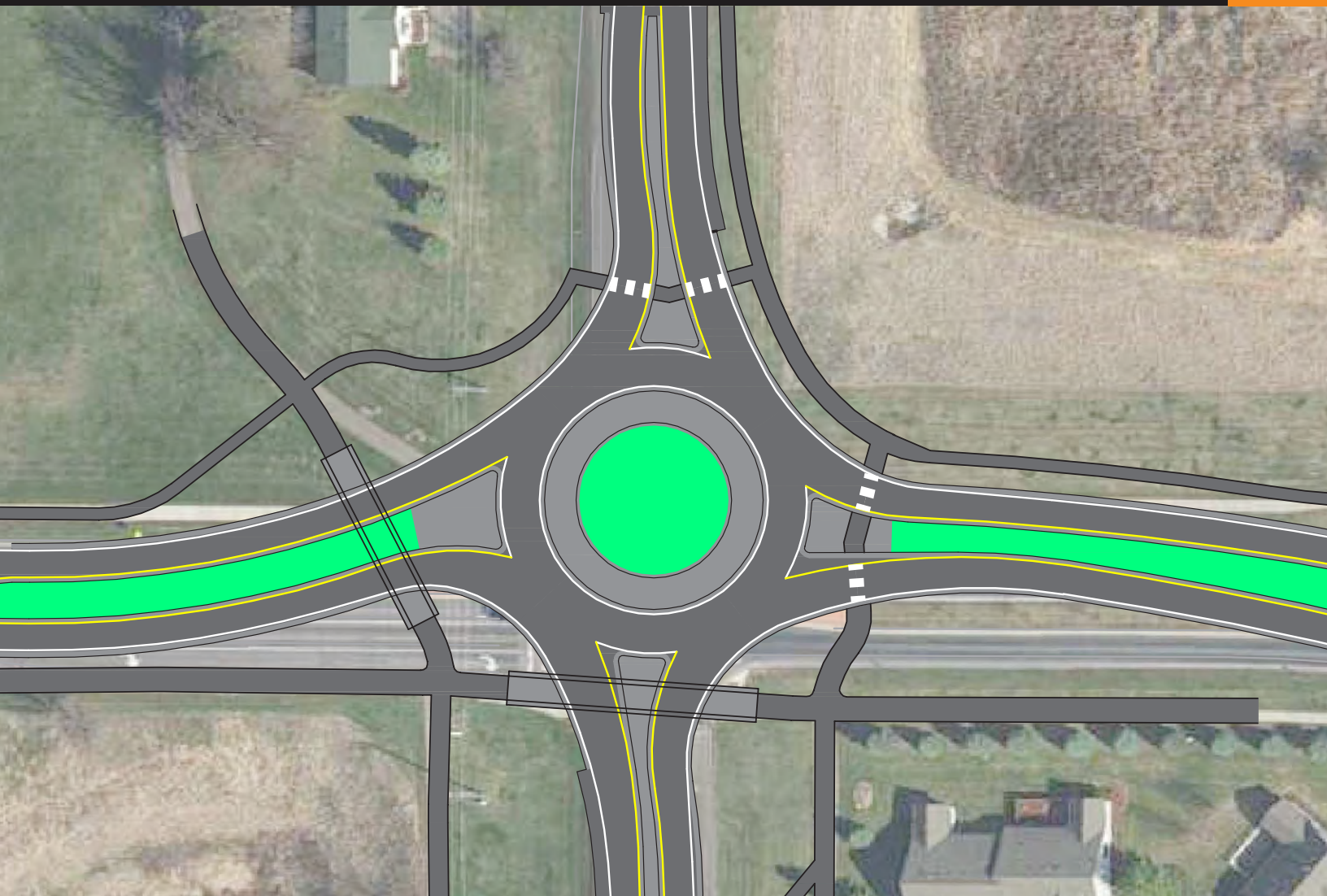


City of Northfield

Trunk Highway 246 and Jefferson Parkway Roundabout Improvement Project

PROPOSAL

March 22, 2019





Stantec Consulting Services Inc.

733 Marquette Avenue, Suite 1000, Minneapolis, Minnesota 55402-2309

Attn: David Bennett, Public Works Director/City Engineer
801 Washington Street
Northfield, MN 55057

March 22, 2019

Reference: Trunk Highway 246 and Jefferson Parkway Roundabout Improvement Project

Dear Mr. Bennett and Review Committee,

Sometimes the most efficient way to move forward is not in a straight line. The Trunk Highway 246 and Jefferson Parkway intersection is surrounded by critical community elements, including three public schools, the Spring Creek Soccer Complex, Northfield Community Resource Center, and the future Mill Town State Trail. To improve the safety for all users at this fundamental intersection, a roundabout with potential pedestrian tunnels was the preferred solution.

Designing roundabouts can be more complex than a traditional intersection. **Stantec has proven experience designing and constructing more than 250 roundabouts** that provide full circle results. When implemented appropriately, modern roundabouts have been proven to calm traffic, improve capacity, provide aesthetic opportunities, and most importantly, significantly improve safety. Stantec understands the complexities of the elevations and topography of this project design. The key to a successful project is the early illustration of the complex grades and elevations.

Stantec is excited to assist the City with this important project and has prepared an outstanding team to deliver the requested design and construction services. As your project manager, I recently delivered a federally-funded roundabout design and construction project in Red Wing, Minnesota. This experience, with many of the same project staff, will be leveraged to drive the project's ambitious schedule. Our design engineer, Tom Fidler, leads Stantec's development of modern roundabouts across the United States. He has designed or overseen design of more than 200 roundabouts that are in various stages of development – including 53 that are in operation. Both myself and Tom are familiar with current thinking around Complete Streets and pedestrian safety practices. We also have extensive experience working with Minnesota Department of Transportation and State Aid, which will help facilitate plan review and discussions about Rectangular Rapid Flashing Beacons. Additionally, our engineers are prepared to promptly evaluate the feasibility of pedestrian tunnel options and assist the City in arriving at a timely decision.

Heidi Hamilton will serve as the principal in charge. As the managing leader of Stantec's community development business line in the Upper Midwest, she will allocate the right resources needed deliver a successful project and will be available should any concerns arise. Heidi's experience living and working in Northfield provides a unique understanding and commitment to the City.

Combined with our landscape architects and community outreach specialists, our team will thoughtfully incorporate the Gateway Enhancement Plans, so the design accommodates plans for the future Mill Town State Trail, and develop public meeting plans that engage the community while assuring the project stays on schedule. As you will read in our proposal, visualization exhibits will be key to the success of the project.

We look forward to demonstrating our commitment to your community by delivering a long-awaited safety improvement at the intersection of Trunk Highway 246 and Jefferson Parkway.

Regards,

STANTEC CONSULTING SERVICES INC.

Tyler McLeete, PE

Project Manager

(612) 712-2089

tyler.mcleete@stantec.com

Heidi Hamilton, PE

Principal in Charge

(612) 712-2055

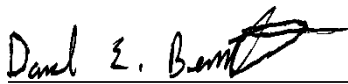
heidi.hamilton@stantec.com

Request for Proposals
City of Northfield, MN
TH 246 and Jefferson Parkway Roundabout Improvement Project
March 14, 2019

RFP Addendum No. 1

1. Respondent's attention is called to Section IX. The submittal date for proposals is extended from March 15, 2019 to March 22, 2019.
2. Please acknowledge in your proposal receipt of this Addendum by inserting the attached page immediately following the cover page of your proposal.

I hereby certify that this addendum was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.



David Bennett, P.E.

Lic. No. 45867

March 14, 2019
Date

*****END OF ADDENDUM*****

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PROJECT UNDERSTANDING

For many years the City of Northfield (City) has been concerned with safety at the Trunk Highway 246 (TH 246) and Jefferson Parkway intersection. This intersection is located on the south side of town, in an area of residential growth, and is surrounded by three schools and important community facilities such as the Spring Creek Soccer Complex and Northfield Community Resource Center. With the growth of traffic along both corridors, this intersection has become a bottleneck for commuters during the morning and afternoon peak periods. Because of the adjacent land uses, pedestrians of all ages pass through this area either on foot or on bicycles.

In 2009, the City received a Safe Routes to School (SRTS) grant to complete a systematic and comprehensive examination of issues preventing K-8 students from walking and bicycling to school. This study highlighted the need to make safety improvements at this location due to traffic volumes and the tendency for unsafe driving behaviors by drivers who tend to become impatient with the long lines of vehicles that pass through the area.

In 2016, the City performed an Intersection Control Evaluation (ICE), concluding that a single lane roundabout would provide the greatest safety and operational benefit at the intersection.

The city secured \$484,480 from Minnesota Department of Transportation's (MnDOT) Local Partnership program, for fiscal year 2020. The City has also been awarded \$900,000 for the Local Road Improvement Program. Due to the fiscal year 2020 funding, the project must proceed efficiently and account for necessary plan review and coordination with the MnDOT Office of State Aid

DESIGN CONSIDERATIONS

To compliment City's vision, care will be taken to develop a design that complies with the City's Complete Street Policy, the SRTS Plan, the Gateway Improvement Plan, and the Trail System Plan. Specifically, the future Mill Towns Trail must be considered in the design so that a future trail can be comply with Minnesota Department of Natural Resources (MNDNR) design guidance.

The community wants underpasses included in this project. However, the feasibility of this feature must be evaluated. Two options will be reviewed: one including an underpass for each of the four intersection legs and a second that only includes two underpasses. The feasibility of each underpass location will be reviewed for constructability, cost, and safety.

To accommodate either of the pedestrian underpass options, the intersection would need to be raised to provide clearances between the street surface and the underpasses and the underpasses and the surface water elevation. The proposed construction limits will extend in all directions to assure a comfortable driving experience for vehicles, while providing adequate drainage. By raising the intersection, the views of the City discussed in the Gateway Improvement Plan will be enhanced and create an even larger view of the greater

community. These views would be further enhanced by the landscaping and streetscaping that could accompany this project.

As part of the strong desire to improve the ability of pedestrians to safely cross TH 246, if the analysis determines that underpasses are not feasible under one or both legs of the highway the possibility of installing a Rectangular Rapid Flashing Beacon will be investigated with MnDOT. **Our strong relationship with MnDOT will help facilitate productive discussions.**

Another area of concern mentioned in the ICE is pedestrian movements between Marvin Lane and a proposed crosswalk near the Northfield High School. A sidewalk is proposed to help distance pedestrians from the Division Street traffic, approximately 750 feet long. There is limited space along this corridor and the need for right-of-way and potential impact to trees will be carefully evaluated to determine a preferred alignment. Care will be taken to preserve the existing trees and fencing while setting the sidewalk as far away from vehicle traffic as possible.

Option 1 - Four Underpasses

Pros: Offers pedestrians the greatest mobility without at-grade crossings
Allows cyclists the ability to cross the intersection without stopping or yielding

Cons: High initial costs

Option 3 - Two underpasses, on the west and south legs of the intersection

Pros: Reduced initial costs

Cons: Some pedestrian traffic will still cross at-grade increasing exposure to accidents
Complex trail design needed to tie the underpasses and at-grade crossings together

PUBLIC INVOLVEMENT

Public education and involvement are critical to the successful implementation of roundabouts. Resident stakeholders are often concerned about safety, traffic flow, truck (or combine) movements, pedestrians, bicyclists, buses, and adjoining properties. The City has indicated that there is already significant support for the roundabout concept, so public meetings will be largely focused on keeping the public informed of design progress, results of the underpass evaluation, and providing opportunities to influence landscaping. Early and continuous public involvement will be important for building support for the project and educating people in preparation for their use of the roundabout. Our public outreach will begin with the preparation of a Communications Work Plan that will detail the methods



Lake Road/Settlers Ridge Parkway Roundabout
Woodbury, Minnesota

and schedule for engaging stakeholders and the general public in a discussion of roundabouts and the proposed project.

EXPERIENCED DESIGN TEAM

The core geometrics of a roundabout may not appear to be complex—particularly for a single lane design. However, it can be a subtle difference between an effective design and a flawed one. It can be a slight change in a curve that gets a driver’s attention to slow and avoid reaching a yield line traveling too fast. It is the bringing together of all the design and external factors that demands experience. Stantec’s experience delivering more than 30 of Minnesota’s existing roundabouts will deliver a high-quality design for the City of Northfield.

Our conceptual design shifts the intersection slightly north, creating more space between the trails and the adjacent homes and will help to reduce the amount of time that vehicles are traveling directly into the rising or setting sun while approaching points of conflict.

CONSTRUCTION MANAGEMENT

Due to the importance of this intersection to the City’s transportation network, a construction plan that minimizes disruption by carefully coordinating all work with adjacent property owners, the School District, and MnDOT will be crucial. Access for both vehicular and non-motorized users must be planned for during construction. A full closure is expected to be necessary, which will require a robust communications plan. Additionally, with State funding involved, specific testing and documentation requirements will be diligently executed.

STRONG PROJECT MANAGEMENT

The City needs an experienced project manager capable of coordinating internal and subconsultant teams, facilitating agency approvals, and maintaining close communications with the City and MnDOT. Responding to the individual needs of the project while maintaining consistency in management and communications will be key. This task includes activities to oversee and direct the project, see that the budget, schedule, and other expectations are established and met, and follow a customized quality management process

Our project manager, Tyler McLeete, has gained the necessary experience to deliver this project effectively and navigate through the Cooperative Agreement construction administration process to obtain the State funding allocated to this project. This project does not have federal funding and will not go through the delegated contract process. Tyler will coordinate and lead the major activities of the project and will handle the daily activities and details of the work effort. Tyler plans to hold regular weekly meetings with City project managers throughout the project. In general, this practice will last from commencement of project design through substantial completion of construction. During the weekly meetings, ongoing project updates are provided.



TH 61/CSAH 2 Roundabout
Forest Lake, Minnesota



← **250+**
the number of roundabouts
built by Stantec across North
America.

RESPONDER'S BACKGROUND AND EXPERIENCE

FIRM PROFILE

We're active members of the communities we serve. That's why at Stantec, we always design with community in mind.

The Stantec community unites approximately 22,000 employees working in over 400 locations across 6 continents. Our work—planning, engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, construction services, project management, and project economics, from initial project concept and planning through to design, construction, commissioning, maintenance, decommissioning, and remediation—begins at the intersection of community, creativity, and client relationships. With a long-term commitment to the people and places we serve, Stantec has the unique ability to connect to projects on a personal level and advance the quality of life in communities across the globe.

GETTING YOU FROM POINT A TO POINT B, SAFELY

We'll get you where you want to go. Wherever you're going, our roadways help get you there safely. We follow a roadmap for every project that's driven by constant communication and collaboration with our clients and communities.

