

PROJECT PROFILE

Thomas & McPherson Boulevards Conceptual GSI Project

Client: Pittsburgh Water & Sewer Authority (performed as a subconsultant) GI TREATMENT SURFACE WIDTH Location: Pittsburgh, PA CATCH BASIN WITH SUMP Service Areas: Green Infrastructure & Sustainability **Civil & Water Resources Engineering** TRADITIONAL ROAD SURFACE EXFILTRATION PIPE Services Provided: Conceptual Stormwater Design STONE RESERVOIR DEPTH Hydrologic Modeling UNDERDRAIN Cost Estimating Public Outreach Peer Review of Construction Documents

Project Activities

Pittsburgh Water and Sewer Authority (PWSA) commissioned an evaluation of using green stormwater infrastructure (GSI) to reduce runoff entering the City's stormwater system and to reduce localized flooding within the Thomas and McPherson neighborhoods in the City of Pittsburgh. The project included an analysis of existing conditions at representative pilot locations that could be retrofit with green infrastructure to serve as a planning guide for PWSA. A procedure for determining stormwater runoff volume and the methodology for the sizing of GSI was developed. Potential locations for GSI were identified based on drainage area maps, typical street typology, and site visit observations. These identified locations were marked on the site maps and alternative GSI techniques for implementation were discussed at a preliminary design workshop with PWSA. Example GSI techniques suggested to PWSA included rain gardens, porous pavement, infiltration trenches, and pavement removal. Results from the preliminary design workshop were reviewed and a set of final GSI recommendations were selected to present to PWSA. Conceptual renderings were created to illustrate the suggested GSI recommendations.

Outcomes

The final outcome was the creation of a memo to PWSA documenting stormwater runoff volume methodology, a memo and accompanying map documenting potential locations for GSI alternatives and example techniques, commentary on design workshop documents, and advising PWSA on implementation.