



| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD DIST. NO. | STATE  | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|---------------------|--------|--------------------|-----------|--------------|
|              |             |              |             | 6                   | ARK.   |                    |           |              |
|              |             |              |             | JOB NO.             |        | 100381             | 23        | 69           |
|              |             |              |             | ① 06957             | LAYOUT |                    |           | 45175        |

### BORING LEGEND

- AI-Moist, Dense, Brown Riprap, Cobbles and Gravel with some Clay Seams (Fill Material)
- BI-Moist, Very Stiff, Brown Silty Clay
- CI-Moist, Very Soft, Gray and Brown Silty Clay
- DI-Moist, Loose, Gray Sand with Clay Seams
- EI-Wet, Medium Dense, Gray Sand
- FI-Wet, Dense, Gray Sand with Traces of Gravel
- GI-Wet, Dense, Gray Sand
- HI-Wet, Medium Dense, Gray Sand with Traces of Organic Matter
- \*JI-Wet, Medium Dense, Gray and Black Lignitic Sand
- KI-Wet, Medium Dense, Gray Sand with Traces of Gravel
- LI-Wet, Very Dense, Gray Sand with Traces of Gravel
- MI-Wet, Dense, Gray Sand with Traces of Gravel and Organic Matter
- NI-Moist, Loose, Brown Sand and Gravel
- PI-Moist, Stiff, Brown and Gray Clay with some Sand
- QI-Moist, Medium Stiff, Brown Sandy Clay
- RI-Moist, Medium Dense, Brown Sand
- SI-Wet, Medium Dense, Gray Sand with some Organic Matter
- TI-Wet, Dense, Gray Sand with Traces of Organic Matter and Clay
- UI-Wet, Dense, Gray Sand with Organic Matter
- VI-Wet, Very Dense, Gray Sand

\*Note: Traces of Lignite were encountered in some of the Borings and may be encountered in greater amounts at other locations within the project area.

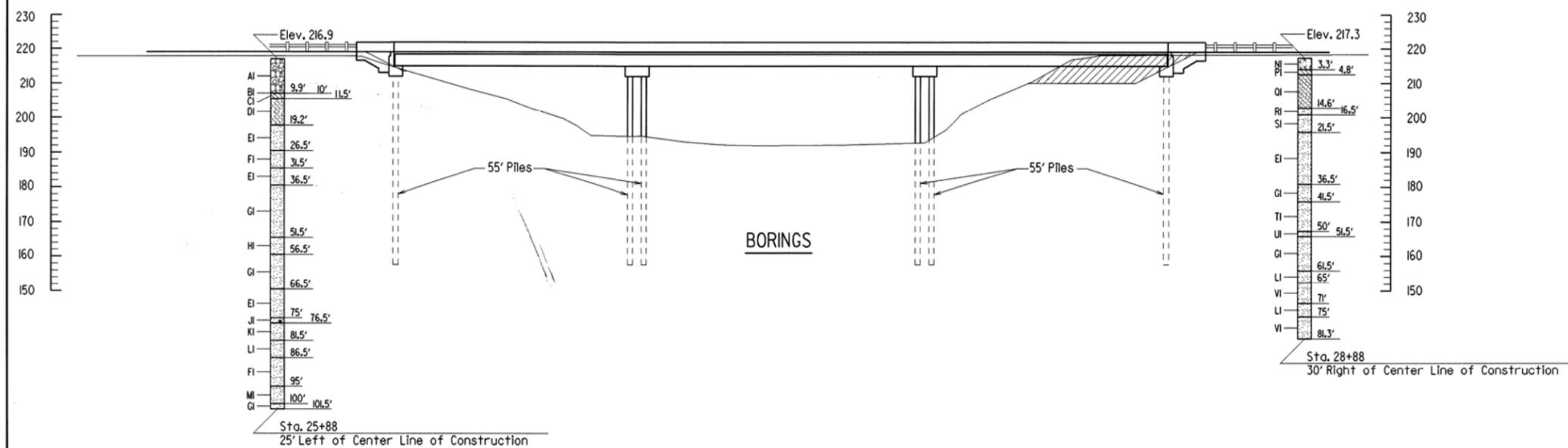
### "N" VALUES

#### Sta. 25+88 - 25' Left of Center Line of Construction

- 10.5 - 11.5, N=1
- 15.5 - 16.5, N=9
- 20.5 - 21.5, N=18
- 25.5 - 26.5, N=20
- 30.5 - 31.5, N=32
- 35.5 - 36.5, N=28
- 40.5 - 41.5, N=32
- 45.5 - 46.5, N=37
- 50.5 - 51.5, N=35
- 55.5 - 56.5, N=20
- 60.5 - 61.5, N=41
- 65.5 - 66.5, N=48
- 70.5 - 71.5, N=30
- 75.5 - 76.5, N=18
- 80.5 - 81.5, N=29
- 85.5 - 86.5, N=64
- 90.5 - 91.5, N=42
- 95.5 - 96.5, N=47
- 100.5 - 101.5, N=43