Our focused expertise, diverse experience, and collaborative teamwork allow us to create solutions that enhance mobility and improve safety; at the same time, they also enhance the local area and meet the current and future needs of that community. Our leading transportation specialists are matched with our best planners, landscape architects, and scientists based on the given project's requirements. With our approach and our team, we help move people and goods within and between neighborhoods and make it easier to interact and share ideas. Our portfolio includes thousands of highways and rural byways, toll roads, and urban streets serving every possible mode of transport, in every climate, and across every terrain in North America. Each project is customized to satisfy client needs and connect people within and

outside the local community. Whether you're traveling by car, bus, or bicycle, we'll get you where you want to go.

FEDERAL, COUNTY, AND LOCAL GOVERNMENT EXPERIENCE

We have extensive experience with state and county transportation departments, as well as with cooperative projects between cities, counties, and the private sector. Stantec holds required prequalifications with the MnDOT. Additionally, we employ former MnDOT employees who have more than 10 years of experience working for MnDOT delivering projects from preliminary design through construction. Their experience provides a comprehensive understanding of the entire project delivery process for projects using multiple funding sources including how funding is administered through the Cooperative Agreement process. We know the plan preparation requirements to obtain MnDOT approval and the construction administration process so that local agencies receive the maximum amount of Federal and State funding for their projects. This extensive knowledge of the MnDOT project delivery process helps us avoid pitfalls and take proactive action to prevent any issues that may derail your project.

With offices in Minneapolis, Rochester, and St. Cloud, Stantec has a strong history of delivering transportation solutions across Minnesota. We thoroughly understand how to coordinate with the FHWA, MnDOT, and local governments through their project delivery processes.

Our experience means your project will be effectively coordinated and reviews and approvals will occur in a timely manner.

ROUNDBOUT EXPERIENCE

Stantec designers have proven experience in designing roundabouts for all roadway classification levels. Our Minnesota staff have provided a variety of engineering services related to roundabout site selection, analysis, design, and construction to numerous communities throughout the region. These services have been provided for single-lane roundabouts with both low and high demand, as well as multi-lane roundabouts.

Stantec helped pioneer some of the design standards for Minnesota's modern roundabouts, drawing on our knowledge of existing state and federal standards and incorporating standards unique to roundabouts from other states. **For example, we designed Minnesota's first constructed, state-funded modern roundabout in Rochester.**

Selected Stantec Roundabout Experience Stantec's Minnesota offices designed 183 Roundabouts • 46 in operation • 2 under construction • 16 designed or in final design • 119 in conceptual design	High Speeds	Steep Grades	High Volume	VSSIM Simulations	MN State Aid	Multi or Single Lane	Approaches	Const. Plans Prepared	Year Opened	Tom Fidler
TH 61 North Ramps & Jamaica Ave Cottage Grove*	■	■	■	■	■	M	3	■	07	D
TH 61 South Ramps, Jamaica, & West Point Douglas Rd*	■	■	■	■	■	M	5	■	07	D
Pioneer Tr & Bavaria Rd Chaska			■		■	M	3	■	08	D
Town Course Dr & Bavaria Rd Carver			■		■	M	4	■	08	D
TH 3 & 190th St Farmington	■		■		■	S/M	4	■	08	D
CR 120 & Unnamed Rd 1 Sartell					■	M	3	■	09	D
CR 120 & Unnamed Rd 2 Sartell					■	M	3	■	09	D
CR 120 & CSAH 1 Sartell			■		■	M	4	■	09	D
Event Center Dr & Grant Ave Bemidji				■		M	4	■	10	D
Event Center Dr & Central Ave Bemidji				■		M	3	■	10	D
US 61 & County Rd 2 / Broadway Ave Forest Lake			■	■	■	M/M	4	■	10	D
Heritage Dr & Robert Rd & 50th St Sartell			■	■	■	S/M	5	■	10	D
CSAH 16 & Glendale/Lynn Savage		■		■	■	M	4	■	10	PR
University Dr & 5th St St. Cloud			■	■	■	M	4	■	11	D
CSAH 17 & CSAH 15 Winona	■	■			■	M	3	■	12	D
Badger Hills Dr & Superior St Rochester		■		■	■	M	4	■	13	D
US 59 / TH 60 / Oxford St Worthington					■	M	4	■	12	CV
TH 60 & I94 Off Ramp Worthington	■	■			■	M	3	■	12	CV
Badger Hills Dr & 46th St Rochester				■	■	S	4	■	14	D
Badger Hills Dr & Alpha Pkwy Rochester		■		■	■	S/M	4	■	14	D
Radio Dr & Military Rd Woodbury	■	■	■	■	■	S/M	4	■	14	D
CSAH 4 (Valleyhigh) & 50th St Rochester	■		■	■	■	M/M	4	■	15	D
Jamaica Ave & 70th St Cottage Grove	■	■	■		■	M/M	4	■	16	D

D Design
 PR Peer Review
 CV Concrete & Vertical Design

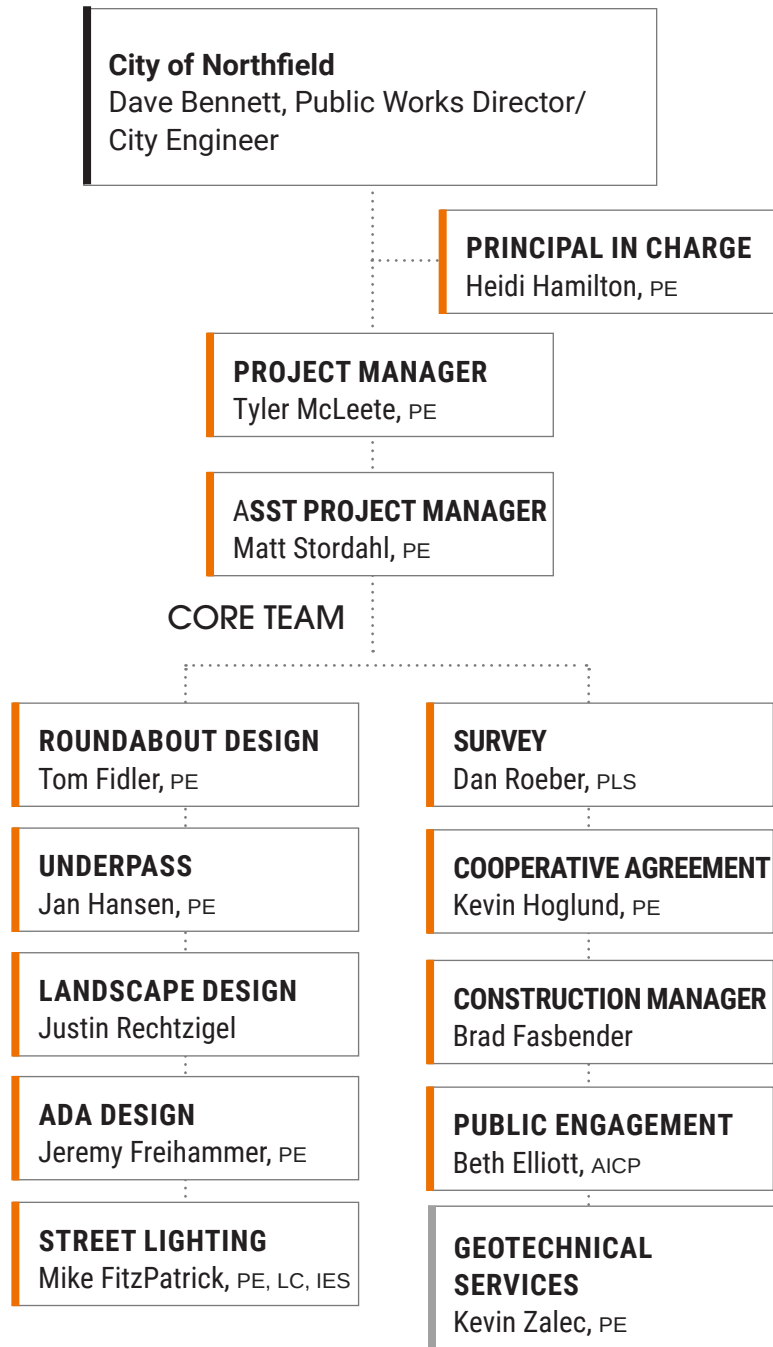
S/M Single/Multiple (fut.)
 M/M Multiple/Multiple (fut.)

*Special vehicles. The detail design for Hibbing accommodates permitted OSOW mining vehicle haulers.

PERSONNEL

ORGANIZATIONAL CHART

The proposed organizational chart, with all key team members, is provided below. The chart demonstrates how the Stantec team will be organized and managed for continuity to ensure your project runs smoothly and efficiently. Each of our team members brings specific expertise to contribute to the success of your project. Moreover, we provide a strong leadership structure to support an efficient and cohesive project delivery.



- Stantec
- Braun Intertec



HEIDI HAMILTON

PE

Principal in Charge

Education

- Master of Science, Infrastructure Systems Engineering, University of Minnesota Technological Leadership Institute, Minneapolis, Minnesota, 2004
- Bachelor of Science, Civil Engineering, University of Wisconsin, Madison, Wisconsin, 1993
- Graduate Certificate, University of Minnesota Center for Transportation Studies, Minneapolis, Minnesota, 2005

Registrations

- Professional Engineer: MN

Heidi's professional experience includes more than 20 years working in municipal engineering, project management, and public works operations and administration for Minnesota cities, including nine years as the Deputy Director of Public Works for the City of Minneapolis. She is a Professional Engineer in Minnesota. Heidi understands infrastructure design, construction and maintenance and enjoys working with diverse stakeholder groups to develop optimal solutions to community concerns. She enjoys problem solving with interdisciplinary teams, whether it be on multi-million dollar multiagency projects or small neighborhood initiatives.

Experience

Director of Public Works/City Engineer*, Northfield, Minnesota

Heidi was responsible for managing all aspects of the Public Works Department, including engineering, streets, parks, facilities, potable water production and distribution, wastewater collection and treatment, and garbage collection with 36 full-time equivalent employees and a \$7 million annual operating budget. She developed strategic annexation, growth boundary, and wastewater treatment service plans while managing day-to-day operations and the capital improvement program.

Downtown East Pedestrian Realm Implementation*, Minneapolis, Minnesota

In 2014, when a major redevelopment on the east side of downtown Minneapolis was announced, Minneapolis public works staff jumped on the opportunity to leverage private development to enhance the pedestrian realm adjacent to the new development. Heidi led a team of city staff and consultants to move a planning level study swiftly to implementation by arranging the financial resources, City Council and County approvals, and contracts needed to leverage private investment to make public improvements. The project, which covers a 12-block area, changed the face of Downtown East, Minneapolis.

Transit Systems and System Integration Blue Line Light Rail Transit (LRT)*, City of Minneapolis, Minnesota

Heidi managed the METRO Blue Line Light Rail Transit project for the City of Minneapolis. This 12-mile line runs between downtown Minneapolis and the Twin Cities International Airport. At the time of its construction, the Blue Line was the state's largest public infrastructure project in history, and its first design-build project. As the project manager for the city, Heidi coordinated all work efforts related to the project, including plan review, utility relocation, traffic management, traffic signal coordination, issue resolution, negotiations, and management of numerous cost-sharing agreements between the city and the project office. Heidi worked closely with Metro Transit, the Minnesota Department of Transportation, consultants, contractors, elected officials, and an inter-disciplinary team of city staff from across the city to deliver this highly successful project.

Green Line Light Rail Transit*, Minneapolis and St. Paul, Minnesota

As Deputy Director of Public Works for the City of Minneapolis, Heidi provided executive leadership for the city in the design and construction of the Green Line Light Rail Transit from downtown Minneapolis, through the University of Minnesota campus, to downtown St. Paul. She represented the city's interests in extensive negotiations between the Metropolitan Council, city, Hennepin County, and University of Minnesota, that covered topics ranging from the closure of a main vehicular thoroughfare through the university campus to managing the electromagnetic impact of the light rail on university research.

* denotes projects completed with other firms



TYLER MCLEETE

PE

Project Manager

Education

- Bachelor of Science, Civil Engineering Major, Construction Management Minor, University of Minnesota, Minneapolis, Minnesota, 2007

Registrations

- Professional Engineer: MN

Tyler joined Stantec in 2014 and is an Associate within our municipal engineering team. Throughout his 12 years of experience, Tyler spent four years as a construction project manager in New York City observing a range of projects. Currently, Tyler serves as Stantec's client service manager for the cities of Arden Hills, Mounds View and Project Manager for various projects within Minneapolis and Maple Grove. Tyler's responsibilities include civil and municipal design, oversight of plan and specification preparation, project management, report preparation, cost estimates, construction administration, and communication with city staff, agencies, and public stakeholders.

Experience

Arbor Lakes Business Park Infrastructure, Maple Grove, Minnesota

Tyler served as project manager and lead designer to provide public infrastructure to support a 71-acre business park development. Over \$6m of improvements were included with this project including a multilane roundabout, CSAH intersection build out, and all new utilities to support future growth in this rapidly developing region.

Safe Routes to Schools (SRTS) Roundabout Project, Red Wing

Tyler generated intersection concepts and traffic modeling to determine the best design for pedestrian safety. He held public stakeholder meetings and applications for federal grant funding. The final design was a roundabout design that was constructed in summer 2017.

City of Minneapolis Pedestrian Realm Implementation Plan, Down Town East Commons, Minneapolis, Minnesota

Tyler provided design and coordination of the new off-street bicycle pathways along Park and Portland Avenues. Coordination involved multiple project interests including private retail and residential development, new public recreation areas, and the US Bank Stadium.

6th Avenue North Utility and Street Reconstruction, Minneapolis, Minnesota

Tyler provided project Management and design for this street reconstruction project in the heart of the North Loop neighborhood in Minneapolis. The project adhered to federal funding and historical preservation requirements as well as the difficult nature of fitting an ADA compliant pedestrian access route through a fully developed corridor. Design included salvaging existing historic pavers and including them in the reconstructed street design.

Street & Utility Improvement Projects, Mounds View, Minnesota

Tyler provided project management and design as well as construction administration support services. Projects consisted of street reconstruction and miscellaneous utility repair; including CIPP, lift station reconstruction, and storm water BMP's. Also included were design and submittal procedures to meet State Aid standards for streets within the project.

Enclave at Dunlavin Woods Utility and Street Improvements, Maple Grove, Minnesota

Tyler provided project management, design support for this new development. Design included storm sewer modeling, new sanitary and water main including services, and streets.

Minnetonka Street & Utility Street Reconstruction, Minnetonka, Minnesota

Tyler provided project management and design support for the project. In addition to complete street reconstruction, the project consists of full water main replacement and storm sewer redesign. This \$6 million project required innovative design and careful phasing to coordinate the various public and private interests. Storm water utilities were designed to meet multiple watershed requirements.



