

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

LOADING: H520-44 WITH ALTERNATE MILITARY.

DESIGN SPECIFICATIONS: AASHTO 1983 EDITION WITH ADDENDA.

CONCRETE: TO BE CLASS 'A' (CAST-IN-PLACE) $f'c = 3000$ PSI, EXCEPT BRIDGE DECK.

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

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. WHEN THE WIDTH OF THE OVERHANG EXCEEDS THE DEPTH OF THE EXTERIOR GIRDER, DETAILS AND DESIGN CALCULATIONS FOR THE CANTILEVER SUPPORT SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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 UNLESS OTHERWISE NOTED ON DETAIL DRAWINGS. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, REINFORCEMENT SHALL BE PLACED WITHIN A TOLERANCE OF $\pm 1/2$ " THE SUFFIX E, FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SPECIAL PROVISION 907A.

SPECIAL NOTE-FOOTING FOR PIERS: AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6" DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER, FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR PIER COLUMNS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

GENERAL NOTES

NOTE: THE CONTRACTOR SHALL CHECK THE LOCATION OF ALL EXISTING SUBSTRUCTURES AND VERIFY SPAN LENGTHS BEFORE FABRICATING GIRDERS.

SPECIAL NOTE FOR UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION 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 INSTALLATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR AS A RESULT.

REQUIREMENTS AND RESTRICTIONS FOR PHASE CONSTRUCTION: THE EXTRACTION OF SOILS COEFFICIENT SHEET PILING ALL COSTS ASSOCIATED WITH SHEET PILING SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR FOUNDATION PREPARATION.

- 1 - THE LOCATION OF LONGITUDINAL CONSTRUCTION JOINTS SHALL NOT BE CHANGED TO ACCOMMODATE REMAIN IN PLACE DECK FORMS.
- 2 - NO SHEET PILES OR BEARING PILES MAY BE DRIVEN FROM THE EXISTING OR PROPOSED STRUCTURE.
- 3 - TWELVE FOOT TRAFFIC LANES SHALL BE MAINTAINED AT ALL TIMES.
- 4 - BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH NOTE C, SHEET 2, OF SPECIAL PROVISION 604.

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 PLANS FOOTING IS TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR FOUNDATION PREPARATION.

ESTIMATED QUANTITIES

ITEM	REMOVAL OF STRUCTURES (BRIDGE I.D. NO. 33100750010)	DRY EXCAVATION (BRIDGES)	WET EXCAVATION (BRIDGES)	ROCK EXCAVATION (BRIDGES)	SCARIFYING	CLASS 'A' CONCRETE (BRIDGE DECK)	EPOXY COATED REINFORCING STEEL	CLASS 'A' CONCRETE (BRIDGES)	STEEL BAR REINFORCEMENT (BRIDGES)	APPLIED TEXTURE FINISH (NEW STRUCTURES)	STEEL PILES (10 INCH)	PRESTRESSED CONCRETE BOX BEAM (21' X 36')	CONCRETE RAILING (M-28-1)	MACHINED RIP-RAP (CLASS A-2)	6" PERF. PIPE WITH DRAIN SYSTEM	6" PIPE UNDERDRAIN	PAVEMENT @ BRIDGE ENDS	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	ROCK DRILLING (BRIDGES)
SUPERSTRUCTURE	L.S. 8	C.Y. 1	C.Y. 1	C.Y. 1	703	196	34,955	4	476	S.Y.	L.F.	L.F. 2	5	L.F. 3	L.F.	S.Y.	S.Y.	L.F.	
ABUTMENT NO.1		10	58	9	102	346		4	616		55			19	5		193		
PIER NO.1		20	100	7				77	11,408										
PIER NO.2		23			94			93	12,849		70			22	5		203		
ABUTMENT NO.2		11			899	196	35,672	5	690		125	207		41	10		396		
TOTAL	1	64	158	16	899	183	26,039	183	26,039	430	125	207	214	365	10	495	396	24	

NOTES: 1 EXCAVATION BASED ON EXISTING GROUND AT PIERS AND FINAL PROFILE AT ABUTMENTS.

2 NOTE: COST OF ELASTOMERIC PADS, RUBBER BONDING CEMENT, DOWEL BARS, ANCHOR BOLTS TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.

3 NOTE: COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED PIPE.

4 NOTE: THE COST OF BITUMINOUS-FIBERBOARD, ETC., AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN BRIDGE ITEMS BID ON.

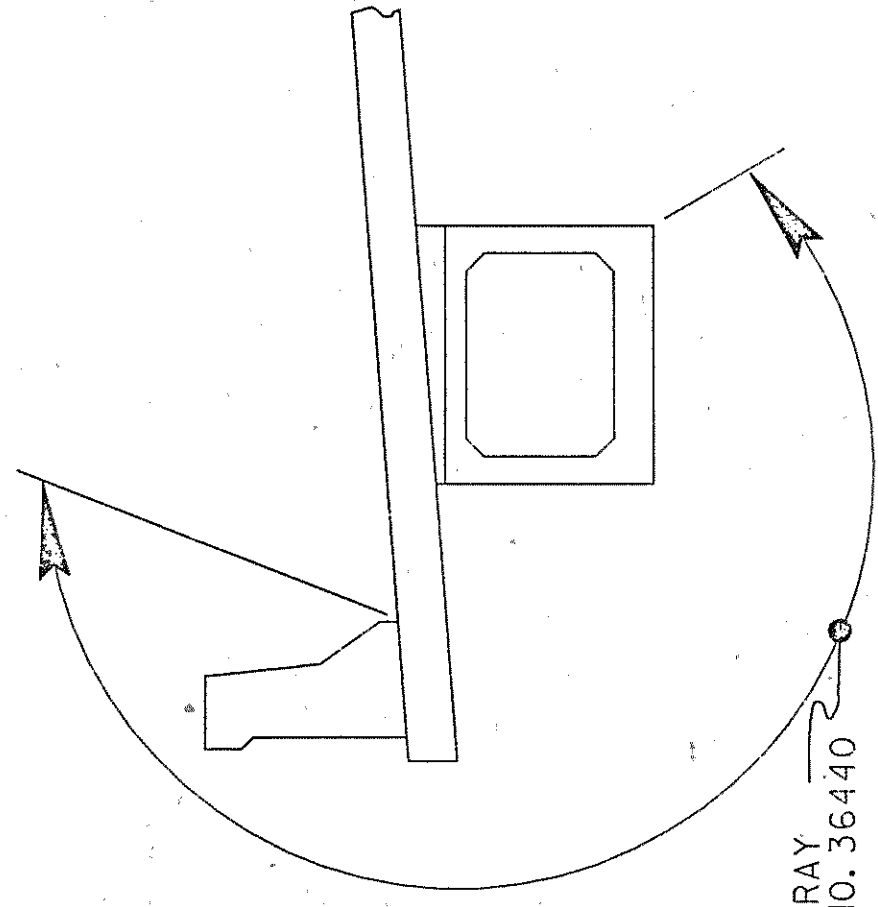
5 NOTE: THE COST OF 8 INSERT ASSEMBLIES AND 32 7/8" DIA. X 4" HEX HEAD BOLTS, (A307), TO BE INCLUDED IN ITEM 620-03.

6 ALL REINFORCING STEEL IN BRIDGE RAIL SHALL BE EPOXY COATED. COST TO BE INCLUDED IN THE PRICE BID FOR ITEM 620-03.

7 NOTE: COST OF BRIDGE RAIL ENDPOST IS TO BE INCLUDED IN THE COST OF THE BRIDGE RAIL SYSTEM.

8 NOTE: THE COST OF REMOVING THE EXISTING CURBS, PORTIONS OF THE EXISTING ABUTMENT, AREA ON PAVEMENT @ BRIDGE ENDS NEEDED FOR EXPANSION, AND THE BRIDGE RAIL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202-04.01

9 THE COST OF REMOVING ANY EXISTING ASPHALT OVERLAY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SCARIFYING. ALSO, THIS QUANTITY INCLUDES THE ASPHALT AND TOP 1" OF CONCRETE ROADWAY SLAB FOR PAVEMENT @ BRIDGE ENDS.



APPLIED TEXTURE FINISH SKETCH

MOUNTAIN GRAY
FED. SPEC. NO. 36440

10 NOTE: SQUARE YARD FOR PAVEMENT AT BRIDGE ENDS SHALL BE MEASURED AS ROAD SURFACE AREA AND SHALL INCLUDE ALL CONCRETE, REINFORCING STEEL, PILES, JOINT MATERIAL, NOTCH FOR ROADWAY DRAIN AND ANY OTHER INCIDENTALS NECESSARY FOR COMPLETE INSTALLATION.

11 NOTE: COST OF THREE BRIDGE DECK DRAINS TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 620-03, CONCRETE RAILING.

12 NOTE: SEE FOUNDATION PREPARATION NOTE THIS SHEET.

13 NOTE: MISCELLANEOUS CRACKS ON EXPOSED BEAMS, ABUTMENTS, AND PIERS TO BE EPOXY INJECTED BY A CONTRACTOR APPROVED BY THE STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION. LOCATIONS OF REPAIR TO BE DESIGNATED BY THE ENGINEER. COST OF ALL EPOXY INJECTION REPAIRS AND LABOR SHALL BE INCLUDED UNDER ITEM NO. 604-10.62.

14 NOTE: MISCELLANEOUS SPALLS AND POPOUTS ON EXPOSED BEAMS, ABUTMENTS, AND PIERS TO BE REPAIRED. SEE DETAIL ABOVE FOR EPOXY CONCRETE REPAIR. COST OF ALL EPOXY CONCRETE REPAIRS INCLUDING LABOR SHALL BE INCLUDED UNDER ITEM 604-10.54, LOCATION OF REPAIR TO BE DESIGNATED BY THE ENGINEER.

15 NOTE: TOP OF BEAMS TO BE SANDBLASTED FREE OF ASPHALT & DEBRIS PRIOR TO PLACEMENT OF DECK CONCRETE. COST TO BE INCLUDED UNDER THE UNIT PRICE BID FOR ITEM 604-36.

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

BRIDGE RAIL SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWING M-28-1.

SHOP DRAWINGS: SEE SPECIAL PROVISION NO. 105A.

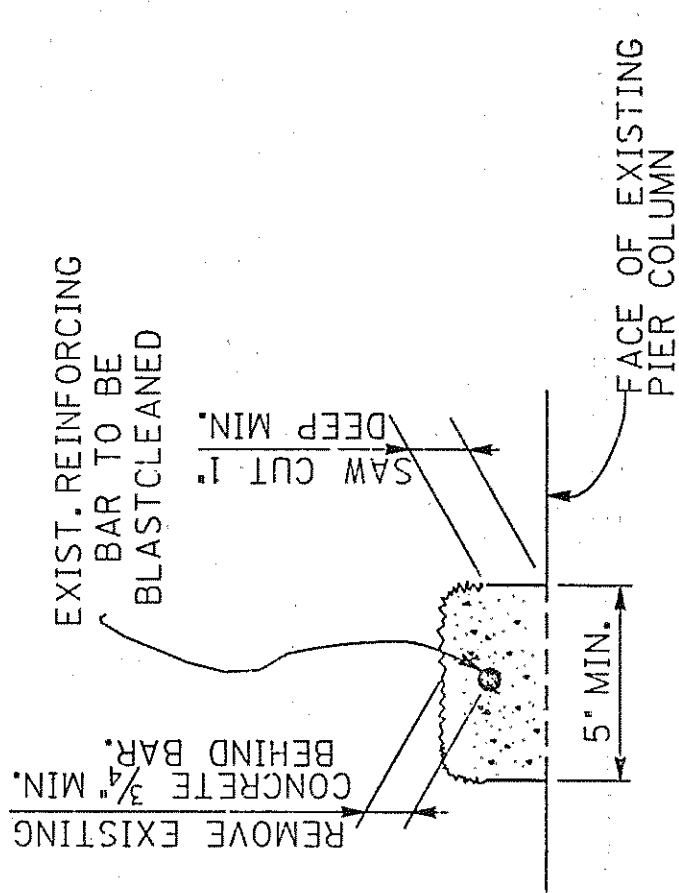
RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS A-2 IN ACCORDANCE SPECIAL PROVISION 709 AND SHALL BE PAID FOR UNDER ITEM 709-05.07.

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 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO MOUNTAIN GRAY, FEDERAL SPECIFICATION NO. 36440, FEDERAL COLOR STANDARD NO. 595A, AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. PAYMENT FOR THE APPLIED TEXTURE FINISH SHALL BE UNDER ITEM 604-04.01 AND 604-04.02.

PILES: TO BE HP-10 X 42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 55 TONS FOR THE ABUTMENTS.

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



DETAIL FOR EPOXY CONCRETE REPAIR

ITEM NO.	204-10.01	204-10.02	604-10.54	604-10.62
FOUNDATION PREPARATION PIER 1 STA. 27+69.63	FOUNDATION PREPARATION PIER 2 STA. 28+05.29	FOUNDATION PREPARATION PIER 2 STA. 28+05.29	CONCRETE REPAIR	EPOXY INJECTION REPAIR (COMPLETE & IN-PLACE)
12 L.S.	12 L.S.	12 L.S.	S.F. 14	13 L.F.
1	1	1	67	96
TOTAL	1	1	67	96

STATE OF TENNESSEE
BUREAU OF HIGHWAYS
DEPARTMENT OF TRANSPORTATION
ESTIMATED QUANTITIES
AND GENERAL NOTES
WIDENING INTERSTATE 75
RAMPS J AND K
OVER SPRING CREEK
STATION 24+00.74
HAMILTON COUNTY
1988

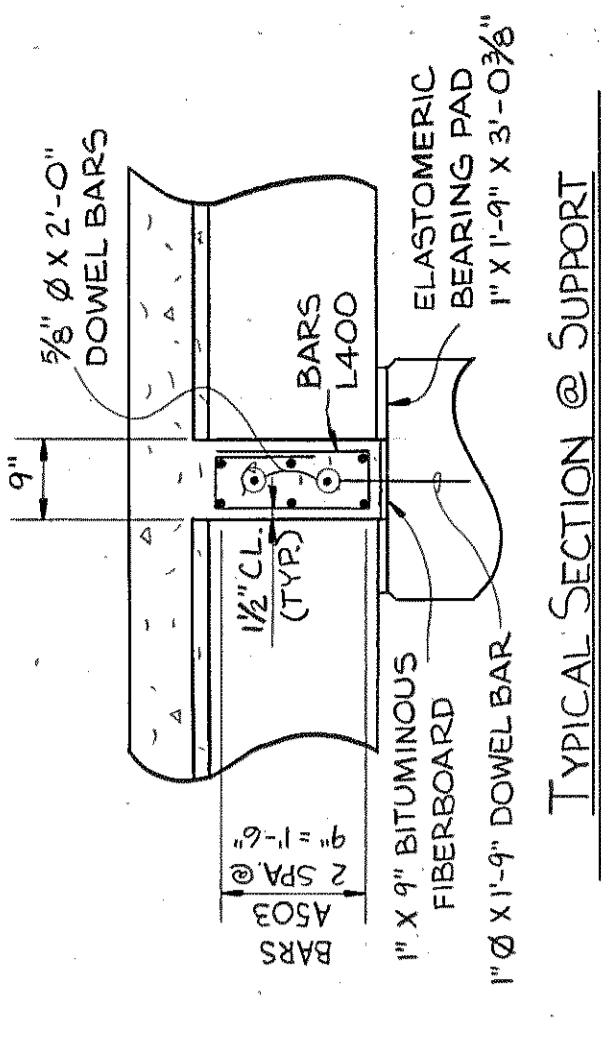
DESIGNED BY: T. MACKIE DATE 11/87
DRAWN BY: MARK SUBRAM DATE 1/88
SUPERVISED BY: FIELDS & PRINCE DATE 1/88
CHECKED BY: T. MACKIE DATE 2/88

CORRECT
APPROVED
E. P. WAGGONER
ENGINEER OF STRUCTURES
OFFICE OF THE ENGINEER

CONST. NO. 33004-3132-44
 PROJECT NO. YEAR SHEET NO.
 IR-75-1(87)O 1988

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-28-88	TDM	ADDED MINI-SLAB THICKNESS
2	12-29-88	TDM	CHANGED QUANTITY
3	11-1-88	TDM	REVISED BEAM SPACINGS TO ALIGN WITH KEER BLOCKS

SPECIAL NOTE FOR DOWEL BARS AT PIERS: TOP OF DOWELS TO BE COVERED WITH 1/2" OF COMPRESSIBLE MATERIAL AND THE 6" PROJECTION WRAPPED WITH TWO LAYERS OF WATERPROOF PAPER.
 NOTE: SUPPORT DIAPHRAGMS SHALL BE POURED CONCURRENTLY WITH THE DECK SLAB AND INCLUDED IN THE QUANTITY FOR ITEM 604-01.12.



1" X 9" BITUMINOUS FIBERBOARD
 1" X 11" DOWEL BAR
 1/2" X 11" X 3'-0" ELASTOMERIC BEARING PAD
 BARS L400
 9" DOWEL BARS

LOCATION	A	B	C	D	E	F	G	H
DIMENSIONS	4'-9 3/4"	13'-9 3/4"	4'-7 3/4"	4'-0 1/4"	13'-7 3/4"	15'-4 1/4"	6'-7 1/2"	6'-6 3/8"

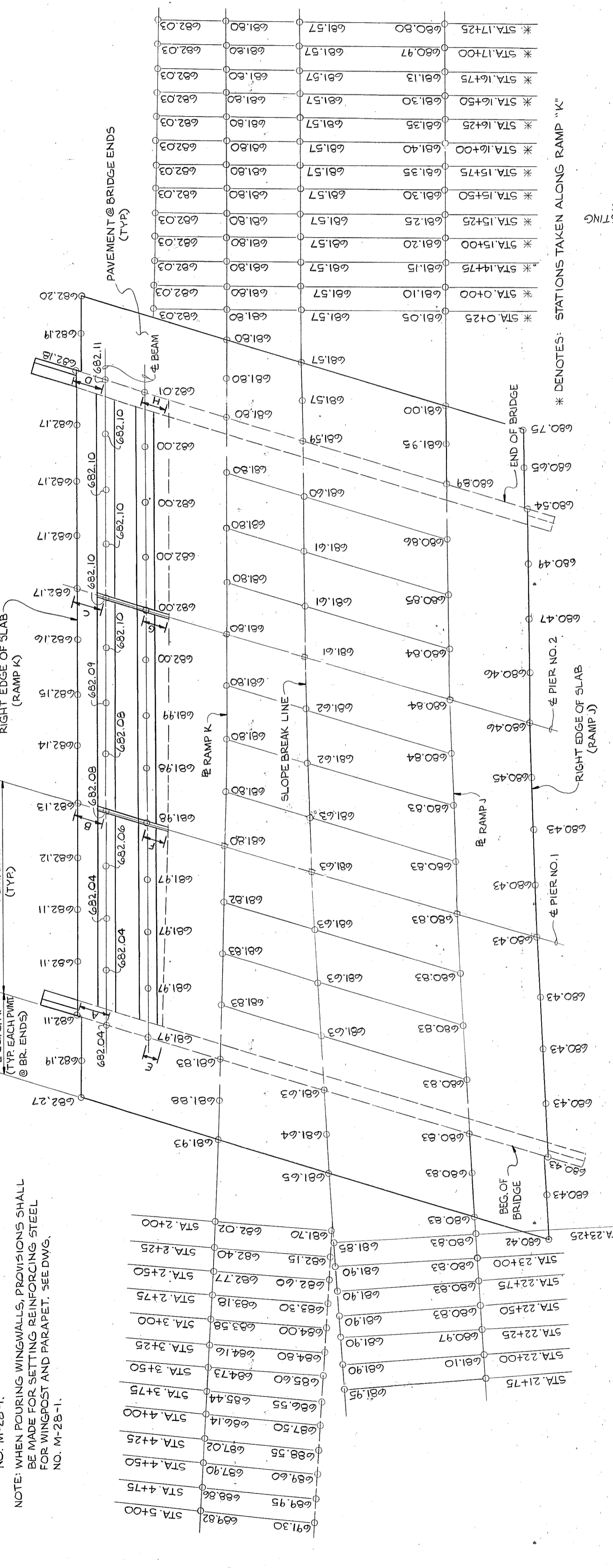
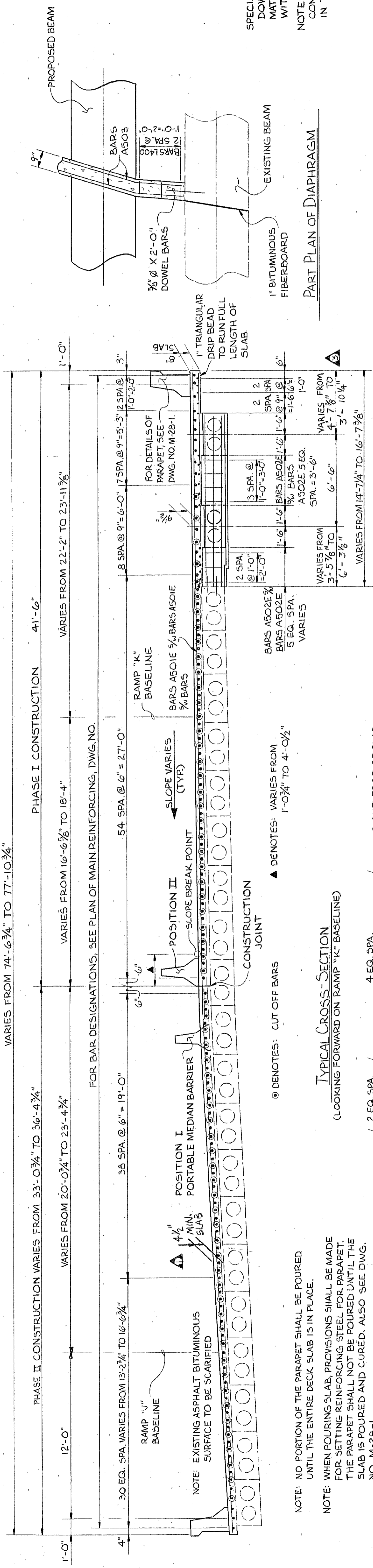
ESTIMATED QUANTITIES				
CLASS "A" CONCRETE (BRIDGE DECK) C.Y.	196	4	476	34,955
CLASS "A" STEEL BAR REINFORCEMENT LBS.				
CLASS "A" EPOXY COATED STEEL REINFORCEMENT LBS.				

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
 SUPERSTRUCTURE
 WIDENING OF INTERSTATE 75 (RAMPS J & K)
 OVER SPRING CREEK
 STATION 24+00.74
 HAMILTON COUNTY
 1988

DESIGNED BY J. MACKIE
 DRAWN BY BRIAN BRUMBACH
 SUPERVISED BY JUNE J. WILF
 CHECKED BY J. MACKIE
 DATE 1-88
 DATE 2-88
 DATE 4-88
 DATE 5-88

APPROVED
 Edward M. McGehee
 ENGINEER OF STRUCTURES
 Lewis Beant
 DIRECTOR OF HIGHWAYS

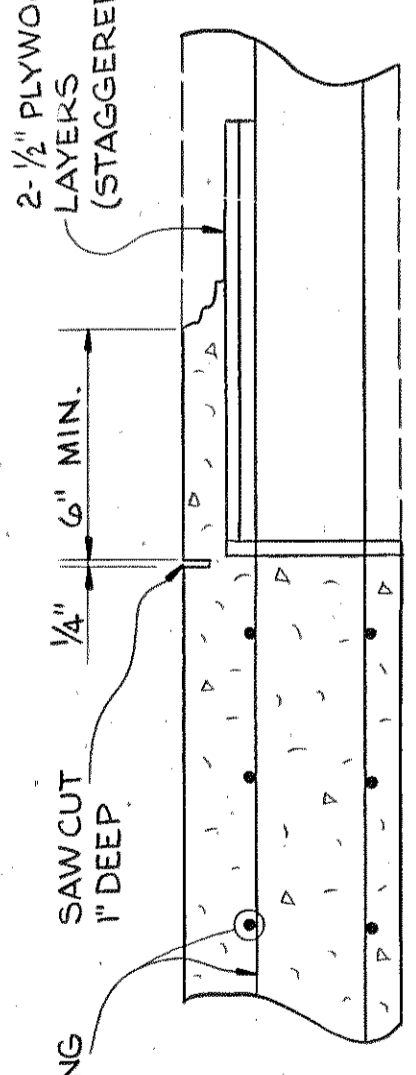
M-202-76



FRAMING PLAN (ALSO SHOWING BRIDGE AND APPROACHES' SCREED ELEVATIONS)

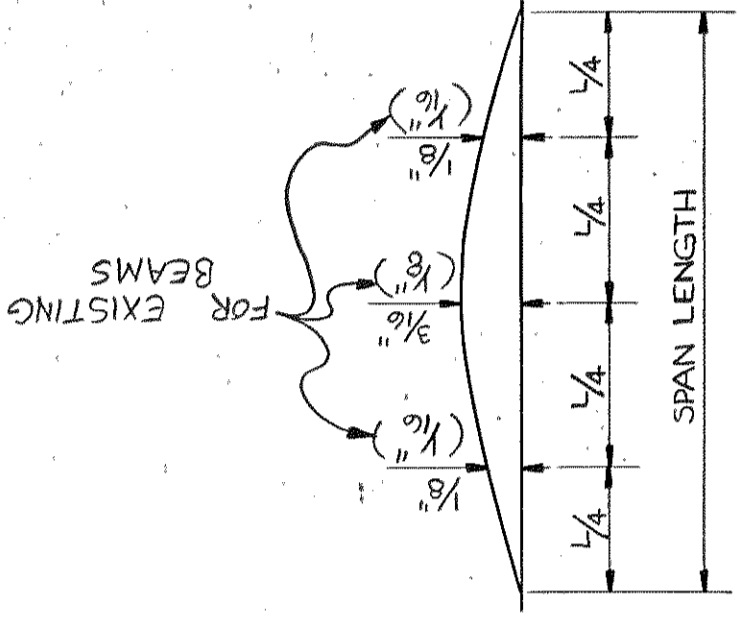
NOTE: OUTSIDE EDGE OF SLAB AND BRIDGE RAIL TO CONFORM TO HORIZONTAL CURVE.

PLANS NOTE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION EXCEPT NO JOINT MAY BE LOCATED CLOSER THAN 1/2 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 CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH THE SLAB CONSTRUCTION JOINT DETAIL.



SLAB CONSTRUCTION JOINT DETAIL

DEAD LOAD CORRECTION CURVE
 NOTE: THIS CURVE IS FOR DEAD LOAD SLAB AND ALL DEAD LOADS THAT ARE APPLIED AFTER SLAB IS IN PLACE.

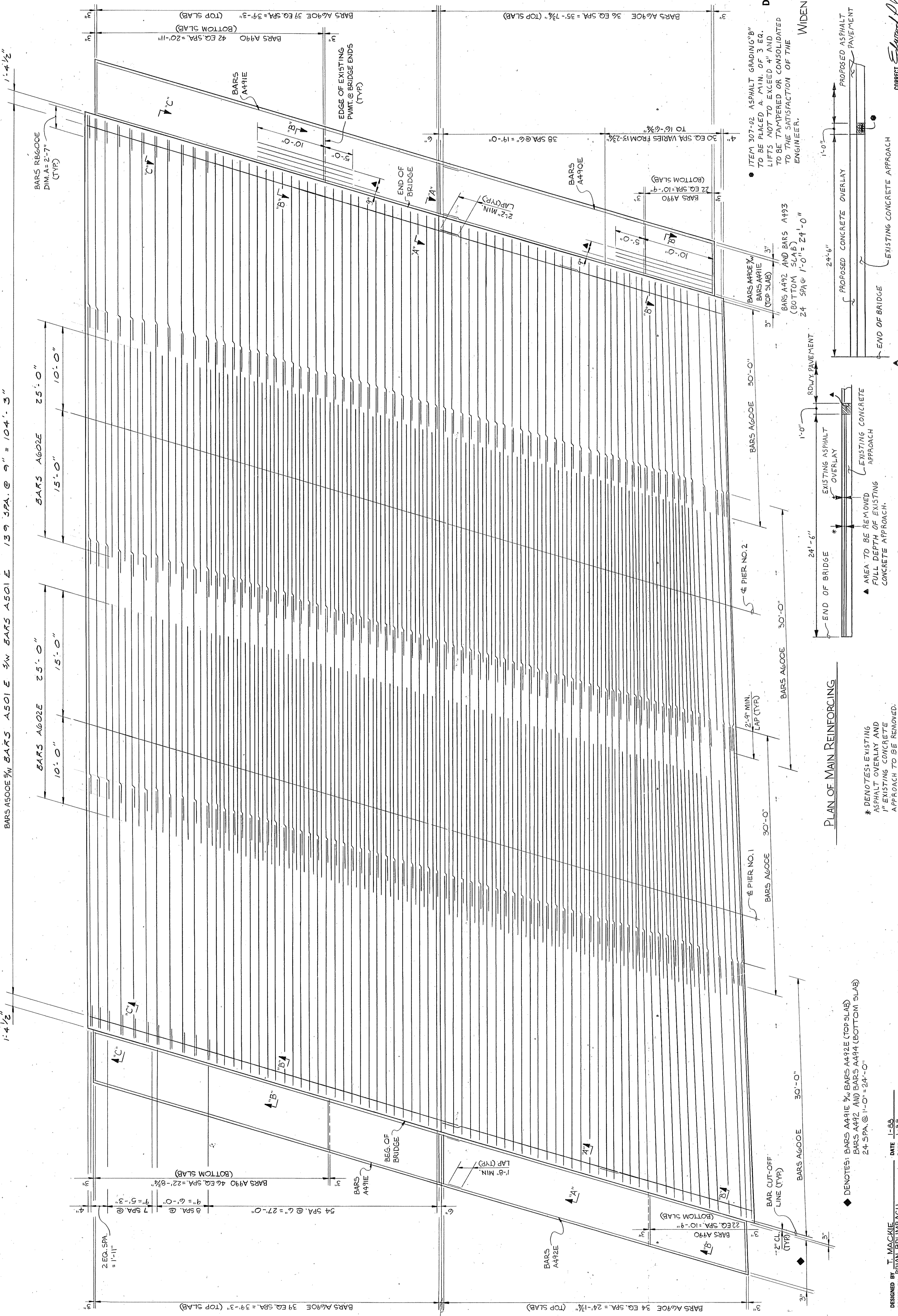


DESIGNED BY J. MACKIE
 DRAWN BY BRIAN BRUMBACH
 SUPERVISED BY JUNE J. WILF
 CHECKED BY J. MACKIE
 DATE 1-88
 DATE 2-88
 DATE 4-88
 DATE 5-88

CONST. NO. 33004-3132-44

PROJECT NO.	YEAR	SHEET NO.
IR-75-1(67)0	1988	

NO.	DATE	BY	REVISIONS	
			DATE	DESCRIPTION
1	7-23-88	TDM	ALTERED	APPROACH DETAILS



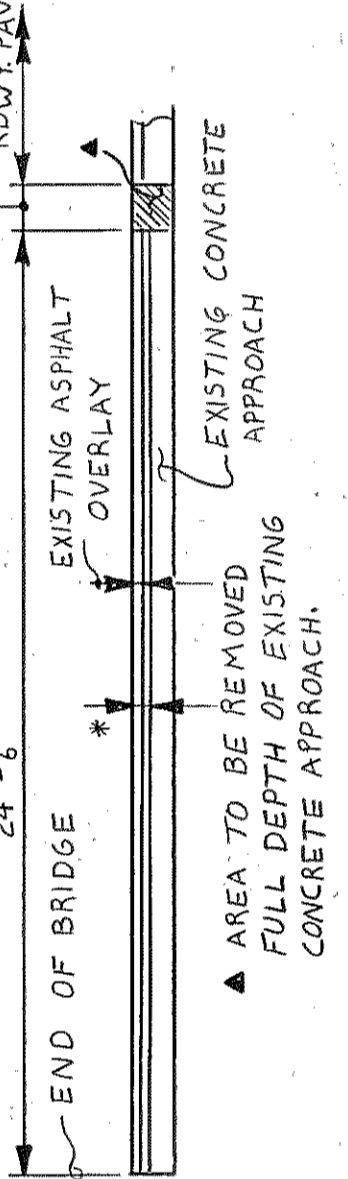
PLAN OF MAIN REINFORCING

* DENOTES: EXISTING ASPHALT OVERLAY AND 1" EXISTING CONCRETE APPROACH TO BE REMOVED.

