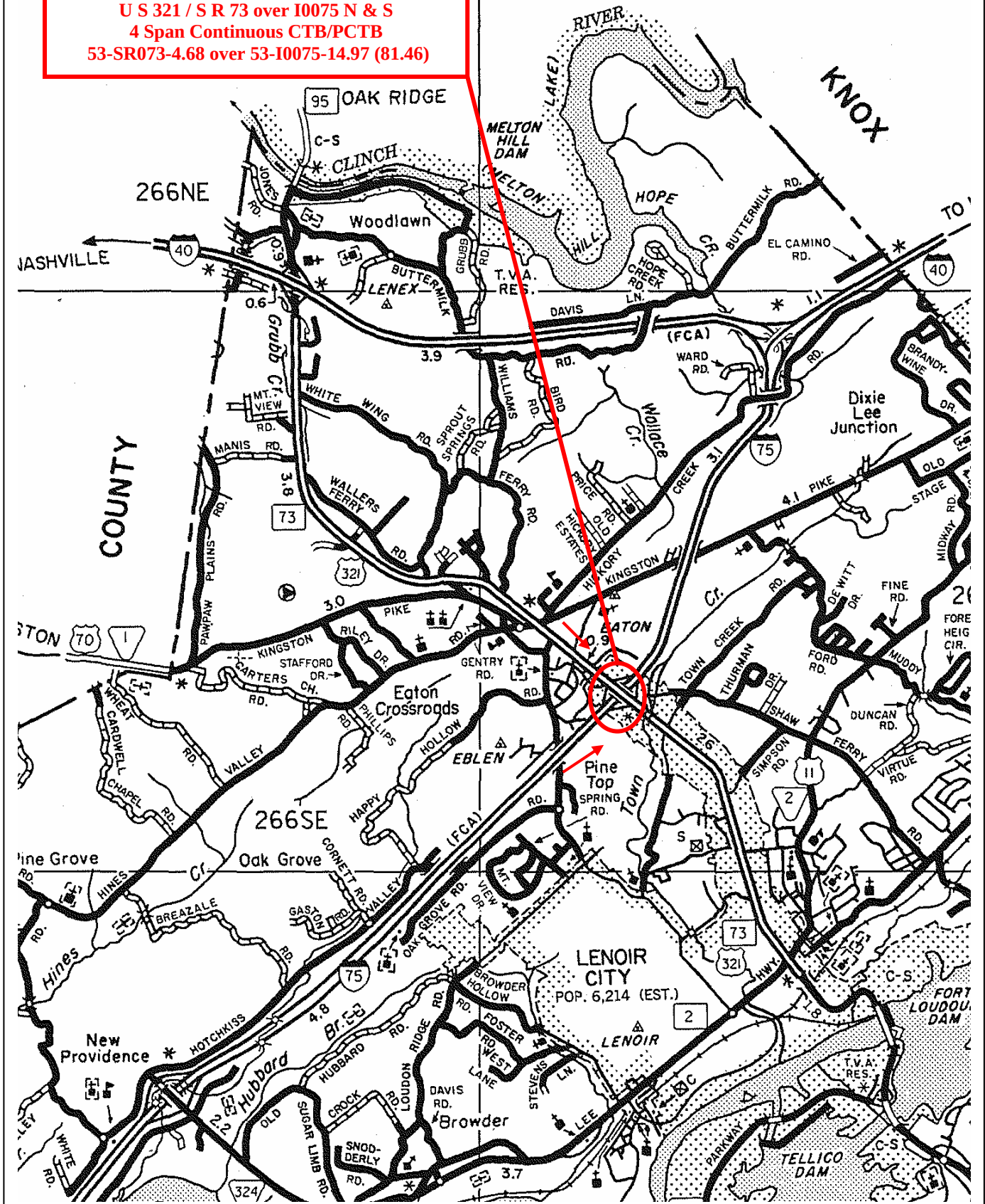


LOUDON COUNTY

1997 Map

53I00750035
U S 321 / S R 73 over I0075 N & S
4 Span Continuous CTB/PCTB
53-SR073-4.68 over 53-I0075-14.97 (81.46)



~ GENERAL NOTES ~

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

LOADING: HS-20-44 WITH ALTERNATE MILITARY.

DESIGN SPECIFICATIONS: AASHTO 1983 EDITION WITH ADDENDA.

CONCRETE: TO BE CLASS "A" (CAST IN PLACE). PC 3000 PSI., EXCEPT BRIDGE DECK SHALL BE FC=4500 PSI.
CONCRETE: (REPAIR AT DIAPHRAGM) TO BE HIGH EARLY STRENGTH FC=3000 PSI.

NOTE: THE CONTRACTOR SHALL TAKE STEPS TO ASSURE THE STABILITY OF THE EXTERIOR GIRDER AGAINST TWISTING OR OVERTURNING DURING SLAB POURING OPERATIONS.

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 1/2". THE SUFFIX "E" FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. (EPOXY TOP & BOTTOM MATS) SEE SPECIAL PROVISION 907A.

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.

PILES: TO BE HP10x42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 55 TONS FOR THE ABUTMENTS.

SPECIAL NOTE: FOUNDATIONS FOR BENTS SHALL BE EXCAVATED TO THE BOTTOM OF FOOTING ELEVATIONS SHOWN; ROD SOUNDINGS SHALL THEN BE MADE AS DIRECTED BY THE ENGINEER. FROM THE RESULTS OBTAINED THE ENGINEER WILL DECIDE IF PILES WILL BE USED OR THE FOOTINGS CARRIED TO ROCK. COST OF ROD SOUNDINGS TO BE INCLUDED IN ITEMS BID ON. NO REINFORCING STEEL FOR BENT COLUMNS SHALL BE ORDERED UNTIL FINAL ELEVATIONS HAVE BEEN DETERMINED.

NOTE: ANY DAMAGE TO STRUCTURAL MEMBERS TO BE LEFT IN PLACE SHALL BE PAID FOR AT CONTRACTOR'S EXPENSE.

PRE-CAST CONCRETE T-BEAMS: SEE SECTION 604 OF THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (MARCH 1981 EDITION).

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

REINFORCED CONCRETE SLOPE PAVING: PAVE SLOPES AND EXPOSED EARTH UNDER BRIDGES WITH 4" THICK CEMENT CONCRETE SLAB REINFORCED WITH NO. 4 GAGE WIRE FABRIC @ 6" CENTERS AND 5616 PER 100 SF. THE WIRE FABRIC REINFORCEMENT SHALL BE PLACED AT ONE-HALF THE DEPTH OF THE SLAB AND EXTEND TO WITHIN 3" OF ITS EDGE WITH A 12" LAP REQ'D. ON ALL SHEETS. THE COST OF THE WIRE FABRIC REINFORCEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 709-04, REINFORCED CONCRETE SLOPE PAVEMENT. ONE-HALF INCH PRE-MOULDED EXPANSION JOINTS WITHOUT LOAD TRANSFERS SHALL BE FORMED ABOUT ALL STRUCTURES AND FEATURES PROJECTING THROUGH, IN OR AGAINST THE SLAB. THE SLAB SHALL BE GROOVED PARALLEL WITH AND AT RIGHT ANGLES TO THE UNDERROADWAY CENTER LINE AT 6' CENTERS. DEPTH OF GROOVE TO BE NOT LESS THAN 1". (SEE STD. DRAWING RD-SA-1 FOR LIMITS OF SLOPE PROTECTION).

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

SHOP DRAWINGS: SEE SPECIAL PROVISION NO. 105A.

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

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

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE 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 SHALL BE SIMILAR TO OFF WHITE FEDERAL SPECIFICATION NO. 37778, 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 FOR NEW PORTION OF BRIDGE AND UNDER ITEM 604-04.02 FOR EXISTING PORTION OF BRIDGE.

NOTE: ALL FILL SHALL BE IN PLACE PRIOR TO EXCAVATING FOR BENT FOOTINGS. AFTER CONSTRUCTING THE BENT, EXTREME CARE SHALL BE TAKEN WHEN BACKFILLING SOAS NOT TO DAMAGE OR MISALIGN THE BENT.

GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED 1/2" DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINKING 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.

REQUIREMENTS AND RESTRICTIONS FOR PHASE CONSTRUCTION:

1) NO SHEET PILES OR BEARING PILES MAY BE DRIVEN FROM THE EXISTING OR PROPOSED STRUCTURE. 2) 2-14'0" TRAFFIC LANES SHALL BE MAINTAINED AT ALL TIMES.

ESTIMATED QUANTITIES

ITEM NO.5	202-04.01	204-02.01		604-01.12	604-02.03	604-03.01	604-03.02	604-04.01	606-02.03	604-04.02	604-36	710-09.01	710-09.02	620-03	709-04	920-02.04	604-10.30	604-10.50	705-10.14	714-01.01
ITEMS	REMOVAL OF STRUCTURES (BR.#53-5873-4.68)	DRY EXCAVATION (BRIDGES)		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)	APPLIED TEXTURE FINISH (EXISTING STRUKS)	SCARIFYING	6" PIPE UNDER DRAIN WITH VERTICAL DRAIN SYSTEM	6" PIPE UNDER DRAIN	CONCRETE PARAPET	REINFORCED CONCRETE SLOPE PAVEMENT	REINFORCED CONCRETE T-BEAMS	BRIDGE DECK REPAIR (FULL DEPTH OF SLAB)	BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB)	CONCRETE BARRIER FOR EXISTING BRIDGE PIERS	STRUCTURE LIGHTING
	(1) L.S. (4)	(CY) (1)		C.Y.	LBS.	C.Y. (13) (2)	LBS.	S.Y.	L.F.	S.Y.	S.Y. (3)	L.F. (3)	L.F.	(5) L.F. (4)	C.Y.	L.F.	S.Y. (9)	S.Y. (9)	L.F. (12)	L.S. (14)
SUPERSTRUCTURE				520	150,926	42	4,051				1603						60	320		3
ABUTMENT NO. 1		20				13	2,837		223			36	10		11					
BENT NO. 1		10				35	8,026		305										111	
BENT NO. 2		49				38	8,848		209											
BENT NO. 3		97				40	9,501		177											
ABUTMENT NO. 2		20				13	2,837		212			36	10		14					
PVMT. CBR ENDS					13,037	211	45,351													
TOTAL	1	196		520	163,963	392	81,451	1874	1,126	2,133	1603	72	20	545	25	1014	60	320	111	3

① EXCAVATION BASED ON LOWER ROAD PROFILE.

② NOTE: COST OF RUBBER BONDING CEMENT, DOWEL BARS, AND ELASTOMERIC BEARING PADS TO BE INCLUDED IN UNIT PRICE BID FOR CLASS "A" CONCRETE.

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 REMOVING THE EXTERIOR PORTION OF THE EXISTING SLAB, PORTIONS OF THE EXISTING ABUTMENT, AND THE BRIDGERAIL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202-04.01.

⑤ NOTE: THE COST OF 4 INSERT ASSEMBLIES AND 16 7/8" Ø x 4" HEX HEAD BOLTS (A307), TO BE INCLUDED IN ITEM 620-03, CONCRETE PARAPET.

⑥ NOTE: ALL REINFORCING STEEL IN THE TRAFFIC FACE OF PARAPET SHALL BE EPOXY COATED. COST TO BE INCLUDED IN THE PRICE BID FOR ITEM 620-03.

⑦ NOTE: THE COST OF BITUMINOUS-FIBERBOARD AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN BRIDGE ITEMS BID ON.

⑧ THE COST OF REMOVING ANY EXISTING ASPHALT OVERLAY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SCARIFYING.

⑨ FOR BRIDGE DECK REPAIR, SEE DWG NO. M-189-99

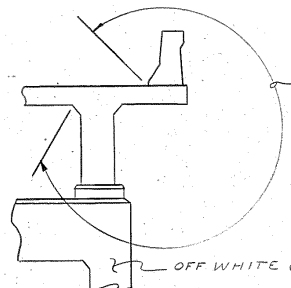
⑩ EXCAVATION REQUIRED FOR APPROACH PAVEMENTS TO BE INCLUDED UNDER ROADWAY ITEM 203-01.

⑪ FOR DETAILS OF SLIDING PLATE REMOVAL SEE DWG. NO. M-189-99. COST TO BE INCLUDED IN THE PRICE BID FOR ITEM 202-04.01.

⑫ THE COST OF REMOVING THE EXISTING BARRIER WALL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 705-10.14

⑬ NOTE: COST OF 2 BRIDGE DECK DRAINS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "A" CONCRETE.

⑭ COST FOR ITEM 714-01.01 SHALL INCLUDE 570 ± L.F. 2" Ø CONDUIT (SCH. 40 P.V.C.) 4 JUNCTION BOXES AND 12 ANCHOR BOLTS.



OFF WHITE (37778)

* IN ADDITION TO THE DETAILS SHOWN, OFF WHITE SHALL BE USED ON ALL EXPOSED ABUTMENTS, BENTS, WEBS OF INTERIOR BEAMS, AND BARRIER WALL FOR BENT PROTECTION.

* TEXTURE COATING SKETCH

CONST. NO. 53012-3218-94

PROJECT NO.	YEAR	SHEET NO.
HES-73(13)	1987	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	7-22-87	FM	ADDED ITEM NO. 714-01.01:
2	11-24-87	TOM	ADDED NOTE - CHANGED STEEL QUANTITY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
GENERAL NOTES AND
ESTIMATED QUANTITIES
STATE ROUTE 73 (LT. & RT. LANES)
OVER INTERSTATE 75
STA. 1147+38.80
LOUDON COUNTY
1987

CORRECTED
Edward P. Absenmer
ENGINEER OF STRUCTURES
APPROVED
Jewie Lane
DIRECTOR OF HIGHWAYS

M-189-74

DESIGNED BY T. MACKIE DATE 12-86
DRAWN BY C. BEANATIE DATE 1-87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

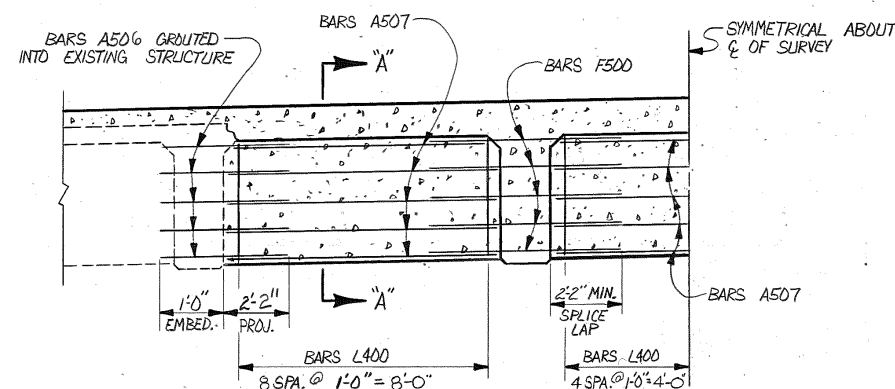
CONST. NO. 53012-3218-74

PROJECT NO.	YEAR	SHEET NO.
HES-73(13)	1987	

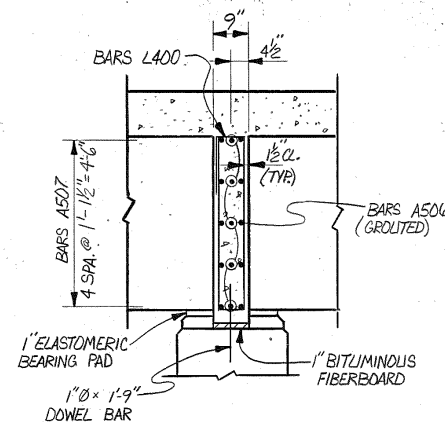
REVISIONS			BRIEF DESCRIPTION
NO.	DATE	BY	
1	11-24-87	TDM	GENERAL REVISION (DIAPH. STEEL)

NOTE: FOR PLAN OF DIAPHRAGMS SEE FRAMING PLAN ON DRAWING NO. M-189-76.

NOTE: SEE BRIDGE REPAIR DETAILS ON DRAWING NO. M-189-79.

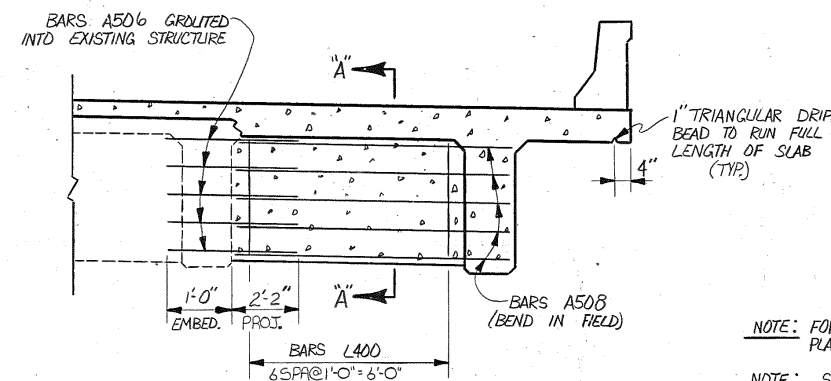


ELEVATION OF MIDDLE DIAPHRAGM
(TYPICAL FOR BENT NOS. 1, 2, & 3)

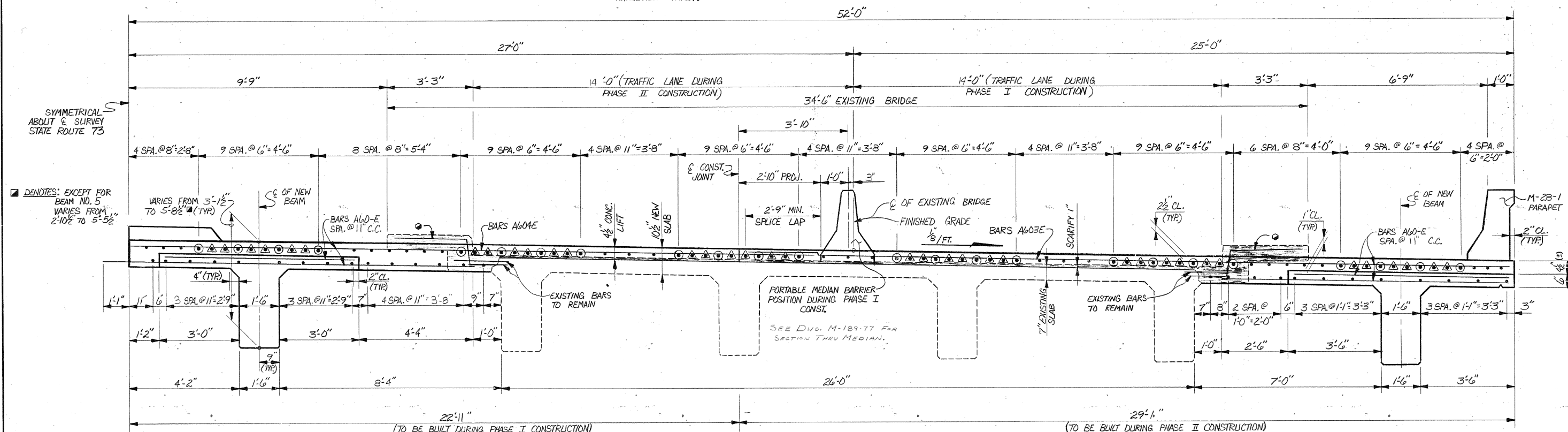


SECTION "A-A"

TOP OF DOWELS TO BE COVERED WITH 1/2" OF COMPRESSIBLE MATERIAL AND THE 9" PROJECTION WRAPPED WITH TWO LAYERS OF WATERPROOF PAPER.



ELEVATION OF OUTSIDE DIAPHRAGM
(TYPICAL FOR BOTH SIDES AND FOR BENTS NOS. 1, 2, & 3)



NOTE: SHADED AREAS DENOTE EXISTING SLAB AND CURBS TO BE REMOVED.

NOTE: EXISTING STRUCTURE IS INDICATED BY DASHED LINES. SEE DWG. NO. K-17-77 FOR DETAILS.

NOTE: FOR EACH PHASE, NO PORTION OF THE PARAPET OR MEDIAN BARRIER RAIL SHALL BE POURED UNTIL THE ENTIRE DECK SLAB IS IN PLACE.

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

NOTE: DENOTES: BARS TO BE CUT-OFF, STRAIGHTENED, AND SPLICED WITH STEEL IN BOTTOM MAT.

TYPICAL CROSS-SECTION

NOTE: CARE SHALL BE TAKEN WHEN REMOVING EXISTING CONCRETE SUCH THAT THE EXISTING REINFORCEMENT IS NOT DAMAGED.

NOTE: BARS A60-E & BARS C300E
REINFORCEMENT OVER BENTS

NOTE: SEE HALF PLAN OF REINFORCEMENT, DWG. NO. M-189-77 FOR OTHER BAR DESIGNATIONS.

PLANS NOTE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S 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.

ESTIMATED QUANTITIES			
CONCRETE CLASS "A" (BRIDGE DECK) C.Y.	EPDXY COATED REINFORCING STEEL LB.	CONCRETE CLASS "A" C.Y.	REINFORCING STEEL LB.
520	150,926	42	4,051

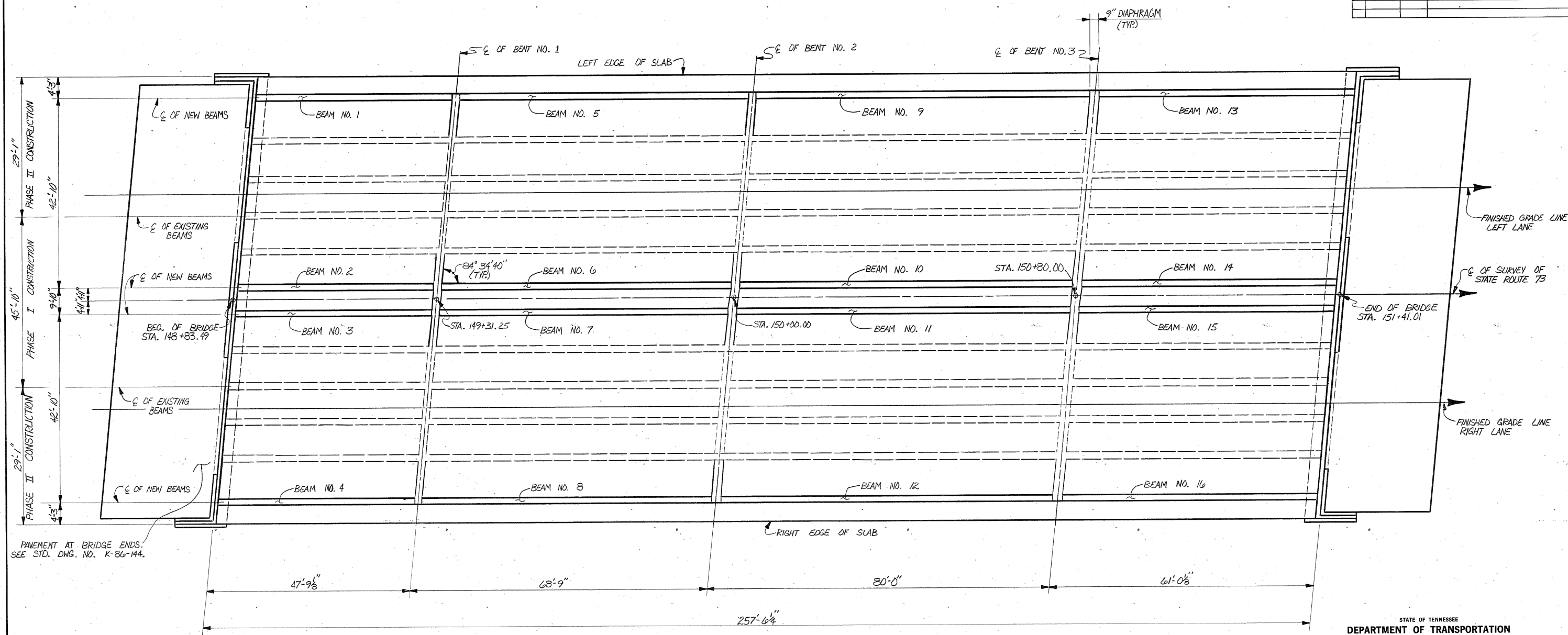
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
SUPERSTRUCTURE
WIDENING LEFT AND RIGHT LANES
STATE ROUTE 73 OVER
INTERSTATE 75
STATION 1147+38.80
LOUDON COUNTY
1987

DESIGNED BY T. MACKIE DATE 11/86
DRAWN BY M. SURDAM DATE 1/87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1/87
CHECKED BY T. MACKIE DATE 1/87

CORRECT Edward P. Woserman
ENGINEER OF STRUCTURES
APPROVED Louis E. Evans
DIRECTOR OF HIGHWAYS

M-189-75

PROJECT NO.	YEAR	SHEET NO.
HE5-73(13)	1987	

[illegible]

FRAMING PLAN

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

WIDENING LEFT AND RIGHT LANES
STATE ROUTE 73 OVER
INTERSTATE 75
STATION 1147+38.80
LODON COUNTY
1987

DESIGNED BY T. MACKIE DATE 12/86
DRAWN BY M. SURDAM DATE 1/87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1/87
CHECKED BY T. MACKIE DATE 1/87

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

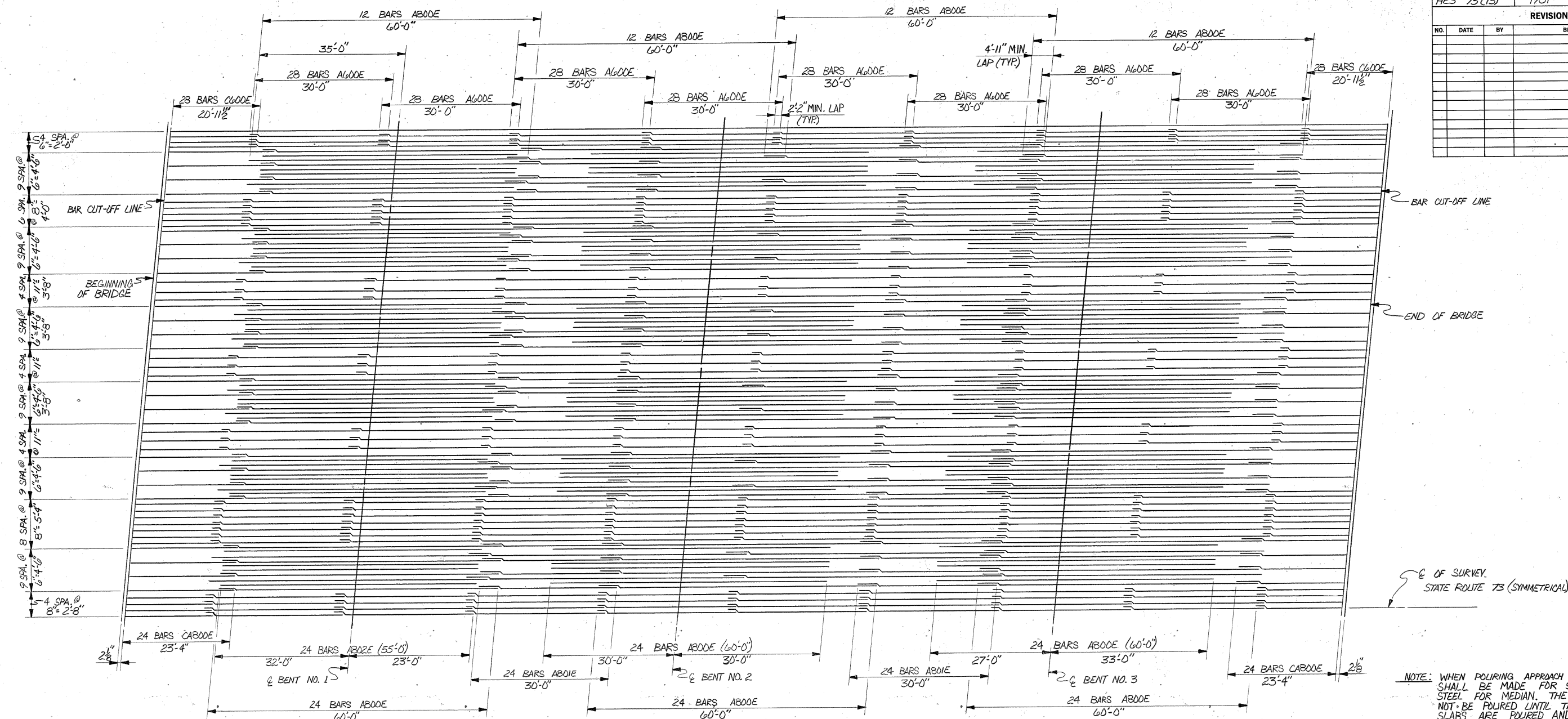
M-189-76

CONST. NO. 53012-3218-94

PROJECT NO.	YEAR	SHEET NO.
HES-73(13)	1987	

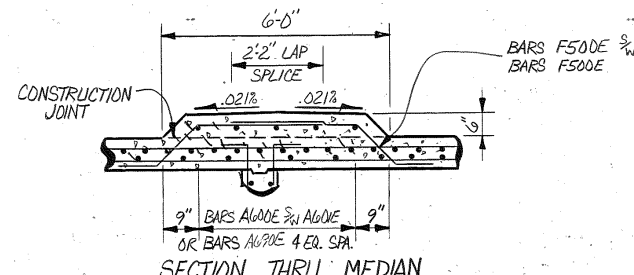
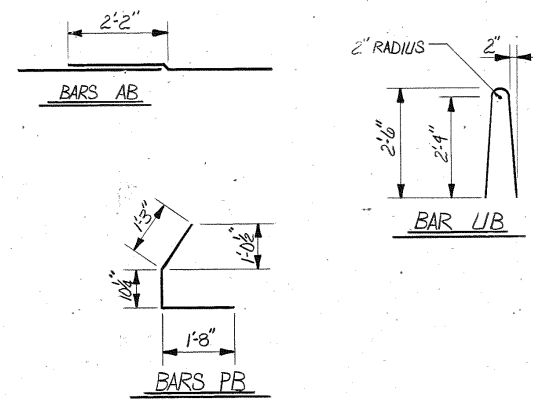
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

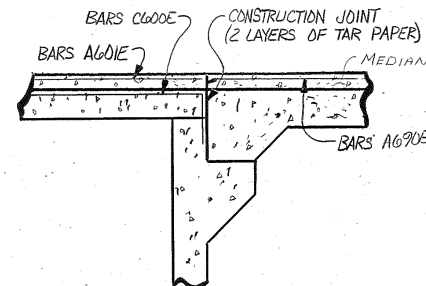


HALF PLAN OF REINFORCEMENT

NOTE: WHEN POURING APPROACH SLABS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR MEDIAN. THE MEDIAN SHALL NOT BE POURED UNTIL THE APPROACH SLABS ARE POURED AND CURED.



