Building Complete Streets to Serve the Red Lake Reservation and Beyond

Red Lake Indian Reservation, Red Lake Minnesota

MERIT CRITERIA

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

Project Name Building Complete Streets to Serve the Red Lake Reservation and Beyond
Project Type Rural Capital Project
Future Eligible Project Costs $25,401,464
FY 2024 RAISE Funds Requested $25,000,000

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Supporting Information can be found at:
https://www.srfconsulting.com/fy24-red-lake-raise/

Building Complete Streets to Serve the Red Lake Reservation and Beyond

Red Lake Indian Reservation, Red Lake Minnesota

FY 2024 REBUILDING AMERICAN INFRASTRUCTURE WITH SUSTAINABILITY AND EQUITY (RAISE) PROGRAM

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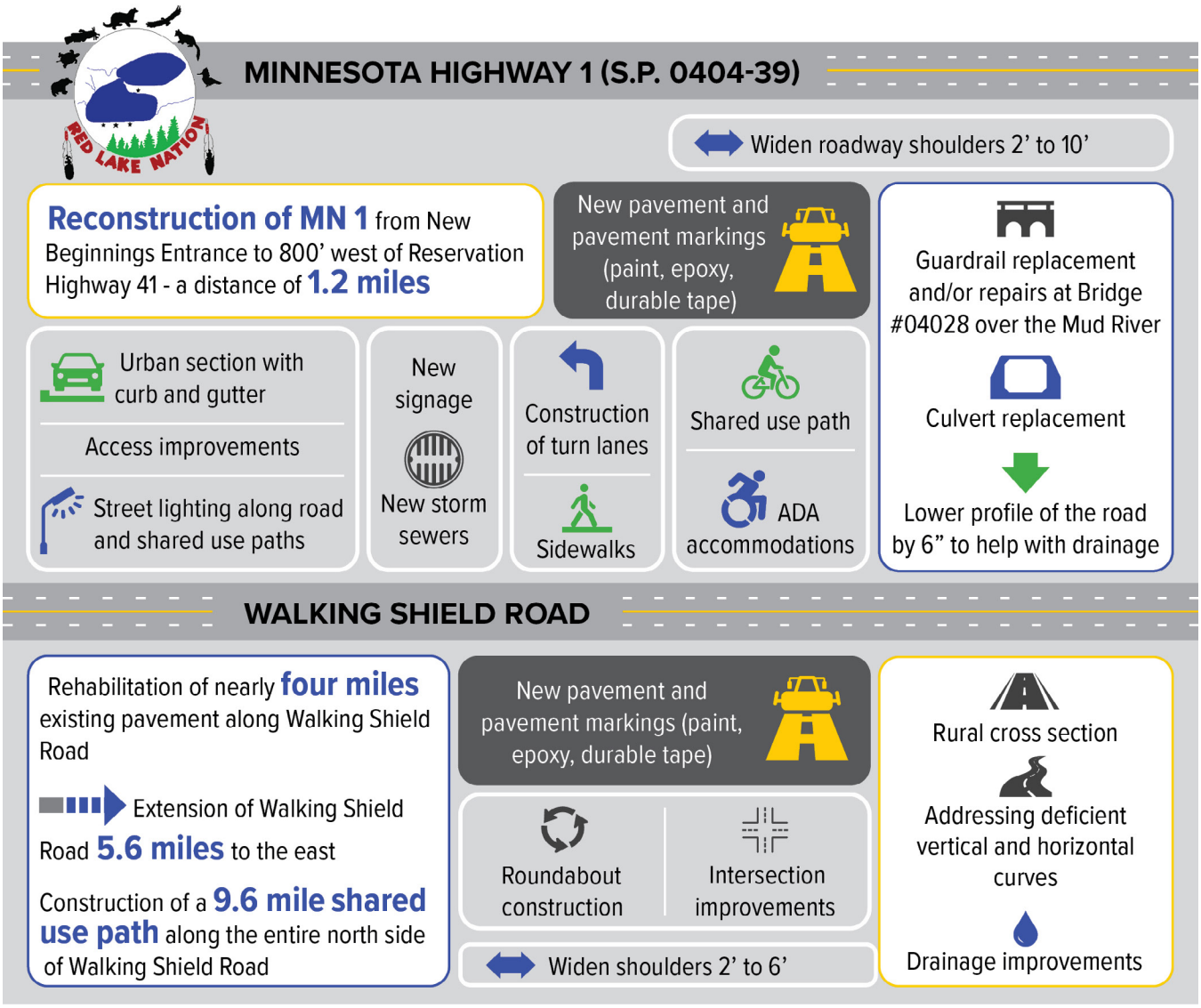
MERIT CRITERIA

1. SAFETY

Safety is a primary Project purpose and the Building Complete Streets to Serve the Red Lake Reservation and Beyond Project will provide multiple safety outcomes for all roadway users including trucks, motorists, cyclists, and pedestrians. The Project includes proven safety counter-measures to protect non-motorized roadway users (in an underserved, rural community) that will contribute to reducing fatalities and serious injuries. Those outcomes will be realized through numerous improvements to MN 1 and Walking Shield Road, including:

- Rehabilitating nearly four miles of pavement along Walking Shield Road
- Reconstructing approximately 1.2 miles of MN 1 in Redby
- Installing lighting along both Walking Shield Road and MN 1 to improve visibility
- Grading and paving nearly eleven miles of shared use paths, separating vehicular traffic from walkers, bicy-clists, and rollers
- Expanding and paving of roadway shoulders from two feet to six feet (Walking Shield Road), and two feet to ten feet (MN 1)
- Adding new pavement marking (paint, epoxy, tape, durable)



- Addressing geometric deficiencies, including horizontal and vertical curves
- Flattening backslopes to assist with the removal of drifting snow
- Correcting inslopes to ensure proper roadway drainage and reduce the risk of hydroplaning
- Adding turn lanes and performing access improvements
- Constructing safer intersections including a roundabout

Reducing Crash Severity

The Red Lake Police Department maintains a crash data application which inventories all of the crashes that have occurred within the boundaries of the Red Lake Reservation. This data includes a date and time stamp, the latitude/longitude of the incident, the number of cars and people involved, the number of injuries and fatalities resulting from the crash, and the weather conditions which were present at the time of the incident.

Despite modest daily traffic volumes (MN 1 average daily traffic (ADT) of 4,050 and Walking Shield Road ADT of 1,020), crash rates in these segments exceed the statewide average for similar roadways. In 2023 alone, there were four crashes which occurred along Walking Shield Road, resulting in one fatality and three injuries. One of the crashes involved an ATV, two crashes were classified as "run off the road" crashes, and the other incident was a collision. According to Tribal officials, there have been numerous unfiled reports of vehicles going through the dead end at the terminus of Walking Shield Road as well. Meanwhile, for the MN 1 segment there have been a total of six crashes within the past two years resulting in at least four injuries, one of which required immediate transportation to a hospital due to a serious head injury. In downtown Redby there have been numerous collisions at access points to local businesses from MN 1. The Red Lake Police Chief has also provided a letter of additional incidents, including two fatal crashes. Intersection improvements at the locations of these incidents are part of this project.

