

UPDATE DATE 8/17/84  
 LETTING DATE

PLANS PREPARED BY LYNCH MAINTENANCE DESIGN SECTION  
 DATE 8-14-85

DESIGNED BY LTB  
 CHECKED BY SGT  
 DATE 7/82

DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

CHRISTIAN COUNTY  
 HOPKINSVILLE-CLARKSVILLE ROAD  
 BRIDGE OVER SOUTH FORK OF LITTLE RIVER

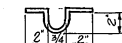
REFERENCE AND ESTIMATE OF QUANTITIES

| ITEM                     | SHEET NO. | CONCRETE CU. YDS. |             | REINF. STEEL LBS. | JOINT SEALING LIN. FT. | P.C.I.B. TYPE II LIN. FT. | REMOVE CONCRETE MASONRY CU. YDS. | STRUCTURAL STEEL ① | MACHINE PREPARATION OF EX. DECKS (SQ. YDS.) | CONCRETE OVERLAY              |                                    | STRUCTURE EXCAVATION (CU. YDS.) |           | BLAST CLEANING (SQ. YDS.) | EPOXY SAND SLURRY SQ. YDS. |
|--------------------------|-----------|-------------------|-------------|-------------------|------------------------|---------------------------|----------------------------------|--------------------|---------------------------------------------|-------------------------------|------------------------------------|---------------------------------|-----------|---------------------------|----------------------------|
|                          |           | CLASS "A"         | CLASS "AA"  |                   |                        |                           |                                  |                    |                                             | ALT. A LATEX CONC. (CU. YDS.) | ALT. B PORT. CEM. CONC. (CU. YDS.) | COMMON                          | SLD. ROCK |                           |                            |
| QUANTITIES & TITLE       | 1         |                   |             |                   |                        |                           |                                  |                    |                                             |                               |                                    |                                 |           |                           |                            |
| NOTES                    | 2+3       |                   |             |                   |                        |                           |                                  |                    |                                             |                               |                                    |                                 |           |                           |                            |
| LAYOUT                   | 4         |                   |             |                   |                        |                           |                                  |                    |                                             |                               |                                    |                                 |           |                           |                            |
| ABUTMENT 1               | 5         | 2.1 (2.3)         |             | 363               |                        |                           | 7                                |                    |                                             |                               | 10                                 |                                 |           |                           |                            |
| PIER 1                   | 6         | 36.7 (39.7)       |             | 4162              |                        |                           | 2                                |                    |                                             |                               | 26                                 | 4                               |           |                           |                            |
| PIER 2                   | 6         | 37.6 (40.6)       |             | 4227              |                        |                           | 2                                |                    |                                             |                               | 30                                 | 4                               |           |                           |                            |
| ABUTMENT 2               | 5         | 2.1 (2.3)         | 86.7        | 363               |                        |                           | 7                                |                    |                                             |                               | 10                                 |                                 |           |                           |                            |
| SUPERSTRUCTURE           | 7-10      |                   | 86.7 (92.3) | 12241             | (117) 114              |                           | 438.8                            | 47                 |                                             |                               |                                    |                                 |           |                           | 62                         |
|                          |           |                   | 86.7 (92.3) | 12241             | (117) 114              |                           | 438.8                            | 47                 | 722                                         | 36.0 (36.9)                   | 48.2 (49.3)                        |                                 |           | 937 (957)                 | 62                         |
| SUPERSTRUCTURE SUBTOTALS |           |                   | 86.7 (92.3) | 12241             | (117) 114              |                           | 438.8                            | 47                 | 722                                         | 36.0 (36.9)                   | 48.2 (49.3)                        | 76                              | 8         | 937 (957)                 | 62                         |
| SUBSTRUCTURE SUBTOTALS   |           | 78.8 (84.9)       |             | 9115              |                        |                           |                                  |                    |                                             | 36.0 (36.9)                   | 48.2 (49.3)                        | 76                              | 8         | 937 (957)                 | 62                         |
| TOTALS                   |           | 78.8 (84.9)       | 86.7 (92.3) | 21356             | (117) 114              |                           | 438.8                            | 65                 | 722                                         | 36.0 (36.9)                   | 48.2 (49.3)                        | 76                              | 8         | 937 (957)                 | 62                         |

① Estimated Weight of Structural Steel = 1197 lbs.

BILL OF INCIDENTAL MATERIALS

| ITEM                           | NO. | SIZE AND LOCATION                       |
|--------------------------------|-----|-----------------------------------------|
| Preformed Cork Exp. St. Mat'l. | 2   | 1" x 1'-6" x 1'-10", Abutments          |
| " " " " "                      | 2   | 1" x 1'-6" x 25'-0", "                  |
| " " " " "                      | 1   | 1" x 1'-0" x 34'-0", Piers Between Col. |
| " " " " "                      | 2   | 1" x 3'-4" x 3'-0", Piers Between Caps  |
| " " " " "                      | 2   | 3/4" x 3'-6" x 25'-5", Slab Jt. @ Piers |
| " " " " "                      | 2   | 1" x 1'-6" x 4'-6", End Diaphragms      |
| Copper Strip                   | 2   | 13'-9", Slab Jt. @ Piers                |
| " " " " "                      | 2   | 11'-3", " " " "                         |



SECTION THRU COPPER STRIP

STANDARD DRAWINGS

BJJ-004-04 PREFORMED CORK

SPECIAL NOTES

FOR NON-SHRINK GROUT

BRIDGE OVER SOUTH FORK OF LITTLE RIVER SHEET 1 OF 11

COMMONWEALTH OF KENTUCKY  
 BUREAU OF HIGHWAYS  
 FRANKFORT  
 COUNTY OF  
 CHRISTIAN  
 HOPKINSVILLE-CLARKSVILLE  
 ROAD P.E. PROJECT NO. 024 0380 000-001D  
 STATION 118 +00  
 CONSTRUCTION PROJECT NO. M7203 (4)  
 MAINTENANCE PROJECT NO.  
 DRAWING NO. 20165

WIDENING PLANS

## GENERAL NOTE

UPDATE DATE  
LETTING DATE

### SPECIFICATIONS

THE KENTUCKY BUREAU OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION SHALL APPLY TO THIS PROJECT.

### DESIGN LOAD

THIS BRIDGE IS DESIGNED FOR HS20-44 LIVE LOAD, AS SPECIFIED IN 1977 AASHTO SPECIFICATIONS. THIS BRIDGE IS DESIGNED FOR A WIND LOAD BASED ON A WIND VELOCITY OF 84 MPH.

### DESIGN METHOD

ALL REINFORCED CONCRETE MEMBERS ARE DESIGNED BY THE LOAD FACTOR METHOD AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS

### FOUNDATION PRESSURE

FOOTINGS ARE DESIGNED FOR A MAXIMUM PRESSURE OF 6000 PSF.

### CONCRETE

CLASS "AA" CONCRETE IS TO BE USED IN THE SUPERSTRUCTURE EXCEPT IN THE OVERLAY. CLASS "A" CONCRETE IS TO BE USED IN THE SUBSTRUCTURE.

### REINFORCEMENT

DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE CLEAR DISTANCES UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS.

### BEVELED EDGES

ALL EXPOSED EDGES SHALL BE BEVELED 7/8" UNLESS OTHERWISE SHOWN.

### BILL OF INCIDENTAL MATERIAL

THE QUANTITIES SHOWN IN THE BILL OF INCIDENTAL MATERIALS ARE APPROXIMATE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ENOUGH MATERIAL TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE COST OF THESE ITEMS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "AA" CONCRETE.

### SUPERSTRUCTURE SLAB

THE SUPERSTRUCTURE SLAB SHALL BE POURED CONTINUOUSLY FROM OUT TO OUT OF JOINTS BEFORE THE CONCRETE IS ALLOWED TO SET.

### PLAN ELEVATION FOR FOOTINGS

WHEN SUITABLE ROCK IS ENCOUNTERED AT A DATUM ELEVATION HIGHER THAN THE PLAN ELEVATION, THE HIGHER ELEVATION MAY BE UTILIZED FOR BEARING AS OUTLINED IN THE SPECIFICATIONS.

### DRILLING HOLES IN CONCRETE

DRILLED HOLES IN EXISTING CONCRETE, FOR STEEL REINFORCEMENT SHALL BE 1 1/8" HOLES. HOLES SHALL BE DRILLED WITH ROTARY EQUIPMENT. THE COST OF DRILLING HOLES IS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "A" CONCRETE.

### BONDING NEW CONCRETE TO OLD CONCRETE

NEW CONCRETE SHALL BE BONDED TO OLD CONCRETE AS SHOWN ON PLANS WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTION 833 OF THE SPECIFICATIONS. THE COST OF THIS WORK, INCLUDING ALL LABOR, TOOLS AND MATERIALS, IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR CLASS "AA" CONCRETE.

### GROUT

GROUT FOR USE IN GROUTING STEEL REINFORCEMENT INTO THE EXISTING CONCRETE SHALL BE OF THE NONSHRINKING TYPE, IN ACCORDANCE WITH THE SPECIAL NOTE FOR NON SHRINK GROUT.

### DAMAGE TO THE STRUCTURE

THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE STRUCTURE DURING RECONSTRUCTION, EVEN TO THE REPLACEMENT OF THE ENTIRE STRUCTURE AND REMOVAL OF THE FALLEN STRUCTURE AT HIS EXPENSE, SHOULD IT BE ALLOWED TO FALL DUE TO HIS ACTIONS.

### EXISTING REINFORCING STEEL

THE COST OF CUTTING, BENDING, AND CLEANING EXISTING REINFORCING STEEL IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR REMOVE CONCRETE MASONRY.

### TRAFFIC

SEE THE ROAD PLANS FOR ALL TRAFFIC NOTES.

### DRAIN DETAILS

FOUNDRY NOTE - ALL DRAINS SHALL BE GRAY IRON CASTINGS, ASTM A48, CURRENT EDITION, CLASS 30A. REPORT OF FIELD INSPECTION OF CASTINGS, CURRENT FORM, SHALL BE SUBMITTED TO THE DIVISION OF MATERIALS. THE COST OF FURNISHING AND PLACING DRAINS SHALL BE INCLUDED IN THE LUMP SUM BID FOR STRUCTURAL STEEL. DRAINS SHALL BE PAINTED IN ACCORDANCE WITH SECTION 607.25 OF THE SPECIFICATIONS.

### SURFACE FINISH OF CLASS "AA" CONCRETE IN THE BRIDGE DECK

THE DECK OF THIS STRUCTURE IS TO RECEIVE AN OVERLAY, THEREFORE, THE BURLAP DRAG FINISH SPECIFIED BY SECTION 609.12 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1979 EDITION, IS ELIMINATED, NOR WILL ANY SURFACE TEXTURING BEYOND 10 FT. STRAIGHTEDGE SECTION 609.11 BE REQUIRED. THE CONTRACTOR IS CAUTIONED THAT THE PROPOSED DECK OVERLAYS ARE VERY SENSITIVE TO OILS, PAINTS, GREASE, WAXES AND SIMILAR SUBSTANCES AND IF THESE SUBSTANCES ARE DEPOSITED IN THE DECK, HE WILL BE RESPONSIBLE FOR THEIR COMPLETE REMOVAL WHICH MAY INCLUDE REMOVAL AND REPLACEMENT OF THE AFFECTED CONCRETE TO THE DEPTH THE SUBSTANCES HAVE PENETRATED. ANY EXPENSE OF THIS REMOVAL WILL BE BORNE BY THE CONTRACTOR.

### STEEL REINFORCEMENT COVER

NEW SLAB STEEL REINFORCEMENT COVER WILL BE CHECKED IN ACCORDANCE WITH KM64-313 AND PENALTIES IN ACCORDANCE WITH SECTION 609.18 OF THE SPECIFICATIONS WILL APPLY IF APPROPRIATE.

