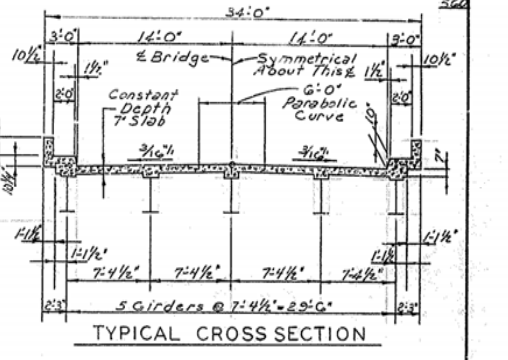
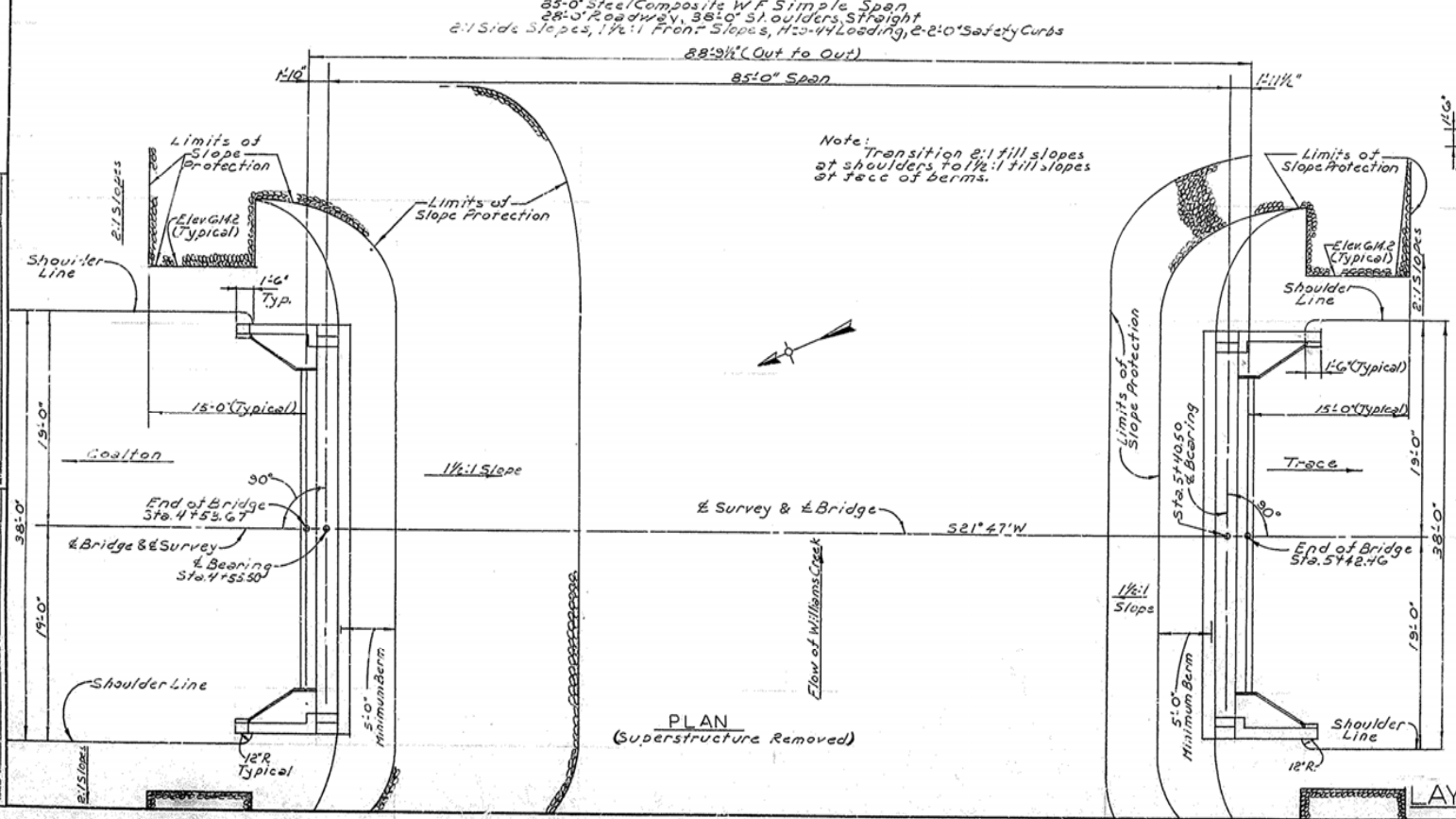
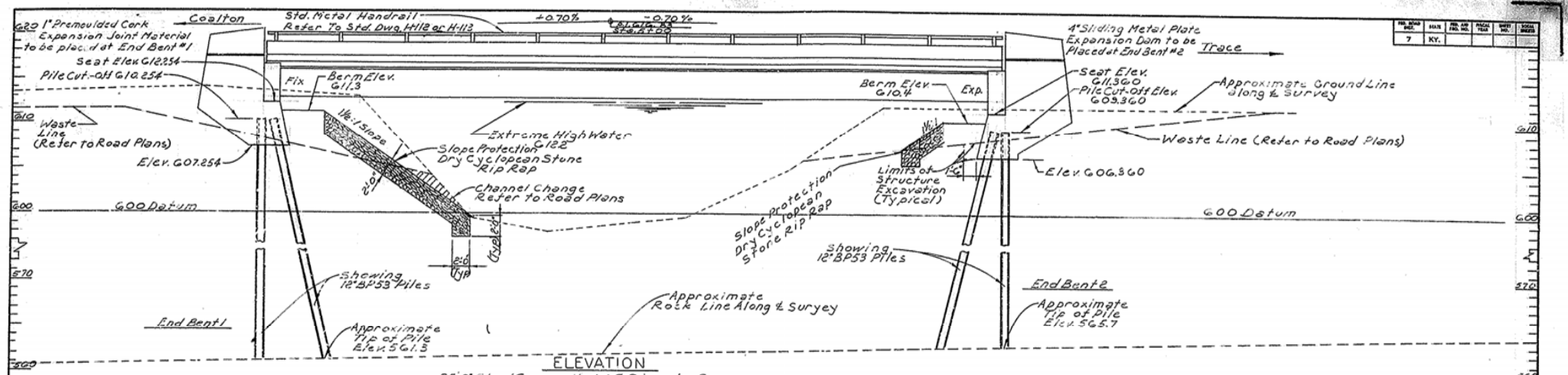


