| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| 4-27-87 | 45[-4-27-87 | | | 6 | ARK. | | | |
| | | | | JOB NO. | | R30007 | 19 | 129 |

① 5877 & 5878 QUANTITIES 23710

## SCHEDULE OF BRIDGE QUANTITIES

205 & SP ①
JOB NO. R30007

| BRIDGE NUMBER | CODE NUMBER | NAME PLATE TITLE | ITEM NO. | 801 | SP & 802 | SP & 802 | 803 | 804 | ▲SP & 805 | ▲SP & 805 | SP & 807 | SP & 809 | 812 | SP & 816 | SP & 816 | SP 820 | ~~205~~ | SP 603-5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | UNIT OF STRUCTURE / ITEM | UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGES | CLASS S CONCRETE | CLASS S (AE) CONCRETE | BOILED LINSEED OIL | REINFORCING STEEL (GRADE 60) | STEEL BEARING PILING (HP 10×42) | TEST PILES (HP 10×42) | STRUCTURAL STEEL IN BEAM SPANS (A588) | PREFORMED JOINT SEALER | BRIDGE NAME PLATES (TYPE C) | DUMPED RIPRAP | FILTER BLANKET | PILE ENCASEMENT | REMOVAL OF EXISTING BRIDGE ~~STRUCTURES~~ ①STRUCTURE | TEMPORARY BRIDGE STRUCTURE (20' ROADWAY WIDTH) |
| | | | UNIT | CUBIC YARD | CUBIC YARD | CUBIC YARD | GALLON | POUND | LINEAR FOOT | LINEAR FOOT | POUND | LINEAR FOOT | EACH | CUBIC YARD | SQUARE YARD | LINEAR FOOT | LUMP SUM | LINEAR FOOT |
| 5877 | X071 | BRUSHY CREEK | END BENT NOS. 1 AND 6 | 20 | 40.42 | | 0.2 | 4,089 | 180 | 25 | 1,202 | | 1 | 411 | 822 | | | |
| | | | INTERMEDIATE BENT NOS. 2 THRU 5 | | 37.18 | | | 4,561 | 654 | 35 | | | | | | 302 | | |
| | | | 5-40'-0" COMPOSITE W-BEAM SPANS | | | 236.70 | 21.0 | 47,980 | | | 137,528 | 258.0 | | | | | | |
| | | | TOTAL FOR BRIDGE NO. 5877 | 20 | 77.60 | 236.70 | 21.2 | 56,630 | 834 | 60 | 138,730 | 258.0 | 1 | 411 | 822 | 302 | 1.0 ①~~0.34~~ | 80 |
| 5878 | X071 | BRUSHY CREEK RELIEF | END BENT NOS. 1 AND 4 | 150 | 40.42 | | 0.2 | 4,089 | 180 | 25 | 1,202 | | 1 | 221 | 443 | | | |
| | | | INTERMEDIATE BENT NOS. 2 AND 3 | | 18.58 | | | 2,282 | 330 | 35 | | | | | | 100 | | |
| | | | 3-35'-0" COMPOSITE W-BEAM SPANS | | | 124.70 | 11.1 | 25,029 | | | 67,478 | 172.0 | | | | | | |
| | | | TOTAL FOR BRIDGE NO. 5878 | 150 | 59.00 | 124.70 | 11.3 | 31,400 | 510 | 60 | 68,680 | 172.0 | 1 | 221 | 443 | 100 | 1.0 ①~~0.57~~ | 50 |
| | | | TOTAL FOR JOB NO. R30007 | 170 | 136.60 | 361.40 | 32.5 | 88,030 | 1344 | 120 | 207,410 | 430.0 | 2 | 632 | 1265 | 402 | ▲▲①~~0.91~~ | 130 |

▲ REFERS TO SP 807-5

▲▲ ~~REMAINING PORTION IS ROADWAY ITEM~~

① Revised for SP JOB NO. R30007, "Removal of Existing Bridge Structures". 4-27-87 dlv.

PHIL BRAND
DESIGN SECTION SUPERVISOR

Fred Pinkerton
BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
I-30 - NORTH
NEVADA COUNTY
ROUTE 19 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: TEB DATE: 2 SEPT 86
CHECKED BY: GEC DATE: 9-8-86
DESIGNED BY: DATE:
SCALE: NONE
BRIDGE NO. 5877 & 5878 DRAWING NO. 23710

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| 4-27-87 | 4-27-87 | | | 6 | ARK. | | | |
| | | | | JOB NO. | | R30007 | 40 | 129 |
| | | | | ① 5877 | LAYOUT | 23711 | | |