MATT STORDAHL

PE

Assistant Project Manager

Education

- Bachelor of Science, Civil Engineering, North Dakota State University, Fargo, North Dakota, 1999

Registrations

- Professional Engineer: MN

Matt joined Stantec in 2000 and served as a Project Engineer until 2006, when he left to work for Minnesota Pipe & Equipment. In 2018, he rejoined Stantec and currently serves as a Project Manager and Design Engineer. In the beginning of his career Matt worked extensively with the City of Farmington, helping to manage the City's development and infrastructure maintenance programs. Reviewing private developments and managing their construction, designing and managing the construction of City infrastructure improvement projects, and working closely with residents and the Public Works staff were all part of his daily duties.

Experience

Chaska Creek Boulevard Phase 2, Chaska, Minnesota

Design and construction services, including permit preparations, for this street and utility extension including new sanitary sewer, watermain, storm sewer, sidewalk facilities, and box culvert construction.

Flagstaff Avenue Utility and Street Improvements, Farmington, MN

The Flagstaff Avenue utility and street improvements were developed to support the construction of a new high school on a 110-acre site on the westerly edge of Farmington. The project involved significant land acquisition, preparation of an EAW and coordination with the Metropolitan Council in providing a truck sanitary sewer interceptor between Farmington and Lakeville. The project included 12,000 feet of sanitary sewer, 16,000 feet of watermain, and 19,700 feet of roadway construction. The sanitary sewer excavations reached depths of 50 feet within a limited right-of-way requiring major trench subcut and material stockpiles.

Main Street Reconstruction Phase 1, Farmington, Minnesota

The Main Street Area Reconstruction project included several square blocks of street, sanitary sewer, watermain, and storm sewer improvements completed over two construction seasons. Extensive coordination efforts were needed between residents, businesses, and utility companies to assure a successful completion of the project.

City of Farmington MN (2000-2006), Farmington, Minnesota (Project Engineer)

Matt reviewed the preliminary and final plats, grading plans, street and utility plans and specifications to ensure compliance to City standards. He prepared development contracts and conducted routine site inspections to solve engineering and construction problems as they arose. He prepared standard detail plates and engineering guidelines to be used as an aid for developers. He also worked extensively with Public Works staff to develop utility basemaps.

Matt was involved in the planning, design, and inspection for the following public projects in Farmington:

- Flagstaff Avenue Utility and Street Improvements
- Main Street Area Reconstruction Phase 1
- Well 6 & 7 Pumping Facility
- Middle Creek Trunk Sanitary Sewer and Watermain Extensions
- 1.5 Million Gallon Elevated Tower
- Prairie Creek Storm Sewer Improvements
- Akin Road Street Improvements
- Akin Road Culvert Replacement Project
- Third Street Sanitary Sewer Sliplining and Mill & Overlay
- Annual Sealcoat Project



TOM FIDLER

PE

Roundabout Design

Education

- Bachelor of Science, Civil Engineering, University of Minnesota, Minneapolis, Minnesota, 1994

Registrations

- Professional Engineer: MN, IL, IA, ND, SD, WI

Tom is a Senior Transportation Engineer specializing in urban and rural roadway design, interchange design, geometric analysis, modern roundabout analysis and design, traffic signal design, trail design, traffic simulation, and other traffic engineering related tasks. Tom's 24 years of experience includes roadway, traffic, and utility projects for various states, counties, cities, and other agencies. Tom has led Stantec's development of modern roundabout expertise in the Upper Midwest. He has designed or overseen design of more than 200 roundabouts that are in various stages of development – including 53 that are in operation. Tom is certified by WisDOT and MnDOT for design and peer review of multi-lane roundabouts.

Experience

Badger Hills Drive Roundabout Corridor, Rochester, Minnesota

Tom was responsible for geometric design, traffic analysis review, and VISSIM simulation of this new road corridor in Rochester. The corridor features three new roundabouts and a modified roundabout at 50th Avenue.

TH 60 Roundabout Grading and Presentation, Worthington, Minnesota

Tom was responsible for detailed vertical design of two multi-lane roundabouts on TH 60. He prepared a 3-D surface model and a procedural guide and presented a how-to seminar to District 7 staff in 2012.

University Avenue and 5th Street Roundabout, St. Cloud, Minnesota

This multi-lane modern roundabout at the St. Cloud State University campus was completed in 2011. This improvement balances aesthetics with efficient pedestrian and vehicular traffic accommodation. Tom was responsible for traffic analysis and the geometric design of the project.

TH 61 at Jamaica Roundabouts, Cottage Grove, Minnesota

Tom was responsible for design of the six-legged and the four-legged multi-lane roundabout interchange. Stantec completed final design, prepared MnDOT-approved bidding documents, and provided construction services. This project won seven state and national awards.

US 61 and CSAH 2 Roundabout, Forest Lake, Minnesota

Tom was responsible for the Geometric Layout and roadway/roundabout design. This project at US 61 and CSAH 2 in Forest Lake included a MnDOT-approved ICE Report and Level 1 Layout for this dual lane roundabout.

CSAH 22 (70th St) and Jamaica Ave Roundabout, Cottage Grove, Washington County, Minnesota

Tom was responsible for the preliminary and final roundabout design. This project included preliminary and final design for the dual lane concrete roundabout.



BETH ELLIOTT

AICP

Public Engagement

Education

- Masters in Urban and Regional Planning, University of Minnesota, Minneapolis, Minnesota, 2002
- Bachelor of Arts, University of Iowa, Iowa City, Iowa, 2000

Registrations

- Certified Planner, American Institute of Certified Planners

Beth is an urban planner with proven experience managing complex projects of regional significance. Her wide-ranging work has included comprehensive planning, community revitalization, zoning and other regulatory frameworks, capital and facilities planning, transportation planning, transit-oriented development, downtown infill redevelopment, and historic preservation. She has developed and led inclusive—and creative—community-engagement programs for diverse stakeholder groups. Known for her exceptional communication skills, she has built a strong reputation for advancing projects by bringing people together and collaborating with elected officials, community members, developers, and businesses.

Experience

2040 Oakdale Comprehensive Plan, Oakdale, Minnesota

Beth supported the Comprehensive Plan engagement process through designing interactive and informative exercises for the Community Advisory Committee and broader community for such topics as equitable access to parks and open space and barriers to walking and biking to community destinations.

North Loop Small Area Plan*, Minneapolis, Minnesota

Following the siting of Target Field ballpark in Minneapolis, Beth conducted a small area plan to provide better direction on how to improve the street infrastructure for safe and efficient multi-modal connections and to balance new construction interests with a designated warehouse historic district and public facilities. She recommended reconfigured roadways for pedestrian safety, filling in gaps in the bicycle system, and opening up opportunities for intense transit-oriented development to support the regional transit system. Beth then worked with public and private partners to implement most of the plan recommendations.

Cemstone Site Plan, Lake City, Minnesota

As project manager, Beth led a team to design a site plan to reclaim a 100-acre former Cemstone gravel mining site near Lake Pepin. Stantec helped the City and Economic Development Authority (EDA) to build consensus around a site plan concept and then provide them with a realistic critical path to implementing public improvements and attracting private investment

Southwest Light Rail Transit/Green Line Extension*, Hennepin County, Minnesota

Beth was a primary staff person involved in the Draft Environmental Impact Statement process and Preliminary engineering of the transit project for the City of Minneapolis. Beth played a critical role in advocating for design of the infrastructure in five Minneapolis station areas, including negotiating for better bicycle, pedestrian, and bus connections in relation to the station platform and potential development sites. She also coordinated her work with planners and engineers at Hennepin County and other cities along the transit line.

Warehouse District Heritage Street Plan*, Minneapolis, Minnesota

Through successful grant applications, Beth oversaw street concept plans and reconstruction projects in a historic warehouse district. The result was a street-by-street analysis of the existing infrastructure conditions and conceptual cross sections that prioritized maintaining historic materials and infrastructure. Her goal was to create a consensus between preservationists, City planners and engineers, and the community on how to improve the road infrastructure while maintaining historic character that establishes the unique character of the Warehouse District. All the historic streets are now in the process of reconstruction consistent with Beth's plan.

** denotes projects completed with other firms*



LINDA BROWN

PLS

Right-of-Way

Education

- Bachelor of Science – Engineering Technology, Savannah State College, Savannah, Georgia, 1984

Registrations

- Professional Land Surveyor: MN, SD, ND
- Licensed Real Estate Agent (Inactive): MN, ND

Linda is a licensed professional land surveyor in North Dakota, Minnesota, and South Dakota with more than 25 years of experience. As an experienced real estate professional in Minnesota and North Dakota, Linda has attended several right of way classes offered through the International Right of Way Association.

Experience

ROW Services for Railroad Avenue, Albany, Minnesota

Linda held public meetings with property owners, informing them of the right of way acquisition process and timeline, and addressed questions and concerns that the affected landowners had. She met with property owners, calculated Minimum Damage assessments, presented offer letters, and negotiated acquisition of the permanent and temporary easements. She also worked on relocation assistance for one property owner. Linda prepared the paperwork required to be in compliance with the Uniform Relocation Assistance and Real Property Acquisitions Policies and its amendments, and the Minnesota Department of Transportation. The project involved a Right of Way Plat, and ROW acquisition and negotiations for 57 parcels along Railroad Avenue.

ROW Acquisition Phase I and II, Silver Creek Township, Minnesota

Linda supervised the crew that surveyed the property, including and adjacent to Barton Avenue. She held public meetings regarding the road construction project, met with adjoining landowners, and negotiated with all property owners on behalf of the township, looking to obtain all required landowners' signatures and documentation of the process needed to begin construction. The project involved right of way negotiations for Barton Avenue NW and 155th Street NW as well as right of way acquisition for temporary easements along Barton Avenue.

Curtis Avenue, Silver Creek Township, Minnesota

Linda negotiated with 29 property owners along Curtis Avenue on behalf of Silvercreek Township to obtain Right-of-Way property. Linda negotiated with all the landowners, obtained signatures and documentation for permanent and temporary construction easements before construction began.

CSAH 36 Reconstruction, West Concord, Minnesota

Linda worked with the City of West Concord to acquire right-of-way parcels in order to complete the CSAH 36 Reconstruction project. Linda worked with the landowners to gather information and negotiate terms with and for the City. Stantec provided Minimum Damage Assessments of each property and re-searched property prices per square foot. Temporary and permanent easements were prepared for each landowner.

Zumbro River Restoration, Oronoco, Minnesota

Linda worked with Olmsted County to acquire portions of properties along the Zumbro River and the Lake Shady lake bed that were needed for the Zumbro River restoration project. Linda prepared Waiver Valuation Reports for landowners and met with each one.



JAN HANSEN

PE

Underpass/Tunnel

Education

- Bachelor of Science, Civil/Structural Emphasis, University of Wisconsin-Milwaukee, Wisconsin, 1982
- Master of Science, Engineering, University of Wisconsin-Milwaukee, Wisconsin, 1994

Registrations

- Professional Engineer: MN, ND, WI, FL

As leader of the Bridge Engineering Group in the downtown Minneapolis, Minnesota office, Jan is responsible for project management, project design and the coordination of project engineers, designers and CADD technicians involved in highway and multi-use trail structure studies, new and rehabilitation designs, and bridge inspections. His structural design experience includes prestressed concrete and structural steel bridges; underpasses and box culverts; retaining walls; and sign and lighting support structures. His responsibilities have included preliminary and final design, technical design reviews, rehabilitation design, load rating analyses, public involvement, bidding, and management of plan production.

Experience

Lake Grace Trail Underpass and Bridge, Chaska, Minnesota

Engineer of Record. Design of geometric layout and foundations for a prefabricated pedestrian bridge carrying the Lake Grace Trail over a portion of the lake. The bridge features a 12-ft wide deck, designed for vehicle loading, and 54-in high railings with timber rub rails. Design of the 123-ft long culvert that will carry the expanded TH 41 over the Lake Grace Trail. The culvert includes 182-ft of retaining walls with architectural surface finish and ornamental metal railings detailed to match other railings throughout the City. Decorative lights were designed over the entrances with tamper resistant fixtures lighting the trail thru the culvert. Large stone block retaining walls, which protect existing old oak trees, will be constructed along the trail approaching the underpass.

Walnut Street Underpass*, Green Bay, Wisconsin

Design of a 300 feet section of the multi-use pedestrian trail passing under Walnut Street along the Fox River in downtown Green Bay. The project included retaining walls and ramps, the concrete underpass, railings, lighting, and aesthetic features.

Beech Street Culvert, Chaska, Minnesota

Engineer of Record. Design of the precast concrete box culvert that will carry Beech Street over the East Creek replacing the existing deteriorated bridge.

Elementary School Park Bridges, Carver, Minnesota

Structural Engineer. Responsible for the preliminary and final design of the geometry and the foundations for two separate pedestrian bridges carrying the walking trail over wetland creeks. Assembled bid documents for the procurement and installation of the panel-laminated timber bridges. The bridges feature 8-ft wide decks, designed for vehicle loading, and 54-in high horizontal timber railings.

Military Trail Bridge, Cottage Grove, Minnesota

Engineer of Record. Responsible for the preliminary and final design of the geometry and the foundations for a pedestrian bridge carrying the walking trail over wetland creeks. Assembled bid documents for the procurement and installation of the steel Bowstring truss bridge. The bridge features a 12-ft wide deck, designed for vehicle loading, and 54-in high railings with timber rub rails.

Cascade Lake Bridges, Rochester, Minnesota

Engineer of Record. Responsible for the preliminary and final design of the geometry and the foundations for two separate pedestrian bridges carrying a walking trail over wetland creeks. Assembled bid documents for the procurement and installation of the steel truss bridges. The bridge features a 12-ft wide deck, designed for vehicle loading, 54-in high railings with timber rub rails, bench/seat walls as part of each abutment, and decorative steel arches along each side.

* denotes projects completed with other firms



MIKE FITZPATRICK

PE, LC, IES
Street Lighting

Education

- Bachelor of Electrical Engineering, University of Minnesota, Minneapolis, Minnesota, 2012

Registrations

- Professional Engineer: MN, WI, ND, IA, ID, CO, IL, IN
- Lighting Certified Professional, National Council on Qualifications for the Lighting Professions

Mike has 20 years of experience and currently serves as an Electrical Team Leader. Mike specializes in lighting and control system design, and electrical drafting and design. He is also proficient in electrical drafting, and power and distribution systems design, emergency power and distribution systems, fire alarm and detection systems, closed circuit television systems (CCTV) security system, and card access systems for various project types including multi-story buildings, mixed use buildings, roadways, sports arenas, athletic complexes, landscapes, commercial offices, boardrooms, water/wastewater and aquatic facilities, fire stations, city halls, ice arenas, and libraries.