#### Sta. 28+88 - 30' Right of Center Line of Construction

- 3.8 - 4.8, N=9
- 8.8 - 9.8, N=7
- 15.5 - 16.5, N=21
- 20.5 - 21.5, N=26
- 25.5 - 26.5, N=28
- 30.5 - 31.5, N=28
- 35.5 - 36.5, N=28
- 40.5 - 41.5, N=31
- 45.5 - 46.5, N=43
- 50.5 - 51.5, N=33
- 55.5 - 56.5, N=46
- 60.5 - 61.5, N=41
- 65.5 - 66.5, N=66
- 70.5 - 71.0, N=60(0.5')
- 75.5 - 76.5, N=57
- 80.5 - 81.3, N=99(0.8')
- 80.5 - 81.3, N=99(0.8')



SHEET 2 OF 2  
 LAYOUT OF BRIDGE OVER  
 DITCH NO. 10  
 DITCH NO. 10 STR. & APPRS. (S)  
 POINSETT COUNTY



BRIDGE ENGINEER

ROUTE 14 SEC. 14  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.  
 DRAWN BY: B.E.F. DATE: 5-24-02 FILENAME: B100381LI  
 CHECKED BY: GVA DATE: 6-11-02 SCALE: No Scale  
 DESIGNED BY: B.E.F. DATE: 5-17-02  
 BRIDGE NO. 06957 DRAWING NO. 45175

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|--------------|-------------|--------------|-------------|---------------------|-------|--------------------|-----------|--------------|
|              |             |              |             | 6                   | ARK.  |                    |           |              |
|              |             |              |             |                     |       | 100381             | 28        | 69           |
|              |             |              |             | 06957               |       | CONT. UNIT         |           | 45180        |

**SLAB REINFORCING**  
 Transverse: S601E @ 14" o.c. in Top  
 S501E @ 14" o.c. in Bottom  
 S502E @ 14" o.c. Bent Up Over Beams  
 S701E @ 14" o.c. (Both Sides)  
 20'-0"

NOTE: Class I Protective Surface Treatment shall be applied to the Roadway Surface and to the Face & Top of the Concrete Parapet Rail.

Longitudinal: S401E in Top (Placed as Shown 18" max.)  
 S401E in Bottom Place as Shown  
 S602E place as shown centered over Int. Supports

**GENERAL NOTES - SUPERSTRUCTURE**

Governing specifications are the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (1996 edition) with applicable supplemental specifications and special provisions.

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See Standard Drawing No. 14991 for allowable modifications and for tolerances when permanent steel bridge deck forms are used.

All concrete shall be Class S(AE) and shall be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

Concrete in bridge superstructure shall be placed and consolidated for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent. The bridge deck shall be given a fine finish as specified for final finishing in subsection 802.19 for a Class 5 Bridge Roadway Surface Finish. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam. If a longitudinal strike-off is used, a vertical camber adjustment must be made in the strike-off to account for the future dead load deflection of the railing.

Reinforcing steel shall conform to AASHTO M31 or M53, Grade 60. The reinforcing is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly but will be considered subsidiary to the item "Reinforcing Steel-Bridge".

All stud shear connectors shall be granular flux filled, solid fluxed, or equal, and shall be automatically end welded in accordance with recommendations of the manufacturer.

Field connections shall be bolted with 3/4" high strength bolts unless otherwise noted. Bolt holes shall be 1/16" Ø except that 1/8" Ø holes may be used for connection of expansion devices, diaphragms and end struts if a washer is used under both the nut and head of the bolt.

Steel Diaphragms shall be installed as beams are erected and shall be completely bolted prior to pouring of the concrete deck.

