

County State Aid Highway 54 Safety Improvements and Multimodal Connectivity Project MERIT CRITERIA

FY 2024 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program



Project Name: County State Aid Highway 54 Safety Improvements and Multimodal Connectivity Project

Project Type: Rural Capital

Future Eligible Project Costs : \$35,365,038

2024 RAISE Funds Requested: \$25,000,000

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<https://www.srfconsulting.com/dakota-county-54/>





County State Aid Highway 54 Safety Improvements and Multimodal Connectivity Project

Submitted by Dakota County, Minnesota

FY 2024 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program

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MERIT CRITERIA

1. SAFETY

Safety is the primary goal of the County State Aid Highway 54 Safety and Multimodal Connectivity Project (herein known as the Project). This application will demonstrate the significant outstanding safety concerns along 6.8 miles of County State Aid Highway (CSAH) 54 and at the intersection of CSAH 54 and CSAH 68. The Project addresses these concerns by incorporating strategies outlined in the USDOT's National Roadway Safety Strategy Plan (NRSS). The NRSS plan identifies safer roadway design as an important strategy to successfully prevent traffic fatalities through context-sensitive design that considers modal equity among all users. The Project adopts Safe System Approach as the guiding paradigm to address roadway safety and employs Safe Streets, Safe People, Safe Vehicles, Safety Data, and Safety Focused Enforcement as its core elements. This underlying principle advances the goals of USDOT, Dakota County, and the RAISE Program to eliminate roadway crashes that result in fatalities and serious injuries along this crucial corridor in Dakota County, Minnesota.



Figure 1 Safe System Approach



Reducing Fatalities and Serious Injuries

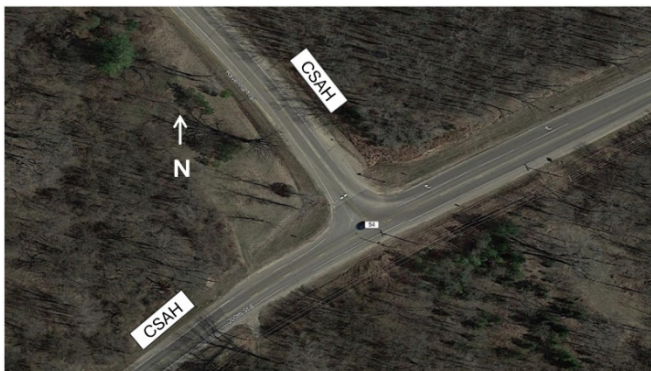


Figure 2 CSAH 54/CSAH 68 T-intersection

County State Aid Highway (CSAH) 54 is a narrow and winding rural two-lane highway (one lane in each direction) with a statutory speed limit of 55 miles per hour (mph) and is classified as a major collector. At its southern limits CSAH 54 forms a T-intersection with CSAH 68 (Figure 2). CSAH 68 is classified as minor arterial and has a posted speed limit of 55 mph. Traffic control at this intersection

is a stop sign for CSAH 54. Crash analysis along CSAH 54 in the Project corridor for years 2019-2023, using Minnesota Department of Transportation's (MnDOT) tool MnCAMT2, reports a total of 80 crashes in the five-year dataset, including five crashes resulting in fatalities or incapacitating injuries. Such a high number of crashes in a rural community with significant traffic volumes (up to 6,400 vehicles per day (vpd) along CSAH 68) is indicative of serious safety issues along the Project corridor. The safety analysis found that the crash rate along CSAH 54 is four times the expected crash rate for similar two-lane rural highways in Minnesota.

The crash rates along the Project corridor were calculated and compared to the critical crash rates. The critical rates were based on vehicular exposure and the statewide average crash rate for similar segments and intersections. It was found that 80 crashes occurred in the Project corridor, of which 17 were intersection crashes and 63 were segment crashes (Figure 3). There were five serious injury crashes, including two fatal crashes. Thirty-one

crashes were single-vehicle run-off-the-road crashes. One crash involved a vehicle rear-ending a bicyclist riding on the shoulder and causing minor injury. Another was a hit-and-run involving a truck and a pedestrian.

Crash rates along this corridor remain elevated above the critical crash rates, which indicates statistically significant safety issues. Between 2019 and 2023, there were 63 segment crashes reported along CSAH 54. For a five-year period and along 6.8 miles of the Project corridor, this equates to a segment crash rate of 1.23, which is four times the expected crash rate for similar two-lane rural highways in Minnesota (Table 1). In addition, the history of severe crashes is reflected in the severity rate, which was found to be more than three times the expected rate. Similar trends were observed with the intersection crash rates on CSAH 54 at both Glendale Road and CSAH 68. The actual crash and severity rates are between three and four times greater than the expected intersection values, indicating a major crash problem along CSAH 54.

Incorporating Specific Safety Improvements

Over the years, several safety improvements have been made by Dakota County to address this problem, such as chevrons, curve speed warnings, rumble strips, etc. However, the County recognizes the need for alternatives that reduce fatalities and/or serious injuries in the corridor and to bring them below the state-wide average, particularly for underserved communities in the Prairie Island Indian Community (PIIC) neighboring the Project corridor. The proposed Project improvements incorporate specific safety improvements that are a part of documented risk reduction mitigation strategies such as FHWA's [Proven Safety Countermeasures](#) (PSC). These will include:

- construction of a new single lane roundabout at the CSAH 54/CSAH 68 intersection to provide traffic calming,

