SECTION 221323 - SANITARY WASTE INTERCEPTORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
   A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
   A. Section Includes:
      1. Grease interceptors.

1.3 DEFINITIONS
   A. FRP: Fiberglass-reinforced plastic.
   B. PP: Polypropylene plastic.

1.4 ACTION SUBMITTALS
   A. Product Data: For each type of interceptor indicated. Include materials of fabrication, dimensions, rated capacities, retention capacities, operating characteristics, size and location of each pipe connection, furnished specialties, and accessories.
   B. Shop Drawings: For each type and size of precast-concrete interceptor indicated.
      1. Include materials of construction, dimensions, rated capacities, retention capacities, location and size of each pipe connection, furnished specialties, and accessories.

1.5 INFORMATIONAL SUBMITTALS
   A. Coordination Drawings: Interceptors, drawn to scale, on which the following items are shown and coordinated with each other, based on input from Installers of the items involved:
      1. Interceptors.
      2. Piping connections. Include size, location, and elevation of each.
      3. Interface with underground structures and utility services.
1.6 PROJECT CONDITIONS

A. Interruption of Existing Sewer Services: Do not interrupt services to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary sewer services according to requirements indicated:

1. Notify Owner no fewer than seven days in advance of proposed interruption of service.
2. Do not proceed with interruption of sewer services without Owner’s written permission.

PART 2 - PRODUCTS

2.1 GREASE INTERCEPTORS

A. Grease Interceptors: Precast concrete complying with ASTM C 913.

1. Include rubber-gasketed joints, vent connections, manholes, compartments or baffles, and piping or openings to retain grease and to permit wastewater flow.
2. Structural Design Loads:
3. Resilient Pipe Connectors: ASTM C 923 (ASTM C 923M), cast or fitted into interceptor walls, for each pipe connection.
4. Steps: Individual FRP steps, FRP ladder, or ASTM A 615/A 615M, deformed, 1/2-inch (13-mm) steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch (300- to 400-mm) intervals. Omit steps if total depth from floor of interceptor to finished grade is less than 60 inches (1500 mm).
5. Grade Rings: Reinforced-concrete rings, 6- to 9-inch (150- to 225-mm) total thickness, to match diameter of manhole frame and cover.
6. Manhole Frames and Covers: Ferrous; 24-inch (610-mm) ID by 7- to 9-inch (175- to 225-mm) riser with 4-inch- (100-mm-) minimum width flange and 26-inch- (660-mm-) diameter cover.
   a. Ductile Iron: ASTM A 536, Grade 60-40-18, unless otherwise indicated.
   c. Include indented top design with lettering cast into cover, using wording equivalent to "GREASE INTERCEPTOR."

B. Capacities and Characteristics:

1. Length by Width by Depth: <Insert inches (mm)>.
2. Number of Compartments: [One] [Two] <Insert number>.
3. Retention Capacity: <Insert gal. or lb (L or kg)>.
4. Inlet and Outlet Pipe Size: <Insert NPS (DN)>.
   a. Centerline of Inlet to Floor: <Insert inches (mm)>.
   b. Centerline of Outlet to Floor: <Insert inches (mm)>.
5. Trapped Outlet Required: [Integral] [No] [Yes].
6. Vent Pipe Size: [Not required] <Insert NPS (DN)>
7. Installation Position: [Top flush with grade] [Underground with manhole riser to grade] <Insert position>.

2.2 PRECAST-CONCRETE MANHOLE RISERS

A. Precast-Concrete Manhole Risers: ASTM C 478 (ASTM C 478M), with rubber-gasket joints.
   1. Structural Design Loads:
   2. Length: From top of underground concrete structure to grade.
   3. Riser Sections: 3-inch (75-mm) minimum thickness and 36-inch (915-mm) diameter.
   4. Top Section: Eccentric cone, unless otherwise indicated. Include top of cone to match grade ring size.
   5. Gaskets: ASTM C 443 (ASTM C 443M), rubber.
   6. Steps: Individual FRP steps, FRP ladder, or ASTM A 615/A 615M, deformed, 1/2-inch (13-mm) steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch (300- to 400-mm) intervals.

B. Grade Rings: Reinforced-concrete rings, 6- to 9-inch (150- to 225-mm) total thickness, diameter matching manhole frame and cover, and height as required to adjust the manhole frame and cover to indicated elevation and slope.

C. Manhole Frames and Covers: Ferrous; 24-inch (610-mm) ID by 7- to 9-inch (175- to 225-mm) riser with 4-inch- (100-mm-) minimum width flange and 26-inch- (660-mm-) diameter cover.
   1. Ductile Iron: ASTM A 536, Grade 60-40-18, unless otherwise indicated.
   3. Include indented top design with lettering cast into cover, using wording equivalent to the following:
      a. Grease Interceptors in Sanitary Sewerage System: "GREASE INTERCEPTOR."

PART 3 - EXECUTION

3.1 EARTHWORK
   A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earth Moving."

3.2 INSTALLATION
   A. Install precast-concrete interceptors according to ASTM C 891. Set level and plumb.
B. Install manhole risers from top of underground concrete interceptors to manholes and gratings at finished grade.

C. Set tops of manhole frames and covers flush with finished surface in pavements. Set tops [3 inches (75 mm)] above finish surface elsewhere, unless otherwise indicated.

D. Set tops of grating frames and grates flush with finished surface.

3.3 CONNECTIONS

A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Make piping connections between interceptors and piping systems.

3.4 IDENTIFICATION

A. Arrange for installation of green warning tapes directly over piping and at outside edges of underground interceptors.

1. Use warning tapes or detectable warning tape over ferrous piping.
2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

END OF SECTION 221323