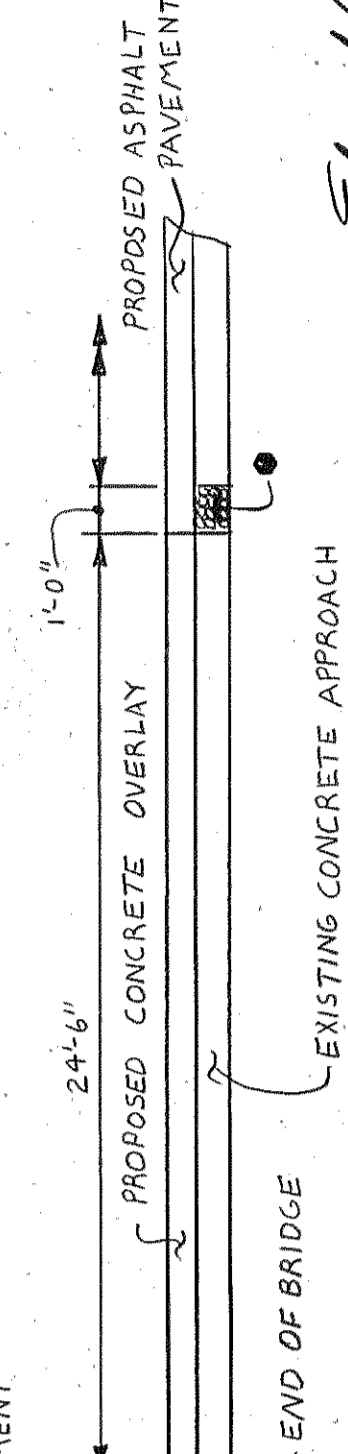
◆ DENOTES: BARS A491E & BARS A492E (TOP SLAB) BARS A492 AND BARS A494 (BOTTOM SLAB) 24 SPA @ 1'-0" = 24'-0"

DESIGNED BY T. MACKIE
 DRAWN BY BRIAN BROWNDACH
 SUPERVISED BY T. MACKIE
 DATE 1-88
 DATE 1-88
 DATE 3-88

SECTION SHOWING CONCRETE APPROACH REMOVAL



SECTION SHOWING PROPOSED CONCRETE APPROACH



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS
 WIDENING OF INTERSTATE 75 (RAMPS J & K)
 OVER SPRING CREEK
 STATION 24+00.74
 HAMILTON COUNTY
 1988

APPROVED
 T. Mackie
 DIRECTOR OF HIGHWAYS

M-202-77

▲ DENOTES: BARS APPLIED (TOP OF SLAB ONLY) 3 SPA @ 1'-0" = 3'-0" TYPICAL FOR NORTH SIDE PAVMT. @ BRIDGE ENDS. BARS TO BE 15'-0"

NOTE: SEE DWG. NO. M-202-74 FOR SECTION VIEWS.

CONST. NO. 33004 - 3132-44

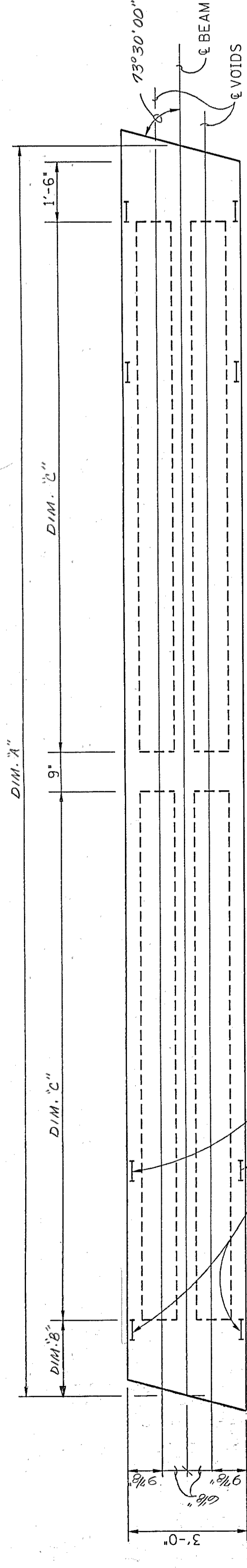
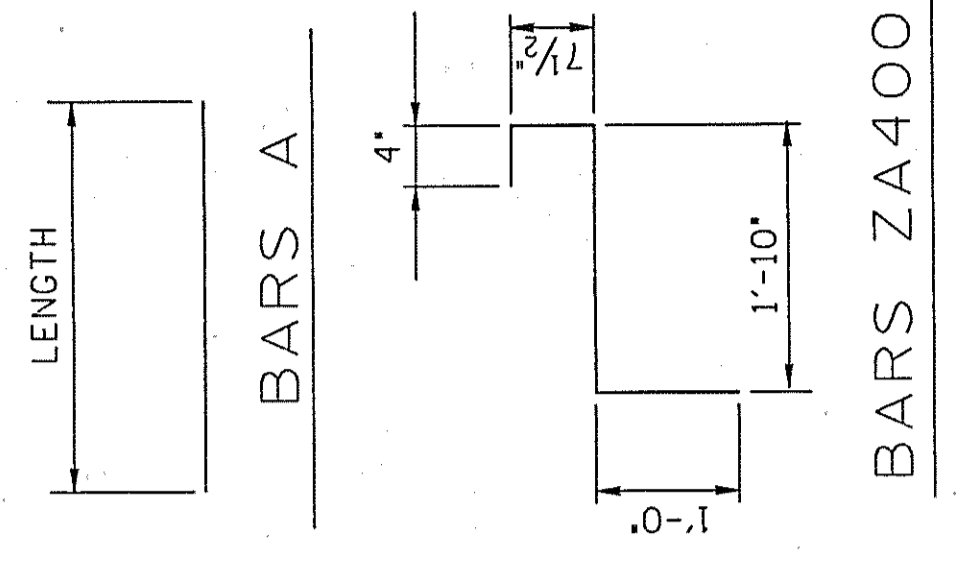
PROJECT NO.	YEAR	SHEET NO.	
12-75-12870	1988		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	7-29-88	TOM	CHANGED QUANTITIES

NOTES:

- THE TOP OF ALL BEAMS TO BE ROUGH FLOATED, AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF THE BEAMS WILL 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 FELT PADS, THE OUTER TWO INCHES OF THE TOP FLANGE MAY BE TROWELED.
- MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
- ALL PRESTRESSING STRANDS TO BE 1/2" Ø ASTM GRADE 270K, 7 WIRE UNCOATED STRESS RELIEVED PRESTRESSING STRANDS OR STRESS RELIEVED LOW RELAXATION PRESTRESSING STRANDS.
- AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C600 AND C400 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE 'C' BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.
- 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.
- THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN (5,000 + PSI) AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST (4,000 + PSI), SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE. IF LOW RELAXATION ALTERNATE IS USED, BEAM CONCRETE STRENGTH SHALL BE AT LEAST 4,000 PSI AND THE RELEASE STRENGTH SHALL BE AT LEAST 5,000 PSI.
- ALL INITIAL FORCE OF 28,936 LBS SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS USING STRESS RELIEVED STRANDS OR 31,000 LBS. ON ALL BEAMS USING LOW RELAXATION STRANDS.
- 1" Ø 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.
- ELASTOMERIC BEARING PADS TO BE 14" X 6" X 3"-1/2" AT THE ABUTMENTS AND 1" X 1'-9" X 3'-1/2" WITH 1/4" Ø HOLES AT THE PIERS.

BILL OF STEEL PER BEAM

BAR SIZE	NO. REQ'D	LENGTH
A500	5	2'-8"
A501	5	1'-1"
C500	5	2'-9"
C501	5	2'-9"
C600	6	2'-9"
H300	3	10
H400	4	4'-7"
ZA400	4	3'-8"



NOTE: LIFTING STRAPS TO BE 3-1/2" Ø 270K PRESTRESSING STRANDS.

PLAN

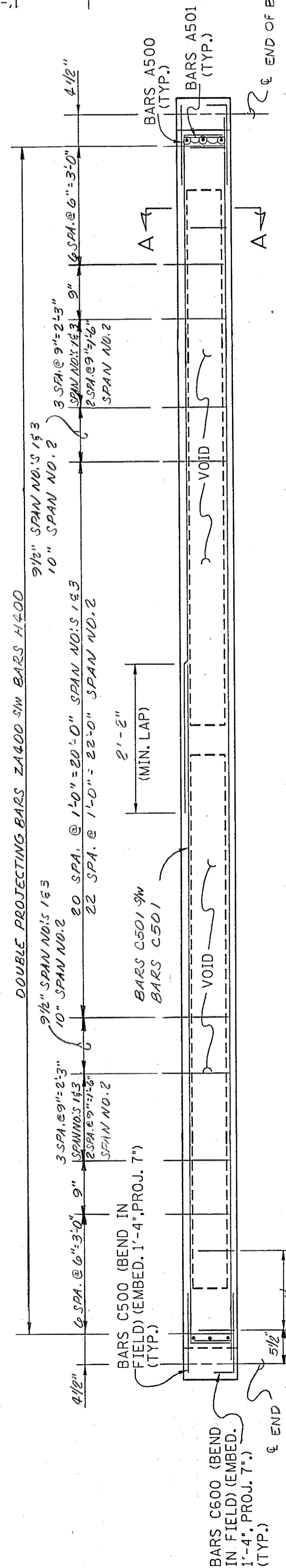
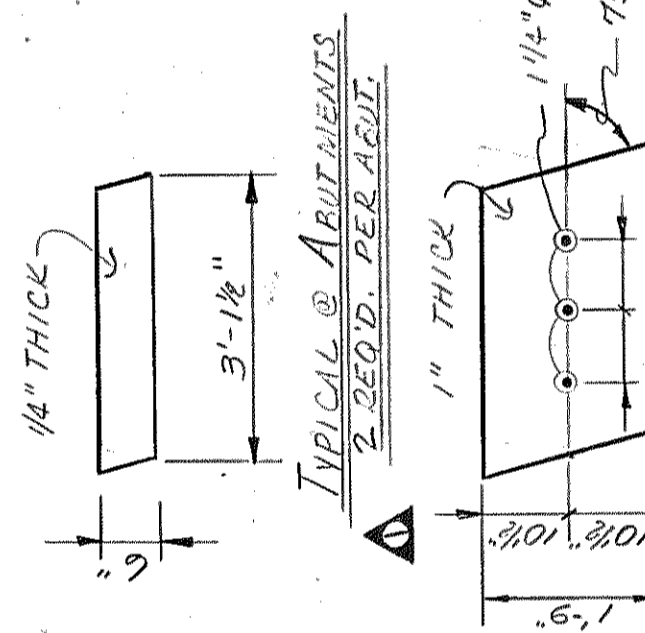


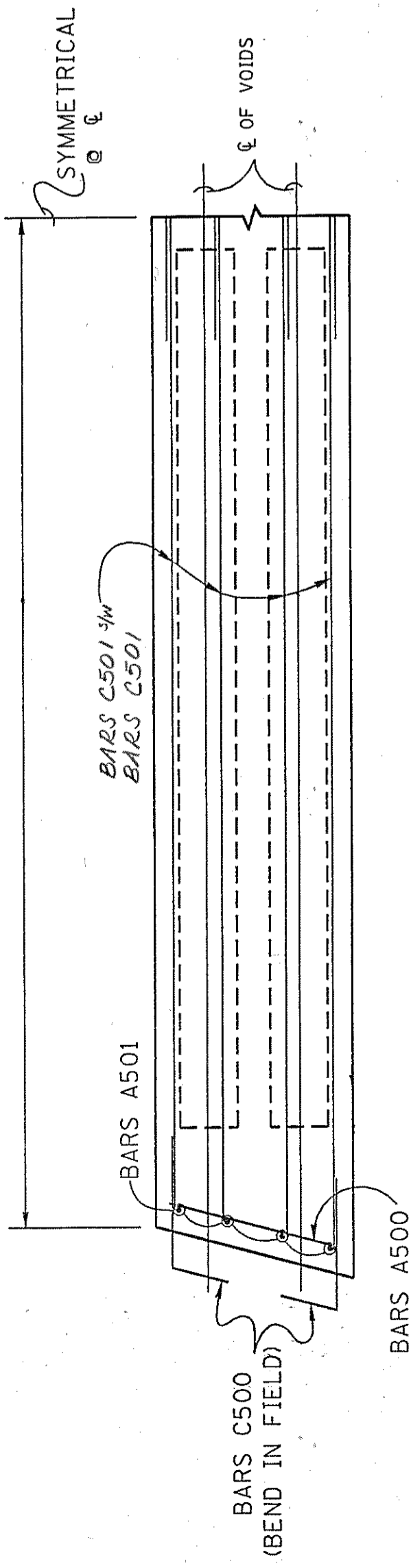
TABLE OF DIMENSIONS

	A	B	C
SPAN NOS 1 & 3	34'-4"	1'-11 3/8"	14'-10 1/8"
SPAN NO. 2	34'-11"	1'-11 3/8"	15'-4 3/8"

ELEVATION

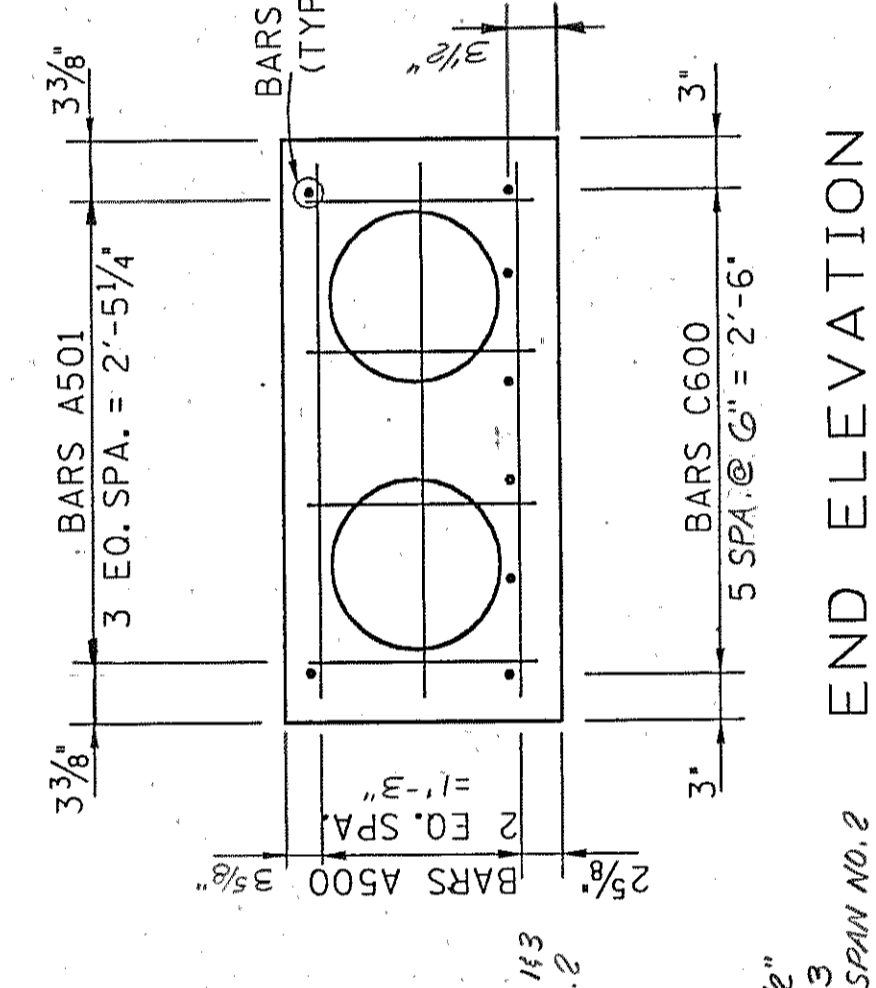


TYPICAL @ ABUTMENTS
2 REQ'D PER ABUT.



HALF PLAN

ELASTOMERIC BEARING PAD DETAILS

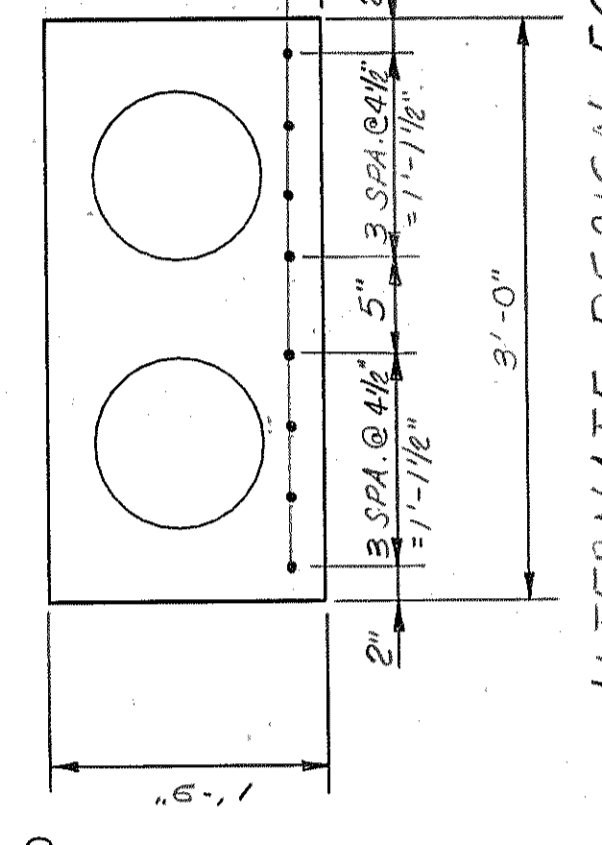


END ELEVATION

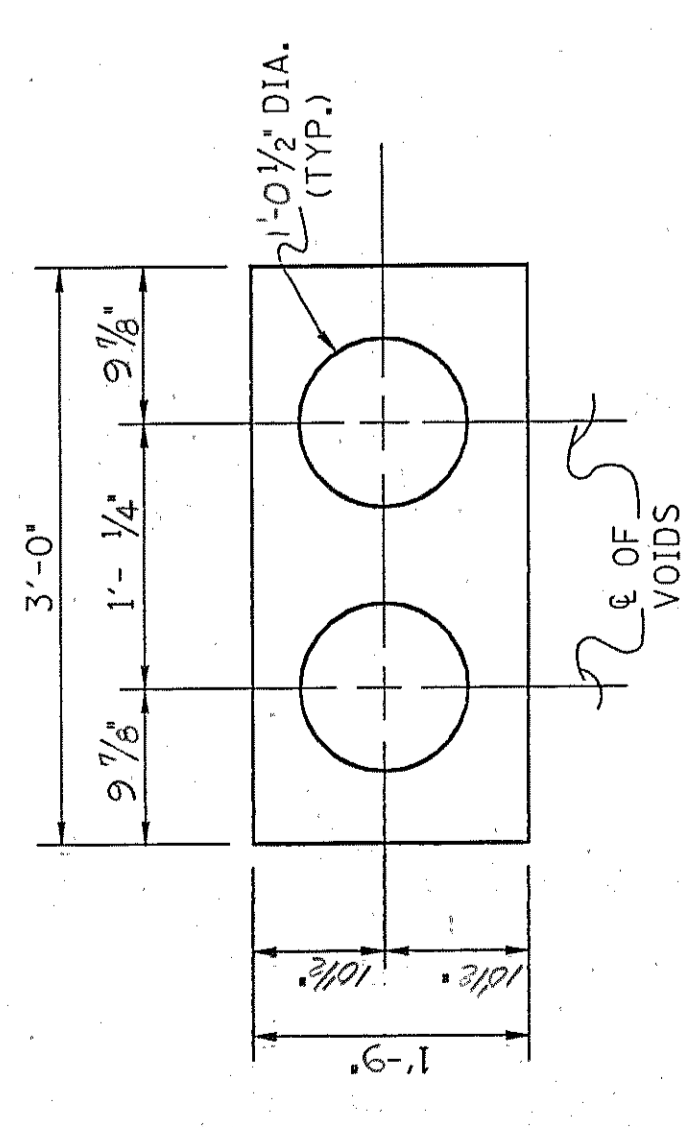
ESTIMATED QUANTITIES - PER BEAM

NO. BEAMS (STRESS-RELIEVED)	PRESTRESSING STRANDS (LOW RELAXATION)	REINFORCING STEEL (LB.)	CLASS 'A' CONCRETE (CY)
2	140	677	4.9
2	140	677	4.9

NOTE: COST OF ELASTOMERIC PADS, ADWEL BARS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.



ALTERNATE DESIGN FOR LOW RELAXATION STRANDS



SECTION SHOWING PROPERTIES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PRESTRESSED BOX BEAM DETAILS
WIDENING OF INTERSTATE 75
(RAMPS J&K) SOUTHBOUND LANE
OVER SPRING CREEK
STATION 24+00.74
HAMILTON COUNTY
1988

DESIGNED BY: T. MACKEY DATE: 12-87
DRAWN BY: C. BEGENTON DATE: 1-88
SUPERVISED BY: J. PRINCE DATE: 1-88
CHECKED BY: T. MACKEY DATE: 2-88

SECTION 'A-A'

● DENOTES: 4" SPA @ 3/16"
= 1'-2" SPA @ 1/16" SPAN NO. 2
▲ DENOTES: 4" SPA @ 1/8"
= 5" SPA @ 1/16" SPAN NO. 2

NOTE: NO BOND BEKIPS ARE REQ'D.

