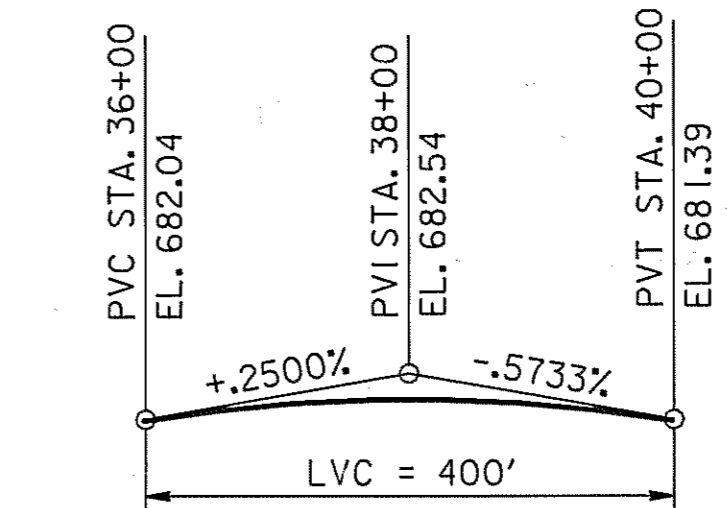
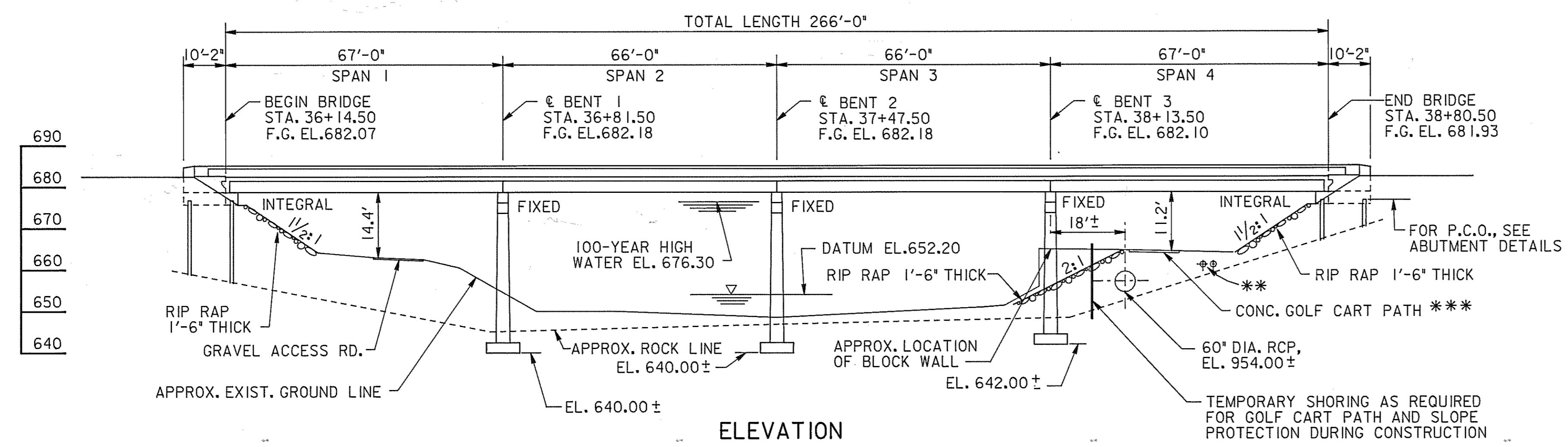


CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(9)02	1991	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	11 JUN 91	J.M.P.	LATEST DATES ADDED TO LIST OF DWGS.
2	4 FEB 91	J.M.P.	LATEST DATES ADDED TO LIST OF DWGS.
3	8 FEB 91	B.T.H.	LATEST DATES ADDED TO LIST OF DWGS.
4	22 APR 91	J.M.P.	LATEST DATES ADDED TO LIST OF DWGS.
5	13 JUN 91	J.M.P.	LATEST DATES ADDED TO LIST OF DWGS.



SPECIAL PROVISION NUMBER	DATE LATEST REVISION	LIST OF SPECIAL PROVISIONS
105A	07-21-87	APPROVAL OF SHOP DRAWINGS
602	05-15-89	SECTION 602 - STEEL STRUCTURES
604	05-14-90	CONCRETE STRUCTURES
604C	08-01-89	STRUCTURAL CONCRETE
604P	05-08-89	PRECAST PRESTRESSED DECK PANELS
709	05-04-87	MACHINED RIP-RAP
907A	03-25-85	EPOXY COATED REINFORCING STEEL
604R	05-14-90	RIDEABILITY OF BRIDGE DECKS AND ROADWAY APPROACHES
615	12-11-89	PRECAST PRESTRESSED CONCRETE BRIDGE MEMBERS

LIST OF DRAWINGS	DRAWING NO.	REVISION DATE
LAYOUT	M-248-84	6-13-91
GENERAL NOTES	M-248-85	6-13-91
EXPANSION JOINT DETAILS	M-248-85A	2-04-91
ESTIMATED QUANTITIES	M-248-86	6-13-91
FOUNDATION DATA	M-248-87	
STAGING PLAN	M-248-88	
REPAIR DETAILS	M-248-89	
SUPERSTRUCTURE DETAILS	M-248-90	2-04-91
SUPERSTRUCTURE DETAILS	M-248-91	
PRESTRESSED CONCRETE BOX BEAMS STAGE I	M-248-92	4-22-91
REPLACEMENT BEAMS J & K	M-248-93	
REPLACEMENT BEAMS A & L	M-248-94	
ABUTMENT DETAILS	M-248-95	4-22-91
ABUTMENT DETAILS	M-248-96	
BENT DETAILS	M-248-97	6-13-91
BENT DETAILS	M-248-98	6-13-91
BILL OF STEEL	M-248-99	
BILL OF STEEL	M-248-100	

STANDARD DRAWINGS	DRAWING NO.	REVISION DATE
STD. REINF. BAR SUPPORT	K-80-14	08-27-76
* BRIDGE END DRAIN DETAILS	M-233-3 TO 5	08-22-90
* REINF. CONCRETE PAVEMENT AT BRIDGE ENDS	M-233-2	08-22-90
* BRIDGE RAILING CONCRETE PARAPET	M-233-1	08-22-90
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS	M-164-24, 25 & 25A	12-18-89
* CONCRETE MEDIAN BARRIER AND PARAPET DRAINS	M-28-1A & 1B	12-06-90
MISC. ABUTMENT & DRAINAGE DETAILS	K-85-150	06-25-87
STD. PILE DETAILS	M-174-150 & 150A	11-27-90
* SEISMIC DETAILS	M-246-70	12-12-90
* BRIDGE RAILING AND PARAPET	M-28-1	11-1-88

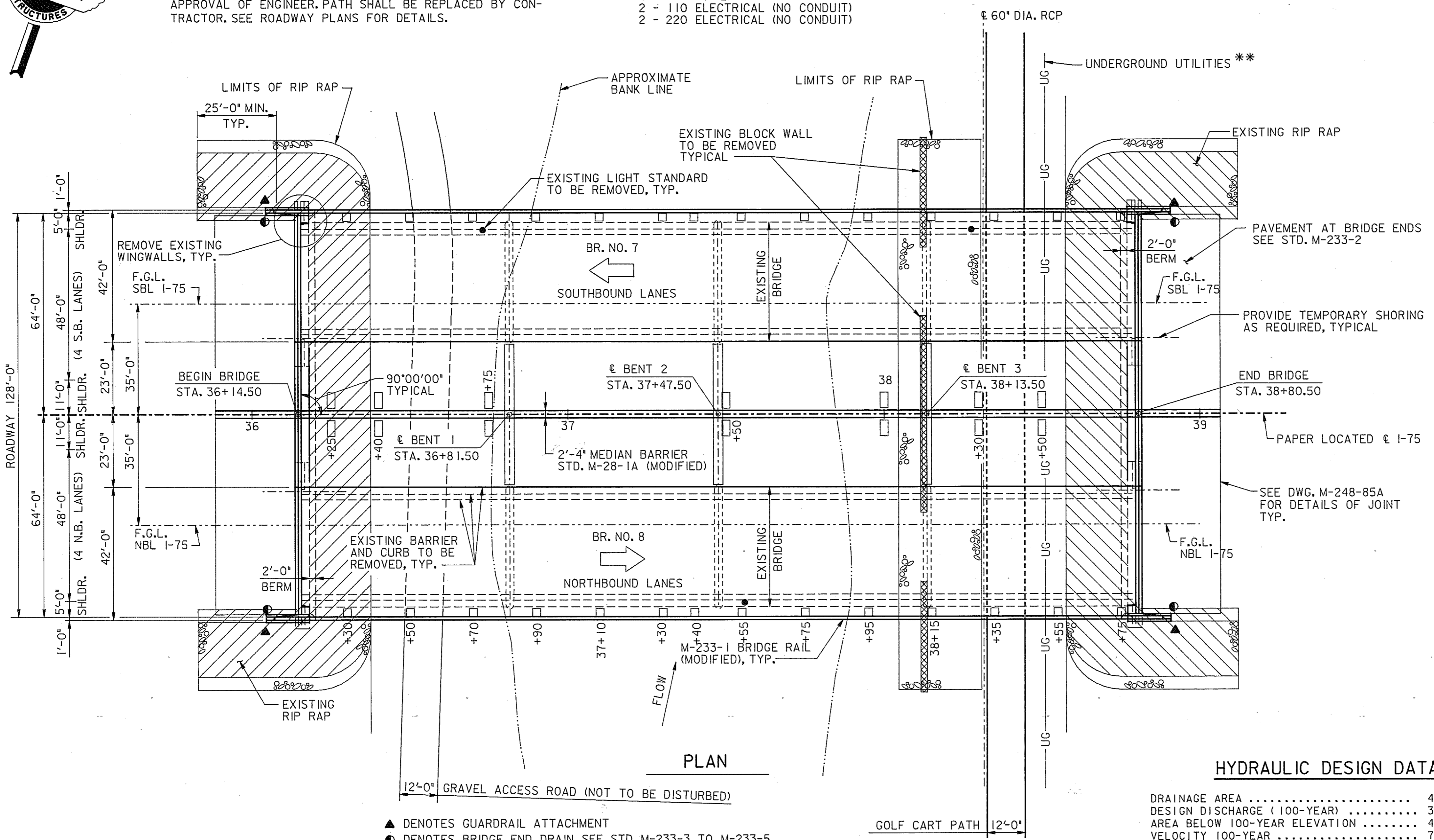
EXISTING BRIDGE PLANS ..... DWG. H-7-117 THRU 120 AND DWG. F-10-84 AND 85

\* DENOTES STANDARDS TO BE PRINTED WITH PLANS.

DESIGN SPEED = 60 MPH  
2011 ADT = 129,000 VPD  
128' ROADWAY WITH M-233-1 BRIDGE RAIL

\*\*\* MAINTAIN A 10'-0" MINIMUM WIDTH CART PATH AT ALL TIMES DURING CONSTRUCTION. DETOURS ARE ALLOWED SUBJECT TO APPROVAL OF ENGINEER. PATH SHALL BE REPLACED BY CONTRACTOR. SEE ROADWAY PLANS FOR DETAILS.

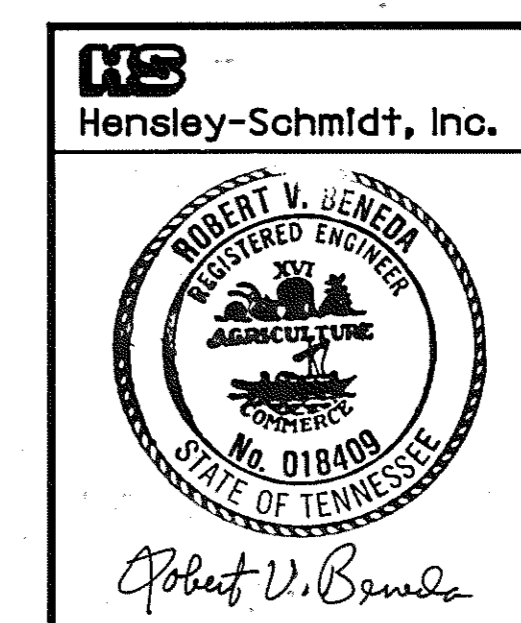
\*\*\* UTILITY TRENCH CONTAINS:  
1 - 6" Ø WATER  
1 - 1" Ø WATER  
2 - 110 ELECTRICAL (NO CONDUIT)  
2 - 220 ELECTRICAL (NO CONDUIT)



DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

- ▲ DENOTES GUARDRAIL ATTACHMENT
  - DENOTES BRIDGE END DRAIN, SEE STD. M-233-3 TO M-233-5
  - DENOTES BRIDGE DECK DRAIN, SEE STD. M-28-1B
  - DENOTES BRIDGE GRATE DRAIN SIMILAR TO NEENAH R-4014-T
- NOTE: PLACEMENT OF BRIDGE DRAINS IS SYMMETRICAL ABOUT P.L. ☉

HYDRAULIC DESIGN DATA	
DRAINAGE AREA	428 SQ MILES
DESIGN DISCHARGE (100-YEAR)	33,570 CFS
AREA BELOW 100-YEAR ELEVATION	4785 SQ FT.
VELOCITY 100-YEAR	7.00 FPS
ROADWAY OVERTOPPING ELEVATION	682.09
500-YEAR DISCHARGE	= 50,200 CFS AT EL. 681.50
NO INCREASE OF BRIDGE BACKWATER OVER EXISTING CONDITIONS	



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

**BRIDGE NO. 7 & 8**

**BRIDGE LAYOUT**

BRIDGE ID NO 33100750020 (BR-7)  
33100750019 (BR-8)

I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY

1991

M-248-84

OS2450, 111BR7PEC1.DGN DATE: 1-2-91 SV=PLAN PRF=BR7PEC1

PORTABLE MEDIAN BARRIER = 801 LIN. FT.

**GENERAL NOTES**

CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	11.AUG.1991	JWP	MECHANICAL BAR COUPLER NOTE REVISED
2	8.FEB.1991	BTH	MEDIAN BARRIER NOTE REVISED
3	13.JUNE.91	JWP	STRUCTURAL STEEL NOTE DELETED

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1981 EDITION)

LOADING: HS20-44 WITH ALTERNATE MILITARY.

DESIGN SPECIFICATIONS: AASHTO 1989 EDITION WITH ADDENDA.

CONCRETE: TO BE CLASS "A". F'C = 3000 PSI UNLESS OTHERWISE NOTED

CLASS "A" CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY SPECIAL PROVISION 604-C.

BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH NOTE C, SHEET 2, OF SPECIAL PROVISION 604.

BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS MAY BE EITHER REMAIN-IN-PLACE STEEL OR PRECAST, PRESTRESSED CONCRETE PANELS. IN EITHER CASE, FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO SUPPORT MEMBERS. THE CONTRACTOR SHALL TAKE STEPS TO ASSURE THE STABILITY OF THE EXTERIOR GIRDER AGAINST TWISTING OR OVERTURNING DURING SLAB POURING OPERATIONS. DETAILS AND DESIGN CALCULATIONS FOR THE CANTILEVER SUPPORT SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

IF THE USE OF PERMANENT DECK FORMS REQUIRES ADDITIONAL SLAB THICKNESS, THE CONTRACTOR WILL BE REQUIRED TO REDESIGN THE GIRDERS WHEN THE SLAB THICKNESS IS INCREASED MORE THAN 1 1/2 INCHES. ALL CHANGES TO THE GIRDERS SHALL BE AT THE CONTRACTOR'S EXPENSE.

IF PRECAST PRESTRESSED DECK PANELS ARE USED, THE CONTRACTOR SHALL PROVIDE SUPPLEMENTAL REINFORCING, ADDITIONAL REINFORCING TIES, AND TEMPORARY OR PERMANENT ERECTION DIAPHRAGMS AS REQUIRED BY SPECIAL PROVISION 604P AND STANDARD DRAWING M-164-25A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT THE PRECAST PANELS WILL FIT BETWEEN THE ERECTED GIRDERS SUCH THAT THE PANEL OVERHANG LIMITS GIVEN ON STANDARD DRAWINGS M-164-24 AND 25 ARE MAINTAINED. PANELS WHICH DO NOT FIT MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE.

REINFORCING STEEL: TO BE ASTM A615 GRADE 60. STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON BILL OF STEEL. SPACING DIMENSIONS ARE CENTER TO CENTER AND COVER DIMENSIONS ARE CLEAR DISTANCE UNLESS OTHERWISE NOTED. PLACING TOLERANCES ARE + 1/2" FOR SPACING AND -1/8" OR +3/8" FOR COVER. THE SUFFIX E, FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SPECIAL PROVISION 907A.

**MECHANICAL BAR COUPLERS** MUST BE APPROVED BY THE DIVISION OF MATERIALS AND TESTS. DOWEL BAR COUPLER AND DOWEL-IN SHALL BE DEFORMED, GRADE 60. WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO SPECIAL PROVISION 907A. ~~THE COST OF FURNISHING THE BAR COUPLER AND DOWELS (EPOXY COATED WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION SHALL BE INCLUDED IN THE PRICE BID, PER POUND, OF ITEM 604-03.02 AND ITEM 604-02.03. NOTE, THE SPLICING BAR AND THE ROOT DIMENSION AT THE THREAD SHALL BE NO LESS THAN THE NOMINAL DIAMETER OF THE SIZE BAR DESIGNATED TO BE SPLICED.~~ THE COST OF FURNISHING THE BAR COUPLER AND DOWELS (EPOXY COATED WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION SHALL BE INCLUDED IN THE PRICE BID, PER POUND, OF ITEM 604-03.02 AND ITEM 604-02.03. NOTE, THE SPLICING BAR AND THE ROOT DIMENSION AT THE THREAD SHALL BE NO LESS THAN THE NOMINAL DIAMETER OF THE SIZE BAR DESIGNATED TO BE SPLICED.

**SPECIAL NOTE - FOOTING FOR BENTS:** AFTER EXCAVATION TO ROCK HAS BEEN COMPLETED, HOLES 6" DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. A MINIMUM OF FOUR HOLES, ONE IN EACH CORNER OF THE FOOTING, SHALL BE DRILLED AT EACH BENT. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR BENT COLUMNS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED. ROCK DRILLING SHALL BE PAID FOR UNDER ITEM NUMBER 204-05, ROCK DRILLING, L.F.

**PILES:** TO BE HP 10 X 42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 55 TONS AT ABUTMENTS

**NOTE:** THE FILLS AT THE ENDS OF THE BRIDGE SHALL BE IN PLACE AND THOROUGHLY COMPACTED BEFORE ANY ABUTMENT PILES ARE DRIVEN.

**NOTE:** AFTER CONSTRUCTING BENT PIERS 1 AND 3, THE PIERS SHALL NOT BE BACKFILLED UNTIL THE ENTIRE SUPERSTRUCTURE IS IN PLACE. THIS REQUIREMENT IS TO AVOID DEFLECTION OF THE PIERS PRIOR TO PLACEMENT OF THE SUPERSTRUCTURE.

**FOUNDATION PREPARATION:** THE LUMP SUM BID FOR FOUNDATION PREPARATION SHALL BE FULL COMPENSATION TO THE CONTRACTOR FOR THE PREPARATION OF FOUNDATIONS FOR ALL SUBSTRUCTURES PRIOR TO POURING CONCRETE FOR FOOTINGS. THE CONTRACTOR SHALL BE PAID FOR EXCAVATION IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE CONTRACT UNIT BID PRICE FOR EACH EXCAVATION ITEM, EXCEPT THAT NO PERCENT INCREASE WILL BE ALLOWED FOR EXTRA DEPTH EXCAVATION. IF COFFERDAMS ARE REQUIRED, THEY SHALL BE IN ACCORDANCE WITH SECTION 204.09 OF THE STANDARD SPECIFICATIONS. THE COST OF ANY COFFERDAMS, SHORING, PUMPING, OR SEAL CONCRETE REQUIRED TO ESTABLISH THE PLAN FOOTINGS IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR FOUNDATION PREPARATION. IF THE CONTRACTOR AT HIS OPTION USES A SEAL FOOTING, AFTER DEWATERING, A MINIMUM OF FOUR (4) CORES SHALL BE DRILLED 80% OF THE SEAL DEPTH INTO THE SEAL FOOTING AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. WITHIN EACH DRILL HOLE ONE 2" BY 24" DEEP CORE SHALL BE OBTAINED FROM EACH TWELVE-FOOT DRILL DEPTH AT LOCATIONS AS DIRECTED BY THE ENGINEER. SHOULD THE CORES OR OTHER INSPECTION INDICATE AN INFERIOR SEAL, ADDITIONAL INSPECTION AND CORRECTIVE MEASURES MAY BE REQUIRED. THE COST OF ANY ADDITIONAL INSPECTION AND/OR CORRECTIVE MEASURES REQUIRED WILL BE AT THE CONTRACTOR'S EXPENSE.

**GROUTED BARS IN DRILLED HOLES:** HORIZONTALLY DRILLED HOLES SHALL BE DRILLED 1/2" IN DIAMETER LARGER THAN THE BAR. THE HOLE SHALL BE CLEANED, PACKED WITH NON-SHRINK GROUT AND THE BAR DRIVEN TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED 1/4" IN DIAMETER LARGER THAN THE BAR. THE HOLE SHALL BE CLEANED, PACKED WITH NON-SHRINK EPOXY GROUT AND THE BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

**SHOP DRAWINGS:** SEE SPECIAL PROVISION NO. 105A.

**BRIDGE RAIL SYSTEM:** CONSTRUCT PRECAST PARAPETS ACCORDING TO DWG. M-248-104. PRECAST PARAPETS SHALL CONFORM TO STD M-233-1 (EXCEPT AS MODIFIED)

**CONSTRUCT REINFORCED CONCRETE MEDIAN BARRIER** ACCORDING TO DRAWING M-28-1A. MEDIAN BARRIER SHALL BE GIVEN AN APPLIED TEXTURE FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO WHITE, FEDERAL SPECIFICATION NO. 37886. THE COST OF THE FINISH AND REINFORCING STEEL DETAILED SHALL BE INCLUDED IN THE LINEAR FOOT PRICE BID FOR THE MEDIAN RAIL.

**RIP-RAP:** MACHINED RIP-RAP SHALL BE CLASS A-1 IN ACCORDANCE WITH SPECIAL PROVISION 709 AND SHALL BE PAID FOR UNDER ITEM 709-05.06.

**NON-PAY ITEMS:** ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE BID FOR PAY ITEMS.

**FINISHING CONCRETE SURFACES:** CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION. AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. THE COLOR OF THE FINISH FOR ALL SURFACES EXCEPT MEDIAN BARRIER AND FACE AND TOP OF PARAPETS SHALL BE SIMILAR TO MOUNTAIN GRAY, FEDERAL SPECIFICATION NO. 36440, FEDERAL COLOR STANDARD NO. 595A. THE COLOR FOR THE MEDIAN BARRIER AND FACE AND TOP OF PARAPETS SHALL BE SIMILAR TO WHITE, FEDERAL SPECIFICATION NO. 37886. COLOR SAMPLES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF POURING AND HAULING OPERATIONS AT THE BRIDGE SITE. PAYMENT FOR THE APPLIED TEXTURE FINISH SHALL BE UNDER ITEMS 604-04.01 AND 604-04.02

**NOTE:** THE CONTRACTOR SHALL CHECK THE LOCATION OF ALL EXISTING SUBSTRUCTURES AND VERIFY SPAN LENGTHS BEFORE FABRICATING GIRDERS. IN ADDITION, BEFORE BEGINNING STAGE I, THE CONTRACTOR SHALL CHECK AND VERIFY THAT OVERLAY THICKNESS ON THE EXISTING STRUCTURE FOR STAGES 2 AND 2A WILL BE WITHIN PLAN LIMITS. IF OVERLAY THICKNESS WILL NOT BE WITHIN PLAN LIMITS, THE CONTRACTOR SHALL MAKE THE ELEVATION ADJUSTMENTS NECESSARY TO THE STAGE I PORTION OF THE STRUCTURE TO ENSURE THAT STAGE 2 AND 2A OVERLAY WILL COMPLY WITH THE PLANS.

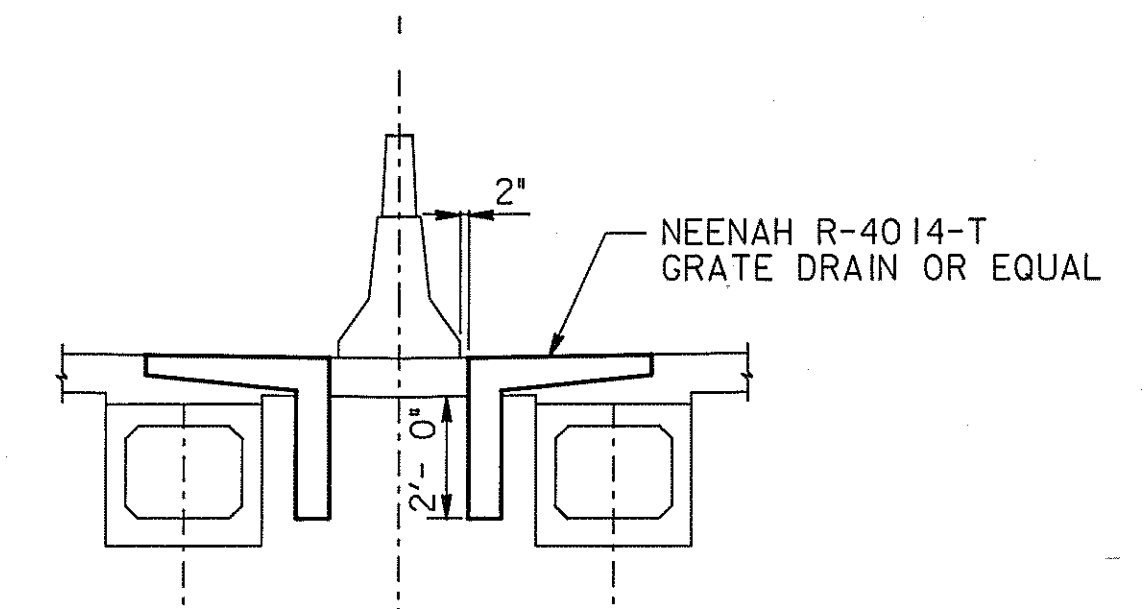
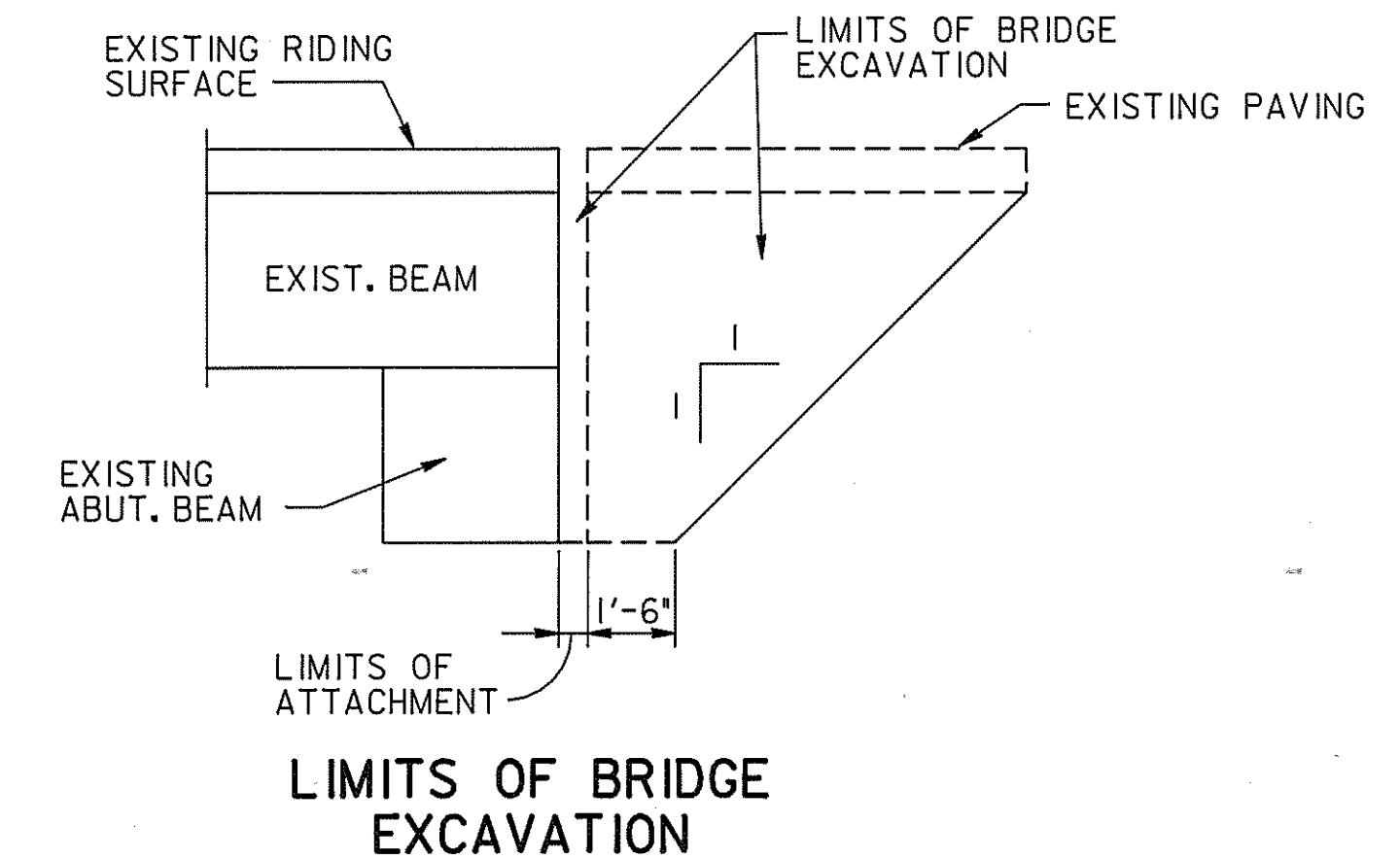
**NOTE:** THE CONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY OF MAINTAINING THE STRUCTURAL INTEGRITY OF THE EXISTING BRIDGE DURING CONSTRUCTION ANY DAMAGE TO STRUCTURAL MEMBERS TO BE LEFT IN PLACE SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND PAID FOR AT THE CONTRACTOR'S EXPENSE.

**NOTE:** THE COST OF TEMPORARY SHORING, IF NECESSARY, FOR STAGED CONSTRUCTION AND PIER CONSTRUCTION SHALL BE INCLUDED IN THE COST OF ITEMS BID ON.

**SPECIAL NOTE FOR UTILITIES:** IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR, IF NECESSARY, FOR THE RELOCATION OF UTILITIES SHALL BE BORNE BY OTHERS AND SHALL NOT BE PAID FOR AS A PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHERS IN THE RELOCATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR AS A RESULT.

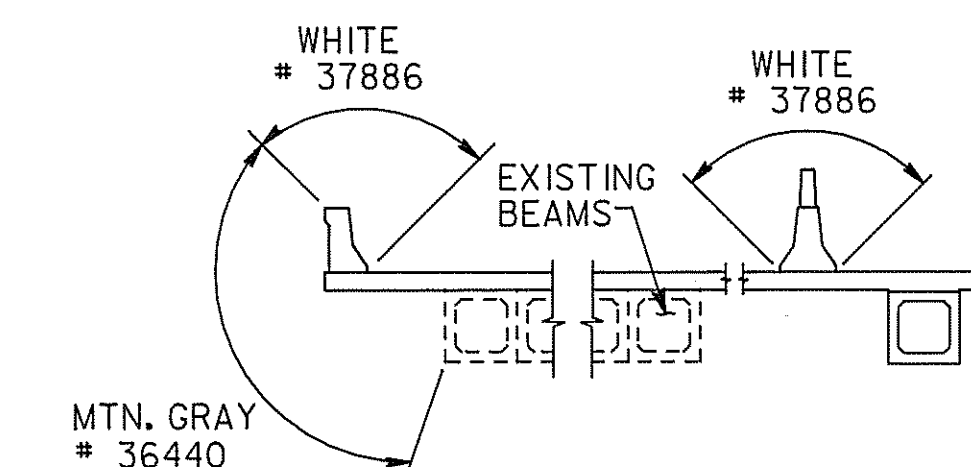
**REQUIREMENTS AND RESTRICTIONS FOR PHASE CONSTRUCTION**

1. THE STAGE CONSTRUCTION SEQUENCE MAY PROHIBIT THE EXTRACTION OF SOME COFFERDAM SHEET PILING. ALL COSTS ASSOCIATED WITH SHEET PILING SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR FOUNDATION PREPARATION.
2. THE LOCATION OF LONGITUDINAL CONSTRUCTION JOINTS SHALL NOT BE CHANGED.
3. NO SHEET PILES OR BEARING PILES MAY BE DRIVEN FROM THE EXISTING OR PROPOSED STRUCTURE.
4. TWO 12'-0" TRAFFIC LANES WITH 2'-0" SHOULDERS SHALL BE MAINTAINED AT ALL TIMES.



