

SECTION 11206

PALMER-BOWLUS FLUMES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Palmer-Bowlus flumes.

1.2 RELATED SECTIONS

A. Section 03300 - Cast-In-Place Concrete.

B. Section 08342 - Fiberglass Doors and Frames.

C. Section 11201 - Wash Troughs.

D. Section 11202 - Effluent (Collection) Troughs (Launders).

E. Section 11203 - Finger Weir Pans.

F. Section 11204 - Weir Plates, Scum Baffles, and Brackets.

G. Section 11205 - Density Current Baffle System.

H. Section 11207 - Parshall Flumes.

I. Section 11208 - Metering Manholes.

J. Section 11286 - Slide Gates and Guides.

K. Section 11305 - Odor Control System.

L. Section 13122 - Pre-Engineered Fiberglass Buildings.

M. Section 13411 - Instrument Consoles.

1.3 REFERENCES

A. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.

B. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

C. ASTM D 2583 - Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Test results of fiberglass reinforced plastic laminate.
- C. Shop Drawings: Show:
 - 1. Critical dimensions, jointing and connections, fasteners and anchors.
 - 2. Materials of construction.
 - 3. Sizes, spacing, and locations of structural members, connections, attachments, openings, fasteners, and loads.
- D. Samples: 8-inch square sample of fiberglass reinforced plastic laminate.
- E. Manufacturer's installation instructions.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products indoors and protect from construction traffic and damage.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Provide products manufactured by Warminster Fiberglass Company; P.O. Box 188, Southampton PA 18966-0188; ASD. Tel. (215) 953-1260, Fax. (215) 357-7893.
- B. Requests for substitution will be considered in accordance with provisions of Section 01600.
- C. Substitutions: Not permitted.

2.2 PALMER-BOWLUS FLUMES

- A. Material: One-piece, fiberglass reinforced plastic; smooth inside surfaces, free of irregularities; 3/16 inch wall thickness.
 - 1. Tensile strength (ASTM D 638): 14,000 psi.
 - 2. Flexural strength (ASTM D 790): 25,000 psi.
 - 3. Flexural modulus (ASTM D 790): 1,000,000 psi.

4. Barcol hardness (resin-rich surface) (ASTM D 2583): 40.
5. Chemical resistant resin: _____.
6. Temperature limit: 150 degrees F.
7. Temperature limit: 200 degrees F.
- B. Flume Type: Provide flumes of the following type(s):
 1. Permanent type: Provide brackets for anchoring to concrete.
 2. Insert type: For insertion into existing half section of pipe.
 3. Cutback-exit type: For placement in discharge pipe leaving manhole.
 4. Dual range nested flumes where indicated.
- C. Size(s): Indicated on the drawings.
- D. Accessories:
 1. Bushing for ultrasonic transponder mounting stand.
 2. Integral stilling well, 8 inches diameter.
 3. Integral stilling well, 10 inches diameter.
 4. Staff gauge graduated in feet, with 1-inch divisions per foot.
 5. Staff gauge graduated in feet, with 50 equal divisions per foot.
 6. Staff gauge graduated in meters, with 1-millimeter divisions per meter.
 7. Staff gauge graduated in gallons per minute.
 8. Staff gauge graduated in MGD.
 9. Inlet and outlet transition pieces or pipe flanges.
 10. Molded-in bubbler tube.
 11. Molded-in Drexelbrook track.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that dimensions are correct and project conditions are suitable for installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Ensure that products are installed plumb and true, free of warp or twist, within tolerances specified by the manufacturer and as indicated in the contract documents.

- C. Set flumes at proper elevation as indicated on drawings.
- D. Install flumes in true level position, both laterally and with the stream.
- E. Embed flumes in concrete; place concrete in stages or internally brace flume walls to eliminate possibility of bowing and to ensure complete contact without voids. Temporarily secure flumes until concrete has hardened.

3.3 ADJUST AND CLEAN

- A. Clean surfaces in accordance with manufacturer's instructions.
- B. Remove trash and debris, and leave the site in a clean condition.

END OF SECTION