

Joel A. Paulsen
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PROFESSIONAL SUMMARY

Seasoned Executive Director and Civil Engineer with over 20 years of comprehensive experience in managing large-scale infrastructure projects in the public and private sectors. Recognized for pioneering the Metro Flood Diversion Authority, overseeing the first and largest split-delivery P3 project in collaboration with the U.S. Army Corps of Engineers, which brought about innovative flood control solutions and substantial cost and time savings. Demonstrated success in securing significant federal and state funding, achieving record-low financing rates, and negotiating pivotal legal settlements to drive project progress. Expert in sustainable practice integration, such as implementing biofuel usage in construction, which marked a national first. Highly adept in technical design and project management across various civil engineering disciplines including water distribution, sanitary systems, and storm sewer management. My career is distinguished by my commitment to achieving project objectives while ensuring environmental compliance and community benefit, earning multiple national and international accolades for project excellence and leadership.

EXPERIENCE

2019 – 2024 ***Metro Flood Diversion Authority***
Executive Director

Fargo, ND

As the inaugural Executive Director of the Metro Flood Diversion Authority (MFDA), a Joint Powers Authority encompassing multiple municipalities and counties, I have been pivotal in setting up and managing all facets of the \$3.2 billion FM Area Diversion Project. My responsibilities included establishing staffing, processes, and procedures, as well as overseeing the daily operations of this landmark infrastructure project. I led the project's development under a unique split-delivery P3 model in partnership with the USACE, achieving significant milestones:

Project Leadership and Innovation: Directed the first and largest split-delivery P3 project in partnership with the USACE. This pilot initiative, initiated by Congress, not only saved over \$300 million but also expedited the schedule by 10 years through innovative project delivery.

Financial Management and Advocacy: Played a crucial role in securing \$750 million in federal funding and facilitated \$870 million in local funding from the ND state legislature. Negotiated the lowest interest rate WIFIA loan in history (\$563 million at 2.01%).

Legal and Community Relations: Successfully negotiated a landmark settlement agreement with the upstream coalition, resolving a federal lawsuit and contentious Minnesota construction permit issues. This agreement allowed the project to move forward with innovative mitigation programs for affected communities and the procurement of a P3 developer.

Sustainability and Resilience: Committed to resilient and sustainable project practices, I incorporated ENVISION standards, workforce training, and apprenticeship programs. Promoted local procurement and was instrumental in initiating the use of biofuels for construction equipment, a first in the U.S., enhancing the project's environmental stewardship.

Awards and Recognition: The project and my leadership have been recognized with numerous national and international awards, underlining our commitment to excellence and innovation in public infrastructure.

Throughout my tenure, I have maintained the project on schedule and within budget, showcasing effective management and strategic foresight in one of the most significant flood control initiatives in the nation.

2019 – Present **Paulsen Engineering**
President

Moorhead, MN

At Paulsen Engineering, I leverage my extensive expertise in civil engineering to provide top-tier expert witness services, dispute resolution, and project management. My approach combines deep technical knowledge with strategic problem-solving to deliver solutions that uphold the highest standards of engineering practice. Key projects and roles include:

Zink vs. Guthmiller, ND: Successfully mediated and settled a significant water dispute, demonstrating adeptness in handling complex environmental and legal challenges.

City of Maddock vs. Interstate Engineering: Resolved a major legal dispute with a settlement of \$800K. Subsequently, Paulsen Engineering took over the project, redesigning and managing the construction of a citywide street repair project.

City of Middle River: Managed multiple projects that enhanced the city's infrastructure and community facilities, including:

- Pump House reconstruction.
- Securing a grant for the restoration of a historic building.
- Lagoon repair and maintenance updates.
- Installation of a wood fire boiler system.
- Advanced water meter system implementation.
- Comprehensive rewrite of city codes and ordinances.
- Design and construction of a new subdivision.

Representation for Metro Flood Diversion Authority: Currently representing 106 eminent domain cases, showcasing strong legal and procedural knowledge in property and construction law.

Represent and Support the Metro Flood Diversion Authority in a variety of aspects relating to P3 construction support, land program advisory services, program management, and financial and public relations support.

These experiences underscore my capability to manage diverse and complex engineering projects from conception through to successful resolution and completion.

2014 – Present **Engineers Without Borders**
President

Moorhead, MN

Outside of the work involved with the MFDA, he serves as the founder and current president of Engineers Without Borders – Red River Valley Professionals chapter and as a professional mentor for Engineers Without Borders – NDSU chapter. In those roles, he has had the opportunity to oversee numerous clean water and structural project implementation trips to Central America.