Multiple studies have shown that implementing access management provides increased roadway capacity, reduces crashes, and shortens travel times for motorists. The U.S. Department of Transportation Federal Highway Administration (FHWA) states that "access points are essential elements of any roadway network as they represent the start and end points of any trip, and every driveway represents potential conflict points between motor vehicles, pedestrians, and bicyclists." Proper access management will be accomplished in this project via multiple upgrades to MN 1 including clearly marked and dedicated driveway access. Additional planned improvements such as new pavement, wider paved roadway shoulders, new street lighting, and addressing deficient horizontal and vertical curves will also contribute to reduced crashes within the project area, and installation of sidewalks and shared use paths will lessen the chances of vehicle and pedestrian/bicycle conflicts as these users will be separated from the roadway.

Figure 1 Current MN 1 Infrastructure in Downtown Redby

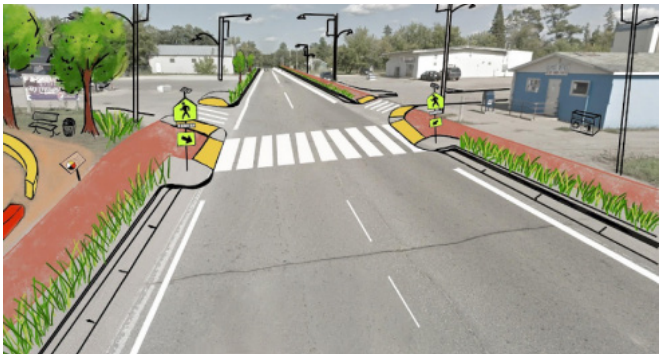
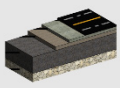


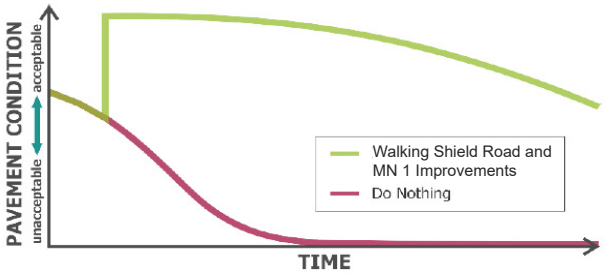
Figure 2 Proposed MN 1 Infrastructure in Downtown Redby

Reconstruction and Resurfacing the Entire Roadway



Currently, pavement conditions on MN 1 and Walking Shield Road are not meeting the needs of the residents of Red Lake, Redby, and the traveling public. Pavement conditions along MN 1 are currently rated "fair" and along Walking Shield "poor" condition and are continuing to

worsen. MN 1 will be rated "poor" by the construction start date (2026), and Walking Shield Road will be in "serious" condition by its construction start date (2025). This project will reconstruct/rehabilitate a combined 5.2 miles of roadway which will enhance the safety of both MN 1 and Walking Shield Road by providing:



- A smoother driving surface and better friction/traction for all users, including heavy trucks, motor vehicles, bicyclists, and pedestrians
- More paved roadway surface due to the installation of wider paved shoulders
- Improved stormwater runoff and roadway drainage reducing the likelihood of hydroplaning
- A reduction of debris accumulating on the highway surface
- New pavement markings that are more visible and reflective during adverse driving conditions

Widening Shoulders

Single vehicle run-off-road crashes are the largest type of fatal vehicle crash in the United States. The proposed improvements will pave and widen shoulder widths from two feet to six feet for the entire nine-mile corridor on Walking Shield Road and expand MN 1 paved roadway shoulders from two feet to ten feet. The safety effects of paving and widening roadway shoulders are a time-tested way to effectively mitigate crashes and improve facilities for non-motorized users such as pedestrians and bicyclists. The Federal Highway Administration (FHWA) specifies guidelines for shoulder widths. According to FHWA, safety and efficient traffic operations can be adversely affected as shoulder widths narrow. Wider shoulders lessen the likelihood of rear-end crashes with parked or disabled vehicles, particularly, two-lane roadways. A Transportation Research Board Record 1195 paper titled "Safety Effects of Cross-Section Design for Two-Lane Roads" determined that crashes will be reduced when wider roadway shoulders are present. The study showed **widening and paving roadway shoulders by four feet resulted in crash reductions of 29 percent and expanding roadway shoulders by eight feet resulted in crash reductions of 49 percent.**

Percent Accident Reduction
For Shoulder Widening Only
(For existing shoulder widths between 0 and 12 feet)

Amount of Shoulder Widening per Side (Ft.)	*Percent Reduction in Related Accident Types*	
	Paved	*Unpaved*
2	16	13
4	29	25
6	40	35
8	49	43

The implementation of wider shoulders will also help to protect pedestrians and cyclists who need to use it to travel to their jobs and other destinations, as well as provide overflow parking areas for downtown Redby stores like Westbrook's Redby Store or Redby's One Stop. Visible crosswalks are planned to accommodate those who need to cross MN 1 in downtown Redby.

Paved Shoulders

71%

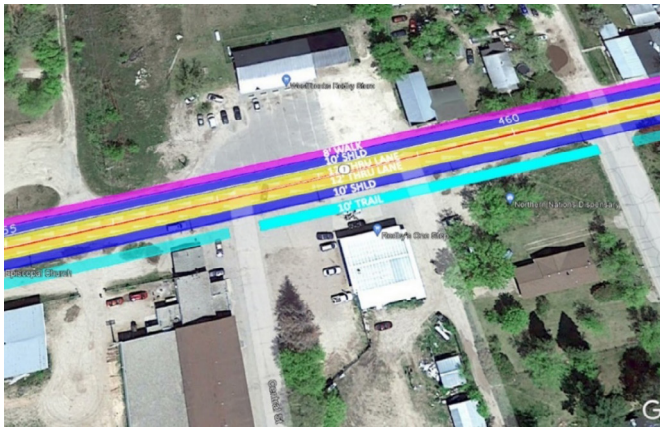
reduction in crashes involving pedestrians walking along roadways.[3]

Furthermore, consistent with FHWA's Safety Program, widening and paving roadway shoulders provides safety benefits for pedestrians and bicyclists as well. **Installing and widening paved shoulders has reduced pedestrian crashes (walking along the roadway) by 71 percent.** Additionally, wider shoulders provide for an increased level of comfort for bicyclists.

Safety benefits of widening the roadway shoulders for this project include:

- Emergency storage for disabled vehicles
- Adequate space for law enforcement stops
- Adequate space for maintenance activities

- Areas for drivers to maneuver to avoid rear-end crashes or animals who enter the roadway
- Areas with a stable, clear recovery for drivers who have departed the travel lane
- Improved areas for bicyclists and pedestrians to safely travel



Approximately 11 miles of shared use paths which are separated from vehicular traffic will be constructed along both the MN 1 and Walking Shield Road segments. These shared use paths will help protect both cyclists and pedestrians who travel in these areas. According to the FHWA Bikeway Selection Guide, proximity to motor vehicle traffic is a significant source of stress and discomfort for bicyclists with crash and fatality risks sharply rising for vulnerable users when motor vehicle speeds exceed 25 mph. Shared lanes, paved shoulders, and shared use paths are appropriate bikeway types on rural roadways with shoulder width being an important consideration for accommodating bicyclists based on traffic volumes and posted speeds in the rural context.