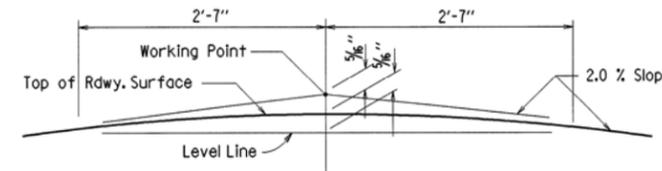
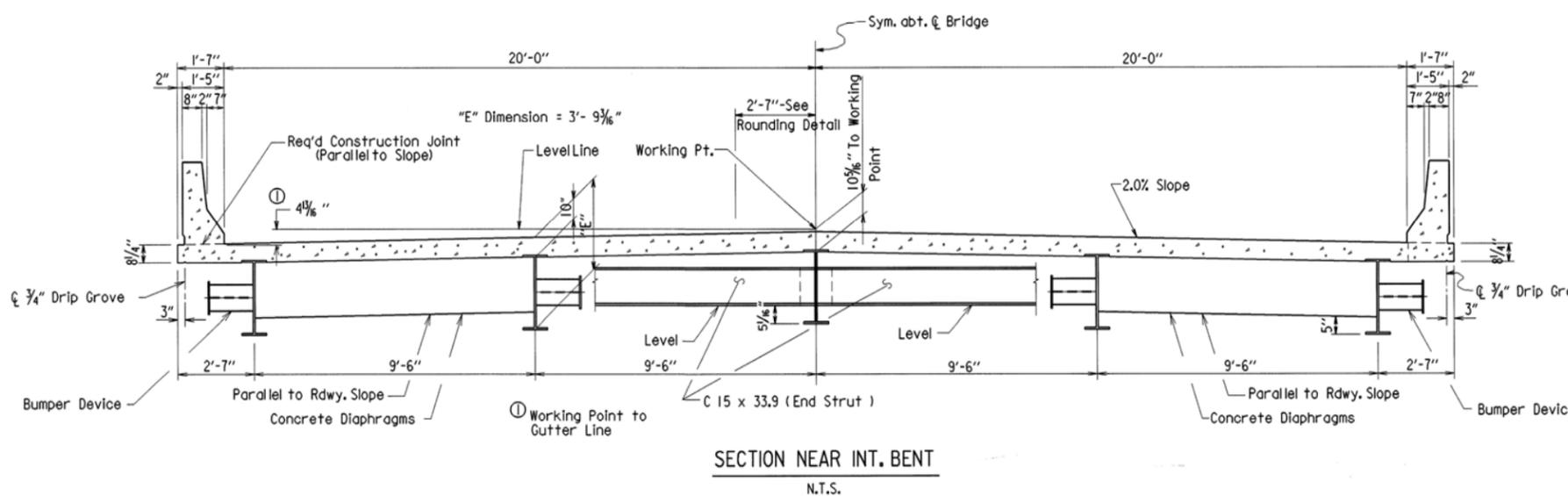
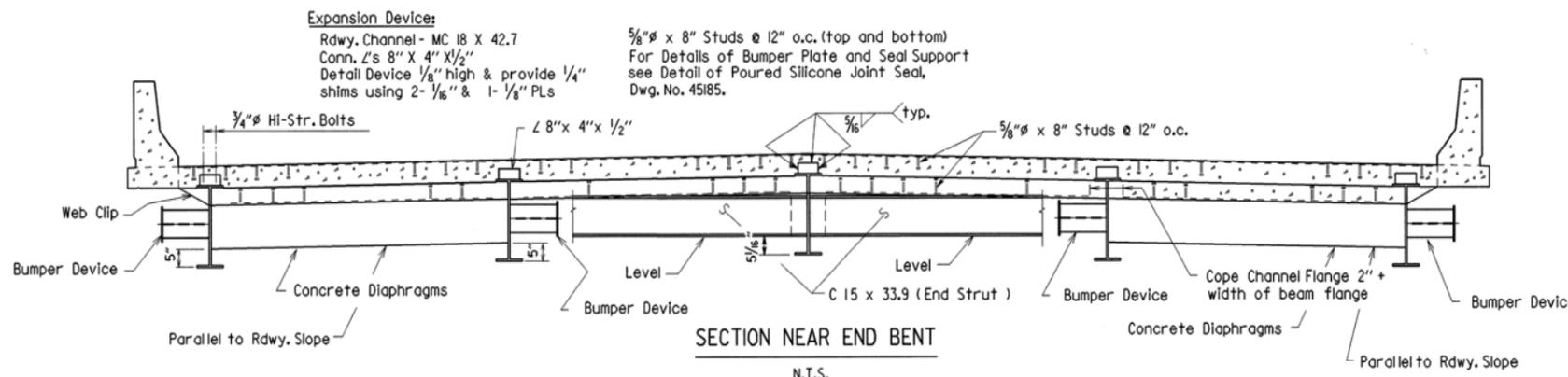
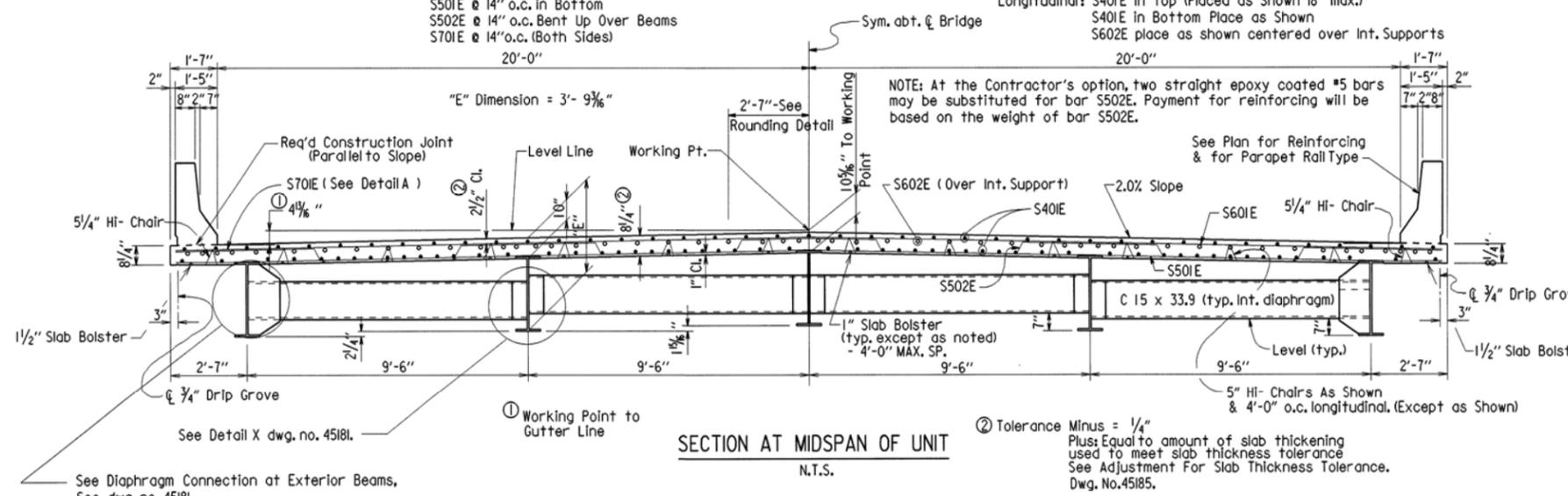
Drawings show general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approved before any fabrication is begun. Structural shapes of equal or greater strength may be substituted for shapes shown if approval is obtained from the Bridge Engineer. Payment will be made on the basis of shapes shown.

