

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

**Benjamin E. Graves**

**2023.09.29 14:47:23-05'00'**

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COMPANY NAME      HDR ENGINEERING, INC.  
ADDRESS            120 BRENTWOOD COMMONS WAY  
                         SUITE 525  
CITY, STATE        BRENTWOOD, TN 37027  
PE NAME, P.E. NO.    BENJAMIN EVAN GRAVES, 117107

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEET .....	STRUCTURE-SIGN1
TITLE SHEET .....	1
ESTIMATED QUANTITIES.....	2
GENERAL NOTES.....	3
PROJECT COMMITMENTS.....	4
TRAFFIC CONTROL PLANS .....	5 – 15
TRAFFIC CONTROL QUANTITIES AND NOTES .....	16
BRIDGE PLANS.....	BR-132-257 THRU 265

\$\$\$\$SYTIME\$\$\$\$  
\$\$\$\$SIGN.P.E.C\$\$\$\$

YEAR	PROJECT NO.	SHEET NO.
2023	75014-4245-04	STRUCTURE-SIGN1

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

SIGNATURE  
SHEET



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

**Benjamin E. Graves**  
2024.02.12 14:43:27-06'00'

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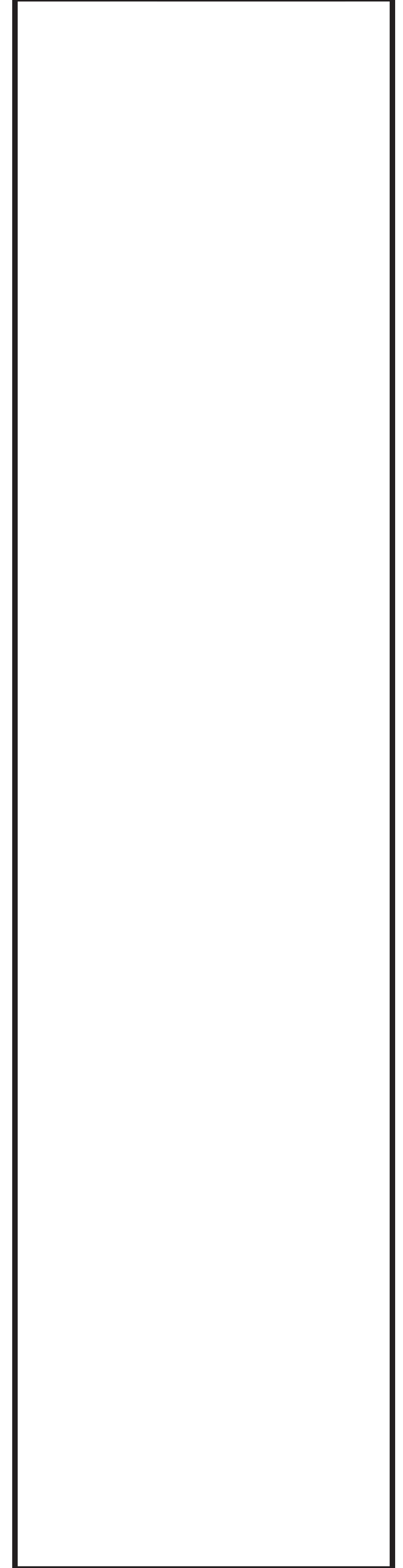
COMPANY NAME      HDR ENGINEERING, INC.  
ADDRESS            120 BRENTWOOD COMMONS WAY  
                         SUITE 525  
CITY, STATE        BRENTWOOD, TN 37027  
PE NAME, P.E. NO.    BENJAMIN EVAN GRAVES, 117107

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SHEET NAME	SHEET NO.
SIGNATURE SHEET .....	STRUCTURE-SIGN2
TITLE SHEET .....	1
ESTIMATED QUANTITIES .....	2
GENERAL NOTES .....	3
PROJECT COMMITMENTS .....	4
TRAFFIC CONTROL PLANS .....	5 - 15
TRAFFIC CONTROL QUANTITIES AND NOTES .....	16
BRIDGE PLANS .....	BR-132-257 THRU 265

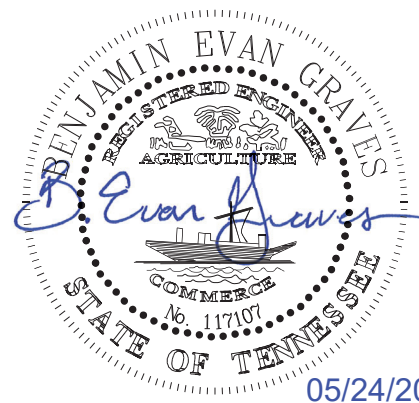
\$\$\$\$SYTIME\$\$\$\$  
\$\$\$\$DGN.PE.C\$\$\$\$

YEAR	PROJECT NO.	SHEET NO.
2024	75014-4245-04	STRUCTURE-SIGN2



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

SIGNATURE  
SHEET



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

**Benjamin E. Graves**  
2024.07.02 11:46:16-05'00'

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COMPANY NAME    HDR ENGINEERING, INC.  
ADDRESS         120 BRENTWOOD COMMONS WAY  
                      SUITE 525  
CITY, STATE     BRENTWOOD, TN 37027  
PE NAME, P.E. NO.    BENJAMIN EVAN GRAVES, 117107

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEET .....	STRUCTURE-SIGN3
TITLE SHEET .....	1
BRIDGE PLANS.....	BR-132-257

\$\$\$\$SYTIME\$\$\$\$  
\$\$\$\$DGN.PE.C\$\$\$\$

YEAR	PROJECT NO.	SHEET NO.
2024	75014-4245-04	STRUCTURE-SIGN3

**STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION**

**SIGNATURE  
SHEET**

# Index Of Sheets

SHEET NO.	DESCRIPTION
STRUCTURE-SIGN1- STRUCTURE-SIGN3	SIGNATURE SHEET
1	TITLE SHEET
2	ESTIMATED QUANTITIES
3	GENERAL NOTES
4	PROJECT COMMITMENTS
5-15	TRAFFIC CONTROL PLANS
16	TRAFFIC CONTROL QUANTITIES AND NOTES

## STANDARD ROADWAY DRAWINGS

### ROADWAY DESIGN STANDARDS

DWG NO.	REVISION	DESCRIPTION
RD-A-1	02-20-20	STANDARD ABBREVIATIONS A THROUGH L
RD-A-2		STANDARD ABBREVIATIONS M THROUGH Z
RD-L-1	02-20-20	STANDARD LEGEND
RD-L-1A		STANDARD LEGEND

### SAFETY DESIGN

DWG NO.	REVISION	DESCRIPTION
S-PL-3	06-28-2019	SAFETY PLAN: MINIMUM INSTALLATION @ BRIDGE ENDS
S-GRC-1M		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL

### DESIGN - TRAFFIC CONTROL

DWG NO.	REVISION	DESCRIPTION
T-M-1	06-28-19	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	06-28-19	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING IN HIGHWAYS AND FREEWAYS
T-WZ-12	03-04-21	ONE LANE CLOSURE DETAIL FOR BRIDGES AND DIVIDED HIGHWAYS
T-WZ-16	03-04-21	LANE SHIFT FOR DIVIDED HIGHWAYS AND FREEWAYS
T-WZ-FAB1	03-04-21	FLASHING YELLOW ARROW BOARD
T-WZ-PBR2	02-28-20	DETAILS FOR WORK ZONE CHANNELIZATION DEVICES
T-WZ-PCB2	01-28-22	20 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB2A	03-04-21	20 FOOT PORTABLE CONCRETE BARRIER RAIL STIFFENER TUBE
T-WZ-PCB3	01-28-22	PORTABLE CONCRETE BARRIER RAIL DETAILS

## LIST OF STANDARD DRAWINGS

DWG NO.	REVISION	DESCRIPTION
SBR-2-115	06-15-16	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT CONSTRUCTION TYPES "A" THRU "J" - 1991
SBR-2-116	01-04-96	GENERAL DETAILS FOR STRIPSEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPES "A" THRU "J" - 1991
SBR-2-117	05-30-96	STRIPSEAL EXPANSION JOINTS - REPLACEMENT CONSTRUCTION DETAILS TYPE "A" AND TYPE "B" - 1991
STD-1-5	03-01-22	REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS
STD-2-3		BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL ALTERNATE CONNECTION DETAIL
STD-10-2	03-01-22	MISC. ABUTMENT & PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS
STD-10-3	03-01-22	STANDARD FLUME DETAILS

## SPECIAL PROVISIONS

DWG NO.	REVISION	DESCRIPTION
SP108B		

## SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2021 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT C.E. MANAGER I OR TDOT DESIGN MANAGER I	DESIGNER HDR
DESIGNER AMY MELTON	CHECKED BY EVAN GRAVES
P.E. NO. 75014-4245-04	PIN 130873.00

# STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING

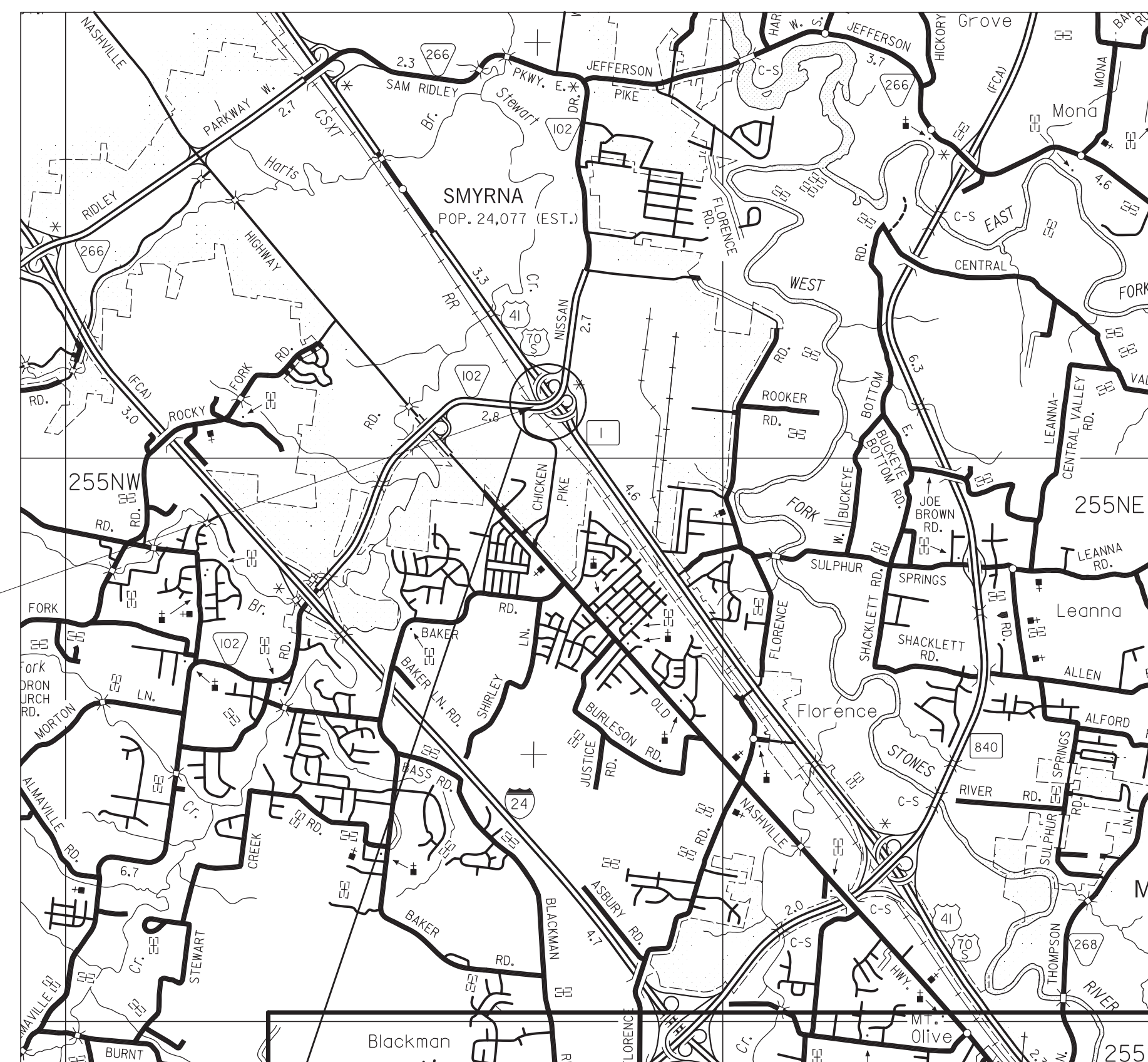
## RUTHERFORD COUNTY

BRIDGE NO. 75-SR102-10.34 R&L OVER SR 1 & CSX RAILROAD  
(FEDERAL ID: 75SR0010033 & 75SR0010034)

### PS&E

### BRIDGE REPAIR

SR 102 R&L F.A.H.S. NO.



SCALE: 1" = 1 MILE

PROJECT NO. 75014-4245-04

BRIDGE NO. 75-SR102-10.34 R&L

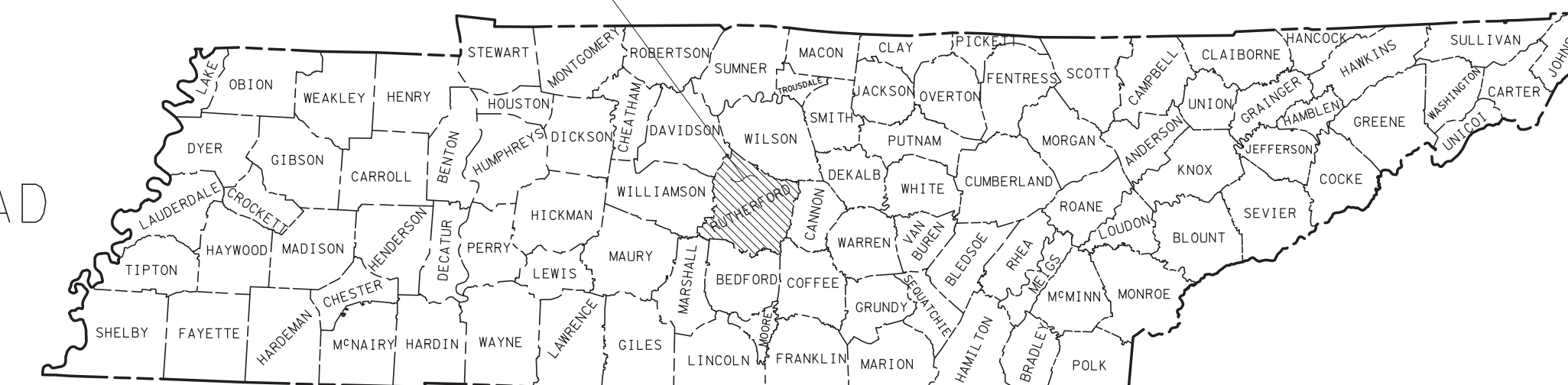
LAND DISTURBANCE: 0.5 ACRES

REVISION 01-10-24: INDEX OF SHEETS AND LETTING YEAR UPDATED.  
REVISION 05-20-24: INDEX OF SHEETS AND TITLE VERBIAGE UPDATED.  
CHAPTER 86 ELIGIBILITY FOR UTILITIES AND  
WORK ZONE SIGNIFICANCE DETERMINATION ADDED.

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES	NO
WORK ZONE SIGNIFICANCE DETERMINATION		
SIGNIFICANT	YES	NO

TENN.	YEAR	SHEET NO.
	2024	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	75014-4245-04	

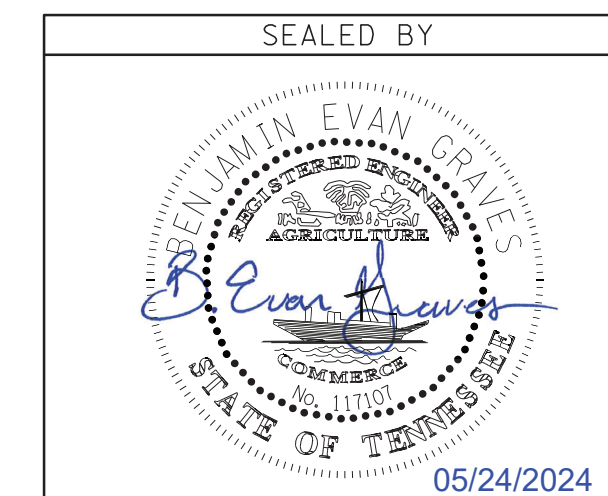
PROJECT LOCATION



## BRIDGE DRAWINGS

DWG. NO.	DRAWING
BR-132-257	LAYOUT OF BRIDGE TO BE REPAIRED
BR-132-258	PHASED CONSTRUCTION DETAILS
BR-132-259	TYPICAL SECTION
BR-132-260	ESTIMATED QUANTITIES
BR-132-261	GENERAL NOTES
BR-132-262	GENERAL REPAIR DETAILS
BR-132-263	GENERAL REPAIR DETAILS
BR-132-264	GENERAL REPAIR DETAILS
BR-132-264A	GENERAL REPAIR DETAILS
BR-132-265	GENERAL REPAIR DETAILS

SEALED BY



APPROVED:

*Will Reid*  
WILL REID, CHIEF ENGINEER

DATE

APPROVED:

*Howard H. Eley*  
HOWARD H. ELEY, COMMISSIONER

## REFERENCE DRAWINGS (TO BE PRINTED WITH PLANS)

DRAWING NO.	DESCRIPTION
BR-64-29 TO BR-64-35	EXISTING BRIDGE PLANS
M-105-21 TO M-105-39	EXISTING BRIDGE PLANS
M-105-42 TO M-105-62	EXISTING BRIDGE PLANS
BR-64-49 TO BR-64-54	EXISTING BRIDGE PLANS

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

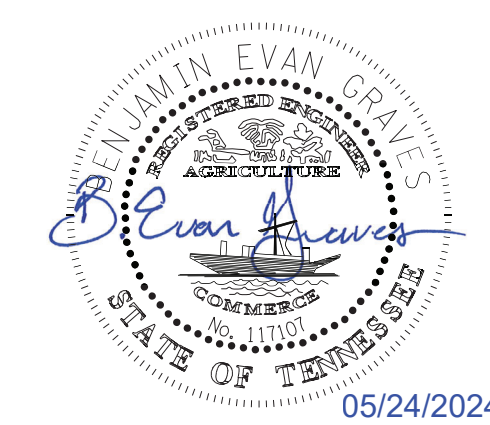
PROJECT NO.	YEAR	SHEET NO.	
75014-4245-04	2024	2	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	01/10/2024	BEG	LETTING YEAR UPDATED

- ① 415-01.02 INCLUDES ALL COSTS ASSOCIATED WITH COLD PLANING EXISTING ASPHALT PAVEMENT OF BOTH APPROACHES ON BOTH BRIDGES. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-132-264.
- ② 604-10.05 INCLUDES ALL COSTS ASSOCIATED WITH SPALL REPAIRS USING HIGH EARLY STRENGTH CONCRETE AT FIELD DESIGNATED LOCATIONS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-132-262.
- ③ 604-10.18 INCLUDES COST OF REINFORCING STEEL REQUIRED FOR THE SIDE DRAIN AT THE NORTHWEST CORNER OF BRIDGE NO. 75-SR102-10.34 (RT.) FOR DETAILS, SEE DWG. NOS. BR-132-257, AND BR-132-265.
- ④ 604-10.44 INCLUDES COST OF ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO REMOVE PORTIONS OF THE EXISTING DECK, PORTIONS OF THE EXISTING APPROACH SLAB, ROADWAY BRACKET, AND JOINT, CLEANING ALL EXPOSED REINFORCING STEEL TO REMAIN, WELDING, PROVIDE NEW CONTINUOUS ELASTOMERIC BEARING PAD AND NEW JOINT SYSTEM, REINFORCING STEEL REQUIRED FOR PORTIONS OF THE DECK AND APPROACH SLAB AND FORMING AND PLACING HIGH EARLY STRENGTH CONCRETE IN PORTIONS OF THE DECK AND APPROACH SLAB AT BOTH ENDS OF BOTH BRIDGES. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-132-263 THRU BR-132-264A.
- ⑤ 604-10.54 INCLUDES ALL COSTS ASSOCIATED WITH SPALL REPAIRS USING POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL AT FIELD DESIGNATED LOCATIONS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-132-262.
- ⑥ 604-10.62 INCLUDES ALL COST OF LABOR AND MATERIALS TO EPOXY INJECT CRACKS AT FIELD DESIGNATED LOCATIONS. FOR NOTES, SEE DWG. NO. BR-132-262. THE ENGINEER FROM TDOT SHALL LOCATE EXACT REPAIR LOCATIONS.
- ⑦ 709-05.06 INCLUDES COSTS OF ALL LABOR AND MATERIALS NECESSARY TO HAUL AND PLACE CLASS A-1 RIP-RAP IN NEW RIP-RAP FLUMES NEAR BEGIN AND END OF BRIDGE NO. 75-SR102-10.34 (LT.). FOR NOTES AND DETAILS, SEE DWG. NO. BR-132-257 AND STD. DWG. NO. STD-10-3.
- ⑧ THE COST OF RELOCATING THE LISTED ITEMS DURING TRAFFIC CONTROL PHASES SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM.
- ⑨ 712-02.60 THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF AASHTO MASH FOR TEST LEVEL 3. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS LISTED ON THE MANUFACTURER'S BILL OF MATERIALS.
- ⑩ THE ENGINEER MAY INCREASE OR DECREASE THE QUANTITY FOR THIS ITEM.
- ⑪ TO BE PLACED AT THE ENGINEERS DISCRETION
- ⑫ 203-03 INCLUDES COST OF ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED FOR PLACEMENT OF BACKFILL IN AREAS OF EROSION ON THE LEFT SIDE OF THE LEFT BRIDGE AT BOTH ENDS, BENEATH PROPOSED RIP-RAP FLUMES, AND THE COST OF ALL LABOR AND MATERIALS TO FURNISH, HAUL, AND PLACE FILL MATERIAL FOR THE SIDE DRAIN AT THE NORTHWEST CORNER OF BRIDGE NO. 75-SR102-10.34 (RT.). FOR NOTES AND DETAILS, SEE DWG. NO. BR-132-257, DWG. NO. BR-132-265, AND STD. DWG. NO. STD-10-3.
- ⑬ 740-10.04 INCLUDES COST OF ALL LABOR, EQUIPMENT AND MATERIAL REQUIRED FOR PLACEMENT OF GEOTEXTILE (TYPE IV) (STABILIZATION) IN AREAS OF EROSION ON THE LEFT SIDE OF LEFT BRIDGE AT BOTH ENDS, WHERE NEW RIP-RAP FLUMES ARE BEING PLACED. FOR NOTES AND DETAILS, SEE DWG. NO. BR-132-257 AND STD. DWG. NO. STD-10-2 & STD-10-3.
- ⑭ 604-10.42 INCLUDES COST OF ALL LABOR, EQUIPMENT AND MATERIALS, EXCLUDING REINFORCEMENT STEEL, REQUIRED FOR THE SIDE DRAIN AT THE NORTHWEST CORNER OF BRIDGE NO. 75-SR102-10.34 (RT.). FOR NOTES AND DETAILS, SEE DWG. NO. BR-132-257 & BR-132-265.
- ⑮ IF BARRIER RAIL MEETING MASH TL-3 REQUIREMENTS IS NOT AVAILABLE THE CONTRACTOR MAY SUPPLY, UPON APPROVAL OF THE ENGINEER, AN EQUIVALENT BARRIER RAIL MEETING NCHRP-350.
- ⑯ 403-01 QUANTITY ASSUMES A RANGE OF APPLICATION FROM 0.08 TO 0.12 GALLONS PER SQUARE YARD.
- ⑰ INCLUDES ALL COST ASSOCIATED WITH THE REMOVAL AND DISPOSAL OF THE EXISTING CONCRETE FLUMES AT BOTH ENDS OF BRIDGE NO. 75-SR102-10.34 (LT.).
- ⑱ TO BE USED IN PREPARATION FOR WORK ON DRAIN AT BEGIN BRIDGE NO. 75-SR102-10.34 (LT.).
- ⑲ INCLUDES ALL COST ASSOCIATED WITH PLACING FLOWABLE FILL TO REPAIR UNDERMINING AT FIELD IDENTIFIED LOCATIONS NEAR THE ABUTMENTS.

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	10.34 (LT.)	10.34 (RT.)	DETOUR	TOTAL QUANTITY
⑱	201-01 CLEARING AND GRUBBING	LS	1	0	--	1
⑰	202-04.01 REMOVAL OF STRUCTURES (EXIST. CONC. FLUMES, 75-SR102-10.34 LT.)	LS	1	0	--	1
⑪⑩⑫	203-03 BORROW EXCAVATION	C.Y.	111	4	--	115
⑪⑩⑱	204-06.01 FLOWABLE FILL (GENERAL)	C.Y.	12.5	12.5	--	25
⑮	403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	0.4	0.2	--	0.6
	411-02.10 ACS MIX(PG70-22) GRADING D	TON	48	31	--	79
①	415-01.02 COLD PLANING BITUMINOUS PAVEMENT	S.Y.	600	440	--	1040
⑩②	604-10.05 CONCRETE	S.F.	19	19	--	38
③	604-10.18 REINFORCING STEEL (REPAIRS)	LB.	0	278	--	278
⑪⑩⑭	604-10.42 CONCRETE REPAIRS	C.F.	0	176	--	176
④	604-10.44 EXPANSION JOINT REPAIRS	L.F.	106	92	--	198
⑪⑩⑤	604-10.54 CONCRETE REPAIRS	S.F.	96	96	--	192
⑪⑩⑥	604-10.62 EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE)	L.F.	924	748	--	1672
⑪⑩⑦	709-05.06 MACHINED RIP-RAP (CLASS A-1)	TON	58	0	--	58
	712-01 TRAFFIC CONTROL	LS	0.33	0.33	0.33	1
⑮	712-02.12 BARRIER RAIL, REDUCED DEFLECTION (MASH TL-3)	L.F.	930	950	--	1880
⑨⑧	712-02.60 TEMPORARY CRASH CUSHION (MASH TL-3)	EACH	1	1	--	2
⑧	712-04.01 FLEXIBLE DRUMS (CHANNELIZING)	EACH	87	155	10	252
⑧	712-04.50 BARRIER RAIL DELINEATOR	EACH	32	33	--	65
⑧	712-06 SIGNS (CONSTRUCTION)	S.F.	550	542	818	1910
⑧	712-07.03 TEMPORARY BARRICADES (TYPE III)	L.F.	88	24	--	112
⑧	712-08.03 ARROW BOARD (TYPE C)	EACH	1	1	--	2
	712-09.02 REMOVABLE PAVEMENT MARKING (8" BARRIER LINE)	L.F.	4595	8840	700	14135
	712-09.08 REMOVABLE PAVEMENT MARKING (6" LINE)	L.F.	3275	4610	--	7885
	712-09.30 REMOVABLE BLACK-OUT TAPE (6")	L.F.	3275	4610	--	7885
⑧⑩⑪	713-16.01 CHANGEABLE MESSAGE SIGN UNIT	EACH	2	2	7	11
	716-12.02 ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	0.1	0.1	--	0.2
	717-01 MOBILIZATION	LS	0.33	0.33	0.33	1
⑩⑪⑬	740-10.04 GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	690	0	--	690

DESIGNED BY Lane M. Decker DATE 02/05/21  
 DRAWN BY Josh A. Perry DATE 02/05/21  
 SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
 CHECKED BY Carter D. Bearden DATE 02/05/21



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

ESTIMATED QUANTITIES

SR 102 OVER SR 1 & CSXRR  
BRIDGE NO. 75-SR102-10.34 (RT. & LT.)  
FED. ID NO. 75SR0010033 & 34  
RUTHERFORD COUNTY  
2024

**GENERAL NOTES**

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (JANUARY 1, 2021 EDITION), AND THE 4TH EDITION (2017) AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS WITH INTERIMS.

DESIGN SPECIFICATIONS: 9TH EDITION (2020) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS WITH INTERIMS, AND THE 2ND EDITION (2011) AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN WITH INTERIMS

REINFORCING STEEL: SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE SECTION 604 AND 907 OF THE STANDARD SPECIFICATIONS.

CONCRETE: TO BE CLASS "A" (CAST-IN-PLACE) F'C = 3000 PSI EXCEPT AS NOTED OTHERWISE.

HIGH EARLY STRENGTH CONCRETE: THE MIX IS TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS "X". THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS. THE WATER-CEMENT RATIO SHALL BE A MAXIMUM OF 0.40. DESIGN AIR CONTENT SHALL BE 6% WITH ±2% ACCEPTANCE RANGE IN THE FIELD. SLUMP SHALL BE 3±1 INCHES. IF USING A TYPE A, F, OR G WATER REDUCER, THE SLUMP SHALL BE MAXIMUM OF 8 INCHES. NO FLY ASH REPLACEMENT WILL BE PERMITTED. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 PSI. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIRED AREAS UNTIL TEST SPECIMENS ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF TWELVE HOURS.

CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

EXPANSION JOINTS (STRIP SEAL AND MODULAR): FOR ADDITIONAL GENERAL NOTES APPLICABLE TO STRIP SEAL EXPANSION JOINTS, SEE STANDARD DRAWING NOS. SBR-2-115 AND SBR-2-116, ALSO SEE SECTION 623 OF THE STANDARD SPECIFICATIONS. FOR MODULAR JOINTS SEE SECTION 623 OF THE STANDARD SPECIFICATIONS.

EXPANSION JOINT: THE RETAINER THAT HOLDS THE MEMBRANE MAY BE AN EXTRUSION OR ROLLED SHAPE AND SHALL BE 50 KSI STEEL. THE REMAINDER OF THE EXPANSION JOINT SHALL BE A36 STEEL. ALL STEEL THAT IS PART OF THE JOINT ASSEMBLY SHALL EITHER BE PAINTED IN ACCORDANCE WITH "SYSTEM A" OF THE STANDARD SPECIFICATIONS, SUBSECTION 603.06, OR GALVANIZED IN ACCORDANCE WITH ASTM A-123. COST OF PAINTING OR GALVANIZING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE EXPANSION JOINT.

DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY. FOR FULL DEPTH SLAB REMOVAL, EXCEPT OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 90 POUND CLASS. FOR PARTIAL DEPTH SLAB REMOVAL AND ANY WORK OVER THE BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS; CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE AS LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. EXPANSION JOINT REMOVAL SHALL FOLLOW THE SAME RESTRICTIONS AS FULL DEPTH SLAB REMOVAL. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.

QUICK-SET PATCHING MATERIAL: QUICK-SET PATCHING MATERIAL SHALL BE A POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL. SEE TDOT QUALIFIED PRODUCTS LIST 13.009 POLY MOD CEMENT STRUCT PATCH VERT Ø OVER FOR ACCEPTABLE PATCHING MATERIALS.

ROADSIDE BANKS/SLOPES, USED BY THE CONTRACTOR FOR WORK ACCESS, PARKING, SHOULDER WIDENING, AND ANY OTHER PURPOSES, THAT ARE DISTURBED BY HIS OPERATIONS SHALL BE REPAIRED BY REMOVING ADDED FILL AND ASPHALT, REGRADING, RESEEDING, MULCHING OR WHATEVER OTHER MEANS ARE NECESSARY TO RESTORE THE BANKS/SLOPES TO THE ORIGINAL CONDITION. ALL RESTORATION WORK SHALL MEET THE FULL SATISFACTION OF THE ENGINEER. COST OF ALL RESTORATION WORK SHALL BE INCLUDED IN ITEMS BID ON.

NOTE: MECHANICAL BAR SPLICERS MUST BE ON THE TDOT QUALIFIED PRODUCTS LIST 27. THE BAR SPLICERS SHALL MEET AASHTO LRFD SPECIFICATIONS FOR MECHANICAL CONNECTION. WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO SECTION 907 OF THE STANDARD SPECIFICATIONS. THE COST OF FURNISHING THE BAR SPLICERS, (AND EPOXY COATING WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE REINFORCING BARS, UNLESS NOTED OTHERWISE IN PLANS.

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 604-04.02, APPLIED TEXTURE FINISH (EXISTING STRUCTURES), S.Y.

RAILROAD CROSSING: THE CONTRACTOR SHALL CONDUCT WORK SO AS TO PROTECT THE RAILROAD TRACKS AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH REGULATIONS STIPULATED BY CSX SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC.

RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS A-1 IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE MEASURED AND PAID FOR UNDER ROADWAY ITEM NO. 709-05.06.

**GUARDRAIL**

THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED.

THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETELY IN PLACE.

**GRADING**

ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

**MISCELLANEOUS**

NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

**UTILITY NOTES**

THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED.

UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL OWNER OF HIS PLAN OF OPERATION IN THE AREA OF UTILITIES. PRIOR TO COMMENCING THE WORK, THE CONTRACTOR SHALL CONTACT OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.

SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111.

UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES AND GRADES ARE A CONTRACT ITEM, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK, AND AT ANY LOCATION OF THE PROJECT DIRECTED BY THE ENGINEER.

**DISTURBED AREA**

CLEARING, GRUBBING, AND OTHER DISTURBANCE TO VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICAL. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES.

CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.

**PAVEMENT MARKINGS**

**FINAL PAVEMENT MARKINGS**

PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

**CSXT RAILROAD NOTES**

1. COMPLY WITH THE CONSTRUCTION SUBMISSION CRITERIA OF THE CSXT PUBLIC INFORMATION DOCUMENT AND CONSTRUCTION REQUIREMENTS OF THE PUBLIC PROJECTS MANUAL, WHICH IS AVAILABLE AT THE FOLLOWING URL: [HTTPS://WWW.CSX.COM/INDEX.CFM/ABOUT-US/PROPERTY/](https://www.csx.com/index.cfm/about-us/property/)
2. ALL WORK IN THE FRA RED ZONE (WITHIN 4 FEET FROM OUTSIDE OF THE RAIL ON EACH SIDE OF THE TRACK) WILL BE ALLOWED ONLY WITH A CSXT, FRA QUALIFIED FLAGMAN OR WATCHMAN AS SPECIFIED BY THE LOCAL ENGINEERING REPRESENTATIVE.
3. ALL WORK BEYOND 4 FEET FROM THE OUTSIDE RAILS AND WITHIN 25 FEET MUST BE DONE UNDER THE SUPERVISION OF A QUALIFIED INSPECTOR OR CSXT FLAGMAN.
4. CERTAIN TYPES OF WORK DONE BEYOND 25 FEET FROM THE OUTSIDE OF THE RAILS, AND WITH EQUIPMENT THAT WILL NOT REACH BEYOND THIS POINT, MAY BE DONE WITHOUT FLAGGING PROTECTION OR A WATCHMAN. THIS MUST BE APPROVED BY THE LOCAL ENGINEERING REPRESENTATIVE. THE AREA MUST BE PROTECTED BY A CONSTRUCTION FENCE, AND THE WORK MUST BE STATIONARY.
5. ALL WORKERS WILL REMAIN OFF THE TRACKS. IF NECESSARY TO PERFORM THE WORK ON TRACK, PROTECTION WILL BE PROVIDED AS STATED ABOVE.
6. ALL WORKERS MUST COMPLY WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THOSE OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND THE FEDERAL RAILROAD ADMINISTRATION (FRA).
7. AT LEAST THIRTY (30) DAYS ADVANCED NOTIFICATION MUST BE GIVEN TO THE RAILROAD REPRESENTATIVE, TO SCHEDULE A RAILROAD FLAGMAN.
8. THE CONTRACTOR MAY NOT USE CSXT RIGHT-OF-WAY, FOR STORAGE OF MATERIALS OR EQUIPMENT, WITHOUT PRIOR WRITTEN APPROVAL FROM CSXT.
9. THE CONTRACTOR SHALL CONDUCT ITS WORK AT ALL TIMES, IN A MANNER WHICH WILL PROTECT CSXT'S PROPERTY AND TRACK FACILITIES FROM DAMAGE AND WITHOUT INTERRUPTION TO TRAIN OPERATIONS

CONST. NO. 75014-4245-04

PROJECT NO.	YEAR	SHEET NO.	
75014-4245-04	2024	3	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	01/10/2024	BEG	LETTING YEAR UPDATED

**CSXT RAILROAD NOTES (CONTINUED)**

10. CONTRACTOR SHALL MAINTAIN ALL DITCHES AND DRAINAGE STRUCTURES FREE OF SILT OR OTHER OBSTRUCTIONS THAT MAY RESULT FROM THEIR OPERATIONS. CONTRACTOR, UPON COMPLETION OF THE PROJECT, SHALL LEAVE CSXT PROPERTY IN A NEAT CONDITION, SATISFACTORY TO THE CSXT REPRESENTATIVE.

11. PRIOR TO THE INSTALLATION OF ANY SIGNAGE WITHIN CSXT RIGHT-OF-WAY, CONTRACTORS MUST CONTACT THE RAILROAD'S REPRESENTATIVE FOR LOCATION OF ALL UNDERGROUND SIGNAL UTILITIES.

12. ANY VIOLATION OF ANY CSXT RULES, REGULATIONS OR POLICIES, MAY RESULT IN REMOVAL OF CONTRACTOR PERSONNEL FROM THE RIGHT-OF-WAY.

13. NO CRANE OR BOOM EQUIPMENT SHALL BE ALLOWED TO SET UP TO WORK OR PARK WITHIN BOOM DISTANCE PLUS 15 FEET OF THE CENTERLINE OF TRACK WITHOUT SPECIFIC PERMISSION FROM THE RAILROAD. NO CRANE OR BOOM EQUIPMENT SHALL BE ALLOWED TO FOUL TRACK, WORK WITHIN THE FOUL ZONE, OR LIFT A LOAD OVER THE TRACK WITHOUT FLAGGING PROTECTION AND PERMISSION FOR TRACK TIME FROM THE RAILROAD.

14. ALL WORKMEN AND MACHINE OPERATORS SHALL STAY WITH THEIR MACHINES WHEN CRANE OR BOOM EQUIPMENT IS POINTED TOWARD THE TRACK. ALL CRANES AND BOOM EQUIPMENT SHALL STOP WORK AND CLEAR TRACK WHILE TRAIN IS PASSING. SWINGING LOADS SHALL BE SECURED TO PREVENT MOVEMENT WHILE TRAIN IS PASSING AND NO LOADS SHALL BE SUSPENDED ABOVE A MOVING TRAIN. ALL CRANES AND BOOM EQUIPMENT SHALL BE TURNED AWAY FROM THE TRACK AFTER EACH WORKDAY OR WHENEVER UNATTENDED BY AN OPERATOR.

15. ALL WORK MUST BE STOPPED WHILE TRAINS ARE PASSING WITHIN THE WORK ZONE.

16. CONSTRUCTION CLEARANCES SHALL BE SUBJECT TO APPROVAL BY CSXT. TYPICALLY, REDUCTION IN CLEARANCE FOR CONSTRUCTION IS NOT PERMITTED.

17. FALSEWORK, NETTING OR OTHER SUITABLE PROTECTION SHALL BE PROVIDED TO PREVENT DEBRIS FROM FALLING ON THE TRACK DURING DEMOLITION AND CONSTRUCTION OPERATIONS

18. "ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE FIVE (5) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED FOR THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

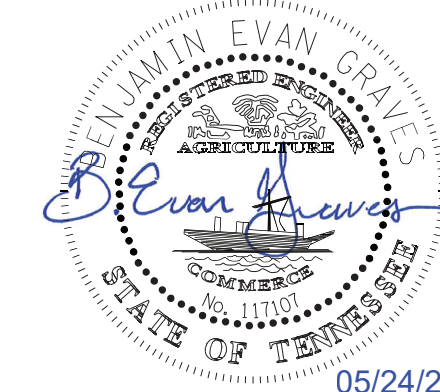
19. ALL SOILS EXCAVATED WITHIN CSXT'S RAILROAD RIGHT-OF-WAY SHALL REMAIN ON CSXT'S RIGHT-OF-WAY. TESTING OF SOILS ON CSXT ROW IS PROHIBITED WITHOUT PRIOR WRITTEN CSXT AUTHORIZATION. ANY SOILS EXCAVATED ON CSXT ROW CAN BE REUSED ON THE ROW PROVIDED PLACING SOILS ALONG CSXT ROW POSSES NO ADVERSE IMPACTS TO THE EXISTING TERRAIN, DRAINAGE OR ENVIRONMENT. SHOULD SOIL NEED TO BE REMOVED FROM CSXT ROW, THE CSXT ENVIRONMENTAL DEPARTMENT WILL SAMPLE THE SOIL FOR DISPOSITION. SOIL STAGED ON CSXT MUST FOLLOW CSXT PROTOCOL AND BE PROPERLY STORED AND/OR PROTECTED FROM THE ELEMENTS AND POTENTIAL EXPOSURE.

20. THE CONTRACTOR SHALL NOTIFY AND COORDINATE THEIR WORK WITH THE FOLLOWING CSXT REPRESENTATIVE:  
 CROUCH ENGINEERING, INC.  
 5115 MARYLAND WAY, SUITE 225  
 BRENTWOOD, TN 37027  
 ATTN: MR. SCOTT VICK, P.E.  
 PHONE: 615-791-0630  
 EMAIL: SVICK@CROUCHENGINEERING.COM

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

SR 102 OVER SR 1 & CSXRR  
 BRIDGE NO. 75-SR102-10.34 (RT. & LT.)  
 FED. ID NO. 75SR0010033&34  
 RUTHERFORD COUNTY  
 2024



DESIGNED BY Lane M. Decker DATE 02/05/21  
 DRAWN BY Josh A. Perry DATE 02/05/21  
 SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
 CHECKED BY Carter D. Bearden DATE 02/05/21



05/24/2024

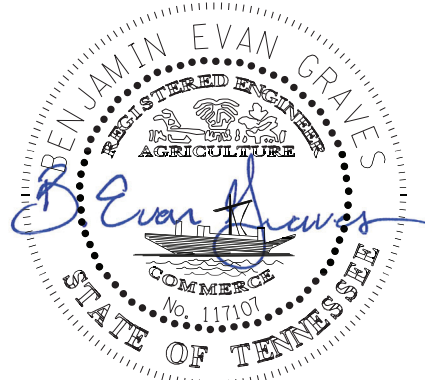
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	4

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA. / LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	ASBESTOS CONTAINING MATERIAL (ACM) SURVEYS WERE COMPLETED ON BRIDGE NO. 75SR0010033 SR-102 EB OVER SR-1 AND CSXRR LM 10.34 (75-SR102-10.34R) AND BRIDGE NO. 75SR0010034 SR-102 WB OVER SR-1 AND CSXRR LM 10.34 (75-SR102-10.34L). NO ACM WAS DETECTED. PLEASE SEE THE REPORTS FOR FURTHER DETAILS AND PHOTOGRAPHS. NO SPECIAL ACCOMODATIONS FOR DEMOLITION AND WASTE DISPOSAL ARE ANTICIPATED FOR THESE STRUCTURES AND THE MATERIAL CAN BE DEPOSITED IN A C&D LANDFILL. PRIOR TO THE DEMOLITION OR REHABILITATION OF ANY STRUCTURE (BRIDGE OR BUILDING), THE CONTRACTOR IS REQUIRED TO SUBMIT THE NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS STANDARD 10-DAY NOTICE OF DEMOLITION TO THE TDEC DIVISION OF AIR POLLUTION CONTROL (PER TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2015) SECTIONS 107.08 D AND 202.03).	BRIDGES

\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DONSPEC\$\$\$\$\$

SEALED BY



05/24/2024

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

PROJECT  
COMMITMENTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	5

ONE LANE BRIDGE  
2 MILES  
HORIZ. CLEARANCE  
18 FEET

SPECIAL 1  
(60"X30")

SPEED  
LIMIT  
35

R2-1  
(48"X60")  
A



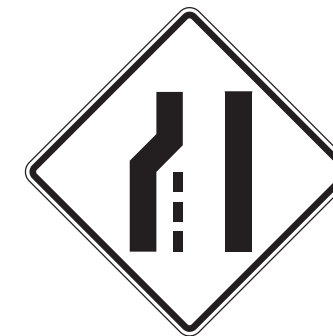
W20-1  
(48"X48")  
B



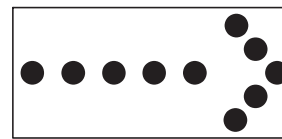
W20-5L  
(48"X48")  
C



W20-5L  
(48"X48")  
D



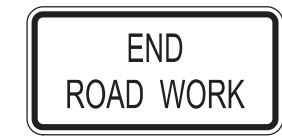
W4-2L  
(48"X48")  
E



TYPE "C" ARROW BOARD  
(96" X 48")  
SEE STD. DWG. T-FAB-1  
F



W20-1  
(48"X48")  
G

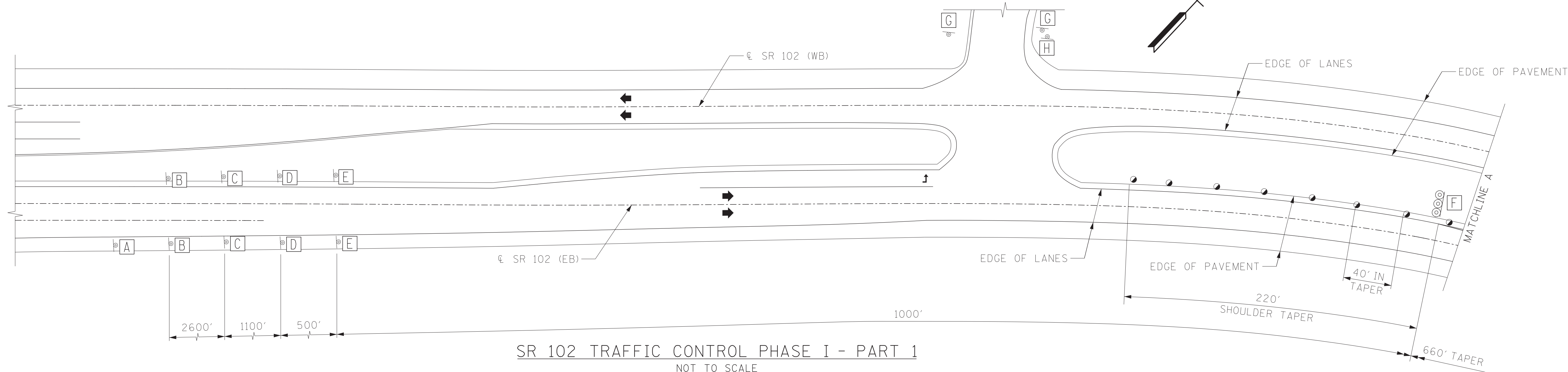


G20-2  
(48"X24")  
H

TRAFFIC CONTROL LEGEND

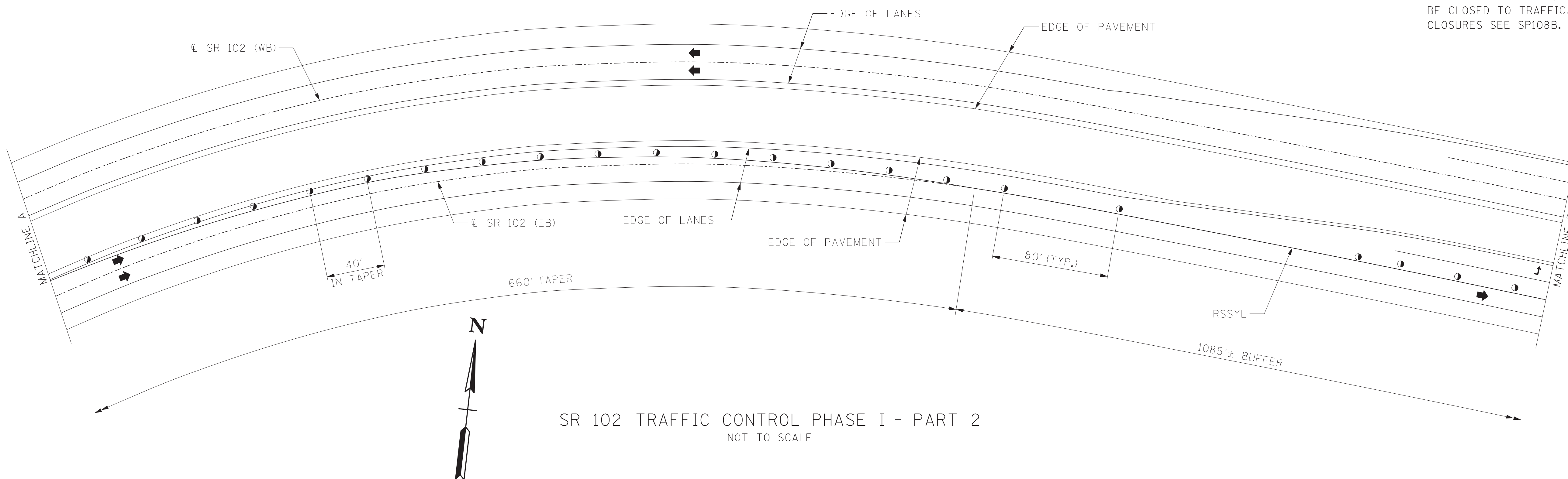
- FLEXIBLE DRUMS (CHANNELIZING)
- ☐ SIGN
- RSSYL 8" TEMP SOLID YELLOW LINE (ITEM NO. 712-09.02)
- ⊞ FLASHING ARROW BOARD (TYPE C)

● NOTE: ERECTION OF SPEED REDUCTION SIGNS WILL ONLY BE PERMITTED UPON WRITTEN REQUEST BY THE CONTRACTOR AND WRITTEN APPROVAL BY THE STATE TRAFFIC ENGINEER.



NOTE: SEE DWG. NO. BR-132-258 FOR TEMPORARY LANE WIDTHS AND LANE SHIFTS.

NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE I WORK, THE INSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



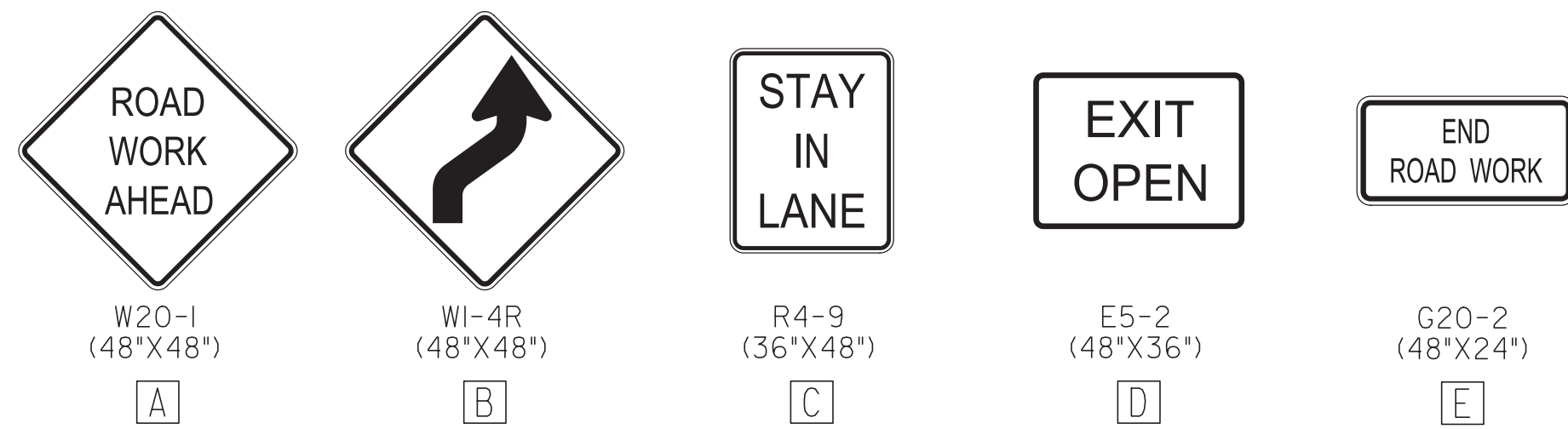
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STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

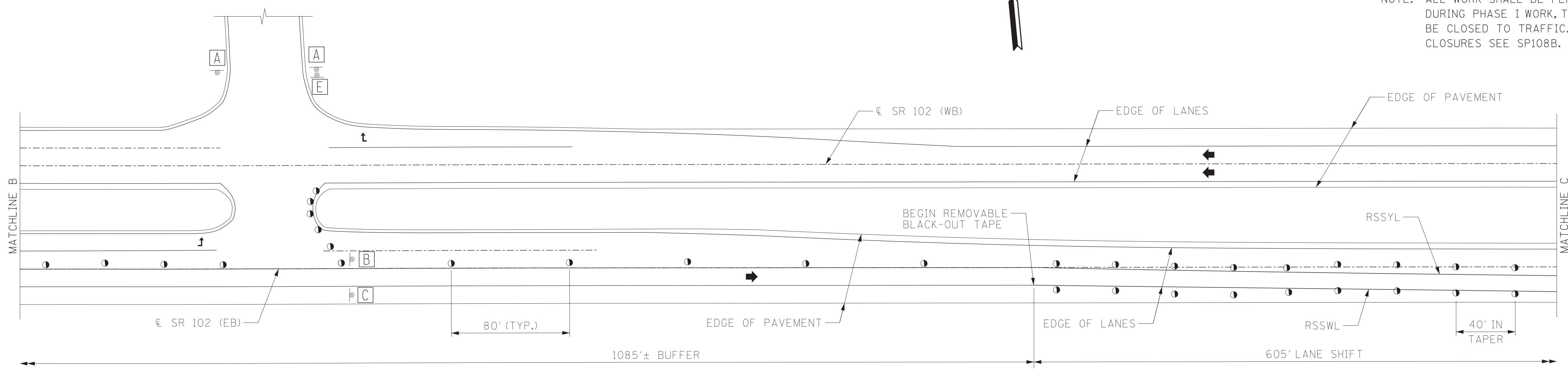
\$\$\$\$\$TIMES\$\$\$\$\$  
\$\$\$\$\$DONSPEC\$\$\$\$\$



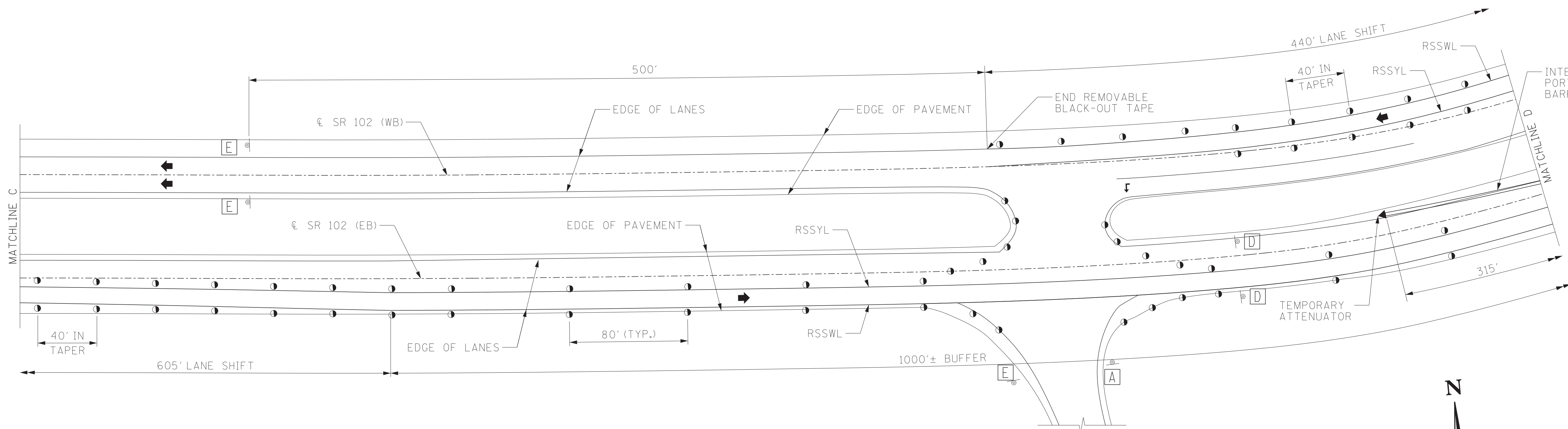
TRAFFIC CONTROL LEGEND			
●	FLEXIBLE DRUMS (CHANNELIZING)		
⊙	SIGN		
—	RSSYL 8" TEMP SOLID YELLOW LINE (ITEM NO. 712-09.02)		
—	RSSWL 6" TEMP SOLID WHITE LINE (ITEM NO. 712-09.08)		
◀	TEMPORARY ATTENUATOR		

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	6

NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE I WORK, THE INSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



SR 102 TRAFFIC CONTROL PHASE I - PART 3  
 NOT TO SCALE



SR 102 TRAFFIC CONTROL PHASE I - PART 4  
 NOT TO SCALE

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05/24/2024

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

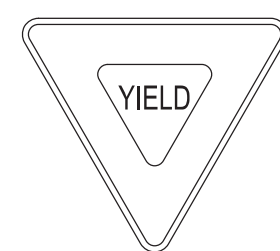
\$\$\$\$\$SYTIME\$\$\$\$\$  
 \$\$\$DGN\$PECOC\$\$\$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	7

NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE I WORK, THE INSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



WI-4L  
(48\"/>



RI-2  
(48\"/>



WI-4R  
(48\"/>



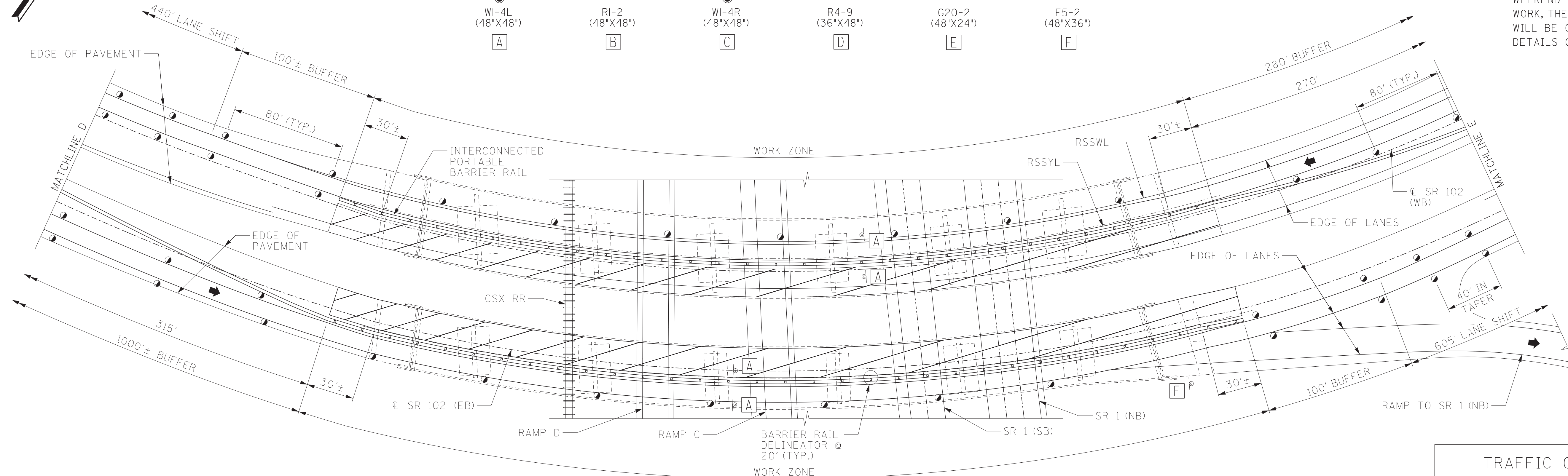
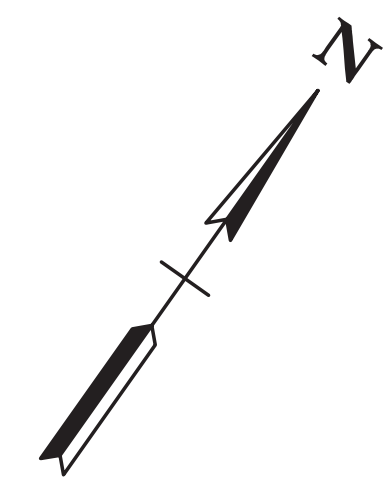
R4-9  
(36\"/>



G20-2  
(48\"/>

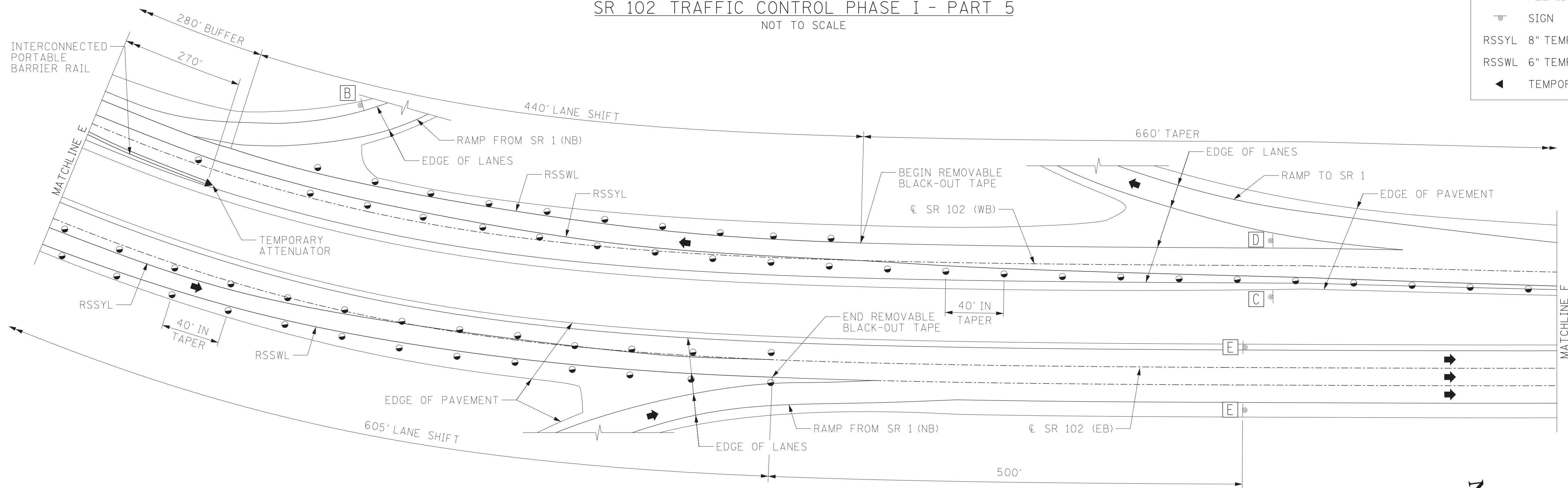


E5-2  
(48\"/>

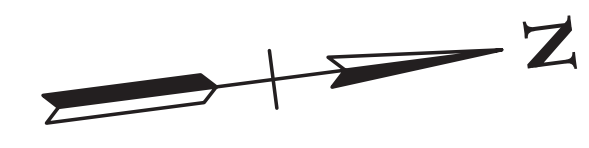


SR 102 TRAFFIC CONTROL PHASE I - PART 5  
NOT TO SCALE

TRAFFIC CONTROL LEGEND	
●	FLEXIBLE DRUMS (CHANNELIZING)
⊙	SIGN
—	RSSYL 8" TEMP SOLID YELLOW LINE (ITEM NO. 712-09.02)
—	RSSWL 6" TEMP SOLID WHITE LINE (ITEM NO. 712-09.08)
◀	TEMPORARY ATTENUATOR



SR 102 TRAFFIC CONTROL PHASE I - PART 6  
NOT TO SCALE



SEALED BY

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

\$\$\$\$\$TIMES\$\$\$\$\$  
\$\$\$\$\$DONSPEC\$\$\$\$\$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	8

ONE LANE BRIDGE  
2 MILES  
HORIZ. CLEARANCE  
17 FEET

SPECIAL 2  
(60"X30")

SPEED  
LIMIT  
35

R2-1  
(48"X60")  
A



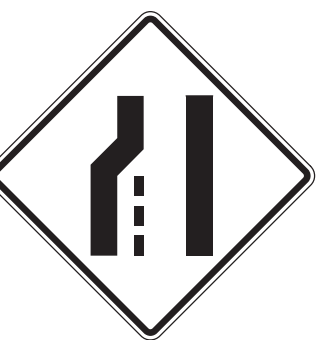
W20-1  
(48"X48")  
B



W20-5L  
(48"X48")  
C



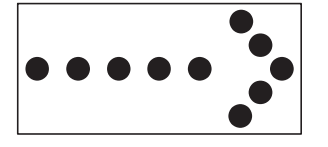
W20-5L  
(48"X48")  
D



W4-2L  
(48"X48")  
E



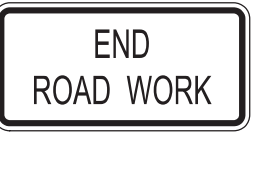
E5-2  
(48"X36")  
F



TYPE "C" ARROW BOARD  
(96" X 48")  
SEE STD. DWG. T-FAB-1  
G



W20-1  
(48"X48")  
H



G20-2  
(48"X24")  
I

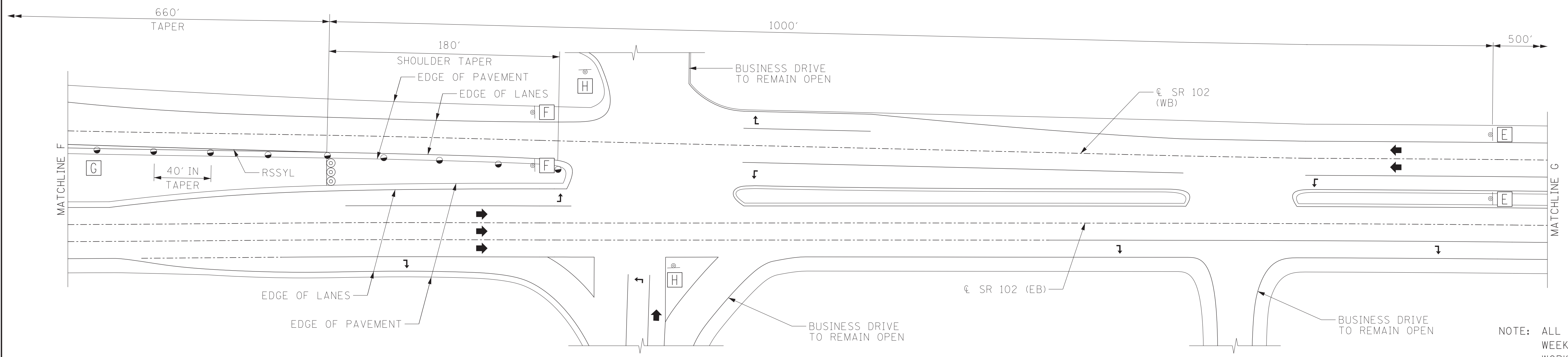


W3-5  
(48"X48")  
J

TRAFFIC CONTROL LEGEND

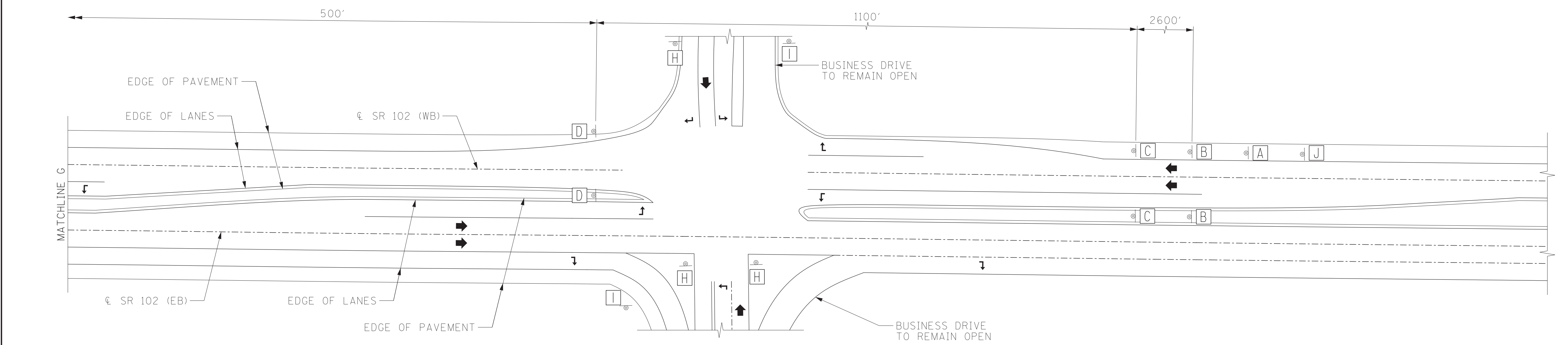
- FLEXIBLE DRUMS (CHANNELIZING)
- ⊞ SIGN
- ⊞⊞⊞ FLASHING ARROW BOARD (TYPE C)
- RSSYL 8" TEMP SOLID YELLOW LINE (ITEM NO. 712-09.02)

● NOTE: ERECTION OF SPEED REDUCTION SIGNS WILL ONLY BE PERMITTED UPON WRITTEN REQUEST BY THE CONTRACTOR AND WRITTEN APPROVAL BY THE STATE TRAFFIC ENGINEER.



SR 102 TRAFFIC CONTROL PHASE I - PART 7  
NOT TO SCALE

NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE I WORK, THE INSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



SR 102 TRAFFIC CONTROL PHASE I - PART 8  
NOT TO SCALE

SEALED BY

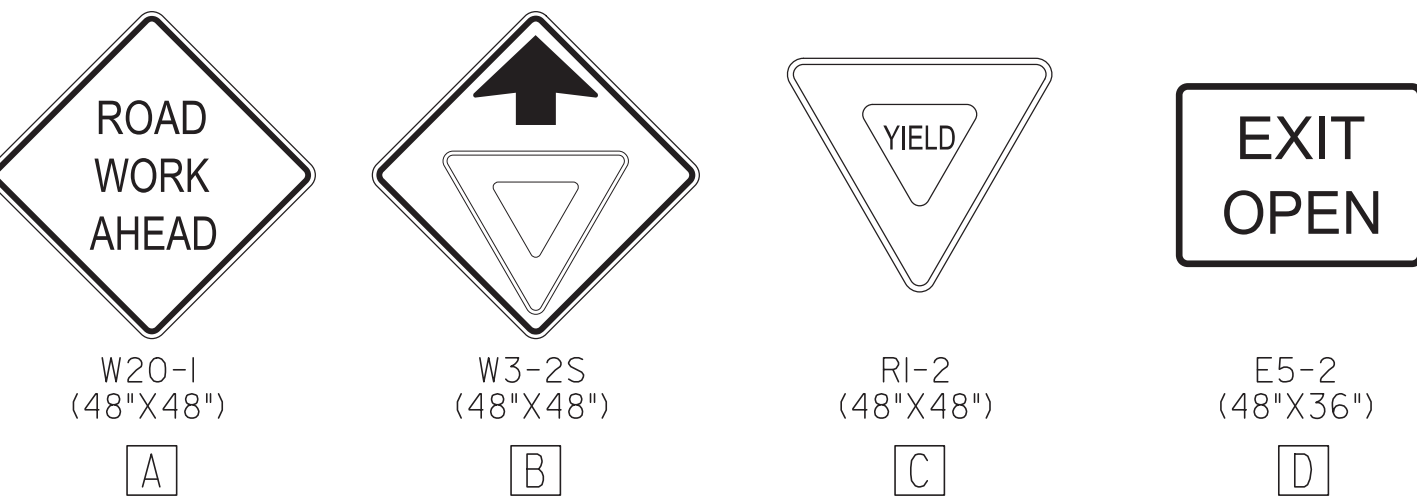
05/24/2024

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DEPARTMENT OF TRANSPORTATION

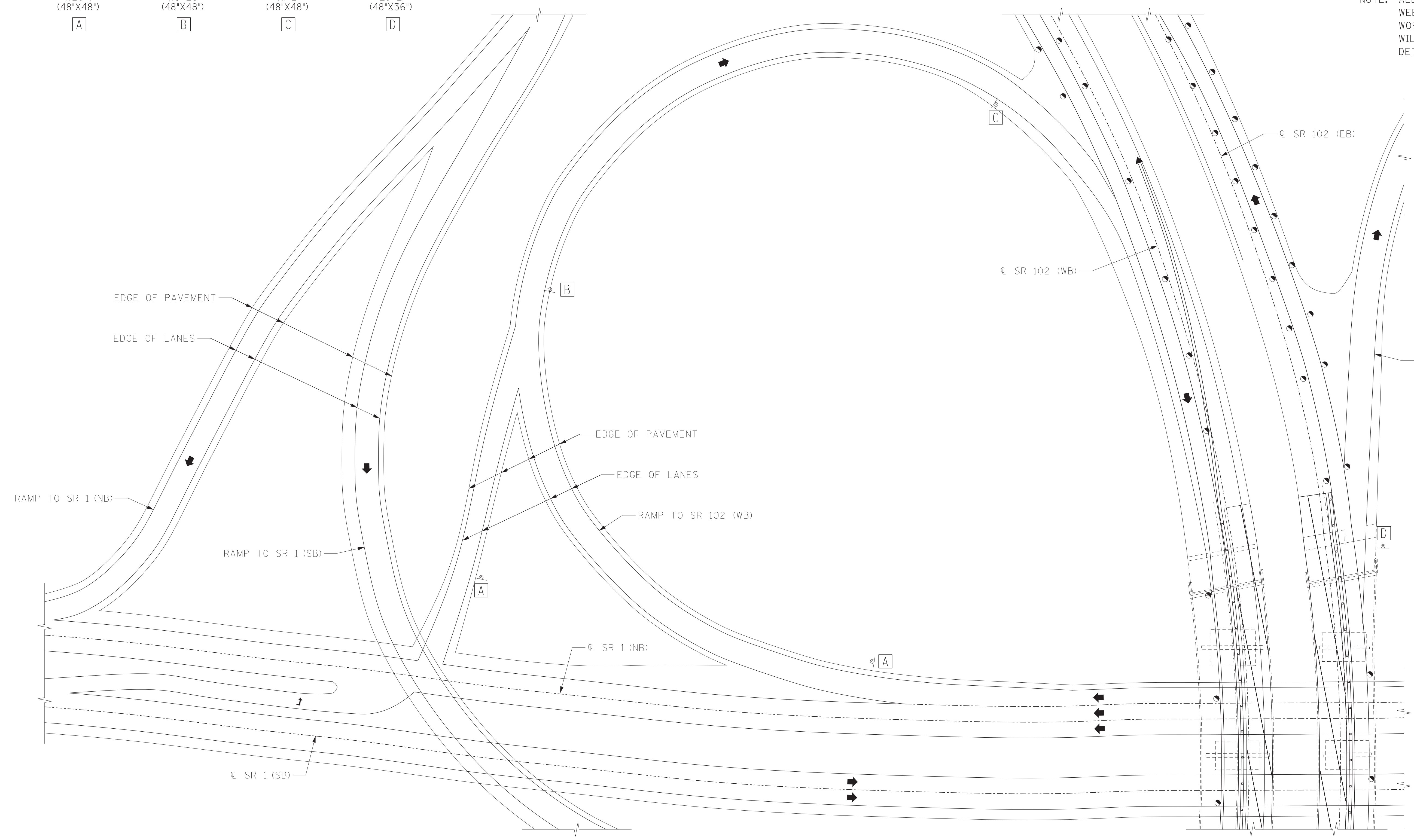
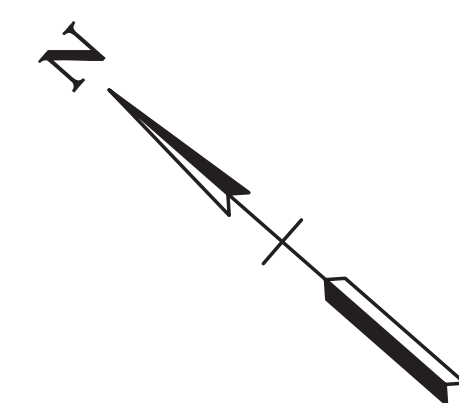
TRAFFIC CONTROL PLANS

\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DONSPEC\$\$\$\$\$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	9



NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE I WORK, THE INSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



\$\$\$\$\$TIMES\$\$\$\$\$  
 \$\$\$DONSPEC\$\$\$\$\$

US 41 / US 70S TO SR 102 RAMP TRAFFIC CONTROL PHASE I  
 NOT TO SCALE

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05/24/2024

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	10

ONE LANE BRIDGE  
2 MILES  
HORIZ. CLEARANCE  
18 FEET

SPECIAL 1  
(60"X30")

SPEED  
LIMIT  
35

R2-1  
(48"X60")  
A



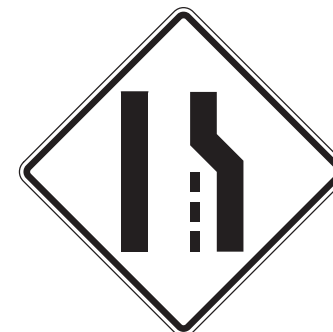
W20-1  
(48"X48")  
B



W20-5R  
(48"X48")  
C



W20-5R  
(48"X48")  
D



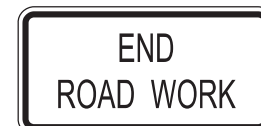
W4-2R  
(48"X48")  
E



W20-1  
(48"X48")  
F



W3-5  
(48"X48")  
G

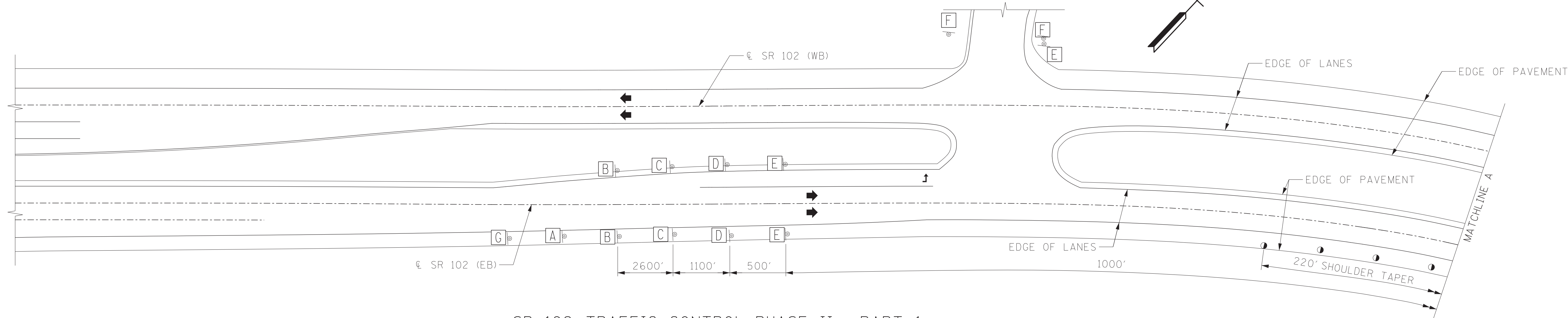


G20-2  
(48"X24")  
E

TRAFFIC CONTROL LEGEND

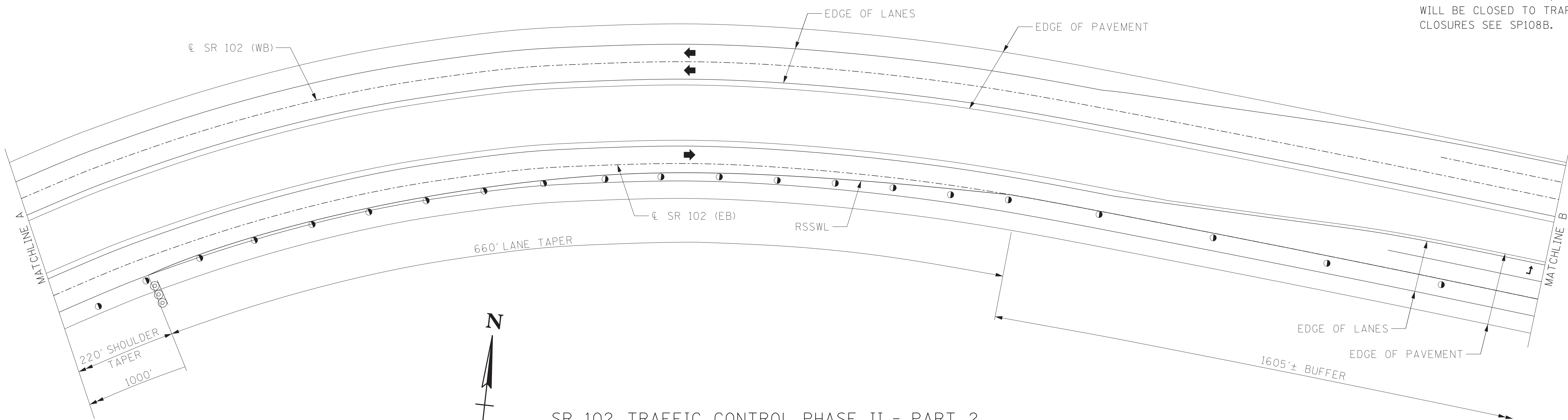
	SIGN
	RSSWL 8" TEMP. SOLID WHITE LINE (ITEM NO. 712-09.02)
	FLASHING ARROW BOARD (TYPE C)

NOTE: ERECTION OF SPEED REDUCTION SIGNS WILL ONLY BE PERMITTED UPON WRITTEN REQUEST BY THE CONTRACTOR AND WRITTEN APPROVAL BY THE STATE TRAFFIC ENGINEER.



SR 102 TRAFFIC CONTROL PHASE II - PART 1  
NOT TO SCALE

NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE II WORK, THE OUTSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



SR 102 TRAFFIC CONTROL PHASE II - PART 2  
NOT TO SCALE

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STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL  
PLANS

\$\$\$\$\$TIMES\$\$\$\$\$  
\$\$\$\$\$DONSPEC\$\$\$\$\$



W20-1  
(48"X48")

A



W1-4R  
(48"X48")

B



R4-9  
(36"X48")

C



E5-2a  
(48"X36")

D



G20-2  
(48"X24")

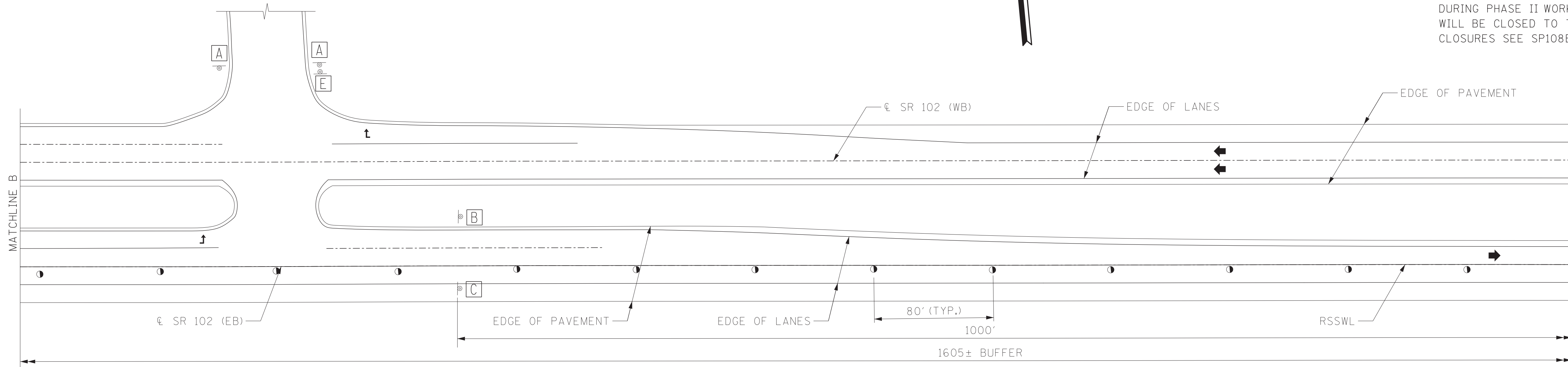
E

### TRAFFIC CONTROL LEGEND

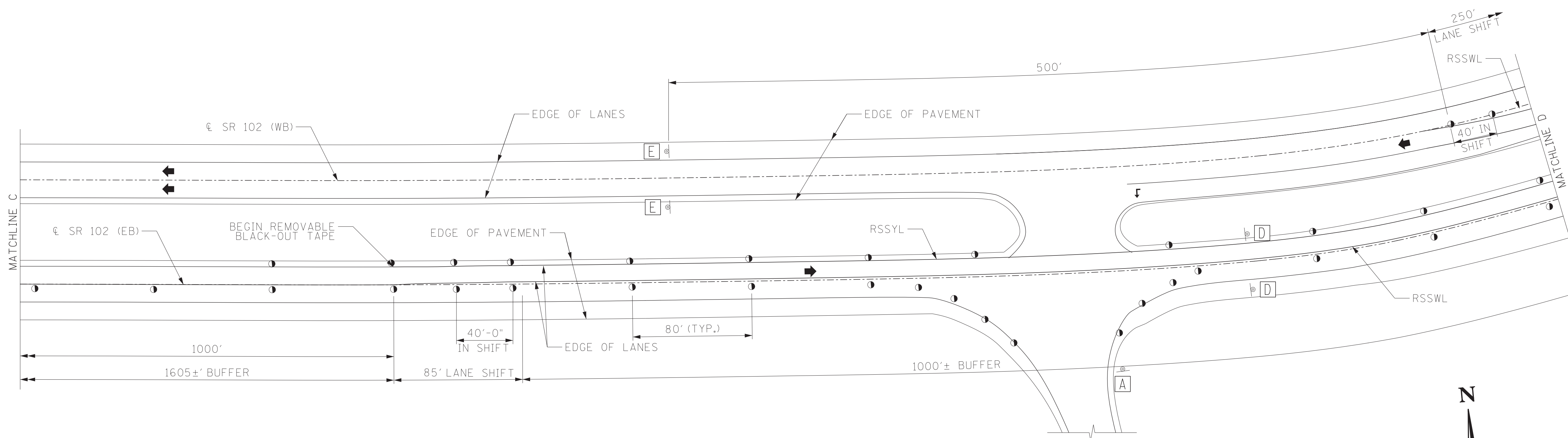
- FLEXIBLE DRUMS (CHANNELIZING)
- ⊙ SIGN
- RSSWL 8" TEMP SOLID WHITE LINE (ITEM NO. 712-09.02)
- RSSYL 6" TEMP SOLID YELLOW LINE (ITEM NO. 712-09.08)
- ⊙⊙⊙ FLASHING ARROW BOARD (TYPE C)

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	11

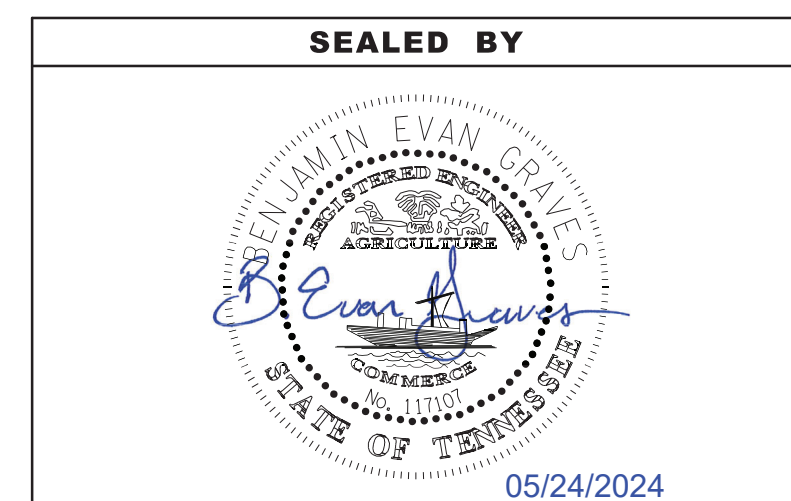
NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE II WORK, THE OUTSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



SR 102 TRAFFIC CONTROL PHASE II - PART 3  
NOT TO SCALE



SR 102 TRAFFIC CONTROL PHASE II - PART 4  
NOT TO SCALE

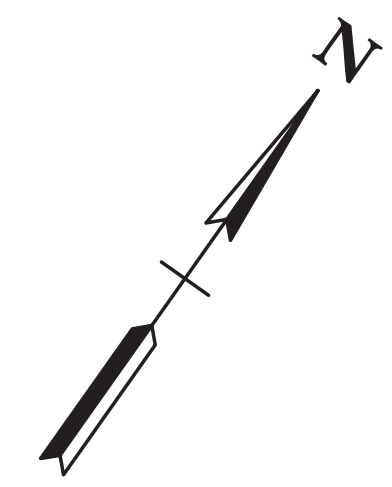


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL  
PLANS

\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DONSPEC\$\$\$\$\$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	12



WI-4R  
(48"X48")  
A



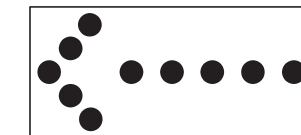
R4-9  
(36"X48")  
B



RII-2  
(48"X30")  
ROAD CLOSED  
TYPE III BARRICADE ROAD CLOSURE  
C



G20-2  
(48"X24")  
D

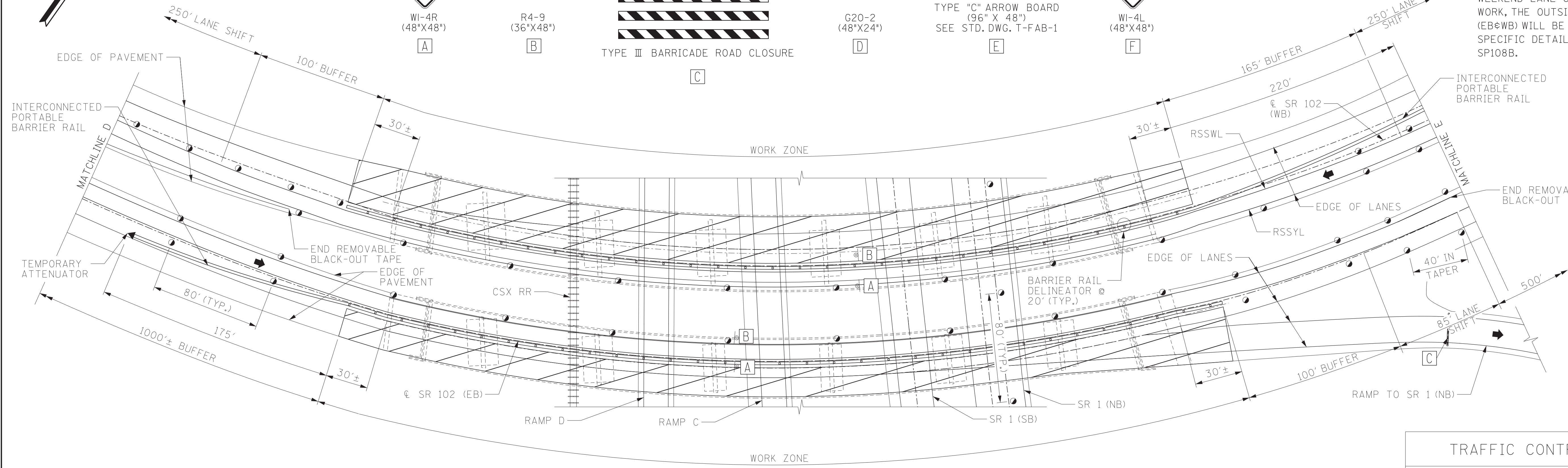


TYPE "C" ARROW BOARD  
(96" X 48")  
SEE STD. DWG. T-FAB-1  
E



WI-4L  
(48"X48")  
F

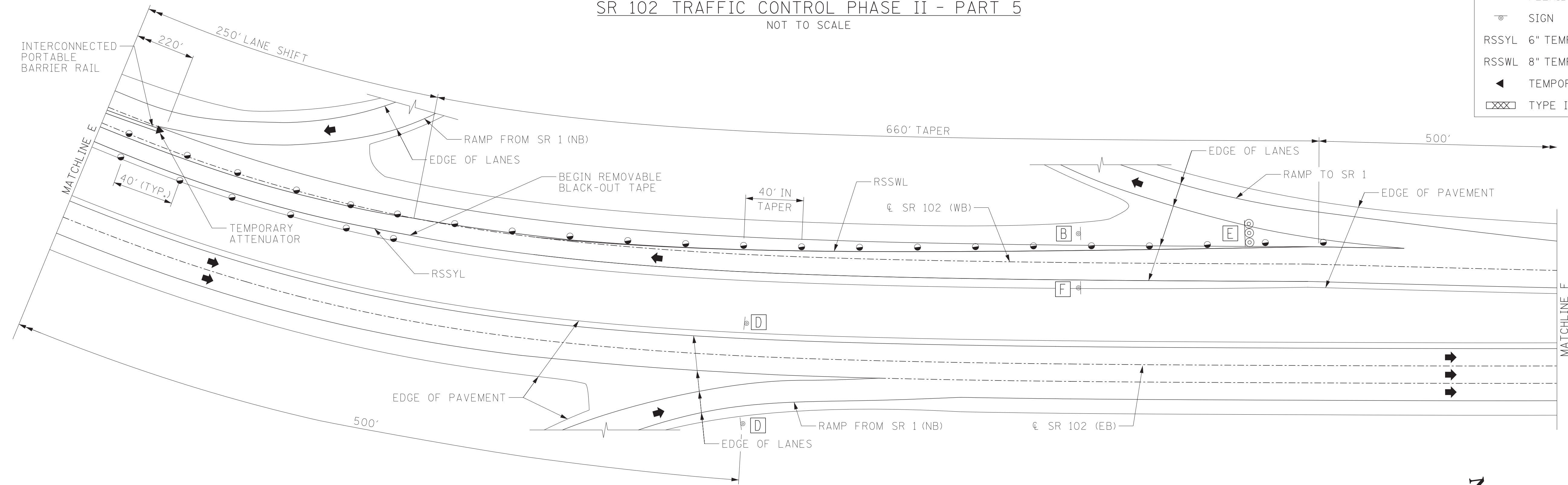
NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE II WORK, THE OUTSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



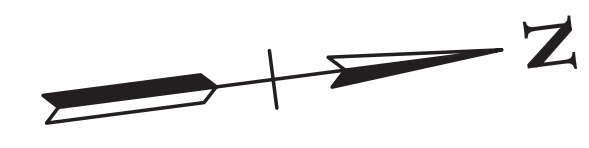
SR 102 TRAFFIC CONTROL PHASE II - PART 5  
NOT TO SCALE

TRAFFIC CONTROL LEGEND	
●	FLEXIBLE DRUMS (CHANNELIZING)
⊕	SIGN
—	RSSYL 6" TEMP SOLID YELLOW LINE (ITEM NO. 712-09.08)
—	RSSWL 8" TEMP SOLID WHITE LINE (ITEM NO. 712-09.02)
◄	TEMPORARY ATTENUATOR
▣	TYPE III BARRICADE

\$\$\$\$\$TIMES\$\$\$\$\$  
\$\$\$\$\$DONSPEC\$\$\$\$\$



SR 102 TRAFFIC CONTROL PHASE II - PART 6  
NOT TO SCALE



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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	13

TRAFFIC CONTROL LEGEND	
●	FLEXIBLE DRUMS (CHANNELIZING)
⊞	SIGN

ONE LANE BRIDGE  
2 MILES  
HORIZ. CLEARANCE  
17 FEET

SPECIAL 2  
(60"X30")

SPEED  
LIMIT  
35

R2-1  
(48"X60")  
A



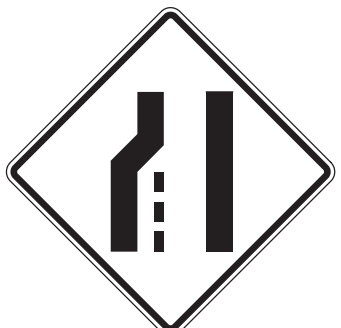
W20-1  
(48"X48")  
B



W20-5L  
(48"X48")  
C



W20-5L  
(48"X48")  
D



W4-2L  
(48"X48")  
E



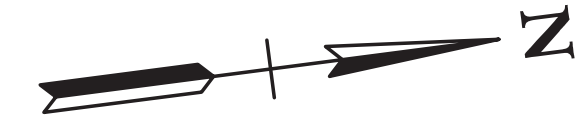
E5-2  
(48"X36")  
F



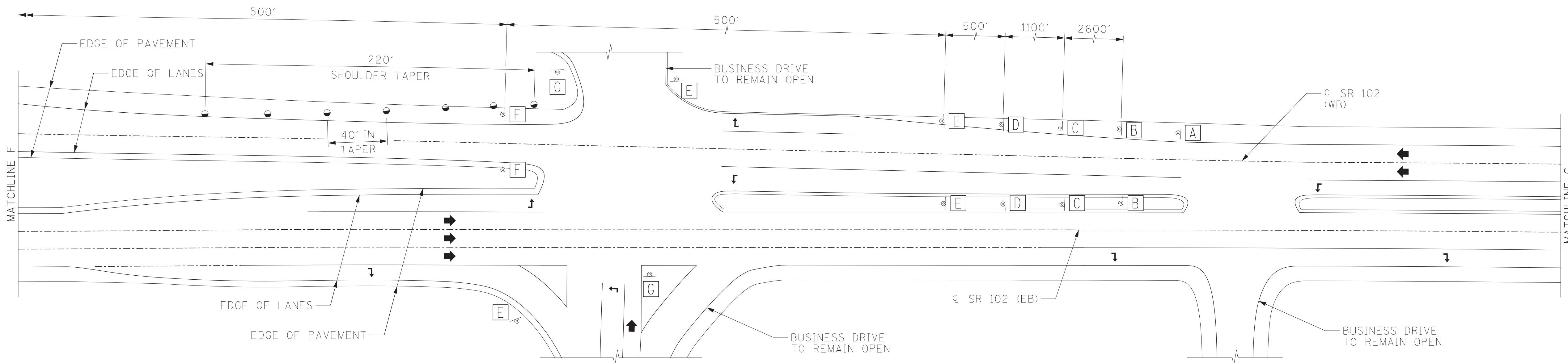
W20-1  
(48"X48")  
G



G20-2  
(48"X24")  
E

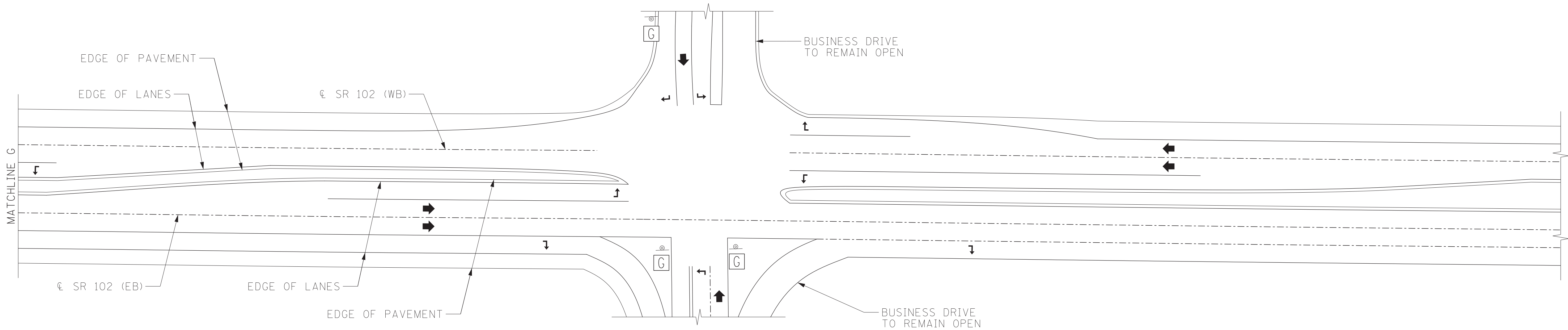


● NOTE: ERECTION OF SPEED REDUCTION SIGNS WILL ONLY BE PERMITTED UPON WRITTEN REQUEST BY THE CONTRACTOR AND WRITTEN APPROVAL BY THE STATE TRAFFIC ENGINEER.

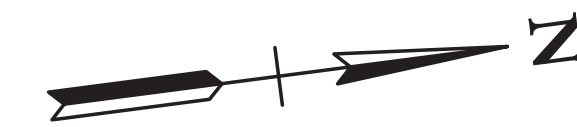


SR 102 TRAFFIC CONTROL PHASE II - PART 7  
NOT TO SCALE

NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE II WORK, THE OUTSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



SR 102 TRAFFIC CONTROL PHASE II - PART 8  
NOT TO SCALE



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DEPARTMENT OF TRANSPORTATION

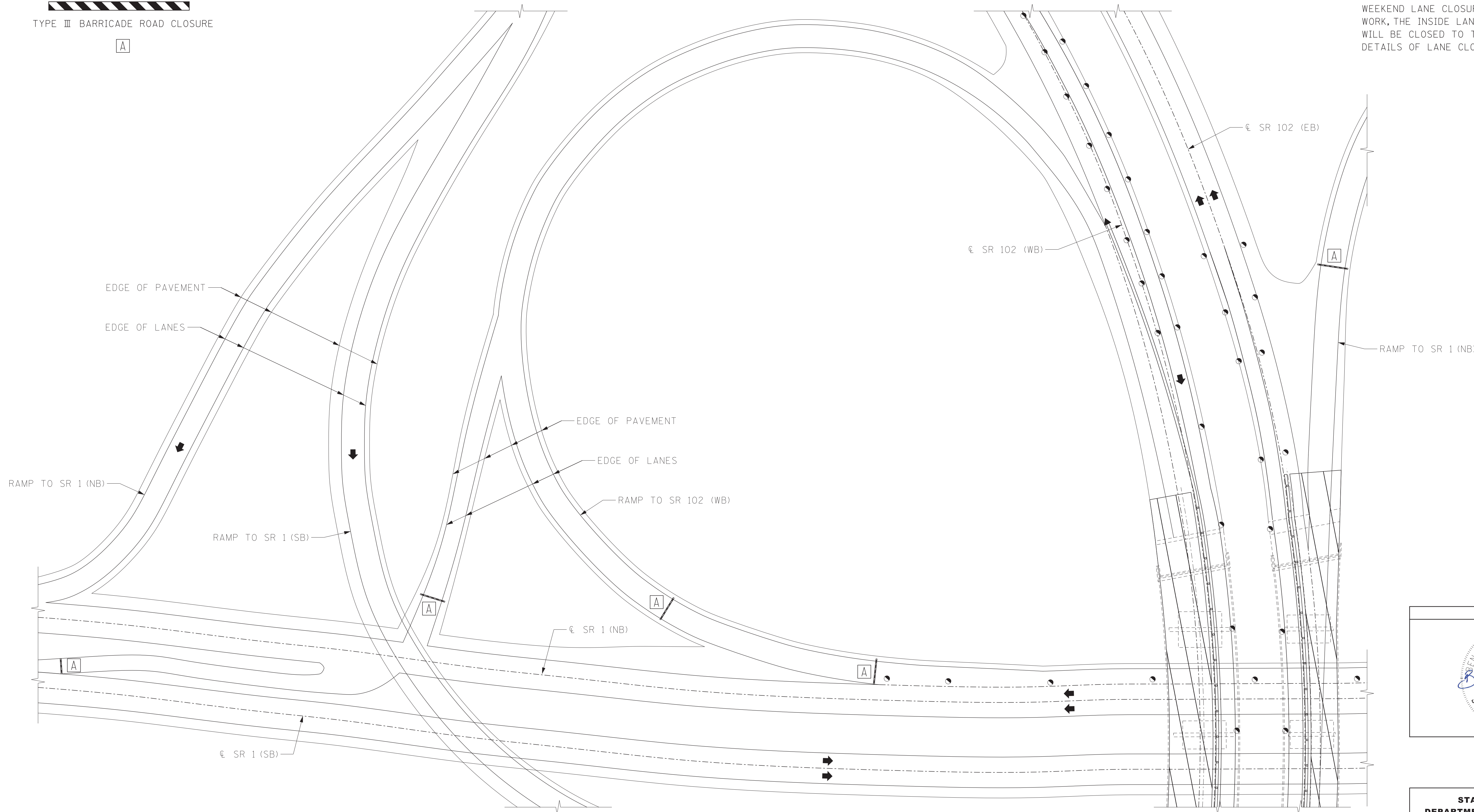
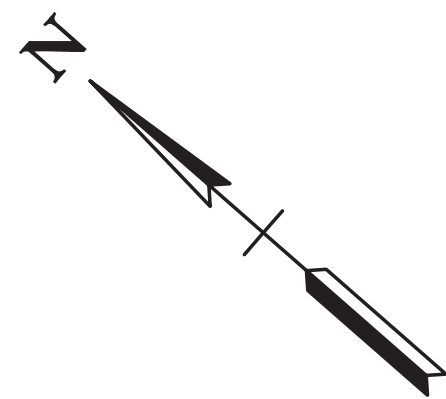
TRAFFIC  
CONTROL  
PLANS

\$\$\$\$\$TIMES\$\$\$\$\$  
\$\$\$\$\$DGN\$PEC\$\$\$\$\$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	14



NOTE: ALL WORK SHALL BE PERFORMED UNDER WEEKEND LANE CLOSURES. DURING PHASE II WORK, THE INSIDE LANE OF SR 102 (EB&WB) WILL BE CLOSED TO TRAFFIC. FOR SPECIFIC DETAILS OF LANE CLOSURES SEE SP108B.



\$\$\$\$\$SYTIME\$\$\$\$\$  
 \$\$\$SDGNSPECOC\$\$\$

US 41 / US 70S TO SR 102 RAMP TRAFFIC CONTROL PHASE II  
 NOT TO SCALE

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 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	15



TRAFFIC CONTROL LEGEND	
	SIGN
	TYPE III BARRICADE



SR 102 AND US 41 / US 70S DETOUR  
 (TO BE PERFORMED ALONG WITH SR 102 PHASE II TRAFFIC CONTROL)  
 NOT TO SCALE

 E5-2a (48"X36")	 E5-2a (48"X36")	 M4-8 (30"X15")	 M4-8 (30"X15")	 M4-8 (30"X15")	 M4-8 (30"X15")
 M1-4.3 (45"X36")	 M1-4.2 (36"X36")	 M4-5 (36"X18")	 M4-5 (36"X18")	 M4-5 (36"X18")	 M4-5 (36"X18")
 M4-8 (30"X15")	 M4-8 (30"X15")	 M1-4.3 (45"X36")	 M1-4.2 (36"X36")	 M1-4.3 (45"X36")	 M1-4.2 (36"X36")
 M6-1L (30"X21")	 M6-1L (30"X21")	 M6-3 (30"X21")	 M6-3 (30"X21")	 M6-2R (30"X21")	 M6-2R (30"X21")
A	B	C	D	E	F

 E5-2a (48"X36")	 E5-2a (48"X36")	 M4-8 (30"X15")	 M4-8 (30"X15")	 E5-2a (48"X36")	 E5-2a (48"X36")
 M3-4 (36"X18")	 M3-4 (36"X18")	 M4-5 (36"X18")	 M4-5 (36"X18")	 E5-2a (48"X36")	 E5-2a (48"X36")
 TN-6 (30"X24")	 TN-6 (30"X24")	 M3-4 (36"X18")	 M3-4 (36"X18")	 M1-4.3 (45"X36")	 M1-4.2 (36"X36")
 M4-8 (30"X15")	 M4-8 (30"X15")	 TN-6 (30"X24")	 TN-6 (30"X24")	 M4-8 (30"X15")	 M4-8 (30"X15")
 M6-3 (30"X21")	 M6-2R (30"X21")	 M6-3 (30"X21")	 M6-2R (30"X21")	 M6-3 (30"X21")	 M6-3 (30"X21")
H	P	J	K	L	M

 M4-8A (24"X18")
G

R11-2  
(48"X30")

TYPE III BARRICADE ROAD CLOSURE

N

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 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL  
 PLANS

\$\$\$\$\$TIMES\$\$\$\$\$  
 \$\$\$DDONSPEC\$\$\$\$\$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	75014-4245-04	16

### CONSTRUCTION WORK ZONE & TRAFFIC CONTROL NOTES

- ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADTS LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADTS OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEERS APPROVAL TO USE THEM.
- THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADTS LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADTS OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADTS LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADTS OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEERS APPROVAL TO USE THEM.
- ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- T.D.O.T. CONSTRUCTION OFFICE SHALL NOTIFY THE OVERWEIGHT AND PERMITS OFFICE OF LANE WIDTH RESTRICTIONS DURING CONSTRUCTION PRIOR TO ALLOWING THE CONTRACTOR TO INSTALL TRAFFIC CONTROL. PERMIT VEHICLES WILL NOT BE ALLOWED UNTIL CONSTRUCTION IS COMPLETE AND FULL LANE WIDTHS HAVE BEEN RESTORED.

### ADDITIONAL TRAFFIC CONTROL NOTES

ADVANCED WARNING SIGNS TO BE PLACED PRIOR TO CONSTRUCTION AND REMAIN IN PLACE UNTIL THE COMPLETION OF THIS PROJECT.

THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID, ITEM NO. 712-06 SIGNS (CONSTRUCTION) S.F.

### MISCELLANEOUS NOTES

- NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE BUSINESSES ALONG THE PROPOSED CONSTRUCTION AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR LOSS OF EXISTING SIGNS DURING CONSTRUCTION. EXISTING SIGNS SHALL BE REMOVED AND REPLACED AS NECESSARY.

### SPECIAL NOTES

- TRAFFIC CONTROL PLAN - SEE SHEETS 5 THROUGH 15 AND STD. DWG. NOS. T-WZ-10, T-WZ-12, AND T-WZ-16.
- SEE SP108B FOR EXACT CLOSURE INFORMATION.

### TRAFFIC CONTROL SIGN QUANTITIES

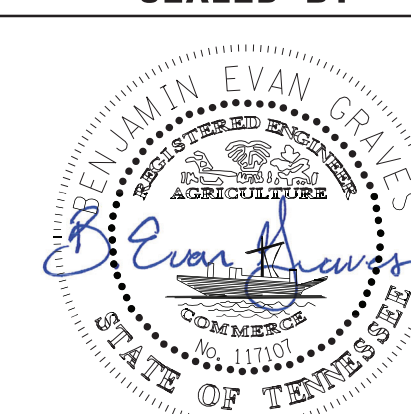
TYPE	DESCRIPTION	SIZE	10.34 (LT.)		10.34 (RT.)		DETOUR		TOTAL	
			EACH	S.F.	EACH	S.F.	EACH	S.F.	EACH	S.F.
E5-2	EXIT OPEN SIGN	48"X36"	2	24	0	0	0	0	2	24
E5-2a	EXIT CLOSED SIGN	48"X36"	0	0	2	24	7	84	9	108
G20-2	END ROAD WORK	48"X24"	5	40	4	32	0	0	9	72
MI-4.2	U.S. ROUTE 41	36"X36"	0	0	0	0	9	81	9	81
MI-4.3	U.S. ROUTE 70S	45"X36"	0	0	0	0	9	102	9	102
M3-4	WEST - SUPPLEMENTAL	36"X18"	0	0	0	0	13	59	13	59
M4-5	TO - SUPPLEMENTAL	36"X18"	0	0	0	0	24	108	24	108
M4-8	DETOUR	30"X15"	0	0	0	0	31	97	31	97
M4-8A	END DETOUR	24"X18"	0	0	0	0	4	12	4	12
M6-1L	DIRECTIONAL ARROW - LEFT	30"X21"	0	0	0	0	2	9	2	9
M6-2R	DIRECTIONAL ARROW - 45 DEGREES RT	30"X21"	0	0	0	0	10	44	10	44
M6-3	DIRECTIONAL ARROW - STRAIGHT	30"X21"	0	0	0	0	17	75	17	75
RI-2	YIELD	48"X48"	1	16	0	0	0	0	1	16
R2-1	SPEED LIMIT 35	48"X60"	1	20	1	20	0	0	2	40
R4-9	STAY IN LANE	36"X48"	2	24	2	24	0	0	4	48
RII-2	ROAD CLOSED	48"X30"	0	0	0	0	5	50	5	50
SP-1	ONE LANE BRIDGE 2 MILE HORIZ. CLEARANCE 18 FEET	78"X48"	0	0	1	26	0	0	1	26
SP-2	ONE LANE BRIDGE 2 MILE HORIZ. CLEARANCE 17 FEET	78"X48"	1	26	0	0	0	0	1	26
TN-6B	STATE ROUTE MARKER 102	30"X24"	0	0	0	0	13	65	13	65
WI-4L	LANE SHIFT - LEFT	48"X48"	2	32	2	32	0	0	4	64
WI-4R	LANE SHIFT - RIGHT	48"X48"	2	32	2	32	0	0	4	64
W3-2	YIELD AHEAD - SYMBOL	48"X48"	1	16	0	0	0	0	1	16
W3-5	REDUCED SPEED LIMIT AHEAD	48"X48"	1	16	1	16	0	0	2	32
W4-2L	LANE CLOSED MERGE RIGHT - SYMBOL	48"X48"	2	32	2	32	0	0	4	64
W4-2R	LANE CLOSED MERGE LEFT - SYMBOL	48"X48"	2	32	2	32	0	0	4	64
W20-1	ROAD WORK 1 MILE	48"X48"	2	32	2	32	0	0	4	64
W20-1	ROAD WORK AHEAD	48"X48"	5	80	5	80	2	32	12	192
W20-5L	LEFT LANE CLOSED 1/2 MILE	48"X48"	2	32	2	32	0	0	4	64
W20-5L	LEFT LANE CLOSED 1500 FT	48"X48"	2	32	2	32	0	0	4	64
W20-5R	RIGHT LANE CLOSED 1/2 MILE	48"X48"	2	32	2	32	0	0	4	64
W20-5R	RIGHT LANE CLOSED 1500 FT	48"X48"	2	32	2	32	0	0	4	64
W20-5R	RIGHT LANE CLOSED AHEAD	48"X48"	0	0	2	32	0	0	2	32
TOTAL				550		542		818		1910

### TRAFFIC CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	10.34 (LT.)	10.34 (RT.)	DETOUR	QUANTITY
712-01	TRAFFIC CONTROL	LS	0.33	0.33	0.33	1
712-02.12	PORTABLE BARRIER RAIL, REDUCED DEFLECTION (MASH TL-3)	L.F.	930	950	--	1880
712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EACH	1	1	--	2
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	87	155	10	252
712-04.50	BARRIER RAIL DELINEATOR	EACH	32	33	--	65
712-06	SIGNS (CONSTRUCTION)	S.F.	550	542	818	1910
712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	88	24	--	112
712-08.03	ARROW BOARD (TYPE C)	EACH	1	1	--	2
712-09.02	REMOVABLE PAVEMENT MARKING (8" BARRIER LINE)	L.F.	4595	8840	700	14135
712-09.08	REMOVABLE PAVEMENT MARKING (6" LINE)	L.F.	3275	4610	--	7885
712-09.30	REMOVABLE BLACK-OUT TAPE (6")	L.F.	3275	4610	--	7885
713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	2	2	7	11
716-12.02	ENHANCED FLATLINE THERMO PYMT MRKNG (6IN LINE)	L.M.	0.1	0.1	--	0.2
717-01	MOBILIZATION	LS	0.33	0.33	0.33	1

① 712-02.60 THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF AASHTO MASH FOR TEST LEVEL 3. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS LISTED ON THE MANUFACTURERS BILL OF MATERIALS.

