

Project Description

Project Overview

This study project was commissioned by the city of Fort Wayne to determine the ultimate storm water discharge rate of approximately 120 acres of developed ground lying on the north side of State Road # 14 west of Interstate #69 in west central Allen County, Indiana. This study was required due to an INDOT pavement and drainage improvement project which would be bringing new storm sewers into an area prone to flooding. In order to size these facilities appropriately, discharge rates for a variety of storm events had to be determined for this area to reduce the likelihood of flooding the road (and homes) in the future.

Study Area Size and Utility Study Cost

The area studied under this contract includes approximately 120 acres. Included in the study area were: Three distinct subdivisions, five detention ponds, and multiple pipe segments and discharges. The study and documentation engineering cost (portion) was approximately \$10,000.



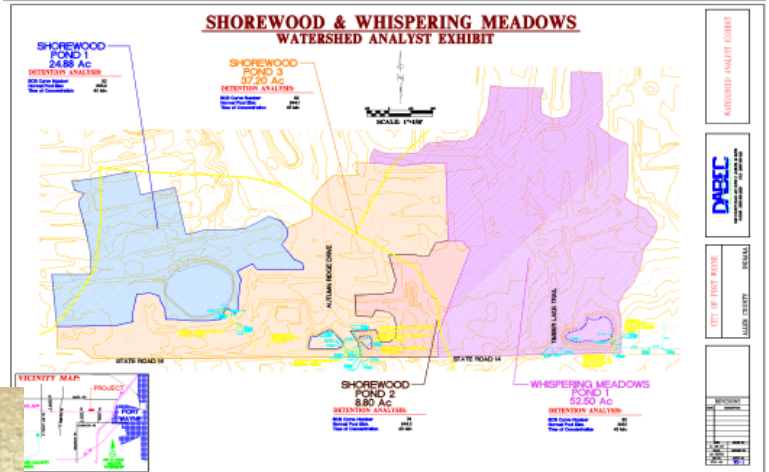
Aerial Photograph of the approximate study area limits

Survey Work

Survey work was completed around the basins to determine discharge pipe sizes and grades for use in the modeling. Additional survey work was collected at key points of interest within the storm sewer systems.

Modeling Effort

The entire system was modeled as a unit to develop the most reasonable prediction of actual outflow rates from this area. Additionally, the area was modeled under varying storm event intensities and frequencies to determine the optimum pipe sizes for the SR # 14 project.



Modeling Summary Exhibit Plan Sheet

Client Reference

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Photograph of one of the pond's discharge structure