### CURING OF CLASS "AA" CONCRETE IN THE BRIDGE DECK

THE DECK OF THIS STRUCTURE IS TO RECEIVE AN OVERLAY, THEREFORE, MEMBRANE CURING AS SPECIFIED IN SECTION 609.15 IS NOT TO BE APPLIED TO THE BRIDGE DECK. THE CONCRETE DECK, INCLUDING PORTIONS OF THE CURBS, AND/OR BARRIER WALLS DESIGNATED, MUST BE WET CURED IN CONFORMITY WITH SUB-SECTION 601.25A OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1988 EDITION, WITH THE FOLLOWING REQUIREMENTS:

1. NO CURING COMPOUND, STYRENE BUTADIENE, LINSEED OIL, MASONRY COATING, FORM OIL OR SIMILAR SUBSTANCES WILL BE PERMITTED ON THE CLASS "AA" CONCRETE DECK SURFACE NOR FOR 6" VERTICALLY ABOVE THE CLASS "AA" CONCRETE GUTTER LINE OF THE INTERIOR FACES OF BARRIER CURBS.
2. AS SOON AFTER FINAL FINISH OF THE CONCRETE AS POSSIBLE, ONE THICKNESS OF PRE-WETTED BURLAP MUST BE APPLIED AND KEPT MOIST BY A FOG SPRAY APPLICATION OF WATER. THIS ONE THICKNESS OF BURLAP MUST BE FOLLOWED, AS SOON AS POSSIBLE, WITHOUT DAMAGING THE SURFACE OF THE CONCRETE, WITH AN ADDITIONAL LAYER OF WET BURLAP, COTTON MATS, ETC.
3. THE REQUIRED INITIAL LAYER OF BURLAP SHALL BE PRE-WETTED BY COMPLETE SATURATION WITH WATER EXCEPT THAT IT SHALL BE SQUEEZED FREE OF EXCESS WATER THAT WILL DAMAGE THE CONCRETE SURFACE BY DRIPPING. THE PRE-WETTED BURLAP MUST BE APPLIED FROM WORK BRIDGES AND WALKWAYS IN A MANNER THAT WILL PRECLUDE WORKMEN OR TOOLS DAMAGING THE FRESH CONCRETE SURFACE. THE PRE-WETTED BURLAP MUST BE APPLIED IN A MANNER THAT WILL PREVENT IT FROM BEING DRAGGED, UNTANGLED, OR UNROLLED ON THE FRESH CONCRETE SURFACE AND DAMAGING IT.

### CONCRETE OVERLAYS

THE EXISTING PORTION OF THE BRIDGE DECK SHALL BE RESTORED AND THE ENTIRE BRIDGE DECK SHALL BE OVERLAYED WITH EITHER A LATEX CONCRETE OVERLAY OR A PORTLAND CEMENT CONCRETE OVERLAY IN ACCORDANCE WITH SECTION 741 OF THE SPECIFICATIONS WITH THE FOLLOWING EXCEPTIONS:

1. MACHINE PREPARATION OF THE NEW CONCRETE SLAB WILL NOT BE REQUIRED, HOWEVER, BLAST CLEANING WILL BE REQUIRED. IF TRAFFIC IS PERMITTED ON THE NEW CONCRETE PRIOR TO PLACING THE OVERLAY, THEN THE MACHINE PREPARATION AND BLAST CLEANING WILL BE REQUIRED.
2. THE THICKNESS OF THE OVERLAY SHALL BE AS SHOWN ON THE PLANS.
3. TEXTURING OF THE OVERLAY SURFACE IN ACCORDANCE WITH SECTION 609.13 OF THE SPECIFICATIONS WILL BE REQUIRED.

### TEMPORARY SUPPORTS

TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING "TOP OF BEAM" ELEVATIONS.

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 TRACED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 REVISED \_\_\_\_\_ DATE \_\_\_\_\_  
 REVISED \_\_\_\_\_ DATE \_\_\_\_\_  
 REVISED \_\_\_\_\_ DATE \_\_\_\_\_  
 LIG. C.B.

GENERAL NOTE

|                                                                                                                                         |                                       |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------|
| BRIDGE OVER SOUTH FORK OF LITTLE R.                                                                                                     |                                       | SHEET 2                     |
| <b>COMMONWEALTH OF KENTUCKY</b><br>BUREAU OF HIGHWAYS<br>FRANKFORT<br>COUNTY OF<br><b>CHRISTIAN</b><br>HOPKINSVILLE-CLARKSVILLE<br>ROAD |                                       |                             |
| STATION 118+00                                                                                                                          | P.E. PROJECT NO. FSP 024 0380 000-001 |                             |
| CONSTRUCTION PROJECT NO.                                                                                                                | MAINTENANCE PROJECT NO.               | DRAWING NO.<br><b>20165</b> |

## GENERAL NOTE

### MATERIALS DESIGN SPECIFICATIONS

FOR CLASS "A" REINFORCED CONCRETE  
F'C = 3500 PSI

FOR CLASS "AA" REINFORCED CONCRETE  
F'C = 4000 PSI

FOR STEEL REINFORCEMENT  
FY = 60000 PSI

FOR PRESTRESSED GIRDER CONCRETE  
F'C = 5000 PSI  
F'S = 270000 PSI

### PRESTRESSING REINFORCEMENT

PRESTRESSED REINFORCEMENT SHALL BE 1/2" NOMINAL DIAMETER UNCOATED SEVEN-WIRE STRESS-RELIEVED STRAND CONFORMING TO THE REQUIREMENTS OF GRADE 270, AASHTO DESIGNATION, M203, CURRENT EDITION.

### TENSIONING METHOD

BEAMS SHALL BE PRETENSIONED.

### CONSTRUCTION METHOD

NO BOND STRESS SHALL BE TRANSFERRED TO THE CONCRETE, NOR SHALL END ANCHORS BE RELEASED, UNTIL THE CONCRETE HAS ATTAINED A COMPRESSIVE STRENGTH AS SHOWN BY STANDARD CYLINDERS MADE AND CURED IDENTICALLY WITH THE GIRDERS, OF AT LEAST A MINIMUM STRENGTH OF 4,000 PSI, CYLINDER STRENGTH SHALL BE 5,000 PSI BEFORE BRIDGE IS OPEN TO TRAFFIC. AN INITIAL FORCE SHALL BE APPLIED TO EACH STRAND SUCH AS TO DEVELOP A STRESS OF 189,000 PSI. BEAMS WITH HONEYCOMB OF SUCH EXTENT AS TO AFFECT THE STRENGTH OR RESISTANCE TO DETERIORATION WILL NOT BE ACCEPTED. AN ALLOWANCE OF .0005L SHALL BE MADE FOR SHORTENING OF BEAMS DUE TO SHRINKAGE AND ELASTIC CHANGE.

### SHOP PLANS

SHOP PLANS SHALL BE IN ACCORDANCE WITH SUB-SECTION 605.05 PART A OF THE SPECIFICATIONS.

### ELASTOMERIC BEARING PADS

THE MATERIAL SPECIFICATIONS FOR ELASTOMERIC BEARING PADS SHALL CONFORM TO THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES EXCEPT THAT THE REQUIREMENT OF THE LOW TEMPERATURE TEST IS WAIVED AND A DUROMETER HARDNESS OF 50 OR 60 IS REQUIRED. THE COST OF THIS ITEM IS TO BE INCLUDED IN THE PRICE PER LINEAR FOOT FOR PRECAST BEAMS.

### PAYMENT FOR PRECAST CONCRETE BEAMS

THE BASIS OF PAYMENT FOR THE PRESTRESSED CONCRETE BEAMS SHALL BE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF BEAM, IN ACCORDANCE WITH THE SPECIFICATIONS.

### DEFORMED WIRE FABRIC

DEFORMED WIRE FABRIC MAY BE USED IN THE PRECAST BEAMS IN LIEU OF REINFORCING BARS, PROVIDED AN EQUIVALENT AREA OF STEEL IS FURNISHED. WIRE FABRIC IS TO BE DEFORMED WIRE MESH MADE OF COLD DRAWN WIRE CONFORMING TO ASTM SPECIFICATION A82, CURRENT EDITION.

### CONSTRUCTION JOINTS

NO CONSTRUCTION JOINTS WILL BE ALLOWED IN THE FOOTINGS. CONSTRUCTION JOINTS MAY BE MADE IN WALLS OUTSIDE BAR SPLICES, WHERE APPROVED BY THE ENGINEER. ALL JOINTS SHALL BE KEYED AND SHALL BE HORIZONTAL FULL LENGTH OF WALLS.

### PRESTRESSING REINFORCEMENT

STABILIZED STRAND (1/2" NOMINAL DIA. 270 GRADE UNCOATED SEVEN-WIRE STRAND IN ACCORDANCE WITH ASTM A416) MAY BE USED IN THE PRESTRESSED CONCRETE BEAMS INSTEAD OF THE 270 GRADE STRESS-RELIEVED STRAND SPECIFIED FOR THIS PROJECT. HOWEVER, IF THE STABILIZED STRAND ALTERNATE IS CHOSEN, THE PRESTRESSED BEAMS MUST BE REDESIGNED AT THE CONTRACTOR'S EXPENSE. DESIGN CALCULATIONS SHALL BE SUBMITTED TO THE DIRECTOR, DIVISION OF BRIDGES FOR REVIEW. COST OF THE PRESTRESSING STRAND IS INCLUDED IN THE COST OF THE PRESTRESSED BEAM.

UPDATE DATE  
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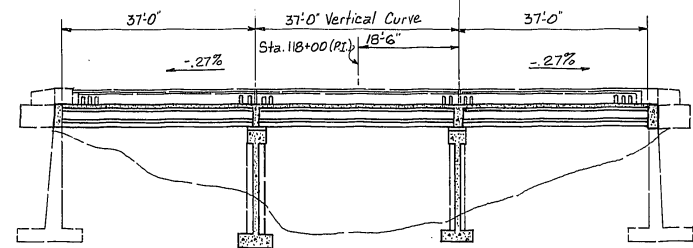
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DATE

|                                                                                                                           |                                       |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| BRIDGE OVER SOUTH FORK OF LITTLE R. SHEET 3                                                                               |                                       |
| COMMONWEALTH OF KENTUCKY<br>BUREAU OF HIGHWAYS<br>FRANKFORT<br>COUNTY OF<br>CHRISTIAN<br>HOPKINSVILLE-CLARKSVILLE<br>ROAD |                                       |
| STATION 118+00                                                                                                            | P.E. PROJECT NO. FSP 024 0380 000-001 |
| CONSTRUCTION PROJECT NO.                                                                                                  | DRAWING NO.<br>20165                  |

