US 212 Rural Freight Mobility and Safety Project

2022 REBUILDING AMERICAN INFRASTRUCTURE WITH SUSTAINABILITY AND EQUITY (RAISE) PROGRAM

Project Name: **US 212 Rural Freight Mobility and Safety Project**
Project Type: **Rural Capital Project**
Total Future Eligible Cost: **$59,146,512**
2022 RAISE Funds Requested: **$10,000,000**

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Supporting Information can be found at:
https://www.srfconsulting.com/carver-county-us-212-raise/

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I. PROJECT DESCRIPTION

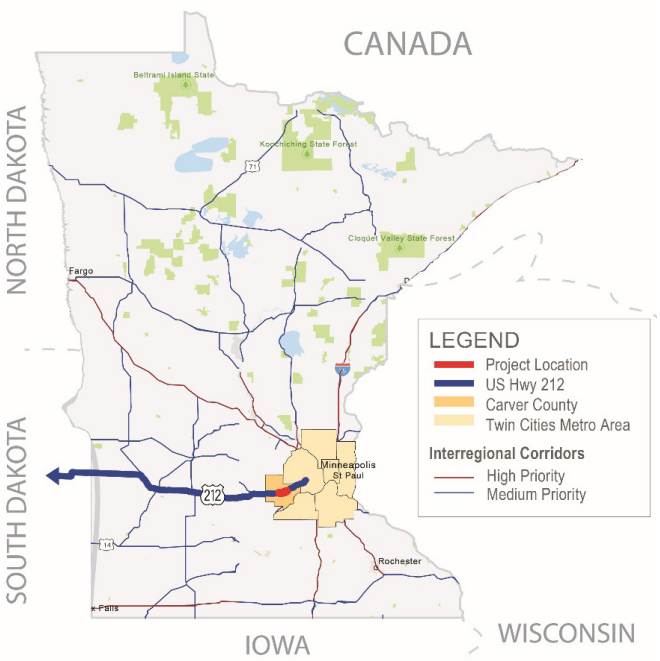

Figure 1 Project Location in Regional Context

The US 212 Rural Freight Mobility and Safety Project (herein known as the Project) will expand approximately five miles of US Highway (US) 212, an existing Principal Arterial roadway, from a rural two-lane undivided highway to a four-lane divided expressway from County State Aid Highway (CSAH) 36 in the City of Cologne to Tacoma Avenue in the City of Norwood Young America. The Project will construct Reduced Conflict Intersections (RCIs) and a grade-separated interchange to improve traffic flow and enhance safety in the corridor. **A short video outlining the Project needs and benefits is available here.** In addition to sustainability and equity advancements, this Project will improve the rural transportation system and freight travel by reconstructing the 90-year-old roadway, adding capacity to address high crash rates, and reconfiguring intersections to address unsafe conditions. These improvements will vastly improve freight efficiency, improve rural safety, and strengthen rural access to economic opportunities.

US 212 is a vital connection for freight transportation and rural access to education, healthcare, and employment.

US 212 is identified by the Minnesota Department of Transportation (MnDOT) as a Critical Rural Freight Corridor in the Minnesota Statewide Freight System and Investment Plan (2018) through the project area. The roadway provides essential freight connection for over 22,000 square miles of Southwest Minnesota that does not have access to the Minneapolis/St. Paul Metropolitan Area (Twin Cities) using the Interstate Highway System. The roadway has 1,350 heavy commercial annual average daily traffic (HCAADT) and moves large amounts of freight from Minnesota, South Dakota, Wyoming, and Montana. This Project will improve freight mobility and connectivity for freight haulers who utilize US 212. There are over 65 major freight generators located along the entirety of US 212 in Minnesota, of which 12 are located immediately adjacent to the project area. As part of the US Highway 212 Corridor Study, 16 major freight generators were interviewed, and all supported the Project. US 212 was identified by every business interviewed as key to receiving inputs to production and shipping manufactured goods to the market.

Expansion of US 212 will directly benefit rural Minnesotans, freight haulers, local and regional businesses, the surrounding environment, commuters, and the local economy. Expanding the roadway will relieve congestion and reduce idling, creating a cost savings for commuters and freight vehicles, reducing negative impacts on the environment, and improving travel time reliability. Reconstruction of the roadway, improved intersection geometry and decreased delays benefit freight haulers, the regional economy, and local businesses. As freight is less likely to be damaged due to poor pavement, drivers

will have more reliable delivery schedules, and vehicles will experience improved safety at intersections, the efficiency and use of US 212 by regional businesses will increase.

This Project benefits rural Minnesotans, freight haulers, local businesses, and the regional economy.

PROPOSED IMPROVEMENTS

The existing Project corridor is a two-lane undivided rural roadway with narrow lanes, narrow shoulders, limited turn lanes, poor roadbed condition, and unsafe intersections. Intersection safety and delay issues are further illustrated in this video. As shown in the video, local road intersections at US 212 are a rolling stop. During PM peak hours, there is a significant wait time, of over two minutes, to make a safe turn from the local connection on to US 212. These inadequacies create bottlenecks in the interstate freight supply chain and perpetuate safety issues, which lead to truck travel time delay and reliability uncertainty. Between the Twin Cities and Cologne, US 212 is a continuous four-lane roadway. **This Project will replace the remaining two-lane gap with a four-lane divided expressway.**

The Project improvements will focus on safety and efficiency for the local rural community and regional freight traffic, while enhancing equity and sustainability along the corridor. According to MnDOT crash data (2010-2020), approximately 15 percent of all crashes (31 crashes) within the project area involve medium to heavy freight trucks, and other freight-related vehicles[1]. The proposed improvements, specifically installation of RCIs, interchange, wider shoulders, and medians between travel lanes, will reduce overall crash frequency at the intersections along US 212 by 15 percent, right angle crashes by 77 percent, and the frequency of severe (fatal and serious injury) crashes by 100 percent[2].

The existing US 212 roadway between CSAH 51 and CSAH 36 is currently at capacity[3] and is identified as a future Congested Principal Arterial in the Metropolitan Council's 2040 Regional Travel Demand Model. The Metropolitan Council expects Carver County to grow by over 60 percent by 2040, leading to further congestion and travel time concerns. It is likely that industrial and manufacturing land uses will continue to locate near the corridor, further increasing freight traffic on US 212. Reconstruction of this segment of roadway is key to ensuring freight facilities and transporters have a safe and efficient connection between rural and urban Minnesota communities.

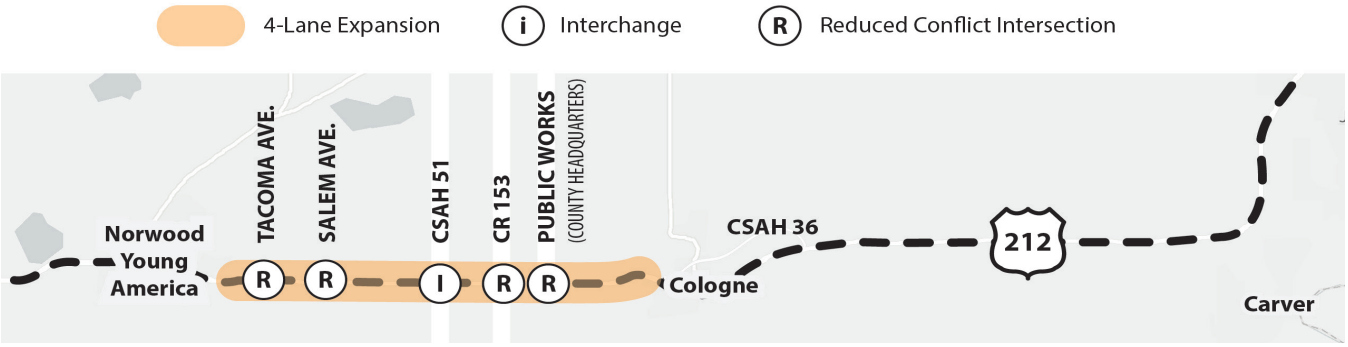

Figure 2 Proposed Project Elements

This Project will expand US 212 from two to four lanes, install RCIs, and construct a grade-separated interchange.

[1] *Based on data from the Minnesota Department of Transportation's Crash Management Analysis Tool*
[2] *Impact of RCIs on Crash Reduction*
[3] *Based on analysis completed for Carver County's US 212 Project*

PROJECT HISTORY

MnDOT and Carver County have partnered to develop a vision for the corridor and implement mobility and safety improvements on US 212.