2019 – Present **Moorhead Public Service**
Board Member

Moorhead, MN

Mr. Paulsen was appointed by the Moorhead City Council to a board position on Moorhead Public Service (MPS), a public utility serving the City of Moorhead's water and electricity service. Mr. Paulsen worked with the MPS board and staff to successfully advocate and implement a 100% carbon-free electrical purchase plan as the first community in northwest Minnesota. He is actively involved in the Minnesota Municipal Utilities Association and the Missouri River Energy Service and serves on the Budget and HR committee for MPS.

2018-2019 **Stantec**
Regional Manager

Fargo, ND

Managed the Fargo, ND, and Bismarck, ND offices covering three service sectors (Transportation, Water Resources, and Municipal Engineering) Administered contracts worth a total of 20 million dollars. Appointed the designation of City Engineer for five communities in Northwest Minnesota ranging in population from 200 to 3000 residents.

- Lead Business Development Engineer in the Fargo office.
- Professional Mentor to staff members
- Focus on Community Planning, Floodplain Management, Site Design, Transportation, and Storm Water Management

2016-2019 **City of Moorhead**
City Council Member

Moorhead, MN

Mr. Paulsen was elected to the Moorhead City Council representing Ward 3 in 2016. He served on many local and regional boards representing the city and his constituency. His primary goals were focused on diversity and inclusion, economic development, and sustainability. During his term, he worked closely with the Moorhead City Manager to implement Indigenous People's Day, a downtown redevelopment plan focused on affordable housing and Renaissance Zone legislation, as well as proposing and working with the city to become part of the Green Step Cities program through the MPCA. Mr. Paulsen resigned from the City Council in 2019 due to a conflict of interest with his appointment to the Executive Director position at the Metro Flood Diversion Authority.

Committees and Boards served.

- Metro Flood Diversion Authority
- West Central Initiative (RDC #4)
- Clay County Public Health
- Clay County Planning Board
- City of Moorhead Planning Commission
- City of Moorhead Economic Development Commission

2015-2018 **Bolton & Menk**
Senior Project Manager

Fargo, ND

Co-managed an office of 15 employees covering three service sectors (Survey, Transportation, Water Resources, and Municipal Engineering) Administered contracts worth a total of 15 million dollars. Appointed the designation of City Engineer for four communities in northwest Minnesota ranging in population from 300 to 2000 residents.

- Lead Business Development Engineer in the Fargo office.
- Professional Mentor to staff members
- Developed innovative GIS-based CRM workflows and implemented them company-wide.

2012-2015 **Kadrmass Lee & Jackson**
Engineer IV, Office Manager

Moorhead, MN

Managed an office of 40 employees covering four service sectors. Administered contracts worth a total of 10 million dollars. Appointed the designation of City Engineer for four communities ranging in population from 600 to 5000 residents. Developed and completed multiple sewer and water extension projects, pavement maintenance programs, asset management plans, and wastewater treatment facilities. Lead the implementation of a Water Resources sector within KLJ.

2009-2012 **Kadrmass Lee & Jackson**
Engineer II, Project Manager

Moorhead, MN

Primary duties include the preparation of proposals, contract documents, plans, and specifications for a range of clients including municipal, NDDOT, MNDOT, and private clients including developers, state and tribal colleges, and architects. Administered construction contracts worth a total of 5 million dollars. Innovated standardized work practices and motivated staff to complete fixed-fee design contracts under budget while maintaining exceptional quality standards. Successfully imported and exported work to maintain strict chargeability requirements.

- As current city engineer completed project design and construction administration for a citywide utility replacement and pavement and road reconstruction design totaling 3 million for a community of 500

people. Activities included the completion of the project documents, project advertisement, bid, and award, coordinating construction oversight, and recommending contractor payment.

- Implemented a multi-phased approach for FEMA levee certification of a 3-mile-long levee system in Argyle, MN. Scope of services performed included analysis of USACE data, collection and analysis of survey data, internal drainage analysis, including a city-wide storm sewer model, modeling of a mile stretch of the Middle River, along with report preparation and extensive community collaboration.
- Designed a 2,500-foot primary flood protection levee around a neighborhood within the City of Fargo. The project included the relocation and demolition of 3 houses, abandonment of wells and septic systems, internal storm sewer collection system, and the design and implementation of inclinometers to measure settlement and subsurface movement. Provided oversight for 2 resident project representatives during construction.
- Designed a storm sewer system along a mile stretch of 7th Avenue North Fargo. The system included lift station modifications, a flood control structure, and a landfill leachate discharge line to the sanitary sewer from the adjacent landfill. Coordinated with the City of Fargo to implement flood control and stormwater operations following the basin-wide master plan. Implemented NDDOT standards and specifications per DOT local government aid.
- Developed alternatives for the principal access drive to Minnesota State Community and Technical College as well as coordinated with the City of Moorhead to conform the access to fit an adjacent interchange reconstruction along I-94.
- Routinely participate in QA/QC design reviews according to company-adopted standards.
- Actively participating in marketing efforts including conference attendance, public meeting attendance, and proposal development. Marketing activities resulted in securing 2 new projects in 2011 resulting in a total of \$600,000 in net revenue.
- Completed data collection and analysis of city-wide storm sewer lift station assessment project. Activities included the condition assessment of the capacity, structural, mechanical, electrical, and criticality of 72 lift stations maintained by the City of Fargo. Data collection results were incorporated into an unweighted scoring model that ranked the condition of each facility.