GENERAL NOTE

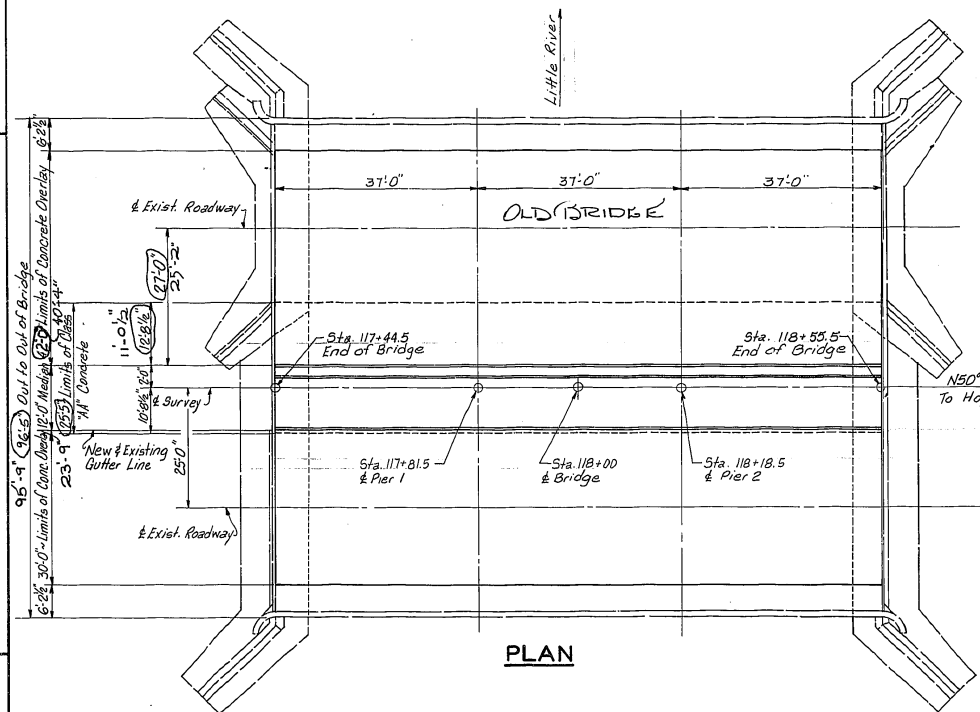
UPDATE DATE  
LETTING DATE

To: Clarksville, Tenn. To: Hopkinsville



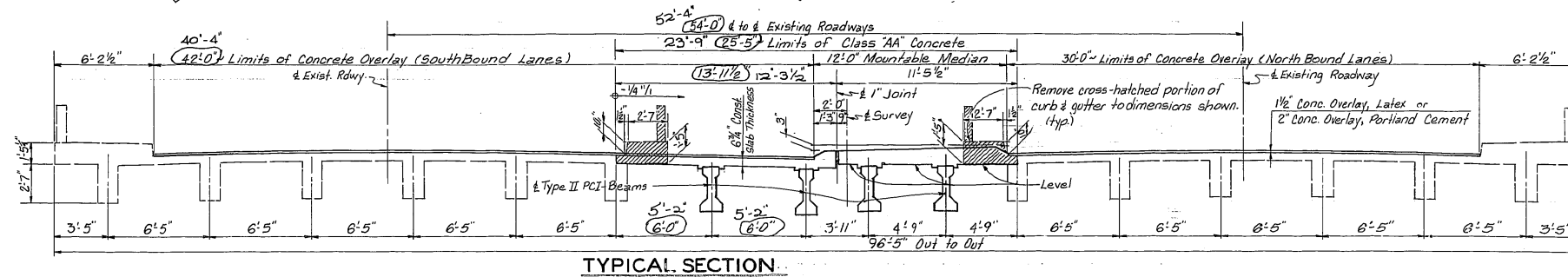
SECTIONAL ELEVATION-- ON CL OF ROADWAY

S.B. Bridge - Exist: 3~34'-0" R.C.D.B., 30'-0" Roadway  
 New: 3~37'-0" PCI B, 42'-0" Roadway, 0° Skew, 2:1 Slopes, HS20-44 Live Load  
 N.B. Bridge - Exist & New: 3~34'-0" R.C.D.B., 30'-0" Roadway  
 40'-4"



PLAN

Note: Slab construction elevations will be established in the field by the project engineer, based on existing slab elevations. Dead load deflection of beams due to slab weight may be neglected.



TYPICAL SECTION

LAYOUT

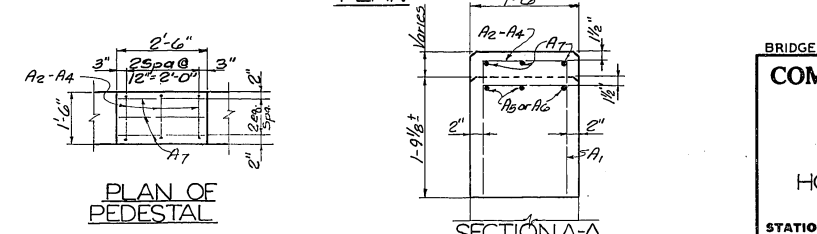
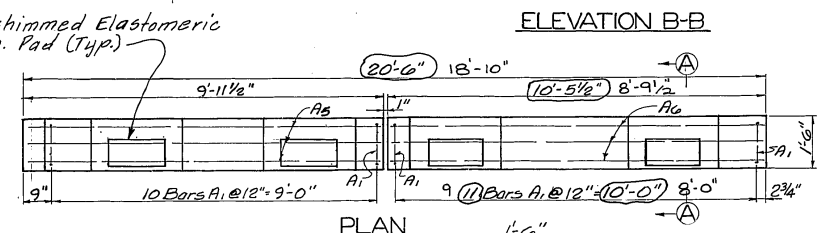
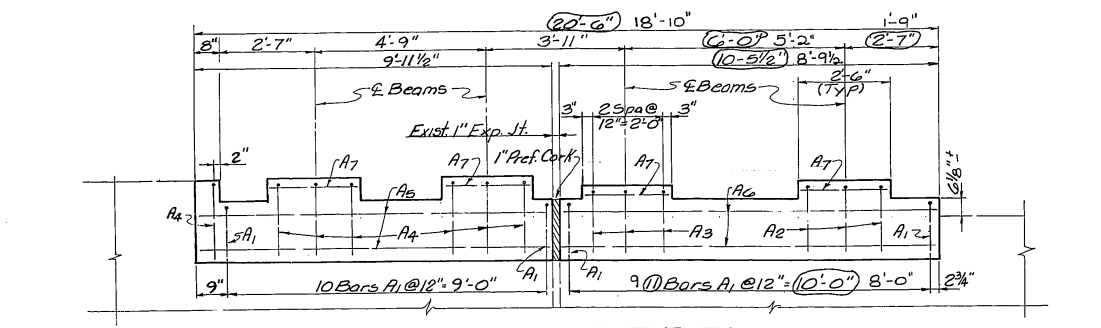
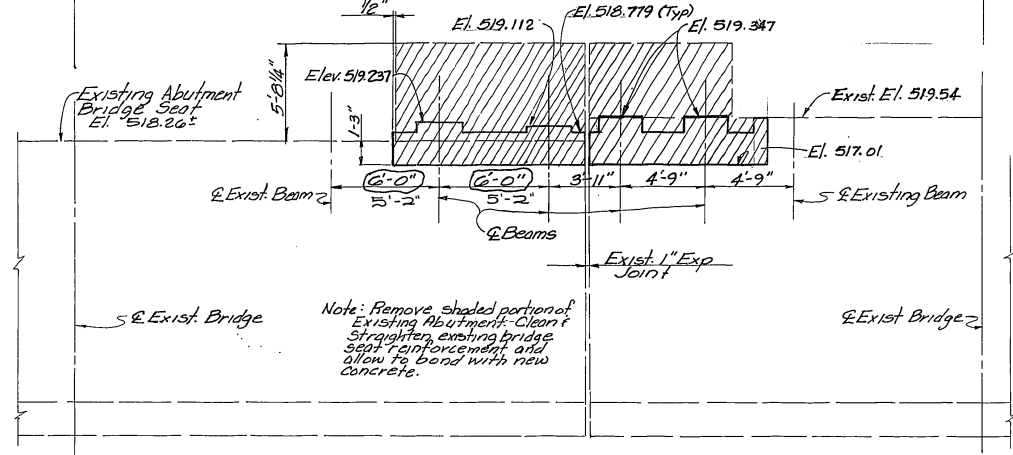
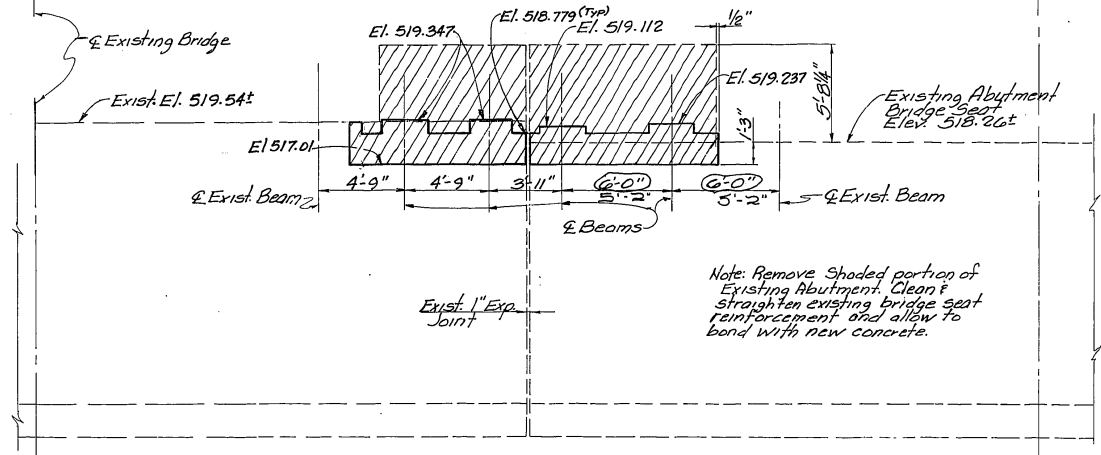
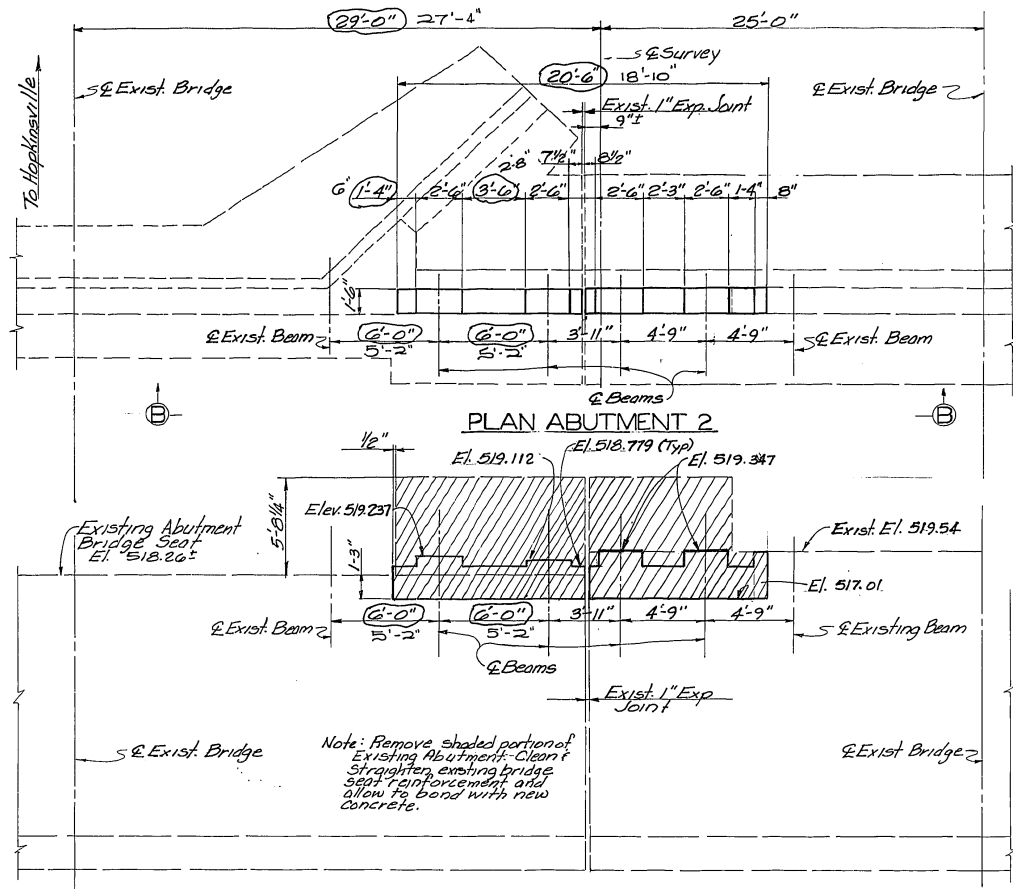
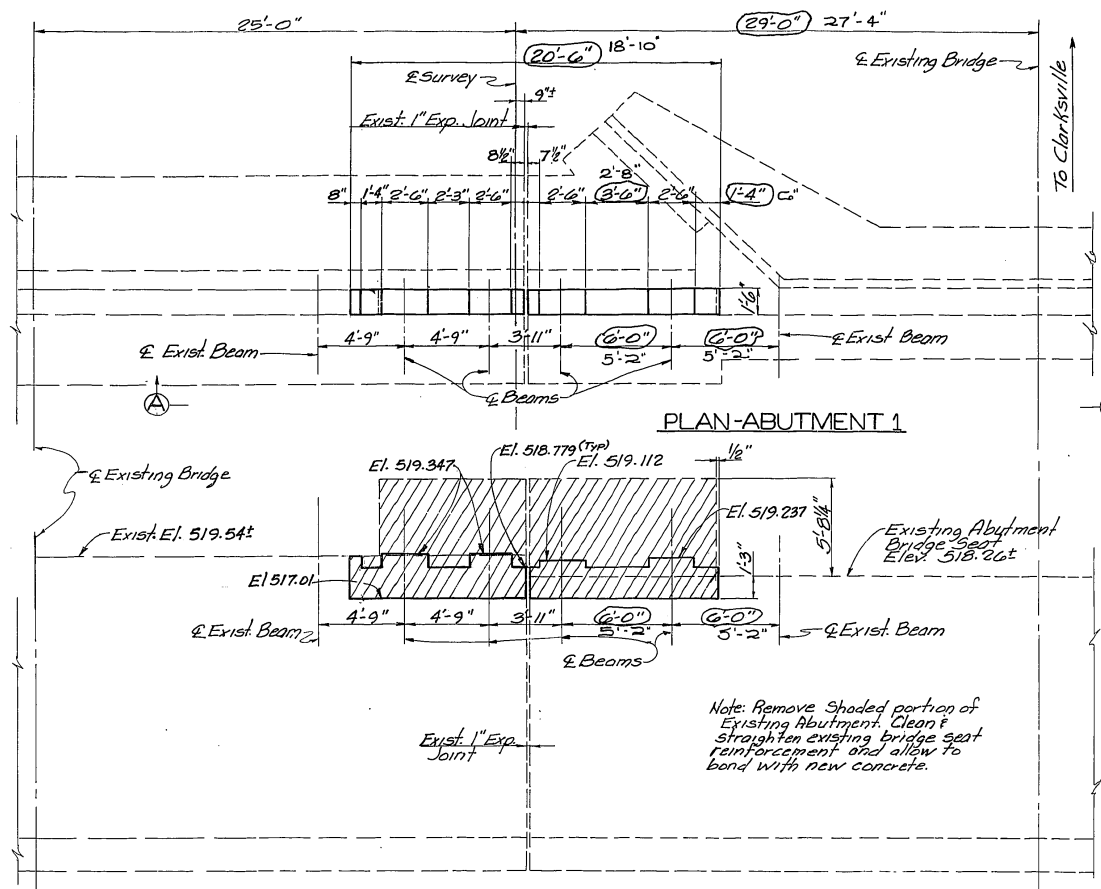
DESIGNED BY: LCE  
 CHECKED BY: SDB  
 DATE: 7/24  
 DATE: 8/14/83  
 DISTANCE BETWEEN EXISTING GUTTER LINES: 96'-9" (36.5) OUT TO OUT OF BRIDGE  
 23'-9" (25.5) LIMITS OF CLASS "AA" CONCRETE  
 6'-2 1/2" (12'-0") LIMITS OF CONCRETE OVERLAY (SOUTH BOUND LANES)  
 30'-0" LIMITS OF CONCRETE OVERLAY (NORTH BOUND LANES)  
 6'-2 1/2" (12'-0") LIMITS OF CONCRETE OVERLAY (SOUTH BOUND LANES)  
 6'-2 1/2" (12'-0") LIMITS OF CONCRETE OVERLAY (NORTH BOUND LANES)  
 96'-5" OUT TO OUT

