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.		110389	12	65
① 06970		QUANTITIES		45893

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 110389

BRIDGE NO. / CODE NO. / NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	603	801	802	802	803	804	804	805	805	807	SP & 808	812	SP JOB 110389
		ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	TEMPORARY BRIDGE STRUCTURE (24' ROADWAY WIDTH)	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE-BRIDGE	CLASS S(AE) CONCRETE-BRIDGE	CLASS 1 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL-BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	STEEL SHELL PILING (24'' DIA.)	PILE ENCASEMENT	STRUCTURAL STEEL IN BEAM SPANS (M 270, GRADE 50W)	ELASTOMERIC BEARINGS	BRIDGE NAME PLATE (TYPE D)	SILICONE JOINT SEALANT
		UNIT	LUMP SUM	LIN. FT.	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LB.	LIN. FT.	LIN. FT.	LB.	CU. IN.	EACH	LIN. FT.
06970 X071 BIG ROBE BAYOU	END BENTS 1 & 9				68	57.50		0.5	5705		480		1520			
	INTERIOR BENTS 2-4 & 6-8					102.10			11000		1950	454				
	INTERIOR BENT 5					17.00			1835		350	73				
	TWO 184'-0'' CONT. COMP. W-BEAM UNITS						443.20	40.0		104210			249830	29088	1	130
TOTALS FOR JOB NO. 110389			1	340	68	176.60	443.20	40.5	18540	104210	2780	527	251350	29088	1	130

AILEEN SCHUBEL
DESIGN SQUAD SUPERVISOR

STATE OF ARKANSAS
CHARLES P. BRAND
REGISTERED PROFESSIONAL ENGINEER
No. 4937
5/6/03

BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
BIG ROBE BAYOU STR. & APPRS. (S)
MONROE COUNTY

ROUTE 70 SEC. 17

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 21 FEB 03 FILENAME: b110389.q1
CHECKED BY: DPm DATE: 04-30-03 SCALE: None
DESIGNED BY: DATE:

BRIDGE NO. 06970 DRAWING NO. 45893

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.		110389	18	65
① 06970		LAYOUT		45894