| NO. | DATE | BY | CHK. BY | APP. BY | SCALE |
|-----|------|----|---------|---------|-------|
| 7 | KY. | | | | |



Bridge Over Williams Creek Sheet 2

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
BOYD
 KY.S 36 (COALTON-TRACE)
 ROAD

STATION 4+98.00 PROJECT NO.
 BRIDGE NUMBER DRAWING NO. 16061

GENERAL NOTE

SPECIFICATIONS: Kentucky Department of Highways Current Standard with Amendments.

DESIGN LOAD: Bridge designed for H20-44 loading as specified in 1961 AASHTO Specifications.

DESIGN STRESSES:
 For reinforced concrete:
 $f_c = 20,000 \text{ psi}$
 $f_t = 3,000 \text{ psi}$
 $f_c = 1,200 \text{ psi}$
 $f_s = 20,000 \text{ psi}$
 For structural steel:
 $v = 200 \text{ psi}$ for embedment
 $v = 300 \text{ psi}$ for S_o
 $n = 10$

FOUNDATION PRESSURE: Piles are designed for a maximum load of 40 tons per pile. The maximums are for group I loads with increases allowed for other loading groups.

CONCRETE: Class "A" concrete is to be used throughout.

REINFORCEMENT: Intermediate or hard grade reinforcement shall be used in accordance with ASTM A15-50T for billet steel, or A16-50T for rail steel, conforming to bending requirements of A.A.S.H.O. Specification M42. Dimensions shown from face of concrete to bars are clear distances. Spacing of bars is from center to center of bars.

PROTECTIVE COATING: The protective coating shall be in accordance with "The Special Provision for Linseed Oil Protective Coating".

BEVELED EDGES: All exposed edges shall be beveled 7/8" unless otherwise shown.

PREPARED CORE EXPANSION JOINT MATERIAL; POLYVINYL WATERSTOP AND SEALING COMPOUND: The cost of these items is to be included in the unit price bid for Class "A" Concrete.

STRUCTURAL STEEL: "Lump Sum Bid" for structural steel shall be full payment for structural steel, bolts, washers, steel pins, cast iron, lead plates, molten lead, welding and welding materials, paint, thin tracings of shop detail and erection drawings, and all labor and materials necessary to erect the steel in accordance with the plans and specifications.

PLACING FILLS: Embankment shall be placed in compacted layers to bottom of bent cap elevation before driving piles in any end bent. Embankment shall be placed simultaneously in front and back of end bents in compacted layers and the 5 ft. minimum berm provided as shown on the plans.

FILING: Piling shall be driven to refusal or to solid rock. Test piles shall be driven where designated on the plans to determine the length required. All test piles shall be accurately located so that they may be used in the finished structure.

PAINT: All structural steel except pins and pin bearing surfaces shall be given one shop coat of type I red lead paint and two field coats of aluminum paint. Exposed surfaces of expansion dams, not accessible after erection shall be given two field coats of aluminum paint before erection. Pins and pin bearing surfaces shall be coated in the shop with a hot mixture of white lead and tallow in accordance with the specifications. Shop paint shall not be applied within 3" of open holes where high strength bolts are to be used for field connections and shall not be applied to steel surfaces in contact with concrete.

SHEAR CONNECTORS: "Lump Sum Bid" for shear connectors shall be full payment for all shear connectors, welding and welding materials, patent royalties, and all labor and materials necessary to field weld or shop weld the shear connectors in place in accordance with the plans and specifications. Connectors shall be welded with approved welding equipment.

OPTIONAL TYPES OF SHEAR CONNECTORS: The Contractor shall use one of the following optional types throughout:
 Option "1" 3/8" x 4" Studs
 Option "2" 4" Channel #5.18
 Option "3" 5/8" x 4" ϕ Spirals

ALTERNATE TYPES OF PILES: The Contractor shall use one of the following types throughout:
 Alternate "C" - 14" RC Precast Piles, Std. Dwg. P2.
 Alternate "D" - 128P53 Steel Piles, Std. Dwg. H7.

