SECTION 33 42 00

STORMWATER CONVEYANCE/TREATMENT/DETENTION/RETENTION

PART 1 - DESIGN DIRECTIVES

1.1 Onsite stormwater systems must comply with the requirements of the State of New Hampshire and Town of Hanover.

1.2 The CONTRACTOR or DESIGNER must provide the Project Manager with a schematic design for the proposed stormwater system prior to initiating final design(s). Project Manager to coordinate with FO&M Grounds Shop to review the design and address any potential issues relating to construction, operation or environmental impact.

1.3 The recommended target for Dartmouth College is retainage of the 90th percentile rainfall depth (approximately 1.1 inches) for all projects, using green infrastructure techniques to the greatest extent possible. See **Thematic Folders: Dartmouth College Masterplan Stormwater Management Technical Toolbox** for information on green infrastructure techniques for stormwater management.

1.4 PROJECT INCLUDES: Storm sewerage system piping, manholes, catch basins, yard drains, and tap connections. Also detention/retention and stormwater treatment facilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Pipe and Fittings:

1. Corrugated High Density Polyethylene Pipe (8" to 36"): HDPE exterior/interior smooth pipe. 12 to 36 inch diameters shall conform to AASHTO M294 Type S; 8 to 10 inch diameters shall conform to AASHTO M252 with a smooth interior liner. Material shall conform to AASHTO D3350.
2. Joints and Fittings: AASHTO M294 or AASHTO M252, or as approved by Engineer.
3. Coupling Bands: Closed-cell synthetic expanded rubber meeting ASTM D1056, Grade RE42. Install gaskets on the coupler by the pipe manufacturer prior to delivery to the job site. Provide coupling bands meeting the soil-tightness requirements of the AASHTO Standard Specifications for Highway Bridges, Section 23, paragraph 23.3.1.5.4(e).

B. Catch Basins, Yard Drains, In-Line Drains: NHDOT Standard Specifications shall be satisfied.

C. There shall be clean outs on all perimeter foundation drains at each 90 * elbow and at a maximum of 150 feet apart.

PART 3 - EXECUTION

3.1 PREPARATION

A. Manhole Safety Rules: Architect shall reference the Dartmouth College confined space requirements for all manhole work.

3.2 TESTING

A. Deflection Testing: Test 100 percent of pipe thirty days or more after back-filling. Use a rigid ball or mandrel with diameter equal to 95 percent of HDPE published (actual) pipe I.D. Do not use mechanical pulling units. Results of the mandrel test will be provided to the Town of Hanover on all lines connected to the town storm water collection system if required by Site Plan approval.

END OF SECTION 33 42 00