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A Quarterly Newsletter

Issue 3 - First Quarter 2010



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Letter from the Founder

As a cofounder of M Squared Engineering, LLC (M²), I would like to welcome you to our quarterly newsletter. In this current publication, you will find valuable information about our firm and we hope that you will keep this copy on file as a resource guide for future projects.

M² is a fast-growing firm continuously building a high-ranking reputation among our clients. Our focus is to provide the highest quality civil engineering services, while building long-term relationships.

Our team is a composition of creative and pioneering individuals whose technical excellence and hard work deliver precisely what our clients need.

Our technical diversity, winning spirit and the desire to help our clients build a better tomorrow are the unique characteristics of our firm.

We welcome challenges and are proud to deliver on these challenges, constantly and consistently.

*Sincerely,
Minal Hahm*



New Offices

On August 10, 2009, M Squared Engineering, LLC (M²) officially opened up its doors to their new offices. The move resulted in an increase of office space. Together with an upgrade of the IT infrastructure, M² is able to provide improved facilities and services for both their employees and their clients.

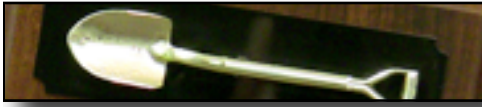
Purchasing a traditional house in downtown Cedarburg, M² enlisted the help of Badger Construction to convert the house to office space with a complete interior renovation. The four month rebuild modified the house into 2200 square feet of open concept office space.

The move in historic Cedarburg was only a short distance from the previous office on Evergreen Blvd. and is a sign of the business's steady growth development over the past few years. It also fulfills a strategic objective to build capacity for the future.

The new office is located at W62N215 Washington Avenue in Cedarburg. The phone numbers and email addresses were unaffected by the move.

M Squared Engineering extends an open invitation for all to stop in and visit the new offices.

In the News



December 2009

Waukesha, WI - M Squared Engineering (M²) was awarded the Outstanding Achievement Award at the Annual DBE Workshop and Secretary's Golden Shovel Awards.

The Wisconsin Department of Transportation recognized M Squared Engineering and their staff for excellent service and growth during 2009. The award was presented on December 18, 2009.

This award is strong validation of M²'s growing role in the DOT arena.

The Golden Shovel Award indicates the success of "shovel ready" projects under construction in the transit industry.

December 2009

Kenosha, WI - M Squared Engineering (M²) Completes DNR ATV Trail Project.



M Squared Engineering was retained by the Department of Administration / Division of State Facilities (DOA/DSF) and the Department of Natural Resources (DNR) to provide engineering services for the renovation and reconstruction of the ATV trails at Richard Bong State Recreation Area (Bong SRA). The trails were renovated during the summer of 2009, giving riders a more enjoyable ATV experience.

Bong SRA is located on State Highway 142 in Kansasville, Wisconsin in Kenosha County. It is approximately 47 miles from Milwaukee. The trails are the only DNR operated ATV trails in southeastern Wisconsin. This recreational area differs from a State Park in that it offers activities not traditionally found in State Parks. For instance, Bong SRA offers areas for model airplane flying, hang gliding, hot air ballooning, dog training, horse riding, and

of course, ATV riding. The ATV site was originally designed to be a jet fighter base but was abandoned during construction, just three days before the 12,500 foot runway was to be poured.

Currently, there are nearly 8 miles of ATV trails divided over three loops. With comments from the DNR and the local ATV club, M² identified the areas that had drainage problems as well as the areas of the trail that required realignment.

Installation of an under drain system and a stone cross-section helped to alleviate some of the areas plagued by rutting and drainage problems. In many areas, the existing trail was abandoned and a new trail alignment was created.

For those riders that are looking for something a bit more challenging, alternate "challenge loops" were added. These alternate paths will let riders tackle more difficult obstacles such as log and water features. For more information on Bong State Recreation Area, or to hear the daily trail availability, call (262) 878-5600.

October 2009

Columbia County, WI - I-39, I-90/94 Wisconsin River Project Kicks Off.



M Squared Engineering (M²) is preparing a report with recommendations for improvements to I-90/94, and I-39 relative to roadway overtopping by flood waters. In June 2008, a portion of I-39, I-90/94 experienced a large flood event that inundated portions of both highways causing long-term closings of the highway system. Alternative options will be developed based on new hydraulic modeling. The project is expected to be completed in November of 2010.