Notes

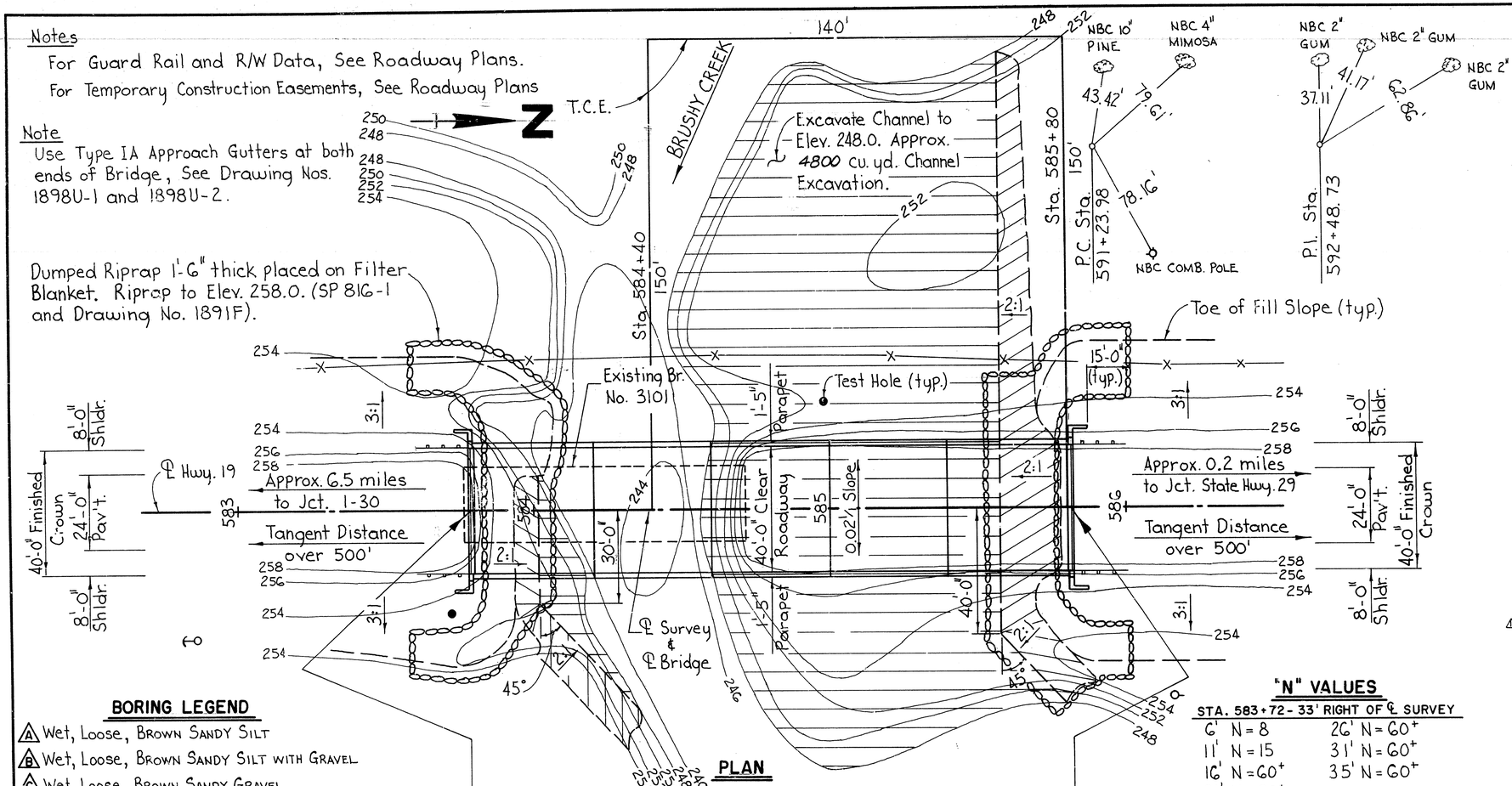
For Guard Rail and R/W Data, See Roadway Plans.

For Temporary Construction Easements, See Roadway Plans

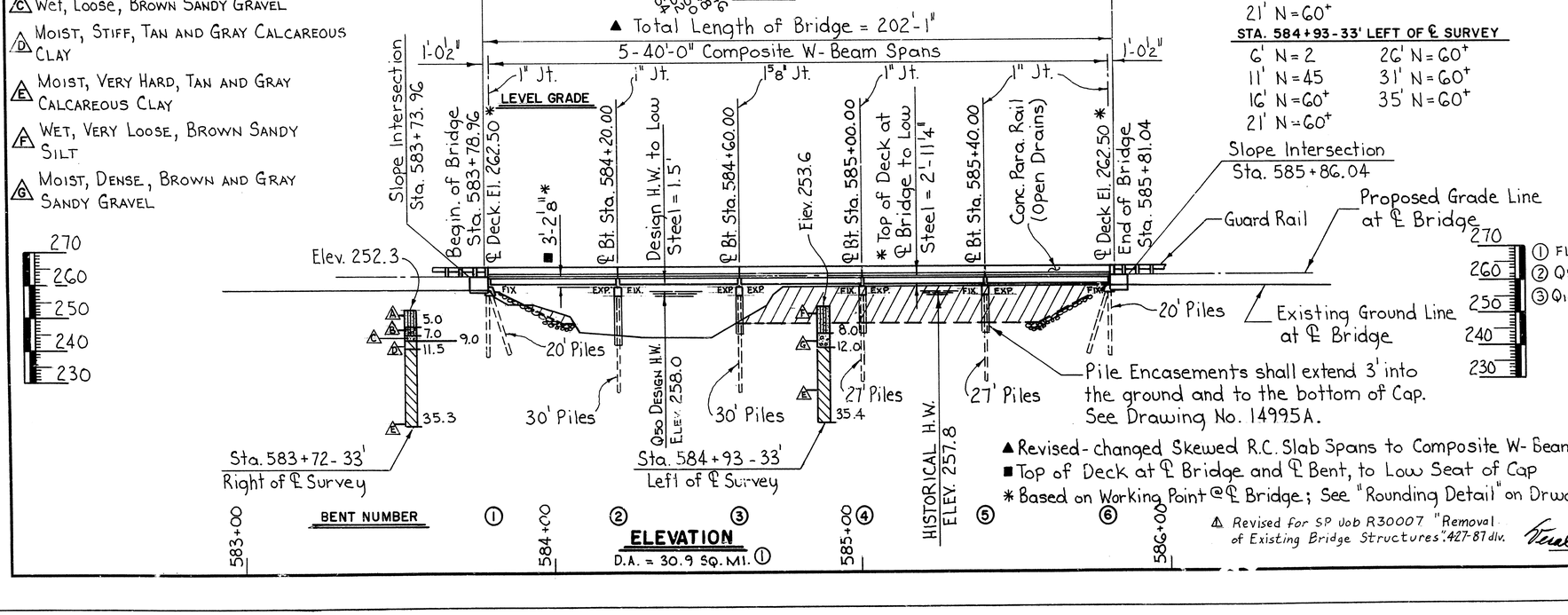
Note

Use Type IA Approach Gutters at both ends of Bridge, See Drawing Nos. 1898U-1 and 1898U-2.

Dumped Riprap 1'-6" thick placed on Filter Blanket. Riprap to Elev. 258.0. (SP 816-1 and Drawing No. 1891F).




