Application

13861 - 2020 Roadway Modernization

14293 - Fletcher Bypass - Hennepin County 116 to 81

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
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Primary Contact

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

Organization Information

Name:	ROGERS, CITY OF

Jurisdictional Agency (if different):

Organization Type: City

Organization Website:

Address: 22350 S DIAMOND LAKE RD

*	ROGERS	Minnesota	55374
	City	State/Province	Postal Code/Zip

County: Hennepin

Phone:* 763-428-8580 Ext.

Fax:

PeopleSoft Vendor Number 0000006587A3

Project Information

Project Name Fletcher Bypass - Hennepin County 116 to 81

Primary County where the Project is Located Hennepin

Cities or Townships where the Project is Located: City of Rogers

Jurisdictional Agency (If Different than the Applicant): Hennepin County

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

The Fletcher Lane bypass project has been in the planning stages for over 20 years between the City of Rogers and Hennepin County. The project will realign the existing 2-lane Fletcher Lane/CSAH 116 with a new 2-lane divided Fletcher Lane bypass. The new Fletcher Lane bypass will be an A-Minor Arterial and be designated as Hennepin CSAH 116 from approximately 2,000 feet south of the existing Territorial Road/CSAH 116 intersection to approximately 1.3 miles east of the TH 101 (Main Street)/CSAH 81 intersection.

South of Territorial Road, the existing Fletcher Lane alignment being replaced is a paved A-Minor Arterial and designated as CSAH 116 with a current AADT of 6,600. North of Territorial Road, the existing Fletcher Lane alignment being replaced is a municipal street B-Minor Arterial gravel road with a current AADT of 2,000. This gravel road has an uncontrolled BNSF Railroad crossing and is commonly used as a cut-thru by motorists in a neighborhood setting, which creates a significant safety issue.

The new Fletcher Lane alignment will be a 2-lane divided design with left and right turn lanes at intersections. The project will also include an upgraded at-grade crossing of the BNSF Railroad (see attached BNSF agreement), new traffic control signal systems at Territorial Road/Fletcher Lane and CSAH 81/Fletcher Lane and a separated bike trail the full length of the project on the west side of the road. The new Fletcher Lane alignment will be an urban design to the inside and an rural design to the outside to allow for potential future expansion. The City of Rogers currently owns right-of-way for the full length of the proposed new alignment with enough width to allow for future expansion to a 4-lane when traffic volumes warrant. Current 2040 forecasted volumes along the new alignment are 9,700 AADT.

Long term plans call for the realigned Fletcher Lane to bridge over Interstate 94 connecting to CSAH 13. This future overpass is important for local circulation and will provide an alternate route for traffic to cross I-94, keeping this traffic out of existing congested interchange areas at TH 101 and CSAH 101/Brockton Lane (See NW Hennepin County I-94 Sub-Area Transportation Study Excerpt attachment).

Existing Main Street (CSAH 150) will be turned back by Hennepin County to the City of Rogers as part of the project from Territorial Road to CSAH 81. Cul-de-sacs will also be constructed along existing Fletcher Lane at Territorial Road and the BNSF Railroad, with a new local neighborhood street connection established from the west (See Figure 2).

The new Fletcher Lane bypass will also benefit existing Main Street (CSAH 150) by shifting traffic away from an elementary school and the Rogers downtown to a more appropriate roadway.

(Limit 2,800 characters; approximately 400 words)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DESCRIPTION - will be used in TIP if the project is selected for funding. See MnDOT's TIP description guidance.	New Construction
Project Length (Miles) *to the nearest one-tenth of a mile*	0.87

Project Funding

Are you applying for competitive funds from another source(s) to implement this project?	Yes
If yes, please identify the source(s)	Roadway Reconstruction/Modernization
Federal Amount	$3,181,040.00
Match Amount	$795,260.00

Minimum of 20% of project total

Project Total $3,976,300.00

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

Match Percentage 20.0%

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

Source of Match Funds City of Rogers

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: 2024

Select 2022 or 2023 for TDM projects only. For all other applications, select 2024 or 2025.

Additional Program Years:

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

Project Information-Roadways

County, City, or Lead Agency City of Rogers, Hennepin County

Functional Class of Road A-Minor Arterial

Road System CSAH

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

Road/Route No. 116

i.e., 53 for CSAH 53

Name of Road CSAH 116

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed 55374

(Approximate) Begin Construction Date 05/01/2024

(Approximate) End Construction Date 11/01/2024

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

From:
(Intersection or Address) 2,000 feet south of existing CSAH 116/Territorial Road intersection

To:
(Intersection or Address) 1.3 miles east of existing TH 101/CSAH 81 intersection

DO NOT INCLUDE LEGAL DESCRIPTION

Or At

Miles of Sidewalk (nearest 0.1 miles) 0.87

Miles of Trail (nearest 0.1 miles) 0.87

Miles of Trail on the Regional Bicycle Transportation Network (nearest 0.1 miles) 0

Primary Types of Work

GRADE, AGG BASE, BIT SURF, BIKE TRAIL, CURB, GUTTER, STORMSEWER, LIGHTING, TRAFFIC SIGNALS, RR XING

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

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:

New Bridge/Culvert No.:

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

Requirements - All Projects

All Projects

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

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

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

B1-Regional transportation partners will incorporate safety and security considerations for all modes and users throughout the processes of planning, funding, construction, and operation.

B6-Regional transportation partners will use best practices to provide and improve facilities for safe walking and bicycling, since pedestrians and bicyclists are the most vulnerable users of the transportation system.

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

C9-The Metropolitan Council will support investments in A-minor arterials that build, manage, or improve the system's ability to supplement the capacity of the Principal Arterial system and support access to the region's job, activity and industrial and manufacturing concentrations.

C16-Regional transportation partners should fund projects that improve key regional bicycle barrier crossing locations, provide for pedestrian travel across barriers, and/or improve continuity of bicycle and pedestrian facilities between jurisdictions.

Limit 2,800 characters, approximately 400 words

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

List the applicable documents and pages:

City of Rogers 2040 Comprehensive Plan, Figure 9.3, Page 8 (attached)

City of Rogers Capital Improvement Program (attached)

Hennepin County Capital Improvement Program, provisional project (attached)

Northwest Hennepin County I-94 Subarea Transportation Study, 2008 (attached)

See attached City letter and resolution of support

See attached County letter of support

Limit 2,800 characters, approximately 400 words

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

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

5.Applicants that are not State Aid cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

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

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

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

7.The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below.
Strategic Capacity (Roadway Expansion): *$1,000,000 to $10,000,000*
Roadway Reconstruction/Modernization: *$1,000,000 to $7,000,000*
Traffic Management Technologies (Roadway System Management): *$250,000 to $3,500,000*
Spot Mobility and Safety: *$1,000,000 to $3,500,000*
Bridges Rehabilitation/Replacement: *$1,000,000 to $7,000,000*

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

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

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

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

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

Date plan completed: 04/02/2020

Link to plan: https://static1.squarespace.com/static/5c54bb97d74562fede1b6ab4/t/5e9f0542e7e6c265a74ed094/1587479878121/Rogers_ADA_Transition_Plan.pdf

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

Date self-evaluation completed:

Link to plan:

Upload plan or self-evaluation if there is no link

Upload as PDF

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

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

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

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

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

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

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

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

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

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

Roadways Including Multimodal Elements

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

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

Roadway Expansion and Reconstruction/Modernization and Spot Mobility projects only:

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

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

Bridge Rehabilitation/Replacement and Strategic Capacity projects only:

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

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

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. Yes

Bridge Rehabilitation/Replacement projects only:

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

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

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

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

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

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

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

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$120,000.00
Removals (approx. 5% of total cost)	$30,000.00
Roadway (grading, borrow, etc.)	$891,500.00
Roadway (aggregates and paving)	$851,000.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$150,000.00
Ponds	$0.00

Concrete Items (curb & gutter, sidewalks, median barriers)	$216,400.00
Traffic Control	$530,000.00
Striping	$15,000.00
Signing	$33,750.00
Lighting	$0.00
Turf - Erosion & Landscaping	$50,000.00
Bridge	$0.00
Retaining Walls	$0.00
Noise Wall (not calculated in cost effectiveness measure)	$0.00
Traffic Signals	$0.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$450,000.00
Roadway Contingencies	$518,650.00
Other Roadway Elements	$0.00
Totals	**$3,856,300.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	**Cost**
Path/Trail Construction	$120,000.00
Sidewalk Construction	$0.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$0.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$0.00
Pedestrian-scale Lighting	$0.00
Streetscaping	$0.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$0.00
Other Bicycle and Pedestrian Elements	$0.00
Totals	**$120,000.00**

Specific Transit and TDM Elements

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

Transit Operating Costs

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

Totals

Total Cost	$3,976,300.00
Construction Cost Total	$3,976,300.00
Transit Operating Cost Total	$0.00

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

Existing Employment within 1 Mile:	2451
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	1104
Existing Post-Secondary Students within 1 Mile:	0
Upload Map	1588954963146_Fletcher Bypass-RegionalEconomy.pdf

Please upload attachment in PDF form.

Measure C: Current Heavy Commercial Traffic

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

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

Measure A: Current Daily Person Throughput

Location	Fletcher Lane (CSAH 116) between Valley View Terrace and Territorial Rd.
Current AADT Volume	6600
Existing Transit Routes on the Project	N/A
For New Roadways only, list transit routes that will likely be diverted to the new proposed roadway (if applicable).	
Upload Transit Connections Map	1588956022012_Fletcher Bypass-TransitConnections.pdf
Please upload attachment in PDF form.	

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	8580.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume	No
If checked, METC Staff will provide Forecast (2040) ADT volume	
OR	
Identify the approved county or city travel demand model to determine forecast (2040) ADT volume	City of Rogers 2040 Comprehensive Plan
Forecast (2040) ADT volume	9700

Measure A: Connection to disadvantaged populations and projects benefits, impacts, and mitigation

*1.**Sub-measure**: Equity Population Engagement: A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and the elderly. Engagement should occur prior to and during a projects development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or the elderly within a ½ mile of the proposed project. Describe how these specific populations were engaged and provided outreach to, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input is reflected in the projects purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.*

Response:

Although the proposed project is located in a census tract that is below the regional average for the populations identified above, these individuals are still present in the project area. According to ACS 2013-2017 5-year estimates, the population within ½ mile of the proposed project is approximately 10% minority, 33% younger than age 18, 11% age 65 and older, and 5% with household income of $25,000 or less (Attachment A). As outlined in the 2040 Comprehensive Plan, the Community Vision for the City of Rogers is as follows:

-Rogers is a community of choice for living and learning with attainable housing for all persons, vibrant neighborhoods, and academically inclusive schools.

-Rogers is a community of equal economic opportunity with a creative workforce and diverse employment options, and linked transport systems that enable job mobility for workers close to home.

-Rogers is a community of quality environments with treasured places and distinct open spaces that enrich our heritage and life experiences and contribute to our physical health and shape our social connections.

(Limit 2,800 characters; approximately 400 words)

*2.**Sub-measure**: Equity Population Benefits and Impacts: A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and the elderly. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.*
a.Describe the projects benefits to low-income populations, people of color, children, people with disabilities, and the elderly. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

Although the proposed project is located in a census tract that is below the regional average for the populations identified above, these individuals are still present in the project area. According to ACS 2013-2017 5-year estimates, the population within ½ mile of the proposed project is approximately 10% minority, 33% younger than age 18, 11% age 65 and older, and 5% with household income of $25,000 or less (Attachment A). These groups will see several benefits from the proposed project, including an improved regional transportation connection, increased opportunities for safe bicycle and pedestrian travel, and a reduction in regional traffic on local roads in Rogers.

Response:

The proposed Fletcher lane bypass will serve a regional transportation purpose. The project will benefit equity populations in the project area (and in the northwest suburbs more generally) by providing a safer and more convenient alternative to Main St that is designed to carry regional traffic. Roughly 86% of Rogers residents travel to work using a car, truck, or van, and nearly 51% of non-home-based workers age 16 and over have a commute that lasts 30 minutes or longer (Minnesota Compass). Therefore, improvements to the regional roadway network will improve access to jobs for these individuals, in addition to healthcare, recreation (including nearby Elm Creek Park Reserve and Crow-Hassan Park Reserve), and other key destinations for equity populations.

The construction of a multiuse trail along the Fletcher bypass will provide a bicycle and pedestrian connection in an area with few designated bicycle/pedestrian facilities (see Attachment B). Construction of the multiuse trail along the proposed bypass will link the existing

Fletcher Ln bikeway to another existing Hennepin County bikeway along CSAH 81 with an improved facility (see Attachment B). Individuals in the project area who rely on bicycling/walking for transportation or recreation will benefit from this improved connection. The trail will be fully separated from vehicle traffic and comfortable for children, families, people with disabilities, and the elderly and will be designed to ADA standards.

In addition to these benefits in the immediate project area, the proposed bypass will shift traffic volumes and associated impacts on local roads and downtown Rogers, especially Main Street, to a more appropriate roadway. Residential areas along Main Street, downtown Rogers, as well as students at Rogers Elementary STEM Magnet School will benefit from reduced traffic and safer bicycle and pedestrian crossings.

(Limit 2,800 characters; approximately 400 words)

b. Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and the elderly created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.
Below is a list of negative impacts. Note that this is not an exhaustive list.
Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
Increased noise.
Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
Increased speed and/or cut-through traffic.
Removed or diminished safe bicycle access.
Inclusion of some other barrier to access to jobs and other destinations.
Displacement of residents and businesses.
Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
Other

Response:

The proposed project will not disproportionately impact disadvantaged populations. Access to residential and commercial properties adjacent to the proposed project will be maintained during construction. Temporary impacts related to additional noise, dust and traffic during construction will be mitigated to the maximum extent feasible. The City will require the contractor to utilize best management practices for dust, erosion, and traffic control and follow local ordinances to ensure all relevant noise regulations are met. Because the roadway will be constructed on land that has not already been developed, impacts on existing populations and properties in the area will be limited.

The City has already purchased all of the necessary right of way for the proposed project with room for future expansion, as necessary. Therefore, no properties will be impacted and no businesses or residences will be displaced.

(Limit 2,800 characters; approximately 400 words)

Select one:

*3.**Sub-measure: Bonus Points** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:*
a.25 points to projects within an Area of Concentrated Poverty with 50% or more people of color
b.20 points to projects within an Area of Concentrated Poverty
c.15 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
d.10 points for all other areas

Project is located in an Area of Concentrated Poverty where 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

(up to 40% of maximum score)

Upload the "Socio-Economic Conditions" map used for this measure. The second map created for sub measure A1 can be uploaded on the Other Attachments Form, or can be combined with the "Socio-Economic Conditions" map into a single PDF and uploaded here.

Upload Map 1588956557456_Fletcher Bypass-SocioEconomic.pdf

Measure B: Part 1: Housing Performance Score

City	Segment Length (For stand-alone projects, enter population from Regional Economy map) within each City/Township	Segment Length/Total Project Length	Score	Housing Score Multiplied by Segment percent
Rogers	2872.0	0.76	20.0	15.212
Dayton	904.0	0.24	44.0	10.534

Total Project Length

Total Project Length 0.87

Project length entered on the Project Information - General form.

Housing Performance Score

Total Project Length (Miles) or Population 3776.0

Total Housing Score 25.746

Affordable Housing Scoring

Part 2: Affordable Housing Access

Reference Access to Affordable Housing Guidance located under Regional Solicitation Resources for information on how to respond to this measure and create the map.
If text box is not showing, click Edit or "Add" in top right of page.

Response:

There are no existing, planned or under construction affordable housing developments within 1/2 mile of the proposed project.

(Limit 2,100 characters; approximately 300 words)

Upload map:

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
2000	0.36	720.0	827.586
1920	0.51	979.2	1125.517
	1	**1699**	**1953**

Total Project Length

Total Project Length (as entered in "Project Information" form) 0.87

Average Construction Year

Weighted Year 1953

Total Segment Length (Miles)

Total Segment Length 0.87

Measure B: Geometric, Structural, or Infrastructure Improvements

Improved roadway to better accommodate freight movements: Yes

Response:

The two-lane divided design of the proposed Fletcher Lane bypass will better accommodate freight movements by providing a 10 ton capacity roadway compared to the existing Fletcher Lane 4 ton capacity roadway. The project will also provide improved thru lane width and paved shoulders along the corridor, which will be safer for freight movement. Enhanced turning radii, a raised center median throughout the corridor and improved geometrics with dedicated turn lanes at the signalized intersections with Territorial Rd and CSAH 81 will also provide a safer freight corridor.

(Limit 700 characters; approximately 100 words)

Improved clear zones or sight lines: Yes

Response:

The proposed bypass will improve sight lines compared to the existing Fletcher Lane alignment. The existing intersection of Fletcher Lane and Territorial Road has limited sight lines due to a structures in the southwest and northeast corners of the intersection. These obstructions will not be present along the new roadway alignment, which will improve sight lights and the ability to see oncoming traffic.

(Limit 700 characters; approximately 100 words)

Improved roadway geometrics:

Yes

Response:

The proposed two-lane divided bypass will replace the existing narrow two-lane partial gravel Fletcher Lane as the regional through connection from south of Territorial Rd to CSAH 81 with left and right turn lanes and traffic signals at Territorial Road and CSAH 81. An existing skewed intersection at Territorial Rd and Fletcher Ln will be replaced with a 90 degree right angle intersection to improve sight distance and turning radius for trucks. The new Fletcher Lane bypass will also have paved shoulders and be constructed to an urban design with a separated bike trail, curb, gutter and storm drain.

(Limit 700 characters; approximately 100 words)

Access management enhancements:

Yes

Response:

The proposed Fletcher Lane bypass will result in removal of a number of private driveways with direct access along the existing Fletcher Lane alignment, providing an improved controlled access A-Minor Arterial facility.

(Limit 700 characters; approximately 100 words)

Vertical/horizontal alignment improvements:

Yes

Response:

Territorial Road currently intersects Fletcher Lane at an angle that creates challenging turning movements from the north leg of the intersection onto westbound Territorial Road and from the south leg of the intersection onto eastbound Territorial Road. The proposed bypass design is perpendicular to both Territorial Rd and CSAH 81, creating 90-degree angles and easier turning movements with signalized intersection control instead of stop sign intersection control.

(Limit 700 characters; approximately 100 words)

Improved stormwater mitigation:

Yes

Response:

Existing Fletcher Lane is currently a rural design gravel roadway with poor drainage. The new proposed Fletcher Lane bypass will be constructed to an urban design to the inside section with curb, gutter and stormwater drainage and an rural design to the outside to allow for future lane expansion, as necessary.

(Limit 700 characters; approximately 100 words)

Signals/lighting upgrades:

Yes

Response:

The new Fletcher Lane bypass will have traffic signals installed at Fletcher Lane/Territorial Road and Fletcher Lane/CSAH 81. The existing Fletcher Lane has side street stop sign control at these existing intersections.

(Limit 700 characters; approximately 100 words)

Other Improvements

Yes

Response:

An improved BNSF railroad crossing compared to the existing Fletcher Lane railroad crossing will be installed as part of the project. The City of Rogers has an agreement with BNSF Railroad for this crossing, which is included as an attachment to this application.

A separated bike trail will also be constructed along the full length of the project corridor.

(Limit 700 characters; approximately 100 words)

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project (Seconds/ Vehicle)	Total Peak Hour Delay Per Vehicle With The Project (Seconds/ Vehicle)	Total Peak Hour Delay Per Vehicle Reduced by Project (Seconds/ Vehicle)	Volume without the Project (Vehicles per hour)	Volume with the Project (Vehicles Per Hour):	Total Peak Hour Delay Reduced by the Project:	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
44.6	13.4	31.2	1151	1151	35911.2	35911.2	Railroad crossing delay will not be reduced with the project, as the Fletcher Bypass will replace an existing railroad crossing. The bypass will create more vehicle traffic across the railroad.	1589221237913_Existing & BUILD PM - Synchro Reports.pdf
						35911		

Vehicle Delay Reduced

Total Peak Hour Delay Reduced	35911.2
Total Peak Hour Delay Reduced	0

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

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
3.08	2.04	1.04
3	**2**	**1**

Total

Total Emissions Reduced:	1.04
Upload Synchro Report	1589221802603_Existing & BUILD PM - Synchro Reports.pdf

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

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

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

Total Parallel Roadway

Emissions Reduced on Parallel Roadways	0
Upload Synchro Report	

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

New Roadway Portion:

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

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

Cruise speed in miles per hour without the project:	0
Vehicle miles traveled without the project:	0
Total delay in hours without the project:	0
Total stops in vehicles per hour without the project:	0
Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons (F1)	0
Fuel consumption in gallons (F2)	0
Fuel consumption in gallons (F3)	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	

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

Crash Modification Factor Used: *(Limit 700 Characters; approximately 100 words)*	Install a Traffic Signal, Increase Triangle Sight Distance
Rationale for Crash Modification Selected: *(Limit 1400 Characters; approximately 200 words)*	The one existing intersection included within the project is being realigned to create better sight distance for all approaches, and is being modified from an all-way stop control to a signalized control.
Project Benefit ($) from B/C Ratio	$100,644.00
Total Fatal (K) Crashes:	0
Total Serious Injury (A) Crashes:	0
Total Non-Motorized Fatal and Serious Injury Crashes:	0
Total Crashes:	2
Total Fatal (K) Crashes Reduced by Project:	0
Total Serious Injury (A) Crashes Reduced by Project:	0
Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project:	0

Total Crashes Reduced by Project:	6
Worksheet Attachment	1589229527287_benefit_cost2020.pdf

Please upload attachment in PDF form.

Roadway projects that include railroad grade-separation elements:

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

Measure A: Multimodal Elements and Existing Connections

Response:

A 10-foot wide multiuse trail would be constructed on the west side of the proposed roadway expansion between CR 116 and CSAH 81, providing access to key employment centers and other local and regional destinations for non-motorized users.

CSAH 81 and CR 116 currently provide connections to an employment center (industrial area), Downtown Rogers, Elm Creek Park Reserve and park trails, the Rush Creek and Medicine Lake Regional Trails, and Crow-Hassan Park Reserve. The multiuse bituminous trail along the east side of the proposed roadway would provide pedestrians and bicyclists an additional north-south access route between CSAH 150 and Brockton Lane along CR 116.

The trail would also connect to future bicycle/pedestrian facilities as identified in the City of Rogers Comprehensive Plan and the Draft 2040 Hennepin County Bicycle Plan (see Attachment B). A multiuse trail along CSAH 81 would connect to the new multiuse trail along the proposed roadway and help eliminate gaps in the regional bicycle network. Pedestrians and bicyclists would also have better access to a future trail that would extend west from Elm Creek Park Reserve to Crow-Hassan Park Reserve also known as the Rush Creek Regional Trails extension (see Attachment C).

The multiuse trail would also intersect with Territorial Road (CR 116), a Regional Bicycle Transportation Network (RBTN) Tier 1 corridor. With city trails proposed on the north side of Territorial Road east of CSAH 150, the new multiuse trail would provide better connectivity to future RBTN Tier 1 alignments.

The project would meet ADA standards to provide a

facility accessible for people with disabilities. ADA compliant curb ramps would be constructed at signals. The trail crossing of the BNSF railway, a Tier 2 Stream & Railway Barriers Crossing Area identified in the Regional Bicycle Barriers Study, would also be ADA compliant.

The project is located in Transit Market Area V as identified in Metropolitan Council's 2040 Transportation Policy Plan (see Attachment D). Transit Market Area V is generally rural and agricultural. With low-density development in the area, the TPP notes that these areas are not suitable for regular transit services. However, dial-a-ride service is still available.

The multiuse trail would provide a safe and comfortable facility for pedestrians and bicyclists, connecting to existing shoulders on CR 116 and CSAH 81. It would also address a Tier 2 Railway Barrier Crossing Area, providing safer and better bicycle network connectivity for non-motorized users.

(Limit 2,800 characters; approximately 400 words)

Measure A: Multimodal Elements and Existing Connections

Response:

The proposed roadway expansion will include a 10-foot wide multiuse trail along the west side of the new roadway between CR 116 and CSAH 81. The multiuse trail will connect to the existing Hennepin County Bikeways on CR 116 and CSAH 81. The City of Rogers 2040 Comprehensive Plan identifies a planned city trail that would connect to the northern terminus of the multiuse trail along the new roadway and connect to CSAH 13, another corridor designated as part of the Hennepin County Bikeway system (see Attachment B).

The construction of a multiuse trail along the west side of the new roadway will provide an additional north-south route for pedestrians. Currently, there are limited north-south routes with designated pedestrian facilities within the project area. Fletcher Lane does provide a north-south connection but the segment north of Territorial Road is not paved and there are no shoulders along the corridor. According to Minnesota Best Practices for Pedestrian/Bicycle Safety guidelines, the addition of a sidewalk has helped reduced pedestrian/bicyclists crashes. The multiuse trail would serve as a pedestrian facility to separate non-motorized users with vehicles traveling at high speeds.