BRIDGE OVER SOUTH FORK OF LITTLE RIVER SHEET 4

COMMONWEALTH OF KENTUCKY  
 BUREAU OF HIGHWAYS  
 FRANKFORT  
 COUNTY OF  
 CHRISTIAN  
 HOPKINSVILLE-CLARKSVILLE  
 ROAD  
 STATION 118+00 P. E. PROJECT NO.  
 CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO.  
 DRAWING NO. 20165

UPDATE DATE  
LETTING DATE

DATE: 3-14-85  
 CHECKED BY: M.J.P.  
 DESIGNED BY: S.E.G.  
 TRACED BY: [blank]  
 REVISIONS: [blank]



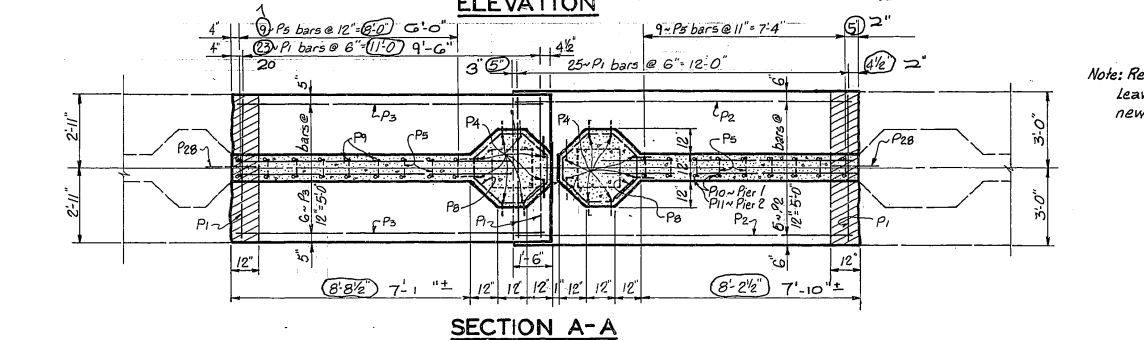
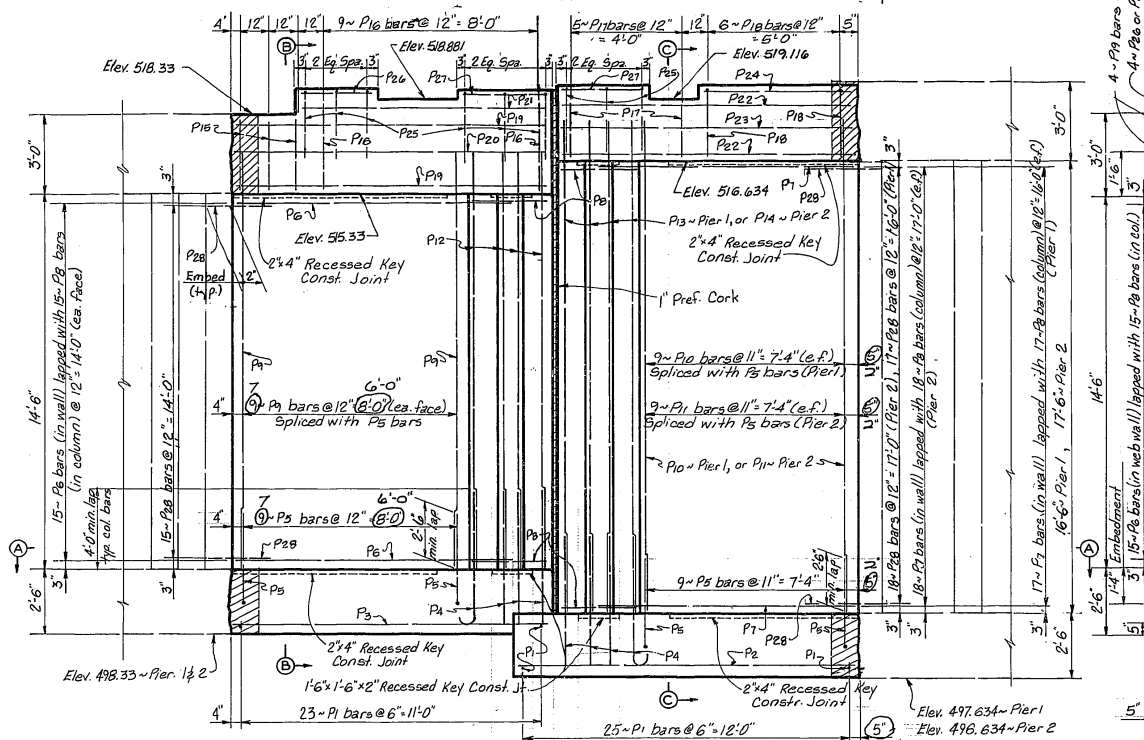
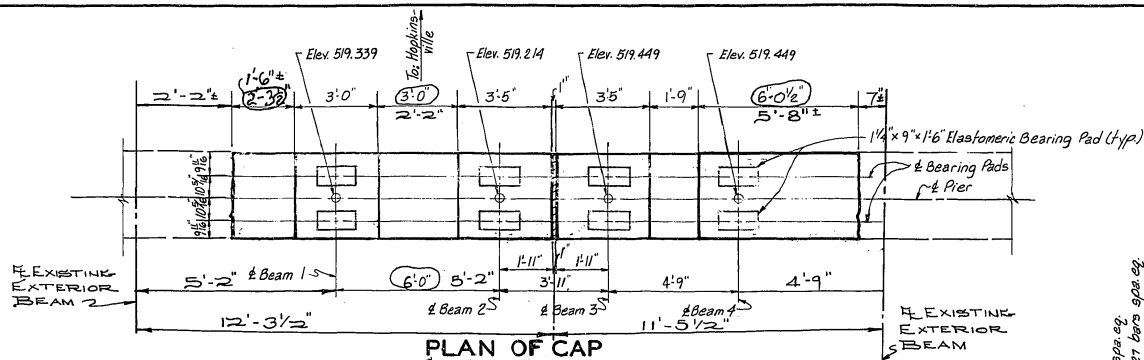
Note: Remove shaded portion of Existing Abutment. Clean & Straighten existing bridge seat reinforcement and allow to bond with new concrete.

Note: Remove shaded portion of Existing Abutment. Clean & Straighten existing bridge seat reinforcement and allow to bond with new concrete.

Unshimmed Elastomeric Brg. Pad (Typ.)