## PLAN




## BORING LEGEND

- Ⓐ Wet, Loose, Brown Sandy Silt
- Ⓑ Wet, Loose, Brown Sandy Silt with Gravel
- Ⓒ Wet, Loose, Brown Sandy Gravel
- Ⓓ Moist, Stiff, Tan and Gray Calcareous Clay
- Ⓔ Moist, Very Hard, Tan and Gray Calcareous Clay
- Ⓕ Wet, Very Loose, Brown Sandy Silt
- Ⓖ Moist, Dense, Brown and Gray Sandy Gravel

## "N" VALUES

STA. 583+72 - 33' RIGHT OF ℄ SURVEY

| | |
|---|---|
| 6' N = 8 | 26' N = 60+ |
| 11' N = 15 | 31' N = 60+ |
| 16' N = 60+ | 35' N = 60+ |
| 21' N = 60+ | |

STA. 584+93 - 33' LEFT OF ℄ SURVEY

| | |
|---|---|
| 6' N = 2 | 26' N = 60+ |
| 11' N = 45 | 31' N = 60+ |
| 16' N = 60+ | 35' N = 60+ |
| 21' N = 60+ | |

## GENERAL NOTES

BENCH MARK: C.P.S. IN COMB. POLE 45' RIGHT OF STA. 591+86, ELEV. 256.59.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1978 AND APPLICABLE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1983 EDITION WITH CURRENT INTERIM SPECIFICATIONS.

LIVE LOAD: HS20

METHOD OF DESIGN: LOAD FACTOR

MATERIALS AND STRENGTH:

| | |
|---|---|
| CLASS S CONCRETE (SUBSTRUCTURE) | f'c = 3500 PSI |
| CLASS S(AE) CONCRETE (SUPERSTRUCTURE) | f'c = 3500 PSI |
| REINFORCING STEEL (A615 OR A617, GR. 60) | fy = 60,000 PSI |
| STRUCTURAL STEEL (A588) | fy = 50,000 PSI |
| STRUCTURAL STEEL (A36) | fy = 36,000 PSI |

BORING LOGS: ORIGINAL BRIDGE SITE BORING LOGS MAY BE OBTAINED FROM THE PROGRAMS AND CONTRACTS DIVISION UPON REQUEST.

ALL PILING SHALL BE HP10X42. PILING IN BENTS 1 AND 6 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 44 TONS PER PILE. PILING IN BENTS 2 THRU 5 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 55 TONS PER PILE. ALL PILING SHALL BE DRIVEN WITH AN APPROVED AIR, STEAM, OR DIESEL HAMMER TO A MINIMUM PENETRATION OF 15' BELOW THE GROUND LINE INTO MATERIAL DESIGNATED ON THE BORING LOGS AS VERY HARD CALCAREOUS CLAY. LENGTHS OF PILING SHOWN ARE ASSUMED FOR ESTIMATING QUANTITIES ONLY. ACTUAL LENGTHS TO BE DETERMINED IN THE FIELD. DRIVE ONE 35' TEST PILE IN BENT NO. 2 AND ONE 25' TEST PILE IN BENT NO. 6. **MINIMUM PILE PENETRATION FOR BENTS 3-5 TO BE MEASURED FROM BOTTOM OF EXCAVATED CHANNEL.**
PREDRILLING MAY BE REQUIRED TO OBTAIN 15' MINIMUM PENETRATION. BACKFILL WITH CLASS S CONCRETE, SB-2, OR OTHER SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER. ANY COST FROM PREDRILLING AND BACKFILLING SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM "STEEL BEARING PILING(HP10X42)."

THE CONCRETE BRIDGE DECK SHALL BE GIVEN A TINE FINISH AS SPECIFIED FOR FINAL FINISHING IN SUBSECTION 802.23 FOR A CLASS 6, ROADWAY SURFACE FINISH.

FOR DETAILS OF BENTS, SEE DWG. NO. 23712
FOR DETAILS OF 40' COMP. W-BEAM SPANS, SEE DWG. NO. 23713
FOR DETAILS OF STEEL BEARING PILING, SEE DWG. NO. 14995A

△ THE CONTRACTOR SHALL REMOVE THE EXISTING 95' BRIDGE IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS.** BRIDGE NO. 3101 CONSISTS OF FIVE 19' SPANS WITH PRECAST CONCRETE DECK UNITS AND ASPHALT OVERLAY ON CONCRETE PILE BENTS. ALL MATERIAL FROM THE EXISTING BRIDGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY BRIDGE APPROXIMATELY 50' EAST OF CENTERLINE CONSTRUCTION. THE BRIDGE SHALL HAVE A MINIMUM LENGTH OF 20', A MINIMUM ROADWAY WIDTH OF 20', A MINIMUM DECK ELEVATION O 257.0 AND H15 DESIGN LIVE LOAD CAPACITY. SEE SPECIAL PROVISION 603-5 AND STANDARD DRAWINGS 2391 AND 92. IF TIMBER PILING AND PINE TIMBER ARE USED ON THIS TEMPORARY BRI , THE MATERIALS SHALL BE TREATED WITH A PRESERVATIVE ACCORDING TO THE STANDARD SPECIFICATIONS.

** See also SP Job R30007 "Removal of Existing Bridge Structures" △

## HYDRAULIC DATA

| | DESIGN FLOOD (Q50) | BASIC FLOOD (Q100) |
|---|---|---|
| ① TOTAL DISCHARGE (CFS) | ② 14,230 | ③ 16,530 |
| NORMAL WATER SURFACE ELEVATION | 258.0 | 258.5 |
| NORMAL WATER SURFACE WITH BACKWATER ELEVATION | 259.3 | 260.1 |

① FLOW IS SPLIT THROUGH BR. NO. 5877 AND BR. NO. 5878
② Q50 = 10,770 CFS THRU BR. NO. 5877 ; 3,460 CFS THRU BR. NO. 5878
③ Q100 = 12,595 CFS THRU BR. NO. 5877 ; 3,935 CFS THRU BR. NO. 5878

△ Revised for SP Job R30007 "Removal of Existing Bridge Structures" 4-27-87 dlv.