Installing Street Lighting

As part of this project, street lighting will be installed along both the MN 1 and Walking Shield Road segments.

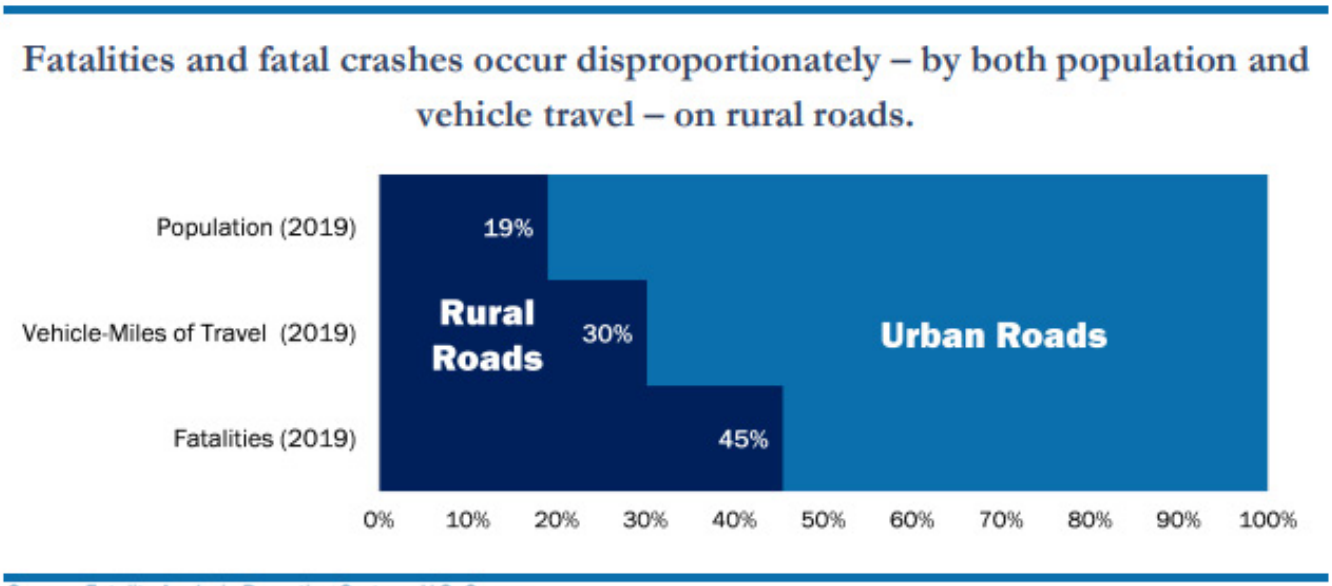
At nighttime, vehicles traveling at higher speeds may not have the ability to stop once a hazard or change in the road ahead becomes visible by the headlights. Adequate lighting can also provide benefits in terms of personal security for pedestrians, wheelchair and other mobility device users, bicyclists, and transit users as they travel along and across roadways.

According to FHWA, lighting can reduce nighttime injury crashes by up to 42 percent at intersections. The lighting of intersections and segments is a FHWA Proven Safety Countermeasure. Most new lighting installations are made with breakaway features, shielded, or placed far enough from the roadway to reduce the probability and/or severity of fixed-object crashes. Modern lighting technology gives precise control with minimal excessive light affecting the nighttime sky or spilling over to adjacent properties.

Alignment with National Roadway Safety Strategy Plan

All aspects of the proposed project will directly align with the U.S. Department of Transportation's National Roadway Safety Strategy Plan (NRSS). NRSS objectives that will be accomplished as a result of the proposed roadway improvements are the following:

- **Safer Roads** – Separated shared use paths and sidewalks along both MN 1 and Walking Shield Road will reduce the vulnerability of pedestrians and cyclists who utilize the rural roadways for recreational exercise and to travel to their destinations. According to the Fatality Analysis Reporting System from the U.S. Census, fatalities and fatal crashes occur disproportionately – by both population and vehicle travel – on rural roads. Advancements in making roadways safer are "important for success in the other NRSS objectives" as safer roads can encourage safe behaviors among drivers and other road users. Additionally, improvements such as street lighting, the resurfacing and rehabilitation of the roadways, and the elimination of geometric deficiencies also provide overlapping safety benefits with the previously mentioned pedestrian/cyclist-oriented infrastructure improvements.
- **Safer Speeds** – Over the past decade speeding has played a role in more than a quarter of traffic deaths nationwide. Roadway design, including roadway widths, pedestrian/bicyclist infrastructure, and intersection design can subconsciously influence motorists to drive at safer speeds.



Source: Fatality Analysis Reporting System, U.S. Census

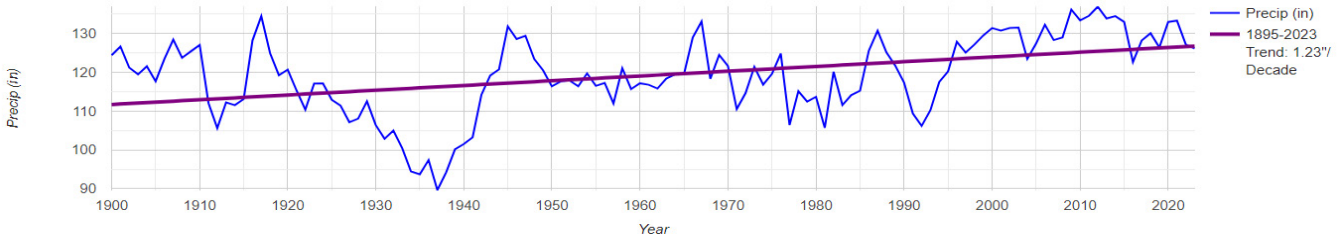
2. ENVIRONMENTAL SUSTAINABILITY

This project strives to advance a sustainable and resilient transportation system that enhances transportation options and reduces greenhouse gas emissions.

Maintaining both MN 1 and Walking Shield Road is vital to insulating the amount of harm that will be experienced by the Red Lake Reservation in the coming years due to climate change. For example, due to rising global temperatures, snow and rainfall patterns are shifting which are in turn causing more extreme climate events in the United States. **Native American tribes, including the Red Lake Band of Chippewa Indians on the reservation, are uniquely vulnerable to climate change, in part due to the relatively inhospitable portions of the country where they reside.** Often situated in rural areas with limited emergency resources, dealing with severe weather events can prove challenging for tribal and state authorities.

Climate Change is already having sizable impacts on Minnesota's weather. The state is seeing increased precipitation, higher levels of wind, and heavy snow events. Daily average minimum temperatures during the winter (December to February) have increased 7.3 degrees from 1895 to 2021 in Northern Minnesota. Warmer days during the winter are leading to larger and more frequent precipitation events, resulting in more snow than ever before. Increased temperatures across the world are contributing to an increased volume of ocean water present in the atmosphere, providing more fuel for passing weather systems to dump snow on the state. Seasonal heavy snow events, defined as calendar days with at least four inches of snow, have been increasing in frequency over time and annual rainfall has increased consistently since 1900.