**GRATE DRAIN DETAIL**

• SUBSTRUCTURE SHALL BE MOUNTAIN GRAY # 36440



**APPLIED TEXTURE FINISH**

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

**BRIDGE NO. 7 & 8**

**GENERAL NOTES**

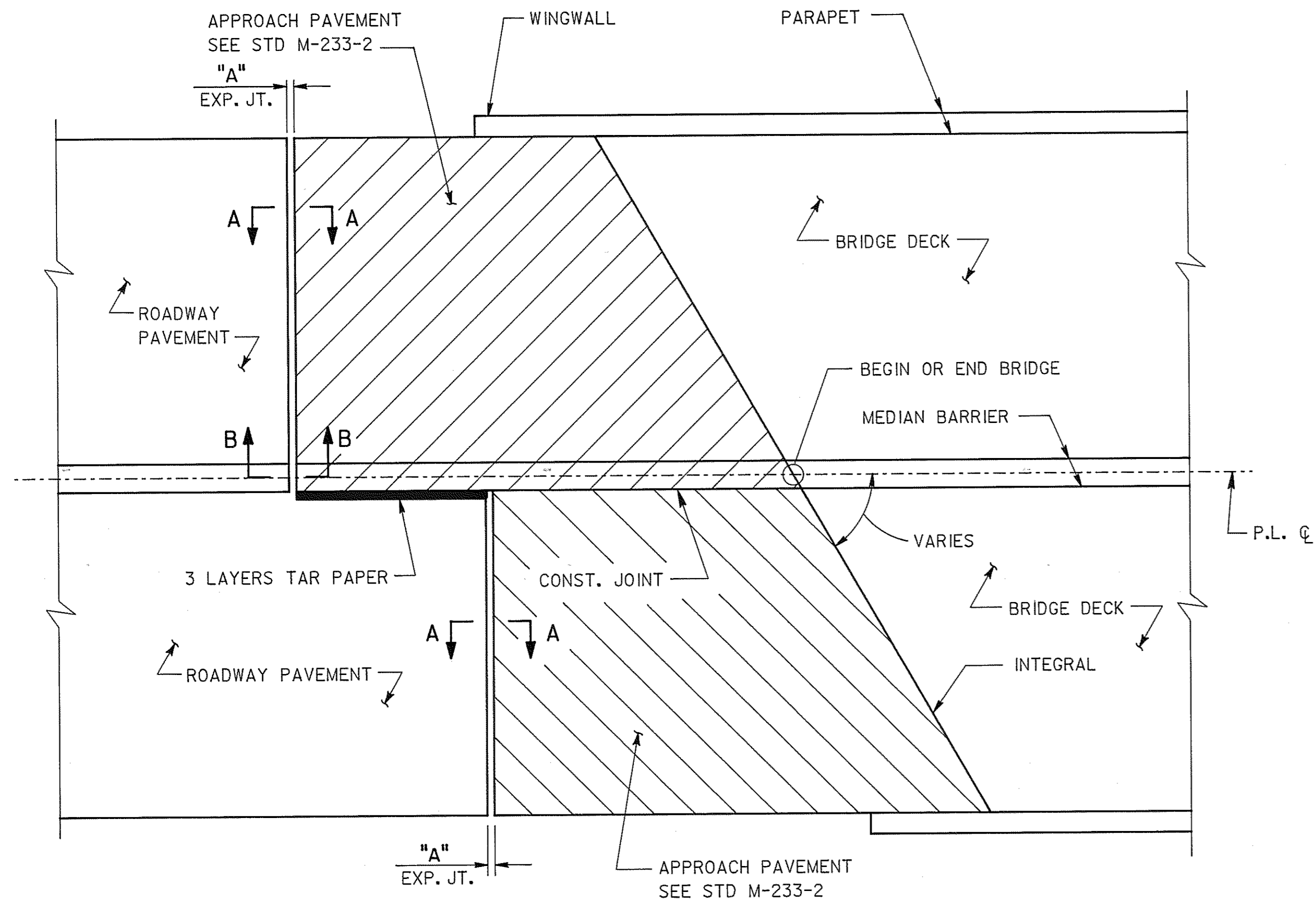
I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

M-248-85

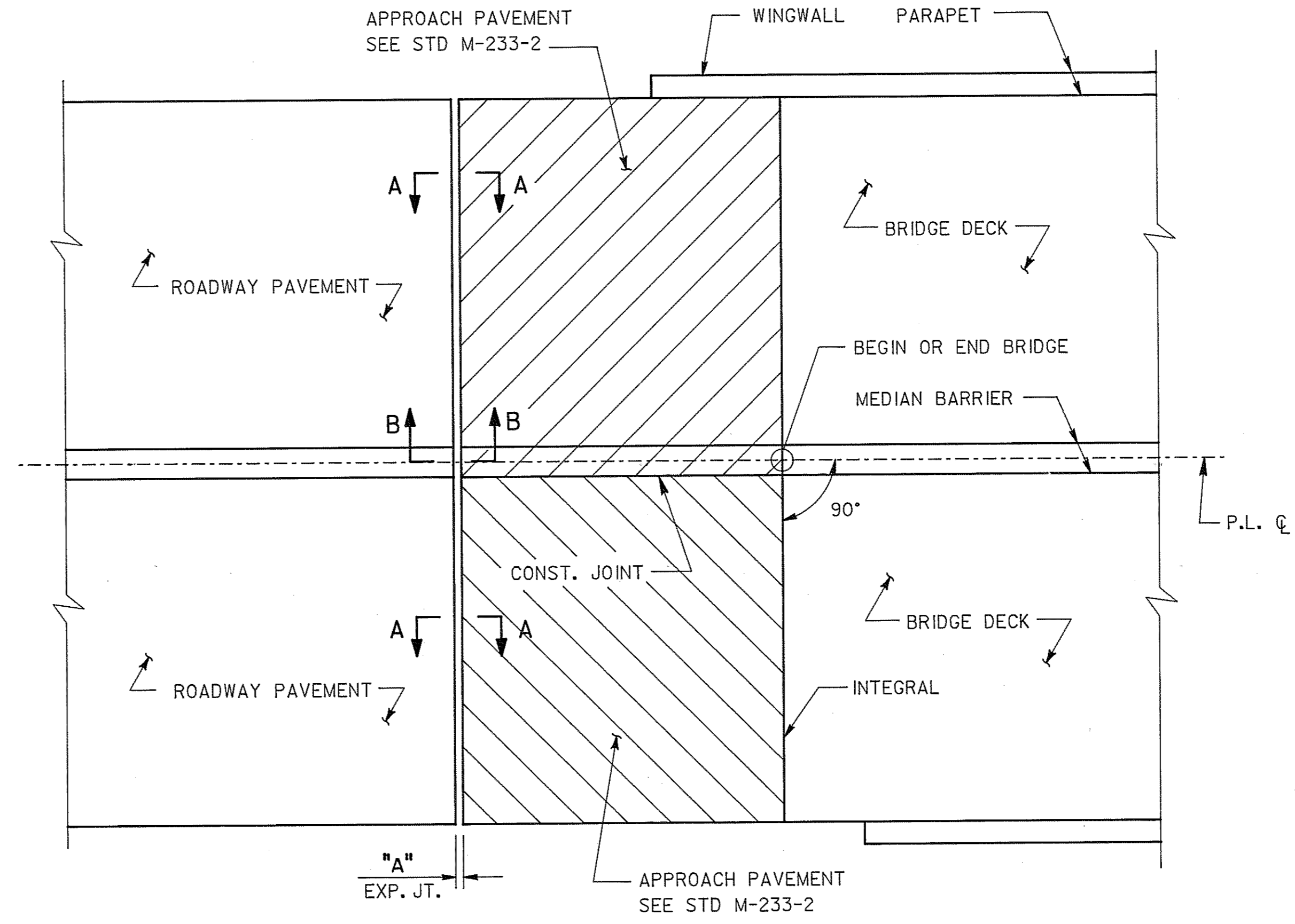
OS2450, 111BR7GNC I.DGN SV=NOTES PRF=BR7GNC I DATE:12-27-90

DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

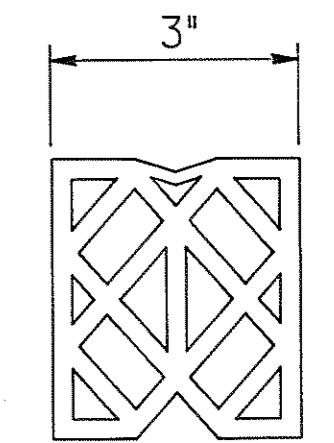
CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	4 Feb, 1991	JAP	General



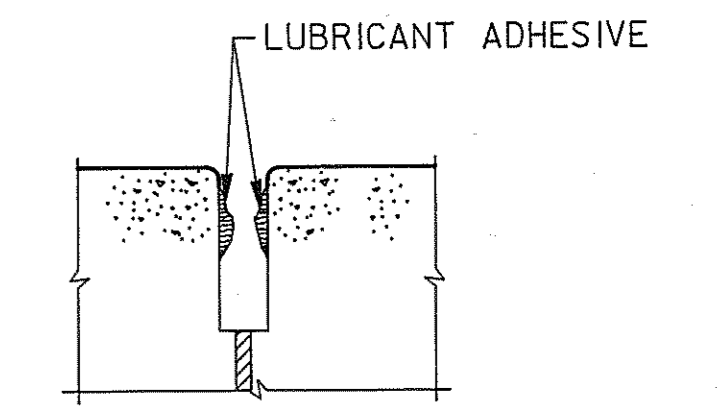
PLAN OF EXPANSION JT. AT APPROACH PAVEMENT (SKEWED BRIDGES)



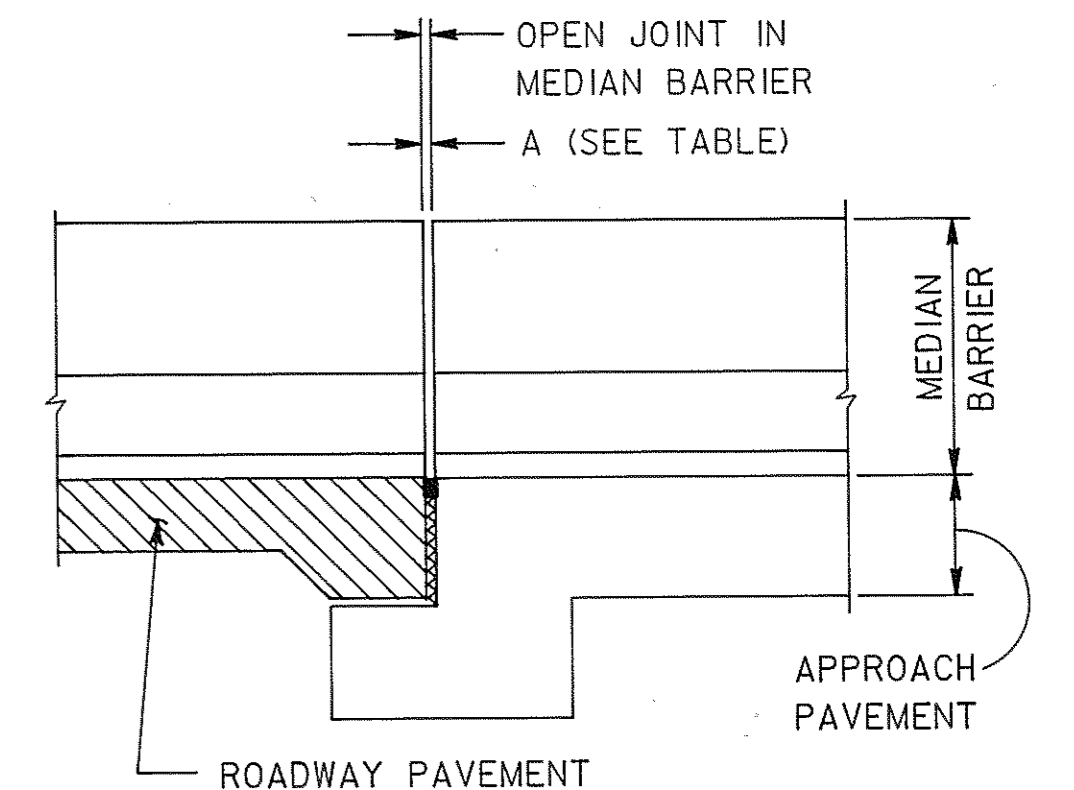
PLAN OF EXPANSION JT. AT APPROACH PAVEMENT (NO SKEW)



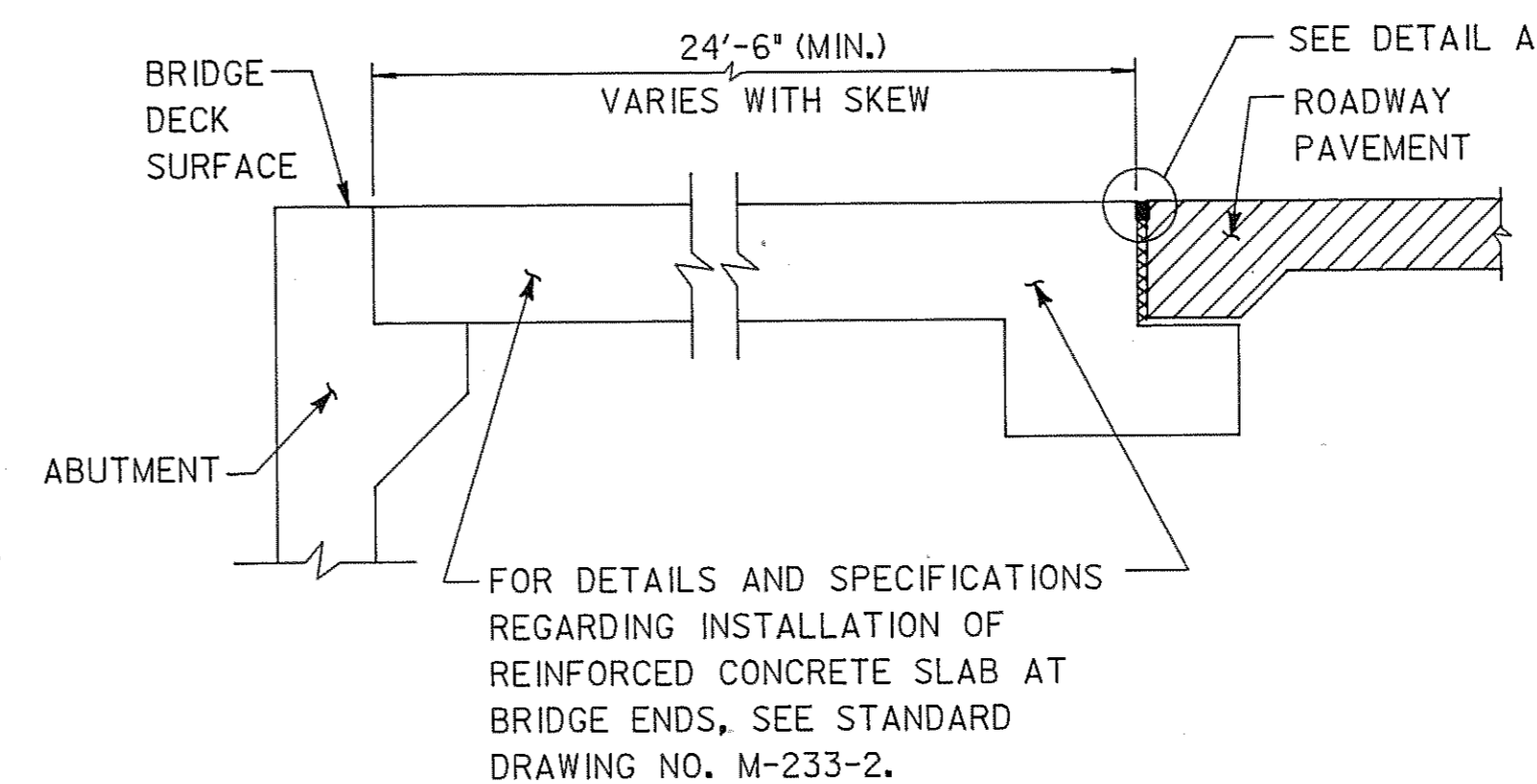
PREFORMED ELASTIC JOINT SEALER FOR 1 3/4" EXPANSION JOINTS



DETAIL SHOWING LUBRICANT - ADHESIVE (APPLIED TO JOINT PRIOR TO PLACING SEALER)



SECTION B-B SHOWING JOINT AT BARRIER



SECTION A-A SHOWING 1 3/4" EXPANSION JOINTS

NOTES

1. THE ELASTIC JOINT SEAL SHALL BE THE OPEN-CELL COMPRESSION TYPE INTENDED FOR USE IN SEALING JOINTS IN CONCRETE PAVEMENT OR APPROVED EQUAL.
2. THE CONTRACTOR SHALL FURNISH THE ENGINEER A CERTIFIED COPY OF THE TEST RESULTS INDICATING THAT THE JOINT MATERIAL TO BE USED COMPLIES WITH THE SPECIFICATION REQUIREMENTS. JOINT SHALL CONFORM TO AASHTO M220.
3. THE CONTRACTOR SHALL ALSO FURNISH A CERTIFICATION FROM THE MANUFACTURER STATING THE LUBRICATING ADHESIVE MEETS THE SPECIFICATION REQUIREMENTS. THE ADHESIVE SHALL CONFORM TO AASHTO M220.
4. THE SEAL CONFIGURATION SHOWN IS GENERAL AND MAY VARY WITH JOINT TYPE AND MANUFACTURER.
5. THE CONTRACTOR SHALL SUBMIT DETAILS OF ELASTIC JOINT SEALER FOR EXPANSION JOINT TO T.D.O.T. MATERIALS AND TESTS DIVISION FOR APPROVAL.
6. THE JOINT OPENING IS TO BE FORMED DURING STAGED CONSTRUCTION.
7. SLAB CONCRETE AT THE APPROACH PAVEMENT AND ROADWAY PAVEMENT TO BE SAW CUT WITH A DOUBLE BLADED SAW, THEN SANDBLASTED AFTER FINAL STAGE OF CONSTRUCTION. ALSO, GAP OPENING TO BE CLEANED PRIOR TO PLACEMENT OF COMPRESSION SEAL. THE COMPRESSION SEAL TO BE PLACED IN ONE CONTINUOUS UNIT ACROSS EACH JOINT SECTION.
8. NO REINFORCING STEEL SHALL EXTEND THROUGH THE OPEN JOINT IN THE MEDIAN BARRIER. THE JOINT SHALL BE CLEAN AFTER THE FINAL STAGE OF CONSTRUCTION.

PROVIDE 3" OF COMPRESSIBLE JOINT FILLER BETWEEN DRAINAGE STRUCTURES AND APPROACH SLABS. DO NOT CAST APPROACH SLABS DIRECTLY AGAINST DRAINAGE STRUCTURES.

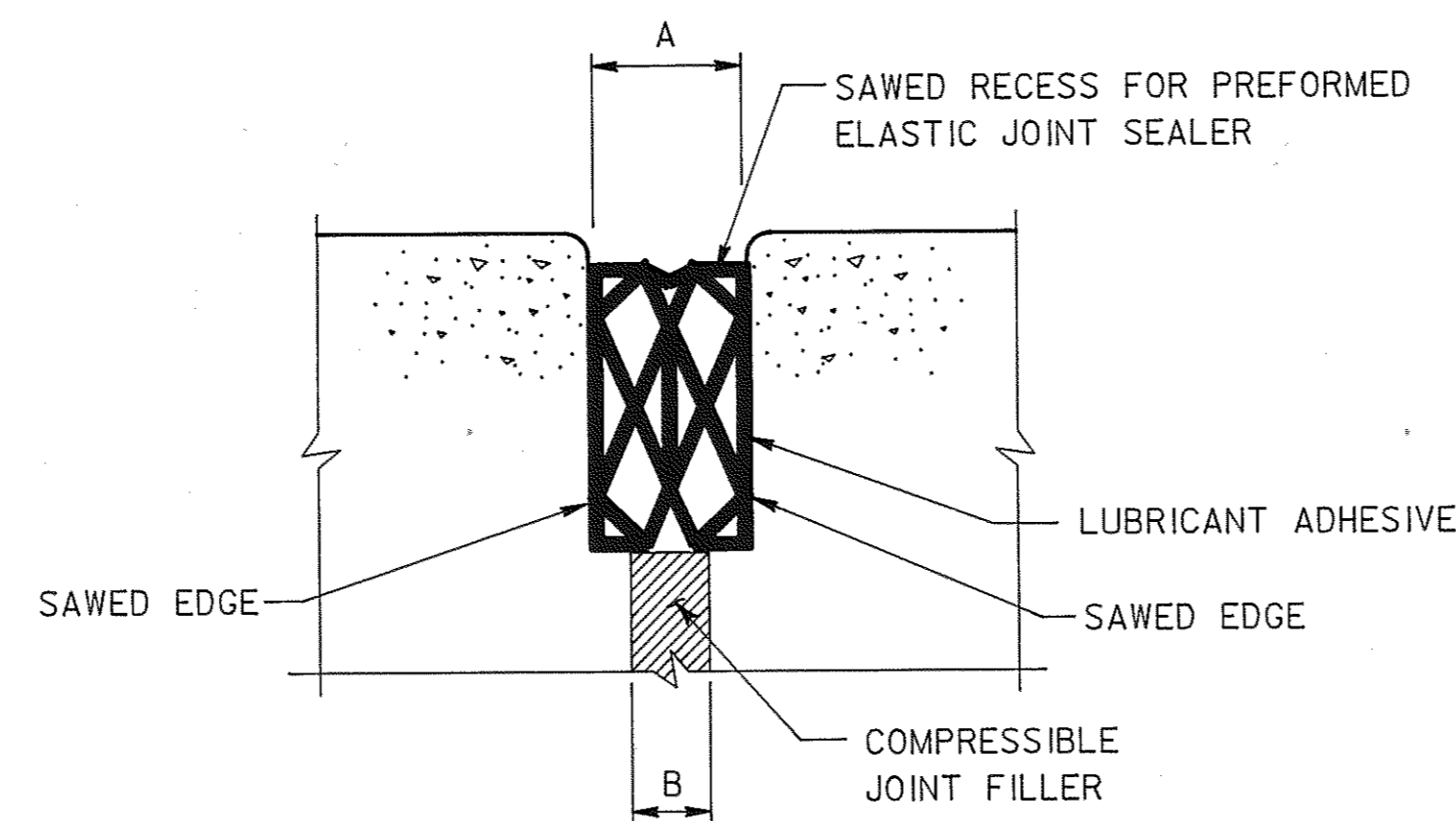


TABLE OF VARIABLE DIMENSIONS (INCHES)

CONCRETE PAVEMENT TEMPERATURE (°F)						
	25°	42°	60°	78°	95°	
A	2 1/2"	2 1/8"	1 3/4"	1 3/8"	1"	
B	1 3/4"	1 3/8"	1"	5/8"	1/4"	

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BRIDGE NO. 7 & 8

EXPANSION JOINT DETAILS

I-75 OVER SOUTH CHICKAMAUGA CREEK  
STATION 36+14.5  
HAMILTON COUNTY  
1991

M-248-85A

E:\9898\BRTEXJT.DGN SV=BRTEXJT PRF=BRTEXJT DATE:1-2-91 Q52450,111

DESIGNED BY	S.L. POWELL	DATE	12-90
DRAWN BY	M.K. DAFTARIAN	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	S.L. POWELL	DATE	12-90

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	11 Jan 1991	JHP	General
2	4 Feb 1991	JHP	General
3	22 April 1991	JHP	General
4	13 June 1991	JHP	STRUCTURAL STEEL ITEM DELETED.

### ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL	SUPERSTRUCTURE	ABUT. NO. 1	BENT NO. 1	BENT NO. 2	BENT NO. 3	ABUT. NO. 2
(10) (17)	202-04.01	REMOVAL OF STRUCTURES (I-75 OVER S. CHICKMAUGA CK. STA. 36+14)	L.S.	1					
(2)	204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	399	78	65	0	178	78
	204-03.01	WET EXCAVATION (BRIDGES)	C.Y.	585		251	123	211	
	204-04.01	ROCK EXCAVATION	C.Y.	63		21	21	21	
	204-05	ROCK DRILLING (BRIDGES)	L.F.	72		24	24	24	
(3)	204-10.01	FOUNDATION PREPARATION (I-75 OVER S. CHICKMAUGA CK. BENT 1)	L.S.	1		1			
(3)	204-10.02	FOUNDATION PREPARATION (I-75 OVER S. CHICKMAUGA CK. BENT 2)	L.S.	1			1		
(3)	204-10.03	FOUNDATION PREPARATION (I-75 OVER S. CHICKMAUGA CK. BENT 3)	L.S.	1				1	
	303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	56					
(12)	407-02.04	COLD PLANING OF BITUMINOUS PAVEMENT	TON	610		610			
	604-01.12	CLASS "A" CONCRETE (BRIDGE DECK)	C.Y.	1,224		1,224			
	604-02.03	EPOXY COATED REINFORCING STEEL	LB.	244,255		242,989			633
	604-03.01	CLASS "A" CONCRETE (BRIDGES)	C.Y.	409	24	119	119	115	24
	604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	76,262	5,589	20,647	20,647	20,128	5,589
(1)	604-03.04	PAVEMENT AT BRIDGE ENDS	S.Y.	690					
	604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	1,634					
	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S.Y.	936					
(13)	604-10.54	CONCRETE REPAIRS	S.F.	68					
(13)	604-10.63	CONCRETE REPAIRS (CRACKS)	L.F.	150					
(5)	604-11.00	EXPANSION DEVICE (1 3/4" MOVEMENT)	L.F.	253					
	606-02.03	STEEL PILES (10 INCH)	L.F.	413	163				250
(6)	615-02.05	PRESTRESSED BOX BEAM (33x36)	L.F.	2,226		2,226			
(7) (9) (11) (4)	620-03.01	PRECAST CONCRETE PARAPET	L.F.	575					
	709-05.06	MACHINED RIP RAP (CLASS A-1)	TON	1,470					
(8)	710-09.01	6" PERF. PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	290	145				145
	710-09.02	6" PIPE UNDERDRAIN	L.F.	40	20				20
(4) (11) (16)	711-02.04	REINFORCED CONCRETE MEDIAN BARRIER (5")	L.F.	315					
	407-02.07	SALVAGE VALUE OF COLD PLANING	TON	610		610			

- (1) NOTE: SQUARE YARD FOR PAVEMENT AT BRIDGE ENDS SHALL BE MEASURED AS ROAD SURFACE AREA AND SHALL INCLUDE ALL CONCRETE, REINFORCING STEEL, JOINT MATERIAL, NOTCH FOR ROADWAY DRAIN, SURFACE FINISH AS PER SP604 AND ANY OTHER INCIDENTALS NECESSARY FOR COMPLETE INSTALLATION.
- (2) NOTE: EXCAVATION BASED ON EXISTING GROUND.
- (3) NOTE: SEE FOUNDATION PREPARATION NOTE ON GENERAL NOTES SHEET.
- (4) NOTE: COST OF 28 BRIDGE PARAPET DRAINS TO BE INCLUDED IN ITEM 620-03.01. COST OF 14 BRIDGE GRATE DRAINS TO BE INCLUDED IN ITEM 711-02.04.
- (5) NOTE: SEE NOTES AND DETAILS ON DWG. M-248-85A. THE COST OF SAW CUTTING, CLEANING, JOINT FILLER, ADHESIVE LUBRICANT, COMPRESSION SEAL AND ALL OTHER MATERIALS AND LABOR REQUIRED FOR COMPLETE INSTALLATION ARE INCLUDED IN PRICE BID FOR ITEM 604-11.00.
- (6) NOTE: COST OF ELASTOMERIC PADS, RUBBER BONDING CEMENT, & ANCHOR BOLT ASSEMBLIES TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.
- (7) NOTE: COST OF BRIDGE RAIL ENDPOST IS TO BE INCLUDED IN THE COST OF THE BRIDGE RAIL SYSTEM.
- (8) NOTE: COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED PIPE.
- (9) NOTE: THE COST OF 8 INSERT ASSEMBLIES AND 32 7/8" DIA. X 4" HEX HEAD BOLTS (A307), TO BE INCLUDED IN ITEM 620-03.01. SEE DWG. M-248-104.

- (10) NOTE: THE COST OF REMOVING THE EXISTING CURB, PORTIONS OF THE EXISTING ABUTMENTS, EXISTING BEAMS, EXISTING LIGHT STANDARDS & THE EXISTING BRIDGERAIL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202-04.01
- (11) ALL REINFORCING STEEL IN THE PRECAST PARAPET AND MEDIAN BARRIER SHALL BE EPOXY COATED. COST TO BE INCLUDED IN PRICE BID FOR ITEMS 620-03.01 AND 711-02.04.
- (12) THE COST OF REMOVING EXISTING ASPHALT OVERLAY SHALL BE PAID FOR IN ITEM 407-02.04, COLD PLANING OF BITUMINOUS PAVEMENT. CARE SHALL BE TAKEN BY THE CONTRACTOR WHEN REMOVING ASPHALT SO AS NOT TO DAMAGE EXISTING PRESTRESSED CONCRETE BOX BEAMS TO REMAIN IN PLACE. TOP OF BEAMS SHALL BE SANDBLASTED CLEAN PRIOR TO PLACEMENT OF CONCRETE DECK SLAB. COST OF SANDBLASTING (1950 S.Y.) TO BE INCLUDED IN ITEM 407-02.04.
- (13) NOTE: SEE DWGS. M-248-89 AND M-248-123.
- (15) NOTE: THE COST OF BITUMINOUS FIBERBOARD AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN COST OF ITEMS BID ON.
- (16) MEDIAN BARRIER QUANTITY INCLUDES THE BARRIER ON THE APPROACH SLABS.
- (17) NOTE: REMOVAL OF CONCRETE CURBS AND CONCRETE BRIDGE RAILING: CONCRETE CURBS AND CONCRETE BRIDGE RAILING SHALL BE REMOVED BY USE OF JACK HAMMERS TO THE FULL SATISFACTION OF THE ENGINEER. RAM HOES AND HEADACHE BALLS WILL NOT BE ALLOWED. ALTERNATE METHODS MAY BE USED SUBJECT TO APPROVAL BY THE ENGINEER.

