SECTION B-B

PLAN OF DRAIN

SECTION A-A

Details for E. B. Lane

Details of Floor Drain Modification

Notes: This drawing is not to scale. Follow dimensions.
### General Notes:

Level signs on brackets.  
All bolts, nuts and washers shall be galvanized.  
All structural steel shall be A.S.T.M. A109, Grade 56, galvanized.  
Cutting of and work is interrupted by light dashed lines. Heavy lines indicate new work.  
Concrete anchors shall be the non-drilling expansion type.  
They shall have a certified concrete pullout strength of 2,000 psi minimum.  
The anchor shall be pre-drilled with a conventional carbide masonry bit.  
The contractor shall verify all dimensions in field before ordering new steel.  
The cost of furnishing and erecting the sign supports shall be paid for as "Fabricated Sign Support Brackets" per pound (tied, then).  

### Sign Support Brackets, Sign No. 16

(Count side of bridge A-116 on N.E. 1-14 under Big Bend Road)
PART PLAN SHOWING LOCATION OF SIGN
Note: All longitudinal dimensions are horizontal.

PART ELEVATION B-B

GENERAL NOTES:

Center and level sign.

All bolts, nuts and washers shall be galvanized.

A 1/2 inch loose plastic washer, 3/4 inch outside diameter shall be placed on each side of the sign at all concrete anchor connections.

Concrete anchors shall be the non-drilling expansion type. They shall have a certified pullout strength (minimum 5,000 pounds in 30 days) comparable to anchors pre-arrived with a conventional concrete masonry unit.

Existing vertical clearance sign to be removed.

See Special Provisions for removal of existing sign.

If any concrete is damaged when removing sign brackets it shall be restored with special mortar.

The existing steel not utilized shall be cut off one inch below the finished tops of the concrete.

All holes existing after sign brackets have been removed shall be filled with special mortar.

Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

The contractor shall verify all dimensions in field before erecting the sign.

The cost of furnishing and erecting the sign (including the concrete anchors complete-in-place) shall be paid for as "Bridge Mounting Signs Without Brackets" per each sign. Item:

SIGN NO. 17
(South side of bridge A-1718 on Rte. 146 under Big Bend Road)
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION
U.J.P. 150' - 81' - 81' - 40' 1 CONTINUOUS CONCRETE BOX GIRDER SPANS

SECTION THRU SLAB

Resin Anchor System

Superstructure Repair (Informal) (See Sec 104)

1" Bent Plate

5/16" holes for 1/2" bolts with lock washers and nuts

$5/16" holes for 1/2" bolts with lock washers and nuts

14" x 6" x 6" Drain Extension

DETAIL "A"

5/16" hole for 1/2" resin anchor system and 1/2" threaded rod with lock washer and nut

5/16" hole for 1/2" resin anchor system and 1/2" threaded rod with lock washer and nut

PART SECTION SHOWING BENT PLATE

PART SECTION SHOWING BRACKET ASSEMBLY

Superstructure Repair (Informal) (See Sec 104)

The contractor shall use one of the qualified resin anchor systems in accordance with Sec 103.

Cost of furnishing and installing the resin anchor system complete-in-place will be considered completely covered by the contract unit price for Slab Drain Extensions only.

The 1/2" diameter resin anchor systems shall have a minimum ultimate burst strength of 2500 lbs. in concrete with E = 4,000 psi.

END BENT NO. 1

REPAIRS TO
BRIDGE: BIG BEND ROAD (WBL) UNDERPASS

STATE ROAD FROM RTE. 1-270 TO RTE. 1-55
ABOUT 2.3 MILES FROM RTE. 1-270
PROJECT NO. STA. 110021.35 (Uncurring Existing)
JOB NO. 061172
RTE. 1-44

ST. LOUIS COUNTY

Sheet No. 1 of 1

General Notes:
Design Specifications:
2002-ASHTO 11th Edition
Bridge Deck Rating = 5
Verify Dimensions:
Contractor shall verify all dimensions in field
before ordering materials.
Traffic Control:
See roadway signs for traffic control during construction.
Miscellaneous:
Outline of old work is indicated by dashed lines. Heavy lines indicate new work.
"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