Experience

Roundabout Street Lighting, Cottage Grove, Minnesota (Electrical Engineer)

Mike designed lighting for the roundabout at CSAH 13 and CSAH 20 to provide an eight pole lighting system. He worked with the electric utility to coordinate the pole mounted electrical service and an underground service to the service cabinet. The equipment specified was based on the MnDOT standard specs and a supplemental lighting specification was including in the contract documents to modify the standard specifications as required by the specific county requirements. The LED fixtures were specified providing energy savings and savings related to maintenance.

Roundabout Street Lighting, Rochester, Minnesota (Electrical Engineer)

Mike designed lighting for the roundabout at CSAH 4 and 50th Avenue NW to provide a twelve-pole lighting system. He worked with the electric utility to coordinate the pole mounted electrical service and an underground service to the service cabinet. The equipment specified was based on the MnDOT standard specs and a supplemental lighting specification was including in the contract documents to modify the standard specifications as required by the specific county requirements. The LED fixtures were specified providing energy savings and savings related to maintenance.

TH 61 at Jamaica Roundabout, Cottage Grove, Minnesota

Mike was responsible for design, bidding, and construction administration phases for the electrical portions of this project. Stantec analyzed roundabout possibilities for the TH 61 Entrance-Exit Ramps/Jamaica Avenue and West Point Douglas Road/Jamaica Avenue intersections. Our design featured a combination of a six-legged multi-lane and a four-legged multi-lane roundabout. The MnDOT Level 1 Geometric Layout we prepared received the first-of-its-kind approval from the state. We then completed final design, prepared complete MnDOT-approved bidding documents, and provided construction services.

CSAH 42 (Main Street E), Blooming Prairie, Minnesota (Electrical Engineer)

Mike was responsible for developing the electrical service and distribution, as well as the LED lighting system for the construction documents. He handed questions and addenda during bidding, and construction services including any RFI, CO, site observations, and shop drawing review.

Highway 10 Intersection, Maple Plain, Minnesota (Electrical Engineer)

Mike was responsible for developing the electrical, lighting of the construction documents, handling questions and addenda during bidding, and construction services including any RFI, CO, site observations, and shop drawing review. The project included falsework on Bridge No. 25609 in Maple Plain, MN.



JUSTIN RECHTZIGEL

Landscape Design

Education

- Bachelor of Science, Environmental Design, University of Minnesota, Minneapolis, Minnesota, 2006

Registrations

- Certified Landscape Specialist, Minnesota Department of Transportation

Justin joined Stantec's landscape architecture team in 2011. He has more than 10 years of experience and works as a landscape designer on the Landscape Architecture team. Justin provides site design, produces construction documents, and prepares project graphics, including animations and 3D renderings for proposed streetscapes enhancements and connectivity studies. He has been involved in several projects that incorporate sustainable design principles.

Experience

Badger Hills Drive Street Improvements, Rochester, Minnesota

Justin was responsible for preliminary and final landscape design of the project, coordination with Stantec's Transportation Team. The Badger Hills Drive project included the extension of Badger Hills Drive from CSAH 22 west 0.75 miles to 50th Avenue NW. Highlights of this MSA-funded project include the reconstruction of the CSAH 22 traffic signal, two multi-lane and one sign-lane roundabouts, bituminous trails, and bike lanes.

41st Street/Badger Hills Drive Street Improvements, Rochester, Minnesota

Justin was responsible for preliminary and final landscape design of the project, coordination with Stantec's Transportation Team. The Badger Hills Drive/41st Street Southwest project includes the reconstruction of 41st Street Southwest between CSAH 22 and the Douglas Trail, and extension of Badger Hills Drive from CSAH 22 westward one-half mile. The entire project includes the design of approximately 0.75 miles of roadway, including two roundabouts, multiple traffic signals, concrete turn lanes, stormwater conveyance facilities, and sanitary sewer and water main improvements.

6th Avenue North Utility and Street Reconstruction, Minneapolis, Minnesota

Justin provided streetscape design, and site and landscape detailing for this street reconstruction project in the heart of the North Loop neighborhood in Minneapolis. The project adhered to federal funding and historical preservation requirements as well as the difficult nature of fitting an ADA compliant pedestrian access route through a fully developed corridor. Design included salvaging existing historic pavers and including them in the reconstructed street design.

2015 City of Minneapolis Pedestrian Realm Implementation Plan, Down Town East Commons, Minneapolis, Minnesota

Jacob provided 3D graphic rendering support for the pedestrian realm study of the area surrounding the football stadium improvements. The document outlines opportunities to enhance and protect the bicycle and pedestrian movements within the downtown corridor.

Downtown East Pedestrian Realm Augmentation Study and Implementation, Minneapolis, Minnesota

Justin provided design and graphic support of the new off-street bicycle pathways along Park and Portland Avenues. Coordination involved multiple project interests including private retail and residential development, new public recreation areas, and the US Bank Stadium.

26th and 28th Streets Bicycle and Pedestrian Improvements, Minneapolis, Minnesota

Justin assisted with 3D graphics illustrating drive and bike lane concepts. These streets form a major east-west corridor across the city that traverses residences, hospitals, parks, and commercial nodes. The proposed bikeways are intended to improve local access to these destinations and create opportunities to improve pedestrian crossings on these streets.



BRAD FASBENDER

Construction Manager

Education

- Masters of Business Administration, Minnesota School of Business, Minneapolis, Minnesota, 2011
- Bachelor of Applied Science, Construction Management, University of Minnesota, St. Paul, Minnesota, 2009

Brad has eight years of construction management experience, which includes residential and transportation projects. His experience includes inspection, contract compliance, federal aid documentation, OneOffice software, and project management.

Experience

SRTS Infrastructure Improvements, Red Wing, Minnesota

This \$900,00 federal aid project included a concrete roundabout and ADA Improvements. The project included grading, concrete paving, bituminous paving, new storm sewer, ADA Ramps, and landscaping. This project utilized OneOffice for all of the pay request, quantity record book, contract changes, and Weekly Diaries. Brad was responsible for Material Certifications, ADA Compliance, Inspections, pay requests, EEO compliance, contract changes, contractor negotiations and Federal Aid documentation.

2015 Infrastructure Improvements, New Hope, Minnesota

This 4 million dollar project included 9 miles of mill and overlay and reconstruction of two streets. The reconstruct consisted of new sanitary sewer, water main, storm sewer, curb and gutter, bituminous paving and restoration. Brad was responsible for field inspections, pay requests, contract changes, and contractor negotiations.

2017 Northwoods North Infrastructure Improvements, New Hope, Minnesota

This 4.3 million dollar residential reconstruction project was located in New Hope, MN. The project included reconstruction and mill and overlay. The reconstruction portion was 4.5 miles, which included new water main, sanitary sewer, storm sewer, curb and gutter, bituminous paving, and restoration. Brad was responsible for field inspections, Oneoffice, pay request, and contractor negotiations.

2016 Northwoods South Infrastructure Improvements, New Hope, Minnesota

This 4.8 million dollar residential reconstruction project was located in New Hope, MN. The project included reconstruction and mill and overlay. The reconstruction portion was 3.2 miles, which included new water main, sanitary sewer, storm sewer, curb and gutter, bituminous paving, and restoration. Brad was responsible for field inspections, resident coordination, contractor coordination, pay requests, contractor negotiations, and construction meetings.

Chavalle Development Improvements, Chaska, Minnesota

This project involved the improvement of roads located in a large development, which included curb and gutter replacement, reclaiming, bituminous oil injected stabilized base, grading, and bituminous paving. Brad was responsible for field inspections, pay requests, contract changes, and Material Certifications.

2017 MnDOT Construction Office Manager, Windom, Minnesota

Brad acted as the Construction Office Manager in the Windom Construction office. He assisted in Federal and State Aid documentation for the D7 district. His responsibilities included labor compliance, creating a DBE tracking form for field personnel, assist with contract modifications, organize project documentation material, work with AASHTOWare for project documentation and subcontractors.



JEREMY FREIHAMMER

PE
ADA Design

Education

- Bachelor of Science, Civil Engineering, North Dakota State University, Fargo, North Dakota, 2004

Registrations

- Professional Engineer: SD

Jeremy joined Stantec in 2015, as a transportation engineer providing preliminary and final design services. Jeremy's 11 years of experience includes rural and urban roadway design, trail design, and utility design for Municipal, County, and State.

Experience

Hadley Ave. Improvements, Cottage Grove, Minnesota

Jeremy assisted in preparing plans for the reconstruction of over a mile of Hadley Ave. for the City of Cottage Grove. Project was a full reconstruct and included extension of water and sanitary sewer for new development. It also included a new roundabout at intersection of Hadley Ave. and 95th Street South. Jeremy also provided construction staking support during construction.

70th Street & Jamaica Ave. Improvements, Cottage Grove, Minnesota

Jeremy assisted in preparing plans for the reconstruction of a half a mile of 70th Street and over a mile of Jamaica Ave. for the City of Cottage Grove and Washington County. Project included a new roundabout at intersection of Jamaica Ave. and 70th Street. Jeremy also provided construction staking support during construction.

TH 169 Improvements, Hibbing, Minnesota

Jeremy assisted in preparing plans reconstruction of the Intersection of TH169 and TH37 in Hibbing, MN for MnDOT. The project included the replacement of a signalized intersection with a roundabout. Another portion of the project includes 12 miles of mill and overlay and ADA improvements to 7 signalized intersections.

TH 42 Improvements, Elgin, Minnesota

Jeremy assisted in preparing plans for the reconstruction of TH42 through Elgin, MN for MnDOT. The project included full reconstruction of road and sidewalks, storm sewer replacements, and ADA improvements.

TH 10 Improvements, Glyndon, Minnesota

Jeremy assisted in preparing plans for the partial reconstruction of TH10 through Glyndon, MN for MnDOT. The project included partial reconstruction of shoulders and turn lanes, replacement of center medians, ADA improvements and a mill and overlay of existing road. Project is scheduled for construction summer 2016.

Dakota Avenue Reconstruction*, Pierre, South Dakota

Jeremy was responsible for project management and design of Dakota Avenue reconstruction in Pierre, South Dakota. Project included the design of 3 blocks of fully reconstructed street in downtown Pierre. Improvements were made from building face to building face and included a new 8 inch concrete pavement, sidewalk and ADA improvements, sanitary sewer lining, and storm sewer improvements. Project was challenging because of numerous businesses that needed access during construction and old existing buildings that needed to be protected during construction.

Country Drive Loop Construction*, Pierre, South Dakota

Jeremy was responsible for project management and design of Country Drive Loop in Pierre, South Dakota. Project included the design of new road, storm sewer, and sanitary sewer to provide a second access to a growing neighborhood of Pierre. Jeremy also assisted with construction management and ROW acquisition.



KEVIN HOGLUND

PE

Local Partnership Program

Education

- Bachelor of Science Civil Engineering - Transportation, University of Minnesota, Minneapolis, Minnesota, 1990

Registrations

- Professional Engineer: MN

Kevin Stantec in 2000 after a 12-year career at MnDOT. Kevin was the Cooperative Agreement Engineer for the Metro District and worked in the State Aid Office. He was responsible for the overall administration of the Metro District's Municipal Agreement Program. Kevin coordinated and managed all MnDOT processes, including planning, programming, pre and final design, environmental documentation, cooperative agreements, turnbacks, bid letting, and construction activities.

Experience

Transportation Funding, Various Projects throughout Minnesota

Kevin gained experience in transportation funding during the five years he spent working within the MnDOT Metro District State Aid Office. Since leaving MnDOT, Kevin has helped numerous clients obtain federal, state and special program funding to deliver small, medium and large transportation infrastructure projects. Kevin is adept at understanding client's needs and then developing comprehensive funding packages to make the projects a reality.

Rum River Regional Trail, Anoka, Minnesota

Stantec was hired by the City of Anoka to develop a master plan for their future Riverfront Park along the Rum River. Although the City was planning to revitalize the park a comprehensive funding package did not exist. In 2009 Kevin prepared a federal funding grant application for Anoka and was successful in securing \$760,000 of funding for the Rum River regional trail that runs through the park as well as amenities including lighting, interpretive and educational features, kiosks, and a river overlook.

TH 42 Mill and Overlay, Culvert Replacements and ADA Improvements, Eyota to Plainview, Minnesota

Kevin has experience in public participation and agency coordination for a variety of projects. His work includes generating cooperation and partnerships necessary to deliver complex, simple, or issue-sensitive projects. Kevin has worked with many groups including federal, state, county, municipal, and other local agencies, city councils, elected officials, affected businesses, and interested citizens.

Intersection Control Evaluation (ICE) Reports, Fargo, North Dakota

Kevin was responsible for the preparation of four ICE reports within the City of Fargo, ND. The reports evaluated the need for traffic signals or roundabouts at three locations with 4-way stop control and one location with a temporary signal. The evaluations demonstrated significant capacity improvements utilizing roundabouts while reducing the number and severity of crashes.

MnDOT – Synthesis and Summary Reports for MnROAD Project

Kevin was responsible for the preparation of research summary reports related to the detailed research completed as part of the MnROAD project. This project focused on the preparation of "reader friendly" summary reports that could effectively convey the research findings to cities, counties and other agencies.

MnDOT – Elk Run Interchange, Pine Island, Minnesota

Kevin was responsible for the Design Oversight review related to the TH 52 Elk Run Design Build project near Pine Island, Minnesota. Kevin is assisting MnDOT in the review of the design build plans including roadway, drainage, geotechnical investigations, bridge, utilities, and traffic.



DAN ROEBER

Survey

Education

- Bachelor of Science, Mathematics, University of Wisconsin, Eau Claire, Wisconsin, 1995

Registrations

- Professional Land Surveyor: MN

Dan has 21 years of experience as a land surveyor, helping to complete projects in an accurate and timely manner. Dan's areas of expertise include ALTA surveys, boundary surveys, final platting, easements, and land development projects.

Experience

Werner Electric Site Platting, Cottage Grove, Minnesota

Dan coordinated the preliminary plat and final plat submittals for the City. Stantec completed preliminary and final plat work for the development of a commercial site north of 95th Street. Work includes a field survey to locate existing pins and cleanup of adjacent plats in Hamlet Park that are affected by the plat.

Newport Transit Station Park and Ride, Washington County Regional Railroad Authority, Newport, Minnesota

Dan served as the surveyor on this project. He led the survey crew in performing the topographic survey, prepared base drawings and other services as determined by the project manager. Stantec provided design, bidding, and construction support for this park and ride facility with 200 parking spaces that is adjacent to the future Red Rock with a potential BRT or commuter rail corridor.