MATERIALS: A.S.T.M. Specifications herein after designated shall govern materials furnished.
 Structural Steel A36-G2T
 Molten Lead, Lead Plates B20-55
 High Strength Bolts, Nuts, Washers A325-C1T
 Stud Shear Connectors A308-C1015
 Welding Electrodes A232-50T

MILL TEST REPORTS: Notarized mill test reports in triplicate shall be furnished the Kentucky Department of Highways showing that all materials furnished conform to the specifications.

STEEL FINISH: Steel bearing surfaces in contact shall be finished in accordance with section 5.2.3 of the specifications.

DIMENSIONS: Dimensions are for a normal temperature of 60 degrees Fahrenheit.

SHOP PLANS: The Contractor shall submit shop detail plans for approval prior to the start of fabrication in accordance with the specifications.

CHANGES IN STRUCTURAL STEEL QUANTITIES: In the event that changes in steel quantities are required due to changes by the Engineer in the plans, additional payments therefor shall be made at a unit price which will be equal to the contract lump sum price divided by the estimated total weight.

FIELD CONNECTIONS: High strength steel bolts shall be used in all field connections in accordance with Section 5.2.3-A-5 (1) of the Specifications, except Assembly and Dimensions of high strength bolts, nuts and washers shall conform to "Specifications for Structural Joints using ASTM A325 Bolts", March 1960, approved by the Research Council on Riveted and Bolted Structural Joints of the Engineering Foundation. All joints are designed as friction-type connections. Installation shall be performed by using the turn-of-nut method. When the width of high-strength bolt heads corresponds to that of the heavy unfinished hexagon bolt only one washer per bolt is required.
 Open holes shall be 15/16" diameter for 7/8" diameter bolts; 1 3/16" diameter for 1 1/8" diameter bolts.
 Where field welding is indicated, welding shall be performed in accordance with the Specifications for welding materials and welding.

SLOPE PROTECTION: Slope protection shall be Dry Cyclopean Stone Riprap in accordance with Section 6.3.3.E of the Specifications.

WIND LOADS: This structure is designed using wind loads based on a wind velocity of 88 mph.

TEMPORARY SUPPORTS: For composite beams, temporary supports or shoring will not be permitted under the steel girders when pouring the concrete floor slab or when taking "top of steel" elevations.

SHOP ASSEMBLY: General reaming of holes for each field splice shall be required with all parts for each splice completely shop assembled with parts adjusted to lines and camber, fit for drilling or reaming. This applies to field splices in girders only. Girders shall remain assembled for inspection by the Department of Highways Inspector and are to be match-marked while assembled. Connections for cross frames, diaphragms, longitudinal bracing, expansion joints and other minor members may be punched or drilled full size without assembly, subject to the requirements in the specifications for general reaming.

SHOP AND MILL INSPECTOR: Kentucky Department of Highways.

WELDING SPECIFICATIONS: All welding materials, welding technique and welding procedure shall comply with American Welding Society Standard Specifications for Welding Highway and Railway Bridges; current edition.

WELDED STUDS: Studs used for composite shear developers shall be welded with approved welding equipment.

REMOVING EXISTING STRUCTURE: This contract includes removal of existing structure in accordance with the plans and specifications. The existing structure shall not be removed until the new work is complete and open to traffic. Cost of all work involved in removing existing structure shall be included in the lump sum bid for Remove Existing Structure.

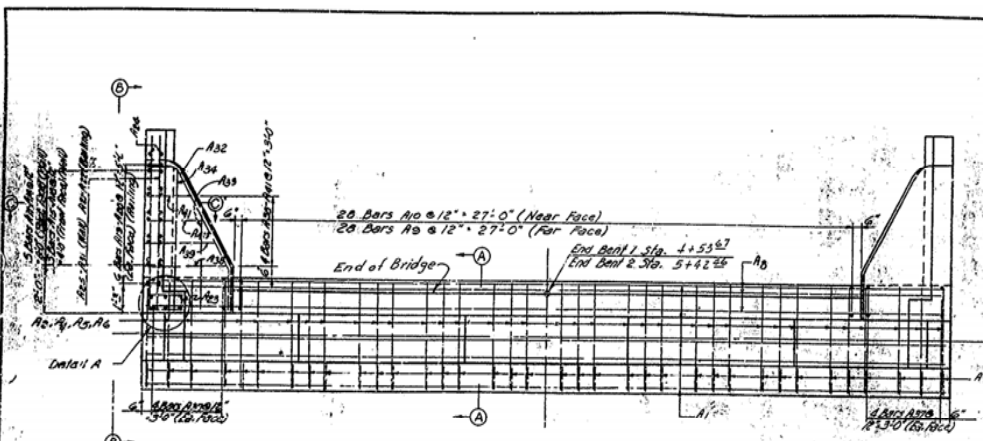
Bridge Over Williams Creek Sheet 3

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
BOYD
 KY966 (COALTON-TRACE)
 ROAD