In addition to a 10-foot wide multiuse trail, there would be two signalized intersections (one at the intersection of CR 159 and one at CSAH 81) and a railroad crossing constructed to ensure the safety of non-motorized users. At each intersection and crossing point, curbs will be ADA compliant to ensure that the multiuse trail would be accessible to people with disabilities. At 10-foot wide, the multiuse trail would also meet AASHTO (American Association of State Highway Transportation Officials)standards. The addition of a multiuse trail along the east side of the proposed roadway will

help eliminate gaps within the sidewalk network. It would also provide pedestrians better access to Downtown Rogers and businesses along CSAH 81.

The project is located in Transit Market Area V as identified in Metropolitan Council's 2040 Transportation Policy Plan (see attachment). Transit Market Area V is generally rural and agricultural. With low-density development in the area, TPP notes that Transit Market Area V is not suitable for regular transit services. However, dial-a-ride service is still available.

A future park and ride lot is also being planned along the new Fletcher Lane alignment just south of the BNSF Railroad (see Figure 2).

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

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

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment - Construction Projects

1)Layout (25 Percent of Points)

Layout should include proposed geometrics and existing and proposed right-of-way boundaries.

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties that the project goes through or agencies that maintain the roadway(s)). A PDF of the layout must be attached along with letters from each jurisdiction to receive points.	Yes
100%	
Attach Layout	1589405255528_Fletcher Bypass Layout - 2 Lane 11x8.5.pdf
Please upload attachment in PDF form.	

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

50%

Attach Layout

Please upload attachment in PDF form.

Layout has not been started

0%

Anticipated date or date of completion

2)Review of Section 106 Historic Resources (15 Percent of Points)

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

100%

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

100%

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

80%

Historic/archeological property impacted; determination of adverse effect anticipated

40%

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

0%

Project is located on an identified historic bridge

3)Right-of-Way (25 Percent of Points)

Right-of-way, permanent or temporary easements either not required or all have been acquired Yes

100%

Right-of-way, permanent or temporary easements required, plat, legal descriptions, or official map complete

50%

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

25%

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

0%

Anticipated date or date of acquisition

4)Railroad Involvement (15 Percent of Points)

No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

100%

Signature Page

Please upload attachment in PDF form.

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

50%

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

0%

Anticipated date or date of executed Agreement

5) Public Involvement (20 percent of points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. List Dates of most recent meetings and outreach specific to this project:

Meeting with general public:

Meeting with partner agencies:

Targeted online/mail outreach:

Number of respondents:

Meetings specific to this project with the general public and partner agencies have been used to help identify the project need.

100%

Targeted outreach to this project with the general public and partner agencies have been used to help identify the project need. Yes

75%

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

50%

At least one meeting specific to this project with key partner agencies has been used to help identify the project need.

50%

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

25%

No outreach has led to the selection of this project.

0%

Response (Limit 2,800 characters; approximately 400 words):	The proposed Fletcher lane bypass project has been discussed as part of a variety of planning documents and public meetings dating back 20 years. Recent discussions have also occurred as part of the Rogers 2040 Comprehensive Plan and recent agency meetings have occurred with Hennepin County and BNSF Railroad. A Hennepin County letter of support and BNSF Railroad agreement are attached. The project has also been formally recognized as a provisional project in the Hennepin County Capital Improvement Program (attached). Recent project specific meetings with the public have been delayed due to the COVID-19 issue. Future public engagement related to the project may include sending mailers to residents and businesses in and near the project area, providing project information and seeking comments online, and holding in-person or virtual public meetings to discuss project details and gather public input.

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	$3,976,300.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$3,976,300.00
Enter amount of any outside, competitive funding:	$0.00
Attach documentation of award:	
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
2020 Transportation CIP Final - City of Rogers.pdf	2020 Transportation CIP Final - City of Rogers	76 KB
AttachmentA_ACS2017_report.pdf	Attachment A: American Community Survey	1.5 MB
AttachmentB_BikePedFacilities.pdf	Attachment B: Bikeway Pedestrian Facilities	1.9 MB
AttachmentC_Three Rivers Park District Map_8.5x11.pdf	Attachment C: Three Rivers Park District Map	1.0 MB
AttachmentD_MetCouncil_TPP Transit Section.pdf	Attachment D: Met Council TPP Transit Section	353 KB
AttachmentE_HennepinCountyCIP.pdf	Attachment E: Hennepin County CIP	329 KB
AttachmentF_CityCIP_CompPlan.pdf	Attachment F: City of Rogers Comp Plan_CIP	141 KB
City Resolution Cover Letter.pdf	City of Rogers Resolution of Support Cover Letter	175 KB
City Resolution.pdf	City of Rogers Resolution of Support	556 KB
Crash_Detail_Report_-_Long_Form_20200429.pdf	Crash Detail Report	129 KB
Figure1_ProjectLocation.pdf	Figure 1 - Project Location	895 KB
Figure2_ProjectAerial.culdesacs.pdf	Figure 2 Project Location Aerial Map	2.0 MB
Fletcher BNSFRR Agreement Excerpts.pdf	BNSF RR Agreement Excerpt	2.5 MB
Fletcher Bypass Cost Estimate - 2 Lane.pdf	Fletcher Bypass Cost Estimate	42 KB
Fletcher Bypass Delay, Emissions, and Safety Memo.pdf	Delay, Emissions and Safety Technical Memorandum	90 KB
Fletcher Bypass One-page Summary.pdf	One Page Project Summary	312 KB
Fletcher Bypass-existing conditions images.pdf	Fletcher Bypass Existing Condition Photos	913 KB
Hennepin County Letter of Support.pdf	Hennepin County Letter of Support	98 KB
MetCouncil_TPP Transit Section.pdf	Met Council TPP Transit Service Area	394 KB
NW Hennepin County I-94 Sub Area Transportation Study-Excerpt.pdf	NW Hennepin County I-94 Sub Area Transportation Study Excerpt	130 KB
Rogers Transportation Plan Excerpts.pdf	City of Rogers Transportation Plan Excerpts	11.2 MB

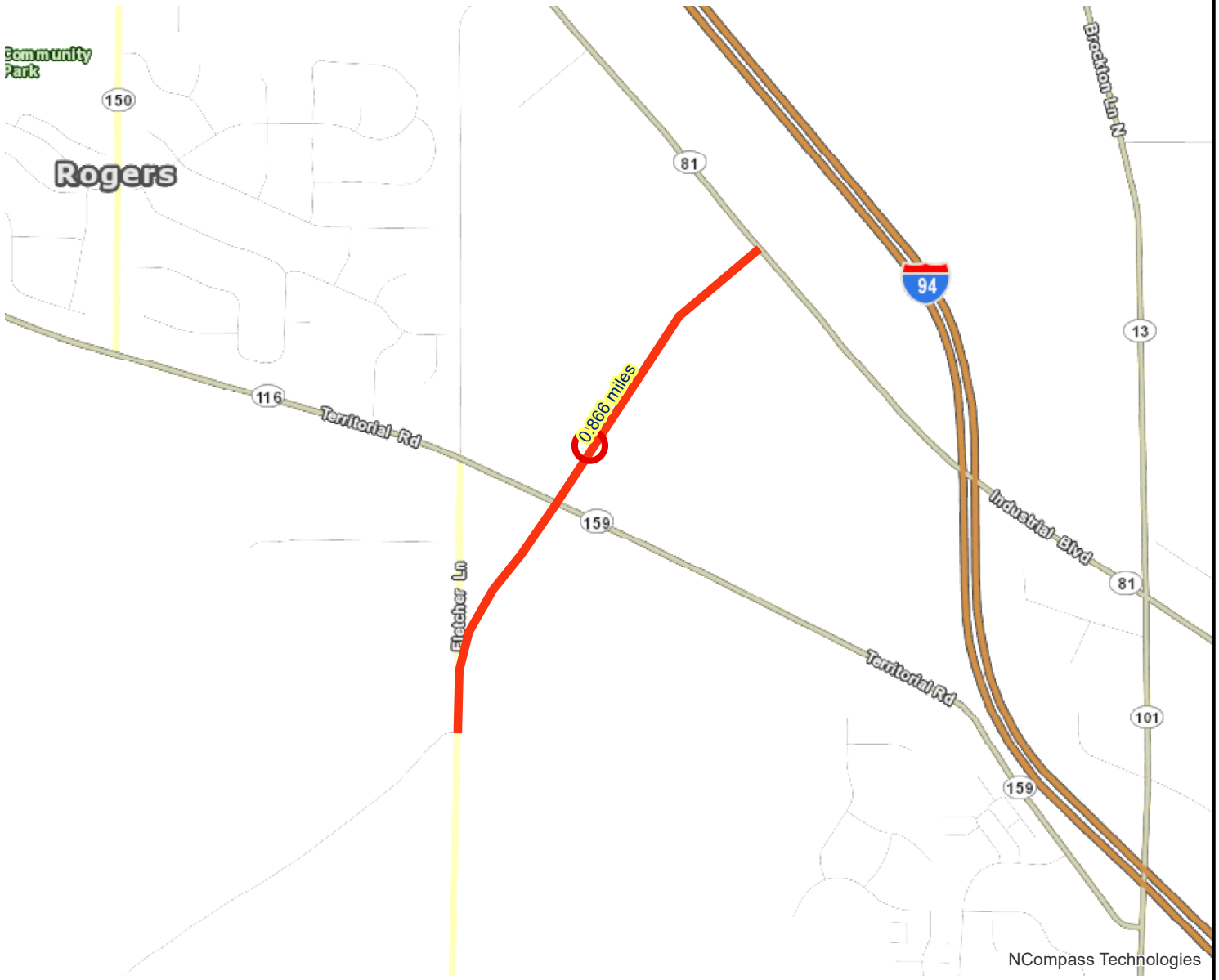
Regional Economy

Roadway Reconstruction/Modernization Project: Fletcher Bypass | Map ID: 1587158948452

Results

WITHIN ONE MI of project:
Postsecondary Students: 0

Totals by City:
Dayton
Population: 904
Employment: 730
Mfg and Dist Employment: 489
Rogers
Population: 2872
Employment: 1721
Mfg and Dist Employment: 615



Project Points
Project
Manfacturing/Distribution Centers
Job Concentration Centers

0 0.125 0.25 0.5 0.75 1 Miles

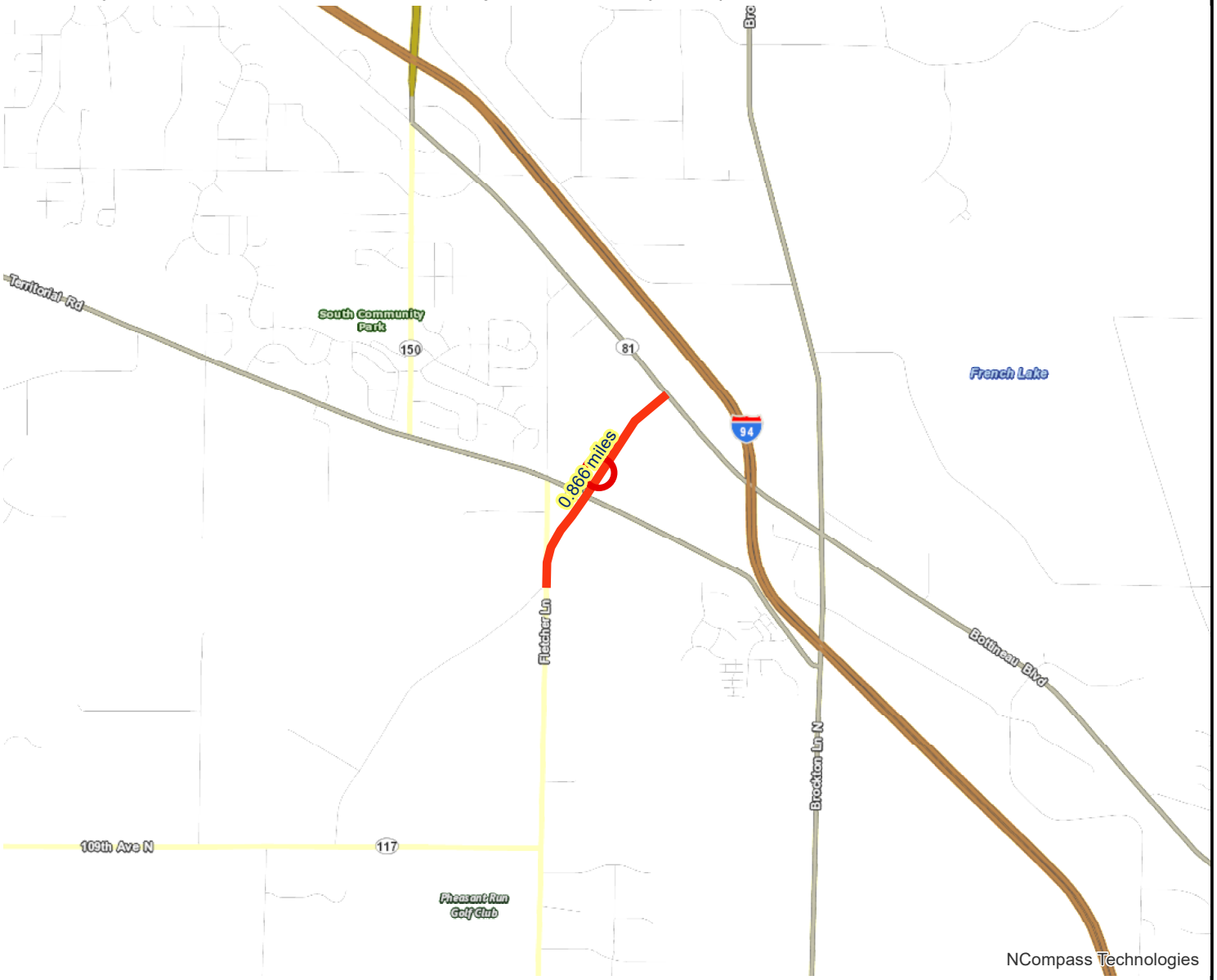
Created: 4/17/2020
LandscapeRSA5

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

METROPOLITAN COUNCIL

Transit Connections

Roadway Reconstruction/Modernization Project: Fletcher Bypass | Map ID: 1587158948452



Results

Transit with a Direct Connection to project:
-- NONE --

**indicates Planned Alignments*

Transit Market areas: 5

Project Points

Project

Project Area

0 0.35 0.7 1.4 2.1 2.8 Miles

Created: 4/17/2020
LandscapeRSA3

METROPOLITAN COUNCIL

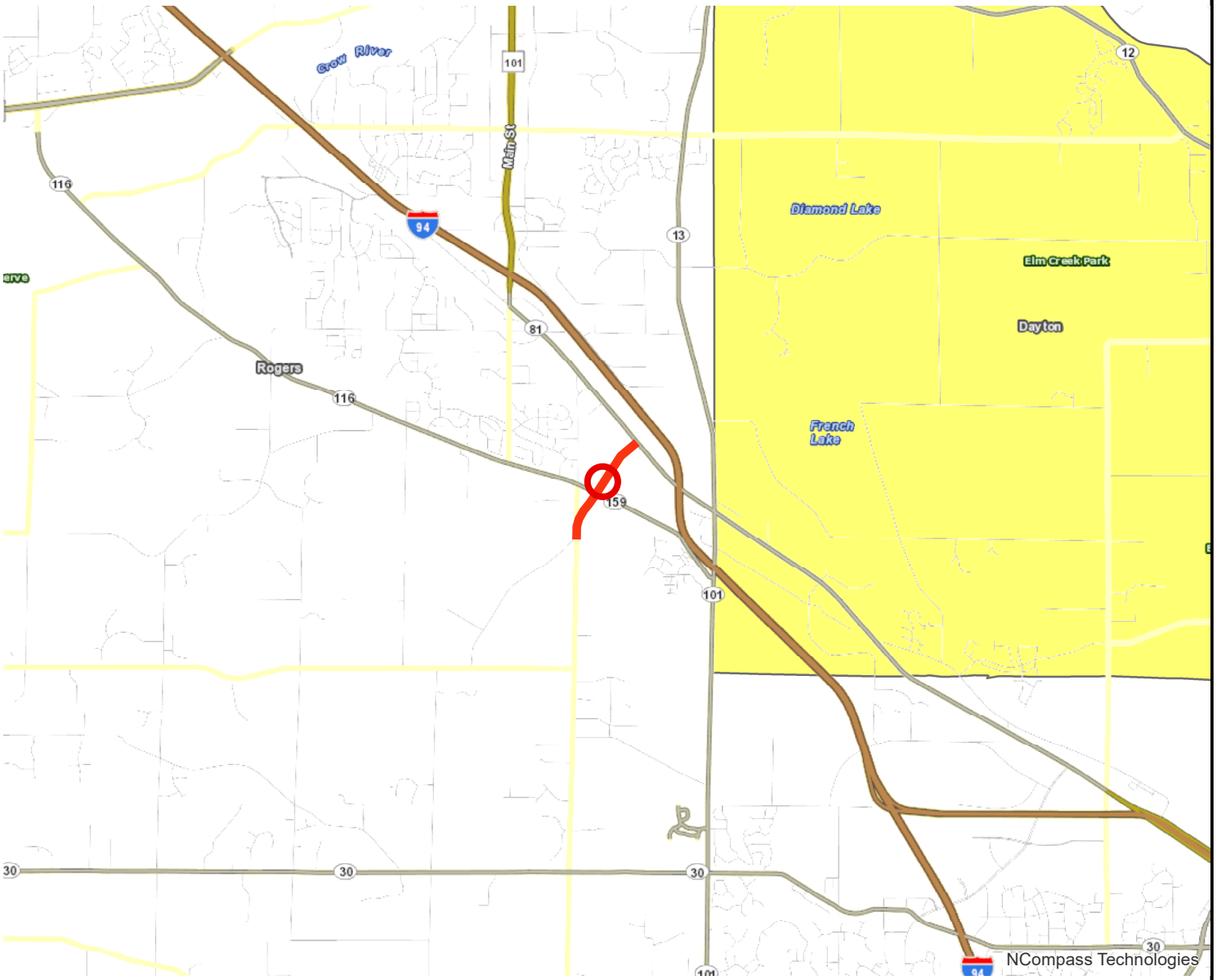
Socio-Economic Conditions

Roadway Reconstruction/Modernization Project: Fletcher Bypass | Map ID: 1587158948452

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)

Tracts within half-mile:
26909



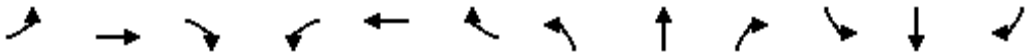
Points
Lines
Area of Concentrated Povertry > 50% residents of color
Area of Concentrated Poverty
Above reg'l avg conc of race/poverty

0 0.5 1 2 3 4 Miles

Created: 4/17/2020
LandscapeRSA2

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

METROPOLITAN COUNCIL



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	33	95	53	381	3	439	81	13	0	37	17
Future Volume (vph)	0	33	95	53	381	3	439	81	13	0	37	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.900			0.999			0.997			0.958	
Flt Protected					0.994			0.960				
Satd. Flow (prot)	0	1676	0	0	1850	0	0	1783	0	0	1785	0
Flt Permitted					0.994			0.960				
Satd. Flow (perm)	0	1676	0	0	1850	0	0	1783	0	0	1785	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2020			1877			1269			912	
Travel Time (s)		45.9			42.7			28.8			20.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	36	103	58	414	3	477	88	14	0	40	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	475	0	0	579	0	0	58	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 76.8%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	44.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	33	95	53	381	3	439	81	13	0	37	17
Future Vol, veh/h	0	33	95	53	381	3	439	81	13	0	37	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	103	58	414	3	477	88	14	0	40	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	34.9	63.2	11.2
HCM LOS	B	D	F	B

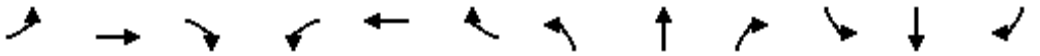
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	82%	0%	12%	0%
Vol Thru, %	15%	26%	87%	69%
Vol Right, %	2%	74%	1%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	533	128	437	54
LT Vol	439	0	53	0
Through Vol	81	33	381	37
RT Vol	13	95	3	17
Lane Flow Rate	579	139	475	59
Geometry Grp	1	1	1	1
Degree of Util (X)	1.003	0.26	0.843	0.117
Departure Headway (Hd)	6.23	6.726	6.391	7.192
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	579	531	565	495
Service Time	4.277	4.799	4.443	5.279
HCM Lane V/C Ratio	1	0.262	0.841	0.119
HCM Control Delay	63.2	12.2	34.9	11.2
HCM Lane LOS	F	B	D	B
HCM 95th-tile Q	14.8	1	8.9	0.4

Network Totals

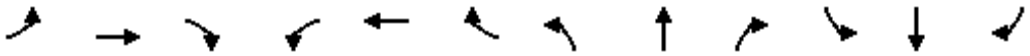
Number of Intersections	1
Control Delay / Veh (s/v)	45
Queue Delay / Veh (s/v)	0
Total Delay / Veh (s/v)	45
Total Delay (hr)	14
Stops / Veh	1.00
Stops (#)	1151
Average Speed (mph)	13
Total Travel Time (hr)	26
Distance Traveled (mi)	342
Fuel Consumed (gal)	31
Fuel Economy (mpg)	11.1
CO Emissions (kg)	2.16
NOx Emissions (kg)	0.42
VOC Emissions (kg)	0.50
Unserved Vehicles (#)	0
Vehicles in dilemma zone (#)	0
Performance Index	17.5

3: Fletcher & Territorial

Direction	EB	WB	NB	SB	All
Future Volume (vph)	128	437	533	53	1151
Control Delay / Veh (s/v)	12	35	64	11	45
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	12	35	64	11	45
Total Delay (hr)	0	4	9	0	14
Stops / Veh	1.00	1.00	1.00	1.00	1.00
Stops (#)	128	437	533	53	1151
Average Speed (mph)	24	16	9	19	13
Total Travel Time (hr)	2	9	14	0	26
Distance Traveled (mi)	49	155	128	9	342
Fuel Consumed (gal)	3	12	15	1	31
Fuel Economy (mpg)	16.1	13.0	8.5	NA	11.1
CO Emissions (kg)	0.21	0.83	1.06	0.06	2.16
NOx Emissions (kg)	0.04	0.16	0.21	0.01	0.42
VOC Emissions (kg)	0.05	0.19	0.24	0.01	0.50
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	19	53	53	324	61	266	251	13	14	80	17
Future Volume (vph)	0	19	53	53	324	61	266	251	13	14	80	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	200		200	200		200	200		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1863	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted				0.499			0.580			0.591		
Satd. Flow (perm)	1863	1863	1583	930	1863	1583	1080	1863	1583	1101	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			176			176			176			176
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2020			1877			1269			912	
Travel Time (s)		45.9			42.7			28.8			20.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	21	58	58	352	66	289	273	14	15	87	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	58	58	352	66	289	273	14	15	87	18
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