Carver Park and Ride, Carver, Minnesota

This 4.3 million dollar residential reconstruction project was located in New Hope, MN. The project included reconstruction and mill and overlay. The reconstruction portion was 4.5 miles, which included new water main, sanitary sewer, storm sewer, curb and gutter, bituminous paving, and restoration. Brad was responsible for field inspections, Oneoffice, pay request, and contractor negotiations.

Public Utilities - Topographic and Boundary Survey, Rochester, Minnesota

Dan coordinated the field and office personnel for the ALTA survey. This project involved preparing an ALTA survey on a 50-acre site along 60th Avenue in Rochester.

South Dodd Road Sanitary Sewer Lift Station Improvements, Eagan, Minnesota

Dan was responsible for preparing and reviewing utility and drainage easements for affected landowners. This project involved the design and construction of a sanitary sewer lift station to serve the south end of Dodd Road. Stantec coordinated construction with a private developer.

Lebanon Hills Regional Park Trunk Storm Sewer Outlet, Eagan, Minnesota

Dan prepared and reviewed utility easements and drainage easements for affected landowners. In a joint effort involving the cities of Eagan, Apple Valley, and Rosemount; Dakota County; and the watershed, this project involved routing stormwater from extreme rain events through Lebanon Hills Regional Park trunk storm sewer outlet into Eagan's system.

Three Rivers Park District - Elm Creek Boundary and Topographic Survey, Maple Grove, Minnesota

Dan coordinated activities between office and field personnel in staking a boundary line of Elm Creek Park. He directed the field crew in gathering topographic information and prepared the final Certificate of Survey drawing showing the boundary and existing condition

EDUCATION

B.S., Geological Engineering,
University of Minnesota, Twin Cities

B.S., Geology,
University of Minnesota, Twin Cities

B.S., Geophysics,
University of Minnesota, Twin Cities

PROFESSIONAL REGISTRATIONS

Professional Engineer
MN No. 47909

CERTIFICATIONS

MnDOT Certified :
Aggregate Production Level I
Concrete Field Level I & II
Concrete Plant Level I
Bituminous Street Level I & II
No. 12638

Radiation Safety
49 CFR Part 172

OSHA 10-Hour

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

Minnesota Geotechnical Society

Mr. Zalec joined Braun Intertec in June 2015 as a project engineer after spending 11 years with previous employers. His responsibilities include providing geotechnical engineering, construction materials testing and inspection services for transportation, heavy civil, industrial, power, as well as residential and commercial building projects.

PROJECT EXPERIENCE

- *Southwest Light Rail Transit (LRT) Project, Hopkins to Eden Prairie, MN* — Project engineer for the geotechnical engineering recommendations for LRT stations, retaining walls, parking ramp, bridges, and LRT guideway for segments W1 through W3. (2015-Present)
- *Blue Line Extension (Bottineau LRT), Minneapolis to Brooklyn Park, MN* — Project engineer for the geotechnical engineering recommendations for LRT stations, retaining walls, parking ramp, and LRT guideway for the north half of the proposed alignment. (2015-Present)
- *Orange Line Bus Rapid Transit (BRT) Project, Minneapolis to Burnsville, MN* — Project engineer providing geotechnical engineering recommendations for BRT stations, retaining walls, bridges and underpasses. (2016-Present)
- *Blue Line Enhancement Project, Minneapolis, MN* — Project geotechnical engineer for replacement of OCS poles, kneewalls and rail crossings along South 5th Street between Hennepin Avenue and Park Avenue. (2016)
- *Central Corridor Light Rail Transit Project, Minneapolis/St. Paul, MN** — Project manager of the Metropolitan Council's ITL for verification testing and Special Inspections for the Civil East, Civil West, and OMF contracts. Duties included independent auditing of the Contractor's testing laboratory, performing Special Inspections, construction materials testing, supervision of up to six field staff, and report preparation and review. (2010-2013)
- *TH 13/CSAH 21 Improvements, Prior Lake, MN* — Provided geotechnical engineering recommendations for roundabout and roadway reconstruction, retaining walls, and addition of lightweight fill. (2017-Present)
- *South Washington Watershed District Central Draw Overflow, Phase V, Cottage Grove, MN* — Provided geotechnical engineering recommendations and slope stability analysis for a new 72-in stormwater pipe installed as deep as 45 feet. (2018-Present)
- *Hennepin Avenue Reconstruction from 3rd Street to 12th Street, Minneapolis, MN* — Provided geotechnical engineering recommendations for roadway and utility reconstruction in downtown Minneapolis. (2018-Present)
- *MnPASS Lanes (I-35W, I-35E, TH36), Minneapolis/St. Paul, Roseville, MN** — Staff engineer whose duties included classification of soil samples for the

**While employed by another firm.*

WORK PLAN

This project is not a standard roundabout design. The inclusion of pedestrian underpasses near existing surface water bodies will require the highest level of expertise on roundabout and trail designs. A firm such as Stantec, with national experts available to the City of Northfield, can best meet the project goals and objectives. While not required by the RFP, the complexity of the design options makes 3D Visualization exhibits key to the success of the project.

PROJECT MANAGEMENT

As the project manager, Tyler McLeete will oversee the entire project and will be the primary point of contact. Tyler will focus on internal management to ensure that cross discipline coordination is continually and seamlessly maintained as well as provide external management with the City and project stakeholders. Tyler has a proven history of successfully managing large, multi-disciplined, multi-faceted projects, including roundabouts. He will clearly define the goals and objectives for each of the team members. He will maintain ongoing communication with our team leaders ensuring critical deliverables are kept on schedule. At Stantec, Stantec's Project Management Framework requires Tyler to manage and direct the project, oversee the budget, monitor the schedule, implement quality control, and see that expectations are established and met.

Tyler will prepare and distribute Progress Reports and invoices monthly. A monthly project update will be submitted to the City's Project Manager with the status of the project schedule, budget and general progress. A Kickoff Meeting will be held and monthly Project Management Team (PMT) Meetings will be facilitated by Stantec. In addition to the PMT Meetings, bi-weekly conference calls or webinar meetings will be held to address specific issues and see that action items are being addressed.

In addition to Tyler's role, Matt Stordahl will serve as the Assistant Project Manager. Matt will provide quality assurance/quality control (QA/QC) checks on the project and assist with the overall project management. By having a primary and assistant project manager, the City can be assured that they will receive prompt service for the project needs.

RISK ASSESSMENT AND MANAGEMENT

A preliminary risk matrix will be part of the agenda for each of the recurring meetings discussed above. Risks will be separated into four groups:

1. Risks that can be controlled by the team.
2. Risks that can be controlled by the City or MnDOT.
3. Risks that can be controlled by others.
4. Risks that cannot be controlled.

The risk matrix will identify, categorize, and rank the risks along one axis. The other axis will list actions to mitigate, eliminate, or compensate for the risks. Once we have consensus that the risks have been comprehensively identified, we will facilitate a discussion of each risk, quantifying it, evaluating mitigation options with respect to costs (money, time, public inconvenience, etc.),

and developing and maintaining a comprehensive risk matrix. The mitigation decisions will be the basis of an on-going Risk Management Plan, which will be incorporated into the project management protocol. While the City's Request for Proposal (RFP) did not request this specific service, the risk assessment process will provide staff with confidence that unexpected complications will be avoided.

QUALITY CONTROL

Stantec is committed to the improvement of project execution, product quality and the reduction of quality related costs. To this end, Stantec established a Practice Management Enhancement Group that reports to the Executive Leadership Team and is tasked with developing, maintaining, enhancing and monitoring the performance of an overall system of quality management. As part of this quality management system, each Practice Area maintains a guide on StanNet, Stantec's corporate intranet, which outlines policy, best practices and guidelines with respect to project execution.

As part of Stantec's overall system of quality management, we will prepare a Project Specific Quality Management Plan (PSQMP) for your project. The goals of a QA/QC or PSQMP are to:

- Increase client satisfaction
- Improve analysis and design solutions
- Facilitate consideration of innovative solutions, materials and techniques
- Reduce constructability issues
- Provide adequate detail on plans
- Reduce errors in reports and plans

This PSQMP will meet the philosophical and practical requirements of Stantec's Quality Management System (SQMS). More information on our PSQMP process is available upon your request.

In addition, we have incorporated detailed QA/QC measures into our scope of services. The proposed QA/QC reviews will be completed as part of each deliverable utilizing Stantec staff that are not directly involved in the original design. This independent evaluation is intended to provide an objective evaluation of the work completed to that point, with review comments and recommendations summarized in a technical memorandum and discussed at a PMT meeting.

Stantec staff members have been hired by MnDOT and have worked in the Central Office providing 100% technical plan reviews for MnDOT lettings. A staff member who has provided these reviews will provide final quality checks prior to each plan submittal made during the plan development process.

TOPOGRAPHIC SURVEY/GEOTECHNICAL SERVICES

An accurate and detailed topographic survey of the project corridor is a critical component to successfully designing and constructing the proposed improvements.



Stantec's survey crews have experience working on MnDOT and local agency partnership projects throughout the state of Minnesota.

As such, we propose to perform a preliminary topographic survey of the project area which includes the following tasks:

- Establish survey vertical and horizontal control throughout the project area.
- Locate existing property corners and section monumentation for use in development of ROW platting and preparation of temporary easements or right-of-way acquisition documents.
- Prepare required temporary easement and right-of-way acquisition descriptions for the project.
- Coordinate location of private utilities within project area using Gopher State One Call. Survey and map utility markings.
- Conduct topographic survey and cross sections to the project right-of-way at 50-foot intervals. Record manhole builds and pipe sizes, materials and direction.
- Stake temporary easements and right-of-way acquisition boundaries for property owners view.
- location and elevation of soil borings for incorporation into the geotechnical report.
- Download topographic survey points and generate topographic mapping line work and create a Digital Terrain Model (DTM). Add mapping information and line work for existing utilities, labels, platting, property ownership information and hatching.
- Research, map and label adjacent property ownership in base drawings.
- Submit mapping to City Staff for review and verification of mapping accuracy.

Dan Roeber, a registered land surveyor, will oversee and coordinate survey crew topographic survey and develop all required right-of-way mapping and temporary easement exhibits. Upon notice to proceed we will begin collecting existing project data from the City and MnDOT. This may include, but is not limited to, aerial photos,

mosaic mapping, photogrammetric mapping and TIN information, recorded easements, planning studies, regulatory requirements, utility information, and record plans.

Braun Intertec Corporation, as a subconsultant to Stantec, will provide Geotechnical Services, including:

- Environmental Well Notification.
- Soil borings, including any required permits and traffic control.
- Borehole abandonment.
- Sample review and laboratory testing.
- Reporting, including boring logs, summary of subsurface profile, and recommendations for the following:
 - Preparing structure subgrades including excavation support
 - Placement and compaction of excavation backfill and other structural fill
 - Embankment construction
 - Culvert construction
 - Utility trench backfill
 - Retaining wall foundation support
 - Pavement section design

RIGHT-OF-WAY ACQUISITION

Stantec has worked on many Local Partnership Projects (LPP) where permanent Right-of-Way or temporary easements are required. Due to the use of State funds for the construction of these projects, LPP projects are often held to State requirements including the processes for acquiring Right-of-Way. It is typical that a Right-of-Way Compliance Letter is required to be submitted when the Cooperative Agreement is requested. This letter states that "all Right-of-Way for this project has been acquired in accordance with the current FHWA and State of Minnesota directive(s) covering acquisition of real property". These requirements mean that "Permits to Construct" and "Right of Entry" documents are not

acceptable documents. Following the State and FHWA process can make Right-of-Way acquisition take longer than a typical city acquisition and may impact the project schedule. It will be important to develop the geometric layout and construction limits early to establish if Right-of-Way is necessary and then develop a schedule that minimizes the impact in order to meet the required letting date. Stantec has Right-of-Way acquisition specialists that can provide assistance in expediting the acquisition process meeting the State and FHWA requirements.

GEOMETRIC LAYOUT

The geometric layout is a critical component of the preliminary design process and serves as an important tool to visually communicate proposed improvements to the agencies, key stakeholders and the general public. To develop this critical component of the preliminary design phase, we propose the following approach:

- Stantec will utilize detailed project corridor mapping from the design survey in combination with aerial photos, parcel maps and available right-of-way mapping as the basis for the development of the geometric layout.
- Identify project design standards including design speed, lane widths, shoulder widths, clear zones, streetscape features, and curb and gutter types.
- The development of the geometric layout will take into account context sensitive solutions while minimizing impact to right-of-way acquisition.

Stantec will prepare the initial draft geometric layout based upon the agreed upon project design standards while considering the results from the ICE report. The color-coded geometric layout will illustrate plan-view improvements, roadway alignments, roadway profiles, roadway typical sections, and existing and proposed right-of-way. The layout plan view will identify proposed roadway geometrics, proposed bisecting roadway geometrics, temporary

easement requirements, construction limits, proposed hydraulic design improvements, intersection/access control/private drive modifications, mapping of existing topographic features and a screened aerial photo.

Utilizing Stantec's Roundabout Expert

Tom Fidler is a multifaceted Senior Transportation Engineer who specializes in modern roundabout analysis and design. **Out of the 22,000+ employees at Stantec, Tom is Stantec's National Technical Leader of modern roundabout design**, having designed and overseen more than 200 roundabouts in North America that are in various stages of development. The City has the benefit of Tom's expertise locally available for this project. In addition, Tom is certified by MnDOT and Wisconsin Department of Transportation for design and peer review of multi-lane roundabouts.

