

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD DIST. NO. | STATE | FED. AID PR. |
|--------------|-------------|--------------|-------------|---------------------|-------|--------------|
| | | | | 6 | ARK. | |
| | | | | JOB NO. | | R300 |

06671, 06672, 06673 QUANTITIES

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. R30087

| BRIDGE NO. CODE NO. | NAME PLATE TITLE | UNIT OF STRUCTURE | ITEM NO. | 205 | 802 | 802 | 803 | SP & 804 | 805 | 805 | 805 | 805 | 812 | 816 | 816 |
|---------------------------|------------------------|--------------------------------|----------|--|-----------------------------------|---------------------------------------|---|--|--|--|------------------------------------|------------------------------|-------------------------------------|-------------------|------------------|
| | | | ITEM | REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO.) | CLASS S CONCRETE- BRIDGE | CLASS S(AE) CONCRETE- BRIDGE | CLASS I PROTECTIVE SURFACE TREATMENT | REINFORCING STEEL- BRIDGE (GRADE 400) | CONCRETE PILING (405 mm OCT. OR 355 mm SQ) | TEST PILE (405 mm OCT. OR 355 mm SQ) | CONCRETE PILING (455 mm SQ.) | TEST PILE (455 mm SQ.) | BRIDGE NAME PLATE (TYPE C) | FILTER BLANKET | DUMPED RIPRAP |
| | | | | UNIT | LUMP SUM | CU. METER | CU. METER | LITER | KILOGRAM | METER | METER | METER | METER | EACH | SQ. METER |
| 06671 X021 | LITTLE CANEY SLOUGH | BENT NO. 1 | | 9.04 | | | | 764 | 44.0 | 12.5 | | | 1 | 261 | 118 |
| | | BENT NO. 2 | | 6.64 | | | | 664 | | | | | | | |
| | | BENT NO. 3 | | 6.64 | | | | 716 | | | 82.5 | 18.0 | | | |
| | | BENT NO. 4 | | 6.64 | | | | 664 | | | 82.5 | | | | |
| | | BENT NO. 5 | | 9.04 | | | | 764 | 55.0 | | | | | 275 | 125 |
| | | 4 - 9 M R.C. DECK GIRDER SPANS | | | 179.00 | 42 | 20,588 | | | | | | | | |
| | | SITE NO. 1 (BRIDGE NO. 02019) | 1 | | | | | | | | | | | | |
| | | TOTALS FOR BRIDGE NO. 06671 | 1 | 38.00 | 179.00 | 42 | 24,160 | 99.0 | 12.5 | 231.0 | 18.0 | 1 | 536 | 243 | |
| 06672 X021 | LITTLE CANEY CREEK | BENT NO. 1 | | 9.06 | | | | 764 | 50.0 | 14.0 | | | 1 | 246 | 112 |
| | | BENT NO. 2 | | 6.64 | | | | 664 | | | 67.5 | | | | |
| | | BENT NO. 3 | | 6.64 | | | | 664 | | | 67.5 | | | | |
| | | BENT NO. 4 | | 6.64 | | | | 664 | | | 54.0 | 15.0 | | | |
| | | BENT NO. 5 | | 6.64 | | | | 716 | | | 67.5 | | | | |
| | | BENT NO. 6 | | 6.64 | | | | 664 | | | 67.5 | | | | |
| | | BENT NO. 7 | | 6.64 | | | | 664 | | | 54.0 | 15.0 | | | |
| | | BENT NO. 8 | | 6.64 | | | | 664 | | | 67.5 | | | | |
| | | BENT NO. 9 | | 9.06 | | | | 764 | 62.5 | | | | | 213 | 97 |
| | | 8 - 9 M R.C. DECK GIRDER SPANS | | | 355.60 | 85 | 41,762 | | | | | | | | |
| | | SITE NO. 2 (BRIDGE NO. 02018) | 1 | | | | | | | | | | | | |
| | | TOTALS FOR BRIDGE NO. 06672 | 1 | 64.60 | 355.60 | 85 | 47,990 | 112.5 | 14.0 | 445.5 | 30.0 | 1 | 459 | 209 | |
| 06673 X021 | CYPRESS CREEK | BENT NO. 1 | | 9.04 | | | | 764 | 44.0 | 12.5 | | | 1 | 146 | 67 |
| | | BENT NO. 2 | | 6.64 | | | | 664 | | | 55.0 | | | | |
| | | BENT NO. 3 | | 6.64 | | | | 716 | | | 44.0 | 12.5 | | | |
| | | BENT NO. 4 | | 6.64 | | | | 664 | | | 55.0 | | | | |
| | | BENT NO. 5 | | 9.04 | | | | 764 | 55.0 | | | | | 115 | 53 |
| | | 4 - 9 M R.C. DECK GIRDER SPANS | | | 180.10 | 42 | 20,780 | | | | | | | | |
| | | SITE NO. 3 (BRIDGE NO. 02017) | 1 | | | | | | | | | | | | |
| | | TOTALS FOR BRIDGE NO. 06673 | 1 | 38.00 | 180.10 | 42 | 24,352 | 99.0 | 12.5 | 154.0 | 12.5 | 1 | 261 | 120 | |
| TOTALS FOR JOB NO. R30087 | | | | 3 | 140.60 | 714.70 | 169 | 96,502 | 310.5 | 39.0 | 830.5 | 60.5 | 3 | 1256 | 572 |

ED FAIN
DESIGN SECTION SUPERVISOR



BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
ROSSSTON - OUACHITA CO. LINE STRS.
NEVADA COUNTY

ROUTE 4 SEC. 7
LITTLE ROCK, ARK.