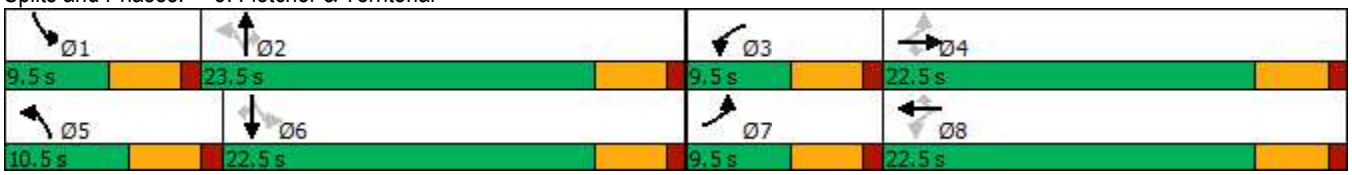


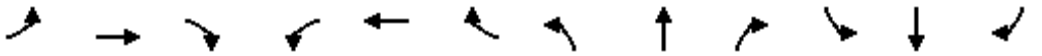
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	10.5	23.5	23.5	9.5	22.5	22.5
Total Split (%)	14.6%	34.6%	34.6%	14.6%	34.6%	34.6%	16.2%	36.2%	36.2%	14.6%	34.6%	34.6%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	6.0	19.0	19.0	5.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)		9.2	9.2	14.6	14.6	14.6	28.0	26.8	26.8	23.1	18.1	18.1
Actuated g/C Ratio		0.18	0.18	0.28	0.28	0.28	0.54	0.51	0.51	0.44	0.35	0.35
v/c Ratio		0.06	0.14	0.17	0.68	0.12	0.44	0.29	0.02	0.03	0.14	0.03
Control Delay		20.9	0.7	14.7	23.7	0.4	10.1	10.4	0.0	6.9	13.6	0.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.9	0.7	14.7	23.7	0.4	10.1	10.4	0.0	6.9	13.6	0.1
LOS		C	A	B	C	A	B	B	A	A	B	A
Approach Delay		6.1			19.4			10.0			10.7	
Approach LOS		A			B			A			B	
90th %ile Green (s)	0.0	8.5	8.5	5.0	18.0	18.0	6.0	19.0	19.0	5.0	18.0	18.0
90th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Max	MaxR	MaxR	Max	MaxR	MaxR
70th %ile Green (s)	0.0	8.5	8.5	5.0	18.0	18.0	6.0	28.5	28.5	0.0	18.0	18.0
70th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Max	Hold	Hold	Skip	MaxR	MaxR
50th %ile Green (s)	0.0	6.0	6.0	5.0	15.5	15.5	6.0	28.5	28.5	0.0	18.0	18.0
50th %ile Term Code	Skip	Gap	Gap	Max	Hold	Hold	Max	Hold	Hold	Skip	MaxR	MaxR
30th %ile Green (s)	0.0	12.7	12.7	0.0	12.7	12.7	6.0	28.5	28.5	0.0	18.0	18.0
30th %ile Term Code	Skip	Hold	Hold	Skip	Gap	Gap	Max	Hold	Hold	Skip	MaxR	MaxR
10th %ile Green (s)	0.0	9.7	9.7	0.0	9.7	9.7	6.0	28.5	28.5	0.0	18.0	18.0
10th %ile Term Code	Skip	Hold	Hold	Skip	Gap	Gap	Max	Hold	Hold	Skip	MaxR	MaxR
Stops (vph)		19	0	37	267	0	146	143	0	8	54	0
Fuel Used(gal)		0	1	1	8	1	4	4	0	0	1	0
CO Emissions (g/hr)		34	59	80	544	63	279	266	9	11	76	8
NOx Emissions (g/hr)		7	11	15	106	12	54	52	2	2	15	2
VOC Emissions (g/hr)		8	14	18	126	15	65	62	2	3	18	2
Dilemma Vehicles (#)		0	0	0	0	0	0	0	0	0	0	0
Queue Length 50th (ft)		6	0	13	95	0	44	41	0	2	18	0
Queue Length 95th (ft)		22	0	34	167	0	92	123	0	9	46	0
Internal Link Dist (ft)		1940			1797			1189			832	
Turn Bay Length (ft)			200	200		200	200		200	200		200
Base Capacity (vph)		644	662	341	644	662	656	955	897	550	644	662
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.03	0.09	0.17	0.55	0.10	0.44	0.29	0.02	0.03	0.14	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 52.3			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 55.5			
70th %ile Actuated Cycle: 55.5			
50th %ile Actuated Cycle: 53			
30th %ile Actuated Cycle: 50.2			
10th %ile Actuated Cycle: 47.2			

Splits and Phases: 3: Fletcher & Territorial





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	19	53	53	324	61	266	251	13	14	80	17
Future Volume (veh/h)	0	19	53	53	324	61	266	251	13	14	80	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	21	58	58	352	66	289	273	14	15	87	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	188	159	362	461	390	786	867	735	573	677	573
Arrive On Green	0.00	0.10	0.10	0.06	0.25	0.25	0.12	0.46	0.46	0.02	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	0	21	58	58	352	66	289	273	14	15	87	18
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.0	0.5	1.7	1.3	8.7	1.6	4.6	4.6	0.2	0.3	1.5	0.4
Cycle Q Clear(g_c), s	0.0	0.5	1.7	1.3	8.7	1.6	4.6	4.6	0.2	0.3	1.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	188	159	362	461	390	786	867	735	573	677	573
V/C Ratio(X)	0.00	0.11	0.36	0.16	0.76	0.17	0.37	0.31	0.02	0.03	0.13	0.03
Avail Cap(c_a), veh/h	393	677	573	443	677	573	786	867	735	719	677	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.4	20.9	16.7	17.4	14.7	6.9	8.4	7.2	9.6	10.6	10.2
Incr Delay (d2), s/veh	0.0	0.3	1.4	0.2	3.1	0.2	0.3	1.0	0.0	0.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.6	0.5	3.6	0.5	1.3	1.7	0.1	0.1	0.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.6	22.3	16.9	20.5	14.9	7.2	9.3	7.3	9.6	11.0	10.4
LnGrp LOS	A	C	C	B	C	B	A	A	A	A	B	B
Approach Vol, veh/h		79			476			576			120	
Approach Delay, s/veh		21.8			19.3			8.2			10.7	
Approach LOS		C			B			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	27.6	7.3	9.5	10.5	22.5	0.0	16.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	6.0	18.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	2.3	6.6	3.3	3.7	6.6	3.5	0.0	10.7
Green Ext Time (p_c), s	0.0	1.3	0.0	0.2	0.0	0.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	19	53	53	324	61	266	251	13	14	80	17
Future Volume (veh/h)	0	19	53	53	324	61	266	251	13	14	80	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	21	58	58	352	66	289	273	14	15	87	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	218	188	159	362	461	390	786	867	735	573	677	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.10	0.10	0.06	0.25	0.25	0.12	0.46	0.46	0.02	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	20.6	22.3	16.9	20.5	14.9	7.2	9.3	7.3	9.6	11.0	10.4
Ln Grp LOS	A	C	C	B	C	B	A	A	A	A	B	B
Approach Vol, veh/h		79			476			576			120	
Approach Delay, s/veh		21.8			19.3			8.2			10.7	
Approach LOS		C			B			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phs Duration (G+Y+Rc), s	5.4	27.6	7.3	9.5	10.5	22.5	0.0	16.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	19.0	5.0	18.0	6.0	18.0	5.0	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.4	3.8	5.0	0.0	5.1
Max Q Clear (g_c+I1), s	2.3	6.6	3.3	3.7	6.6	3.5	0.0	10.7
Green Ext Time (g_e), s	0.0	1.3	0.0	0.2	0.0	0.3	0.0	1.4
Prob of Phs Call (p_c)	0.19	1.00	0.55	1.00	0.98	1.00	0.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.49

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1781		1781		1781		1781	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	15	0	58	0	289	0	0	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	0.3	0.0	1.3	0.0	4.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.3	0.0	1.3	0.0	4.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1092	0	1320	0	1289	0	969	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	18.0	0.0	7.0	0.0	20.0	0.0	5.0	0.0
Perm LT Serve Time (g_u), s	18.0	0.0	4.5	0.0	16.5	0.0	3.6	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.1	0.0	1.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	573	0	362	0	786	0	218	0
V/C Ratio (X)	0.03	0.00	0.16	0.00	0.37	0.00	0.00	0.00
Avail Cap (c_a), veh/h	719	0	443	0	786	0	393	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	9.6	0.0	16.7	0.0	6.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	9.6	0.0	16.9	0.0	7.2	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.1	0.0	0.5	0.0	1.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.5	0.0	1.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.01	0.00	0.06	0.00	0.17	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	273	0	21	0	87	0	352
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	4.6	0.0	0.5	0.0	1.5	0.0	8.7
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	0.5	0.0	1.5	0.0	8.7
Lane Grp Cap (c), veh/h	0	867	0	188	0	677	0	461
V/C Ratio (X)	0.00	0.31	0.00	0.11	0.00	0.13	0.00	0.76
Avail Cap (c_a), veh/h	0	867	0	677	0	677	0	677
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.4	0.0	20.4	0.0	10.6	0.0	17.4
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.3	0.0	0.4	0.0	3.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.3	0.0	20.6	0.0	11.0	0.0	20.5
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	0.2	0.0	0.5	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.2	0.0	0.6	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.02	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	14	0	58	0	18	0	66
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.2	0.0	1.7	0.0	0.4	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	0.2	0.0	1.7	0.0	0.4	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	735	0	159	0	573	0	390
V/C Ratio (X)	0.00	0.02	0.00	0.36	0.00	0.03	0.00	0.17
Avail Cap (c_a), veh/h	0	735	0	573	0	573	0	573
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.2	0.0	20.9	0.0	10.2	0.0	14.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	0.1	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.3	0.0	22.3	0.0	10.4	0.0	14.9
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.6	0.0	0.1	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.6	0.0	0.1	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.08	0.00	0.02	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Network Totals

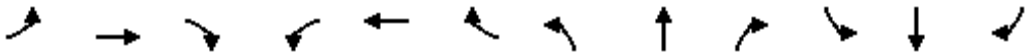
Number of Intersections	1
Control Delay / Veh (s/v)	13
Queue Delay / Veh (s/v)	0
Total Delay / Veh (s/v)	13
Total Delay (hr)	4
Stops / Veh	0.59
Stops (#)	674
Average Speed (mph)	22
Total Travel Time (hr)	15
Distance Traveled (mi)	330
Fuel Consumed (gal)	20
Fuel Economy (mpg)	16.1
CO Emissions (kg)	1.43
NOx Emissions (kg)	0.28
VOC Emissions (kg)	0.33
Unserved Vehicles (#)	0
Vehicles in dilemma zone (#)	0
Performance Index	6.2

3: Fletcher & Territorial

Direction	EB	WB	NB	SB	All
Future Volume (vph)	72	438	530	111	1151
Control Delay / Veh (s/v)	6	19	10	11	13
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	6	19	10	11	13
Total Delay (hr)	0	2	1	0	4
Stops / Veh	0.26	0.69	0.55	0.56	0.59
Stops (#)	19	304	289	62	674
Average Speed (mph)	27	21	22	20	22
Total Travel Time (hr)	1	8	6	1	15
Distance Traveled (mi)	28	156	127	19	330
Fuel Consumed (gal)	1	10	8	1	20
Fuel Economy (mpg)	20.8	15.9	16.1	14.0	16.1
CO Emissions (kg)	0.09	0.69	0.55	0.10	1.43
NOx Emissions (kg)	0.02	0.13	0.11	0.02	0.28
VOC Emissions (kg)	0.02	0.16	0.13	0.02	0.33
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

Network Totals

Number of Intersections	1
Control Delay / Veh (s/v)	13
Queue Delay / Veh (s/v)	0
Total Delay / Veh (s/v)	13
Total Delay (hr)	4
Stops / Veh	0.59
Stops (#)	674
Average Speed (mph)	22
Total Travel Time (hr)	15
Distance Traveled (mi)	330
Fuel Consumed (gal)	20
Fuel Economy (mpg)	16.1
CO Emissions (kg)	1.43
NOx Emissions (kg)	0.28
VOC Emissions (kg)	0.33
Unserved Vehicles (#)	0
Vehicles in dilemma zone (#)	0
Performance Index	6.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	33	95	53	381	3	439	81	13	0	37	17
Future Volume (vph)	0	33	95	53	381	3	439	81	13	0	37	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.900			0.999			0.997			0.958	
Flt Protected					0.994			0.960				
Satd. Flow (prot)	0	1676	0	0	1850	0	0	1783	0	0	1785	0
Flt Permitted					0.994			0.960				
Satd. Flow (perm)	0	1676	0	0	1850	0	0	1783	0	0	1785	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2020			1877			1269			912	
Travel Time (s)		45.9			42.7			28.8			20.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	36	103	58	414	3	477	88	14	0	40	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	475	0	0	579	0	0	58	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 76.8%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	44.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	33	95	53	381	3	439	81	13	0	37	17
Future Vol, veh/h	0	33	95	53	381	3	439	81	13	0	37	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	103	58	414	3	477	88	14	0	40	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	34.9	63.2	11.2
HCM LOS	B	D	F	B

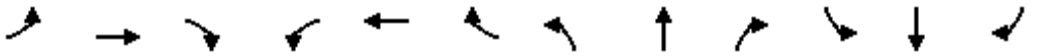
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	82%	0%	12%	0%
Vol Thru, %	15%	26%	87%	69%
Vol Right, %	2%	74%	1%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	533	128	437	54
LT Vol	439	0	53	0
Through Vol	81	33	381	37
RT Vol	13	95	3	17
Lane Flow Rate	579	139	475	59
Geometry Grp	1	1	1	1
Degree of Util (X)	1.003	0.26	0.843	0.117
Departure Headway (Hd)	6.23	6.726	6.391	7.192
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	579	531	565	495
Service Time	4.277	4.799	4.443	5.279
HCM Lane V/C Ratio	1	0.262	0.841	0.119
HCM Control Delay	63.2	12.2	34.9	11.2
HCM Lane LOS	F	B	D	B
HCM 95th-tile Q	14.8	1	8.9	0.4

Network Totals

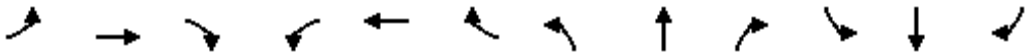
Number of Intersections	1
Control Delay / Veh (s/v)	45
Queue Delay / Veh (s/v)	0
Total Delay / Veh (s/v)	45
Total Delay (hr)	14
Stops / Veh	1.00
Stops (#)	1151
Average Speed (mph)	13
Total Travel Time (hr)	26
Distance Traveled (mi)	342
Fuel Consumed (gal)	31
Fuel Economy (mpg)	11.1
CO Emissions (kg)	2.16
NOx Emissions (kg)	0.42
VOC Emissions (kg)	0.50
Unserved Vehicles (#)	0
Vehicles in dilemma zone (#)	0
Performance Index	17.5

3: Fletcher & Territorial

Direction	EB	WB	NB	SB	All
Future Volume (vph)	128	437	533	53	1151
Control Delay / Veh (s/v)	12	35	64	11	45
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	12	35	64	11	45
Total Delay (hr)	0	4	9	0	14
Stops / Veh	1.00	1.00	1.00	1.00	1.00
Stops (#)	128	437	533	53	1151
Average Speed (mph)	24	16	9	19	13
Total Travel Time (hr)	2	9	14	0	26
Distance Traveled (mi)	49	155	128	9	342
Fuel Consumed (gal)	3	12	15	1	31
Fuel Economy (mpg)	16.1	13.0	8.5	NA	11.1
CO Emissions (kg)	0.21	0.83	1.06	0.06	2.16
NOx Emissions (kg)	0.04	0.16	0.21	0.01	0.42
VOC Emissions (kg)	0.05	0.19	0.24	0.01	0.50
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	19	53	53	324	61	266	251	13	14	80	17
Future Volume (vph)	0	19	53	53	324	61	266	251	13	14	80	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	200		200	200		200	200		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1863	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted				0.499			0.580			0.591		
Satd. Flow (perm)	1863	1863	1583	930	1863	1583	1080	1863	1583	1101	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			176			176			176			176
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2020			1877			1269			912	
Travel Time (s)		45.9			42.7			28.8			20.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	21	58	58	352	66	289	273	14	15	87	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	58	58	352	66	289	273	14	15	87	18
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

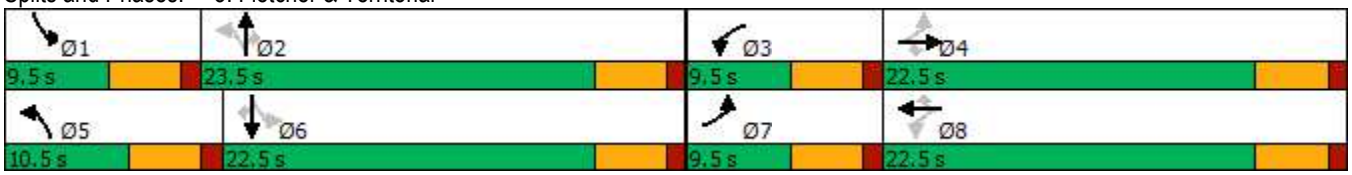


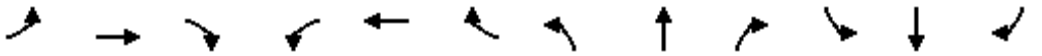
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	10.5	23.5	23.5	9.5	22.5	22.5
Total Split (%)	14.6%	34.6%	34.6%	14.6%	34.6%	34.6%	16.2%	36.2%	36.2%	14.6%	34.6%	34.6%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	6.0	19.0	19.0	5.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)		9.2	9.2	14.6	14.6	14.6	28.0	26.8	26.8	23.1	18.1	18.1
Actuated g/C Ratio		0.18	0.18	0.28	0.28	0.28	0.54	0.51	0.51	0.44	0.35	0.35
v/c Ratio		0.06	0.14	0.17	0.68	0.12	0.44	0.29	0.02	0.03	0.14	0.03
Control Delay		20.9	0.7	14.7	23.7	0.4	10.1	10.4	0.0	6.9	13.6	0.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.9	0.7	14.7	23.7	0.4	10.1	10.4	0.0	6.9	13.6	0.1
LOS		C	A	B	C	A	B	B	A	A	B	A
Approach Delay		6.1			19.4			10.0			10.7	
Approach LOS		A			B			A			B	
90th %ile Green (s)	0.0	8.5	8.5	5.0	18.0	18.0	6.0	19.0	19.0	5.0	18.0	18.0
90th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Max	MaxR	MaxR	Max	MaxR	MaxR
70th %ile Green (s)	0.0	8.5	8.5	5.0	18.0	18.0	6.0	28.5	28.5	0.0	18.0	18.0
70th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Max	Hold	Hold	Skip	MaxR	MaxR
50th %ile Green (s)	0.0	6.0	6.0	5.0	15.5	15.5	6.0	28.5	28.5	0.0	18.0	18.0
50th %ile Term Code	Skip	Gap	Gap	Max	Hold	Hold	Max	Hold	Hold	Skip	MaxR	MaxR
30th %ile Green (s)	0.0	12.7	12.7	0.0	12.7	12.7	6.0	28.5	28.5	0.0	18.0	18.0
30th %ile Term Code	Skip	Hold	Hold	Skip	Gap	Gap	Max	Hold	Hold	Skip	MaxR	MaxR
10th %ile Green (s)	0.0	9.7	9.7	0.0	9.7	9.7	6.0	28.5	28.5	0.0	18.0	18.0
10th %ile Term Code	Skip	Hold	Hold	Skip	Gap	Gap	Max	Hold	Hold	Skip	MaxR	MaxR
Stops (vph)		19	0	37	267	0	146	143	0	8	54	0
Fuel Used(gal)		0	1	1	8	1	4	4	0	0	1	0
CO Emissions (g/hr)		34	59	80	544	63	279	266	9	11	76	8
NOx Emissions (g/hr)		7	11	15	106	12	54	52	2	2	15	2
VOC Emissions (g/hr)		8	14	18	126	15	65	62	2	3	18	2
Dilemma Vehicles (#)		0	0	0	0	0	0	0	0	0	0	0
Queue Length 50th (ft)		6	0	13	95	0	44	41	0	2	18	0
Queue Length 95th (ft)		22	0	34	167	0	92	123	0	9	46	0
Internal Link Dist (ft)		1940			1797			1189			832	
Turn Bay Length (ft)			200	200		200	200		200	200		200
Base Capacity (vph)		644	662	341	644	662	656	955	897	550	644	662
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.03	0.09	0.17	0.55	0.10	0.44	0.29	0.02	0.03	0.14	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 52.3			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 55.5			
70th %ile Actuated Cycle: 55.5			
50th %ile Actuated Cycle: 53			
30th %ile Actuated Cycle: 50.2			
10th %ile Actuated Cycle: 47.2			

Splits and Phases: 3: Fletcher & Territorial





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	19	53	53	324	61	266	251	13	14	80	17
Future Volume (veh/h)	0	19	53	53	324	61	266	251	13	14	80	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	21	58	58	352	66	289	273	14	15	87	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	188	159	362	461	390	786	867	735	573	677	573
Arrive On Green	0.00	0.10	0.10	0.06	0.25	0.25	0.12	0.46	0.46	0.02	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	0	21	58	58	352	66	289	273	14	15	87	18
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.0	0.5	1.7	1.3	8.7	1.6	4.6	4.6	0.2	0.3	1.5	0.4
Cycle Q Clear(g_c), s	0.0	0.5	1.7	1.3	8.7	1.6	4.6	4.6	0.2	0.3	1.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	188	159	362	461	390	786	867	735	573	677	573
V/C Ratio(X)	0.00	0.11	0.36	0.16	0.76	0.17	0.37	0.31	0.02	0.03	0.13	0.03
Avail Cap(c_a), veh/h	393	677	573	443	677	573	786	867	735	719	677	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.4	20.9	16.7	17.4	14.7	6.9	8.4	7.2	9.6	10.6	10.2
Incr Delay (d2), s/veh	0.0	0.3	1.4	0.2	3.1	0.2	0.3	1.0	0.0	0.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.6	0.5	3.6	0.5	1.3	1.7	0.1	0.1	0.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.6	22.3	16.9	20.5	14.9	7.2	9.3	7.3	9.6	11.0	10.4
LnGrp LOS	A	C	C	B	C	B	A	A	A	A	B	B
Approach Vol, veh/h		79			476			576			120	
Approach Delay, s/veh		21.8			19.3			8.2			10.7	
Approach LOS		C			B			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	27.6	7.3	9.5	10.5	22.5	0.0	16.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	6.0	18.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	2.3	6.6	3.3	3.7	6.6	3.5	0.0	10.7
Green Ext Time (p_c), s	0.0	1.3	0.0	0.2	0.0	0.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	19	53	53	324	61	266	251	13	14	80	17
Future Volume (veh/h)	0	19	53	53	324	61	266	251	13	14	80	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	21	58	58	352	66	289	273	14	15	87	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	218	188	159	362	461	390	786	867	735	573	677	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.10	0.10	0.06	0.25	0.25	0.12	0.46	0.46	0.02	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	20.6	22.3	16.9	20.5	14.9	7.2	9.3	7.3	9.6	11.0	10.4
Ln Grp LOS	A	C	C	B	C	B	A	A	A	A	B	B
Approach Vol, veh/h		79			476			576			120	
Approach Delay, s/veh		21.8			19.3			8.2			10.7	
Approach LOS		C			B			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phs Duration (G+Y+Rc), s	5.4	27.6	7.3	9.5	10.5	22.5	0.0	16.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.0	19.0	5.0	18.0	6.0	18.0	5.0	18.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.4	3.8	5.0	0.0	5.1
Max Q Clear (g_c+I1), s	2.3	6.6	3.3	3.7	6.6	3.5	0.0	10.7
Green Ext Time (g_e), s	0.0	1.3	0.0	0.2	0.0	0.3	0.0	1.4
Prob of Phs Call (p_c)	0.19	1.00	0.55	1.00	0.98	1.00	0.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.49

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1781		1781		1781		1781	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	15	0	58	0	289	0	0	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	0.3	0.0	1.3	0.0	4.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.3	0.0	1.3	0.0	4.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1092	0	1320	0	1289	0	969	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	18.0	0.0	7.0	0.0	20.0	0.0	5.0	0.0
Perm LT Serve Time (g_u), s	18.0	0.0	4.5	0.0	16.5	0.0	3.6	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.1	0.0	1.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	573	0	362	0	786	0	218	0
V/C Ratio (X)	0.03	0.00	0.16	0.00	0.37	0.00	0.00	0.00
Avail Cap (c_a), veh/h	719	0	443	0	786	0	393	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	9.6	0.0	16.7	0.0	6.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	9.6	0.0	16.9	0.0	7.2	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.1	0.0	0.5	0.0	1.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.5	0.0	1.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.01	0.00	0.06	0.00	0.17	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	273	0	21	0	87	0	352
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	4.6	0.0	0.5	0.0	1.5	0.0	8.7
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	0.5	0.0	1.5	0.0	8.7
Lane Grp Cap (c), veh/h	0	867	0	188	0	677	0	461
V/C Ratio (X)	0.00	0.31	0.00	0.11	0.00	0.13	0.00	0.76
Avail Cap (c_a), veh/h	0	867	0	677	0	677	0	677
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.4	0.0	20.4	0.0	10.6	0.0	17.4
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.3	0.0	0.4	0.0	3.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.3	0.0	20.6	0.0	11.0	0.0	20.5
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	0.2	0.0	0.5	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.2	0.0	0.6	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.02	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	14	0	58	0	18	0	66
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.2	0.0	1.7	0.0	0.4	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	0.2	0.0	1.7	0.0	0.4	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	735	0	159	0	573	0	390
V/C Ratio (X)	0.00	0.02	0.00	0.36	0.00	0.03	0.00	0.17
Avail Cap (c_a), veh/h	0	735	0	573	0	573	0	573
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.2	0.0	20.9	0.0	10.2	0.0	14.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	0.1	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.3	0.0	22.3	0.0	10.4	0.0	14.9
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.6	0.0	0.1	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.6	0.0	0.1	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.08	0.00	0.02	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Network Totals

Number of Intersections	1
Control Delay / Veh (s/v)	13
Queue Delay / Veh (s/v)	0
Total Delay / Veh (s/v)	13
Total Delay (hr)	4
Stops / Veh	0.59
Stops (#)	674
Average Speed (mph)	22
Total Travel Time (hr)	15
Distance Traveled (mi)	330
Fuel Consumed (gal)	20
Fuel Economy (mpg)	16.1
CO Emissions (kg)	1.43
NOx Emissions (kg)	0.28
VOC Emissions (kg)	0.33
Unserved Vehicles (#)	0
Vehicles in dilemma zone (#)	0
Performance Index	6.2