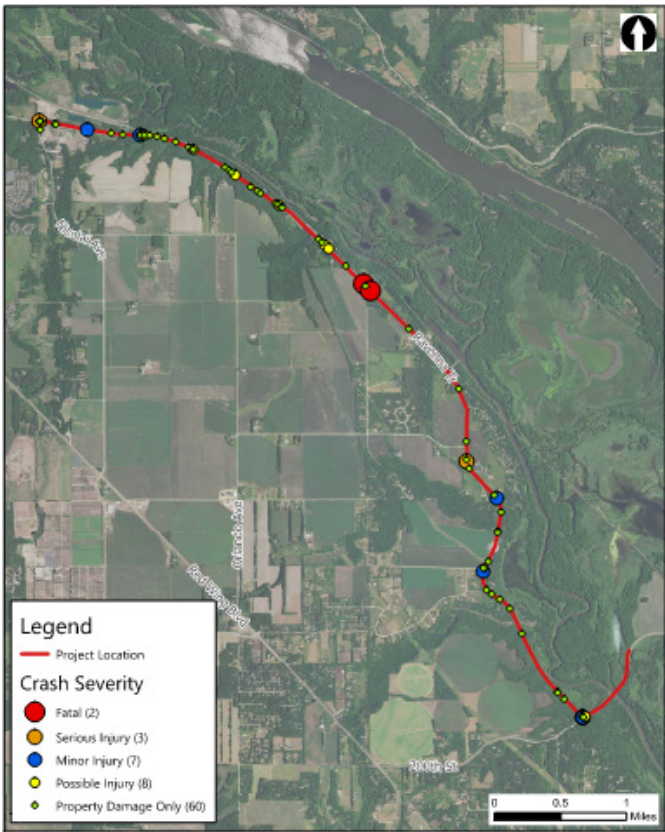


Figure 3 Crash Map for All Users within the Project Corridor (2019-2023).

- consistent eight-foot-wide shoulders to provide extra space for vehicles to recover from run-off-the-road incidents,
- dedicated turn lanes at intersections to provide separation for slower turning traffic at intersections,
- intersection lighting to improve navigation and driving/walking conditions, and
- a 7.5 long mile multi-use off-road trail to keep vulnerable roadway users separated from the high-speed vehicular traffic.

Table 1 Crash Analysis on the Project Corridor (2019-2023).

			Crash Rates - All Crashes			Severity Rates		
Description		AADT	Expected Crash Rate*	Actual Crash Rate	Critical Crash Rate	Expected Severity Rate	Actual Severity Rate	Critical Severity Rate
Intersections	County Road 54 & County Road 68	6,500	0.25	0.76	0.67	0.41	1.60	0.93
	County Road 54 & Glendale Road	5,500	0.25	0.8	0.71	0.41	1.30	0.98
Segment	County Road 54 (from Glendale Road to CR 68)	4,200	0.31	1.23	0.8	0.51	1.73	1.13
*Expected rates from MnDOT's 2015 Segment Green Sheets								
Crash Rate < Expected Crash Rate								
Expected Crash Rate < Crash Rate < Critical Crash Rate								
Crash Rate > Critical Crash Rate								

Protecting Non-Motorized Travelers



The Project incorporates Complete Streets methodology to create a network of active transportation infrastructure in Dakota County in alignment with the goals of [2040 Transportation Plan](#). The Project will improve safety for both motorized and non-motorized travelers along the corridor by constructing an off-road multi-use trail, extending for 7.5 miles within the project limits. The multi-use trail will provide a designated safe area for pedestrians away from the high-speed roadway. The trail will also provide a safer extension of the national Mississippi River Trail (MRT) and will further enhance connectivity

and recreational opportunities in Dakota County and the surrounding region.

The Project will resolve the existing safety challenges along the corridor by implementing a context-sensitive Safe Systems design that will improve equity and safety for all modes of travel.

It will also improve traffic operations and travel time reliability, reduce conflicts, and build a pedestrian/bicyclist

2. ENVIRONMENTAL SUSTAINABILITY

Alignment with Minnesota's Decarbonization Plan

Climate change is an important concern for many Minnesotans. In 2007, the State of Minnesota passed the Next Generation Energy Act (NGEA) that established goals for the state to reduce greenhouse gas (GHG) emissions by 80 percent before 2050. Progress towards this goal has been unsteady, and since 2016 GHG emissions from transportation, homes, and industry have been neutral or increasing. In December 2019, Governor Tim Walz established a Climate Change Subcabinet and a Climate Change Advisory Council to refocus towards reaching

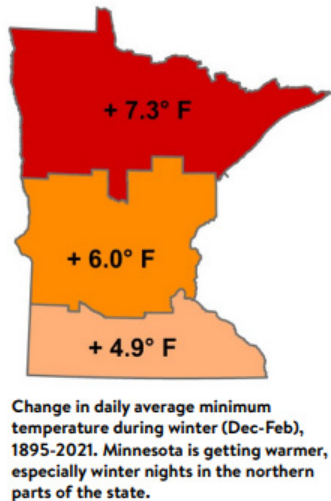


infrastructure that will provide safer movement for all users including the vulnerable population. **The projected crash cost saving because of the Project, over 20 years, is over \$47.7 million discounted at a rate of 3.1 percent.**

the NGEA goals. This initiative led to the development of [Minnesota Climate Action Framework](#) that prioritizes the following actions for clean transportation:

- increase funding for non-motorized transportation
- increase transit services and multimodal transport options
- develop a Clean Fuels Standard to incentivize increased investment in cleaner fuels such as ethanol, biomethane, lower-carbon biofuels, renewable fuels, etc.
- implement the Regional Electric Vehicle (EV) Midwest Memorandum of Understanding to establish an EV charging network across the Midwest
- develop a Minnesota Strategic Electric Vehicle Plan

This Framework also accounts for modal and user equity in policy decisions such that the benefits and burdens of transportation spending, services, and systems are distributed equitably and ensures that all Minnesotans can access the places they need to travel safely, conveniently, and affordably.