DRAWN BY: LM DATE: 4-24-96
CHECKED BY: C.J.F. DATE: 5-3-96 SCALE: NO
DESIGNED BY: DATE:

BRIDGE NO. 06671, 06672, 06673 DRAWING NO. 376

Use Type B2 Approach Gutters at both ends of Bridge. See dwg. no. 36526

Excavate channel as shown; approx. 260 cubic meters of channel excavation

Toe of fill slope

LITTLE CANEY SLOUGH

Dumped Riprap 450 mm thick placed on filter blanket. (Top of riprap Elev. 71.76 m)

9.75 km to West City limits of Rosston

Tan. Dist. = 4.930 m

Tan. Dist. over 150 m

S83°04'59"E

C.L. Bridge & Constr.

11.5 km to Ouachita County line

HYDRAULIC DATA

| Flood Description | Frequency | Total Discharge | Discharge thru bridge opening | *Natural Water Surface Elevation | Water Surface Elevation with Backwater |
|-------------------|-----------|-----------------|-------------------------------|----------------------------------|--|
| | Years | CMS | CMS | Meters | Meters |
| Design | 50 | 238.7 | 89.3 | 71.46 | 71.94 |
| Base | 100 | 281.8 | 104.1 | 71.62 | 72.10 |
| Extreme | 500 | 390.8 | 141.3 | 71.90 | 72.47 |
| Overtopping | >500 | - | - | - | - |

*Unrestricted water surface without structure or roadway approaches.

Drainage area = 107.5 sq. km (includes Little Caney Creek)
Historical H.W. Elev. = 71.44

Beg. Bridge Sta. 278+12.000

Theoretical Beg. of Slope Sta. 278+10.500

Proposed grade line

Elev. 70.2

1.5- 1.9, N+1
2.7- 3.2, N+9
4.6- 5.0, N+7
6.1- 6.6, N+6
7.6- 8.1, N+10
9.1- 9.6, N+30
10.7- 11.1, N+24
12.2- 12.6, N+29
13.7- 14.2, N+31
15.2- 15.7, N+63
16.8- 17.2, N+60
18.3- 18.7, N+65
19.8- 20.3, N+91

Bent No.

Sta. 278+12
C.L. of Constr.

① Taken @ Sta. 278+12.000

PLAN

Total Length of Bridge = 36 m

4 - 9 m R.C.D.G. Spans

Level Grade

C.L. Deck Elev. 73.300

End Bridge Sta. 278+48.000

Theoretical Beg. of Slope Sta. 278+49.500

Concrete Parapet rail

Elev. 70.4

3.0- 3.5, N+9
4.6- 5.0, N+3
6.1- 6.6, N+3
7.6- 8.1, N+6
9.1- 9.6, N+44
10.7- 11.1, N+37
12.2- 12.6, N+34
13.7- 14.2, N+61
15.2- 15.7, N+73
16.8- 17.2, N+63
18.3- 18.7, N+50

11.0 m piles, Bent 1 or 5
16.5 m piles, Bents 2 - 4

ELEVATION

Sta. 278+47
C.L. of Constr.

GENERAL NOTES

All dimensions are in meters unless otherwise noted.
BENCH MARKS: Chiseled Sq., NE corner bridge, 2.98 m Lt. Sta. 278+42.93, Elev. 72.96

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (1996 edition) with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications (1994 edition).

LIVE LOADING: HL93
SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:
Class 5/ACI Concrete (superstructure) $f'_c = 28.0$ MPa
Class 5 Concrete (substructure) $f'_c = 24.0$ MPa
Reinforcing Steel (AASHTO M31 or M53, Gr. 400) $f_y = 400$ MPa

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

CONCRETE PILING: Piling for Bents 1 and 5 shall be 405 mm octagonal or 355 mm square precast concrete and shall be driven to a minimum safe bearing capacity of 390 kN per pile. Piling shapes shall not be mixed. Piling in Bents 2 thru 4 shall be 455 mm square precast concrete and shall be driven to a minimum safe bearing capacity of 490 kN per pile. All piling shall be driven with an approved air, steam, or diesel hammer. Piling in end bents shall be driven after embankment to bottom of cap is in place and shall have a minimum penetration of 6.0 m below natural ground. Piling in Bents 2 thru 4 shall be driven to a minimum tip elevation of 59.5. Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. Drive one 12.5 m test pile in Bent 1, and one 18.0 m test pile in Bent 3.

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in Subsection 802J9 for Class 5 Tined Bridge Roadway Surface Finish.

