Application

19838 - 2024 Roadway Modernization
20036 - CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project
Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted
Submitted Date: 12/13/2023 3:50 PM

Primary Contact

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Name:*

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*

City	State/Province	Postal Code/Zip
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Fax:

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

*

City	State/Province	Postal Code/Zip
MEDINA	Minnesota	55340

County: Hennepin
Phone:* 763-745-7600 Ext.

Fax:
PeopleSoft Vendor Number 0000028004A9

Project Information

Project Name CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project
Primary County where the Project is Located Hennepin
Cities or Townships where the Project is Located: City of Minneapolis & City of St. Anthony
Jurisdictional Agency (If Different than the Applicant): N/A

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

The CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project includes the reconstruction of the corridor from 150' E of Johnson St NE to 200' W of St. Anthony Blvd in the cities of Minneapolis and St. Anthony. CSAH 153 (Lowry Ave/Kenzie Ter) is classified as an A-Minor Augmenter. Attachment 02 provides a map of the project location.

The project objectives are to improve safety, accessibility, and mobility for people who walk, roll, bike, and drive along the corridor. Photos depicting the roadway's existing condition are included in Attachment 03.

This project represents the third phase of improvements along the CSAH 153 (Lowry Ave) corridor. While engagement for the proposed project segment has not yet occurred, previous engagement has shaped the overall corridor design, including the desire to see improvements that promote livability, safety, and accessibility for all modes, while also promoting business along the corridor.

In recognition of the surrounding land uses, it's anticipated that different typical sections will be selected for the west segment (extending from Johnson St NE to Stinson Pkwy) versus the east segment (extending from Stinson Pkwy to St. Anthony Pkwy). The project will include, but is not limited to the following elements. The specific types of improvements and locations will be determined as part of the design process and based on additional community input, data analysis, and environmental review. Attachment 04 includes the potential typical sections for the corridor, and Attachment 05 includes the potential concept.

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

- Safety improvements; including dedicated left turn lanes at signalized intersections, pedestrian crossing enhancements, and dedicated off-street bicycle facilities to separate people biking from driving.

- Pedestrian improvements; such as, ADA compliant ramps, upgraded sidewalks (free of obstructions), pedestrian scale lighting, high visibility crosswalk markings, curb extensions, and raised medians.

- Bicycle improvements; such as the introduction of a dedicated off-street facility for people biking (contingent on the design process).

- For people taking transit, this project will improve first and last mile connections to Metro Transit Route 32. Metro Transit has identified this corridor as a priority for arterial bus rapid transit (aBRT) prior to 2040.

- Streetscaping improvements; such as the introduction of green space for boulevards, lighting and stormwater management. County staff will explore the feasibility of adding additional green space where medians are shown in the proposed concept.

(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 153 (Lowry Ave/Kenzie Ter) from 150' E of Johnson St NE to 200' W of St. Anthony Blvd in the cities of Minneapolis and St. Anthony.

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)

to the nearest one-tenth of a mile

0.97

Project Funding

Are you applying for competitive funds from another source(s) to implement this project?

No

If yes, please identify the source(s)

Not Applicable

Federal Amount

$7,000,000.00

Match Amount

Minimum of 20% of project total

$6,090,000.00

Project Total

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

$13,090,000.00

Match Percentage

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

46.52%

Source of Match Funds

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

Hennepin County

Preferred Program Year

Select one:

Select 2026 or 2027 for TDM and Unique projects only. For all other applications, select 2028 or 2029.

2028

Additional Program Years:

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

Project Information-Roadways

NOTE: If your project has already been assigned a State Aid Project # (SAP or SP), please Indicate SAP# here

SAP#:

County, City, or Lead Agency

Hennepin County

Functional Class of Road

A-Minor Arterial (Augmenter)

Road System

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

CSAH

Road/Route No.

i.e., 53 for CSAH 53

153

Name of Road

Example; 1st ST., MAIN AVE

Lowry Ave/Kenzie Terr

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

From:
Road System

MSAS

Road/Route No.

i.e., 53 for CSAH 53

3736

Name of Road

Example; 1st ST., MAIN AVE

Johnson St NE

To:
Road System

DO NOT INCLUDE LEGAL DESCRIPTION

MSAS

Road/Route No.

i.e., 53 for CSAH 53

6064

Name of Road

Example; 1st ST., MAIN AVE

St. Anthony Pkwy

In the City/Cities of:

(List all cities within project limits)

Minneapolis and St. Anthony

OR:

At:
Road System

(TH, CSAH, MSAS, CO. RD., TWP. RD., City Street)

Road/Route No.

i.e., 53 for CSAH 53

Name of Road

Example; 1st ST., MAIN AVE

In the City/Cities of:

(List all cities within project limits)

PROJECT LENGTH

Miles

(nearest 0.1 miles)

Primary Types of Work (check all the apply)

New Construction	
Reconstruction	Yes
Resurfacing	
Bituminous Pavement	Yes
Concrete Pavement	
Roundabout	
New Bridge	
Bridge Replacement	
Bridge Rehab	
New Signal	
Signal Replacement/Revision	Yes
Bike Trail	Yes
Other (do not include incidental items)	GRADING, AGG BASE, BIT BASE & SURFACE, STORM SEWER, BIKEWAY (IF FEASIBLE), SIDEWALK, ADA, SIGNALS, STREETSCAPING, LIGHTING, AND CURB/GUTTER

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:	
New Bridge/Culvert No.:	
Structure is Over/Under (Bridge or culvert name):	

OTHER INFORMATION:

Zip Code where Majority of Work is Being Performed	55418
Approximate Begin Construction Date	05/01/2028
Approximate End Construction Date	10/31/2029
Miles of Trail (nearest 0.1 miles)	1.0
Miles of Sidewalk (nearest 0.1 miles)	1.0
Miles of trail on the Regional Bicycle Transportation Network (nearest 0.1 miles):	0
Is this a new trail?	Yes

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

The project will reconstruct the roadway to update assets to a state of good repair. The roadway and related assets are beyond their useful life. The project will include sidewalk improvements and add an off-street bikeway which will encourage people to make local trips walking and biking, which can reduce traffic and extend the useful life of the roadway.

B) Safety and security (p 2.5-2.9)

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

The project is improving safety outcomes for all users. The project is adding multimodal facilities and supports traffic calming strategies by reducing the number of travel lanes on CSAH 153 (Lowry Ave/Kenzie Ter) and adding boulevards to increase space between people driving and non-motorized users. Intersection improvements are anticipated at key crossing locations.

C) Access to destinations (p 2.10-2.25)

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

The roadway is an A-minor Augmenter that serves as an east-west multimodal connection for residential, recreational and commercial destinations. The project connects to the programmed (CSAH 153) Lowry Ave Phase 1 and Phase 2 projects. The dedicated facility for people biking and improved sidewalk facilities will increase multimodal travel on the corridor.

D) Competitive economy (p 2.26-2.29)

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

The project improves access to recreation, residential and commercial destinations in northeast Minneapolis and Saint Anthony. The project is within the metropolitan regional job concentration area and will safely integrate people accessing jobs and homes in the area. The project will prepare the corridor for planned future arterial Bus Rapid Transit.

E)Healthy and equitable communities (p 2.30-2.34)

Objectives A, B, C & D; Strategies E1, E2, E3, E4, E5, E6 & E7

The project will build upon outreach completed for CSAH 153 (Lowry Ave) west of the project area. Several events were held to solicit input from key stakeholders. The corridor will significantly improve multimodal transportation, which will encourage alternatives to vehicle trips and decrease transportation related emissions. The project will add boulevards between the separated bikeway and sidewalk to enhance green space.

F) Leveraging transportation investments to guide land use (p 2.35-2.41)

Objectives A & C; Strategies F1, F2, F3, F5, F6, F8

The project supports a Complete Streets design that suits the urban and urban center environment. The project prioritizes multimodal safety and supports safe integration between people driving, biking and walking along the corridor and through intersections.

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 2024-2028 Capital Improvement Plan (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 and Green Streets Policy (pages 10-11)

URL: hennepin.us/-/media/hennepinus/your-government/projects-initiatives/complete-streets/Complete-and-Green-Streets-Policy_Oct2023.pdf

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 16-35)

URL: lims.minneapolismn.gov/Download/RCAV2/31027/18-Vision-Zero-Action-Plan-2023-2025.pdf

8) City of Minneapolis Pedestrian Priority Network Map (page 47 (2 of 26))

URL:go.minneapolismn.gov/application/files/7316/0753/2056/TAP_Final_WALKING.pdf

9) St. Anthony Village Comprehensive Plan (page 95 (101 of 512))

URL: savmn.com/DocumentCenter/View/979/St-Anthony-2040-Comprehensive-Plan

10) Metro Transit Network Next

URL: metrotransit.org/Data/Sites/1/media/network-next/nn-corridor-profile-lowry.pdf

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 2024 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 future Regional Solicitation funding cycles, this requirement may include that the plan has undergone a recent update, e.g., within five years prior to application.

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. This includes assurance of year-round use of bicycle, pedestrian, and transit facilities, per FHWA direction established 8/27/2008 and updated 4/15/2019. 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 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. Bridge Rehabilitation/Replacement projects must be located on a minor collector and above functionally classified roadway in the urban areas or a major collector and above in the rural areas.

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 MnDOT?s ?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 in-place structure is 20 feet or longer.

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

6. The bridge must have a Local Planning Index (LPI) of less than 60 OR a National Bridge Inventory (NBI) Rating of 3 or less for either Deck Geometry, Approach Roadway, or Waterway Adequacy as reported on the most recent Minnesota Structure Inventory Report.

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 David Elvin at MnDOT (David.Elvin@state.mn.us or 651-234-7795) 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.

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$516,000.00
Removals (approx. 5% of total cost)	$430,000.00
Roadway (grading, borrow, etc.)	$646,360.00
Roadway (aggregates and paving)	$1,320,000.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$1,037,000.00
Ponds	$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$608,900.00
Traffic Control	$516,000.00
Striping	$107,500.00
Signing	$42,420.00
Lighting	$196,000.00
Turf - Erosion & Landscaping	$518,000.00
Bridge	$0.00
Retaining Walls	$1,430,000.00
Noise Wall (not calculated in cost effectiveness measure)	$0.00
Traffic Signals	$510,000.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$2,420,870.00
Other Roadway Elements	$194,000.00
Totals	**$10,493,050.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	$331,500.00
Sidewalk Construction	$349,350.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$200,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$107,000.00
Pedestrian-scale Lighting	$388,000.00
Streetscaping	$518,000.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$599,300.00
Other Bicycle and Pedestrian Elements	$103,800.00

Totals	**$2,596,950.00**

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

PROTECT Funds Eligibility

One of the new federal funding sources is Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT). Please describe which specific elements of your project and associated costs out of the Total TAB-Eligible Costs are eligible to receive PROTECT funds. Examples of potential eligible items may include: storm sewer, ponding, erosion control/landscaping, retaining walls, new bridges over floodplains, and road realignments out of floodplains.

INFORMATION: Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Formula Program Implementation Guidance (dot.gov).

Response: Based on a planning level review of the proposed scope of work, the following project elements appear to be eligible for the PROTECT Program: Storm Sewer, Landscaping, and Streetscaping (within the Bicycle and Pedestrian Elements)

Totals

Total Cost	$13,090,000.00
Construction Cost Total	$13,090,000.00
Transit Operating Cost Total	$0.00

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

Existing Employment within 1 Mile:	11944
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	4313
Existing Post-Secondary Students within 1 Mile:	0
Upload Map	1702161076783_2024 RS Map 02 - CSAH 153 Lowry Ave NE Phase 3 - 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:	
None of the tiers:	Yes

Measure A: Current Daily Person Throughput

Location	CSAH 153 (Kenzie Terr) W of St. Anthony Blvd (Sequence ID #43095)
Current AADT Volume	8250
Existing Transit Routes on the Project	4, 25, 32

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

Upload Transit Connections Map	1702161266799_2024 RS Map 04 - CSAH 153 Lowry Ave NE Phase 3 - Transit Connections.pdf

Please upload attachment in PDF form

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	10725.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume	No
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	Hennepin County conducted a comprehensive travel demand forecasting analysis based on the Metropolitan Council's regional activity based model. Forecast traffic volumes were based on a combination of socio-economic and land use assumptions. It should be noted that the future transportation network was assumed to include projects identified in the county's Capital Improvement Program. Attachment 7 illustrates the forecast traffic volumes.
Forecast (2040) ADT volume	9500

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:

1. *What engagement methods and tools were used?*
2. *How did you engage specific communities and populations likely to be directly impacted by the project?*
3. *What techniques did you use to reach populations traditionally not involved in community engagement related to transportation projects?*
4. *How were the project?s purpose and need identified?*
5. *How was the community engaged as the project was developed and designed?*
6. *How did you provide multiple opportunities for of Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing to engage at different points of project development?*
7. *How did engagement influence the project plans or recommendations? How did you share back findings with community and re-engage to assess responsiveness of these changes?*
8. *If applicable, how will NEPA or Title VI regulations will guide engagement activities?*

Response:

Within 0.5 miles of the project corridor, 24% of the population are Black, Indigenous, and People of Color (BIPOC) and 13% of the population has a disability of any kind. In addition, 19% of the population are under the age of 18 and 14% are over the age of 65. Finally, 20% of the population within 0.5 miles of the project area has a household income under 200% of the federal poverty level. These demographic profiles are from the 2017 - 2021 5-year ACS estimates.

Public engagement will start in the beginning stages of project development. The CSAH 153 (Lowry Ave NE/Kenzie Ter) Phase 3 Reconstruction Project has been informed thorough previous public engagement for reconstruction activities to the west as well as by the 2015 Lowry Ave NE Corridor Plan and Implementation Framework (hennepin.us/-/media/hennepinus/residents/transportation/lowry-ave-community-works/lowry-avenue-northeast-final-plan-10-15.pdf). Public engagement for the first phase of reconstruction includes the use of a stakeholder advisory committee, in-person events, direct business outreach, virtual events and a public workshop. Events attended included farmers markets, open streets, and direct work with neighborhood association meetings. Outreach occurred in two phases from 2021 to 2022. Materials were presented in both English and Spanish to ensure inclusivity throughout the engagement process.

The 2015 Lowry Ave NE Corridor and Implementation Framework utilized three committees including representatives of neighborhood organization, business associations, local institutions and property owners. As part of the planning process, staff from Hennepin County also worked with local high school students and Level 2 English language Learners across several different languages to solicit feedback from a BIPOC residents and stakeholders. Key themes identified through public engagement included poor pedestrian conditions, a lack of streetscaping and inadequate stormwater management, among other concerns.

Engagement will be coordinated with the City of Minneapolis, the City of St. Anthony and Metro Transit to identify appropriate strategies to facilitate community input, particularly from BIPOC residents, youth, older adults and other disadvantaged communities. Staff from communications will be included in the project team to ensure the use of best practices. Historically, strategies to engage disadvantaged populations include, but are not limited to, working directly with community groups and neighborhood organizations, focus groups, technical advisory committees, virtual and in-person events, surveys, and physical signage throughout the project area.

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

Measure B: Disadvantaged Communities Benefits and Impacts

Describe the project?s benefits to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Benefits could relate to:

? pedestrian and bicycle safety improvements;
? public health benefits;
? direct access improvements for residents or improved access to destinations such as jobs, school, health care, or other;
? travel time improvements;
? gap closures;
? new transportation services or modal options;
? leveraging of other beneficial projects and investments;
? and/or community connection and cohesion improvements.

This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Disadvantaged communities residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Disadvantaged communities 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.

? Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
? Increased speed and/or ?cut-through? traffic.
? Removed or diminished safe bicycle access.
? Inclusion of some other barrier to access to jobs and other destinations.

Response:

The CSAH 153 (Lowry Ave NE/Kenzie Ter) Phase 3 Reconstruction Project will benefit BIPOC populations, low-income households, people with disabilities, children, youth, and older adults through introducing complete streets elements to accommodate all modes of travel. Attachment 08 provides an overview of key community resources and destinations which will benefit from improved access through the project as well as census tracts with high scores of the CDC/ATSDR Social Vulnerability Index (SVI), a resource that uses a range of census variables to measure resilience to disasters. A portion of the 0.5-mile project buffer south of CSAH 88 has a high CDC SVI score, as well as much of Northeast Minneapolis west of the project. This indicates that the project would have a direct benefit on vulnerable communities who may be more likely to walk, roll, cycle, or use transit.

The current design of CSAH 153 (Lowry Ave NE/Kenzie Ter) does not provide a positive experience for nonmotorized users. East of Stinson Pkwy, there are no dedicated facilities for people biking. The construction of off-street facilities will be explored through the design process to create an all ages and abilities connection to proposed shared use paths west along CSAH 153 (Lowry Ave NE/Kenzie Ter), creating a continuous off-street connection through the entirety of Northeast Minneapolis to the Mississippi River. This will provide safe connections for residents to schools such as Pillsbury Elementary and Northeast Middle School, and various childcare centers and places of worship in the project area as well as resources throughout Northeast Minneapolis.

The proposed project will also provide direct benefit for older adults, people with disabilities and others with limited mobility through a reconstructed pedestrian realm. Existing sidewalks are narrow and contain aging pedestrian ramps, obstructions, and defects. Sidewalks along CSAH 153 (Kenzie Ter) are at back of curb, negatively impacting snow removal operations and providing an uncomfortable experience for people walking and rolling. As feasible, pedestrian crossing enhancements such as curb extensions, pedestrian refuges, pedestrian beacons, and high visibility crosswalks will be implemented to promote safety and mobility for pedestrians.

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 provide instructions on detour routes for all people traveling through the corridor. Access to adjacent buildings will be critical, and staff will seek out 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 developments?existing, under construction, or planned?within 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 project?s benefits to current and future affordable housing residents within ½ mile of the project. Benefits must relate to affordable housing residents. Examples may include:

- *? specific direct access improvements for residents*
- *? improved access to destinations such as jobs, school, health care or other;*
- *? new transportation services or modal options;*
- *? and/or community connection and cohesion improvements.*

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.

Response:

A total of 8 affordable subsidized housing developments are located within 0.5 miles of the project area, many of which specifically target serving those with disabilities, seniors, and families with children. Attachment 09 provides a map and full detail summary of these locations, including unit sizes and affordability limits based on area median incomes. The proposed project would provide a direct benefit to residents of affordable housing through the allocation of existing right of way to facilities for those walking, rolling, cycling, and using transit. Currently, the existing 4-lane divided configuration creates significant a barrier for those crossing CSAH 153 (Lowry Ave/Kenzie Ter). As identified in the Met Council generated Socio-Economic Conditions map, 546 subsidized units exist in census tracts within 0.5 miles of the project.

One development of note is Walker Methodist, a retirement community providing subsidized independent and assisted living apartments. Walker Methodist includes 45 affordable one-bedroom units for seniors, which represents a significant population of pedestrians and transit users who would benefit from proposed multimodal improvements. Another notable development is Urban Grove, a manufactured housing park. While not subsidized, Urban Grove represents a naturally occurring form of owner-occupied housing which is unique for established neighborhood contexts.

The project will also create a safe route to school for families in affordable housing attending schools such as Northeast Middle School as well as improving access to the numerous destinations along the corridor as noted in Attachment 08 including libraries, childcare and places of worship. The project will also leverage previous county investments along CSAH 153 (Lowry Ave NE) as well as the improving first and last mile connections to the future F line service planned along TH 65 (Central Ave).

This project will also directly benefit corridor users and residents of affordable housing through conditions for multimodal users by addressing drainage issues present along the project area through the introduction of green infrastructure. Residents of the Urban Grove have been impacted by historical flooding issues, as well as users along CSAH 153 (Kenzie Ter). Sidewalks and intersections experience severe freeze and thaw cycles that lead to ice and snow accumulation and large areas of ponding. Drainage issues pose a safety hazard, particularly to those with limited mobility, and contribute to the deterioration of roadside assets. Green infrastructure and the introduction of boulevards along CSAH 153 (Kenzie Ter) will also provide a positive experience to residents of affordable housing walking and rolling through the project area.

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

Measure D: BONUS POINTS

Project is located in an Area of Concentrated Poverty:	
Project?s 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):	Yes

Upload the ?Socio-Economic Conditions? map used for this measure.

1701382033903_2024 RS Map 03 - CSAH 153 (Lowry Ave NE) Phase 3 - Socio Economic Conditions.pdf

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
1962	0.48	941.76	970.887
1968	0.49	964.32	994.144
	1	**1906**	**1965**

Total Project Length

Total Project Length (as entered in "Project Information" form) 0.97

Average Construction Year

Weighted Year 1965

Total Segment Length (Miles)

Total Segment Length 0.97

Measure B: Geometric, Structural, or Infrastructure Improvements

Improved roadway to better accommodate freight movements: Yes

Response:

Lowry Ave NE from Johnson St NE to Stinson Pkwy was originally constructed with brick pavers, and has since been overlaid with bituminous pavement - suggesting less than ideal conditions for providing a smooth surface for people driving. A StreetLight analysis estimates 730 daily commercial vehicles (Attachment 10).

From a freight mobility perspective, the proposed project is anticipated to remove 2 unwarranted traffic signals, reducing unnecessary delay for trucks travelling along Lowry Ave NE.

From a freight access perspective, dedicated left-turn lanes are anticipated to be retained east of Stinson Pkwy to facilitate delivery operations for nearby businesses.

(Limit 700 characters; approximately 100 words)

Improved clear zones or sight lines: Yes

Response:

Lowry Ave NE from Johnson St NE to Stinson Pkwy includes steep topography, limiting sight lines for people entering from north/south streets. Also, due to the lack of boulevard space, utility poles are located within the sidewalk facility - presenting sight obstructions.

Compact intersection designs will be introduced to promote traffic calming, reduce crossing distances, and maximize sight distance. Raised crosswalks are being constructed on north/south local streets within the Lowry Ave NE Phase 1 Reconstruction, and this design will be considered on this Phase 3 project.

Boulevard space will maximized to the extent feasible to provide space for utility poles, snow storage, and signs.

(Limit 700 characters; approximately 100 words)

Improved roadway geometrics: Yes

Response:

Lowry Ave NE was expanded in the 1960s to prioritize driving and parking purposes along the corridor. This resulted in excessive pavement surfaces, relatively narrow sidewalk facilities, and minimal boulevard space. The 4-lane undivided design east of Stinson Pkwy will be evaluated for conversion to a 3-lane or 2-lane to allow for the reallocation of space for other modes.

The project will introduce proven traffic calming strategies such as compact intersections, raised medians, and consistent boulevards. These design strategies are better suited for the surrounding residential and commercial land uses that encourage all forms of transportation.

(Limit 700 characters; approximately 100 words)

Access management enhancements:

Yes

Response:

Approximately 42 access points (including 32 driveways and 10 local streets) currently exist where all turning movements are generally permitted. This presents the potential for rear-end, left-turn, and right-angle crashes.

The following strategies will be evaluated to reduce conflict points involving people driving. Crossing access for people walking and biking will be retained to the extent feasible.

- Right-in/right-out restrictions via medians to leverage the surrounding grid network

- Driveway consolidation for commercial businesses

- Potential removal of 2 unwarranted signals to improve travel time reliability

- Dedicated left-turn lanes at key intersections to concentrate turns

(Limit 700 characters; approximately 100 words)

Vertical/horizontal alignment improvements:

Yes

Response:

Lowry Ave NE west of Stinson Pkwy includes relatively steep slopes due to the topography. Conversely, Lowry Ave NE east of Stinson Pkwy includes a horizontal curve that is somewhat unexpected for eastbound drivers.

Since the built environment is well established west of Stinson Pkwy, Complete Streets design strategies (such as compact intersections, medians, and boulevards) will be leveraged to minimize negative impacts caused by steep slopes.

Also, the anticipated conversion of the 4-lane design east of Stinson Pkwy will allow for a full redesign of the horizontal curve to promote user predictable and satisfy current design standards - reducing the potential for lane departure crashes.

(Limit 700 characters; approximately 100 words)

Improved stormwater mitigation:

Yes

Response:

The existing conditions along Lowry Ave NE include minimal pervious surfaces as the current design prioritizes people driving and parking. Flooding issues have been reported by the city for the area near Urban Grove - which is consistent with MetCouncil's Flood Map Screening Tool.

Staff will collaborate with the cities and the Mississippi River WMO to explore BMPs for improving water quality and withstanding desired flood events. Boulevard space is anticipated to be maximized, including relatively wide medians east of Stinson Pkwy, to assist with controlling stormwater. Consideration will be given to species that can withstand Minnesota's harsh climate to ensure their effectiveness.

(Limit 700 characters; approximately 100 words)

Signals/lighting upgrades: Yes

Response:

Existing signals are showing signs of deterioration. Also, the pedestrian crossing beacon system at 27th Ave NE (enhanced with in-road LEDs) has not been cost effective to maintain.

Alternative intersection control will be considered at 2 intersections where unwarranted signals currently exist (Hayes St NE & Autumn Woods). The signal at Stinson Pkwy will upgraded to current design standards - eliminating median pedestals that experience knockdowns. Pedestrian crossing beacon systems will be designed to meet standards to promote cost effective maintenance.

Lighting will be designed to current standards, which is especially key at intersections that experience frequent pedestrian crossings.

(Limit 700 characters; approximately 100 words)

Other Improvements Yes

Response:

People walking - boulevard areas will improve pedestrian experiences by providing separation from people driving and designating space for snow storage, signs, and utility poles.

People using transit - first/last mile connections for future BRT service planned for Route 32 as part of Network Next (metrotransit.org/Data/Sites/1/media/network-next/nn-corridor-profile-lowry.pdf)

People biking - accommodations are anticipated similar to Lowry Ave NE Phase 1 (multi-use trail facility along north side) to promote use by All Ages and Abilities.

People driving - conversion of 2 unwarranted signals to alternative intersection control devices to improve travel time reliability along the corridor.

(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 without the Project:	Total Peak Hour Delay by the Project:	Total Peak hour Delay Reduced by project	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
18.0	0	18.0	846	846	15228.0	0	15228.0	N/A	1702162423535_CSAH 153 LowryKenzie- Synchro Report for Congestion Reduction.pdf
16.0	21.0	-5	1293	1293	20688.0	27153.0	-6465	N/A	1702162452973_CSAH 153 LowryKenzie- Synchro Report for Congestion Reduction.pdf
12.0	1.0	11.0	884	884	10608.0	884.0	9724.0	N/A	1702162476946_CSAH 153 LowryKenzie- Synchro Report for Congestion Reduction.pdf
						28037			

Vehicle Delay Reduced

Total Peak Hour Delay Reduced	Total Peak Hour Delay Reduced	Delay Reduced Total
46524.0	28037.0	18487.0

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):
1.68	1.05	0.63
2.43	2.59	-0.16
1.4	0.88	0.52
6	**5**	**1**

Total

Total Emissions Reduced: 0.99

Upload Synchro Report 1702162644400_CSAH 153 LowryKenzie- Synchro Report for Emission Reduction.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:

Attachment 11 listed reported crashes (2020-2022) along the project, and Attachment 12 lists CMFs applied in the B/C Analysis.

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

01) Remove unwarranted signal: All (CMF 00332, 25%)

02) Upgrade to 12" lenses: RA (CMF 01444, 46%)

03) Improve ped crossings: Ped (CMF 01697, 25%)

04) Construct multi-use trail: Bike (CMF 09250, 25%)

05) Resurface pavement: RE, SS, LT, RA, OR, & HO (CMF 09300, 14.7%)

06) Install median: All (FHWA Desk Ref, assumed at 12.5%)

07) Prohibit parking: Parked Veh (no CMF, 100%)

08) Introduce streetscaping: All (NCHRP Report 612, 5%)

09) Remove pedestals within medians: Pedestal Knockdowns (no CMF, 100%)

(Limit 700 Characters; approximately 100 words)

Rationale for Crash Modification Selected:

The Benefit/Cost Analysis evaluated the project corridor in seven different sections (comprised of major intersections and segments) to target crash themes. Up to two (of the nine 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.

The expected service life for each improvement was entered as 20 years in the Benefit/Cost Worksheets based on the service life information included in the 2024 Highway Safety Improvement Program guidelines.

The overall crash reduction expected from the project is 33% (based on a 67% crash modification factor). Approximately 33% (2 crashes) of the total number of reported crashes from the years 2020-2022 will be reduced annually through the implementation of proved safety countermeasures as part of this project.

(Limit 1400 Characters; approximately 200 words)

Project Benefit ($) from B/C Ratio	$5,045,720.00
Total Fatal (K) Crashes:	2
Total Serious Injury (A) Crashes:	0
Total Non-Motorized Fatal and Serious Injury Crashes:	2
Total Crashes:	18

Total Fatal (K) Crashes Reduced by Project:	0
Total Serious Injury (A) Crashes Reduced by Project:	0
Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project:	0
Total Crashes Reduced by Project:	6
Worksheet Attachment	1700850988504_153_Benefit_Cost_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 B: 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 doesn?t 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 roadway?s 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:

The existing configuration along CSAH 153 (Lowry Ave NE) varies across the project corridor as described below. This project presents an opportunity to reallocate space and introduce complete streets best practices for people walking along and across CSAH 153 (Lowry Ave NE).

- From Johnson St NE to Stinson Pkwy: Generally a 2-lane undivided roadway with on-street parking permitted along both sides.

- From Stinson Pkwy to St. Anthony Blvd: Generally a 4-lane divided roadway with dedicated turn lanes provided at intersections & driveways.

Signalized intersections

The project is anticipated to replace 1 of the existing signalized intersections (at Stinson Pkwy) and introduce appropriate lane configurations as the roadway does not transition properly on the west and east approaches at the Lowry/Stinson intersection. In addition, lighting conditions will be upgraded to provide adequate nighttime visibility. Furthermore, consideration will be given to the placement and orientation of pedestrian and bicycle facilities at the Lowry/Stinson intersection to promote comfortable crossings through this area that experiences high multimodal activity. Signal components such as pedestrian countdown timers, APS, and protected/permitted left-turn phasing will communicate necessary instructions to intersection users.

