PLEASE PLANT

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Product 4.1: Modular Stormwater Tanks | GEO-TNK

SECTION 334600 – MODULAR STORMWATER TANKS
PART 1 – GENERAL

1.1 SUMMARY
A. Section Includes:
Modular stormwater tanks for retention, detention, and infiltration applications.
B. Related Sections:
Section 312000 – Earth Moving for excavation and grading.
Section 334100 – Storm Utility Drainage Piping for integration with drainage systems.

1.2 REFERENCES
A. ASTM D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
B. ASTM C1613 – Standard Specification for Precast Concrete Water and Wastewater Structures.
C. ASTM G154 – Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.

1.3 SUBMITTALS
A. Product Data: Include capacity, dimensions, materials, and performance ratings.
B. Shop Drawings: Detailed layouts with inlet/outlet configurations and structural reinforcements.
C. Samples: Provide material samples for approval as required.

1.4 QUALITY ASSURANCE
A. Manufacturer Qualifications: Minimum 5 years of experience in producing stormwater management systems.
B. Mock-Up: Provide a mock-up section for approval if requested by the project owner.

1.5 DELIVERY, STORAGE, AND HANDLING
A. Protect modules from UV exposure and mechanical damage during transport and storage.
B. Store components on a level surface with adequate support to prevent warping.

1.6 WARRANTY
A. Provide manufacturer's standard warranty, including an 8-year structural warranty, 3 years on coatings and finishes, and 2 years on components. Consult terms and conditions for full warranty details per product type.

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PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Please Plant, 200-100 Park Royal S, Vancouver, BC
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2.2 MODULAR STORMWATER TANKS

A. Product Nomenclature: GEO-TNK-[Type Code]-[Capacity Code]-[Finish Code]
Type Code: RDT (Retention), DTN (Detention), INF (Infiltration).
Capacity Code: L20 (20,000 gallons), L50 (50,000 gallons), L100 (100,000 gallons).
Finish Code: UVR (UV-Resistant), RE (Reinforced Eco).
Example: GEO-TNK-RDT-L50-UVR (Retention tank, 50,000-gallon capacity, UV-resistant finish).

2.3 MATERIALS

A. Primary Materials:
High-Density Polyethylene (HDPE) for lightweight and durable construction.
Reinforced structural components for heavy-load applications.
B. Performance Ratings:
Load Bearing: Compliant with ASTM D1621 for vehicular and heavy equipment loads.
Water Tightness: Leak-proof joints and seals tested to ASTM C1613 standards.
UV Resistance: Coatings compliant with ASTM G154 for extended sun exposure.

2.4 DIMENSIONS AND CUSTOMIZATION

A. Standard Dimensions:
Modules: 3’ x 3’ x 3’ to 5’ x 5’ x 5’.
Capacities: From 5,000 to 500,000 gallons.
B. Customization Options:
Tailored inlet/outlet configurations for specific project needs.
Integrated inspection ports and overflow systems.
Reinforced coatings for specialized environments.

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PART 3 – EXECUTION

3.1 EXAMINATION
A. Verify that subgrade is compacted and stable.
B. Confirm alignment of drainage connections per shop drawings.

3.2 INSTALLATION
A. Below-Ground Installation:
Excavate and prepare subgrade with compacted aggregate or bedding material.
Position modules and connect per manufacturer guidelines.
B. At-Grade Installation:
Level surface for tank placement.
Secure modules with anchoring systems for stability.
C. Combination Systems:
Integrate with permeable paving or biofiltration systems for enhanced performance.

3.3 MAINTENANCE AND CLEANING
A. Cleaning:
Flush tanks annually to remove sediment buildup.
Clean inspection ports and access areas as needed.
B. Repairs:
Replace seals and fittings as necessary to maintain performance.

3.4 PROTECTION
A. Protect installed tanks from damage during remaining site construction activities.

END OF SECTION