The Firm

VSM Engineering, LLC (VSM) is a professional civil engineering service firm providing general civil engineering services for capital projects to clients in the public and private sectors. Typical services include planning, design, analysis, construction plans and construction management for infrastructure projects. VSM is a certified DBE, WBE, SLBE firm with over 20 years’ experience on capital projects. VSM has experience with on-call engineering and city engineering and has worked alongside the citizens, City Administration, other City departments, developers and contractors.

VSM’s municipal clients include the City of Kansas City, MO, the City of Riverside, MO, Platte County, MO, Jackson County, MO and Johnson County, KS. VSM has performed on-call engineering services for Platte County and currently holds the 2017 SLBE Design Professional Services Contract for Open-End Stormwater Projects for the City of Kansas City. VSM has worked with MODOT as a subcontractor on multiple LPA projects such as the I-29 Bridge over Tiffany Springs Roadway.

VSM has a certified flood manager and two water resources engineers on staff qualified to perform FIRM, CLOMR, LOMR, site flood studies, amongst others. In the past five years, VSM has completed over 34,000 linear feet of water main replacement and over 25 Utility Accommodation & Coordination projects. VSM has administered construction contracts ranging from $80,000 to $20,000,000 for Municipal Transportation projects and has completed over a dozen construction projects ranging from $50,000 to $20,000,000 in cost.

Project categories include:

- Water Line Design
- Subsurface Utility Engineering
- Project Management
- Municipal Engineering
- Stormwater Analysis & Design
- Stormwater Management &
- Erosion Control
- Construction Management
- Sanitary Sewer Design
- Park & Recreation Facilities
- Site Design & Development
- Parking Lots
- Constructability Reviews
- Specifications
- Quality Control Reviews
- Municipal Transportation

What this means to you Due to its size, VSM is as a small, mobile firm adept in responding to last-minute requests and project changes with prompt service and attention to detail.

The VSM team has 13 years of completed projects within Missouri including stormwater, sanitary sewer and road. From project inception through the design and completion phases of engineering, this team is seamlessly integrated. With years of experience and successful working relationships, we are poised to provide the ultimate suite of services to the Missouri Department of Transportation.
The Team

Valerie McCaw, P.E., ENV SP
Project Manager, Lead Engineer

The owner and President of VSM Engineering, Valerie is former Assistant City Engineer and former Roads Engineer with over 20 years of experience on capital projects throughout Missouri, Kansas and Oklahoma. She has performed in varying capacities from lead engineer to principal designer and project manager. She has extensive experience in management, design and construction management of capital projects such as roadways, slope stabilization, storm sewers and stormwater detention facilities, park and recreation, water line, sanitary sewer and site design projects. | PE: MO, KS, OK | DBE: MoDOT & KDOT | ENV SP - 2014 | SLBE & DWBE: KCMO | WBE: MO & KCK

Heather Carpenter, E.I.
Civil Design Support, Roadway

Heather is a talented engineer with 16 years of civil design experience. Her diverse background includes roadway geometrics, enclosed drainage systems and site grading for KCMO, MoDOT, KDOT and NDOR as well as city and county agencies. | EI: MO | OSHA 10 Card

Amy VanYperen
Utility Coordinator

Organized and attentive to detail, Amy is a strong asset to the VSM team as Utility Coordinator. Her strong experience includes utility coordination for stormwater, road and streetcar projects.

Sarah Beers, P.E., QCIS, QPSWPPP
Stormwater Design, SWPPP

Sarah brings over 11 years’ experience as a design engineer to this team. Ms. Beers also has experience in drainage, culvert and storm sewer design projects for various residential, commercial, municipal, and highway projects. She is proficient in HEC-RAS & HydroCAD modeling and flood studies. She has assisted in preparation of water supply and treatment studies, environmental information documents, fire protection studies, water distribution modeling, water line extension and replacement, and hydraulic analysis of water treatment plants. Sarah is QPSWPPP certified allowing her the ability to prepare Construction Storm Water Pollution Prevention Plans (SWPPP) in compliance with the National Pollutant Discharge Elimination System (NPDES) permit program. She is also a credentialed QCIS which qualifies her to inspect and maintain construction sites for stormwater compliance. | PE: MO | OSHA 10 Card
The Experience