BRIDGE OVER SOUTH FORK OF LITTLE RIVER SHEET 5  
**COMMONWEALTH OF KENTUCKY**  
 BUREAU OF HIGHWAYS  
 FRANKFORT  
 COUNTY OF  
**CHRISTIAN**  
 HOPKINSVILLE-CLARKSVILLE  
 ROAD  
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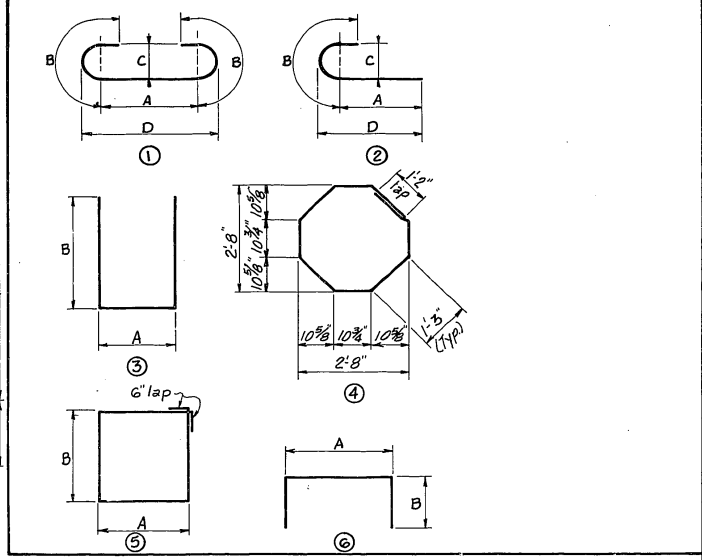
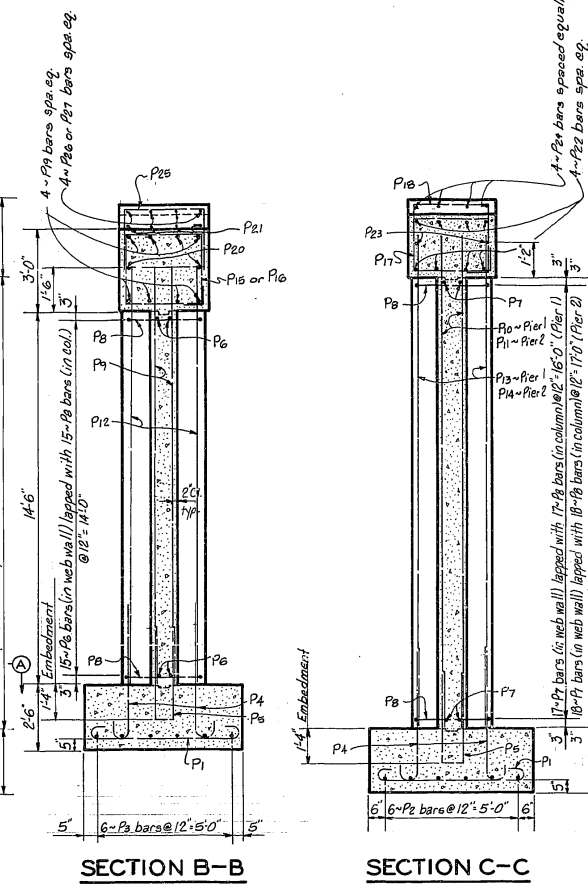


**BILL OF REINFORCEMENT--ABUT 1 & 2**

| MARK | TYPE | NO. | SIZE | LENGTH |     | LOCATION | A   |     | B   |     |
|------|------|-----|------|--------|-----|----------|-----|-----|-----|-----|
|      |      |     |      | FT.    | IN. |          | FT. | IN. | FT. | IN. |
| A1   | ⊙    | 42  | #5   | 3      | 11  | Cap      | 1   | 2   | 1   | 5   |
| A2   | ⊙    | 6   | #5   | 5      | 1   | Pedestal | 1   | 2   | 2   | 0   |
| A3   | ⊙    | 6   | #5   | 4      | 11  | "        | 1   | 2   | 1   | 11  |
| A4   | ⊙    | 14  | #5   | 5      | 5   | "        | 1   | 2   | 2   | 2   |
| A5   | Str. | 12  | ⊙    | 9      | 8   | Cap      |     |     |     |     |
| A6   | Str. | 12  | ⊙    | 10     | 3   | Cap      |     |     |     |     |
| A7   | Str. | 24  | ⊙    | 2      | 2   | Pedestal |     |     |     |     |

**BILL OF REINFORCEMENT FOR PIERS 1 AND 2**

| MARK | TYPE | NUMBER | SIZE | LENGTH |     | LOCATION | A                  |     | B   |     | C     |     | D   |       |
|------|------|--------|------|--------|-----|----------|--------------------|-----|-----|-----|-------|-----|-----|-------|
|      |      |        |      | FT.    | IN. |          | FT.                | IN. | FT. | IN. | FT.   | IN. | FT. | IN.   |
| P1   | ⊙    | 42     | #5   | 6      | 9   | Footing  | 5                  | 1   | 0   | 10  | 0     | 5   | 5   | 6     |
| P2   | Str. | 6      | ⊙    | 5      | 12  | 7        |                    |     |     |     |       |     |     |       |
| P3   | Str. | 6      | ⊙    | 5      | 11  | 6        |                    |     |     |     |       |     |     |       |
| P4   | ⊙    | 16     | #5   | 7      | 6   | 11       | Ftg. into column   | 5   | 9   | 1   | 2     | 0   | 7   | 6 1/2 |
| P5   | ⊙    | 16     | #5   | 5      | 9   | 0        | " web              | 0   | 9   | 4   | 2     |     |     |       |
| P6   | Str. | 30     | ⊙    | 5      | 10  | 3        | Web into column    |     |     |     |       |     |     |       |
| P7   | Str. | 34     | ⊙    | 5      | 9   | 9        | "                  |     |     |     |       |     |     |       |
| P8   | ⊙    | 32     | #5   | 4      | 9   | 6        | Column             |     |     |     |       |     |     |       |
| P9   | Str. | 16     | ⊙    | 5      | 17  | 0        | Web into Cap       |     |     |     |       |     |     |       |
| P10  | Str. | 18     | ⊙    | 5      | 19  | 0        | "                  |     |     |     |       |     |     |       |
| P11  | Str. | 14     | ⊙    | 5      | 20  | 0        | "                  |     |     |     |       |     |     |       |
| P12  | Str. | 8      | ⊙    | 7      | 17  | 0        | Column into Cap    |     |     |     |       |     |     |       |
| P13  | Str. | 8      | ⊙    | 7      | 19  | 0        | "                  |     |     |     |       |     |     |       |
| P14  | Str. | 8      | ⊙    | 7      | 20  | 0        | "                  |     |     |     |       |     |     |       |
| P15  | ⊙    | 3      | #5   | 5      | 12  | 1        | Cap                | 3   | 0   | 2   | 8     |     |     |       |
| P16  | ⊙    | 9      | #5   | 5      | 13  | 2        | "                  | 3   | 0   | 3   | 2 1/2 |     |     |       |
| P17  | ⊙    | 5      | #5   | 5      | 10  | 7        | "                  | 3   | 0   | 1   | 11    |     |     |       |
| P18  | ⊙    | 6      | #5   | 5      | 11  | 8        | "                  | 3   | 0   | 2   | 5 1/2 |     |     |       |
| P19  | Str. | 8      | ⊙    | 8      | 11  | 0        | " 9'-9"            |     |     |     |       |     |     |       |
| P20  | Str. | 2      | ⊙    | 5      | 11  | 0        | " 9'-9"            |     |     |     |       |     |     |       |
| P21  | Str. | 4      | ⊙    | 8      | 9   | 2        | " 8'-4"            |     |     |     |       |     |     |       |
| P22  | Str. | 8      | ⊙    | 8      | 10  | 11       | " 10'-6"           |     |     |     |       |     |     |       |
| P23  | Str. | 2      | ⊙    | 5      | 10  | 11       | " 10'-6"           |     |     |     |       |     |     |       |
| P24  | Str. | 4      | ⊙    | 8      | 5   | 11       | " 5'-4"            |     |     |     |       |     |     |       |
| P25  | ⊙    | 9      | #5   | 4      | 7   | 11       | Pedestal           | 3   | 0   | 2   | 6     |     |     |       |
| P26  | Str. | 4      | ⊙    | 4      | 2   | 9        | "                  |     |     |     |       |     |     |       |
| P27  | Str. | 8      | ⊙    | 4      | 3   | 2        | "                  |     |     |     |       |     |     |       |
| P28  | Str. | 32     | ⊙    | 6      | 2   | 0        | Exist. col. to web |     |     |     |       |     |     |       |



Note: Remove cross-hatched portions of cap if footing. Leave exist protruding reinforcement to bond with new concrete.

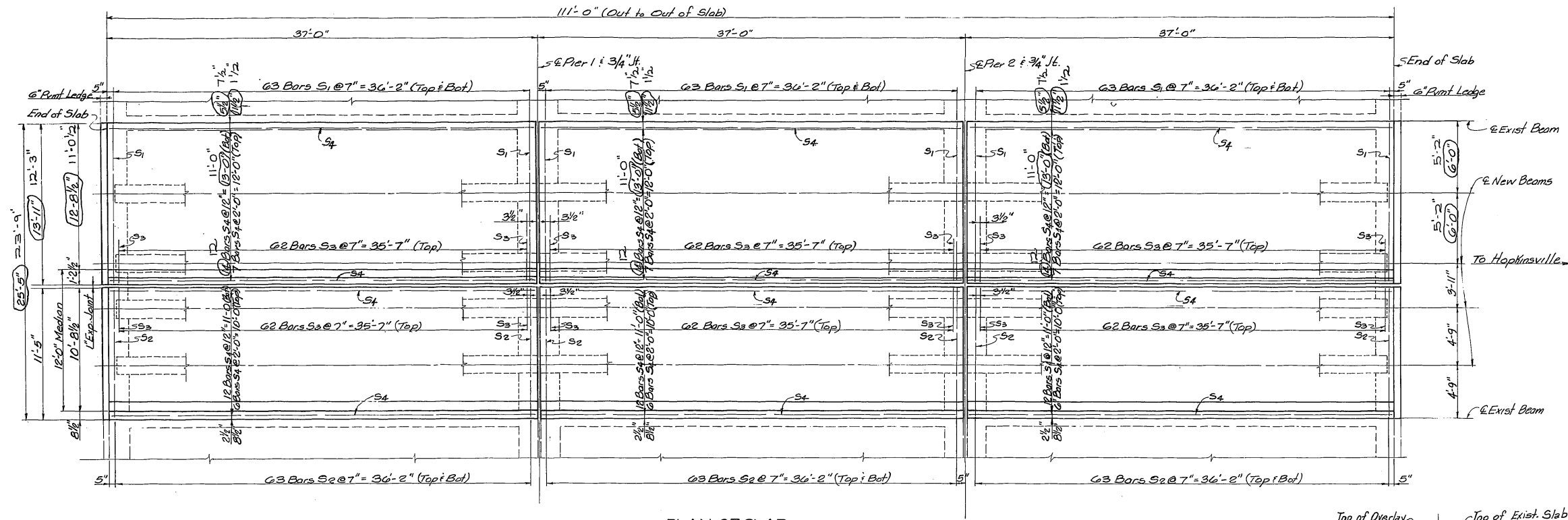
DESIGNED BY: [Signature] DATE: 7/1/82  
 CHECKED BY: [Signature] DATE: [Blank]  
 REVISIONS: [Blank]  
 DISTANCE BETWEEN EXT. PIERS: [Blank]

