



## APWA MINNESOTA CHAPTER PUBLIC WORKS PROJECT OF THE YEAR NOMINATION FORM

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**Submission Deadline: October 1, 2022**

**All nomination and supporting data are to be submitted as a PDF to Sarah at [sarah.lloyd@bolton-menk.com](mailto:sarah.lloyd@bolton-menk.com) with a maximum page size of 5 pages, including photos.**

**Project Nominated:** Highway 36 & Manning Avenue Interchange

Managing Agency: Washington County, MN  
Contact Person: Kevin Peterson, PE  
Agency Address: 11660 Myeron Road North, Stillwater, MN 55082  
Agency Phone Number: 651-430-4330  
Email: Kevin.Peterson@co.washington.mn.us

Project Design Firm: SRF Consulting Group, Inc  
Project Construction Administration Firm: Washington County/WSB  
Project General Contractor: Shafer Contracting

Name of Person Making Nomination: Brian C, Johnson, PE  
Phone Number: 763-249-6787  
Email: Kevin.Peterson@co.washington.mn.us

### Criteria for Nomination

- Project must be substantially completed by October 31, 2021 or October 31, 2022.
- Includes use of innovative construction management techniques and completion of the project on schedule.
- Maintained excellent safety performance and safety program throughout construction.
- Evidence of strong community relations during all project phases.
- Consideration given to the environment. Sustainable design techniques involved.
- Unusual accomplishments given adverse conditions.
- Provides future value to the public works profession and perception by the public.
- Additional considerations such as value engineering, innovative project financing, multi-agency coordination and participation.

**Reasons for Nomination:** Describe the project with the aspects and features of the project that fulfilled any of the applicable criteria listed. (Include description on a separate page.)

# HIGHWAY 36 & MANNING AVENUE INTERCHANGE

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## PUBLIC WORKS PROJECT OF THE YEAR

APWA Minnesota Chapter

October 1, 2022





# HWY 36/MANNING AVE INTERCHANGE

## WASHINGTON COUNTY



Washington County embarked on a study in 2017 to identify a solution that would best address the need for safety and capacity improvements at Highway 36 and Manning Avenue (County State Aid Highway 15). This study aimed to align the long-term corridor vision and the needs of the local communities. A new interchange was the result of an extensive alternatives evaluation process and coordination with multiple agencies, and was informed by a comprehensive public outreach program.

### A Collaborative Partnership Shaping Success

To effectively deliver this complex project, Washington County sought active participation and representation from several critical agencies with a strong interest in this project, as follows.

- **Washington County** was the lead agency through the study, design, and construction process and secured the project funding.
- **MnDOT** was heavily involved with jurisdictional control over most of the project footprint and provided review and approvals of project plans and documents.
- **FHWA** provided oversight of the NEPA process, ensuring it met federal funding parameters.
- The project area borders **Grant, Stillwater, Lake Elmo, Oak Park Heights and Stillwater Township**, requiring intimate local involvement regarding infrastructure needs and community planning.
- **Browns Creek Watershed District** was a critical partner that helped explore regional water treatment options and developed a stormwater reuse system (see below for more details).
- **Several consultants** and contractors were also involved in helping support the project development and construction processes.

### Regional Significance

With the recent opening of the Saint Croix River Crossing, Highway 36 is under additional pressure to efficiently move large volumes of commuter, freight, and recreational traffic to regional and interregional destinations. Several key capital improvement projects have recently been constructed along Highway 36 to improve traffic safety and operations. A new interchange at Highway 36 and Manning Avenue was critical to this initiative.



### Need for Project

The previous at-grade signalized intersection configuration was fraught with safety and operational deficiencies and was approaching its total capacity. The intersection had above-average crash and severity rates compared to similar intersections.

## PROJECT NEEDS



**20-30%**

Increase in traffic expected by 2040.

In addition to 20% increase since the opening of the St. Croix Crossing Bridge



Intersection is approaching its full capacity (long delays/frustrations)



**75**

Intersection rank (out of 8,000) based on statewide crash cost comparisons



**56**

Reported Crashes (2011 - 2015)

## Economic Development

Developers have revealed plans for significant future expansion near the Highway 36 and Manning Avenue intersection, including a large hospital campus in the NE quadrant and commercial/residential development in the SE quadrant. These developments, if fully realized, could generate more than 25,000 additional daily trips through the project area, which was a key consideration in implementing improvements at this intersection, including frontage road realignment locations and stormwater management.



## Pedestrians and Bicyclists

Pedestrian and bicyclist safety and connectivity at the intersection was a key project consideration. In its previous configuration, users found it challenging to cross Highway 36 due to the number of lanes and high-speed conditions. They experienced extensive delays when waiting to cross the intersection because of the amount of “green time” allocated to Highway 36. During the public outreach process, the project team learned that many high school bike club students use this crossing to get to the Browns Creek Trail, located 2.5 miles north of the intersection.

The new interchange offers pedestrians and bicyclists a much safer grade-separated crossing over Highway 36 that connects to the existing trail network, with foresight as to how it can make future connections to the regional network. The project team also coordinated with the Stillwater Snowmobile Club to incorporate the Star Trail snowmobile route into the new interchange design to provide safer crossings for snowmobile users.

“I use the Highway 36 and Manning crossing with the Stillwater High School bike team as part of our daily training route. A safer crossing here would be good for my team and everyone who rides a bike.”