SECTION THRU MEDIAN



SECTION AT ABUTMENTS

ESTIMATED QUANTITIES - PER FOOT (REINFORCED CONCRETE MEDIAN)	
CLASS "A" CONCRETE C.Y.	REINFORCING STEEL LBS.
0.1	23

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
SUPERSTRUCTURE DETAILS
WIDENING STATE ROUTE 73
OVER INTERSTATE 75
STATION 1147+38.80
LODGE COUNTY
1987

DESIGNED BY T. MACKIE DATE 11/86
DRAWN BY M. SURDAM DATE 11/87
SUPERVISED BY J. HIGDON & J. PRINCE DATE 11/87
CHECKED BY T. MACKIE DATE 11/87

CORRECT Edward P. Wossner
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

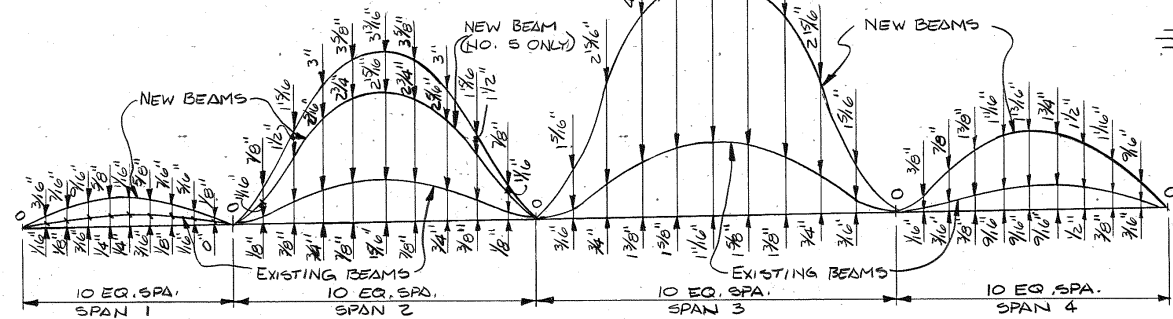
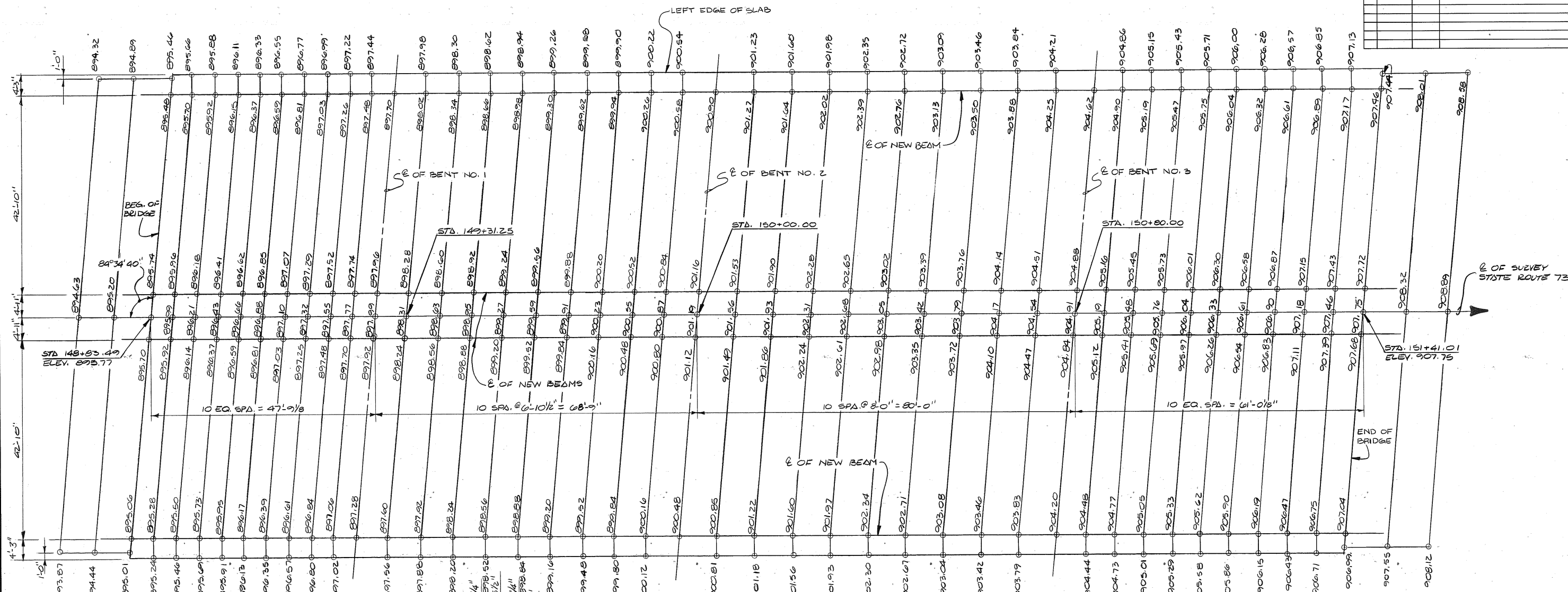
M-189-77

CONST. NO. 53012-3210-94

PROJECT NO.	YEAR	SHEET NO.
HE-73 (13)	1987	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	6-8-87	TDM	ADDED NOTE



DEAD LOAD CORRECTION CURVE

NOTE: THIS CURVE IS FOR DEAD LOAD CAMBER ONLY, AND SHOULD BE INCREASED BY THE AMOUNT OF ANTICIPATED TAKE UP IN THE FALSEWORK.

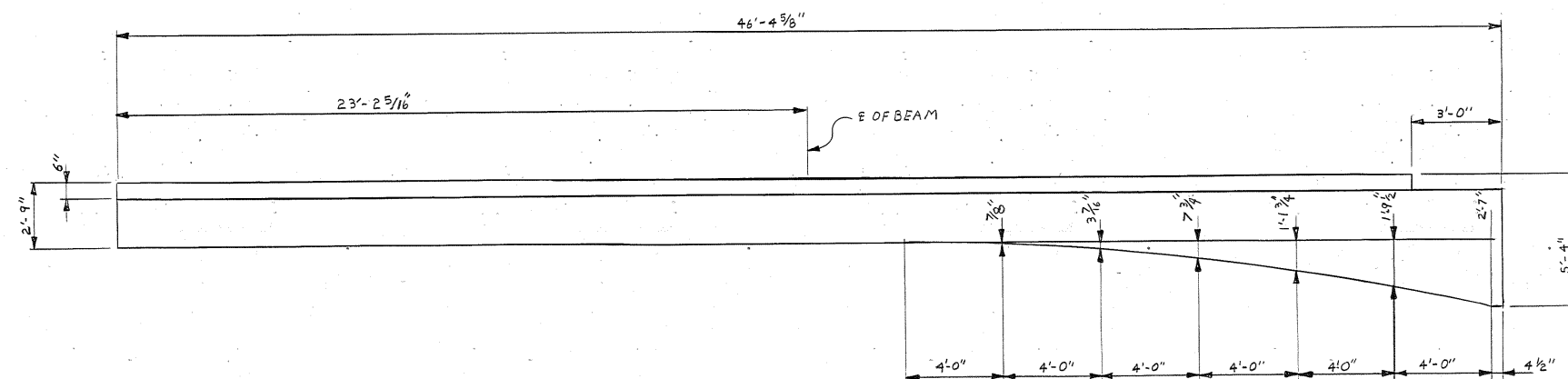
DESIGNED BY T. MACKIE
 DRAWN BY S. LEWIS
 SUPERVISED BY FIELD & PRINCE
 CHECKED BY T. MACKIE
 DATE 11-86
 DATE 1-87
 DATE 1-87
 DATE 1-87

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
 SUPERSTRUCTURE DETAILS
 WIDENING STATE ROUTE 73 LEFT AND
 RIGHT LANES OVER INTERSTATE-75
 STATION 1147+38.80
 LOUDON COUNTY
 1987

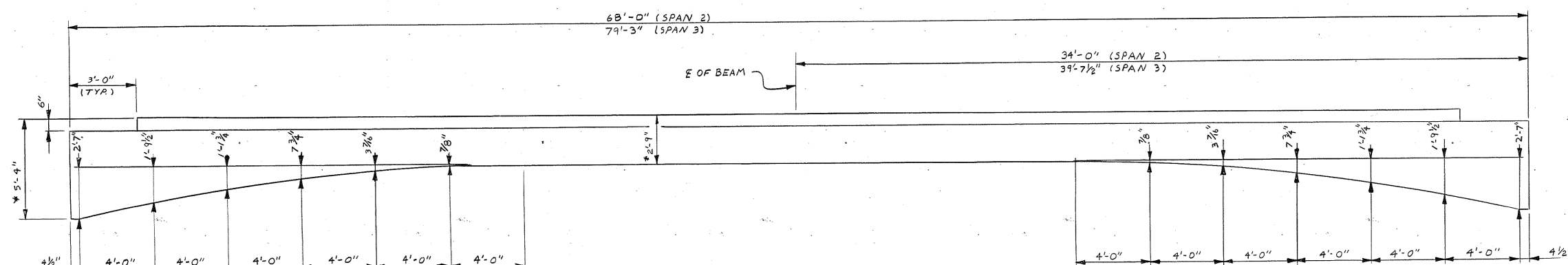
CORRECTED BY Edward P. Wasserman
 ENGINEER OF STRUCTURES
 APPROVED R. W. Evans
 DIRECTOR OF HIGHWAYS

M-189-79

PROJECT NO.	YEAR	SHEET NO.
HES 73(13)	1987	

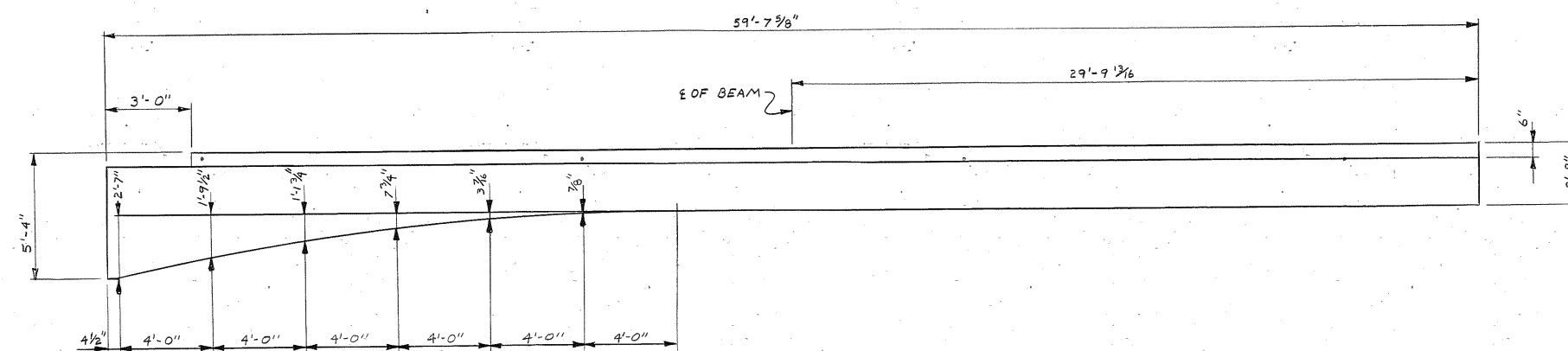
[illegible]

ELEVATION
(SPAN 1)



ELEVATION
(SPANS 2 & 3)

*NOTE: BEAM NO. 5 IN SPAN 2
VARIES FROM 2'-6" TO
5'-1".



ELEVATION
(SPAN NO. 4)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PRE-CAST T-BEAMS DETAILS
WIDENING OF STATE-ROUTE 73
OVER INTERSTATE 75
STATION 1147+38.8
LOUDON COUNTY
1987

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES
APPROVED Louis Gross
DIRECTOR OF HIGHWAYS

M-189-80

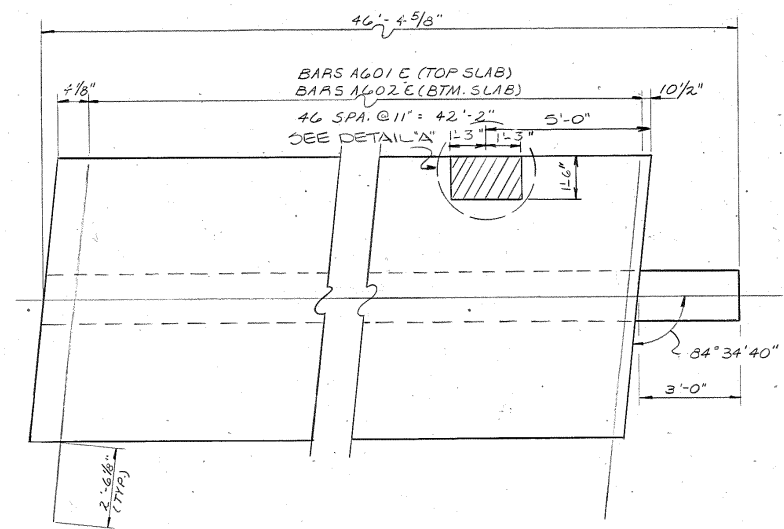
TRAINING 44-141 61318

DESIGNED BY T. MACKIE DATE 1-87
DRAWN BY D. HAMPTON DATE 1-87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

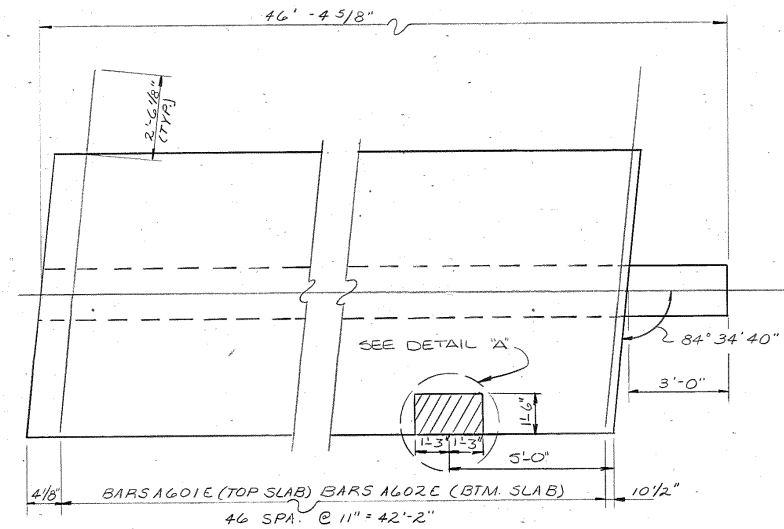
CONST. NO. 53012-3218-94

PROJECT NO.	YEAR	SHEET NO.
HCS-73(13)	1987	

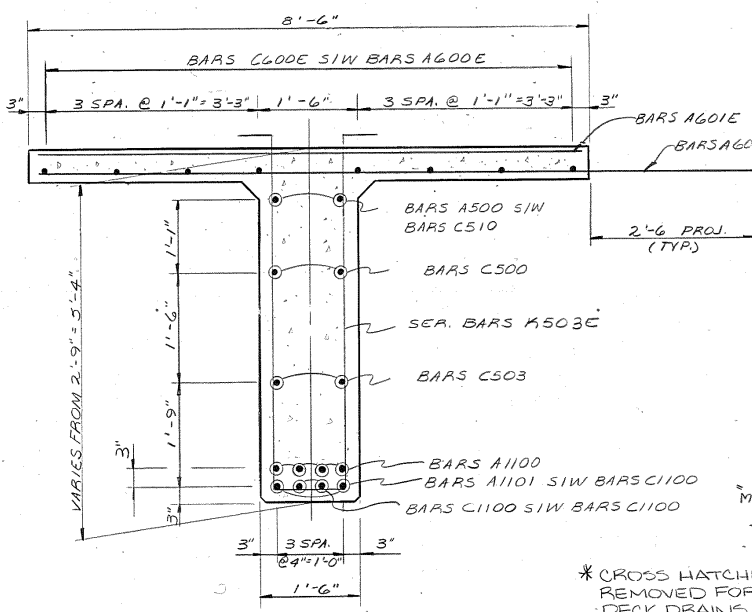
REVISIONS			BRIEF DESCRIPTION
NO.	DATE	BY	
1	8-17-87	TDM	CHANGED CROSS HATCHED AREA'S DIMENSIONS, ADDED NOTE
2			CHANGED SHEAR STEEL



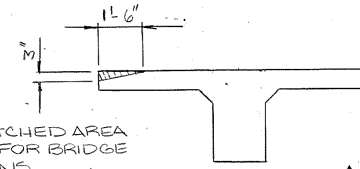
PLAN OF BEAM 1



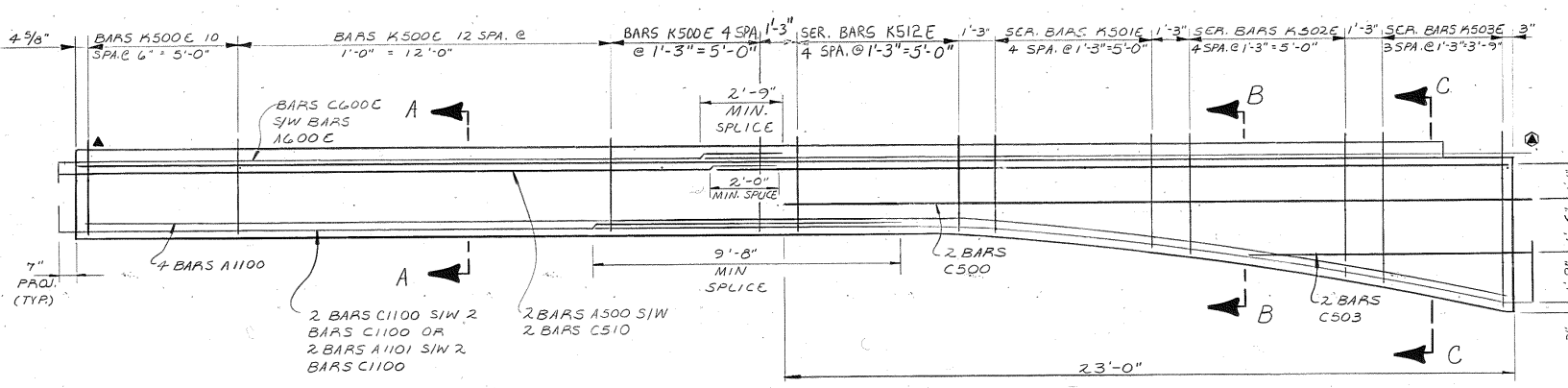
PLAN OF BEAM 4



SECTION C-C
(LOOKING FORWARD BEAM 1)
(LOOKING BACK BEAM 4)

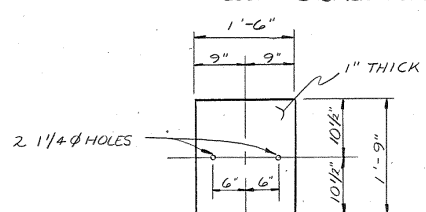


DETAIL "A"
(LOOKING FORWARD BEAM 1)
(LOOKING BACK BEAM 4)

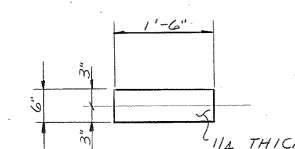


ELEVATION

- ▲ DENOTES: 2 1/2" PROJECTION
- DENOTES: 6 1/2" PROJECTION



TYPICAL @ BENTS
ELASTOMERIC BEARING
PAD DETAILS



TYPICAL @ ABUTMENTS
ELASTOMERIC BEARING
PAD DETAILS

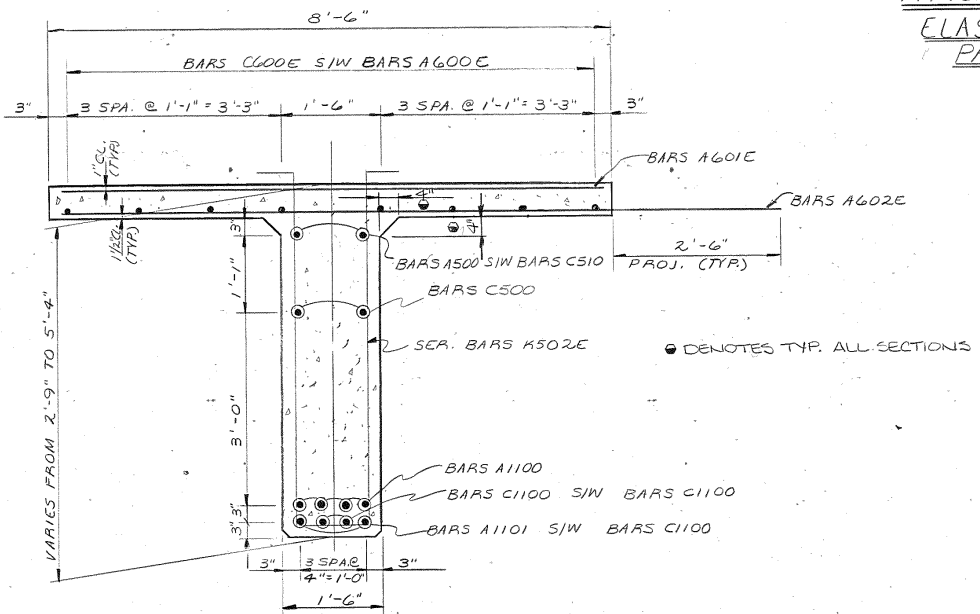
▲ NOTE: SEE DWG. NO. M-189-89 FOR MODIFICATIONS TO SHEAR STEEL.
NOTE: SEE DWG. NO. M-189-80 FOR ORDINATES OF PARABOLIC HAUNCH.