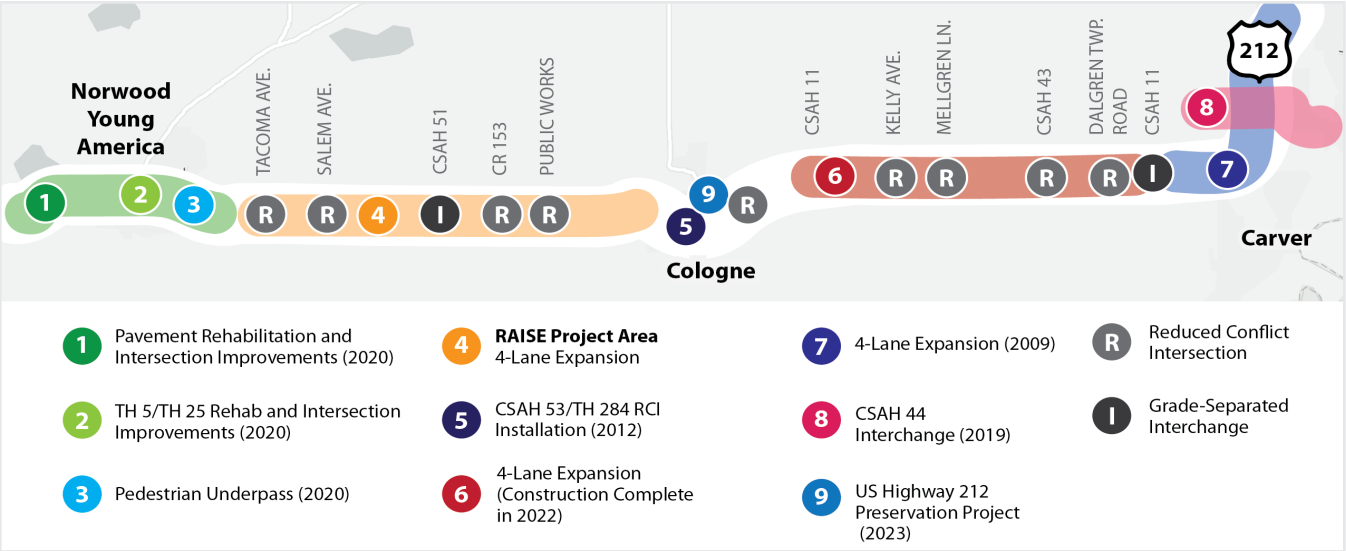

Figure 3 US 212 Project History

The County in partnership with MnDOT, local communities, businesses, elected officials and interested citizens completed the US Highway 212 Corridor Study in 2013 which identified a long-term vision and short-term safety improvements for the corridor. This study identified expansion of the remaining two-lane, undivided sections of US 212 as a critical priority in achieving a seamless freight corridor.

The County and its partners have made several critical investments in the corridor to improve safety and mobility. In 2009, MnDOT upgraded a portion of US 212 from a two-lane highway to a four-lane limited access highway from the eastern terminus of the corridor to the City of Eden Prairie. The expansion of US 212 between CSAH 36 (east of Cologne) and CSAH 11 (Jonathan Carver Parkway) – immediately to the east of this Project is under construction and on schedule to be completed in October 2022. MnDOT is currently advancing a preservation project to resurface the existing pavement, construct a median barrier, rehabilitate two bridges, and install lighting to improve safety and pavement conditions along the existing expressway segment in Cologne from CSAH 36 W to CSAH 36 E. This project is planned to begin construction in 2023.

If this Project receives RAISE funding, it will remove the only remaining two-lane section along the corridor.

II. PROJECT LOCATION

US 212 spans 138 miles from the South Dakota state line to Interstate 494 (I-494), connecting regional traffic from the urban Twin Cities and Western Minnesota rural communities to the rest of the Great Plains. US 212 serves as a primary route linking Minnesota's economic regional trade centers. The Project is located approximately 8 miles west of the Minneapolis – St. Paul, MN-WI (Twin Cities) Urbanized Area and is designated as a Rural Area. The Project includes approximately five miles of US 212 between the Cities of Norwood Young America and Cologne in Carver County, Minnesota.

Table 1 Project Area Population

Location	City of Norwood Young America	Benton Township	City of Cologne
Population	3,746	774	2,199

Source: American Community Survey, 2020

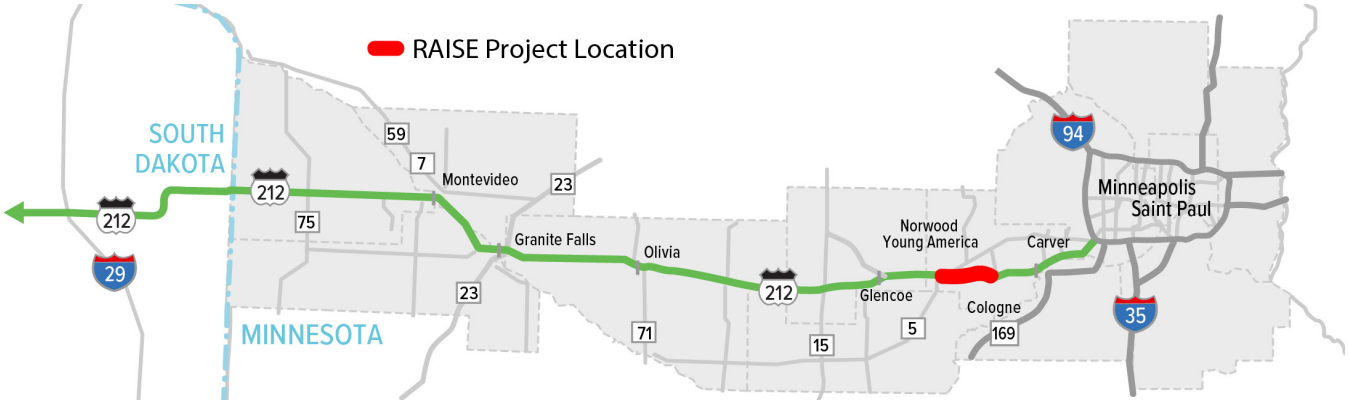

Figure 4 Project Location

The entire Project corridor is in a rural area, outside of designated urbanized areas. The Project intersects communities whose economies depend upon manufacturing and agricultural industries. The proposed safety and capacity improvements will strengthen the rural transportation infrastructure to reduce fatalities and facilitate the efficient movement of goods and people. US 212 impacts freight communities from western South Dakota through eastern Wisconsin and is an integral part of Minnesota's interstate freight transportation system (see Figure 5).

Figure 5 Most Utilized Freight Routes from Project Area

Source: MnDOT Urban Freight Perspectives Study

III. GRANT FUNDS, SOURCES AND USES OF ALL PROJECT FUNDING

PROJECT BUDGET

Total Future Eligible Cost: **$59,146,512**

RAISE Grant Request Amount: **$10,000,000**

Availability and Commitment of Funding Sources

This funding request is the final piece to the total project funding package. All funding identified below is available and is formally committed to this Project (see documentation including Metropolitan Council Letter of Support, MnDOT Letter of Support, and Carver County Resolution.)

Carver County is committed to contributing $4.5 million dollars from the adopted County Transportation Local Option Sales Tax. At the State level, the Project is receiving funding from MnDOT and State Legislature as state bond funds. MnDOT has allocated $2.55 million to utilize for construction administration costs and $3.9 million for design and right-of-way, Additionally, $25 million has been allocated by Minnesota State Legislature in 2021 state bond funds.

The Project has secured $3.5 million from the Metropolitan Council's (the local MPO) Regional Solicitation funding program for federal fiscal year 2025 and $7.5 million in Minnesota Highway Freight Program (MHFP). Additionally, $2.5 million has been secured though congressionally directed funding. This amounts to a total of $13.5 million or 23 percent secured in other federal funding and will be allocated to construction.

Table 2 Project Costs and Funding.

	Project Tasks	Project Funding										Total Cost Estimate
		Federal Funding		Other Federal		Non-Federal						
		RAISE		Regional Solicitation, MHFP & Congressionally Directed		State of Minnesota		MnDOT		Carver County		
		Dollars	Percent Total	Dollars	Percent Total	Dollars	Percent Total	Dollars	Percent Total	Dollars	Percent Total	
Past Expenses	Design Engineering & Environmental Review	$0	0%	$0	0%	$0	0%	$303,488	0%	$0	0%	$303,488
	Right-of-Way Acquisition (Trunk Highway)	$0	0%	$0	0%	$0	0%	$0	0%	$0	0%	$0
	Right-of-Way Acquisition (Local Roads)	$0	0%	$0	0%	$0	0%	$0	0%	$0	0%	$0
	Total Past Expenses	$0	0%	$0	0%	$0	0%	$303,488	0%	$0	0%	$303,488
Future Costs	Prelim Design & Environmental Assessment	$0	0%	$0	0%	$0	0%	$596,512	1%	$0	0%	$596,512
	Final Design Engineering	$0	0%	$0	0%	$0	0%	$2,000,000	3%	$0	0%	$2,000,000
	Right-of-Way Acquisition (Local Roads)	$0	0%	$0	0%	$2,000,000	3%	$1,000,000	2%	$0	0%	$3,000,000
	Construction Costs	$10,000,000	17%	$13,500,000	23%	$23,000,000	39%	$0	0%	$500,000	1%	$47,000,000
	Contingency	$0	0%	$0	0%	$0	0%	$0	0%	$4,000,000	7%	$4,000,000
	Construction Administration	$0	0%	$0	0%	$0	0%	$2,550,000	4%	$0	0%	$2,550,000
	Total Future Costs	$10,000,000	17%	$13,500,000	23%	$25,000,000	42%	$6,146,512	10%	$4,500,000	8%	$59,146,512
Funding Breakdown	RAISE Request	$10,000,000	17%									
	Other Federal	$13,500,000	23%									
	Non-Federal	$35,646,512	60%									
	Total Future Project Cost	$59,146,512										
										Total Project Cost (Past + Future)		$59,450,000

For a detailed cost and funding breakdown, please see the Detailed Cost and Funding Table on the project website.