In alignment with the Minnesota Climate Action Framework, Dakota County aims to promote a friendly, clean, healthy, and growing community without placing environmental, economic and social burdens on current and future generations, as part of its [2040 Comprehensive Plan](#). The goals of this plan are to promote business and employment while protecting natural resource systems and providing a high quality of life. The main components of this plan are Transportation, Park System, Land Use, Natural Resources, and Mississippi River Critical Area. The Project will advance the goals of Minnesota Climate Action Framework and Dakota County 2040 Comprehensive Plan by increasing non-motorized infrastructure and through constructing and modernizing the deficient elements of the transportation system along the CSAH 54 corridor.

Avoiding Adverse Environmental Impacts

The Project is located in the vicinity of the Prairie Island Indian Community (PIIC), a Mdewakanton Sioux Indian reservation and federally recognized tribe. The community is located on an island in the floodplain of the Mississippi River, which suffers the dangers of major flooding every time the river overflows. Prairie Island is also home to the Prairie Island Nuclear Plant which also stores 47 casks of spent nuclear fuel on its premises. There are potentially several culturally significant sites in and around the Project corridor which need to be preserved through due processes during the environmental review phase.



Figure 4 Prairie Island Nuclear Plant and the Mississippi River

Dakota County recognizes the importance of this corridor to the tribal members of PIIC as well as to community residents. The Project will proceed through National Environmental Policy Act (NEPA) review and permit application in accordance with the requirements of Minnesota Pollution Control Agency (MPCA). The Project is near important public waters: the Vermillion River and the Mississippi River. The entire Mississippi River Valley is a massive wetland ecosystem directly north and east of CSAH 54. Additionally, the Natural Resources Department of Dakota County has found some rare plants such as [Berula erecta](#) in the Project corridor, near the intersection of CSAH 54 and CSAH 68. The Project will ensure no adverse impacts to the regional ecosystem by obtaining the necessary permits from applicable agencies.

Co-benefits of action

Connected communities and clean fuels support many additional benefits:



- Jobs in installing and maintaining clean fuel infrastructure and manufacturing clean transportation technology
- Healthier communities from more active transportation and reduced pollution
- Safer communities with fewer traffic accidents
- More accessible transportation that supports the movement of all Minnesotans, regardless of physical abilities
- Cleaner air and water
- Economic growth in rural communities

Reducing Transportation-Related Pollution and GHG Emissions

The Project supports the goals of the Minnesota Climate Action Framework through investment in affordable, multimodal transportation options. The Project improvements include constructing Americans with Disabilities Act (ADA) compliant, Complete Streets Approach based active transportation infrastructure for people walking, bicycling, rolling, and taking transit/micromobility options. Additionally, the Project will utilize recycled materials throughout construction process to minimize the carbon footprint due to construction. Improving travel time reliability will reduce idle time on the roads, thereby lowering GHG emissions.

Table 2 Emission Reduction

Emission Type	Reduction
CO2 (metric tons)	5,714
NOX (kg)	5,056
SO2 (kg)	35
PM2.5 (kg)	112

The Project is estimated to reduce 5,714 metric tons of Carbon Dioxide (CO2), 5,056 kilograms of Nitric Oxide (NOx), 35 kilograms of Sulfur Oxide (SO2), and 112 kilograms of particulate matter that are two- and one-half microns or less in width (PM2.5) over a 20-year period (Table 2). The projected air quality savings benefit because of the Project over this period will be approximately \$1.3 million.

Reducing Vehicle Miles Traveled by Encouraging Active Transportation

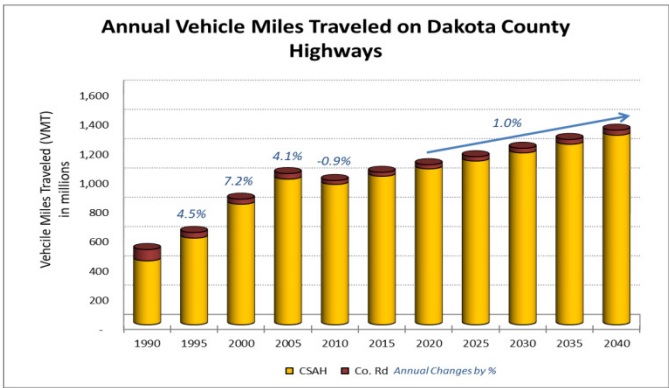


Figure 5 Annual VMT Increase Projections

Dakota County has expanded its [regional trail network](#) to encourage active transportation. The 2040 County [travel demand model](#) estimates that the vehicle miles traveled (VMT) will grow by approximately one percent annually, compared to the significantly higher increase

anticipated from previous models. This demonstrates that the efforts to reduce VMT are helping change travel behavior. Construction of a new off-road multi-use trail along CSAH 54 will enhance the multimodal network for pedestrians, bicyclists, and individuals of all ages and abilities. An increase in the active transportation mode would reduce the share of travel devoted to automobiles. [Studies](#) have shown that there is a reduction of up to 15 percent of VMT when pedestrian or bicycle facilities are offered in lieu of automobile transportation.

