Matthew J. Moffitt, PE, CFM

Associate Vice President, Water Resources & Natural Resources

EDUCATION

Water Resources Graduate Certificate
University of Illinois at Urbana-Champaign, 2012

B.S., Civil and Environmental Engineering
University of Illinois at Urbana-Champaign, 2006

B.S. Physics
Western Illinois University, 2006

Joined Firm in 2013

Years of Experience: 19

REGISTRATIONS

Licensed Professional Engineer: Illinois, Texas

Certified Floodplain Manager

HONORS

Zweig Group/Civil + Structural Engineer 2022 Rising Stars AEC Industry

PUBLICATIONS

APWA Construction Inspection Manual (APWA, 2018) – co-authored Permeable Pavement construction chapter

Matt leads Baxter & Woodman's Water Resources Practice in Illinois and Wisconsin and he sits on the Board of Directors for Baxter & Woodman Natural Resources. He brings with him well-rounded project experience in planning, analysis, modeling, design, bidding, and construction (including design-build) of open and closed drainage systems, detention/retention systems, native areas restoration, roadways, utilities, and other civil site, with a specific focus on sustainability and resiliency. Matt values the importance of project communication and works with clients, residents, agencies, and other stakeholders from initiation through project delivery.

REPRESENTATIVE PROJECTS

DESIGN

Wheeling, IL
South Dunhurst Neighborhood Stormwater Improvements
Project Manager for the Study and Project Advisor for design of RCP storm sewers ranging from 54-inch to 72-inch that leads to a detention basin, and an 18-inch RCP outlet pipe. The project included reviewing, updating, and expanding the existing conditions model; performing a value engineering of the previous conceptual study; analyzing upstream improvement options; and completing preliminary design of the recommended improvements.

Lincolnshire, IL
Queens Way Drainage Improvements
Project Manager for study and design of streambank stabilization along approximately 700-linear feet channel along the rear yards of residential homes. The project included evaluation of existing conditions, proposed storm sewer system improvements, streambank stabilization alternatives, and options to reduce drainage structure blockages. A wetland delineation was performed along the channel, and stream conditions were evaluated using the Center for Watershed Protection's Unified Stream Assessment field data sheets. The analyses included XP-SWMM modeling of the tributary drainage area and storm sewer system within Queens Way, and HEC-RAS modeling of the channel.

Lake Zurich, IL
Kildeer Creek Restoration
Program Manager for the clearing, grading, and reshaping 0f 2,000-linear feet of shoreline of Kildeer Creek in Lake Zurich. This included stone armoring of the shoreline, placement of erosion control blanket, installation of temporary erosion control devices during construction, and natively seeding the creek corridor.

Fox River Grove, IL
Gardner Road Creek Improvements
Project Manager for replacement of an existing 12-inch culvert through private property and installation of an open channel. Replacing the culvert with an open channel cross section improved flood conveyance and reduced flood impacts on adjacent upstream properties. The proposed improvements were permitted by the McHenry County Department of Planning & Development for work in a wetland area.

ASSOCIATIONS

IAFSM H&H Modeling Subcommittee Chair 2022-Present

APWA PWX 2024 Planning Committee - Sessions Subcommittee Chair - 2021-Present

APWA: Suburban Branch President 2022-2023

Palatine Rural Fire Protection District Trustee (2017-2022)

ASCE EWRI: Chicago Chapter (Past-Chair)

ASCE: Central Section - East Branch, (Past-President)

ISPE: Champaign County, Young Engineer of the Year 2011

BACOG Water Resources Committee Member-At-Large 2016 – present

HEC-HMS modeling software was used to analyze the hydrologic conditions of the site, which accounted for existing depressional storage areas located upstream of the project site. HEC-RAS software was used to analyze the hydraulic conditions of the site.

Lake Forest, IL
West Fork Drive and Hackberry Lane Drainage Improvements
Project Manager for 2,879-lineal feet of storm sewer and appurtenant structures; sewer and water utility relocations; asphaltic pavement restoration, asphaltic pavement mill and overlay; and concrete curb and gutter replacement. The storm sewer replacement includes pipe diameters from 12-feet to a 34-inch x 53-inch horizontal elliptical pipe. Many lateral and private sewer lines had to be reconnected to the new system. Additionally, two large junction chambers were necessary. The design team had to work around, or design replacements for, many driveways, trees, and other resident landscaping.

Northbrook, IL
Wescott Park Stormwater Storage Facility
Project Engineer for design and bidding services for a 23.7 acre-feet underground stormwater storage facility in Wescott Park. The project included three blocks of proposed 42-inch storm sewer and additional inlet capacity to convey flow to the storage vault, roadway reconstruction, restoration of the park, and installation of an irrigation system. Additionally, a rainwater harvesting system was added to the project that filters, treats, and supplies water to the irrigation system.

MODELING/STUDIES

Lake Villa, IL
Stormwater Master Plan
Project Advisor for the assessment of known problem areas, development of a conceptual recommendation and cost estimate to improve the problem areas, and preparation of a report documenting the recommendations. The work included collecting existing data; conducting hydrologic and hydraulic analyses; and developing alternatives and concept plans. PCSWMM results were exported to GIS and used to develop exhibits of existing and proposed conditions to illustrate the benefit of alternatives for the Village staff and their board. A Final Report with exhibits and preliminary estimates of probable costs will be prepared.

Fox Lake, IL
Sayton Road Drainage Study
Project Manager for the assessment of current drainage conditions and recommendation of potential drainage improvements along Sayton Road and on the Northwest Regional Water Reclamation Facility (NWRWRF) property. Sayton Road and the NWRWRF are in the Village of Fox Lake, within Lake County. Obtained available information and data, conducted limited topographic survey, developed an XP-SWMM model, performed analysis of the existing conditions, and evaluated several drainage improvement alternatives. Results, conclusions, and recommendations were summarized in a memorandum. The recommended improvements included over 4,000-linear feet of new or replaced storm sewers ranging from 18-inch diameter to 38-inch by 60-inch horizontal elliptical pipes, and a new outfall to a wetland area located within the Fox River 100-year floodplain.