SEALED BY



05/24/2024

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

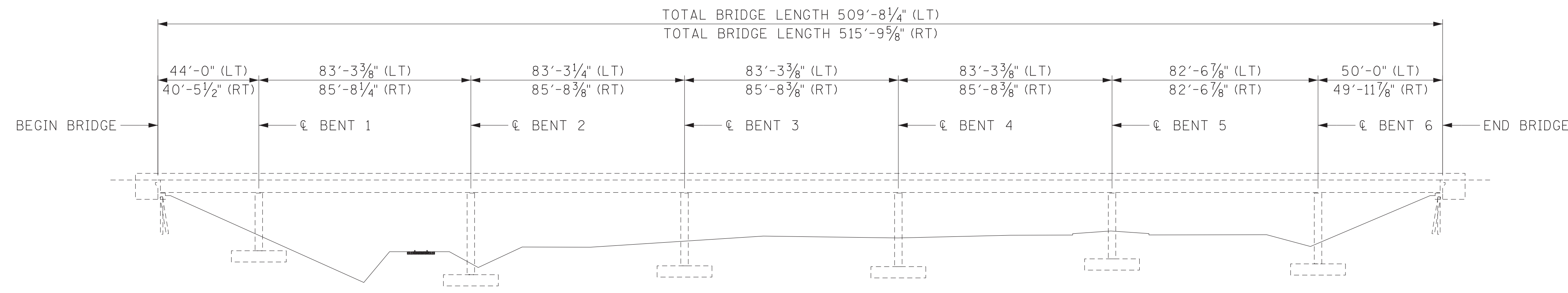
TRAFFIC CONTROL  
QUANTITIES AND  
NOTES

\$\$\$\$\$TIMES\$\$\$\$\$  
\$\$\$\$\$DONSPEC\$\$\$\$\$

PROJECT NO.	YEAR	SHEET NO.
75014-4245-04	2024	

REVISIONS		
NO.	DATE	BRIEF DESCRIPTION
1	01/10/2024	BEG LETTING YEAR UPDATED
2	05/20/2024	CDS SCOPE OF WORK, NOTE 1 REVISED

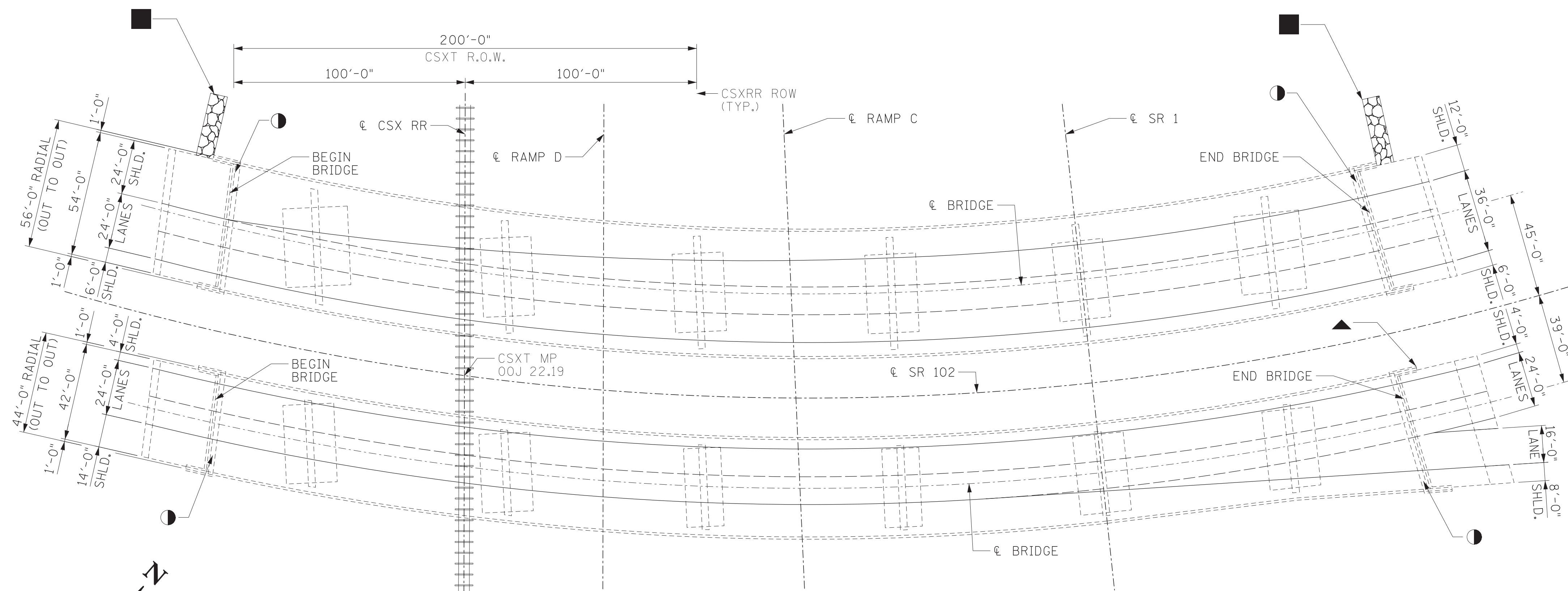


ELEVATION

SCOPE OF WORK

1. PROVIDE TRAFFIC CONTROL UTILIZING EXTENDED WEEKEND ONE LANE CLOSURES. SEE DETAILS ON SHEETS 5-16 AND SPI08B FOR ADDITIONAL INFORMATION.
2. REPAIR APPROACH SETTLEMENT AT BOTH BEGINNING AND END OF BOTH BRIDGES (BRIDGE NO. 75-SR102-10.34 (LT. & RT.)) BY REPAIRING PAVING BRACKETS, PLACING NEW APPROACH SLABS AND PLACING NEW HEADERS AND NEW JOINTS. FOR DETAILS AND NOTES SEE DWG. NO. BR-132-263, BR-132-264 & BR-132-264A.
3. PERFORM EPOXY INJECTION REPAIR AT FIELD DESIGNATED LOCATIONS ON THE DECK PANELS OF BOTH BRIDGES. FOR NOTES, SEE DRAWING NO. BR-132-262.
4. PERFORM SPALL REPAIR AT FIELD DESIGNATED LOCATIONS ON BEAM DIAPHRAGMS. FOR NOTES, SEE DRAWING NO. BR-132-262.
5. REMOVE AND REPLACE THE SIDE DRAIN ON THE LEFT SIDE AT THE END OF THE RIGHT BRIDGE. FOR NOTES, SEE DRAWING NO. BR-132-265.
6. REPAIR END DRAINS AND PLACE RIPRAP ON THE LEFT SIDE OF THE LEFT BRIDGE AT BOTH ENDS, TO PREVENT FUTURE EROSION. FOR NOTES, SEE STD. DWG. NOS. STD-10-2 AND STD-10-3.
7. REPAIR UNDERMINING AT FIELD IDENTIFIED AREAS NEAR THE ABUTMENTS USING FLOWABLE FILL.
8. CONTRACTOR TO PROVIDE COORDINATION WITH THE RAILROAD OWNER.

- ▲ NEW BRIDGE END DRAIN, PER DETAILS ON DWG. BR-132-265.
- NEW RIP-RAP FLUME WITH BACKFILL, PER STD. DWG. STD-10-3.



PLAN

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR 102 OVER SR 1 & CSXRR  
BRIDGE NO. 75-SR102-10.34 (RT.&LT.)  
FED. ID NO. 75SR0010033&34  
RUTHERFORD COUNTY  
2024

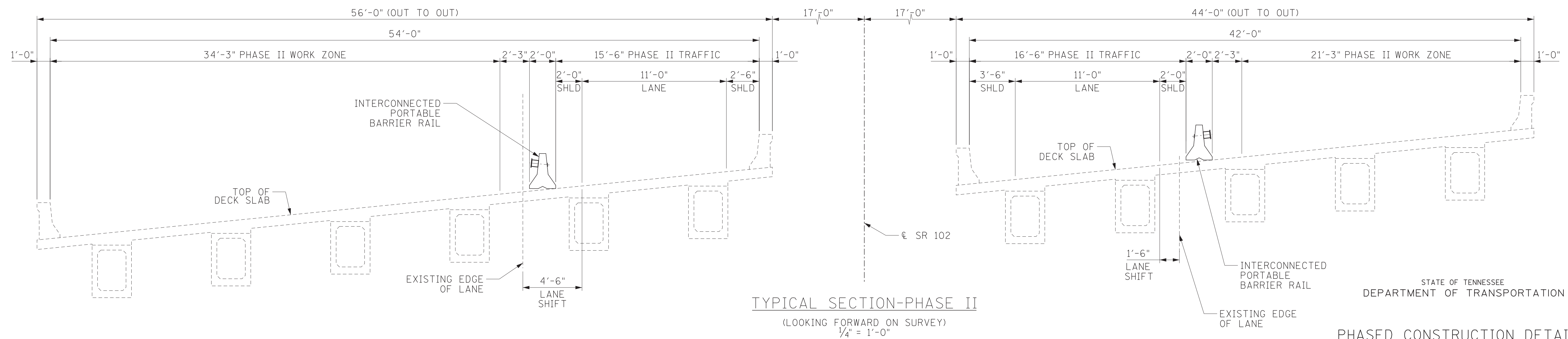
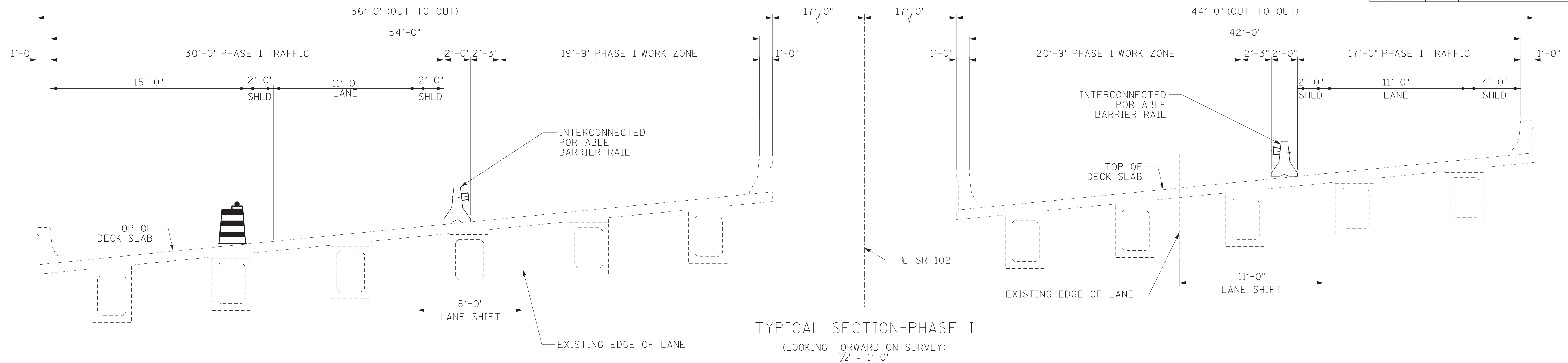


DESIGNED BY Lane M. Decker DATE 02/05/21  
DRAWN BY Josh A. Perry DATE 02/05/21  
SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
CHECKED BY Carter D. Bearden DATE 02/05/21

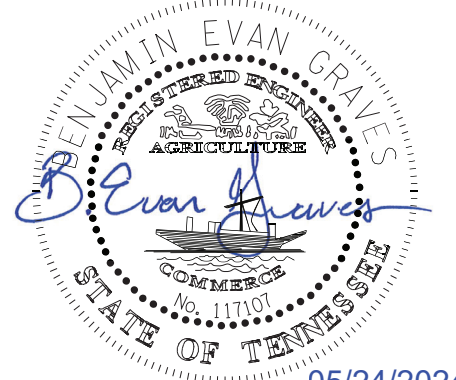


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REVISIONS		
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1	01/10/2024	BEG LETTING YEAR UPDATED



NOTE:  
ALL TRANSVERSE DIMENSIONS SHOWN ARE MEASURED RADIALLY TO € SR 102.



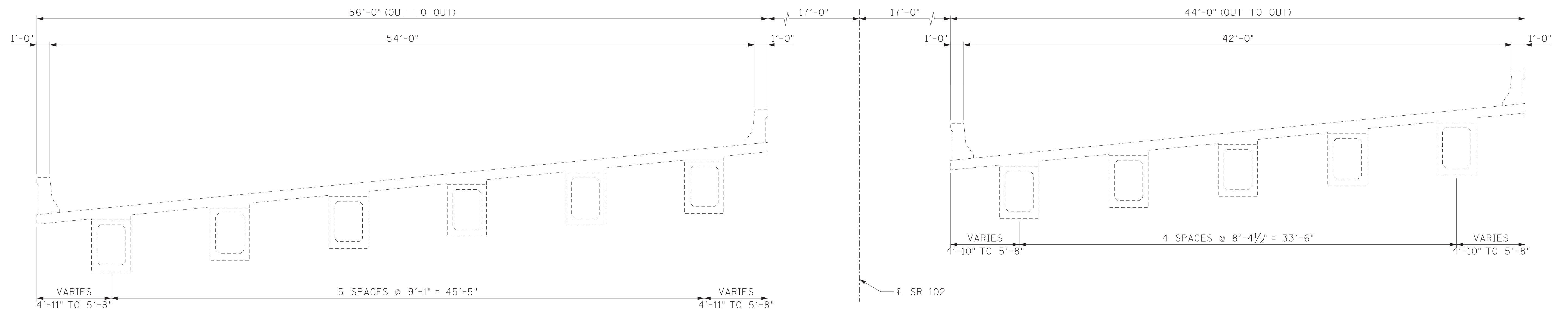
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

PHASED CONSTRUCTION DETAILS  
SR 102 OVER SR 1 & CSXRR  
BRIDGE NO. 75-SR102-10.34 (RT. & LT.)  
FED. ID NO. 75SR0010033 & 34  
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NO.	DATE	BY	BRIEF DESCRIPTION
1	01/10/2024	BEG	LETTING YEAR UPDATED



**EXISTING/FINAL TYPICAL SECTION**

(LOOKING FORWARD ON SURVEY)  
1/4" = 1'-0"

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

**TYPICAL SECTION**

SR 102 OVER SR 1 & CSXRR  
BRIDGE NO. 75-SR102-10.34 (RT. & LT.)  
FED. ID NO. 75SR0010033 & 34  
RUTHERFORD COUNTY  
2024



DESIGNED BY Lane M. Decker DATE 02/05/21  
 DRAWN BY Josh A. Perry DATE 02/05/21  
 SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
 CHECKED BY Carter D. Bearden DATE 02/05/21



NOTES FOR EPOXY INJECTION

UNLESS OTHERWISE NOTED, THE INTENT OF THIS SPECIFICATION IS FOR DESIGNATED CRACKS TO BE INJECTED THEIR FULL LENGTH AND DEPTH.

DESIGNATED CRACKS SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE FILLING ALL VOIDS FOR THE CRACK DEPTH OR THICKNESS OF THE MEMBER. THE EPOXY RESIN ADHESIVE SHALL BE ON THE CURRENT QUALIFIED PRODUCTS LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TEST. ALL CRACKS SHALL BE INJECTED USING AN ADHESIVE SUITABLE FOR THE FIELD CONDITIONS (CRACK WIDTH, TEMPERATURE, HUMIDITY, ETC.) RECOMMENDED BY THE ADHESIVE MANUFACTURER AS SHOWN ON MATERIAL DATA SHEETS. FOLLOWING INJECTION, ALL INJECTION PORTS AND CAPPING MATERIAL SHALL BE REMOVED FROM EXPOSED SURFACES LEAVING THE SURFACE SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACES.

THE CONTRACTOR SHALL HAVE SUFFICIENT EXPERIENCE AND TRAINING TO PERFORM THE EPOXY INJECTION IN ACCORDANCE WITH THESE PLANS. PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A WRITTEN PROCEDURE FOR PERFORMING THE EPOXY INJECTION. THE PROCEDURE SHALL DESCRIBE IN DETAIL HOW THE WORK WILL BE PERFORMED. THE PROCEDURE SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION.

- 1) DESCRIPTION OF EQUIPMENT
  - A. THE INJECTION EQUIPMENT SHALL BE OF THE TYPE THAT MIXES ADHESIVE COMPONENTS AT THE INJECTION HEAD.
  - B. THE INJECTION EQUIPMENT SHALL BE CAPABLE OF DISCHARGING MIXED ADHESIVE AT ANY PRESSURE UP TO 300 PSI. THE INJECTION EQUIPMENT SHALL BE EQUIPPED WITH GAUGES WHICH CAN MEASURE THE INJECTION PRESSURE AND VOLUME.
- 2) EQUIPMENT CALIBRATION PROCEDURES AND SCHEDULE.
- 3) MATERIALS TO BE USED (INCLUDING MANUFACTURER DATA SHEETS).
  - A. CAPPING MATERIAL
  - B. EPOXY ADHESIVE (TYPE TO BE APPROPRIATE FOR CRACK SIZES TO BE INJECTED).
- 4) PORT SPACING
  - A. PORT SPACING SHALL NOT BE LESS THAN THE THICKNESS OF THE CONCRETE IN THAT LOCATION.
- 5) INJECTION SEQUENCE
  - A. INJECTION SHALL PROCEED FROM LOWER END OF CRACK ALONG ADJACENT PARTS.
  - B. SKIPPING OF PORTS DURING INJECTION SHALL NOT BE ALLOWED.

THE CONTRACTOR SHALL HAVE THE MANUFACTURER'S INSTRUCTIONS FOR PROPORTIONING AND MIXING AVAILABLE AT THE JOB SITE AT ALL TIMES AND SHALL ENSURE THAT THE EQUIPMENT IS SUPPLYING THE MIXED ADHESIVE IN THE CORRECT PROPORTIONS.

TO ENSURE PROPER MIXING AND PROPORTIONING, SAMPLES SHALL BE TAKEN FROM THE INJECTOR HEAD. SAMPLES SHALL BE TAKEN AT THE START OF EACH WORKDAY AND EACH TIME THE ADHESIVE RESERVOIRS ARE REFILLED. THE SAMPLES SHALL BE IN A TEST CUP. THE SAMPLE SHALL BE MONITORED TO ENSURE THAT THE CURE TIME IS IN COMPLIANCE WITH THE MANUFACTURER'S DATA SHEET. IF THE SAMPLES DO NOT CURE IN THE SPECIFIED TIME THEN THE EQUIPMENT USED TO PRODUCE THE SAMPLE SHALL NOT BE USED UNTIL THE PROBLEM IS CORRECTED.

CORE SAMPLES SHALL BE TAKEN AS VERIFICATION OF THE QUALITY OF WORK. THE CONTRACTOR SHALL TAKE ONE (1) ONE (1) INCH DIAMETER (FULL DEPTH OF CONCRETE AT LOCATION CORED) CORE SAMPLE STARTING WITH THE FIRST REPAIR LOCATION THEN EVERY 3RD REPAIR LOCATION AFTERWARDS. WORK SHALL NOT PROCEED UNTIL THE CORE SAMPLE IS TAKEN AND ACCEPTED. ALL CORE SAMPLES AND HOLES SHALL BE INDEXED FOR FUTURE REFERENCE. THE ENGINEER SHALL DESIGNATE ALL LOCATIONS TO BE CORED. IF ANY CORES SHOW UNACCEPTABLE RESULTS, ALL WORK SHALL BE STOPPED UNTIL THE CONTRACTOR SUBMITS A PROPOSAL FOR CORRECTING UNACCEPTABLE WORK.

THE INITIAL CORE WILL ALSO SERVE TO QUALIFY THE FOREMAN OF THIS WORK. IF AT ANY TIME A NEW FOREMAN IS USED, HE SHALL BE QUALIFIED WITH A CORE SAMPLE.

THE CONTRACTOR, AT HIS EXPENSE, SHALL REPAIR ALL CORE HOLES WITH AN APPROVED CEMENTITIOUS PATCHING MATERIAL.

CORE SAMPLES SHALL BE VISUALLY INSPECTED TO CONFIRM THAT CRACKS ARE COMPLETELY FILLED WITH ADHESIVE. ANY CORE HAVING LESS THAN 95% OF THE CRACK FILLED WITH ADHESIVE SHALL BE CONSIDERED UNACCEPTABLE AND BE REJECTED.

CORE SAMPLES SHALL BE TESTED FOR BOND STRENGTH. SAMPLES MAY BE FRACTURED BY HAMMER BLOW TO CRACK AREA OR THROWN AT A HARD SURFACE. IF ADHESIVE FAILURE OCCURS BEFORE CONCRETE FAILURE, THE CORE SHALL BE CONSIDERED UNACCEPTABLE AND REJECTED.

PAYMENT FOR EPOXY INJECTION CRACK REPAIR SHALL BE MADE UNDER ITEM NUMBER 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), LF

PRICE BID FOR ITEM NUMBER 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), LF, SHALL INCLUDE COST OF ALL LABOR AND MATERIALS FOR GRINDING FOR SURFACE PREPARATION, CRACK PREPARATION, CAPPING, INJECTION OF ADHESIVE, ALL SAMPLING AND TESTING, REMOVAL OF CAPPING MATERIAL AND PORTS, AND OTHER INCIDENTALS. CRACKS SHALL BE MEASURED FOR PAYMENT ALONG THE LENGTH OF THE VISIBLE SURFACE CRACK. PRICE BID ALSO INCLUDES ALL COSTS ASSOCIATED WITH MAKING THE EXISTING INJECTION PORTS SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACES.

NO PAYMENT SHALL BE MADE FOR REWORK DEEMED NECESSARY BY FAILURE OF ADHESIVE SAMPLES OR CORE SAMPLES.

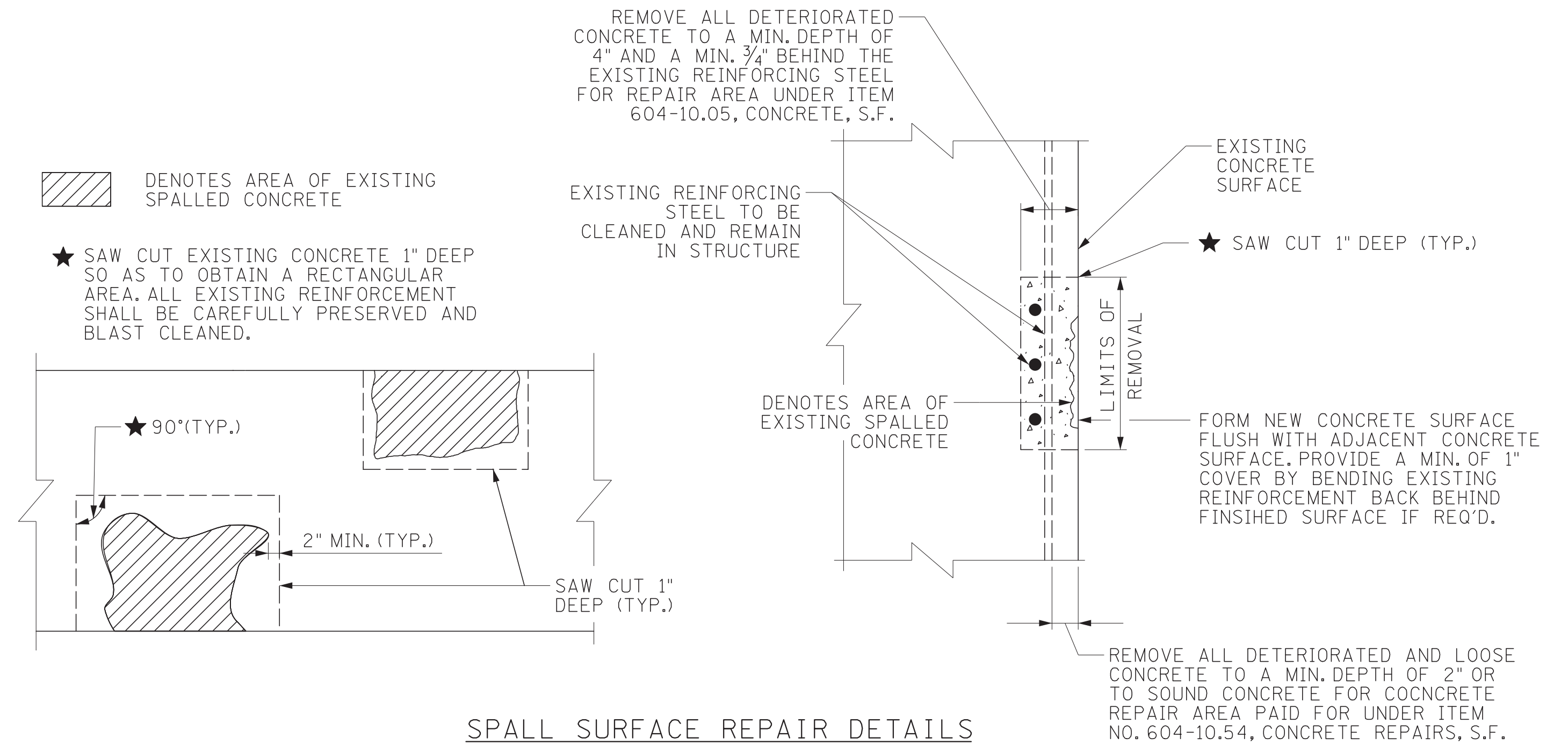
ALL WORK INCLUDING SAMPLING AND TESTING SHALL BE IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE OR CONTRACT INSPECTORS. ANY WORK DONE WITHOUT INSPECTORS PRESENT SHALL NOT BE PAID FOR. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH WEEKLY SCHEDULES OF WORK TO BE PERFORMED. SCHEDULES SHALL BE SUBMITTED AT LEAST THREE (3) DAYS IN ADVANCE OF WORK TO BE DONE. THE ENGINEER SHALL BE NOTIFIED OF ANY CHANGE IN THE SCHEDULE A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE OF CHANGE.

CONST. NO. 75014-4245-04

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REVISIONS		
NO.	DATE	BRIEF DESCRIPTION
1	01/10/2024	BEG LETTING YEAR UPDATED



SPALL SURFACE REPAIR DETAILS

NOTES FOR ITEM NO. 604-10.05:

COST OF CUTTING, REMOVING SPALLED OR CRACKED CONCRETE, CLEANING EXPOSED REINFORCING STEEL, CONCRETE, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN ITEM NO. 604-10.05, CONCRETE S.F.

CONCRETE SHALL BE HIGH EARLY STRENGTH CONCRETE, F'C = 3500 PSI AT 28 DAY STRENGTH.

ITEM NO. 604-10.05 SHALL BE BID SUCH THAT THIS ITEM MAY BE INCREASED OR DECREASED AS DIRECTED BY ENGINEER.

ALL AREAS TO BE REPAIRED ARE TO BE MARKED BY THE ENGINEER FROM THE BRIDGE INSPECTION AND REPAIR OFFICE.

NOTES FOR ITEM NO. 604-10.54:

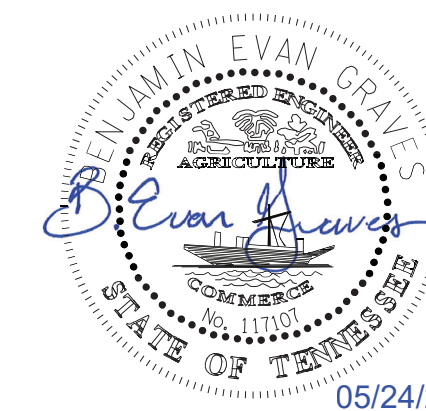
THE COST OF SAW CUTTING, REMOVING SPALLED OR CRACKED CONCRETE, CLEANING EXPOSED REINFORCING STEEL, PATCHING MATERIAL, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F.

PATCHING MATERIAL SHALL BE A POLYMER-MODIFIED CEMENTITIOUS STRUCTURAL PATCHING VERTICAL AND OVERHEAD MATERIAL. SEE T.D.O.T. QUALIFIED PRODUCTS LIST 13, SPEC. SECTION B.6. SUBLIST F FOR ACCEPTABLE PATCHING MATERIALS.

AFTER CONCRETE REMOVAL OF THE 2" DEPTH HAS TAKEN PLACE, THE ENGINEER SHALL HAVE THE OPTION TO REMOVE ADDITIONAL CONCRETE DEPTH AND SHALL DESIGNATE THIS AREA TO BE REPAIRED AND PAID FOR UNDER ITEM NO. 604-10.05 INSTEAD OF UNDER ITEM NO. 604-10.54.

ITEM NO. 604-10.54 SHALL BE BID SUCH THAT THIS ITEM MAY BE INCREASED OR DECREASED AS DIRECTED BY THE ENGINEER.

DESIGNED BY Lane M. Decker DATE 02/05/21  
 DRAWN BY Josh A. Percy DATE 02/05/21  
 SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
 CHECKED BY Carter D. Bearden DATE 02/05/21



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

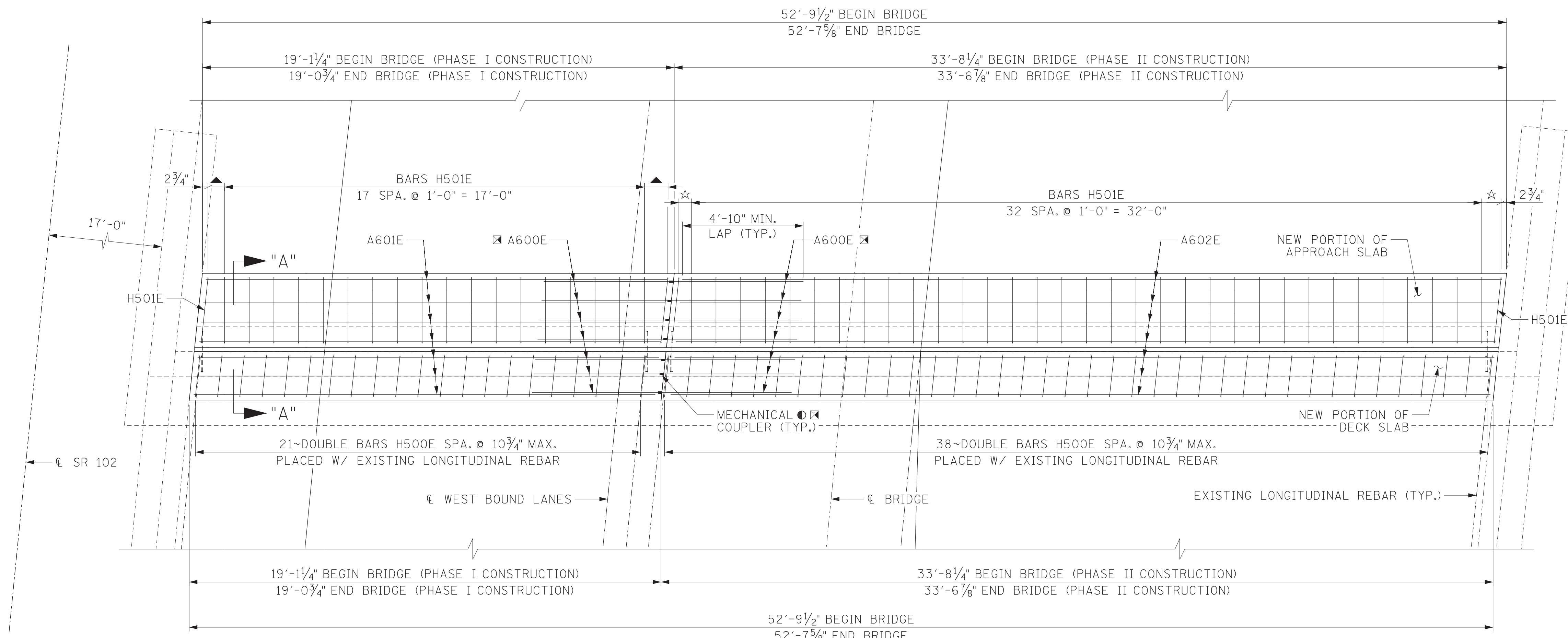
GENERAL REPAIR DETAILS

SR 102 OVER SR 1 & CSXRR  
 BRIDGE NO. 75-SR102-10.34 (RT. & LT.)  
 FED. ID NO. 75SR0010033&34  
 RUTHERFORD COUNTY  
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1	01/10/2024	BEG LETTING YEAR UPDATED



- ▲ BEGIN BRIDGE: 8" SPACING ON DOWN STATION END, AND 11 1/4" ON UPSTATION END  
END BRIDGE: 10" SPACING ON DOWN STATION END, AND 8" ON UP STATION END
- ☆ BEGIN BRIDGE: 9 3/8" SPACING ON DOWN STATION END, AND 6" ON UP STATION END  
END BRIDGE: 8 1/4" SPACING ON DOWN STATION END, AND 6" ON UPSTATION END
- ☒ SEE DETAIL A, THIS SHEET.
- ☑ SEE JOINT SEAL DETAIL, THIS SHEET.
- FOR NOTES, SEE DWG. NO. BR-132-261.

NOTE: FOR BILL OF STEEL, SEE DWG. NO. BR-132-264

**PLAN VIEW**  
(LEFT BRIDGE - BEGIN BRIDGE SHOWN)  
(LEFT BRIDGE - END BRIDGE SIMILAR BY OPPOSITE HAND U.N.O)  
3/8" = 1'-0"

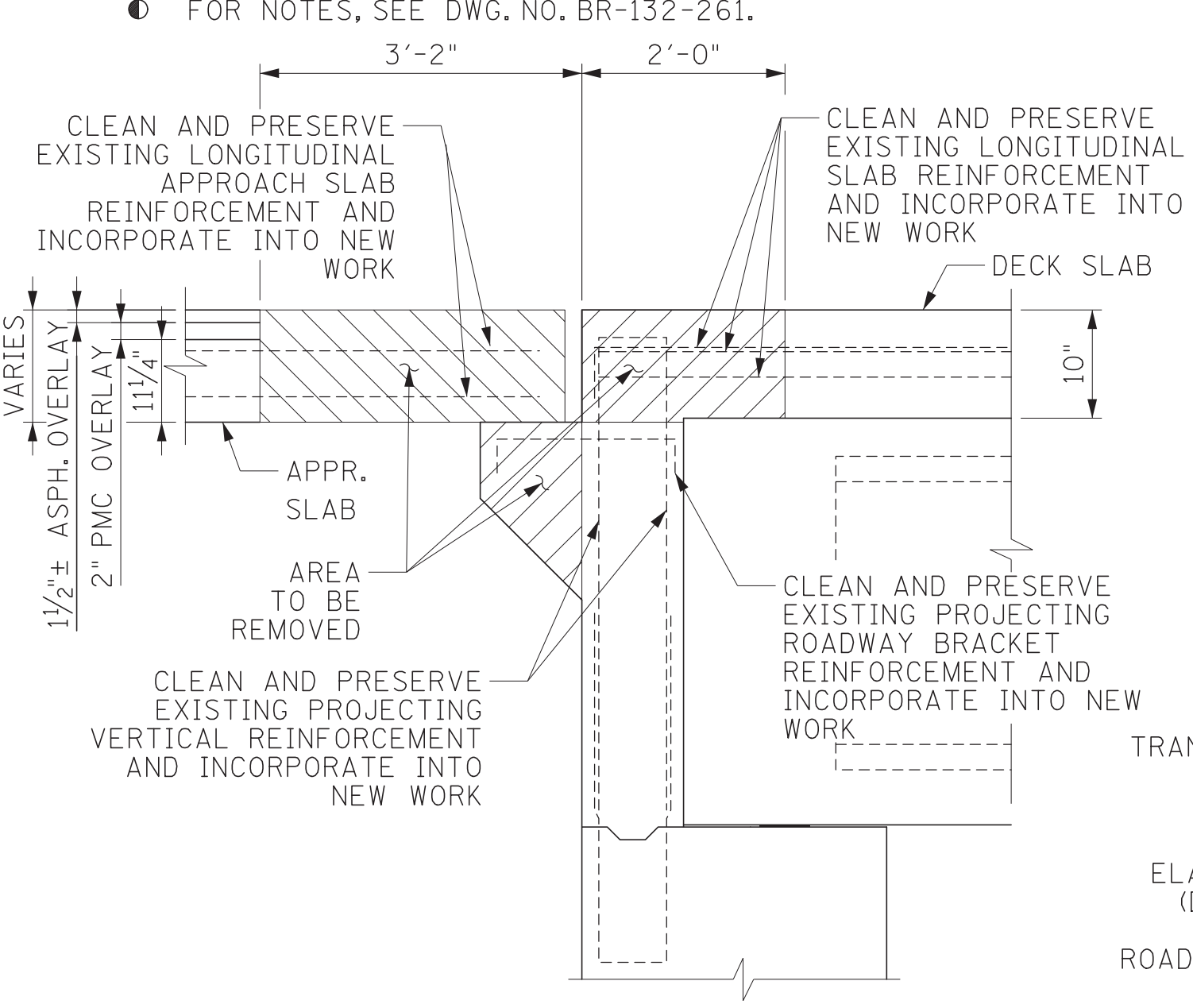
TEMPERATURE	20°	60°	100°
BEGIN BRIDGE	2 1/2"	2"	1 1/2"
END BRIDGE	2 1/2"	2"	1 1/2"

\* SET GAP PER CHART ABOVE. T.D.O.T INSPECTOR TO VERIFY FORMED OPENING GAP IS CORRECT AT THE TIME OF CONCRETE POUR FOR APPROACH SLAB

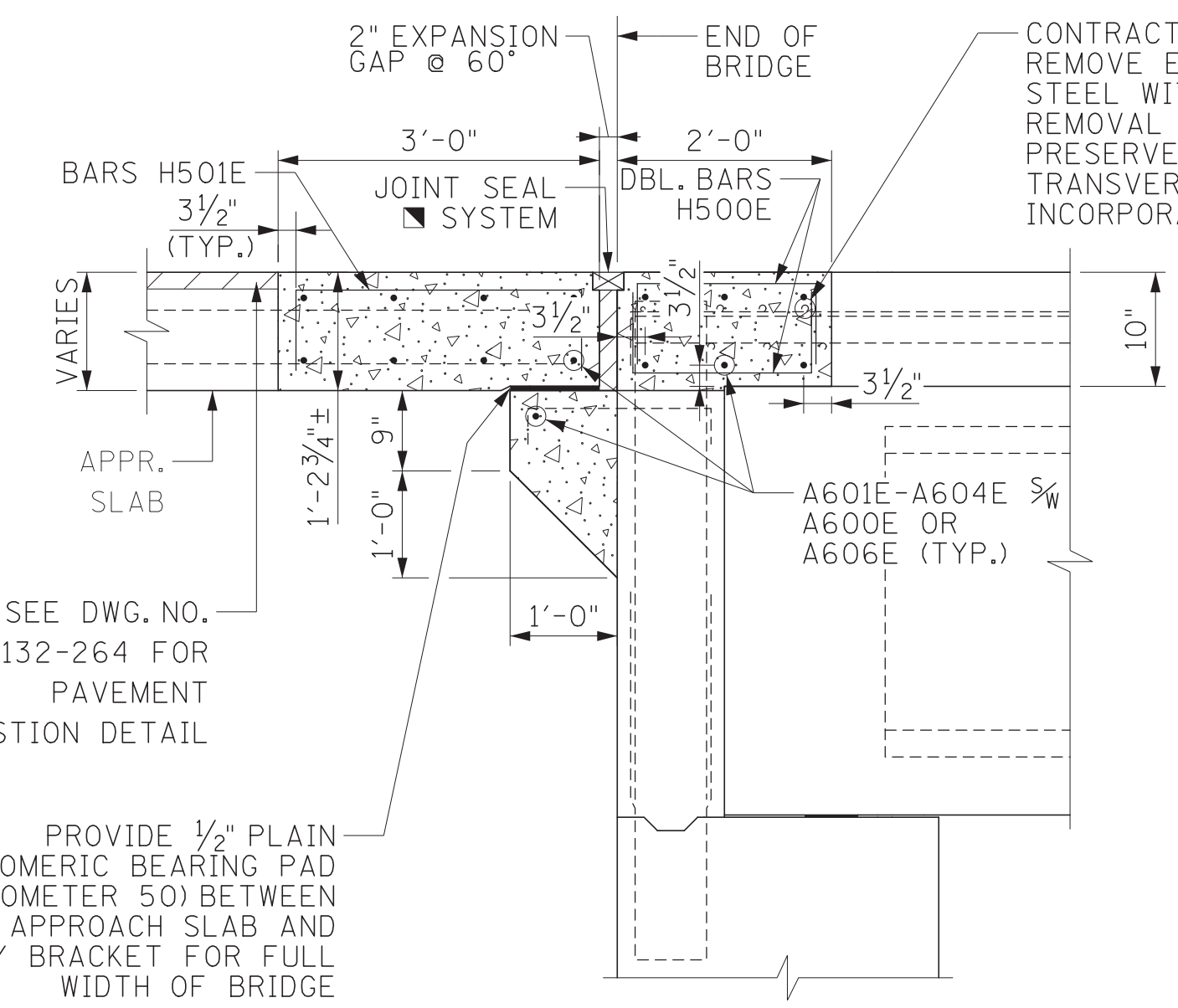
- \* \* LEFT BRIDGE - BEGIN BRIDGE  
L = 19'-1 1/4" (PHASE I)  
L = 33'-8 1/4" (PHASE II)  
LEFT BRIDGE - END BRIDGE  
L = 19'-0 3/4" (PHASE I)  
L = 33'-6 7/8" (PHASE II)  
RIGHT BRIDGE - BEGIN BRIDGE  
L = 20'-1 1/4" (PHASE I)  
L = 20'-7" (PHASE II)  
RIGHT BRIDGE - END BRIDGE  
L = 20'-0 3/4" (PHASE I)  
L = 29'-9 5/8" (PHASE II)

● JOINT SEAL SYSTEM SHALL BE EITHER A D.S. BROWN V-SEAL EXPANSION JOINT SYSTEM (V-400) OR A R.J. WATSON SILICOFLEX JOINT SEALING SYSTEM (MODEL SF400) OR A WATSON BOWMAN ACME WABO SPS-400. COST OF LABOR, MATERIAL, AND EQUIPMENT FOR NEW V-SEAL EXPANSION JOINT SYSTEM TO BE INCLUDED IN ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS, L.F.

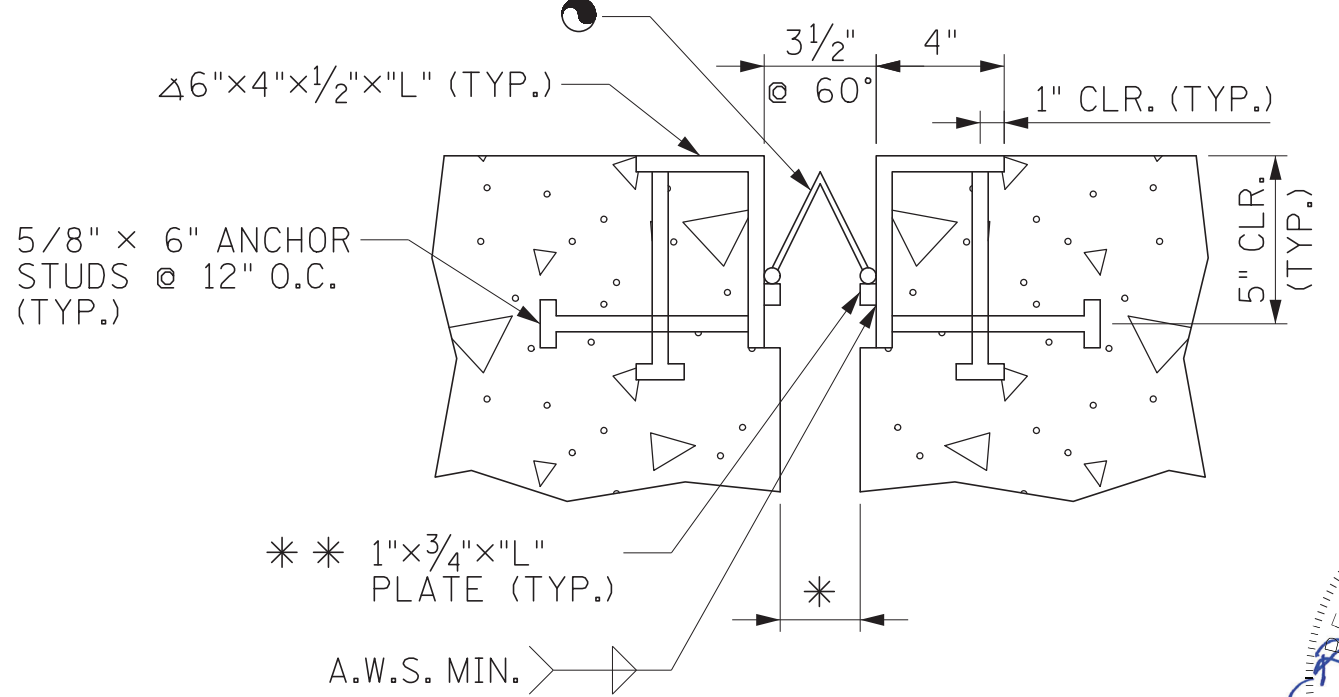
**NOTES:**  
ALL CONCRETE POURS SHALL BE WELL CONSOLIDATED BEHIND AND AROUND THE EXPANSION JOINT STEEL RETAINER.  
EXTREME CARE SHALL BE TAKEN WHEN REMOVING CONCRETE SLAB SO AS NOT TO DAMAGE THE EXISTING LONGITUDINAL REINFORCING STEEL. ALL EXISTING LONGITUDINAL REINFORCING STEEL SHALL BE CLEANED AND INCORPORATED INTO NEW WORK. ALL WORK MUST MEET WITH FULL SATISFACTION OF THE ENGINEER.  
CONCRETE FOR ALL EXPANSION JOINT REPAIR AREAS IS TO BE HIGH EARLY STRENGTH CONCRETE WITH A COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS.  
COST OF POURING WITH HIGH EARLY STRENGTH CONCRETE, REINFORCING STEEL, STRUCTURAL STEEL, WELDING, AND PROVIDING NEW CONTINUOUS ELASTOMERIC BEARING PAD AND NEW JOINT SYSTEM SHALL BE PAID FOR UNDER ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS, L.F. (TYPICAL AT BOTH ENDS OF BOTH BRIDGES). THIS ITEM WILL ALSO INCLUDE ALL COSTS ASSOCIATED WITH REMOVING PORTIONS OF EXISTING DECK, BACKWALL, AND ROADWAY APPROACHES AND CLEANING ALL EXPOSED REINFORCING STEEL TO REMAIN.  
COST OF INCIDENTALS SUCH AS CLEANING, SAW CUTTING, DRILLING, ETC. AND MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE INSTALLATION SHALL BE INCLUDED UNDER ITEMS BID.  
ALL COSTS ASSOCIATED WITH PLACING ELASTOMERIC BEARING PADS SHALL BE CONSIDERED INCIDENTAL TO ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS.  
CONSTRUCTION SEQUENCE: SCARIFYING, COLD PLANING AND PAVING SHALL BE COMPLETED PRIOR TO SAWCUTTING AND REMOVAL OF END OF THE EXISTING DECK.  
WITH APPROVAL FROM THE ENGINEER, SHOULD THE CONTRACTOR FIND THAT THE ROADWAY BRACKET IS IN GOOD CONDITION, THE CONTRACTOR MAY LEAVE EXISTING ROADWAY BRACKET AS IS BUT SHALL STILL PROVIDE A BEARING PAD AND PERFORM THE REMAINDER OF THE REPAIRS AS SHOWN IN THESE PLANS.



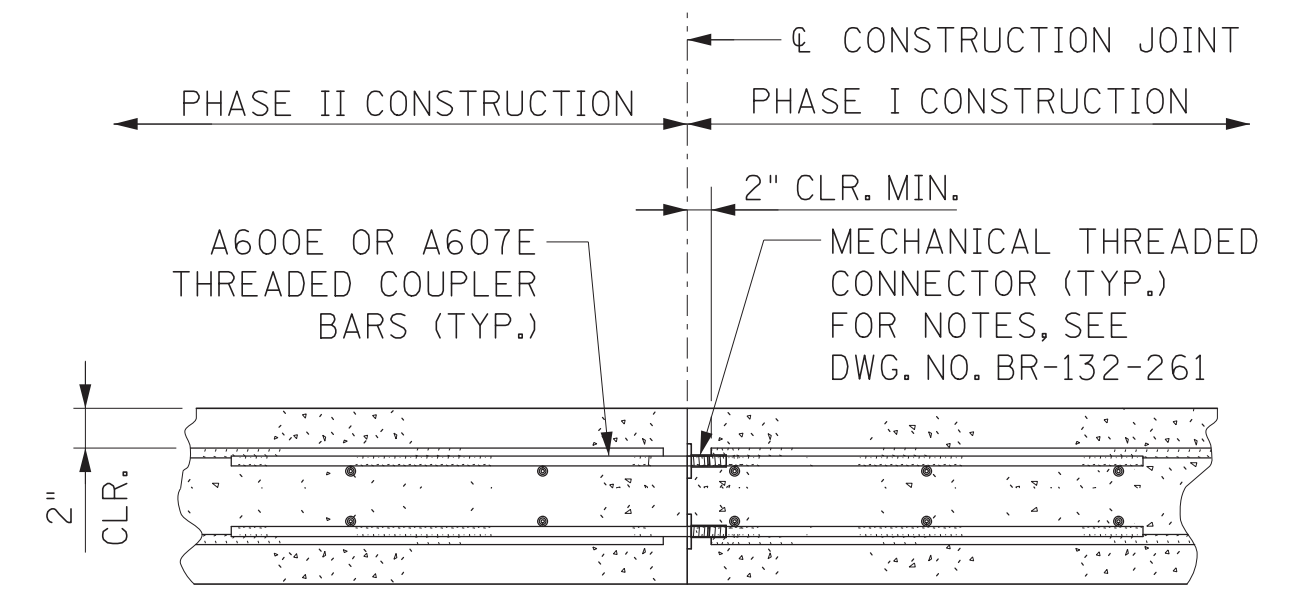
**SECTION A-A (DEMOLITION)**  
NO SCALE



**SECTION A-A (CONSTRUCTION)**  
NO SCALE



**JOINT SEAL DETAIL**



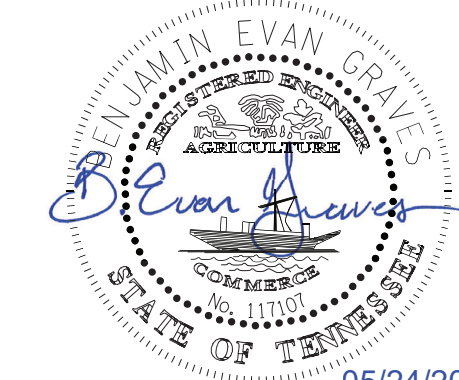
**DETAIL A**

NOTE: THE COST OF MECHANICAL THREADED CONNECTORS AND THE COST OF THREADING THE COUPLER BARS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 604-10.44

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

GENERAL REPAIR DETAILS

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2024



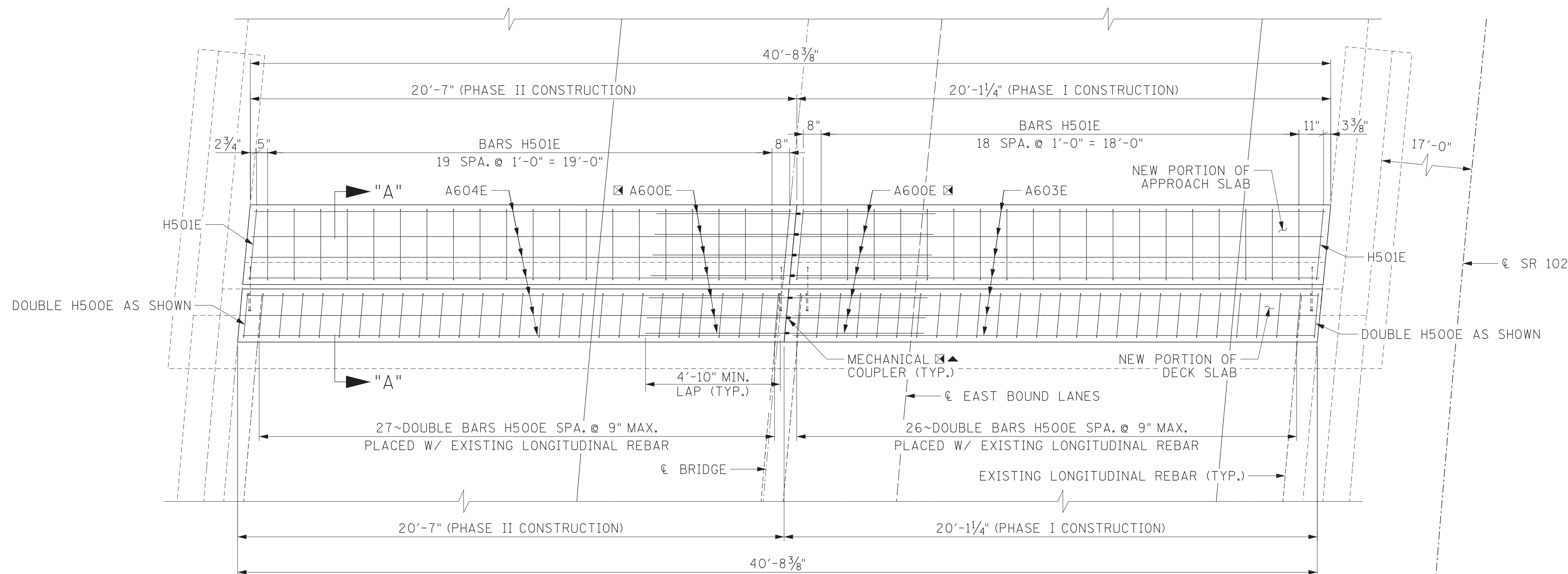
05/24/2024

DESIGNED BY Lane M. Decker DATE 02/05/21  
DRAWN BY Josh A. Perry DATE 02/05/21  
SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
CHECKED BY Carter D. Bearden DATE 02/05/21



PROJECT NO.	YEAR	SHEET NO.
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REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	01/10/2024	BEG	LETTING YEAR UPDATED



**PLAN VIEW**

(RIGHT BRIDGE - BEGIN BRIDGE)  
3/8" = 1'-0"

NOTE: SEE DWG. NO. BR-132-263 FOR ADDITIONAL NOTES AND DETAILS.

SEE DWG. NO. BR-132-263 FOR DETAIL A

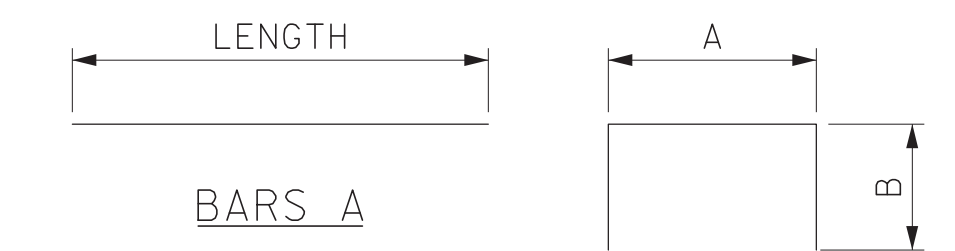
FOR NOTES, SEE DWG. NO. BR-132-261

**BILL OF STEEL (75-SR102-10.34 LT.)(PER ABUT.)**

BARS	SIZE	NO. REQ'D.	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A600E	6	30					5'-3"
A601E	6	15					18'-8"
A602E	6	15					33'-2"
H500E	5	118	1'-8"	6"			2'-8"
H501E	5	55	2'-8"	10"			4'-4"

**BILL OF STEEL (75-SR102-10.34 RT.)(ABUT. #1)**

BARS	SIZE	NO. REQ'D.	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A600E	6	30					5'-3"
A603E	6	15					19'-9"
A604E	6	15					20'-3"
H500E	5	110	1'-8"	6"			2'-8"
H501E	5	43	2'-8"	10"			4'-4"

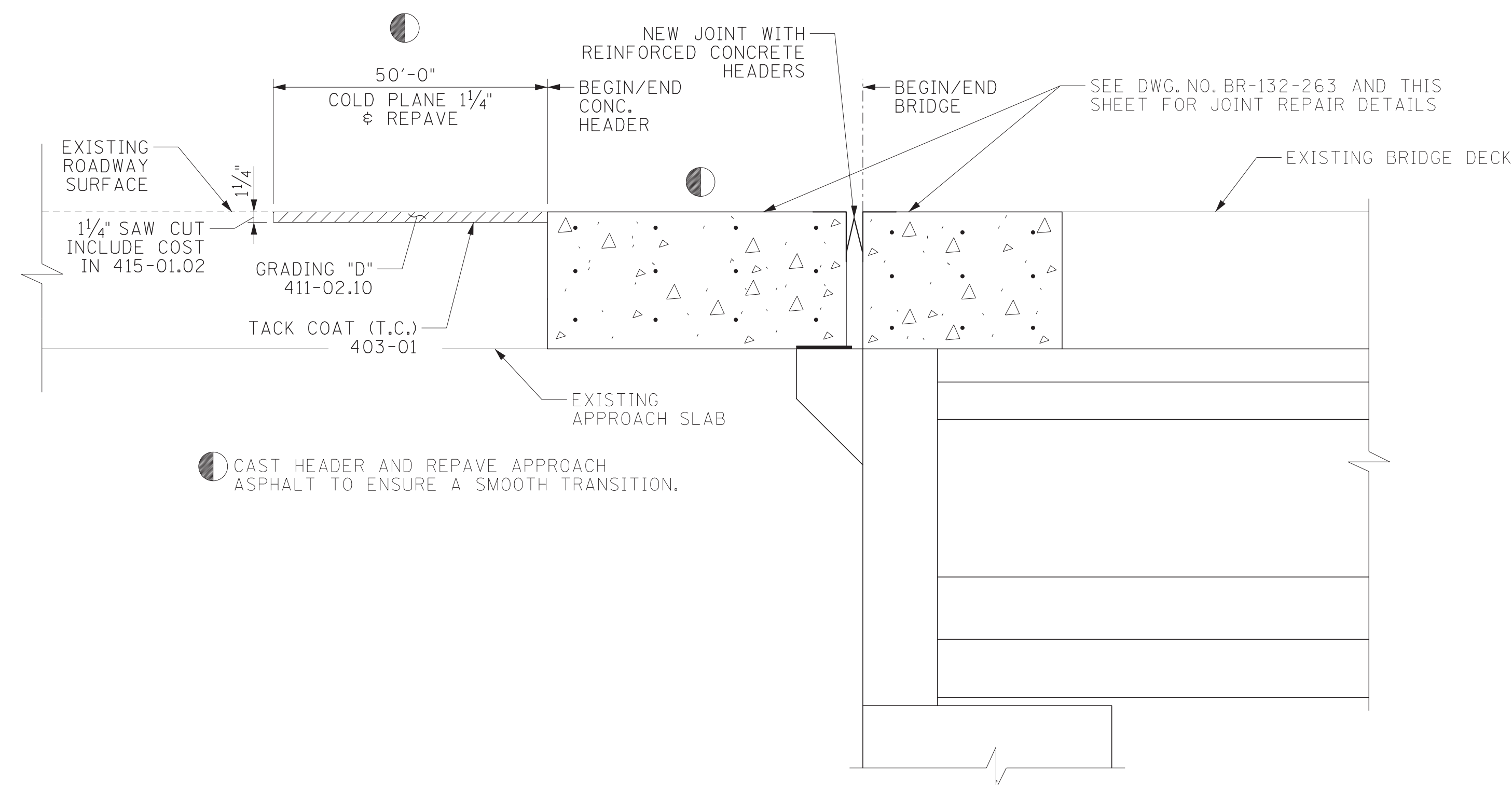


**NOTES:**

- ALL BAR DIMENSIONS ARE OUT-TO-OUT.
- ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.
- BARS ENDING IN "E" TO BE EPOXY COATED.
- DENOTES: THREADED FOR MECHANICAL COUPLER.
- FOR ADDITIONAL NOTES AND DETAILS, SEE DWG. NO. BR-132-263.

ESTIMATED QUANTITIES RT. ABUTMENT #1	
E.C. REINFORCING STEEL (LBS)	1638
HIGH EARLY STR. CONCRETE (CY)	10

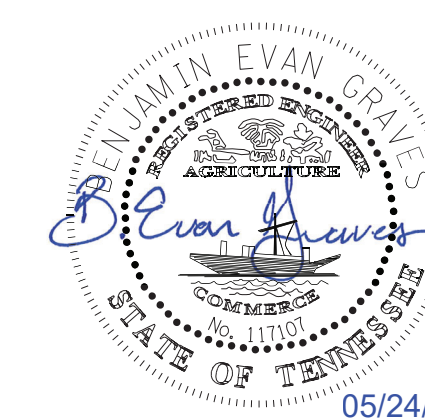
ESTIMATED QUANTITIES LT. ABUTMENTS	
E.C. REINFORCING STEEL (LBS)	1981
HIGH EARLY STR. CONCRETE (CY)	13.3



**PAVEMENT TRANSITION DETAIL**

(TYP. AT BEGIN/END BRIDGE)

DESIGNED BY Lane M. Decker DATE 02/05/21  
 DRAWN BY Josh A. Perry DATE 02/05/21  
 SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
 CHECKED BY Carter D. Bearden DATE 02/05/21



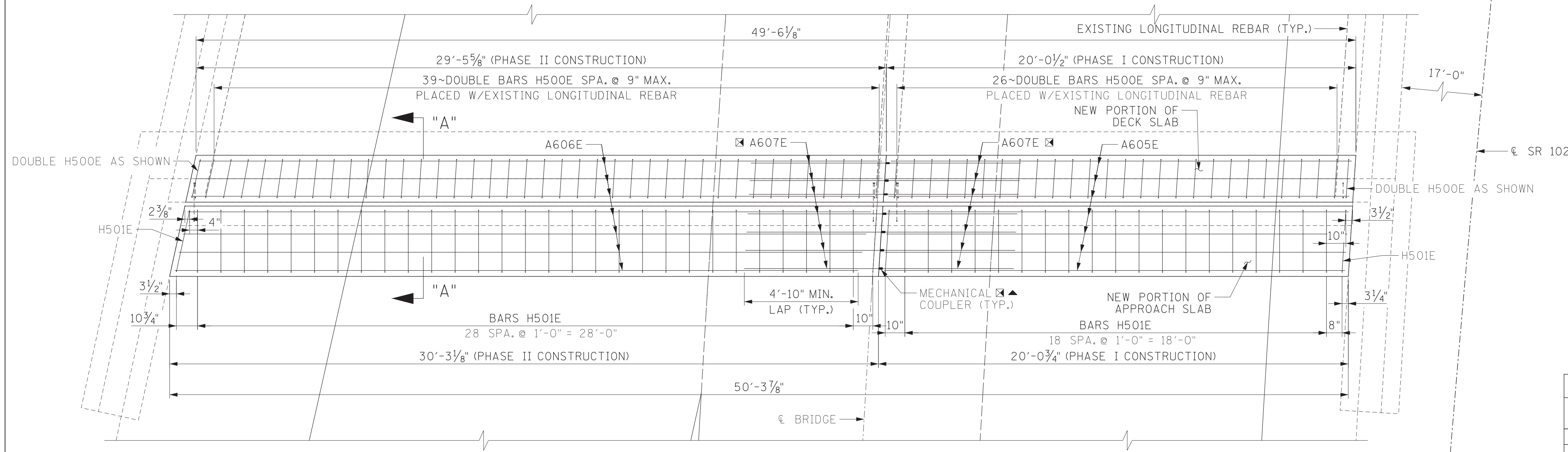
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

**GENERAL REPAIR DETAILS**

SR 102 OVER SR 1 & CSXRR  
BRIDGE NO. 75-SR102-10.34 (RT. & LT.)  
FED. ID NO. 75SR0010033&34  
RUTHERFORD COUNTY  
2024

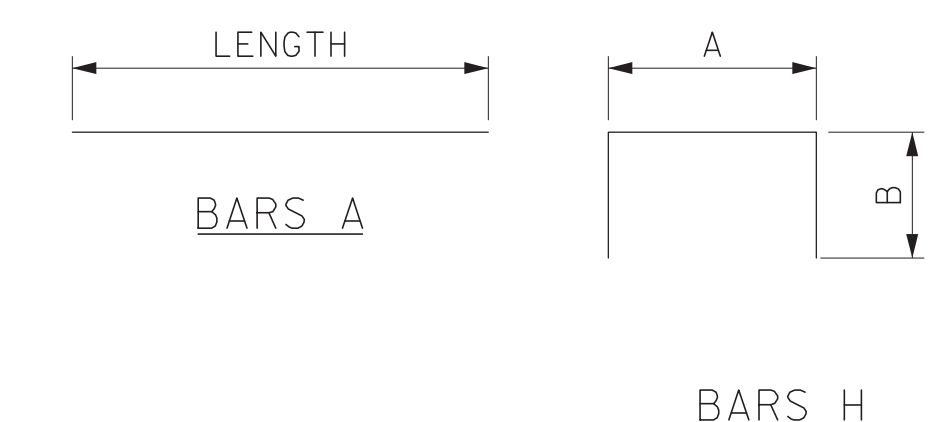
PROJECT NO.	YEAR	SHEET NO.
75014-4245-04	2024	

REVISIONS		
NO.	DATE	BRIEF DESCRIPTION
1	01/10/2024	BEG LETTING YEAR UPDATED



BILL OF STEEL (75-SR102-10.34 RT.)(ABUT. #2)

BARS	SIZE	NO. REQ'D.	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A605E	6	15					19'-8"
A606E	6	15					29'-2"
A607E	6	30					5'-9"
H500E	5	134	1'-8"	6"			2'-8"
H501E	5	52	2'-8"	10"			4'-4"



SEE DWG. NO. BR-132-263 FOR DETAIL A  
 FOR NOTES, SEE DWG. NO. BR-132-261

PLAN VIEW  
 (RIGHT BRIDGE - END BRIDGE)  
 3/8" = 1'-0"

NOTE: SEE DWG. NO. BR-132-263 FOR ADDITIONAL NOTES AND DETAILS.

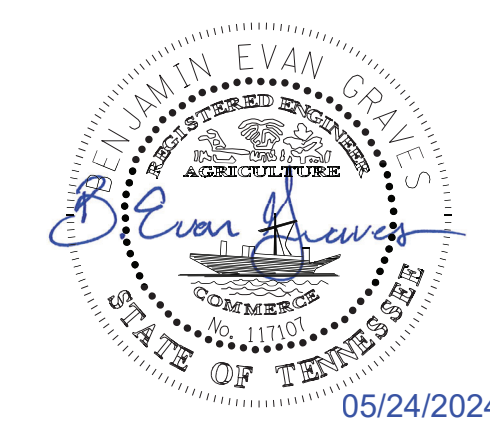
- NOTES:
- ALL BAR DIMENSIONS ARE OUT-TO-OUT.
  - ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.
  - BARS ENDING IN "E" TO BE EPOXY COATED.
  - DENOTES: THREADED FOR MECHANICAL COUPLER.
  - FOR ADDITIONAL NOTES AND DETAILS, SEE DWG. NO. BR-132-263.

ESTIMATED QUANTITIES RT. ABUTMENT #2		
E.C. REINFORCING STEEL (LBS)		1967
HIGH EARLY STR. CONCRETE (CY)		10.1

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

GENERAL REPAIR DETAILS

SR 102 OVER SR 1 ϕ CSXRR  
 BRIDGE NO. 75-SR102-10.34 (RT.ϕLT.)  
 FED. ID NO. 75SR0010033ϕ34  
 RUTHERFORD COUNTY  
 2024



DESIGNED BY Lane M. Decker DATE 02/05/21  
 DRAWN BY Josh A. Perry DATE 02/05/21  
 SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
 CHECKED BY Carter D. Bearden DATE 02/05/21

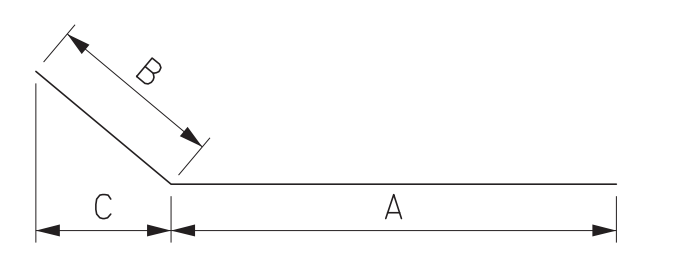


PROJECT NO.	YEAR	SHEET NO.
75014-4245-04	2024	

REVISIONS		
NO.	DATE	BRIEF DESCRIPTION
1	01/10/2024	BEG LETTING YEAR UPDATED

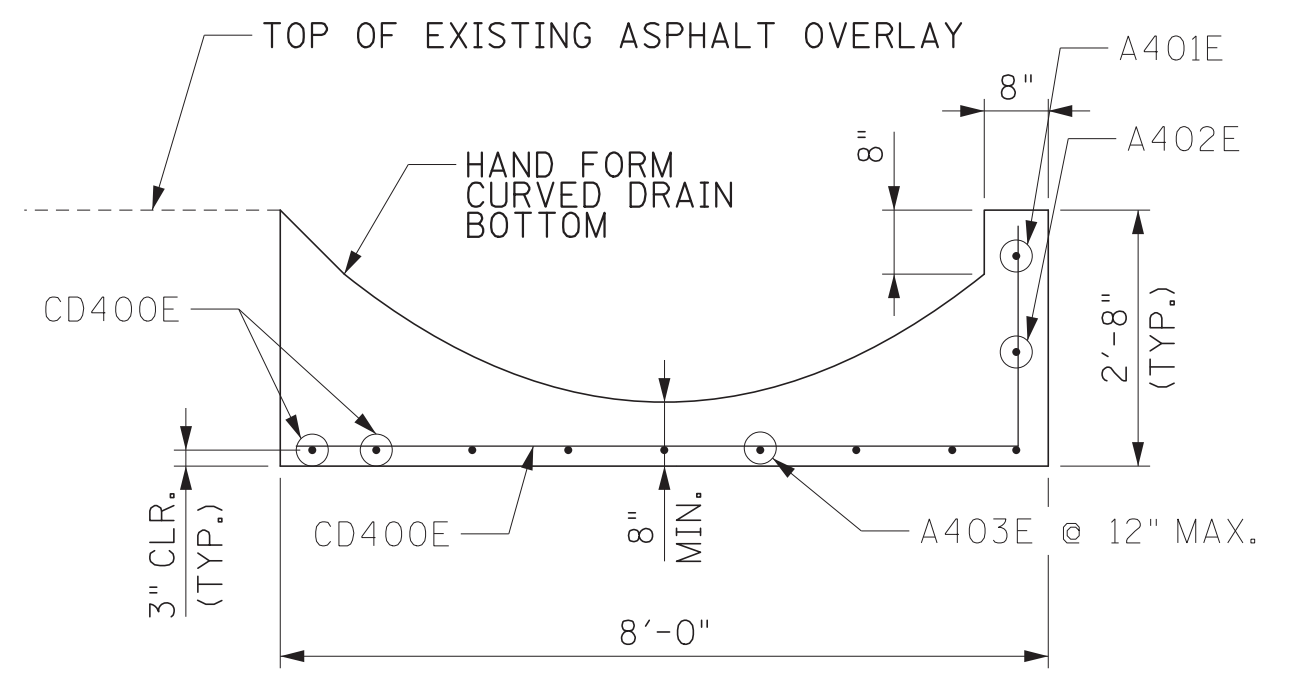
BILL OF STEEL (DITCH)						
BARS	SIZE	NO. REQ'D.	BENDING DIMENSIONS			LENGTH
			A	B	C	
A400E	4	2				7'-8"
A401E	4	1				20'-9"
A402E	4	1				20'-6"
A403E	4	7				22'-6"
CD400E	4	10	7'-6"	2'-2"	0"	9'-8"
SERIES CD401E	4	1	6'-6"	*	0"	104'-10"
			*DIM. B VARIES FROM 2'-2" TO 11" IN INC. OF 1/4" (13 BARS)			

● FIELD TRIM/BEND AS NEEDED

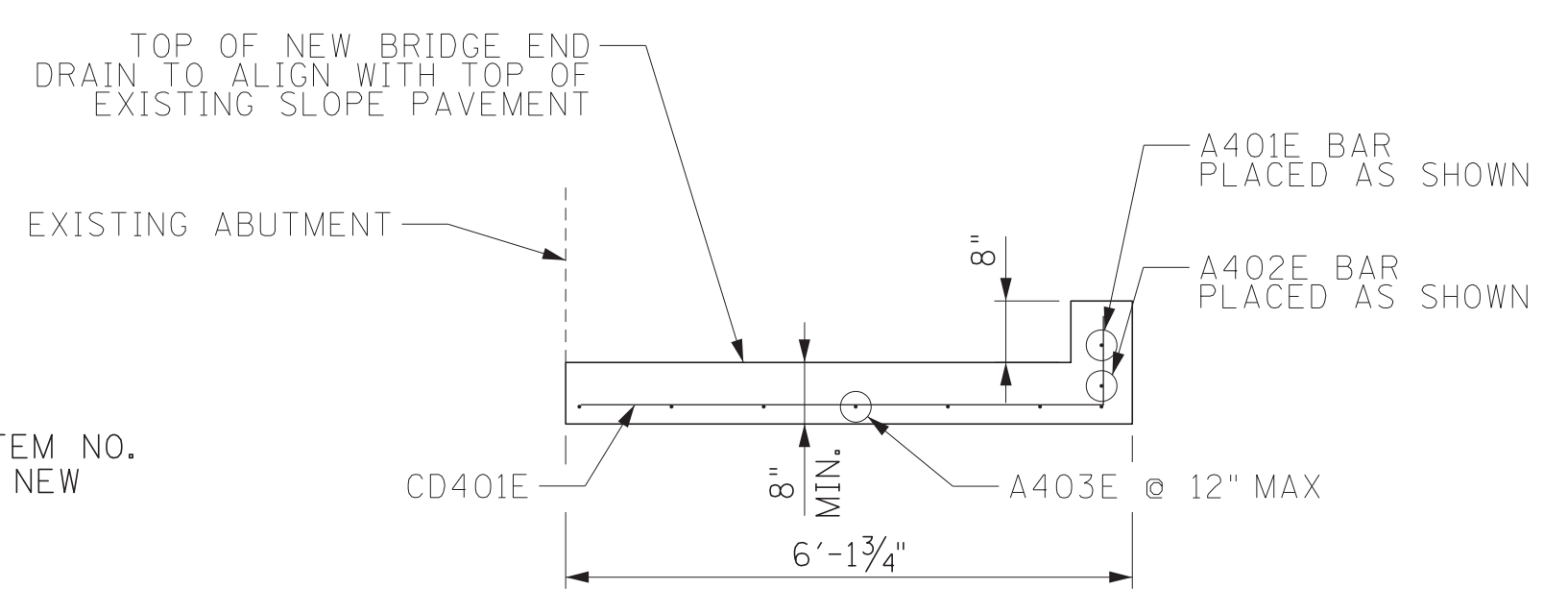


BARS CD  
BAR BENDING DETAILS

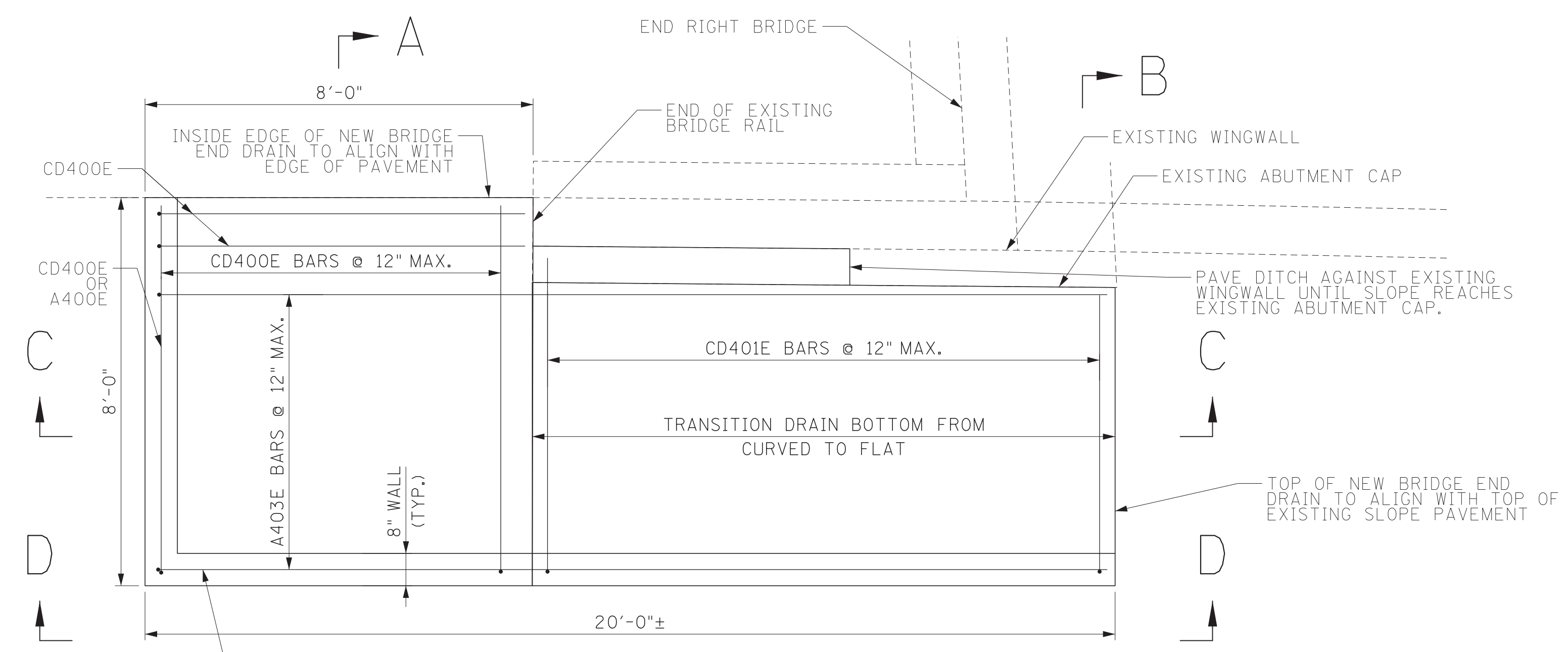
ESTIMATED QUANTITIES FOR DITCH	
E.C. REINFORCING STEEL (LBS)	278
HIGH EARLY STR. CONCRETE (CF)	176



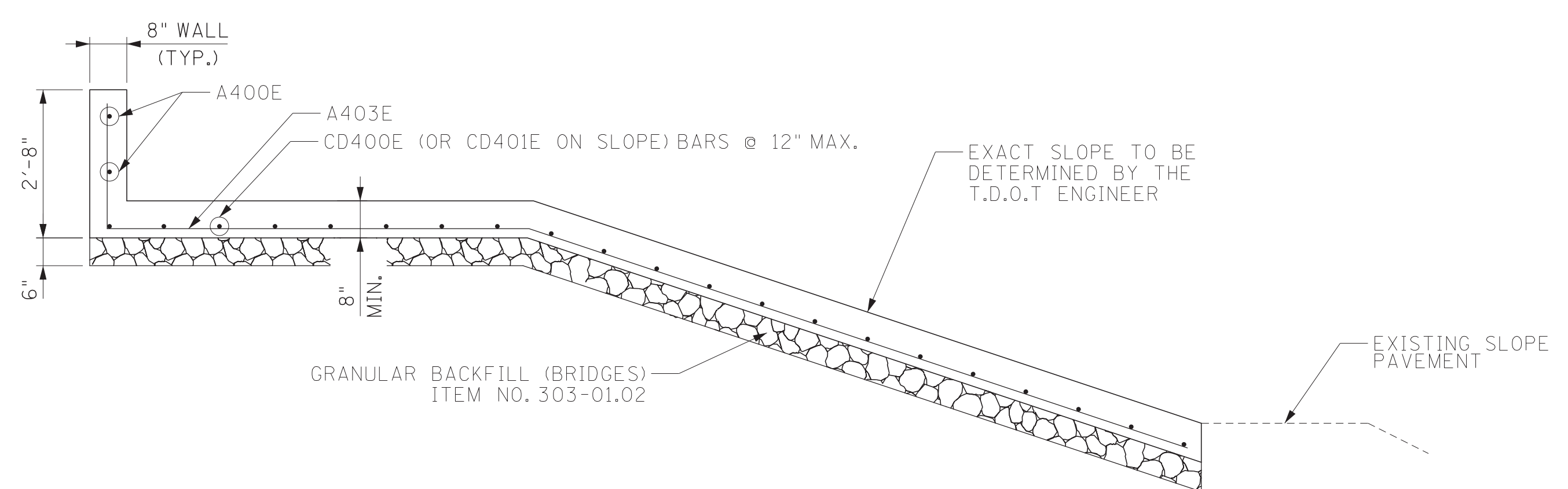
SECTION A-A  
SCALE: 1/2" = 1'-0"



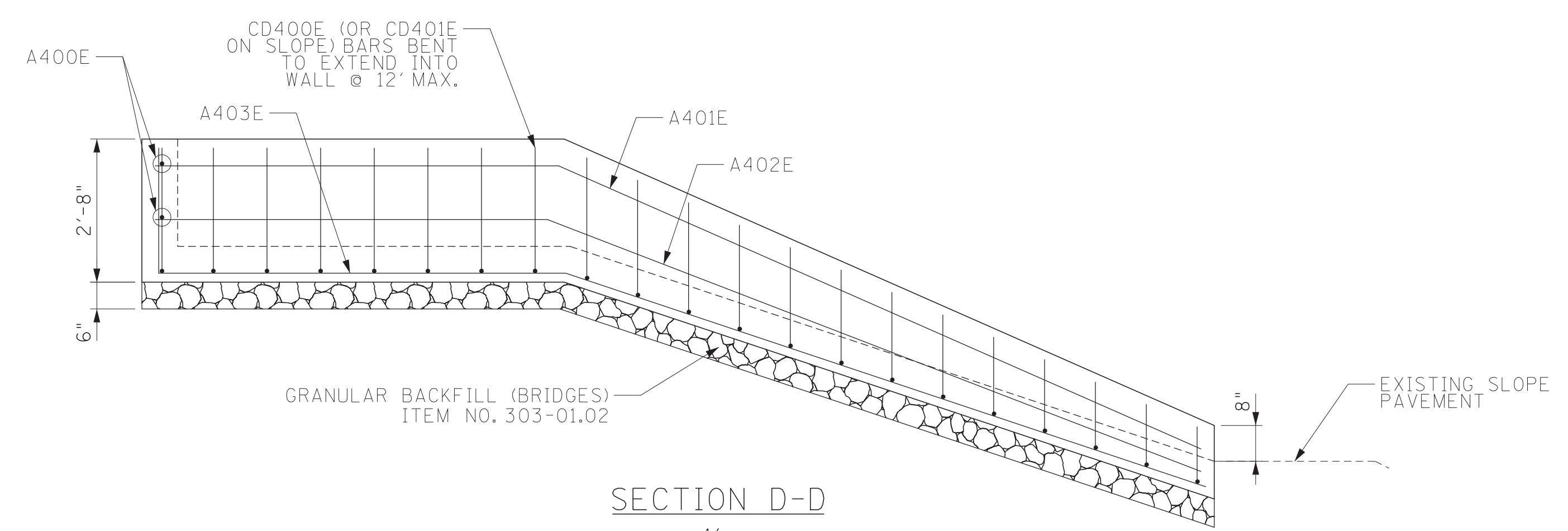
SECTION B-B  
SCALE: 1/2" = 1'-0"



PLAN VIEW  
(N.W. CORNER OF RIGHT BRIDGE)  
SCALE: 1/2" = 1'-0"



SECTION C-C  
SCALE: 1/2" = 1'-0"



SECTION D-D  
SCALE: 1/2" = 1'-0"

NOTES:

COSTS OF REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL, LB. FORMING AND PLACING OF NEW CONCRETE IN THE SIDE DRAIN BE PAID FOR UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

COST OF PLACING AND COMPACTING AGGREGATE BASE UNDER NEW DRAINS TO BE INCLUDED UNDER ITEM NO. 203-03 BORROW EXCAVATION (UNCLASSIFIED), C.Y.

ALL WORK MUST MEET THE FULL APPROVAL OF THE ENGINEER.

ALL DIMENSIONS SHOWN ON THE DETAILS OF THIS DRAWING TO BE FIELD VERIFIED BY CONTRACTOR. ALL BARS TO BE MEASURED AND CUT IN FIELD. FINAL DIMENSIONS OF THE DRAIN TO BE APPROVED BY THE T.D.O.T. ENGINEER.

DRAIN SHALL BE CONSTRUCTED TO MEET EXISTING END OF BRIDGE RAIL AT BRIDGE END.

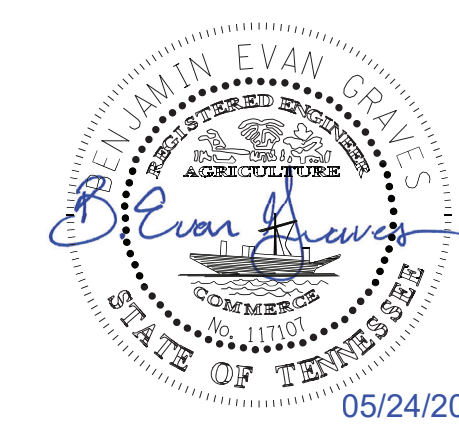
DRAIN SHALL BE CONSTRUCTED TO ACCOMMODATE ANY EXISTING GUARDRAIL POSTS.

FOR LOCATION, SEE DWG. NO. BR-132-257.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

GENERAL REPAIR DETAILS

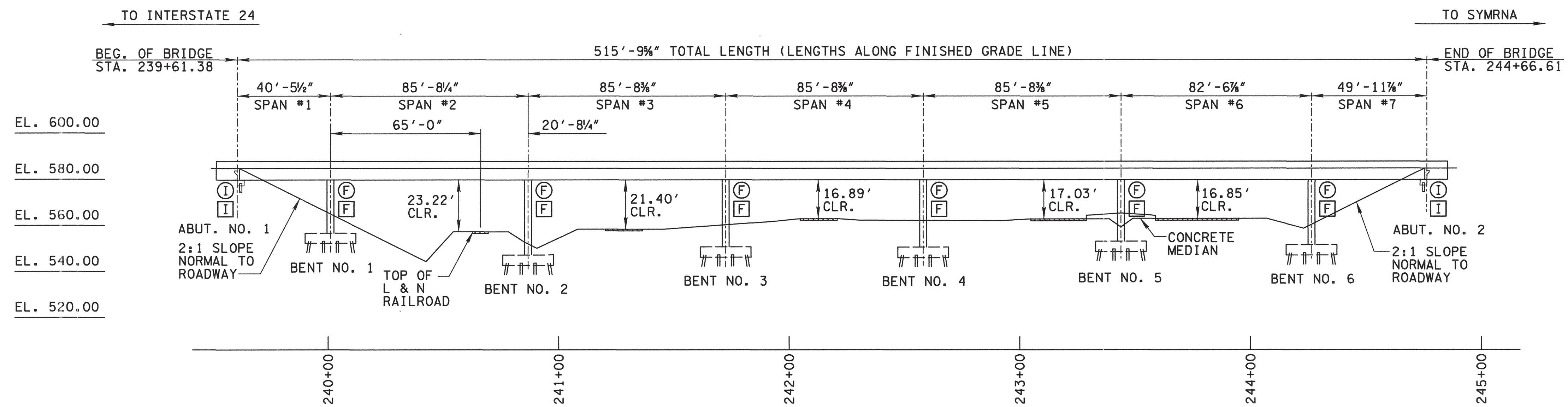
SR 102 OVER SR 1 & CSXRR  
BRIDGE NO. 75-SR102-10.34 (RT. & LT.)  
FED. ID NO. 75SR0010033 & 34  
RUTHERFORD COUNTY  
2024



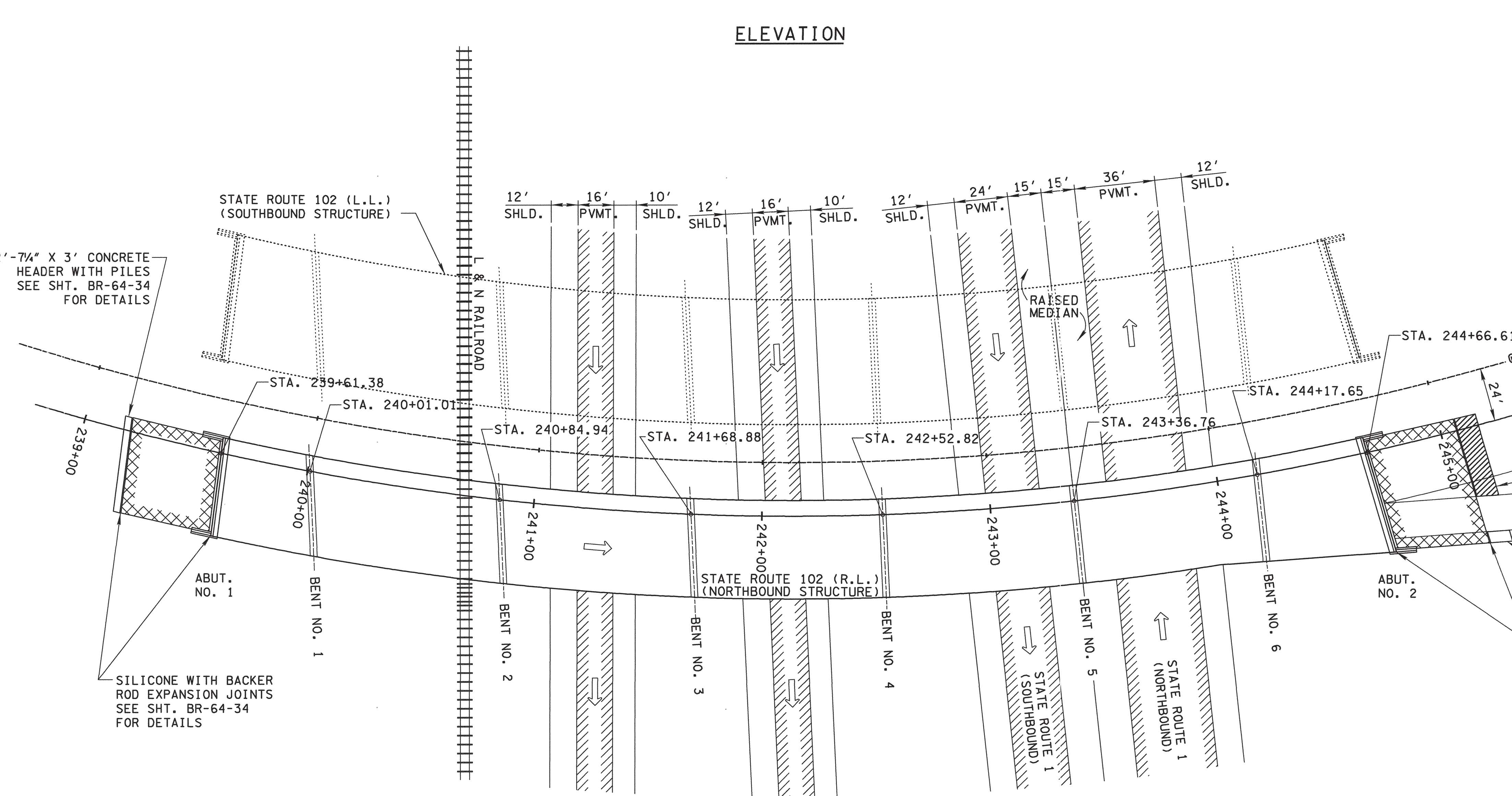
DESIGNED BY Lane M. Decker DATE 02/05/21  
DRAWN BY Josh A. Perry DATE 02/05/21  
SUPERVISED BY Benjamin E. Graves DATE 02/05/21  
CHECKED BY Carter D. Bearden DATE 02/05/21



PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



- I DENOTES INTEGRAL (EXPANSION)
- F DENOTES FIXED
- DENOTES EXISTING SUPPORT CONDITION
- DENOTES PROPOSED SUPPORT CONDITION



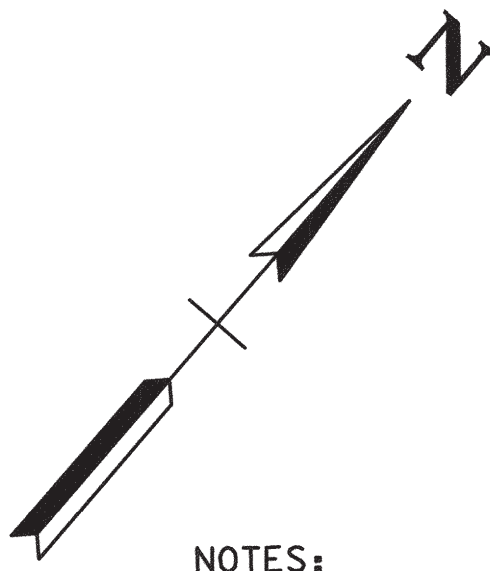
NOTES:

FOR HYDRODEMOLITION AND PMC OVERLAY DETAILS, SEE SHTS. BR-64-49 AND BR-64-50.

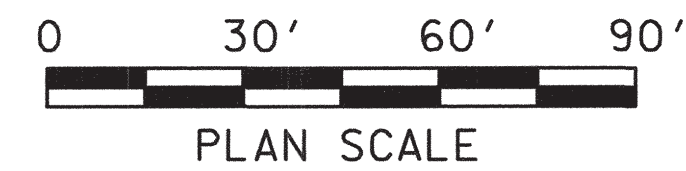
FOR SPOT REPAIR LOCATIONS AND DETAILS, SEE SHTS. BR-64-52 AND BR-64-53.

FOR DETAILS OF EPOXY INJECTION FOR PRECAST DECK FORMS, SEE SHT. BR-64-51.

FOR A LIST OF BRIDGE DRAWINGS, STANDARD DRAWINGS, SPECIAL PROVISIONS AND SCOPE OF WORK SEE DRAWING NO. BR-64-31.



PLAN



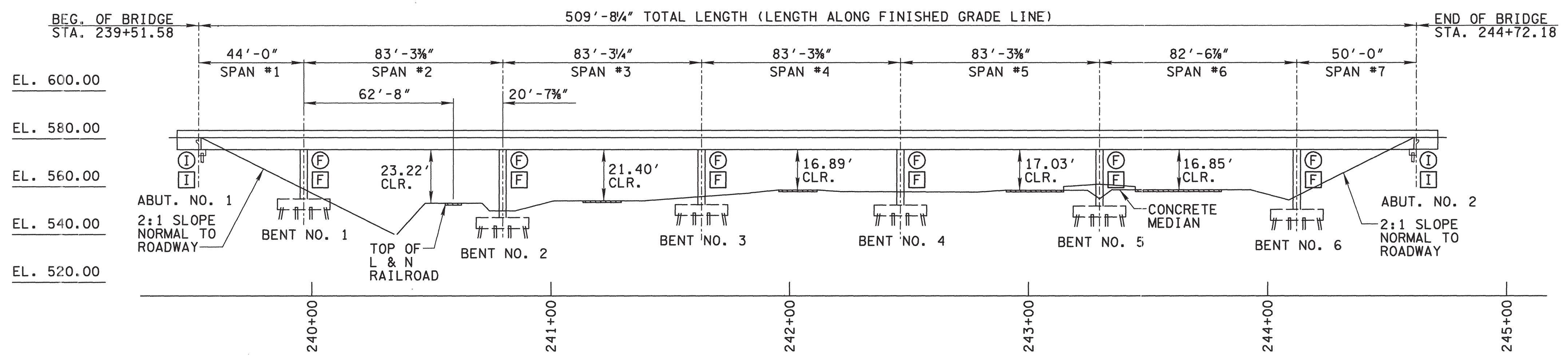
DESIGNED BY JACOB WILLIAMS, P.E. DATE 11-02  
 DRAWN BY ANGIE MOORE DATE 11-02  
 SUPERVISED BY JACOB WILLIAMS, P.E. DATE 11-02  
 CHECKED BY JACOB WILLIAMS, P.E. DATE 11-02



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 LAYOUT OF BRIDGE NO. 1  
 TO BE REPAIRED  
 BRIDGE NO. 75-SR102-10.34  
 (R.L. & L.L.)  
 SR-102 OVER SR-1  
 RUTHERFORD CO.  
 2003

TO INTERSTATE 24

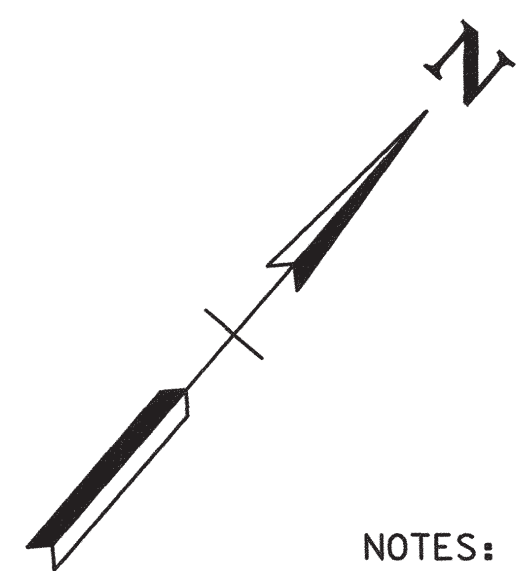
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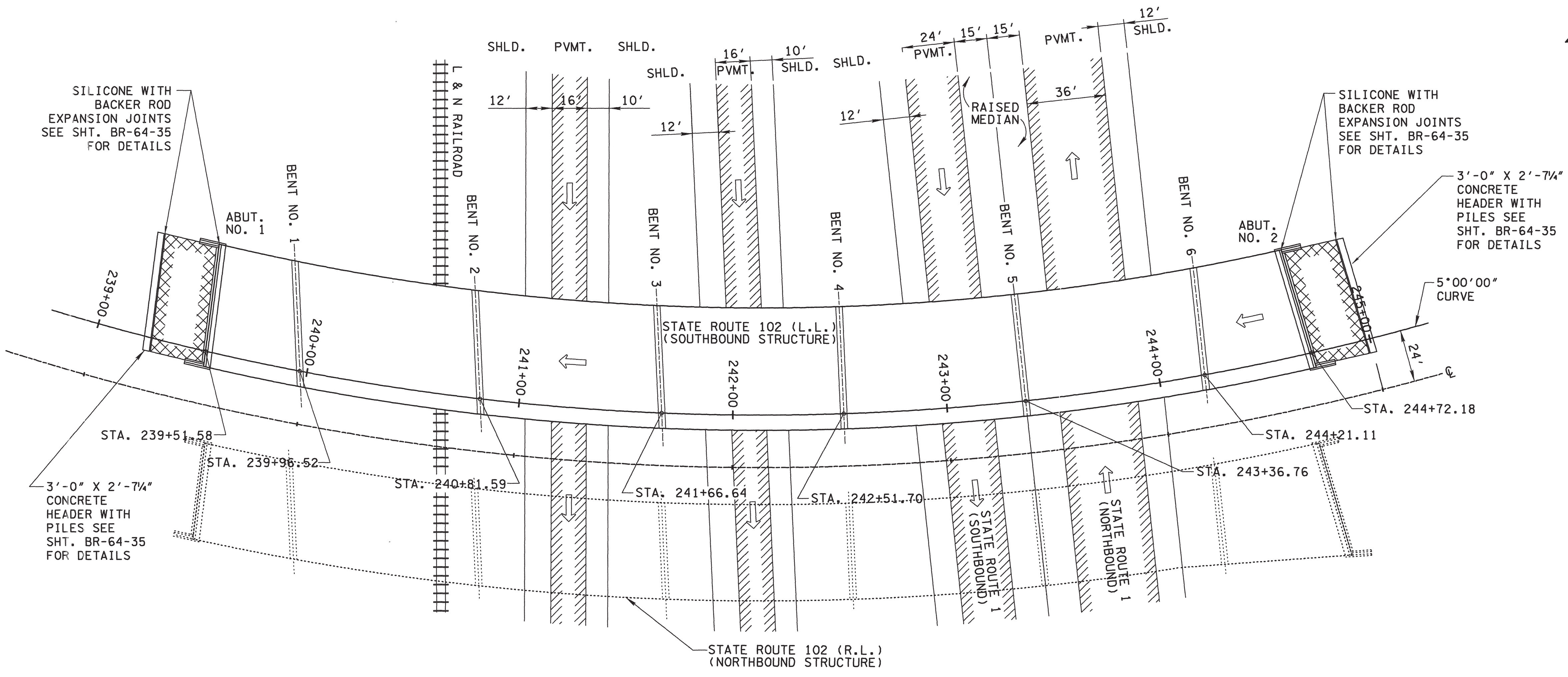
ELEVATION SCALE: 1" = 30'

- I DENOTES INTEGRAL (EXPANSION)
- F DENOTES FIXED
- DENOTES EXISTING SUPPORT CONDITION
- DENOTES PROPOSED SUPPORT CONDITION

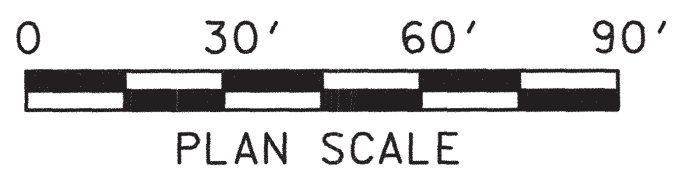
PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



- NOTES:
- FOR HYDRODEMOLITION AND PMC OVERLAY DETAILS, SEE SHTS. BR-64-49 AND BR-64-50.
  - FOR SPOT REPAIR LOCATIONS AND DETAILS, SEE SHTS. BR-64-52 AND BR-64-53.
  - FOR DETAILS OF EPOXY INJECTION FOR PRECAST DECK FORMS, SEE SHT. BR-64-51.
  - FOR A LIST OF BRIDGE DRAWINGS, STANDARD DRAWINGS, SPECIAL PROVISIONS AND SCOPE OF WORK SEE DRAWING NO. BR-64-31.



PLAN SCALE: 1" = 30'



DESIGNED BY JACOB WILLIAMS, P.E. DATE 11-02

DRAWN BY ANGIE MOORE DATE 11-02

SUPERVISED BY JACOB WILLIAMS, P.E. DATE 11-02

CHECKED BY JACOB WILLIAMS, P.E. DATE 11-02



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 LAYOUT OF BRIDGE NO. 1A  
 TO BE REPAIRED  
 BRIDGE NO. 75-SR102-10.34  
 (R.L. & L.L.)  
 SR-102 OVER SR-1  
 RUTHERFORD CO.  
 2003

## LIST OF BRIDGE DRAWINGS

DRAWING NO.	LAST REV. DATE	TITLE
BR-64-29		LAYOUT OF BRIDGE NO. 1 TO BE REPAIRED (BR. NO. 75-SR102-10.34 R.L. & L.L.)
BR-64-30		LAYOUT OF BRIDGE NO. 1A TO BE REPAIRED (BR. NO. 75-SR102-10.34 R.L. & L.L.)
BR-64-31		BRIDGE REFERENCE DRAWINGS
BR-64-20		ESTIMATED BRIDGE QUANTITIES
BR-64-21		BRIDGE GENERAL NOTES
BR-64-32		PHASING SCHEDULE - BRIDGE NO. 1 (BR. NO. 75-SR102-10.34 R.L.)
BR-64-33		PHASING SCHEDULE - BRIDGE NO. 1A (BR. NO. 75-SR102-10.34 L.L.)
BR-64-34		PAVEMENT AT BRIDGE ENDS (BR. NO. 75-SR102-10.34 R.L.)
BR-64-34A		PAVEMENT AT BRIDGE ENDS (BR. NO. 75-SR102-10.34 L.L.)