Improving Resilience of At-Risk Infrastructure

The existing storm sewer system along CSAH 54 needs to be replaced or rehabilitated from its existing conditions. Currently, natural surface water is conveyed via a series of culverts that qualify as bridges (bridge numbers 19J04, 2951, 92731, and L3214) at four locations along CSAH 54. All four crossings are experiencing varying levels of disrepair. Three of these culverts are located over dry run while one is situated over a stream. One of the structures is load posted (bridge #2951) and is exhibiting minor to deep spalling with rusted rebar, centerline delamination, minor to moderate cracking in wing walls, and other deficiencies documented during routine inspections. While the other three culverts are in relatively better condition, the CSAH 54 corridor is routinely impacted by major flooding during the snow melt in spring season. As the design progresses, the County will conduct hydraulic risk assessments and evaluate the need for replacement or rehabilitation of the existing stormwater infrastructure in the corridor. Dakota County considers sustainability and resilience measures such as addition fortification with rip rap or other slope protection given the known flooding impact of this critical access route.



Figure 6 Stormwater Infrastructure along CSAH 54.

3. QUALITY OF LIFE

Increasing Transportation Choices

Travel demand on CSAH 54 has grown considerably in the last 30 years. Dakota County is positioned favorably to the southeast of the Twin Cities Metropolitan Area and serves both urban and rural regions. The County provides access to airports, highways, and key employment and recreation destinations, along with the charm of balancing a rural lifestyle. These traditionally rural communities are becoming part of the commuter shed for the Twin Cities Metropolitan area, especially as hybrid and remote work environments change the landscape of commuter traffic patterns. The Project will improve mobility and safety along the CSAH 54 corridor by reducing congestion, improving pedestrian and bicycle circulation, and developing access for multimodal transit networks in the region, thereby providing significant quality of life benefits.

Proactively Addressing Equity

The Project will proactively address equity in the region through the creation of a new and safe off-road multi-use trail network. This active transportation infrastructure will help connect the tribal community of PIIC as well as County residents to important employment hubs in the region. The County has a significant population of people over 65 years of age who are traditionally dependent on multimodal transportation options such as on-demand transit or shared mobility services. The Project will help connect disadvantaged populations such as low-income individuals, seniors, tribal members, etc. to daily destinations and recreational facilities (Treasure Island Resort and Casino) in the vicinity of the Project. Dakota County champions the [Living Longer and Stronger](#) initiative that connect residents with resources to help them remain active and engaged in the community.

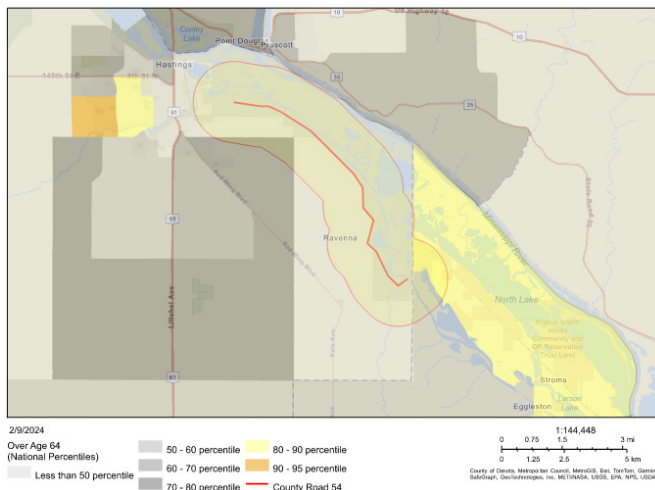


Figure 7 Aging Population in Dakota County.

As Project design progresses, the County aims to engage public individuals and disadvantaged groups, including PIIC tribal members, to better understand current transportation barriers and needs for underserved communities. Inputs from the underserved communities, obtained through meaningful engagement, will be the foundation of decision-making. The Project aims at increasing affordable transportation options through Complete Streets approach that integrates walking, bicycling, and transit choices.

The role of alternative modes of transportation is increasing to address congestion and changes in social and demographic needs including an aging population, more diverse population, and transit dependent population.

Expanding Active Transportation

Although the Project corridor is a part of the Mississippi River Trail (MRT), a designated bicycle and pedestrian trail that follows the Mississippi River, it is located on the paved shoulders along CSAH 54. Currently, there are no existing separate pedestrian and bicycle facilities along the corridor. Pedestrians and bicyclists use the shoulders along the high-volume, high-speed, two-lane rural roadway. This causes major safety concerns for vulnerable road users. There were two crashes reported between 2019 and 2023 that involved a bicyclist or pedestrian on the roadway.



Figure 8 Absence of Safe Multimodal Infrastructure.

The construction of the multi-use trail with ADA upgrades will enhance the regional trail network of Dakota County and beyond. The Project will leverage and advance the federal investments made in the region through the award of FY 2023 RAISE discretionary funds to Dakota County for the Mississippi River Greenway (MRG) project. The MRG project will complete the network gaps in the 27-mile scenic trail network from St. Paul, MN to Hastings, MN. The

trail provides important regional recreational connections and a safe transportation alternative for pedestrians and bicyclists. The proposed trail along CSAH 54 will further connect the MRG trail from Hastings to the PIIC and will follow similar design and innovation standards.

Project design will include construction of modern multimodal facilities along CSAH 54 and CSAH 68, thereby advancing public health by adding new facilities that promote walking, biking, and other forms of active transportation.

Integrated Land Use

The Metropolitan Council, the Twin Cities Metropolitan Planning Organization (MPO), is planning to relocate their currently operated wastewater collection and treatment plant (WWTP) from downtown Hastings to the site of a previous gravel pit on the border of Hastings and Ravenna Township. This site is located at the northwestern limits of the Project along CSAH 54 (Figure 9). The existing plant site located in downtown Hastings presents challenges to major renewal, land use compatibility, and expandability of the plant to respond to growth and changes in regulatory requirements. The new plant site provides the ability to expand to support growth in the long-term service area identified in the 2040 Water Resources Policy Plan. Access to the new WWTP site is provided by two entrances from CSAH 54 with additional access points created and abandoned during mining activities. The WWTP has completed preliminary design and is currently in final design. The construction of the project is anticipated to occur between 2024 and 2026 and is to be commissioned in 2027. The total capital cost associated with this project is \$165 million.

