

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
04-15-16				6	ARK.			
				JOB NO.		061349	32	944

(1) 07297 - LAYOUT - 56936

GENERAL NOTES

BENCH MARK: Vertical Control Data is shown in the Survey Control Data Sheets.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2004 edition) with applicable Supplemental Specifications and Special Provisions. Unless otherwise noted, Section and Subsection refer to the Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Sixth Edition (2012) with 2013 Interims.

LIVE LOADING: HL93
SEISMIC PERFORMANCE ZONE: 2

MATERIALS AND STRENGTHS:	
Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Class S Concrete (substructure)	f'c = 3,500 psi
Reinforcing Steel(Gr. 60, AASHTO M 31 or M 322, Type A)	fy = 60,000 psi
Structural Steel(AASHTO M 270, Gr. 50W)	Fy = 36,000 psi
Structural Steel(AASHTO M 270, Gr. 36)	Fy = 50,000 psi

BORING LOGS: Boring logs may be obtained from the Construction Contract Procurement Section of the Program Management Division.

STEEL PILING: All piling shall be ~~HP 14x73~~ (Grade 50) and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 100 tons per pile and into material designated as Sandstone on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with Section 805. Actual lengths are to be determined in the field. The Contractor shall use approved Steel H-pile driving points on all piles.

PILE CASINGS FOR DRIVEN PILES: Pile casings are required for all piling. Casings shall be installed prior to or during embankment construction and shall extend from top of leveling pad to bottom of cap. Pile casing material shall be of sufficient strength to resist its original form free from harmful distortion after removal of the fill material surrounding it. The minimum inside diameter of the casing shall be 24". Piles shall be driven through the open casings after embankment to the bottom of cap in place and to a minimum penetration of 20' below leveling pad. After driving is completed, the pile casing shall be backfilled with approved non-shrink grout or other approved material in a single continuous operation to completely fill voids. Pile casings and backfill will not be paid for directly but shall be considered subsidiary to the item "Steel Piling".

PILE CASINGS WITHOUT PILES: Additional pile casings will be required at Bents 1 and 2 in accordance with Dwg. No's, 5634 and 56342 to provide for future widening. These casings shall be installed during embankment construction and shall extend from top of leveling pad to approximately one foot below the finished surface of concrete riprap. Pile casing diameter and material shall conform to the above. No piling shall be driven through these casings, but they shall be kept clean from debris and capped at the top with a durable waterproof material as approved by the Engineer. Payment for this work and materials will be considered subsidiary to all other contract items in the job.

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

DETAIL DRAWINGS:	DRWG. NOS.
Retaining Walls	56939 - 56940
End Bents	56941 - 56943
Elastomeric Bearings	56944
100' Composite W-Beam Span	56945 - 56949
Steel Piling	55020

EXISTING BRIDGE: The existing three-span bridge, No. M2250 (L.M. 4.88), is 32' wide and 107.5' long. It consists of a concrete deck on steel beams supported by concrete columns and abutments on spread footings.

REMOVAL AND SALVAGE: After the new bridge is open to traffic, existing bridge No. M2250 shall be removed in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

⚠ Increased pile size for sacrificial corrosion resistance due to acidic soil encountered during construction per Change Order No. 2.
04-15-16 ACP

SHEET 1 OF 2
LAYOUT OF BRIDGE OVER
BAUXITE & NORTHERN RAILROAD SPUR
BAUXITE & NORTHERN RR SPUR
STR. & APPRS. (S)
SALINE COUNTY

ROUTE 183 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: ACP/PGT DATE: 6-13 FILENAME: b061349-L1.dgn

CHECKED BY: JYP DATE: 4-14-15 SCALE: 1" = 20'