ESTIMATED QUANTITIES (PER BEAM)

	CLASS "A" CONCRETE C.Y.	EPOXY COATED REINFORCING STEEL LB.	REINFORCING STEEL LB.
BEAM 1	14	2357	2429
BEAM 4	14	2357	2429

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRECAST T-BEAMS 1 & 4
WIDENING OF STATE ROUTE
73 (LT. & RT. LANES) OVER
INTERSTATE 75
STA. 1147+38.80
LOUDON COUNTY
1987

SECTION A-A
(LOOKING FORWARD BEAM 1)
(LOOKING BACK BEAM 4)



SECTION B-B
(LOOKING FORWARD BEAM 1 LOOKING BACK BEAM 4)

DESIGNED BY T. MACKIE DATE 12-86
DRAWN BY C. BERNATEK DATE 1-87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

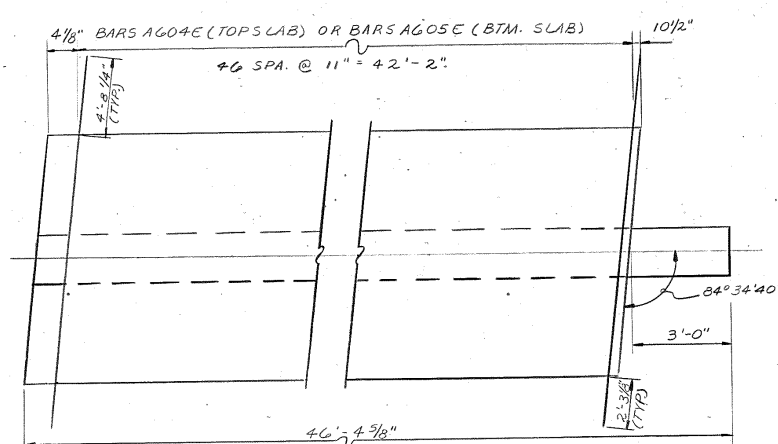
CORRECT Edward P. Wessman
ENGINEER OF STRUCTURES
APPROVED Lewis Quana
DIRECTOR OF HIGHWAYS
M-189-81

REVISION 44-141 61318

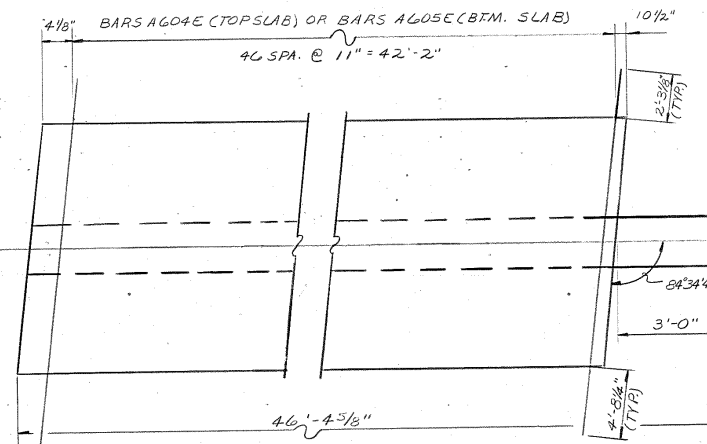
CONST. NO. 53012-3218-94

PROJECT NO.	YEAR	SHEET NO.
HES-73 (13)	1987	

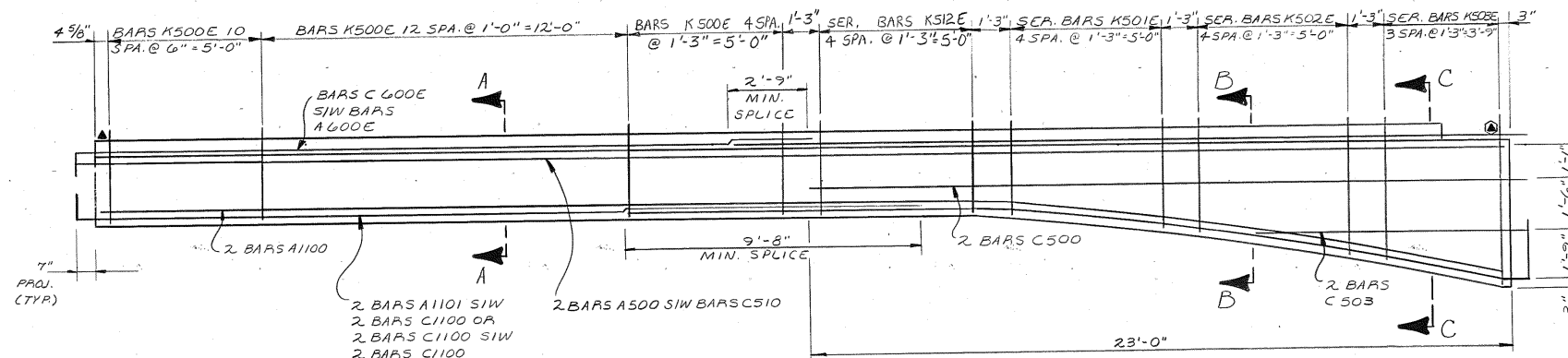
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	8-17-87	TDM	ADDED NOTE AND CHANGED SHEAR STEEL.



PLAN OF BEAM 2

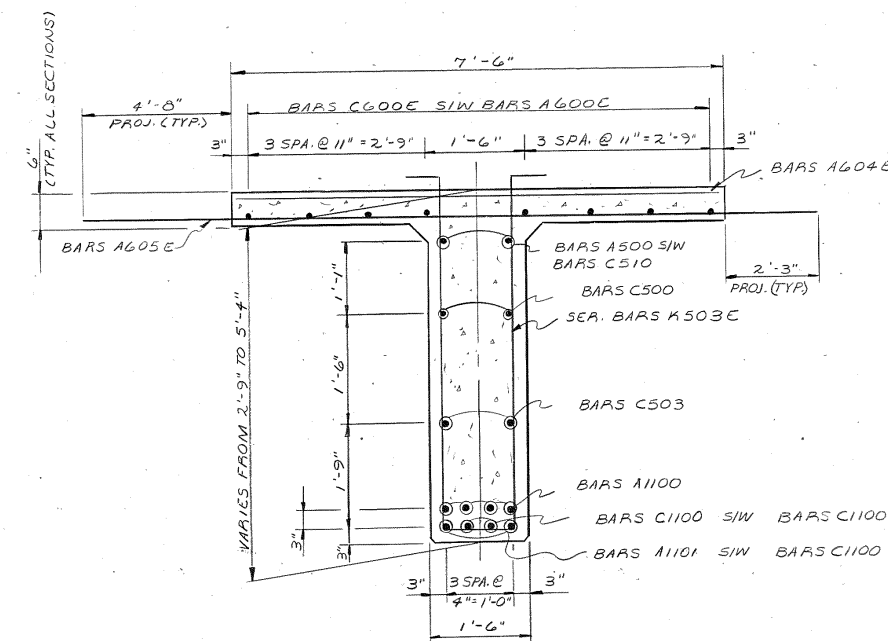


PLAN OF BEAM 3



ELEVATION A

▲ DENOTES: 2 1/2\"/>



SECTION C-C
(LOOKING FORWARD BEAM 2)
(LOOKING BACK BEAM 3)

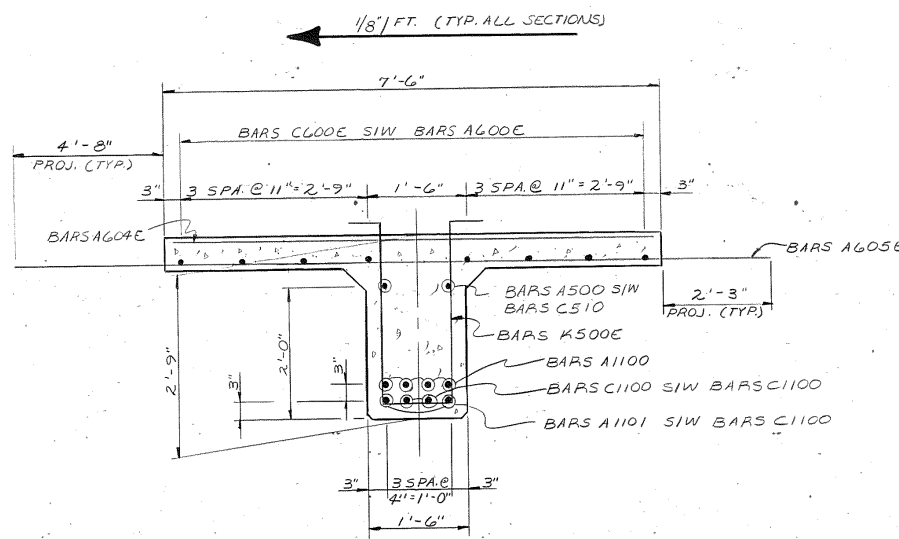
NOTE: SEE DWG. NO. M-189-B9 FOR MODIFICATIONS TO SHEAR STEEL.

NOTE: SEE DWG. NO. M-189-80 FOR ORDINATES OF PARABOLIC HAUNCH.

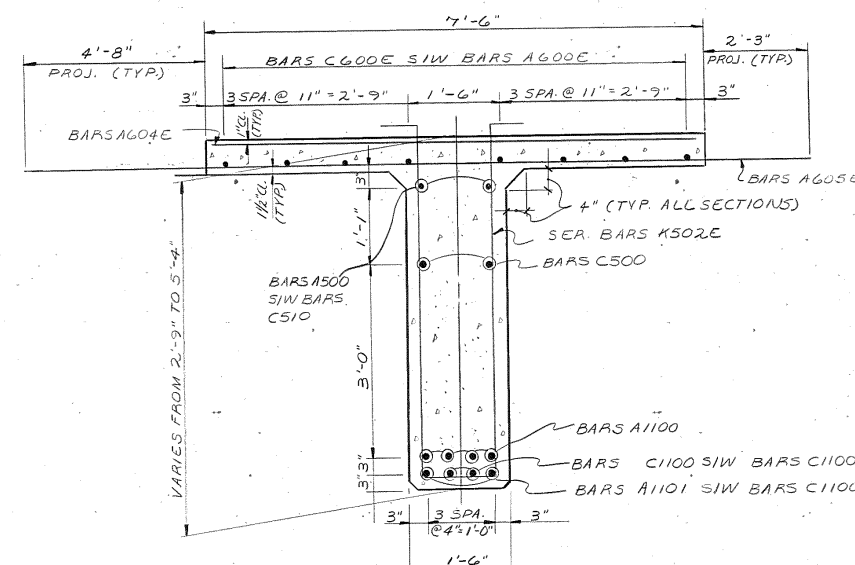
ESTIMATED QUANTITIES PER BEAM

	CLASS "A" CONCRETE C.Y.	EPOXY COATED REINFORCING STEEL C.Y.	REINFORCING STEEL LB.
BEAM 2	13	2545	2429
BEAM 3	13	2545	2429

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRE-CAST T-BEAMS 2 & 3
WIDENING OF STATE ROUTE 73 (LT & RT LANES) OVER INTERSTATE 75
STA. 1147+38.80
LOUDON COUNTY
1987



SECTION A-A
(LOOKING FORWARD BEAM 2)
(LOOKING BACK BEAM 3)



SECTION B-B
(LOOKING FORWARD BEAM 2)
(LOOKING BACK BEAM 3)

DESIGNED BY T. MACKIE DATE 12-86
DRAWN BY C. BERNATEK DATE 1-87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

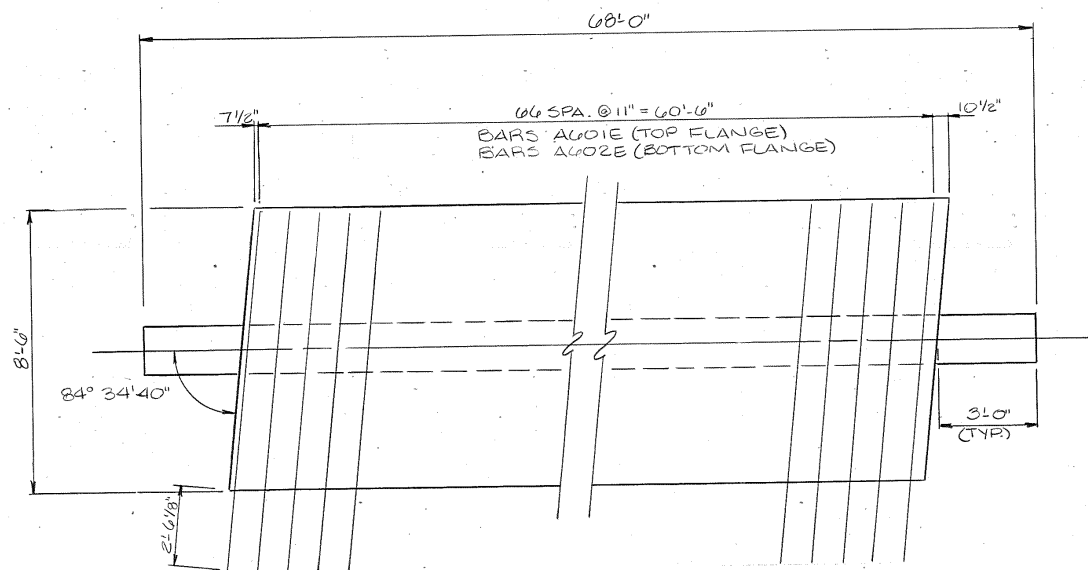
CORRECT Edward P. Wosman
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-189-82

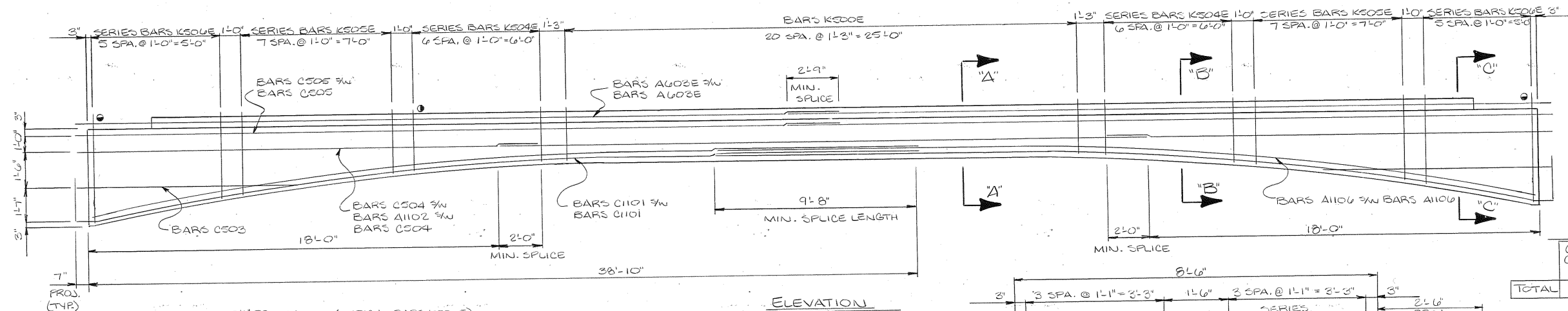
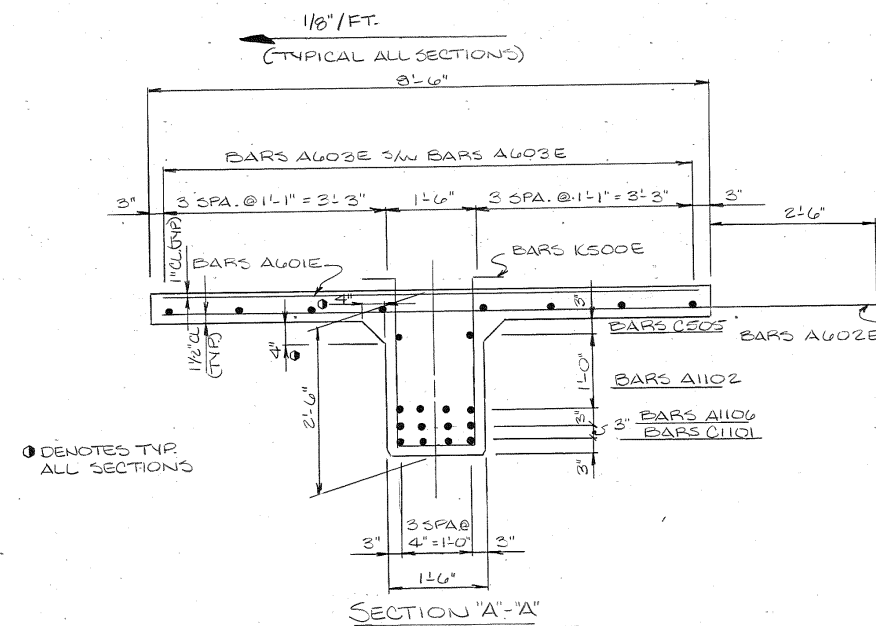
PROJECT NO.	YEAR	SHEET NO.
HES 73 (13)	1987	

[illegible]

NOTE: SEE DWG. NO. M-189-89 FOR MODIFICATIONS TO SHEAR STEEL.

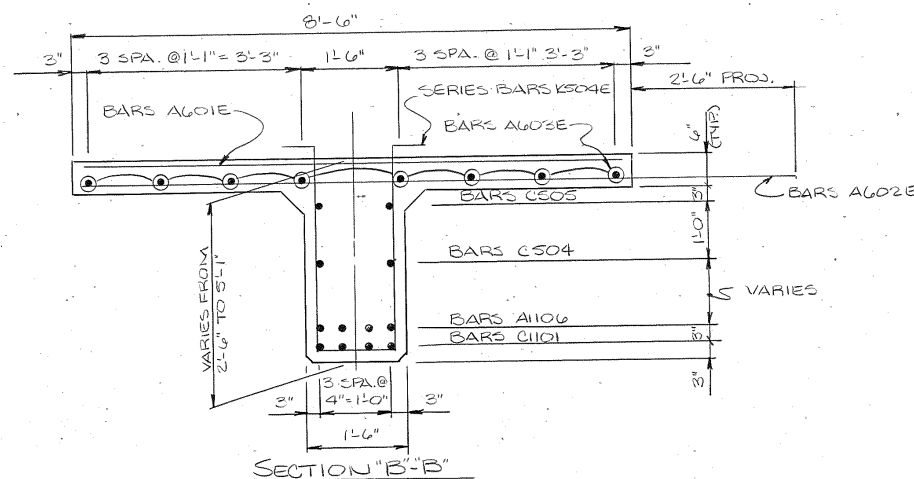


PLAN BEAM 5

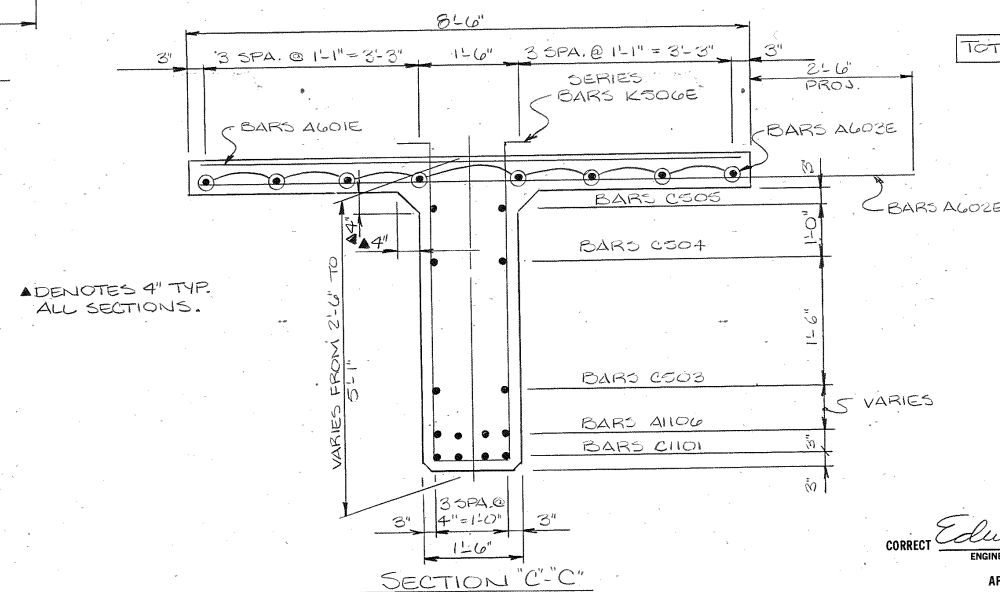


ELEVATION

- DENOTES 8 1/2" PROJECTION (TYPICAL BARS K50-E)
- ① DENOTES 2 1/2" PROJECTION (TYPICAL BARS K50-E)



SECTION "B"- "B"



SECTION "C"-C

(BEAM 5)

"ESTIMATED QUANTITIES"

	CLASS "A" CONCRETE CY.	EPOXY-COATED STEEL LB.	REINFORCING STEEL LB.
TOTAL	20	3365	4388

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRECAST T-BEAM 5
WIDENING STATE ROUTE 73
(LT. & RT. LANES) OVER
INTERSTATE 75
STATION 1147+38.80
LOUDON COUNTY
1987

CORRECT Edward P. Wosservan
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-189-83

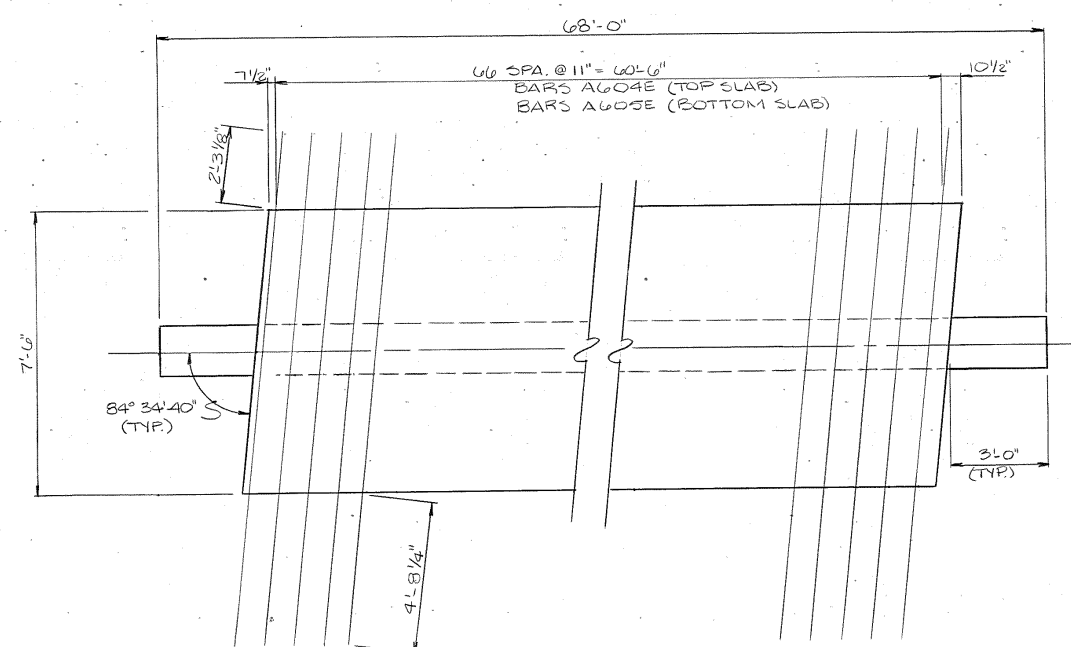
BLINDING 44-141 61318

DESIGNED BY T. MACKIE DATE 11-86
DRAWN BY K. DOUGLAS DATE 1-87
SUPERVISED BY J. FIELDS DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

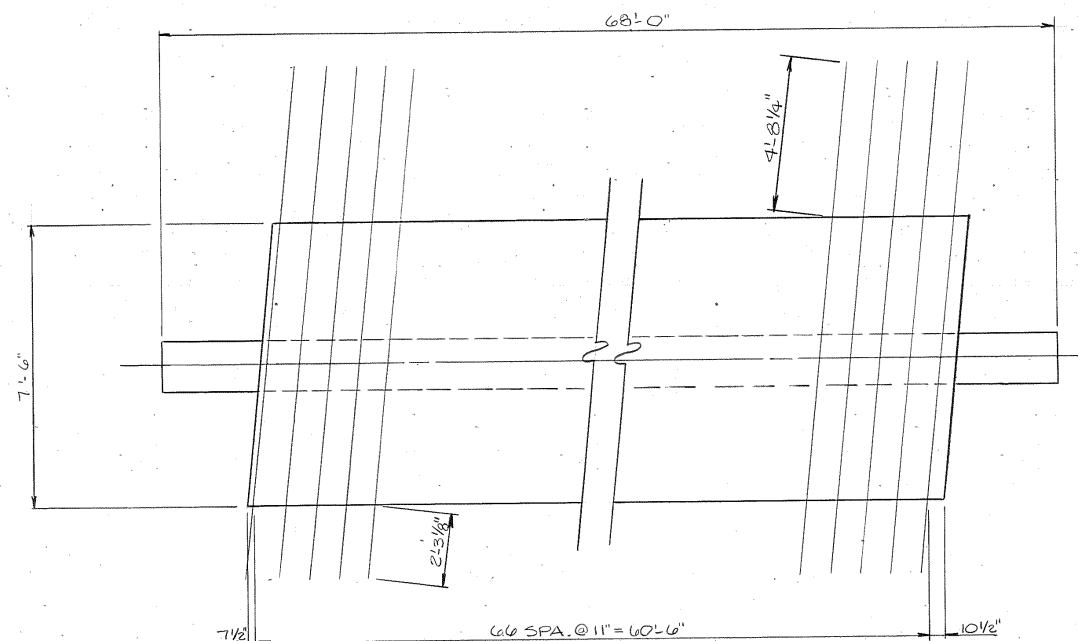
PROJECT NO.	YEAR	SHEET NO.
HES-73-(13)	1987	

[illegible]

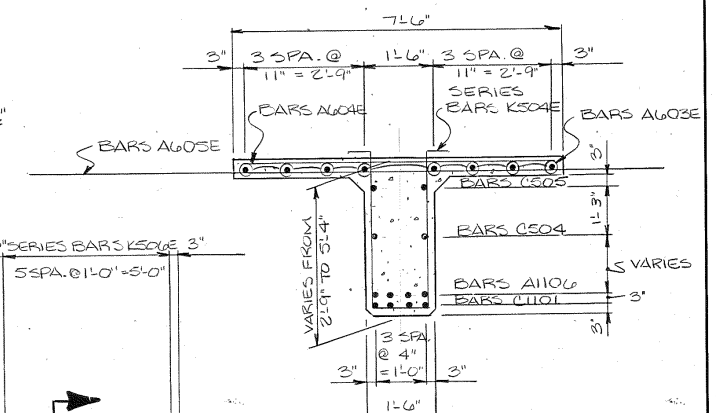
⚠ NOTE: SEE DWG. NO. M-189-89 FOR MODIFICATIONS TO SHEAR STEEL.



