



US Highway (US) 14/County State Aid Highway (CSAH) 44 Interchange Project

Addressing Critical Safety, Equity, and Mobility Challenges
in Rochester, MN Regional Center

PROJECT DESCRIPTION

2023 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program



Project Name:

US Highway (US) 14/County State Aid Highway (CSAH) 44 Interchange Project

Project Type:

Rural Capital Project – Road, Road/Rail Crossing

Total Project Cost:

\$60.54 million

2023 RAISE Funds Requested:

\$42.1 million

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Supporting Information can be found at:

<https://www.srfconsulting.com/raise-us14-olmsted/>



US Highway (US) 14/County State Aid Highway (CSAH) 44 Interchange Project

Submitted by Olmsted County

2023 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program

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PROJECT DESCRIPTION

Olmsted County is requesting \$42.1 million in FY 2023 Appropriation funds under the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program for the construction of [US Highway \(US\) 14/County State Aid Highway \(CSAH\) 44 Interchange Project](#) – Addressing Critical Safety, Equity, and Mobility Challenges in Rochester, MN Regional Center (herein known as the Project). Olmsted County (herein known as the County) and the Minnesota Department of Transportation (MnDOT) will partner with the USDOT to address critical safety concerns at two intersections along US 14, by constructing an interchange at CSAH 44 and an associated flyover structure at 7th Street NW. The Project will also eliminate the existing at-grade railroad crossing between CSAH 44 and Canadian Pacific (CP) railway, 100 ft north of the US 14/CSAH 44 intersection. Further, the Project will improve multimodal mobility in southeastern Minnesota by providing efficient connections to the world’s leading healthcare facility – Mayo Clinic. The Project’s total eligible cost is \$60.54 million and complies with RAISE requirements for a rural capital project.

The project area is located approximately one mile west of the city boundary of Rochester, Minnesota ([Figure 1](#)). Located in southeastern Minnesota, Rochester is the third-largest city in the state and home to a world-renown medical facility and the State of Minnesota’s [largest private employer](#), the Mayo Clinic. Rochester has a strong economy, major healthcare, educational, research, and cultural institutions, and a diverse range of industries that support its growing population. Rochester is [projected](#) to add 55,000 additional residents, 50,000 additional jobs, and 3,000,000 annual visitors between 2015 and 2040 (Figure 2). The catalyst of this significant growth is the upcoming expansion of Mayo Clinic’s innovative healthcare initiative [Destination Medical Center](#) (DMC), the largest public-private economic initiative in Minnesota. As this regional center grows, so will the associated travel volumes on US 14, which will further compound existing safety and mobility concerns. The Project lies within Rochester’s urban growth boundary. These forecasted future conditions will exacerbate existing safety and mobility issues and further contribute to this Project’s urgency.

PROJECT AREA

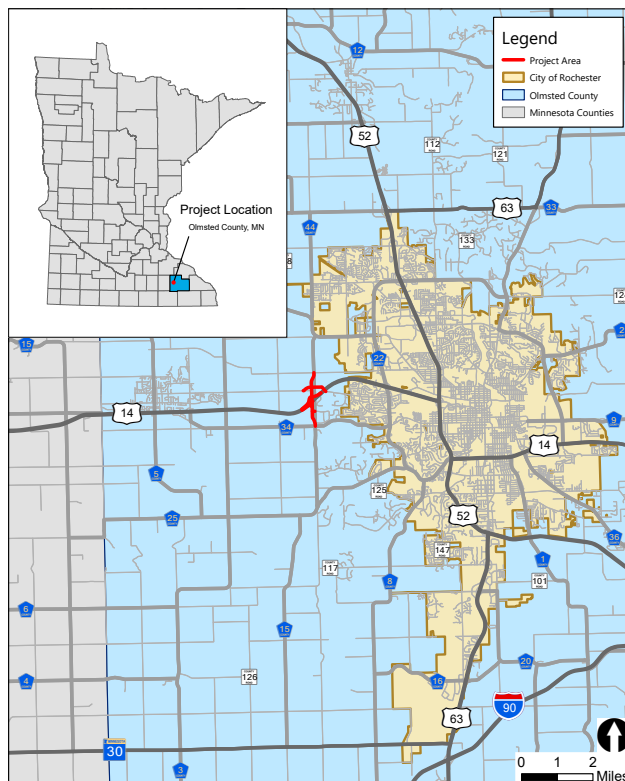


Figure 1 [Project Location](#)