October, 2009



Milwaukee, WI - M Squared Engineering (M²) Principals Nominated by Local Bank for 2010 Wisconsin Emerging Small Business Persons.

Jeffrey R. Schaefer, Assistant Vice President of Associated Bank, nominated Matt and Minal Hahm for this award. Jeff felt that M² should be nominated because of their steady growth in sales and staff, the result of their high-quality work, versatility, and tremendous work ethic.

December 2009

Milwaukee, WI - I-94 North-South Freeway Project



A large section of I-94 will undergo reconstruction over the next several years. The project, referred to as the I-94 North-South Freeway Project, will involve the reconstruction and redesign of the stretch of I-94 from the Wisconsin-Illinois border, north to the Mitchell Interchange.

M Squared Engineering was selected to play a part in this project, for both the design aspect and the construction inspection side.



Teaming up with DAAR Engineering, M² provided engineering design services for the County KR Interchange which is located at the border of Kenosha and Racine Counties. M² was responsible for all the stormwater management for this interchange. A drainage analysis was performed for the more than 400 acres tributary to an unnamed stream passing beneath CTH KR. Culverts were sized and placed at 17 locations throughout the interchange to facilitate proper drainage. M² also provided all the storm sewer design. A detention pond was sized to provide both water quantity standards as well as water quality goals.

M² is currently involved in the construction inspection for the I-94 corridor project, marking the first time that M² is performing inspection for a WisDOT project.

Minal Hahm, PE, CFM
Principal



As one of the cofounders of M Squared Engineering (M²), Minal has over 17 years of civil engineering experience in hydrologic and hydraulic analysis,

stormwater management design, recreational facilities design, residential, commercial and industrial land development, agency permitting, and public works design in both Wisconsin and Illinois.

Minal is also a Certified Floodplain Manager (CFM), with a strong understanding of local, as well as federal requirements relating to stormwater projects. She serves as the Executive Chair for WAFSCM, CFM and Conference Committee Chairs for WAFSCM and Membership Committee Chair for WTS. She has served as a judge and finals judge for the Future City Competition in Milwaukee for the past 11 years. Just recently she accepted a position on the CEC Advisory Board at Bradley University.

Matthew Hahm, PE
Principal



As the cofounder of M², Matt brings over 15 years of experience in municipal engineering, hydrologic and hydraulic analysis, stormwater

management design, treatment plant maintenance, residential, commercial and industrial land development and agency permitting.

Matt has worked extensively with municipalities and is currently Kewaskum's Town Engineer. His professional relationship, influential personality, and high ethical standards have helped gain additional clients for the firm.

Andrew Wells, EIT
Staff Engineer



Andy has been with M² since June 2006. He has over four years of experience in stormwater management; hydrologic and hydraulic analysis; site

design; residential, commercial, and industrial land development; and construction inspection. Besides being responsible for the AutoCAD training at M², Andy also performs much of the hydraulic modeling and water quality modeling.

Throughout his career, Andy has been able to work on many different types of projects which have helped to give him a broad background of experience.

Tony Gromacki, PLS
Professional Land Surveyor



A Professional Land Surveyor, Tony is the head of our Survey Department. He has over 29 years of experience in land surveying, right-of-way plats, construction

staking, as-built drawings, boundary and topographical surveys, ALTA/ACSM surveys, plat preparation, and Certified Survey Maps. Tony also provides transportation construction inspection.

Jared Simon, EIT
Staff Engineer



In January of 2009, Jared Simon joined the M² team as a staff engineer. He has over three years of experience in site design, grading and earthwork estimates, and sewer and water

main design. His emphasis, however, has always been on stormwater management.

Jared has designed a variety of site-specific detention ponds, infiltration devices and green-roof systems and has prepared countless stormwater management reports, permit applications, and as-built inspections. Jared recently completed seven months of on-site design assistance on the I-94 corridor-Racine project.

Ron La Porte
Civil Engineering Technician



Having over nine years of experience in many aspects of civil engineering, Ron La Porte enjoys working on transportation construction projects.

Two of his most recent projects were American Recovery and Reinvestment Act (ARRA) projects. Before joining M², he worked as a project manager, land surveyor, and CAD technician. Ron is pursuing his civil engineering degree.