DETAIL DRAWINGS:
End Bents 37650
Intermediate Bents 37651
9 m R.C.D.G. Spans 37652-37654
Concrete Piling 36506
Type C Bridge Name Plate 36502
Embankment Construction 36500
Dumped Riprap and Filter Blanket 36501
Computing Excavation for Structures 36501
Type B2 Approach Gutters 36526

DRAWING NO.

EXISTING BRIDGE: The existing bridge No. 02019 (log 17.28) is 61 m wide and 35.4 m long and consists of 6-1 Beam Spans supported by a timber substructure. The existing bridge is located approximately 15.0 meters upstream from the proposed new bridge.

REMOVAL AND SALVAGE: After the new bridge is open to traffic, the existing bridge (02019) shall be removed in accordance with section 205 of the Standard Specifications. All material from the existing bridge shall become the property of the contractor except the Steel I-Beams which shall remain the property of the State.

Boring Legend

A-Moist, Very Loose, Brown to Gray Silty Sand with Organic Matter
B-Moist, Loose, Gray Silty Sand
C-Wet, Loose, Gray Silty Sand
D-Wet, Loose, Gray Silty Sand with Clay Seams
E-Wet, Loose, Gray Silty Sand and Gravel
F-Wet, Medium Dense, Gray Silty Sand
G-Wet, Dense, Gray Silty Sand
H-Wet, Very Dense, Gray Silty Sand with Organic Matter
J-Moist, Very Dense, Gray Silty Sand with Clay Seams and Traces of Organic Matter
K-Moist, Very Hard, Gray Clay with Silt and Sand Lenses and Traces of Organic Matter
L-Moist, Medium Stiff, Gray Sandy, Silty Clay with some Organic Matter
M-Moist, Stiff, Gray Clay with Silt Seams
N-Moist to Wet, Loose, Gray Silty Sand
O-Wet, Very Loose, Gray Silty Sand
P-Wet, Loose to Medium Dense, Gray Silty Sand with some Clay Seams
Q-Wet, Dense, Gray Silty Sand with Clay Seams and Organic Matter
R-Wet, Dense, Gray Silty Sand with Organic Matter and some Gravel
S-Wet, Very Dense, Gray Silty Sand
T-Moist, Very Hard, Gray Clay with Silt and Sand Lenses
U-Moist, Very Dense, Gray Silty Sand with some Clay Seams and Organic Matter

