

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.		R50064	65	244
			①	06838	LAYOUT		42282	

### GENERAL NOTES

BENCH MARK: Chiseled Square in Left Bridge End 29.58' Left of C.L. Const. Sta. 116+45.51, Elev. 231.250

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (1996 edition) with applicable supplemental specifications and special provisions. Unless otherwise noted, Section and subsection numbers in the plans refer to the Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition) with current interim specifications.

LIVE LOADING: HS20                      METHOD OF DESIGN: Load Factor

SEISMIC PERFORMANCE CATEGORY: B

MATERIALS AND STRENGTHS:

Class 5(AE) Concrete (superstructure)	$f'_c = 4,000$ psi
Class 5 Concrete (substructure)	$f'_c = 3,500$ psi
Reinforcing Steel (AASHTO M31 or W53, GR. 60)	$F_y = 60,000$ psi
Structural Steel (AASHTO M270, Gr. 36)	$F_y = 36,000$ psi
Structural Steel (AASHTO M270, Gr. 50W)	$F_y = 50,000$ psi

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

STEEL SHELL PILING: Piling in Bents 1 & 4 shall be 14" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 124 tons per pile. Piling in Bents 2 & 3 shall be 24" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 205 tons 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. 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 and 4 it is estimated that a minimum rated hammer energy of 18,000 foot pounds per blow will be required to obtain the ultimate bearing capacity. At Bents 2 and 3 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.

**PREBORING:** Preboring is required for all piling at Bents 1 and 4 to a depth of 10' below bottom of cap. Prebored holes shall be 6" greater than the diagonal of the pile cross-section and shall be backfilled in accordance with subsection 805.08(a) after piles are in place. The Contractor shall be responsible for keeping prebored holes free of debris prior to backfilling, which may require the use of temporary casings or other methods.

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.

PIPE UNDERDRAIN: One Pipe Underdrain with Outlet Protectors shall be installed behind each Bridge End in accordance with Section 611. Pipe Underdrains will not be paid for directly but shall be considered subsidiary to "Approach Slabs".

DETAIL DRAWINGS:	DRAWING NO.
End Bents	42283
Intermediate Bents	42284
Concrete Filled Steel Shell Piles	42285
175' Integral W-Beam Unit	42286-42290
Type C Approach Gutters and Slabs	2016C & 2018

EXISTING BRIDGE: Existing Bridge No. MI286 (Log Mile 6.76) is 26.1' wide and 131' long and consists of precast concrete spans supported by concrete piling.

REMOVAL AND SALVAGE: After the new bridge is open to traffic, Existing Bridge No. M1286 shall be removed in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor.

### BORING LEGEND

Al-Moist, Stiff, Brown Silty Clay  
 Bl-Moist, Very Stiff, Brown Silty Clay with some Organic Matter  
 Cl-Moist, Loose, Brown Silty Sand with Clay Seams  
 Dl-Wet, Very Loose, Brown and Gray Silty Sand with Clay Seams  
 El-Wet, Soft, Gray Sandy, Silty Clay with Organic Matter (Wood)  
 Fi-Wet, Soft, Gray Silty Clay  
 Gi-Wet, Soft, Gray Sandy, Silty Clay with Traces of Organic Matter (Wood)  
 Hi-Wet, Medium Dense, Gray Sand and Gravel  
 Ji-Wet, Medium Dense, Gray Sand with Traces of Gravel and Organic Matter  
 Ki-Wet, Medium Dense, Brown Sand with Traces of Gravel  
 Li-Wet, Medium Dense, Brown Sand  
 Mi-Wet, Dense, Brown Sand with Traces of Organic Matter  
 Ni-Wet, Dense, Brown Sand and Gravel  
 Pi-Wet, Medium Dense, Gray Sand with some Clay Seams  
 Qi-Wet, Very Dense, Gray Sand with some Gravel  
 Ri-Moist, Hard, Gray Silty Clay  
 Si-Moist, Very Stiff, Brown Silty Clay  
 Ti-Moist, Medium Dense, Brown Silt with some Clay  
 Ui-Wet, Medium Dense, Brown Silty Sand  
 Vi-Wet, Medium Dense, Brown Gravel  
 Wi-Wet, Medium Dense, Brown Sand and Gravel  
 Xi-Wet, Loose to Medium Dense, Brown Sand and Gravel  
 Yi-Wet, Medium Dense to Dense, Brown Sand with Traces of Gravel  
 Zi-Wet, Very Dense to Dense, Gray Sand  
 A2-Wet, Dense, Gray Sand with Traces of Gravel  
 B2-Wet, Dense to Very Dense, Gray Sand and Gravel with some Thin Cemented Sand Seams

and Seams

LAYOUT OF  
BRIDGE OVER LONG SLOUGH  
HWY. 122 - EAST (S)  
INDEPENDENCE COUNTY  
ROUTE 69 SEC. 4  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 11/17/2000 FILENAME: BR50064X.LI  
 CHECKED BY: AMS DATE: 12-7-00 SCALE: 1" = 20'-0"  
 DESIGNED BY: JAC DATE: 11/4/2000  
 BRIDGE NO. 06838 DRAWING NO. 42282

