PROJECT PROFILE

SITE ENGINEERING SERVICES FOR RESIDENTIAL HOME DEVELOPMENT

D'Appolonia was retained by the site developer to prepare a stormwater management plan for a 100-acre residential development. The work included design of a dam, spillway and reservoir for providing required stormwater detention and improving the aesthetic quality of the development.

Dam and spillway nearing completion.

Spillway and reservoir at Timber Lake residential community in Peters Township, PA.

The principal/emergency spillway for the storm water retention dam consisted of three 6-foot-diameter, reinforced concrete pipes. These conduits were designed to withstand overburden and E-20 highway loading. They were also designed to have the hydraulic capacity to convey discharge from the 100-year, 24-hour storm event. The pipes were supported on concrete cradles that served to increase the structural capacity of the concrete pipes and to control potential seepage around the pipes. A concrete headwall and endwall were constructed at the ends of the spillway pipes for erosion protection.

In addition to the above scope of work, D'Appolonia was also responsible for the engineering and design of the earth dam, preparation of the erosion and sedimentation control plan and related permitting for the development, evaluation of the potential for subsidence of abandoned underground mines below the development, preparation of geotechnical recommendations for the construction of cut and fill earth slopes, and monitoring of construction activities for conformance with the project plans and specifications.

Above photographs show construction of the dam and spillway at two stages.