	Top Flange	18"x ⅜"x 1'-6½"	18"x ⅜"x 1'-6½"	18"x ⅜"x 1'-6½"	18"x ⅜"x 1'-6½"	18"x ⅝"x 1'-6½"	18"x ⅝"x 1'-6½"
	Bot. Flange	———	———	———	———	20"x ½"x 1'-6½"	18"x ½"x 1'-6½"
Girder G3	Top Flange	18"x ⅜"x 1'-6½"	———	———	18"x ⅜"x 1'-6½"	18"x ¾"x 1'-6½"	18"x ¾"x 1'-6½"
	Bot. Flange	———	———	———	20"x ½"x 1'-6½"	20"x ⅝"x 1'-6½"	20"x ⅝"x 1'-6½"
Girder G4	Top Flange	18"x ⅜"x 1'-6½"	———	———	18"x ⅜"x 1'-6½"	18"x ¾"x 1'-6½"	18"x ¾"x 1'-6½"
	Bot. Flange	———	———	———	20"x ½"x 1'-6½"	20"x ⅝"x 1'-6½"	20"x ⅝"x 1'-6½"
Girder G5	Top Flange	18"x ⅜"x 1'-6½"	———	———	18"x ⅜"x 1'-6½"	18"x ¾"x 1'-6½"	18"x ¾"x 1'-6½"
	Bot. Flange	———	———	———	20"x ½"x 1'-6½"	20"x ⅝"x 1'-6½"	20"x ⅝"x 1'-6½"



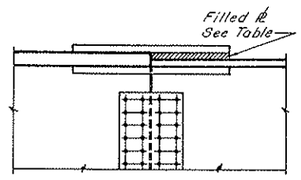
SECTION C-C

NOTES

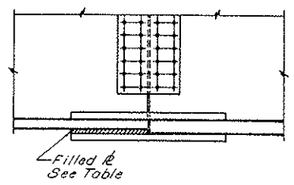
All parts of each field splice shall be completely shop assembled taking into account their relative position in the finished structure due to grade, camber and curvature. Sections shall be matchmarked while so assembled.
All shop splices in flange or web plates shall be made prior to welding flange plates to web plates. All such proposed splices shall be indicated on the Shop Drawings.
General reaming of holes for each field splice will be required while all parts of each splice are completely shop assembled in the correct position. All bolts shall be 1"ϕ high strength bolts (Friction Type). High strength bolts shall conform to the requirements of Specification Designation A-325 and shall be galvanized.



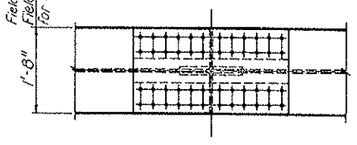
VIEW A-A
(Same width of Top Flanges)



TOP FLANGE ELEVATION
(Different thickness of Top Flanges)



BOTTOM FLANGE ELEVATION
(Different thickness of Bottom Flanges)



VIEW B-B
(Same width of Bottom Flanges)

FIELD SPLICE NO. 1 THRU NO. 6
Note: 1"ϕ H.S. Bolts A-325 for Field Splice Connection

FIELD SPLICES

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R.45 CONNECTOR
OVER S.R.45 (U.S.41)

ROAD NO.	COUNTY	PROJECT NO.
S.R.61	SARASOTA	17005-3501

	Names	Dates
Designed by	R. A.	2-78
Checked by	S. H. W.	6-78
Quantities by	---	---
Checked by	---	---
Supervised by	S. H. W.	

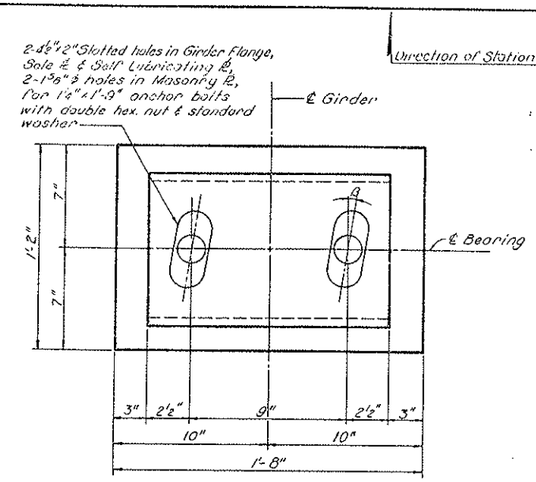
APPROVED BY
Deputy Design Engineer, Structures
Drawing No. 36 of 42
Index No.

REVISIONS	
Date	Descriptions

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-15

FED. ROAD DIV. NO.	STATE	PROJECT NO	FISCAL YEAR	SHEET NO.
3	FLA.			A-37

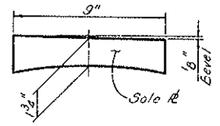


β=8° 51' 00" End Bent No.1
β=5° 41' 11.17" End Bent No.5

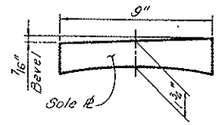
PLAN

Note: Shoe for End Bent No.1 Shown. That for End Bent No.5 is opposite hand.

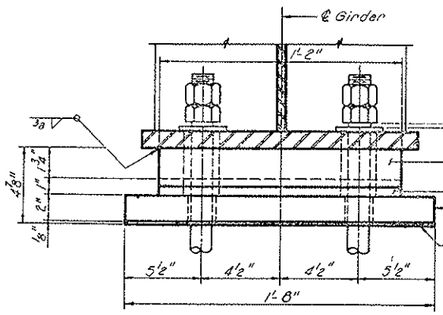
Estimated weight of one Expansion Shoe = 290 lbs.



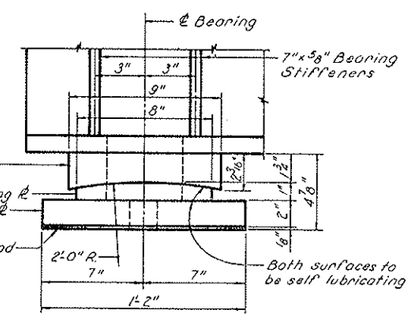
SOLE ℄ AT END BENT NO.5



SOLE ℄ AT END BENT NO.1

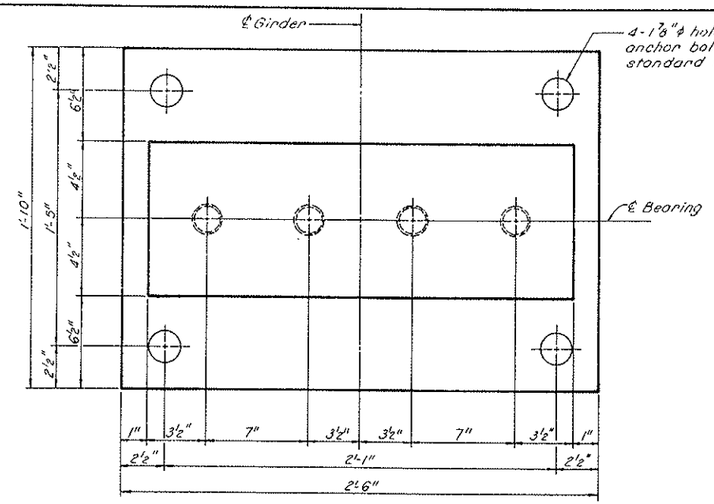


ELEVATION



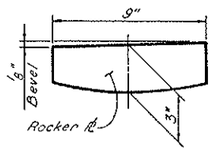
VIEW A-A

EXPANSION BEARING AT END BENTS NO.1 & NO.5

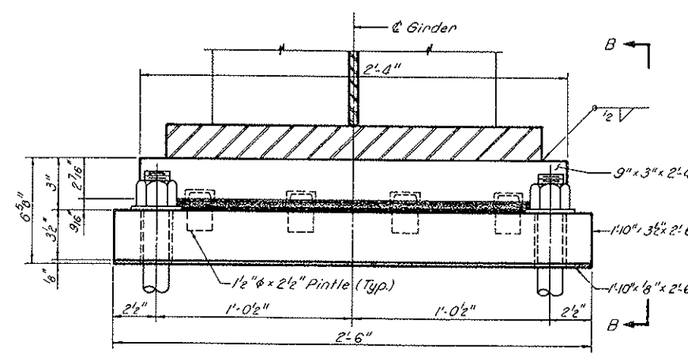


PLAN

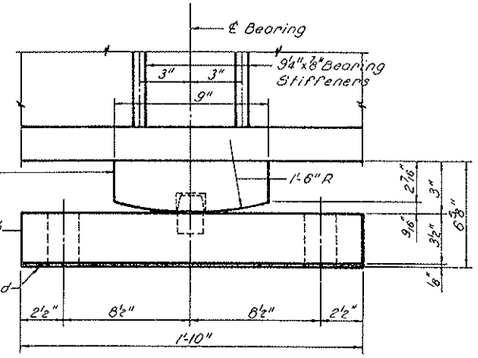
Estimated weight of one Fixed Shoe = 340 lbs.



ROCKER ℄ AT PIER NO.3

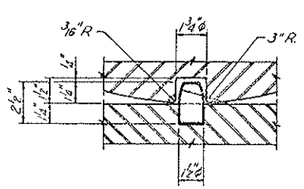


ELEVATION



VIEW B-B

FIXED SHOE AT PIER NO.3



PINTLE DETAIL
For 1½"ϕ Pintle

NOTES FOR SHOE ASSEMBLIES

1) Cost of Shoe Assemblies including Anchor Bolts and Resilient Pads shall be included in the Contract Lump Sum Price for Structural Steel (Shoe Assemblies).
2) All Structural Steel for Shoe Assemblies except bolts and pins described above shall comform to A.T.S.M. Specifications A-36.
3) Bearing Surfaces shall be Machine-Finished and the surface roughness shall not exceed 125 Micro-inches, when measured in accordance with A.S.A. Standards.
4) All Bolts shall be in accordance with either A.S.T.M. Specifications A-307 or A-36.
5) Self-Lubricating Plate shall be bronze plate in accordance with Article 964-2 of the Standard Specifications.
6) Bearing Shoes shall be hot-dip galvanized in accordance with the requirements of A.S.T.M. specification A-123.

GEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

BEARING DETAILS (1)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R.45 CONNECTOR OVER S.R.45 (U.S.41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Descriptions	S.R.681	SARASOTA	17005-3501

	Names	Dates
Designed by	M.F.V.	2-78
Checked by	S.H.W.	4-78
Quantities by		
Checked by		
Supervised by	S.H.W.	

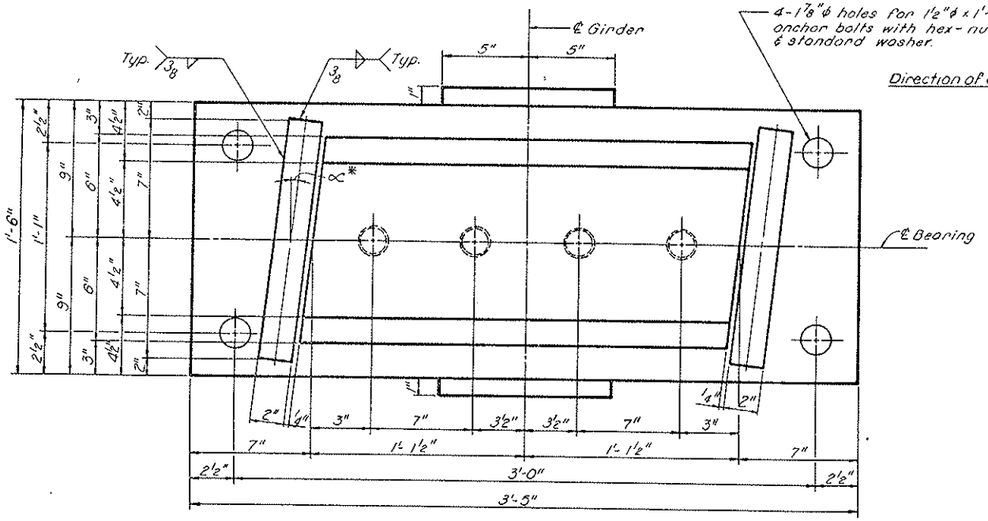
APPROVED BY

Deputy Design Engineer, Structures

Drawing No. 37 of 42 | Index No. 7345

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX2-16

FED. ROAD DIV. NO.	STATE	PROJECT NO	FISCAL YEAR	SHEET NO.
3	FLA.			A-38

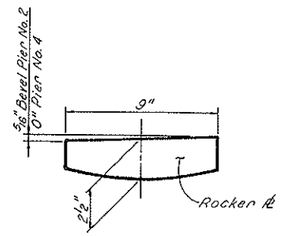


*At Pier No.2: ∝ = 5°33'00"
At Pier No.4: ∝ = 3°54'40"

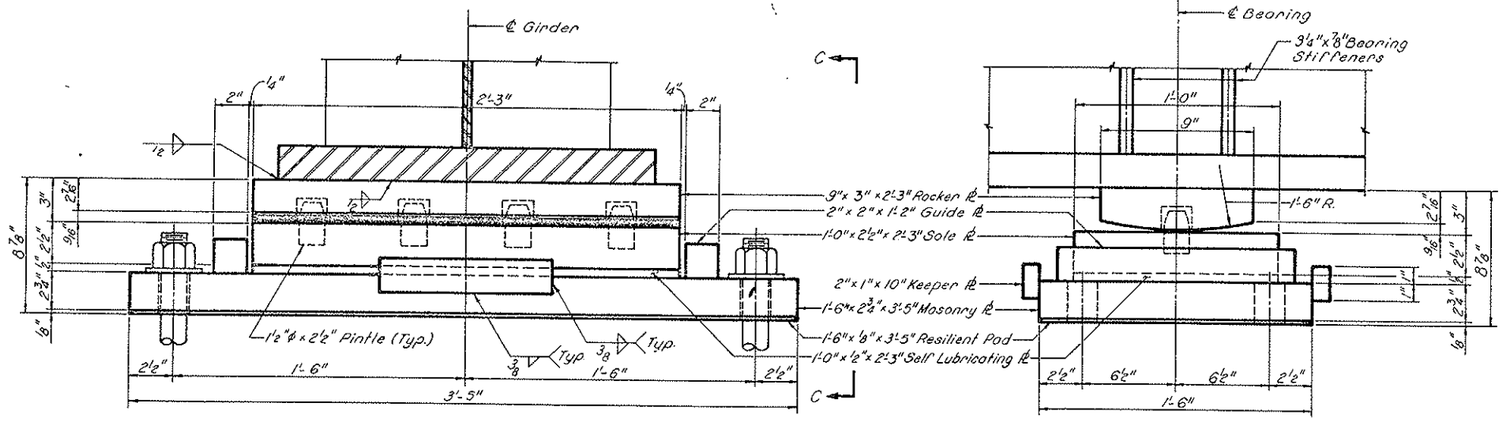
PLAN

Note: Shoe at Pier No.2 Shown.
Shoe at Pier No.4 is apposite hand.

Estimated weight of one Expansion Shoe = 1,180 lbs.



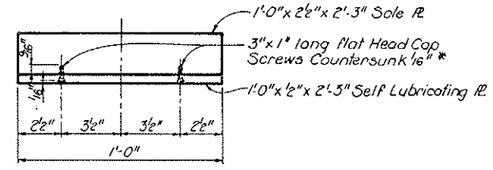
ROCKER ℞ AT PIERS NO. 2 & NO. 4



ELEVATION
(Along ℄)

VIEW C-C

EXPANSION BEARING AT PIER NO. 2 & NO. 4



DETAIL OF SELF LUBRICATING PLATE ATTACHMENT

*Note: Drill holes 5/16"ϕ x 7/8" deep into Sole ℞ & Tap 3/8" (16 NC2) x 3/8" deep.

Note: For Pintle Detail see Sheet No. A-37.

Note: For "Notes for Shoe Assemblies", see Sheet No. A-37.

BEARING DETAILS (2)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES

SOUTHBOUND S.R.45 CONNECTOR
OVER S.R.45 (U.S.41)

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R.681	SARASOTA	17005-3501

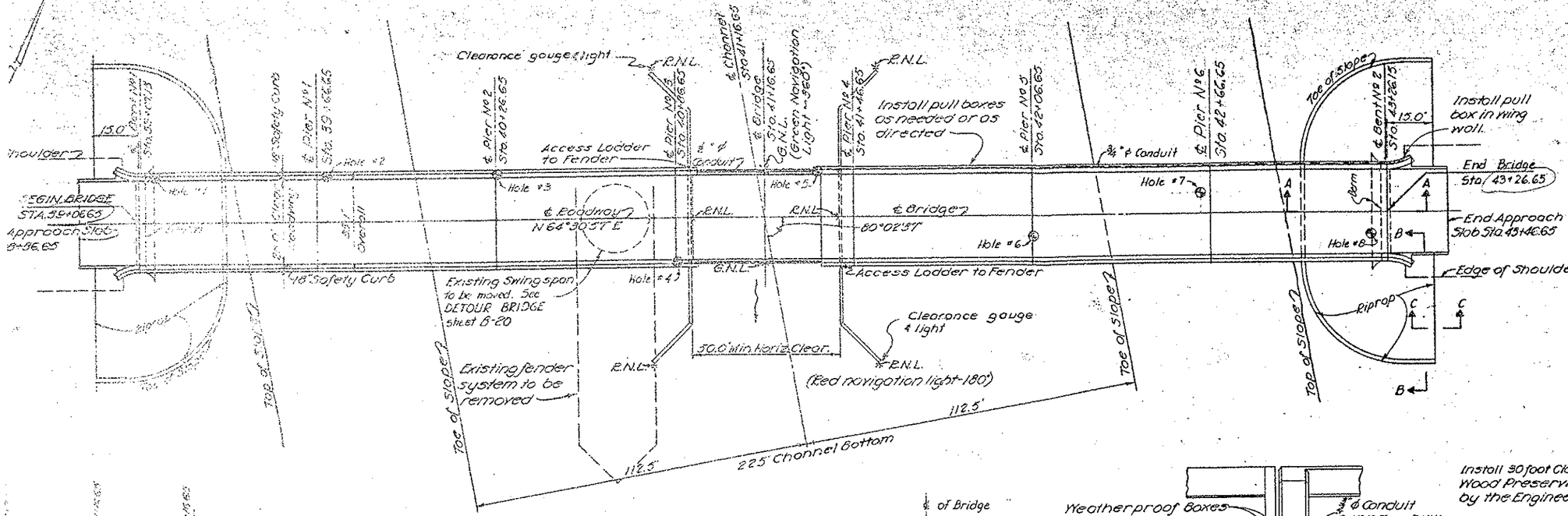
	Names	Dates	APPROVED BY
Designed by	M.T.V.	2-78	
Checked by	S.H.W.	4-78	
Quantities by			Deputy Design Engineer, Structures
Checked by			Drawing No. 35 of 42
Supervised by	S.H.W.		Index No. 17035

BEISWENGER, HOCH & ASSOCIATES
CONSULTING ENGINEERS

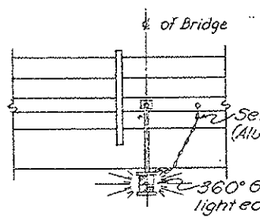
FED. ROAD DIV. No.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
9	FLA.		65	B-1

STATE JOB No. 91070-3502

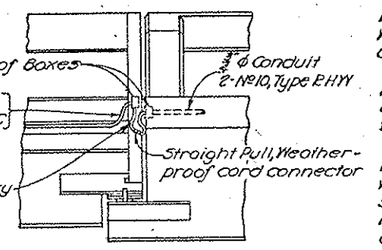
INDEX OF BRIDGE SHEETS



PLAN
Scale: 1" = 20'



DETAIL OF NAVIGATION LIGHT ON CHANNEL SPAN



DETAIL REST END
Electrical Connection

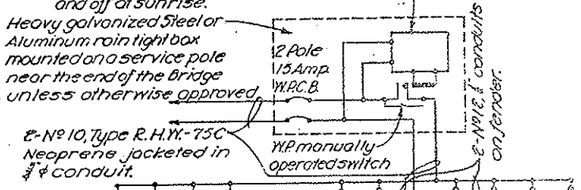
HINGE END:
Use unbroken cord and clamp to post at bottom.