▲ Revised - changed Skewed R.C. Slab Spans to Composite W-Beam Spans. 8-5-86 TEB
■ Top of Deck at ℄ Bridge and ℄ Bent, to Low Seat of Cap
* Based on Working Point @ ℄ Bridge; See "Rounding Detail" on Drwg. No. 23713

**LAYOUT OF BRIDGE OVER BRUSHY CREEK**
**I-30 - NORTH**
**NEVADA COUNTY**
ROUTE 19 SEC. 5

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TEB DATE: 5 AUG 86
CHECKED BY: CES DATE: 9-8-86
DESIGNED BY: CPB DATE: 7/86
SCALE: 1" = 20'-0"

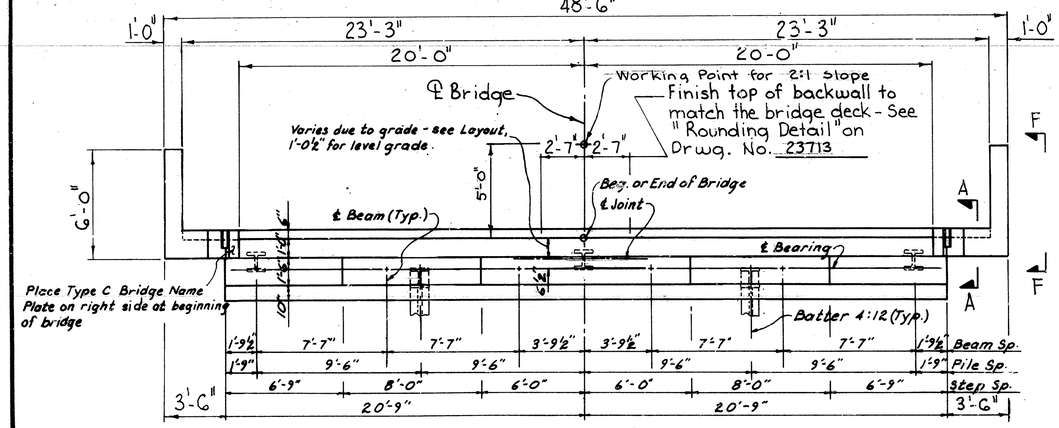
Neal Pinkerton
BRIDGE ENGINEER

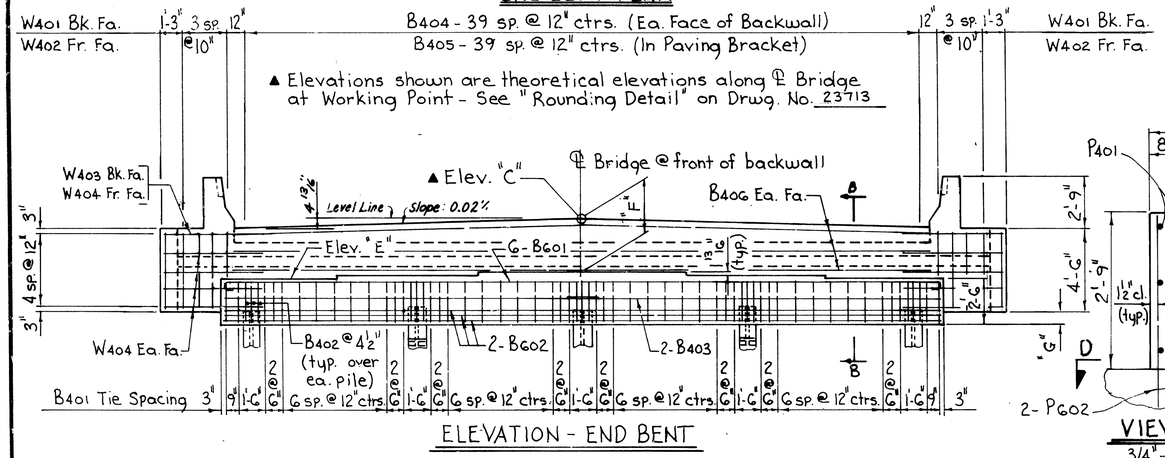
BRIDGE NO. 5877 DRAWING NO. 23711

| DATE REVISED | DATE PLOTTED | DATE REVISED | DATE PLOTTED | FED. ROAD NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | R30007 | 41 | 129 |