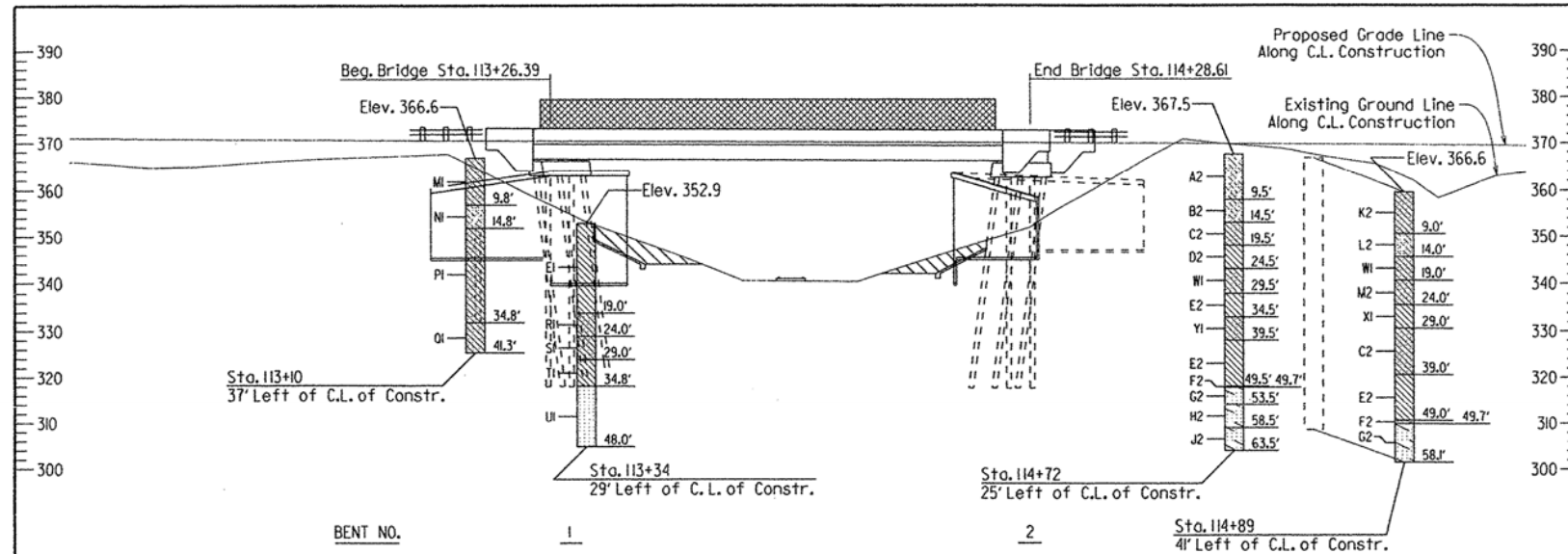
CHECKED BY: SA DATE: 4-11-15 SCALE: 1" = 20'
DESIGNED BY: ACP DATE: 6-13

BRIDGE NO. 07297 DRAWING NO. 56936

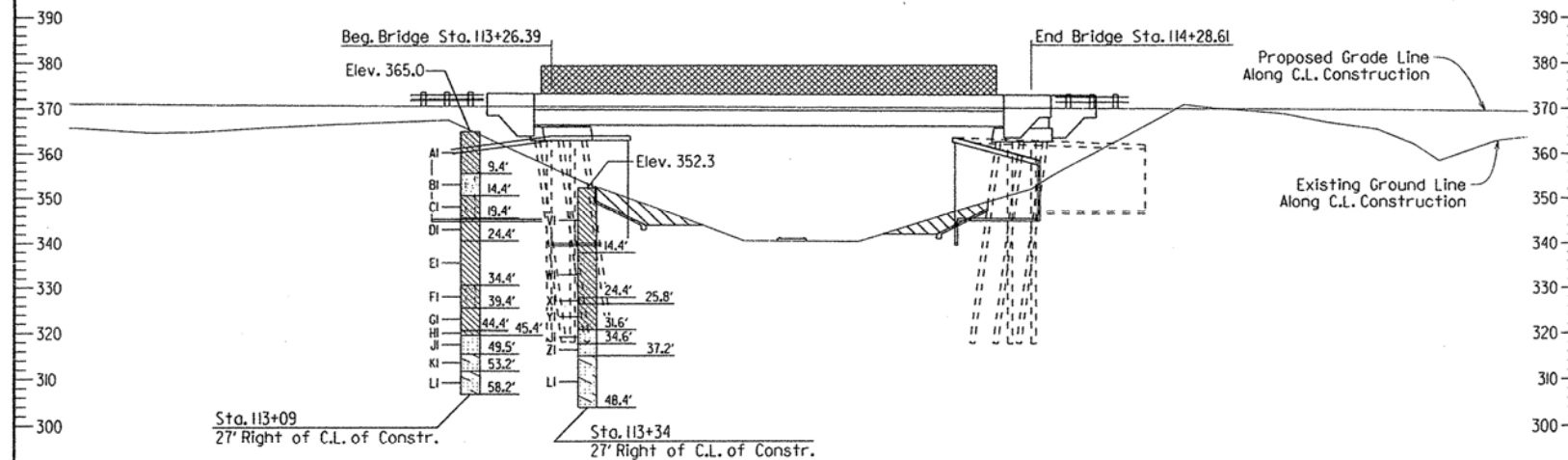
STATE OF
ARKANSAS
Charles R. Ellis
REGISTERED
PROFESSIONAL
ENGINEER
No. 9235
4-14-15
CHARLES R. ELLIS