NON-FEDERAL FUNDING SOURCES

Carver County Funding

Carver County has served as the champion of the Project and is committed to provide $4.5 million toward the Project. The Carver County Board of Commissioners adopted a resolution to approve the request for RAISE funding and to commit to the local match for the Project. Local funding from Carver County is dedicated to the Project from the local option sales tax. In 2017, Carver County enacted a one-half cent local option sales tax and $20 wheelage tax on vehicle purchases to finance transportation projects in the county. The one-half cent local option sales tax provides approximately $8 million in annual, non-federal revenue dedicated for transportation improvements within the County. This Project is specifically identified to receive

these local funds in the County's adopted Transportation Tax Plan, which designates eligible projects for the tax revenue.

STATE FUNDING

MnDOT is committed to providing State funding for this highway Project, which is under their jurisdiction. This includes two allocations by law from the State Legislature of $3.9 million and $25 million allocated for the project. MnDOT has also committed to providing Construction Administration services for the project totaling $2.55 million. Since the roadway is a US Highway, future ongoing maintenance and operations of the new facility will be managed by MnDOT. Section IV, Criterion #6, State of Good Repair, provides additional details about MnDOT's operation and maintenance commitment.

OTHER FEDERAL FUNDING SOURCES

The Project was submitted for INFRA and BUILD/RAISE funding in FY 2018-2019, 2019-2020 and 2020-2021. Carver County and MnDOT have previously secured the funding detailed below for additional improvements within the larger US Highway 212 Corridor.

Metropolitan Council Regional Solicitation

The Metropolitan Council, the Twin Cities regional metropolitan planning organization, administers the Regional Solicitation program, a competitive process where federal transportation funds are allocated to local governments, state agencies, and transit providers to fund regional transportation needs. In 2020, this Project received $3.5 million to address safety and congestion issues at the intersection of US 212 and CSAH 51.

Minnesota Highway Freight Program (MHFP) Federal Funding

In 2017, Carver County was awarded $15 million in federal Minnesota Highway Freight Program (MHFP) funding through MnDOT.

RAISE FUNDING NEED

Carver County, in partnership with MnDOT and local communities, has secured approximately $50 million in non-federal and Federal funding to invest in the Project (approximately 83 percent of the total future eligible project costs). Over $245 million in roadway investments and over $30 million in transit have been secured and utilized for projects immediately adjacent to this Project to advance US 212 Corridor expansion.

If the RAISE grant is not awarded, the expansion of US 212 from a two-lane rural highway to four-lane divided highway with wider shoulders would be limited in scope with added dependence on increased local County funding to implement the full project vision for a US Highway. The geometry of the roadway would be unchanged, meaning the Project corridor would see increases in the crash cost and crash frequency. There have been 11 fatalities from crashes on the existing two-lane segments of US 212 in the last 11 years. None of the planned innovative and safety improvements of the Project would be constructed.

IV. MERIT CRITERIA

ELIMINATE the freight bottleneck | **EXPAND** rural access & opportunity | **IMPROVE** roadway safety | **ENSURE** sustainability & equity

SAFETY

This Project supports the ROUTES initiative by implementing key design interventions to reduce the number of fatal and serious injury crashes along US 212. In the past 5 years, 3 fatalities have occurred at the intersection of US 212/CSAH 51, with two of them in 2018. Thirty percent of the crashes in the project area are categorized as serious injury or fatal crashes, with 50 percent of the freight-related crashes resulting in serious, minor, or possible injury.

This Project will reduce the crash rate for fatal and serious injury crashes by up to 73 percent.

The existing geometry and alignment of US 212 presents a serious safety issue. From 2018-2020, the following types of crashes have occurred in the project area:

3	11	14
serious injury or fatal crashes	minor injury crashes	possible injury crashes

The US 212/CSAH 51 intersection was included as a "study intersection" as part of the MnDOT County Road Safety Plan Update workshops. Crash data was obtained for the years 2018 through 2020 from the Minnesota Crash Mapping Analysis Tool (MnCMAT). Following extensive analysis, community engagement and expert review, the following key takeaways emerged: 1) Current crash rates for the segment of US 212 between CSAH 51 and CSAH 36 is over the statewide average crash rate. 2) In the past ten years, 50 percent of the freight-related crashes resulted in serious, minor, or possible injury. The implementation of strategic improvements will greatly reduce the crash rate occurrence and crash severity along US 212. Using relevant studies[4] and research and Crash Modification Factors[5], the estimated crash rate following Project implementation was estimated.

Approximately 65 percent of Minnesota's severe lane-departure crashes occurred on rural roadways. Of these, over three-fourths occurred on 2-lane roads with speeds of 45 MPH or greater – such as US 212. This Project will implement shoulder rumble strips and stripes, widen shoulders, expand to 4-lanes, install RCIs, and construct a grade-separated interchange – all of which are significantly linked to a decrease in fatal and severe accidents.

According to MnDOT crash data (2010-2020), approximately 15 percent of all crashes (31 crashes) within the project area involve medium to heavy freight trucks, and other freight-related vehicles. The proposed improvements, specifically installation of RCIs, interchange, wider shoulders, and medians between travel lanes, will reduce overall crash frequency at the intersections along US 212 by 15 percent, right angle crashes by 77 percent, and the frequency of severe (fatal and serious injury) crashes by 100 percent.

[4] *Relevant Crash Reduction Studies*
[5] *Relevant Crash Modification Factors*

The proposed safety improvements will also address the reliability impact that occurs when the highway is shut down for several hours in both directions following a severe or fatal crash. Recently, on Memorial Day, May 31, 2021, US 212 was closed for approximately 4 hours in both directions following a head-on severe crash between a pickup truck and a semi-tractor trailer. The crash occurred within the project area approximately 1-mile east of Salem Ave. at about 11:30 AM. The driver of the pickup truck was extricated from the vehicle and transported to emergency medical services. The MN State Patrol conducted an investigation of the crash scene, which required US 212 to be closed for the extended period.

Crash along the eastern end of US 212 (4-lane to 2-lane transition)

Table 3 Crash Rate (All types)

Type	Location	Existing Crash Rate	Average Crash Rate*	Average Critical Crash Rate*	Critical Index	Estimated Crash Rate After Project	Crash Rate Change
Intersection (All Types)	CSAH 51	0.36	0.25	0.53	0.68	0.08	**-78%**
	CR 153	0.13	0.25	0.54	0.24	0.04	**-69%**
	CSAH 36	0.36	0.25	0.55	0.65	0.16	**-56%**
Intersection (K & A Only)	CSAH 51	8.07	1.05	5.70	1.42	0.0	**-100%**
Segment (All Types)	CSAH 36	0.78	0.76	1.08	0.72	0.27	**-65%**
Segment (K & A Only)	CSAH 36	3.88	1.97	5.45	0.71	0.0	**-100%**

Source: Technical Analysis based on Crash Modification Factors from the CMF Clearinghouse

**Statewide Average for Similar Intersections*

ENVIRONMENTAL SUSTAINABILITY

Support for Local and Regional Sustainability Plans

This project directly supports the State of Minnesota's Climate Action Plan, specifically the following goals:

Strengthen efforts to [...] **reduce reliance on** single occupancy, **internal combustion engine vehicles**	**Reducing surface transportation emissions** by reducing the number of trips taken, making shorter trips, and increasing the efficiency of vehicles or traveling by foot or bike
Promote transit and multimodal travel	**Increase availability of multimodal travel options**

The Project will decrease heavy commercial vehicle operational time by 10,500 hours annually, reduce the 13% through traffic travel speed reduction during peak hours, and reduce vehicle idling (both personal and commercial) by reducing congestion, crash, and snow-related delays.

Table 4 Emission Impacts at US 212 & CSAH 51

	Existing Value	Future Value	Change
Volume (vehicles per hour)	1,543	1,083	Reduction of 460 vehicles
Total Delay per Vehicle (seconds/vehicle)	5	1	Reduction of 4 seconds
CO Emissions (kg)	2.96	0.61	CO emission reduction of 2.35 kg
NOx Emissions (kg)	0.58	0.12	NOx emission reduction of 0.46 kg
VOC Emissions (kg)	0.69	0.14	VOC emission reduction of 0.55 kg

Source: Synchro Analysis completed as part of the US 212 Expansion Regional Solicitation Application (2020)

The Project will promote transit, pedestrian, and bicycle travel. For the 12,000 workers who live within one mile of US 212, transit travel time reliability, safety, and efficiency will improve[6]. The Project will also improve connection and speed for existing transit operations-such as the SmartLink (TransitLink) bus garage adjacent to the corridor, and the SouthWest Transit Park and Ride immediately east of the Project. Pedestrians and bicyclists will experience increased safety with wider shoulders, divided medians, RCIs and improved visibility. As part of sidewalk construction, all sidewalks and curbs will also be upgraded to meet ADA requirements.