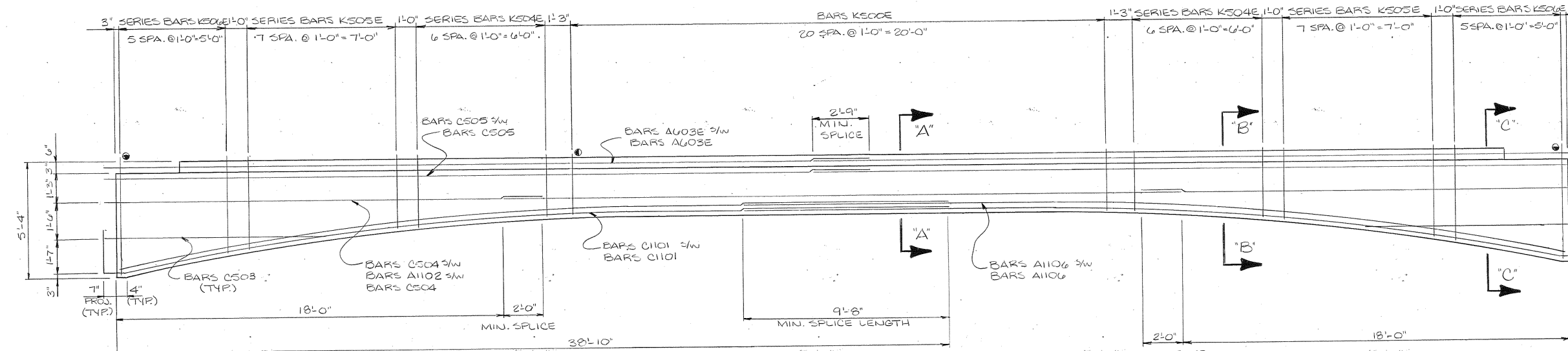
PLAN BEAM 7



PLAN BEAM 6

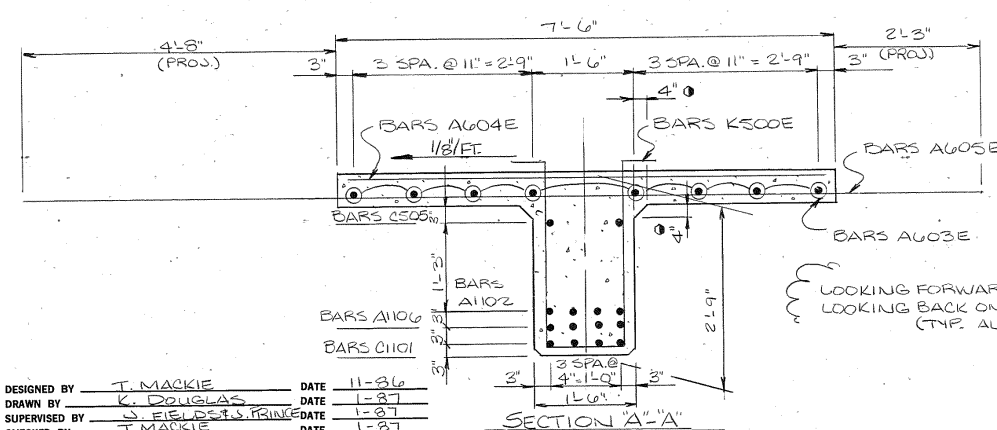


SECTION "B"-B



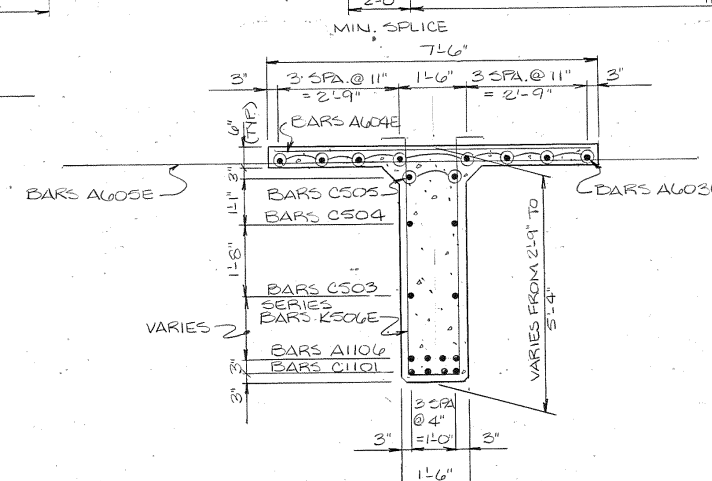
1/8" / FT.
(TYPICAL ALL SECTIONS)

ELEVATION



LOOKING FORWARD ON SURVEY T-BEAM 6
LOOKING BACK ON SURVEY T-BEAM 7
(TYP. ALL SECTIONS)

SECTION "A"- "A"



SECTION "C"-C

(PER BEAM)

ESTIMATED QUANTITIES

	CLASS IV CONCRETE CY	EPOXY-COATED STEEL LB	REINFORCING STEEL LB
TOTAL	20	3648	4388

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRECAST T-BEAM 6 FT.
WIDENING STATE ROUTE 73
(LT. & RT. LANES) OVER
INTERSTATE 75
STATION 1147+38.80
LOUDON COUNTY
1987

CORRECT Edward P. Wosserman
ENGINEER OF STRUCTURES

APPROVED Louis Evans
DIRECTOR OF HIGHWAYS

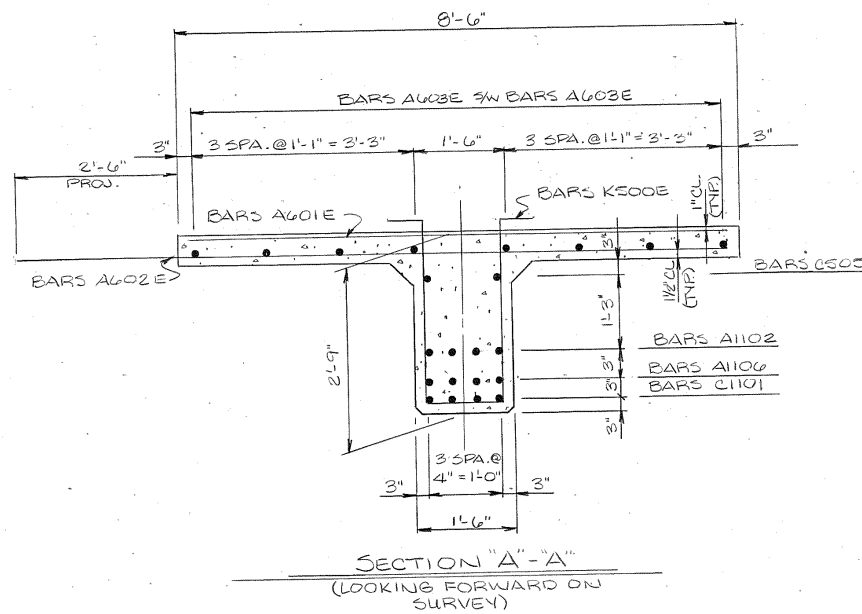
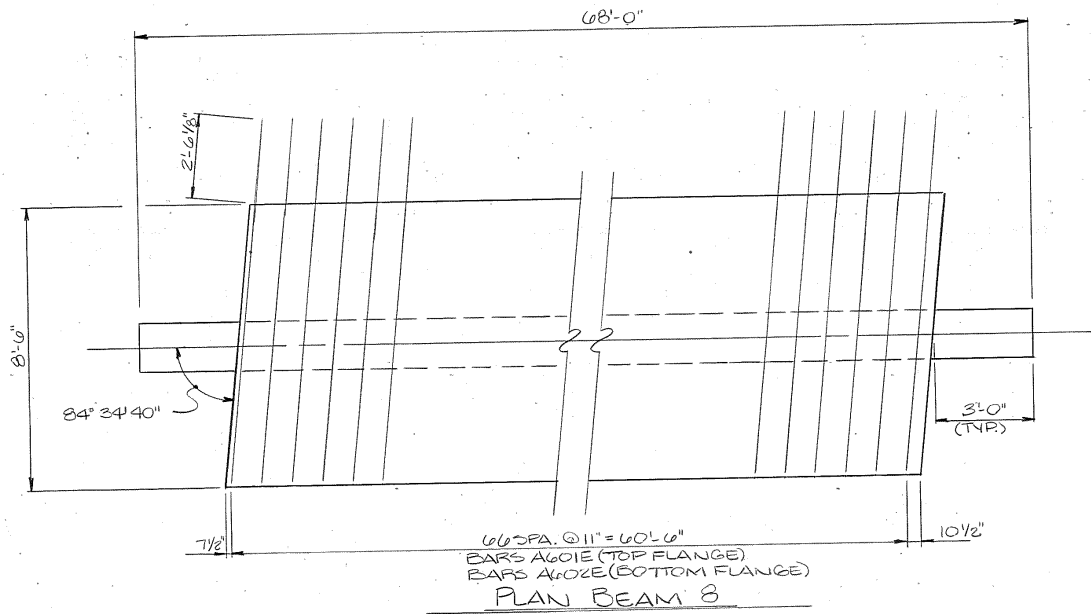
✓ 1-189-84

RUNING 44-141 61318

DESIGNED BY T. MACKIE DATE 11-86
DRAWN BY K. DOUGLAS DATE 1-87
SUPERVISED BY J. FIELD & S. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

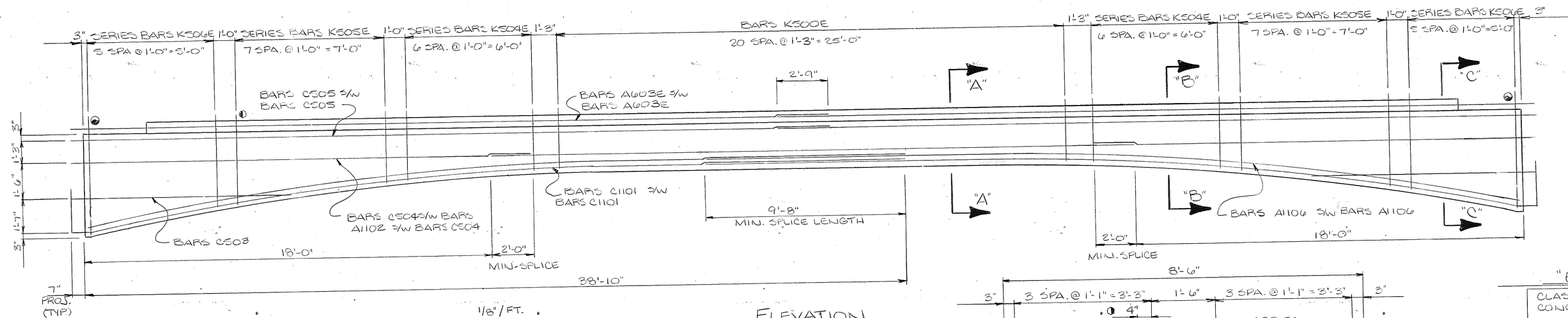
CONST. NO. 53012-3218-94

PROJECT NO.	YEAR	SHEET NO.	
HES-73(13)	1987		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	8-17-87	TDM	CHANGED QUANTITY AND ADDED NOTE



NOTE: SEE DWG. NO. M-189-80 FOR ORDINATES OF PARABOLIC HAUNCH.

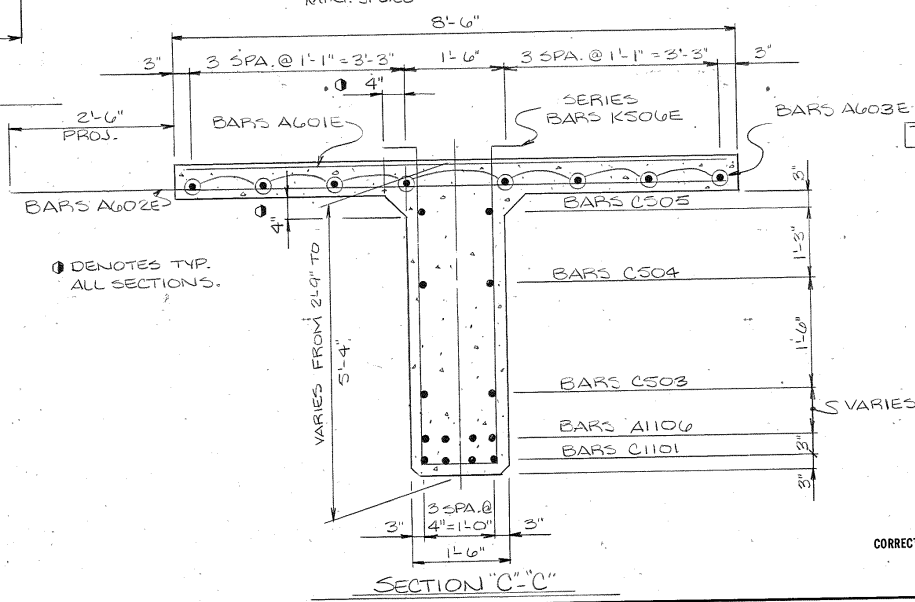
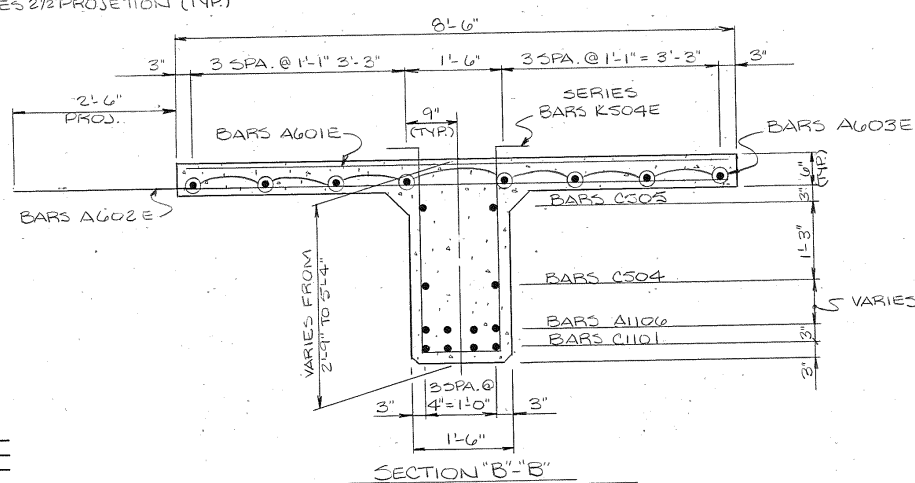
NOTE: SEE DWG. NO. M-189-89 FOR MODIFICATIONS TO SHEAR STEEL.



● DENOTES 8/8" PROJECTION

○ DENOTES 2 1/2" PROJECTION (TYP)

1/8" / FT. (TYPICAL ALL SECTIONS)



(BEAM 8) "ESTIMATED QUANTITIES"

CLASS 2' CONCRETE	EPOXY-COATED STEEL	REINFORCING STEEL
CY.	LB.	LB.
21	3,380	4,338
TOTAL		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRECAST T-BEAM 8
WIDENING STATE ROUTE 73
(LT. & RT. LANES) OVER
INTERSTATE 75
STATION 1147+38.80
LODON COUNTY
1987

CORRECT *Edward P. Wosserman*
ENGINEER OF STRUCTURES
APPROVED *Louis E. Burns*
DIRECTOR OF HIGHWAYS

M-189-85

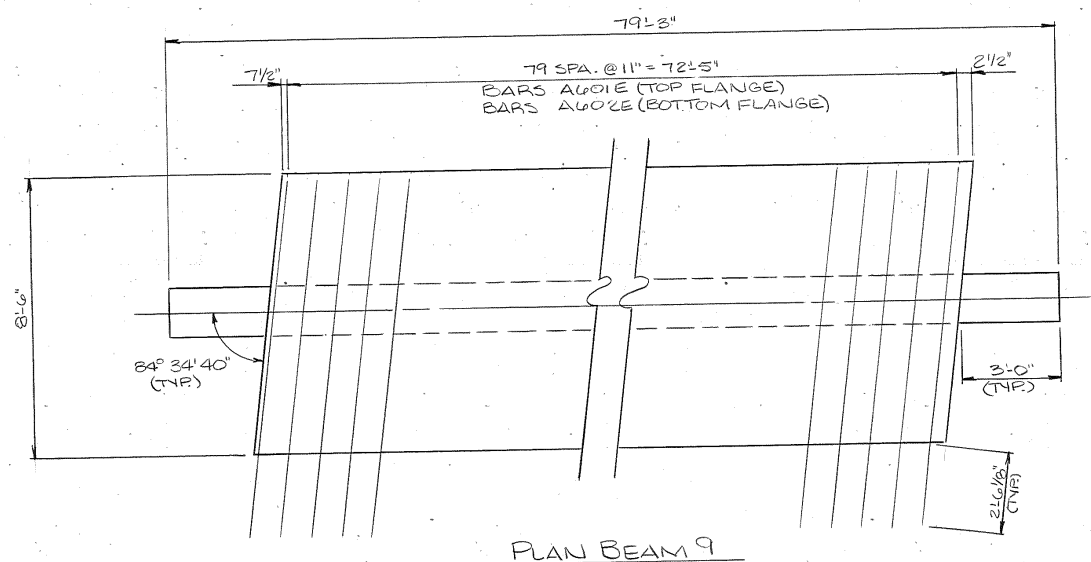
DESIGNED BY T. MACKIE DATE 11-86
DRAWN BY K. DOUGLAS DATE 1-87
SUPERVISED BY S. FIELDSTON DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

BRUNING 44-141 61318

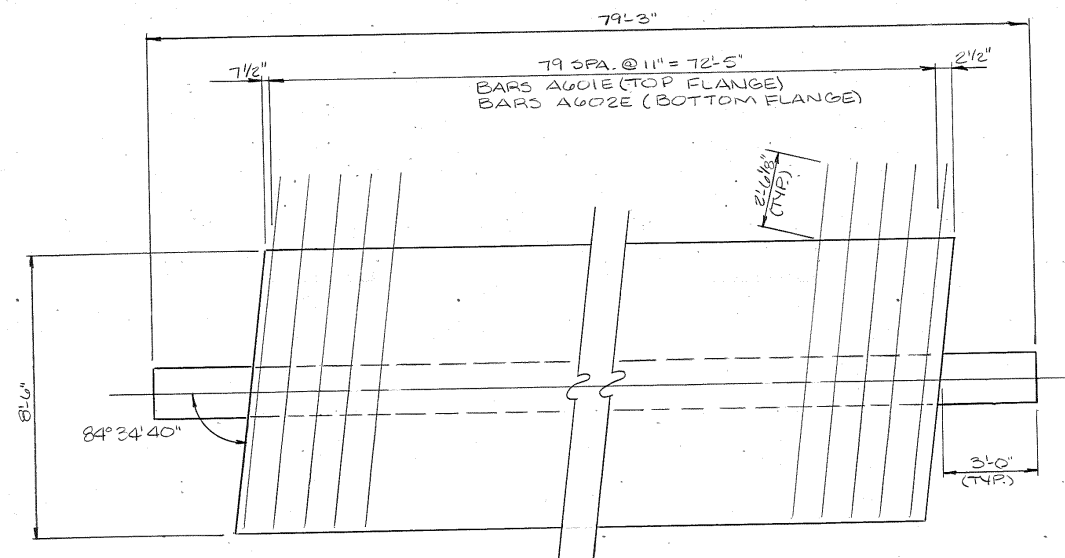
PROJECT NO.	YEAR	SHEET NO.
HE-73(12)	1987	

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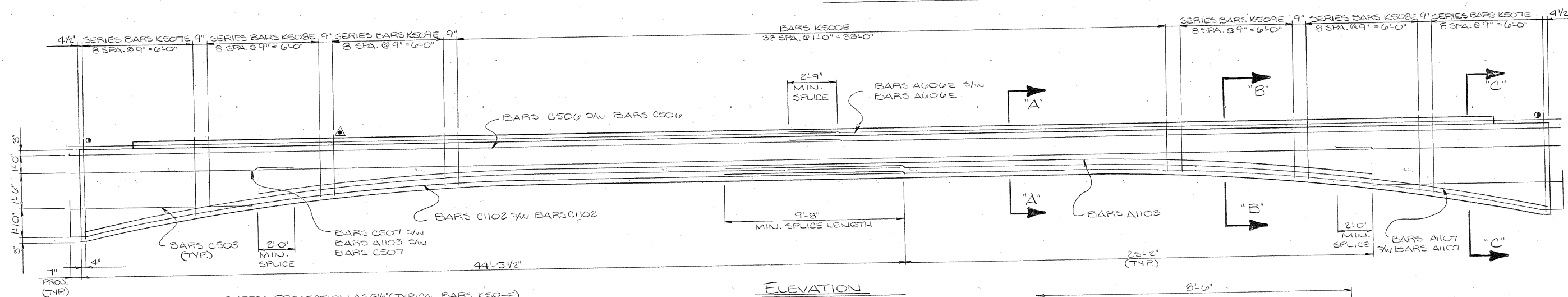
⚠ NOTE: SEE DWG. NO. M-189-89 FOR
MODIFICATIONS TO SHEAR STEEL.



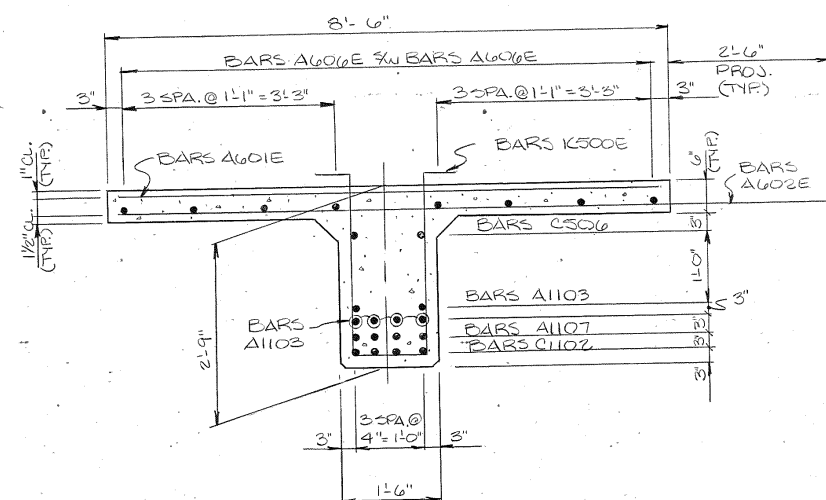
PLAN BEAM 9



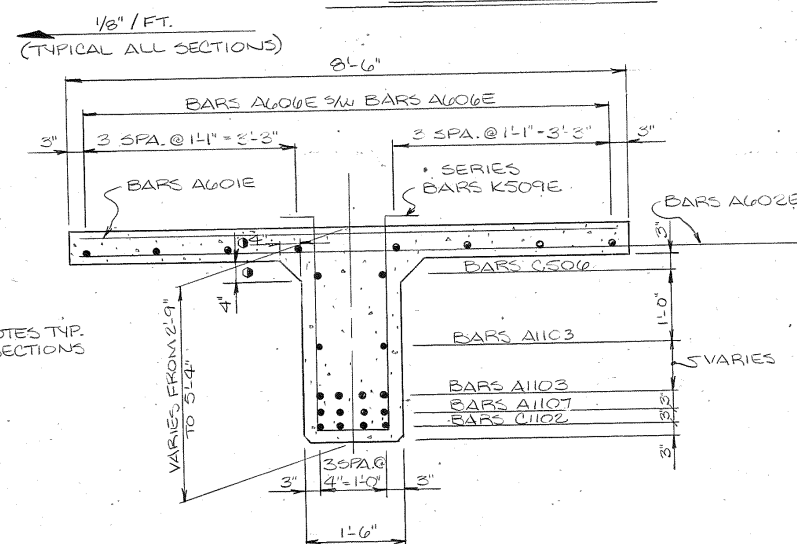
PLAN BEAM 12



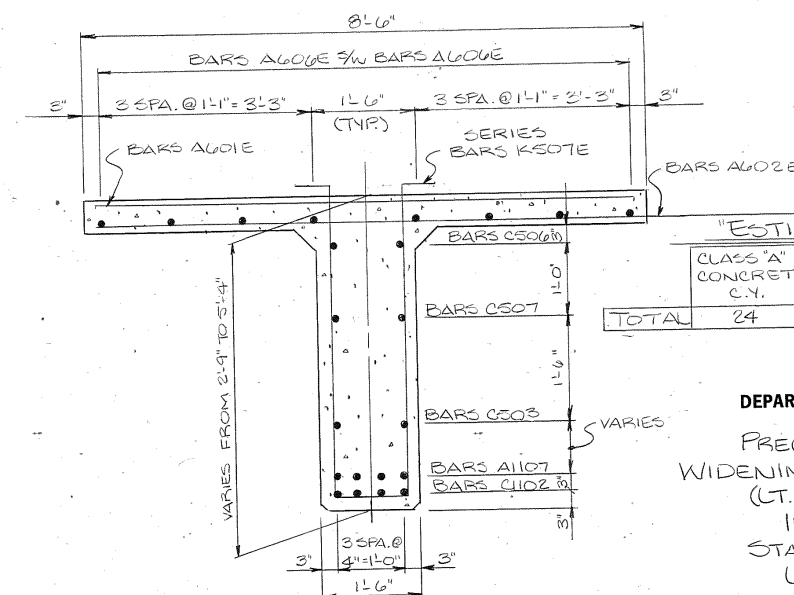
① DENOTES PROJECTION AS 8 1/2" (TYPICAL BARS K50-E)
 ▲ DENOTES PROJECTION AS 2 1/2" (TYPICAL BARS K50-E)



SECTION "A"- "A"
(LOOKING FORWARD BEAM 9)
(LOOKING BACK BEAM 12)



SECTION "B"- "B"
(LOOKING FORWARD BEAM 9)
(LOOKING BACK BEAM 12)



SECTION "C"- "C"
(LOOKING FORWARD BEAM 9)
(LOOKING BACK BEAM 12)

(PER BEAM)

"ESTIMATED QUANTITIES"

	CLASS "A" CONCRETE C.Y.	EPOXY-COATED STEEL LB.	REINFORCING STEEL LB.
TOTAL	24	4,159	6,059

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRECAST T-BEAM 9412
WIDENING STATE ROUTE 73
(LT. & RT. LANES) OVER
INTERSTATE 75
STATION 1147+38.80
LOUDON COUNTY
1987

DESIGNED BY T. MACKIE DATE 11-86
DRAWN BY K. DOUGLAS DATE 1-87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-189-86

PROJECT NO.	YEAR	SHEET NO.
HES-73(13)	1987	

[illegible]

79'-3"

71'-6"

1/2"

79'-3" @ 11" = 72'-5"

BARS A604E (TOP FLANGE)

BARS A605E (BOTTOM FLANGE)

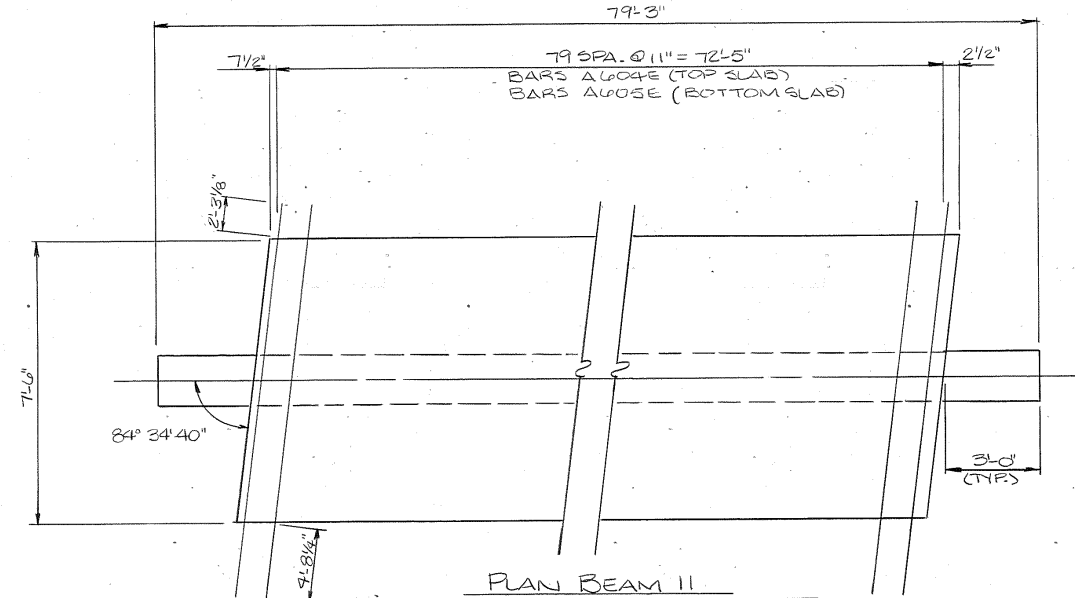
4'-8 1/4"

84° 34' 40" (TYP.)

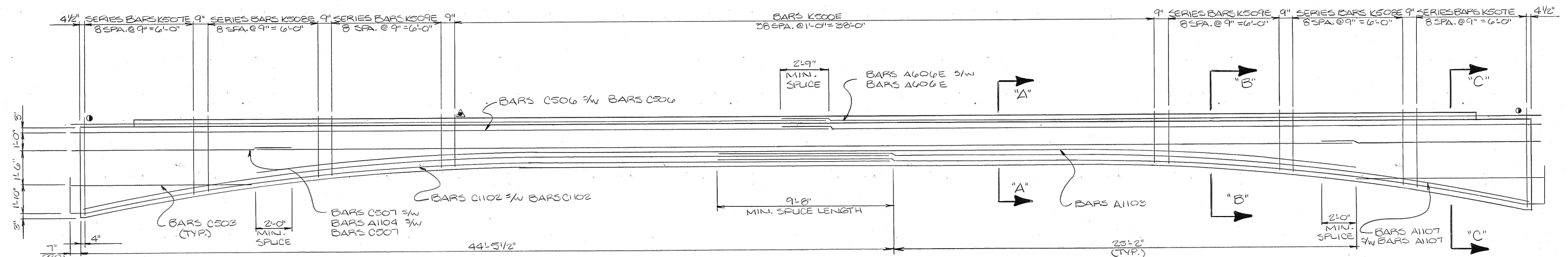
3'-0" (TYP.)