BRIDGE ENGINEER

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.		061349	33	av
				07297 - LAYOUT - 56937				



ELEVATION OF SOIL BORINGS LEFT OF C.L. CONSTRUCTION



ELEVATION OF SOIL BORINGS RIGHT OF C.L. CONSTRUCTION

BORING LEGEND

A1-Moist, Stiff, Reddish Brown to Brown Sandy Clay
 B1-Moist, Medium Dense, Brown and Gray Silty Sand
 C1-Moist, Very Stiff, Gray Clay with Silt and Sand Seams
 D1-Moist, Very Stiff, Dark Brown Clay with Silt and Sand Partings
 E1-Moist, Very Stiff, Brown and Gray Clay with Silt and Sand Partings
 F1-Moist, Very Stiff, Brown and Gray Clay with Silt and Sand Seams
 G1-Moist, Very Stiff, Brown and Gray Clay with Silt Partings
 H1-Moist, Very Hard, Brown and Gray Clay with Silt Partings
 I1-SANDSTONE - Light Brown, Poorly-Cemented (Bauxite)
 K1-SANDSTONE WITH REDDISH BROWN CLAY LAYERS - Reddish Brown and Gray, Medium Bedded, Cemented, with Slight Dip (Bauxite)
 L1-SANDSTONE WITH REDDISH BROWN CLAY LAYERS - Reddish Brown and Gray, Medium Bedded, Poorly-Cemented, with Slight Dip (Bauxite)
 M1-Moist, Stiff, Dark Gray Sandy Clay
 N1-Moist, Medium Dense, Dark Gray Sand with Clay
 P1-Moist, Very Stiff, Gray and Brown Clay with Silt and Sand Seams
 Q1-Moist, Very Stiff, Gray and Brown Clay with Sand Layers
 R1-Moist, Very Stiff, Brown and Gray Clay with Sand Seams
 S1-Moist, Hard, Brown and Gray Clay with Sand Seams
 T1-Moist, Hard, Dark Brown Clay with Slickensides
 U1-SANDSTONE WITH REDDISH BROWN CLAY SEAMS - Reddish Brown and Gray, Medium Bedded, Poorly-Cemented, with Slight Dip (Bauxite)
 V1-Moist, Very Stiff, Gray and Brown Clay with Silt and Sand Partings
 W1-Moist, Very Stiff, Gray and Brown Clay with Sand Seams
 X1-Moist, Very Stiff, Gray and Brown Clay with Sand Partings
 Y1-Moist, Hard, Gray and Brown Clay with Sand Seams
 Z1-SANDSTONE - Light Brown and Gray, Medium Bedded, Cemented, with Slight Dip (Bauxite)
 A2-Moist, Medium Dense, Brown Sand with Gray Clay and some Gravel (Sandstone Fragments)
 B2-Moist, Medium Dense, Brown and Gray Sand with Clay
 C2-Moist, Very Stiff, Gray Clay with Sand Seams
 D2-Moist, Very Stiff, Gray Clay with Sand Partings
 E2-Moist, Hard, Gray and Brown Clay with Sand Partings
 F2-SANDSTONE WITH CLAY LAYERS - Reddish Brown, Poorly-Cemented (Bauxite)
 G2-SANDSTONE WITH CLAY LAYERS - Reddish Brown, Medium Bedded, Poorly-Cemented, with Slight Dip (Bauxite)
 H2-SANDSTONE WITH CLAY SEAMS - Reddish Brown, Medium Bedded, Poorly-Cemented, with Slight Dip (Bauxite)
 J2-ALTERNATING LAYERS OF REDDISH BROWN AND BLACK SANDSTONE WITH CLAY SEAMS - Medium Bedded, Poorly-Cemented, with Slight Dip (Bauxite)
 K2-Moist, Medium Stiff, Gray Clay with Sand Seams
 L2-Moist, Medium Dense, Brown Sand with Clay
 M2-Moist, Very Stiff, Dark Brown Clay with Sand Seams