US 212 is identified as an Electric Vehicle (EV) Charging Station Corridor by the Minnesota Pollution Control Agency (MPCA)[7]. These corridors receive priority for grants related to EV stations and facilitate a state-wide system of accessible EV facilities. Carver County intends to install DC Fast-Charge Electric Vehicle (EV) Charging Stations along the project corridor for community use. Two EV stations are planned to be installed at the Public Works facility centrally located in the project area. These fast-charge stations (fully charging in approximately 30 minutes) will encourage the use of EV, ensure commuters utilizing US 212 have accessible and convenient access to

[6] *Based on data from OnTheMap, an employment analysis tool utilizing US Census Data*
[7] *Minnesota Pollution Control Agency Map of EV Corridors*

charging stations, and reduce vehicle-related emissions within the project area.

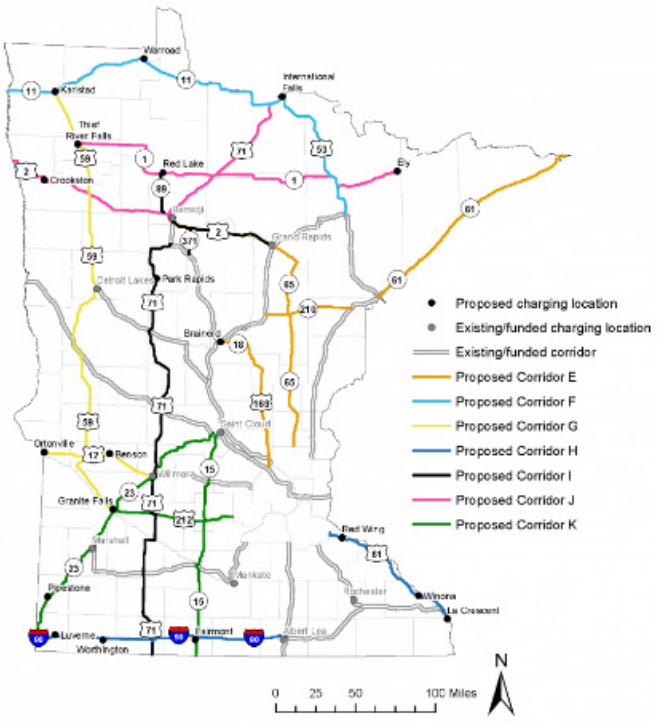

Figure 6 EV Charging Station Corridors

Water Management

The existing corridor contains minimal stormwater management practices to reduce nutrient loading or runoff volume to downstream water resources. Sediment and nutrients picked up along paved surfaces by runoff are discharged to surrounding wetlands, streams and lakes. The Project will incorporate new stormwater management practices that reduce nutrient loading and runoff volume. Proposed improvements include sedimentation, filtration, plant uptake, and groundwater recharge methods. The Project includes many wet ponds and infiltration basins (see detailed map here).

The wet ponds and infiltration basins are designed to meet Carver County Water Management Organization (CCWMO) and MnDOT standards. The cumulative treatment capacity along the corridor will remove nutrients from more than 270,000 cubic-feet of runoff (generated by a 1-inch storm). The new improvements will also capture and retain more than 130,000 cubic-feet of runoff (from a 1-inch storm). Ninety percent of the total suspended solids and total phosphorus of this runoff will be removed through stormwater management design.

QUALITY OF LIFE

Expand Rural Access and Opportunity

US 212 serves as a critical link between rural communities in Carver County and job opportunities in the Twin Cities urban center. As a Principal Arterial roadway through the rural area, US Highway 212 is depended on as a safe and reliable commuting option without similar alternative routes available. The Project will expand rural employment access and opportunity for the over 12,000 employees who live within one mile of US 212 in Carver County. There are approximately 700 employment opportunities within one mile of the Project, with almost 400 being manufacturing or distribution related employment opportunities. By increasing efficiency, safety, and reliability of US 212, rural employees will have greater access to these job opportunities. They will also have improved access to employment opportunities outside the County, as US 212 serves as a primary connection the Twin Cities Urbanized Area, a major job center in Minnesota. Additional benefits provided to rural communities near US 212 are detailed in the Safety and Environmental Sustainability sections of this application.

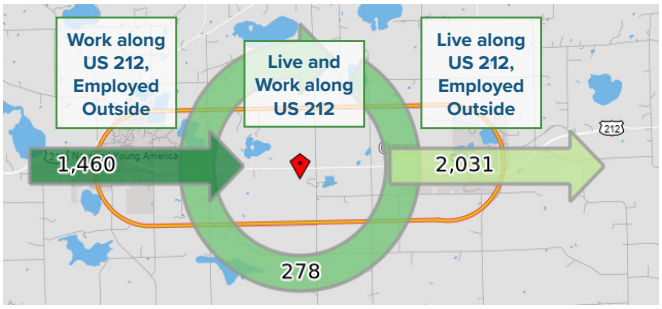

Figure 7 Employment Inflow & Outflow (1 mile from Project Area)

Responding to Community Needs

As part of Project planning, Carver County studied the impact on environmental justice communities. Carver County is home to approximately 4,100 Hispanic/Latino, 2,800 Asian, 1,800 Black/African American, and 200 American Indian residents, most of whom utilize US 212 to access employment, healthcare, or education. Within four miles of the Project corridor there are four senior housing

facilities, seven schools, five healthcare facilities, and 11 affordable housing sites with 155 units- providing services and housing for low income, persons with disabilities, and youth/ elderly populations (this data was obtained from the EPA's EJSCREEN online tool). The Project improves a regionally significant corridor and provides direct economic, safety, and social benefits to these diverse populations.

Environmental justice communities - including low-income populations, communities of color, and senior and youth communities – were engaged throughout project planning stages and development to ensure all voices were being heard and contributing to the project vision. A survey was distributed to over 600 locations, specifically chosen to include senior/assisted living and low-income housing locations, and representative of locations that use the corridor everyday as there is no other similar connecting highway serving this rural area. Through direct mail and online distribution, surveys were targeted toward populations not typically involved in transportation projects, such as residents under age 18, disabled, and low-income. Over 430 responses were received, of which 70 identified as members of diverse populations (over the age of 65, or Hispanic/Latino, Asian, Black/ African American or American Indian). **Over 60 percent of respondents listed difficulty turning on and off US 212 and the number of crashes on US 212 as their top two concerns along the corridor.** The Project specifically addresses these concerns, calling for dramatic safety improvements to improve highway access and reduction of crash rates. To address these concerns, the Project will install RCIs, a grade-separated interchange, construct medians and wider shoulders, and expand the roadway to improve safety and reduce crashes on US 212. Roughly 40 percent of respondents listed safety concerns while driving in snow as a primary concern, which was directly translated to a project need. The Project will install snow fencing along US 212 to prevent snow drifts and improve winter driving for residents.

To keep all residents informed and provide opportunities for feedback, a project website was created. The site displays information on design development, construction schedules, open houses, and other opportunities for informational meetings and feedback. Additional public meetings will be held throughout the project development process.

Environmental Justice Impacts

The Project benefits low-income populations by improving access, safety, and efficiency for residents traveling to the Twin Cities for employment, healthcare, or education. Sixty-one percent of Carver County residents travel outside the County for work – and most commute to the Twin Cities along US 212. Expanded capacity along US 212 will result in a safer commute for workers, with increased travel time reliability, fewer crashes, and decreased congestion for the 12,000 workers in the County who live within one mile of US 212. The project benefits children by improving safety at school bus stops within the project area. Currently, children are required to wait in the narrow shoulder area of the two-lane undivided roadway. The bus needs to pull onto the shoulder for pickup and cars and freight vehicles in all lanes of US 212 are required to stop. As a result of the proposed project, children will be able to wait along an expanded shoulder, providing greater distance from vehicular traffic. In addition, the median construction will prevent two lanes of traffic from interacting with the bus loading area. These two separated lanes will also experience decreased congestion as they will no longer need to brake for a stopped bus.

The Project benefits people with disabilities by improving accessibility along the corridor. The Project will integrate Americans with Disabilities Act (ADA) compliant pedestrian ramps and crossings at the intersections of US 212 and CSAH 51, County Road 153, and CSAH 36. These improvements will ensure safe and accessible pedestrian crossings for residents of all abilities. With the introduction of an RCI, the number of conflict points between pedestrian and vehicular traffic will be decreased. Instead of pedestrians crossing the roadway with four directions of vehicular traffic, pedestrians will only interact with two directions of vehicles.