LAYOUT OF BRIDGE OVER LITTLE CANEY SLOUGH

ROSSTON - OUACHITA CO. LINE STRS. & APPRS. (S)
NEVADA COUNTY

ROUTE 4 SEC. 7

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: LM DATE: 11-29-95

CHECKED BY: ETE DATE: 2-12-96 SCALE: 1:200

DESIGNED BY: MEC DATE: 11-7-95

BRIDGE NO. 06671

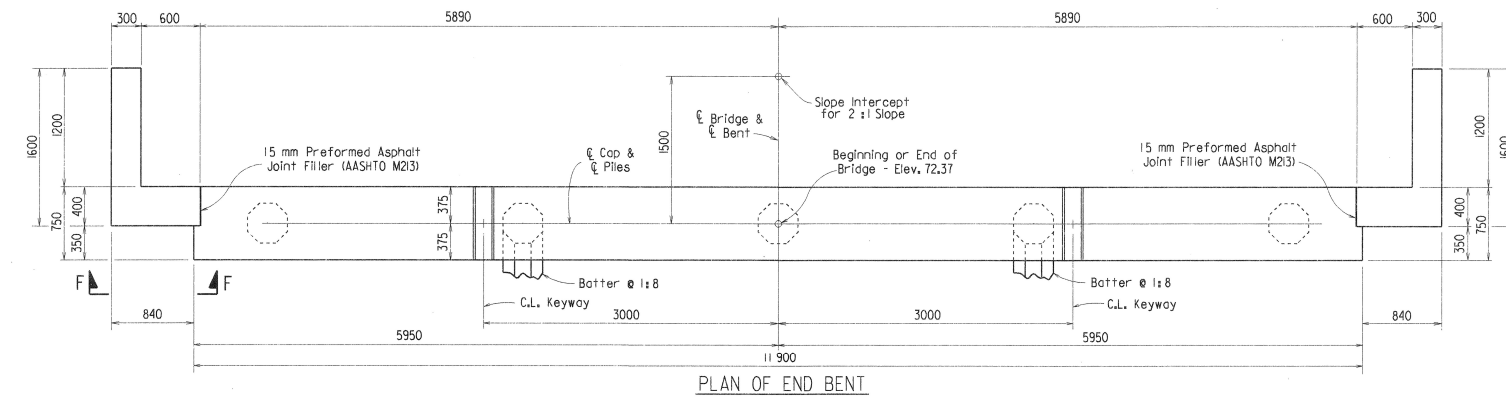
DRAWING NO. 37649



BRIDGE ENGINEER

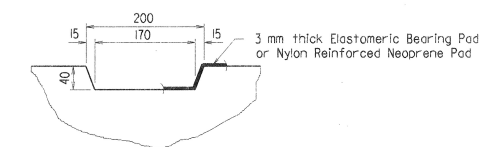
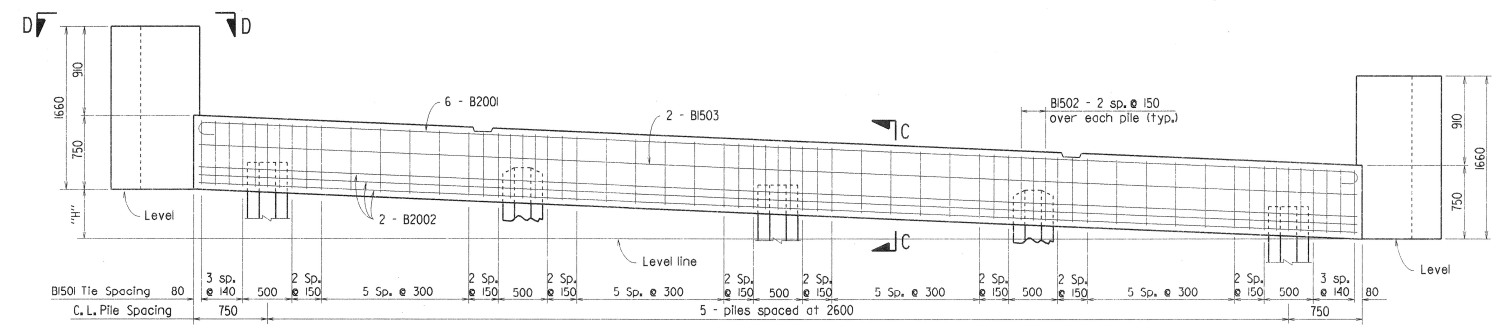
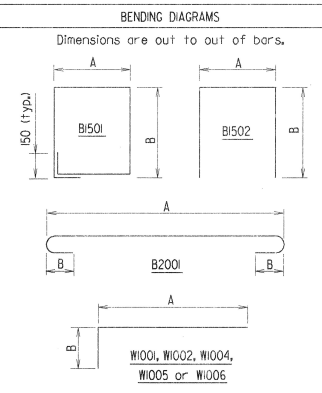


br30087x11



BAR LIST - PER BENT

| MARK | NUMBER REQUIRED | LENGTH | A | B | P.D. |
|-------|-----------------|--------|--------|------|------|
| B1501 | 48 | 2700 | 650 | 635 | 70 |
| B1502 | 15 | 1850 | 650 | 635 | 70 |
| B1503 | 2 | 11 800 | | | Str. |
| B2001 | 6 | 12 240 | 11 800 | 160 | 120 |
| B2002 | 6 | 11 800 | | | Str. |
| W1001 | 10 | 1980 | 1200 | 800 | 50 |
| W1002 | 10 | 2080 | 1500 | 600 | 50 |
| W1003 | 44 | 1560 | | | Str. |
| W1004 | 8 | 2480 | 1200 | 1300 | 50 |
| W1005 | 8 | 2580 | 1500 | 1100 | 50 |
| W1006 | 18 | 1580 | 800 | 800 | 50 |



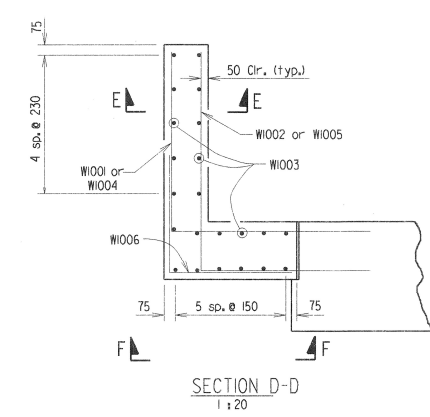
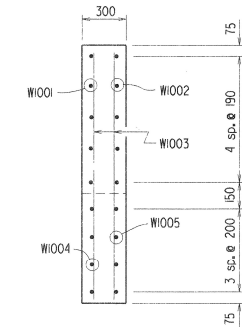
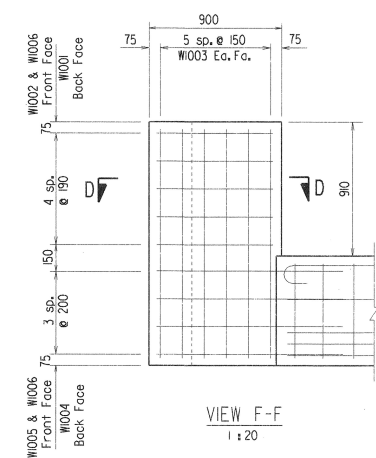
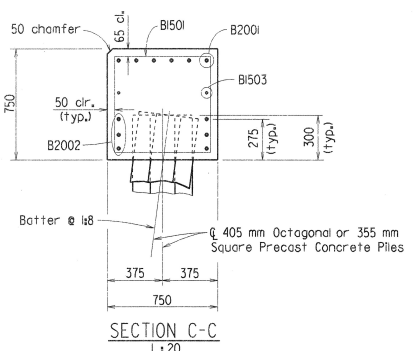
Note: 3 mm thick Elastomeric Bearing Pad or Nylon Reinforced Neoprene Pad to be in full contact with bent cap surfaces when placing superstructure concrete. See span details for material specifications and payment.