Install 30 foot Class V Service Pole, treated in accordance with American Wood Preserving Association Standards at a location as directed by the Engineer.

Install Meter-Socket and weather-head for two wire service and extend ¾" galvanized conduit from bridge abutment to switch and relay panel.

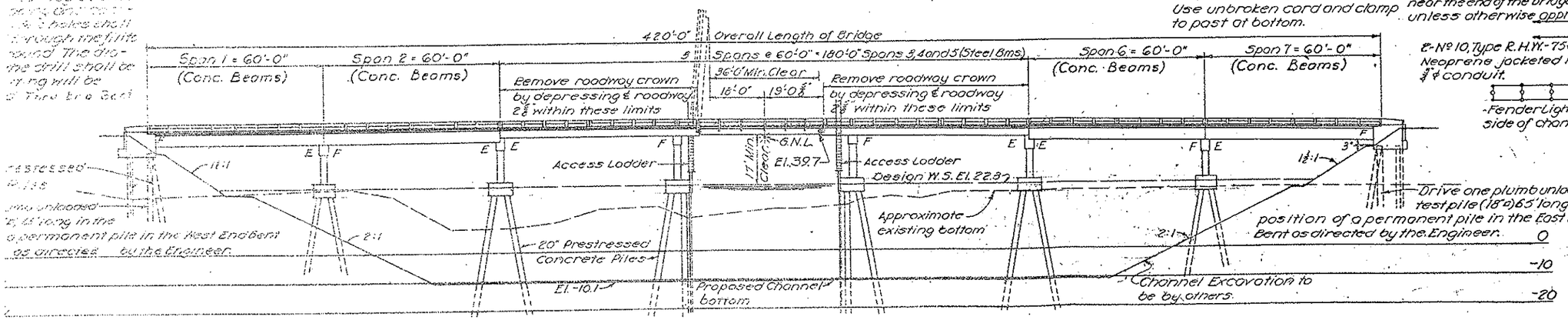
Photo-electric operated relay, complete with all Rectifiers, Amplifiers, etc. w.p. and designed for use in very damp locations. This relay shall turn the navigation lights on at sundown and off at sunrise.

Flexible connection from pier to fender shall be 2-№12 Type SO



Channel Span Navigation Lights shall be Type MS-301, 8 green 360° lens, Fender navigation lights shall be Type MS-55, 6 red 180° lens as manufactured by the Bond & Engineering Co. Norwood, La. (or equal)

NOTE: Place expansion joints at each expansion joint of the structure in the main conduit run.

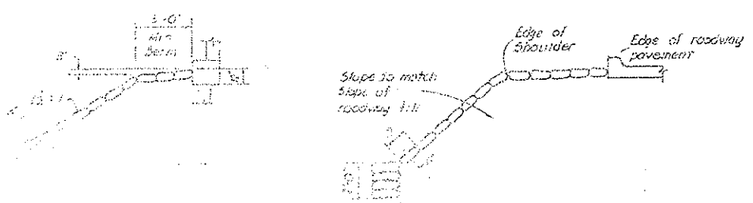


ELEVATION
Scale: 1" = 20'

Drive one battered unloaded test pile (20"ø) of the lengths noted in the position of permanent piles in each of the following locations as directed by the Engineer.

Pier № 1 - 65' long
Pier № 3 - 65' long
Pier № 4 - 65' long
Pier № 6 - 65' long

Drive one timber test piling (treated or untreated) 55 ft. long in the vicinity of each fender



SECTION C-C

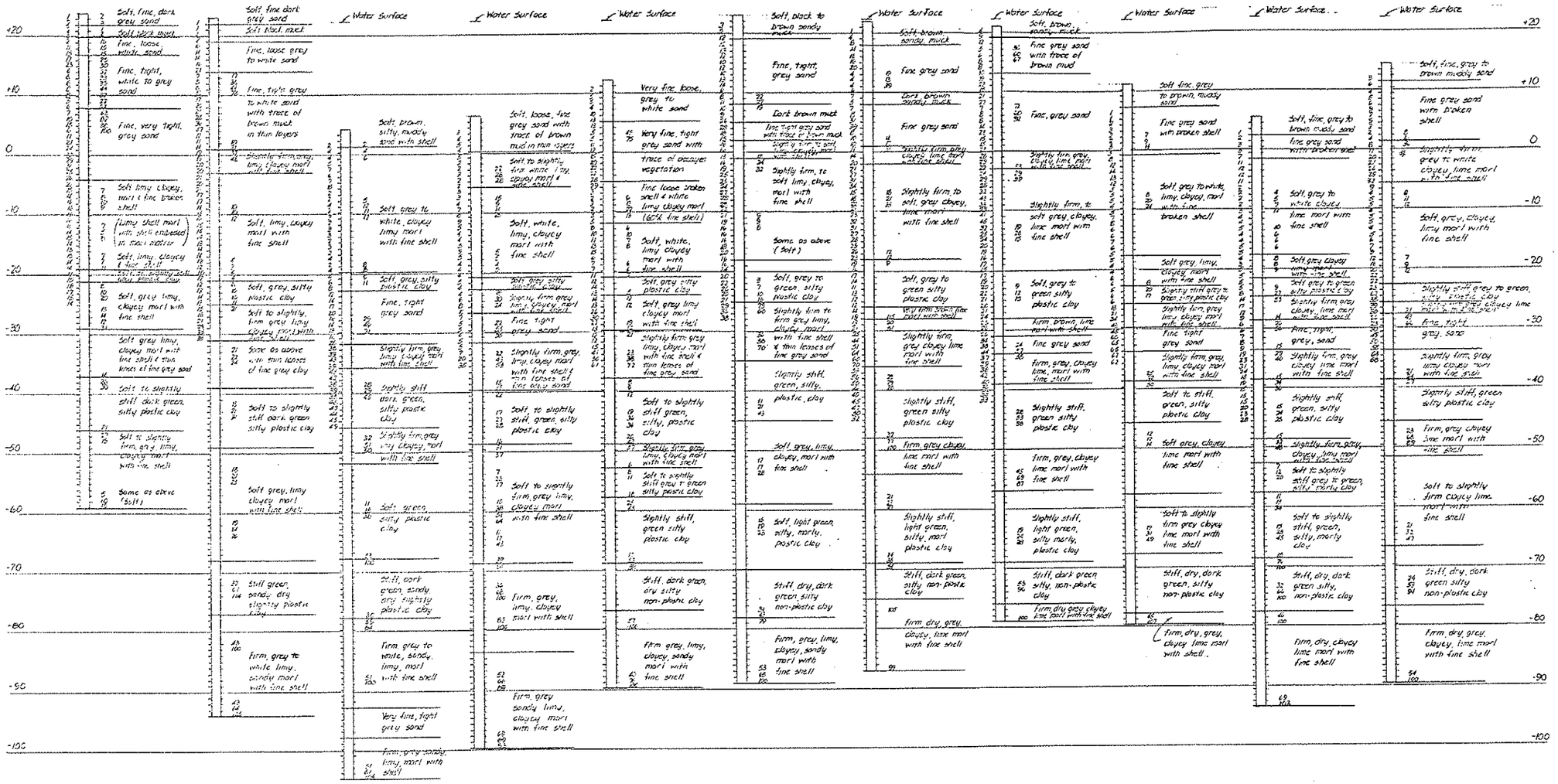
PLAN AND ELEVATION

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	S.R. 70	OKEECHOBEE	91070-3502
3/67 APP.	Raised footings on Piers			

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-1



Note:
For Boring locations see Sheets 8-1 and 8-20

General Data

Date: 11-20-64 Thru 12-17-64
Contractor: State Core Drill Unit
Type of Rig: Sullivan HD-22
Casing: Inside Diameter 2.5"
Outside Diameter 2.9"
Weight of Hammer 490#
Average Drop of Hammer 24"
Spoon: Inside Diameter 1.5"
Outside Diameter 2.0" 5' long
Weight of Hammer 140#
Average Drop of Hammer 30" *
* Except for Hole No. 9 Which Was 24"

Numbers at left of Boring Columns are blows per foot on Casing at Elevations shown.
Numbers at right of Boring Columns are blows per foot on Spoon at Elevations shown.

Vertical Scale : 1" = 10'

BORING LOGS

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

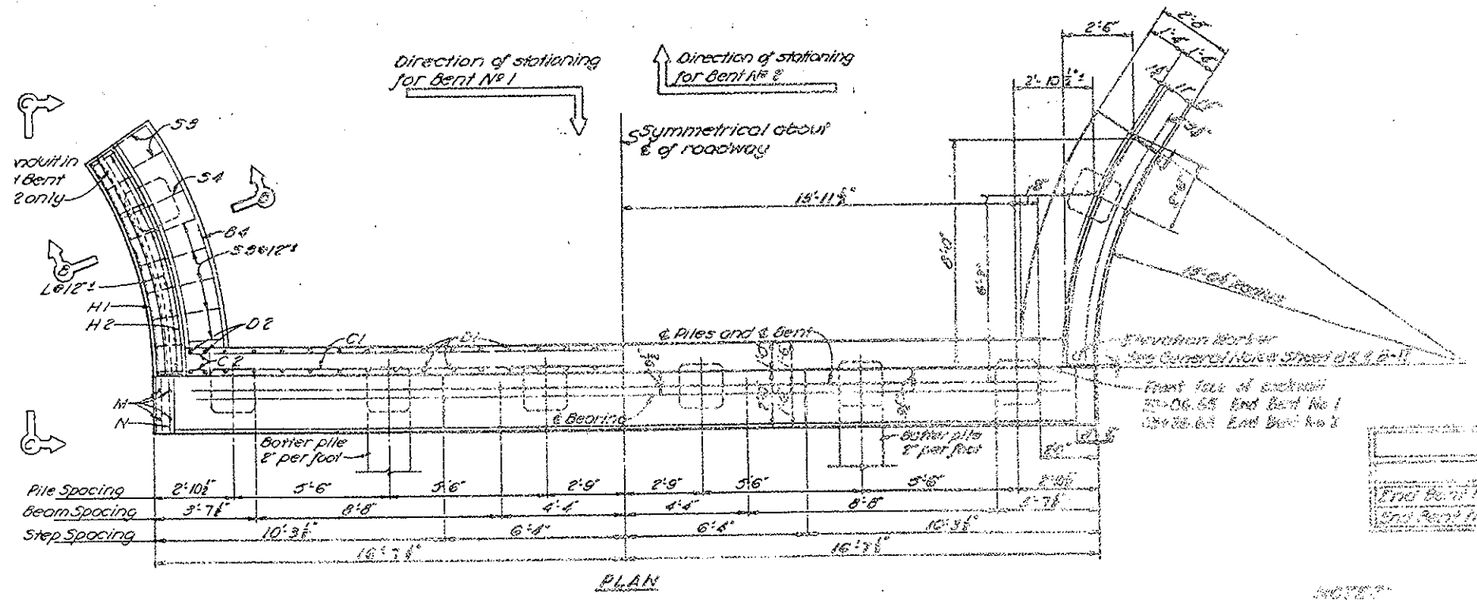
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

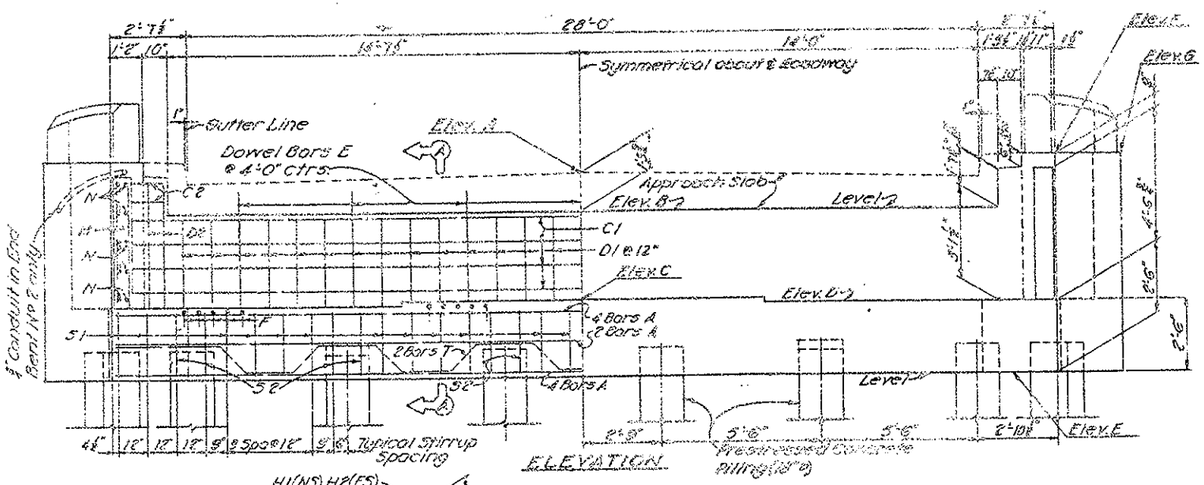
REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R. 70	OKEECHOBEE	91070 - 3502

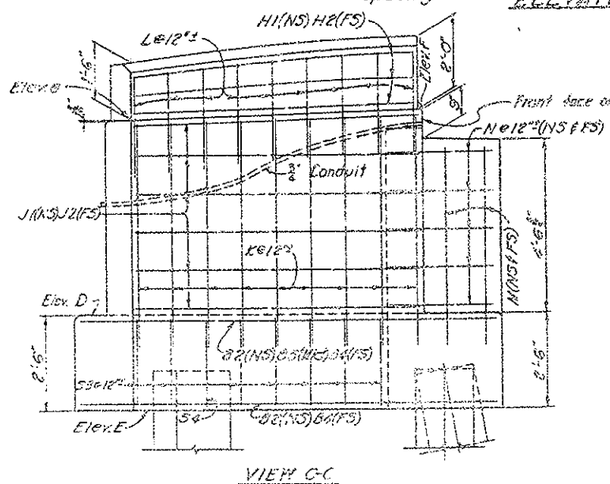
	Names	Dates	APPROVED BY
Detailed by	S.J.H.	1-65	
Checked by	R.A.R.	1-65	
Quantities by			Assistant State Highway Engineer
Checked by			Drawing No. 3 of 23
Traced by			Index No. 875

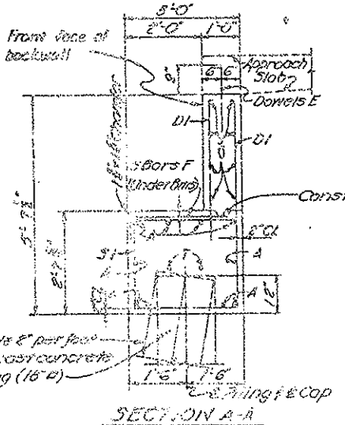
EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-2

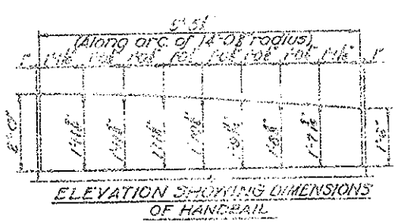
STATE JOB Nº 91070-3502

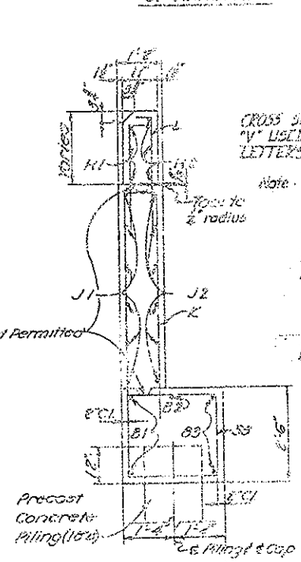


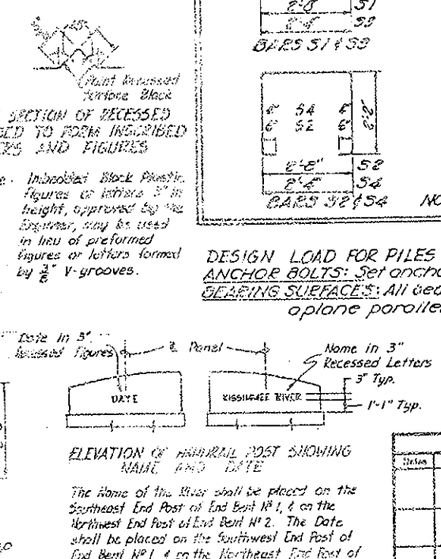












ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Class A Concrete	Cu.Yd.	21.5 *
Reinforcing Steel	Lb.	2523 *
Prestressed Concrete Piling (18"ø)	Lin.Ft.	" "

* Bill of Reinforcing Steel and Estimated Quantities are for one End Bent only.
** See Estimated Bridge Quantities.

