Application

04774 - 2016 Roadway Modernization

05014 - CSAH 66 (Golden Valley Road) Reconstruction

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
Submitted Date:	07/15/2016 10:39 AM

Primary Contact

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

Organization Information

Name:	HENNEPIN COUNTY

Jurisdictional Agency (if different):

Organization Type: County Government

Organization Website:

Address: DPT OF PUBLIC WORKS

1600 PRAIRIE DR

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

County: Hennepin

Phone:* 763-745-7600 Ext.

Fax:

PeopleSoft Vendor Number 0000028004A9

Project Information

Project Name CSAH 66 (Golden Valley Road) Reconstruction / Modernization

Primary County where the Project is Located Hennepin

Jurisdictional Agency (If Different than the Applicant):

The CSAH 66 (Golden Valley Road) project reconstructs a 0.93 mile section of roadway from Regent Avenue to Bonnie Lane in the City of Golden Valley. The project objectives are to provide a safe, comfortable, and inviting corridor for people living, working, or visiting the area by improving safety and operations for pedestrian, bicycle, transit, vehicle, and freight travel movements along the corridor. West of Noble Avenue, CSAH 66 will have a three-lane typical section with two travel lanes and a center turn lane. East of Noble Avenue, CSAH 66 will include two travel lanes with dedicated turn lanes provided at signalized intersections. A planted boulevard, sidewalk, and trail will be included throughout the project corridor. Intersection geometry and signal upgrades will improve the safety and level of service for all modes.

Brief Project Description (Limit 2,800 characters; approximately 400 words)

The project will incorporate the following improvements, pending final approval by the Golden Valley City Council:

1.Replace sidewalks, fill sidewalk gaps, and relocate obstructing utilities

2.Construct the Bassett Creek Regional Trail along project's full extent

3.Upgrade pedestrian and bicycle crossings with ADA compliant ramps, Accessible Pedestrian Signals (APS), durable crosswalk markings, pedestrian median islands, and countdown timers

4.Add planted boulevards to increase green space and buffer sidewalk and trail users from traffic

5.Enhance streetscaping with lighting and other elements

6.Improve efficiency and safety by converting an unwarranted all-way stop at CSAH 66/Regent Avenue to a two-way stop with a center median, providing flashing yellow arrows at signalized intersections, and reconfiguring striping and turn lanes

When complete, this project will achieve a safe and inviting corridor for all ages, physical abilities, and travel modes. Improvements will provide additional multimodal travel benefits when the Blue Line Extension becomes operational, as the CSAH 66 corridor provides a direct connection to the proposed future Golden Valley Bottineau Blue Line LRT station at CSAH 66 and Theodore Wirth Parkway.

Include location, road name/functional class, type of improvement, etc.

TIP Description Guidance (will be used in TIP if the project is selected for funding)

CSAH 66 (GOLDEN VALLEY RD) FROM REGENT AVE TO BONNIE LANE IN GOLDEN VALLEY - RECONSTRUCT ROADWAY, CURB AND GUTTER, SIDEWALK, TRAIL FOR PEDS AND BIKES, TRAFFIC SIGNALS, AND STREETSCAPING.

Project Length (Miles)

0.93

Project Funding

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

No

If yes, please identify the source(s)

Federal Amount

$7,000,000.00

Match Amount

$1,761,000.00

Minimum of 20% of project total

Project Total

$8,761,000.00

Match Percentage

20.1%

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

Source of Match Funds

Local

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

Preferred Program Year

Select one: 2020

For TDM projects, select 2018 or 2019. For Roadway, Transit, or Trail/Pedestrian projects, select 2020 or 2021.

Additional Program Years:

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

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$450,000.00
Removals (approx. 5% of total cost)	$450,000.00
Roadway (grading, borrow, etc.)	$836,000.00
Roadway (aggregates and paving)	$1,364,000.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$700,000.00
Ponds	$80,000.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$325,000.00
Traffic Control	$75,000.00
Striping	$65,000.00
Signing	$15,000.00
Lighting	$0.00
Turf - Erosion & Landscaping	$250,000.00
Bridge	$0.00
Retaining Walls	$1,000,000.00
Noise Wall (do not include in cost effectiveness measure)	$0.00
Traffic Signals	$500,000.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$1,170,000.00
Other Roadway Elements	$500,000.00
Totals	**$7,780,000.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	$350,000.00
Sidewalk Construction	$150,000.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$150,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$50,000.00
Pedestrian-scale Lighting	$100,000.00
Streetscaping	$75,000.00
Wayfinding	$6,000.00
Bicycle and Pedestrian Contingencies	$50,000.00
Other Bicycle and Pedestrian Elements	$50,000.00
Totals	**$981,000.00**

Specific Transit and TDM Elements

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

Transit Operating Costs

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

Totals

Total Cost	$8,761,000.00
Construction Cost Total	$8,761,000.00
Transit Operating Cost Total	$0.00

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, the 2040 Regional Parks Policy Plan (2015), 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 objectives and strategies that relate to the project.

List the goals, objectives, strategies, and associated pages:

A) Transportation System Stewardship: The CSAH 66 project provides a new and structurally adequate roadway that accommodates forecasted 2040 traffic volumes. This A-Minor Arterial functions as an Augmentor and provides an essential east-west connection between North Minneapolis and Golden Valley. This project is a preferred alignment for the Hennepin County Bicycle Transportation Plan, Metropolitan Council Regional Bicycle Transportation Network, and the Three Rivers Park District's Bassett Creek Regional Trail.

B) Safety/Security: Planted boulevards and curb enhancements will provide delineation between modes. ADA compliant ramps, pedestrian median islands, countdown timers and crosswalk markings will significantly enhance safety for all users along the corridor. Driver safety and efficiency will also be improved through removal of an unwarranted all-way stop.

C) Access to Destinations: CSAH 66 is a regionally significant corridor that provides a direct connection to TH 100 and serves as a key alternate to TH 55 during periods of construction or congestion. This project will connect all modes and users directly to the Bottineau LRT Station and park & ride at Golden Valley Road. Metro Transit local bus route 14 and express route 758 provide connections to Minneapolis, Robbinsdale, and other cities. Theodore Wirth Park and the Grand Rounds Regional Trail are immediately east of the roadway and attract visitors year round from the local area and broader region.

D) Competitive Economy: Courage Kenny Rehabilitation and other vital medical facilities rely on the direct connection along this route both for

clients as well as hundreds of employees.

E) Healthy Environment: The multi-modal enhancements previously mentioned along the corridor will provide residents first/last mile connections to the regional LRT system maximizing ridership potential. These improvements aim to invite more people to integrate walking, biking, and transit into their transportation routines. Project staff are working with the Bassett Creek Watershed Management. Commission to identify opportunities for storm drainage and storage enhancements.

F) Leveraging Transportation Investments to Guide Land Use: This project enhances an already mature, medium-density neighborhood. The complimentary enhancements of this project, the Bassett Creek Regional Trail, and Bottineau LRT provide sustainable infrastructure for future investments in the area.

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:

- Hennepin County 2040 Bicycle Transportation Plan (Pg. 36)

- Three Rivers Park District Bassett Creek Regional Trail Master Plan (Pg. 40 to 41, 49 to 50, 60, 75)

- Bassett Creek Regional Trail CSAH 66 / Golden Valley Road Segment Feasibility Study (Full document)

- Golden Valley Comprehensive Plan (Pg. 7-29)

- METRO Blue Line Extension (Bottineau LRT) Station Area Planning: Plymouth Avenue and Golden Valley Road Stations (Pg.3-12 to 3-17)

- Metropolitan Council Regional Bicycle Transportation Network (Attachment 3.6)

4.The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of bicycle/pedestrian projects, 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.

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

5.Applicants that are not 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.
Roadway Expansion: *$1,000,000 to $7,000,000*
Roadway Reconstruction/ Modernization: *$1,000,000 to $7,000,000*
Roadway System Management *$250,000 to $7,000,000*
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.

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

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

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

10.The owner/operator of the facility must operate and maintain the project for the useful life of the improvement.

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

11.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

12.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

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

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

Roadways Including Multimodal Elements

1.All roadway and bridge projects must be identified as a Principal Arterial (Non-Freeway facilities only) or A-Minor Arterial as shown on the latest TAB approved roadway functional classification map.

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

Roadway Expansion and Reconstruction/Modernization 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 projects only:

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

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

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

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

5.The length of the bridge must equal or exceed 20 feet.

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

6. The bridge must have a sufficiency rating less than 80 for rehabilitation projects and less than 50 for replacement projects. Additionally, the bridge must also be classified as structurally deficient or functionally obsolete.

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

Requirements - Roadways Including Multimodal Elements

Project Information-Roadways

County, City, or Lead Agency	Hennepin County
Functional Class of Road	A-Minor Augmentor
Road System *TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET*	CSAH
Road/Route No. *i.e., 53 for CSAH 53*	66
Name of Road *Example; 1st ST., MAIN AVE*	Golden Valley Road
Zip Code where Majority of Work is Being Performed	55422
(Approximate) Begin Construction Date	07/01/2021
(Approximate) End Construction Date	11/01/2022

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

From: **(Intersection or Address)**	100' west of Regent Avenue
To: **(Intersection or Address)** *DO NOT INCLUDE LEGAL DESCRIPTION*	Bonnie Lane (Note: additional work may be needed to reach a logical project terminus)
Or At	
Primary Types of Work *Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.*	Grade, aggregate base, bituminous base and surfacing, curb and gutter, sidewalks, bike path, lighting, pedestrian ramps, storm sewer, and signals.

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

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

Expander/Augmentor/Connector/Non-Freeway Principal Arterial

Select one:	Augmentor
Area	0.993
Project Length	0.932
Average Distance	1.0655

Upload Map	1466013979859_CSAH66_RoadwayDefinition.pdf

Reliever: Relieves a Principal Arterial that is a Freeway Facility

Facility being relieved

Number of hours per day volume exceeds capacity (based on the Congestion Report)	0

Reliever: Relieves a Principal Arterial that is a Non-Freeway Facility

Facility being relieved

Number of hours per day volume exceeds capacity (based on the table below)	0

Non-Freeway Facility Volume/Capacity Table

Hour	NB/EB Volume	SB/WB Volume	Capacity	Volume exceeds capacity
12:00am - 1:00am			0	
1:00am - 2:00am			0	
2:00am - 3:00am			0	
3:00am - 4:00am			0	
4:00am - 5:00am			0	
5:00am - 6:00am			0	
6:00am - 7:00am			0	
7:00am - 8:00am			0	
8:00am - 9:00am			0	
9:00am - 10:00am			0	
10:00am - 11:00am			0	
11:00am - 12:00pm			0	
12:00pm - 1:00pm			0	
1:00pm - 2:00pm			0	
2:00pm - 3:00pm			0	
3:00pm - 4:00pm			0	
4:00pm - 5:00pm			0	
5:00pm - 6:00pm			0	
6:00pm - 7:00pm			0	
7:00pm - 8:00pm			0	

8:00pm - 9:00pm	0
9:00pm - 10:00pm	0
10:00pm - 11:00pm	0
11:00pm - 12:00am	0

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

Existing Employment within 1 Mile:	14078
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	2096
Existing Students:	0
Upload Map	1466014330781_CSAH66_RegionalEconomy.pdf

Measure C: Current Heavy Commercial Traffic

Location:	CSAH 66, east of TH 100
Current daily heavy commercial traffic volume:	927
Date heavy commercial count taken:	05/17/2016 - 05/19/2016

Measure D: Freight Elements

Response (Limit 1,400 characters; approximately 200 words)

The CSAH 66 (Golden Valley Road) reconstruction project will modernize a 0.93 mile section of a 10-ton roadway between Regent Avenue and Bonnie Lane in the City of Golden Valley. The improvements provide a new and structurally adequate roadway that can accommodate 2040 forecast traffic volumes. CSAH 66 is classified as an A-Minor Arterial that provides an essential east-west connection near TH 100 between North Minneapolis and Golden Valley. Carrying 927 heavy commercial vehicles daily, this roadway provides a key alternate to TH 55 during periods of construction or congestion. Among other purposes, this roadway provides a direct route for medical and other supply deliveries to the Courage-Kenny Rehabilitation Institute. Additionally, the Golden Valley Fire Station #3 is located directly on CSAH 66, which depends on a direct, continuous, and structurally sound roadway for emergency response vehicles.

Additional improvements to facilitate freight movements and improve overall safety and efficiency along the corridor include, but are not limited to:

- Convert an unwarranted all-way stop at CSAH 66 and Regent Avenue to a two-way stop control intersection

- Provide flashing yellow arrows at all signalized intersections

- Reconfigure striping and install turn lanes
- Replace existing curb and gutter, and construct new curb and gutter where missing for improved roadway definition

Measure A: Current Daily Person Throughput

Location	West of Noble Avenue
Current AADT Volume	16500
Existing Transit Routes on the Project	14, 758
For New Roadways only, list transit routes that will be moved to the new roadway	
Upload Transit Map	1466439770953_CSAH66_TransitConnections.pdf

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	21450.0

Measure B: 2040 Forecast ADT

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

Measure A: Project Location and Impact to Disadvantaged Populations

Select one:

Project located in Area of Concentrated Poverty with 50% or more of residents are people of color (ACP50):	
Project located in Area of Concentrated Poverty:	
Projects census tracts are above the regional average for population in poverty or population of color:	
Project located in a census tract that is below the regional average for population in poverty or populations of color or includes children, people with disabilities, or the elderly:	Yes

When complete, this project will achieve a safe and inviting corridor for all ages, physical abilities, and travel modes. The project greatly enhances connectivity and safety, specifically for the elderly and disabled by constructing ADA compliant pedestrian ramps, Accessible Pedestrian Signals (APS), durable crosswalk markings, pedestrian median islands, and countdown timers. Considering the existing bus service along this corridor as well as the planned Bottineau LRT Station, pedestrian enhancements and ADA features are critical to ridership. These first/last mile improvements are especially beneficial in relation to the medical facilities at Hidden Lakes Parkway including Courage Kenny Rehabilitation Institute which has numerous clients with disabilities.

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

The CSAH 66 Reconstruction Project is located in a census tract that is below the regional average for population in poverty or populations of color. The CSAH 66 Reconstruction Project will not have an adverse effect on populations in poverty or populations of color. This project will maintain a vital link between Minneapolis and western suburban communities.

The area of Minneapolis to the immediate east of the project is an area of concentrated poverty with 50% or more residents being people of color. CSAH 66 provides a vital link to employment and services for people living in this area.

The response should address the benefits, impacts, and mitigation for the populations affected by the project.

Upload Map 1466086677453_CSAH66_SocioEconomic.pdf

Measure B: Affordable Housing

City/Township	Segment Length in Miles (Population)
City of Golden Valley	0.93

Total Project Length

Total Project Length (Total Population)	0.93

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

City/Township	Segment Length (Miles)	Total Length (Miles)	Score	Segment Length/Total Length	Housing Score Multiplied by Segment percent
		0	**0**	**0**	**0**

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles)	0.93
Total Housing Score	0

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
1963	0.28	549.64	591.011
1951	0.65	1268.15	1363.602
	1	**1818**	**1955**

Average Construction Year

Weighted Year	1954

Total Segment Length (Miles)

Total Segment Length	0.93

Measure B: Geometric, Structural, or Infrastructure Improvements

Improving a non-10-ton roadway to a 10-ton roadway:	Yes

Response (Limit 700 characters; approximately 100 words)

Golden Valley Road is currently provides a 10-ton pavement structure given its State Aid designation. The paved shoulders exhibit significant settlement due to poor stormwater drainage caused by poor condition of the existing stormwater structures and lack of concrete curb and gutter. Over the years heavy commercial truck traffic has caused significant deterioration to the roadway to the point where maintenance activities offer little to no benefit in improving the pavement. The project will install concrete curb and gutter along the entire corridor defining the roadway limits and separating the vehicle facilities from the bicycle and pedestrian facilities.

Improved clear zones or sight lines:

Yes

Response (Limit 700 characters; approximately 100 words)

Sight lines will be improved for vehicles traveling southbound on Regent Avenue, looking east on CSAH 66. The horizontal curve at this location will be improved to meet a design speed of 35 mph. In addition, new sidewalk and boulevard on the north side of CSAH 66 will allow for better sight lines by removing some existing landscaping near the edge of the roadway.

Improved roadway geometrics:

Yes

Response (Limit 700 characters; approximately 100 words)

The existing four-lane undivided section between Regent Avenue and Noble Avenue will be restriped as a three-lane section with a two-way left turn lane to allow for safer local street and driveway access by separating turning vehicles from through traffic. New dedicated eastbound and westbound left-turn lanes on CSAH 66 at Regent Avenue will be properly aligned to eliminate the negative offset of the existing condition. Dedicated southbound right and left-turn lanes will be striped on Noble Avenue approaching CSAH 66 to clarify lane usage.

Access management enhancements:

Yes

Response (Limit 700 characters; approximately 100 words)

The roadway section between Regent Avenue and Noble Avenue will be converted from a 4-lane undivided roadway to a 3-lane section with a shared left turn lane to improve access and safety throughout the residential area. Golden Valley Road serves as a major east/west through corridor to bypass TH 55, so a majority of the vehicles do not turn into the side streets. Therefore, a 3-lane section will provide a dedicated space for left-turning vehicles to improve comfort and safety for drivers. The Golden Valley Road Project will also install concrete curb and gutter which will better define the roadway to reduce confusion on where access points are located.

Vertical/horizontal alignments improvements:

Yes

Response (Limit 700 characters; approximately 100 words)

Horizontal improvement: Currently a 30 mph speed advisory is posted for westbound vehicles approaching Regent Avenue. This curve will be revised to meet a 35 mph design speed, consistent with the remainder of the roadway.