David Dekelaita
Electrical Engineer



David Dekelaita brings more than 30 years of experience as an electrical engineer to M² Engineering. His

background includes reviewing and supervising electrical wiring and traffic controls for the Department of Transportation and the Tollway Authority construction projects in Southern Wisconsin and Northern Illinois.

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Staff Continued...

Thomas “T.J.” D’Amico
Civil Engineering Technician



T.J.’s background consists of civil engineering, land surveying, project estimating, planning, site due diligence, construction management, construction inspection and project management. T.J. has over nine years of experience as a land surveyor, engineering tech and construction inspector.

T.J. has served as a Survey Party Chief for six years with experience in ATLA ACSM, topographic surveys, certified survey mapping, construction layout, and boundary surveys.

Mike Krohn
Construction Inspector



Mike is an experienced land surveyor and construction inspector with nine years of construction related experience. His background consists of surveying, construction

inspection, project estimating and planning, site due diligence, and managing the Quality Control program at his previous employer.

As a newer M² employee, Mike will be providing construction inspection for all WisDOT, municipal and private construction projects. He will also be performing topographic surveys, construction staking, CSM reviews, as well as assisting in the CAD department while not inspecting.

Jon Schreiner, PE
Senior Project Engineer



Jon has ten years of experience in project design and construction inspection / management. His past responsibilities included site development and stormwater management design for municipal, commercial, private and urban projects.

Jon has expertise in complex stormwater management and erosion control design and inspection and has recently taken over the role of Project Manager responsible for the stormwater management plans and Hydraulics for the Runway 7R- Safety Area Improvement Project at General Mitchell International Airport (GMIA).

Kris Koepke
Office Manager



Kris is our Office Manager. Her responsibilities include invoicing, bookkeeping, project administration, and general office organization for our growing staff. Kris usually keeps everyone in

line and makes sure the office runs smoothly.

Jane Karrels
Business Development/Marketing Manager



With over 20 years of marketing experience, Jane’s main responsibility is to develop and execute the firms’ marketing plan which includes identifying and prioritizing potential opportunities.

She is also responsible for the development of proposals, presentations and brochures as well as tracing and reporting on the status of all proposals and their components.

WLSLS Survey Wisconsin



On Saturday, March 20, M Squared Engineering LLC (M²) participated in the largest single day survey in Wisconsin’s history as a kickoff to promoting National Surveyor’s Week, March 21-27.

Hoping to set a world record in the Guinness Book of World Records, the WLSLS asked member surveyors and others around the state to set up GPS receivers and simultaneously obtain GPS signals from the satellite constellation and then process that extensive data set into a single precise latitude and longitude location for each point measured. Every point will be determined to accuracy of about 1 centimeter or close to a half of an inch on the surface of the earth. WLSLS will preserve the values of these locations and in future years, during National Surveyors Week, the members of WLSLS plan to remeasure the same monuments to determine any shift in where Wisconsin is located on the face of the earth.

M² set their GPS unit up at the corner of Western Avenue and Wauwatosa Road in Cedarburg, Wisconsin, the location for one of M²’s upcoming projects.

Tony Gromacki, Professional Land Surveyor and a member of the M² staff, was responsible for setting up and monitoring the GPS equipment.





I-94 N/S Freeway Construction (WisDOT)

M Squared Engineering, LLC (M²) currently provides construction inspection services for the I-94 North/South Freeway Construction project in southeast Wisconsin. Work performed includes interpreting plans, specifications, and special provisions. Inspections include drainage, sub-grade, gravel base, concrete, curb and gutter, base course asphalt, concrete pavement, electrical and performing survey construction verification. The project has a February 2011 completion date.



US Route 150 - Location Drainage Study

This project will improve US Route 150 beginning at Urbandale Avenue, in East Peoria to Detroit Avenue, in Morton, Illinois. These improvements will increase the two-lane rural highway to a three-lane urban highway. M² is responsible for the Location Drainage Study for this 6.0 mile corridor. Some of the site challenges include the meandering Dempsey Creek, located in a 40-50 foot deep ravine throughout the corridor. Floodplain encroachments were a concern and addressed during the analysis. The steep embankments and large offsite drainage areas required many unique and creative solutions for this project.