These changes are resulting in more severe winter weather, creating additional maintenance needs, and more unsafe conditions for wintertime travel. For MnDOT District 2 where the Red Lake Reservation is located, this increase in snowfall equated to more than 92 inches of snow recorded during the 2022-2023 winter season. To help track the severity of individual winter seasons, each MnDOT District calculates a Winter Severity Index that compares maintenance and labor costs annually.



For MnDOT District 2 the Winter Severity Index has continuously exceeded the statewide average and in the 2021-2022 season, reached its highest rating of 167. As the prevalence of severe weather increases over time, maintenance needs for rural roads such as Walking Shield Road and MN 1 will expand, safety issues will be exacerbated, and the need to apply salt, brine, and sand to the roadways will increase.

Table 1 Minnesota Winter Severity Index 2018-2023

Area	2018 -19	2019 -20	2020 -21	2021 -22	Average
Statewide	154	128	86	138	126.5
District 2	164	140	91	167	140.5

The proposed changes to Walking Shield Road and MN 1 will greatly increase the roadways resilience to extreme climate and weather events. Repaving the roadway will make clean up and maintenance during extreme weather (such as snow plowing) easier, quicker, and more cost effective, allowing the roadways to stay open longer during storms and other weather events.

The census tract in which the Red Lake Reservation is located is categorized as an Area of Persistent Poverty as well as a Historically Disadvantaged Community. According to the U.S. Congressional Budget Office (CBO), the largest source of emissions of carbon dioxide (CO2, the most common greenhouse gas) in the United States is the transportation sector with the majority of emissions coming from cars and trucks. Motor vehicles account for 83 percent of CO2 emissions from transportation. By being able to proactively invest in MN 1 and Walking Shield Road, the Tribe and MnDOT will be able to keep these roads open and avoid the creation of lengthy detours which could result in environmental harm to the reservation.

According to the CBO, "carbon dioxide emissions, per passenger-mile from travel by personal vehicles are higher on a per-mile basis than emissions from other forms of passenger travel." A benefit cost analysis conducted for this application found that the proposed Project will reduce the amount of harmful carbon dioxide emissions produced by motorists using both MN 1 and Walking Shield Road by about 636 metric tons, providing air quality benefits of $48,403. By strategically implementing this reconstruction project, the Tribe and MnDOT will be able to better protect both the environment as well as the people of the Red Lake Nation.

Further, this project also has the potential to greatly reduce the car-dependence of the community through the construction of the shared use paths and sidewalks. Single occupancy vehicles are one of the greatest producers of carbon emissions in the transportation sector. Creating connections that use active transportation can reduce the car dependence of the community which will reduce the community's generated CO2 emissions. Finally, the contractor chosen for this project, Red Lake Builders, has a long history of utilizing sustainable construction techniques on highways and other construction projects. These practices will ensure that carbon emissions from the construction process will be mitigated to the greatest extent possible.

3. QUALITY OF LIFE

This project aims to improve multimodal connections that are essential for the wellbeing of Red Lake residents and will contribute to the improvement of public health and safety by reducing the risk of crashes, injuries, and fatalities associated with deteriorating infrastructure. Tribal communities often have significantly longer response times for emergency medical care than other communities. Well-maintained roadways provide reliable routes for emergency response vehicles, enabling timely access to medical facilities during emergencies. By minimizing congestion, travel delays, and air pollution, efficient transportation infrastructure enhances the overall quality of life for residents, promoting physical and mental well-being. Communities with well-maintained roadways experience fewer disruptions to daily life, allowing residents to spend more time with their families, pursue recreational activities, and engage in community events, ultimately contributing to a higher quality of life.

MN 1 is a critical east-west route for freight and people as the highway serves as a direct connection to the Red Lake Reservation and the people who call it home. Accurate population and household projections for the Reservation are somewhat difficult to derive due to a number

of inconsistent sources. Data from the U.S. Census Bureau, for example, is generally believed to be inaccurate by Tribal officials due to a variety of issues, including new privacy methods implemented by the U.S. Census Bureau during the 2020 Census as well as impacts from the COVID-19 Pandemic. According to post-Census data collected by the U.S. Census Bureau and reported by the Associated Press, American Indian or Alaska Native people on reservations were among the most undercounted populations in the 2020 census, with "an estimated 5.6 percent of residents missed." While the Tribe is currently challenging the official census tally of the Red Lake Reservation's population, the Census is the only federal data source the Tribe has access to. Therefore, according to Census data, there are approximately 5,944 people who reside on the Red Lake Reservation – 78.9 percent of whom are considered to be Low-and-Moderate Income (LMI).

If FY 2024 RAISE funding is not awarded, the Project would be delayed, and costs will continue to rise. Without the proposed improvements, residents of the Red Lake Reservation, who face high rates of poverty, historic underinvestment, and underrepresentation, will continue to experience a lack of multimodal facilities, worsening pavement conditions, and poor access to growth and economic opportunities. The pavement conditions will quickly worsen to poor and failed conditions. The much-needed pedestrian/bicyclist improvements of Americans with Disabilities Act (ADA) compliant multimodal infrastructure will not get constructed, leading to gaps in multimodal connectivity.

Subsequent impacts to regional mobility and quality of life would include:

- Reduced access to economic opportunities, cultural and heritage-related events such as powwows or interpretive sites, healthcare, and other goods and services.
- Reduced access to hunting and gathering of food including medicinal and culturally significant plants.
- Increased time spent in motor vehicles, with increasing exposure to adverse driving conditions such as winter weather, icy conditions, or other extreme weather events.
- Increased vehicle miles traveled and greenhouse gas emissions.
- Diminished connectivity and resiliency of tribal transit, school busing, and emergency services.
- Reduced reliability of the route and degradation of Red Lake Reservation's quality of life.

Substance Abuse and Deaths of Despair

Economic adversity perpetuates a cycle of substance abuse, chronic impoverishment, and premature morbidity. American Indian and Alaska Natives are disproportionately impacted by "deaths of despair" (mortality stemming from alcohol-related liver disease, drug overdoses, and suicides). Suicide rates for this group are nearly 50 percent greater than those for non-Hispanic whites. Deaths attributable to chronic liver disease are five times greater.

The opioid epidemic has had an especially devastating impact on reservations across the United States, including the Red Lake Reservation. Although infrastructure

improvements cannot fix the opioid crisis, investing in infrastructure through this project helps reverse endemic inequities and strengthens mobility and access to opportunities including education, employment, social services, cultural heritage, emergency medical care, and overall sense of community.

Access to Healthcare Facilities & Emergency Services

MN 1 and Walking Shield Road provides access to the Indian Health Service (IHS) clinic and hospital in Red Lake. The Red Lake IHS Hospital is a fully accredited, 23-bed hospital staffed by Physicians and Nurse Practitioners and provides primary care and an emergency department that offers 24-hour care. MN 1 and Walking Shield Road connect residents to MN 89 so they can access hospital facilities with a higher level of care (Sanford Bemidji Medical Center), a designated Level III Trauma Center located approximately 35 miles south of Red Lake.