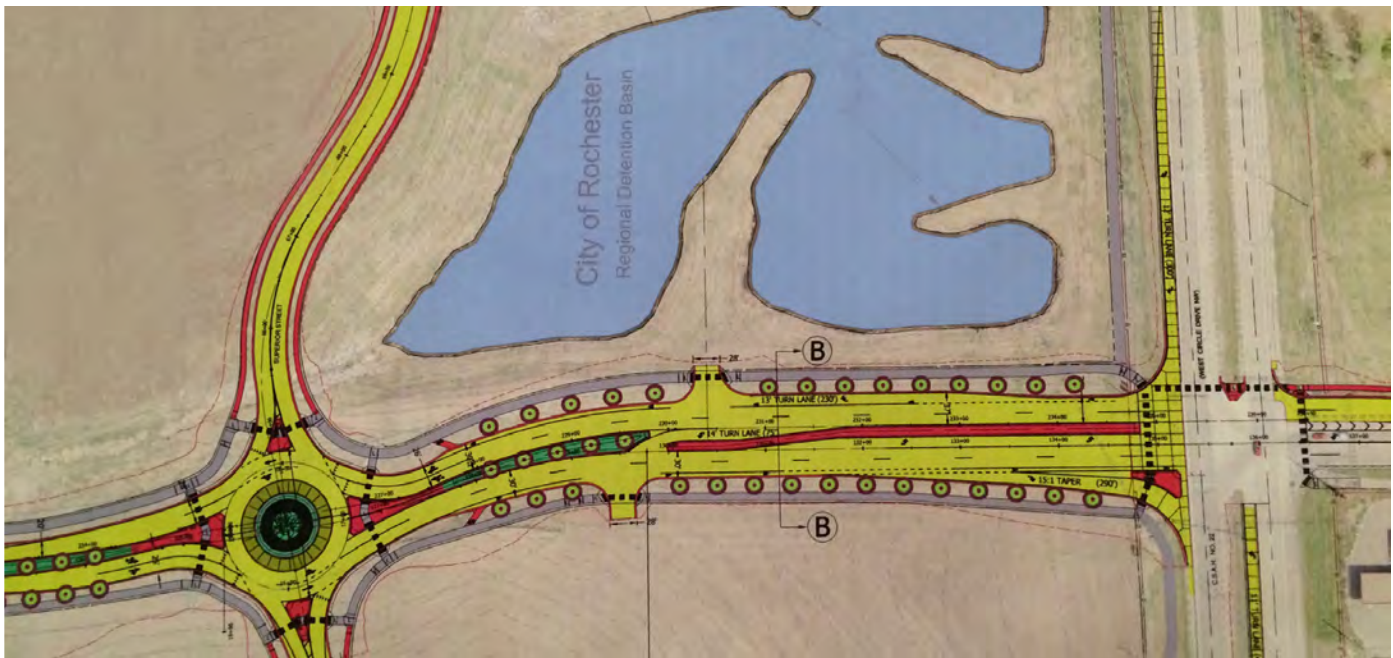
Tom will be responsible for the development of the detailed 3D model. He will leverage the Civil 3D modeling tools interactively throughout the design process to support establishing construction limits, identifying wetland impacts, and designing the grading at critical locations – including driveways, intersections, culverts, and pedestrian ramps, and during the development of ditch, sidewalk, trail, tunnel, and curb profiles.

A model will be created that will support the iterative design of the profiles and cross sections where right of way, drainage, trail, and ADA pedestrian ramp and walk requirements all create competing constraints. In the final design phase, the model will be utilized to generate accurate cross sections, compute earthwork, and develop staking data. Tom will lead the preparation of the construction limits map.

DETAILED ROADWAY DESIGN

The Stantec team will prepare construction plans for the proposed roadway improvements that are consistent with the horizontal and vertical alignments, typical sections, and construction limits of the approved Geometric Layout. The plans will also be consistent

A detailed, well thought out geometric layout effectively communicates the intent of the project to the public and stakeholders.



with recommendations identified in the Materials Design Recommendation. The plans will be developed according to the City and MnDOT D6 standards as required by the LPP. Our team just completed a LPP project for MnDOT D6 located on TH 61 at Huff Street in the City of Winona, therefore, we are very familiar with the design requirements for an LPP project for MnDOT's Rochester District. The construction plan set may consist of, but is not limited to, the following plan sheets:

1. Title Sheet
2. General Layout
3. Statement of Estimated Quantities (SEQ)
4. Soils Construction Notes and Standard Plates & Plans
5. Typical Sections
6. Quantity Tabulations
7. Public Utility Tabulations
8. Miscellaneous Details
9. Standard Plan Sheets
10. ADA Intersection Detail Sheets
11. Construction Staging Plans
12. Traffic Control Plans and Tabulations
13. Alignment Tabulations
14. In-place Topography, Utility and Right-of-Way
15. Removal Plans and Tabulations
16. Construction Plan Sheets (including trail and sidewalk)
17. Roadway Profile Sheets
18. Trail Underpass Structure Plan Sheets
19. City Utility Plan Sheets
20. Rectangular Rapid Flashing Beacon Plan Sheets
21. Street and Trail Lighting Plan Sheets
22. Landscaping Plan Sheets
23. Storm Water Pollution Prevention Plan
24. Drainage Plans, and Profiles
25. Temporary Erosion/Sediment Control Plans
26. Turf Establishment and Permanent Erosion/Sediment Control Plans
27. Proposed Drainage Tabulation
28. Striping Plan
29. Signing Plan
30. Cross-Section Sheets

Final design plans will be submitted at the 60%, 90%, and 100% Plan stages. Each review set will include an updated cost estimate and special provisions. Revisions and changes will be made in accordance with the comments received from the City and MnDOT. The final plan set will be prepared to meet the City and MnDOT standards.

STREET LIGHTING

Street lighting is an important factor in developing a safe facility for pedestrian and bicyclists who will be traversing trails and sidewalks around the roundabout. Stantec has developed lighting facilities for a significant number of roundabout projects where sidewalks and trails have been installed. We will perform a photometric study of the area to ensure that lights are placed to provide the required degree of light at the trail and sidewalk locations. Stantec will work with the City to determine the style of light fixture and ensure that it meets the MnDOT required standards. We will prepare a preliminary street lighting unit layout for incorporation into the streetscape/geometric layout development process.

HYDRAULIC ANALYSIS

The hydrologic and hydraulic needs for the project include evaluating and designing the urban storm sewer system. We will evaluate the project area and develop the drainage area maps. Stantec will utilize drainage areas and modify them as needed to accommodate the proposed catch basin's that are being proposed as part of the project. Once the watershed's are delineated for the proposed structures, Stantec will use the procedures laid out in the State's Drainage Manual and the Standard Specifications for Highway Construction to design the appropriate storm sewer size and ensure the proper spacing is achieved between catch basins. We will work with the City to obtain their future land use maps for the area to accommodate for additional future flows to ensure proper sizing of the storm sewer and catch basins occur. Drainage maps will be created for the project that depict each storm drain inlet that clearly shows the drainage boundary, the general flow path to the inlet, the storm sewer system, runoff coefficients, time of concentration, and land use with design curve numbers. Based on the preliminary concepts, we anticipate having to relocate the storm sewer from the pond to the northeast of the intersection to a new location north of the intersection.

The hydraulic team will conduct hydrologic and hydraulic design and provide recommendations in accordance with MnDOT District 6 Hydraulic Guidelines, the MnDOT Drainage Design Manual, and the latest Technical Memorandums. Software used for the project will be MnDOT approved programs.

UTILITY COORDINATION

Upon notice to proceed, we will immediately begin the utility location process and will place the Gopher State One Call in conformance with the Minnesota State Statute 216D.04 and the MnDOT Utility Coordination process defined in MnDOT Technical Memorandum 07-08-TS-02. We will have the utilities marked within the project corridor prior to a project field walk. We will begin the utility investigation with the utility company's assistance identifying utility conflicts as early as possible. Accurate mapping and effective coordination of private utilities within the project corridor is important to avoid costly construction delays and disruptions to service. As such, we will initiate correspondence with the utility owners to verify utility survey mapping following the Gopher State One Call process. A follow up Utility Identification letter will be sent to the primary contact of each utility company with copies of the plan sheets.

Meetings with the impacted owners will be scheduled at 60%, and 90% plan stages as needed. This will keep them updated as the project progresses and provide them with enough lead time to schedule adjustments and relocations as necessary. We will collect utility relocation plans from the utility companies and make adjustments based on the MnDOT Utility Process. As the project concepts develop we will work with the City of Northfield to review the City utilities and potential impacts that may need to be addressed as part of this project. Based on the conceptual designs, we anticipate having to get to work early with the overhead power utility to provide adequate clearances between their systems and traffic.

SANITARY SEWER AND WATERMAIN REPLACEMENT/REALIGNMENTS

We will work with City staff to identify existing infrastructure that is in conflict with the proposed work. We'll work closely with Public Works to develop a plan that addresses any and all concerns they have. Based on the conceptual design concept of raising the intersection, watermain adjustments are anticipated to better facilitate future maintenance needs. The City will want to avoid having a trunk watermain line located 20'+ deep and/or under a pedestrian underpass.

SIDEWALK IMPROVEMENTS

In addition to the trail construction proposed near the roundabout, the ICE Study discusses the need for a sidewalk extension from Marvin Lane to a proposed street crossing near the High School. This sidewalk, approximately 750 feet in length, will need to be laid out carefully to satisfy any concerns the one homeowner may have, to avoid the many trees along this route, as well as the avoiding the property line fence at the Northfield Cemetery, all while assuring safety for the users of this facility.

TRAIL/UNDERPASS IMPROVEMENTS

Jan Hansen is a structural bridge designer with more than 20 years experience. Jan has designed more than 50 pedestrian structures and will work with Tom Fidler to develop underpass designs for either of the two design options. Also included is headwall designs and retaining wall designs and details, all in accordance with MnDOT standards.

ADA DESIGN OF PEDESTRIAN RAMP FACILITIES

Jeremy Freihammer will work directly with lead designer Tom Fidler to complete design for all pedestrian facility improvements. Jeremy has attended MnDOT's ADA Design Training in January 2018 and has performed ADA design for several MnDOT projects. The plans will include the required ADA details at the ramps throughout the roundabout to ensure compliance with the ADA regulations.

RECTANGULAR RAPID FLASHING BEACON (RRFB)

Where required, the RRFB plan sheets will be developed for the pedestrian crossing locations as allowed by MnDOT. The plans will include the Beacon, wiring diagrams and detail sheets. The specifications will be prepared in accordance with the City's and MnDOT's standards.

TRAFFIC CONTROL/DETOUR

Temporary traffic control and detour plans will be prepared to meet the City and MnDOT Standards, incorporate input from the City and MnDOT, and will be consistent with the Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD). We will develop an overall staging and paving plan to accommodate the construction of the roundabout in conjunction with the installation of the pedestrian tunnels. The project will include a substantial amount of fill to raise the grade of the roundabout in order to be able to incorporate the tunnel installations. A detour will be used during this fill operation, tunnel installation and roundabout paving portions of the project. We will work with the City and MnDOT

to determine how to address the Temporary Pedestrian Access Routes (TPAR) that may be required as part of the traffic staging plan. If a TPAR is required we will prepare the plan sheets required for the TPAR installation.

SPECIAL PROVISIONS

Stantec will prepare one set of Special Provisions for project letting. The Special Provisions will address all unique items that are not covered in the MnDOT Standard Specifications for Construction. The content and format of the Special Provisions will be as established by MnDOT's Special Provisions Boilerplate document. Construction contract time and traffic provisions (timeline and bar chart) will be developed with input from the City and MnDOT. A copy of the Special Provisions will be submitted to the City and State for review at 60%, 90%, and 100% Construction Plan submittals.

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS

Stantec will submit the Engineer's Opinion of Probable Construction Cost starting with the 60% plan submittal and all submittals thereafter. The cost estimates will use the latest cost data readily available. Stantec has bid information from numerous recent projects that provides valuable information as to what individual bid items, costs and trends we can expect with future bid lettings. This information provides our clients valuable information to know and understand the current cost of projects. This can be very valuable and will be used to determine the best dates for bid letting to get the best prices possible.

A significant driver of the overall project cost is going to be the imported fill needed to raise the intersection. Stantec recommends the City start utilizing their network to find a source for this material immediately. These early efforts could save the project significant costs.

COOPERATIVE AGREEMENT

At the 90% plan submittal date we will also provide a submittal to MnDOT District 6 requesting that they submit a request for the Cooperative Agreement to the MnDOT Central Office. This submittal will include the 90% plan, Engineers Estimate and the Statement of Estimated Quantities (SEQ). The SEQ will be broken down into details related to the various funding sources on the project. This breakdown is necessary for the preparation of the Cooperative Agreement and is different than the SEQ located within the plan set. The submittal will also include a colored layout for the project which shows MnDOT eligible pay items. This is necessary for the Cooperative Agreement preparation to ensure that the MnDOT funding is provided to State eligible items as defined within MnDOT's Cost Participation Policy for Cooperative Construction Projects. As the SEQ and layout are developed we will work to maximize the MnDOT eligible items based upon past experience in developing Cooperative Agreement projects. This Best Management Practice will optimize the available MnDOT funding applied to the project.

PERMIT APPLICATIONS

We will prepare all required exhibits for permits required for this project as requested by the City and MnDOT. This may include,



Stantec offers a robust public involvement scope of services. We will work with Northfield to tailor these services to meet your needs.

but is not limited to, investigating the needs for the MNDNR Public Waters permit and Wetland permit, and NPDES. We will submit the permits on behalf of the City if desired.

Local Partnership Program

Stantec is very familiar with the Local Partnership Program and executing Cooperative Agreements for projects where local agencies partner with MnDOT. Kevin Hoglund spent five years in the Metro District State Aid Office delivering Federal Aid, State Aid and Local Partnership Program projects. Kevin has a comprehensive understanding of the entire project delivery process for projects using multiple funding sources. He knows how the funding is administered through the Cooperative Agreement process. He knows the plan preparation requirements in order to obtain MnDOT approval and knows the construction administration process to ensure that local agencies receive the maximum amount of Federal and State funding for their projects. This extensive knowledge of the MnDOT project delivery process helps us avoid pitfalls and take action prior to running into problems that can derail your project. Kevin has delivered several Local Partnership Projects with the most recent one being the MnDOT District 6, TH 61 at Huff Street in Winona, Minnesota in 2018.

PUBLIC AND AGENCY INVOLVEMENT

By their very nature, any public improvement project may have individuals who are concerned about negative impacts. To provide for project success, the public involvement approach must be sound. The Stantec Project Management Team will develop the Public and Agency Involvement Plan. This will include the timing, agendas and formats for the meetings identified within the scope of services which include the City Council, General Public, Citizen Groups and School District. We will work with the City to develop a targeted communications approach to include appropriate tools for various audiences' public officials, property owners, the public and other stakeholders.

Visualization

Because of the complex nature of this project, Stantec recommends considering the utilization of visualization. Stantec can prepare 3D illustrations and simulations to better illustrate to interested parties what the project options will look like once constructed, helping to answer questions before they're even asked. Renderings from a vehicles point of view as well as those from a pedestrian on the trails will all be included, showing all of the project details, including retaining walls, guardrails, lighting, and landscaping. Visualization scope and costs can be discussed upon contract negotiation and award.

We anticipate two City Council Presentations, one Public Input Meeting, up to three Citizen Group Meetings and one School District Meeting. The format of the open house meeting will include displays, graphic renderings and electronic presentations as needed to disseminate the information. The overall objectives are:

- Understand existing conditions, including assets, constraints and usage.
- Facilitate strong interaction and feedback from adjacent property owners.
- Build consensus with local stakeholders on vision and outcomes.
- Comprehensively reach diverse perspectives in the project area.