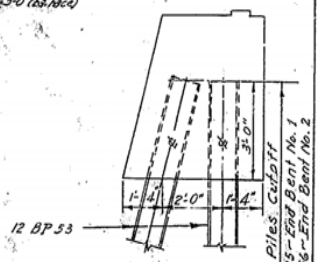
| | |
|---------------------------|-------------|
| STATION 4+98 ⁰ | PROJECT NO. |
| BRIDGE NUMBER | DATE |
| | NOV 1961 |

GENERAL NOTE

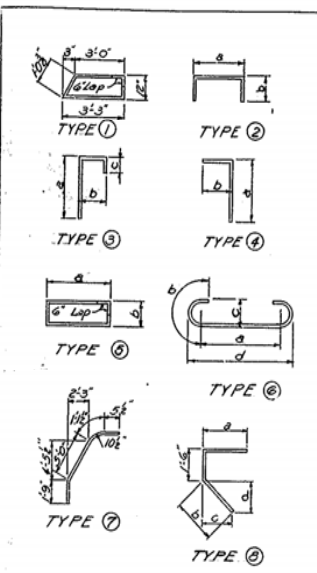
Taken from Mc-Caperton Dwg. # 100-100-100



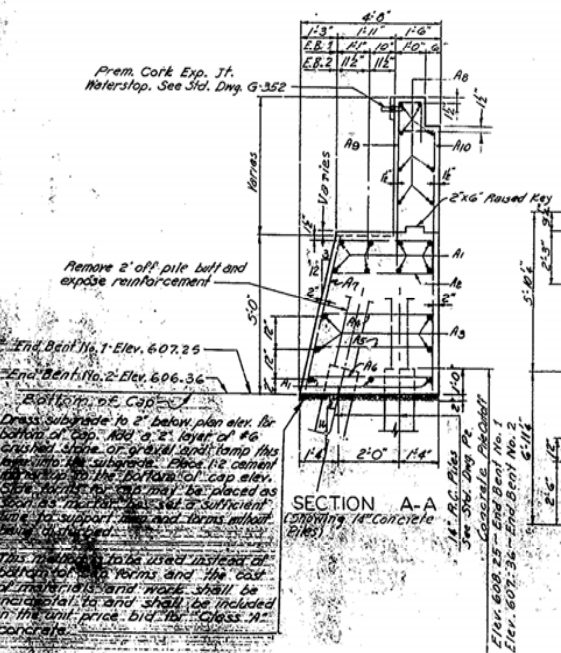
PLAN
(Showing Reinforcement)



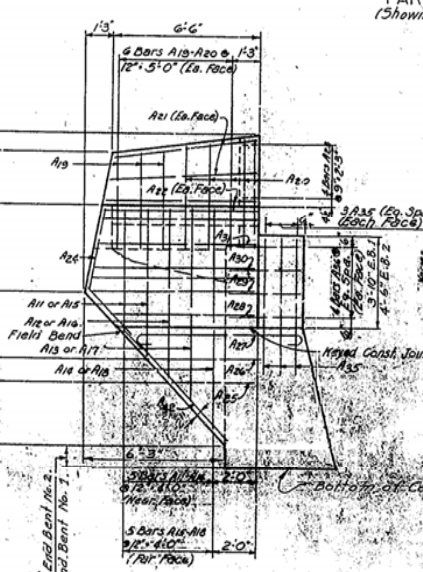
PART SECTION A-A
(Showing 12" Steel Piles)



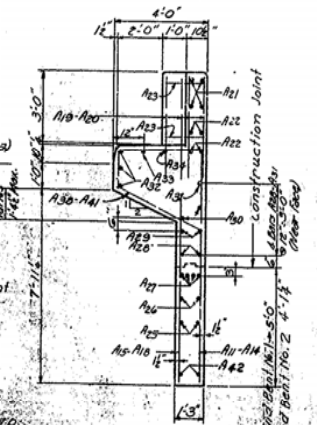
| BILL & TYPES OF REINFORCEMENT (FOR ONE BENT) | | LOCATION | | | | | |
|--|------|----------|-------------------|----|-------|-------|-----------|
| BAR NO. | TYPE | NO. | LENGTH FT. IN. | a | b | c | d |
| | | | | FF | IN | FF | IN |
| A1 | Stc | 11 | 35 9 | | | | |
| A2 | ① | 36 | 9 0 | | | | |
| A3 | Stc | 4 | 35 9 | | | | |
| A4 | ② | 36 | 3 7 | | | | |
| A5 | Stc | 4 | 2 | | 3 7 | 0 3 | |
| A6 | Stc | 4 | 5 | | 3 7 | 0 3 | |
| A7 | Stc | 36 | 4 9 | | 4 7 | 0 3 | |
| A8 | Stc | 8 | 35 9 | | | | |
| A9 | ③ | 28 | 8 1 | | 6 0 | 0 9 | 1 6 |
| A10 | ④ | 28 | 6 6 | | 5 4 | 1 3 | |
| A11 | Stc | 4 | 5 8 | | | | |
| A12 | Stc | 2 | 6 9 | | | | |
| A13 | Stc | 2 | 7 0 | | | | |
| A14 | Stc | 2 | 9 0 | | | | |
| A15 | Stc | 4 | 4 3 | | | | |
| A16 | Stc | 2 | 5 3 | | | | |
| A17 | Stc | 2 | 6 3 | | | | |
| A18 | Stc | 2 | 7 3 | | | | |
| A19 | Stc | 12 | 4 7 | | | | |
| A20 | Stc | 24 | 5 1 | | | | |
| A21 | Stc | 8 | 6 4 | | | | |
| A22 | Stc | 8 | 6 6 | | | | |
| A23 | ⑤ | 8 | 4 5 3 | | 1 7 6 | 0 7 6 | |
| A24 | Stc | 4 | 5 2 9 | | | | |
| A25 | Stc | 4 | 3 9 | | | | |
| A26 | Stc | 4 | 4 9 | | | | |
| A27 | ⑥ | 8 | 8 6 | | | | |
| A28 | Stc | 4 | 6 3 | | 5 6 | 1 6 | 0 10 6 4 |
| A29 | Stc | 4 | 7 3 | | | | |
| A30 | Stc | 4 | 7 0 | | | | |
| A31 | Stc | 2 | 6 9 | | | | |
| A32 | ⑦ | 2 | 8 4 | | | | |
| A33 | Stc | 2 | 3 9 | | | | |
| A34 | Stc | 2 | 5 10 | | | | |
| A35 | Stc | 12 | 5 9 | | | | |
| A36 | Stc | 16 | 3 3 | | | | |
| A37 | Stc | 16 | 6 1 | | | | |
| A38 | ⑧ | 2 | 8 11 | | 3 6 | 3 11 | 3 6 1 9 |
| A39 | Stc | 2 | 7 10 | | 3 0 | 3 44 | 3 0 1 6 |
| A40 | Stc | 2 | 6 5 | | 2 4 | 2 7 4 | 2 4 1 2 |
| A41 | Stc | 2 | 5 4 | | 1 10 | 2 0 6 | 1 10 0 11 |
| A42 | Stc | 4 | 8 10 | | | | |