The Project sustains safety and mobility for residents of the Reservation to access critical healthcare services. Emergency service providers depend on MN 1 and Walking Shield Road to effectively respond to acute needs of individuals experiencing sometimes life-threatening health problems. According to the Red Lake Police Department, response times on the reservation without being able to access MN 1 and/or Walking Shield Road would add more than 15 minutes to ideal alternate route conditions. It is imperative to keep these two segments in a state of good repair.

Access to Everyday Goods

Everyday goods are difficult to access for residents of Beltrami County and the Red Lake Indian Reservation. Westbrook's Redby Store in downtown Redby offers groceries including limited fresh produce options. Limited goods are also available at Jensen's Grocery, located about 12 miles northeast of Redby. The closest big box stores are in Bemidji, approximately 35 miles south of Red Lake. Improving the active transportation options of the community through the shared use paths and complete streets concepts will make it easier for residents to access the local stores and avoid the long journey to the outlying stores on a regular basis. Further, the resilient improvements offered by this project will allow freight to reach the local stores in case of extreme weather.

4. IMPROVES MOBILITY AND COMMUNITY CONNECTIVITY

Mobility and Community Connectivity is one of the priorities of this project. As previously mentioned, 78.9 percent of the population within the Red Lake Reservation is listed as low to moderate income, which ranks in the 97th percentile for low income tracts nationally. Despite this, residents are spending an unproportional amount of their income on transportation. The tract is ranked in the 91st percentile for transportation barriers, which is a measure of relative cost and time spent by each person on transportation. Nearly 15 percent of the Census Tract population are zero-car households, nearly double the 8.5 percent of zero-car households nationally. This is a common trend in Indian Country, which consistently has lower rates of car ownership. Black, Indigenous, and people of color represent 38 percent of the total U.S. population but account for 48 percent of all pedestrian fatalities. Additionally, 75 percent of pedestrian crash hotspot locations are bordered by low-income communities. It is essential that investments are made through Complete Streets initiatives and prioritizing the creation of safe and connected networks that are ADA compliant and for all users, ages, and abilities.

The project location (Census Tract 9400.01) is listed in the 99th percentile (worst in the United States) for unemployment and 97th percentile for low income tracts nationally.

According to the Climate and Economic Justice Screening Tool, Census Tract 9400.01 (project location) is listed as disadvantaged. The reservation is among the most disadvantaged communities in the United States when it comes to health outcomes, and the Census Tract is ranked at or above all four Health Burden criteria including the 98th percentile of census tracts nationwide for the share of people who have asthma, 97th percentile for heart disease, the 94th percentile for diabetes, and the 93rd percentile for low life expectancy.

The existing gaps and poor state of pedestrian/bicyclist infrastructure in the project area have either discouraged residents from choosing to walk or bike or led to several crashes involving vulnerable users. Therefore, it is essential to eliminate conflict points and accommodate safer pedestrian movements while encouraging the use of pedestrian facilities for recreational use and exercise.

The need for this infrastructure may be best demonstrated in the MnDOT's Priority Areas for Walking (PAWS) tool. The tool maps half-mile hexagons statewide based on equity, safety, health, infrastructure, and land use factors. The hexagons are sorted into five tiers, with Tier 1 indicating the highest priority. The highest scoring hexagons statewide received a score of 16. Within the project area, all hexagons are within Tier 1 (red) and Tier 2 (orange), with the equity total scoring maximum points, indicating the need for shared use paths, trails, sidewalks, and safe crossing accommodations at access points and intersections. This trend is also shown on MnDOT's Suitability for Pedestrian and Cycling Environment (SPACE) Tool. This tool uses 19 flags related to social and transportation conditions that indicate the suitability for active transportation infrastructure. The areas in and around the project score 53 out of 100, meaning 10 of the 19 flags are triggered. The shared use paths will greatly enhance the facilities for these active transportation users and these tools showcase the clear need the community has for this kind of complete street infrastructure.

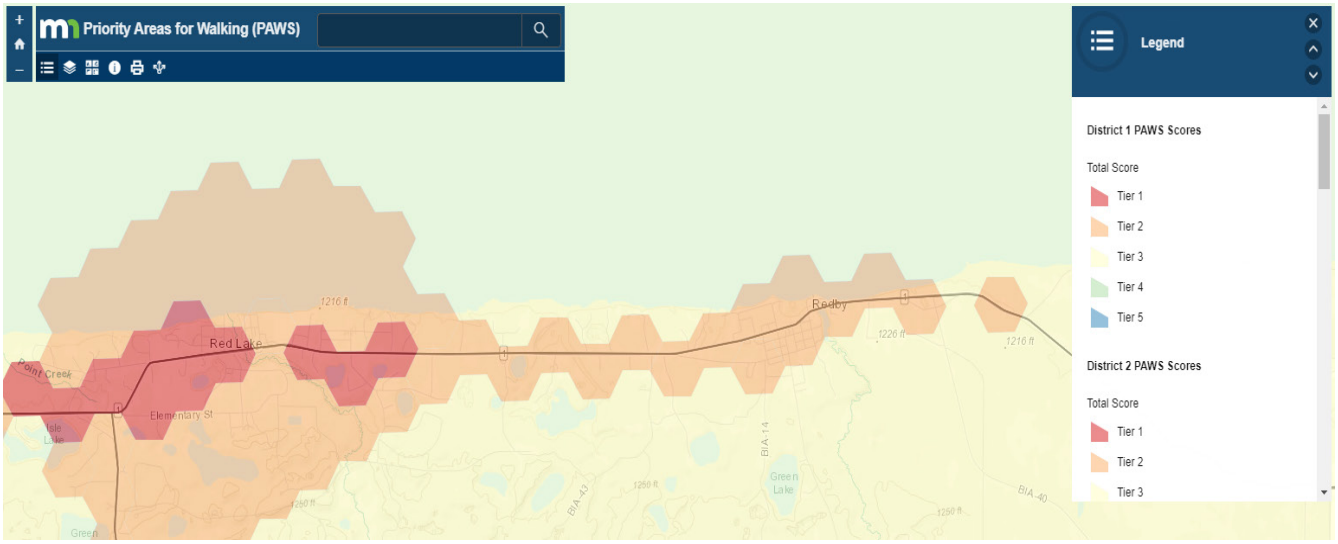
By constructing 8' sidewalks, 10' shoulders, and a 10' wide shared use path, users of all ages and abilities can experience better community connectivity, improve their health, and reduce their carbon footprint. Users can exercise freely separated from vehicular traffic; choose walking, rolling, or bicycling as their mode of transportation, and can count on getting to their destination, including work or school safely.

The shared use path will provide dedicated pedestrian and bicycle accommodations through Redby and connect residents to an existing path through Redby near the Red Lake Nation Fishery providing direct access to the Mud River and Lower Red Lake. Fishing in these locations is a popular pastime for members of the Tribe due to both its cultural and recreational/commercial importance. The Red Lake Reservation is home to the oldest and largest walleye commercial fishing in the United States with an estimated one million pounds of walleye being harvested annually on the reservation.