SV-NOTES PRF=BRTEOC1 DATE:1-2-91 QS2450 1113BRTEOC1.DGN

DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BRIDGE NO. 7 & 8

ESTIMATED QUANTITIES

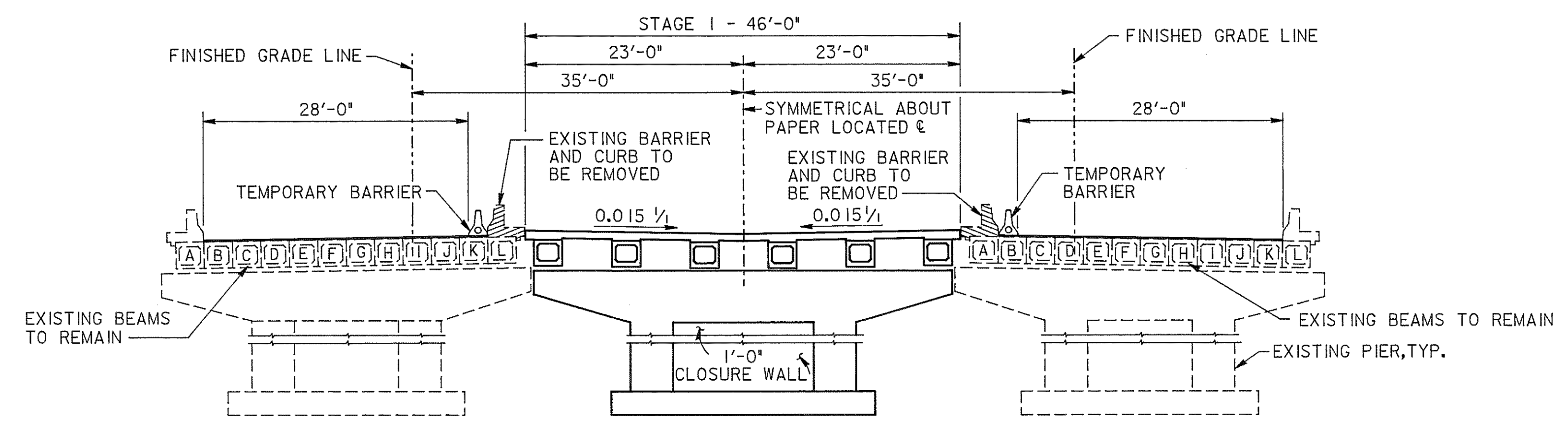
I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

M-248-86

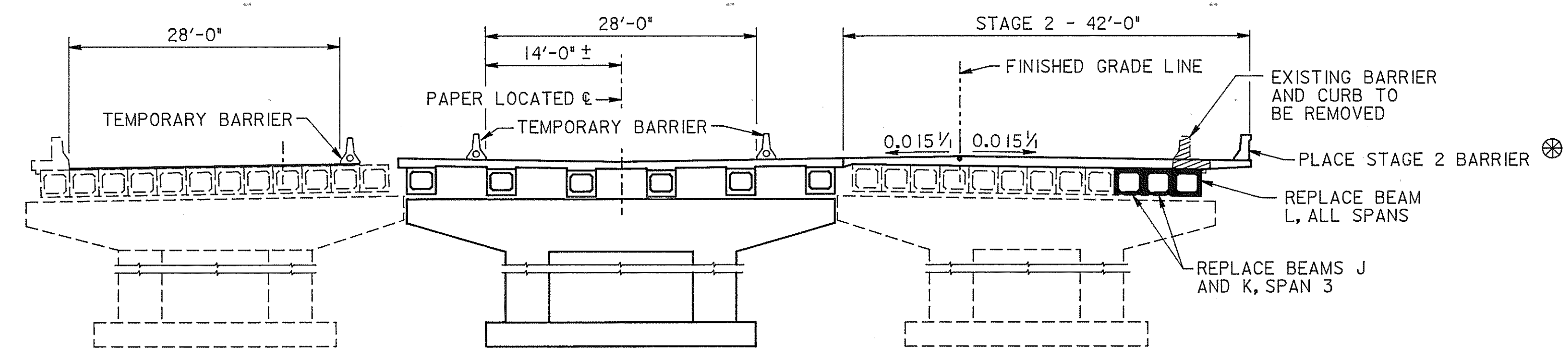


CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	

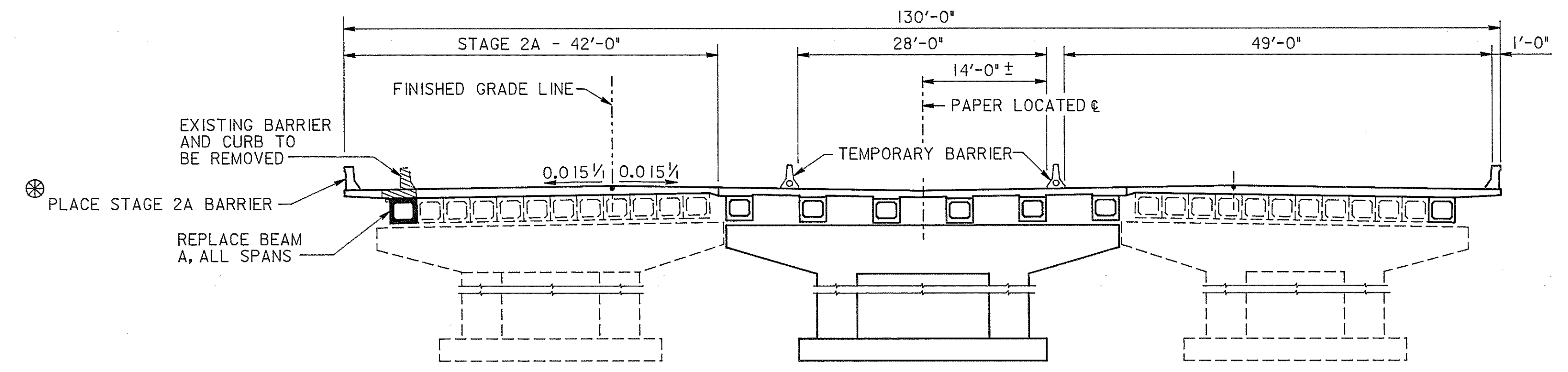
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



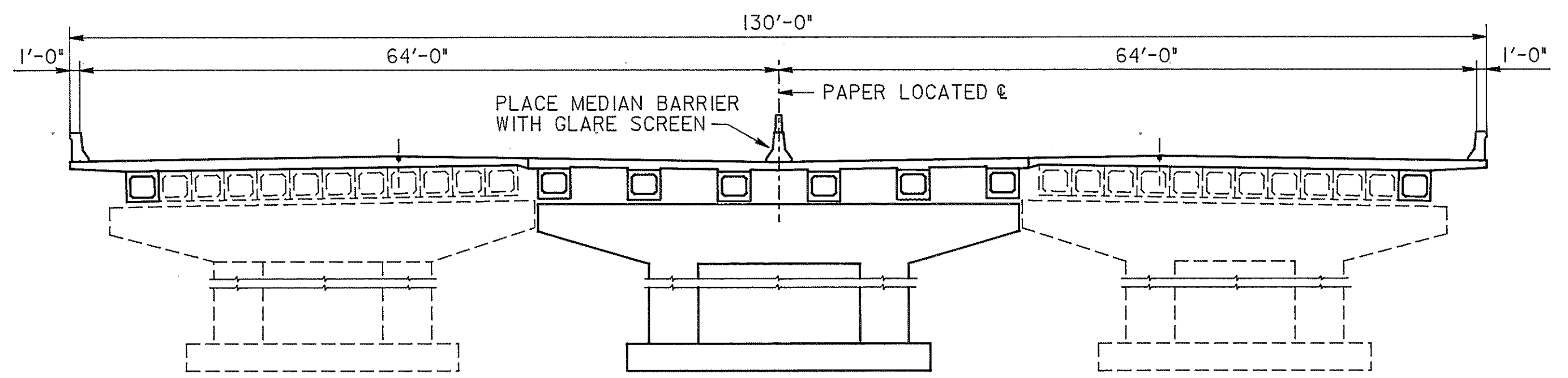
STAGE 1 - (PHASE I CONTRACT)



STAGE 2 - (PHASE I CONTRACT)



STAGE 2A - (PHASE I CONTRACT)



STAGE 2A - (PHASE I CONTRACT)

⊗ NEW M-233-1 BARRIER TO BE BOLTED TEMPORARILY TO DECK AND REUSED AS PERMANENT BARRIER DURING ULTIMATE PHASE CONTRACT NOT SHOWN HERE.

SV=STAGE PRF=BRTSTGCC1 DATE:12-19-90 OS2450,111BRTSTGCC1.DGN D:\

DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

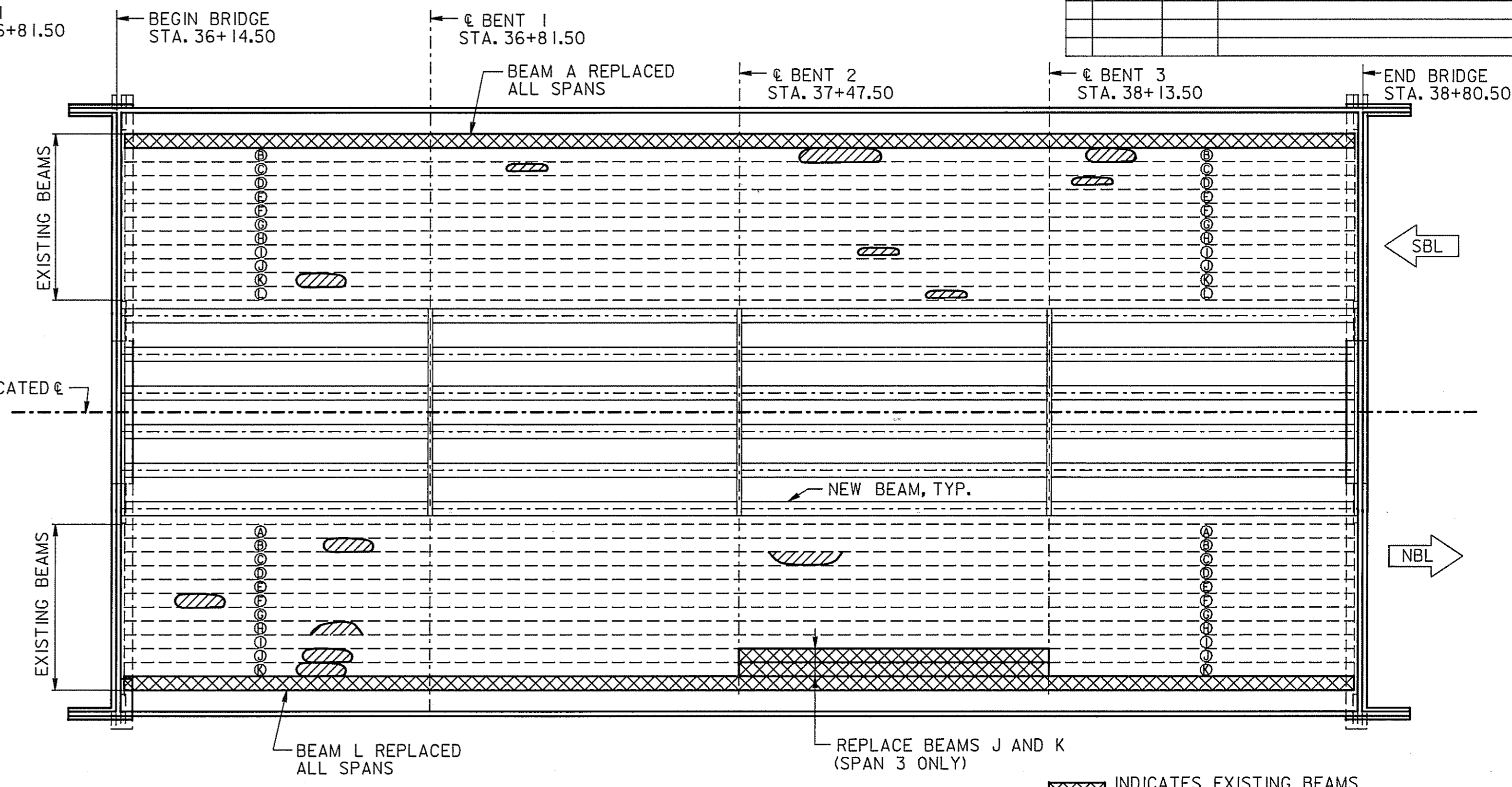
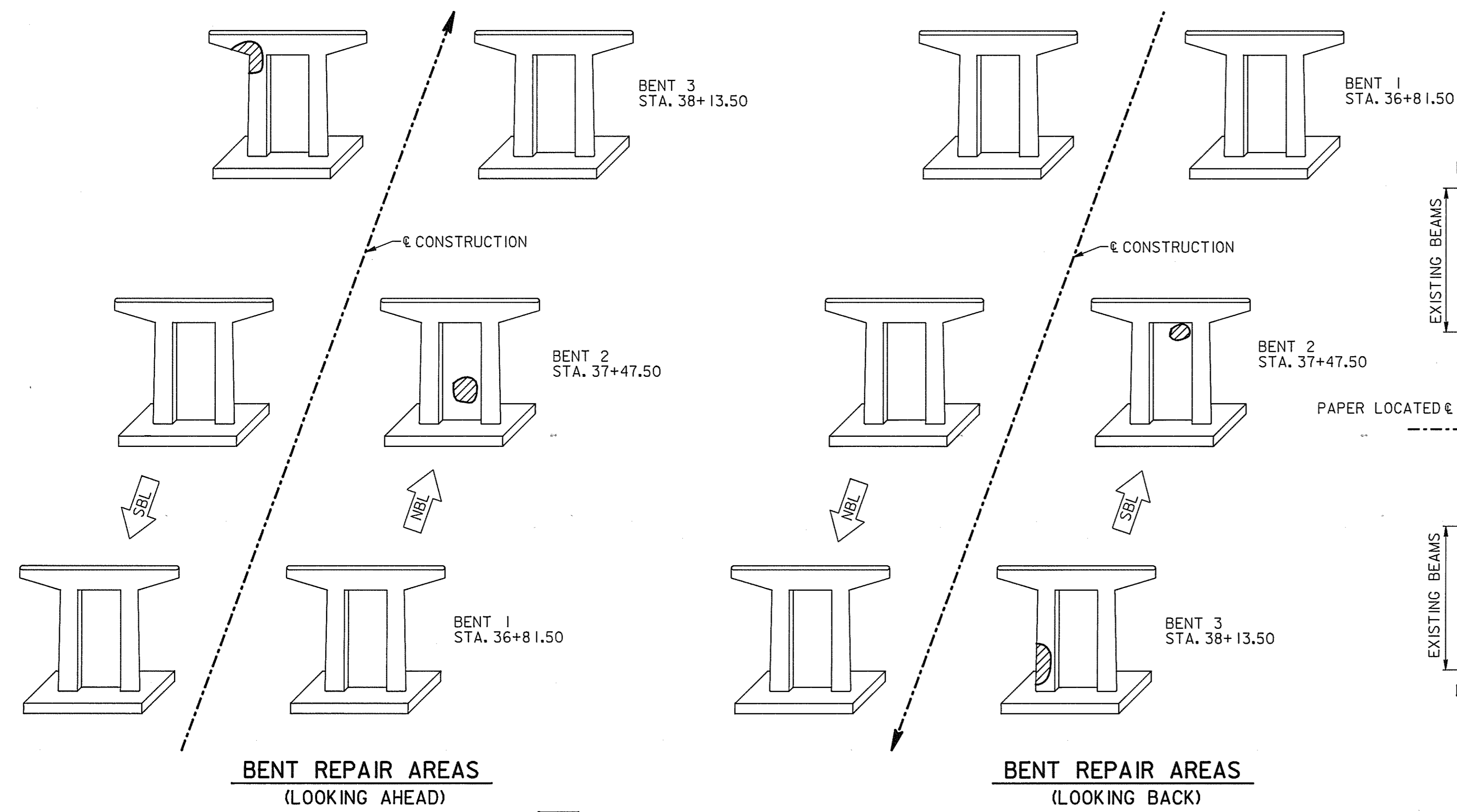
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BRIDGE NO. 7 & 8

STAGING PLAN

I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



**BENT REPAIR AREAS (LOOKING AHEAD)**

**BENT REPAIR AREAS (LOOKING BACK)**

**BEAM REPLACEMENT AND REPAIR**

INDICATES AREAS TO RECEIVE EPOXY CONCRETE REPAIR

INDICATES EXISTING BEAMS TO BE REPLACED  
 INDICATES AREAS TO RECEIVE EPOXY CONCRETE REPAIR

⊙ INDICATES EXISTING BEAM LOCATION

**NOTES FOR PLACING NEW EPOXY CONCRETE**

- SURFACE AREAS WHICH ARE SPALLED, DELAMINATED OR CRACKED (PARTICULARLY WHERE CORROSION STAINING IS EVIDENT) SHALL HAVE UNSOUND CONCRETE REMOVED TO EXPOSE THE STRAND OR REINFORCEMENT AND SHALL BE REPAIRED TO THE ORIGINAL SURFACE FINISH LINES USING NEW EPOXY CONCRETE. SHADED AREAS ON BEAM LAYOUT AND BENT REPAIR SKETCH GIVE APPROXIMATE LOCATIONS AND EXTENT OF AREAS TO BE REPAIRED.
- FOR BEAMS, CAUTION SHALL BE USED TO INSURE ONLY MINIMAL CONCRETE REMOVAL SUFFICIENT TO EXPOSE STRAND OR REBAR AND PERMIT BLAST CLEANING AND PLACEMENT OF CONCRETE PATCH MATERIAL. CONSTRUCTION OR TRAFFIC LOADS SHALL NOT ACT ON THE BEAM DURING THE PATCHING OPERATION. SEE EXISTING PLANS FOR BEAM DETAILS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE AND THE INTEGRITY OF THE BEAMS DURING THE PATCHING OPERATIONS.
- FOR BENTS, AREAS TO BE REPAIRED SHALL BE SUFFICIENTLY LARGER THAN THE SPALLED OR CRACKED AREAS SO THAT THE NEW CONCRETE PATCH EXTENDS INTO SOUND CONCRETE ON ALL EDGES. WHERE CRACKING WITH CORROSION STAINING EXISTS, CONCRETE SHALL BE REMOVED TO A DISTANCE OF 3/4" BENEATH THE CORRODED REINFORCING AND THE REINFORCING SHALL BE BLAST CLEANED BEFORE PLACING EPOXY CONCRETE. CRACKS SHALL BE "TRACED" TO THEIR END BY CHIPPING AND EXPOSURE UNTIL SOUND, UNRUSTED REINFORCING IS FOUND. SMALL OR HAIRLINE CRACKING, WHERE STAINING IS NOT PRESENT, NEED NOT BE REPAIRED AT THE DISCRETION OF THE ENGINEER. CONSTRUCTION AND TRAFFIC LOADS SHALL NOT ACT ON ANY SUBSTRUCTURE UNIT WHILE IT IS UNDER REPAIR. ONLY ONE FACE, EITHER FORWARD FACE OR BACK FACE OR BOTTOM OF CAP BEAM SHALL BE REPAIRED IN ITS ENTIRETY AT ONE TIME, UNLESS THE CONTRACTOR TAKES NECESSARY MEASURES TO PROVIDE SUPPORT OR SHORING FOR THE BENT STRUCTURE. ONE ADJACENT COLUMN FACE MAY ALSO BE REPAIRED DURING THE PROCEDURE, SO THAT NEVER MORE THAN TWO ADJACENT FACES HAVE EXPOSED REINFORCING DURING UNSHORED RECONSTRUCTION.
- THE CONTRACTOR IS ADVISED THAT REMOVAL OF CONCRETE BELOW EXISTING REINFORCING WILL REDUCE THE CAPACITY OF THE BEAM OR BENT BEING REPAIRED. NECESSARY SHORING WILL BE AT THE EXPENSE OF THE CONTRACTOR, AND THE SAFETY OF THE STRUCTURE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR DURING THE REPAIR OPERATIONS.
- THE COST OF SAW CUTTING AND REMOVING UNSOUND CONCRETE, CLEANING REBAR AND STRAND, PLACING EPOXY CONCRETE, INSTALLING AND REMOVING SHORING, AND ALL LABOR AND MATERIALS NECESSARY FOR COMPLETING THE WORK SHALL BE PAID FOR UNDER ITEM NO. 604-10.54, CONCRETE REPAIRS, SQ. FT.
- THE CONTRACTOR MAY OBTAIN A LIST OF ACCEPTABLE BRANDS OF EPOXY CONCRETE FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.
- FOR DETAILS NOT SHOWN, SEE DWG NO. M-248-123.

**CONSTRUCTION SEQUENCE FOR BEAM REMOVAL AND REPLACEMENT**

- UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE FOLLOWING SEQUENCE OF CONSTRUCTION SHALL BE FOLLOWED FOR REMOVING AND REPLACING EXISTING BEAMS A, J, K AND L.
- REMOVE ALL EXISTING ASPHALT FROM BRIDGE SURFACE TO THE TOP OF EXISTING BOX BEAM SURFACES. CARE SHALL BE TAKEN TO AVOID DAMAGING EXISTING BEAM TOP SURFACES DURING THE GRINDING OPERATION.
- ALL EXISTING BEAMS SHALL BE INSPECTED BY THE ENGINEER TO THE FULL EXTENT OF THEIR EXPOSURE. EXISTING BEAMS, IN ADDITION TO THOSE LISTED IN THE PLANS, SHALL BE REPLACED AS DETERMINED BY THE ENGINEER.
- TO RELEASE BEAMS SCHEDULED FOR REPLACEMENT:
  - CUT OR REMOVE THE EXISTING 3/4" DOWELS AT PRESENT "FIXED" ENDS OF BEAMS.
  - CUT THE EXISTING 1" DIAMETER TRANSVERSE DIAPHRAGM TIE RODS. BEAM WEBS SHALL NOT BE REMOVED BEYOND THE AMOUNT MINIMALLY NECESSARY TO CUT AND REMOVE TIE RODS. EXTREME CAUTION SHALL BE USED DURING THIS PROCEDURE TO MAINTAIN THE ABILITY OF THE BEAM TO SUPPORT ITS OWN WEIGHT. TEMPORARY SHORING SHALL BE USED IF NECESSARY. BEAM PRESTRESSING STRANDS SHALL NOT BE CUT.
- REMOVE BEAMS TO BE REPLACED. BEAMS SHALL BE LIFTED ONLY AT END POINTS DURING REMOVAL UNLESS APPROVED OTHERWISE BY THE ENGINEER.
- REMOVE EXISTING MASONRY PLATES AND EXISTING DOWEL BARS AT EACH BEAM END. DOWELS SHALL BE REMOVED FROM BENT CAP BY CORING A 2" DIAMETER HOLE 1'-0" INTO BENT CAP. TO AVOID DAMAGING BENT CAP REINFORCING, DOWEL HOLE SHALL NOT BE DRILLED AFTER BEAMS ARE IN PLACE. RATHER, REPLACEMENT BEAMS SHALL HAVE THEIR 2" DIAMETER HOLES FORMED TO MATCH THE LOCATION OF THE HOLES IN THE BENT CAP.
- INSTALL TWO 3/4" X 2'-0" REPLACEMENT DOWELS (A709 GR 36) AND ONE 1/2" ELASTOMERIC BEARING PAD AT EACH BEAM END. DOWELS SHALL BE GROUTED IN PLACE WITH EPOXY GROUT AFTER SETTING NEW BEAMS.
- REPLACEMENT BEAMS SHALL BE CAREFULLY PLACED IN POSITION RELATIVE TO THE REMAINING RETAINED BEAMS. REPLACEMENT TIE RODS ARE NOT REQUIRED. THE CONTRACTOR SHALL USE CARE IN FITTING THE REPLACEMENT BEAMS TO AVOID DAMAGING ADJACENT EXISTING BEAMS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE AND THE INTEGRITY OF EXISTING AND REPLACEMENT BEAMS DURING THE ABOVE OPERATIONS. ANY BEAMS DAMAGED DURING THESE OPERATIONS SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. DRAWINGS SHOWING THE PROPOSED METHOD FOR REMOVING AND REPLACING EXISTING BEAMS SHALL SUBMITTED TO THE ENGINEER.
- COST OF BEAMS, CORINGS, ELASTOMERIC PADS, NON-SHRINK GROUT, AND REPLACEMENT DOWELS, AS WELL AS ALL OTHER MATERIALS AND LABOR REQUIRED TO PERFORM THE OPERATIONS SHALL BE INCLUDED UNDER ITEM 615-02.05, PRESTRESSED CONCRETE BEAMS, LIN FT.

**REPAIR LIST**

EXISTING BEAM REPLACEMENTS ...	BEAMS J AND K BEAM A BEAM L	SPAN 3 ALL SPANS	NBL (2) SBL (4) NBL (4)
EXISTING BEAM REPAIRS .....	PATCH REBAR POP-OUTS ON THE FOLLOWING BEAMS: BEAMS B, F, H, J AND K BEAM C BEAM K BEAM C BEAMS B, I AND L BEAM B AND D	SPAN 1 SPAN 3 SPAN 1 SPAN 2 SPAN 3 SPAN 4	NBL NBL SBL SBL SBL SBL
EXISTING PIER REPAIRS .....	PATCH CONCRETE SPALLS AND REBAR POP-OUTS AT BENT 2 NBL, BENT 2 SBL, AND BENT 3 SBL		

DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

**BRIDGE NO. 7 & 8**

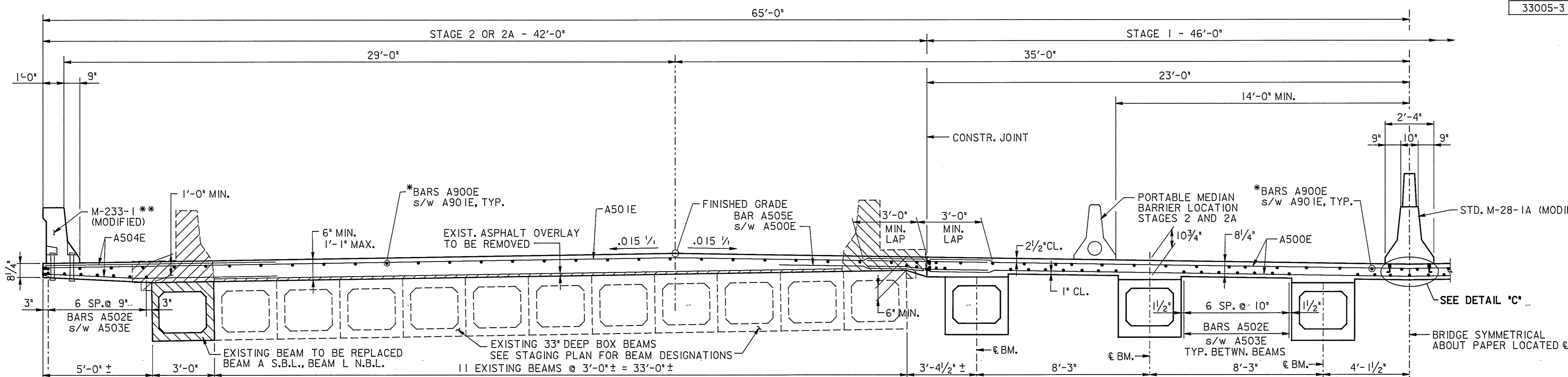
**REPAIR DETAILS**

I-75 WIDENING OVER  
 SOUTH CHICKAMAUGA CREEK  
 STATION 36+14.50  
 HAMILTON COUNTY  
 1991

M-248-89

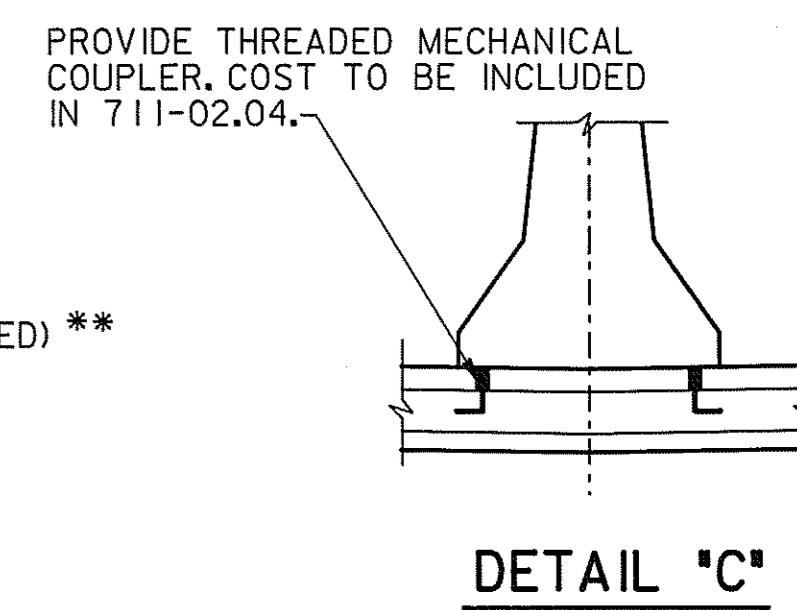
052450, I I DBR7RC.LDGN D:\ SV=REPAIR PRF=BR7RC DATE:1-2-91

CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
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REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	4 Feb 1991	JRP	Quantity



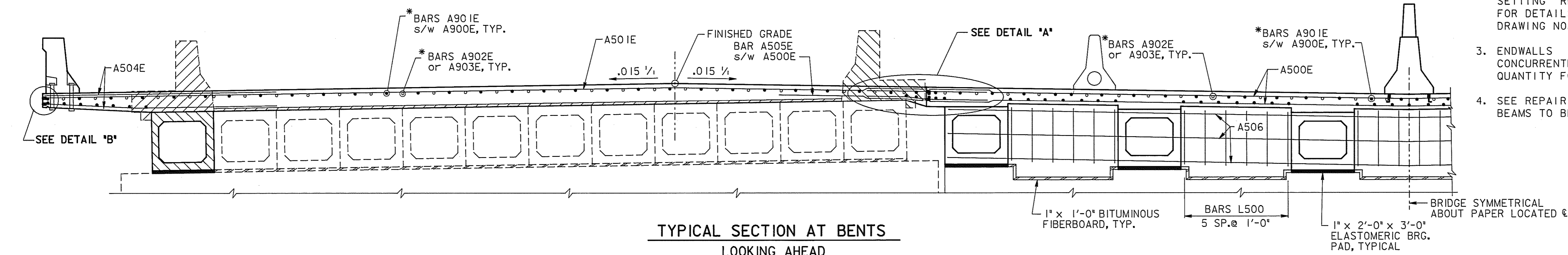
TYPICAL SECTION AT MIDSPAN  
LOOKING AHEAD

\*\* DELINEATORS WITH YELLOW REFLECTORS AS DETAILED ON STD. S-MB-1 SHALL BE PLACED ON THE MEDIAN BARRIER AT 40'-0" MAXIMUM SPACING. DELINEATORS WITH WHITE REFLECTORS AS DETAILED ON STD. S-MB-1 SHALL BE PLACED ON PARAPET AT 12'-6" MAXIMUM SPACING. COST OF MATERIALS AND INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BIDS FOR MEDIAN BARRIER AND PARAPET.

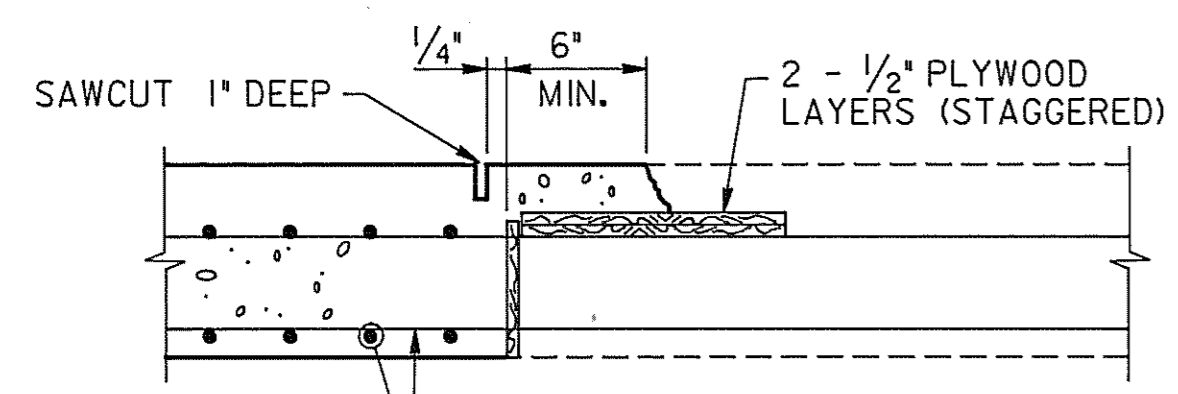


NOTES

1. WHEN POURING SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING INSERTS FOR PARAPET AND MEDIAN BARRIER RAIL. THE PARAPET AND MEDIAN BARRIER RAIL SHALL NOT BE PLACED UNTIL THE ENTIRE DECK SLAB IS POURED AND CURED. SEE ALSO STANDARD DRAWINGS M-233-1 AND M-28-1A.
2. WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOST AND PARAPET. FOR DETAILS OF WINGPOST AND PARAPET SEE STANDARD DRAWING NO. M-233-1.
3. ENDWALLS AND SUPPORT DIAPHRAGMS SHALL BE POURED CONCURRENTLY WITH THE DECK SLAB AND INCLUDED IN THE QUANTITY FOR ITEM 604-01.12.
4. SEE REPAIR DETAILS FOR LIST AND LOCATION OF EXISTING BEAMS TO BE REPLACED AND REPAIRED.