3: Fletcher & Territorial

Direction	EB	WB	NB	SB	All
Future Volume (vph)	72	438	530	111	1151
Control Delay / Veh (s/v)	6	19	10	11	13
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	6	19	10	11	13
Total Delay (hr)	0	2	1	0	4
Stops / Veh	0.26	0.69	0.55	0.56	0.59
Stops (#)	19	304	289	62	674
Average Speed (mph)	27	21	22	20	22
Total Travel Time (hr)	1	8	6	1	15
Distance Traveled (mi)	28	156	127	19	330
Fuel Consumed (gal)	1	10	8	1	20
Fuel Economy (mpg)	20.8	15.9	16.1	14.0	16.1
CO Emissions (kg)	0.09	0.69	0.55	0.10	1.43
NOx Emissions (kg)	0.02	0.13	0.11	0.02	0.28
VOC Emissions (kg)	0.02	0.16	0.13	0.02	0.33
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

Network Totals

Number of Intersections	1
Control Delay / Veh (s/v)	13
Queue Delay / Veh (s/v)	0
Total Delay / Veh (s/v)	13
Total Delay (hr)	4
Stops / Veh	0.59
Stops (#)	674
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Fuel Economy (mpg)	16.1
CO Emissions (kg)	1.43
NOx Emissions (kg)	0.28
VOC Emissions (kg)	0.33
Unserved Vehicles (#)	0
Vehicles in dilemma zone (#)	0
Performance Index	6.2

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	Fletcher Ln	**District**	Metro	**County**	Hennepin
Begin RP		**End RP**		**Miles**	
Location	Territorial Rd & Fletcher Lane				

B. Project Description

Proposed Work	Convert from an all-way stop control to a signalized intersection		
Project Cost*	$3,976,300	**Installation Year**	2024
Project Service Life	20 years	**Traffic Growth Factor**	4.9%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

0.56	**Fatal (K) Crashes**	**Reference**	Install a traffic signal
0.56	**Serious Injury (A) Crashes**		
0.56	**Moderate Injury (B) Crashes**	**Crash Type**	All types and severities in a rural Setting
0.56	**Possible Injury (C) Crashes**		
0.56	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

0.89	**Fatal (K) Crashes**	**Reference**	Increase triangle sight distance
0.89	**Serious Injury (A) Crashes**		
0.89	**Moderate Injury (B) Crashes**	**Crash Type**	All types, Property damage only
0.89	**Possible Injury (C) Crashes**		
0.89	**Property Damage Only Crashes**		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2016	**End Date**	12/31/2018	3 years
Data Source	MnCMAT 2			

Crash Severity	All types and severities in a rural S	All types, Property damage only
K crashes	0	
A crashes	0	
B crashes	0	
C crashes	0	
PDO crashes	2	

F. Benefit-Cost Calculation

$100,644	**Benefit (present value)**	**B/C Ratio = 0.03**
$3,976,300	**Cost**	

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

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,360,000
A crashes	$680,000
B crashes	$210,000
C crashes	$110,000
PDO crashes	$12,000

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

Real Discount Rate	1.2%
Traffic Growth Rate	4.9%
Project Service Life	20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	0.00	0.00	$0
C crashes	0.00	0.00	$0
PDO crashes	0.88	0.29	$3,520
			$3,520

H. Amortized Benefit

Year	Crash Benefits	Present Value
2024	$3,520	$3,520
2025	$3,691	$3,647
2026	$3,870	$3,778
2027	$4,057	$3,915
2028	$4,254	$4,056
2029	$4,461	$4,202
2030	$4,677	$4,354
2031	$4,904	$4,511
2032	$5,142	$4,674
2033	$5,391	$4,842
2034	$5,652	$5,017
2035	$5,926	$5,198
2036	$6,214	$5,385
2037	$6,515	$5,579
2038	$6,831	$5,781
2039	$7,163	$5,989
2040	$7,510	$6,205
2041	$7,874	$6,429
2042	$8,256	$6,661
2043	$8,657	$6,901
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Total = $100,644


N
SCALE: IN FEET

City of Rogers FMP Document - Transportation Capital Improvement Projects - Intersection Focus

Updated 5/14/2020

			Cost Estimates					Funding										
Map No.	Project	Year	Other Indirect Costs	ROW	Engineering	Construction	Total	Federal / State	County	MSA	Assessment	Franchise Fees	Developer	TIF 1	Other City Funds	Area Wide Assessments (402 unallocated)	Fund 402 -- Allocated Funds	Total Funding Sources
	2019																	
4	Northdale from 141st to South Diamond Lake rd.	2019			$230,400	$1,151,900	**$1,382,300**			$508,750	$204,000	$505,000			$122,550		$42,000	**$1,382,300**
			$0	$0	$230,400	$1,151,900	$1,382,300	$0	$0	$508,750	$204,000	$505,000	$0	$0	$122,550	$0	$42,000	$1,382,300
	2020																	
2A	Industrial Blvd. to CSAH 144 - STAGE I	2020			$220,000	$1,100,000	**$1,320,000**		$150,000	$920,000						$250,000		**$1,320,000**
7	Fletcher Lane Improvements	2020	$5,000		$72,473	$410,680	**$488,153**				$310,000				$102,380		$75,773	**$488,153**
-	Fletcher By-Pass ROW Acquisition	2020		$300,000			**$300,000**							$300,000				**$300,000**
-	Downtown R.O.W for Transportation	2020		$500,000			**$500,000**							$500,000				**$500,000**
9	129TH AVE/ MAIN ST/ MEMORIAL DR REALIGNMENT	2020	$0	$50,000	$108,000	$600,000	**$758,000**			$250,000				$258,000		$250,000		**$758,000**
-	CSAH 116 & Wood Lane	2020			$150,000	$750,000	**$900,000**				$900,000							**$900,000**
-	CSAH 13 & Lucas/Bebeau	2020			$120,000	$600,000	**$720,000**				$720,000							**$720,000**
8	Main Street Reconstruct - CSAH 81 to Rogers Elem New Entrance	2020	$5,000		$300,000	$2,282,000	**$2,587,000**		$500,000			$500,000		$300,000	$1,287,000			**$2,587,000**
			$10,000	$850,000	$970,473	$5,742,680	$7,573,153	$0	$650,000	$1,170,000	$1,930,000	$500,000	$0	$1,358,000	$1,389,380	$500,000	$75,773	$7,573,153
	2021																	
18	Dayton Parkway Interchange	2021	$0	$0	$3,360,000	$38,640,000	**$42,000,000**	$33,000,000	$7,500,000							$1,500,000		**$42,000,000**
6	Fletcher By-Pass PHASE I (1st two lanes)	2021	$9,000		$1,300,000	$6,500,000	**$7,809,000**	$0	$6,925,000	$384,000						$500,000		**$7,809,000**
10	John Deere Lane Extension to 129th Avenue	2021	$0	$350,000	$540,000	$2,700,000	**$3,590,000**			$1,375,000	$500,000			$500,000	$320,000	$895,000		**$3,590,000**
			$9,000	$350,000	$5,200,000	$47,840,000	$53,399,000	$33,000,000	$14,425,000	$1,759,000	$500,000	$0	$0	$500,000	$320,000	$2,895,000	$0	$53,399,000
	2022																	
32	CSAH 116 & Tucker Road Intersection Improvements	2021		$250,000	$240,000	$1,200,000	**$1,690,000**	$750,000	$250,000							$690,000		**$1,690,000**
11	129th Avenue Upgrade Phase 2 (Arthur Street to Oakwood Drive)	2020	$6,400	$100,000	$390,000	$1,950,000	**$2,446,400**			$1,250,000		$250,000			$446,400	$500,000		**$2,446,400**
12/13	CSAH 144 Expansion/ CSAH 13 & 144 Intersection	2022	$0	$350,000	$820,000	$4,100,000	**$5,270,000**		$4,428,000	$241,571							$600,429	**$5,270,000**
			$6,400	$700,000	$1,450,000	$7,250,000	$9,406,400	$750,000	$4,678,000	$1,491,571	$0	$250,000	$0	$0	$446,400	$1,190,000	$600,429	$9,406,400
	2023																	
14	Main St. (CSAH 150) / Territorial Rd. (CSAH 116) Intersection	2023	$0	$50,000	$163,750	$720,500	**$934,250**	$720,500								$166,160	$47,590	**$934,250**
29	Edgewater Parkway from Edgewater Development to 129th Ave	2019				$1,900,000	$1,900,000						$1,900,000					$1,900,000
16	CSAH 81 Upgrade (Relates to Fletcher Bypass)	2023	$0	$125,000	$775,000	$3,100,000	**$4,000,000**	$2,500,000	$600,000							$900,000		**$4,000,000**
			$0	$175,000	$938,750	$5,720,500	$6,834,250	$3,220,500	$600,000	$0	$0	$0	$1,900,000	$0	$0	$1,066,160	$47,590	$6,834,250
	2024																	
19/20	CSAH 13 4 Lane Expansion (CSAH 81 to Rogers Dr) Stage 1	2024	$50,000	$500,000	$1,500,000	$7,500,000	**$9,550,000**	$4,000,000	$2,500,000	$50,000					$1,000,000	$2,000,000		**$9,550,000**
30	Edgewater Parkway - 129th Ave to CSAH 116	2023				$1,900,000	$1,900,000						$1,900,000					$1,900,000
33	CSAH 116 & Co Rd 203 Intersection Alignment	2024	$0	$250,000	$240,000	$1,200,000	**$1,690,000**		$1,440,000							$250,000		**$1,690,000**
			$50,000	$750,000	$1,740,000	$10,600,000	$13,140,000	$4,000,000	$3,940,000	$50,000	$0	$0	$1,900,000	$0	$1,000,000	$2,250,000	$0	$13,140,000
	2025																	
2B	Industrial Blvd. from Edgewater Pkwy to CSAH 144	2025	$0	$250,000	$300,000	$1,500,000	**$2,050,000**		$1,650,000		$400,000							**$2,050,000**
17	129th Avenue Upgrade Phase 3 (Oakwood Drive to CSAH 116)	2025	$0	$250,000	$350,000	$1,750,000	**$2,350,000**			$1,200,000		$250,000				$900,000		**$2,350,000**
			$0	$500,000	$650,000	$3,250,000	$4,400,000	$0	$1,650,000	$1,200,000	$400,000	$250,000	$0	$0	$0	$900,000	$0	$4,400,000
	2026+																	
22	CSAH 117 to CSAH 13 (Extension from 116 to Brockton Lane)	2026+	$1,000,000	$500,000	$3,000,000	$15,000,000	**$19,500,000**	$7,000,000	$8,000,000				$4,500,000					**$19,500,000**
21	Fletcher By-Pass PHASE II (2nd two lanes)	2026+	$0	$0	$490,000	$2,450,000	**$2,940,000**		$2,500,000	$440,000								**$2,940,000**
23	CSAH 144 Expansion I-94 to Marie Ave	2026+		$1,275,000	$1,700,000	$8,500,000	**$11,475,000**	$4,975,000	$2,500,000	$1,500,000						$2,500,000		**$11,475,000**
15	Rogers Dr. Realignment - S. of South Dia. Lk. Rd.	2026+	$0	$1,300,000	$750,000	$2,500,000	**$4,550,000**						$3,550,000			$1,000,000		**$4,550,000**
25	CSAH 144 Realignment - North Section (116 to Industrial)	2026+	$0	$300,000	$620,000	$3,100,000	**$4,020,000**		$3,520,000	$500,000								**$4,020,000**
26	Co RD 203 Intersections (Tucker, Hassan Pkwy, Curve Radius)	2026+	$0	$250,000	$180,000	$1,200,000	**$1,630,000**	$0	$1,110,000							$520,000		**$1,630,000**
			$1,000,000	$3,625,000	$6,740,000	$32,750,000	$44,115,000	$11,975,000	$17,630,000	$2,440,000	$0	$0	$8,050,000	$0	$0	$4,020,000	$0	$44,115,000

Attachment A

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 0.5-miles radius
Description: Fletcher Bypass_1mi

Summary of ACS Estimates	2013 - 2017
Population	316
Population Density (per sq. mile)	215
Minority Population	31
% Minority	10%
Households	102
Housing Units	102
Housing Units Built Before 1950	4
Per Capita Income	42,661
Land Area (sq. miles) (Source: SF1)	1.47
% Land Area	98%
Water Area (sq. miles) (Source: SF1)	0.03
% Water Area	2%

	2013 - 2017 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	316	100%	680
Population Reporting One Race	314	99%	1,360
White	287	91%	771
Black	0	0%	12
American Indian	0	0%	12
Asian	25	8%	502
Pacific Islander	0	0%	18
Some Other Race	1	0%	45
Population Reporting Two or More Races	3	1%	61
Total Hispanic Population	4	1%	87
Total Non-Hispanic Population	312		
White Alone	285	90%	765
Black Alone	0	0%	12
American Indian Alone	0	0%	12
Non-Hispanic Asian Alone	25	8%	502
Pacific Islander Alone	0	0%	18
Other Race Alone	0	0%	12
Two or More Races Alone	2	1%	46
Population by Sex			
Male	147	46%	385
Female	170	54%	467
Population by Age			
Age 0-4	16	5%	150
Age 0-17	87	28%	373
Age 18+	229	72%	594
Age 65+	36	11%	261

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2013 - 2017 .

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 0.5-miles radius
Description: Fletcher Bypass_1mi

	2013 - 2017 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	204	100%	513
Less than 9th Grade	0	0%	21
9th - 12th Grade, No Diploma	10	5%	153
High School Graduate	44	21%	390
Some College, No Degree	78	38%	352
Associate Degree	28	14%	207
Bachelor's Degree or more	72	35%	372
Population Age 5+ Years by Ability to Speak English			
Total	300	100%	645
Speak only English	275	92%	675
Non-English at Home[1+2+3+4]	25	8%	372
[1]Speak English "very well"	14	5%	184
[2]Speak English "well"	6	2%	135
[3]Speak English "not well"	2	1%	46
[4]Speak English "not at all"	4	1%	147
[3+4]Speak English "less than well"	6	2%	154
[2+3+4]Speak English "less than very well"	11	4%	204
Linguistically Isolated Households*			
Total	2	100%	61
Speak Spanish	0	0%	12
Speak Other Indo-European Languages	0	0%	12
Speak Asian-Pacific Island Languages	2	100%	60
Speak Other Languages	0	0%	12
Households by Household Income			
Household Income Base	102	100%	193
< $15,000	3	3%	67
$15,000 - $25,000	2	2%	70
$25,000 - $50,000	11	11%	145
$50,000 - $75,000	15	15%	176
$75,000 +	70	69%	317
Occupied Housing Units by Tenure			
Total	102	100%	193
Owner Occupied	83	82%	196
Renter Occupied	19	18%	159
Employed Population Age 16+ Years			
Total	239	100%	594
In Labor Force	176	74%	522
Civilian Unemployed in Labor Force	6	3%	102
Not In Labor Force	62	26%	275

Data Note: Datail may not sum to totals due to rounding. Hispanic population can be of anyrace.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

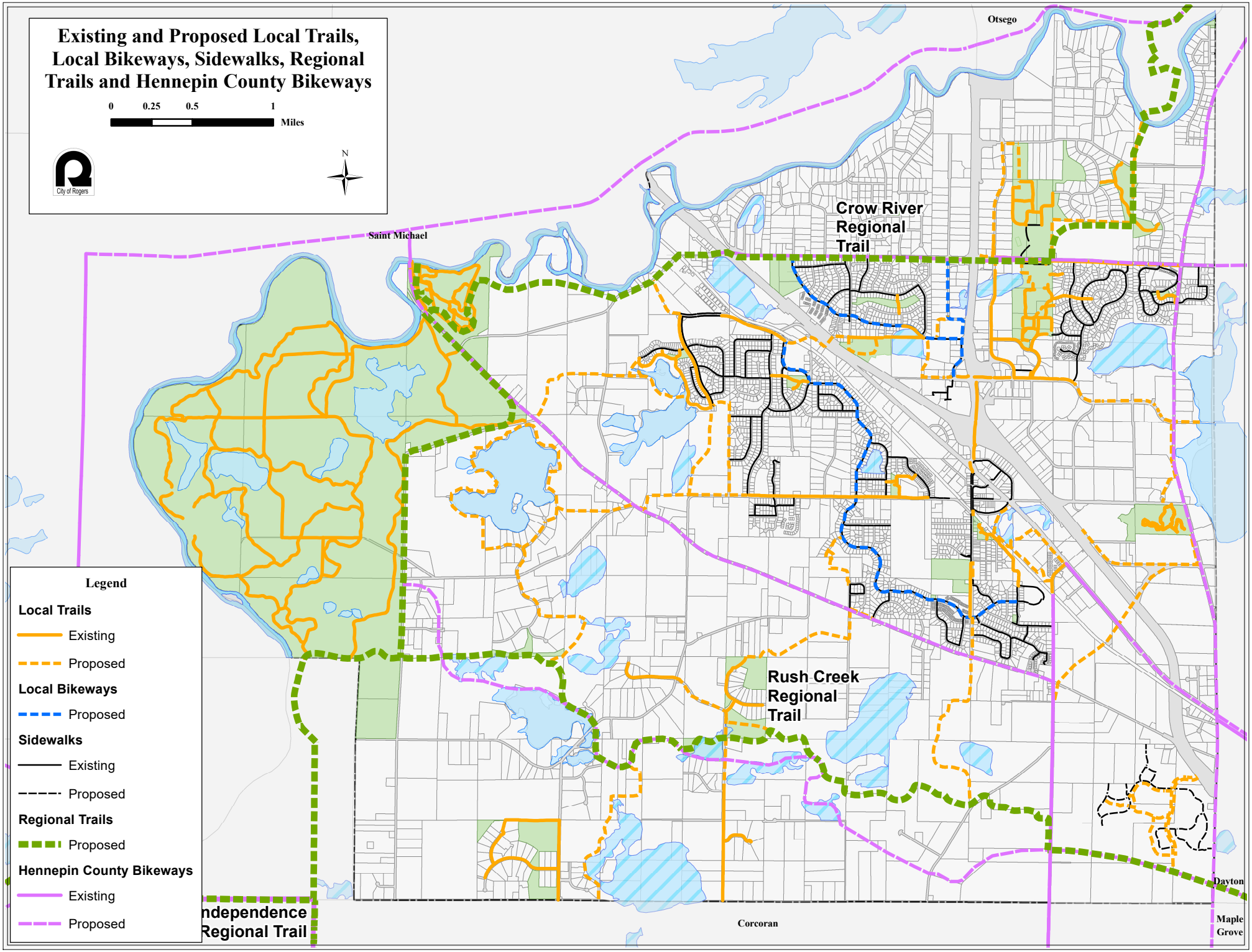
EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 0.5-miles radius
Description: Fletcher Bypass_1mi

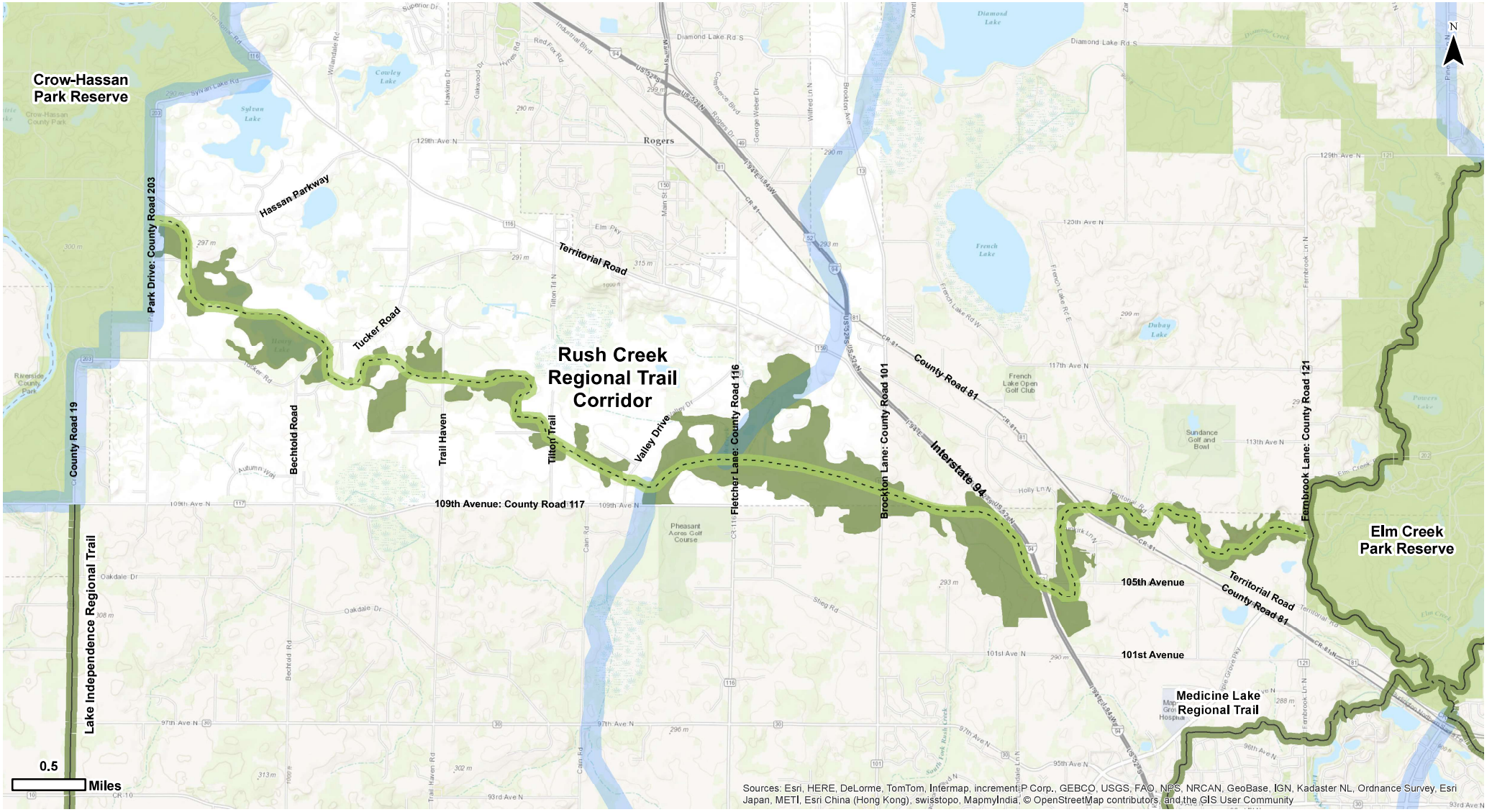
	2013 - 2017 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	N/A	N/A	N/A
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic popultion can be of any race.
N/A meansnot available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2013 - 2017.
*Population by Language Spoken at Home is available at the census tract summary level and up.

Attachment B



Created by: City of Rogers > Public Works > GIS



Rush Creek Regional Trail Corridor

Attachment C

- Existing: Open to the Public
- Approved Route: No Construction Funding in Place
- Regional Trail Search Corridor
- Areas with Natural Resource Value Along Rush Creek Regional Trail Corridor

ThreeRivers PARK DISTRICT

Commuter and Express Route Design

The factors that guide the design of express routes are somewhat different from those covered in the above section for local routes. Express routes are focused on providing fast, reliable trips into major regional centers. The most important factors for express service success are high-density origins and destinations at both ends of the route (such as at a park-and-ride and downtown) and demand management that balances parking supply and cost with the demand for parking and access for transit. The level and location of congestion can also be a substantial factor in the success of express bus services.

Transit Market Areas

Market Areas Overview

An important underlying element to the transit investment plan is the definition of Transit Market Areas. Transit Market Areas are defined by the demographic and urban design factors that are associated with successful transit service. There are five Transit Market Areas (see figure 6-3) as well as some unique Market Area features. The Transit Market Areas are generally associated with community designations in *Thrive MSP 2040* (see Land Use and Local Planning for more details) as follows:

- **Transit Market Areas I and II** are mostly Urban Center communities where urban form and density are most supportive of transit. These areas also have the largest concentrations of transit-dependent residents in the region. Transit service in these areas focuses on providing a dense network of local routes with high levels of service to accommodate a wide variety of trip purposes. Market Area II will typically have a similar route structure to Market Area I, but lower levels of service, as demand warrants.
- **Transit Market Area III** is primarily Urban along with portions of the Suburban, Suburban Edge, and Emerging Suburban Edge and is generally characterized by overall lower density and less transit-supportive urban form along with some pockets of denser development. The primary emphasis of transit service in this area is express and commuter service with some suburban local routes and dial-a-ride service providing basic access.
- **Transit Market Area IV** is primarily Suburban Edge and Emerging Suburban Edge along with portions of Suburban, and is generally characterized by consistently low-density development and an urban form that does not support frequent local transit service. Transit service in Market Area IV is primarily peak-period express and commuter service oriented to park-and-ride facilities that can effectively capture the lower density transit demand. Local trips are provided by general public dial-a-ride services.
- **Transit Market Area V** is generally all forms of Rural and Agricultural but does include the unique freestanding town centers of Stillwater, Waconia, Forest Lake, and Hastings; Market Area V is generally characterized by low-density development or undeveloped land not well suited for regular-route transit service outside of limited peak-period express and commuter service.

Unique Market Areas

The Emerging Market overlays are unique areas of Transit Market Areas II and III where significant pockets of higher density exist but surrounding conditions still limit the success of local transit. These areas should be a focus for future development that will connect them with areas of higher transit intensity, specifically looking at extensions of existing routes or connections.

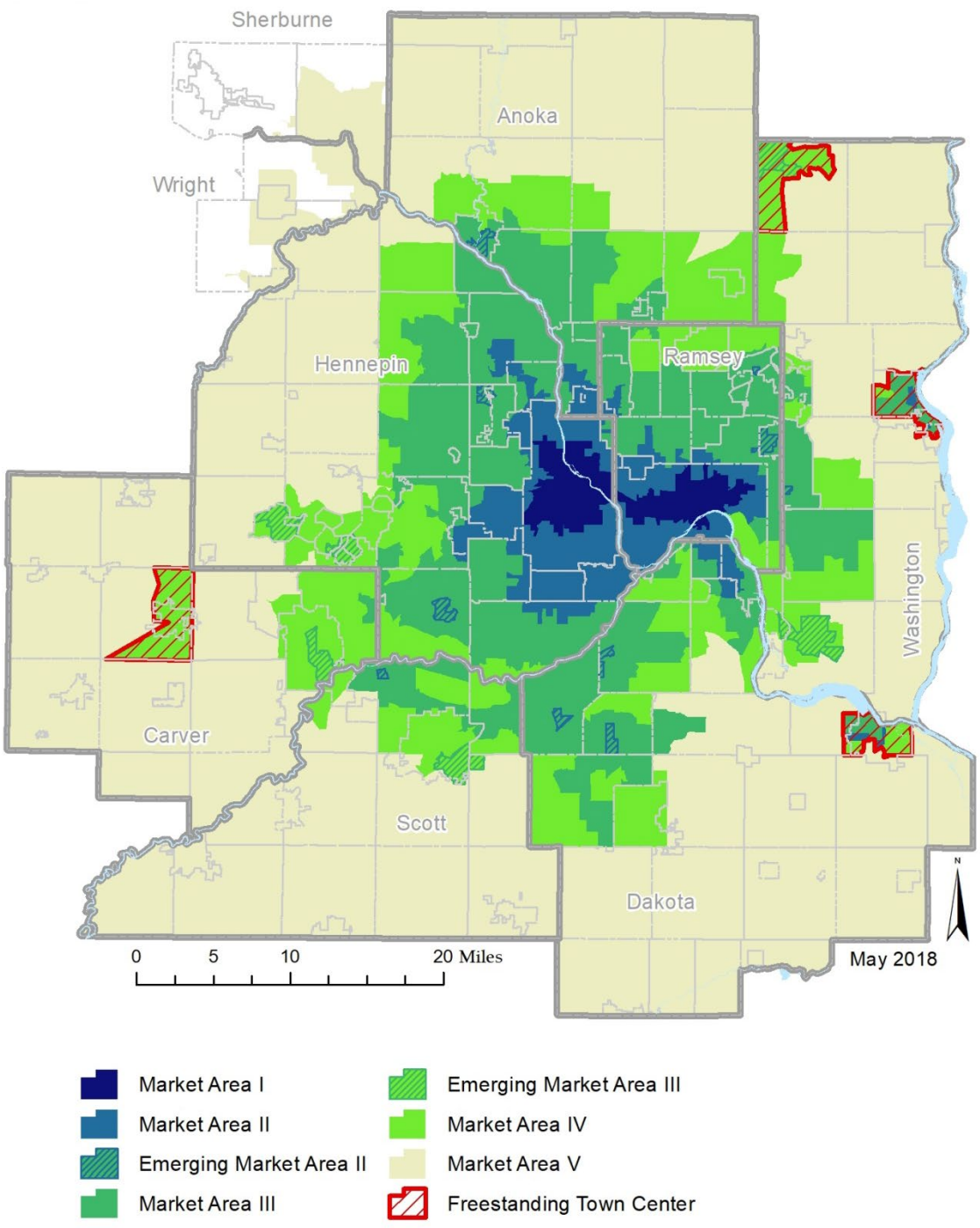
Freestanding Town Centers are unique areas that grew independently of Minneapolis and Saint Paul and act as suburbs but are still separated from the urban and suburban areas by rural land. These areas typically have small downtowns of their own but also export many workers to other regional centers. Local transit services that connect to the region would not be as effective serving these areas given their location in the region, despite their relatively concentrated nature. However, these areas may still have express service demand and possible demand for small circulator services.

The Metropolitan Council and regional transit providers will also coordinate their efforts with MnDOT and transit services that connect beyond the seven-county metropolitan region. The Transit Market Areas do not address the feasibility of these kinds of services, which are coordinated on a case-by-case basis.

Two additional areas of emphasis in *Thrive MSP 2040* are important for consideration in transit service design, the special features of Areas of Concentrated Poverty, Areas of Concentrated Poverty where at least 50% of residents are people of color, and Job Concentrations. Residents of Areas of Concentrated Poverty must overcome a legacy of private disinvestment to access the opportunity of the region. In transit, this often means considering higher levels of service, better amenities, or unique service types focused on providing better access to jobs or education. These areas are also highly correlated with limited household access to a private vehicle. Job Concentrations have good potential to be served with transit because of their density and level of activity. Many of these concentrations will need to adapt and continue adding density and diversifying land uses to be truly transit-oriented. This will need to be coordinated with continued investments in transit access to these areas as well as better transit facilities.

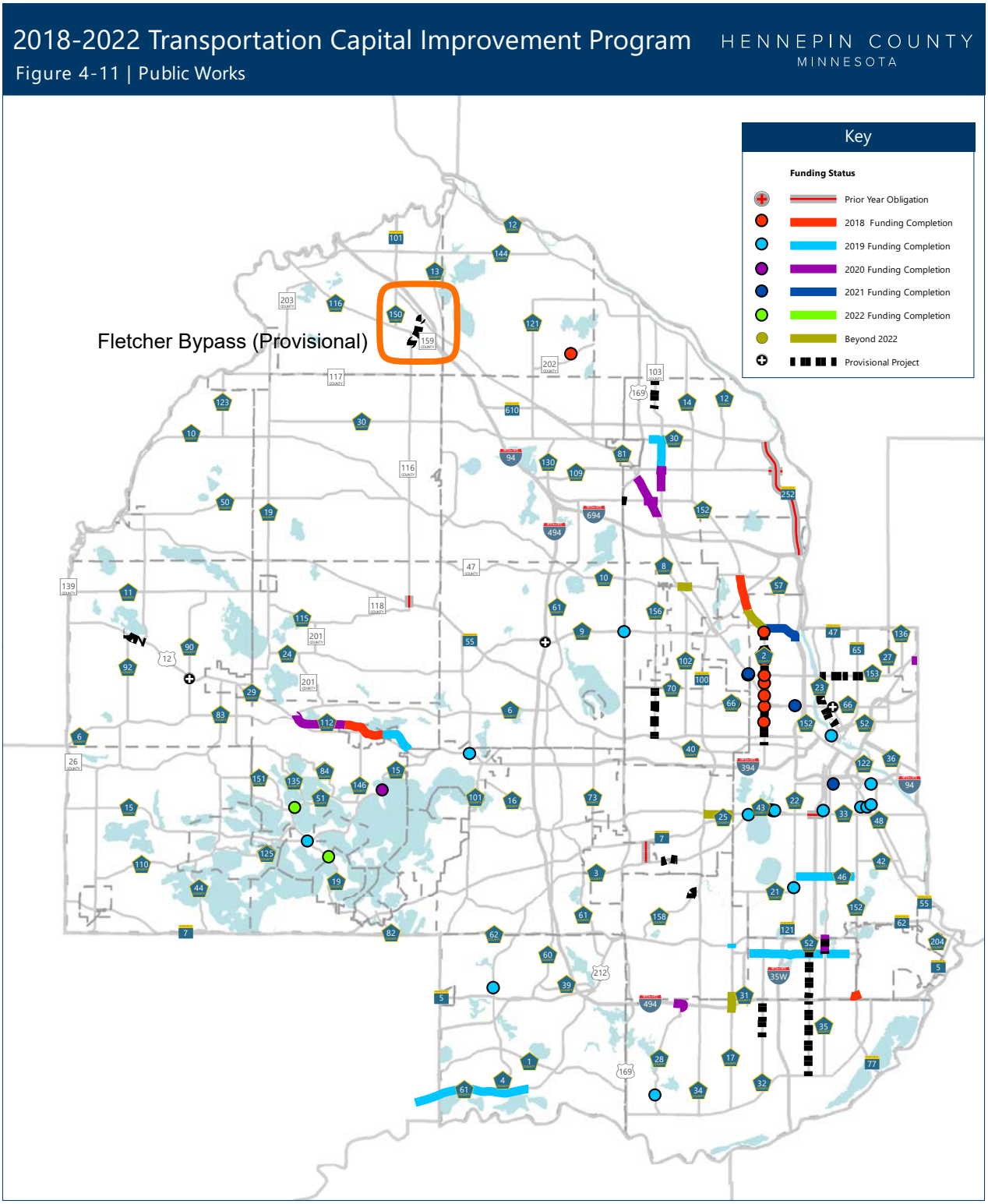
The Transit Market Areas are shown in Figure 6-3 and described in more detail in Appendix G. Transit Market Areas are primarily used to design the regional bus system, but some guidance on their application to transitways is discussed in the Regional Transitway Guidelines.

Figure 6-3: Transit Market Areas



Attachment E

Figure 4-11



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.

Publication date: 5/30/2018

Programmed & Planned Improvements

Programmed and planned roadway improvements identified in the Rogers Transportation Capital Improvement Program (CIP) or Hennepin County's Capital Improvement Program (CIP) within the City of Rogers include:

- **Fletcher Lane (CR 116) Bypass.** The City has been working with Hennepin County on plans to upgrade and re-route Fletcher Lane to the east, bypassing the Fletcher area to connect with CSAH 81. This rerouting would allow better connection of minor arterials and relocate through traffic from downtown Main Street (CSAH 150) onto Fletcher Lane (CR 116). Ultimately, the Fletcher Lane (CR 116) Bypass will connect to CSAH 13 north of I-94 via an overpass.
- **Downtown Main Street Reconstruction.** In conjunction with the Fletcher Lane (CR 116) bypass project, the City is redesigning Main Street from CR 81 to Point Drive as part of a major reconstruction project that will feature pedestrian and bicycle enhancements and streetscape elements to improve the walkability of downtown and its connection to Triangle Park and adjacent neighborhoods.
- **Extension of 109th Avenue (CR 117).** Movement along the community's southern boundary will be facilitated by the extension of 109th Avenue (CR 117) from Fletcher Lane (CR 116) to Brockton Lane (CSAH 101).
- **Brockton Lane (CSAH 13) Expansion.** The City plans to work with Hennepin County and the City of Dayton to expand Brockton Lane (CSAH 13) to a 4-Lane roadway from CSAH 81 to Rogers Drive. This expansion will add the necessary roadway capacity to support future demand along this eastern boundary.
- **141st Avenue (CSAH 144) Expansion.** To support future land uses and increased demand along the 141st Avenue (CSAH 144) corridor, the City plans to work with Hennepin County to finish building out this corridor as a future 3-lane roadway from the I-94 overpass to Northdale Boulevard. The segment from Northdale Boulevard to Brockton Lane (CSAH 13) plans to be a 4-lane roadway.
- **Industrial Boulevard Extension.** To improve residential access and continuity in the City's roadway system, Industrial Boulevard will be extended from Edgewater Parkway to 141st Avenue (CSAH 144).

Although not located in the City of Rogers, the Dayton Parkway Interchange is a programmed roadway improvement in MnDOT's Transportation System Plan. This new interchange is located east of Brockton Lane (CSAH 101), within the City of Dayton. Design work continues for this new Interchange, which will benefit the Rogers community by providing an additional access point to I-94 and reduce overall traffic volumes near the existing I-94 and TH 101 interchange area. Improvements to adjacent roadways, such as the extension of 109th Avenue (CR 117), is being planned to facilitate traffic to and from the new interchange.

The City of Rogers will continue to coordinate with adjacent jurisdictions – Dayton, Maple Grove, Corcoran and Hanover – and Hennepin County and MnDOT when planning future improvements. This on-going coordination will result in financial and time savings through economies of scale; such coordination may reduce construction impacts to residents and businesses.

Several Hennepin County roadways border the Crow-Hassan Park Reserve. The City of Rogers will continue to coordinate with Hennepin County and the Three Rivers Park District when considering and planning for any roadway realignments to minimize negative impacts to the park reserve.

2040 Travel Demand Forecasts

The pattern and intensity of travel is directly related to the distribution and magnitude of households, population and employment within a community, neighboring communities, and the larger region. This section provides an overview of the existing land use pattern in the City of Rogers.

CITY OF ROGERS

PUBLIC WORKS DEPARTMENT **(763) 428-8580**
22350 SOUTH DIAMOND LAKE ROAD • ROGERS, MINNESOTA 55374 **www.rogersmn.gov**

May 4, 2020

Elaine Koutsoukos
TAB Coordinator
Metropolitan Council
390 Robert Street North
St. Paul, Minnesota 55101

RE: Fletcher Bypass
2020 Met Council Regional Solicitation Application

Dear Elaine:

Please find attached a resolution adopted by the Rogers City Council approving submittal of a Roadway Reconstruction/Modernization application to the Metropolitan Council as part of its 2020 Regional Solicitation for the Fletcher Bypass, connecting County Road 116 (Fletcher Lane) to CSAH 81. The City is taking the lead on this project application and coordinating with Hennepin County, who is also submitting a separate letter of support.

This project is identified as a provisional project in the Hennepin County Capital Improvement Program (CIP) and is also included in the City of Rogers CIP and 2040 Comprehensive Plan.

The City of Rogers acknowledges, to the extent it has jurisdiction and controls right-of-way of the associated facilities, that the City will operate and maintain the roadway for the useful life of the improvement and will not change the use of any right-of-way acquired without prior approval from MnDOT.

Sincerely,

John Seifert
Public Works Director

RESOLUTION NO. 2020-30

A RESOLUTION FOR APPROVAL OF METROLITAN COUNCIL FLETCHER BYPASS RECONSTRUCTION & MODERNIZATION GRANT APPLICATION AND AUTHORIZATION FOR STAFF TO PROVIDE A LETTER OF SUPPORT

WHEREAS, the Metropolitan Council is requesting project submittals for federal funding under the Reconstruction and Modernization Grant Program; and

WHEREAS, the City of Rogers is proposing a Fletcher Bypass (Hennepin County CSAH 116) extension east of its current alignment to provide a new alignment four lane divided A-Minor Arterial Expander connection to CSAH 81 including traffic signal and intersection improvements, railroad crossing improvements and a separated multi-use trail to be submitted under the Reconstruction and Modernization Program for 2024/2025 funding; and

WHEREAS, this proposed improvement has undergone environmental review and preliminary design and is identified in the City of Rogers 2040 Comprehensive Plan and currently held valid City of Rogers Capital Improvement Program (CIP); and

WHEREAS, existing Fletcher Lane (CSAH 116) from Territorial Road to CSAH 81 will be downgraded as a result of the proposed Fletcher Bypass improvement to a 2-lane local collector roadway;

WHEREAS, the proposed Fletcher Bypass is a regionally significant federally eligible project eligible for submittal under the Reconstruction and Modernization Program; and

WHEREAS, all Metropolitan Council Regional Solicitation projects require a 20 percent local match from non-federal sources; and

WHEREAS, the City of Rogers has the legal authority to apply for financial assistance, and the institutional, managerial and financial capacity to ensure matching funds and adequate construction of the proposed project; and

WHEREAS, Hennepin County indicates financial support for the local match showing this project in its current Capital Improvement Program (CIP); and

WHEREAS, subject to a federal funding award the City Council of Rogers Minnesota, would be asked to consider authorization to execute a federal grant agreement at a future meeting; and

WHEREAS, 2024/2025 Metropolitan Council Reconstruction and Modernization Regional Solicitation grant application submittals are due on May 15, 2020.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Rogers, Minnesota, hereby:

1. Authorizes the City Public Works Superintendent to submit a Metropolitan Council Reconstruction and Modernization Regional Solicitation grant application for 2024/2025 Fletcher Bypass improvements, including a Fletcher Lane (Hennepin County CSAH 116) extension east of its current alignment to provide a new alignment four-lane divided A-Minor Arterial Expander connection to CSAH 81 including traffic signal and intersection improvements, railroad crossing improvements and a separated multi-use trail.

2. Authorizes the City Public Works Superintendent to submit a letter of support as part of the Reconstruction and Modernization grant submittal package by the City of Rogers.

3. Acknowledges, to the extent it has jurisdiction and controls right-of-way of the associated facilities, that the City of Rogers will operate and maintain the proposed roadway improvement for its useful life and will not change the use any of the right-of-way acquired without prior approval from MnDOT.

Moved by Councilmember Eiden, seconded by Councilmember Jakel

The following voted in favor of said resolution: Eiden, Goracki, Ihli, Jakel and Klick

The following voted against the same: none

The following abstained: none

Whereupon said resolution was declared duly passed and adopted, and was signed by the Mayor, and attested by the Clerk dated this 28th day of April, 2020.

Rick Ihli, Mayor

ATTEST:

Stacy Scharber, Asst. City Administrator/City Clerk

Crash Detail Report - Long Form

CRASH

INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME
00368293	10-MUN	4	0.000	FLETCHER LA

COUNTY	CITY	TOWNSHIP	MNDOT DISTRICT	RELATION TO INT	LOCAL ID
27	Rogers		D-METRO	Four-Way Intersection	16011835

CRASH SEVERITY	DATE	TIME	DAY OF WEEK	INTERSECT WITH
N - Prop Damage Only	08/01/16	16:44	Mon	TERRITORIAL RD

BASIC TYPE	MANNER OF COLLISION	NUM VEH	NUM KILLED	DIV RDWY DIR	FIRST HARMFUL
Angle	Angle	2	0	Not Applicable	Motor Vehicle In Transport

ROADWAY SURF	LIGHT CONDITION	WEATHER PRIMARY	WEATHER SECONDARY	HIT & RUN	PUBLIC PRIVATE CODE
Dry	Daylight	Clear		No	No

WORK ZONE TYPE	WORK ZONE LOC	WORKERS PRES	LAW ENF PRES
NOT APPLICABLE			

ON/OFF TRAFFICWAY	RELATIVE LOC TRAFFICWAY	ON BRIDGE?	ROAD CONTRIB CIRCUM 1	ROAD CONTRIB CIRCUM 2
Trafficway, On Road	On Roadway (including alley,	No	On Roadway (including alley, driveway	

Unit 1 - Motor Vehicle in Transport

UNIT TYPE	VEH TYPE	DL STATUS	PERSON TYPE
Motor Vehicle in Transport	Passenger Car	Valid	Driver

AGE	SEX	INJURY SEVERITY	ZIP	DL STATE
17	Female	N - Prop Dmg Only	55374	MN

DL CLASS
D The Normal (Not Commercial) Driver License

DL ENDORSEMENTS	DL RESTRICTIONS
None	Corrective Lenses

RECOMMENDATIONS?
None

PHYSICAL CONDITIONS	VIOLATIONS
Apparently Normal (Including No Drugs/Alcoh	No

Unit 2 - Motor Vehicle in Transport

UNIT TYPE	VEH TYPE	DL STATUS	PERSON TYPE
Motor Vehicle in Transport	Pickup	Valid	Driver

AGE	SEX	INJURY SEVERITY	ZIP	DL STATE
20	Male	N - Prop Dmg Only	553090000	MN

DL CLASS
D The Normal (Not Commercial) Driver License

DL ENDORSEMENTS	DL RESTRICTIONS
None	None

RECOMMENDATIONS?
None

PHYSICAL CONDITIONS	VIOLATIONS
Apparently Normal (Including No Drugs/Alcoh	No

Unit 1 - Vehicle Information

VEH USE	EMERGENCY VEH USE	TOWED?
Normal		Not Towed

INITIAL CONTACT	MOST HARMFUL	TRAILERS
Rear Right Passenger Car	Motor Vehicle In Transpor	No

SEQUENCE OF EVENTS	VEH MANEUVER
Motor Vehicle In Transport	Ran Off Roadway Right
	VEH CONTRIBUTING FACTORS
	Improper Turn/Merge

Unit 2 - Vehicle Information

VEH USE	EMERGENCY VEH USE	TOWED?
Normal		Not Towed

INITIAL CONTACT	MOST HARMFUL	TRAILERS
Front	Motor Vehicle In Transpor	No

SEQUENCE OF EVENTS	VEH MANEUVER
Motor Vehicle In Transport	Cross Centerline
	VEH CONTRIBUTING FACTORS
	Improper Turn/Merge

Unit 1 - Person Information

CONTRIB FACTORS	DRIVER DISTRACTED BY
	Unknown
	SPEEDING RELATED
	Not Speeding

NON-MOTORIST MANEUVER	NON-MOTORIST LOCATION

LE SUSPECTS ALCOHOL	LE SUSPECTS DRUG
No	No

ALCOHOL TEST GIVEN	ALCOHOL TEST TYPE	ALCOHOL TEST RESULT
No, Test Not Given		

DRUG TEST GIVEN	DRUG TEST TYPE	DRUG TEST RESULT
No, Test Not Given		

Unit 2 - Person Information

CONTRIB FACTORS	DRIVER DISTRACTED BY
	Not Distracted
	SPEEDING RELATED
	Not Speeding

NON-MOTORIST MANEUVER	NON-MOTORIST LOCATION

LE SUSPECTS ALCOHOL	LE SUSPECTS DRUG
No	No

ALCOHOL TEST GIVEN	ALCOHOL TEST TYPE	ALCOHOL TEST RESULT
No, Test Not Given		

DRUG TEST GIVEN	DRUG TEST TYPE	DRUG TEST RESULT
No, Test Not Given		

Unit 1 - Roadway Characteristics

DIRECTION	ALIGNMENT	GRADE	SPEED LIMIT
Eastbound	Straight	Level	30

ROADWAY DESIGN	NUM LANES
Two-Way, Not Divided	1

TRAFFIC CONTROL	TRAF CONTRL WORKING CODE
Stop Sign	Operational

Unit 2 - Roadway Characteristics

DIRECTION	ALIGNMENT	GRADE	SPEED LIMIT
Northbound	Straight	Level	30

ROADWAY DESIGN	NUM LANES
Two-Way, Not Divided	1

TRAFFIC CONTROL	TRAF CONTRL WORKING CODE
Stop Sign	Operational

ROUTE ID	LATITUDE	LONGITUDE	UTM X	UTM Y
1000023964150004-I	45.1726	-93.5422	457395.8	5002264.2

Crash Detail Report - Long Form

CRASH

Unit 3				
UNIT TYPE	VEH TYPE	DL STATUS	PERSON TYPE	
AGE	SEX	INJURY SEVERITY	ZIP	DL STATE
DL CLASS				
DL ENDORSEMENTS	DL RESTRICTIONS			
RECOMMENDATIONS?				
PHYSICAL CONDITIONS	VIOLATIONS			

Unit 4				
UNIT TYPE	VEH TYPE	DL STATUS	PERSON TYPE	
AGE	SEX	INJURY SEVERITY	ZIP	DL STATE
DL CLASS				
DL ENDORSEMENTS	DL RESTRICTIONS			
RECOMMENDATIONS?				
PHYSICAL CONDITIONS	VIOLATIONS			

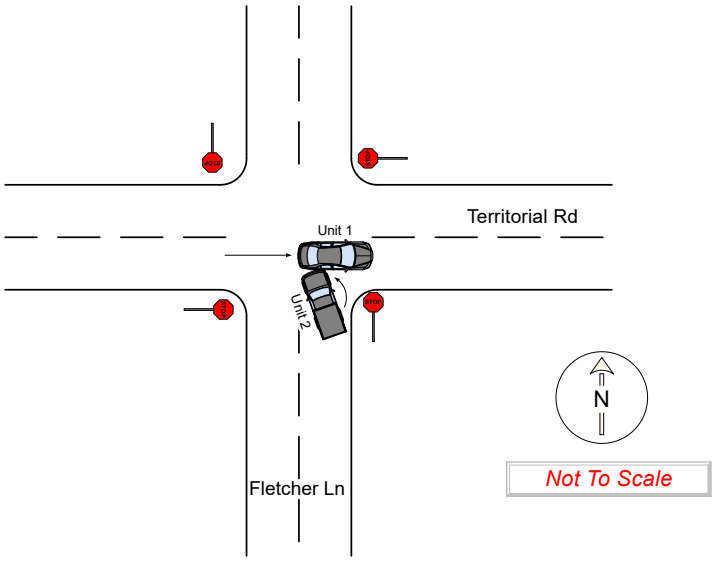
Unit 3 - Vehicle Information		
VEH USE	EMERGENCY VEH USE	TOWED?
INITIAL CONTACT	MOST HARMFUL	TRAILERS
SEQUENCE OF EVENTS	VEH MANEUVER	
	VEH CONTRIBUTING FACTORS	

Unit 4 - Vehicle Information		
VEH USE	EMERGENCY VEH USE	TOWED?
INITIAL CONTACT	MOST HARMFUL	TRAILERS
SEQUENCE OF EVENTS	VEH MANEUVER	
	VEH CONTRIBUTING FACTORS	

Unit 3 - Person Information		
CONTRIB FACTORS	DRIVER DISTRACTED BY	
	SPEEDING RELATED	
NON-MOTORIST MANEUVER	NON-MOTORIST LOCATION	
LE SUSPECTS ALCOHOL	LE SUSPECTS DRUG	
ALCOHOL TEST GIVEN	ALCOHOL TEST TYPE	ALCOHOL TEST RESULT
DRUG TEST GIVEN	DRUG TEST TYPE	DRUG TEST RESULT

Unit 4 - Person Information		
CONTRIB FACTORS	DRIVER DISTRACTED BY	
	SPEEDING RELATED	
NON-MOTORIST MANEUVER	NON-MOTORIST LOCATION	
LE SUSPECTS ALCOHOL	LE SUSPECTS DRUG	
ALCOHOL TEST GIVEN	ALCOHOL TEST TYPE	ALCOHOL TEST RESULT
DRUG TEST GIVEN	DRUG TEST TYPE	DRUG TEST RESULT

OFFICER SKETCH



NARRATIVE

DRIVER 2 STATED WAS TRAVELING NORTH ON FLETCHER LANE AND CAME TO THE 4 WAY STOP WITH TERRITORIAL RD. HE STATED HE INTENDED ON TURNING LEFT TO TRAVEL WEST ON TERRITORIAL RD. HE SAID HE CAME TO THE STOP SIGN AT THE SAME TIME AS A VEHICLE TO HIS RIGHT. HE MENTIONED HE LOOKED TO HIS LEFT AND SAW DRIVER 1 APPROACHING THE 4 WAY STOP AS SHE WAS TRAVELING EAST ON TERRITORIAL RD. HE STATED WHEN HE FIRST NOTICED DRIVER 1, SHE WAS STILL APPROACHING THE STOP SIGN AND HAD NOT STOPPED. DRIVER 1 THEN LOOKED BACK OVER AT THE VEHICLE TO HIS RIGHT AND PROCEEDED TO ENTER THE INTERSECTION. DRIVER 2 SAID AS HE ENTERED THE INTERSECTION, HE STRUCK DRIVER 1. HE STATED HE BELIEVED DRIVER 1 ROLLED THROUGH THE STOP SIGN AS HE HAD THE RIGHT OF WAY. DRIVER 2'S VEHICLE SUSTAINED MODERATE DAMAGE TO THE FRONT END BUT WAS DRIVEN FROM THE SCENE. DRIVER 1 STATED SHE WAS TRAVELING EAST ON TERRITORIAL RD AND WAS APPROACHING THE 4 WAY STOP WITH FLETCHER LANE. SHE STATED SHE CAME TO A COMPLETE STOP AT THE STOP SIGN, THEN ENTERED THE INTERSECTION. AS SHE WAS GOING THROUGH THE INTERSECTION, DRIVER 2 ALSO ENTERED THE INTERSECTION AS SHE HAD TO TRY TO MAKE AN EVASIVE MANEUVER BUT DRIVER 2 STRUCK HER VEHICLE. DRIVER 1 DENIED NOT COMING TO A COMPLETE STOP. DRIVER 1'S VEHICLE HAD MODERATE DAMAGE AND WAS ABLE TO DRIVE IT INTO A NEARBY PARKING LOT. IT IS UNKNOWN TO THE OFFICER IF IT WAS EVENTUALLY TOWED.