Unsignalized intersections

This project is anticipated to redesign each of the 10 unsignalized intersections. Although contingent on the project development process, the planning level concept identifies approximately 2 crossing beacons and 5 high-visibility crosswalk markings that may be feasible at unsignalized intersections. Of note, is the narrowing of curb lines in recognition of anticipated on-street parking restrictions that will reduce the crossing distance by approximately 18' for the segment extending from Johnson St NE to Stinson Pkwy. Also, these unsignalized intersections will be properly illumined with upgraded lighting. In addition, although not shown on the concept, raised pedestrian crosswalks will be considered on the north/south approaches of local streets as part of the project development process - in a similar manner as the county's Lowry Ave NE Phase 1 project (url: hennepin.us/residents/transportation/lowry-corridor).

Roundabout intersections

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

Midblock locations

The proposed project will aim to encourage pedestrian crossings at intersections, however, mid-block crossings are not anticipated to be prohibited via installation of barriers. Also, access management revisions from Stinson Pkwy to St. Anthony Blvd will be evaluated during project development to consolidate redundant driveways and minimize conflicts with people walking and biking.

(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, it's anticipated that alternative intersection control devices may be selected at the following two intersections:

Hayes St NE - This intersection primarily facilitates people walking and biking across CSAH 153 (Lowry Ave NE) as there is a disconnect within the surrounding grid network. The existing traffic signal system was installed during a time when today's proven safety countermeasures (curb extensions, and crossing beacons) were not widely accepted by the transportation industry. It's anticipated that a series of design strategies will be implemented to support a Safe Systems Approach.

Autumn Woods - This intersection serves two high density residential complexes on either side of CSAH 153 (Lowry Ave NE). Similar to the Hayes St NE, the existing traffic signal system was installed during a time (late 1980s) when today's proven safety countermeasures were not widely accepted. The anticipated conversion from a 4-lane to 2-lane, supplemented with dedicated left-turn lanes, will minimize the potential for dual threat related crashes. In addition, other design strategies (such as curb extensions, medians, and crossing beacons) will be evaluated as part of the project development process as denoted on the planning level concept.

(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 suggests the following changes to pedestrian crossing distances along the CSAH 153 (Lowry Ave NE) Phase 2 Reconstruction project corridor:

Signalized intersections (Stinson Pkwy) - Crossing distances are anticipated to be reduced as described below.

- West approach: Reduction of approximately 18' (from 44' to 26') by eliminating on-street parking

- East approach: Reduction of approximately 20' (from 66' to 46') by converting from a 4-lane divided to a 2-lane divided configuration

Non-signalized intersections without left-turn lanes (Ulysses, Hayes, Garfield, Arthur, Cleveland, Benjamin, & McKinley) - Crossing distances are anticipated to be reduced by approximately 44' (from 44' to 26') by eliminating on-street parking

Non-signalized intersections with left-turn lanes (Stinson, Lowry, Autumn Woods, & 27th) - Crossing distances are anticipated to be reduced by approximately 20' (from 66' to 46') by converting from a 4-lane divided to a 2-lane divided roadway

Overall, the planning level concept illustrates how the narrowing of curb lines will significantly reduce pedestrian crossing distances. In addition, high visibility pavement markings (supplemented with stop bars), crossing beacons, and a raised median (along the east segment) are anticipated to further promote pedestrian safety.

(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 doesn?t require much elevation change instead of pedestrian bridge with numerous switchbacks).

Response:

Although contingent on the project development process, no new grade separated pedestrian crossings are anticipated to be introduced as part of the CSAH 153 (Lowry Ave NE) Phase 3 Reconstruction Project.

(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 153 (Lowry Ave NE) Phase 3 Reconstruction Project.

The east segment, from Stinson Pkwy to St. Anthony Blvd, is relatively unique as there is a high frequency of commercial driveways present along the corridor. It's anticipated that access management strategies will be considered, especially at locations with redundant driveways, to reduce conflicts with people walking along and across CSAH 153 (Lowry Ave NE).

(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 153 (Lowry Ave NE) Phase 3 Reconstruction Project will introduce several proven design strategies to promote uniform, safe, and reasonable speeds by people driving along the corridor.

West segment (from Johnson St NE to Stinson Pkwy)

The removal of on-street parking will allow for the narrowing of curbs by approximately 18' (from 44' to 26') will promote traffic calming through the presence of curb immediately adjacent to travel lanes. Also, boulevards are anticipated to be introduced to provide separation between people driving and people walking. In addition, raised crosswalks will be considered on the north/south approaches of local streets to slow turning vehicles to/from CSAH 153 (Lowry Ave NE). Furthermore, the introduction a multi-use trail facility will encourage biking by All Ages and Abilities, likely increasing bicycle volumes, and raise awareness of multimodal users.

East segment (from Stinson Pkwy to St. Anthony Blvd)

The potential conversion from a 4-lane divided roadway to a 2-lane divided roadway will also allow for the narrowing of curbs by approximately 20' (from 66' to 46'). The retention of the existing median (whenever possible) provides a continuous vertical element adjacent to travel lanes. County staff will collaborate with the City of St. Anthony to identify the appropriate greening for both the median and boulevards to further maximize the benefits offered by these spaces. Additionally, this east segment includes a high frequency of commercial driveways that will be reviewed for consolidation to promote sound access management along the corridor. Any driveways retained will be reconstructed to design standards to make it more obvious to corridor users of their presence. Furthermore, the introduction of a multi-use trail facility will promote a multimodal user experience along the corridor.

(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 existing posted speed limit along (CSAH 153 Lowry Ave NE) 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 boulevards, lane widths, and raised medians) will be designed to support the desired 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 Yes

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

List the AADT 8250

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.) 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.)

Existing road is within 500? of 1+ shopping, dining, or entertainment destinations (e.g., grocery store, restaurant) Yes

If checked, please describe:

Metro Transit Route 32 currently provides east/west service to the entirety of the project area, with 14 transit stops within the limits of the proposed reconstruction project. While not on the high frequency network, this route will serve as a future connection to the proposed F Line service anticipated along TH 65 (Central Ave) to the west.

In addition, CSAH 153 (Lowry Ave/Kenzie Ter) is home to several smaller neighborhood commercial destinations east of Stinson Pkwy as well as the St. Anthony Shopping Center which is home to a mix of shopping and dining destinations serving St. Anthony Village as well as adjacent neighborhoods in Northeast Minneapolis. Below is a summary of key locations within 500 feet of the proposed project likely to generate pedestrian activity:

-Mother Earth Gardens (Retail)

-Cryptid Hair Parlor (Service)

-Lempira Market (Grocery Store)

-Great Dragon (Restaurant)

-Wine & Canvas (Entertainment)

-Teasource (Retail)

-Great Dragon (Restaurant)

-Hidden Treasures Thrift Store (Shopping)

-Village Pub (Restaurant)

-St. Anthony Wine & Spirits (Retail)

-Dairy Queen (Restaurant)

(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:

CSAH 153 (Lowry Ave/Kenzie Ter) also has a variety of civic, residential, and educational destinations within 500 feet of the proposed project which generate pedestrian activity. The following list is a selection of resources along the proposed project area which will benefit from improved multimodal access:

-Windom Park (Recreation)

-St. Anthony Park Library (Library)

-Autumn Woods of St. Anthony (Senior Housing)

-The Legacy of St. Anthony (Assisted Living Facility)

-Kenzington Condominiums (Senior Housing)

-Urban Grove (Manufactured Housing Park)

-Hayden Grove Senior Living (Assisted Living Facility)

-Mn Chinese Day Care & Learning Center (Childcare)

-Walker Methodist, Kenzie (Senior Living)

-Northeast United Methodist Church (Place of Worship)

In addition, 42% of the population in the project area rent their homes and 20% of households which indicates that the project area is a mix of housing types and affordability levels which in of itself generates pedestrian activity.

(Limit 1,400 characters; approximately 200 words)

Measure A: Multimodal Elements and Existing Connections

Response:

The CSAH 153 (Lowry Ave NE/Kenzie Ter) Phase 3 Reconstruction Project will provide numerous multimodal connections.

For people walking and rolling, this project will provide dedicated sidewalk space (free of obstructions), ADA compliant pedestrian ramps, high visibility crosswalk markings, Accessible Pedestrian Signals (APS), and pedestrian scale lighting. Improvements noted in this proposed project are consistent with Hennepin County's ADA Transition Plan. In addition, boulevard space between the sidewalk and roadway will further separate people driving from people walking and provide a more pleasant user experience. Pedestrian crossing enhancements will also be evaluated at intersections, and crossing distances will be reduced by the new lane configuration proposed for the roadway as well as the addition of medians (where feasible).

In addition, for people taking transit, the walkable and bikeable environment proposed as part of this project will enhance first and last mile connections to Metro Transit's Route 32, and compliment future plans for arterial bus rapid transit (aBRT) that is planned along the corridor. Attachment 13 highlights key multimodal connections and shows that the F Line aBRT service will run within a 1/2 mile of the project area.

While this corridor is not on the RBTN, it does intersect and provide direct connections to other RBTN routes, most notably at Stinson Pkwy. County staff will coordinate with the Minneapolis Park and Recreation Board as part of this project or a future project to align with the vision for the Grand Rounds Missing Link near the termini of this project corridor. Finally, for people biking, an off-street facility will be provided on one side of the roadway and will provide a consistent user experience across CSAH 153 (Lowry Ave/Kenzie Ter) to the west. The Met Council's Regional Bicycle Barriers webmap identifies CSAH 88 (New Brighton Blvd) as an Expressway Barrier. A portion of CSAH 153 (Kenzie Ter) falls within the Expressway Barrier Crossing Area for the CSAH 88 (New Brighton Blvd) barrier. The proposed project will provide parallel multimodal facilities and an all ages and abilities bicycle connection approximately 500' to the north of CSAH 88 (New Brighton Blvd)

For people driving, a smooth pavement surface, turn lanes at key intersections, and green space will provide a more pleasant user experience. The use of medians and travel lanes that are right-sized for the surrounding environment will provide visual cues to drivers to manage speeds, which will benefit people of all modes traveling along and across CSAH 153 (Lowry Ave/Kenzie Ter).

(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.

Yes

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.

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 153 (Lowry Ave NE/Kenzie Ter) Phase 3 Reconstruction Project has been informed thorough previous public engagement for reconstruction activities to the west as well as by the 2015 Lowry Ave NE Corridor Plan and Implementation Framework (hennepin.us/-/media/hennepinus/residents/transportation/lowry-ave-community-works/lowry-avenue-northeast-final-plan-10-15.pdf). Public engagement for the first phase of reconstruction included the use of a stakeholder advisory committee, in-person events, direct business outreach, virtual events and a public workshop. Events attended included farmers markets, open streets, and direct work with neighborhood association meetings. Outreach occurred in two phases from 2021 to 2022. Materials were presented in both English and Spanish to ensure inclusivity throughout the engagement process.

The 2015 Lowry Ave NE Corridor and Implementation Framework utilized three committees (a steering team, a community advisory team, and a technical advisory team) including representatives of neighborhood organization, business associations, local institutions and property owners. As part of the planning process, staff from Hennepin County also worked with local high school students and Level 2 English language Learners across several different languages to solicit feedback from a BIPOC residents and stakeholders. Key themes identified through public engagement included poor pedestrian conditions, a lack of streetscaping and inadequate stormwater management, among other concerns, which helped inform the potential design for the CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project.

Future engagement will be coordinated with the City of Minneapolis, the City of St. Anthony as well as other key stakeholders such as Metro Transit and the Minneapolis Park and Recreation Board to identify appropriate strategies to facilitate community input, particularly from BIPOC residents, youth, older adults and other disadvantaged communities. Staff from communications will be included in the project team to ensure the use of best practices. Historically, strategies to engage disadvantaged populations include, but are not limited to, working directly with community groups and neighborhood organizations, focus groups, technical advisory committees, virtual and in-person events, surveys, and physical signage throughout the project area.

(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 project?s 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	1702502840477_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	Yes
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	
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):	$13,090,000.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$13,090,000.00
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	78 KB
Attachment 01 - Project Narrative.pdf	Attachment 01 - Project Narrative	96 KB
Attachment 02 - Project Location Map.pdf	Attachment 02 - Project Location Map	859 KB
Attachment 03 - Existing Condition Photos.pdf	Attachment 03 - Existing Condition Photos	304 KB
Attachment 04 - Potential Typical Sections.pdf	Attachment 04 - Potential Typical Sections	147 KB
Attachment 05 - Potential Concept.pdf	Attachment 05 - Potential Concept	2.5 MB
Attachment 06 - Hennepin County 2024-2028 Transportation CIP.pdf	Attachment 06 - Hennepin County 2024-2028 Transportation CIP	191 KB
Attachment 07 - 2040 Forecast Traffic Volumes.pdf	Attachment 07 - 2040 Forecast Traffic Volumes	581 KB
Attachment 08 - Disadvantaged Communities and Resources Map.pdf	Attachment 08 - Disadvantaged Communities and Resources Map	971 KB
Attachment 09 - Affordable Housing Access Map and Detail Summary.pdf	Attachment 09 - Affordable Housing Access Map and Detail Summary	468 KB
Attachment 10 - HC Streetlight Analysis.pdf	Attachment 10 - HC Streetlight Analysis	153 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	1.2 MB
Attachment 13 - Multimodal Connections Map.pdf	Attachment 13 - Multimodal Connections Map	1.1 MB
Attachment 14 - Notice of Application Submittal to City of Minneapolis.pdf	Attachment 14 - Notice of Application Submittal to City of Minneapolis	101 KB
Attachment 15 - City of St. Anthony Support Letter.pdf	Attachment 15 - City of St. Anthony Support Letter	349 KB
Attachment 16 - MPRB Support Letter.pdf	Attachment 16 - MPRB Support Letter	175 KB
Attachment 17 - Metro Transit Support Letter.pdf	Attachment 17 - Metro Transit Support Letter	109 KB
Attachment 18 - Hennepin County and Minneapolis Maintenance Agreement.pdf	Attachment 18 - Hennepin County and Minneapolis Maintenance Agreement	1.5 MB

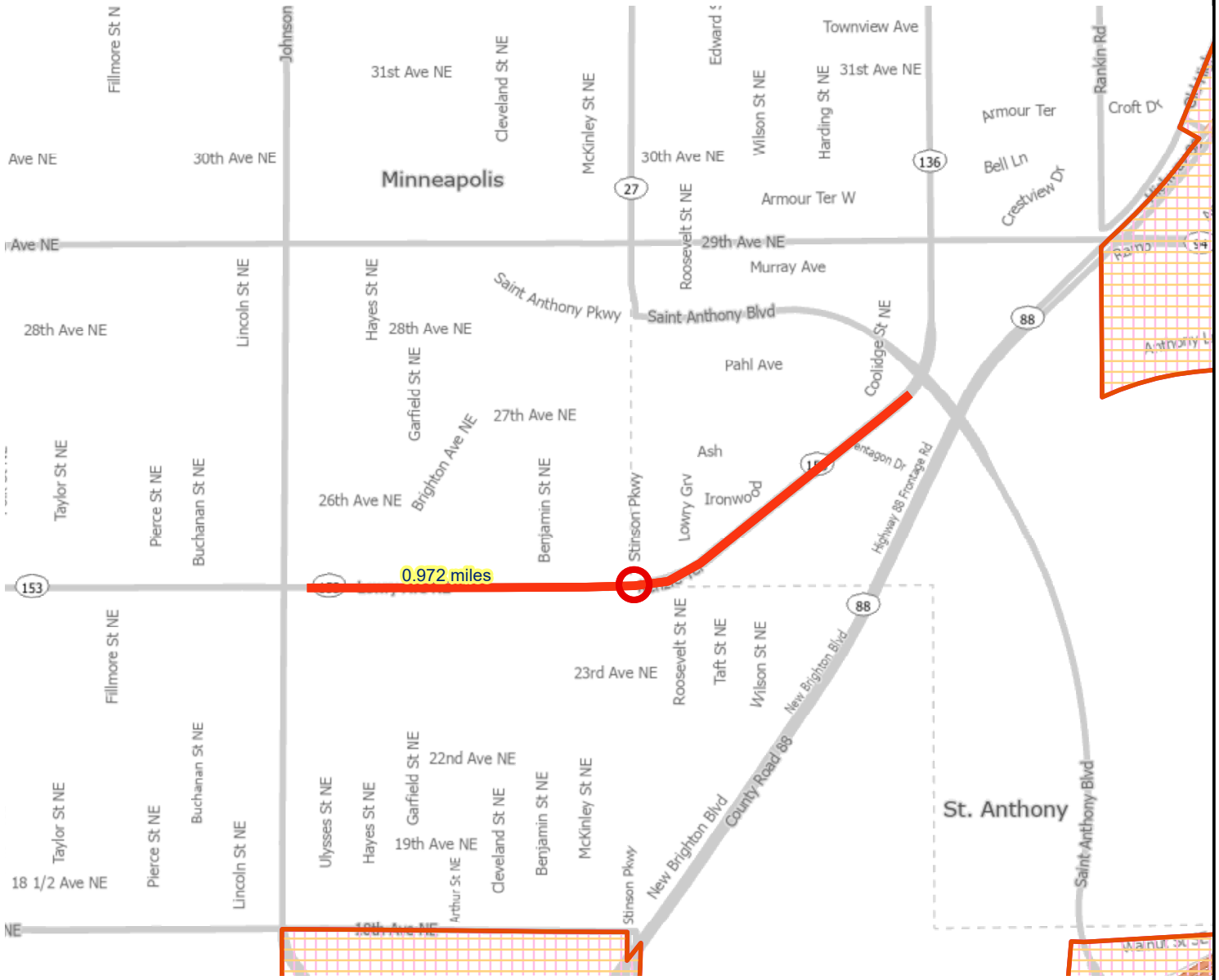
Regional Economy

Roadway Reconstruction/Modernization Project: CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction P | M

Results

WITHIN ONE MI of project:
Postsecondary Students: 0

Totals by City:
Minneapolis
Population: 14831
Employment: 6260
Mfg and Dist Employment: 1757
Roseville
Population: 0
Employment: 3659
Mfg and Dist Employment: 2046
St. Anthony
Population: 4881
Employment: 2025
Mfg and Dist Employment: 510



Project Points
Project
Manfacturing/Distribution Centers
Job Concentration Centers

0 0.125 0.25 0.5 0.75 1 Miles

Created: 10/31/2023
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 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction P |

Results

Transit with a Direct Connection to project:
25 32 4
*Johnson/Lyndale
*Lowry

**indicates Planned Alignments*

Transit Market areas: 3

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 0.125 0.25 0.5 0.75 1 Miles

Created: 10/31/2023
LandscapeRSA3

METROPOLITAN COUNCIL

Socio-Economic Conditions

Roadway Reconstruction/Modernization Project: CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction P | Map ID: 1

Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 546

Project located in census tracts that are BELOW the regional average for population in poverty or population of color.

Points
Lines
Area of Concentrated Poverty
Regional Environmental Justice Area

0 0.125 0.25 0.5 0.75 1 Miles

Created: 10/31/2023
LandscapeRSA2

METROPOLITAN COUNCIL

CSAH 153 (Lowry Ave/Kenzie Ter) Phase 3 Reconstruction Project

Synchro Report – Congestion Reduction

Existing conditions (PM Peak)

10: Hayes Street & Kenzie Terrace

Direction	All
Future Volume (vph)	846
Total Delay / Veh (s/v)	18
CO Emissions (kg)	1.18
NOx Emissions (kg)	0.23
VOC Emissions (kg)	0.27

Proposed conditions (PM Peak)

10: Hayes Street & Kenzie Terrace

Direction	All
Future Volume (vph)	846
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.74
NOx Emissions (kg)	0.14
VOC Emissions (kg)	0.17

Existing conditions (PM Peak)

20: Stinson Parkway & Kenzie Terrace

Direction	All
Future Volume (vph)	1293
Total Delay / Veh (s/v)	16
CO Emissions (kg)	1.70
NOx Emissions (kg)	0.33
VOC Emissions (kg)	0.40

Proposed conditions (PM Peak)

20: Stinson Parkway & Kenzie Terrace

Direction	All
Future Volume (vph)	1293
Total Delay / Veh (s/v)	21
CO Emissions (kg)	1.82
NOx Emissions (kg)	0.35
VOC Emissions (kg)	0.42

Existing conditions (PM Peak)

30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Direction	All
Future Volume (vph)	884
Total Delay / Veh (s/v)	12
CO Emissions (kg)	0.98
NOx Emissions (kg)	0.19
VOC Emissions (kg)	0.23

Proposed conditions (PM Peak)

30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Direction	All
Future Volume (vph)	884
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.62
NOx Emissions (kg)	0.12
VOC Emissions (kg)	0.14

Synchro Report for existing conditions (PM Peak) CSAH 153 & Hayes St

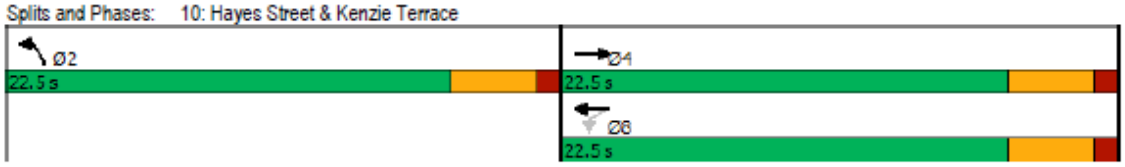
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
10: Hayes Street & Kenzie Terrace

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	365	5	441	10
Future Volume (vph)	365	5	441	10
Turn Type	NA	Perm	NA	Prot
Protected Phases	4		8	2
Permitted Phases		8		
Detector Phase	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
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)	4.5		4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	Max
Act Effct Green (s)	15.0		15.0	18.1
Actuated g/C Ratio	0.36		0.36	0.43
v/c Ratio	0.63		0.74	0.03
Control Delay	16.0		19.3	8.4
Queue Delay	0.0		0.0	0.0
Total Delay	16.0		19.3	8.4
LOS	B		B	A
Approach Delay	16.0		19.3	8.4
Approach LOS	B		B	A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 42.1	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hayes Street & Kenzie Terrace



Synchro Report for proposed conditions (PM Peak) CSAH 153 & Hayes St

County staff are proposing to remove the existing traffic signal at the CSAH 153 and Hayes St intersection (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed conditions.

Synchro Report for existing conditions (PM Peak) CSAH 153 & Stinson Pkwy

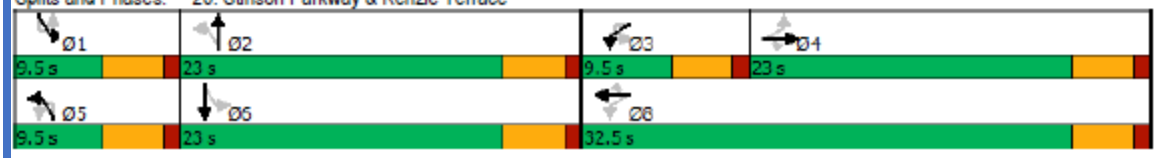
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
20: Stinson Parkway & Kenzie Terrace

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	26	262	112	1	49	226	25	1	153	176	1	31
Future Volume (vph)	26	262	112	1	49	226	25	1	153	176	1	31
Turn Type	Perm	NA	Perm	custom	pm+pt	NA	Perm	custom	pm+pt	NA	custom	pm+pt
Protected Phases		4			3	8			5	2		1
Permitted Phases	4		4	3	8		8	5	2		1	6
Detector Phase	4	4	4	3	3 8	8	8	5	5 2	2	1	1 6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	9.5	9.5
Total Split (s)	23.0	23.0	23.0	9.5	9.5	32.5	32.5	9.5	9.5	23.0	9.5	9.5
Total Split (%)	35.4%	35.4%	35.4%	14.6%	14.6%	50.0%	50.0%	14.6%	14.6%	35.4%	14.6%	14.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5		4.5	4.5		4.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead			Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	Max	None	None
Act Effct Green (s)		14.5	14.5		19.5	19.5	19.5		25.0	23.3		23.2
Actuated g/C Ratio		0.26	0.26		0.35	0.35	0.35		0.45	0.42		0.42
v/c Ratio		0.67	0.22		0.18	0.38	0.04		0.31	0.30		0.07
Control Delay		27.9	2.5		12.7	14.9	0.1		12.9	15.5		10.9
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Total Delay		27.9	2.5		12.7	14.9	0.1		12.9	15.5		10.9
LOS		C	A		B	B	A		B	B		B
Approach Delay		20.7				13.3				14.4		
Approach LOS		C				B				B		

Intersection Summary			
Cycle Length: 65			
Actuated Cycle Length: 55.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Stinson Parkway & Kenzie Terrace



Lane Group	SBT
Lane Configurations	
Traffic Volume (vph)	157
Future Volume (vph)	157
Turn Type	NA
Protected Phases	6
Permitted Phases	
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	23.0
Total Split (%)	35.4%
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Max
Act Effct Green (s)	19.5
Actuated g/C Ratio	0.35
v/c Ratio	0.32
Control Delay	17.5
Queue Delay	0.0
Total Delay	17.5
LOS	B
Approach Delay	16.5
Approach LOS	B

Intersection Summary

Synchro Report for proposed conditions (PM Peak) CSAH 153 & Stinson Pkwy

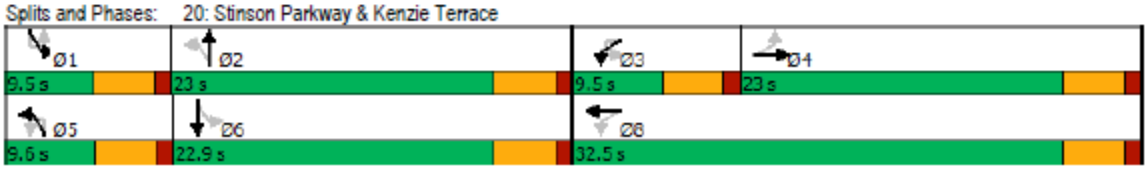
16612 - 2024 Regional Solicitation
Kenzie Terrace - Build PM Peak

11/21/2023
20: Stinson Parkway & Kenzie Terrace

Lane Group	EBL	EBT	WBU	WBL	WBT	NBU	NBL	NBT	SBU	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	26	262	1	49	226	1	153	176	1	31	157
Future Volume (vph)	26	262	1	49	226	1	153	176	1	31	157
Turn Type	Perm	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA
Protected Phases		4		3	8		5	2		1	6
Permitted Phases	4		3	8		5	2		1	6	
Detector Phase	4	4	3	3 8	8	5	5 2	2	1	1 6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	9.5	22.5	9.5	9.5	22.5	9.5	9.5	22.5
Total Split (s)	23.0	23.0	9.5	9.5	32.5	9.6	9.6	23.0	9.5	9.5	22.9
Total Split (%)	35.4%	35.4%	14.6%	14.6%	50.0%	14.8%	14.8%	35.4%	14.6%	14.6%	35.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5		4.5	4.5		4.5	4.5		4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead		Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Act Effct Green (s)		17.1		22.2	22.2		24.7	22.9		22.8	19.1
Actuated g/C Ratio		0.30		0.38	0.38		0.43	0.40		0.39	0.33
v/c Ratio		0.82		0.19	0.38		0.33	0.32		0.07	0.34
Control Delay		34.4		12.7	14.1		13.7	16.1		11.2	18.3
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay		34.4		12.7	14.1		13.7	16.1		11.2	18.3
LOS		C		B	B		B	B		B	B
Approach Delay		34.4			13.8			15.1			17.3
Approach LOS		C			B			B			B

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 57.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: Stinson Parkway & Kenzie Terrace



Synchro Report for existing conditions (PM Peak) CSAH 153 & Autumn Woods Apartment Access

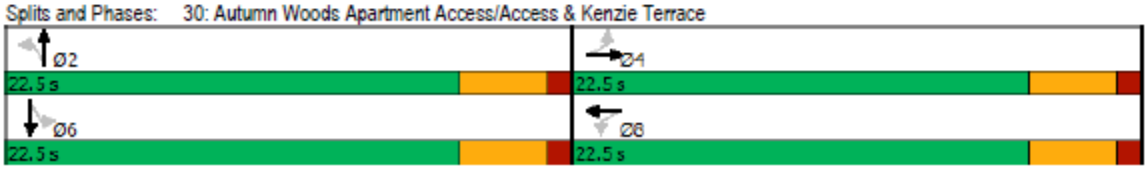
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	6	411	21	396	3	0	8	0
Future Volume (vph)	6	411	21	396	3	0	8	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5		4.5		4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	10.4	10.4	10.4	10.4		18.1		18.1
Actuated g/C Ratio	0.28	0.28	0.28	0.28		0.48		0.48
v/c Ratio	0.03	0.47	0.09	0.45		0.02		0.01
Control Delay	9.5	12.6	10.5	12.4		1.6		1.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	9.5	12.6	10.5	12.4		1.6		1.3
LOS	A	B	B	B		A		A
Approach Delay		12.5		12.3		1.6		1.3
Approach LOS		B		B		A		A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 37.5	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 29.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 30: Autumn Woods Apartment Access/Access & Kenzie Terrace



Synchro Report for proposed conditions (PM Peak) CSAH 153 & Autumn Woods Apartment Access

County staff are proposing to remove the existing traffic signal at the CSAH 153 and the Autumn Woods Apartment Access (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed conditions.

CSAH 153 (Lowry Ave/Kenzie Ter) Phase 3 Reconstruction Project

Synchro Report – Congestion Reduction

Existing conditions (PM Peak)

10: Hayes Street & Kenzie Terrace

Direction	All
Future Volume (vph)	846
Total Delay / Veh (s/v)	18
CO Emissions (kg)	1.18
NOx Emissions (kg)	0.23
VOC Emissions (kg)	0.27

Proposed conditions (PM Peak)

10: Hayes Street & Kenzie Terrace

Direction	All
Future Volume (vph)	846
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.74
NOx Emissions (kg)	0.14
VOC Emissions (kg)	0.17

Existing conditions (PM Peak)

20: Stinson Parkway & Kenzie Terrace

Direction	All
Future Volume (vph)	1293
Total Delay / Veh (s/v)	16
CO Emissions (kg)	1.70
NOx Emissions (kg)	0.33
VOC Emissions (kg)	0.40

Proposed conditions (PM Peak)

20: Stinson Parkway & Kenzie Terrace

Direction	All
Future Volume (vph)	1293
Total Delay / Veh (s/v)	21
CO Emissions (kg)	1.82
NOx Emissions (kg)	0.35
VOC Emissions (kg)	0.42

Existing conditions (PM Peak)

30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Direction	All
Future Volume (vph)	884
Total Delay / Veh (s/v)	12
CO Emissions (kg)	0.98
NOx Emissions (kg)	0.19
VOC Emissions (kg)	0.23

Proposed conditions (PM Peak)

30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Direction	All
Future Volume (vph)	884
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.62
NOx Emissions (kg)	0.12
VOC Emissions (kg)	0.14

Synchro Report for existing conditions (PM Peak) CSAH 153 & Hayes St

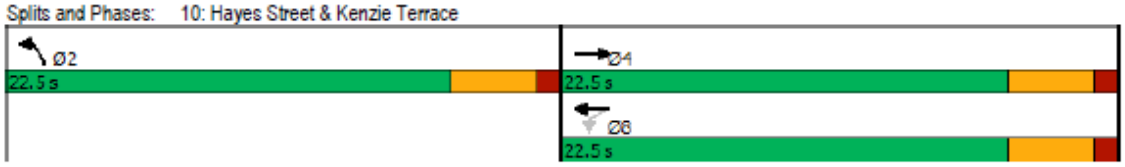
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
10: Hayes Street & Kenzie Terrace

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	365	5	441	10
Future Volume (vph)	365	5	441	10
Turn Type	NA	Perm	NA	Prot
Protected Phases	4		8	2
Permitted Phases		8		
Detector Phase	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
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)	4.5		4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	Max
Act Effct Green (s)	15.0		15.0	18.1
Actuated g/C Ratio	0.36		0.36	0.43
v/c Ratio	0.63		0.74	0.03
Control Delay	16.0		19.3	8.4
Queue Delay	0.0		0.0	0.0
Total Delay	16.0		19.3	8.4
LOS	B		B	A
Approach Delay	16.0		19.3	8.4
Approach LOS	B		B	A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 42.1	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hayes Street & Kenzie Terrace



Synchro Report for proposed conditions (PM Peak) CSAH 153 & Hayes St

County staff are proposing to remove the existing traffic signal at the CSAH 153 and Hayes St intersection (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed conditions.

Synchro Report for existing conditions (PM Peak) CSAH 153 & Stinson Pkwy

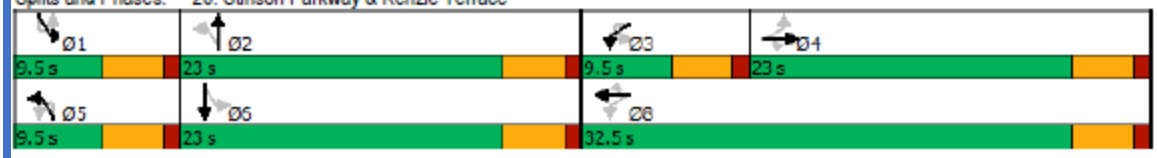
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
20: Stinson Parkway & Kenzie Terrace

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	26	262	112	1	49	226	25	1	153	176	1	31
Future Volume (vph)	26	262	112	1	49	226	25	1	153	176	1	31
Turn Type	Perm	NA	Perm	custom	pm+pt	NA	Perm	custom	pm+pt	NA	custom	pm+pt
Protected Phases		4			3	8			5	2		1
Permitted Phases	4		4	3	8		8	5	2		1	6
Detector Phase	4	4	4	3	3 8	8	8	5	5 2	2	1	1 6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	9.5	9.5
Total Split (s)	23.0	23.0	23.0	9.5	9.5	32.5	32.5	9.5	9.5	23.0	9.5	9.5
Total Split (%)	35.4%	35.4%	35.4%	14.6%	14.6%	50.0%	50.0%	14.6%	14.6%	35.4%	14.6%	14.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5		4.5	4.5		4.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead			Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	Max	None	None
Act Effct Green (s)		14.5	14.5		19.5	19.5	19.5		25.0	23.3		23.2
Actuated g/C Ratio		0.26	0.26		0.35	0.35	0.35		0.45	0.42		0.42
v/c Ratio		0.67	0.22		0.18	0.38	0.04		0.31	0.30		0.07
Control Delay		27.9	2.5		12.7	14.9	0.1		12.9	15.5		10.9
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Total Delay		27.9	2.5		12.7	14.9	0.1		12.9	15.5		10.9
LOS		C	A		B	B	A		B	B		B
Approach Delay		20.7				13.3				14.4		
Approach LOS		C				B				B		

Intersection Summary			
Cycle Length: 65			
Actuated Cycle Length: 55.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Stinson Parkway & Kenzie Terrace



Lane Group	SBT
Lane Configurations	
Traffic Volume (vph)	157
Future Volume (vph)	157
Turn Type	NA
Protected Phases	6
Permitted Phases	
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	23.0
Total Split (%)	35.4%
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Max
Act Effct Green (s)	19.5
Actuated g/C Ratio	0.35
v/c Ratio	0.32
Control Delay	17.5
Queue Delay	0.0
Total Delay	17.5
LOS	B
Approach Delay	16.5
Approach LOS	B

Intersection Summary

Synchro Report for proposed conditions (PM Peak) CSAH 153 & Stinson Pkwy

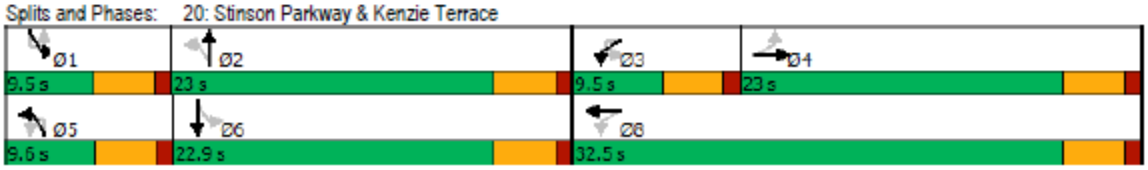
16612 - 2024 Regional Solicitation
Kenzie Terrace - Build PM Peak

11/21/2023
20: Stinson Parkway & Kenzie Terrace

Lane Group	EBL	EBT	WBU	WBL	WBT	NBU	NBL	NBT	SBU	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	26	262	1	49	226	1	153	176	1	31	157
Future Volume (vph)	26	262	1	49	226	1	153	176	1	31	157
Turn Type	Perm	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA
Protected Phases		4		3	8		5	2		1	6
Permitted Phases	4		3	8		5	2		1	6	
Detector Phase	4	4	3	3 8	8	5	5 2	2	1	1 6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	9.5	22.5	9.5	9.5	22.5	9.5	9.5	22.5
Total Split (s)	23.0	23.0	9.5	9.5	32.5	9.6	9.6	23.0	9.5	9.5	22.9
Total Split (%)	35.4%	35.4%	14.6%	14.6%	50.0%	14.8%	14.8%	35.4%	14.6%	14.6%	35.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5		4.5	4.5		4.5	4.5		4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead		Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Act Effct Green (s)		17.1		22.2	22.2		24.7	22.9		22.8	19.1
Actuated g/C Ratio		0.30		0.38	0.38		0.43	0.40		0.39	0.33
v/c Ratio		0.82		0.19	0.38		0.33	0.32		0.07	0.34
Control Delay		34.4		12.7	14.1		13.7	16.1		11.2	18.3
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay		34.4		12.7	14.1		13.7	16.1		11.2	18.3
LOS		C		B	B		B	B		B	B
Approach Delay		34.4			13.8			15.1			17.3
Approach LOS		C			B			B			B

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 57.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: Stinson Parkway & Kenzie Terrace



Synchro Report for existing conditions (PM Peak) CSAH 153 & Autumn Woods Apartment Access

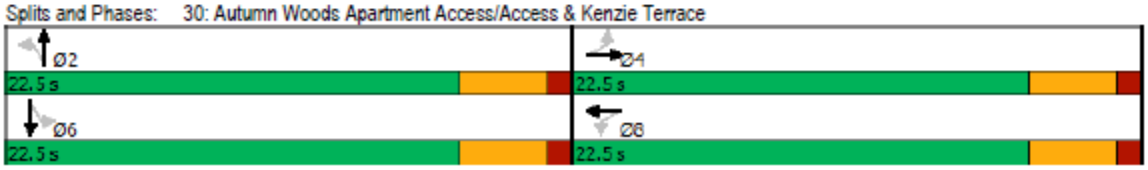
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	6	411	21	396	3	0	8	0
Future Volume (vph)	6	411	21	396	3	0	8	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5		4.5		4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	10.4	10.4	10.4	10.4		18.1		18.1
Actuated g/C Ratio	0.28	0.28	0.28	0.28		0.48		0.48
v/c Ratio	0.03	0.47	0.09	0.45		0.02		0.01
Control Delay	9.5	12.6	10.5	12.4		1.6		1.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	9.5	12.6	10.5	12.4		1.6		1.3
LOS	A	B	B	B		A		A
Approach Delay		12.5		12.3		1.6		1.3
Approach LOS		B		B		A		A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 37.5	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 29.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 30: Autumn Woods Apartment Access/Access & Kenzie Terrace



Synchro Report for proposed conditions (PM Peak) CSAH 153 & Autumn Woods Apartment Access

County staff are proposing to remove the existing traffic signal at the CSAH 153 and the Autumn Woods Apartment Access (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed conditions.

CSAH 153 (Lowry Ave/Kenzie Ter) Phase 3 Reconstruction Project

Synchro Report – Congestion Reduction

Existing conditions (PM Peak)

10: Hayes Street & Kenzie Terrace

Direction	All
Future Volume (vph)	846
Total Delay / Veh (s/v)	18
CO Emissions (kg)	1.18
NOx Emissions (kg)	0.23
VOC Emissions (kg)	0.27

Proposed conditions (PM Peak)

10: Hayes Street & Kenzie Terrace

Direction	All
Future Volume (vph)	846
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.74
NOx Emissions (kg)	0.14
VOC Emissions (kg)	0.17

Existing conditions (PM Peak)

20: Stinson Parkway & Kenzie Terrace

Direction	All
Future Volume (vph)	1293
Total Delay / Veh (s/v)	16
CO Emissions (kg)	1.70
NOx Emissions (kg)	0.33
VOC Emissions (kg)	0.40

Proposed conditions (PM Peak)

20: Stinson Parkway & Kenzie Terrace

Direction	All
Future Volume (vph)	1293
Total Delay / Veh (s/v)	21
CO Emissions (kg)	1.82
NOx Emissions (kg)	0.35
VOC Emissions (kg)	0.42

Existing conditions (PM Peak)

30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Direction	All
Future Volume (vph)	884
Total Delay / Veh (s/v)	12
CO Emissions (kg)	0.98
NOx Emissions (kg)	0.19
VOC Emissions (kg)	0.23

Proposed conditions (PM Peak)

30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Direction	All
Future Volume (vph)	884
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.62
NOx Emissions (kg)	0.12
VOC Emissions (kg)	0.14

Synchro Report for existing conditions (PM Peak) CSAH 153 & Hayes St

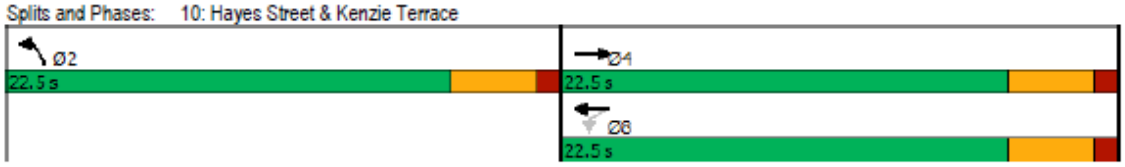
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
10: Hayes Street & Kenzie Terrace

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	365	5	441	10
Future Volume (vph)	365	5	441	10
Turn Type	NA	Perm	NA	Prot
Protected Phases	4		8	2
Permitted Phases		8		
Detector Phase	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
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)	4.5		4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	Max
Act Effct Green (s)	15.0		15.0	18.1
Actuated g/C Ratio	0.36		0.36	0.43
v/c Ratio	0.63		0.74	0.03
Control Delay	16.0		19.3	8.4
Queue Delay	0.0		0.0	0.0
Total Delay	16.0		19.3	8.4
LOS	B		B	A
Approach Delay	16.0		19.3	8.4
Approach LOS	B		B	A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 42.1	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hayes Street & Kenzie Terrace



Synchro Report for proposed conditions (PM Peak) CSAH 153 & Hayes St

County staff are proposing to remove the existing traffic signal at the CSAH 153 and Hayes St intersection (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed conditions.

Synchro Report for existing conditions (PM Peak) CSAH 153 & Stinson Pkwy

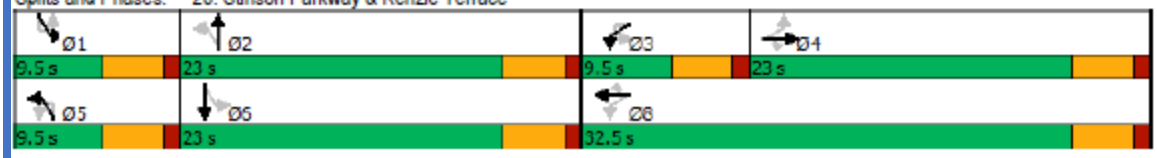
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
20: Stinson Parkway & Kenzie Terrace

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	26	262	112	1	49	226	25	1	153	176	1	31
Future Volume (vph)	26	262	112	1	49	226	25	1	153	176	1	31
Turn Type	Perm	NA	Perm	custom	pm+pt	NA	Perm	custom	pm+pt	NA	custom	pm+pt
Protected Phases		4			3	8			5	2		1
Permitted Phases	4		4	3	8		8	5	2		1	6
Detector Phase	4	4	4	3	3 8	8	8	5	5 2	2	1	1 6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	9.5	9.5
Total Split (s)	23.0	23.0	23.0	9.5	9.5	32.5	32.5	9.5	9.5	23.0	9.5	9.5
Total Split (%)	35.4%	35.4%	35.4%	14.6%	14.6%	50.0%	50.0%	14.6%	14.6%	35.4%	14.6%	14.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5		4.5	4.5		4.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead			Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	Max	None	None
Act Effct Green (s)		14.5	14.5		19.5	19.5	19.5		25.0	23.3		23.2
Actuated g/C Ratio		0.26	0.26		0.35	0.35	0.35		0.45	0.42		0.42
v/c Ratio		0.67	0.22		0.18	0.38	0.04		0.31	0.30		0.07
Control Delay		27.9	2.5		12.7	14.9	0.1		12.9	15.5		10.9
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Total Delay		27.9	2.5		12.7	14.9	0.1		12.9	15.5		10.9
LOS		C	A		B	B	A		B	B		B
Approach Delay		20.7				13.3				14.4		
Approach LOS		C				B				B		

Intersection Summary			
Cycle Length: 65			
Actuated Cycle Length: 55.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Stinson Parkway & Kenzie Terrace



Lane Group	SBT
Lane Configurations	
Traffic Volume (vph)	157
Future Volume (vph)	157
Turn Type	NA
Protected Phases	6
Permitted Phases	
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	23.0
Total Split (%)	35.4%
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Max
Act Effct Green (s)	19.5
Actuated g/C Ratio	0.35
v/c Ratio	0.32
Control Delay	17.5
Queue Delay	0.0
Total Delay	17.5
LOS	B
Approach Delay	16.5
Approach LOS	B

Intersection Summary

Synchro Report for proposed conditions (PM Peak) CSAH 153 & Stinson Pkwy

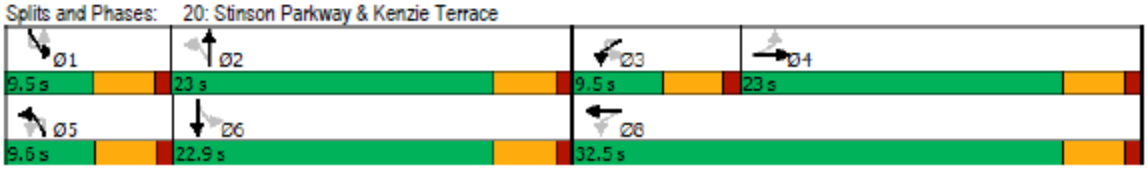
16612 - 2024 Regional Solicitation
Kenzie Terrace - Build PM Peak

11/21/2023
20: Stinson Parkway & Kenzie Terrace

Lane Group	EBL	EBT	WBU	WBL	WBT	NBU	NBL	NBT	SBU	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	26	262	1	49	226	1	153	176	1	31	157
Future Volume (vph)	26	262	1	49	226	1	153	176	1	31	157
Turn Type	Perm	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA
Protected Phases		4		3	8		5	2		1	6
Permitted Phases	4		3	8		5	2		1	6	
Detector Phase	4	4	3	3 8	8	5	5 2	2	1	1 6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	9.5	22.5	9.5	9.5	22.5	9.5	9.5	22.5
Total Split (s)	23.0	23.0	9.5	9.5	32.5	9.6	9.6	23.0	9.5	9.5	22.9
Total Split (%)	35.4%	35.4%	14.6%	14.6%	50.0%	14.8%	14.8%	35.4%	14.6%	14.6%	35.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5		4.5	4.5		4.5	4.5		4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead		Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Act Effct Green (s)		17.1		22.2	22.2		24.7	22.9		22.8	19.1
Actuated g/C Ratio		0.30		0.38	0.38		0.43	0.40		0.39	0.33
v/c Ratio		0.82		0.19	0.38		0.33	0.32		0.07	0.34
Control Delay		34.4		12.7	14.1		13.7	16.1		11.2	18.3
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay		34.4		12.7	14.1		13.7	16.1		11.2	18.3
LOS		C		B	B		B	B		B	B
Approach Delay		34.4			13.8			15.1			17.3
Approach LOS		C			B			B			B

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 57.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: Stinson Parkway & Kenzie Terrace



Synchro Report for existing conditions (PM Peak) CSAH 153 & Autumn Woods Apartment Access

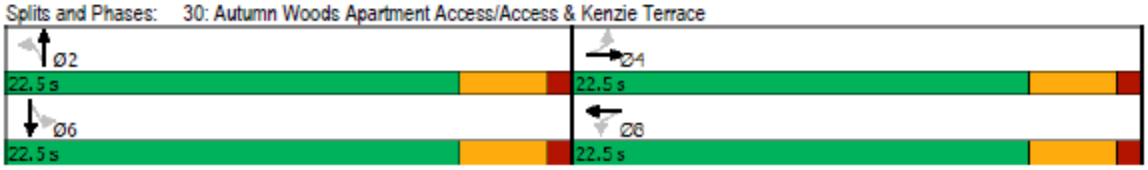
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	6	411	21	396	3	0	8	0
Future Volume (vph)	6	411	21	396	3	0	8	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5		4.5		4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	10.4	10.4	10.4	10.4		18.1		18.1
Actuated g/C Ratio	0.28	0.28	0.28	0.28		0.48		0.48
v/c Ratio	0.03	0.47	0.09	0.45		0.02		0.01
Control Delay	9.5	12.6	10.5	12.4		1.6		1.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	9.5	12.6	10.5	12.4		1.6		1.3
LOS	A	B	B	B		A		A
Approach Delay		12.5		12.3		1.6		1.3
Approach LOS		B		B		A		A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 37.5	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 29.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 30: Autumn Woods Apartment Access/Access & Kenzie Terrace



Synchro Report for proposed conditions (PM Peak) CSAH 153 & Autumn Woods Apartment Access

County staff are proposing to remove the existing traffic signal at the CSAH 153 and the Autumn Woods Apartment Access (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed conditions.

CSAH 153 (Lowry Ave/Kenzie Ter) Phase 3 Reconstruction Project

Synchro Report – Emission Reduction

Existing conditions (PM Peak)

10: Hayes Street & Kenzie Terrace

Direction	All
Future Volume (vph)	846
Total Delay / Veh (s/v)	18
CO Emissions (kg)	1.18
NOx Emissions (kg)	0.23
VOC Emissions (kg)	0.27

Proposed conditions (PM Peak)

10: Hayes Street & Kenzie Terrace

Direction	All
Future Volume (vph)	846
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.74
NOx Emissions (kg)	0.14
VOC Emissions (kg)	0.17

Existing conditions (PM Peak)

20: Stinson Parkway & Kenzie Terrace

Direction	All
Future Volume (vph)	1293
Total Delay / Veh (s/v)	16
CO Emissions (kg)	1.70
NOx Emissions (kg)	0.33
VOC Emissions (kg)	0.40

Proposed conditions (PM Peak)

20: Stinson Parkway & Kenzie Terrace

Direction	All
Future Volume (vph)	1293
Total Delay / Veh (s/v)	21
CO Emissions (kg)	1.82
NOx Emissions (kg)	0.35
VOC Emissions (kg)	0.42

Existing conditions (PM Peak)

30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Direction	All
Future Volume (vph)	884
Total Delay / Veh (s/v)	12
CO Emissions (kg)	0.98
NOx Emissions (kg)	0.19
VOC Emissions (kg)	0.23

Proposed conditions (PM Peak)

30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Direction	All
Future Volume (vph)	884
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.62
NOx Emissions (kg)	0.12
VOC Emissions (kg)	0.14

Synchro Report for existing conditions (PM Peak) CSAH 153 & Hayes St

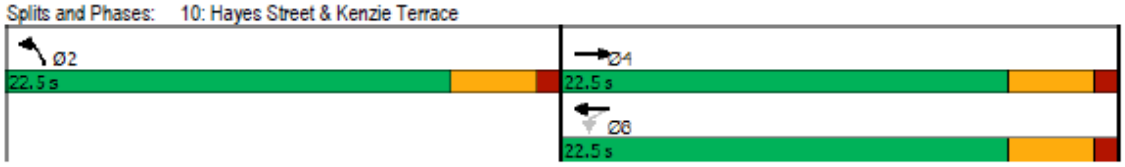
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
10: Hayes Street & Kenzie Terrace

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	365	5	441	10
Future Volume (vph)	365	5	441	10
Turn Type	NA	Perm	NA	Prot
Protected Phases	4		8	2
Permitted Phases		8		
Detector Phase	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
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)	4.5		4.5	4.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	Max
Act Effct Green (s)	15.0		15.0	18.1
Actuated g/C Ratio	0.36		0.36	0.43
v/c Ratio	0.63		0.74	0.03
Control Delay	16.0		19.3	8.4
Queue Delay	0.0		0.0	0.0
Total Delay	16.0		19.3	8.4
LOS	B		B	A
Approach Delay	16.0		19.3	8.4
Approach LOS	B		B	A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 42.1	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hayes Street & Kenzie Terrace



Synchro Report for proposed conditions (PM Peak) CSAH 153 & Hayes St

County staff are proposing to remove the existing traffic signal at the CSAH 153 and Hayes St intersection (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed conditions.

Synchro Report for existing conditions (PM Peak) CSAH 153 & Stinson Pkwy

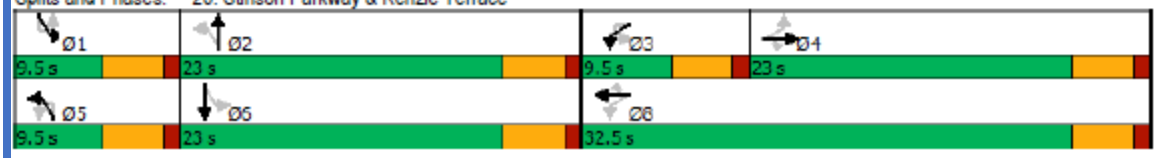
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
20: Stinson Parkway & Kenzie Terrace

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	26	262	112	1	49	226	25	1	153	176	1	31
Future Volume (vph)	26	262	112	1	49	226	25	1	153	176	1	31
Turn Type	Perm	NA	Perm	custom	pm+pt	NA	Perm	custom	pm+pt	NA	custom	pm+pt
Protected Phases		4			3	8			5	2		1
Permitted Phases	4		4	3	8		8	5	2		1	6
Detector Phase	4	4	4	3	3 8	8	8	5	5 2	2	1	1 6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	9.5	9.5
Total Split (s)	23.0	23.0	23.0	9.5	9.5	32.5	32.5	9.5	9.5	23.0	9.5	9.5
Total Split (%)	35.4%	35.4%	35.4%	14.6%	14.6%	50.0%	50.0%	14.6%	14.6%	35.4%	14.6%	14.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5		4.5	4.5		4.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead			Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	Max	None	None
Act Effct Green (s)		14.5	14.5		19.5	19.5	19.5		25.0	23.3		23.2
Actuated g/C Ratio		0.26	0.26		0.35	0.35	0.35		0.45	0.42		0.42
v/c Ratio		0.67	0.22		0.18	0.38	0.04		0.31	0.30		0.07
Control Delay		27.9	2.5		12.7	14.9	0.1		12.9	15.5		10.9
Queue Delay		0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Total Delay		27.9	2.5		12.7	14.9	0.1		12.9	15.5		10.9
LOS		C	A		B	B	A		B	B		B
Approach Delay		20.7				13.3				14.4		
Approach LOS		C				B				B		

Intersection Summary			
Cycle Length: 65			
Actuated Cycle Length: 55.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Stinson Parkway & Kenzie Terrace



Lane Group	SBT
Lane Configurations	
Traffic Volume (vph)	157
Future Volume (vph)	157
Turn Type	NA
Protected Phases	6
Permitted Phases	
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	23.0
Total Split (%)	35.4%
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Max
Act Effct Green (s)	19.5
Actuated g/C Ratio	0.35
v/c Ratio	0.32
Control Delay	17.5
Queue Delay	0.0
Total Delay	17.5
LOS	B
Approach Delay	16.5
Approach LOS	B

Intersection Summary

Synchro Report for proposed conditions (PM Peak) CSAH 153 & Stinson Pkwy

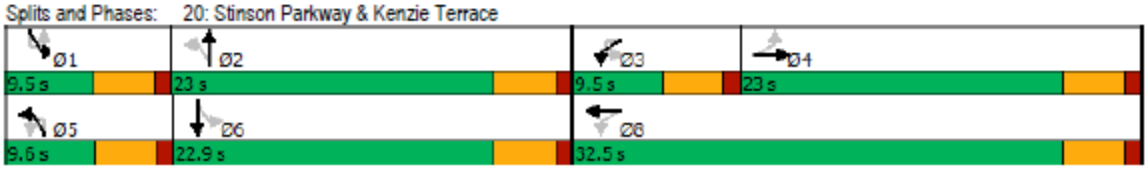
16612 - 2024 Regional Solicitation
Kenzie Terrace - Build PM Peak

11/21/2023
20: Stinson Parkway & Kenzie Terrace

Lane Group	EBL	EBT	WBU	WBL	WBT	NBU	NBL	NBT	SBU	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	26	262	1	49	226	1	153	176	1	31	157
Future Volume (vph)	26	262	1	49	226	1	153	176	1	31	157
Turn Type	Perm	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA
Protected Phases		4		3	8		5	2		1	6
Permitted Phases	4		3	8		5	2		1	6	
Detector Phase	4	4	3	3 8	8	5	5 2	2	1	1 6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	9.5	22.5	9.5	9.5	22.5	9.5	9.5	22.5
Total Split (s)	23.0	23.0	9.5	9.5	32.5	9.6	9.6	23.0	9.5	9.5	22.9
Total Split (%)	35.4%	35.4%	14.6%	14.6%	50.0%	14.8%	14.8%	35.4%	14.6%	14.6%	35.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5		4.5	4.5		4.5	4.5		4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead		Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Act Effct Green (s)		17.1		22.2	22.2		24.7	22.9		22.8	19.1
Actuated g/C Ratio		0.30		0.38	0.38		0.43	0.40		0.39	0.33
v/c Ratio		0.82		0.19	0.38		0.33	0.32		0.07	0.34
Control Delay		34.4		12.7	14.1		13.7	16.1		11.2	18.3
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay		34.4		12.7	14.1		13.7	16.1		11.2	18.3
LOS		C		B	B		B	B		B	B
Approach Delay		34.4			13.8			15.1			17.3
Approach LOS		C			B			B			B

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 57.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: Stinson Parkway & Kenzie Terrace



Synchro Report for existing conditions (PM Peak) CSAH 153 & Autumn Woods Apartment Access

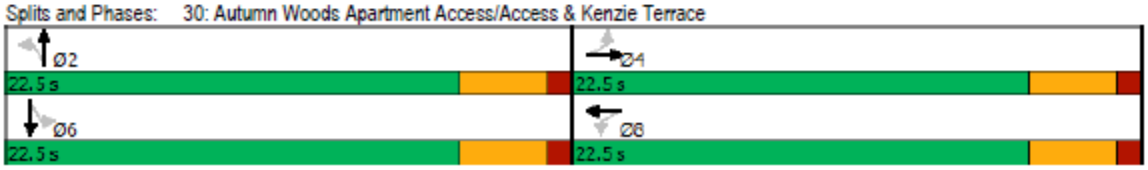
16612 - 2024 Regional Solicitation
Kenzie Terrace - Exisitng PM Peak

11/21/2023
30: Autumn Woods Apartment Access/Access & Kenzie Terrace

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	6	411	21	396	3	0	8	0
Future Volume (vph)	6	411	21	396	3	0	8	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5		4.5		4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	10.4	10.4	10.4	10.4		18.1		18.1
Actuated g/C Ratio	0.28	0.28	0.28	0.28		0.48		0.48
v/c Ratio	0.03	0.47	0.09	0.45		0.02		0.01
Control Delay	9.5	12.6	10.5	12.4		1.6		1.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	9.5	12.6	10.5	12.4		1.6		1.3
LOS	A	B	B	B		A		A
Approach Delay		12.5		12.3		1.6		1.3
Approach LOS		B		B		A		A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 37.5	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 29.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 30: Autumn Woods Apartment Access/Access & Kenzie Terrace



Synchro Report for proposed conditions (PM Peak) CSAH 153 & Autumn Woods Apartment Access

County staff are proposing to remove the existing traffic signal at the CSAH 153 and the Autumn Woods Apartment Access (pending further evaluation and local approval). Therefore, there are no signal timing plans for the proposed conditions.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route CSAH 153 **District** Metro **County** Hennepin County

Begin RP 4.03 **End RP** 4.10 **Miles** 0.07

Location From 150' East of Johnston St NE to Hayes St NE

B. Project Description

Proposed Work Prohibit on-street parking along both sides and resurface pavement
Introduce multi-use trail facility and improve pedestrian crossings

Project Cost* $13,090,000 **Installation Year** 2028

Project Service Life 20 years **Traffic Growth Factor** 0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

0.85	**Fatal (K) Crashes**	**Reference**	No CMF: Prohibit parking along both sides (100% reduction)
	Serious Injury (A) Crashes		CMF 09300: Resurface Pavement (14.7% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	No CMF: Crashes involving parked vehicles
	Possible Injury (C) Crashes		CMF 09300: RE, SS, LT, RA, OR, & HO
0.00	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	CMF 09250: Introduce multi-use trail facility (25% reduction)
	Serious Injury (A) Crashes		CMF 01697: Improve pedestrian crossings (25% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 09250: Bike Crashes
	Possible Injury (C) Crashes		CMF 01697: Ped Crashes
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date 1/1/2020 **End Date** 12/31/2022 3 years

Data Source MnCMAT Version 2.0

Crash Severity	No CMF: Parked Vehicles CMF 09300: RE, SS, LT, RA, OR, & HO	CMF 09250: Bike Crashes CMF 01697: Ped Crashes
K crashes	1	0
A crashes	0	0
B crashes	0	0
C crashes	0	0
PDO crashes	1	0

F. Benefit-Cost Calculation

$1,621,671	**Benefit (present value)**
$13,090,000	**Cost**

B/C Ratio = 0.13

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	$1,600,000
A crashes	$800,000
B crashes	$250,000
C crashes	$130,000
PDO crashes	$15,000

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

Real Discount Rate: 0.8% Default

Traffic Growth Rate: 0.5% **Revised**

Project Service Life: 20 years **Revised**

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.15	0.05	$78,400
A crashes	0.00	0.00	$0
B crashes	0.00	0.00	$0
C crashes	0.00	0.00	$0
PDO crashes	1.00	0.33	$5,000
			$83,400

H. Amortized Benefit

Year	Crash Benefits	Present Value
2028	$83,400	$83,400
2029	$83,817	$83,152
2030	$84,236	$82,904
2031	$84,657	$82,658
2032	$85,081	$82,412
2033	$85,506	$82,166
2034	$85,933	$81,922
2035	$86,363	$81,678
2036	$86,795	$81,435
2037	$87,229	$81,192
2038	$87,665	$80,951
2039	$88,103	$80,710
2040	$88,544	$80,470
2041	$88,987	$80,230
2042	$89,432	$79,991
2043	$89,879	$79,753
2044	$90,328	$79,516
2045	$90,780	$79,279
2046	$91,234	$79,043
2047	$91,690	$78,808
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 = $1,621,671

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 153	**District**	Metro	**County**	Hennepin County
Begin RP	4.10	**End RP**	4.16	**Miles**	0.06
Location	At Hayes St NE				

B. Project Description

Proposed Work Remove unwarranted traffic signal and install raised median

Project Cost*	$13,090,000	**Installation Year**	2028
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 00332: Remove unwarranted signal (25% reduction)
	Serious Injury (A) Crashes		FHWA Desk Ref: Installed raised median (12.5% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 00332: All Crashes
0.66	**Possible Injury (C) Crashes**		FHWA Desk Ref: All Crashes
0.66	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	Not Applicable
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	Not Applicable
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date 1/1/2020 **End Date** 12/31/2022 3 years

Data Source MnCMAT Version 2.0

Crash Severity	CMF 00332: All Crashes FHWA Desk Ref: All Crashes	None
K crashes	0	0
A crashes	0	0
B crashes	0	0
C crashes	1	0
PDO crashes	1	0

F. Benefit-Cost Calculation

$323,298	**Benefit (present value)**
$13,090,000	**Cost**

B/C Ratio = 0.03

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	$1,600,000
A crashes	$800,000
B crashes	$250,000
C crashes	$130,000
PDO crashes	$15,000

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

Real Discount Rate: 0.8% Default

Traffic Growth Rate: 0.5% **Revised**

Project Service Life: 20 years **Revised**

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	0.34	0.11	$14,907
PDO crashes	0.34	0.11	$1,720
			$16,627

H. Amortized Benefit

Year	Crash Benefits	Present Value
2028	$16,627	$16,627
2029	$16,710	$16,577
2030	$16,793	$16,528
2031	$16,877	$16,479
2032	$16,962	$16,430
2033	$17,047	$16,381
2034	$17,132	$16,332
2035	$17,217	$16,283
2036	$17,303	$16,235
2037	$17,390	$16,187
2038	$17,477	$16,138
2039	$17,564	$16,090
2040	$17,652	$16,042
2041	$17,740	$15,995
2042	$17,829	$15,947
2043	$17,918	$15,900
2044	$18,008	$15,852
2045	$18,098	$15,805
2046	$18,188	$15,758
2047	$18,279	$15,711
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 = $323,298

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route CSAH 153 **District** Metro **County** Hennepin County

Begin RP 4.16 **End RP** 4.48 **Miles** 0.32

Location From Hayes St NE to Stinson Blvd

B. Project Description

Proposed Work Prohibit on-street parking along both sides and resurface pavement
Introduce multi-use trail facility and improve pedestrian crossings

Project Cost* $13,090,000 **Installation Year** 2028

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**	No CMF: Prohibit parking along both sides (100% reduction)
	Serious Injury (A) Crashes		CMF 09300: Resurface Pavement (14.7% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	No CMF: Crashes involving parked vehicles
	Possible Injury (C) Crashes		CMF 09300: RE, SS, LT, RA, OR, & HO
0.64	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

0.75	**Fatal (K) Crashes**	**Reference**	CMF 09250: Introduce multi-use trail facility (25% reduction)
	Serious Injury (A) Crashes		CMF 01697: Improve pedestrian crossings (25% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 09250: Bike Crashes
	Possible Injury (C) Crashes		CMF 01697: Ped Crashes
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date 1/1/2020 **End Date** 12/31/2022 3 years

Data Source MnCMAT Version 2.0

Crash Severity	No CMF: Parked Vehicles CMF 09300: RE, SS, LT, RA, OR, & HO	CMF 09250: Bike Crashes CMF 01697: Ped Crashes
K crashes	0	1
A crashes	0	0
B crashes	0	0
C crashes	0	0
PDO crashes	4	0

F. Benefit-Cost Calculation

$2,732,600	**Benefit (present value)**	**B/C Ratio = 0.21**
$13,090,000	**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	$1,600,000
A crashes	$800,000
B crashes	$250,000
C crashes	$130,000
PDO crashes	$15,000

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

Real Discount Rate:	0.8%	Default
Traffic Growth Rate:	0.5%	**Revised**
Project Service Life:	20 years	**Revised**

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.25	0.08	$133,333
A crashes	0.00	0.00	$0
B crashes	0.00	0.00	$0
C crashes	0.00	0.00	$0
PDO crashes	1.44	0.48	$7,200
			$140,533

H. Amortized Benefit

Year	Crash Benefits	Present Value
2028	$140,533	$140,533
2029	$141,236	$140,115
2030	$141,942	$139,698
2031	$142,652	$139,282
2032	$143,365	$138,868
2033	$144,082	$138,454
2034	$144,802	$138,042
2035	$145,526	$137,632
2036	$146,254	$137,222
2037	$146,985	$136,814
2038	$147,720	$136,406
2039	$148,459	$136,000
2040	$149,201	$135,596
2041	$149,947	$135,192
2042	$150,697	$134,790
2043	$151,450	$134,389
2044	$152,208	$133,989
2045	$152,969	$133,590
2046	$153,733	$133,192
2047	$154,502	$132,796
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 = $2,732,600

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 153	**District**	Metro	**County**	Hennepin County
Begin RP	4.48	**End RP**	4.54	**Miles**	0.06
Location	At Stinson Blvd				

B. Project Description

Proposed Work Remove signal pedestals within medians and upgrade to 12" signal lenses

Project Cost*	$13,090,000	**Installation Year**	2028
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**	No CMF ID: Remove pedestals in medians (100% reduction)
	Serious Injury (A) Crashes		CMF 01444: Upgrade to 12" signal lenses (46% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	No CMF ID: Off-road crashes involving pedestals in medians
	Possible Injury (C) Crashes		CMF 01444: RA crashes
0.50	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	Not Applicable
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	Not Applicable
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date 1/1/2020 **End Date** 12/31/2022 3 years

Data Source MnCMAT Version 2.0

Crash Severity	No CMF ID: OR Crashes inv pedestals CMF 01444: RA	None
K crashes	0	0
A crashes	0	0
B crashes	0	0
C crashes	0	0
PDO crashes	2	0

F. Benefit-Cost Calculation

$97,223	**Benefit (present value)**
$13,090,000	**Cost**

B/C Ratio = 0.01

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	$1,600,000
A crashes	$800,000
B crashes	$250,000
C crashes	$130,000
PDO crashes	$15,000

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

Real Discount Rate: 0.8% Default

Traffic Growth Rate: 0.5% **Revised**

Project Service Life: 20 years **Revised**

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	1.00	0.33	$5,000
			$5,000

H. Amortized Benefit

Year	Crash Benefits	Present Value
2028	$5,000	$5,000
2029	$5,025	$4,985
2030	$5,050	$4,970
2031	$5,075	$4,955
2032	$5,101	$4,941
2033	$5,126	$4,926
2034	$5,152	$4,911
2035	$5,178	$4,897
2036	$5,204	$4,882
2037	$5,230	$4,868
2038	$5,256	$4,853
2039	$5,282	$4,839
2040	$5,308	$4,824
2041	$5,335	$4,810
2042	$5,362	$4,796
2043	$5,388	$4,781
2044	$5,415	$4,767
2045	$5,442	$4,753
2046	$5,470	$4,739
2047	$5,497	$4,725
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 = $97,223

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 153	**District**	Metro	**County**	Hennepin County
Begin RP	4.54	**End RP**	4.75	**Miles**	0.21
Location	From Stinson Blvd to Autumn Woods Entrance				

B. Project Description

Proposed Work	Resurface pavement and provide streetscaping via urban design Introduce multi-use trail facility		
Project Cost*	$13,090,000	**Installation Year**	2028
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 09300: Resurface Pavement (14.7% reduction)
	Serious Injury (A) Crashes		No CMF: Provide streetscaping via urban design (5% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 09300: RE, SS, LT, RA, OR, & HO
	Possible Injury (C) Crashes		No CMF: All Crashes
0.81	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	CMF 09250: Introduce multi-use trail facility (25% reduction)
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	CMF 09250: Bike Crashes
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date 1/1/2020 **End Date** 12/31/2022 3 years

Data Source MnCMAT Version 2.0

Crash Severity	CMF 09300: RE, SS, LT, RA, OR, & HO No CMF: All Crashes	CMF 09250: Bike Crashes
K crashes	0	0
A crashes	0	0
B crashes	0	0
C crashes	0	0
PDO crashes	2	0

F. Benefit-Cost Calculation

$36,945	**Benefit (present value)**	**B/C Ratio = 0.01**
$13,090,000	**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	$1,600,000
A crashes	$800,000
B crashes	$250,000
C crashes	$130,000
PDO crashes	$15,000

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

Real Discount Rate: 0.8% Default

Traffic Growth Rate: 0.5% **Revised**

Project Service Life: 20 years **Revised**

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	0.38	0.13	$1,900
			$1,900

H. Amortized Benefit

Year	Crash Benefits	Present Value
2028	$1,900	$1,900
2029	$1,910	$1,894
2030	$1,919	$1,889
2031	$1,929	$1,883
2032	$1,938	$1,877
2033	$1,948	$1,872
2034	$1,958	$1,866
2035	$1,968	$1,861
2036	$1,977	$1,855
2037	$1,987	$1,850
2038	$1,997	$1,844
2039	$2,007	$1,839
2040	$2,017	$1,833
2041	$2,027	$1,828
2042	$2,037	$1,822
2043	$2,048	$1,817
2044	$2,058	$1,812
2045	$2,068	$1,806
2046	$2,078	$1,801
2047	$2,089	$1,795
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 = $36,945

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route CSAH 153 **District** Metro **County** Hennepin County

Begin RP 4.75 **End RP** 4.81 **Miles** 0.06

Location At Autumn Woods Entrance

B. Project Description

Proposed Work Remove unwarranted traffic signal

Project Cost* $13,090,000 **Installation Year** 2028

Project Service Life 20 years **Traffic Growth Factor** 0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

Fatal (K) Crashes

Serious Injury (A) Crashes

Moderate Injury (B) Crashes

Possible Injury (C) Crashes

Property Damage Only Crashes

Reference CMF 00332: Remove unwarranted signal (25% reduction)

Crash Type CMF 00332: All Crashes

www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

Fatal (K) Crashes

Serious Injury (A) Crashes

Moderate Injury (B) Crashes

Possible Injury (C) Crashes

Property Damage Only Crashes

Reference Not Applicable

Crash Type Not Applicable

www.CMFclearinghouse.org

E. Crash Data

Begin Date 1/1/2020 **End Date** 12/31/2022 3 years

Data Source MnCMAT Version 2.0

Crash Severity	CMF 00332: All Crashes	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)**

$13,090,000 **Cost**

B/C Ratio = 0.00

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	$1,600,000
A crashes	$800,000
B crashes	$250,000
C crashes	$130,000
PDO crashes	$15,000

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

Real Discount Rate: 0.8% Default

Traffic Growth Rate: 0.5% **Revised**

Project Service Life: 20 years **Revised**

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

Year	Crash Benefits	Present Value
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
2043	$0	$0
2044	$0	$0
2045	$0	$0
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2047	$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	$0	$0

Total = $0

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	CSAH 153	**District**	Metro	**County**	Hennepin County
Begin RP	4.81	**End RP**	5.00	**Miles**	0.19
Location	From Autumn Woods Entrance to 200' West of St. Anthony Blvd				

B. Project Description

Proposed Work	Resurface pavement and provide streetscaping via urban design Introduce multi-use trail facility		
Project Cost*	$13,090,000	**Installation Year**	2028
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 09300: Resurface Pavement (14.7% reduction)
	Serious Injury (A) Crashes		No CMF: Provide streetscaping via urban design (5% reduction)
	Moderate Injury (B) Crashes	**Crash Type**	CMF 09300: RE, SS, LT, RA, OR, & HO
0.81	**Possible Injury (C) Crashes**		No CMF: All Crashes
0.81	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	CMF 09250: Introduce multi-use trail facility (25% reduction)
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	CMF 09250: Bike Crashes
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date 1/1/2020 **End Date** 12/31/2022 3 years

Data Source MnCMAT Version 2.0

Crash Severity	CMF 09300: RE, SS, LT, RA, OR, & HO No CMF: All Crashes	CMF 09250: Bike Crashes
K crashes	0	0
A crashes	0	0
B crashes	0	0
C crashes	1	0
PDO crashes	4	0

F. Benefit-Cost Calculation

$233,983	**Benefit (present value)**	**B/C Ratio = 0.02**
$13,090,000	**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	$1,600,000
A crashes	$800,000
B crashes	$250,000
C crashes	$130,000
PDO crashes	$15,000

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

Real Discount Rate: 0.8% Default

Traffic Growth Rate: 0.5% **Revised**

Project Service Life: 20 years **Revised**

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	0.19	0.06	$8,233
PDO crashes	0.76	0.25	$3,800
			$12,033

H. Amortized Benefit

Year	Crash Benefits	Present Value
2028	$12,033	$12,033
2029	$12,094	$11,998
2030	$12,154	$11,962
2031	$12,215	$11,926
2032	$12,276	$11,891
2033	$12,337	$11,855
2034	$12,399	$11,820
2035	$12,461	$11,785
2036	$12,523	$11,750
2037	$12,586	$11,715
2038	$12,649	$11,680
2039	$12,712	$11,645
2040	$12,776	$11,611
2041	$12,839	$11,576
2042	$12,904	$11,542
2043	$12,968	$11,507
2044	$13,033	$11,473
2045	$13,098	$11,439
2046	$13,164	$11,405
2047	$13,229	$11,371
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

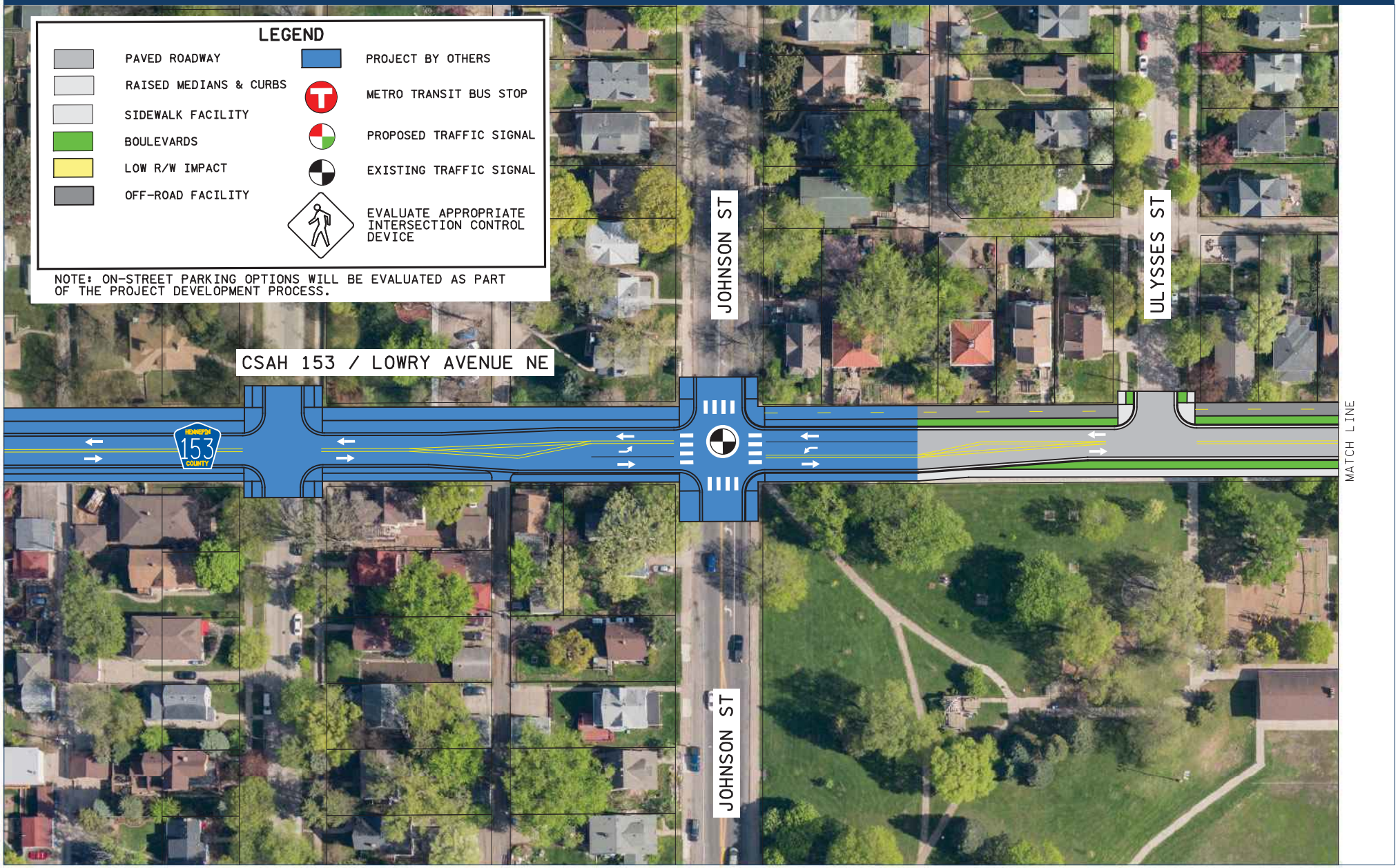
Total = $233,983

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

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Figure 1

Job #16612
11/10/2023
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CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

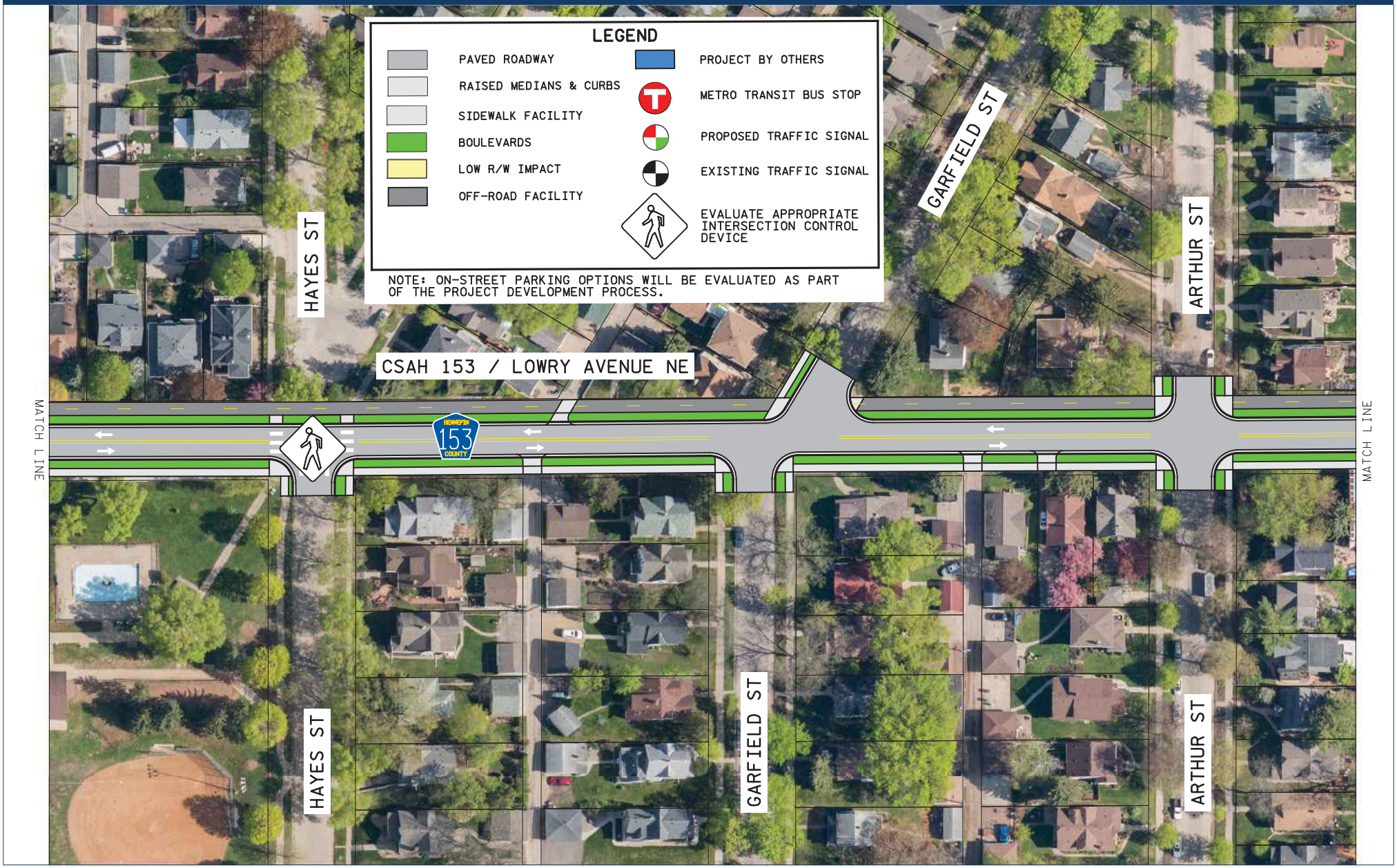

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Figure 2

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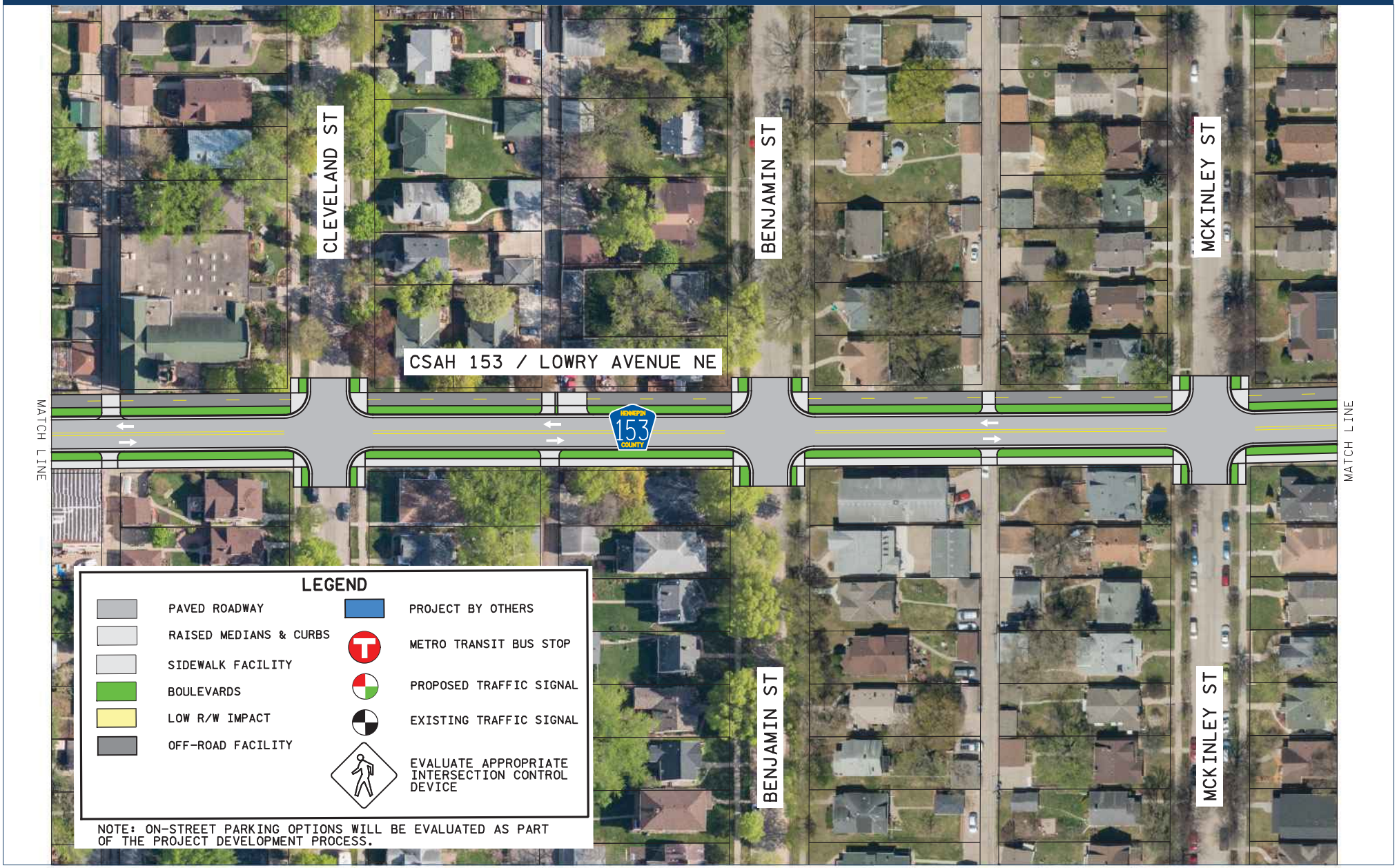
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

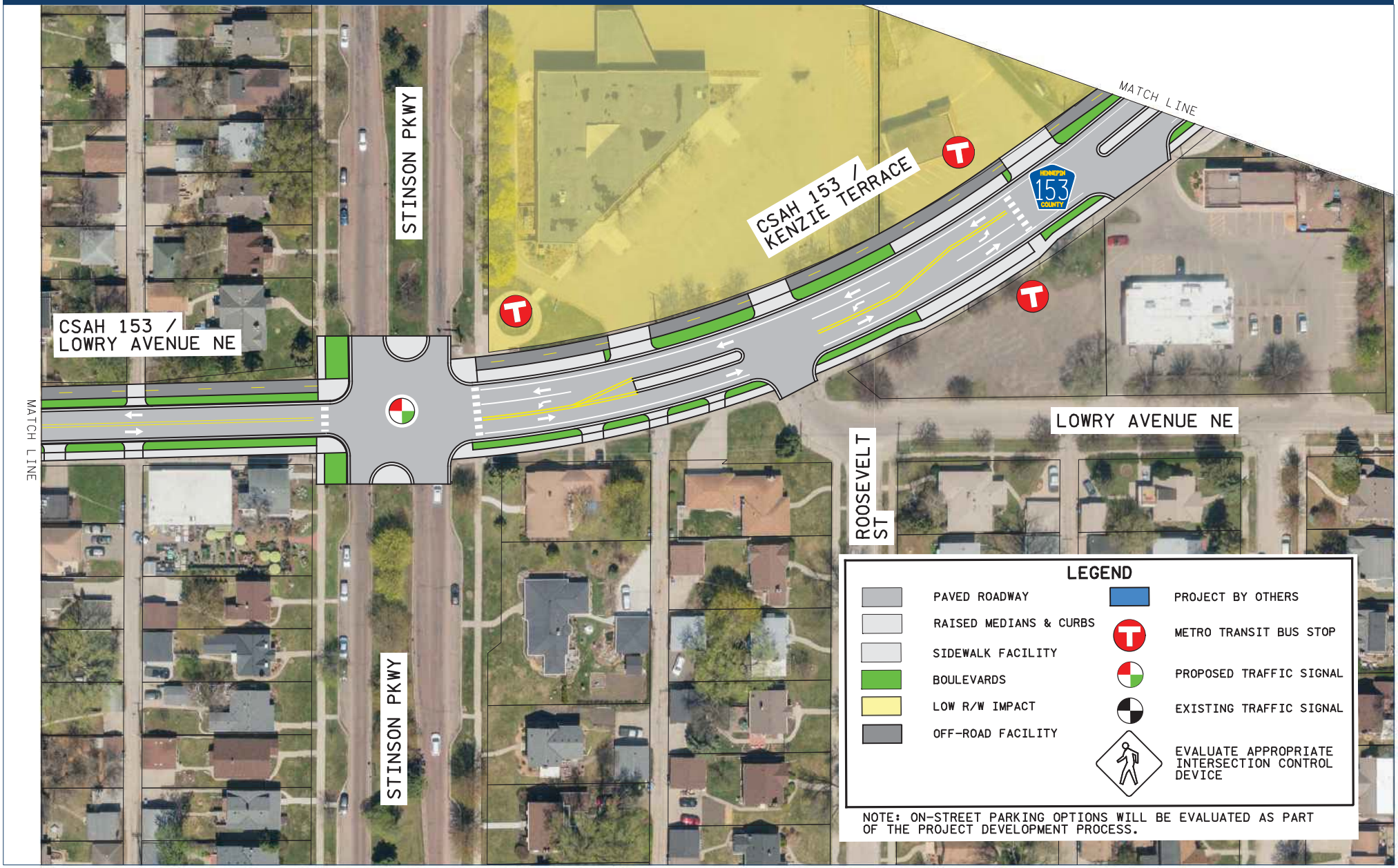

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Figure 4

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CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

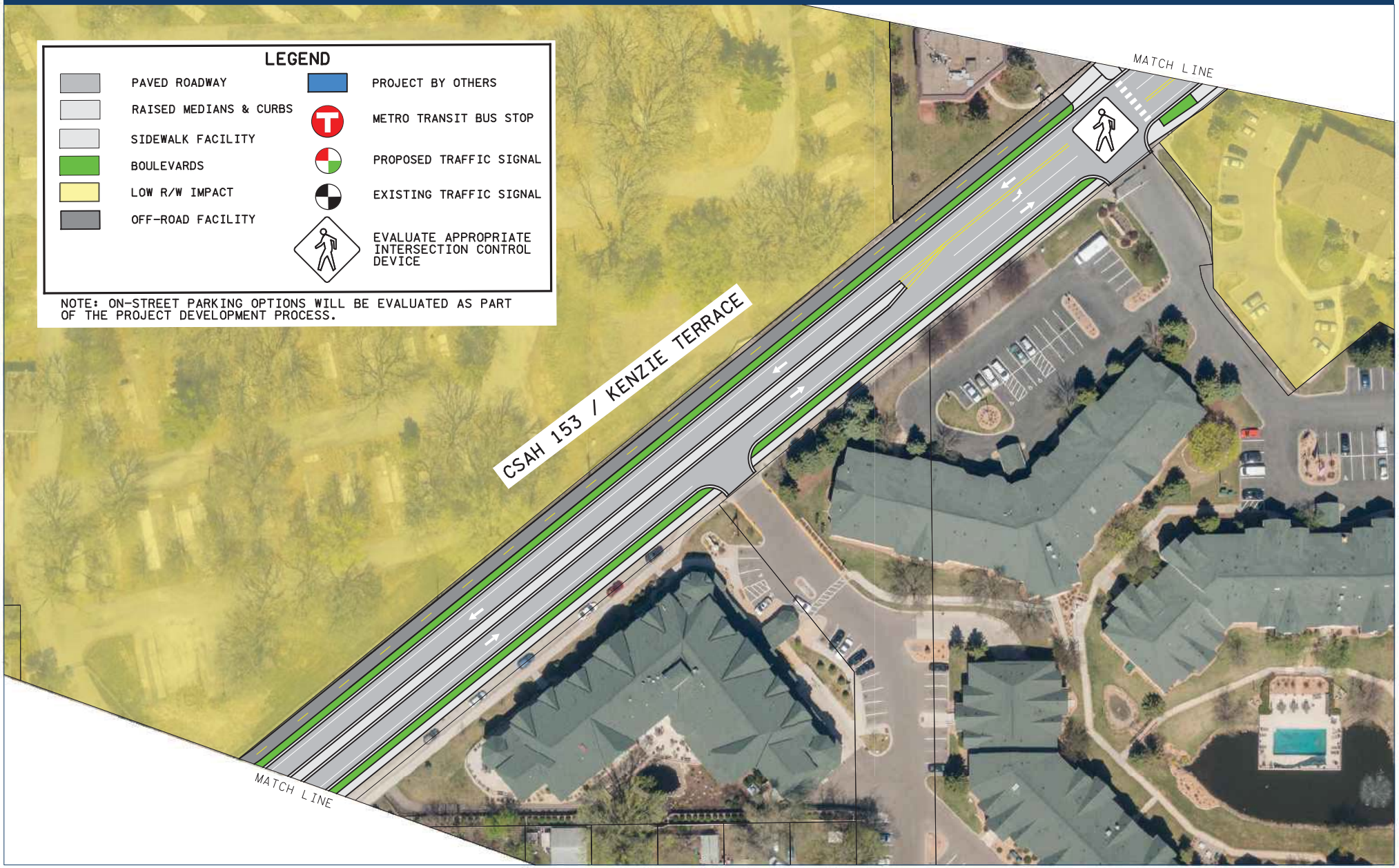

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Figure 5

Job #16612
11/10/2023
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CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

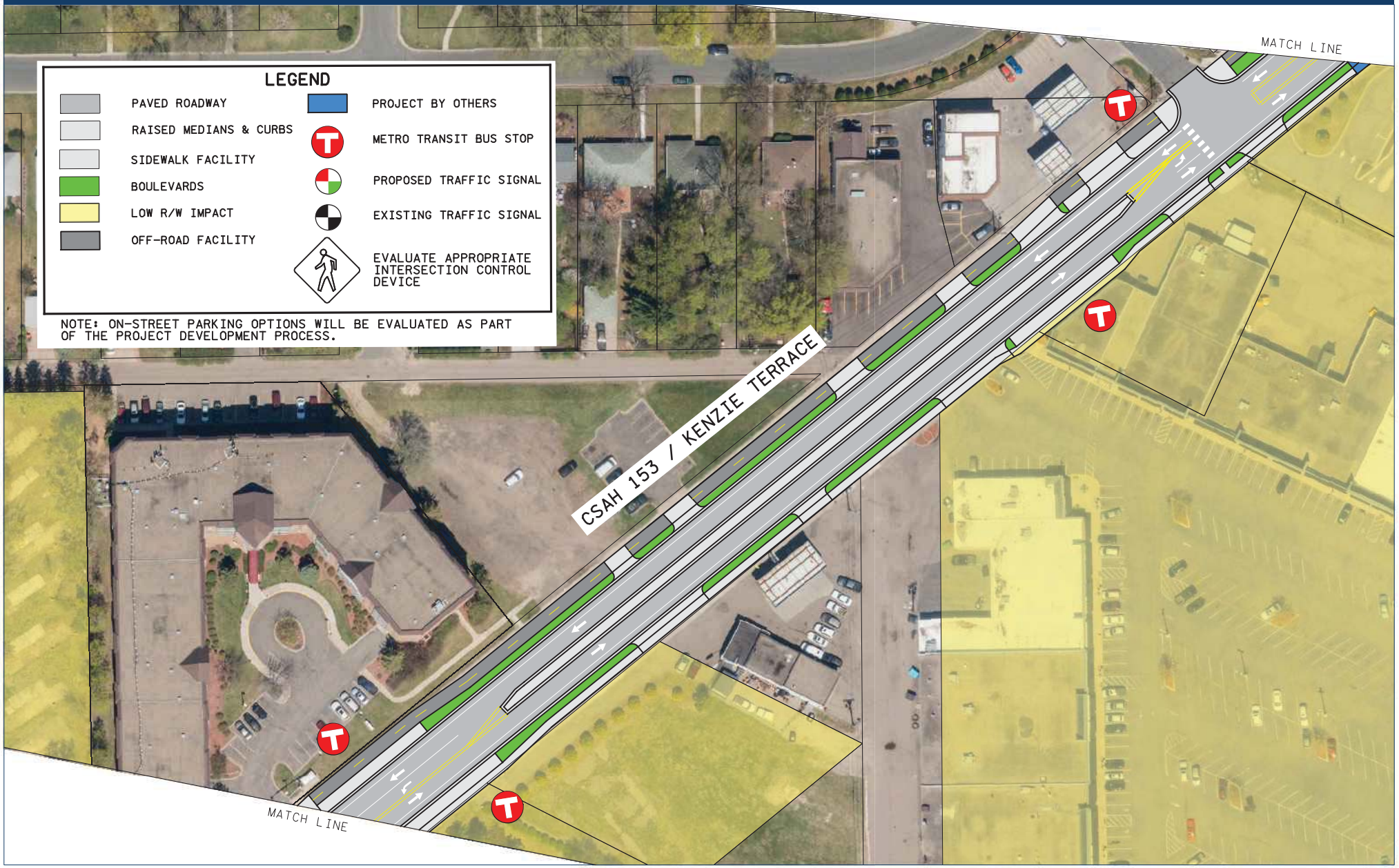

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Figure 6

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CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

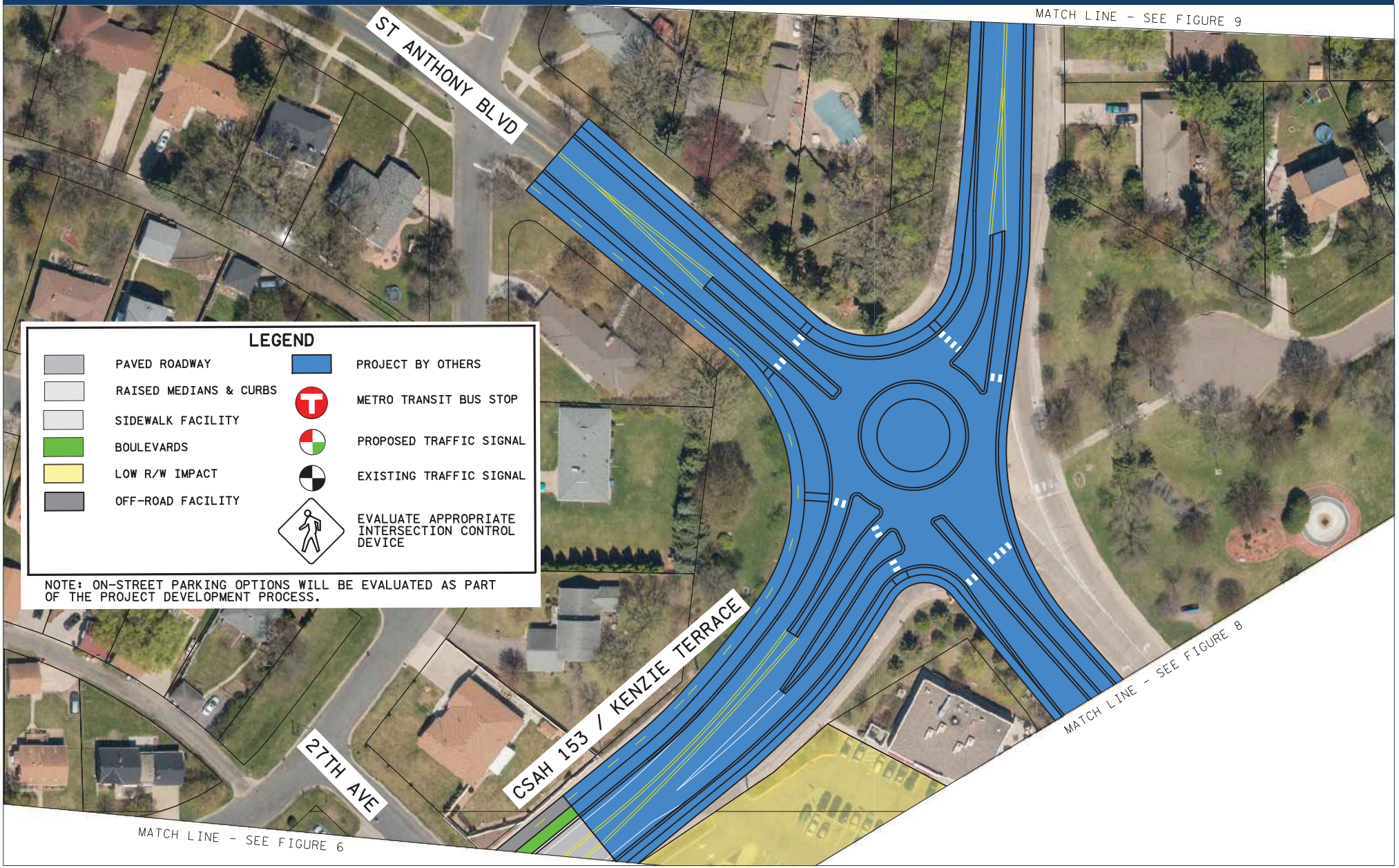

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Figure 7

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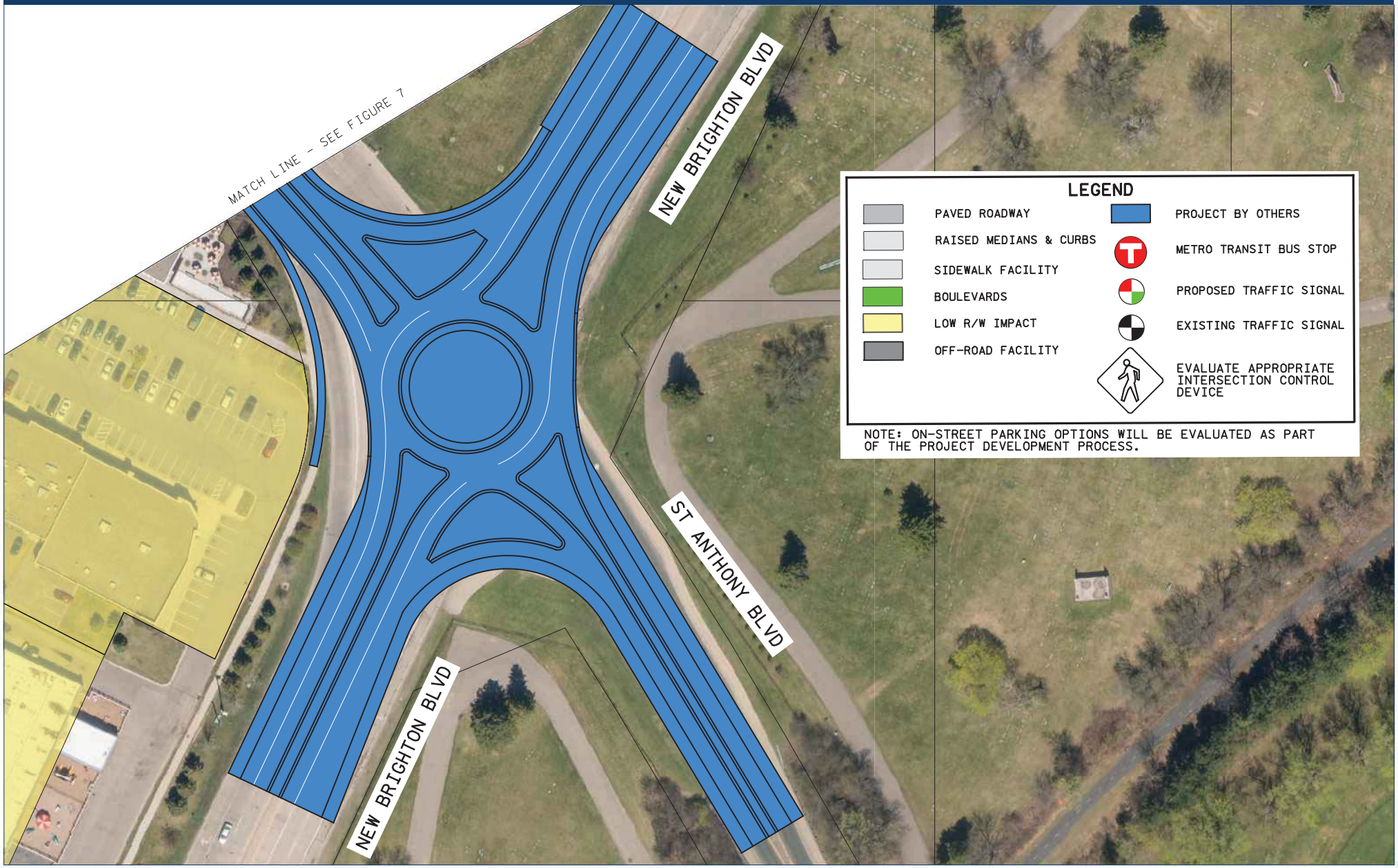
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

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Figure 8

Job #16612
11/10/2023
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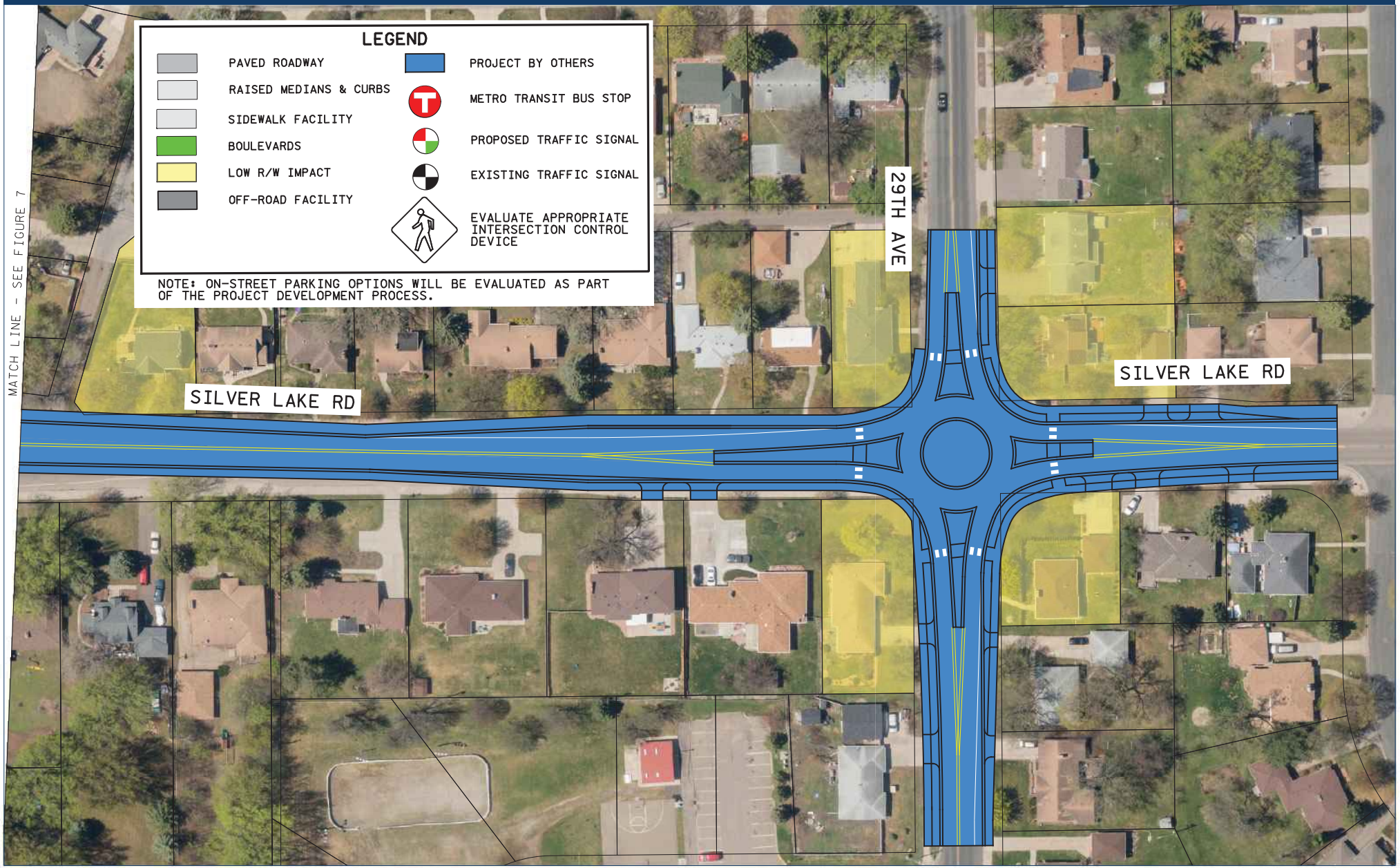
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

Figure 9

Job #16612
11/10/2023
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CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

List of Attachments

1. Project Narrative
2. Project Location Map
3. Existing Condition Photos
4. Potential Typical Sections
5. Potential Concept
6. Hennepin County 2024-2028 Transportation CIP
7. 2040 Forecast Traffic Volumes
8. Disadvantaged Communities and Resources Map
9. Affordable Housing Access Map and Detail Summary
10. Hennepin County Streetlight Analysis
11. Crash Map and Detail Listing
12. Crash Modification Factors
13. Multimodal Connections Map
14. Notice of application Submittal to City of Minneapolis
15. City of St. Anthony Support Letter
16. Minneapolis Park and Recreation Board Support Letter
17. Metro Transit Support Letter
18. Hennepin County and City of Minneapolis Maintenance Agreement

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

HENNEPIN COUNTY
MINNESOTA

Attachment 01 | Project Narrative

Project Name

CSAH 153 (Lowry Ave NE/Kenzie Ter) Phase 3 Reconstruction Project

City(ies)

Minneapolis St. Anthony

Commisioner District(s)

2

Capital Project Number

CP 2141000

Project Category

Roadway Reconstruction

Scoping Manager

KC Atkins

Scoping Form Revision Dates

11/9/2023

Project Summary

Reconstruct Lowry Avenue NE /Kenzie Terrace (CSAH 153) from 150' East of Johnson Street NE to 200' West of St. Anthony Boulevard in the cities of Minneapolis and St. Anthony.

Roadway History

The existing roadway (last reconstructed in 1968) is nearing the end of its useful life and warrants replacement. Routine maintenance activities are no longer cost effective in preserving assets. The west segment, from Johnson Street NE to Stinson Parkway, is especially showing signs of advanced deterioration as the curb has settled; diminishing in its ability to collect and retain water. Although sidewalks are provided along both sides, they do not provide a positive user experience as the sidewalk facilities are located immediately adjacent to the roadway. In addition, the sidewalk facilities along the west side of Lowry Avenue NE (CSAH 153) include a number of obstructions (such as utility poles, fire hydrants, and signal poles) within the walking path. Many pedestrian ramps do not meet current ADA standards, posing challenges for people with limited mobility. Also, minimal pedestrian crossing enhancements (such as curb extensions, raised medians, and beacons) exist along the corridor. Lastly, there are no dedicated facilities for people biking.

Project Description and Benefits

The proposed project will include new pavement, curb, storm water utilities, sidewalk, ADA accommodations, and traffic signals. In recognition of the surrounding land uses, it's anticipated that different typical sections will be selected for the west segment (extending from Johnson Street NE to Stinson Parkway) versus the east segment (extending from Stinson Parkway to St. Anthony Parkway). Further investigation will take place during design to determine the feasibility of dedicated accommodations for people biking; building on engagement efforts completed along Lowry Avenue NE (CSAH 153) to the west. In addition, the existing Hayes Street NE and Autumn Woods Driveway will be evaluated during project development to determine the recommended intersection control device. Lastly, it is anticipated that proven traffic calming strategies (such as medians, curb extensions, and beacons) will be introduced to improve the crossing experience and manage vehicle speeds.

Project Risks & Uncertainities

Additional coordination needed with Metro Transit as Route 32 is included as a planned Arterial Bus Rapid Transit (ABRT) service as part of Network Next.

Project Map

Initial Project Timeline

Scoping:	Q2 2023 - Q4 2024
Design:	Q1 2025 - Q4 2027
R/W Acquisition:	Q1 2026 - Q4 2027
Bid Advertisement:	Q1 2028
Construction:	Q2 2028 - Q4 2029

Project Delivery Responsibilities

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

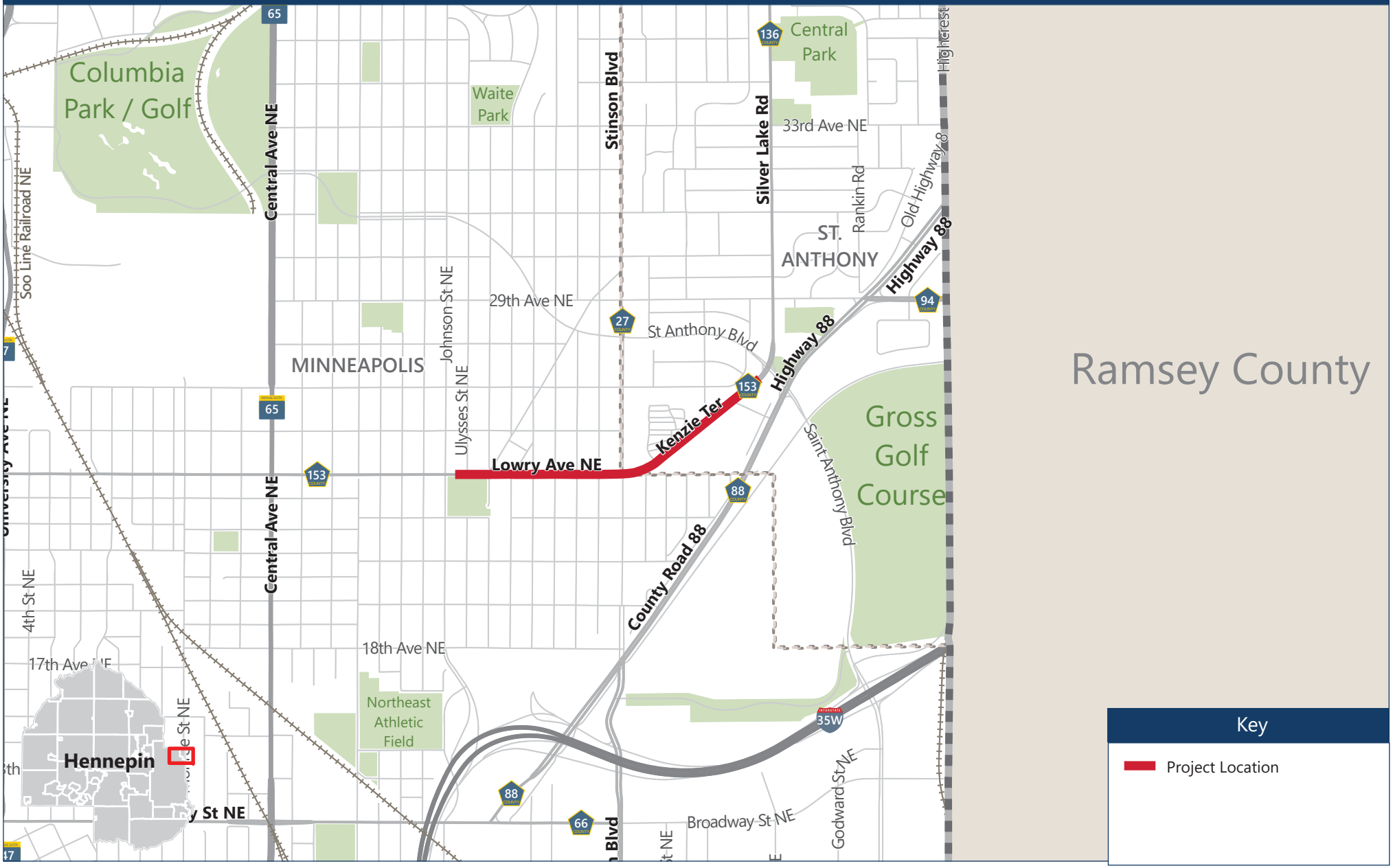
Project Budget -		Project Level
Construction:	$	10,070,000
Cost Estimate Year:		2023
Construction Year:		2028
Annual Inflation Rate:		2.0%
Inflated Construction:	$	11,120,000
Design Services:	$	2,220,000
R/W Acquisition:	$	1,590,000
Other (Utility Burial):	$	-
Construction Services:	$	890,000
Contingency:	$	3,340,000
Total Project Budget:	**$**	**19,160,000**

Funding Notes

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

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 02 | Project Location Map



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.

N

0 0.5 1 Miles

Publication date: 11/2/2023

Data sources (if applicable):

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 03 | Existing Roadway Condition Photos

The intersection of Lowry Ave NE (CSAH 153) and Johnson St NE is pictured above. Ramps along the corridor are not ADA compliant. Insufficient storm water management along the corridor leads to flooding obstructions at intersections.

Sidewalks and pavement are aging and require replacement. There are many obstructions along the corridor for people walking as shown above at Kenzie Terr (CSAH 153) and Stinson Pkwy.

Roadway infrastructure is beyond its useful life and requires replacement.

Aging sidewalk infrastructure making it difficult for people to walk and roll.

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

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 04 | Potential Typical Sections

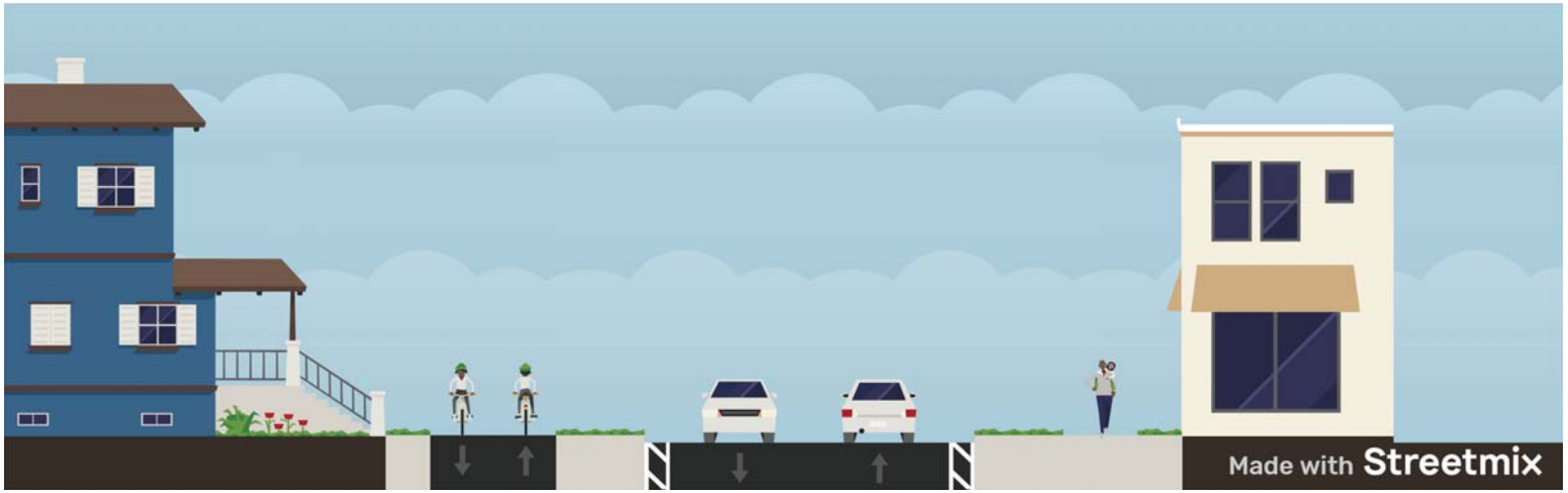


Figure 1 | Potential typical section along CSAH 153 (Lowry Avenue NE) from 50' East of Johnson Street NE to Stinson Parkway

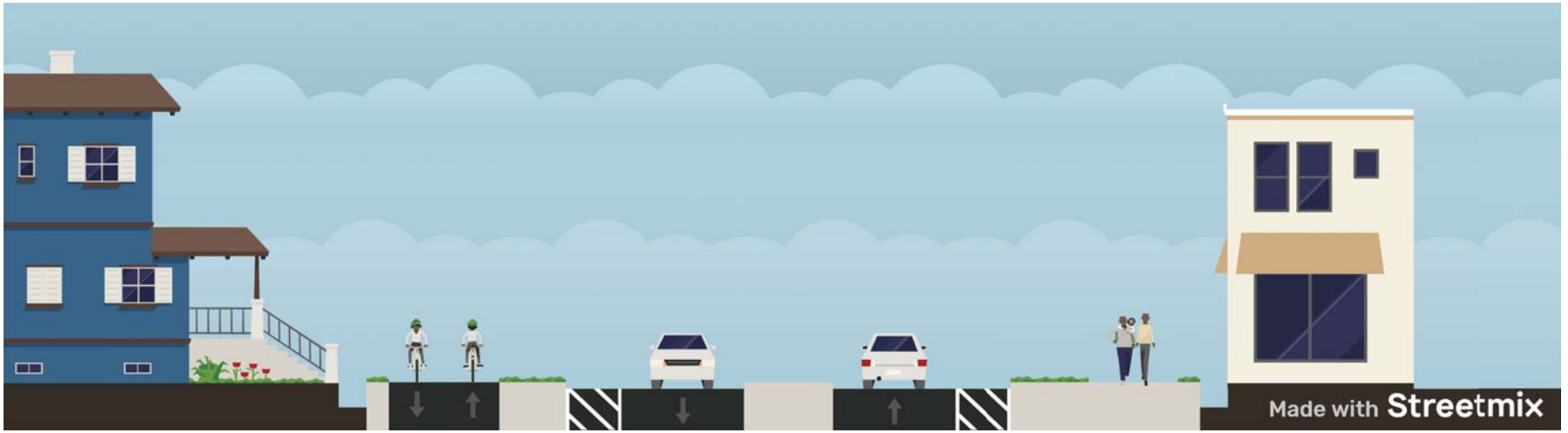
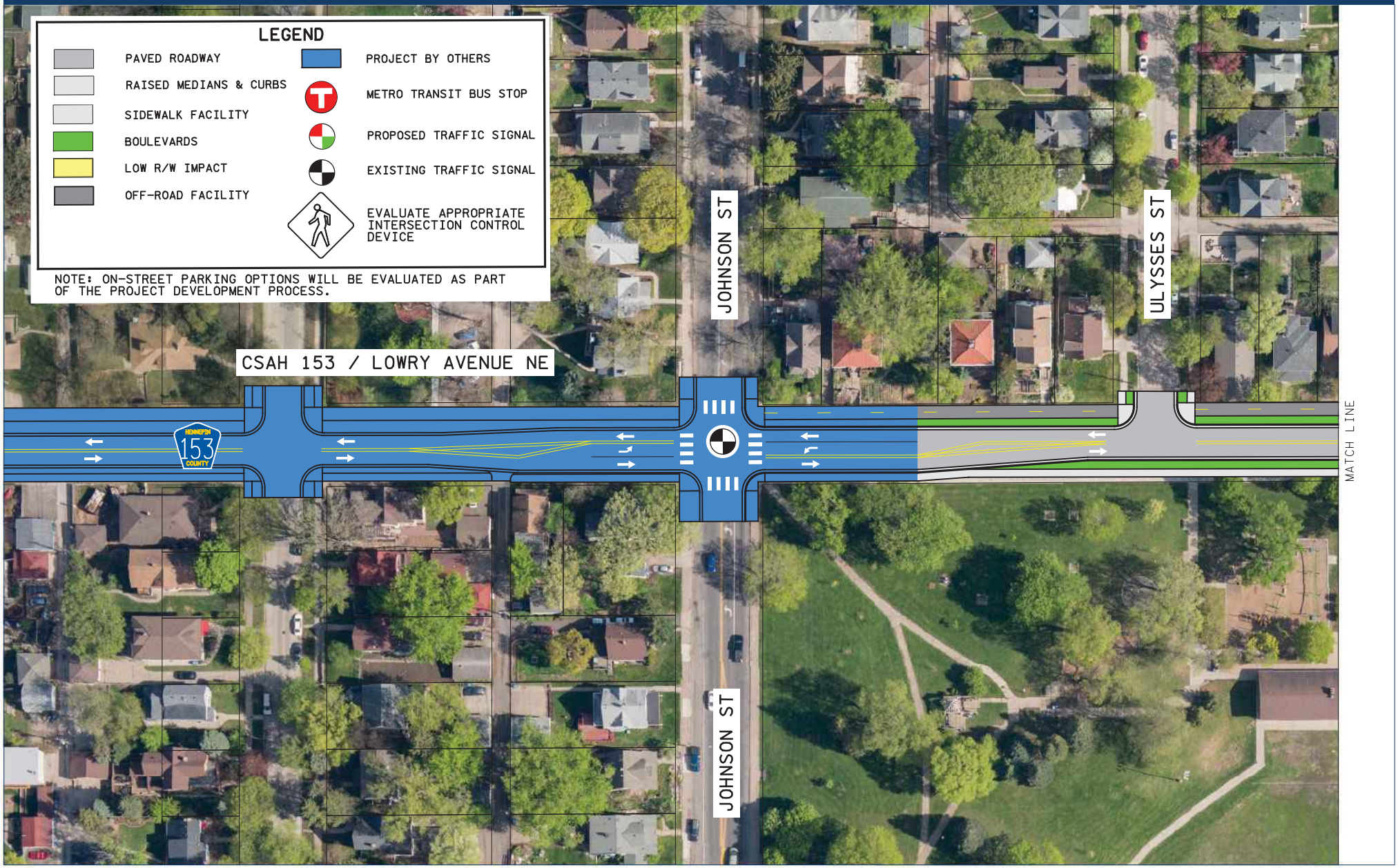


Figure 2 | Potential typical section along CSAH 153 (Kenzie Terrace) from Stinson Parkway to 200' West of St. Anthony Boulevard

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

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Figure 1

Job #16612
11/10/2023
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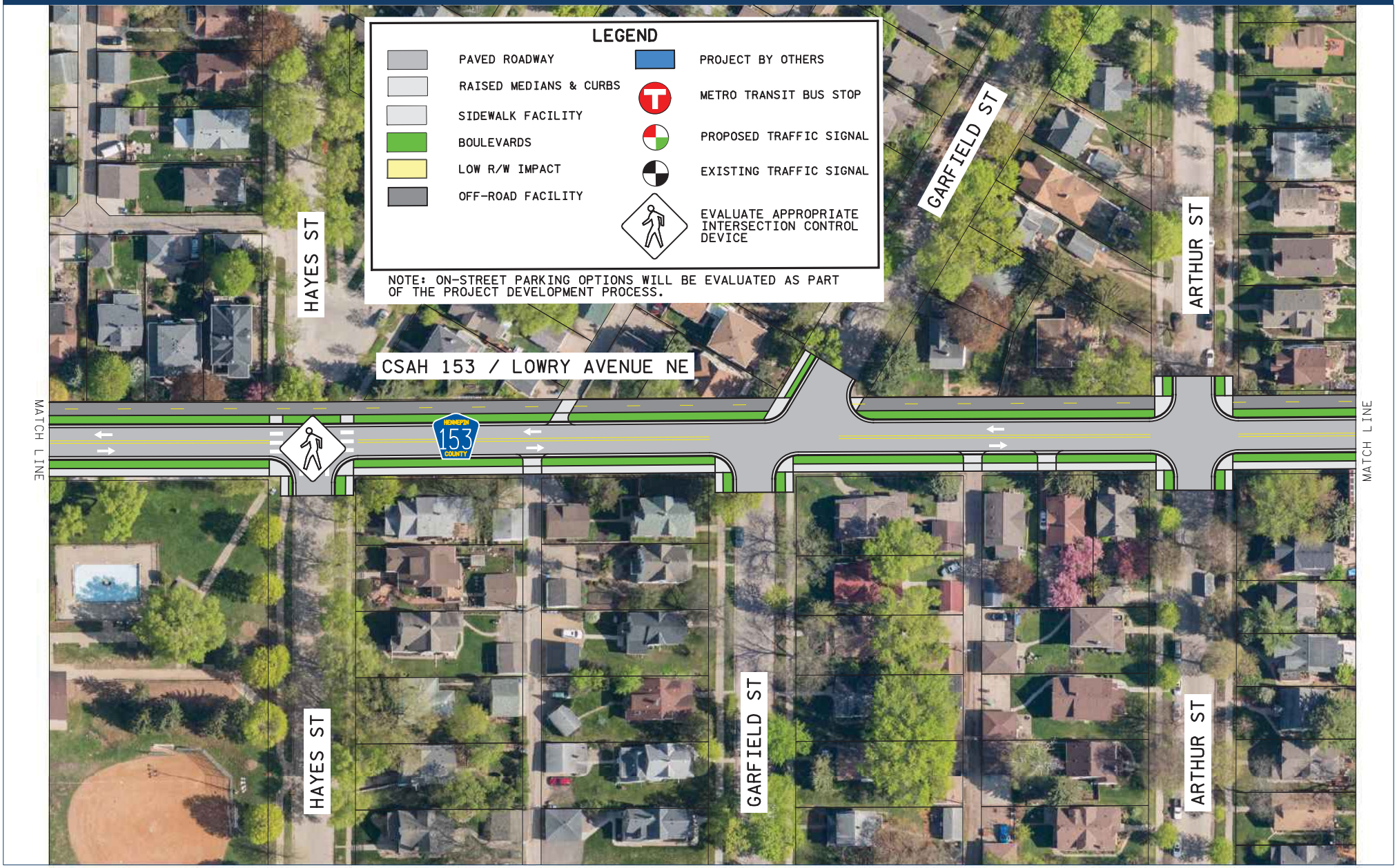
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

Figure 2

Job #16612
11/10/2023
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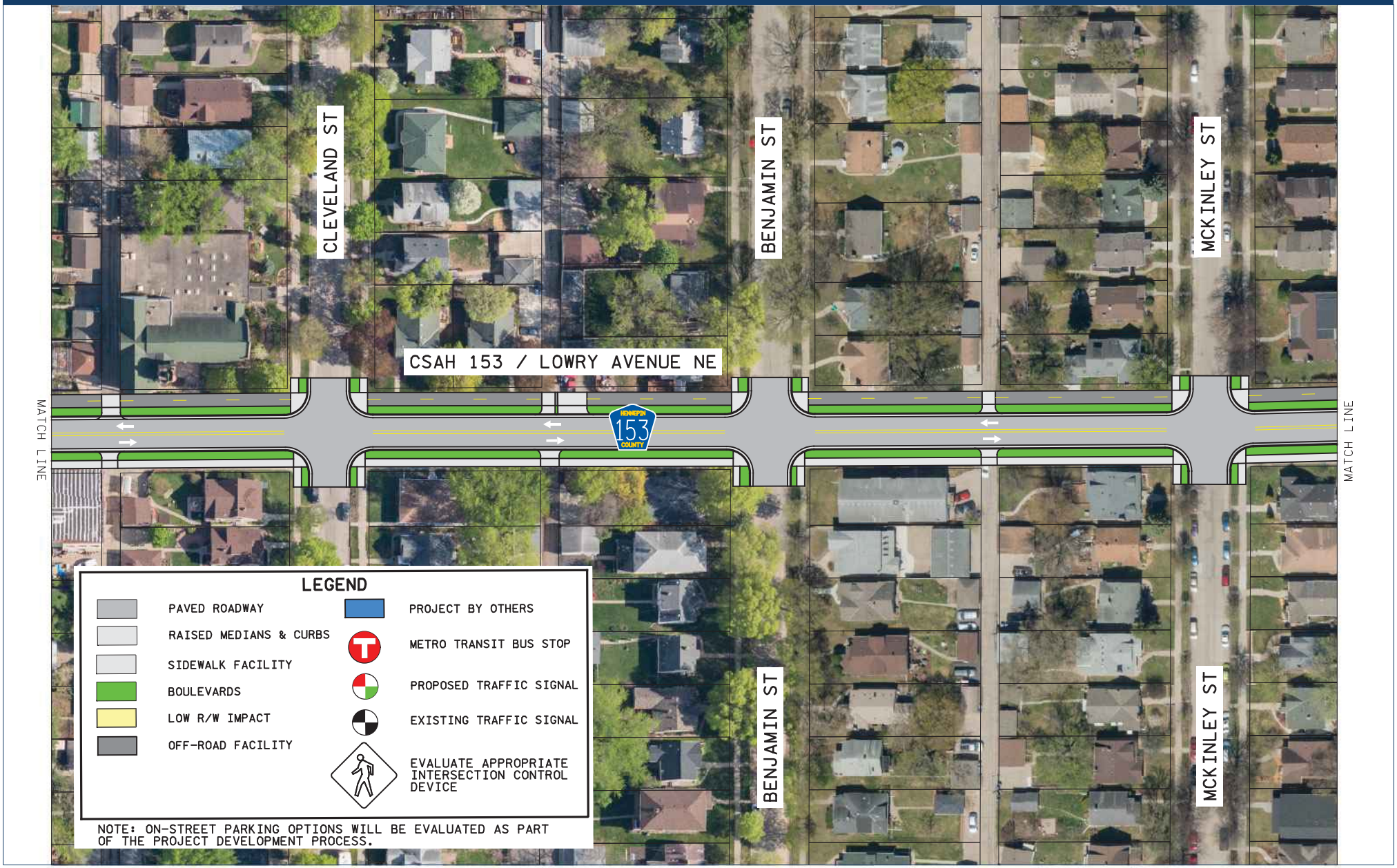
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

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Figure 3

Job #16612
11/10/2023
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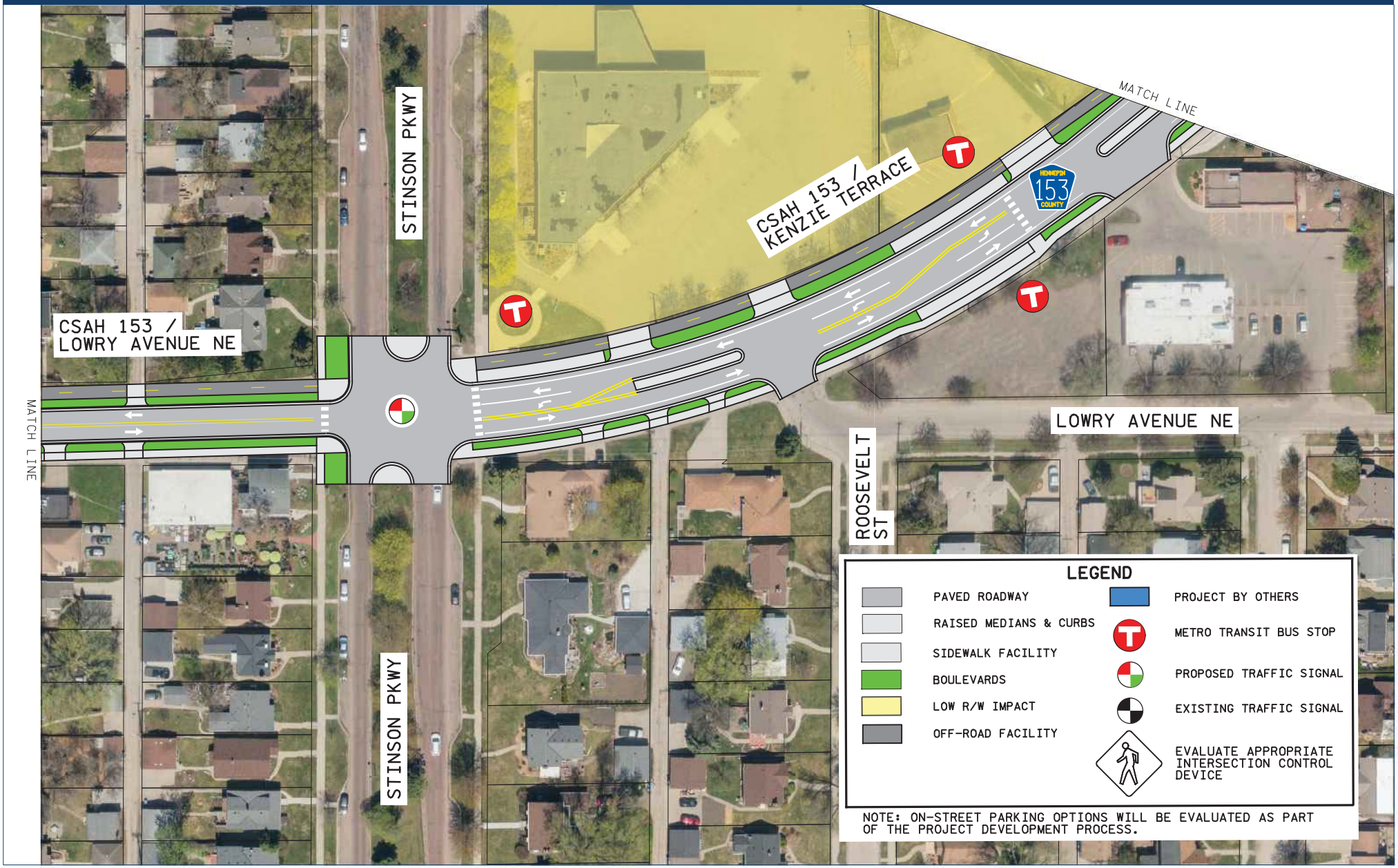
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

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Figure 4

Job #16612
11/10/2023
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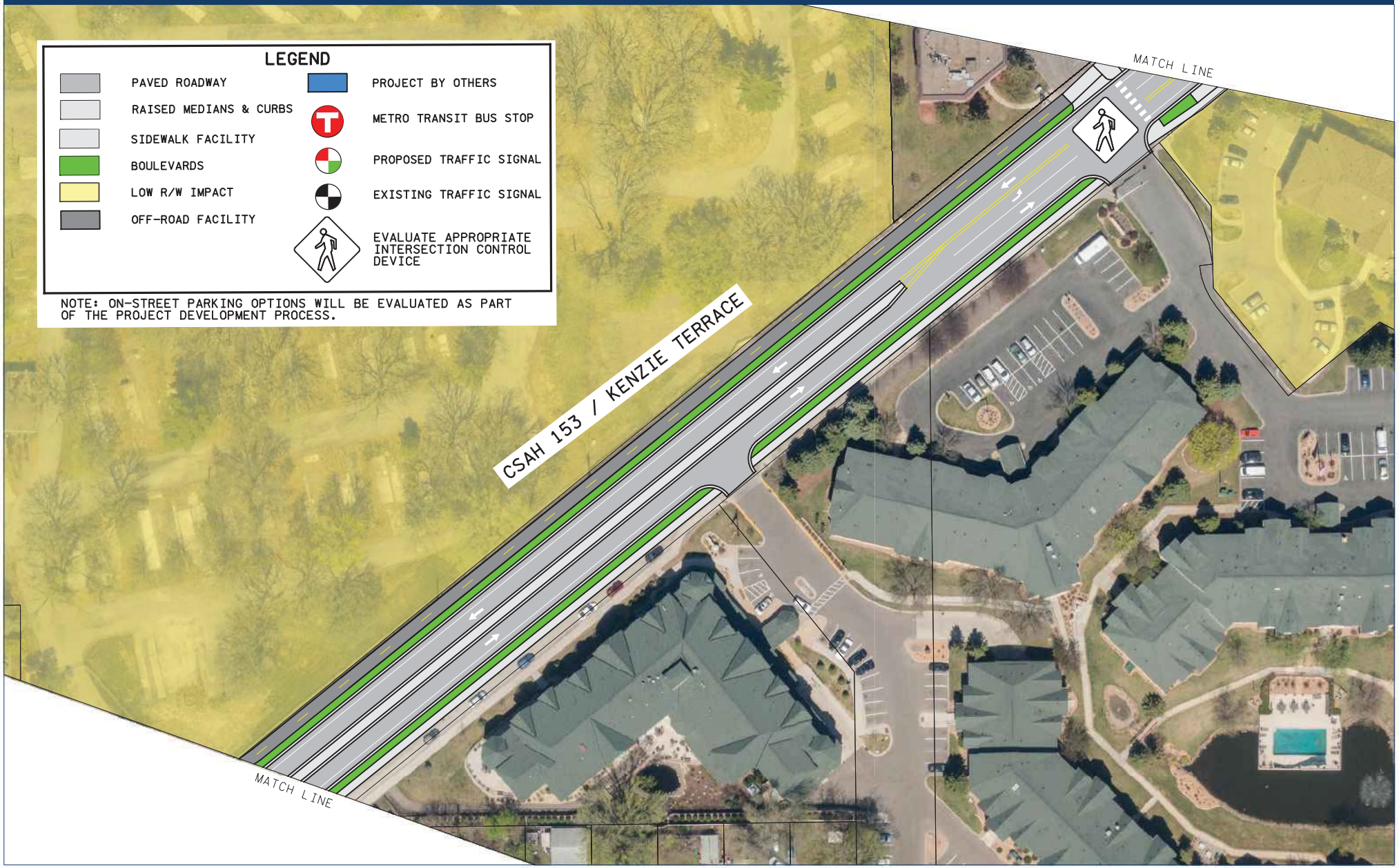
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

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Figure 5

Job #16612
11/10/2023
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CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA

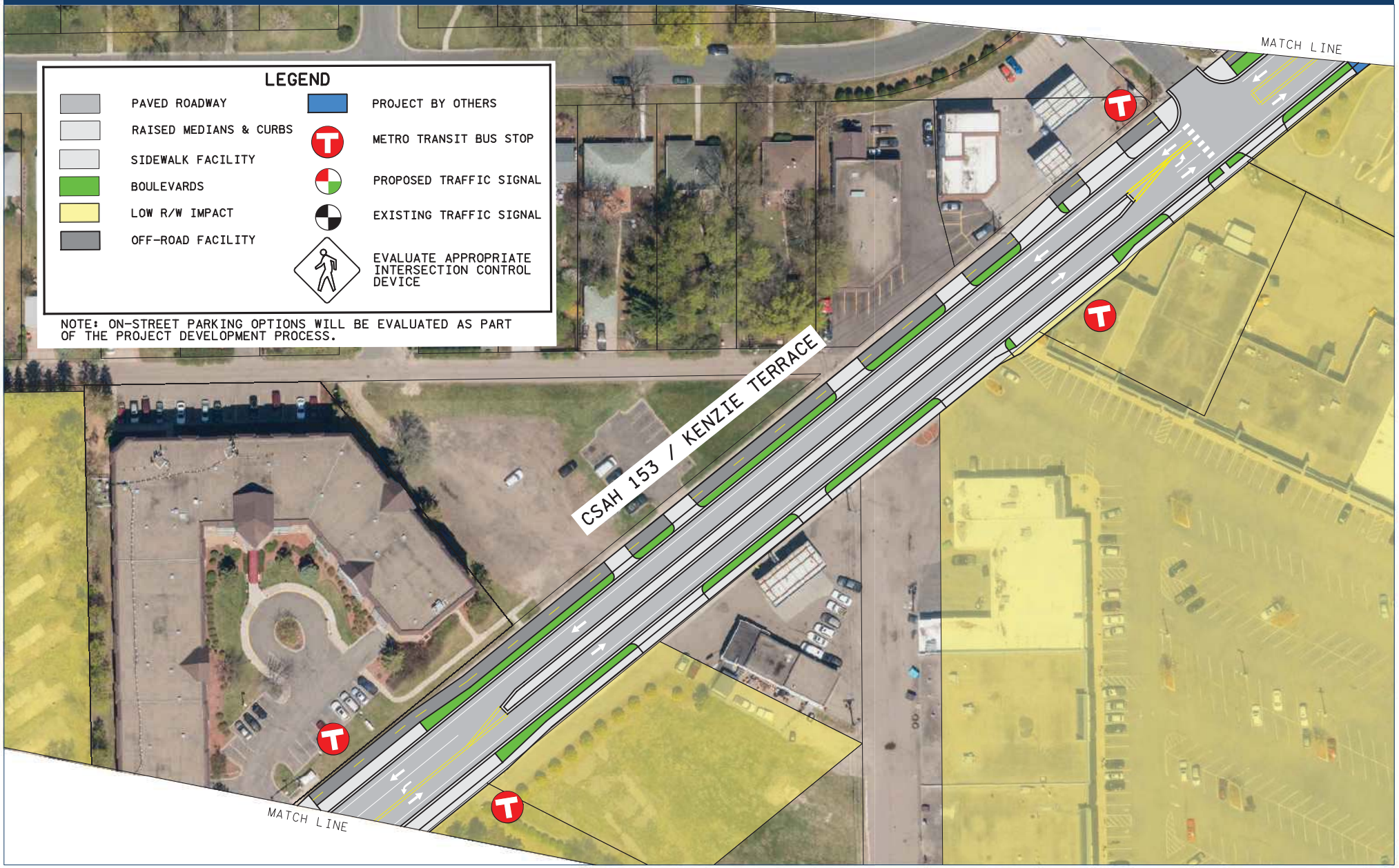

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Figure 6

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11/10/2023
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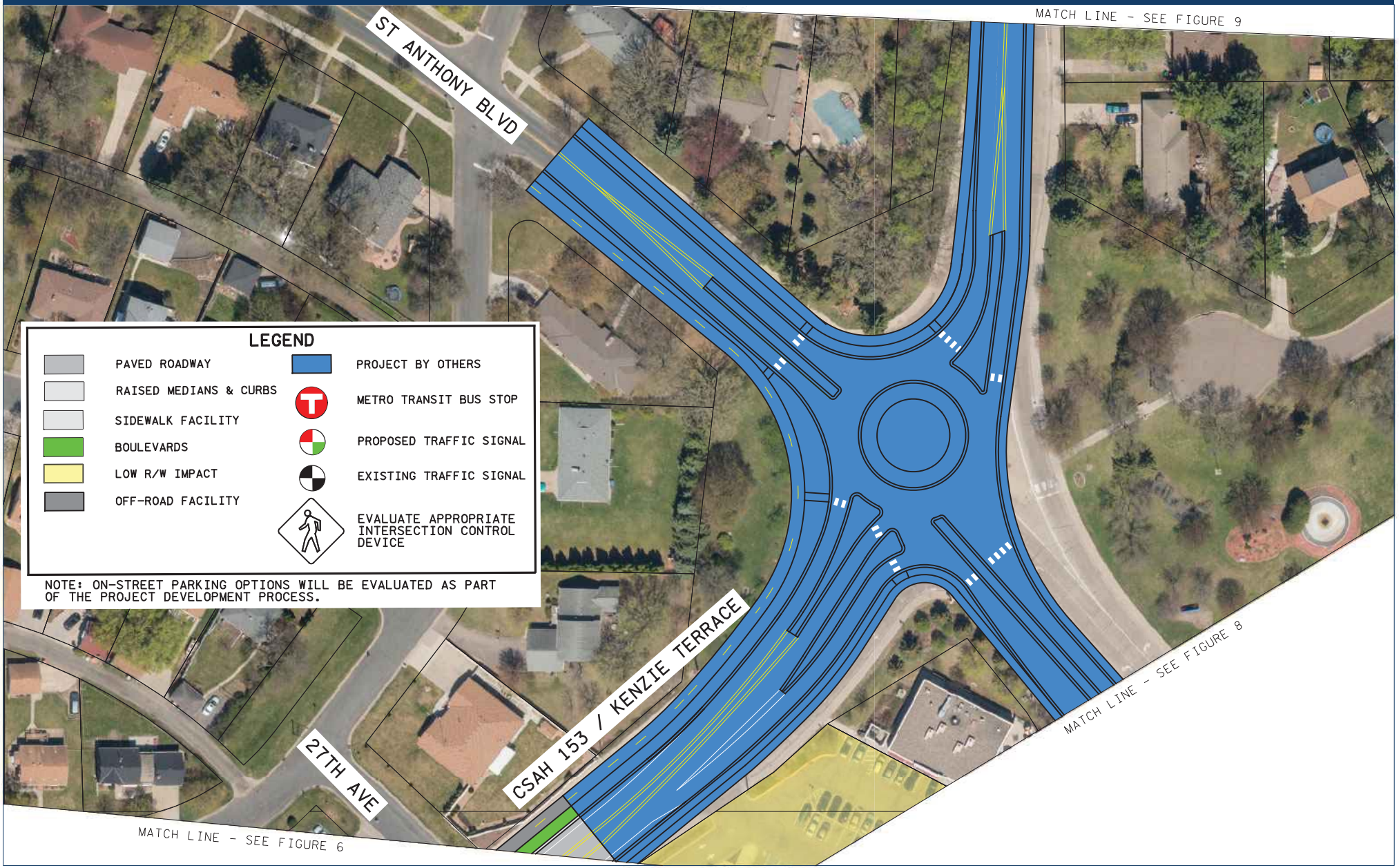
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