TABLE OF REACTIONS

	A	B	C	D	E	F	G
End Bent Nº 1	42.0 K	80.51	57.39	57.39	34.69	48.10	42.58
End Bent Nº 2	40 K	78.20	56.27	36.19	33.65	41.44	41.98

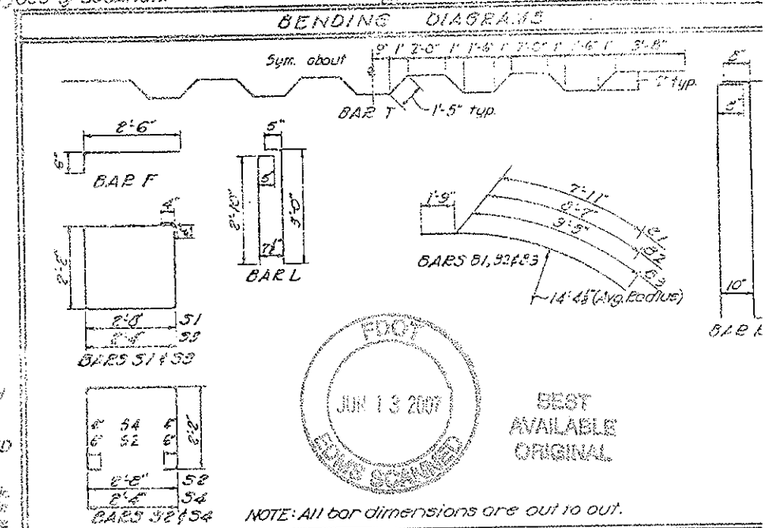
BILL OF REINFORCING STEEL *

Mark	Size	Nº Reqd.	Length	Bending
A	5	10	32'-11"	Straight
B1	5	4	9'-8"	See diagram
B2	5	2	10'-4"	"
B3	5	"	11'-0"	"
C1	4	8	32'-11"	Straight
C2	4	8	1'-8"	"
D1	4	16	4'-0"	"
D2	4	6	5'-8"	"
E	5	7	16"	"
F	5	20	10"	See diagram
H1	4	2	2"	Field bend
H2	"	6	"	"
J1	"	12	"	"
J2	"	12	"	"
J4	"	10	3'-8"	See diagram
K	"	8	"	"
L	"	8	"	"
N	"	18	5'-5"	Straight
S1	4	24	10'-6"	See diagram
S2	4	12	8'-10"	"
S3	4	14	9'-6"	"
S4	4	2	7'-2"	"
T	6	2	37'-0"	"

NOTES:

1. Concrete, reinforcing steel and piles on wings shall be paid for at the contract unit price for Class A Concrete and Reinforcing Steel and have been included in the quantities shown on this sheet.
2. Beam seat elevations shall be on the front face of backwall.

BENDING DIAGRAMS



GENERAL NOTES

DESIGN LOAD FOR PILES (Except Wing Piles): 40 Tons, Wing Piles: 20 Tons.
ANCHOR BOLTS: Set anchor bolts as shown on prestressed beams details.
BEARING SURFACES: All bearing surfaces for prestressed beams shall be finished to a plane parallel to the bottom of the beams.

END BENTS

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO
Dates	Descriptions	S.R. 70	OKEECHOBEE	91070-35

	Names	Dates
Detailed by	R.E.P.	1-65
Checked by	R.A.R.	1-65
Quantities by	R.A.R.	1-65
Checked by	S.J.H.	1-65
Traced by		

Assistant State Rd.

Drawing No. 5 of 23 | Sheet No.

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-3

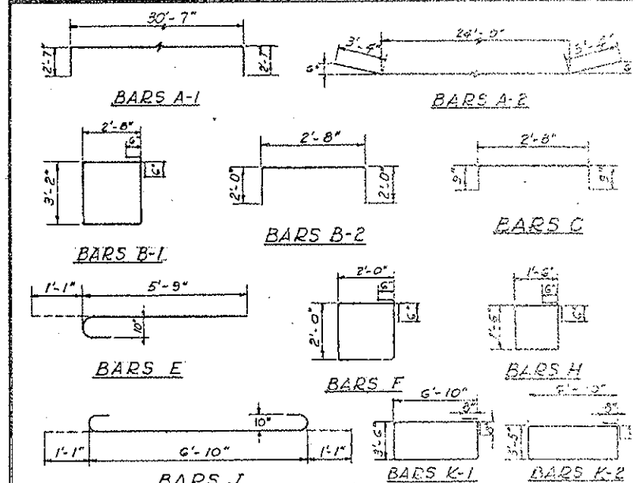
FED. ROAD DIV. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	CHECK NO.
3	FLA.		65		B-1

STATE JOB Nº 91070-3502

BILL OF REINFORCING STEEL

MARK	SIZE	No. REQD. PER PIER No. 1	No. REQD. PER PIER No. 6	LENGTH	BENDING
A-1	9	8	8	35'-9"	See diagram
A-2	9	8	8	30'-8"	" "
A-3	9	2	2	30'-7"	Straight
B-1	4	34	34	12'-8"	See diagram
B-2	4	16	16	6'-8"	" "
C	4	20	20	4'-2"	" "
D-1	8	24	— 12-8	(15'-2")	Straight
D-2	8	—	24 11-12	(14'-3")	"
E	8	24	24	6'-10"	See diagram
F	4	(26) 22	(24) 20	9'-0"	" "
G	8	8	8	20'-6"	Straight
H	4	17	17	7'-0"	See diagram
J	8	40	40	9'-0"	" "
K-1	5	8	8	22'-0"	" "
K-2	5	4	4	21'-10"	" "
L	5	8	8	6'-10"	Straight

BENDING DIAGRAMS

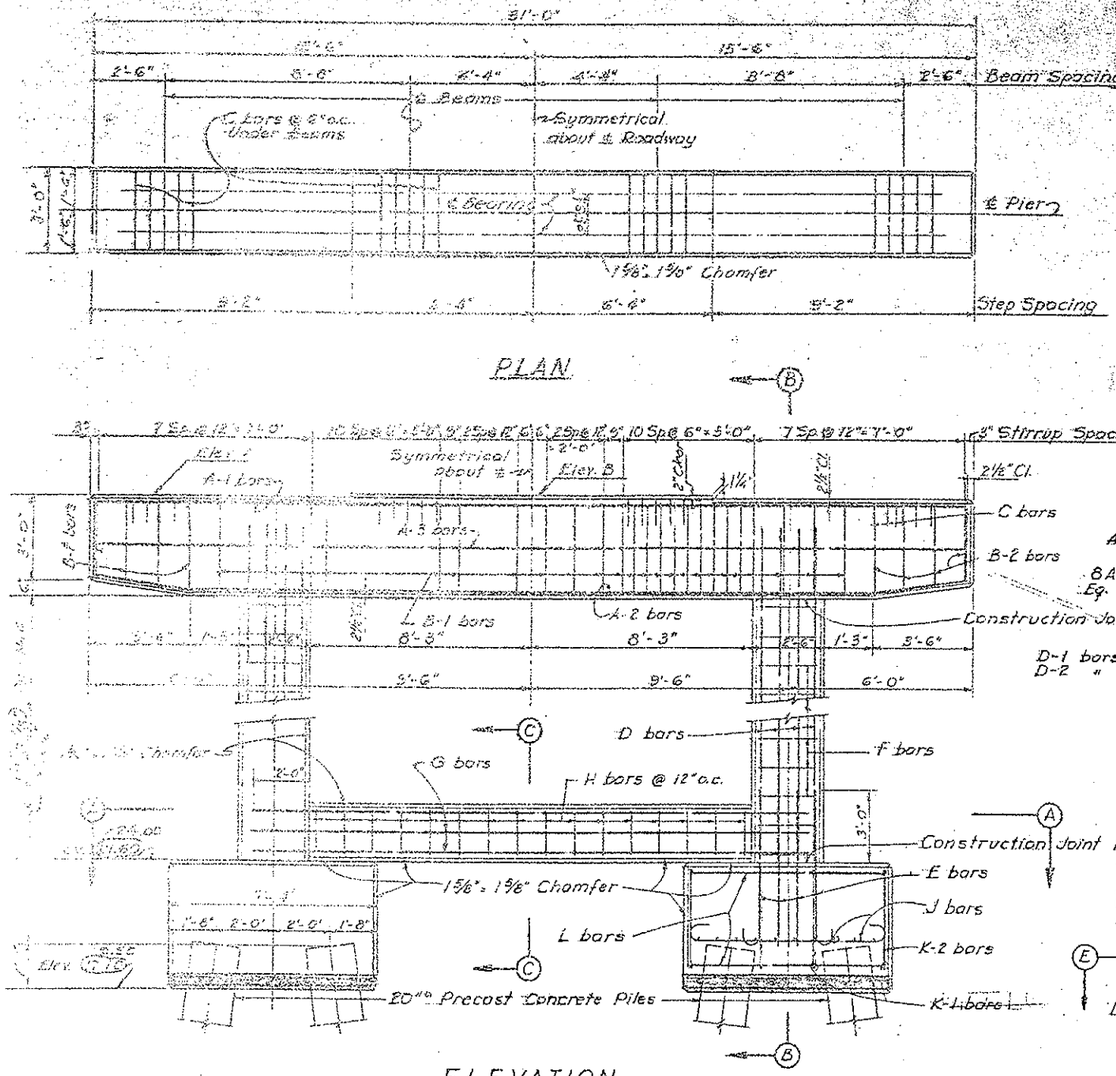


NOTE: All bar dimensions are out to out

ESTIMATED QUANTITIES

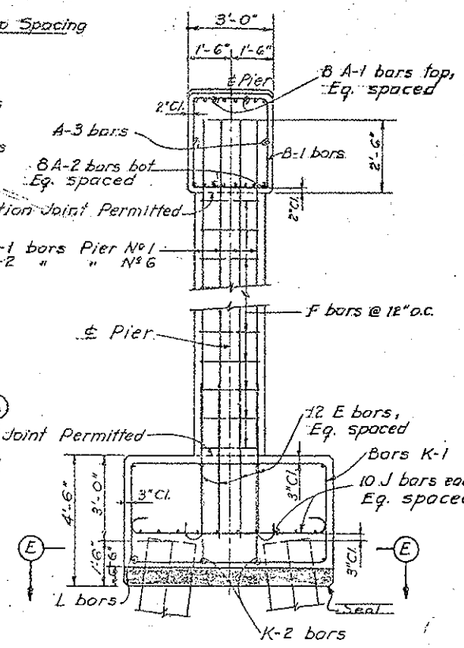
ITEM	UNIT	QUANTITY PIER No. 1	QUANTITY PIER No. 6
Class "A" Concrete	Cu. Yd.	(370) 355	(370) 355
Reinforcing Steel	Lb.	(38006)	(37356)
Precast Concrete Piling (20" ⌀)	Lin. Ft.	* 5627	* 5527

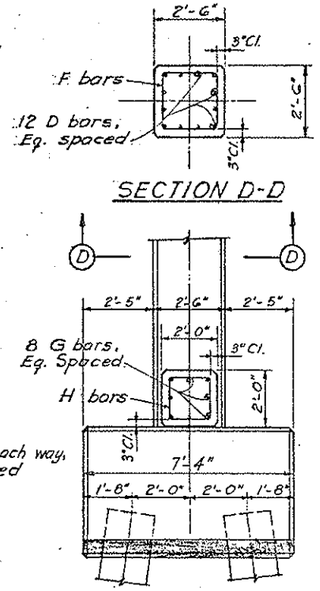
* See Estimated Bridge Quantities



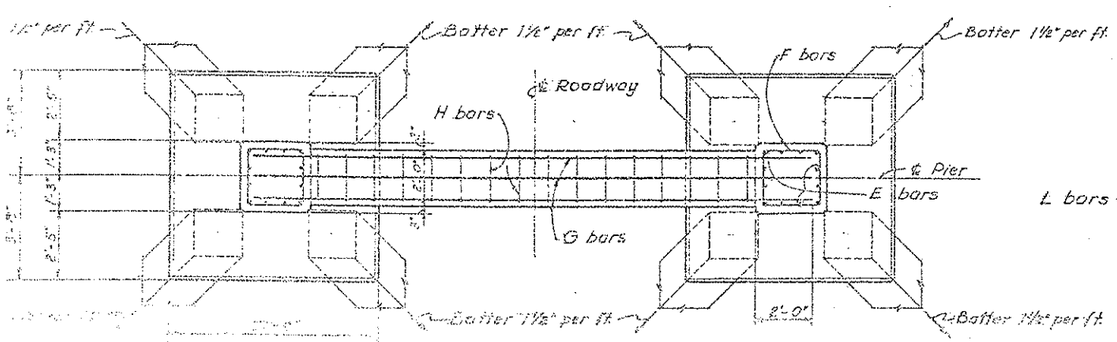
ELEVATIONS		
POINT	PIER Nº 1	PIER Nº 6
A	37.73	36.83
B	37.87	36.97

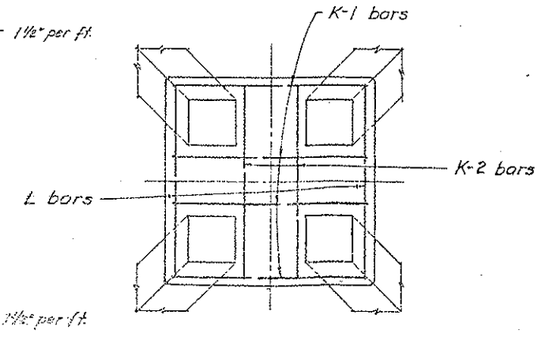
Elevations A and B are at ℄ of piers





Note: Seal Concrete shall be Class "A" and may at the option of the contractor be either poured simultaneously with the pier footing or prior to placing the footing concrete.





EDOT JUN 13 2017 BEST AVAILABLE ORIGINAL

GENERAL NOTES

ANCHOR BOLTS: Set anchor bolts as shown on prestressed beam det.

BEARING SURFACES: All bearing surfaces for prestressed beams shall be finished to a plane parallel to the bottom of the beams.

PIERS Nº 1 AND 6

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

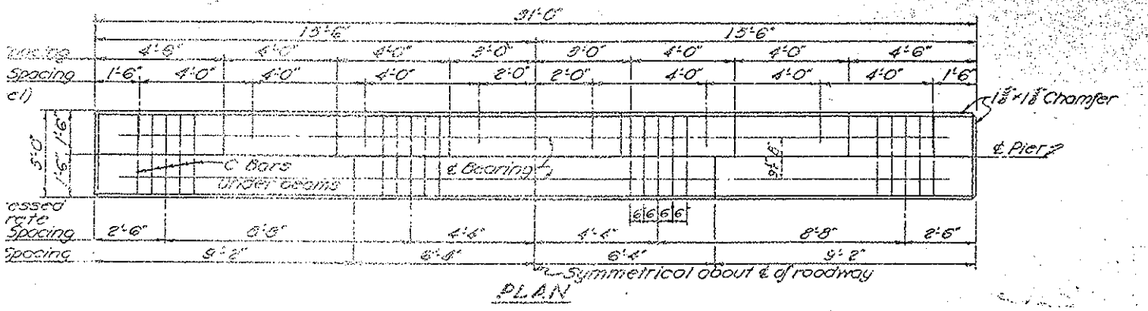
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R. 70	OKEECHOBEE	91070-3502
3-24-65	Raised footings by 2.0			
5-11-65	Revised name, & total quantities accordingly	Detailed by	Names: G.A.R.	Dates: 9/64
			APPROVED BY	

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-4

FED. ROAD DIV. No.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.		65	B-7

STATE JOB Nº 91070-3502



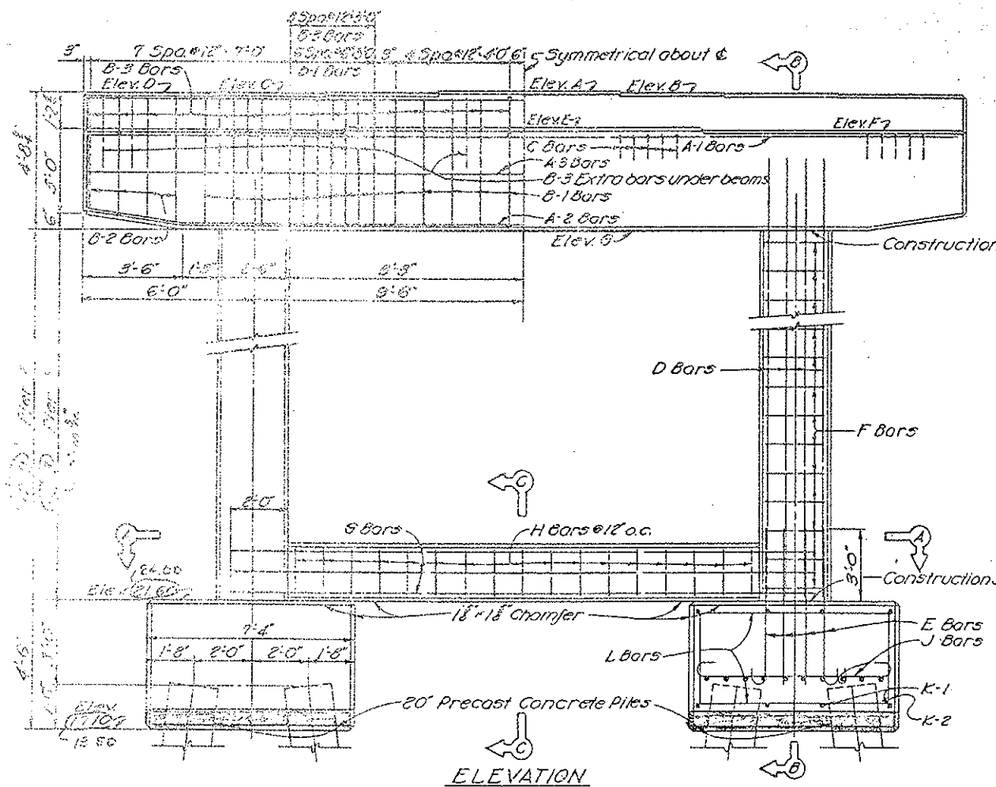
ELEVATIONS

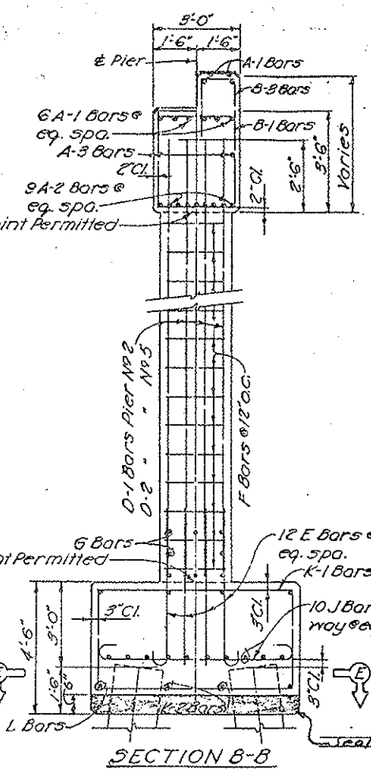
	A	B	C	D	E	F	G
PIER 2	39.82	39.25	39.19	39.13	38.03	37.90	34.40
PIER 3	38.78	38.71	38.65	38.59	37.49	37.36	33.86

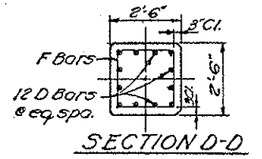
Elevations A, B, C, D, E, F ℗ ℄ of Piers.