PIERS 1 & 2

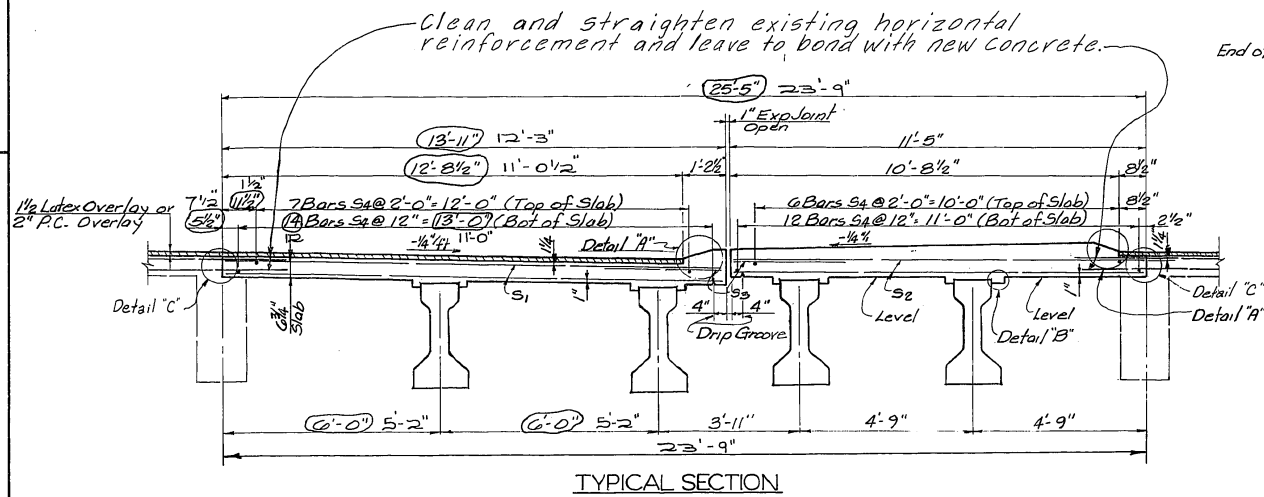
BRIDGE OVER SOUTH FORK OF LITTLE RIVER SHEET 6  
**COMMONWEALTH OF KENTUCKY**  
 BUREAU OF HIGHWAYS  
 FRANKFORT  
 COUNTY OF  
**CHRISTIAN**  
 HOPKINSVILLE-CLARKSVILLE  
 ROAD  
 STATION  
 P. E. PROJECT NO.  
 CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO.  
**20165**

UPDATE DATE  
LETTING DATE

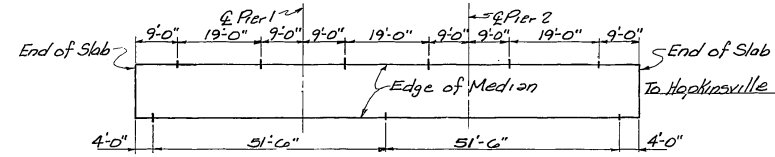
DATE: 7/18/82  
REVISIONS:  
BY: JES  
CHECKED BY: KTB  
DATE: 7/22/82  
REVISIONS:  
BY: JES  
CHECKED BY: KTB  
DATE: 8/16/85  
REVISIONS:  
BY: JES  
CHECKED BY: KTB



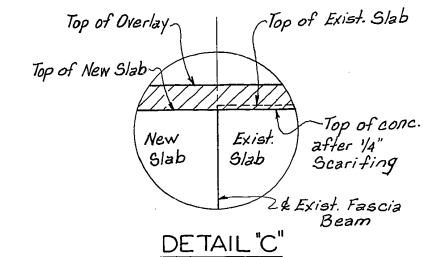
PLAN OF SLAB  
(Existing Concrete Removed)



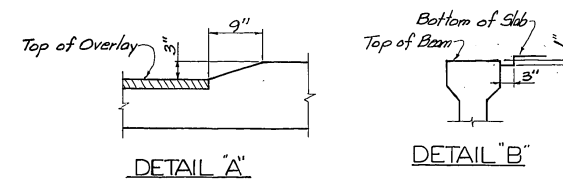
TYPICAL SECTION



DRAIN SPACING  
See Sheet 10 for drain details



DETAIL "C"



DETAIL "A"

DETAIL "B"

SUPERSTRUCTURE

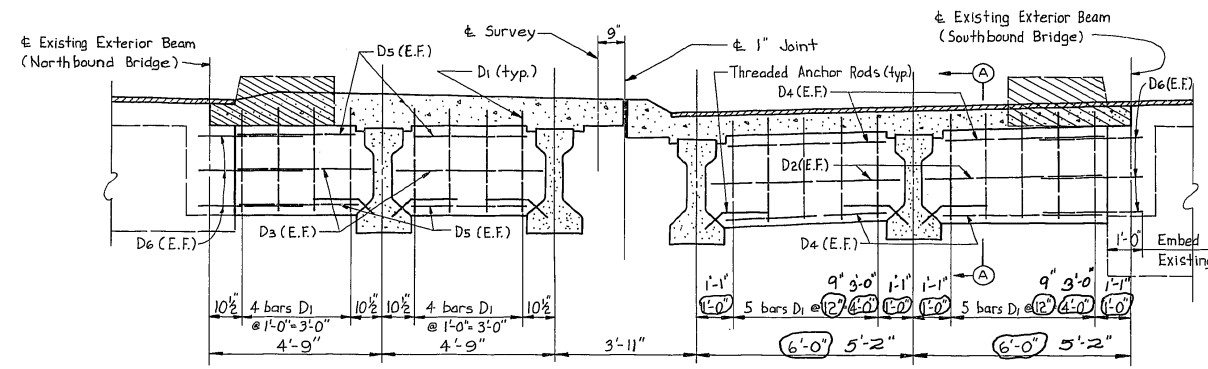
BRIDGE OVER SOUTH FORK LITTLE RIVER SHEET 2

**COMMONWEALTH OF KENTUCKY**  
BUREAU OF HIGHWAYS  
FRANKFORT  
COUNTY OF  
**CHRISTIAN**  
HOPKINSVILLE-CLARKSVILLE  
ROAD

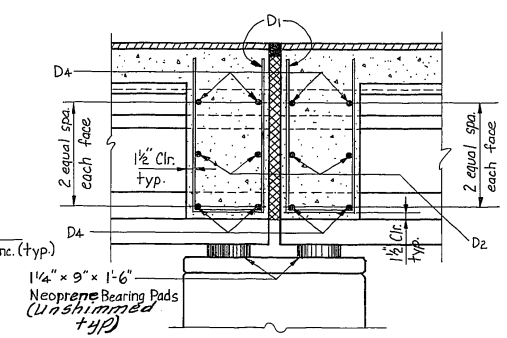
STATION: \_\_\_\_\_ P. E. PROJECT NO. \_\_\_\_\_  
CONSTRUCTION PROJECT NO. \_\_\_\_\_ MAINTENANCE PROJECT NO. \_\_\_\_\_  
DRAWING NO. 20165

UPDATE DATE  
LETTING DATE

REVISIONS  
DATE BY  
1/62  
2/62  
3/62  
4/62  
5/62  
6/62  
7/62  
8/62  
9/62  
10/62  
11/62  
12/62

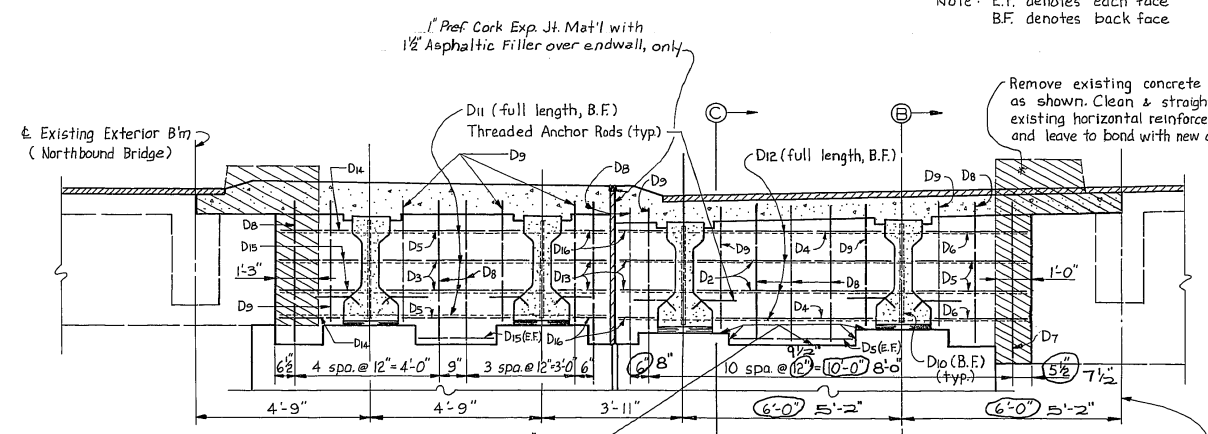
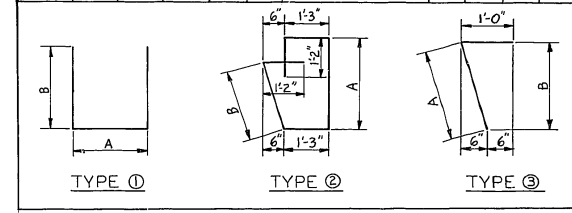


TYPICAL SECTION THRU DECK  
(SHOWING DIAPHRAGMS @ PIERS)  
(LOOKING BACK STATION)

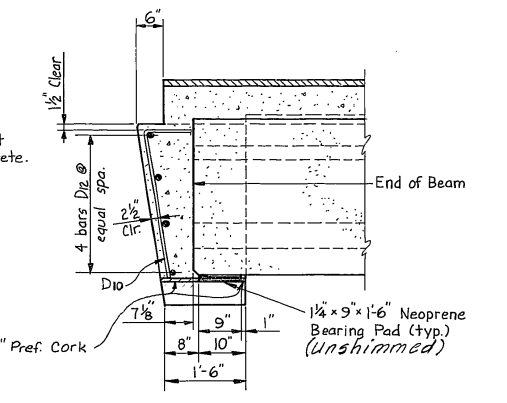


SECTION A-A

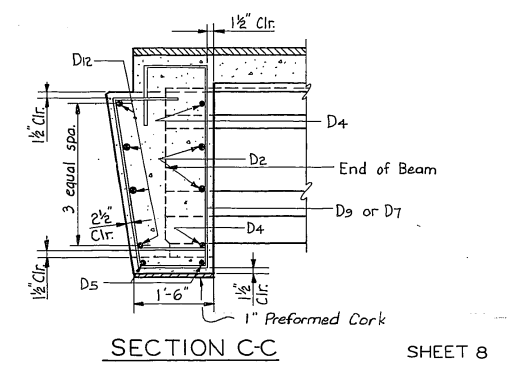
| BILL OF REINFORCEMENT |      |     |      |                   |                       |     |     |     |       |
|-----------------------|------|-----|------|-------------------|-----------------------|-----|-----|-----|-------|
| MARK                  | TYPE | NO. | SIZE | LENGTH<br>FT. IN. | LOCATION              | A   |     | B   |       |
|                       |      |     |      |                   |                       | FT. | IN. | FT. | IN.   |
| S1                    | str  | 189 | #5   | 13 8              | 12'-0" slab           |     |     |     |       |
| S2                    | str  | 189 | #5   | 11 2              | slab                  |     |     |     |       |
| S3                    | str  | 372 | #5   | 4 0               | slab                  |     |     |     |       |
| S4                    | str  | 117 | #5   | 36 7              | slab                  |     |     |     |       |
| D1                    | ⊙    | 36  | #5   | 6 8               | pier diaphragms       | 1   | 3   | 2   | 9     |
| D2                    | str  | 12  | #5   | 5 0               | pier & end diaphragms |     |     |     |       |
| D3                    | ⊙    | 12  | #5   | 3 9               | " "                   |     |     |     |       |
| D4                    | ⊙    | 20  | #5   | 4 6               | " "                   |     |     |     |       |
| D5                    | ⊙    | 28  | #5   | 3 3               | " "                   |     |     |     |       |
| D6                    | str  | 28  | #5   | 2 10              | " "                   |     |     |     |       |
| D7                    | ⊙    | 2   | #5   | 12 4              | end diaphragms        | 4   | 4   | 3   | 5     |
| D8                    | ⊙    | 18  | #5   | 11 4              | " "                   | 3   | 9   | 3   | 0     |
| D9                    | ⊙    | 16  | #5   | 10 7              | " "                   | 3   | 4   | 2   | 8     |
| D10                   | ⊙    | 8   | #5   | 3 9               | " "                   | 2   | 9   | 2   | 8 1/2 |
| D11                   | str  | 8   | #5   | 9 1               | " "                   |     |     |     |       |
| D12                   | str  | 8   | #5   | 11 4              | 9'-8"                 |     |     |     |       |
| D13                   | ⊙    | 8   | #5   | 3 11              | " "                   | 1   | 2   | 1   | 5     |
| D14                   | str  | 4   | #5   | 1 8               | " "                   |     |     |     |       |
| D15                   | str  | 8   | #5   | 2 0               | " "                   |     |     |     |       |
| D16                   | ⊙    | 8   | #5   | 2 11              | " "                   | 1   | 2   | 0   | 11    |