"N" VALUES

Sta. 113+09 - 27' Right of C.L. of Constr.

4.9- 5.9, N=15
 9.9- 10.9, N=22
 14.9- 15.9, N=22
 19.9- 20.9, N=17
 24.9- 25.9, N=20
 29.9- 30.9, N=28
 34.9- 35.9, N=23
 39.9- 40.9, N=25
 44.9- 45.5, N=98(7')
 49.4- 49.5, N=60(1')

Sta. 113+10 - 37' Left of C.L. of Constr.

5.3- 6.3, N=9
 10.3- 11.3, N=16
 15.3- 16.3, N=18
 20.3- 21.3, N=20
 25.3- 26.3, N=27
 30.3- 31.3, N=29
 35.3- 36.3, N=22
 40.3- 41.3, N=30

Sta. 113+34 - 29' Left of C.L. of Constr.

4.5- 5.5, N=19
 9.5- 10.5, N=22
 14.5- 15.5, N=27
 19.5- 20.5, N=22
 24.5- 25.5, N=33
 29.5- 30.5, N=31
 34.5- 34.8, N=60(3')

Sta. 113+34 - 27' Right of C.L. of Constr.

4.9- 5.9, N=19
 9.9- 10.9, N=23
 14.9- 15.9, N=23
 19.9- 20.9, N=23
 24.9- 25.9, N=29
 29.9- 30.9, N=34
 34.4- 34.6, N=30(2')

Sta. 114+72 - 25' Left of C.L. of Constr.

5.0- 6.0, N=15
 10.0- 11.0, N=18
 15.0- 16.0, N=24
 20.0- 21.0, N=24
 25.0- 26.0, N=27
 30.0- 31.0, N=37
 35.0- 36.0, N=33
 40.0- 41.0, N=41
 45.0- 46.0, N=32
 49.5- 49.7, N=60(2')

Sta. 114+89 - 41' Left of C.L. of Constr.

4.5- 5.5, N=8
 9.5- 10.5, N=16
 14.5- 15.5, N=20
 19.5- 20.5, N=20
 24.5- 25.5, N=23
 29.5- 30.5, N=25
 34.5- 35.5, N=25
 39.5- 40.5, N=37
 44.5- 45.5, N=50
 49.5- 49.7, N=60(2')



BRIDGE ENGINEER

SHEET 2 OF 2
 LAYOUT OF BRIDGE OVER
 BAUXITE & NORTHERN RAILROAD SPUR
 BAUXITE & NORTHERN RR SPUR
 STR. & APPRS. (S)
 SALINE COUNTY
 ROUTE 183 SEC. 1
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