TABLE OF VARIABLES

| Bt. No. | "H" |
|---------|-----|
| 1 | 554 |
| 5 | 251 |

ELEVATION OF END BENT

Looking ahead - Bt. 5
Looking Back - Bt. 1



GENERAL NOTES

Stations and elevations are in meters. All other dimensions are in millimeters (mm) unless otherwise noted.

All concrete shall be Class "S" with a minimum 28 day compressive strength $f'_c=24.0$ MPa and shall be poured in the dry. All exposed corners shall be chamfered 20 mm unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Grade 400 (yield strength = 400 MPa).

Preformed Asphalt Joint Filler shall be measured and paid for as Class S Concrete-Bridge.

All piles shall be 405 mm octagonal or 355 mm square precast concrete and shall be driven to a minimum safe bearing capacity of 390 kN per pile.

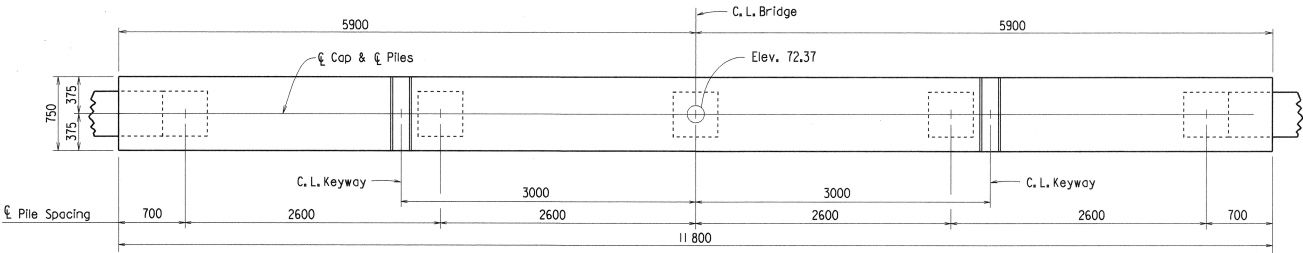
For additional information, see Layout.



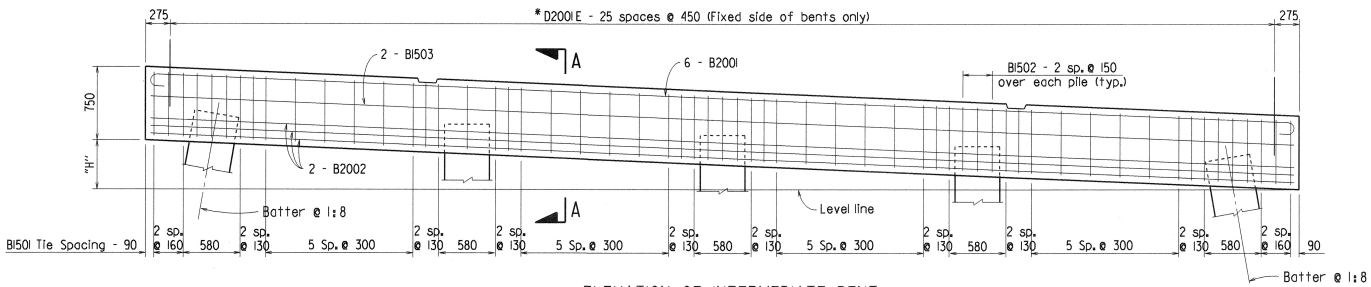
DETAILS OF END BENTS
LITTLE CANYE SLOUGH
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

ALTERED BY: LM DATE: 4-19-96
CHECKED BY: C.J.F. DATE: 4-22-96 SCALE: 1:30 OR AS NOTED
DESIGNED BY: C.J.F. DATE: 4-10-96
BRIDGE NO. 06671 DRAWING NO. 37650





PLAN OF INTERMEDIATE BENT

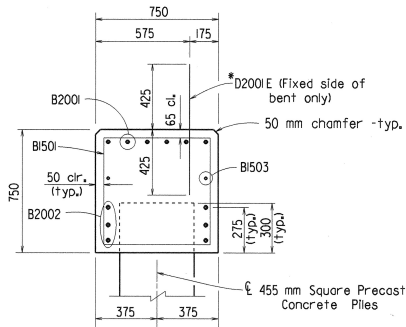


ELEVATION OF INTERMEDIATE BENT

Looking ahead

TABLE OF VARIABLES

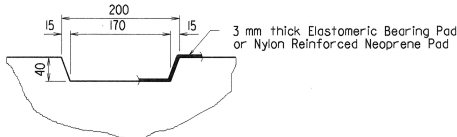
| Bt. No. | "H" |
|---------|-----|
| 2 | 472 |
| 3 | 397 |
| 4 | 323 |



SECTION A-A

N.T.S.

* D2001E bars shall be epoxy coated and shall be measured and paid for as "Reinforcing Steel-Bridge (Grade 400)".



KEYWAY DETAIL

N.T.S.

Note: 3 mm thick Elastomeric Bearing Pad or Nylon Reinforced Neoprene Pad to be in full contact with bent cap surfaces when placing superstructure concrete. See span details for material specifications and payment.

BAR LIST - PER BENT

| MARK | No. Req'd. | LENGTH | PIN. DIA. | BENDING DIAGRAMS |
|--------|------------|--------|-----------|------------------|
| B1501 | 46 | 2700 | 70 | |
| B1502 | 15 | 1850 | 70 | |
| B1503 | 2 | 11700 | Str. | |
| B2001 | 6 | 12140 | 120 | |
| B2002 | 6 | 11700 | Str. | |
| D2001E | ** | 850 | Str. | |

Note: Bars with an "E" suffix are epoxy coated.

** 26 for Fix - Exp.
52 for Fix - Fix

GENERAL NOTES

Stations and elevations are in meters. All other dimensions are in millimeters (mm) unless otherwise noted.

All concrete shall be Class "S" with a minimum 28 day compressive strength $f'_c = 24.0$ MPa and shall be poured in the dry. All exposed corners shall be chamfered 20 mm unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Grade 400 (yield strength = 400 MPa).

All piles shall be 455 mm square precast concrete and shall be driven to a minimum safe bearing capacity of 490 kN per pile.

For additional information, see Layout.

QUANTITIES (PER INTERMEDIATE BENT)

| Bent | Class S Concrete | Reinforcing Steel |
|---------|------------------|-------------------|
| Fix-Fix | 6.64 cu.meters | 716 kg |
| Fix-Exp | 6.64 cu.meters | 664 kg |



DETAILS OF INTERIOR BENTS
LITTLE CANEY SLOUGH

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

ALTERED BY: LM DATE: 4-19-96

CHECKED BY: C.J.F. DATE: 4-23-96

DESIGNED BY: C.J.F. DATE: 4-4-96

BRIDGE NO. 06671

SCALE: 1:30 OR AS NOTED

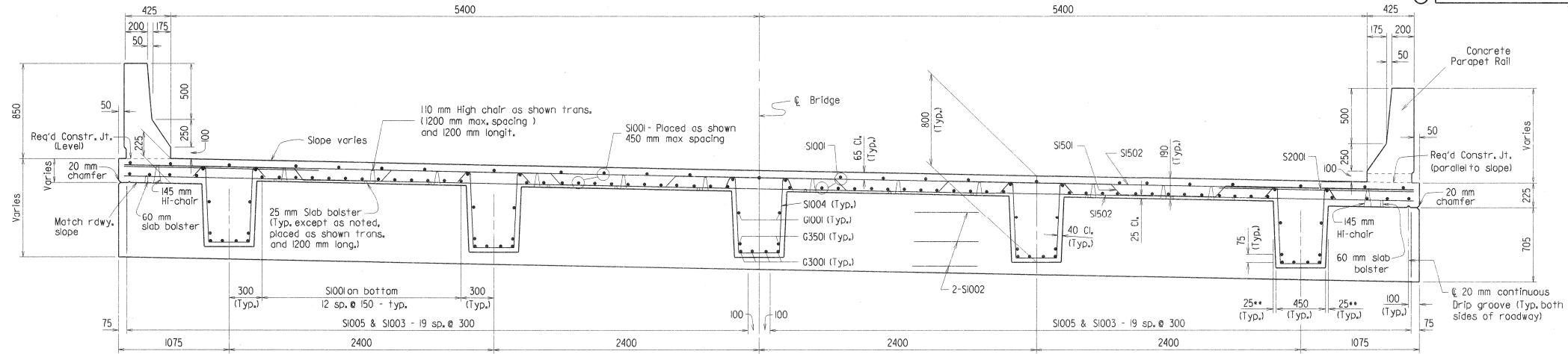
DRAWING NO. 37651



Note: One #15 bar in the top and one #15 bar in the bottom may be substituted for each bar S1501. Payment will be based on the weight of bar S1501.

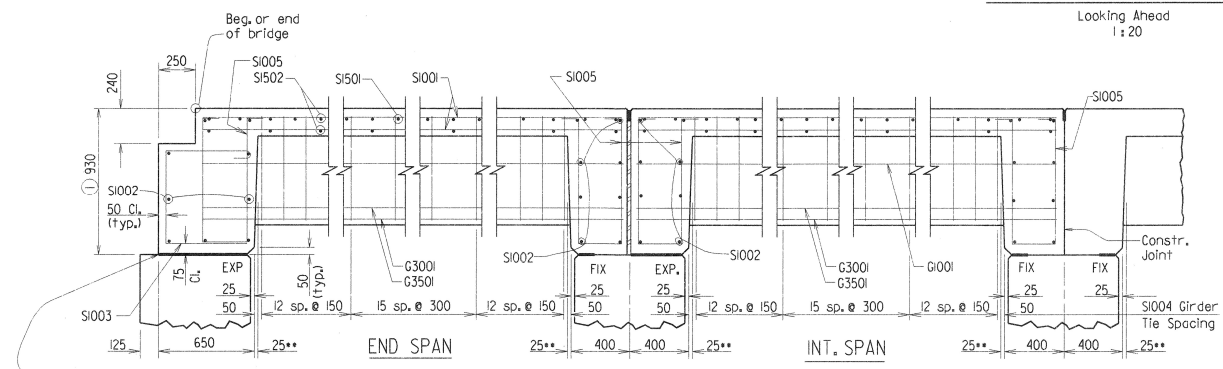
Note: Class I Protective surface treatment shall be applied to the roadway surface and the roadway face and top of concrete parapet rail.