25 1/8"

PLAN BEAM 10



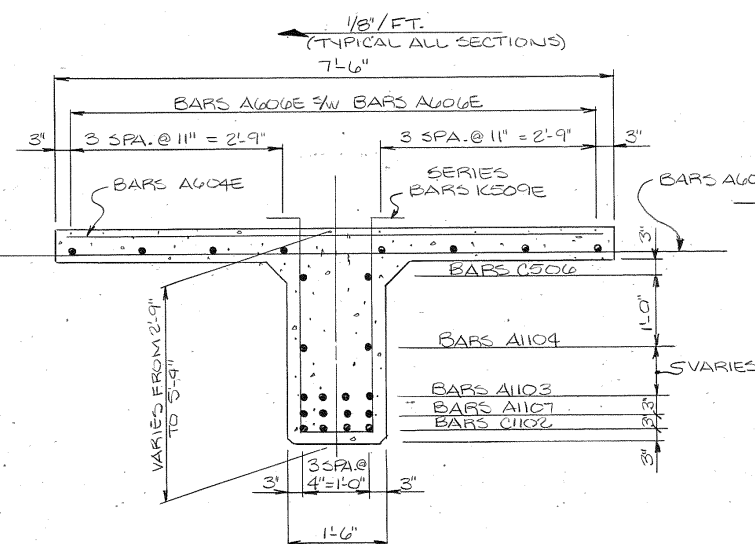
PLAN BEAM 1



ELEVATION

SECTION "A"-A"

DESIGNED BY T. MACKIE DATE 11-86
DRAWN BY K. DOUGLAS DATE 1-87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87



SECTION "B"-B"

[illegible]

SECTION "C"-"C"

(LOOKING FORWARD BEAM 10)
(LOOKING BACK BEAM 11)

(PER BEAM)

"ESTIMATED QUANTITIES"

	CLASS A ¹ CONCRETE CU.	EPoxy COATED STEEL LB.	REINFORCING STEEL LB.
TOTAL	23	4469	4059

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRECAST T-BEAM 10'x11'
WIDENING STATE ROUTE 73
(LT. & RT. LANES) OVER
INTERSTATE 75
STATION 1147+38.80
LOUDON COUNTY
1987

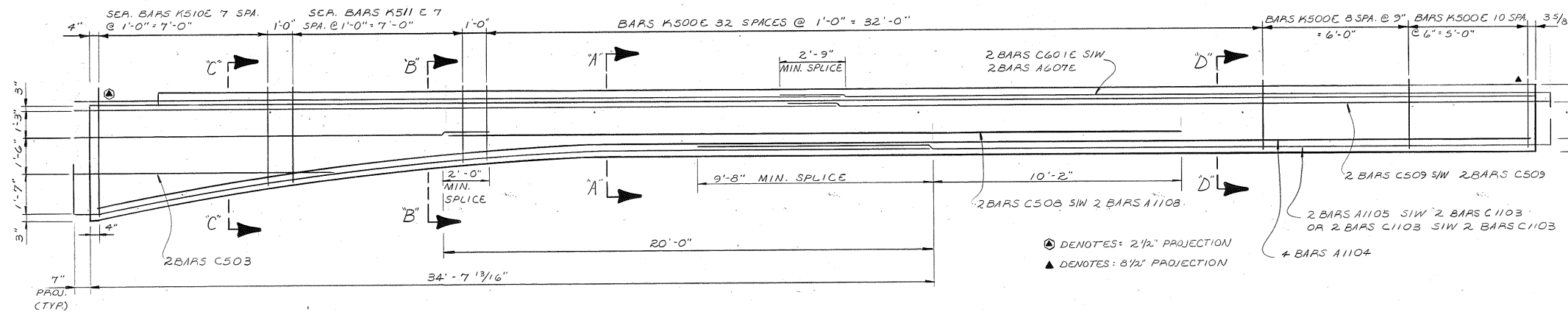
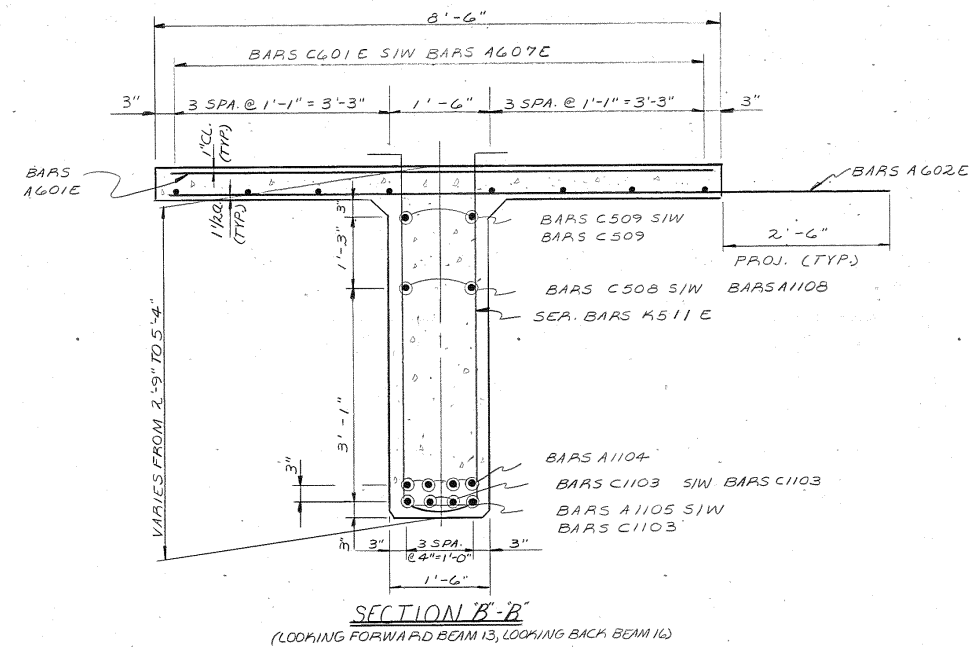
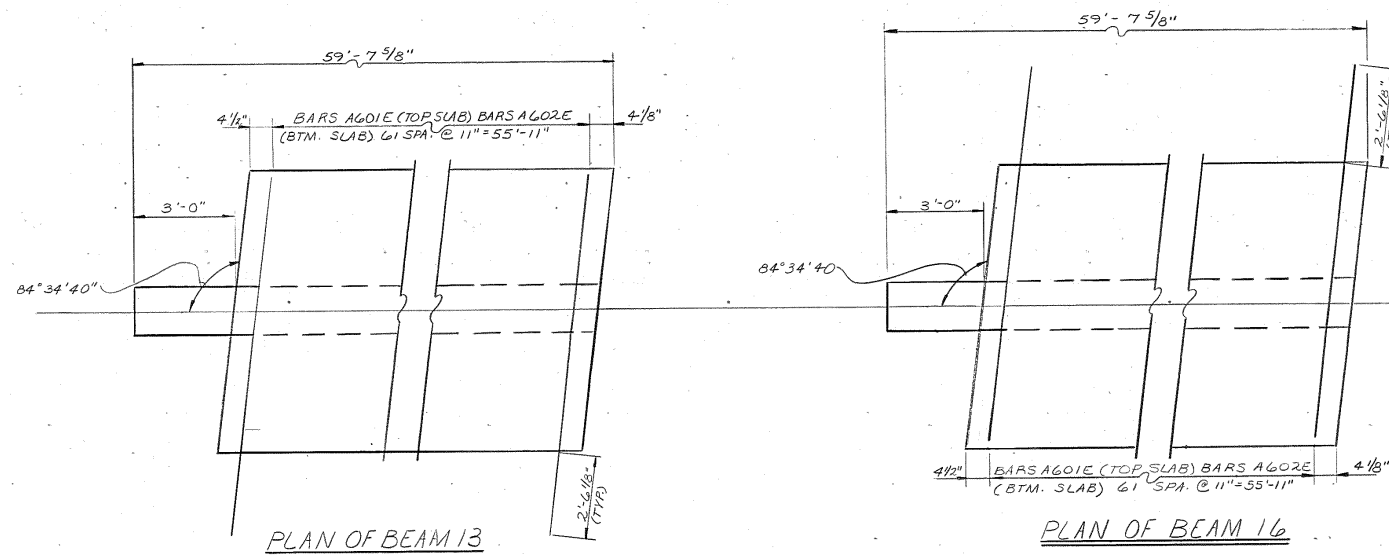
CORRECT Edward P. Wosseman
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

1-189-87

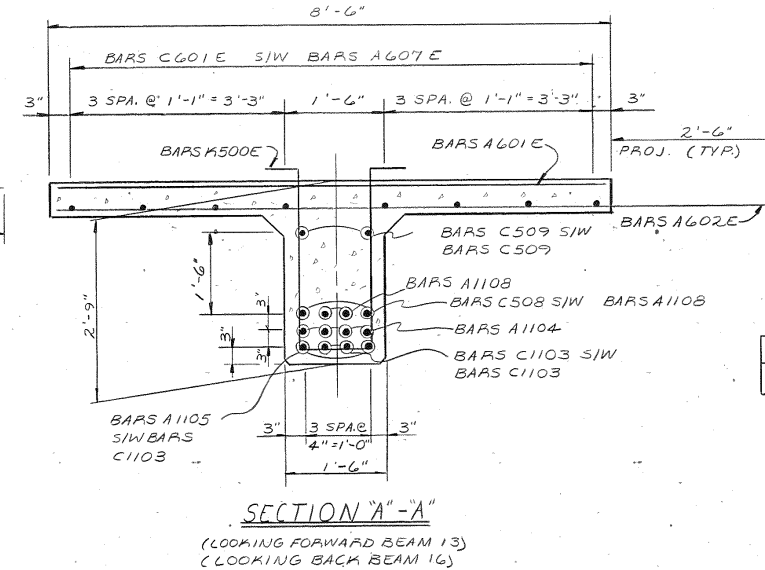
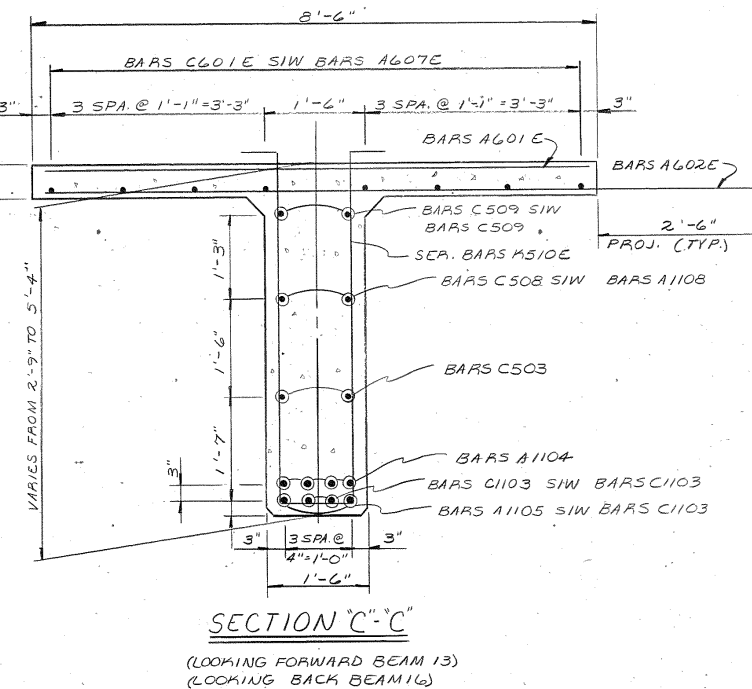
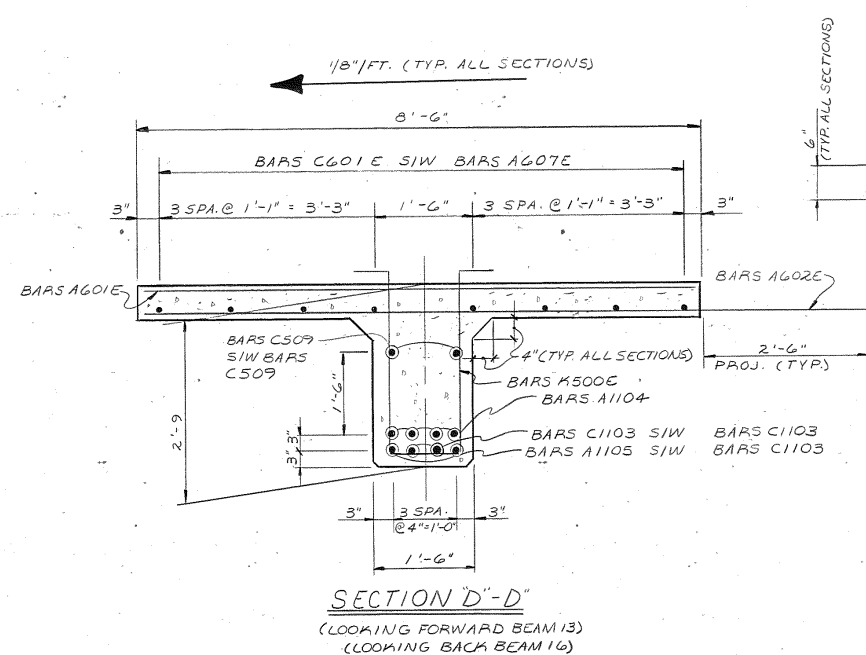
CONST. NO. 53012-3218-94

PROJECT NO.	YEAR	SHEET NO.
HES-73 (13)	1987	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	8-17-87	TOM	ADDED NOTE



⬤ DENOTES: 2 1/2" PROJECTION
▲ DENOTES: 8 1/2" PROJECTION



NOTE: SEE DWG. NO. M-189-89 FOR MODIFICATIONS TO SHEAR STEEL.
NOTE: SEE DWG. NO. M-189-80 FOR ORDINATES OF PARABOLIC HAUNCH.

ESTIMATED QUANTITIES (PER BEAM)

CLASS 'A' CONCRETE	EPOXY COATED REINFORCING STEEL	
	C.Y.	LB.
BEAM 13	18	3131
BEAM 16	18	3131

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRECAST T-BEAMS 13 & 16
WIDENING OF STATE ROUTE 73 (LT. & RT. LANES) OVER INTERSTATE 75
STA. 1147+38.80
LOUDON COUNTY
1987

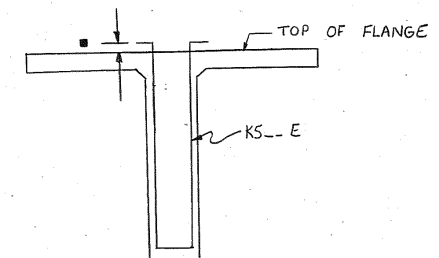
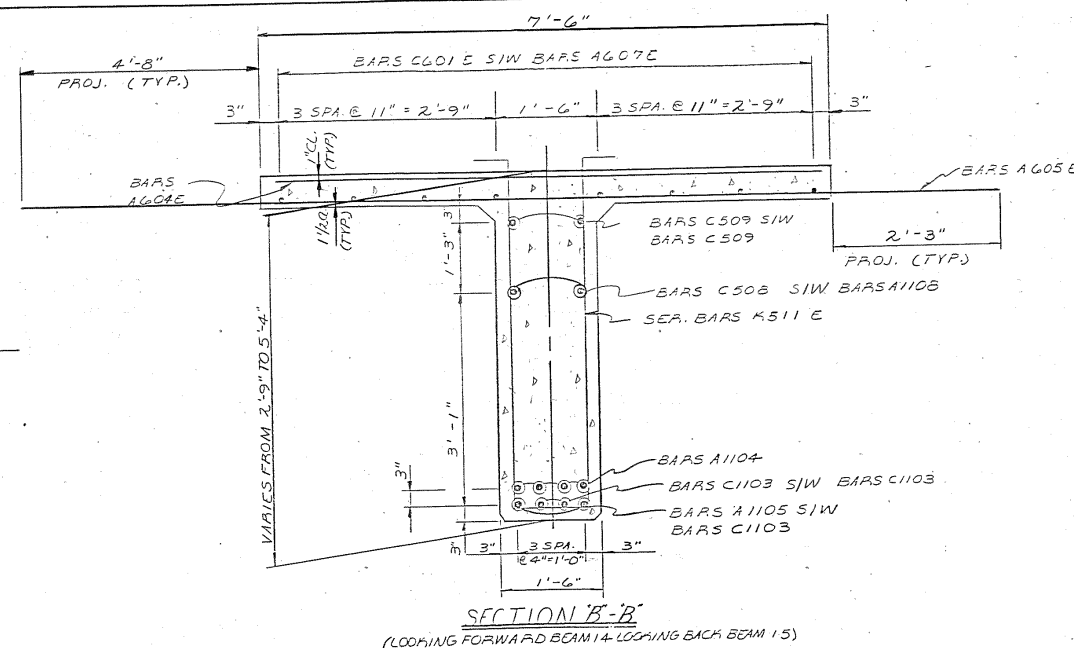
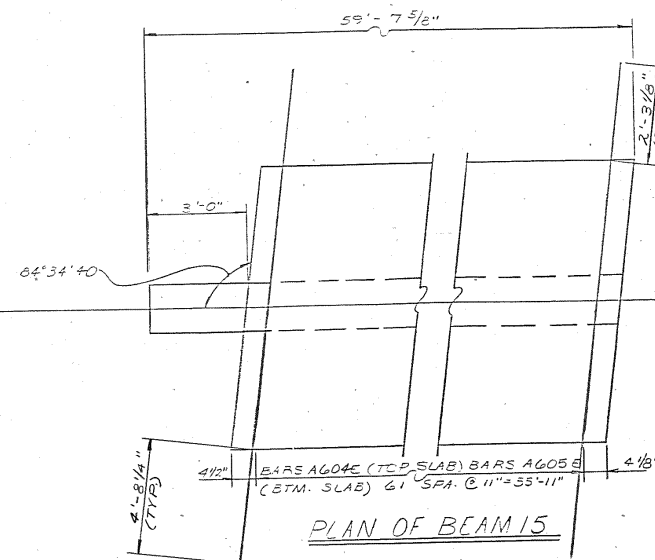
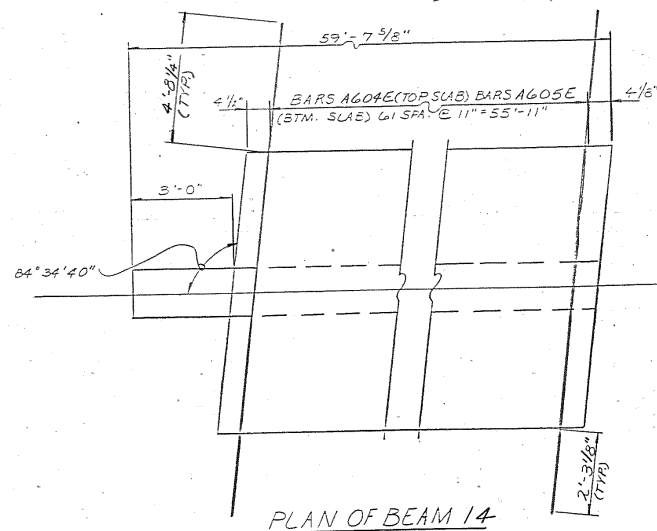
DESIGNED BY T. MACKIE DATE 12-86
DRAWN BY C. BERNATEK DATE 1-87
SUPERVISED BY J. FIELDS & J. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

CORRECT *Edward F. Wassman*
ENGINEER OF STRUCTURES
APPROVED *Lewis Quano*
DIRECTOR OF HIGHWAYS
M-189-88

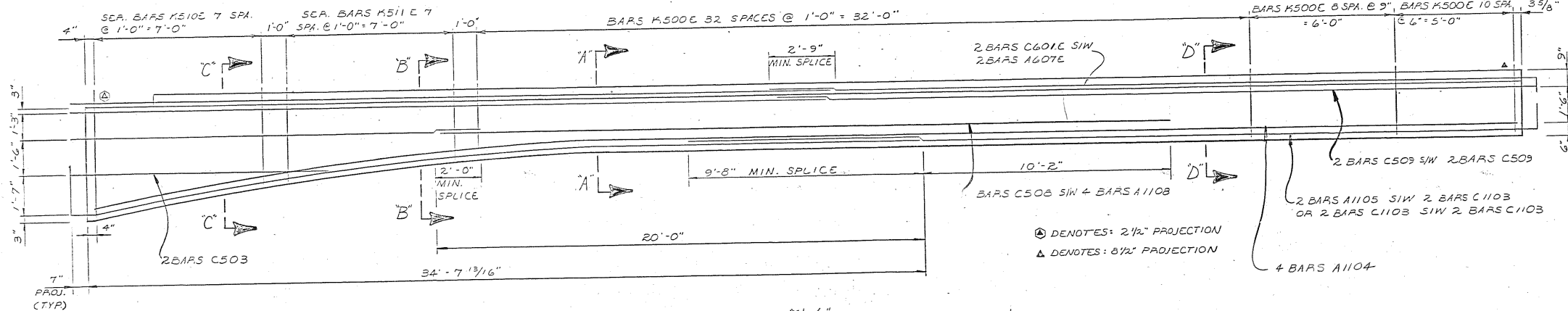
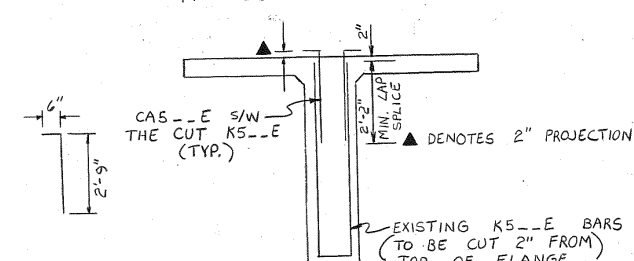
CONST. NO. 53012-3218-94

PROJECT NO. YEAR SHEET NO.
HES-73(13) 1987

REVISIONS
NO. DATE BY BRIEF DESCRIPTION
8-17-87 TOM ADDED DETAILS

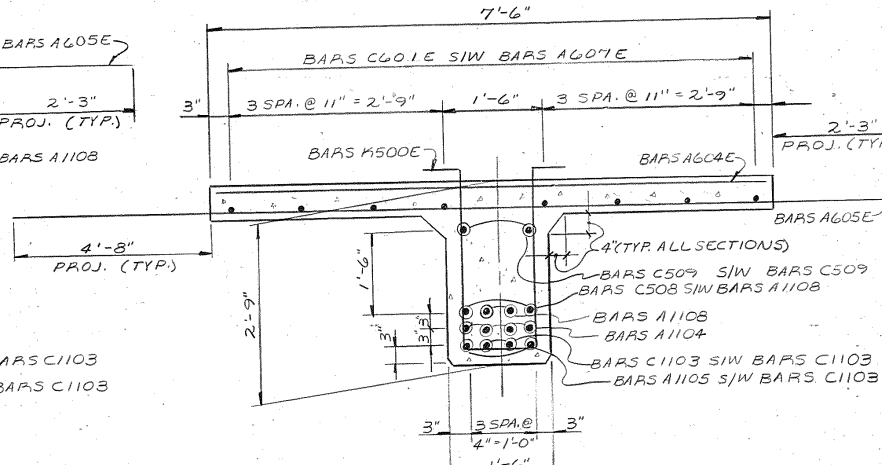
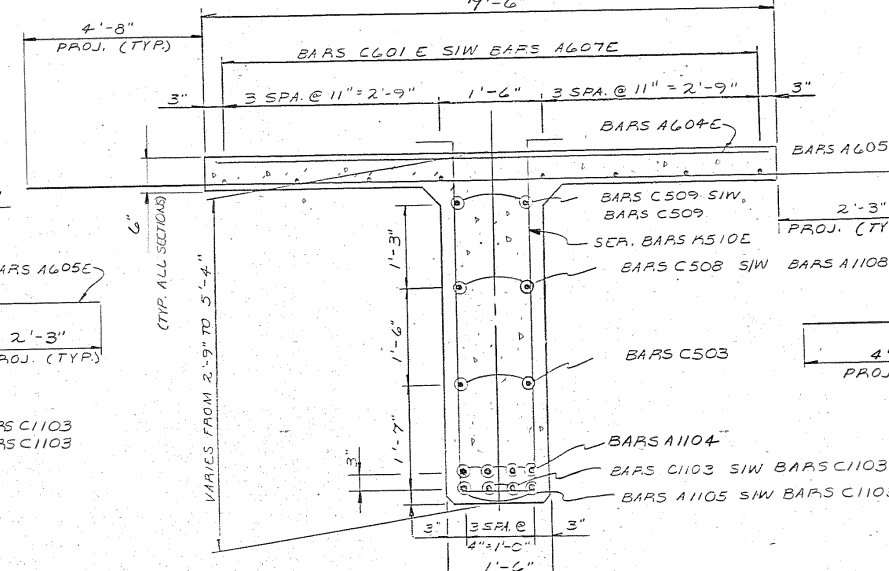
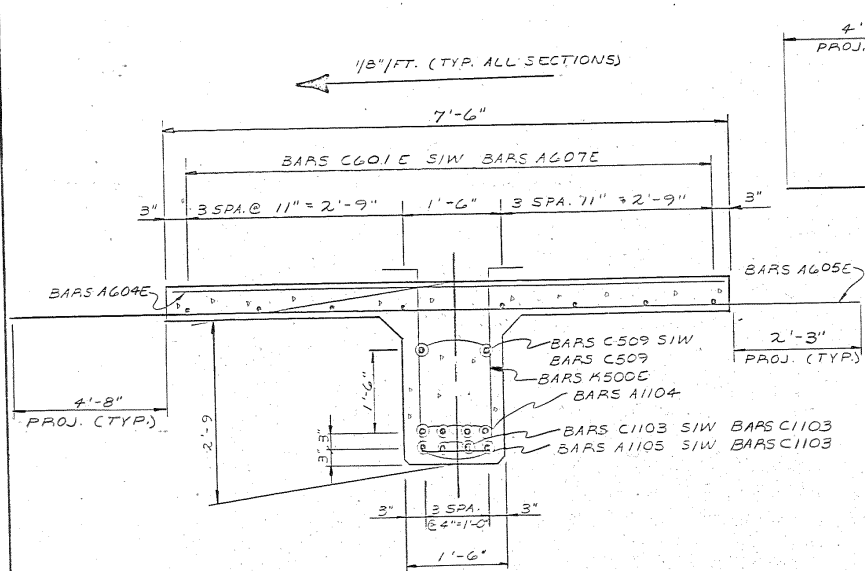


■ DENOTES: 1/2" MIN. CLEAR DISTANCE FROM TOP OF FLANGE TO BOTTOM OF KS-E REINFORCING STEEL. 2 1/2" MAX. DISTANCE FROM TOP OF FLANGE TO CENTER OF KS-E REINFORCING STEEL.
NOTE: FOR KS-E REINFORCING STEEL VIOLATING THE MAX. & MIN. DISTANCE ABOVE SEE THE MODIFIED PRECAST T-BEAM SECTION BELOW.



Ⓢ DENOTES: 2 1/2" PROJECTION
▲ DENOTES: 8 1/2" PROJECTION

NOTE: SEE DWG. NO. M-189-80 FOR ORDINATES OF PARABOLIC HAUNCH.