Native Americans have the highest pedestrian fatality risk of any racial group — and are almost five times more likely than white people to be killed while walking in the U.S. – Angie Schmitt, author of Right of Way: Race, Class and the Silent Epidemic of Pedestrian Deaths in America

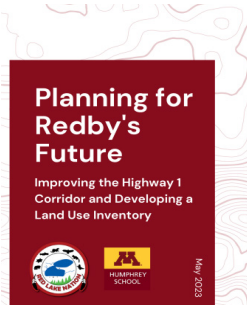
Cultural Elements and Sense of Place

Red Lake Nation is proud of its history and heritage and values input from their community as part of the planning and decision-making process. As is custom in this and previous engagement along the corridor, opportunities to provide input on this project continue to occur as this project evolves. To date, a meeting was held on

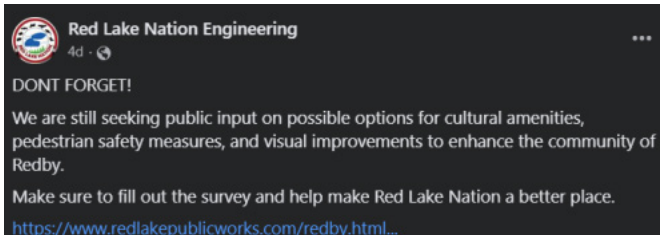


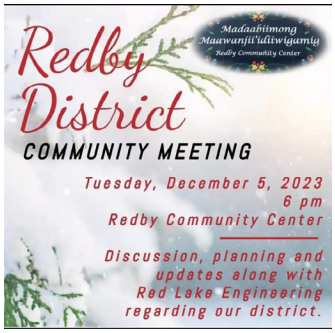
December 5, 2023 to discuss planning and updates of the Project.

Planning for Redby's Future – Improving the Highway 1 Corridor and Developing a Land Use Inventory



In 2023, three graduate students and their capstone professor from the University of Minnesota Humphrey School of Planning collaborated with members of the Red Lake Nation and MnDOT staff to drive this project forward. Through this effort and collaboration, Planning for Redby's Future – Improving the Highway 1 Corridor and Developing a Land Use Inventory was published in May 2023 outlining the needs to increase livability throughout the downtown area of the community of Redby.



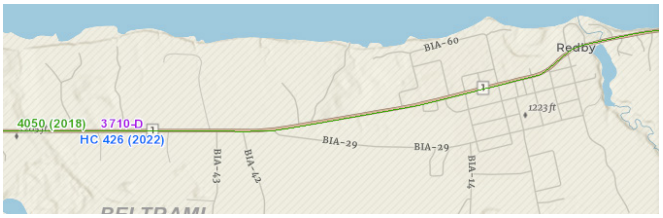


Community feedback was a pillar in developing the future land use scenarios and a survey was conducted to gather feedback. Social media updates are provided on the Red Lake Nation Engineering Facebook page and residents are continually encouraged to participate in engineering projects.

Cultural elements will be incorporated as part of this project along MN 1. The facilities themselves will include various amenities including benches, trash receptacles, planters (for beautification), exercise equipment (chin up bars, etc.) for those seeking to enhance their exercise, and interpretive signs that provide some additional cultural/educational information about each of the clans that can be enjoyed by pedestrian users.

5. ECONOMIC COMPETITIVENESS AND OPPORTUNITY

Indian Reservations such as Red Lake are disproportionately affected by deficient infrastructure due to their rural and isolated locations as well as historical inequities. These communities often bear the brunt of deteriorating roadways, experiencing increased travel times, limited access to essential services, and higher rates of crashes and fatalities. Reconstruction of roadways such as the ones prioritized by this project can catalyze economic development and prosperity in underserved communities by improving connectivity and access to economic opportunities. Reliable transportation infrastructure attracts investment which encourages business growth and creates job opportunities, particularly in areas with historically limited access to transportation networks. By prioritizing reconstruction and maintenance activities that enhance the functionality and safety of the identified roadways, the Tribe and MnDOT will be able to address longstanding disparities in infrastructure investment and promote equitable economic development. This targeted approach to infrastructure investment will help bridge the gap between communities and ensure that all residents can benefit from the economic opportunities and improved quality of life facilitated by well-maintained roadways and pedestrian/bicycle facilities.

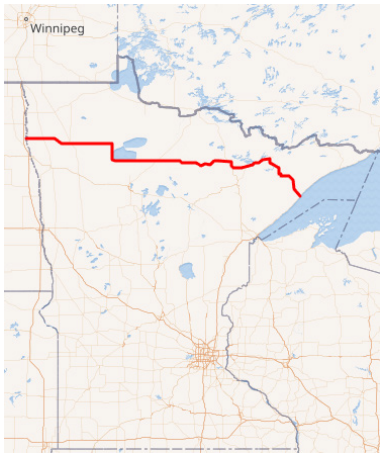


Improved Intermodal and/or Multimodal Freight Mobility

Based on findings from FPInnovations – Analysis of Car and Truck Pavement Impacts, Allan Bradley and Papa-Masseck Thiam, published in October 2018, a moderately worn asphalt/moderately weak subgrade indicate that an 80,000 lb 5-axle truck is equivalent to 285 passenger cars. Utilizing these traffic counts, MN 1 carries 4,050 vehicles per day (2018 count), including 426 heavy commercial vehicles per day (2022 count). This equates

to MN 1 pavement bearing the wear and tear of 125,460 automobiles daily. The roadway, which is currently in fair condition will quickly deteriorate to "poor" and "failed" condition if the road isn't rebuilt and reconstructing MN 1 with a new pavement section with 17" of Select Granular, 8" of Class 6, and 5" of Bituminous will assure MN 1's ability to carry not only cars, but heavy trucks well into the future.

Tourism Opportunities



MN 1 is the **longest state route in Minnesota**, extending 346 miles from North Dakota Highway 54 (ND 54) at the North Dakota state line (Red River in Oslo) to MN 61 at the unincorporated community of Illgen City in Beaver Bay Township on the north shore of Lake Superior. The road meanders through five Minnesota State Forests and one National Forest. MN 1 is the only east-west highway serving the Red Lake Nation Reservation.

MN 1 serves the Seven Clans Casino. The casino (operated by the Red Lake Band of Chippewa Indians) is the financial lifeblood of the Red Lake Reservation. Not only does the Casino provide jobs to Red Lake members, but it also serves as a major contributor to the economic vitality of the Reservation and its nearby rural areas. The Seven Clans Casino features 300+ gaming machines and 40 hotel rooms, a gift shop, and a restaurant. The site is also home to various banquets, weddings, and meetings for gathering as large as 800 people.

The Red Lake Reservation is nestled among the pristine lakes and forests of northern Minnesota and within driving distance of nearby tourism locations. At 288,800 acres, Red Lake is the largest of all inland lakes in Minnesota and the 16th largest lake in the United States. Approximately 48,000 acres are open to non-tribal sportfishing and the lake is a popular destination for fishing and ice fishing. The Red Lake Peatland Scientific and Natural Area (SNA) offers unmatched bird and wildlife viewing just 56 miles to the north of Redby.

The Project Area is located within a 35-minute drive of Bemidji. MN 1 serves as a vital route to connect to recreational opportunities including fishing, camping, golfing, hiking, hunting, snowmobiling, beach, and theater options. Itasca State Park (32,000 acres and Minnesota's oldest state park), Bemidji State Park (6,420 acres), Big Bog State Recreation Area (500 square mile peat bog, the largest in the lower 48 states) are all located close by.