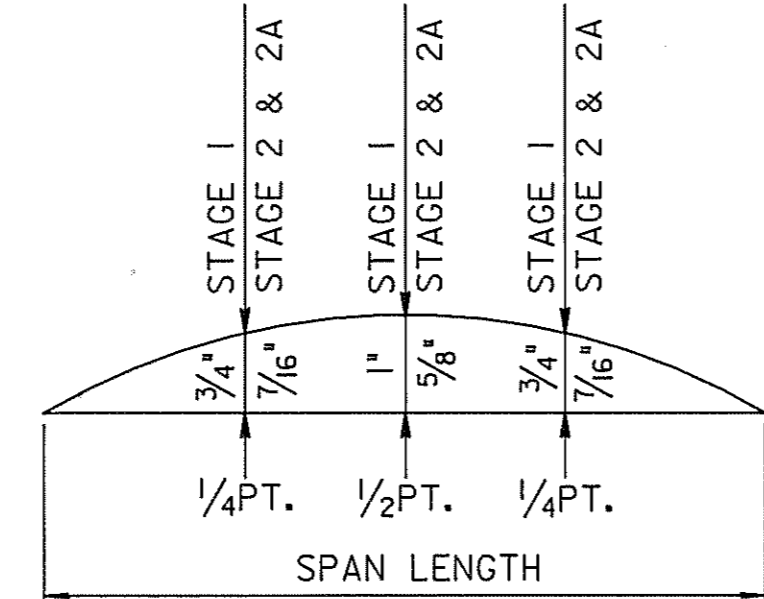
TYPICAL SECTION AT BENTS  
LOOKING AHEAD



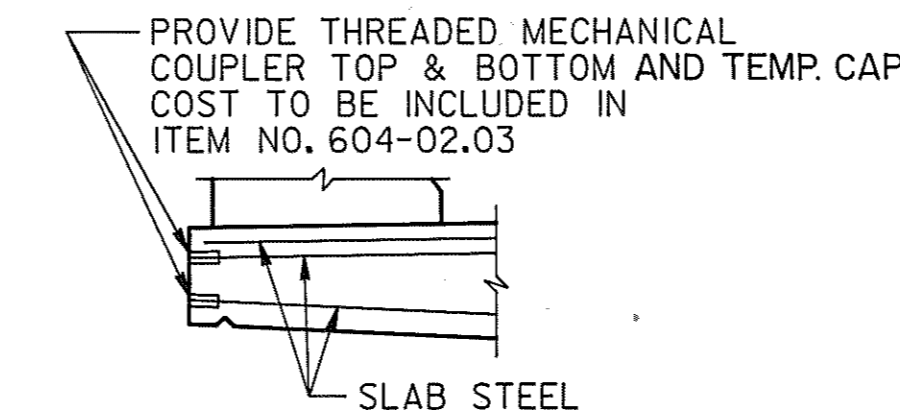
SLAB CONSTRUCTION JOINT DETAIL

NOTE:  
SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTORS OPTION EXCEPT NO JOINT MAY BE LOCATED CLOSER THAN 1/5 SPAN LENGTH FROM AN INTERIOR SUPPORT. THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS DURING PLACEMENT OF SLAB TO PREVENT THE EXTERIOR BEAM FROM TWISTING. NO EQUIPMENT SHALL BE PERMITTED ON THE BRIDGE UNTIL ALL POURS ARE MADE AND THE CONCRETE IS PROPERLY CURED. ALL SLAB CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN BELOW.

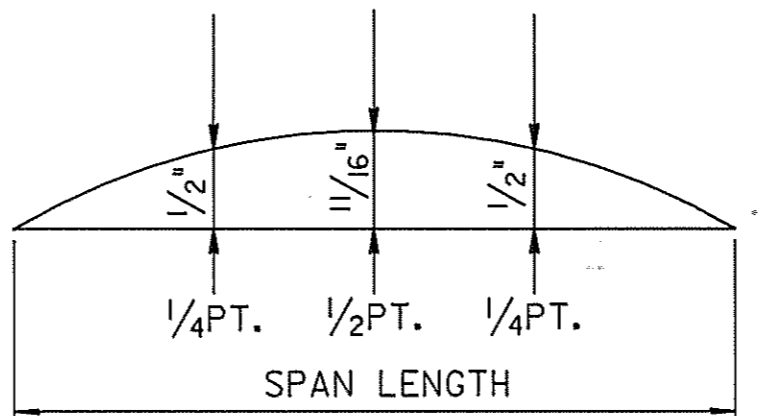
NOTE:  
CORRECTION CURVES ARE FOR DEAD LOAD SLAB AND ALL DEAD LOADS THAT ARE APPLIED AFTER SLAB IS IN PLACE AND SHOULD BE CORRECTED TO COMPENSATE FOR THE EFFECTS OF VERTICAL CURVE.



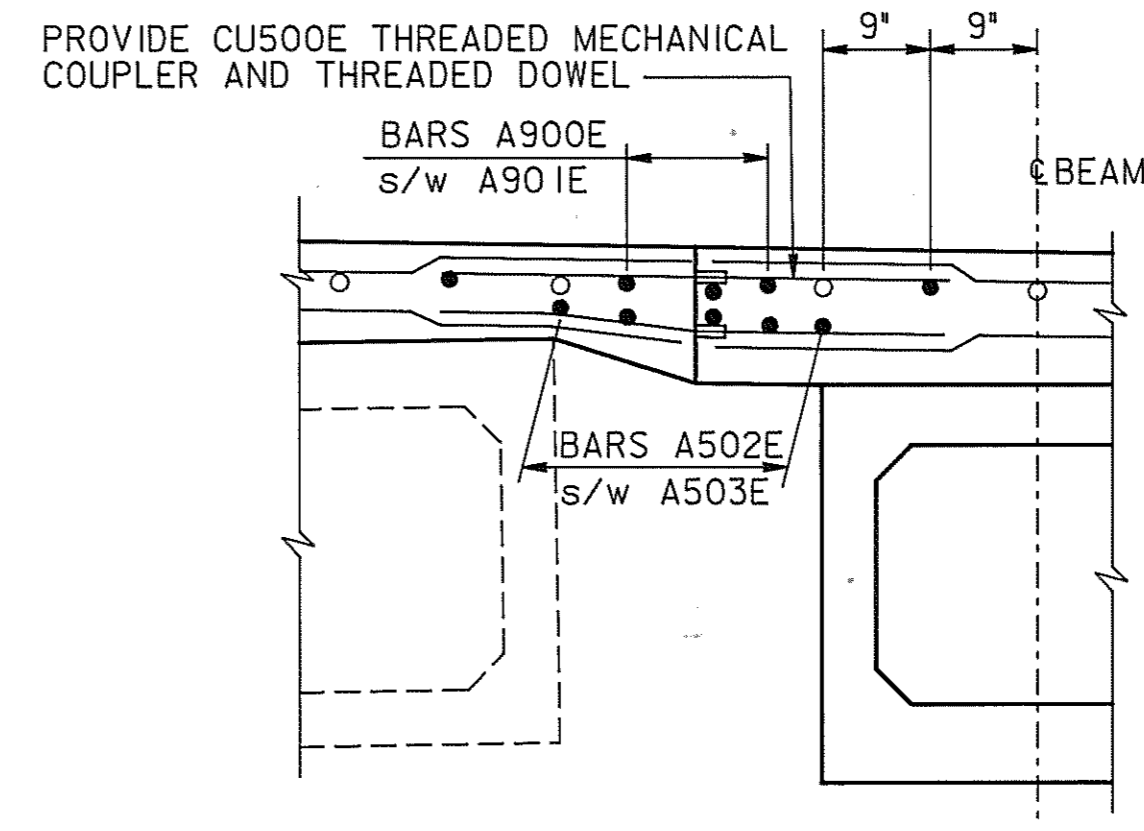
DEAD LOAD CORRECTION CURVE  
NEW BEAMS



DETAIL 'B'



DEAD LOAD CORRECTION CURVE  
EXISTING BEAMS



DETAIL 'A'

ESTIMATED QUANTITIES			
CLASS "A" CONCRETE (BRIDGE DECK) C.Y.	EPOXY-COATED REINFORCING STEEL LB.	CLASS "A" CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT LB.
1,224	242,989	80	3,663

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BRIDGE NO. 7 & 8

SUPERSTRUCTURE DETAILS

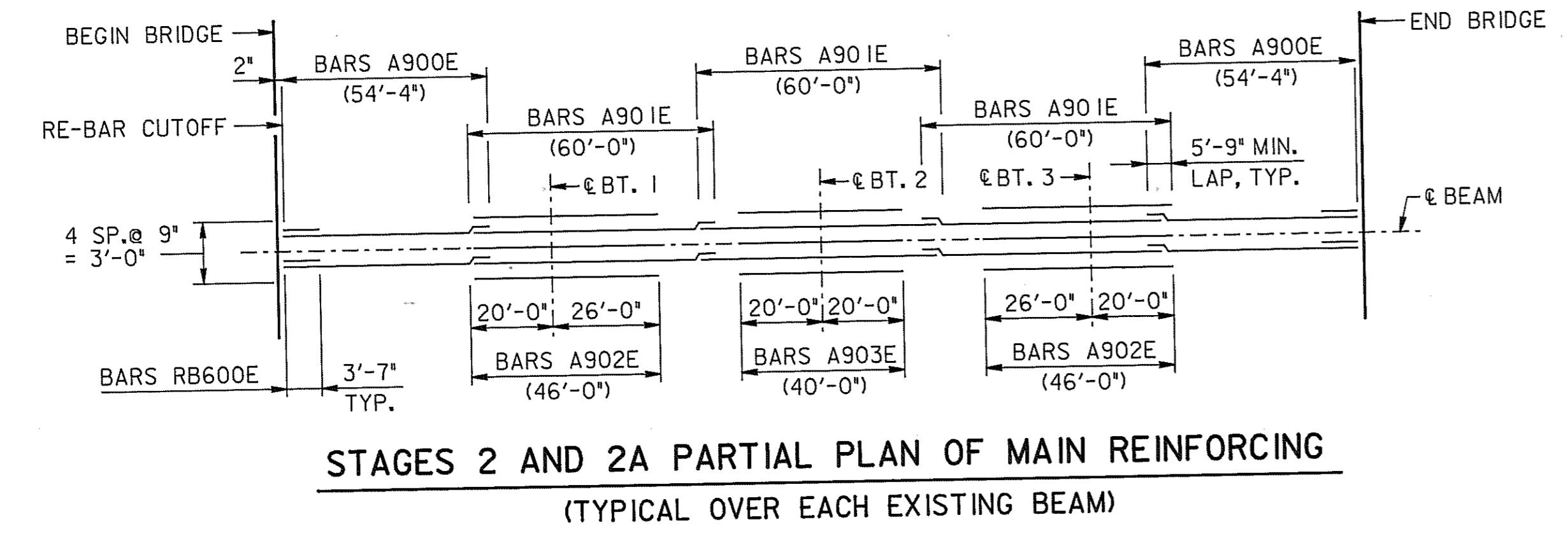
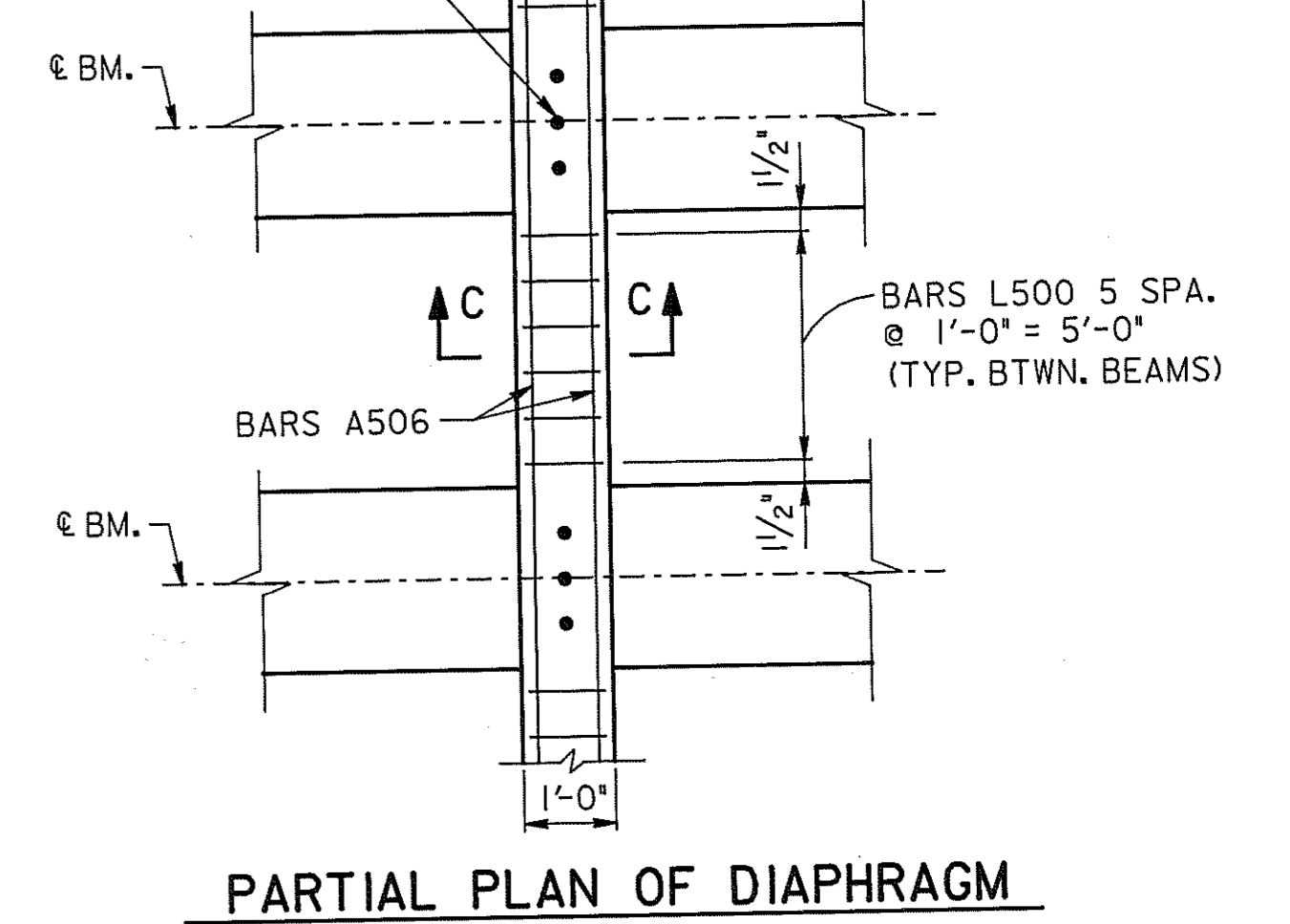
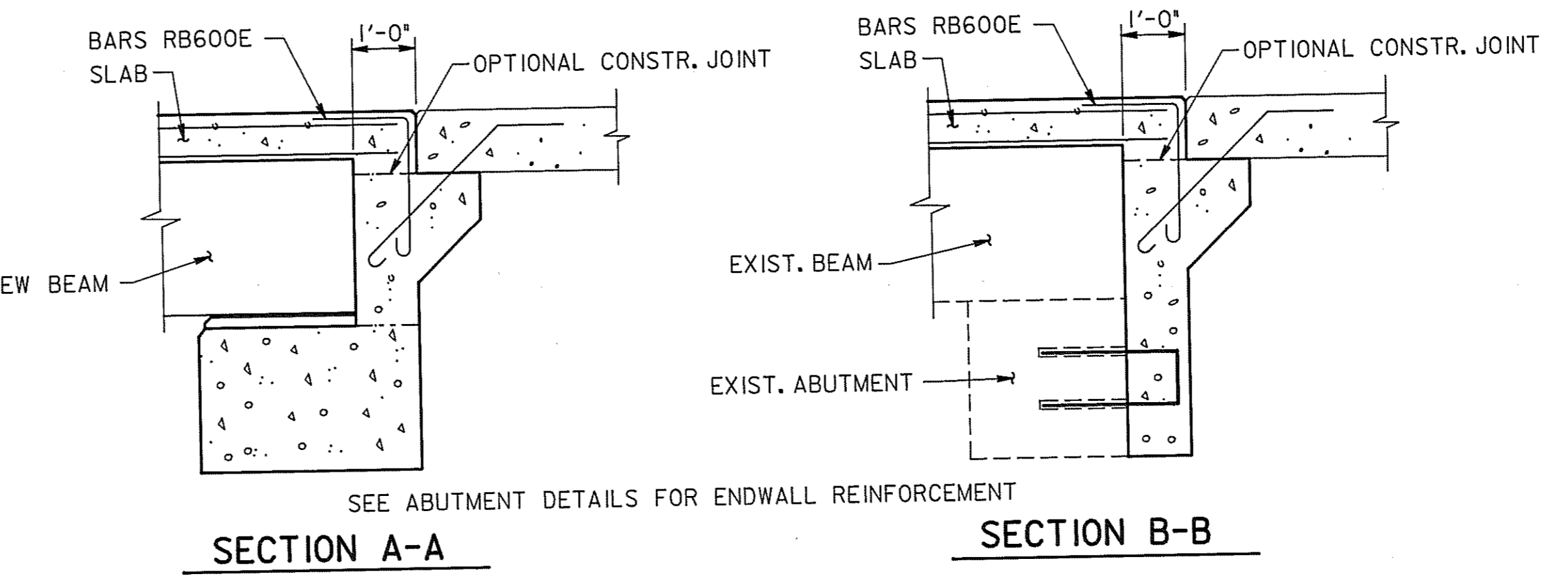
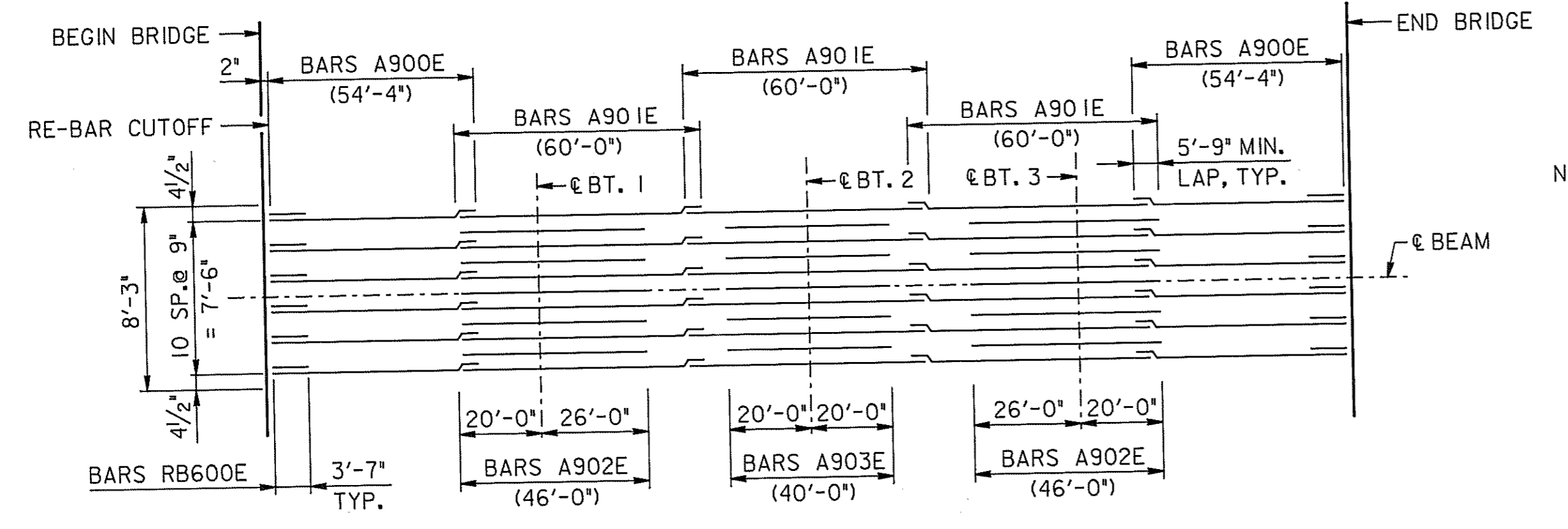
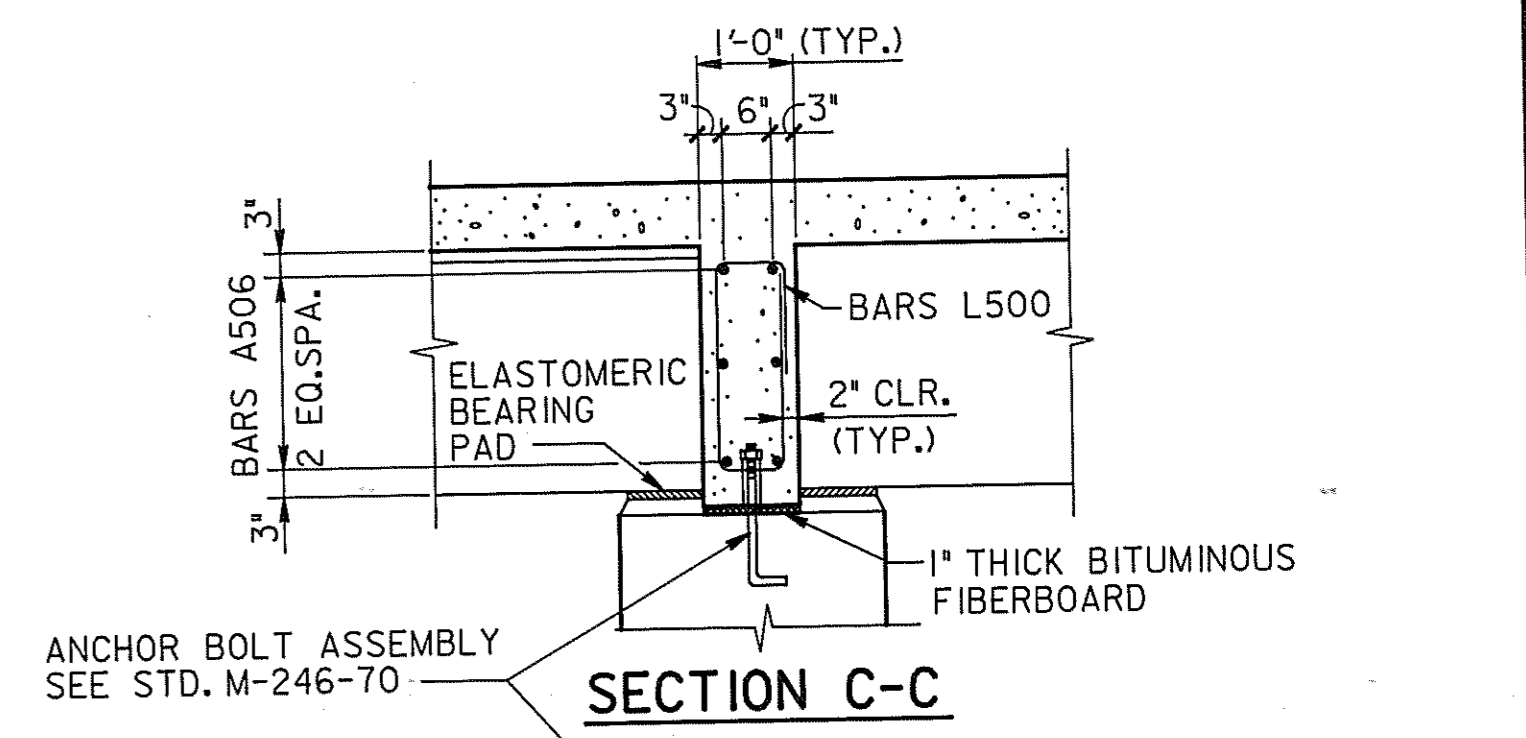
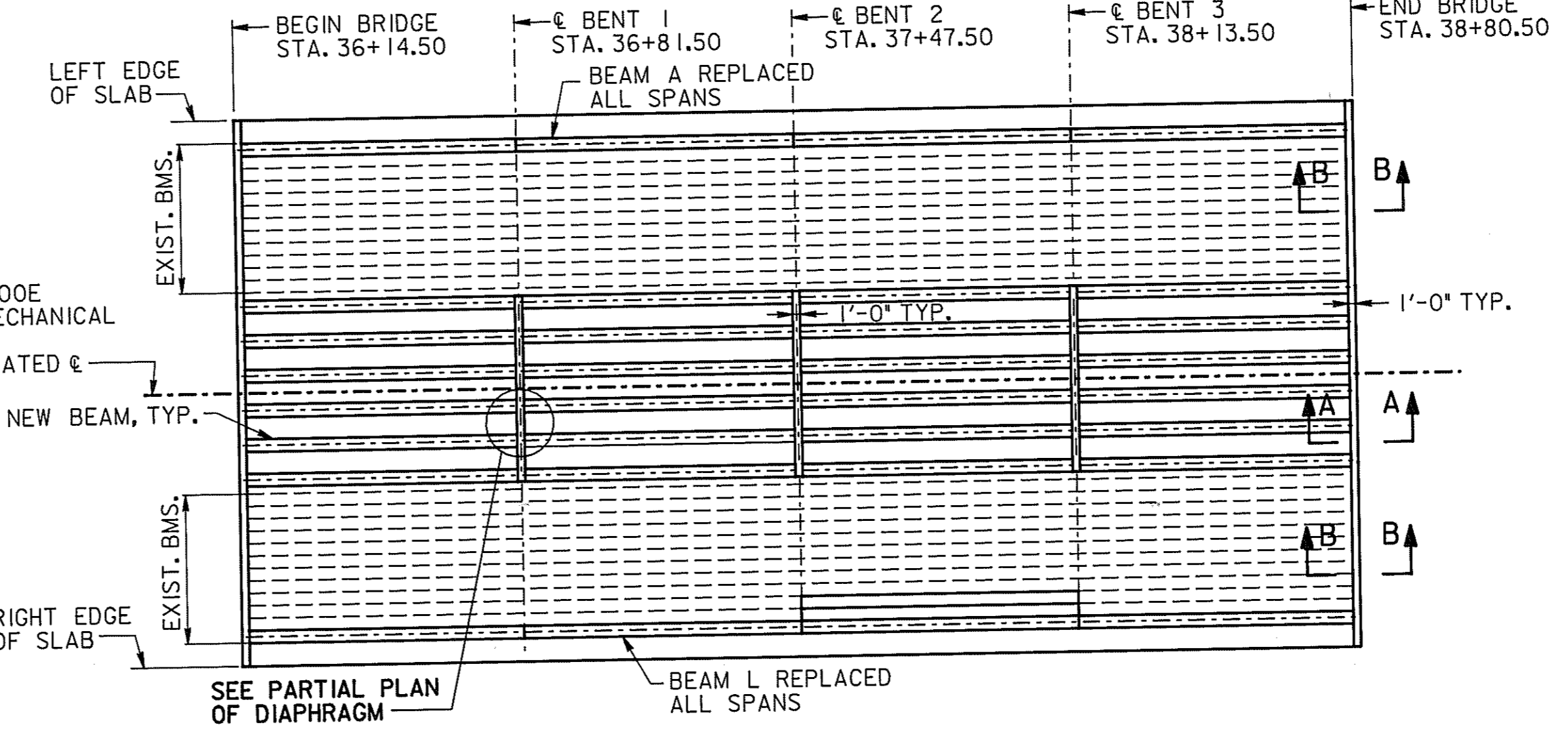
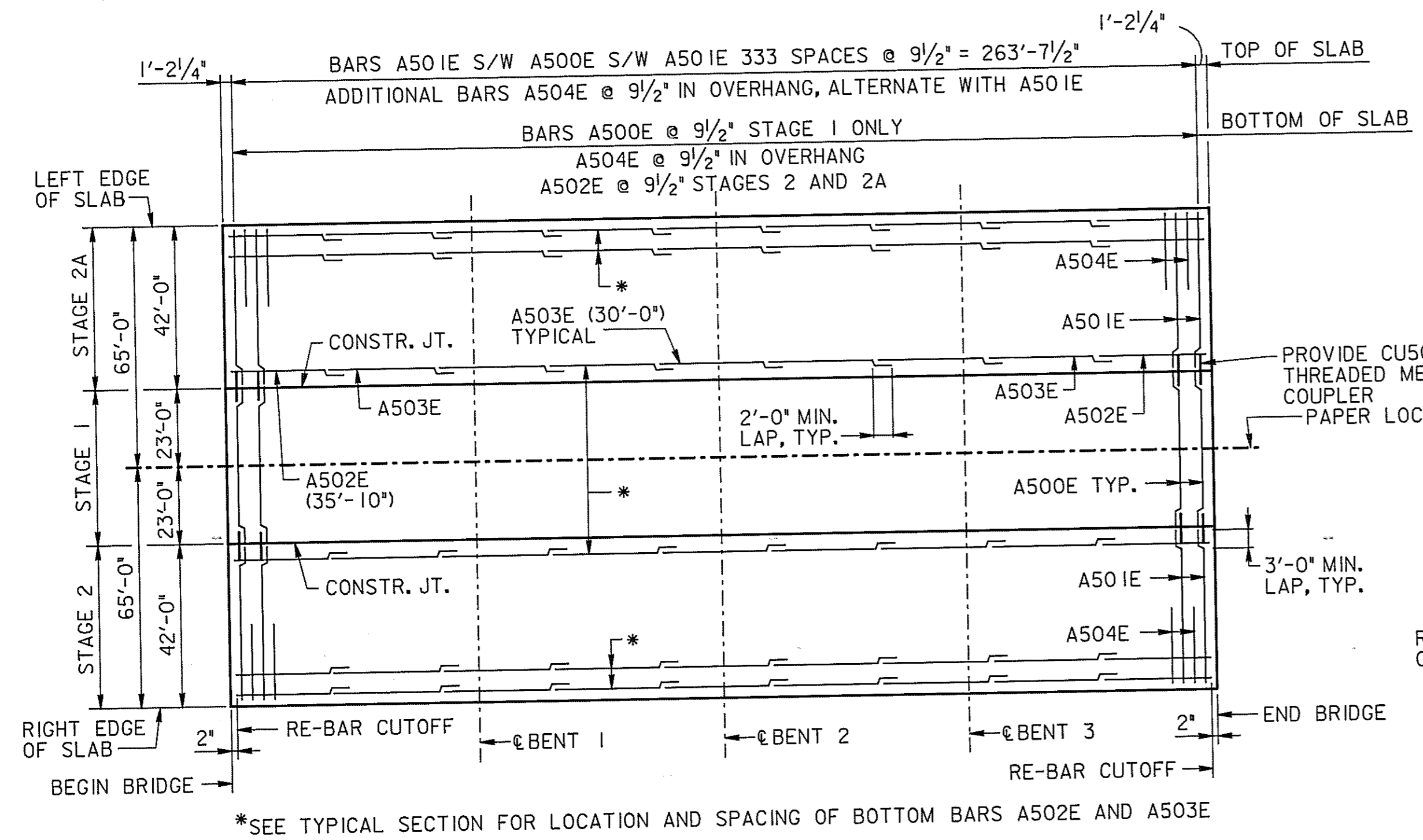
I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

OS2450, 111BRTXSC.LDGN D:\ SV=SECT PRF=BRTXSCI DATE:12-27-90

DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90



CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3 148-44	IR-75-1(90)2	1991	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



NOTE:  
BARS CU500E TO BE DAYTON SUPERIOR, RICHMOND SCREW ANCHOR, OR APPROVED EQUAL. EPOXY-COATED DOWEL BAR SPLICER AND DOWEL IN DEFORMED GRADE 60 TO BE USED. THE EXPOSED THREADS, AFTER SPACING, TO BE REPAIRED ACCORDING TO SPECIAL PROVISION 907A. THE SPLICING BAR AND THE ROOT DIMENSION AT THE THREAD SHALL BE NO LESS THAN NOMINAL DIAMETER OF A NO. 5 BAR.