## BRIDGE APPURTENANCES

DRAWING NO.	LAST REV. DATE	TITLE
STD-I-I	7-31-00	BRIDGE RAILING CONCRETE PARAPET - 1990
STD-6-I	5-21-99	SEISMIC DETAILS-1990
STD-6-2	11-07-94	SEISMIC DETAILS
STD-9-I	12-19-94	REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS
STD-10-I	5-11-92	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS - 1971
SBR-2-I31	1-22-02	DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS TO EXISTING CONCRETE SLOPE FACE ENDPOST - 1989
SBR-2-I32	1-04-96	DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS TO EXISTING CONCRETE SLOPE FACE ENDPOST - 1989

## LIST OF BRIDGE REFERENCE DRAWINGS

DRAWING NO.	LAST REV. DATE	TITLE
<del>M-105-21</del>	<del>8-16-82</del>	<del>LAYOUT OF BRIDGE NO. 1A</del>
M-105-22	10-14-82	GENERAL NOTES & ESTIMATED QUANTITIES
M-105-23		FOUNDATION DATA SHEET
M-105-24		FOUNDATION DATA SHEET
M-105-25	3-16-82	LAYOUT OF SUBSTRUCTURE
M-105-26	2-12-82	SLAB ELEVATION
M-105-27	2-12-82	SUPERSTRUCTURE DETAILS
M-105-28	10-14-82	SUPERSTRUCTURE DETAILS
M-105-29	10-14-82	SUPERSTRUCTURE DETAILS
M-105-30	10-14-82	SUPERSTRUCTURE DETAILS
M-105-31	2-12-82	PRESTRESSED BEAM DETAILS
M-105-32	2-12-82	PRESTRESSED BEAM DETAILS
M-105-33	2-12-82	BENT DETAILS
M-105-34	5-16-82	BENT DETAILS
M-105-35	2-12-82	BENT DETAILS
M-105-36	3-16-82	BENT FOOTING DETAILS
M-105-37	3-16-82	BENT FOOTING DETAILS
M-105-38	3-16-82	ABUTMENT No. 1 DETAILS
M-105-39	3-16-82	ABUTMENT No. 2 DETAILS
M-105-40	10-14-82	BILL OF STEEL
M-105-40A	8-16-82	BILL OF STEEL
M-105-40B	10-14-82	BILL OF STEEL
M-105-41	3-16-82	BILL OF STEEL

## LIST OF BRIDGE REFERENCE DRAWINGS

DRAWING NO.	LAST REV. DATE	TITLE
M-105-42	3-16-82	LAYOUT OF BRIDGE No. 1
M-105-43	3-16-82	GENERAL NOTES & ESTIMATED QUANTITIES
M-105-44		FOUNDATION DATA SHEET
M-105-45		FOUNDATION DATA SHEET
M-105-46	3-16-82	LAYOUT OF SUBSTRUCTURE
M-105-47	2-12-82	SLAB ELEVATION
M-105-48	2-12-82	SUPERSTRUCTURE DETAILS
M-105-49	2-12-82	SUPERSTRUCTURE DETAILS
M-105-50	2-12-82	SUPERSTRUCTURE DETAILS
M-105-51	2-12-82	SUPERSTRUCTURE DETAILS
M-105-52	2-12-82	PRESTRESSED BEAM DETAILS
M-105-53	2-12-82	PRESTRESSED BEAM DETAILS
M-105-54	3-16-82	BENT DETAILS
M-105-55	2-12-82	BENT DETAILS
M-105-56	2-12-82	BENT DETAILS
M-105-57	3-16-82	BENT FOOTING DETAILS
M-105-58	3-16-82	BENT FOOTING DETAILS
M-105-59	2-12-82	ABUTMENT No. 1 DETAILS
M-105-60	2-12-82	ABUTMENT No. 2 DETAILS
M-105-61	2-12-82	BILL OF STEEL
M-105-61A	2-12-82	BILL OF STEEL
M-105-62	2-12-82	BILL OF STEEL

## LIST OF SPECIAL PROVISIONS

DRAWING NO.	LAST REV. DATE	TITLE
604R	**	BRIDGE DECK RIDEABILITY
105A	**	APPROVAL OF SHOP DRAWINGS
108B	**	PROJECT COMPLETION & INCENTIVE/DISINCENTIVE
604H	**	BRIDGE DECK PREPARATION USING HYDRODEMOLITION
604CR	**	REPAIR OF BRIDGE DECK CRACKS
619A	**	POLYMER MODIFIED CONCRETE (PMC) OVERLAY

\*\* DENOTES CURRENT REVISION DATE AS PER CONTRACT DOCUMENTS

PROJECT NO.	YEAR	SHEET NO.
75014-4238-04	2003	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

## SCOPE OF WORK

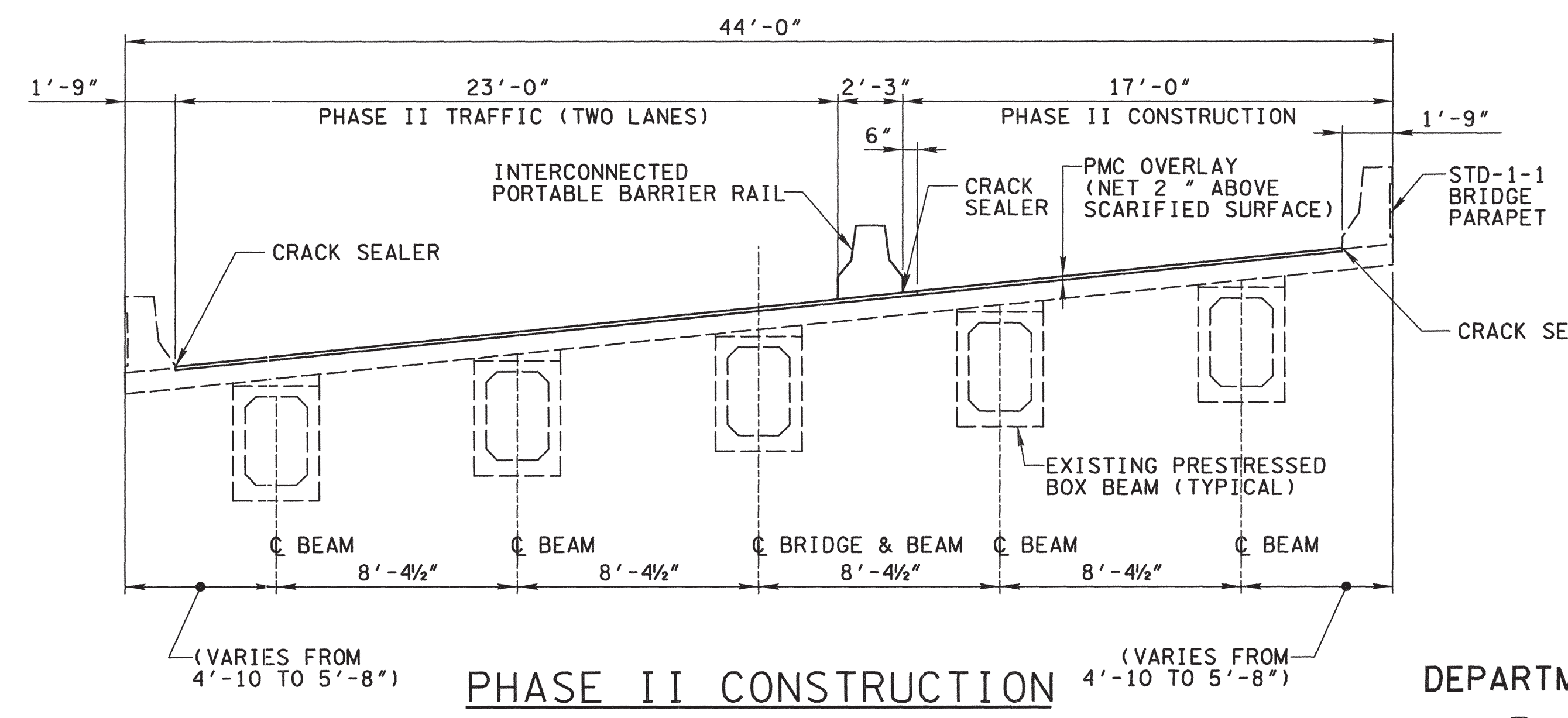
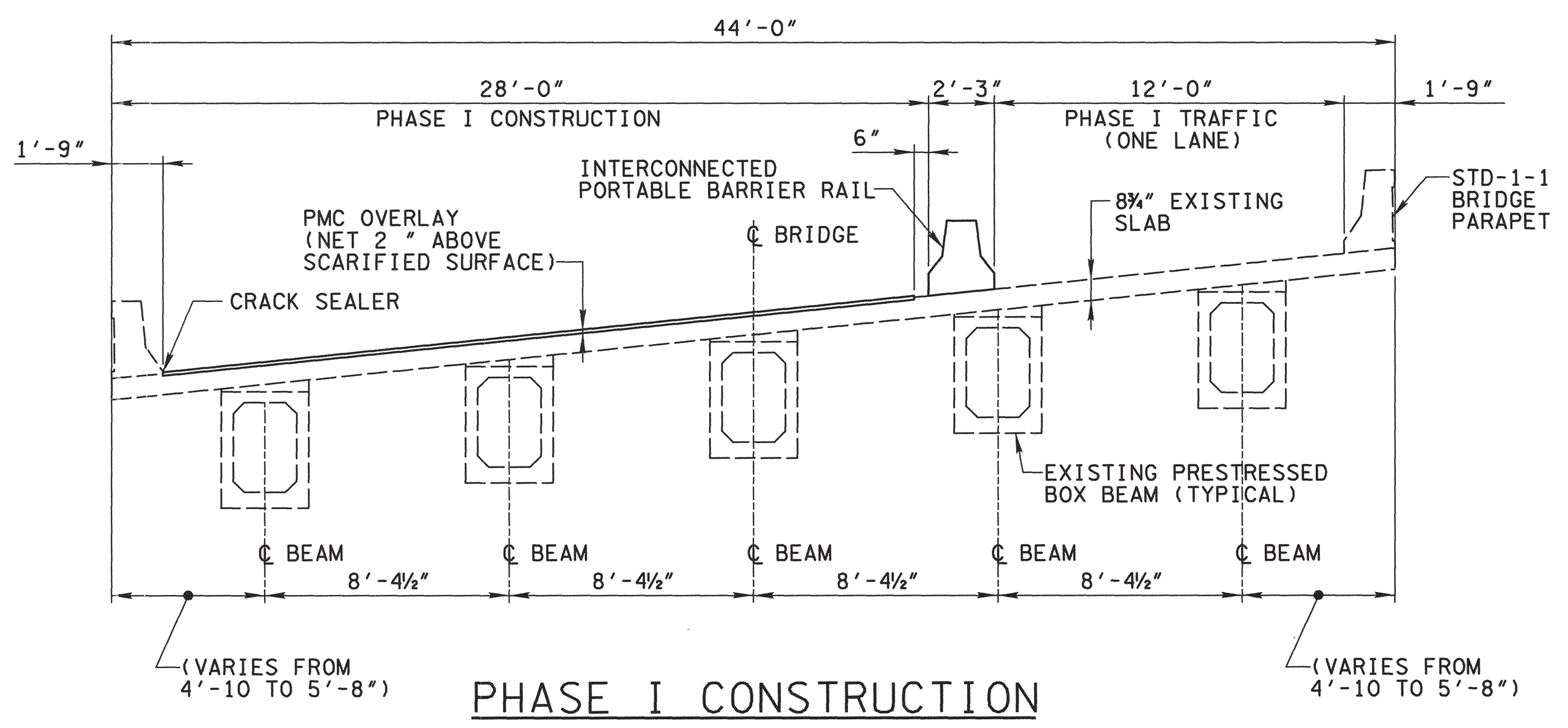
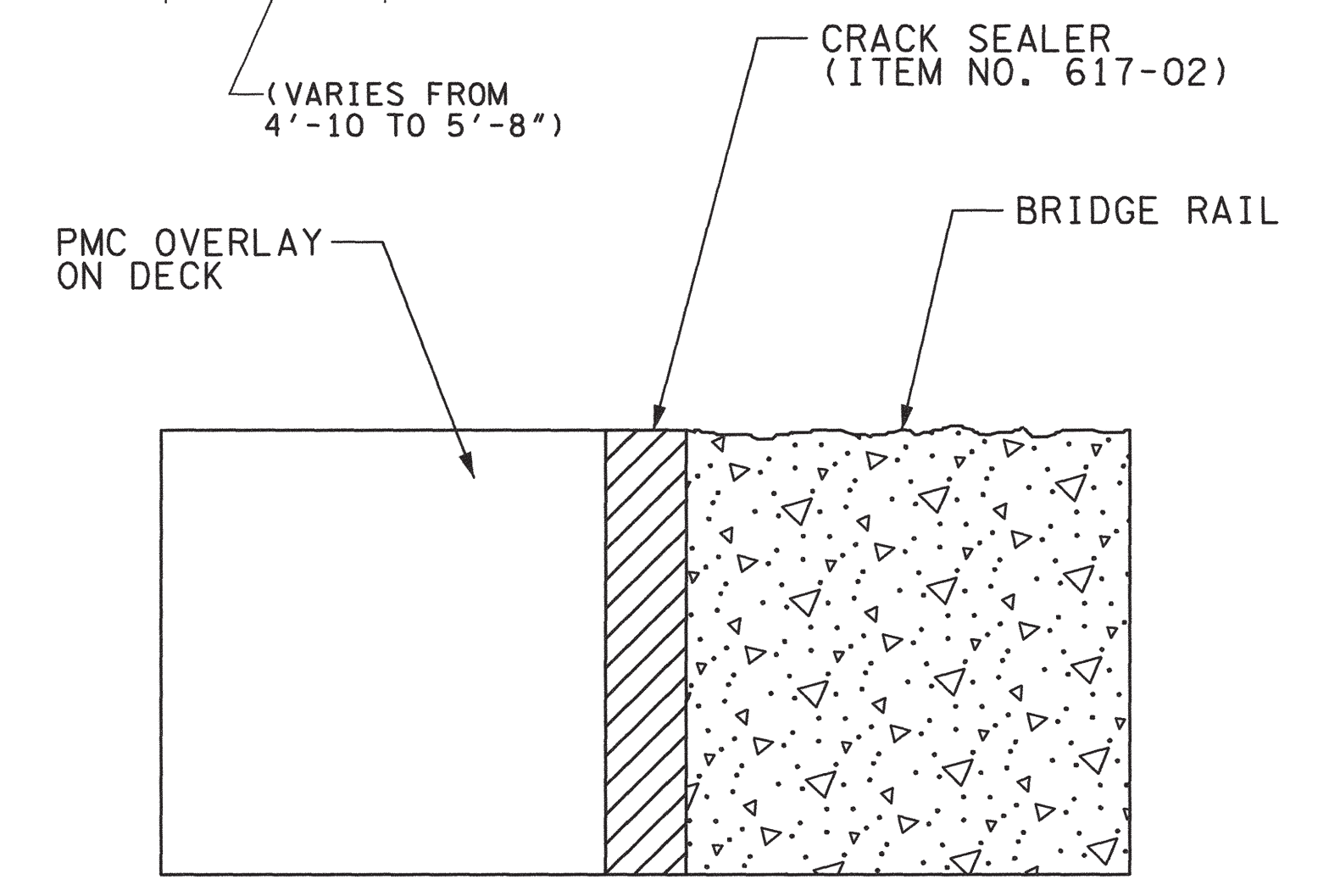
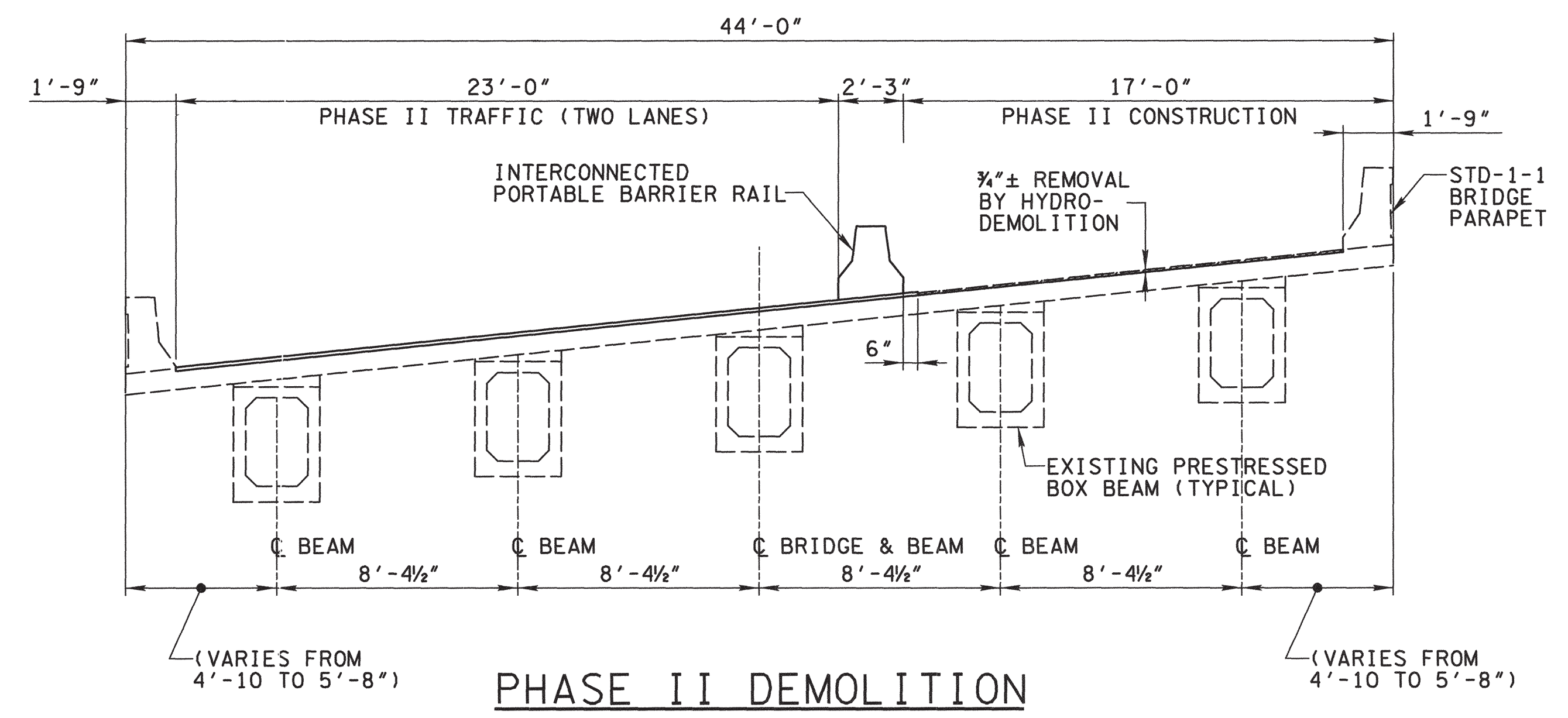
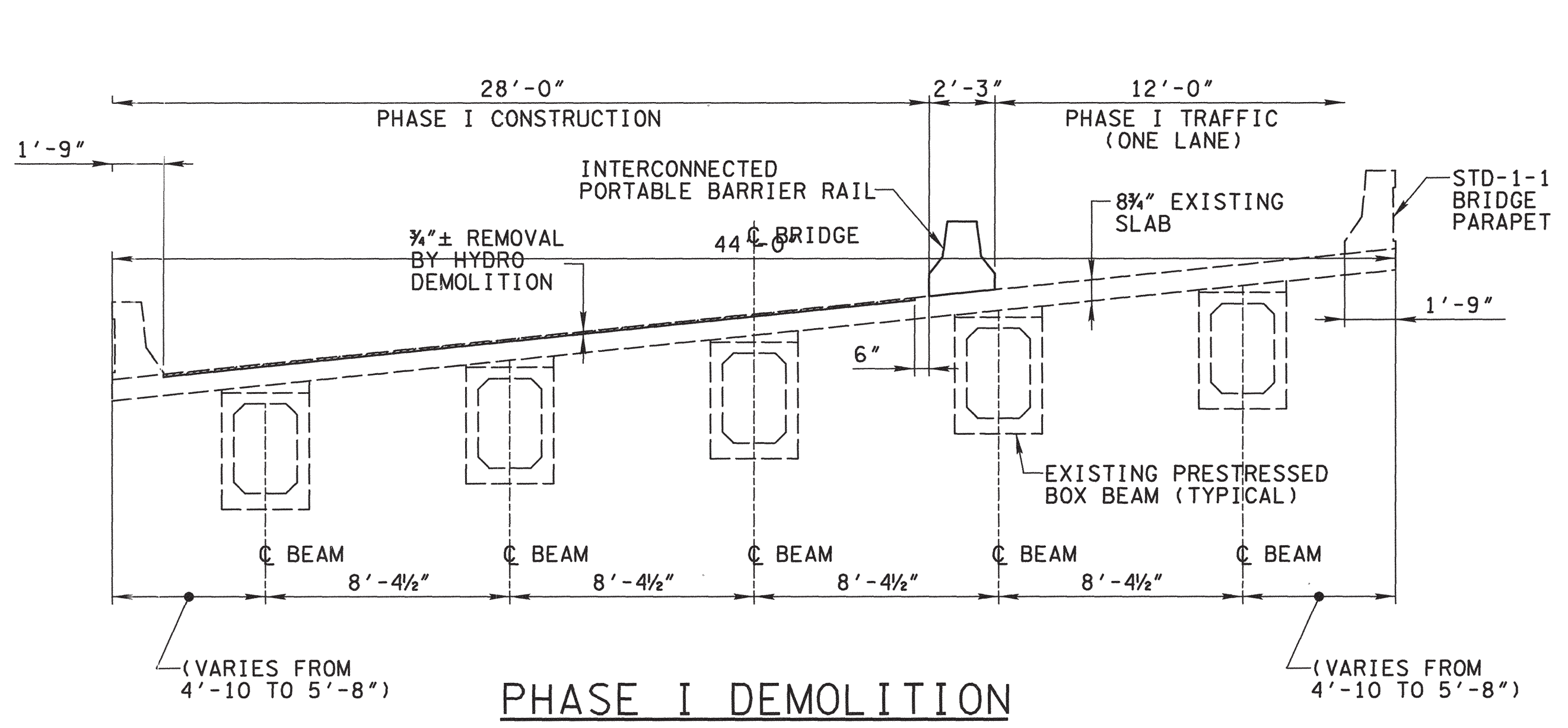
- PERFORM SPOT REPAIRS ON THE ABUTMENTS AND SUPPORT BENTS.
- EPOXY INJECT CRACKS IN PRECAST DECK FORMS ON THE UNDERSIDE OF THE SUPERSTRUCTURE ON BOTH BRIDGES. FOR DETAILS OF REPAIR, SEE DETAILS ON SHT. BR-64-51.
- SCARIFY BRIDGE DECK AND PAVEMENT AT BRIDGE ENDS  $\frac{3}{4}$ " BY HYDRODEMOLITION. PLACE A PMC OVERLAY OVER THE SCARIFIED SECTIONS. FILL IN AREAS OF PARTIAL DEPTH REPAIR THAT DEVELOP WITH PMC. THE SCARIFICATION AND OVERLAY SHALL COVER THE ENTIRE LENGTH OF THE BRIDGES, INCLUDING THE PAVEMENT AT BRIDGE ENDS. PROVIDE BLOCK OUTS TO MAINTAIN ANY EXISTING DECK DRAINS. PROVIDE PAVEMENT TRANSITION TO MATCH NEW DECK ELEVATION.
- REPLACE THE EXISTING GUARDRAIL WITH APPROVED TDOT STANDARD GUARDRAIL SYSTEMS. STABILIZE THE SHOULDERS ON THE APPROACHES FOR THE NEW GUARDRAIL. PROVIDE DETAILS FOR LIMITS OF EROSION CONTROL.
- CLEAN AND REPAIR THE EXPANSION JOINTS AT BOTH ABUTMENTS ON BOTH BRIDGES. INSTALL EXPANSION JOINTS AT LOCATIONS SPECIFIED ON SHT. BR-64-34 AND BR-64-35.
- INSTALL 3' X 2'-7/4" HEADERS WITH STEEL PILES AT ABUTMENT #1 R.L. & L.L. AND ABUTMENT #2 L.L. INSTALL 1' X 10' CONCRETE SLAB AT ABUTMENT #2 R.L. DOWEL THESE HEADERS INTO EXISTING CONCRETE PAVEMENT.
- PERFORM A PMC TRANSITION AT THE ABUTMENT #2 END OF THE R.L. BRIDGE ACCORDING TO DETAILS ON SHT. BR-64-34A. PERFORM ASPHALT TRANSITIONS AT LOCATIONS SHOWN ON BR-64-34 AND BR-64-35.
- TEXTURE FINISH THE EXISTING BRIDGE PARAPETS WITHIN LIMITS SPECIFIED ON SHT. 2A.
- INSTALL TRAFFIC CONTROL TO PROVIDE ONE LANE OF TRAFFIC FOR THE RIGHT LANE BRIDGE AND LEFT LANE BRIDGE DURING CONSTRUCTION. PHASE TRAFFIC CONTROL TO PERFORM BRIDGE REPAIRS FOR THE RIGHT LANE BRIDGE FIRST, AND THEN PHASE TRAFFIC CONTROL TO FINISH CONSTRUCTION WITH THE LEFT LANE BRIDGE.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BRIDGE REFERENCE  
DRAWINGS  
BRIDGE NO. 75-SR102-10.34  
(R.L. & L.L.)  
SR-102 OVER SR-1  
RUTHERFORD CO.  
2003

DESIGNED BY JACOB WILLIAMS, P.E. DATE 11-02  
DRAWN BY BEN BYARS, E.I. DATE 11-02  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 11-02  
CHECKED BY JACOB WILLIAMS, P.E. DATE 11-02

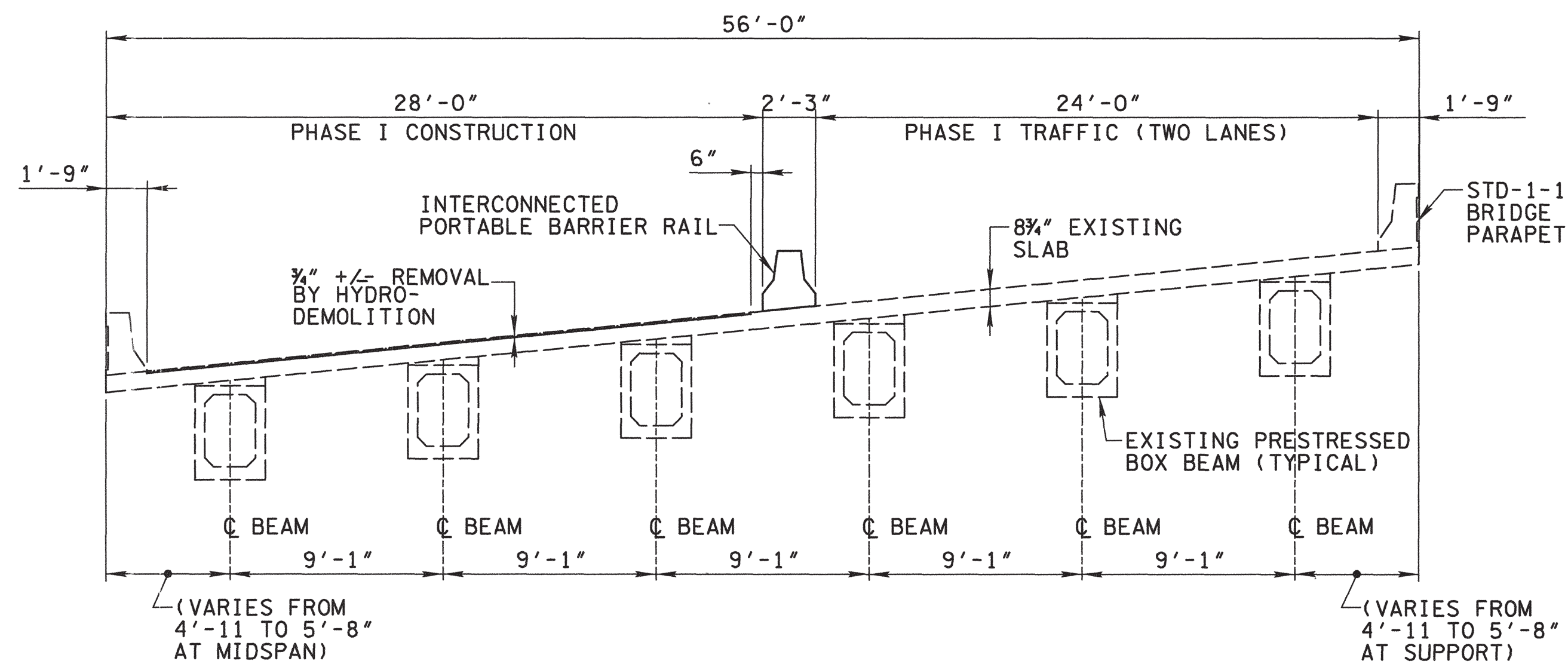
PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



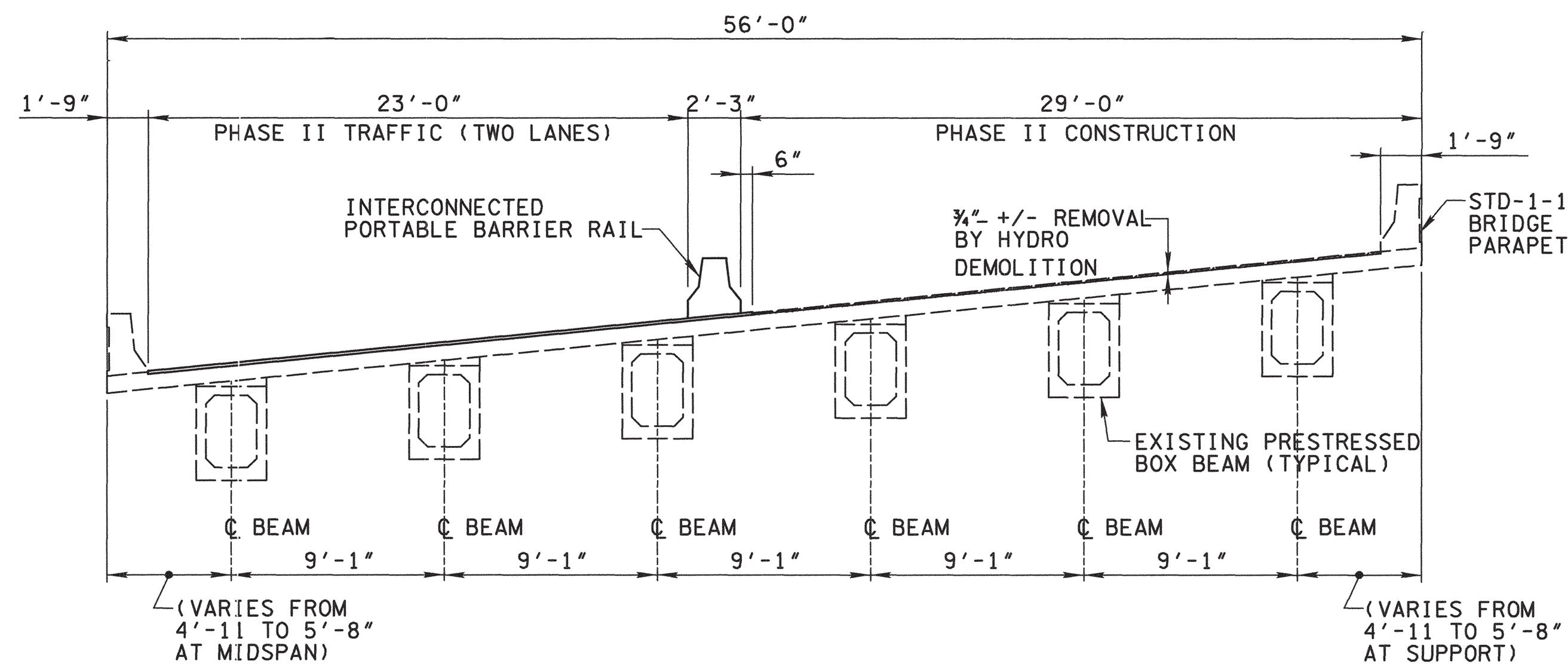
DESIGNED BY JACOB WILLIAMS, P.E. DATE 11-02  
 DRAWN BY ANGIE MOORE DATE 11-02  
 SUPERVISED BY JACOB WILLIAMS, P.E. DATE 11-02  
 CHECKED BY JACOB WILLIAMS, P.E. DATE 11-02

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 PHASING SCHEDULE  
 BRIDGE NO. 1  
 BRIDGE NO. 75-SR102-10.34  
 (R.L.)  
 SR-102 OVER SR-1  
 RUTHERFORD CO.  
 2003

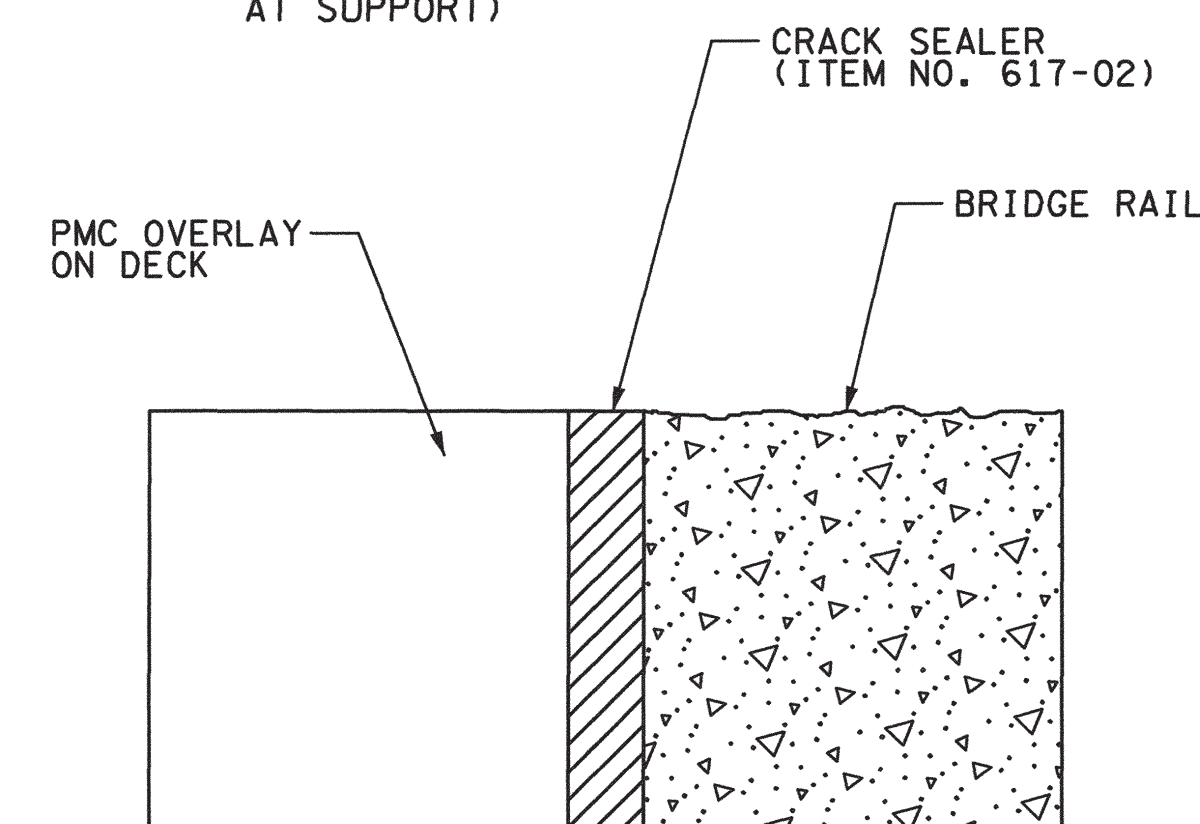
PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



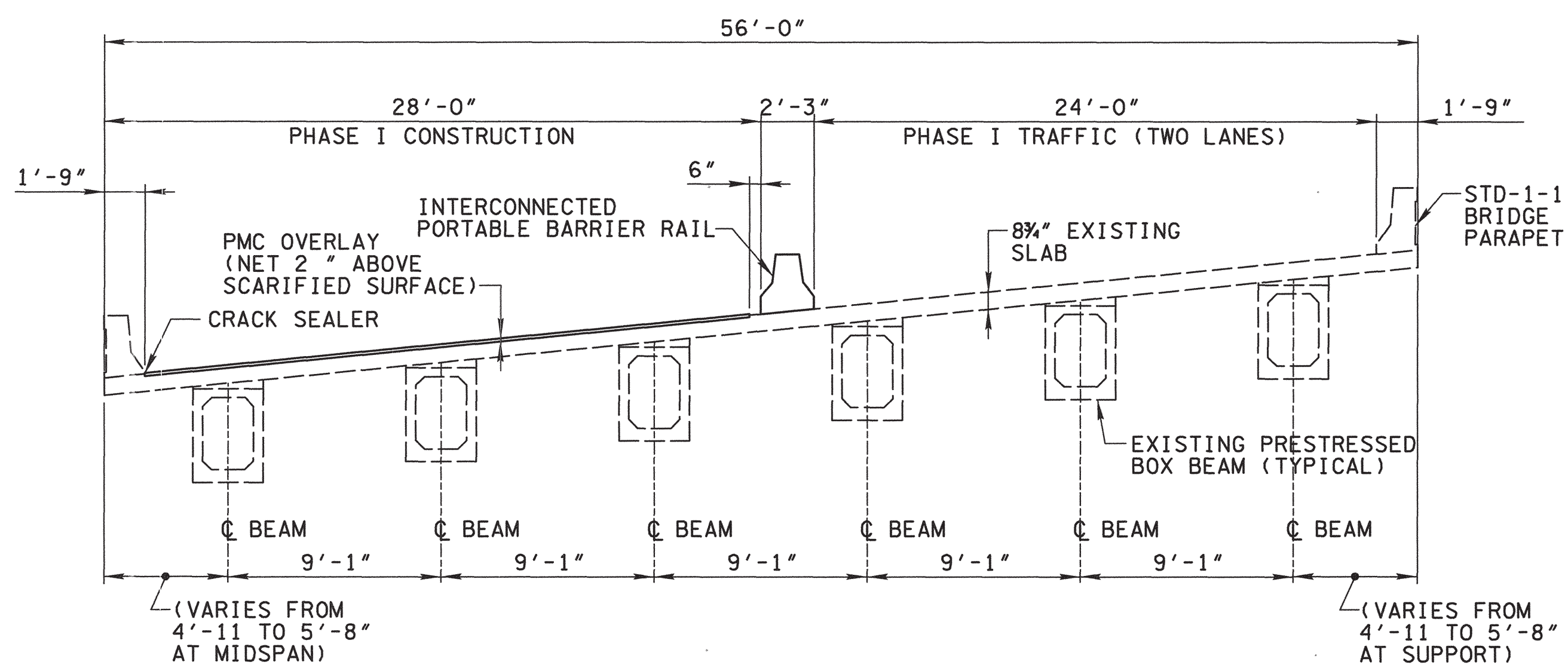
PHASE I DEMOLITION



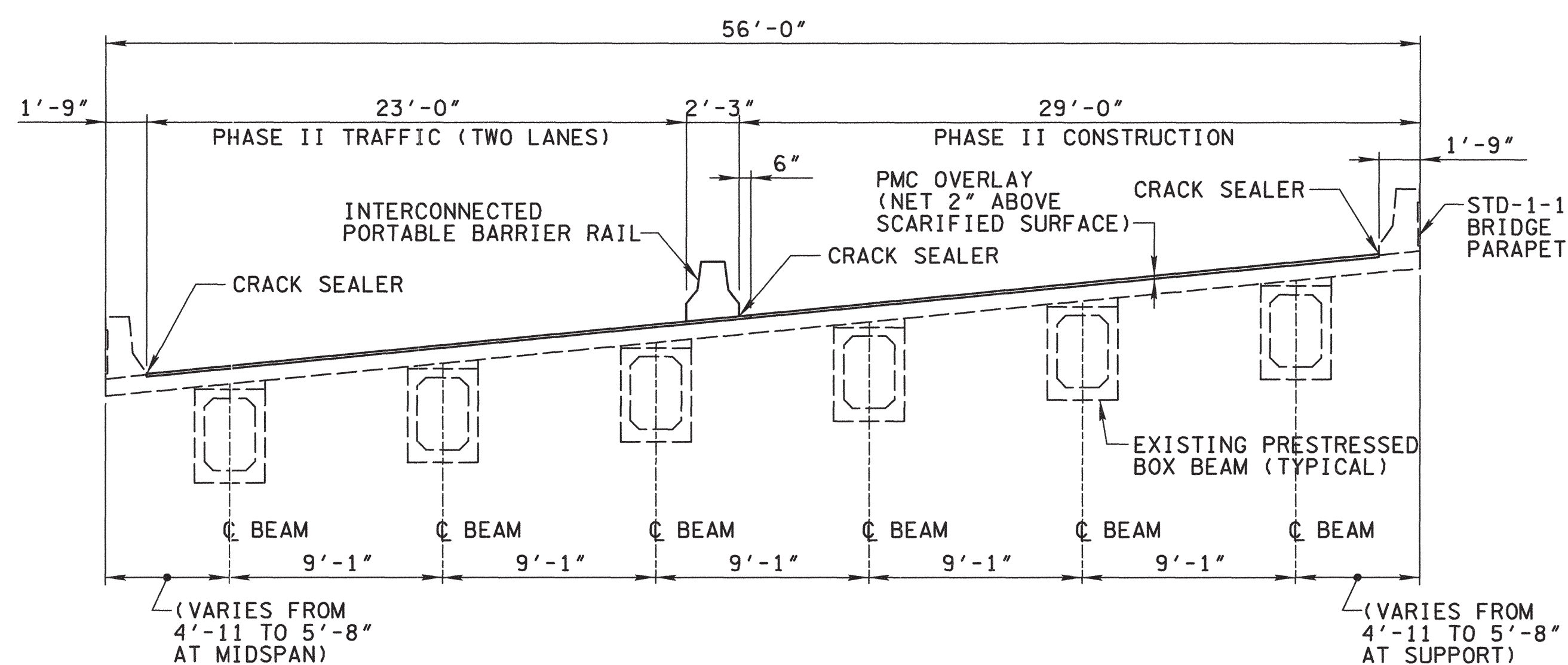
PHASE II DEMOLITION



DETAIL OF CRACK SEALER



PHASE I CONSTRUCTION



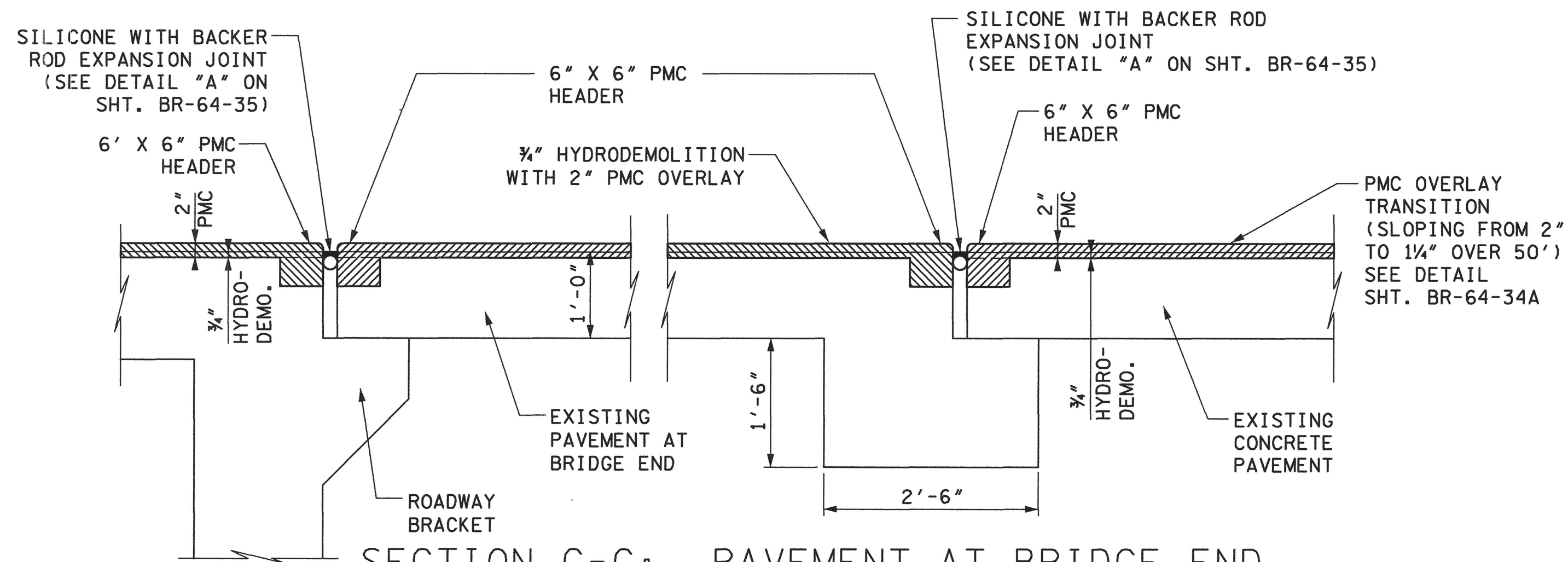
PHASE II CONSTRUCTION



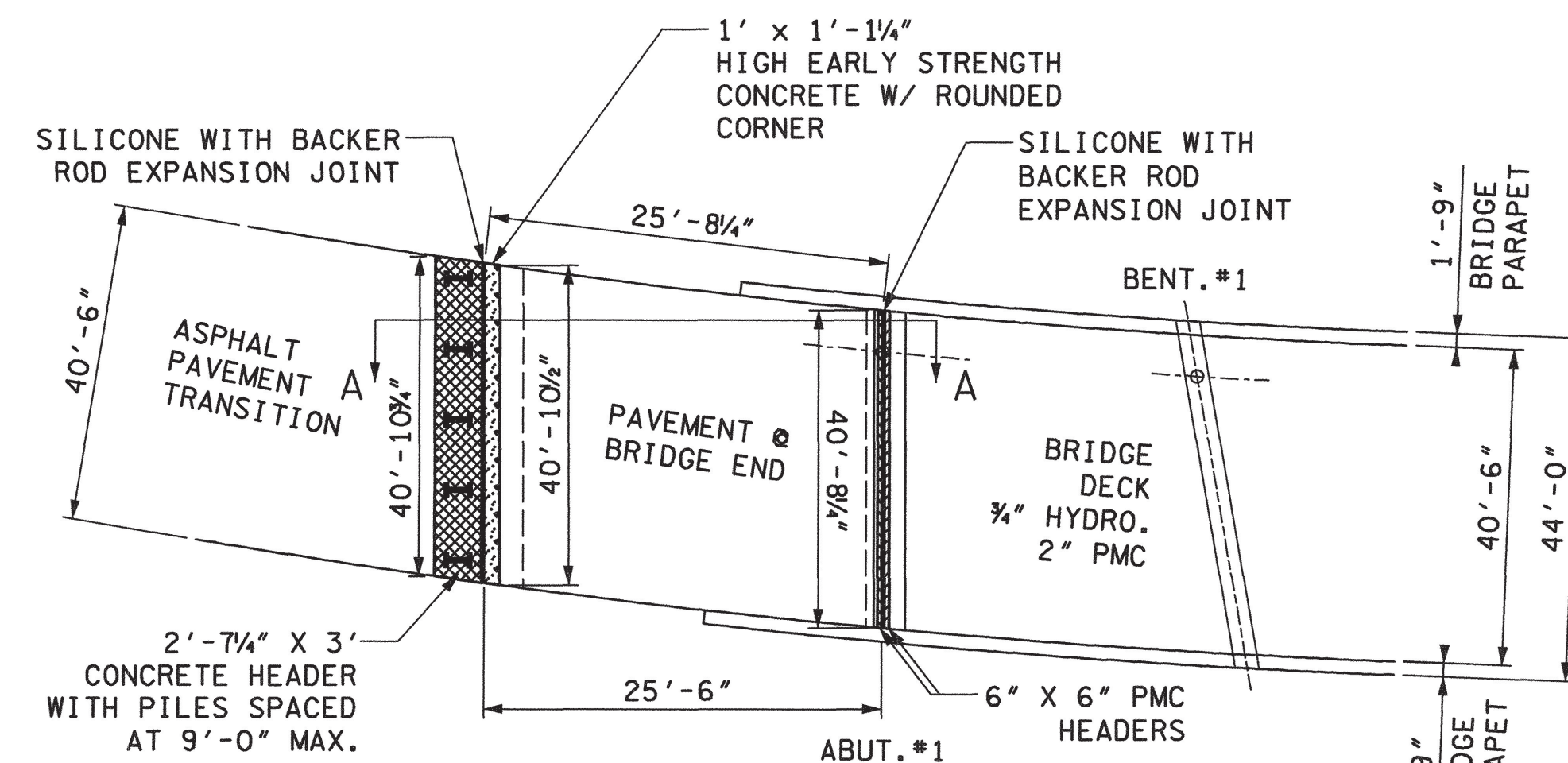
STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 PHASING SCHEDULE  
 BRIDGE NO. 1A  
 BRIDGE NO. 75-SR102-10.34  
 (L.L.)  
 SR-102 OVER SR-1  
 RUTHERFORD CO.  
 2003

DESIGNED BY JACOB WILLIAMS, P.E. DATE II-02  
 DRAWN BY ANGIE MOORE DATE II-02  
 SUPERVISED BY JACOB WILLIAMS, P.E. DATE II-02  
 CHECKED BY JACOB WILLIAMS, P.E. DATE II-02

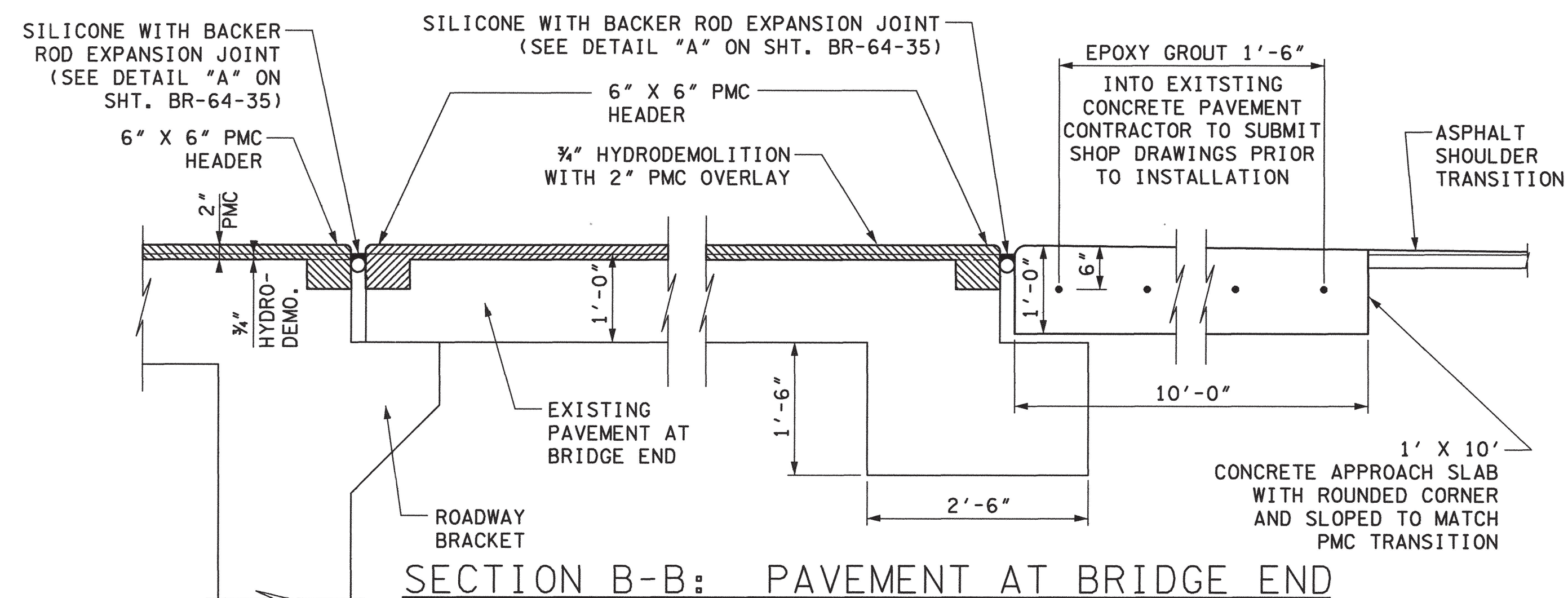
PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



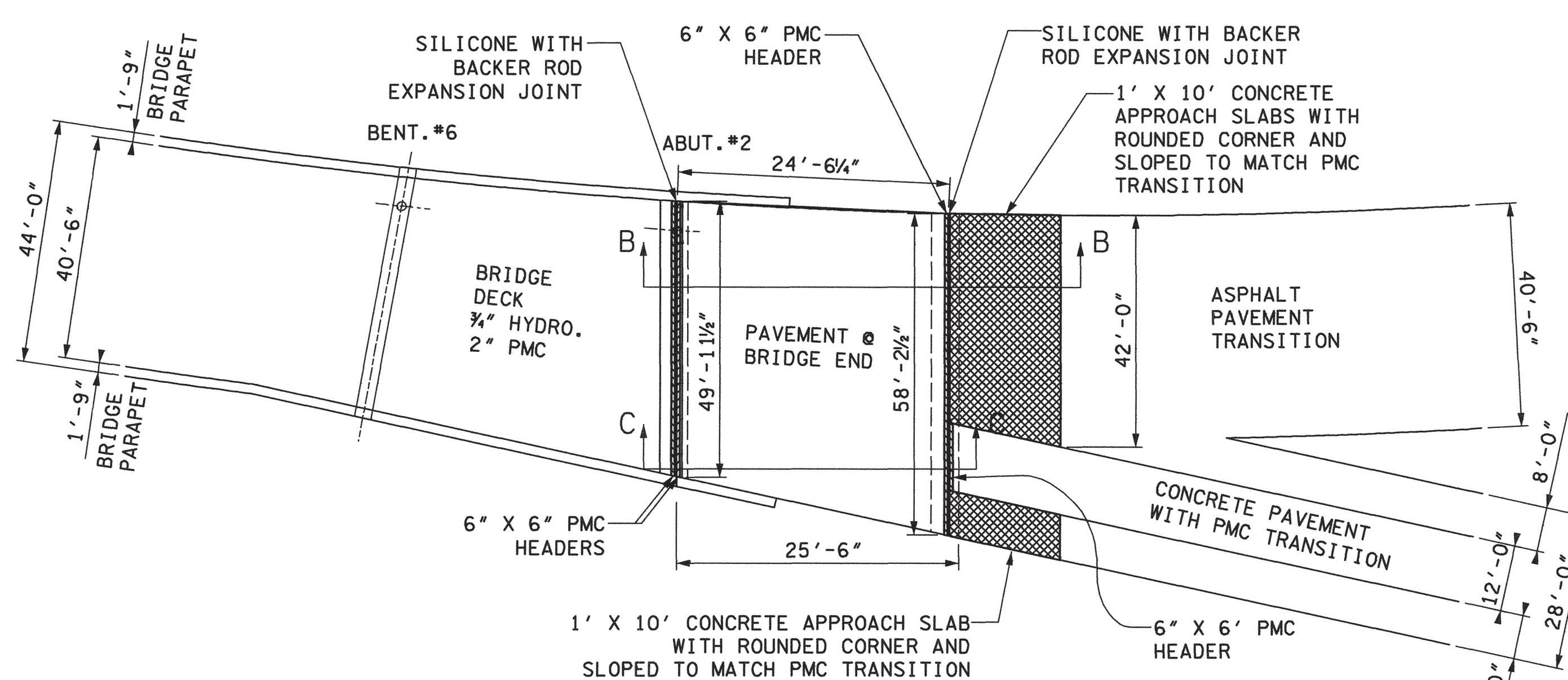
SECTION C-C: PAVEMENT AT BRIDGE END TRANSITION TO CONCRETE PAVEMENT



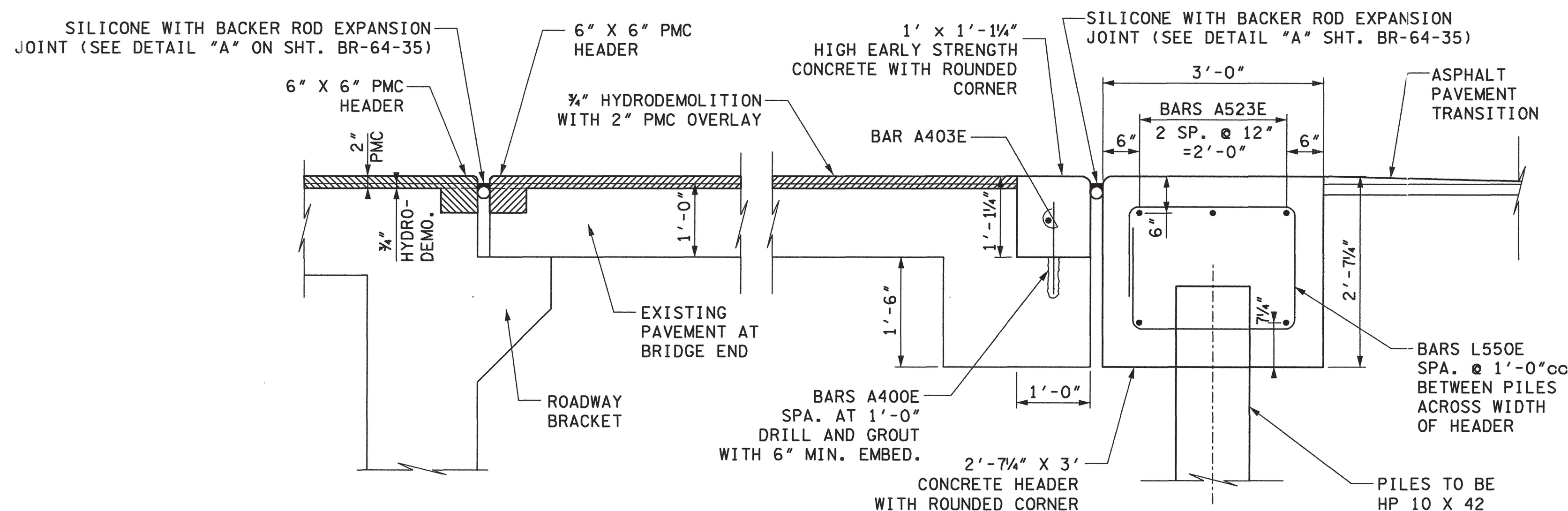
PLAN VIEW - PAVEMENT AT BRIDGE END ABUTMENT #1



SECTION B-B: PAVEMENT AT BRIDGE END TRANSITION TO ASPHALT SHOULDER



PLAN VIEW - PAVEMENT AT BRIDGE END ABUTMENT #2



SECTION A-A: PAVEMENT AT BRIDGE END TRANSITION TO ASPHALT PAVEMENT

NOTES:

- COST OF BACKER ROD, NEW JOINT SEALER, SAW CUTTING ANY MISCELLANEOUS MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF THE NEW EXPANSION DEVICE TO BE INCLUDED UNDER ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS, L.F.
- THICKNESS OF PMC OVER THE PAVEMENT AT BRIDGE ENDS MAY VARY DUE TO SETTLEMENT OF BRIDGE END.
- COST OF LABOR AND MATERIALS REQUIRED FOR THE HIGH EARLY STRENGTH CONCRETE FOR THE HEADERS AND FILLING THE LEDGES AT THE PAVEMENTS AT BRIDGE ENDS SHALL BE INCLUDED IN ITEM NO. 604-03.01.
- COST OF REINFORCEMENT REQUIRED FOR THE 3'-0" X 2'-7/4" CONCRETE HEADERS TO BE INCLUDED IN ITEM NO. 604-10.18, REINFORCING STEEL, LBS. REINFORCEMENT AND DRILLING AND GROUTING REQUIRED FOR THE LEDGES ON THE PAVEMENT AT BRIDGE END ALSO TO BE INCLUDED ITEM NO. 604-10.18.
- COST OF LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION OF NEW 10-FOOT CONCRETE PAVEMENT SECTIONS SHALL BE INCLUDED IN ITEM NO. 604-03.01, CLASS "A" CONCRETE (BRIDGES), C.Y. EXCAVATION REQUIRED FOR THE INSTALLATION OF THESE SECTIONS IS TO BE INCLUDED IN ITEM NO. 204-11, BRIDGE EXCAVATION (UNCLASSIFIED), C.Y.
- COST OF PILES AND INSTALLATION OF PILES TO BE INCLUDED IN ITEM NO. 606-02.03.

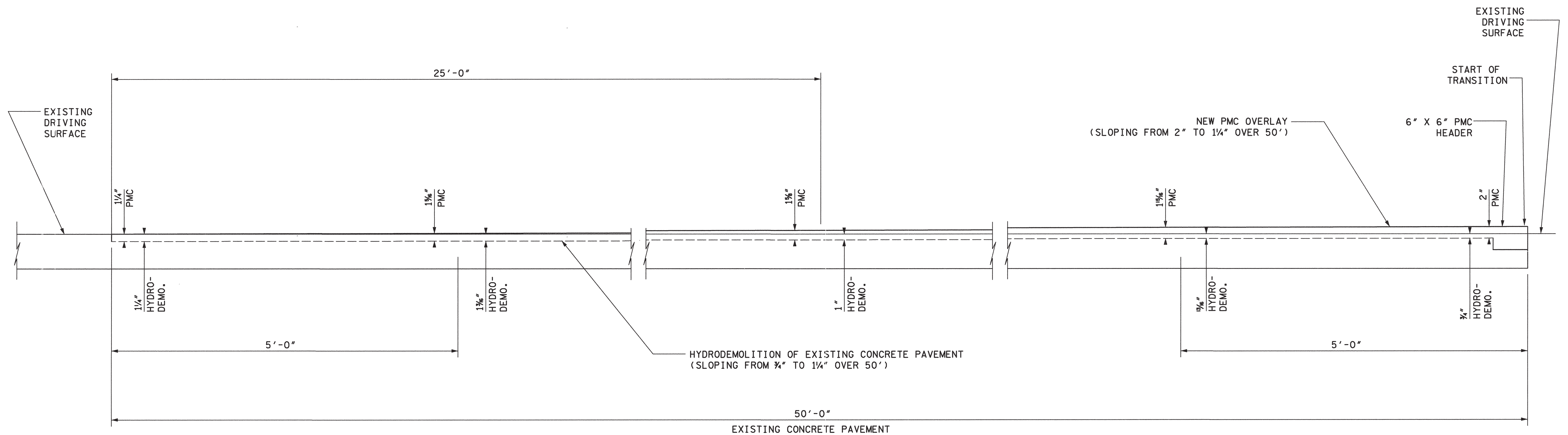


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
RIGHT LANE  
BRIDGE END REPAIR DETAILS  
BRIDGE NO. 75-SR102-10.34  
(R.L.)  
SR-102 OVER SR-1  
RUTHERFORD CO.  
2003

DESIGNED BY BEN BYARS, E.I. DATE 11-02  
DRAWN BY BEN BYARS, E.I. DATE 11-02  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 11-02  
CHECKED BY JACOB WILLIAMS, P.E. DATE 11-02

PROJECT NO.	YEAR	SHEET NO.
75014-4238-04	2003	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



PMC TRANSITION ON CONCRETE PAVEMENT

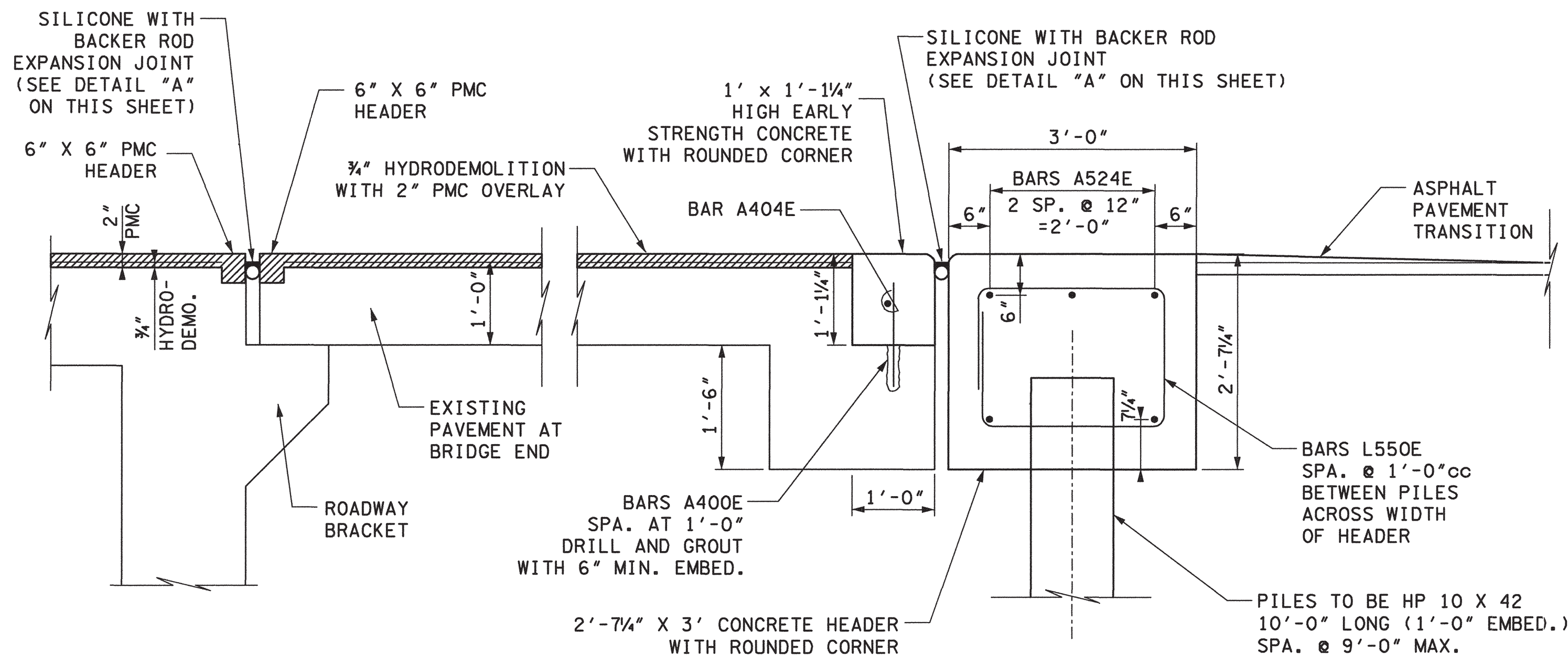
NOTE: COST REQUIRED FOR HYDRODEMOLITION TO BE INCLUDED IN ITEM NO. 604-10.20, HYDRODEMOLITION, S.Y. COST REQUIRED FOR PMC NECESSARY TO BE INCLUDED IN ITEM NO. 69-01, BRIDGE DECK OVERLAY (PMC), S.Y.



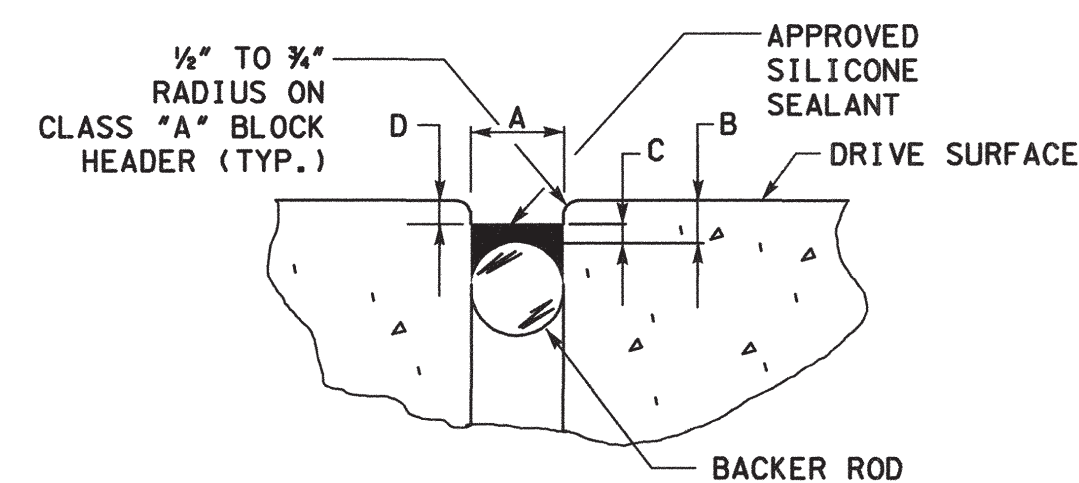
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
PAVEMENT TRANSITION  
BRIDGE NO. 75-SR102-10.34  
(R.L.)  
SR-102 OVER SR-1  
RUTHERFORD CO.  
2003

DESIGNED BY BEN BYARS, E.J. DATE II-02  
DRAWN BY BEN BYARS, E.J. DATE II-02  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE II-02  
CHECKED BY JACOB WILLIAMS, P.E. DATE II-02

PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



TYPICAL SECTION @ PAVEMENT AT BRIDGE END



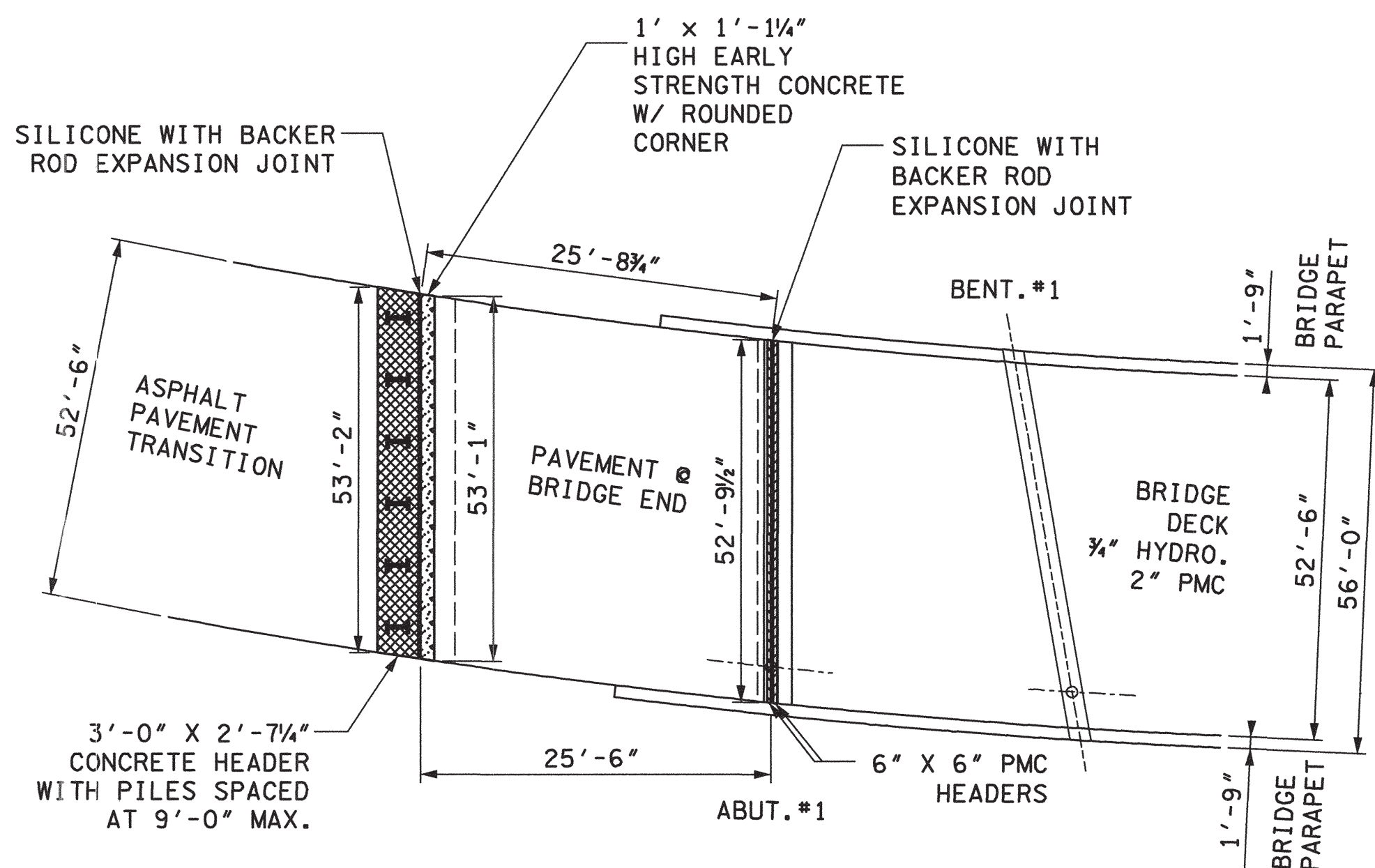
A CONSTRUCTED AT 2 INCHES AT TIME OF SEALING  
 B DISTANCE FROM TOP OF BACKER ROD TO DRIVE SURFACE 1 1/4\"/>

DETAIL "A"

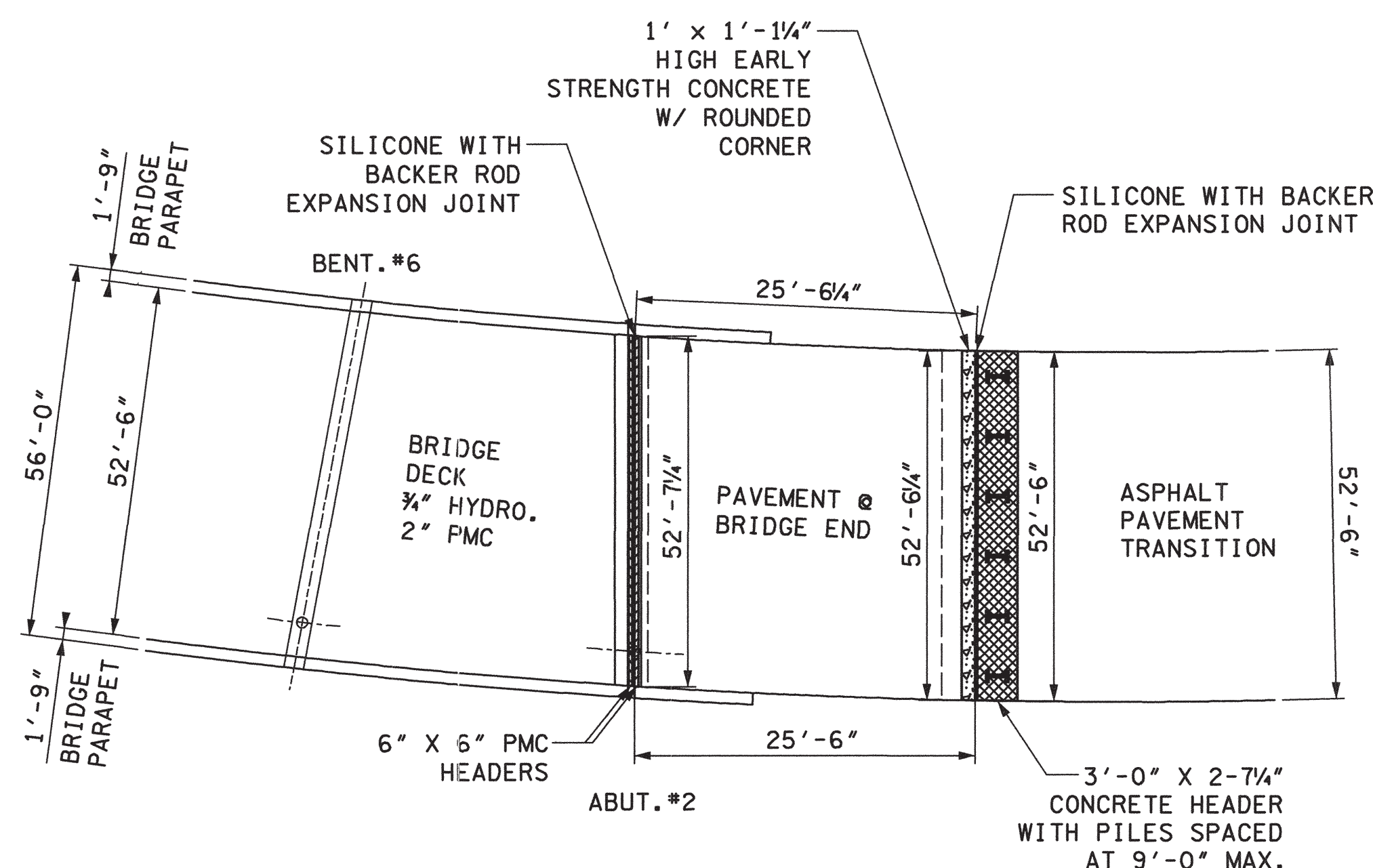
EXPANSION JOINT DIAGRAM (SHOWING JOINT BETWEEN A CONCRETE HEADER ON A PAVEMENT AT BRIDGE END AND A CONCRETE HEADER BEFORE PAVEMENT TRANSITION)

NOTES:

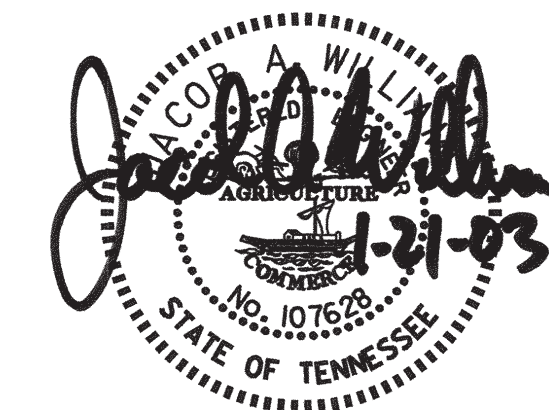
- COST OF BACKER ROD, NEW JOINT SEALER, SAW CUTTING ANY MISCELLANEOUS MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF THE NEW EXPANSION DEVICE TO BE INCLUDED UNDER ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS, L.F.
- THICKNESS OF PMC OVER THE PAVEMENT AT BRIDGE ENDS MAY VARY DUE TO SETTLEMENT OF BRIDGE END.
- COST OF LABOR AND MATERIALS REQUIRED FOR THE HIGH EARLY STRENGTH CONCRETE FOR THE HEADERS AND FILLING THE LEDGES AT THE PAVEMENTS AT BRIDGE ENDS SHALL BE INCLUDED IN ITEM NO. 604-03.01.
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- COST OF PILES AND INSTALLATION OF PILES TO BE INCLUDED IN ITEM NO. 606-02.03.



PLAN VIEW - PAVEMENT AT BRIDGE END ABUTMENT #1



PLAN VIEW - PAVEMENT AT BRIDGE END ABUTMENT #2

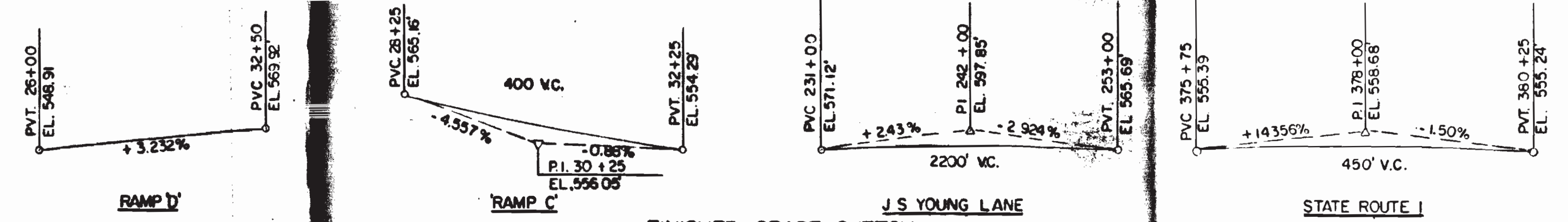


STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 LEFT LANE  
 BRIDGE END REPAIR DETAILS  
 BRIDGE NO. 75-SR102-10.34  
 (L.L.)  
 SR-102 OVER SR-1  
 RUTHERFORD CO.  
 2003

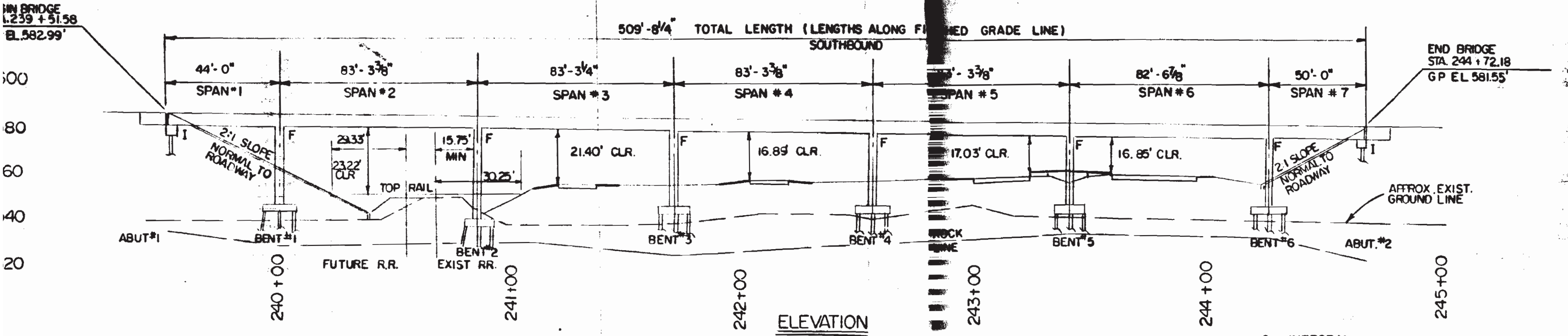
DESIGNED BY BEN BYARS, E.I. DATE II-02  
 DRAWN BY BEN BYARS, E.I. DATE II-02  
 SUPERVISED BY JACOB WILLIAMS, P.E. DATE II-02  
 CHECKED BY JACOB WILLIAMS, P.E. DATE II-02

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50(6)	81	27	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	MSB	ADDED CRITICAL CLEARANCES
2	3-16-82	MSB	CHANGED BEARING BENT NO 5
3	10-14-82	GSH	ADDED DVA. M-105-4DB

NOTE: THE FILLS AT THE BENT AND ABUTMENT FOUNDATIONS SHALL BE IN PLACE AND THOROUGHLY COMPACTED BEFORE ANY FOUNDATION PILES ARE DRIVEN



FINISHED GRADE SKETCH  
NOTE ALL ELEVATIONS ARE BASED ON FINISHED GRADES



I = INTEGRAL  
F = FIXED

LIST OF DRAWINGS

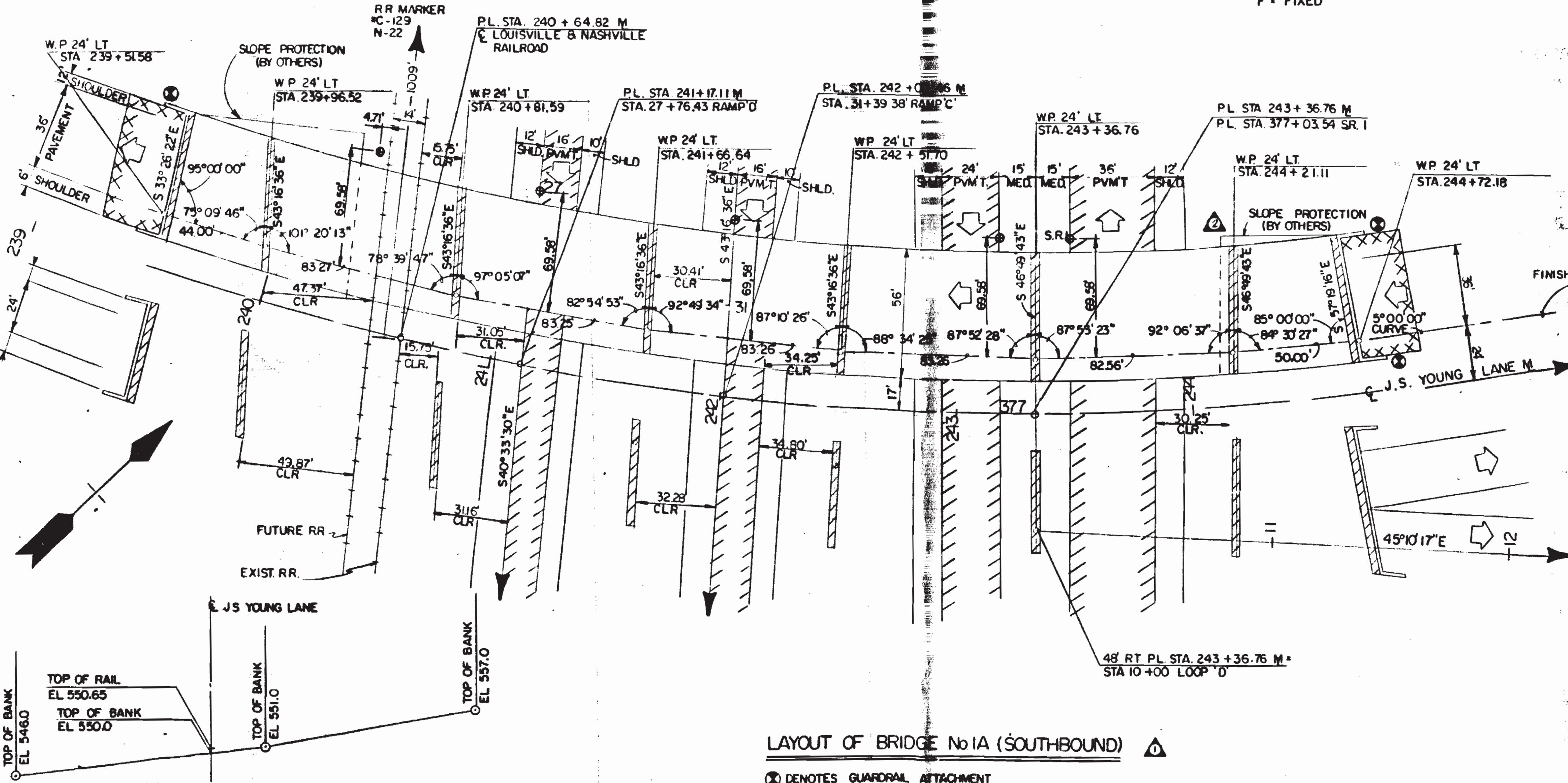
DWG. No.	LAST REV. DATE
LAYOUT OF BRIDGE No. 1-A	M-105-21
GENERAL NOTES & ESTIMATED QUANTITIES	M-105-22
FOUNDATION DATA SHEET	M-105-23
FOUNDATION DATA SHEET	M-105-24
LAYOUT OF SUBSTRUCTURE	M-105-25
SLAB ELEVATIONS	M-105-26
SUPERSTRUCTURE DETAILS	M-105-27
SUPERSTRUCTURE DETAILS	M-105-28
SUPERSTRUCTURE DETAILS	M-105-29
SUPERSTRUCTURE DETAILS	M-105-30
PRESTRESSED BEAM DETAILS	M-105-31
PRESTRESSED BEAM DETAILS	M-105-32
BENT DETAILS	M-105-33
BENT DETAILS	M-105-34
BENT DETAILS	M-105-35
BENT FOOTING DETAILS	M-105-36
BENT FOOTING DETAILS	M-105-37
ABUTMENT No. 1 DETAILS	M-105-38
ABUTMENT No. 2 DETAILS	M-105-39
BILL OF STEEL	M-105-40
BILL OF STEEL	M-105-40A
BILL OF STEEL	M-105-40B
BILL OF STEEL	M-105-41

LIST OF STANDARD DRAWINGS

STANDARD PILE DETAILS	H-5-111	11-27-73
REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	K-80-14	8-27-76
TENN. STD. PRECAST PRESTRESSED BRIDGE DECK PANELS	K-80-15A	
MISC. ABUTMENT AND DRAINAGE DETAILS	K-85-150	1-9-75
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	K-86-144	7-17-81
BRIDGE RAILING CONCRETE PARAPET	M-28-1	7-17-81

LIST OF SPECIAL PROVISIONS

S.P. No.	DATE
REGARDING EPOXY COATED REINFORCING STEEL	907A
REGARDING APPROVAL OF SHOP DRAWINGS	105A



LAYOUT OF BRIDGE No. 1A (SOUTHBOUND)

⊗ DENOTES GUARDRAIL ATTACHMENT  
⊕ DENOTES POINT OF MIN. VERTICAL CLEARANCE

DESIGNED BY	DATE
RON BACON	
CHECKED BY	DATE
A. BUCKINGHAM / B. THISTLEWOOD	9-10-81
J.D. MOORE	

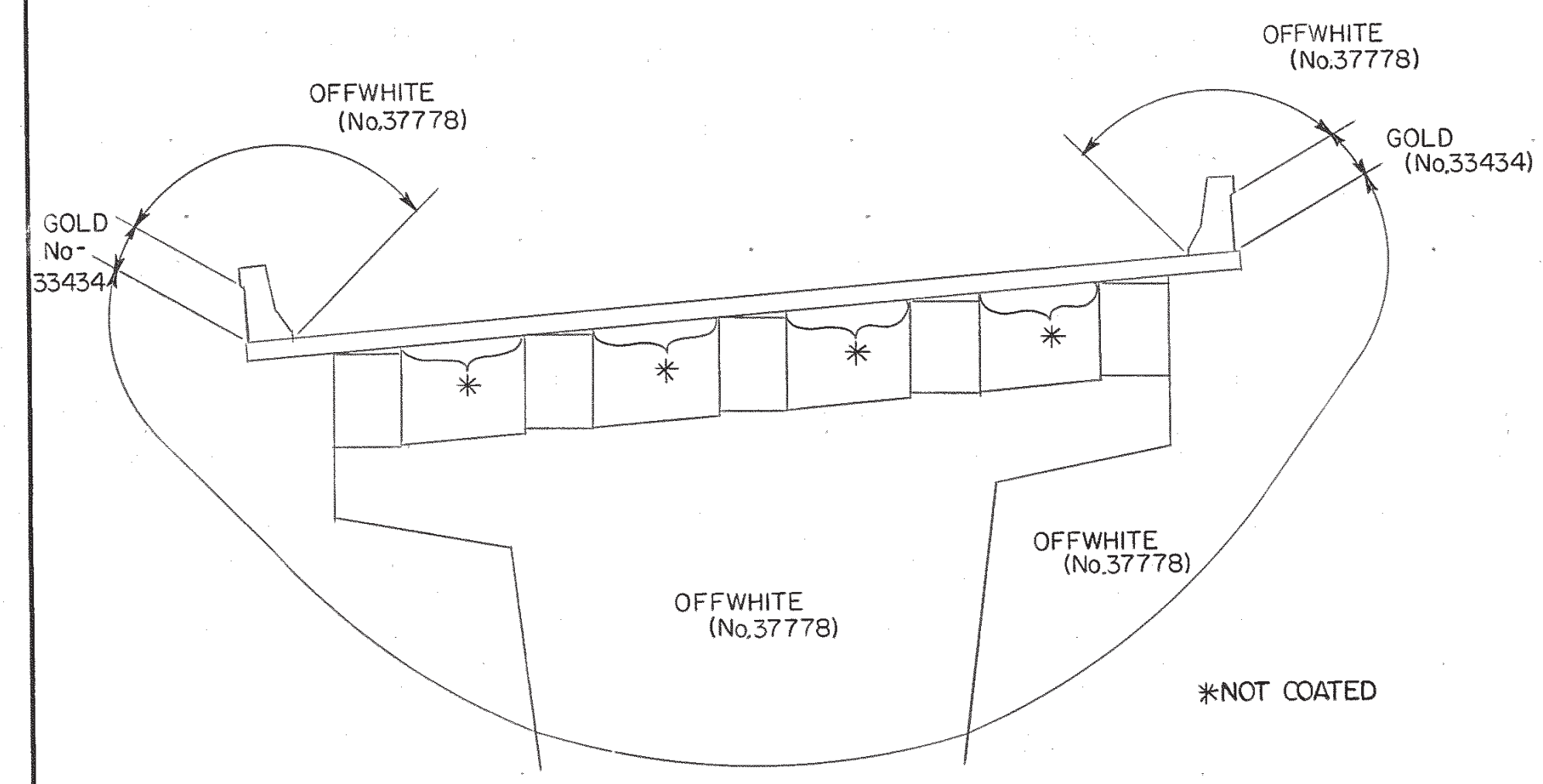
EST ADT (2001)-1453  
54'-0" ROADWAY WITH CONCRETE PARAPETS  
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

LAYOUT OF BRIDGE 1A  
SOUTHBOUND  
J.S. YOUNG LANE (M)  
OVER SR 1 & L&N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
—1981—

*J. Young Lane*

CORRECT: ENGINEER OF STRUCTURES  
APPROVED: DIRECTOR OF HIGHWAYS  
M-105-21  
M-105-21

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50 (6)	81	27A	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-1-81	HMB	CHANGED REINFORCEMENT QUANTITIES
2	2-12-82	HMB	CHANGED REINFORCEMENT QUANTITIES
3	3-16-82	HMB	CHANGED QUANTITIES
4	10-14-82	GBH	CHANGED EPOXY REBAR QUANTITIES



**TEXTURE COATED COLOR SKETCH**

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604 22 OF THE TENNESSEE STANDARD SPECIFICATION. A TEXTURED COATED FINISH SHALL BE USED IN LIEU OF A CLASS 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO OFFWHITE, FEDERAL SPECIFICATION No.37778, AND GOLD, FEDERAL SPECIFICATION No.33434, FEDERAL COLOR STANDARD No.595a AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURED FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATION AT THE BRIDGE SITE.

ITEM No	204-0201			604-0203	604-0301	604-0302	604-0303	604-0401	606-2203	606-3203	606-4203		615-0230	620-03		710-10	710-11
ITEM	DRY EXCAVATION (BRIDGES) C.Y.			EPOXY COATED REINFORCING STEEL LB.	CLASS "A" CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LB.	LINSEED OIL TREATMENT S.Y.	APPLIED TEXTURE FINISH (NEW STRUCTURES) S.Y.	STEEL PILES (10-INCH) (DRIVING) LF.	STEEL PILES (10-INCH) (FURNISH DOMESTIC) LF.	STEEL PILES (10-INCH) (FURNISH FOREIGN) LF.		PRESTRESSED CONCRETE BOX BEAM (48" X 36") L.F.	CONCRETE PARAPET L.F.		6" PERFORATED C.M. PIPE (18 GA) W/ POROUS BACK-FILL L.F.	6" C.M. PIPE UNDEDRAINS (18 GA) L.F.
SUPER-STRUCTURE				258,808	877.2		2,923	5,221					2,958	1,002.0			
ABUTMENT No 1	200			262	41.4	5,720		59	552	552	552			20.0		53	40
BENT No 1	1002			0	226.6	30,892		157	850	850	850						
BENT No 2	20			0	212.9	27,618		202	385	385	385						
BENT No 3	265			0	198.4	25,753		170	424	424	424						
BENT No 4	277			0	198.4	25,679		170	564	564	564						
BENT No 5	410			0	198.3	25,679		170	342	342	342						
BENT No 6	329			0	234.5	31,637		175	499	499	499			20.0		52	40
ABUTMENT No 2	92			262	41.8	5,720		59	587	587	587						
PVMT AT BRIDGE END				6,469	105.5	23,736			120	120	120						
TOTAL	2595			265,801	2,335.0	202,434	2,923	6,383	4,323	4,323	4,323		2,958	1,042.0		105	80

- ① EXCAVATION BASED ON LOWER ROAD PROFILE.
  - ② THE COST OF ELASTOMERIC PADS, RUBBER BONDING CEMENT, AND DOWEL BARS OR ANCHOR BOLTS TO BE INCLUDED IN THE COST OF PRESTRESSED BEAMS.
  - ③ THE COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED C.M. PIPE.
  - ④ ALL REINFORCING STEEL IN THE TRAFFIC FACE OF PARAPETS SHALL BE EPOXY COATED. COST TO BE INCLUDED IN THE PRICE BID FOR ITEM 620-03.
- THE COST OF 12 THREADED STEEL INSERTS AND 12 7/8" Øx4" HEX HEAD BOLTS, A307, TO BE INCLUDED IN BRIDGE ITEMS BID ON.

**GENERAL NOTES**

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

LOADING: HS20-44

DESIGN SPECIFICATIONS: AASHTO 1977 EDITION WITH ADDENDA.

CONCRETE: TO BE CLASS 'A' (CAST-IN-PLACE), f'c 3000 PSI.

BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVAL 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.

REINFORCING STEEL: TO BE ASTM A615 GRADE 60 STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON BILL OF STEEL. BENDING DIMENSIONS SHOWN ARE BASED ON GRADE 60. SPACING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON DETAIL DRAWING. THE SUFFIX 'E', FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SPECIAL PROVISION 907A.

SPECIAL NOTE FOR RAILROAD CROSSING: THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD TRACKS AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH REGULATIONS STIPULATED BY THE L&N R.R. SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC.

PILES: TO BE HP10x42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 55 TONS FOR THE BENTS, AND 40 TONS FOR THE ABUTMENTS.

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

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

LINSEED OIL PROTECTIVE TREATMENT: SURFACES RECEIVING TEXTURED COATED FINISH SHALL NOT RECEIVE A LINSEED OIL TREATMENT. SEE TEXTURED COATING DETAIL THIS SHEET.

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

DESIGNED BY: RON BACON DATE: \_\_\_\_\_  
 DRAWN BY: A. BUCKINGHAM / B. THISTLEWOOD DATE: 8-28-81  
 SUPERVISED BY: J.D. MOORE DATE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CORRECT: \_\_\_\_\_ ENGINEER OF STRUCTURES  
 APPROVED: \_\_\_\_\_ DIRECTOR OF HIGHWAYS

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

**GENERAL NOTES AND ESTIMATED QUANTITIES**  
 BRIDGE No. 1A SOUTHBOUND  
 J.S. YOUNG LANE (M)  
 OVER S.R.1 & L&N R.R.  
 STA. 377+03.54  
 RUTHERFORD COUNTY  
 1981

M-105-22

PROJECT NO.	YEAR	SHEET NO.
F-50-(6)	81	27B

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

**REQUIRED INFORMATION**  
 1. SUFFICIENT GROUND, ROCK, AND CORING INFORMATION FOR BRIDGE INFORMATION.  
 2. APPROXIMATE EXISTING GROUND LINE & ROCK LINE.

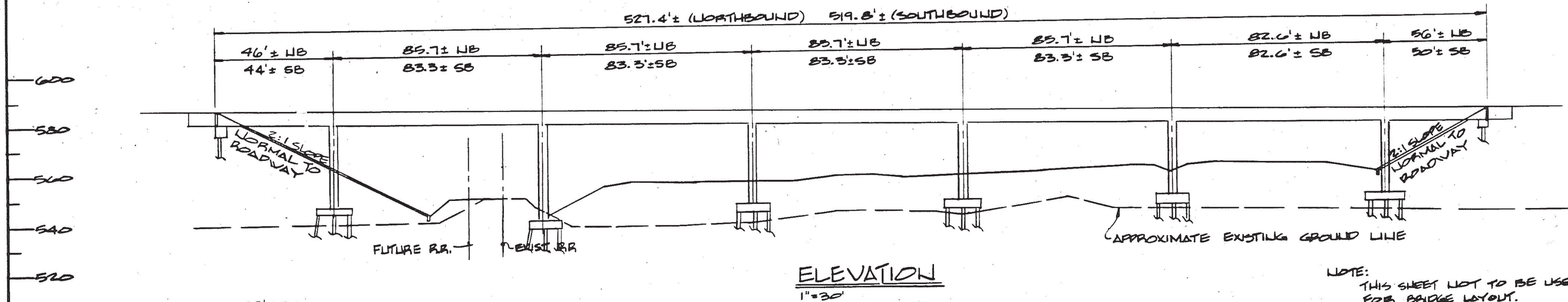
BM ELEV. 549.03  
 NAIL IN POWER POLE TO LT. STA. 376+80  
 O.S. STATE ROUTE 1  
 BM ELEV. 550.04  
 TOP OF U.S.G.S. MONUMENT #549  
 105' RT. STA. 353+00  
 O.S. STATE ROUTE 1

**-Legend-**

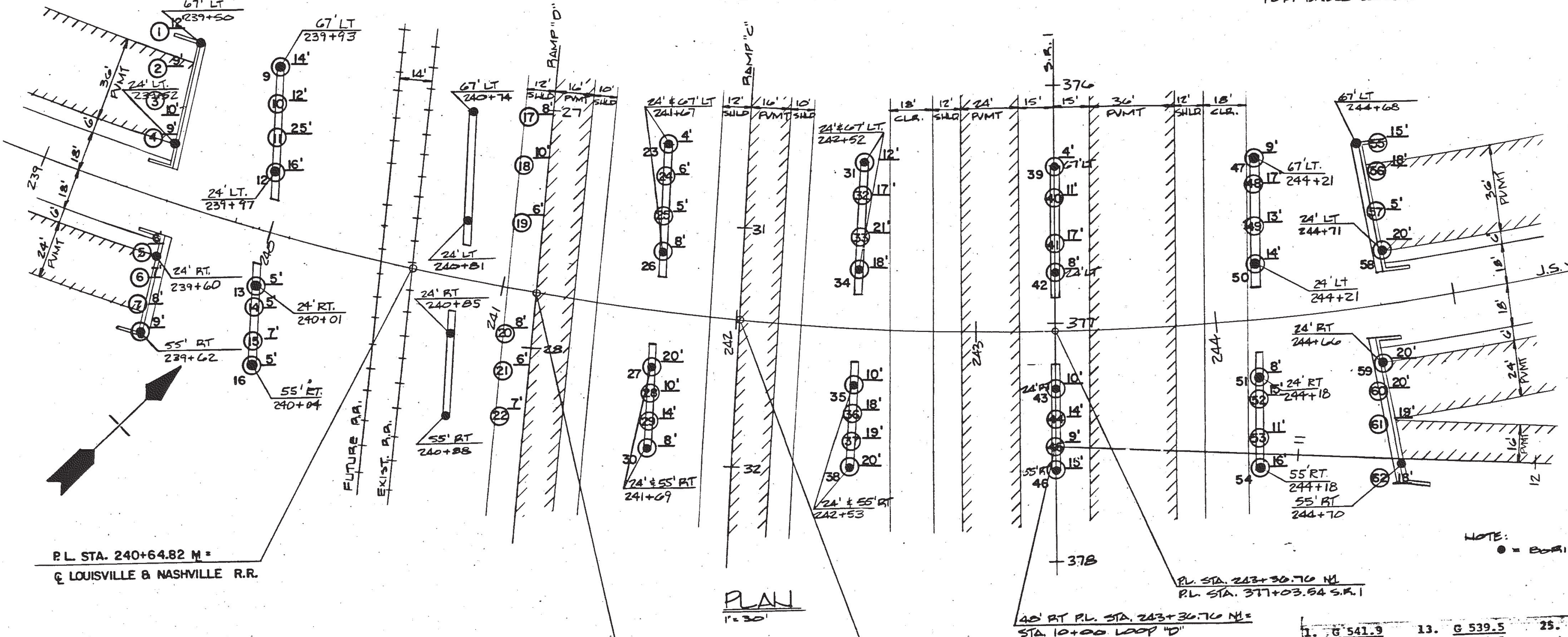
- SILTY CLAY
- LIMESTONE (10 TONS/FT.²)

**NOTE:**  
 ● = BORING LOCATIONS

**Legend:**  
 12" DEPTH AUGERED TO REFUSAL  
 Hole No.



**NOTE:**  
 THIS SHEET NOT TO BE USED FOR BRIDGE LAYOUT.



1. G 541.9 R 529.9	13. G 539.5 R 534.5	25. G 537.3+ R 532.3+	37. G 543.6+ R 524.6+	49. G 543.7+ R 530.7+	61. G 543.1+ R 524.1+
2. G 541.8+ R 532.8+	14. G 539.4+ R 534.4+	26. G 537.4 R 529.4	38. G 543.7 R 523.7	50. G 543.5 R 529.5	62. G 543.2 R 525.2
3. G 541.8+ R 531.8+	15. G 539.2+ R 532.2+	27. G 538.1 R 518.1	39. G 544.7 R 540.7	51. G 543.3 R 535.3	
4. G 541.7 R 532.7	16. G 539.1 R 534.1	28. G 538.3+ R 528.3+	40. G 544.4+ R 533.4+	52. G 543.3+ R 528.3+	
5. G 542.0 R 536.0	17. G 537.0+ R 529.0+	29. G 538.6+ R 524.6+	41. G 544.1+ R 527.1+	53. G 543.3+ R 532.3+	
6. G 541.8+ R 534.8+	18. G 537.0+ R 527.0+	30. G 538.8 R 530.8	42. G 543.8 R 535.8	54. G 543.3 R 527.3	
7. G 541.6+ R 533.6+	19. G 537.0+ R 531.0+	31. G 542.3 R 530.3	43. G 542.8 R 532.8	55. G 543.0 R 528.0	
8. G 541.5 R 532.5	20. G 537.0+ R 529.0+	32. G 542.4+ R 525.4+	44. G 542.6+ R 528.6+	56. G 542.9+ R 524.9+	
9. G 540.4 R 526.4	21. G 537.0+ R 531.0+	33. G 542.6+ R 521.6+	45. G 542.5+ R 533.5+	57. G 542.8+ R 537.8+	
10. G 540.2+ R 528.2+	22. G 537.0+ R 530.0+	34. G 542.7 R 524.7	46. G 542.3 R 527.3	58. G 542.7 R 522.7	
11. G 540.0+ R 515.0+	23. G 537.1 R 533.1	35. G 543.3 R 533.3	47. G 544.0 R 535.0	59. G 542.8 R 522.8	
12. G 539.8 R 523.8	24. G 537.2+ R 531.2+	36. G 543.4+ R 525.4+	48. G 543.8+ R 526.8+	60. G 542.9+ R 522.9+	

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY GR HARDY DATE \_\_\_\_\_  
 SUPERVISED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

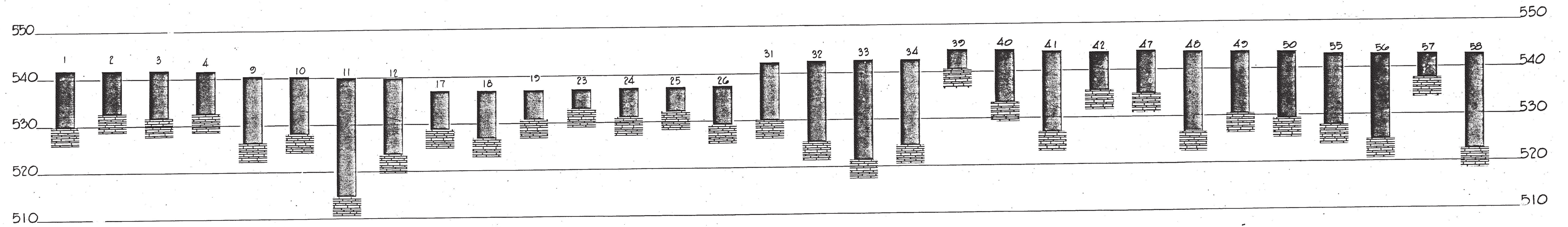
CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
 APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS  
 M-105-23

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

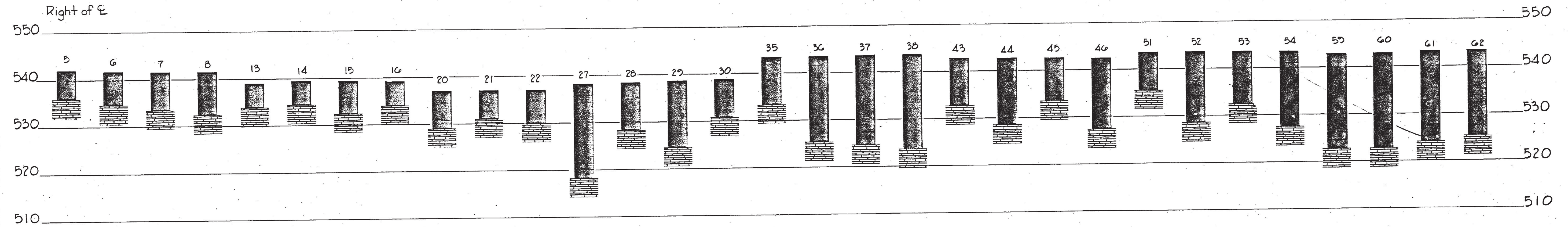
**FOUNDATION DATA**  
 BRIDGE NO. 1 NORTHBOUND AND 1A  
 SOUTHBOUND J.S. YOUNG LANE  
 OVER RUTHERFORD COUNTY  
 #B1 @ STA. 371+03.54

TYPE	YEAR	PROJECT NO.	SHEET NO.
	81	F-50-(6)	27C

Left of C



Right of C



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

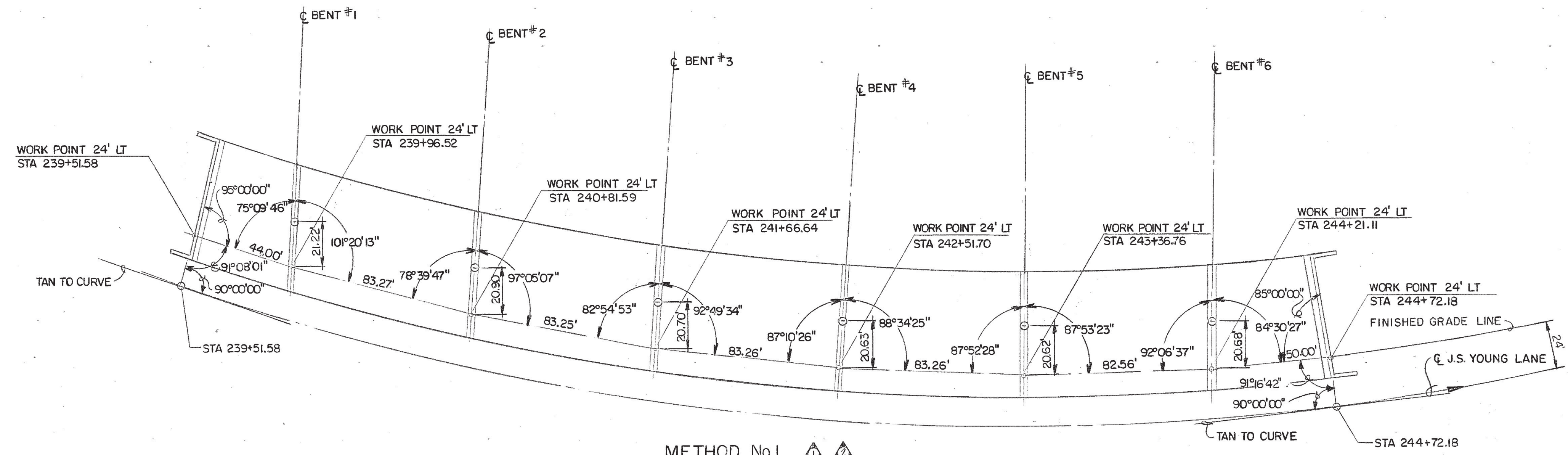
FOUNDATION DATA

BRIDGE NO. 1 NORTHBOUND  
SOUTHBOUND J.S. YOUNG  
LANE OVER S.R. 1 & L+N RR

Sta. 377+03.54

M-103-24

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50 (6)	81	27D	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	HSD	W.P. FLAG, BENT #2 ANGLE
2	3-16-82	HSD	CHK. OFFSETS TO BENT #2, CLEAN UP END ANGLES, METHOD #1

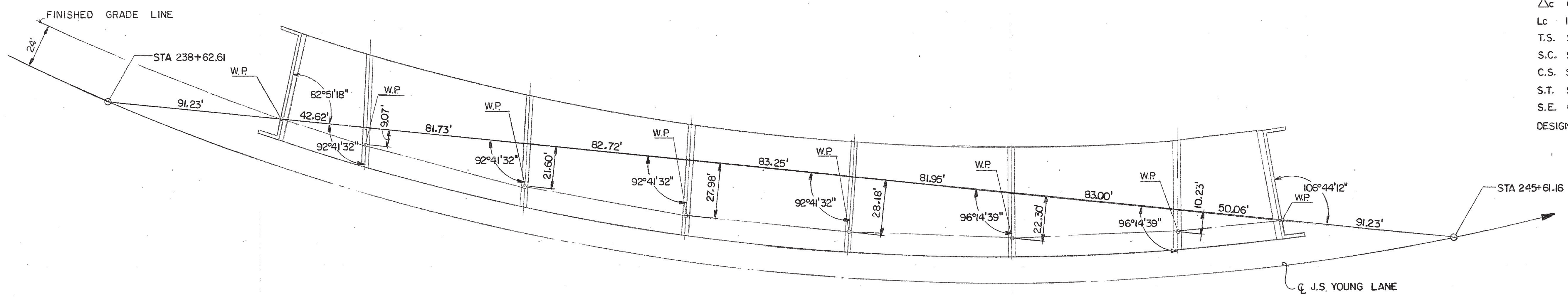


METHOD No.1

**HORIZONTAL CURVE DATA**

MAINLINE  
PAPER LOCATED

P.I. STA. 245 + 03.77  
 $\Delta$  87°13'31"  
Dc 5°00'00"  
Ls 500.00'  
R 1145.92'  
 $\Theta_s$  12°30'00"  
x 497.62'  
y 36.24'  
K 249.60'  
P 9.07'  
Ts 1349.97'  
Es 449.33'  
L 334.17'  
St 167.43'  
L.C. 498.94'  
 $\Delta_c$  62°13'31"  
Lc 1244.51'  
T.S. STA.231+53.80  
S.C. STA.236+53.80  
C.S. STA.248+98.31  
S.T. STA.253+98.31  
S.E. 0.099 1/4  
DESIGN SPEED = 60 M.P.H.



METHOD No. 2

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

LAYOUT OF SUBSTRUCTURE  
BRIDGE No. 1A SOUTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 18 & L&N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
— 1981 —

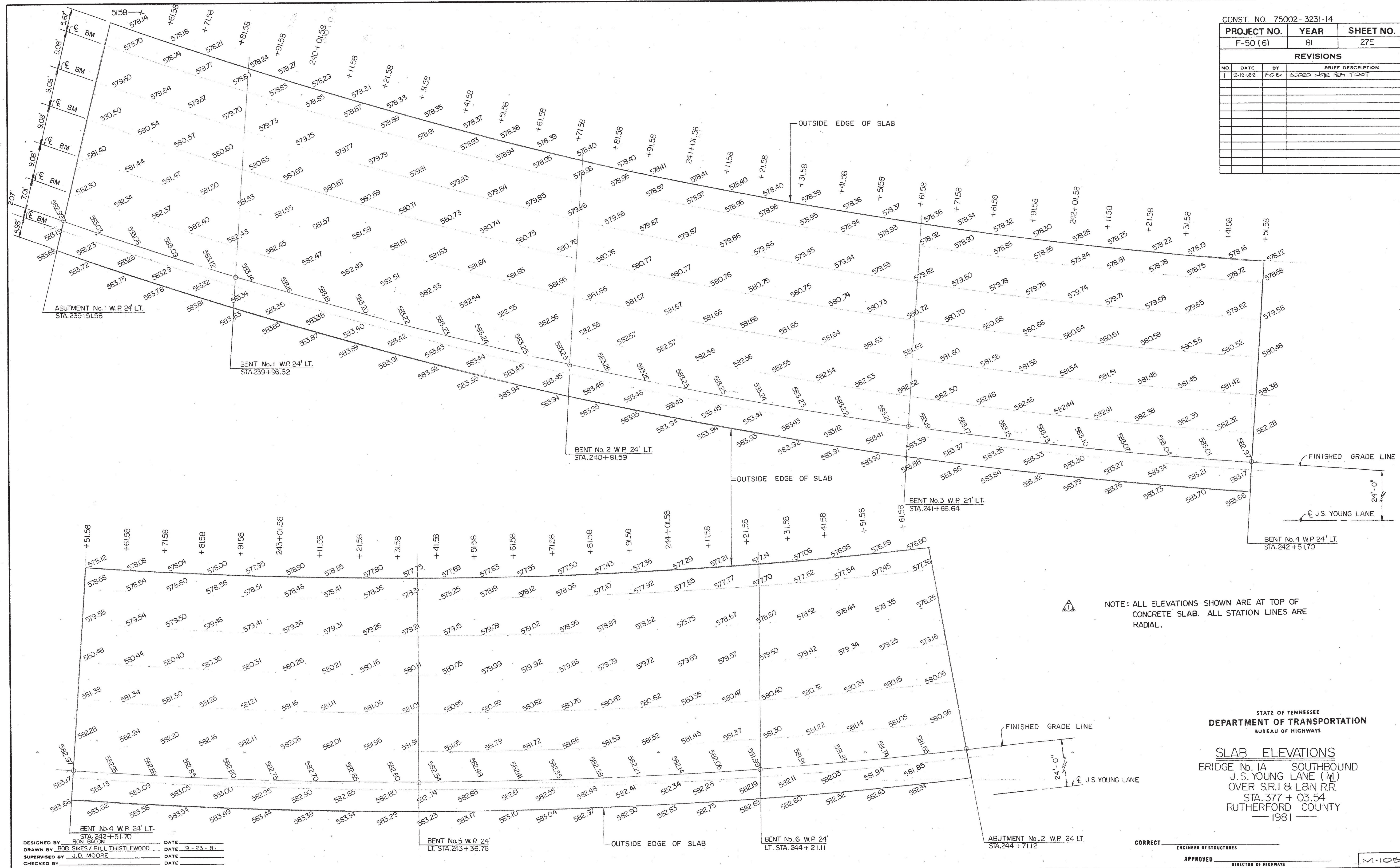
DESIGNED BY: RON BACON  
DRAWN BY: BOB SIKES / BILL THISTLEWOOD  
SUPERVISED BY: J.D. MOORE  
CHECKED BY: \_\_\_\_\_

DATE: 9-21-81  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_

CORRECT: \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED: \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-103.25

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50 (6)	81	27E	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-81	MSB	ADDED NOTE PER T&E

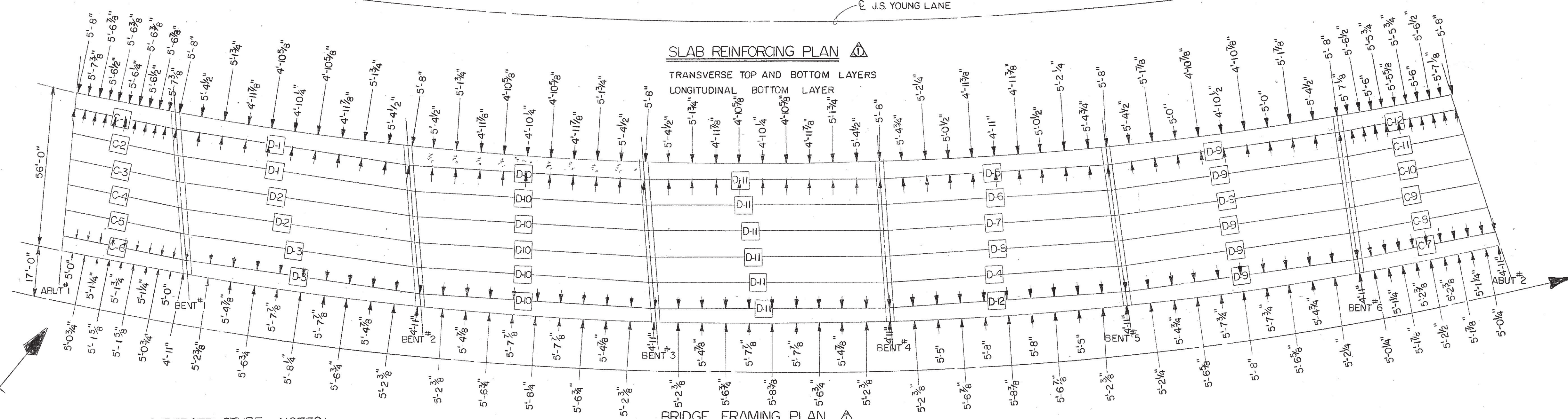
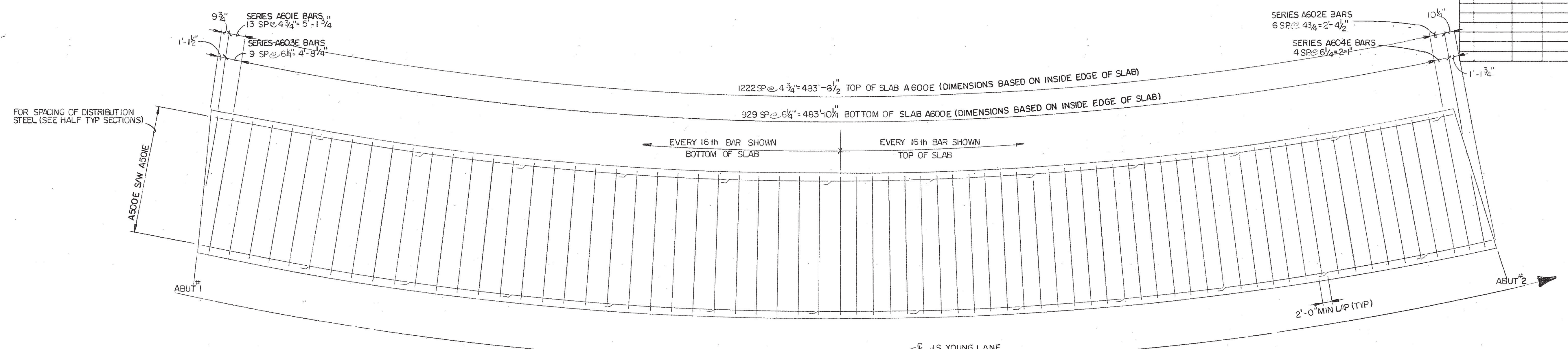


DESIGNED BY: ROY R. MOORE DATE: 9-23-81  
 DRAWN BY: BOB SIKES/BILL THISTLEWOOD DATE: 9-23-81  
 SUPERVISED BY: J.D. MOORE DATE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS  
**SLAB ELEVATIONS**  
 BRIDGE No. 1A SOUTHBOUND  
 J.S. YOUNG LANE (M)  
 OVER S.R. 1 & L&N R.R.  
 STA. 377 + 03.54  
 RUTHERFORD COUNTY  
 1981

CORRECT: \_\_\_\_\_ ENGINEER OF STRUCTURES  
 APPROVED: \_\_\_\_\_ DIRECTOR OF HIGHWAYS  
 M-105-26

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50 (6)	81	27F	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	H.S.D.	REVISED OFFSETS, INDICATED SERIES CAPS



**SLAB REINFORCING PLAN** ⚠

TRANSVERSE TOP AND BOTTOM LAYERS  
LONGITUDINAL BOTTOM LAYER

**BRIDGE FRAMING PLAN** ⚠

**SUPERSTRUCTURE NOTES:**

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.

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

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 DRAWING NO.

**NOTE:**

SLAB OFFSET DIMENSIONS GIVEN AT TENTH POINTS OF EACH SPAN.

SPECIAL NOTE FOR DOWEL BARS AT BENTS: TOP OF DOWELS TO BE COVERED WITH 1/2" OF COMPRESSIBLE MATERIAL AND THE 9" PROJECTION WRAPPED WITH TWO LAYERS OF WATERPROOF PAPER.

WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. FOR DETAILS OF PARAPET SEE STANDARD DRAWING NO. M-28-1. ALSO SEE DRAWING NO. M-105-29.