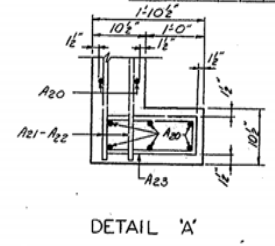
SECTION A-A
(Showing 14" Concrete)



ELEVATION B-B



SECTION C-C



DETAIL 'A'

Remove 2' off pile wall and expose reinforcement

End Bent No. 1 Elev. 607.25

End Bent No. 2 Elev. 606.36

Bottom of Cap

Draw subgrade to 2" below plan elev. for bottom of cap. Add a 2" layer of #4 crushed stone or gravel for top 12" and 12" subgrade. Place 12" cement concrete on the bottom of cap elev. (See notes for caps may be placed as soon as the subgrade is set a sufficient time to support form and forms without the need of shoring.)

This material to be used instead of bituminous seal and the cost of materials and work shall be included in the unit price bid for "Class A" concrete.

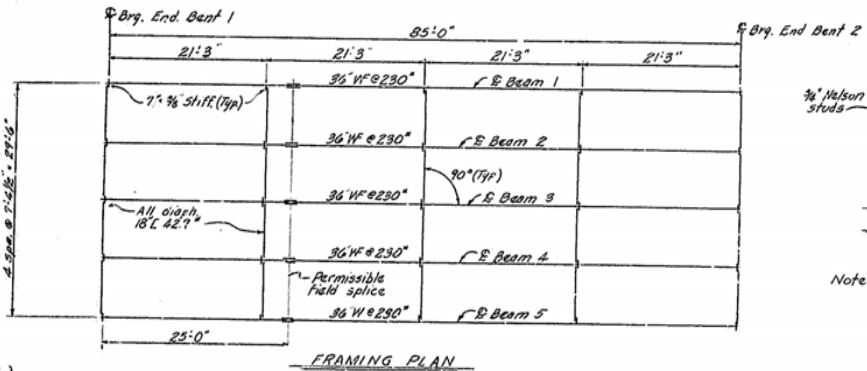
Bridge Over Williams Creek. Sheet 5

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
BOYD
KY. 966 (CULTON - TRACE)
ROAD

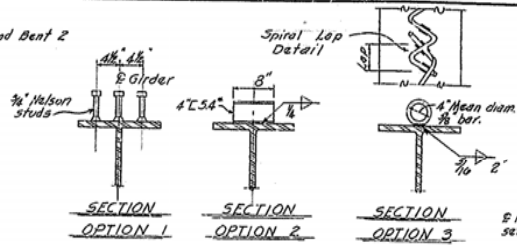
STATION 4+98.69 PROJECT NO.