Long-term Economic Growth

Constructing Walking Shield Road (also referred to as Thunder Lake Road) will help to spur housing projects on the reservation which will support the growing population within the Red Lake Nation and surrounding area. As of December 2023, there are several facilities and housing developments under construction or planned for construction in the communities of Red Lake and Redby that will provide housing and health services to tribal members. These include the following:

- Red Lake Family Services
- Red Lake Medication Assisted Recovery Services Facility

- Red Lake Immersion School
- Red Lake Chemical Dependency Treatment Facility (16 beds)
- Red Lake Supportive Housing Complex (24 beds)
- Red Lake Supportive Housing Project (4-5 homes)
- Red Lake Homes Subdivision #14 (13 homes)
- Red Lake Homes Subdivision #15 (13 homes)
- Red Lake Congregate Shelter (72 occupants)
- Red Lake Sober Village (27 units)
- Red Lake Detox Center (12 occupants)

Housing was identified as one of the biggest economic needs for the community, and this project will directly expedite the construction of additional affordable housing stock on the reservation.

Once Walking Shield Road is expanded, development in five proposed future housing sites will occur.

Further, as has been mentioned previously, Native American communities, have a significantly lower rate of car ownership. This means that many community members rely on walking or other active transportation modes to access jobs or other economic activity. But, due to the sparse rural nature of the reservation, this often means people need to walk great distances to reach their destinations. By improving the active transportation access through the shared use paths, residents who do not own a car will be able to more efficiently access economic opportunities such as jobs.

Local Economic Hiring Preferences

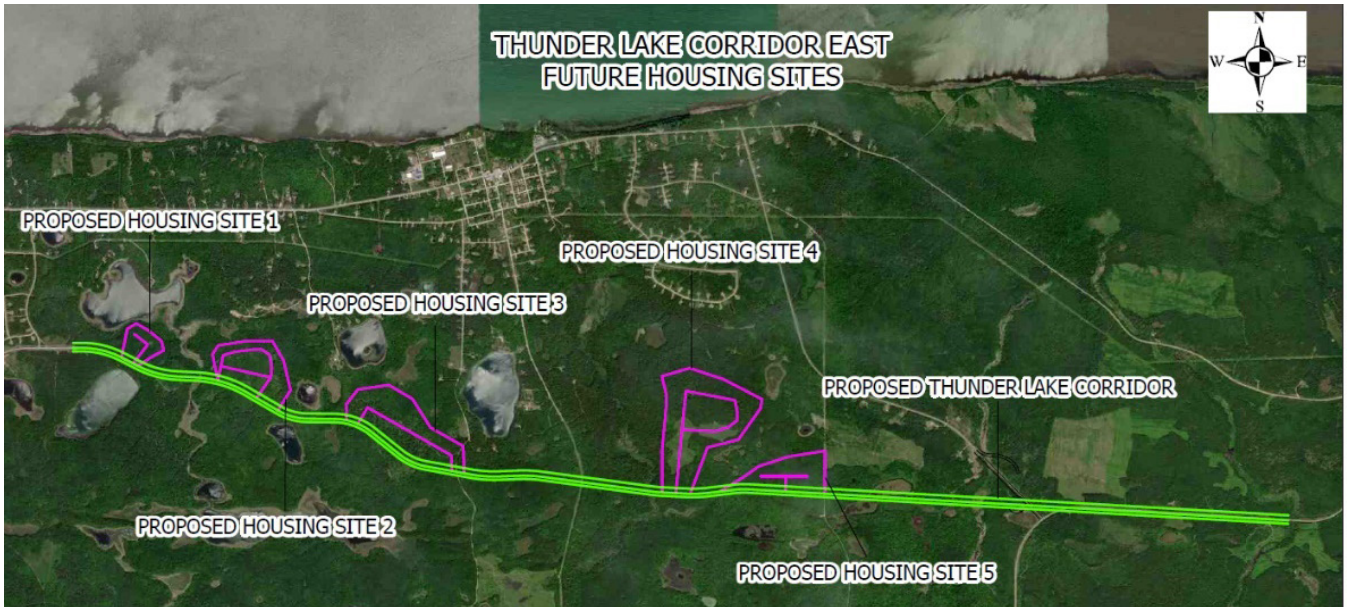
Red Lake Builders is a trusted partner of the Tribe and will be the primary contractor for construction work on the Project. The business is owned by the Red Lake Band of Chippewa Indians through Red Lake Incorporated – an entity that owns and operates multiple businesses on the Red Lake Reservation which help to stimulate the Tribe's economy and create jobs in accordance with the economic development and self-determination policies and plans of the Red Lake Nation. Red Lake Builders has extensive experience as a commercial, highway/heavy, and residential construction company which has completed numerous construction projects on the reservation since its founding in 1976. See Section 7 - Partnership and Collaboration for more details on Red Lake Builders' involvement with this project.

6. STATE OF GOOD REPAIR

State of good repair is a primary project purpose and has clear, direct, data-driven benefits.

Restoration and Modernization of Infrastructure Assets

For more than a decade, MnDOT has been a Complete Streets leader in the industry and was one of the first DOTs in the country to develop a statewide policy. A Complete Streets approach is required on all projects which receive state funding. This means projects must address the safety and access needs of users of all ages and abilities as well



Note: Walking Shield Road is also known as Thunder Lake Road

as the needs of people walking, biking, and using transit. Motorists, commercial vehicles, and emergency vehicles moving along and across roads are considered during the design of a project under the statewide Complete Streets policy. A Complete Streets approach recognizes varying needs across urban, suburban, and rural settings. Such an approach is being used for this project and elements of the Project, including the inclusion of shared use paths and sidewalks, are primary examples of how the Complete Streets approach has factored into the project's design.

Reduction of Construction and Maintenance Burdens via Efficient, Well-Integrated Design

MnDOT's Pavement Management Unit (PMU) is responsible for the collection and analysis of pavement condition data on Minnesota's Trunk Highway system which consists of approximately 12,000 centerline miles. Each year, the PMU collects pavement roughness and digital image data on the entire trunk highway system, in both directions providing the most accurate data. Year 2022 pavement condition maps for District 2, show that MN 1 has 4-11 years of remaining service life. However, the highway (which is a planned reconstruction project for 2031), is deteriorating quickly due to its age (85+ years old), extreme weather conditions, and increasing traffic volumes.

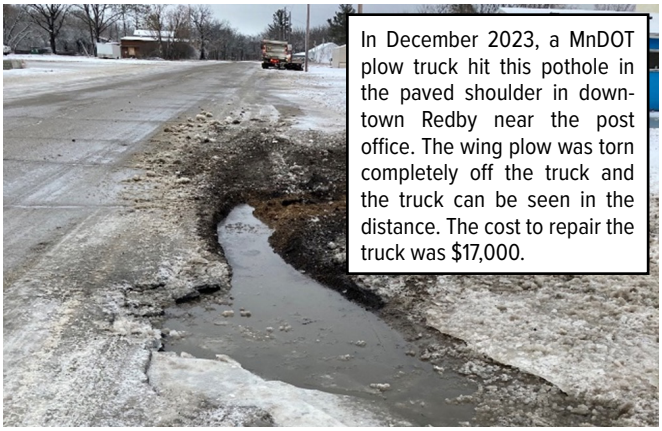
Creation of New Infrastructure in a Remote Community

Shared use paths and sidewalks will be constructed through the Project. These facilities will provide separated bicycle and pedestrian accommodations for users of all ages and abilities. The lighted shared use paths and sidewalks will bring measurable safety benefits to a rural area that currently lacks good visibility at night.