CORRECT

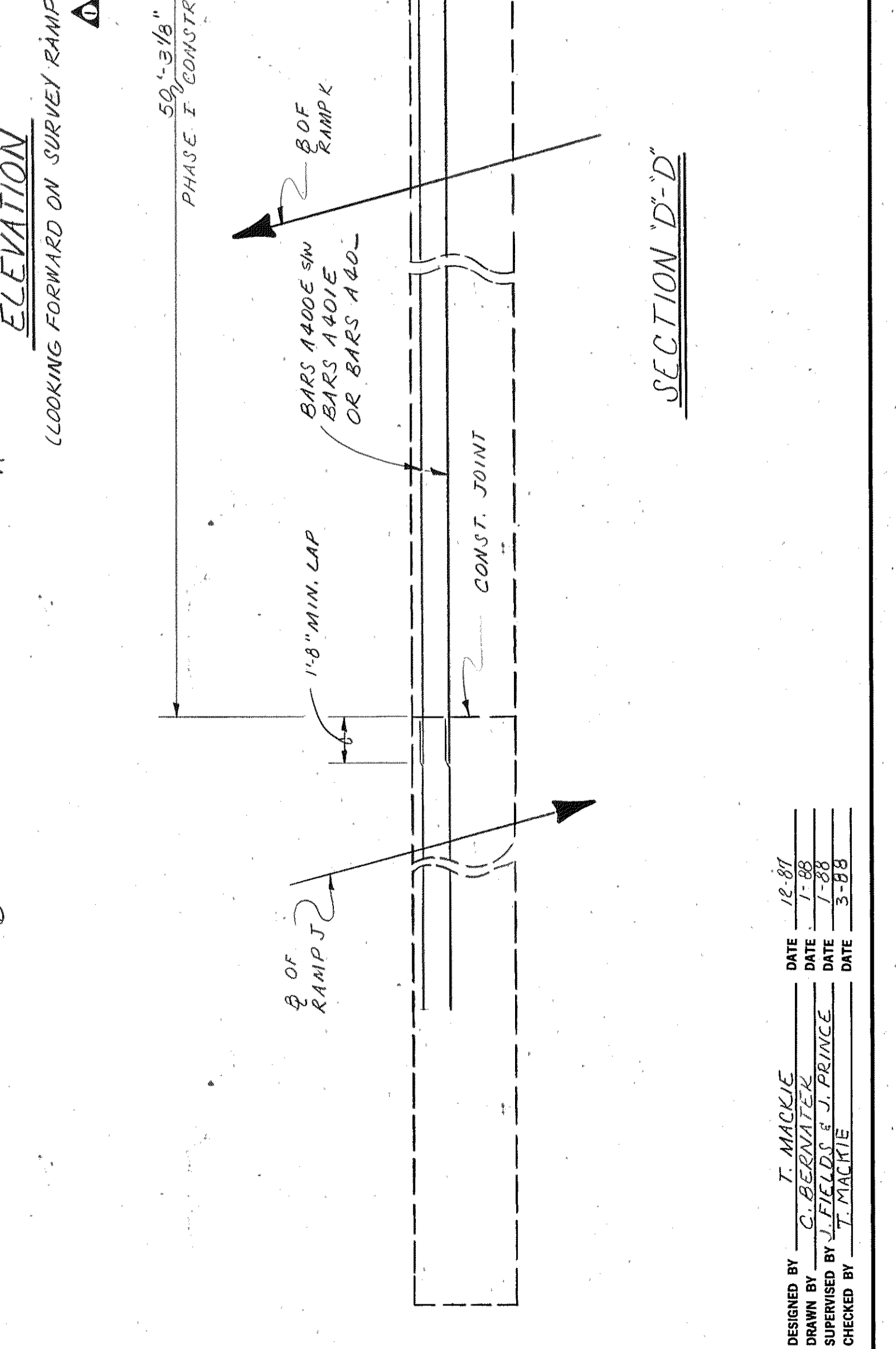
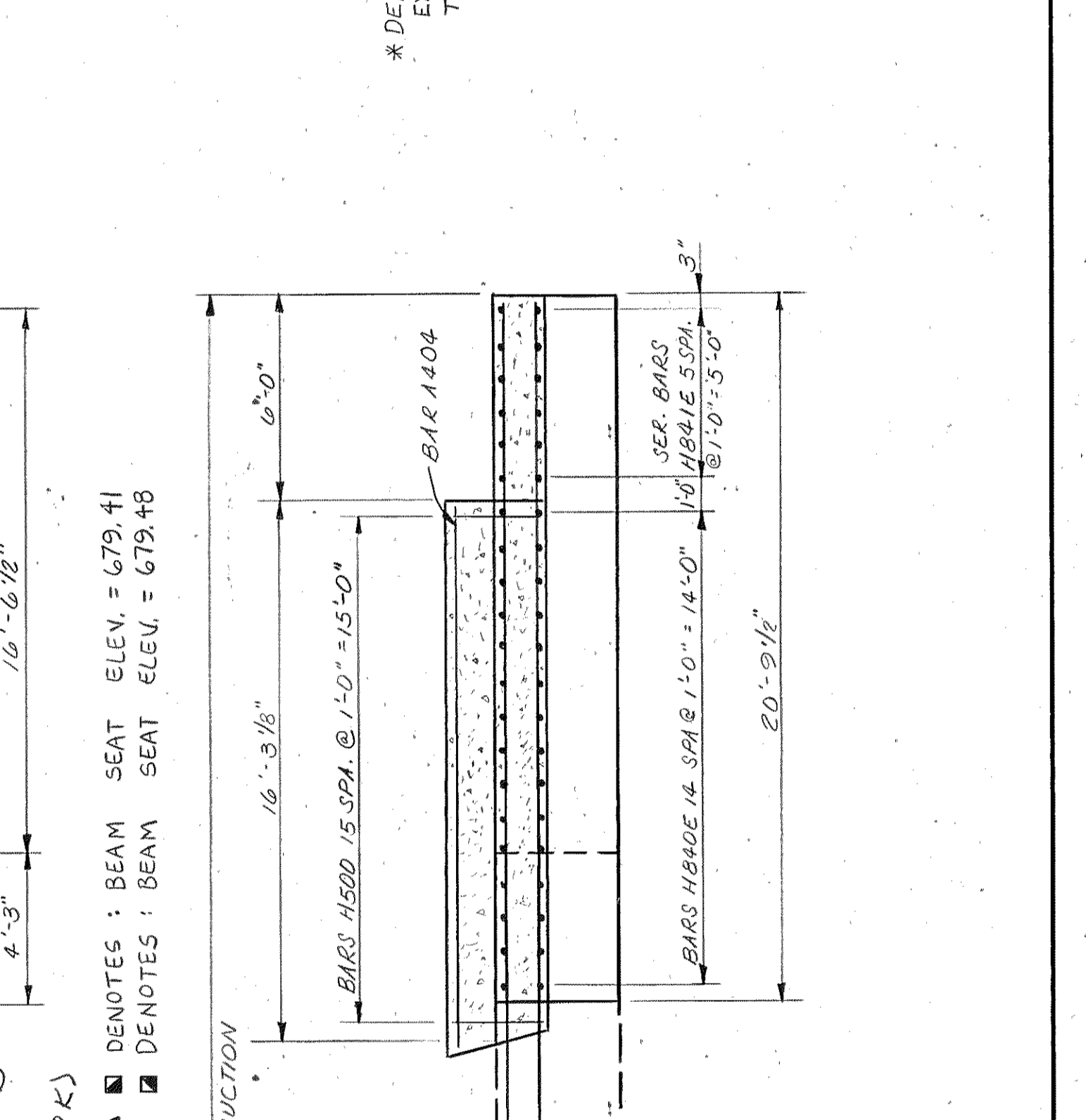
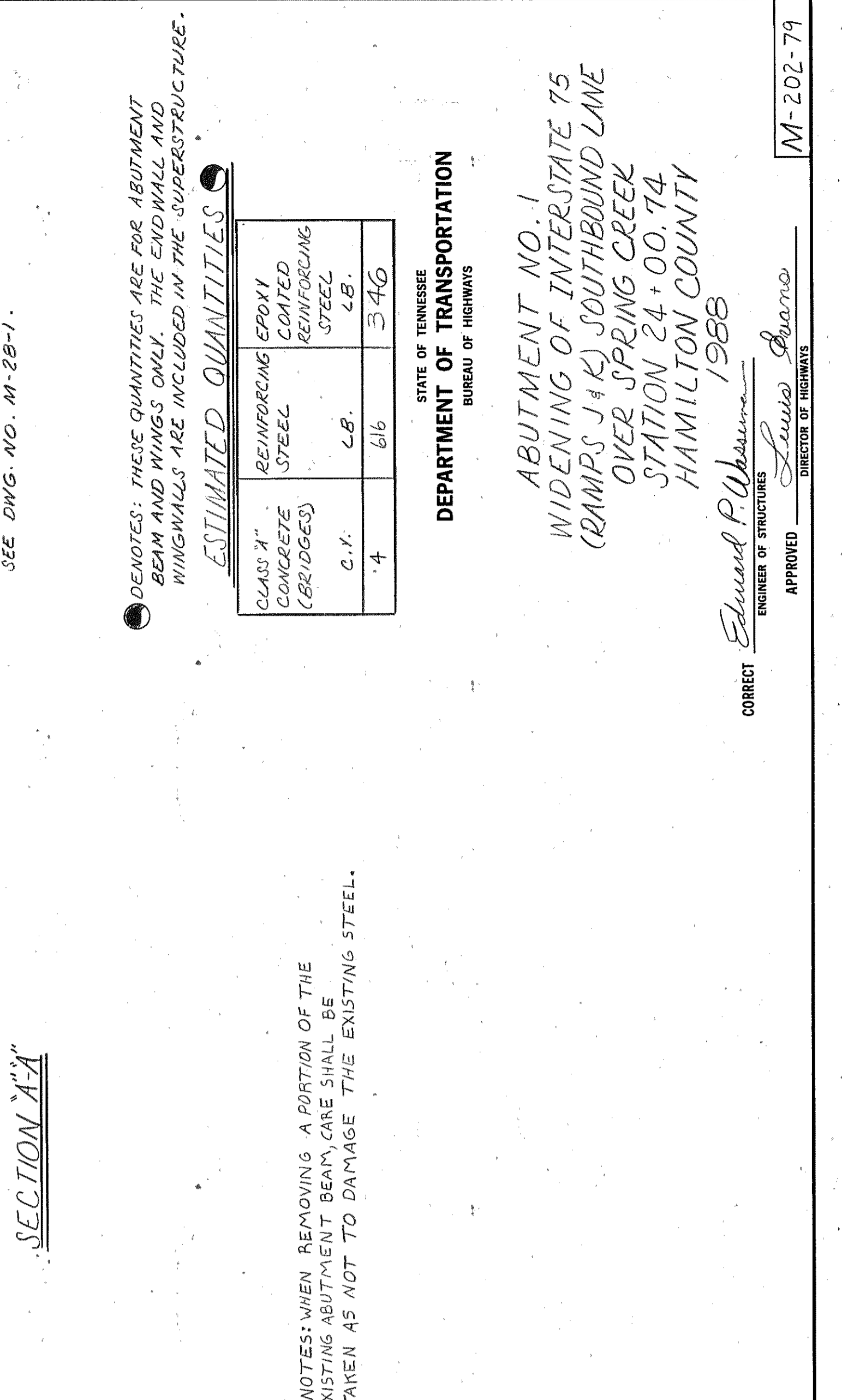
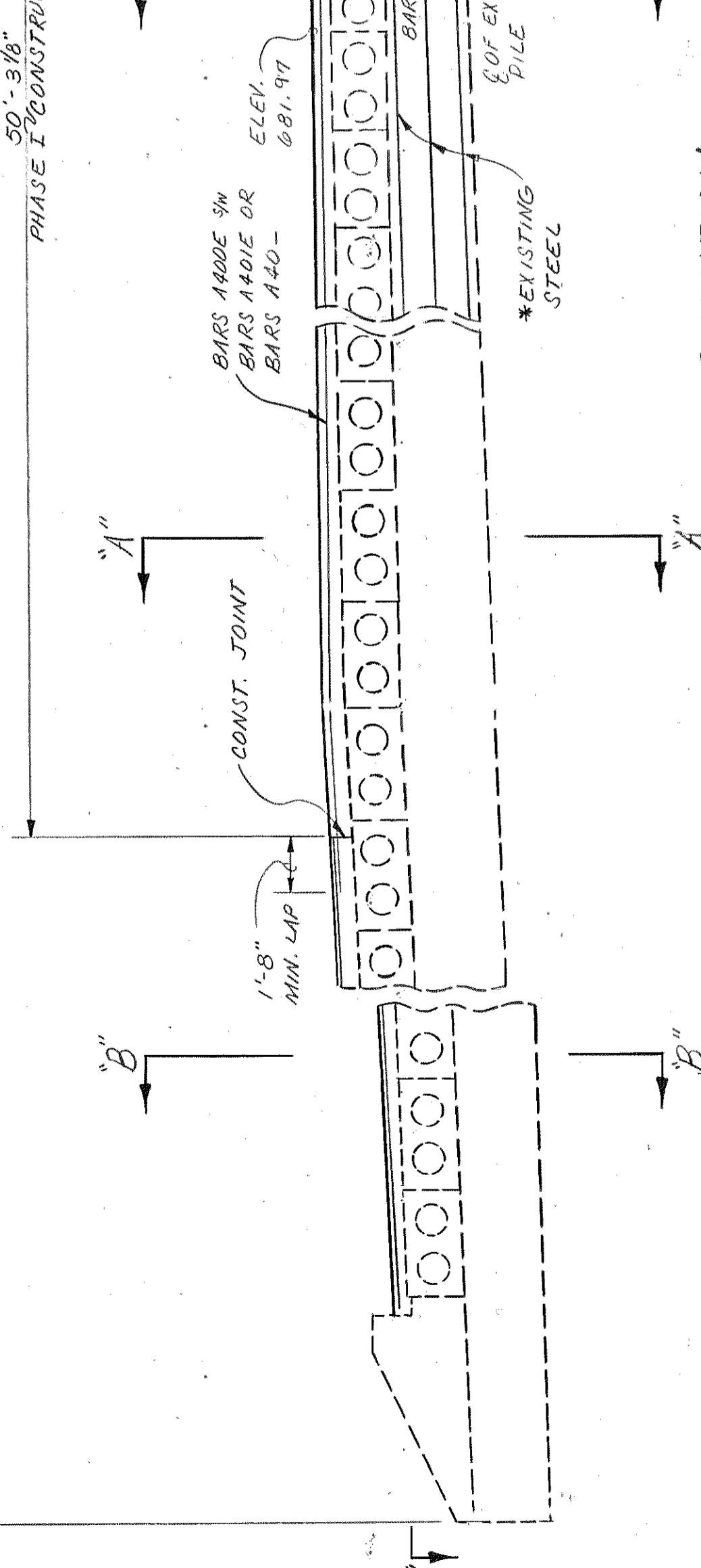
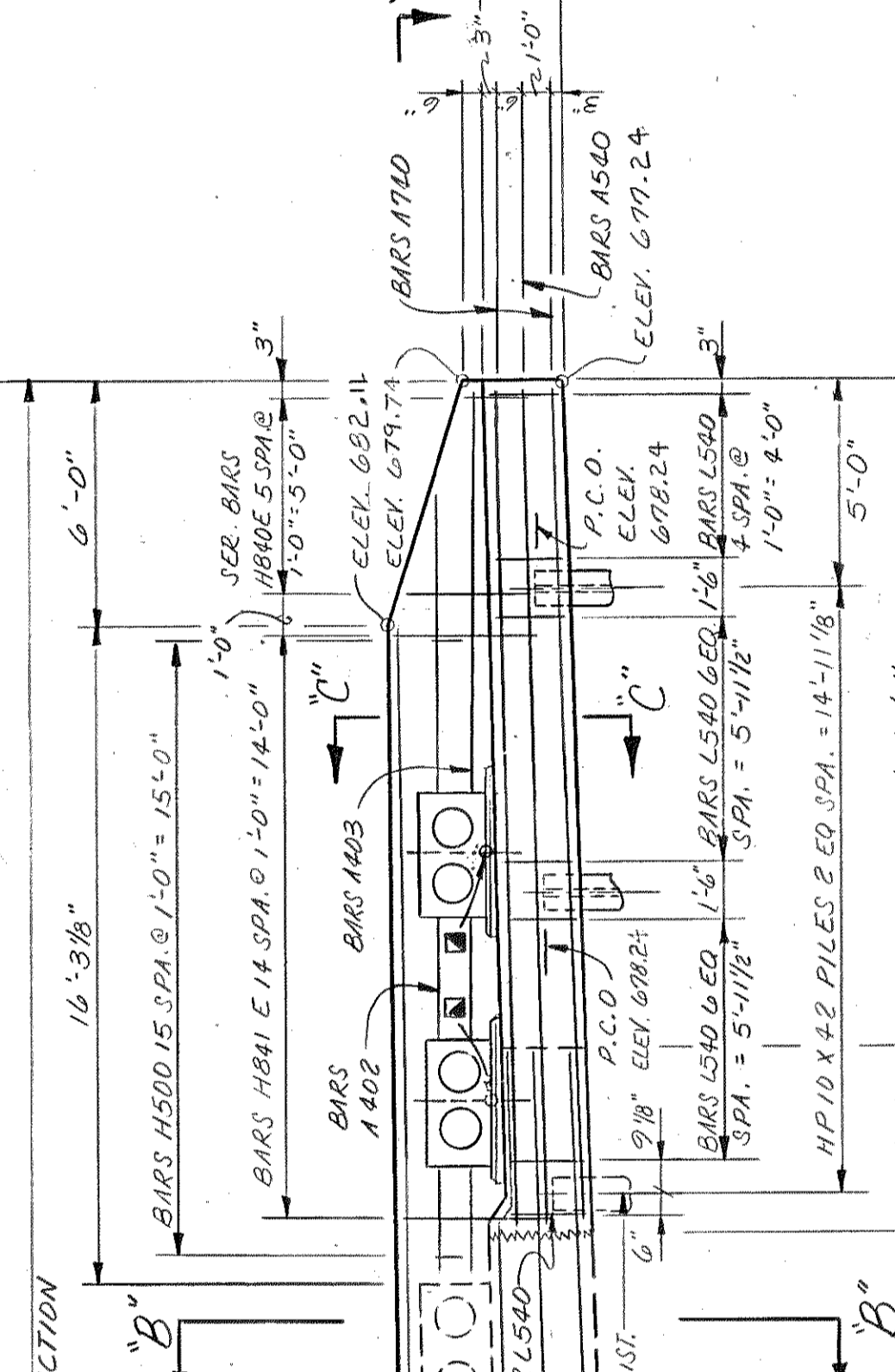
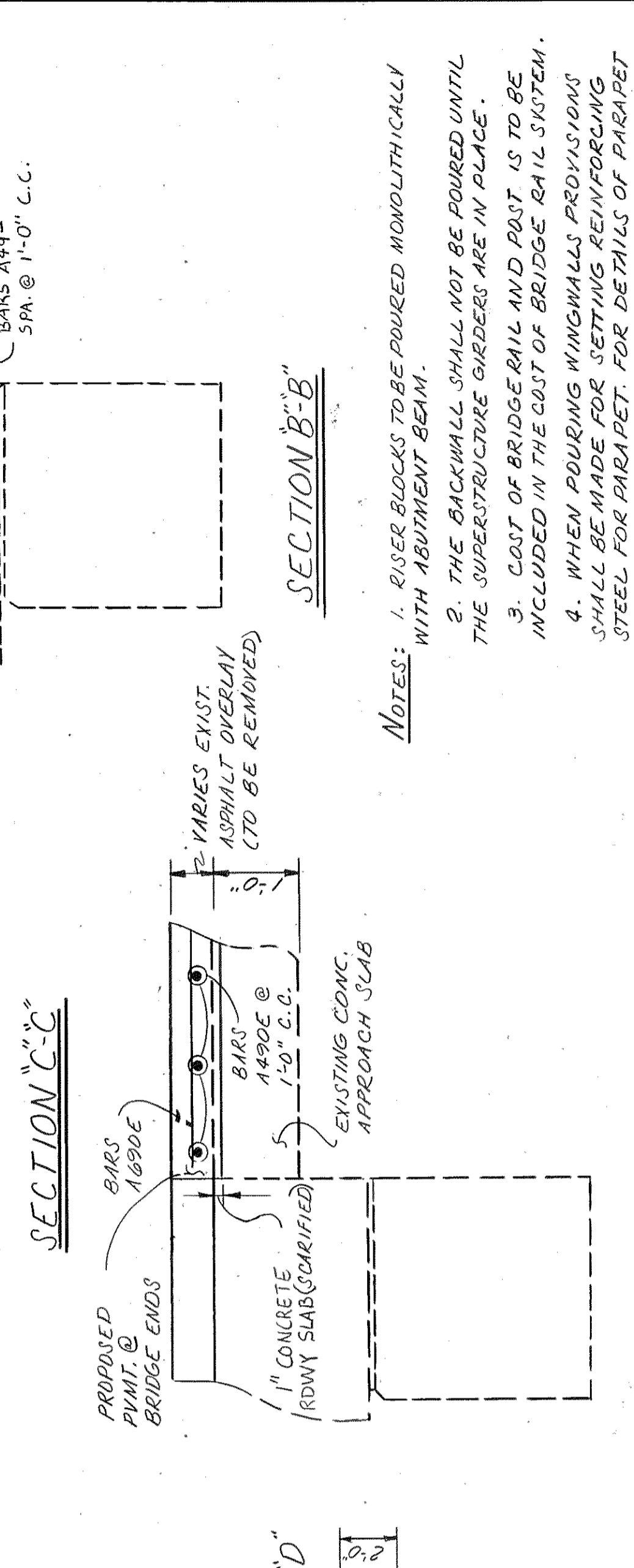
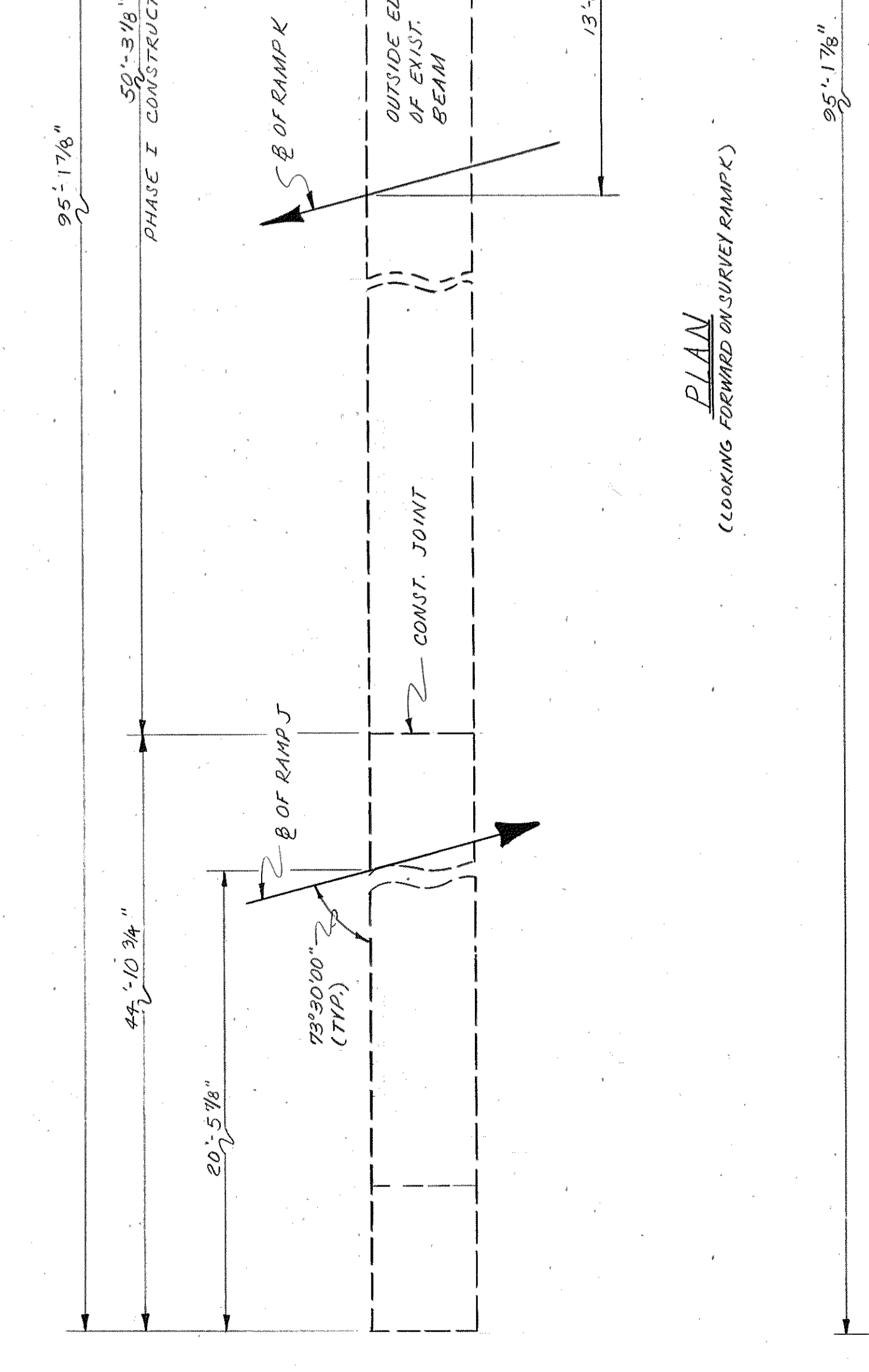
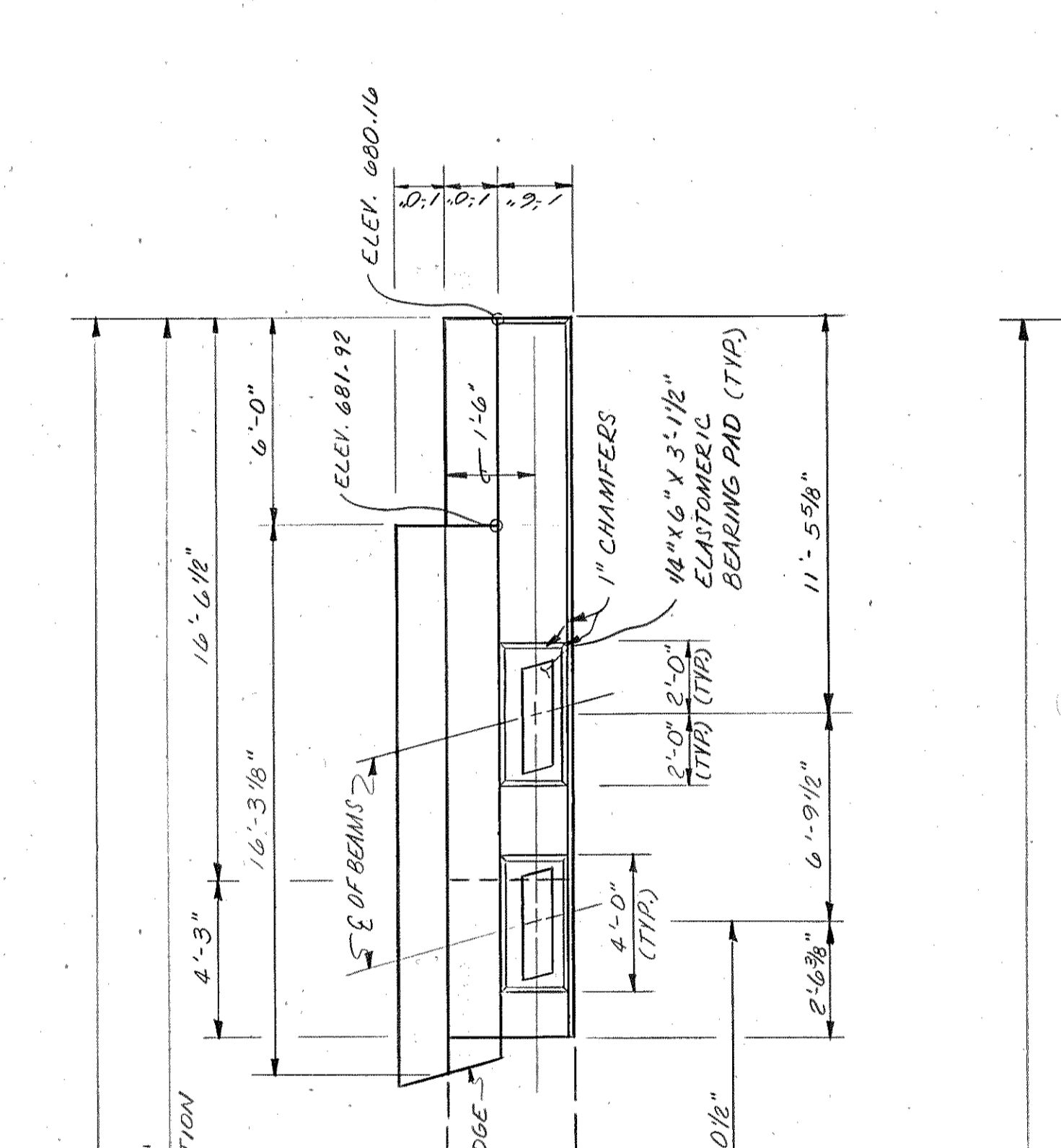
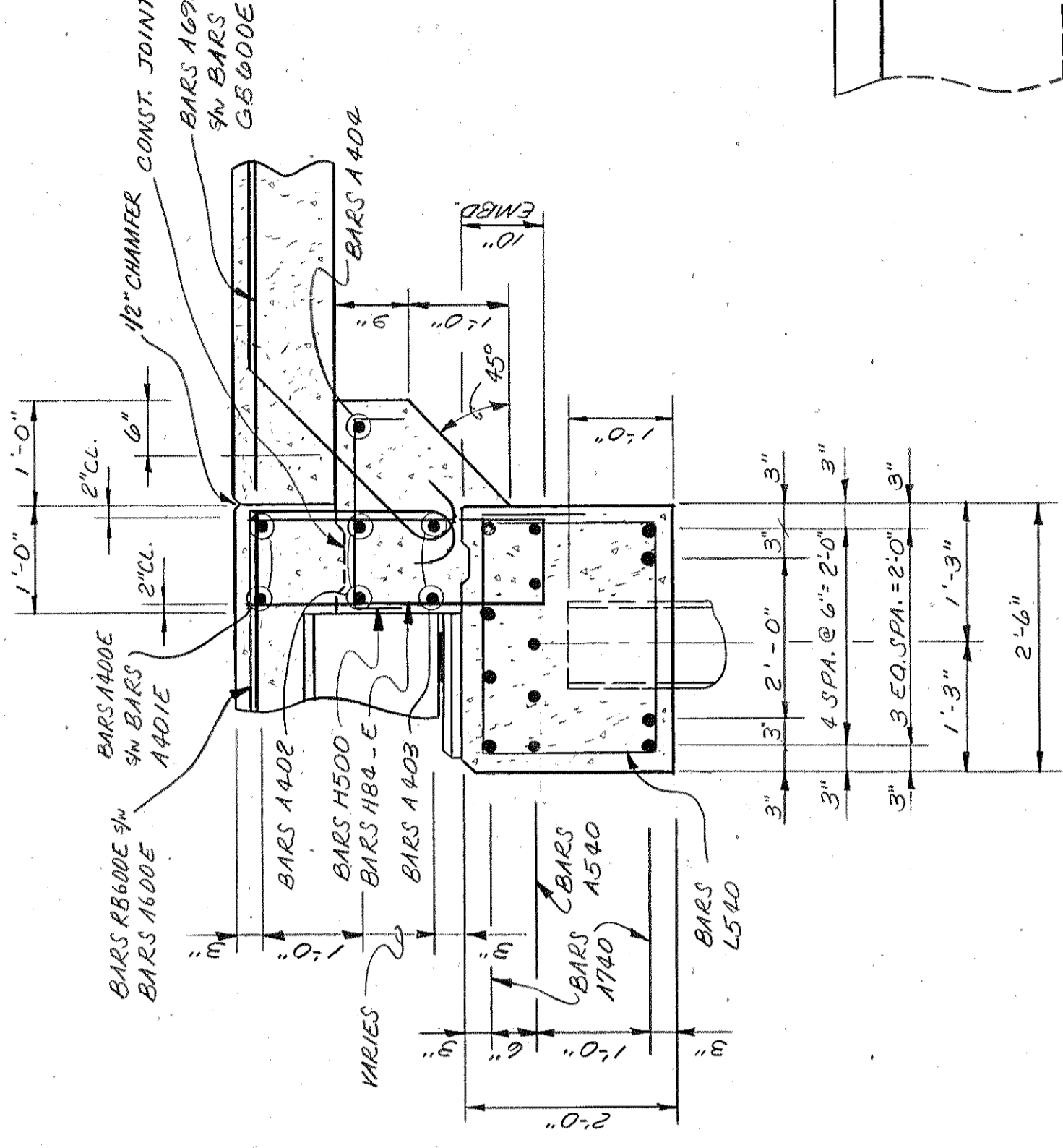
Edward A. Wasserman
ENGINEER OF STRUCTURES
APPROVED

M-202-18

CONST. NO. 33004-3132-44

PROJECT NO. YEAR SHEET NO.
28-75-1 (87) 1988

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	7-29-88	TDM	ADDED BEAM SEAT ELEVATIONS



NOTES: 1. REINFORCING BARS ARE TO BE POURED MONOLITHICALLY WITH ABUTMENT BEAM.
2. THE BACKWALL SHALL NOT BE POURED UNTIL THE SUPERSTRUCTURE GUARDERS ARE IN PLACE.
3. COST OF BRIDGE RAIL AND POST IS TO BE INCLUDED IN THE COST OF BRIDGE RAIL SYSTEM.
4. WHEN POURING WINGWALLS PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. FOR DETAILS OF PARAPET SEE DWG. NO. M-28-1.

NOTES: THESE QUANTITIES ARE FOR ABUTMENT BEAM AND WINGS ONLY. THE ENDWALL AND WINGWALLS ARE INCLUDED IN THE SUPERSTRUCTURE.

ESTIMATED QUANTITIES	
CLASS #	REINFORCING EPOXY COATED REINFORCING STEEL (BRIDGES)
C.Y.	2.8
CLASS #	REINFORCING EPOXY COATED REINFORCING STEEL
C.Y.	3.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENT NO. 1
WIDENING OF INTERSTATE 75
(RAMPS J & K) SOUTHBOUND LANE
OVER SPRING CREEK
STATION 24+00.74
HAMILTON COUNTY
1988

APPROVED: Edward P. Johnson
DIRECTOR OF STRUCTURES

DESIGNED BY: T. MICKLE
DRAWN BY: C. BECKWITH
SUPERVISED BY: J. F. FLEWELL & J. PRINCE
CHECKED BY: T. MACKIE

DATE: 12-87
DATE: 1-88
DATE: 3-88

PLUNING 44-11 61318

M-202-79

* DENOTES: WHEN REMOVING A PORTION OF THE EXISTING ABUTMENT BEAM, CARE SHALL BE TAKEN AS NOT TO DAMAGE THE EXISTING STEEL.

