Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

December 28, 2004

SUBJECT: TR Route 158
Project BROS-0139(50)
Section 03-05123-00-BR
Moultrie County
Contract No 91318
Item 65
January 21, 2005 Letting

TO PROSPECTIVE BIDDERS:

To clarify information it is necessary to revise the following:

Proposal - Revised Special Provision "Three Sided Precast Concrete Structure"

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal. Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Since the proposal sheets are printed back to back, bidders are cautioned to exercise care when inserting revised and/or added special provisions into their proposals.

Please call 217-782-7806 if any of the above-described material is not included in this transmittal.

Very truly yours,

Michael L. Hine
Engineer of Design
and Environment

By: Ted B. Walschleger, P. E.
Engineer of Project Management

THREE SIDED PRECAST CONCRETE STRUCTURE

This work shall consist of furnishing and installing the three-sided precast concrete structure according to applicable portions of Sections 503 and 504 of the Standard Specifications. All three-sided precast concrete structures, precast headwalls, precast wingwalls and precast footings shall be produced according to the Department's latest Policy Memorandum "Quality Control/ Quality Assurance Program for Precast Products".

The three-sided concrete structure shall be designed according to AASHTO and shall include the effects of unyielding foundation conditions for the sequence of construction anticipated.

The Contractor shall be responsible for diverting the water from the construction area using a method meeting the approval of the Engineer. The cost of diverting the water shall be considered as included in the contract unit price bid for the three sided structure being constructed and no additional compensation will be allowed.

Except as follows, all joints between segments shall be sealed according to Article 540.06. When the minimum fill over the structure, between the edges of the shoulders, is less than or equal to 1 m (3 ft), the sealing of the top joint shall be replaced by a grouted keyway or a previously approved mechanical connection between the segments. The grouted keyway or mechanical connection shall be used to connect a minimum length of 3.65 m (12 ft) of exterior segments at each end of the structure. The keyway shall be cast in the top slab of the segments and grouted according to Article 504.06(e). If exterior mechanical connectors are used, there shall be a minimum of 4 mechanical connections per joint with a maximum spacing of 3 m (10 ft). All plates, shapes, and hardware shall be galvanized or stainless steel.

Three sided precast concrete structures located in areas with a seismic acceleration coefficient A>0.09 shall satisfy the following requirements:

1) The structure shall be connected to the footing/pedestal 600 mm (2 ft) from the outermost exterior edge of the structure at all four corners with a galvanized rigid mechanical connection subject to the approval of the Engineer. This connection shall be located on the interior face of the segment to allow for future inspection.

2) All top joints of exterior segments within a length of 3.65 m (12 ft) at each end of the structure, regardless of the fill cover, shall be mechanically connected as previously described. The mechanical connection is subject to the approval of the Engineer.

Shop drawings for three sided precast concrete structures shall be submitted according to Article 504.04(a) and Article 105.04 of the Standard Specifications. The supplier selected by the Contractor shall submit complete design calculations and shop drawings, prepared and sealed by an Illinois Licensed Structural Engineer, for approval by the Engineer.

Prior approval by the Department for the structural feasibility and adequacy of proprietary systems will enhance the approval process of the final structure design but in no case shall relieve the Contractor of the design or QC/QA requirements stated herein. The following

proprietary systems have been previously approved for the structural feasibility and adequacy only:

1) Hy-Span
2) Con Span
3) Tri-Span Bridge

When precast concrete substructure is specified, the Contractor may choose to substitute cast-in-place for precast headwalls, wingwalls and footings unless otherwise specified on the plans. No additional compensation for these substitutions will be allowed and the supplier shall submit complete design calculations and shop drawings, prepared and sealed by an Illinois Licensed Structural Engineer, for approval by the Engineer.

When Cast-in-place concrete substructure is specified, the Contractor may choose to substitute precast for cast-in-place headwalls, wingwalls and footings unless otherwise specified on the plans. No additional compensation for these substitutions will be allowed and the supplier shall submit complete design calculations and shop, drawings prepared and sealed by an Illinois Licensed Structural Engineer, for approval by the Engineer.

If a precast footing is used, it shall be built to the manufacturers specifications and the Contractor shall prepare a 150 mm (6 in.) thick layer of compacted granular material placed below the bottom of the footing. The porous granular material shall be gradation CA 7, CA 11, or CA 18 and shall be placed to extend at least 600 mm (2 ft) beyond the limits of the precast footing. There shall be no additional compensation for the porous granular bedding material.

The excavation and backfill for three sided precast concrete structures shall be according to Section 502 of the Standard Specifications and any additional backfilling requirements based on the precast supplier's design. All construction inspection and material certification necessary to verify these additional backfilling requirements in the field shall be the responsibility of the supplier. The three-sided precast concrete structure shall be placed according to applicable requirements of Article 542.04(d) of the Standard Specifications. When multi-spans are used a 75 mm (3 in.) minimum space shall be left between adjacent sections. After the precast units are in place and the backfill has been placed to midheight on each exterior side of the barrel, the space between adjacent units shall be filled with Class SI concrete. The Class SI concrete shall be according to Section 1020, except the maximum size of the aggregate shall be 9.5 mm (3/8 in.).

Method of Measurement. Three sided precast concrete structures will be measured in meters (feet). The overall length shall be measured from out to out of headwalls along the centerline of each span of the structure. Class SI concrete placed between adjacent spans, grouted keyways or mechanical connections between precast units, and mechanical connections between the precast units and the substructure will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for THREE SIDED PRECAST CONCRETE STRUCTURES of the size specified. This price will be payment in full for furnishing and installing all three sided precast concrete units, precast headwalls, precast wingwalls, cast-in-place portions between spans, backfill and excavation, except rock excavation. Rock excavation will be paid for according to Article 502.15 of the Standard Specifications.

The cost of specified cast-in-place footings will not be included in this item but will be paid for separately.

Revised 12/28/04