| | | | | | |
|---------|-------------|-------|----|--|--|
| 6 | ARK. | | | | |
| JOB NO. | R30087 | 2.6 | 91 | | |
| 06671 | SPAN DTL'S. | 37652 | | | |



SECTION THRU ROADWAY

** This dimension may be increased from 25mm to 40mm. Method of measurement and basis of payment to be based upon 25mm.

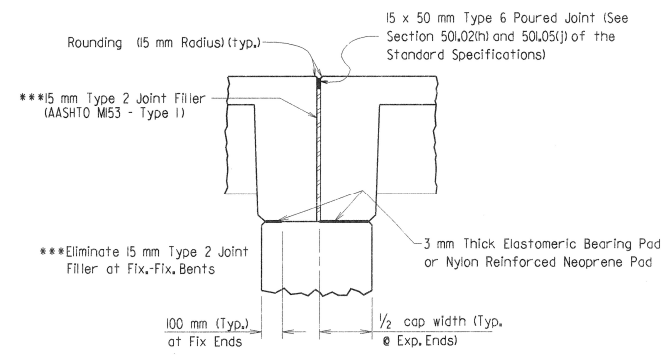


LONGITUDINAL SECTION AT CL BRIDGE

** This dimension may be increased from 25mm to 40mm. Method of measurement and basis of payment to be based upon 25mm.

Note: For location of Fixed and Expansion Joints, see Bridge Layout.

① Varies under transition end panel on high side.



Note: All joints to be cleaned by sandblasting or other approved methods before pouring joint.

TYPICAL SECTION THRU JOINT

TABLE OF QUANTITIES

| Span | Reinf. kg | Class S(AE) Conc. m ³ | Structural Steel kg (2) |
|------|-----------|----------------------------------|-------------------------|
| End | 5139 | 45.85 | — |
| Int. | 5155 | 43.65 | 41 |

(2) For information only

GENERAL NOTES

Stations and elevations are in meters. All other dimensions are in millimeters unless otherwise noted.

All concrete shall be Class S(AE). All exposed corners shall be chamfered 20 mm unless otherwise noted.

The concrete in the girders, end diaphragms, and deck shall be placed in one continuous pour.

Reinforcing steel to be AASHTO M31 or M53 (Grade 400). Bar supports of reinforcing bars will not be paid for directly, but shall be considered subsidiary to the item "Reinforcing Steel - Bridge".

Elastomeric bearing pad or nylon reinforced neoprene pad, Type 2 joint filler, structural steel, and Type 6 poured joints shall be measured and paid for as Class S(AE) Concrete-Bridge. Elastomeric bearing pad material shall meet the requirements of Section 808 of the Standard Specifications for unreinforced pads. Nylon reinforced neoprene pad material shall meet the requirement of section 807.20 of the Standard Specifications. The pad shall be in one piece for the full length and width of the bearing.

Live Loadings: HL93

Load To Interior Girder

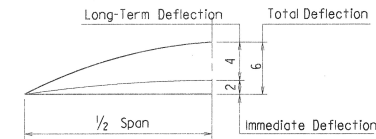
Dead Load: 25.44 kN/m *

Live Load: 0.7528 Lanes + Impact

* Includes 2.38 kN/m Future Wearing Surface

Unit Stresses: 28 day compressive strength of Class S(AE) Concrete = 28.0 MPa.

Yield Strength of Reinforcing Steel = 400 MPa.



DEAD LOAD CAMBER DIAGRAM

N.T.S.



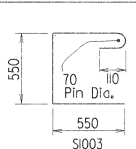
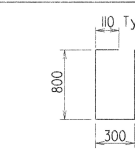

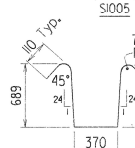
SHEET 1 OF 3
DETAILS OF
9 METER R.C. DECK GIRDER
10.8 METER CL. SUPERELEVATED RDWY.
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JWD DATE: 2-1-96
CHECKED BY: CJE DATE: 5-1-96 SCALE: AS NOTED
DESIGNED BY: STD. DATE:
BRIDGE NO. 06671 DRAWING NO. 37652