DESIGNED BY RON BACON DATE \_\_\_\_\_  
 DRAWN BY BOBBY CLYMER/BILL THISTLEWOOD DATE 8-26-81  
 SUPERVISED BY J.D. MOORE DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

**SUPERSTRUCTURE DETAILS**  
 BRIDGE No 1A SOUTHBOUND  
 J.S. YOUNG LANE (M1)  
 OVER S.R. 1 & L&N RR.  
 STA 377 + 0354  
 RUTHERFORD COUNTY  
 —1981—

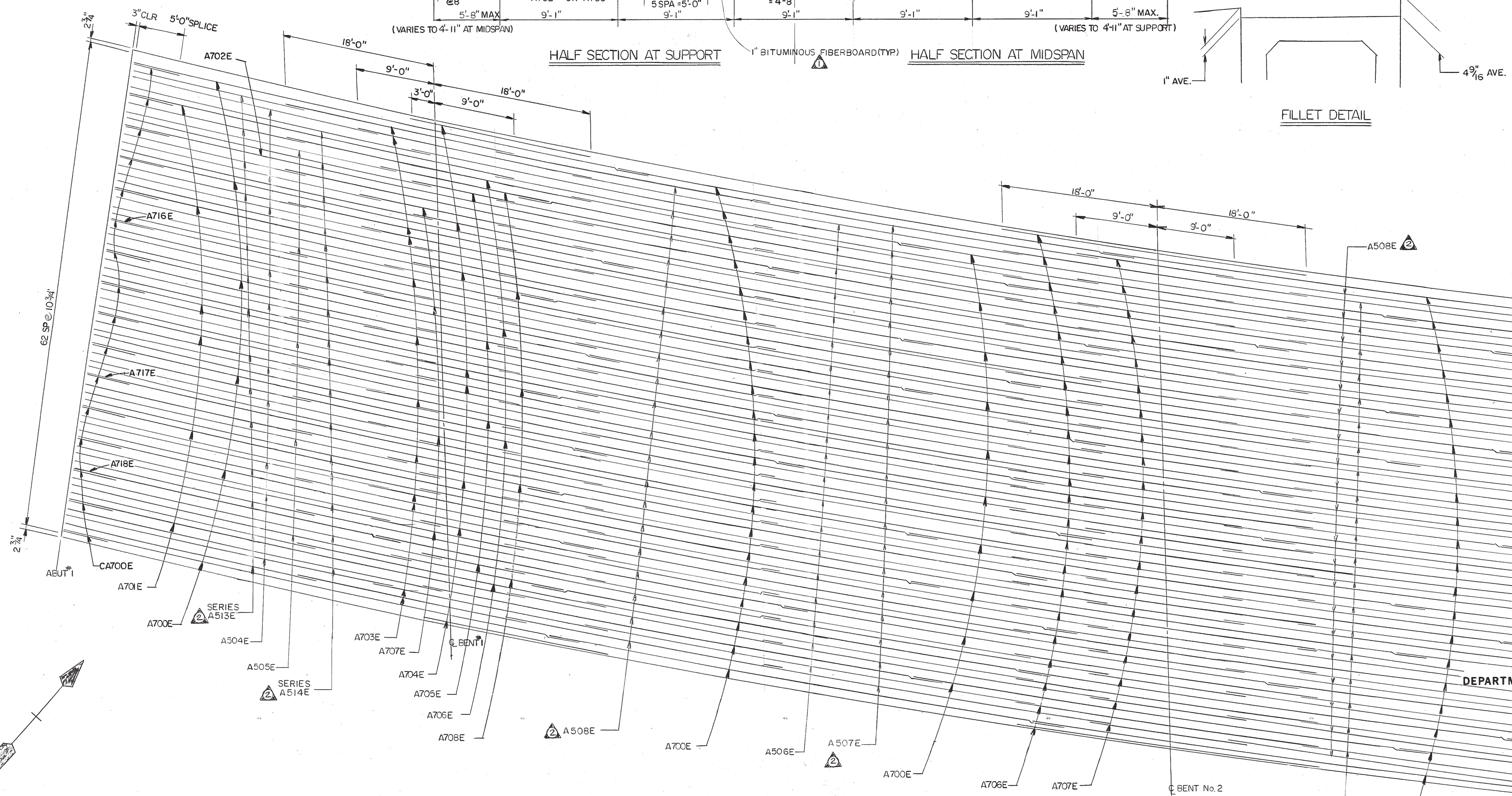
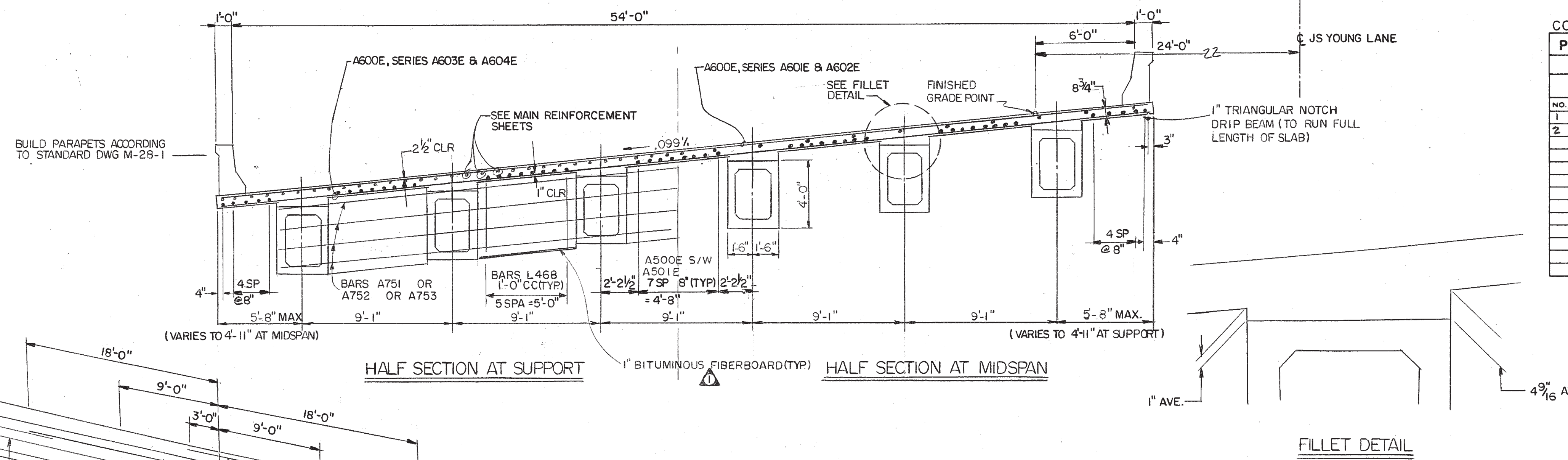
CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
 APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS  
 M-105-27

CONST. NO. 75002 - 3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50 (6)	81	27G

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	A.S.B.	PENKED TYPICAL
2	10-14-82	GBH	ADDED SLAB REINF.



ESTIMATED QUANTITIES

ITEM	EPOXY COATED REINFORCING STEEL lbs.	CLASS "A" CONCRETE C.Y.
SUPER-STRUCTURE	258,808	877.2

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS  
 BRIDGE No. 1-A SOUTHBOUND  
 JS. YOUNG LANE (M)  
 OVER S.R. 18 & L&N RR.  
 STA. 377+03.54  
 RUTHERFORD COUNTY  
 1981

DESIGNED BY: RON BACON  
 DRAWN BY: BOBBY CLYMER / BILL THISTLEWOOD  
 SUPERVISED BY: J.D. MOORE  
 CHECKED BY: \_\_\_\_\_

DATE: 8-26-81  
 DATE: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

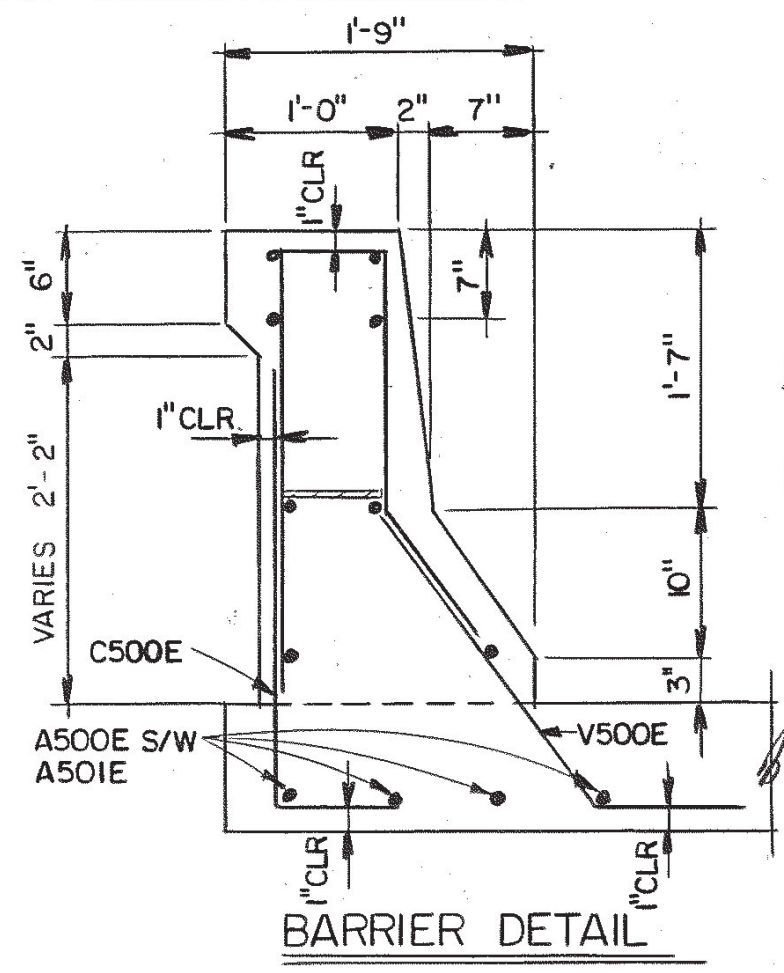
PLAN OF TOP SLAB  
 MAIN REINFORCEMENT

CORRECT ENGINEER OF STRUCTURES

APPROVED DIRECTOR OF HIGHWAYS

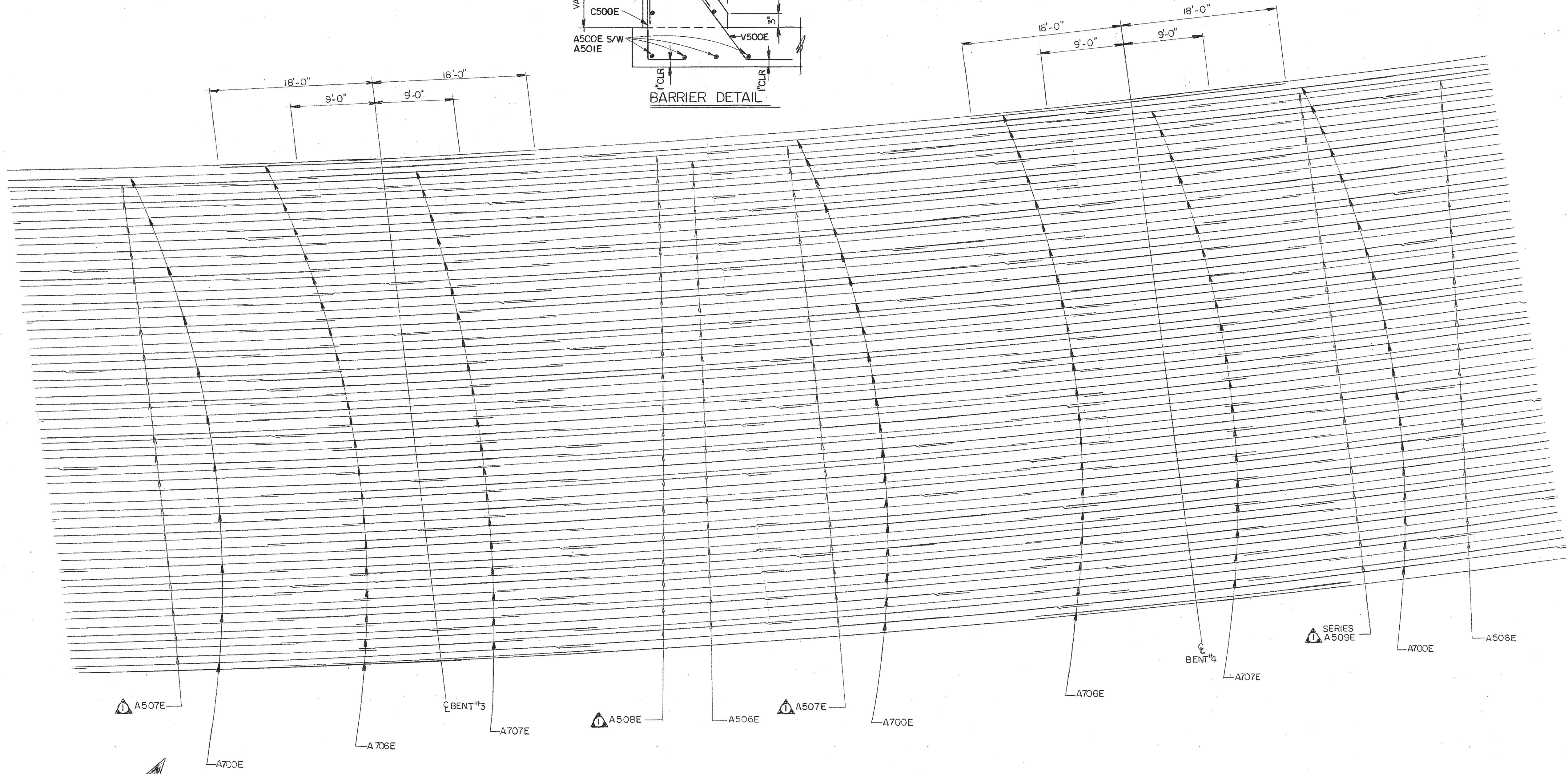
M-105-28

CONST. NO. 75002-3231-14			
<b>PROJECT NO.</b>	<b>YEAR</b>	<b>SHEET NO.</b>	
F-50 (6)	81	27H	
<b>REVISIONS</b>			
<b>NO.</b>	<b>DATE</b>	<b>BY</b>	<b>BRIEF DESCRIPTION</b>
1	10-14-82	GBH	ADDED SLAB REINF.



NOTE: SEE STANDARD DRAWING NO M-28-1

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



PLAN OF TOP SLAB  
MAIN REINFORCEMENT

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS  
BRIDGE No. 1-A SOUTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R.1 & L&N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
1981

DESIGNED BY: RON BACON DATE: \_\_\_\_\_  
DRAWN BY: TOM RIDEOUT/BILL THISTLEWOOD DATE: 8-27-81  
SUPERVISED BY: J.D. MOORE DATE: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CORRECT: \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED: \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-105-29

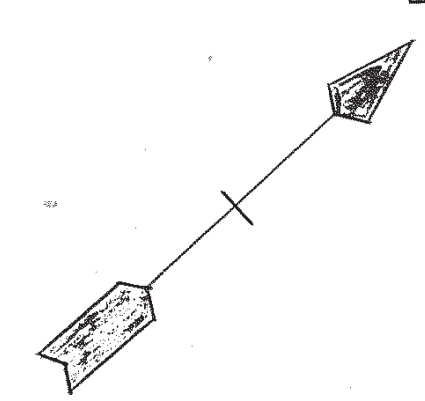
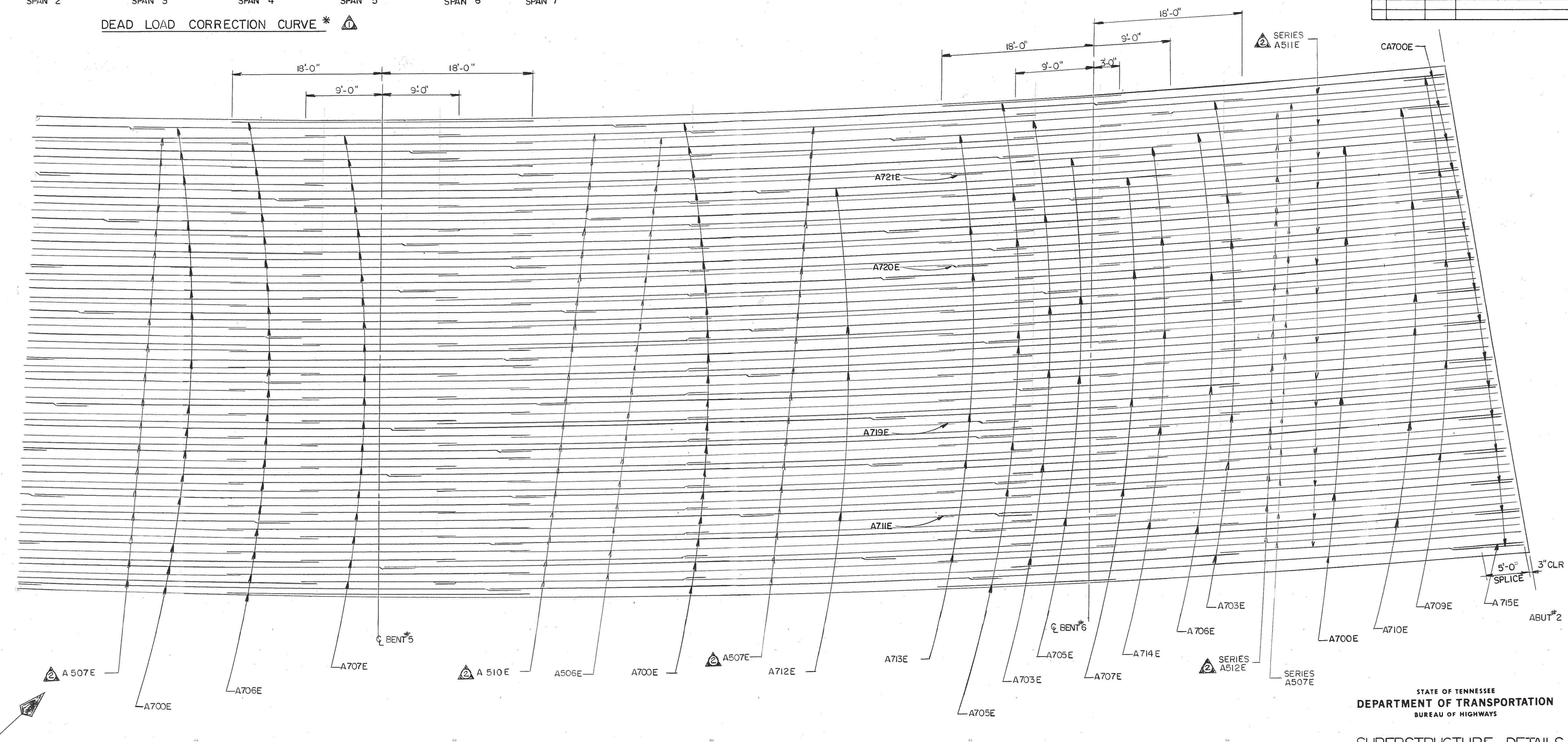
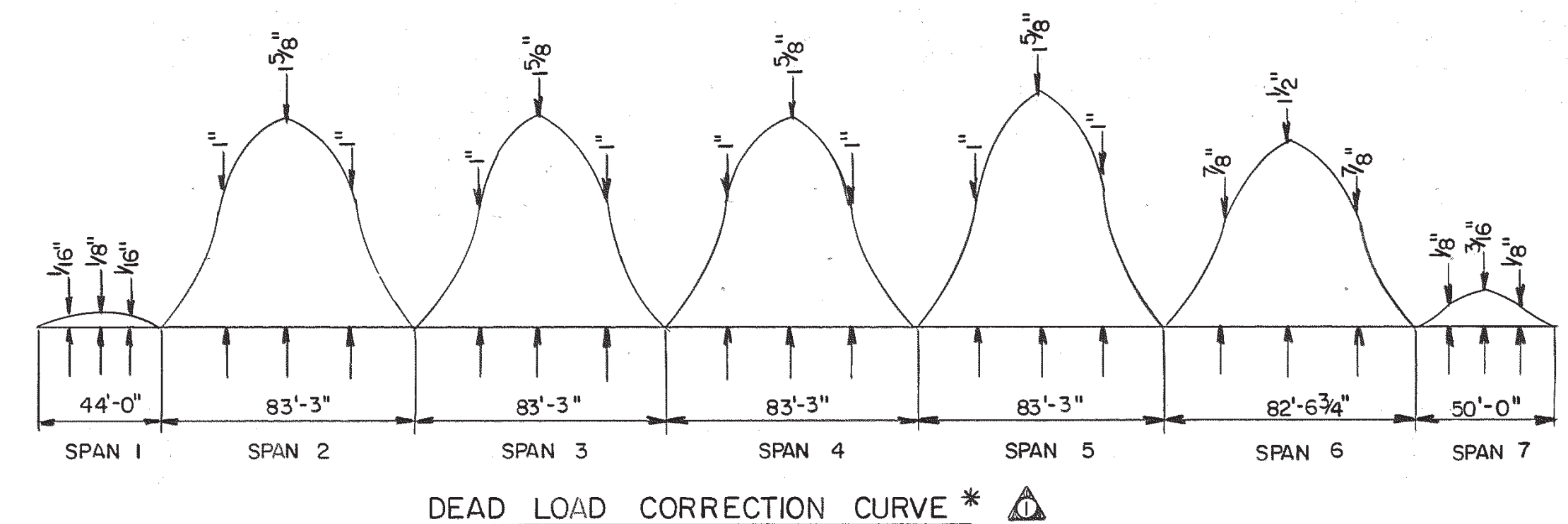
CONST. NO. 75002-3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50 (6)	81	271

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	DSB	REVISE SLAB LIGHS N CORRECTION CURVE
2	10-14-82	SBH	ADDED SLAB REIN F.

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



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS  
BRIDGE No. 1-A SOUTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 18 & L&N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
— 1981 —

DESIGNED BY: RON BACON DATE: \_\_\_\_\_  
DRAWN BY: TOM RIDEOUT DATE: 9-2-81  
SUPERVISED BY: J.D. MOORE DATE: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CORRECT: \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED: \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-105-30

PROJECT NO.	YEAR	SHEET NO.
F-50 (6)	81	27J

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-1-81	HVE	ADDED ESTIMATED QUANTITIES AND REINFORCEMENT BARS
2	2-12-82	H.S.B.	ADDED STRIP LIGHT, CLK. ANGLE "C"

THE TOP OF ALL BEAMS ARE 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 TOP FLANGE MAY BE TROWELED.

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 (5000 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 (4000 PSI), SEE LAYOUT SHEET FOR CONCRETE FINISHING NOTE.

AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C600 AND C500 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.

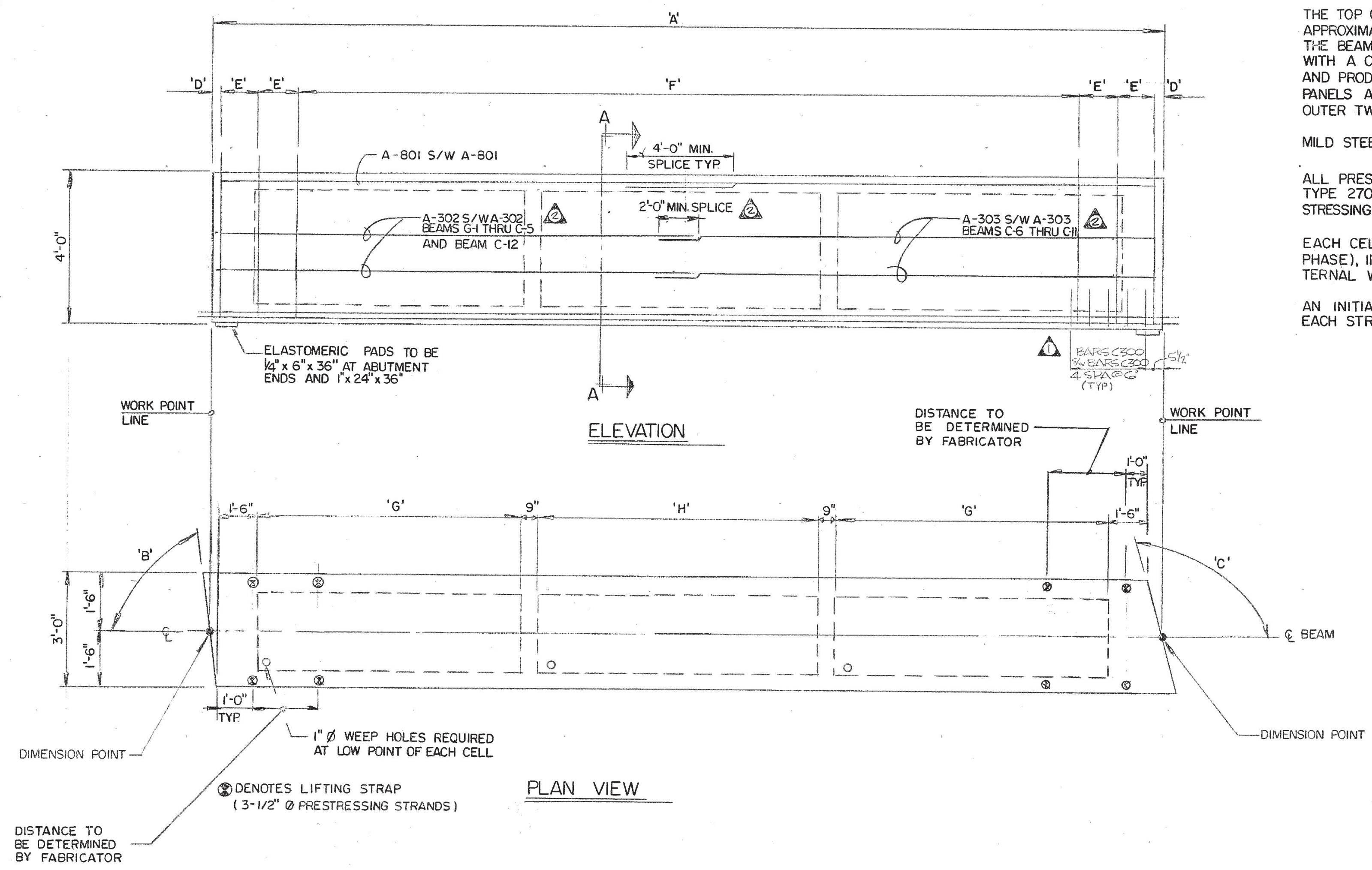
DIMENSIONS "E" AND "F" ARE STIRRUP SPACINGS. ONE COMPLETE STIRRUP SET CONSISTS OF TWO BARS ZA400E, TWO BARS C400, AND ONE BAR H400.

MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.

ALL PRESTRESSING STRANDS TO BE 1/2" Ø HIGH STRENGTH TYPE 270K WIRE UNCOATED STRESS-RELIEVED PRE-STRESSING STRANDS.

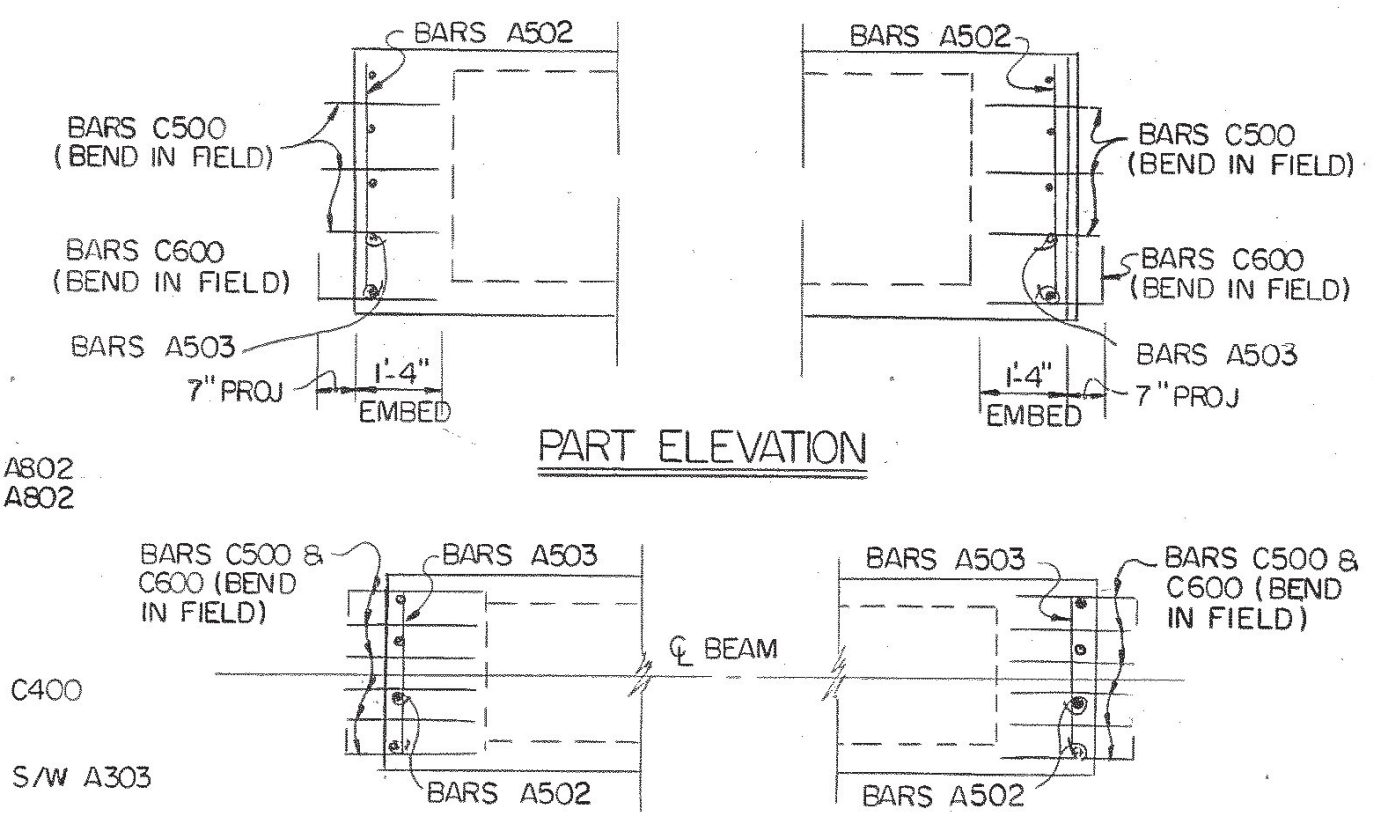
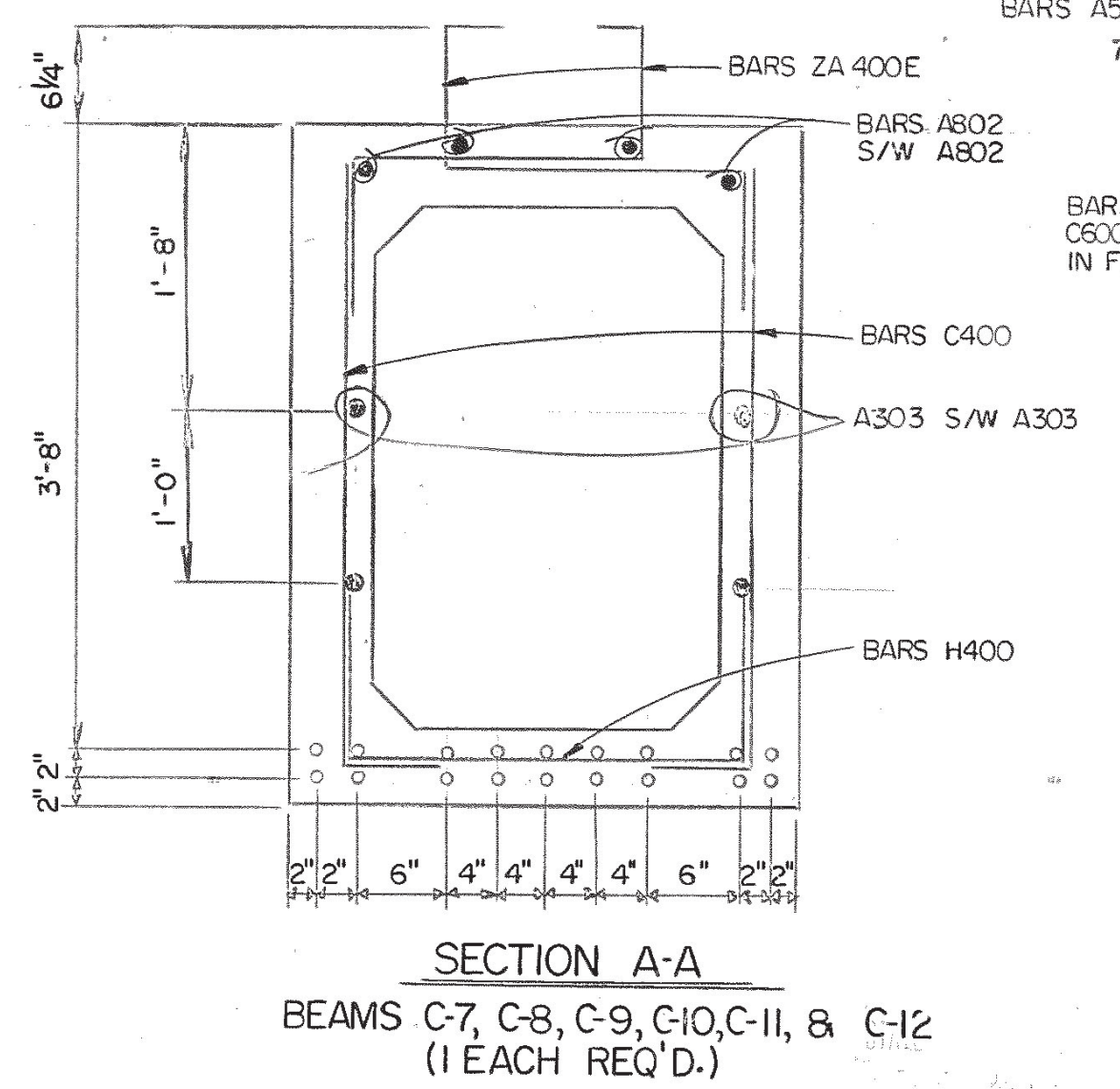
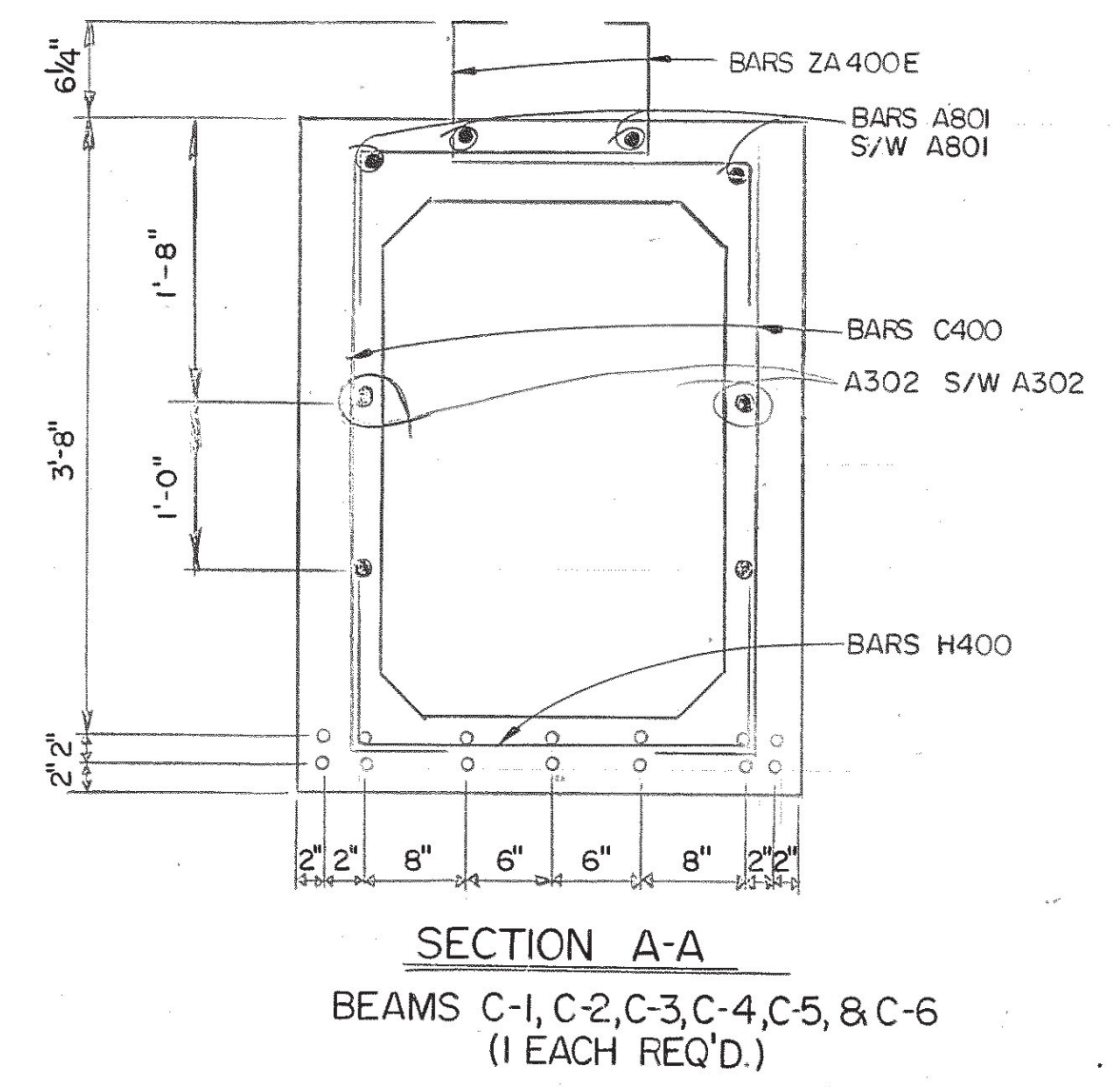
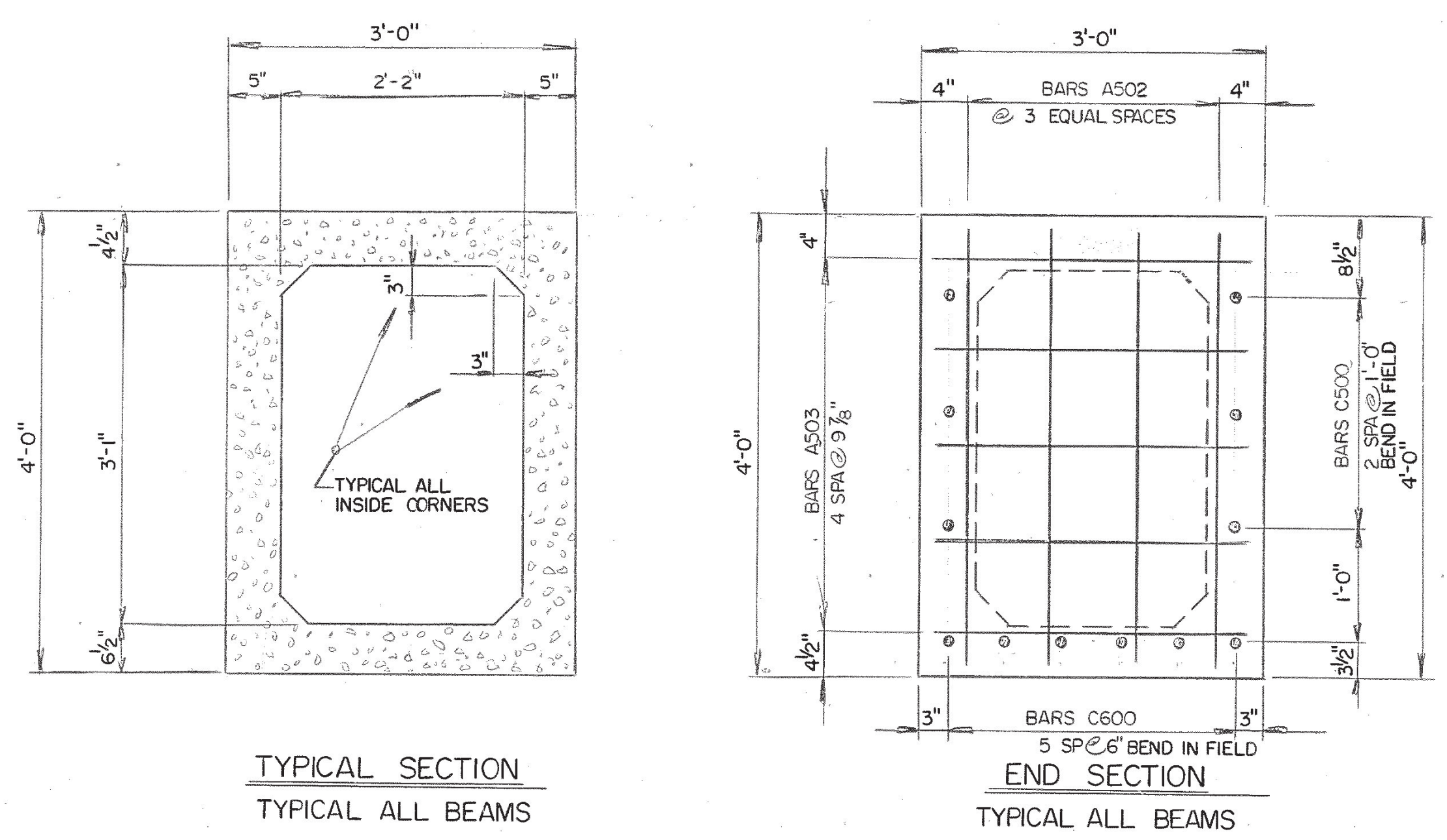
EACH CELL SHALL BE VENTED, (DURING THE FABRICATION PHASE), IN SUCH A MANNER SO AS NOT TO ALLOW EXTERNAL WATER TO ENTER THE CELL.

AN INITIAL FORCE OF 28,936lbs. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.



BEAM NO.	DIMENSIONAL DATA								ESTIMATED QUANTITIES		
	'A'	ANGLE 'B'	ANGLE 'C'	'D'	'E'	'F'	'G'	'H'	CLASS 'A' CONCRETE C.Y.	REINFORCING STEEL LBS.	PRESTRESSING STRANDS LBS.
C-1	34'-10 1/2"	85°	105°	5 1/4"	1'-0"	15 SP @ 24"	9'-1 1/2"	10'-5 1/2"	7.9	979	258
C-2	36'-5 1/2"	85°	105°	4"	11 7/8"	16 SP @ 24"	10'-5"	11'-1 1/2"	8.2	933	269
C-3	38'-0 1/2"	85°	105°	4"	10 1/8"	17 SP @ 24"	11'-0"	11'-6 1/2"	8.5	1007	281
C-4	39'-8"	85°	105°	4"	9"	18 SP @ 24"	11'-6"	12'-2"	8.9	1021	292
C-5	41'-3"	85°	105°	4"	7 3/4"	19 SP @ 24"	12'-1"	12'-7"	9.2	1035	304
C-6	42'-10"	85°	105°	6"	11 1/2"	19 SP @ 24"	12'-6"	13'-4"	9.5	1035	315
C-7	48'-10 1/2"	° 30'	95°	5 3/4"	11 3/4"	22 SP @ 24"	14'-7 1/2"	15'-1 1/2"	10.0	1145	462
C-8	47'-2 1/2"	° 30'	95°	4"	7 5/8"	22 SP @ 24"	14'-0"	14'-8 1/2"	10.3	1145	447
C-9	45'-6 1/2"	95° 30'	95°	4"	8 5/8"	21 SP @ 24"	13'-6"	14'-0 1/2"	10.0	1131	431
C-10	43'-10 1/2"	95° 30'	95°	4"	10 5/8"	20 SP @ 24"	12'-11 1/2"	13'-0 1/2"	9.6	1117	415
C-11	42'-2 1/2"	95° 30'	95°	4"	10 5/8"	19 SP @ 24"	12'-4"	13'-0 1/2"	9.3	1103	400
C-12	40'-6 1/2"	95° 30'	95°	4"	11 5/8"	18 SP @ 24"	11'-10"	12'-4 1/2"	9.0	1080	384

NOTE: COST OF ELASTOMERIC PADS, AND 1/4" DIA. DOWEL BARS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

PRESTRESSED BEAM DETAILS  
 BRIDGE No 1A SOUTHBOUND  
 J S YOUNG LANE (M)  
 OVER S.R.I & L&N R.R.  
 STA 377 + 03.54  
 RUTHERFORD COUNTY  
 -1981-

DESIGNED BY: RON BACON  
 DRAWN BY: BOB SIKES / BILL THISTLEWOOD  
 SUPERVISED BY: J.D. MOORE  
 CHECKED BY: \_\_\_\_\_

DATE: \_\_\_\_\_  
 DATE: 9-18-81  
 DATE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

CORRECT: \_\_\_\_\_  
 ENGINEER OF STRUCTURES

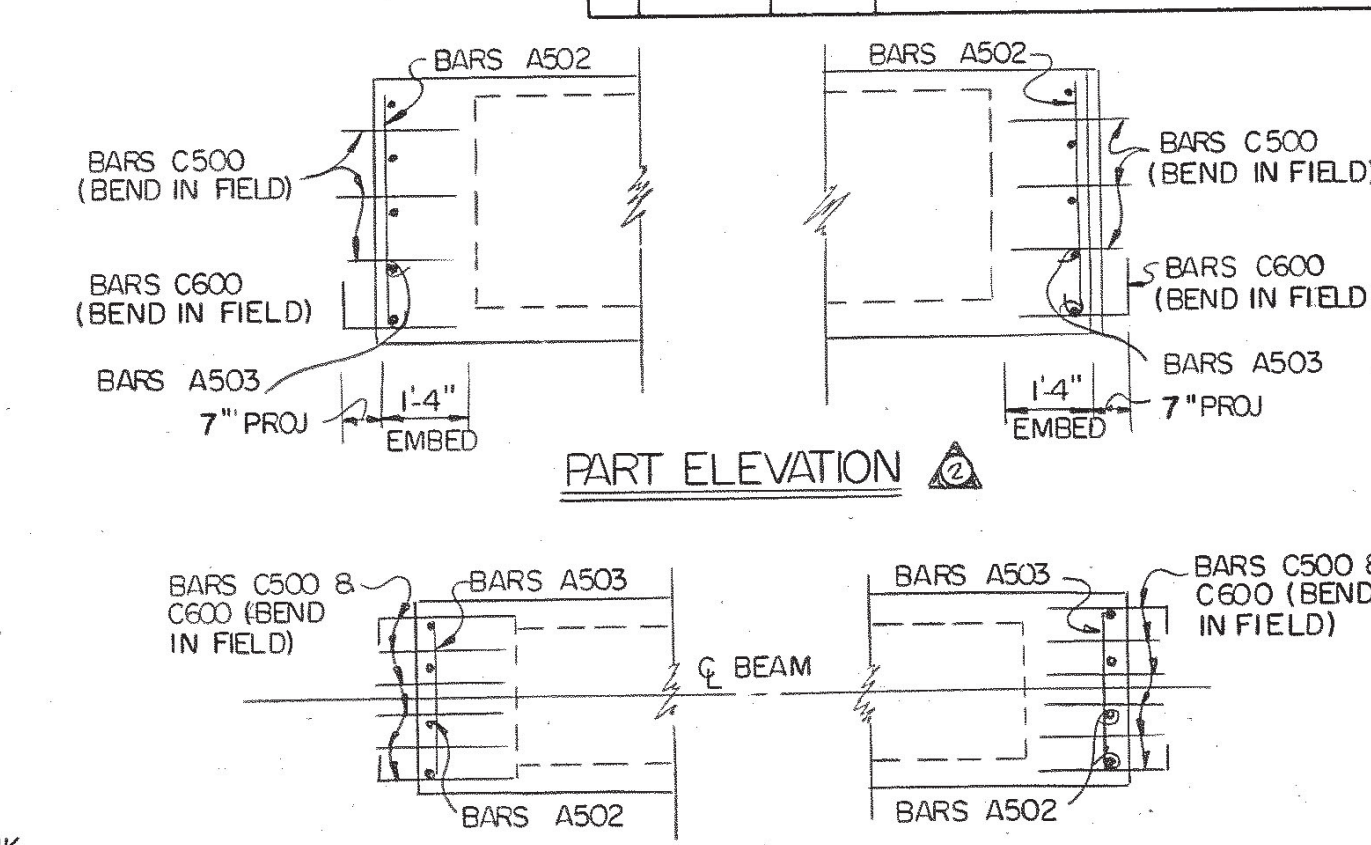
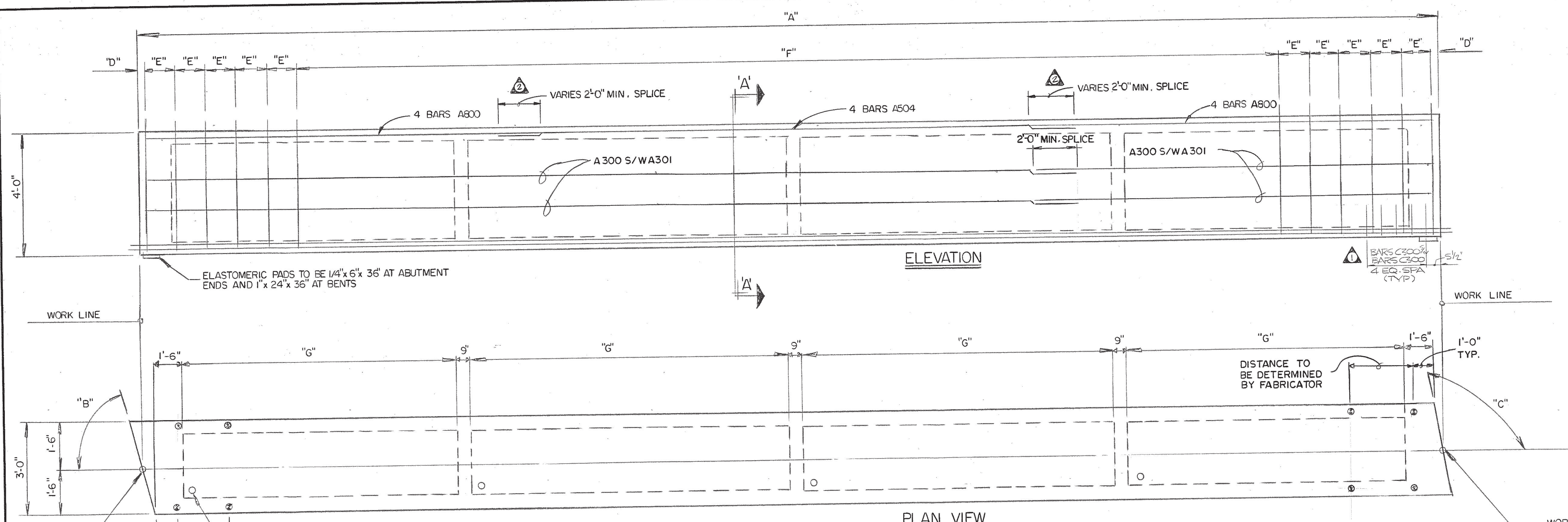
APPROVED: \_\_\_\_\_  
 DIRECTOR OF HIGHWAYS

CONST. NO. 75002-3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50 (6)	81	27K

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-1-81	HMB	ADDED ESTIMATED QUANTITIES
2	2-12-82	PSB	3/8 REINFORCING BARS
3	3-16-82	PSB	CHK. SPICE LATH, CHK. PROJECTION Beam D-7 Diam. "A" & "D"



ELASTOMERIC PADS TO BE 1/4" x 6" x 3/8" AT ABUTMENT ENDS AND 1" x 24" x 3/8" AT BENTS

WORK LINE

1'-6" 6" 9" 6" 9" 6" 1'-6" 1'-0" TYP.

DISTANCE TO BE DETERMINED BY FABRICATOR

1" Ø WEEP HOLES REQUIRED AT LOW POINT OF EACH CELL

⊙ DENOTES LIFTING STRAP (3-1/2" Ø PRESTRESSING STRANDS)

THE TOP OF ALL BEAMS ARE 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 LANTANCE AND PRODUCE A ROUGH SURFACE. WHERE PRECAST SLAB PANELS ARE TO BE USED AND SET ON FELT PADS THE OUTER TWO INCHES OF TOP FLANGE MAY BE TROWELED.

MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.

ALL PRESTRESSING STRANDS TO BE 1/2" Ø HIGH STRENGTH TYPE 270K7 WIRE UNCOATED STRESS-RELIEVED PRESTRESSING STRANDS.

EACH CELL SHALL BE VENTED, (DURING THE FABRICATION PHASE), IN SUCH A MANNER SO AS NOT TO ALLOW EXTERNAL WATER TO ENTER THE CELL.

AN INITIAL FORCE OF 28,936 lbs., SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.

THE PRESTRESSING STRANDS SHALL BE LEFT PROJECTING 3 1/2" 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.

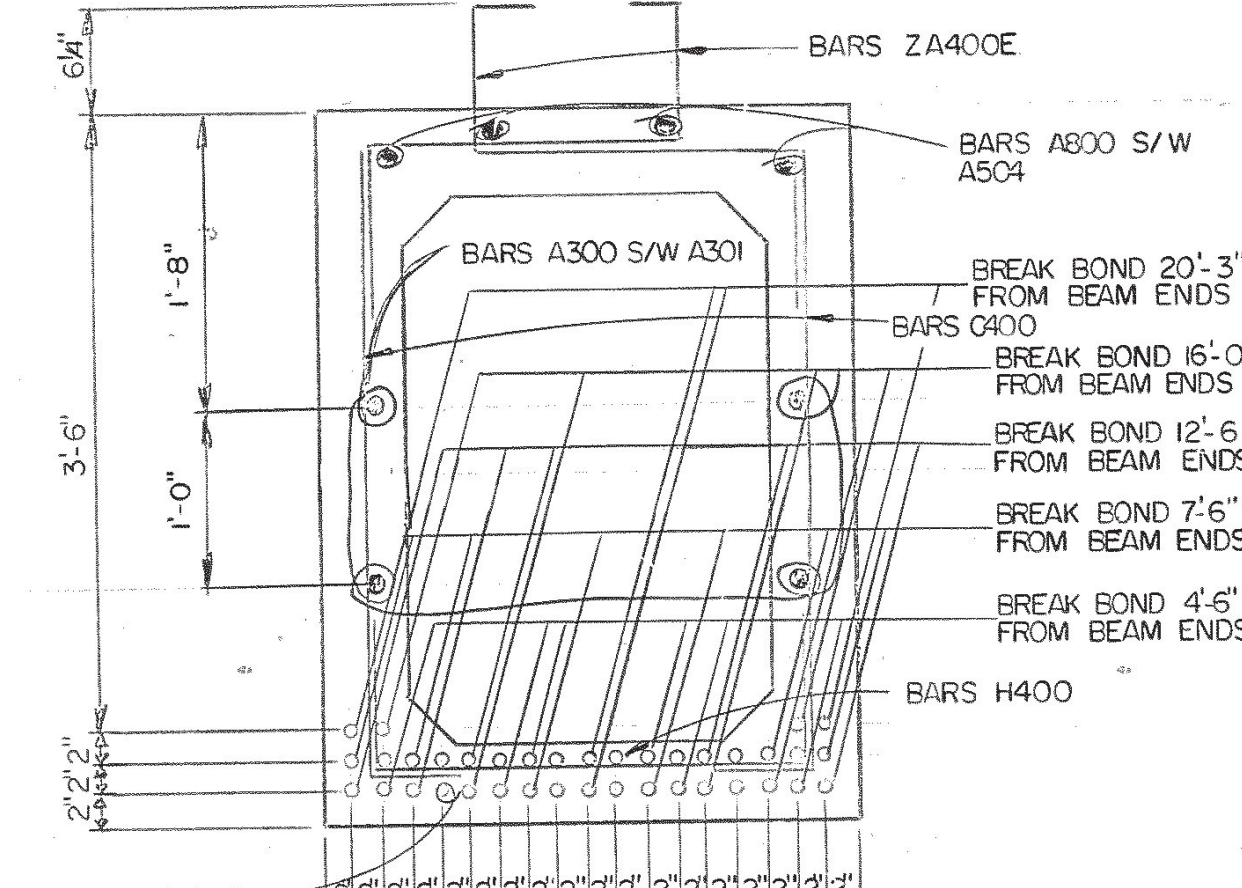
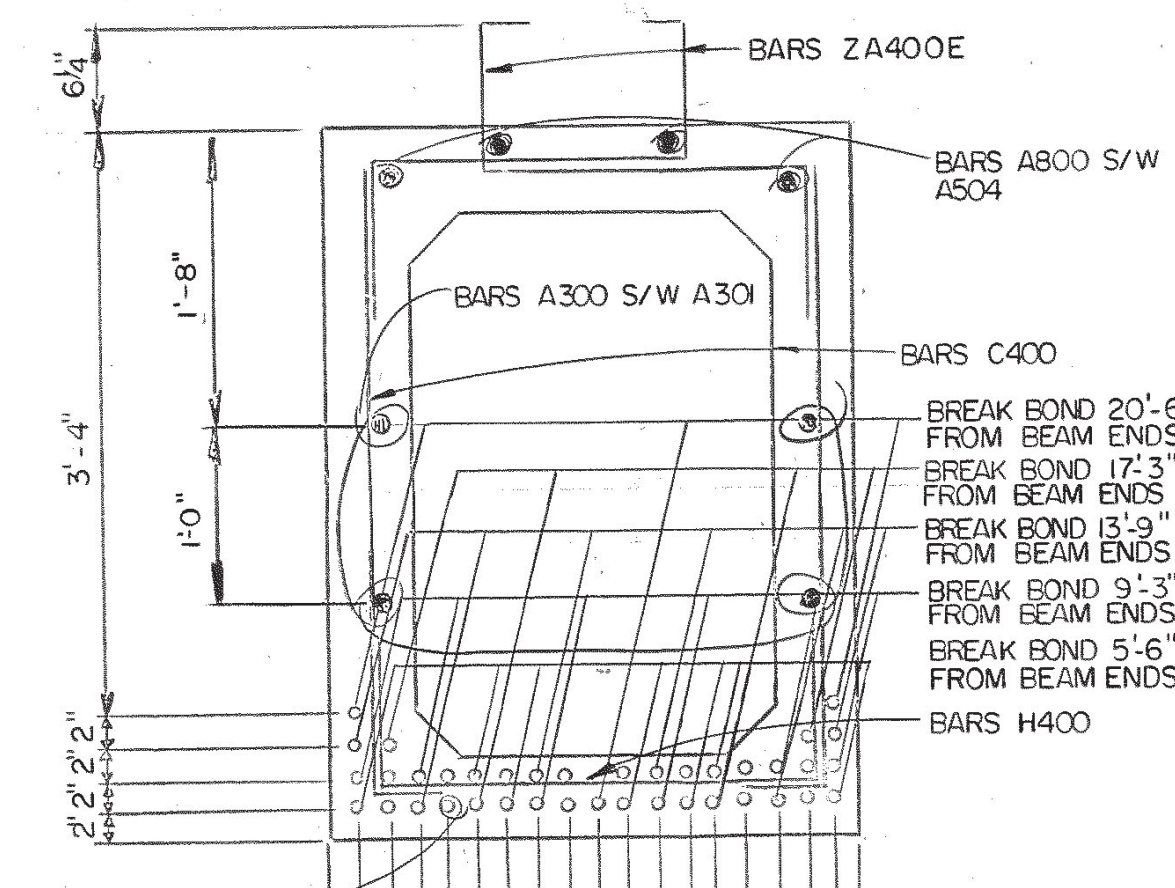
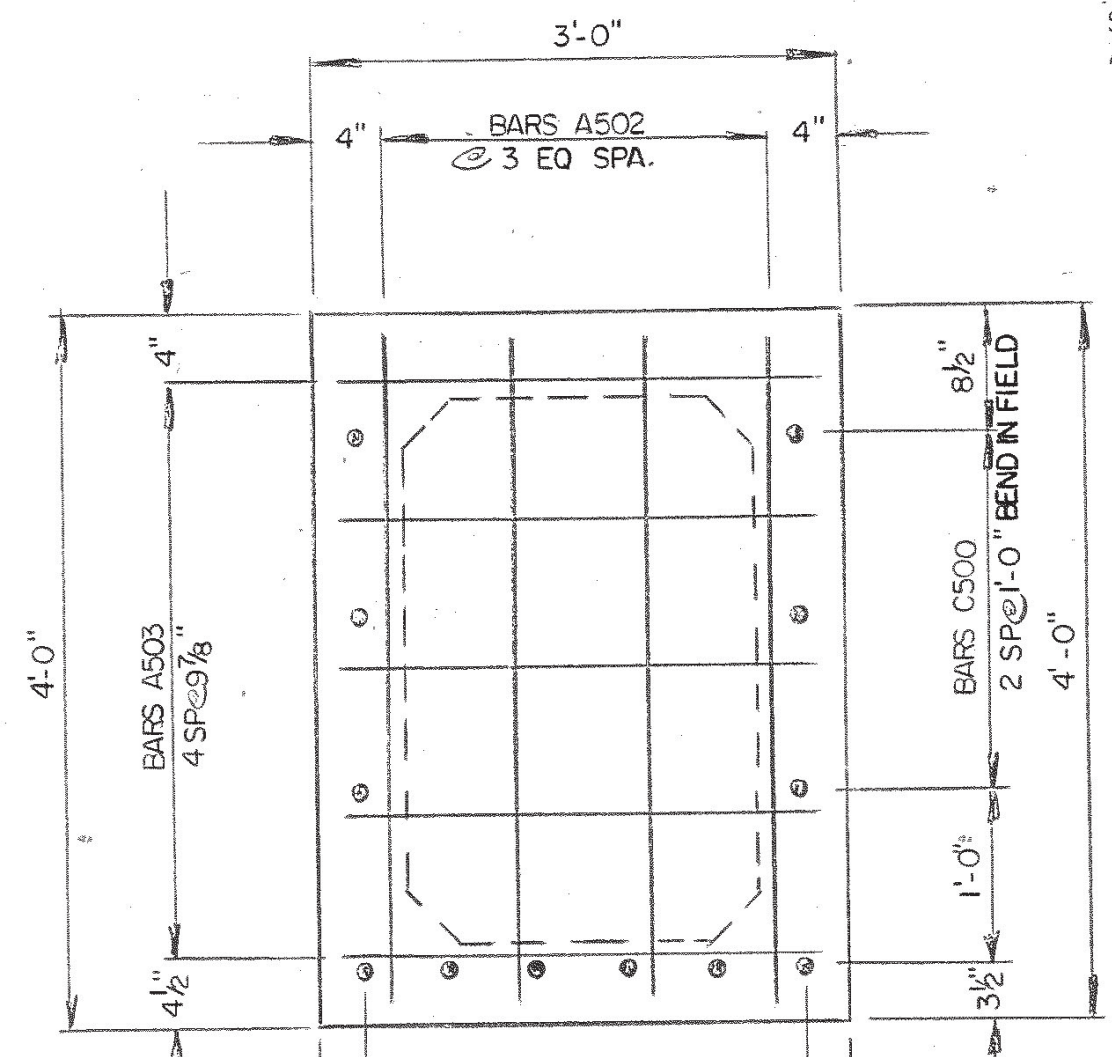
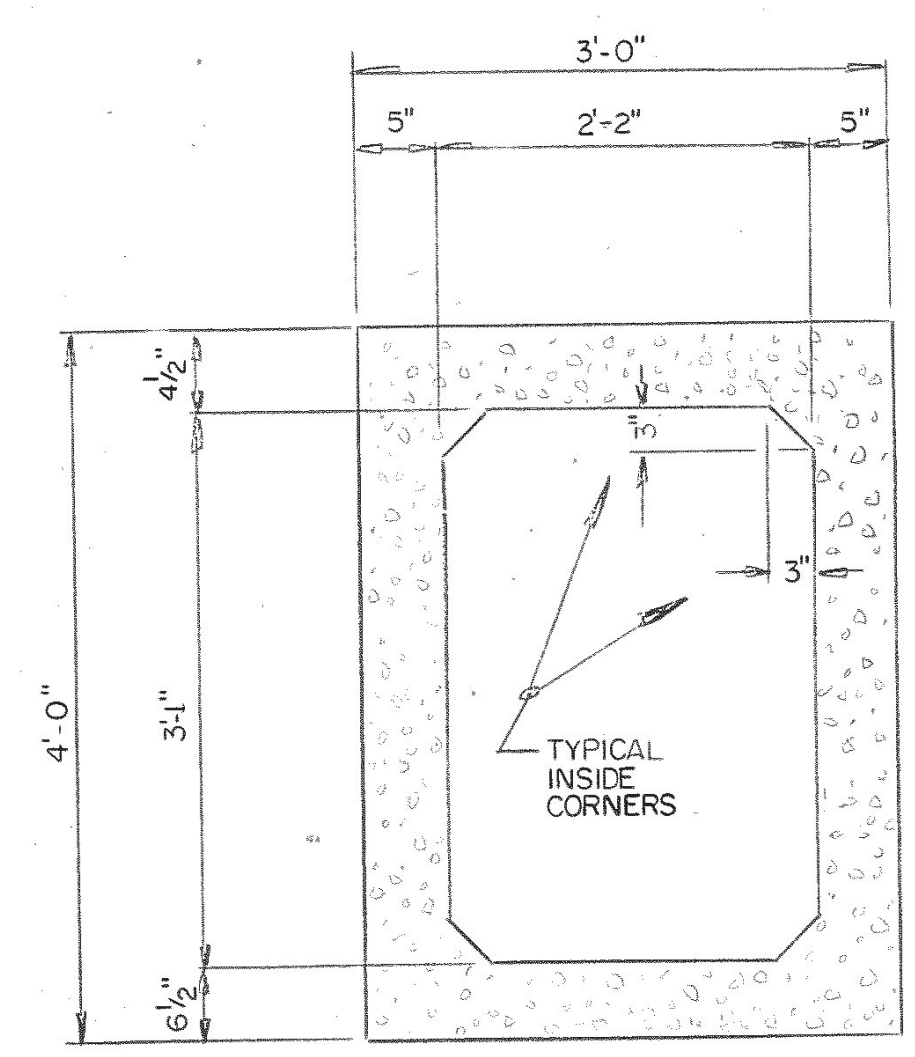
THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN (5000 PSI) AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST (4,000 PSI). SEE LAYOUT SHEET FOR CONCRETE FINISHING NOTE.

AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C600 AND C500 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.

DIMENSIONS "E" AND "F" ARE STIRRUP SPACINGS, ONE COMPLETE STIRRUP SET CONSISTS OF TWO BARS ZA400 E, TWO BARS C400, AND ONE BAR H400.

ESTIMATED QUANTITIES			DIMENSIONAL DATA							
CLASS "A" CONCRETE	REINFORCING STEEL LBS.	PRESTRESSING STEEL LBS.	BEAM NO.	"A"	ANGLE "B"	ANGLE "C"	"D"	"E"	"F"	"G"
18.1	1558	1682	D-1	82'-5 1/2"	78° 30'	101° 30'	4"	11 3/4"	36 SP @ 24"	19'-3 3/8"
18.0	1558	1681	D-2	82'-4 1/2"	78° 30'	101° 30'	4 3/4"	11 1/2"	36 SP @ 24"	19'-3 3/8"
18.0	1558	1679	D-3	82'-3 1/2"	78° 30'	101° 30'	5 1/2"	11 1/4"	36 SP @ 24"	19'-3 3/8"
17.8	1572	1669	D-4	81'-9 1/2"	91° 30'	92°	4 1/4"	8 1/2"	37 SP @ 24"	19'-1 5/8"
17.3	1558	1624	D-5	81'-7"	91° 30'	92°	4 1/4"	8 1/4"	36 SP @ 24"	18'-7"
17.4	1558	1635	D-6	80'-1 1/2"	91° 30'	92°	5"	8 3/4"	36 SP @ 24"	18'-6 3/8"
17.5	1558	1641	D-7	80'-8 1/2"	91° 30'	92°	6"	9 1/4"	36 SP @ 24"	18'-9 1/2"
17.7	1558	1658	D-8	81'-3"	91° 30'	92°	4 1/4"	10 1/4"	36 SP @ 24"	19'-0"
17.7	1558	1792	D-9	81'-6 1/2"	92°	88°	4 3/4"	10 1/2"	36 SP @ 24"	19'-0 7/8"
17.9	1558	1679	D-10	82'-3 1/2"	83°	97°	5 1/2"	11 1/4"	36 SP @ 24"	19'-3 1/8"
17.9	1558	1679	D-11	82'-3 1/2"	87°	93°	5 1/2"	11 1/4"	36 SP @ 24"	19'-3 1/8"
18.0	1558	1681	D-12	82'-4 1/2"	91° 30'	92°	4 3/4"	11 1/2"	36 SP @ 24"	19'-3 3/8"

NOTE: COST OF ELASTOMERIC PADS, AND 1/4" DIA. DOWEL BARS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.



DESIGNED BY RON BACON DATE 9-24-81  
 DRAWN BY BOB SIKES / BILL THISTLEWOOD DATE  
 SUPERVISED BY J.D. MOORE DATE  
 CHECKED BY DATE

TYPICAL SECTION (TYPICAL ALL BEAMS)

END SECTION (TYPICAL ALL BEAMS)

SECTION 'A-A' BEAMS D1 (2 REQ'D), D2 (2 REQ'D), D3 (2 REQ'D), D10 (6 REQ'D), D11 (6 REQ'D), D4, D5, D6, D7, D8, & D12 (1 EACH REQ'D)

SECTION 'A-A' BEAM D-9 (6 REQ'D)

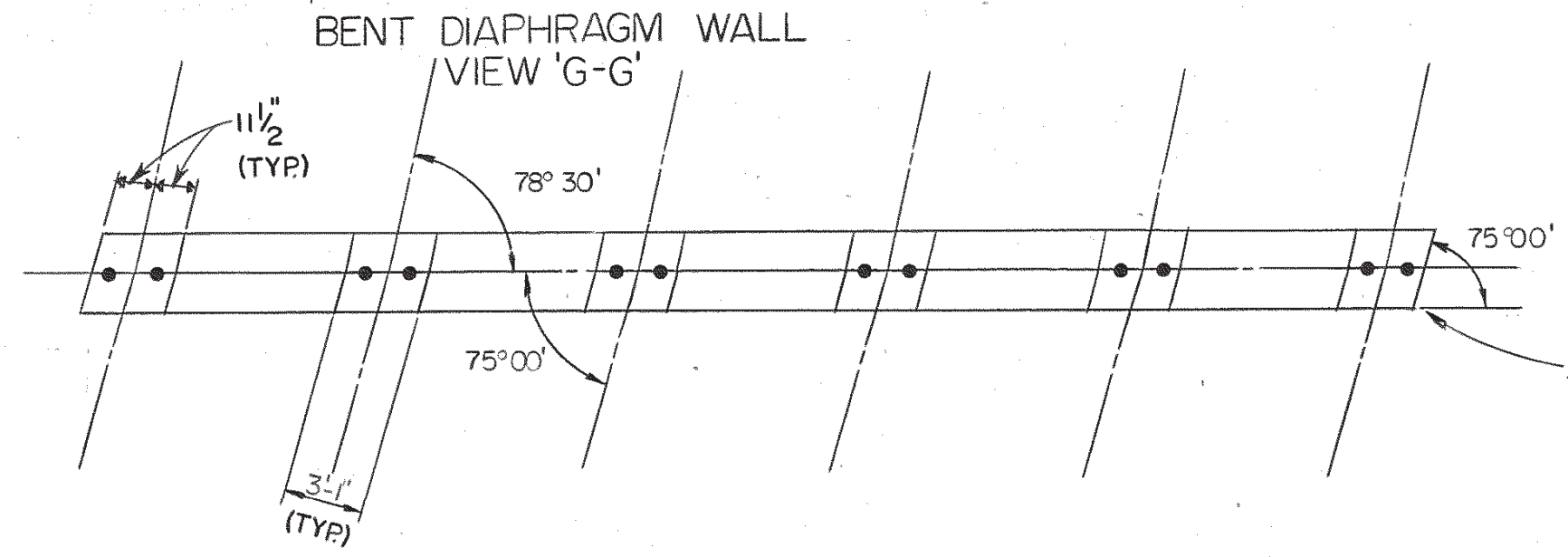
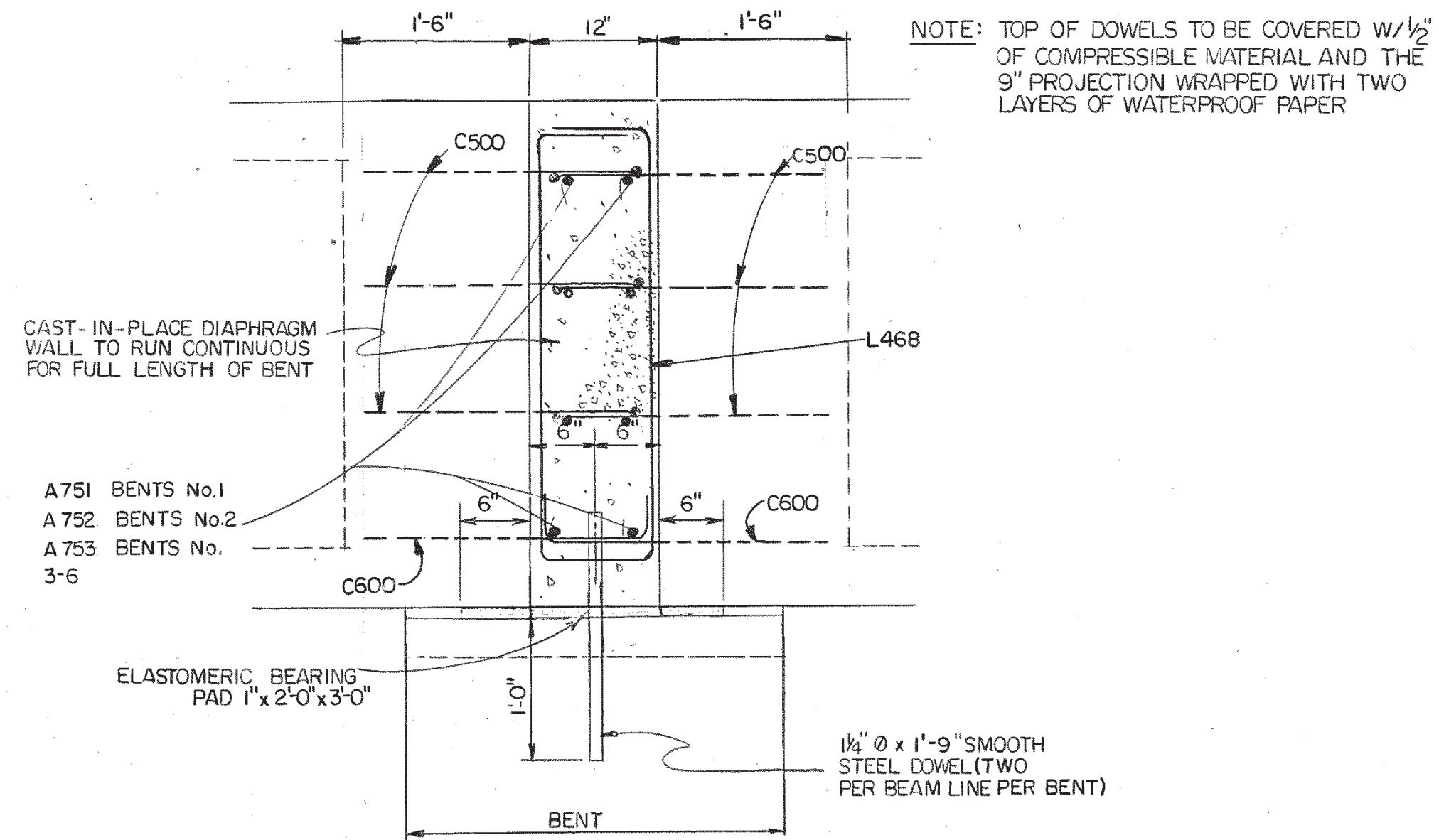
STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

PRESTRESSED BEAM DETAILS  
 BRIDGE No. 1A SOUTHBOUND  
 J.S. YOUNG LANE (M.)  
 OVER S.R. 1 & L&N R.R.  
 STA. 377 + 03.54  
 RUTHERFORD COUNTY  
 1981

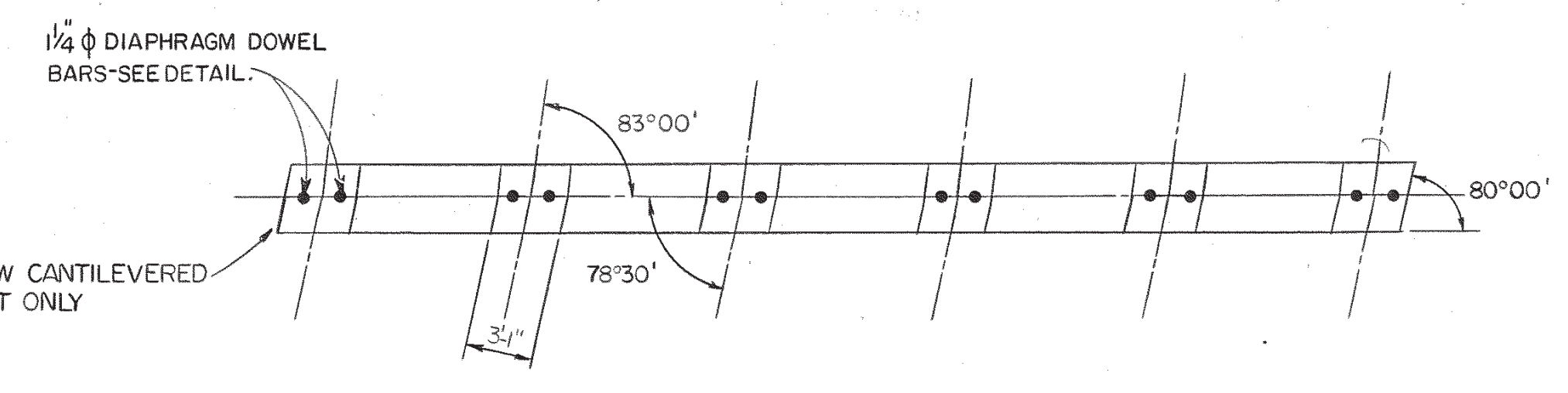
CORRECT ENGINEER OF STRUCTURES  
 APPROVED DIRECTOR OF HIGHWAYS

M-105-32

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50 (6)	81	27L	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-12-82	P.S.D.	DIMENSIONS, NOTES, REINFORCEMENT



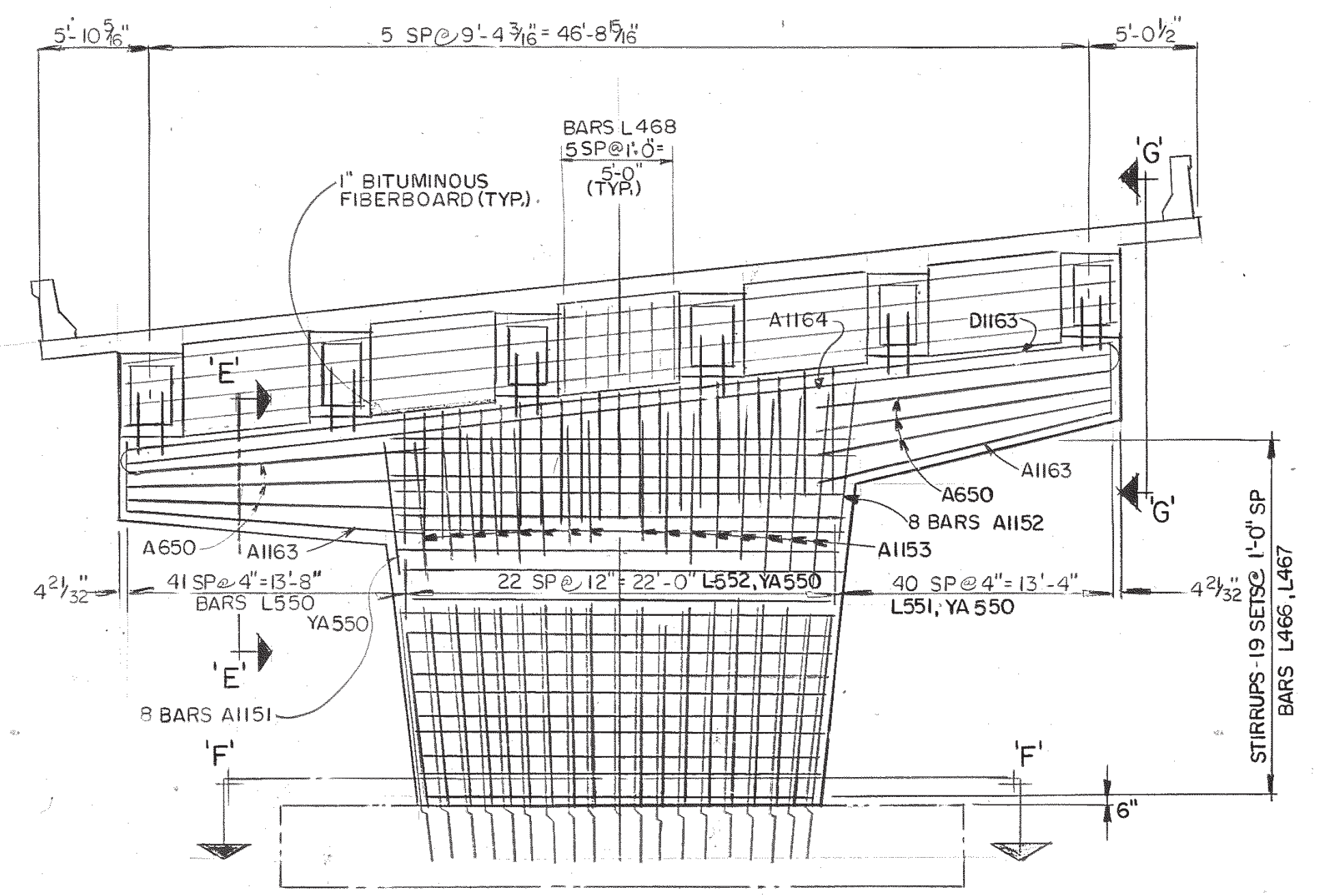
RISER BLOCK PLAN



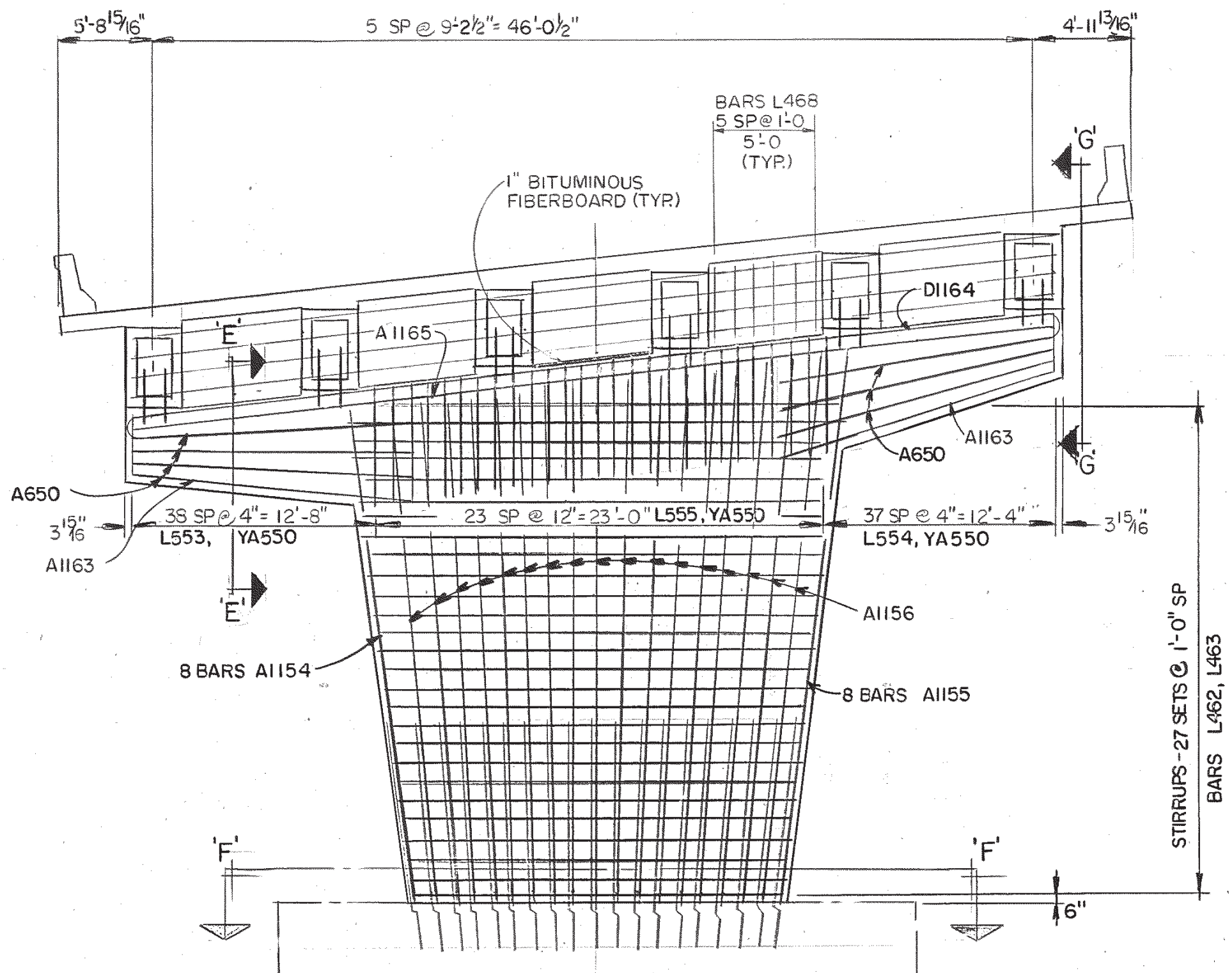
RISER BLOCK PLAN

BENT NOTES

- FOR DIMENSIONS SEE TABLE OF BENT ELEVATIONS AND DIMENSIONS SHEET.
- RISER BLOCKS TO BE POURED MONOLITHICALLY WITH CAP BEAM.
- ALL ELEVATIONS SHOWN LOOKING UP STATION.
- WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING DOWEL BARS. 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".
- RISER BLOCK BEARING PAD SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.
- COLUMN STEEL TO EXTEND AT LEAST 3'-6" INTO CAP BEAM.



BENT No. 1 LOOKING FORWARD ON SURVEY



BENT No. 2 LOOKING FORWARD ON SURVEY

ESTIMATED QUANTITIES

ITEM	CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT lbs.
BENT NO.1	226.6	30,892
BENT NO.2	212.9	27,618

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BENT DETAILS  
BRIDGE No. 1A SOUTHBOUND  
JS YOUNG LANE (M)  
OVER S.R. 1 & L&N R.R.  
STA 377+03.54  
RUTHERFORD COUNTY  
1981

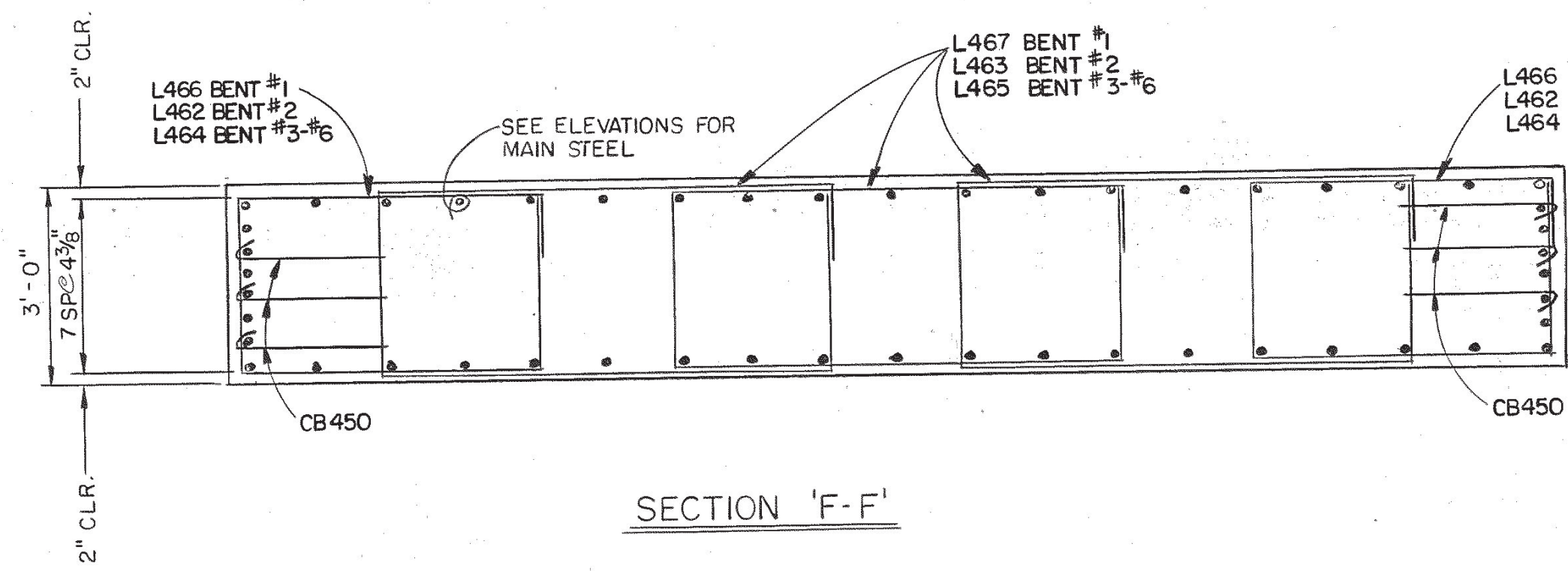
DESIGNED BY: RON BACON  
DRAWN BY: BOB SIKES/PILLI THISTLEWOOD  
SUPERVISED BY: J.D. MOORE  
CHECKED BY: \_\_\_\_\_

DATE: \_\_\_\_\_  
DATE: 8-15-81  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_

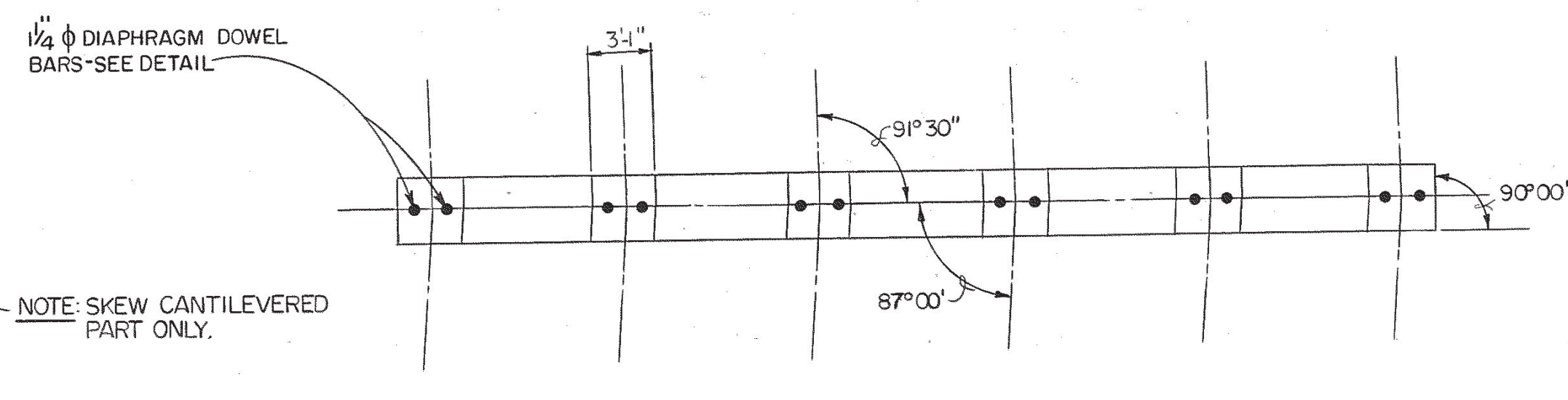
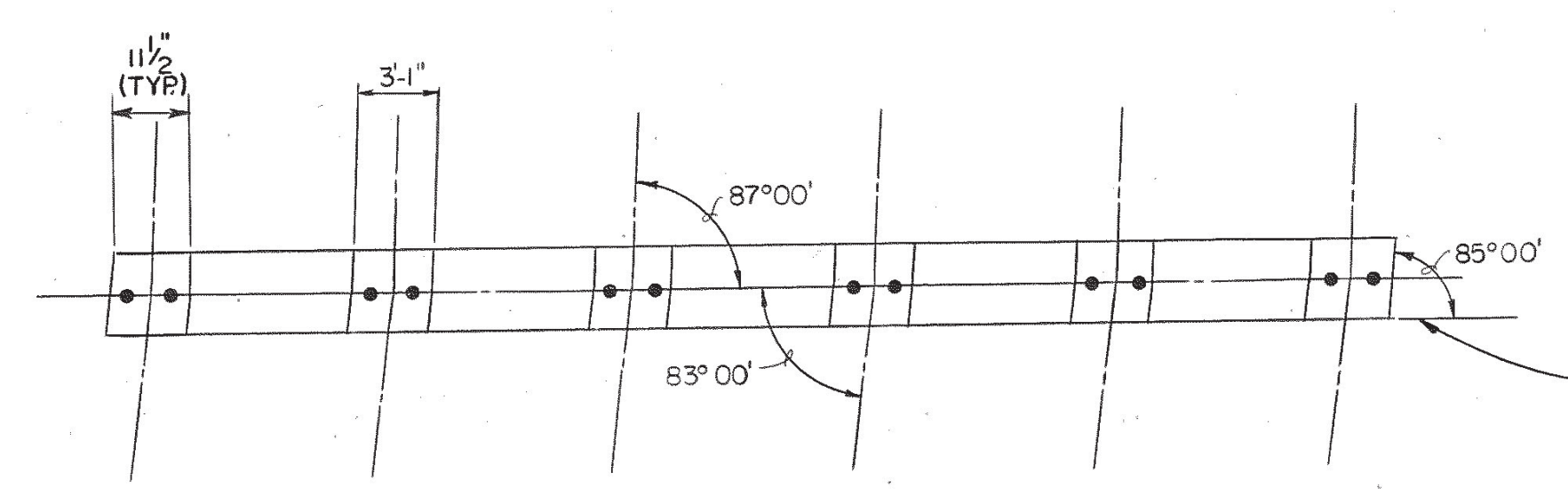
CORRECT: \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED: \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-103-33

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50 (6)	81	27M	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	NSD	DIMENSIONS, REINFORCEMENT
2	2-16-82	NSD	CHANGED YA450 TO YA550

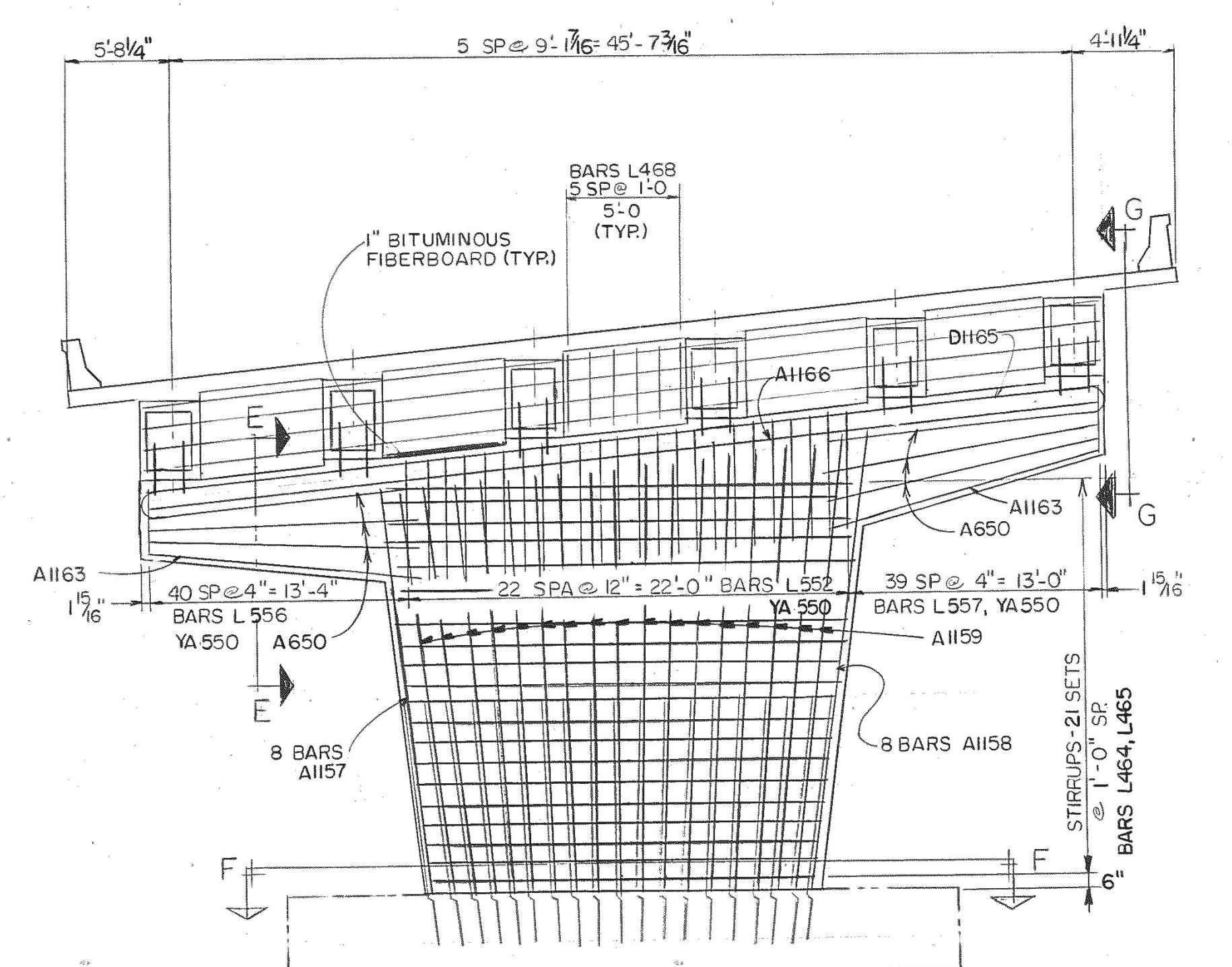


NOTE: ONE STIRRUP SET CONSISTS OF 2 BARS L466 (BENT#1) OR L462 (BENT#2) OR L464 (BENT#3 #6); 3 BARS L467 (BENT#1) OR L463 (BENT#2) OR L465 (BENT#3 #6); AND 6 BARS CB450

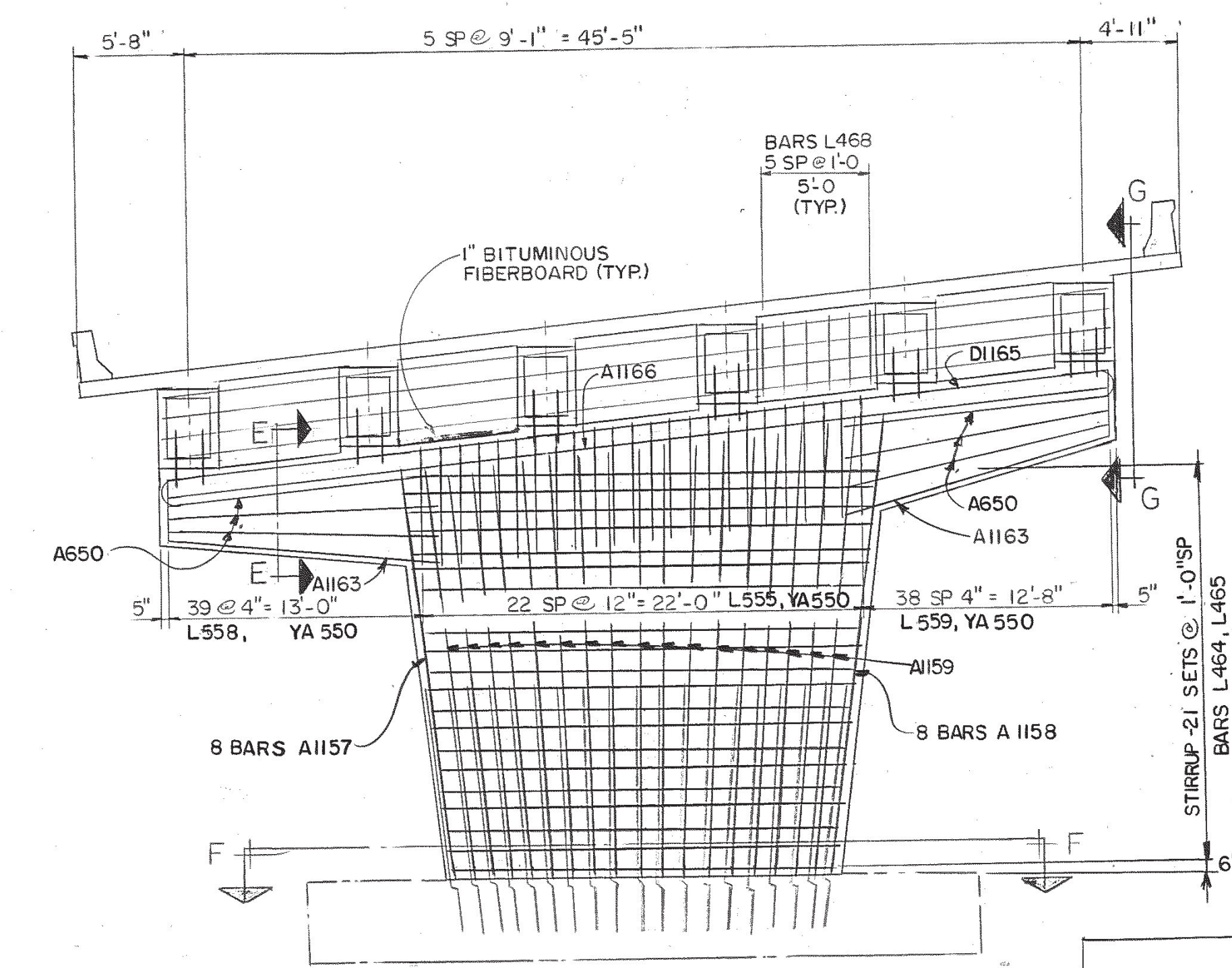


RISER BLOCK PLAN

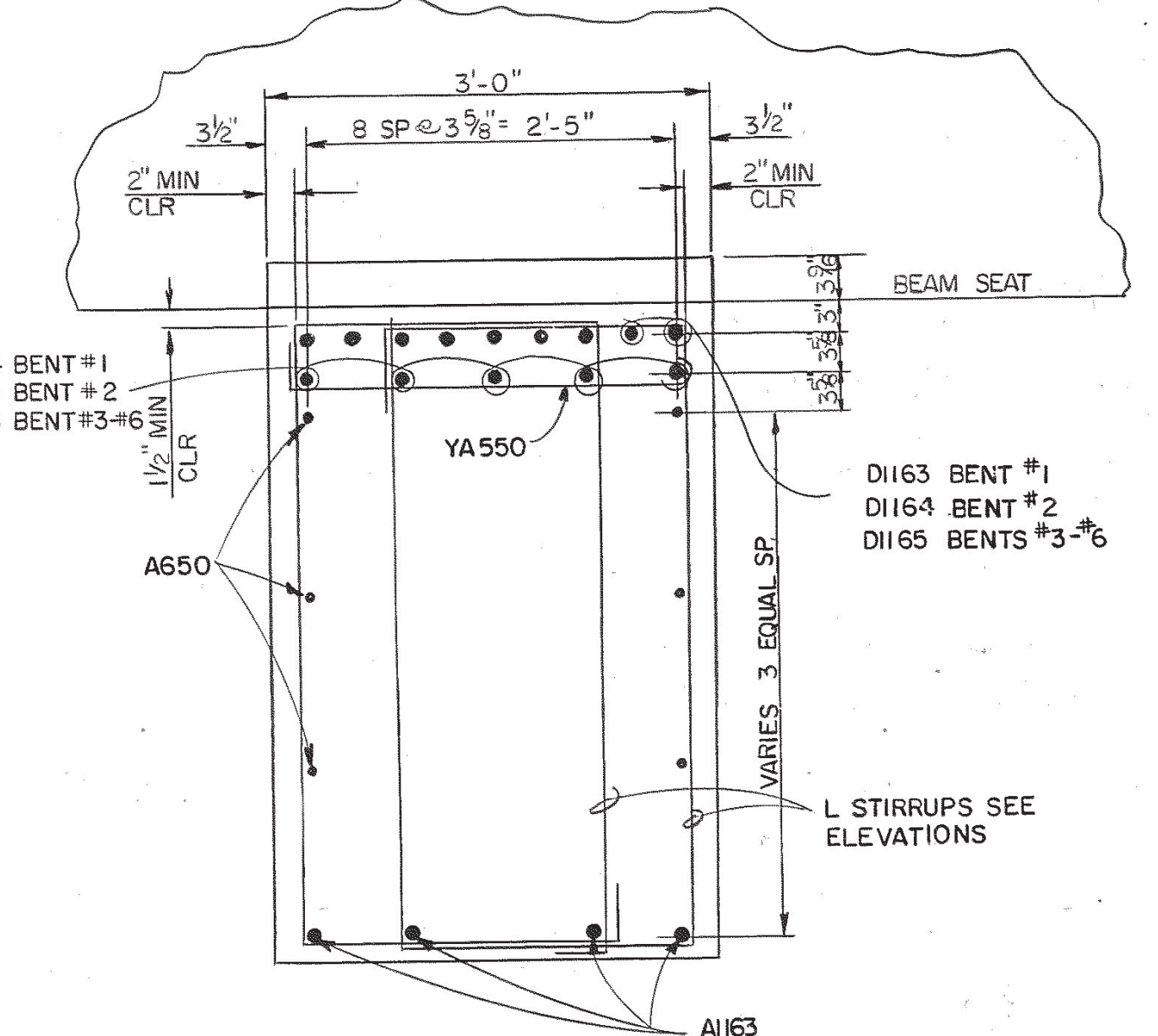
RISER BLOCK PLAN



BENT No. 3  
LOOKING FORWARD ON SURVEY



BENT No. 4  
LOOKING FORWARD ON SURVEY



SECTION VIEW 'E-E'

ESTIMATED QUANTITIES

ITEM	CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT lbs.
BENT NO.3	198.4	25,753
BENT NO.4	198.4	21,726

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BENT DETAILS -  
BRIDGE No 1A SOUTHBOUND  
JS YOUNG LANE (M)  
OVER SR.18 & L&N R.R.  
STA 377+03.54  
RUTHERFORD COUNTY  
—1981—

DESIGNED BY RON BACON DATE  
DRAWN BY BOB SIKES / BILL THISTLEWOOD DATE 8-14-81  
SUPERVISED BY J.D. MOORE DATE  
CHECKED BY DATE

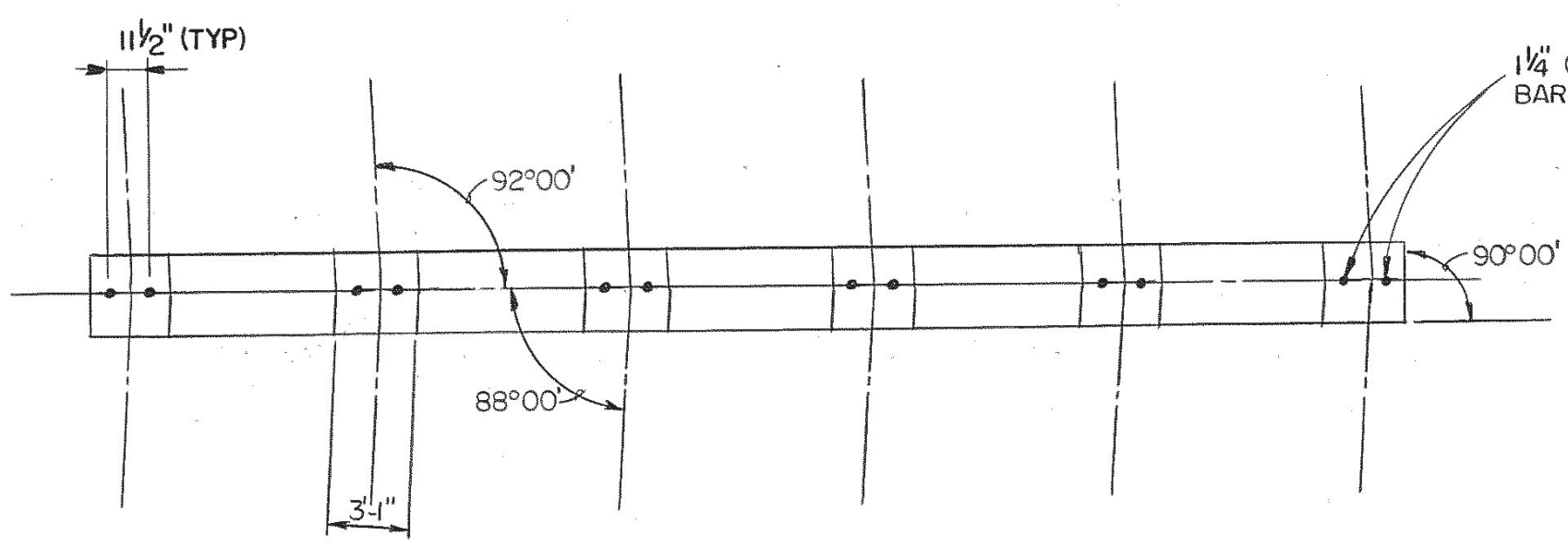
CORRECT ENGINEER OF STRUCTURES  
APPROVED DIRECTOR OF HIGHWAYS

M-105-34

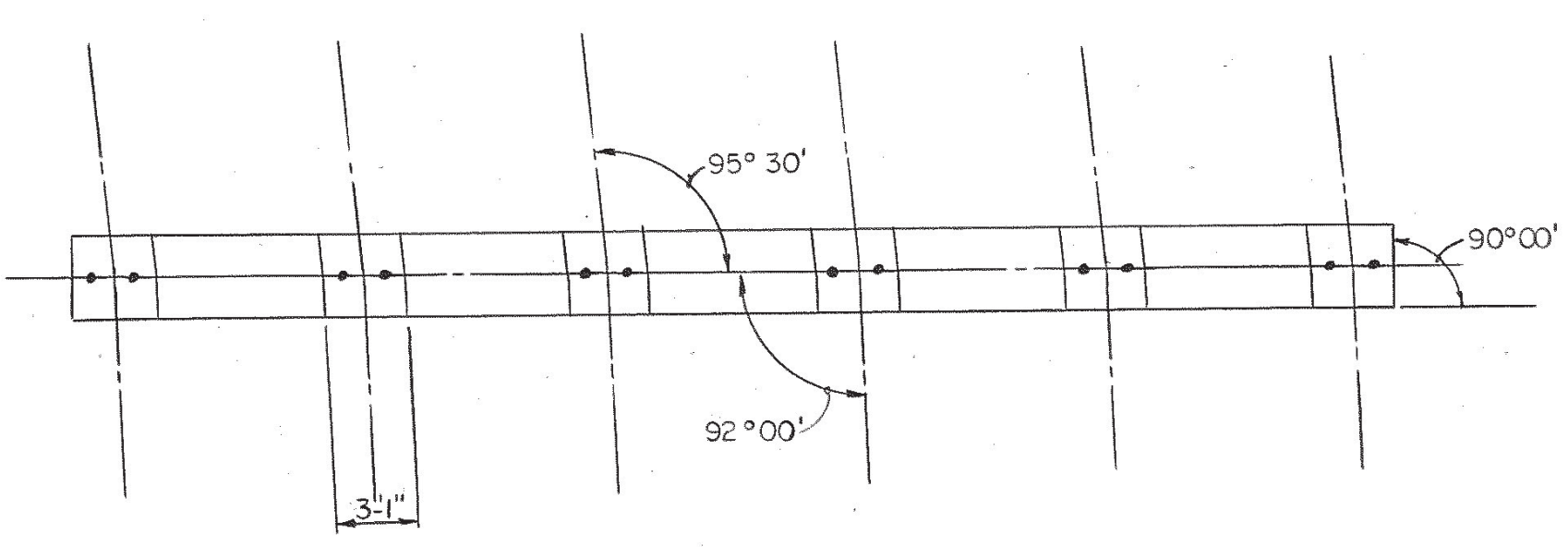
PROJECT NO.	YEAR	SHEET NO.
F-50 (6)	81	27N

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	ASB	DIMENSIONS, ELEVATIONS, REINFORCEMENT

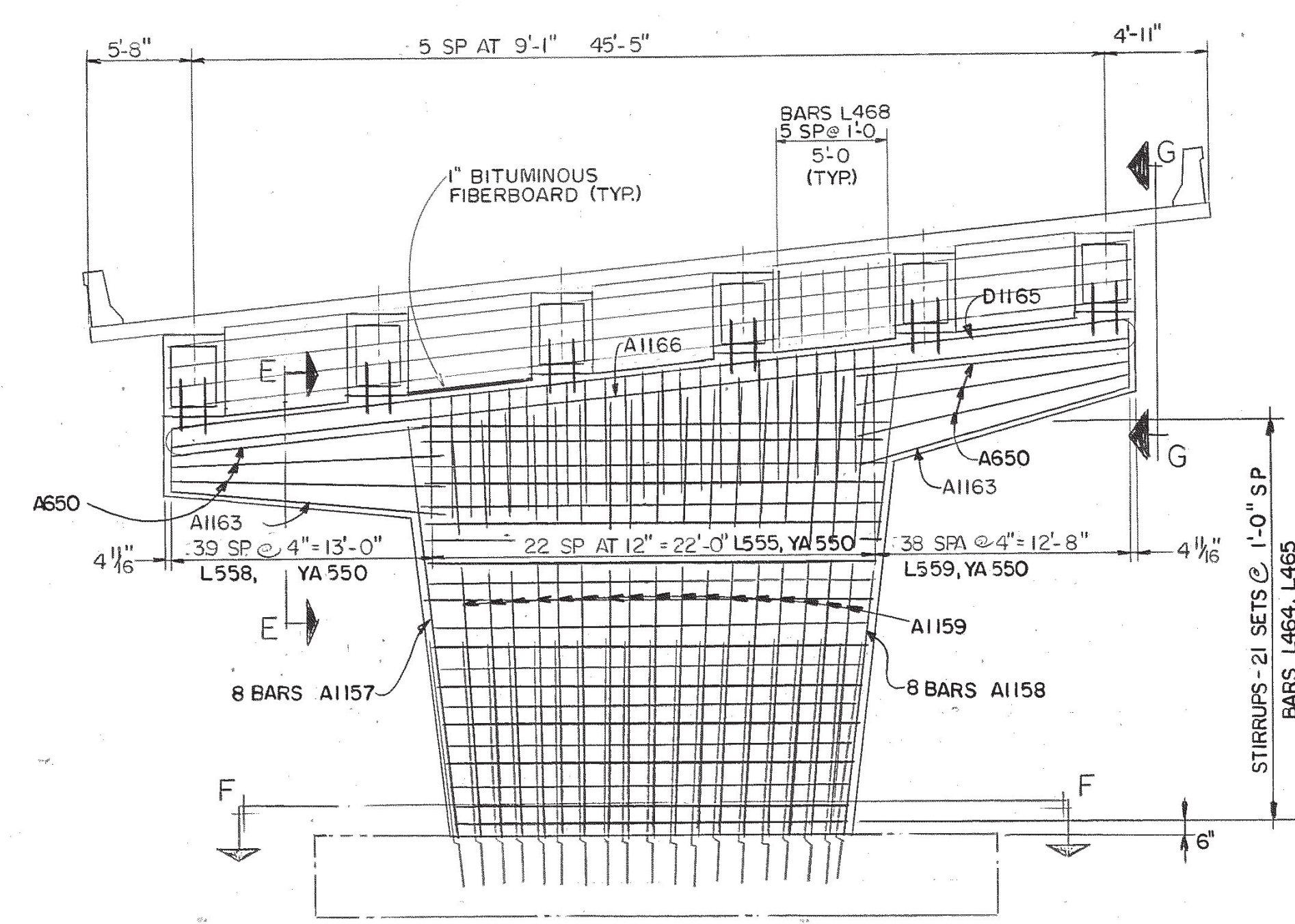
BENT ELEVATIONS AND DIMENSIONS																				
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	h	j	k	m	n	p	q	r	s	t	u	v	w
BENT No 1	573.76	574.67	575.57	576.48	577.38	578.29	554.96	13'-2"	1'-4"	4'-3 <sup>9</sup> / <sub>16</sub> "	13'-4 <sup>1</sup> / <sub>4</sub> "	13'-1"	15'-7"	3'-9"	4'-0"	10'-0"	0'-3 <sup>9</sup> / <sub>16</sub> "	11'-6 <sup>3</sup> / <sub>8</sub> "	11'-9 <sup>1</sup> / <sub>16</sub> "	49'-9 <sup>5</sup> / <sub>16</sub> "
BENT No 2	573.90	574.80	575.70	576.60	577.51	578.41	547.10	21'-3 <sup>3</sup> / <sub>4</sub> "	1'-2 <sup>1</sup> / <sub>2</sub> "	4'-3 <sup>9</sup> / <sub>16</sub> "	12'-0 <sup>1</sup> / <sub>4</sub> "	11'-8 <sup>3</sup> / <sub>4</sub> "	23'-11 <sup>1</sup> / <sub>2</sub> "	3'-4"	4'-0"	10'-0"	0'-3 <sup>9</sup> / <sub>16</sub> "	12'-3 <sup>1</sup> / <sub>16</sub> "	12'-7 <sup>3</sup> / <sub>16</sub> "	48'-7 <sup>7</sup> / <sub>8</sub> "
BENT No 3	573.85	574.76	575.66	576.55	577.45	578.35	552.54	15'-9 <sup>1</sup> / <sub>4</sub> "	1'-3"	4'-3 <sup>9</sup> / <sub>16</sub> "	12'-5 <sup>1</sup> / <sub>4</sub> "	12'-1 <sup>3</sup> / <sub>4</sub> "	18'-4"	3'-5 <sup>3</sup> / <sub>4</sub> "	4'-0"	10'-0"	0'-3 <sup>9</sup> / <sub>16</sub> "	11'-10 <sup>1</sup> / <sub>16</sub> "	12'-2 <sup>3</sup> / <sub>16</sub> "	48'-7 <sup>7</sup> / <sub>8</sub> "
BENT No 4	573.64	574.53	575.43	576.33	577.23	578.13	552.32	15'-9 <sup>1</sup> / <sub>2</sub> "	1'-2 <sup>3</sup> / <sub>4</sub> "	4'-3 <sup>9</sup> / <sub>16</sub> "	12'-4 <sup>1</sup> / <sub>4</sub> "	12'-0 <sup>1</sup> / <sub>2</sub> "	18'-4 <sup>1</sup> / <sub>2</sub> "	3'-5 <sup>3</sup> / <sub>4</sub> "	4'-0"	10'-0"	0'-3 <sup>9</sup> / <sub>16</sub> "	11'-10 <sup>3</sup> / <sub>4</sub> "	12'-2 <sup>1</sup> / <sub>2</sub> "	48'-6"
BENT No 5	573.22	574.12	575.00	575.92	576.82	577.71	551.90	15'-9 <sup>1</sup> / <sub>2</sub> "	1'-2 <sup>3</sup> / <sub>4</sub> "	4'-3 <sup>9</sup> / <sub>16</sub> "	12'-4"	12'-0 <sup>1</sup> / <sub>2</sub> "	18'-4 <sup>1</sup> / <sub>2</sub> "	3'-5 <sup>3</sup> / <sub>4</sub> "	4'-0"	10'-0"	0'-3 <sup>9</sup> / <sub>16</sub> "	11'-10 <sup>1</sup> / <sub>16</sub> "	12'-2 <sup>3</sup> / <sub>16</sub> "	48'-5 <sup>3</sup> / <sub>8</sub> "
BENT No 6	572.62	573.52	574.43	575.33	576.24	577.14	550.51	16'-7"	1'-2 <sup>3</sup> / <sub>4</sub> "	4'-3 <sup>9</sup> / <sub>16</sub> "	12'-3 <sup>3</sup> / <sub>4</sub> "	12'-0 <sup>1</sup> / <sub>4</sub> "	19'-2 <sup>1</sup> / <sub>4</sub> "	3'-5 <sup>3</sup> / <sub>4</sub> "	4'-0"	10'-0"	0'-3 <sup>9</sup> / <sub>16</sub> "	12'-0 <sup>3</sup> / <sub>8</sub> "	12'-3 <sup>3</sup> / <sub>8</sub> "	48'-7 <sup>1</sup> / <sub>4</sub> "