BRIDGE NUMBER 16001

END BENTS 1 & 2

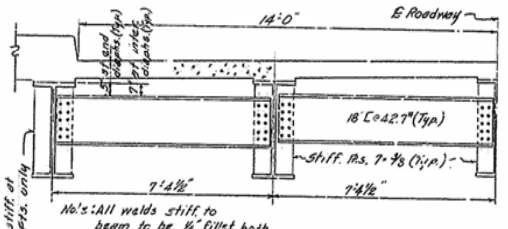


FRAMING PLAN

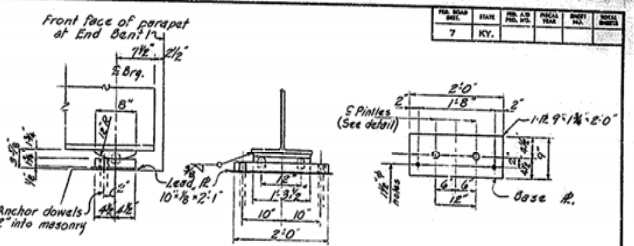


SHEAR CONNECTOR DETAILS

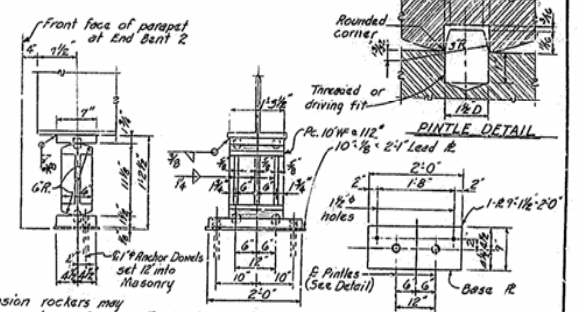
Note: The contractor may use any one of the three types of shear connectors shown. The option selected shall be used throughout the job. If option 3 is selected the pitch shown on shop details must provide ultimate capacity equal to other options.



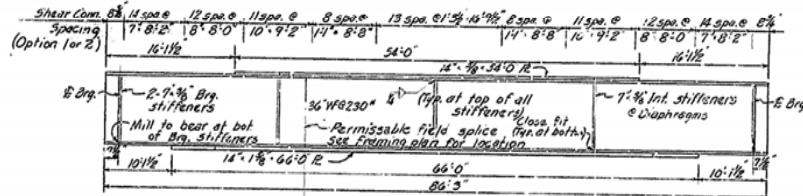
HALF SECTION SHOWING DIAPHS.



FIXED SHOES AT END BENT 1 (5 Req'd)

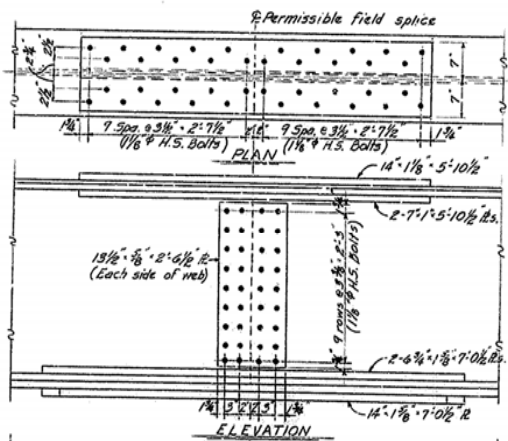


EXPANSION ROCKERS AT END BENT 2 (5 Req'd)



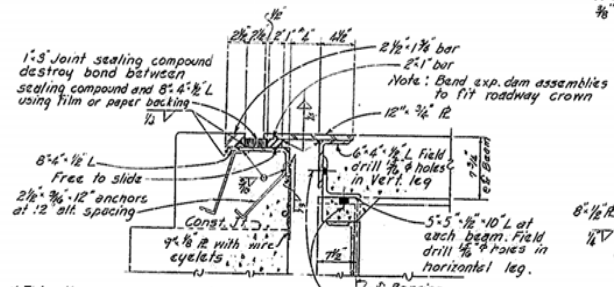
GIRDER DETAILS

Note: 7/8" H.S. bolts to be used in all field connections unless otherwise noted
1 1/8" H.S. bolts to be used in permissible field splice.



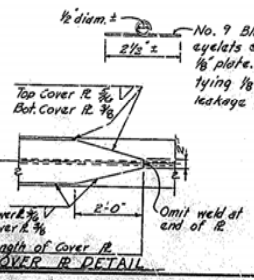
ELEVATION

SPLICE DETAILS

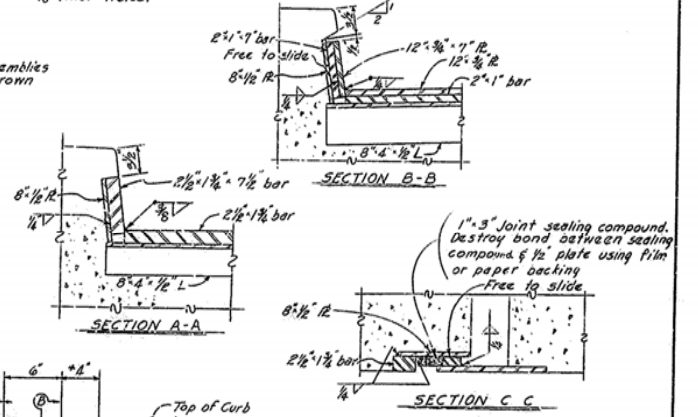


CROSS SECTION OF EXPANSION DAM AT END BENT 2

*This dimension to be maintained at normal temperature of 60°F. For each 10° above or below 60°F, increase or decrease respectively by 3/8".