BIDDING DOCUMENT PREPARATION

Stantec will prepare a project manual (plans and specifications booklet) for the project. This will include the required contract documents including the MnDOT Special Provisions and State requirements for a Cooperative Agreement project. Per the RFP, it is understood that the City will distribute copies of the contract documents for the project letting.



BIDDING ASSISTANCE

Stantec will prepare the bid documents, proposal forms and advertisement for bids. Ten copies of the plans and specifications will be printed and bound for use during construction. Support will be provided to the City of Northfield during the bidding process including addressing bidder and material supplier questions. We will also prepare any addenda that may be required for revisions, clarifications or additions to the bidding documents during the bidding process. Assistance will be provided to the City in securing bids, attending the public bid letting, analyzing bids and preparing a bid tabulation and letter recommending bid award. It should be noted that no award can be made until MnDOT has reviewed the bid tab and concurs in the award.

CONSTRUCTION SERVICES

Stantec is well prepared to fulfill the construction services as outlined in the RFP. Additionally, Stantec has developed a weekly report on the construction service engineering budget. Recognizing that the Contractors performance affects engineering efforts necessary, these weekly reports identify early potential cost implications. Stantec will provide weekly construction updates for the City to utilize in their community outreach efforts.

PROJECT CLOSEOUT

Stantec has significant experience with the requirements for MnDOT LPP and LRIP project closeout standards. Proper documentation of the community's investment is key to a successful and timely project closeout.

City of Northfield TH 246 and Jefferson Parkway Improvements - Option 1: Four Underpasses

	Principal in Charge	Project Manager	Assistant Project Manager/Engineer	Engineering Technician	Land Surveyor	Senior Traffic Engineer	Senior Transportation Engineer	Senior Transportation Engineer	Senior Structural Engineer	Structural Technician	Electrical Engineer	Landscape Designer	Public Outreach	Construction Manager	Survey Crew Chief	Survey Technician	Project Technician	Administrative Assistant	Hours	Fee
Task 1.0 Topographic Survey/Geotechnical Services																				
1.0 Conduct Topographic Survey				25											50	50			125	\$ 14,400
1.1 Prepare preliminary and final permanent easement descriptions (Up to two)		1		2	12														15	\$ 2,255
1.2 Prepare preliminary and final temporary easement descriptions (Up to four)		1		2	24														27	\$ 4,115
1.3 Stake all temporary and permanent easements.															10	10			20	\$ 2,260
1.4 Coordinate soil borings to assist in preparing design documents.		1	1																2	\$ 294
																		Subtotals	64	\$ 23,324
Task 2.0 Design																				
2.1 Use topographic and ROW survey information to prepare base/existing plans.			2	25															27	\$ 3,394
2.2 Prepare preliminary and final plans and specifications:																				
2.2.1 Set alignment for all road segments		6	6	4		20													36	\$ 5,200
2.2.2 Set profiles for the project		6	6	4		20													36	\$ 5,200
2.2.3 Develop cross sections for the project		2	2	8		4													16	\$ 2,168
2.2.4 Develop a removals plan			4	12															16	\$ 2,076
2.2.5 Review storm drainage system and develop replacement/realignment plan			60	24															84	\$ 11,796
2.2.6 Utilities (electric, gas, telephone, cable TV) coordination and relocation		4	16	6										8				4	38	\$ 5,200
2.2.6.1 Small utility meeting to coordinate relocation and schedule			10	2										6				8	26	\$ 3,380
2.2.7 Sanitary sewer replacement/realignment			1																1	\$ 147
2.2.8 Watermain replacement/realignment			1	6															7	\$ 891
2.2.9 Signing and striping plan				12		3													15	\$ 1,929
2.2.10 Intersection design plan				60		120													180	\$ 25,080
2.2.11 Sidewalk improvements plan			8	24															32	\$ 4,152
2.2.12 Trail/Underpass improvements plan.		4	4	4					108	232									348	\$ 48,768
2.2.12.1 Meeting with DNR and City officials	4	4	4	6									8						22	\$ 3,098
2.2.13 Landscape/streetscape plan (assumes no irrigation)				16								16							32	\$ 3,744
2.2.13.1 Landscape concept plan public input process			12									24	20						56	\$ 6,564
2.2.14 Stormwater pollution prevention plan						24													24	\$ 3,528
2.2.15 Street/Underpass lighting plan				24							100								124	\$ 17,376
2.2.16 Traffic control plan including phasing/detour plan			4	20															24	\$ 3,068
2.2.17 Estimated project quantities			16	16															32	\$ 4,336
2.2.18 Prepare contract documents			40	20					20	20								16	116	\$ 15,960
2.2.19 City review and approval		2	2																4	\$ 588
2.2.20 Obtain required permits		4	4															16	24	\$ 2,856
2.2.21 Prepare opinion of probable costs		8	12	12						16	4	8							60	\$ 7,900
2.2.22 City will prepare copies of plans and specifications for bidding																			0	\$ -
2.2.23 Familiarize with LPP process and prepare any required documents/reports		10	10					30											50	\$ 8,160
2.2.24 Familiarize with LRIP process and prepare any required documents/reports		10	10					30											50	\$ 8,160
																		Subtotals	1480	\$ 204,719
Task 3.0 Public Engagement																				
3.1 City Council meetings																			0	\$ -
3.1.1 Present 30% plans and specifications including cost estimates	6	6		8								8							28	\$ 3,884
3.1.2 Present to Council when approving documents and authorizing for bids	6	6		4							4								20	\$ 2,956
3.2 Public input meetings																			0	\$ -
3.2.1 One public input meeting for Landscape/Streetscape plan	6	6	6	12								6	12	6					54	\$ 7,176
3.2.1.1 Additional meetings with various Citizen Groups (Two meetings)			12	4								12	12						40	\$ 4,876
3.2.2 Public input meeting with design concepts	6	8	10	4								6	14	6					54	\$ 7,282
3.2.3 School District meeting		6	6																12	\$ 1,764
																		Subtotals	208	\$ 27,938
Task 4.0 Bidding Administration																				
4.1 Prepare ad for bids		1	1															2	4	\$ 504
4.2 Answer bidder's questions		4	8																12	\$ 1,764
4.3 Issue addenda if required		2	4	8														2	16	\$ 2,084
4.4 Bid opening and tabulation		4	6															4	14	\$ 1,890
4.5 Prepare letter of award recommendation		1																1	2	\$ 252
																		Subtotals	48	\$ 6,494
Task 5.0 Construction Services																				
5.1 Construction administration																			0	\$ -
5.1.1 Attend preconstruction conference		6	6											6					18	\$ 2,586
5.1.2 Perform on-site review or project's work and status as needed			42									16							58	\$ 7,934
5.1.3 Attend progress meetings as needed		20	60											16					96	\$ 13,952
5.1.4 Approve shop drawings, material list reports			12						4	20									36	\$ 4,964

City of Northfield TH 246 and Jefferson Parkway Improvements - Option 1: Four Underpasses

	Principal in Charge	Project Manager	Assistant Project Manager/Engineer	Engineering Technician	Land Surveyor	Senior Traffic Engineer	Senior Transportation Engineer	Senior Transportation Engineer	Senior Structural Engineer	Structural Technician	Electrical Engineer	Landscape Designer	Public Outreach	Construction Manager	Survey Crew Chief	Survey Technician	Project Technician	Administrative Assistant	Hours	Fee	
5.2 Field staking																			0	\$ -	
5.2.1 Stake limits of construction				2											10	10			22	\$ 2,508	
5.2.2 Stake temporary and permanent easements				2											10	10			22	\$ 2,508	
5.2.3 Stake for grading				4											20	20			44	\$ 5,016	
5.2.4 Stake alignment and grades for storm sewer, sanitary sewer, and watermain				4											10	10			24	\$ 2,756	
5.2.5 Stake alignment and grades for curb and gutter				8											20	10			38	\$ 4,622	
5.2.6 Stake alignment and grades for sidewalk and pedestrian amenities				4											45	45			94	\$ 10,666	
5.2.7 Stake locations for signage				1											2				3	\$ 398	
5.2.8 Stake landscaping amenities				4											2				6	\$ 770	
5.2.9 Stake pavement markings				2											2				4	\$ 522	
5.2.10 Stake any other facilities as necessary				2											1				3	\$ 385	
5.3 Construction observation support																			0	\$ -	
5.3.1 Fulltime daily on-site inspection services		20	40											800					860	\$ 118,420	
5.3.2 Maintain good public relations			20										40	60					120	\$ 15,480	
5.3.3 Maintain daily diary of construction activity														100					100	\$ 13,700	
5.3.4 Daily documentation of pay item quantities														100					100	\$ 13,700	
5.3.5 Prepare partial pay estimates														40					40	\$ 5,480	
5.3.6 Coordination and documentation of materials testing requirements														40					40	\$ 5,480	
5.3.7 Documenting certification of materials			20											40					60	\$ 8,420	
5.3.8 Verify conformity of materials and construction outcomes to specifications			20											40					60	\$ 8,420	
																		Subtotals	1848	\$ 248,687	
Task 6.0 Project Close-out																					
6.1 Conduct final review of project		20	20											80					120	\$ 16,840	
6.2 Obtain record information from field representatives														40					40	\$ 5,480	
6.3 Submit all final documents to MnDOT to satisfy LPP & LRIP process		20	20				8												48	\$ 7,272	
6.4 Prepare record drawings				24										20	10	10			64	\$ 7,976	
																		Subtotals	272	\$ 37,568	
Task 7.0 Geotechnical Testing Services - See Subconsultant Item Below																					
Rates	\$ 191	\$ 147	\$ 147	\$ 124	\$ 155	\$ 147	\$ 147	\$ 174	\$ 170	\$ 126	\$ 144	\$ 110	\$ 108	\$ 137	\$ 137	\$ 89	\$ 87	\$ 105			
Base Scope Hours	28	193	550	421	36	167	24	68	132	288	104	88	118	1408	192	175	0	53			
Base Scope Fees	\$ 5,348	\$ 28,371	\$ 80,850	\$ 52,204	\$ 5,580	\$ 24,549	\$ 3,528	\$ 11,832	\$ 22,440	\$ 36,288	\$ 14,976	\$ 9,680	\$ 12,744	\$ 192,896	\$ 26,304	\$ 15,575	\$ -	\$ 5,565			
Direct Expenses (mileage, reproduction, materials, etc.)	250	750	2000		250			250				250	250	5000	1500						
Subconsultant for Geotechnical work is Braun Intertec.																					
																		Total Subconsultant Fees		\$	99,214
																		Total Base Stantec Hours			4045
																		Total Base Stantec Fees		\$	647,944
																		Total Stantec Expenses		\$	10,500
																		Total Base Stantec Fees + Expenses		\$	658,444

City of Northfield TH 246 and Jefferson Parkway Improvements - Option 2: Two Underpasses

	Principal Charge	Project Manager	Assistant Project Manager/Engineer	Engineering Technician	Land Surveyor	Senior Traffic Engineer	Senior Transportation Engineer	Senior Transportation Engineer	Senior Structural Engineer	Structural Technician	Electrical Engineer	Landscape Designer	Public Outreach	Construction Manager	Survey Crew Chief	Survey Technician	Administrative Assistant	Hours	Fee
Task 1.0 Topographic Survey/Geotechnical Services																			
1.0 Conduct Topographic Survey		1		25											50	50		125	\$ 14,400
1.1 Prepare preliminary and final permanent easement descriptions (Up to two)		1		2	12													15	\$ 2,255
1.2 Prepare preliminary and final temporary easement descriptions (Up to four)		1		2	24													27	\$ 4,115
1.3 Stake all temporary and permanent easements.		1	1												10	10		20	\$ 2,260
1.4 Coordinate soil borings to assist in preparing design documents.																		2	\$ 294
																	Subtotals	\$ 189	\$ 23,324
Task 2.0 Design																			
2.1 Use topographic and ROW survey information to prepare base/existing plans.			2	25														27	\$ 3,394
2.2 Prepare preliminary and final plans and specifications:																			
2.2.1 Set alignment for all road segments		6	6	4		20												36	\$ 5,200
2.2.2 Set profiles for the project		6	6	4		20												36	\$ 5,200
2.2.3 Develop cross sections for the project		2	2	8		4												16	\$ 2,168
2.2.4 Develop a removals plan			4	12														16	\$ 2,076
2.2.5 Review storm drainage system and develop replacement/realignment plan			60	24														84	\$ 11,796
2.2.6 Utilities (electric, gas, telephone, cable TV) coordination and relocation		4	16	6										8			4	38	\$ 5,200
2.2.6.1 Small utility meeting to coordinate relocation and schedule			10	2										6			8	26	\$ 3,380
2.2.7 Sanitary sewer replacement/realignment			1															1	\$ 147
2.2.8 Watermain replacement/realignment			1	6														7	\$ 891
2.2.9 Signing and striping plan				12		3												15	\$ 1,929
2.2.10 Intersection design plan				60		120												180	\$ 25,080
2.2.11 Sidewalk improvements plan			8	24														32	\$ 4,152
2.2.12 Trail/Underpass improvements plan.		4	4	4					88	156								252	\$ 35,792
2.2.12.1 Meeting with DNR and City officials	4	4	6										8					22	\$ 3,098
2.2.13 Landscape/streetscape plan (assumes no irrigation)				16								16						32	\$ 3,744
2.2.13.1 Landscape concept plan public input process			12									24	20					56	\$ 6,564
2.2.14 Stormwater pollution prevention plan						24												24	\$ 3,528
2.2.15 Street/Underpass lighting plan				24							80							104	\$ 14,496
2.2.16 Traffic control plan including phasing/detour plan			4	20					20	20							16	24	\$ 3,068
2.2.17 Estimated project quantities			16	16														32	\$ 4,336
2.2.18 Prepare contract documents			40	20					20	20								116	\$ 15,960
2.2.19 City review and approval		2	2															4	\$ 588
2.2.20 Obtain required permits		4	4														16	24	\$ 2,856
2.2.21 Prepare opinion of probable costs		8	12	12						16	4	8						60	\$ 7,900
2.2.22 City will prepare copies of plans and specifications for bidding																		0	\$ -
2.2.23 Familiarize with LPP process and prepare any required documents/reports		10	10					30										50	\$ 8,160
2.2.24 Familiarize with LRIP process and prepare any required documents/reports		10	10					30										50	\$ 8,160
																	Subtotals	1364	\$ 188,863
Task 3.0 Public Engagement																			
3.1 City Council meetings																		0	\$ -
3.1.1 Present 30% plans and specifications including cost estimates	6	6		8									8					28	\$ 3,884
3.1.2 Present to Council when approving documents and authorizing for bids	6	6		4									4					20	\$ 2,956
3.2 Public input meetings																		0	\$ -
3.2.1 One public input meeting for Landscape/Streetscape plan	6	6	6	12								6	12	6				54	\$ 7,176
3.2.1.1 Additional meetings with various Citizen Groups (Two meetings)			12	4								12	12					40	\$ 4,876
3.2.2 Public input meeting with design concepts	6	8	10	4								6	14	6				54	\$ 7,282
3.2.3 School District meeting		6	6															12	\$ 1,764
																	Subtotals	208	\$ 27,938
Task 4.0 Bidding Administration																			
4.1 Prepare ad for bids		1	1														2	4	\$ 504
4.2 Answer bidder's questions		4	8															12	\$ 1,764
4.3 Issue addenda if required		2	4	8													2	16	\$ 2,084
4.4 Bid opening and tabulation		4	6														4	14	\$ 1,890
4.5 Prepare letter of award recommendation		1															1	2	\$ 252
																	Subtotals	48	\$ 6,494
Task 5.0 Construction Services																			