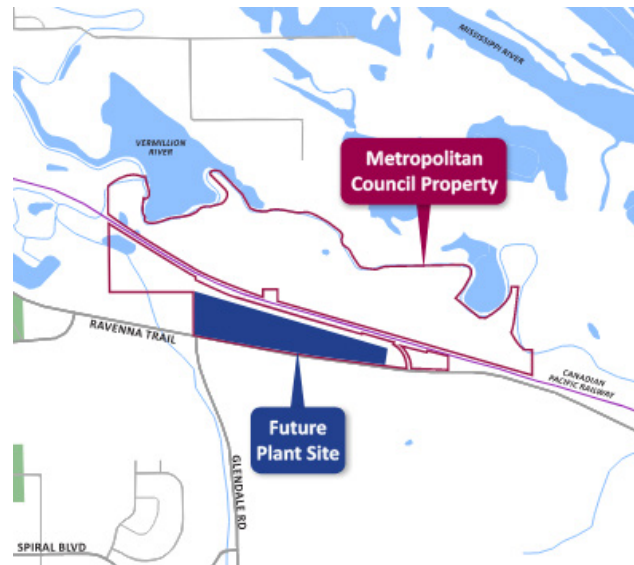


Figure 9 Met Council's New Wastewater Treatment Plant Site.

Improve Access to Daily Destinations

CSAH 54 creates a barrier to pedestrian mobility as it currently lacks any existing active transportation infrastructure along the corridor which further complicates mobility. The Project improvements previously noted will directly remedy the lack of current multimodal infrastructure, reduce automobile dependence, and improve access for people with disabilities.

The Benefit Cost Analysis for the Project shows a cost saving of over \$3.4 million in Quality of Life benefits, over 20 years.

4. MOBILITY AND COMMUNITY CONNECTIVITY

County State Aid Highway (CSAH) 54 corridor is critical for local circulation for both motorized and non-motorized travelers as it connects the city of Hastings to PIIC. Hastings has an excellent off-road trail system within the city as well as other active transportation systems connecting to other municipalities. This Project will be an extension of the regional system and will provide much needed connections to the PIIC.

Listening to Community Voices

Through past and currently active projects, Dakota County has meaningfully [engaged the community](#) in activities directly related to improving the active transportation network within the County (Figure 10). The County employs a deliberative, integrative, and comprehensive design/planning approach towards decision-making through community participation and data collection. The community has identified current barriers in mobility along CSAH 54 due to the lack of pedestrian infrastructure and the deteriorated roadway conditions. As preliminary design progresses, the County will continually seek public comment through various forms of outreach such as project [website updates](#), planned in-person open houses, newsletters, social media campaign, surveys, and feedback forums. The engagement activities will present information and incorporate feedback into the proposed improvements to gauge perception and identify if existing gaps have been addressed.

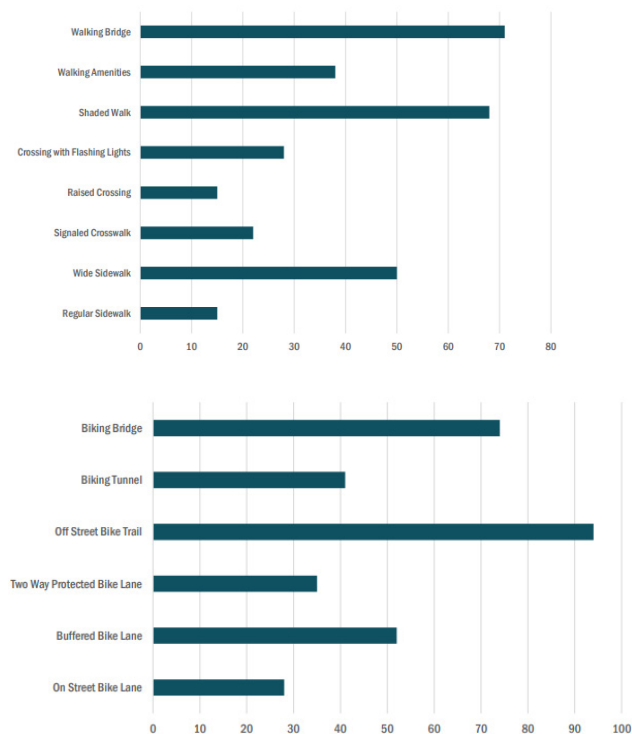


Figure 10 **Community Preference to Walking and Biking**

Removing Physical Barriers & Connecting Communities

The need for improved ADA compliant pedestrians and bicyclist connections identified through past public engagement was found to overlap with quantitative measurement of pedestrian and cycling infrastructure demand along the entire Project corridor, including the underserved communities in the Prairie Island Indian Community (PIIC). The [Suitability for the Pedestrian and Cycling Environment](#) (SPACE), a MnDOT tool to measure the need for prioritizing active transportation infrastructure over other modes of transportation, identified a high demand for pedestrian and cycling infrastructure along CSAH 54 (Figure 11). The Project improvements consists of several design elements, discussed further below, that proactively address the needs of the community by incorporating several elements of Universal Design and Complete Streets approach.