Interchange at Tiffany Springs Parkway and I-29- Kansas City, MO
Utility coordination services. This project cooperative which included the KCI TIF Advisory Commission, MoDOT, Kansas City, Mo. and Platte County, Missouri. A standard Diamond Interchange into a Diverging Diamond Interchange (DDI) was converted and ramp water mains relocated. VSM worked with local power, water, sanitary, sewer, telephone, fiber, telecom and gas utilities to configure the best relocations for the redesigned interchange. The team’s final plans were turned in ahead of MoDOT’s schedule. 1000 ft bridge, related roadway 11M project

Parvin Road Rehabilitation- Kansas City, MO
Design engineer for the secondary arterial street rehabilitation of Parvin Road from Skiles Avenue to Kentucky Street. The project included 3,600 LF of four-lane arterial with curb and gutter.

Red Bridge Road over the Blue River- Kansas City, MO
Utility relocation coordination for the widening of Red Bridge Road for approximately 3.1 miles from Holmes Rd. to Blue River Rd. The project included the replacement of the Red Bridge over the Blue River and selected intersection improvements. 1000LF bridge with 3.1 miles from Holmes to Blue River Rd.

North Garfield Ave Rehabilitation Design-Build- Kansas City, MO
Utility coordination for 1,935 linear feet of complete residential street reconstruction delivered by the design-build process.

K-7 Highway Improvements at 43rd and 75th Streets- Shawnee, KS
Project manager for signal improvements at the intersection of K-7 Highway and 43rd Street. Improvements included adding left turn signal and signal timing and replacing the existing mast arm for a longer arm of 60 feet. VSM hired a structural engineer to design a new, non-standard pole base for the long mast arm. The project also included the installation of a permanent concrete median at the intersection of 75th and K-7 Highway and the addition of northbound and southbound left turn arrows at 43rd and K-7.
City of Kansas City, MO
VSM has completed over a dozen water line projects for the City in the last several years. Duties have included engineering design, utility and agency coordination for water main replacements and water line replacements, relocation and upgrades.

VSM currently holds the 2017 SLBE Design Professional Services Contract for Open-End Stormwater Projects for the Water Services Department

2017 SLBE Design Professional Services Contract for Stormwater On-Call for the Water Services Department

From 2010-2011 VSM Engineering served as the Utility Coordination Engineer for the City of Kansas City Missouri’s Public Works Department.

VSM has performed utility coordination for over 10 projects within Kansas City, MO within the past two years. This includes working with power, water, sanitary sewer, telephone, fiber, telecom, and gas utilities to work out the best relocations.

Interim County Engineer for Platte County, MO
VSM held the on-call contract for various bridge and roadway projects and served as Interim County Engineer in 2013. Services included, development plan review, stormwater study review. VSM held the on-call contract for various bridge and roadway projects. Selected projects include Construction Management of the following bridge projects: Duncan Road Bridge Replacement, Humphrey’s Access Bridge Replacement, Spring Street Bridge replacement.

Merrimac Street Rehabilitation Project for the City of Riverside, MO
VSM was Design Engineer and Project Manager for approximately 400 LF of residential street rehabilitation including widening, curb and gutter and pavement improvements and retaining wall.

Kansas City Streetcar, Kansas City, MO
VSM Engineering prepared the Stormwater Pollution Prevention Plan (SWPPP) for the Kansas City Streetcar Construction Project. The SWPPP covered a variety of construction sites and stormwater protection issues along the 2.2 mile corridor.

Hydraulic Profile Analyses for Wastewater Treatment Plants in Kansas City, MO
Hydraulic calculations for the treated Effluent Disinfection Study for Westside, Birmingham, Blue River, Todd Creek and Rocky Branch wastewater treatment plants.

[additional experience and recent project updates found at www.vsmkc.com]