Addressing Current or Projected System Vulnerabilities for Underserved Communities

This project serves residents in a Census Tract within the boundaries of the Red Lake Reservation – a federally recognized reservation in the United States – which automatically qualifies the tract as a historically disadvantaged community. The majority of households have incomes below the federal poverty line and the unemployment rate on the Reservation lingers at approximately 50 percent, (99th percentile Census Tract nationwide for unemployment), and nearly 15 percent of households within this Tract do not own a vehicle. The chronic lack of good roads and infrastructure for pedestrians and bicyclists derail efforts to expand economic development and job opportunities on the Reservation. According to the Climate and Economic Justice Screening Tool (CJEST) developed by the White House Council on Environmental Quality, the tract has five indicators of disadvantage, including Climate Change, Energy, Health, Transportation, and Workforce Development. Providing safe streets, in a state of good repair and adding pedestrian and bicycle infrastructure facilities separated from the traveling public will increase safety, quality of life and health for all users.

Prioritization of the Condition and Safety of Existing Transportation Infrastructure Within the Existing Footprint



In December 2023, a MnDOT plow truck hit this pothole in the paved shoulder in downtown Redby near the post office. The wing plow was torn completely off the truck and the truck can be seen in the distance. The cost to repair the truck was $17,000.

Current pavement conditions along Walking Shield Road and MN 1 are already in or will be in "poor" condition by 2026 and a new roadway surface is needed. However, not only the roadway surfaces are in poor condition, the roadway shoulders and intersections are also degrading quickly and are causing financial impacts to users. In December 2023, a MnDOT plow truck while on a route hit a pothole along the paved shoulder in downtown Redby near the post office. The wing of the snow plow was torn completely off the truck causing $17,000 in damage. While it makes sense to make these improvements for those users using an automobile, now is the time to also upgrade facilities to accommodate all users especially in an area with a growing population and the desire for a less auto-centric focus.

Safety features include: a separated pedestrian/bicycle path away from motor vehicles, lighting, ADA compliant curb ramps at intersections, new smooth/paved surface, more visible pavement markings, additional signing, and defined access driveways.

7. PARTNERSHIP AND COLLABORATION

Partnerships and Collaboration is a highlight of this project.

Coordination with Residents and Community-Based Organizations to Ensure Equity Considerations for Underserved Communities are Integrated Throughout the Project Lifecycle

Red Lake and MnDOT Partnership

In 2018, MnDOT and Red Lake Nation received a State Government Innovation Award for their collaboration in transportation projects, specifically on MN 1. For their rank among the top three projects statewide and their team approach, a professional video was produced to show their success story in partnership.

The video highlights past examples of when state highways ran through a Reservation, MnDOT was in charge of doing the work, designing the project, and contracting the work, but the Tribes did not play a role in the design or construction of the project and the two parties would have minimal communication. The Redby Bridge Project was a bridge reconstruction project within the town of Redby, and when a contractor was selected, Red Lake Builders, which is owned by the Tribe, did not feel like they received a fair opportunity to compete for the bidding of the job, which created angst amongst the Tribe and MnDOT. The Tribe expressed they have proven qualified professionals that could handle the job on the Reservation. This triggered deeper discussions between the two parties for projects on the Reservation and since that time, the relationship between the Tribe and MnDOT has only strengthened.

With capable staff and resources conversations evolved into Red Lake Builders serving important roles on these types of transportation projects on MN 1 where pre-planning and dividing up of responsibilities occurred. The unique piece of this partnership was that MnDOT handed over the procurement pieces of the design and construction and funded the project but served as a resource and background role in the delivery of the project. From Red Lake's perspective, where unemployment rates are very high, keeping the jobs on the reservation was critical to provide for their families.

Partnership with High-Quality Workforce Development Programs with Supportive Services

The Tribe has a variety of workforce development programs with supportive services that may be utilized for this project. For example, the Red Lake Public Works Department is a participant in the Tribe's Oshkiimaajitahdah Summer Youth Employment Program which provides job training for youths between the ages of 14-21. On average, the Public Works Department usually has four participants from the program. In addition to the Oshkiimaajitahdah Program, the Tribe also maintains a Supported Work Experience Program which is an opportunity for individuals to be employed on a contract basis which may lead to full-time employment.

Partnership with Unions and/or Worker Organizations in the Development of the Project

Red Lake Nation has benefited from this program through the construction of Walking Shield Road in 2001. Walking Shield has also provided 109 homes through an excess military homes transfer program to Red Lake Nation, that has helped mitigate homelessness and subpar housing conditions and overcrowded living conditions.

8. INNOVATION

The Project brings Innovative Project Delivery and Innovative Financing benefits.

Innovative Project Delivery

Red Lake Builders

The Red Lake Band of Chippewa Indians is proud of the resilience and innovation the Tribe has shown through the centuries. No matter the task at hand or the hardship that has needed to be overcome, tribal members have historically banded together to make the best of their situation and contribute to the Tribe's goal of self-determination. As mentioned previously, the Tribe will be directly contracting work to Red Lake Builders Inc., a certified Disadvantaged Business Enterprise, for construction on this project. Established in 1976, Red Lake Builders is a pillar of excellence in the construction industry and is owned by the Tribe. The construction business hires local tribal members and is headquartered on the reservation which will provide cost savings for the Project as all equipment will be stored on-site and all workers will have short commutes. Single source procurement for this project will also result in less administrative work/costs, better inventory management, and expedited accomplishment of project milestones.

Innovative Financing

MnDOT IIJA Discretionary Grants Tribal Contract

MnDOT has made significant investments to provide the best chances to compete for IIJA funds under the BIL and bring federal funding dollars to underserved areas. MnDOT is the first DOT in the nation to hire a consultant team that will work with each of the eleven federally recognized tribes in Minnesota to advance priority projects and prepare IIJA applications. Through the contract, each Tribe will have the opportunity to identify and rank their priority projects, create a funding roadmap, and use MnDOT dollars to prepare federal grant applications. This application is living proof of that process as this project is the Tribe's number one priority and the application is being funded through this investment in underserved and rural areas.

MnDOT IIJA Discretionary Grants Technical Assistance

State funds are available to local units of government and tribal governments (up to $30,000 on a first-come-first serve basis) that seek to submit an application for a federal discretionary grant for a transportation purpose. State technical assistance funds can be used to hire a consultant for identification of available grants, grant writing, analysis, data collection, technical review, legal interpretations, planning, pre-engineering, application finalization, and similar activities.

MnDOT IIJA Discretionary Grants Match Program

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.

The federal grant must be for a transportation-related purpose, such as a transportation project, program, planning and program delivery, and it may include administrative costs, ongoing operations, or other related expenditures. Awards made under this grant program will be capped at the match amount or at $10 million, whichever is less.

Project will connect with recently completed shared use path investments along MN 1