FOR R/W DATA, SEE RDWY. PLANS

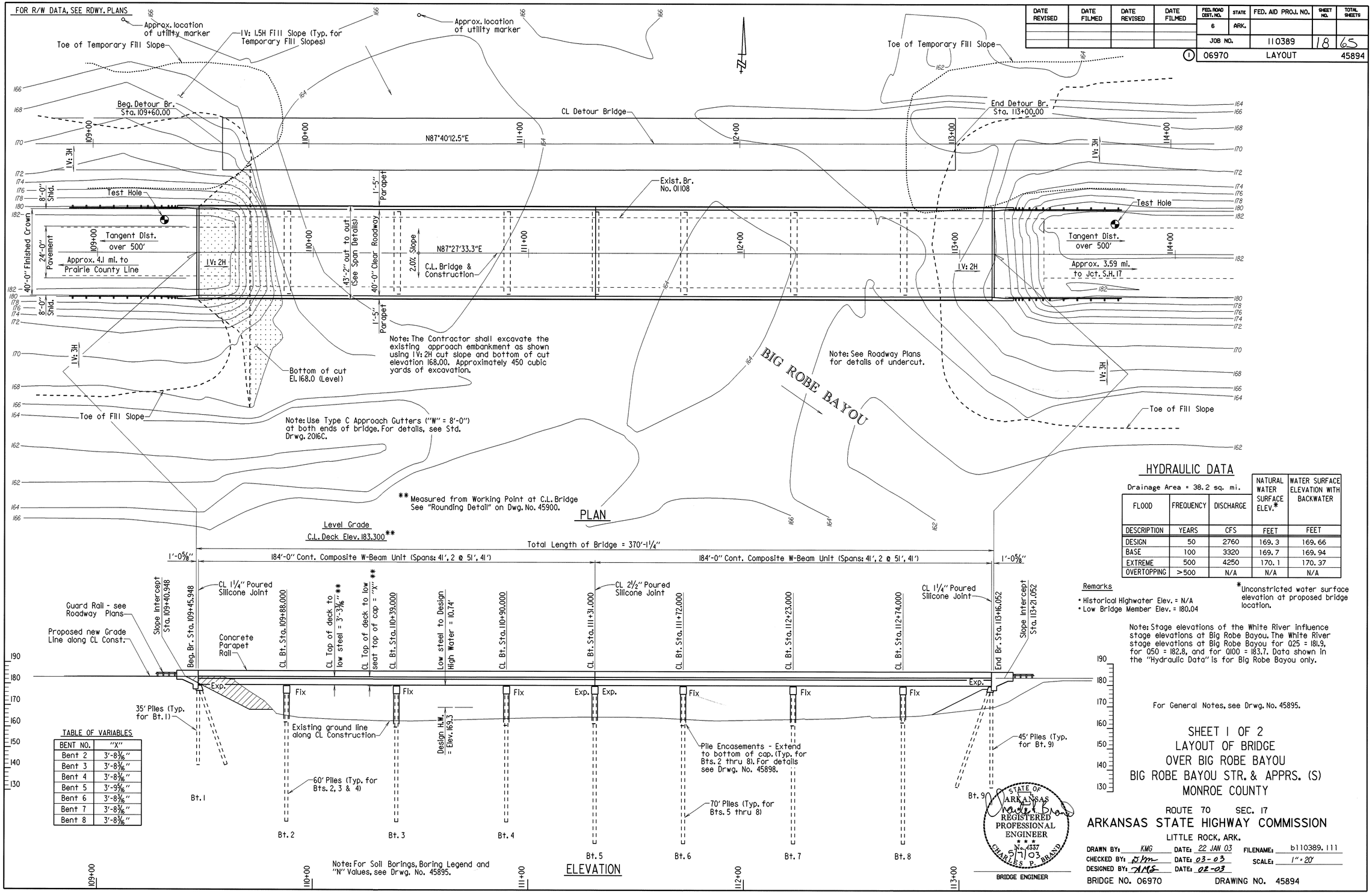


TABLE OF VARIABLES

BENT NO.	"X"
Bent 2	3'-8 3/16"
Bent 3	3'-8 3/16"
Bent 4	3'-8 3/16"
Bent 5	3'-9 5/16"
Bent 6	3'-8 3/16"
Bent 7	3'-8 3/16"
Bent 8	3'-8 3/16"

Note: For Soil Borings, Boring Legend and "N" Values, see Drwg. No. 45895.

HYDRAULIC DATA

Drainage Area = 38.2 sq. mi.

FLOOD	FREQUENCY	DISCHARGE	NATURAL WATER SURFACE ELEV.*	WATER SURFACE ELEVATION WITH BACKWATER
DESCRIPTION	YEARS	CFS	FEET	FEET
DESIGN	50	2760	169.3	169.66
BASE	100	3320	169.7	169.94
EXTREME	500	4250	170.1	170.37
OVERTOPPING	>500	N/A	N/A	N/A

*Unconstricted water surface elevation at proposed bridge location.

Remarks

- Historical Highwater Elev. = N/A
- Low Bridge Member Elev. = 180.04

Note: Stage elevations of the White River influence stage elevations at Big Robe Bayou. The White River stage elevations at Big Robe Bayou for Q25 = 181.9, for Q50 = 182.8, and for Q100 = 183.7. Data shown in the "Hydraulic Data" is for Big Robe Bayou only.

For General Notes, see Drwg. No. 45895.

STATE OF ARKANSAS CHARLES P. BRAND No. 4337 REGISTERED PROFESSIONAL ENGINEER 5/7/03

BRIDGE ENGINEER

SHEET 1 OF 2
LAYOUT OF BRIDGE OVER BIG ROBE BAYOU
BIG ROBE BAYOU STR. & APPRS. (S)
MONROE COUNTY

ROUTE 70 SEC. 17

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KMC DATE: 22 JAN 03 FILENAME: b110389.111
CHECKED BY: DJM DATE: 03-03 SCALE: 1" = 20'
DESIGNED BY: AMS DATE: 02-03

BRIDGE NO. 06970 DRAWING NO. 45894

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.		110389	19	65
				(1) 06970		LAYOUT		45895

GENERAL NOTES

BENCH MARK: BM #906, 13.81' left of centerline construction Sta. 109+64.11. Elevation 183.41.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 edition), with applicable supplemental specifications and special provisions. Unless otherwise noted on the plans, Section and Subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (2002 edition), with current interim specifications.

LIVE LOADING: HS20 METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:

Reinforcing Steel (AASHTO M31 or M53, Gr. 60)	fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 36)	Fy = 36,000 psi
Class S Concrete (substructure)	f'c = 3,500 psi
Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Structural Steel (AASHTO M270, Gr. 50W)	Fy = 50,000 psi

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

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

STEEL SHELL PILING: All piling shall be 24" diameter concrete filled steel shell piles and shall be driven with an approved air, steam, or diesel hammer. Piling in Bents 1 & 9 shall be driven to a minimum ultimate bearing capacity of 121 tons per pile and to a minimum penetration of 20' below bottom of cap. Piling in Bents 2 thru 8 shall be driven to a minimum ultimate bearing capacity of 207 tons per pile and shall be driven to a tip elevation of 135.0 or lower. Piling in end bents shall be driven after embankment to bottom of cap is in place.

Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. No additional payment will be made for cut-off or build-up. Test piles are not required, but may be driven for the Contractor's information in accordance with Subsection 805.08(g).

DRIVING SYSTEM: The driving system approval and ultimate bearing capacity determination for piling shall be based on the requirements of Subsection 805.09(b) "Method B - Wave Equation Analysis (WEAP)". At Bents 1 thru 9 it is estimated that a minimum rated hammer energy of 28,000 foot pounds per blow will be required to obtain the ultimate bearing capacity.

PILE DESIGN CAPACITY: Bents 1 & 9; Concrete Filled Steel Shell Pile (24" Dia.) = 44 Tons
Bents 2 thru 8; Concrete Filled Steel Shell Pile (24" Dia.) = 75 Tons

DETAIL DRAWINGS:	DRAWING NO.
End Bents	45896, 45897
Intermediate Bents	45899
184'-0" Cont. Comp. W-Beam Units	45900-45905
Steel Shell Piles	45898
Type C Approach Gutters	2016C

EXISTING BRIDGE: The existing bridge No. 01108 (Log Mile 4.14) is 27' wide and 375' long and consists of 11- R. C. Deck Girder spans, supported by concrete bent caps on concrete piles. The existing bridge is at the same location as the proposed bridge.

REMOVAL AND SALVAGE: Existing Bridge No. 01108 shall be removed in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor.

TEMPORARY BRIDGE: Construct a temporary bridge approximately 50' upstream from centerline construction with a minimum deck elevation of 182.8. See Roadway Plans for actual detour grade and alignment. The temporary bridge shall be 340' long with a minumum roadway width of 24', a minimum live load capacity of H15 and shall have a concrete deck. See Section 603 and Drawing Nos. 2465 thru 2467 for standard temporary bridge details. If timber piling and pine timber are used on this temporary bridge structure the materials shall be treated with a preservative according to the Standard Specifications.

BORING LEGEND *

AI-Moist, Medium Stiff, Brown and Gray Clay
BI-Moist, Soft, Gray and Brown Clay
CI-Wet, Soft, Gray and Brown Clay with some Organic Matter (Wood)
DI-Wet, Medium Stiff, Brown and Gray Clay
EI-Wet, Medium Stiff, Brown and Gray Clay with some Organic Matter
FI-Wet, Dense, Gray Sand with some Organic Matter
GI-Wet, Dense, Gray Sand
HI-Wet, Medium Dense, Gray Sand with Traces of Gravel
JI-Wet, Medium Dense, Gray Sand with some Lignite
KI-Wet, Medium Dense, Gray Sand with Traces of Lignite
LI-Wet, Medium Dense, Gray Sand with some Gravel and Traces of Lignite
MI-Wet, Medium Dense, Gray Sand with some Gravel
NI-Wet, Dense, Gray Sand and Gravel
PI-Wet, Medium Dense, Gray Sand and Gravel
QI-Wet, Dense, Gray Sand with Clay Seams and Gravel
RI-Wet, Dense to Very Dense, Gray Sand
SI-Moist, Medium Stiff, Gray and Brown Clay with some Iron Nodules
TI-Wet, Soft, Gray and Brown Silty Clay with some Organic Matter (Wood)
UI-Wet, Medium Stiff, Gray and Brown Clay
VI-Wet, Soft, Gray and Brown Clay with some Organic Matter
WI-Wet, Loose, Gray Silty Sand with some Clay
XI-Wet, Soft, Gray Clay
YI-Wet, Medium Dense, Gray Sand
ZI-Wet, Medium Dense, Gray Sand and Gravel with Traces of Lignite
A2-Wet, Medium Dense, Gray Sand and Pea Gravel
B2-Wet, Dense, Gray Sand with Traces of Gravel

*Hollow stem augers were utilized to a depth of 8.0'.