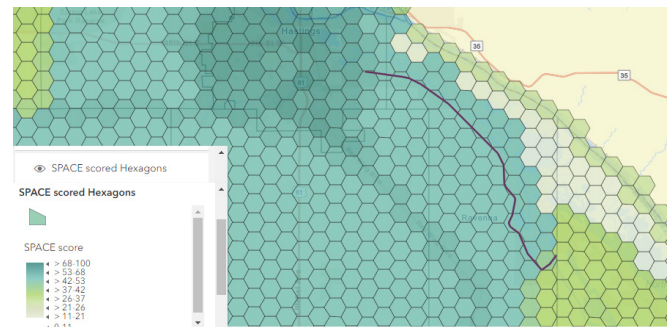


Figure 11 **Suitability for the Pedestrian and Cycling Environment**

Complete Streets Approach and Universal Design

The Project implements principles of the [Complete Streets approach](#) and [Universal Design](#) in the Project design elements by incorporating off-road multi-use trails, green spaces, raised medians, curb extensions, ADA compliant upgrades, marked crosswalks, tactile paving, and improved lighting and landscaping, among other elements. The Project corridor is redesigned as a vital public space with a focus on healthy, equitable design that can aggressively address unsafe road conditions, while also creating streets that support equitable mobility and sustainable transportation choices.

**“Most people prefer that walkers
and bikers have separated facilities from cars, especially on high-traffic roads.
Participants overwhelmingly preferred trails...”**

– Dakota County [Community Engagement Summary](#)

The construction of 7.5 miles of safer pedestrian and bicyclist infrastructure will encourage thriving communities to work, live, and play using transportation choices that do not involve the use of a car, thereby, benefiting the underserved communities of PIIC around the Project area. This is a crucial step towards improving mobility and increasing community connectivity for non-motorized travelers in the region.

5. ECONOMIC COMPETITIVENESS AND OPPORTUNITY

Facilitating Tourism Opportunities

The [historic town](#) of Hastings, Minnesota, has the charm of rural living with the benefit of proximity to the Twin Cities Metro area. Many enjoy evening trips and spending weekends in Hastings to get away from busy city life. Often their destination is the Treasure Island Resort and Casino, located on Prairie Island. It is one of the [“Five Main Twin Cities Casinos”](#), and features a 788-room hotel, 140-slip marina, 100-space recreation vehicle (RV) park and a 16,000-person capacity amphitheater.



Figure 12 Vermillion Falls Park in Hastings

Vacationers from the Twin Cities take CSAH 54 as the direct route as they pass through Hastings to Treasure Island. However, due to the current unsafe driving conditions along CSAH 54, some travelers choose to take the longer routes to bypass Hastings and avoid CSAH 54 to reach Treasure Island. The proposed improvements will make CSAH 54 safer and multimodal friendly by adding traffic calming solutions, dedicated turn lanes, improved lighting, and increased shoulder width as well as moving pedestrians

and cyclists onto their own separated multi-use trail. This will lead to better facilitating tourism opportunities to Treasure Island, an important recreational and employment hub in the region.



Figure 13 Treasure Island Resort and Casino

Promoting Long-Term Economic Growth & Wealth Building

[Dakota County](#) is the tenth fastest growing county in Minnesota by population. Of the 87 Minnesota counties, it has the 3rd largest economy. This can be partially attributed to the range of employment opportunities in the area, with almost 100,000 job vacancies. Unemployment is at 2.4 percent, lower than the state average. The labor force is also more racially diverse than the state average and is becoming increasingly diverse over time. Investing in transportation is important to leverage the opportunities in the area and maintain safe travel for commuters.

Supporting Local Inclusive Employment

Commuting and transportation are vital to employment in Dakota County. The neighboring communities of Hastings, Ravenna Township, and PIIC form a regional employment center. Most residents live and work within these limits. Additionally, a high number of non-residents commute here for employment. Within a three-mile radius of the Project, approximately 4,700 people commute here for work and approximately 8,800 people commute out (Figure 14). There are also about 2,000 residents who both live and work within three miles of the Project corridor.

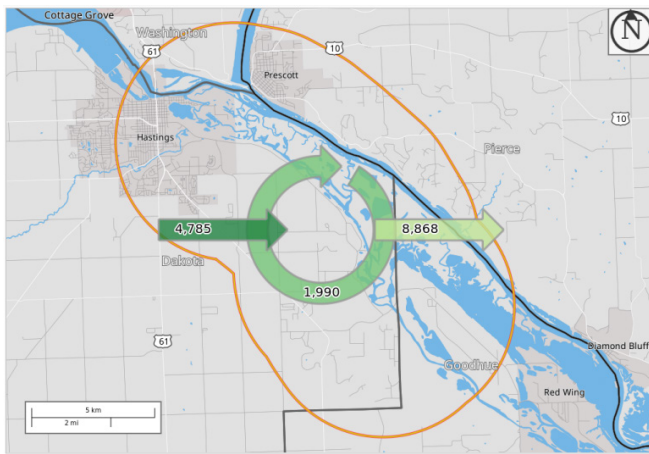


Figure 14 Inflow-Outflow Analysis

The Project corridor acts as a key link for employee commutes and as the major route leading to and from the significant employers such as Prairie Island Nuclear Power Plant (700 employees) and Treasure Island Resort and Casino (1,500 employees), etc. Several of these employers provide a choice to join a union for their employees and hire locally. Improvements to CSAH 54 will benefit those who commute from Hastings and Ravenna Townships to these regional employers. The Project will also generate employment as Dakota County partners with several local contractors and businesses as per their Equity and Inclusion Programs detailed in the Partnership and Collaboration Criteria later in the narrative.

The travel time and vehicle operating cost benefits due to the Project results in cost savings of over \$14.7 million.