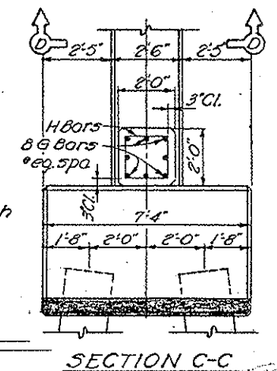
BILL OF REINFORCING STEEL

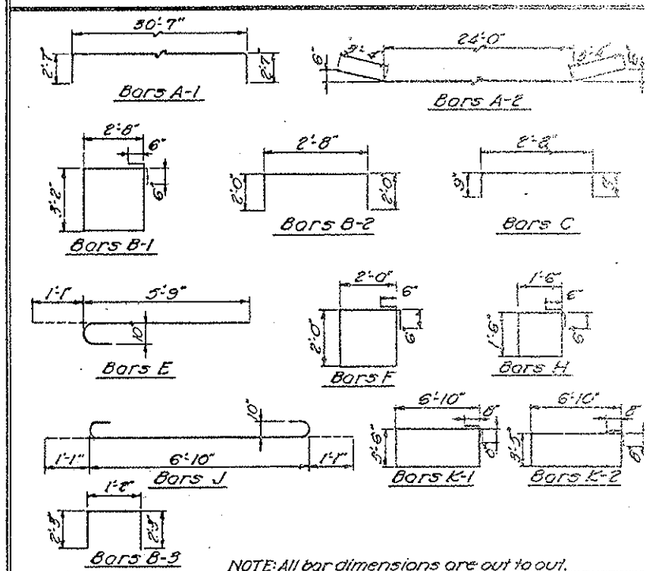
Mark	Size	Nº Reqd per Pier Nº 2	Nº 5	Length	Bending
A-1	9	8	8	35'-9"	See diagram
A-2	9	9	9	30'-8"	"
A-3	9	2	2	30'-7	Straight
B-1	4	30	30	12'-8"	See diagram
B-2	4	16	16	6'-8"	"
B-3	4	46	46	3'-8"	"
C	4	20	20	4'-2"	"
D-1	6	24		12'-11" (5'-4")	Straight
D-2	6		24	14'-9" (12'-4")	"
E	8	24	24	6'-10"	See diagram
F	4	(26)22	(26)22	9'-0"	"
G	8	8	8	20'-6	Straight
H	4	17	17	7'-0"	See diagram
J	8	40	40	9'-0"	"
K-1	5	8	8	22'-0"	"
K-2	5	4	4	21'-10"	"
L	5	8	8	6'-10"	Straight









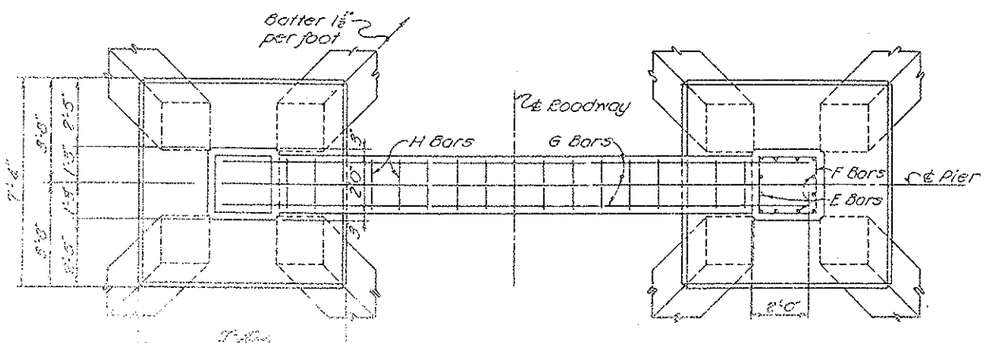


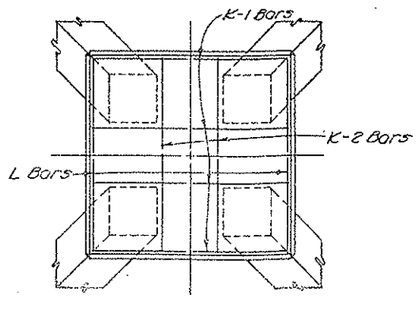
NOTE: All bar dimensions are out to out.

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY PIER Nº 2	PIER Nº 3
Class "A" Concrete	Cu. Yd.	93.3	95.0
Reinforcing Steel	Lb.	(6061)	(6072)
Precast Concrete Piling (20"ø)	Lin. ft.	*560	*560

*See Estimated Bridge Quantities





GENERAL NOTES

ANCHOR BOLTS: Set anchor bolts as shown on prestressed and steel beam details.

BEARING SURFACES: All beam bearing surfaces shall be finished to a plane parallel to the bottom of the beams for prestressed beams. Bearing surfaces for steel beams to be level.

PIERS Nº 2 and 3

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R. 70	OKEECHOBEE	91070-3502
3-24-65	Raised footing 2.9' Reduced conc. & steel quan. 4-9-65 accordingly		Names	Dates
5-11-65		Detailed by	E.E.P.	1-65
		Checked by		
		Approved by		

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-5

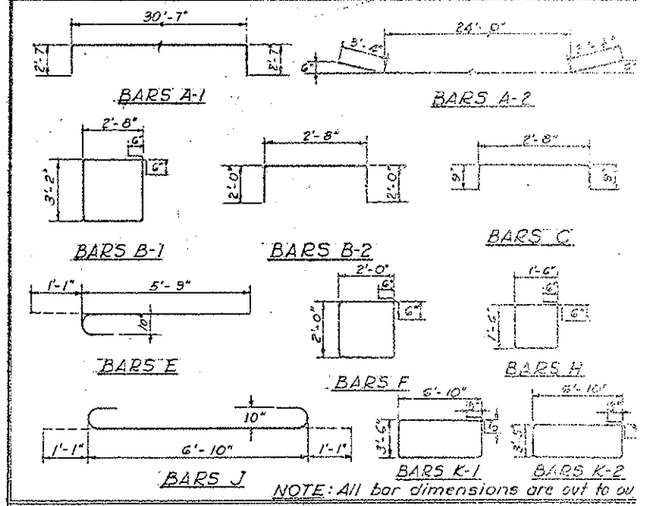
DIV. No.	STATE	PROJECT NO.	YEAR	SHEET NO.
3	FLA.		65	B-6

STATE JOB Nº 91070-3502

BILL OF REINFORCING STEEL

MARK	SIZE	Nº REQ'D PER PIER Nº 3	Nº 4	LENGTH	BENDING
A-1	9	4	4	35'-9"	See diagram
A-2	9	9	9	30'-8"	" "
A-3	9	2	2	30'-7"	Straight
B-1	4	30	30	12'-8"	See diagram
B-2	4	16	16	6'-8"	" "
C	4	40	40	4'-2"	" "
D-1	8	24	16-1	(16'-6")	Straight
D-2	8	—	24	(16'-2")	13'-11" "
E	8	24	24	6'-10"	See diagram
F	4	(28) 24	(28) 24	9'-0"	" "
G	8	8	8	20'-6"	Straight
H	4	17	17	7'-0"	See diagram
J	8	40	40	9'-0"	" "
K-1	5	8	8	22'-0"	" "
K-2	5	4	4	21'-10"	" "
L	5	8	8	6'-10"	Straight

BENDING DIAGRAMS

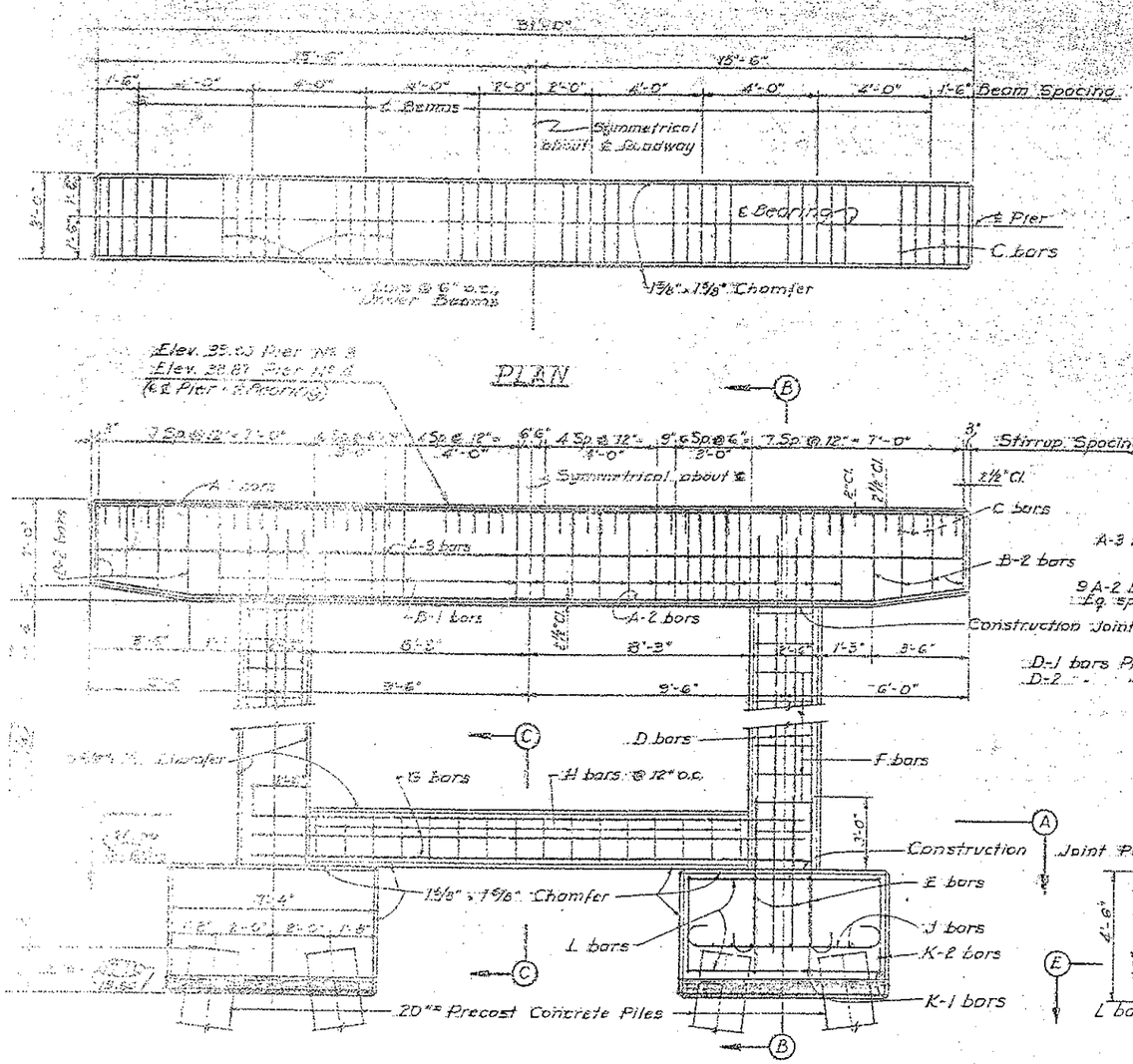


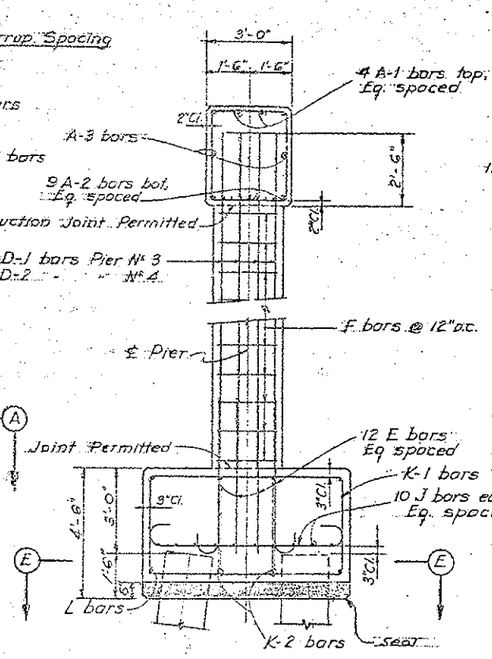
NOTE: All bar dimensions are out to ou

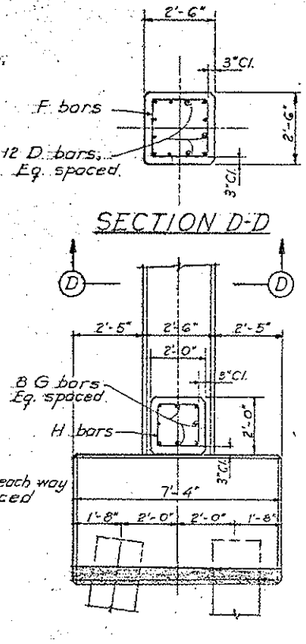
ESTIMATED QUANTITIES

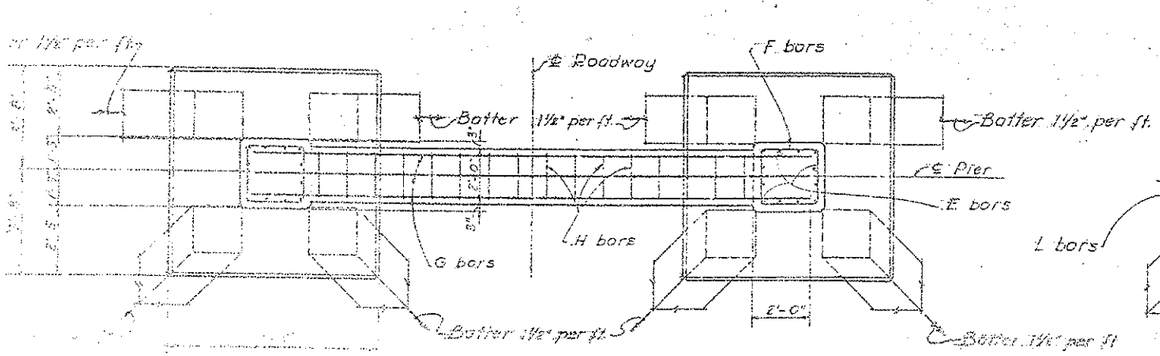
ITEM	UNIT	QUANTITY PIER Nº 3	PIER Nº
Class "A" Concrete	Cu. Yd.	(17.4) 26.3	(17.3) 3
Reinforcing Steel	Lb.	(6 543)	(6 532)
Precast Concrete Piling (20"ø)	Lin. Ft.	* L 536.4	* L 53

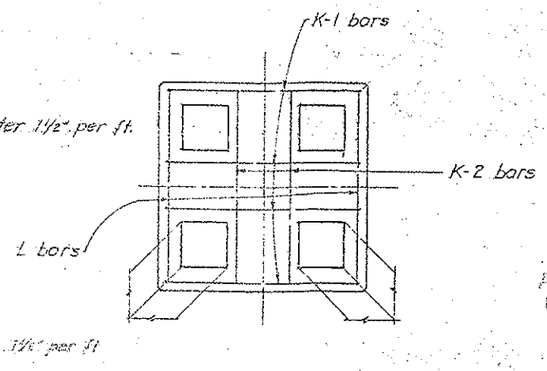
* See Estimated Bridge Quantities











GENERAL NOTES

ANCHOR BOTS: Set anchor bolts as show on steel beam details.
BEARING SUEFACES: All beam bearing surfaces shall be finished too level plane.

BEST AVAILABLE ORIGINAL

FILED JUN 13 2000

PIERS Nº 3 AND 4

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R. 70	OKEECHOBEE	91070-3502
9-26-66 S.N.H.	Raised footings by 2'-9". Revised conc. & steel quantities accordingly.		Names	Dates
		Detailed by	G. A. R.	9-64
		APPROVED BY		

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-6

STATE JOB Nº 91070-3502

BILL OF REINFORCING STEEL

MARK	SIZE	Nº REQD	LENGTH	BENDING
A	5	144	29'-9"	Straight
B	7	1	30'-7"	See diagram
C	4	200	29'-5"	Straight
D	5	17	7'-6"	See diagram
E	3	12	10"	" "
F	5	108	11"	" "
G	4	24	2'-4"	See diagram
H	4	24	5'-5"	" "
J-1	6	16	7'-7"	Straight
J-2	5	8	7'-7"	"
K-1	5	8	7'-7"	"
K-2	6	2	7'-7"	"
L	6	16	5'-5"	Straight
M	1"ø	1	2'-6"	"
N *	4	2	2'-4"	See diagram

* Bars N in Spans 1 and 7 only

BEARING AREAS

NOTE: All bar dimensions are out to out.

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY PER SPAN Nº1	Nº2	Nº6	Nº7
Class "A" Concrete	Cu. Yd.	52.1	52.0	52.1	52.1
Reinforcing Steel	Lb.	13,407	13,400	13,400	13,407
Prestressed Beams (Type III)	Lin. Ft.	237.0	237.0	237.0	237.0

NOTES:

1. Bar M shall be a 1" smooth round bar of structural or intermediate grade steel with coarse threads and heavy duty nuts.
2. Slabs shall be screeded to grade with no allowance for permanent camber. The slabs shall be screeded longitudinally between bulkheads, unless otherwise directed by the Engineer.