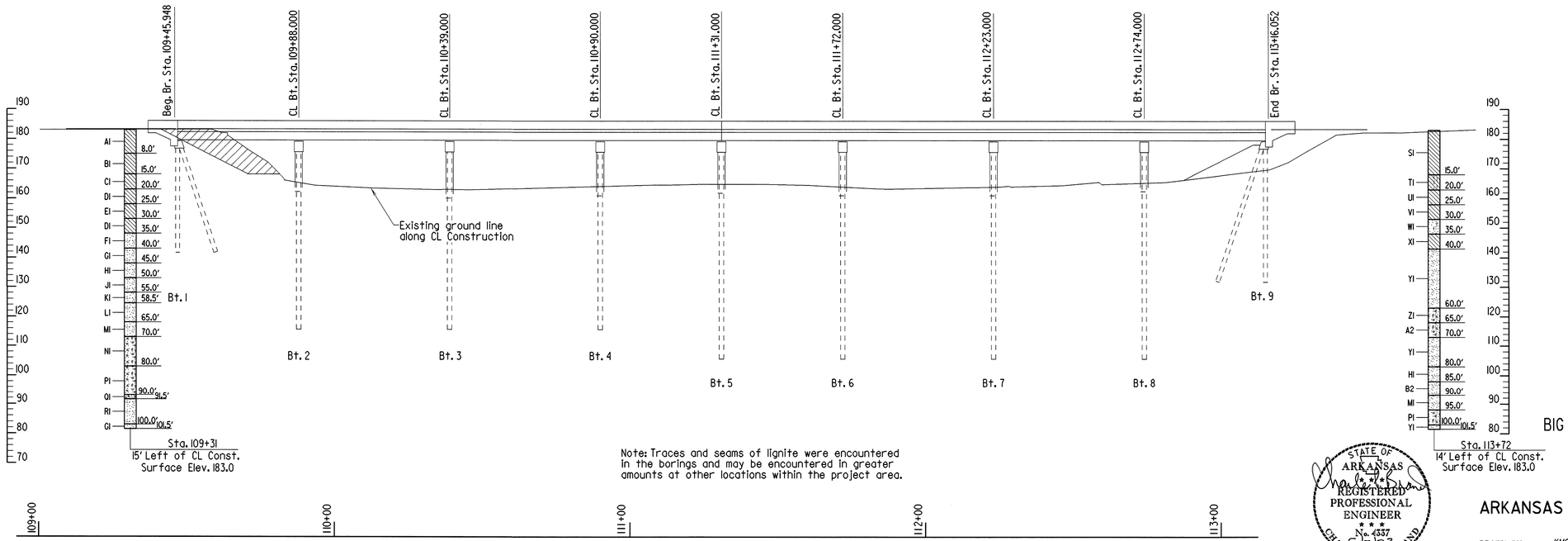
"N" VALUES

Sta. 109+31 - 15' Left of CL Const.

3.5- 4.5, N=5
8.5- 9.5, N=4
15.5- 16.5, N=3
20.5- 21.5, N=8
25.5- 26.5, N=8
30.5- 31.5, N=6
35.5- 36.5, N=45
40.5- 41.5, N=39
45.5- 46.5, N=22
50.5- 51.5, N=20
55.5- 56.5, N=20
60.5- 61.5, N=16
65.5- 66.5, N=20
70.5- 71.5, N=31
75.5- 76.5, N=31
80.5- 81.5, N=19
85.5- 86.5, N=22
90.5- 91.5, N=31
95.5- 96.5, N=65
100.5-101.5, N=44

Sta. 113+72 - 14' Left of CL Const.

3.5- 4.5, N=6
8.5- 9.5, N=7
15.5- 16.5, N=4
20.5- 21.5, N=5
25.5- 26.5, N=2
30.5- 31.5, N=7
35.5- 36.5, N=2
40.5- 41.5, N=20
45.5- 46.5, N=18
50.5- 51.5, N=27
55.5- 56.5, N=18
60.5- 61.5, N=19
65.5- 66.5, N=23
70.5- 71.5, N=19
75.5- 76.5, N=28
80.5- 81.5, N=25
85.5- 86.5, N=36
90.5- 91.5, N=19
95.5- 96.5, N=23
100.5-101.5, N=30



Note: Traces and seams of lignite were encountered in the borings and may be encountered in greater amounts at other locations within the project area.

SOIL BORINGS
Scale: 1" = 20'

STATE OF ARKANSAS
CHARLES P. BRAND
No. 13337
REGISTERED PROFESSIONAL ENGINEER
01-7-03

BRIDGE ENGINEER

SHEET 2 OF 2
LAYOUT OF BRIDGE
OVER BIG ROBE BAYOU
BIG ROBE BAYOU STR. & APPRS. (S)
MONROE COUNTY

ROUTE 70 SEC. 17
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 22 JAN 03 FILENAME: b110389.112
CHECKED BY: KMM DATE: 03-03 SCALE: As Shown
DESIGNED BY: AMS DATE: 02-03

BRIDGE NO. 06970 DRAWING NO. 45895