The Project will improve access for residents relying on public transit for employment, healthcare, or education. Nearby transit and commuting facilities, such as the SmartLink (TransitLink) bus garage (adjacent to US 212) and a SouthWest Transit Park and Ride (east of project), will benefit from improved safety, efficiency, and travel

time reliability along the roadway. SmartLink (TransitLink) is a Dial-A-Ride service that serves transit dependent rural populations for access to jobs, medical services, and other required trips. Currently, the SmartLink buses are housed at the County Public Works Headquarters along the project corridor and must use US 212 project area to service all riders. Rural residents will also be likely to use the project area to access the SouthWest Transit Park and Ride on US 212 in the City of Carver, which is the farthest west transit connection to employment in the Twin Cities. Future planned transit service along the corridor includes Inter-City service to Hutchinson, MN, which will add a meaningful connection to jobs and rural population approximately 28 miles west of the project area. Buses servicing this Inter-City transit connection will benefit from the safety and reliability improvements included in the proposed roadway expansion to a 4-lane expressway facility and 10 ft. wide shoulders. Roadway benefits will translate to travel time savings, improved safety, and increased reliability for residents who utilize these services.

Carver County Park and Ride

As elderly, youth, low income and disabled populations are often frequent users of public transit, the Project will provide direct benefits to these equity populations with a connection to the park and ride a few miles east of the project area. The expansion from two to four lanes will significantly improve travel time savings along US 212. All users of US 212, including equity populations, will gain monetary or time benefits from these travel time savings.

The Project will result in approximately $42 million in travel time benefits (between the years of 2026 and 2045).

In addition to the previously discussed investments, this Project will also install and upgrade broadband fiber infrastructure along the corridor. The Project will connect rural communities to fiber-optic internet access by utilizing the existing CarverLink the publicly owned broadband fiber optics network that runs adjacent to the Corridor east of CSAH 51 and approximately 1 mile north of the project corridor west of CSAH 51. **Investments will be in partnership with the CarverLink long range investment plan.**

Providing reliable and fast data communications is becoming necessary as local agencies and communities adopt technology. Fiber optic communications can vastly improve the speed and reliability of internet service – a requirement as population and employment centers continue to grow. CarverLink, the publicly owned broadband fiber optics network that covers hundreds of miles of Carver County, provides internet service and network connectivity to communities, businesses, and people across the County, though there is still room for the network to expand. Improving internet access along the US 212 corridor will benefit the businesses, employees, and residents who work and live near the roadway, providing more reliable connections to help small businesses compete. Fiber optic networks will guarantee quality internet speeds along the corridor and serve as a reliable communication method for transportation applications such as traditional ITS applications as well as connected and automated vehicles.

Rural internet access is a growing concern as rural communities are far less likely to have access to reliable internet service. Public schools in the local district have transitioned some of their instruction to online formats, including days with inclement weather (snow days) becoming "E-Learning Days" using online instruction[8]. Fiber-optic rings can vastly improve internet service in rural areas. Federal internet service standards have increased, and many rural areas have not been able to maintain

[8] *Learning Model Changes 6-12 | Central Public Schools*

quality internet access. Carver County is resolving this issue by ensuring fiber optic internet access to residents and businesses along US 212.

MOBILITY AND COMMUNITY CONNECTIVITY

The Project area is currently a 2-lane bottleneck that hinders mobility between recently expanded 4-lane sections of US 212. The 35-mile-long corridor between Minneapolis and Glencoe is entirely 4-lane divided highway except for the Project's 5-mile segment of US 212 between Cologne and Norwood Young America. The Project will better connect these cities by improving local and regional mobility.

Increasing Mobility by Improving Traffic Flow

Traffic volumes are approaching capacity withing the Project area. The volume to capacity ratio is an indicator of the congestion of a roadway. A volume to capacity ratio between 0.85 to 1.00 is considered approaching capacity, and a ratio above 1.00 is over capacity. The capacity for the 2-lane segment is 15,000 vehicles per day (VPD). The average daily traffic (ADT) volume is 12,700 VPD, as of 2018. Based on the Metropolitan Council's traffic model projection, the 2040 Traffic projections estimate 17,000 VPD, which gives the Project area a volume to capacity ratio of 1.13[9]. Hence, US 212 will be over capacity by the year 2040 if no improvements are made to capacity.

Currently, travel time reliability is low and fluctuates based on time of day, freight traffic demands, and crashes. Per the Metropolitan Council's traffic data analysis, the free-flow travel speed on US 212 within the project limits is 60 mph[10]. **During peak hours, the through-traffic travel speed is reduced by 13 percent to a speed of 52 mph.** Additionally, Highway 5 through Waconia operates as a parallel reliever route to US 212. Free-flow through-traffic travel speed on Highway 5 is 38 mph with a reduction of 39 percent to a speed of 23 mph during peak hours. The proposed Project will have significant improvement on the travel speed on both US 212 and the parallel route of Highway 5 as vehicles will likely utilize US 212, the safer, more efficient route through Carver County.

Freight mobility is also severely impacted by the existing geometrics of the roadway. Trucks attempting to enter the roadway face inadequate turning radii and often experience extended wait times to begin the turn. At intersections such as CSAH 51 and CSAH 36 trucks have limited movement within the intersection to move safely and are often in conflict with other turning vehicles. The 4-lane to 2-lane merge in the project corridor also creates a mobility bottleneck condition for the movement of freight. The Project improvements will increase shipping reliability and reduce costs for more than 65 freight generators located adjacent to US 212 that utilize the Project corridor. Based on data collected in 2020, the Project will reduce heavy commercial vehicle operational costs by more than 17 percent, or 10,500 hours annually. The proposed improvements will remove this merge point, overall reducing the number of conflicts between freight and passenger vehicles, thereby facilitating efficient movement of freight through the corridor and eliminating the supply chain bottlenecks.

Inadequate turning radii for trucks at intersection

ECONOMIC COMPETITIVENESS AND OPPORTUNITY

Improve Freight Transit by Eliminating Bottleneck

US 212, a Critical Rural Freight Corridor, acts as an Interstate System connecting over 22,000 square miles of southwest Minnesota with the Twin Cities metropolitan area, as no actual Interstate connection exists. The roadway officially carries 1,350 trucks daily, which significantly exceeds typical truck percentages on most state highways at over 10 percent.

[9] *US Highway 212 - Benton Township Project Purpose and Need Statement (carver.mn.us)*
[10] *Based on StreetLight data*

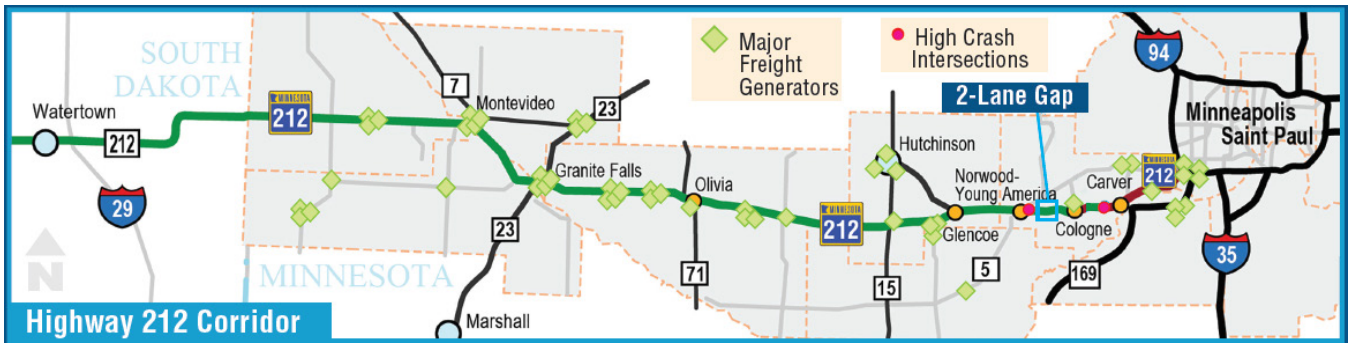

Figure 8 Freight Along US 212

The Project directly benefits the freight community. Increasing capacity of the roadway from two to four lanes and adding wider shoulders and turn lanes will give freight haulers increased free flow speeds, less congestion, increased travel time reliability, eliminate merge bottlenecks, and improved safety. The Project improvements will increase shipping reliability and reduce costs for more than 65 freight generators located adjacent to US 212 that utilize the Project corridor. Based on data collected in 2020, the total daily truck load equivalents directly entering and exiting the project area from freight facilities is 765 vehicles[11]. **The Project will reduce heavy commercial vehicle operational costs by more than 17 percent, or 10,500 hours annually**.

An origin-destination (OD) analysis using StreetLight (2020) was completed to quantify the users of this segment of US 212 and the importance of the corridor to the region, Minnesota, and surrounding states. This analysis showed the corridor serves traffic from 85 percent of Minnesota counties and equally serves the Metro and Greater Minnesota Districts on a typical travel day. **The results of the commercial OD analysis show this segment of US 212 supports both intrastate and interstate freight traffic,** as over five percent of freight traffic using this segment of US 212 cross the Wisconsin border.

