

APM

CLIENT

The Madeira School
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DESIGN ENGINEER

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GENERAL CONTRACTOR

Whiting Turner Contracting
Company
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**\$ 5.0 MILLION
MASTER BUDGET**

10 MONTHS OF CONSTRUCTION

900 SF

**NEW CONSTRUCTION,
DEMO OF EXISTING BUILDING AND
REFORESTATION**



The Madeira School – Waste Water Treatment Plant McLean, VA

The Madeira School is a Girls' boarding and day school for grades 9-12; which has more than 6,000 alumnae. In 2006 Madeira celebrated its centennial year.

The existing wastewater treatment plant at The Madeira School was built in the 1940's and includes upgraded components that have been added over the past 70 years. Due to the age, condition, and type of the existing facility, the plant will not be able to meet future effluent requirements by the Virginia Pollutant Discharge Elimination System (VPDES) which is the Commonwealth of Virginia's program to administer the national requirements in the Clean Water Act. To this end The Madeira School is constructing a new wastewater treatment plant that will meet high quality secondary effluent requirements for years to come.

- The project consists of the construction of a new package extended aeration wastewater treatment plant with an ultimate hydraulic design capacity of 49,500 GPD to replace the existing wastewater treatment plant. The current project is designed to match the existing plant capacity for 39,500 GPD flows, with the ability to expand with the addition of further equipment up to the 49,500 GPD design capacity. In addition to the new plant, the project includes construction of new pumping station at the current WWTP location, a new outfall pipe line, and a sanitary sewer force main with over 175 feet in vertical rise to the new WWTP location.
- After completion of the new Building, the old WWTP buildings and structures will be demolished and the quarter-acre site will be reforested with over 347 new trees and shrubs in accordance with the Chesapeake Bay Preservation Act. APM coordinated the installation of new electrical feeders to both the new WWTP and the Pumping Station, which required nearly 2,000 LF of feeders to be installed through mostly existing woodland. An extensive tree preservation survey and plan covering over 6 acres of land was undertaken to protect existing forest around new facilities and utility routes.
- Status: Construction Completed Summer 2010

The plant will treat the water so it can be placed back into the Potomac as viewed from the School

