**SPECIAL NOTE FOR HDPE PIPE LINER**

The bid item(s) “HDPE Pipe Liner (\_\_ Inch)” is to be used to line the existing culvert pipes at the locations noted in the Proposal.

The diameter of the HDPE Pipe Liner(s) shall be compatible and appropriate for the size(s) of the existing culvert pipe(s) to be lined, based on the recommendations of the manufacturer, and as approved by the Engineer.  Some, or all, of the existing pipes may have proposed pipe extensions. If an existing pipe is proposed to be extended, the HDPE Pipe Liner shall serve as the pipe extension in most cases, unless the proposal specifically calls for the existing pipe to be extended in like-kind material prior to installing the HDPE Pipe Liner. Additionally, HDPE Pipe Liner shall adhere to the following specifications:

**Material Specifications:**

Except as provided herein, conform to all requirements of AASHTO Designation: M 326-08 and ASTM Designation: F894 as specified by size in contract.

**Method of Measurement:**

The completed and accepted quantities of HDPE Pipe Liner will be measured in linear feet.

**Pipe:**

The Contractor must provide one trained and experienced technician to assist the Engineer in determining the needed pipe liner size (length and diameter) and to help determine blocking and grout tube placement. This will be provided at no cost to the Department.

**Grout:**

Grout shall meet specifications of the Kentucky Standard Specifications for Road and Bridge Construction, current edition. Grout ingredients and proportions may be adjusted by the Engineer to meet field conditions. Work shall include installing grout material into annular space between existing pipe and pipe liner. The Contractor will be responsible for providing any needed traffic control, constructing bulkheads, vent tubes, grout tubes, and blocking if needed. The Contractor shall provide a concrete pump and air foam generator to deliver desired pressure and material as determined by the Engineer. The Contractor shall supply at least **two** (2) trained and experienced technicians per job. The Contractor shall ensure all voids are filled by pumping grout from upstream or downstream of culvert and continue pumping until grout is expelled from the highest vent pipe on the inlet end. The Contractor shall take appropriate precautions to avoid over pressurization, buckling, and floating of the pipe liner during the grouting process. The Contractor shall comply with the pipe manufacture’s recommendations for grouting procedures. Multiple grout lifts may be required to avoid buckling the liner pipe. The Contactor shall take all necessary precautions to protect and preserve the interior of the pipe from damage. Spills shall be minimized and cleaned up immediately. Any damage to the pipe caused by or occurring during the grouting operation shall be repaired by a method approved by the Engineer at no additional cost to the Department.