The undivided two-lane section of US 212 between Norwood Young America and CSAH 36 presents timing, limited mobility, product quality, and safety reliability issues for freight haulers. The congestion in this segment makes travel time reliability issues a common occurrence during both AM and PM peak hours, especially to find a gap to access US 212. This situation will only deteriorate, as the County is expected to grow significantly over the next 20 years– adding even more traffic and delay to an already congested two-lane roadway. Unreliable safety conditions also create travel time reliability issues along this segment of US 212, as freight traffic often interacts with inconsistent travel speeds, unsafe pavement conditions, narrow lanes, inadequate shoulders, and crash related delays.

Poor roadway condition adds to the limited mobility of freight vehicles, often limiting their ability to transport goods in a time efficient and high-quality manner and causing delivery drivers to travel at reduced speeds. The roadway has not been reconstructed since 1930, and continuous overlays will be necessary temporary solutions until a full reconstruction project is completed. Several freight facilities along the corridor stated their freight loads often shift or bounce along this segment, leading to damaged product and increased cost.

[11] *US 212 MHFP Grant Application*

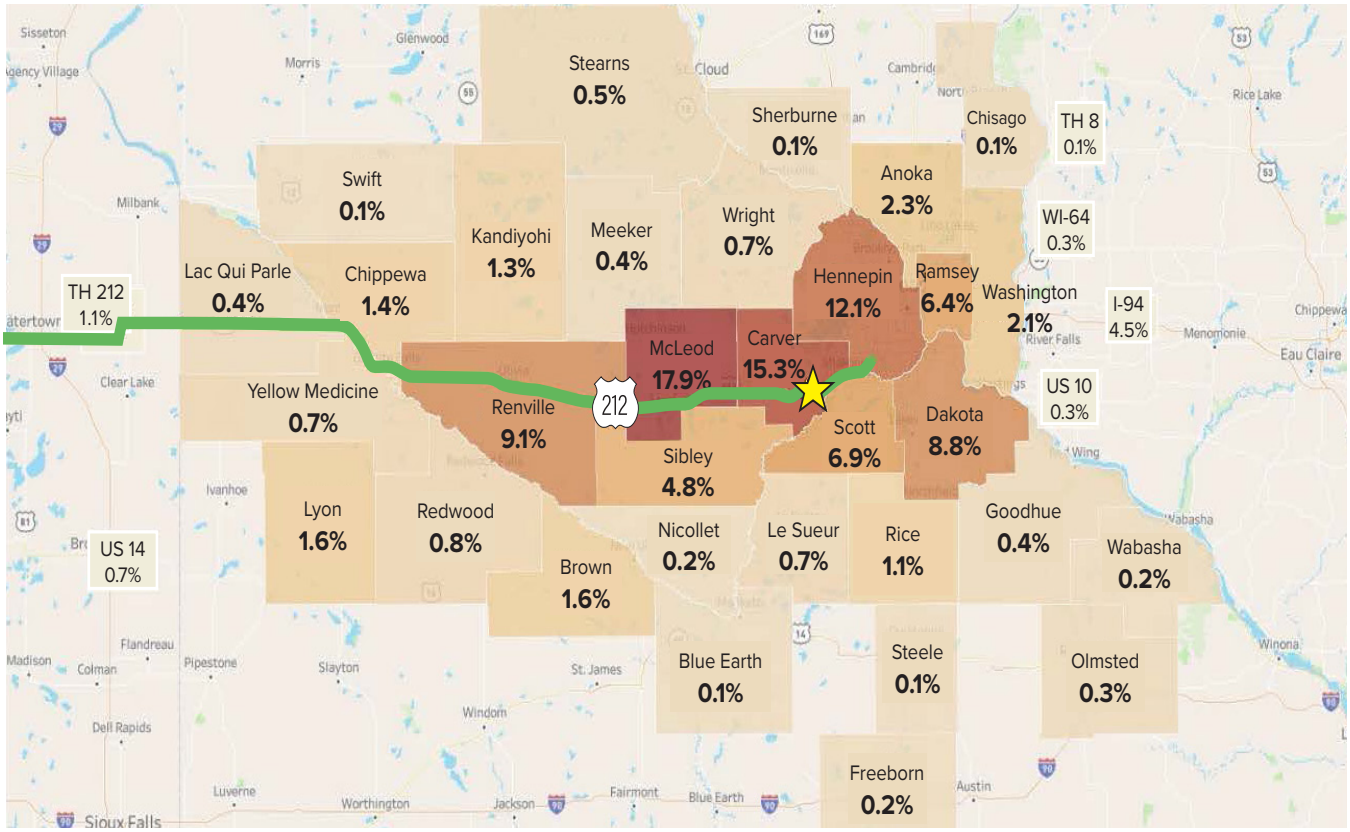

Figure 9 Commercial Origin-Destination Analysis

To quantify travel delay and reliability issues related to crashes along the corridor, an analysis was completed to combine travel time information with weather and crash data. The data show that 75 percent of the major congested days on the corridor were due to a crash or snow event or a combined snow and crash event. The proposed improvements will mitigate these major congestion and delay days by implementing safer intersection designs and upgrading the highway to a four-lane divided expressway. Crash-related congestion and delay will be mitigated by not having to close or block the highway to one-way traffic when a crash occurs or closing the highway completely for several hours following a severe or fatal crash, which was necessary when the crash pictured below occurred.

Furthermore, oversized loads are not permitted to operate in narrow segments of the corridor, requiring a State Patrol escort. Due to the increased cost of this escort, oversized shipments often divert onto the county road system. This rerouting adds time and expense to a trip, increases the potential for damaged goods, reduces safety, and affects the local roadway system. Expansion to a four-lane facility will alleviate the need for a State Patrol escort.

> **"Expanding Highway 212 to four lanes will save us time and money, but the safety benefits of the expansion are the most valuable to us.** – *Michael Foods Inc.*

> **"Many production inputs at our 1,500-person Hutchinson facility come via the Highway 212 corridor. Any delay in receiving these inputs hurts our bottom line.** – *3M*

Additionally, the County intends to install broadband along the updated corridor. Further details about this installation can be found in the Quality of Life section of this application.

STATE OF GOOD REPAIR

Corridor pavement within the Project Corridor was originally constructed in 1930. The aging infrastructure has not been expanded or reconstructed since. Although the road surface is currently in acceptable condition, the Depression-Era sub-grade is deteriorating the road surface at a quicker rate than typically expected.

The Project is consistent with relevant plans to maintain transportation facilities in a state of good repair and address current and projected vulnerabilities. The Project is consistent with the goals and policies established in the Minnesota 20-Year State Highway Investment Plan (MnSHIP), Metropolitan Council 2040 Transportation Policy Plan, and Carver County 2040 Transportation Plan. The segment is identified as one of the projects for the Minnesota Highway Freight Program Projects 2018-2022 as well as one of the projects in the Highway Strategic Capacity Enhancements 2018-2025.

Life-Cycle Costs

Carver County has extensive experience with managing roadway improvement projects and has worked with MnDOT on numerous highway improvement projects. In coordination with MnDOT, the County has identified the anticipated cost estimates to effectively operate and maintain the Project corridor once it is constructed. MnDOT will be responsible for the operation and maintenance of the state highway and has dedicated funding available to ensure that the roadway is properly maintained. The County has committed to meeting construction start and end dates and is willing to implement accountability measures based on these dates.

US 212 Operation and Maintenance Plan

MnDOT will operate and maintain US 212 as it does the 12,000-mile state highway system. Long-term maintenance operations will be performed by MnDOT based upon its typical maintenance schedule for bituminous roadways. The table below presents key maintenance improvements that would be required during the lifecycle of the Project based on guidance from MnDOT's Metro District Materials and Pavements Engineer.

Table 5 Operation and Maintenance Schedule

ACTIVITY	YEAR	COST (PER MILE)	TOTAL COST
Annual Maintenance	Annual	$8,100	$40,500
2-inch bituminous mill & overlay	20	$250,000	$1,250,000
4-inch bituminous mill and overlay	35	$350,000	$1,750,000

Operation and Maintenance Funding

The Project will result in a net decrease in maintenance costs over the project life due to the existing state of pavement requiring more intense maintenance and rehabilitation. **The Project is expected to produce approximately $2.25 million in maintenance cost savings over the project life.**

Financial trends indicate that operation and maintenance revenues have slowed compared to previous decades. Consequently, MnDOT is committed to implementing timely investments in capital and preventative maintenance treatments to extend the service life of assets while reducing lifecycle costs. Ongoing operation and maintenance (O&M) costs on the state highway

system are funded by taxes and fees from four main revenue sources:

- State gas tax (motor fuel excise tax)
- State tab fees (motor vehicle registration tax)
- State motor vehicle sales tax
- Federal highway funds (highway user tax distributions, flexible highway account, and County State Aid Highway Fund)

MnDOT Transportation Asset Management Plan (TAMP)

MnDOT has a demonstrated history of fully funding maintenance improvements and is an established national leader in asset management. MnDOT developed its first Transportation Asset Management Plan (TAMP) in accordance with the 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21). MnDOT's TAMP expanded beyond minimum requirements per MAP-21 to include the entire state highway system as well as other infrastructure within the right-of-way corridor. MnDOT's TAMP was a national pilot project and serves as a guide for other states.

