

# Brimfield Stormwater Management Facility Retrofit

## **Background:**

The Brimfield stormwater management facility is an existing facility located off of Brimfield Circle and Macbeth Avenue in Eldersburg. This facility was targeted because of the steep slopes of the embankment which made it very hard to maintain, the current condition of the riser structure, and the facility was not capturing all of the intended run-off from the subdivision. Because of the condition of the facility the County wanted to bring it up to current standards thereby ensuring that the facility provides stormwater control for the entire contributing drainage area, and it can be easily maintained.

## **Scope of Work:**

The site was analyzed by CLSI to determine if infiltration would be feasible. The design for the facility included a regenerative conveyance channel to convey storm flow into the facility, and a recharge reservoir. The pond bottom was designed with a 12” layer of #2 stone with 6” HDPE type “SP” pipe laying on top to draw any excess water off the surface. The pipe was topped with 18” of a sand-soil filter mixture. All of the slopes were designed at 3:1 to allow efficient machine mowing. An endwall was constructed on the backside of the facility so that 3:1 slopes could be achieved. A new emergency spillway was graded in and lined with 19” of Class I rip-rap. The facility was designed to meet and exceed all current county and state stormwater management regulations.

## **Sequence of Construction:**

The homeowners around the facility were contacted about the retrofit in September of 2008. At that time staff members met with two adjoining property owners to discuss the proposed retrofit. The facility went out to bid on November 12, 2009 with bids due back November 30, 2009.

The job was awarded to Magstone, LLC. and was slated to begin work January of 2010. The contractor began working in February of 2010, but with unexpected snowfall the progress was slow. The contractor completed the project in September, but had to wait until a two inch stand of grass was established before it received it’s final grading and sediment control inspection. The grading completion certificate was issued on November 18, 2011. The as-built was accepted by the County on October 29, 2010.

## **Project Details:**

Watershed:	Liberty Reservoir
Drainage Area:	34.69 acres
Impervious Surface Treated:	17.23 acres
Costs: Clearing	\$ 7,189.00
Engineering	\$ 23,649.50
Construction	\$ 212,672.10

## **Submitted By:**

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