2005-2009 **Kadmas Lee & Jackson**
Engineer I, Project Engineer

Moorhead, MN

Designed and provided construction observation on numerous projects including the storm sewer for a 5 million dollar interstate interchange, two separate 3 million dollar urban roadways, as well as several lift stations and rural culverts and ditches. Provided construction observation on 18 projects totaling 12 million dollars.

- Resident project representative for a 5 million dollar urban corridor reconstruction project in Valley City, ND. Provided holistic construction services consisting of observation, testing, and surveying. Ensured contractor compliance with gradation, compaction, concrete quality, asphalt quality, and thickness tolerances corresponding to the NDDOT specifications.
- Tasked with becoming the storm sewer expert for their eastern North Dakota offices.
- Prepared a drainage study and designed an urban storm sewer system per NDDOT standards for a mile stretch of University Drive in South Fargo. Utilized MicroStation/Geopak Drainage to model hydrology, storm sewer, and surface drainage as well as prepare plans per NDDOT CAD standards. Worked with a team to design a 4000-foot levee system along with 900 feet of concrete flood walls. Independently designed one of the largest flood protection storm water stations in Fargo as well as 4000 feet of 36" water main.
- Prepared drainage studies alternatives and final design for an interchange reconstruction project at 52nd Avenue and I-29 in Fargo. Duties included utilizing MicroStation/Geopak for the design of roadway alignments, dirt work, drainage, and plan preparation. Attended regular meetings with NDDOT, City of Fargo, the City of Frontier, and private developers to ensure the interchange met the needs of all stakeholders. Assisted the NDDOT during construction as needed.
- Provided Flood fighting support to the City of Fargo during the historic flood of 2009. Consisted of the design and construction of temporary levees, coordination of volunteers, and communication with city engineers, FEMA, and the USACE.
- Designed a sanitary lift station at 17th Avenue and 25th Street South Fargo. The project included a 42-foot-deep dry well submersible station with an architectural housing for controls and mechanical equipment. Provided construction observation of the structure to ensure the caisson sinking method

resulted in proper tolerances.

2001-2005 **United Rentals Inc.**
Traffic Control Supervisor, Traffic Control Technician

West Fargo, ND

Designed and implemented traffic control in conformance with the MUTCD. Managed 3 work crews and provided safety and administrative oversight to ensure construction personnel and public safety. Implemented a warehouse inventory system to effectively produce and deliver traffic control efficiently.

- Provided traffic supervision for the contractor during a large interchange project at HWY 336 and HWY 10, 5 miles east of Moorhead. Project duties included coordinating lane closures with MNDOT and traffic control material maintenance,
- Implemented the traffic control plan for a 10-mile stretch of HWY 2 reconstruction between Mentor, MN, and Erskine, MN for MNDOT.

EDUCATION

B.S. Civil Engineering, North Dakota State University, Fargo, North Dakota, 2005

LICENSURE, CERTIFICATIONS, MEMBERSHIPS

Licensed Professional Engineer, Minnesota, 47964 and North Dakota, 6633.

Certified FEMA Floodplain Manager

Certified Traffic Control Supervisor, American Traffic Safety Services Association

Certified Storm Water Pollution Prevention Plan Designer, University of Minnesota

Minnesota Department of Transportation Certified Technician:

- Aggregate Production
- Bituminous Street
- Concrete Field Inspection 1 & 2
- Grading & Base

Certified, American Concrete Institute

City Engineers Association of Minnesota, Associate Member

National Society of Professional Engineers, Member in North Dakota & Minnesota

American Society of Flood Plan Managers, Member

American Society of Civil Engineers, Associate Member

Engineers Without Borders, President and Founder of Red River Valley Professional Chapter, Professional mentor for the North Dakota State University Chapter, Liaison for the University of North Dakota chapter, and Former North Dakota State Representative to the Midwest Steering Committee.