City of Northfield TH 246 and Jefferson Parkway Improvements - Option 2: Two Underpasses

	Principal in Charge	Project Manager	Assistant Project Manager/Engineer	Engineering Technician	Land Surveyor	Senior Traffic Engineer	Senior Transportation Engineer	Senior Transportation Engineer	Senior Structural Engineer	Structural Technician	Electrical Engineer	Landscape Designer	Public Outreach	Construction Manager	Survey Crew Chief	Survey Technician	Administrative Assistant	Hours	Fee	
5.1 Construction administration														6				0	\$ -	
5.1.1 Attend preconstruction conference		6	6															18	\$ 2,586	
5.1.2 Perform on-site review or project's work and status as needed			42									16						58	\$ 7,934	
5.1.3 Attend progress meetings as needed		20	60											16				96	\$ 13,952	
5.1.4 Approve shop drawings, material list reports			12						4	20								36	\$ 4,964	
5.2 Field staking																		0	\$ -	
5.2.1 Stake limits of construction				2											10	10		22	\$ 2,508	
5.2.2 Stake temporary and permanent easements				2											10	10		22	\$ 2,508	
5.2.3 Stake for grading				4											20	20		44	\$ 5,016	
5.2.4 Stake alignment and grades for storm sewer, sanitary sewer, and watermain				4											10	10		24	\$ 2,756	
5.2.5 Stake alignment and grades for curb and gutter				8											20	20		48	\$ 5,512	
5.2.6 Stake alignment and grades for sidewalk and pedestrian amenities				4											30	30		64	\$ 7,276	
5.2.7 Stake locations for signage				1											2			3	\$ 398	
5.2.8 Stake landscaping amenities				4											2			6	\$ 770	
5.2.9 Stake pavement markings				2											2			4	\$ 522	
5.2.10 Stake any other facilities as necessary				2											1			3	\$ 385	
5.3 Construction observation support																		0	\$ -	
5.3.1 Fulltime daily on-site inspection services		20	40											700				760	\$ 104,720	
5.3.2 Maintain good public relations			20										40	60				120	\$ 15,480	
5.3.3 Maintain daily diary of construction activity														100				100	\$ 13,700	
5.3.4 Daily documentation of pay item quantities														100				100	\$ 13,700	
5.3.5 Prepare partial pay estimates														40				40	\$ 5,480	
5.3.6 Coordination and documentation of materials testing requirements														40				40	\$ 5,480	
5.3.7 Documenting certification of materials			20											40				60	\$ 8,420	
5.3.8 Verify conformity of materials and construction outcomes to specifications			20											40				60	\$ 8,420	
																	Subtotals	1728	\$ 232,487	
Task 6.0 Project Close-out																				
6.1 Conduct final review of project		20	20											80				120	\$ 16,840	
6.2 Obtain record information from field representatives														40				40	\$ 5,480	
6.3 Submit all final documents to MnDOT to satisfy LPP & LRIP process		20	20				8											48	\$ 7,272	
6.4 Prepare record drawings				24										20	10	10		64	\$ 7,976	
																	Subtotals	272	\$ 37,568	
Task 7.0 Geotechnical Testing Services - See Subconsultant Item Below																				
Rates	\$ 191	\$ 147	\$ 147	\$ 124	\$ 155	\$ 147	\$ 147	\$ 174	\$ 170	\$ 126	\$ 144	\$ 110	\$ 108	\$ 137	\$ 137	\$ 89	\$ 105			
Base Scope Hours	28	193	550	421	36	167	24	68	112	212	84	88	118	1308	177	170	53			
Base Scope Fees	\$ 5,348	\$ 28,371	\$ 80,850	\$ 52,204	\$ 5,580	\$ 24,549	\$ 3,528	\$ 11,832	\$ 19,040	\$ 26,712	\$ 12,096	\$ 9,680	\$ 12,744	\$ 179,196	\$ 24,249	\$ 15,130	\$ 5,565			
Direct Expenses (mileage, reproduction, materials, etc.)	250	750	2000		250			250				250	250	5000	1500					
Subconsultant for Geotechnical work is Braun Intertec.																				
																	Total Subconsultant Fees	\$	84,749	
																	Total Base Stantec Hours		3809	
																	Total Base Stantec Fees	\$	601,423	
																	Total Stantec Expenses	\$	10,500	
																	Total Base Stantec Fees + Expenses	\$	615,732	

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SCHEDULE

The Stantec is composed of highly skilled professionals who are available and committed to supporting the City of Northfield throughout this project. Our proposal has attempted to maintain the schedule proposed in the RFP. With our extensive knowledge of the LPP process, our schedule takes the cooperative agreement request and execution time frames into account. The bid opening is still projected to occur during a competitive bidding period. The construction start date has not been affected.

2019



2020



PROJECT EXPERIENCE AND REFERENCES

SAFE ROUTES TO SCHOOL INFRASTRUCTURE IMPROVEMENTS

Red Wing, Minnesota

Stantec worked with the City of Red Wing to gain Safe Routes to School funding and designed safer crossings for two of its schools.

When it comes to pedestrians -- and especially children walking to school -- safety is paramount. That's what drove the City of Red Wing to pursue crossing improvements for two of its schools.

As a first step, the City asked Stantec to help them prepare a Minnesota Safe Routes to School (MnSRTS) infrastructure grant application. We studied the crossings, including a dangerous skewed intersection, to develop conceptual improvement designs. Then, working collaboratively with City staff and stakeholders including Red Wing Public Schools, Goodhue County, and Live Healthy Red Wing, we developed alternatives that balanced traffic and safety and fostered an active, walkable, mixed-use pedestrian environment. When the City's application resulted in over \$700,000 of funding, our team worked with the community to refine the alternatives, prepare the final design, and carry the project through construction.

Our design for Twin Bluff Middle School replaced the skewed intersection with a roundabout that reduces congestion and improves pedestrian safety with shortened crossing distances and new refuge islands. Other crosswalks include curb bump outs and Rapid Rectangular Flashing Beacons (RRFBs) to increase driver awareness of the pedestrian crossings. The roundabout smooths vehicle movements during student drop-off and pick-up, and this even flow also reduces traffic noise. Sunnyside Elementary School benefited from bump outs to reduce crossing distance and RRFBs to alert approaching drivers. Other project improvements include sidewalk and drainage improvements, ADA accessibility upgrades, traffic calming features, and signing and marking enhancements.

Reference	Jay Owens, City Engineer City of Red Wing 229 Tyler Rd. N., Red Wing, Minnesota, 55066 (651) 385-3625
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TH 75 – I-94 INTERCHANGE IMPROVEMENTS

Moorhead, Minnesota

We challenged conventional design concepts when we led the design of a diverging diamond interchange that increased capacity, improved operations, and enhanced safety for the community's busiest transportation node, while also saving millions of dollars in construction costs.

The TH 75 – I-94 interchange is a busy place and the Minnesota Department of Transportation (MnDOT) made improving this spot a top priority. Impacted by traffic from three colleges, more than 80,000 local and interstate vehicles use it. By 2040, it's anticipated to carry 130,000 vehicles per day.

During conceptual design, Stantec design engineers evaluated nine geometric layouts and ultimately recommended a relatively unconventional design: a diverging diamond interchange (DDI) that, among other benefits, eliminated four left-hand turns into oncoming traffic. The result: improved safety, capacity, and operations. And bonus: the bridge over I-94 could stay in place, saving millions during construction.

Stantec modeled the interchange to help MnDOT secure an approved FHWA Interstate Modification Request, prepared and simulated detailed detour and traffic control plans to move traffic smoothly during construction, and addressed the challenge of a project partially located within a FEMA-mapped floodplain draining into the flood-prone Red River. The team also designed upgrades for nearby signalized intersections, auxiliary lanes on I-94, and a multi-use trail along TH 75 (including underpasses of the interchange ramps).

Communication was key to project success. Stantec kept in frequent touch with MnDOT to keep all the wheels moving to meet schedules and budget. Because this design was the first DDI in the region, Stantec made stakeholder involvement a priority and executed a comprehensive, objectives-driven plan.

Thanks to creative thinking and collaboration, this DDI interchange is ready for 2040

Reference	Seth Yliniemi, MnDOT project manager 395 John Ireland Blvd, St. Paul, MN 55155 (218) 846-3631
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ARBOR LAKES BUSINESS PARK INFRASTRUCTURE IMPROVEMENTS

Maple Grove, Minnesota

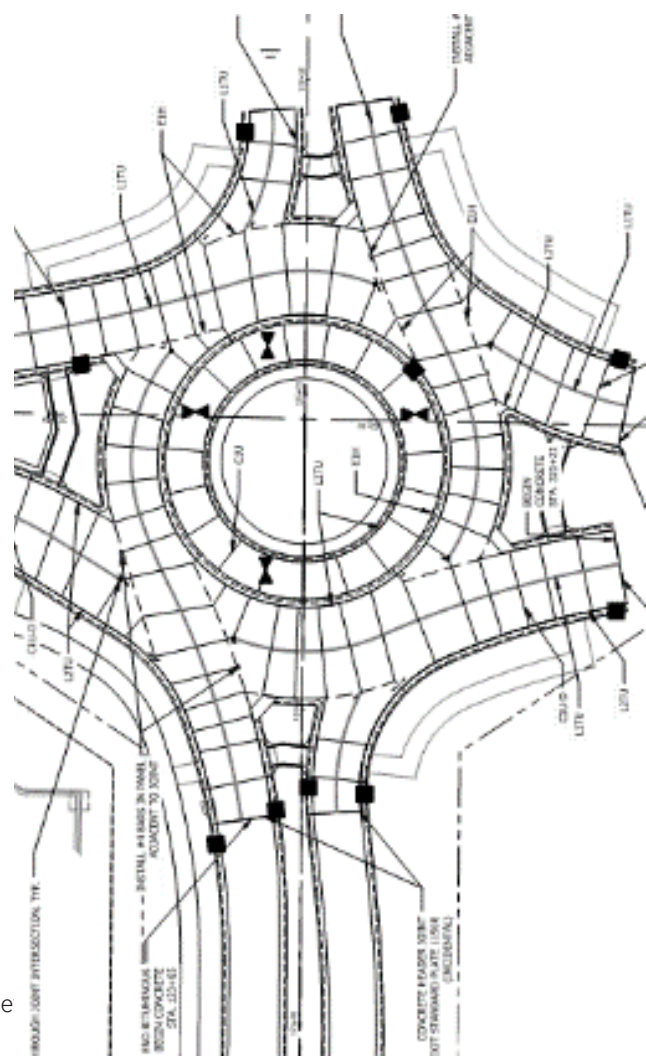
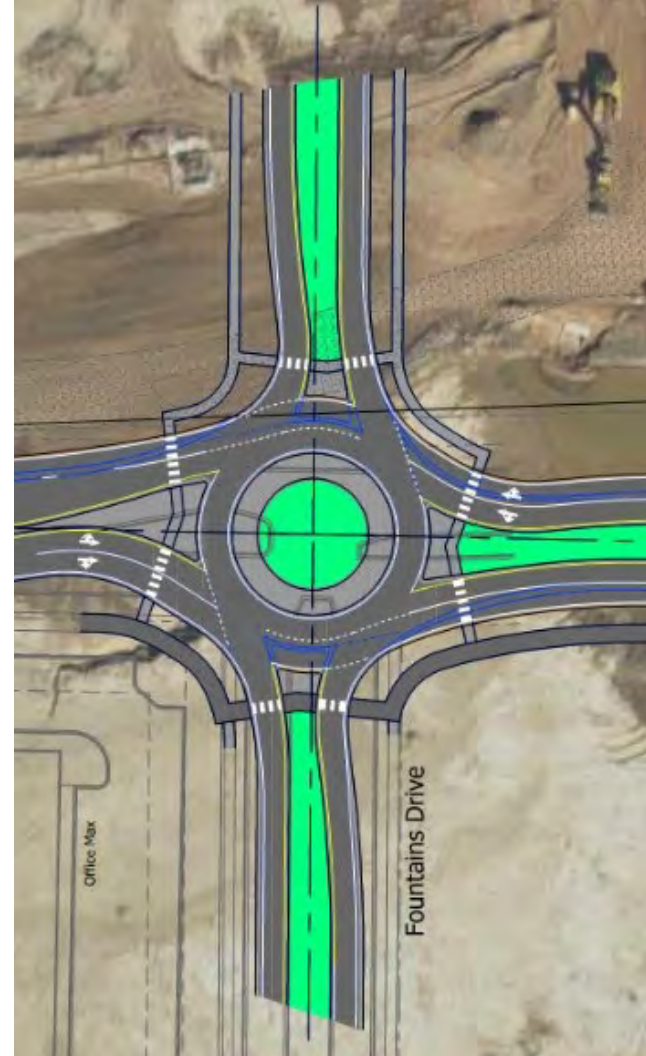
Stantec worked with the City of Maple Grove to develop stages of their Arbor lakes Business Park infrastructure.

Maple Grove needed to accommodate a new 71-acre property that will contain 4 office/warehouse buildings ranging in size from approximately 220,000 SF to 278,000 SF. The improvements also provided sanitary sewer and water to the property. The development was located south of Elm Creek Blvd east of Zachary Lane, north of future Fountains Drive and west of future Revere Lane N.

Stantec designed and analyzed single lane and multi-lane roundabouts at the intersections of Fountains Drive with Revere Lane and Zachary Lane. In 2018, the City constructed the Fountains Drive and Revere Lane multi-lane concrete roundabout, new segments of both roadways, and signal updates at the Revere Lane and Elm Creek Boulevard intersection. A multi-lane roundabout is planned at Foundations Drive and Zachary Lane and will be coordinated with future development.

Reference	Jupe Hale, PE, Assistant City Engineer 12800 Arbor Lakes Pkwy Maple Grove, MN 55369 (763) 494-6350
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Design with
community in mind