

## SECTION 33 46 16

### SUB-DRAINAGE SYSTEM (DOWNSPOUTS)

#### PART 1 GENERAL

##### 1.1 SUMMARY

###### A. Section Includes:

1. Sub-drainage system for roof drains and downspouts.

##### 1.2 REFERENCES

###### A. American Society for Testing & Materials (ASTM):

1. ASTM D2729 - Poly (Vinyl Chloride)(PVC) Sewer Pipe and Fittings.
2. ASTM D3350 - Standard Specification for Polyethylene Plastics Pipe and Fitting Materials.
3. ASTM F405 - Standard Specification for Corrugated Polyethylene Tubing and Fittings.

#### PART 2 PRODUCTS

##### 2.1 PIPE MATERIALS

- A. Polyvinyl Chloride Pipe: Schedule 40, ASTM D2729; with required fittings.
- B. Corrugated Polyethylene Drainage Pipe: ASTM D3350, non-perforated, with required fittings.

##### 2.2 FILL MATERIAL

- A. Type specified for remainder of building pad.

##### 2.3 ACCESSORIES

- A. Pipe transitions and pipe sleeves as required for installation.

#### PART 3: EXECUTION

##### 3.1 EXAMINATION

- A. Verify that excavation base is ready to receive work, and excavations, dimensions, and elevations are as indicated on Drawings.
- B. Beginning of installation means acceptance of existing conditions.

### 3.2 PREPARATION

- A. Hand trim excavations to required elevations. Correct over excavation with fill material of coarse aggregate.
- B. Remove large stones or other hard matter which could damage drainage tile or impede consistent backfilling or compaction.

### 3.3 INSTALLATION

- A. Install and join pipe and pipe fittings.
  - 1. Place pipe at elevations shown on drawings
  - 2. Install coarse aggregate bed and surrounding cover as indicated on Drawings, minimum 12 inch depth.
  - 3. Join pipe ends mechanically.
- B. Do not disturb drainage system in subsequent backfilling compaction operations.
- C. See Mechanical and Civil Drawings for pipe sizes and routing of sub-drainage system.

### 3.4 PROTECTION

- A. Protect pipe from damage or displacement until backfilling operation begins.

END OF SECTION