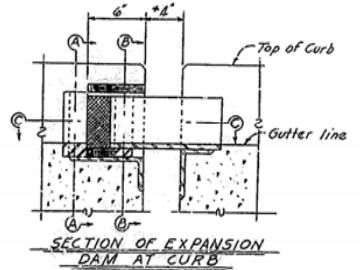
COVER R DETAIL



SECTION A-A

SECTION B-B

SECTION C-C



SECTION OF EXPANSION DAM AT CURB

SUPERSTRUCTURE

Sheet 7

Bridges over Williams Creek

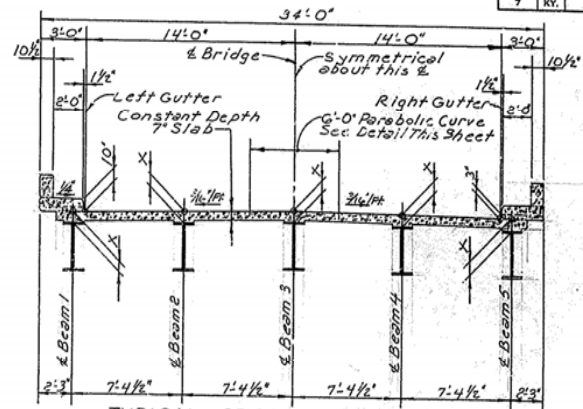
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
BOYD
KY 966 (COALTON - TRACE)
ROAD