COST OF FURNISHING THE EPOXY-COATED BAR SPLICES AND DOWELS, INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION SHALL BE INCLUDED IN THE PRICE BID PER POUND ITEM NO. 604-02.03.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

**BRIDGE NO. 7 & 8**

**SUPERSTRUCTURE DETAILS**

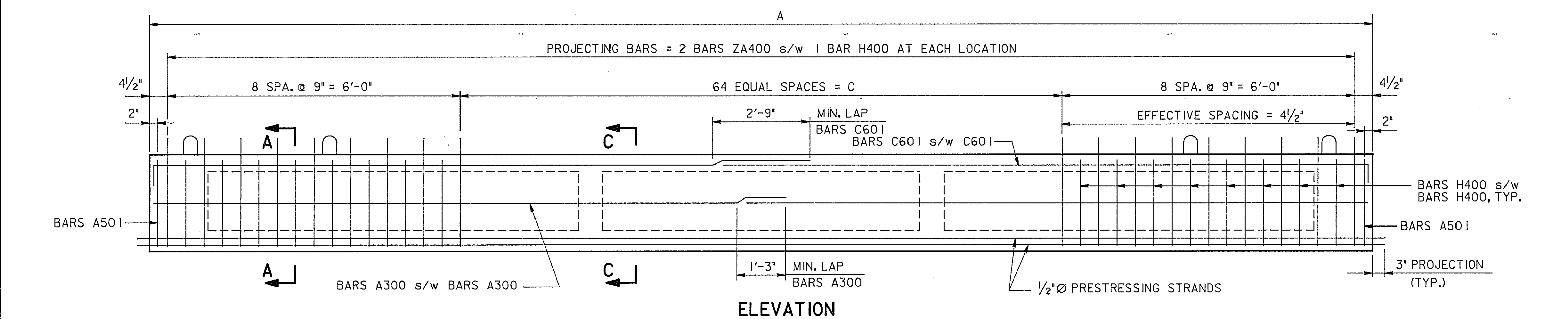
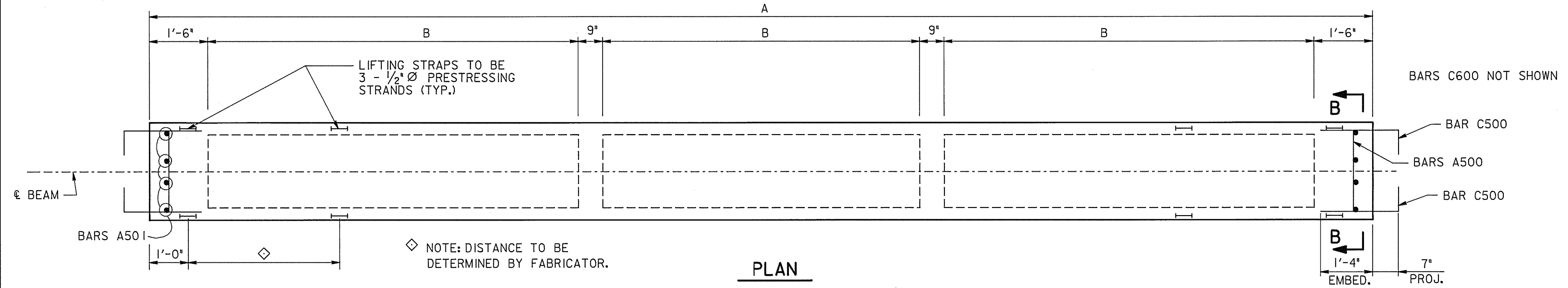
I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

OS2450, I11BRTSDC1.DGN D:\ SV=PLAN PRF=BRTSDC1 DATE:12-27-90

CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	22 Apr 91	JMP	Dimension "C"



**NOTES**

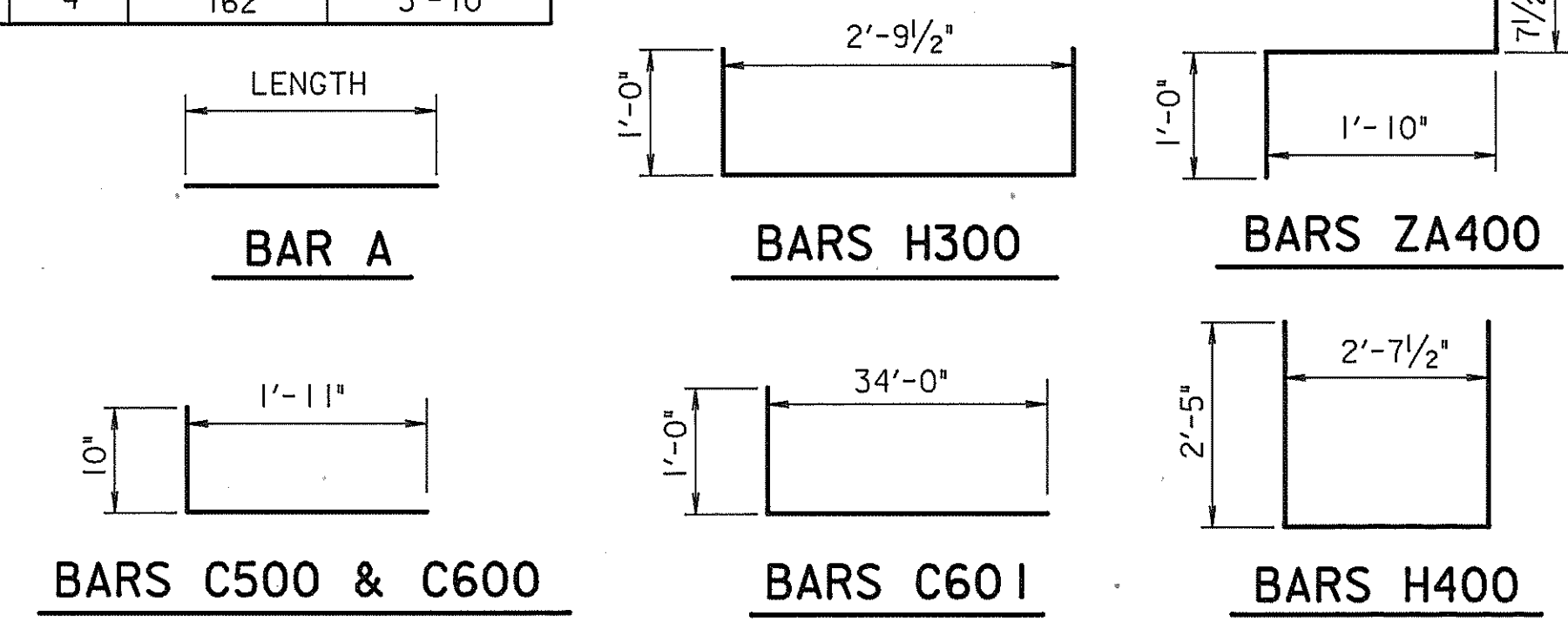
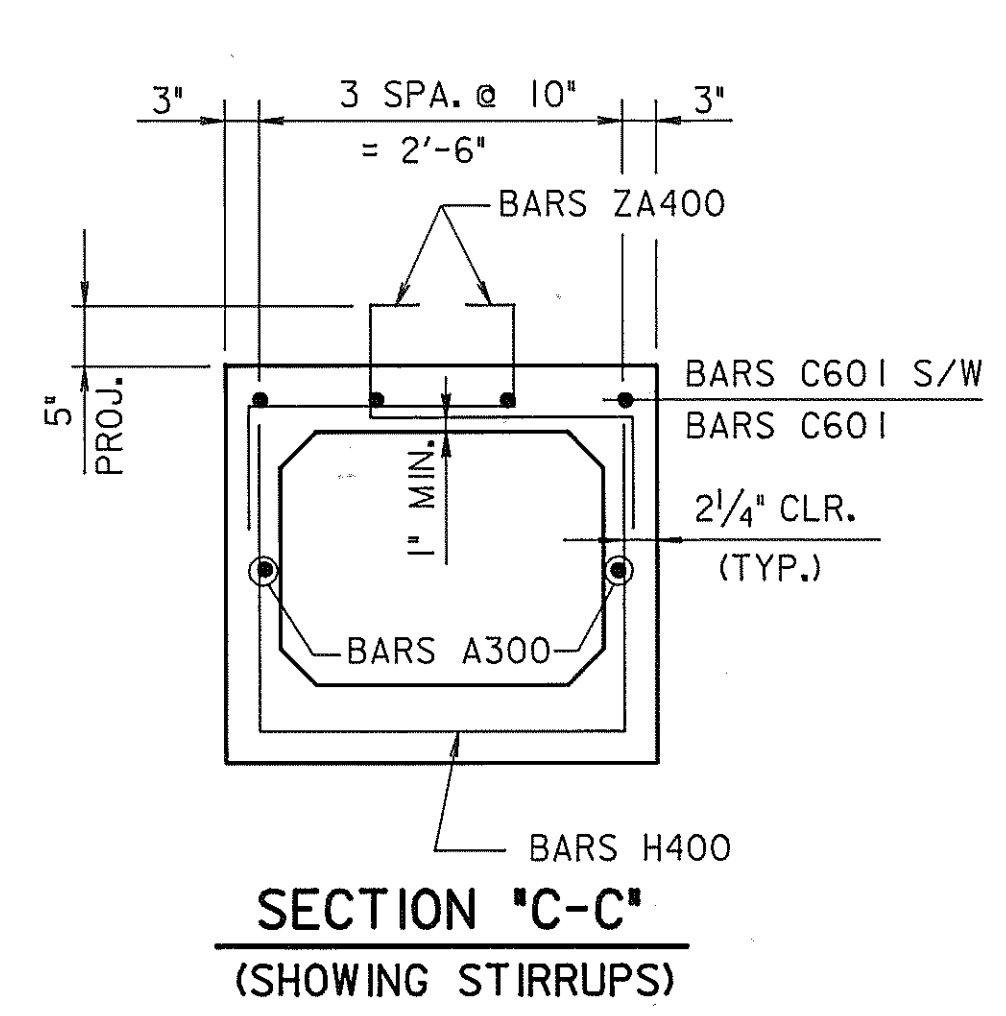
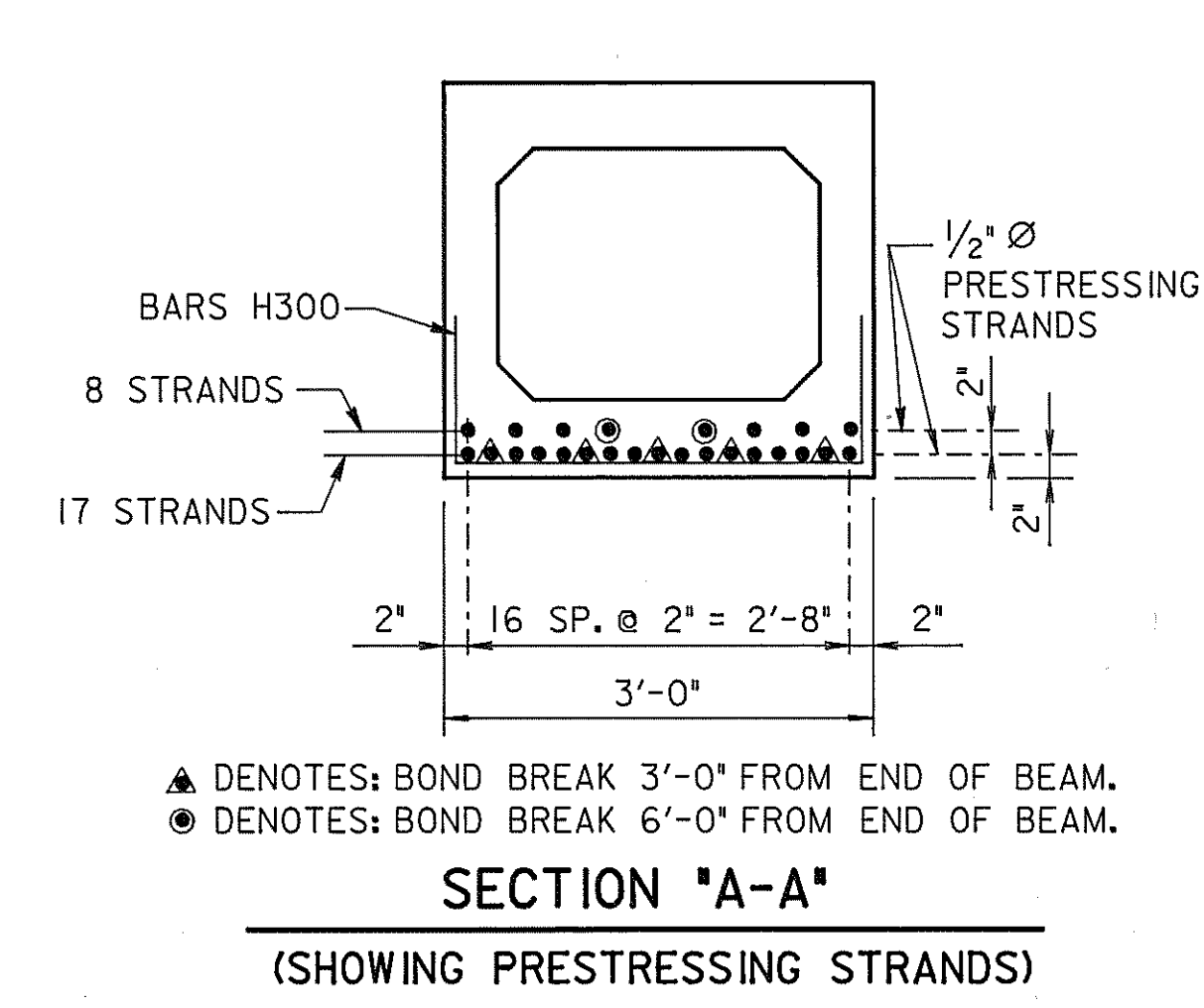
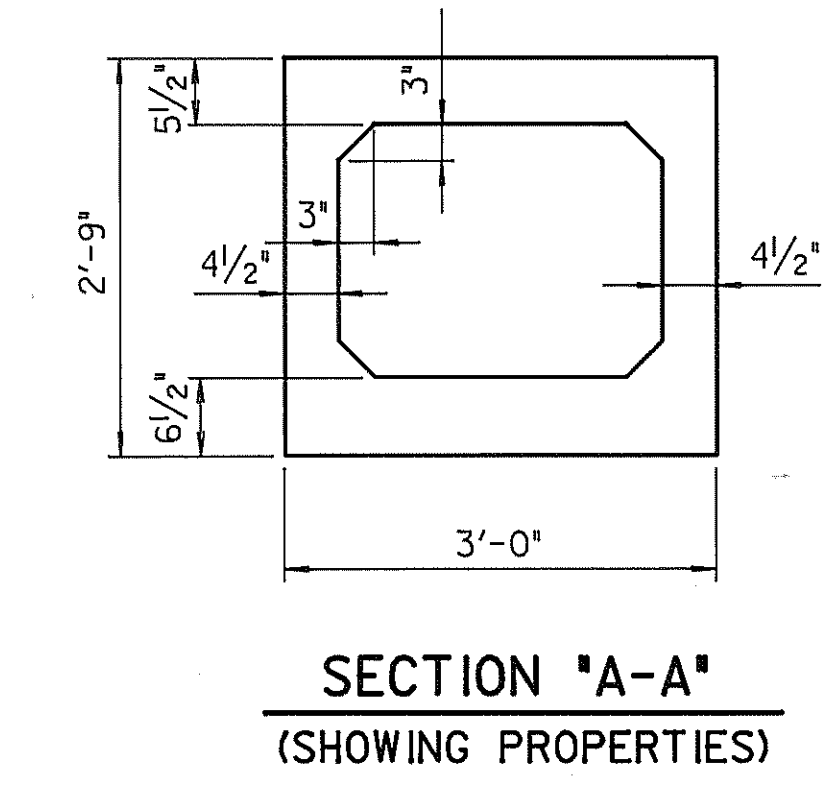
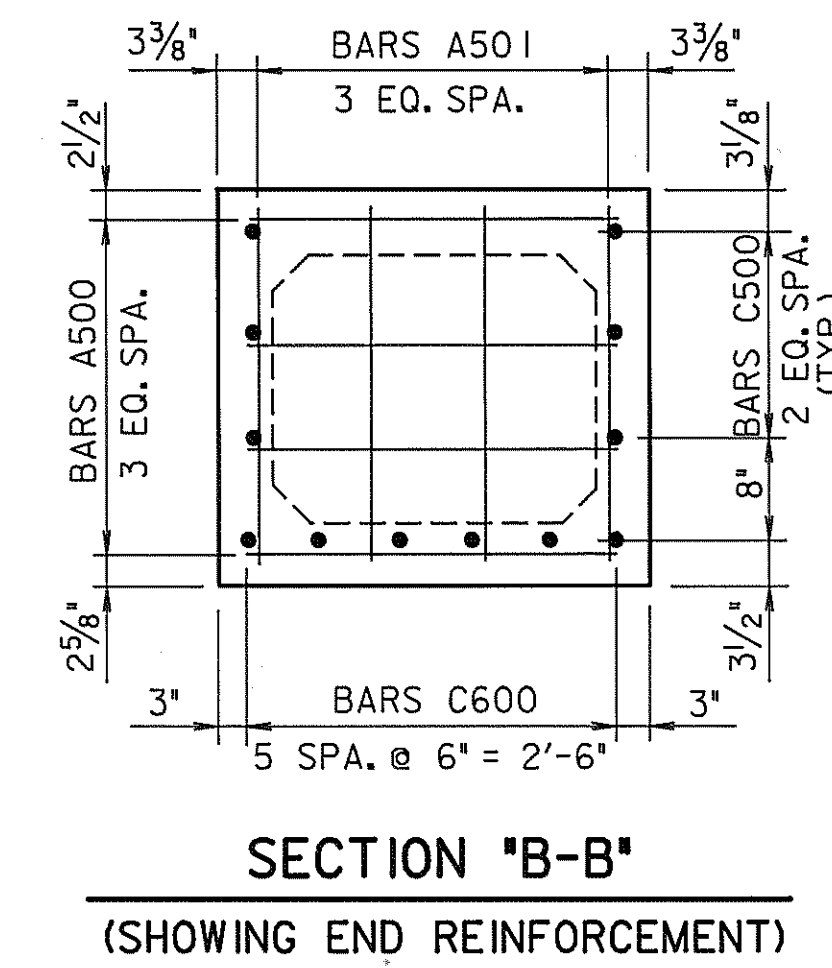
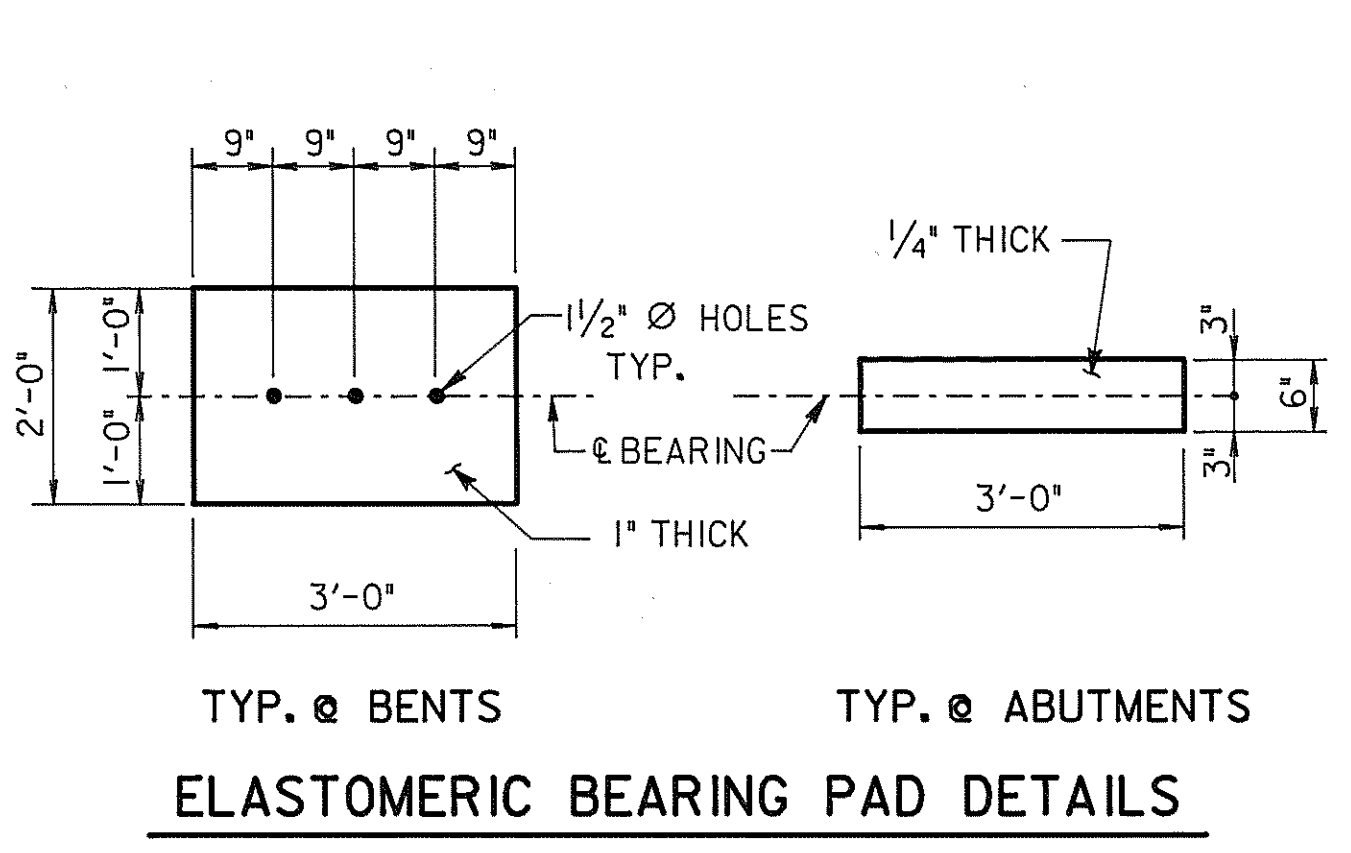
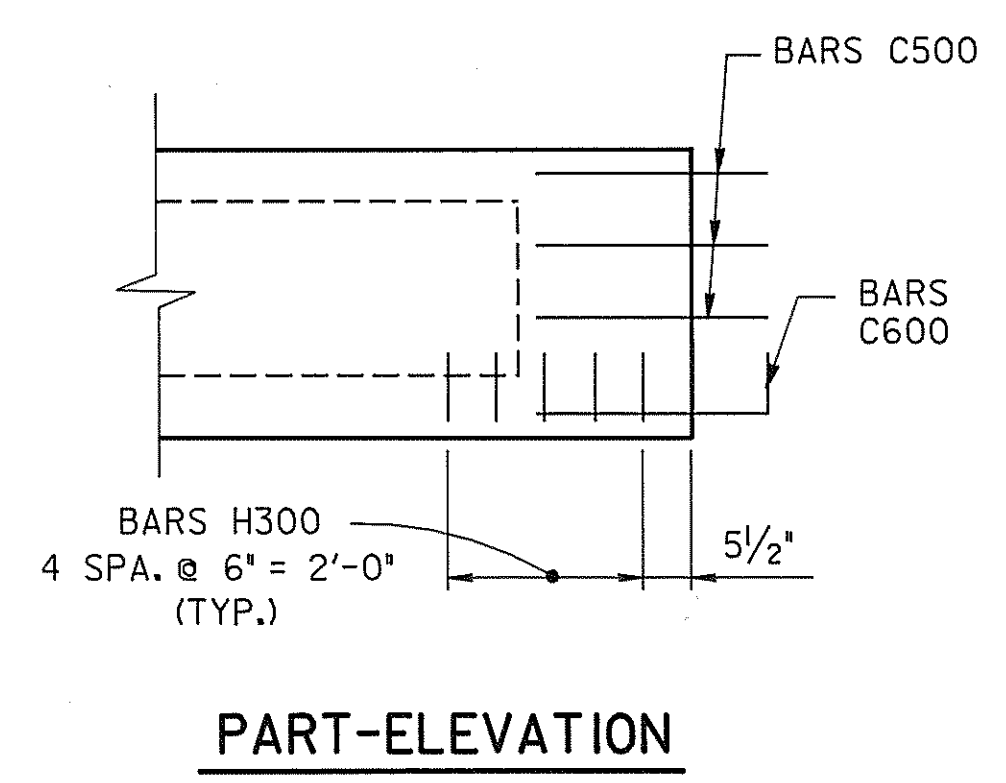
1. THE TOP OF ALL BEAMS ARE TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET THE TOP OF THE BEAMS SHALL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE. WHERE PRECAST SLAB PANELS ARE TO BE USED AND SET ON BITUMINOUS FIBERBOARD, THE OUTER TWO INCHES OF THE TOP FLANGE MAY BE TROWELED.
2. ALL PRESTRESSING STRANDS TO BE 1/2" DIA. A416-86 GRADE 270K, 7 WIRE UNCOATED LOW RELAXATION PRESTRESSING STRANDS. PRESTRESSING STRANDS SHALL NOT BE GREATER THAN NOMINAL 1/2" DIAMETER.
3. MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
4. AN INITIAL FORCE OF 31,003 LBS. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.
5. AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C600 AND C500 SHALL BE BENT A SUFFICIENT AMOUNT TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.
6. THE PRESTRESSING STRANDS SHALL BE LEFT PROJECTING 3"+ FROM THE ENDS OF THE BEAMS. THERE SHALL NOT BE ANY PROTECTIVE COATING PLACED ON THE ENDS OF THE BEAMS OR ON THE PROJECTING STRANDS.
7. ELASTOMERIC PADS TO BE 1/4" X 6" X 3'-0" AT ABUTMENTS AND 1" X 2'-0" X 3'-0" WITH 1 1/2" DIA. HOLES AT BENTS.
8. THE CONCRETE FOR THIS CONSTRUCTION SHALL ATTAIN A COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BEAM UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4,500 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.
9. 1" DIA. WEEP HOLES SHALL BE PROVIDED AT THE LOW POINT OF EACH CELL. VENT HOLES SHALL BE PROVIDED IN THE TOP OF EACH CELL DURING FABRICATION TO RELIEVE GAS PRESSURES THAT OCCUR DURING CURING. THE VENT HOLES SHALL BE PLUGGED AFTER CURING IS COMPLETED.
10. THE SEQUENCE FOR TRANSFER OF STRESS OR THE CUTTING STRANDS SHALL BE IN ACCORDANCE WITH ARTICLE 615.14 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND SHALL BE SHOWN ON THE APPROVED SHOP DRAWINGS. AT NO TIME SHALL MORE THAN 1/6TH OF THE TOTAL PRESTRESSING FORCE BE ECCENTRIC ABOUT THE CENTERLINE OF THE BEAM.

**BILL OF STEEL PER BEAM**

BAR	SIZE	NO. REQ'D	LENGTH
A300	3	4	33'-3"
A500	5	8	2'-8"
A501	5	8	2'-5"
C500	5	12	2'-9"
C600	6	12	2'-9"
C601	6	8	35'-0"
H300	3	10	4'-10"
H400	4	113	7'-6"
ZA400	4	162	3'-10"

**TABLE OF LETTERED DIMENSIONS**

LOCATION	A	B	C
SPANS 1 & 4	65'-6"	20'-4"	52'-9"
SPANS 2 & 3	65'-0"	20'-2"	52'-3"



**ESTIMATED QUANTITIES - PER BEAM**

SPAN NO.	NO. BEAMS REQ'D.	PRESTRESSING STRANDS (LOW RELAXATION) LBS.	CLASS "A" CONCRETE C.Y.	REINFORCING STEEL LBS.
1 or 4	6	858	11.40	1597
2 or 3	6	852	11.32	1597

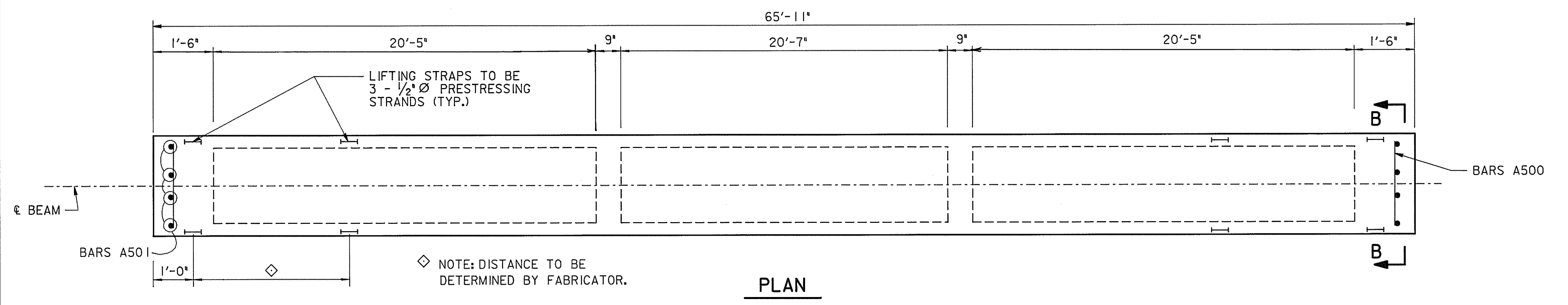
COST OF ELASTOMERIC PADS, ANCHOR BOLT ASSEMBLIES AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS  
**BRIDGE NO. 7 & 8**  
**PRESTRESSED BOX BEAM DETAILS**  
STAGE I  
  
I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

OS24150, 11 DBRTNBM1.DGN D:\ SV=BEAM PRF=BRTNBM1 DATE:12-19-90

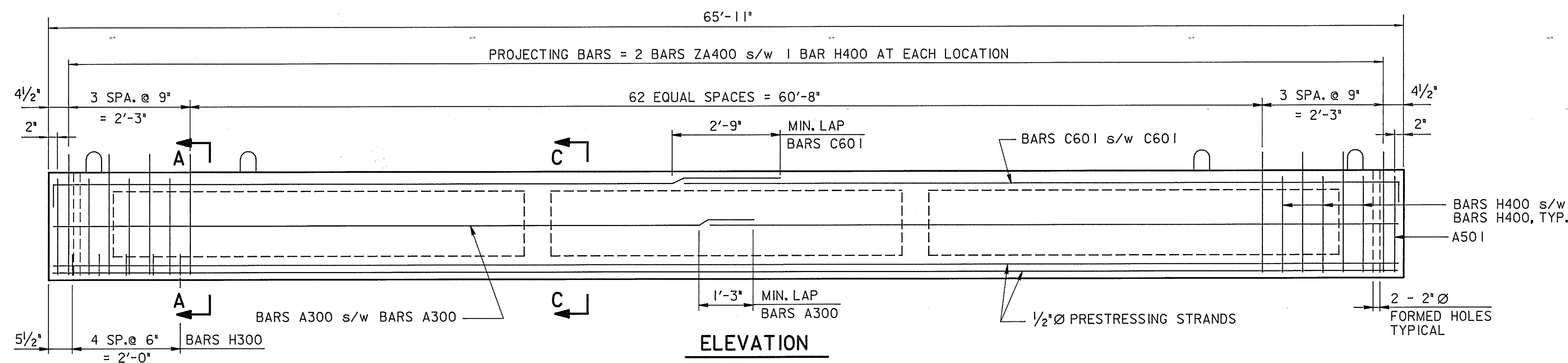
DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