Improved stormwater mitigation:

Yes

Response (Limit 700 characters; approximately 100 words)

The project is within the boundaries of the Bassett Creek Watershed Management Commission (BCWMC) and adjacent to Sweeney Lake (27-0035). Sweeney Lake (listed as impaired for nutrients and chlorides) has an approved TMDL and as a result, the county has an associated waste load allocation for phosphorus.

While the county will meet all of the watershed's stormwater management rules triggered by the project, the county has already initiated conversations with the BCWMC to research opportunities to partner on additional stormwater BMPs (i.e., stormwater reuse for irrigation on public parcels) to go beyond compliance and get more stormwater volume and associated nutrient load reductions.

Signals/lighting upgrades:

Yes

Response (Limit 700 characters; approximately 100 words)	Existing traffic signals at Noble Avenue and Hidden Lakes Parkway will be upgraded to meet current signal and ADA design standards. All signals will include yellow flashing arrows for improved left turn operation. Traffic signal luminaires will be upgraded with new lighting, and additional lighting will be installed throughout the corridor to provide a more comfortable and inviting environment for sidewalk and trail users.
Other Improvements	Yes
Response (Limit 700 characters; approximately 100 words)	Traffic calming elements will encourage drivers to abide by the posted speed limit and result in a more inviting and attractive corridor: - Narrowing travel lanes to 11 feet - Creating a boulevard space between the roadway and trail or sidewalk with vertical elements including landscaping, lighting, signs, and other streetscaping elements that will help visually narrow the roadway - Improving safety at pedestrian crossings - Adding of a regional trail connection and improved sidewalk connections - Enhancing placemaking treatments at key gateway locations along the corridor, including signalized intersections

Measure A: Congestion Reduction/Air Quality

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

24.0	7.0	17.0	1546	26282.0	1468507257421_CSAH 66 - Congestion Reduction - Regent.pdf

Total Delay

Total Peak Hour Delay Reduced	26282.0

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

Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced Per Vehicle by the Project (Kilograms):	Volume (Vehicles Per Hour):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
2.88	1.27	1.61	1546.0	2489.06
3	**1**		**1546**	**2489**

Total

Total Emissions Reduced:	2489.06
Upload Synchro Report	1468507336625_CSAH 66 - Congestion Reduction - Regent.pdf

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

Total Parallel Roadways

Emissions Reduced on Parallel Roadways	0
Upload Synchro Report	

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)	

Transit Projects Not Requiring Construction

If the applicant is completing a transit or TDM 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

1)Project Scope (5 Percent of Points)

Meetings or contacts with stakeholders have occurred Yes

100%

Stakeholders have been identified

40%

Stakeholders have not been identified or contacted

0%

2)Layout or Preliminary Plan (5 Percent of Points)

Layout or Preliminary Plan completed

100%

Layout or Preliminary Plan started Yes

50%

Layout or Preliminary Plan has not been started

0%

Anticipated date or date of completion 05/07/2018

3)Environmental Documentation (5 Percent of Points)

EIS

EA Yes

PM

Document Status:

Document approved (include copy of signed cover sheet)
100%

Document submitted to State Aid for review
75% date submitted

Document in progress; environmental impacts identified; review request letters sent

50%

Document not started Yes

0%

Anticipated date or date of completion/approval 07/01/2019

4)Review of Section 106 Historic Resources (10 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%

Historic/archeological review under way; determination of no historic properties affected or no adverse effect anticipated

80%

Historic/archaeological review under way; determination of adverse effect anticipated

40%

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

0%

Anticipated date or date of completion of historic/archeological review: — 03/04/2019

Project is located on an identified historic bridge

5)Review of Section 4f/6f Resources (10 Percent of Points)

4(f) Does the project impacts any public parks, public wildlife refuges, public golf courses, wild & scenic rivers or public private historic properties?
6(f) Does the project impact any public parks, public wildlife refuges, public golf courses, wild & scenic rivers or historic property that was purchased or improved with federal funds?

No Section 4f/6f resources located in the project area

100%

No impact to 4f property. The project is an independent bikeway/walkway project covered by the bikeway/walkway Negative Declaration statement; letter of support received

100%

Section 4f resources present within the project area, but no known adverse effects — Yes

80%

Project impacts to Section 4f/6f resources likely coordination/documentation has begun

50%

Project impacts to Section 4f/6f resources likely coordination/documentation has not begun

30%

Unsure if there are any impacts to Section 4f/6f resources in the project area

0%

6)Right-of-Way (15 Percent of Points)

Right-of-way, permanent or temporary easements not required

100%

Right-of-way, permanent or temporary easements has/have been acquired

100%

Right-of-way, permanent or temporary easements required, offers made

75%

Right-of-way, permanent or temporary easements required, appraisals made

50%

Right-of-way, permanent or temporary easements required, parcels identified Yes

25%

Right-of-way, permanent or temporary easements required, parcels not identified

0%

Right-of-way, permanent or temporary easements identification has not been completed

0%

Anticipated date or date of acquisition 03/02/2020

7)Railroad Involvement (25 Percent of Points)

No railroad involvement on project Yes

100%

Railroad Right-of-Way Agreement is executed (include signature page) 100%

Railroad Right-of-Way Agreement required; Agreement has been initiated

60%

Railroad Right-of-Way Agreement required; negotiations have begun

40%

Railroad Right-of-Way Agreement required; negotiations not begun

0%

Anticipated date or date of executed Agreement 11/04/2019

8)Interchange Approval (15 Percent of Points)*

**Please contact Karen Scheffing at MnDOT (Karen.Scheffing@state.mn.us or 651-234-7784) to determine if your project needs to go through the Metropolitan Council/MnDOT Highway Interchange Request Committee.*

Project does not involve construction of a new/expanded interchange or new interchange ramps Yes

100%

Interchange project has been approved by the Metropolitan Council/MnDOT Highway Interchange Request Committee

100%

Interchange project has not been approved by the Metropolitan Council/MnDOT Highway Interchange Request Committee

0%

9)Construction Documents/Plan (10 Percent of Points)

Construction plans completed/approved (include signed title sheet)

100%

Construction plans submitted to State Aid for review

75%

Construction plans in progress; at least 30% completion

50%

Construction plans have not been started Yes

0%

Anticipated date or date of completion 03/02/2020

10)Letting

Anticipated Letting Date 06/01/2020

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

Crash Modification Factor Used: 39.0

Rationale for Crash Modification Selected:

The following is a list of Crash Modification Factors accessed from the CMF Clearinghouse database. Multiple CMF's were applied to each crash since the CSAH 66 Reconstruction Project will include multiple improvements to address safety. The overall average crash reduction expected is 61%, based on a 39% crash modification factor.

Improvement type (CMF ID, crash reduction)

01) Increased pavement friction - all crashes (CMF 194, 24%)

02) Increased pavement friction - wet pavement (CMF 195, 57%)

03) Increased pavement friction - rear end crashes (CMF 197, 42%)

04) Increased pavement friction - single vehicle crashes (CMF 198, 30%)

05) Narrow cross section from 4 to 3 lanes (CMF 874, 37%)

06) Coordinated signal timing (CMF 3072, 83%)

07) Convert unwarranted all-way stop to two-way stop. This project is proposing removal of an unwarranted all-way stop at CSAH 66 and Regent Avenue. Logically, rear end crashes on CSAH 66 at Regent will be eliminated. (100% reduction for these types of crashes).

(Limit 1400 Characters; approximately 200 words)

Project Benefit ($) from B/C Ratio

$3,436,297.00

Worksheet Attachment

1468508343734_CSAH 066 (Golden Valley Rd) Reconstruction - Benefit Cost Worksheets.pdf

Roadway projects that include railroad grade-separation elements:

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

Measure A: Multimodal Elements and Existing Connections

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

This segment of CSAH 66 (Golden Valley Road) transitions from an undivided four-lane roadway at Regent Avenue to a two-lane roadway with turn lanes at signalized intersections east of Noble Avenue to the project termini at Bonnie Lane. Sidewalks are present on both sides of the corridor in most locations, but critical gaps and deteriorating conditions make them difficult to navigate. Existing shoulders were recently painted as bicycle lanes east of Noble Avenue.

The CSAH 66 reconstruction project will provide the following multimodal elements (subject to approval by the Golden Valley City Council):

- Replace the existing sidewalks, fill gaps in the sidewalk network, and relocate obstructing utilities
- Upgrade crossings and intersections with ADA-compliant pedestrian ramps, pedestrian crossing islands, and Accessible Pedestrian Signals (APS) with countdown timers
- Construct a shared-use Bassett Creek Regional Trail segment for the full project length

- Provide a planted boulevard with streetscaping elements

- Improve transit access, amenities, and circulation for existing routes and a planned LRT station

CSAH 66 is identified as a planned off-street bikeway in the county bicycle plan and as the preferred alignment for the Three Rivers Park District's Bassett Creek Regional Trail (BCRT). The dilapidated and incomplete sidewalk will be replaced with a new regional trail connection (BCRT) on the south side of the roadway, and continuous concrete sidewalk on the north side

(pending city council approval). ADA-compliant pedestrian ramps will be installed at all crossings, and signalized intersections will be upgraded to include ADA-compliant signals with countdown timers. A planted boulevard will further enhance the corridor for all users, adding green space, calming traffic, providing a buffer between sidewalk/trail users and motorized traffic, and creating space for improved lighting, streetscaping, and transit stop improvements.

Metro Transit routes 14 and 758 currently serve the corridor. Sidewalk, trail, boulevard, and crossing improvements will provide immediate and direct benefits to transit users. Context-sensitive improvements to the Courage Kenny Rehabilitation Institute transit stop will benefit riders who are more likely to experience mobility limitations. The Metro Blue Line Extension is also planned within a quarter mile of the project, including a station at Golden Valley Road and Theodore Wirth Parkway. This project implements improvements specified in previous station area plans, which call for improved pedestrian and bicycle access to Golden Valley Station. Final connections between this project and Golden Valley Station and the Minneapolis Grand Rounds will be implemented in coordination with Blue Line Extension construction.

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	$8,761,000.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$8,761,000.00
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
Attachment 1.1 - Hennepin County - Project Map.pdf	Project area map for CSAH 66 reconstruction	628 KB
Attachment 1.2 - Hennepin County - Typical Sections.pdf	Typical sections for CSAH 66 reconstruction	226 KB
Attachment 1.3 - Hennepin County - Concept.pdf	Attachment 1.3 - Concept	116.5 MB
Attachment 2.1 - City of Golden Valley - Letter of Support.pdf	City of Golden Valley letter of support for CSAH 66 reconstruction	804 KB
Attachment 2.2 - Three Rivers Park District - Letter of Support.pdf	Three Rivers Park District letter of support for CSAH 66 reconstruction	213 KB
Attachment 3.1 - Hennepin County - Planned Bikeway System Map.pdf	Hennepin County Planned Bikeway System Map, project area identified as off street bikeway	1.9 MB
Attachment 3.2 - Three Rivers Park District - BCRT Master Plan - Golden Valley Segment.pdf	Three Rivers Park District Bassett Creek Regional Trail Master Plan, Golden Valley Segment	1.0 MB
Attachment 3.3 - City of Golden Valley - BCRT Feasibility Study Alignment.pdf	City of Golden Valley Bassett Creek Regional Trail Feasibility Study, Trail Alignment	395 KB
Attachment 3.4 - City of Golden Valley - Comprehensive Plan - Ped Bike Network.pdf	City of Golden Valley Comprehensive Plan, Pedestrian and Bicycle Network	890 KB
Attachment 3.5 - METRO Transit - Blue Line Ext - Station Area Planning.pdf	METRO Transit Blue Line Extension Station Area Planning, Golden Valley Station Circulation and Streetscaping Improvements	380 KB
Attachment 3.6 - Metropolitan Council - Regional Bicycle Transportation Network.pdf	CSAH 66 project area identified as a Tier 2 corridor in Metropolitan Council's Regional Bicycle Transportation Network (RBTN)	369 KB
Attachment 4.1 - Hennepin County - Traffic Volumes.pdf	2016 Hennepin County Traffic Volume Data, AADT, CSAH 66 and East of T.H. 100	51 KB
Attachment 4.2 - Hennepin County - Heavy Vehicle Volumes.pdf	2016 Hennepin County Traffic Volume Data, Heavy Vehicle Traffic, CSAH 66 and East of T.H. 100	60 KB
Attachment 4.3 - CSAH 66 2040 Forecasts from Mark Filipi.pdf	2040 Traffic Volume Forecasts from Mark Filipi	96 KB
Attachment 4.4 - Hennepin County - Turning Movement Counts.pdf	2016 Hennepin County Turning Movement Counts - CSAH 66 & Regent Ave	121 KB

Attachment 5.1 - MnDOT - 2013-2015 Crash Data.pdf	2013-2015 crash data provided by MnDOT	656 KB
Attachment 5.2 - CMF Clearinghouse - CSAH 66 Crash Modification Factors.pdf	CMF Clearinghouse details used for cost/benefit analysis	254 KB
Attachment 5.3 - CMF Clearinghouse - CSAH 66 Crash Modification Factors.pdf	Crash Modification Factors applied to CSAH 66 2013-2015 collisions	277 KB
Attachment 6 - Hennepin County - Risk Assessment Notes.pdf	Risk Assessment Notes	65 KB

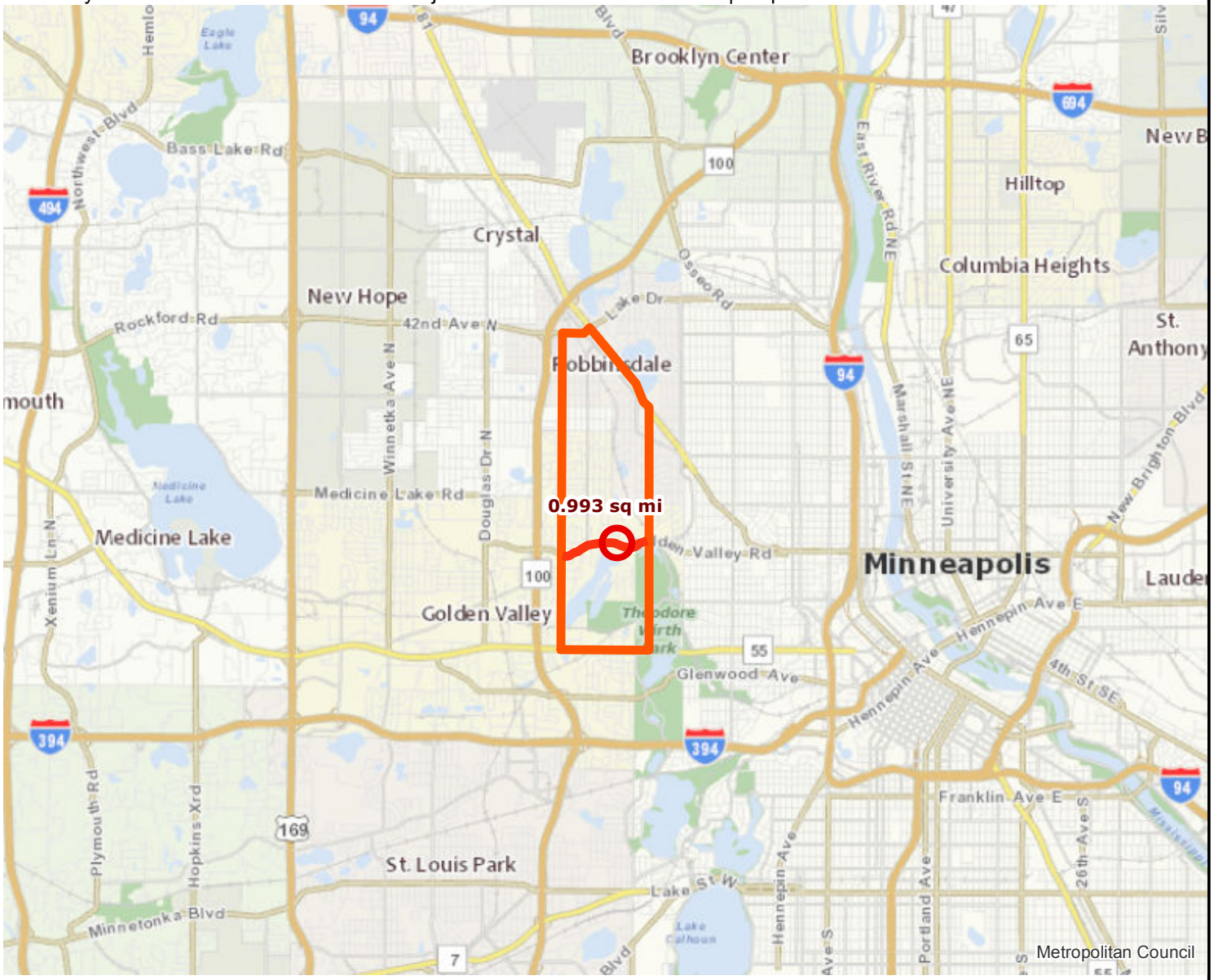
Roadway Area Definition

Roadway Reconstruction/Modernization Project: CSAH 66 Reconstruction | Map ID: 1465848313196

Results

Project Length: 0.932 miles

Project Area: 0.993 sq mi



Project Points Project Area

Project

0 1 2 4 6 8 Miles

Created: 6/13/2016
LandscapeRSA1

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

METROPOLITAN COUNCIL

Regional Economy

Roadway Reconstruction/Modernization Project: CSAH 66 Reconstruction | Map ID: 1465848313196

Results

WITHIN ONE MI of project:

Totals by City:

Golden Valley
- Population: 8226
- Employment: 9888
- Mfg and Dist Employment: 2078