STATION 4178.00 PROJECT NO. 16081

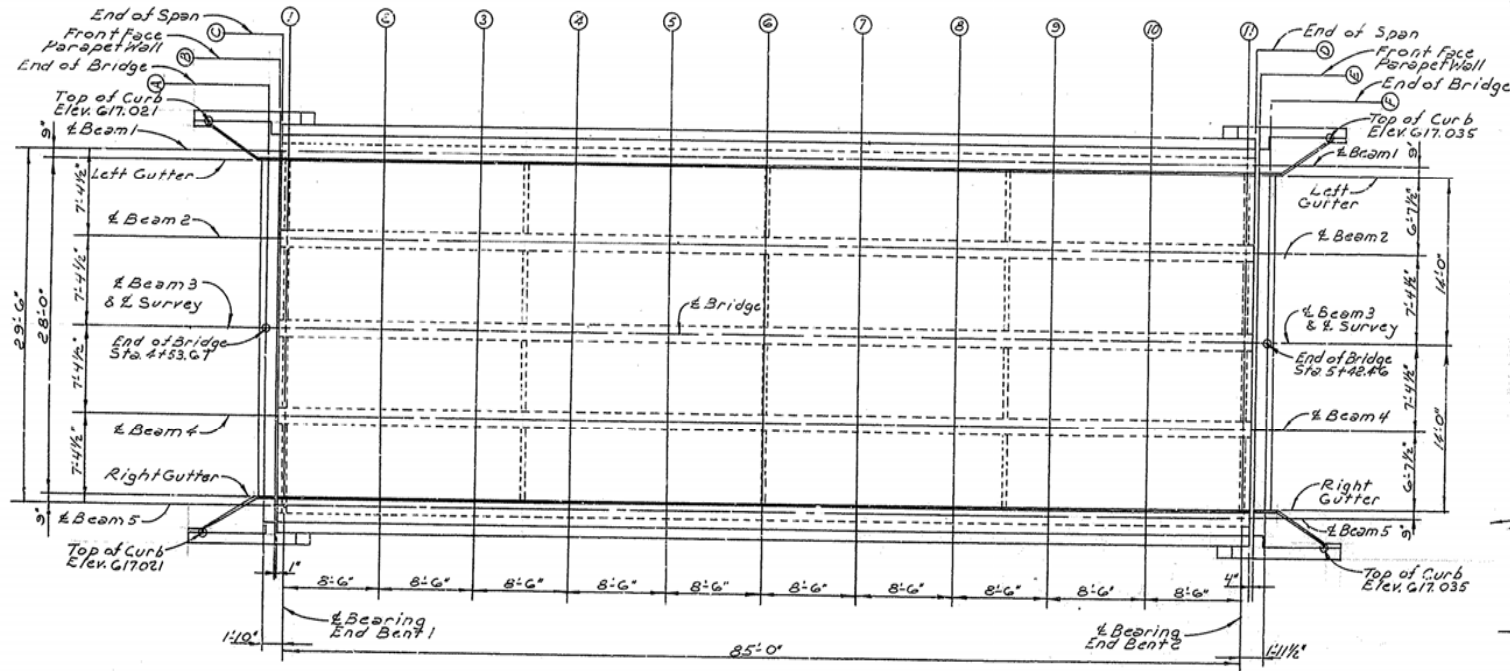
BRIDGE NUMBER 16081

TABLE OF ELEVATIONS

| Location | % Beam 1 | | % Beam 2 | | | | % Beams 3 & 4 Bridge | | | % Beam 4 | | | % Beams 5 | | | Right Gutter | |
|-------------|-------------|----------------------|--------------|----------|-------------|--------------|----------------------|-------------|--------------|----------|-------------|--------------|-----------|----------------------|--------------|--------------|----------|
| | Left Gutter | Top of Slab @ Gutter | Top of Steel | Dim. 'X' | Top of Slab | Top of Steel | Dim. 'X' | Top of Slab | Top of Steel | Dim. 'X' | Top of Slab | Top of Steel | Dim. 'X' | Top of Slab @ Gutter | Top of Steel | | Dim. 'X' |
| Grid Line A | G/G.186 | | | | G/G.290 | | | | | | | | | | | | |
| B | G/G.189 | | | | G/G.293 | | | | | | | | | | | | G/G.186 |
| C | G/G.190 | | | | G/G.293 | | | | | | | | | | | | G/G.189 |
| 1 | G/G.192 | G/G.192 | 615.530 | 0.662 | G/G.295 | 615.650 | 0.645 | G/G.387 | 615.740 | 0.641 | G/G.295 | 615.660 | 0.635 | G/G.192 | 615.590 | 0.642 | G/G.192 |
| 2 | G/G.216 | G/G.216 | 615.530 | 0.686 | G/G.319 | 615.650 | 0.649 | G/G.411 | 615.760 | 0.671 | G/G.319 | 615.620 | 0.631 | G/G.216 | 615.590 | 0.666 | G/G.216 |
| 3 | G/G.235 | G/G.235 | 615.590 | 0.645 | G/G.338 | 615.700 | 0.638 | G/G.430 | 615.790 | 0.640 | G/G.338 | 615.710 | 0.628 | G/G.235 | 615.580 | 0.655 | G/G.235 |
| 4 | G/G.249 | G/G.249 | 615.580 | 0.669 | G/G.352 | 615.700 | 0.652 | G/G.444 | 615.790 | 0.654 | G/G.352 | 615.700 | 0.652 | G/G.249 | 615.560 | 0.689 | G/G.249 |
| 5 | G/G.257 | G/G.257 | 615.570 | 0.687 | G/G.361 | 615.700 | 0.661 | G/G.453 | 615.790 | 0.663 | G/G.361 | 615.700 | 0.661 | G/G.257 | 615.560 | 0.677 | G/G.257 |
| 6 | G/G.261 | G/G.261 | 615.570 | 0.691 | G/G.365 | 615.700 | 0.665 | G/G.457 | 615.790 | 0.667 | G/G.365 | 615.700 | 0.665 | G/G.261 | 615.560 | 0.701 | G/G.261 |
| 7 | G/G.260 | G/G.260 | 615.580 | 0.680 | G/G.363 | 615.700 | 0.663 | G/G.455 | 615.790 | 0.665 | G/G.363 | 615.700 | 0.663 | G/G.260 | 615.560 | 0.700 | G/G.260 |
| 8 | G/G.253 | G/G.253 | 615.590 | 0.669 | G/G.357 | 615.710 | 0.647 | G/G.449 | 615.800 | 0.649 | G/G.357 | 615.710 | 0.647 | G/G.253 | 615.570 | 0.683 | G/G.253 |
| 9 | G/G.242 | G/G.242 | 615.600 | 0.642 | G/G.345 | 615.720 | 0.625 | G/G.437 | 615.810 | 0.627 | G/G.345 | 615.720 | 0.625 | G/G.242 | 615.580 | 0.662 | G/G.242 |
| 10 | G/G.225 | G/G.225 | 615.560 | 0.665 | G/G.329 | 615.680 | 0.649 | G/G.421 | 615.780 | 0.641 | G/G.329 | 615.670 | 0.657 | G/G.225 | 615.560 | 0.665 | G/G.225 |
| 11 | G/G.207 | G/G.207 | 615.560 | 0.644 | G/G.306 | 615.680 | 0.621 | G/G.399 | 615.780 | 0.619 | G/G.307 | 615.670 | 0.637 | G/G.207 | 615.570 | 0.634 | G/G.207 |
| D | G/G.202 | | | | G/G.306 | | | G/G.397 | | | G/G.306 | | | | | | G/G.202 |
| E | G/G.201 | | | | G/G.305 | | | G/G.394 | | | G/G.305 | | | | | | G/G.201 |
| F | G/G.198 | | | | G/G.302 | | | G/G.394 | | | G/G.302 | | | | | | G/G.198 |



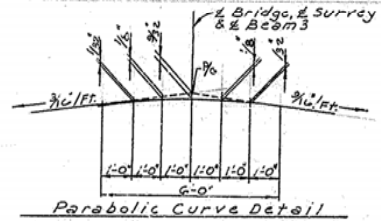
TYPICAL CROSS SECTION



PLAN

CONSTRUCTION NOTE

1. Take elevations on top of steel at the points indicated after all diaphragms are in place, but before forms for pouring slab are in place.
2. Compute Dimension 'X' as follows: "Elevation Top of Slab" minus "Elevation Top of Steel" equals "Dimension 'X'". "Elevation Top of Slab" includes camber due to weight of the slab.
3. For setting template measure dimension 'X' above top of steel. Do not set template by elevations.
4. Construct hand rail plinths to sidewalk grade. Do not add camber to handrail plinths.
5. Indicates points where elevations are taken.
6. Slab elevation tolerances are based on delivery to the bridge site of fabricated steel having dimension and sweep tolerances meeting the requirements of A.S.T.M. Designation A6 for rolled beams, and are based on erection of the steel undamaged.



Parabolic Curve Detail

Bridge Over Williams Creek Sheet 9

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
BOYD
 KY.966 (COALTON-TRACE)
 ROAD

STATION 4+98.00 PROJECT NO. _____
 BRIDGE NUMBER _____ DRAWING NO. 1608/

ELEVATIONS