ESTIMATED QUANTITIES (PER BEAM)

	CLASS 'A' CONCRETE	EPOXY COATED REINFORCING STEEL	REINFORCING STEEL
	C.Y.	LB.	LB.
BEAM 14	17	3371	3664
BEAM 15	17	3371	3664

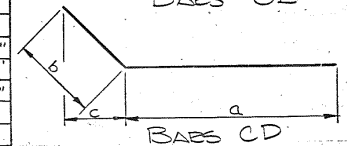
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
PRECAST T-BEAMS 14 & 15
WIDENING OF STATE ROUTE 73 (LT. & RT LANES) OVER INTERSTATE 75
STA. 1147+38.80
LOUDON COUNTY
1987

CORRECT *Edward P. Wynn*
ENGINEER OF STRUCTURES
APPROVED *James Guano*
DIRECTOR OF HIGHWAYS

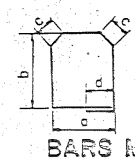
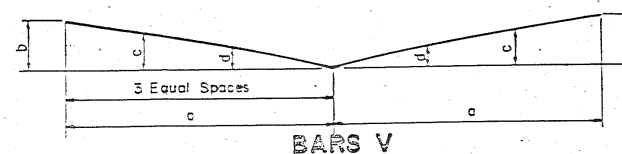
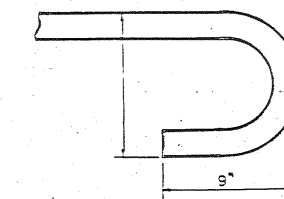
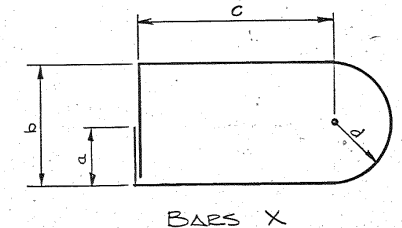
M-189-89

DESIGNED BY T. MACKIE DATE 12-86
DRAWN BY C. BERNARD DATE 1-87
SUPERVISED BY J. FIELDS, JR. DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

CONST. NO. 53012-3218-94

[illegible]

NOTE Dimensions shown on this sheet
are outside to outside of bar
Standard C R S. I. Hook Details
Shall Apply, Except As Noted.



DETAIL SHOWING HOOK FOR TRANSVERSE DECK BARS
DETAIL "A"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
BILL OF STEEL
FOR
PRECAST T-BEAMS
WIDENING OF STATE ROUTE 73 (L
RIGHT LANES) OVER INTERSTATE
STATION 1147+38.00
LOUDON COUNTY
1987

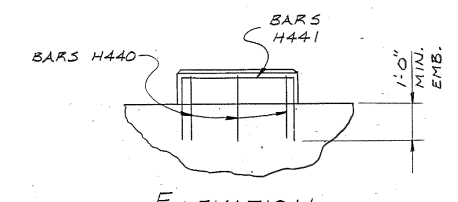
CORRECT Edward A Wasserman
ENGINEER OF STRUCTURES

APPROVED Levin C. Ernst
DIRECTOR OF HIGHWAYS

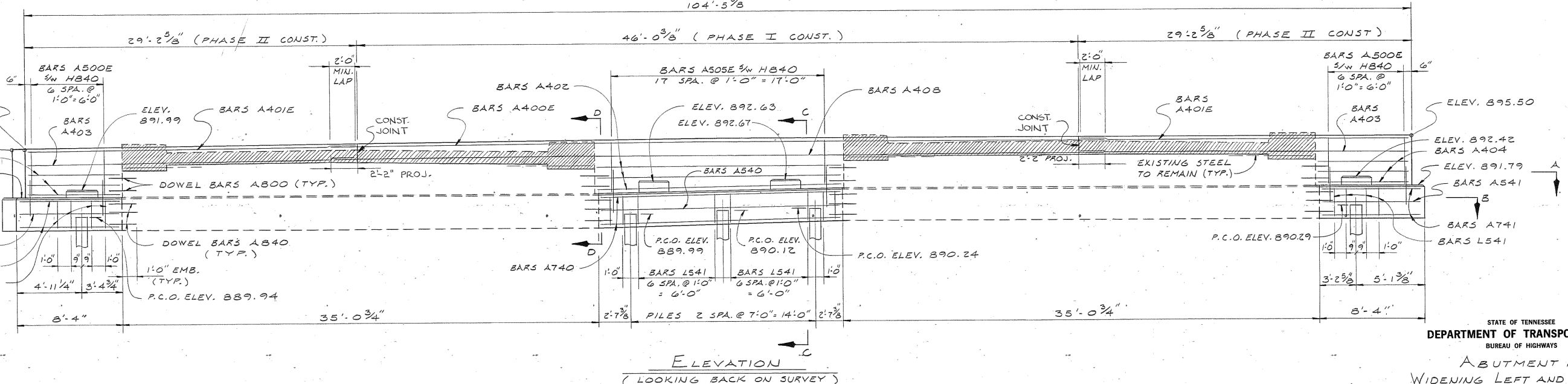
PROJECT NO.	YEAR	SHEET NO.
HES-73 (13)	1987	

[illegible]

NOTE: BARS A54- AND BARS A74- TO BE FIELD ADJUSTED



A diagram showing a horizontal line with an arrow pointing to the right, labeled "DIRECTION OF SURVEY". Below the line, there is a small vertical line segment with a horizontal tick mark, and a larger rectangular block below that.



ESTIMATED QUANTITIES	
CLASS "A" CONCRETE C.Y.	REINFORCING STEEL LB.
13	2,837

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

APPROVED Louis Evans
DIRECTOR OF HIGHWAYS

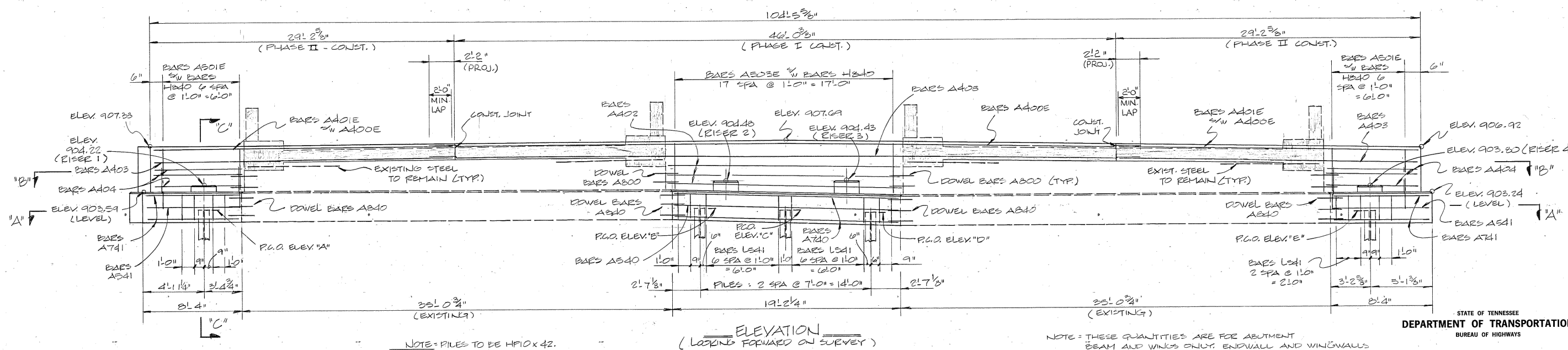
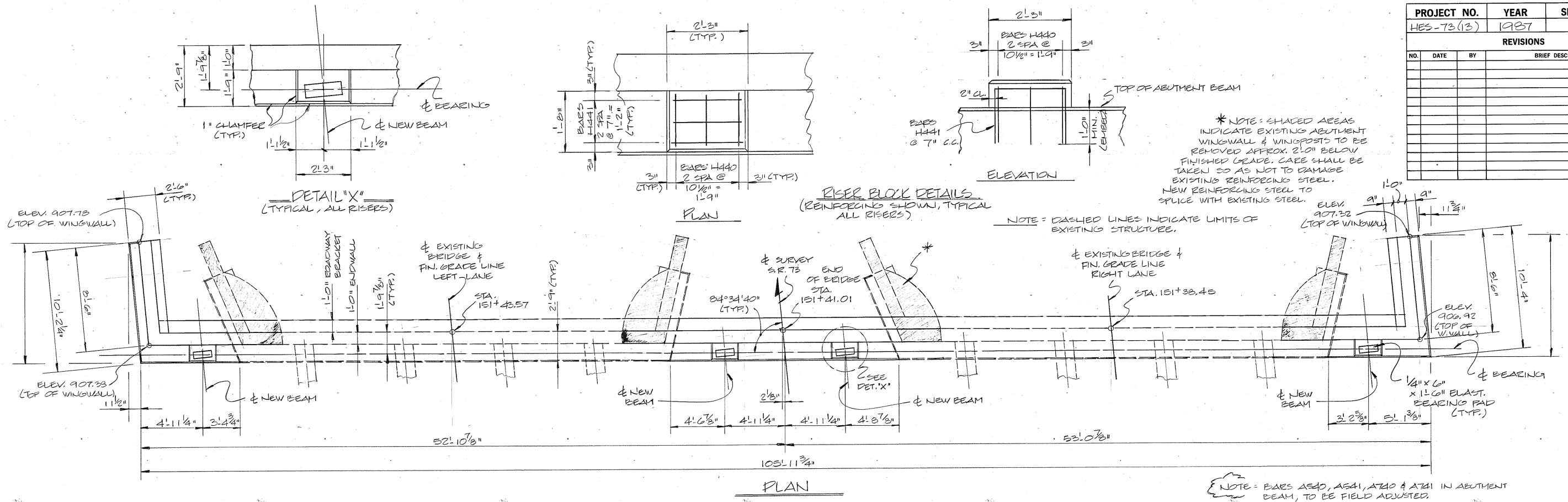
M-189-92

BRUNING 44-141 61318

CONST. NO. 53012-3218-94

PROJECT NO.	YEAR	SHEET NO.
HES-73(13)	1987	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



P.C.O. ELEVATIONS

ELEV. "A"	= 902.09
ELEV. "B"	= 902.04
ELEV. "C"	= 901.92
ELEV. "D"	= 901.79
ELEV. "E"	= 901.74

"ESTIMATED QUANTITIES"

CLASS "A" CONCRETE C.Y.	REINFORCING STEEL LBS.
13	2,837

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENT NO. 2
WIDENING OF STATE
ROUTE 73 (LEFT &
RIGHT LANES) OVER
INTERSTATE 75
STATION 1147+38.80
LOUDON COUNTY

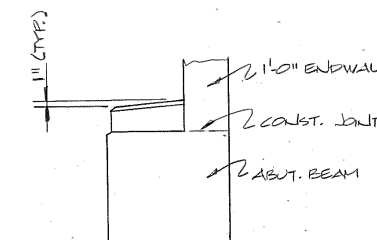
DESIGNED BY T. MACKIE
DRAWN BY DONNA ALLEN
SUPERVISED BY FIELDS & PRINKE
CHECKED BY T. MACKIE

DATE 12-86
DATE 1-87
DATE 1-87
DATE 1-87

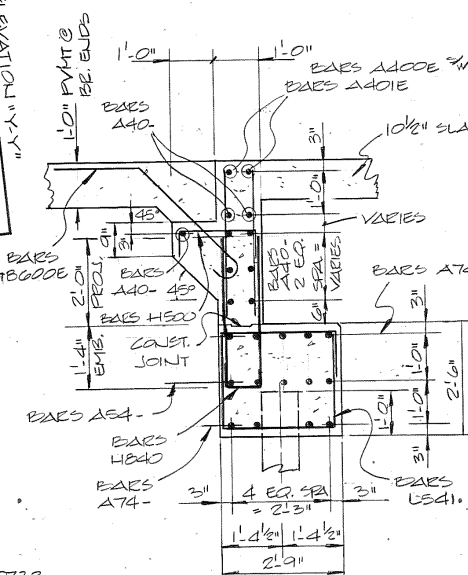
CORRECT *James A. Allen*
ENGINEER OF STRUCTURES
APPROVED *Edward P. Wessman*
DIRECTOR OF HIGHWAYS

M-189-94

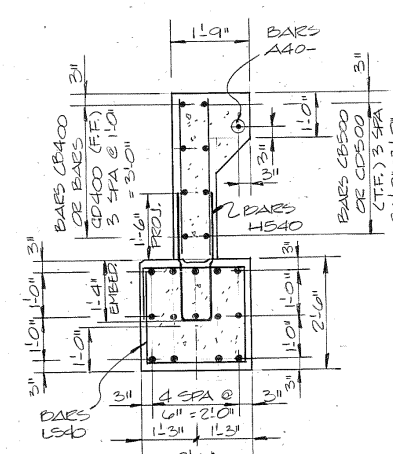
PROJECT NO.	YEAR	SHEET NO.
HES-73(12)	1987	

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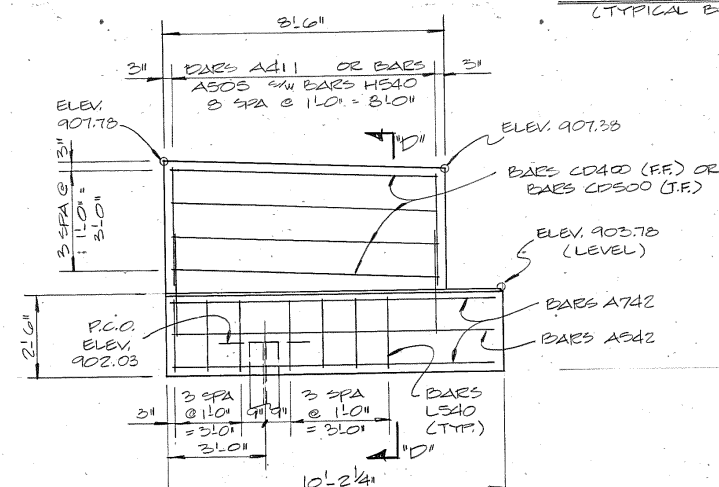
SECTION "A-A"
(THRU ABUTMENT BEAM)



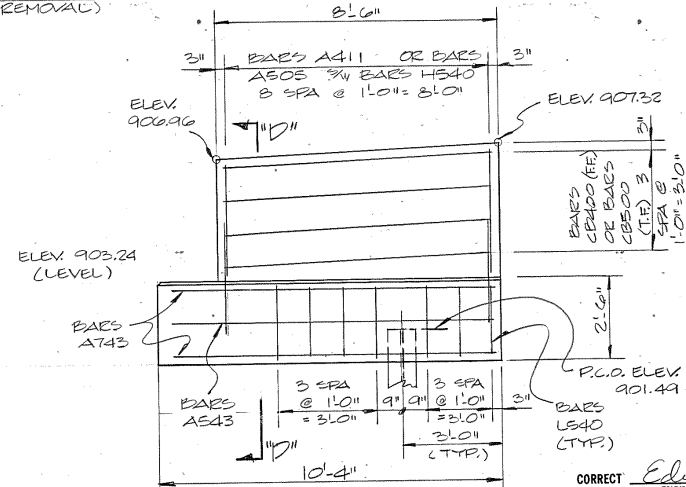
HALF SECTION "B-B"
(TYPICAL @ REMOVAL)



HALF SECTION "B-B"
(TYPICAL BELOW REMOVAL)



HALF SECTION "B-B"
(TYPICAL BELOW REMOVAL)



ELEVATION "Y-Y"

ABUTMENT NO. 2 DETAILS
WIDENING OF STATE ROUTE 73
(LEFT & RIGHT LANES) OVER
INTERSTATE 75
STATION 1147 + 38.80
LOUDON COUNTY
1987

APPROVED Lewis P. ...
DIRECTOR OF HIGHWAYS

M-189-95

CONST. NO. 53012-3218-94

PROJECT NO.	YEAR	SHEET NO.
HES-73 (13)	1987	

REVISIONS				BRIEF DESCRIPTION
NO.	DATE	BY		
1	8-28-87	TDM		ADD FOOTING MOD. DETAIL

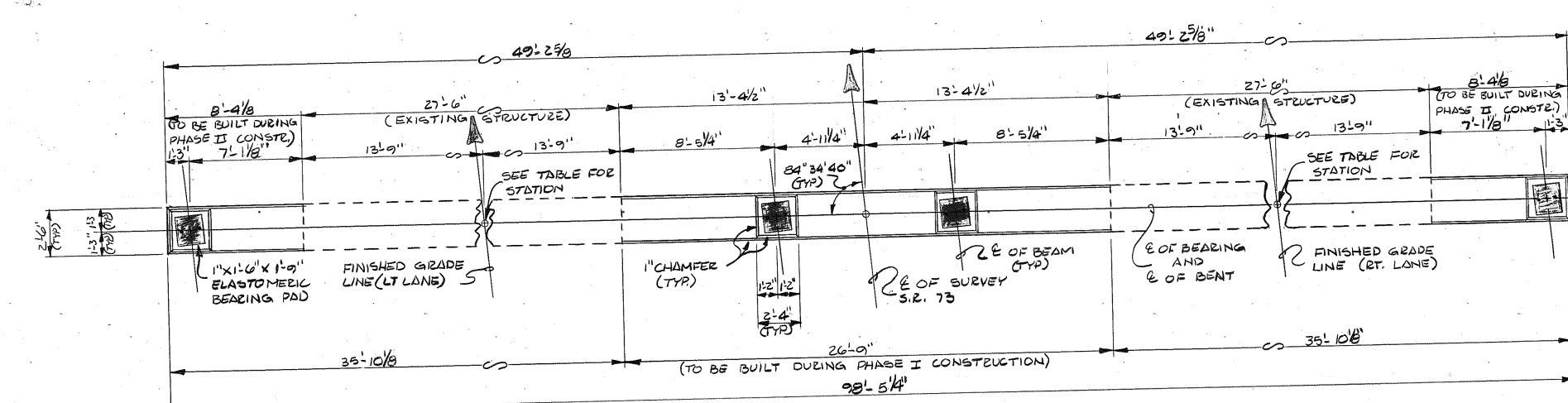
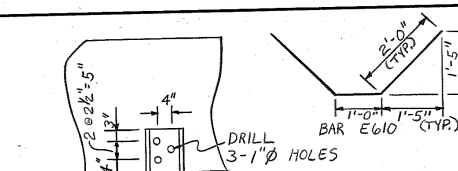


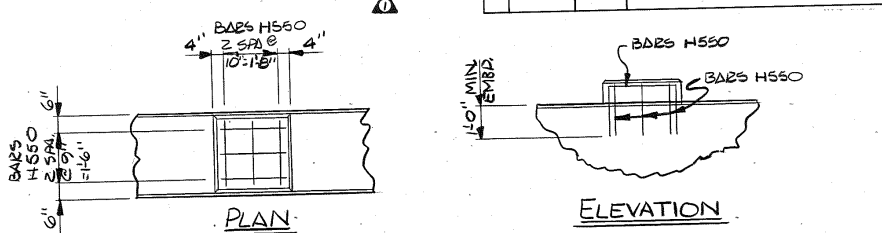
TABLE OF STATIONS		
LOCATION	LEFT LANE	RIGHT LANE
BENT NO 1	149+33.81	149+28.69
BENT NO 2	150+02.56	149+97.44
BENT NO 3	150+82.56	150+77.44

NOTES: RISER BLOCK BEARING PAD SURFACES TO CONFORM TO BOTTOM OF BEAM GRADE
COLUMN STEEL TO EXTEND 2'-0" INTO CAP BEAM.

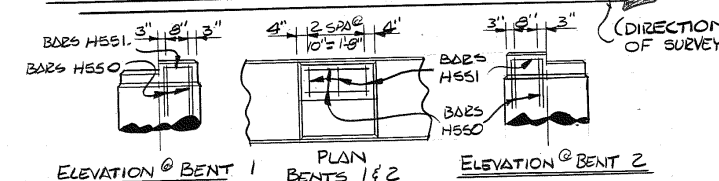


ALTERNATE A: DRILL 3-1/2" HOLES PER EXTERIOR PILE (4 PILES EACH FOOTING) AND PLACE ONE E610 BAR (ABOVE) THRU EACH HOLE.
ALTERNATE B: WELD A 10"X10"X1/2" PLATE ON TOP OF EACH EXTERIOR PILE (4 PILES EACH FOOTING).

FOOTING MODIFICATIONS



RISER BLOCK REINFORCEMENT DETAILS



ELEVATION @ BENT 1, BENTS 1 & 2, ELEVATION @ BENT 2

DETAIL "X"

TABLE OF ELEVATIONS				
POINTS	BENT NO. 1	BENT NO. 2	BENT NO. 3	
"A"	891.48	894.68	898.40	
"B"	892.12	895.32	899.03	
"C"	892.16	895.36	899.08	
"D"	891.91	895.10	898.82	
"E"	892.16	895.35		
"F"	891.50	894.73	898.41	
"G"	891.50	894.73	898.41	
"H"	891.65	894.88	898.56	
"I"	891.62	894.75	898.43	
"J"	891.15	894.39	898.07	
"K"	891.15	894.39	898.07	
"L"	871.00	870.50	871.00	
"M"	871.50	871.00	871.50	
"N"	872.50	871.50	872.00	

PCO. ELEVATIONS			
POINTS	BENT 1	BENT 2	BENT 3
O	870.5	869.5	870.0
P	869.5	869.0	869.5
Q	869.0	868.5	869.0

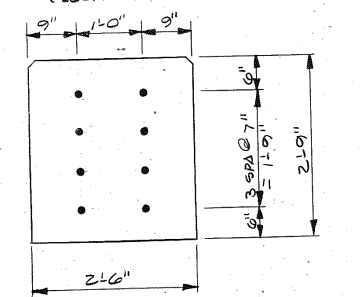
ESTIMATED QUANTITIES		
ITEM	CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LB.
BENT NO 1	35	8026
BENT NO 2	38	8848
BENT NO 3	40	9,501

NOTES: WHEN POURING CAP BEAM, PROVISION SHALL BE MADE FOR SETTING DOWNEL BARS IF THE CONTRACTOR ELECTS TO DRILL THE HOLES FOR THE DOWNEL BARS. THE REINFORCING STEEL SHALL BE PLACED SO AS NOT TO INTERFERE WITH DRILLING. DOWNEL BAR PROT. IS 9".
RISER BLOCKS TO BE POURED MONOLITHICALLY WITH CAP BEAM.
ELASTOMERIC PADS SHALL BE IN PLACE A MIN. OF ONE DAY BEFORE BEING DISTURBED BY PLACING SUPER-STRUCTURE FORMS ON CONCRETE. PLACE RUBBER ROLLING CEMENT IN SUCH A WAY THAT COLUMN SURFACES WILL NOT BE STAINED.

FOOTING DETAILS

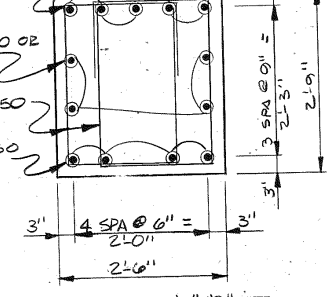
* PILES TO BE HP 10X42 DO NOT BATTER (TYP. ALL BENTS)

ELEVATION (LOOKING FORWARD ON SURVEY)

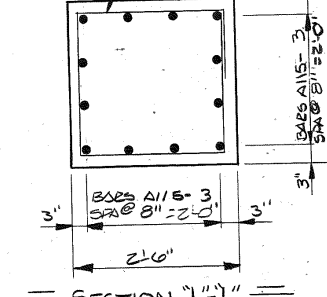


SECTION SHOWING DOWNEL BARS

SECTION "S-S"



SECTION "L-L"



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
BENT NO'S 1, 2 AND 3
WIDENING STATE ROUTE 73 LEFT
AND RIGHT LANES OVER INTERSTATE 75
STATION 1147+38.80
LOUDON COUNTY
1987

CORRECT *Edward J. Wosserman*
ENGINEER OF STRUCTURES
APPROVED *David S. Evans*
DIRECTOR OF HIGHWAYS

M-189-95A

DESIGNED BY T. MACKIE
DRAWN BY S. D. LEWIS
SUPERVISED BY F. E. PRINCE
CHECKED BY T. MACKIE
DATE 11-86
DATE 1-87
DATE 1-87
DATE 1-87

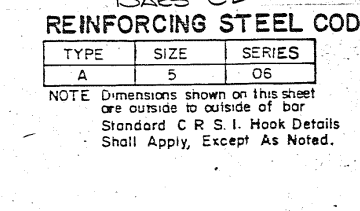
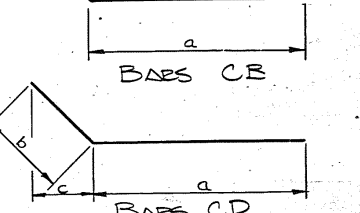
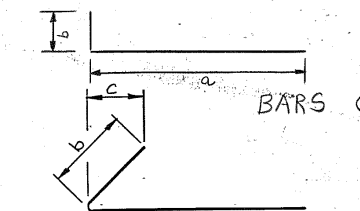
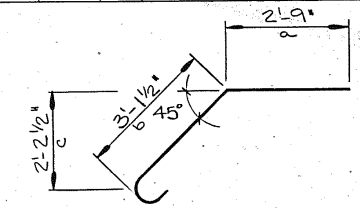
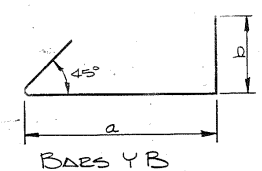
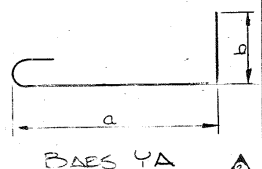
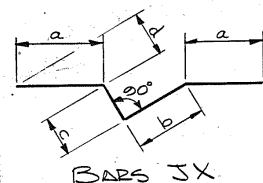
BILL OF STEEL

CONST. NO. 53012-3218-94

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	HES-73(13)	18		

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	11-24-87	TDM	ADDED A & F BARS TO DIAPHRAGM STEEL
2	5-16-88	TDM	CHANGED BAR DIMENSIONS