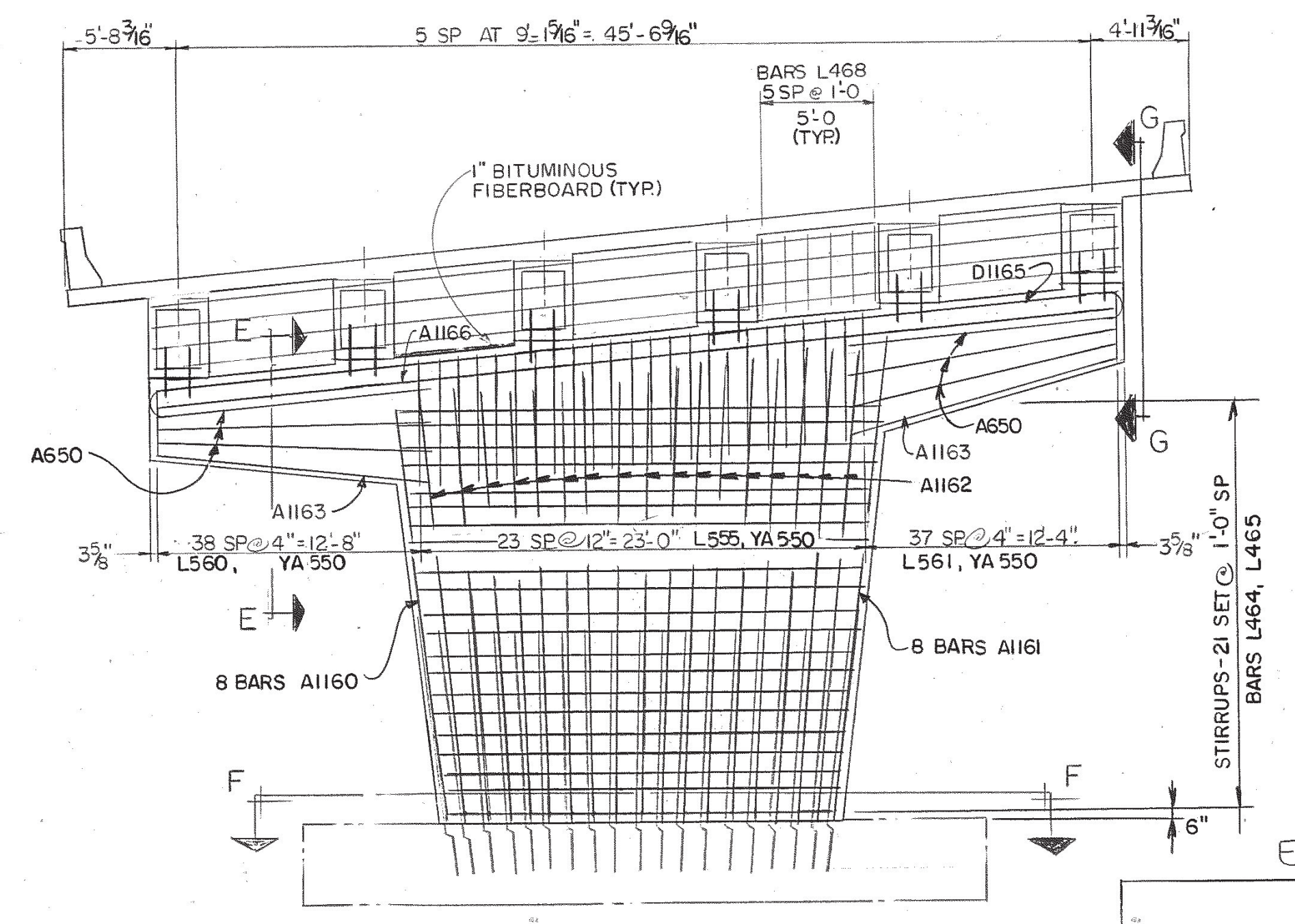
RISER BLOCK PLAN



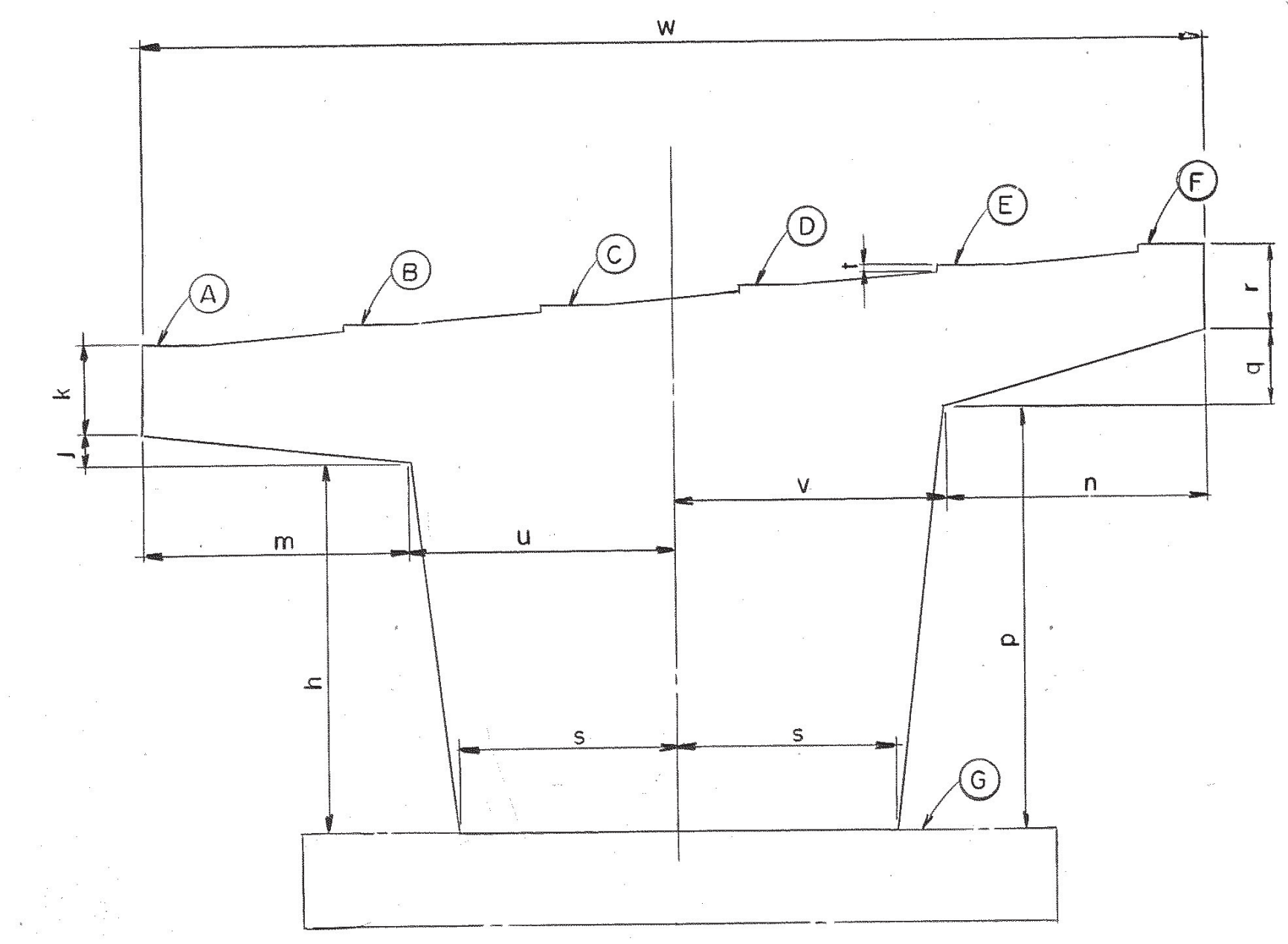
RISER BLOCK PLAN



BENT No. 5  
LOOKING FORWARD ON SURVEY



BENT No. 6  
LOOKING FORWARD ON SURVEY



ESTIMATED QUANTITIES

ITEM	CLASS "A" CONCRETE	STEEL BAR REINFORCEMENT
	C.Y.	lbs
BENT NO. 5	198.3	21,726
BENT NO. 6	234.0	31,637

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BENT DETAILS  
BRIDGE No 1A SOUTHBOUND  
JS YOUNG LANE (M)  
OVER S.R.1 & L&N R.R.  
STA 377 + 03.54  
RUTHERFORD COUNTY  
—1981—

DESIGNED BY RON BACON  
DRAWN BY BOB SIKES/BILL THISTLEWOOD  
SUPERVISED BY JD MOYRE  
CHECKED BY \_\_\_\_\_  
DATE 8-15-81  
DATE \_\_\_\_\_  
DATE \_\_\_\_\_

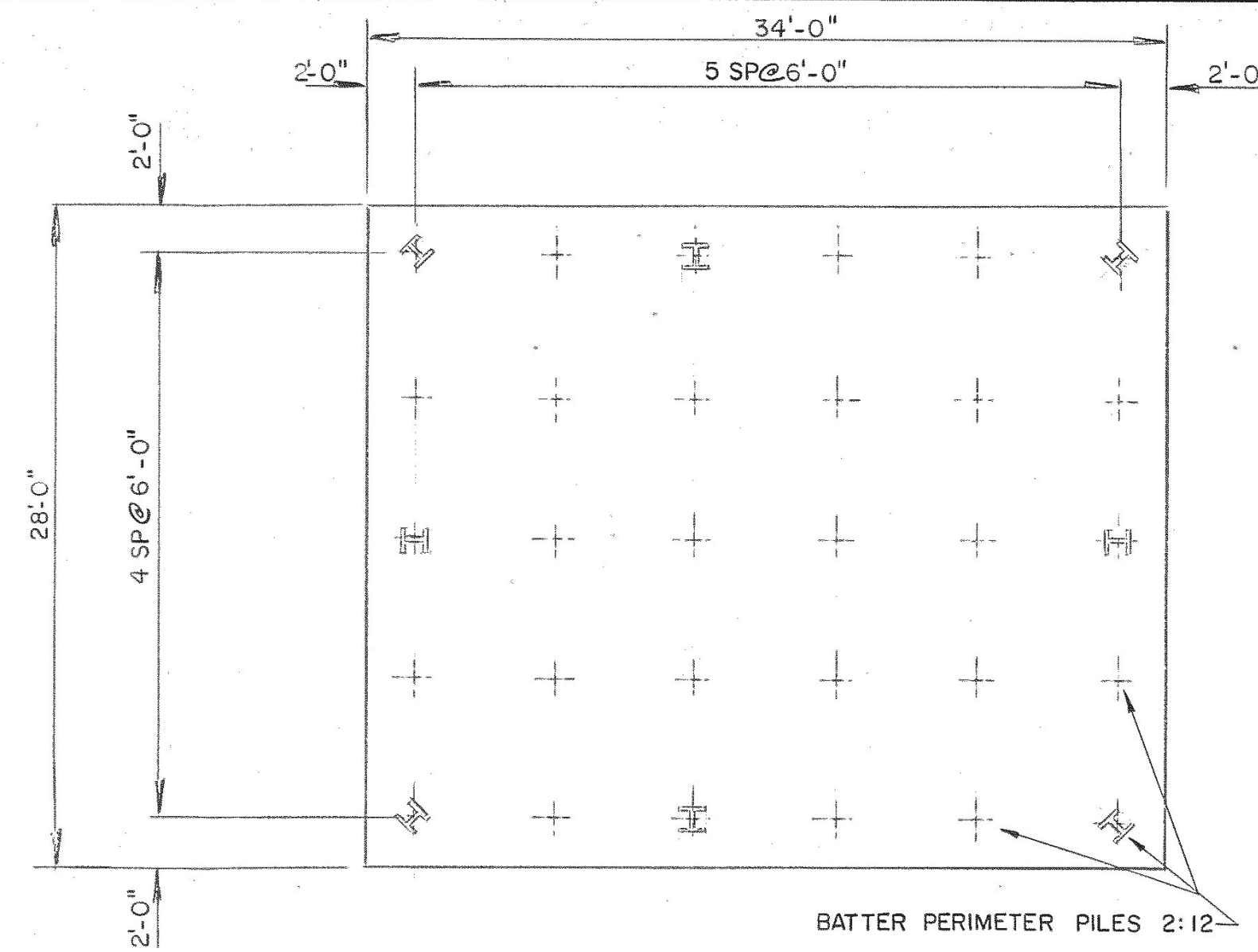
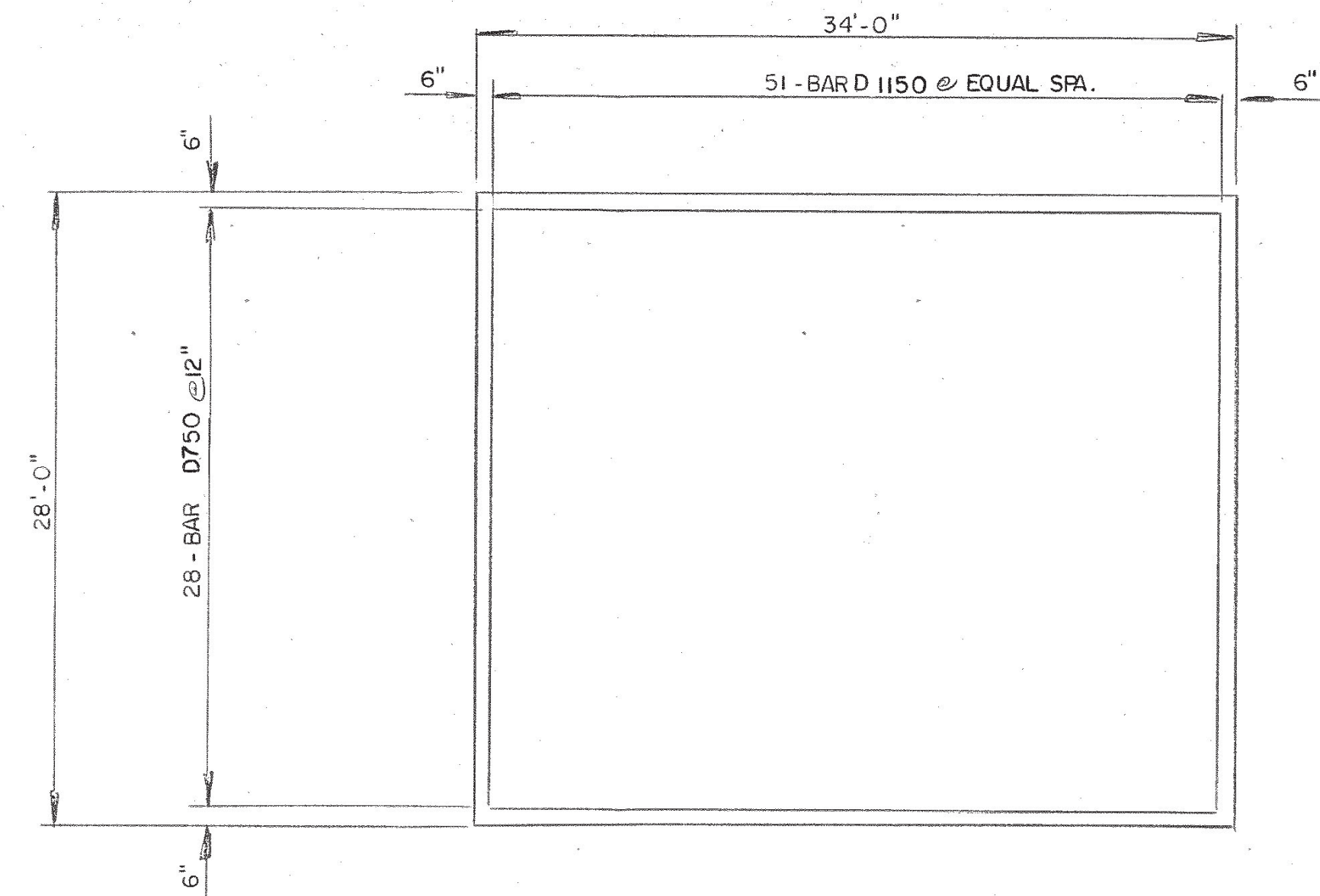
CORRECT \_\_\_\_\_  
ENGINEER OF STRUCTURES  
APPROVED \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

M-105-35

CONST. NO. 75002-3231-14

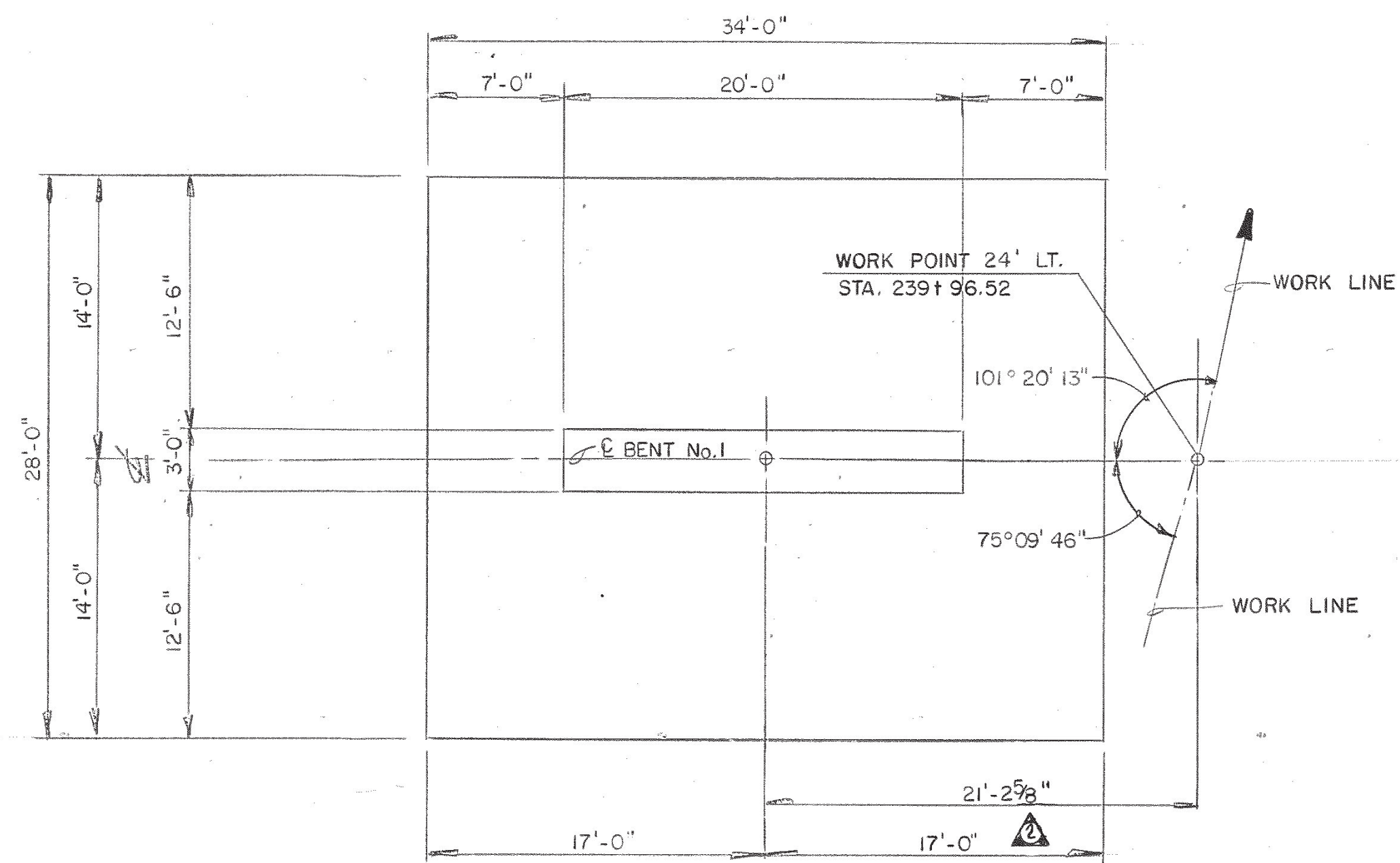
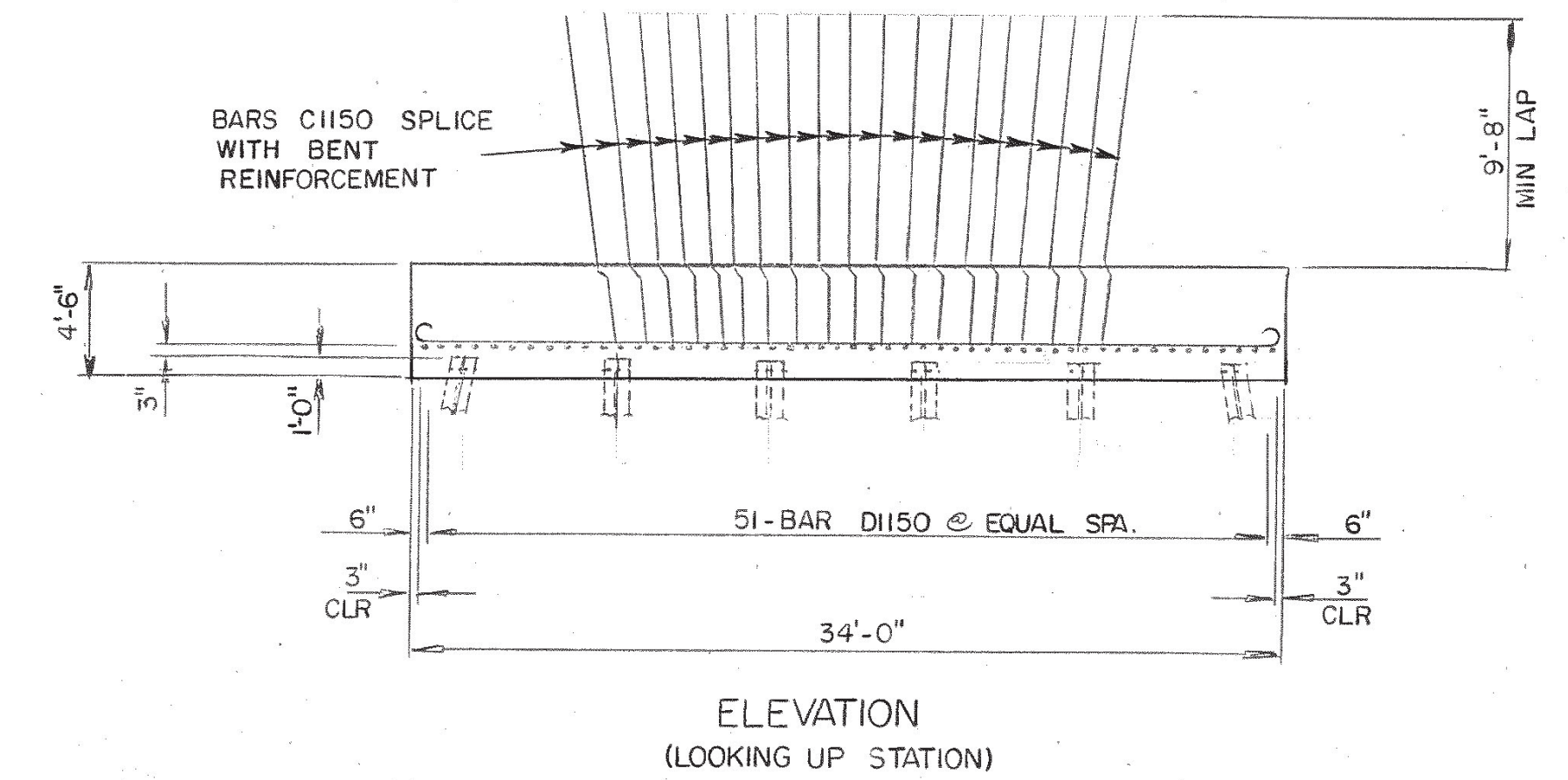
PROJECT NO.	YEAR	SHEET NO.
F-50(6)	81	27P

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	RSB	CHANGED ELEVATIONS
2	3-16-82	RSB	CHANGED W.P. OFFSET DIM.



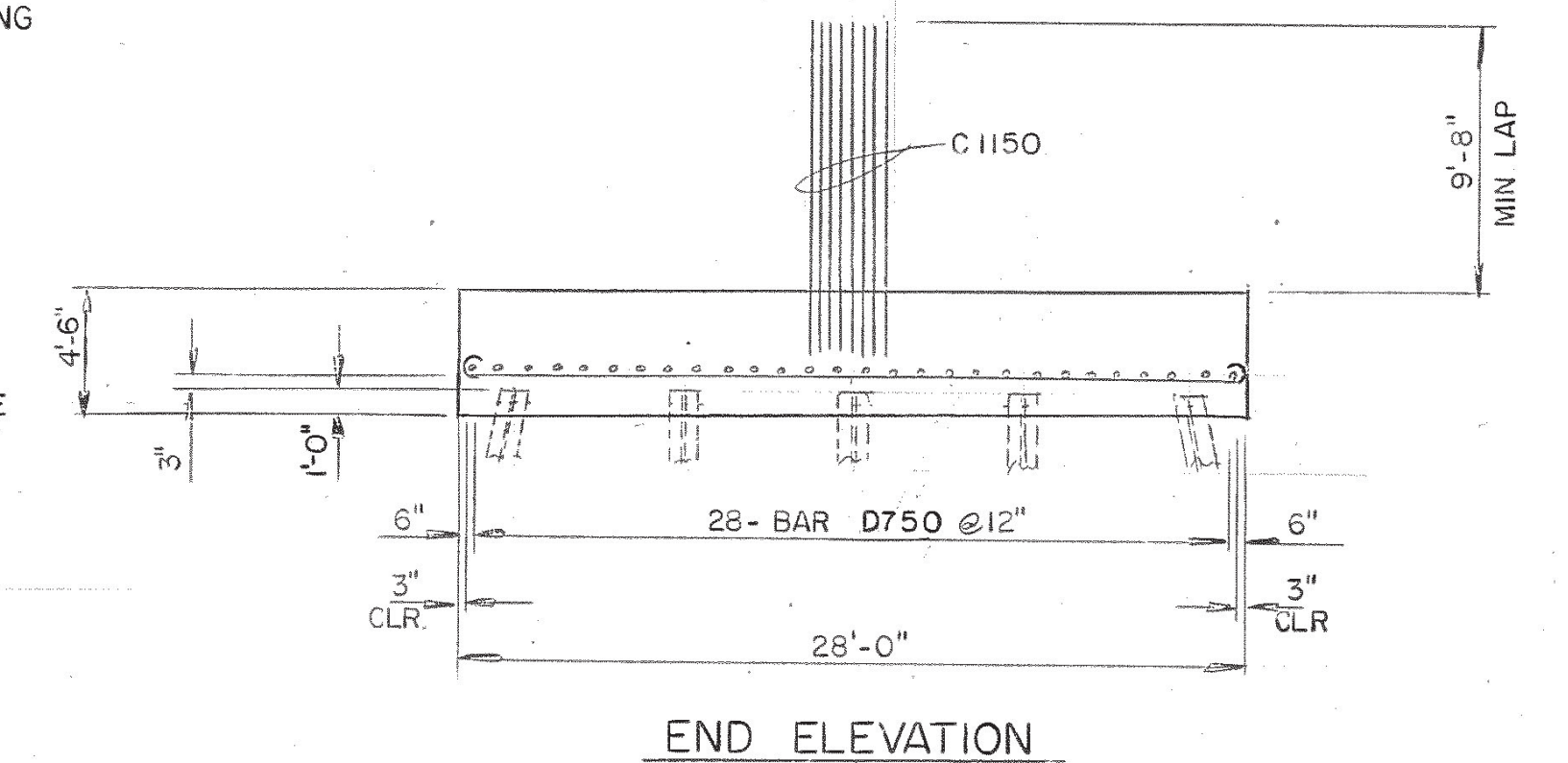
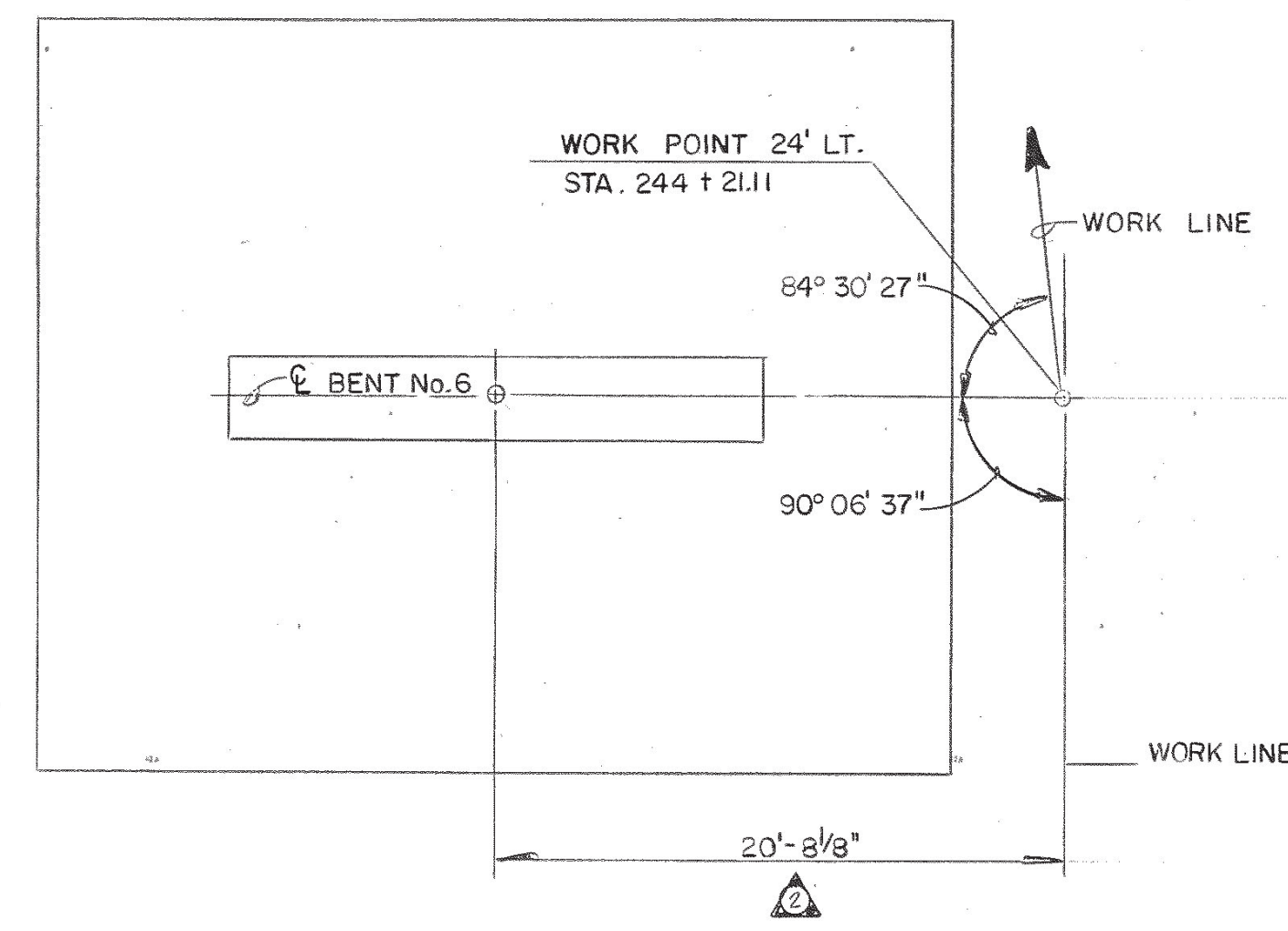
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ELEVATION DATA		
	BENT #1	BENT #6
TOP OF FOOTING	554.96'	550.51'
BOTTOM OF FOOTING	550.46'	546.01'
PILE CUT-OFF	551.46'	547.01'



NOTE: DIMENSIONS GIVEN AT BENT 1 ARE TYPICAL FOR BENT 6 EXCEPT FOR WORK POINT LINE

NOTE: ALL VIEWS SHOWN LOOKING UP STATION



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

FOOTING DETAILS  
BRIDGE No. 1A SOUTHBOUND  
OVER S.R. 18 L&N RR.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
—1981—

DESIGNED BY RON BACON DATE \_\_\_\_\_  
DRAWN BY BOB SIKES / BILL THISTLEWOOD DATE 8-14-81  
SUPERVISED BY J. D. MOORE DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

FOOTING  
— PLAN VIEW —  
BENT #1

FOOTING  
— PLAN VIEW —  
BENT #6

CORRECT \_\_\_\_\_  
ENGINEER OF STRUCTURES

APPROVED \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

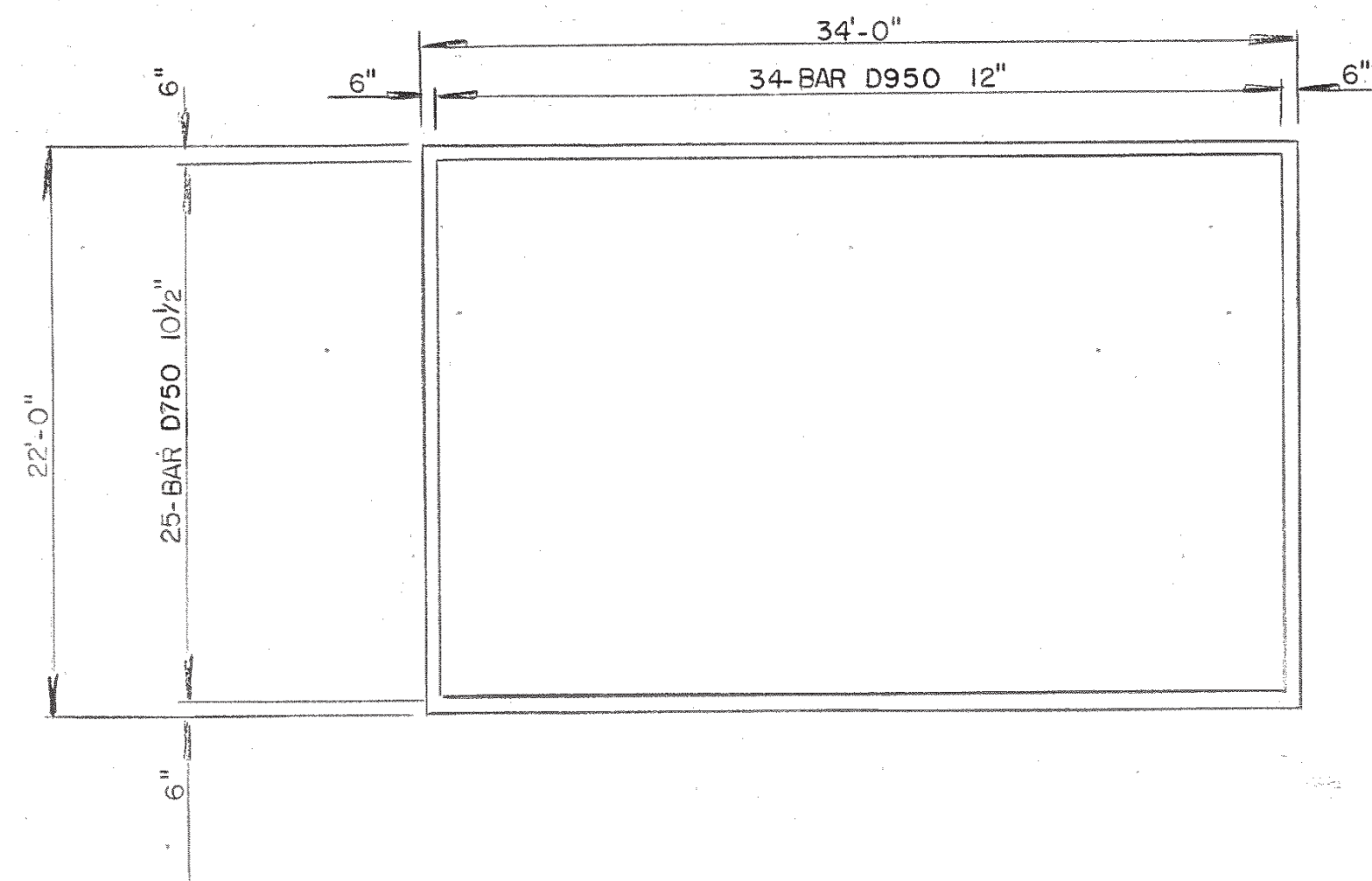
M-105-36

CONST. NO. 75002-3231-14

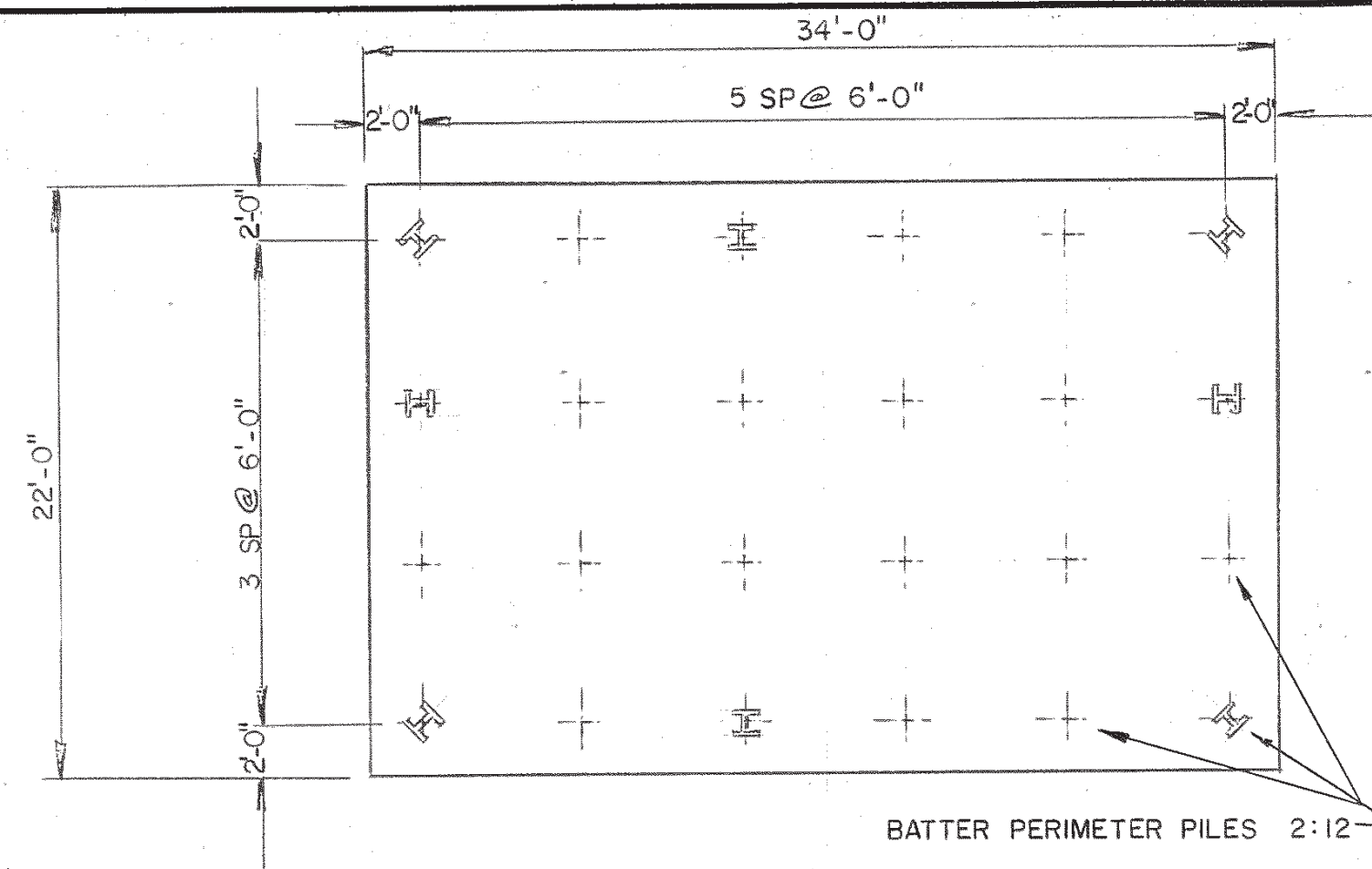
PROJECT NO.	YEAR	SHEET NO.
F-50 (6)	81	270

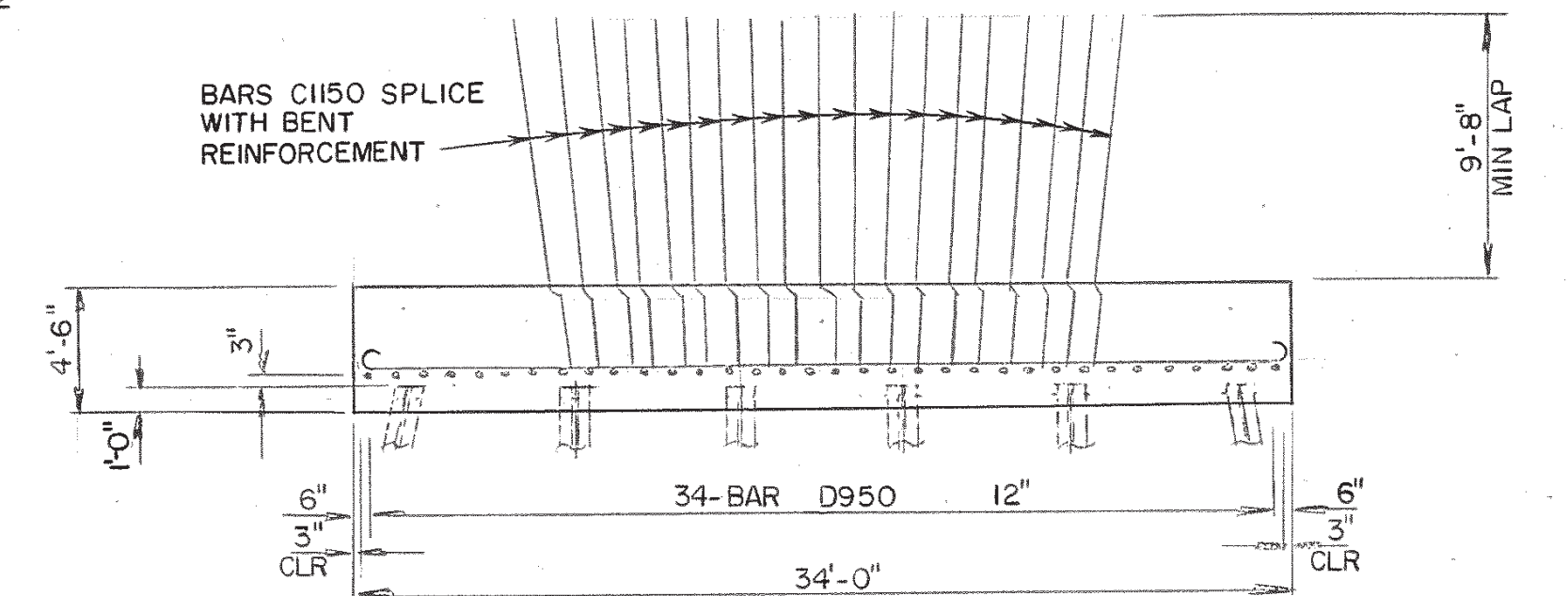
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	RSB	CHANGED ELEVATIONS
2	3-16-82	RSB	CHANGED W.P. OFFSET DIMENSIONS



FOOTING REINFORCEMENT



PILE LAYOUT

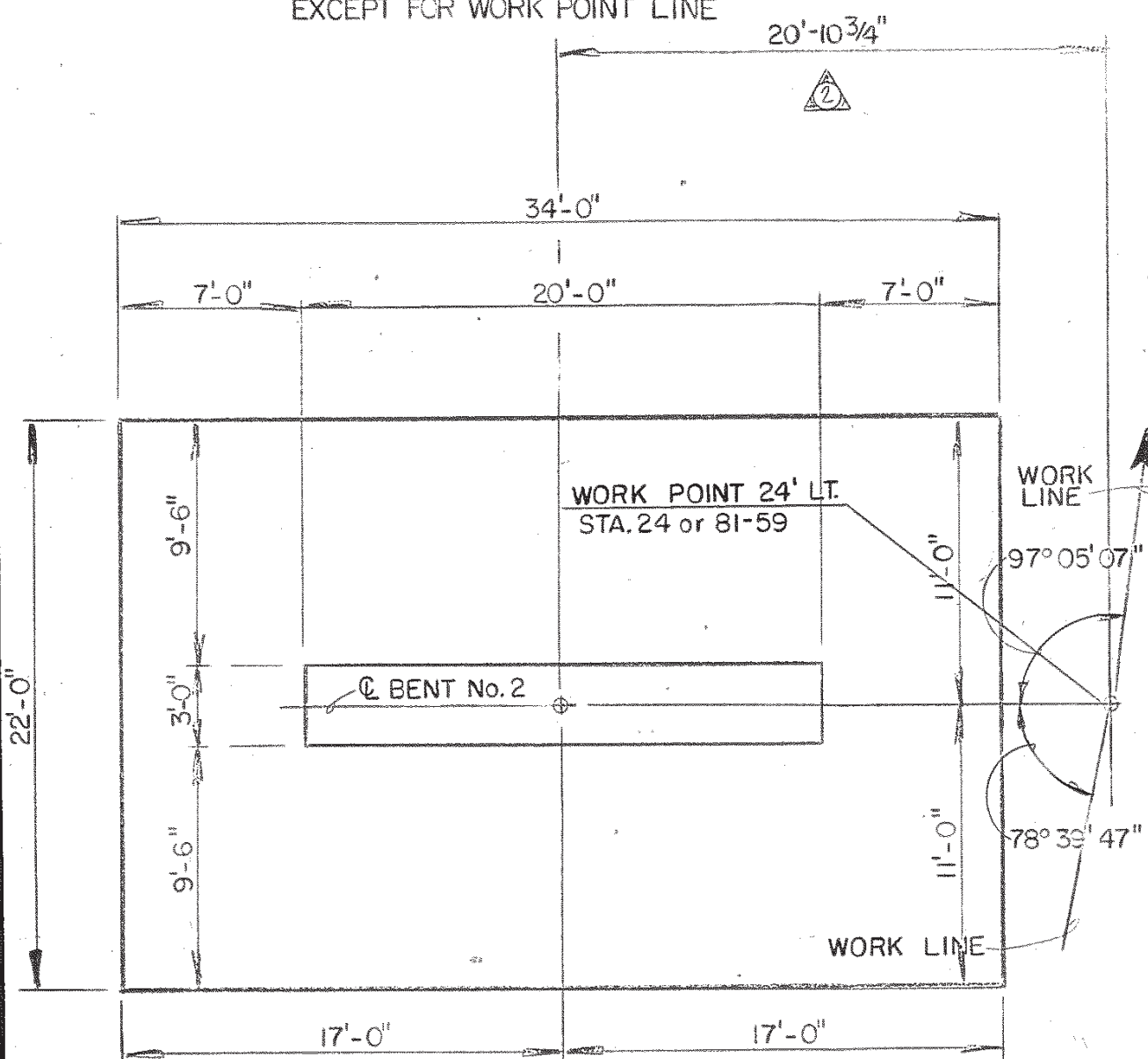


ELEVATION (LOOKING UP STATION)

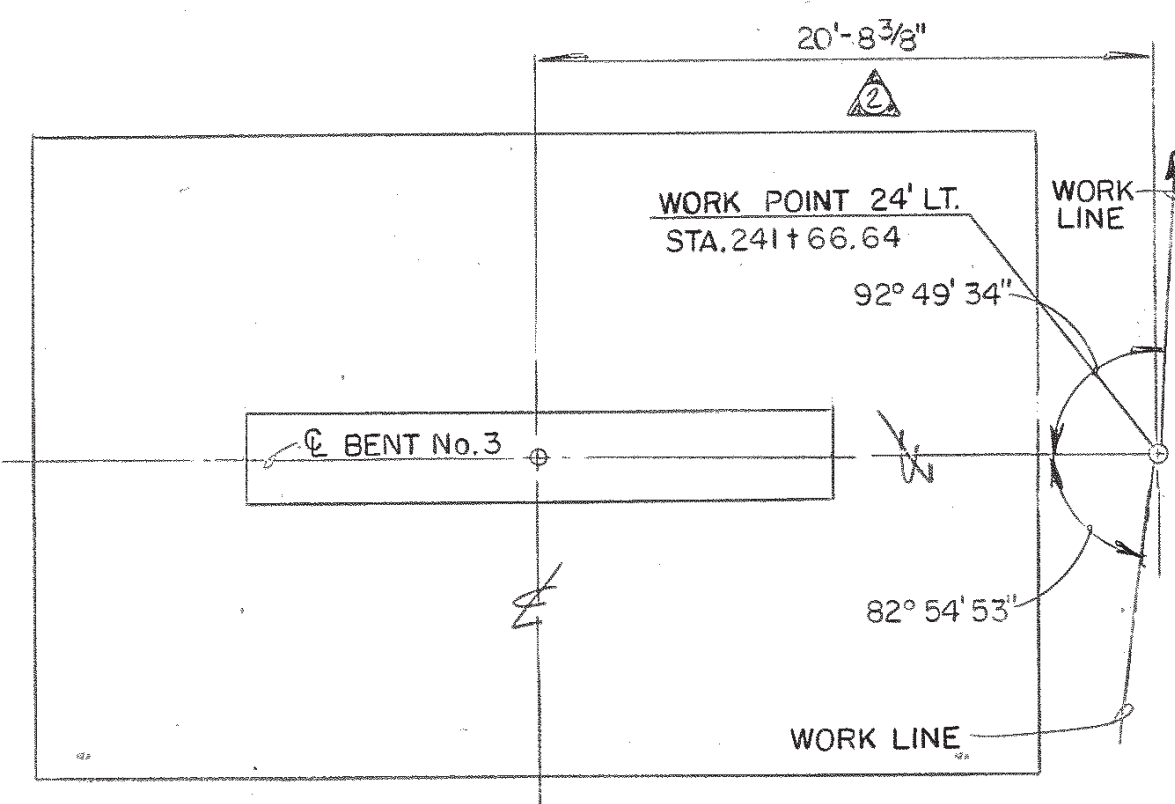
ELEVATION DATA				
	BENT #2	BENT #3	BENT #4	BENT #5
TOP OF FOOTING	547.10'	552.54'	552.32'	551.90'
BOTTOM OF FOOTING	542.60'	548.04'	547.82'	547.40'
PILE CUT-OFF	543.60	549.04	548.82	548.40'

NOTE: DIMENSIONS GIVEN AT BENT #2 ARE TYPICAL FOR BENTS 3, 4, & 5, EXCEPT FOR WORK POINT LINE

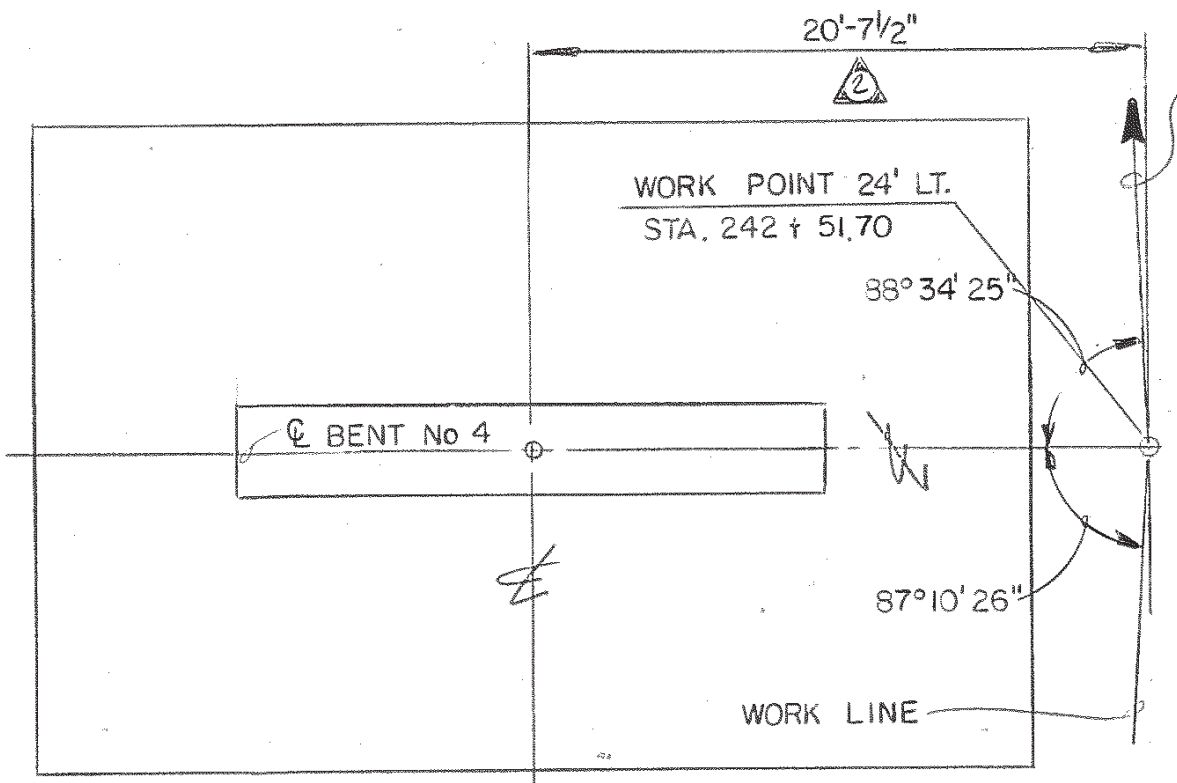
NOTE ALL VIEWS SHOWN LOOKING UP STATION



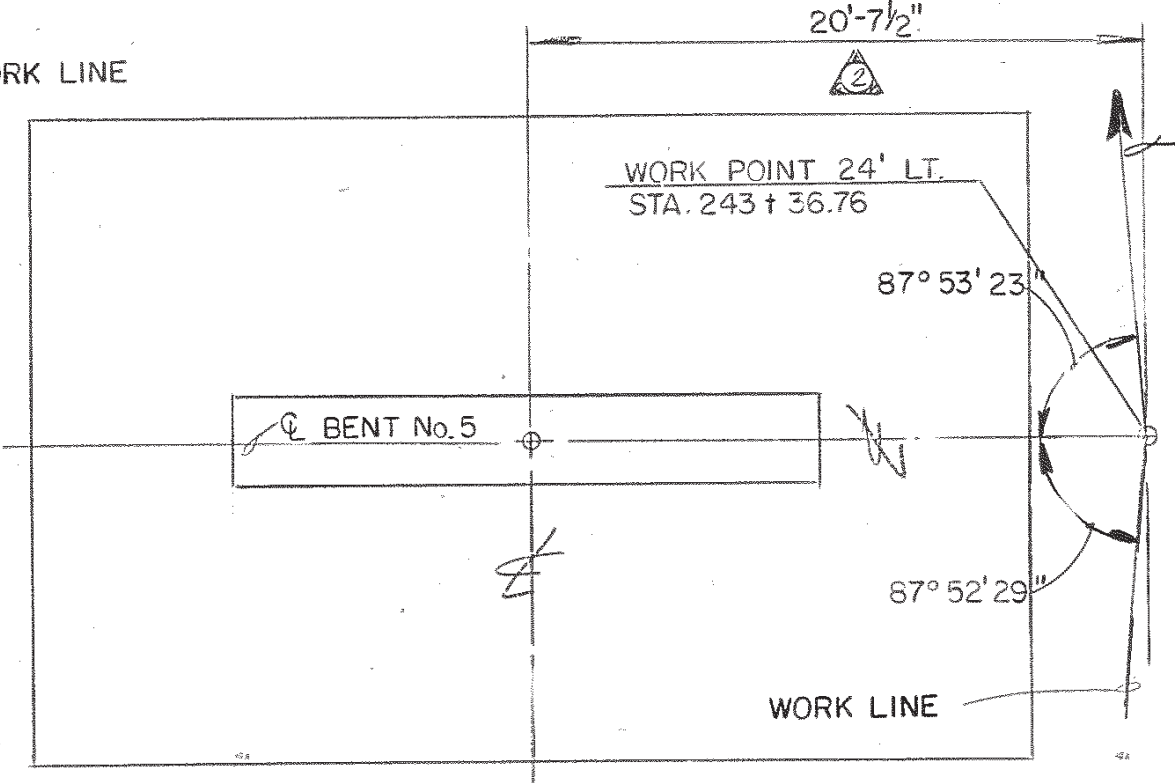
FOOTING PLAN VIEW BENT #2



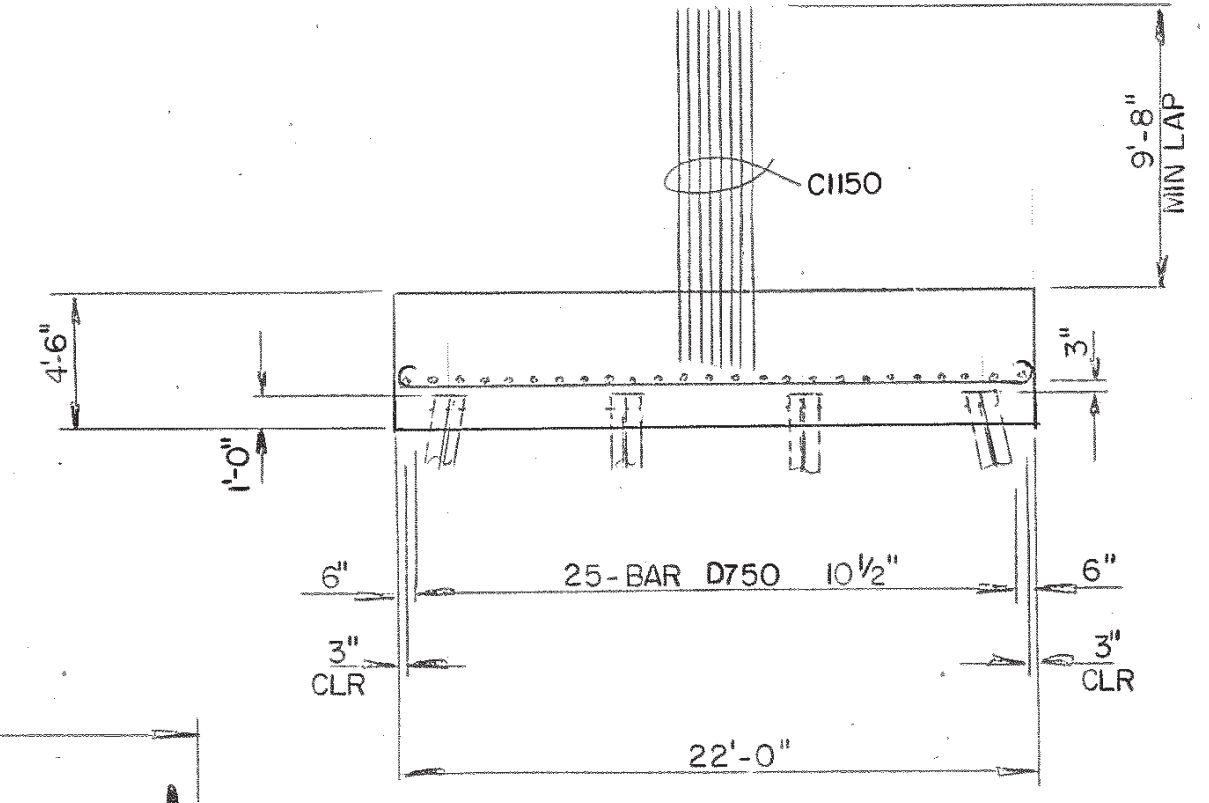
FOOTING PLAN VIEW BENT #3



FOOTING PLAN VIEW BENT #4



FOOTING PLAN VIEW BENT #5



END ELEVATION

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

FOOTING DETAILS  
BRIDGE No. 1A SOUTHBOUND  
J.S. YOUNG LANE (M)  
OVER SR.1 & L&N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
— 1981 —

DESIGNED BY RON BACON  
DRAWN BY BOB SIKES / BILL THISTLEWOOD  
SUPERVISED BY J.D. MOORE  
CHECKED BY \_\_\_\_\_

DATE 8-14-81  
DATE \_\_\_\_\_  
DATE \_\_\_\_\_  
DATE \_\_\_\_\_

CORRECT ENGINEER OF STRUCTURES  
APPROVED DIRECTOR OF HIGHWAYS

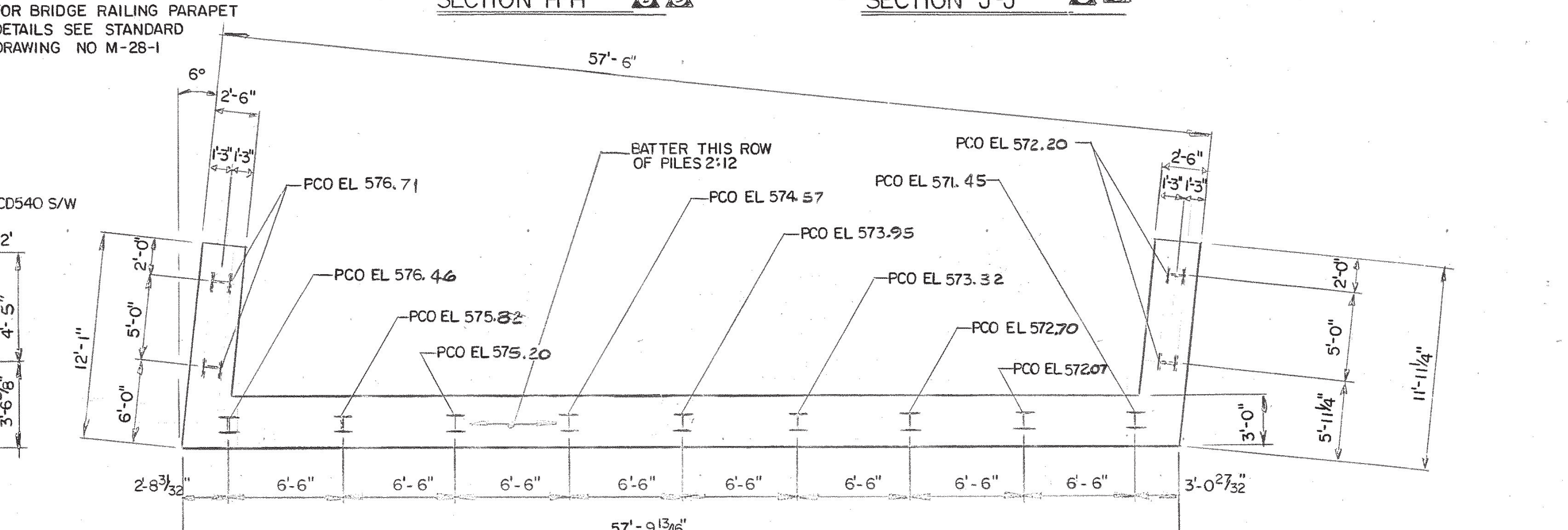
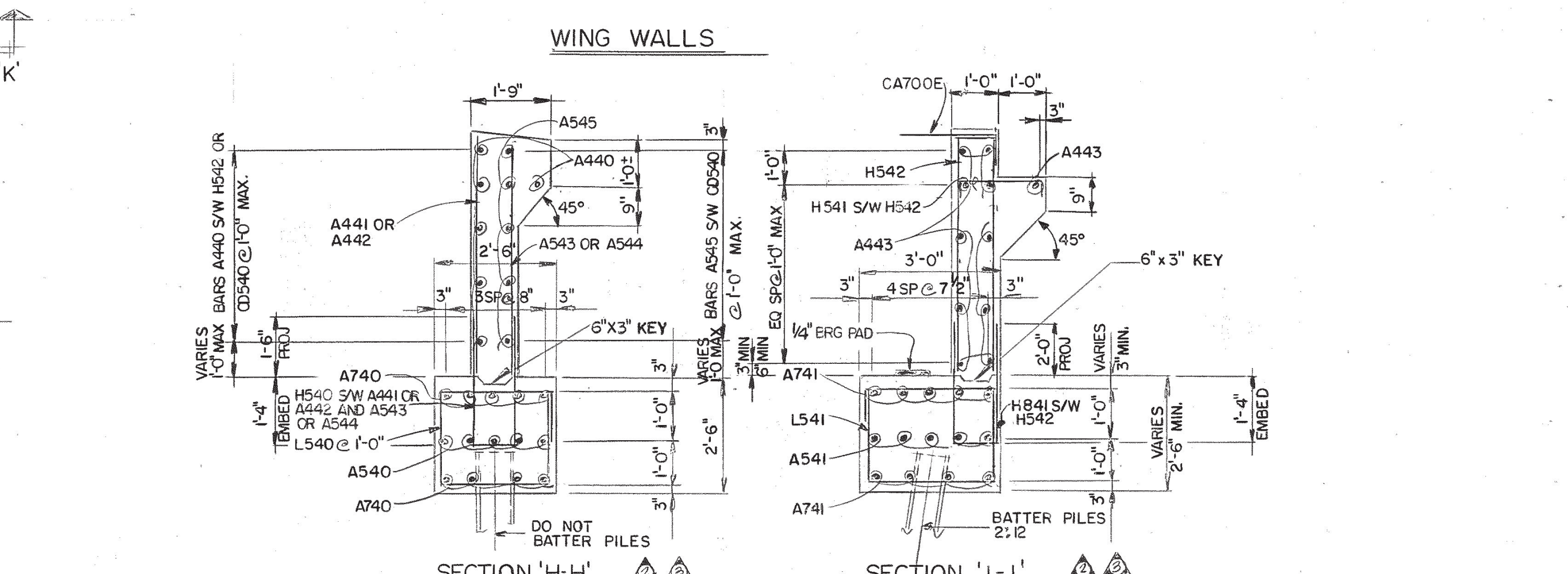
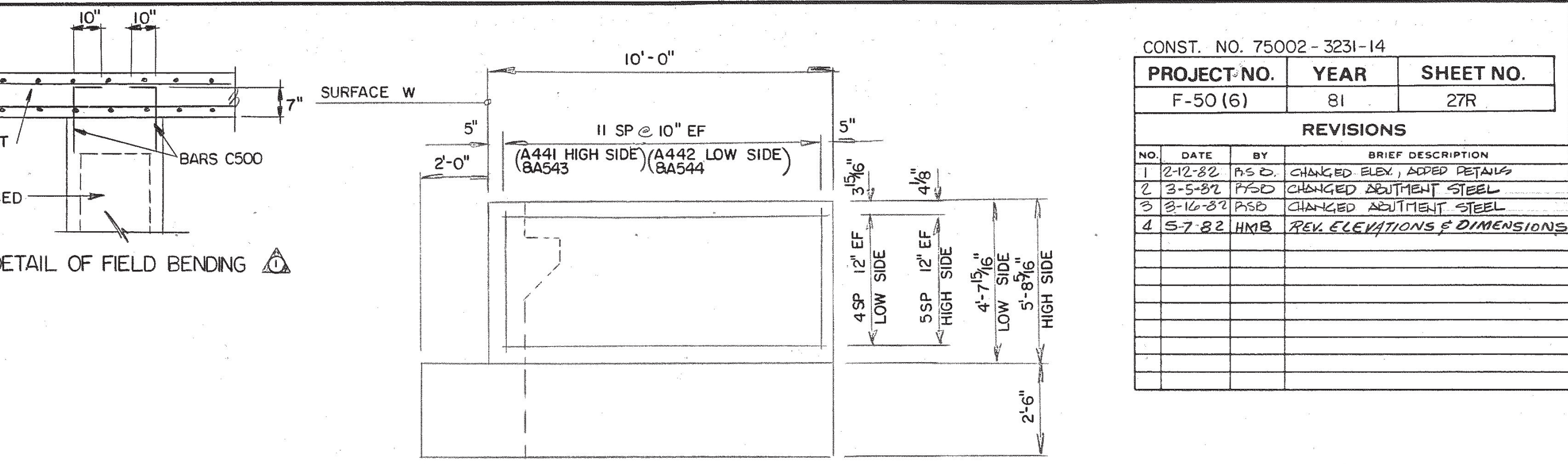
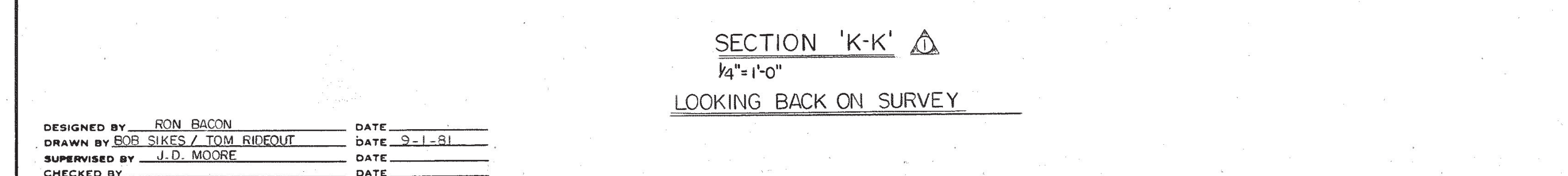
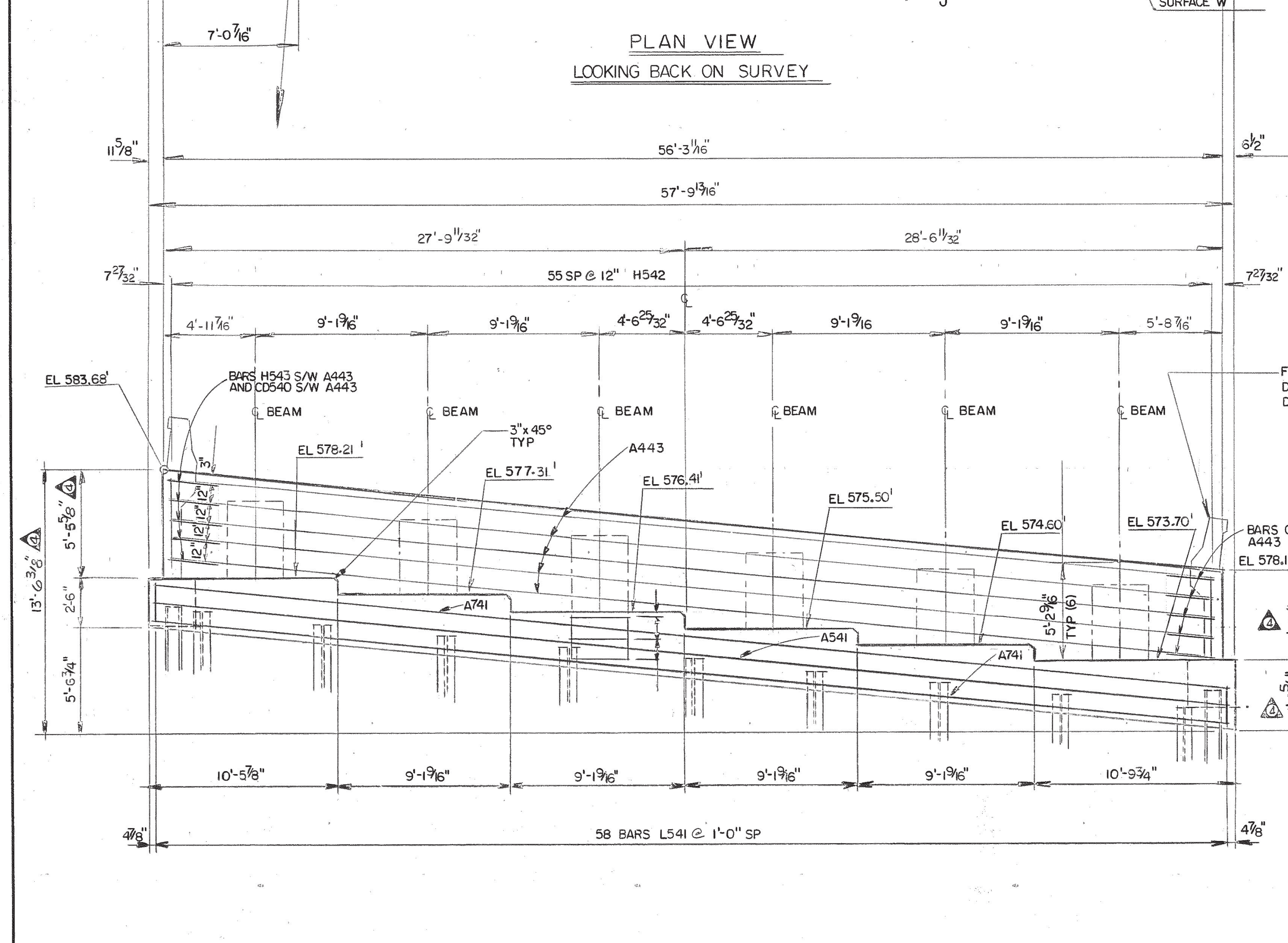
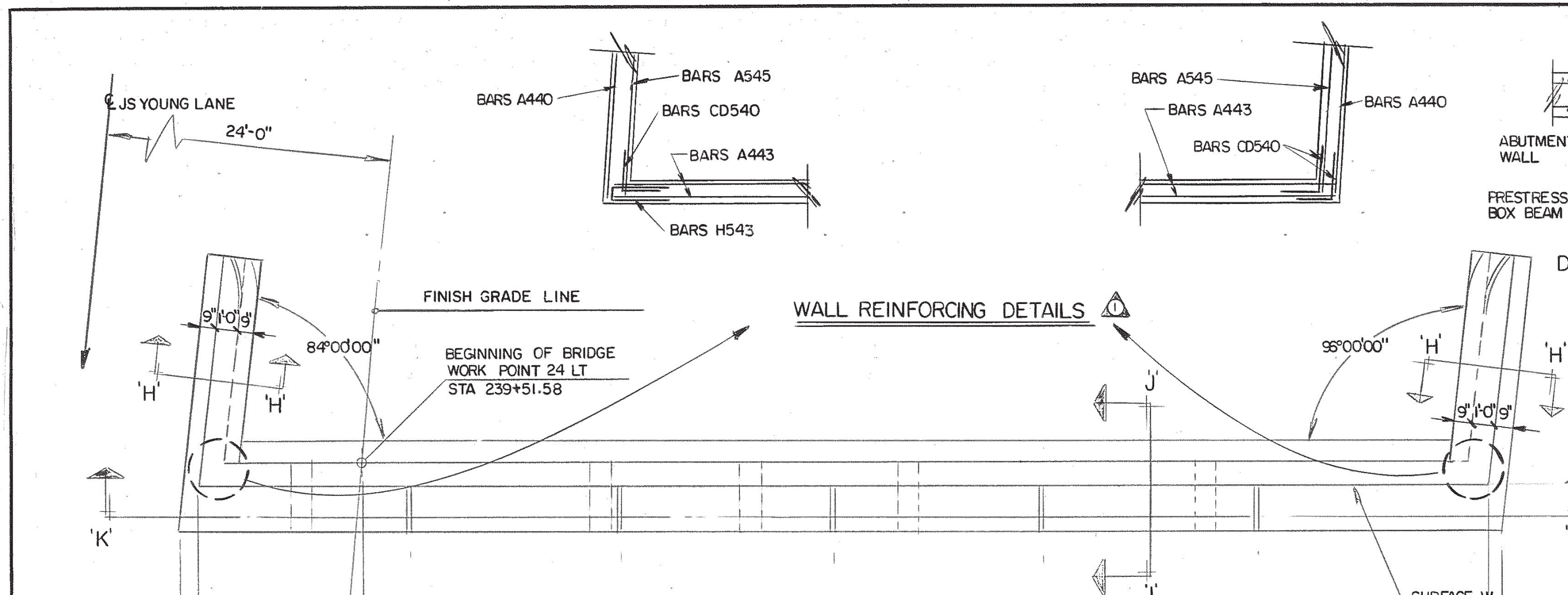
M-105-37

CONST. NO. 75002-3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50 (6)	81	27R

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	PSD	CHANGED ELEV., ADDED DETAILS
2	3-5-82	PSD	CHANGED ABUTMENT STEEL
3	2-16-82	PSB	CHANGED ABUTMENT STEEL
4	5-7-82	HMB	REV. ELEVATIONS & DIMENSIONS



DESIGNED BY: RON BACON  
DRAWN BY: BOB SIKES / TOM RIDGOUT  
SUPERVISED BY: J.D. MOORE  
CHECKED BY: \_\_\_\_\_

DATE: \_\_\_\_\_  
DATE: 9-1-81  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_

AGGREGATE CLASS "A" GRADING "D" FOR DRAINAGE = 28 CY.

CORRECT: \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED: \_\_\_\_\_ DIRECTOR OF HIGHWAYS

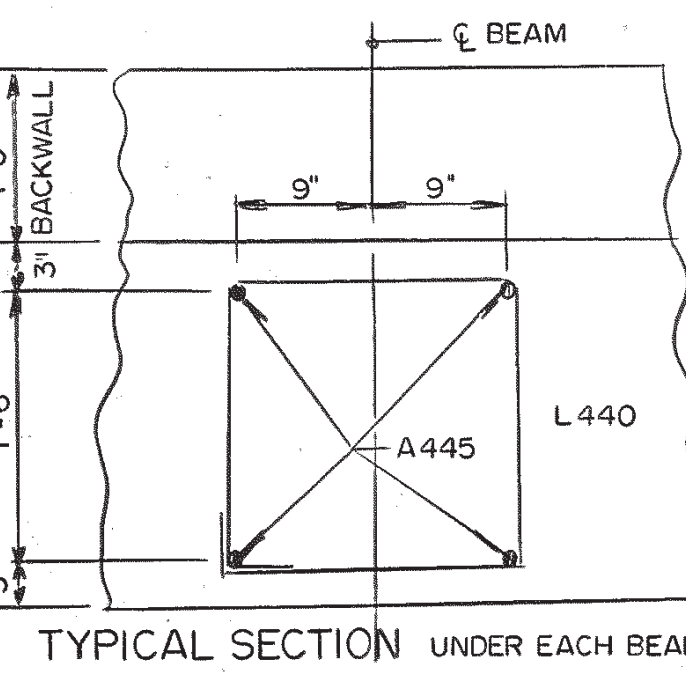
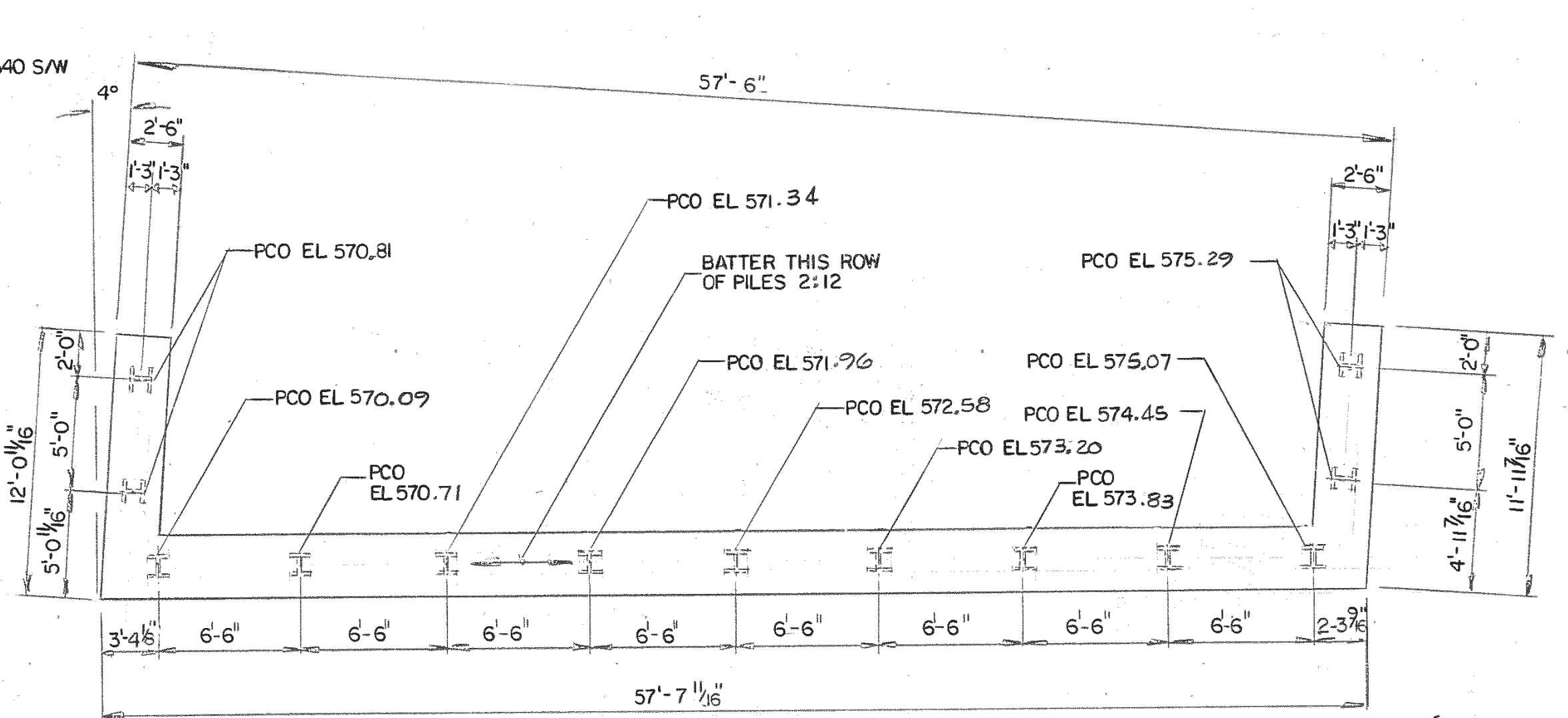
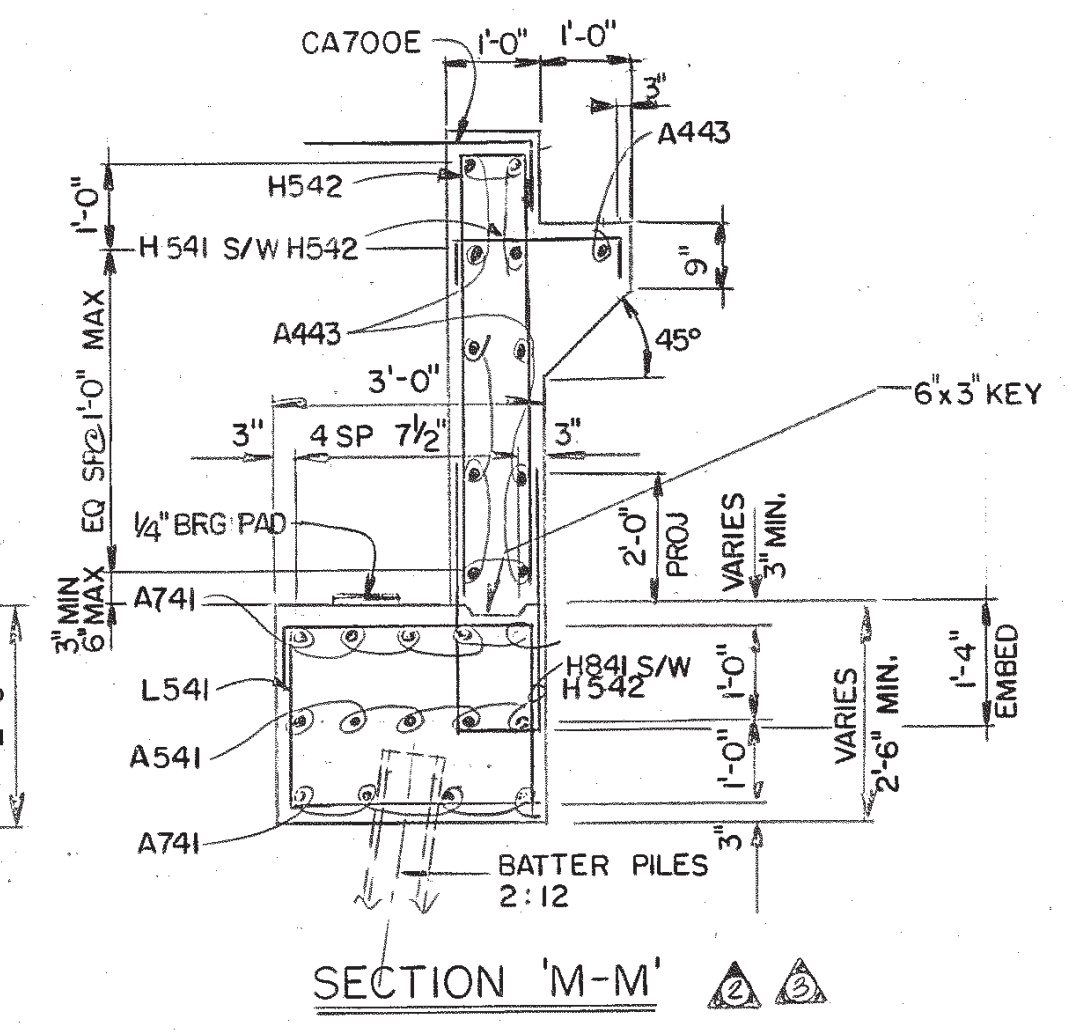
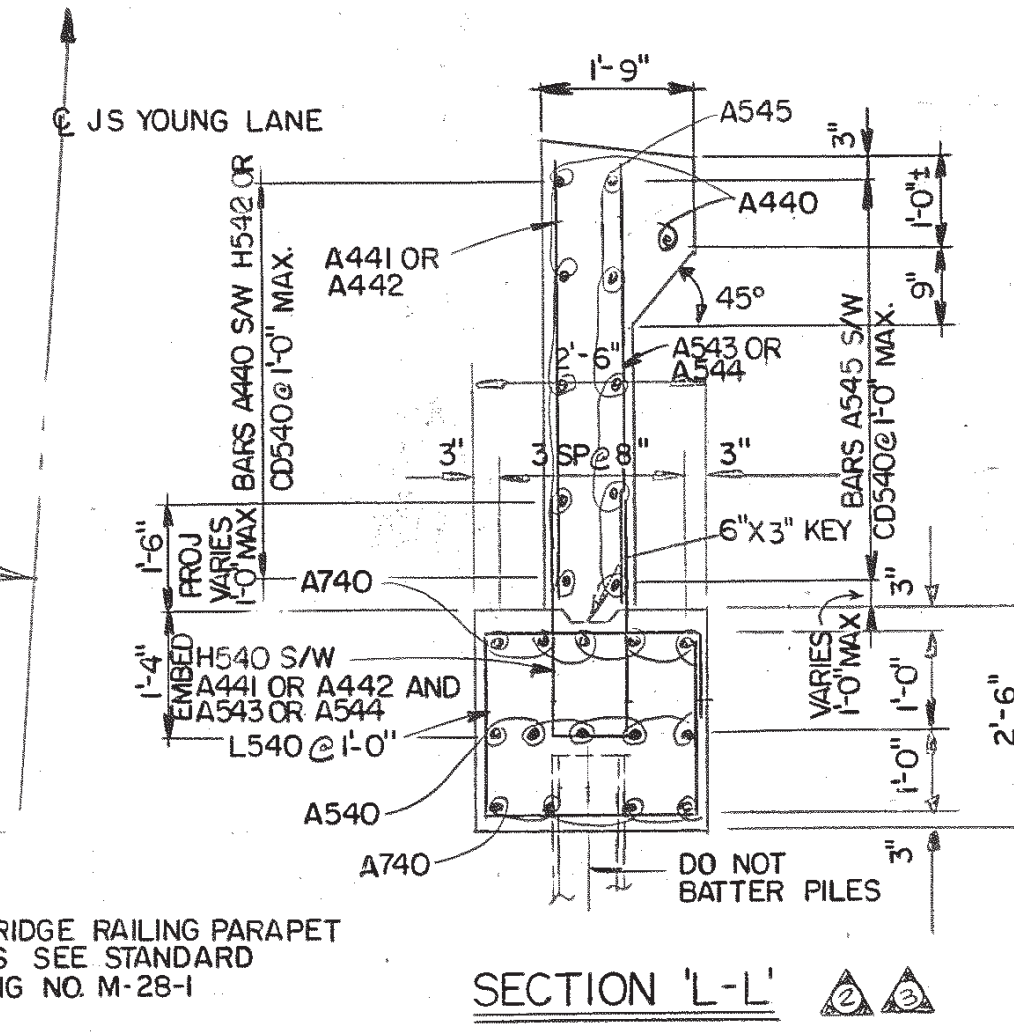
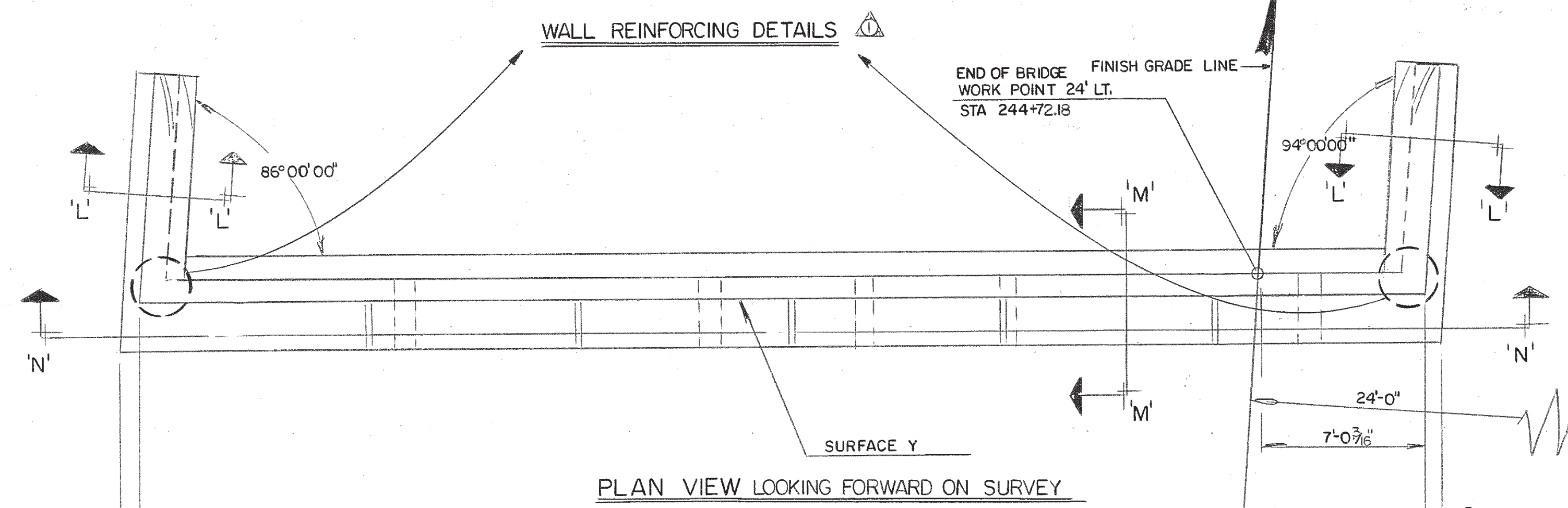
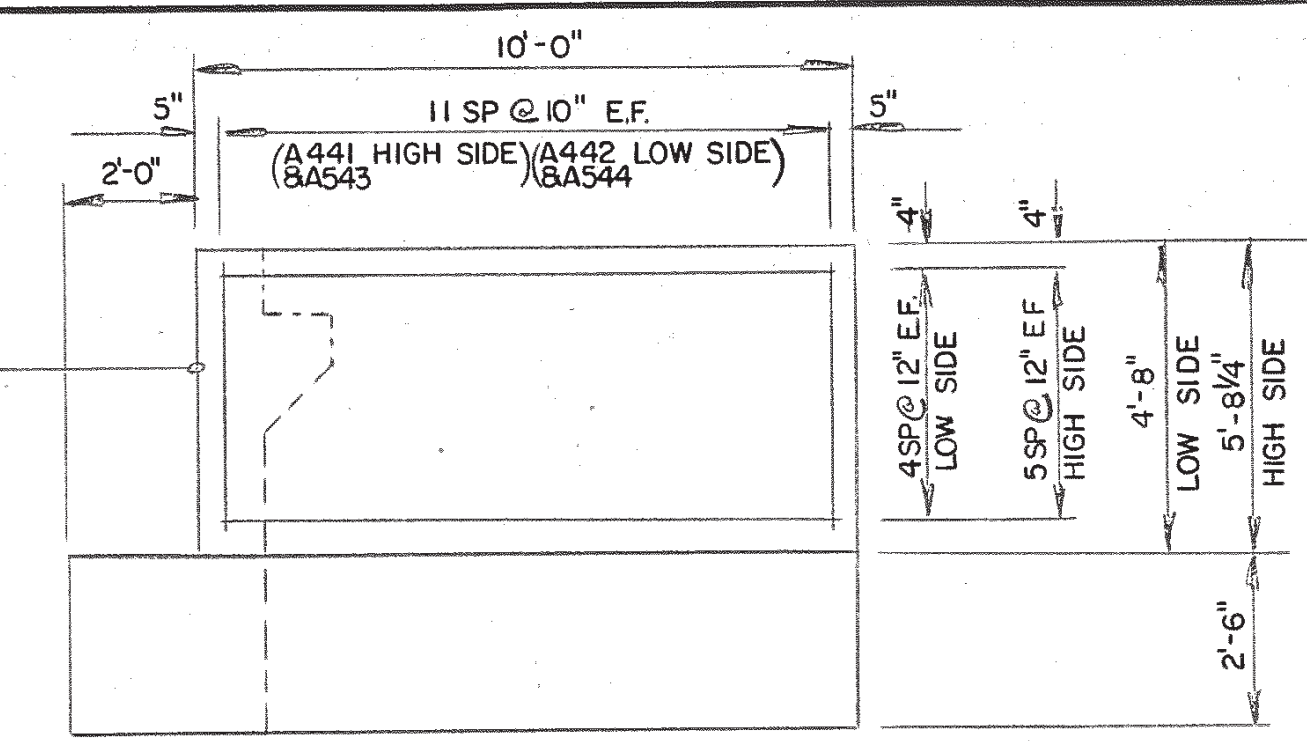
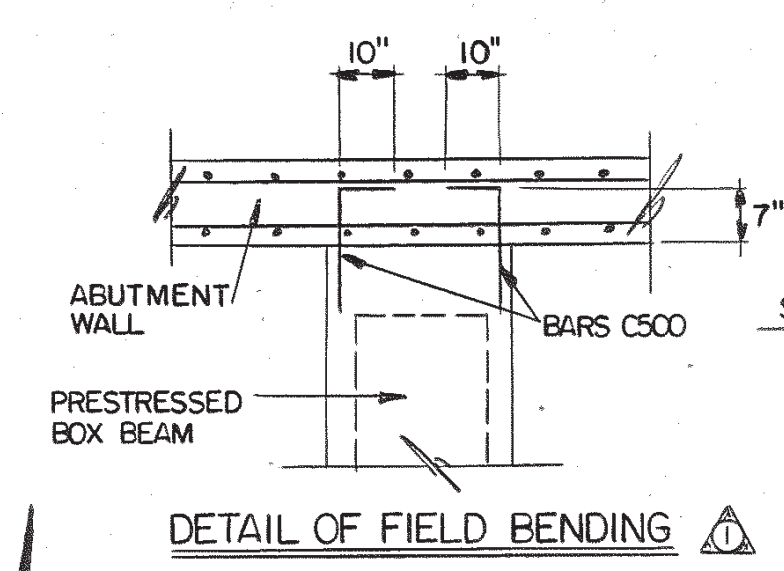
M-105-33

CONST. NO. 75002-3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50 (6)	81	27S

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	P.S.B.	REV. ELEVATION ADDED DETAILS
2	3-5-82	P.S.B.	CHANGED ABUTMENT STEEL
3	8-10-82	P.S.B.	CHANGED ABUTMENT STEEL
4	5-7-82	H.M.B.	REV. DIMENSIONS & ELEVATIONS



ESTIMATED QUANTITIES

ITEM	EPOXY COATED REINFORCING STEEL lbs.	STEEL BAR REINFORCEMENT lbs.	CLASS "A" CONCRETE C.Y.
ABUTMENT NO. 2	262	5720	41.4

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

**ABUTMENT No. 2 DETAILS**  
BRIDGE No. 1-A SOUTHBOUND  
JS. YOUNG LANE (M.)  
OVER S.R. 18 & L&N R.R.  
STA. 377+03.54  
RUTHERFORD COUNTY  
—1981—

DESIGNED BY: RON BACON  
DRAWN BY: BOB SIKES / TOM RIDEOUT  
SUPERVISED BY: J. D. MOORE  
CHECKED BY: \_\_\_\_\_

DATE: 8-27-81  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_

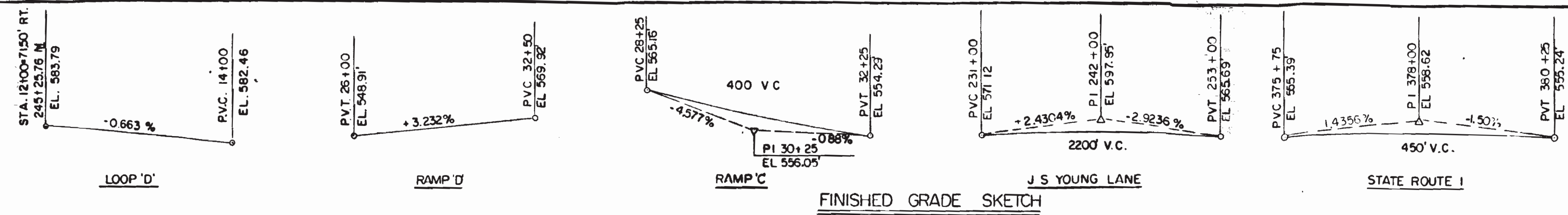
SECTION 'N-N'  
1/4" = 1'-0"  
LOOKING FORWARD ON SURVEY

CORRECT  
ENGINEER OF STRUCTURES  
APPROVED  
DIRECTOR OF HIGHWAYS

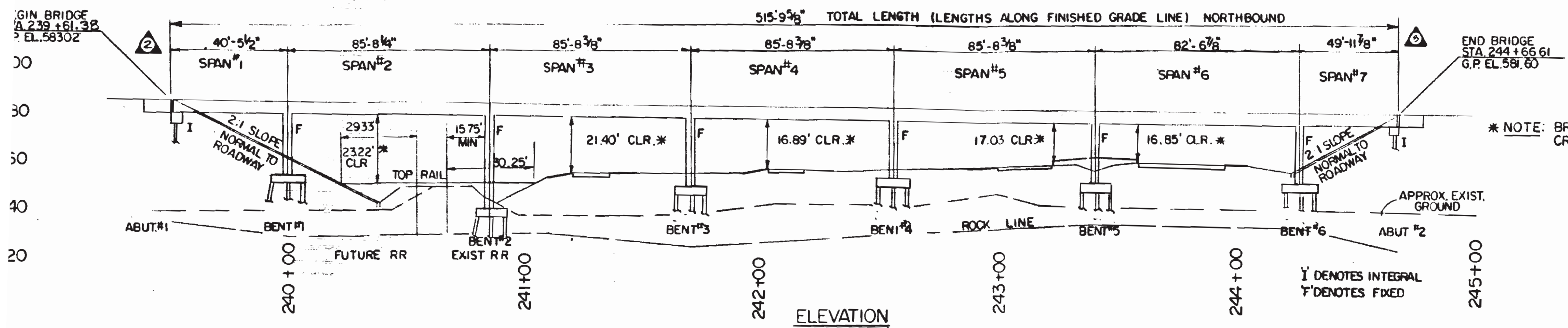
M-105-39

AGGREGATE CLASS "A" GRADING "D" FOR DRAINAGE = 28 C.Y.

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-1G	1982	26	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	R.S.D.	CHANGED BEGINNING STATION
			MOVED MIN VENT. CLEAR. P.T.S
2	3-5-82	H.M.B.	Sta. @ Abt 1 and Span 1 Lgth
3	3-16-82	R.S.D.	SPANS TO 165'



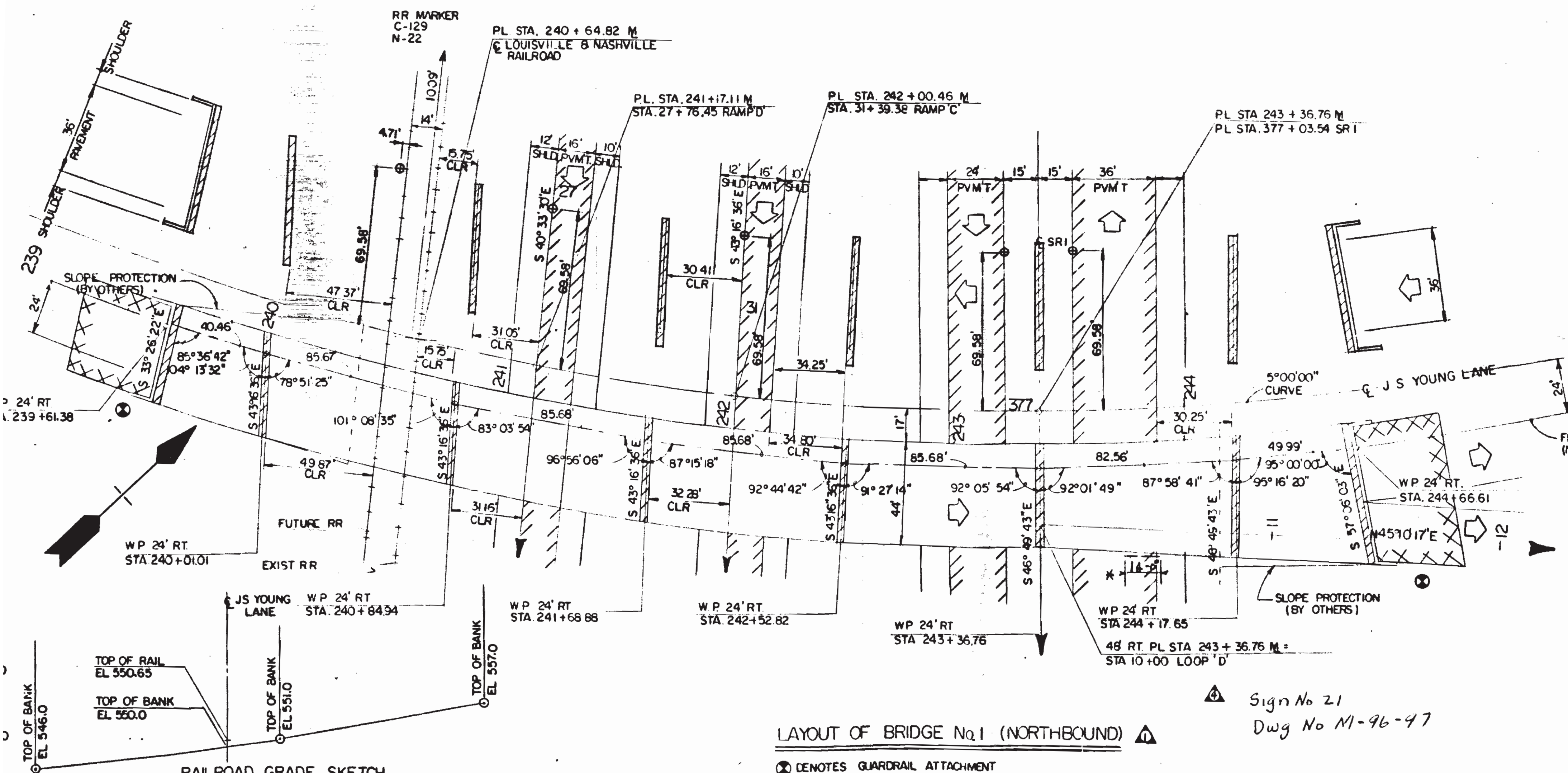
NOTE: THE FILLS AT THE BENT AND ABUTMENT FOUNDATIONS SHALL BE IN PLACE AND THOROUGHLY COMPACTED BEFORE ANY FOUNDATION PILES ARE DRIVEN.



DWG. No.	LAST REV. DATE
LAYOUT OF BRIDGE No. 1	M-105-42
GENERAL NOTES & ESTIMATED QUANTITIES	M-105-43
FOUNDATION DATA SHEET	M-105-44
FOUNDATION DATA SHEET	M-105-45
LAYOUT OF SUBSTRUCTURE	M-105-46
SLAB ELEVATIONS	M-105-47
SUPERSTRUCTURE DETAILS	M-105-48
SUPERSTRUCTURE DETAILS	M-105-49
SUPERSTRUCTURE DETAILS	M-105-50
SUPERSTRUCTURE DETAILS	M-105-51
PRESTRESSED BEAM DETAILS	M-105-52
PRESTRESSED BEAM DETAILS	M-105-53
BENT DETAILS	M-105-54
BENT DETAILS	M-105-55
BENT DETAILS	M-105-56
BENT FOOTING DETAILS	M-105-57
BENT FOOTING DETAILS	M-105-58
ABUTMENT No. 1 DETAILS	M-105-59
ABUTMENT No. 2 DETAILS	M-105-60
BILL OF STEEL	M-105-61
BILL OF STEEL	M-105-61A
BILL OF STEEL	M-105-62

STANDARD DRAWINGS	DATE
STANDARD PILE DETAILS	H-5-111
REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	K-80-14
TENN. STD. PRECAST PRESTRESSED BRIDGE DECK PANELS	K-80-15A
MISC. ABUTMENT AND DRAINAGE DETAILS	K-85-150
REINFORCED CONCRETE PAVEMENT A BRIDGE ENDS	K-86-144
BRIDGE RAILING CONCRETE PARAPET	M-28-1

S.P. No.	DATE
REGARDING EPOXY COATED REINFORCING STEEL	907A
REGARDING APPROVAL OF SHOP DRAWINGS	105A



LAYOUT OF BRIDGE No. 1 (NORTHBOUND)

⊗ DENOTES GUARDRAIL ATTACHMENT  
⊕ DENOTES GUARDRAIL ATTACHMENT

Sign No 21  
Dwg No M-96-47

EST AUT (2001) = 1458  
42'-0" ROADWAY WITH CONCRETE PARAPETS  
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

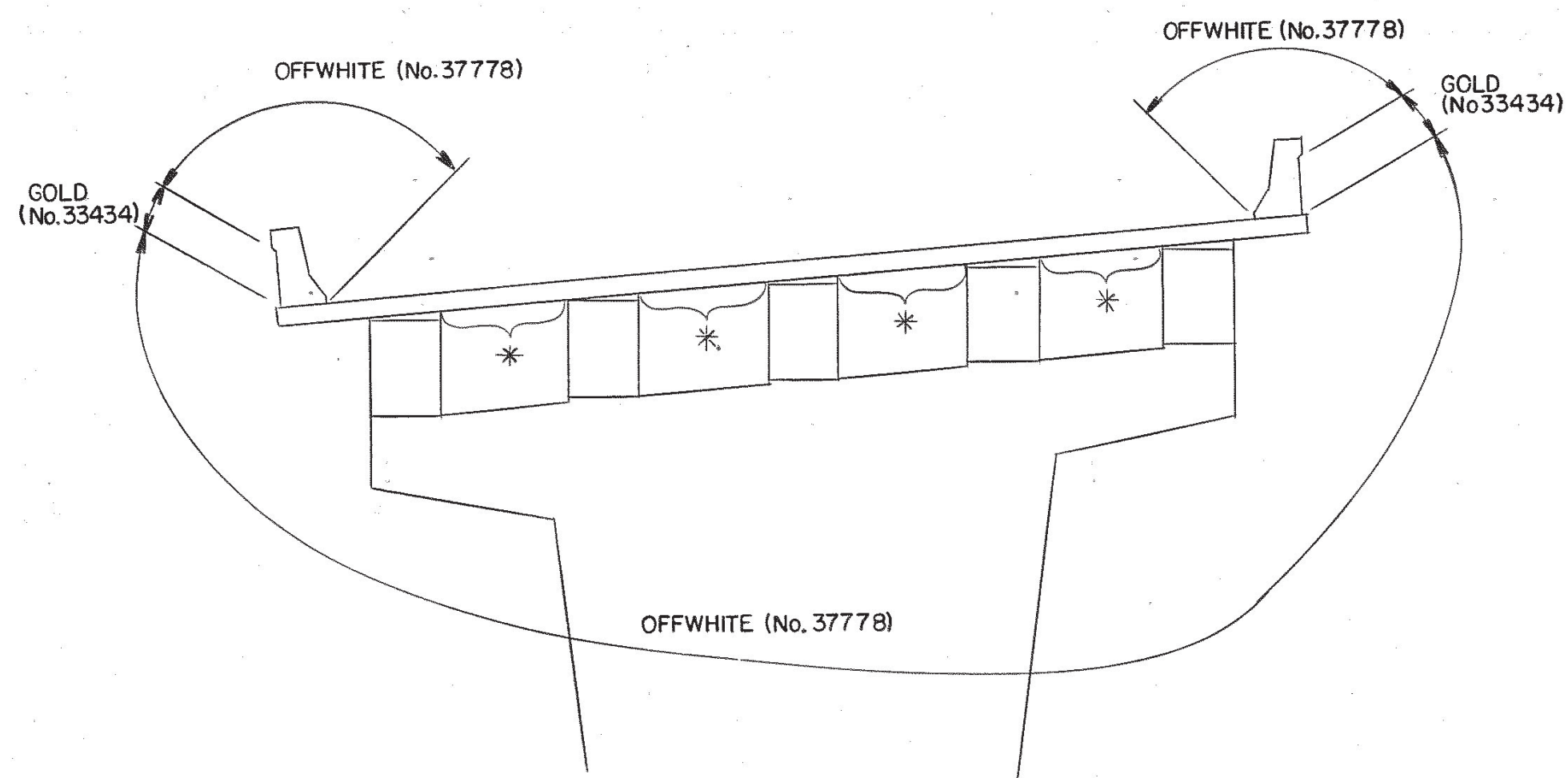
LAYOUT OF BRIDGE No. 1  
(NORTHBOUND STRUCTURE)  
J.S. YOUNG LANE (M)  
OVER S.R. 1 & L & N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
1981

DESIGNED BY: RON BACON  
DRAWN BY: A. RICKINGHAM / R. THISTLEWOOD  
SUPERVISED BY: J.D. MOORE  
CHECKED BY:

CORRECT: \_\_\_\_\_  
ENGINEER OF STRUCTURES  
APPROVED: \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

M-105-4

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26A	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-1-81	HED	CHANGED STEEL QUANTITIES
2	2-12-82	PSD	CHANGED QUANTITIES & NOTES
3	2-16-82	PSD	CHANGED QUANTITIES
4	5-24-82	PSD	CHANGED QUANTITIES PERCENT & TOTALS



**TEXTURE COATED COLOR SKETCH**

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION. A TEXTURED COATED FINISH SHALL BE USED IN LIEU OF A CLASS 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO OFFWHITE, FEDERAL SPECIFICATION NO. 37778 AND GOLD FEDERAL SPECIFICATION NO. 33434; FEDERAL COLOR STANDARD NO. 595a AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURED FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATION AT THE BRIDGE SITE.

\*NOT COATED

**ESTIMATED QUANTITIES**

ITEM No	204-02.01			604-02.03	604-03.01	604-03.02	604-03.03	604-04.01	606-22.03	606-32.03	606-42.03		615-02.30	620-03		710-10	710-11		
ITEM	DRY EXCAVATION (BRIDGES) C.Y. ①			EPOXY COATED REINFORCING STEEL LB.	CLASS "A" CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LB.	LINSEED OIL TREATMENT S.Y.	APPLIED TEXTURE FINISH (NEW STRUCTURES) S.Y.	STEEL PILES (DRIVING) (10-INCH) L.F.	STEEL PILES (10-INCH) (FURNISH DOMESTIC) L.F.	STEEL PILES (10-INCH) (FURNISH FOREIGN) L.F.		PRESTRESSED CONCRETE BOX BEAM (48' x 36") L.F. ②	CONCRETE PARAPET L.F. ④		6" PERF. C.M. PIPE (18 GA) WITH POROUS BACKFILL L.F. ③	6" C.M. PIPE UNDERDRAINS (18 GA) L.F.		
SUPER-STRUCTURE				225,772	720.2		2,352	4,712					2,627	1,010.30					
ABUTMENT No 1	96			327	33.8	4,727		48	527	527	527			20.0		66	13		
BENT No 1	350			0	180.4	21,372		132	468	468	468								
BENT No 2	126			0	202.6	24,198		182	312	312	312								
BENT No 3	278			0	159.5	21,283		161	393	393	393								
BENT No 4	245			0	159.5	21,283		161	366	366	366								
BENT No 5	268			0	186.4	22,130		145	458	458	458								
BENT No 6	249			0	188.7	22,843		149	511	511	511								
ABUTMENT No 2	135			376	38.3	5,478		56	688	688	688			20.0		75	13		
PVM'T AT BRIDGE END				5,836	113.0	17,685													
TOTAL	1,747			232,311	1,982.4	162,999	2,352	5,746	3,843	3,843	3,843		2,627	1,050.30		141	26		

- ① EXCAVATION BASED ON LOWER ROAD PROFILE.
  - ② THE COST OF ELASTOMERIC PADS, RUBBER BONDING CEMENT, AND DOWEL BARS OR ANCHOR BOLTS TO BE INCLUDED IN THE COST OF PRESTRESSED BEAMS.
  - ③ THE COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED C.M. PIPE.
  - ④ ALL REINFORCING STEEL IN THE TRAFFIC FACE OF PARAPETS SHALL BE EPOXY COATED. COST TO BE INCLUDED IN THE PRICE BID FOR ITEM 620-03.
- THE COST OF 12 THREADED STEEL INSERTS AND 12 7/8" Ø x 4" HEX HEAD BOLTS, A307 TO BE INCLUDED IN BRIDGE ITEMS BID ON.