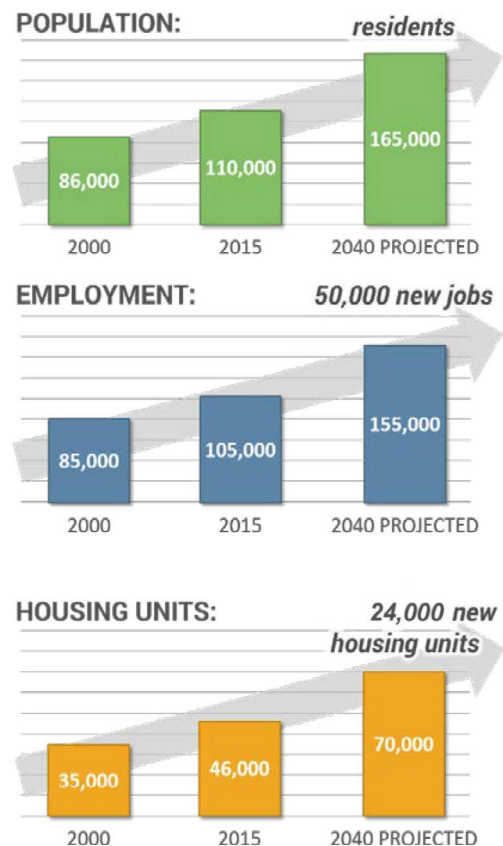


Figure 2 [Projected Growth in Rochester, MN](#)

US 14 is a critical east-west corridor that connects Rochester's regional economic, employment, and medical centers to many smaller communities throughout southern Minnesota and extending into Wisconsin and the Dakotas. US 14 is also classified by MnDOT as one of Minnesota's Principal Freight Corridors and is designated as a [National Highway System \(NHS\) Non-Interstate route](#). Within the Project corridor, US 14 is a divided four-lane rural expressway with several at-grade intersections. The posted speed limit is 65 miles per hour (mph). The existing annual average daily traffic (AADT) in the Project corridor along US 14 is approximately 32,200 vehicles per day (2021).

CSAH 44 intersects with US 14 from the north approximately one mile west of Rochester. CSAH 44 is a key north-south route that provides regional connectivity and access to US 14. It serves both growing commercial activities to the north as well as residential areas to the south. Currently designated as a federally classified minor collector, CSAH 44 carries approximately 3,600 vehicles per day (2018). The Rochester-Olmsted Council of Government (ROCOG), the Metropolitan Planning Organization (MPO) for the City of Rochester and Olmsted County, recognizes the future importance of CSAH 44 and the projected growth expected over the next 20 years along the CSAH 44 corridor. According to the ROCOG [Long Range Transportation Plan](#) (LRTP), CSAH 44 is classified as a future Strategic Arterial, which in urban areas are of regional importance and designed to “carry high volumes of higher speed traffic, including through traffic, with limited direct service to abutting land and design characteristics such as medians and limited traffic signalization to enhance traffic flow” as priority is given to mobility over access from a functional perspective.

There are significant safety concerns due to the skewed angle intersection of US 14 and CSAH 44 (Figure 3), as well as increasingly high traffic volumes. The MnDOT Access Management Manual indicates high-risk conditions for vehicles on CSAH 44 trying to find an adequate gap in traffic flows on US 14, as seen in this [video](#). The actual crash rate at this intersection is approximately two times the critical crash rate and 3.5 times the statewide average crash rate for similar intersections. Additionally, the safety issues are further exacerbated due to the presence of an at-grade railroad crossing between CSAH 44 and the Canadian Pacific Railway (CP) railroad line, immediately north of the US 14/CSAH 44 intersection..