All Structural Steel shall be AASHTO M270, Gr. 50W unless otherwise noted and shall be paid for at the unit price per pound bid for "Structural Steel in Beam Spans (M270, Gr. 50W)". M270, Gr. 50W steel shall not be painted. All exposed surfaces are to be cleaned in accordance with Subsection 807.84(e) of the Standard Specifications. See dwg. no. 45186 for cleaning of external load plates. Structural steel completely embedded in concrete may be AASHTO M270, Gr. 36.

All beams shall be blocked in their true position in the shop. The camber, length of sections, distance between bearings and openings of joints shall be measured with the beams in this position and this information shall become a part of the permanent record of the job. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram. All beam dimensions are based on a temperature of 60°F. A tolerance of 1/4" is allowed for camber.

Flange Splice plates for main members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stress.

Beams are considered main load carrying members and shall meet the longitudinal Charpy V-Notch test specified in Section 807.05. Charpy V-notch test will not be required on Web and Flange splice plates. All welding shall conform to Subsection 807.26. Welded connections shall be 5/16" fillet shop welds unless otherwise noted. All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If the Contractor or Erector should want to make additional welds, whether temporary or permanent, he shall submit detailed drawings with a formal request to the Bridge Engineer for approval.



**SHEET 1 OF 6**  
**DETAILS OF**  
**226'-0" CONT. COMP. W-BEAM UNIT**  
**DITCH NO. 10**  
 ROUTE SEC.  
**ARKANSAS STATE HIGHWAY COMMISSION**  
 LITTLE ROCK, ARK.  
 DRAWN BY: B.E.F. DATE: 6-10-02 FILENAME: B100381.SII  
 CHECKED BY: GVA DATE: 9-24-02 SCALE: No Scale  
 DESIGNED BY: B.E.F. DATE: 6-6-02  
 BRIDGE NO. 06957 DRAWING NO. 45180