Statement of Work (SOW)
Eisenhower Tunnel Pressure Grout Repairs

1. Background Information:

The Great Lakes St. Lawrence Seaway Development Corporation (GLS) is a wholly owned U.S. Government corporation within the U.S. Department of Transportation, which owns and operates that portion of the Saint Lawrence Seaway in U.S. territorial waters between Lake Ontario and Montreal, Canada. The Corporation's function is to facilitate the safe and efficient passage of commercial vessels through the Seaway. A major part of this function is the operation and maintenance of Eisenhower and Snell Locks located in Massena, New York. These locks were constructed in the late 1950's and opened to commercial navigation in 1959. The lock walls are composed of a series of mass concrete monoliths, with internal galleries and recesses that contain lock machinery and utilities.

There are numerous cracks, seams, and construction joints (all referred to as "cracks" in this document), and pipe penetrations in a crawl space above the Eisenhower Lock Tunnel that either currently leak water into the space. The cracks are of varying widths, but most are fine (approximately 3 mm. in width). Although the cracked concrete is structurally stable, it is necessary to seal the cracks to prevent water infiltration and resultant corrosion and ice formation during the winter months.

Access to these areas requires entry through hatches above the tunnel, followed by descending a flight of stairs and walking a distance to reach the work location. Work shall be conducted under confined-space conditions and in accordance with all applicable federal, state, and local regulations.

2. Mission/Purpose:

GLS is seeking a qualified Contractor to seal designated cracks in the selected recesses to stop current water infiltration and any infiltration in adjacent areas because of the work.

3. Scope:

An estimated total of 500 linear feet of crack is to be sealed as summarized by location below. Note that the estimated quantities by area are not consecutive linear feet and will entail multiple locations.

The specific cracks to be repaired will be indicated to the Contractor by the Contracting Officer's Representative (COR) in a walk-through inspection at the beginning of the project. Estimated Linear Feet is given as a reference. Pricing should be submitted as a per linear foot cost to seal all water infiltration in the areas as listed in CLINs. The Contractor should be aware that there are high voltage and other utilities in these areas, and thus shall take appropriate safety precautions when working in the vicinity of them.

4. Requirements:

4.1 General

- The Contractor shall furnish all labor, materials, equipment, and supervision necessary to seal active water infiltration through cracks, joints, voids, or pipe penetrations in concrete structures using a hydrophobic polyurethane injection resin.
- All work shall be performed in accordance with manufacturer's installation guidelines,

industry best practices, and applicable safety regulations.

4.2 Materials

- Approved Product: SPETEC PUR F400 Hydrophobic Closed Cell Polyurethane Foam Injection Resin, or approved equal.
- Performance Criteria requirements for an approved equal:
  - **Hydrophobic**: Designed to react with water to form a closed-cell, flexible foam.
  - **Expansion**: Minimum free-foam expansion of 20 times original liquid volume.
  - **Water Cut-off Capability**: Stops active water leaks under hydrostatic pressure.
  - **Durability**: Resistant to shrinkage, chemical degradation, and long-term water exposure.
  - **Curing**: Achieves full cure in accordance with manufacturer specifications (typically within minutes).

4.3 Surface and Crack Preparation

- Inspect and identify all cracks, joints, or voids with visible water infiltration.
- Clean crack surfaces to remove dirt, laitance, grease, loose particles, or other contaminants that may impede bond or resin penetration.
- Drill injection ports at proper spacing and angle to ensure complete crack penetration.
- Flush cracks with clean water as required to facilitate resin expansion and penetration.

4.4 Injection Procedure

- Install injection packers or ports at all designated locations.
- Mix and prepare SPETEC PUR F400 (or approved equal) per manufacturer's instructions.
- Inject resin under controlled pressure until resin flow is observed at adjacent ports or until refusal.
- Monitor pressure to prevent damage to surrounding concrete.
- Remove packers after injection and patch holes with compatible non-shrink grout.

4.5 Quality Control

- All materials shall be handled and installed by personnel experienced in polyurethane injection systems.
- Contractor shall verify complete crack fill and leak cessation.
- All repaired areas shall be inspected at least 24 hours after injection to confirm water infiltration has been eliminated.
- Any areas still exhibiting leakage shall be re-injected at no additional cost to the Government until fully sealed.

5. Deliverables

Tasks	Deliverables	Due
1	Attend Pre-Construction Meeting with GLS representatives.	Within 15 days of award
CLIN 0001	Mobilization	
CLIN 0002	Crack Repairs - Eisenhower Lock Tunnel	

CLIN 0003	Demobilization	

6. Period of Performance / Place of Performance

The Contractor shall begin performance within 10 calendar days and complete within ninety (90) calendar days after receiving the notice to proceed.

Work will be performed at Eisenhower Lock Tunnel in Massena, NY 13662.

7. Government-Furnished Equipment, Property, and Services

GLS will provide the following resources and services:

- Access to the job site and secure work areas
- Existing system drawings and documentation

8. Safety and Environmental Requirements

- All work shall be conducted in accordance with applicable OSHA regulations, GLS safety policies, and federal/state environmental regulations.

9. Attachments

- Reference Drawings.PDF

  It should be noted that cable trays, utilities and some other features are not shown on these drawings. Other drawings can be made available for inspection, upon request.