**GENERAL NOTES**

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

**LOADING:** HS20-44

**DESIGN SPECIFICATIONS:** AASHTO 1977 EDITION WITH ADDENDA.

**CONCRETE:** TO BE CLASS 'A' (CAST-IN-PLACE) f'c 3000 PSI.

**BRIDGE DECK FORMS:** BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVAL 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.

**REINFORCING STEEL:** TO BE ASTM A615 GRADE 60. STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON BILL OF STEEL. BENDING DIMENSIONS SHOWN ARE BASED ON GRADE 60. SPACING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON DETAIL DRAWING. THE SUFFIX 'E', FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT SEE SPECIAL PROVISION 907A.

**PILES:** TO BE HP10 x 42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 55 TONS FOR THE BENTS AND 40 TONS FOR THE ABUTMENTS.

**SPECIAL NOTE FOR RAILROAD CROSSING:** THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD TRACKS AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH REGULATIONS STIPULATED BY THE L.B.N.R.R. SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC.

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

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

**LINSEED OIL PROTECTIVE TREATMENT:** SURFACES RECEIVING TEXTURED COATED FINISH SHALL NOT RECEIVE A LINSEED OIL TREATMENT. SEE TEXTURED COATING DETAIL THIS SHEET.

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

STATE OF TENNESSEE  
**DEPARTMENT OF TRANSPORTATION**  
 BUREAU OF HIGHWAYS

GENERAL NOTES AND  
 ESTIMATED QUANTITIES  
 BRIDGE No. 1 NORTHBOUND  
 J S YOUNG LANE (M)  
 OVER S.R. 1 & L.B. N.R.R.  
 STA. 377 + 03.54  
 RUTHERFORD COUNTY  
 — 1981 —

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SUPERVISED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

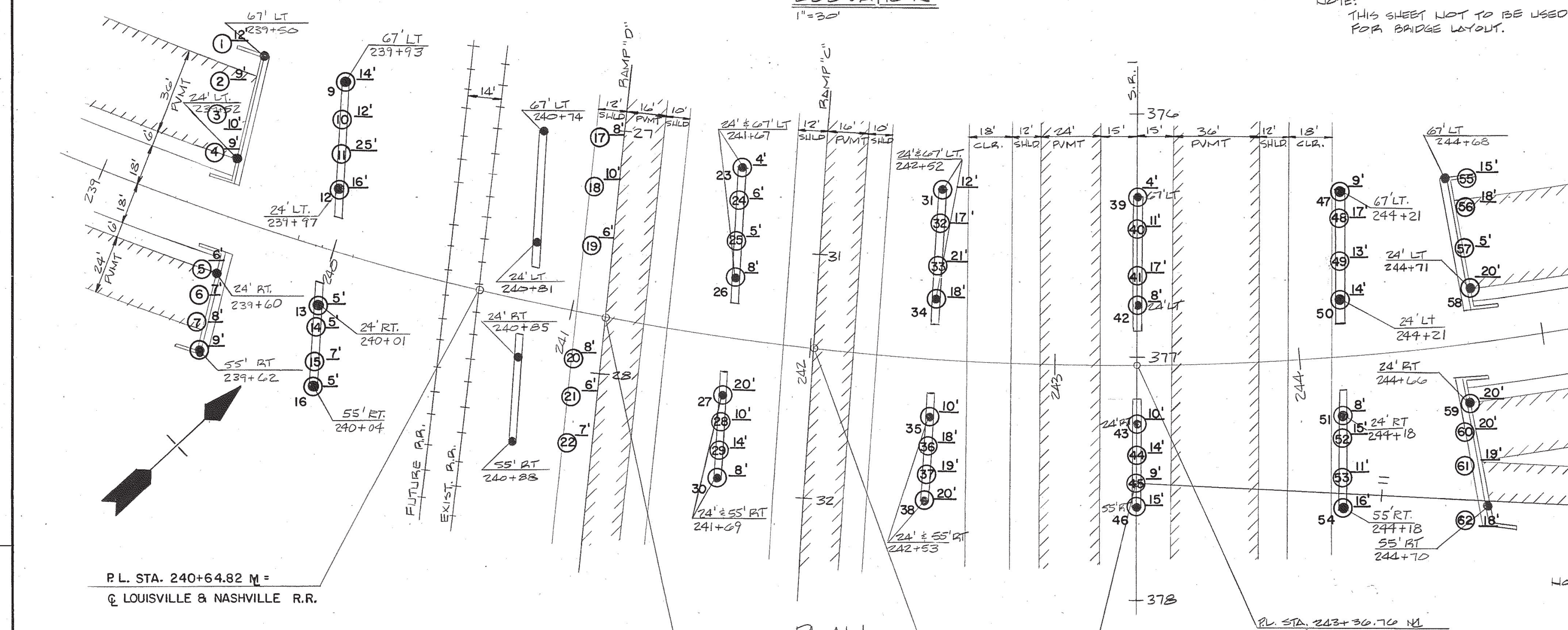
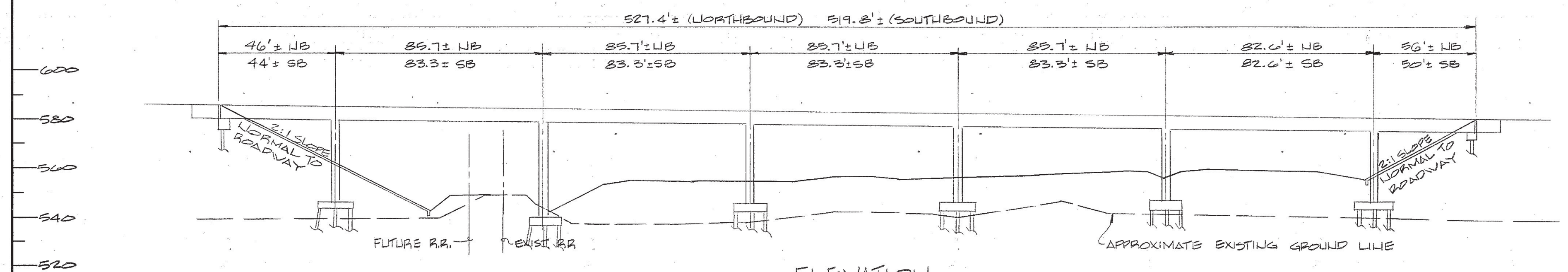
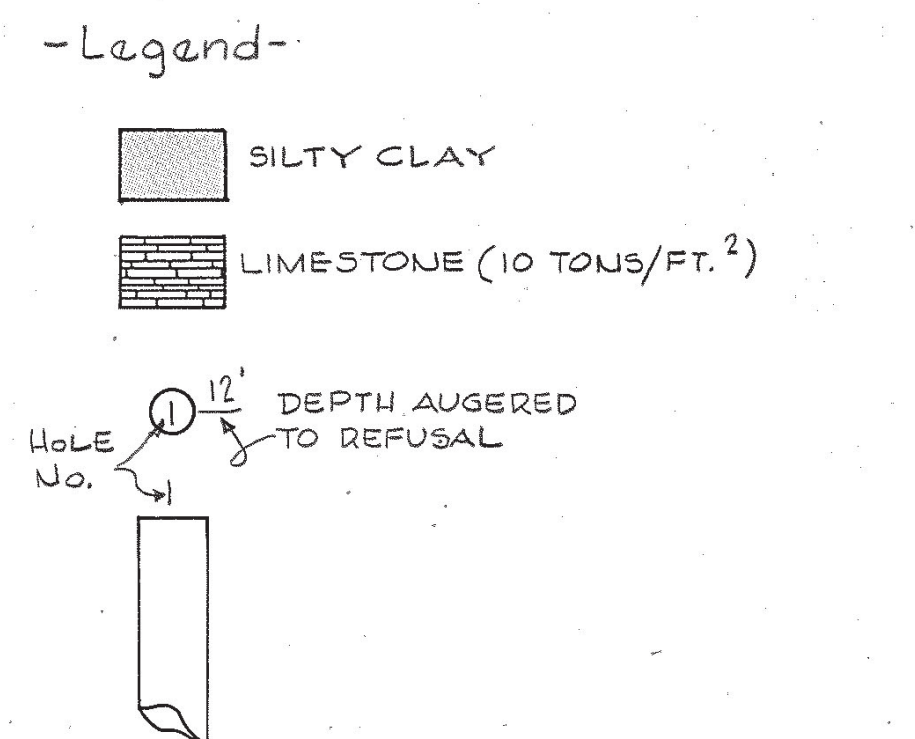
CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
 APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-105-43

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26B	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

**REQUIRED INFORMATION**  
 1. SUFFICIENT GROUND, ROCK, AND CORING INFORMATION FOR BRIDGE INFORMATION  
 2. APPROXIMATE EXISTING GROUND LINE & ROCK LINE.

BM ELEV. 549.03  
 NAIL IN POWER POLE  
 TO LT. STA. 376+50  
 O.S. STATE ROUTE 1  
 BM ELEV. 530.64  
 TOP OF U.S.G.S. MONUMENT #349  
 TO RT. STA. 333+00  
 O.S. STATE ROUTE 1



P.L. STA. 240+64.82 M =  
 Q LOUISVILLE & NASHVILLE R.R.

P.L. STA. 241+17.11 M =  
 STA. 27+76.43 RAMP "D"

P.L. STA. 242+00.46 M =  
 STA. 31+39.38 RAMP "C"

1. G 541.9 R 529.9	13. G 539.5 R 534.5	25. G 537.3+ R 532.3+	37. G 543.6+ R 524.6+	49. G 543.7+ R 530.7+	61. G 543.1+ R 524.1+
2. G 541.8+ R 532.8±	14. G 539.4+ R 534.4±	26. G 537.4 R 529.4	38. G 543.7 R 523.7	50. G 543.5 R 529.5	62. G 543.2 R 525.2
3. G 541.8+ R 531.8±	15. G 539.2+ R 532.2±	27. G 538.1 R 518.1	39. G 544.7 R 540.7	51. G 543.3 R 535.3	
4. G 541.7 R 532.7	16. G 539.1 R 534.1	28. G 538.3+ R 528.3±	40. G 544.4+ R 533.4±	52. G 543.3+ R 528.3±	
5. G 542.0 R 536.0	17. G 537.0+ R 529.0±	29. G 538.6+ R 524.6±	41. G 544.1+ R 527.1±	53. G 543.3+ R 532.3±	
6. G 541.8+ R 534.8±	18. G 537.0+ R 527.0±	30. G 538.8 R 530.8	42. G 543.8 R 535.8	54. G 543.3 R 527.3	
7. G 541.6+ R 533.6±	19. G 537.0+ R 531.0±	31. G 542.3 R 530.3	43. G 542.8 R 532.8	55. G 543.0 R 528.0	
8. G 541.5 R 532.5	20. G 537.0+ R 529.0±	32. G 542.4+ R 525.4±	44. G 542.6+ R 528.6±	56. G 542.9+ R 524.9±	
9. G 540.4 R 526.4	21. G 537.0+ R 531.0±	33. G 542.6+ R 521.6±	45. G 542.5+ R 533.5±	57. G 542.8+ R 537.8±	
10. G 540.2+ R 528.2±	22. G 537.0+ R 530.0±	34. G 542.7 R 524.7	46. G 542.3 R 527.3	58. G 542.7 R 522.7	
11. G 540.0+ R 515.0±	23. G 537.3 R 533.3	35. G 543.3 R 533.3	47. G 544.0 R 535.0	59. G 542.8 R 522.8	
12. G 539.8 R 523.8	24. G 537.2+ R 531.2±	36. G 543.4+ R 525.4±	48. G 543.8+ R 526.8±	60. G 542.9+ R 522.9±	

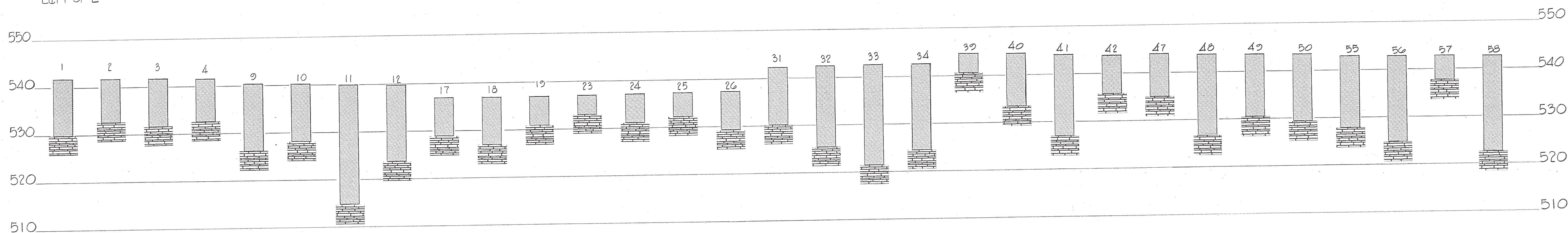
DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY G.B. Hardy DATE \_\_\_\_\_  
 SUPERVISED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
 APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS

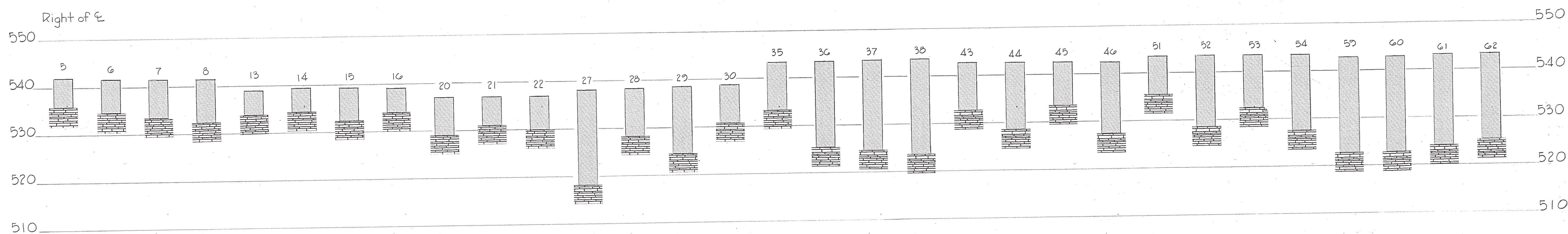
STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS  
**FOUNDATION DATA**  
 BRIDGE 1X1 NORTHBOUND AND 1A  
 SOUTHBOUND J.S. YOUNG LANE  
 OVER STA. 377+03.54  
 RUTHERFORD COUNTY  
 1981

TYPE	YEAR	PROJECT NO.	SHEET NO.
	81	F-50-(6)	26C

Left of E



Right of E



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

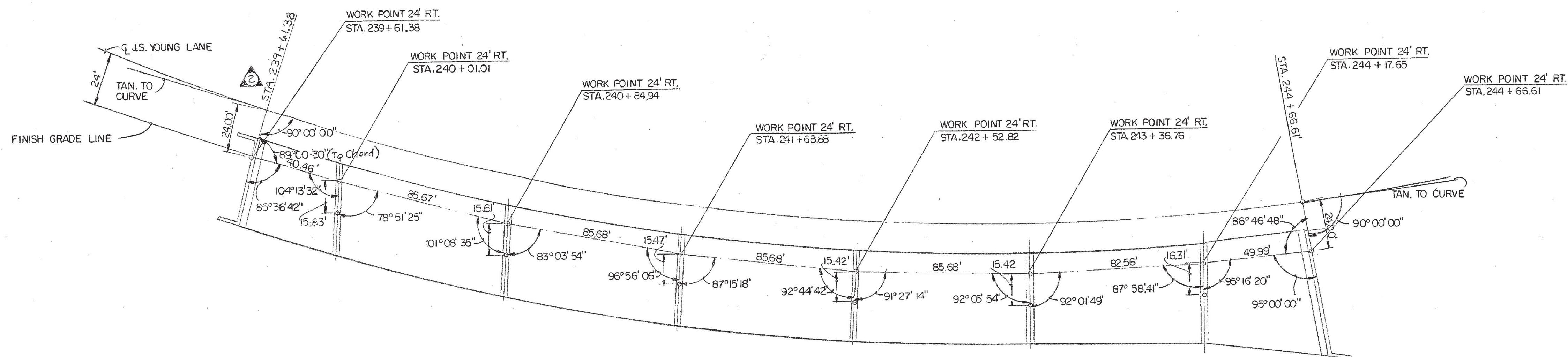
FOUNDATION DATA

BRIDGE NO. 1 NORTHBOUND  
SOUTHBOUND J.S. YOUNG  
LANE OVER S.R. 1 & L&N RR

Sta. 377+03.54

M-105-45

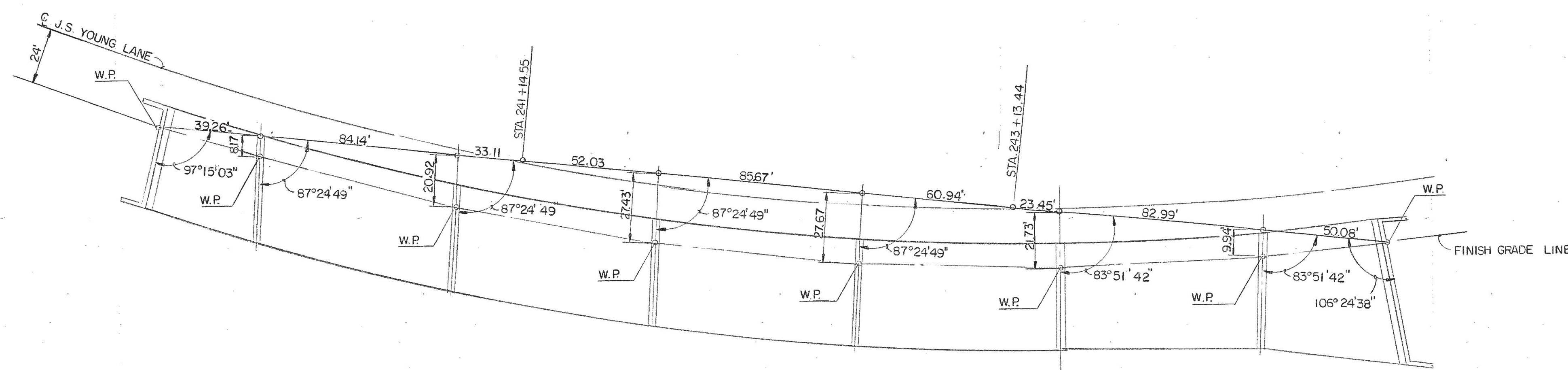
CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26 D	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	PSB	CHANGED ANGLES, DIST. STATIONS
2	3-5-82	HVB	Station
3	3-10-82	PSB	RENT & OFFSETS



METHOD No. 1

HORIZONTAL CURVE DATA

MAINLINE  
 PAPER LOCATED  
 P.I. STA. 245+03.77  
 $\Delta$  87° 13' 3"  
 Dc 5° 00' 00"  
 Ls 500.00'  
 R 1145.92'  
 Os 12° 30' 00"  
 x 497.62'  
 y 36.24'  
 K 249.60'  
 P 9.07'  
 Ts 1349.97'  
 Es 449.33'  
 Lt 334.17'  
 St 167.43'  
 L.C. 498.94'  
 $\Delta c$  62° 13' 31"  
 Lc 1244.51'  
 T.S. STA. 231+53.80  
 S.C. STA. 236+53.80  
 C.S. STA. 248+98.31  
 S.T. STA. 253+98.31  
 S.E. 0.099 1/4  
 DESIGN SPEED = 60 M.P.H.



METHOD No. 2

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

LAYOUT OF SUBSTRUCTURE  
 BRIDGE No. 1 NORTHBOUND  
 J.S. YOUNG LANE (M)  
 OVER S.R. 18 L & N R.R.  
 STA. 377+03.54  
 RUTHERFORD COUNTY  
 1981

DESIGNED BY RON BACON DATE \_\_\_\_\_  
 DRAWN BY BOB SIKES / B. THISTLEWOOD DATE 9-18-81  
 SUPERVISED BY J.D. MOORE DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

CORRECT \_\_\_\_\_  
 ENGINEER OF STRUCTURES

APPROVED \_\_\_\_\_  
 DIRECTOR OF HIGHWAYS

M-105-46

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26E	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	ASB	ADDED LATE BEAM CE



NOTE: ALL ELEVATIONS SHOWN ARE AT TOP OF CONCRETE SLAB. ALL STATION LINES ARE RADIAL.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

**SLAB ELEVATIONS**

BRIDGE No. 1 NORTHBOUND  
J. S. YOUNG LANE (M)  
OVER S. R. 1 & L. & N R. R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
1981

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY \_\_\_\_\_ DATE \_\_\_\_\_  
SUPERVISED BY \_\_\_\_\_ DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

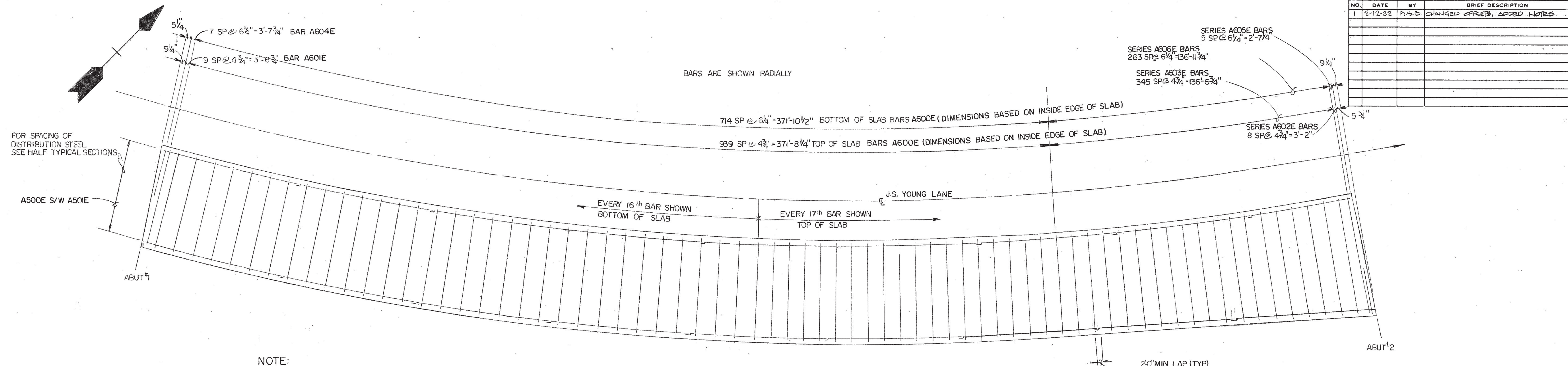
CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-105-47

PROJECT NO.	YEAR	SHEET NO.
F-50-(6)	81	26F

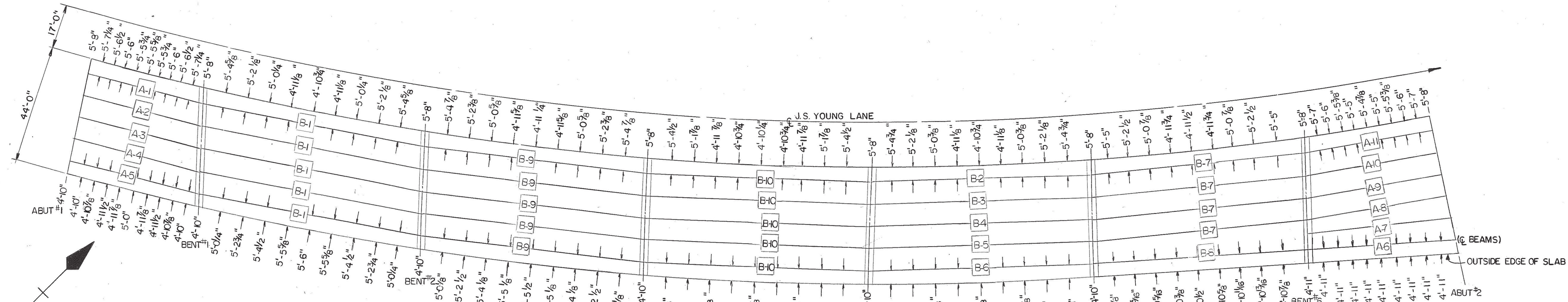
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	2-10-82	F.S.B	CHANGED OFFSETS, ADDED NOTES



NOTE:  
SLAB OFFSET DIMENSIONS GIVEN AT TENTH POINTS OF EACH SPAN.

**SLAB REINFORCEMENT PLAN**  
TRANSVERSE TOP AND BOTTOM LAYERS  
LONGITUDINAL BOTTOM LAYER



**SUPERSTRUCTURE NOTES:**

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.

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

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 DRAWING NO. M-145-49.

**BRIDGE FRAMING PLAN**

SPECIAL NOTE FOR DOWEL BARS AT BENTS: TOP OF DOWELS TO BE COVERED WITH 1/2" OF COMPRESSIBLE MATERIAL AND THE 9" PROJECTION WRAPPED WITH TWO LAYERS OF WATERPROOF PAPER.

WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. FOR DETAILS OF PARAPET SEE STANDARD DRAWING NO. M-28-1. ALSO SEE DRAWING NO. M-105-50.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

**SUPERSTRUCTURE DETAILS**  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 18 & N R.R.  
STA. 377+03.54  
RUTHERFORD COUNTY  
—1981—

DESIGNED BY: RON BACON  
DRAWN BY: BOBBY CLYMER/BILL THISTLEWOOD  
SUPERVISED BY: J. D. MOORE  
CHECKED BY:

DATE: 8/26/81  
DATE:  
DATE:  
DATE:

CORRECT \_\_\_\_\_  
ENGINEER OF STRUCTURES

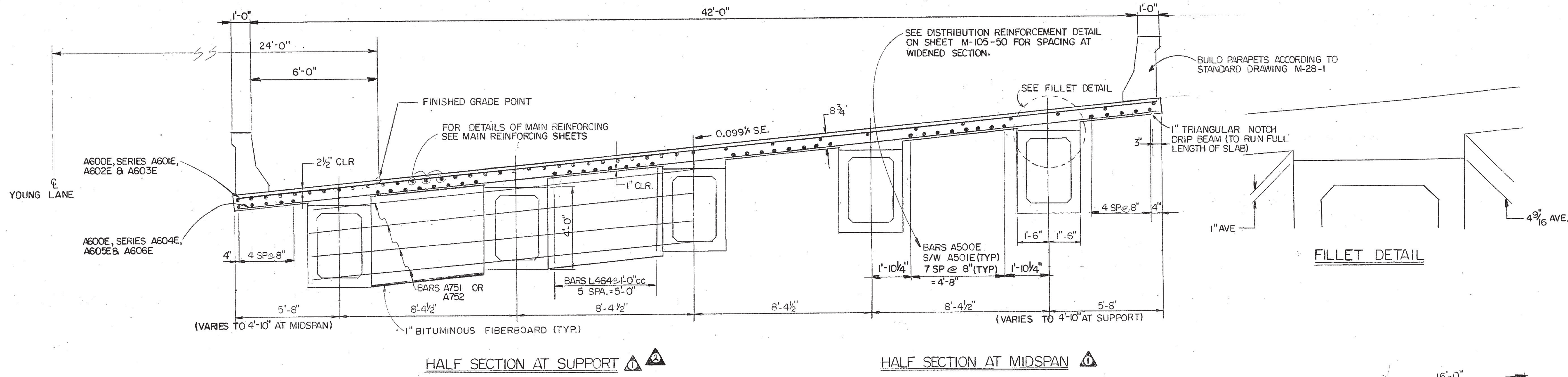
APPROVED \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

CONST. NO. 75002-3231-14

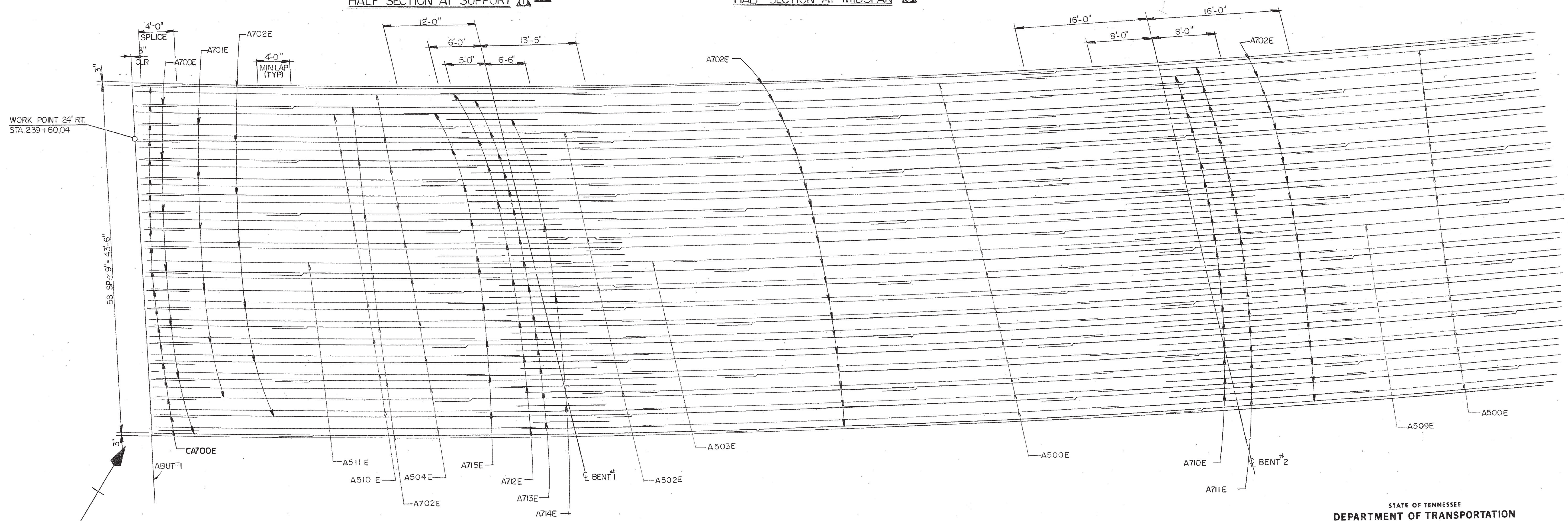
PROJECT NO.	YEAR	SHEET NO.
F-50-(6)	81	26 G

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	P.S.B.	ADDED TYPICAL NOTES
2	3-16-82	P.S.B.	STEEL IN DIAGRAM CHANGED ADD BARS TO SLAB



FILLET DETAIL



PLAN OF TOP SLAB  
MAIN REINFORCEMENT

ESTIMATED QUANTITIES

Item	CLASS 'A' CONCRETE C.Y.	EPOXY COATED REINFORCING STEEL LBS.
SUPERSTRUCTURE	720.2	225,772

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

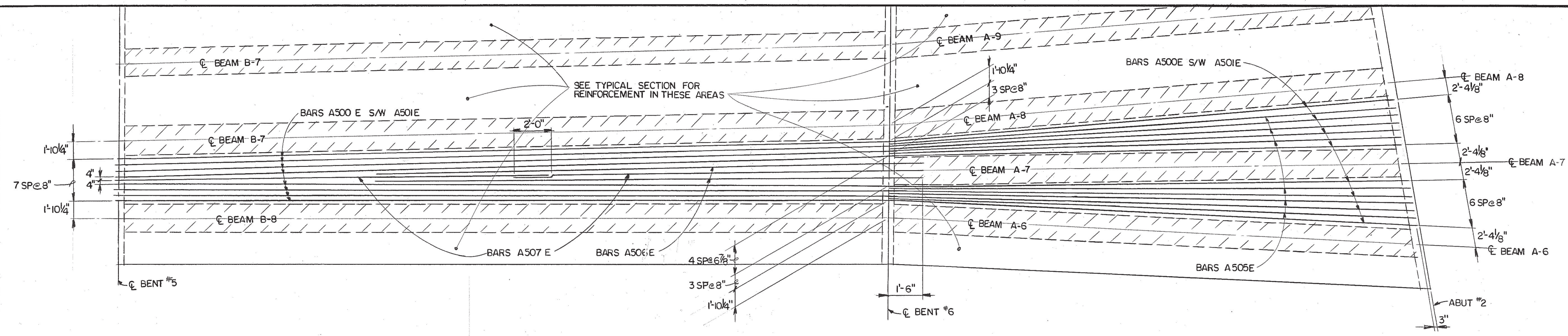
SUPERSTRUCTURE DETAILS  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 1 & L & N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
—1981—

DESIGNED BY RON BACON DATE \_\_\_\_\_  
DRAWN BY BOBBY CLYMER/BILL THISTLEWOOD DATE 8-25-81  
SUPERVISED BY J.D. MOORE DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

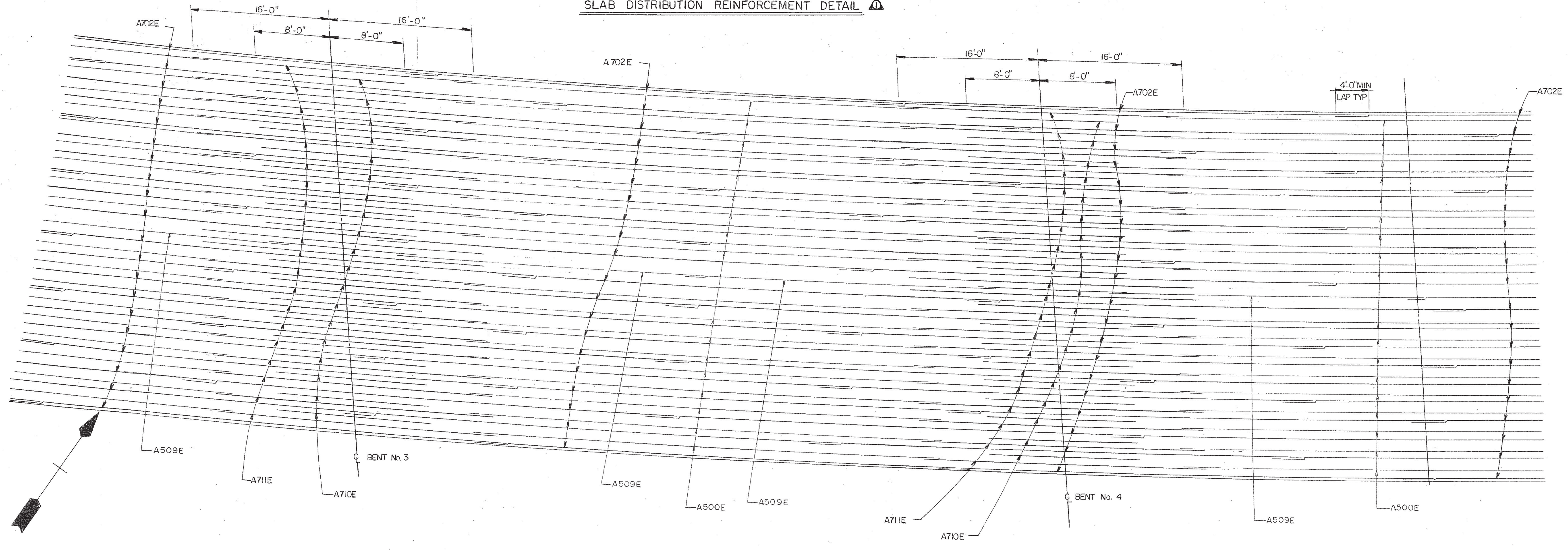
CORRECT ENGINEER OF STRUCTURES  
APPROVED DIRECTOR OF HIGHWAYS

M-105-49

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26H	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	R.S.B.	ADDED DETAIL REINFORCEMENT
2	3-16-82	R.S.B.	ADDED BARS TO SLAB



SLAB DISTRIBUTION REINFORCEMENT DETAIL



PLAN OF TOP SLAB  
MAIN REINFORCEMENT

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 1 & L & N R.R.  
STA. 377+03.54  
RUTHERFORD COUNTY  
1981

DESIGNED BY: RON BACON DATE: \_\_\_\_\_  
DRAWN BY: TOM RIDEOUT / B. THISTLEWOOD DATE: 8-25-81  
SUPERVISED BY: J.D. MOORE DATE: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

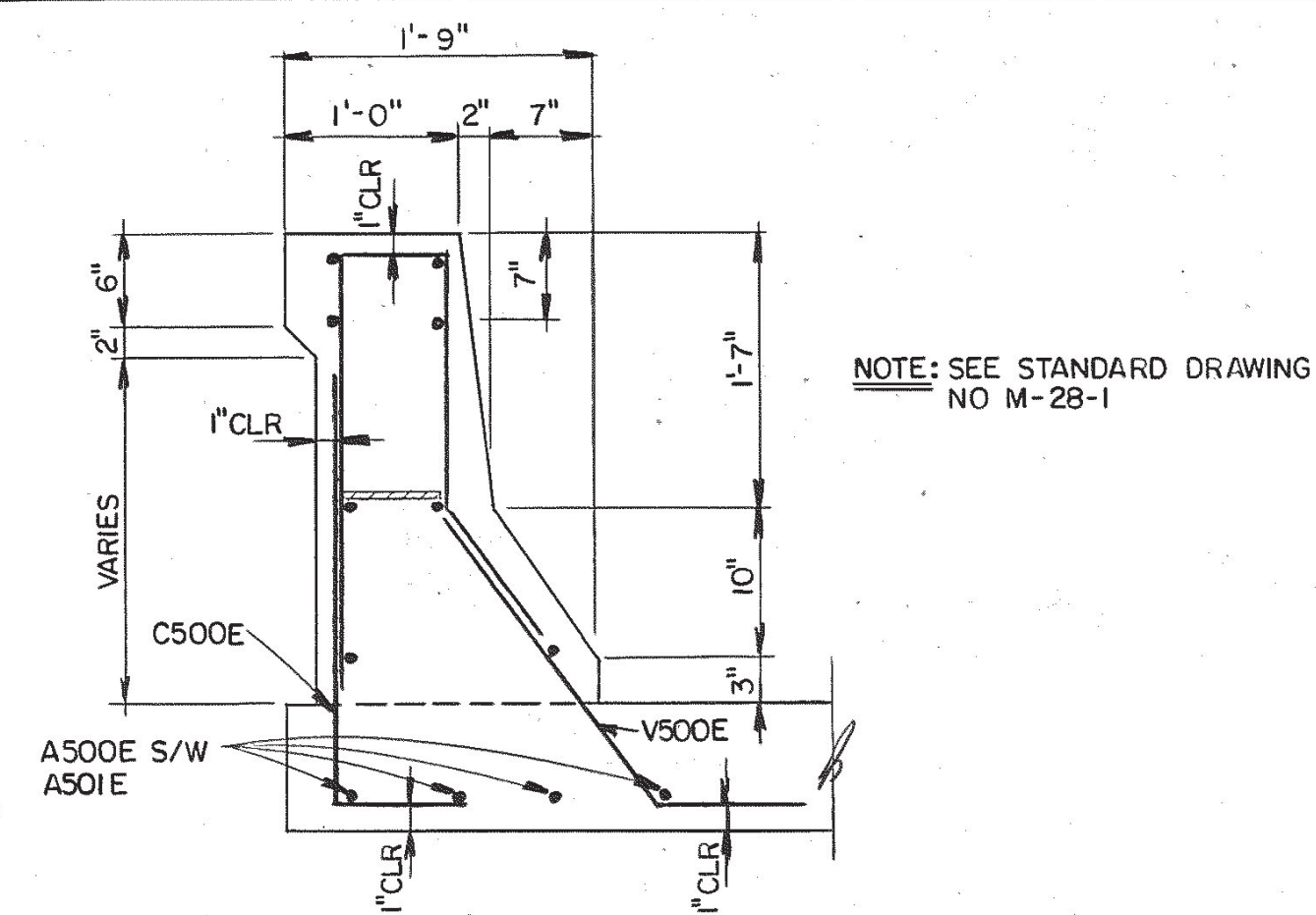
CORRECT: \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED: \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-105-50

PROJECT NO.	YEAR	SHEET NO.
F-50-(6)	81	26I

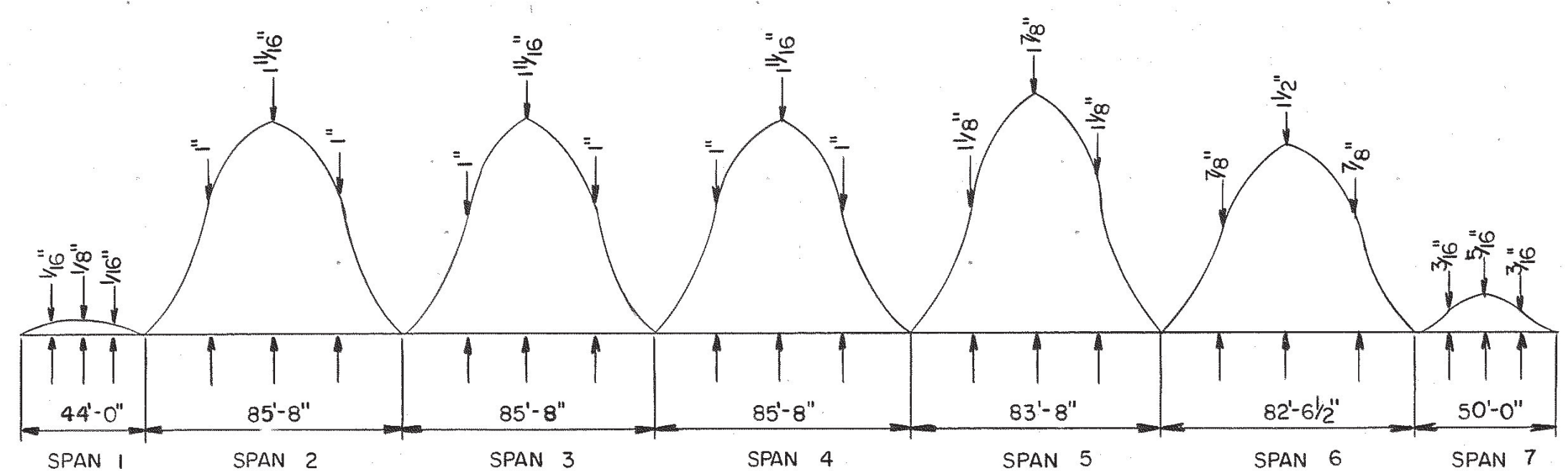
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	RSB	CHANGED CENTERLINE FROM L&N
2	3-16-82	RSB	ADDED BARS TO SLAB



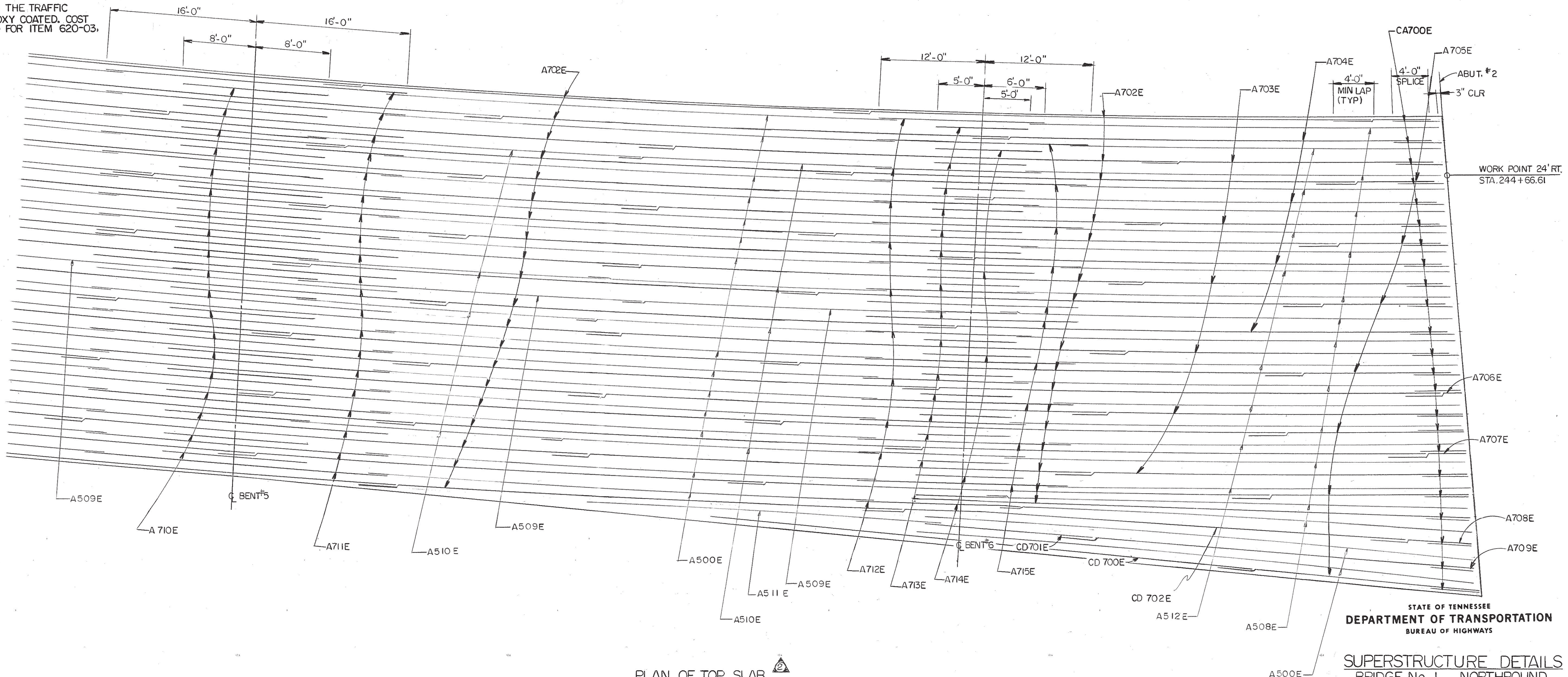
NOTE: SEE STANDARD DRAWING NO M-28-1

BARRIER DETAIL



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

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



PLAN OF TOP SLAB  
 MAIN REINFORCEMENT

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS  
 BRIDGE No. 1 NORTHBOUND  
 J.S. YOUNG LANE (M)  
 OVER S.R. 1 & L & N R.R.  
 STA. 377+03.54  
 RUTHERFORD COUNTY  
 1981

DESIGNED BY: RON BACON  
 DRAWN BY: BOBBY CLYMER / BILL THISTLEWOOD  
 SUPERVISED BY: J.D. MOORE  
 CHECKED BY: \_\_\_\_\_

DATE: \_\_\_\_\_  
 DATE: 8-26-81  
 DATE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

CORRECT \_\_\_\_\_  
 ENGINEER OF STRUCTURES

APPROVED \_\_\_\_\_  
 DIRECTOR OF HIGHWAYS

M-105-51

CONST. NO. 75002-3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50-(6)	81	26J

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-1-81	HMB	ADD ESTIMATED QUANTITIES AND REINFORCEMENT BARS
2	2-12-82	H.S.D.	ADJUST LENGTH BEAM A-1 DIMENSIONS

THE TOP OF ALL BEAMS ARE 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 TOP FLANGE MAY BE TROWELED.

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 5000 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 4000 PSI. SEE LAYOUT SHEET FOR CONCRETE FINISHING NOTE.

MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60

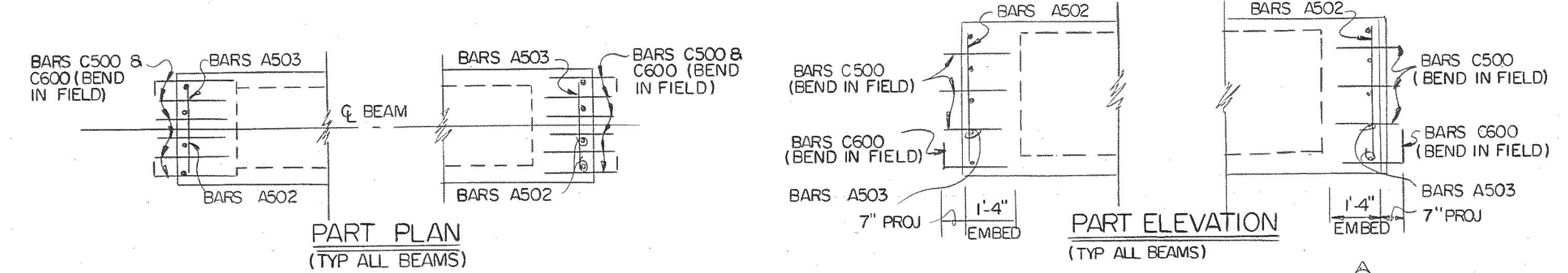
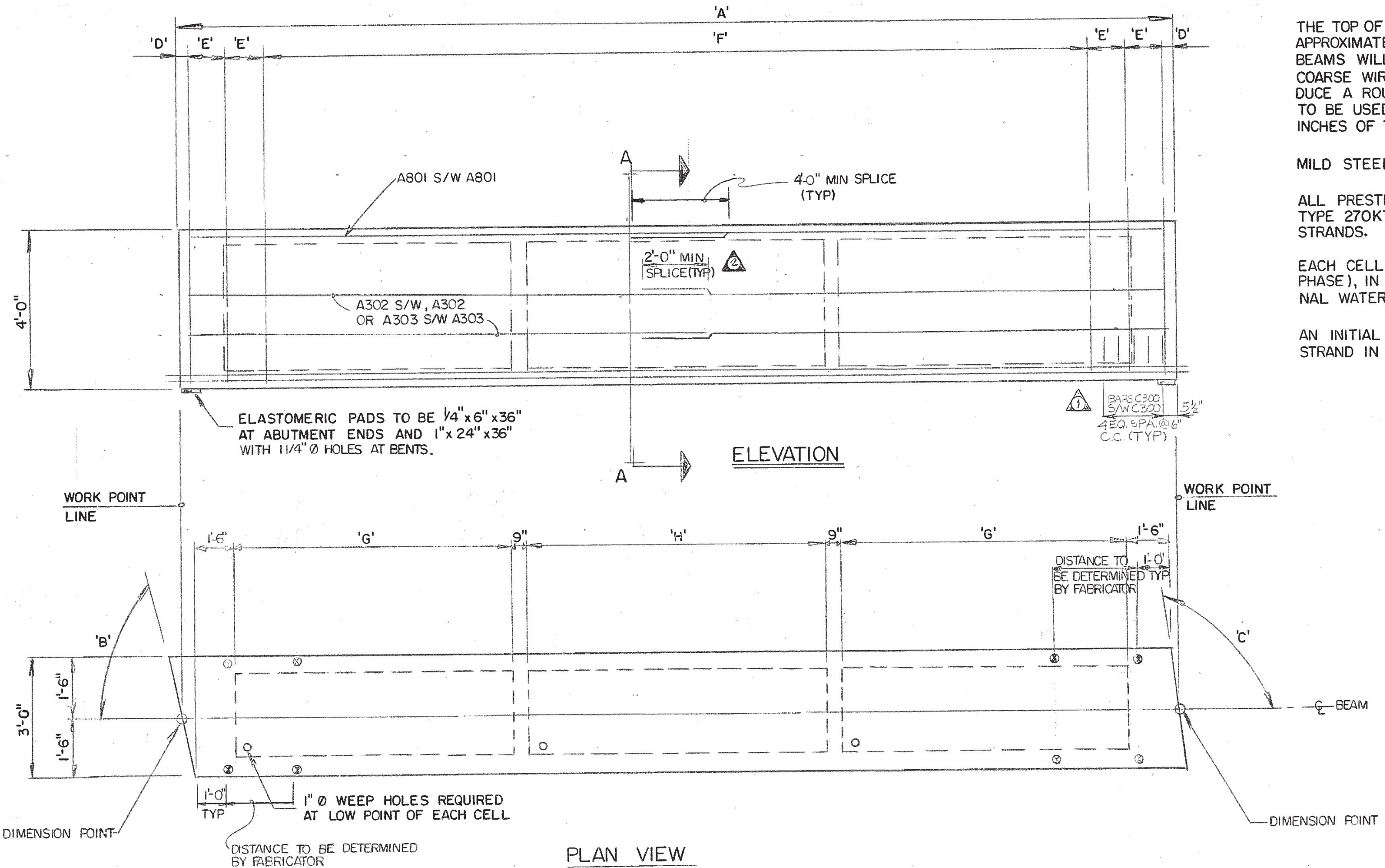
ALL PRESTRESSING STRANDS TO BE 1/2" Ø HIGH STRENGTH TYPE 270K7 WIRE UNCOATED STRESS-RELIEVED PRESTRESSING STRANDS.

EACH CELL SHALL BE VENTED, (DURING THE FABRICATION PHASE), IN SUCH A MANNER SO AS NOT TO ALLOW EXTERNAL WATER TO ENTER THE CELL.

AN INITIAL FORCE OF 28,936 lbs. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.

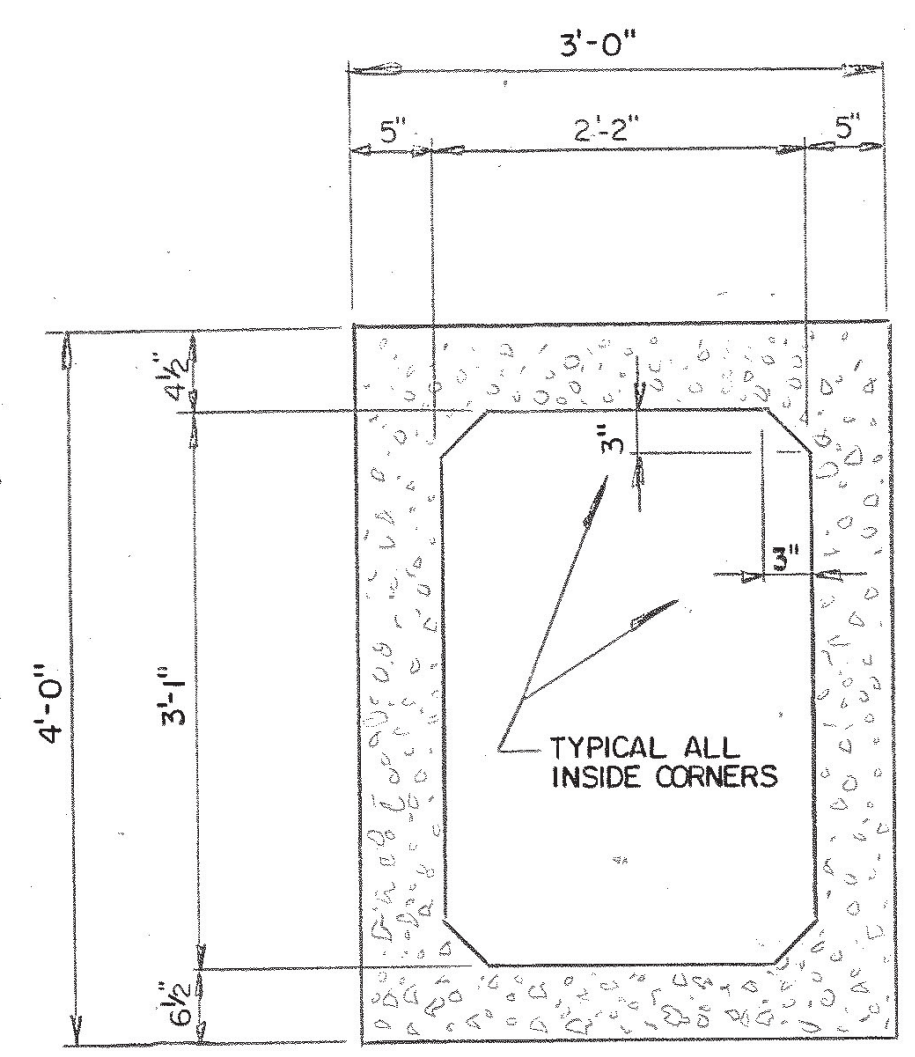
AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C500 AND C600 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.

DIMENSIONS "E" AND "F" ARE STIRRUP SPACINGS. ONE COMPLETE STIRRUP SET CONSISTING OF TWO BARS ZA400E, TWO BARS C400, AND ONE BAR H400.

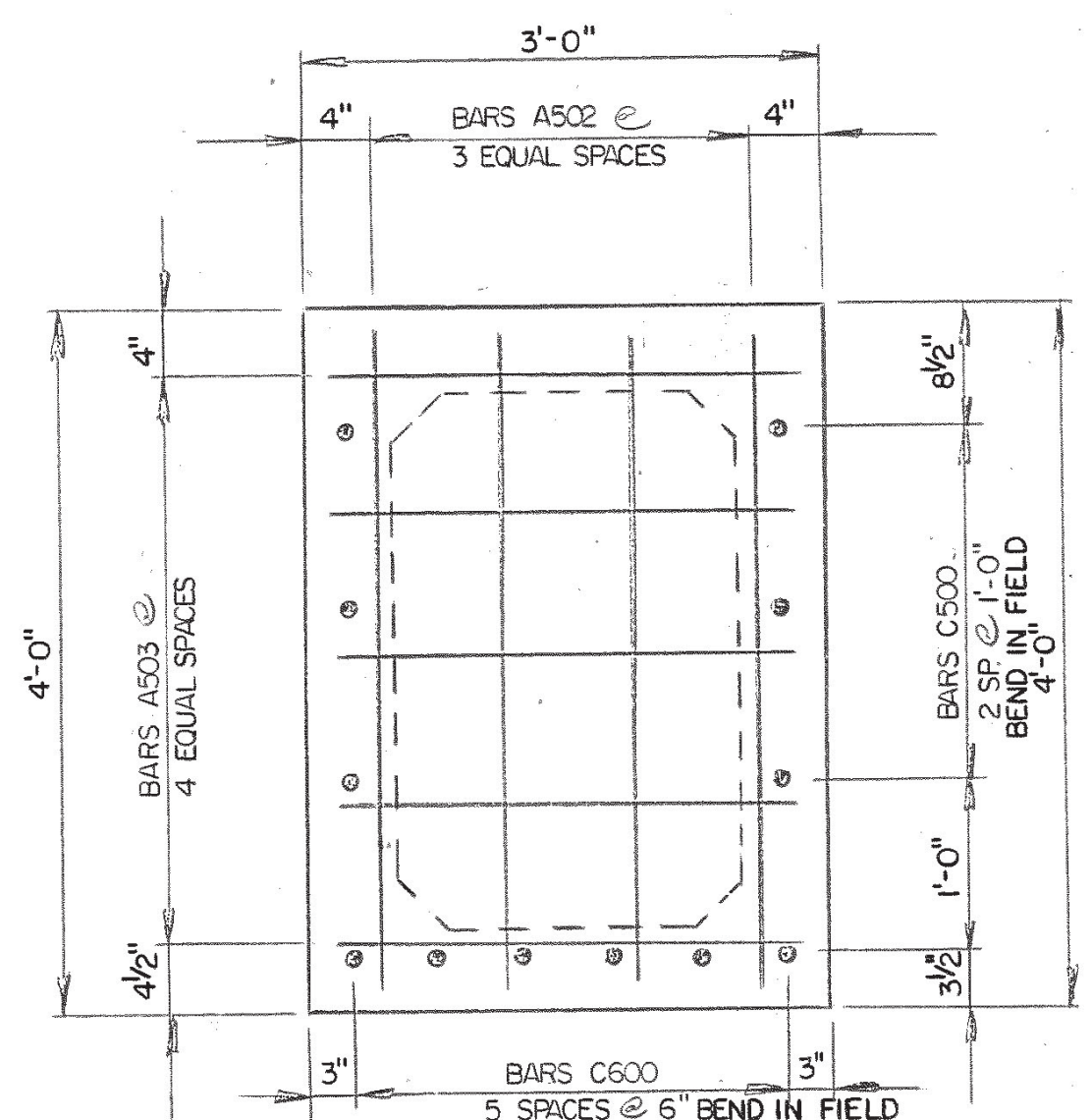


BEAM NO.	'A'	ANGLE 'B'	ANGLE 'C'	'D'	'E'	'F'	'G'	'H'	ESTIMATED QUANTITIES		
									CLASS 'A' CONCRETE CY	REINFORCING STEEL LBS.	PRESTRESSING STEEL LBS.
A-1	38'-8 1/2"	86°	104°	4 1/4"	12"	17 SP @ 24"	11'-0"	11'-8 3/4"	9.0	1027	285
A-2	40'-2"	86°	104°	5"	10"	18 SP @ 24"	11'-6"	12'-8"	9.3	1041	296
A-3	41'-8"	86°	104°	4"	9"	19 SP @ 24"	11'-6"	14'-2"	9.6	1055	307
A-4	43'-1 1/2"	86°	104°	4"	7 3/8"	20 SP @ 24"	12'-6"	13'-7 1/2"	9.8	1069	318
A-5	44'-7"	86°	104°	5 1/2"	11"	20 SP @ 24"	12'-6"	15'-1"	10.1	1069	328
A-6	55'-11 1/2"	88°	102°	4"	9 7/8"	26 SP @ 24"	16'-6"	18'-5 1/2"	12.4	1161	646
A-7	54'-11"	92°	98°	6"	11 3/4"	25 SP @ 24"	16'-6"	17'-5"	12.2	1147	634
A-8	52'-9"	95°	95°	5"	11 3/4"	24 SP @ 24"	15'-11"	16'-5"	11.8	1133	609
A-9	51'-3"	95°	95°	4"	7 3/4"	24 SP @ 24"	15'-5"	15'-5"	11.5	1133	592
A-10	49'-9"	95°	95°	4"	9 1/4"	23 SP @ 24"	14'-11"	15'-5"	11.2	1119	575
A-11	48'-3"	95°	95°	4"	10 3/4"	22 SP @ 24"	14'-5"	14'-11"	10.9	1105	556

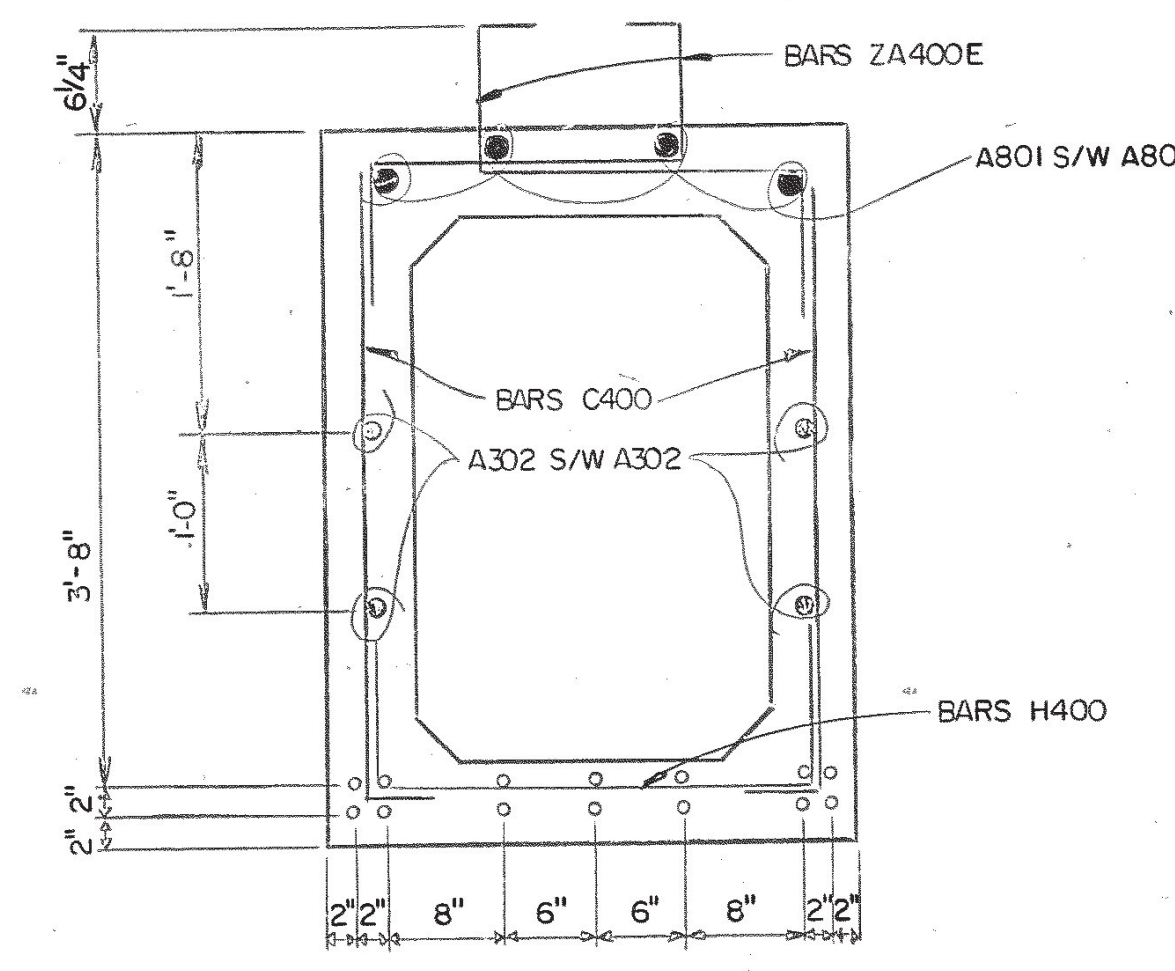
NOTE: COST OF ELASTOMERIC PADS, AND 1/4" DIA. DOWEL BARS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.



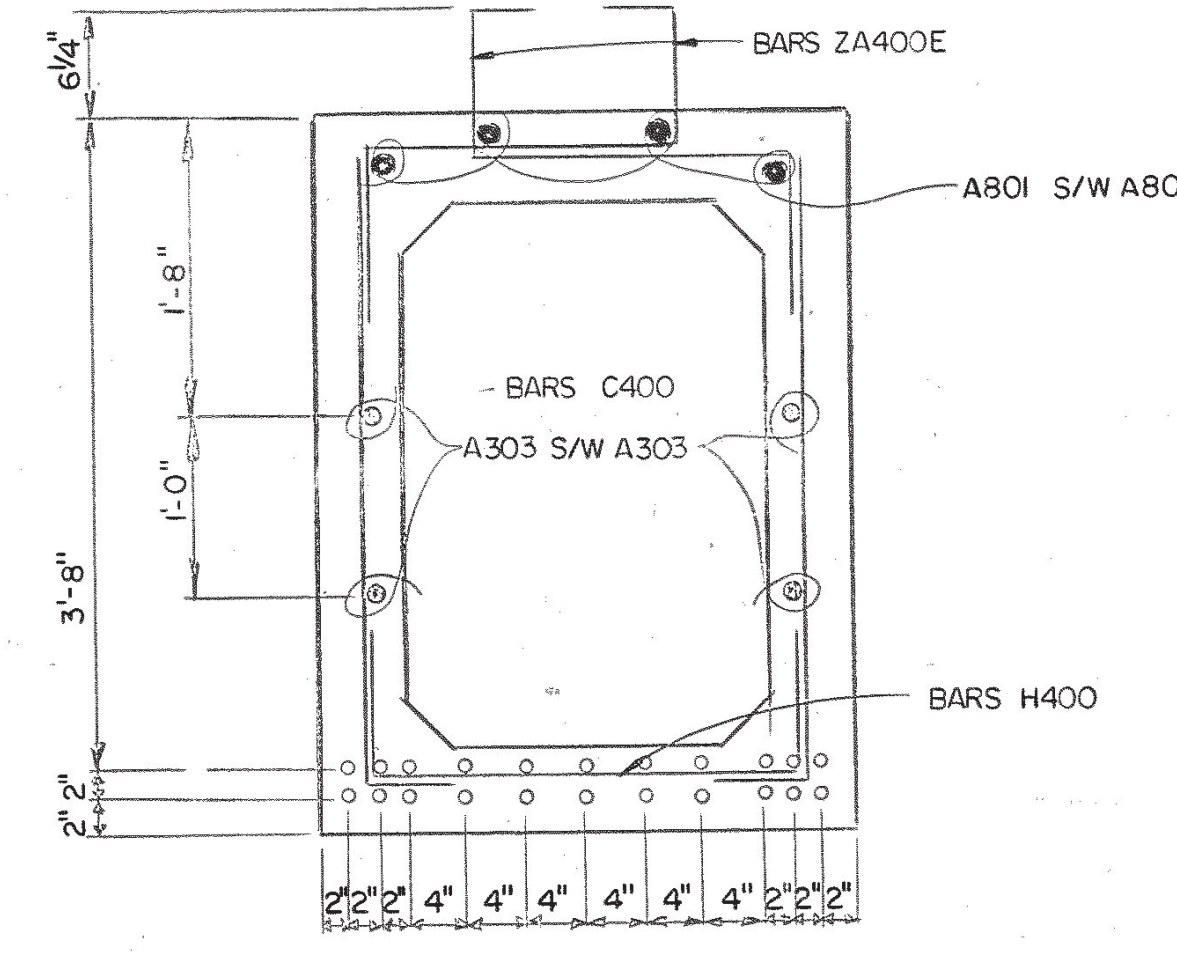
TYPICAL SECTION  
TYPICAL ALL BEAMS



END SECTION  
TYPICAL ALL BEAMS



SECTION A-A  
BEAMS A-1, A-2, A-3, A-4, & A-5  
(1 EACH REQ'D.)



SECTION A-A  
BEAMS A-6, A-7, A-8, A-9, A-10, & A-11  
(1 EACH REQ'D.)

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY \_\_\_\_\_ DATE \_\_\_\_\_  
SUPERVISED BY \_\_\_\_\_ DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS  
PRESTRESSED BEAM DETAILS  
BRIDGE NO. 1 NORTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 1 & L & N R.R.  
STA 377 + 03.54  
RUTHERFORD COUNTY  
— 1981 —

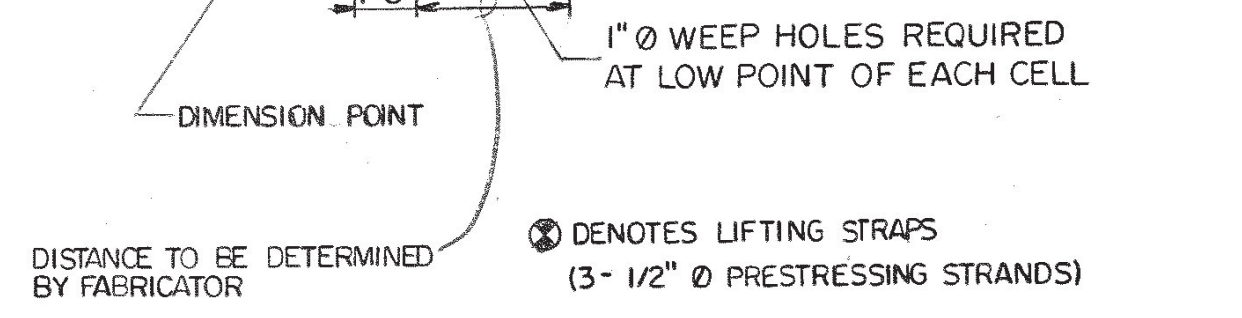
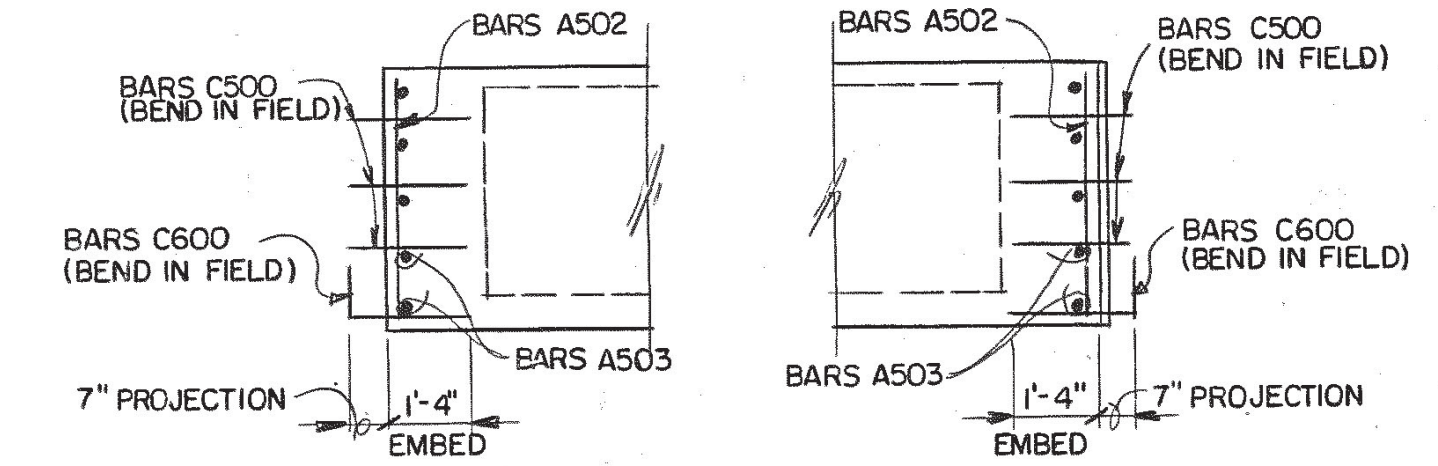
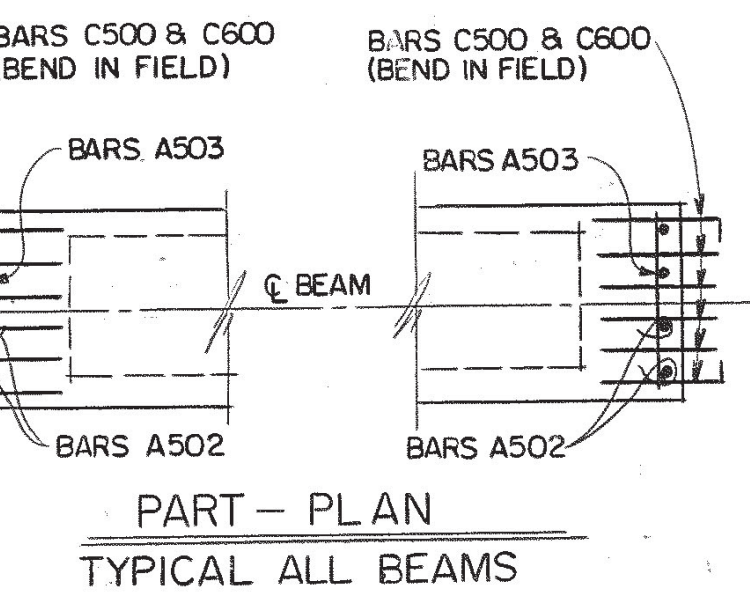
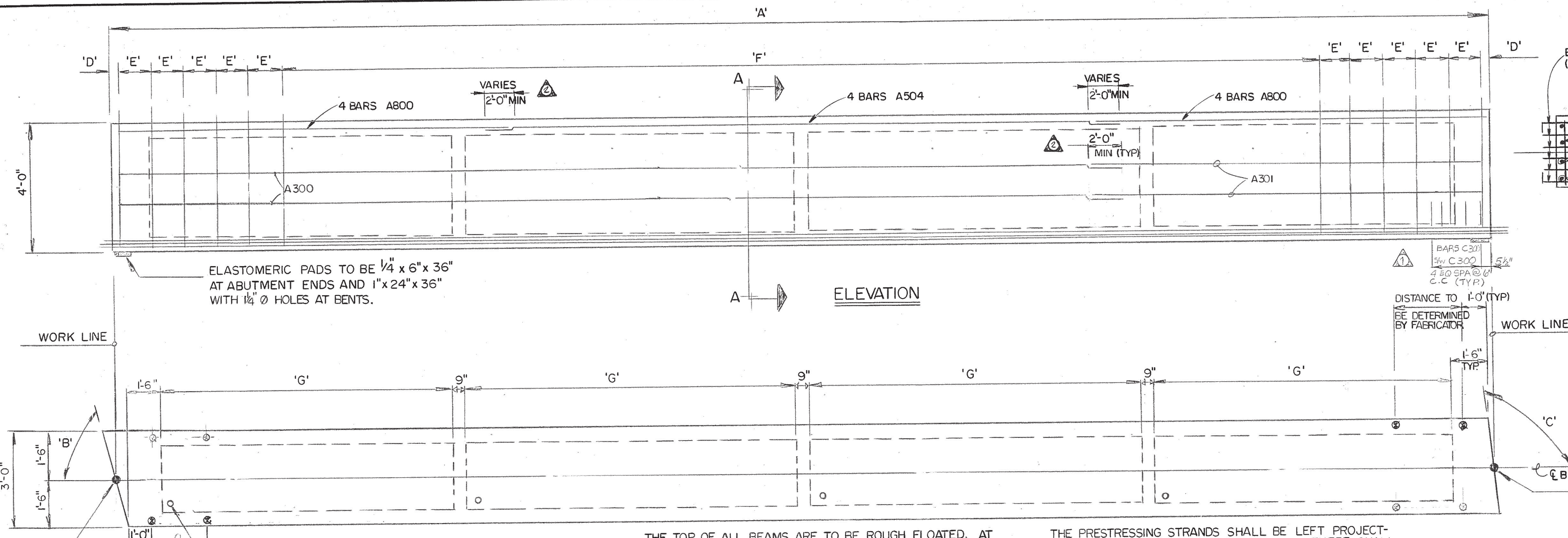
M-105-52

CONST. NO. 75002-3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50-(6)	81	26K

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-18-81	HMB	ADDED ESTIMATED QUANTITIES AND REINFORCING BAR SPACING.
2	2-12-82	PSD	SPACE LGTH. BEAM BY DIMENSIONS



**PLAN VIEW**

THE TOP OF ALL BEAMS ARE 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 TOP FLANGE MAY BE TROWELED.

MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.

ALL PRESTRESSING STRANDS TO BE 1/2" Ø HIGH STRENGTH TYPE 270K7 WIRE UNCOATED STRESS-RELIEVED PRE-STRESSING STRANDS.

EACH CELL SHALL BE VENTED, (DURING THE FABRICATION PHASE), IN SUCH A MANNER SO AS NOT TO ALLOW EXTERNAL WATER TO ENTER THE CELL.

AN INITIAL FORCE OF 23,936lbs. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.

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.

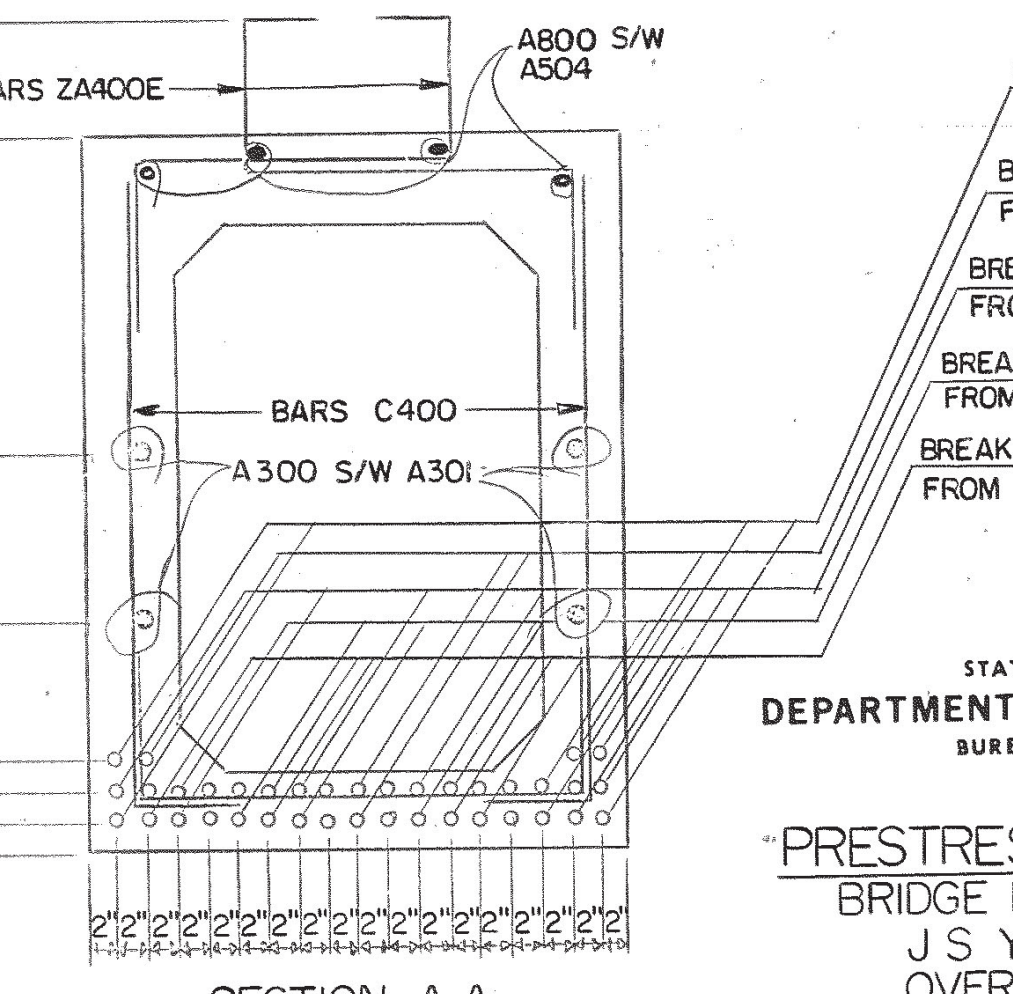
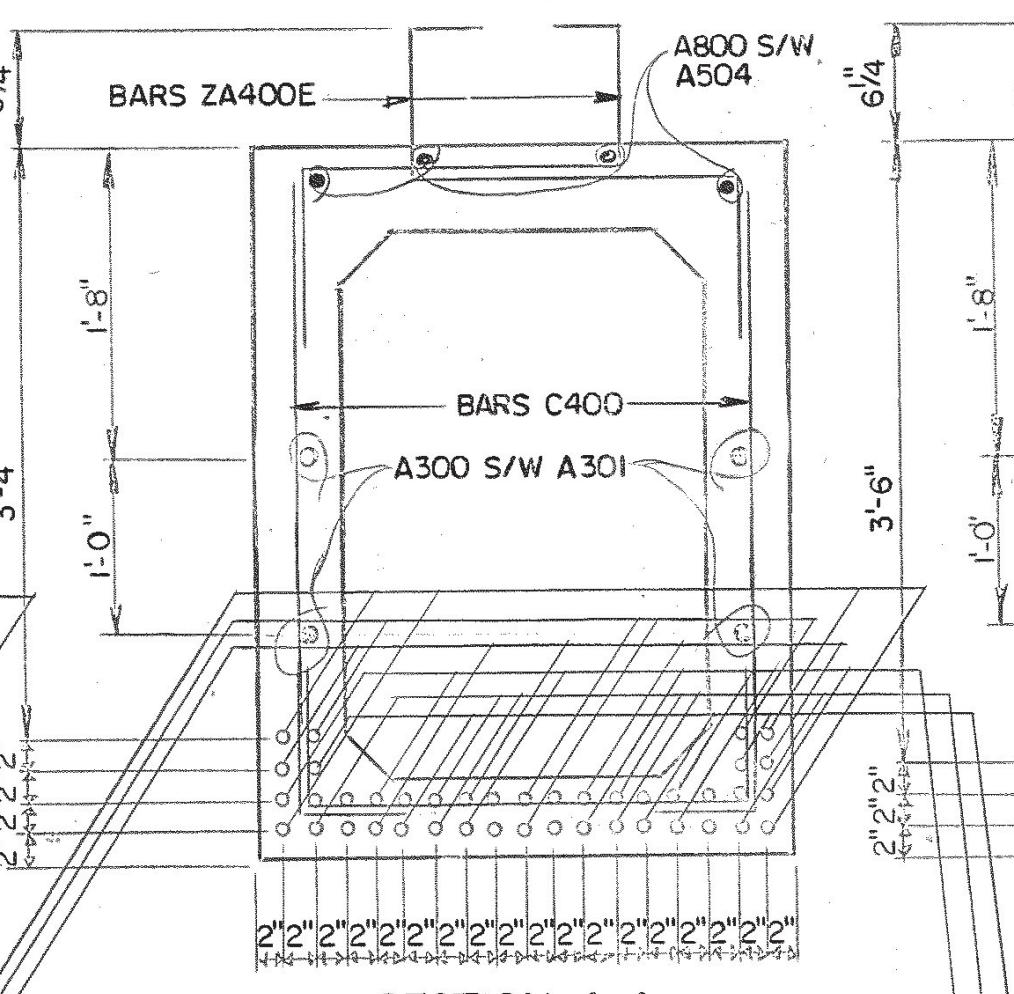
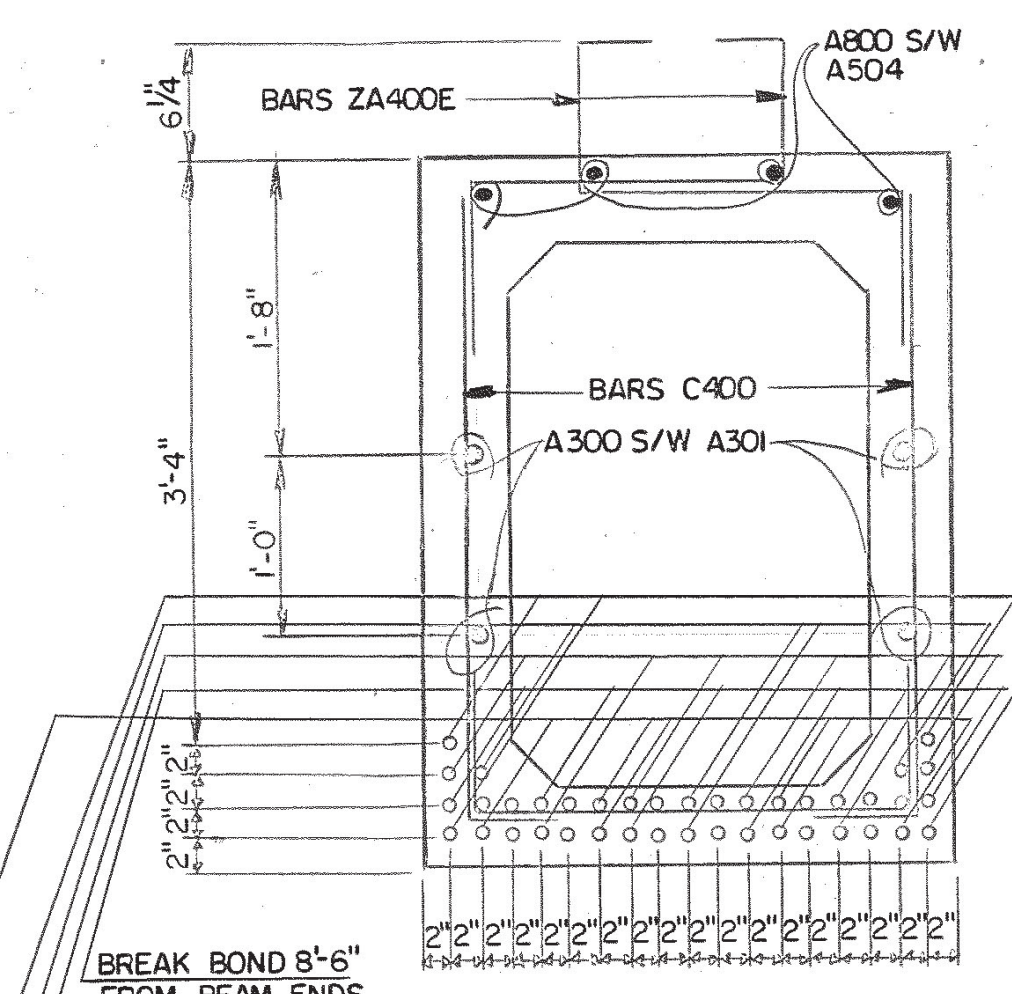
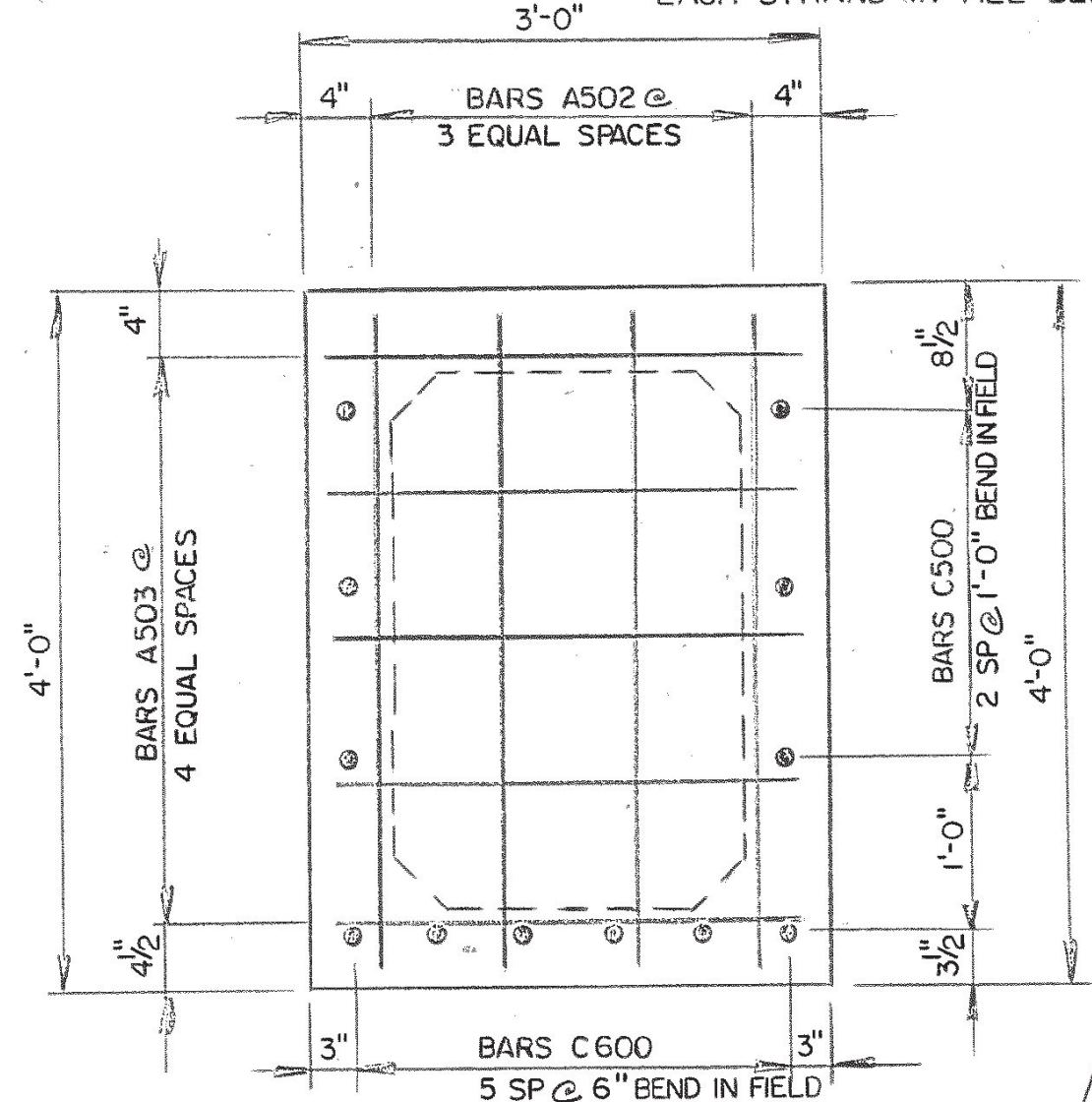
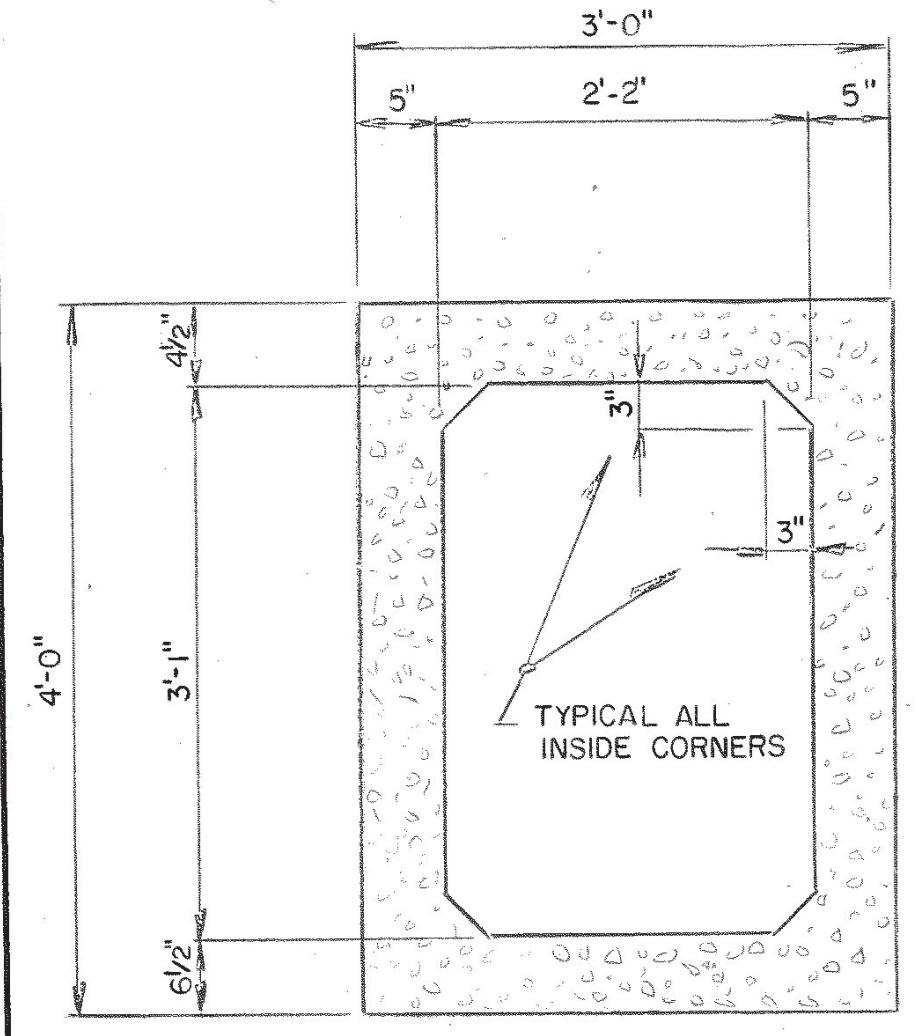
THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 5000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4000 PSI, SEE LAYOUT SHEET FOR CONCRETE FINISHING NOTE.

AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C500 AND C600 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.

DIMENSIONS "E" AND "F" ARE STIRRUP SPACINGS. ONE COMPLETE STIRRUP SET CONSISTING OF TWO BARS ZA400E, TWO BARS C400, AND ONE BAR H400.

BEAM No	'A'	ANGLE 'B'	ANGLE 'C'	'D'	'E'	'F'	'G'	ESTIMATED QUANTITIES		
								CLASS 'A' CONC. CY	REINFORCING STEEL LBS	PRESTRESSING STEEL LBS
B-1	84'-8"	79°	101°	4"	12"	37 SP @ 24"	19'-10 1/4"	18.4	1593	1772
B-2	84'-8"	88°30'	92°	4"	12"	37 SP @ 24"	19'-10 1/4"	18.4	1593	1860
B-3	85'-1 1/2"	88°30'	92°	4 3/4"	10"	38 SP @ 24"	19'-11 7/8"	18.5	1607	1881
B-4	85'-7 1/2"	88°30'	92°	5 1/4"	10 1/2"	38 SP @ 24"	20'-1 1/8"	18.6	1621	1893
B-5	86'-2"	88°30'	92°	4"	9"	39 SP @ 24"	20'-2 3/4"	18.8	1621	1904
B-6	86'-8"	88°30'	92°	4 1/2"	9 1/2"	39 SP @ 24"	20'-4 1/4"	17.7	1579	1621
B-7	81'-6 1/2"	92°	88°	4 3/4"	10 1/2"	36 SP @ 24"	19'-2 7/8"	17.8	1593	1626
B-8	81'-9 1/2"	92°	89°	4 1/4"	8 1/2"	37 SP @ 24"	19'-10 1/4"	18.4	1593	1772
B-9	84'-8"	83°	97°	4"	12"	37 SP @ 24"	19'-10 1/4"	18.4	1593	1772
B-10	84'-8"	87°	92°30'	4"	12"	37 SP @ 24"	19'-10 1/4"	18.4	1593	1772

NOTE: COST OF ELASTOMERIC PADS, AND 1/4" DIA. DOWEL BARS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

PRESTRESSED BEAM DETAILS  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (N.L.)  
OVER S.R. 1 & L & N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
1981

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY \_\_\_\_\_ DATE \_\_\_\_\_  
SUPERVISED BY \_\_\_\_\_ DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-105-53

**BENT NOTES**

RISER BLOCK BEARING PAD SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

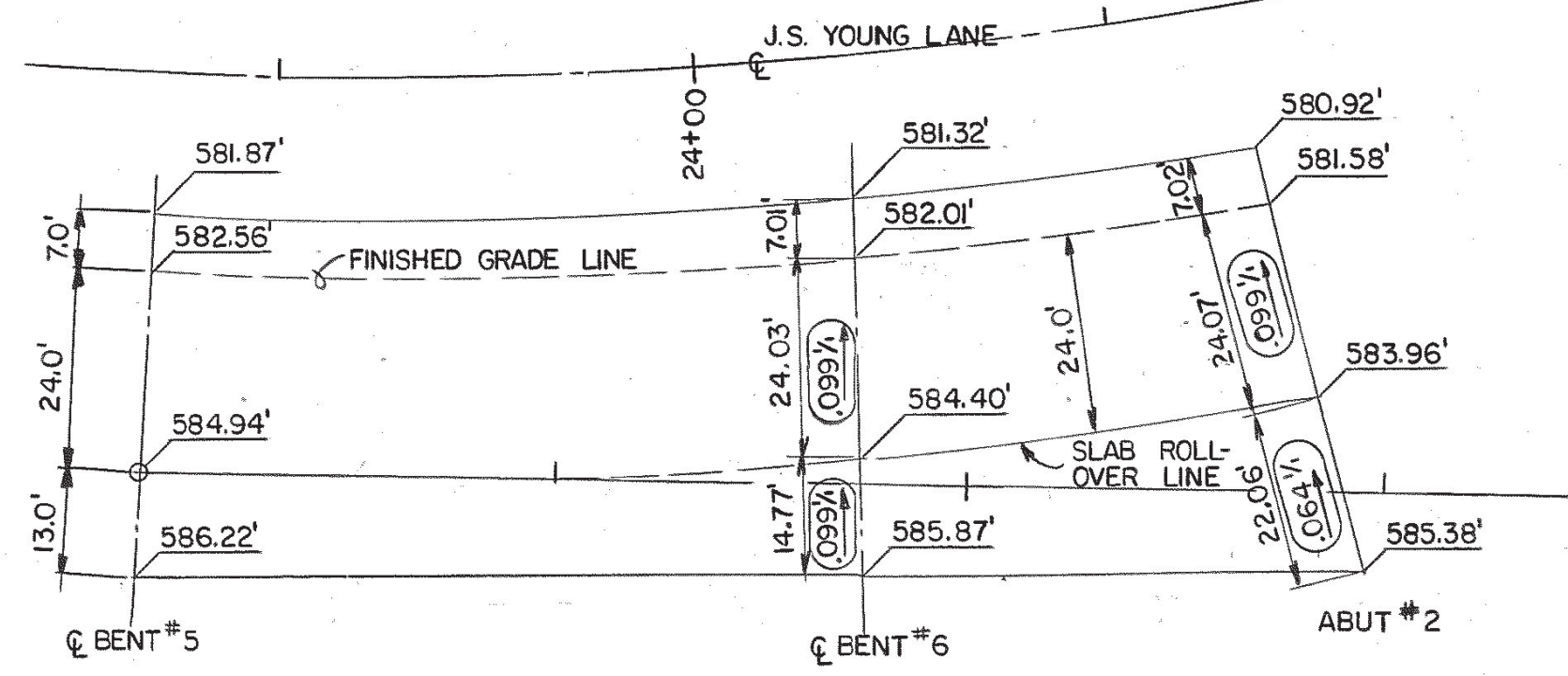
FOR DIMENSIONS SEE TABLE OF BENT ELEVATIONS AND DIMENSIONS, SHEET

RISER BLOCKS TO BE POURED MONOLITHICALLY WITH CAP BEAM.

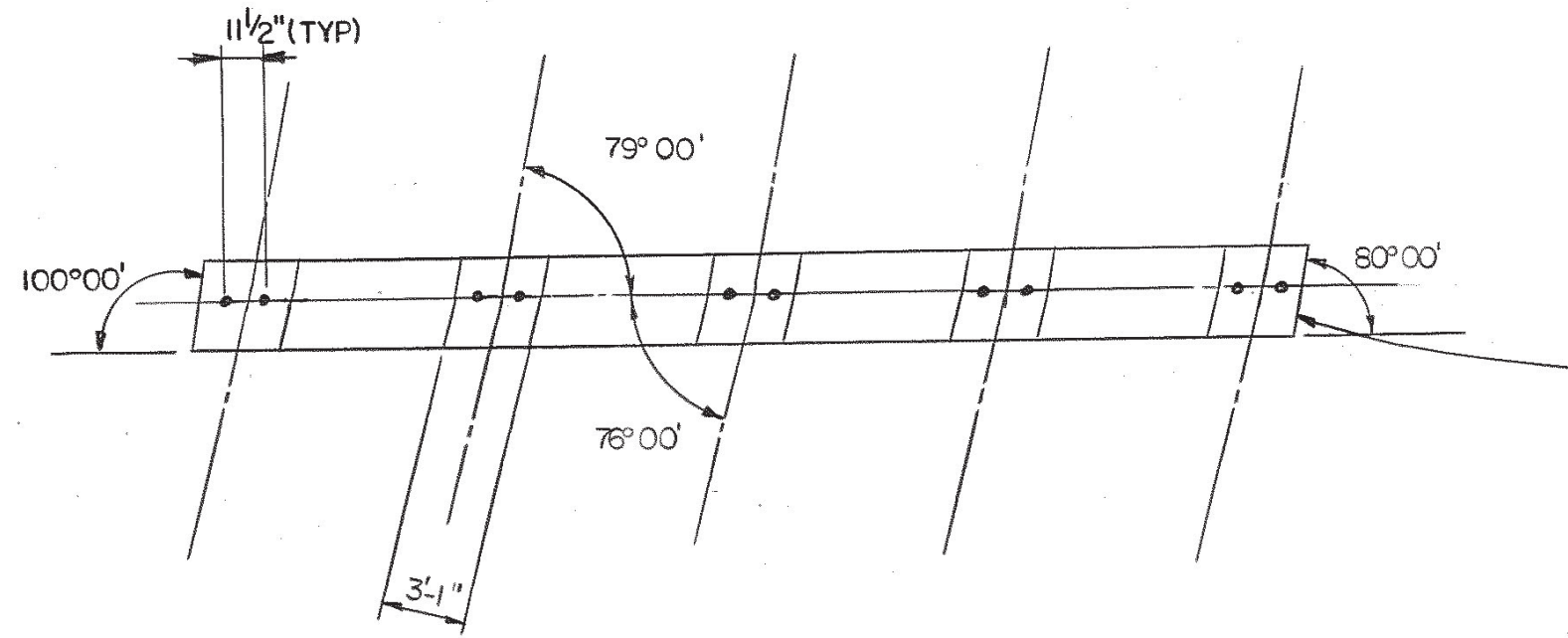
ALL ELEVATIONS SHOWN LOOKING UP STATION.

WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING DOWEL BARS. 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".

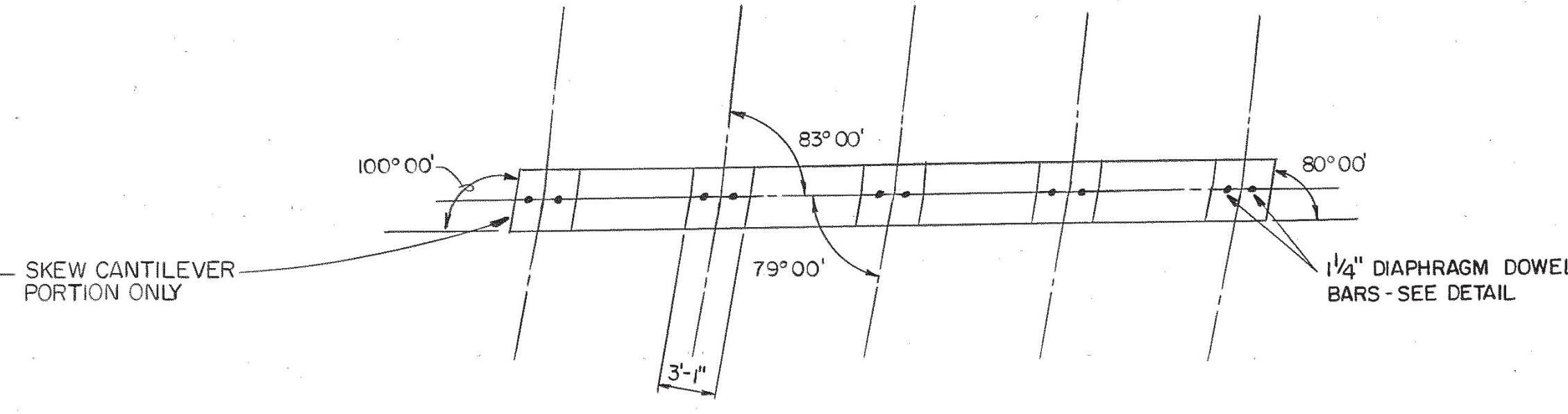
COLUMN STEEL TO EXTEND AT LEAST 3'-6" INTO CAP BEAM.



SLAB DEVELOPMENT DETAIL

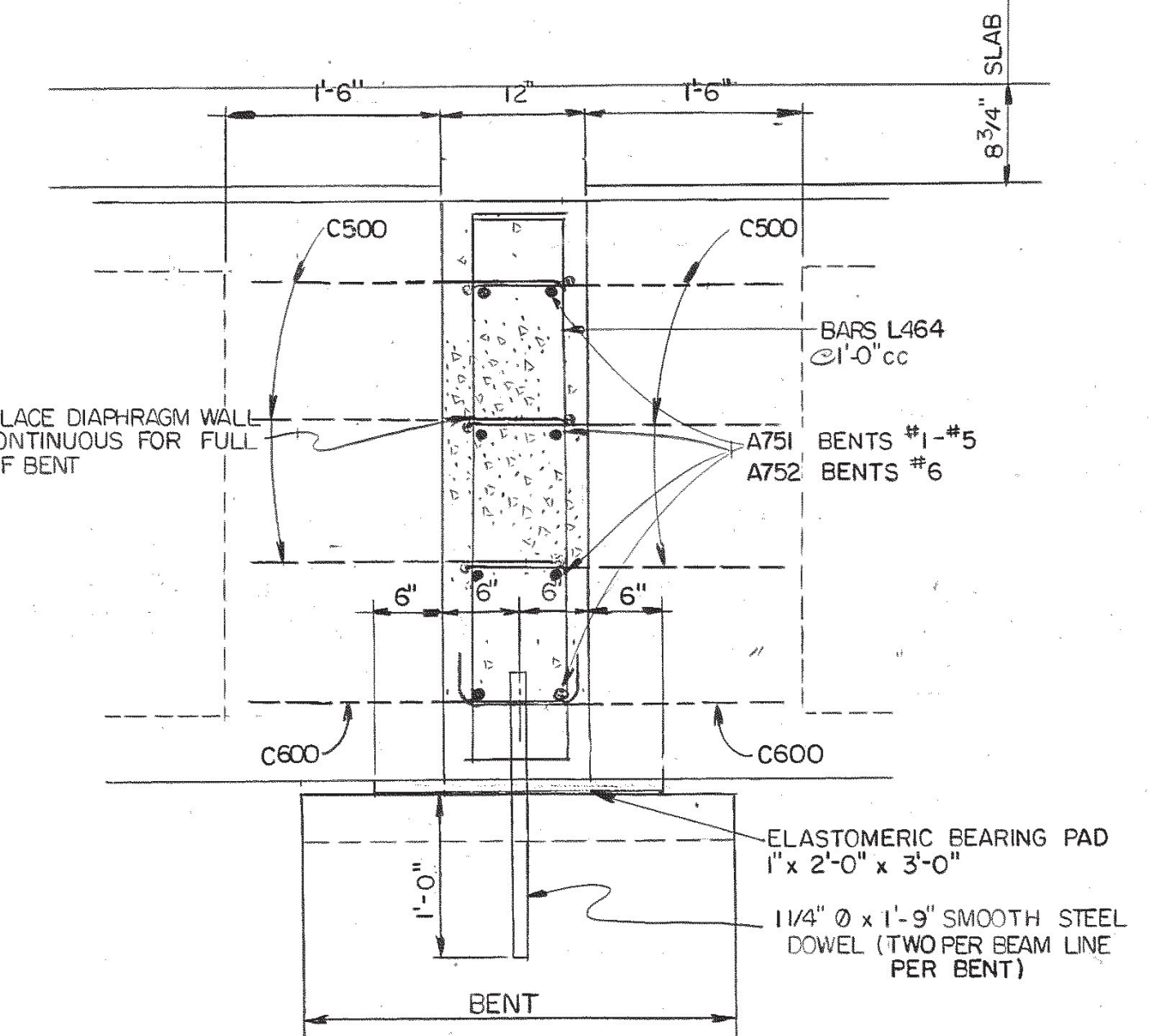


RISER BLOCK PLAN



RISER BLOCK PLAN

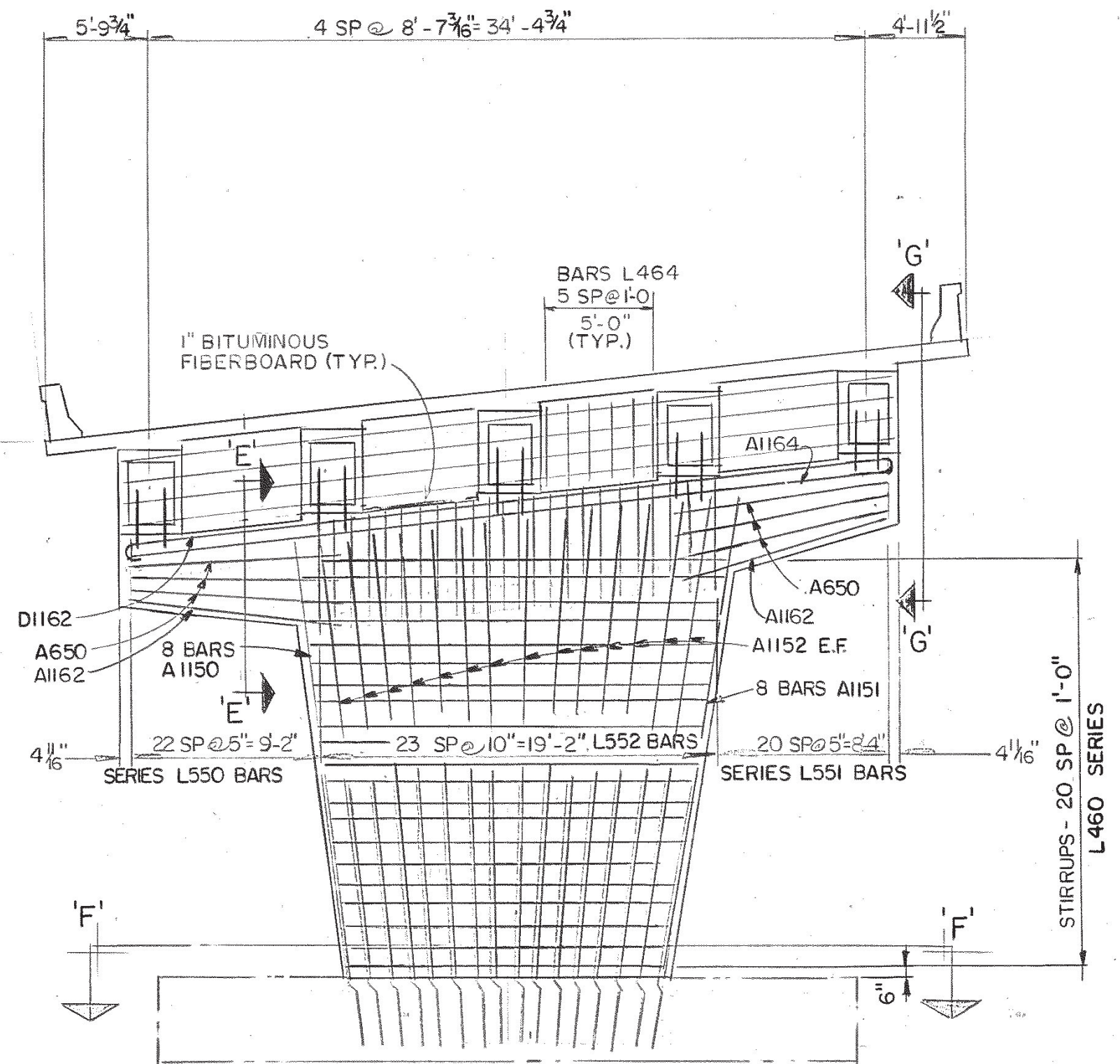
NOTE: TOP OF DOWELS TO BE COVERED W/ 1/2" OF COMPRESSIBLE MATERIAL AND THE 9" PROJECTION WRAPPED W/ TWO LAYERS OF WATERPROOF PAPER.