Minneapolis
- Population: 5550
- Employment: 91
- Mfg and Dist Employment: 13

Robbinsdale
- Population: 3573
- Employment: 4099
- Mfg and Dist Employment: 5

Postsecondary Students:
0

Project Points Project Area

Project

0 1 2 4 6 8 Miles

Created: 6/13/2016
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 66 Reconstruction | Map ID: 1465848313196

Results

Transit with a Direct Connection to project:
14 758
*Blue Line Extension
*Blue Line Extension

**indicates Planned Alignments*

Project Points
Project
Project Area

Transitway
Blue / Green Line
Blue Line
Green Line
Northstar Line
Light Rail, Blue Line Extension
Light Rail, Green Line Extension

Planned Alignments
Arterial BRT
BRT, Orange Line

0 1 2 4 6 8 Miles

Created: 6/13/2016
LandscapeRSA3

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

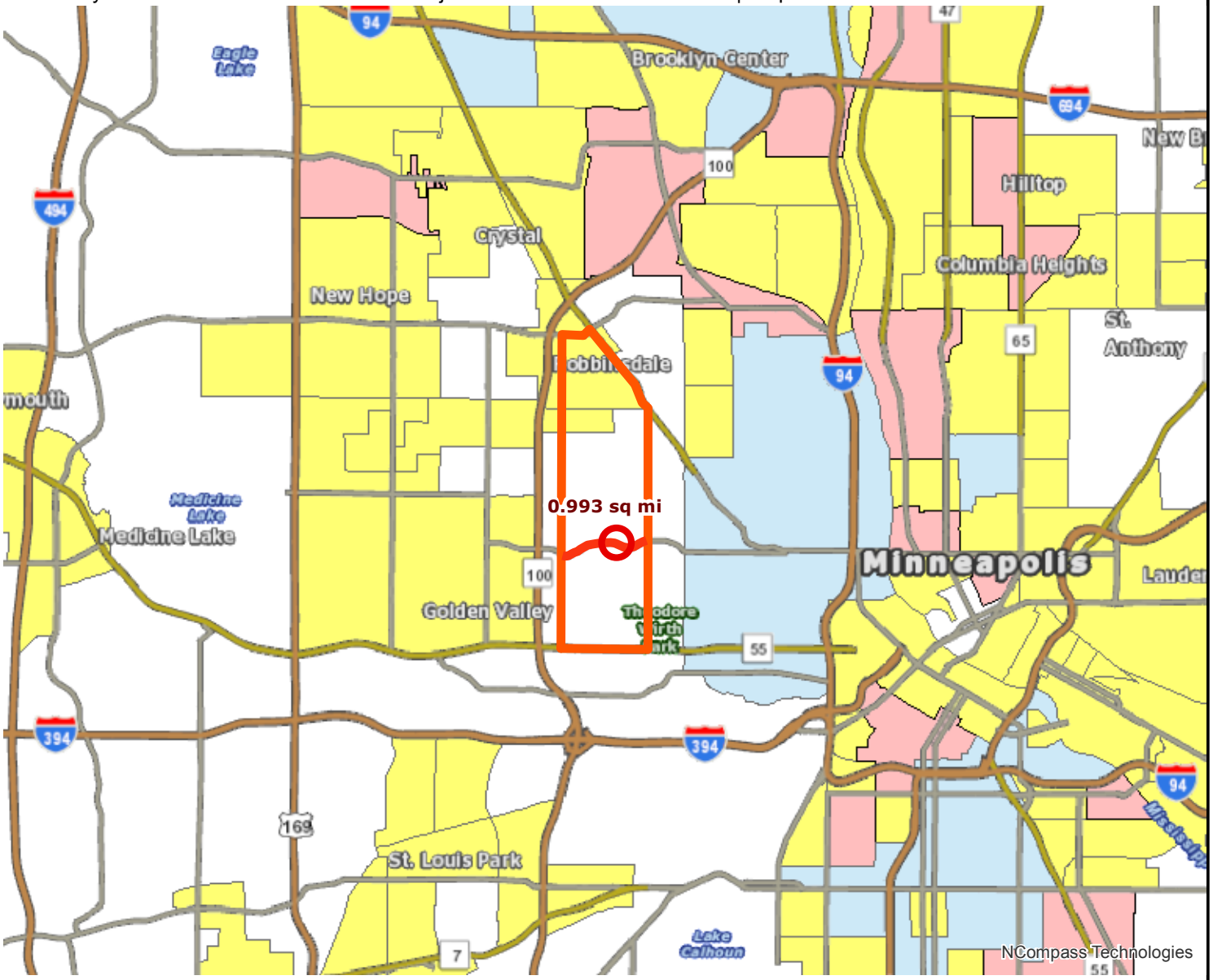
METROPOLITAN COUNCIL

Socio-Economic Conditions

Roadway Reconstruction/Modernization Project: CSAH 66 Reconstruction | Map ID: 1465848313196

Results

Project located in
a census tract that is below
the regional average for
population in poverty
or populations of color,
or includes children,
people with disabilities,
or the elderly:
(0 to 12 Points)



Project Points
Project
Project Area
Area of Concentrated Povertry > 50% residents of color
Area of Concentrated Poverty
Above reg'l avg conc of race/poverty

0 1 2 4 6 8 Miles

Created: 6/13/2016
LandscapeRSA2

METROPOLITAN COUNCIL

1: CSAH 66 & REGENT AVE N

Direction	All
Volume (vph) Total	1546
Delay / Veh (s/v)	24
CO Emissions (kg)	2.02
NOx Emissions (kg)	0.39
VOC Emissions (kg)	0.47

1: CSAH 66 & REGENT AVE N

Direction	All
Volume (vph) Total	1536
Delay / Veh (s/v)	7
CO Emissions (kg)	0.89
NOx Emissions (kg)	0.17
VOC Emissions (kg)	0.21

1: CSAH 66 & REGENT AVE N

Direction	All
Volume (vph) Total	1546
Delay / Veh (s/v)	24
CO Emissions (kg)	2.02
NOx Emissions (kg)	0.39
VOC Emissions (kg)	0.47

1: CSAH 66 & REGENT AVE N

Direction	All
Volume (vph) Total	1536
Delay / Veh (s/v)	7
CO Emissions (kg)	0.89
NOx Emissions (kg)	0.17
VOC Emissions (kg)	0.21

B/C worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	CSAH 66	At Regent Ave	0.80	0.86	Hennepin County	1/1/2013	12/31/2015

Description of Proposed Work: Convert intersection to Two-Way stop control (No CMF Available - Engineering Judgement)
Convert CSAH 66 to 3-lane section with TWLTL (CMF ID 2841)
Increase pavement friction for wet pavement crashes (CMF ID 195)

			Accident Diagram Codes 1	2	3	5	4, 7	8, 9	Pedestrian	6, 90, 98, 99 Other	Total
Study Period: Number of Crashes	Fatal	**F**									
	Personal Injury (PI)	**A**									
		B									
		C	1								**1**
	Property Damage	**PD**	1							1	**2**
% Change in Crashes *Use FHWA cmfclearinghouse for Crash Reduction Factors	Fatal	**F**									
	PI	**A**									
		B									
		C	-100%								
	Property Damage	**PD**	-100%							-57%	
Change in Crashes = No. of crashes **X** % change in crashes	Fatal	**F**									
	PI	**A**									
		B									
		C	**-1.00**								**-1.00**
	Property Damage	**PD**	**-1.00**							**-0.57**	**-1.57**

Year (Safety Improvement Construction): **2020**

		Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
Project Cost (exclude Right of Way)	**$ 8,461,000**					
Right of Way Costs (optional)		**F**			**$ 1,140,000**	
Traffic Growth Factor	**3%**	**A**			**$ 570,000**	
Capital Recovery		**B**			**$ 170,000**	
1. Discount Rate	**4.5%**	**C**	**-1.00**	**-0.33**	**$ 83,000**	**$ 27,692**
2. Project Service Life (n)	**20**	**PD**	**-1.57**	**-0.52**	**$ 7,600**	**$ 3,981**
		Total				**$ 31,673**

B/C= 0.07

Using present worth values,

B= $ 554,084

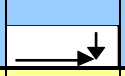
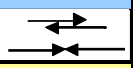
C= $ 8,461,000

See "Calculations" sheet for amortization.

B/C worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	CSAH 66	At Noble Ave	1.08	1.14	Hennepin County	1/1/2013	12/31/2015

Description of Proposed Work: Convert CSAH 66 to 3-lane section with TWLTL (CMF ID 2841)

Accident Diagram Codes		1 	2 	3 	5 	4, 7 	8, 9 	Pedestrian	6, 90, 98, 99 Other	Total
Study Period: Number of Crashes	Fatal **F**									
	Personal Injury (PI) **A**									
	Personal Injury (PI) **B**									
	Personal Injury (PI) **C**									
	Property Damage **PD**		1							**1**
% Change in Crashes *Use FHWA cmfclearinghouse for Crash Reduction Factors	Fatal **F**									
	PI **A**									
	PI **B**									
	PI **C**									
	Property Damage **PD**		-37%							
Change in Crashes = No. of crashes **x** % change in crashes	Fatal **F**									
	PI **A**									
	PI **B**									
	PI **C**									
	Property Damage **PD**		**-0.37**							**-0.37**

Year (Safety Improvement Construction): **2020**

Project Cost (exclude Right of Way): **$ 8,956,000**

Right of Way Costs (optional):

Traffic Growth Factor: **3%**

Capital Recovery

1. **Discount Rate:** **4.5%**
2. **Project Service Life (n):** **20**

Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
F			**$ 1,140,000**	
A			**$ 570,000**	
B			**$ 170,000**	
C			**$ 83,000**	
PD	**-0.37**	**-0.12**	**$ 7,600**	**$ 938**
Total				**$ 938**

B/C= 0.00

Using present worth values,

B= $ 16,413

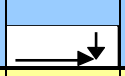
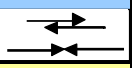
C= $ 8,956,000

See "Calculations" sheet for amortization.

B/C worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	CSAH 66	At Hidden Lakes Parkway	1.47	1.53	Hennepin County	1/1/2013	12/31/2015

Description of Proposed Work: Implement traffic signal coordination along arterial roadway (CMF ID 3072); Improve pavement friction - rear end crashes (CMF ID 197)

Accident Diagram Codes		1 	2 	3 	5 	4, 7 	8, 9 	Pedestrian	6, 90, 98, 99 Other	Total
Study Period: Number of Crashes	Fatal **F**									
	Personal Injury (PI) **A**									
	Personal Injury (PI) **B**									
	Personal Injury (PI) **C**									
	Property Damage **PD**	2								**2**
% Change in Crashes *Use FHWA cmfclearinghouse for Crash Reduction Factors	Fatal **F**									
	PI **A**									
	PI **B**									
	PI **C**									
	Property Damage **PD**	-91%								
Change in Crashes = No. of crashes **x** % change in crashes	Fatal **F**									
	PI **A**									
	PI **B**									
	PI **C**									
	Property Damage **PD**	**-1.82**								**-1.82**

Year (Safety Improvement Construction): **2020**

Project Cost (exclude Right of Way): **$ 8,761,000**

Right of Way Costs (optional):

Traffic Growth Factor: **3%**

Capital Recovery

1. **Discount Rate**: **4.5%**
2. **Project Service Life (n)**: **20**

Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
F			**$ 1,140,000**	
A			**$ 570,000**	
B			**$ 170,000**	
C			**$ 83,000**	
PD	**-1.82**	**-0.61**	**$ 7,600**	**$ 4,615**
Total				**$ 4,615**

B/C= 0.01

Using present worth values,

B= $ 80,732

C= $ 8,761,000

See "Calculations" sheet for amortization.

B/C worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	CSAH 66	West of Noble Avenue	0.86	1.08	Hennepin County	1/1/2013	12/31/2015

Description of Proposed Work

Convert CSAH 66 to 3-lane section with TWLTL (CMF ID 2841)
Increase pavement friction - rear end crashes (CMF ID 197)
Increase pavement friction - all crashes (CMF ID 194)
Increase pavement friction - wet pavement crashes (CMF ID 195)
Increase pavement friction - single vehicle crashes (CMF ID 198)

		Accident Diagram Codes 1	2	3	5	4, 7	8, 9	Pedestrian	6, 90, 98, 99 Other	Total
Study Period: Number of Crashes	Fatal **F**									
	Personal Injury (PI) **A**									
	Personal Injury (PI) **B**								1	**1**
	Personal Injury (PI) **C**								1	**1**
	Property Damage **PD**	1		1						**2**
% Change in Crashes *Use FHWA cmfclearinghouse for Crash Reduction Factors	Fatal **F**									
	PI **A**									
	PI **B**								-56%	
	PI **C**								-73%	
	Property Damage **PD**	-63%		-52%						
Change in Crashes = No. of crashes **x** % change in crashes	Fatal **F**									
	PI **A**									
	PI **B**								**-0.56**	**-0.56**
	PI **C**								**-0.73**	**-0.73**
	Property Damage **PD**	**-0.63**		**-0.52**						**-1.15**

Year (Safety Improvement Construction) **2020**

Project Cost (exclude Right of Way) **$ 8,761,000**

Right of Way Costs (optional)

Traffic Growth Factor **3%**

Capital Recovery

1. **Discount Rate** **4.5%**
2. **Project Service Life (n)** **20**

Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
F			$ 1,140,000	
A			$ 570,000	
B	-0.56	-0.19	$ 170,000	$ 31,762
C	-0.73	-0.24	$ 83,000	$ 20,215
PD	-1.15	-0.38	$ 7,600	$ 2,916
Total				$ 54,893

B/C= 0.11

Using present worth values,

B= $ 960,302

C= $ 8,761,000

See "Calculations" sheet for amortization.

B/C worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	CSAH 66	East of Noble Avenue	1.14	1.78	Hennepin County	1/1/2013	12/31/2015

Description of Proposed Work: Increase pavement friction - rear end crashes (CMF ID 197); Increase pavement friction - wet pavement crashes (CMF ID 195); Incrase pavement friction - single vehicle crashes (CMF ID 198)

Accident Diagram Codes		1	2	3	5	4, 7	8, 9	Pedestrian	6, 90, 98, 99 Other	Total
Study Period: Number of Crashes	Fatal **F**									
	Personal Injury (PI) **A**								1	**1**
	Personal Injury (PI) **B**						1			**1**
	Personal Injury (PI) **C**	1								**1**
	Property Damage **PD**	1				2				**3**
% Change in Crashes *Use FHWA cmfclearinghouse for Crash Reduction Factors	Fatal **F**									
	PI **A**								-30%	
	PI **B**						-57%			
	PI **C**	-42%								
	Property Damage **PD**	-42%				-44%				
Change in Crashes = No. of crashes **X** % change in crashes	Fatal **F**									
	PI **A**								**-0.30**	**-0.30**
	PI **B**						**-0.57**			**-0.57**
	PI **C**	**-0.42**								**-0.42**
	Property Damage **PD**	**-0.42**				**-0.88**				**-1.30**

Year (Safety Improvement Construction): **2020**

		Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
Project Cost (exclude Right of Way)	**$ 8,761,000**					
Right of Way Costs (optional)		**F**			**$ 1,140,000**	
Traffic Growth Factor	**3%**	**A**	**-0.30**	**-0.10**	**$ 570,000**	**$ 57,052**
Capital Recovery		**B**	**-0.57**	**-0.19**	**$ 170,000**	**$ 32,330**
1. Discount Rate	**4.5%**	**C**	**-0.42**	**-0.14**	**$ 83,000**	**$ 11,631**
2. Project Service Life (n)	**20**	**PD**	**-1.30**	**-0.43**	**$ 7,600**	**$ 3,296**
		Total				**$ 104,309**

B/C= 0.21

Using present worth values,

B= $ 1,824,766

C= $ 8,761,000

See "Calculations" sheet for amortization.