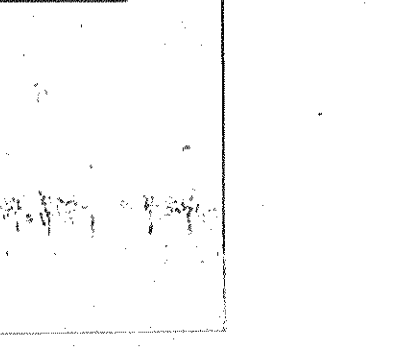
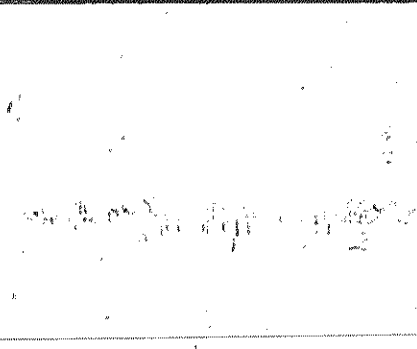
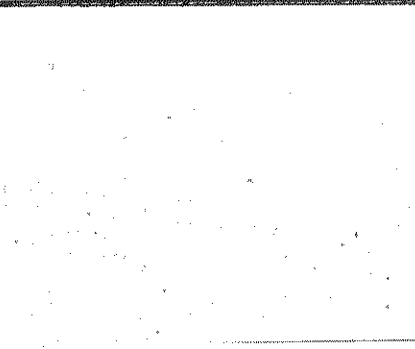
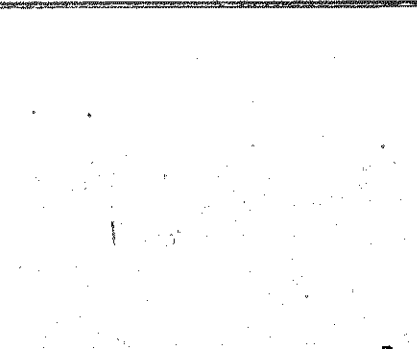
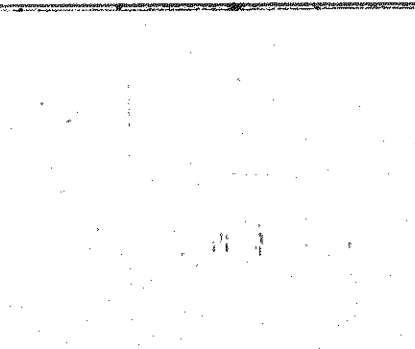
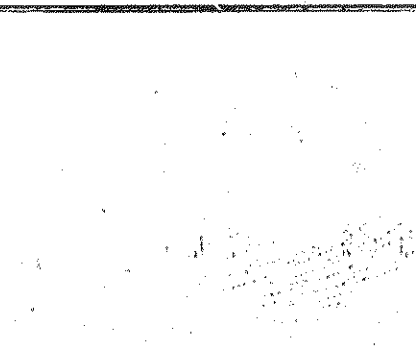
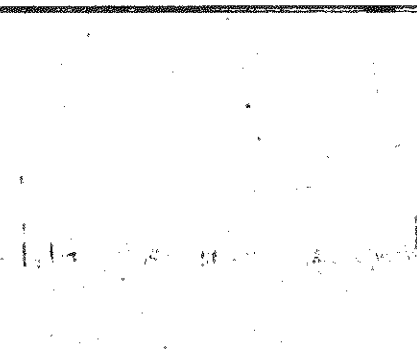
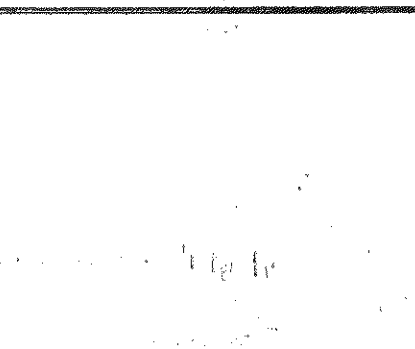
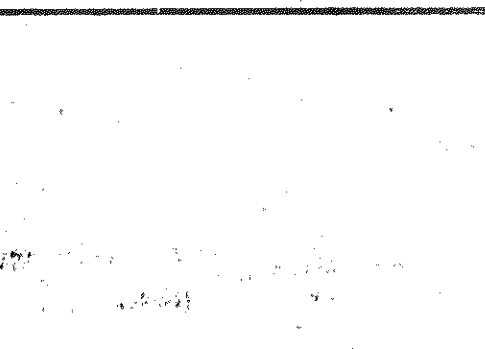
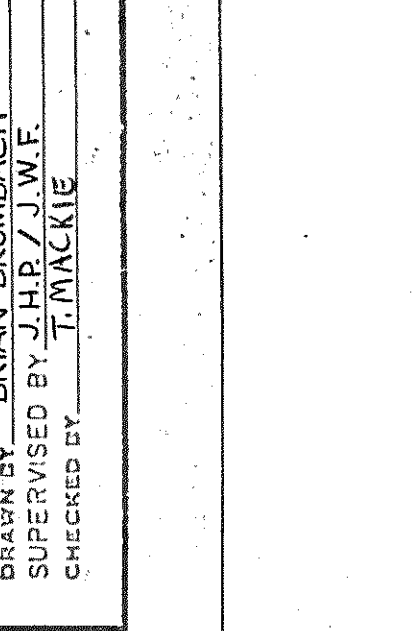
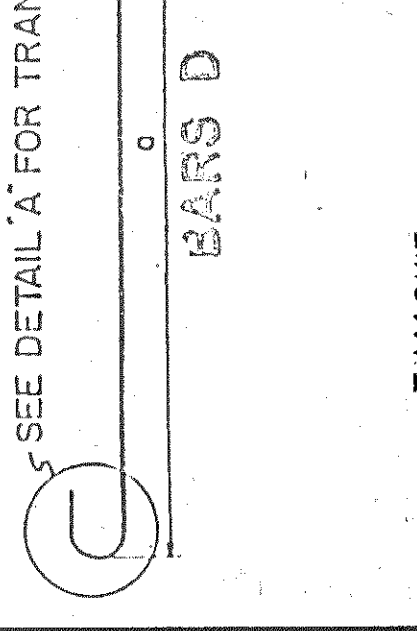
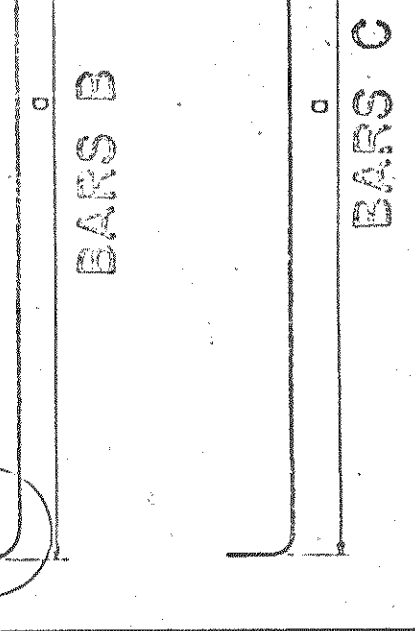
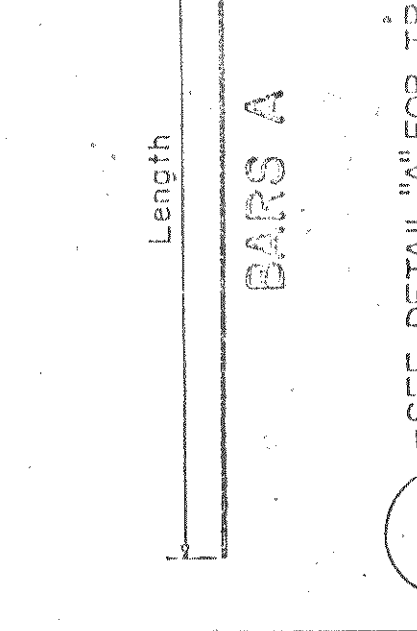
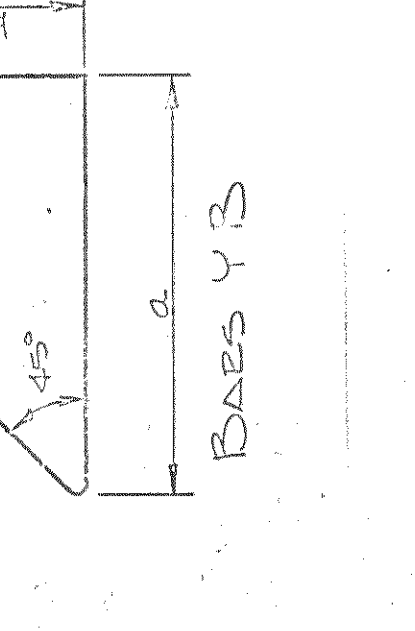
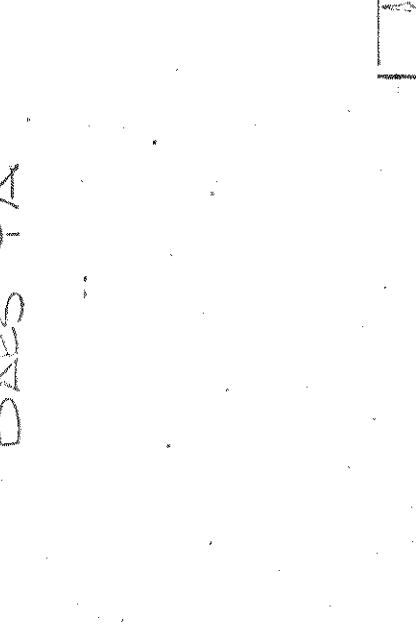
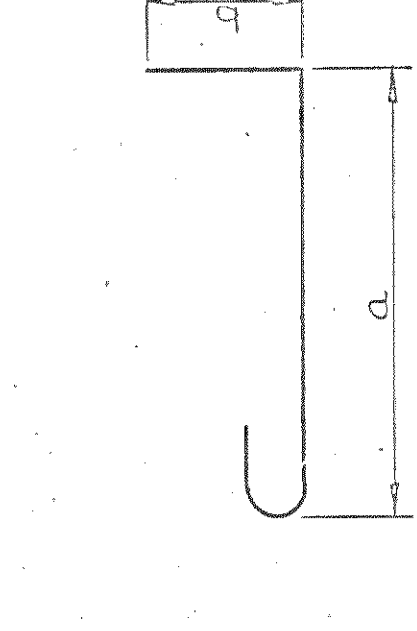
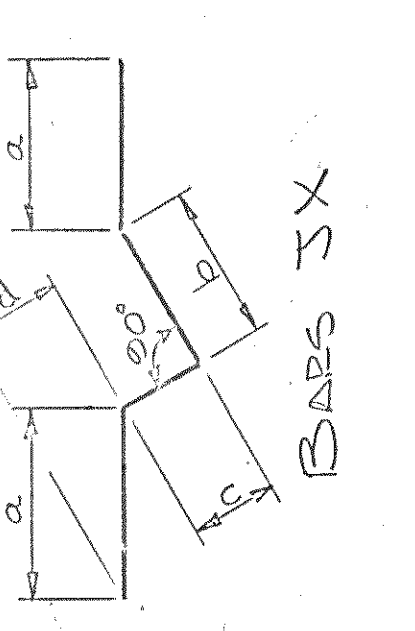
△ DENOTES: BEAM SEAT ELEV. = 679.41
■ DENOTES: BEAM SEAT ELEV. = 679.48

ELEVATION
(LOOKING FORWARD ON SURVEY RAMP K)

SECTION 'D-D'

NO.	DATE	BY	BRIEF DESCRIPTION

SUPERSTRUCTURE (EPOXY COATED)				ABUTMENT No. 1				ABUTMENT No. 2				PIER No. 1 (CONTINUED)				
BAR	LOCATION	NO. RECD	LENGTH	BAR	LOCATION	NO. RECD	LENGTH	BAR	LOCATION	NO. RECD	LENGTH	BAR	LOCATION	NO. RECD	LENGTH	
			a b c d				a b c d				a b c d				a b c d	
A40E	ENDWALL	4	51'-9"	A540	ABUTMENT BEAM	5	20'-2"	A541	ABUTMENT BEAM	5	21'-11"	A952	COLUMN	9	2	603'-2"
A40E	ENDWALL	4	38'-1"	A740	ABUTMENT BEAM	7	20'-2"	A741	ABUTMENT BEAM	7	21'-11"	A954	COLUMN	9	2	22'-3"
A40E	ENDWALL	4	34'-3"	A740	ABUTMENT BEAM	7	20'-2"	A741	ABUTMENT BEAM	7	21'-11"	A1050	CAP	10	4	13'-3"
A500E	SLAB	5	45'-6"	L540	ABUTMENT BEAM	5	8'-8"	L540	ABUTMENT BEAM	5	24'-2"	B1050	CAP	10	4	14'-8"
A501E	SLAB	5	19'-2"													9'-11"
A502E	SLAB	5	36'-6"													10'-6"
A503E	SLAB	5	24'-11"													7'-8"
A600E	SLAB	6	30'-0"													20'-5"
A601E	SLAB	6	24'-0"													181'-4"
A602E	SLAB	6	25'-0"													466'-3"
F500E	SLAB	5	12'-2"													110'-3"
F500E	SLAB	5	14'-9"													504'-7"
S600E	ENDWALL	6	32'-2"													181'-4"
S600E	ENDWALL	6	21'-9"													466'-3"
RB600E	SLAB	6	22'-3"													110'-3"
A402	ENDWALL	4	18'-11"													504'-7"
A403	ENDWALL	4	21'-11"													466'-3"
A404	ROADWAY BRACKET	4	16'-2"													110'-3"
A406	ENDWALL	4	21'-0"													504'-7"
A407	ENDWALL	4	24'-0"													466'-3"
A408	ROADWAY BRACKET	4	17'-9"													110'-3"
A503	DIAPHRAGM	5	11'-9"													504'-7"
A504	DIAPHRAGM	5	2'-0"													466'-3"
H500	ROADWAY BRACKET	5	3'-9"													110'-3"
L400	DIAPHRAGM	4	5'-4"													504'-7"
L400	DIAPHRAGM	4	7'-11"													466'-3"
SUPERSTRUCTURE																
ABUTMENT No. 1 (EPOXY COATED)																
SERIES	ABUTMENT BEAM	8	1	8'	DIM. 'B' VARIES FROM 1'-3" TO 2'-10" IN INC. OF 3/4" (6 BARS)	28'-6"										
H840E	ABUTMENT BEAM	8	1	8'	DIM. 'B' VARIES FROM 1'-3" TO 2'-9" IN INC. OF 3/8" (6 BARS)	28'-0"										
H841E	ABUTMENT BEAM	8	15	8'	2'-11"	6'-6"										
ABUTMENT No. 2 (EPOXY COATED)																
SERIES	ABUTMENT BEAM	8	1	8'	DIM. 'B' VARIES FROM 1'-3" TO 2'-9" IN INC. OF 3/8" (6 BARS)	28'-0"										
H842E	ABUTMENT BEAM	8	1	8'	DIM. 'B' VARIES FROM 1'-3" TO 2'-9" IN INC. OF 3/8" (6 BARS)	28'-0"										
H843E	ABUTMENT BEAM	8	18	8'	2'-9"	6'-2"										
PIER No. 1																
SERIES	CAP	4	2			14'-9"										
A450	CAP	4	2			14'-9"										
A550	CAP	5	8			13'-3"										
A850	PIER	8	70			5'-6"										
A950	CAP & COLUMN	9	17			28'-5"										
ABUT. No. 1 PVMT. @ BRIDGE ENDS																
A492	SLAB	4	25			11'-6"										
A494	SLAB	4	25			24'-0"										
A790	FOOTING & SLAB	7	8			11'-6"										
A791	FOOTING & SLAB	7	8			24'-2"										
A990	SLAB	9	70			24'-2"										
L591	FOOTING	5	42			7'-8"										
ABUT. No. 2 PVMT. @ BRIDGE ENDS																
A492	SLAB	4	25			11'-6"										
A494	SLAB	4	25			24'-0"										
A790	FOOTING & SLAB	7	8			11'-6"										
A791	FOOTING & SLAB	7	8			24'-2"										
A990	SLAB	9	66			24'-2"										
L591	FOOTING	5	42			7'-8"										
PIER No. 1																
SERIES	CAP	4	1	6'-9"	1'-0"	DIM. 'C' VARIES FROM 2'-7/4" TO 3'-2" IN INC. OF 5/16" (23 BARS)										
L452	CAP	4	1	6'-9"	1'-0"	DIM. 'C' VARIES FROM 2'-7/4" TO 3'-2" IN INC. OF 5/16" (23 BARS)										
L451	CAP	4	1	7'-7"	1'-0"	DIM. 'C' VARIES FROM 2'-7/4" TO 3'-2" IN INC. OF 5/16" (23 BARS)										
L451	CAP	4	1	7'-7"	1'-0"	DIM. 'C' VARIES FROM 2'-7/4" TO 3'-2" IN INC. OF 5/16" (23 BARS)										
L452	CAP	4	1	6'-9"	1'-0"	DIM. 'C' VARIES FROM 2'-7/4" TO 3'-2" IN INC. OF 5/16" (23 BARS)										
L456	CAP	4	2	11'-8"	1'-0"	DIM. 'C' VARIES FROM 3'-0" TO 4'-11" IN INC. OF 2/8" (9 BARS)										



SEE DETAIL 'A' FOR TRANSVERSE DECK STEEL.

SEE DETAIL 'A' FOR TRANSVERSE DECK STEEL.

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SEE DETAIL 'A' FOR TRANSVERSE DECK STEEL.

DESIGNED BY T. MACKIE

DRAWN BY BRIAN BRUMBACH

SUPERVISED BY J.H.P. / J.W.F.

CHECKED BY T. MACKIE

DATE 1-88

DATE 2-88

DATE 2-88

DATE 3-88

DATE 3-88

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAYS

BILL OF STEEL

WIDENING OF INTERSTATE 75 (RAMPS J & K)

OVER SPRING CREEK

STATION 24+00.74

HAMILTON COUNTY

1988

CORRECTED BY [Signature]

ENGINEER OF STRUCTURES

APPROVED [Signature]

DIRECTOR OF HIGHWAYS

M-202-82

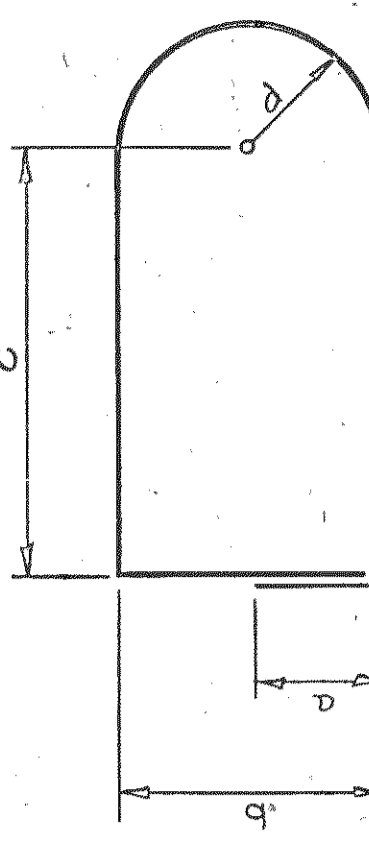
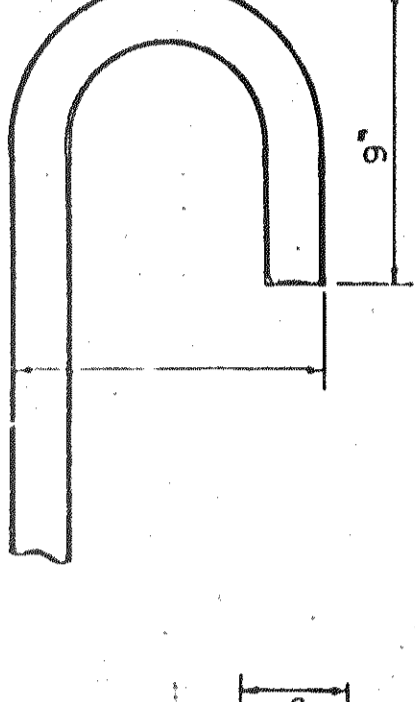
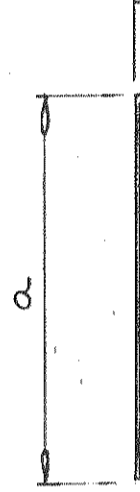
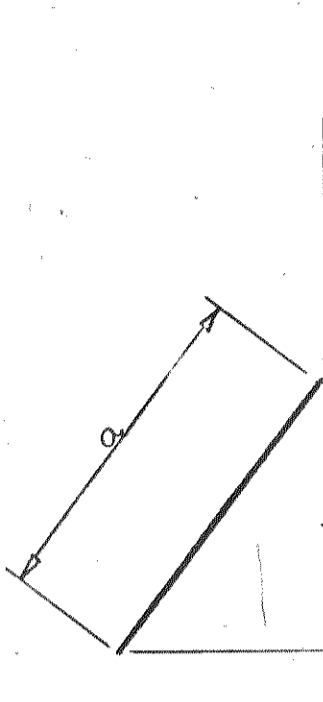
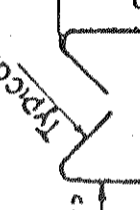
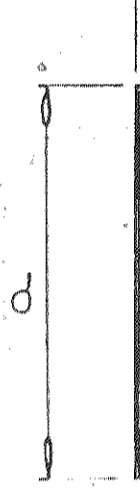
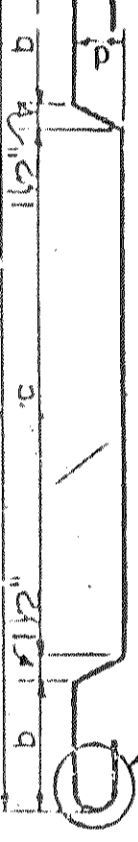
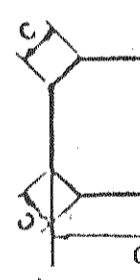
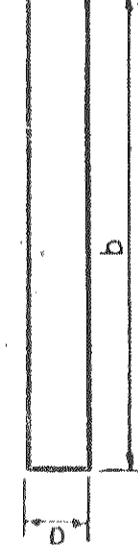
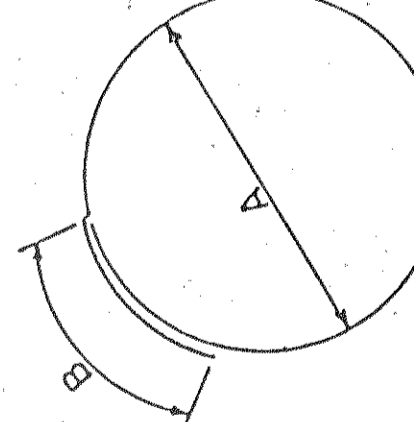
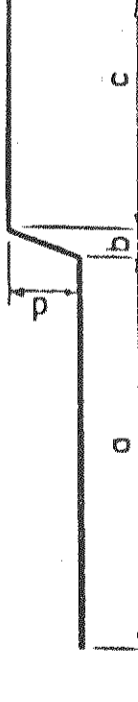
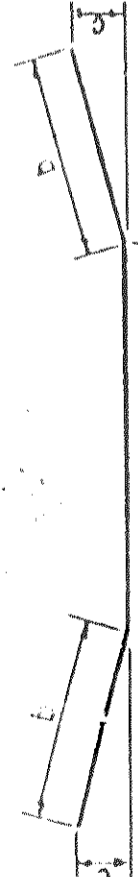
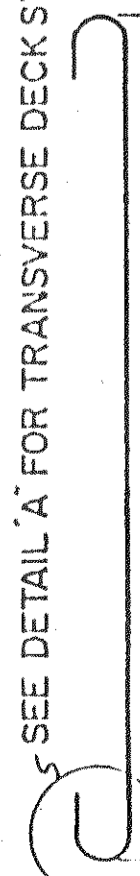
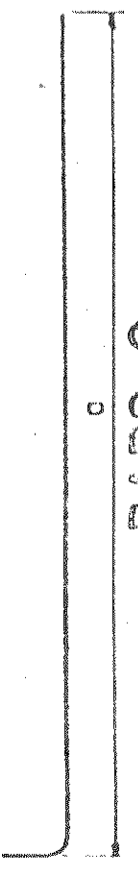
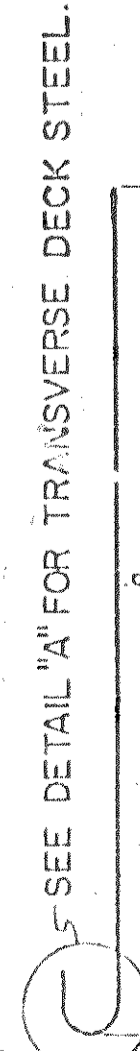
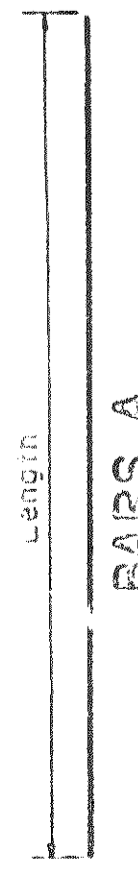
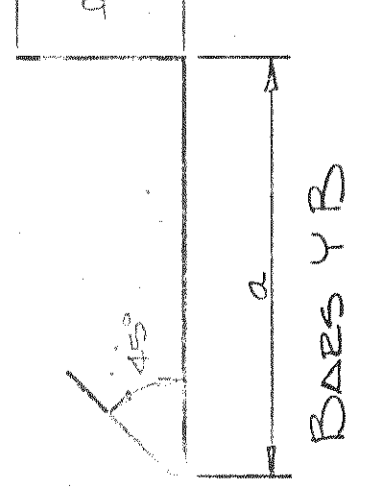
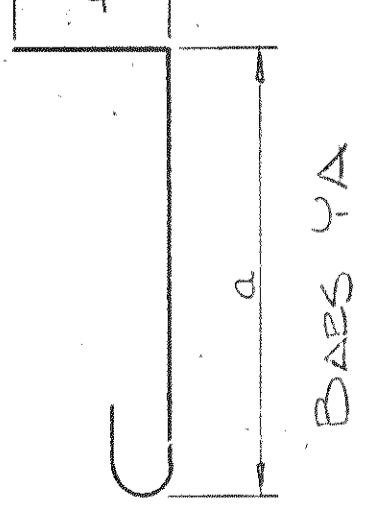
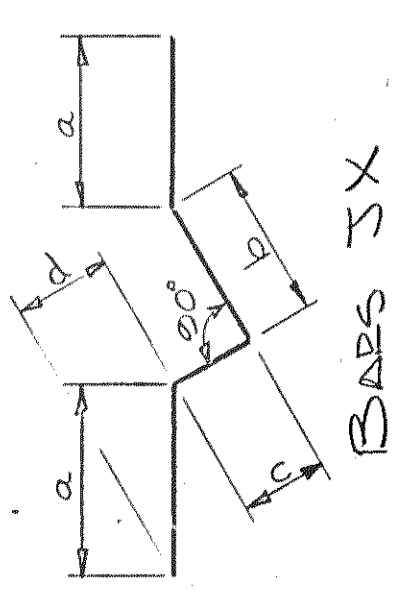
BILL OF STEEL

CONST. NO. 33004-3132-44

FED. ROAD DIST. NO.	STATE	YEAR	REV. NO.	PROJ. YEAR	SHEET NO.	TOTAL SHEETS
3	IR-75-(87)0	1988				

NO.	DATE	BY	BRIEF DESCRIPTION
REVISIONS			

PIER No. 1 (CONTINUED)				PIER No. 2 (CONTINUED)							
BAR	LOCATION	SIZE	NO. RECD	BENDING DIMENSIONS	LENGTH	BAR	LOCATION	SIZE	NO. RECD	BENDING DIMENSIONS	LENGTH
				a b c d						a b c d	
X450	CAP	4	4	1'-0" 2'-5" 1'-8" 1'-2 1/2"	10'-7"	L453	COLUMN	4	1	9'-3" 1'-0" DIM. "C" VARIES FROM 2'-11 1/2" TO 3'-8 1/8" IN INC. OF 5/16" (28 BARS)	731'-10"
X451	COLUMN	4	1	1'-0" 13'-1" DIM. "B" VARIES FROM 2'-7 1/4" TO 3'-2" IN INC. OF 5/16" DIM. "D" VARIES FROM 1'-3 5/8" TO 1'-7" (23 BARS)	335'-5"	L454	COLUMN	4	1	7'-7" 1'-0" DIM. "C" VARIES FROM 2'-11 1/2" TO 3'-8 1/8" IN INC. OF 5/16" (28 BARS)	638'-5"
PIER No. 2											
A451	COLUMN	4	2		15'-6"	L455	COLUMN	4	1	6'-9" 1'-0" DIM. "C" VARIES FROM 2'-11 1/2" TO 3'-8 1/8" IN INC. OF 5/16" (28 BARS)	591'-10"
A551	CAP	5	8		14'-1"	L456	CAP	4	1	1'-8" 1'-0" DIM. "C" VARIES FROM 3'-0" TO 4'-11" IN INC. OF 2 7/8" (9 BARS)	110'-3"
A650	PIER	8	70		5'-6"	X450	CAP	4	4	1'-0" 2'-5" 1'-8" 1'-2 1/2"	10'-7"
A951	CAP & COLUMN	9	17		33'-5"	X451	COLUMN	4	1	1'-0" 3'-7" DIM. "B" VARIES FROM 2'-11 1/2" TO 3'-8 1/8" IN INC. OF 5/16" DIM. "D" VARIES FROM 1'-3 5/8" TO 1'-10" (28 BARS)	467'-3"
A953	COLUMN	9	2	BARS VARY FROM 26'-8" TO 30'-2" IN INC. OF 1 3/4" (25 BARS)	710'-5"						
A955	COLUMN	9	2		26'-8"						
A1051	CAP	10	4		14'-1"						
B1051	CAP	10	4		15'-6"						
C950	COLUMN & FOOTING	9	41		9'-11"						
CD1050	CAP	10	4	7'-0" 3'-6" 3'-3"	10'-6"						
D750	FOOTING	7	25	6'-0"	7'-8"						
D751	FOOTING	7	9	19'-9"	21'-5"						
H450	COLUMN	4	1	DIM. "C" VARIES FROM 2'-11 1/2" TO 3'-8 1/8" IN INC. OF 5/16" (28 BARS)	232'-11"						



REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	O6

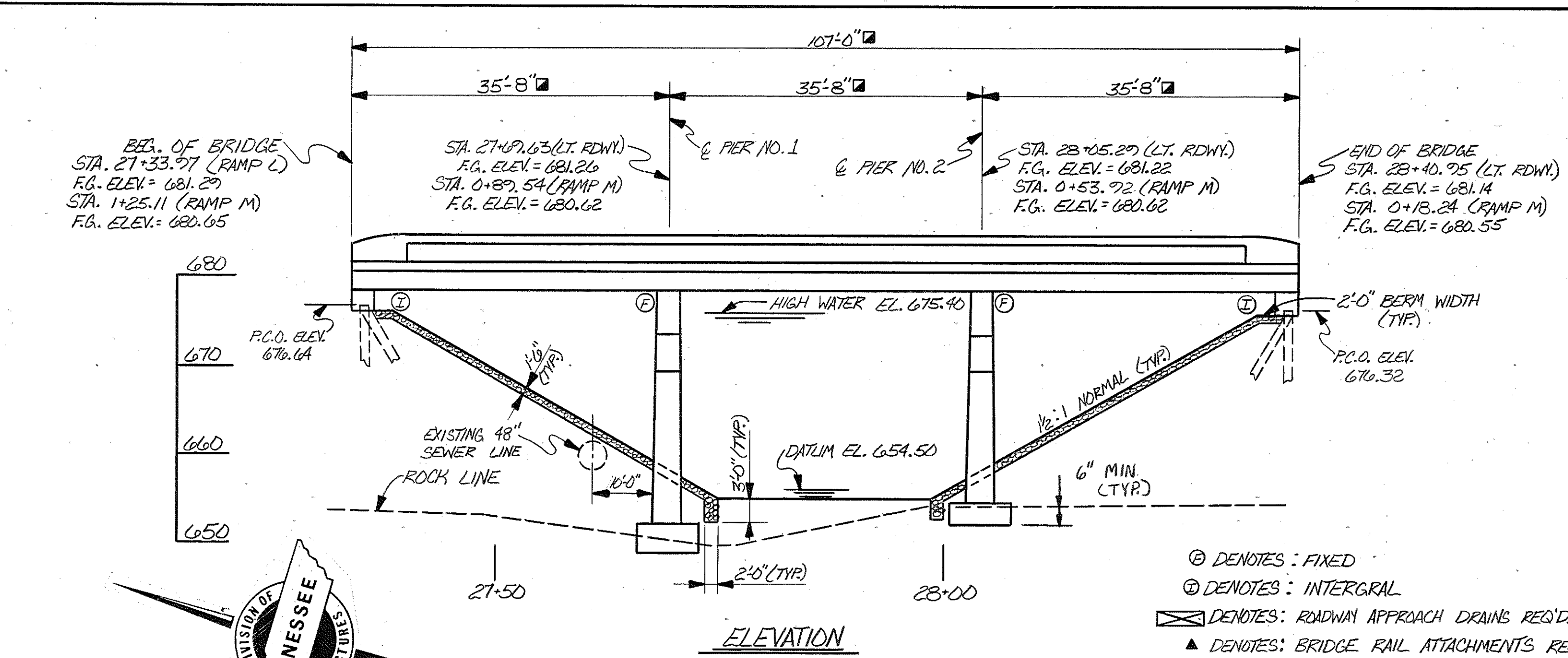
NOTE: Dimensions shown on this sheet are in feet and inches. Standard C.P.S.I. Heat Details Shall Apply, Except As Noted.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
BILL OF STEEL
WIDENING OF INTERSTATE 75 (RAMPS J & K)
OVER SPRING CREEK
STATION 24+00.74
HAMILTON COUNTY
1988

DESIGNED BY: T. MACKIE
DRAWN BY: BRIAN BROWNBACH
SUPERVISED BY: J. H. WALKER
CHECKED BY: J. H. WALKER
DATE: 1-88
DATE: 3-88
DATE: 3-88

M-202-82A

CONST. NO. 3304-3132-44			
PROJECT NO.	YEAR	SHEET NO.	
IR-75-1(87)0	1988		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	4-28-88	TDM	LATEST REVISION DATES
2	5-20-88	J.H.P.	ADDED S.P. NO. 615
3	7-29-88	TDM	LATEST REVISION DATES



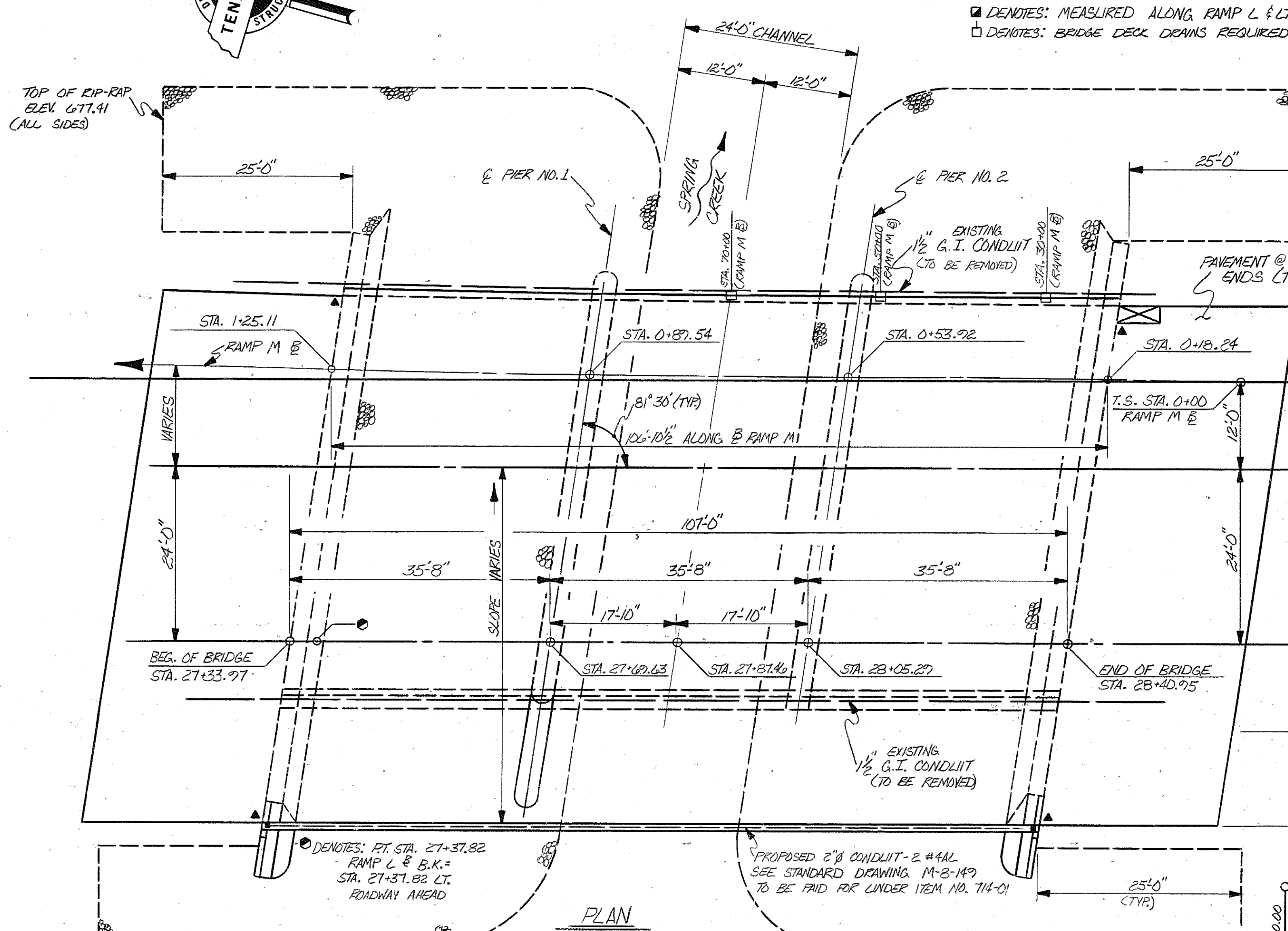
HYDRAULIC DATA

PROPOSED STRUCTURE:
 DRAINAGE AREA: 20 SQ. MILES
 MAX. HIGHWATER - 50 YR. FLOOD = 675.40
 HIGHWATER EL. - MARCH 1951 = 673.40
 WATERWAY OPENING: 1200 SQ. FT. TO EL. 675.40
 DESIGN V: 8.5 F.P.S. THRU STRUCTURE
 DEPTH OF FLOW: 16.30 FT.
 CHANNEL SLOPE: S=0.2%

EXISTING STRUCTURE UPSTREAM
 TYPE: 2 SIMPLE SPANS
 SPAN: 60' ROLLED BEAM WITH CONCRETE DECK
 DISTANCE: APPROXIMATELY 1000 FT (LINDER SPRING CREEK ROAD)

NOTE: EXCAVATION FOR APPROACH PAVEMENT IS TO BE PAID FOR LINDER ROADWAY ITEM NO. 203-01.

LIST OF DRAWINGS	DWG. NO.	LAST REV. DATE
LAYOUT	M-202-83	5-20-88
GENERAL NOTES & ESTIMATED QUANTITIES	M-202-84	7-29-88
SUPERSTRUCTURE	M-202-85	7-29-88
SUPERSTRUCTURE DETAILS	M-202-86	7-29-88
PRESTRESSED BOX BEAM DETAILS	M-202-87	7-29-88
ABUTMENT NO. 1	M-202-88	7-29-88
ABUTMENT NO. 2	M-202-89	7-29-88
PIERS NO. 1 & 2	M-202-90	7-29-88
BILL OF STEEL	M-202-91	
BILL OF STEEL	M-202-91A	
FOR DETAILS OF EXISTING BRIDGE, SEE DWGS. H-2-48 THROUGH H-2-51.		
BRIDGE RAILING CONCRETE PARAPET	M-2-8-1	2-8-88
STANDARD PILE DETAILS	M-174-150	



DESCRIPTION OF WIDENING

SUPERSTRUCTURE: REMOVAL OF EXISTING CURBS; EXISTING ASPHALT BITUMINOUS SURFACE TO BE SCARIFIED; ADDITION OF FOUR AND ONE-HALF INCHES OF CONCRETE DECK SLAB.

SUBSTRUCTURE: REMOVAL OF EXISTING ABUTMENT WINGS BELOW FINISHED GRADE.

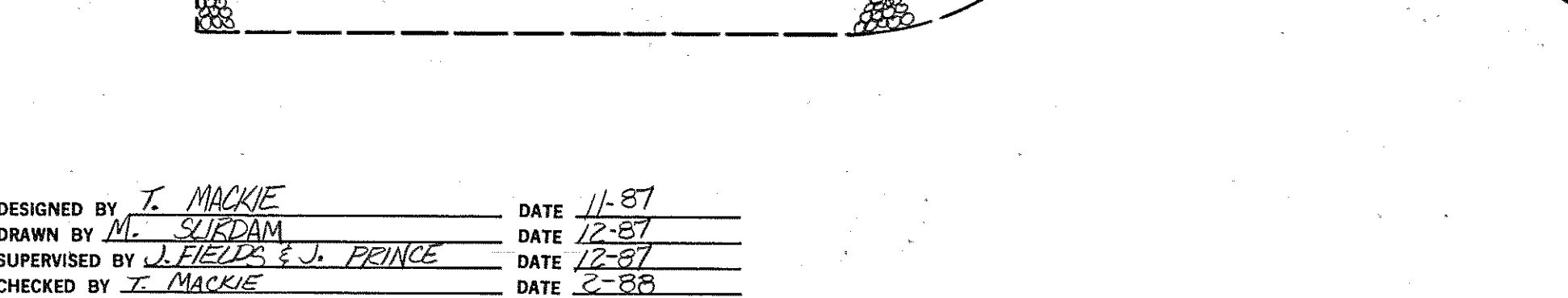
LIST OF STANDARD DRAWINGS	DWG. NO.	LAST REV. DATE
REINFORCED BAR SUPPORT DETAILS FOR CONCRETE SLABS	K-80-14	08-27-76
MISC. ABUTMENT & DRAINAGE DETAILS	K-85-150	06-25-87
REINFORCED CONCRETE PAVEMENT @ BRIDGE ENDS	K-86-144	07-17-81
STANDARD DRAWING LIGHT STANDARD SUPPORT DETAILS	M-8-149	11-20-75
STD. PRECAST, PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA	M-164-24	01-11-88
STD. PRECAST, PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	M-164-25	01-11-88

SPECIAL PROV. NO.	LAST REV. DATE	LIST OF SPECIAL PROVISIONS
105A	7-21-87	REG. APPROVAL OF SHOP DRAWINGS
604	11-06-87	REG. CONCRETE STRUCTURES
604C	1-26-88	REG. STRUCTURAL CONCRETE
604P	11-11-85	REG. PRECAST PRESTRESSED BRIDGE DECK PANELS
709	5-04-87	REG. MACHINED RIP-RAP
604R	09-08-87	REG. RIDEABILITY OF BRIDGE DECK AND ROADWAY APPROACHES
907A	03-25-85	REG. EPOXY COATED REINFORCING STEEL
615	05-18-88	REG. PRECAST PRESTRESSED CONCRETE BRIDGE MEMBERS

VELOCITY = 70 M.P.H.
 ADT (1988) = 62,000
 ADT (2018) = 106,400
 ROADWAY WIDTH VARIES FROM 72'-0" TO 75'-0 3/4" WITH M-28-1 RAILING

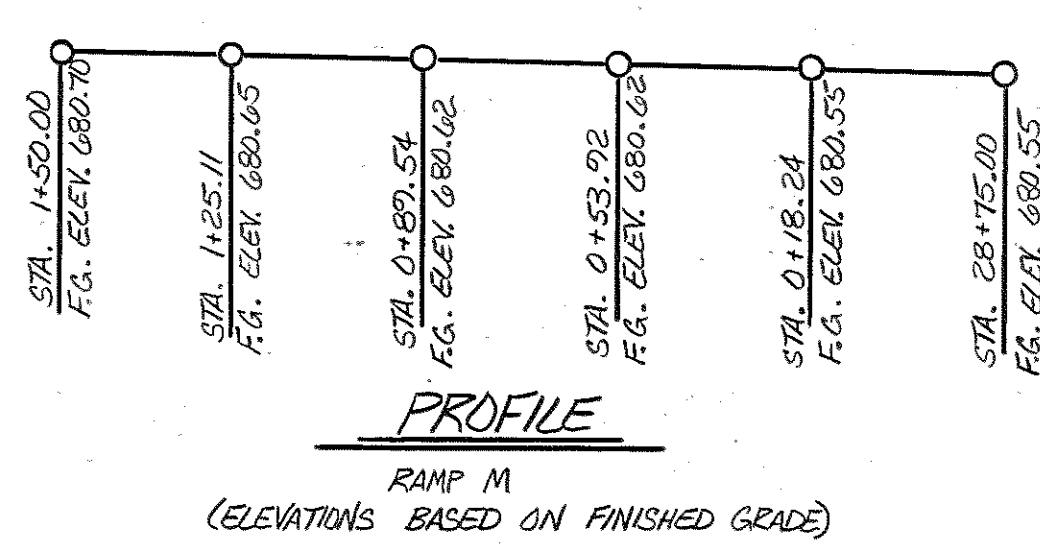
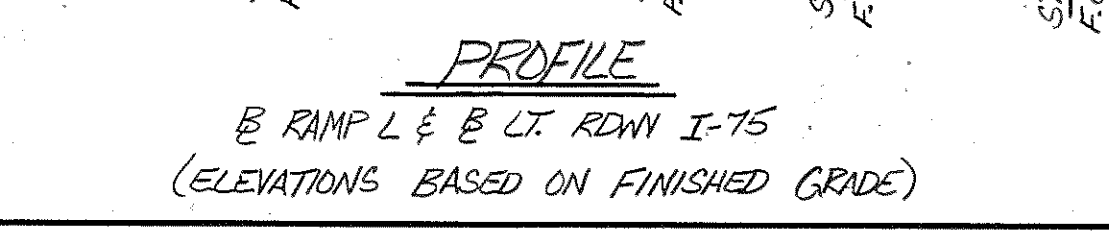
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS

LAYOUT
 WIDENING OF I-75
 (RAMPS L & M)
 OVER SPRING CREEK
 STATION 27+87.46
 HAMILTON COUNTY
 1988



CURVE DATA RAMP M E

P.I. STA. 10+95.46	L ₁ 1095.46'
Δ 84°-35'	L ₂ 300'
P.C. 1000	X ₁ 279.33'
L ₃ 1211.6'	X ₂ 14.98'
C _s 8°-35'-40"	



DESIGNED BY J. MACKIE DATE 11-87
 DRAWN BY M. SLEDAM DATE 12-87
 SUPERVISED BY J. FIELDS & J. PRINCE DATE 12-87
 CHECKED BY J. MACKIE DATE 2-88

CORRECT Edward P. Wosserman
 ENGINEER OF STRUCTURES
 APPROVED Lewis P. Priddy
 DIRECTOR OF HIGHWAYS

PORTABLE MEDIAN BARRIER - 157 L.F. CLASS "A" GRADING "D" = 60 C.Y.

CONST. NO. 33004-3132-44

PROJECT NO.	YEAR	SHEET NO.
IR-75-1(87)0	1988	

NO.	DATE	BY	BRIEF DESCRIPTION
1	11-28-88	TDM	CHANGED NOTE
2	12-29-88	TDM	CHANGED QUANTITIES

GENERAL NOTES

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

BRIDGE RAIL SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWING M-28-1.

SHOP DRAWINGS: SEE SPECIAL PROVISION NO. 105A.

RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS A-2 IN ACCORDANCE SPECIAL PROVISION 709 AND SHALL BE PAID FOR UNDER ITEM 709-05.07.

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 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO MOUNTAIN GRAY. FEDERAL SPECIFICATION NO. 36440. FEDERAL COLOR STANDARD NO. 595A. AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. PAYMENT FOR THE APPLIED TEXTURE FINISH SHALL BE UNDER ITEM 604-04.01.

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

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

NOTE: THE CONTRACTOR SHALL CHECK THE LOCATION OF ALL EXISTING SUBSTRUCTURES AND VERIFY SPAN LENGTHS BEFORE FABRICATING GIRDERS.

SPECIAL NOTE FOR UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION 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 INSTALLATION 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 SOLID 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 TO ACCOMMODATE REMAIN IN PLACE DECK FORMS.
- 3 - NO SHEET PILES OR BEARING PILES MAY BE DRIVEN FROM THE EXISTING OR PROPOSED STRUCTURE.
- 4 - TWELVE FOOT TRAFFIC LANES SHALL BE MAINTAINED AT ALL TIMES.

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

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 PLANS FOOTING IS TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR FOUNDATION PREPARATION.

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. WHEN THE WIDTH OF THE OVERHANG EXCEEDS THE DEPTH OF THE EXTERIOR GIRDER, DETAILS AND DESIGN CALCULATIONS FOR THE CANTILEVER SUPPORT SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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 UNLESS OTHERWISE NOTED ON DETAIL DRAWINGS. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, REINFORCEMENT SHALL BE PLACED WITHIN A TOLERANCE OF + 1/2". THE SUFFIX E, FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SPECIAL PROVISION 907A.

SPECIAL NOTE-FOOTING FOR PIERS: AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6" DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR PIER COLUMNS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

NOTE: THE CONTRACTOR SHALL CHECK THE LOCATION OF ALL EXISTING SUBSTRUCTURES AND VERIFY SPAN LENGTHS BEFORE FABRICATING GIRDERS.

SPECIAL NOTE FOR UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION 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 INSTALLATION 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 SOLID 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 TO ACCOMMODATE REMAIN IN PLACE DECK FORMS.
- 3 - NO SHEET PILES OR BEARING PILES MAY BE DRIVEN FROM THE EXISTING OR PROPOSED STRUCTURE.
- 4 - TWELVE FOOT TRAFFIC LANES SHALL BE MAINTAINED AT ALL TIMES.

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

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 PLANS FOOTING IS TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR FOUNDATION PREPARATION.

ESTIMATED QUANTITIES

ITEM	202-04-02	204-02-03	604-01-12	604-02-03	604-03-01	604-03-02	604-04-01	606-02-03	615-02-03	620-03	709-05-07	710-09-01	710-09-02	604-03-04	604-04-02	204-05
SUPERSTRUCTURE																
ABUTMENT NO.1																
PIER NO.1																
PIER NO.2																
ABUTMENT NO.2																
TOTAL	1		166	34,136	8	440	59	207	214	138	42	21	9	192	506	24

ITEM NO.	204-10.03	204-10.04	714-01	604-10.54	604-10.62
FOUNDATION PREPARATION PIER 1 STA. 27+69.63	(13) L.S.	1	1	1	1
FOUNDATION PREPARATION PIER 2 STA. 28+05.29	(13) L.S.	1	1	1	1
ROADWAY AND STRUCTURAL LIGHTING					
CONCRETE REPAIR					
EPOXY INJECTION REPAIR (COMPLETE & IN-PLACE)					
TOTAL					

NOTES:

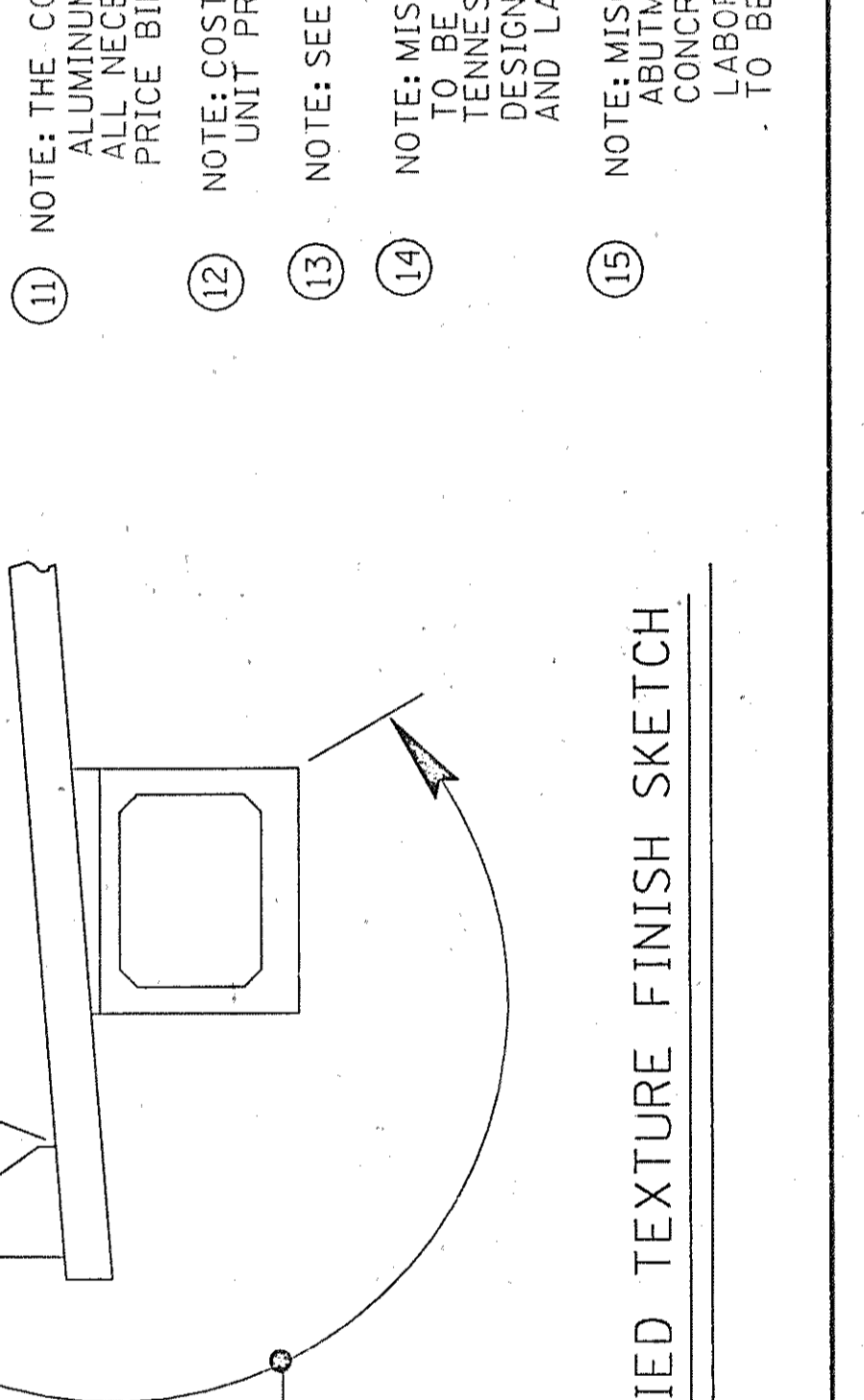
- EXCAVATION BASED ON EXISTING GROUND AT PIERS AND FINAL PROFILE AT ABUTMENTS.
- COST OF ELASTOMERIC PADS, RUBBER BONDING CEMENT, DOWEL BARS, ANCHOR BOLTS TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.
- COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED PIPE.
- COST OF BITUMINOUS-FIBERBOARD, ETC., AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN BRIDGE ITEMS BID ON.
- COST OF 8 INSERT ASSEMBLIES, AND 32 7/8" DIA. X 4" HEX HEAD BOLTS, TO BE INCLUDED IN ITEM 620-03.
- ALL REINFORCING STEEL IN BRIDGE RAIL SHALL BE EPOXY COATED. COST TO BE INCLUDED IN THE PRICE BID FOR ITEM 620-03.
- COST OF BRIDGE RAIL ENDPOST IS TO BE INCLUDED IN THE COST OF THE BRIDGE RAIL SYSTEM.
- COST OF REMOVING THE EXISTING CURBS, AREA ON PAVEMENT @ BRIDGE ENDS NEEDED FOR EXPANSION PORTIONS OF THE EXISTING ABUTMENT, AND THE BRIDGE RAIL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202-04-01 OR 02.
- COST OF REMOVING ANY EXISTING ASPHALT OVERLAY @ 1" CONCRETE DECK @ APPROACHES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SCARIFYING.
- NOTE: SQUARE YARD FOR PAVEMENT AT BRIDGE ENDS SHALL BE MEASURED AS ROAD SURFACE AREA AND SHALL INCLUDE ALL CONCRETE REINFORCING STEEL, PILES, JOINT MATERIAL, NOTCH FOR ROADWAY DRAIN AND ANY OTHER INCIDENTALS NECESSARY FOR COMPLETE INSTALLATION.

NOTE: THE COST OF 130 L.F. OF 2" P.V.C., 2 PULL BOXES, 260 L.F. OF NO. 4 ALUMINUM CABLE (MEETING EPB SPECIFICATION NO. 383-6A), AND ALL NECESSARY MATERIALS FOR INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 714-01.

NOTE: COST OF THREE BRIDGE DECK DRAINS TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 620-03, CONCRETE RAILING.

NOTE: SEE FOUNDATION PREPARATION NOTE THIS SHEET.

NOTE: MISCELLANEOUS SPALLS AND POPOUTS ON EXPOSED BEAMS, ABUTMENTS, AND PIERS TO BE REPAIRED. SEE DETAIL ABOVE FOR EPOXY CONCRETE REPAIR. COST OF ALL EPOXY INJECTION REPAIRS INCLUDING LABOR SHALL BE INCLUDED UNDER ITEM 604-10.54. LOCATION OF REPAIR TO BE DESIGNATED BY THE ENGINEER.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ESTIMATED QUANTITIES AND GENERAL NOTES
WIDENING INTERSTATE 75
RAMP 1 AND M
OVER SPRING CREEK
STATION 27+87.46
HAMILTON COUNTY
1988

DESIGNED BY: J. MACKIE
DRAWN BY: MARK SURDAM
SUPERVISED BY: FIELDS & PRINCE
CHECKED BY: T. MACKIE

DATE 11/87
DATE 1/88
DATE 1/88
DATE 2/88

APPLIED TEXTURE FINISH SKETCH

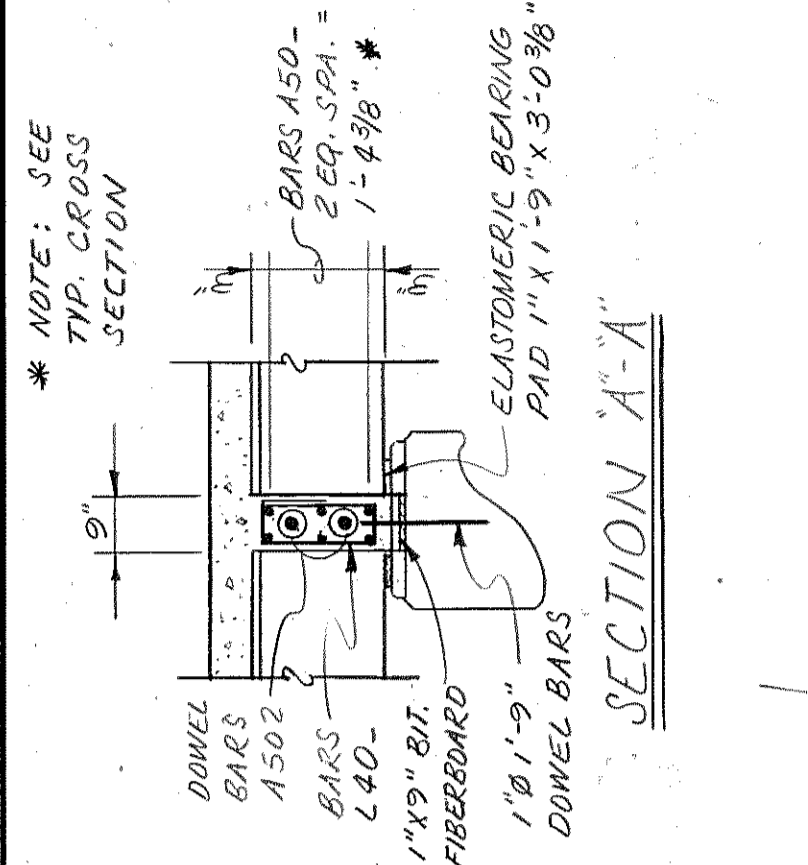
APPROVED: Edward F. Waggoner
ENGINEER OF STRUCTURES
DIRECTOR OF HIGHWAYS

CORRECT

M-202-84

PROJECT NO.	YEAR	SHEET NO.
IR-75-1(97)0	1988	

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	7-27-88	TDM	CHANGED QUANTITIES.