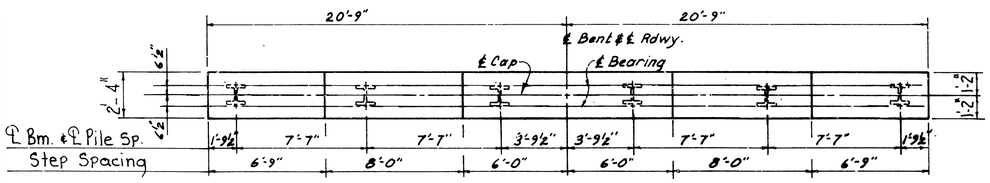
(1) 5877 & 5878 Bents 23712

# END BENT PLAN

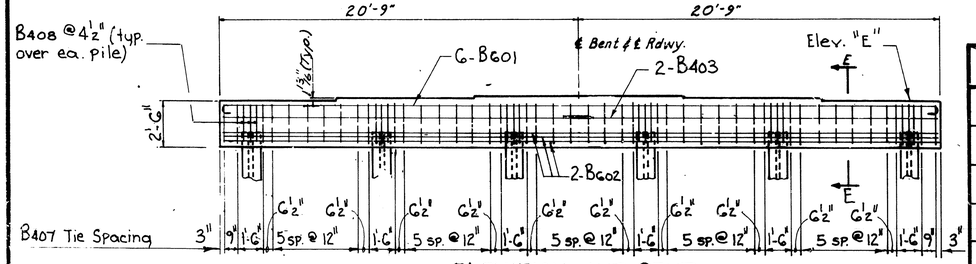



ELEVATION - END BENT




PLAN - INT. BENT



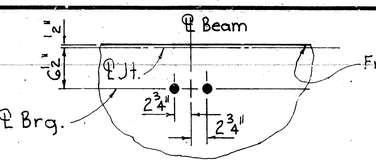

ELEVATION - INT. BENT

▲ BR. NO. 5877 - End Bt. Nos. 1 & 6 & BR. NO. 5878 - End Bt. No. 1 & 4

▲▲ BR. NO. 5877 - Int. Bt. Nos. 2 thru 5 & BR. NO. 5878 - Int. Bt. Nos. 2 & 3

## TABLE OF VARIABLES

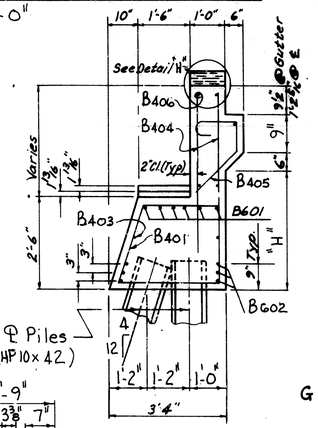
| | BT. NO. ▲ | BT. NO. ▲▲ | BT. NO. | BT. NO. |
|---|---|---|---|---|
| ELEV. "C" | 262.50 | | | |
| ELEV. "E" | 259.32 | 259.32 | | |
| "F" | 2'-10½" | | | |
| "G" | 9 5/16" | | | |
| "H" | 3'-2 13/16" | | | |
| | | | | |
| | | | | |




## END BENT ANCHOR BOLT LAYOUT

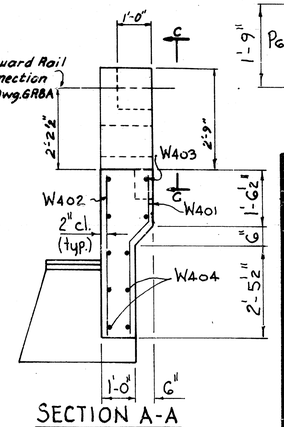
1" = 1'-0"

Note: Type B2 Fixed Shoes



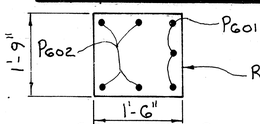

## SECTION B-B

½" = 1'-0"



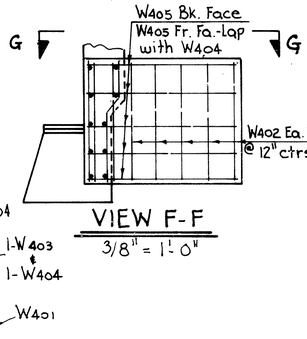

## SECTION A-A

1/2" = 1'-0"



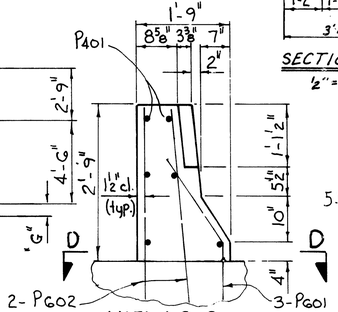

## SECTION D-D

3/4" = 1'-0"



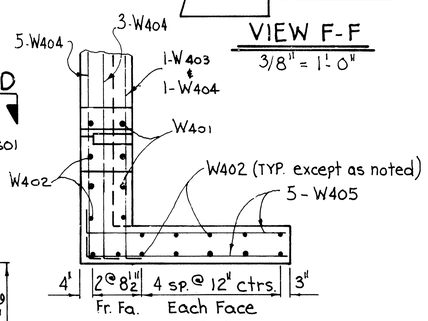

## VIEW F-F

3/8" = 1'-0"



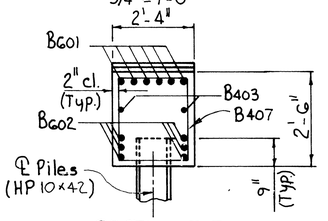

## VIEW C-C

3/4" = 1'-0"



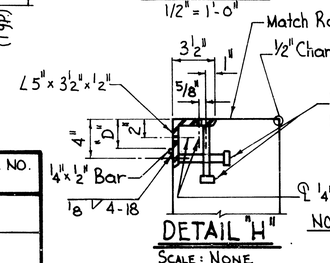

## VIEW G-G

1/2" = 1'-0"




## SECTION E-E

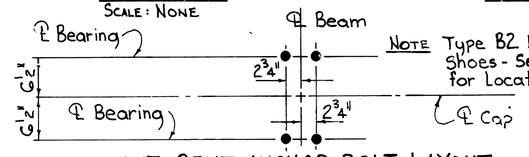
1/2" = 1'-0"




## DETAIL "H"

SCALE: NONE

NOTE FOR ADDITIONAL JOINT DETAILS, SEE STANDARD DRAWING No. 14990H




NOTE Type B2 Fixed or Exp. Shoes - See Layout for Location

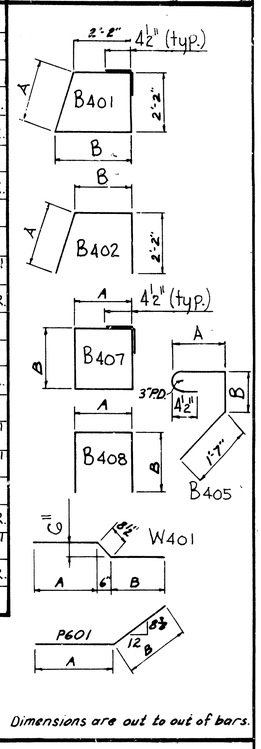
## INT. BENT ANCHOR BOLT LAYOUT

1" = 1'-0"

## BAR LIST PER BENT

| Mark | No. Req'd End | No. Req'd Int. | Length | A | B | Pin Dia. |
|---|---|---|---|---|---|---|
| B401 | 48 | – | 9'-11" | 2'-3½" | 2'-11" | 2" |
| B402 | 15 | – | 6'-6" | 2'-3½" | 2'-2" | 2" |
| B403 | 4 | 4 | 21'-5" | – | – | Str. |
| B404 | 80 | – | "F" + 1'-6" | – | – | Str. |
| B405 | 40 | – | 3'-8" | 1'-2" | 6" | 2" |
| B406 | 6 | – | 40'-0" | – | – | Str. |
| B407 | – | 44 | 8'-8" | 2'-0" | 2'-2" | 2" |
| B408 | – | 18 | 6'-2" | 2'-0" | 2'-2" | 2" |
| B601 | 6 | 6 | 42'-6" | 41'-2" | 6" | 4½" |
| B602 | 6 | 6 | 41'-2" | – | – | Str. |
| W401 | 8 | – | 4'-4" | 1'-4" | 2'-4" | 2" |
| W402 | 30 | – | 4'-2" | – | – | Str. |
| W403 | 2 | – | 3'-9" | 3'-2" | 8" | 2" |
| W404 | 18 | – | 5'-7" | 5'-0" | 8" | 2" |
| W405 | 20 | – | 6'-2" | 5'-7" | 8" | 2" |
| P401 | 12 | – | 1'-2" | – | – | Str. |
| P601 | 6 | – | 3'-10" | 1'-10" | 2'-0" | 4½" |
| P602 | 8 | – | 4'-5" | – | – | Str. |

Bending Diagrams




Dimensions are out to out of bars.