2016 Regional Solicitation | Project Location Map

CSAH 066 Reconstruction Project

Hennepin
Transportation
Planning
www.hennepin.us
04/01/2016

MINNAQUA DR
MARKAY RDG
NOBLE AVE N
SPRUCE TRL
KYLE AVE N
DRESDEN LN
KEWANEE WAY
BASSETT CREEK DR
REGENT AVE N
ORCHARD AVE N
LEE AVE N
TOLEDO AVE N
LEGEND LN
LEGEND DR
WASATCH LN
BONNIE LN
WINDSOR WAY
PERRY AVE N
WESTBEND RD
ORDWAY ST
MAJOR CIR
INDIANA AVE N
MARY HILLS DR
GOLDEN VALLEY RD
66
VALERY RD
KYLE PL
HEATHBROOKE CIR
SCOTT AVE N
SORELL AVE N
SPRING VALLEY CIR
DULUTH ST
QUAIL AVE N
NOBLE DR
GOLDEN VALLEY RD
FRONTENAC AVE N
HIDDEN LAKES PKWY
SPRING VALLEY RD
MAJOR DR
BRIDGEWATER RD
SAINT CROIX AVE N
SAINT CROIX CIR
WATERFORD CT
CARRIAGE PATH
SKYLINE DR
TOLEDO AVE N
WINSDALE ST N

Project Location

N
W
E
S

0 175 350 700 Feet

CSAH 66 (Golden Valley Road) Reconstruction

Typical Sections - Widths Vary

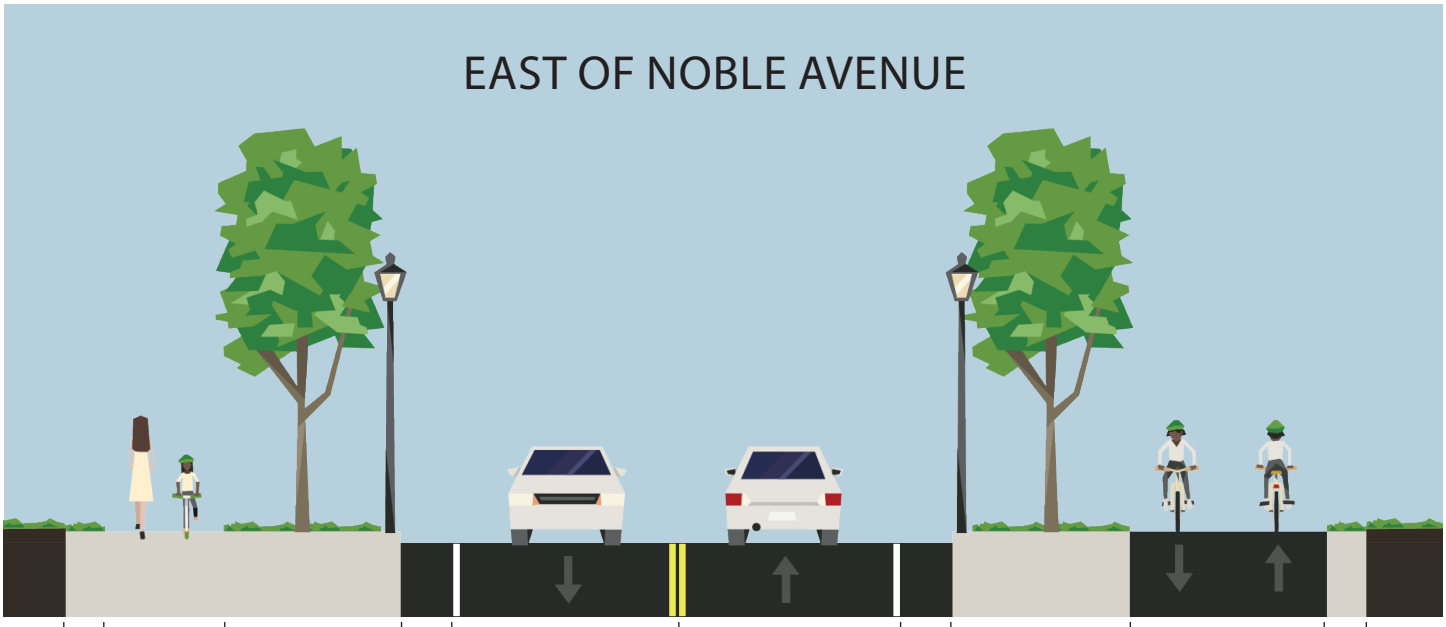
WEST OF NOBLE AVENUE

sidewalk | boulevard | travel lane | center turn lane | travel lane | boulevard | shared-use trail

N

TYPICAL 66' RIGHT-OF-WAY

EAST OF NOBLE AVENUE



sidewalk | boulevard | travel lane | travel lane | boulevard | shared-use trail

N

TYPICAL 66' RIGHT-OF-WAY

CSAH 66 (Golden Valley Rd) Reconstruction Concept

RECEIVED JUN 24 2016

city of golden valley
7800 Golden Valley Road
Golden Valley, MN 55427

June 22, 2016

James N. Grube, P.E.
Director of Transportation and County Engineer
Transportation Department
1600 Prairie Drive
Medina, Minnesota 55340

Re: Letter of Support for Hennepin County's Regional Solicitation Application and Project
CSAH 66 (Golden Valley Road) Reconstruction and Trail Implementation
Regent Avenue to Bonnie Lane

Dear Mr. Grube:

The City of Golden Valley supports Hennepin County's federal funding application through the Regional Solicitation for the proposed CSAH 66 (Golden Valley Road) roadway reconstruction and regional trail project from Regent Avenue to Bonnie Lane, which will include the following improvements:

- Full roadway reconstruction
- Traffic signal replacement/upgrades
- Sidewalk replacement and implementation
- Regional trail implementation
- Streetscaping and greening elements

The city supports this county reconstruction project, as it will improve capacity, access, and safety for multiple transportation modes. Improvements along this corridor will enhance the livability and quality of life for Golden Valley and Hennepin County residents.

Thank you for making us aware of this application effort and the opportunity to provide support. The city looks forward to working with you on this project.

Sincerely,

Marc Nevinski
Physical Development Director

Cc: Shep Harris, Mayor
Timothy J. Cruikshank, City Manager
Jeff Oliver, PE, City Engineer

ThreeRivers
PARK DISTRICT

June 9, 2016

James N. Grube, P.E.
Director of Transportation and County Engineer
Transportation Department
1600 Prairie Drive
Medina, Minnesota 55340

Re: Letter of Support for Regional Solicitation Application
CSAH 66 (Golden Valley Road) Reconstruction and Trail Implementation
Regent Avenue to Bonnie Lane

Dear Mr. Grube:

Three Rivers Park District supports Hennepin County's federal funding application through the Regional Solicitation for the proposed CSAH 66 (Golden Valley Road) roadway reconstruction and regional trail project from Regent Avenue to Bonnie Lane, which will include the following improvements:

- Full roadway reconstruction
- Implementation of the Bassett Creek Regional Trail in the project area
- Sidewalk replacement and streetscaping improvements
- Traffic signal replacement/upgrades
- Pedestrian and bicycle crossing improvements

Three Rivers Park District supports this project as it fills one of the last missing critical gaps of the Bassett Creek Regional Trail. The Bassett Creek Regional Trail is a multi-use off-road trail which provides a high level of safety and comfort to people biking and walking. This facility type serves people which fall into one of the three following bicycle attitude and perception categories: strong and fearless, enthusiastic and confident, and interested but concerned – totally over 60 percent of the population.

Improvements along this corridor will enhance the livability and quality of life for Golden Valley and Hennepin County residents, and improved connectivity and mobility options for users of Three Rivers Park District's trail system. Three Rivers Park District looks forward to working with you on this project.

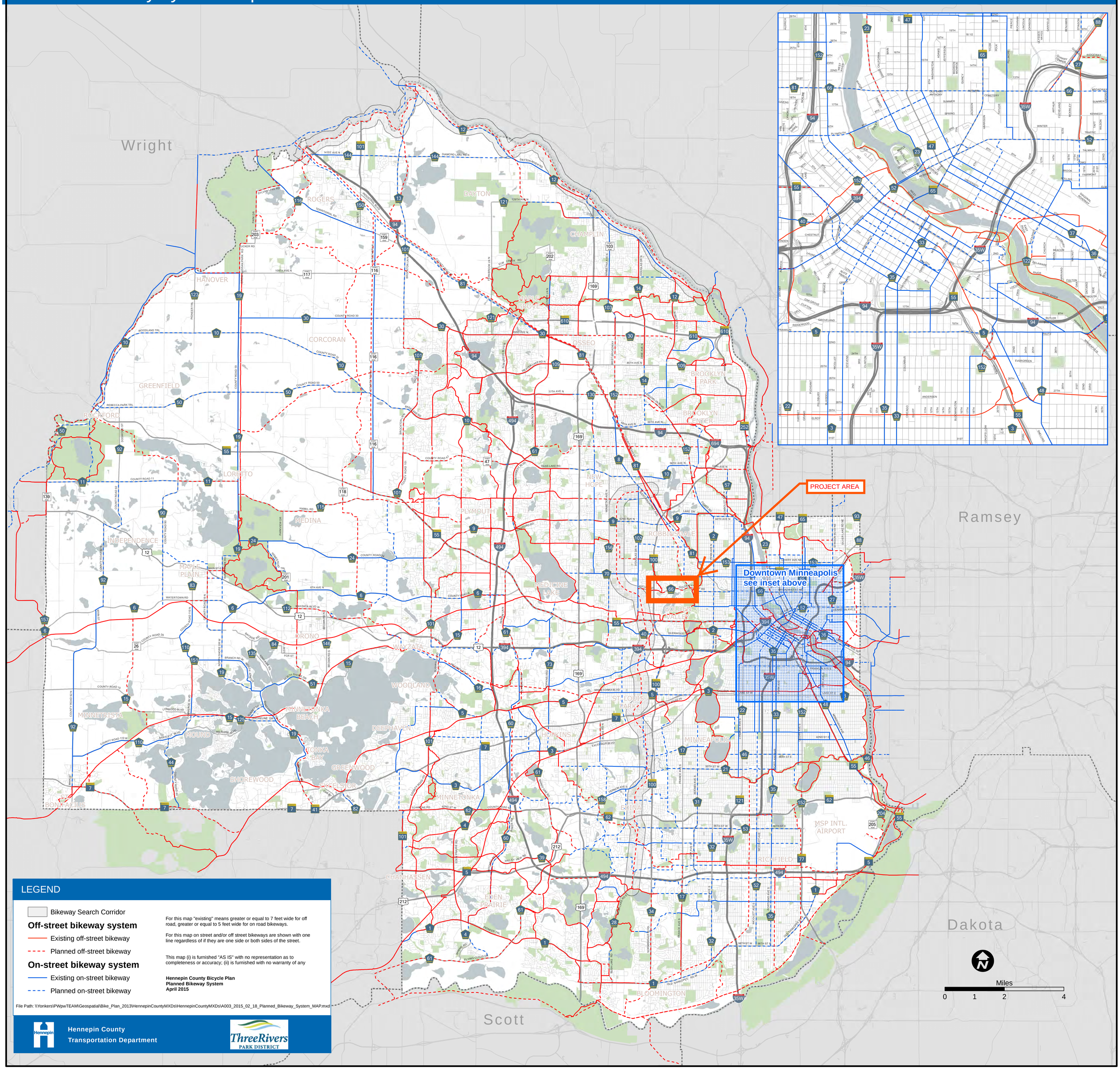
Sincerely,

Boe R. Carlson

Boe Carlson, Superintendent
Three Rivers Park District

G:\Planning\Administration\Letters of Support\Hennepin County - GV Road 2016 Fed App.docx

Hennepin County Bicycle Transportation Plan
Planned bikeway system - April 2015



LEGEND

- Bikeway Search Corridor

Off-street bikeway system

- Existing off-street bikeway
- Planned off-street bikeway

On-street bikeway system

- Existing on-street bikeway
- Planned on-street bikeway

For this map "existing" means greater or equal to 7 feet wide for off road, greater or equal to 5 feet wide for on road bikeways.

For this map on street and/or off street bikeways are shown with one line regardless of if they are one side or both sides of the street.

This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any

Hennepin County Bicycle Plan
Planned Bikeway System
April 2015

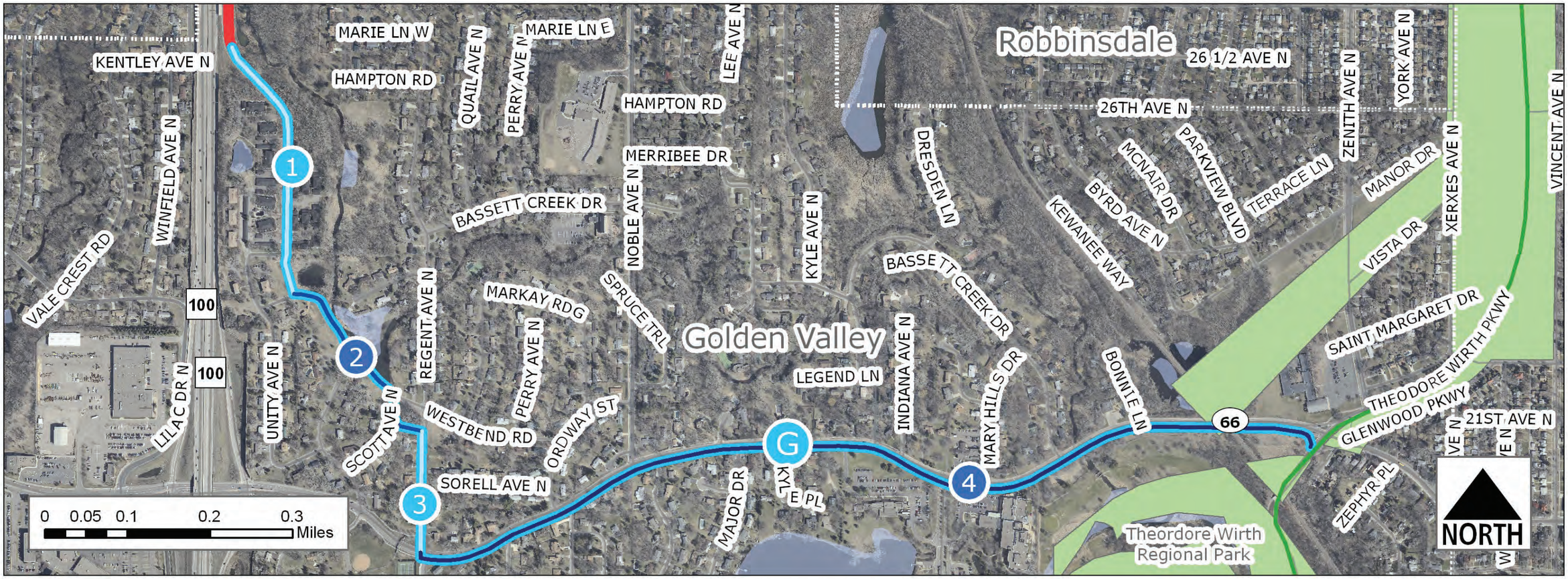
File Path: \\Yonkers\PWpwTEAM\Geospatial\Bike_Plan_2013\HennepinCountyMXDs\HennepinCountyMXDs\A003_2015_02_18_Planned_Bikeway_System_MAP.mxd

Miles
0 1 2 4

Hennepin County
Transportation Department

ThreeRivers PARK DISTRICT

APPENDIX A



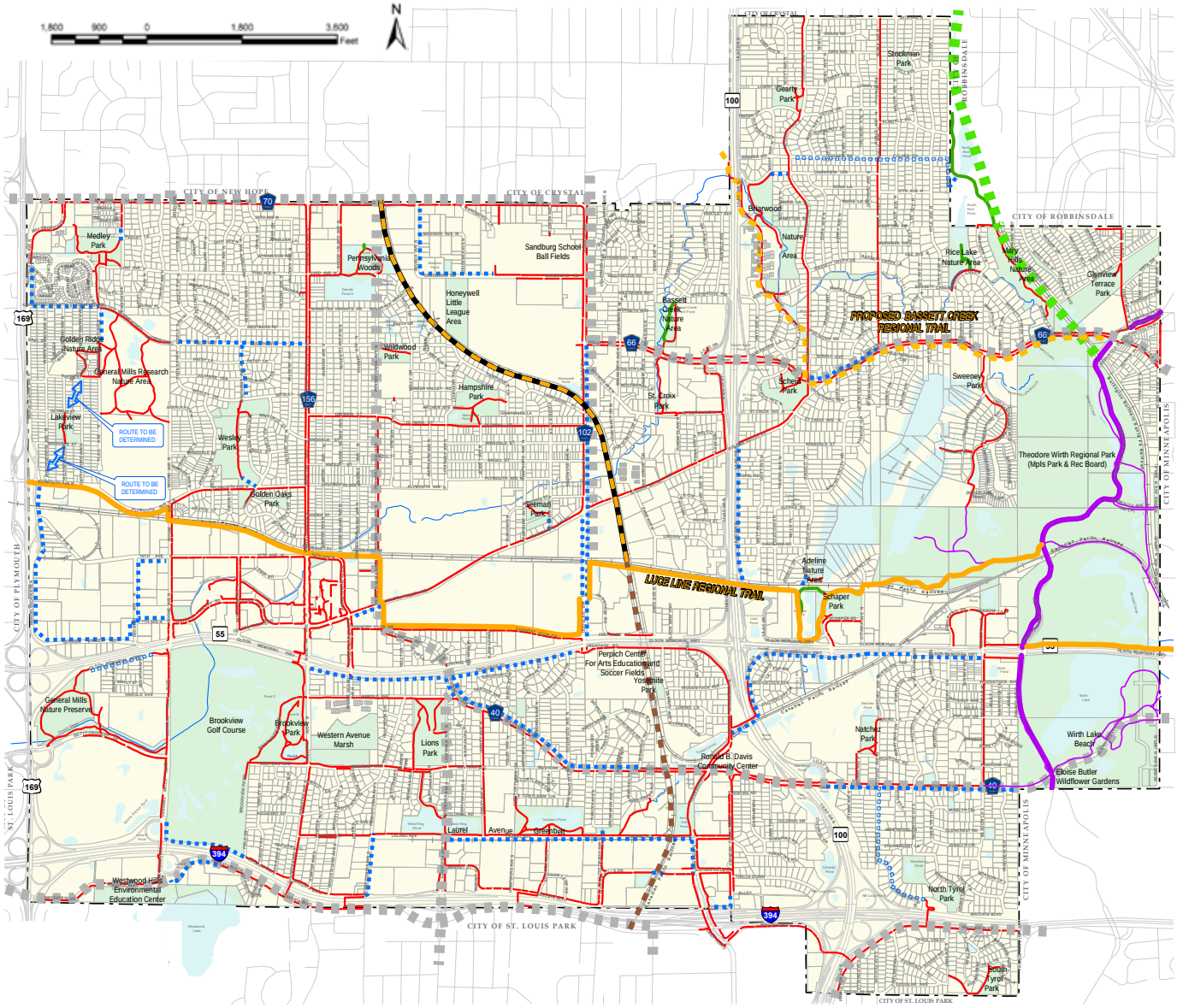
Segment	From	To	Along | Through	Length
Golden Valley				
G	**Highway 100 Pedestrian Bridge**	**Theodore Wirth Parkway (Theodore Wirth Regional Park)**	**Unity Avenue | Open Space | Toledo Avenue | Open Space | Scott Avenue | Regent Avenue | Golden Valley Road/CR66**	
G1	Highway 100 Pedestrian Bridge	Minnaqua Drive	Unity Avenue (east side) | Open Space	0.34
G2	Minnaqua Drive	Regent Avenue	Toledo Avenue (east side) | Open Space | Scott Avenue (east side)	0.31
G3	Westbend Road	Golden Valley Road/CR 66	Regent Avenue (west side)	0.18
G4	Regent Avenue	Theodore Wirth Parkway (Theodore Wirth Regional Park)	Golden Valley Road/CR 66 (south side)	1.15
			Subtotal	1.98 miles

Segment G - Golden Valley

Source: Three Rivers Park District

Appendix C: Sections 2 & 3 Alignment

Figure 7.8: Existing and Proposed Trails and Sidewalks



Existing Trails & Walks

- *Paved*
- *Unpaved*
- *Proposed Trail*
- *Proposed On-Street Pedestrian/Bike Route "SHARE THE ROAD"*
- *Potential North/South Corridor*

Three Rivers Park District Trails

- *Existing*
- *Proposed*
- *Potential North/South Regional Corridor (feasibility study underway, responsibility for implementation not determined)*

Proposed Hennepin County Trails

- *Primary System: Bikeway (on/off roadway)*
- *Secondary System*

Minneapolis Park & Recreation Board Trails

- *"Grand Rounds"—Theodore Wirth Byway District*
- *Local Trails*
- *Parks and Open Space*
- *Water*
- *Creek*
- *City Limits*

Date: July 30, 2009
Sources: SEH for proposed trail layer, MnDOT for neighboring city streets, Hennepin County Surveyors Office for Property Lines (2006), City of Golden Valley for all other layers

Figure 3.9: Pedestrian Circulation Enhancements

This map shows recommended pedestrian circulation enhancement to better support station area livability and LRT station access.

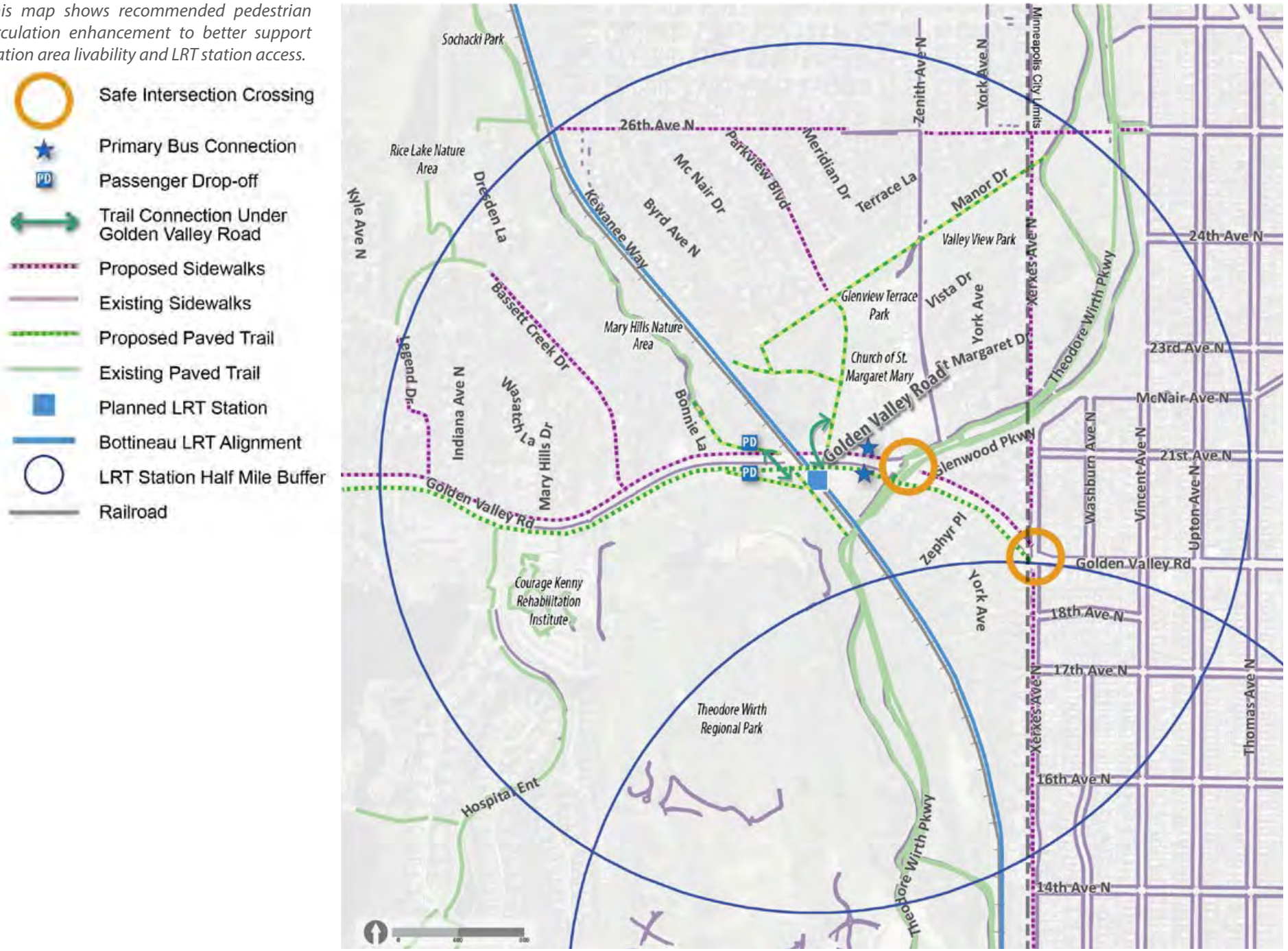


Figure 3.10: Bicycle Circulation Enhancements

This map shows recommended bicycle circulation enhancement to better support station area livability and LRT station access.

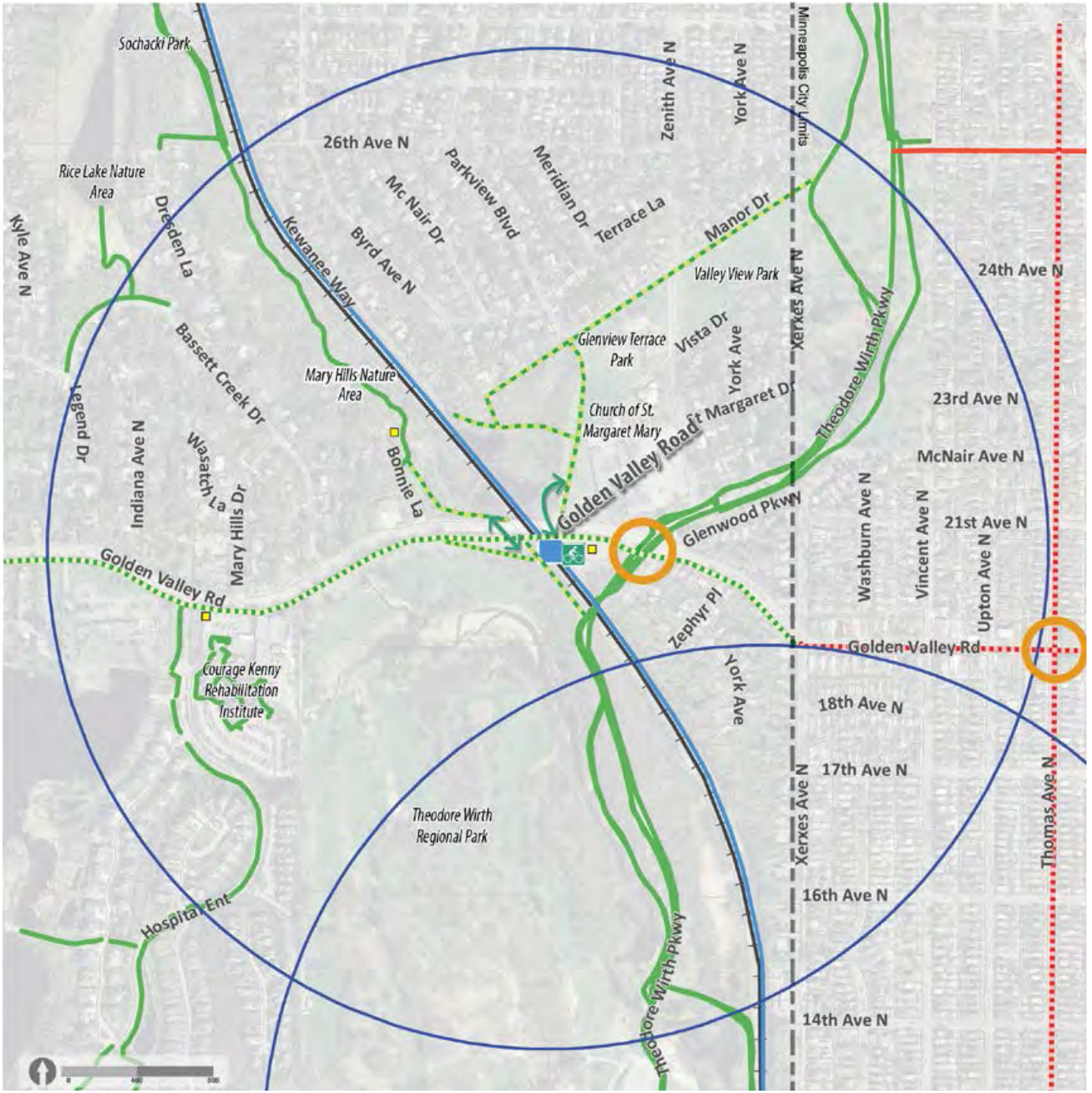
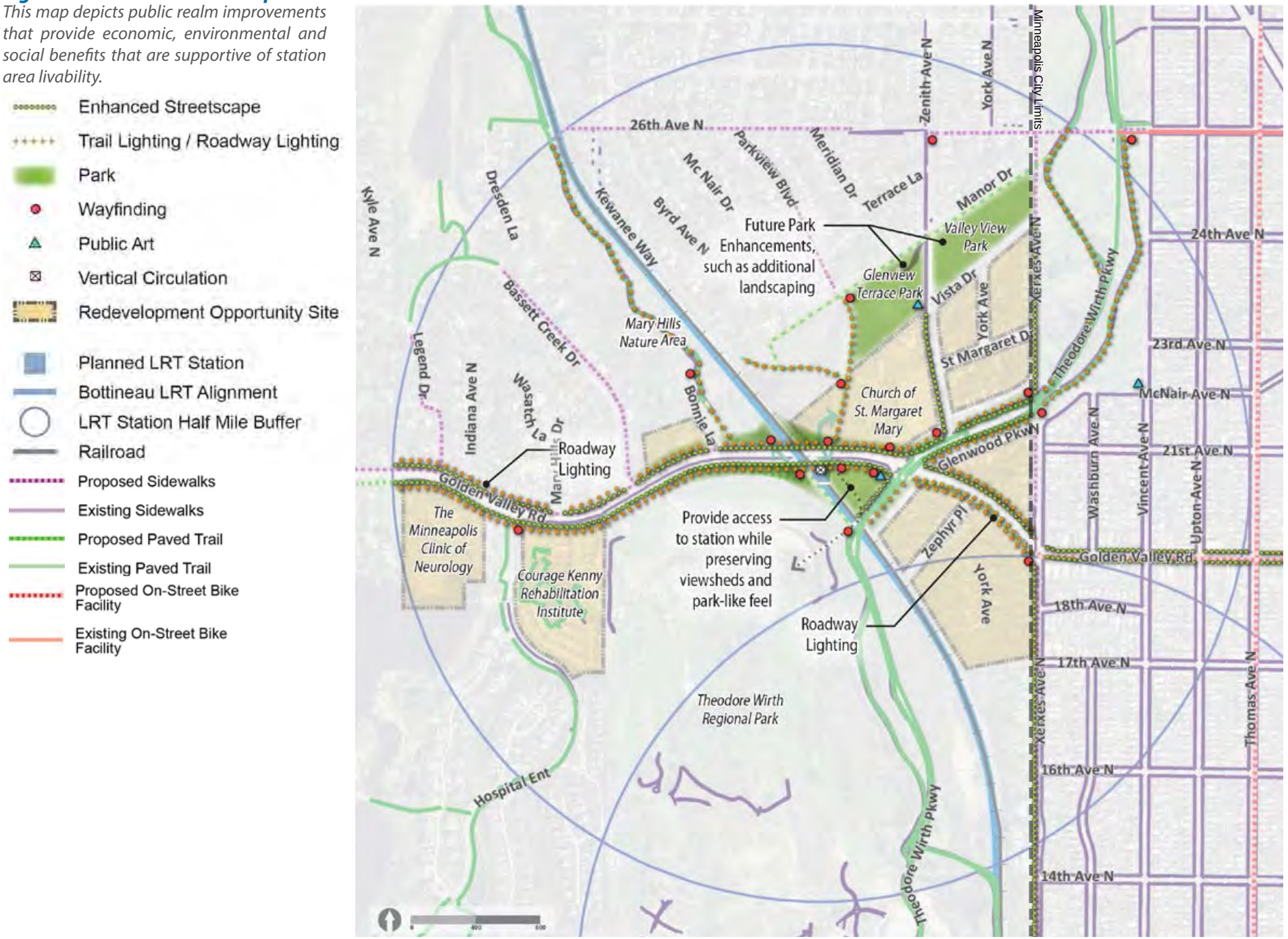


Figure 3.17: Public Realm Improvements

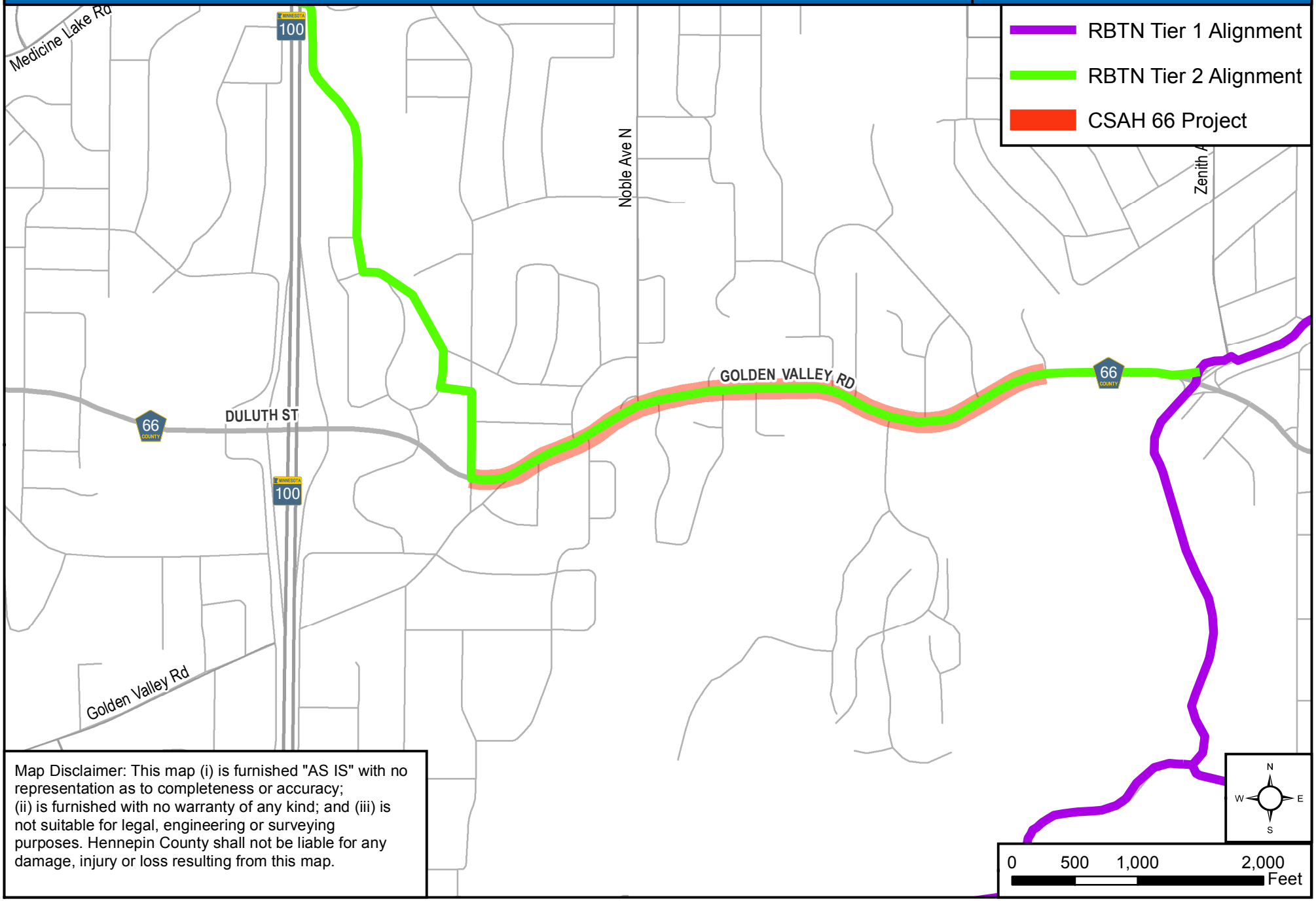
This map depicts public realm improvements that provide economic, environmental and social benefits that are supportive of station area livability.



CSAH 66 (Golden Valley Road) Reconstruction Project

Regional Bicycle Transportation Network

Hennepin
TRANSPORTATION
PLANNING DIVISION



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.

HENNEPIN COUNTY
TRANSPORTATION PLANNING DIVISION

TOTAL VOLUME DATA
CSAH 66 (GOLDEN VALLY RD.) E. OF -
T.H. 100 / STUDY # 4057

Site: 03

Weekly Volume, per Channel

E.B.