6. STATE OF GOOD REPAIR

Prioritizing Existing Infrastructure

Dakota County owns and operates [424 miles](#) of county roads, including CSAH 54. The County maintains a high level of asset performance that makes the system safer and more reliable. However, due to the tremendous growth in the population of the area and resulting load on transportation networks within the County, investments in this Project by the USDOT and Dakota County will ensure that the current state of failing infrastructure is restored, upgraded, and maintained to build a safe transportation network that reduces future maintenance needs and lower life-cycle costs.

The Project meets the goal of USDOT and Dakota County to improve the condition and safety of existing transportation infrastructure within the existing footprint before proposing projects that add new general-purpose travel.

Addressing Current & Projected Vulnerabilities



Figure 15 Cracking along CSAH 54.

Under a no-build condition, CSAH 54 will deteriorate at a quickening pace as traffic volumes continue to rise as [forecasted](#). The County's Highway Maintenance Department predicts that crack sealing at a current cost of \$50,000 will be required every three years in addition to more frequent mill-and-overlays under No-Build. The Project improvements address current and projected vulnerabilities through a complete reconstruction of the corridor along with a single lane roundabout at the CSAH 54/CSAH 68 intersection, construction of the 7.5 miles of ADA compliant active transportation infrastructure, resilient drainage to avoid stormwater flooding, improved lighting, and other benefits. This not only provides much needed safety enhancements, but also ensures continued efficiency of transportation network, improved accessibility, and accelerated economic growth. Therefore, the Project is a sound investment as it maximizes and preserves the long-term value of CSAH 54 and the surrounding transportation network, by sustaining its long-term performance under growing traffic volumes.

Operation & Maintenance Plan/Funding

Dakota County will operate and maintain the infrastructure of the Project within its right-of-way. The County applies varying pavement preservation techniques to its roadway system to maintain it in a state of good repair. Generally, this includes applying three different pavement treatment types which are routine maintenance, pavement preservation, and rehabilitation/reconstruction. Property tax and municipal state aid maintenance allocation funds are used for annual routine maintenance and mill and overlay (pavement preservation) activities. Major roadway rehabilitation and reconstruction is funded by a combination of special assessments (where applicable), general fund levy, municipal state aid construction allocations, and long-term development funds. All sources of the County's funding are stable or growing based upon continued residential and commercial growth.

Operations and Maintenance Cost

Dakota County estimates that operation and maintenance of the Project, over 20 years, will result in a benefit of over \$4.8 million. Detailed analysis of the operation and maintenance activity cost estimates is available in [Benefit-Cost Analysis Memo](#).

7. PARTNERSHIP AND COLLABORATION

Leveraging Existing Investments

While CSAH 54 and CSAH 68 provide vital connections to the key destinations in Dakota County and beyond, they are also viewed as barriers to the local movement of non-motorized travelers due to the lack of safe pedestrian and bicycle infrastructure. Since 2008, Dakota County has actively engaged residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated in County projects. Dakota County, project partners – City of Hastings, Ravenna Township, Prairie Island Indian Community, and local stakeholders have participated in activities directly related to improving pedestrian/bicycle/vehicular movement and safety through a deliberative, inclusive, and comprehensive design/planning approach through various initiatives in the County.

Recent examples of Dakota County's collaboration with indigenous communities include working with Tribal Historic Preservation Officers on the Minnesota River Greenway – Interpretative and Culture Resources Plan, Spring Lake Regional Park Reserve Master Plan and the Bison Reintroduction Project at Spring Lake Regional Park Reserve.

Equity-Focused Meaningful Public Engagement

Dakota County is committed to successfully engaging the community through a process that is characterized by technical competence, honesty, integrity, and good listening. These principles will create the framework within which engagement will occur throughout the lifecycle of the Project. The County is currently hiring consultants to develop a Community Engagement Plan and conduct meaningful engagement and outreach activities through the following strategies:

- Early and continuous participation of community members,
- Reasonable availability of project information in a digital-first environment,
- Collaborative input on preliminary engineering,
- Open access to the decision-making process, and
- Proactive efforts to inform and engage community members.

The County has tentatively planned for two open houses, up to two neighborhood meetings, up to eight property owner meetings, as well as an online survey/comment platform. Additionally, project information will be disseminated through newsletters and a project website, throughout the duration of the Project.

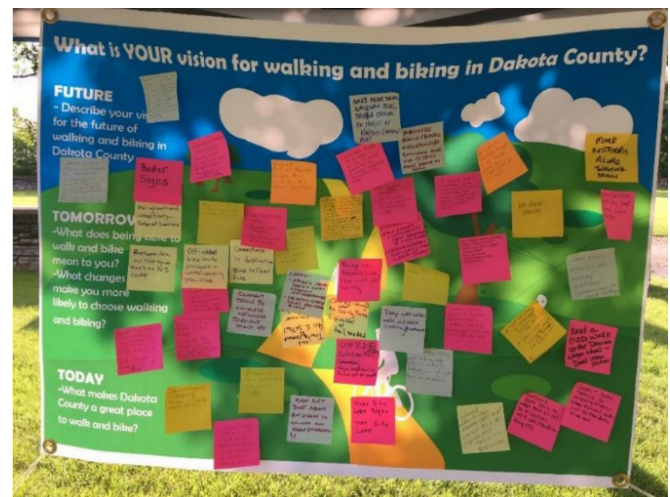


Figure 16 Public Engagement Event.

Equity and Inclusion & Workforce Development Programs

Dakota County is the lead applicant and primary point of contact for this RAISE Grant application. Dakota County has a long history of successful collaboration and coordination with other agencies at the local, state, and federal levels. The County officials have significant, proven experience in the successful management and implementation of federal grants, as the County received \$8.8 million from RAISE 2023 to construct the project “Dakota County, Minnesota: Completing the Mississippi River Greenway”. The County sought partnerships with cities, private landowners, community groups, the National Park Service, and the Metropolitan Council to meet the diverse needs of the users.