SUPERSTRUCTURE: SPANS 1, 2, 6 & 7

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

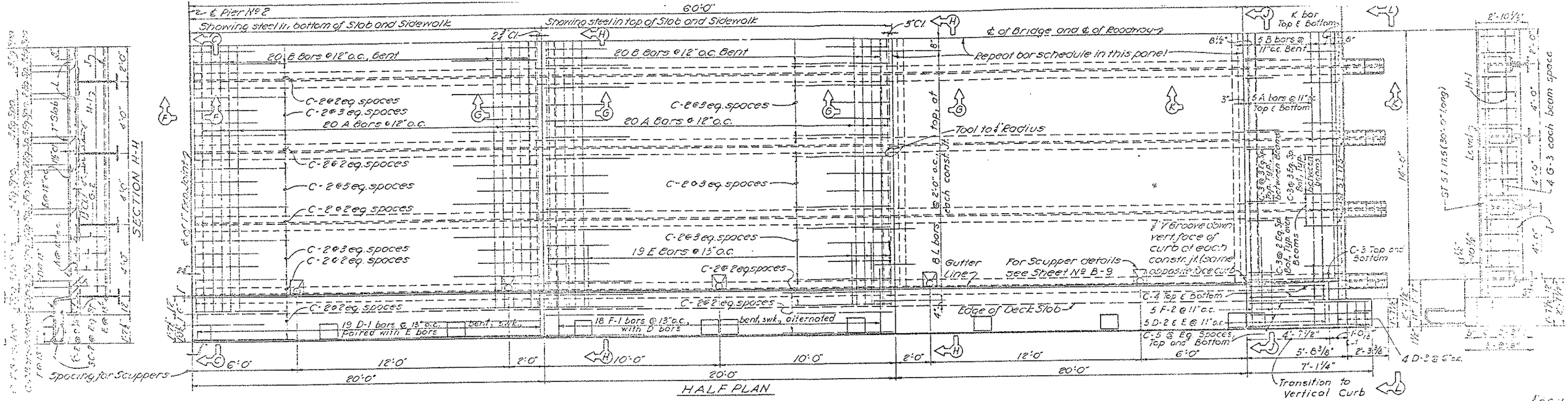
REVISIONS	ROAD NO.	COUNTY	PROJECT NO.
Dates / Descriptions	S.R. 70	OKEECHOBEE	91070-3502

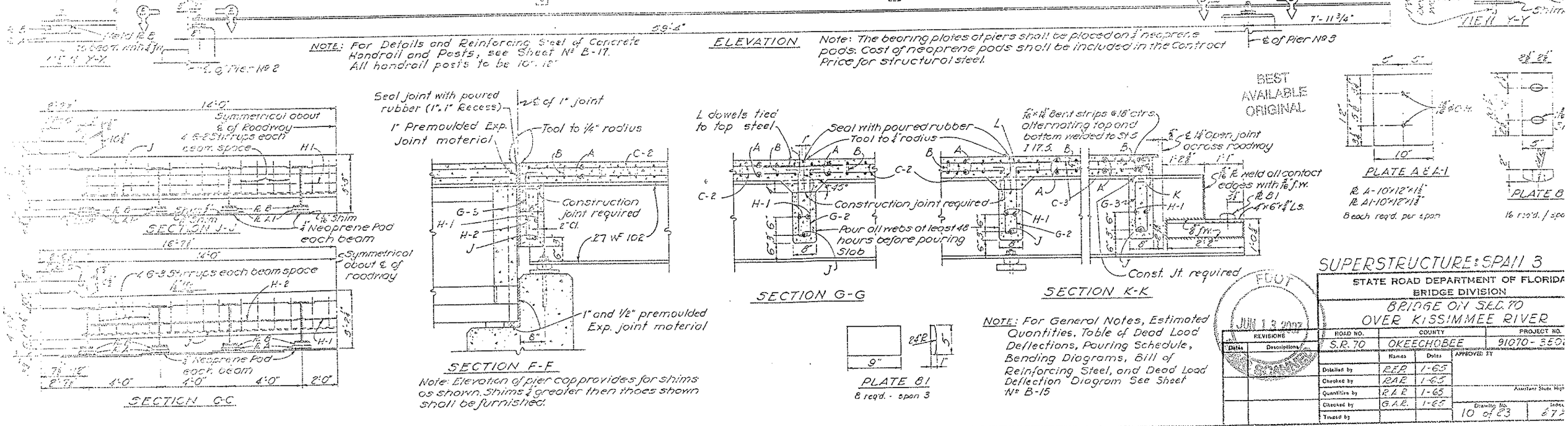
	Names	Dates	APPROVED BY
Detailed by	G.A.R.	10-64	
Checked by	R.A.R.	11-64	
Quantities by	G.A.R.	11-64	Assistant State Highway Engineer
Checked by	R.A.R.	11-64	
Traced by	G.A.R.	10-64	Drawing No. 9 of 23 / Index No. 8795

JUN 13 2006

BEST AVAILABLE ORIGINAL

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-7





SUPERSTRUCTURE : SPAN 3

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

BRIDGE ON SR 70 OVER KISSIMMEE RIVER

FDOT JUN 13 2007

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R. 70	OKEECHOBEE	91070-3502

	Names	Dates
Detailed by	R.E.P.	1-65
Checked by	R.A.E.	1-65
Quantities by	R.A.E.	1-65
Checked by	G.A.R.	1-65
Traced by		

APPROVED: BY
Assistant State Highway Engineer
Drawing No. 10 of 23
Index 277

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-8

STATE JOB Nº 91070-3502

SECTION A-A

3" Deep Steel Flooring welded to stringers according to Manufacturers Specifications

Level 2

1" Rodius

4 WF 13

4'-10"

4'-5"

0'-2"

0'-7"

0'-8"

0'-10" Roadway

Scuppers at Low Point

Conduit 3"ø

15'-0"

15'-11"

41'-18"

24 WF 76

3" Steel Flooring

2" Open Joint

6 WF 25

10 U 15.3

Trussed diaphragm L 5 x 3½ x ⅜ W.P. 2 Stiffeners (1 each)

Longitudinal cover plate for details see sheet 9-C

Conc. Curb Weld

12 U 20.7

1" Rodius

Conc. Curb Weld

3" Steel Floor

10 U 15.3

2" (to fit contact surface of 12 to 20.7)

24 WF 76

SECTION B-B

8 U 18.75

1" Clr. Pl.

1" Dia.

1" Rodius

10 U 15.3

24 WF 76

Weld U to 24 WF 76

SECTION D-D

Movable Hinge Assembly (see detail) 5'-8½"

Fixed Hinge Plate (See detail)

Provide Shims See sheet 9-10

27 WF 102

Shim ¼" normal Provide for ½"

24 WF 76

Bearing of 3" Deep Steel Flooring

2" Open Joint

Shim ¼" normal Provide for ½"

27 WF 102

Provide Shims See sheet 9-12

℄ Bearing

℄ Pier Nº 3

℄ Pier Nº 4

SECTION AT ℄ ROADWAY

Spacing of handrail posts

5-12 U 20.7

1" Clr. Pl.

10 U 15.3

Hinged End

24 WF 76

Rest End

2" Open Joint

SIDE ELEVATION

Pier Nº 3

2"x2"x⅜" L

1" Clr. Pl.

1" Bar

8 U 18.75

10 U 15.3

24 WF 76

SECTION E-E

12 U 20.7

Weld on inside only AT HINGED END

Weld top & bottom AT REST END

DETAILS AT END OF HANDRAIL

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Structural Steel (Movable Span)	Lump Sum	*
3" Deep Steel Flooring	Sq. Ft.	1171

* See Estimated Bridge Quantities. Approximately 39,966 lbs Carbon Steel.

FDOT JUN 13 2007 RECEIVED

BEST AVAILABLE ORIGINAL

SUPERSTRUCTURE : SPAN 4

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R. 70	OKEECHOBEE	91070-3502

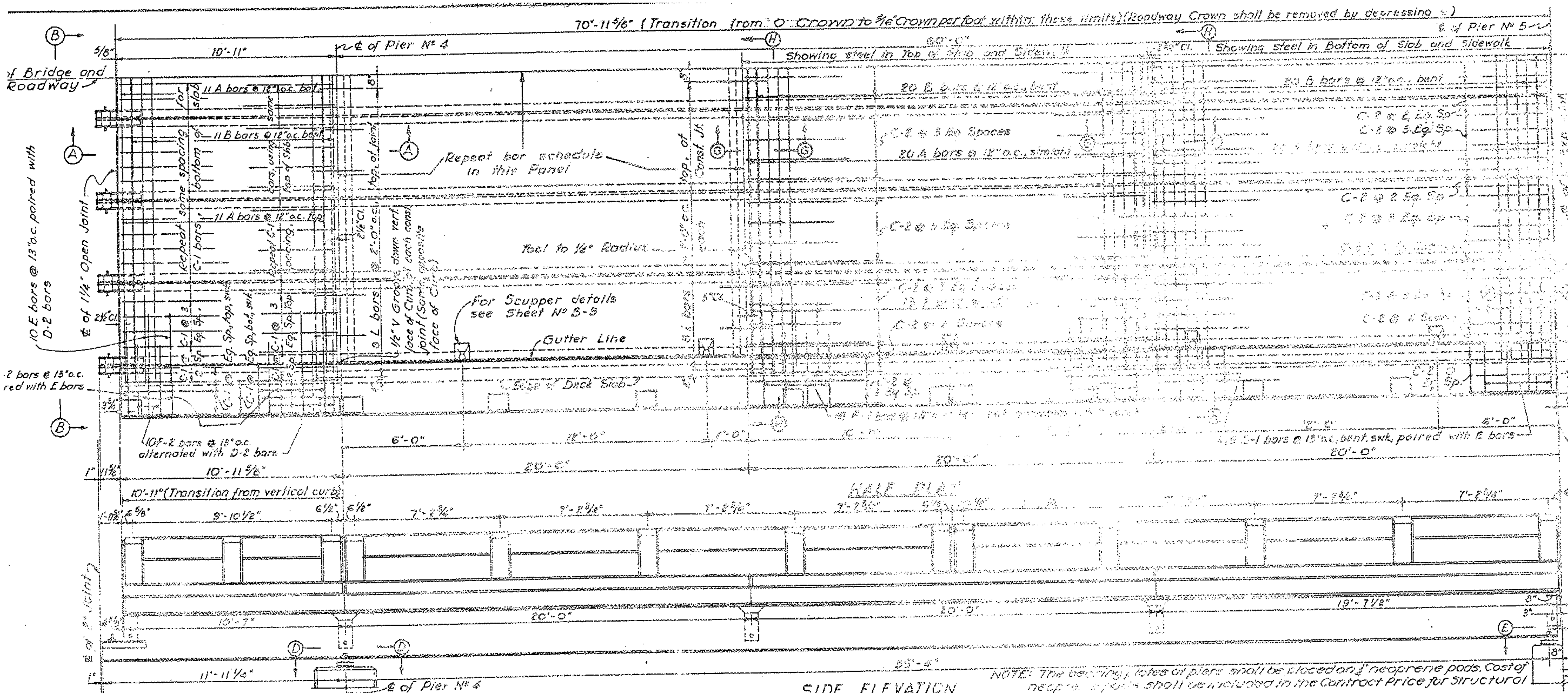
	Names	Dates	APPROVED BY
Detailed by	R.E.P.	11-64	
Checked by	R.A.R.	11-64	
Quantities by	R.A.R.	1-65	
Checked by	B.H.M.	1-65	
Traced by	R.E.P.	11-64	

Drawing No. 11 of 29

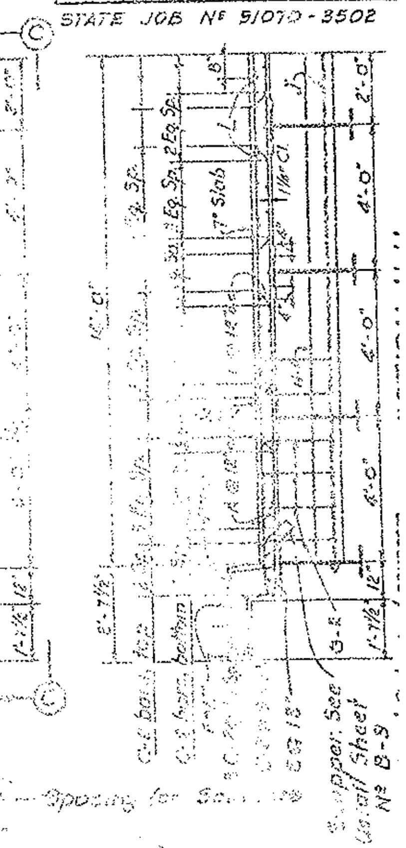
Index No. 87128

Okeechobee State Highway System

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-9

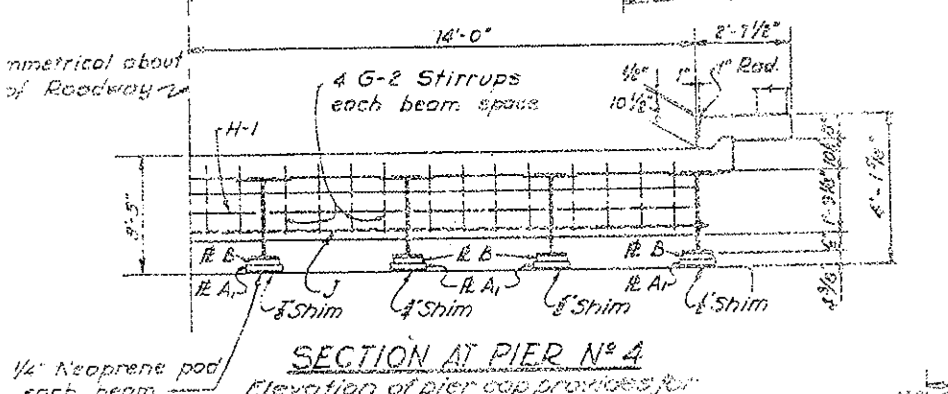


NOTE: The bearing plates at piers shall be placed on 1/4" neoprene pads. Cost of neoprene pads shall be included in the Contract Price for Structural Steel.



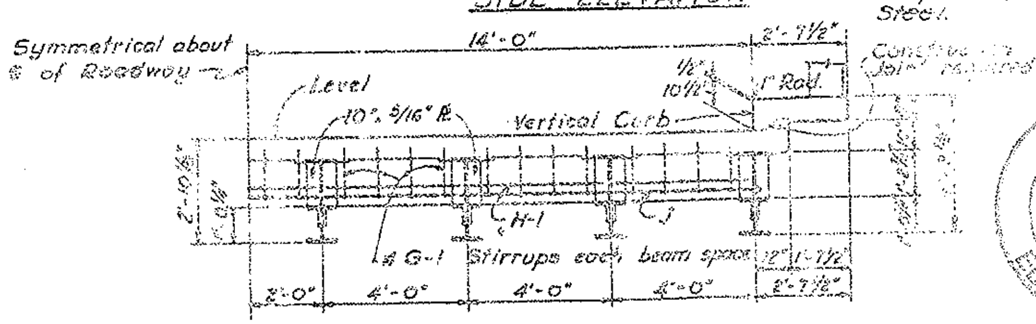
NOTE:
All handrail posts to be 10".

For Details and Reinforcing Steel of Concrete Handrail and Posts, See Sheet Nº B-17

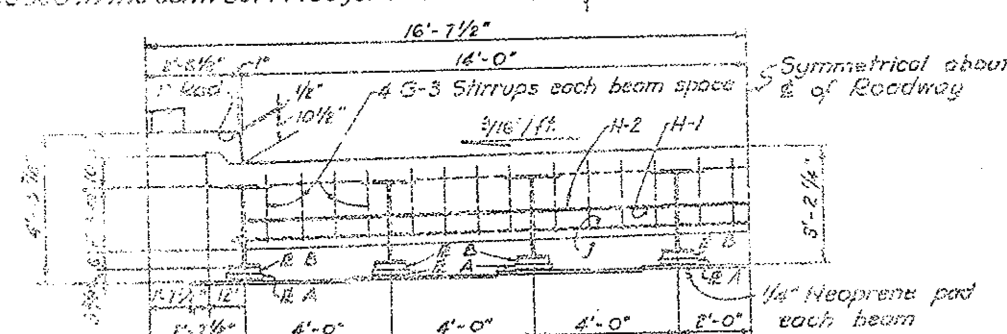


SECTION AT PIER Nº 4

Elevation of pier cap provides for Shims as shown. Shims ⅛" greater than those shown shall be furnished.



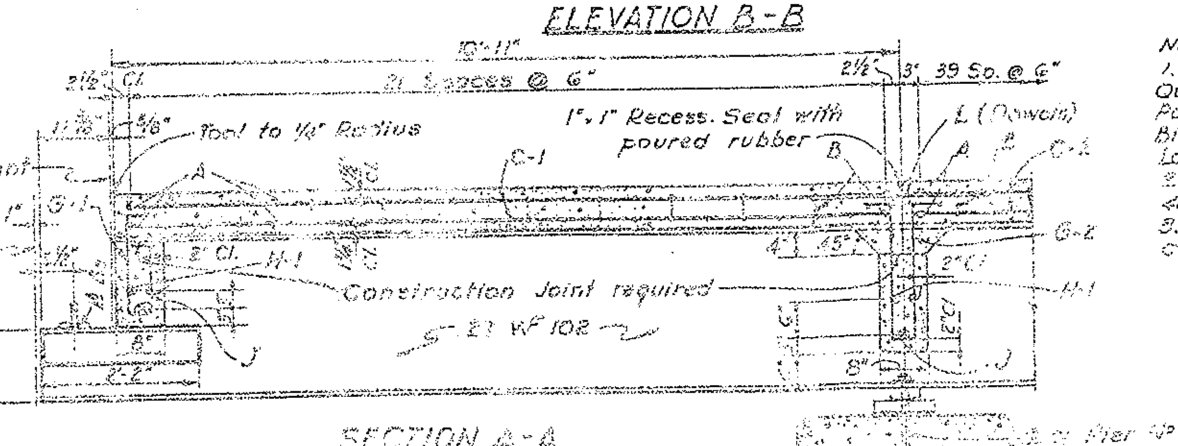
ELEVATION B-B



END ELEVATION C-C

NOTE: For Details of Bearing Plates A, A₁ and B see Sheet Nº B-10
16 Plates B required
8 " A "
8 " A₁ "

NOTE: For Details of Plates B₁ and B₂ see Sheet Nº B-10 and B-15
For Sections D-D, E-E, F-F and G-G, See Sheet Nº B-10



SECTION A-A

NOTES:
1. For General Notes, Estimated Quantities, Table of Dead Load Deflections, Pouring Schedule, Bending Diagrams, Bill of Reinforcing Steel, and Dead Load Deflection Diagram See Sheet Nº B-15
2. All diaphragms must be poured at least 48 hours before pouring slab.
3. For location of ¾" conduit in North curb see Sheets B-1 and B-9.