Interval Start	Mon 5/16/2016	Tue 5/17/2016	Wed 5/18/2016	Thu 5/19/2016	Fri 5/20/2016	Sat 5/21/2016	Sun 5/22/2016	Mon - Fri Average	Weekly Average
12:00 AM	-	-	61	53	-	-	-	57.0	57.0
1:00 AM	-	-	33	35	-	-	-	34.0	34.0
2:00 AM	-	-	31	34	-	-	-	32.5	32.5
3:00 AM	-	-	17	13	-	-	-	15.0	15.0
4:00 AM	-	-	20	20	-	-	-	20.0	20.0
5:00 AM	-	-	43	45	-	-	-	44.0	44.0
6:00 AM	-	-	272	270	-	-	-	271.0	271.0
7:00 AM	-	-	445	425	-	-	-	435.0	435.0
8:00 AM	-	-	559	502	-	-	-	530.5	530.5
9:00 AM	-	-	480	483	-	-	-	481.5	481.5
10:00 AM	-	-	376	418	-	-	-	397.0	397.0
11:00 AM	-	464	441	-	-	-	-	452.5	452.5
12:00 PM	-	525	551	-	-	-	-	538.0	538.0
1:00 PM	-	538	506	-	-	-	-	522.0	522.0
2:00 PM	-	616	626	-	-	-	-	621.0	621.0
3:00 PM	-	712	762	-	-	-	-	737.0	737.0
4:00 PM	-	913	882	-	-	-	-	897.5	897.5
5:00 PM	-	944	1007	-	-	-	-	975.5	975.5
6:00 PM	-	819	800	-	-	-	-	809.5	809.5
7:00 PM	-	570	553	-	-	-	-	561.5	561.5
8:00 PM	-	553	503	-	-	-	-	528.0	528.0
9:00 PM	-	384	413	-	-	-	-	398.5	398.5
10:00 PM	-	220	231	-	-	-	-	225.5	225.5
11:00 PM	-	108	116	-	-	-	-	112.0	112.0
Totals	0	7366	9728	2298	0	0	0	9696.0	9696.0
Peak Hours									
12:00 AM - 12:00 PM	-	11:00 AM	8:00 AM	8:00 AM	-	-	-	8:00 AM	8:00 AM
Volume	-	464	559	502	-	-	-	530.5	530.5
12:00 PM - 12:00 AM	-	5:00 PM	5:00 PM	-	-	-	-	5:00 PM	5:00 PM
Volume	-	944	1007	-	-	-	-	975.5	975.5

EB volume: 9,696
WB volume: 9,126.5
Total volume: 18,822.5

Adjustment factor: 1.142

2016 AADT: 16,500

HENNEPIN COUNTY
TRANSPORTATION PLANNING DIVISION

TOTAL VOLUME DATA
CSAH 66 (GOLDEN VALLY RD.) E. OF -
T.H. 100 / STDY 4057

Site: 03

Weekly Volume, per Channel

WB.

Interval Start	Mon 5/16/2016	Tue 5/17/2016	Wed 5/18/2016	Thu 5/19/2016	Fri 5/20/2016	Sat 5/21/2016	Sun 5/22/2016	Mon - Fri Average	Weekly Average
12:00 AM	-	-	40	40	-	-	-	40.0	40.0
1:00 AM	-	-	19	13	-	-	-	16.0	16.0
2:00 AM	-	-	12	11	-	-	-	11.5	11.5
3:00 AM	-	-	16	14	-	-	-	15.0	15.0
4:00 AM	-	-	78	70	-	-	-	74.0	74.0
5:00 AM	-	-	193	190	-	-	-	191.5	191.5
6:00 AM	-	-	532	497	-	-	-	514.5	514.5
7:00 AM	-	-	849	868	-	-	-	858.5	858.5
8:00 AM	-	-	627	669	-	-	-	648.0	648.0
9:00 AM	-	-	587	594	-	-	-	590.5	590.5
10:00 AM	-	-	449	495	-	-	-	472.0	472.0
11:00 AM	-	493	465	-	-	-	-	479.0	479.0
12:00 PM	-	493	516	-	-	-	-	504.5	504.5
1:00 PM	-	483	535	-	-	-	-	509.0	509.0
2:00 PM	-	562	549	-	-	-	-	555.5	555.5
3:00 PM	-	632	661	-	-	-	-	646.5	646.5
4:00 PM	-	659	634	-	-	-	-	646.5	646.5
5:00 PM	-	595	655	-	-	-	-	625.0	625.0
6:00 PM	-	556	594	-	-	-	-	575.0	575.0
7:00 PM	-	400	419	-	-	-	-	409.5	409.5
8:00 PM	-	361	316	-	-	-	-	338.5	338.5
9:00 PM	-	187	239	-	-	-	-	213.0	213.0
10:00 PM	-	115	130	-	-	-	-	122.5	122.5
11:00 PM	-	68	73	-	-	-	-	70.5	70.5
Totals	0	5604	9188	3461	0	0	0	9126.5	9126.5
Peak Hours									
12:00 AM - 12:00 PM	-	11:00 AM	7:00 AM	7:00 AM	-	-	-	7:00 AM	7:00 AM
Volume	-	493	849	868	-	-	-	858.5	858.5
12:00 PM - 12:00 AM	-	4:00 PM	3:00 PM	-	-	-	-	3:00 PM	3:00 PM
Volume	-	659	661	-	-	-	-	646.5	646.5

HENNEPIN COUNTY
TRANSPORTATION PLANNING DIVISION

VEHICLE CLASSIFICATION DATA
CSAH 66 (GOLDEN VALLY RD.) E. OF-
T.H. 100 / STUDY # 4042

Site: 03
Tuesday, 5/17/2016 11:00 AM -
Thursday, 5/19/2016 11:00 AM

Classification Grand Totals

Hourly Averages

E.B.

Interval Start	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
12:00 AM	57.0	0.0	55.0	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1:00 AM	34.0	0.0	29.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2:00 AM	32.5	0.0	28.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3:00 AM	15.0	0.0	14.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4:00 AM	20.0	0.0	16.0	2.0	1.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
5:00 AM	44.0	0.0	35.5	6.5	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6:00 AM	271.0	1.5	233.0	21.5	6.0	7.0	0.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
7:00 AM	435.0	2.0	361.5	46.5	8.5	11.5	0.5	0.0	3.5	0.5	0.0	0.5	0.0	0.0	0.0
8:00 AM	530.5	1.5	426.5	66.0	7.0	20.5	1.0	0.0	5.5	1.5	0.0	1.0	0.0	0.0	0.0
9:00 AM	481.5	1.0	381.5	66.0	7.0	18.5	1.0	0.0	3.5	0.5	0.0	2.0	0.0	0.0	0.5
10:00 AM	397.0	1.0	306.5	61.0	5.5	17.5	1.5	0.0	2.5	0.5	0.0	1.0	0.0	0.0	0.0
11:00 AM	452.5	2.0	375.5	51.0	2.5	18.0	0.5	0.0	2.0	0.0	0.0	1.0	0.0	0.0	0.0
12:00 PM	538.0	3.0	435.0	65.5	7.5	19.0	1.5	0.0	5.5	0.0	0.0	1.0	0.0	0.0	0.0
1:00 PM	522.0	1.5	436.0	65.5	3.0	11.5	0.0	0.0	3.5	0.0	0.0	1.0	0.0	0.0	0.0
2:00 PM	621.0	2.5	505.5	75.0	13.5	15.5	1.5	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3:00 PM	737.0	4.0	612.0	75.5	19.0	19.0	0.5	0.0	5.5	0.0	0.0	1.0	0.0	0.0	0.5
4:00 PM	897.5	3.0	767.0	82.5	16.5	14.0	0.5	0.0	10.5	0.0	0.0	2.5	0.0	1.0	0.0
5:00 PM	975.5	5.0	842.0	92.0	9.0	11.0	0.0	1.0	12.5	0.0	0.0	2.0	0.0	0.5	0.5
6:00 PM	809.5	4.0	723.5	64.5	5.0	6.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.5
7:00 PM	561.5	3.0	499.0	51.5	1.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
8:00 PM	528.0	2.0	480.0	34.5	2.5	5.5	0.0	0.0	3.0	0.0	0.0	0.5	0.0	0.0	0.0
9:00 PM	398.5	2.5	363.5	27.5	2.0	2.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
10:00 PM	225.5	0.0	205.0	16.5	1.0	2.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
11:00 PM	112.0	0.0	102.0	9.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Daily Average	9696.0	39.5	8232.5	991.5	119.5	204.0	10.0	1.0	78.0	3.0	0.0	13.5	0.0	1.5	2.0

Study Grand Totals

	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
E.B.	19392	79	16465	1983	239	408	20	2	156	6	0	27	0	3	4
		0.4 %	84.9 %	10.2 %	1.2 %	2.1 %	0.1 %	0.0 %	0.8 %	0.0 %	0.0 %	0.1 %	0.0 %	0.0 %	0.0 %

HENNEPIN COUNTY
TRANSPORTATION PLANNING DIVISION

VEHICLE CLASSIFICATION DATA
CSAH 66 (GOLDEN VALLY RD.) E. OF -
T.H. 100 / STUDY # 4042

Site: 03
Tuesday, 5/17/2016 11:00 AM -
Thursday, 5/19/2016 11:00 AM

Classification Grand Totals

Hourly Averages

W.B.

Interval Start	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
12:00 AM	40.0	0.5	38.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1:00 AM	16.0	0.0	14.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2:00 AM	11.5	0.0	9.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3:00 AM	15.0	0.0	11.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4:00 AM	74.0	0.0	67.0	6.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5:00 AM	191.5	0.0	157.5	27.5	1.5	4.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
6:00 AM	514.5	1.5	432.5	60.5	6.5	9.5	1.0	0.0	2.5	0.0	0.0	0.5	0.0	0.0	0.0
7:00 AM	858.5	9.0	669.5	106.5	24.0	17.5	1.0	0.0	26.0	0.0	0.0	3.5	0.0	1.0	0.5
8:00 AM	648.0	2.5	534.5	72.5	10.5	16.5	0.5	0.0	10.0	0.5	0.0	0.5	0.0	0.0	0.0
9:00 AM	590.5	4.0	454.5	91.0	12.5	18.0	0.5	0.0	7.0	1.0	0.0	1.5	0.0	0.0	0.5
10:00 AM	472.0	1.5	367.5	70.5	6.5	18.0	1.0	0.5	4.5	0.5	0.0	1.5	0.0	0.0	0.0
11:00 AM	479.0	1.5	363.5	80.0	3.5	22.0	0.5	0.5	6.0	0.5	0.0	0.0	0.0	0.0	1.0
12:00 PM	504.5	2.0	396.5	77.5	3.0	17.5	1.0	0.0	5.0	0.5	0.0	1.0	0.0	0.0	0.5
1:00 PM	509.0	1.0	402.0	83.0	3.0	16.5	0.0	0.0	3.0	0.0	0.0	0.5	0.0	0.0	0.0
2:00 PM	555.5	4.5	421.5	91.0	6.0	22.5	0.5	0.0	8.5	0.0	0.0	0.5	0.0	0.0	0.5
3:00 PM	646.5	2.0	493.5	98.5	15.0	19.0	1.0	0.0	15.0	0.0	0.0	1.5	0.5	0.0	0.5
4:00 PM	646.5	6.0	523.5	80.0	11.5	12.0	0.5	0.0	11.5	0.0	0.0	1.0	0.0	0.0	0.5
5:00 PM	625.0	6.0	517.0	73.0	7.0	10.5	1.0	0.0	8.5	0.5	0.0	1.0	0.0	0.0	0.5
6:00 PM	575.0	6.5	474.0	71.0	4.0	11.0	0.0	0.0	7.5	0.5	0.0	0.5	0.0	0.0	0.0
7:00 PM	409.5	3.5	355.5	45.5	0.0	2.5	0.0	0.0	2.0	0.0	0.0	0.5	0.0	0.0	0.0
8:00 PM	338.5	4.0	285.0	39.0	2.5	6.5	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.0	0.0
9:00 PM	213.0	1.5	189.5	20.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10:00 PM	122.5	0.0	109.5	10.0	1.5	0.5	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
11:00 PM	70.5	0.5	63.5	5.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Daily Average	9126.5	58.0	7351.5	1216.5	121.5	225.5	8.5	1.0	119.0	4.0	0.0	15.0	0.5	1.0	4.5

Study Grand Totals

	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
W.B.	18253	116	14703	2433	243	451	17	2	238	8	0	30	1	2	9
		0.6 %	80.6 %	13.3 %	1.3 %	2.5 %	0.1 %	0.0 %	1.3 %	0.0 %	0.0 %	0.2 %	0.0 %	0.0 %	0.0 %

EB ONLY - SUM OF DAILY AVG CLASSES 4 THROUGH 13 = 430.5

WB ONLY - SUM OF DAILY AVG CLASSES 4 THROUGH 13 = 496

DAILY TOTAL HEAVY COMMERCIAL VEHICLES = 926.5

From: Filipi, Mark
To: Sierra Saunders
Cc: Jason R Pieper; Jason D Gottfried; Carla J Stueve; Robert H. Byers
Subject: RE: 2016 Regional Solicitation - Forecast AADT"s
Date: Thursday, June 16, 2016 10:23:49 AM
Attachments: image006.png
image008.png
image010.png

Sierra,

Here is the data you requested. It is generated from the model runs from the most recent update of the Council's 2040 Transportation Policy Plan and is based in the four-step trip-based regional travel demand forecast model.

Project	Forecast Volume
CSAH 15 (Shoreline Dr) Bridge Replacement	20,900
CSAH 19 (Manitou Rd/Shadywood Rd) Bridge Rehabilitation	16,200
CSAH 23 (Marshall St NE)	10,500
CSAH 32 (Penn Ave) Reconstruction	16,200 (Note: The 2014 AADT you cite of 12,800 is actually outside your project area. 10,800 is the only AADT reported in your project area)
CSAH 66 (Golden Valley Rd) Reconstruction	19,900 (West of Noble Ave.) 10,200 (East of Indiana Ave.)
CSAH 81 (Bottineau Blvd) Expansion	51,100
CSAH 81 (Broadway Ave) Bridge Replacement	24,700
CSAH 152 (Webber Pkwy) Reconstruction	This roadway is not in the regional model. The model links in the area show an annualized growth rate of 0.5%. When applied to the 13,700 2013 volume, this grows to 16,100.

If you have any questions, please feel free to contact me.

METROPOLITAN COUNCIL

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Manager, Technical Planning Support
Metropolitan Transportation Services
mark.filipi@metc.state.mn.us
P.651.602.1725 | F.651.602.1739
390 North Robert Street | St. Paul, MN | 55101 | metrocouncil.org

From: Sierra Saunders [mailto:Sierra.Saunders@hennepin.us]
Sent: Wednesday, June 15, 2016 8:02 AM
To: Filipi, Mark <Mark.Filipi@metc.state.mn.us>
Cc: Jason R Pieper <Jason.Pieper@hennepin.us>; Jason Gottfried <Jason.gottfried@hennepin.us>; Carla Stueve <Carla.Stueve@hennepin.us>; Robert H. Byers <Robert.Byers@hennepin.us>
Subject: 2016 Regional Solicitation - Forecast AADT's

Greetings Mark,

I'm writing to request 2040 Forecast AADT information for the Regional Solicitation. Below is the list of projects with our most recent adjusted traffic counts. Project location maps are attached, in the same order as the list below:

- CSAH 15 (Shoreline Dr) Bridge Replacement (Over Browns Bay/Tanager Channel): **16,500** (2014 AADT)
- CSAH 19 (Manitou Rd/Shadywood Rd) Bridge Rehabilitation (Over Narrows Channel): **11,900** (2016 AADT)
- CSAH 23 (Marshall St NE) Reconstruction: **8,800** (2016 AADT)
- CSAH 32 (Penn Ave) Reconstruction: **12,800** (2014 AADT)
- CSAH 66 (Golden Valley Rd) Reconstruction: **11,900** (2016 AADT)
- CSAH 81 (Bottineau Blvd) Expansion (4-lane divided to 6-lane divided): **21,400** (2013 AADT)
- CSAH 81 (Broadway Ave) Bridge Replacement (Over CSAH 153 [Lowry Ave]): **12,100** (2016 AADT)
- CSAH 152 (Webber Pkwy) Reconstruction: **13,700** (2013 AADT)

Please let me know if you need any additional information, and thank you!