As the lead implementing agency Dakota County will ensure broad advertisement of proposals to attract consulting firms, construction companies, and vendors that meet the disadvantaged business goals of program. As a partnership project with the Prairie Island Indian Community, it is important that indigenous based firms are encouraged to submit proposals for all or a portion of the proposed Project.

Project Partners

The Project will be led by Dakota County and is overwhelmingly supported by various public and private organizations including the City of Hastings, Ravenna Township, and the Tribal Council of the Prairie Island Indian Community. Additionally, the Project is also supported by various members of Congress both at federal and state levels. The letters of support can be found [here](#).

8. INNOVATION

Innovative Technology

Dakota County has championed numerous innovative strategies through planning, design, and construction processes in the implementation of various County projects. In 2010 Dakota County created the Greenway Collaborative. The collaborative framework is used to plan projects across jurisdictional boundaries, share project delivery, create efficiencies among agencies, and develop cost-share agreements for initial construction and ongoing maintenance. As technology evolves, the County challenges itself to embrace new ideas and implement resulting innovations into their construction projects.

Electric Bike/Wheelchair Charging

Dakota County continues to observe significant growth in the number of electric bikes traveling to and along the

Mississippi River Trail. Recently Dakota County has initiated an effort to better integrate charging facilities at trailheads and rest areas to accommodate recharging electric bikes and mobility devices for people of all abilities. The Project will leverage similar federal investments in the Mississippi River Greenway project and will include outlets along the trail for mobility devices. These proposed strategies will facilitate better access to charging by:

- Providing wayfinding and signage that identifies available outlets,
- Inclusion of electrical outlets at new rest areas with access to power, and
- Piloting the use of solar charging benches along Project corridor.

Providing mobility device charging is an innovative approach that is currently not a standard approach for trails in the Twin Cities region.



Figure 17 **Electric Charging Station**

Context-Specific Solutions

Dakota County has been actively studying its transportation corridors and travel pattern behaviors. As a result, improved crossing designs of major roadways, specific to the higher speed and high volume, have been investigated/piloted. The County studied using temporary installation of design elements and collected data at each location for context-specific solutions. The innovative use of temporary installations enabled the County to observe driver behavior and modify safety initiatives to fit the specific locations and make the most effective long-term safety improvements. Similar elements will be incorporated in this Project to enhance the safety of non-motorized users with a focus on context-specific solutions.

Fiber Optics Network

Rural internet access is a growing concern with rural communities far less likely to have access to reliable internet service. Fiber-optics conduits can vastly improve internet service in rural areas, support economic development opportunities, provide a framework to adopt Intelligent Transportation Systems (ITS), and/or to assist future Connected and Automated Vehicles (CAV). As project design progresses, Dakota County will explore the construction of a fiber optics infrastructure to facilitate advanced technologies.

Innovative Project Delivery

Civil Information Management Software/3D & 4D Modeling

The Project designers will use innovative Civil Information Management (CIM) software for preliminary modeling and visualization of the Project to understand and mitigate impacts. This allowed stakeholders and partners to make decisions through visuals in real-time. The Project will continue to utilize CIM software to model and visualize the project, as well as increase transparency of the project. Transparency enables owners, consultants, contractors, and stakeholders to easily work together. The CIM software enables designers to make constant adjustments to the design to ensure the best alternatives. The software also uses embedded 3D visualization as part of the process which enables effective conflict detection, rapid design review, and validation. These efforts will reduce the project schedule and overall cost.

Transportation Management Plans for Mitigating Risks

A project-specific transportation management plan (TMP) will be designed and implemented to maintain acceptable levels of safety, accessibility, and mobility. The plan will minimize traffic congestion near the work zone because of temporary roadway closures and detour routes. The TMP will also identify a variety of management strategies to mitigate negative impacts on traffic. These strategies will include increased incident management and vehicle removal capabilities, intelligent transportation system

(ITS) technologies to divert traffic and inform travelers of delays and encourage alternate routes, work zone traffic simulations to forecast impacts on traffic flow and congestion, alternative scheduling and phasing including nighttime construction, and scheduling work to minimize lane closures and delays during peak traffic hours.

Innovative Financing

Dakota County recognizes that transportation investments directly and indirectly foster economic growth through the provisioning of construction jobs, enabling goods to be transported through a commerce friendly network of corridors and providing mobility to citizens; Dakota County is committed to investing in our roads and bridges that contribute to a growing economy and will continue supporting commerce.

IIJA Discretionary Match Program

The Minnesota Department of Transportation (MnDOT) created the IIJA Discretionary Match Program with \$216.4 million in general funds provided by the Minnesota Legislature in the 2023 Session ([Chapter 68, Article 4, Section 111](#)). This funding is available to grant recipients that have directly received a federal discretionary award for a transportation-related purpose under IIJA and will be used as matching funds towards such awards. The County will utilize IIJA Discretionary Match program to provide local funds following an award of the RAISE grant.

Transportation Advancement Account & Sales Tax

Dakota County implemented a quarter-cent sales tax and \$20 excise tax on new vehicle sales to fund much needed transit and transportation projects in the County. In addition, the County may further utilize Transportation Advancement Account (TAA) established by the Minnesota Legislature through omnibus transportation bill, [Chapter 68](#), which provides ongoing funding for transportation projects in Minnesota. This would enable the County to provide additional funding, if needed, to fund the project completely.

SUPPORTING DOCUMENTS

Links to supporting documents are included throughout this narrative. All supporting documents and the RAISE grant application narrative are available to view at the following webpage:

<https://www.srfconsulting.com/dakota-county-54/>