ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

SPECIAL PROVISION

JOB NO. 110229

SLURRY DISPLACEMENT DRILLED SHAFT

DESCRIPTION: This work includes the furnishing of all materials and the construction of foundations consisting of reinforced concrete shafts placed within drilled excavations using a slurry displacement method. This method uses mineral or polymer slurry to maintain stability of the borehole while advancing the excavation to the final depth and placing the reinforcing cage and shaft concrete. Such foundations shall be constructed in accordance with the details and governing dimensions shown on the plans, the Standard Specifications, this special provision, and as directed by the Engineer.

MATERIALS: (a) Slurry. The slurry shall be a mineral or polymer slurry product developed for concrete shaft construction using a slurry displacement method.

The Contractor shall provide the Engineer with a copy of the Manufacturer's Specifications including the parameters for the tests required in this Special Provision for the slurry he intends to use. The approval to use this slurry shall be made by the Engineer.

(b) Concrete. All concrete shall be Class S with a minimum 28-day compressive strength of 3500 psi and shall conform to Section 802 unless modified herein.

The slump of the drilled shaft concrete, at time of placement, shall 8 inches ± 1 inch for concrete placed underwater/under slurry. The maximum water cement ratio specified in subsection 802.05 shall not be increased. Approved admixtures may be used to obtain desired workability.

TRIAL BATCH: Each concrete mix design proposed by the Contractor to be used in the drilled shafts shall be submitted to the Engineer at least 10 business days prior to preparing a trial batch. A trial batch for each concrete mix design shall be prepared using the specific materials, including admixtures, that are intended for use on the job. The Contractor shall prepare a plant batch of at least 3 cubic yards or one-third the rated capacity of the mixer, whichever is greater. This trial batch shall be accomplished by the Contractor under the observation of the Engineer. This batch shall be sampled and tested by the Engineer for compliance with the specifications for slump and compressive strength. Additionally, this batch shall be sampled and tested by the Engineer for slump loss according to the following procedure: