Application

17063 - 2022 Roadway Modernization

17446 - CSAH 152 (Cedar Ave) Reconstruction Project

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
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Primary Contact

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What Grant Programs are you most interested in?	Regional Solicitation - Roadways Including Multimodal Elements			

Organization Information

Name:	HENNEPIN COUNTY

Jurisdictional Agency (if different):

Organization Type: County Government

Organization Website:

Address: DPT OF PUBLIC WORKS

1600 PRAIRIE DR

*	MEDINA	Minnesota	55340
	City	State/Province	Postal Code/Zip

County: Hennepin

Phone:* 763-745-7600 Ext.

Fax:

PeopleSoft Vendor Number 0000028004A9

Project Information

Project Name CSAH 152 (Cedar Ave) Reconstruction Project

Primary County where the Project is Located Hennepin

Cities or Townships where the Project is Located: Minneapolis

Jurisdictional Agency (If Different than the Applicant):

Brief Project Description (Include location, road name/functional class, type of improvement, etc.)

The proposed project includes the reconstruction of the CSAH 152 (Cedar Ave) corridor from approximately 150' north of CSAH 3 (Lake St) to 24th St in the City of Minneapolis. CSAH 152 (Cedar Ave) is classified as an A-Minor Arterial roadway that functions as an Augmenter. The project ends just north of CSAH 3 (Lake St), a Tier 3 Regional Truck Corridor, as a result of a recent reconstruction project that impacted the intersection of CSAHs 3 and 152. The current configuration of the roadway consists of a 2-lane undivided roadway with no turn lanes, and parking. Attachment 02 provides an illustration of the project location, and Attachment 03 provides photos of the existing conditions along the corridor.

The project objectives are to improve the accessibility, mobility, and safety for all modes. Metro Transit has identified this corridor as a future arterial bus rapid transit route in the 2030-2035 timeframe; and this proposed reconstruction project will improve multimodal user experiences for first and last mile connections to transit. Improvements made as part of this reconstruction project are not anticipated to preclude future arterial bus rapid transit along this corridor. Furthermore, the proposed reconstruction project along CSAH 152 (Cedar Ave) provides an opportunity to coordinate improvements with the City of Minneapolis as part of their Phillips Traffic Safety Improvements and Little Earth Transportation Study.

This project will include, but is not limited to, the following elements. The specific locations and types of improvements will be determined as part of the design process based on additional community input, data analysis, and environmental review. A potential typical section is shown in Attachment 04 and a potential planning level concept for the

corridor is shown in Attachment 05.

- Roadway improvements; such as the replacement of the deteriorated pavement, pavement substructure, curb and gutter, and storm sewer structures.

- Safety improvements; such as the upgrading of traffic signal systems to include dedicated left-turn phasing, the conversion of the existing two-lane undivided with parking configuration to a two-lane divided with turn lanes (retaining parking on one-side); along with the installation of curb extensions, and/or raised medians that will reduce the distance for people walking and manage the speeds for people driving.

- Pedestrian improvements; such as ADA compliant ramps and sidewalks, APS, high visibility crosswalk markings, curb extensions, raised medians, and countdown timers.

- Streetscaping improvements; such as improved boulevard space, lighting, and street furniture. Additionally, staff will evaluate the potential for burying overhead utilities as part of the design process.

(Limit 2,800 characters; approximately 400 words)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DESCRIPTION - will be used in TIP if the project is selected for funding. See MnDOT's TIP description guidance.

CSAH 152 (Cedar Ave) from 150' north of CSAH 3 (Lake St) to 24th St in Minneapolis

Include both the CSAH/MSAS/TH references and their corresponding street names in the TIP Description (see Resources link on Regional Solicitation webpage for examples).

Project Length (Miles)

0.74

to the nearest one-tenth of a mile

Project Funding

Are you applying for competitive funds from another source(s) to implement this project? No

If yes, please identify the source(s)

Federal Amount $5,536,000.00

Match Amount $1,384,000.00

Minimum of 20% of project total

Project Total $6,920,000.00

For transit projects, the total cost for the application is total cost minus fare revenues.

Match Percentage 20.0%

Minimum of 20%
Compute the match percentage by dividing the match amount by the project total

Source of Match Funds Hennepin County

A minimum of 20% of the total project cost must come from non-federal sources; additional match funds over the 20% minimum can come from other federal sources

Preferred Program Year

Select one: 2026

Select 2024 or 2025 for TDM and Unique projects only. For all other applications, select 2026 or 2027.

Additional Program Years:

Select all years that are feasible if funding in an earlier year becomes available.

Project Information-Roadways

County, City, or Lead Agency Hennepin County

Functional Class of Road A-Minor Arterial Augmentor

Road System CSAH

TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET

Road/Route No. 152

i.e., 53 for CSAH 53

Name of Road Cedar Ave

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed 55407

(Approximate) Begin Construction Date 05/01/2026

(Approximate) End Construction Date 10/31/2026

TERMINI:(Termini listed must be within 0.3 miles of any work)

From:
(Intersection or Address) 150 ft north of CSAH 3 (Lake St)

To:
(Intersection or Address) 24th St

DO NOT INCLUDE LEGAL DESCRIPTION

Or At

Miles of Sidewalk (nearest 0.1 miles)	1.5
Miles of Trail (nearest 0.1 miles)	0
Miles of Trail on the Regional Bicycle Transportation Network (nearest 0.1 miles)	0
Primary Types of Work	GRADING, AGG BASE, BIT BASE & SURF, CURB/GUTTER, STORM SEWER, SIDEWALK, ADA, SIGNALS, STREETSCAPING, AND LIGHTING

Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:

New Bridge/Culvert No.:

Structure is Over/Under (Bridge or culvert name):

Requirements - All Projects

All Projects

1.The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2040 Transportation Policy Plan (2018), the 2040 Regional Parks Policy Plan (2018), and the 2040 Water Resources Policy Plan (2015).

Check the box to indicate that the project meets this requirement. Yes

2.The project must be consistent with the 2040 Transportation Policy Plan. Reference the 2040 Transportation Plan goals, objectives, and strategies that relate to the project.

Briefly list the goals, objectives, strategies, and associated pages:

A) Transportation System Stewardship (p 2.2-2.4)

Objectives A & B; Strategies A1 & A2

Due to the age of existing roadway assets, the reconstruction of Cedar Ave is the most cost-effective strategy to provide a roadway which achieves multi-modal transportation goals and will accommodate 2040 forecast traffic volumes. The project will provide improved facilities for those walking, using transit, and biking to promote safety and access for multimodal users.

B) Safety and Security (p 2.5-2.9)

Objectives A & B; Strategies B1, B3, B4, B6

This project will address safety improvements for all modes through traffic calming and complete streets elements such as raised medians, curb extensions, and a 3-lane configuration to reduce crash frequency and promote user comfort. Improved pedestrian facilities, crossings, and boulevards will also be critical to support the many people walking and rolling along the corridor.

C) Access to Destinations (p 2.10-2.25)

Objectives A, B, C, D, and E; Strategies C1, C2, C3, C4, C8, C9, C15, C16, C17

The corridor is home to Little Earth, as well as a variety of childcare centers, parks, places of worship, and nonprofit service providers. The reconstruction of Cedar Ave will improve access to all of these destinations; particularly through

enhancements to the pedestrian environment and boulevard spaces.

D) Competitive Economy (p2.26-2.29)

Objectives A, B & C; Strategies D1, D3, D4, D5

Cedar Ave provides access to TH 55, Lake St, and I-94, all identified as Regional Truck Corridors. The corridor is also identified as an area of job concentration in Thrive MSP 2040, and is an important connector for those walking, using transit, biking, and driving to access jobs in the Downtown Central Business District.

E) Healthy and Equitable Communities (p 2.30-2.34)

Objectives A, B, C, D; Strategies E1, E3, E4, E5, E6, E7

During the design process, county staff will conduct extensive public engagement, particularly with vulnerable user groups, to ensure disparities are addressed during and after construction. The project will also address historical flooding issues along the corridor as the existing storm water infrastructure is nearing the end of its useful life.

F) Leveraging Transportation Investments to Guide Lane Use (p 2.35-2.41)

Objectives: A & C; Strategies: F1, F2, F5, F6, F7

The reconstruction of Cedar Ave will allow for a design which will support improved

accommodations for multimodal travel. Evaluation of existing pedestrian crossings for complete streets elements will provide a safer and more comfortable environment for Little Earth community members. In addition, a 3-lane configuration will be explored to facilitate safer and more reliable access to adjacent neighborhoods and diverse land uses.

Limit 2,800 characters, approximately 400 words

3.The project or the transportation problem/need that the project addresses must be in a local planning or programming document. Reference the name of the appropriate comprehensive plan, regional/statewide plan, capital improvement program, corridor study document [studies on trunk highway must be approved by the Minnesota Department of Transportation and the Metropolitan Council], or other official plan or program of the applicant agency [includes Safe Routes to School Plans] that the project is included in and/or a transportation problem/need that the project addresses.

List the applicable documents and pages: Unique projects are exempt from this qualifying requirement because of their innovative nature.

1. Hennepin County Board Resolution 22-0109 (Attachment 06)

2. Hennepin County 2040 Transportation Plan (pages 2-11 - 2-18)

URL: hennepin.us/-/media/hennepinus/your-government/projects-initiatives/2040-comprehensive-plan/2040-comprehensive-plan-full.pdf

3. Hennepin County Climate Action Plan (pages 50-54)

URL: hennepin.us/climate-action/-/media/climate-action/hennepin-county-climate-action-plan-final.pdf

4. Hennepin County Complete Streets Policy

URL: hennepin.us/completestreets

5. Hennepin County Bike Plan (page 36)

URL: hennepin.us/-/media/hennepinus/residents/transportation/biking/bicycle-transportation-plan.pdf

6. Hennepin County Pedestrian Plan (page 8)

URL: hennepin.us/-/media/hennepinus/residents/transportation/documents/pedestrian-plan.pdf

7. City of Minneapolis Vision Zero Action Plan (pages 7, 16)

URL: minneapolismn.gov/media/-www-content-assets/documents/VZ-Action-Plan-2020-22.pdf

8. City of Minneapolis Pedestrian Priority Network Map

URL: go.minneapolismn.gov/final-plan/walking/pedestrian-priority-network

9. City of Minneapolis Little Earth Transportation Study

URL: minneapolismn.gov/government/projects/18th-ave-s-little-earth/

Limit 2,800 characters, approximately 400 words

4.The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of transit stations/stops, transit terminals, park-and-ride facilities, or pool-and-ride lots. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding as a standalone project, but can be included as part of the larger submitted project, which is otherwise eligible. Unique project costs are limited to those that are federally eligible.

Check the box to indicate that the project meets this requirement. Yes

5.Applicant is a public agency (e.g., county, city, tribal government, transit provider, etc.) or non-profit organization (TDM and Unique Projects applicants only). Applicants that are not State Aid cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

Check the box to indicate that the project meets this requirement. Yes

6.Applicants must not submit an application for the same project elements in more than one funding application category.

Check the box to indicate that the project meets this requirement. Yes

7.The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below in Table 1. For unique projects, the minimum award is $500,000 and the maximum award is the total amount available each funding cycle (approximately $4,000,000 for the 2022 funding cycle).
Strategic Capacity (Roadway Expansion): *$1,000,000 to $10,000,000*
Roadway Reconstruction/Modernization: *$1,000,000 to $7,000,000*
Traffic Management Technologies (Roadway System Management): *$500,000 to $3,500,000*
Spot Mobility and Safety: *$1,000,000 to $3,500,000*
Bridges Rehabilitation/Replacement: *$1,000,000 to $7,000,000*

Check the box to indicate that the project meets this requirement. Yes

8.The project must comply with the Americans with Disabilities Act (ADA).

Check the box to indicate that the project meets this requirement. Yes

9.In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must be completed by the local agency before the Regional Solicitation application deadline. For the 2022 Regional Solicitation funding cycle, this requirement may include that the plan is updated within the past five years.

The applicant is a public agency that employs 50 or more people and has a completed ADA transition plan that covers the public right of way/transportation. Yes

(TDM and Unique Project Applicants Only) The applicant is not a public agency subject to the self-evaluation requirements in Title II of the ADA.

Date plan completed: 08/31/2015

Link to plan: hennepin.us/-/media/hennepinus/residents/transportation/documents/ada-sidewalk-transition-plan.pdf

The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public right of way/transportation.

Date self-evaluation completed:

Link to plan:

Upload plan or self-evaluation if there is no link

Upload as PDF

10.The project must be accessible and open to the general public.

Check the box to indicate that the project meets this requirement. Yes

11.The owner/operator of the facility must operate and maintain the project year-round for the useful life of the improvement, per FHWA direction established 8/27/2008 and updated 6/27/2017. Unique projects are exempt from this qualifying requirement.

Check the box to indicate that the project meets this requirement. Yes

12.The project must represent a permanent improvement with independent utility. The term independent utility means the project provides benefits described in the application by itself and does not depend on any construction elements of the project being funded from other sources outside the regional solicitation, excluding the required non-federal match. Projects that include traffic management or transit operating funds as part of a construction project are exempt from this policy.

Check the box to indicate that the project meets this requirement. Yes

13.The project must not be a temporary construction project. A temporary construction project is defined as work that must be replaced within five years and is ineligible for funding. The project must also not be staged construction where the project will be replaced as part of future stages. Staged construction is eligible for funding as long as future stages build on, rather than replace, previous work.

Check the box to indicate that the project meets this requirement. Yes

14.The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.

Check the box to indicate that the project meets this requirement. Yes

Roadways Including Multimodal Elements

1.All roadway and bridge projects must be identified as a principal arterial (non-freeway facilities only) or A-minor arterial as shown on the latest TAB approved roadway functional classification map.

Check the box to indicate that the project meets this requirement. Yes

Roadway Strategic Capacity and Reconstruction/Modernization and Spot Mobility projects only:

2.The project must be designed to meet 10-ton load limit standards.

Check the box to indicate that the project meets this requirement. Yes

Bridge Rehabilitation/Replacement and Strategic Capacity projects only:

3.Projects requiring a grade-separated crossing of a principal arterial freeway must be limited to the federal share of those project costs identified as local (non-MnDOT) cost responsibility using MnDOTs Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.

Check the box to indicate that the project meets this requirement.

4.The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that are exclusively for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are ineligible for funding.

Check the box to indicate that the project meets this requirement.

Bridge Rehabilitation/Replacement projects only:

5.The length of the bridge clear span must exceed 20 feet.

Check the box to indicate that the project meets this requirement.

6. The bridge must have a National Bridge Inventory Rating of 6 or less for rehabilitation projects and 4 or less for replacement projects.

Check the box to indicate that the project meets this requirement.

Roadway Expansion, Reconstruction/Modernization, and Bridge Rehabilitation/Replacement projects only:

7. All roadway projects that involve the construction of a new/expanded interchange or new interchange ramps must have approval by the Metropolitan Council/MnDOT Interchange Planning Review Committee prior to application submittal. Please contact Michael Corbett at MnDOT (Michael.J.Corbett@state.mn.us or 651-234-7793) to determine whether your project needs to go through this process as described in Appendix F of the 2040 Transportation Policy Plan.

Check the box to indicate that the project meets this requirement. Yes

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$231,000.00
Removals (approx. 5% of total cost)	$231,000.00
Roadway (grading, borrow, etc.)	$403,000.00
Roadway (aggregates and paving)	$986,000.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$675,000.00
Ponds	$0.00

Concrete Items (curb & gutter, sidewalks, median barriers)	$332,000.00
Traffic Control	$231,000.00
Striping	$60,000.00
Signing	$32,000.00
Lighting	$280,000.00
Turf - Erosion & Landscaping	$115,000.00
Bridge	$0.00
Retaining Walls	$0.00
Noise Wall (not calculated in cost effectiveness measure)	$0.00
Traffic Signals	$955,000.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$1,359,000.00
Other Roadway Elements	$0.00
Totals	**$5,890,000.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	**Cost**
Path/Trail Construction	$0.00
Sidewalk Construction	$414,000.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$115,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$60,000.00
Pedestrian-scale Lighting	$0.00
Streetscaping	$113,000.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$238,000.00
Other Bicycle and Pedestrian Elements	$90,000.00
Totals	**$1,030,000.00**

Specific Transit and TDM Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Fixed Guideway Elements	$0.00
Stations, Stops, and Terminals	$0.00
Support Facilities	$0.00
Transit Systems (e.g. communications, signals, controls, fare collection, etc.)	$0.00
Vehicles	$0.00
Contingencies	$0.00
Right-of-Way	$0.00
Other Transit and TDM Elements	$0.00
Totals	**$0.00**

Transit Operating Costs

Number of Platform hours	0
Cost Per Platform hour (full loaded Cost)	$0.00
Subtotal	$0.00
Other Costs - Administration, Overhead,etc.	$0.00

Totals

Total Cost	$6,920,000.00
Construction Cost Total	$6,920,000.00
Transit Operating Cost Total	$0.00

Measure B: Project Location Relative to Jobs, Manufacturing, and Education

Existing Employment within 1 Mile:	46213
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	3601
Existing Post-Secondary Students within 1 Mile:	3350
Upload Map	1648316557915_2022 RS Map 02 - CSAH 152 (Cedar Ave) Reconstruction Project - Regional Economy.pdf

Please upload attachment in PDF form.

Measure C: Current Heavy Commercial Traffic

RESPONSE: Select one for your project, based on the updated 2021 Regional Truck Corridor Study:

Along Tier 1:	
Miles:	0
(to the nearest 0.1 miles)	
Along Tier 2:	
Miles:	0
(to the nearest 0.1 miles)	
Along Tier 3:	
Miles:	0
(to the nearest 0.1 miles)	
The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:	Yes
None of the tiers:	

Measure A: Current Daily Person Throughput

Location	CSAH 152 north of 26th St (SEQ ID #62010)
Current AADT Volume	19000
Existing Transit Routes on the Project	21, 22, 27, 901-METRO Blue Line

For New Roadways only, list transit routes that will likely be diverted to the new proposed roadway (if applicable).

Upload Transit Connections Map	1648316878777_2022 RS Map 04 - CSAH 152 (Cedar Ave) Reconstruction Project - Transit Connections.pdf

Please upload attachment in PDF form.

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	24700.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume	Yes
If checked, METC Staff will provide Forecast (2040) ADT volume	
OR	
Identify the approved county or city travel demand model to determine forecast (2040) ADT volume	
Forecast (2040) ADT volume	

Measure A: Engagement

i.Describe any Black, Indigenous, and People of Color populations, low-income populations, disabled populations, youth, or older adults within a ½ mile of the proposed project. Describe how these populations relate to regional context. Location of affordable housing will be addressed in Measure C.

ii.Describe how Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing were engaged, whether through community planning efforts, project needs identification, or during the project development process.

iii.Describe the progression of engagement activities in this project. A full response should answer these questions:

Within 0.5 miles of the CSAH 152 (Cedar Ave) project corridor, the population is between 21% and 82% non-white. The census track that CSAH 152 (Cedar Ave) extends through includes the highest concentration of American Indians in Hennepin County at 20%; with adjacent census tracks also having high American Indian population (2020 Census). 9% to 22% of the population are people with a disability of any kind; 6% to 13% of people are over the age of 65; 15% to 38% are children under the age of 18, and 9% to 45% of residents are under the federal poverty level. These demographic profiles are based on ACS 2014-2018 5-year estimates.

Response:

Public engagement will start in the beginning stages of project development. In-progress projects adjacent to CSAH 152 (Cedar Ave) have identified community concerns related to the corridor that have informed Hennepin County's approach to this project. The City of Minneapolis' Phillips Traffic Safety Improvements Project engaged community members Summer/Fall 2021 (round 1). The Phillips neighborhood includes a large population of non-English speaking residents. City staff deployed strategies to reduce barriers to engagement, including; printing materials in multiple languages (English, Somali, and Spanish), presentations in multiple languages, and tabling at events that cater to the community. Events included tabling and meetings at Little Earth, Mercado Central, Waite House, the 24th Street Mall, 13th Avenue Mall, and Anderson School. Residents shared specific concerns related to CSAH 152 (Cedar Ave) with the locations of 26th/Cedar (22 comments), 28th/Cedar (13 comments), and 24th/Cedar (12 comments) receiving the most feedback. Major themes were to reduce reckless driving/speeding, to improve safety for people walking and biking (especially children and during winter), and to address visibility issues.

The City of Minneapolis Transportation Study for 18th Avenue has also engaged the residents centered around CSAH 152 (Cedar Ave). The city hosted a community workshop in January 2022. Attendees included Little Earth, East Phillips, and Powderhorn Park residents. Key themes heard during the workshop included the need for lighting, community art, traffic calming, and improved public safety. Many of these community needs are directly related to the CSAH 152 (Cedar Ave) corridor.

The engagement activities described above informed the beginning stages of this project. Feedback from residents and organizational leaders emphasized the need to improve corridor safety for all modes; with a focus on vulnerable users. The prior engagement led by Minneapolis will be incorporated into the CSAH 152 (Cedar Ave) Reconstruction Project to ensure community needs are understood and addressed.

(Limit 2,800 characters; approximately 400 words):

Measure B: Equity Population Benefits and Impacts

Describe the projects benefits to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Benefits could relate to:
This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Equity populations residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Equity populations specifically identified through engagement, and substantiate benefits with data.
Acknowledge and describe any negative project impacts to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Describe measures to mitigate these impacts. Unidentified or unmitigated negative impacts may result in a reduction in points.
Below is a list of potential negative impacts. This is not an exhaustive list.

Response:

The project will benefit Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. The reconstruction of CSAH 152 (Cedar Ave) will improve overall corridor safety and make crossing intersections more comfortable for people walking and rolling.

Up to 45% of residents in nearby census tracts do not own a car. The current design of CSAH 152 (Cedar Ave) lacks complete streets design elements that provide adequate accessibility, mobility, and safety for people walking; especially those with limited mobility. Hennepin County will introduce proven design strategies that accommodate the travel needs of all modes. As a result, a safer travel experience for all is anticipated. A street that encourages walking will provide public health benefits by improving access to parks, schools, and dwellings as shown in the Socio-Economic Access Map (Attachment 07).

People of Color, those with disabilities, older adults, and children make up a high percentage of residents adjacent to the corridor. The surrounding neighborhood is home to the largest American Indian community in the metro area. Reconstructing CSAH 152 (Cedar Ave) to make it safer and more comfortable to walk and roll will have a direct and positive impact on user access, mobility, and quality of life of these population groups. When considering pedestrian crashes throughout all of Hennepin County, American Indians are disproportionately overrepresented in crashes involving people walking. Improving roadway safety is an opportunity to promote equity in this community.

Improvements are anticipated to include ADA compliant curb ramps, sidewalk, and signals, 3-lane configuration, two-stage crossing with pedestrian

refuge island, street lighting, and enhanced pavement markings.

This project will leverage other county investments and promote network cohesion. CSAH 3 (Lake St), located near the south termini, will experience a large investment through Metro Transit's B Line service. This project will support and enhance City of Minneapolis traffic safety projects within the Phillips neighborhood, and the safety and placemaking opportunities as identified in the Little Earth Transportation Study. Improvements to CSAH 152 (Cedar Ave) will contribute to overall experiences in community safety and quality of life.

Increased noise and impacts to the roadway and sidewalks are anticipated during construction. The contractor will be required to follow temporary traffic control plans which specify detour routes for all people traveling through the corridor. Access to adjacent buildings will be critical, and staff will seek our opportunities to ensure that nearby businesses and services are not negatively impacted during construction.

(Limit 2,800 characters; approximately 400 words):

Measure C: Affordable Housing Access

Describe any affordable housing developmentsexisting, under construction, or plannedwithin ½ mile of the proposed project. The applicant should note the number of existing subsidized units, which will be provided on the Socio-Economic Conditions map. Applicants can also describe other types of affordable housing (e.g., naturally-occurring affordable housing, manufactured housing) and under construction or planned affordable housing that is within a half mile of the project. If applicable, the applicant can provide self-generated PDF maps to support these additions. Applicants are encouraged to provide a self-generated PDF map describing how a project connects affordable housing residents to destinations (e.g., childcare, grocery stores, schools, places of worship).

Describe the projects benefits to current and future affordable housing residents within ½ mile of the project. Benefits must relate to affordable housing residents. Examples may include:

This is not an exhaustive list. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements. A full response will support the benefits claimed, identify benefits specific to residents of affordable housing, identify benefits addressing a transportation issue affecting residents of affordable housing specifically identified through engagement, and substantiate benefits with data.

A total of 36 affordable, subsidized housing developments are located within 0.5 miles of the project area. Attachment 08 provides a map and full detail summary of these locations; including unit sizes and affordability limits based on area median incomes. Two locations are currently under construction within 0.5 miles of the project area. Bloom Lake Flats is a 42-unit project under development by the nonprofit Project for Pride in Living, which will provide supportive housing to those households living with and affected by HIV. Wadaag Commons is the final phase of the larger Seward Commons development and is being developed by Noor Companies, a Somali-American, woman-owned social enterprise. When the project is complete, Wadaag Commons will provide 32 affordable 3- and 4-bedroom units. As identified in the Met Council generated Socio-Economic Conditions map, 6,243 subsidized units exist in census tracts within 0.5 miles of the project.

Response:

The project will provide direct benefit to residents of these affordable housing developments through multimodal access to key community resources. One of the most significant of these is Little Earth, the only HUD Section-8 project-based development with an indigenous preference in the United States. Little Earth provides substantial resources not only to the residents of their 212 subsidized units, but also to the wider indigenous community across Minneapolis. Cedar Field Park and East Phillips Park and Community Center are major destinations for families with children, and serve a substantial number of BIPOC families. Other community resources in the project area include the Mercy Islamic Center, the University of Minnesota Fairview Clinic, and multiple childcare centers. At the south end of the project area, CSAH 3 (Lake St) includes a concentration of commercial uses which residents of affordable housing access rely on for

their employment and/or household needs. Complete streets and traffic calming elements will be maximized to improve access to these destinations for all users.

Lastly, the project will promote cohesion with the greater transportation system. Enhancements to multimodal facilities will directly improve first/last mile transit connections for residents who depend on the existing Metro Transit Route 22 service and the future B Line Arterial BRT on CSAH 3 (Lake St). CSAH 152 (Cedar Ave) has also been identified as a future Arterial BRT corridor. Intersection improvements and traffic calming will complement existing on-street bicycle facilities along 26th St and 28th St. The mid-block crossing at Little Earth will be evaluated thoroughly during project development to reduce barriers for residents of that development; particularly families with children accessing Cedar Field Park.

(Limit 2,800 characters; approximately 400 words):

Measure D: BONUS POINTS

Project is located in an Area of Concentrated Poverty:	Yes
Projects census tracts are above the regional average for population in poverty or population of color (Regional Environmental Justice Area):	
Project located in a census tract that is below the regional average for population in poverty or populations of color (Regional Environmental Justice Area):	
Upload the Socio-Economic Conditions map used for this measure.	1646928660388_2022 RS Map 03 - CSAH 152 (Cedar Ave) Reconstruction Project - Socio Economic Conditions.pdf

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2

2006	0.07	140.42	189.757
1966	0.07	137.62	185.973
2018	0.02	40.36	54.541
1966	0.58	1140.28	1540.919
	1	**1459**	**1971**

Total Project Length

Total Project Length (as entered in "Project Information" form) 0.74

Average Construction Year

Weighted Year 1971

Total Segment Length (Miles)

Total Segment Length 0.74

Measure B: Geometric, Structural, or Infrastructure Improvements

Improved roadway to better accommodate freight movements: Yes

Response:

Cedar Ave was originally constructed as a constrained 4-lane as the width is only 44'. Three pavement overlays have been completed and are no longer cost effective in extending the useful life. In 2020, due to poor pavement conditions, Cedar Ave was restriped as a 2-lane as the outside lanes were no longer suitable for supporting traffic loads. Also, a StreetLight analysis estimates 2,050 daily commercial vehicles (Attachment 09).

The pavement design will support estimated traffic loads and reduce the likelihood that goods are damaged during transport. A 3-lane will be considered to promote safe and reliable freight operations. In addition, lane widths will reflect surrounding land uses.

(Limit 700 characters; approximately 100 words)

Improved clear zones or sight lines:

Yes

On-street parking areas present obstructions for users on local streets. Also, elevated planting beds between EM Stately St and 24th St make it difficult to notice people walking and rolling. In addition, the bridge at Little Earth limits sight lines for users approaching the signalized crossing.

Response:

Curb extensions will better define on-street parking areas and improve sight lines. Boulevard areas will be upgraded to incorporate green streets strategies to improve user comfort and security; while not diminishing user sight distance. Both the grade-separated and at-grade pedestrian crossings at Little Earth will be evaluated to determine how best to facilitate crossings at this busy location.

(Limit 700 characters; approximately 100 words)

Improved roadway geometrics:

Yes

The roadway width along Cedar Ave is 44' and lacks vertical design elements to define on-street parking areas, bus stops, and crossing locations.

Response:

A full reconstruction will allow for the reallocation of space for people walking, using transit, biking, and driving along the corridor. Proven design strategies, such as a 3-lane configuration, curb extensions, and raised medians will be considered during project development to promote user predictability. Traffic calming strategies will specifically be explored at TEE intersections (29th St and EM Stately St) to maximize available space. In addition, the design of lane tapers will encourage natural transitions as users travel along Cedar Ave.

(Limit 700 characters; approximately 100 words)

Access management enhancements:

Yes

Approximately 16 access points (including 6 local streets and 10 driveways) currently exist along Cedar Ave where all turning movements are permitted. These conditions present a relatively high likelihood for rear-end, left-turn, and right-angle related crashes.

Response:

The proposed project will explore the feasibility of 3-lane roadway to better facilitate turning movements. Access management strategies will specifically be evaluated at the Little Earth Residents Association building to improve the crossing experience for people walking. In addition, raised medians and curb extensions will be considered at T-intersections and one-ways to discourage improper turning movements by people driving.

(Limit 700 characters; approximately 100 words)

Vertical/horizontal alignment improvements:

Yes

Response:

The existing vertical elevation of the roadway is substantially lower than adjacent properties, requiring stairs and retaining walls to accommodate the topography. This presents accessibility challenges and unnecessary public/private infrastructure that requires ongoing maintenance. Also, the lack of dedicated left-turn lanes present uncomfortable turning experiences due to the absence of a positive off-set.

The proposed project will adjust roadway grades within the right of way to properly transition from the roadway environmental to adjacent properties. Additionally, boulevard areas will be properly designed to avoid unnecessary grade changes between the roadway and sidewalk facilities.

(Limit 700 characters; approximately 100 words)

Improved stormwater mitigation:

Yes

The gutter pan has been overlaid; diminishing the curb's ability to collect and manage storm water. Retaining walls negatively impact on how storm water naturally flows throughout the corridor. Also, the area near the Cedar/Lake intersection was identified by MetCouncil's Localized Flood Map as a location susceptible for flooding.

Response:

Staff will collaborate with the city and the Mississippi River WMO to explore BMPs to improve water quality and withstand desired flood events. If feasible, the elimination of retaining walls will allow water to flow more naturally as originally intended. Green space will be maximized through boulevards, curb extensions, and medians to reduce imperious surfaces.

(Limit 700 characters; approximately 100 words)

Signals/lighting upgrades:

Yes

Left-turning operations at signals operate as permissive only. Also, some mastarms lack luminaires due to overhead utilities. In addition, signal heads at the Little Earth crossing are obstructed by the pedestrian bridge.

Response:

The project will upgrade signals to the latest technologies; including turn phasing, detection, high-speed communications, and ITS components. These will improve incident management for city staff who are responsible for signal operations. The project will follow the city's Street Lighting Policy as Cedar Ave is identified as a Street Lighting Corridor (Attachment 10). These lighting improvements will promote pedestrian comfort and security; especially near Little Earth.

(Limit 700 characters; approximately 100 words)

Other Improvements

Yes

Metro Transit's Network Next Study identifies Route 22 as a potential Bus Rapid Transit (BRT) service candidate in the 2030s. This reconstruction project presents an opportunity to improve first/last mile connections to future BRT stations along Cedar Ave. (Url: metrotransit.org/Data/Sites/1/media/network-next/nn-corridor-profile-w-broadway-cedar.pdf)

Response:

Also, 26th St and 28th St operate as east/west one-way pairs in this area of Minneapolis. Effective messaging strategies will be explored to communicate turn restrictions at these intersections.

Additionally, disturbances to mature trees along the corridor will be minimized to preserve shade and promote comfort for people walking and rolling.

(Limit 700 characters; approximately 100 words)

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project (Seconds/ Vehicle)	Total Peak Hour Delay Per Vehicle With The Project (Seconds/ Vehicle)	Total Peak Hour Delay Per Vehicle Reduced by Project (Seconds/ Vehicle)	Volume without the Project (Vehicles per hour)	Volume with the Project (Vehicles Per Hour):	Total Peak Hour Delay Reduced by the Project:	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports

36.0	32.0	4.0	2346	2346	9384.0	9384.0	N/A	1649289233147_CSAH 152 (Cedar Ave) Reconstruction Project - Synchro Report for Congestion.pdf
3.0	0	3.0	1681	1681	5043.0	5043.0	N/A	1649336902683_CSAH 152 (Cedar Ave) Reconstruction Project - Synchro Report for Congestion.pdf
						14427		

Vehicle Delay Reduced

Total Peak Hour Delay Reduced	14427.0
Total Peak Hour Delay Reduced	14427.0

Measure B:Roadway projects that do not include new roadway segments or railroad grade-separation elements

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
4.02	3.82	0.2
0.79	0.56	0.23
5	**4**	**0**

Total

Total Emissions Reduced:	0.43

Upload Synchro Report	1649289330160_CSAH 152 (Cedar Ave) Reconstruction Project - Synchro Report for Emissions.pdf

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

Measure B: Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements (for Roadway Expansion applications only):

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
0	**0**	**0**

Total Parallel Roadway

Emissions Reduced on Parallel Roadways	0
Upload Synchro Report	

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

New Roadway Portion:

Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons:	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0.0

Measure B:Roadway projects that include railroad grade-separation elements

Cruise speed in miles per hour without the project:	0
Vehicle miles traveled without the project:	0
Total delay in hours without the project:	0
Total stops in vehicles per hour without the project:	0
Cruise speed in miles per hour with the project:	0

Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons (F1)	0
Fuel consumption in gallons (F2)	0
Fuel consumption in gallons (F3)	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	

Measure A: Roadway Projects that do not Include Railroad Grade-Separation Elements

Crash Modification Factor Used:

(Limit 700 Characters; approximately 100 words)

Attachment 11 lists reported crashes (2019-2021) along the project, and Attachment 12 lists CMFs applied in the B/C Analysis.

XX) Countermeasure: Crashes targeted (CMF ID, % reduction)

01) Replace 8" signal heads with 12" heads: RE, LT, & RA (CMF 02333, 42%)

02) Install TWLTL on 2-lane roadway: SS, RE, LT, RA, & HO (CMF 02338, 31.4%)

03) Implement protected/permitted LT phasing: RE, LT, & RA (CMF 04140, 42%)

04) Install pedestrian countdown timers: PED (CMF 05272, 70%)

05) Install LT lane: RE, LT, & RA (CMF 07998, 12.4%)

06) Resurface pavement: SS, RE, LT, RA & HO (CMF 09298, 9.9%)

07) Improve intersection lighting: PED nighttime (FHWA Desktop Reference, 42%)

The Benefit/Cost Analysis evaluated the project corridor in six separate sections (comprised of major intersections and segments) to target crash themes. Up to two (of the seven selected) CMFs were applied to each crash based on the reported crash type, along with the anticipated benefit provided by each safety countermeasure. A maximum of four CMFs were applied to each individual intersection or segment since the project corridor experiences diverse crash types among people walking, biking, and driving.

Rationale for Crash Modification Selected:

The expected service life for each improvement was entered as 20 years in the Benefit/Cost Worksheets based on service life information included in the 2022 Highway Safety Improvement Program criteria.

The overall crash reduction expected from the project is 36% (based on a 64% crash modification factor). Approximately 36% (4) of the total number of reported crashes from the years 2019 to 2021 will be reduced annually through the implementation of various safety countermeasures as part of this project.

(Limit 1400 Characters; approximately 200 words)

Project Benefit ($) from B/C Ratio	$14,628,217.00
Total Fatal (K) Crashes:	0
Total Serious Injury (A) Crashes:	3
Total Non-Motorized Fatal and Serious Injury Crashes:	2
Total Crashes:	34
Total Fatal (K) Crashes Reduced by Project:	0
Total Serious Injury (A) Crashes Reduced by Project:	2
Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project:	1
Total Crashes Reduced by Project:	12
Worksheet Attachment	1649688234004_CSAH 152 (Cedar Ave) Reconstruction Project - BC Analysis Worksheets.pdf

Please upload attachment in PDF form.

Roadway projects that include railroad grade-separation elements:

Current AADT volume:	0
Average daily trains:	0
Crash Risk Exposure eliminated:	0

Measure A: Pedestrian Safety

Determine if these measures do not apply to your project. *Does the project match either of the following descriptions?*
If either of the items are checked yes, then ***score for entire pedestrian safety measure is zero****. Applicant does not need to respond to the sub-measures and can proceed to the next section.*

Project is primarily a freeway (or transitioning to a freeway) and does not provide safe and comfortable pedestrian facilities and crossings.	No
Existing location lacks any pedestrian facilities (e.g., sidewalks, marked crossings, wide shoulders in rural contexts) and project does not add pedestrian elements (e.g., reconstruction of a roadway without sidewalks, that doesnt also add pedestrian crossings and sidewalk or sidepath on one or both sides).	No

SUB-MEASURE 1: Project-Based Pedestrian Safety Enhancements and Risk Elements
To receive maximum points in this category, pedestrian safety countermeasures selected for implementation in projects should be, to the greatest extent feasible, consistent with the countermeasure recommendations in the Regional Pedestrian Safety Action Plan and state and national best practices. Links to resources are provided on the Regional Solicitation Resources web page.
Please answer the following two questions with as much detail as possible based on the known attributes of the proposed design. If any aspect referenced in this section is not yet determined, describe the range of options being considered, to the greatest extent available. If there are project elements that may increase pedestrian risk, describe how these risks are being mitigated.
1. Describe how this project will address the safety needs of people crossing the street at signalized intersections, unsignalized intersections, midblock locations, and roundabouts.
Treatments and countermeasures should be well-matched to the roadways context (e.g., appropriate for the speed, volume, crossing distance, and other location attributes). Refer to the Regional Solicitation Resources web page for guidance links.

Response:

CSAH 152 (Cedar Ave) was previously a 4-lane undivided roadway until 2020 when it was restriped to a 2-lane as the pavement condition in the outside lanes was no longer suitable for traffic. The 4-lane to 2-lane conversion provided some near-term safety benefits for people walking, however, a full reconstruction is necessary to introduce complete streets best practices for people walking along and across CSAH 152 (Cedar Ave).

Signalized intersections

The project is anticipated to replace and/or upgrade 3 of the 4 existing signalized intersections. Although contingent on the project development process, the planning concept identifies approximately 4 curb extensions, 1 raised median, and 9 high-visibility crosswalks that may be feasible at signalized intersections. Also, the use of protected/permissive left-turn phasing, countdown timers, and APS will allow for safe and comfortable crossings. In addition, the use of ITS strategies, such as signal communications, video detection, and ATMS will allow staff to maintain a reasonable balance of mobility and delay. Furthermore, lighting conditions will be upgraded to provide adequate nighttime visibility. It should be noted that the signalized intersection at Cedar/Little Earth will be evaluated for other design options.

Unsignalized intersections

The project is anticipated to redesign each of the 3 unsignalized intersections to advance Complete Streets strategies. Although contingent on the project development process, the planning concept identifies approximately 5 curb extensions, 1 raised median, and 1 high-visibility crosswalk that may be feasible at unsignalized intersections. Shorter

crossing distances are anticipated at Cedar/29th and Cedar/EM Stately given their T-intersection configuration. An extensive review of pedestrian crossing activity will be completed in the area near Little Earth and Cedar Field Park to identify how people can be encouraged to cross at locations enhanced with curb extensions, medians, and/or crossing beacons. Furthermore, lighting conditions at unsignalized intersections will be upgraded to promote user safety and security.

Roundabout intersections

Although contingent on the project development process, no roundabouts are anticipated.

Midblock locations

The project will aim to encourage pedestrian crossings at intersections, however, mid-block crossings are not anticipated to be prohibited via barrier installation. The existing Cedar/Little Earth crossing will be evaluated to determine the appropriate crossing design (at-grade and/or grade separated). The existing signal and pedestrian bridge were installed at a time when today's proven safety countermeasures (medians, curb extensions, and crossing beacons) were not widely accepted by the transportation industry.

(Limit 2,800 characters; approximately 400 words)

Is the distance in between signalized intersections increasing (e.g., removing a signal)?

Select one: Yes

If yes, describe what measures are being used to fill the gap between protected crossing opportunities for pedestrians (e.g., adding High-Intensity Activated Crosswalk beacons to help motorists yield and help pedestrians find a suitable gap for crossing, turning signal into a roundabout to slow motorist speed, etc.).

Response:

Although contingent on the project development process, a different intersection control device may be selected for the Cedar/Little Earth crossing that's better suited for intersection activity. If the existing traffic signal is removed as part of the project, one or more proven safety countermeasures (raised medians, curb extensions, and/or crossing beacons) will be implemented to accommodate pedestrian crossings. In addition, the existing driveway operations for the Little Earth surface parking lot will be evaluated to determine if right-in/right-out operation is feasible to provide additional traffic calming at the Cedar/Little Earth crossing. Furthermore, pedestrian crossing enhancements (such as curb extensions) will be evaluated at the Cedar/EM Stately intersection to provide an additional crossing option to Cedar Field Park.

(Limit 1,400 characters; approximately 200 words)

Will your design increase the crossing distance or crossing time across any leg of an intersection? (e.g., by adding turn or through lanes, widening lanes, using a multi-phase crossing, prohibiting crossing on any leg of an intersection, pedestrian bridge requiring length detour, etc.). This does not include any increases to crossing distances solely due to the addition of bike lanes (i.e., no other through or turn lanes being added or widened).

Select one: No

If yes,
How many intersections will likely be affected?

Response: 0

Describe what measures are being used to reduce exposure and delay for pedestrians (e.g., median crossing islands, curb bulb-outs, etc.)

Response:

Although contingent on the project development process, the planning level concept identifies approximately 9 curb extensions, 5 raised medians, 1 crossing beacon, and 10 high visibility crosswalks that may be feasible as part of the CSAH 152 (Cedar Ave) Reconstruction Project.

(Limit 1,400 characters; approximately 200 words)

If grade separated pedestrian crossings are being added and increasing crossing time, describe any features that are included that will reduce the detour required of pedestrians and make the separated crossing a more appealing option (e.g., shallow tunnel that doesnt require much elevation change instead of pedestrian bridge with numerous switchbacks).

Response:

It's anticipated that the existing grade separated crossing at Cedar/Little Earth will be reviewed as part of the project development process. At the time of original installation in 1976, proven safety countermeasures (such as curb extensions, raised medians, and crossing beacons) weren't widely accepted in the transportation industry. Although the bridge provides a safe crossing of CSAH 152 (Cedar Ave), the switchback ramp design causes inconveniences for people who rely on it. A recommended crossing design (at-grade and/or grade separated) will be selected at Cedar/Little Earth based on stakeholder input, data analysis, and an environmental review.

A similar evaluation took place at the CSAH 152 (Cedar Ave) at 5th St intersection in the Cedar/Riverside neighborhood where a pedestrian bridge previously extended across CSAH 152 (Cedar Ave). The location currently operates as an at-grade crossing that is enhanced with a raised median and crossing beacon.

(Limit 1,400 characters; approximately 200 words)

If mid-block crossings are restricted or blocked, explain why this is necessary and how pedestrian crossing needs and safety are supported in other ways (e.g., nearest protected or enhanced crossing opportunity).

Response:

Although contingent on the project development process, no mid-block crossings are anticipated to be prohibited as part of the CSAH 152 (Cedar Ave) Reconstruction Project.

(Limit 1,400 characters; approximately 200 words)

2. Describe how motorist speed will be managed in the project design, both for through traffic and turning movements. *Describe any project-related factors that may affect speed directly or indirectly, even if speed is not the intended outcome (e.g., wider lanes and turning radii to facilitate freight movements, adding turn lanes to alleviate peak hour congestion, etc.). Note any strategies or treatments being considered that are intended to help motorists drive slower (e.g., visual narrowing, narrow lanes, truck aprons to mitigate wide turning radii, etc.) or protect pedestrians if increasing motorist speed (e.g., buffers or other separation from moving vehicles, crossing treatments appropriate for higher speed roadways, etc.).*

Response:

The CSAH 152 (Cedar Ave) Reconstruction Project will introduce proven design strategies to promote uniform, safe, and reasonable speeds by people driving along the corridor.

Roadway operation changes

It's anticipated that on-street parking will be evaluated as part of the project development process. Although on-street parking creates the potential for rear-end and sideswipe related crashes, parked cars occupy space within the curb lines and assist in managing vehicle speeds along the corridor. In addition, driveway access at the surface parking lot for the Little Earth Residents Association will be evaluated to determine if modifications are feasible to reduce conflict points at the nearby Cedar/Little Earth pedestrian crossing. Furthermore, consideration will be given at existing transit stops along CSAH 152 (Cedar Ave) to discourage aggressive behaviors by people driving during bus boarding/unloading procedures.

Roadway design changes

It's anticipated that a 3-lane configuration will be evaluated as part of the project development process. If implemented, the shared left-turn lane will discourage weaving maneuvers by people driving caused by turning vehicles. Lane widths will be determined based on stakeholder input, data analysis, and an environmental review. The introduction of raised medians will provide vertical cues to encourage slower speeds by people driving. In addition, the Cedar/29th and Cedar/EM Stately intersections present excellent opportunities to introduce curb extensions and raised medians given their T-intersection designs. Furthermore, the introduction of a raised median at the Cedar/Little

Earth crossing will significantly reduce pedestrian distance and vehicle stopping sight distance to decrease the likelihood of a pedestrian related crash.

Green streets changes

Mature trees currently exist within the boulevards along CSAH 152 (Cedar Ave). The project will aim to preserve as many trees as feasible as they improve the quality of life for people walking along and across CSAH 152 (Cedar Ave). In addition, the feasibility of median plantings will be evaluated as part of the project development process as the existing 44' curb-to-curb width along CSAH 152 (Cedar Ave) only includes bituminous pavement.

Multimodal facility changes

The existing sidewalk facilities along CSAH 152 (Cedar Ave) between Little Earth and 24th St are currently obstructed by relatively high planting beds. This design is not common, and will likely be modified as part of the CSAH 152 (Cedar Ave) Reconstruction Project to maintain adequate sight distance for people walking and people driving.

(Limit 2,800 characters; approximately 400 words)

If known, what are the existing and proposed design, operation, and posted speeds? Is this an increase or decrease from existing conditions?

Response:	The current posted speed limit along CSAH 152 (Cedar Ave) is 30 mph. The proposed design speed limit(s) will be determined as part of the project development process based on data analysis, stakeholder input, and environmental review. At this time, an increase in the existing speed limit is not anticipated. Project elements such as raised medians, curb extensions, streetscaping, and lane widths will support the proposed design speed limit(s).

(Limit 1,400 characters; approximately 200 words)

SUB-MEASURE 2: Existing Location-Based Pedestrian Safety Risk Factors

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following factors are present. Applicants receive more points if more risk factors are present.

Existing road configuration is a One-way, 3+ through lanes or	
Existing road configuration is a Two-way, 4+ through lanes	
Existing road has a design speed, posted speed limit, or speed study/data showing 85th percentile travel speeds in excess of 30 MPH or more	Yes
Existing road has AADT of greater than 15,000 vehicles per day	Yes
List the AADT	19000

SUB-MEASURE 3: Existing Location-Based Pedestrian Safety Exposure Factors

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following existing location exposure factors are present. Applicants receive more points if more risk factors are present.

Existing road has transit running on or across it with 1+ transit stops in the project area (If flag-stop route with no fixed stops, then 1+ locations in the project area where roadside stops are allowed. Do not count portions of transit routes with no stops, such as non-stop freeway sections of express or limited-stop routes. If service was temporarily reduced for the pandemic but is expected to return to 2019 levels, consider 2019 service for this item.)	Yes
Existing road has high-frequency transit running on or across it and 1+ high-frequency stops in the project area (high-frequency defined as service at least every 15 minutes from 6am to 7pm weekdays and 9am to 6pm Saturdays. If service frequency was temporarily reduced for the pandemic but is expected to return to 2019 levels, consider 2019 frequency for this item.)	
Existing road is within 500 of 1+ shopping, dining, or entertainment destinations (e.g., grocery store, restaurant)	Yes

Metro Transit Local Bus Routes 22 and 27 operate along and across CSAH 152 (Cedar Ave), providing connections north to Downtown Minneapolis and Brooklyn Center and south to the Veterans Affairs Medical Center in Bloomington.

If checked, please describe:

While CSAH 152 (Cedar Ave) is connected via CSAH 3 (Lake St) to significant commercial shopping, dining, and entertainment opportunities, the project area itself primarily is home to neighborhood commercial uses which serve residents of the East Philips Neighborhood. Cedar Food and Grill, for example, is a neighborhood corner store serving prepared food as well as household goods and groceries. Other destinations include:

- Taqueria El Primo (Restaurant)

- City Market & Halal Meat (Groceries)

- Soccer Place (Sports Supplies)

- La Alborada (Groceries, Shopping)

(Limit 1,400 characters; approximately 200 words)

Existing road is within 500 of other known pedestrian generators (e.g., school, civic/community center, senior housing, multifamily housing, regulatorily-designated affordable housing)

Yes

If checked, please describe:

The CSAH 152 (Cedar Ave) corridor is home to a rich diversity in community resources, many of which have a focus on serving Black, Indigenous, and People of Color (BIPOC) populations. The corridor is also home to significant amount of multifamily housing stock, including income-restricted and affordable housing. Below is a (non-exhaustive) summary of major school, civic, and residential destinations within 500' of the proposed project:

- Little Earth, a 212-unit section-8 project-based (subsidized) affordable housing development with an indigenous preference. It is the only development of its kind in the United States, and provides vital programming and public services for both the residents of the project area and the greater indigenous community across the Twin Cities.

- East Philips Park Cultural & Community Center

- Loaves and Fishes Community Meal Site

- Holy Rosary Catholic Church

- Babyspace Preschool

- Southside Family Nurturing Center

- Circulo de Amigos Childcare Center

- 29XX 18th Ave S (12 Units of Subsidized Multi-Family Housing)

- Cedar28 (15 Units of Subsidized and Market-Rate Housing)

(Limit 1,400 characters; approximately 200 words)

Measure A: Multimodal Elements and Existing Connections

The CSAH 152 (Cedar Ave) Reconstruction Project will make the corridor safer and more inviting for people walking, using transit, biking, and driving.

The primary benefit will be the reduction of crossing distance, conflict points, and multiple-threats for people crossing CSAH 152 (Cedar Ave); including at the Little Earth community. The project includes curb extensions, accessibility improvements identified in the county's ADA Transition Plan, wider sidewalks, and pedestrian refuge islands. The reconstruction will provide space between motor vehicles and people using the sidewalks. This half-mile corridor connects residents of Little Earth with the Midtown Greenway and the Hiawatha LRT trail. Multimodal connections within the project area are shown in Attachment 13.

Response:

This project will benefit people biking by reducing vehicle speeds, weaving, and conflict points at intersections. Longer-distance north-south bicycling traffic is served by the existing parallel 17th Ave low-stress bikeway, part of Minneapolis's All Ages and Abilities Network, located 650' west of CSAH 152 (Cedar Ave). People biking southbound may also choose to ride in the parking lane if unobstructed. Once at their destinations, people biking will find more sidewalk space for maneuvering and safely parking their bikes. This project will connect the Midtown Greenway (Regional Bicycle Transportation Network Tier 1) with the existing bike and pedestrian bridge over TH 55 connecting to the Hiawatha LRT Trail (RBTN Tier 1). CSAH 152 (Cedar Ave) itself is the center of an RBTN Tier 1 corridor, however, the City of Minneapolis and Hennepin County have coordinated to plan and implement a north-south connection along 17th Ave to facilitate this regional bicycle traffic.

The reconstruction will benefit transit users by providing more space dedicated to bus stops and raised medians that will discourage improper passing of departing buses. At the north end, the reconstruction connects with the existing pedestrian and bicycle bridge over TH 55 to the Franklin Ave Blue Line Station, a half-mile walk from the project terminus. The corridor currently supports Metro Transit routes 22 and 27, connecting to CSAH 3 (Lake Street), the Blue Line, downtown Minneapolis, the Mall of America, and Brooklyn Center. This corridor may be a future arterial bus rapid transit service within the 2030-2035 timeframe.

CSAH 152 (Cedar Ave) experiences erratic driving and speeding, in part because the route links TH 77 to the south with TH 55 and I-94 to the north. This project is expected to reduce motor vehicle speeds and encourage drivers to behave more predictably. People driving also will benefit from a smooth pavement surface as well as reduced sideswipe, rear-end, left-turn, and right-angle crashes.

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

If the applicant is completing a transit application that is operations only, check the box and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.
Park-and-Ride and other transit construction projects require completion of the Risk Assessment below.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment - Construction Projects

1.Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) specific to this project with the general public and partner agencies have been used to help identify the project need.

100%

At least one meeting specific to this project with the general public has been used to help identify the project need.

50%

At least online/mail outreach effort specific to this project with the general public has been used to help identify the project need.

50%

No meeting or outreach specific to this project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort. Yes

25%

No outreach has led to the selection of this project.

0%

Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.

Response:

The CSAH 152 (Cedar Ave) Reconstruction Project was selected for pursuit of Regional Solicitation funding based on the overall condition of roadway assets.

Multiple related planning efforts have discussed the CSAH 152 (Cedar Ave) corridor and led to the development of this application; including planning at the Franklin/Cedar/Minnehaha intersection located just north of the project, CSAH 3 (Lake St) at the southern end, and potential improvements on CSAH 152 (Cedar Ave) to the south. Hennepin County will conduct community engagement specific to this project once funding is secured/programmed.

The City of Minneapolis has also conducted extensive engagement as part of their Phillips Traffic Safety Improvements Study and Little Earth Transportation Study. Engagement from both of these projects revealed a desire for safer crossings and improved accessibility along and across CSAH 152 (Cedar Ave). Excerpts from the City's engagement efforts may be found in Attachment 14 and Attachment 15.

(Limit 2,800 characters; approximately 400 words)

2.Layout (25 Percent of Points)

Layout includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend; city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the projects termini does not suffice and will be awarded zero points. *If applicable*

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100%

A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid colleen.brown@state.mn.us.

100%

For projects where MnDOT trunk highways are impacted and a MnDOT Staff Approved layout is required. Layout approved by the applicant and all impacted local jurisdictions (i.e., cities/counties), and layout review and approval by MnDOT is pending. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

75%

Layout completed but not approved by all jurisdictions. A PDF of the layout must be attached to receive points. Yes

50%

Layout has been started but is not complete. A PDF of the layout must be attached to receive points.

25%

Layout has not been started

0%

Attach Layout 1649292480433_Attachment 05 - Potential Concept.pdf

Please upload attachment in PDF form.

Additional Attachments

Please upload attachment in PDF form.

3.Review of Section 106 Historic Resources (15 Percent of Points)

No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100%

There are historical/archeological properties present but determination of no historic properties affected is anticipated.

100%

Historic/archeological property impacted; determination of no adverse effect anticipated Yes

80%

Historic/archeological property impacted; determination of adverse effect anticipated

40%

Unsure if there are any historic/archaeological properties in the project area.

0%

Project is located on an identified historic bridge

4.Right-of-Way (25 Percent of Points)

Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

100%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - plat, legal descriptions, or official map complete	
50%	
Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels identified	Yes
25%	
Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels not all identified	
0%	

5.Railroad Involvement (15 Percent of Points)

No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)	Yes
100%	
Signature Page	
Please upload attachment in PDF form.	
Railroad Right-of-Way Agreement required; negotiations have begun	
50%	
Railroad Right-of-Way Agreement required; negotiations have not begun.	
0%	

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	$6,920,000.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$6,920,000.00
Enter amount of any outside, competitive funding:	$0.00
Attach documentation of award:	
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
Attachment 00 - List of Attachments.pdf	Attachment 00 - List of Attachments	77 KB
Attachment 01 - Project Narrative.pdf	Attachment 01 - Project Narrative	275 KB
Attachment 02 - Project Location Map.pdf	Attachment 02 - Project Location Map	148 KB
Attachment 03 - Existing Roadway Condition Photos.pdf	Attachment 03 - Existing Condition Photos	2.7 MB
Attachment 04 - Potential Typical Section.pdf	Attachment 04 - Potential Typical Section	245 KB
Attachment 05 - Potential Concept.pdf	Attachment 05 - Potential Concept	4.8 MB
Attachment 06 - Hennepin County Board Resolution 22-0109.pdf	Attachment 06 - Hennepin County Board Resolution 22-0109	468 KB
Attachment 07 - Socio-Economic Equity Map.pdf	Attachment 07 - Socio-Economic Equity Map	1.6 MB
Attachment 08 - Affordable Housing Access Map and Detail Summary.pdf	Attachment 08 - Affordable Housing Map and Detail Summary	1.7 MB
Attachment 09 - Streetlight HCAADT Report.pdf	Attachment 09 - Streetlight HCAADT Report	100 KB
Attachment 10 - Minneapolis Street Lighting Plan.pdf	Attachment 10 - Minneapolis Street Lighting Plan	681 KB
Attachment 11 - Crash Map and Detail Listing.pdf	Attachment 11 - Crash Map and Detail Listing	421 KB
Attachment 12 - Crash Modification Factors.pdf	Attachment 12 - Crash Modification Factors	1.4 MB
Attachment 13 - Multimodal Connections Map.pdf	Attachment 13 - Multimodal Connections Map	615 KB
Attachment 14 - Phillips Safety Improvements Community Engagement Summary.pdf	Attachment 14 - Phillips Safety Improvements Community Engagement Summary	1.3 MB
Attachment 15 - Little Earth Community Engagement Summary.pdf	Attachment 15 - Little Earth Community Engagement Summary	2.8 MB
Attachment 16 - City of Minneapolis Letter of Support.pdf	Attachment 16 - City of Minneapolis Letter of Support	509 KB
Attachment 17 - Minneapolis Park and Recreation Board Support Letter.pdf	Attachment 17 - Minneapolis Park and Recreation Board Support Letter	178 KB
Attachment 18 - Metro Transit Support Letter.pdf	Attachment 18 - Metro Transit Support Letter	1.9 MB

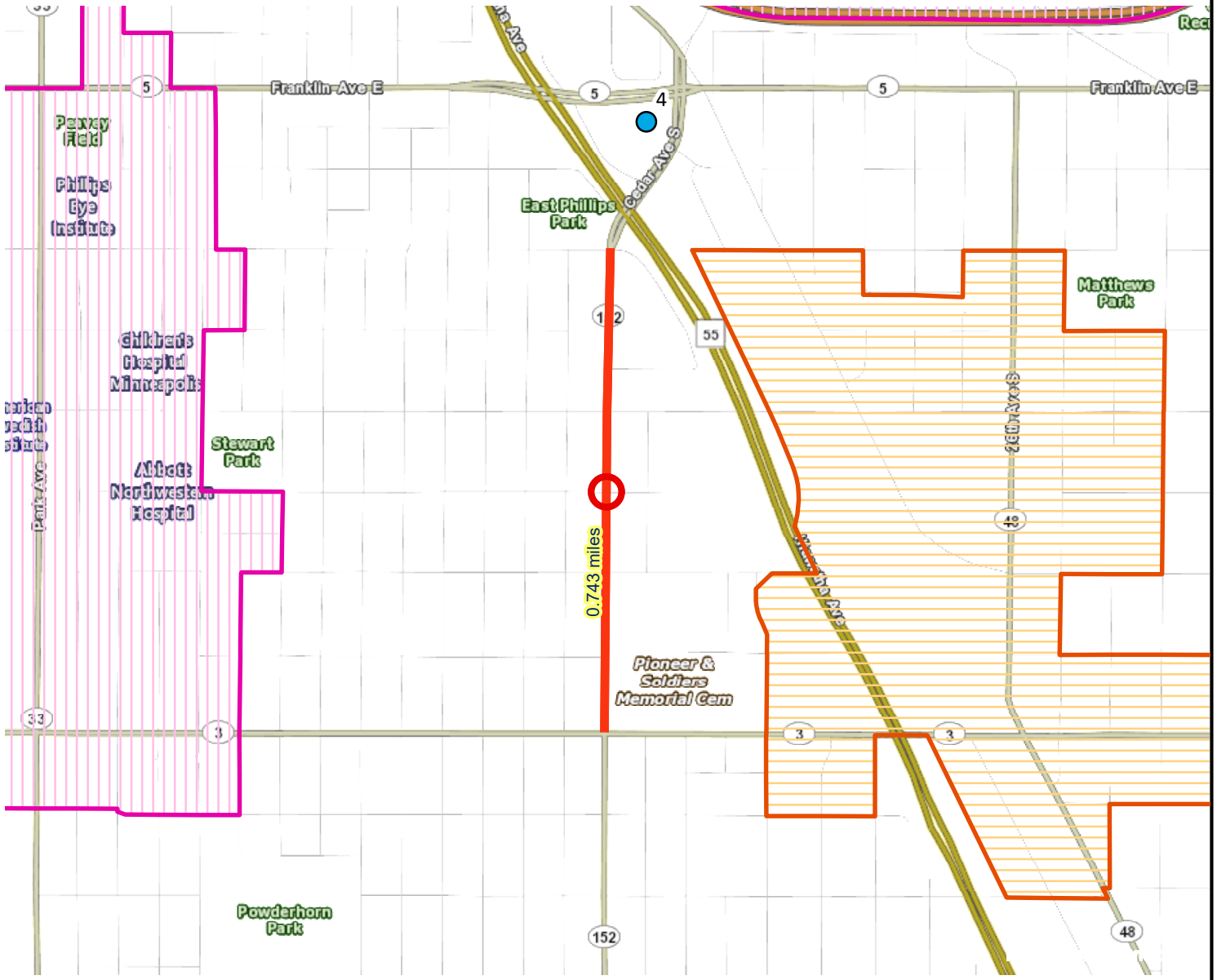
Regional Economy

Roadway Reconstruction/Modernization Project: CSAH 152 (Cedar Ave) Reconstruction Project | Map ID: 164685180

Results

WITHIN ONE MI of project:
Postsecondary Students: 3350

Totals by City:
Minneapolis
Population: 56361
Employment: 46213
Mfg and Dist Employment: 3601



Project Points
Project
Postsecondary Education Centers
Manfacturing/Distribution Centers
Job Concentration Centers

0 0.15 0.3 0.6 0.9 1.2 Miles

Created: 3/9/2022
LandscapeRSA5

For complete disclaimer of accuracy, please visit
http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx

METROPOLITAN COUNCIL

Transit Connections

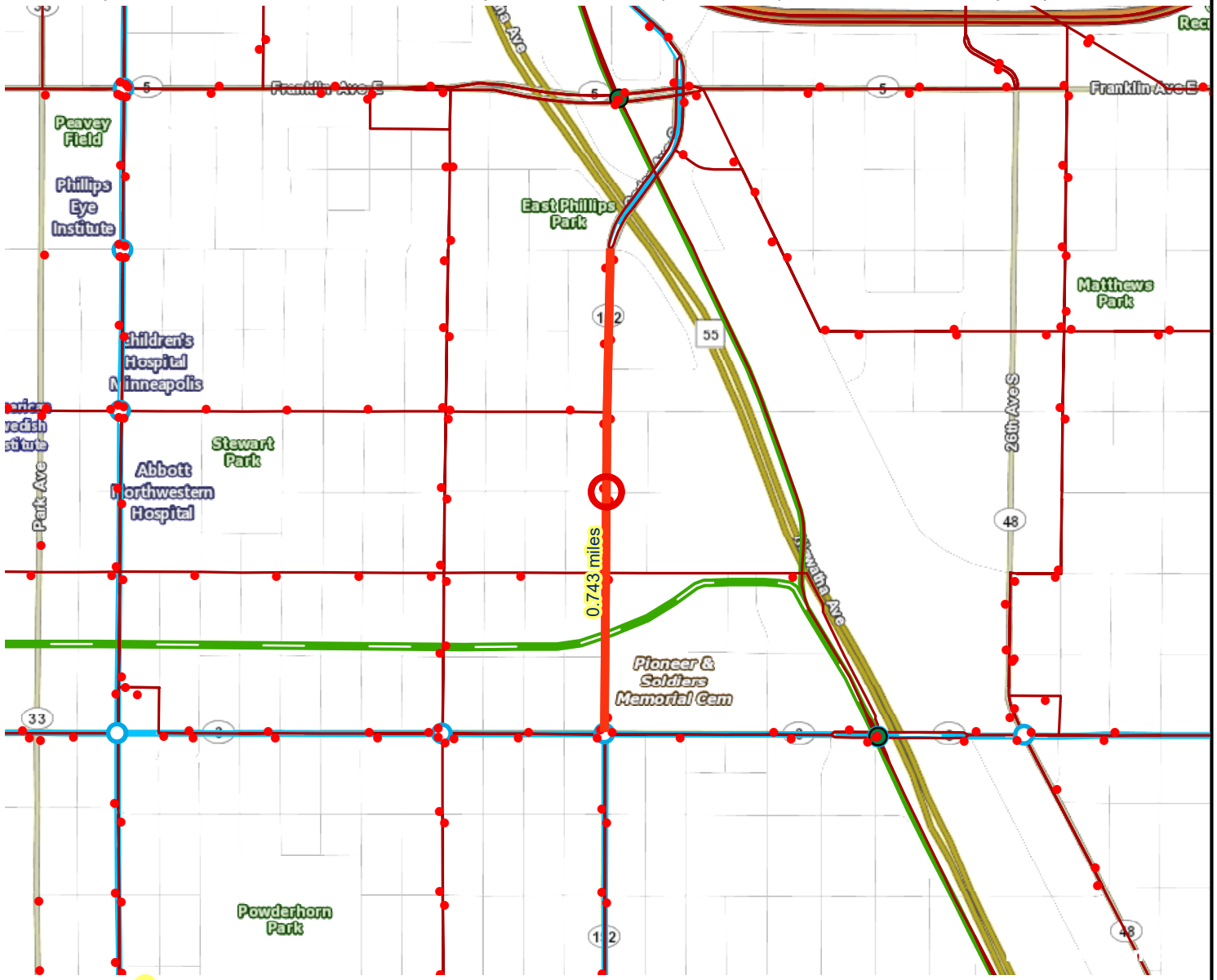
Roadway Reconstruction/Modernization Project: CSAH 152 (Cedar Ave) Reconstruction Project | Map ID: 16468518

Results

Transit with a Direct Connection to project:
21 22 27 901
*West Broadway/Cedar
*B Line
*Midtown

**indicates Planned Alignments*

Transit Market areas: 1



Project Points
Project
Project Area
Active Stop
Arterial Bus Rapid Transit

Commuter Rail
Dedicated Bus Rapid Transit
Highway Bus Rapid Transit
Light Rail
Arterial Bus Rapid Transit

Commuter Rail
Dedicated Bus Rapid Transit
Highway Bus Rapid Transit
Light Rail
Transit Routes

Arterial Bus Rapid Transit
Dedicated Bus Rapid Transit
Highway Bus Rapid Transit
Light Rail
Modern Streetcar

Undetermined
Arterial Bus Rapid Transit
Commuter Rail
Dedicated Bus Rapid Transit
Highway Bus Rapid Transit

Light Rail
Modern Streetcar
Undetermined

0 0.15 0.3 0.6 0.9 1.2 Miles

Created: 3/9/2022
LandscapeRSA3

METROPOLITAN COUNCIL

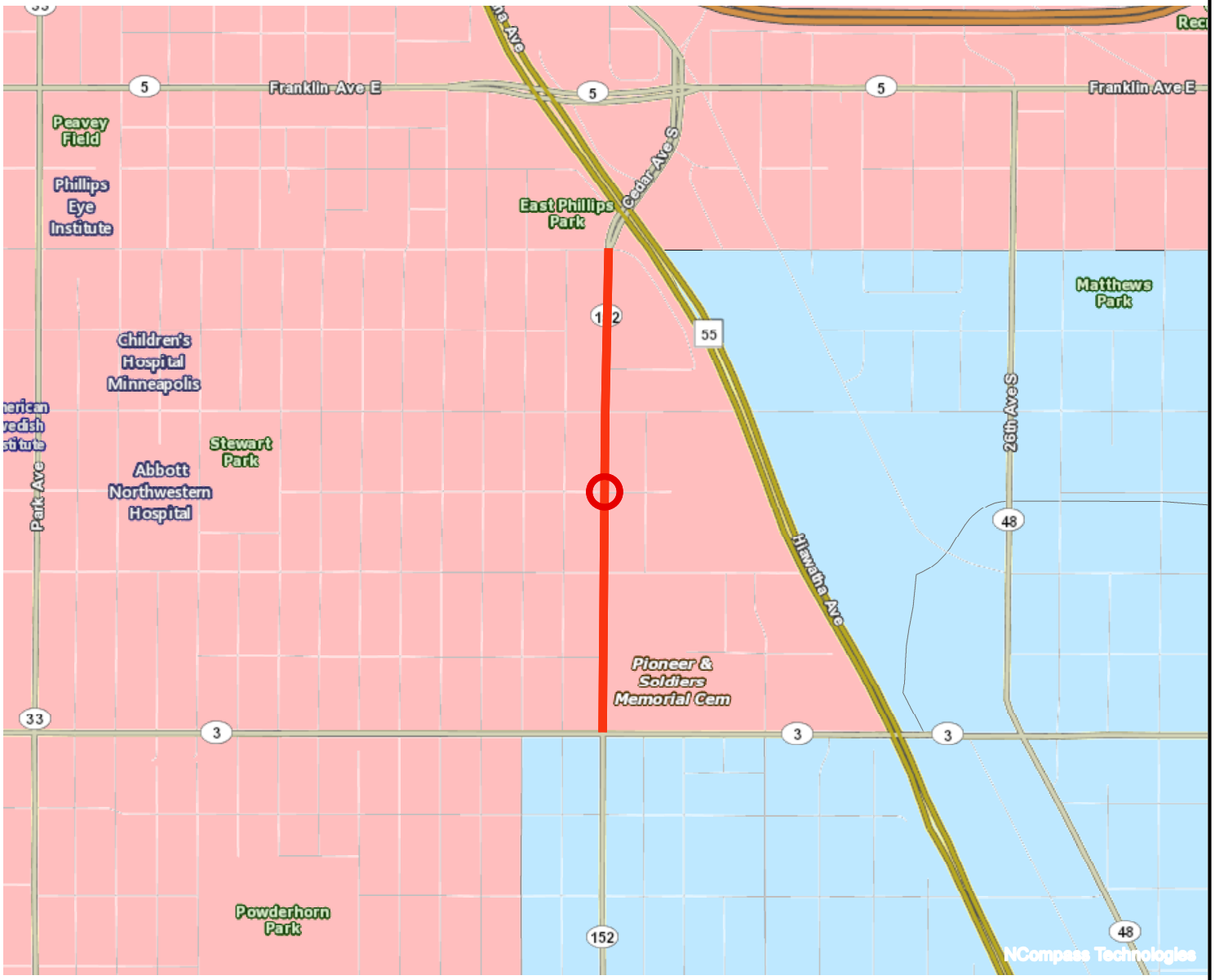
Socio-Economic Conditions

Roadway Reconstruction/Modernization Project: CSAH 152 (Cedar Ave) Reconstruction Project | Map ID: 1646851800471

Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 6243

Project located IN an Area of Concentrated Poverty.



Points
Lines
Area of Concentrated Poverty
Regional Environmental Justice Area

0 0.15 0.3 0.6 0.9 1.2 Miles

Created: 3/9/2022
LandscapeRSA2

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METROPOLITAN COUNCIL

CSAH 152 (Cedar) Reconstruction Project

Synchro Report – Congestion

Existing conditions (PM Peak)

Existing PM Peak 04/03/2022

7: Cedar Ave & 26th St

Direction	All
Future Volume (vph)	2346
Total Delay / Veh (s/v)	36
CO Emissions (kg)	2.82
NOx Emissions (kg)	0.55
VOC Emissions (kg)	0.65

16: Cedar Ave & Little Earth Driveway

Direction	All
Future Volume (vph)	1677
Total Delay / Veh (s/v)	3
CO Emissions (kg)	0.55
NOx Emissions (kg)	0.11
VOC Emissions (kg)	0.13

Proposed conditions (PM Peak)

Future PM Peak 04/03/2022

7: Cedar Ave & 26th St

Direction	All
Future Volume (vph)	2346
Total Delay / Veh (s/v)	32
CO Emissions (kg)	2.68
NOx Emissions (kg)	0.52
VOC Emissions (kg)	0.62

16: Cedar Ave & Little Earth Driveway

Direction	All
Future Volume (vph)	1681
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.39
NOx Emissions (kg)	0.08
VOC Emissions (kg)	0.09

Synchro Report for existing conditions (PM Peak) – Cedar/26th

Cedar Ave Regional Solicitation
Existing PM Peak 04/05/2022

Lane Group	WBT	NBL	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	468	76	686	11	562
Future Volume (vph)	468	76	686	11	562
Turn Type	NA	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		2		6	
Detector Phase	8	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	51.0	51.0	51.0	51.0
Total Split (%)	32.0%	68.0%	68.0%	68.0%	68.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0
Total Lost Time (s)	6.0		6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
Act Effct Green (s)	17.9		45.0		45.0
Actuated g/C Ratio	0.24		0.60		0.60
v/c Ratio	0.89		0.94		0.86
Control Delay	42.4		33.2		22.1
Queue Delay	0.0		0.0		10.4
Total Delay	42.4		33.2		32.5
LOS	D		C		C
Approach Delay	42.4		33.2		32.5
Approach LOS	D		C		C

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 74.9	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 35.6	Intersection LOS: D
Intersection Capacity Utilization 115.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Cedar Ave & 26th St

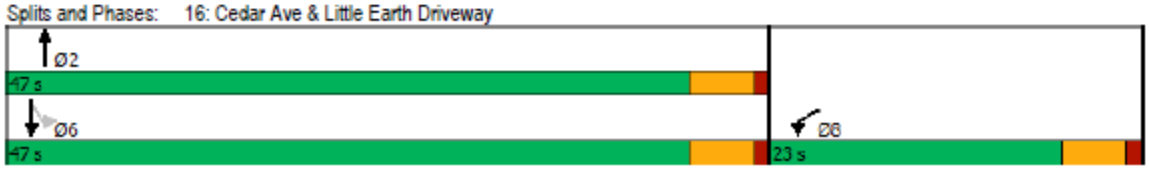
Synchro Report for existing conditions (PM Peak) – Cedar/Little Earth Crossing

Cedar Ave Regional Solicitation
Existing PM Peak 04/05/2022

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	2	723	5	936
Future Volume (vph)	2	723	5	936
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	23.0	24.0	24.0	24.0
Total Split (s)	23.0	47.0	47.0	47.0
Total Split (%)	32.9%	67.1%	67.1%	67.1%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0		5.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Max	Max	Max
Act Effct Green (s)	5.9	61.5		61.5
Actuated g/C Ratio	0.09	0.95		0.95
v/c Ratio	0.08	0.45		0.58
Control Delay	19.2	2.0		3.1
Queue Delay	0.0	0.0		0.1
Total Delay	19.2	2.0		3.2
LOS	B	A		A
Approach Delay	19.2	2.0		3.2
Approach LOS	B	A		A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.4	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 2.8	Intersection LOS: A
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Cedar Ave & Little Earth Driveway



Synchro Report for proposed conditions (PM Peak) – Cedar/26th

Future PM Peak 04/05/2022

Lane Group	WBT	NBL	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	468	76	686	11	562
Future Volume (vph)	468	76	686	11	562
Turn Type	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	5	2	1	6
Permitted Phases		2		6	
Detector Phase	8	5	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	8.0	24.0	8.0	24.0
Total Split (s)	26.0	8.0	56.0	8.0	56.0
Total Split (%)	28.9%	8.9%	62.2%	8.9%	62.2%
Yellow Time (s)	4.0	3.5	4.0	3.5	4.0
All-Red Time (s)	2.0	0.5	2.0	0.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.0	6.0	4.0	6.0
Lead/Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max
Act Effct Green (s)	20.0	57.6	54.8	55.2	50.1
Actuated g/C Ratio	0.23	0.65	0.62	0.62	0.57
v/c Ratio	0.94	0.41	0.70	0.04	0.90
Control Delay	55.7	11.5	16.1	5.4	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	11.5	16.1	5.4	30.2
LOS	E	B	B	A	C
Approach Delay	55.7		15.7		29.9
Approach LOS	E		B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 88.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 32.5	Intersection LOS: C
Intersection Capacity Utilization 83.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Cedar Ave & 26th St

Synchro Report for proposed conditions (PM Peak) – Cedar/Little Earth Crossing

County staff is proposing to remove the existing traffic signal at the Cedar/Little Earth Crossing (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed condition.

CSAH 152 (Cedar) Reconstruction Project

Synchro Report – Congestion

Existing conditions (PM Peak)

Existing PM Peak 04/03/2022

7: Cedar Ave & 26th St

Direction	All
Future Volume (vph)	2346
Total Delay / Veh (s/v)	36
CO Emissions (kg)	2.82
NOx Emissions (kg)	0.55
VOC Emissions (kg)	0.65

16: Cedar Ave & Little Earth Driveway

Direction	All
Future Volume (vph)	1677
Total Delay / Veh (s/v)	3
CO Emissions (kg)	0.55
NOx Emissions (kg)	0.11
VOC Emissions (kg)	0.13

Proposed conditions (PM Peak)

Future PM Peak 04/03/2022

7: Cedar Ave & 26th St

Direction	All
Future Volume (vph)	2346
Total Delay / Veh (s/v)	32
CO Emissions (kg)	2.68
NOx Emissions (kg)	0.52
VOC Emissions (kg)	0.62

16: Cedar Ave & Little Earth Driveway

Direction	All
Future Volume (vph)	1681
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.39
NOx Emissions (kg)	0.08
VOC Emissions (kg)	0.09

Synchro Report for existing conditions (PM Peak) – Cedar/26th

Cedar Ave Regional Solicitation
Existing PM Peak 04/05/2022

Lane Group	WBT	NBL	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	468	76	686	11	562
Future Volume (vph)	468	76	686	11	562
Turn Type	NA	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		2		6	
Detector Phase	8	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	51.0	51.0	51.0	51.0
Total Split (%)	32.0%	68.0%	68.0%	68.0%	68.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0
Total Lost Time (s)	6.0		6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
Act Effct Green (s)	17.9		45.0		45.0
Actuated g/C Ratio	0.24		0.60		0.60
v/c Ratio	0.89		0.94		0.86
Control Delay	42.4		33.2		22.1
Queue Delay	0.0		0.0		10.4
Total Delay	42.4		33.2		32.5
LOS	D		C		C
Approach Delay	42.4		33.2		32.5
Approach LOS	D		C		C

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 74.9	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 35.6	Intersection LOS: D
Intersection Capacity Utilization 115.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Cedar Ave & 26th St

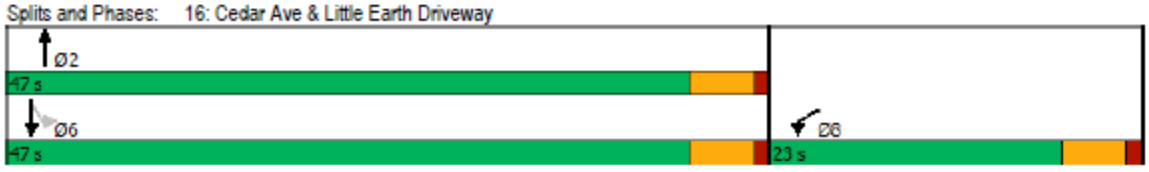
Synchro Report for existing conditions (PM Peak) – Cedar/Little Earth Crossing

Cedar Ave Regional Solicitation
Existing PM Peak 04/05/2022

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	2	723	5	936
Future Volume (vph)	2	723	5	936
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	23.0	24.0	24.0	24.0
Total Split (s)	23.0	47.0	47.0	47.0
Total Split (%)	32.9%	67.1%	67.1%	67.1%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0		5.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Max	Max	Max
Act Effct Green (s)	5.9	61.5		61.5
Actuated g/C Ratio	0.09	0.95		0.95
v/c Ratio	0.08	0.45		0.58
Control Delay	19.2	2.0		3.1
Queue Delay	0.0	0.0		0.1
Total Delay	19.2	2.0		3.2
LOS	B	A		A
Approach Delay	19.2	2.0		3.2
Approach LOS	B	A		A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.4	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 2.8	Intersection LOS: A
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Cedar Ave & Little Earth Driveway



Synchro Report for proposed conditions (PM Peak) – Cedar/26th

Future PM Peak 04/05/2022

Lane Group	WBT	NBL	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	468	76	686	11	562
Future Volume (vph)	468	76	686	11	562
Turn Type	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	5	2	1	6
Permitted Phases		2		6	
Detector Phase	8	5	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	8.0	24.0	8.0	24.0
Total Split (s)	26.0	8.0	56.0	8.0	56.0
Total Split (%)	28.9%	8.9%	62.2%	8.9%	62.2%
Yellow Time (s)	4.0	3.5	4.0	3.5	4.0
All-Red Time (s)	2.0	0.5	2.0	0.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.0	6.0	4.0	6.0
Lead/Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max
Act Effct Green (s)	20.0	57.6	54.8	55.2	50.1
Actuated g/C Ratio	0.23	0.65	0.62	0.62	0.57
v/c Ratio	0.94	0.41	0.70	0.04	0.90
Control Delay	55.7	11.5	16.1	5.4	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	11.5	16.1	5.4	30.2
LOS	E	B	B	A	C
Approach Delay	55.7		15.7		29.9
Approach LOS	E		B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 88.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 32.5	Intersection LOS: C
Intersection Capacity Utilization 83.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Cedar Ave & 26th St

Synchro Report for proposed conditions (PM Peak) – Cedar/Little Earth Crossing

County staff is proposing to remove the existing traffic signal at the Cedar/Little Earth Crossing (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed condition.

CSAH 152 (Cedar) Reconstruction Project

Synchro Report – Emissions Reduction

Existing conditions (PM Peak)

Existing PM Peak 04/03/2022

7: Cedar Ave & 26th St

Direction	All
Future Volume (vph)	2346
Total Delay / Veh (s/v)	36
CO Emissions (kg)	2.82
NOx Emissions (kg)	0.55
VOC Emissions (kg)	0.65

16: Cedar Ave & Little Earth Driveway

Direction	All
Future Volume (vph)	1677
Total Delay / Veh (s/v)	3
CO Emissions (kg)	0.55
NOx Emissions (kg)	0.11
VOC Emissions (kg)	0.13

Proposed conditions (PM Peak)

Future PM Peak 04/03/2022

7: Cedar Ave & 26th St

Direction	All
Future Volume (vph)	2346
Total Delay / Veh (s/v)	32
CO Emissions (kg)	2.68
NOx Emissions (kg)	0.52
VOC Emissions (kg)	0.62

16: Cedar Ave & Little Earth Driveway

Direction	All
Future Volume (vph)	1681
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.39
NOx Emissions (kg)	0.08
VOC Emissions (kg)	0.09

Synchro Report for existing conditions (PM Peak) – Cedar/26th

Cedar Ave Regional Solicitation
Existing PM Peak 04/05/2022

Lane Group	WBT	NBL	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	468	76	686	11	562
Future Volume (vph)	468	76	686	11	562
Turn Type	NA	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		2		6	
Detector Phase	8	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	51.0	51.0	51.0	51.0
Total Split (%)	32.0%	68.0%	68.0%	68.0%	68.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0
Total Lost Time (s)	6.0		6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	Max	Max	Max	Max
Act Effct Green (s)	17.9		45.0		45.0
Actuated g/C Ratio	0.24		0.60		0.60
v/c Ratio	0.89		0.94		0.86
Control Delay	42.4		33.2		22.1
Queue Delay	0.0		0.0		10.4
Total Delay	42.4		33.2		32.5
LOS	D		C		C
Approach Delay	42.4		33.2		32.5
Approach LOS	D		C		C

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 74.9	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 35.6	Intersection LOS: D
Intersection Capacity Utilization 115.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Cedar Ave & 26th St

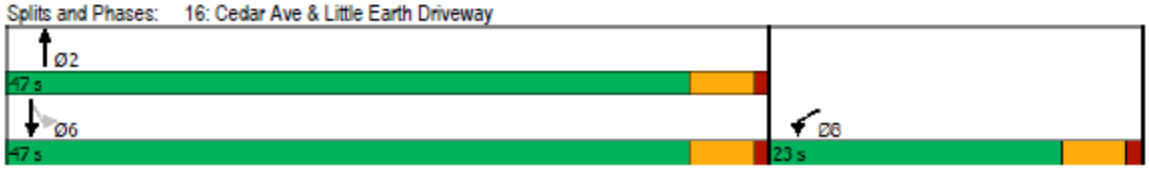
Synchro Report for existing conditions (PM Peak) – Cedar/Little Earth Crossing

Cedar Ave Regional Solicitation
Existing PM Peak 04/05/2022

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	2	723	5	936
Future Volume (vph)	2	723	5	936
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	23.0	24.0	24.0	24.0
Total Split (s)	23.0	47.0	47.0	47.0
Total Split (%)	32.9%	67.1%	67.1%	67.1%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0		5.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Max	Max	Max
Act Effct Green (s)	5.9	61.5		61.5
Actuated g/C Ratio	0.09	0.95		0.95
v/c Ratio	0.08	0.45		0.58
Control Delay	19.2	2.0		3.1
Queue Delay	0.0	0.0		0.1
Total Delay	19.2	2.0		3.2
LOS	B	A		A
Approach Delay	19.2	2.0		3.2
Approach LOS	B	A		A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.4	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 2.8	Intersection LOS: A
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Cedar Ave & Little Earth Driveway



Synchro Report for proposed conditions (PM Peak) – Cedar/26th

Future PM Peak 04/05/2022

Lane Group	WBT	NBL	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	468	76	686	11	562
Future Volume (vph)	468	76	686	11	562
Turn Type	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	5	2	1	6
Permitted Phases		2		6	
Detector Phase	8	5	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	8.0	24.0	8.0	24.0
Total Split (s)	26.0	8.0	56.0	8.0	56.0
Total Split (%)	28.9%	8.9%	62.2%	8.9%	62.2%
Yellow Time (s)	4.0	3.5	4.0	3.5	4.0
All-Red Time (s)	2.0	0.5	2.0	0.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.0	6.0	4.0	6.0
Lead/Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max
Act Effct Green (s)	20.0	57.6	54.8	55.2	50.1
Actuated g/C Ratio	0.23	0.65	0.62	0.62	0.57
v/c Ratio	0.94	0.41	0.70	0.04	0.90
Control Delay	55.7	11.5	16.1	5.4	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	11.5	16.1	5.4	30.2
LOS	E	B	B	A	C
Approach Delay	55.7		15.7		29.9
Approach LOS	E		B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 88.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 32.5	Intersection LOS: C
Intersection Capacity Utilization 83.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Cedar Ave & 26th St

Synchro Report for proposed conditions (PM Peak) – Cedar/Little Earth Crossing

County staff is proposing to remove the existing traffic signal at the Cedar/Little Earth Crossing (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed condition.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 152	**District**	Metro	**County**	Hennepin County
Begin RP	14.17	**End RP**	13.92	**Miles**	0.25
Location	From 0.03 mi north of CSAH 3 (Lake St) to 28th St				

B. Project Description

Proposed Work	CSAH 152: Install TWLTL on 2-lane roadway and resurface pavement		
Project Cost*	$6,920,000	**Installation Year**	2026
Project Service Life	20 years	**Traffic Growth Factor**	0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

	Fatal (K) Crashes	**Reference**	CMF 02338: Install TWLTL on 2-lane roadway (31.4% reduction)
	Serious Injury (A) Crashes		CMF 09298: Resurface pavement (9.9% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 02338: LT & HO
0.62	**Possible Injury (C) Crashes**		CMF 09298: LT & HO
0.62	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2019	**End Date**	12/31/2021	3 years
Data Source	MnCMAT Version 2.0			

Crash Severity	**CMF 02338: LT & HO** **CMF 09298: LT & HO**	**None**
K crashes	0	
A crashes	0	
B crashes	0	
C crashes	1	
PDO crashes	1	

F. Benefit-Cost Calculation

$332,392	**Benefit (present value)**	**B/C Ratio = 0.05**
$6,920,000	**Cost**	

Proposed project expected to reduce 1 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,500,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate	0.7%
Traffic Growth Rate	0.5%
Project Service Life	20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	0.00	0.00	$0
C crashes	0.38	0.13	$15,280
PDO crashes	0.38	0.13	$1,655
			$16,935

H. Amortized Benefit

Total = $332,392

Year	Crash Benefits	Present Value
2026	$16,935	$16,935
2027	$17,020	$16,902
2028	$17,105	$16,868
2029	$17,191	$16,835
2030	$17,277	$16,801
2031	$17,363	$16,768
2032	$17,450	$16,735
2033	$17,537	$16,701
2034	$17,625	$16,668
2035	$17,713	$16,635
2036	$17,801	$16,602
2037	$17,890	$16,569
2038	$17,980	$16,536
2039	$18,070	$16,503
2040	$18,160	$16,470
2041	$18,251	$16,438
2042	$18,342	$16,405
2043	$18,434	$16,373
2044	$18,526	$16,340
2045	$18,619	$16,308
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 152	**District**	Metro	**County**	Hennepin County
Begin RP	13.92	**End RP**	13.86	**Miles**	0.06
Location	At 28th St				

B. Project Description

Proposed Work	CSAH 152: Replace 8" signal heads with 12" signal heads CSAH 152: Install LT lane on N App		
Project Cost*	$6,920,000	**Installation Year**	2026
Project Service Life	20 years	**Traffic Growth Factor**	0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

	Fatal (K) Crashes	**Reference**	CMF 02333: Replace 8" signal heads with 12" heads (42% reduction)
0.57	**Serious Injury (A) Crashes**		CMF 07998: Install LT lane on N App (12.4% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 02333: RA
0.88	**Possible Injury (C) Crashes**		CMF 07998: RE, LT, & RA
0.67	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2019	**End Date**	12/31/2021	3 years
Data Source	MnCMAT Version 2.0			

Crash Severity	CMF 02333: RA CMF 07998: RE, LT, & RA	None
K crashes	0	
A crashes	1	
B crashes	0	
C crashes	1	
PDO crashes	3	

F. Benefit-Cost Calculation

$2,285,792	**Benefit (present value)**	**B/C Ratio = 0.34**
$6,920,000	**Cost**	

Proposed project expected to reduce 1 crashes annually, 1 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,500,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate	0.7%
Traffic Growth Rate	0.5%
Project Service Life	20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.43	0.14	$107,250
B crashes	0.00	0.00	$0
C crashes	0.12	0.04	$4,960
PDO crashes	0.98	0.33	$4,251
			$116,461

H. Amortized Benefit

Year	Crash Benefits	Present Value
2026	$116,461	$116,461
2027	$117,043	$116,230
2028	$117,629	$115,999
2029	$118,217	$115,768
2030	$118,808	$115,539
2031	$119,402	$115,309
2032	$119,999	$115,080
2033	$120,599	$114,851
2034	$121,202	$114,623
2035	$121,808	$114,396
2036	$122,417	$114,169
2037	$123,029	$113,942
2038	$123,644	$113,715
2039	$124,262	$113,490
2040	$124,884	$113,264
2041	$125,508	$113,039
2042	$126,136	$112,815
2043	$126,766	$112,591
2044	$127,400	$112,367
2045	$128,037	$112,144
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Total = $2,285,792

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 152	**District**	Metro	**County**	Hennepin County
Begin RP	13.86	**End RP**	13.67	**Miles**	0.19
Location	From 28th St to 26th St				

B. Project Description

Proposed Work	CSAH 152: Install TWLTL on 2-lane roadway and resurface pavement		
Project Cost*	$6,920,000	**Installation Year**	2026
Project Service Life	20 years	**Traffic Growth Factor**	0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

	Fatal (K) Crashes	**Reference**	CMF 02338: Install TWLTL on 2-lane roadway (31.4% reduction)
	Serious Injury (A) Crashes		CMF 09298: Resurface pavement (9.9% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 02338: SS, RE, LT, & RA
0.62	**Possible Injury (C) Crashes**		CMF 09298: SS, RE, LT, & RA
0.62	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2019	**End Date**	12/31/2021	3 years
Data Source	MnCMAT Version 2.0			

Crash Severity	**CMF 02333: RA CMF 07998: RE, LT, & RA**	**None**
K crashes	0	
A crashes	0	
B crashes	0	
C crashes	1	
PDO crashes	6	

F. Benefit-Cost Calculation

$494,839	**Benefit (present value)**	**B/C Ratio = 0.08**
$6,920,000	**Cost**	

Proposed project expected to reduce 1 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,500,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate	0.7%
Traffic Growth Rate	0.5%
Project Service Life	20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	0.00	0.00	$0
C crashes	0.38	0.13	$15,280
PDO crashes	2.29	0.76	$9,932
			$25,212

H. Amortized Benefit

Total = $494,839

Year	Crash Benefits	Present Value
2026	$25,212	$25,212
2027	$25,338	$25,162
2028	$25,465	$25,112
2029	$25,592	$25,062
2030	$25,720	$25,012
2031	$25,849	$24,963
2032	$25,978	$24,913
2033	$26,108	$24,864
2034	$26,238	$24,814
2035	$26,369	$24,765
2036	$26,501	$24,716
2037	$26,634	$24,667
2038	$26,767	$24,618
2039	$26,901	$24,569
2040	$27,035	$24,520
2041	$27,171	$24,471
2042	$27,306	$24,423
2043	$27,443	$24,374
2044	$27,580	$24,326
2045	$27,718	$24,277
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 152	**District**	Metro	**County**	Hennepin County
Begin RP	13.67	**End RP**	13.61	**Miles**	0.06
Location	At 26th St				

B. Project Description

Proposed Work	CSAH 152: Replace 8" signal heads with 12" & implement prot/perm LT phasing CSAH 152: Install ped countdown timers and improve intersection lighting		
Project Cost*	$6,920,000	**Installation Year**	2026
Project Service Life	20 years	**Traffic Growth Factor**	0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

	Fatal (K) Crashes	**Reference**	CMF 02333: Replace 8" signal heads with 12" heads (42% reduction)
	Serious Injury (A) Crashes		CMF 04140: Implement protected/permitted LT phasing (42% reduction)
0.34	**Moderate Injury (B) Crashes**	**Crash Type**	CMF 02333: RE, LT, & RA
0.34	**Possible Injury (C) Crashes**		CMF 04140: RE, LT, & RA
0.34	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	CMF 05272: Install pedestrian countdown timers (70% reduction)
0.17	**Serious Injury (A) Crashes**		FHWA Desktop Reference: Improve lighting (42% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 05272: PED
0.17	**Possible Injury (C) Crashes**		FHWA Desktop Reference: PED nighttime
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2019	**End Date**	12/31/2021	3 years
Data Source	MnCMAT Version 2.0			

Crash Severity	**CMF 02333: RE, LT, & RA CMF 04140: RE, LT, & RA**	**CMF 05272: PED FHWA Desktop Reference: PED nighttime**
K crashes	0	0
A crashes	0	2
B crashes	1	0
C crashes	2	1
PDO crashes	3	0

F. Benefit-Cost Calculation

$10,965,635	**Benefit (present value)**	**B/C Ratio = 1.59**
$6,920,000	**Cost**	

Proposed project expected to reduce 3 crashes annually, 1 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,500,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate	0.7%
Traffic Growth Rate	0.5%
Project Service Life	20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	1.65	0.55	$413,000
B crashes	0.66	0.22	$50,907
C crashes	2.15	0.72	$86,160
PDO crashes	1.99	0.66	$8,632
			$558,699

H. Amortized Benefit

Year	Crash Benefits	Present Value
2026	$558,699	$558,699
2027	$561,492	$557,589
2028	$564,300	$556,482
2029	$567,121	$555,376
2030	$569,957	$554,273
2031	$572,807	$553,173
2032	$575,671	$552,074
2033	$578,549	$550,977
2034	$581,442	$549,883
2035	$584,349	$548,791
2036	$587,271	$547,701
2037	$590,207	$546,613
2038	$593,158	$545,528
2039	$596,124	$544,444
2040	$599,104	$543,363
2041	$602,100	$542,284
2042	$605,110	$541,207
2043	$608,136	$540,132
2044	$611,177	$539,059
2045	$614,233	$537,988
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Total = $10,965,635

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 152	**District**	Metro	**County**	Hennepin County
Begin RP	13.61	**End RP**	13.42	**Miles**	0.19
Location	From 26th St to 24th St				

B. Project Description

Proposed Work	No CMFs proposed - No reported crashes from 2019-2021		
Project Cost*	$6,920,000	**Installation Year**	2026
Project Service Life	20 years	**Traffic Growth Factor**	0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2019	**End Date**	12/31/2021	3 years
Data Source	MnCMAT Version 2.0			

Crash Severity	**None**	**None**
K crashes	0	0
A crashes	0	0
B crashes	0	0
C crashes	0	0
PDO crashes	0	0

F. Benefit-Cost Calculation

$0	**Benefit (present value)**	**B/C Ratio = 0.00**
$6,920,000	**Cost**	

Proposed project expected to reduce 0 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,500,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate	0.7%
Traffic Growth Rate	0.5%
Project Service Life	20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	0.00	0.00	$0
C crashes	0.00	0.00	$0
PDO crashes	0.00	0.00	$0
			$0

H. Amortized Benefit

Total = $0

Year	Crash Benefits	Present Value
2026	$0	$0
2027	$0	$0
2028	$0	$0
2029	$0	$0
2030	$0	$0
2031	$0	$0
2032	$0	$0
2033	$0	$0
2034	$0	$0
2035	$0	$0
2036	$0	$0
2037	$0	$0
2038	$0	$0
2039	$0	$0
2040	$0	$0
2041	$0	$0
2042	$0	$0
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0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 152	**District**	Metro	**County**	Hennepin County
Begin RP	13.42	**End RP**	13.36	**Miles**	0.06
Location	At 24th St				

B. Project Description

Proposed Work	CSAH 152: Install ped countdown timers		
Project Cost*	$6,920,000	**Installation Year**	2026
Project Service Life	20 years	**Traffic Growth Factor**	0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

	Fatal (K) Crashes	**Reference**	CMF 05272: Install pedestrian countdown timers (70% reduction)
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	CMF 05272: PED
0.30	**Possible Injury (C) Crashes**		
0.00	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2019	**End Date**	12/31/2021	3 years
Data Source	MnCMAT Version 2.0			

Crash Severity	CMF 05272: PED	None
K crashes	0	0
A crashes	0	0
B crashes	0	0
C crashes	1	0
PDO crashes	0	0

F. Benefit-Cost Calculation

$549,559	**Benefit (present value)**	**B/C Ratio = 0.08**
$6,920,000	**Cost**	

Proposed project expected to reduce 1 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,500,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate	0.7%
Traffic Growth Rate	0.5%
Project Service Life	20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	0.00	0.00	$0
C crashes	0.70	0.23	$28,000
PDO crashes	0.00	0.00	$0
			$28,000

H. Amortized Benefit

Total = $549,559

Year	Crash Benefits	Present Value
2026	$28,000	$28,000
2027	$28,140	$27,944
2028	$28,281	$27,889
2029	$28,422	$27,833
2030	$28,564	$27,778
2031	$28,707	$27,723
2032	$28,851	$27,668
2033	$28,995	$27,613
2034	$29,140	$27,558
2035	$29,285	$27,503
2036	$29,432	$27,449
2037	$29,579	$27,394
2038	$29,727	$27,340
2039	$29,876	$27,286
2040	$30,025	$27,231
2041	$30,175	$27,177
2042	$30,326	$27,123
2043	$30,478	$27,069
2044	$30,630	$27,016
2045	$30,783	$26,962
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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SCALE IN FEET

Job #14870
3/17/2022
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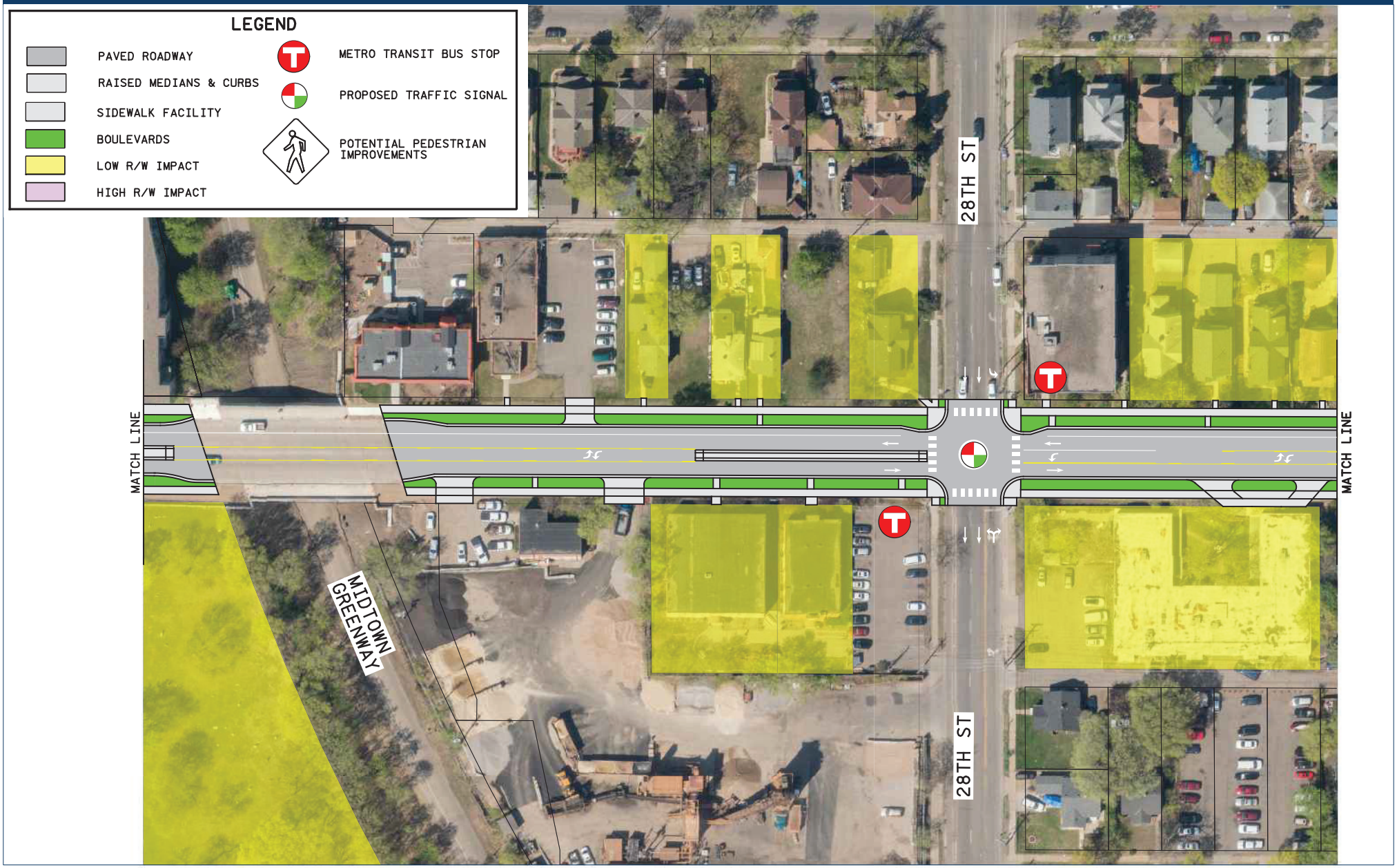
CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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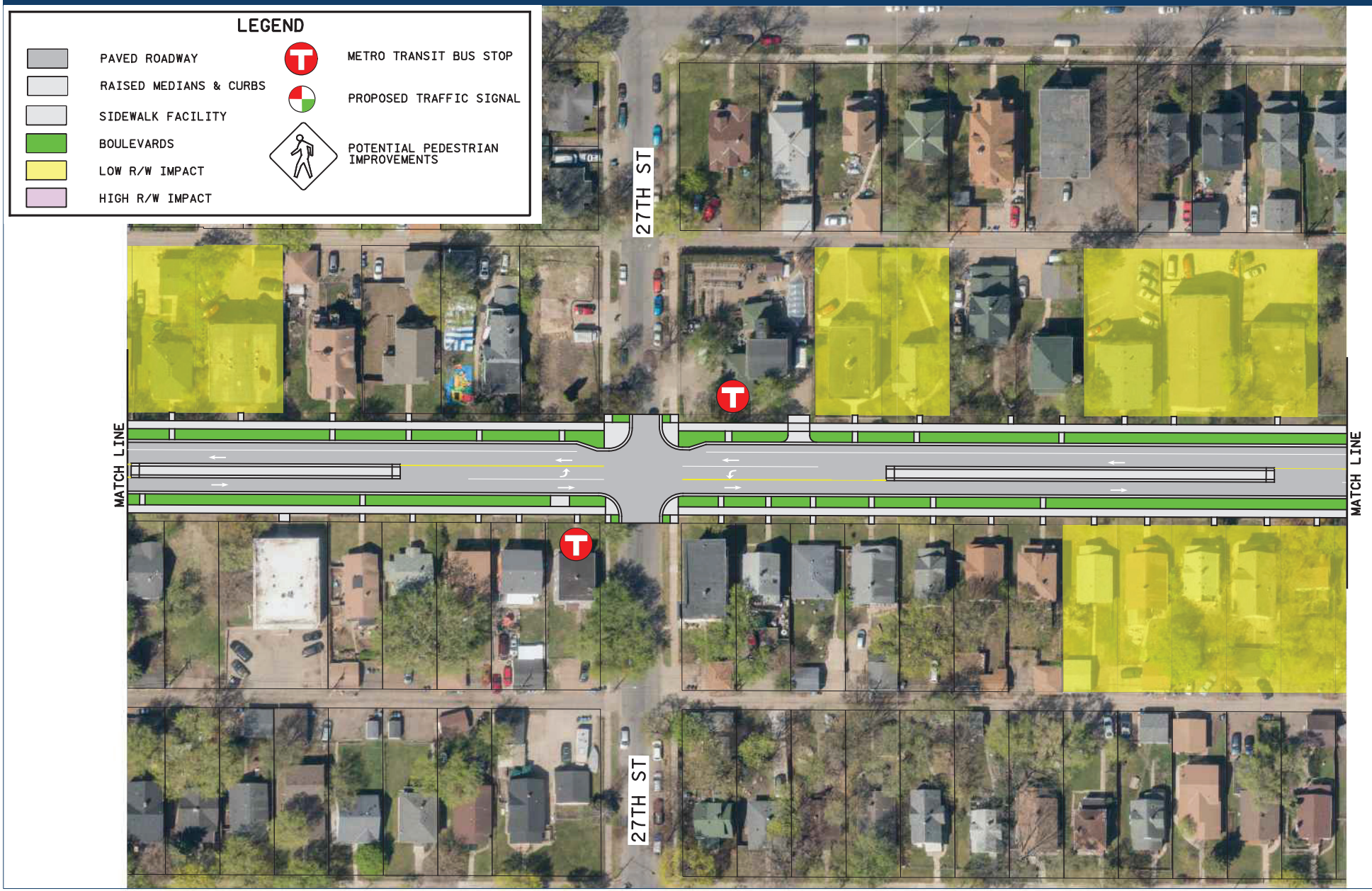
CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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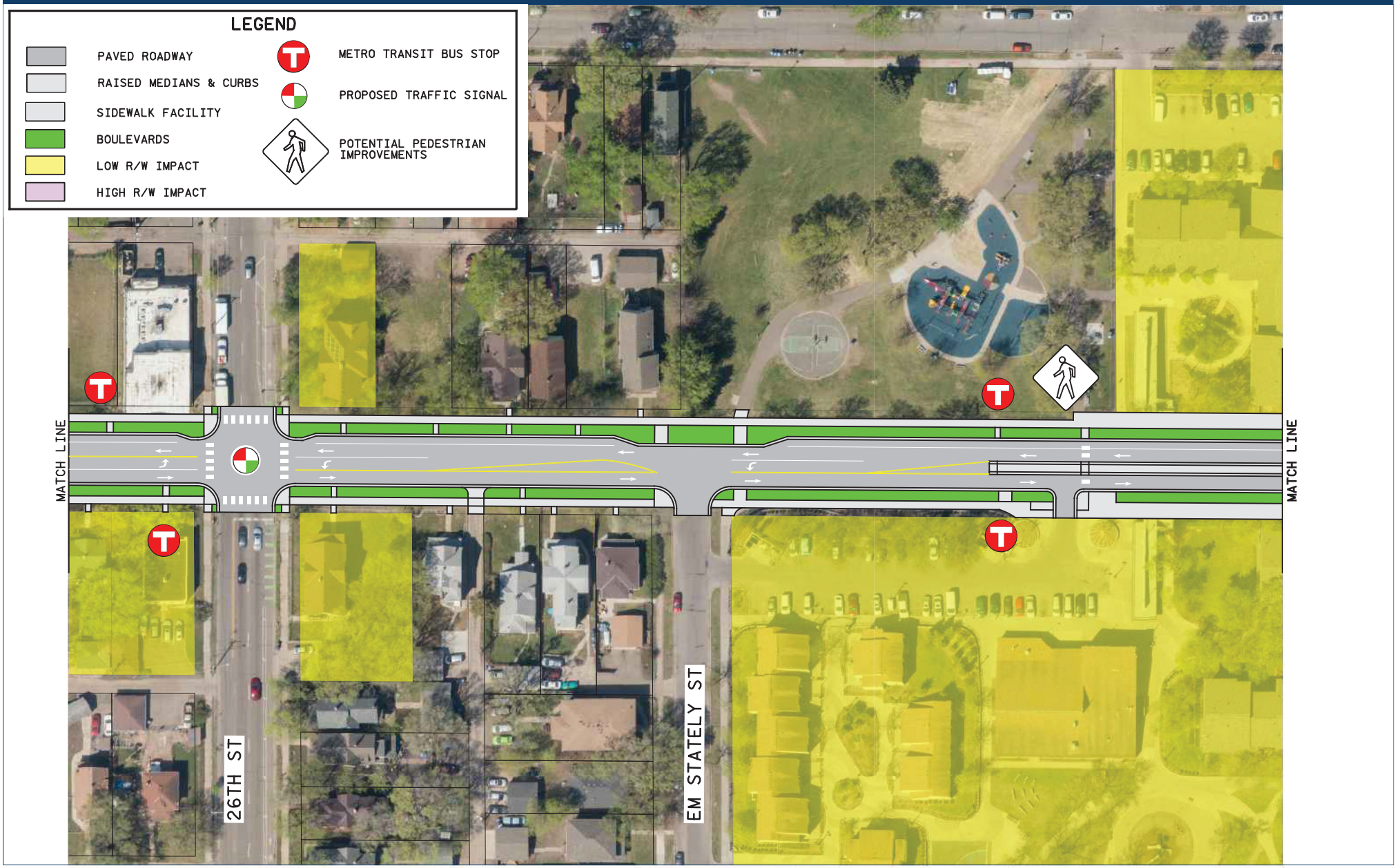
CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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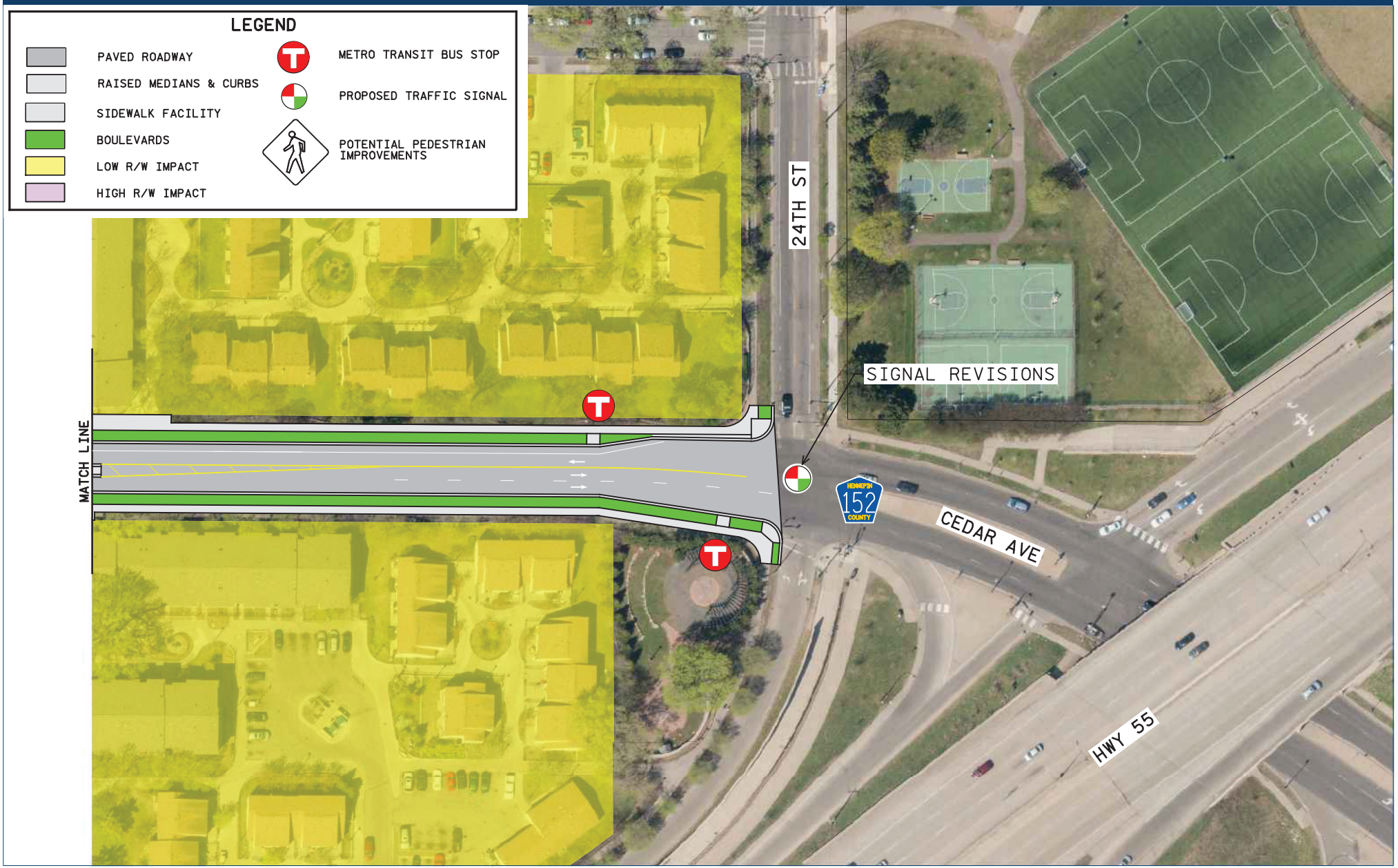
CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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3/17/2022
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CSAH 152 (Cedar Ave) Reconstruction Project

List of Attachments

1. Project Narrative
2. Project Location Map
3. Existing Roadway Condition Photos
4. Potential Typical Section
5. Potential Concept
6. Hennepin County Board Resolution 22-0109
7. Socio-Economic Equity Map
8. Affordable Housing Access Map and Detail Summary
9. StreetLight HCAADT Report
10. Minneapolis Pedestrian Street Lighting Corridor Map
11. Crash Map and Detail Listing
12. Crash Modification Factors
13. Multimodal Connections Map
14. Phillips Traffic Safety Improvements Community Engagement Summary
15. Little Earth Community Engagement Summary
16. City of Minneapolis Support Letter
17. Minneapolis Park and Recreation Board Support Letter
18. Metro Transit Support Letter

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 01 | Project Narrative

HENNEPIN COUNTY
MINNESOTA

Project Name
CSAH 152 (Cedar Ave) Reconstruction Project

City(ies)
Minneapolis

Commisioner District(s)
4

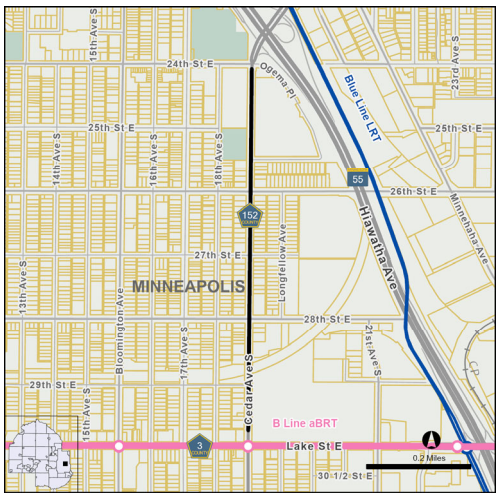
Capital Project Number
CP 2220200

Project Category
Reconstruction

Scoping Manager
Emily Buell

Scoping Form Revision Dates
3/31/2022

Project Map



Project Summary
Reconstruct Cedar Avenue (CSAH 152) from 150 ft north of Lake Street (CSAH 3) to 24th Street in the City of Minneapolis.

Project Timeline

Scoping:	Q1 2022 - Q1 2023
Design:	Q2 2023 - Q4 2025
R/W Acquisition:	Q1 2024 - Q4 2025
Bid Advertisement:	Q1 2026
Construction:	Q2 2026-Q4 2027

Roadway History
The existing roadway (last reconstructed in the 1960s) is nearing the end of its useful life and warrants replacement. Routine maintenance activities are no longer cost effective in preserving assets. The current roadway consists of a 2-lane undivided configuration with no turn lanes, and parking. Although sidewalks are provided along both sides of the roadway, they do not provide a positive user experiences and crossing CSAH 152 (Cedar Avenue) also serves as a barrier for people walking and rolling. This roadway provides key first mile/last mile transit connections, key east/west enhanced city bikeways, and important community services.

Project Delivery Responsibilities

Preliminary Design:	Consultant
Final Design:	Consultant
Construction Services:	Consultant

Project Description and Benefits
The proposed project will include new pavement, curb, storm water utilities, sidewalk, ADA accommodations, and traffic signals. It is anticipate that proven traffic calming strategies (such as raised medians, curb extensions, and streetscaping) will be introduced to improve the crossing experiences for people walking and to manage vehicle speeds. This project provides an opportunity to coordinate with the Minneapolis Park and Recreation Board for nearby park improvements; Metro Transit for a future arterial bus rapid transit (ABRT) line along the corridor; and, the City of Minneapolis as part of their Little Earth Transportation Study and Phillips Traffic Safety Improvements.

Project Budget -		Project Level
Construction:	$	5,320,000
Cost Estimate Year:		2022
Construction Year:		2026
Annual Inflation Rate:		2.0%
Inflated Construction:	$	5,760,000
Design Services:	$	860,000
R/W Acquisition:	$	1,010,000
Other (Utility Burial):	$	-
Construction Services:	$	580,000
Contingency:	$	1,730,000
Total Project Budget:	**$**	**9,940,000**

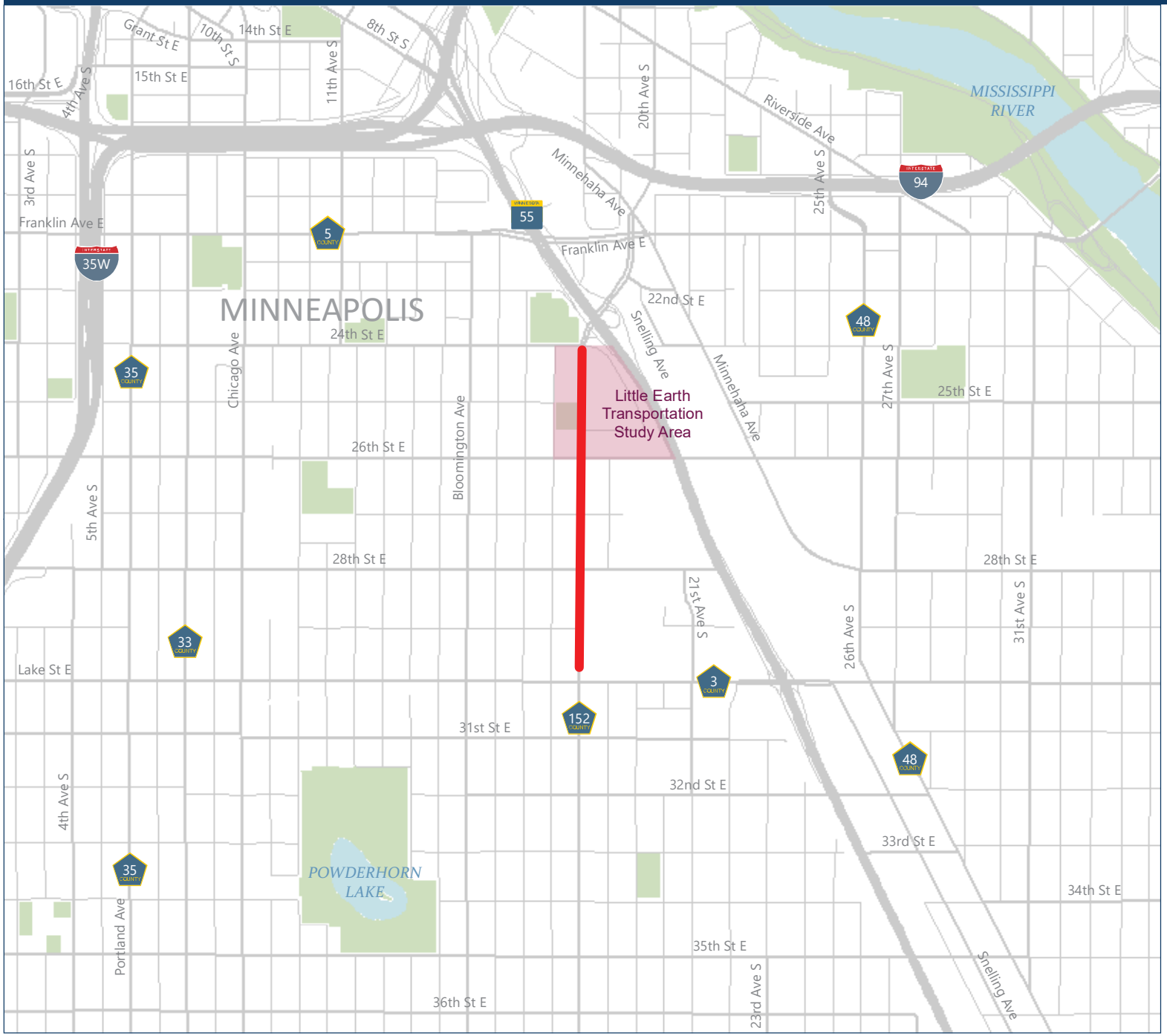
Project Risks & Uncertainties
Additional coordination will be needed with Metro Transit, the Minneapolis Park and Recreation Board, and City of Minneapolis for nearby transit, placemaking, and safety improvements.

Funding Notes
Eligible for federal funding through the Metropolitan Council's Regional Solicitation given the function classification of A-Minor Arterial.

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 02 | Project Location Map

HENNEPIN COUNTY
MINNESOTA



Key

Project Location

0 0.25 0.5 Miles

Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Published date: 1/26/2022

N

Hennepin

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 03 | Existing Roadway Condition Photos

Existing roadway assets are past their useful life. As shown above, the outside lanes of Cedar Ave were transformed into parking lanes due to degrading pavement quality.

Pavement maintenance activities, such as the patch shown above, are no longer cost efficient for extending the useful life of the roadway.

Many signals are aging and are in need of replacement, such as this signal at the 28th St and Cedar Ave intersection which was originally constructed in 1966.

Due to the original 4-lane configuration, pedestrian crossings at 27th and Cedar Ave are difficult.

Hennepin County Public Works
1600 Prairie Drive, Medina, MN 55340
612-596-0300 | hennepin.us

CSAH 152 (Cedar Ave) Reconstruction Project

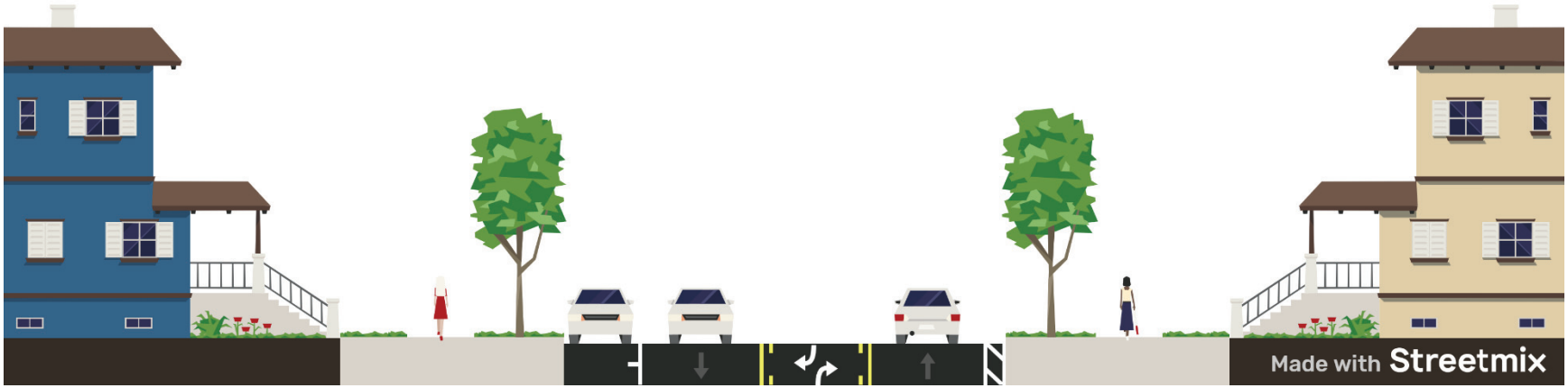
Attachment 03 | Existing Roadway Condition Photos

(Above) The crossing at the Little Earth development is both at-grade and grade separated through a pedestrian bridge. As shown above, the pedestrian bridge can block sightlines for the at-grade crossing signal.

(Left) Sidewalk assets throughout the corridor are in poor condition and are often uneven and cracked.

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 04 | Potential Typical Section



CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

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SCALE IN FEET

Job #14870
3/17/2022
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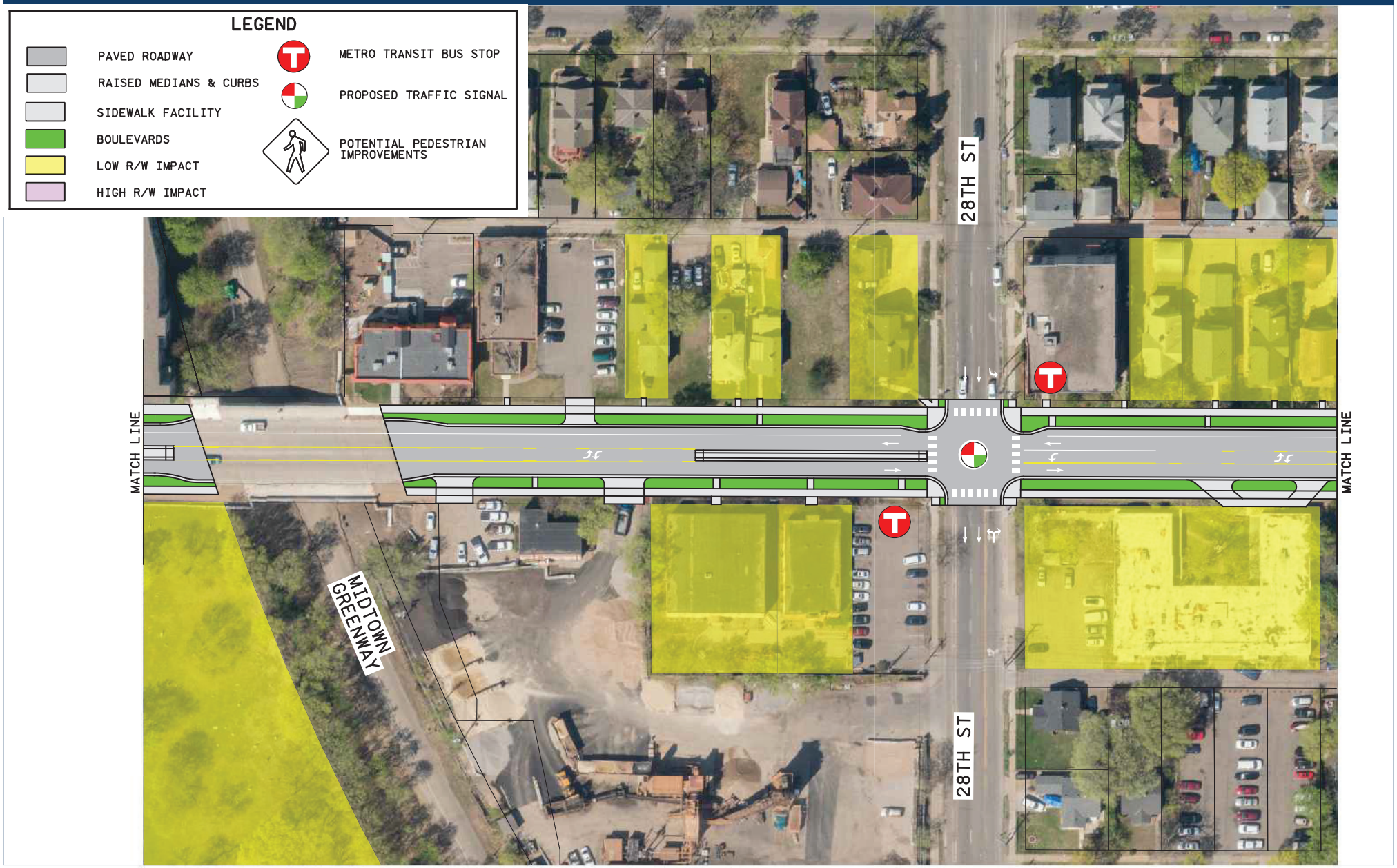
CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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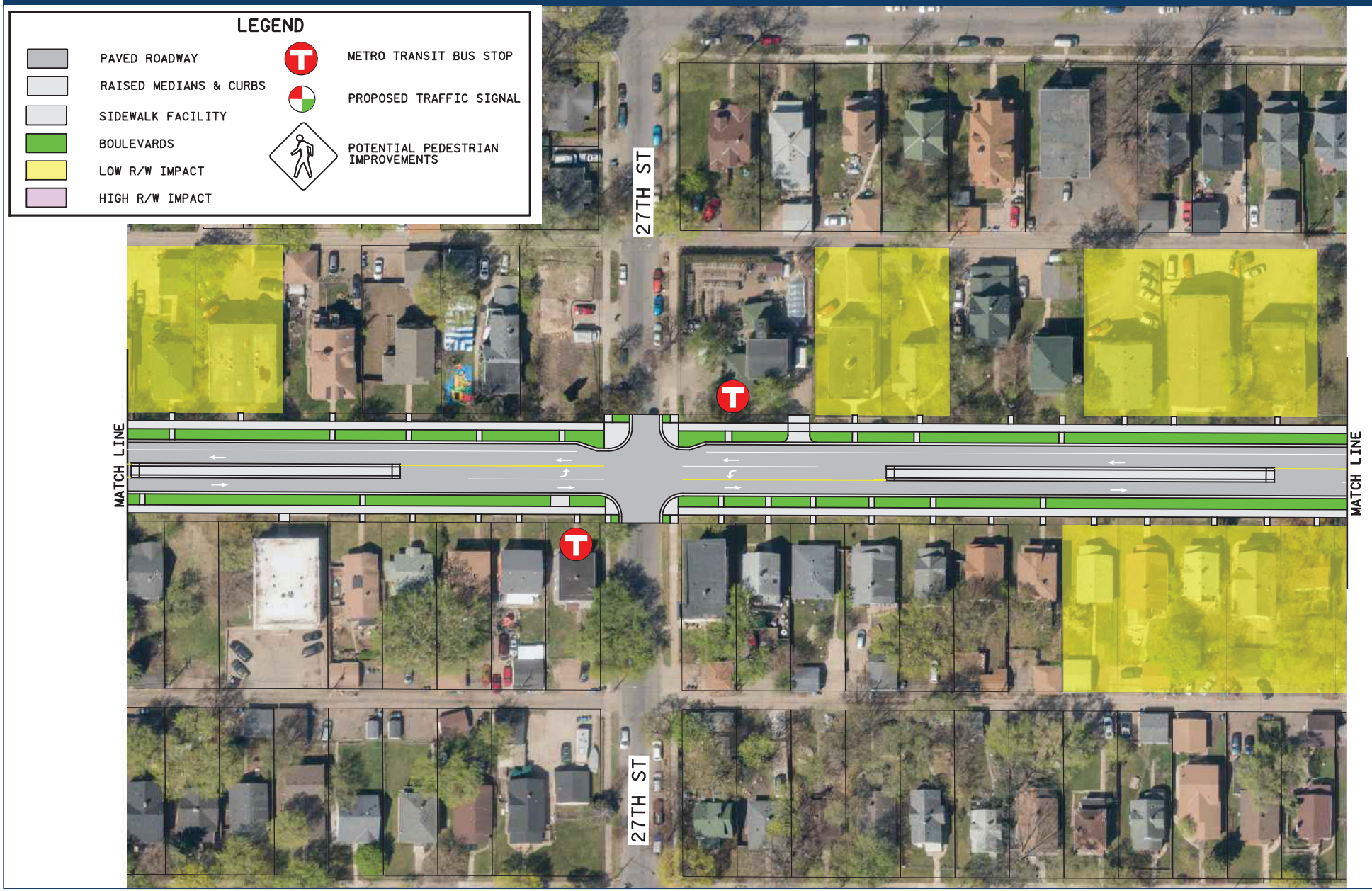
CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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3/17/2022
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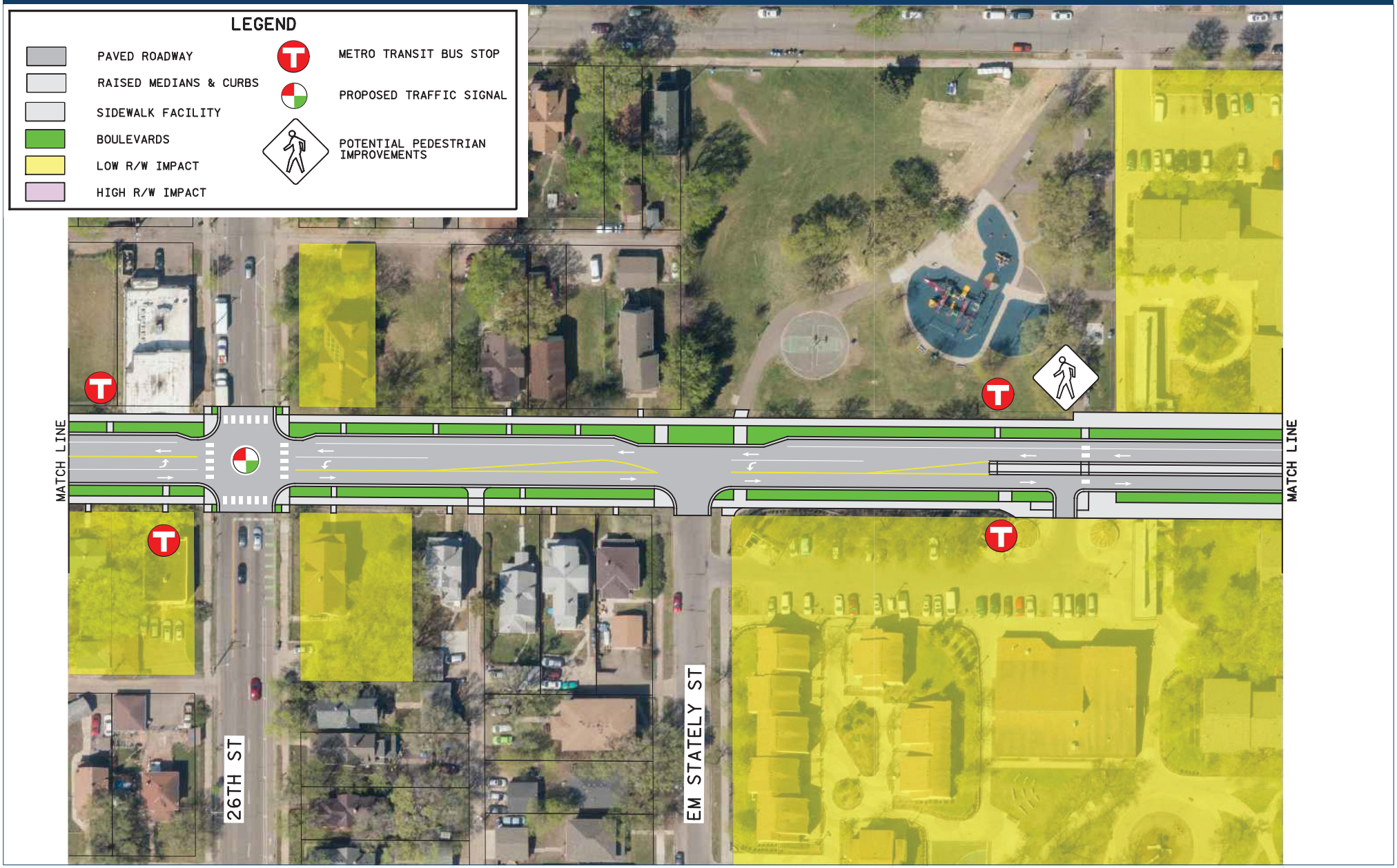
CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

Job #14870
3/17/2022
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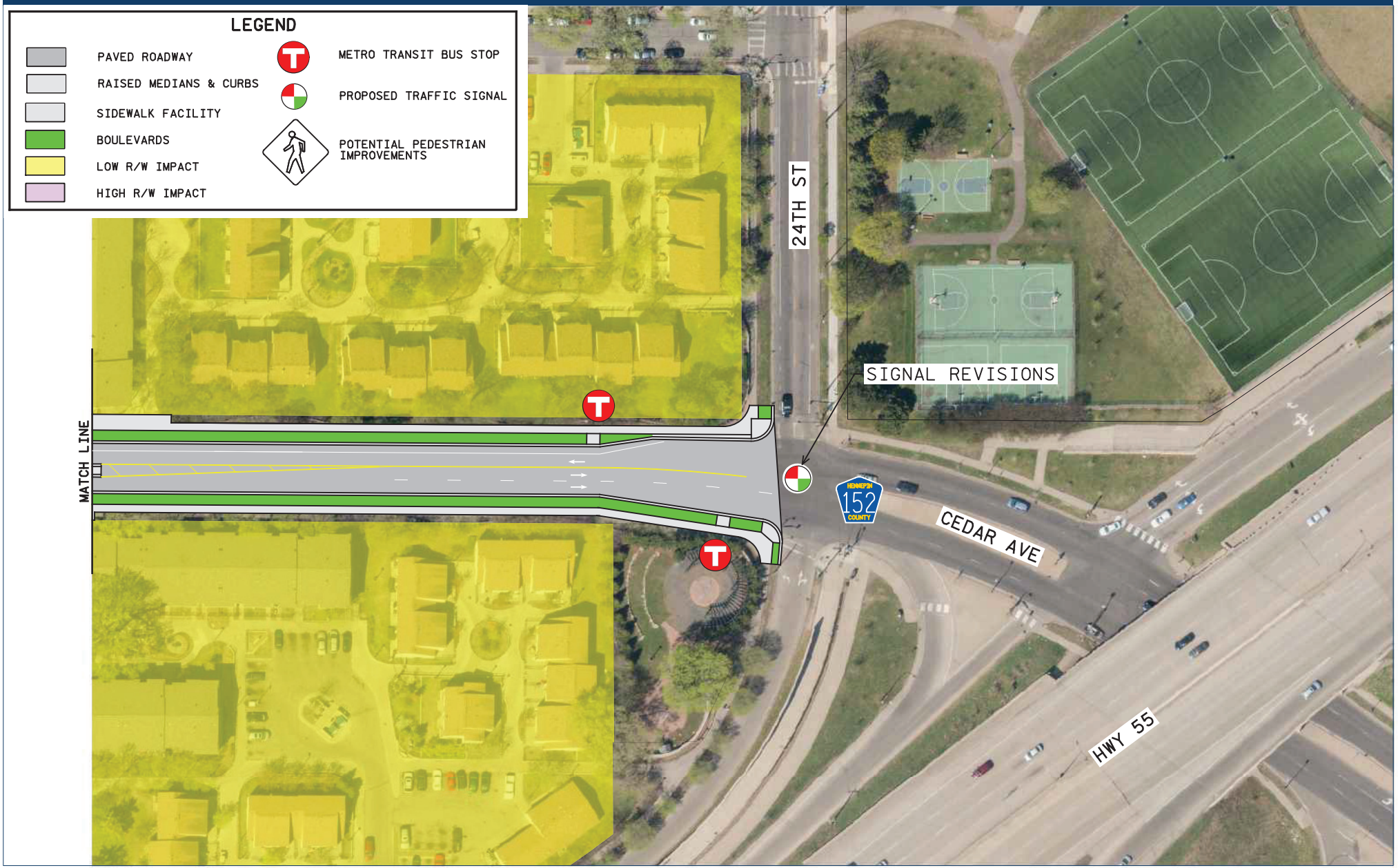
CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

Job #14870
3/17/2022
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CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 06 | Hennepin County Board Resolution 22-0109

HENNEPIN COUNTY
MINNESOTA

Hennepin County, Board of Commissioners

RESOLUTION 22-0109

2022

The following resolution was moved by Commissioner Angela Conley and seconded by Commissioner Debbie Goettel:

BE IT RESOLVED, that Hennepin County be authorized to apply for federal funding through the Regional Solicitation for the following projects (separated by category) on various County State Aid Highways (CSAHs) throughout the county:

Roadway Reconstruction/Modernization

Projects programmed in the 2022-2026 CIP:

- Franklin Avenue (CSAH 5) from Lyndale Avenue (CSAH 22) to Blaisdell Avenue in Minneapolis
- Dayton River Road (CSAH 12) from Colburn Street to North Diamond Lake Road (CSAH 144) in Dayton and Champlin
- Lyndale Avenue (CSAH 22) from the Hennepin County Regional Railroad Authority (HCRRA) bridge to Franklin Avenue (CSAH 5) in Minneapolis

Projects identified in the county's 10-year work-plan, but not programmed in the 2022-2026 CIP:

- Penn Avenue (CSAH 32) from 75th Street to the Trunk Highway 62 South Ramp in Richfield
- Cedar Avenue (CSAH 152) from Lake Street (CSAH 3) to 24th Street in Minneapolis

Bridge Rehabilitation/Replacement

Project programmed in the 2022-2026 CIP:

- Bass Lake Road (CSAH 10) bridge over the Twin Lakes Inlet in Brooklyn Center and Crystal

Projects identified in the county's 10-year work-plan, but not programmed in the 2022-2026 CIP:

- Pioneer Trail (CSAH 1) bridge over the HCRRA corridor in Eden Prairie
- Eden Prairie Road (CSAH 4) bridge over Twin Cities and Western Railroad in Eden Prairie

Multiuse Trails/Bicycle and Pedestrian Facilities (sidewalks, streetscaping and improved accessibility)

Project partially programmed in the 2022-2026 CIP:

- Lake Street (CSAH 3) from Dupont Avenue to the Mississippi River

Project identified in the county's 10-year work-plan, but not programmed in the 2022-2026 CIP:

- Marshall Street NE (CSAH 23) from Third Avenue NE to Lowry Avenue NE (CSAH 153).

Project not currently identified in the county's 2022-2026 CIP or 10-year work-plan:

- Park Avenue (CSAH 33) and Portland Avenue (CSAH 35) from Lake Street (CSAH 3) to the I-94/I-35W Bridge in Minneapolis

Mobility and Safety

Projects not currently identified in the county's 10-year work-plan or 5-year CIP:

- Rockford Road (CSAH 9) and Northwest Boulevard (CSAH 61) in Plymouth
- Hemlock Lane (CSAH 61) and Elm Creek Boulevard (CSAH 130) in Maple Grove

The question was on the adoption of the resolution and there were 7 YEAS and 0 NAYS, as follows:

County of Hennepin
Board of County Commissioners

YEAS	NAYS	ABSTAIN	ABSENT
Marion Greene			
Debbie Goettel			
Irene Fernando			
Angela Conley			
Jeff Lunde			
Chris LaTondresse			
Kevin Anderson			

RESOLUTION ADOPTED ON **3/22/2022**

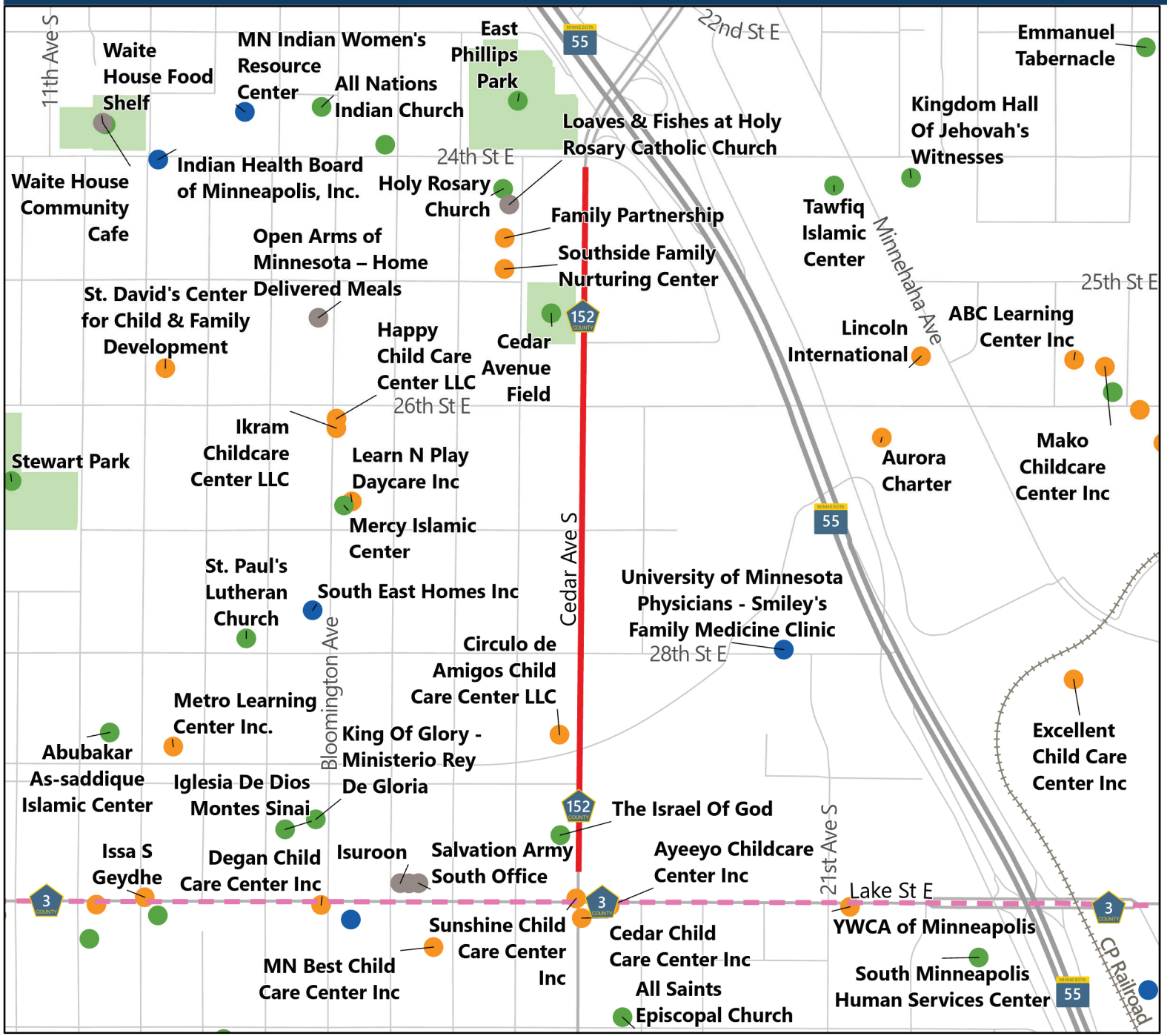
ATTEST: M. Rose

Deputy/Clerk to the County Board

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 07 | Socio-Economic Equity Map

HENNEPIN COUNTY
MINNESOTA



Key

- Project Location

Arterial BRT Services

- Future B Line

Resource Category

- Healthcare Facilities
- Schools & Childcare
- Community Facilities
- Food Shelves

0 0.1 0.2 Miles

Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Published date: 3/22/2022

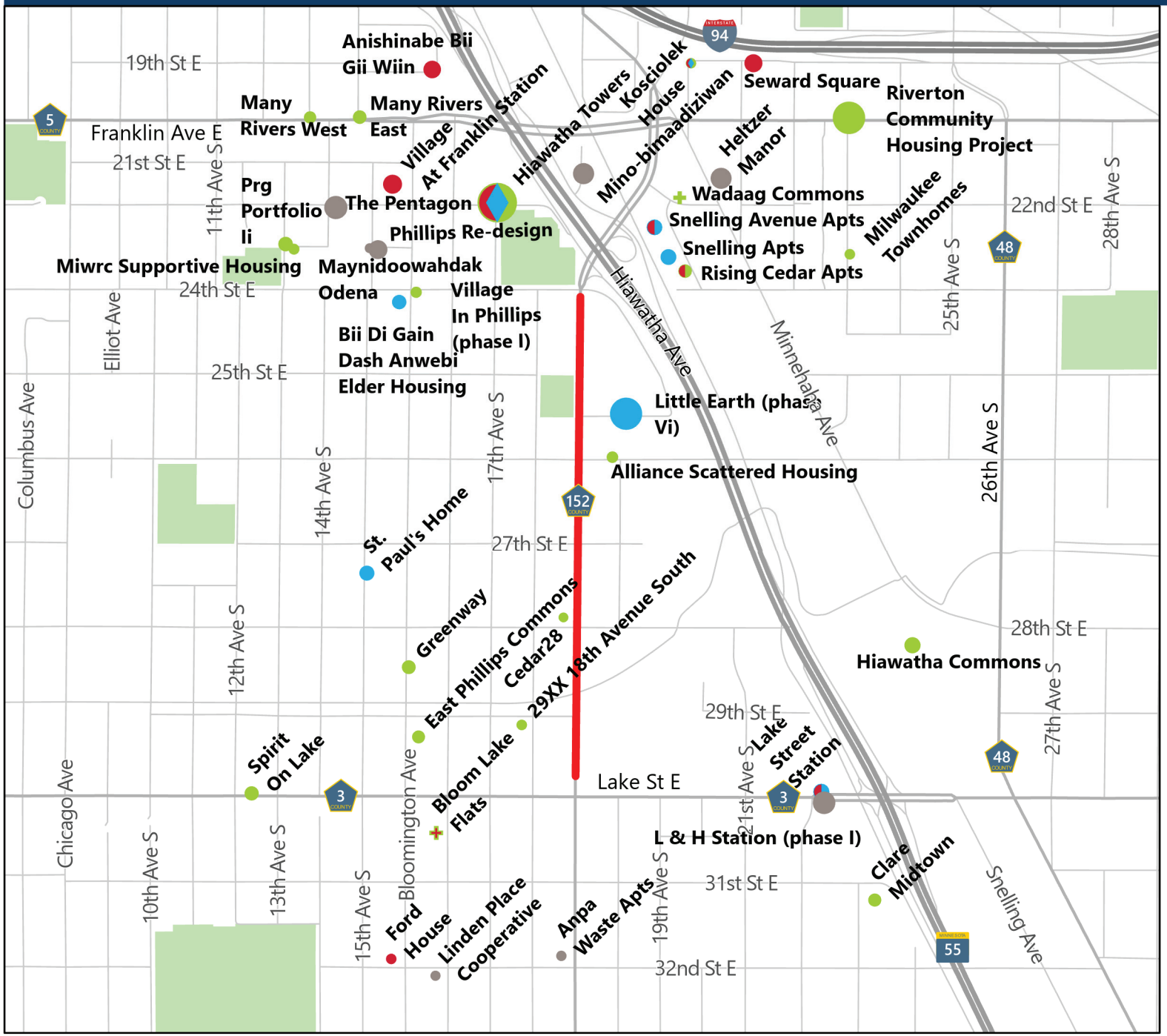
N

Hennepin

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 08 | Affordable Housing Access Map and Detail Summary

HENNEPIN COUNTY
MINNESOTA



Key

- Project Location

Population Served

- Family
- Elderly
- People with Disabilities
- Multiple
- Homeless
- No Information

Affordable Units

- 5
- 29 - 97
- 65 - 189
- 130 - 281

Construction Status

- Existing Affordable Housing
- Proposed or Under Construction

0 0.1 0.2 Miles

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Published date: 2/16/2022

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Hennepin

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 08 | Affordable Housing Access Map and Detail Summary

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
St. Paul's Home	53	53	53	0	0	17	36	0	0	0
Bii Di Gain Dash Anwebi Elder Housing	47	47	0	47	0	0	47	0	0	0
Little Earth (phase Vi)	212	212	0	78	0	20	28	30	88	18
Hiawatha Commons	80	64	8	17	0	32	25	7	0	0
East Phillips Commons	34	34	0	0	0	0	6	19	9	0
Linden Place Cooperative	8	8	0	0	0	0	0	4	4	0
Alliance Scattered Housing aka: Alliance Housing	21	21	11	10	0	11	0	4	6	0

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
Phillips Re-design	89	89	0	0	0	1	-19	36	60	11
Anishinabe Bii Gii Wiin (aka: Anishinabe	77	77	25	52	0	77	0	0	0	0
Cedar28	15	5	0	3	1	0	2	3	0	0
Riverton Community Housing Project	345	215	0	33	131	10	70	101	27	7
Village In Phillips (phase I)	28	18	0	8	10	0	0	4	14	0
Ford House	11	11	0	11	0	0	11	0	0	0
Anpa Waste Apts	10	10	0	10	0	0	0	0	0	0

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
Miwrc Supportive Housing	19	6	0	6	0	0	0	6	0	0
Many Rivers East	53	40	0	30	0	3	11	26	13	0
Many Rivers West	28	28	3	9	8	0	8	6	14	0
Seward Square	81	81	81	0	0	0	19	62	0	0
Kosciolek House	15	11	0	0	0	0	7	4	0	0
Spirit On Lake	46	46	5	41	0	0	29	17	0	0
Rising Cedar Apts (aka Touchstone Supportive	40	40	20	20	0	0	40	0	0	0

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
Snelling Apts (aka The Cooperage, Seward Commons)	60	60	0	60	0	0	60	0	0	0
Greenway	42	42	0	42	0	0	0	16	22	4
Lake Street Station	64	64	0	0	0	0	53	11	0	0
Snelling Avenue Apts	128	60	0	60	0	0	60	0	0	0
Clare Midtown	45	35	0	21	0	18	17	0	0	0
Hiawatha Towers	281	281	281	0	0	0	279	2	0	0
Heltzer Manor	109	109	109	0	0	0	109	0	0	0

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
The Pentagon	129	129	129	0	0	0	128	1	0	0
Maynidoowahdak Odena	15	15	0	15	0	4	3	2	3	3
Prg Portfolio Ii	49	49	0	35	0	0	2	18	22	7
L & H Station (phase I)	123	123	0	0	123	36	69	18	0	0
29XX 18th Avenue South	12	12	0	0	0		2	10		
Mino-bimaadiziwan - Residential Only	110	110	6	60	0	10	15	55	30	
Milwaukee Townhomes	12	12	12	0	0					

Location Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4+ BR
Village At Franklin Station Fka 2100 Bloomington	90	90	90	0	0					

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 09 | StreetLight HCAADT Report

Type of Travel	Zone Name	Average Daily Zone Traffic (Stl Index)	HCAADT to Index Ratio	**Estimated HCAADT**
Commercial	CSAH 012 & N of S Diamond Lake Rd	4447	0.3165	**1400**
Commercial	CSAH 032 & S of 68th St	1061	0.3165	**335**
Commercial	CSAH 152 S of 27th St E	6552	0.3165	**2050**
Commercial	CSAH 22 S of 25th St W	7719	0.3165	**2450**
Commercial	CSAH 5 W of Grand Ave	3102	0.3165	**980**

Example calculation: 4447*0.3165 = 1407

Type of Travel	Zone Name	Average Daily Zone Traffic (Stl Index)	2021 HCAADT	HCAADT to Index Ratio
Commercial	H019	1383	270	0.1952
Commercial	H045	14065	2950	0.2097
Commercial	H052	6362	2750	0.4323
Commercial	H118	1182	330	0.2792
Commercial	H120	9342	750	0.0803
Commercial	H146	3241	770	0.2376
Commercial	H250	6117	500	0.0817
Commercial	H251	4374	2050	0.4687
Commercial	H302	28750	3250	0.1130
Commercial	H313	4877	1300	0.2666
Commercial	H315	3686	920	0.2496
Commercial	H404	1756	890	0.5068
Commercial	H443	5276	2850	0.5402
Commercial	H488	1173	225	0.1918
Commercial	H543	2906	960	0.3304
Commercial	H570	5203	2700	0.5189
Commercial	H571	11760	1450	0.1233
Commercial	H573	6757	6100	0.9028
Commercial	H610	10808	4100	0.3793
Commercial	H637	6878	1600	0.2326
Commercial	H649	2398	600	0.2502
Commercial	H745	8291	3350	0.4041
Commercial	H766	3945	1800	0.4563
Commercial	H807	13018	1900	0.1460

Average ratio **0.3165**

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 10 | Minneapolis Pedestrian Street Lighting Corridor Map

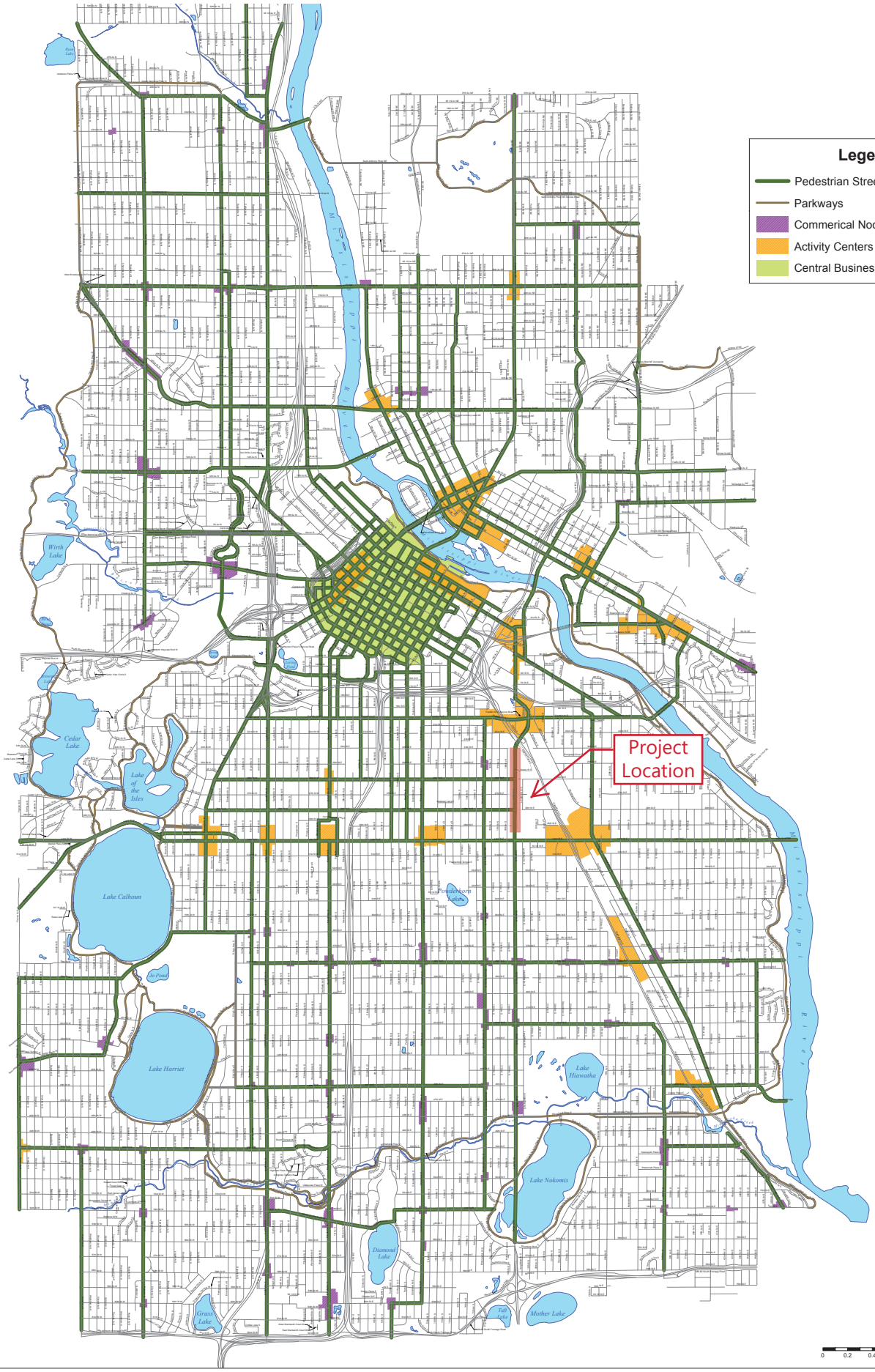


Figure 2: Minneapolis Street Lighting Plan

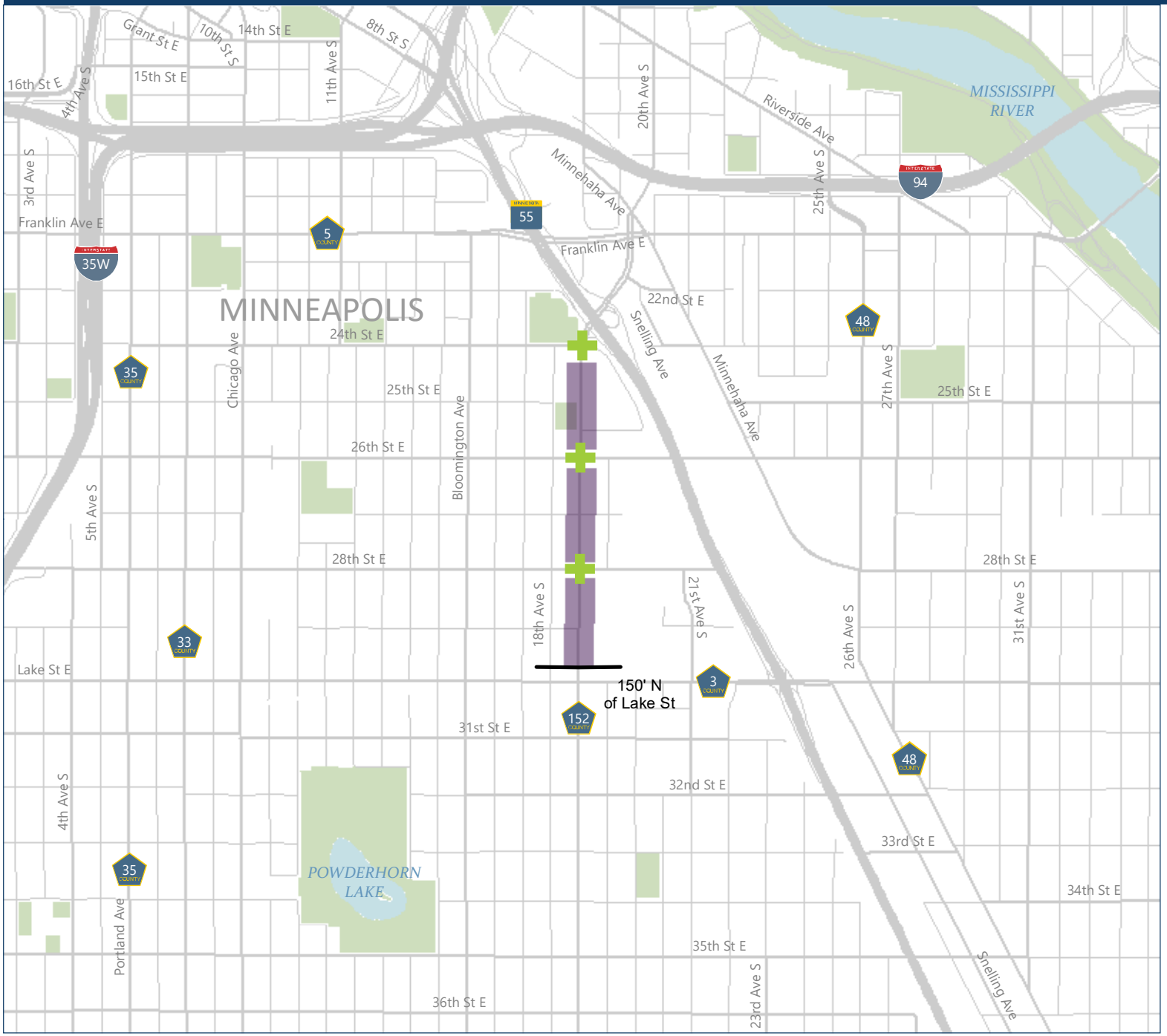
4/3/2015

Traffic & Parking Services Division
Department of Public Works
300 Border Avenue North
Minneapolis, MN 55405
612.673.5750