In July 2022, MnDOT closed the medians at US 14/CSAH 44 and US 14/7th Street NW as an interim safety measure until an interchange crossing can be funded. It converted both intersections into right-in right-out (RI/RO) access only. While this temporary solution had some positive effects, significant safety concerns remain a known problem at these intersections. Further, this interim solution did not consider long-term regional mobility and considerations for traffic shifts and operational impacts. The interim solution eliminated accessibility in the project area by creating longer diversion routes which further led to exacerbated capacity challenges at other intersections along US 14. The next interchange to the east of US 14/7th Street NW intersection, West Circle Drive, experiences increased congestion and operational problems.



CURRENT TRANSPORTATION CHALLENGES

A range of serious operational and safety concerns are present for roadway users, freight haulers, and businesses along the Project corridor. Existing transportation challenges in the area include:

- **Significant Safety Concerns:** The skewed intersection of US 14/CSAH 44 causes acute angle turns on and off the roadways and provides insufficient sight lines. These concerns are present for both freight and vehicular traffic.
- **Mobility Challenges:** Increasingly higher traffic volume coupled with high speeds along US 14 result in inadequate gaps in traffic flow. Motorists have challenges judging gaps with the amount of traffic on US 14 and high travel speeds. As traffic volumes continue to increase as forecasted, these delays will continue to lengthen, further incentivizing drivers to “dart out” into the traffic stream and engage in risk-taking behavior and unsafe merging conditions. This Project will address these existing and future safety issues.
- **Railroad Crossing:** The existing at-grade railroad crossing just north of the CSAH 44/US 14 intersection presents unique challenges to the safety and overall traffic flow

to/from this intersection. The railroad crossing is just 100 feet north of US 14.

- **Increased Travel Times:** The recent closure of the medians at both CSAH 44 and 7th Street NW intersections, while an interim safety solution, has resulted in significantly longer alternative routes and increased travel time for the local community.
- **Congested Roadways:** The interim solution has increased congestion at existing US 14 access points.
- **Unsafe Bicycle / Pedestrian Environment:** Existing vehicle and rail volumes create unsafe conditions for users trying to access employment center.
- **Absence of Americans with Disabilities Act (ADA) compliant** multimodal infrastructure.

The combination of high speeds, high traffic volumes, the geometry of the roadways, an active at-grade rail crossing, current traffic diversions due to the interim solutions, and lack of multimodal infrastructure has made travel through this vital corridor extremely challenging.

PROPOSED IMPROVEMENTS



The Project aims to address the above identified issues by designing and implementing a modernized interchange that provides long-term solutions to improve safety and efficiency for all users. The proposed improvements include (Figure 4):

- **Improved Safety:** Construction of a new interchange at US 14/CSAH 44 with on and off-ramp connections in both directions to grade separate US 14 and CSAH 44.
- **Improved Neighborhood Access:** Construction of an overpass to replace at-grade access to US 14 at 7th Street NW to provide safer connections and maintain the continuity of the local roadway system.
- **Improved Visibility:** Realignment of CSAH 44, 300 ft west of existing CSAH 44, with two travel lanes in each direction with addition of turn lanes to accommodate future volumes and provide safer connections.
- **Enhanced Business Neighborhood Access:** Addition of an east-west connection from 7th Street NW to 14th Street NW to improve local connections.
- **Safer Streets, Sidewalks and Bike Lanes:** Construction of multimodal trails, with ADA upgrades, on both sides of realigned CSAH 44 to add pedestrian and bicyclist infrastructure where there is currently none.
- **Improved Geometrics:** Reconfiguration of existing CSAH 44 as a frontage road to improve safety and access management.
- **Stormwater Improvements:** Replacement of stormwater infrastructure to expand capacity to address flooding and provide water quality treatment along the corridor.

Figure 4 Proposed Improvements

- **Improved Visual Quality:** Replacement of landscaping and streetlighting along CSAH 44 to maintain safety and aesthetics.
- **Economic Growth:** RAISE investments will help unleash significant economic growth and create jobs in the developing industrial area, as well as connect low-income residents to good-paying employment opportunities at the Mayo Clinic and downtown Rochester.
- **Facilitate Managed Growth:** The proposed interchange will permit the City of Rochester to grow bases on the City's Comprehensive Plan and sewer extension plans.