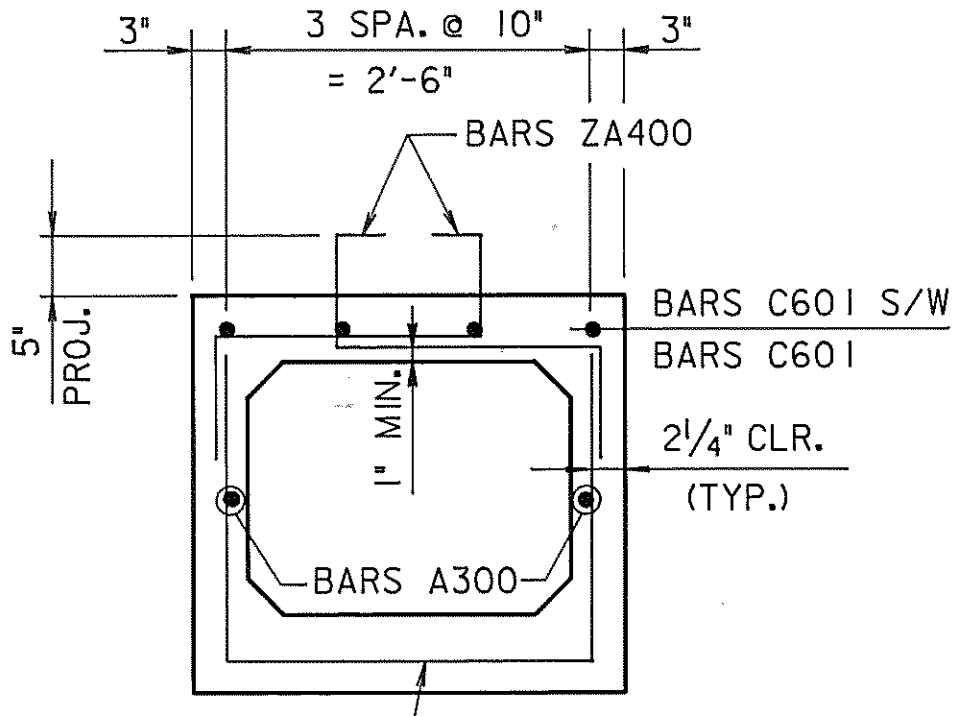
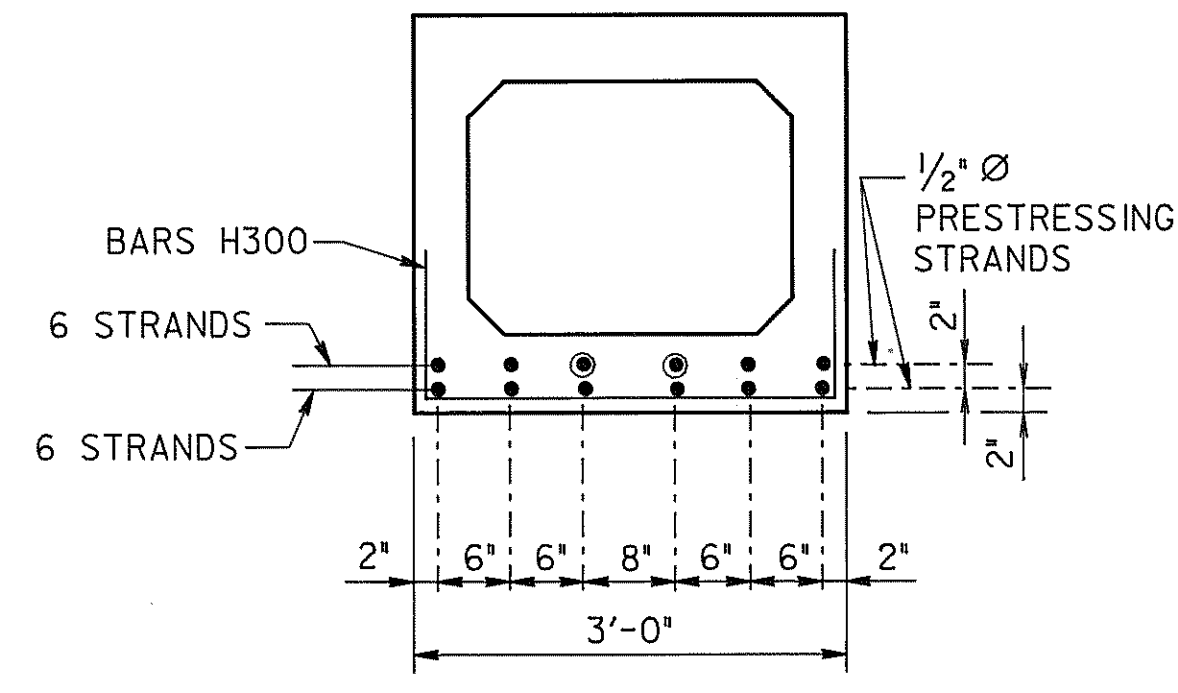
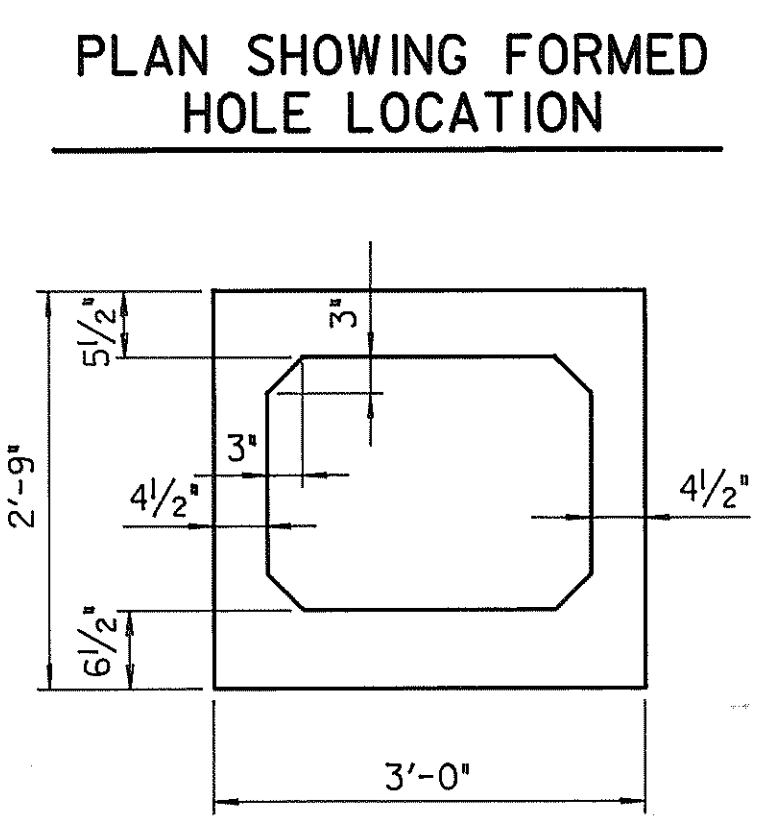
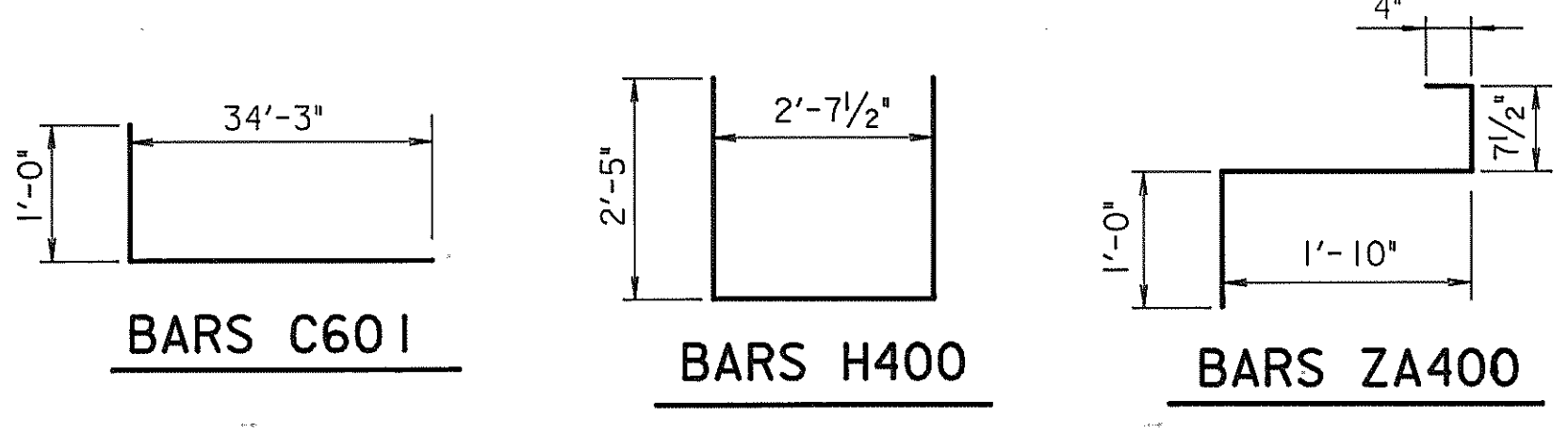
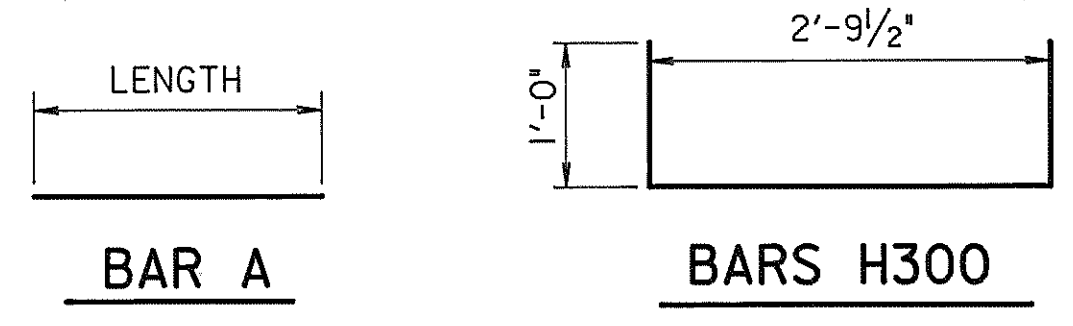
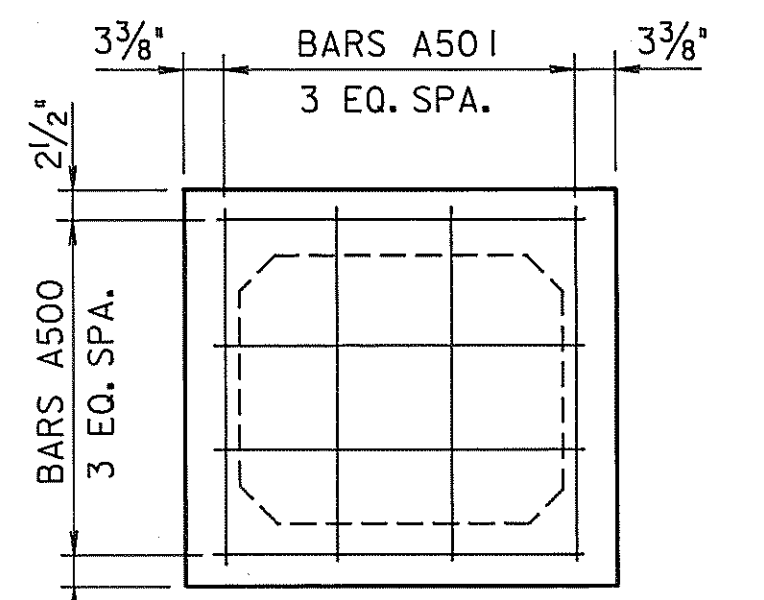
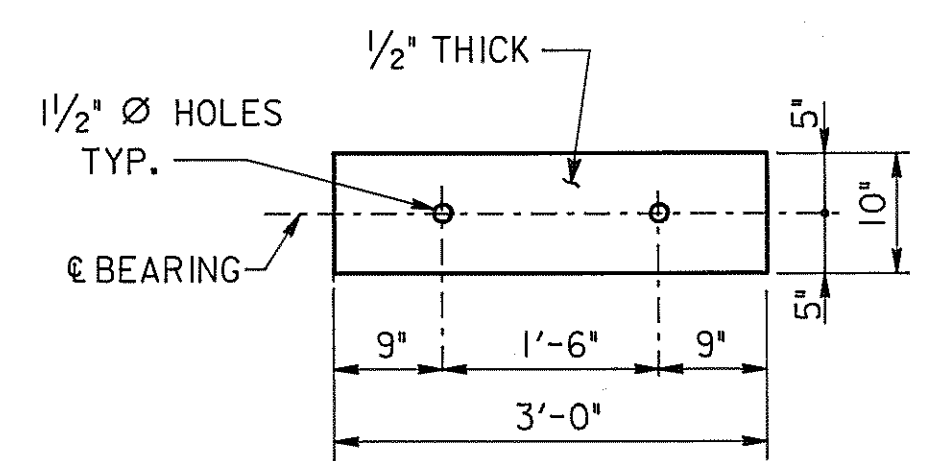
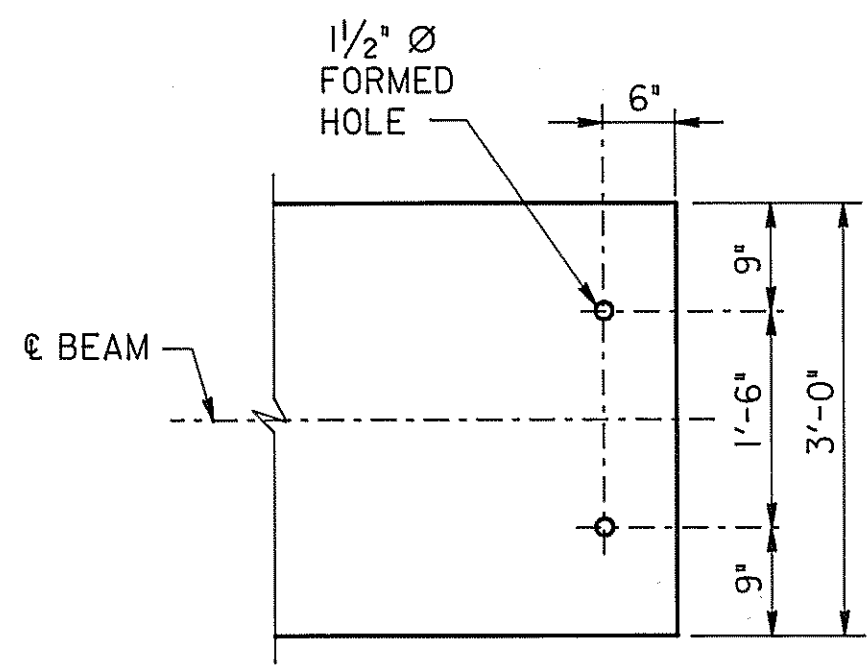
**NOTES**

1. THE TOP OF ALL BEAMS ARE TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET THE TOP OF THE BEAMS SHALL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE.
2. ALL PRESTRESSING STRANDS TO BE 1/2" DIA. A416-86 GRADE 270K, 7 WIRE UNCOATED LOW RELAXATION PRESTRESSING STRANDS. PRESTRESSING STRANDS SHALL NOT BE GREATER THAN NOMINAL 1/2" DIAMETER.
3. MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
4. AN INITIAL FORCE OF 31,003 LBS. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.
5. ELASTOMERIC PADS TO BE 1/2" X 10" X 3'-0".
6. THE CONCRETE FOR THIS CONSTRUCTION SHALL ATTAIN A COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BEAM UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4,500 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.
7. 1" DIA. WEEP HOLES SHALL BE PROVIDED AT THE LOW POINT OF EACH CELL. VENT HOLES SHALL BE PROVIDED IN THE TOP OF EACH CELL DURING FABRICATION TO RELIEVE GAS PRESSURES THAT OCCUR DURING CURING. THE VENT HOLES SHALL BE PLUGGED AFTER CURING IS COMPLETED.
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9. CARE SHALL BE TAKEN TO ENSURE THAT 2" Ø HOLES FORMED IN BEAMS LINE UP WITH HOLES PROVIDED IN BENT CAPS.



**BILL OF STEEL PER BEAM**

BAR	SIZE	NO. REQ'D	LENGTH
A300	3	4	33'-6"
A500	5	8	2'-8"
A501	5	8	2'-5"
C601	6	8	35'-3"
H300	3	10	4'-10"
H400	4	81	7'-6"
ZA400	4	138	3'-10"



**ESTIMATED QUANTITIES - PER BEAM**

SPAN NO.	BEAM	NO. BEAMS REQ'D.	PRESTRESSING STRANDS (LOW RELAXATION) LBS.	CLASS "A" CONCRETE C.Y.	REINFORCING STEEL LBS.
3	J & K	2	411	11.48	930

COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.

● DENOTES: BOND BREAK 3'-0" FROM END OF BEAM.

DESIGNED BY S. L. POWELL DATE 12-90  
 DRAWN BY S. J. MATHEWS DATE 12-90  
 SUPERVISED BY R. V. BENEDA DATE 12-90  
 CHECKED BY R. V. BENEDA DATE 12-90

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

**BRIDGE NO. 7 & 8**

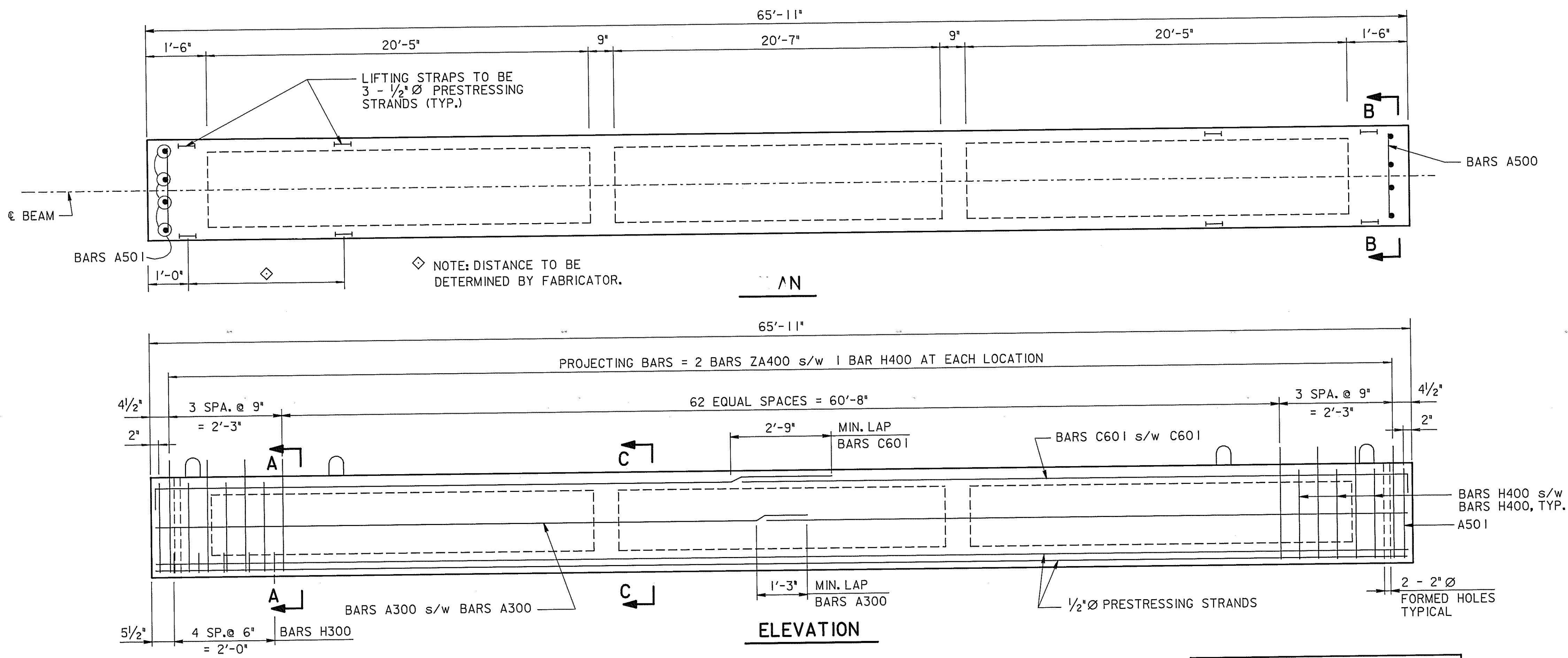
**PRESTRESSED BOX BEAM DETAILS**  
 STAGES 2 AND 2A  
 REPLACEMENT BEAMS J AND K  
 SPAN 3 N.B.L.

I-75 WIDENING OVER  
 SOUTH CHICKAMAUGA CREEK  
 STATION 36+14.50  
 HAMILTON COUNTY

1991

OS2450, 1113BRTB1.DGN D:\ SV=BEAM PRF=BRTB1 DATE:12-19-90

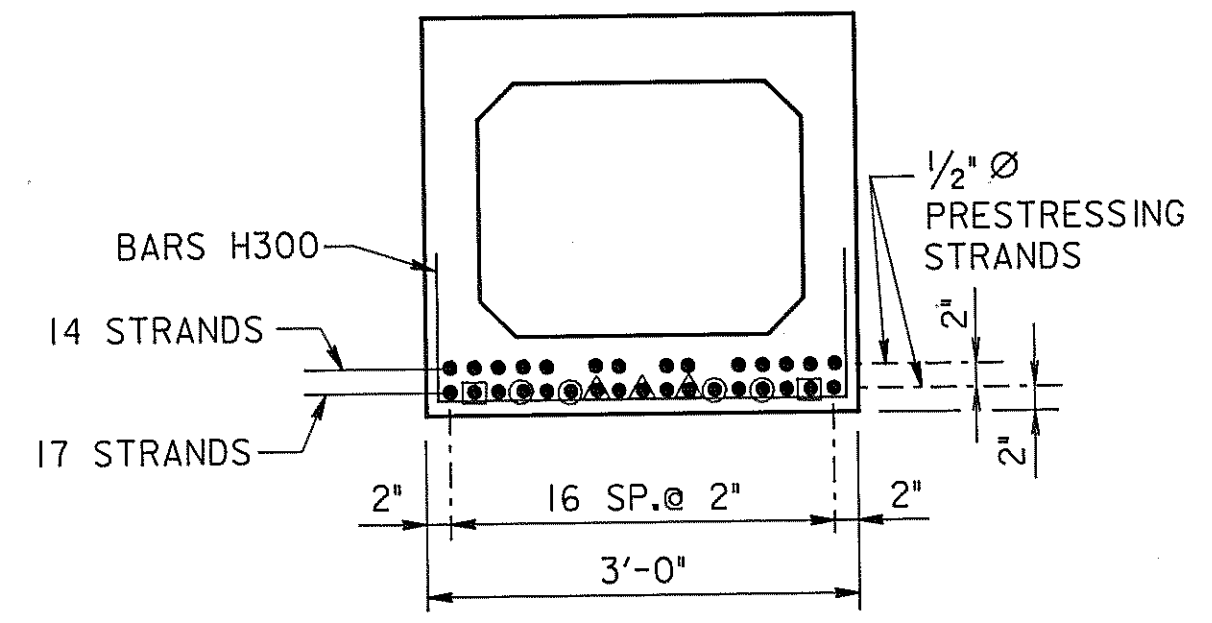
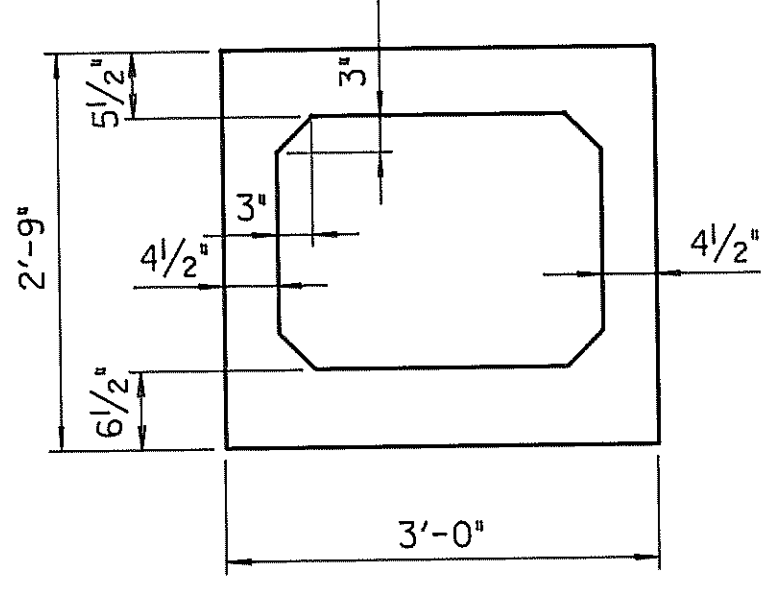
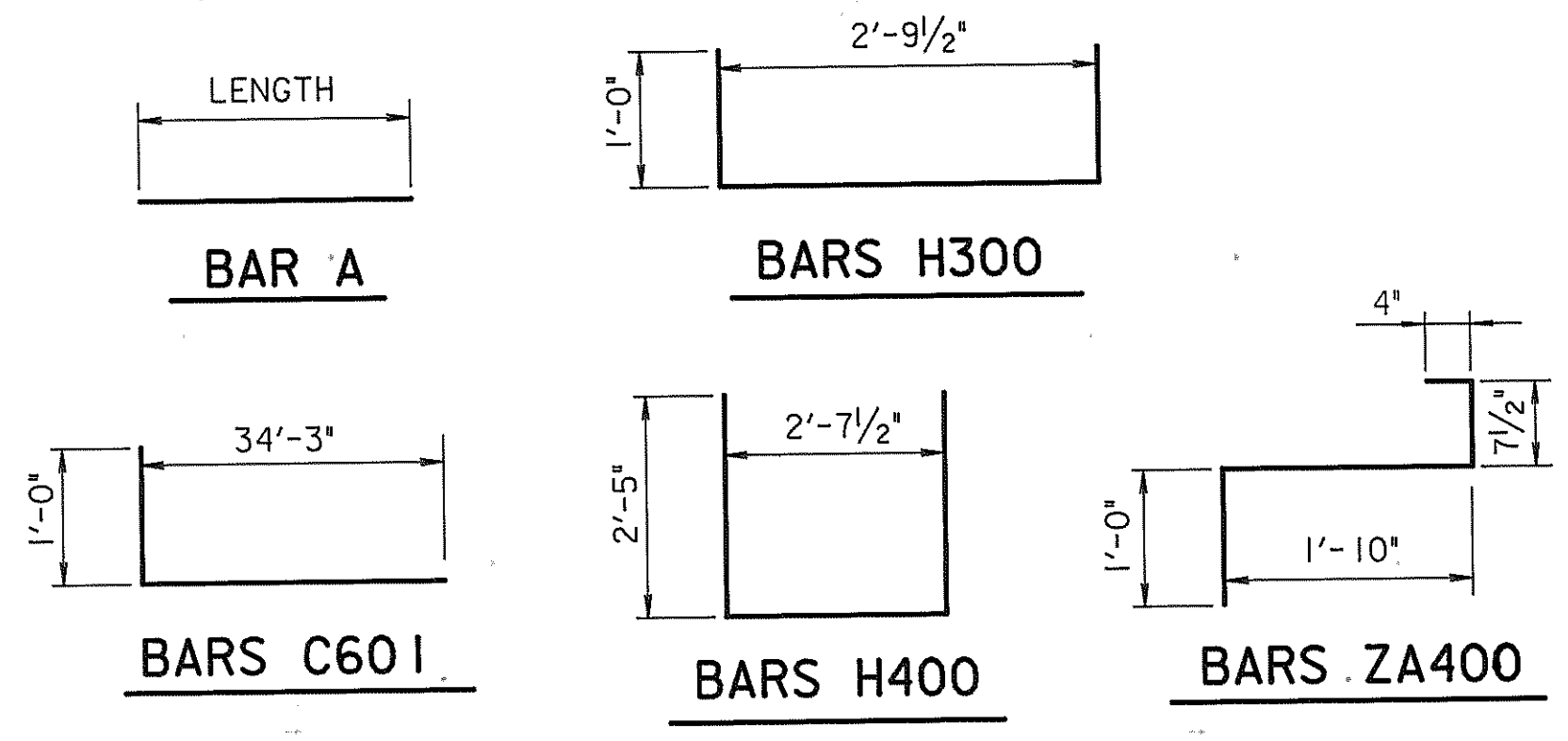
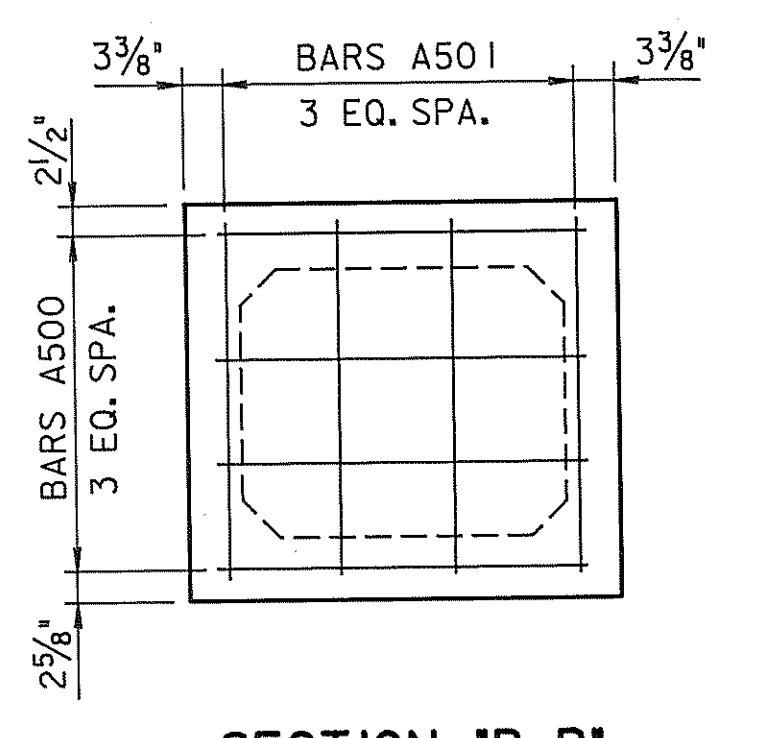
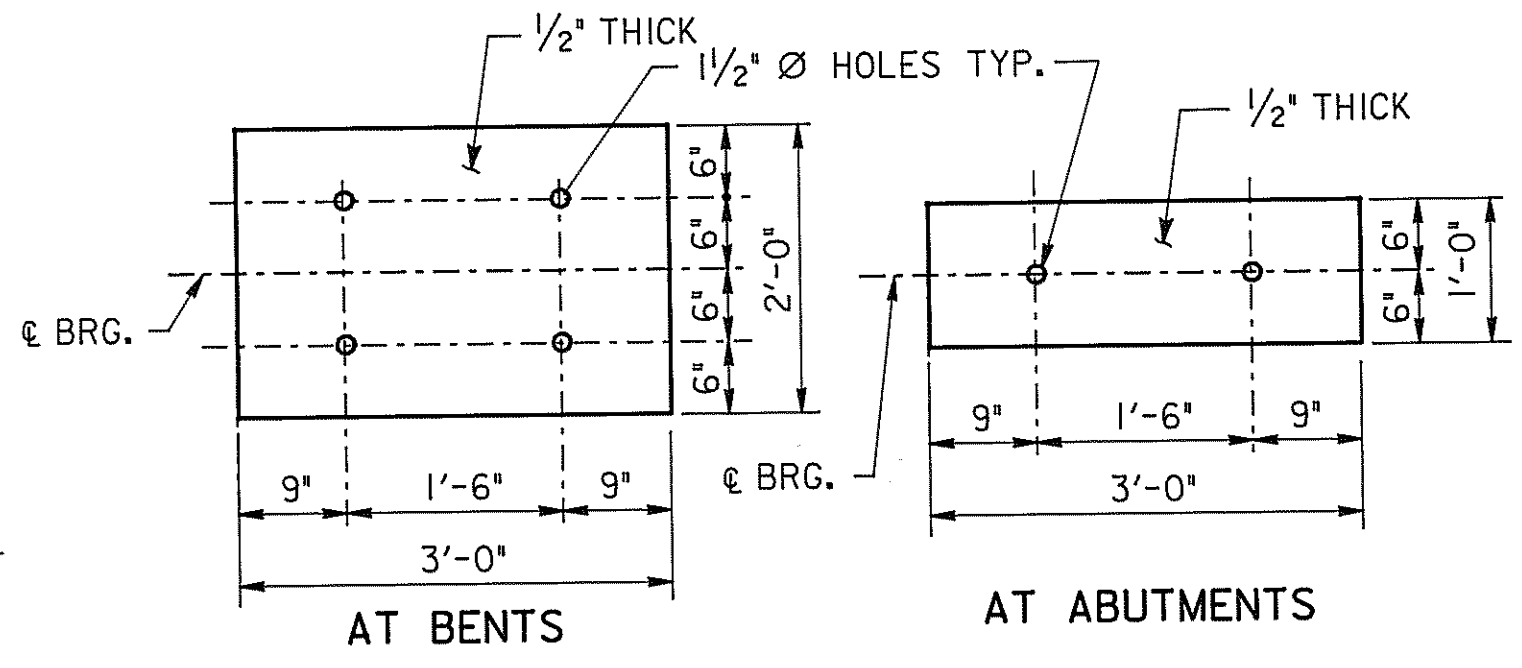
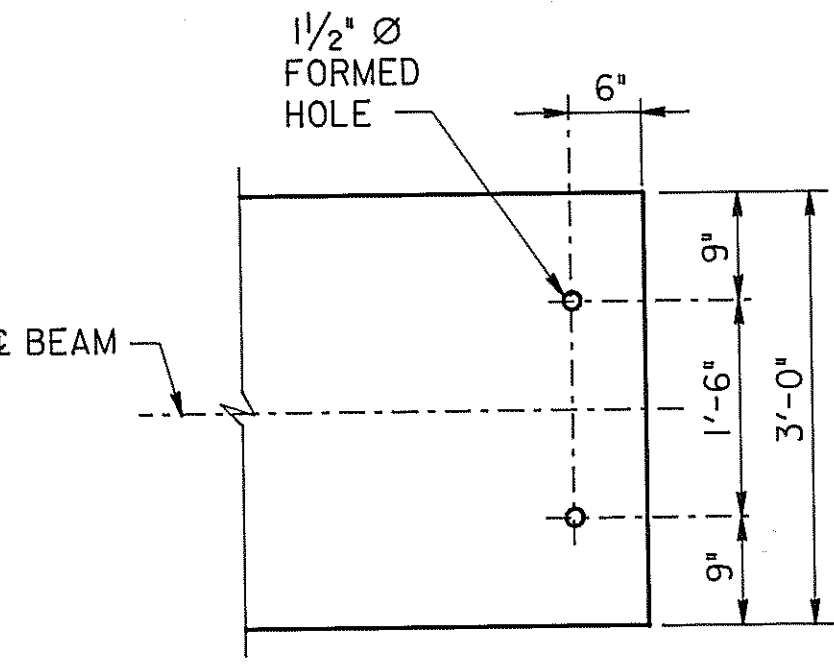
CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