Crash Detail Report - Long Form

CRASH

INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME
00399479	07-CR	116	8.742	TERRITORIAL RD

COUNTY	CITY	TOWNSHIP	MNDOT DISTRICT	RELATION TO INT	LOCAL ID
27	Rogers		D-METRO	T or Y Intersection	16018333

CRASH SEVERITY	DATE	TIME	DAY OF WEEK	INTERSECT WITH
N - Prop Damage Only	12/01/16	16:43	Thu	

BASIC TYPE	MANNER OF COLLISION	NUM VEH	NUM KILLED	DIV RDWY DIR	FIRST HARMFUL
Angle	Angle	2	0		Motor Vehicle In Transport

ROADWAY SURF	LIGHT CONDITION	WEATHER PRIMARY	WEATHER SECONDARY	HIT & RUN	PUBLIC PRIVATE CODE
Dry	Dark (No Str Lights)	Clear		No	No

WORK ZONE TYPE	WORK ZONE LOC	WORKERS PRES	LAW ENF PRES
NOT APPLICABLE			

ON/OFF TRAFFICWAY	RELATIVE LOC TRAFFICWAY	ON BRIDGE?	ROAD CONTRIB CIRCUM 1	ROAD CONTRIB CIRCUM 2
Trafficway, On Road	On Roadway (including alley,	No	On Roadway (including alley, driveway	

Unit 1 - Motor Vehicle in Transport

UNIT TYPE	VEH TYPE	DL STATUS	PERSON TYPE
Motor Vehicle in Transport	Passenger Car	Valid	Driver

AGE	SEX	INJURY SEVERITY	ZIP	DL STATE
16	Female	N - Prop Dmg Only	55374	MN

DL CLASS
D The Normal (Not Commercial) Driver License

DL ENDORSEMENTS	DL RESTRICTIONS
None	Corrective Lenses

RECOMMENDATIONS?
None

PHYSICAL CONDITIONS	VIOLATIONS
Apparently Normal (Including No Drugs/Alcoh	No

Unit 2 - Motor Vehicle in Transport

UNIT TYPE	VEH TYPE	DL STATUS	PERSON TYPE
Motor Vehicle in Transport	Sport Utility Vehicle	Valid	Driver

AGE	SEX	INJURY SEVERITY	ZIP	DL STATE
38	Male	N - Prop Dmg Only	55330	MN

DL CLASS
D The Normal (Not Commercial) Driver License

DL ENDORSEMENTS	DL RESTRICTIONS
None	None

RECOMMENDATIONS?
None

PHYSICAL CONDITIONS	VIOLATIONS
Apparently Normal (Including No Drugs/Alcoh	No

Unit 1 - Vehicle Information

VEH USE	EMERGENCY VEH USE	TOWED?
Normal		Towed Due to Disabling D

INITIAL CONTACT	MOST HARMFUL	TRAILERS
Front Left Quarter Panel	Motor Vehicle In Transpor	No

SEQUENCE OF EVENTS	VEH MANEUVER
Motor Vehicle In Transport	Cross Centerline
	VEH CONTRIBUTING FACTORS
	Improper Turn/Merge

Unit 2 - Vehicle Information

VEH USE	EMERGENCY VEH USE	TOWED?
Normal		Not Towed

INITIAL CONTACT	MOST HARMFUL	TRAILERS
Rear Left Quarter Panel	Motor Vehicle In Transpor	No

SEQUENCE OF EVENTS	VEH MANEUVER
Motor Vehicle In Transport	Ran Off Roadway Right
	VEH CONTRIBUTING FACTORS
	Improper Turn/Merge

Unit 1 - Person Information

CONTRIB FACTORS	DRIVER DISTRACTED BY
	Not Distracted
	SPEEDING RELATED
	Not Speeding

NON-MOTORIST MANEUVER	NON-MOTORIST LOCATION

LE SUSPECTS ALCOHOL	LE SUSPECTS DRUG
No	No

ALCOHOL TEST GIVEN	ALCOHOL TEST TYPE	ALCOHOL TEST RESULT
No, Test Not Given		

DRUG TEST GIVEN	DRUG TEST TYPE	DRUG TEST RESULT
No, Test Not Given		

Unit 2 - Person Information

CONTRIB FACTORS	DRIVER DISTRACTED BY
	Not Distracted
	SPEEDING RELATED
	Not Speeding

NON-MOTORIST MANEUVER	NON-MOTORIST LOCATION

LE SUSPECTS ALCOHOL	LE SUSPECTS DRUG
No	No

ALCOHOL TEST GIVEN	ALCOHOL TEST TYPE	ALCOHOL TEST RESULT
No, Test Not Given		

DRUG TEST GIVEN	DRUG TEST TYPE	DRUG TEST RESULT
No, Test Not Given		

Unit 1 - Roadway Characteristics

DIRECTION	ALIGNMENT	GRADE	SPEED LIMIT
Eastbound	Straight	Level	

ROADWAY DESIGN	NUM LANES
Two-Way, Not Divided	2

TRAFFIC CONTROL	TRAF CONTRL WORKING CODE
Stop Sign	Operational

Unit 2 - Roadway Characteristics

DIRECTION	ALIGNMENT	GRADE	SPEED LIMIT
Eastbound	Straight	Level	55

ROADWAY DESIGN	NUM LANES
Two-Way, Not Divided	2

TRAFFIC CONTROL	TRAF CONTRL WORKING CODE
Stop Sign	Operational

ROUTE ID	LATITUDE	LONGITUDE	UTM X	UTM Y
0700006594720116-I	45.1726	-93.5422	457394.0	5002263.6

Crash Detail Report - Long Form

CRASH

Unit 3				
UNIT TYPE	VEH TYPE	DL STATUS	PERSON TYPE	
AGE	SEX	INJURY SEVERITY	ZIP	DL STATE
DL CLASS				
DL ENDORSEMENTS	DL RESTRICTIONS			
RECOMMENDATIONS?				
PHYSICAL CONDITIONS	VIOLATIONS			

Unit 4				
UNIT TYPE	VEH TYPE	DL STATUS	PERSON TYPE	
AGE	SEX	INJURY SEVERITY	ZIP	DL STATE
DL CLASS				
DL ENDORSEMENTS	DL RESTRICTIONS			
RECOMMENDATIONS?				
PHYSICAL CONDITIONS	VIOLATIONS			

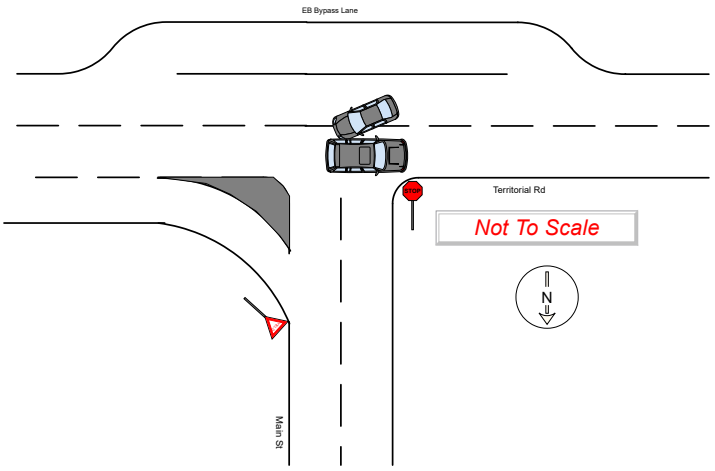
Unit 3 - Vehicle Information		
VEH USE	EMERGENCY VEH USE	TOWED?
INITIAL CONTACT	MOST HARMFUL	TRAILERS
SEQUENCE OF EVENTS	VEH MANEUVER	
	VEH CONTRIBUTING FACTORS	

Unit 4 - Vehicle Information		
VEH USE	EMERGENCY VEH USE	TOWED?
INITIAL CONTACT	MOST HARMFUL	TRAILERS
SEQUENCE OF EVENTS	VEH MANEUVER	
	VEH CONTRIBUTING FACTORS	

Unit 3 - Person Information		
CONTRIB FACTORS	DRIVER DISTRACTED BY	
	SPEEDING RELATED	
NON-MOTORIST MANEUVER	NON-MOTORIST LOCATION	
LE SUSPECTS ALCOHOL	LE SUSPECTS DRUG	
ALCOHOL TEST GIVEN	ALCOHOL TEST TYPE	ALCOHOL TEST RESULT
DRUG TEST GIVEN	DRUG TEST TYPE	DRUG TEST RESULT

Unit 4 - Person Information		
CONTRIB FACTORS	DRIVER DISTRACTED BY	
	SPEEDING RELATED	
NON-MOTORIST MANEUVER	NON-MOTORIST LOCATION	
LE SUSPECTS ALCOHOL	LE SUSPECTS DRUG	
ALCOHOL TEST GIVEN	ALCOHOL TEST TYPE	ALCOHOL TEST RESULT
DRUG TEST GIVEN	DRUG TEST TYPE	DRUG TEST RESULT

OFFICER SKETCH



NARRATIVE

INITIAL INFORMATION ON 12/01/2016 I WAS WORKING THE POWER SHIFT FROM 1400-0200 HOURS. I WAS OPERATING MARKED SQUAD 6843 AND WEARING FULL POLICE UNIFORM. DETAILS AT 1643 HOURS I WAS DISPATCHED TO A PROPERTY DAMAGE ACCIDENT AT TERRITORIAL ROAD AND FLETCHER LANE. I LOCATED THE CRASH AT TERRITORIAL ROAD AND MAIN STREET. RILEY BETH LEWIS (DOB 08/02/2000) WAS THE DRIVER OF A TOYOTA YARIS WITH MINNESOTA PLATE 872LCK. THE DRIVER OF THE FORD EDGE WITH MINNESOTA PLATE 383KDZ WAS (DOB 05/15/1970). THE TOYOTA YARIS WAS DRIVING EASTBOUND ON TERRITORIAL ROAD (COUNTY ROAD 116) AND TURNED LEFT TO GO NORTHBOUND ON MAIN STREET. THE FORD EDGE WAS DRIVING WESTBOUND ON TERRITORIAL ROAD AT THE TIME. THE TOYOTA YARIS MADE AN UNSAFE CHANGE OF COURSE AND FAILED TO YIELD AS IT TURNED NORTHBOUND ON MAIN STREET. THE FRONT PASSENGER SIDE OF THE TOYOTA STRUCK THE REAR DRIVERS SIDE TIRE AREA OF THE FORD. THE TOYOTA HAD MODERATE DISABLING DAMAGES TO THE FRONT PASSENGER SIDE AND IT APPEARED THE FRONT DRIVERS WHEEL WAS FLAT. THE FORD HAD MINOR DAMAGES TO THE REAR DRIVERS SIDE. CONCLUSION THE TOYOTA HAD TO BE TOWED FROM THE SCENE BY BURDAS TOWING. THE FORD WAS ABLE TO BE DRIVEN FROM THE SCENE. A CRASH EXCHANGE FORM WAS COMPLETED. THE CRASH WAS CAUSED BY THE DRIVER OF THE TOYOTA MAKING AN UNSAFE CHANGE OF COURSE. OFFICER ROSE #6827 12/01/2016

Crash Detail Report - Long Form
CRASH

Selection Filter:

WORK AREA: County('659472') - FILTER: Year('2016','2017','2018') - SPATIAL FILTER APPLIED

Analyst: Mallori Fitzpatrick

Notes:

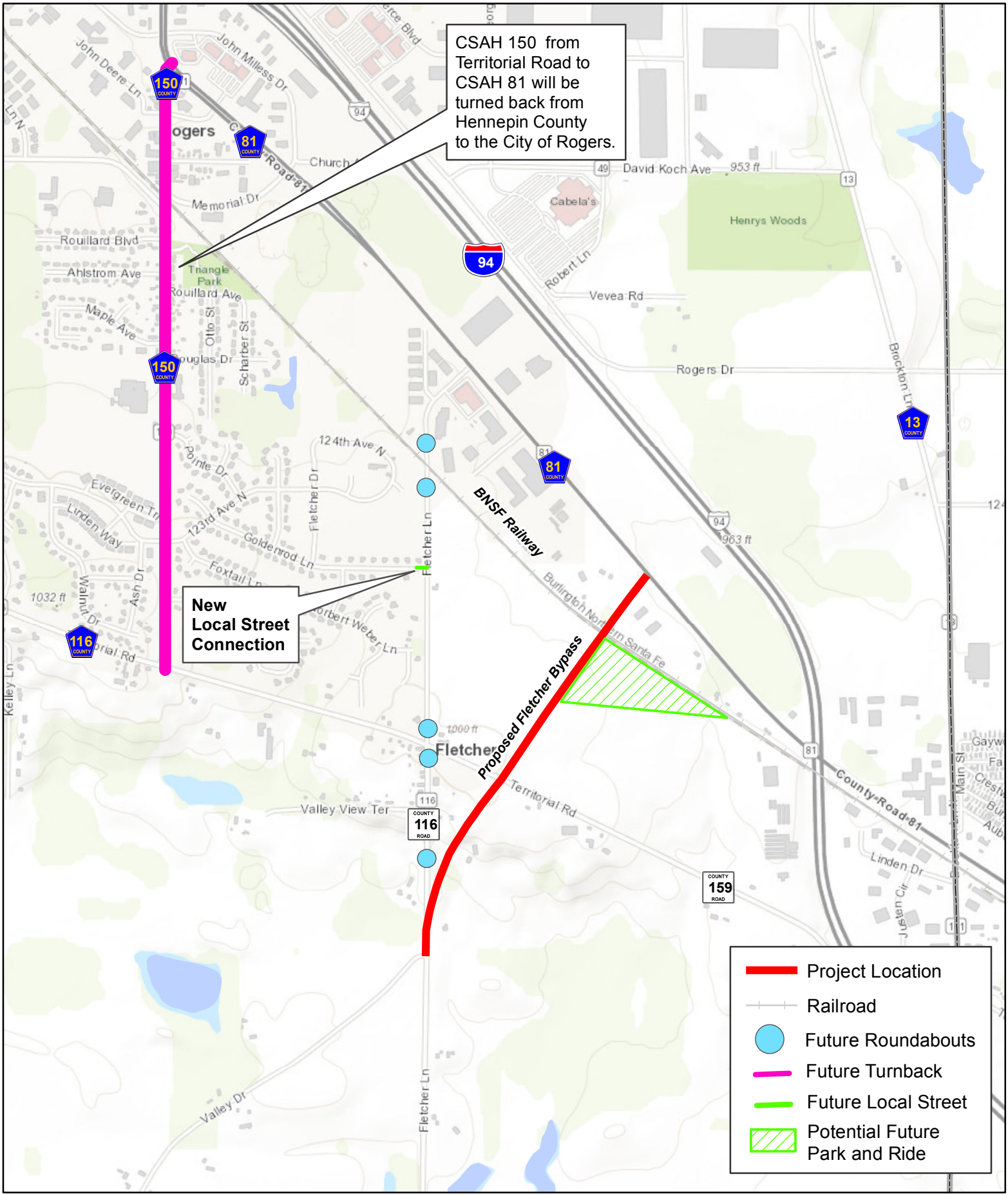


Figure 1 - Project Location

CR 116 Extension to CSAH 81 (Fletcher Bypass)
City of Rogers, MN
Hennepin County

N

0 0.15 Miles

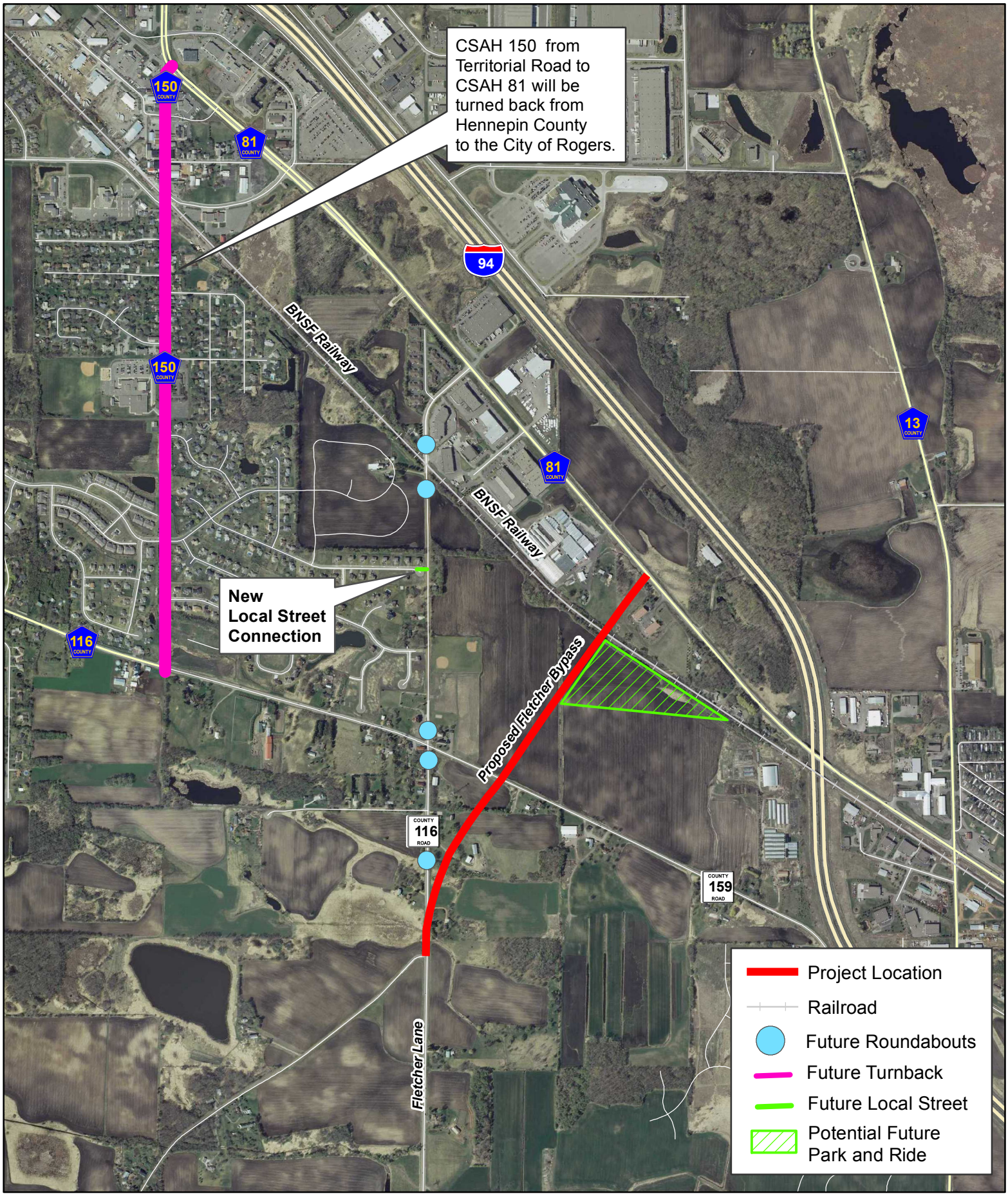


Figure 2 - Project Location Aerial

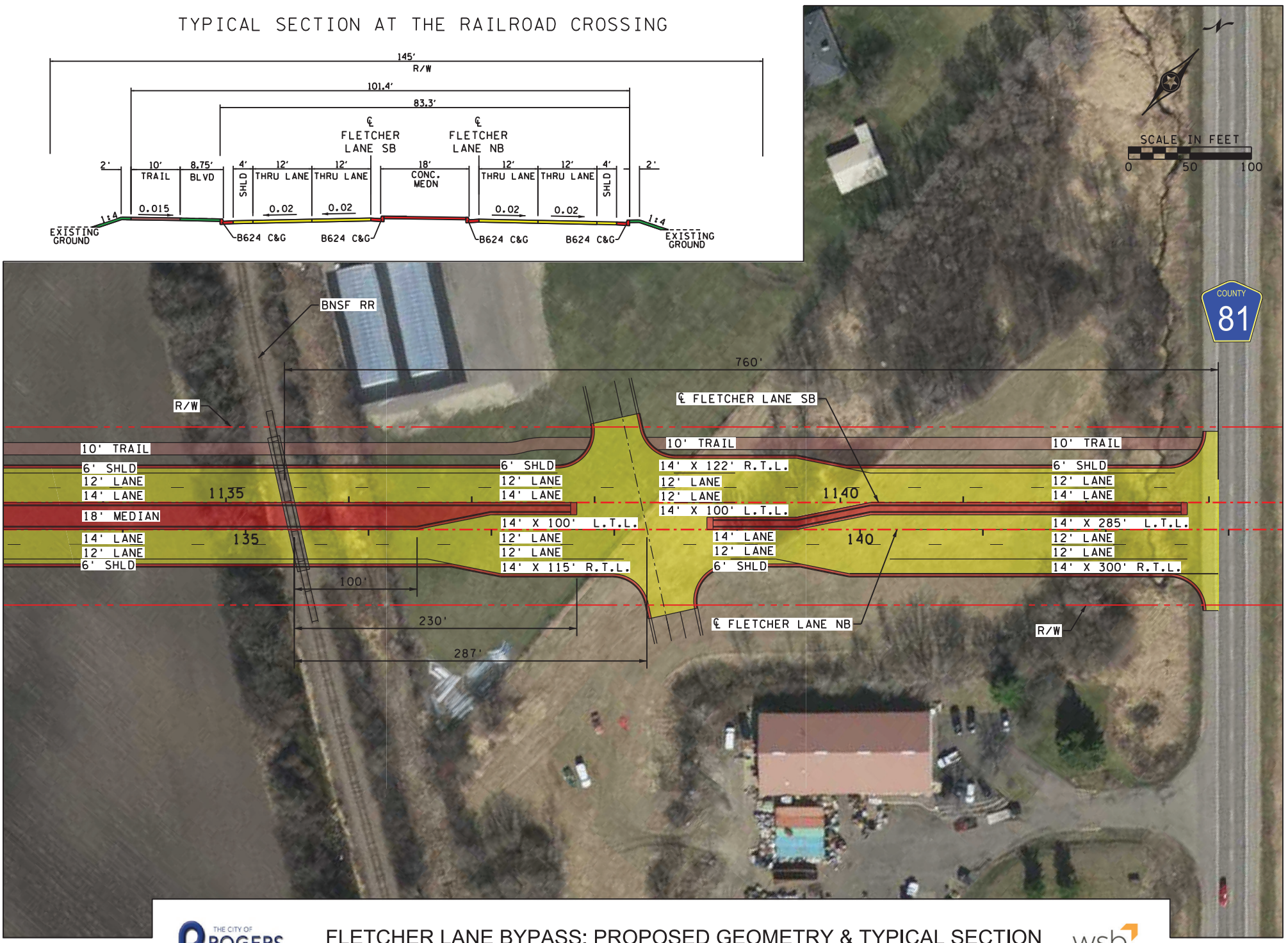
CR 116 Extension to CSAH 81 (Fletcher Bypass)
City of Rogers, MN
Hennepin County