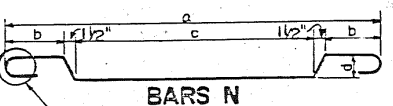
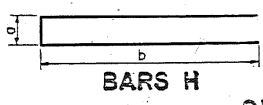
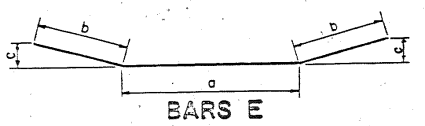
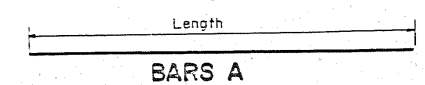
SUPERSTRUCTURE EPOXY										SUPERSTRUCTURE NON-EPOXY CONT'D										ABUTMENT NO.1 P.V.M.T. @ BRIDGE ENDS EPOXY										ABUTMENT NO.2 P.V.M.T. @ BRIDGE ENDS EPOXY									
BAR	LOCATION	SIZE	NO REQ'D	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO REQ'D	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO REQ'D	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO REQ'D	BENDING DIMENSIONS				LENGTH				
				a	b	c	d						a	b	c	d					a	b	c	d					a	b	c	d							
A400E	ENDWALL	4	4					46'-0"	A504	WINGWALL	5	18					3'-3"	A490E	SLAB (PHASE I)	4	25					49'-5"	A490E	SLAB (PHASE I)	4	25					49'-5"				
A401E	ENDWALL	4	8					29'-1"	A505	WINGWALL	5	18					3'-6"	A491E	SLAB (PHASE II)	4	50					27'-3"	A491E	SLAB (PHASE II)	4	50					27'-3"				
A500E	ENDWALL	5	12					3'-3"									A690E	SLAB	6	106					24'-2"	A690E	SLAB	6	106					24'-2"					
A501E	ENDWALL	5	40					3'-5"	CB400	WINGWALLS	4	8	9'-10"	1'-5"	2"		11'-3"	A1190C	SLAB (DRAINS)	11	8					6'-0"													
A502E	ENDWALL	5	36					3'-4"																															
A503E	ENDWALL	5	30					3'-9"	CB500	WINGWALLS	5	8	9'-6"	1'-5"	2"		10'-11"	L590E	FOOT. & SLAB	5	101	1'-2"	1'-0"	2'-2"		7'-8"	L590E	FOOT. & SLAB	5	101	1'-2"	1'-0"	2'-2"		7'-8"				
A600E	SLAB	6	480					30'-0"										ABUTMENT NO.1 P.V.M.T. @ BRIDGE ENDS NON-EPOXY										ABUTMENT NO.2 P.V.M.T. @ BRIDGE ENDS NON-EPOXY											
A601E	SLAB	6	10					21'-0"	CD400	WINGWALLS	4	8	8'-2"	1'-5"	2"		9'-7"	A492	SLAB (PHASE I)	4	25					49'-5"	A492	SLAB (PHASE I)	4	25					49'-5"				
A602E	SLAB	6	10					24'-2"										A493	SLAB (PHASE II)	4	50					27'-3"	A493	SLAB (PHASE II)	4	50					27'-3"				
A603E	SLAB	6	554					29'-11"	CD500	WINGWALLS	5	8	7'-8"	1'-5"	2"		9'-1"	A790	FOOT. & SLAB (PHASE I)	7	16					53'-7"	A790	FOOT. & SLAB (PHASE I)	7	16					53'-7"				
A604E	SLAB	6	276					51'-6"										A791	FOOT. & SLAB (PHASE II)	7	32					27'-3"	A791	FOOT. & SLAB (PHASE II)	7	32					27'-3"				
A608E	SLAB	6	42					10'-11"										A990	SLAB	9	202					24'-2"	A990	SLAB	9	202					24'-2"				
A609E	SLAB	6	21					23'-10"	H500	RDWY. BRACKET	5	58	1'-8"	10"		3'-4"																							
A800E	SLAB	8	336					60'-0"																															
A801E	SLAB	8	96					30'-0"	L400	DIAPHRAGM	4	114	4'-8"	1'-0"	6"	10'-5"																							
A802E	SLAB	8	48					55'-0"	A506	DIAPHRAGM	5	60				3'-2"																							
									A507	DIAPHRAGM	5	90				8'-5"																							
									A508	DIAPHRAGM	5	60				9'-9"																							
									F500	DIAPHRAGM	5	60	2'-2"	1'-6"	2'-2"	2"	6'-0"	L591	FOOTING	5	101	1'-2"	1'-0"	2'-2"		7'-8"	L591	FOOTING	5	101	1'-2"	1'-0"	2'-2"		7'-8"				
CG00E	SLAB	6	56	21'-0"				22'-0"	ABUTMENT NO. 1										ABUTMENT NO. 2																				
CB00E	SLAB	8	96	23'-2"	10"			24'-0"	A540	ABUT. BEAM	5	5				18'-10"	A540	ABUT. BEAM	5	5					18'-10"														
F500E	MEDIAN	5	554	9"	9"	2'-10"	11"	4'-9"	A541	ABUT. BEAM	5	10				8'-0"	A541	ABUT. BEAM	5	10					8'-0"														
CB400E	ENDWALL	6	64	2'-9"	3'-1/2"	8"		6'-7"	A542	WING	5	5				9'-10"	A542	WING	5	5					9'-10"														
F600E	ENDWALL	6	144	8"	3"	2'-9"	1'-0"	4'-5"	A543	WING	5	5				9'-11"	A543	WING	5	5					9'-11"														
SUPERSTRUCTURE NON-EPOXY									A740	ABUT. BEAM	7	9				18'-10"	A740	ABUT. BEAM	7	9					18'-10"														
A402	ENDWALL	4	12					18'-11"	A741	ABUT. BEAM	7	18				8'-0"	A741	ABUT. BEAM	7	18					8'-0"														
A403	ENDWALL	4	8					29'-1"	A742	WING	7	9				9'-10"	A742	WING	7	9					9'-10"														
A404	ENDWALL	4	24					7'-3"	A743	WING	7	9				9'-11"	A743	WING	7	9					9'-11"														
A405	RDWY. BRACKET	4	4					5'-9"	A840	ABUT. BEAM	8	36				3'-0"	A840	ABUT. BEAM	8	36					3'-0"														
A406	PAR. SUPPORT	4	2					9'-0"																															
A407	WINGWALL	4	18					3'-3"	H440	RISE BLOCKS	4	12	1'-4"	1'-11"		5'-2"	H440	RISE BLOCKS	4	12	1'-4"	1'-11"			5'-2"														
A408	ENDWALL	4	4					46'-0"	H441	RISE BLOCKS	4	12	1'-11"	1'-11"		5'-9"	H441	RISE BLOCKS	4	12	1'-11"	1'-11"			5'-9"														
A409	PAR. SUPPORT	4	2					8'-10"																															
A410	RDWY. BRACKET	4	2					19'-2"	H540	WING	5	18	8"	2'-10"		6'-4"	H540	WING	5	18	8"	2'-10"			6'-4"														
A411	WINGWALL	4	18					2'-3"	H640	ABUT. BEAM	8	32	8"	3'-4"		7'-4"	H640	ABUT. BEAM	8	32	8"	3'-4"			7'-4"														
									L540	WINGS	5	14	2'-2"	1'-0"	2'-2"	9'-8"	L540	WINGS	5	14	2'-2"	1'-0"	2'-2"		9'-8"														
									L541	ABUT. BEAM	5	27	2'-5"	1'-0"	2'-2"	10'-2"	L541	ABUT. BEAM	5	27	2'-5"	1'-0"	2'-2"		10'-2"														



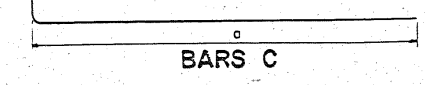
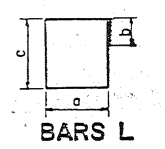
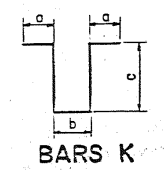
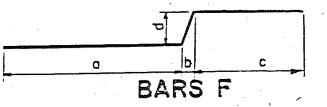
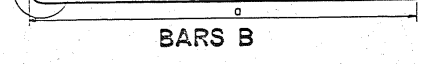
REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

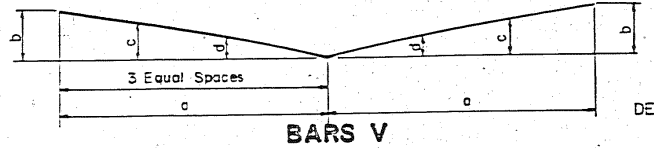
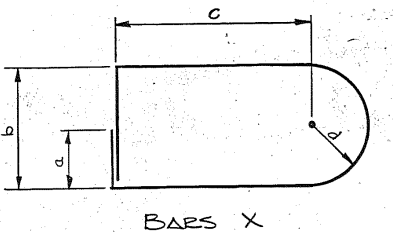
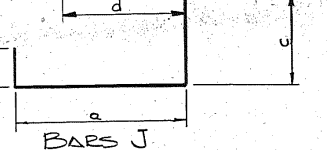
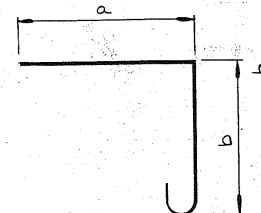
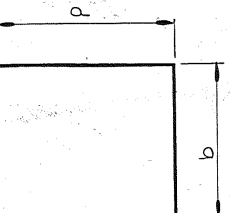
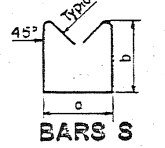
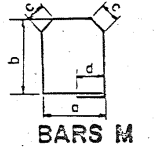
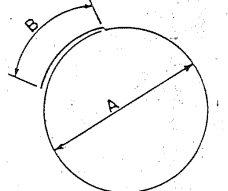
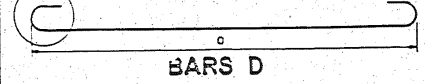
NOTE: Dimensions shown on this sheet are outside to outside of bar. Standard C.R.S.I. Hook Details Shall Apply, Except As Noted.



SEE DETAIL "A" FOR TRANSVERSE DECK STEEL.



SEE DETAIL "A" FOR TRANSVERSE DECK STEEL.



DETAIL SHOWING HOOK FOR TRANSVERSE DECK BARS
DETAIL "A"

DESIGNED BY: T. MACKIE
DRAWN BY: C. BERNARD
SUPERVISED BY: J. PRINCE & J. FIELDS
CHECKED BY: T. MACKIE
DATE: 12-86
DATE: 1-87
DATE: 1-87
DATE: 1-87

CORRECTED: Edward P. Wasserman
APPROVED: [Signature]
DIRECTOR OF HIGHWAYS
M-189-96

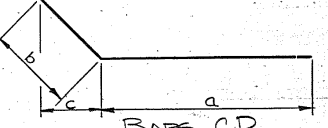
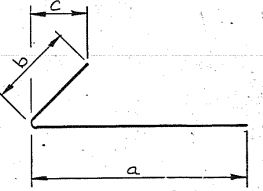
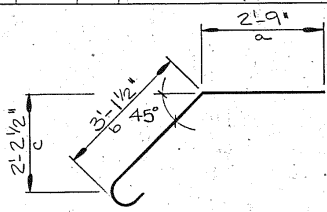
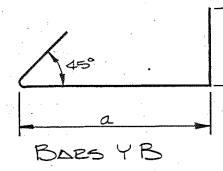
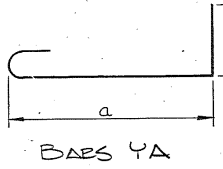
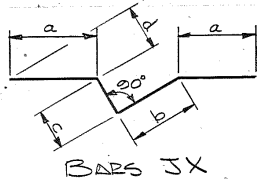
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
BILL OF STEEL
WIDENING OF STATE ROUTE 73 (LT. & RT. LANES) OVER INTERSTATE 75
STA. 1147+38.80
LOUDON COUNTY
1987

BILL OF STEEL

CONST. NO. 53012 - 3218-74

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	HES-73(13)	19		
REVISIONS					
NO.	DATE	BY	BRIEF DESCRIPTION		

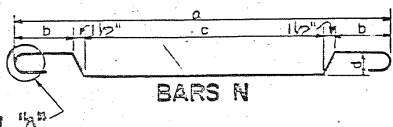
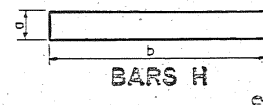
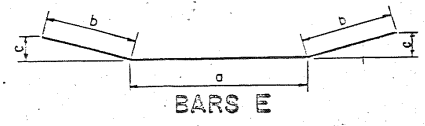
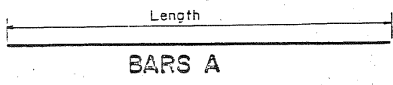
BENT NO. 1									BENT NO. 2									BENT NO. 3								
BAR	LOCATION	SIZE	NO. REQD.	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO. REQD.	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO. REQD.	BENDING DIMENSIONS				LENGTH
				a	b	c	d						a	b	c	d					a	b	c	d		
A450	CAP	4	8					8'-2"	A450	CAP	4	8					8'-2"	A450	CAP	4	8					8'-2"
A451	CAP	4	4					26'-7"	A451	CAP	4	4					26'-7"	A451	CAP	4	4					26'-7"
A550	CAP	5	8					8'-2"	A550	CAP	5	8					8'-2"	A550	CAP	5	8					8'-2"
A551	CAP	5	9					26'-7"	A551	CAP	5	9					26'-7"	A551	CAP	5	9					26'-7"
A850	CAP	8	32					2'-0"	A850	CAP	8	32					2'-0"	A850	CAP	8	32					2'-0"
A1150	COLUMN	11	12					18'-9"	A1151	COLUMN	11	12					22'-11"	A1152	COLUMN	11	12					26'-2"
A1153	COLUMN	11	24					19'-10"	A1154	COLUMN	11	24					23'-7"	A1155	COLUMN	11	24					26'-9"
B550	CAP	5	10	8'-1"				8'-8"	B550	CAP	5	10	8'-1"				8'-8"	B550	CAP	5	10	8'-1"				8'-8"
C1150	COL. & FOOT.	11	36	11'-3"				13'-1"	C1150	COL. & FOOT.	11	36	11'-3"				13'-1"	C1150	CAP & FOOT.	11	36	11'-3"				13'-1"
D550	FOOTING	5	36	5'-8"				6'-10"	D550	FOOTING	5	36	5'-8"				6'-10"	D550	FOOTING	5	36	5'-8"				6'-10"
H550	RISE BLOCK	5	14	2'-0"	1'-6"			5'-0"	H550	RISE BLOCK	5	14	2'-0"	1'-6"			5'-0"	H550	RISE BLOCK	5	12	2'-0"	1'-6"			5'-0"
H551	RISE BLOCK	5	3	10"	1'-6"			3'-10"	H551	RISE BLOCK	5	3	10"	1'-6"			3'-10"									
L450	CAP	4	72	1'-8"	1'-0"	2'-5"		9'-2"	L450	CAP	4	72	1'-8"	1'-0"	2'-5"		9'-2"	L450	CAP	4	72	1'-8"	1'-0"	2'-5"		9'-2"
L451	COLUMNS	4	50	2'-2"	1'-0"	2'-2"		9'-8"	L451	COLUMNS	4	62	2'-2"	1'-0"	2'-2"		9'-8"	L451	COLUMNS	4	72	2'-2"	1'-0"	2'-2"		9'-8"



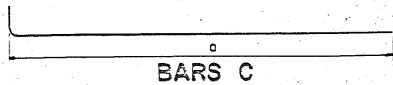
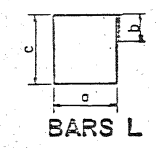
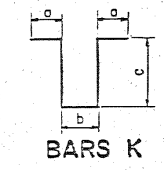
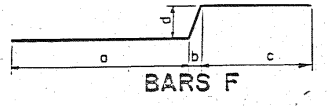
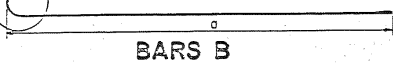
REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	05

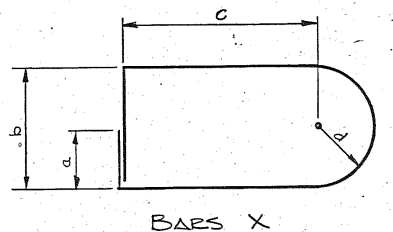
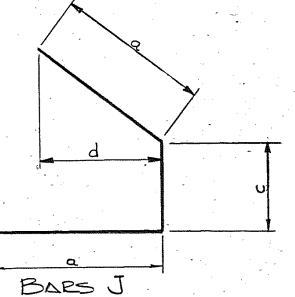
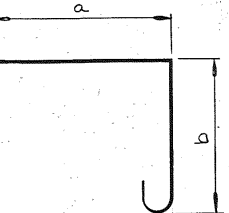
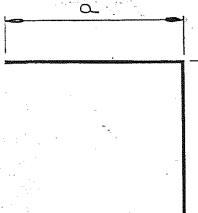
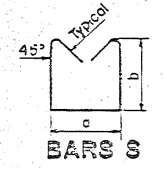
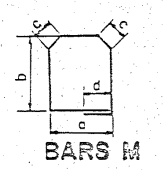
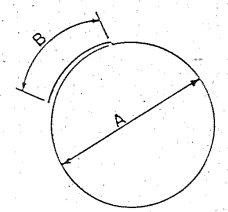
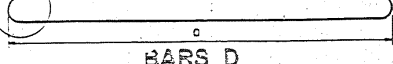
NOTE: Dimensions shown on this sheet are outside of bar. Standard C.R.S.I. Hook Details shall apply, except as noted.



SEE DETAIL "A" FOR TRANSVERSE DECK STEEL.



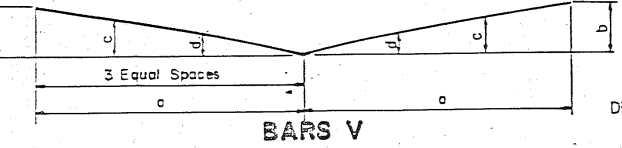
SEE DETAIL "A" FOR TRANSVERSE DECK STEEL.



BARS R

BARS RB

BARS J



BARS V

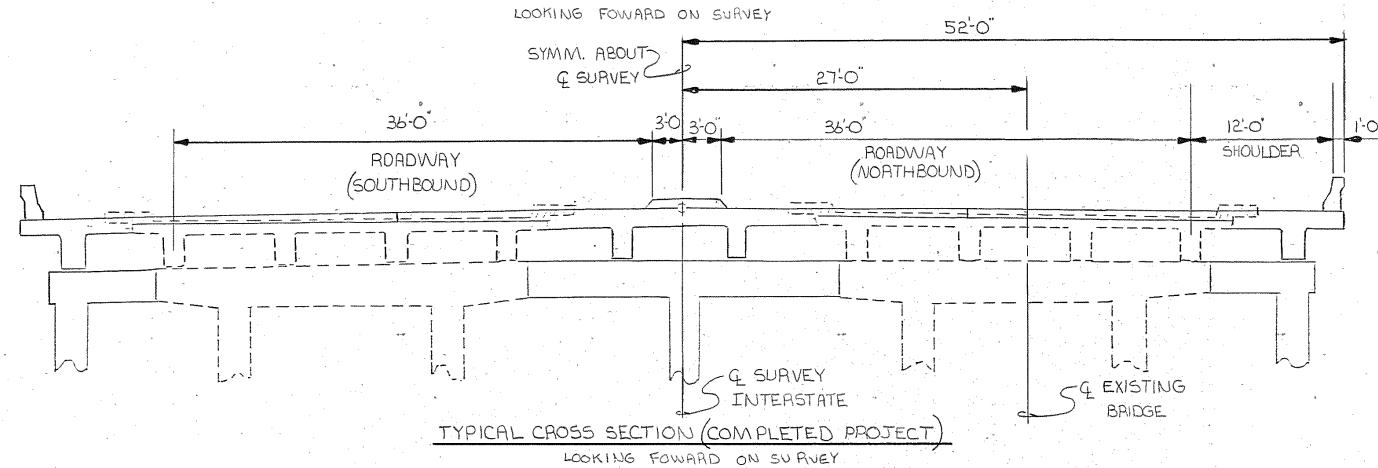
DETAIL SHOWING HOOK FOR TRANSVERSE DECK BARS
DETAIL "A"

DESIGNED BY T. MACKIE
DRAWN BY C. BEAMTEK
SUPERVISED BY J. PRINCE & J. FIELDS
CHECKED BY T. MACKIE
DATE 12-86
DATE 1-87
DATE 1-87
DATE 1-87

CORRECTED BY Edward Wasserman
ENGINEER OF STRUCTURES
APPROVED BY [Signature]
DIRECTOR OF HIGHWAYS

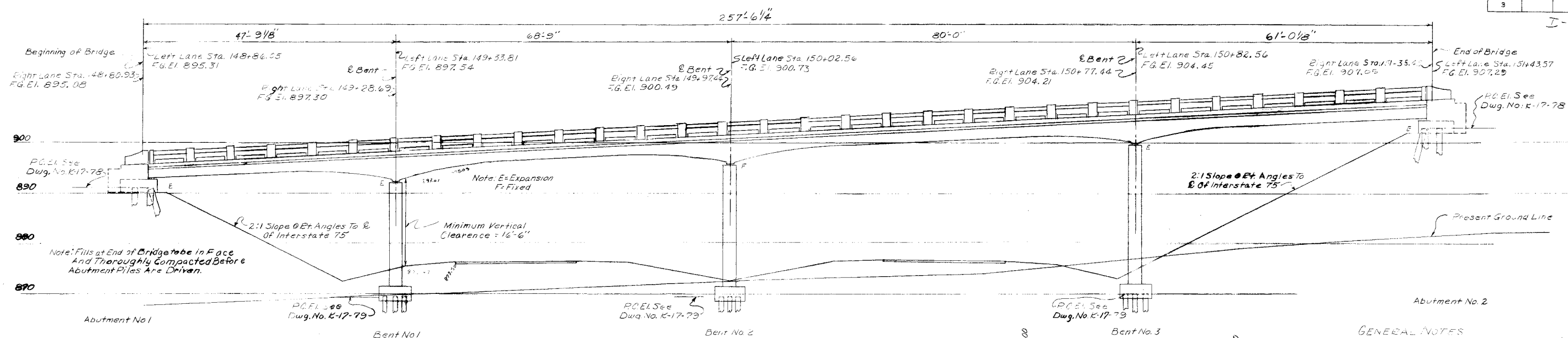
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
BILL OF STEEL
WIDENING OF STATE ROUTE
73 (L.T. & R.T. LANES) OVER
INTERSTATE '75
STA. 1147 + 38.80
LOUDON COUNTY
1987

14-189-77

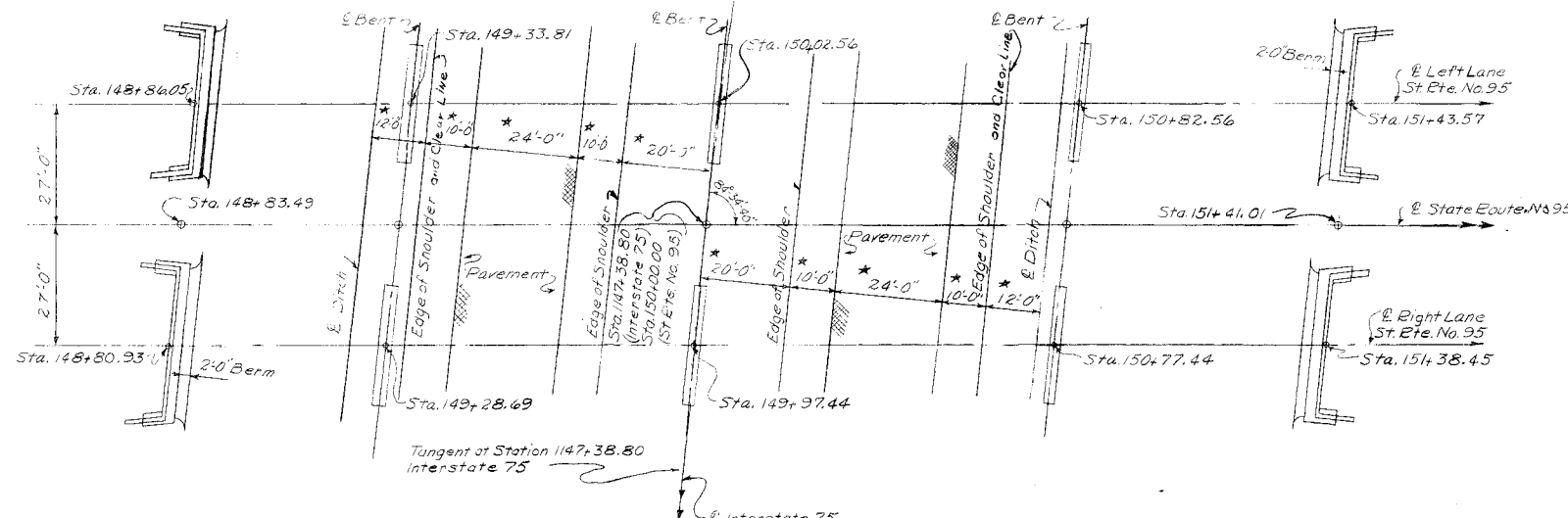


DESIGNED BY T. MACKIE DATE 12-86
DRAWN BY CHARLES W. ROSS Jr DATE 1-87
SUPERVISED BY J. FIELDS & T. PRINCE DATE 1-87
CHECKED BY T. MACKIE DATE 1-87

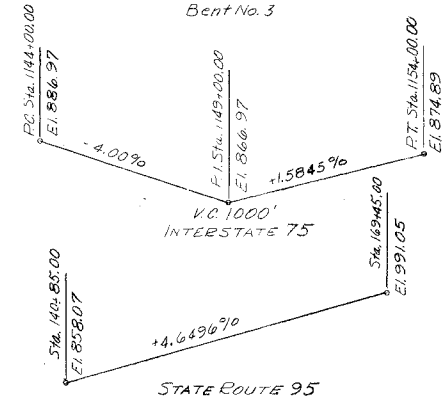
CORRECTED Edward P. Vossemma
ENGINEER OF STRUCTURES
APPROVED Louis Evans
DIRECTOR OF HIGHWAYS



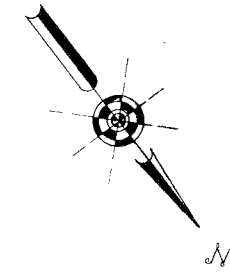
ELEVATION AT RT 1/4 TO E STATE ROUTE NO. 95



PLAN
* Radial Distances
Note: 84°34'40" to Local Tangent



SKETCH SHOWING GRADES
Note: Grades Shown are Based on Finished Grade.



GENERAL NOTES
SPECIFICATIONS: Standard Road and Bridge Specifications of the Tennessee Department of Highways
LOADING: HS-20-SIG 1+
CONCRETE: Type Class A
REINFORCING STEEL: To be Intermediate or Hard Grade. Standard Hook Details as Recommended by CRSI Shall Apply.
PILES: To be 10" BP42* for Abutments and 12" BP53* for Bents. SELF LUBRICATING PLATES See Special Provisions.

SPECIAL NOTE - PILES
All Piles Shall be Driven to Rock or Minimum Bearing of 36 Tons for Abutments and 45 Tons for Bents.

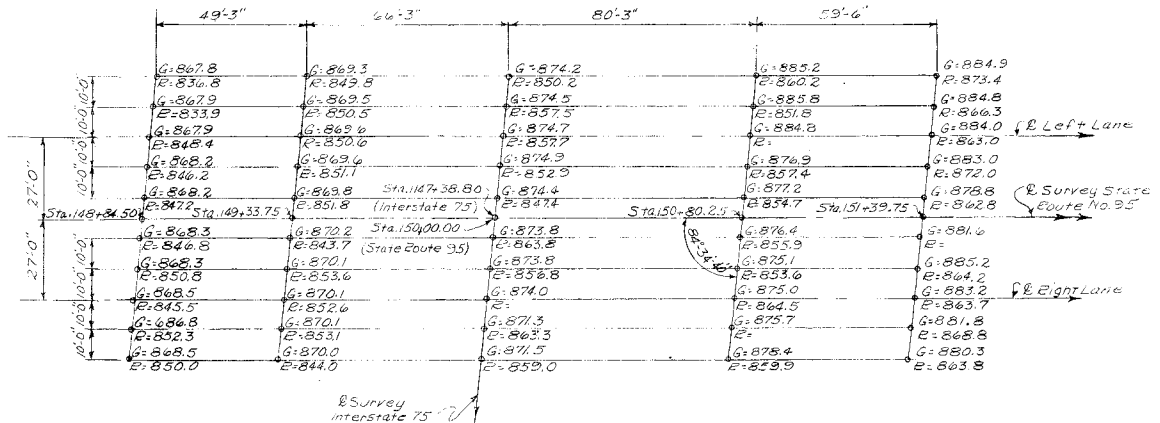
BEARING DEVICE NOTE
Use Standard Expansion Bearing Devices, Types E1 as Shown on Standard Drawing G-10-42.
Use Fixed Bearing Devices, Type F1 as Shown on Standard Drawing G-10-42.
Required 32 Expansion Devices and 8 Fixed Devices.