- Amelia Lehmann, Student  
Stillwater Area High School







## Public Engagement and Community Relations

Washington County's Public Works Department aims to achieve excellence in design through comprehensive public engagement with every project. The team employed a robust public engagement plan to facilitate community acceptance while maintaining its partners' transportation objectives and requirements. The following highlights essential coordination efforts with stakeholder groups.

Due to the large and diverse number of agencies involved, a Local Advisory Team (LAT) was formed to provide input, share local insights, and advise the project process. The LAT consisted of staff from the Cities of Grant, Stillwater, Lake Elmo, Oak Park Heights, Stillwater Township, Metropolitan Council, and Browns Creek Watershed District. Between July 2017 and June 2018, the LAT met four times to provide early input regarding project issues and concerns, local community considerations, the status of planned land use, and future development and provided feedback on conceptual interchange alternatives.

Several meetings with developers were required to understand and plan for future development in the northeast and southeast quadrants of the intersection.

### Public Open Houses at the Washington County Government Center

The purpose of the open house was to share study goals and objectives, review concepts, and gather public input. The team displayed several informational boards, layouts with project-related information, and the conceptual alternatives under consideration.

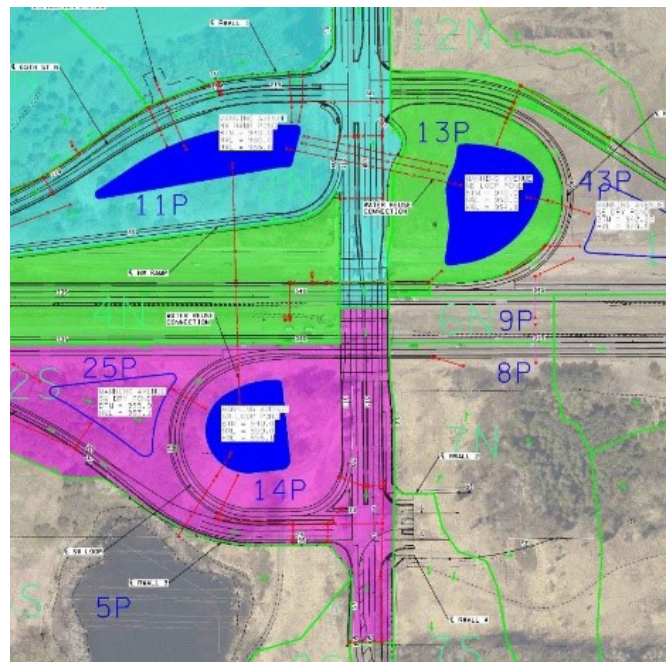
To help communicate project information, a project [website](#) was established and maintained by Washington County.

The project website included an overview of the project goals, schedule, and feedback gathered at public open houses. Interested parties were also able to use the site to subscribe to project update communications.

As the project transitioned into construction, Washington County sent out bi-weekly updates to subscribers regarding construction activities and schedules, including photos, maps, and other information, so that residents and business owners could stay informed on the progress and changes to traffic control and detour routes.

## Resiliency, Sustainability, and Environmental Considerations

As noted earlier, creating partnerships between multiple agencies, regulators, and private land owners proved vital to the success of this project. These partnerships resulted in an innovative stormwater reuse system providing increased environmental benefits and meeting the needs of all parties involved. Captured runoff is stored in three wet ponds within the interchange to irrigate the adjacent private golf course. Various parties agreed on long-term maintenance and operation of the ponds, pumps, and piping. The irrigation pumping and piping, constructed on private property as a separate project, combined funding from BCWD with a contribution from Washington County. Intensive coordination was required throughout the process but was rewarded by minimized maintenance needs, reduced downstream runoff volume, reduced demand on groundwater, and increased pollutant removal.





## Unusual Accomplishments



Along the south side of Highway 36, Xcel Energy owns and operates a 115 kV transmission line and a 345 kV transmission line. Both transmission lines run parallel to Highway 36 within a private utility easement approximately 500 feet south of Highway 36 and include large, lattice-style transmission towers close to Manning Avenue. The infrastructure required close coordination with Xcel Energy to investigate options to avoid or relocate one or both towers. It was determined that one of the towers would need to be relocated and replaced with a mono-pole system. Due to significant changes in grade, critical clearances for the high voltage wires were analyzed for construction safety and long term needs. Through early and frequent coordination efforts, the project team ensured that the tower was relocated before the interchange construction, which helped keep the project on schedule.

## Value Engineering

A Value Engineering (VE) study was conducted from February 26 – March 1, 2019. The primary objectives of the VE Study were to conduct a thorough review and analysis of the critical project issues using a multidiscipline, cross-functional team (i.e., review the baseline design) and to verify or improve upon the various concepts for the project. This approach would enhance the value of the project through innovative measures aimed at improving performance while reducing costs.

## Project Benefits

The new interchange was open to traffic in July 2022. Immediate (and sustained) benefits include improved safety, capacity, and operations for all users and a grade-separated crossing for pedestrians, bicyclists, and snowmobiles. Long-term benefits will include enhanced water quality and access for future development, including planned commercial development and the new hospital campus. Additionally, the interchange was developed such that it does not preclude future improvements at Highway 36 and Lake Elmo Avenue (County State Aid Highway 17) one mile to the west.