Sierra Saunders
Multimodal Planner
Hennepin County Public Works
1600 Prairie Drive, Medina, MN 55340

Office: 612.596.0364
sierra.saunders@hennepin.us

Hennepin County

Department of Public Works
Transportation Planning Division
Traffic Movement Study

Turning Movement Study
CSAH 066 & Regent Ave
Thursday, June 16th, 2016
7 AM - 9 AM & 4 PM - 6 PM

File Name : STDY 4071
Site Code : 4071
Start Date : 6/16/2016
Page No : 1

Groups Printed- Cars - Hvy Comm

	Regent Ave Southbound					CSAH 066 Westbound					Regent Ave Northbound					CSAH 066 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	13	3	3	0	19	1	70	1	0	72	1	0	5	0	6	2	73	0	3	78	175
07:15 AM	14	3	3	2	22	0	86	1	0	87	0	1	8	2	11	5	91	4	0	100	220
07:30 AM	19	5	6	2	32	0	105	5	0	110	2	0	7	1	10	6	104	8	0	118	270
07:45 AM	20	6	3	0	29	1	105	3	0	109	0	1	9	1	11	7	128	4	0	139	288
Total	66	17	15	4	102	2	366	10	0	378	3	2	29	4	38	20	396	16	3	435	953
08:00 AM	30	3	4	1	38	3	78	0	0	81	0	1	11	0	12	11	100	7	2	120	251
08:15 AM	21	2	0	2	25	3	103	2	0	108	0	0	10	0	10	5	99	5	0	109	252
08:30 AM	18	7	2	0	27	1	84	3	0	88	1	2	7	0	10	6	118	10	1	135	260
08:45 AM	11	3	1	0	15	0	87	1	0	88	2	1	9	1	13	8	104	13	0	125	241
Total	80	15	7	3	105	7	352	6	0	365	3	4	37	1	45	30	421	35	3	489	1004
****BREAK																					
04:00 PM	7	1	1	0	9	0	108	2	0	110	2	1	2	1	6	13	173	13	1	200	325
04:15 PM	13	0	0	0	13	2	103	2	0	107	4	5	5	0	14	15	176	21	0	212	346
04:30 PM	13	3	2	0	18	2	103	0	1	106	0	1	7	1	9	15	207	32	2	256	389
04:45 PM	10	2	0	0	12	4	117	2	0	123	3	2	2	4	11	12	176	30	4	222	368
Total	43	6	3	0	52	8	431	6	1	446	9	9	16	6	40	55	732	96	7	890	1428
05:00 PM	22	0	2	1	25	3	107	5	1	116	6	7	5	2	20	13	203	24	3	243	404
05:15 PM	14	3	3	1	21	1	97	3	0	101	7	6	13	0	26	11	219	27	0	257	405
05:30 PM	13	1	1	0	15	1	119	3	0	123	1	2	8	0	11	16	189	24	3	232	381
05:45 PM	13	1	1	0	15	1	96	2	0	99	3	1	2	2	8	18	200	27	3	248	370
Total	62	5	7	2	76	6	419	13	1	439	17	16	28	4	65	58	811	102	9	980	1560
Grand Total	251	43	32	9	335	23	1568	35	2	1628	32	31	110	15	188	163	2360	249	22	2794	4945
Apprch %	74.9	12.8	9.6	2.7		1.4	96.3	2.1	0.1		17	16.5	58.5	8		5.8	84.5	8.9	0.8		
Total %	5.1	0.9	0.6	0.2	6.8	0.5	31.7	0.7	0	32.9	0.6	0.6	2.2	0.3	3.8	3.3	47.7	5	0.4	56.5	
Cars	248	43	31	2	324	22	1538	32	0	1592	29	30	108	2	169	160	2311	247	12	2730	4815
% Cars	98.8	100	96.9	22.2	96.7	95.7	98.1	91.4	0	97.8	90.6	96.8	98.2	13.3	89.9	98.2	97.9	99.2	54.5	97.7	97.4
Hvy Comm	3	0	1	7	11	1	30	3	2	36	3	1	2	13	19	3	49	2	10	64	130
% Hvy Comm	1.2	0	3.1	77.8	3.3	4.3	1.9	8.6	100	2.2	9.4	3.2	1.8	86.7	10.1	1.8	2.1	0.8	45.5	2.3	2.6

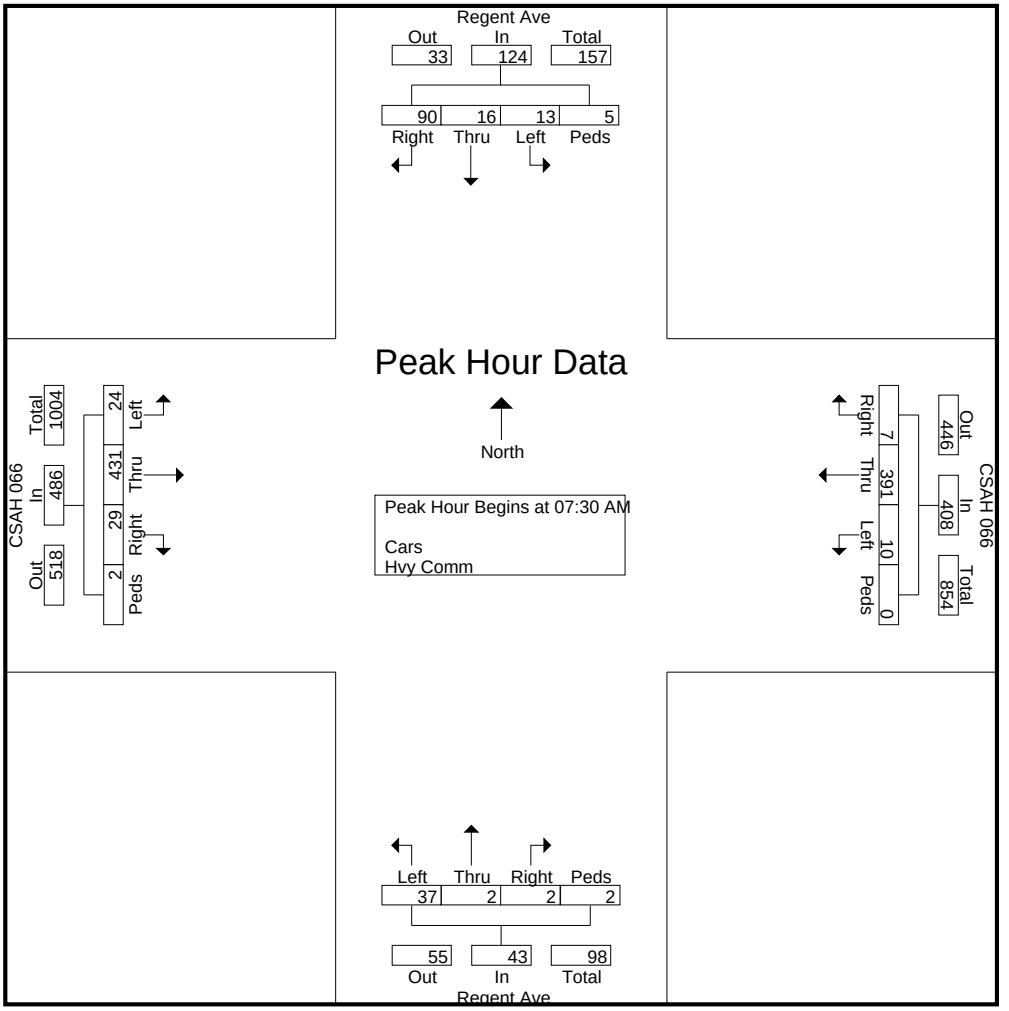
Hennepin County

Department of Public Works
Transportation Planning Division
Traffic Movement Study

Turning Movement Study
CSAH 066 & Regent Ave
Thursday, June 16th, 2016
7 AM - 9 AM & 4 PM - 6 PM

File Name : STDY 4071
Site Code : 4071
Start Date : 6/16/2016
Page No : 4

	Regent Ave Southbound					CSAH 066 Westbound					Regent Ave Northbound					CSAH 066 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	19	5	**6**	**2**	32	0	**105**	**5**	0	**110**	**2**	0	7	**1**	10	6	104	**8**	0	118	270
07:45 AM	20	**6**	3	0	29	1	105	3	0	109	0	**1**	9	1	11	7	**128**	4	0	**139**	**288**
08:00 AM	**30**	3	4	1	**38**	**3**	78	0	0	81	0	1	**11**	0	**12**	**11**	100	7	**2**	120	251
08:15 AM	21	2	0	2	25	3	103	2	0	108	0	0	10	0	10	5	99	5	0	109	252
Total Volume	90	16	13	5	124	7	391	10	0	408	2	2	37	2	43	29	431	24	2	486	1061
% App. Total	72.6	12.9	10.5	4		1.7	95.8	2.5	0		4.7	4.7	86	4.7		6	88.7	4.9	0.4		
PHF	.750	.667	.542	.625	.816	.583	.931	.500	.000	.927	.250	.500	.841	.500	.896	.659	.842	.750	.250	.874	.921



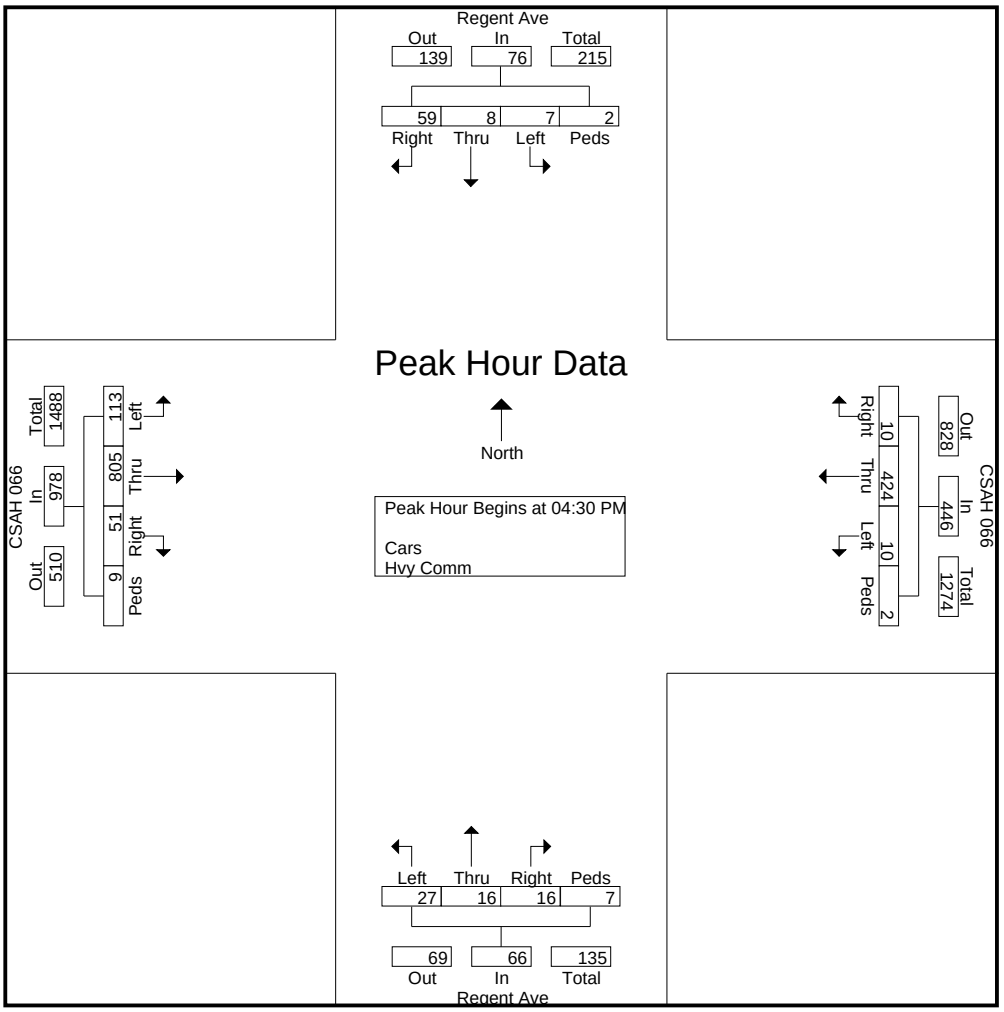
Hennepin County

Department of Public Works
Transportation Planning Division
Traffic Movement Study

Turning Movement Study
CSAH 066 & Regent Ave
Thursday, June 16th, 2016
7 AM - 9 AM & 4 PM - 6 PM

File Name : STDY 4071
Site Code : 4071
Start Date : 6/16/2016
Page No : 6

	Regent Ave Southbound					CSAH 066 Westbound					Regent Ave Northbound					CSAH 066 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	13	**3**	2	0	18	2	103	0	**1**	106	0	1	7	1	9	**15**	207	**32**	2	256	389
04:45 PM	10	2	0	0	12	**4**	**117**	2	0	**123**	3	2	2	**4**	11	12	176	30	**4**	222	368
05:00 PM	**22**	0	2	**1**	**25**	3	107	**5**	1	116	6	**7**	5	2	20	13	203	24	3	243	404
05:15 PM	14	3	**3**	1	21	1	97	3	0	101	**7**	6	**13**	0	**26**	11	**219**	27	0	**257**	**405**
Total Volume	59	8	7	2	76	10	424	10	2	446	16	16	27	7	66	51	805	113	9	978	1566
% App. Total	77.6	10.5	9.2	2.6		2.2	95.1	2.2	0.4		24.2	24.2	40.9	10.6		5.2	82.3	11.6	0.9		
PHF	.670	.667	.583	.500	.760	.625	.906	.500	.500	.907	.571	.571	.519	.438	.635	.850	.919	.883	.563	.951	.967



CSAH 66 - All Crashes

2013-2015 Crash Data Provided by MnDOT TIS Office

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U	ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV	NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM
04	27000066	000+00.830	0427000066	0.830	Z		1	3	U	UNITS 1 AND 2 WERE WB ON DULUTH ST. UNIT 2 ATTEMPTED TO STOP FOR THE STOP SIGN AT DULUTH/REGENT AND	27	1495	5-Thu	2	14	2013	0801	C	0	2	4	35	1	1	1	3	1	2	1	3	2	5	130450070
04	27000066	000+00.830	0427000066	0.830	W		1	3	U	UNIT 2 WAS STOPPED FOR INTERSECTION STOP SIGN. UNIT 1 WAS SLOWING TO STOP WHEN HE SLID ON ICE AND B	27	1495	5-Thu	12	5	2013	1557	N	0	3	4	35	1	1	1	3	1	1	0	5	6	5	13339302
04	27000066	000+00.830	0427000066	0.830	N		1	3	U	UNIT 1 TRAVELING NORTHBOUND REGENT AVE N JUST NORTH OF COUNTY ROAD 66 (DULUTH ST). UNIT 1 STRUCK U	27	1495	5-Thu	1	2	2014	0101	N	0	2	1	30	2	1	2	98	6	1	0	5	1	8	140020014
04	27000066	000+00.880	0427000066	0.880	Z		1	3	U	VEH 2 WAS WAITING FOR TRAFFIC TO TURN LEFT INTO HIS DRIVEWAY. VEH 1 REAR ENDED VEH 2. NO INJURIES R	27	1495	7-Sat	12	21	2013	1014	N	0	2	1	30	1	1	1	98	1	2	0	1	6	5	133550111
04	27000066	000+00.880	0427000066	0.880	W		1	3	U	UNIT 1 WAS TURNING LEFT OUT OF BYERLYS PARKING LOT. UNIT 2 WAS WB DULUTH ST. UNIT 1 DRIVER'S VISIO	27	1495	2-Mon	12	22	2014	1733	N	0	2	2	35	1	3	1	98	4	5	0	2	1	5	143570037
04	27000066	000+00.930	0427000066	0.930	Z		1	3	U	UNIT 1 TURNING FROM NB QUAIL TO GO WB GOLDEN VALLEY RD. UNIT 2 EB GOLDEN VALLEY RD APPROACHING QUAI	27	1495	6-Fri	1	24	2014	2230	N	0	2	2	35	1	3	1	4	4	2	0	5	6	8	140260017
04	27000066	000+00.935	0427000066	0.935	Z		1	3	U	UNIT 1 EB CR 66 CROSSED OVER CENTERLINE & STRUCK UNIT 2 WHICH WAS WB CR 66 IN #2 LN. DRVR 1 STATED	27	1495	2-Mon	2	16	2015	0634	C	0	2	1	35	1	90	1	98	4	4	0	2	6	5	150480015
04	27000066	000+00.990	0427000066	0.990	Z		1	1	U	DV1 NB WASHINGTON AVE. DV1 ATTEMPTED TO TURN WB ONTO BROADWAY AVE. V1 THEN LOST CONTROL, IMPACTED	27	1495	7-Sat	8	23	2014	0346	N	0	1	4	30	26	90	1	1	4	1	0	1	1	90	142370268
04	27000066	001+00.010	0427000066	1.010	Z		1	3	U	LIGHT WAS RED AND DR#1 LOOKED LIKE SHE WAS REACHING FOR SOMETHING AND NOT PAYING ATTENTION. DR#1 U	27	1495	6-Fri	2	22	2013	1638	N	0	2	2	35	1	1	1	1	1	1	1	1	1	8	130590028
04	27000066	001+00.037	0427000066	1.037	Z		1	3	U	UNIT 1 WAS WB ON CR 66. UNIT 1 OBSERVED WITNESS VEHICLE MAKE RIGHT TURN ONTO EB CR 66 FROM ORDWAY S	27	1495	6-Fri	5	24	2013	0701	B	0	1	1	35	51	90	1	4	1	1	0	1	7	6	131500023
04	27000066	001+00.140	0427000066	1.140	Z		1	3	U	UNITS 1 AND 2 WERE WB GOLDEN VALLEY RD PASSING NOBLE AVE N IN THE LEFT LANE. THE RIGHT LANE WAS CON	27	1495	2-Mon	7	7	2014	1323	N	0	2	2	35	1	2	1	1	1	2	0	1	5	5	141880080
04	27000066	001+00.217	0427000066	1.217	Z		1	3	U	UNIT 1 WAS WEST BOUND ON GOLDEN VALLEY RD NEAR MAJOR CIR. UNIT 1 LOST CONTROL ON THE SNOWY STREET,	27	1495	4-Wed	12	4	2013	1311	N	0	1	1	35	35	7	4	98	1	4	2	3	6	8	133380302
04	27000066	001+00.228	0427000066	1.228	W		1	3	U	UNIT#1 STATES SHE WAS STOPPED IN TRAFFIC. UNIT#2 STATES THEY WERE MOVING AND UNIT#1 CAME TO AN ABRU	27	1495	3-Tue	3	12	2013	1724	C	0	2	1	35	1	1	1	98	1	2	0	1	4	8	130710125
04	27000066	001+00.230	0427000066	1.230	W		1	3	U	DRIVER OF UNIT #1 SHOT HIMSELF WHILE DRIVING WESTBOUND GOLDEN VALLEY RD CAUSING HIM TO RUN OFF THE	27	1495	2-Mon	11	2	2015	0023	N	0	1	1	35	35	7	1	98	4	2	1	1	6	8	153140032
04	27000066	001+00.371	0427000066	1.371	Z		1	3	U	VEHICLE TRAVELING AT HIGH RATE OF SPEED. DRIVER LOST CONTROL AND LEFT ROADWAY. DR DROVE UP ON A RET	27	1495	3-Tue	9	30	2014	2318	A	0	1	1	35	30	90	1	98	4	2	0	1	5	8	142740024
04	27000066	001+00.487	0427000066	1.487	E		1	3	U	UNIT 2 STARTED ON GREEN THEN SLOWED FOR EMERGENCY VEHICLES APPROACHING FROM BEHIND. UNIT 1 SAW EMER	27	1495	7-Sat	2	1	2014	1507	N	0	2	7	35	1	1	1	1	1	2	0	3	5	8	140320153
04	27000066	001+00.550	0427000066	1.550	Z		1	3	U	VEH #1 WAS TRAVELLING EB ON DULUTH ST. DR #2 WAS EXITING THE BYERLYS LOT. DR #2 DID NOT SEE VEH	27	1495	5-Thu	7	25	2013	1311	N	0	2	2	35	1	6	1	4	1	2	0	1	1	5	132060155
04	27000066	001+00.550	0427000066	1.550	W		1	3	U	UNIT 2 STOPPED QUICKLY FOR VEHICLE IN FRONT OF IT THAT STOPPED QUICKLY FOR PEDESTRIAN CROSSING. UNI	27	1495	3-Tue	1	27	2015	1639	N	0	2	1	35	1	1	1	5	1	2	0	1	5	8	150270163
04	27000066	001+00.678	0427000066	1.678	W		1	3	U	UNIT#1 WB GOLDEN VALLEY ROAD SKIDS INTO OTHER LANE AND COLLIDES WITH UNIT#2. LIGHT SNOW/SLUSH ON RO	27	1495	3-Tue	3	5	2013	1118	B	0	2	1	35	1	9	1	98	1	4	90	4	5	8	130640151

Crashes identified in red occurred outside of the project area, and were not included in the benefit / cost calculation.

