MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**PRECAST CONCRETE SEPTIC TANK**

UTL:JBM 1 of 2 APPR:DMG:NJM:03-29-22

**a. Description****.** This work consists of furnishing and installing 5000-gallon precast concrete septic tanks as shown on the plans, including the manhole frames and covers, grade adjusting rings, PVC connection pipes and fittings, effluent filter, and all excavation, bedding, backfill, compaction, and dewatering as necessary to complete the installation.

Ensure the precast concrete septic tanks comply with all state and local regulations which apply to construction, installation, and use in a septic system.

**b. Materials.** Ensure each precast concrete septic tank is rated at a minimum of 5000 gallons, is in accordance with *ASTM C1227,* and is constructed of precast concrete segments free of interior lateral or other bracing, as manufactured by Advance Concrete Products Company, Kerkstra Precast, Inc., Norwalk Concrete Industries, or Engineer approved equal. Ensure the septic tank is certified to meet HS-20 loading by a Professional Engineer licensed in the State of Michigan.

Furnish septic tank effluent filter with stem extension and stainless-steel stiffener, as shown on the plans. Use Orenco Systems Inc. Biotube Effluent Filter FT1554-36, Zabel A100-HIP, or Engineer approved equal. Place the effluent filter as shown on the plans or where easily accessible.

Furnish Schedule 40 PVC pipe in accordance with *ASTM D2665*. Pipe connections to tanks must utilize cast-in connectors or boot connectors as approved by the Engineer.

Furnish manhole frames and covers in accordance with the Standard Plan R-18 Series, Cover Q.

Furnish granular material Class IIIA for bedding in accordance with section 902 of the Standard Specifications for Construction. Ensure the bedding material is from a natural source. The use of fine material generated from recycled crushed concrete is prohibited.

**c. Construction.** Place septic tanks on firm and compacted soil capable of bearing the weight of the tank and its contents. Set the tanks level on a six-inch thick bedding material comprised of granular material Class IIIA compacted to 95 percent of the maximum unit weight. Ensure excavation and backfill is in accordance with sections 206, 402, and 902 of the Standard Specifications for Construction.

Minimize disturbance to the existing ground and avoid damage to existing vegetation.

Fill the septic tanks with water and monitor for leakage for 48 hours before backfilling. No leakage is allowed. If leakage is discovered ensure the tank is repaired or replaced at no cost to the contract. If a tank is replaced due to leakage the replacement is subject to leakage testing.

Submit shop drawings in PDF for all appurtenances associated with the concrete septic tank. Ensure shop drawings are reviewed and approved prior to beginning work on the concrete septic tank.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contact unit price using the following pay item:

**Pay Item Pay Unit**

Conc Septic Tank, 5000 Gallon Each

**Conc Septic Tank, 5000 Gallon** includes installing the 5000-gallon precast concrete septic tanks. All manhole frames and covers, grade adjusting rings, PVC connection pipes and fittings, effluent filter, excavation, bedding, backfill, compaction, and dewatering will not be paid for separately but is included in the pay item **Conc Septic Tank, 5000 Gallon.**