TYPICAL SECTION THRU DECK  
(SHOWING DIAPHRAGM @ END BENTS)  
(LOOKING BACK STATION)



SECTION B-B



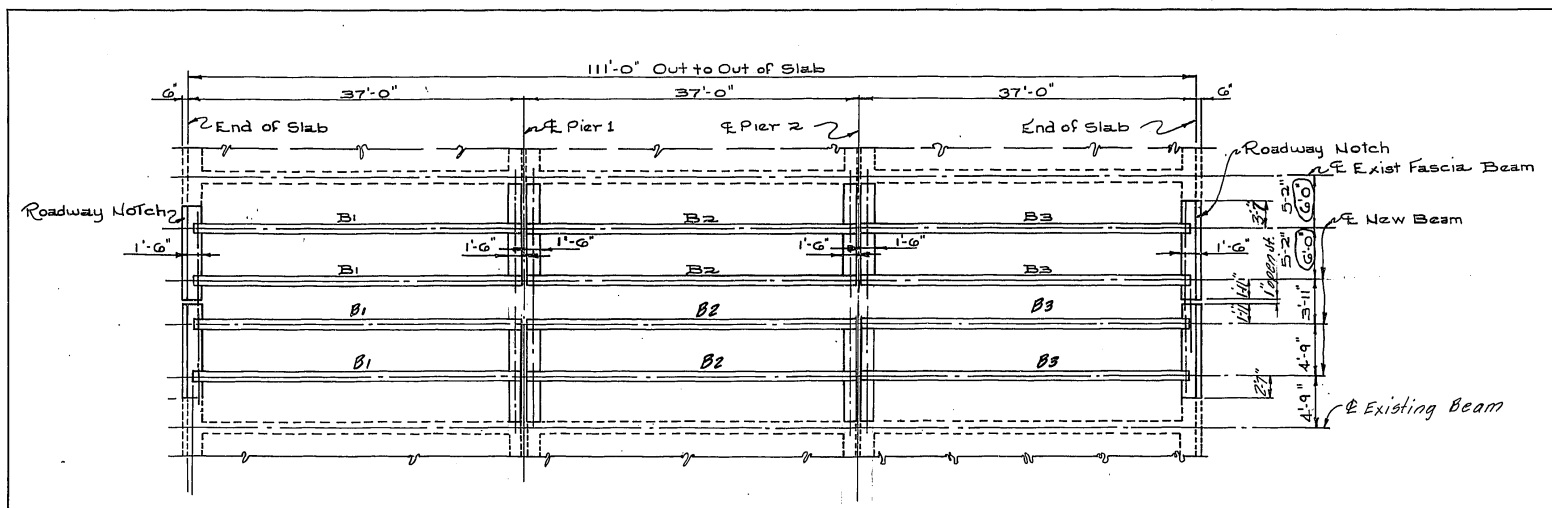
SECTION C-C SHEET 8

SUPERSTRUCTURE

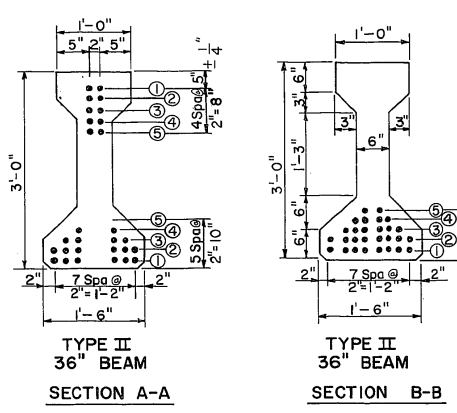
BRIDGE OVER SOUTH FORK OF LITTLE RIVER  
**COMMONWEALTH OF KENTUCKY**  
 BUREAU OF HIGHWAYS  
 FRANKFORT  
 COUNTY OF  
**CHRISTIAN**  
 HOPKINSVILLE - CLARKSVILLE  
 ROAD  
 STATION  
 P. E. PROJECT NO.  
 CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO.  
 20165



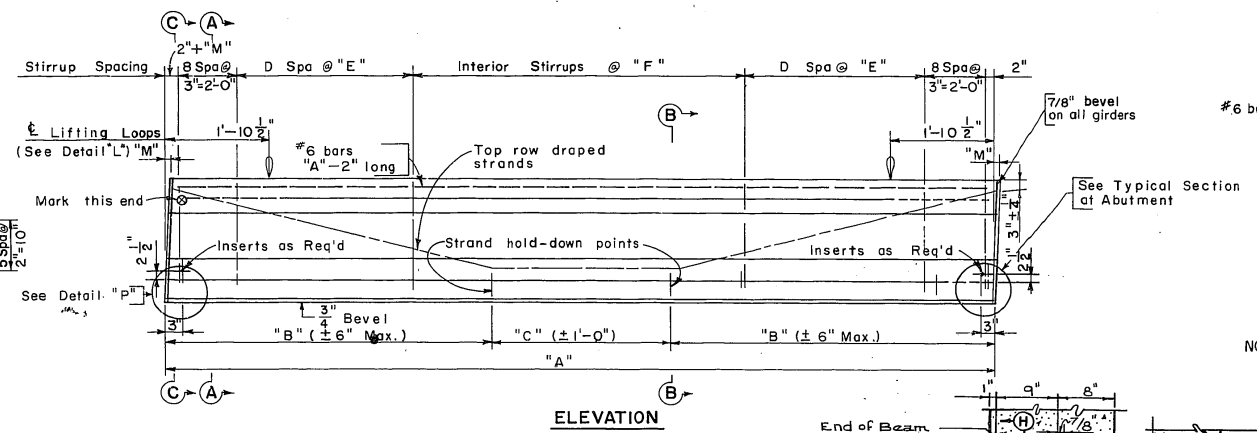
LETTING DATE: \_\_\_\_\_  
 BEAM SPACING: \_\_\_\_\_  
 REVISIONS: \_\_\_\_\_  
 DATE: 3-14-63  
 DRAWN BY: SEC  
 CHECKED BY: SEC  
 DATE: 7-6-62  
 REVISIONS: \_\_\_\_\_  
 DATE: \_\_\_\_\_



**FRAMING PLAN**



**TYPE II 36" BEAM SECTION A-A**  
**TYPE II 36" BEAM SECTION B-B**

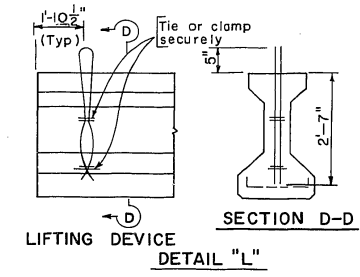


**ELEVATION**

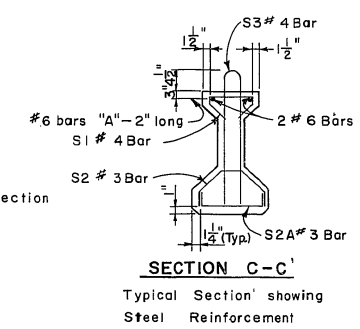
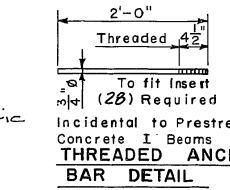
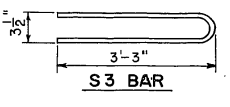
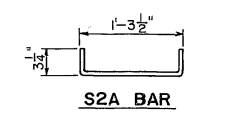
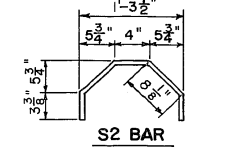
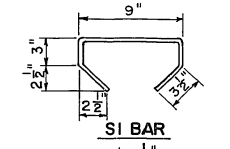
\*These Dimensions Given on  $\epsilon$  of Beams

| MARK | NO. REQ'D | DIMENSIONS* |          |         |   |    |         |   | APPROX. WEIGHT EACH |
|------|-----------|-------------|----------|---------|---|----|---------|---|---------------------|
|      |           | A           | B        | C       | D | E  | F       | M |                     |
| B1   | 4         | 36-4 1/2    | 12-1 1/2 | 2-1 1/2 | 8 | 9" | 15"     |   | 13.981              |
| B2   | 4         | 36-1 1/2    | 12-4     | 2-3 1/4 | 8 | 9" | 15 3/8" |   | 14.135              |
| B3   | 4         | 36-4 1/2    | 12-1 1/2 | 2-1 1/2 | 8 | 9" | 15"     |   | 13.981              |

| MARK | NUMBER OF 1/2 $\phi$ -7 WIRE STRANDS IN INDICATED ROW |   |   |   |   |                   |   |   |   |   | TOTAL NO. | INITIAL PRESTRESS FORCE/STRAND (lbs) |     |        |
|------|-------------------------------------------------------|---|---|---|---|-------------------|---|---|---|---|-----------|--------------------------------------|-----|--------|
|      | MIDSPAN (SECTION B-B)                                 |   |   |   |   | END (SECTION A-A) |   |   |   |   |           |                                      | TOP | BOTTOM |
|      | ①                                                     | ② | ③ | ④ | ⑤ | ①                 | ② | ③ | ④ | ⑤ |           |                                      |     |        |
| B1   | 2                                                     | 2 | 2 | 2 | 2 | 2                 | 2 | 2 | 2 | 2 | 2         | 2                                    | 10  | 28,935 |
| B2   | 2                                                     | 2 | 2 | 2 | 2 | 2                 | 2 | 2 | 2 | 2 | 2         | 2                                    | 10  | 28,935 |
| B3   | 2                                                     | 2 | 2 | 2 | 2 | 2                 | 2 | 2 | 2 | 2 | 2         | 2                                    | 10  | 28,935 |

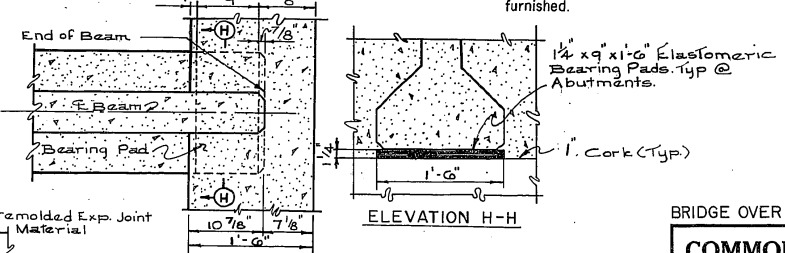


NOTE: Lifting shall be by equal loads to each pair of loops



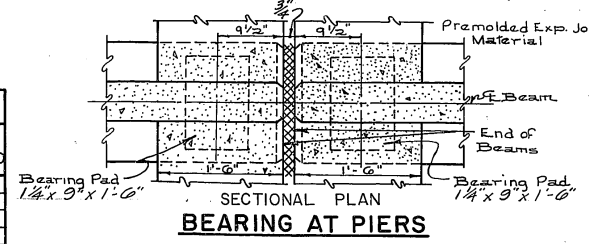
**SECTION C-C'**  
Typical Section showing Steel Reinforcement

NOTE: Wire mesh may be substituted for stirrups shown, provided that an equivalent area of steel is furnished.



**BEARING DETAILS AT END BENTS**

NOTE: Elastomeric Bearing Pads are incidental to Prestressed Beams.