Estimated Quantities

<table>
<thead>
<tr>
<th>Item</th>
<th>Total</th>
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<tbody>
<tr>
<td>Superstructure Repair (Informal)</td>
<td>220</td>
</tr>
<tr>
<td>Aluminum Zinc-Indium Anode</td>
<td>120</td>
</tr>
<tr>
<td>Slab Drain Extensions</td>
<td>11</td>
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</tbody>
</table>

Note: This drawing is not to scale. Follow dimensions.

Designed May 2003
Detail ed May 2003
Printed June 2003
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION
U.I.P. (50' - 81' - 81' - 40') CONTINUOUS CONCRETE BOX GIRDER SPANS

FINAL PLANS

General Notes:
Design Specifications:
2002-ASHTO 17th Edition
Verify Dimensions:
Contractor shall verify all dimensions in field before ordering materials.
Traffic Control:
See roadway plans for traffic control during construction.
Miscellaneous:
Outline of old work is indicated by dashed lines. Heavy lines indicate new work.

Final Field Measured Quantities

<table>
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<tr>
<th>Item</th>
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<tbody>
<tr>
<td>Substructure Repair (Informal)</td>
<td>sq ft</td>
</tr>
<tr>
<td>Superstructure Repair (Informal)</td>
<td>sq ft</td>
</tr>
<tr>
<td>Slab Drain Extensions</td>
<td>each</td>
</tr>
<tr>
<td>Aluminum-Zinc-Indium Anode</td>
<td>sq ft</td>
</tr>
</tbody>
</table>

The contractor shall use one of the resin anchor systems listed in the tab special provisions. These anchor systems shall be installed according to the manufacturer's specifications, except for the minimum required insertion depth:

Cost of furnishing and installing the anchor system complete in place shall be included in the price bid for Slab Drain Extensions.

The 1/2 inch resin anchor systems shall have a minimum ultimate tensile strength of 5000 psi, in concrete with 4000 psi, see special provisions.

REPAIRS TO BRIDGE: BIG BEND ROAD (WBL) UNDERPASS
STATE ROAD FROM RTE. I-270 TO RTE. I-65
ABOUT 3.5 MILES FROM RTE. I-270
PROJECT NO. STA. 1100+21.351 (Match Existing)
JOB NO. J61672 RTE. I-44

ST. LOUIS COUNTY

END BENT NO. 1

Part Section Showing Bent Plate

Part Section Showing Bracket Assembly

Note: This drawing is not to scale. Follow dimensions.

1

Sheet No. 1 of 1.
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION
U.1.P. (50′ - 81′ - 81′ - 40′) CONTINUOUS CONCRETE BOX GIRDER SPANS

General Notes:
- Design Specifications:
  - 2002 AASHTO 11th Edition
  - Bridge Design Deck Rating "C"
- Verify Dimensions:
  - Contractor shall verify all dimensions in field before ordering materials.
- Traffic Control:
  - See roadway plans for traffic control during construction.
- Miscellaneous:
  - Outline of old work is indicated by dashed lines. Heavy lines indicate new work.
  - "Sec" refers to the sections in the standard and supplemental specifications unless otherwise specified.

Estimated Quantities

<table>
<thead>
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<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Aluminum-Zinc-Ionomide</td>
<td>250</td>
</tr>
</tbody>
</table>

REPAIRS TO
BRIDGE: BIG BEND ROAD (EBL) UNDERPASS

STATE ROAD FROM RTE. 1-270 TO RTE. 1-95
ABOUT 2.3 MILES FROM RTE. 1-270
PROJECT NO. STA. 110+21.39+ (Match Existing)
JOB NO. 6J11672 RTE. 1-44

ST. LOUIS COUNTY

[Signature]

A17164

Note: This drawing is not to scale. Follow dimensions.