N

0 0.15 Miles

EXHIBIT “A”

[PLAN OVERVIEW]



THE CITY OF ROGERS MINNESOTA

FLETCHER LANE BYPASS: PROPOSED GEOMETRY & TYPICAL SECTION

wsb

COORDINATE SYSTEM: MN_S

EXHIBIT "A"

SCALE:1 IN = 75 FT

JLL TI #: -
BW Proj. No.: 12196.003
MAP REFERENCE:
STA. = -
R/W = r50369

TO: CITY OF ROGERS
AT: ROGERS

HENNEPIN COUNTY,
MN

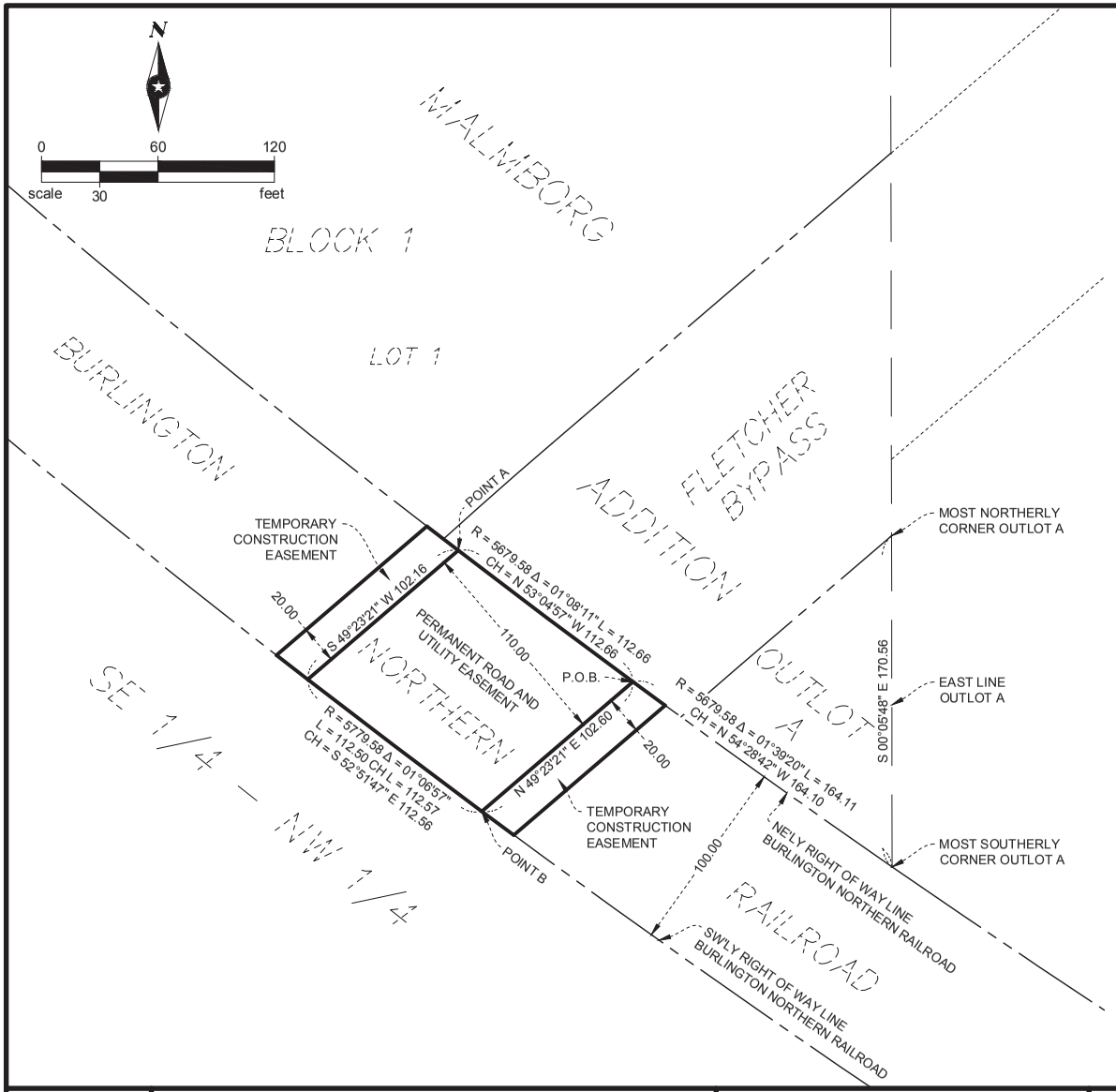
LEGEND:

- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- RIGHT OF WAY LINE
- PARCEL LINES
- TRACK

MEASUREMENTS BASED ON PROVIDED SURVEYS
(S) MEASUREMENTS TAKEN OFF SURVEY
(M) MEASUREMENT

TWIN CITIES DIVISION
MONTICELLO SUBDIVISION - L.S. 0202-1
VAL.SEC. 69015
GN RY MN-15, MAP 05
SEC. 25, T120N, R23W 5PM
DATE: 4/8/2019
MP 19.47

DRAWN BY:JNC DRAWING NO. 75334



A perpetual easement for road and utility purposes over, under, across and through that part of the Southeast Quarter of the Northwest Quarter of Section 25, Township 120 North, Range 23 West, Hennepin County, Minnesota, described as follows:

Commencing at the most northerly corner of Outlot A, MALMBORG ADDITION, according to the recorded plat thereof; thence on an assigned bearing of South 00 degrees 05 minutes 48 seconds East, along the east line of said Outlot A 170.56 feet to the most southerly corner of said Outlot A, and the northeasterly right of way line of the Burlington Northern Railroad; thence northwesterly 164.11 feet along a non-tangential curve, and said right of way line, concave to the northeast with a radius of 5679.58 feet and a central angle of 01 degrees 39 minutes 20 seconds, the chord of said curve bears North 54 degrees 28 minutes 42 seconds West 164.10 feet, to the point of beginning of the easement to be herein described; thence continue northwesterly 112.66 feet along said curve and said right of way line, central angle of 01 degrees 08 minutes 11 seconds, to a point hereinafter referred to as "Point A"; thence South 49 degrees 23 minutes 21 seconds West, not tangent to said curve, 102.16 feet to the southwesterly right of way line of said Burlington Northern Railroad; thence southeasterly 112.57 feet along a non-tangential curve, and said right of way line, concave to the northeast with a radius of 5779.58 feet and a central angle of 01 degrees 06 minutes 57 seconds, the chord of said curve bears South 52 degrees 51 minutes 47 seconds East 112.56 feet to a point hereinafter referred to as "Point B"; thence North 49 degrees 23 minutes 21 seconds East, not tangent to said curve, 102.60 feet to the point of beginning. Said easement contains 11,262 square feet, or less.

Together with,

A 20.00 wide temporary construction easement over, under, across and through that part of the Southeast Quarter of the Northwest Quarter of Section 25, Township 120 North, Range 23 West, Hennepin County, Minnesota, the southeasterly line of said easement is described as follows:

Beginning at the aforementioned Point A; thence South 49 degrees 23 minutes 21 seconds West 102.16 feet to the southwesterly right of way line of said Burlington Northern Railroad, and said line there terminating. The sidelines of said easement shall be shortened or prolonged to terminate on the northeasterly and southwesterly right of way lines. Said easement contains 2,043 square feet, more or less.

Together with,

A 20.00 wide temporary construction easement over, under, across and through that part of the Southeast Quarter of the Northwest Quarter of Section 25, Township 120 North, Range 23 West, Hennepin County, Minnesota, the northwesterly line of said easement is described as follows:

Beginning at the aforementioned Point B; thence North 49 degrees 23 minutes 21 seconds East 102.60 feet to the northeasterly right of way line of said Burlington Northern Railroad, and said line there terminating. The sidelines of said easement shall be shortened or prolonged to terminate on the northeasterly and southwesterly right of way lines. Said easement contains 2,053 square feet, more or less.

FILE NO. ROGER 147586

DRAWN BY: BRW
SURVEYED BY: _____
CHECKED BY: DWS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

Daniel W. Skinner, PLS
Date: 03/22/2019 Lic. No. 40827

SEH
PHONE: 320.229.4300
1200 25TH AVENUE SOUTH
P.O. BOX 1717
ST. CLOUD, MN 56302-1717
www.sehinc.com

EASEMENT EXHIBIT FOR:
2018 FLETCHER LANE

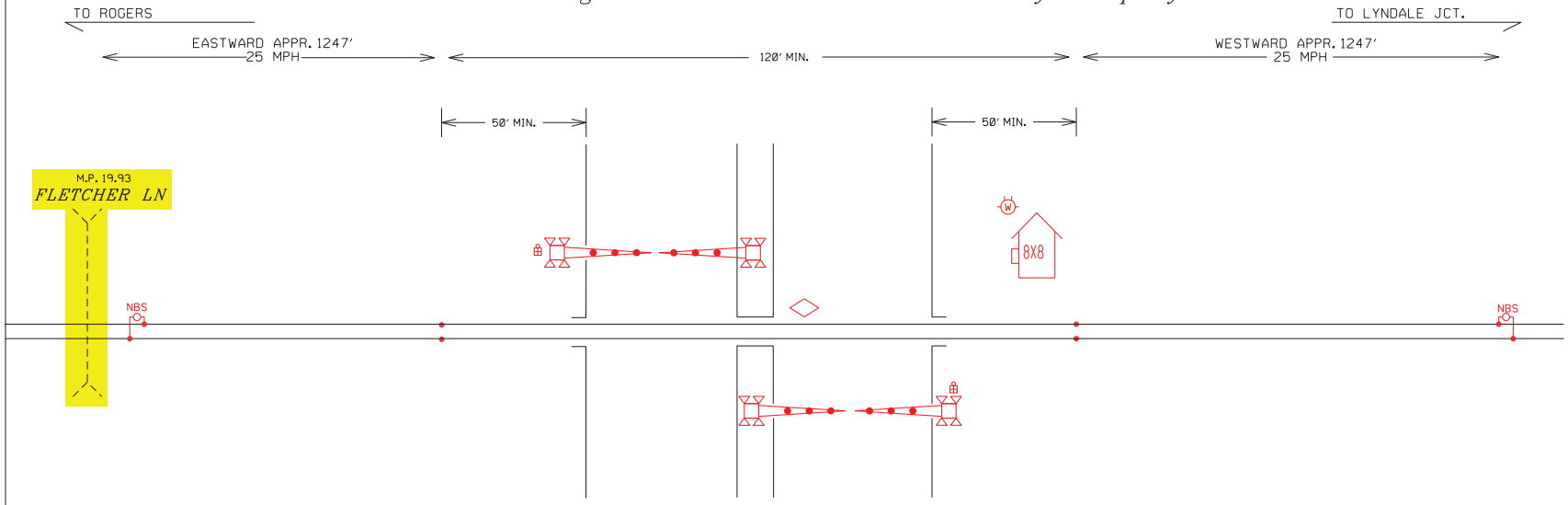
ROGERS, MINNESOTA

1
1

Save: 3/22/2019 10:49 AM bwisted Plot: 3/22/2019 10:50 AM U:\PT\RROGER\common\General Numbers\G155 2018 Fletcher Lane BNSF Crossing Closure\8-survey\92-CADD\5-dwg\RG147586EX1.dwg

EXHIBIT "D"
[Cost ESTIMATE for Railroad Work]

The Burlington Northern & Santa Fe Railway Company



M.P. 19.93
FLETCHER LN
DOT # 095657R

PROJECT# 75889

INSTALL: GATES, LEDS, FLASHERS
CONTROL DEVICES: CONSTANT WARNING
SALVAGE: NONE
RED = IN YELLOW = OUT

- 8X8 — INSTRUMENT HOUSE
- BELL
- METER
- CROSSING CONTROLL CONNECTIONS
- BIDIRECTIONAL CROSSING CONTROL
- UNIDIRECTIONAL CROSSING CONTROL
- COUPLER OR TERMINATION
- GUARD RAIL

Warning device placement:
Clearance to C.L. Track = Min. 12'
Edge of Road to C.L. Foundation:
Min. 4'3" with curb,
Min. 8'3" without curb,
Max. 12'
House Clearance: 25' Min. to Near Rail
30' Min. to Edge of Road
ALL LIGHTS TO BE LED

BNSF RAILWAY CO.
LOCATION: ROGERS MN
STREET: FLETCHER LN
LS: 202
M.P. 19.93
DOT # 095657R
DIVISION: TWIN CITIES
SUBDIVISION: MONTICELLO
NO SCALE
DATE: 02/19/19
FILE: 75889-StateSketch.dgn
AMW

AUTHORITY FOR EXPENDITURE

LOCATION :	HENNEPIN COOP	LINE SEGMENT :	202	AFE NUMBER :	
PLANITEM NUMBER :	229557000	MILEPOST :	19.5	RFA NUMBER :	5917819
PROPERTY OF :	BNSF RAILWAY COMPANY	DIVISION :	TC	CPAR NUMBER :	CB960119
OPERATED BY :	BNSF RAILWAY COMPANY	SUBDIVISION :	MONTICELLO	BUDGET YEAR :	2019
JOINT FACILITY :	CITY OF ROGERS	TRACK TYPE :	S	BUDGET CLASS :	6
% BILLABLE (+/-) :	100.0	TAX STATE :	MN	REPORTING OFFICE :	718
		SPONSOR :	VP ENGINEERING	CENTER/ROLLUP :	S3551

PURPOSE, JUSTIFICATION AND DESCRIPTION

PIP - TCE DIV MONTICELLO SUB LS 202 MP 19.932 - DOT #095657R - 100% BILLABLE TO CITY OF ROGERS - ROGERS, MN DOT 095657R FLETCHER LN, CROSSING RELOCATION FOR ROADWAY REALIGNMENT PROJECT, 104-FT X 1 CONCRETE CROSSING

PRIMARY FUNDING SOURCE IS FHWA

** BUY AMERICA(N) APPLIES **

PLAN ITEM	LINE SEG	BEG MP	END MP	TRK NBR	BEGIN STATION	END STATION	PROJECT TYPE	BUD YEAR
229557000	202	19.5	19.5	S	HENNEPIN COOP	HENNEPIN COOP	PUBLIC IMPROVEMENT PROJECT	2019

	CASH CAPITAL	NONCASH CAPITAL	OPERATING EXP	REMOVAL COSTS	BILLABLE	TOTALS
LABOR COSTS	0	0	0	0	48,328	48,328
MATERIAL COSTS	0	0	0	0	56,220	56,220
OTHER COSTS	0	0	0	0	18,726	18,726
TOTALS	0	0	0	0	123,274	123,274

SYSTEM MAINTENANCE AND PLANNING
ESTIMATE REF. NUMBER: 5917819
COSTING DATE: 01/14/2019

PRINTED ON: 01/14/2019
ESTIMATED BY: Savard
PRINTED BY: Savard

***** MAINTAIN PROPRIETARY CONFIDENTIALITY *****

BNSF RAILWAY COMPANY
FHPM ESTIMATE FOR
CITY OF ROGERS

LOCATION HENNEPIN COOP | DETAILS OF ESTIMATE | PLAN ITEM : 229557000 | VERSION : 2

PURPOSE, JUSTIFICATION AND DESCRIPTION

PIP - TCE DIV MONTICELLO SUB LS 202 MP 19.932 - DOT #095657R - 100% BILLABLE TO CITY OF ROGERS

ROGERS, MN DOT 095657R FLETCHER LN, CROSSING RELOCATION FOR ROADWAY REALIGNMENT PROJECT, 104-FT X 1 CONCRETE CROSSING, PLANNED 2020 CONSTRUCTION, CROSSING RELOCATING 2470-FT SOUTHEAST TO APPROX. MP 19.5, NEW DOT# FOLLOWING INSTALLATION

REQUESTED BY KRISTOPHER SWANSON 8/11/16
REVISION REQUESTED BY RICHARD D. SCOTT 1/7/19
PRIMARY FUNDING SOURCE IS FHWA
** BUY AMERICA(N) APPLIES **

DESCRIPTION	QUANTITY	U/M	COST	TOTAL $
**********				
LABOR				
**********				
PLACE CROSS TIES - CAP	13.5	MH	457	
PLACE FIELD WELDS - CAP	128.0	MH	4,063	
REMOVE PUBLIC CROSSING	73.48	MH	2,199	
REPLACE PUBLIC CROSSING - TOTAL REHAB	104.0	MH	3,113	
SURFACE TRACK - REPLACEMENT - CAP	72.0	MH	2,224	
UNLOAD BALLAST - REPLACEMENT - CAP	27.0	MH	808	
UNLOAD CROSSING MATERIAL - PUBLIC - CAP	52.0	MH	1,557	
PAYROLL ASSOCIATED COSTS			9,200	
DA OVERHEADS			14,902	
EQUIPMENT EXPENSES			7,387	
INSURANCE EXPENSES			2,418	
TOTAL LABOR COST			48,328	48,328
**********				
MATERIAL				
**********				
BALLAST, FOR GENERIC USE ONLY	450.0	NT **	4,388	
TRACK PANEL, 115 STANDARD RAIL, 60 FT -10 FT TIES-	2.0	EA **	18,344	
SPIKE, TBR SCREW 3/4"X13", F/ROAD XING	234.0	EA **	468	
TIE, TRK,10FT,PRE-PLATED,6IN, STD AREA	20.0	EA	2,136	
WELDKIT, GENERIC FOR ALL RAIL WEIGHTS	16.0	KT **	1,085	
CONC STEEL CLAD FOR TANGENT PANELS ON 10' WOOD	104.0	FT **	16,848	
MATERIAL HANDLING			2,161	
ONLINE TRANSPORTATION			7,015	
USE TAX			3,314	
OFFLINE TRANSPORTATION			461	
TOTAL MATERIAL COST			56,220	56,220
**********				
OTHER				
**********				
TRAFFIC CONTROL	1.0	LS	7,500	
TOTAL OTHER ITEMS COST			7,500	7,500
PROJECT SUBTOTAL				112,048
CONTINGENCIES				10,005
BILL PREPARATION FEE				1,221
GROSS PROJECT COST				123,274
LESS COST PAID BY BNSF				0
TOTAL BILLABLE COST				123,274

CITY OF ROGERS, MINNESOTA

Computation of Present Value for BNSF Maintenance Costs

72 AAR Units at Current Rate of $255.39/per unit

Inflator Date	Annual Maintenance Costs	Present Value using yield of 3.5%	No. of Payments
8-Mar-19			0
8-Mar-20	$ 18,388.08	$ 17,744.50	1
8-Mar-21	$ 18,388.08	$ 17,123.44	2
8-Mar-22	$ 18,388.08	$ 16,524.12	3
8-Mar-23	$ 18,388.08	$ 15,945.78	4
8-Mar-24	$ 18,388.08	$ 15,387.67	5
8-Mar-25	$ 18,388.08	$ 14,849.10	6
8-Mar-26	$ 18,388.08	$ 14,329.39	7
8-Mar-27	$ 18,388.08	$ 13,827.86	8
8-Mar-28	$ 18,388.08	$ 13,343.88	9
8-Mar-29	$ 18,388.08	$ 12,876.85	10
8-Mar-30	$ 18,388.08	$ 12,426.16	11
8-Mar-31	$ 18,388.08	$ 11,991.24	12
8-Mar-32	$ 18,388.08	$ 11,571.55	13
8-Mar-33	$ 18,388.08	$ 11,166.54	14
8-Mar-34	$ 18,388.08	$ 10,775.71	15
8-Mar-35	$ 18,388.08	$ 10,398.56	16
8-Mar-36	$ 18,388.08	$ 10,034.61	17
8-Mar-37	$ 18,388.08	$ 9,683.40	18
8-Mar-38	$ 18,388.08	$ 9,344.48	19
8-Mar-39	$ 18,388.08	$ 9,017.43	20
8-Mar-40	$ 18,388.08	$ 8,701.82	21
8-Mar-41	$ 18,388.08	$ 8,397.25	22
8-Mar-42	$ 18,388.08	$ 8,103.35	23
8-Mar-43	$ 18,388.08	$ 7,819.73	24
8-Mar-44	$ 18,388.08	$ 7,546.04	25
8-Mar-45	$ 18,388.08	$ 7,281.93	26
8-Mar-46	$ 18,388.08	$ 7,027.06	27
8-Mar-47	$ 18,388.08	$ 6,781.12	28
8-Mar-48	$ 18,388.08	$ 6,543.78	29
8-Mar-49	$ 18,388.08	$ 6,314.74	30
8-Mar-50	$ 18,388.08	$ 6,093.73	31
8-Mar-51	$ 18,388.08	$ 5,880.45	32
8-Mar-52	$ 18,388.08	$ 5,674.63	33
8-Mar-53	$ 18,388.08	$ 5,476.02	34
8-Mar-54	$ 18,388.08	$ 5,284.36	35
8-Mar-55	$ 18,388.08	$ 5,099.41	36
8-Mar-56	$ 18,388.08	$ 4,920.93	37
8-Mar-57	$ 18,388.08	$ 4,748.70	38
8-Mar-58	$ 18,388.08	$ 4,582.49	39
8-Mar-59	$ 18,388.08	$ 4,422.10	40
	Agency Contribution:	$ 385,061.92	

BNSF RAILWAY COMPANY
FHPM ESTIMATE FOR
CITY OF ROGERS

LOCATION HENNEPIN COOP TO K&K MFG CO SPU | DETAILS OF ESTIMATE | PLAN ITEM : 000312819 | VERSION : 1

PURPOSE, JUSTIFICATION AND DESCRIPTION

FLETCHER LN - ROGERS, MN; INSTALL CONSTANT WARNING / FLASHERS / GATES; TWIN CITIES DIV; MONTICELLO SUBDIV; LS 0202; MP 019.93; DOT# 095657R; SEQ# 75889.

MONTHLY POWER UTILITY COST CENTER : 61740.

THE MATERIAL LIST BELOW REFLECTS TYPICAL REPRESENTATIVE PACKAGES USED FOR ESTIMATING PURPOSES ONLY.

THIS ESTIMATE IS GOOD FOR 180 DAYS. THE ESTIMATE IS SUBJECT TO CHANGE IN COST FOR LABOR, MATERIAL, AND OVERHEAD.

CONTRACTS HAVE BEEN ESTABLISHED FOR PORTIONS OF SIGNAL WORK ON THE BNSF RAILROAD.

********** SIGNAL WORK ONLY **********

THE CITY OF ROGERS, MN / MNDOT IS FUNDING 100% OF THIS PROJECT.