MnDOT applies the TAMP, which has been updated to reflect current guidance per the Fixing America's Surface Transportation (FAST) Act which replaced MAP-21 in 2015, as a guide to analyze life-cycle costs, evaluate risks and develop mitigation strategies, establish asset condition performance measures and targets, and develop investment strategies. The TAMP will serve as a guide to ensure all necessary Project operation and maintenance is implemented.

PARTNERSHIP AND COLLABORATION

Grant Recipient

Carver County

Carver County is the project sponsor of this RAISE grant application. The County has been a proactive leader and advocate for this Project for several years. That the County is leading this effort for major investment on a US highway corridor and investing County funding is a standout feature of this application. The County has extensive experience with procuring and developing transportation improvement projects including several state and federally funded projects. The County owns and operates over 274 miles of road. The County's 2040 Road Systems Plan (RSP) prioritizes major future transportation investments and identifies potential fiscal resources to advance these projects.

Primary Contact

Lyndon Robjent, P.E., County Engineer
11360 Highway 212 West, Suite 1, Cologne, MN 55322
Phone: 952.466.5206
Email: lrobjent@co.carver.mn.us

Project Partners

Minnesota Department of Transportation

MnDOT is a dedicated partner in this Project. MnDOT has established a firm commitment of investment towards improving the US 212 corridor. MnDOT has participated in the NEPA environmental review process and development of the final design. MnDOT has reviewed the design plans and will provide final approval.

MnDOT will operate and maintain the Project as part of the State highway system as stated in MnDOT's letter of support for the Project. MnDOT and Carver County have an established agreement for preliminary engineering for this Project. The County and MnDOT will negotiate agreements on the construction and long-term maintenance of the Project. The Performance and Accountability section of this application includes additional details regarding MnDOT's operation and maintenance commitment towards the Project.

MnDOT and the County have successively partnered on past and planned investments on the corridor including the freeway construction from Eden Prairie to Carver in 2009, the construction of the US 212/County Highway 44 Interchange in Chaska, construction of three RCIs in Cologne at US 212/ County Road 53, US 212/County Road 36, and US 212/ CSAH 41. MnDOT and the County have partnered to fund several other projects in the US 212 Corridor including the US 212 pedestrian underpass in the City of Norwood Young America, and the State Highway 5/State Highway 25/CSAH 33 intersection improvements

project in the City of Norwood Young America. Carver County is working with local communities and MnDOT to improve a five-mile stretch of Highway 212 in Dahlgren Township which is scheduled to be completed in Fall 2022.

Southwest Corridor Transportation Coalition (SWCTC)

The SWCTC was formed to work cooperatively with MnDOT, local governments, businesses, state, and federal legislators and interested citizens to advocate for transportation improvements on US Highway 212 and State Highway 5. The SWCTC travels to Washington DC every year to meet with Members of Congress and transportation officials to promote the importance of US 212 and request funding assistance. These meetings resulted in $1.2 million in Federal Appropriation to allow project development to occur and assist in project readiness. There is also $2.5 million in 2022 Congressional Appropriation (community project request) allocated to the Project. The SWCTC is a strong partnership with broad representation from all sectors. In total, 41 communities and local chambers of commerce have passed resolutions supporting improvements to expand the capacity of this highway including the Board of Commissioners of every county along the corridor. Several agencies and jurisdictions passed specific letters of support for this RAISE grant application. Letters of support have been obtained from key agencies, elected officials, counties, cities, Chambers of Commerce, and businesses (see agency letters of support here).

Freight Community

Carver County has solicited input on the Project from several freight generators in the US 212 Corridor. As part of the US Highway 212 Corridor Study, the County, in partnership with the SWCTC and MnDOT, conducted interviews with 16 major freight generators to obtain feedback on shipping and transportation infrastructure needs of these businesses. The County incorporated the input received through this outreach to develop the improvements included in this Project. Letters of support have been received by business and industries in the Corridor.

INNOVATION

Broadband Deployment

The Project will connect rural communities to fiber-optic internet access by utilizing the existing CarverLink, the publicly owned broadband fiber optics network that runs adjacent to the Corridor. The fiber ring connection runs along the US 212 corridor east of CSAH 51 and approximately 1 mile north of the project corridor west of CSAH 51. Details about fiber upgrades included in this project can be found in the **Quality of Life** section of this application.

Electric Vehicle Charging

The Project will include installation of two Electric Vehicle (EV) charging stations at the Carver County Public Works facility. More information on this project element can be found in the Environmental **Sustainability** section of this application.

Snow Fencing

Ice on roadways is a significant concern for a region that experiences below-freezing temperatures for the better part of three months. Even the most experienced drivers can be caught off-guard when traveling over black ice, through freezing rain, and on snow-packed roadways. “Blow ice” forms when snow blows across the highway, creating an unexpected sheet of ice for travelers. This blow ice phenomenon has caused numerous accidents. Carver County and MnDOT have modeled the snow drifting issues along US 212 and will install permanent snow fences at critical locations along the Project.

Intelligent Transportation Systems (ITS)

The Project will incorporate appropriate Intelligent Transportation Systems (ITS) elements within the Project. ITS technologies advance transportation safety, mobility, and efficiency by integrating advanced technologies into transportation infrastructure or vehicles. ITS encompasses a broad range of electronic communication and sensing technologies but traditionally includes elements such as dynamic message signs, CCTV cameras, and vehicle detection. By deploying these ITS elements along US 212, the County can provide traveler information such as travel times, alternate routes, and incident notifications. These

enhance driver awareness and allow drivers to make informed decisions while traveling. These deployments can also be used for incident management purposes such as identifying crashes, detecting queued traffic, and emergency response.

The Project will explore installation of wireless dynamic message signs that provide real-time traffic advisory and route guidance information to road users. By providing information to road users in advance of a situation, they help to improve safety and reduce congestion when an incident occurs or in the event of poor road or weather conditions.

Innovative Project Delivery

Civil Information Management Software

During public engagement of the corridor study, project designers used innovative Civil Information Management (CIM) software for preliminary modeling and visualization of the proposed project to understand and mitigate impacts. This allowed stakeholders and partners to make decisions through a visual compare and contrast in real-time.

The Project will continue to utilize CIM software to model and visualize the project, as well as increased transparency of the project. The transparency will enable owners, consultants, contractors, and stakeholders to work together easily. 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. This enables an effective conflict detection, rapid design review and validation. These efforts will reduce project schedule timelines and overall costs.

Moreover, 3D or 4D modeling could be bused to develop the Project Execution Plan (PxP), which will document the process operations addressing software requirements; define the Level of Detail (LOD), file formats necessary for deliverables, and file naming conventions; and detail the data-sharing requirements for information exchanges (interoperability requirements). Once 3D models are developed, at any level of detail, there are several BIM-use cases that can be applied during design and construction that will have a greater impact on reducing the risks identified regarding cost and traffic control. There is also a possibility to use 4D/MOT modeling which is primarily beneficial to identify alternatives that minimize construction costs and maximize vehicular mobility for MOT.

Environmental Review and Permitting

Development of the Environmental Assessment and preliminary design for this Project is in progress. The Contract with MnDOT started in October of 2021, with traffic forecasting, Purpose and Need completed as of now. Wetland delineation is planned for completion by November 2022. The Project will benefit from existing MnDOT programmatic agreements and agency liaisons to maximize the efficiency of environmental review and permitting processes. MnDOT has executed a programmatic agreement with FHWA and the State Historic Preservation Office (SHPO) to streamline the Section 106 review process. Additionally, MnDOT has established an agency liaison with the US Army Corps of Engineers (USACE) to directly manage the Section 404 permitting process for state highway projects.

Innovative Financing

Carver County is one of the leading counties in Minnesota to implement both a one-half percent sales tax and an excise tax to create a new, non-federal transportation revenue source for county and state transportation projects in the County. By the year 2037, the collected revenue is expected to be approximately $181 million. This new dedicated transportation funding source will enable the County to provide a local match to state and federal funding for critical infrastructure projects, including this Project. In 2017, Carver County adopted this local option sales and excise tax along with a $20 per vehicle wheelage tax. (See Carver County Resolutions #25-17 and #26-17).

V. PROJECT READINESS

TECHNICAL FEASIBILITY

The County is the lead agency on the US 212 Rural Freight Mobility and Safety Project. The County has delivered several federally funded highway projects and understands the rules and procedures to manage a federal grant. Carver County and MnDOT have worked together to explore the best ways to address access, safety, freight movement, and mobility needs along US Highway 212. To move the project forward and fully understand the impacts and cost, Carver County has proceeded with an alignment concept study, preliminary design, and environmental documentation. With this work, Carver County will also identify R/W impacts and needs. Final design and right-of-way acquisition will be completed by December of 2023.