HANDRAIL NOTE
Build Handrail According to Standard Drawing H-5-110, Except use End Post Shown on Dwg. No. K-17-78
L=6'-8 1/2" @ 31 Spaces, Q=255'-0", X=0

LIST OF DRAWINGS

HANDRAIL - See Note this Sheet &	DWG. NO.
SUPERSTRUCTURE	H-5-110
ABUTMENT NO. 1 & 2	K-17-77
BENTS NO. 1, 2 & 3	K-17-78
BILL OF STEEL	K-17-79
BEARING DEVICES - See Note this Sheet &	K-17-80
PILE SPLICE DETAIL	G-10-42
ROADWAY EXPANSION DEVICE	G-10-42
	K-17-80

ESTIMATED 1975 ADT 6662



ROCK SOUNDING SKETCH
Note: G = Ground
R = Rock

ITEM	Excavation		Concrete Class A	Steel		Bronze	10" BP42* Steel Piles Lineal Ft.	12" BP53* Steel Piles Lineal Ft.	Concrete Handrail Lineal Ft.	Rock Drilling Lineal Ft.
	Cu. Yds.	Dry	Cu. Yds.	Reinforcing	Structural	Lbs.				
Superstructure			397.2	138579	8955	1328				
Abutment No. 1			21.7	2251						
Bent No. 1	54		24.7	5018						
Bent No. 2	37		26.4	5272						
Bent No. 3	47		27.8	5446						
Abutment No. 2			22.0	2251						
Total	138	5	502.8	158975	8955	1328	546	520	510	36
Superstructure			380.2	138579	8955	1328				
Abutment No. 1			21.7	2251						
Bent No. 1	54		24.3	5071						
Bent No. 2	37		26.0	5312						
Bent No. 3	47		27.4	5512						
Abutment No. 2			22.0	2251						
Total	138	5	501.6	158975	8955	1328	546	330	510	36
Total	276	10	1004.4	317791	17910	2656	1127	850	1020	72

* Self Lubricating Plates

2-28'-0" ROADWAYS WITH SAFETY CURBS
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE
LAYOUT OF BRIDGE
RIGHT & LEFT LANES
STATE ROUTE 95 OVER INTERSTATE 75
STATION 147+38.80
LOUDON COUNTY
1962

DESIGNED BY A.M. COED
DRAWN BY J. BYRD
CHECKED BY A.M. & P.D.G.
DATE 2-2-62
DATE 4-2-62
DATE 5-4-62

CORRECT
APPROVED
J. J. GENE
BRIDGE ENGINEER
STATE HIGHWAY ENGINEER
K-17-76

REVISED 7-5-62

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19	25	131

HALF SECTION AT SUPPORT

The drawing illustrates the layout of a bridge with four spans. The spans are labeled as follows:

- Span No. 1: 23'-3"
- Span No. 2: 34'-4 1/2"
- Span No. 3: 40'-0"
- Span No. 4: 22'-3"

The diaphragm spacing is indicated as 28'-10 1/2" between spans. The construction joint dimensions are shown as 29'-6" for Span No. 1, 17'-3" for Span No. 2, 29'-3" for Span No. 3, and 22'-3" for Span No. 4. The total length of the bridge is 84'-3 1/4" + 40" = 124'-3 1/4".

The pouring schedule is indicated by the letters A, B, and C, corresponding to the spans. The construction joints are parallel to the skew. The bridge is labeled as "Bent No. 1 or 3" and "Bent No. 2".

Reinforcement Symm. About
Center of Bridge

struction

and

84° 34' 40"

9"

12"

Bars N 500 @ 11" c.c.
(138 Spaces)

Bars A 500 @ 11" c.c.
(138 Spaces)

Bars P 500 @ 11" c.c.
(137 Spaces)

5 1/2"

NOTE: Dimension Varies So That
Bottom Of Diaphragm Is Level.

SECTION SHOWING ENDWALL REINFORCEMENT
(25 spaces)

3'-3"

3"

3"

3 #4 Bars

3 #6 Bars

1'-6"

Bars A110

Bars B110

Reinforcement detail for a 12x12 inch column. The column has a total width of 12 inches and a total height of 12 inches. It is reinforced with 4 bars of A10 grade in the top and bottom layers, and 3 bars of B10 grade in the middle layer. The bars are spaced at 3 inches on center. The column is shown with a cross-section and a side view.

[illegible]

NOTE: This Curve Shows The Dead Load Chamber Only And Should Be Increased By The Anticipated Take Up In The Falsework.

NOTE: This Curve Shows The Dead Load Chamber Only And Should Be Increased By The Anticipated Take Up In The Falsework.

Diagram of a 12-inch wide, 9-inch high curb with a 1/4-inch radius. The curb is shown in cross-section with dimensions for its width and height. The top surface is divided into six equal spaces, each 4 feet 0 inches wide. The curb is labeled "Level At All Bearings". The diagram also shows the curb's profile and the spacing of the stones.

ELEVATION OF BEAMS

Typical For All Beams

Reinforcement details shown include:

- 4 Bars A1109
- 4 Bars A1110
- 4 Bars A1111
- 4 Bars A1112
- 4 Bars A1110
- 3 Bars A1114
- 4 Bars A1115
- 4 Bars A1110
- 4 Bars A1116
- 3 Bars A1117
- 4 Bars A1118

Dimensions and notes include:

- 16'-7"
- 30'-0"
- 21'-6"
- 21'-6"
- 30'-0"
- 8'-9"
- 30'-0"
- 25'-6"
- 12'-6"
- 15'-3"
- 22'-0"
- 30'-0"
- 20'-0"
- 30'-0"
- 24'-0"
- 14'-0"
- 16'-0"
- 29'-6"
- 30'-0"
- 29'-9"
- Beginning Of Beam
- 84° 34' 40"
- 2'-0" 16' 2'-0"
- 4 5pa
- Bar Cut-Off Line
- 4 Bearing R
- End of Beam
- Bar Cut-Off Line

NOTE: Same for all beams.

Concrete Class "A" 380.2 Cu. Yds.
Reinforcing Steel 138,578 Lbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

SUPERSTRUCTURE DETAILS
RIGHT AND LEFT LANES
STATE ROUTE 95 OVER INTERSTATE 75
STATION 1147 + 38.80
LOUDON COUNTY
1962

DESIGNED BY A. McCORD DATE 4-1-62
 DRAWN BY DONALD ELKINS DATE 4-9-62
 TRACED BY _____ DATE _____
 CHECKED BY A.M., P.D.Q. DATE 5-10-62

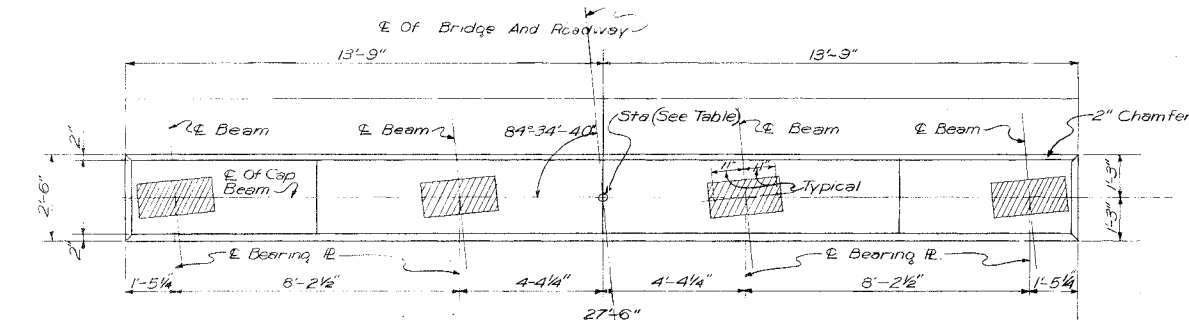
Fred Green

BRIDGE ENGINEER

APPROVED _____ *eee Del*

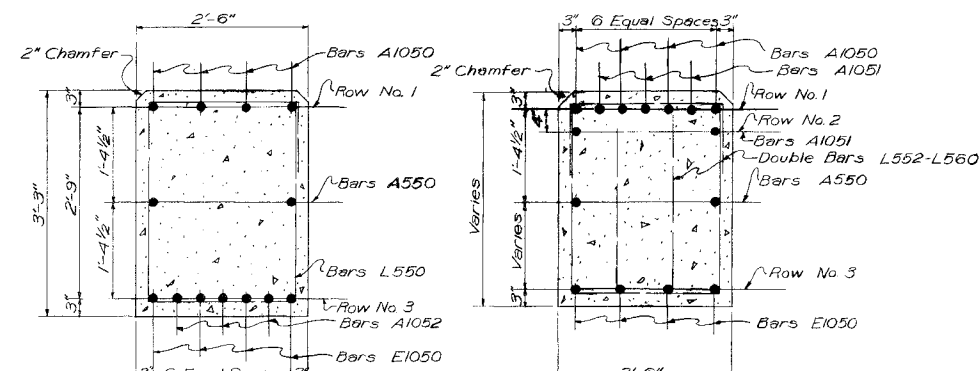
SEAL:  E. E. DELONG
PROFESSIONAL ENGINEER

K-17-77



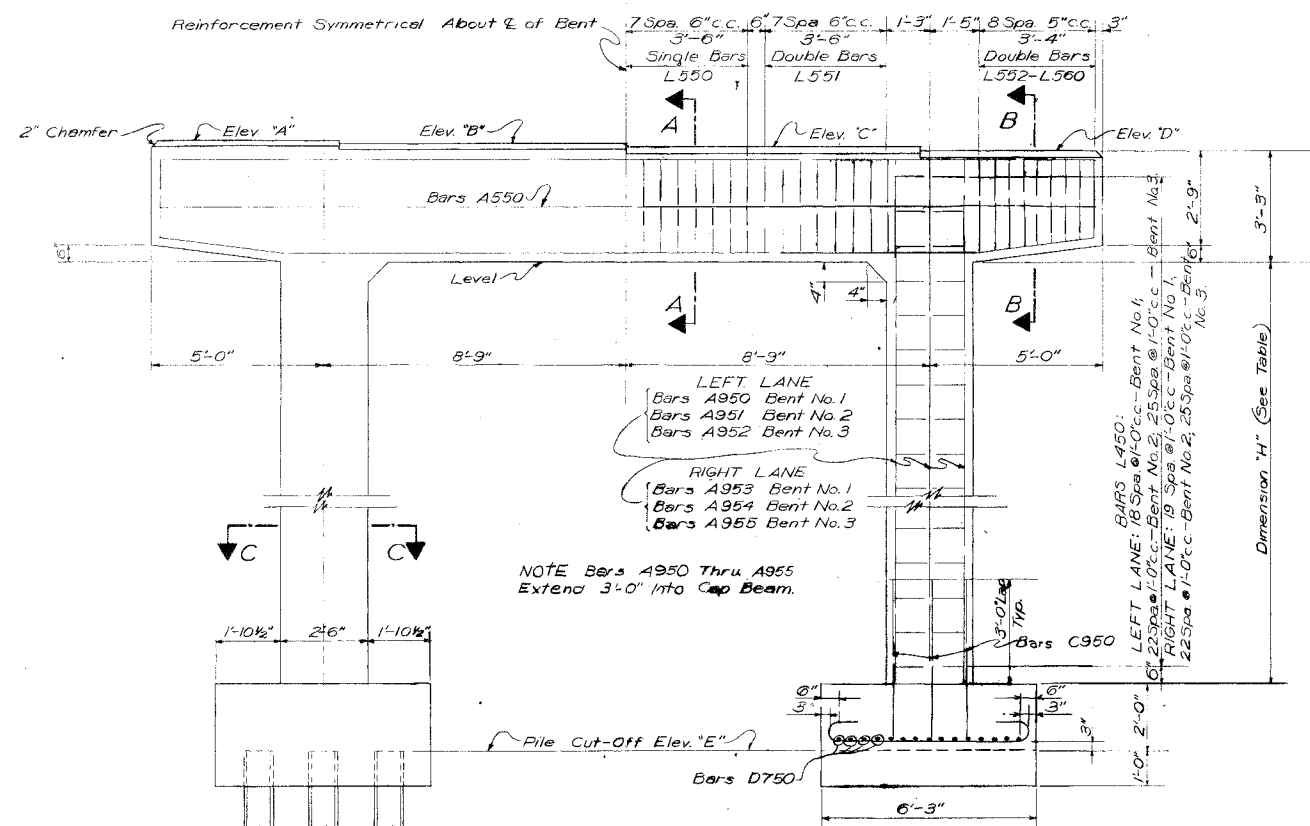
Note: When Pouring Cap Beam, Provisions Shall Be Made For Setting Anchor Bolts For Bearing Plates, Location Shown Above, Bolt Projection 3 1/2"

PLAN



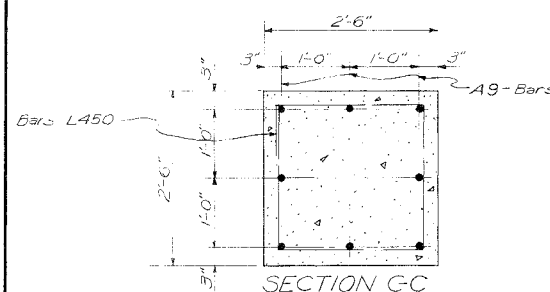
SECTION A-A

SECTION B-B

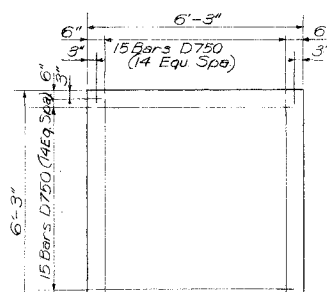


ELEVATION BENT NO. 12, E3

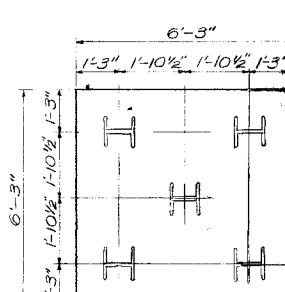
Left Lane Looking Back On Survey; Right Lane Looking Forward On Survey



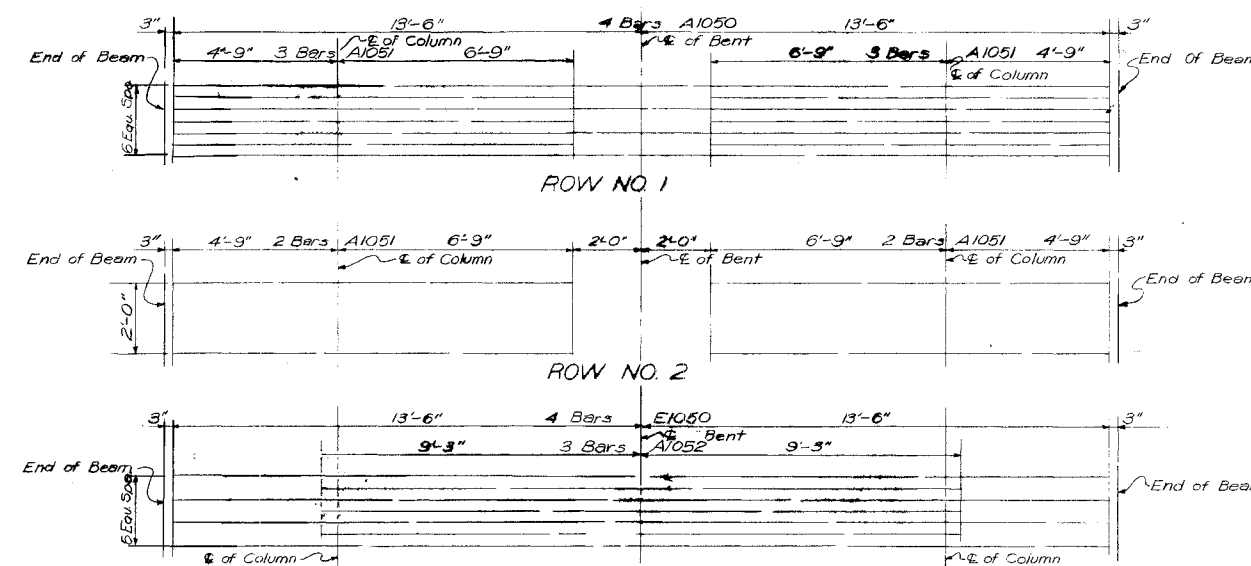
SECTION G-C



PLAN SHOWING FOOTING REINFORCEMENT



PLAN SHOWING PILE ARRANGEMENT



PLAN OF MAIN REINFORCING - CAP BEAM

TABLE OF STATIONS, ELEVATIONS, AND DIMENSIONS

	BENT	STATION	ELEVATIONS					DIMENSION
			"A"	"B"	"C"	"D"	"E"	
Left Lane	Bent No. 1	149 + 33.81	891.65	891.60	891.55	891.50	870.50	15'-9"
	Bent No. 2	150 + 02.56	894.86	894.83	894.78	894.73	869.98	19'-6"
	Bent No. 3	150 + 82.56	898.56	898.51	898.46	898.41	870.66	22'-6"
Right Lane	Bent No. 1	149 + 28.69	891.52	891.49	891.47	891.45	869.40	16'-6"
	Bent No. 2	149 + 97.44	894.75	894.73	894.71	894.69	868.89	20'-3"
	Bent No. 3	150 + 77.44	898.43	898.31	898.19	898.07	869.47	23'-3"

ESTIMATED QUANTITIES

ITEM	Bent No. 1	Bent No. 2	Bent No. 3
Class "A" Concrete	24.7	26.4	27.8
Reinforcing Steel	50.11	53.12	55.12
Class "B" Concrete	24.3	26.0	27.4
Reinforcing Steel	52.13	52.72	54.46

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE
BENTS NO. 1, 2, & 3
LEFT & RIGHT LANES
STATE ROUTE 95 OVER INTERSTATE 75
STATION 1147 + 38.80
LOUDON COUNTY
1962

DESIGNED BY: A. McCORD
DRAWN BY: J. GRIFFITH
CHECKED BY: A. McCORD, P.D.Q.
DATE: 3-62
DATE: 3-62
DATE: 3-62

CORRECT: Fred Gene
APPROVED: [Signature]
STATE HIGHWAY ENGINEER

K-17-79

LEFT LANE

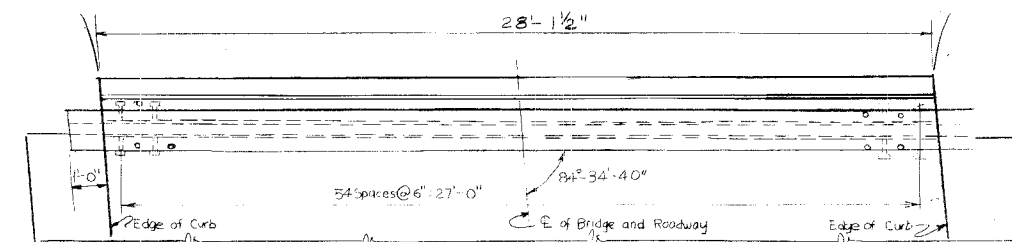
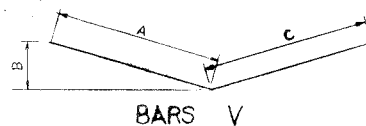
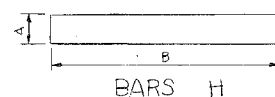
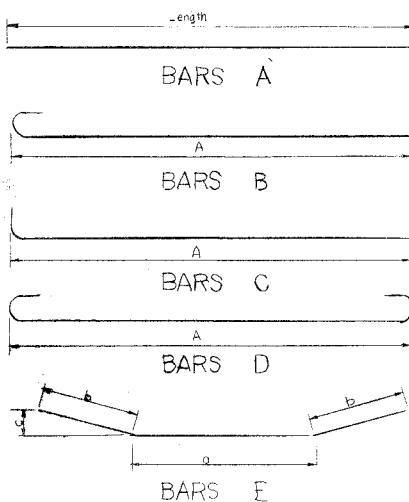
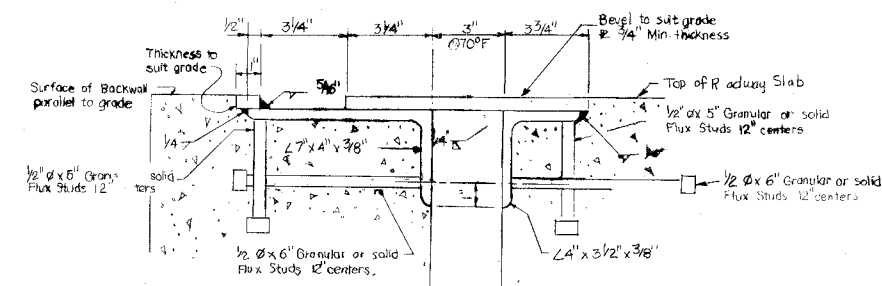
BILL OF STEEL

RIGHT LANE

STATE	TENN.	PROJECT NO.	19	SHEET NO.	28	TOTAL SHEETS	131
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SUPERSTRUCTURE										ABUTMENTS NO'S 1 & 2										BENTS NO'S 1, 2, & 3									
Bar	Location	Size	No. Req'd	Bending Dimensions				Length	Bar	Location	Size	No. Req'd	Bending Dimensions				Length	Bar	Location	Size	No. Req'd	Bending Dimensions				Length			
A	B	C	D	A	B	C	D	A	B	A	B	C	D	A	B	A	B	A	B	C	D	A	B	C	D	A	B		
A500	Slab	5	277					29'-6"		A440	Beam	4	10					34'-8"		A550	Cap Beam	5	6					27'-0"	
A501	Slab	5	456					33'-6"		A441	Backwall	4	12					34'-8"		A550	Column	9	16					18'-9"	
A502	Beam	5	24					27'-0"		A442	Beam	4	10					6'-8"		A551	"	9	16					22'-6"	
A503	Int. Diaphragm	5	24					9'-0"		A443	Beam	4	10					6'-8"		A552	"	9	16					25'-0"	
A504	End Diaphragm	5	16					25'-6"		A444	Wingwall	4	12					8'-0"		A550	Cap Beam	10	12					27'-0"	
A505	Curb	3	18					15'-0"		A445	"	4	12					7'-3"		A551	"	10	30					11'-6"	
A1100	Beam	11	16					26'-3"		A446	"	4	16					2'-9"		A1052	"	10	9					18'-6"	
A1101	"	11	16					55'-0"		A447	"	4	64					3'-6"		C950	Column & Footing	9	48	4'-0"				16'-5"	
A1102	"	11	16					37'-3"		A448	Wingwall	4	20					5'-3"		D750	Footing	7	180	5'-9"				7'-5"	
A1103	"	11	8					13'-0"		A449	Curb	4	4					5'-0"		E1050	Cap Beam	10	12	20'-0"	3'-9"	6"		27'-0"	
A1104	"	11	16					60'-0"		A450	"	4	4					0'-9"		L450	Column	4	136	2'-2"	6"	2'-2"		9'-2"	
A1105	"	11	16					45'-0"		A451	"	4	8					3'-0"		L550	Cap Beam	5	45	2'-2"	1'-0"	2'-2"		11'-2"	
A1106	"	11	16					30'-6"		A452	"	4	4					5'-6"		L551	"	5	76	1'-5"	1'-0"	2'-2"		9'-8"	
A1107	"	11	16					41'-3"		A453	"	4	4					0'-6"		L552	"	5	12	1'-5"	1'-0"	2'-2"		9'-8"	
A1108	"	11	16					34'-3"		A454	Wingpost	4	16					1'-7"		L553	"	5	12	1'-5"	1'-0"	2'-2"		9'-2"	
A1109	Slab	11	16					20'-7"		A455	"	4	16					1'-7"		L554	"	5	12	1'-5"	1'-0"	2'-2"		9'-2"	
A1110	"	11	48					80'-0"		A456	"	4	8					2'-3"		L555	"	5	12	1'-5"	1'-0"	2'-2"		9'-2"	
A1111	"	11	16					45'-0"		A457	"	4	8					2'-8"		L556	"	5	12	1'-5"	1'-0"	2'-2"		9'-0"	
A1112	"	11	16					16'-9"		A458	"	4	16					5'-6"		L557	"	5	12	1'-5"	1'-0"	2'-2"		9'-0"	
A1113	"	11	16					47'-6"		A459	"	4	12					3'-7"		L558	"	5	12	1'-5"	1'-0"	2'-2"		8'-10"	
A1114	"	11	12					27'-9"		A460	"	4	12					3'-0"		L559	"	5	12	1'-5"	1'-0"	2'-2"		8'-10"	
A1115	"	11	16					25'-0"		A461	Roadway Bracket	4	2					2'-6"		L560	Cap Beam	5	12	1'-5"	1'-0"	2'-2"		8'-8"	
A1116	"	11	16					53'-6"		A462	Beam	7	12					14'-8"											
A1117	"	11	12					30'-0"		A463	Beam	7	10					6'-8"											
A1118	"	11	16					33'-9"		A464	"	7	10					6'-8"											
B1120	Beam	11	16					54'-1"		A465	Wing post	4	14					4'-8"											
B1101	"	11	16					54'-1"		A466	Roadway Bracket	4	2					2'-6"											
L440	Int. Diaphragm	4	64	6"	5"	2'-5"		6'-3"		L440	Curb	4	4	1'-8"	6"	11"		5'-0"											
L441	Diaph. at Bent	4	63	6"	5"	4'-6"		10'-5"		L441	"	4	4	2'-2"	6"	11"		6'-8"											
L440	Endwall	4	62	5"	5"	1'-8"		4'-8"		L442	"	4	2	2'-0"	6"	11"		7'-10"											
N500	Slab	5	277					36'-4"		L443	"	4	6	3'-2"	6"	11"		3'-8"											
N500	Beam	5	275					30'-6"		L444	"	4	2	6"	11"			9'-0"											
S500	Beam	5	454					7'-0"		L445	"	4	2	6"	11"			8'-2"											
S501	"	5	24					7'-2"		L446	"	4	2	6"	11"			6'-4"											
S502	"	5	24					7'-2"		L447	"	4	2	6"	11"			7'-6"											
S503	"	5	24					7'-2"		L448	Beam	5	68	1'-8"	3'-2"			10'-2"											
S504	"	5	24					7'-2"		L449	Beam	5	22	1'-0"	2'-2"			9'-8"											
S505	"	5	24					7'-4"		L541	Beam	5	22	1'-0"	2'-2"			9'-8"											
S506	"	5	24					7'-4"																					
S507	"	5	24					7'-4"																					
S508	"	5	24					7'-6"																					
S509	"	5	24					7'-6"																					
S510	"	5	24					7'-6"																					
S511	"	5	24					7'-8"																					
S512	"	5	24					7'-8"																					
S513	"	5	24					7'-10"																					
S514	"	5	24					7'-10"																					
S515	"	5	24					8'-0"																					
S516	"	5	24					8'-2"																					
S517	"	5	24					8'-2"																					
S518	"	5	24					8'-4"																					
S519	"	5	24					8'-4"																					
S520	"	5	24					8'-8"																					
S521	"	5	24					8'-8"																					
S522	"	5	24					8'-10"																					
S523	"	5	24					8'-10"																					
S524	"	5	24					9'-0"																					
S525	"	5	24					9'-2"																					
S526	"	5	24					9'-4"																					
S527	"	5	24					9'-6"																					
S528	"	5	24					9'-10"																					
S529	"	5	24					10'-2"																					
S530	"	5	24					10'-8"																					
S531	"	5	24					11'-2"																					
S532	"	5	24					11'-8"																					
S533	"	5	24					12'-2"																					
V1100	Beam	11	10					24'-8"																					
V1101	Beam	11	92					23'-8"																					

* Wing Post, Wingwall, Beam & Curb.

PLAN OF ROADWAY AND CURB EXPANSION DEVICES
Plan above shows one set - two sets required

SECTION A-A AT ABUTMENT NO