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 11 | Crash Map and Detail Listing

HENNEPIN COUNTY
MINNESOTA



Key

- Crash Analysis Intersection
- Crash Analysis Segement

0 0.25 0.5 Miles

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CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 11 | Crash Map and Detail Listing

Segment A | From North of CSAH 3 (Lake Street) to South of 28th Street

Incident ID	Roadway	Month	Day	Year	Hour	Sev	Number K's	Number of Veh	Contributing Factor	Latitude	Longitude
00740664	E 29TH ST	8	15	2019	14	5	0	2		44.9500729	-93.24742543
00969851	CEDAR AVE S	10	28	2021	18	3	0	1	99	44.9487357	-93.24737699
00972849	CEDAR AVE S	11	11	2021	20	4	0	3		44.95117757	-93.24725158

Subtotal: 2

Intersection B I At 28th Street

Incident ID	Roadway	Month	Day	Year	Hour	Sev	Number K's	Number of Veh	Contributing Factor	Latitude	Longitude
00867616	CEDAR AVE S	12	12	2020	2	5	0	2		44.95198131	-93.24727824
00780512	E 28TH ST	1	17	2020	19	5	0	2	10	44.95196679	-93.24760595
00935223	E 28TH ST	8	19	2021	14	4	0	2		44.95196432	-93.24739211
00967097	E 28TH ST	10	15	2021	16	5	0	2	1	44.95196358	-93.2473273
00911880	28 ST E	6	14	2021	0	2	0	3	65	44.95196088	-93.24729639

Subtotal: 5

Segment C | From North of 28th Street to South of 26th Street

Incident ID	Roadway	Month	Day	Year	Hour	Sev	Number K's	Number of Veh	Contributing Factor	Latitude	Longitude
00673409	CEDAR AVE S	1	2	2019	16	5	0	2	2	44.95379985	-93.24727255
00691743	CEDAR AVE S	2	25	2019	17	4	0	2	99	44.9537736	-93.24727225
00702776	E 27TH ST	4	10	2019	15	5	0	2	1	44.95378672	-93.24731952
00747495	E 27TH ST	9	15	2019	13	5	0	2	1	44.95378689	-93.24733471
00786594	E 27TH ST	2	9	2020	19	3	0	2	1	44.95378634	-93.24728584
00678520	E 27TH ST	1	24	2019	7	5	0	2	1	44.95378591	-93.24724217
00969389	E 27TH ST	10	26	2021	14	5	0	2		44.95378634	-93.24728597
00967975	E 27TH ST	10	19	2021	3	5	0	2		44.95378564	-93.24721204
00816781	E 26TH ST	6	28	2020	6	5	0	2		44.95553587	-93.2473161

Subtotal: 9

Intersection D I At 26th Street

Incident ID	Roadway	Month	Day	Year	Hour	Sev	Number K's	Number of Veh	Contributing Factor	Latitude	Longitude
00718520	E 26TH ST	5	8	2019	10	4	0	3	1	44.95553629	-93.24729891
00737576	E 26TH ST	8	1	2019	15	3	0	1	1	44.95553649	-93.2472907
00683570	E 26TH ST	2	5	2019	6	5	0	2	99	44.95554057	-93.2471234
00805505	E 26TH ST	3	28	2020	4	5	0	1	99	44.95554267	-93.24703733
00745955	E 26TH ST	9	9	2019	4	5	0	2	99	44.95553378	-93.24750875
00759384	E 26TH ST	11	3	2019	17	2	0	1		44.95553406	-93.24747944
00730927	E 26TH ST	7	2	2019	11	5	0	1	99	44.95553469	-93.24741491
00698472	E 26TH ST	3	17	2019	21	5	0	2		44.95553475	-93.24740834
00783275	E 26TH ST	1	24	2020	18	4	0	1	99	44.95553491	-93.24739241
00819174	E 26TH ST	7	12	2020	3	5	0	3		44.9555349	-93.24739312
00740052	E 26TH ST	8	13	2019	14	5	0	2	99	44.95553532	-93.24734961
00762992	E 26TH ST	11	15	2019	22	2	0	1	1	44.95553536	-93.24734581
00809223	E 26TH ST	5	5	2020	17	3	0	2	99	44.95553545	-93.2473359
00934977	E 26TH ST	8	18	2021	13	4	0	2	1	44.9555357	-93.24732315

Subtotal: 11

Segment E | From North of 26th Street to South of 24th Street

Incident ID	Roadway	Month	Day	Year	Hour	Sev	Number K's	Number of Veh	Contributing Factor	Latitude	Longitude
No crashes were reported along this segment over the years 2019-2021											

Subtotal: 0

Note: Crashes highlighted in **red** were determined to not be located within the project limits.

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 11 | Crash Map and Detail Listing

Intersection F I At 24th Street

Incident ID	Roadway	Month	Day	Year	Hour	Sev	Number K's	Number of Veh	Contributing Factor	Latitude	Longitude
00862551	E 24TH ST	11	11	2020	7	5	0	3	4	44.95914953	-93.24760134
00823339	E 24TH ST	8	3	2020	13	5	0	2		44.95915563	-93.24743794
00702609	E 24TH ST	4	9	2019	15	5	0	2		44.95915681	-93.24740625
00751654	E 24TH ST	10	2	2019	16	5	0	2	1	44.95915785	-93.24737819
00811272	E 24TH ST	5	22	2020	21	5	0	2		44.95915832	-93.24736581
00729505	E 24TH ST	6	26	2019	13	5	0	2	10	44.95915905	-93.2473462
00720458	E 24TH ST	5	17	2019	7	5	0	2		44.95915985	-93.24732467
00849565	E 24TH ST	10	26	2020	16	4	0	1	1	44.95916029	-93.24731282
00841735	OGEMA PL	9	15	2020	10	3	0	2	2	44.95916095	-93.24729327
00975234	E 24TH ST	11	22	2021	18	5	0	2		44.95912707	-93.24736306
	Subtotal:	**7**									
	Project Total:	**34**									

Note: Crashes highlighted in **red** were determined to not be located within the project limits.

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 2333

REPLACE 8-INCH RED SIGNAL HEADS WITH 12-INCH

DESCRIPTION:

PRIOR CONDITION: *NO PRIOR CONDITION(S)*

CATEGORY: INTERSECTION TRAFFIC CONTROL

STUDY: *EVALUATION OF THE SAFETY EFFECTIVENESS OF SELECTED TREATMENTS AT URBAN SIGNALIZED INTERSECTIONS*, SRINIVASAN ET AL., 2008

Star Quality Rating:	★★★★★ [VIEW SCORE DETAILS]
Rating Points Total:	135

Crash Modification Factor (CMF)

Value:	0.58
Adjusted Standard Error:	
Unadjusted Standard Error:	0.07

Crash Reduction Factor (CRF)

Value:	42 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	7

Applicability

Crash Type:	Angle
Crash Severity:	All
Roadway Types:	Not Specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	
Traffic Volume:	
Average Traffic Volume:	
Time of Day:	All

If countermeasure is intersection-based

Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	
Average Major Road Volume :	
Average Minor Road Volume :	

Development Details

Date Range of Data Used:	1990 to 2004
Municipality:	Winston-Salem
State:	NC
Country:	
Type of Methodology Used:	2
Sample Size (site-years):	364 site-years before, 364 site-years after

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-01-2009
Comments:	

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CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF ID: 2338

INSTALL TWLTL (TWO-WAY LEFT TURN LANE) ON TWO LANE ROAD

DESCRIPTION:

PRIOR CONDITION: *NO PRIOR CONDITION(S)*

CATEGORY: ROADWAY

STUDY: *SAFETY EVALUATION OF INSTALLING CENTER TWO-WAY LEFT-TURN LANES ON TWO-LANE ROADS*, LYON ET AL., 2008

Star Quality Rating:	★★★★☆ [VIEW SCORE DETAILS]
Rating Points Total:	120

Crash Modification Factor (CMF)

Value:	0.686
Adjusted Standard Error:	
Unadjusted Standard Error:	0.057

Crash Reduction Factor (CRF)

Value:	31.4 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	5.7

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not Specified
Number of Lanes:	2
Road Division Type:	Divided by TWLTL
Speed Limit:	
Area Type:	All
Traffic Volume:	
Average Traffic Volume:	
Time of Day:	All

If countermeasure is intersection-based

Intersection Type: jor Road Traffic Volume:	
Intersection Geometry: or Road Traffic Volume:	
Traffic Control: ge Major Road Volume :	
Ma	
Min	
Avera	
Average Minor Road Volume :	

Development Details

Date Range of Data Used:	1991 to 2004
Municipality:	
State:	CA
Country:	
Type of Methodology Used:	2

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-01-2009
Comments:	

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CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 4140

CHANGE PERMISSIVE LEFT-TURN PHASING TO PROTECTED ONLY OR PROTECTED/PERMISSIVE

DESCRIPTION: TREATMENT GROUP INCLUDES INTERSECTIONS WHERE SIGNAL PHASES WERE CHANGED FROM PERMISSIVE TO PROTECTED-ONLY OR PROTECTED/PERMISSIVE.

PRIOR CONDITION: TREATMENT GROUP INCLUDES INTERSECTIONS WHERE SIGNAL PHASES WERE CHANGED FROM PERMISSIVE TO PROTECTED-ONLY OR PROTECTED/PERMISSIVE.

CATEGORY: INTERSECTION TRAFFIC CONTROL

STUDY: *LEFT-TURN PHASE: PERMISSIVE, PROTECTED, OR BOTH?*, LI CHEN, CYNTHIA CHEN, AND REID EWING, 2012

Star Quality Rating:	★★☆☆☆ [VIEW SCORE DETAILS]
Rating Points Total:	65

Crash Modification Factor (CMF)

Value:	0.58
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)

Value:	42 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not Specified
Number of Lanes:	1 to 5
Road Division Type:	
Speed Limit:	
Area Type:	Urban
Traffic Volume:	
Average Traffic Volume:	
Time of Day:	All

If countermeasure is intersection-based	
Intersection Type:	Roadway/roadway (not interchange related)
Intersection Geometry:	3-leg,4-leg,More than 4 legs
Traffic Control:	Signalized
Major Road Traffic Volume:	
Minor Road Traffic Volume:	
Average Major Road Volume :	
Average Minor Road Volume :	

Development Details

Date Range of Data Used:	1995 to 2009
Municipality:	New York City
State:	NY
Country:	USA
Type of Methodology Used:	3
Sample Size (crashes):	2447 crashes before, 564 crashes after

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Nov-01-2012
Comments:	The corresponding change in crashes in the comparison group was a 35 percent reduction in total crashes. This could adjust the treatment effect to account for other factors not related to the treatment.

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 5272

INSTALL PEDESTRIAN COUNTDOWN TIMER

DESCRIPTION: INSTALL PEDESTRIAN COUNTDOWN TIMER

PRIOR CONDITION: UNKNOWN

CATEGORY: INTERSECTION TRAFFIC CONTROL

STUDY: *EVALUATING PEDESTRIAN SAFETY IMPROVEMENTS*, VAN HOUTEN ET AL., 2012

Star Quality Rating:	★★★☆☆ [VIEW SCORE DETAILS]
Rating Points Total:	100

Crash Modification Factor (CMF)

Value:	0.3
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)

Value:	70 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	

Applicability

Crash Type:	Vehicle/pedestrian
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Not specified
Traffic Volume:	
Average Traffic Volume:	
Time of Day:	

If countermeasure is intersection-based

Intersection Type:	Roadway/roadway (not interchange related)
Intersection Geometry:	Not specified
Traffic Control:	Signalized
Major Road Traffic Volume:	
Minor Road Traffic Volume:	
Average Major Road Volume :	
Average Minor Road Volume :	

Development Details

Date Range of Data Used:	
Municipality:	Detroit
State:	MI
Country:	
Type of Methodology Used:	8
Sample Size (sites):	449 sites

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-02-2013
Comments:	The study did not adjust the reduction in crashes at the treatment location based on the change in the comparison sit

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CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 7998

INSTALL LEFT-TURN LANE

DESCRIPTION:

PRIOR CONDITION: INTERSECTIONS WITHOUT LEFT TURN LANES

CATEGORY: INTERSECTION GEOMETRY

STUDY: *SAFETY EVALUATION OF SIGNAL INSTALLATION WITH AND WITHOUT LEFT TURN LANES ON TWO LANE ROADS IN RURAL AND SUBURBAN AREAS*, SRINIVASAN ET AL., 2

Star Quality Rating:	★★★☆☆ [VIEW SCORE DETAILS]
Rating Points Total:	105

Crash Modification Factor (CMF)

Value:	0.876
Adjusted Standard Error:	
Unadjusted Standard Error:	0.066

Crash Reduction Factor (CRF)

Value:	12.4 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	6.6

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	2
Road Division Type:	
Speed Limit:	
Area Type:	All
Traffic Volume:	
Average Traffic Volume:	
Time of Day:	All

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 12 | Crash Modification Factors

If countermeasure is intersection-based

Intersection Type:	Not specified
Intersection Geometry:	3-leg,4-leg
Traffic Control:	Signalized
Major Road Traffic Volume:	Minimum of 1360 to Maximum of 18248 Annual Average Daily Traffic (AADT)
Minor Road Traffic Volume:	Minimum of 746 to Maximum of 13880 Annual Average Daily Traffic (AADT)
Average Major Road Volume :	8323 Annual Average Daily Traffic (AADT)
Average Minor Road Volume :	4188 Annual Average Daily Traffic (AADT)

Development Details

Date Range of Data Used:	1992 to 2012
Municipality:	
State:	NC
Country:	
Type of Methodology Used:	2
Sample Size (crashes):	2368 crashes before, 1415 crashes after
Sample Size (sites):	117 sites before, 117 sites after
Sample Size (site-years):	576 site-years before, 559 site-years after

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Nov-10-2016
Comments:	The CMF was developed for both rural and suburban areas. The number of crashes in the after period were not repor study, however, they have been recorded as 300 to give 10 points as a beneift of doubt for one or more of the followin number of miles/sites in the reference/treatment group, (2) number of crashes in the references/treatment group, (3 AADTs for the aggregate dataset but not for the disaggragate dataset used for CMF development.

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CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 9298

RESURFACE PAVEMENT

DESCRIPTION:

PRIOR CONDITION: *NO PRIOR CONDITION(S)*

CATEGORY: ROADWAY

STUDY: *TIME SERIES TRENDS OF THE SAFETY EFFECTS OF PAVEMENT RESURFACING*, PARK ET AL., 2017

Star Quality Rating:	[VIEW SCORE DETAILS]
Rating Points Total:	105

Crash Modification Factor (CMF)

Value:	0.901
Adjusted Standard Error:	
Unadjusted Standard Error:	0.05

Crash Reduction Factor (CRF)

Value:	9.9 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	5

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Principal Arterial Other
Number of Lanes:	1-4
Road Division Type:	
Speed Limit:	25mph to 65mph
Area Type:	Urban
Traffic Volume:	Minimum of 2100 to Maximum of 40500 Annual Average Daily Traffic (AADT)
Average Traffic Volume:	8659 Annual Average Daily Traffic (AADT)
Time of Day:	Not specified

If countermeasure is intersection-based

Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	
Average Major Road Volume :	
Average Minor Road Volume :	

Development Details

Date Range of Data Used:	2004 to 2013
Municipality:	
State:	FL
Country:	USA
Type of Methodology Used:	1

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jun-17-2018
Comments:	Heavy vehicle volume rate > 3.3% The number of crashes in the after period were not reported in this study, however been recorded as 300 to give 10 points as a beneift of doubt for one or more of the following: (1) number of miles/site reference/treatment group, (2) number of crashes in the references/treatment group, (3) reporting AADTs for the ag dataset but not for the disaggragate dataset used for CMF development.

VIEW THE FULL STUDY DETA

EXPORT DETAIL PAGE AS A P

This site is funded by the **U.S. Department of Transportation Federal Highway Administration** and maintained by the **University of North Carolina Highway Safety Research Center**

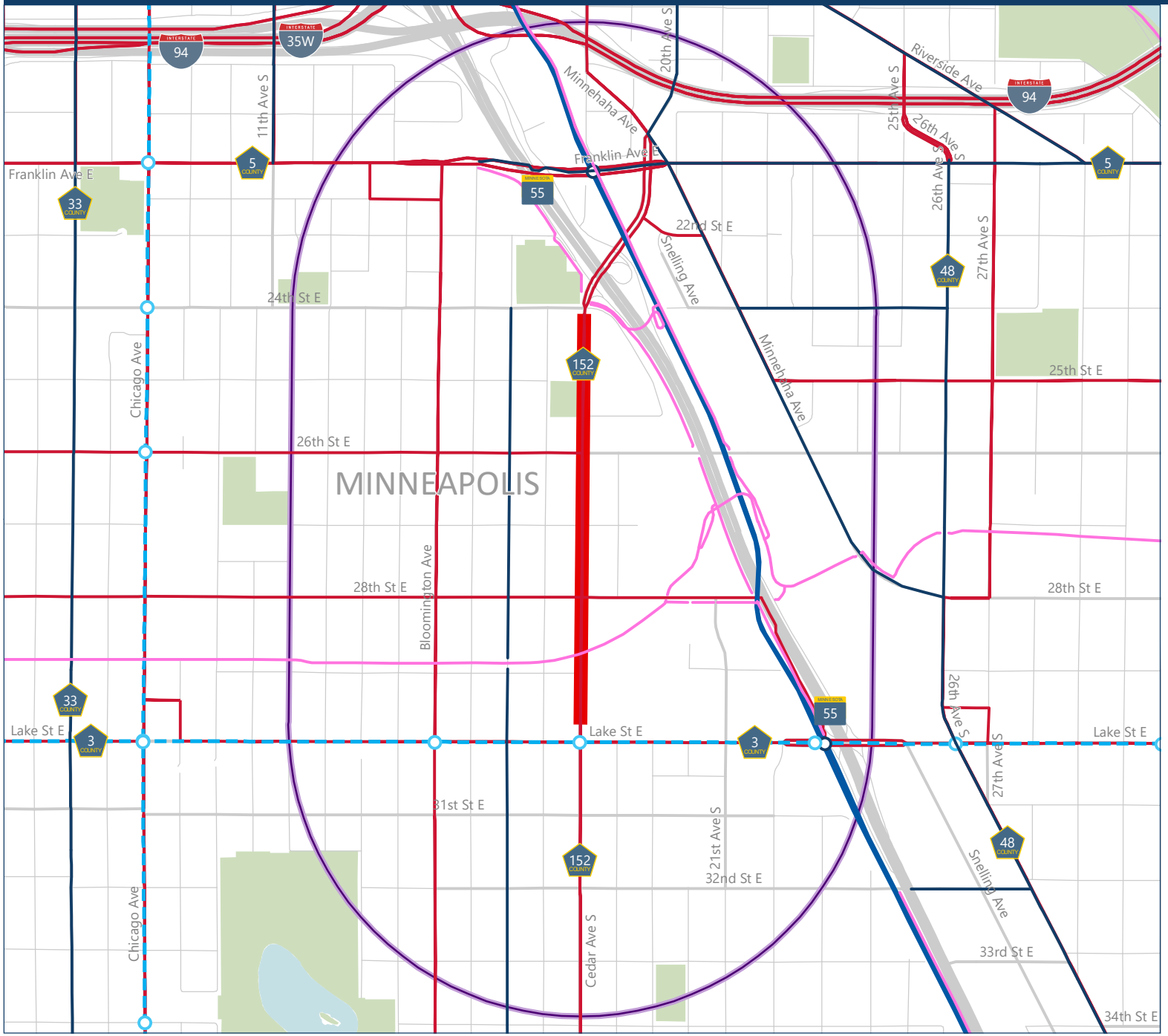
For more information, contact Karen Scurry at **karen.scurry@dot.gov**

Countermeasure(s)	Crash Type	Crash Severity	Area Type	Config	Control	Major Daily Traffic Volume (veh/day)	Minor Daily Traffic Volume (veh/day)	Ref	Obs	Effectiveness: Crash Reduction Factor / Function	Effectiveness: Std Error	Effectiveness: Range Low	Effectiveness: Range High	Study Type
Prohibit right-turn-on-red (cont'd)	All	All	Urban/ Suburban		Signal			62		100(1-(0.984)^n); n=number of signalized intersection appraoches where RTOR is prohibited				Expert Panel
	Right-angle	All			Signal			15		30				Cross-section
	Sideswipe	All			Signal			15		20				Cross-section
Prohibit turns	All turns	All	All					1		45		40	90	
Restrict parking near intersections (to off-street)	All	All						28		49		8	90	
	Ped	All						15		30				
Vary speed	All	All	Rural					6		100(1-EXP(0.019(V-55))); V=major-road speed limit (or design speed) (mph)				
	All	All	Urban					6		100(1-EXP(0.005(V-40))); V=major-road speed limit (or design speed) (mph)				
LIGHTING														
Improve lighting at intersection	Ped	Fatal						5		78	87			
	Ped	Injury						5		**42**	18			
Install lighting	All	All			Signal			51		30				
	All	Fatal/Injury			Signal			51		17				
	Night	All			Signal			51		50				
	All	All			No Signal			28		47				
	All	All						62		4				Meta Analysis/ Expert Panel
	All	Injury						62		6				Meta Analysis/ Expert Panel
	Night	All						62		21				Meta Analysis/ Expert Panel
	Night	Injury						62		29				Meta Analysis/ Expert Panel

CSAH 152 (Cedar Ave) Reconstruction Project

Attachment 13 | Multimodal Connections Map

HENNEPIN COUNTY
MINNESOTA



Key

- Project Location
- 1/2 Mi Buffer

Bikeways

- Off-Street
- On-Street

Transitway Stations

- Arterial BRT
- Blue Line

Transitway Alignments

- Blue Line LRT
- Planned Arterial BRT
- Transit Routes

0 0.25 0.5 Miles

Published date: 3/23/2022

N

Hennepin

Summary of Engagement in summer and fall of 2021

Minneapolis
City of Lakes

The City of Minneapolis held the first round of community engagement for the Phillips Traffic Safety Project in the summer and fall of 2021. Staff collected information via tabling at community events, online surveys, holding in person and online meetings, and various other community outreach.

More general information about the project is available at: https://www.minneapolismn.gov/projects/phillips/

Engagement Approach

Public Works staff used several methods for collecting information from stakeholders:

- **Participating in community events and meetings:** Public Works staff attended existing community events in collaboration with local organizations, such as neighborhood associations, Waite House, Little Earth, and Communidades Latinas Unidas en Servicio (CLUES). Staff collected comments about specific intersections as well as general comments on traffic safety in the neighborhood.
- **Holding Community Events:** Public Works staff held online and in-person engagement events, including community walks, an online open house, and in-person meetings.
- **Online Survey and Mapping Tool:** Public Works used an online survey and mapping tool where respondents could share concerns and ideas.

Inclusivity and Equity Measures

The Phillips neighborhood has a large population of non-English speaking residents. Given these circumstances, staff took measures to reduce barriers to engagement, including printing materials in multiple languages (English, Somali, and Spanish), presentations in multiple languages, and tabling at events and locations that cater to certain communities. Areas and events included tabling/meetings at Little Earth, Mercado Central, Waite House, the 24th Street Mall, 13th Avenue Mall and Anderson School/Stewart Park.

Summary of Findings

- Public Works received 351 comments on the project during the first round of engagement. Of these comments , 286 were about existing concerns and 65 were requests for various traffic safety improvements .
- Most of the comments, 257, were received during in-person events, while 94 comments were received via online sources.
- The most common concerns residents shared were related to speeding (47 comments), sight issues (33 comments), and unsafe conditions for biking (32 comments)
- The locations with the most common comments were 26th Street/Cedar Ave (22 comments), 28th Street/Cedar Ave (13 comments), and 24th Street/Cedar Ave (12 comments)
- The most frequent requests around treatments were for changes to signage or street striping (15 comments), additional bike separation from vehicles (13 comments), and changes to traffic patterns (nine comments).

Questions?: Contact Trey Joiner, Minneapolis Public Works Department at
612 - 271 -8684 or Phillips.Traffic@minneapolismn.gov

Summary of Engagement in summer and fall of 2021

Minneapolis
City of Lakes

Next Steps

The project schedule is shown below. Public Works staff will be developing initial project concepts in late 20221 and early 2022, and will share those concepts with the community through another round of engagement in 2022.

Engagement Findings

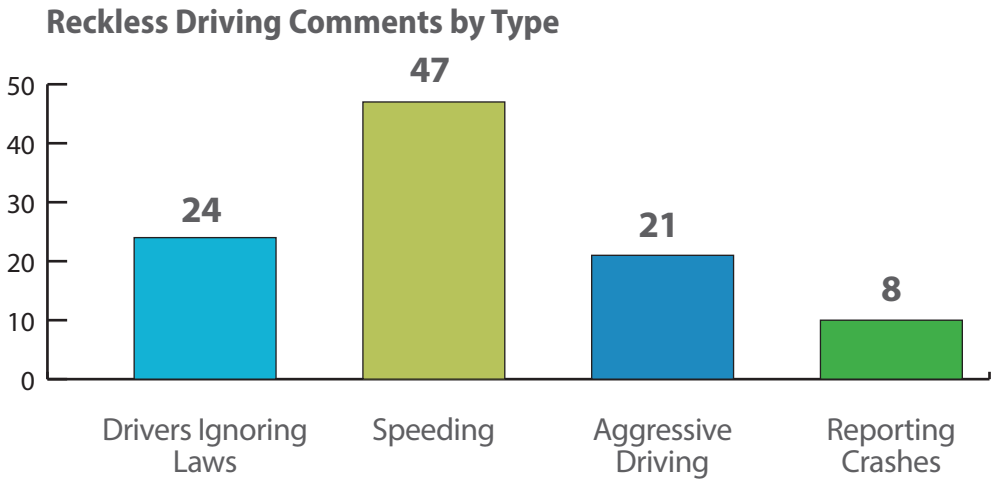
Three themes emerged through this round of engagement: reckless driving, bicycle/pedestrian issues, and request for street improvements. Below is more information about each theme.

Reckless Driving

Aggressive driving was mentioned by many of the people who left comments. Reckless driving was divided into four sub-categories: drivers ignoring laws, speeding, aggressive driving, and reporting crashes.

Aggressive driving includes comments such as drivers tailgating, purposely driving against 1-ways to reach areas more quickly, and turning without regards to other drivers, pedestrians, and cyclists.

Reporting crashes refers to people commenting about crash history at certain locations.