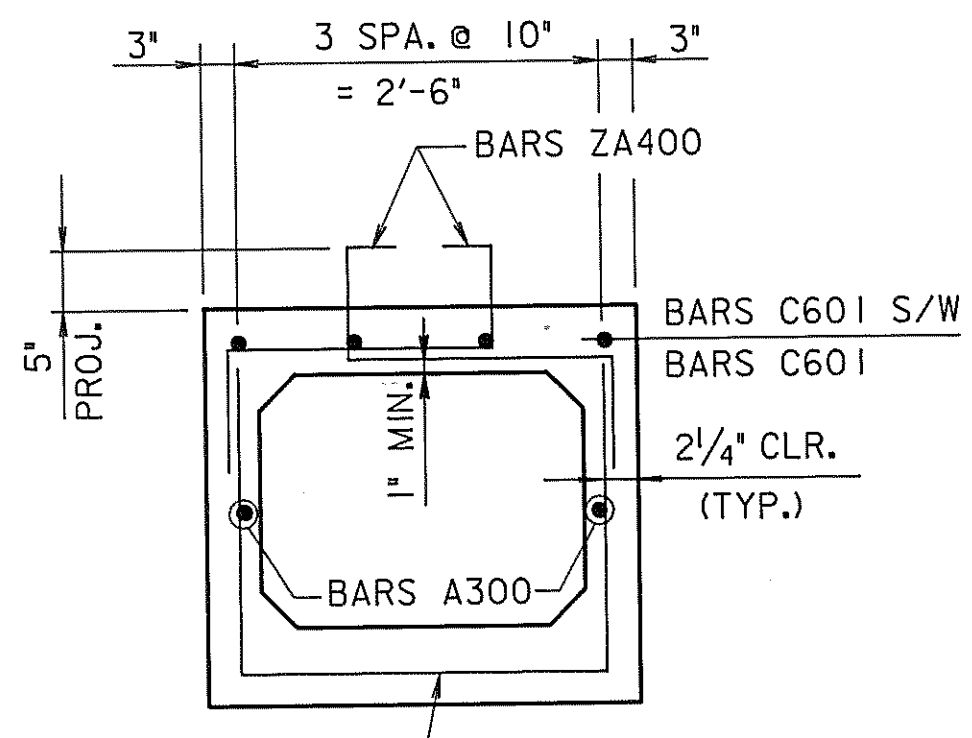
- NOTES**
- THE TOP OF ALL BEAMS ARE TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET THE TOP OF THE BEAMS SHALL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE.
  - ALL PRESTRESSING STRANDS TO BE 1/2" DIA. A416-86 GRADE 270K, 7 WIRE UNCOATED LOW RELAXATION PRESTRESSING STRANDS. PRESTRESSING STRANDS SHALL NOT BE GREATER THAN NOMINAL 1/2" DIAMETER.
  - MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
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**BILL OF STEEL PER BEAM**

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A500	5	8	2'-8"
A501	5	8	2'-5"
C601	6	8	35'-3"
H300	3	10	4'-10"
H400	4	81	7'-6"
ZA400	4	138	3'-10"



- ▲ DENOTES: BOND BREAK 20'-0" FROM END OF BEAM.
- DENOTES: BOND BREAK 9'-0" FROM END OF BEAM.
- DENOTES: BOND BREAK 3'-0" FROM END OF BEAM.



**ESTIMATED QUANTITIES - PER BEAM**

SPAN NO.	BEAM	NO. BEAMS REQ'D.	PRESTRESSING STRANDS (LOW RELAXATION) LBS.	CLASS "A" CONCRETE C.Y.	REINFORCING STEEL LBS.
ALL	A & L	8	1063	11.48	930

COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

**BRIDGE NO. 7 & 8**

**PRESTRESSED BOX BEAM DETAILS  
STAGES 2 AND 2A  
REPLACEMENT BEAMS A AND L  
ALL SPANS**

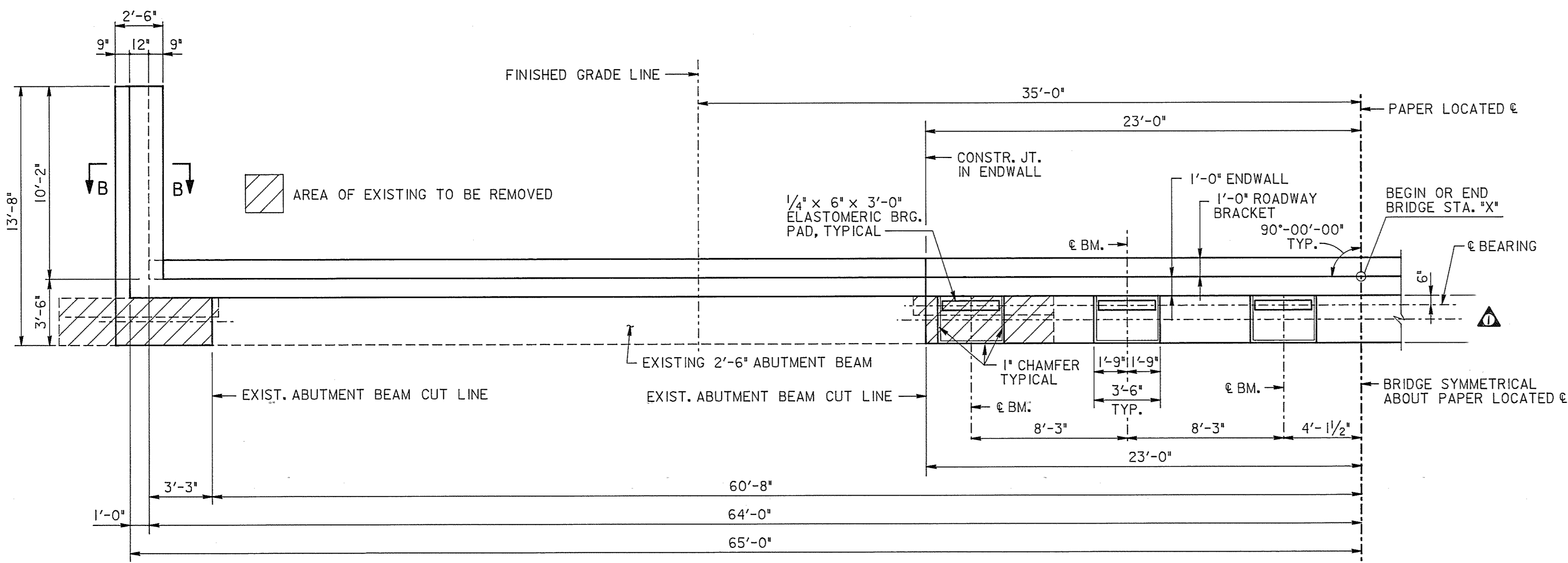
I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY

1991

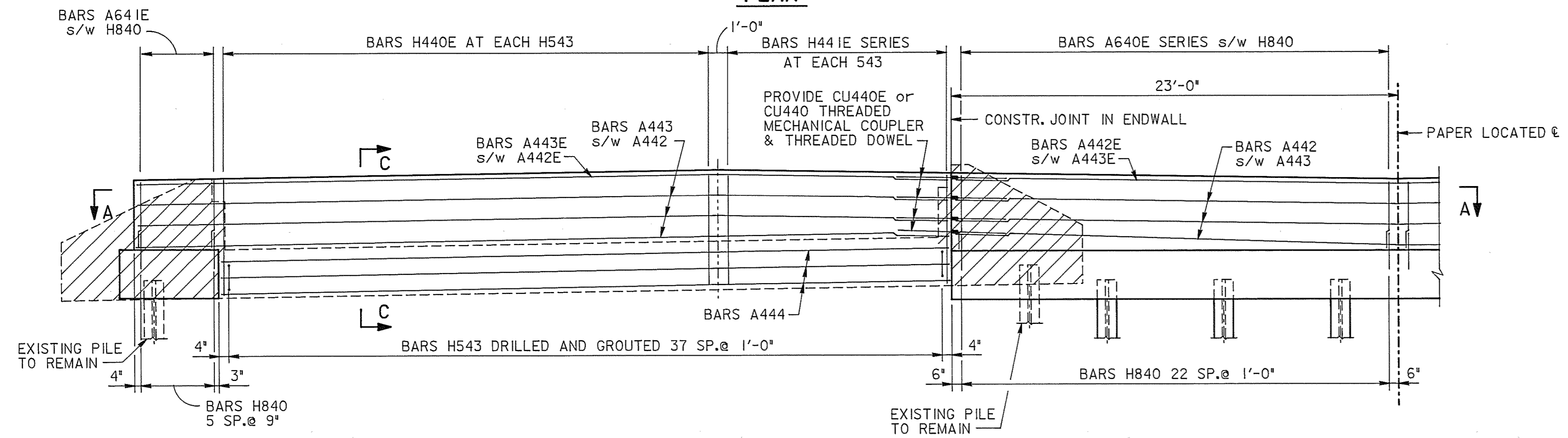
Q524150, 11 DBRTABM L DGN Dt SV=BEAM PRF=BRTABM1 DATE:12-19-90

DESIGNED BY S. L. POWELL DATE 12-90  
 DRAWN BY S. J. MATHEWS DATE 12-90  
 SUPERVISED BY R. V. BENEDA DATE 12-90  
 CHECKED BY R. V. BENEDA DATE 12-90

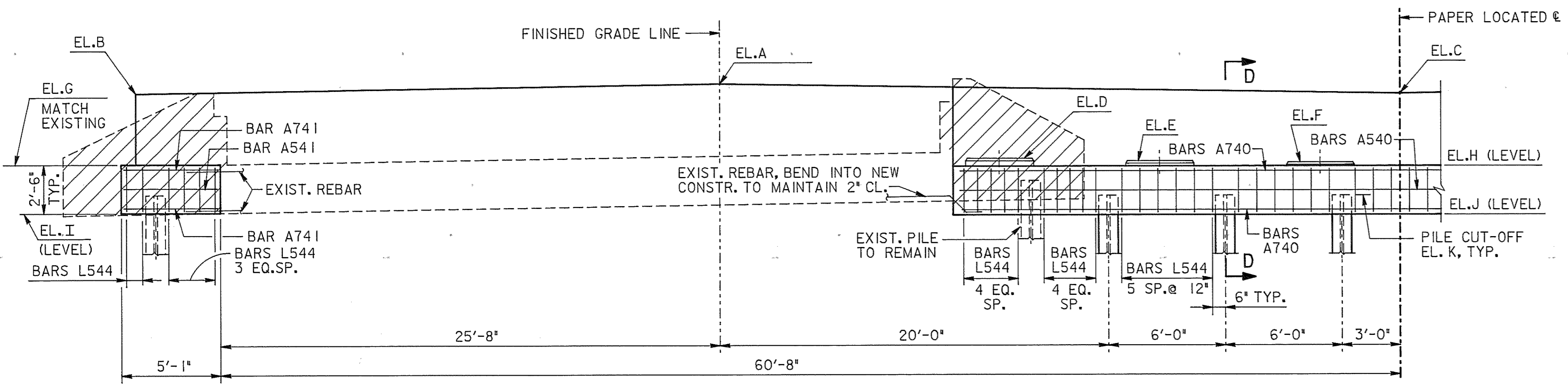
CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	22 April 91	JBP	General



**PLAN**



**ELEVATION SHOWING ENDWALL REINFORCING**



**ELEVATION SHOWING ABUTMENT BEAM REINFORCING**

**NOTES**

- NOTE: RISER BLOCKS TO BE POURED MONOLITHICALLY WITH ABUTMENT BEAM.
- NOTE: THE ENDWALL SHALL NOT BE POURED UNTIL THE BEAMS ARE IN PLACE. THE TOP 1'-0" OF THE ENDWALL SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB.
- NOTE: RISER BLOCK BEARING PAD SURFACES TO CONFORM TO BOTTOM OF BEAM GRADE.
- NOTE: COST OF BRIDGE RAIL AND POST IS TO BE INCLUDED IN THE COST OF BRIDGE RAIL SYSTEM.
- NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.
- NOTE: QUANTITIES ARE FOR ABUTMENT BEAM AND WING BEAM ONLY. ENDWALL AND WINGWALLS ARE INCLUDED IN SUPERSTRUCTURE QUANTITIES.

LOCATION	A	B	C	D	E	F	G	H	I	J	K	STA. *X*
ABUT. 1	682.07	681.62	681.54	678.19	678.06	677.94	677.81±	677.81	675.31±	675.31	676.31	36+14.50
ABUT. 2	681.93	681.48	681.41	678.04	677.92	677.79	677.81±	677.66	675.31±	675.16	676.16	38+80.50

LOCATION	CLASS "A" CONCRETE C.Y.	EPOXY-COATED REINFORCING STEEL LBS.	STEEL BAR REINFORCEMENT LBS.
ABUTMENT 1	24	633	5,589
ABUTMENT 2	24	633	5,589

NOTE: ALL PILES HP 10x42.

NOTE: BARS CU440E OR CU440 TO BE DAYTON SUPERIOR, RICHMOND SCREW ANCHOR, OR APPROVED EQUAL. EPOXY-COATED DOWEL BAR SPLICER AND DOWEL IN DEFORMED GRADE 60 TO BE USED. THE EXPOSED THREADS, AFTER SPACING, TO BE REPAIRED ACCORDING TO SPECIAL PROVISION 907A. THE SPLICING BAR AND THE ROOT DIMENSION AT THE THREAD SHALL BE NO LESS THAN NOMINAL DIAMETER OF A NO. 4 BAR.

COST OF FURNISHING THE EPOXY-COATED BAR SPLICES AND DOWELS, INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION SHALL BE INCLUDED IN THE PRICE BID PER POUND ITEM NO. 604-02.03 AND 604-03.02.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

**BRIDGE NO. 7 & 8**

**ABUTMENTS 1 AND 2**

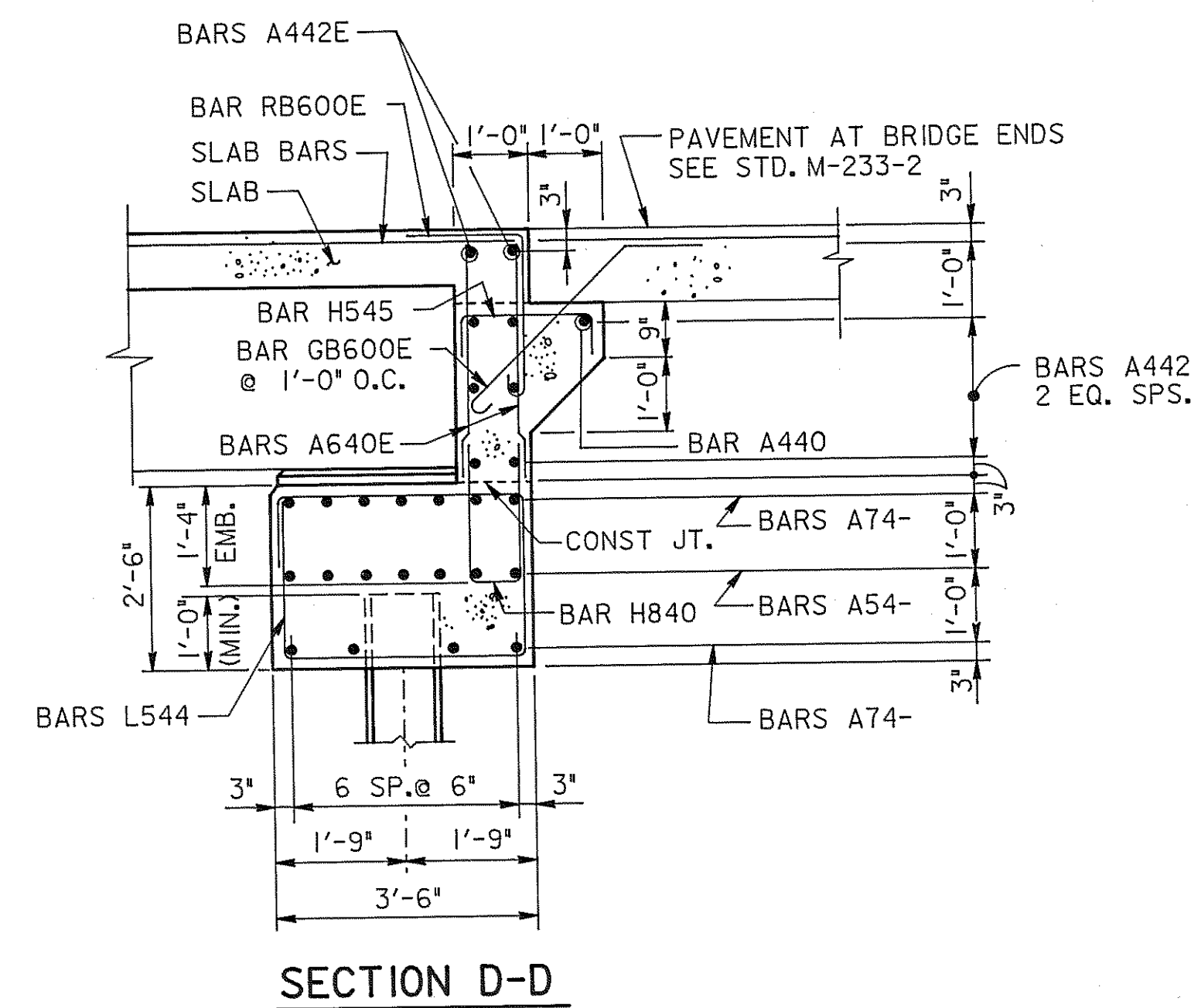
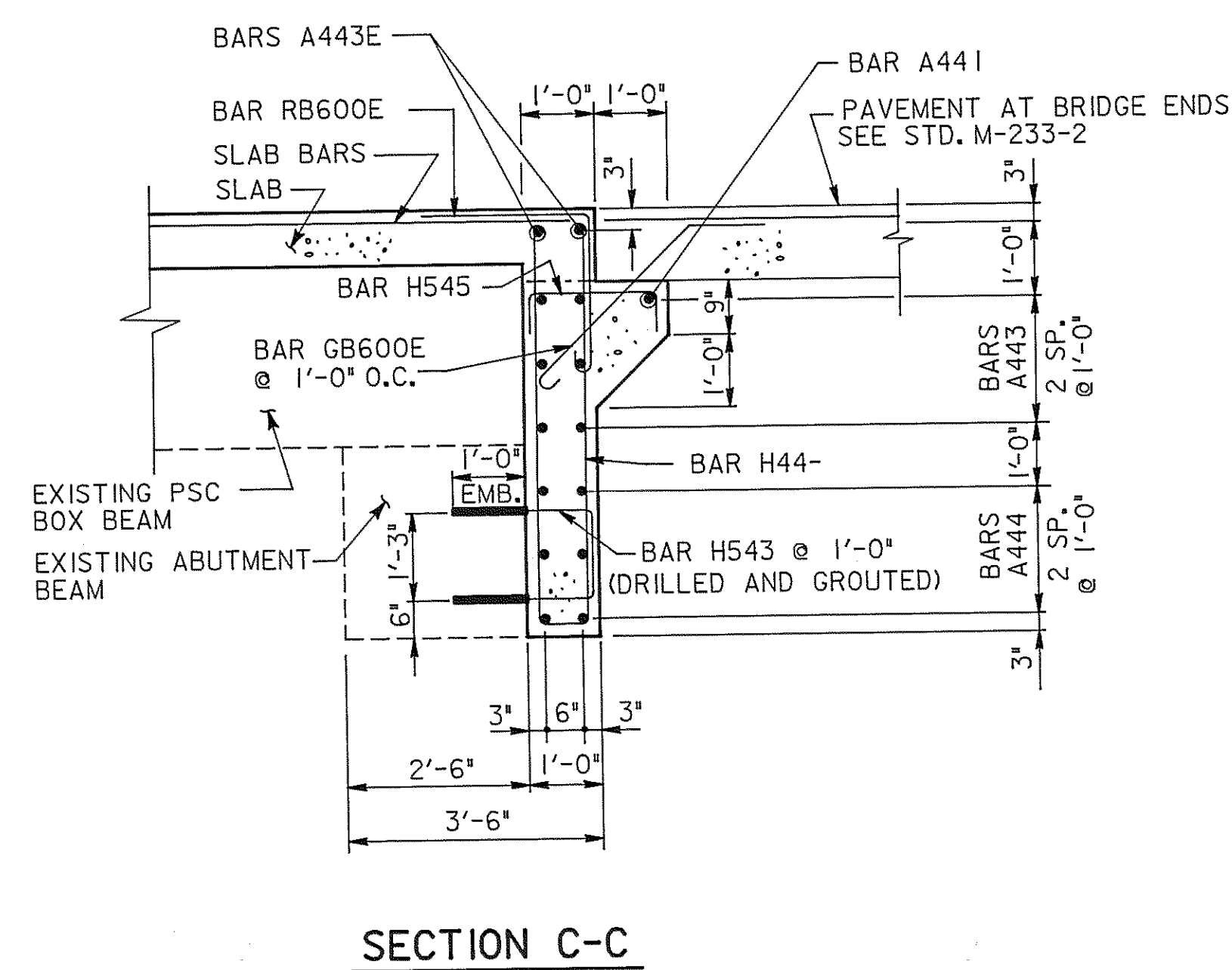
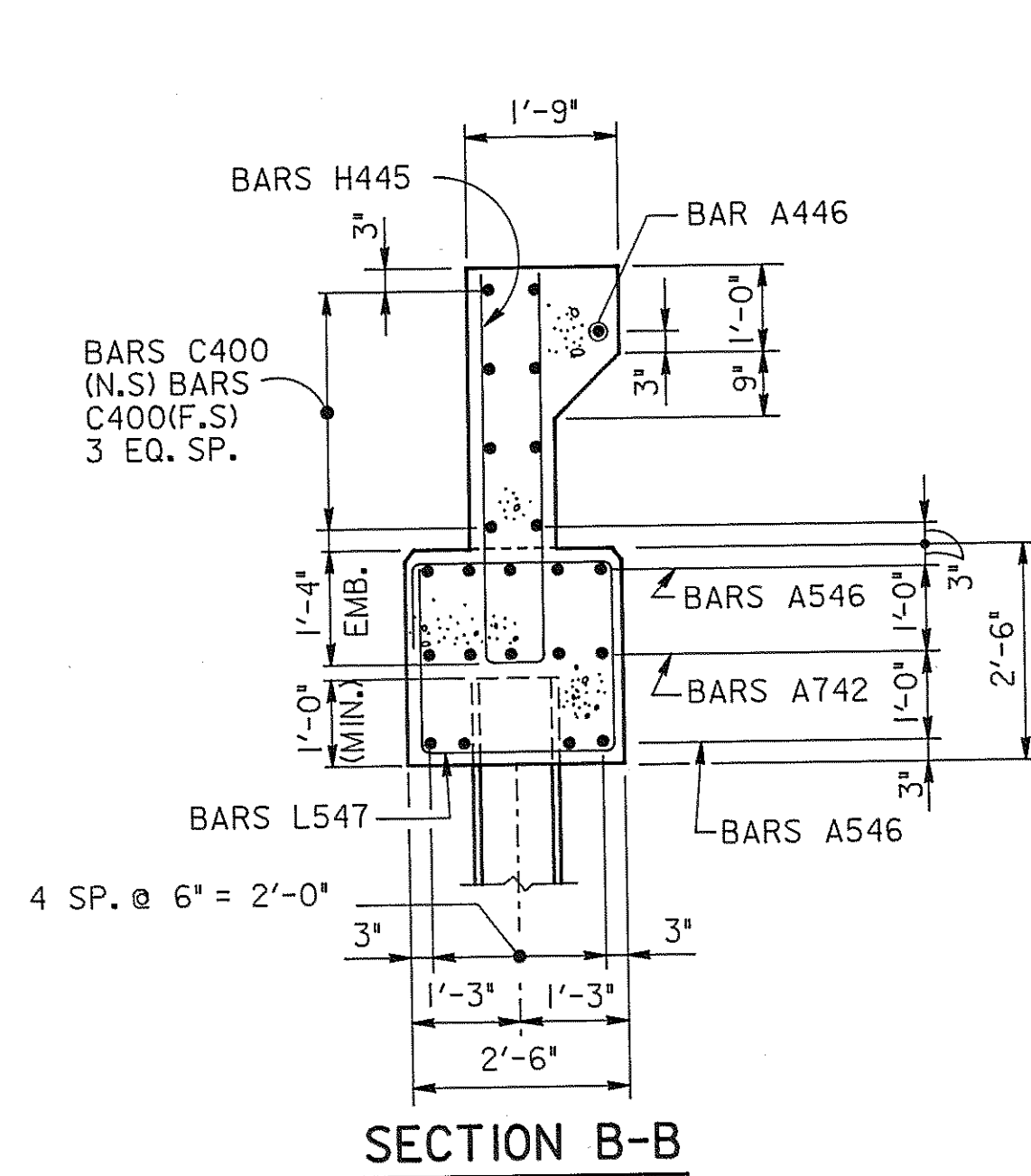
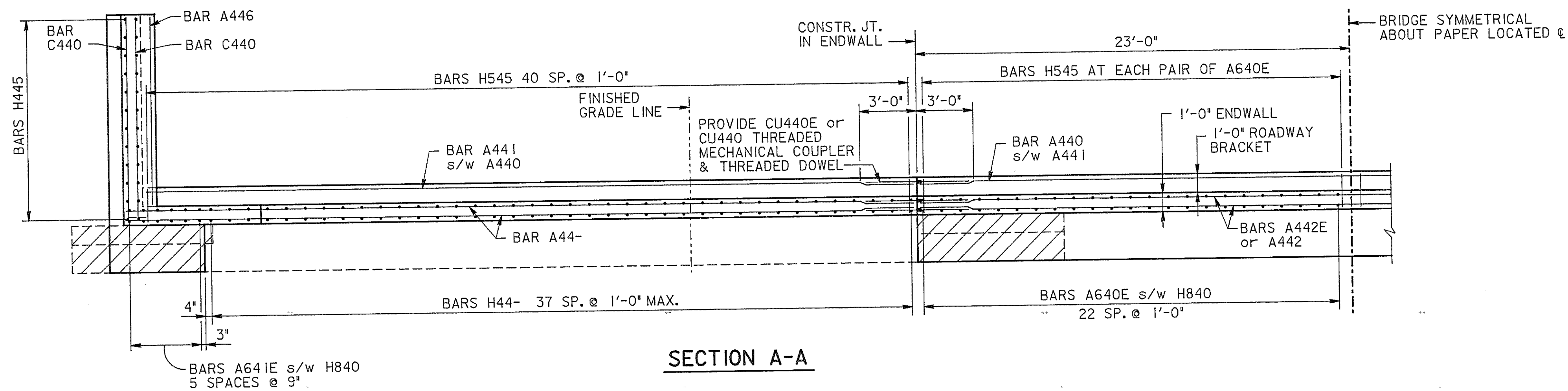
I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

DESIGNED BY	S.L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

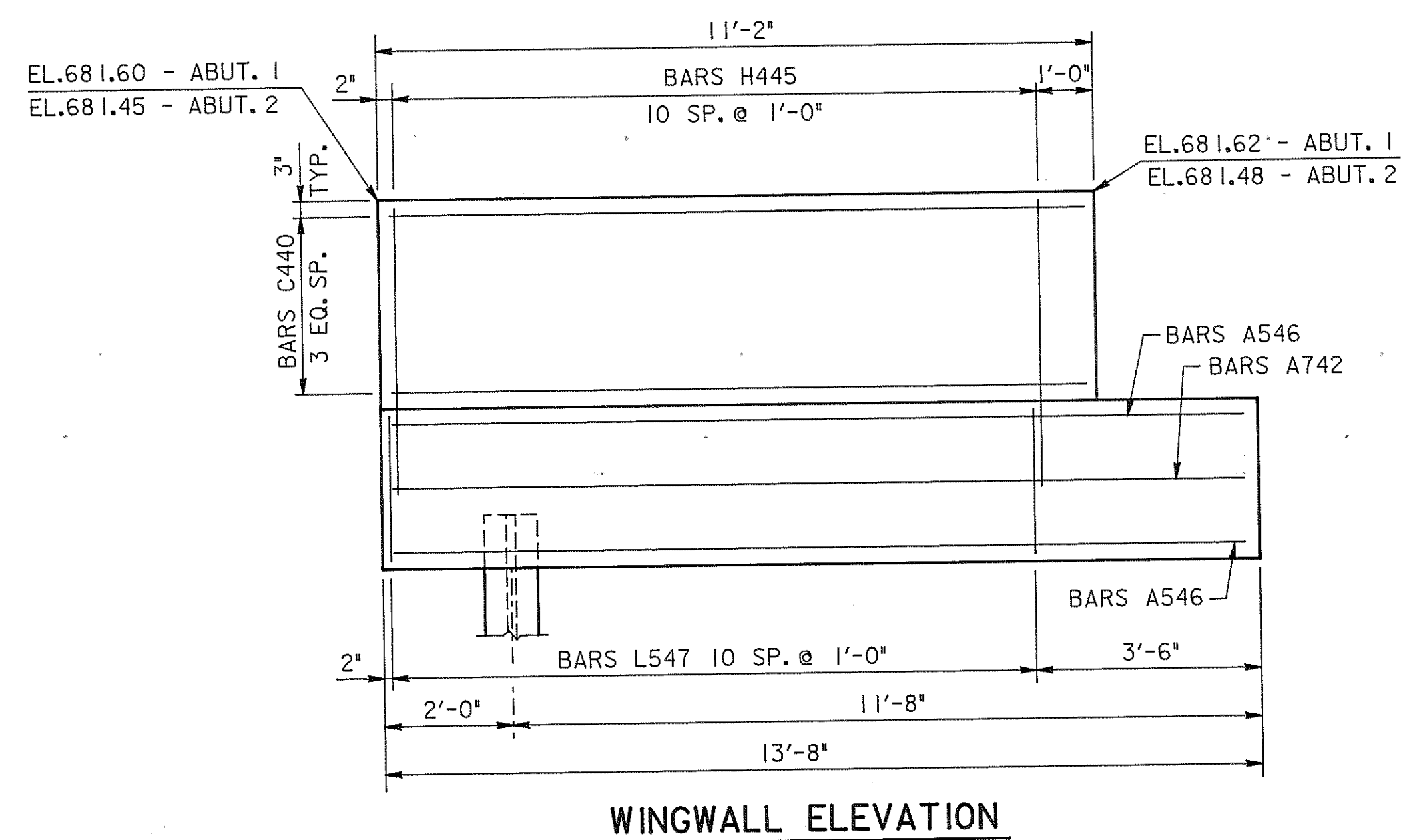
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CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



NOTE:  
 COST OF DRILLING AND GROUTING FOR  
 BARS H543 SHALL BE INCLUDED IN  
 ITEM NO. 604-03.01.