SUPERSTRUCTURE: SPAN 5

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

ROAD NO.	COUNTY	PROJECT NO.
S.R. 70	OKEECHOBEE	91070-3502

	Names	Date
Detailed by	G.A.R.	11-64
Checked by	R.A.R.	1-65
Quantities by	G.A.R.	11-64

REVISIONS — Dates | Descriptions

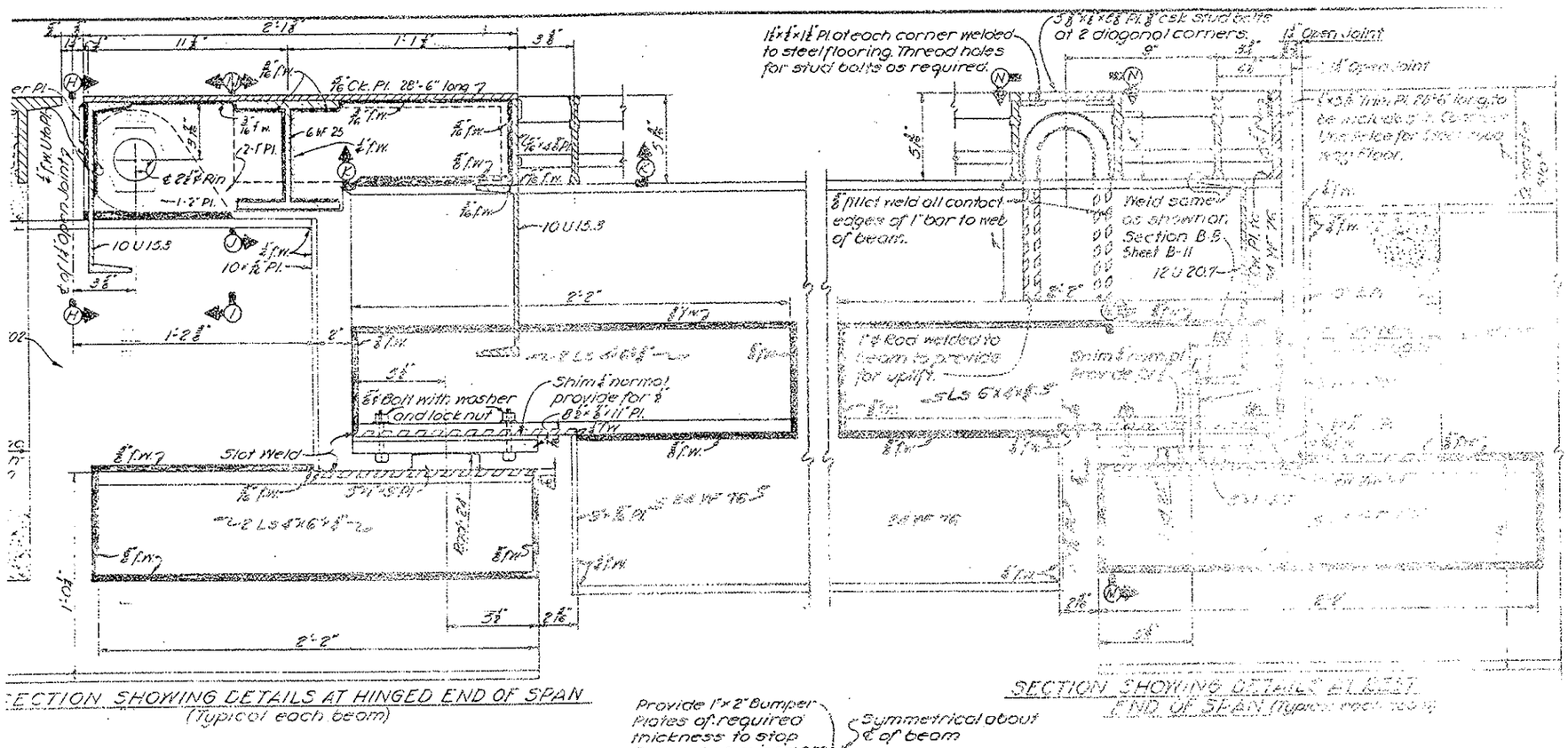
EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-10

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
4	FLA.		65	5-14

STATE JOB Nº 91070 3502

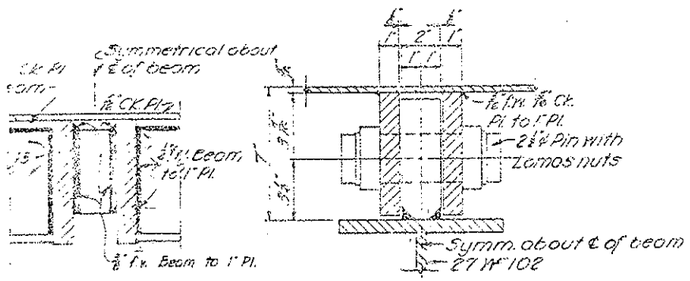
GENERAL NOTES

SPECIFICATIONS: A.A.S.H.O. 1961, with Approved Revisions.
LOADING: H-20 44.
PAINT: See General Notes on Sheet B-1.
FABRICATION OF HINGES: See Special Provisions.
PINS AND BEARINGS FOR HINGE: Turned [illegible] pins
[illegible] bearings with Graphite Paste before
assembly.
WELDS: Cost of welds [illegible] Price
for Structural Steel, shear connectors, or [illegible] steel
[illegible]



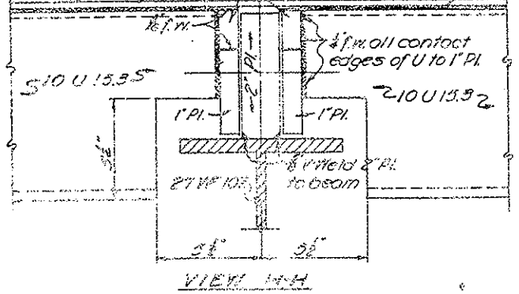
SECTION SHOWING DETAILS AT HINGED END OF SPAN
(Typical each beam)

SECTION SHOWING DETAILS AT REST END OF SPAN (Typical each beam)

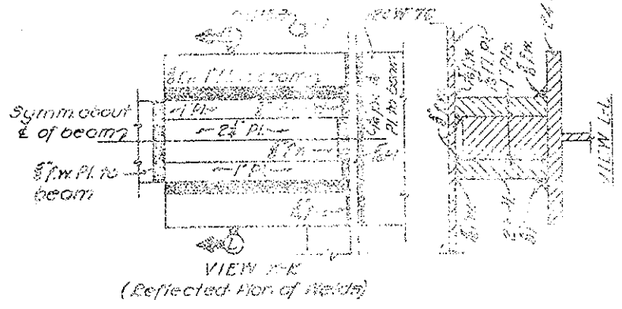


VIEW J-J

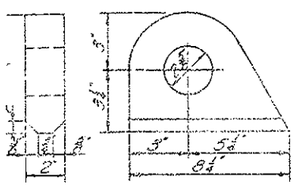
VIEW I-I



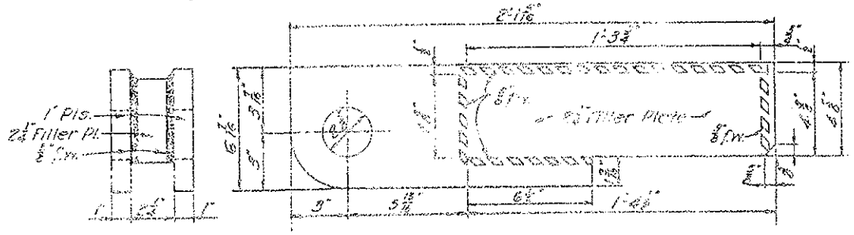
VIEW H-H



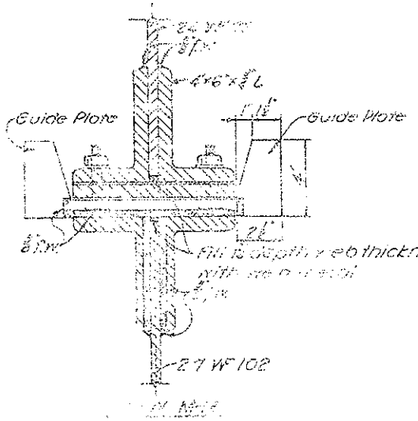
VIEW F-F
(Reflected Plan of Welds)



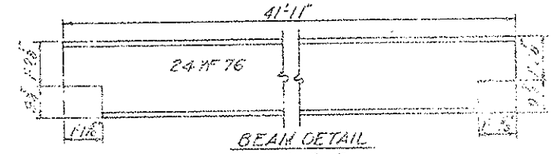
DETAIL AT FIXED HINGE PLATE



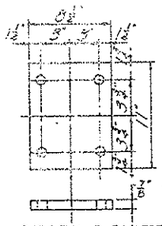
DETAIL OF MOVABLE HINGE ASSEMBLY



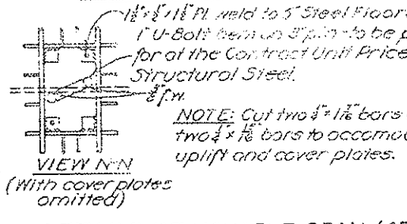
VIEW M-M



BEAM DETAIL



BEARING PLATE



VIEW N-N
(With cover plates omitted)

NOTE: Cut two ⅞"x1'-6" bars and two ¾"x1'-6" bars to accommodate uplift and cover plates.

BEST AVAILABLE ORIGINAL

FDOT JUN 13 2017 LEWIS SCANNED

DETAILS OF MOVABLE SPAN (SPAN 4

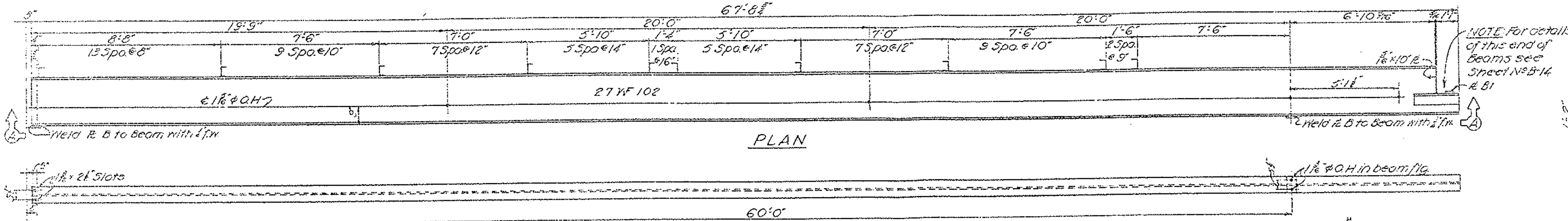
STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Descriptions	S.R. 70	OKEECHOBEE	91070-3502

	Names	Dates	APPROVED BY
Detailed by	R.E.P.	10-64	
Checked by	R.A.R.	11-64	
Quantities by	R.A.R.	1-65	

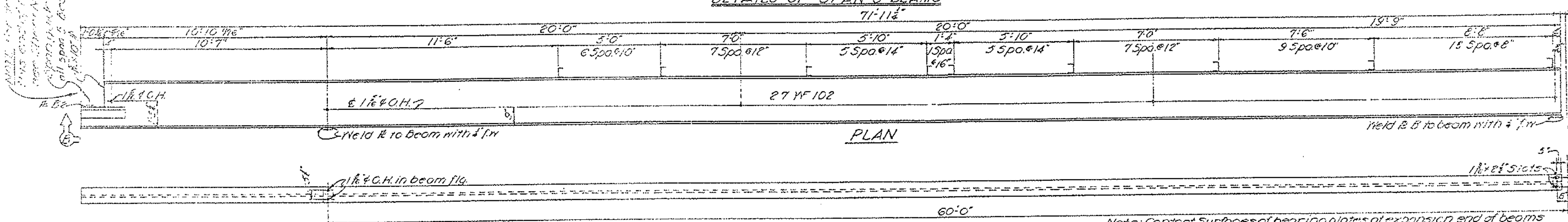
Assistant State Highway Engineer

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-11



VIEW A-A

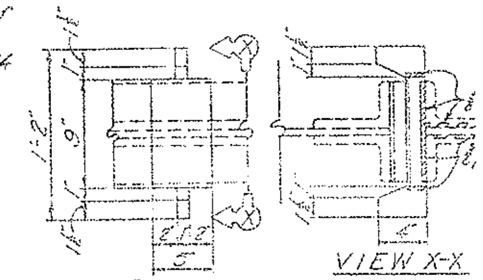
DETAILS OF SPAN 3 BEAMS



VIEW B-B

DETAILS OF SPAN 5 BEAMS

Note: Contact Surfaces of bearing plates at expansion end of beams shall be lubricated with graphite paste at time of erection.



DETAILS OF PLATE B2

(Same as B1 with Guide Plate add

6 req'd - span 5

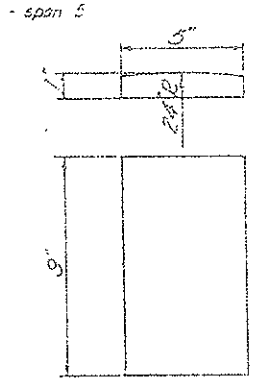
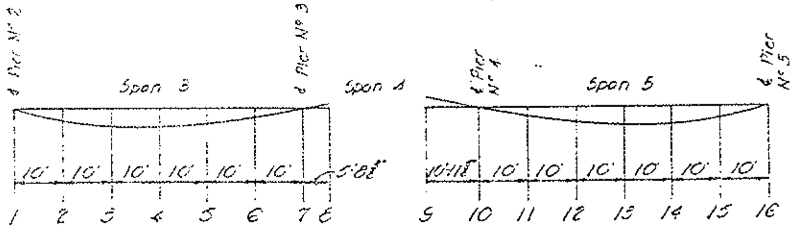
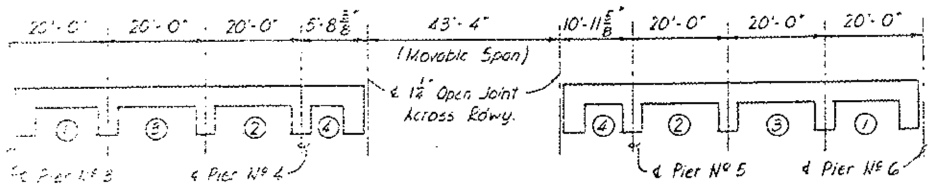


PLATE B1



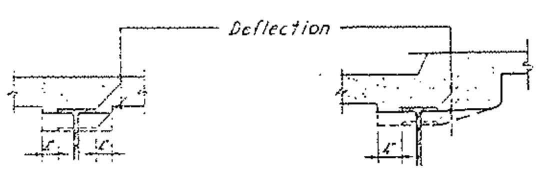
Deflections due to Suspended Span are calculated on the basis that the Suspended Span will be erected before concrete is poured on Spans adjacent to the Suspended Span. If concrete on adjacent spans is poured before the Suspended Span is erected, deflections are to be adjusted.

Note - In "Table of Dead Load Deflections", minus deflections are down and plus deflections are up



POURING SCHEDULE

Note: Slab shall be screeded longitudinally between bulkheads using a vibratory screed.

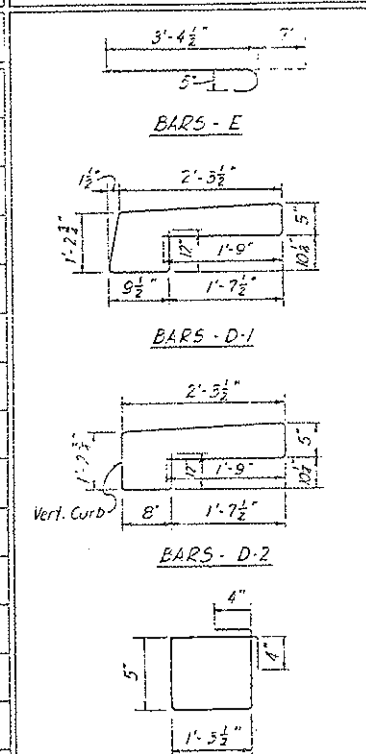


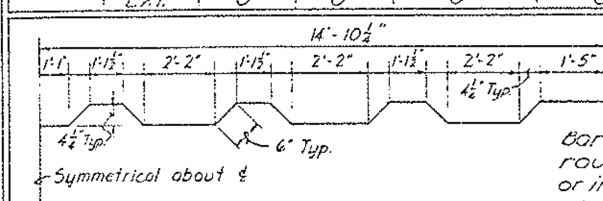
SECTION THRU BEAMS SHOWING METHOD OF ALLOWING FOR DEAD LOAD DEFLECTION

TABLE OF DEAD LOAD DEFLECTIONS

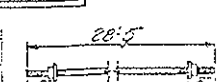
Point	Beam	Deflection Due To: Slab	Span 4	Curb & Rail	Total Deflection
1	Int.	0	0	0	0
	Ext.	0	0	0	0
2	Int.	-1/8"	+1/16"	-1/16"	-1/8"
	Ext.	-3/8"	+1/16"	-1/8"	-7/16"
3	Int.	-13/16"	+1/16"	-1/8"	-7/8"
	Ext.	-5/8"	+1/16"	-3/16"	-3/4"
4	Int.	-15/16"	+1/16"	-3/16"	-1 1/16"
	Ext.	-11/16"	+1/8"	-3/16"	-3/4"
5	Int.	-13/16"	+1/16"	-1/8"	-7/8"
	Ext.	-5/8"	+1/8"	-3/16"	-11/16"
6	Int.	-1/2"	+1/16"	-1/16"	-1/2"
	Ext.	-3/8"	+1/16"	-1/8"	-7/16"
7	Int.	0	0	0	0
	Ext.	0	0	0	0
8	Int.	+5/16"	-1/16"	+1/16"	+5/16"
	Ext.	+3/16"	-1/16"	+1/16"	+3/16"
9	Int.	+1/2"	-3/16"	+1/16"	+3/8"
	Ext.	+3/8"	-3/16"	+1/8"	+5/16"
10	Int.	0	0	0	0
	Ext.	0	0	0	0
11	Int.	-7/16"	+1/16"	-1/16"	-7/16"
	Ext.	-5/16"	+1/8"	-1/8"	-5/16"
12	Int.	-3/4"	+1/8"	-1/8"	-3/4"
	Ext.	-9/16"	+3/16"	-3/16"	-9/16"
13	Int.	-7/8"	+1/8"	-3/16"	-15/16"
	Ext.	-11/16"	+3/16"	-3/16"	-11/16"
14	Int.	-13/16"	+1/8"	-1/8"	-13/16"
	Ext.	-9/16"	+1/8"	-3/16"	-5/8"
15	Int.	-7/16"	+1/16"	-1/16"	-7/16"
	Ext.	-3/8"	+1/16"	-1/8"	-7/16"
16	Int.	0	0	0	0
	Ext.	0	0	0	0

BENDING DIAGRAMS



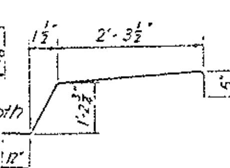


HALF BAR - B



BARS J

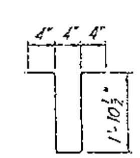
Bar J shall be a 1" smooth round bar of Structural or intermediate grade steel with coarse threads and heavy duty nuts.