For reasonable accommodations or alternative formats, please contact:
Trey Joiner, Minneapolis Public Works Department at 612 - 271 -8684 or Phillips.Traffic@minneapolismn.gov

Summary of Engagement in summer and fall of 2021

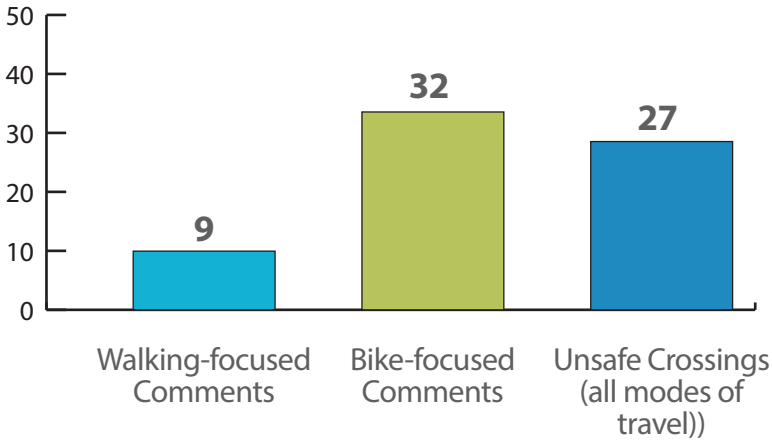
Minneapolis
City of Lakes

Biking and Walking

There were many comments from community members about biking and walking in the neighborhood. Common themes included people feeling uncomfortable due to speeding, issues crossing, difficulty walking during winter, and concerns about children walking. Comments about biking included cars driving and parking in the bike lane, and turning cars not yielding to those bikes crossing the street.

Comments about unsafe crossing refer to all modes of travel.

Biking and Walking Comments by Type



Street Improvements

There were a number of comments focused on concerns about street design elements such as parking, lighting, signage, and street striping. Here's some examples of how these comments were categorized:

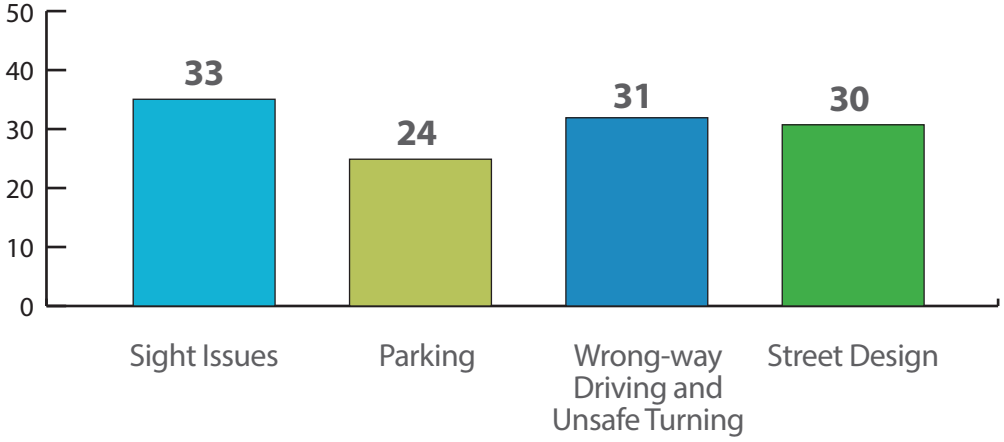
Sight Issues includes comments about lighting and parked cars making it hard to see approaching traffic.

Parking Issues includes illegal, cars double parking, trouble finding and parking near businesses.

Wrong-way driving and unsafe turning refers to vehicles traveling in the wrong direction on one-way streets and cars not yielding to people biking or walking when the car is turning.

Street Design comments included requests for more stop signs, calls to change 26th and 28th Streets to two-way travel for vehicles, and requests for various traffic safety improvements like bump outs, medians, and signage/ striping improvements.

Street Improvement Comments by Type

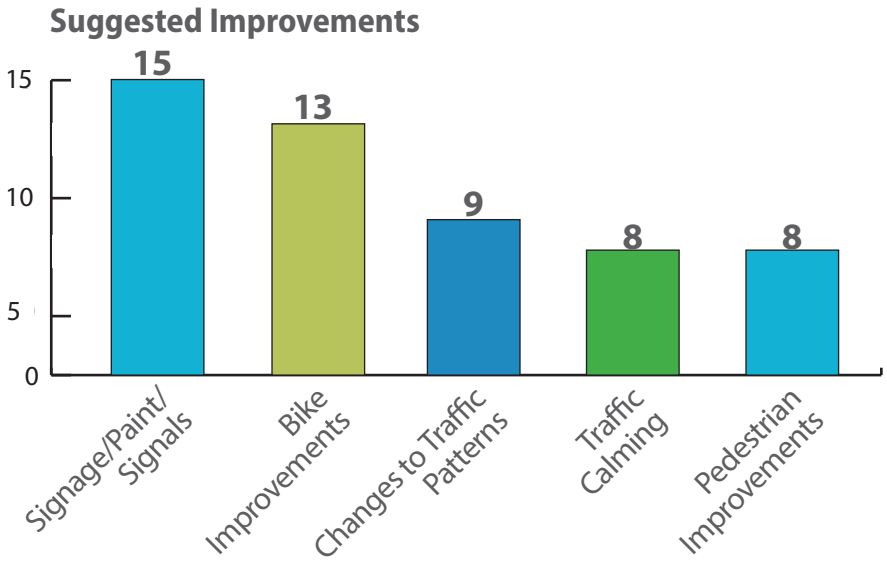


Summary of Engagement in summer and fall of 2021

Minneapolis
City of Lakes

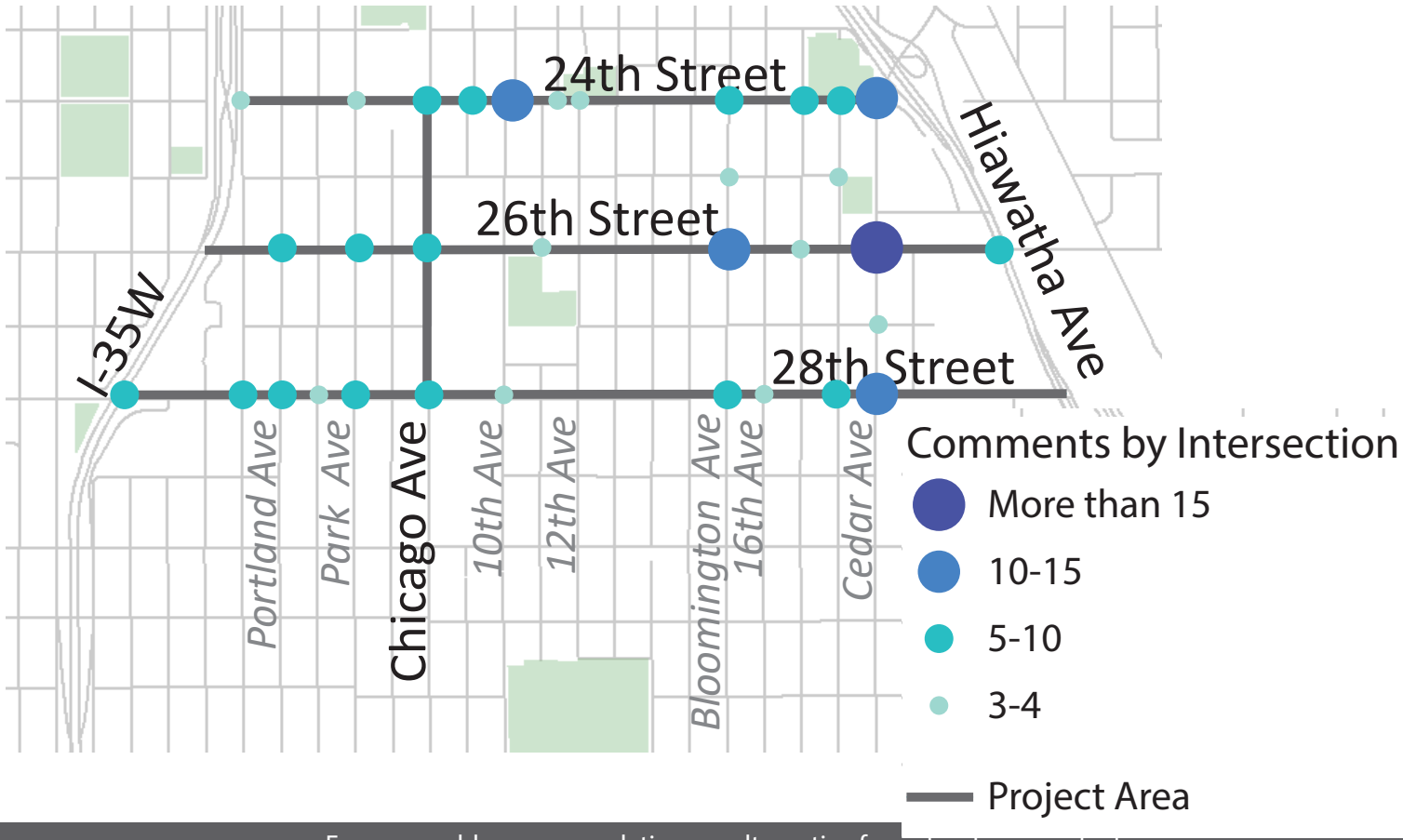
Suggested Improvements

The graph to the right shows the types of improvements suggested by residents. While most of the comments are related to traffic safety, there were also a number of comments about beautification.



Location of Comments

The map below shows comments by intersection. Many comments did not include information about specific locations, and so were not mapped. In addition, locations with fewer than three comments are not shown. Signalized intersections (such as along Cedar Ave, Bloomington Ave, and Chicago Ave) generally received the most comments. Several of the streets with high numbers of comments - Cedar Ave, Park Ave, and Portland Ave - are owned by Hennepin County. Minneapolis Public Works will share these comments with staff from Hennepin County.



For reasonable accommodations or alternative formats, please contact:
Trey Joiner, Minneapolis Public Works Department at 612 - 271 -8684 or Phillips.Traffic@minneapolismn.gov

Community Workshop Summary | January 2022

Date of event: Thursday, November 18, 2021
Location: Cedar Field Park, 2500 Cedar Avenue S

Public Works is conducting a Transportation Study for permanent changes to 18th Avenue S between 24th and 26th Streets, Ogema Pl and Stately St. The changes will be reflective of Little Earth, East Philips Neighborhood, businesses and agency needs and desires for the area. On November 18, 2021, Public Works with support from Little Earth Residents Association and the City's consultant hosted a Community Workshop as part of Round 1 engagement to gather feedback on community priorities. This engagement summary documents the details and comments received during the outdoor, in-person event held at Cedar Field Park.

Location Map

About the community workshop

- **Audience:** Residents and adjacent property owners surrounding the study area (primarily from Little Earth and East Phillips neighborhoods)
- **Format:** To follow CDC guidelines and help prevent the spread of COVID-19, the project team held the event outdoors, encouraged social distancing, had disposable masks and sanitizer available and encouraged attendees to follow advertised precautions.
- **Presentation Boards:** Included background information on the study, results of initial outreach and demonstration project, and boards focused on previously identified themes: community representation, safety, and comfort.
- **Activities:** Included interactive feedback opportunities at each station, as well as a kid's crafting table, warming fires, hot cocoa and s'mores for attendees.
- **Incentives:** Target gift cards were given to the first 30 attendees/heads of households that provided feedback at each of the feedback stations.
- **Language Interpretation:** Spanish interpreters were present.

Who we heard from

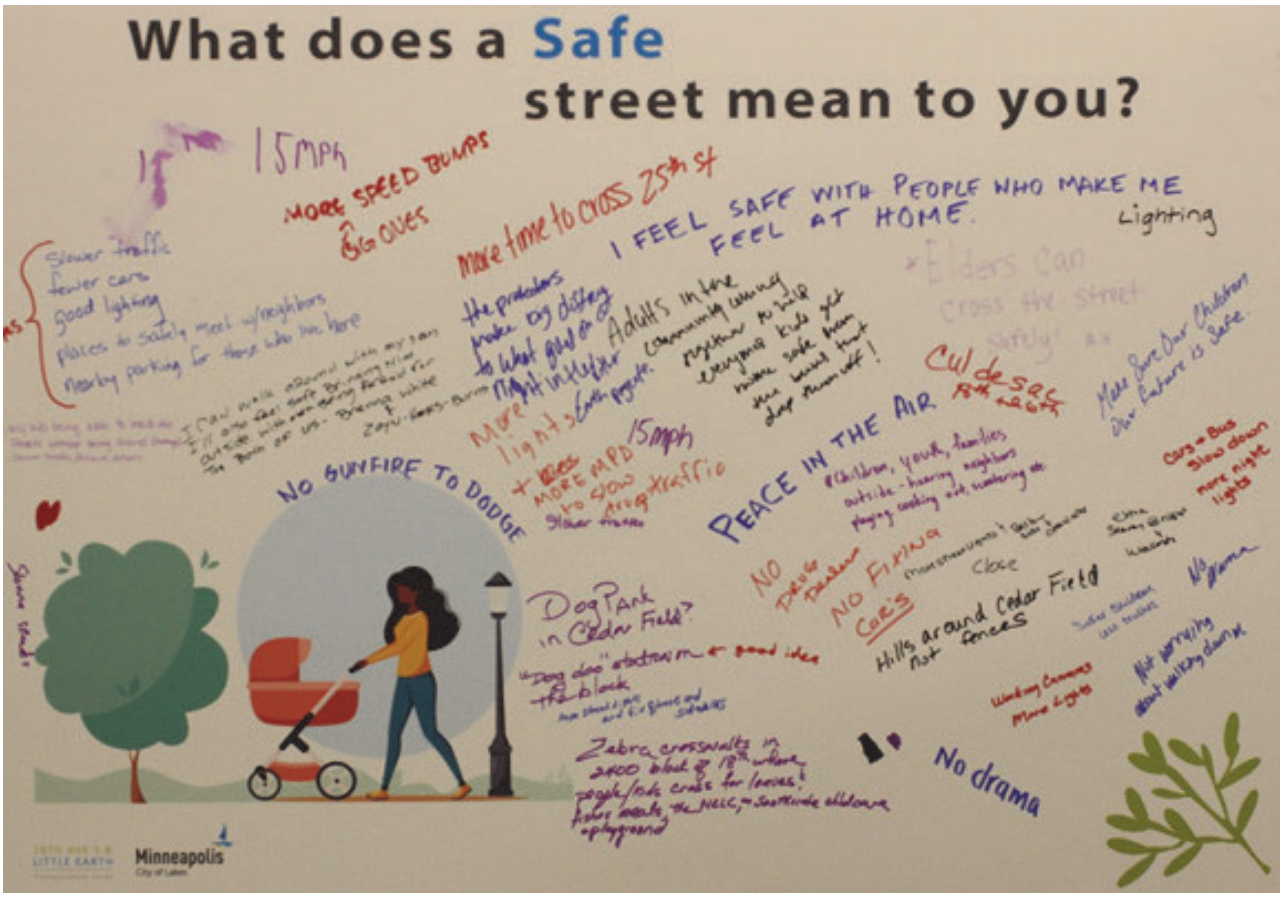
Approximately **43 members** of the community members signed in. Some additional 10-15 attendees participated without signing in. Of those that registered, the participants identified as:

- 27 Little Earth Residents
- 11 East Phillips Residents
- 4 South Minneapolis, Powderhorn Residents

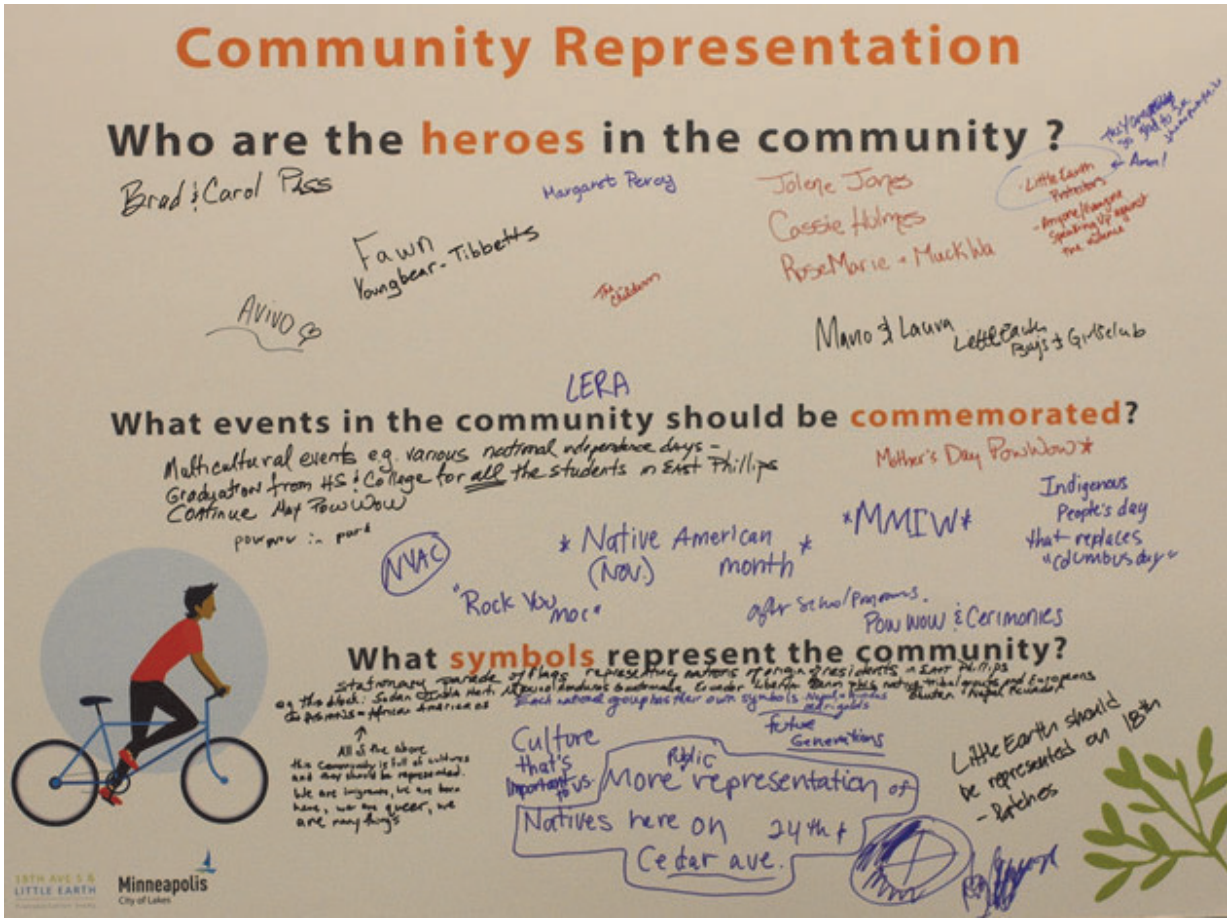
What we heard

The following feedback was received during the Community Workshop on previously identified themes of:

SAFETY



COMMUNITY REPRESENTATION

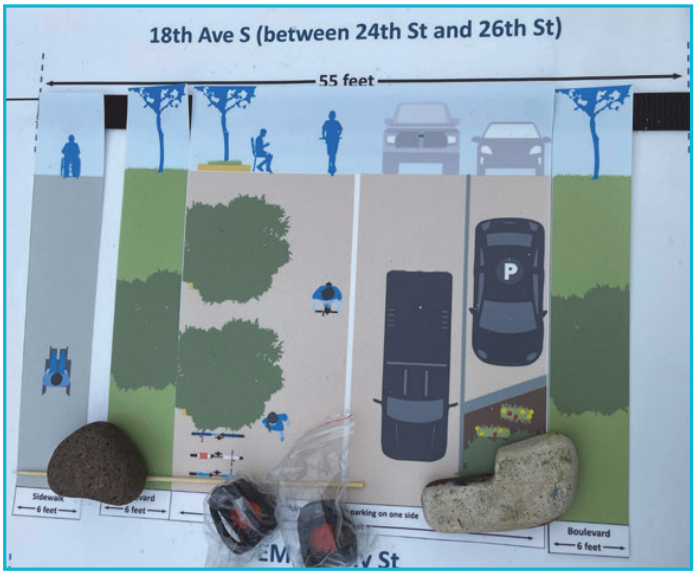


COMFORT

Event Photos

Key themes heard

1. Add more **lighting**
2. Need for more **art**
3. Desire for art that is **representative** of the entire community along all corridors
4. Slow motorists down through the area with **speed humps** and other **street design** elements
5. Make it **difficult for motorists** to move through the area
6. Most people supported the current **demonstration project** on 18th Avenue S adjacent to Cedar Field Park
7. Improve **public safety** at community spaces (Cedar Field Park, etc.)
8. Consider restricting access/slowing traffic or closing segment of 18th Avenue S, west of Cedar Field Park, and extending **public space** into existing public right-of-way (see concept)
9. **Cul de Sac** on Ogema Pl & Elm Stately Street
10. Provide a green/walking space as a **buffer** for the Little Earth side of Ogema Place



Next Steps & Timeline

Based on the feedback received and key themes heard, Public Works plans to present draft street design concepts during Round 2 of engagement in early 2022 back to the community.

PROJECT WEBSITE
https://www.minneapolismn.gov/government/projects/18th-ave-s-little-earth/

FOR REASONABLE ACCOMMODATIONS OR ALTERNATIVE FORMATS PLEASE CONTACT:
Jasna Hadzic-Stanek, Minneapolis Department of Public Works
612-271-7401 \\ Jasna.Hadzic-Stanek@minneapolismn.gov

People who are deaf or hard of hearing can use a relay service to call 311 at 612-673-3000. TTY users call 612-673-2157.
Para asistencia 612-673-2700 - Rau kev pab 612-673-2800 - Hadii aad Caawimaad u baahantahay 612-673-3500

Minneapolis
City of Lakes

Public Works
350 S. Fifth St. - Room 203
Minneapolis, MN 55415
TEL 612.673.3000
www.minneapolismn.gov

Support for Hennepin County
Regional Solicitation Applications

Dear Ms. Stueve:

Hennepin County has requested letters of support for a series of grant applications as part of the Regional Solicitation process, by which the Metropolitan Council competitively allocates federal transportation funds. As a part of this request, Minneapolis conducted a review of completed plans, studies, and community engagement, as well as documented priorities and adopted policies to identify which projects to support. Improvements along Hennepin County streets offer significant opportunities to address some of the greatest safety and mobility needs within Minneapolis and are a critical part of the city's goal to address climate change, support mode shifts, and eliminate deaths and severe injuries resulting from traffic crashes.

Minneapolis hereby supports the following applications:

Roadway Reconstruction / Modernization

- Franklin Ave (CSAH 5) Reconstruction: Lyndale Ave (CSAH 22) to approx. 250' West of Blaisdell Ave
- Lyndale Ave (CSAH 22) Reconstruction: HCRRA to Franklin Ave (CSAH 5)
- Cedar Ave (CSAH 152) Reconstruction: 150' North of Lake St (CSAH 3) TO 24TH St

Multiuse Trail and Bicycle Facilities

- *Marshall St NE (CSAH 23) Bikeway: 3rd Ave NE to (CSAH 153) Lowry Ave NE
- Park Ave (CSAH 33) and Portland Ave (CSAH 35) Bikeway: Lake St (CSAH 3) to the I-35W/I-94 Bridges

Pedestrian Facilities

- *Marshall St NE (CSAH 23) Pedestrian Improvements: 3rd Ave NE to (CSAH 153) Lowry Ave NE
- Lake St (CSAH 3) Pedestrian Improvements: Dupont to the Mississippi River

*Whereas the County is pursuing grant funding in the Multiuse Trail and Bicycle Facilities and Pedestrian Facilities categories, the city supports the County applications with the understanding that this funding is applied to fully reconstruct Marshall St NE.

At this time, Minneapolis has no funding programmed in its adopted 2023-2028 Transportation Capital Improvement Program (CIP) for these projects. Therefore, Minneapolis is currently unable to commit cost participation in these projects. However, we request that Hennepin County includes city staff as part of the design process to ensure project success. Furthermore, Minneapolis agrees to provide maintenance, such as sweeping and plowing, for protected bikeways until such time Hennepin County has the resources to do so.

Thank you for making us aware of this application effort and the opportunity to provide support. Minneapolis Public Works looks forward to working with you on these projects.

Sincerely,

Margaret Anderson Kelliher

Margaret Anderson Kelliher
Director of Public Works
City of Minneapolis

Minneapolis
Park & Recreation Board

Administrative Offices
2117 West River Road North
Minneapolis, MN 55411-2227

Northside Operations Center
4022 1/2 North Washington Avenue
Minneapolis, MN 55412-1742

Southside Operations Center
3800 Bryant Avenue South
Minneapolis, MN 55409-1000

Phone
612-230-6400

Fax
612-230-6500

www.minneapolisparks.org

March 30, 2022

Carla Stueve, P.E.
Director and County Highway Engineer
Hennepin County Transportation Project Delivery
1600 Prairie Drive
Medina, MN 55340

Dear Ms. Stueve:

The Minneapolis Park and Recreation Board (MPRB) hereby expresses its support for Hennepin County's Regional Solicitation federal funding application for the proposed reconstruction project on CSAH 152 (Cedar Ave) from 150' North of CSAH 3 (Lake St) to 24th Street in Minneapolis.

This project will involve the reconstruction of the existing roadway and will include, but is not limited to, the following elements: new pavement, curb, stormwater structures, traffic signals, sidewalk, and ADA accommodations. As proposed, this project will bring about accessibility, mobility, and safety improvements for people walking, using transit, biking, and driving.

MPRB acknowledges that the Park Board may be asked to cost participate in this project as outlined in the county's cost participation policy for potential improvements near Cedar Field Park in alignment with park master plans. MPRB will be conducting a green space and connectivity planning effort over the next few years and requests that County improvements align and coordinate with Park plans and engagement efforts in the area. Specific details regarding cost participation and maintenance responsibilities are anticipated to be determined during the design process as project development is advanced.

Thank-you for making us aware of this application and project, and the opportunity to provide support. MPRB looks forward to working with you on this project.

Sincerely,

Adam Regn Arvidson, PLA, FASLA
Director of Strategic Planning, Minneapolis Park & Recreation Board

Metro Transit

April 7, 2022

Carla Stueve, P.E., P.T.O.E
Director and County Highway Engineer
Hennepin County Transportation Project Delivery
1600 Prairie Drive
Medina, MN 55340

Re: Metro Transit Support for Hennepin County 2022 Regional Solicitation Application: CSAH 152 (Cedar Ave) from 150' North of CSAH 3 (Lake St) to 24th St in Minneapolis

Dear Ms. Stueve:

Metro Transit is supportive of Hennepin County's Regional Solicitation federal funding application for the proposed reconstruction project on CSAH 152 (Cedar Ave) from 150' North of CSAH 3 (Lake St) to 24th Street in Minneapolis.

This project will involve the reconstruction of the existing roadway and will include, but is not limited to, the following elements: new pavement, curb, stormwater structures, traffic signals, sidewalk, and ADA accommodations.

This segment is served today by Route 22, with existing local bus stops at most intersections. As you are aware, Metro Transit has also identified the West Broadway/Cedar corridor, planned along the segment of CSAH 152 within the proposed reconstruction project, as a priority for arterial BRT expansion prior to 2040. Metro Transit will update its BRT plans in 2025 and bring forward the next priorities for implementation at that time.

We appreciate that the County intends to engage Metro Transit staff early and often during project development to discuss current and future transit needs along this street. We look forward to continued coordination during the project development process to accommodate existing local bus service in this corridor and support implementation of potential future arterial BRT service.

Thank you for making us aware of this application and project, and the opportunity to provide support. Metro Transit looks forward to working with you on this project.

Sincerely,

Wes Kooistra
General Manager