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Figure 7

Job #16612
11/10/2023
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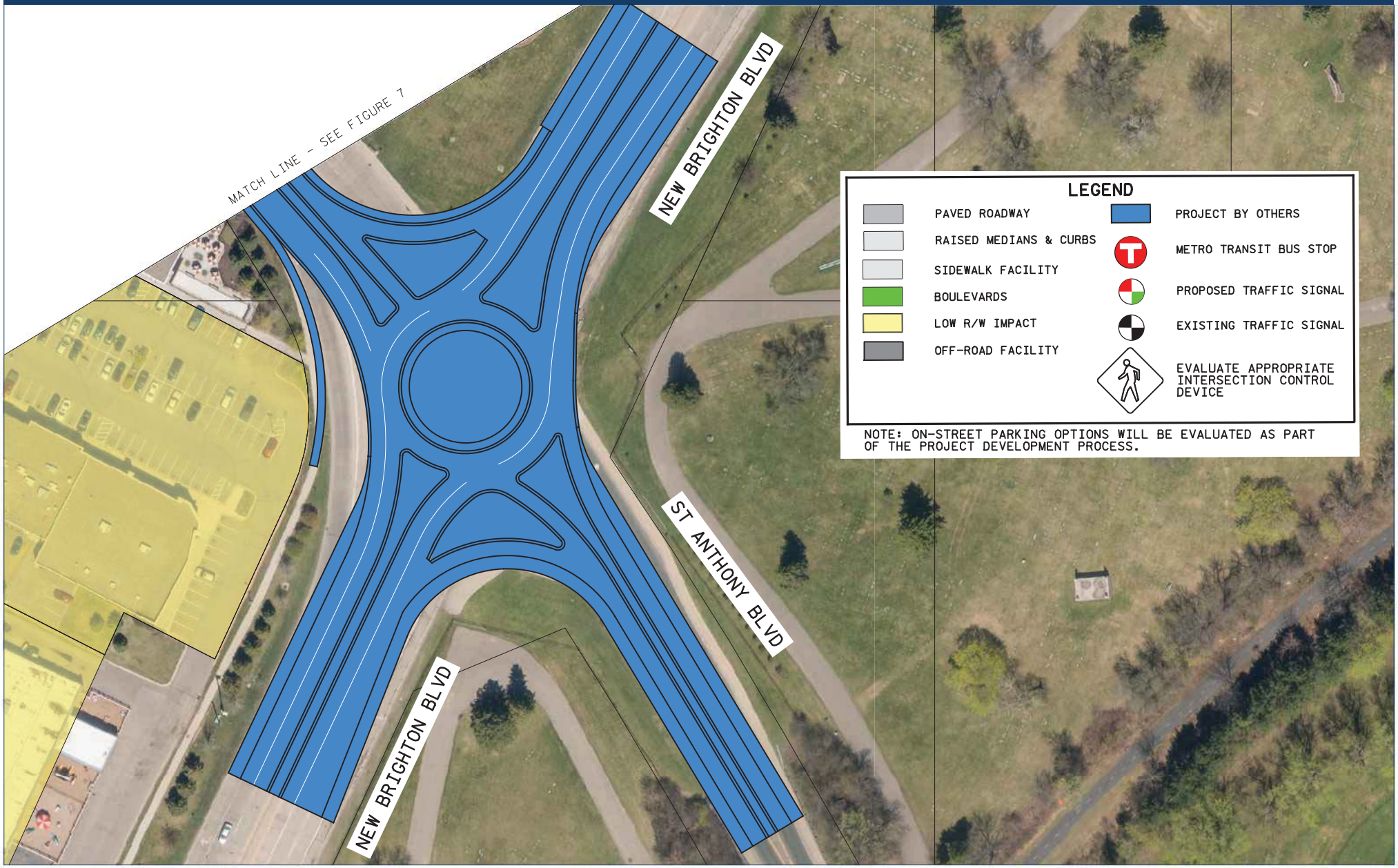
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



0 50 100
SCALE IN FEET

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Figure 8

Job #16612
11/10/2023
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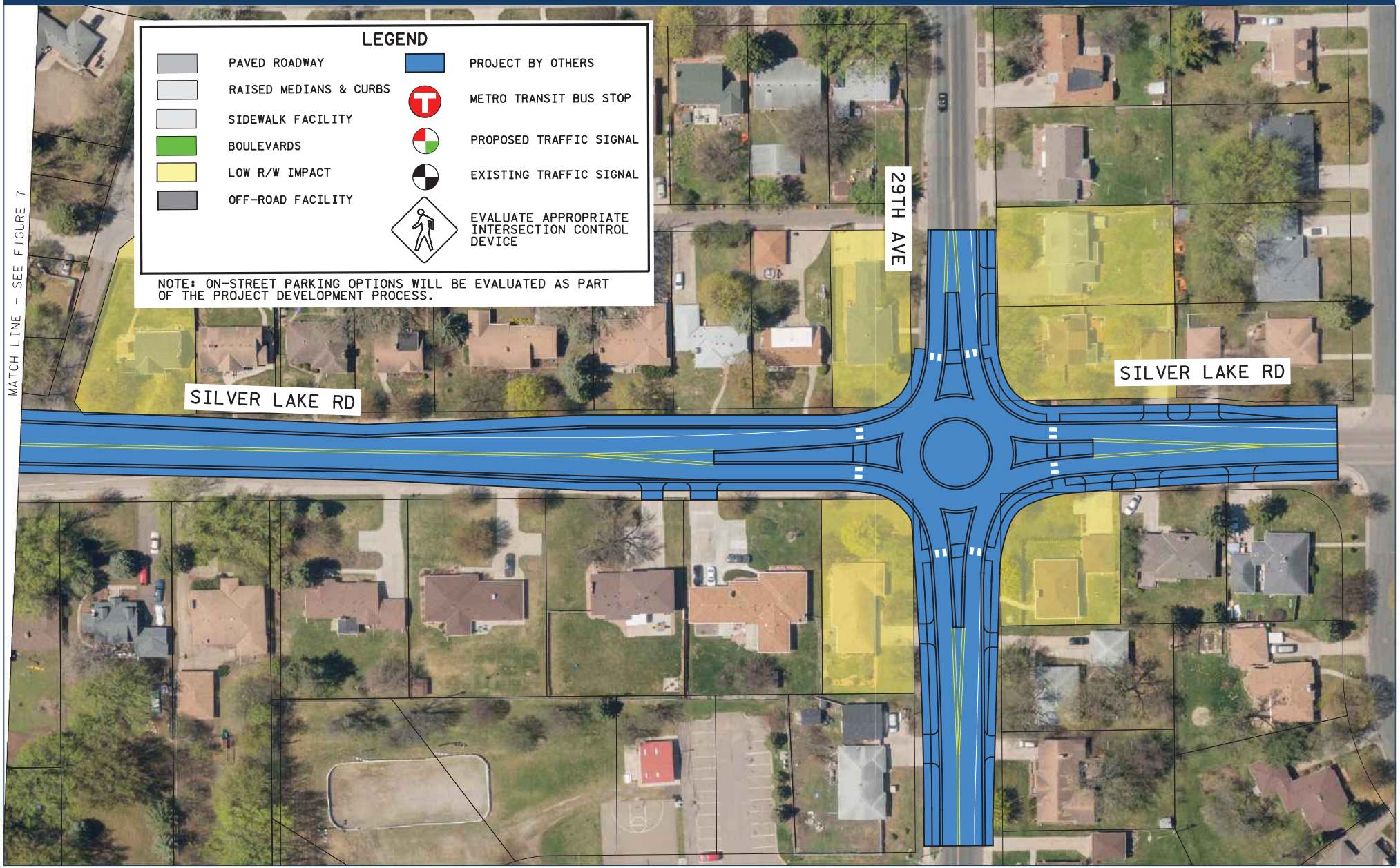
CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 05 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



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SCALE IN FEET

Figure 9

Job #16612
11/10/2023
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CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 06 | Hennepin County 2024-2027 Transportation CIP

Project Name: 2141000 CSAH 153 - Reconst Lowry/Kenzie Ter fr Johnson to St Anthony
Major Program: Public Works
Department: Transportation Roads & Bridges

Funding Start: 2025
Funding Completion: 2028

Summary:

Reconstruct Lowry Avenue NE (CSAH 153) from Johnson Street NE to St. Anthony Boulevard (CSAH 136) in the Cities of Minneapolis and St. Anthony. Note that the local name changes from Lowry Avenue NE to Kenzie Terrace NE at Stinson Parkway which represents the municipal boundary.

Purpose & Description:

The existing roadway (last reconstructed in 1968) is nearing the end of its useful life and warrants replacement. Routine maintenance activities are no longer cost effective in preserving assets. The roadway segment extending from Johnson Street NE to Stinson Parkway was originally constructed as concrete pavement that has since received bituminous overlays on its concrete surface. These conditions are undesirable as they result in premature cracking in the pavement surface at pre-existing joints.West of Stinson Parkway, the roadway consists of a 2-lane undivided section with off-street parking provided along both sides of the roadway, and east of Stinson Parkway, the roadway consists of a 4-lane divided roadway with turn lanes. Throughout the corridor, the sidewalk facilities are located immediately adjacent to the roadway, include various obstructions within the walking route, and many pedestrian ramps do not satisfy current ADA design standards.

Housing and Economic Development completed the Lowry Avenue NE Framework Plan in 2015 that identified corridor needs in terms of mobility and development potential as well as opportunities to create a more pedestrian friendly environment. This project represents Phase 3 (of 3) for implementing improvements along Lowry Avenue NE (CSAH 153) and is directly related to Capital Project 2140900 and Capital Project 2140800.

The proposed project is anticipated to include new pavement, curb, storm water utilities, sidewalk facilities, ADA accommodations, and traffic signals. It is anticipated that a boulevard will be constructed to provide space for streetscaping elements, separate people walking from people driving, and provide space for signage and snow storage. Complete and Green Streets strategies will especially be explored for the segment extending from Stinson Parkway to St. Anthony Parkway to promote adequate stormwater management. The proposed project also provides an opportunity to coordinate with the Minneapolis Park and Recreation Board to close a nearby trail gap within the Grand Rounds Regional Trail network.

REVENUE	Budget To-Date	Act & Enc	Balance	2024	2025	2026	2027	2028	Future	Total
Federal - Other - Roads								7,000,000		7,000,000
Mn/DOT State Aid - Regular					1,392,000	1,025,000	230,000	4,784,000		7,431,000
Minneapolis					19,000	34,000	80,000	478,000		611,000
St Anthony Village					29,000	51,000	120,000	718,000		918,000
Total					**1,440,000**	**1,110,000**	**430,000**	**12,980,000**		**15,960,000**

EXPENSE	Budget To-Date	Act & Enc	Balance	2024	2025	2026	2027	2028	Future	Total
Right of Way						90,000	380,000			470,000
Construction								10,080,000		10,080,000
Consulting					1,200,000	820,000				2,020,000
Contingency					240,000	200,000	50,000	2,900,000		3,390,000
Total					**1,440,000**	**1,110,000**	**430,000**	**12,980,000**		**15,960,000**

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 06 | Hennepin County 2024-2027 Transportation CIP

Project Name: 2141000 CSAH 153 - Reconst Lowry/Kenzie Ter fr Johnson to St Anthony
Major Program: Public Works
Department: Transportation Roads & Bridges

Funding Start: 2025
Funding Completion: 2028

Current Year's CIP Process Summary	Budget To-Date	2024	2025	2026	2027	2028	Future	Total
Department Requested			1,440,000	1,110,000	430,000	12,980,000		15,960,000
Administrator Proposed			1,440,000	1,110,000	430,000	12,980,000		15,960,000
CBTF Recommended			1,440,000	1,110,000	430,000	12,980,000		15,960,000
Board Approved Final			1,440,000	1,110,000	430,000	12,980,000		15,960,000

Scheduling Milestones (major phases only):

Activity	Anticipated Timeframe
Planning	Q3 2022 - Q4 2024
Design	Q1 2025 - Q4 2027
Bid Advertisement	Q1 2028
Construction	Q2 2028 - Q4 2028
Completion	2029

Project's Effect on the Operating Budget:

Additional planning and design work is required to determine the anticipated impact to Transportation Department staff or annual operating costs.

Project's Effect on County Priorities:

This project will reduce disparities in the transportation domain and vehicle miles traveled per capita by creating new safe, accessible connections for all modes. This is especially important as the project is located in an area that includes relatively high percentages of people with limited mobility.

Changes from Prior CIP:

- This is a new project request by Transportation Project Delivery for the 2024-2028 Transportation CIP to reconstruct Lowry Avenue NE/Kenzie Terrace (CSAH 153) from Johnson Street NE to St. Anthony Boulevard (CSAH 136) in the Cities of Minneapolis and St. Anthony.

Board Resolutions / Supplemental Information:

Project Budget Notes:

- This project is Phase 3 (of 3) of capital improvements recommended for the Lowry Avenue NE corridor and is related to Capital Projects 2140900 and 2140800.

Last Year's CIP Process Summary	Budget To-Date	2023	2024	2025	2026	2027	Future	Total
Department Requested								
Administrator Proposed								
CBTF Recommended								
Board Approved Final								

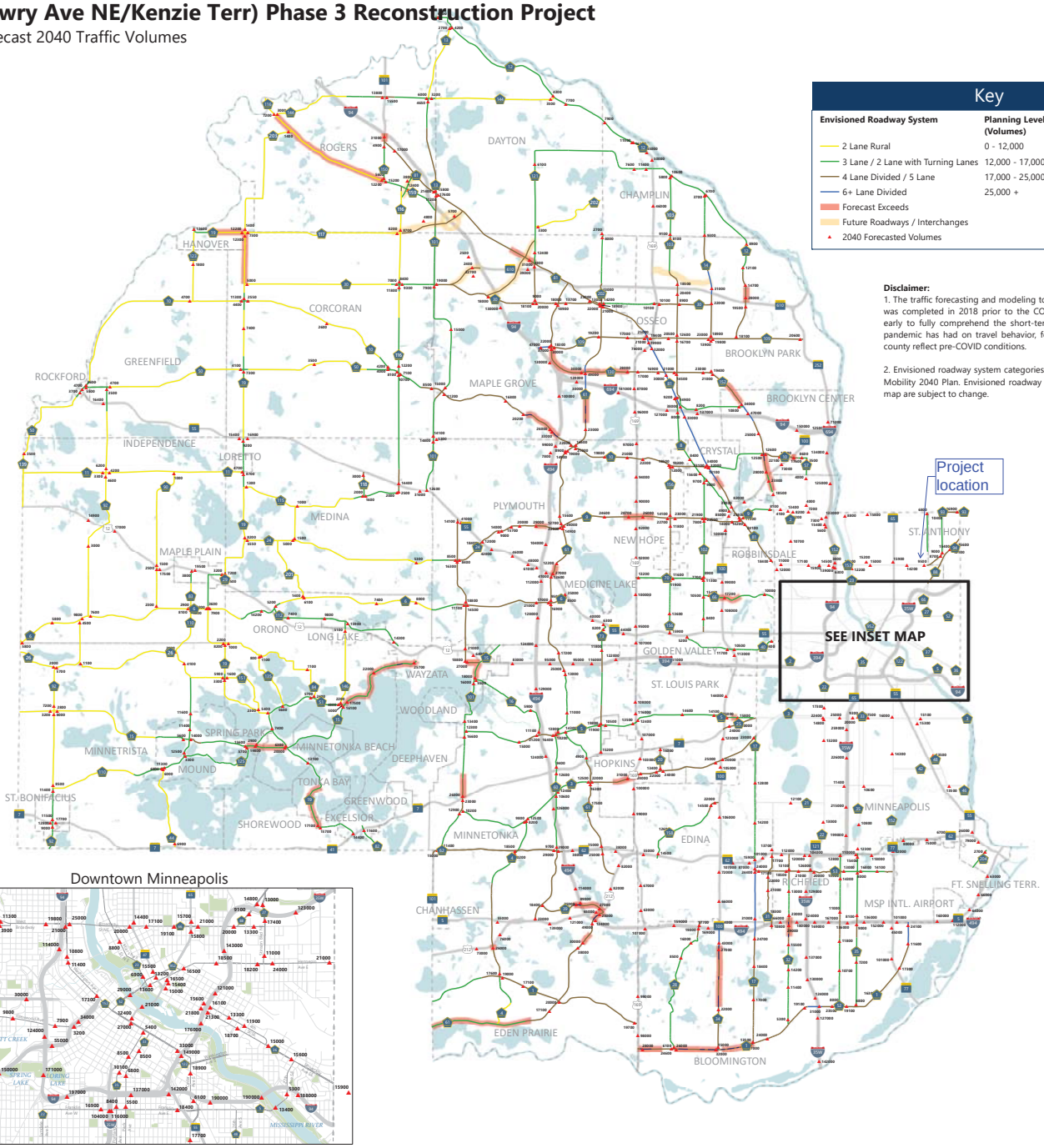
Envisioned roadway system and right-of-way needs

Transportation Planning | Hennepin County Public Works

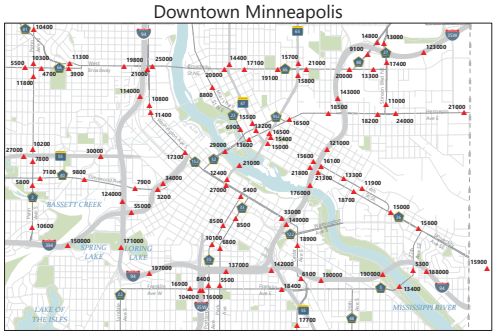
HENNEPIN COUNTY
MINNESOTA

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 07 | Forecast 2040 Traffic Volumes



Downtown Minneapolis



Key

Envisioned Roadway System	Planning Level Thresholds (Volumes)	Right of Way
2 Lane Rural	0 - 12,000	146' - 166'
3 Lane / 2 Lane with Turning Lanes	12,000 - 17,000	90' - 110'
4 Lane Divided / 5 Lane	17,000 - 25,000	126' - 152'
6+ Lane Divided	25,000 +	154' +
Forecast Exceeds		
Future Roadways / Interchanges		
2040 Forecasted Volumes		

Disclaimer:

1. The traffic forecasting and modeling to identify future roadway needs was completed in 2018 prior to the COVID-19 pandemic. As it is too early to fully comprehend the short-term and long-term impacts the pandemic has had on travel behavior, forecasts and modeling for the county reflect pre-COVID conditions.

2. Envisioned roadway system categories were developed as part of the Mobility 2040 Plan. Envisioned roadway configurations reflected in this map are subject to change.

Publication date: 7/13/2023

Data sources: SRF Consulting, Hennepin County Transportation Planning

N 0 5 10 Miles

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 08 | Disadvantaged Communities and Resources Map

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.

N

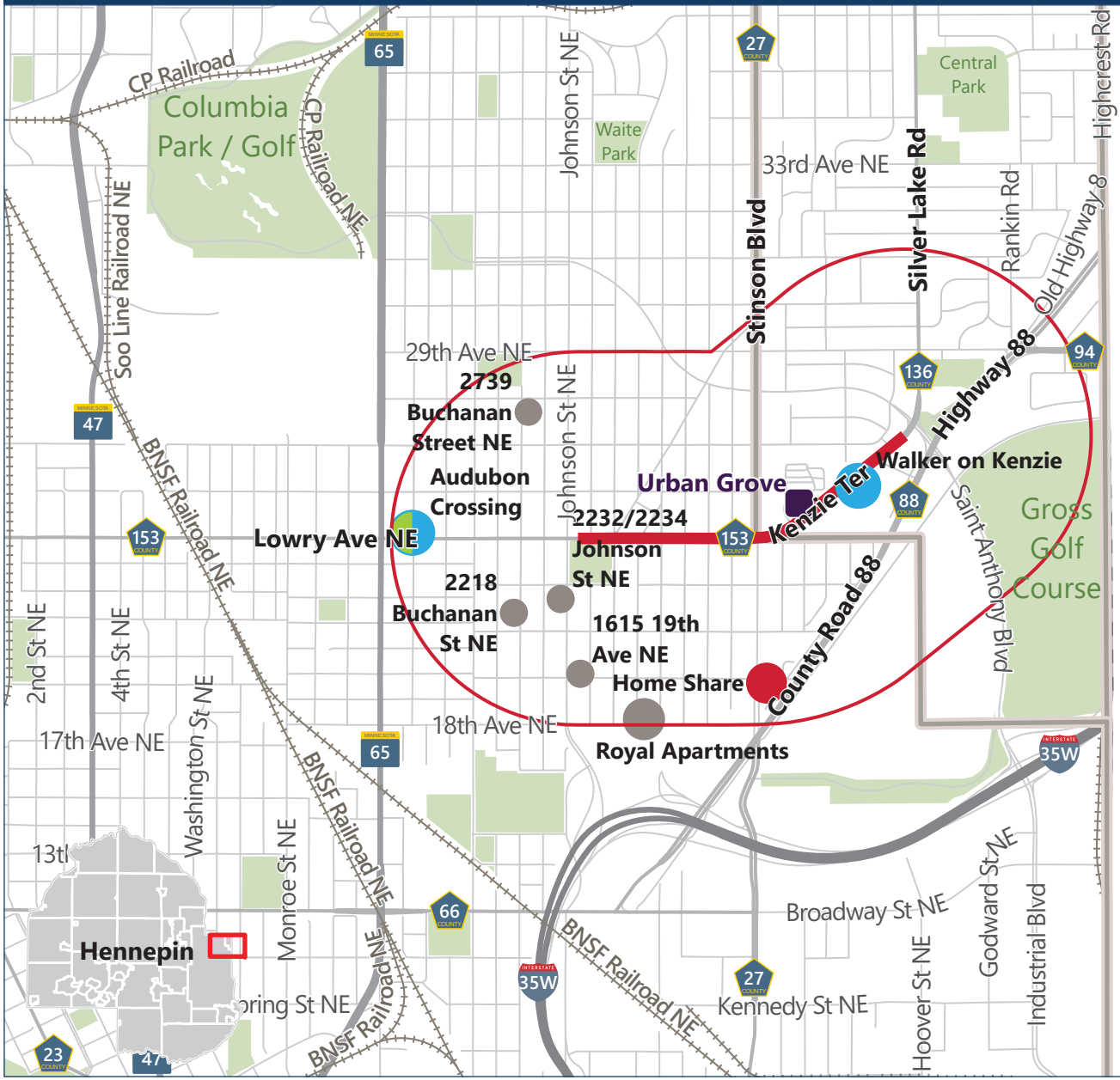
0 0.4 0.8 Miles

Publication date: 11/9/2023

Data sources (if applicable):

CSAH 153 (Lowry Ave/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 09 | Affordable Housing Access Map and Detail Summary



Ramsey County

Key

Size Proportional to Number of Affordable Units

Population Served
- Disabled
- Elderly
- Family
- Multiple
- No Information

- Project Location
- 0.5 Mile Project Buffer

Construction Status
- Existing Affordable Housing
- Proposed or Under Construction
- Manufactured Housing

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.

N

0 0.75 1.5 Miles

Publication date: 11/8/2023

Data sources (if applicable):

CSAH153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 09 | Affordable Housing Access Map and Detail Summary

Property ID	Property Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4 BR
3397	Home Share	22	22	0	22	0	0	22	0	0	0
3886	Audubon Crossing	30	30	6	24	0	0	7	15	8	0
15833	1615 19th Ave NE	2	2	0	0	2	0	0	0	0	0
15848	Royal Apartments	36	24	0	0	24	0	0	0	0	0
15893	2218 Buchanan St NE	2	2	0	0	2	0	0	0	0	0
15896	2232/2234 Johnson St NE	2	2	0	0	2	0	0	0	0	0
15967	2739 Buchanan Street NE	2	1	0	0	1	0	0	0	0	0
3636	Walker on Kenzie	45	45	45	0	0	0	45	0	0	0

AMI: Area Median Income

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 10 | Hennepin County StreetLight Analysis

Type of Travel	Zone Name	Truck - StL Truck Index	HCAADT to Index Ratio	**Estimated HCAADT**
Commercial	CSAH 005 & E of Louisiana Ave	2058	0.2910	**600**
Commercial	CSAH 023 & N of 28th Ave NE	11578	0.2910	**3350**
Commercial	CSAH 030 & W of Jefferson Hwy	1658	0.2910	**485**
Commercial	CSAH 152 & S of 36th St E	5993	0.2910	**1750**
Commercial	CSAH 153 & W of Stinson Pkwy	2512	0.2910	**730**

Example calculation: 2058*0.2910=600

Type of Travel	Zone Name	Truck - StL Truck Index	2021 HCAADT	HCAADT to Index Ratio
Commercial	H019	1383	270	0.1952
Commercial	H045	14065	2950	0.2097
Commercial	H052	6363	2750	0.4322
Commercial	H118	1182	330	0.2792
Commercial	H120	9342	750	0.0803
Commercial	H146	3240	770	0.2377
Commercial	H250	6116	500	0.0818
Commercial	H251	4374	2050	0.4687
Commercial	H302	28750	3250	0.1130
Commercial	H313	4876	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	5202	2700	0.5190
Commercial	H571	11759	1450	0.1233
Commercial	H610	10808	4100	0.3793
Commercial	H637	6878	1600	0.2326
Commercial	H649	2398	600	0.2502
Commercial	H745	8290	3350	0.4041
Commercial	H766	3945	1800	0.4563
Commercial	H807	13019	1900	0.1459

Average ratio **0.2910**

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 11 | Crash Map and Detail Listing

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.

N

0 0.23 0.45 Miles

Publication date: 11/20/2023

Data sources (if applicable):

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 11 | Crash Map and Detail Listing

Segment A | From 150' East of Johnston St NE to Hayes St NE

Incident ID	Roadway	Month	Day	Year	Basic Type	Severity	Number K's	Number of Veh	Latitude	Longitude
00797807	LOWRY AVE NE	2-Feb	14	2020	Rear End - Parked Car	Property Damage Only	0	2	45.01323	-93.23548
00979155	E/B LOWRY AVE NE AND NE HAYES	12-Dec	9	2021	Single Vehicle Run Off Road	Fatal	2	1	45.01323	-93.23460
	Subtotal:	**2**								

Intersection B | At Hayes St NE

Incident ID	Roadway	Month	Day	Year	Basic Type	Severity	Number K's	Number of Veh	Latitude	Longitude
00868824	NE HAYES ST	12-Dec	18	2020	Rear End	Possible Injury	0	3	45.01318	-93.23462
00967789	NE HAYES ST	10-Oct	12	2021	Bike	Property Damage Only	0	1	45.01323	-93.23462
	Subtotal:	**2**								

Segment C | From Hayes St NE to Stinson Blvd

Incident ID	Roadway	Month	Day	Year	Basic Type	Severity	Number K's	Number of Veh	Latitude	Longitude
01054830	LOWRY AVE NE	10-Oct	30	2022	Rear End - Parked Car	Property Damage Only	0	2	45.01324	-93.23234
01063812	NE MCKINLEY ST	12-Dec	7	2022	Sideswipe Same Direction	Property Damage Only	0	2	45.01326	-93.22814
00846842	NE ARTHUR ST	10-Oct	16	2020	Single Vehicle Run Off Road	Property Damage Only	0	1	45.01315	-93.23202
00934152	NE ARTHUR ST	8-Aug	14	2021	Angle	Property Damage Only	0	2	45.01320	-93.23202
00874049	NE ARTHUR ST	1-Jan	12	2021	Pedestrian	Fatal	1	1	45.01322	-93.23202
	Subtotal:	**5**								

Intersection D | At Stinson Blvd

Incident ID	Roadway	Month	Day	Year	Basic Type	Severity	Number K's	Number of Veh	Latitude	Longitude
01017643	LOWRY AVE NE	4-Apr	14	2022	Rear End	Property Damage Only	0	2	45.01327	-93.22708
00871917	LOWRY AVE NE	12-Dec	30	2020	Single Vehicle Run Off Road	Property Damage Only	0	1	45.01327	-93.22692
	Subtotal:	**2**								

Segment E | From Stinson Blvd to Autumn Woods Entrance

Incident ID	Roadway	Month	Day	Year	Basic Type	Severity	Number K's	Number of Veh	Latitude	Longitude
01017643	LOWRY AVE NE	4-Apr	14	2022	Rear End	Property Damage Only	0	2	45.01327	-93.22708
00871917	LOWRY AVE NE	12-Dec	30	2020	Single Vehicle Run Off Road	Property Damage Only	0	1	45.01327	-93.22692
	Subtotal:	**2**								

Intersection F | At Autumn Woods Entrance

Incident ID	Roadway	Month	Day	Year	Basic Type	Severity	Number K's	Number of Veh	Latitude	Longitude
No crashes reported within the Area of Influence for Intersection F										
	Subtotal:	**0**								

Segment G | From Autumn Woods Entrance to 200' West of St. Anthony Blvd

Incident ID	Roadway	Month	Day	Year	Basic Type	Severity	Number K's	Number of Veh	Latitude	Longitude
01069051	KENZIE TER	12-Dec	23	2022	Angle	Property Damage Only	0	2	45.01625	-93.22025
00786733	KENZIE TER	2-Feb	10	2020	Angle	Property Damage Only	0	2	45.01636	-93.22007
00799696	KENZIE TER	2-Feb	20	2020	Angle	Property Damage Only	0	2	45.01644	-93.21992
00929203	KENZIE TER	7-Jul	19	2021	Angle	Possible Injury	0	2	45.01705	-93.21886
01062460	KENZIE TER	12-Dec	1	2022	Angle	Property Damage Only	0	2	45.01711	-93.21877
	Subtotal:	**5**								
	Grand Total:	**18**								

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 11 | Crash Map and Detail Listing

Reported Crashes Located Outside of the Project Area

Incident ID	Roadway	Month	Day	Year	Basic Type	Severity	Number K's	Number of Veh	Latitude	Longitude
00781426	SILVER LAKE RD	1-Jan	20	2020	Left Turn	Property Damage Only	0	2	45.01759	-93.21820
00937378	SILVER LAKE RD	8-Aug	26	2021	Angle	Possible Injury	0	2	45.01771	-93.21838
00932669	SILVER LAKE RD	8-Aug	6	2021	Angle	Property Damage Only	0	2	45.01766	-93.21816
01053828	SILVER LAKE RD	10-Oct	25	2022	Angle	Property Damage Only	0	2	45.01779	-93.21834
00865905	SILVER LAKE RD	11-Nov	30	2020	Left Turn	Property Damage Only	0	2	45.01777	-93.21811
01001216	LOWRY AVE NE	1-Jan	23	2022	Single Vehicle Run Off Road	Property Damage Only	0	1	45.01324	-93.23421
01005188	KENZIE TER	2-Feb	9	2022	Angle	Possible Injury	0	2	45.01757	-93.21822
00798538	ST ANTHONY BLVD	2-Feb	17	2020	Rear End	Property Damage Only	0	2	45.01792	-93.21838
00842636	ST ANTHONY BLVD	9-Sep	24	2020	Angle	Minor Injury	0	2	45.01781	-93.21821
	Subtotal:	**9**								

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 332

REMOVE UNWARRANTED SIGNAL (ONE-LANE, ONE-WAY STREETS, EXCLUDING MAJOR ARTERIALS)

DESCRIPTION:

PRIOR CONDITION: *NO PRIOR CONDITION(S)*

CATEGORY: INTERSECTION TRAFFIC CONTROL

STUDY: *CRASH REDUCTIONS RELATED TO TRAFFIC SIGNAL REMOVAL IN PHILADELPHIA*, PERSAUD ET AL., 1997

Star Quality Rating:	★★★★☆ [VIEW SCORE DETAILS]
Rating Points Total:	117

Crash Modification Factor (CMF)

Value:	0.76
Adjusted Standard Error:	0.09
Unadjusted Standard Error:	0.07

Crash Reduction Factor (CRF)

Value:	24 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	9
Unadjusted Standard Error:	7

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Street Type:	
Minimum Number of Lanes:	
Maximum Number of Lanes:	
Number of Lanes Direction:	
Number of Lanes Comment:	

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

Road Division Type:	
Minimum Speed Limit:	
Maximum Speed Limit:	
Speed Unit:	
Speed Limit Comment:	
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:	
State:	
Country:	
Type of Methodology Used:	Simple before/after

Other Details

Included in Highway Safety Manual?	Yes. HSM lists this CMF in **bold** font to indicate that it has the highest reliability since it has an adjusted standard erro less.
Date Added to Clearinghouse:	Dec 01, 2009
Comments:	Countermeasure name has been slightly modified for consistency across Clearinghouse

VIEW THE FULL STUDY DETA

EXPORT DETAIL PAGE AS PDF

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 1444

INSTALL LARGER SIGNAL LENSES (12 INCH)

DESCRIPTION:

PRIOR CONDITION: REPLACE 8 INCH SIGNAL HEADS WITH 12 INCH SIGNAL HEADS.