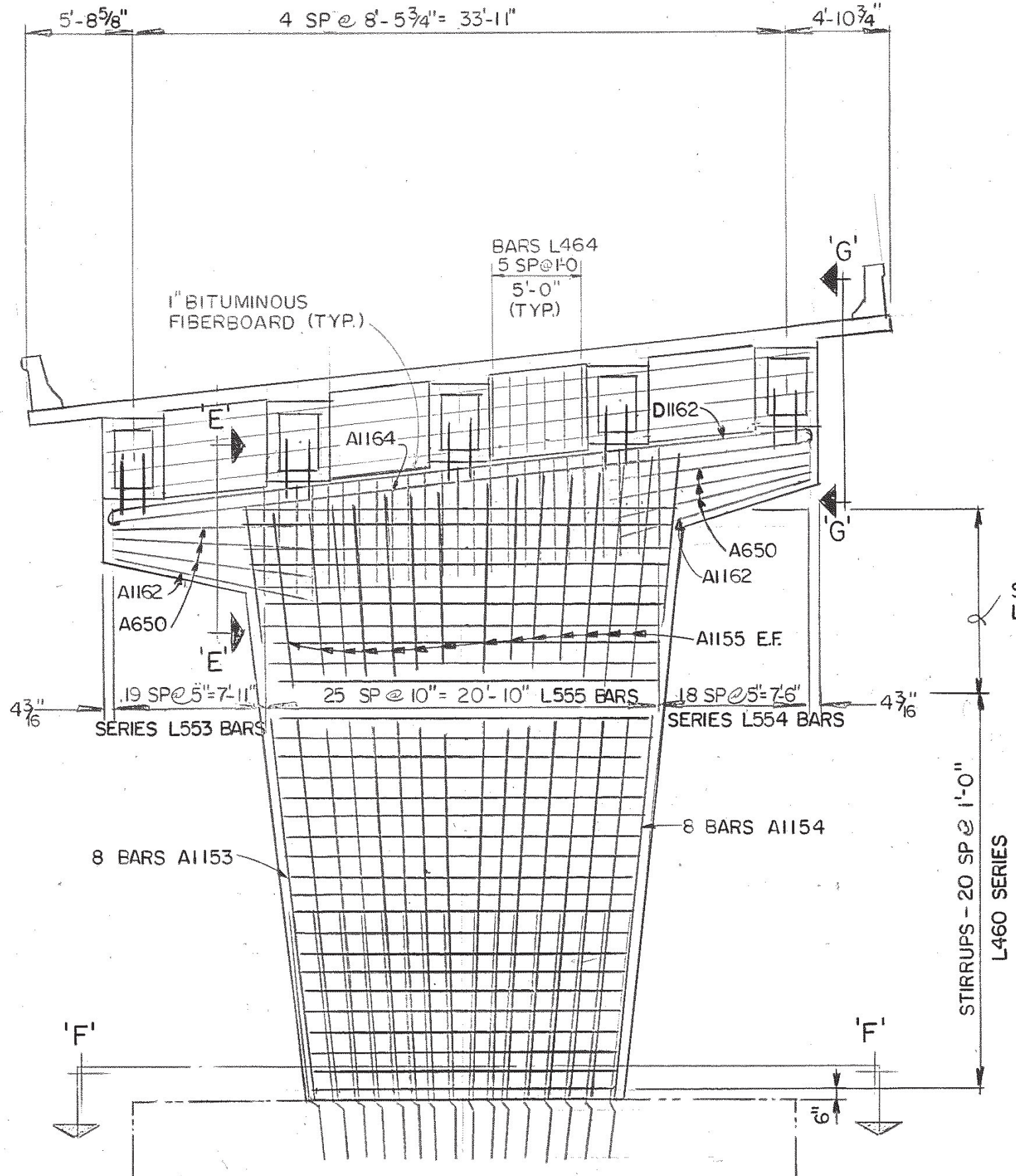
BENT DIAPHRAGM WALL VIEW 'G-G'

ESTIMATED QUANTITIES

Item	CLASS 'A' CONCRETE C.Y.	REINFORCING STEEL LBS.
BENT No. 1	180.4	21,372
BENT No. 2	202.6	24,198



BENT No. 1  
LOOKING FORWARD ON SURVEY



BENT No. 2  
LOOKING FORWARD ON SURVEY

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26L	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	HSP	NOTES BENT BEARING, STIRRUPS
2	3-16-82	HSP	CHANGED L552 TO L555, DELETED Y2400 & Y4000

DESIGNED BY RON BACON DATE \_\_\_\_\_  
 DRAWN BY BOB SIKES / BILL THISTLEWOOD DATE 8-14-81  
 SUPERVISED BY J.D. MOORE DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
 APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS  
 M-105-54

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS  
**BENT DETAILS**  
 BRIDGE No. 1 NORTHBOUND  
 J.S. YOUNG LANE (M)  
 OVER S.R. 1 & L & N R.R.  
 STA. 377+03.54  
 RUTHERFORD COUNTY  
 1981

BENT ELEVATIONS AND DIMENSIONS

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	h	j	k	m	n	p	q	r	s	t	u	v	w
BENT No. 1	577.97	578.80	579.64	580.47	—	581.30	556.57	17'-2 3/4"	0'-10 1/2"	3'-3 3/16"	8'-9"	8'-0"	19'-3 1/2"	2'-5"	3'-0"	8'-0"	0'-3 3/16"	9'-11 1/16"	10'-8 1/16"	37'-5 3/8"
BENT No. 2	578.08	578.91	579.75	580.58	—	581.41	547.08	26'-11 3/4"	0'-8 3/4"	3'-3 3/16"	7'-3 1/2"	7'-0"	29'-3 3/4"	2'-0"	3'-0"	8'-0"	0'-3 3/16"	11'-2 3/16"	11'-5 1/16"	36'-11 3/8"
BENT No. 3	578.03	578.85	579.68	580.50	—	581.32	550.61	23'-4 1/2"	0'-9"	3'-3 3/16"	7'-6 1/2"	7'-3 1/4"	25'-7 1/2"	2'-1"	3'-0"	8'-0"	0'-3 3/16"	10'-9 3/16"	11'-0 7/16"	36'-7 3/8"
BENT No. 4	577.80	578.63	579.41	580.28	—	581.10	550.39	23'-4 1/2"	0'-9"	3'-3 3/16"	7'-5 3/4"	7'-2 3/4"	25'-7 3/4"	2'-0 3/4"	3'-0"	8'-0"	0'-3 3/16"	10'-9 7/16"	11'-0 7/16"	36'-6 3/8"
BENT No. 5	577.39	578.22	579.04	579.87	—	580.69	552.98	20'-4"	0'-9 1/2"	3'-3 3/16"	7'-10 1/4"	7'-7"	22'-6 1/2"	2'-2"	3'-0"	8'-0"	0'-3 3/16"	10'-9 7/16"	11'-0 7/16"	36'-6 3/8"
BENT No. 6	576.84	577.67	578.50	579.37	579.89	580.41	551.44	21'-4"	0'-9 3/8"	3'-3 3/16"	7'-9 1/2"	9'-2"	23'-3 1/4"	2'-7 1/16"	3'-0"	8'-0"	0'-3 1/16"	11'-3 7/8"	9'-11 7/16"	38'-2 1/16"

CONST. NO. 75002-3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50-(6)	81	26M

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	12-12-82	RSB	CHANGED ELEVATIONS
2	3-16-82	RSB	ADD QUANTITY BOX
3	5-24-82	RSB	Revise Table for Bent No. 6

BENT NOTES

FOR DIMENSIONS SEE TABLE OF BENT ELEVATIONS AND DIMENSIONS, SHEET

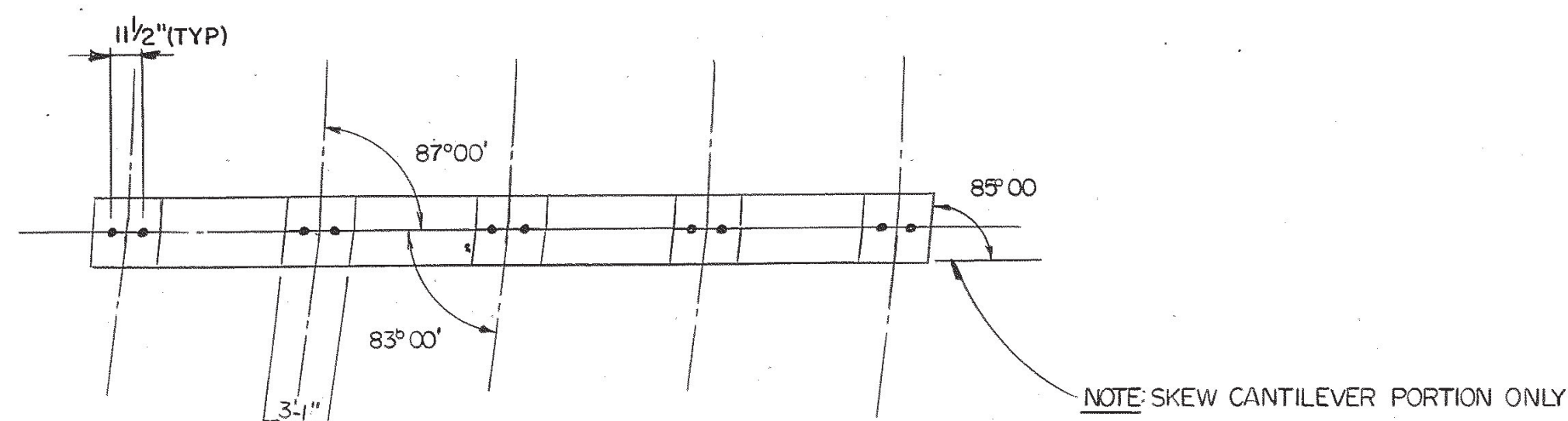
RISER BLOCKS TO BE POURED MONOLITHICALLY WITH CAP BEAM.

ALL ELEVATIONS SHOWN LOOKING UP STATION.

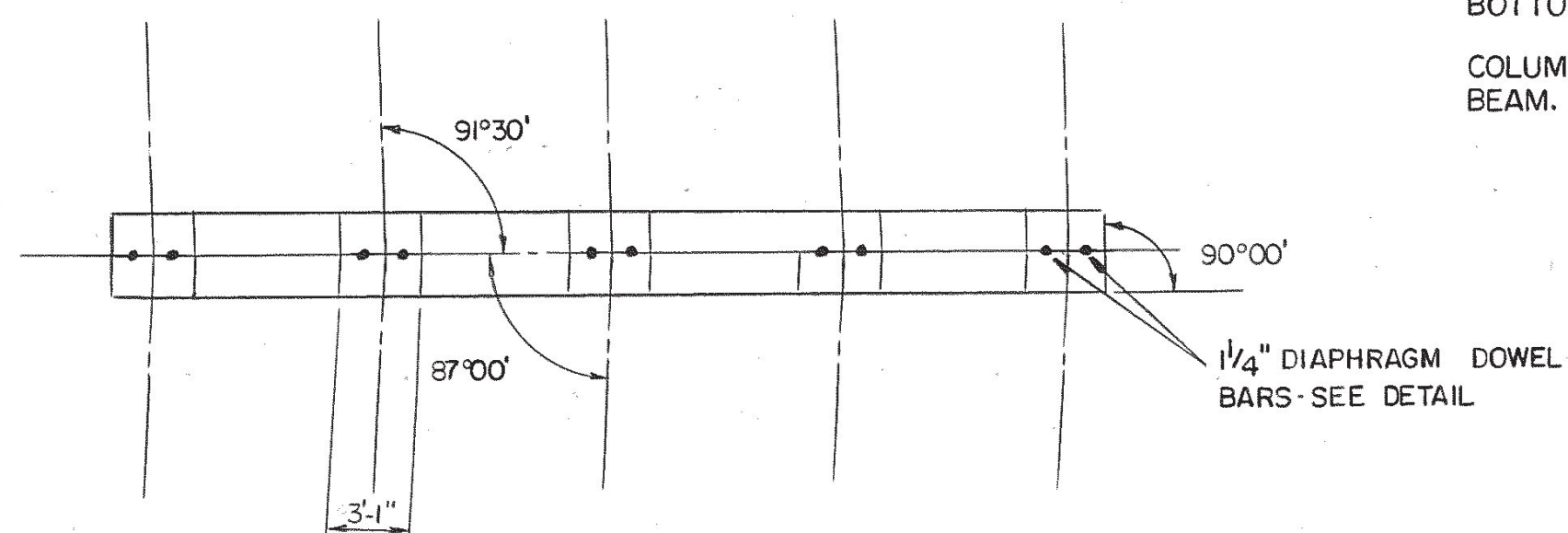
WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING DOWEL BARS. IF THE CONTRACTOR ELECTS TO DRILL THE HOLES FOR THE DOWEL BARS, THE REINFORCING STEEL SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE DRILLING. DOWEL BAR PROJECTION 9"

RISER BLOCK BEARING PAD SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

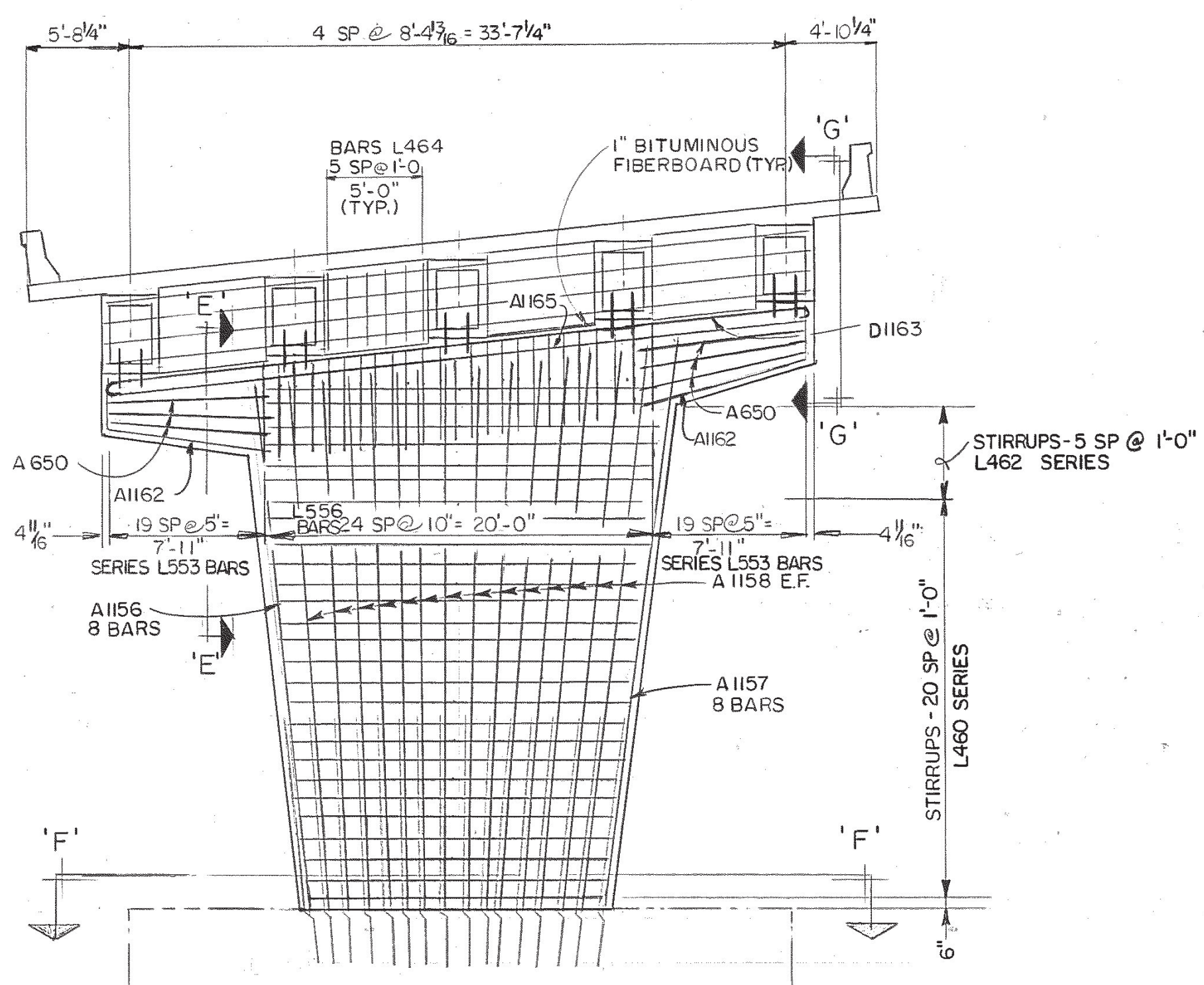
COLUMN STEEL TO EXTEND AT LEAST 3'-6" INTO CAP BEAM.



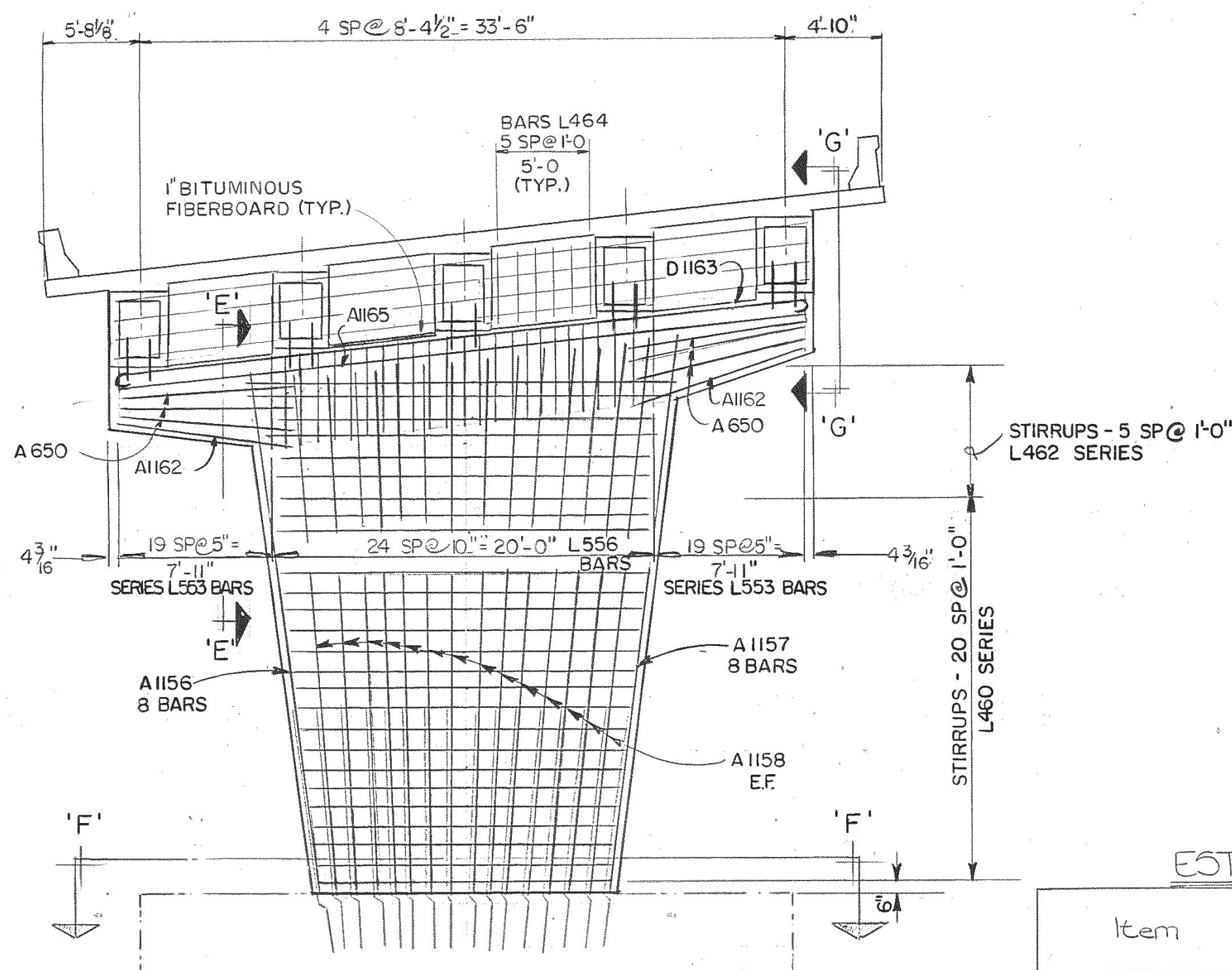
RISER BLOCK PLAN



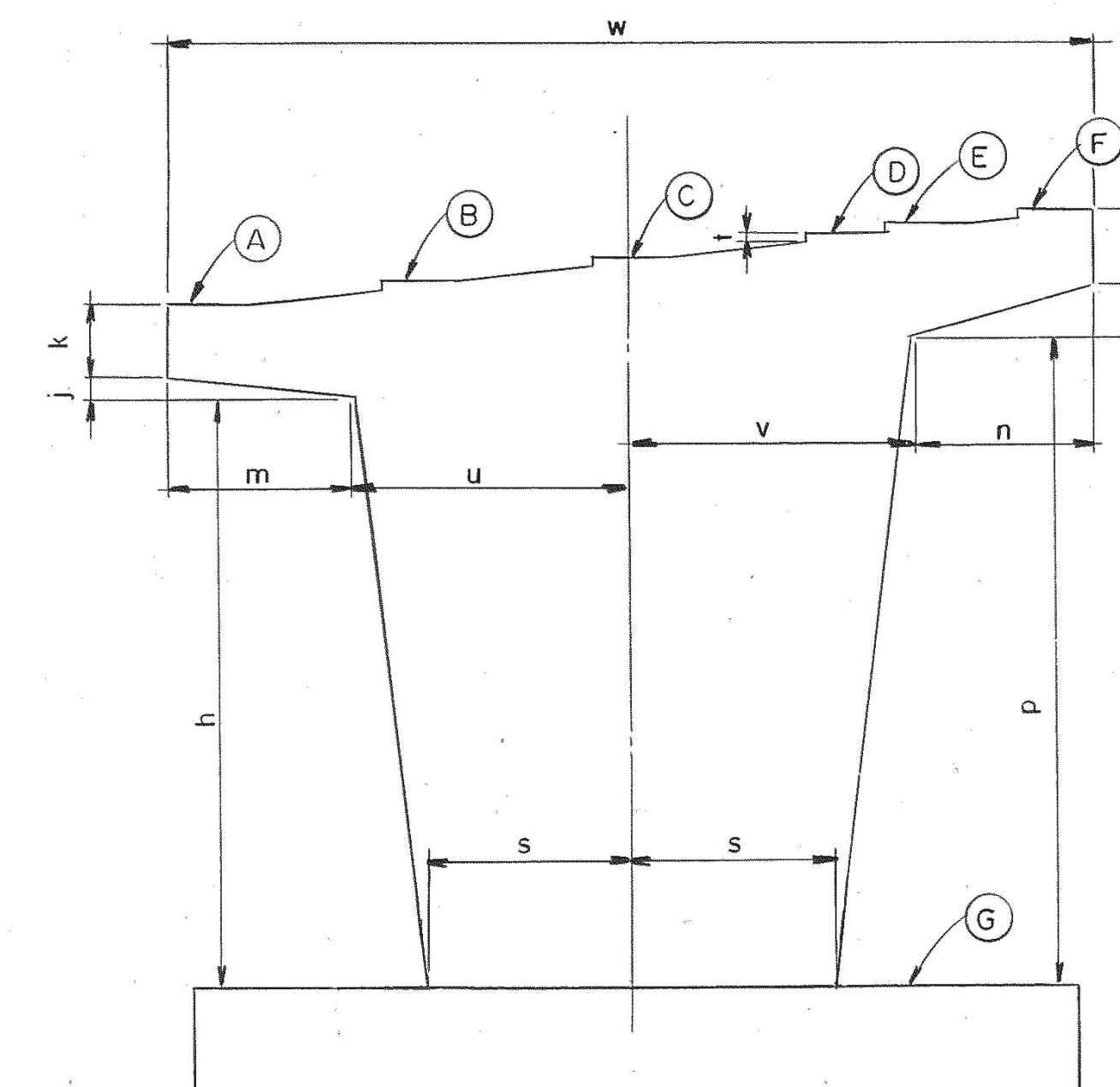
RISER BLOCK PLAN



BENT No. 3  
LOOKING FORWARD ON SURVEY



BENT No. 4  
LOOKING FORWARD ON SURVEY



ESTIMATED QUANTITIES

Item	CLASS 'A' CONCRETE CY.	REINFORCING STEEL LBS.
BENT No. 3	159.5	21,283
BENT No. 4	159.5	21,283

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BENT DETAILS  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 1 & L & N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
— 1981 —

DESIGNED BY RON BACON  
DRAWN BY BOB SIKES / BILL THISTLEWOOD  
SUPERVISED BY J.D. MOORE  
CHECKED BY

DATE  
DATE 8-14-81  
DATE  
DATE

CORRECT ENGINEER OF STRUCTURES

APPROVED DIRECTOR OF HIGHWAYS

M-105-55

CONST. NO. 75002-3231-14

PROJECT NO.	YEAR	SHEET NO.
F-50-(6)	81	26N

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	R.S.B.	NOTES, STIRRUPS
2	3-16-82	R.S.B.	ADD QUANTITY BOX
3	5-24-82	R.S.B.	REVISED BENT #6, ADDED L470'S REVISED QUANTITIES BENT #6

### BENT NOTES

FOR DIMENSIONS SEE TABLE OF BENT ELEVATIONS AND DIMENSIONS, SHEET

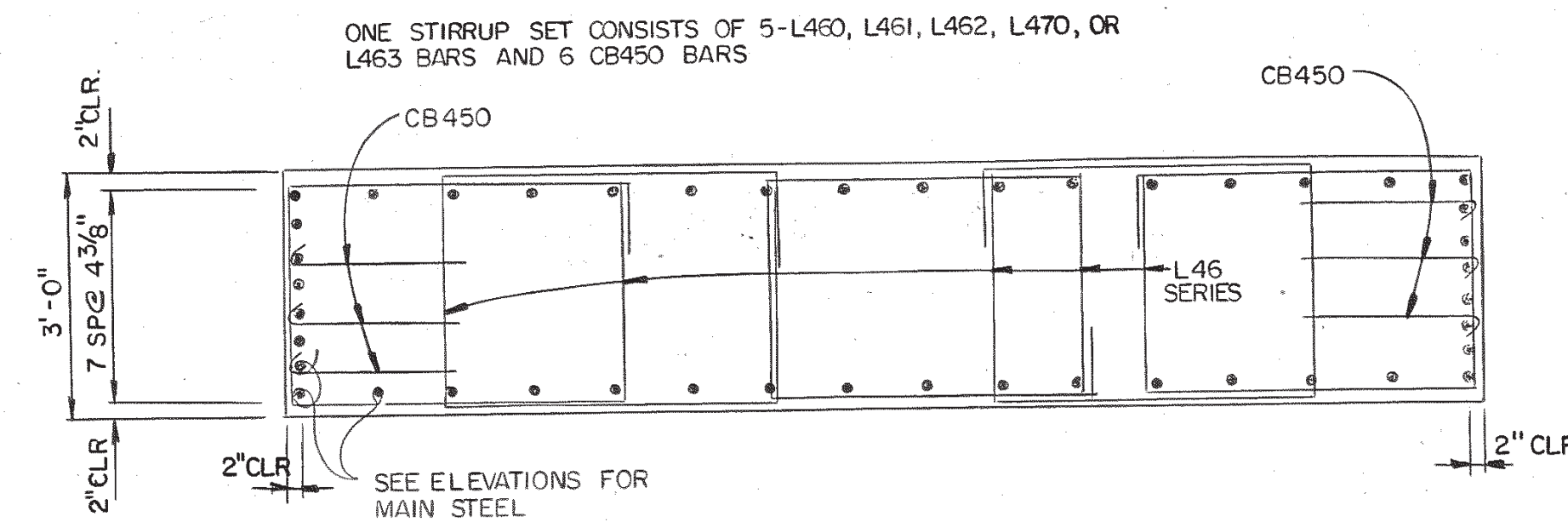
RISE BLOCKS TO BE POURED MONOLITHICALLY WITH CAP BEAM.

ALL ELEVATIONS SHOWN LOOKING UP STATION.

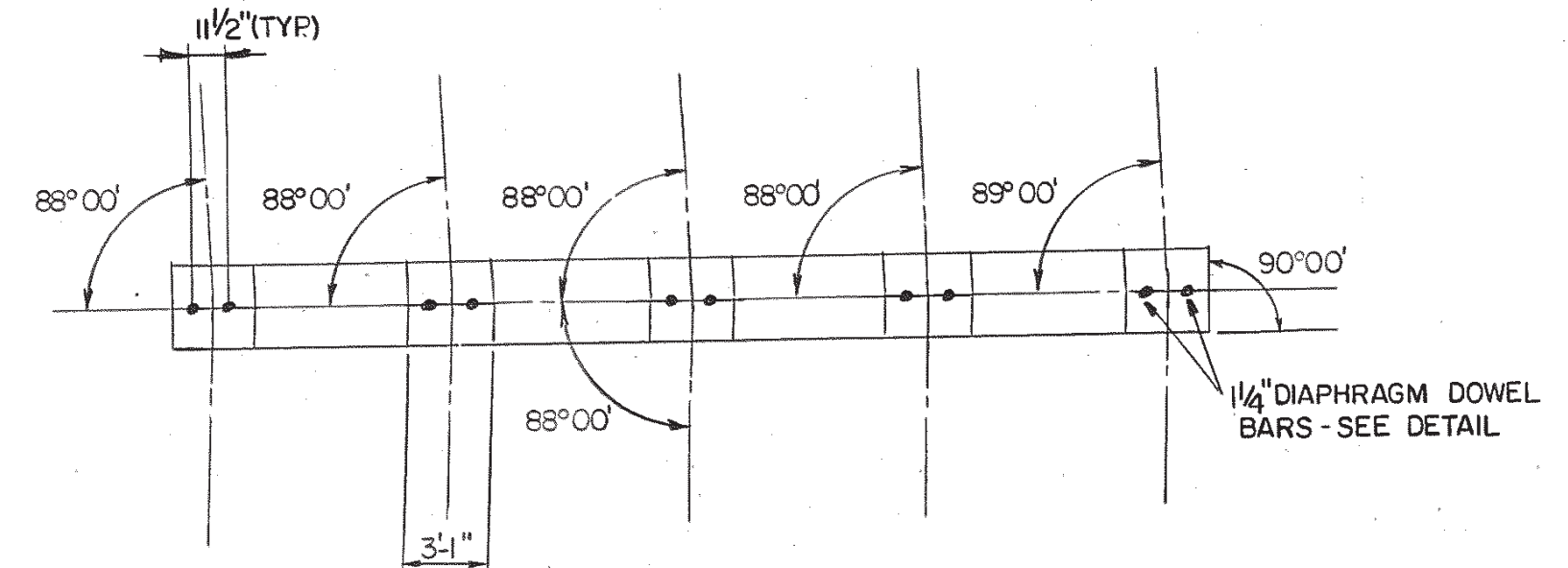
WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING DOWEL BARS. IF THE CONTRACTOR ELECTS TO DRILL THE HOLES FOR THE DOWEL BARS, THE REINFORCING STEEL SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE DRILLING. DOWEL BAR PROJECTION 9"

RISE BLOCK BEARING PAD SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

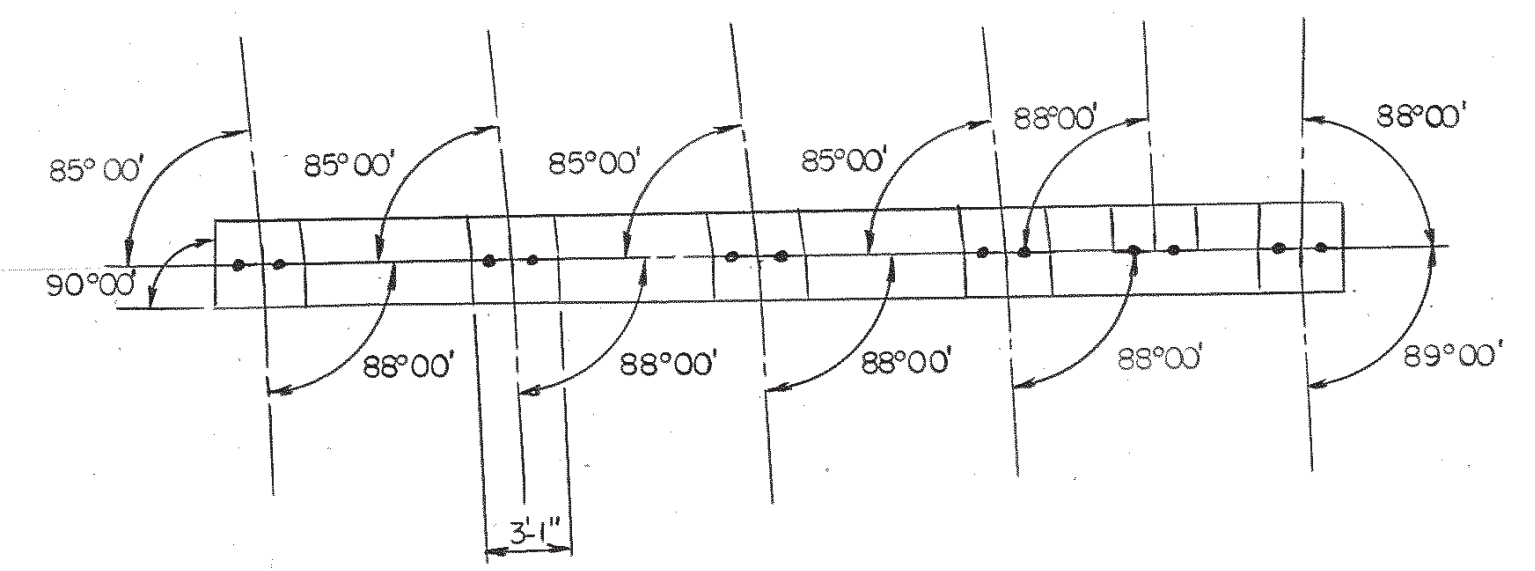
COLUMN STEEL TO EXTEND AT LEAST 3'-6" INTO CAP BEAM.



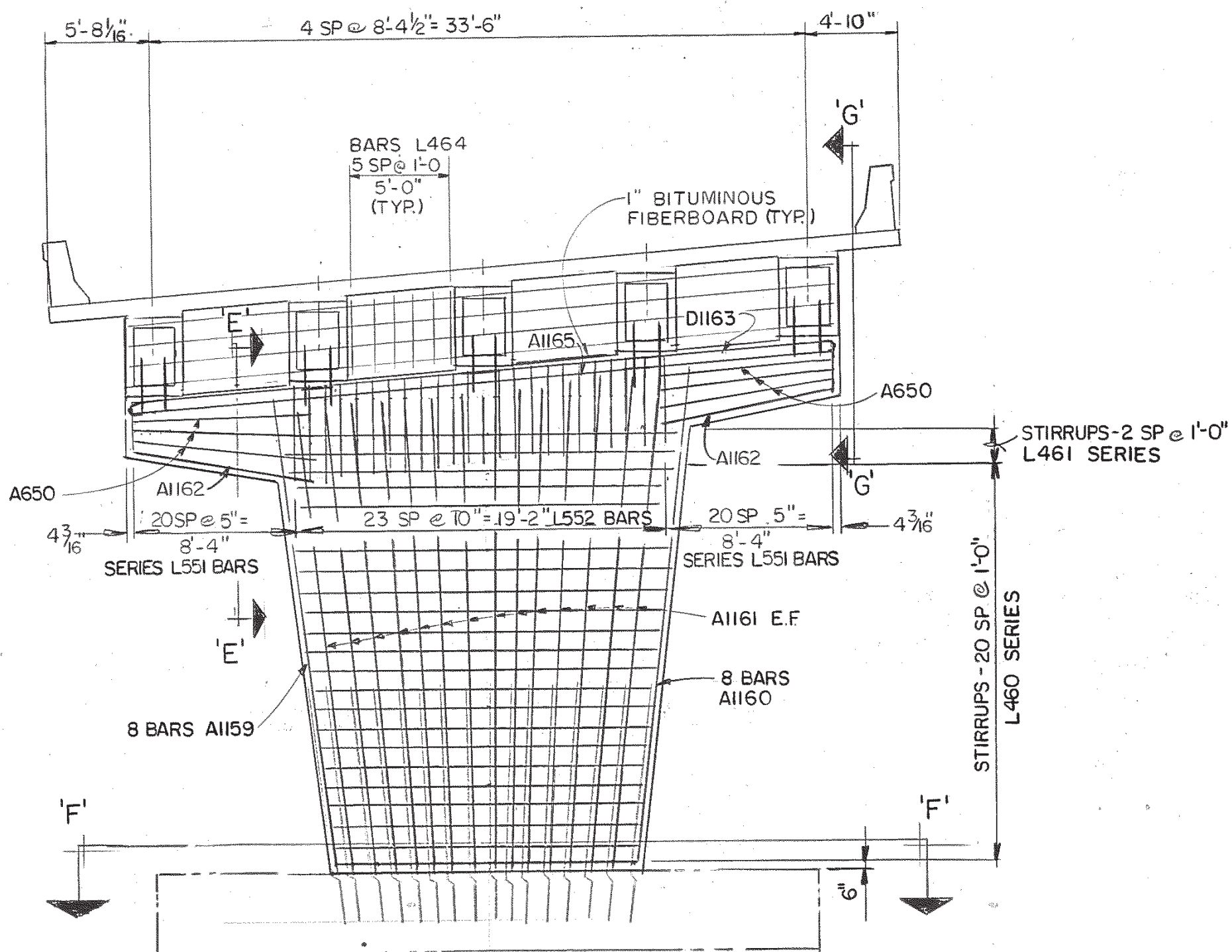
SECTION 'F-F'



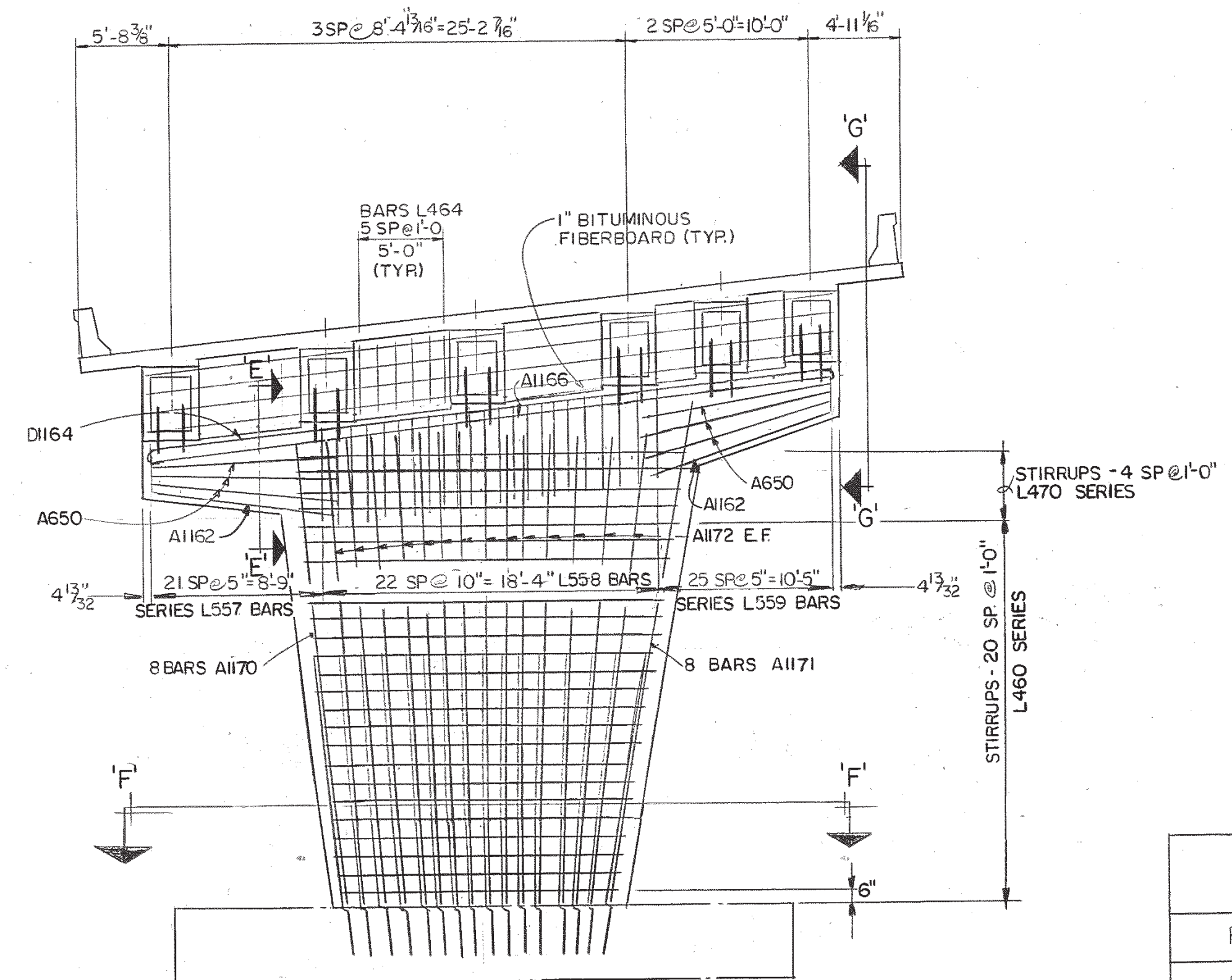
RISER BLOCK PLAN



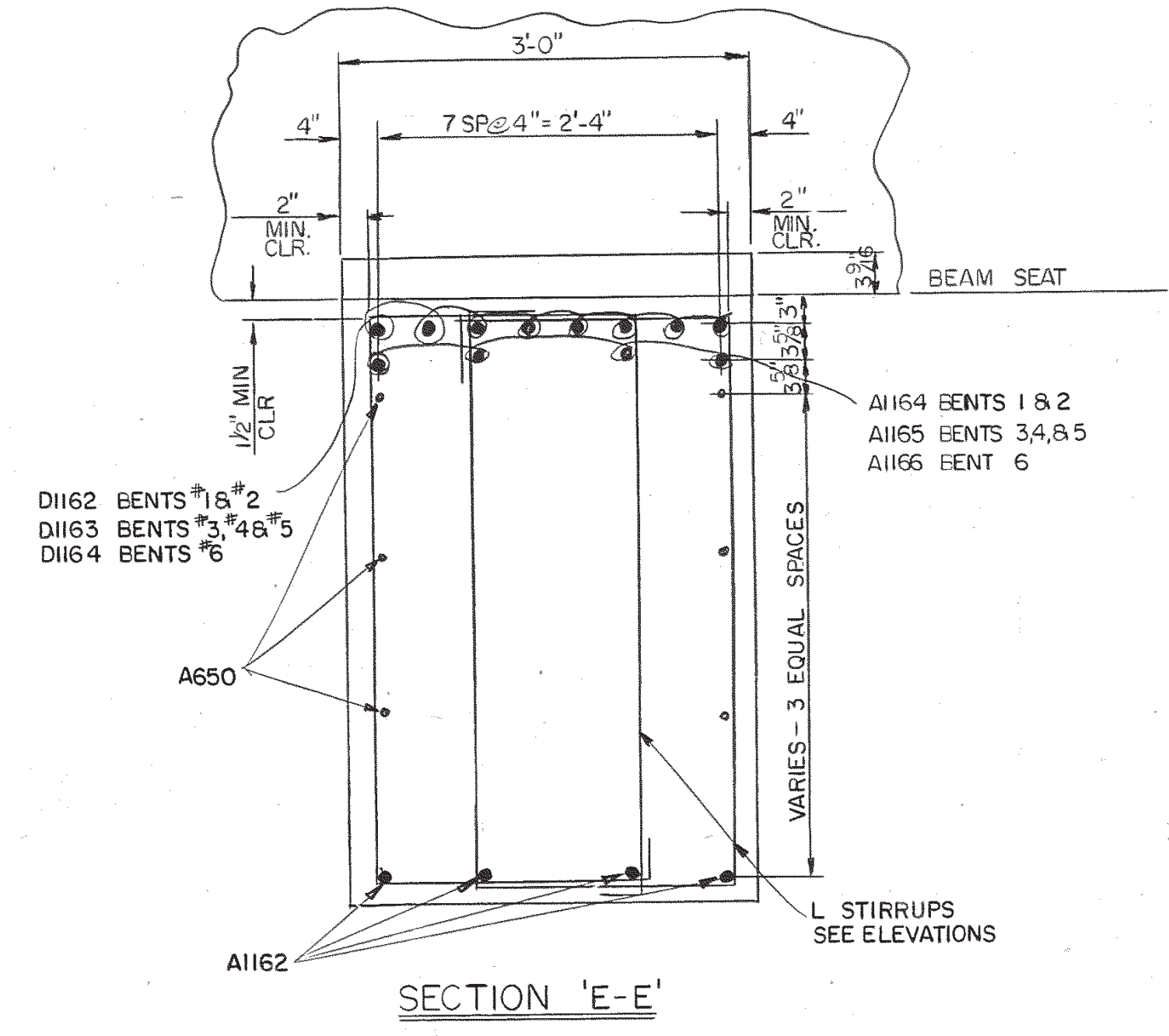
RISER BLOCK PLAN



BENT No. 5  
LOOKING FORWARD ON SURVEY



BENT No. 6  
LOOKING FORWARD ON SURVEY



SECTION 'E-E'

### ESTIMATED QUANTITIES

Item	CLASS 'A' CONCRETE C.Y.	REINFORCING STEEL LBS.
BENT No. 5	186.4	22,130
BENT No. 6	188.7	22,843

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

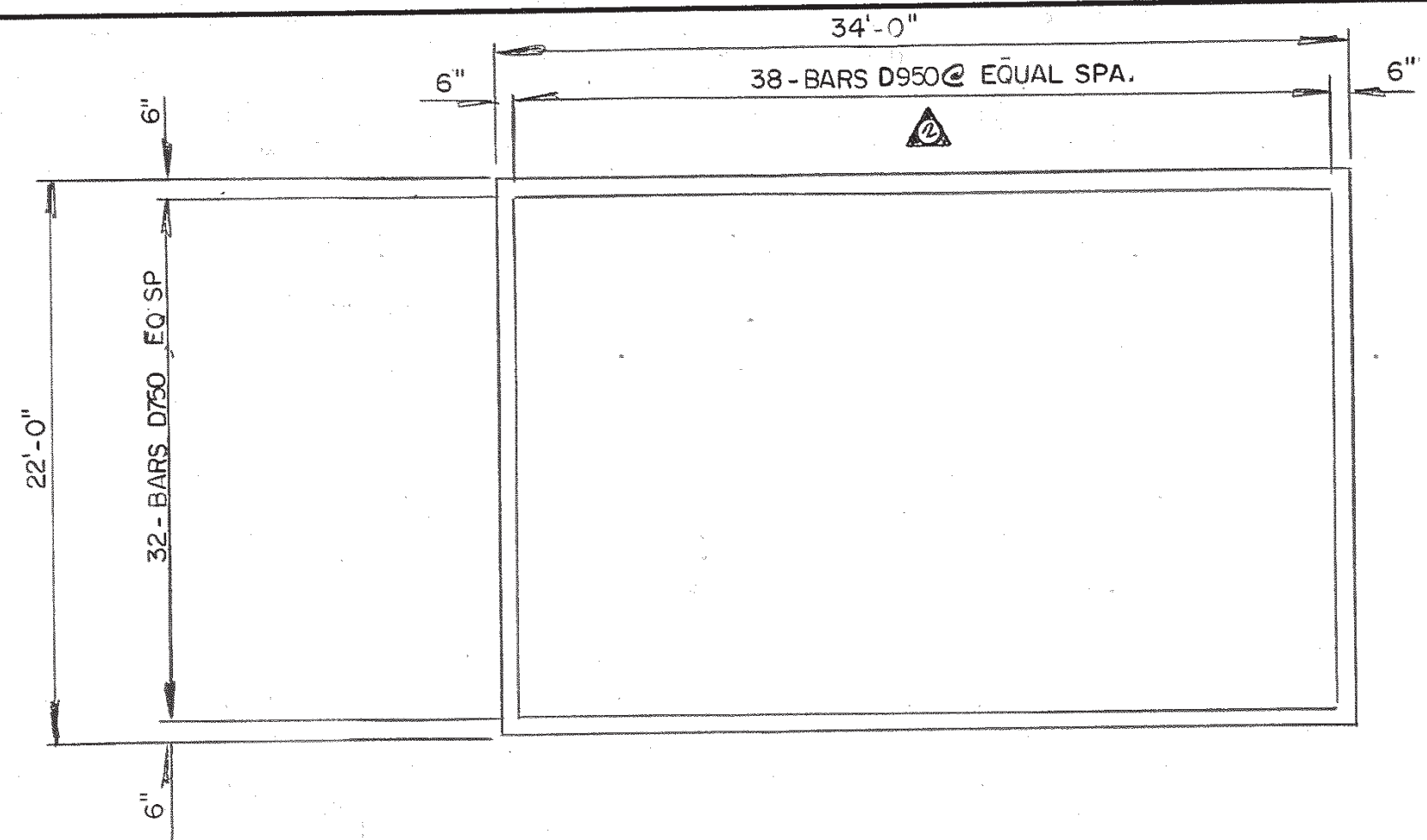
BENT DETAILS  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 18 & L.B. N. R.R.  
STA. 377+03.54  
RUTHERFORD COUNTY  
—1981—

DESIGNED BY RON BACON DATE  
DRAWN BY BOB SIKES / BILL THISTLEWOOD DATE 8-14-81  
SUPERVISED BY J.D. MOORE DATE  
CHECKED BY DATE

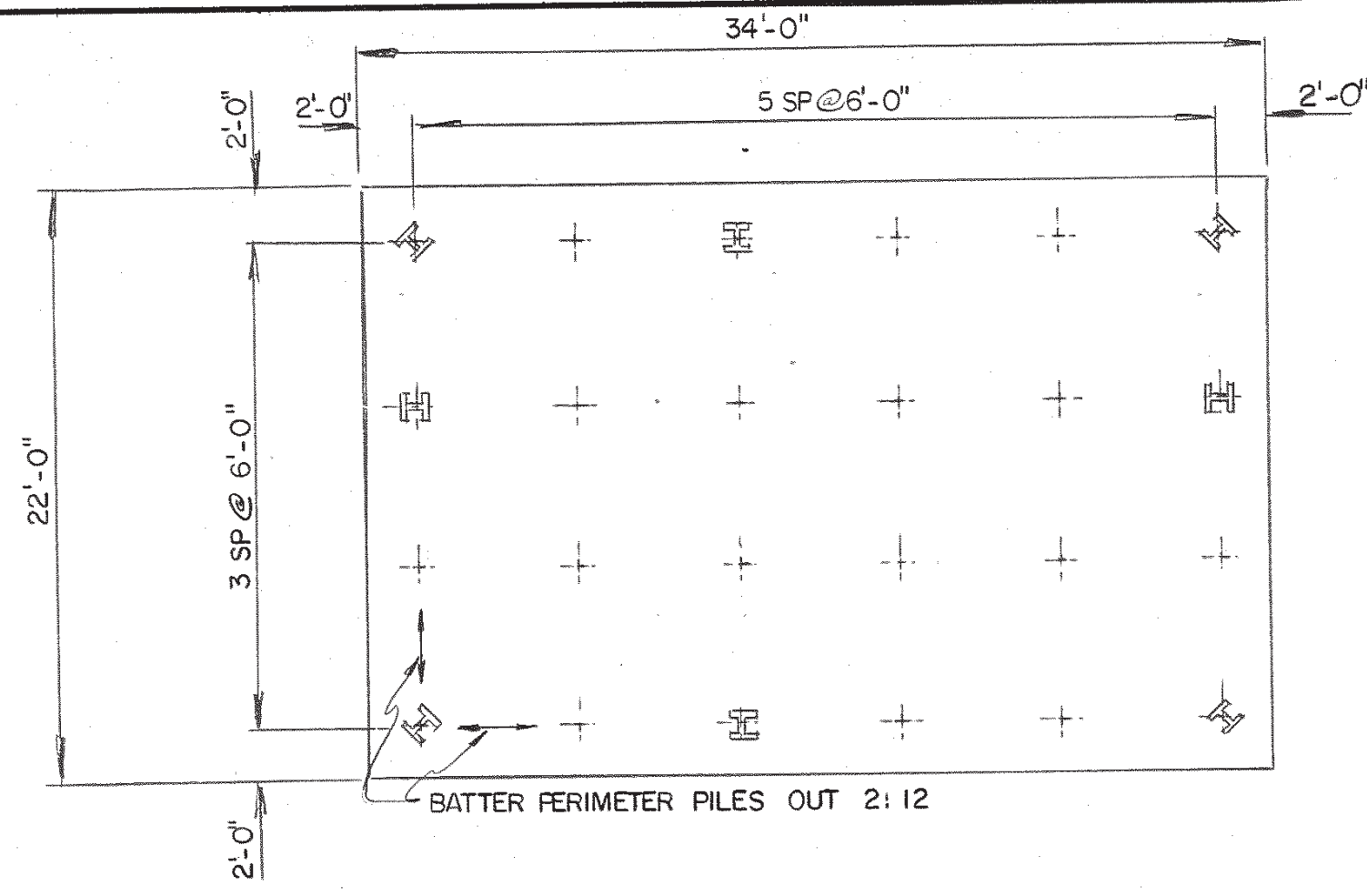
CORRECT  
ENGINEER OF STRUCTURES  
APPROVED  
DIRECTOR OF HIGHWAYS

M-105-50

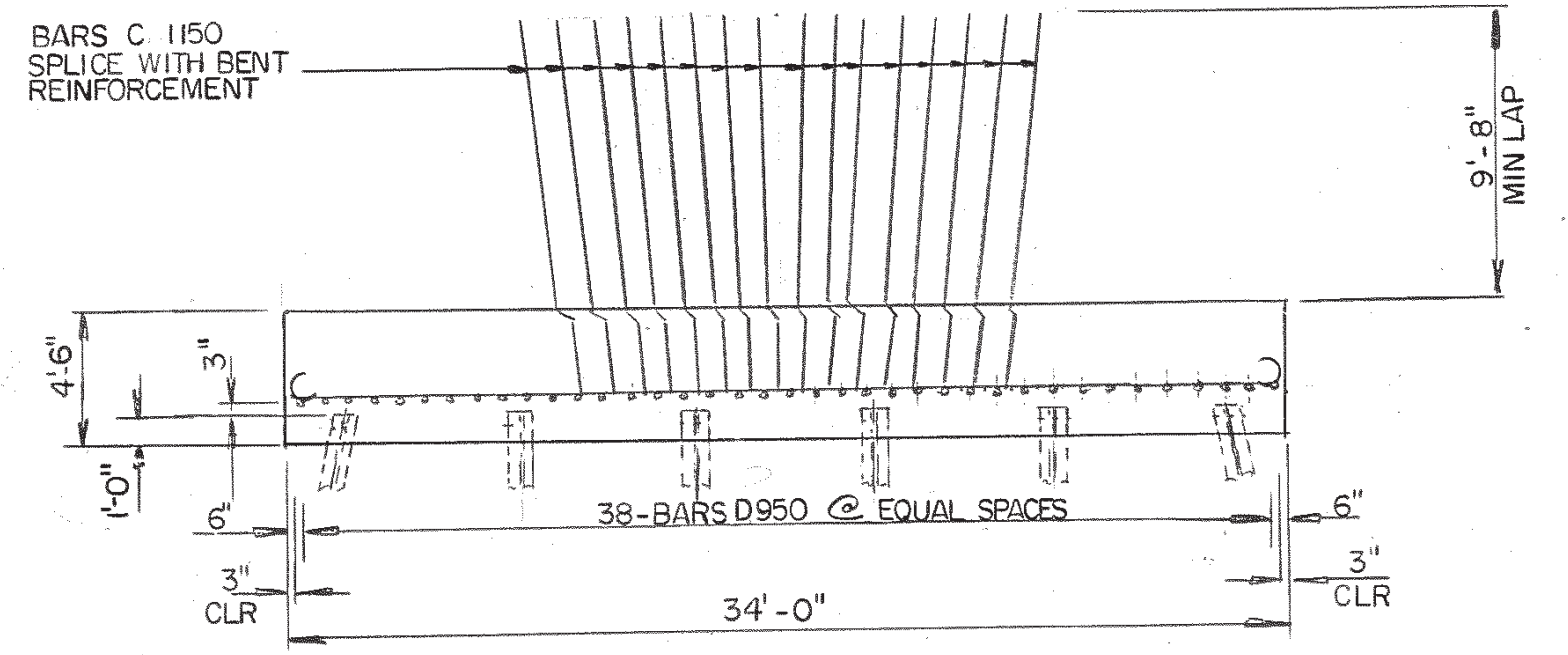
CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26 P	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	P.S.B.	CHANGED ELEVATIONS
2	3-16-82	P.S.B.	SHOWED ALL "D" BARS IN FIG. LOCATING DIMENSIONS
3	5-24-82	P.S.B.	CHANGED ELEV. DATA BENT #6.



FOOTING REINFORCEMENT



PILE LAYOUT

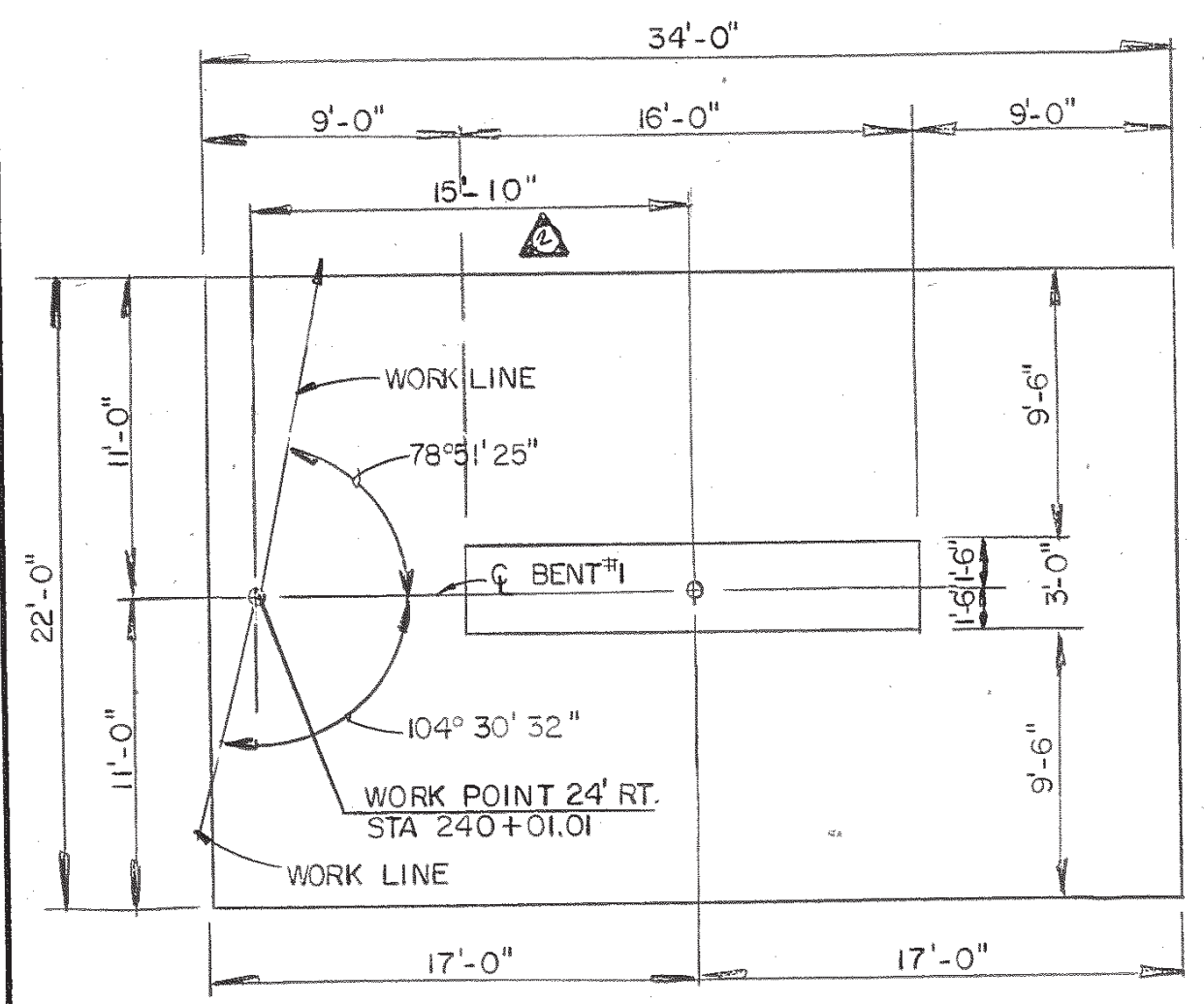


ELEVATION  
(LOOKING UP STATION)

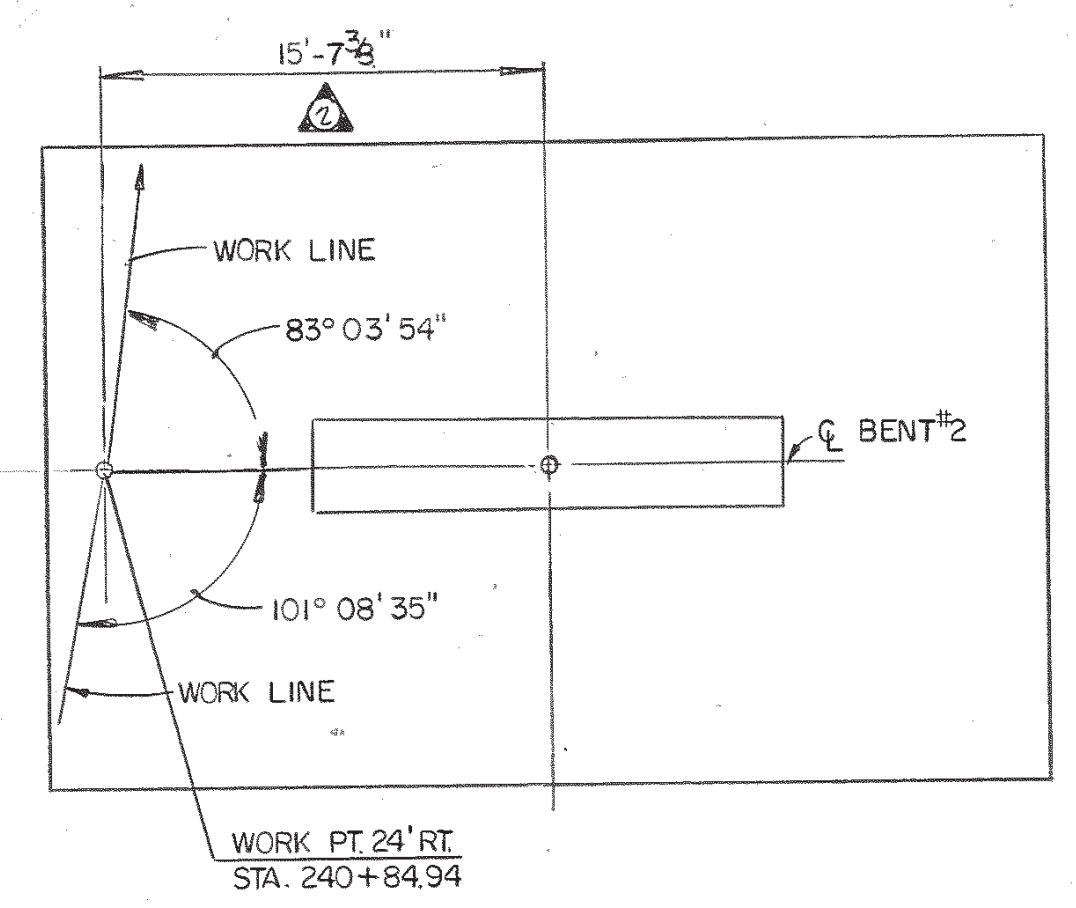
ELEVATION DATA $\Delta$				
	BENT #1	BENT #2	BENT #5	BENT #6
TOP OF FOOTING	556.57'	547.08'	552.98'	551.44'
BOTTOM OF FOOTING	552.07'	542.58'	548.48'	546.94'
PILE CUT-OFF	553.07'	543.58'	549.48'	547.94'

NOTE: DIMENSIONS GIVEN FOR BENT 1 ARE TYPICAL FOR BENTS 2, 5, & 6, EXCEPT FOR WORK POINT LINE

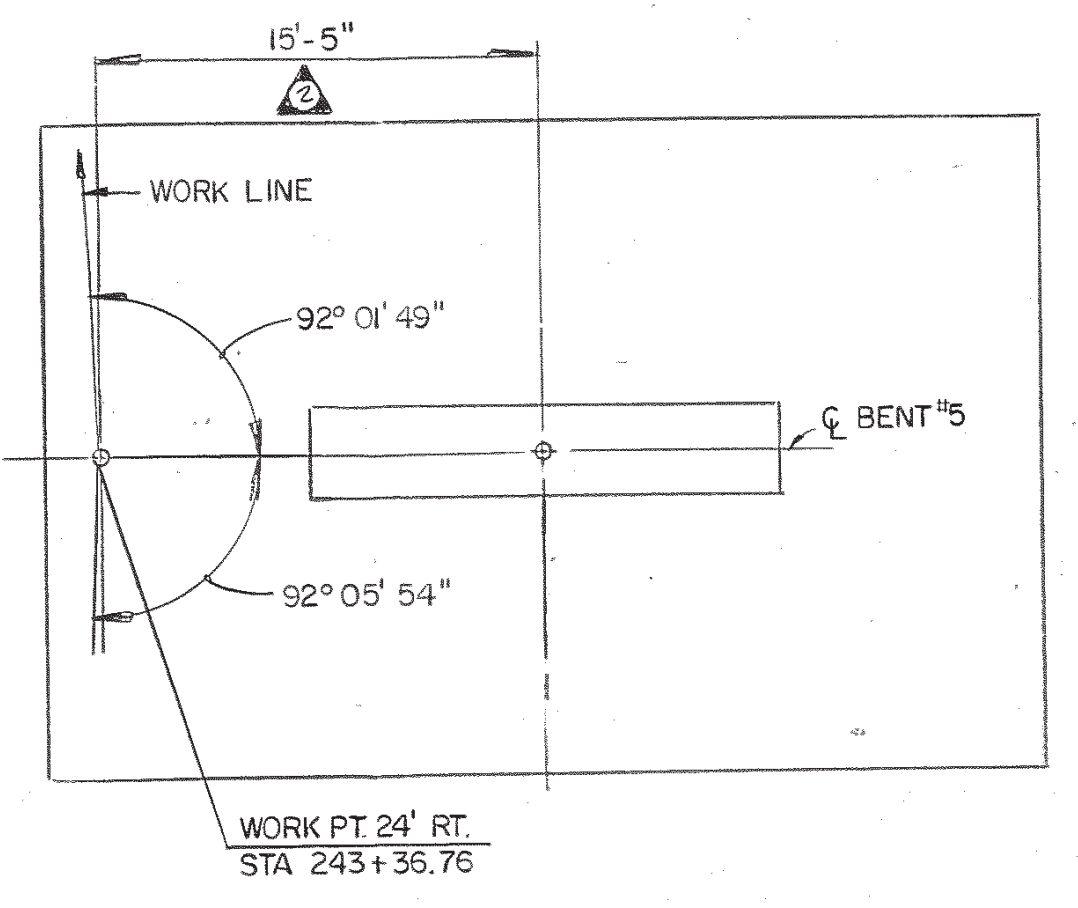
NOTE: ALL VIEWS ARE SHOWN LOOKING UP STATION



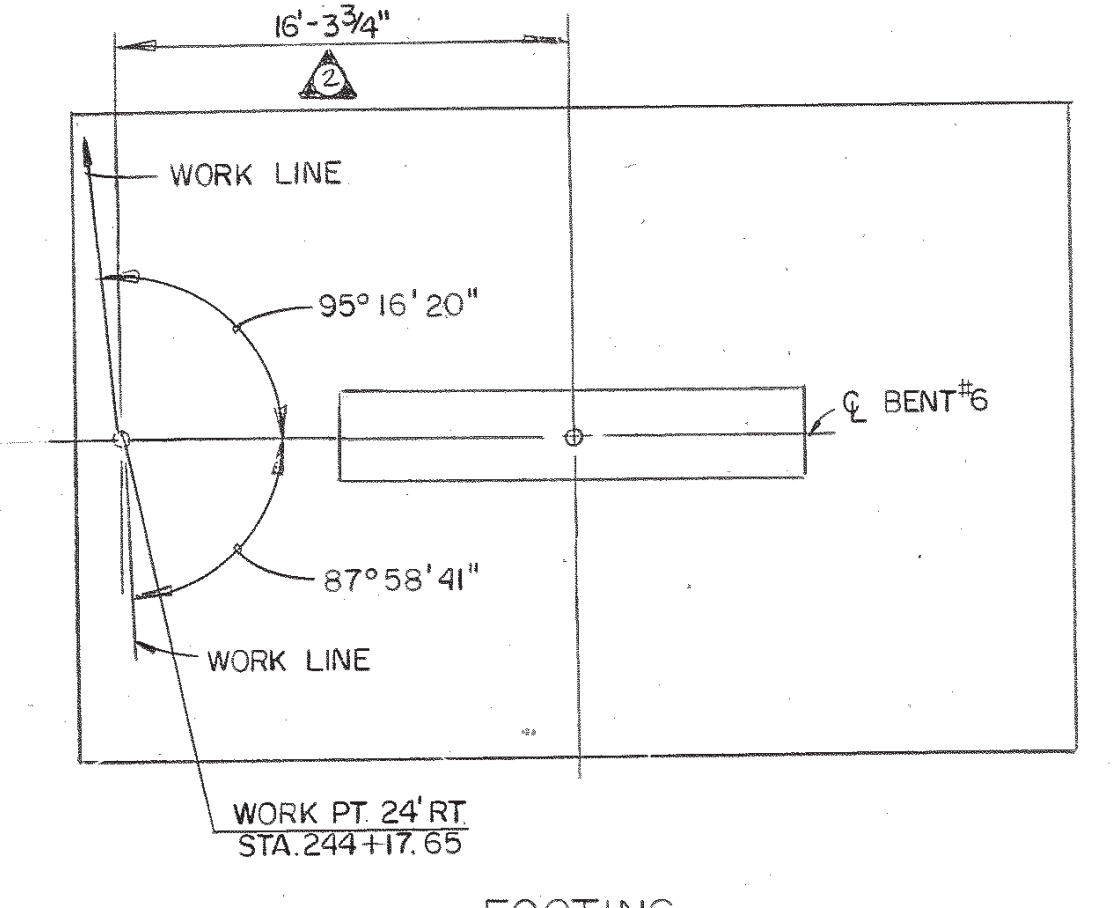
FOOTING  
PLAN VIEW  
BENT #1



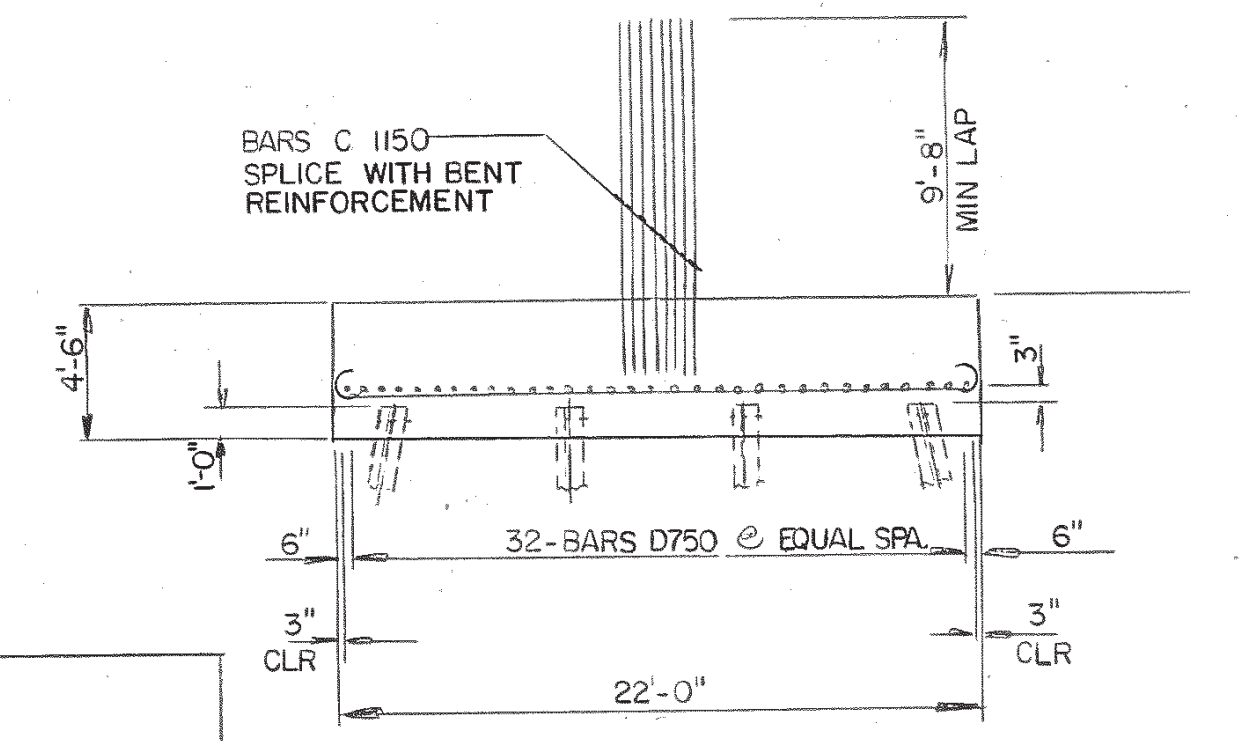
FOOTING  
PLAN VIEW  
BENT #2



FOOTING  
PLAN VIEW  
BENT #5



FOOTING  
PLAN VIEW  
BENT #6



END ELEVATION

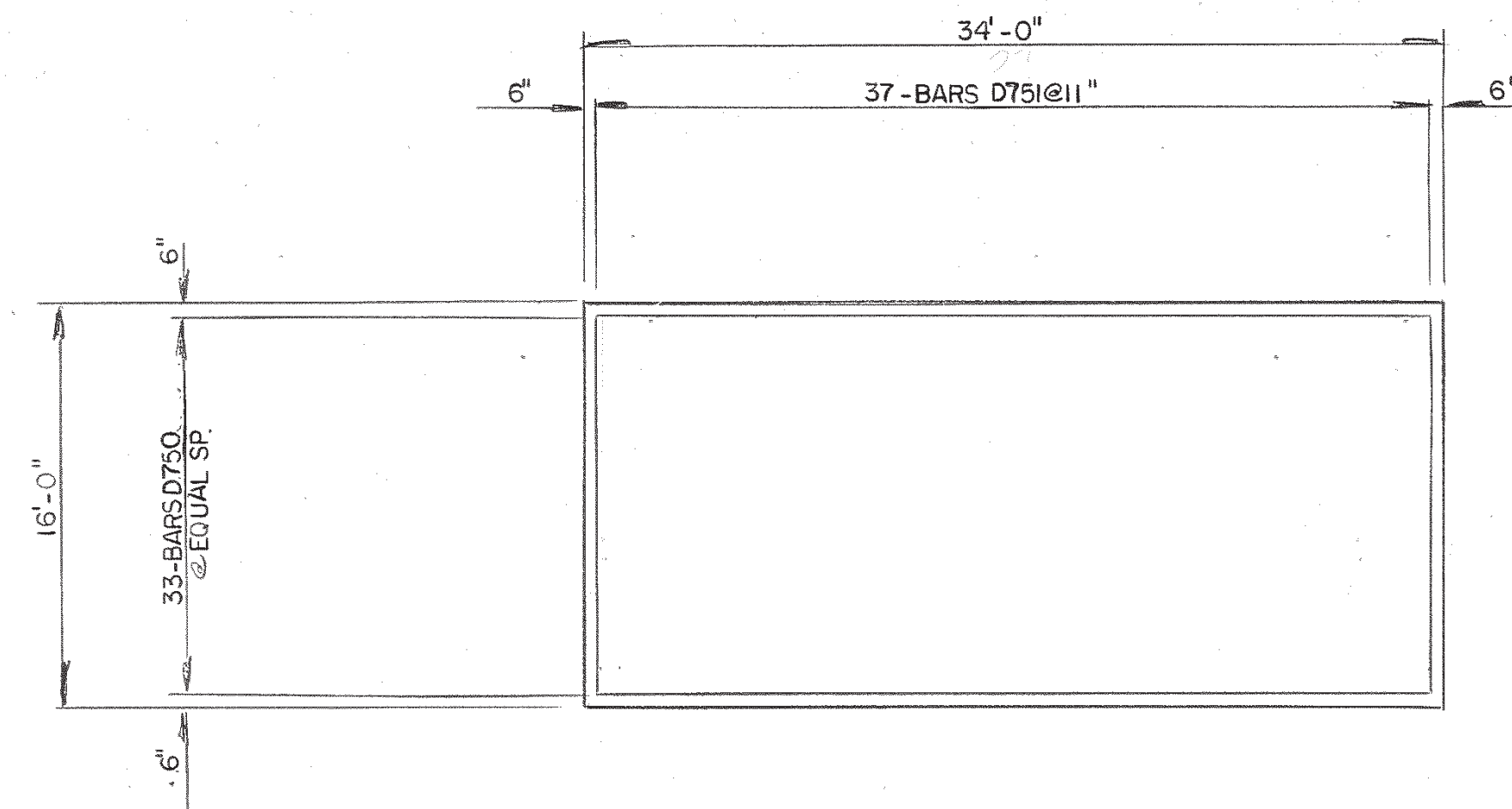
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS  
BENT # FOOTING DETAILS  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (M.)  
OVER S.R. 1 & L & N R.R.  
STA. 377+03.54  
RUTHERFORD COUNTY  
1981

DESIGNED BY RON BACON DATE \_\_\_\_\_  
DRAWN BY BOB SIKES/BILL THISTLEWOOD DATE 8-13-81  
SUPERVISED BY J.D. MOORE DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

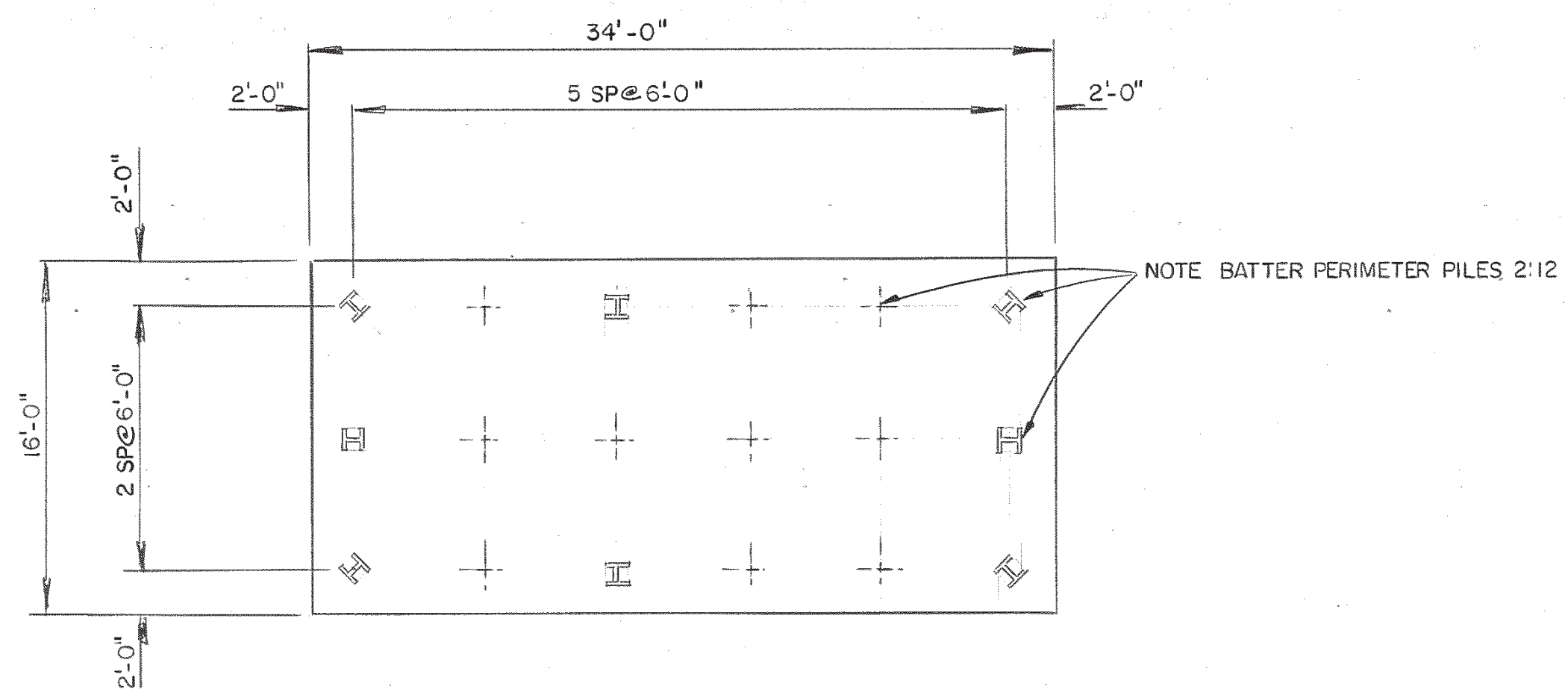
CORRECT \_\_\_\_\_ ENGINEER OF STRUCTURES  
APPROVED \_\_\_\_\_ DIRECTOR OF HIGHWAYS

M-105-57

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26 Q	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	R.S.B.	CHANGED ELEVATIONS
2	3-16-82	R.S.P.	ADDED ALL "D" PILES IN FIG LOCATING DIMENSIONS

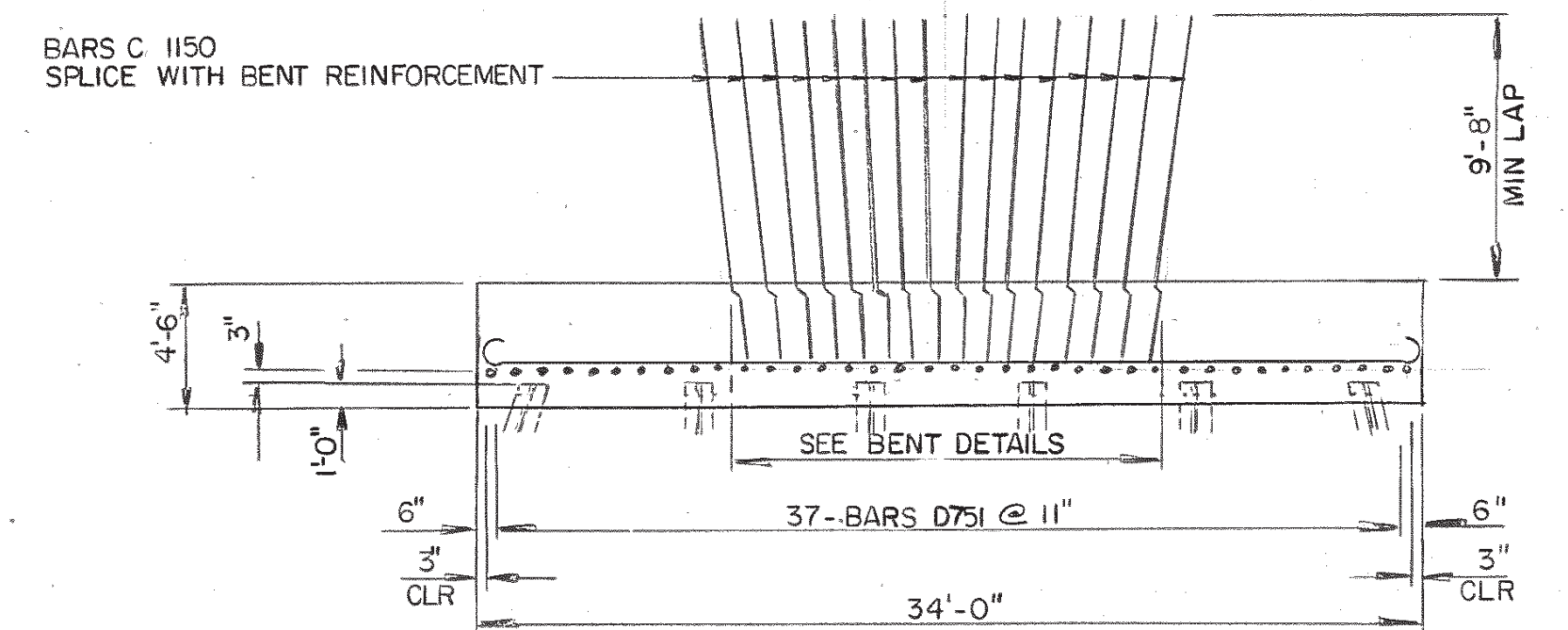


FOOTING REINFORCEMENT

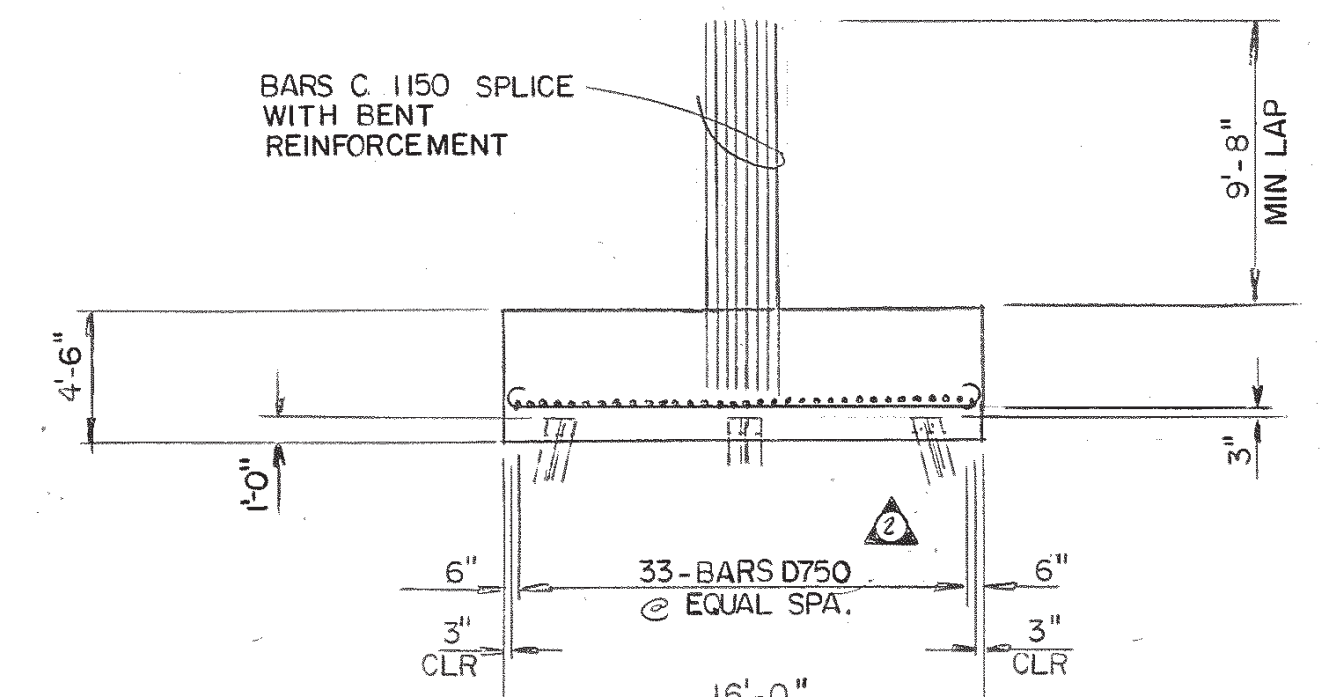


PILE LAYOUT

ELEVATION DATA $\Delta$		
	BENT #3	BENT #4
TOP OF FOOTING	550.61'	550.39'
BOTTOM OF FOOTING	546.11'	545.89'
PILE CUT-OFF	547.11'	546.89'



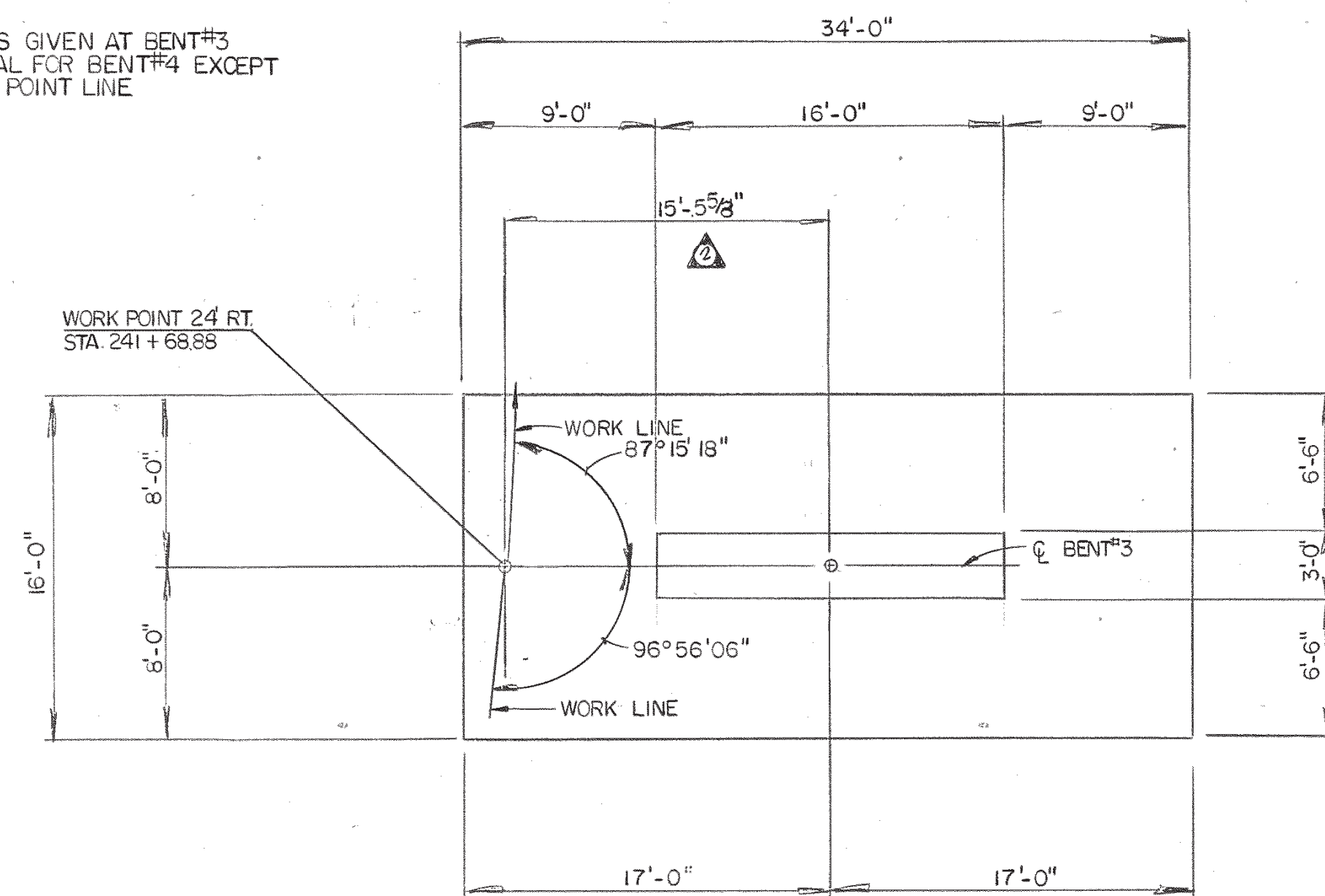
ELEVATION  
(LOOKING UP STATION)



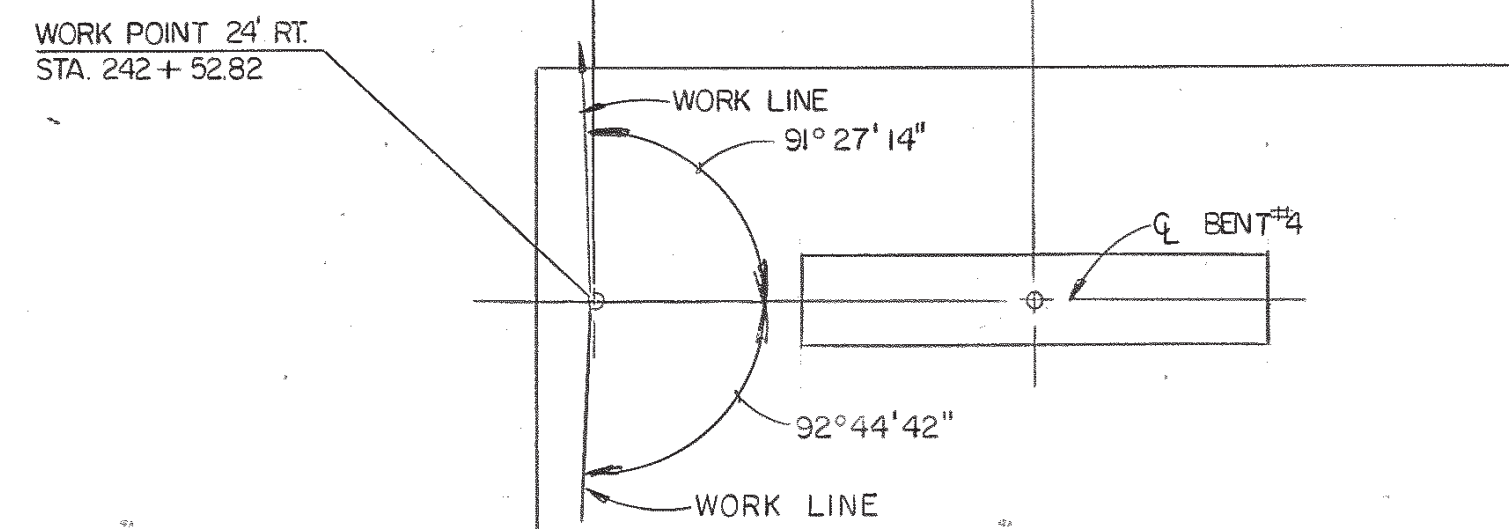
END ELEVATION

NOTE: ALL VIEWS LOOKING UP STATION

NOTE: DIMENSIONS GIVEN AT BENT#3 ARE TYPICAL FOR BENT#4 EXCEPT FOR WORK POINT LINE



FOOTING  
PLAN VIEW  
BENT #3



FOOTING  
PLAN VIEW  
BENT #4

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

BENT FOOTING DETAILS  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (M.)  
OVER S.R. 1 & L & N R.R.  
STA. 377 + 03.54  
RUTHERFORD COUNTY  
— 1981 —

DESIGNED BY: RON BACON  
DRAWN BY: BOB SIKES / BILL THISTLEWOOD  
SUPERVISED BY: J.D. MOORE  
CHECKED BY: \_\_\_\_\_

DATE: 8-13-81  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_

CORRECT: \_\_\_\_\_  
ENGINEER OF STRUCTURES  
APPROVED: \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

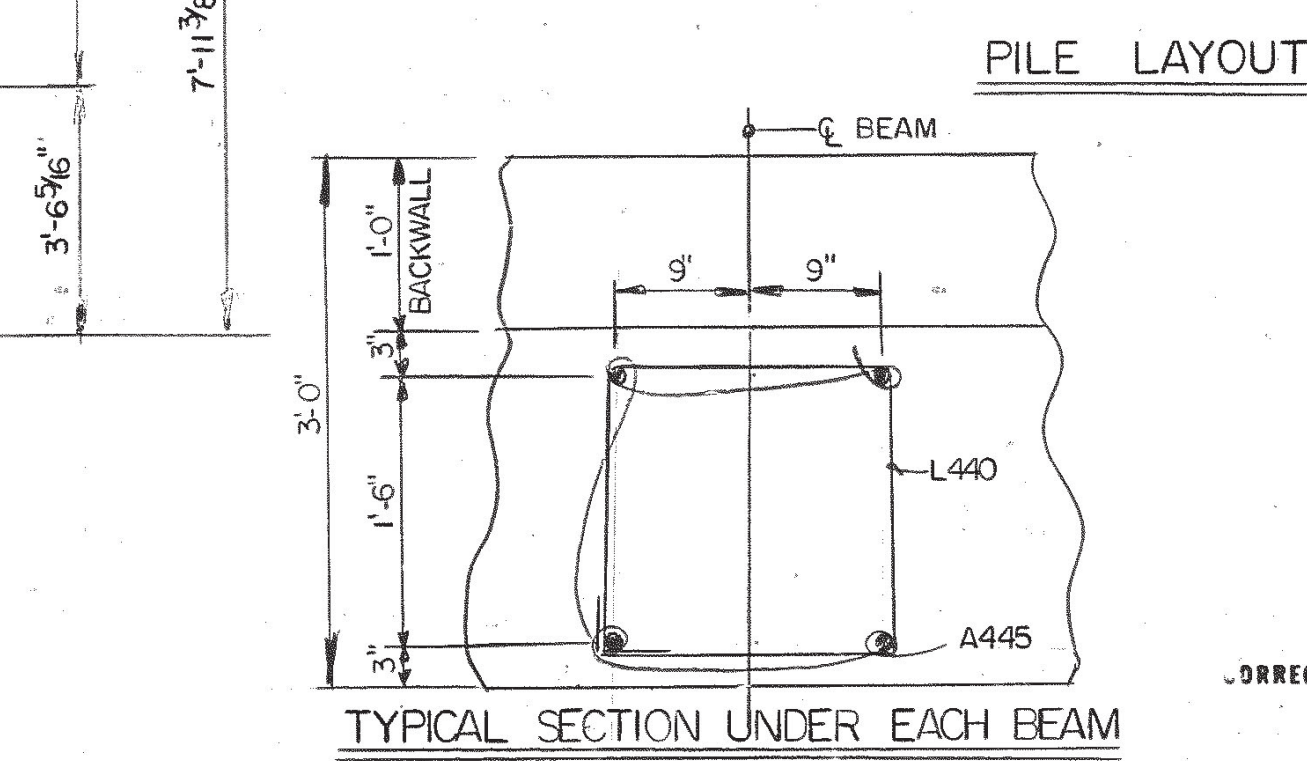
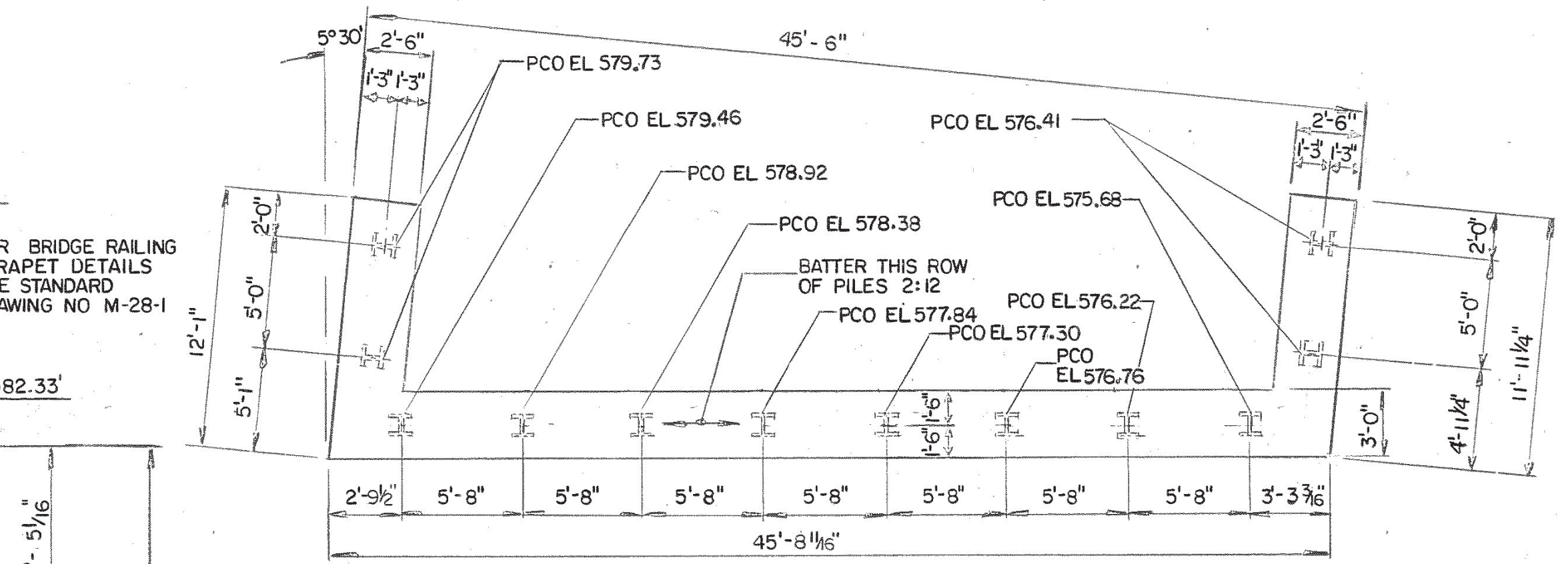
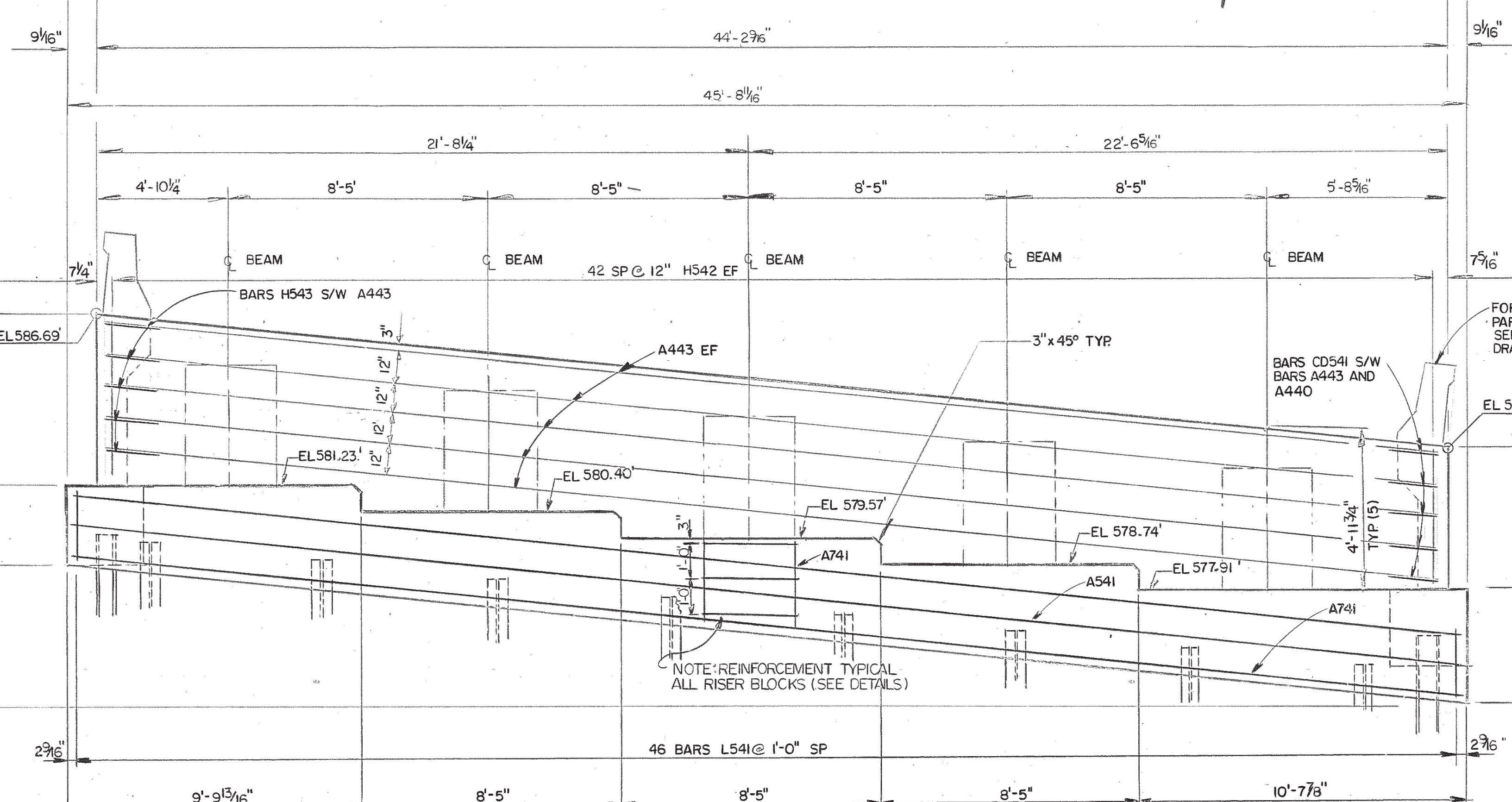
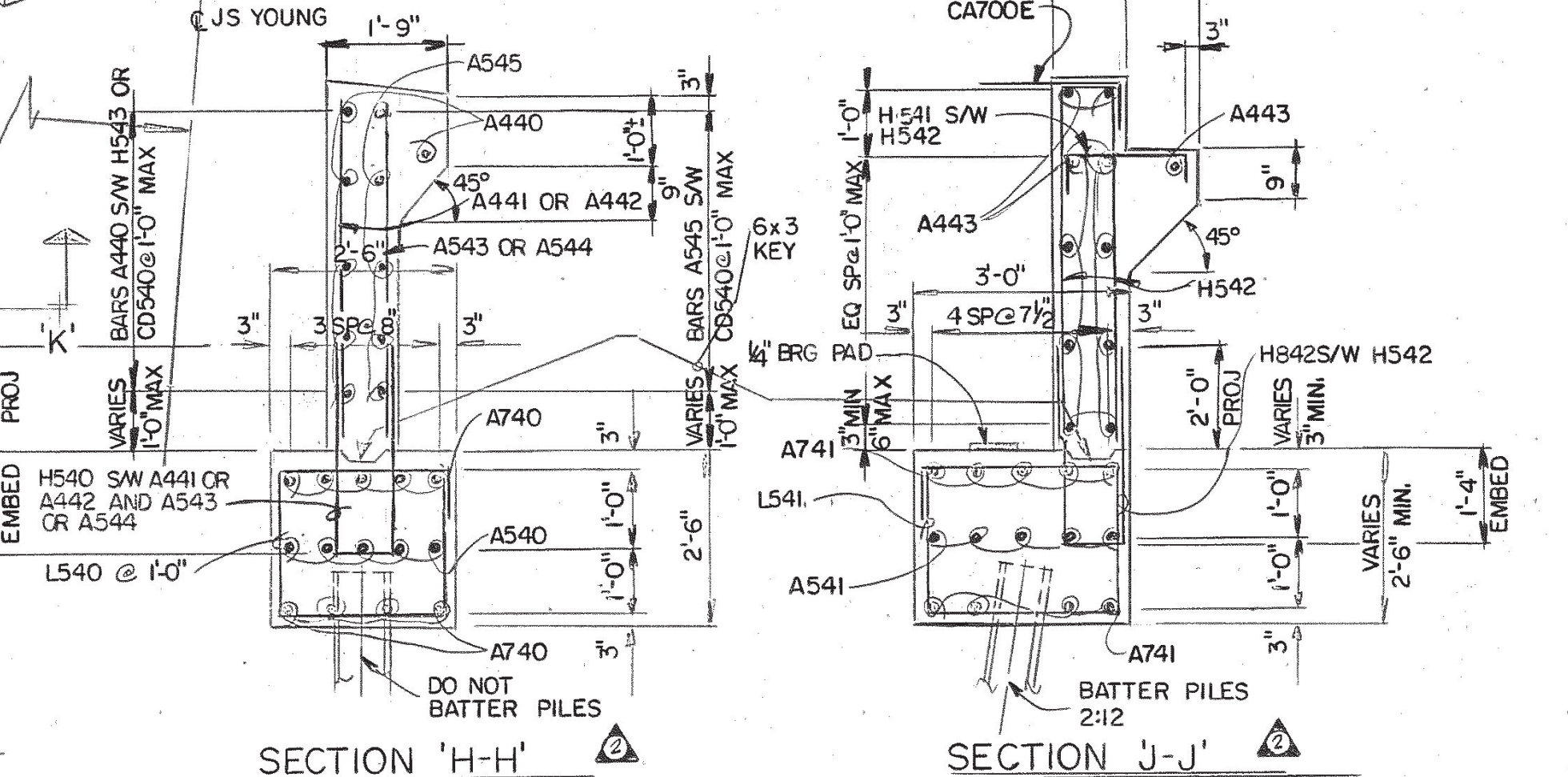
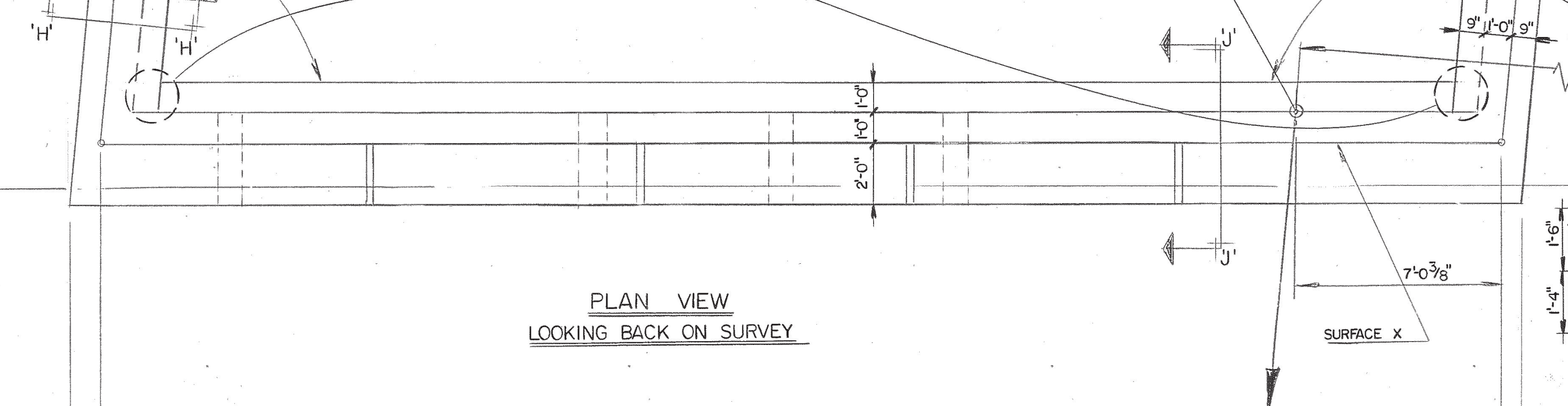
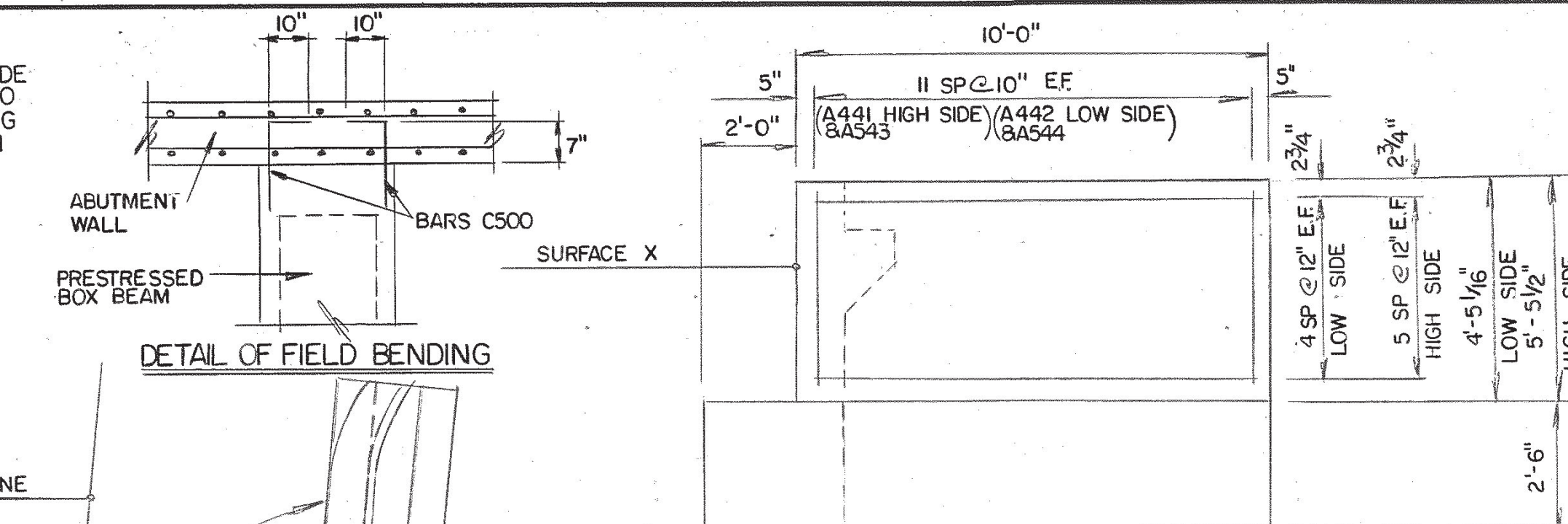
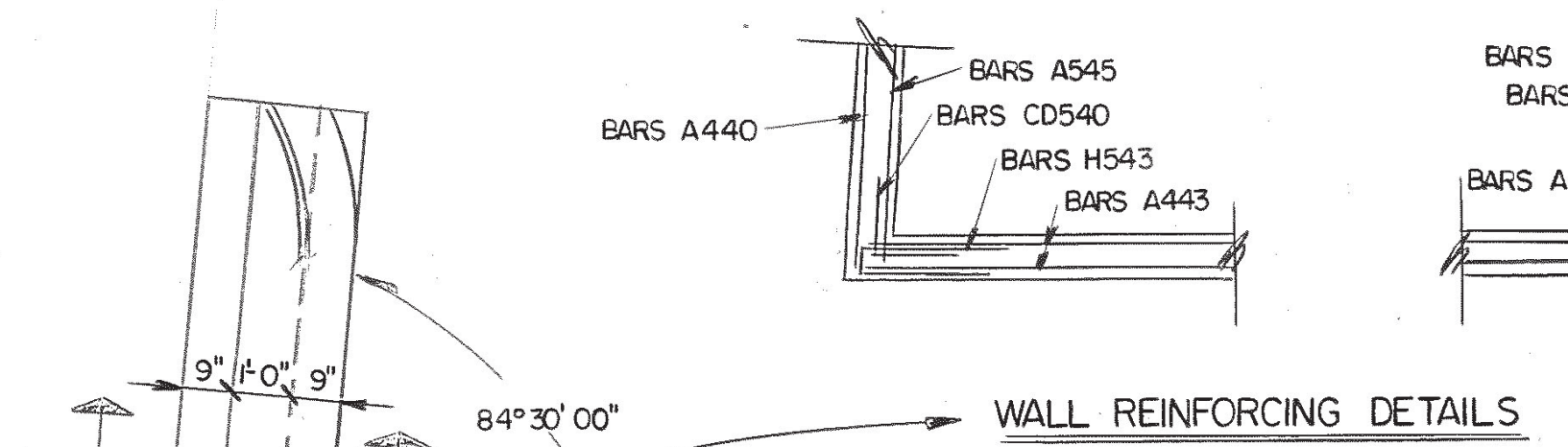
M-105-58

**ABUTMENT NOTES**

THE BACKWALL SHALL NOT BE POURED UNTIL THE SUPERSTRUCTURE GIRDERS ARE IN PLACE.  
THE COST OF BRIDGE RAIL AND POST IS TO BE INCLUDED IN THE COST OF BRIDGE RAIL SYSTEM.