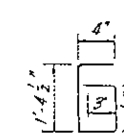
BARS - F-1

BILL OF REINFORCING STEEL

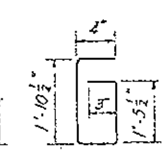
MARK	SIZE	Nº REQ'D SPAN 3	Nº REQ'D SPAN 5	LENGTH	BENDING
A	4	130	142	29'-9"	Straight
B	4	65	71	31'-9"	See diagram
C-1	4	-	82	10'-7"	Straight
C-2	4	246	246	19'-7"	Straight
C-3	4	66	-	5'-3"	Straight
C-4	4	8	-	4'-4"	Straight
C-5	6	12	-	6'-9"	Straight
D-1	5	114	114	7'-6"	See diagram
D-2	5	10	20	7'-4"	See diagram
D-3	5	8	-	4'-1"	See diagram
E	5	124	134	4'-0"	See diagram
F-1	5	108	108	4'-11"	See diagram
F-2	5	10	20	4'-11"	See diagram
G-1	4	-	28	3'-3"	See diagram
G-2	4	84	84	4'-9"	See diagram
G-3	4	56	28	4'-3"	See diagram
H-1	4	63	63	3'-8"	Straight
H-2	4	1	1	27'-8"	Straight
J	1" ⌀	5	5	28'-5"	Straight
L	6	48	48	2'-6"	Straight
K	5	2	-	27'-8"	Straight



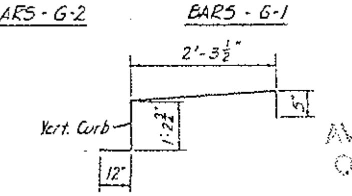
BARS - G-2



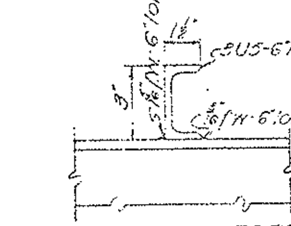
BARS - G-1



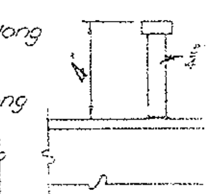
BARS - G-3



BARS - F-2



SHEAR CONNECTOR DETAIL



ALTERNA SHEAR CONNECTO DETAIL

(Using Welded S

NOTE: 1 1/4" flux filled stud, automatically er welded, may be substituted for each 2 of channel. Each stud will be paid for 2" of channel.

ESTIMATED QUANTITIES

ITEM	UNIT	QUAN SPAN 3
Class "A" Concrete	Cu. Yd.	59.3
Reinforcing Steel	Lb.	10,897
Structural Steel (Carbon)	L.S.	*
Shear Connectors	Lb.	1180

* Includes approximately 58,430 lbs. of Carbon

** Includes approximately 60,900 lbs. of Carbon

DETAILS OF SPANS ADJAC TO MOVABLE SPAN (SPANS

STATE ROAD DEPARTMENT OF FLORI

BRIDGE DIVISION

BRIDGE ON S.R. 70 OVER KISSIMMEE RIVER

ROAD NO.	COUNTY	PROJECT
S.R. 70	OKEECHOBEE	91070-3

	Names	Dates
Detailed by	R.E.P.	12-64
Checked by	R.A.R.	12-64
Quantities by	R.A.R.	1-65

APPROVED BY

Assistant State

REVISIONS	
Dates	Descriptions

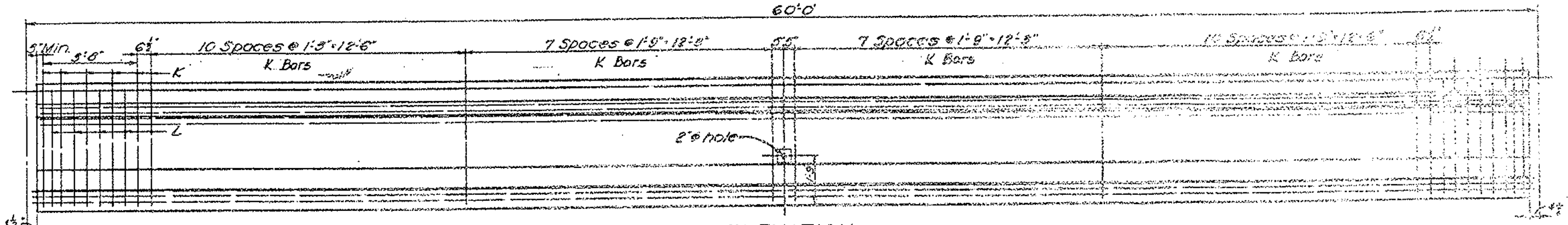
EXISTING BRIDGE PLANS-FOR INFORMATION ONLY

FPID 413817-1-52-01

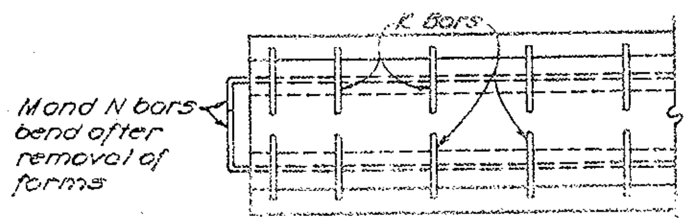
DRAWING NO. BX3-12

FLA. ROAD DIV. No.	STATE	PROJECT NO.	FISCAL YEAR
1	FLA.		65

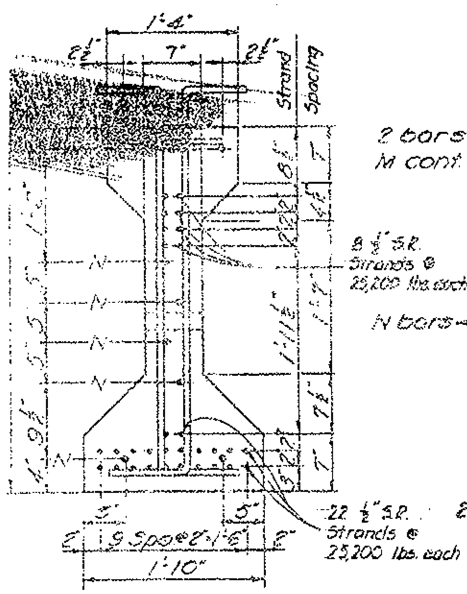
STATE JOB Nº 91070-3502



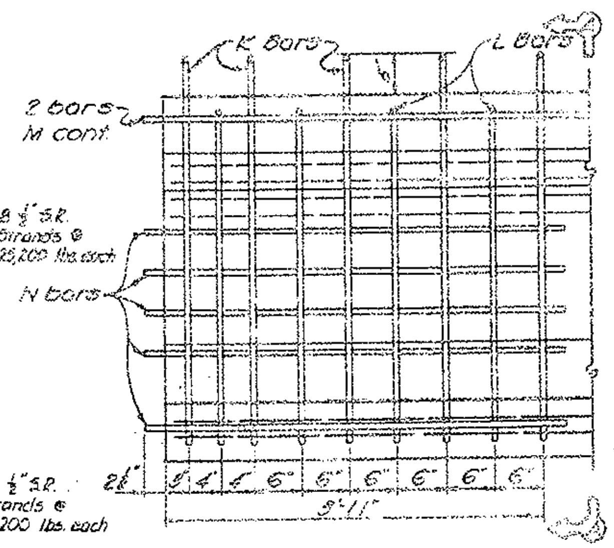
ELEVATION



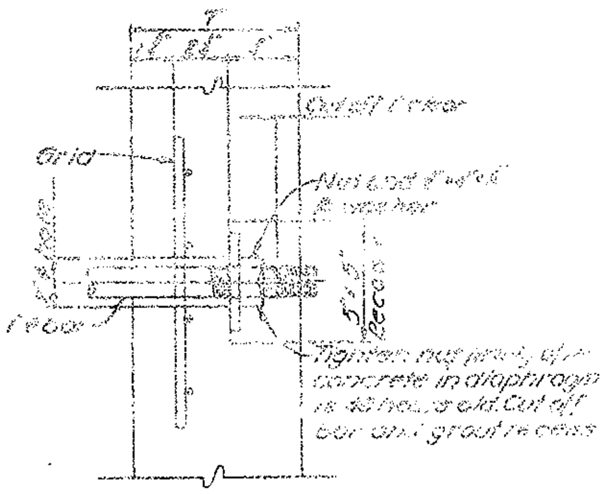
VIEW C-C



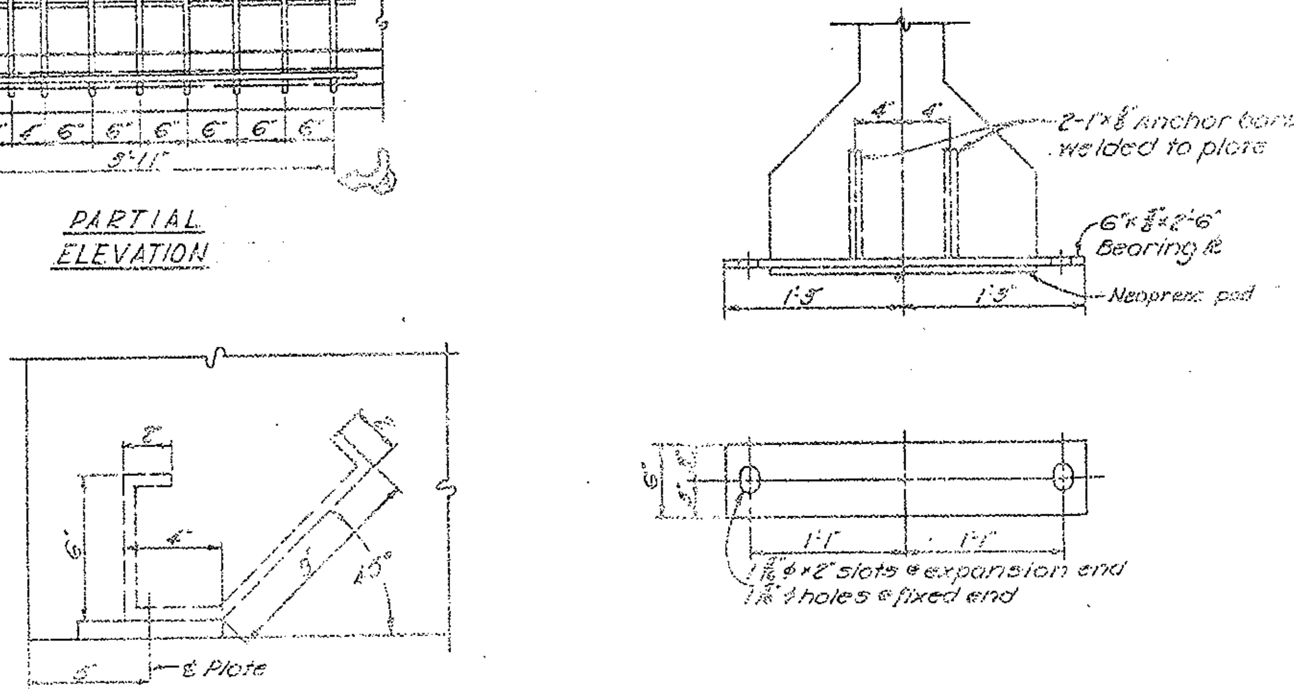
SECTION A-A



PARTIAL ELEVATION



DETAIL A



TYPICAL BEARING PLATE DETAILS
EXTERIOR BEAMS ONLY

[illegible]

CASTING PALLETS: All beams shall be cast on concrete based pallets in metal forms.

FINISH: Tops of beams to be rough floated & approximately the time of initial set, entire top of beam shall be scrubbed transversely with coarse wire brush to remove all laitance and to produce a roughened surface for bonding slab.

CONCRETE: Concrete for beams shall be Class P.

CYLINDER STRENGTH: At transfer of the tensioning load, the cylinder strength of concrete shall be 4,000 p.s.i.

STRAND EXTENSION: All strands shall extend 6" beyond ends of beam.

HANDLING: In the handling of beams, they must be maintained in an upright position at all times and must be picked up from points located a maximum distance of 5 ft. from the ends of the beam.

BEAM ENDS: The bottom edge of the bottom flange across the ends of the beams shall have a 3/4" chamfer. The chamfers are to be formed by the use of softwood chamfer strips.

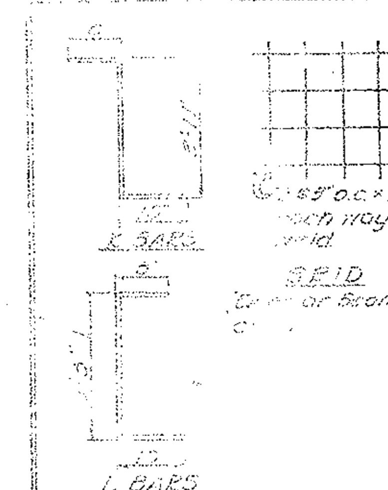
CURING COMPOUND: The use of membrane compound will not be permitted on the tops of prestressed beams

ACCESSORIES: Bearing Plates, Anchor Bolts, Nuts and Washers shall be hot dip galvanized in accordance with requirements of A.S.T.M. Specification Designation A-123. The cost of Bearing Plates, Neoprene Pads, and Premoulded Expansion Material shall be included in the Contract Unit Price for Prestressed Beams. Steel Anchor Bolts shall be in accordance with A.S.T.M. Specification A-307

BILL OF REINFORCING STE[EL]

MARK	SIZE	NO. REQD.	LENG[TH]
K	4	32	5'-5"
L	4	16	4'-11"
M		2	61'-8"
N		12	5'-0"
[illegible]	3	1 Pr. Exterior Beam	See Di[agram]

BENDING DIAGRAMS



NOTE: All dimensions are out to [out]

PRESTRESSED BEAMS (TYPE III - 30-0) 60' SPAN

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

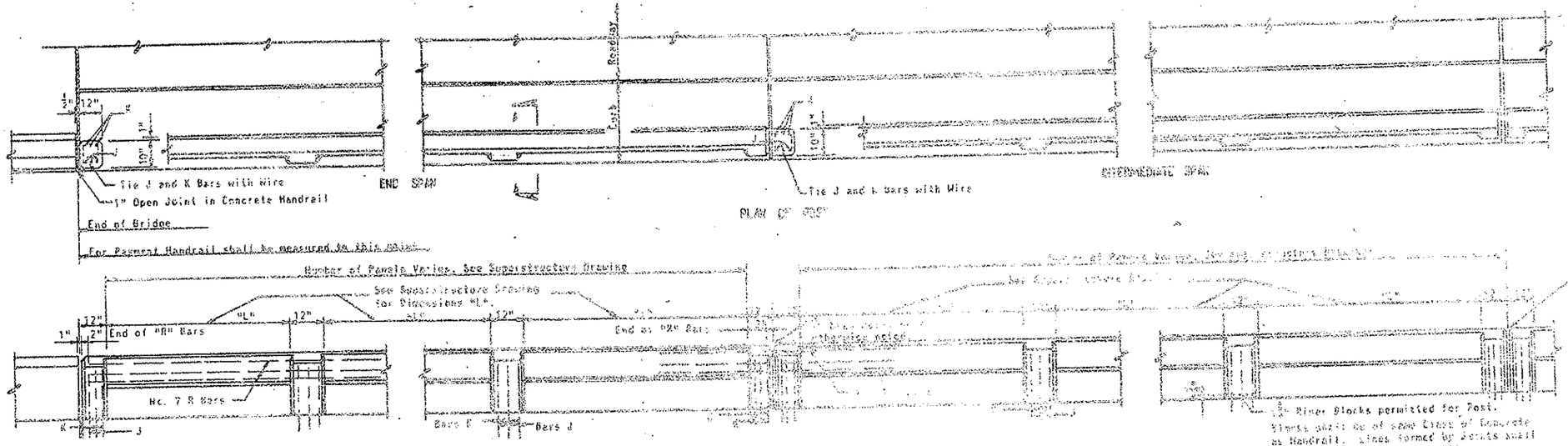
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Description	S.R. 70	OKEECHOBEE	91070-350[2]

	Names	Dates	APPROVED BY
Detailed by	R.E.R.	11-64	
Checked by	R.A.R.	11-64	

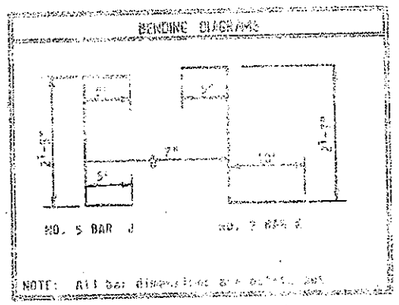
EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-13

STATE JOB No 91070-3502

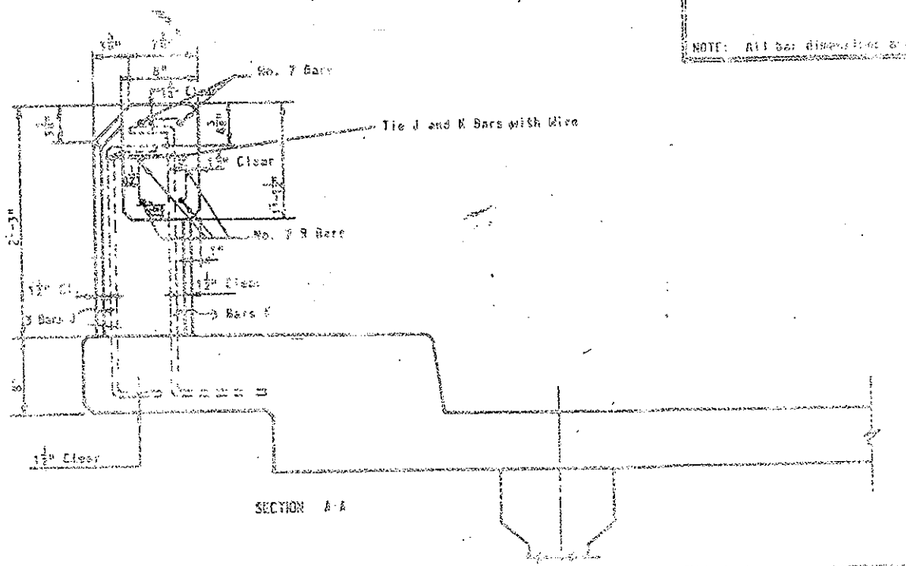


NOTE: Concrete End Post shall be paid for at the Contract Unit Price for Class A Concrete and Reinforcing Steel. For Details of End Post see Details of End Bents.