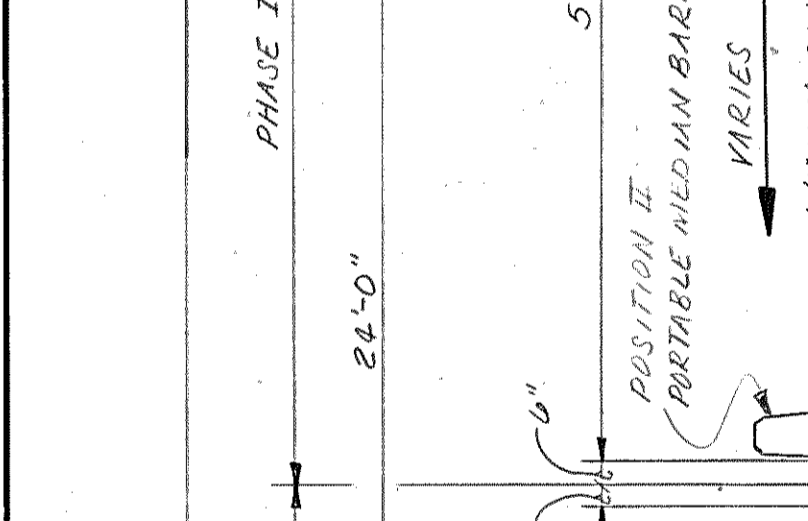


SPECIAL NOTE FOR DOWEL BARS AT PIERS:
TOP OF DOWELS TO BE COVERED WITH 1/2" CON. PRESSIBLE MATERIAL AND 3" PROJECTION WRAPPED WITH 2 LAYERS OF WATER-PROOF PAPER.

NOTE: SEE TIP, CROSS SECTION

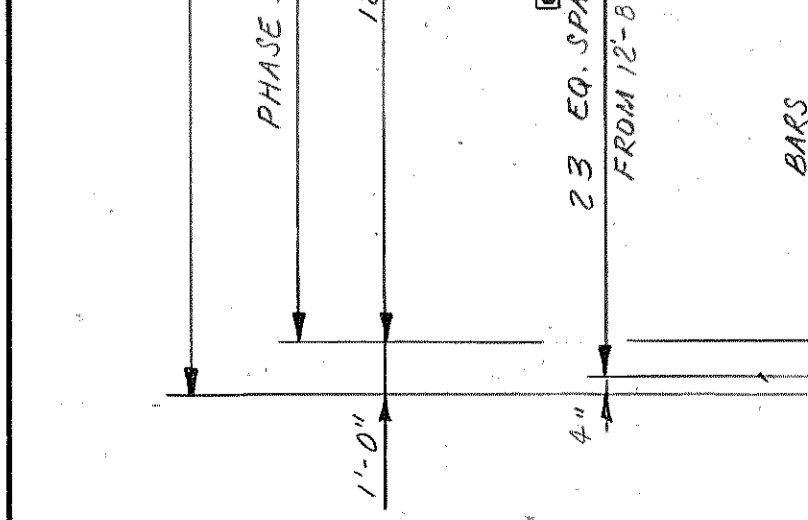
NOTE: THIS CURVE IS FOR DEAD LOAD SUB AND ALL DEAD LOADS THAT ARE APPLIED AFTER SLAB IS IN PLACE AND SHOULD BE CORRECTED TO COMPENSATE FOR THE EFFECTS DUE TO VERTICAL CURVE.

PLANS NOTE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION EXCEPT THAT 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 SLAB CONSTRUCTION JOINT DETAIL SHOWN BELOW.



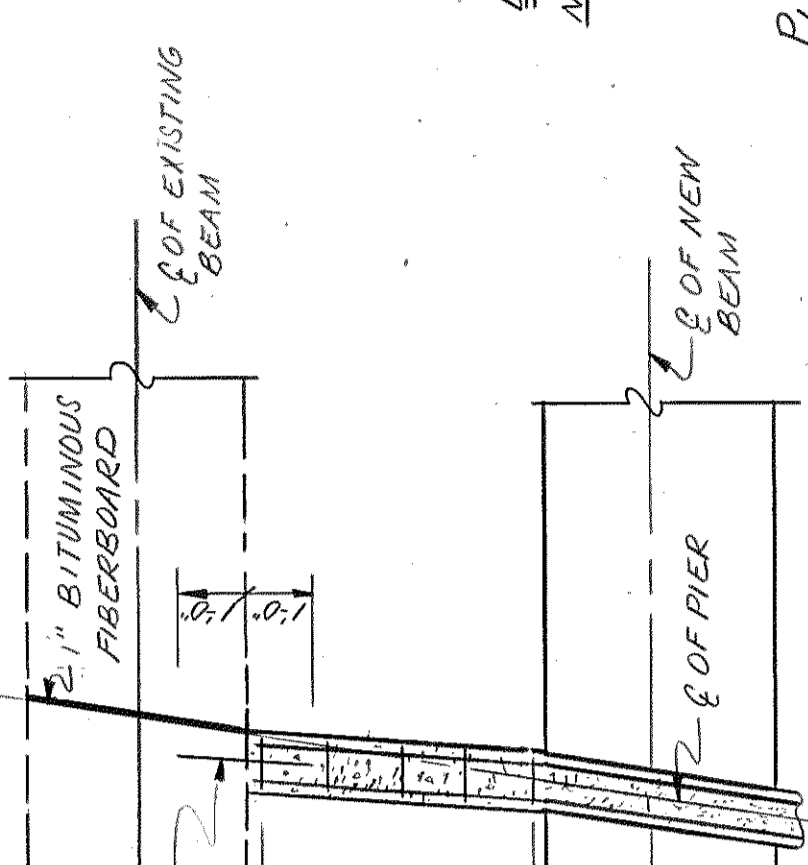
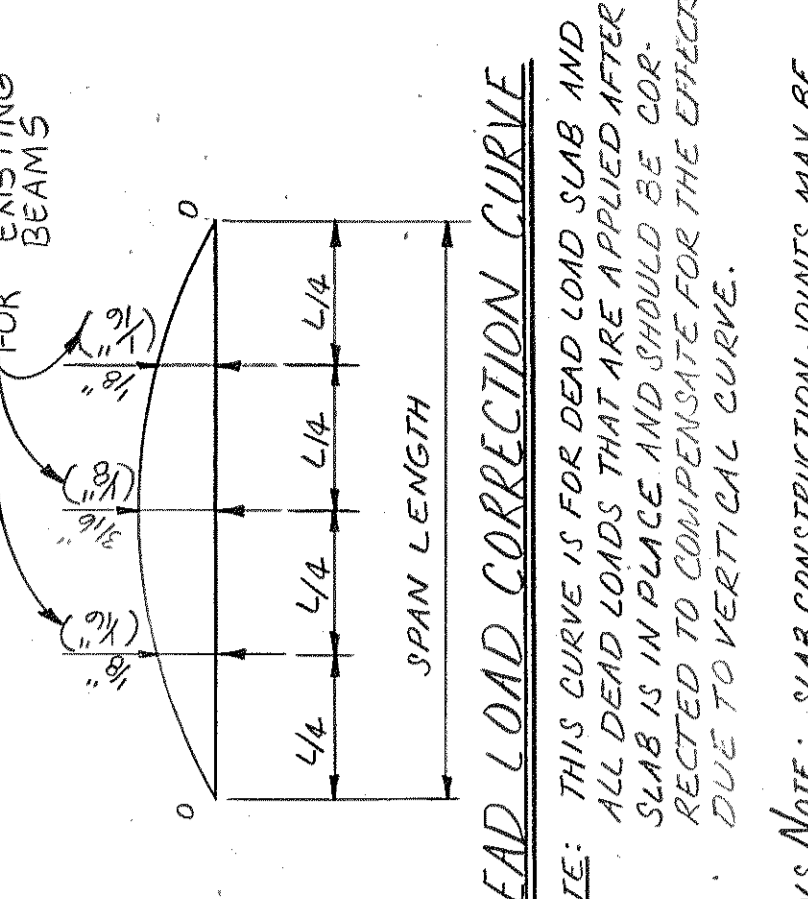
NOTE: WHEN POURING SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. THE PARAPET SHALL NOT BE Poured UNTIL THE SLAB IS Poured AND CURED. ALSO SEE DWG NO. M-28-1.

NOTE: SUPPORT DIAPHRAGMS SHALL BE Poured CONCURRENTLY WITH THE DECK SLAB AND INCLUDED IN THE QUANTITY FOR ITEM NO. 604-01.12.



NOTE: NO PORTION OF THE PARAPET SHALL BE Poured UNTIL THE ENTIRE DECK SLAB IS IN PLACE.

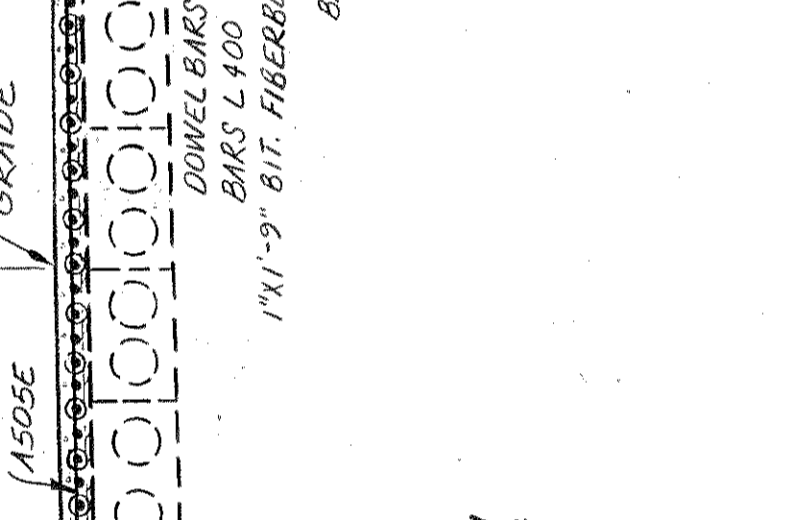
NOTE: OUTSIDE EDGE OF SLAB AND BRIDGE RAIL TO CONFORM TO HORIZONTAL CURVE.



NOTE: SEE TIP, CROSS SECTION

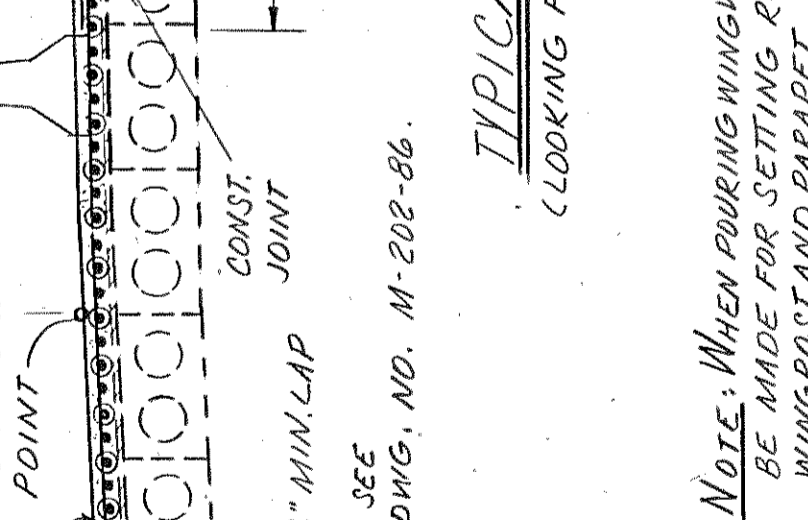
NOTE: THIS CURVE IS FOR DEAD LOAD SUB AND ALL DEAD LOADS THAT ARE APPLIED AFTER SLAB IS IN PLACE AND SHOULD BE CORRECTED TO COMPENSATE FOR THE EFFECTS DUE TO VERTICAL CURVE.

PLANS NOTE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION EXCEPT THAT 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 SLAB CONSTRUCTION JOINT DETAIL SHOWN BELOW.



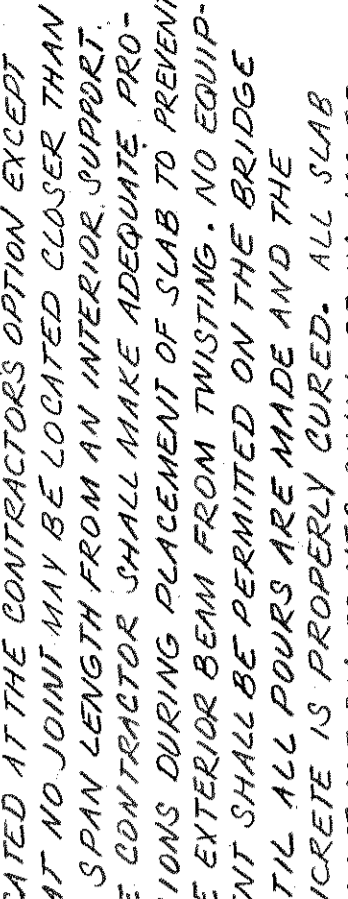
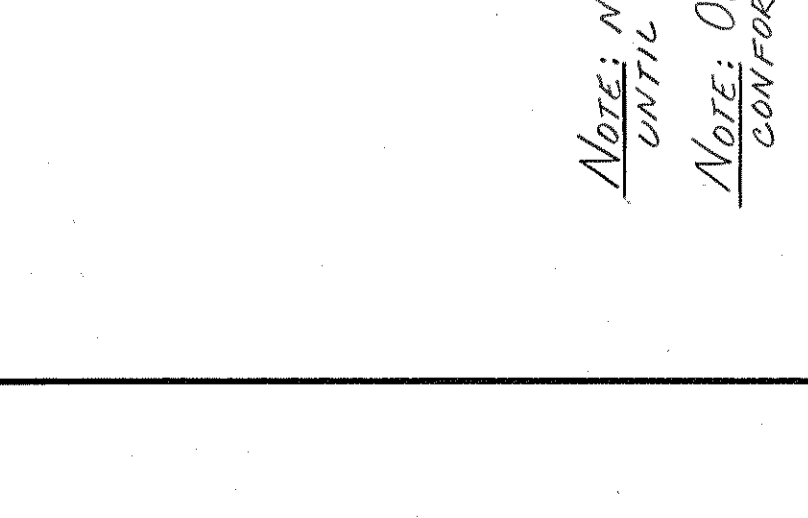
NOTE: NO PORTION OF THE PARAPET SHALL BE Poured UNTIL THE ENTIRE DECK SLAB IS IN PLACE.

NOTE: OUTSIDE EDGE OF SLAB AND BRIDGE RAIL TO CONFORM TO HORIZONTAL CURVE.



NOTE: SEE TIP, CROSS SECTION

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



NOTE: SEE TIP, CROSS SECTION

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

PLANS NOTE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION EXCEPT THAT 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 SLAB CONSTRUCTION JOINT DETAIL SHOWN BELOW.



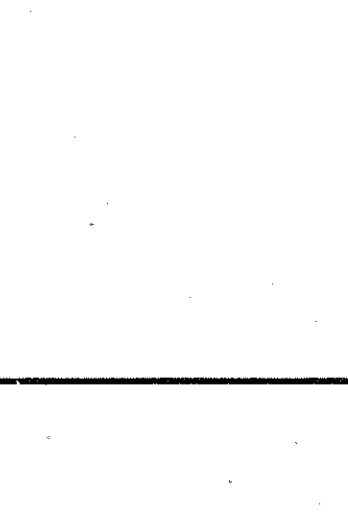
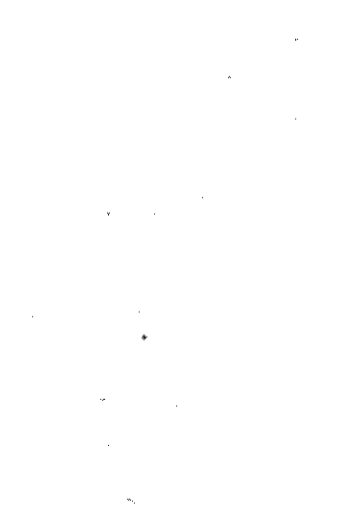
NOTE: NO PORTION OF THE PARAPET SHALL BE Poured UNTIL THE ENTIRE DECK SLAB IS IN PLACE.

NOTE: OUTSIDE EDGE OF SLAB AND BRIDGE RAIL TO CONFORM TO HORIZONTAL CURVE.



NOTE: SEE TIP, CROSS SECTION

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



ESTIMATED QUANTITIES

CLASS	CLASS #	STEEL BAR	CONCRETE	REINFORCING (BRIDGE DECK)	REINFORCING (PARAPET)	STEEL	LB.	YD.
1	166	440	34,136					

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE
WIDENING OF INTERSTATE 75
(RAMPS L&M) NORTHBOUND LANE
OVER SPRING CREEK
STATION 27+87.46
HAMILTON COUNTY
1988

DESIGNED BY T. MACKAYE
DRAWN BY C. REEDWATER
SUPERVISED BY J. FIELDER & J. PRINCE
CHECKED BY T. MACKAYE

DATE 1-88
DATE 2-88
DATE 2-88

APPROVED
Edward P. Wasserman
ENGINEER OF STRUCTURES
M-202-85

BRUNING 44161 61318

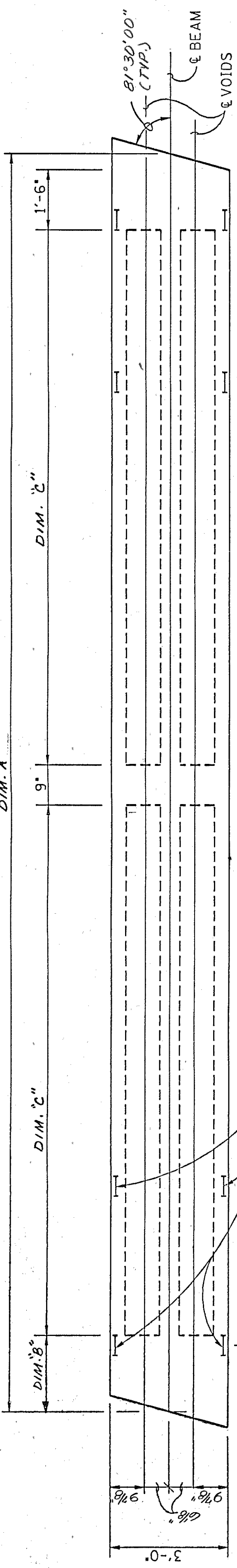
CONST. NO. 33004-3132-44

PROJECT NO.	YEAR	SHEET NO.		
12-75-1(87)0	1988			
REVISIONS				
NO.	DATE	BY	BRIEF DESCRIPTION	QUANTITIES
1	7-29-88	TDM	CHANGED	

- NOTES:**
- THE TOP OF ALL BEAMS TO BE ROUGH FLOATED, AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF THE BEAMS WILL 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 FELT PADS, THE OUTER TWO INCHES OF THE TOP FLANGE MAY BE TROWELED.
 - MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
 - ALL PRESTRESSING STRANDS TO BE 1/2" Ø ASTM GRADE 270K, 7 WIRE UNCOATED STRESS RELIEVED LOW RELAXATION PRESTRESSING STRANDS.
 - AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C600 AND C400 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE 'C' BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.
 - 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.
 - THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 4,000 + PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4,000 + PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE, IF LOW RELAXATION ALTERNATE IS USED, BEAM CONCRETE STRENGTH SHALL BE AT LEAST 4,000 PSI AND THE RELEASE STRENGTH SHALL BE AT LEAST 5,000 PSI.
 - ALL INITIAL FORCE OF 28,936 LBS SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS USING STRESS RELIEVED STRANDS OR 31,003 LBS. ON ALL BEAMS USING LOW RELAXATION STRANDS.
 - 1" Ø 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.
 - ELASTOMERIC BEARING PADS TO BE 1/4" X 6" X 3-0/8" AT THE ABUTMENTS AND 1/4" X 9" X 3-0/8" WITH 1/4" Ø HOLES AT THE PIERS.

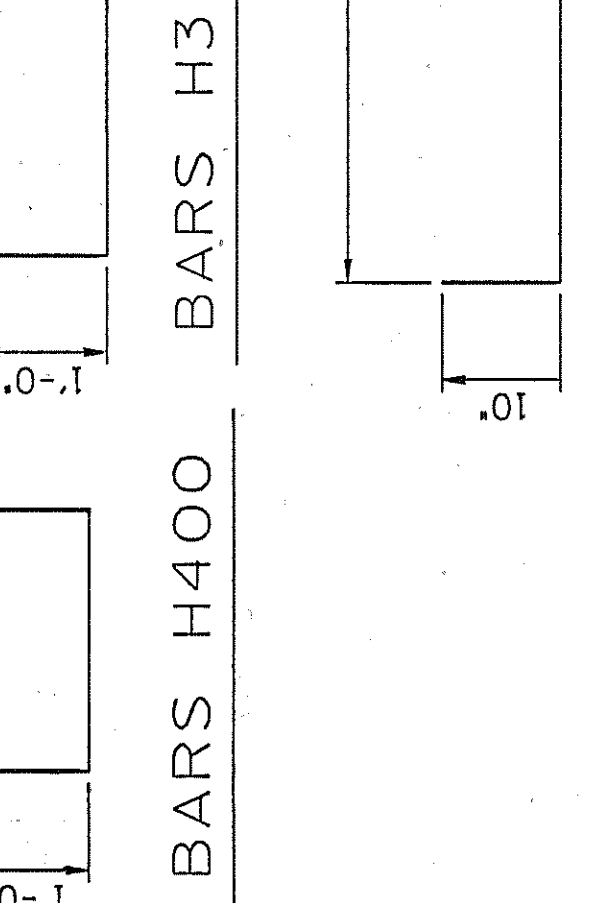
BILL OF STEEL PER BEAM

BAR	SIZE	NO. REQ'D	LENGTH
A500	5	6	2'-8"
A501	5	8	1'-5"
C500	5	4	2'-9"
C501	5	8	20'-0"
C600	6	12	2'-9"
H300	3	10	4'-10"
H400	4	43	4'-7"
ZA400	4	26	3'-8"



NOTE: LIFTING STRAPS TO BE 3-1/2" Ø 270K PRESTRESSING STRANDS.

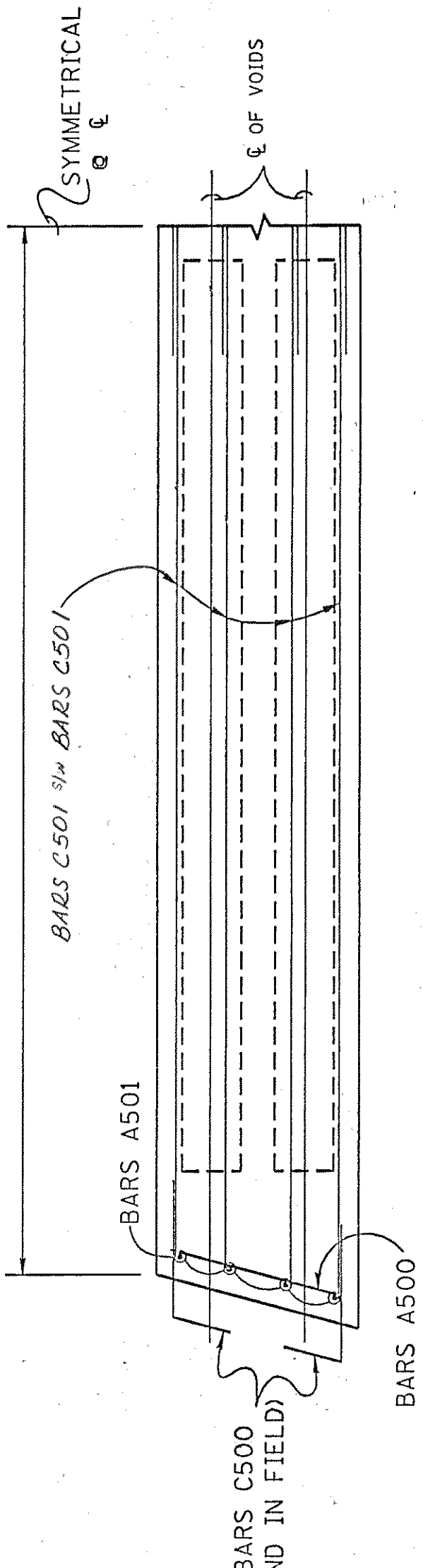
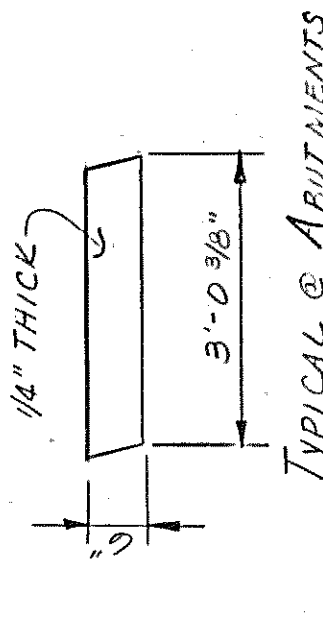
PLAN



ELEVATION

TABLE OF DIMENSIONS

SPAN NO'S	A	B	C
1 & 3	34'-4"	1'-8 3/4"	15'-0 1/2"
SPAN NO. 2	34'-11"	1'-9 3/8"	15'-4 1/4"

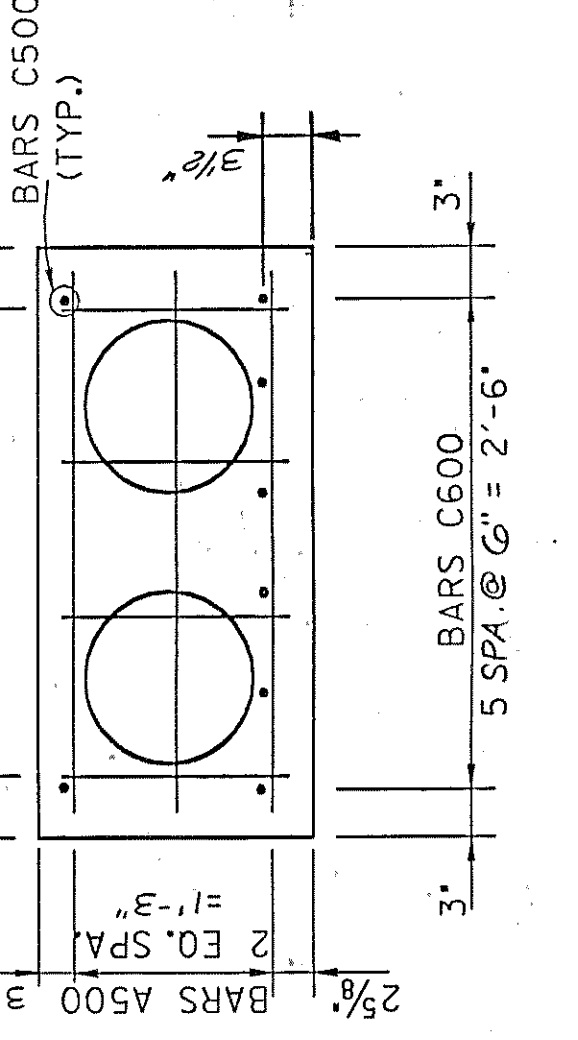


HALF PLAN

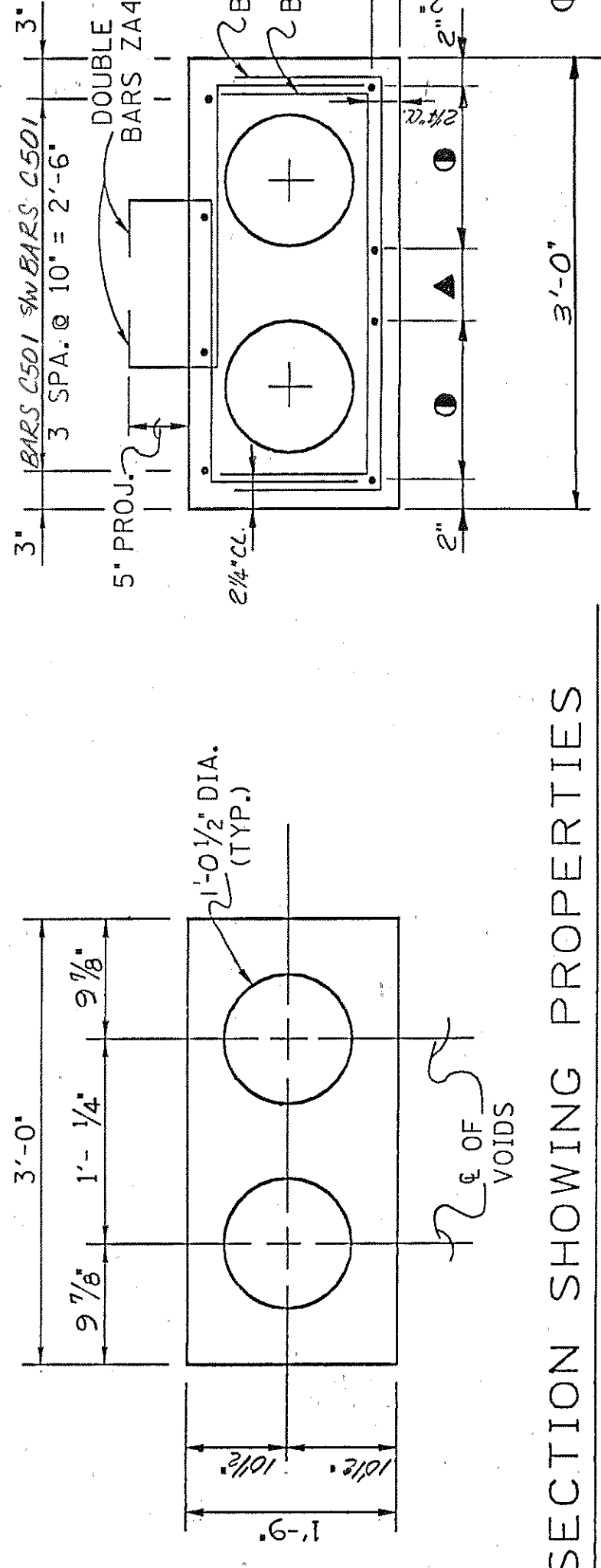
ESTIMATED QUANTITIES - PER BEAM

NO. BEAMS REQ'D	PRESTRESSING STRANDS (STRESS-RELIEVED) LB.	REINFORCING STEEL LB.	CLASS 'A' CONCRETE C.Y.	PRESTRESSING STRANDS (LOW RELAXATION) LB.
4	183	617	4.8	740
2	183	617	4.8	740

NOTE: COST OF ELASTOMERIC PADS, GOWEL BARS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.



