

## **SECTION 3140 - ABS OR PVC COMPOSITE WALL GRAVITY SEWER PIPE**

### **PART 1 - GENERAL**

#### **1.1 SCOPE OF WORK:**

Provide all labor, materials, equipment and services required for furnishing and installing all piping and appurtenances specified herein.

#### **1.2 RELATED WORK SPECIFIED ELSEWHERE:**

- A. Trench Excavation: Section 3720
- B. Bedding and Backfill: Section 3730

### **PART 2 - PRODUCTS**

#### **2.1 COMPOSITE ACRYLONITRILE-BUTADIENE-STYRENE (ABS) OR POLYVINYL CHLORIDE (PVC) PIPE**

- A. Composite ABS or PVC Pipe: Composite pipe and fittings shall conform to ASTM D2680, and can be used for gravity pipe sizes 8" through 15". All pipe spigots shall have a "home" mark to facilitate joint closure.
- B. Fittings: ABS or PVC fittings shall be factory made with a dimension ratio of 23.5 and provided with joints of proper design to connect to the pipe or approved adapters shall be furnished to connect the pipe to the fittings. Adapters shall be provided for connection to pipes of different materials. All joints and fittings shall be formed to provide as nearly as practical a leak-free and easily assembled system.
- C. Certificate: A manufacturer's certificate that the ABS or PVC material and pipe was manufactured and tested in accordance with the appropriate ASTM specification shall be furnished to the ENGINEER prior to installation of the pipe.
- D. Straightness: Pipe intended to be straight shall have a maximum deviation from straightness of 1/16 inch per linear foot when measured in accordance with ASTM D2122.
- E. Inspection: All pipe and fittings will be inspected by the ENGINEER or his authorized representative immediately prior to installation and all rejected pieces must be completely removed from the project. Pipe acceptable to the ENGINEER shall be substituted for rejected pieces at the CONTRACTOR's expense. No repairs of pipe or fittings will be allowed; undamaged lengths of straight pipe may be salvaged by neatly sawing off the damaged portion of the pipe.
- F. Care shall be taken to protect pipe from prolonged exposure to heat or direct sunlight.
- G. No sewer shall exceed 25 feet in depth without the approval of the ENGINEER.

#### **2.2 PIPE JOINTS:**

ABS or PVC sewer pipe joints shall be solvent cemented conforming to ASTM D2680 or shall be elastomeric gasketed conforming to ASTM D-3212. If solvent cemented joints are used, cement shall be according to ASTM D-2235 for ABS pipe or ASTM D-2564 for PVC pipe. The CONTRACTOR shall furnish evidence of satisfactory performance of the joint for previous installations.

- A. Testing: Testing of ABS or PVC sewer pipe joints, when so directed by the ENGINEER, shall be made in accordance with ASTM D-3212 for elastomeric gasketed joints with modification as specified below. All equipment necessary to conduct the pipe joint test shall be provided by the CONTRACTOR at no cost to the OWNER.

- B. Test Specimens: The ENGINEER or his authorized representative may initially and periodically select random sewer pipe for test purposes. The tests shall be performed on not less than two specimens and not more than one (1) percent of the total pipe length of each size, wall type, and joint type required for the project.

### **PART 3 - BASIS OF PAYMENT**

Payment for ABS or PVC gravity sewer lines of the different sizes at the various depths of cut will be made at the contract unit price per linear foot in place, which price will include compensation for furnishing pipe, all trenching (including rock excavation), bedding, laying, jointing, testing, backfilling, surface restoration (except pavement replacement) connections to new manholes, and all plugs as required. The depth of cut to be paid for shall be measured from the existing ground surface at the top of the trench to the invert of the sewer line. The quantity of sewer to be paid for shall be the length of pipe measured along the centerline of the completed pipeline without deducting the length of branches, fittings and manhole inverts. Connections of existing sewers to new sewers will be incidental to this pay item.

END OF SECTION