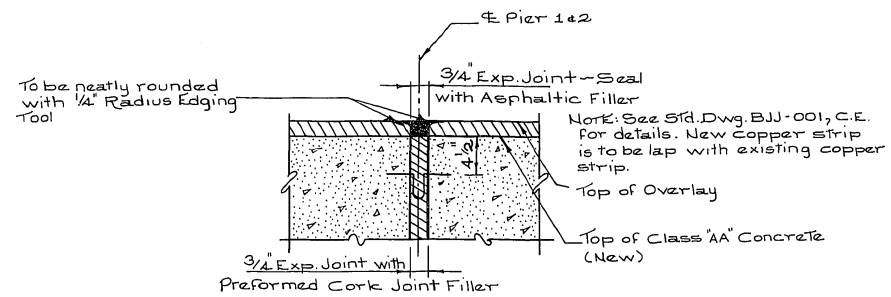


**SECTIONAL PLAN BEARING AT PIERS**

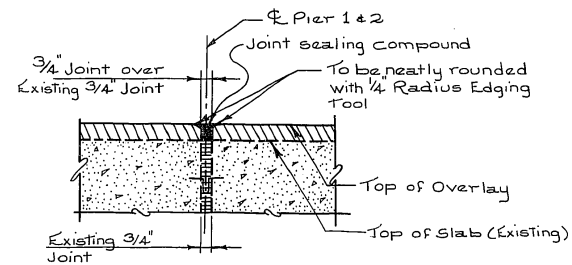
**PRESTRESSED-CONCRETE I BEAM TYPE II DETAILS**

SHEET 9  
 BRIDGE OVER SOUTH FORK OF LITTLE RIVER  
**COMMONWEALTH OF KENTUCKY**  
 BUREAU OF HIGHWAYS  
 FRANKFORT COUNTY OF  
**CHRISTIAN**  
 HOPKINSVILLE - CLARKSVILLE  
 ROAD  
 STATION 118+00 P. E. PROJECT NO. \_\_\_\_\_  
 CONSTRUCTION PROJECT NO. \_\_\_\_\_ MAINTENANCE PROJECT NO. \_\_\_\_\_ DRAWING NO. 20165

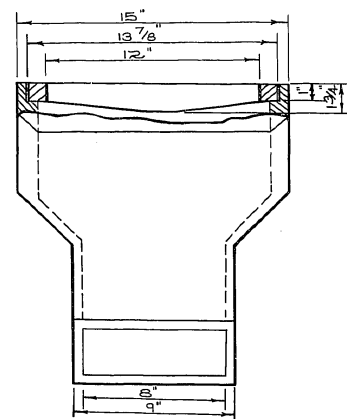
UPDATE DATE  
LETTING DATE



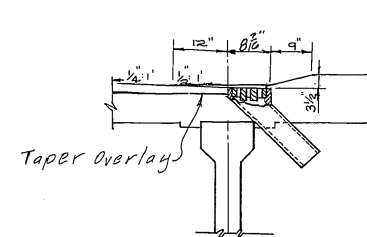
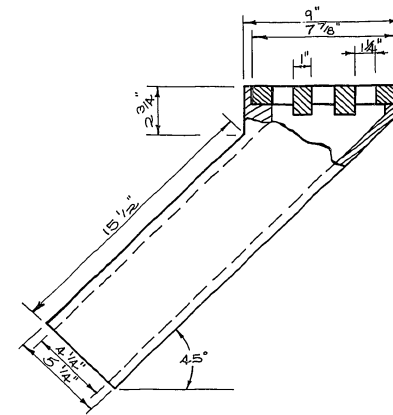
**SECTION THRU NEW SLAB**



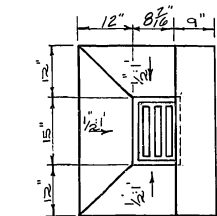
**NEW SECTION THRU EXISTING SLAB**



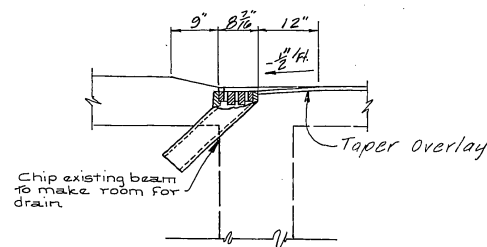
**BRIDGE DRAIN FRAME AND GRATE**  
(9" REQUIRED)



**TYPICAL DRAIN SECTION S.B. BRIDGE**



**PLAN OF DRAIN**



**TYPICAL DRAIN SECTION N.B. BRIDGE**

REVISIONS  
DATE DATE DATE DATE DATE DATE  
BY BY BY BY BY BY BY BY  
LTC LTC LTC LTC LTC LTC LTC LTC  
BY BY BY BY BY BY BY BY

MISCELLANEOUS DETAILS

SHEET 10  
BRIDGE OVER SOUTH FORK OF LITTLE RIVER

COMMONWEALTH OF KENTUCKY  
BUREAU OF HIGHWAYS  
FRANKFORT  
COUNTY OF  
**CHRISTIAN**  
HOPKINSVILLE - CLARKSVILLE  
ROAD

|                             |                         |
|-----------------------------|-------------------------|
| STATION 118 + 00            | P. E. PROJECT NO.       |
| CONSTRUCTION PROJECT NO.    | MAINTENANCE PROJECT NO. |
| DRAWING NO.<br><b>20165</b> |                         |

**GENERAL NOTE**

**CONSTRUCTION NOTE:** This drawing to be used in conjunction with Standard Plans or Special Plans for concrete floors on bridges when so noted on the Standard or Special Plans.

The joint between the spans shall have the copper strip and preformed joint filler so placed as to prevent contact of concrete between spans and to provide the full width of joint shown on plans. The copper strip and preformed joint filler shall be accurately placed and rigidly held in correct position. The preformed filler on the roadway between curbs shall be trimmed or placed  $\frac{1}{2}$ " below the concrete surface and sealed with asphaltic joint filler, as indicated on this Drawing.

**PAYMENT:**

No direct payment will be made for material or installation of copper expansion strip, preformed expansion joint filler and asphaltic filler, the cost of these shall be included in the unit price bid for Class "AA" Concrete.

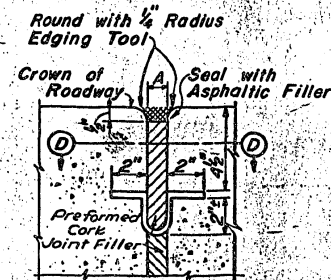
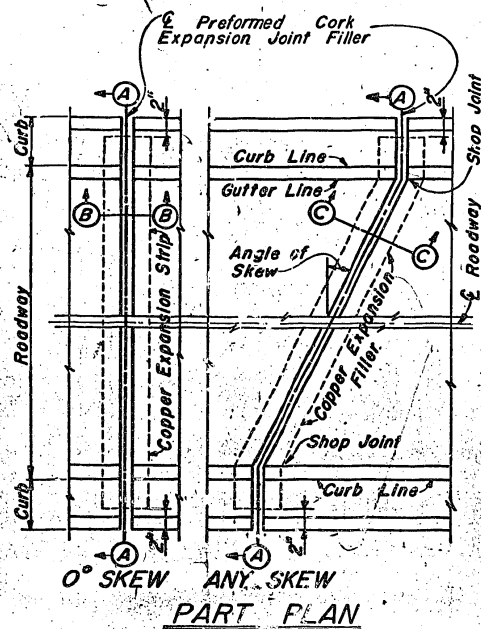
**PREFORMED CORK EXPANSION JOINT MATERIAL:** Preformed Cork expansion joint filler shall conform to Subsection 807.03.02 (Type II) of the Kentucky Bureau of Highways Specifications.

**ASPHALTIC FILLER:** The Asphaltic Filler shall conform to the requirements of Subsection 807.02.01 of the Kentucky Bureau of Highways Specifications.

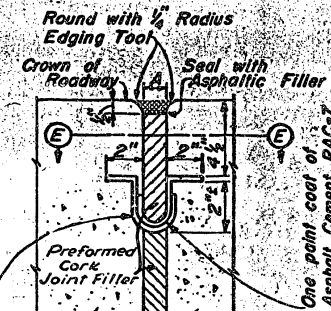
**SPECIFICATION FOR COPPER EXPANSION STRIP:** The copper strips are to be 24 ounces soft sheet commercial grade.

A tolerance of 8% variation in weight above or below that specified will be allowed. The strips are to be shop fabricated to the section and dimensions shown. Field bending and fabrication will not be permitted except as provided herein. Unless otherwise provided by plans, the strips may be furnished in one or two pieces. If furnished in two pieces, the field joint shall be at the centerline of roadway. Shop joints shall not be spaced closer than six (6) feet, unless otherwise shown on plans and shall be lock seam and soldered. The field joint at the centerline of roadway, may be a two (2) inch width lap joint soldered. All joints shall be watertight.

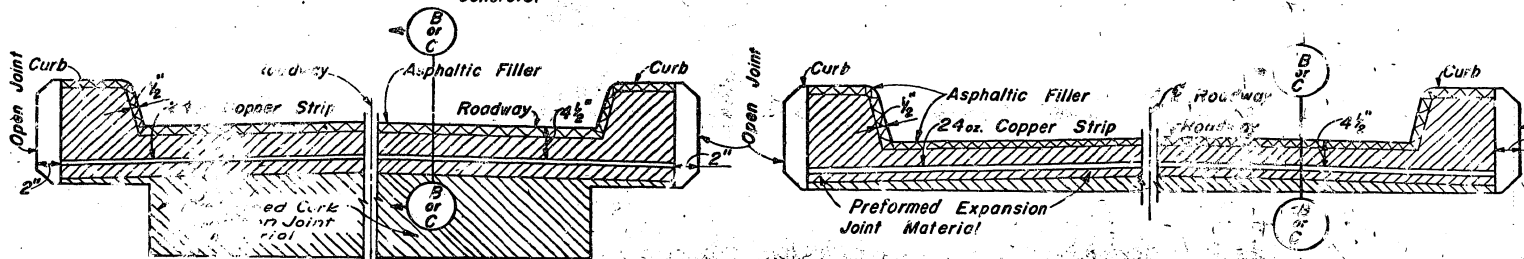
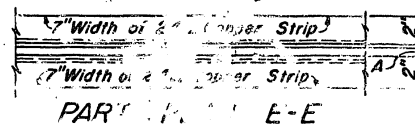
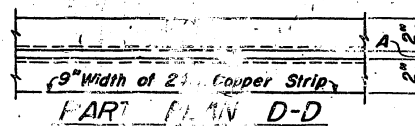
On Skewed Spans, the copper strips are separate units and are not to be connected in any way that will prevent movement of the strips relative to each other. All points will be located to allow free movement of the individual strips.



**NOTE:** Dimension "A" is inside dimension and is to be same as thickness shown on Drawings for Preformed Cork Expansion Joint Filler.



**NOTE:** Lower section of copper strip is placed first, just prior to placing upper section of copper strip. Joint to be section with PAC-7 along all areas of contact, to provide additional seal. Cost of this work shall be included in the unit price bid for Class "AA" Concrete.



**Note:** Preformed Expansion Joint Material of the thickness shown on plans to be used in joint over area shown as shaded above. Joint to be left open over unshaded areas.

SHEET II  
BRIDGE OVER SOUTH FORK OF LITTLE RIVER

COMMONWEALTH OF KENTUCKY  
BUREAU OF HIGHWAYS  
FRANKFORT  
COUNTY OF  
CHRISTIAN  
HOPKINSVILLE - CLARKSVILLE  
ROAD  
STATION: 118 + 00 P. E. PROJECT NO.  
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO.  
DRAWING NO. 20165

DRAWN: J. L. G.  
CHECKED: C. J. Z.  
RECOMMENDED: S. J. A. Y. C.