Westmoreland Conservation District

Watershed Restoration

Westmoreland Fairgrounds Project

Design Features: Three stormwater/ sediment basins, French mattress, and conveyor belt diversions.

Date of Installation: Three separate phases in 2009, 2010, and 2011.

Location: 123 Blue Ribbon Lane, Greensburg, PA 15601

Client: Westmoreland Fairgrounds

Cost: $ 150,000

Partners: PA Department of Environmental Protection, Westmoreland County Commissioners, Mount Pleasant Township, and Sewickley Creek Watershed Association.

Project Contact: Rob Cronauer, Rob@wcdpa.com

During construction of retention basin.

Project Specifications

In 2008 the Westmoreland Conservation District took a step towards improving water quality and quantity flowing into the headwaters of Sewickley Creek. That step actually turned into a three-phase project, which resulted in the installation of several best management practices at the Fairgrounds and surrounding areas.

Phase I

Work was able to begin after the Westmoreland Conservation District acquired a $150,000 County Environmental Initiative Growing Greener Grant 2008. After a year of planning, surveying, and design, phase I was constructed in the Fall of 2009. Phase I included the installation of a retention basin to control sediment-laden runoff from the fair's heavily used arena area. Because the arena is continually disturbed due to various events which take place at the fairgrounds year round, the runoff from this area had a tendency to deposit sediment into a tributary of Sewickley Creek. To contain this runoff, a large basin was constructed that captures the sediment-laden runoff from the arena area and outlets much cleaner water, at a slower rate.

Phase II

The work performed in phase II, included the construction of a second retention basin. This basin is designed to capture uncontrolled runoff flowing from parking areas at the fairgrounds as well as water from Fairgrounds Road. Because Fairgrounds Road is maintained by Mount Pleasant Township, the Township partnered with the Conservation District and installed inlets and pipes which direct water into the newly constructed basin. A "flow splitter" was also used with this project. This innovative control moderates the amount of water which enters the basin and

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Before construction of retention basin.

During construction of the retention basin.

Retention basin managing stormwater after Hurricane Sandy.

prevents excess water from flooding the structure and potentially compromising its integrity. The flow splitter will direct water into the pond which is flowing at the capacity of an 8" pipe or less. Anything greater will bypass the basin and continue on its traditional path to Sewickley Creek. This allows the basin to retain and treat most storm events and reduces the amount of uncontrolled runoff entering the tributary of Sewickley Creek.

Phase III

The third and final phase of this project was completed in the Spring of 2011. Due to the success of the retention basin constructed in phase II, a "mirror image" of the same basin in phase III was created. This work took place on a different section of Fairgrounds Road and was done again with the help of Mount Pleasant Township. Along with the construction of another retention basin, best management practices

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Installation of a French mattress.

Picture taken during hurricane Sandy showing flowing water through road (French mattress) with no pipe!

Conveyor belt diversion installed to direct water off of road surface.

were implemented on many of the fairground's dirt and gravel access lanes. Conveyor belt diversions and a French mattress were installed to direct water away from the roads, preventing accelerated erosion from occurring.

Benefits

Projects such as these are a great benefit for Sewickley Creek. They control runoff in such a way as to retain it on-site during storm events, and release it at a much slower rate, thus reducing downstream flooding and bank erosion. In addition to this water quantity benefit, water quality is improved by reducing the sediment load flowing into the stream, thus improving aquatic habitat.

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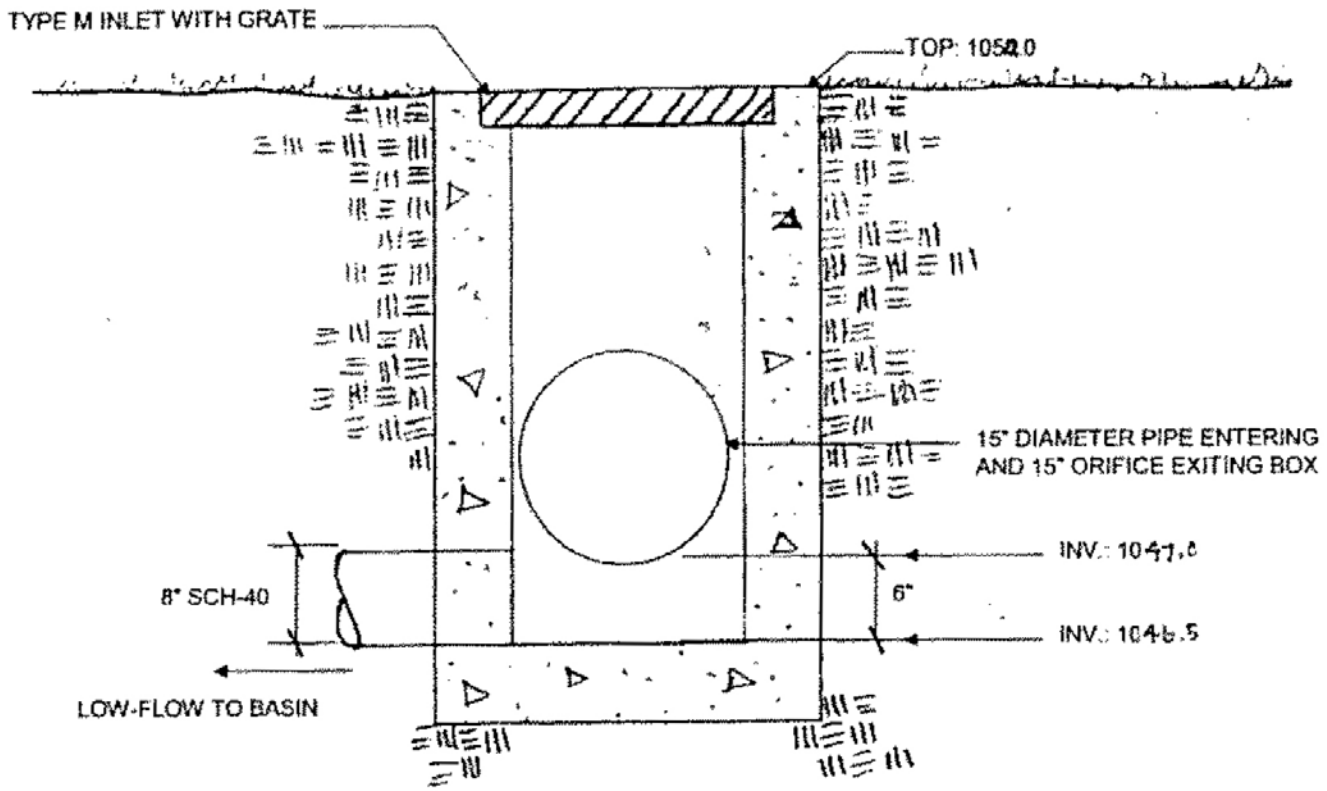

FLOW-SPLITTER INLET BOX

NOT TO SCALE

WCD 2/20