GENERAL NOTES:

ALL CONCRETE SHALL BE CLASS "S" AND SHALL BE POURED IN THE DRY. EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.

REINFORCING STEEL TO BE ASTM A615 OR A617, GRADE 60.

BACKWALL SHALL NOT BE POURED BEFORE BEAMS ARE IN PLACE.

STRUCTURAL STEEL IN END BENTS SHALL BE ASTM A588 AND SHALL BE PAID FOR AS "STRUCTURAL STEEL IN BEAM SPANS A588."

PILING SHALL BE HP 10 X 42 STEEL BEARING PILING DRIVEN TO A MINIMUM BEARING CAPACITY OF 144 TONS PER PILE IN THE END BENTS AND 55 TONS PER PILE IN THE INTERIOR BENTS.

SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1978 AND APPLICABLE SPECIAL PROVISIONS.

IF ANCHOR BOLTS ARE DRILLED INTO CAP, TOP REINFORCING BARS SHALL BE PROPERLY PLACED TO AVOID DAMAGE.

# DETAILS OF STD. PILE BENTS FOR COMPOSITE W-BEAM SPANS 40'-0" CLEAR ROADWAY 5'-0" TURNBACK WINGS 0.02½" PEAKED CROWN

ROUTE SEC.

**ARKANSAS STATE HIGHWAY COMMISSION**

LITTLE ROCK, ARK.

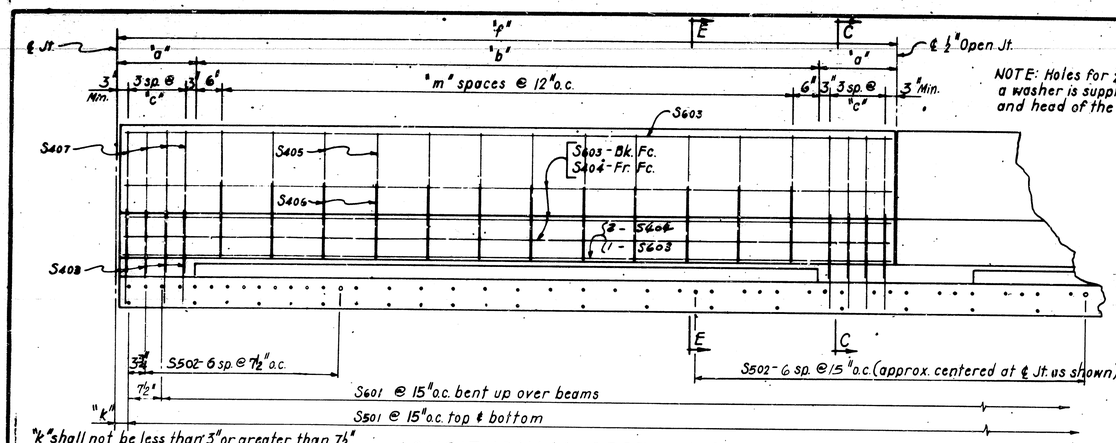
DRAWN BY: TEB DATE: 13 AUG 86
CHECKED BY: GEC DATE: 9-3-86
DESIGNED BY: Std. DATE:
SCALE: 4"=1'-0" or as noted

BRIDGE NO. 5877 & 5878

DRAWING NO. 23712

Kirsal Pinkerton
BRIDGE ENGINEER

| DATE REVISED | DATE REVISED | DATE REVISED | DATE REVISED | FED. ROAD NO. | STATE | FED.-AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO. | | R30007 | 42 | 129 |
| | | | | ① 5877 5878 | | — SPAN: DTLS. — | 23713 | |




"k" shall not be less than 3" or greater than 7½".

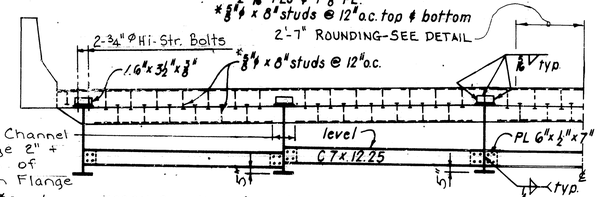
NOTE: Boiled Linseed Oil Treatment shall be applied to the roadway surface and the face and top of concrete parapet rail.

## LONGITUDINAL SECTION AT CURB FOR OPEN PARAPET RAIL

¾" = 1'-0"

NOTE: Holes for ¾"ϕ hi-str. bolts may be ⅞"ϕ if a washer is supplied for use under both the nut and head of the bolt.

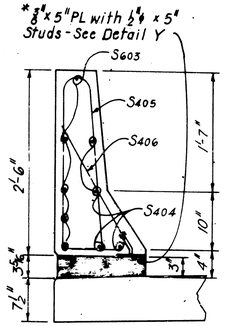
*Expansion Device:*
Roadway C15 x 33.9
Conn. ℄ 6" x 3½" x ⅜" x 0'-8"
Preformed Joint Sealer supported by ¼" x ½" bars
Detail device ⅛" high ℄ provide ¼" shims, using
2-⅛" PLs ℄ 1-½" PL
*⅞"ϕ x 8" studs @ 12" o.c. top ℄ bottom




*See drwg. no. 14990H for alternate anchor details.