END ELEVATION



SECTION A-A

- SECTION SHOWING PROPERTIES**
- DENOTES: 4 SPA @ 3/16" = 1'-2" SPAN NO'S 1 & 3
 - ▲ DENOTES: 4" SPA @ 1-1/2" = 5' SPAN NO'S 1 & 3
 - ▲ DENOTES: 4" SPA @ 1-1/2" = 5' SPAN NO'S 1 & 3
- NOTE: NO BOND ESCOES ARE REQ'D.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PRESTRESSED BOX BEAM DETAILS
WIDENING OF INTERSTATE 75
(CRAMPS LAM) NORTHBOUND LANE
OVER SPRING CREEK
STATION 27+87.46
HAMILTON COUNTY
1988

DESIGNED BY: T. MACKIE
DRAWN BY: C. BECHTOLD
SUPERVISED BY: J. J. REINER
CHECKED BY: T. MACKIE

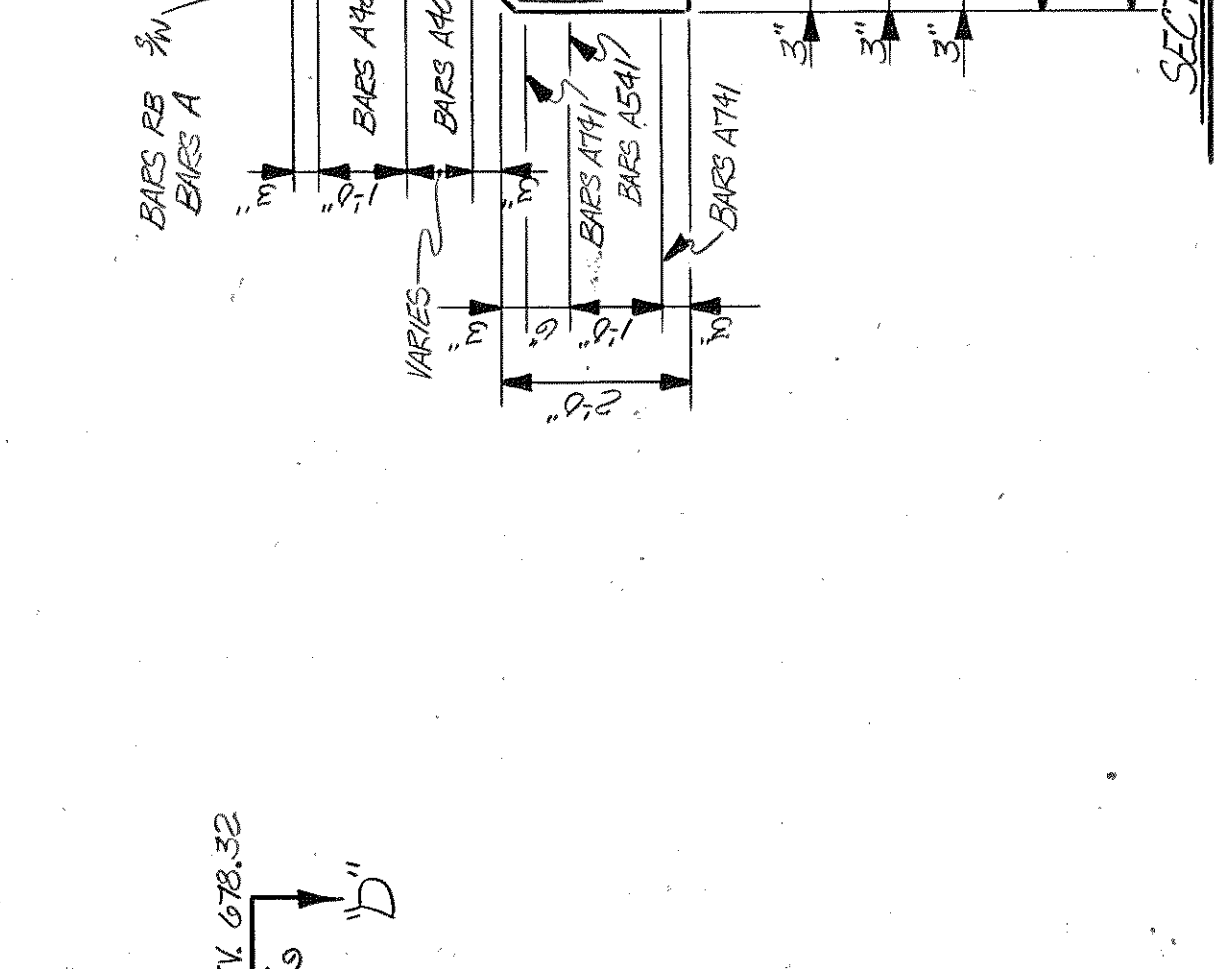
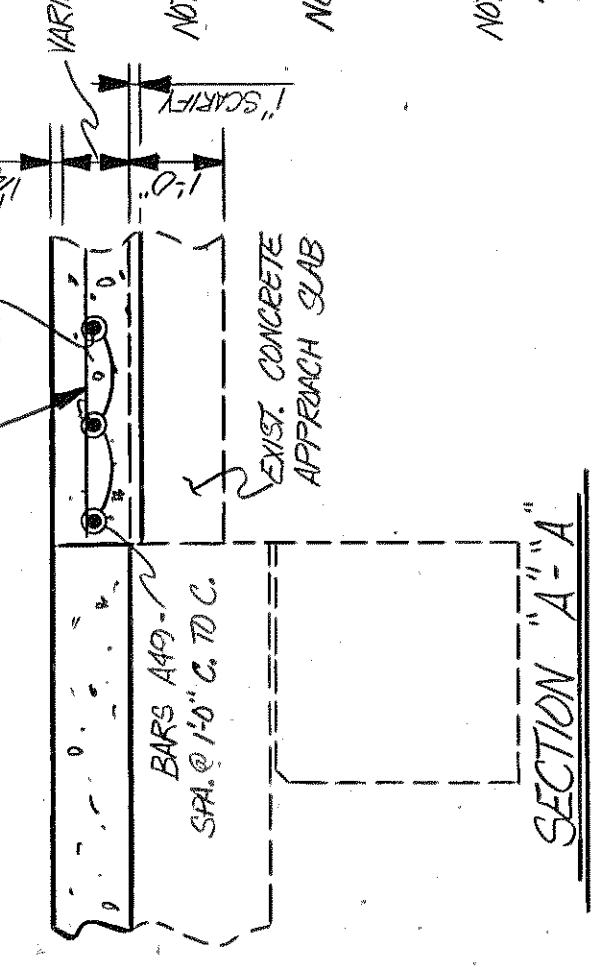
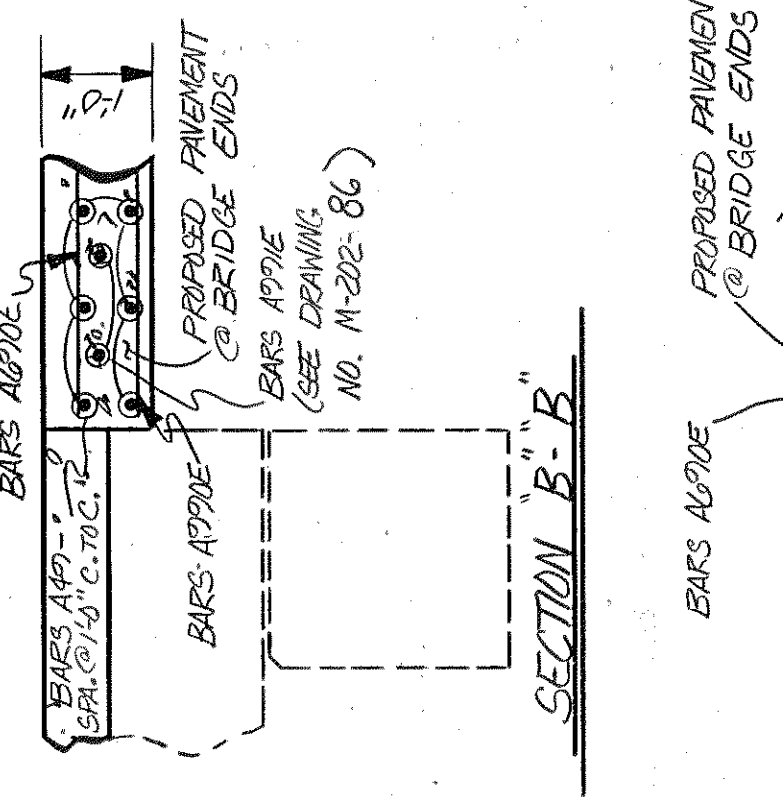
DATE: 12-87
DATE: 1-88
DATE: 1-88
DATE: 3-88

CORRECT: Edward P. Wasserman
ENGINEER OF STRUCTURES

APPROVED: [Signature]
DIRECTOR OF HIGHWAYS

CONST. NO. 3300-3132-44
 PROJECT NO. YEAR SHEET NO.
 IR-75-1(87)0 1988

REVISIONS	
NO.	DATE
1	7-29-88
ADDED NOTE, RISER BLOCK DIMENSIONS, BEAM SPAC. ELEV. AND CHANGED P.C.D. ELEV.	

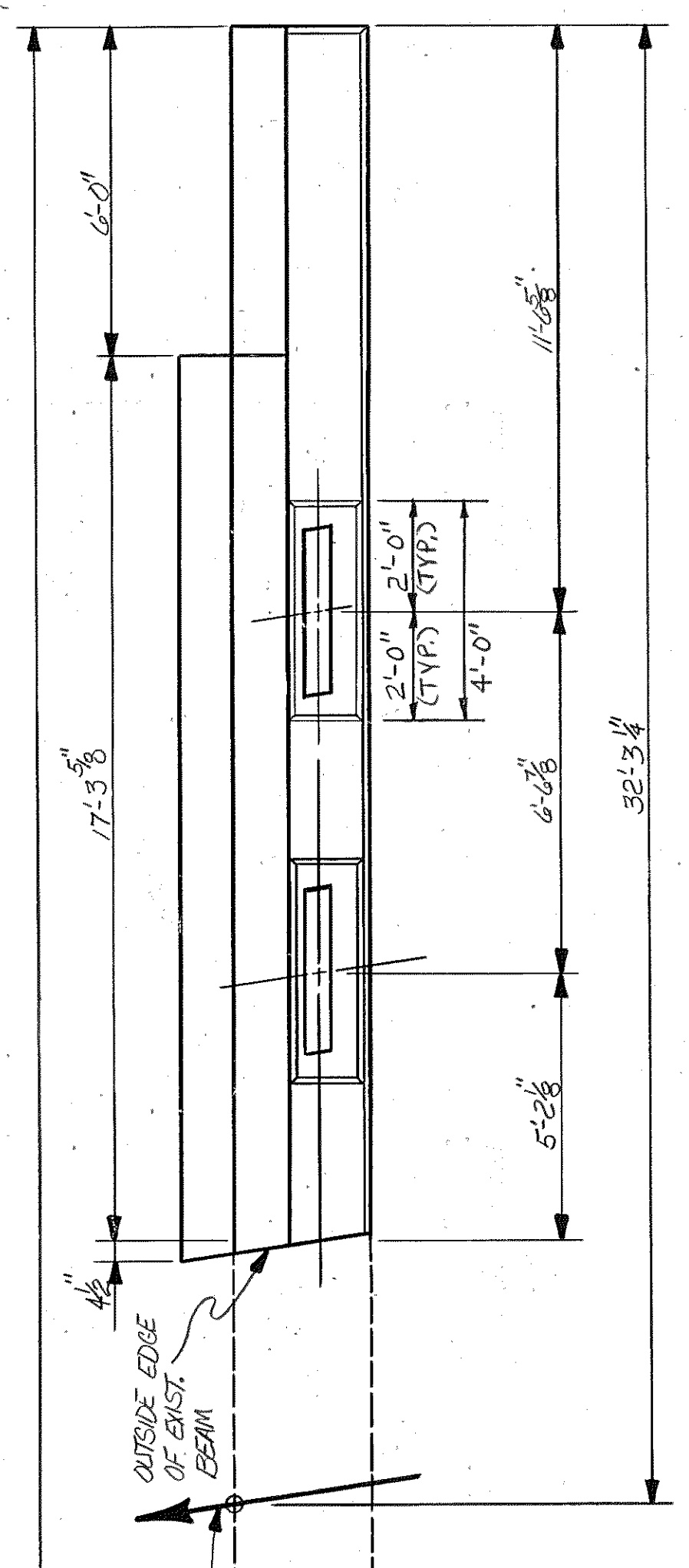


NOTES: THESE QUANTITIES ARE FOR ABUTMENT BEAM AND WINGS ONLY. THE ENDWALL AND WINGWALLS ARE INCLUDED IN THE SUPERSTRUCTURE QUANTITIES.

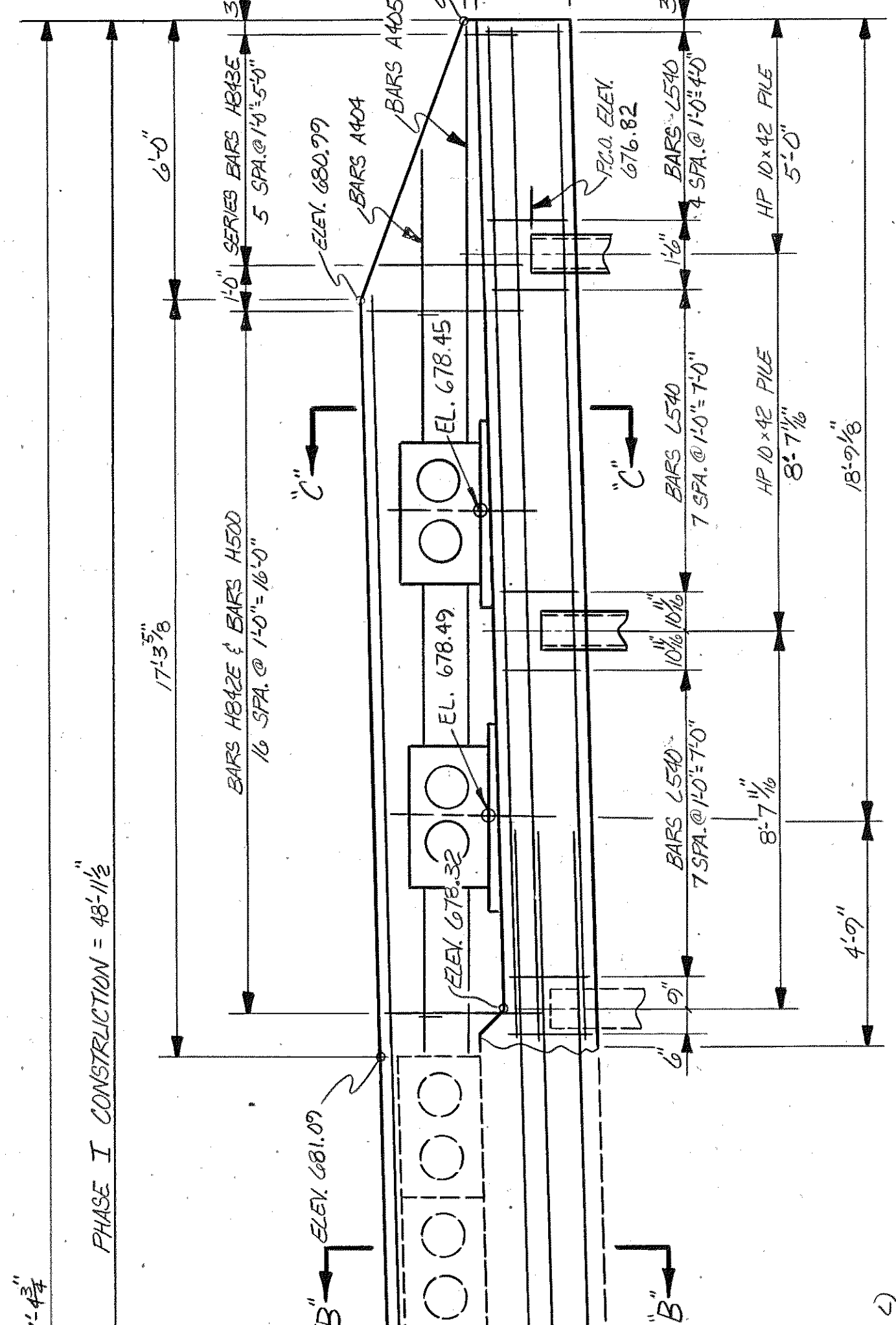
ESTIMATED QUANTITIES	
CLASS "A" REINFORCING STEEL (BRIDGES)	5
CLASS "A" REINFORCING STEEL (OTHER)	445
CONCRETE	5
STEEL	445

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
 ABUTMENT NO. 2
 WIDENING OF INTERSTATE 75
 (RAMPS L & M)
 OVER SPRING CREEK
 STATION 27+87.46
 HAMILTON COUNTY
 1988

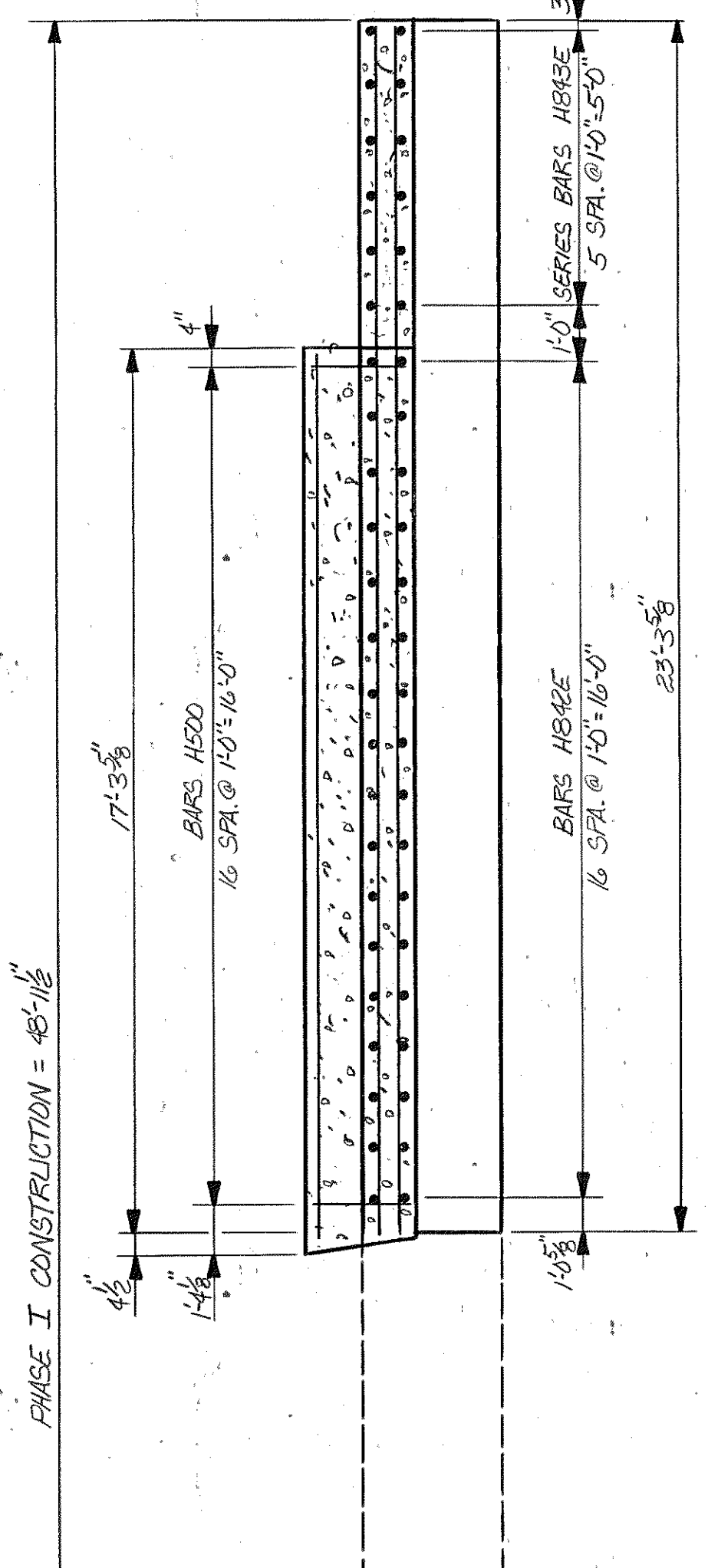
CORRECT
 Edward P. Houser
 ENGINEER OF STRUCTURES
 APPROVED
 M-202-87



NOTE: FOR BEARING PAD DIMENSIONS SEE DRAWING NO. M-202-87.



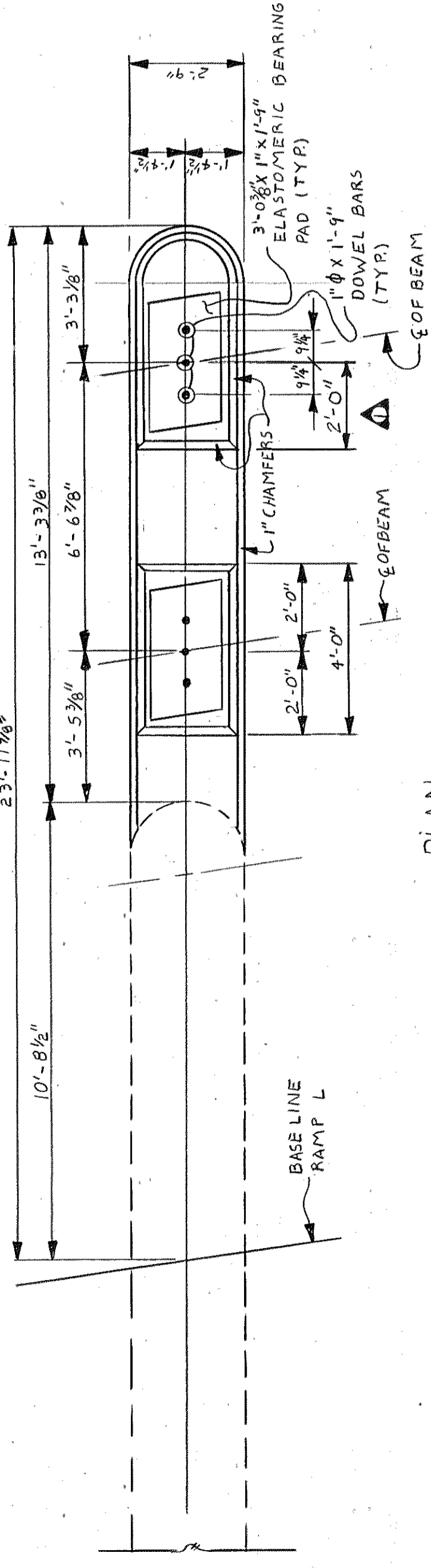
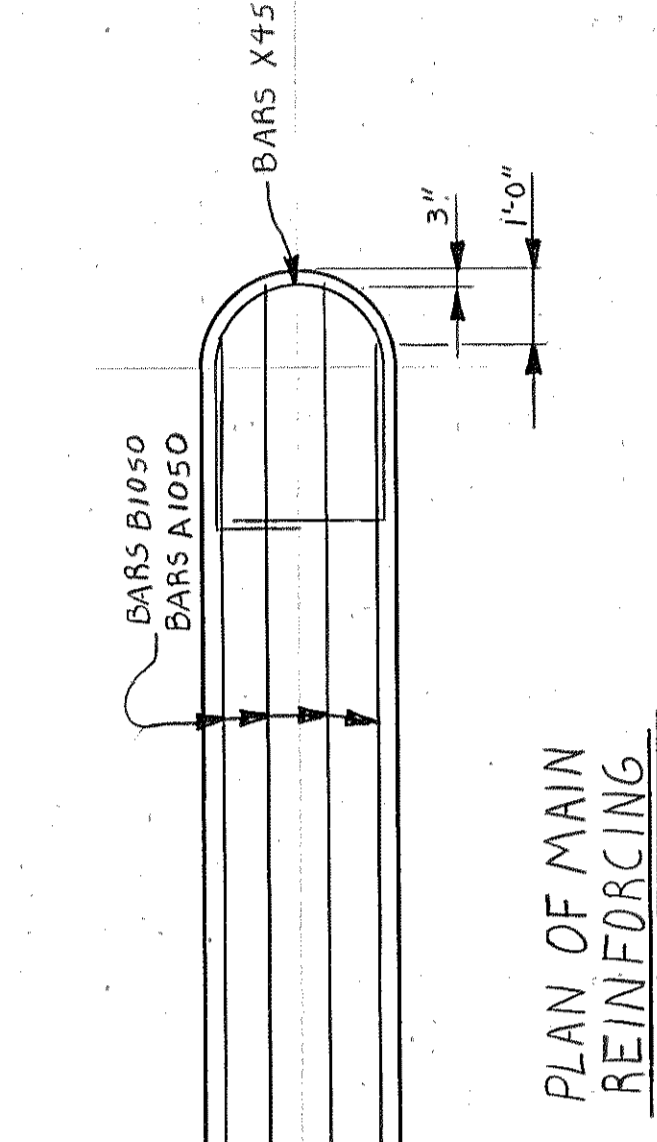
PHASE I CONSTRUCTION = 48'-11 1/2"



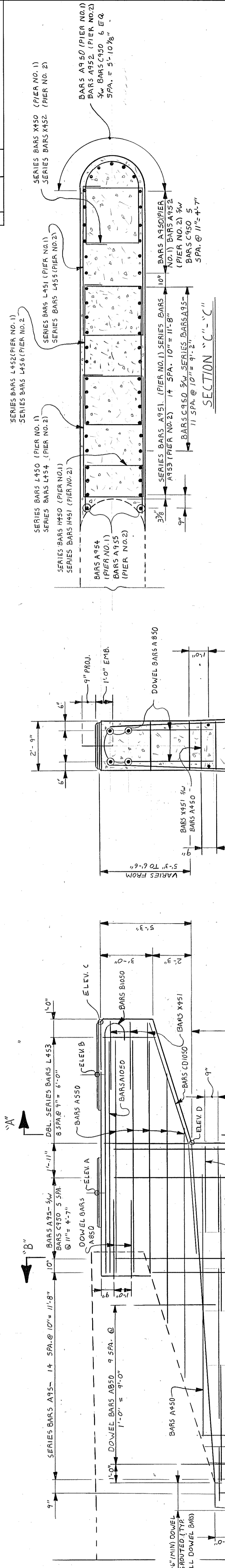
NOTES: WHEN REMOVING A PORTION OF THE EXISTING ABUTMENT BEAM CARE SHALL BE TAKEN AS NOT TO DAMAGE THE EXISTING STEEL.