BENDING DIAGRAMS



NOTE: All bar dimensions are out to out of bars.



GENERAL NOTES

CONCRETE: Class A Concrete shall be used in Handrail.
PAYMENT: Handrail shall be paid for per linear foot, which shall include all Concrete and Reinforcing Steel. Handrail shall be measured along the center line of Rail with no deduction for Open Joints.
CHAMFER: ¾" Chamfer all edges of Handrails and Post.
MARKERS: Markers recording the Elevation shall be placed on top of the Curbs at End Bents. On Bridges longer than 100 Feet, one marker shall be placed at each end of the Bridge.
On Bridges less than 100 feet long, one marker shall be placed at one end of the bridge only.
Markers are to be furnished by the State Road Dept. and installed by Contract
The cost of installing the Markers shall be included in the Contract Unit Pri for Concrete Handrail.
PANEL LENGTHS: Dimension "L" shall not exceed 7'-0".
CYLINDER STRENGTH: The Cylinder Strength of the Concrete shall be 3,750 p.s.i. minimum, at twenty eight days.

FDOT
JUN 13 2007
BRIDGE DEVELOPMENT

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION

CONCRETE HANDRAIL

REVISIONS	ROAD NO.	COUNTY	PROJECT NO.
Date / Description	S.R. 70	OKEECHOBEE	91070-3502

	Name	Date
Detailed by	R.H.H.	6-64
Checked by	A.F.R.	7-64
Quantities by		

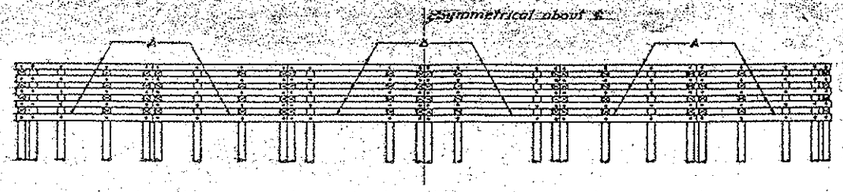
APPROVED BY T. W. Jennings, Assistant State Highway Engineer

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-14

ENV. No.			YEAR	NO.
9	FLA.		63	6-18

STATE JOB Nº 91070-3502

Symmetrical about ℄



ELEVATION A-A

BILL OF TREATED STRUCTURAL TIMBER FOR TWO FENDERS

MARK	SIZE	LENGTH	No. REQ'D	F.B.M.	CUTTING DIAGRAMS
A	10"×10"	18'-0"	40	6000	22° 30' — 18'-0"
B	10"×10"	18'-0"	20	3000	18'-0"
C	8"×8"	1'-0"	144	768	1'-0"
D	3"×8"	18'-0"	12	432	18'-0"
E	2"×6"	2'-6"	372	930	2'-6"
T	10"×10"	14'-0"	2	283	Cut to Fit
TOTAL				11,363	

ESTIMATED QUANTITIES

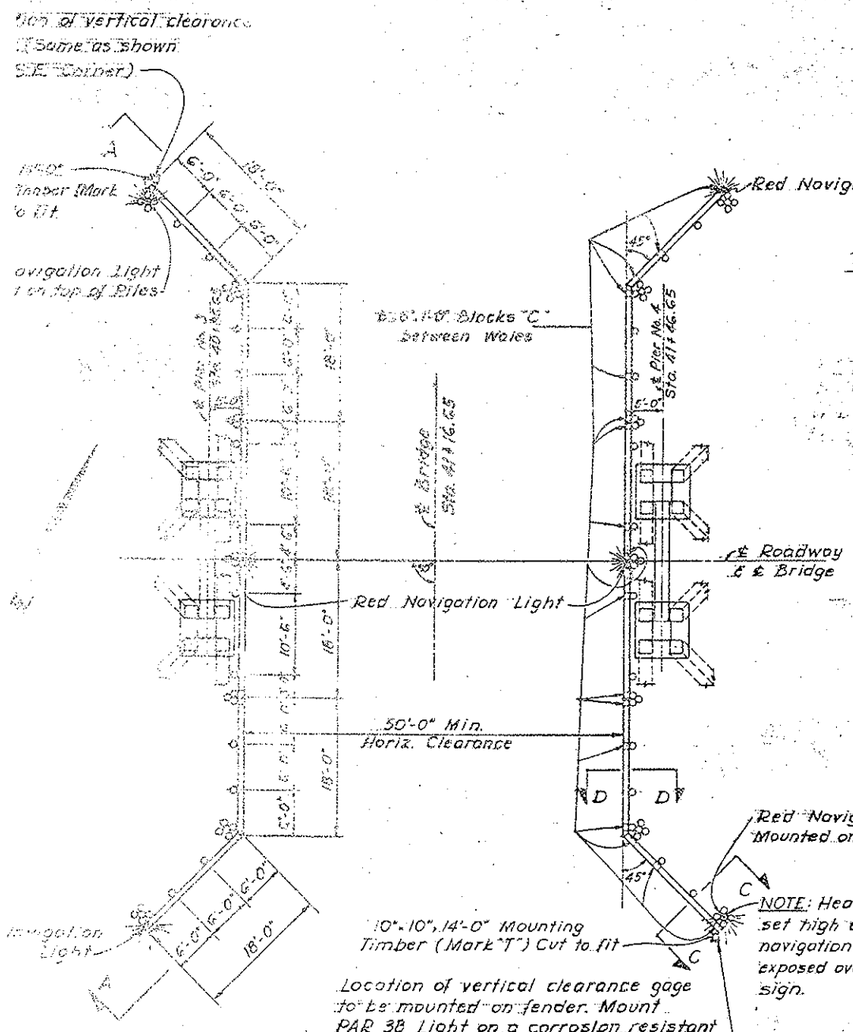
ITEM	UNIT	QUANTITY
Treated Structural Timber (12 lb. Treatment)	M.F.B.M.	11.363
Treated Timber Piling	Lin. Ft.	4100

GENERAL NOTES

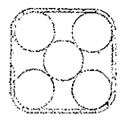
TREATMENT: All Timber shall be given 12 lb. Treatment.
TIMBER: All Timber shall be rough.
HARDWARE: All Hardware shall be hot-dip-galvanized in accordance with requirements of A.S.T.M. Specification Designation A-123.
FORGED NUTS: Special forged nuts, equal in diameter of O.G. Washer may be used in lieu of O.G. Washer.
PILE TIPS: 7" Diameter Tips will be accepted on Timber Piles.
PILE HEADS: Treat with Creosote oil and pitch as specified in Article 405-11. Band cover with 16 oz. copper sheets at least 4 inches larger in each dimension than the diameter of the pile. Bend cover down and fasten with large headed copper nails or three wraps of #12 Copper Wire.

NOTE: The cost of Hardware shall be included in the Contract Unit Price for treated Structural Timber.

NOTE: Signs to be furnished by State Road Department and erected by the Contractor. Cost of erecting signs to be included in the Contract Unit Price for Treated Structural Timber.

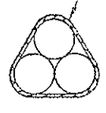


DETAIL OF FENDER
(With Catwalk Omitted)



All outside piles to be equally spaced
on circle and drawn together at top with
one 3/4" ϕ, 19 x 5/8" ϕ galvanized cable of

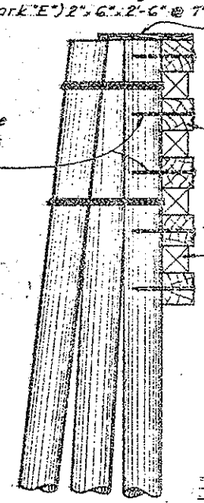
PILE CLUSTER



Drive piles on 3 ft. centers and
draw together at top with 3 strands
of 6 x 19 x 5/8" ϕ galvanized cable at
Elevations +(18.35) 20.75 and +(21.35) 23.75

DETAIL OF 3 PILE CLUSTER

Catwalk full length of both fenders.
(Mark "E") 2"×6"×2'-6" @ 7" c. to c.

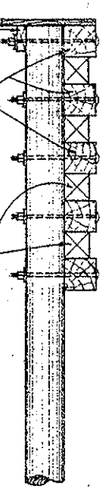


NOTE: 7/8" ϕ, 19" Drive Spikes shall be used to connect wales to all Dolphins

3"×8"×18'-0" Mark "D"

10"×10" Wales

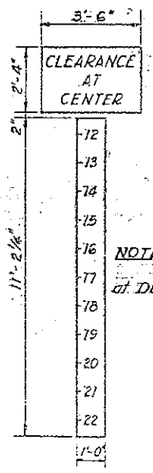
8"×8"×1'-0" Blocks (Mark "C") Spiked to Wales as shown on Elevation A-A.



NOTE: Bolts to be used to connect Wales to all piles other than Dolphin Piles. All bolts 7/8" ϕ complete with nut and O.G. Washer.

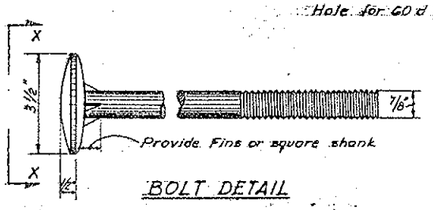
SECTION C-C

SECTION D-D

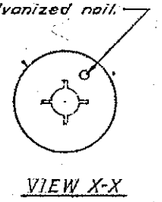


NOTE: Set Sign to 17.0 at Design Water El. 22.30

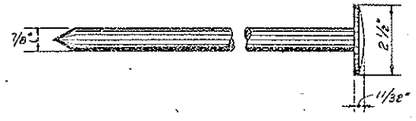
CLEARANCE GAGE



BOLT DETAIL



VIEW X-X



DRIVE SPIKE DETAIL

FDOT
JUL 13 2017
BEST AVAILABLE ORIGINAL

FENDER DETAILS

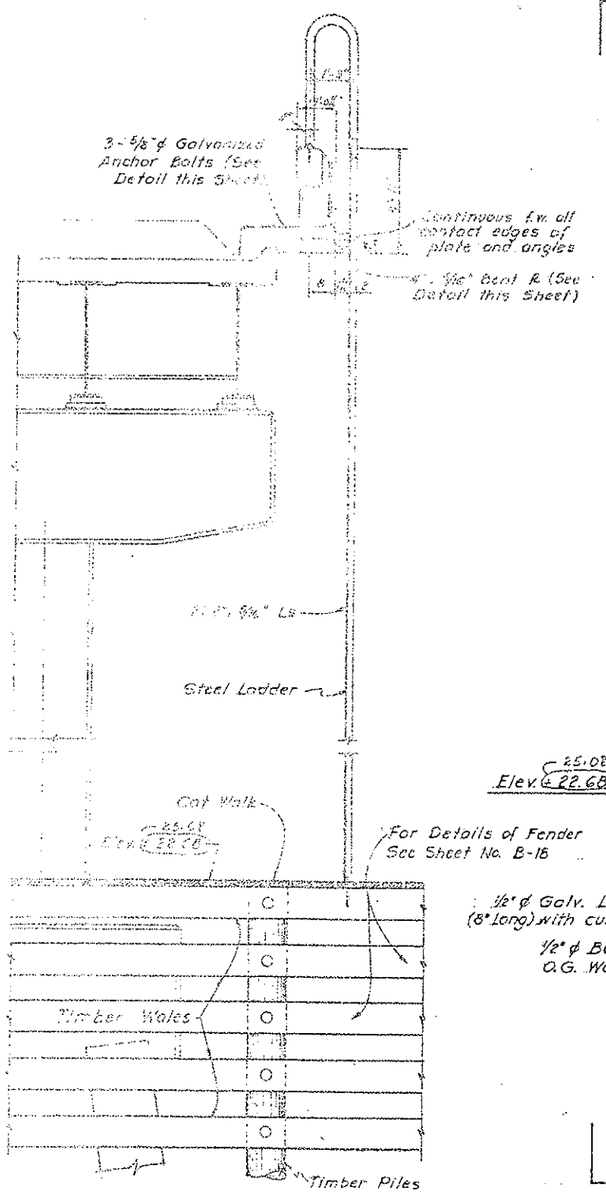
STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Date	Descriptions	S.R. 70	OKEECHOBEE	91070-3502
3/65	Raised elevations on Fenders 2.4'			
RFK		Name	Date	APPROVED BY
	Detailed by	G.A.R.	8-24-64	
	Checked by	E.A.P.	1-65	

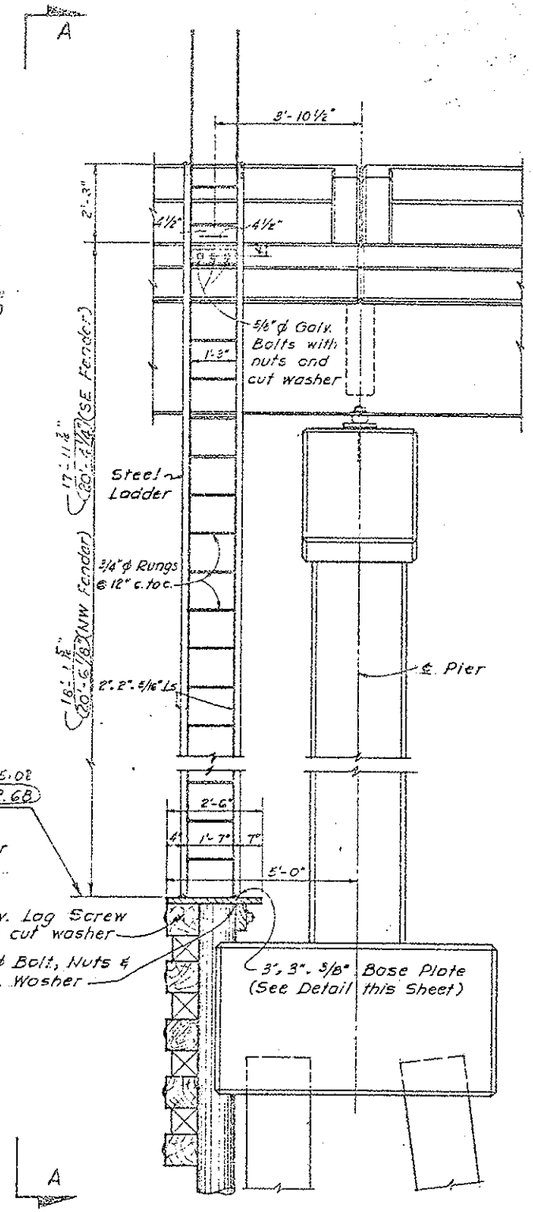
EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-15

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
S	FLA.		65	B-1

STATE JOB Nº 91070 - 3502

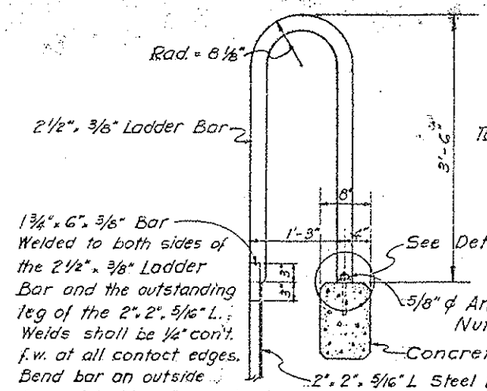


VIEW A-A

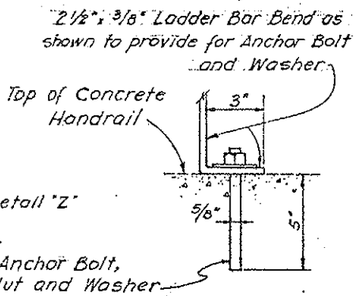


PART ELEVATION

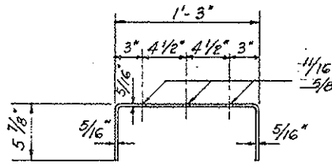
DETAILS OF ACCESS LADDER TO FENDER



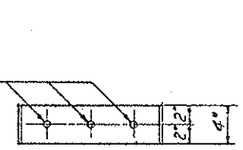
DETAIL AT TOP OF LADDER



DETAIL "Z"

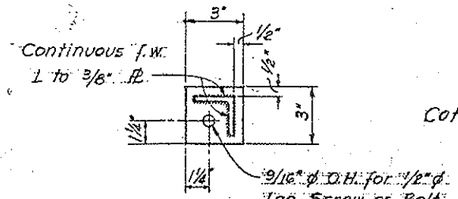


PLAN

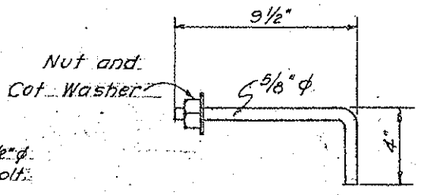


ELEVATION

DETAILS OF 4" x 5/16" BENT PLATE



DETAIL OF 3" x 3" x 3/8" BASE PLATE



DETAIL OF ANCHOR BOLT

ESTIMATED QUANTITIES (TWO LADDERS)		
ITEM	UNIT	QUANTITY
Structural Steel	Lump Sum	*

* See Estimated Bridge Quantities. (The estimated quantity of Structural Steel for Two Ladders is 572 534 lbs. Carbon Steel.)

NOTE: Aluminum Ladder Assembly of approved corrosion Resistant Alloys and of strength equal to the steel design shown may be substituted at the option of the Contractor. If aluminum alternate is used detail drawings shall be submited to the Engineer for Approval.

NOTE: All steel for Ladders including plates, shapes, bars, bolts, nuts and washers shall be hot dip galvanized in accordance with requirements of A.S.T.M. Specification Designation A-123.
Welding of parts shall be done prior to galvanizing.

ACCESS LADDER ASSEMBLY

STATE ROAD DEPARTMENT OF FLORIDA
BRIDGE DIVISION
BRIDGE ON S.R. 70
OVER KISSIMMEE RIVER

REVISIONS		ROAD NO.	COUNTY	PROJECT NO.
Dates	Descriptions	S.R. 70	OKEECHOBEE	91070-3502
3/65	Raised Top of Fender 2.4'			
F.F.E.	Changed Quantity of Structural Stl.		Names / Dates	APPROVED BY
		Detailed by	G.A.R. 9-64	
		Checked by	P.A.R. 10-64	

EXISTING BRIDGE PLANS-FOR INFORMATION ONLY
FPID 413817-1-52-01
DRAWING NO. BX3-16

See Sheet No. B-1 for Notation of Ladders