US 53 / CTH V Grade Separation - Stormwater Management

M² has been retained by WisDOT to design the stormwater management and drainage system in conjunction with the wetlands mitigation and restoration for the proposed grade separation improvements. The grade separation will require a 40' plus excavation from existing grades. The project's proximity to Bear Creek, a WDNR identified pristine water stream, will require special attention to the water quality treatment for TSS removal both during and after construction.

Cedarburg Science will be assisting M² in developing the wetland mitigation and restoration plan.

I-39, I-90/94 Wisconsin River Project

On June 2008, a portion of I-39, I-90/94 between Portage and Mauston experienced a large flood event that inundated portions of both highways causing long-term closings of the highway system.

In conjunction with Ayers Associates, M² is conducting a detailed hydraulic analysis of the Baraboo River as well as the Wisconsin River. Both river models will be updated with newly surveyed data, as-built information and newer modeling software. The updated models will be used to analyze different options for flood proofing the highways. The project will involve incorporating updated hydrology for the Baraboo River, hydraulic modeling, alternative options development, and public involvement.

M² will prepare a report summarizing the findings of the hydraulic analysis of the proposed options. The project team will make recommendations for improvements to I-90/94, and I-39 relative to roadway overtopping by floodwaters. The project is expected to be completed by November of 2010.

Partial Projects Listing

Douglas Avenue Racine, Wisconsin

M² is teamed up with GRAEF to provide various engineering services for the reconstruction of approximately 1.5 miles of Douglas Avenue in Racine County. M² is tasked with establishing the existing Right of Way, developing the Right of Way Plat, storm and sanitary sewer design, and the development of a Pavement Marking, Signing, and Transportation Management Plans.

There are approximately 166 parcels along the corridor that will require the development of legal descriptions. The storm and sanitary sewer will require either repairs or replacement. GRAEF will be mentoring M², on an informal basis, with the Transportation Management Plan.



Listing of Services

Taking a project from conception to construction involves great levels of integration and coordination between multiple disciplines and agencies. M Squared Engineering's broad range of experience and professional insight provides a great foundation for project guidance from planning, to design, to construction.

Municipal Engineering - Offering a wide range of engineering services to various local agencies including counties, cities, towns, villages, regional water and sewer districts, and state regulatory agencies in Wisconsin and Illinois.

Water Resource Management - M² specializes in water resources and has become one of the leading firms called upon for watercourse hydrology/hydraulics. Our project history has earned us a great reputation as one of the best firms in Wisconsin to help manage water resources projects.

Construction Engineering - M² provides full construction engineering services from onsite construction observation to weekly or critical point inspections. A sampling of our clients include: WisDOT, WisDNR, private developers and local municipalities. Our inspection services include overall project management or general site inspections, such as erosion control.

Transportation Engineering - Our water resource experience extends into transportation engineering. M² continues to provide comprehensive water resources services to WisDOT either directly or through peer engineering firms. Our clients rely on our extensive expertise and our high quality deliverables.

Rail Engineering - With Wisconsin looking to expand their rail services, so is M Squared Engineering. At this time M² offers stormwater solutions, bridge hydraulic analysis, and land surveying for any rail projects. Our existing DOT drainage experience for roadways can easily be applied toward any rail project.

Surveying - Our surveying services include all aspects of surveying including design surveys, ALTA surveys, highway plats, construction layout and staking, and stream surveys. An experienced survey project manager and the latest in GPS and robotic equipment prepare us to meet all survey needs.

Site Design - Site development planning and design, including varying projects from single family residential to a 150-acre subdivision or a 210-acre industrial park are part of our comprehensive civil engineering experience. Detailed project planning and extensive communication with key stakeholders allows us to minimize the critical time path for any project. Early communication with key regulators and approving authorities help fast-track a project through the approval process. Our staff has successfully completed projects throughout the Midwest, taking them from concept to reality.



W62N215 Washington Avenue
Cedarburg, Wisconsin 53012

Mission Statement

M Squared Engineering, LLC is a full service civil engineering firm that is committed to enhancing the value of our clients' projects by providing quality service while meeting project schedules and budgets. We will accomplish this by developing a project plan that is customized based on our clients' goals, by maintaining a high level of communication, by creatively exploring solutions during all project phases, and by maintaining our technical level of expertise through continuing education.