DATE 12-87
 DRAWN BY J. M. SUDROM
 SUPERVISED BY J. H. DEWINE
 CHECKED BY J. MACKIE

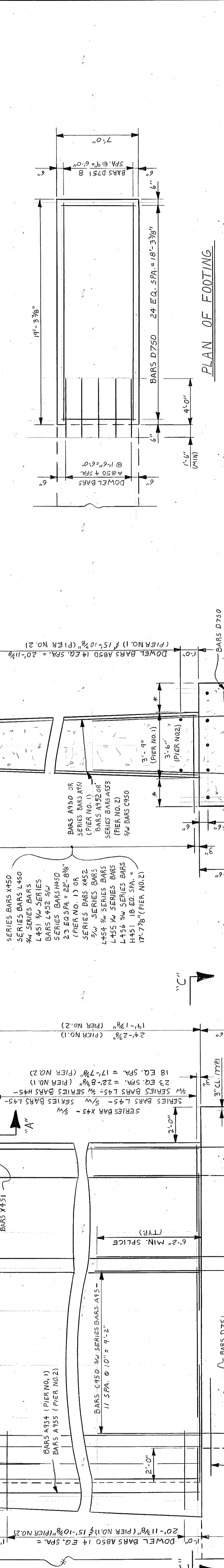
PROJECT NO.	YEAR	SHEET NO.	
1A-75-168710	1988		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	7-29-88	EDM.	CHANGED QUANTITIES AND ADDED RISER BLOCK DIMENSION



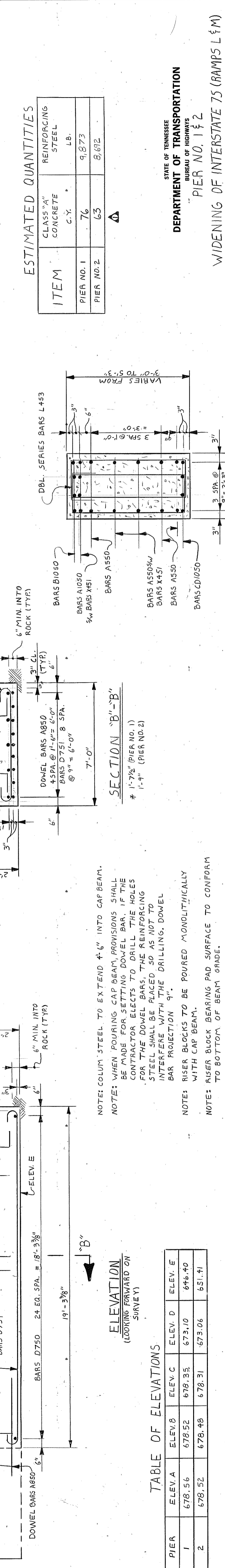
PLAN



SECTION "A"-A'



SECTION "B"-B'



SECTION "C"-C'

PLAN OF FOOTING

ESTIMATED QUANTITIES

ITEM	CLASS "A" CONCRETE C.Y.	REINFORCING STEEL L.B.
PIER NO. 1	76	9,873
PIER NO. 2	63	8,672

NOTE: COLUMN STEEL TO EXTEND 4'-6" INTO CAP BEAM.
 NOTE: WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING DOWEL BAR. IF THE CONTRACTOR ELECTS TO DRILL THE HOLES FOR THE DOWEL BARS, THE REINFORCING STEEL SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE DRILLING. DOWEL BAR PROJECTION 9".
 NOTE: RISER BLOCKS TO BE POURED MONOLITHICALLY WITH CAP BEAM.
 NOTE: RISER BLOCK BEARING PAD SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

ELEVATION (LOOKING FORWARD ON SURVEY)

TABLE OF ELEVATIONS

PIER	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E
1	678.56	678.52	678.33	673.10	646.40
2	678.52	678.48	678.31	673.06	651.41

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
 PIER NO. 1 & 2
 WIDENING OF INTERSTATE 75 (RAMPS L & M)
 OVER SPRING CREEK
 STATION 27+87.46
 HAMILTON COUNTY

1988
 APPROVED
 Edward P. Wasserman
 ENGINEER OF STRUCTURES
 DIRECTOR OF HIGHWAYS

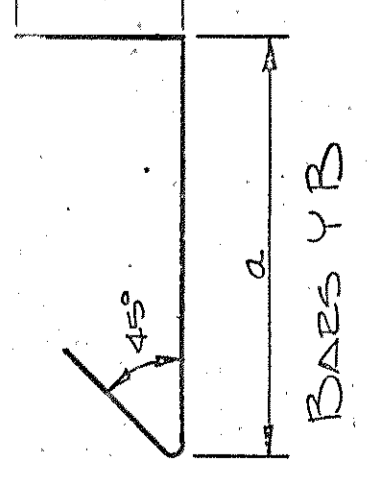
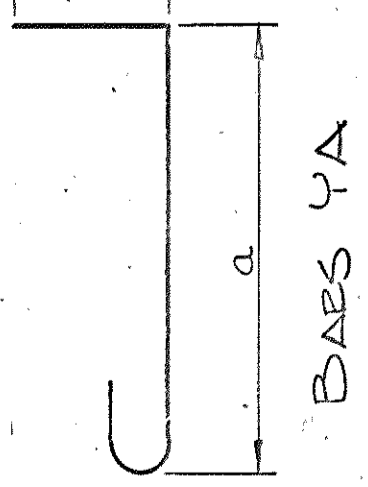
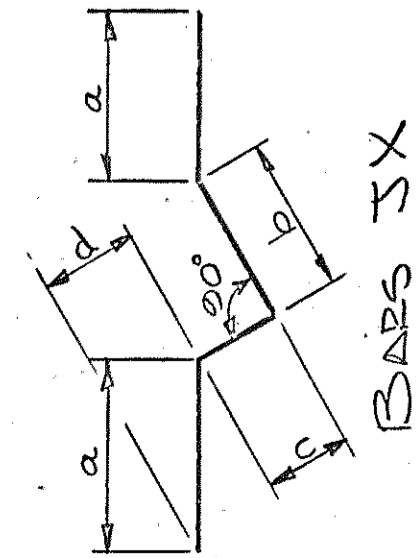
DESIGNED BY T. MACKIE
 DRAWN BY D. HAMILTON
 SUPERVISED BY J. PRINCE
 CHECKED BY T. MACKIE
 DATE 1-88
 DATE 3-88
 DATE 2-88

CONST. NO. 33004-3132-44

BILL OF STEEL

SUPERSTRUCTURE - EPOXY

BAR	LOCATION	SIZE	BENDING DIMENSIONS			LENGTH	BAR	LOCATION	SIZE	NO. RECD	BENDING DIMENSIONS			LENGTH
			a	b	c						a	b	c	
A400E	ENDWALLS	4	4			44'-6"	H840E	ABUTMENT BEAM	8	17	8"	4'-2"	7'-10"	
A401E	ENDWALLS	4	4			34'-0"	SERIES							
A503E	SLAB	5	5			30'-0"	H840E	ABUTMENT BEAM	8	17	8"	3'-5"	34'-6"	
A504E	SLAB	5	5			23'-2"	H840E	ABUTMENT BEAM	8	1	8"	*		
A505E	SLAB	5	5			44'-0"	*DIM. VARIES FROM 1'-5" TO 3'-3" IN INC. OF 5/8" (6 BARS)							
A506E	SLAB	5	5			32'-9"	*DIM. VARIES FROM 1'-5" TO 3'-8" IN INC. OF 5/8" (6 BARS)							
A600E	SLAB	6	210			17'-11"								
A601E	SLAB	6	70			30'-0"								
A602E	SLAB	6	130			24'-11"								
A603E	SLAB	6	130			25'-0"								
F500E	SLAB	5	140	16'-1"	6" 1'-9"	5" 18'-6"	A540	ABUTMENT BEAM	5	5			23'-0"	
C6000E	ENDWALL + P.A.B.A	6	35	2'-9"	3'-1/2" 12'-2 1/2"	6'-7"	A740	ABUTMENT BEAM	7	8			23'-0"	
A8600E	SLAB	6	26	3'-9"	2'-2"	6'-5"	L540	ABUTMENT BEAM	5	22	2'-2"	1'-0" 1'-8"	8'-8"	



ABUTMENT NO. 1 - EPOXY

BAR	LOCATION	SIZE	NO. RECD	BENDING DIMENSIONS			LENGTH
				a	b	c	
H840E	ABUTMENT BEAM	8	17	8"	4'-2"		7'-10"
H840E	ABUTMENT BEAM	8	1	8"	*		34'-6"

ABUTMENT NO. 2

BAR	LOCATION	SIZE	NO. RECD	BENDING DIMENSIONS			LENGTH
				a	b	c	
A541	ABUTMENT BEAM	5	5				23'-0"
A741	ABUTMENT BEAM	7	8				23'-0"
L540	ABUTMENT BEAM	5	22	2'-2"	1'-0"	1'-8"	8'-8"

SUPERSTRUCTURE

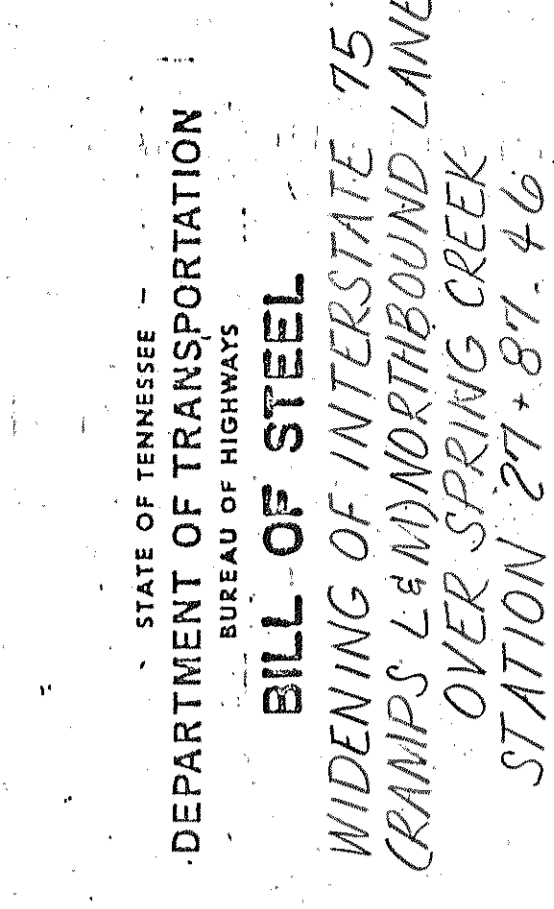
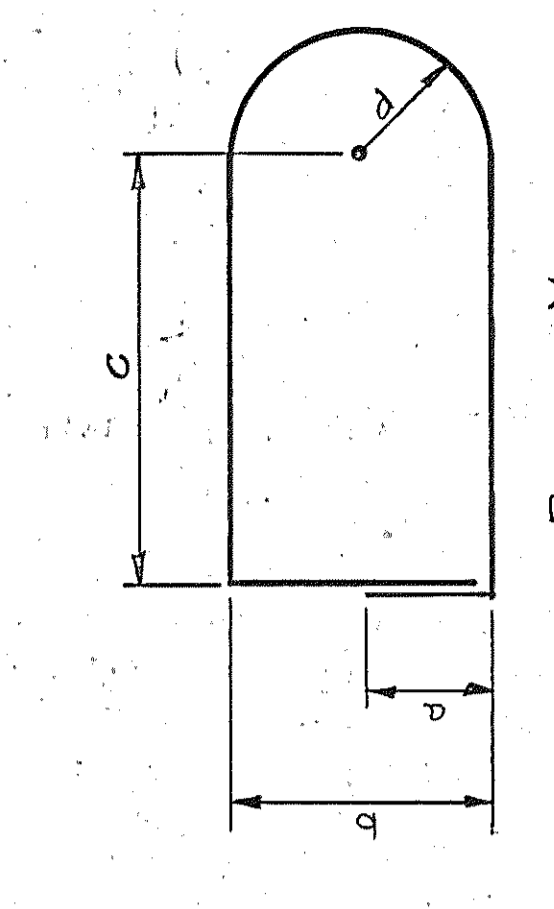
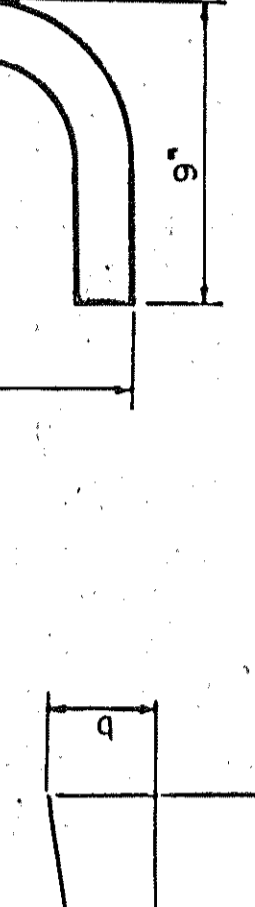
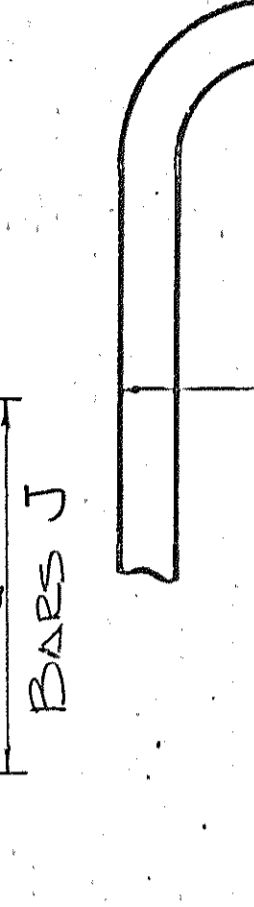
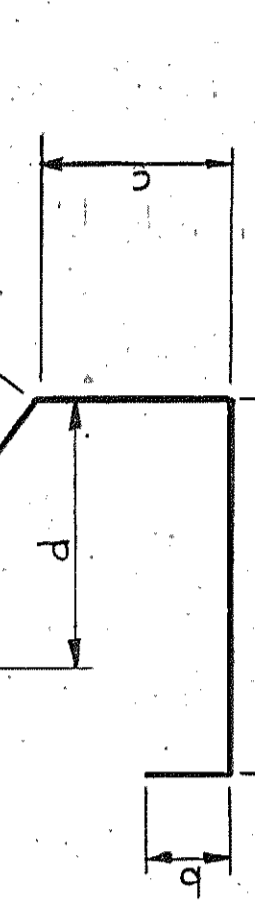
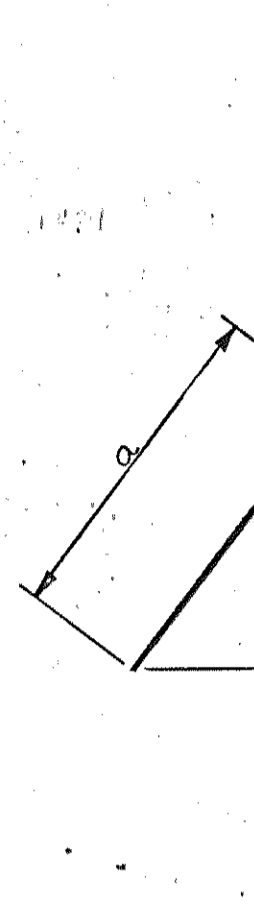
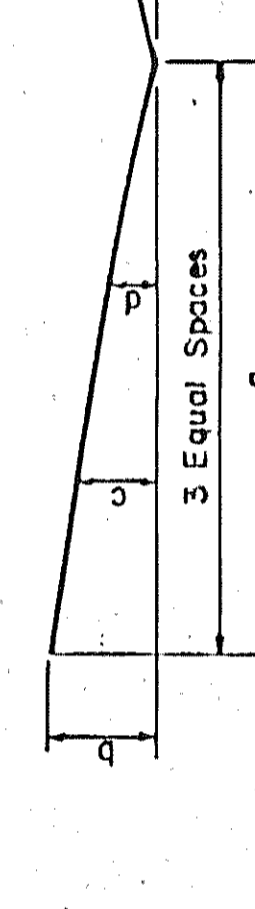
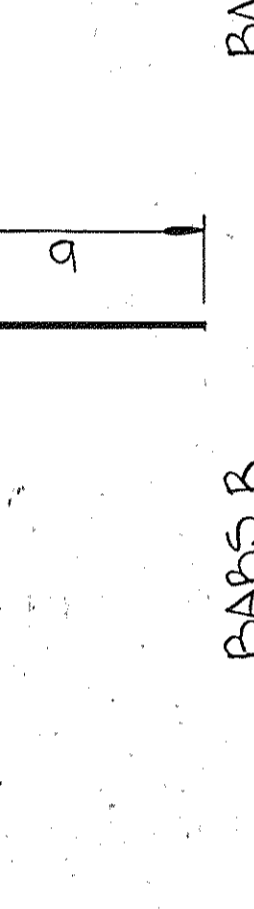
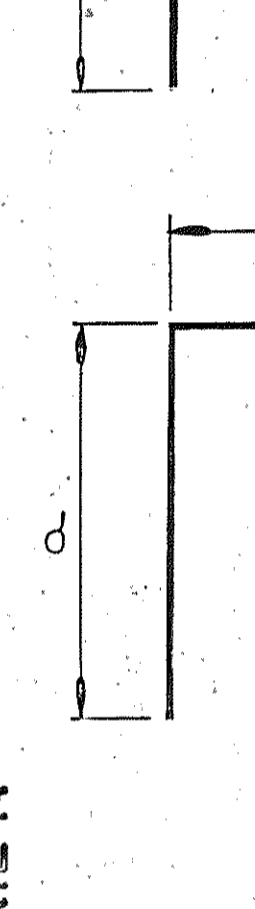
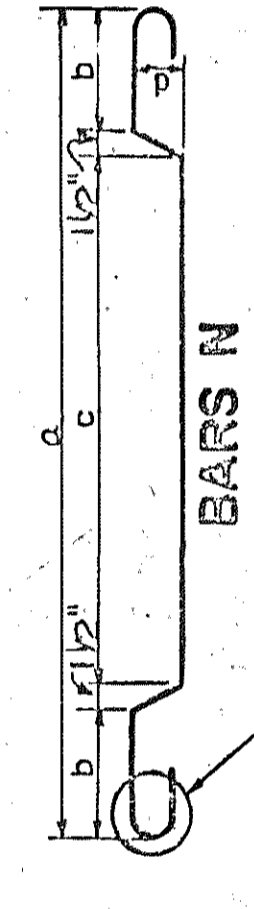
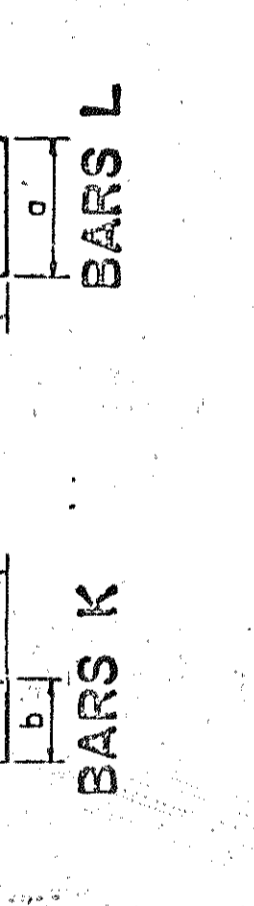
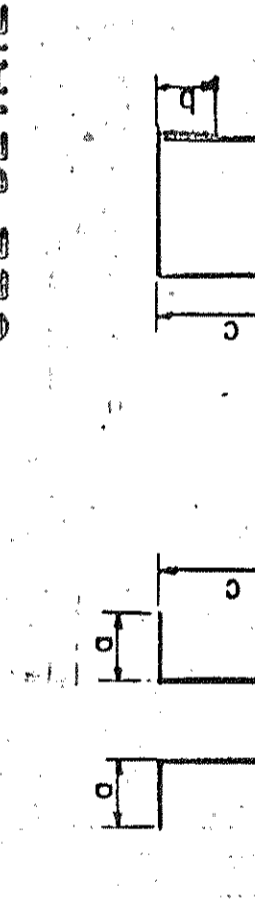
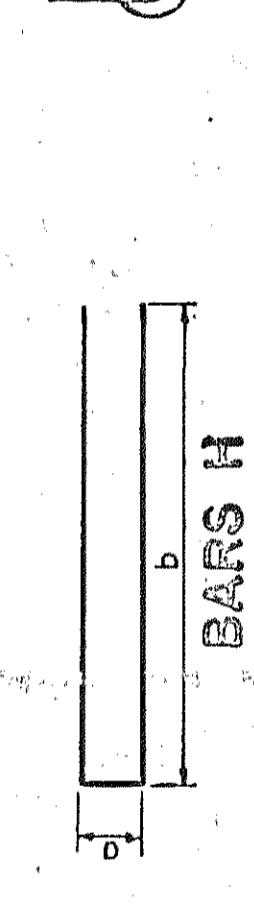
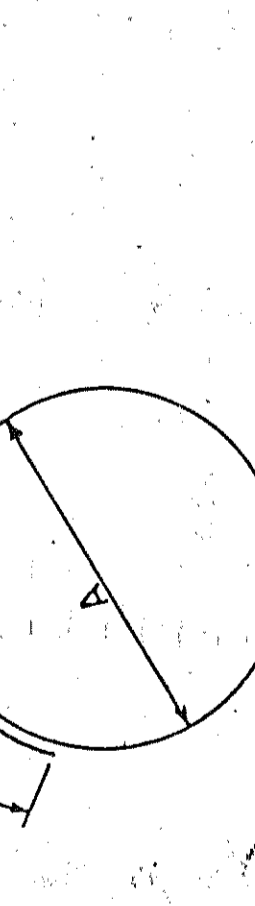
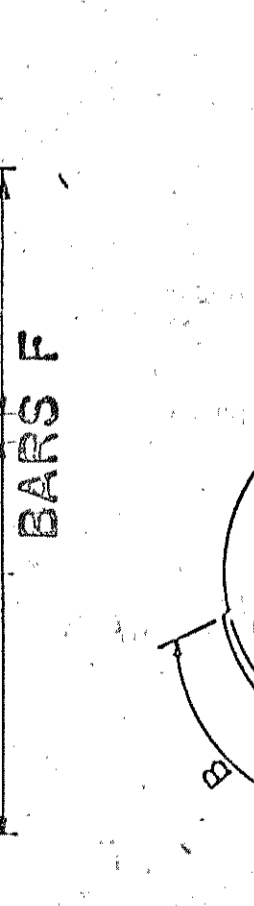
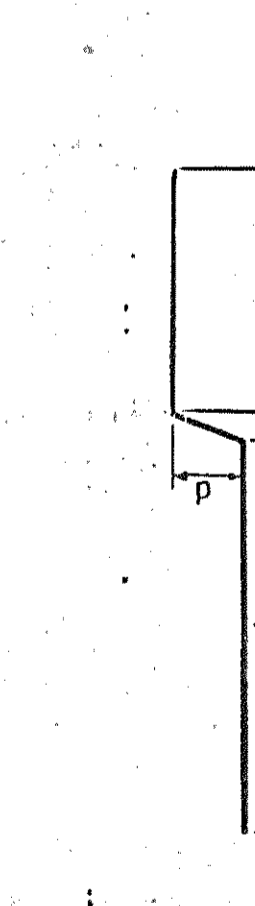
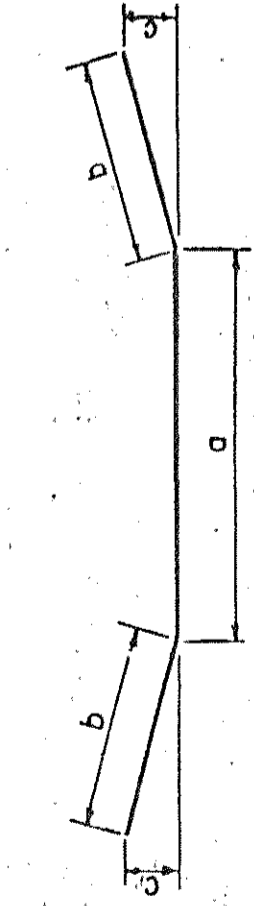
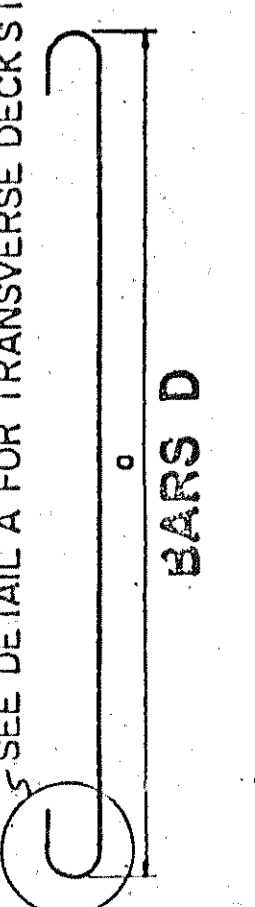
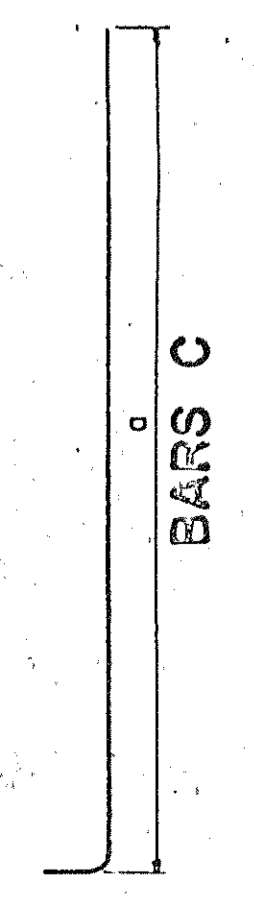
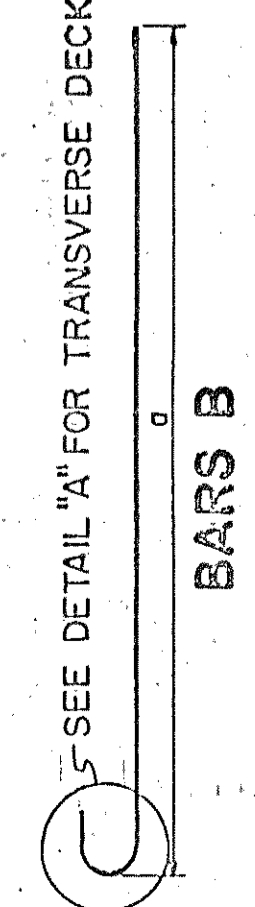
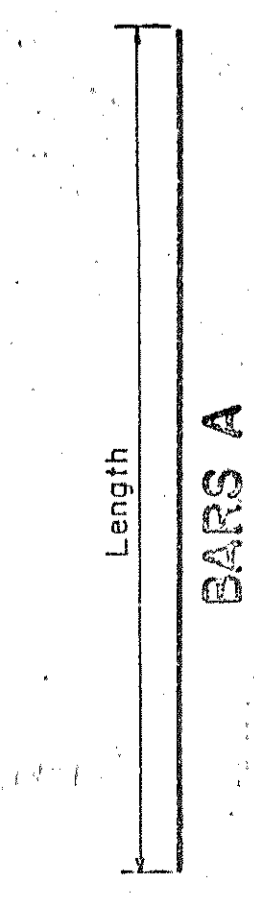
BAR	LOCATION	SIZE	NO. RECD	BENDING DIMENSIONS			LENGTH
				a	b	c	
A490E	SLAB	4	25	41'-6"			41'-6"
A491E	SLAB	4	25	30'-0"			29'-7"
A690E	SLAB	6	72	24'-2"			24'-2"
A691E	SLAB	6	71	24'-2"			24'-2"
A692E	SLAB (DRAINS)	11	4	15'-0"			15'-0"
L590E	FOOTING & SLAB	5	58	1'-2"	1'-0"	2'-2"	7'-8"
A493	SLAB	4	25	22'-10"			22'-10"
A494	SLAB	4	25	10'-10"			10'-10"
A690	FOOTING & SLAB	7	8	22'-10"			22'-10"
A691	FOOTING & SLAB	7	8	10'-10"			10'-10"
A692	SLAB	9	60	24'-2"			24'-2"

ABUTMENT NO. 1 - EPOXY

BAR	LOCATION	SIZE	NO. RECD	BENDING DIMENSIONS			LENGTH
				a	b	c	
A490E	SLAB	4	25	41'-6"			41'-6"
A491E	SLAB	4	25	30'-0"			29'-7"
A690E	SLAB	6	71	24'-2"			24'-2"
A691E	SLAB	6	71	24'-2"			24'-2"
A692E	SLAB (DRAINS)	11	4	15'-0"			15'-0"
L590E	FOOTING & SLAB	5	58	1'-2"	1'-0"	2'-2"	7'-8"

ABUTMENT NO. 2

BAR	LOCATION	SIZE	NO. RECD	BENDING DIMENSIONS			LENGTH
				a	b	c	
A493	SLAB	4	25	22'-10"			22'-10"
A494	SLAB	4	25	10'-10"			10'-10"
A690	FOOTING & SLAB	7	8	22'-10"			22'-10"
A691	FOOTING & SLAB	7	8	10'-10"			10'-10"
A692	SLAB	9	60	24'-2"			24'-2"



DESIGNED BY: T. MICKLE
 DRAWN BY: C. BEZMATEK & J. PRINCE
 SUPERVISED BY: J. FELLOS & J. PRINCE
 CHECKED BY: T. MICKLE
 DATE: 12-87
 DATE: 2-88
 DATE: 3-88
 DATE: 3-88

SEE DETAIL "A" FOR TRANSVERSE DECK STEEL.

SEE DETAIL "A" FOR TRANSVERSE DECK STEEL.

DETAIL "A"

DETAIL "A"

DETAIL "A"

DETAIL "A"

DETAIL "A"

DETAIL "A"

DETAIL "A"

DETAIL "A"

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
BILL OF STEEL
 WIDENING OF INTERSTATE 75
 CRAMPS L&M/NORTHBOUND LANE
 OVER SPRING CREEK
 STATION 27+81.46
 HAMILTON COUNTY
 1988

CORRECTED BY: [Signature]
 ENGINEER OF STRUCTURES
 APPROVED: [Signature]
 DIRECTOR OF HIGHWAYS

M-202-91

