WATER RESOURCES/ TRANSPORTATION

2008 to 2011

Key Project Staff:

Matt Hahm, PE
Project Manager

Minal Hahm, PE, CFM
Project Engineer

Andy Wells, EIT
Staff Engineer

Client:
Milwaukee County

Prime:
Mead & Hunt, Inc.

Contact:
Laura Morland, Project Coordinator

Services & Solutions

- Hydraulic & Hydrologic Analyses using SWMM
- Water Quality Improvement Analysis
- Stormwater Management
- Floodplain Analysis (HEC-RAS)
- Permanent BMPs

GENERAL MITCHELL INTERNATIONAL AIRPORT - COLLEGE AVENUE LOWERING

Milwaukee County, WI

The Federal Aviation Administration (FAA) has issued a national directive to bring runway safety areas (RSAs) at airports around the country into compliance with FAA airport design standards. **M²** is on the Mead & Hunt team to provide the stormwater management portion of this project for the General Mitchell International Airport (GMIA) in Milwaukee. One of the major components of the project is the lowering of College Avenue into a tunnel.

Increased impervious areas required detention and water quality treatment to meet regulations. Due to FAA regulations, airports cannot have ponds with standing water and must drain down within 48 hours. The site's grading was dictated by the runway expansions with specific grading requirements thereby restricting drainage patterns. Downstream floodplain from the Mitchell Drainage Field created tailwater conditions that restricted many of the BMP's. Another inherent restriction is the use of any sort of native vegetation that may attract wildlife. Based on these constraints, **M²** researched many creative solutions for the stormwater management.

Creative combinations of Best Management Practices (BMP's) treatment trains such as long filter strips, bio-swales, bio-retention facilities, and dry detention facilities were incorporated into the stormwater management plan. **M²** was able to meet and exceed State and local water quality and quantity requirements by developing unique BMPs.

Other options considered included underground storage, rain gardens, infiltration ponds, bioretention facilities and manufactured treatment devices. Construction is expected to begin in 2009.