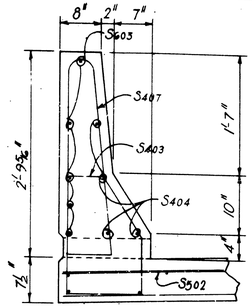
## HALF-SECTION B-B MODIFIED OR REGULAR SPANS

⅜" = 1'-0"



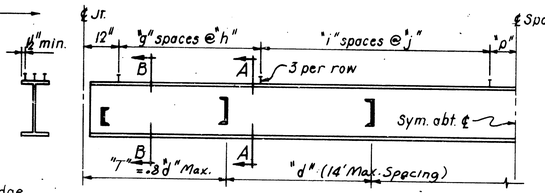

## SECTION E-E

1" = 1'-0"



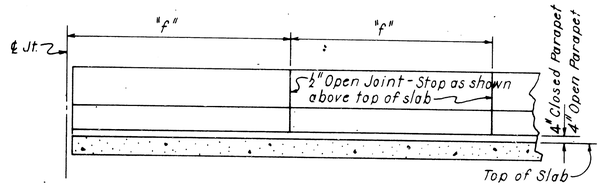

## SECTION C-C

1" = 1'-0"



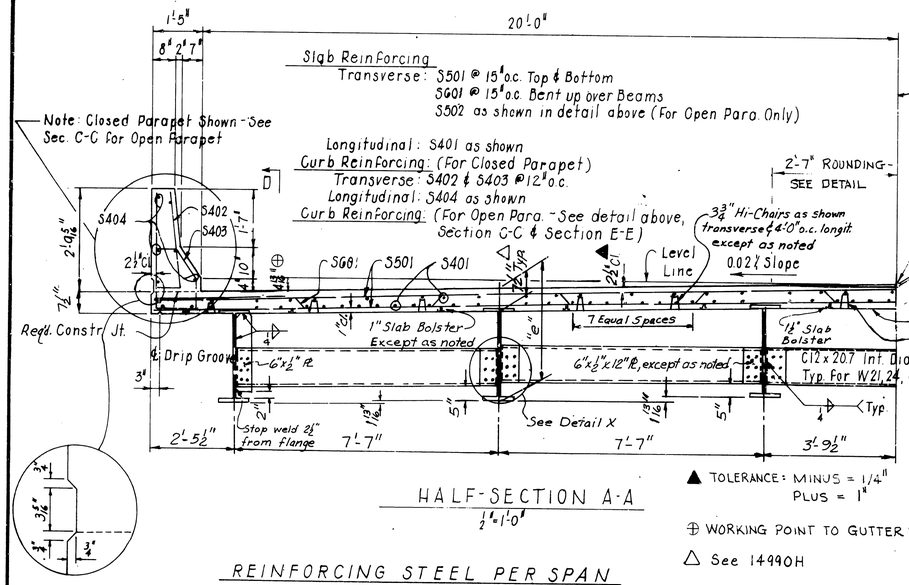

## SPACING FOR ¾" STUD SHEAR CONNECTORS ℄ DIAPHRAGMS

N.T.S.




## SECTION D-D

N.T.S.




## HALF-SECTION A-A

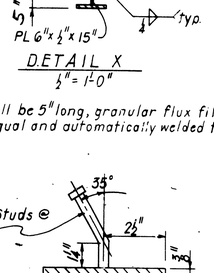
½" = 1'-0"

▲ TOLERANCE: MINUS = 1/4" PLUS = 1"

⊕ WORKING POINT TO GUTTER LINE.

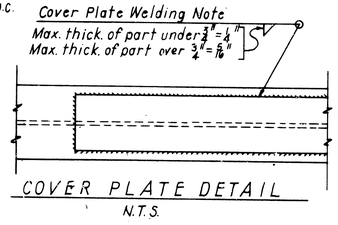
△ See 14990H

NOTE: 7/8" STUDS, C3X6 CHANNELS MAY BE USED IN PLACE OF THE 3/4" STUDS THAT ARE SHOWN. AT THE RATIO OF 0.735 - 7/8" STUD OR 2.0 INCHES OF C3X6 CHANNEL IN PLACE OF ONE 3/4" STUD. THE STUD CONNECTORS SHALL BE 4" LONG AND MAY BE GRANULAR FLUX FILLED, SOLID FLUXED, OR EQUAL, AND AUTOMATICALLY END WELDED TO THE BEAM FLANGES IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER. 3/4" STUDS WILL BE USED AS BASIS FOR MEASUREMENT OF STRUCTURAL STEEL IN SHEAR CONNECTORS.




## DETAIL X

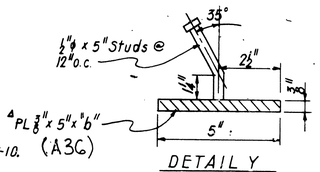
½" = 1'-0"




## COVER PLATE DETAIL

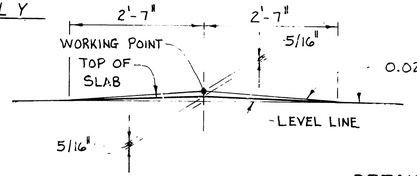
N.T.S.

NOTE: Studs shall be 5" long, granular flux filled, solid flux or equal and automatically welded to plate.




## DETAIL Y

N.T.S.




## ROUNDING DETAIL

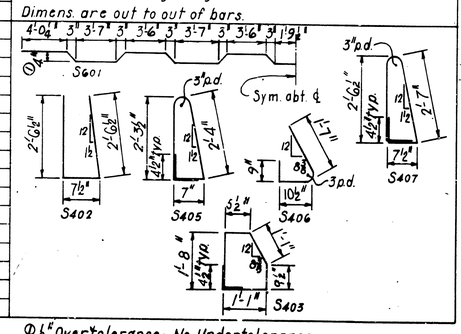
NOTE: SCALE: NONE. WORKING POINT MATCHES THEORETICAL ROADWAY GRADE.