WHEN POURING ABUTMENT BEAM PROVISIONS SHALL BE MADE FOR SETTING DOWEL BARS. 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".  
RISER BLOCK (S) TO BE POURED MONOLITHICALLY WITH ABUTMENT BEAM.

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26R	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	PSD	CHANGED NOTES, ELEVATIONS, REINF
2	3-5-82	PSD	CHANGED ABUTMENT STEEL
3	5-7-82	HMB	REVISED DIMENSION



ESTIMATED QUANTITIES

ITEM	CONCRETE CLASS "A" C.Y.	REINFORCING STEEL LBS.	EPOXY COATED REINFORCING STEEL LBS.
ABUTMENT NO.1	33.8	4,727	327

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

ABUTMENT No.1 DETAILS  
BRIDGE No.1 NORTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 1 & L & N R.R.  
STA. 377+03.54  
RUTHERFORD COUNTY  
1981

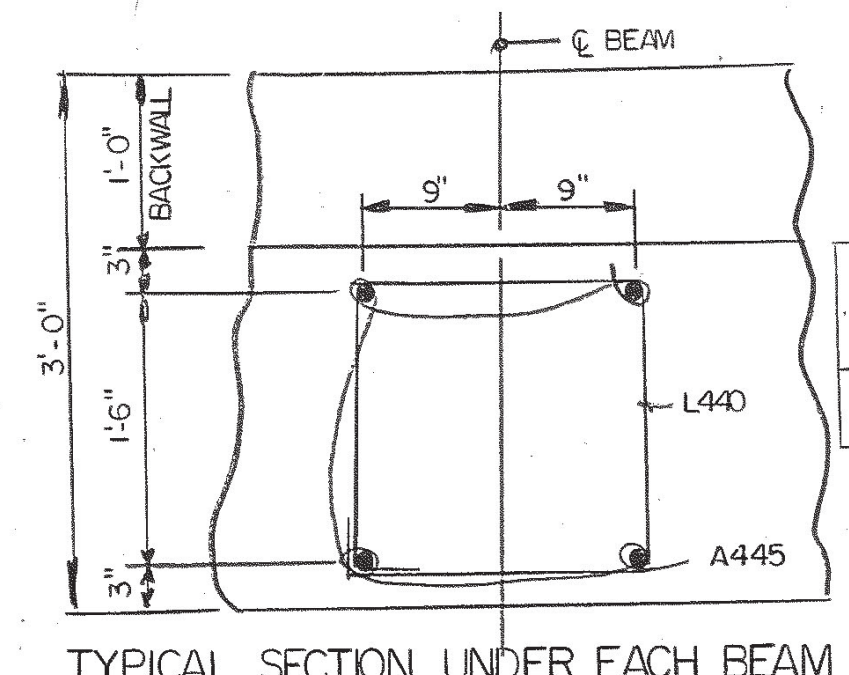
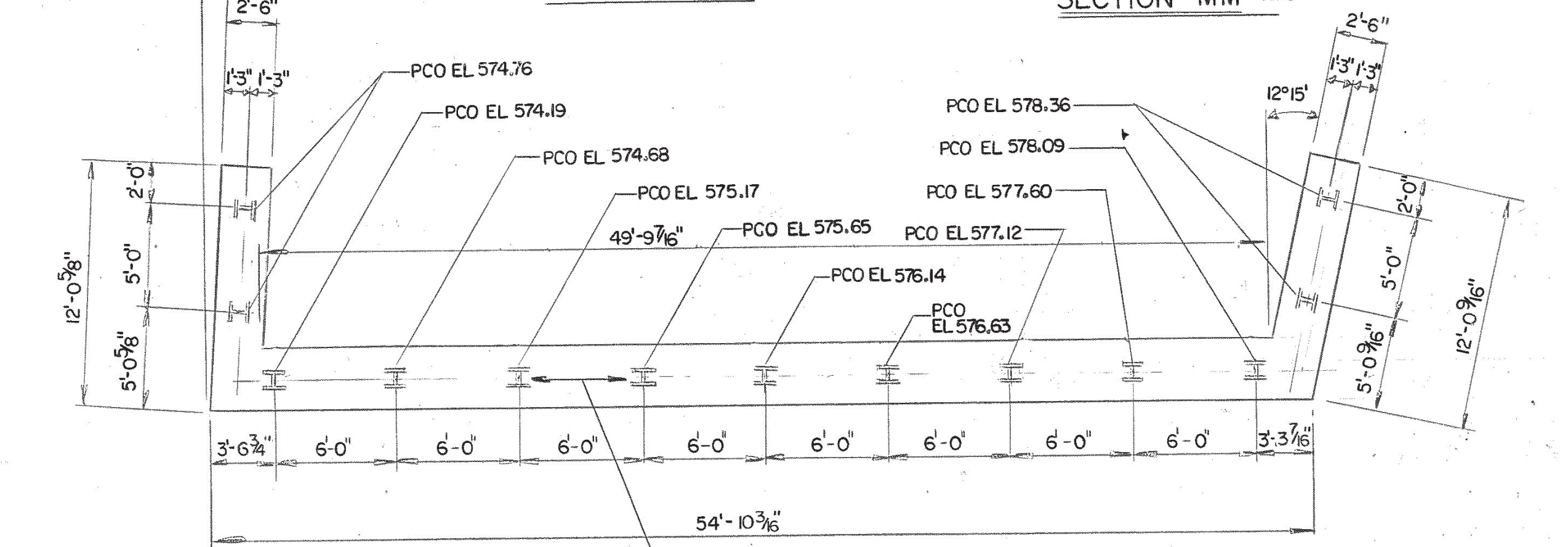
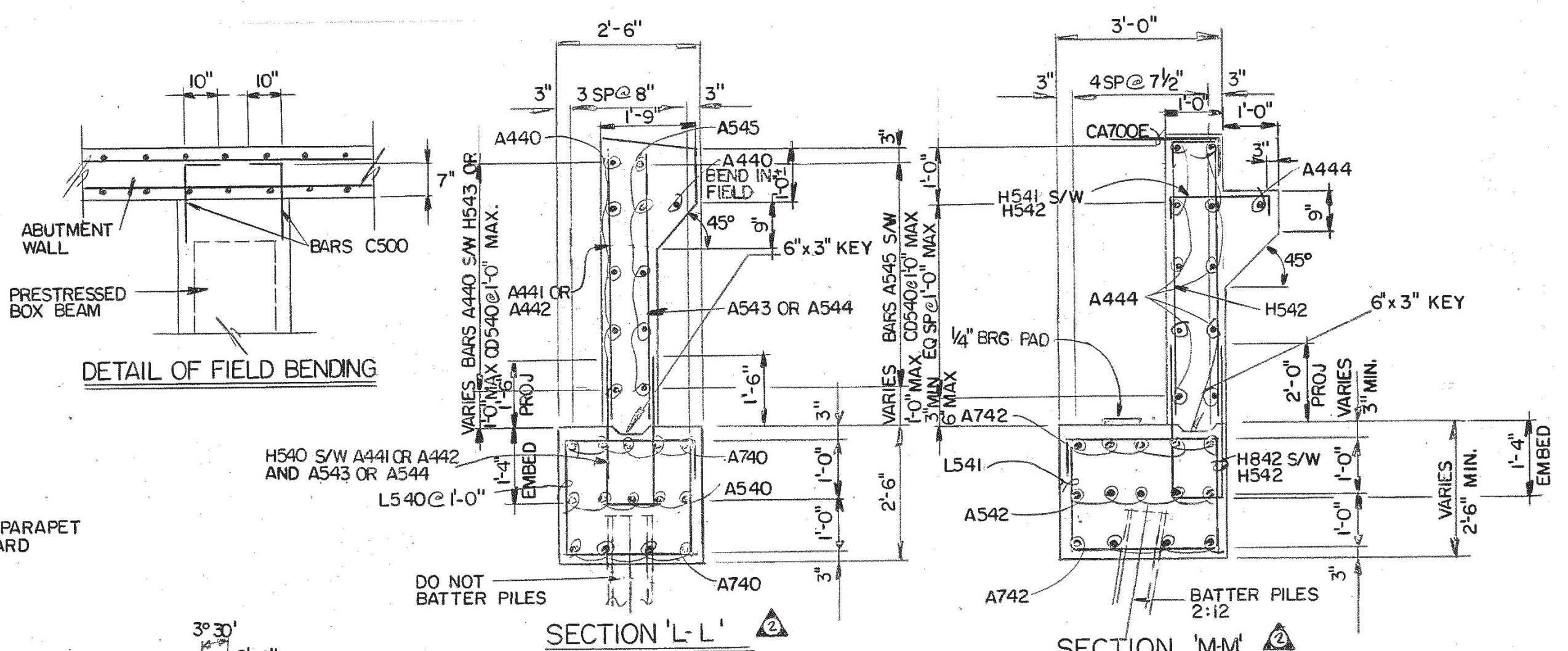
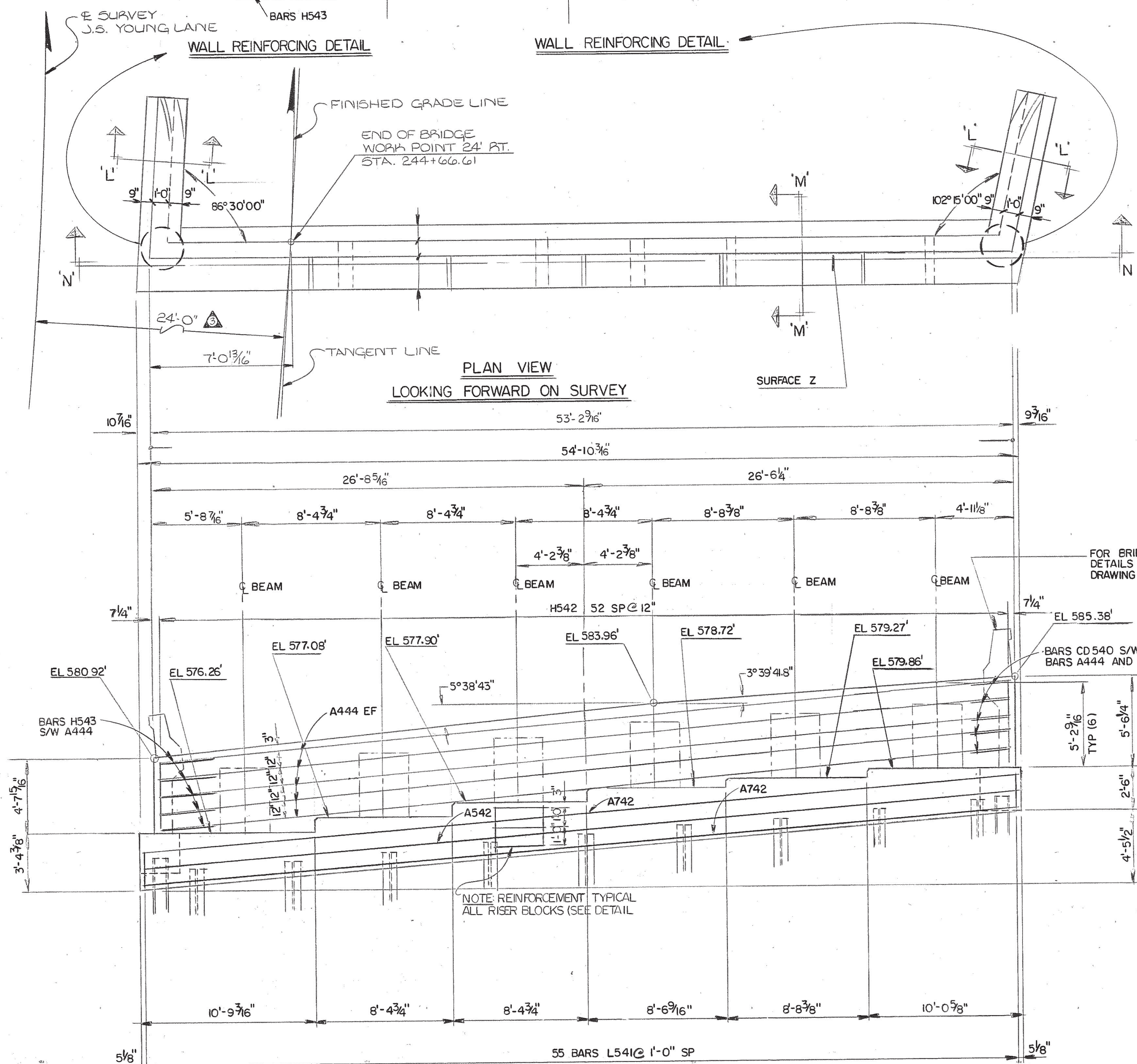
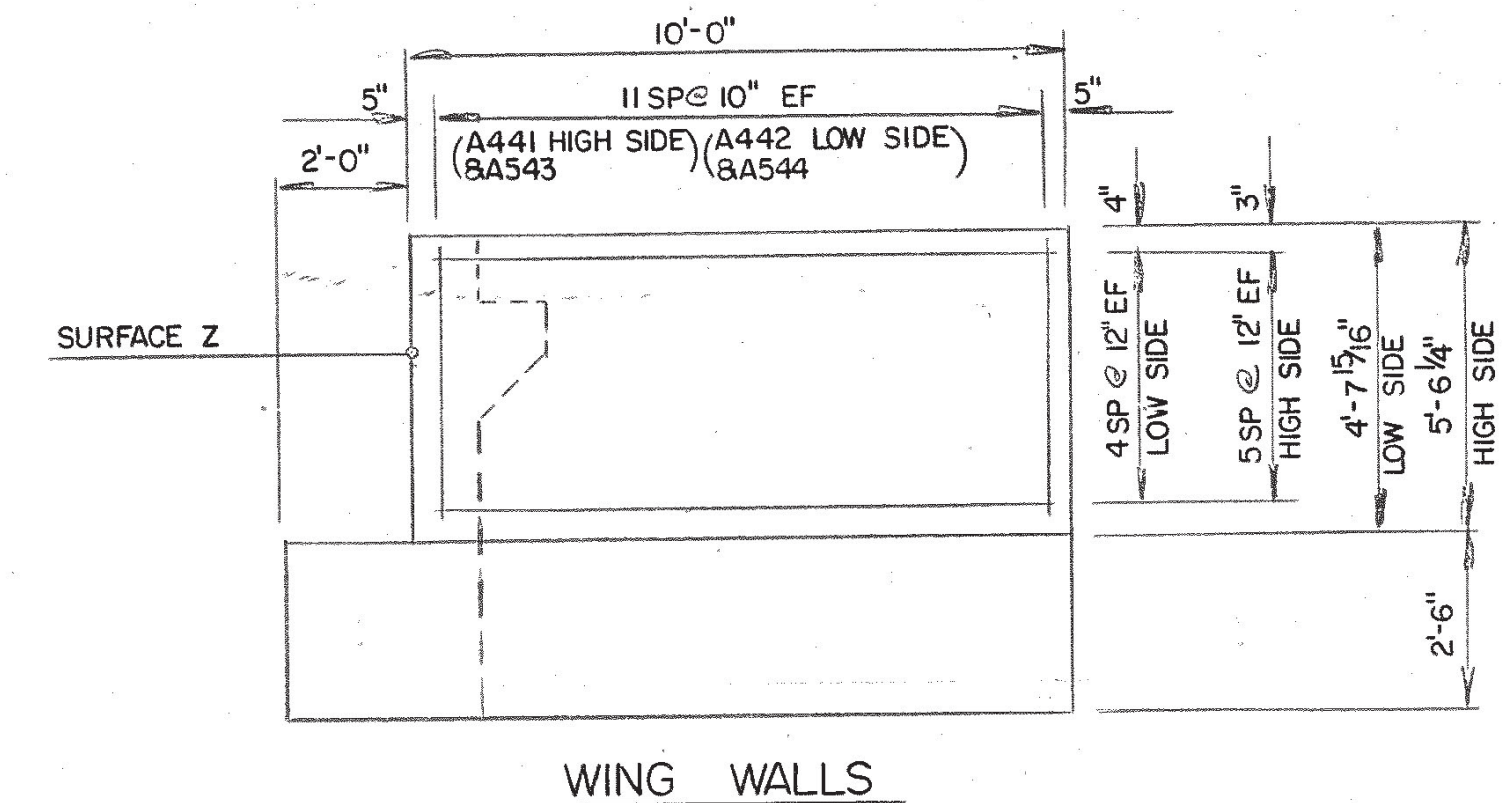
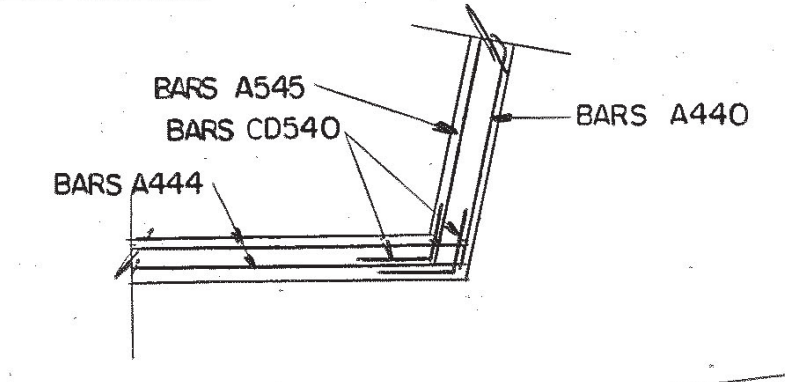
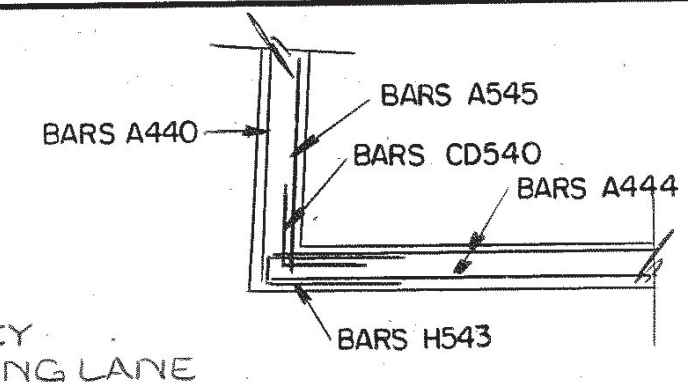
DESIGNED BY: RON BACON  
DRAWN BY: BOB SIKES/BILL THISTLEWOOD  
SUPERVISED BY: J.D. MOORE  
CHECKED BY: \_\_\_\_\_  
DATE: 8-28-81  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_

DIRECTOR: \_\_\_\_\_  
ENGINEER OF STRUCTURES: \_\_\_\_\_  
APPROVED: \_\_\_\_\_  
DIRECTOR OF HIGHWAYS: \_\_\_\_\_

AGGREGATE CLASS "A" GRADING "D" FOR DRAINAGE=22 CY.

M-103-89

CONST. NO. 75002-3231-14			
PROJECT NO.	YEAR	SHEET NO.	
F-50-(6)	81	26S	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-12-82	PSD	CHANGED LINES, ELEVATIONS, FINISH
2	3-5-82	PSD	CHANGED ABUTMENT STEEL
3	7-30-82	HYD	RELOCATE E. J.S. YOUNG LANE



ESTIMATED QUANTITIES

Item	CLASS 'A' CONCRETE C.Y.	REINFORCING STEEL LBS.	EPOXY COATED REINFORCING STEEL LBS.
Abut. No. 2	38.3	54.78	376

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

ABUTMENT No. 2 DETAILS  
BRIDGE No. 1 NORTHBOUND  
J.S. YOUNG LANE (M)  
OVER S.R. 18 L&N R.R.  
STA. 377+03.54  
RUTHERFORD COUNTY  
—1981—

DESIGNED BY: RON BACON  
DRAWN BY: BOB SIKES / BILL THISTLEWOOD  
SUPERVISED BY: J.D. MOORE  
CHECKED BY:

DATE: 9-21-81

CORRECT: ENGINEER OF STRUCTURES  
APPROVED: DIRECTOR OF HIGHWAYS

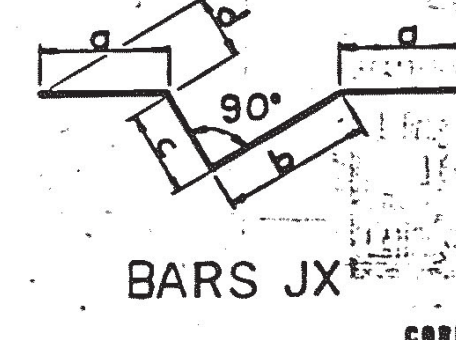
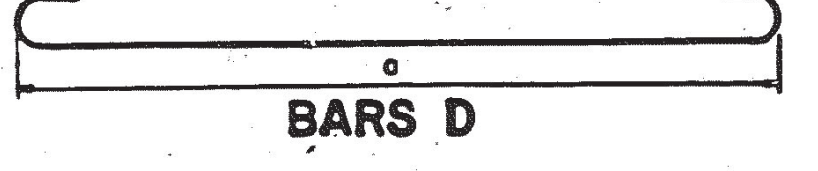
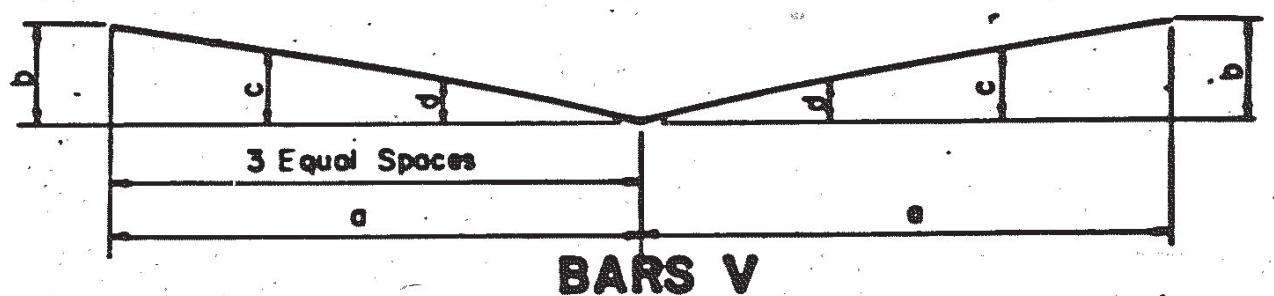
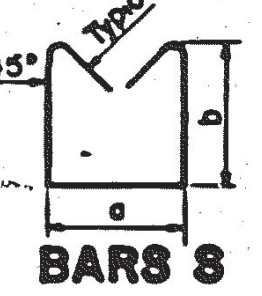
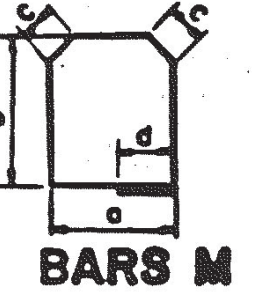
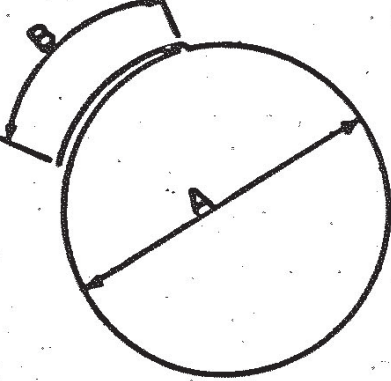
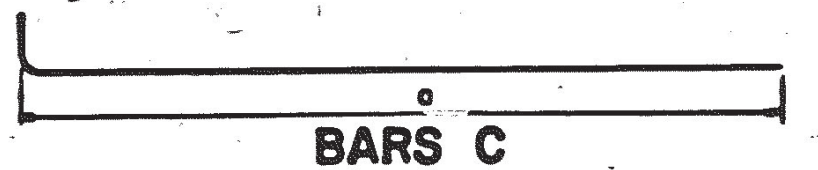
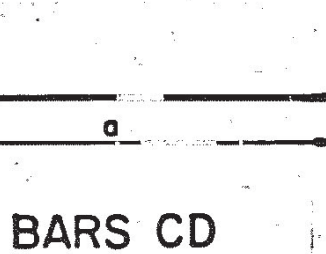
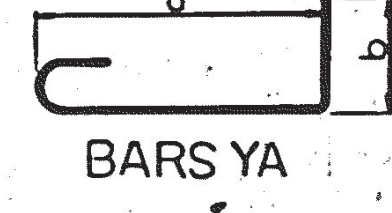
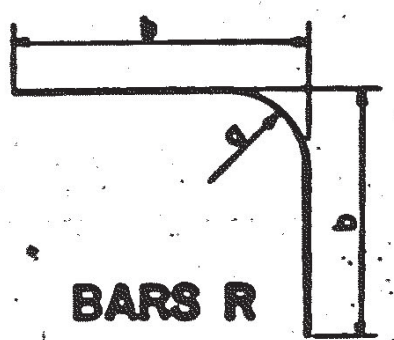
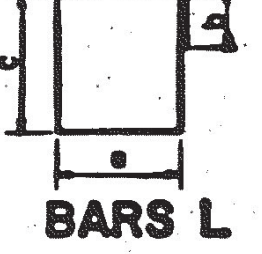
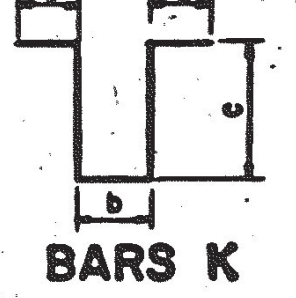
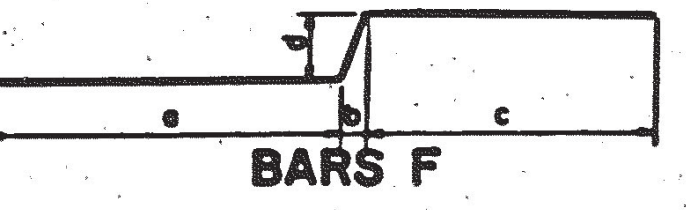
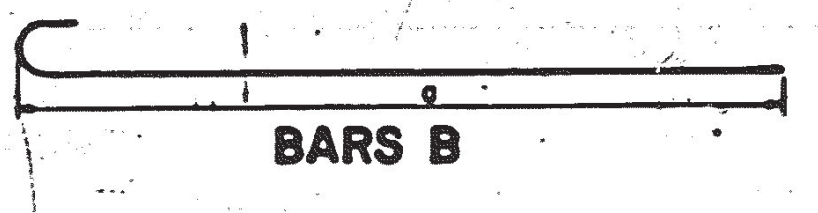
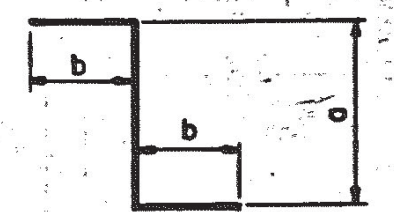
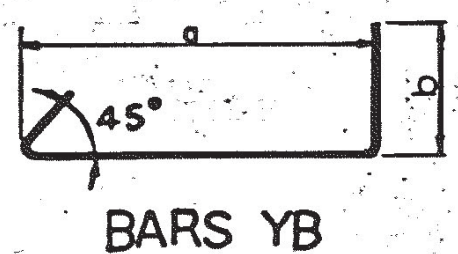
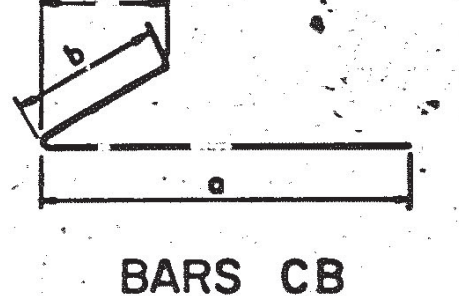
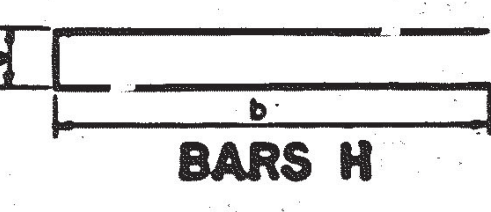
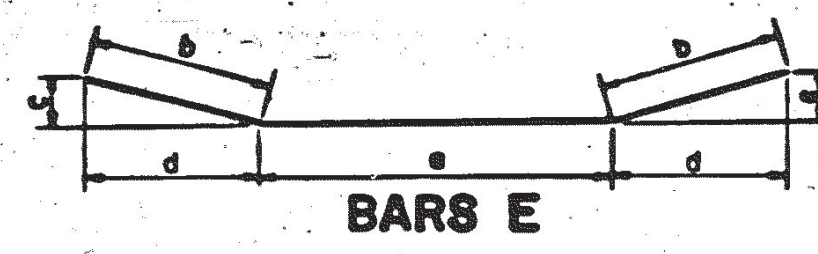
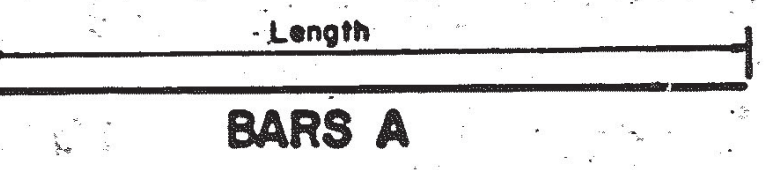
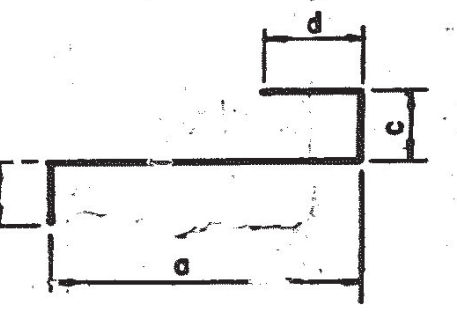
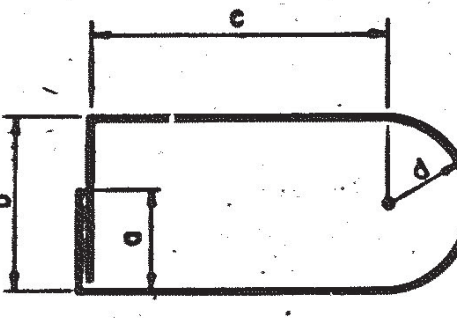
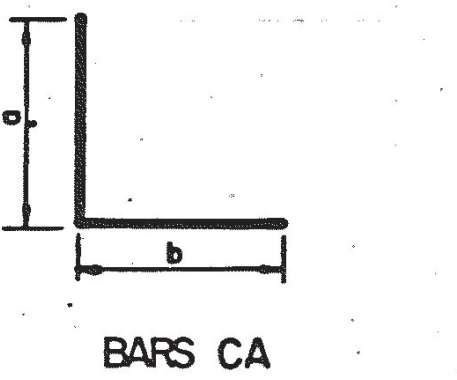
AGGREGATE CLASS "A" GRADING "D" FOR DRAINAGE=26 C.Y.

M-105-60

**BILL OF STEEL**

SUPERSTRUCTURE											SUPERSTRUCTURE (CONT.)											PAVEMENT AT BRIDGE ENDS											ABUTMENT No. 1 (CONT.)											
BAR	LOCATION	SIZE	NO RECD	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO RECD	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO RECD	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO RECD	BENDING DIMENSIONS				LENGTH									
				a	b	c	d					a	b	c	d					a	b	c	d					a	b	c	d													
A300	BEAMS *	3	100					60-0	SERIES	SLAB	6	1	LENGTH VARIES FROM 2388-9					BEGINNING OF BRIDGE											H541	B W HAUNCH	5	43	1'-8"	6"			2'-8"							
A301	BEAMS *	3	100					27-6	A605E				43-8 TO 50-4 IN INC OF 7/16 (25 BARS)					A490E	SLAB (TOP)	4	25					40'-0"	H542	BACKWALL	5	43	8"	4'-3"			9'-2"									
A302	BEAMS *	3	40					22-9 1/2										A490	SLAB (BOTTOM)	4	25						H543	WALL CORNERS	5	5	8"	2'-0"			4'-8"									
A303	BEAMS *	3	48					28-6										L590	PILE CAP	5	43	1'-2"	1'-0"	2'-1 1/2"		7'-5"																		
C400	BEAMS *	4	2980	3-8"				4'-4"	O600	BEAM ENDS *	6	432	1-11				2-11	A890E	SLAB	6	41					24'-0"																		
A509E	SLAB	5	8					38'-11"	A700E	SLAB	7	7					20'-0"	A790	PILE CAP	7	8					40'-0"	L540	WINGWALL	5	24	2'-2"	1'-0"	2'-2"		9'-8"									
H400	BEAMS *	4	1495	2-7 1/2"	1-0"			4-7 1/2	A701E	SLAB	7	6					40'-6"	A890	SLAB	9	81					24'-0"	L541	PILE CAP	5	43	2'-8"	1'-0"	2'-2"		10'-8"									
A508E	SLAB	5	12					54'-8"	A702E	SLAB	7	163					60'-0"	L590E	PILE CAP & SLAB	5	43	1'-2"	1'-0"	2'-1 1/2"		7'-5"	CAT00E	SLAB	7	20	5'-3"	2'-9"			8'-0"									
Z440D	BEAMS *	4	2990	1-10"	1-0"	10"	4"	4'-0"																								A740	WINGWALL	7	18					11'-6"				
A512E	SLAB	5	8					47'-8"	SERIES	SLAB	7	1	LENGTH VARIES FROM 223-6																			A741	PILE CAP	7	9					43'-10"				
A500E	SLAB	5	425					60'-0"	A703E				29-10 1/2 TO 44-7 1/2 IN INC OF 2-11/2 (6 BARS)					A490				LENGTH VARIES FROM 1313-6 1/2																						
A511E	SLAB	5	2					43'-0"					3-11 TO 21-7/2 IN INC OF 2-11/2 (7 BARS)					SERIES	SLAB (BOTTOM)	4	1	LENGTH VARIES FROM 50-8 TO 54-5 IN INC OF 1 1/2 (25 BARS)					A741	PILE CAP	7	9					43'-10"									
SERIES	SLAB	5	1	LENGTH VARIES FROM 1995'-0"									28-10 1/2 TO 37-9 IN INC OF 2-11/2 (4 BARS)					L590	PILE CAP	5	55	1'-2"	1'-0"	2'-1 1/2"		7'-5"	H842	BACKWALL KEY	8	43	8"	3'-4"			7'-4"									
A401E				45'-0 TO 50'-0 IN INC OF 1 1/2 (42 BARS)					A704E				3-11 TO 21-7/2 IN INC OF 2-11/2 (7 BARS)					A605E	SLAB	6	57					24'-0"																		
A502E	SLAB	5	4					9'-2"										L590E	PILE CAP & SLAB	5	5	1'-2"	1'-0"	2'-1 1/2"		7'-5"																		
A502	BEAM ENDS *	5	288					3'-8"	SERIES	SLAB	7	1	LENGTH VARIES FROM 89-5					A790	PILE CAP	7	8					54'-10"																		
A503	BEAM ENDS *	5	360					2'-8"	A705E				3-11 TO 21-7/2 IN INC OF 2-11/2 (7 BARS)					A890	SLAB	9	81					24'-0"	SERIES	SLAB (TOP)	4	1	LENGTH VARIES FROM 60'-8 TO 54'-5 IN INC OF 1 1/2 (25 BARS)					A440	WINGWALLS	4	13					9'-6"
A504	BEAMS *	5	100					39'-2"										A441	WINGWALLS	4	12					5'-3"	A442	WINGWALLS	4	12					4'-3"									
A503E	SLAB	5	1					15'-7"										A443	BACKWALL #1	4	11					43'-10"																		
C500	BEAM ENDS *	5	432	1-11				2'-9"	A706E	SLAB	7	1					4-8 1/2															A445	PILE CAP	4	20					2'-0"				
A504E	SLAB	5	10					42'-0"	A707E	SLAB	7	1					7-8	A440	WINGWALLS	4	13					9'-6"	L440	PILE CAP	4	15	1'-7/2"	1'-0"	1'-7/2"		7'-6"									
A600E	SLAB	6	1653					43'-6"	A708E	SLAB	7	1					11-9	A441	WINGWALLS	4	12					5'-3"	A540	W W PILE CAP	5	10					11'-6"									
A510E	SLAB	5	16					36'-0"	A709E	SLAB	7	1					46-3	A442	WINGWALLS	4	12					4'-3"	A541	PILE CAP	5	5					43'-10"									
SERIES	SLAB	6	1	LENGTH VARIES FROM 257-3 1/2					A710E	SLAB	7	1					16'-0"	A443	BACKWALL #1	4	11					43'-10"																		
A601E				7-11 1/2 TO 43'-6 IN INC OF 3-11 1/2 (10 BARS)					A711E	SLAB	7	80					32-0	A445	PILE CAP	4	20					2'-0"																		
									A712E	SLAB	7	20					19-5																											
									A713E	SLAB	7	30					11-8																											
SERIES	SLAB	6	1	LENGTH VARIES FROM 250-0					A714E	SLAB	7	9					12-6																											
A602E				13-7 1/2 TO 50'-10 IN INC OF 4-7 1/2 (9 BARS)					A715E	SLAB	7	20					25-5																											
SERIES	SLAB	6	1	LENGTH VARIES FROM 16,193'-5/2																																								
A603E				43'-6 TO 50'-4 1/2 IN INC OF 7/16 (345 BARS)					CD700E	SLAB	7	1	33-6	26-6	2-6		60'-0"	A543	WINGWALLS	5	12					5'-3"																		
									CD701E	SLAB	7	1	15-0	5-0	5"		20'-0"	A544	WINGWALLS	5	12					4'-3"																		
SERIES	SLAB	6	1	LENGTH VARIES FROM 191'-4"					CD702E	SLAB	7	1	49-6	10-6	1-0		30'-0"	A545	WINGWALLS	5	11					9'-6"																		
A604E				4-4 TO 43'-6 IN INC OF 5-7/8 (8 BARS)					A800	BEAMS *	8	200					25-6																											
									A801	BEAMS *	8	88					24-6 1/2	CD540	BACKWALL	5	5	2'-0"	2'-0"	5"		4'-0"																		
SERIES	SLAB	6	1	LENGTH VARIES FROM 160-11					A802	BEAMS *	8	48					30-3	CD541	BACKWALL	5	10	2'-0"	2'-0"	2 1/4"		4'-0"																		
A605E				11-8 1/2 TO 52'-8 IN INC OF 10-2 7/8 (5 BARS)					A505E	SLAB WIDENING	5	6					49'-0"	H540	WINGWALL	5	24	8"	2'-10"			6'-4"																		
									A506E	SLAB WIDENING	5	2					58'-0"																											
									A507E	SLAB WIDENING	5	2					35'-0"																											

CONST. NO. 75002-3231-14					
NO. 3	DATE	F-50-(6)	SCALE	8:1	TOTAL SHEETS 26T
REVISIONS					
NO.	DATE	BY	BRIEF DESCRIPTION		
1	12-1-81	HMB	ADDED AND CHANGED REINFORCEMENT		
2	2-17-82	HSB	SCOPED, DELETED & CHANGED PLAN/F.		
3	8-10-82	HSB	DELETED DEVS, ADDED INDV. ABUT. LIST		



DESIGNED BY RON BACON DATE \_\_\_\_\_  
 DRAWN BY BILL THISTLEWOOD DATE 9-25-81  
 SUPERVISED BY J.D. MOORE DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

\*NOTE: THESE BARS ARE TO BE USED IN THE PRESTRESSED BEAMS. QUANTITIES ARE NOT INCLUDED IN SUPERSTRUCTURE QUANTITIES. THE BARS ARE INCLUDED IN THE PER BEAM QUANTITIES SHOWN ON THE PRESTRESSED BEAM DETAILS.

**REINFORCING STEEL CODES**

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.

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

**BILL OF STEEL**  
 BRIDGE No. 1 NORTHBOUND  
 J.S. YOUNG LANE (M.)  
 OVER S.R. 1 & L'EN R.R.  
 STA. 377 + 03.54  
 RUTHERFORD COUNTY  
 1981

CORRECT *L. Nelson L. Sorell*  
 ENGINEER OF STRUCTURES

APPROVED *Francis Evans*  
 DIRECTOR OF HIGHWAYS

M-103-61

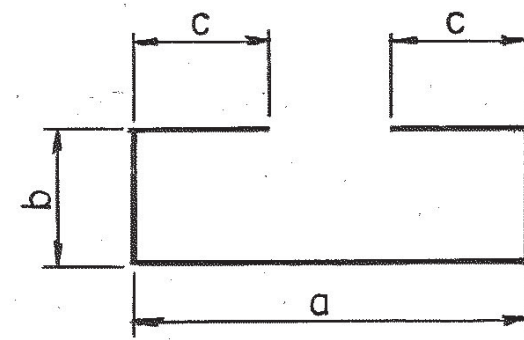
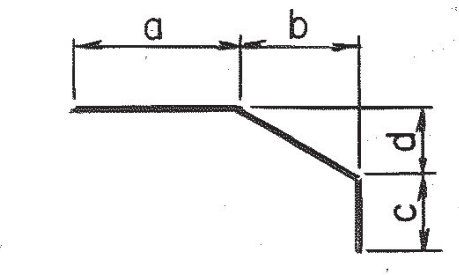
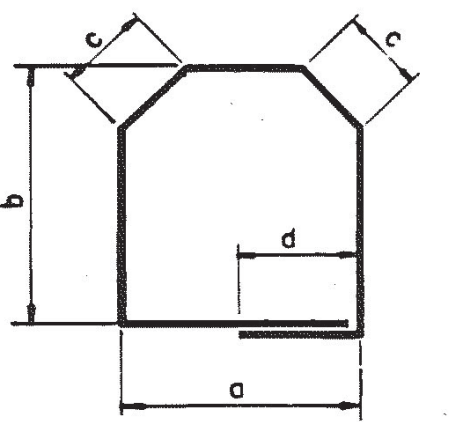
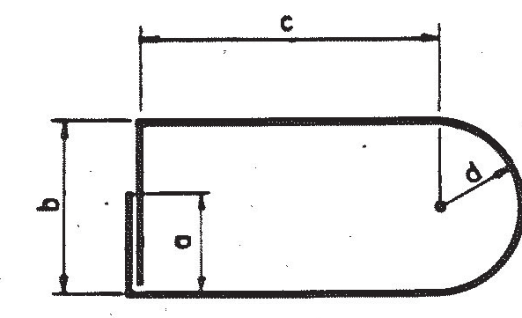
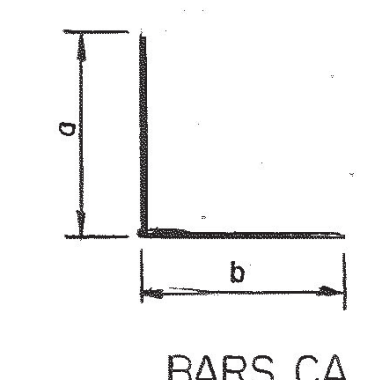
**BILL OF STEEL**

CONST. NO.		75002-3231-14	
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
3	TENN.	F-50-(6)	1981
SHEET NO.		TOTAL SHEETS	
11		18	

**REVISIONS**

NO.	DATE	BY	BRIEF DESCRIPTION
1	3-10-82	RSB	NEW SHEET, INCL. BENT LISTS

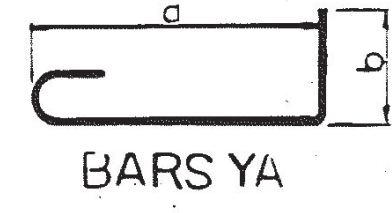
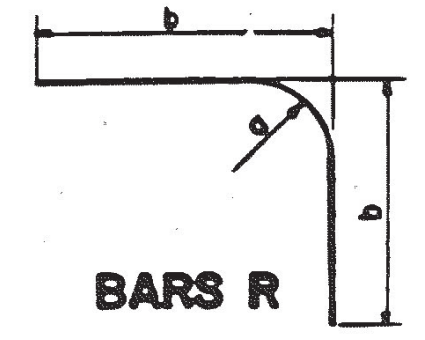
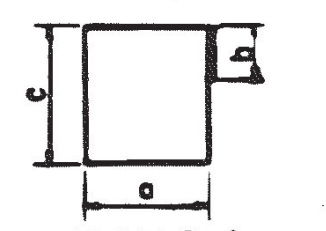
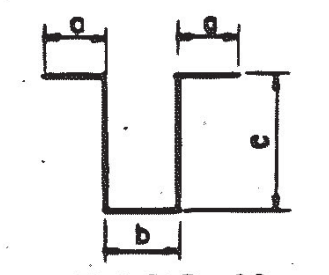
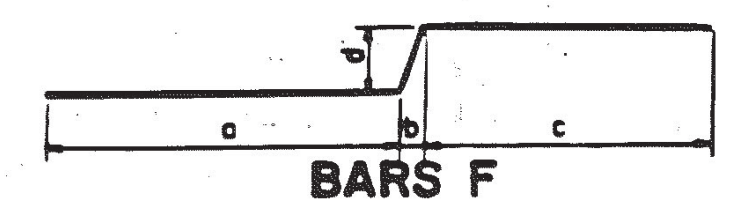
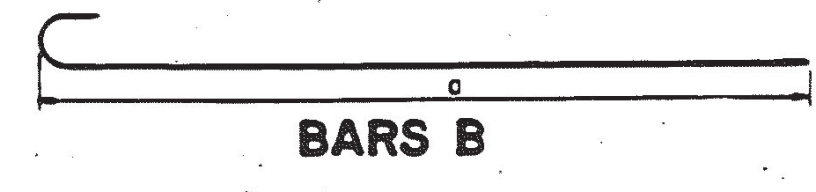
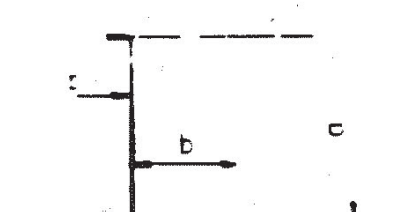
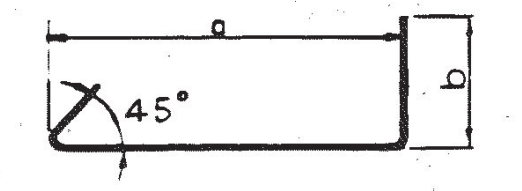
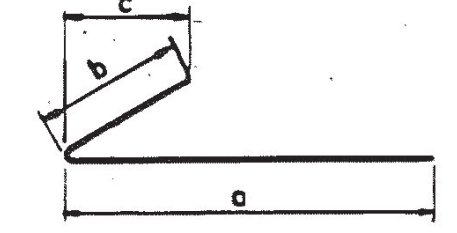
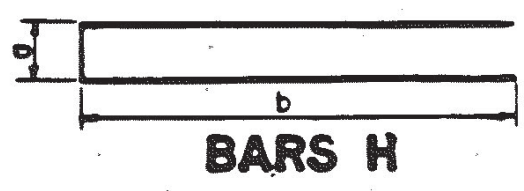
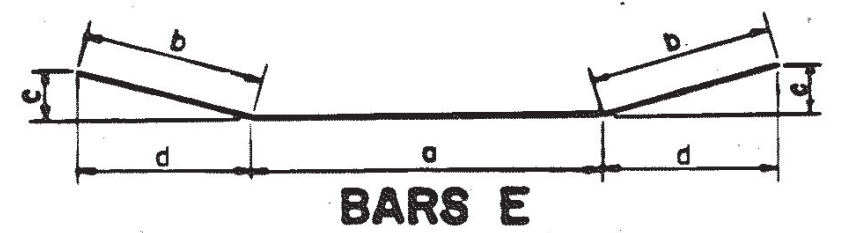
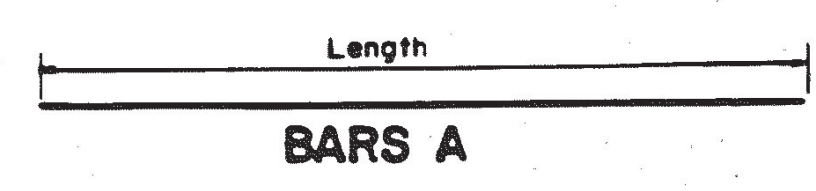
BENT No. 1						BENT No. 2						BENT No. 2 (CONT.)						BENT No. 3 (CONT.)																																			
BAR	LOCATION	SIZE	NO. REQD.	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO. REQD.	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO. REQD.	BENDING DIMENSIONS				LENGTH																											
				a	b	c	d					a	b	c	d					a	b	c	d																														
CB450	STIRRUPS	4	126	3'-0"	3"	2"		3'-3"	CB450	STIRRUPS	4	186	3'-0"	3"	2"		3'-3"	DI162	BENT CAP	11	8	36'-6"					39'-8"	C1150	BENT	11	44	12'-9"					14'-9"																
SERIES	STIRRUPS	4	5	DIM a VARIES FROM 4'-3 3/8 TO 5'-7 IN INC OF 3/4" (21 BARS) DIM b = 1'-0" DIM c = 2'-7 1/2"				338'-9"	SERIES	STIRRUPS	4	5	DIM a VARIES FROM 4'-3 3/8 TO 5'-7 IN INC OF 3/4" (21 BARS) DIM b = 1'-0" DIM c = 2'-7 1/2"				338'-9"										DI163	BENT CAP	11	8	36'-0"					39'-2"																	
L460									L460																																												
L464	DIAPHRAGM	4	24	3'-9"	1'-0"	8"		9'-10"	SERIES	STIRRUPS	4	5	DIM a VARIES FROM 5'-7 3/4 TO 6'-2 1/2 IN INC OF 3/4" (10 BARS) DIM b = 1'-0" DIM c = 2'-7 1/2"				181'-0 1/2"	BENT No. 3																																			
SERIES	BENT CAP	5	2	DIM a VARIES FROM 2'-8 TO 4'-5 IN INC OF 1" (22 BARS) DIM b = 1'-0" DIM c = 1'-9 7/8"				258'-0 1/2"	L463									CB450	STIRRUPS	4	156	3'-0"	3"	2"		3'-3"	BENT No. 4																										
L550									L464	DIAPHRAGM	4	24	3'-9"	1'-0"	8"		9'-10"	SERIES	STIRRUPS	4	5	DIM a VARIES FROM 4'-3 3/8 TO 5'-7 IN INC OF 3/4" (21 BARS) DIM b = 1'-0" DIM c = 2'-7 1/2"				338'-9"	CB450	STIRRUPS	4	156	3'-0"	3"	2"		3'-3"																		
L551	BENT CAP	5	2	DIM a VARIES FROM 2'-8 TO 4'-3 IN INC OF 1" (20 BARS) DIM b = 1'-0" DIM c = 1'-9 7/8"				231'-3"	L553	BENT CAP	5	2	DIM a VARIES FROM 2'-8 TO 4'-2 IN INC OF 1" (19 BARS) DIM b = 1'-0" DIM c = 1'-9 7/8"				213'-1 1/4"	SERIES	STIRRUPS	4	5	DIM a VARIES FROM 4'-3 3/8 TO 5'-7 IN INC OF 3/4" (21 BARS) DIM b = 1'-0" DIM c = 2'-7 1/2"				338'-9"	L460																										
L552	BENT CAP	5	48	4'-3"	1'-0"	1'-9 7/8"		13'-1 3/4"	SERIES	BENT CAP	5	2	DIM a VARIES FROM 2'-8 TO 4'-1 IN INC OF 1" (18 BARS) DIM b = 1'-0" DIM c = 1'-9 7/8"				205'-1 1/2"	L462									SERIES	STIRRUPS	4	5	DIM a VARIES FROM 5'-7 3/4 TO 5'-10 3/4 IN INC OF 3/4" (5 BARS) DIM b = 1'-0" DIM c = 2'-7 1/2"				88'-11 1/2"	L462																	
A650	BENT CAP	6	12					12'-0"	L554									L464	DIAPHRAGM	4	24	3'-9"	1'-0"	8"		9'-10"	SERIES	STIRRUPS	4	5	DIM a VARIES FROM 5'-7 3/4 TO 5'-10 3/4 IN INC OF 3/4" (5 BARS) DIM b = 1'-0" DIM c = 2'-7 1/2"				88'-11 1/2"	L464	DIAPHRAGM	4	24	3'-9"	1'-0"	8"		9'-10"									
A751	DIAPHRAGM	7	8					36'-0"	L555	BENT CAP	5	52	4'-1"	1'-0"	1'-9 7/8"		12'-9 3/4"	L553									SERIES	BENT CAP	5	4	DIM a VARIES FROM 2'-8 TO 4'-2 IN INC OF 1" (19 BARS) DIM b = 1'-0" DIM c = 1'-9 7/8"				218'-1 1/4"	L464	DIAPHRAGM	4	24	3'-9"	1'-0"	8"		9'-10"									
D750	FOOTING	7	32	33'-6"				35'-2"	A650	BENT CAP	6	12					12'-0"	L556	BENT CAP	5	50	4'-2"	1'-0"	1'-9 7/8"		12'-1 1/4"	L555																										
D950	FOOTING	9	38	21'-6"				24'-0"	A751	DIAPHRAGM	7	8					36'-0"	A650	BENT CAP	6	12					12'-0"	L556	BENT CAP	5	50	4'-2"	1'-0"	1'-9 7/8"		12'-1 1/4"	A751	DIAPHRAGM	7	8					36'-0"									
A1150	BENT VERT	11	8					21'-9"	D750	FOOTING	7	32	33'-6"				35'-2"	A751	DIAPHRAGM	7	8					36'-0"	L556	BENT CAP	5	50	4'-2"	1'-0"	1'-9 7/8"		12'-1 1/4"	A650	BENT CAP	6	12					12'-0"									
A1151	BENT VERT	11	8					23'-6"	D751	FOOTING	7	37	15'-6"				17'-2"	A1152								448'-0"	A1157	BENT VERT	11	8					29'-6"	A751	DIAPHRAGM	7	8					36'-0"									
SERIES	BENT VERT	11	2	LENGTH VARIES FROM 21'-9 TO 23'-6 IN INC OF 1 5/8" (14 BARS)				316'-9"	A1153	BENT VERT	11	8					31'-0"	A1153	BENT VERT	11	8					31'-0"	A1156	BENT VERT	11	8					27'-9"	A751	DIAPHRAGM	7	8					36'-0"									
A1162	BENT CAP	11	8					17'-1"	A1154	BENT VERT	11	8					33'-0"	A1154	BENT VERT	11	8					33'-0"	A1157	BENT VERT	11	8					29'-6"	D750	FOOTING	7	33	33'-6"				35'-2"									
A1164	BENT CAP	11	4					36'-6"	SERIES	BENT VERT	11	2	LENGTH VARIES FROM 31'-0 TO 33'-0 IN INC OF 1 5/8" (14 BARS)				448'-0"	A1155								31'-0 TO 33'-0 IN INC OF 1 5/8" (14 BARS)	A1157	BENT VERT	11	8					29'-6"	D751	FOOTING	7	37	15'-6"				17'-2"									
C1150	BENT	11	44	12'-9"				14'-9"	A1162	BENT CAP	11	8					17'-1"	A1156	BENT VERT	11	8					27'-9"	A1157	BENT VERT	11	8					29'-6"	D751	FOOTING	7	37	15'-6"				17'-2"									
DI162	BENT CAP	11	8	36'-6"				39'-8"	A1164	BENT CAP	11	4					36'-6"	A1158								27'-9 TO 29'-6 IN INC OF 1 5/8" (14 BARS)	A1158	BENT VERT	11	2	LENGTH VARIES FROM 27'-9 TO 29'-6 IN INC OF 1 5/8" (14 BARS)				400'-9"	A1158	BENT VERT	11	8					29'-6"									
									C1150	BENT	11	44	12'-9"				14'-9"	A1162	BENT CAP	11	8					17'-1"	A1158	BENT VERT	11	2	LENGTH VARIES FROM 27'-9 TO 29'-6 IN INC OF 1 5/8" (14 BARS)				400'-9"	A1158	BENT VERT	11	8					29'-6"									
																		A1165	BENT CAP	11	4					36'-0"	A1158	BENT VERT	11	2	LENGTH VARIES FROM 27'-9 TO 29'-6 IN INC OF 1 5/8" (14 BARS)				400'-9"	A1158	BENT VERT	11	8					29'-6"									



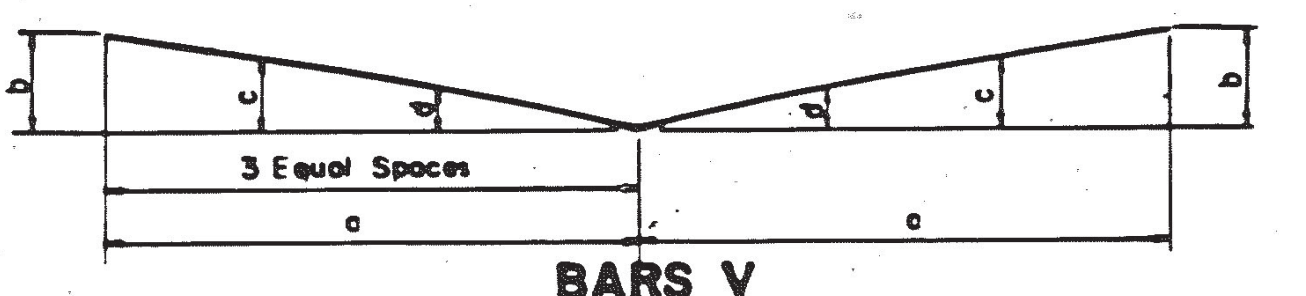
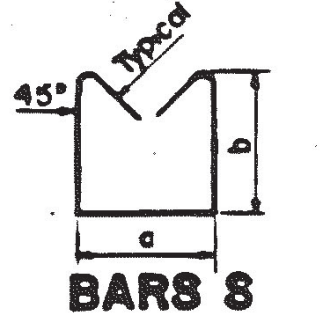
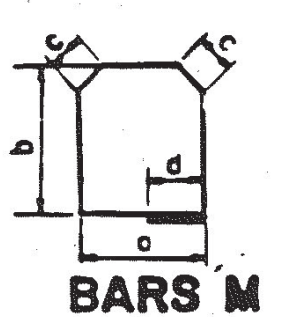
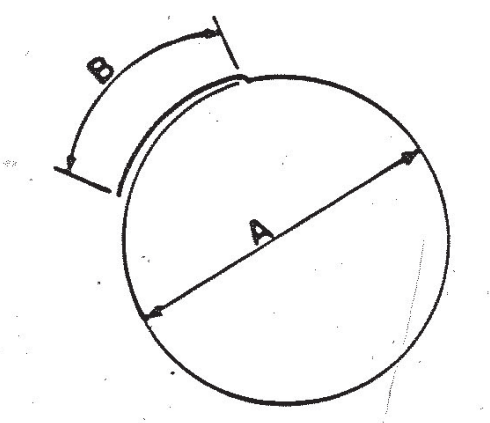
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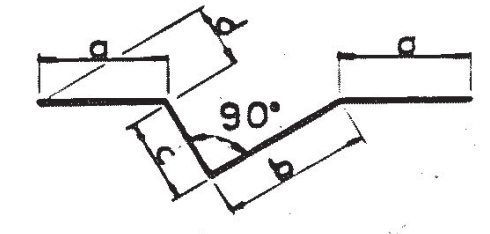
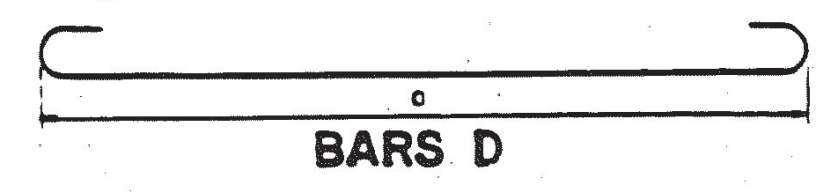
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BARS Z



BARS CD

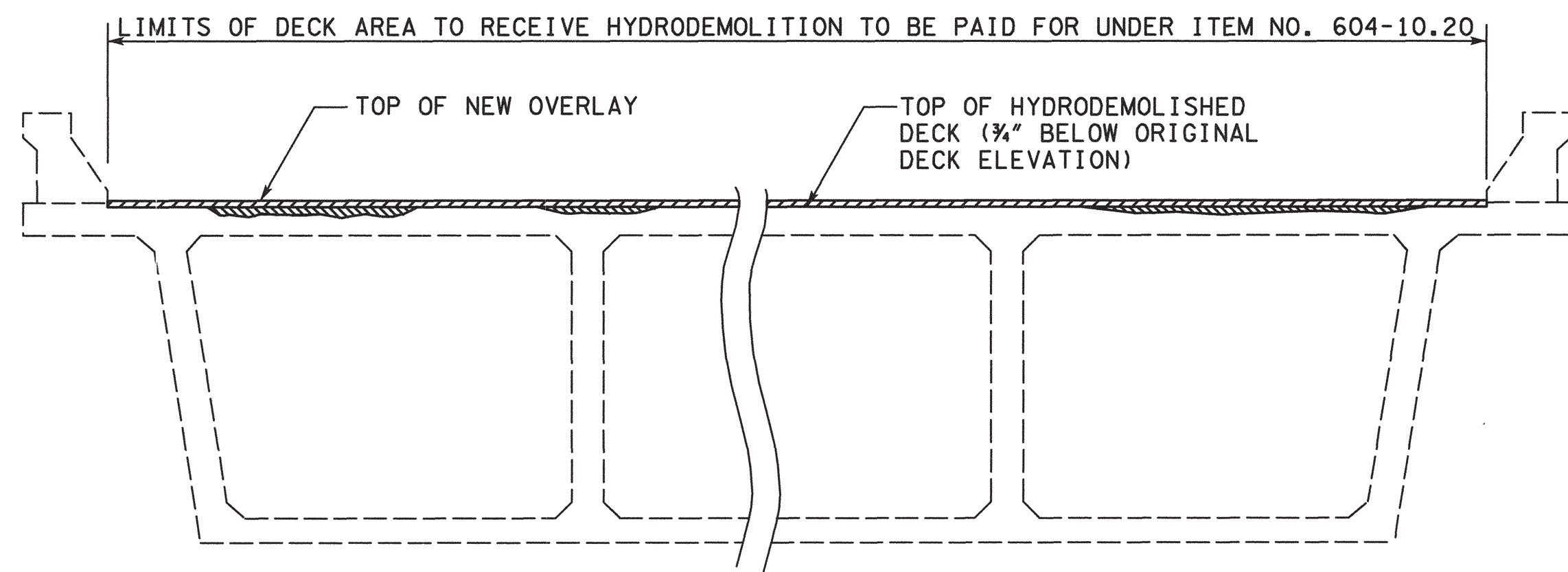


DESIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SUPERVISED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

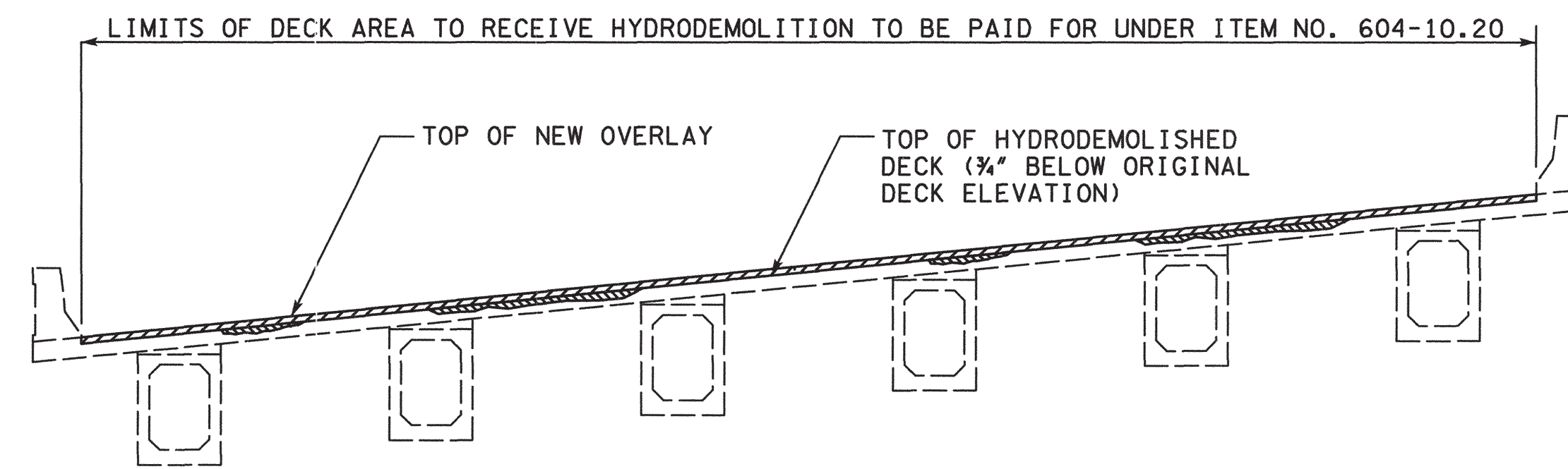
STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS  
**BILL OF STEEL**  
 BRIDGE No. 1 NORTHBOUND  
 J.S. YOUNG LANE (M)  
 OVER S.R. 1 & L & N R.R.  
 STA. 377 + 03.54  
 RUTHERFORD COUNTY  
 1981

M-105-61A





**FOR CONCRETE HOLLOW BOX CROSS SECTIONS**



**FOR BOX BEAM CROSS SECTIONS**

PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

**NOTE:** CONTRACTOR TO TAKE EXTREME CARE THAT NO AREA OF THE DECK BE REMOVED TO FULL DEPTH OF SLAB. AREAS REMOVED TO FULL DEPTH SHALL BE REPAIRED TO SCARIFIED LEVEL AT CONTRACTORS EXPENSE. THESE AREAS SHALL BE REPAIRED WITH HIGH EARLY STRENGTH CONCRETE AND CURED BEFORE PLACEMENT OF PMC OVERLAY.

**DETAILS SHOWING LIMITS FOR POLYMER MODIFIED CONCRETE PAY ITEMS**

**NOTE:** CONCRETE FOR ITEM NOS. 619-01 AND 619-01.10 SHALL BE PLACED MONOLITHICALLY

- DENOTES NEW CONCRETE PLACED IN AREAS OF FULL AND PARTIAL DEPTH REMOVAL (3/4" BELOW ORIGINAL DECK ELEVATION) ALL NEW CONCRETE PLACED UP TO 3/4" BELOW THE EXISTING TOP BRIDGE DECK SURFACE IS TO BE PAID FOR UNDER ITEM NO. 619-01.
- DENOTES LIMITS OF NEW CONCRETE IN THE 2" MIN. PMC OVERLAY (ALL CONCRETE ABOVE 3/4" BELOW THE EXISTING TOP BRIDGE DECK SURFACE), TO BE PAID FOR UNDER ITEM NO. 619-01, BRIDGE DECK OVERLAY (PMC), S.Y.

**SUGGESTED POLYMER MODIFIED CONCRETE CURING PROCEDURES**

COVER THE OVERLAY PROMPTLY WITH A SINGLE LAYER OF WET BURLAP, NEW BURLAP, EVEN WHEN PRESOAKED, CAN DRY OUT QUICKLY AND SHOULD BE AVOIDED OR PRESOAKED FOR SEVERAL DAYS. IT MAY REQUIRE THE BURLAP TO BE WET, LET DRY OUT, AND THIS PROCEDURE REPEATED SEVERAL TIMES TO ALLOW TOTAL ABSORPTION. USE WHITE VISQUEEN (PLASTIC) TO COVER THE WET BURLAP DURING THE OVER LAY IN HOT WEATHER.

PLACE THE WET BURLAP ON THE OVERLAY AS SOON AS POSSIBLE. CONSISTENTLY SPRAY A MIST OF WATER OVER THE BURLAP BEFORE IT IS COVERED WITH WHITE VISQUEEN (PLASTIC). HOWEVER SPRAYING THE BURLAP WITH WATER BEFORE COVERING WITH WHITE VISQUEEN (PLASTIC) SHOULD NOT BE EXCESSIVE TO THE POINT THE WATER IS DAMAGING THE FRESH OVERLAY SURFACE.

THE WHITE VISQUEEN (PLASTIC) SHOULD BE PULLED, PLACED AND KEPT WITHIN TEN (10) TO THIRTY (30) FEET OF THE FRONT COVER OF BURLAP. THESE DISTANCES SHOULD BE ADJUSTED BASED ON THE WEATHER CONDITIONS AT THE TIME OF PLACEMENT. SECURE THE PLASTIC SO IT WILL NOT BLOW OFF THE BURLAP DURING THE WET CURE. MINIMIZING THE NUMBER OF SEAMS IN THE PLASTIC IS BEST SUITED AND EASIER TO SECURE.

SECURE THE PLASTIC BY USING THE RAILS, ROLLING OVER THE EDGES OF WET BURLAP ONTO THE PLASTIC, LAYING FOLDED WET BURLAP TRANSVERSELY ACROSS THE DECK OR BY KEEPING WATER ON THE SURFACE OF THE PLASTIC. SEAL THE PLASTIC TO AVOID THE WIND FROM PUFFING UP THE PLASTIC DURING THE WET CURE. EXERCISE CAUTION WHEN WETTING DOWN THE SURFACE OF THE PLASTIC SO AS NOT TO ALLOW THE WATER TO RUN INTO THE OVERLAY BEING PLACED.

DURING HOT SUMMER OVERLAYS, SOAKER HOSES SHOULD BE PLACED UNDER THE PLASTIC. THIS SHOULD BE DONE WHEN THE OVERLAY HAS SET LONG ENOUGH TO SUPPORT THE WEIGHT OF THE SOAKER HOSES AND AFTER THE OVERLAY PLACEMENT IS COMPLETED. USING THE COOLEST WATER POSSIBLE WILL GREATLY ENHANCE ALL THE PROCEDURES IN HOT WEATHER.

A RANDOM SAMPLE OF THE LATEX SHALL BE TAKEN OFF EACH CONCRETE MOBILE SUPPLIER TO BE TAKEN TO THE T.D.O.T. DEPARTMENT OF MATERIALS AND TEST FOR EVALUATION. THE RANDOM SAMPLE WILL BE APPROXIMATELY ONE (1) QUART.

AN ENGINEER FROM THE OFFICE OF BRIDGE INSPECTION AND REPAIR SHALL BE PRESENT FOR THE INITIAL CALIBRATION OF THE CONCRETE MOBILE.

THE ENGINEER SHALL CHECK AND MEASURE THE VOLUME OF THE LATEX, CEMENT, AGGREGATE AND WATER OF THE CONCRETE MOBILE BEFORE AND AFTER AS AN APPROXIMATE CHECK OF THE CALIBRATION OF THE CONCRETE MOBILE.

**SPECIAL NOTE CONCERNING USE OF HYDRODEMOLITION FOR SCARIFYING DECK 3/4", PARTIAL DEPTH CONCRETE REMOVAL AND NEW CONCRETE.**

(THIS IS A GENERAL DESCRIPTION OF WORK REQUIRED AND PAYMENT FOR THAT WORK. SEE SPECIAL PROVISION 604H FOR EXACT LIMITS OF WORK AND PAYMENT CONCERNING HYDRODEMOLITION AND NEW PMC OVERLAY.)

THE ENTIRE DECK AREA ON THE BRIDGE SHALL RECEIVE HYDRODEMOLITION AS SHOWN ABOVE. THE DECK SHALL BE SCARIFIED 3/4" MAXIMUM AND HAVE PARTIAL DEPTH DETERIORATED CONCRETE REMOVED USING HYDRODEMOLITION, PARTIAL DEPTH AREAS WILL NOT BE MARKED ON THE DECK BUT WILL BE REMOVED AS THE HYDRODEMOLITION COMES IN CONTACT WITH PARTIAL DEPTH DETERIORATED CONCRETE WHILE SCARIFYING. THESE AREAS SHALL BE PAID FOR UNDER ITEM NO. 604-10.20, HYDRODEMOLITION, S.Y.

NOTE: FOR DECK REPAIR DETAILS AND NOTES, SEE SHEET BR-64-50.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
**BRIDGE OVERLAY  
DETAILS**

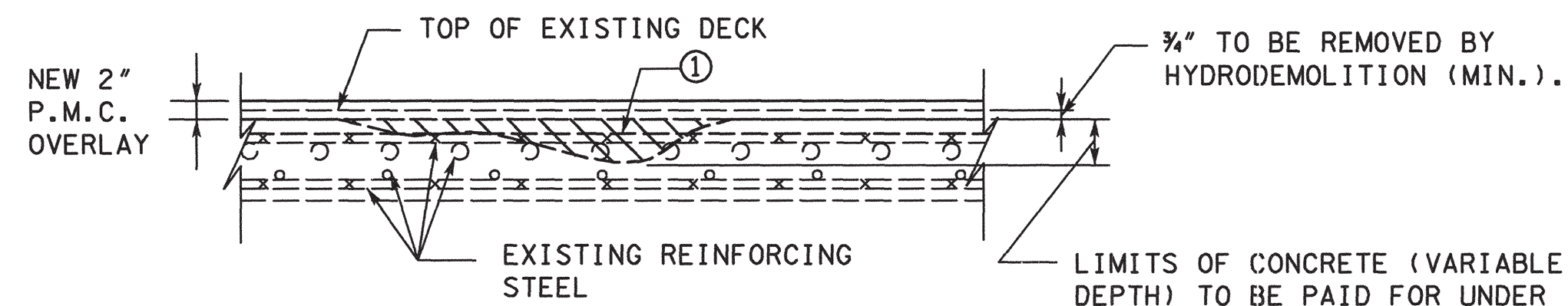
BRIDGE NO. 75-SR102-9.24  
SR-102 OVER STEWART CREEK (R.L. & L.L.)  
AND  
BRIDGE NO. 75-SR102-9.32  
SR-102 OVER OLD NASHVILLE PK. (R.L. & L.L.)  
AND  
BRIDGE NO. 75-SR102-10.34  
SR-102 OVER SR-1 (R.L. & L.L.)  
AND

BRIDGE NO. 75-SR102-10.48  
SR-102 OVER SR-1 (RAMP C)  
AND  
BRIDGE NO. 75-SR001-7.29  
~~SR-102 OVER SR-1 (RAMP D)~~

RUTHERFORD COUNTY  
2003

DESIGNED BY JACOB WILLIAMS, P.E. DATE 01-03  
DRAWN BY JIM ROBERTS DATE 01-03  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 01-03  
CHECKED BY JACOB WILLIAMS, P.E. DATE 01-03

PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



**BRIDGE DECK REPAIR DETAIL**  
(SHOWING PARTIAL DEPTH REPAIR)

☐ DENOTES: VARIABLE DEPTH AREA SHALL BE PAID FOR UNDER ITEM NO. 619-01.

**NOTES:**

① EXTREME CARE SHALL BE TAKEN WHEN REMOVING DETERIORATED CONCRETE IN THE VARIABLE DEPTH AREAS SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED REINFORCING SHALL BE COMPLETELY CLEANED TO THE SATISFACTION OF THE ENGINEER BEFORE REPOURING.

COST OF CLEANING THE EXISTING REINFORCING STEEL, FORMING, HAND TROWELING WEDGE AND ALL ADDITIONAL MATERIALS AND LABOR NECESSARY TO COMPLETE THE NEW P.M.C. OVERLAY SHALL BE INCLUDED IN ITEM NO. 619-01.

THE REQUIREMENT OF REMOVING 3/4" OF CONCRETE BEHIND THE EXISTING REINFORCING IN THE BRIDGE DECK IS WAIVED.

CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.

THE CONTRACTOR SHALL NOT REMOVE CONCRETE BELOW THE TOP 3/4" OF THE EXISTING DECK UNLESS IT IS DETERIORATED.

**NOTES:**

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE OF ITEMS BID ON.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
**BRIDGE OVERLAY  
DETAILS**

BRIDGE NO. 75-SR102-9.24  
SR-102 OVER STEWART CREEK (R.L. & L.L.)  
AND  
BRIDGE NO. 75-SR102-9.32  
SR-102 OVER OLD NASHVILLE PK. (R.L. & L.L.)  
AND  
BRIDGE NO. 75-SR102-10.34  
SR-102 OVER SR-1 (R.L. & L.L.)  
AND

BRIDGE NO. 75-SR102-10.48  
SR-102 OVER SR-1 (RAMP C)  
AND  
BRIDGE NO. 75-SR001-7.29  
~~SR-102 OVER SR-1 (RAMP D)~~  
RUTHERFORD COUNTY  
2003

DESIGNED BY JACOB WILLIAMS, P.E. DATE 01-03  
DRAWN BY JIM ROBERTS DATE 01-03  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 01-03  
CHECKED BY JACOB WILLIAMS, P.E. DATE 01-03

PROJECT NO.	YEAR	SHEET NO.	
75014-4238-04	2003		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

**GENERAL NOTES AND SPECIFICATIONS FOR  
EPOXY INJECTION OF EXISTING STRUCTURAL CRACKS**

ALL CRACKS SMALLER THAN 1/4" SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE. ALL CRACKS 1/4" OR LARGER SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE OF THE GEL TYPE.

EXTREME CAUTION SHALL BE TAKEN WHEN SELECTING A PRESSURE NECESSARY TO COMPLETE THE EPOXY INJECTION CRACK REPAIR SO AS NOT TO DAMAGE THE STRUCTURE BY CAUSING ADDITIONAL CRACKING. IF ADDITIONAL DAMAGE OCCURS, THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY. ALL EPOXY INJECTION WORK SHALL MEET WITH THE FULL APPROVAL OF THE ENGINEER.

ALL EPOXY INJECTION CONTRACTORS AND/OR SUBCONTRACTORS SHALL BE APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.

AFTER EPOXY INJECTION IS COMPLETE, ALL INJECTION PORTS SHALL BE REMOVED AND ALL EXCESS SEALING MATERIAL AND EPOXY SHALL BE REMOVED FLUSH WITH THE SURROUNDING CONCRETE SURFACES.

CRACK LOCATIONS SHOWN THIS SHEET ARE APPROXIMATE ONLY. THE ENGINEER FROM THE STRUCTURES DIVISION, BRIDGE INSPECTION AND REPAIR, WILL MARK EXACT CRACK LOCATIONS TO RECEIVE EPOXY INJECTION.

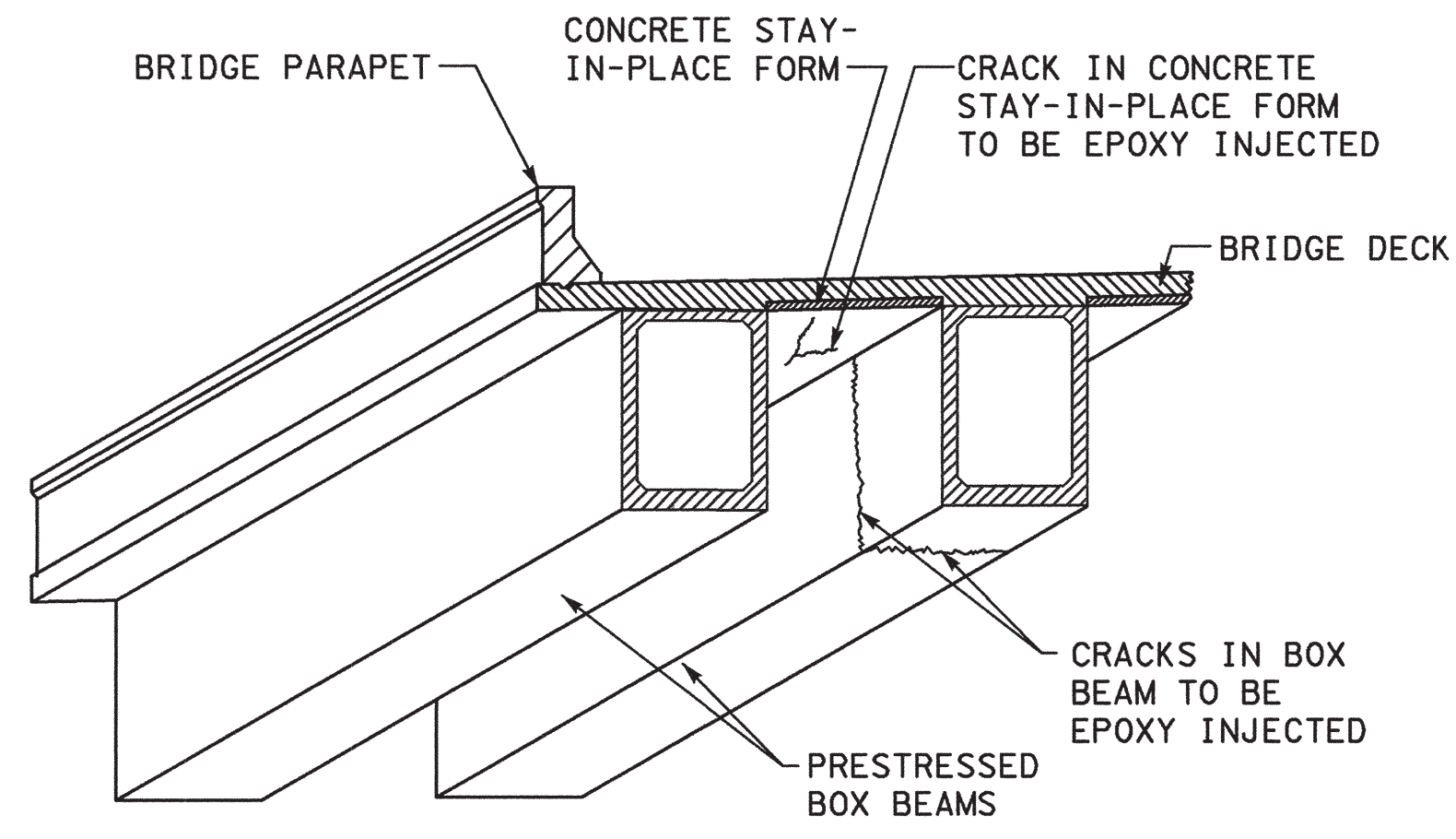
THE ENGINEER SHALL COLLECT RANDOM SAMPLES OF THE EPOXY RESIN FOR EVALUATION BY THE MATERIALS AND TEST DEPARTMENT, DEPARTMENT OF TRANSPORTATION, FOR VERIFICATION OF THE STRENGTH AND QUALITY OF THE MATERIAL.

IF THE CRACKS ARE NOT FULLY SEALED OR THE STRENGTH REQUIREMENTS ARE NOT MET, THEN REDUCTION IN PAYMENT DETERMINED BY THE ENGINEER WILL BE MADE TO THE CONTRACTORS BID PRICE OF ITEM NO. 604-10.62, EPOXY INJECTION REPAIRS (COMPLETE AND IN PLACE), L.F..

THE ENGINEER FROM THE STRUCTURES DIVISION, BRIDGE INSPECTION AND REPAIR OFFICE SHALL DESIGNATE FOUR (4) RANDOM LOCATIONS WHERE THE CRACKS HAVE BEEN EPOXY INJECTED FOR THE CONTRACTOR TO CORE. THE ONE (1) INCH DIAMETER CORES WILL BE IMMEDIATELY TURNED OVER TO THE ENGINEER FOR INSPECTION AND TO VERIFY FULL SEALING OF THE CRACKS. COST OF CORING SHALL BE INCLUDED IN ITEM NO. 604-10.62, EPOXY INJECTION REPAIRS (COMPLETE AND IN PLACE), L.F..

COST OF ALL LABOR AND MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE EPOXY INJECTION REPAIRS TO EXISTING CONCRETE CRACKS SHALL BE INCLUDED UNDER ITEM NO. 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F.. ITEM NO. 604-10.62 SHALL BE BID SUCH THAT THIS ITEM MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

ALL EPOXY INJECTION PER BEAM SHALL BE COMPLETED BEFORE STARTING ANY CONCRETE PATCHING FOR DAMAGED AREAS.



**ISOMETRIC VIEW SHOWING EXISTING  
CONCRETE BRIDGE SUBSTRUCTURE**

NOTE: FOR LOCATIONS OF CRACKS REQUIRING REPAIR, REFER TO LAYOUT SHEETS BR-64-18, BR-64-29 AND BR-64-30.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
**BRIDGE REPAIR  
DETAILS**

BRIDGE NO. 75-SR102-9.24  
SR-102 OVER STEWART CREEK (R.L. & L.L.)  
AND  
BRIDGE NO. 75-SR102-9.32  
SR-102 OVER OLD NASHVILLE PK. (R.L. & L.L.)  
AND  
BRIDGE NO. 75-SR102-10.34  
SR-102 OVER SR-1 (R.L. & L.L.)  
AND

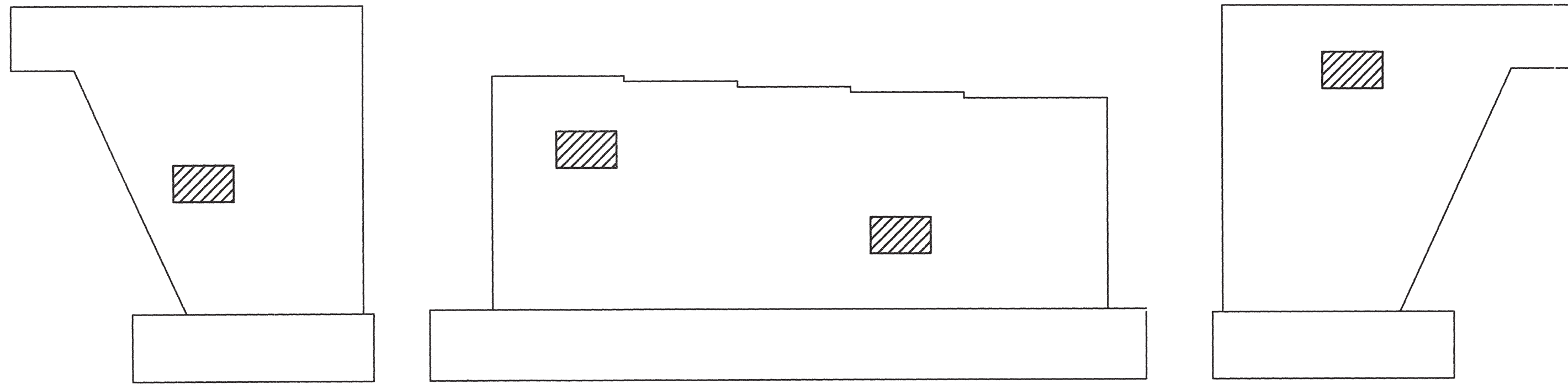
BRIDGE NO. 75-SR102-10.48  
SR-102 OVER SR-1 (RAMP C)  
AND  
BRIDGE NO. 75-SR001-7.29  
~~SR-102 OVER SR-1 (RAMP D)~~

RUTHERFORD COUNTY  
2003

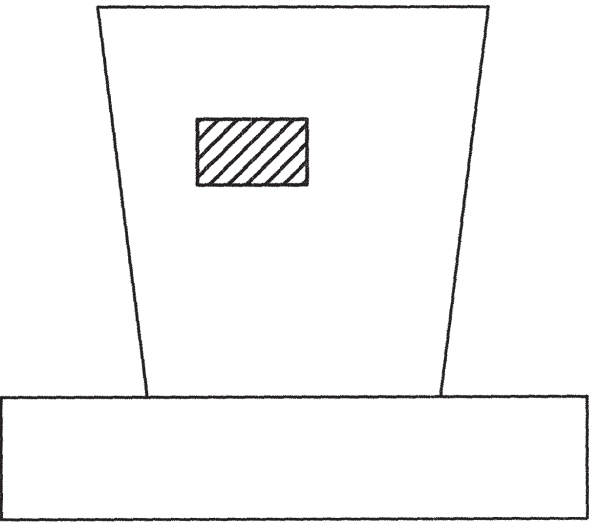
DESIGNED BY JACOB WILLIAMS, P.E. DATE 01-03  
DRAWN BY JIM ROBERTS DATE 01-03  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 01-03  
CHECKED BY JACOB WILLIAMS, P.E. DATE 01-03

PROJECT NO.	YEAR	SHEET NO.
75014-4238-04	2003	

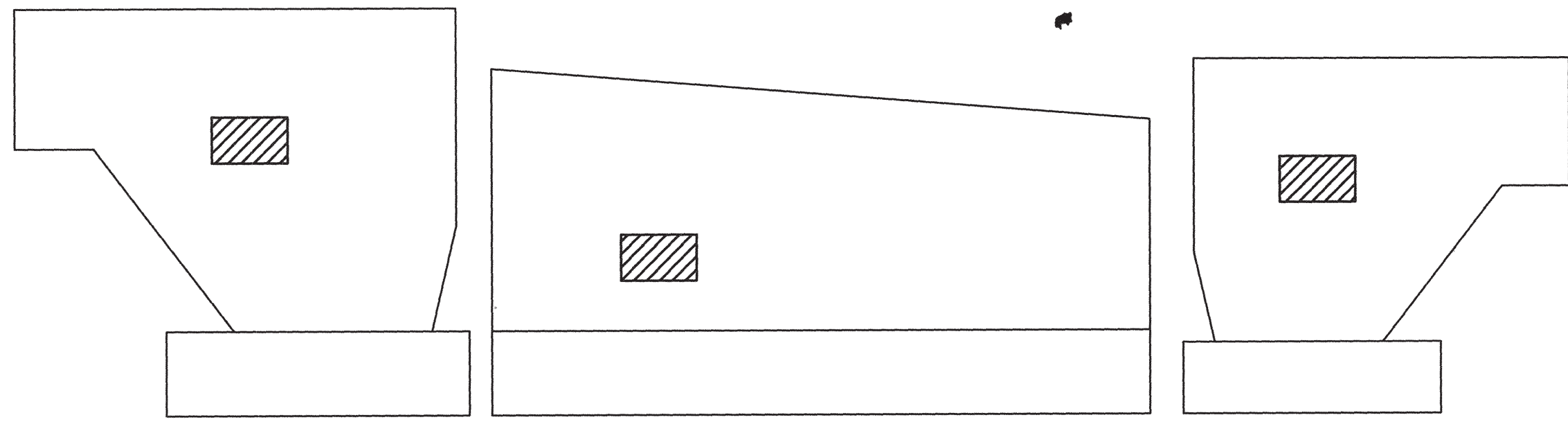
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



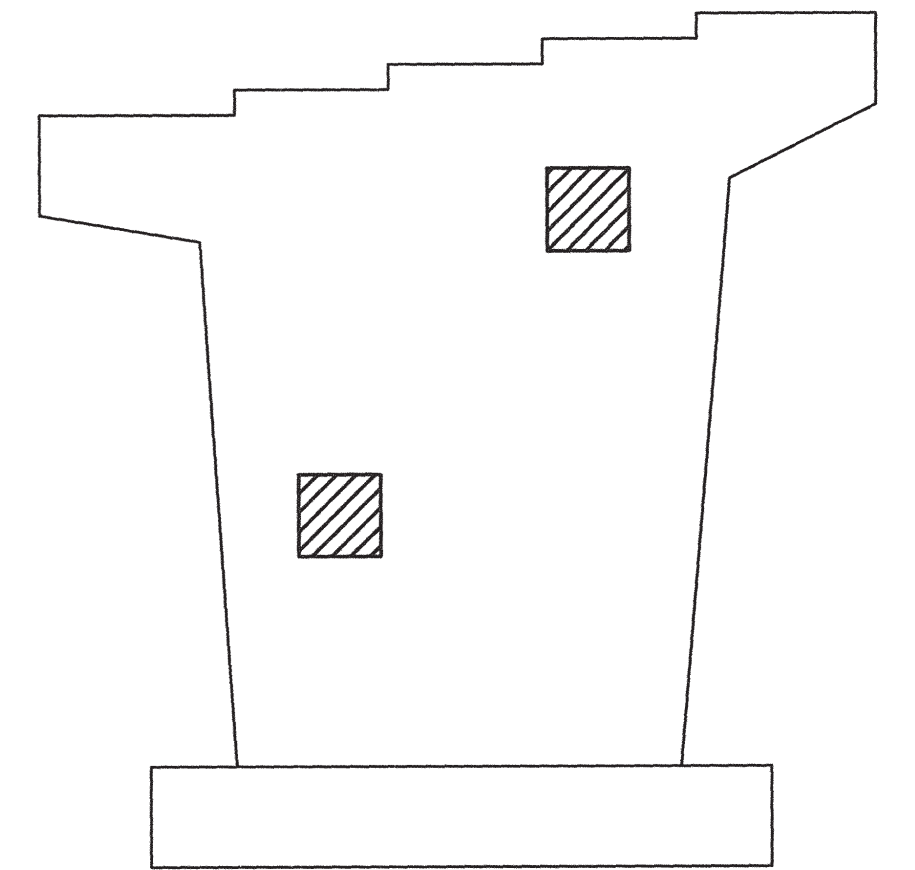
TYPICAL ABUTMENT FOR 75-SR102-9.32



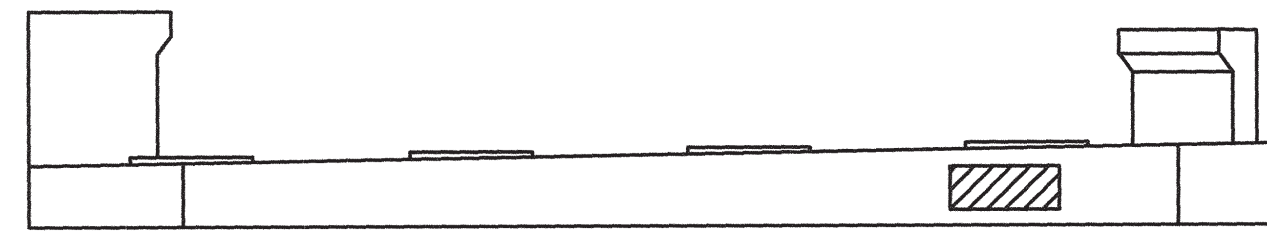
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75-SR102-7.29



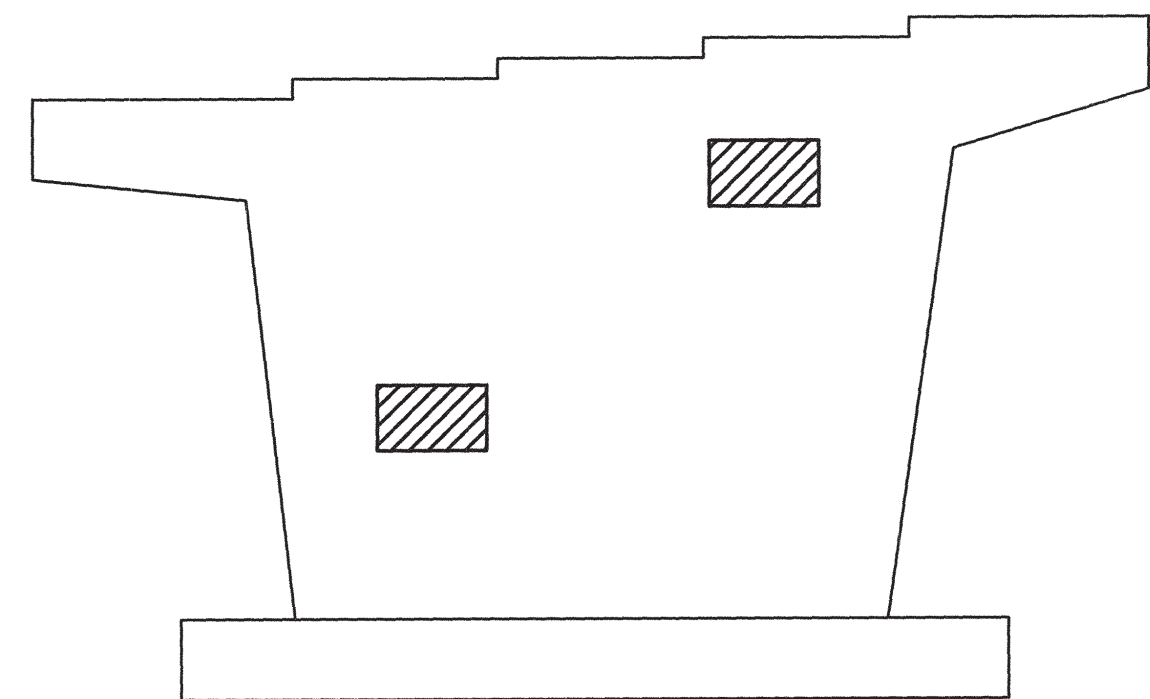
TYPICAL ABUTMENT FOR 75-SR102-7.29



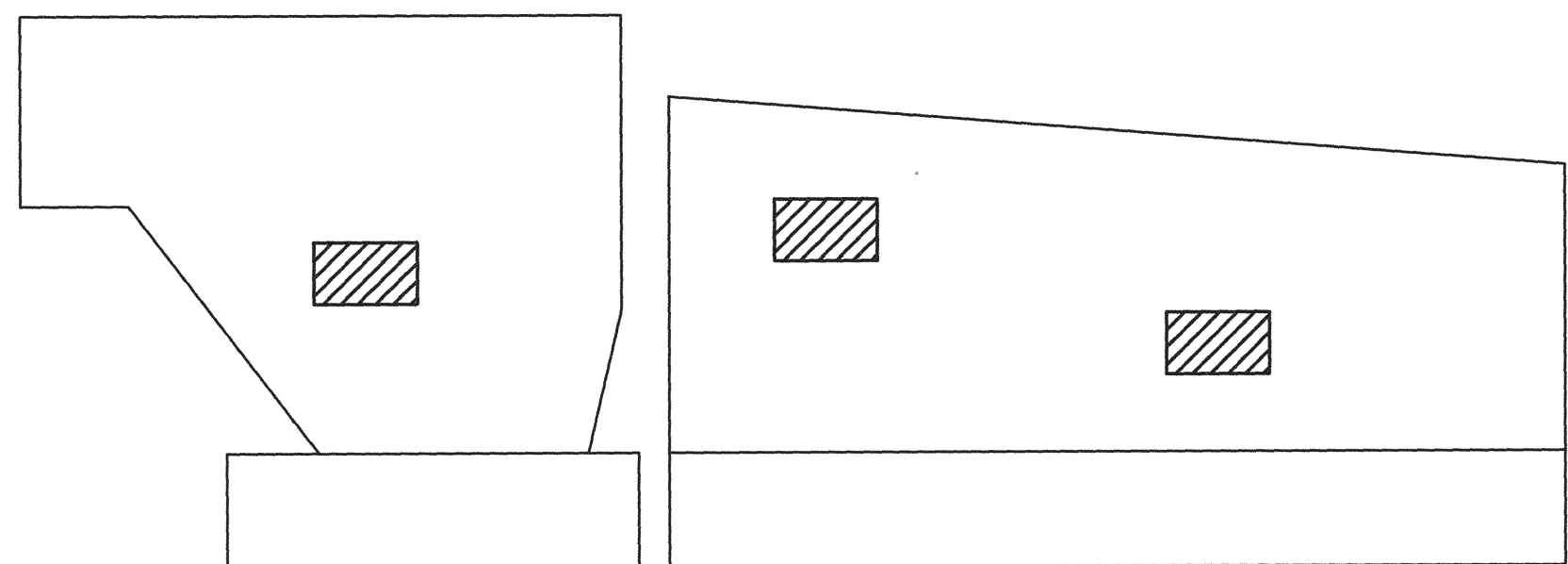
TYPICAL PIER FOR 75-SR102-9.24



TYPICAL ABUTMENT FOR 75-SR102-10.34 & 75-SR102-9.24



TYPICAL BENT FOR 75-SR102-10.34



ABUTMENT NO. 1 FOR 75-SR102-10.48

 SPOT REPAIR LOCATION

BRIDGE NO. 75-SR102-9.24  
 SR-102 OVER STEWART CREEK (R.L. & L.L.)  
 AND  
 BRIDGE NO. 75-SR102-9.32  
 SR-102 OVER OLD NASHVILLE PK. (R.L. & L.L.)  
 AND  
 BRIDGE NO. 75-SR102-10.34  
 SR-102 OVER SR-1 (R.L. & L.L.)  
 AND

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
**SPOT REPAIR  
 LOCATIONS**

BRIDGE NO. 75-SR102-10.48  
 SR-102 OVER SR-1 (RAMP C)  
 AND  
 BRIDGE NO. 75-SR001-7.29  
~~SR-102 OVER SR-1 (RAMP D)~~  
 RUTHERFORD COUNTY  
 2003

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 01-03  
 DRAWN BY SCOTT SCHRIVER, E.I. DATE 01-03  
 SUPERVISED BY JACOB WILLIAMS, P.E. DATE 01-03  
 CHECKED BY JACOB WILLIAMS, P.E. DATE 01-03

**NOTE:**

THE ENGINEER SHALL HAVE THE OPTION OF DESIGNATING A SPALL AREA TO BE REPAIRED UNDER ITEM No. 604-10.05 OR 604-10.54. PATCHING MATERIAL FOR ITEM No. 604-10.05 SHALL BE HIGH EARLY STRENGTH CONCRETE. PATCHING MATERIAL FOR ITEM No. 604-10.54 SHALL BE A POLYMER MODIFIED CEMENTIOUS STRUCTURAL PATCHING MATERIAL. SEE QUALIFIED PRODUCTS LIST 13, SUBLIST (F).

EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.

THE ENGINEER SHALL DESIGNATE ALL SPALLED CONCRETE REPAIR AREAS IN THE FIELD. QUANTITIES GIVEN ARE APPROXIMATE. ITEM No. 604-10.05 AND 604-10.54 SHALL BE BID WITH THE CONTINGENCY THAT IT MAY BE INCREASED, DECREASED, OR ELIMINATED BY THE ENGINEER.

POWER DRIVEN HAND TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

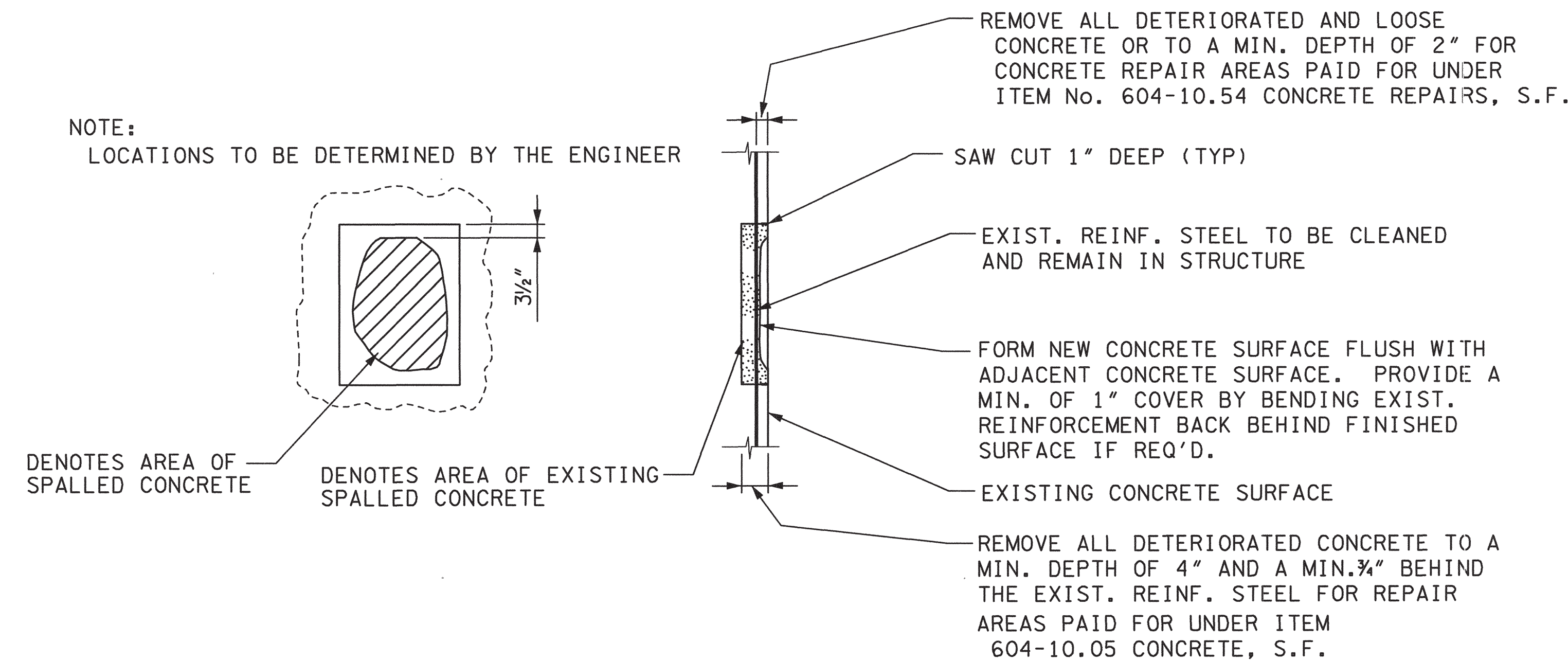
1. PNEUMATIC HAMMERS HEAVIER THAN 35 LB. CLASS SHALL NOT BE USED.
2. CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BEHIND REINFORCING STEEL.

COST OF SAW CUTTING, REMOVING SPALL CONCRETE, CLEANING, PATCHING MATERIAL, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN TO BE INCLUDED IN ITEM No. 604-10.54, CONCRETE REPAIRS, S.F. OR ITEM No. 604-10.05, CONCRETE, S.F.

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QUANTITIES

75-SR102-10.48				75-SR102-10.34								75-SR102-7.29			75-SR102-9.32		75-SR102-9.24			
ITEM NO.	ABUT. NO.1	BENT NO.1	ABUT. NO.2	ABUT. NO.1	BENT NO.1	BENT NO.2	BENT NO.3	BENT NO.4	BENT NO.5	BENT NO.6	ABUT. NO. 2	ABUT. NO.1	BENT NO.1	ABUT. NO.2	BENT NO.1	ABUT. NO.2	ABUT. NO.1	PIER NO.1	PIER NO.2	ABUT. NO.2
604-10.05 (SF)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
604-10.54 (SF)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10



SPALLED CONCRETE REPAIR DETAIL



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
SPOT REPAIR DETAILS

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 01-03  
DRAWN BY SCOTT SCHRIVER, E.I. DATE 01-03  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 01-03  
CHECKED BY JACOB WILLIAMS, P.E. DATE 01-03

BRIDGE NO. 75-SR102-9.24  
SR-102 OVER STEWART CREEK (R.L. & L.L.)  
AND  
BRIDGE NO. 75-SR102-9.32  
SR-102 OVER OLD NASHVILLE PK. (R.L. & L.L.)  
AND  
BRIDGE NO. 75-SR102-10.34  
SR-102 OVER SR-1 (R.L. & L.L.)  
AND

BRIDGE NO. 75-SR102-10.48  
SR-102 OVER SR-1 (RAMP C)  
AND  
BRIDGE NO. 75-SR001-7.29  
~~SR-102 OVER SR-1 (RAMP D)~~  
RUTHERFORD COUNTY  
2003

**BILL OF STEEL (75-SR102-9.24 R.L. & L.L.)**

BAR	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS				LENGTH
				A	B	C	D	
A400E	P.@B.E. LEDGE	4	168	1'-3"				1'-3"
A401E	P.@B.E. LEDGE	4	4	43'-0"				43'-0"
A521E	HEADER	5	20	43'-0"				43'-0"
L550E	HEADER	5	144	2'-3"	1'-3"	1'-9"		9'-3"

**BILL OF STEEL (75-SR102-9.32 R.L. & L.L.)**

BAR	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS				LENGTH
				A	B	C	D	
A502E	COUPLER BAR	5	28	3'-0"				3'-0"
A511E	DECK	5	28	17'-8"				17'-8"
A530E	DECK	5	144	2'-10"				2'-10"

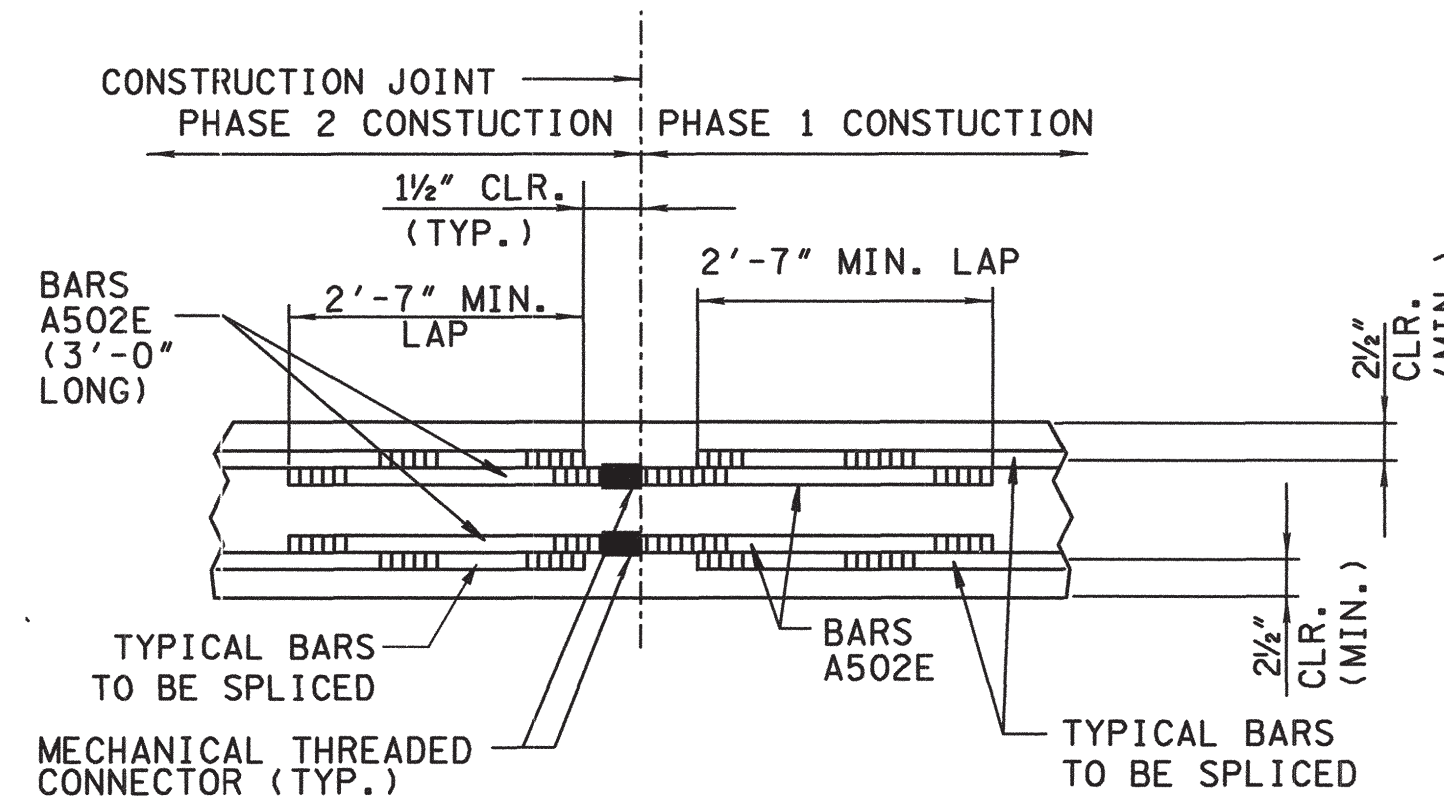
**BILL OF STEEL (75-SR102-10.34 R.L. & L.L.)**

BAR	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS				LENGTH
				A	B	C	D	
A400E	P.@B.E. LEDGE	4	141	1'-3"				1'-3"
A403E	P.@B.E. LEDGE	4	1	40'-4"				40'-4"
A404E	P.@B.E. LEDGE	4	2	52'-0"				52'-0"
A523E	HEADER	5	5	40'-4"				43'-0"
A524E	HEADER	5	10	52'-6"				52'-6"
L550E	HEADER	5	128	2'-3"	1'-3"	1'-9"		9'-3"

**BILL OF STEEL (75-SR102-10.48)**

BAR	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS				LENGTH
				A	B	C	D	
A450E	PAVE. @ BRG. END	4	50	30'-0"				30'-0"
A451E	PAVE. @ BRG. END	4	30	25'-0"				25'-0"
A595E	ROADWAY BRKT	5	2	32'-0"				32'-0"
C570E	ROADWAY BRKT	5	66	2'-5"	7"			3'-0"
A540E	HEADER	5	3	29'-9"				29'-9"
L540E	HEADER	5	29	2'-3"	1'-9"	2'-2"		10'-7"

NOTE: QUANTITY OF STEEL REQUIRED FOR PARAPET REPAIRS FOR BRIDGE NOS. 75-SR102-10.48 & 75-SR001-7.29 SHALL BE INCLUDED IN ITEM NO. 604-10.22.



CONSTRUCTION JOINT DETAIL "A"

NOTES:

THE COST OF MECHANICAL THREADED CONNECTORS AND THE COST OF THREADING THE COUPLER BARS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 604-10.18 REINFORCING STEEL (REPAIRS), LBS.

MECHANICAL COUPLERS ARE REQUIRED WHERE PHASED CONSTRUCTION DOES NOT PERMIT CONTINUOUS CONSTRUCTION OF PAVEMENTS AT BRIDGE ENDS, ROADWAY BRACKETS CONCRETE HEADERS OR NEW DECK SECTIONS.

THE NUMBER OF #5 BAR MECHANICAL COUPLERS REQUIRED FOR BRIDGE NO. 75-SR102-9.32 IS 14.

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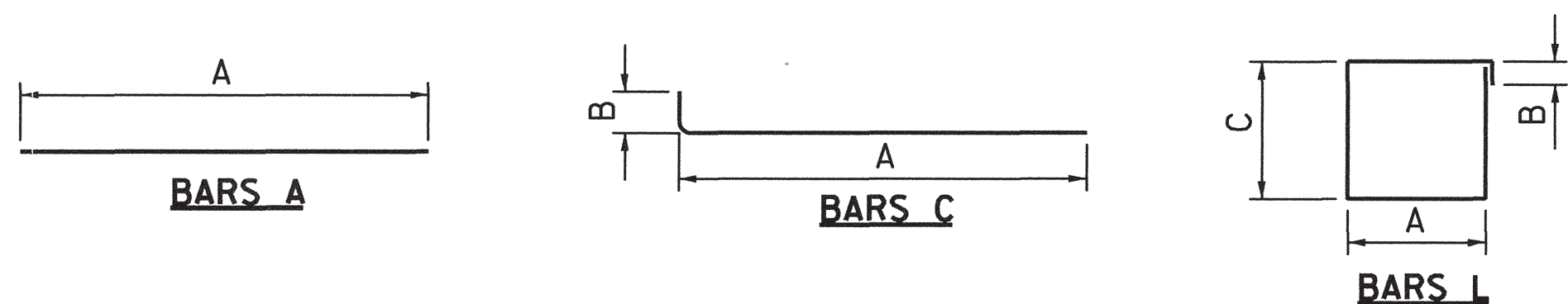


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

**BILL OF STEEL**

BRIDGE NO. 75-SR102-9.24  
SR-102 OVER STEWART CREEK (R.L. & L.L.)  
AND  
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AND

BRIDGE NO. 75-SR102-10.48  
SR-102 OVER SR-1 (RAMP C)  
AND  
BRIDGE NO. 75-SR001-7.29  
~~SR-102 OVER SR-1 (RAMP D)~~  
RUTHERFORD COUNTY  
2003



DESIGNED BY JACOB WILLIAMS, P.E. DATE 01-03  
DRAWN BY BEN BYARS, E.I. DATE 01-03  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 01-03  
CHECKED BY JACOB WILLIAMS, P.E. DATE 01-03