CATEGORY: INTERSECTION TRAFFIC CONTROL

STUDY: *LOW-COST SAFETY IMPROVEMENTS CHAPTER 27, THE TRAFFIC SAFETY TOOLBOX: A PRIMER ON TRAFFIC SAFETY*, POLANIS, 1999

Star Quality Rating:	★★☆☆☆ [VIEW SCORE DETAILS]
Rating Points Total:	40

Crash Modification Factor (CMF)

Value:	0.54
Adjusted Standard Error:	
Unadjusted Standard Error:	0.075

Crash Reduction Factor (CRF)

Value:	46 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	7.5

Applicability

Crash Type:	Angle
Crash Severity:	All
Roadway Types:	Not specified
Street Type:	
Minimum Number of Lanes:	
Maximum Number of Lanes:	
Number of Lanes Direction:	
Number of Lanes Comment:	

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

Road Division Type:	
Minimum Speed Limit:	
Maximum Speed Limit:	
Speed Unit:	
Speed Limit Comment:	
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:	
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:	Winston Salem
State:	NC
Country:	
Type of Methodology Used:	Simple before/after
Sample Size (sites):	44 sites after

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec 01, 2009
Comments:	The number of crashes in the after period were not reported in this study, however, they have been recorded as 300 t points as a beneift of doubt for one or more of the following: (1) number of miles/sites in the reference/treatment grc number of crashes in the references/treatment group, (3) reporting AADTs for the aggregate dataset but not for the dataset used for CMF development.

VIEW THE FULL STUDY DETA

EXPORT DETAIL PAGE AS PDF

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 1697

IMPROVE/INSTALL PEDESTRIAN CROSSING

DESCRIPTION:

PRIOR CONDITION: *NO PRIOR CONDITION(S)*

CATEGORY: PEDESTRIANS

STUDY: *UPDATE OF FLORIDA CRASH REDUCTION FACTORS AND COUNTERMEASURES TO IMPROVE THE DEVELOPMENT OF DISTRICT SAFETY IMPROVEMENT PROJECTS*, GAN ET

Star Quality Rating:	CANNOT BE RATED
Rating Points Total:	

Crash Modification Factor (CMF)

Value:	0.75
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)

Value:	25 *(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
Street Type:	
Minimum Number of Lanes:	
Maximum Number of Lanes:	
Number of Lanes Direction:	
Number of Lanes Comment:	

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

Road Division Type:	
Minimum Speed Limit:	
Maximum Speed Limit:	
Speed Unit:	
Speed Limit Comment:	
Area Type:	
Traffic Volume:	
Average Traffic Volume:	
Time of Day:	

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:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	

Other Details

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

VIEW THE FULL STUDY DETA

EXPORT DETAIL PAGE AS PDF

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 9250

INSTALL SHARED PATH

DESCRIPTION:

PRIOR CONDITION: NO SHARED PATH PRESENT

CATEGORY: BICYCLISTS

STUDY: *STATEWIDE ANALYSIS OF BICYCLE CRASHES*, ALLURI ET AL., 2017

Star Quality Rating:	★★☆☆☆ [VIEW SCORE DETAILS]
Rating Points Total:	50

Crash Modification Factor (CMF)

Value:	0.75
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)

Value:	25 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	

Applicability

Crash Type:	Vehicle/bicycle
Crash Severity:	All
Roadway Types:	Principal Arterial Other
Street Type:	
Minimum Number of Lanes:	6
Maximum Number of Lanes:	6
Number of Lanes Direction:	
Number of Lanes Comment:	

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

Road Division Type:	Divided by Median
Minimum Speed Limit:	
Maximum Speed Limit:	
Speed Unit:	
Speed Limit Comment:	
Area Type:	Urban
Traffic Volume:	Minimum of 5700 to Maximum of 98500 Annual Average Daily Traffic (AADT)
Average Traffic Volume:	42085 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:	2011 to 2014
Municipality:	
State:	FL
Country:	
Type of Methodology Used:	Regression cross-section
Sample Size (crashes):	2049 crashes
Sample Size (miles):	1209 miles

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jun 17, 2018
Comments:	Minor arterial, major collector, and minor collector facility types were also included.

VIEW THE FULL STUDY DETA

EXPORT DETAIL PAGE AS PDF

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

CMF / CRF DETAILS

CMF ID: 9300

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:	0.853
Adjusted Standard Error:	
Unadjusted Standard Error:	0.074

Crash Reduction Factor (CRF)

Value:	14.7 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	7.4

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Principal Arterial Other
Street Type:	
Minimum Number of Lanes:	1
Maximum Number of Lanes:	4
Number of Lanes Direction:	
Number of Lanes Comment:	

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

Road Division Type:	
Minimum Speed Limit:	25
Maximum Speed Limit:	65
Speed Unit:	mph
Speed Limit Comment:	
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:	Before/after using comparison group
Sample Size (crashes):	1157 crashes before
Sample Size (sites):	195 sites before, 195 sites after
Sample Size (miles):	115.44 miles before, 115.44 miles after

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jun 17, 2018
Comments:	Second year after treatment implementation

VIEW THE FULL STUDY DETA

EXPORT DETAIL PAGE AS PDF

Intersection Crashes

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
Improve sight distance to intersection	All	Fatal						51		56				
	All	Injury						51		37				
Increase median width by 3 ft	Multiple-vehicle	All	Rural	4-Leg	Stop			24		**4**	1			Cross-section
	Multiple-vehicle	All	Urban	3-Leg	Stop			24		**-3**	1			Cross-section
	Multiple-vehicle	All	Urban	4-Leg	Signal			24		**-3**	1			Cross-section
	Multiple-vehicle	All	Urban	4-Leg	Stop			24		**-6**	1			Cross-section
	Multiple-vehicle	Fatal/Injury	Rural	4-Leg	Stop			24		**4**	1			Cross-section
	Multiple-vehicle	Fatal/Injury	Urban	4-Leg	Signal			24		**-3**	1			Cross-section
	Multiple-vehicle	Fatal/Injury	Urban	4-Leg	Stop			24		**-5**	1			Cross-section
Increase pedestrian storage area at corner	All	Fatal/Injury						5		-12	126			Meta-analysis
Install median	All	All	Rural		Stop			6		27				
Install median islands (painted) on major road approaches	All	Fatal/Injury	All	All	All			58		15				
Install median islands (physical) on major road approaches	All	Fatal/Injury	All	All	All			58		25				
	All	All			No signal			28		25				
Install raised median	All	All						28		25				
	Ped	All			No signal			28		69				
Install raised median (marked crosswalk)	Ped	All						60		46				

A crash reduction value of 12.5% was used at the CSAH 153 (Lowry Ave NE)/Hayes Intersection in recognition of a raise median only being installed on the west approach.

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 12 | Crash Modification Factors

	Streetscape Project Elements														Before-After Crash Trends*			
Case No.	Curb & Gutter	Curb Extensions	Sidewalk Additions / Improvements	Landscape Buffer Next to Road & Sidewalk	Add Landscaping / Street Trees	Trees Removal / Relocation	Improve Roadside Grading/Ditch Removal	Relocate Utility Poles	Add or Enhance Street Lights	Bus Stops / Bays	Enhanced Pedestrian Crossings / Access	Median Islands / Raised Islands	Bicycle Lanes	Widening of Road > 8'	Frequency of All Crashes	Crash Rate	Frequency of Severe Crashes	Frequency of Single-Vehicle Crashes
CS-AZ-1	x		x	x	x		x				x	x			⇓	⇓	⇓	⇔
CS-AZ-2	x	x	x	x	x		x			x					⇑	⇑	⇔	⇑
CS-AZ-3	x	x	x	x											⇓	⇔	⇑	⇔
CS-CA-1	x		x		x		x						x		⇑	⇑	⇔	⇑
CS-CA-2	x		x				x					x			⇑	⇔	⇔	⇔
CS-CA-3	x		x	x	x			x	x			x		x	⇓	⇓	⇔	⇔
CS-MN-1	x		x	x	x							x		x	⇓	⇓	⇔	⇓
CS-MT-1	x		x	x											⇑	⇑	⇔	⇔
CS-MT-2	x	x	x		x						x				⇑	⇑	⇔	⇑
CS-NC-1	x		x	x	x							x			⇓	⇓	⇔	⇑
CS-NC-2	x		x	x	x	x		x					x	x	⇓	⇓	⇓	⇓
CS-NC-3	x		x									x			⇓	⇓	⇓	⇑
CS-NC-4	x		x	x		x		x	x				x		⇓	⇔	⇔	⇔
CS-NC-5	x		x	x	x							x			⇓	⇓	⇔	⇔
CS-NC-6	x		x	x	x							x	x	x	⇓	⇓	⇔	⇓
CS-NC-7	x		x									x			⇓	⇑	⇔	⇓
CS-OR-1	x		x	x			x					x			⇑	⇑	⇑	⇔
CS-OR-2	x		x	x	x			x			x	x			⇑	⇑	⇑	⇔
CS-OR-3		x			x						x				⇓	⇓	⇔	⇔
CS-OR-4		x									x				⇓	⇓	⇔	⇑
CS-OR-5	x	x	x		x				x			x			⇓	⇓	⇔	⇔
CS-OR-6		x	x		x						x				⇓	⇓	⇔	⇓
CS-OR-7		x			x					x	x		x		⇓	⇓	⇔	⇑
CS-UT-1		x	x								x				⇓	⇓	⇔	⇔
CS-UT-2	x		x												⇓	⇓	⇓	⇑
CS-UT-3	x		x								x				⇓	⇓	⇔	⇓
CS-UT-4	x		x								x				⇑	⇑	⇔	⇔

*Before-After symbols depict the following:

⇑ ≡ Crash frequencies increased by more than one crash per year; crash rates increased by more than 5 percent.

⇓ ≡ Crash frequencies decreased by more than one crash per year; crash rates decreased by more than 5 percent.

⇔ ≡ Crash frequencies for the "After" condition were within one crash per year of the "Before" condition; crash rates for the "After" condition were within 5 percent of the "Before" condition crash rates.

A conservative crash reduction value of 5% was used along CSAH 153 (Kenzie Terr) for segments east of Stinson Pwky in recognition of streetscaping anticipated to be introduced within both the raised medians and boulevard areas.

In Table 22, the before-after crash trends are represented by the four statistics:

- Frequency of all crashes at a site,
- Crash rate,
- Frequency of severe crashes at a site, and
- Frequency of single-vehicle crashes.

Ideally, a reduction in all four trend statistics would be observed, clearly demonstrating enhanced safety at a site; however, in many cases, an increase occurred for one before-after crash trend statistic while others remained constant or decreased. For all candidate improvement projects, a designer seeks to reduce the number of severe crashes at a site. Severe crashes, for the purposes of the values shown in the case study tables, generally include incapacitating injuries or fatalities.

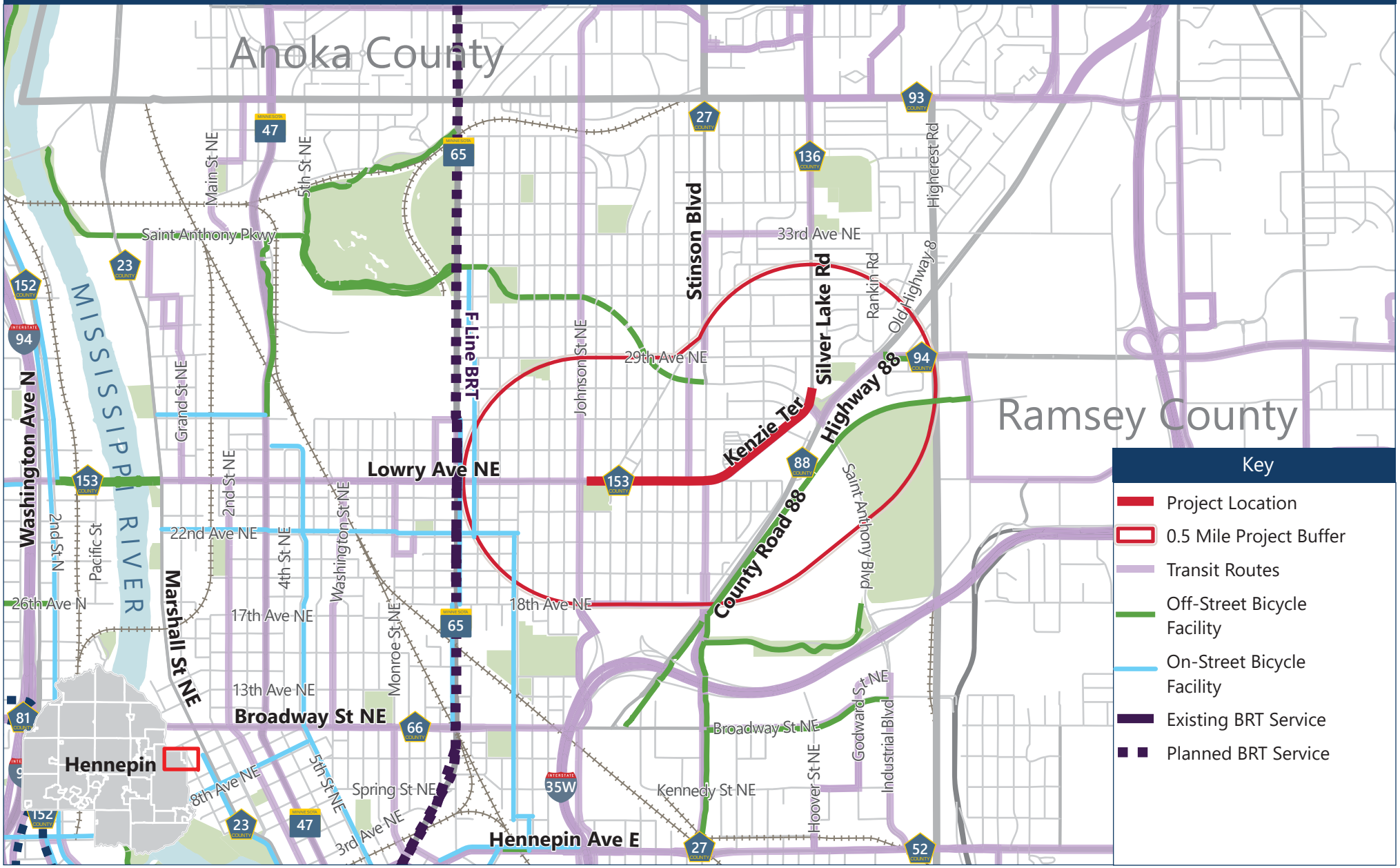
Only three of the case study sites ex
than one additional severe crash p
case study sites included sidewalk i
strips, but several similar improvement projects resulted in little change to a reduction in severe crashes.

Since the focus of this research effort is roadside crashes, and these frequently are single-vehicle crashes, an increase in these kinds of crashes may be of concern. Single-vehicle crashes increased by more than one crash at eight of the sites. In general, these sites included pedestrian enhancement improvements; however, as was the case with the sites of severe crashes discussed above, there were many pedestrian enhancement projects that resulted in reduced single-vehicle crashes.

Since inspection of the individual before-after crash trends provides confounding results, a more effective approach may be to examine all four before-after crash trends collectively.

CSAH 153 (Lowry Ave/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 13 | Multimodal Connections Map



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.

N

0 0.75 1.5 Miles

Publication date: 10/5/2023

Data sources (if applicable):

HENNEPIN COUNTY
MINNESOTA

November 9, 2023

Nathan Koster
Transportation Planning Manager
City of Minneapolis – Department of Public Works
301 4th Ave S – Suite 785N
Minneapolis, MN 55415

Re: Support for 2024 Regional Solicitation Application
CSAH 153 (Lowry Ave/Kenzie Ter) from Johnson St NE to St. Anthony Blvd

Dear Mr. Koster:

As part of the Metropolitan Council's 2024 Regional Solicitation, Hennepin County is submitting an application to seek federal funding for a reconstruction project along CSAH 153 (Lowry Ave/Kenzie Ter) from Johnson St NE to St. Anthony Blvd in the Cities of Minneapolis and St. Anthony. Federal funding through this solicitation is available for program years 2028 and 2029.

This project will involve the reconstruction of the existing roadway and will include, but not limited to, the following elements: new pavement, curb, stormwater structures, traffic signals, sidewalk facilities, and ADA accommodations. The preferred typical section will be determined as part of the project development process based on characteristics of the project area, values of the community, as well as the infrastructure, safety, and user needs. It is anticipated that these proposed improvements will provide additional accessibility, safety, and mobility for people walking, taking transit, biking, and driving, thereby enhancing the livability and quality of life for Minneapolis and Hennepin County residents.

We would appreciate a letter of support or resolution from the City of Minneapolis for this application and project, acknowledging that the city is aware of this project and understands that the city will likely be required to cost participate in this project as outlined in the county's Cost Participation and Maintenance policies. Specific details regarding cost participation and maintenance responsibilities are anticipated to be determined during the design process as project development is advanced.

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

Hennepin

CSAH 153 (Lowry Ave NE/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 14 | Notice of Application Submittal to City of Minneapolis

If you agree to support this proposed project, please send a PDF letter via email addressed to:

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

You may email the electronic version of the letter to me at Emily.Buell@hennepin.us. I have attached a letter template that you may use or modify as you see fit.

Hennepin County appreciates the opportunity to partner with the City of Minneapolis on this important transportation improvement project. Given an application deadline of December 15, 2023, we would appreciate your support letter by December 1, 2023. If you have any questions, please contact me at (612) 543-1963 or at Emily.Buell@hennepin.us.

Sincerely,

Emily Buell

Emily Buell
Transportation Project Delivery – Capital Programming

Cc: Carla Stueve, P.E. – Director and County Highway Engineer
Jason Pieper, P.E. - Transportation Project Delivery – Capital Programming Manager

CSAH 153 (Lowry Ave/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 15 | City of St. Anthony Support Letter

November 15, 2023

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

Dear Ms. Stueve:

The City of St. Anthony hereby expresses its support for Hennepin County's Regional Solicitation federal funding application for the proposed reconstruction project along CSAH 153 (Lowry Ave/Kenzie Ter) from Johnson St NE to St. Anthony Blvd in the Cities of Minneapolis and St. Anthony.

This project will involve the reconstruction of the existing roadway and will include, but not limited to, the following elements: new pavement, curb, stormwater structures, traffic signals, sidewalk facilities, and ADA accommodations. The preferred typical section will be determined as part of the project development process based on characteristics of the project area, values of the community, as well as the infrastructure, safety, and user needs. It is anticipated that these proposed improvements will provide additional accessibility, safety, and mobility for people walking, taking transit, biking, and driving, thereby enhancing the livability and quality of life for Minneapolis, St. Anthony, and Hennepin County residents.

The City of St. Anthony acknowledges that the city will likely be required to cost participate in this project as outlined in the county's cost participation policy. 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. The City of St. Anthony looks forward to working with you on this project.

Mayor Councilmember Councilmember Councilmember Councilmember

CSAH 153 (Lowry Ave/Kenzie Terr) Phase 3 Reconstruction Project

Attachment 16 | Minneapolis Park and Recreation Board Support Letter

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

December 5, 2023

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

RE: Letter of Support
Regional Solicitation for Reconstruction Project at CSAH 153

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 along CSAH 153 (Lowry Ave/Kenzie Ter) from Johnson St NE to St. Anthony Blvd in the cities of Minneapolis and St. Anthony.

This project will involve the reconstruction of the existing roadway and will include, but not be limited to, the following elements: new pavement, curb, stormwater structures, traffic signals, sidewalk facilities, and ADA accommodations. The MPRB understands the preferred typical section will be determined as part of the project development process based on characteristics of the project area, values of the community, as well as infrastructure, safety, and user needs. It is understood that the proposed improvements may impact parkland under the MPRB's jurisdiction but it is anticipated that the improvements will provide additional accessibility, safety, and mobility for people walking, taking transit, biking, and driving. The MPRB believes the improvements will enhance accessibility to MPRB parklands for park and trail users on Stinson Parkway, and improve the livability and quality of life for Minneapolis, St. Anthony, and Hennepin County residents

The Minneapolis Park and Recreation Board acknowledges that the county will likely request cost participation from the park board in this project as outlined in the county's cost participation policy. 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 offer support for its advancement.

Sincerely,

Michael Schroeder, Assistant Superintendent for Planning Services

Metro Transit
a service of the Metropolitan Council

December 1, 2023

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

Dear Ms. Stueve:

Metro Transit is supportive of Hennepin County's Regional Solicitation federal funding application for the proposed reconstruction project along CSAH 153 (Lowry Avenue/Kenzie Terrace) from Johnson St NE to St. Anthony Blvd in Minneapolis and St. Anthony. This segment of Lowry Avenue/Kenzie Terrace is served today by Route 32, with seven existing bus stops within the project area. Metro Transit has also identified the Lowry Avenue corridor as a priority for arterial BRT expansion prior to 2040.

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 facilities, and ADA accommodations. The preferred typical section will be determined as part of the project development process based on characteristics of the project area, values of the community, as well as infrastructure, safety, and user needs. The proposed project will provide key first- and last-mile connections to current and future transit service in the corridor. It is anticipated that the project will improve accessibility, safety, and mobility for people walking, riding transit, biking, and driving.

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 collaborating with the County in the project development process to accommodate transit needs.

Thank you for making us aware of this application and the opportunity to provide support.

Sincerely,

Lesley Kandaras
Lesley Kandaras (Nov 30, 2023 18:44 CST)

Lesley Kandaras
General Manager

CC: Nick Thompson, METRO Projects for Metro Transit
Katie Roth, Director, Arterial Bus Rapid Transit
Marilyn Porter, Director, Engineering & Facilities

Agreement No. PW 41-20-20
Contract No. _____
Maintenance Agreement
City of Minneapolis
County of Hennepin

COUNTY OF HENNEPIN/CITY OF MINNEAPOLIS ROAD MAINTENANCE AGREEMENT

This Agreement ("Agreement") is made between the **County of Hennepin**, a body politic and corporate under the laws of the State of Minnesota, hereinafter referred to as the "County", and the **City of Minneapolis**, a Minnesota home-rule charter city under the laws of the State of Minnesota, hereinafter referred to as the "City". The County and the City collectively are referred to as the "Parties".

Recitals

The following Recitals are incorporated into this Agreement.

1. There exists County State Aid Highways (CSAHs) inside of and bordering the corporate limits of the City as shown in the attached Exhibit "A", "B", "C", "D" and "H", and traffic signal systems owned by the County within the said limits as shown in the attached Exhibit "E" and "I".

2. The geographical location of the CSAHs and traffic signal systems listed in Exhibits above are such that the City can provide routine maintenance services in a more timely and cost effective manner.

3. To ensure proper maintenance, repair and coordination of the County's infrastructure within and bordering the City's corporate limits, both Parties periodically enter into an agreement called County of Hennepin/City of Minneapolis Road Maintenance Agreement (the "Agreement"), providing for the maintenance of County-owned roadways, bridges, storm sewers and traffic control devices within the corporate limits of the City.

4. To effectively coordinate all work, the County and City staffs will meet quarterly (or as needed) to discuss general maintenance items, and leadership will meet as needed to discuss any amendment to the Agreement.

5. The work will be carried out by the Parties under the provisions of Minnesota Statutes, Section 162.17.

Agreement

NOW, THEREFORE, the Parties agree as follows:

1. Term of Agreement, Survival of Terms, and Exhibits.

1.1. Effective Date. This Agreement is effective as of the date of the final signature, and retroactively in effect from January 01, 2021.

1.2. Expiration Date. This Agreement will expire on December 31, 2023.

1.3. Survival of Terms. Provisions that by their nature are intended to survive the term, cancellation or termination of this Agreement do survive such term, cancellation or termination. Such provisions include but are not limited to: Maintenance Responsibilities, Records/Audits, Indemnification, Insurance, Worker Compensation Claims, Cancellation, Termination, and Minnesota Laws Govern.

1.4. Exhibits are attached and incorporated into this Agreement.

1.4.1. Exhibit "A".

- COUNTY STATE AID HIGHWAYS IN MINNEAPOLIS
  Surface Maintenance by City of Minneapolis Forces
- COUNTY STATE AID HIGHWAYS IN MINNEAPOLIS
  Towing, Snow and Ice Control by City of Minneapolis Forces (Including Bridges and Bridge Sidewalks and Vertically Separated Bikeways)
- COUNTY STATE AID HIGHWAYS BORDERING MINNEAPOLIS
  Sign Maintenance, Permit Responsibility, and Lane Designation Striping by City of Minneapolis Forces

  Routine Sweeping, Roadside, Drainage, Bridge Maintenance, Snow and Ice Control, and Sign Legends by Hennepin County Forces

1.4.2. Exhibit "B".

- COUNTY STATE AID HIGHWAYS IN MINNEAPOLIS
  Routine Sweeping, Roadside, Bridge Maintenance
  Sign Maintenance, Permit Responsibility, and Lane Designation Striping by City of Minneapolis Forces

  Sign Legends by Hennepin County Forces

1.4.3. Exhibit "C".

- COUNTY STATE AID HIGHWAYS IN MINNEAPOLIS
  Routine Surface Maintenance by Hennepin County Forces

1.4.4. Exhibit "D".

- COUNTY STATE AID HIGHWAYS IN MINNEAPOLIS
  Snow and Ice Control by Hennepin County Forces (Bridge Sidewalks Cleared

by City of Minneapolis) (Tagging and Towing Services by City of Minneapolis)

1.4.5. Exhibit "E".

- COUNTY STATE AID HIGHWAYS IN MINNEAPOLIS Traffic Signals

1.4.6. Exhibit "F". Schedule of Costs

1.4.7. Exhibit "G". Lane Mile Table

1.4.8. Exhibit "H". Selected Sample of Urban County State Aid Highways

1.4.9. Exhibit "I". Selected Sample of Traffic Control Signals

1.4.10. Exhibit "J". Lowry Bridge Electrical Services

2. The City's Maintenance Responsibilities.

2.1. Surface Maintenance.

2.1.1. The City's Core Area Surface Maintenance. The City shall maintain the City's core area portion of the County State Aid Highways defined as the area south of CSAH 66 (Broadway Avenue), east and north of I-94, and west of I-35W and southwest of the Mississippi River, marked as Exhibit "A", so as to keep the same reasonably smooth and in reasonably good repair for the passage of vehicular traffic and reasonably free of all obstructions and impediments to traffic. This maintenance shall include such preventative maintenance services as may be reasonably required to preserve the roadway in reasonably good condition, including but not limited to proper and timely crack and joint sealing and surface patching.

2.2. Snow and Ice Control.

2.2.1. The City's Core Area Snow and Ice Control. The City shall keep the aforesaid portions of County State Aid Highways marked as Exhibit "A", reasonably free and clear from snow, ice and debris and undertake proper snow and ice control operations when necessary. The City shall maintain the through traffic lanes to their full width and ensure that such lanes are reasonably free and clear from snow and ice within a reasonable period of time following each winter storm.

2.2.2. Raised Medians/Pedestrian Refuges. The City shall keep raised median pedestrian openings and pedestrian refuges reasonably free and clear from snow and ice in accordance with City practices following each winter storm.

2.2.3. Bicycle Facilities. The City shall keep protected bicycle facilities with vertical separation including; delineators, raised curb, concrete barrier, parking, etc., on County State Aid Highways marked as Exhibit "B", reasonably free and clear

from snow, ice and debris in accordance with City practices.

2.2.4. Unlimited Access to Fueling Station. The City shall provide County personnel and vehicles unlimited access to an automated fueling station 24 hours a day. To facilitate fueling station access:

The County will:

- Provide employees' names and associated County driver permit numbers,
- Provide County unit numbers, unit descriptions, VINs, and tank capacities assigned to each City provided fueling fob,
- Provide the unit numbers that are taken out of service when no longer in use,
- Provide the employees' names and driver permit numbers of employees separated from employment and/or who no longer need to fuel County units,
- Pay for fuel usage within 30 calendar days of being invoiced by the City, and
- Provide a point of contact to resolve issues related to fueling and billing.

The City will:

- Provide a fueling PIN for each County employee with fueling station access,
- Provide fueling fobs and associated fob number,
- Add County employees to City's fueling station database,
- Add County vehicle information assigned to each fob to City's fueling station database,
- Modify unit status within fuel management system,
- Disable fuel access for users who no longer require the fuel privileges,
- Provide a monthly invoice of County fuel use, and
- Provide a point of contact to resolve issues related to fueling and billing.

2.3. Sweeping. Maintain the portions of the County State Aid Highways marked as Exhibit "B" by keeping them reasonably free of all obstructions and impediments. This maintenance shall include street sweeping, rubbish removal, and cleaning in accordance with City practices and trimming of trees within County State Aid Highway right of way.

2.4. Drainage. The City-owned drainage trunk line storm sewers under County roads listed on Exhibit "B" shall be maintained by the City in accordance with City practices.

2.4.1 Manhole and Catch Basin Maintenance as Agreed to by County. If, in the context of performing maintenance on the City's drainage system, the City observes a need for corrective maintenance on nearby County-owned manholes or catch basins, the City will notify the County Road Operations Manager via Hennepin County Dispatch 612-596-0299. If it is agreed to be mutually beneficial, the County, subject to limitations and restrictions provided in Subsection 4.1, may facilitate or cause the City to perform the agreed upon corrective maintenance. The