The Project will be constructed under traffic with lane closures controlled with approved temporary traffic control devices/practices and signed local detour providing alternate routes, where necessary. Access to adjacent properties will be maintained during construction but may be limited at times due to phasing requirements.

DETAILED STATEMENT OF WORK/ DESIGN STATUS

The Project is currently in the preliminary design phase. The goal of the preliminary design is to complete a MnDOT approved Geometric Layout and an approved non-programmatic Categorical Exemption (CATEX), as the appropriate level of NEPA review. The Project's needs and solutions have been identified through active public and stakeholder engagement conducted to inform, educate, and incorporate gathered feedback into the designed solution. As per the Project [schedule](#), it is expected that the 30 percent design (approved layout and environmental documentation) will be completed by Fall 2023.

Upon completion of the preliminary design, final project plans and specifications will be prepared in accordance with MnDOT Design Manuals and Standards. Final design engineering will include preparation of 60 percent, 90 percent, and 100 percent

construction plans, cost estimates, drainage, signing, and lighting designs, traffic management plans, right-of-way acquisition plans, and risk management plans, among others. The County will hire contractors to construct the Project in accordance with its [workforce and labor development plans](#), including fulfilling goals of its Disadvantaged Business Enterprises (DBE) plans. The County will be responsible for facilitating the coordination of all activities necessary for implementation of the Project. The County will fund maintenance costs of all infrastructure within its right-of-way (CSAH 44) while MnDOT will fund the maintenance of exit and entrance ramps associated with US 14 as well as the 7th Street NW overpass, upon Project completion. Maintenance of local roadways east of the corridor are the responsibility of Cascade Township while roadways west of the corridor are the responsibility of Kalmar Township.

PROJECT HISTORY

Olmsted County has invested funding, time, and resources in planning for the Project corridor over the last 15 years. Starting in 2007-2008, the County, MnDOT, and Federal Highway Administration (FHWA) conducted a [joint study](#) to understand the crucial safety deficiencies and changing travel needs in the area. The study resulted in an approved preferred alternative for the preservation of right-of way and an upgrade of CSAH 44 (then County Road (CR) 104) and US 14 intersection, that would benefit safety, mobility, and multimodality, as well as accommodate economic and regional growth.

However, since 2008, CSAH 44 has been upgraded in its classification and safety issues have been compounded at its intersection with US 14. The growth of downtown Rochester and the State's largest employer, the Mayo Clinic, have continued to increase employment opportunities for residents on the western edge of the City and smaller communities to the West, thereby increasing the commuter volumes. As this Project proceeds through the preliminary

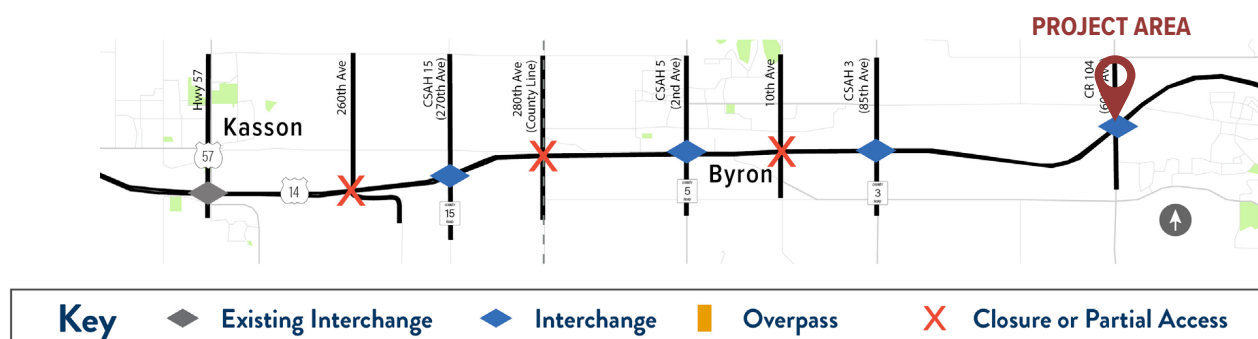


Figure 5 US 14 Corridor Analysis Study Area

design, the environmental documentation for the Project is currently being revisited and updated, in compliance with federal and state requirements. The County has requested federal Categorical Exclusion (non-programmatic CATEX) as the appropriate level of NEPA review.