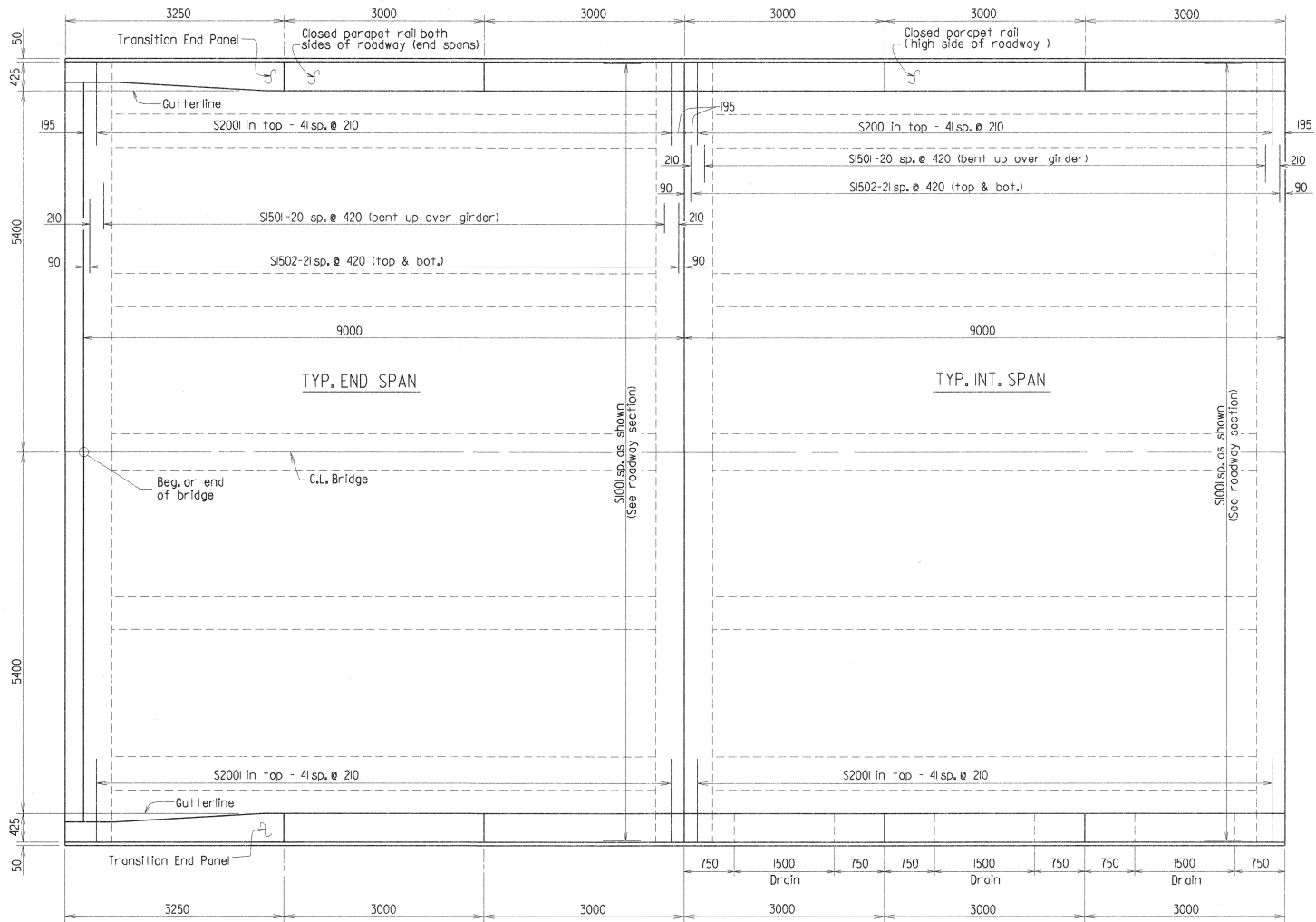


REPRODUCTION
JUL 23 1996

BAR LIST - PER SPAN

| Mark | No. Req'd | | Length | Pin Dia. | Bending Diagrams (Dimensions are out to out of bars.) |
|-------|-----------|------|--------|----------|---|
| | End | Int. | | | |
| S1001 | 95 | 95 | 8900 | Str. |  |
| S1002 | 17 | 16 | 11650 | Str. | |
| S1003 | 40 | — | 1800 | 50 | |
| S1004 | 200 | 200 | 2020 | 50 | |
| S1005 | 80 | 80 | 2030 | 50 | |
| S1501 | 21 | 21 | 11880 | 80 |  |
| S1502 | 44 | 44 | 11650 | Str. | |
| S2001 | 84 | 84 | 1770 | Str. | |
| G1001 | 10 | 10 | 8850 | Str. | |
| G3001 | 20 | 20 | 8850 | Str. | |
| G3501 | 10 | 10 | 8850 | Str. |  |
| | | | | | |
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| | | | | | |
| | | | | | |

For additional bending diagrams, see Drawing No. 37654.



PLAN

MS&P/PLW/ED
JUL 23 1996



SHEET 2 OF 3
DETAILS OF
9 METER R.C. DECK GIRDER
10.8 METER CL. SUPERELEVATED RDWY.
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JWD DATE: 2-1-96
CHECKED BY: C.J.F. DATE: 5-4-96 SCALE: 1:40
DESIGNED BY: STD. DATE:
BRIDGE NO. 06671 DRAWING NO. 37653



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