Bentley Software Certificate – Productive MicroStation, Geopak 1, Geopak 2, Geopak Drainage

Kadrmas, Lee & Jackson – Charitable Contributions Committee

Kadrmas, Lee & Jackson – Honorable Mention Community Involvement

Kadrmas, Lee & Jackson – Process Innovation Team

Bolton & Menk – Process development group

Order of the Engineer

RECENT PRESENTATIONS

Testimony: ND Legislature – Feb. 1, 2021 at Bismarck, ND

Conference: International ROW Association – Jun. 7-9 at San Antonio, TX

Leadership Academy: Missouri River Energy Services – Sep. 15-17 at Sioux Falls, SD

Meeting with Whitehouse concerning IJJA funding – Oct. 27-30, 2021 at Washington D.C.

Conference: P3 Government Conference – Dec. 6-8, 2021 at Washington, D.C.

Conference: Red River Basin Commission Conference - Jan. 11-13, 2022 at Grand Forks

Award Presentation: P3 of Americas Award Reception - Mar. 3, 2022 at New York City

Speaking Engagement: NDSU Contracts & Specs Class - Mar. 21, 2022 at NDSU

Speaking Engagement: WTOC Update - Mar. 22, 2022 at Bismarck, ND

Conference: P3 Water Conference – Apr. 6-8, 2022 at San Diego, CA

Networking: FMWF Chamber Voices of Vision - Apr. 21, 2022 at Fargo, ND

Testimony: ND Legislative Briefing - Apr. 26, 2022 at Fargo

Award Presentation: Project Finance International – May 7-10 at London, U.K.

Conference: American Floodplain Manager – May 16-20, 2022 at Orlando, FL

Conference: Proximo Financing Americas Infrastructure – May 23-25 at Nashville, TN

Conference: Minnesota Municipal Utilities – Aug. 22-24, 2022 at Brainerd, MN
Speaking Engagement: FM Realtor Presentation - Sept. 28, 2022 at Fargo
Conference: Association of State Floodplain Managers – Sept. 13-16 at St. Paul, MN
Award Presentation: P3 Awards – Oct. 10-12 2022 at New York City, NY
Conference: International ROW Association – Oct. 21-26, at San Antonio, TX
Speaking Engagement: P3 Government Conference – Dec. 1-3, 2022 at Washington D.C.
Award Presentation: Bond Buyer – Dec. 22 at New York City, NY
Speaking Engagement: City of Moorhead Presentation - Jan. 23, 2023 at Moorhead, MN
Conference: American Water Summit - Jan. 26, 2023 at Los Angeles Airport Marriott
Speaking Engagement: Chamber’s Leadership program - Feb. 17, 2023 at Local
Speaking Engagement: P3 Conference – Mar. 6-8, 2023 Dallas, TX
Speaking Engagement: ND Legislative Update - Mar. 15, 2023 at Bismarck Capitol
Advisor: City of Fargo Growth Plan – Mar. 23 – Present, Fargo, ND
Conference: American Floodplain Manager – May 7-12, 2023 at Raleigh, NC
Conference: American Public Power Association – Jun. 18-21, 2023 Seattle, WA
Testimony: Senate EPW Committee – Jul. 20 at Washington D.C.
Conference: Minnesota Municipal Utilities Association – Aug. 22-24 Duluth, MN
Testimony: ND Legislative Water Topics – Sep. 12, 2023 at Bismarck Capitol
Speaking Engagement: P3 Water Conference – Sep. 21·2023 – San Deigo, CA
Speaking Engagement: Boston Storm Surge Working Group – Oct. 13th at Boston, MA
ND Water Conference: Program update – Nov. 8th, 2023 at Bismarck, ND
Advisory Board: P3 Conference – Mar. 11th to Mar. 13th 2024 Dallas, TX
Opening Plenary Speaker: P3 Conference – Mar. 11, 2024 Dallas, TX
Speaking Engagement: UND Civil Engineering - Apr. 8, 2024 at UND Campus, Grand Forks, ND

AWARDS AND RECOGNITIONS

Americas P3 Deal of the Year from Project Finance International
North America Water Deal of the Year Award from Proximo
Dan W. Renfro Partnering Award (Ames Construction, USACE contractor)
IJ Global’s Water Deal of the Year and Public Sector Project of the Year in North America
Environmental Finance Green Social and Sustainability Loan of the Year
Americas Award for Public Finance from International Finance Law Review
Project Delivery Team of the Year (USACE)
P3 Awards Public Sector Promoter/Procurer of the Year (MFDA), Best Financial Structure (Agentis Capital) and Legal Advisor of the Year (Ashurst)
Bond Buyer’s P3 Deal of the Year and P3 Public Financing Award
IJ Global’s ESG Climate Adaptation Award
National Academy of Construction’s Recognition of Special Achievement Award
Associated General Contractors of North Dakota’s 2023 Safety Award (ASN Constructors)
ND Ready Mix Gold Star Award (City of Fargo) for Drain 27
Prairie Business 40 under 40 recipient