The Environmental Assessment began in April of 2021 and will be completed by May of 2023. The Purpose and Need Statement was completed in December of 2021. The proposed design will meet all current USDOT, AASHTO, and MnDOT standards for multi-lane highways. General details of the design include: 70 mph design speed, 12-foot lanes, 10-foot outside shoulder, 4-foot inside shoulder, rural ditch drainage (NOAA Atlas 14 - Precipitation Frequency met for design), 84-foot centerline spacing, and bituminous pavement. Expected unit costs are based on the most recent record of similar highway construction projects in Minnesota.

PROJECT SCHEDULE

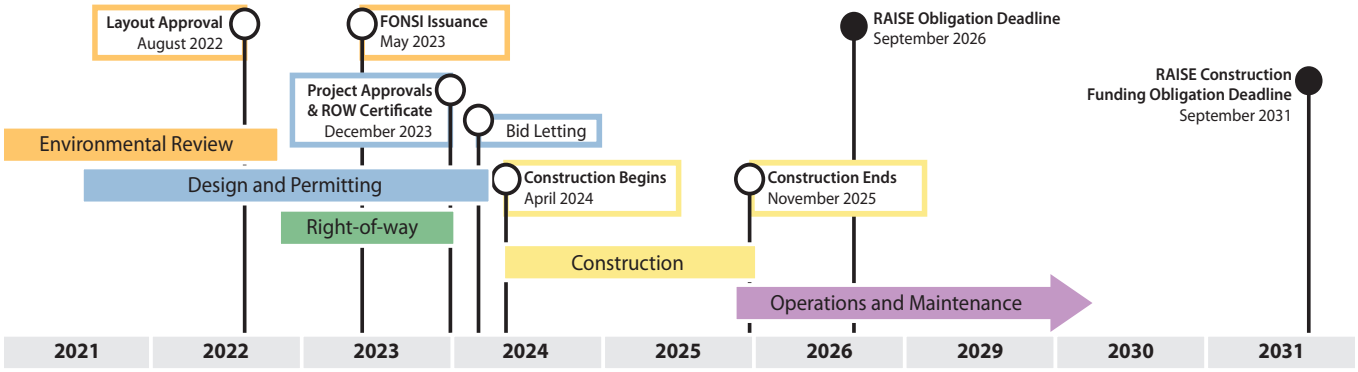

Figure 10 Project Schedule

The Project schedule demonstrates that grant funds can be obligated by March 2024 in advance of the RAISE funding obligation date requirement of September 30, 2026. Carver County anticipates that construction will begin by April of 2024, and end by November of 2025. All property and right-of-way acquisition will be completed in accordance with 49 CFR Part 24 and other Federal regulations. The County has an experienced right-of-way acquisition staff that have been actively involved during the project development process and have worked with MnDOT on numerous state highway projects. For example, Carver County led the right-of way acquisition for the US 212 Project in Dahlgren Township immediately to the east of the Project area. The acquisition phase for the Dahlgren project was similar in scope, yet only took 12 months to complete. This Project has 15 months scheduled for completion of right-of-way acquisition, leaving a large enough buffer to mitigate potential delays.

For a detailed breakdown of the Project schedule, please see the "Detailed Project Schedule" on the project website.

The design and the right-of-way acquisition processes have important upcoming milestones. The first is MNDOT GDSU (Geometric Design and Layout Development) approval of the geometric layout and profile by August of 2022. Completion of the 60% plan set and cost estimate will happen in January of 2023. This will allow Carver County to move forward with final plat and acquisition, completing all right-of-way acquisition by December

of 2023. The 100% Roadway Plans, Specifications, and Estimates (PS&E) will be submitted in August of 2023.

There are several permitting and environmental approval milestones that will happen by the end of May in 2023. The first is preparation and approval of the Environmental Assessment Worksheet (EAW). The EAW will be submitted for MnDOT review in September of 2022. MnDOT review will end in January of 2023, where the EAW will be sent out for a one-month public comment period. A Non-Programmatic Categorical Exclusion (NON-PCE) will also be prepared concurrently with a separate approval process by both MnDOT and FHWA. For stormwater management, the drainage overview plan will go through MnDOT and Carver County WMO for review and approval, starting in November of 2022, before being drafted into a National Pollutant Discharge Elimination System (NPDES) permit application in February of 2023.

REQUIRED APPROVALS

State and Local Approvals

Support for the Project is provided for by several different levels. There is a broad base of support for the project, as shown by the letters of support submitted for this application. These include Letters of Support from MnDOT, Metropolitan Council, and US Congress Representatives from MN to cities and local businesses along the US 212 Corridor. The portion of US 212 immediately adjacent to this Project is programmed in MnDOT's State Transportation Improvement Program (STIP) and in the Metropolitan Council's Transportation Improvement Program (TIP) as state project number 010-596-012. The Project is also currently listed in the Metropolitan Council Transportation Policy Plan (TPP) for four-lane expansion from Norwood Young America to Cologne. This project is specifically identified to receive Carver County local sales tax funds in the County's adopted Transportation Tax Plan and is in the Capital Improvement Plan as the highest priority project.

The US 212 Project is included in all relevant local, metropolitan, and state planning documents. This includes the MN Statewide Freight System and Investment Plan (2018) and related Metropolitan Council and Carver County comprehensive planning elements.

RISK ASSESSMENT AND MITIGATION STRATEGIES

Identification of right-of-way requirements has been initiated, and conservative cost estimates are included in the Project budget. The estimate includes significant contingency for acquisition cost to ensure right-of-way is secured. Public support is high for the Project because of the benefits detailed in the **Quality of Life** section of this application. Further public outreach to residents, emergency services, and transit services regarding the Transportation Management Plan (TMP) is scheduled for June of 2022. There is also going to be public comments for the environmental assessment to address potential environmental concerns.

VI. BENEFIT COST ANALYSIS

The objective of a benefit-cost analysis (BCA) is to bring all the direct effects of a transportation investment into a common measure (dollars), and to account for the fact that benefits accrue over an extended period while costs are incurred primarily in the initial years. The primary elements that can be monetized are travel time, changes in vehicle operating costs, vehicle crashes, environmental impacts, remaining capital value, and maintenance costs. The results of the BCA are briefly summarized below. A detailed technical memorandum of the analysis is available to view at the grant application website: https://www.srfconsulting.com/us-212-RAISE-grant/

NO BUILD ALTERNATIVE

The No Build Alternative included leaving the US 212 corridor between the cities of Norwood Young America to Cologne in its current geometric and operational condition, with no modifications or restrictions to current access. Regional roadway improvements that are currently programmed were included as part of the regional transportation network.

BUILD ALTERNATIVE

The proposed project replaces approximately five miles of the existing two-lane undivided section with a four-lane divided roadway. Several spot mobility and safety improvements were also assumed throughout the study corridor. The comprehensive list of improvements that were considered in the BCA is summarized below:

- **Conversion** from two-lane undivided to four-lane divided expressway with restricted side-street left turn movements at all at-grade access locations from Cologne to Norwood Young America
- **US 212 and Tacoma Avenue intersection** – conversion from side-street stop control to reduced conflict intersection (RCI) with restricted side-street left-turn movements
- **US 212 and Salem Avenue intersection** – conversion from side-street stop control to reduced conflict intersection (RCI) with restricted side-street left-turn movements
- **US 212 and CSAH 51 intersection** – conversion from at-grade, side-street stop control to grade separated interchange
- **US 212 and County Road (CR) 153 intersection** – conversion from side-street stop control to reduced conflict intersection (RCI) with restricted side-street left-turn movements
- **US 212 and access to Carver County government building** – conversion from side-street stop control to reduced conflict intersection (RCI) with restricted side-street left-turn movements
- **US 212 and CSAH 36 intersection** – conversion from side-street stop control to three-quarter access (i.e. removing left turns from side-street only)

The Build Alternative also included the same programmed improvements to the regional transportation system that were assumed in the No Build Alternative.

BCA METHODOLOGY

The primary cost and benefit components analyzed in the BCA included:

- Travel time/delay (vehicle hours traveled -VHT)
- Operating costs (vehicle miles traveled-VMT)
- Environmental and air quality impacts
- Crashes by severity
- Initial capital costs
- Remaining Capital Value: The remaining capital value (value of improvement beyond the analysis period) was considered a benefit and was added to other user benefits
- Maintenance and rehabilitation costs
- Other analysis considerations included:
  - This analysis assumed that construction would take place from year 2024 to 2025. Therefore, year 2026 was assumed to be the first full year that benefits will be accrued from the project.

PROJECT COSTS

Year 2020 project cost for the RAISE Grant components of the overall project is expected to be about **$43 million**.

BCA RESULTS

Table 6 Benefit Cost Analysis Summary

	Cost (in millions)
Benefits	$76.6
Costs	$43
B/C Ratio	**1.8**
Net Present Value	$33.6

The BCA Analysis for this Project resulted in a benefit-cost ratio of 1.8

The benefit-cost analysis provides an indication of the economic desirability of a scenario, but results must be weighed by decision-makers along with the assessment of other effects and impacts. Projects are considered cost-effective if the benefit-cost ratio is greater than 1.0. The larger the ratio number, the greater the benefits per unit cost. Results of the benefit-cost analysis are included in Table 6.

VII. 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/carver-county-us-212-raise/