DESIGNED BY	S.L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

**BRIDGE NO. 7 & 8**

**ABUTMENT DETAILS**

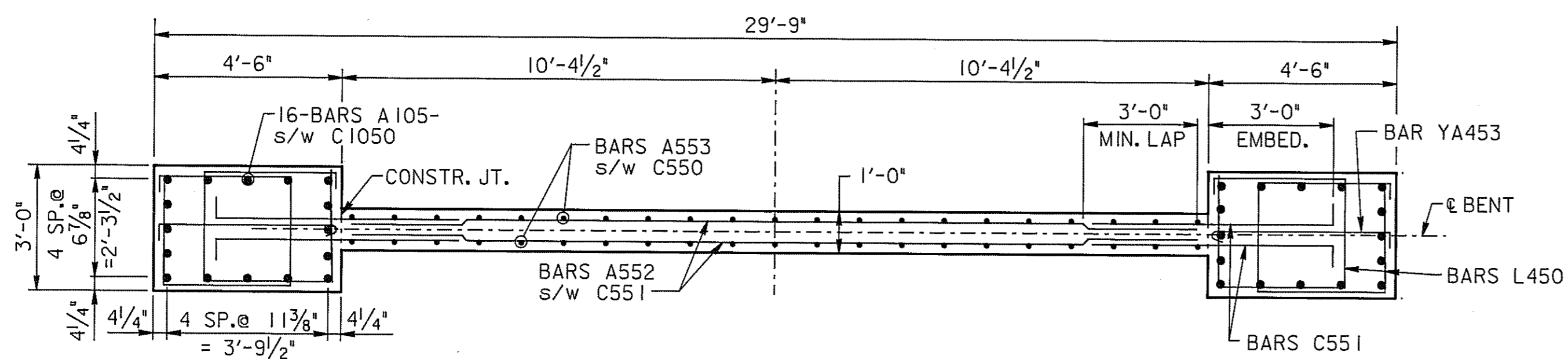
I-75 WIDENING OVER  
 SOUTH CHICKAMAUGA CREEK  
 STATION 36+14.50  
 HAMILTON COUNTY  
 1991

Q521450, 1111BRTA IDC.LDGN SV=DETAIL PRF=BRTA IDC1 DATE:12-20-90

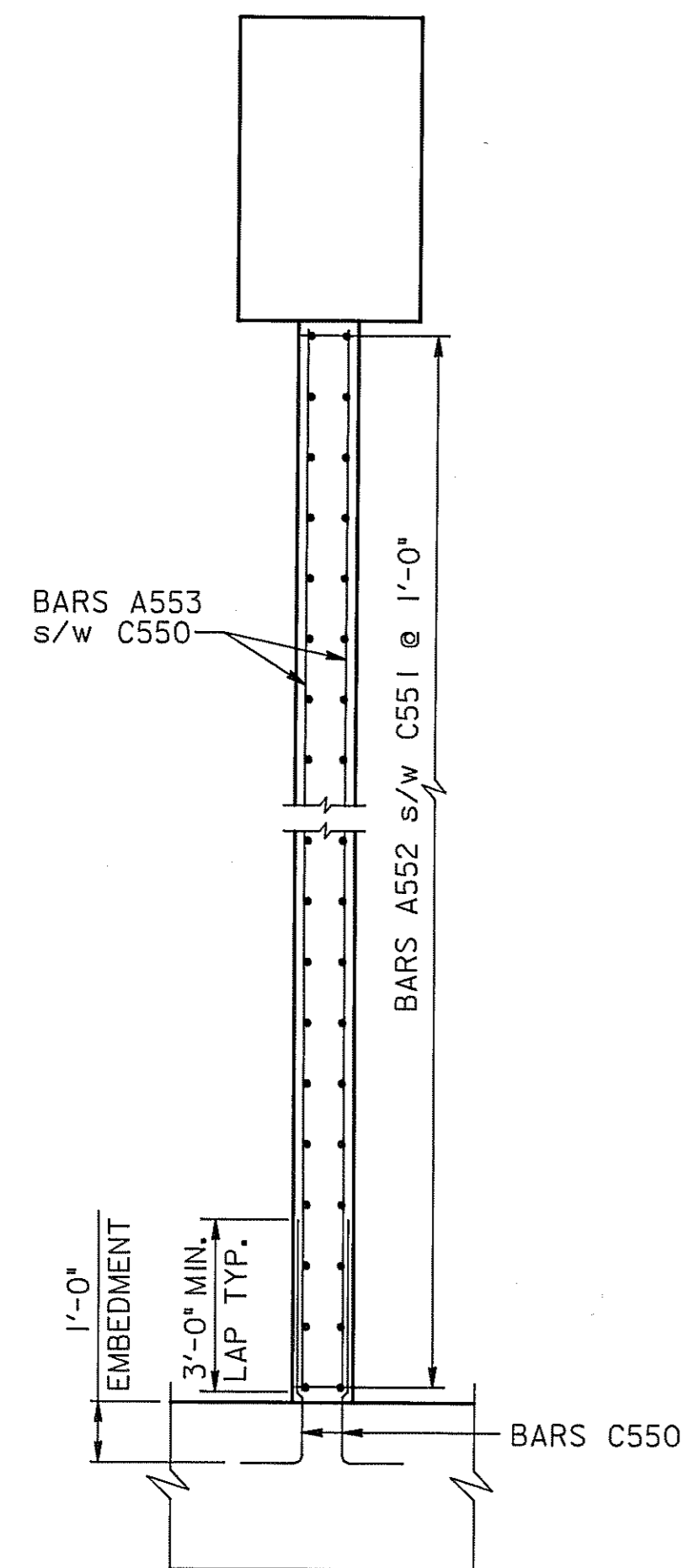


CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	

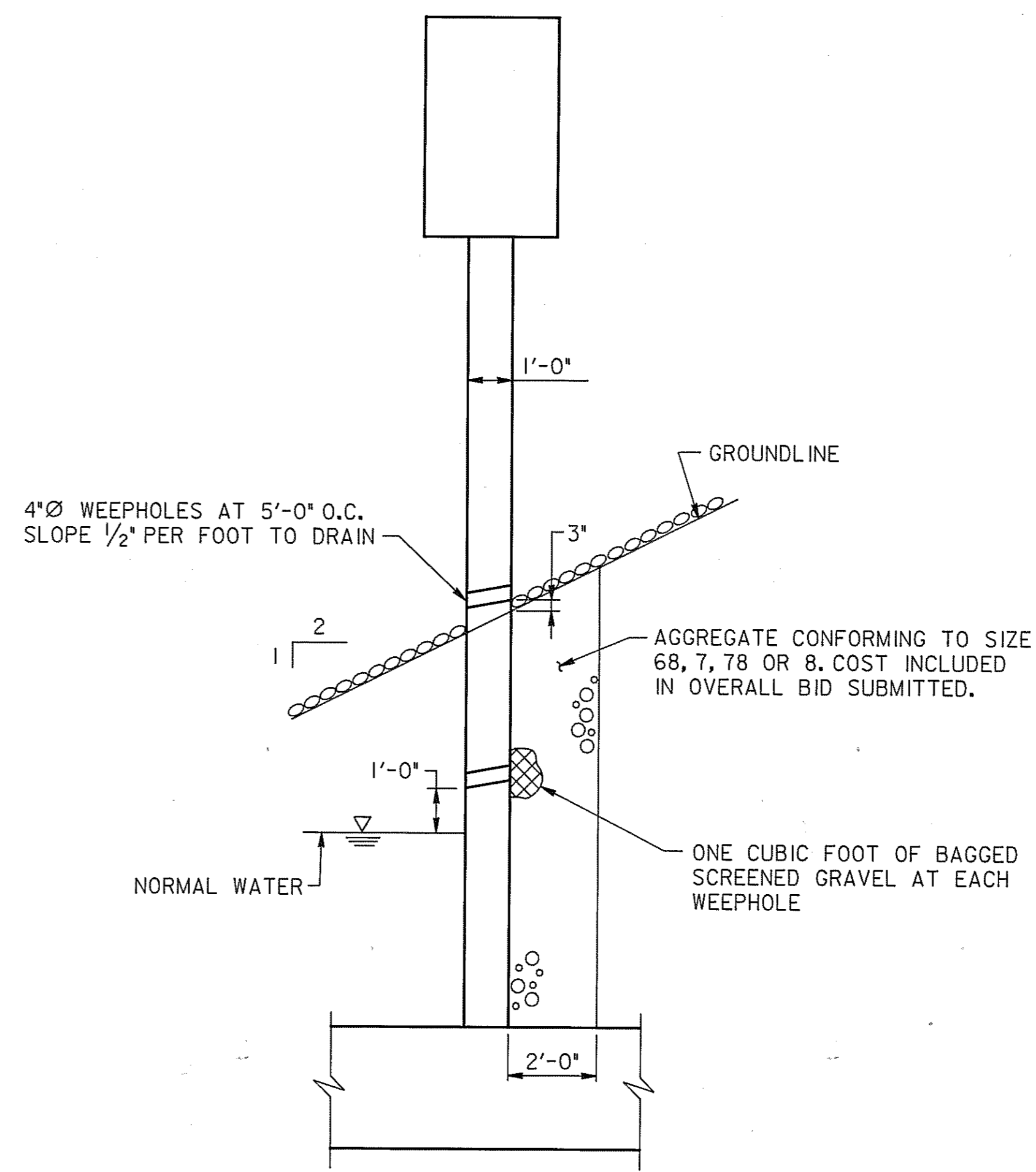
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12/21/91	JHP	General
2	12 JUNE 91	JHP	DELETED DETAIL B & NOTES



SECTION D-D



SECTION E-E



WEEPHOLE DETAIL  
BENT 3 SHOWN (BENT 1 SIMILAR)

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BRIDGE NO. 7 & 8

BENT DETAILS

I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

DESIGNED BY	S. L. POWELL	DATE	12-90
DRAWN BY	S. J. MATHEWS	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

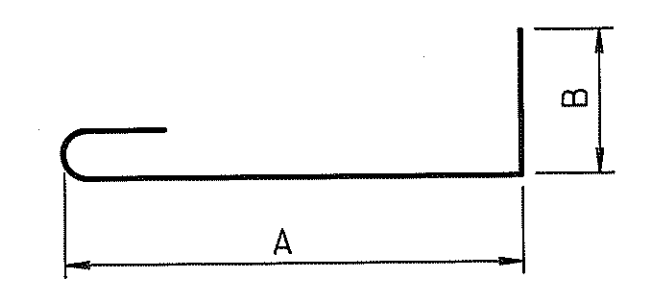
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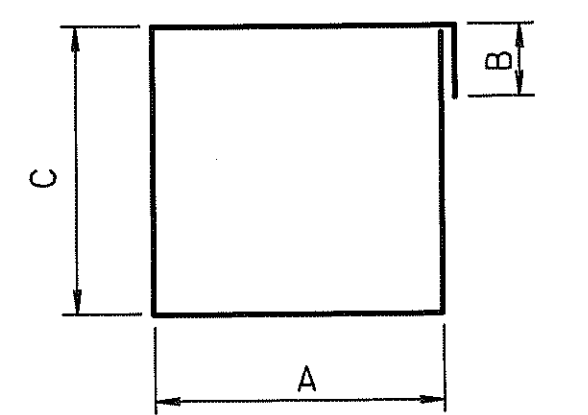
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

BAR	LOCATION	SIZE	REQ'D	A	B	C	D	LENGTH
SUPERSTRUCTURE - EPOXY								
A442E	ENDWALL	4	4					45'-10"
A443E	ENDWALL	4	8					41'-9"
A500E	TOP & BOTTOM SLAB	5	668					45'-10"
A501E	TOP SLAB	5	668					41'-9"
A502E	BOTTOM SLAB	5	118					35'-10"
A503E	BOTTOM SLAB	5	413					30'-0"
A504E	TOP & BOTTOM SLAB	5	1332					11'-0"
A505E	BOTTOM SLAB	5	668					7'-0"
A640E	ENDWALL	6	8					84'-4"
A DIMENSION VARIES FROM 3'-10" TO 3'-6" IN INCREMENTS OF 3/16" (23 BARS)								
A641E	ENDWALL	6	48					3'-6"
A900E	TOP SLAB	9	188					54'-4"
A901E	TOP SLAB	9	282					60'-0"
A902E	TOP SLAB	9	168					46'-0"
A903E	TOP SLAB	9	84					40'-0"
CU440E	ENDWALL	4	8					4'-0"
CU400	ENDWALL	4	24					4'-0"
CU500E	TOP & BOTTOM SLAB	5	1336					6'-0"
GB600E	ENDWALL	6	256	2'-9"	2'-2"	3'-1"		6'-7"
RB600E	TOP SLAB	6	188	3'-7"	2'-4"			6'-7"
SUPERSTRUCTURE - NON EPOXY								
A440	ROADWAY BRACKET	4	2					45'-10"
A441	ROADWAY BRACKET	4	4					40'-9"
A442	ENDWALL	4	12					45'-10"
A443	ENDWALL	4	24					41'-9"
A446	WINGWALL	4	4					9'-11"
A506	DIAPHRAGM	5	18					43'-11"
C400	WINGWALL	4	32	10'-9"				11'-9"
H545	ROADWAY BRACKET	5	256	1'-8"	0'-6"			2'-8"
L500	DIAPHRAGM	5	90	2'-3"	1'-0"	0'-8"		6'-10"

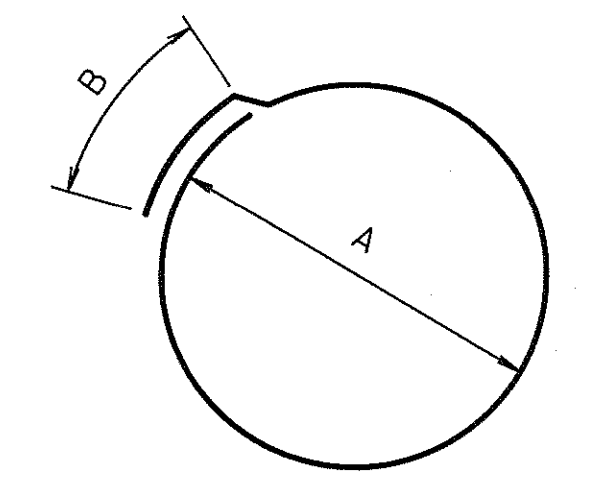
BAR	LOCATION	SIZE	REQ'D	A	B	C	D	LENGTH
CORR 2								
A550	CAP	5	4					44'-2"
A551	CAP	5	2					41'-2"
A552	WALL	5	62					20'-7"
A553	WALL	5	42					29'-10"
A554	CAP	5	2					35'-9"
A750	FOOTING	7	24					33'-6"
A751	FOOTING	7	34					11'-6"
A1050	COLUMN	10	32					34'-0"
A1052	CAP	10	2					25'-3"
A1053	CAP	10	4					29'-9"
C550	FOOTING	5	42	4'-2"				5'-0"
C551	COLUMN	5	124	6'-2"				7'-0"
C1050	FOOTING	10	32	10'-5"				12'-3"
CD1050	CAP	10	8	7'-0"	7'-2"	7'-8"		14'-8"
D850	FOOTING	8	67	11'-6"				13'-4"
D1050	CAP	10	8	44'-2"				47'-0"
L450	COLUMN	4	124	3'-1"	1'-0"	2'-6"		12'-2"
L451	CAP	4	4	1'-9"	1'-0"			172'-6"
C DIMENSION VARIES FROM 2'-3" TO 4'-9" IN INCREMENTS OF 2 1/8" (15 BARS)								
L452	CAP	4	42	1'-9"	1'-0"	4'-9"		14'-0"
YA453	COLUMN	4	62	4'-0"	0'-8"			5'-2"



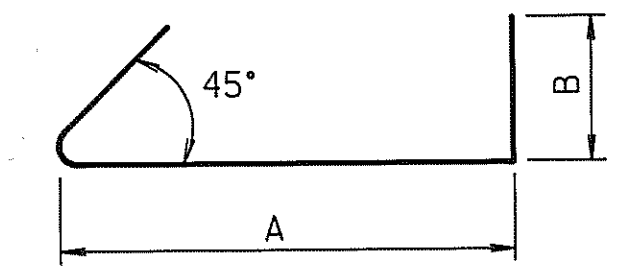
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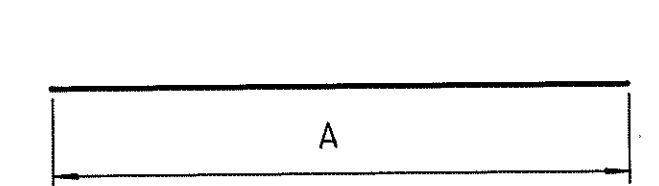
BARS L



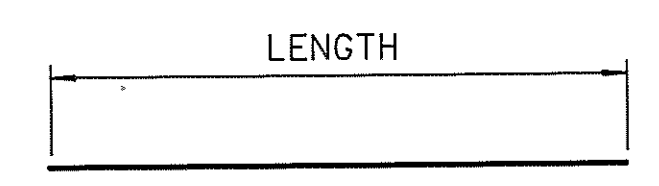
BARS T



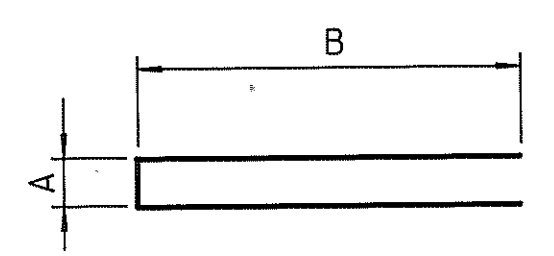
BARS YB



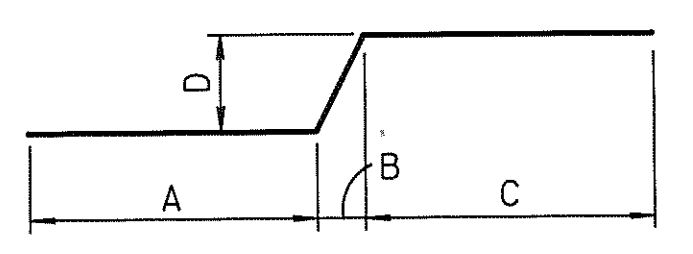
BARS B



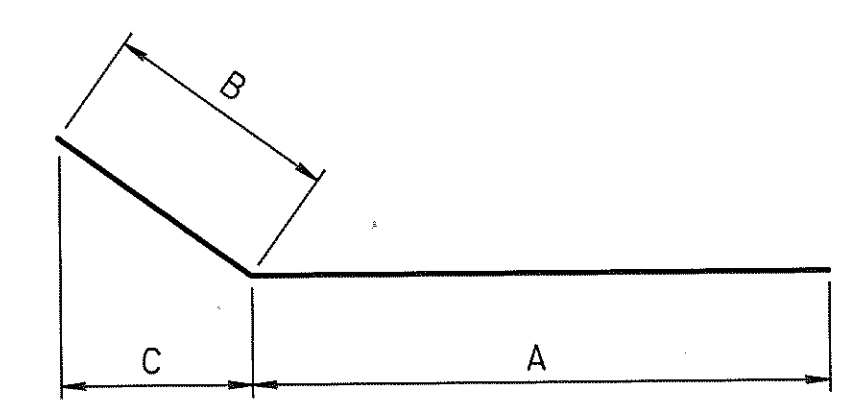
BARS A



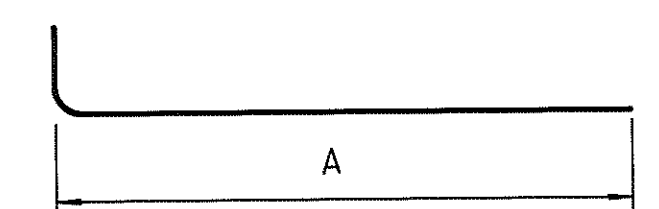
BARS H



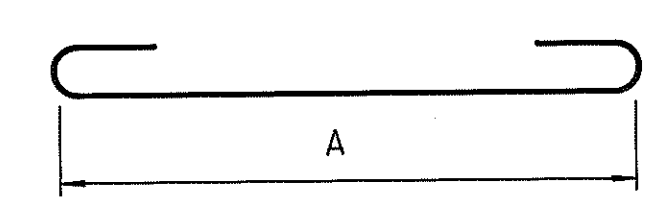
BARS F



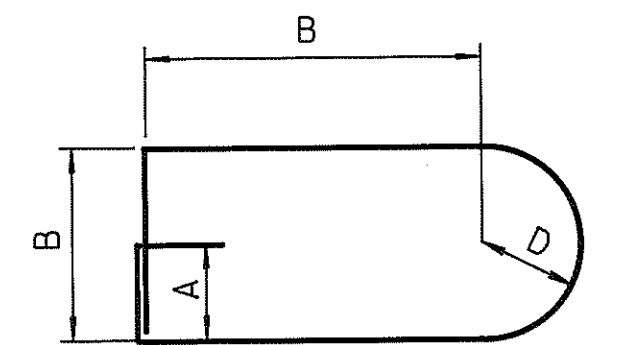
BARS CD



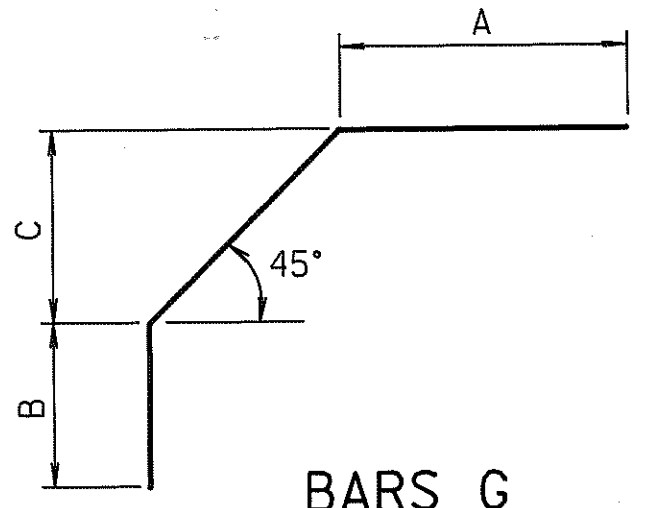
BARS C



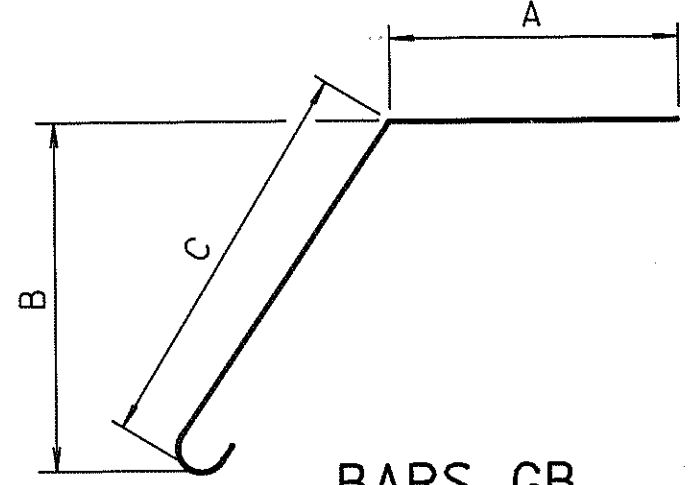
BARS D



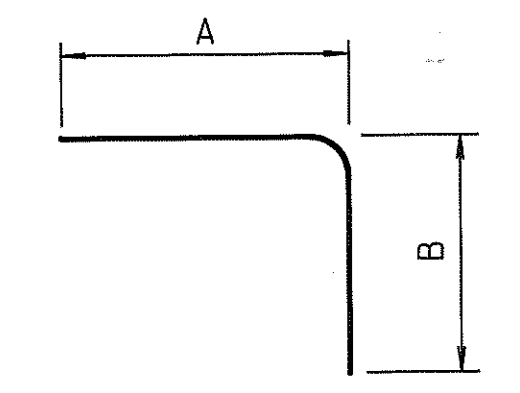
BARS X



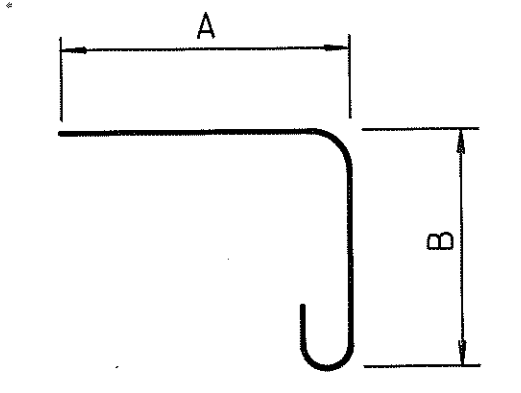
BARS G



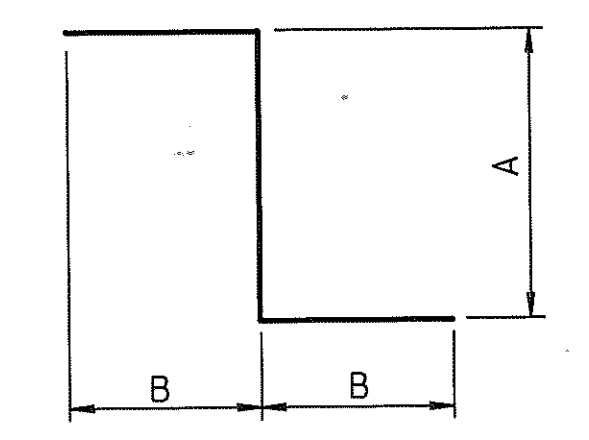
BARS GB



BARS R



BARS RB



BARS Z

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BRIDGE NO. 7 & 8

BILL OF STEEL

I-75 WIDENING OVER  
SOUTH CHICKAMAUGA CREEK  
STATION 36+14.50  
HAMILTON COUNTY  
1991

Q52450, 1111  
 E:\9898\B78BAR.DGN SV=BAR I  
 PRF=B78BAR I  
 DATE: 12-31-90

DESIGNED BY	S.L. POWELL	DATE	12-90
DRAWN BY	M. K. DAFTARIAN	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

CONSTRUCTION NO.	PROJECT NO.	YEAR	SHEET NO.
33005-3148-44	IR-75-1(90)2	1991	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

BAR	LOCATION	SIZE	REQ'D	A	B	C	D	LENGTH
BENT 3								
A550	CAP	5	4					44' - 2"
A551	CAP	5	2					41' - 2"
A552	WALL	5	58					20' - 7"
A553	WALL	5	42					29' - 10"
A554	CAP	5	2					35' - 9"
A750	FOOTING	7	24					33' - 6"
A751	FOOTING	7	34					11' - 6"
A1051	COLUMN	10	32					32' - 0"
A1052	CAP	10	2					25' - 3"
A1053	CAP	10	4					29' - 9"
C550	FOOTING	5	42	4' - 2"				5' - 0"
C551	COLUMN	5	116	6' - 2"				7' - 0"
C1050	FOOTING	10	32	10' - 5"				12' - 3"
CD1050	CAP	10	8	7' - 0"	7' - 2"	7' - 8"		14' - 8"
D850	FOOTING	8	67	11' - 6"				13' - 4"
D1050	CAP	10	8	44' - 2"				47' - 0"
L450	COLUMN	4	116	3' - 1"	1' - 0"	2' - 6"		12' - 2"
L451	CAP	4	4	1' - 9"	1' - 0"			172' - 6"
C DIMENSION VARIES FROM 2'-3" TO 4'-9" IN INCREMENTS OF 2 1/8" (15 BARS)								
L452	CAP	4	42	1' - 9"	1' - 0"	4' - 9"		14' - 0"
YA453	COLUMN	4	58	4' - 0"	0' - 8"			5' - 2"
ABUTMENT 1 - EPOXY								
H440E	ENDWALL	4	50	0' - 9"	6' - 0"			12' - 7"
H441E	ENDWALL	4	2	0' - 9"				159' - 3"
B DIMENSION VARIES FROM 5'-6" TO 6'-0" IN INCREMENTS OF 1/2" (13 BARS)								

BAR	LOCATION	SIZE	REQ'D	A	B	C	D	LENGTH
ABUTMENT 1 - NON EPOXY								
A444	ENDWALL	4	12					37' - 4"
A540	ABUTMENT BEAM	5	7					45' - 8"
A541	ABUTMENT BEAM	5	14					4' - 9"
A546	WINGBEAM	5	18					13' - 4"
A740	ABUTMENT BEAM	7	11					45' - 8"
A741	ABUTMENT BEAM	7	22					4' - 9"
A742	WINGBEAM	7	10					13' - 4"
H445	WINGBEAM	4	22	0' - 9"	4' - 6"			9' - 9"
H543	ENDWALL	5	76	1' - 4"	1' - 10"			5' - 0"
L544	ABUTMENT BEAM	5	62	3' - 2"	1' - 0"	2' - 2"		11' - 8"
L547	WINGBEAM	5	22	2' - 2"	1' - 0"	2' - 2"		9' - 8"
H840	ABUTMENT BEAM	8	58	0' - 9"	3' - 0"			6' - 9"
ABUTMENT 2 - EPOXY								
H440E	ENDWALL	4	50	0' - 9"	6' - 0"			12' - 7"
H441E	ENDWALL	4	2	0' - 9"				159' - 3"
B DIMENSION VARIES FROM 5'-6" TO 6'-0" IN INCREMENTS OF 1/2" (13 BARS)								
ABUTMENT 2 - NON EPOXY								
A444	ENDWALL	4	12					37' - 4"
A540	ABUTMENT BEAM	5	7					45' - 8"
A541	ABUTMENT BEAM	5	14					4' - 9"
A546	WINGBEAM	5	18					13' - 4"
A740	ABUTMENT BEAM	7	11					45' - 8"
A741	ABUTMENT BEAM	7	22					4' - 9"
A742	WINGBEAM	7	10					13' - 4"
H445	WINGBEAM	4	22	0' - 9"	4' - 6"			9' - 9"
H543	ENDWALL	5	76	1' - 4"	1' - 10"			5' - 0"
L544	ABUTMENT BEAM	5	62	3' - 2"	1' - 0"	2' - 2"		11' - 8"
L547	WINGBEAM	5	22	2' - 2"	1' - 0"	2' - 2"		9' - 8"
H840	ABUTMENT BEAM	8	58	0' - 9"	3' - 0"			6' - 9"

E:\9898\BRT8BAR.DGN SV=BAR2 DATE:12-3-90 PRF=B78BAR2

DESIGNED BY	S.L. POWELL	DATE	12-90
DRAWN BY	M. K. DAFTARIAN	DATE	12-90
SUPERVISED BY	R. V. BENEDA	DATE	12-90
CHECKED BY	R. V. BENEDA	DATE	12-90

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS  
**BRIDGE NO. 7 & 8**  
  
**BILL OF STEEL**  
  
 I-75 WIDENING OVER  
 SOUTH CHICKAMAUGA CREEK  
 STATION 36+14.50  
 HAMILTON COUNTY  
 1991