In 2020, the [US 14 Corridor Analysis Project](#) was completed. The study established a long-term vision to improve safety and mobility for US 14 between Rochester and Kasson, MN. The project implementation plan identifies the Project

intersection, US 14 and CSAH 44, as an immediate (five-year) improvement critical to address the safety and regional mobility challenges along the corridor.

In July 2022, MnDOT installed a short-term interim safety measure of closing two center medians in hopes to reduce high-speed, right-angle crashes until the interchange can be constructed. Inevitably this temporary solution resulted in longer diversion routes and traffic shifts to other key intersections along US 14, creating longer travel times and capacity impacts.

PROJECT LOCATION

The Project is located at the intersection of US 14 and CSAH 44, approximately one mile west of Rochester, MN. Rochester is a crucial economic hub in southeast Minnesota and is the county seat for Olmsted County. The location coordinates are 44.032653°, -92.558420°.

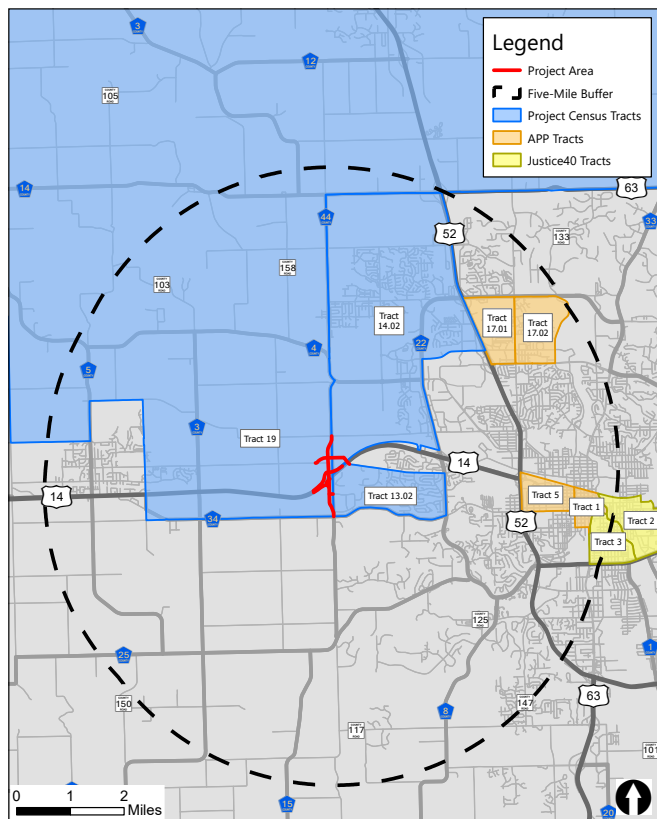


Figure 6 [Project Location in Regional context](#)

The Project is located outside of a Census-designated urbanized area with a population greater than 200,000, and therefore, designated a rural capital project. This intersection serves several communities in Olmsted County, within the urban growth boundary of Rochester but close to the rural cities of Byron and Kasson, MN. The Project serves the needs of both urban and rural communities and strengthens the regional transportation network in and around southeastern Minnesota.

The project area is located within three census tracts: 19, 13.02, and 14.02. While none of these census tracts are designated as an [Areas of Persistent Poverty \(APP\)](#), according to the recently released US DOT [Equitable Transportation Community Explorer \(ETCE\)](#), all three tracts are categorized as "Transportation Safety Disadvantage" tracts, i.e. the community experiences higher levels of fatalities related to motor vehicle crashes. Four neighboring APPs census tracts, tracts 1 and 5 (about 3.5 miles from the Project) and tracts 17.01 and 17.02 (about 6 miles from the Project) are in the vicinity of the Project and are designated as APPs. Additionally, tracts 1, 2, and 3 are designated as a [Justice 40 Disadvantaged community](#) under health, housing, legacy pollution, or workforce development categories. The Project is not located in a Historically Disadvantaged Community (HDC), Empowerment Zones, Promise Zones, or Choice Neighborhoods.

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/raise-us14-olmsted/>