## REINFORCING STEEL PER SPAN

| MK. | Size | Length Closed Parapet Rail | Length Open Parapet Rail | Pin Dia. | Span Length 40'-0" No. Required | Span Length 35'-0" No. Required |
|---|---|---|---|---|---|---|
| S502 | 5 | – | 4'-9" | Str. | 70 | 56 |
| S601 | 6 | 43'-6" | 43'-6" | 33" | 31 | 27 |
| S603 | 6 | – | "f"-6" | Str. | 40 | 30 |
| S501 | 5 | 42'-6" | 42'-6" | Str. | 64 | 56 |
| S401* | 4 | 5'-6" | 5'-6" | Str. | 105 | 105 |
| S401** | 4 | ⅝ + 7" | ⅝ + 7" | Str. | – | – |
| S401*** | 4 | ⅝ + 12" | ⅝ + 12" | Str. | – | – |
| S402 | 4 | 5'-6" | – | 2" | – | – |
| S403 | 4 | 5'-6" | 5'-6" | 2" | 64 | 48 |
| S404 | 4 | "f"-6" | "f"-6" | Str. | 32 | 24 |
| S405 | 4 | – | 5'-10" | 2" | 56 | 48 |
| S406 | 4 | – | 3'-2" | 2" | 56 | 48 |
| S407 | 4 | – | 6'-4" | 2" | 64 | 48 |
| | | – | | | | |

* Use for Span Lengths thru 40'
** " " " " 41' thru 78'
*** " " " " 79' thru 90'

Bending Diagrams
Dimens. are out to out of bars.




ϕ ½" Overtolerance; No Undertolerance.

Note: At the Contractors option, in lieu of providing Bar S601, two straight #6 bars may be substituted. Payment for Reinforcing will be based on the weight of bar S601.

## TABLE OF VARIABLES

| NO. of SPANS | SPAN | BEAM SIZE | COVER PL SIZE | "e" | Diaphragm Spacing "f" | Diaphragm Spacing "d" | Variable of Shear Connector Spacing "g" | "h" | "i" | "j" | "p" | Parapet Joint Sp. No. @ "t" | Variables of Open Parapet Rail "a" | "b" | "c" | "k" | "m" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 40'-0" | W24 x 76 | – | 2'-6" | 6'-6" | 9'-0" | 18 | 8" | 8 | 10" | 4" | 4@10'-0" | 1'-6" | 7'-0" | 4" | 7½" | 6 |
| 3 | 35'-0" | W24 x 68 | – | 2'-6" | 7'-6" | 10'-0" | 11 | 8" | 11 | 10" | 0" | 3@11'-8" | 1'-10" | 8'-0" | 5" | 7½" | 7 |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

## TABLE OF DEFLECTIONS

| SPAN | BEAM | BEAM ¼ PT. | BEAM ½ PT. | BEAM + SLAB ¼ PT. | BEAM + SLAB ½ PT. | BEAM + SLAB + PARAPET RAIL ¼ PT. | BEAM + SLAB + PARAPET RAIL ½ PT. |
|---|---|---|---|---|---|---|---|
| 40'-0" | INTERIOR | 1/16 | 1/16 | 1/2 | 11/16 | 9/16 | 3/4 |
| | EXTERIOR | 1/16 | 1/16 | 3/8 | 1/2 | 7/16 | 5/8 |
| 35'-0" | INTERIOR | 0 | 1/16 | 5/16 | 7/16 | 5/16 | 1/2 |
| | EXTERIOR | 0 | 1/16 | 1/4 | 3/8 | 5/16 | 3/8 |

Tabular Data by: TEB Date: 14 AUG 86
Checked by: DLV Date: 8 Sept 86
Revised Rounding DTLS.; 6-12-95
Revised 11-14-84.

Verd Pinkerton
BRIDGE ENGINEER

GENERAL NOTES

ALL STRUCTURAL STEEL SHALL BE ASTM DESIGNATION A588 UNLESS OTHERWISE NOTED AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND BID FOR "STRUCTURAL STEEL IN BEAM SPANS A588." A588 STEEL SHALL NOT BE PAINTED. ALL EXPOSED SURFACES TO BE CLEANED IN ACCORDANCE WITH SP 807-12, "UNPAINTED WEATHERING STRUCTURAL STEEL." STRUCTURAL STEEL COMPLETELY EMBEDDED IN CONCRETE MAY BE ASTM A36.

THIS DRAWING TO BE USED WITH DRAWING NO. 14990H

LOADING: HS20
DESIGN SPECIFICATIONS: AASHTO 1985 WITH CURRENT INTERIMS.

| DEAD LOAD: | INTERIOR BEAM | EXTERIOR BEAM |
|---|---|---|
| a. TO WF BEAM | 715 #/' + 1.30 (# /FT OF WF) | 580 #/' + 1.30 (# /FT OF WF) |
| b. TO COMPOSITE BEAM* | 277 #/' (OPEN BARRIER) 290 #/' (CLOSED BARRIER) | 277 #/' (OPEN BARRIER) 290 #/' (CLOSED BARRIER) |
| LIVE LOAD: TO EACH COMPOSITE BEAM | 1.379 WHEELS + IMPACT | 1.286 WHEELS + IMPACT |

CLASS S(AE) CONCRETE (N=9) f'c = 3500 PSI
STRUCTURAL STEEL (A588) fy = 50,000 PSI
REINFORCING STEEL (A615, GRADE 60) fy = 60,000 PSI

ALL REINFORCING STEEL SHALL BE A615 OR A617 GRADE 60.

*INCLUDES 160 #/FT FUTURE SURFACE.

ALL W-BEAMS AND COVER PLATES ARE CONSIDERED MAIN LOAD CARRYING MEMBERS AND SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN *SECTION 807.05 OF THE STANDARD SPECIFICATIONS.*
METHOD OF DESIGN: LOAD FACTOR

△ Note: The surfaces of the ⅜" Plates which will not be in contact with Concrete shall receive two coats of paint in the Shop. These coats shall be those specified as First Shop Coat and Second Field Coat in Subsection 807.59(a) and 807.59(c), ℄ SP807-10.

DETAILS OF STANDARD
35'-90' COMPOSITE W-BEAM SPANS
CONC. PARAPET RAIL (OPEN OR CLOSED)
40'-0" CL. RDWY. 0.02¼ PEAKED CROWN
ROUTE 19 SEC. 5

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: L.M. DATE: 6-28-78
CHECKED BY: MEC. DATE: 6-29-78
DESIGNED BY: GVA DATE: 6-28-78
SCALE: As Shown

BRIDGE NO. 5877 5878 DRAWING NO. 23713