

BAIR ROAD STORMWATER RETROFIT PROJECT

BACKGROUND:

The Bair Stormwater (SW) Project included design and construction of various stormwater improvements, including but not limited to, new stormwater inlets, piping, and other drainage improvements, along with eleven (11) Underground Stormwater Infiltration Beds installed along sections of Bair Road between intersections of Keller Road and Mt View Road. In addition to the stormwater improvements, the project installed new concrete curbing and asphalt paving within the project limits. The SW Infiltration beds, collect, store, infiltrate and reduce stormwater runoff volume and peak rate from what falls directly onto the surface of Bair Road, as well as the surrounding drainage areas which include single family residential properties (with impervious surfaces, such as driveways, houses, and pervious lawn and wooded areas, etc.). Overflow is conveyed into the existing Township stormwater drainage system which discharges, via a 30-inch concrete pipe outfall, just upgradient of the Contention Lane Tributary of Trout Creek. The project was completed on time in the Spring of 2025 and came in slightly under the approved budget.

PARTNERS:

- **Tredyffrin Township** - (Project Manager/ Township Engineer - Stephen Burgo, P.E.)
- **Jacobs** - (Designer - Dan Wible, P.E.) - Subsurface Infiltration Bed design/planning/hydrologic modeling
- **Site Prep, LLC** - Project Construction Contractor
- **PADEP (Growing Greener Grant)**
- **Chester County Conservation District (ARPA Grant)**

PROJECT DESIGN:

- 11 - Underground Storage and Infiltration Systems (Beds and Trenches)
- New Stormwater Inlets
- New Stormwater HPDE Piping
- Existing Stormwater Outfall to remain.
- New Concrete Curbing and Asphalt Pavement within project limits

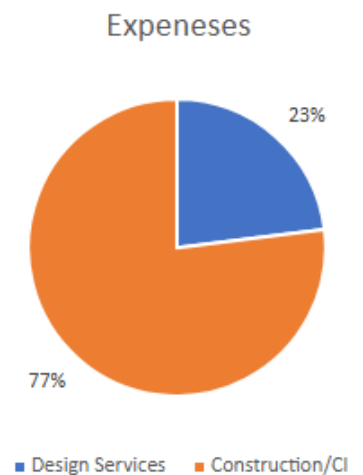
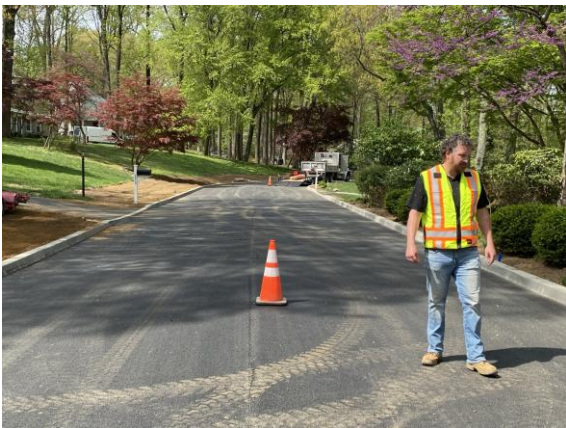


COST/FUNDING SUMMARY:

<u>Expense or Fund</u>	<u>Provider of Service</u>	<u>Amount</u>	<u>% of total</u>
Total Project Costs		\$1,214,417.72	100%
Design & Construction Inspection (CI)	Jacobs	\$280,048.65	23.1%
Construction	Site Prep, LLC.	\$934,369.07	76.9%
Funding Sources		\$1,214,417.72	100.00%
PADEP Growing Greener Grant		\$340,000	28.0%
CCCD (ARPA Grant)		\$235,880	19.4%
Tredyffrin Township		\$638,537.72	52.6%

BENEFITS AND RESULTS:

The improvements are showing their potential with the new drainage systems capturing most of the excess runoff. The system captures the water and releases it through infiltration into the ground or the existing stormwater system within 72 hours. The systems functions most effectively for smaller storms, however that represents most of the rainfall falling during a typical calendar year. The system will capture and manage runoff from over a 15-acre drainage area. At the completion of the project, the surrounding roadways were repaved and had new curb installed, as well.



Written by: Alex Gardiner
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