CSAH 66 at Regent Avenue - Intersection

2013-2015 Crash Data Provided by MnDOT TIS Office

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U	ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV	NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM
04	27000066	000+00.830	0427000066	0.83	Z		1	3	U	UNITS 1 AND 2 WERE WB ON DULUTH ST. UNIT 2 ATTEMPTED TO STOP FOR THE STOP SIGN AT DULUTH/REGENT AND	27	1495	5-Thu	2	14	2013	0801	C	0	2	4	35	1	1	1	3	1	2	1	3	2	5	130450070
04	27000066	000+00.830	0427000066	0.83	W		1	3	U	UNIT 2 WAS STOPPED FOR INTERSECTION STOP SIGN. UNIT 1 WAS SLOWING TO STOP WHEN HE SLID ON ICE AND B	27	1495	5-Thu	12	5	2013	1557	N	0	3	4	35	1	1	1	3	1	1	0	5	6	5	133390302
04	27000066	000+00.830	0427000066	0.83	N		1	3	U	UNIT 1 TRAVELING NORTHBOUND REGENT AVE N JUST NORTH OF COUNTY ROAD 66 (DULUTH ST). UNIT 1 STRUCK U	27	1495	5-Thu	1	2	2014	0101	N	0	2	1	30	2	1	2	98	6	1	0	5	1	8	140020014

CSAH 66 from Regent Ave to Noble Ave - Segment

2013-2015 Crash Data Provided by MnDOT TIS Office

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U	ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV	NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM
04	27000066	000+00.880	0427000066	0.88	Z		1	3	U	VEH 2 WAS WAITING FOR TRAFFIC TO TURN LEFT INTO HIS DRIVEWAY. VEH 1 REAR ENDED VEH 2. NO INJURIES R	27	1495	7-Sat	12	21	2013	1014	N	0	2	1	30	1	1	1	98	1	2	0	1	6	5	133550111
04	27000066	000+00.930	0427000066	0.93	Z		1	3	U	UNIT 1 TURNING FROM NB QUAIL TO GO WB GOLDEN VALLEY RD. UNIT 2 EB GOLDEN VALLEY RD APPROACHING QUAI	27	1495	6-Fri	1	24	2014	2230	N	0	2	2	35	1	3	1	4	4	2	0	5	6	8	140260017
04	27000066	000+00.935	0427000066	0.935	Z		1	3	U	UNIT 1 EB CR 66 CROSSED OVER CENTERLINE & STRUCK UNIT 2 WHICH WAS WB CR 66 IN #2 LN. DRVR 1 STATED	27	1495	2-Mon	2	16	2015	0634	C	0	2	1	35	1	90	1	98	4	4	0	2	6	5	150480015
04	27000066	001+00.037	0427000066	1.037	Z		1	3	U	UNIT 1 WAS WB ON CR 66. UNIT 1 OBSERVED WITNESS VEHICLE MAKE RIGHT TURN ONTO EB CR 66 FROM ORDWAY S	27	1495	6-Fri	5	24	2013	0701	B	0	1	1	35	51	90	1	4	1	1	0	1	7	6	131500023

CSAH 66 at Noble Ave - Intersection

2013-2015 Crash Data Provided by MnDOT TIS Office

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U	ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV	NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM
04	27000066	001+00.140	0427000066	1.14	Z		1	3	U	UNITS 1 AND 2 WERE WB GOLDEN VALLEY RD PASSING NOBLE AVE N IN THE LEFT LANE. THE RIGHT LANE WAS CON	27	1495	2-Mon	7	7	2014	1323	N	0	2	2	35	1	2	1	1	1	2	0	1	5	5	141880080

CSAH 66 from Noble Ave to Bonnie Lane - Segment

2013-2015 Crash Data Provided by MnDOT TIS Office

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U	ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV	NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM
04	27000066	001+00.217	0427000066	1.217	Z		1	3	U	UNIT 1 WAS WEST BOUND ON GOLDEN VALLEY RD NEAR MAJOR CIR. UNIT 1 LOST CONTROL ON THE SNOWY STREET,	27	1495	4-Wed	12	4	2013	1311	N	0	1	1	35	35	7	4	98	1	4	2	3	6	8	133380302
04	27000066	001+00.228	0427000066	1.228	W		1	3	U	UNIT#1 STATES SHE WAS STOPPED IN TRAFFIC. UNIT#2 STATES THEY WERE MOVING AND UNIT#1 CAME TO AN ABRU	27	1495	3-Tue	3	12	2013	1724	C	0	2	1	35	1	1	1	98	1	2	0	1	4	8	130710125
04	27000066	001+00.230	0427000066	1.23	W		1	3	U	DRIVER OF UNIT #1 SHOT HIMSELF WHILE DRIVING WESTBOUND GOLDEN VALLEY RD CAUSING HIM TO RUN OFF THE	27	1495	2-Mon	11	2	2015	0023	N	0	1	1	35	35	7	1	98	4	2	1	1	6	8	153140032
04	27000066	001+00.371	0427000066	1.371	Z		1	3	U	VEHICLE TRAVELING AT HIGH RATE OF SPEED. DRIVER LOST CONTROL AND LEFT ROADWAY. DR DROVE UP ON A RET	27	1495	3-Tue	9	30	2014	2318	A	0	1	1	35	30	90	1	98	4	2	0	1	5	8	142740024
04	27000066	001+00.550	0427000066	1.55	W		1	3	U	UNIT 2 STOPPED QUICKLY FOR VEHICLE IN FRONT OF IT THAT STOPPED QUICKLY FOR PEDESTRIAN CROSSING. UNI	27	1495	3-Tue	1	27	2015	1639	N	0	2	1	35	1	1	1	5	1	2	0	1	5	8	150270163
04	27000066	001+00.678	0427000066	1.678	W		1	3	U	UNIT#1 WB GOLDEN VALLEY ROAD SKIDS INTO OTHER LANE AND COLLIDES WITH UNIT#2. LIGHT SNOW/SLUSH ON RO	27	1495	3-Tue	3	5	2013	1118	B	0	2	1	35	1	9	1	98	1	4	90	4	5	8	130640151

CSAH 66 at Hidden Lakes Pkwy - Intersection

2013-2015 Crash Data Provided by MnDOT TIS Office

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U	ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV	NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM
04	27000066	001+00.010	0427000066	1.01	Z		1	3	U	LIGHT WAS RED AND DR#1 LOOKED LIKE SHE WAS REACHING FOR SOMETHING AND NOT PAYING ATTENTION. DR#1 U	27	1495	6-Fri	2	22	2013	1638	N	0	2	2	35	1	1	1	1	1	1	1	1	1	8	130590028
04	27000066	001+00.487	0427000066	1.487	E		1	3	U	UNIT 2 STARTED ON GREEN THEN SLOWED FOR EMERGENCY VEHICLES APPROACHING FROM BEHIND. UNIT 1 SAW EMER	27	1495	7-Sat	2	1	2014	1507	N	0	2	7	35	1	1	1	1	1	2	0	3	5	8	140320153

CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 194

Increased pavement friction

Description:

Prior Condition: No Prior Condition(s)

Category: Roadway

Study: Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008

Star Quality Rating:	★★★★★

Crash Modification Factor (CMF)	
Value:	0.76
Adjusted Standard Error:	0.03
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	24 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	3
Unadjusted Standard Error:	

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	All
Traffic Volume:	Minimum of All to Maximum of All
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 195

Increased pavement friction

Description:

Prior Condition: No Prior Condition(s)

Category: Roadway

Study: Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008

Star Quality Rating:	★★★★★

Crash Modification Factor (CMF)	
Value:	0.43
Adjusted Standard Error:	0.03
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	57 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	3
Unadjusted Standard Error:	

Applicability	
Crash Type:	Wet road
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	All
Traffic Volume:	Minimum of All to Maximum of All
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 197

Increased pavement friction

Description:

Prior Condition: No Prior Condition(s)

Category: Roadway

Study: Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008

Star Quality Rating:	★★★★☆

Crash Modification Factor (CMF)	
Value:	0.58
Adjusted Standard Error:	0.07
Unadjusted Standard Error:	

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

Applicability	
Crash Type:	Rear end
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	All
Traffic Volume:	Minimum of All to Maximum of All
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 198

Increased pavement friction

Description:

Prior Condition: No Prior Condition(s)

Category: Roadway

Study: Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008

Star Quality Rating:	★★★★★

Crash Modification Factor (CMF)	
Value:	0.7
Adjusted Standard Error:	0.05
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	30 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	5
Unadjusted Standard Error:	

Applicability	
Crash Type:	Single vehicle
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	All
Traffic Volume:	Minimum of All to Maximum of All
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 874

Narrow cross section (4 to 3 lanes with two way left-turn lane)

Description:

Prior Condition: Four-lane cross-section, two in each direction.

Category: Roadway

Study: The Safety and Operational Effects of Road Diet Conversion in Minnesota, Gates et al., 2007

Star Quality Rating:	★★★☆☆ [View score details]

Crash Modification Factor (CMF)	
Value:	0.63
Adjusted Standard Error:	
Unadjusted Standard Error:	0.00632455532034

Crash Reduction Factor (CRF)	
Value:	37 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	0.632455532034

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	4
Road Division Type:	Undivided
Speed Limit:	

Area Type:	Urban
Traffic Volume:	
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	MN
Country:	
Type of Methodology Used:	Simple before/after
Sample Size Used:	Crashes
Before Sample Size Used:	516 Crashes
After Sample Size Used:	811 Crashes

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 3072

Change number of traffic signal cycles per hour on arterial with signal coordination from X to Y

Description:

Prior Condition: No Prior Condition(s)

Category: Intersection traffic control

Study: Safety Effect of Arterial Signal Coordination, Wei and Tarko, 2011

Star Quality Rating:	★★★☆☆ [View score details]

Crash Modification Factor (CMF)	
Value:	$100 * (1 - e^{-0.0444(Y-X)})$
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	$e^{-0.0444(Y-X)}$
Adjusted Standard Error:	
Unadjusted Standard Error:	

Applicability	
Crash Type:	Rear end
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	1 to 3

Road Division Type:	
Speed Limit:	30-50 mph
Area Type:	Urban and suburban
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:	Maximum of 1840 veh/hr/ln Vehicles Per Hour
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	2003 to 2006
Municipality:	
State:	IN
Country:	USA
Type of Methodology Used:	Regression cross-section
Sample Size Used:	324 Crashes

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 194

Increased pavement friction

Description:

Prior Condition: No Prior Condition(s)

Category: Roadway

Study: Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008

Star Quality Rating:	★★★★★

Crash Modification Factor (CMF)	
Value:	0.76
Adjusted Standard Error:	0.03
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	24 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	3
Unadjusted Standard Error:	

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	All
Traffic Volume:	Minimum of All to Maximum of All
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 195

Increased pavement friction

Description:

Prior Condition: No Prior Condition(s)

Category: Roadway

Study: Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008

Star Quality Rating:	★★★★★

Crash Modification Factor (CMF)	
Value:	0.43
Adjusted Standard Error:	0.03
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	57 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	3
Unadjusted Standard Error:	

Applicability	
Crash Type:	Wet road
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	All
Traffic Volume:	Minimum of All to Maximum of All
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 197

Increased pavement friction

Description:

Prior Condition: No Prior Condition(s)

Category: Roadway

Study: Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008

Star Quality Rating:	★★★★☆

Crash Modification Factor (CMF)	
Value:	0.58
Adjusted Standard Error:	0.07
Unadjusted Standard Error:	

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

Applicability	
Crash Type:	Rear end
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	All
Traffic Volume:	Minimum of All to Maximum of All
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 198

Increased pavement friction

Description:

Prior Condition: No Prior Condition(s)

Category: Roadway

Study: Crash Reduction Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008

Star Quality Rating:	★★★★★

Crash Modification Factor (CMF)	
Value:	0.7
Adjusted Standard Error:	0.05
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	30 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	5
Unadjusted Standard Error:	

Applicability	
Crash Type:	Single vehicle
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	All
Traffic Volume:	Minimum of All to Maximum of All
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 874

Narrow cross section (4 to 3 lanes with two way left-turn lane)

Description:

Prior Condition: Four-lane cross-section, two in each direction.

Category: Roadway

Study: The Safety and Operational Effects of Road Diet Conversion in Minnesota, Gates et al., 2007

Star Quality Rating:	★★★☆☆ [View score details]

Crash Modification Factor (CMF)	
Value:	0.63
Adjusted Standard Error:	
Unadjusted Standard Error:	0.00632455532034

Crash Reduction Factor (CRF)	
Value:	37 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	0.632455532034

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	4
Road Division Type:	Undivided
Speed Limit:	

Area Type:	Urban
Traffic Volume:	
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	MN
Country:	
Type of Methodology Used:	Simple before/after
Sample Size Used:	Crashes
Before Sample Size Used:	516 Crashes
After Sample Size Used:	811 Crashes

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 3072

Change number of traffic signal cycles per hour on arterial with signal coordination from X to Y

Description:

Prior Condition: No Prior Condition(s)

Category: Intersection traffic control

Study: Safety Effect of Arterial Signal Coordination, Wei and Tarko, 2011

Star Quality Rating:	★★★☆☆ [View score details]

Crash Modification Factor (CMF)	
Value:	$100 * (1 - e^{-0.0444(Y-X)})$
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	$e^{-0.0444(Y-X)}$
Adjusted Standard Error:	
Unadjusted Standard Error:	

Applicability	
Crash Type:	Rear end
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	1 to 3

Road Division Type:	
Speed Limit:	30-50 mph
Area Type:	Urban and suburban
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:	Maximum of 1840 veh/hr/ln Vehicles Per Hour
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	2003 to 2006
Municipality:	
State:	IN
Country:	USA
Type of Methodology Used:	Regression cross-section
Sample Size Used:	324 Crashes

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	
Comments:	

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CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 7848

Install a traffic signal

Description:

Prior Condition: Stop-Controlled Intersections

Category: Intersection traffic control

Study: Validation and Application of Highway Safety Manual (Part D) in Florida, Abdel-Aty et al., 2014

Star Quality Rating:	★★★☆☆ [View score details]

Crash Modification Factor (CMF)	
Value:	0.61
Adjusted Standard Error:	
Unadjusted Standard Error:	0.06

Crash Reduction Factor (CRF)	
Value:	39 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	6

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	

Area Type:	Urban
Traffic Volume:	
Time of Day:	All
If countermeasure is intersection-based	
Intersection Type:	Not specified
Intersection Geometry:	4-leg
Traffic Control:	Stop-controlled
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	2005 to 2009
Municipality:	
State:	FL
Country:	USA
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Mar-08-2016
Comments:	

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CSAH 66 Reconstruction
Risk Assessment: Additional Comments / Explanations

1. Project Scope
    - A work group of key agency, neighborhood and advocacy groups was developed as part of the Bassett Creek Trail Feasibility Study.
    - Public open house meetings have occurred as part of the trail feasibility study.
    - A general public engagement process with respect to the roadway improvements is planned with expanded business contacts.

2. Layout or Preliminary Plan
    - Typical sections developed
    - Concept layout underway

3. Environmental Documentation

4. Review of Section 106 Historic Resources

5. Review of Section 4f / 6f Resources
    - Project is adjacent to Scheid and Sochacki Parks (Golden Valley) and Theodore Wirth Parkway (Minneapolis)
    - No known adverse impacts.

6. Right-of-Way
    - Trail feasibility study identified areas of potential right-of-way needs and possible construction easement requirements.

7. Railroad Involvement

8. Interchange Approval

9. Construction Documents

10. Letting
    - Anticipated October 2020