**SECTION 5.6**

**TECHNICAL SPECIFICATION FOR**

**PRECAST CONCRETE ADDITIVE FOR WASTEWATER MANHOLE**

**PART 1: GENERAL**

* 1. **Scope of Work**

A protective additive can be used during concrete mixing of new pre-cast concrete wastewater manholes and similar structures in order to prevent microbiologically induced corrosion (MIC).

Precast concrete additive can only be used in lieu of protective lining if specified by the plans or specifications as approved by the Owner.

* 1. **Approved Manufacturer**
* “Precast Concrete Additive along with Con-Tint Indentifier” as manufactured by Conshield Technologies, Inc and A+ Engineering, respectively, shall be used.

**PART 2: QUALITY ASSURANCE**

* 1. **Reference Standards**

### Unless otherwise stated, the latest editions of the following documents are applicable

for this specification:

## ASTM C478 Standard Specification for Precast Reinforced Concrete Manhole Sections

## ASTM C76 Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

* 1. **Sample Testing**

The precaster shall retain two labeled specimens from each production run. One set shall be retained by the precaster and the other set shall be sent to manufacturer or independent laboratory as directed by the Owner for verification on a random or as needed basis.

* 1. **Warranty**
		+ The Contractor shall warrant all work against any defects in materials and workmanship for a period of one (1) year.
		+ Unless otherwise specified, the warranty periods shall begin after the Certificate of Acceptance is issued for the Contract.

**2.4 Submittal**

 Following submittals shall be provided by the contractor:

* + - Technical data sheet showing characteristics of the additive to be used by the precaster.
		- A letter of certification from the precaster stating that the correct amount and correct mixing procedure as recommended by the manufacturer were followed for all antimicrobial concrete.
		- Copy of sample test result as specified in Section 2.2.

**PART 3: PRODUCTS**

* 1. **Concrete Additive**
* Antimicrobial additive shall be used to render the concrete uninhabitable for bacteria growth.
* The liquid antibacterial additive shall be an EPA registered material and the registration number shall be submitted for approval prior to use in the project.
* The amount to be used shall be as recommended by the manufacturer of the antibacterial additive. This amount shall be included in the total water content of the concrete mix design.
* The additive shall be added into the concrete mix water to insure even distribution of the additive throughout the concrete mixture.
* The antibacterial additive shall have successfully demonstrated prevention of MIC in sanitary sewers for ten or more years.
* The antibacterial additive shall be used by factory certified precast concrete plants.

**PART 4: EXECUTION**

**4.1 General**

* Concrete additive shall only be used during concrete mixing process of precast manhole strictly in accordance with the product manufacturer’s recommendation.

**4.2 Product Surface Marking**

* The “brick-red” color of the concrete surface from the Con-Tint Identifier will indicate that Conshield has been added. No other markings or labels are necessary.

**4.3 Field Repair**

* Field repairs to the precast concrete shall be made using ConmicShield® Joint Set Grout pre-portioned and factory packaged that requires the addition of no other components. This repair grout may be used for filling joints, lift holes, and damaged areas.

**PART 5: METHOD OF MEASUREMENT AND PAYMENT**

Payment for Corrosion Protection Epoxy Liner System for new manhole shall be incidental and inclusive in the applicable unit price bid item.

**\*\*END OF SECTION\*\***