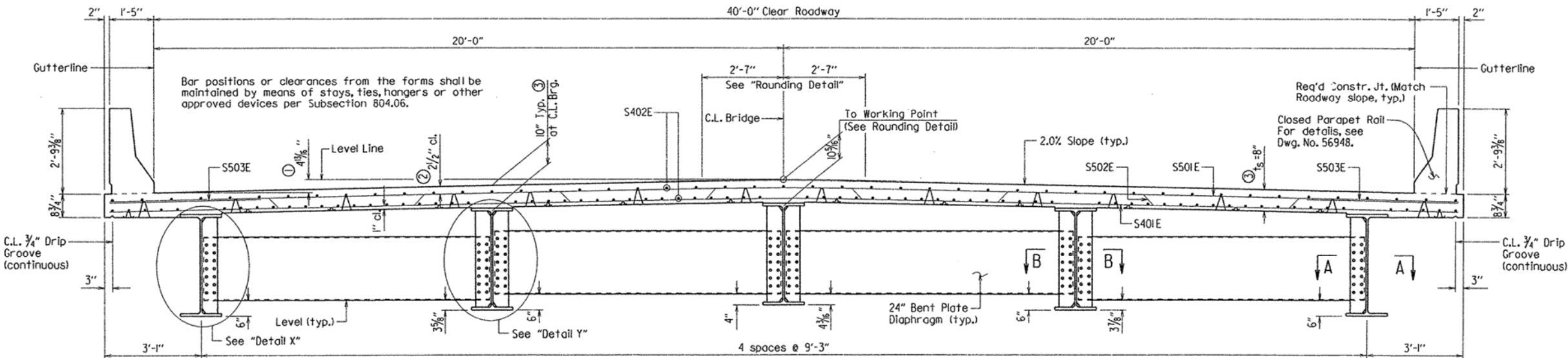
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 CHECKED BY: JNP DATE: 4-14-15 SCALE: 1" = 20'
 DESIGNED BY: ACP DATE: 6-13
 BRIDGE NO. 07297 DRAWING NO. 56937

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						07297 - 100' SPAN - 56945		

Slab Reinforcing:
 Longitudinal: S402E as shown
 Transverse: S502E @ 12" o.c. bent up over beams
 S501E @ 12" o.c. in top, S401E @ 12" o.c. in bottom
 S503E @ 6" in top of overhangs (bundled with #5 bars)

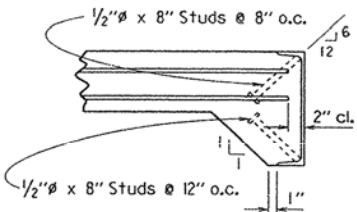
NOTES:
 Class I Protective Surface Treatment shall be applied to the roadway surface and the roadway face and top of the concrete parapet rail.
 At the Contractor's option, two straight epoxy coated #5 bars, top and bottom, may be substituted for bar S502E. Payment will be based on the weight of bar S502E.
 Bars with an "E" suffix are epoxy coated.

- Working point to gutterline.
- Tolerance: Minus = 1/4"; Plus equal to the amount of slab thickening used to meet slab thickness tolerance. See "Adjustment for Slab Thickness Tolerance".
- See "Adjustment for Slab Thickness Tolerance".



TYPICAL ROADWAY SECTION

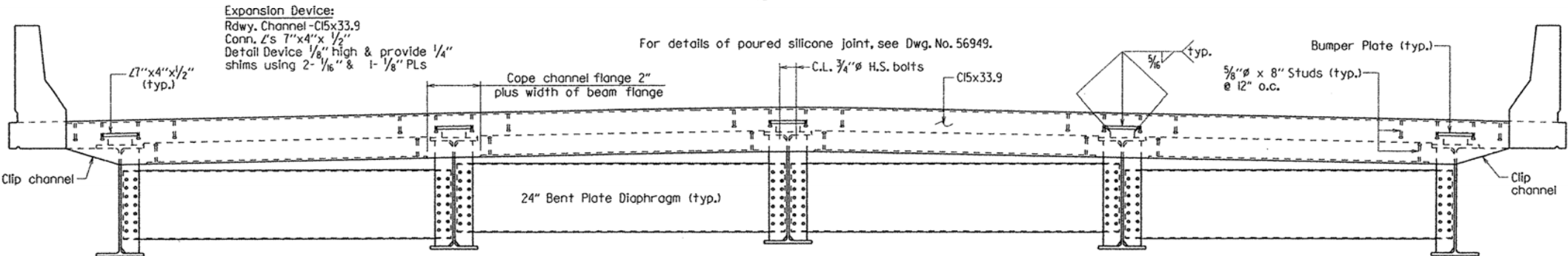
For "Section A-A" and "Section B-B", see Dwg. No. 56946.



DETAILS OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT

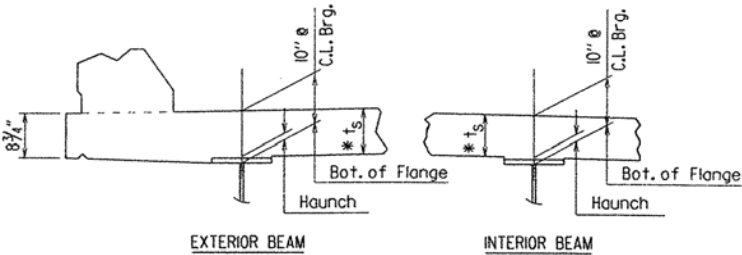
N.T.S.

† s = slab thickness as shown in "Typical Roadway Section"



ROADWAY SECTION NEAR JOINT

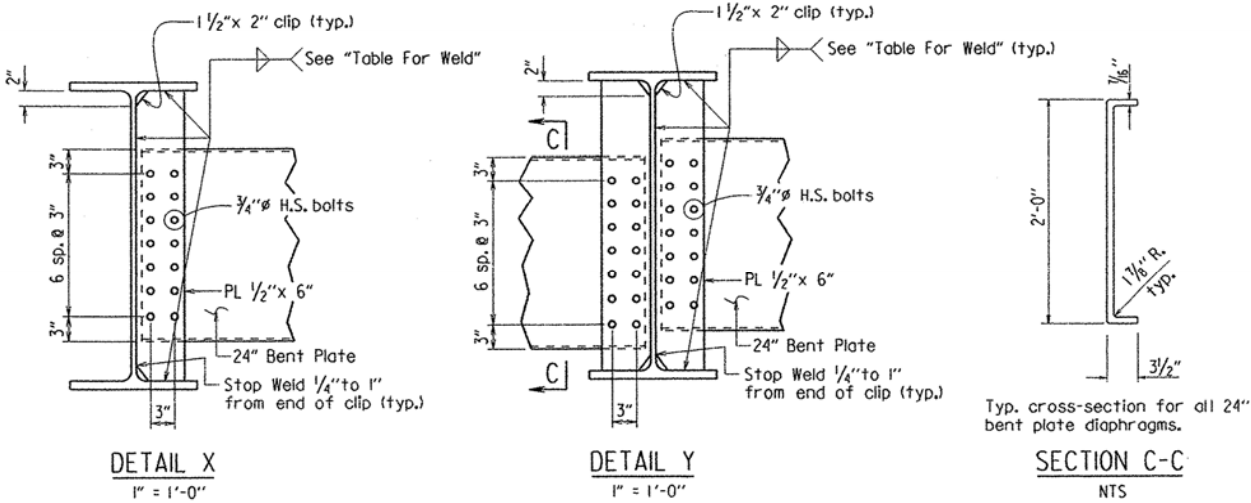
Looking Ahead
 1/2" = 1'-0"



ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

No Scale

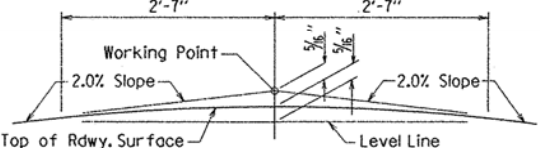
NOTES:
 Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum occurs when top flange contacts bottom reinforcing steel; Maximum = top flange thickness plus 1/4". No increase in concrete and structural steel quantities will be made to maintain tolerances.
 Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.



DETAIL X
 1" = 1'-0"

DETAIL Y
 1" = 1'-0"

SECTION C-C
 N.T.S.



ROUNDING DETAIL

No Scale

TABLE FOR WELD

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 3/4" Inclusive	1/4"	Be
Over 3/4"	3/8"	Used

NOTE: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.



BRIDGE ENGINEER

SHEET 1 OF 5
 DETAILS OF 100'-0"
 W-BEAM SPAN

ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: ACP DATE: 07-16-13 FILENAME: b061349.sldgn
 CHECKED BY: JNP DATE: 4-14-15 SCALE: As Noted
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