MAINTAIN PROPRIETARY CONFIDENTIALITY.
PRIMARY FUNDING SOURCE IS FHWA
** BUY AMERICA(N) APPLIES **

DESCRIPTION	QUANTITY	U/M		COST	TOTAL $
**********					
LABOR					
**********					
ELECTRICAL LABOR F/SIGNAL EQUIPMENT	54.0	MH		1,669	
SIGNAL FIELD - INSTALL	840.0	MH		25,898	
SIGNAL SHOP LABOR - CAP	0.01	MH		1	
PAYROLL ASSOCIATED COSTS				18,020	
DA OVERHEADS				29,919	
EQUIPMENT EXPENSES				6,130	
INSURANCE EXPENSES				4,824	
TOTAL LABOR COST				86,461	86,461
**********					
MATERIAL					
**********					
ARRESTOR, MDSA-2 XS	1.0	EA	N	697	
BATTERY, 20 VGL-255, 9 VGL-350	1.0	LS	N	6,764	
BELLS	2.0	EA	N	412	
BONDING MATERIAL	1.0	LS	N	500	
BUNGALOW 8X8 W/ AC	1.0	LS	N	10,142	
BUNGALOW MATERIAL	1.0	LS	N	9,564	
CABLE, 2C/6 TW	500.0	FT	N	610	
CABLE, 3C/2	250.0	FT	N	1,458	
CABLE, 5C/10	70.0	FT	N	132	
CABLE, 5C/6	1000.0	FT	N	4,130	
CABLE, 7C/14	1000.0	FT	N	1,740	
CHARGERS, 12/80 (20/40/60)	3.0	EA	N	3,110	
CONSTANT WARNING, XP4, 1TK	1.0	EA	N	16,252	
ELECTRICAL MATERIAL	1.0	LS	N	1,500	
EVENT RECORDER	1.0	EA	N	3,250	
FIELD MATERIAL	1.0	LS	N	9,372	
FILL DIRT	44.0	CY	N	1,100	
FOUNDATION, CONCRETE	4.0	EA	N	1,093	
GATE KEEPER	4.0	EA	N	6,668	
GATE MECHANISM, S-60	4.0	EA	N	21,881	
HAWK 48 DIM	1.0	EA	N	1,930	
LED LIGHT	16.0	EA	N	2,921	
LIGHT OUT DETECTOR	2.0	EA	N	1,826	
RELAY, GATE	3.0	EA	N	2,250	
SHUNT, NBS	2.0	EA	N	2,012	
SURFACE ROCK	10.0	CY	N	500	
USE TAX				8,558	
OFFLINE TRANSPORTATION				1,396	

TOTAL MATERIAL COST		121,768	121,768
**********			
OTHER			
**********			
AC POWER SERVICE	1.0 EA N	5,000	
BUNGALOW, WIRE AND TEST	1.0 LS N	4,418	
CONTRACT ENGINEERING	1.0 LS N	10,000	
DIRECTIONAL BORING	300.0 FT N	15,000	
TOTAL OTHER ITEMS COST		34,418	34,418
PROJECT SUBTOTAL			242,647
CONTINGENCIES			0
BILL PREPARATION FEE			2,427
GROSS PROJECT COST			245,074
LESS COST PAID BY BNSF			0
TOTAL BILLABLE COST			245,074

PRELIMINARY ESTIMATE Fletcher Connnection

Wide Section With Median

Project: Fletcher Connection

Project Location:

WSB Project No: 02169-070

5/8/2020

ITEM NUMBER	DESCRIPTION	UNIT	Unit Price	PROJECT TOTAL ESTIMATED QUANTITY	PROJECT TOTAL Estimated Cost	Intersection ESTIMATED QUANTITY	Intersection Estimated Cost
2021.501	MOBILIZATION	LUMP SUM	$120,000.00	1	$120,000.00	1	$120,000.00
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	1000	$5,000.00	1000	$5,000.00
2104.509	MISC REMOVALS	LUMP SUM	$25,000.00	1	$25,000.00	1	$25,000.00
2105.501	COMMON EXCAVATION	CU YD	$8.50	55000	$467,500.00	55000	$467,500.00
2105.507	SUBGRADE EXCAVATION	CU YD	$10.00	5500	$55,000.00	5500	$55,000.00
2105.522	SELECT GRANULAR BORROW (CV)	CU YD	$18.00	20500	$369,000.00	20500	$369,000.00
2211.503	AGGREGATE BASE (CV) CLASS 6	CU YD	$28.00	5750	$161,000.00	5750	$161,000.00
2221.501	AGGREGATE SHOULDERING (CV) CLASS 2	TON	$30.00	1500	$45,000.00	1500	$45,000.00
2360.501	TYPE SP 12.5 WEARING COURSE MIXTURE (4,F)	TON	$70.00	5500	$385,000.00	5500	$385,000.00
2360.502	TYPE SP 12.5 NON WEARING COURSE MIXTURE (4,B)	TON	$65.00	4000	$260,000.00	4000	$260,000.00
2503.541	PIPE CULVERTS & STORM SEWER	LUMP SUM	$150,000.00	1	$150,000.00	1	$150,000.00
2521.518	10' BITUMINOUS TRAIL	SQ FT	$3.00	40000	$120,000.00	40000	$120,000.00
2531.501	CONCRETE CURB & GUTTER DESIGN B424	LIN FT	$28.00	6800	$190,400.00	6800	$190,400.00
2533.507	PORTABLE PRECAST CONCRETE BARRIER DES 8337	LIN FT	$18.00	1000	$18,000.00	1000	$18,000.00
2533.508	RELOCATE PORTABLE PRECAST CONC BAR DES 8337	LIN FT	$8.00	1000	$8,000.00	1000	$8,000.00
2563.601	TRAFFIC CONTROL	LUMP SUM	$15,000.00	1	$15,000.00	1	$15,000.00
2564.531	SIGN PANELS TYPE C	SQ FT	$45.00	750	$33,750.00	750	$33,750.00
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM A	SIG SYS	$250,000.00	2	$500,000.00	2	$500,000.00
2565.601	EMERGENCY VEHICLE PREEMPTION SYS A	LUMP SUM	$15,000.00	1	$15,000.00	1	$15,000.00
2573.550	EROSION CONTROL & TURF ESTABLISHMENT	LUMP SUM	$50,000.00	1	$50,000.00	1	$50,000.00
2582.501	STRIPING	LUMP SUM	$15,000.00	1	$15,000.00	1	$15,000.00
	RR CROSSING CONSTRUCTION	LUMP SUM	$450,000.00	1	$450,000.00	1	$450,000.00
	CONSTRUCTION TOTAL				$3,457,650.00		$3,457,650.00
	15% CONTIGENCY				$518,650.00		$518,650.00
	GRAND TOTAL				$3,976,300.00		$3,976,300.00

Memorandum

To: File

From: Mallori Fitzpatrick, EIT

Date: May 11, 2020

Re: Fletcher Bypass (Reconstruction/Modernization Application) Task 5 and 6
WSB Project No. 015956-000

The purpose of this technical memorandum is to analyze the Congestion Reduction/Air Quality and Safety of the existing condition and proposed Fletcher Bypass project to satisfy the requirements of the Reconstruction and Modernization criteria. As the bypass will be a new alignment south of Territorial Road and a new roadway north of Territorial, only the existing intersection of Territorial Road (CSAH 116) and Fletcher Lane was analyzed for Task 5 and 6.

Task 5. Congestion Reduction/Air Quality

A capacity and emissions analysis was conducted at the intersection of Territorial Road and Fletcher Lane using 2019 PM peak hour traffic counts. Synchro software was used to analyze the delay for the existing and proposed network. Synchro was also used to report the Carbon Monoxide (CO), Nitrogen Oxides (NOx), and Volatile Organic Compound (VOC) emissions at the intersection of Territorial Road and Fletcher Lane.

Table 1 identifies the existing and build condition delays at the intersection during the PM peak hour as reported from Synchro 10.

Table 1. Existing and Build Condition Delays

PM PEAK						
Intersection	**Existing Vehicles**	**Build Vehicles**	**Synchro Existing Delay per vehicle (s)**	**Synchro Build Delay per vehicle (s)**	**Synchro Existing Total Delay (s)**	**Synchro Build Total Delay (s)**
Fletcher Ln & Territorial Rd	1151	1151	44.6	13.4	51334.6	15423.4

The following includes responses to Part A:

- Total Peak Hour Delay/Vehicle without the Project (Seconds/Vehicle): 44.6
- Total Peak Hour Delay/Vehicle with the Project (Seconds/Vehicle): 13.4
- Total Peak Hour Delay/Vehicle Reduced by the Project (Seconds/Vehicle): 31.2
- Volume without the Project (Vehicles per hour): 1151
- Volume with the Project (Vehicles per hour): 1151
- Total Peak Hour Delay Reduced by the Project (Seconds): 35,911

Table 2 identifies the existing and build condition emission outputs at the intersection during the PM peak hour as reported from Synchro 10.

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

Table 2. Existing and Build Emissions

PM PEAK						
Intersection	Existing CO Emissions (kg)	Existing Nox Emissions (kg)	Existing VOC Emissions (kg)	Build CO Emissions (kg)	Build NOx Emissions (kg)	Build VOC Emissions (kg)
Fletcher Ln & Terriorial Rd	2.16	0.42	0.5	1.43	0.28	0.33
Total	3.08			2.04		

The following includes responses to Part B:

- Total (CO, NOx, and VOC) Peak Hour Emissions without the Project (Kilograms): 3.08
- Total (CO, NOx, and VOC) Peak Hour Emissions with the Project (Kilograms): 2.04
- Total (CO, NOx, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): 1.04

Task 6. Safety

A safety analysis was conducted at the intersection of Territorial Road and Fletcher Lane. Three years of crash data (2016-2018) was collected at intersection and analyzed in a Benefit/Cost (B/C) worksheet. A total of two crashes occurred at the intersection within the three-year period. **Table 3** identifies the severity and type of collisions from the data set.

Table 3. Existing Intersection Crash Data

Territorial Road and Fletcher Lane (2016-2018)								
Classification by Type								
Severity	Rear End	Side Swipe	Left Turn	Ran Off Road	Right Angle	Right Turn	Head On	Other
K	0	0	0	0	0	0	0	0
A	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0	0
N	0	0	0	0	2	0	0	0
Total	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**

The following includes responses to Part A:

- A crash modification factor was identified using the Federal Highway Administration's (FHWA) Crash Modification Factors (CMF) Clearinghouse to predict the annual crash reduction and cost benefit. The following CMFs were applied:
  - Install a Traffic Signal (CMF = 0.56 for all crash and severity types at a rural intersection)
  - Increase Triangle Sight Distance (CMF = 0.89 for all property damage only crashes)
- Project Benefit ($) from B/C ratio: $100,644
- Total Fatal (K) Crashes: 0
- Total Serious Injury (A) Crashes: 0
- Total Non-Motorized Fatal and Serious Injury Crashes: 0
- Total Crashes: 2
- Total Fatal (K) Crashes Reduced by Project: 0
- Total Serious Injury (A) Crashes Reduced by Project: 0
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: 0
- Total Crashes Reduced by Project: 5.8 crashes over 20 years

The overall Benefit/Cost (B/C) Ratio is 0.03, see the B/C worksheet for the breakdown of the benefit analysis. However, this B/C Ratio only includes the one intersection that exists currently and is proposed with the project, as the project consists of a new alignment,

Project Name: Fletcher Bypass Roadway Modernization

Applicant: City of Rogers
Project Location: Fletcher Lane (CSAH 116) to CSAH 81
Total Project Cost: $3,976,300
Requested Federal Amount: $3,181,040
Local Match: $795,260 (20% local match)

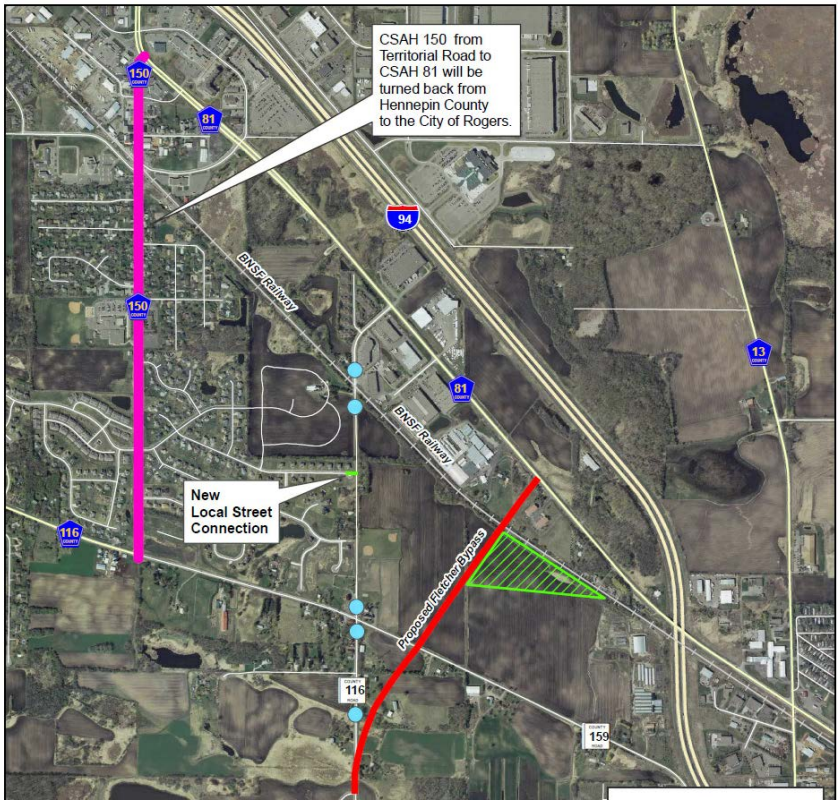
Project Description:

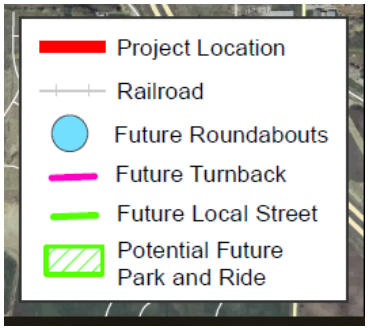
The City of Rogers is proposing a project that will realign the existing 2-lane Fletcher Lane/CSAH 116 with a new 2-lane divided A-Minor Arterial that includes left and right turn lanes and traffic signals at intersections with Territorial Road and CSAH 81. The new alignment, also referred to as the Fletcher Bypass, will begin approximately 2,000 feet south of the existing CSAH 116/Territorial Road intersection and continue north to approximately 1.3 miles east of the TH 101 (Main Street)/CSAH 81 intersection. This future I-94 overpass is important for improved local and regional traffic circulation. It will provide an alternate route for traffic crossing I-94, redirecting this traffic from Main Street (CSAH 150) and nearby residential areas, an elementary school and the Rogers downtown. The Fletcher bypass will also help with congested I-94 interchange areas at TH 101 and CSAH 101/Brockton Lane. A separated bike/ped trail will also be constructed and a future park and ride lot is being planned along the bypass.

Project Benefits:

- Improved Fletcher Lane will better accommodate regional travel demands
- Improved access management along the new A-Minor Arterial roadway
- Reduced traffic and improved safety along Main Street (CSAH 150) through residential areas, an elementary school zone and the Rogers downtown
- Safer BNSF railroad crossing – a Tier 2 Stream & Railway Barriers Crossing Area
- Separated trail connecting to a Tier 2 RBTN
- Planned future park and ride lot
- Existing Fletcher Lane, an unsafe gravel road with 2,000 AADT, will be redesigned for adjacent property access purposes only with new cul-de-sacs constructed

Project Area:





City of Rogers: Fletcher Bypass

Existing Conditions Images

CSAH 116 (Fletcher Ln), facing north, just south of Valley Dr.
Photo Credit: Google (Street View)

CSAH 116 (Fletcher Ln), facing south, just north of Valley Dr.
Photo Credit: Google (Street View)

CR 159 (Territorial Rd), facing northwest near location of proposed signalized intersection.
Photo Credit: Google (Street View)

CR 159 (Territorial Rd), facing southeast near location of proposed signalized intersection.
Photo Credit: Google (Street View)

CSAH 81, facing northwest near location of proposed signalized intersection.
Photo Credit: Google (Street View)

CSAH 81, facing southeast near location of proposed signalized intersection.
Photo Credit: Google (Street View)

HENNEPIN COUNTY
MINNESOTA

April 30, 2020

Elaine Koutsoukos - TAB Coordinator
Metropolitan Council
390 North Robert Street
St. Paul, MN 55101

Re: Support for 2020 Regional Solicitation Application
Fletcher Bypass Project
From CR 116 (Fletcher Lane) to CSAH 81

Dear Ms. Koutsoukos,

Hennepin County has been notified that the City of Rogers is submitting an application for funding as part of the 2020 Regional Solicitation through the Metropolitan Council. The proposed project is the Fletcher Bypass Project which includes the extension of Fletcher Lane from its current alignment to connect to CSAH 81. This project will improve mobility through the area by providing an alternate route for users to access CSAH 81, TH 101, and I-94; and thus, decrease demand for CSAH 150 (Main Street) through this part of Rogers. Hennepin County supports this funding application and acknowledges that the project aligns with the county's Mobility 2040 Plan along with the 2008 Northwest Hennepin County I-94 Subarea Transportation Study. The county agrees to continue operating and maintaining roadway facilities currently under county jurisdiction.

At this time, Hennepin County has no funding programmed in its 2020-2024 Transportation Capital Improvement Program (CIP) for this project. Therefore, county staff is currently unable to commit county cost participation in this project. However, we kindly request that the City of Rogers includes county staff in the project development process to ensure project success. In addition, we understand that the Fletcher Bypass Project is directly related to a potential jurisdictional transfer of CSAH 150 (Main Street). County staff is available to continue these discussions and we look forward to working together to improve the mobility for people driving through the area.

Sincerely,

Carla Stueve

Carla Stueve, P.E., P.T.O.E.
Transportation Project Delivery Director and County Engineer

cc: Chad Ellos, P.E. – Transportation Planning Division Manager

Hennepin County Transportation Project Delivery
7009 York Avenue South, MN 55435 (Temporary)
612-596-0241 | hennepin.us

Hennepin

Commuter and Express Route Design

The factors that guide the design of express routes are somewhat different from those covered in the above section for local routes. Express routes are focused on providing fast, reliable trips into major regional centers. The most important factors for express service success are high-density origins and destinations at both ends of the route (such as at a park-and-ride and downtown) and demand management that balances parking supply and cost with the demand for parking and access for transit. The level and location of congestion can also be a substantial factor in the success of express bus services.

Transit Market Areas

Market Areas Overview

An important underlying element to the transit investment plan is the definition of Transit Market Areas. Transit Market Areas are defined by the demographic and urban design factors that are associated with successful transit service. There are five Transit Market Areas (see figure 6-3) as well as some unique Market Area features. The Transit Market Areas are generally associated with community designations in *Thrive MSP 2040* (see Land Use and Local Planning for more details) as follows:

- **Transit Market Areas I and II** are mostly Urban Center communities where urban form and density are most supportive of transit. These areas also have the largest concentrations of transit-dependent residents in the region. Transit service in these areas focuses on providing a dense network of local routes with high levels of service to accommodate a wide variety of trip purposes. Market Area II will typically have a similar route structure to Market Area I, but lower levels of service, as demand warrants.
- **Transit Market Area III** is primarily Urban along with portions of the Suburban, Suburban Edge, and Emerging Suburban Edge and is generally characterized by overall lower density and less transit-supportive urban form along with some pockets of denser development. The primary emphasis of transit service in this area is express and commuter service with some suburban local routes and dial-a-ride service providing basic access.
- **Transit Market Area IV** is primarily Suburban Edge and Emerging Suburban Edge along with portions of Suburban, and is generally characterized by consistently low-density development and an urban form that does not support frequent local transit service. Transit service in Market Area IV is primarily peak-period express and commuter service oriented to park-and-ride facilities that can effectively capture the lower density transit demand. Local trips are provided by general public dial-a-ride services.
- **Transit Market Area V** is generally all forms of Rural and Agricultural but does include the unique freestanding town centers of Stillwater, Waconia, Forest Lake, and Hastings; Market Area V is generally characterized by low-density development or undeveloped land not well suited for regular-route transit service outside of limited peak-period express and commuter service.

Unique Market Areas

The Emerging Market overlays are unique areas of Transit Market Areas II and III where significant pockets of higher density exist but surrounding conditions still limit the success of local transit. These areas should be a focus for future development that will connect them with areas of higher transit intensity, specifically looking at extensions of existing routes or connections.

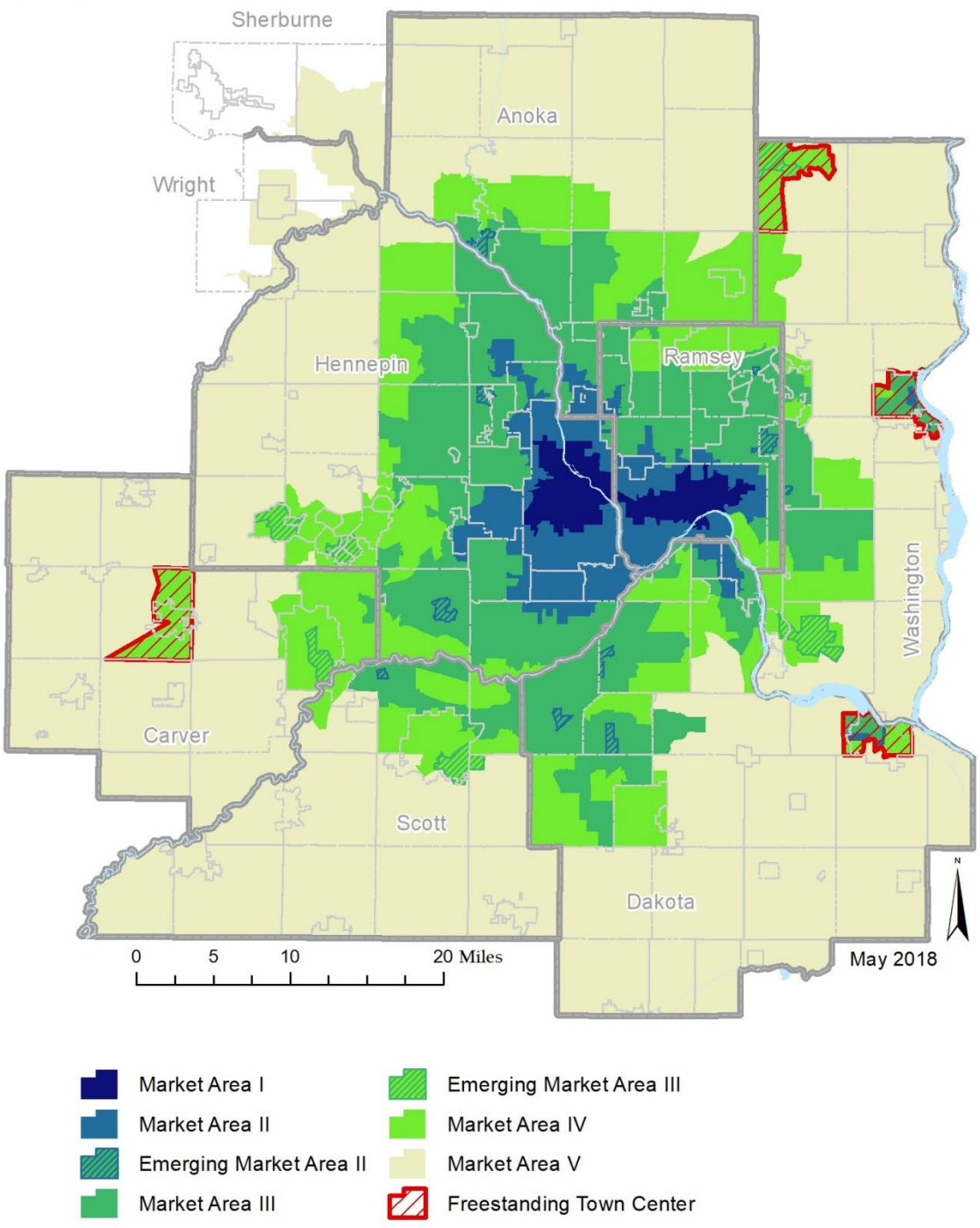
Freestanding Town Centers are unique areas that grew independently of Minneapolis and Saint Paul and act as suburbs but are still separated from the urban and suburban areas by rural land. These areas typically have small downtowns of their own but also export many workers to other regional centers. Local transit services that connect to the region would not be as effective serving these areas given their location in the region, despite their relatively concentrated nature. However, these areas may still have express service demand and possible demand for small circulator services.

The Metropolitan Council and regional transit providers will also coordinate their efforts with MnDOT and transit services that connect beyond the seven-county metropolitan region. The Transit Market Areas do not address the feasibility of these kinds of services, which are coordinated on a case-by-case basis.

Two additional areas of emphasis in *Thrive MSP 2040* are important for consideration in transit service design, the special features of Areas of Concentrated Poverty, Areas of Concentrated Poverty where at least 50% of residents are people of color, and Job Concentrations. Residents of Areas of Concentrated Poverty must overcome a legacy of private disinvestment to access the opportunity of the region. In transit, this often means considering higher levels of service, better amenities, or unique service types focused on providing better access to jobs or education. These areas are also highly correlated with limited household access to a private vehicle. Job Concentrations have good potential to be served with transit because of their density and level of activity. Many of these concentrations will need to adapt and continue adding density and diversifying land uses to be truly transit-oriented. This will need to be coordinated with continued investments in transit access to these areas as well as better transit facilities.

The Transit Market Areas are shown in Figure 6-3 and described in more detail in Appendix G. Transit Market Areas are primarily used to design the regional bus system, but some guidance on their application to transitways is discussed in the Regional Transitway Guidelines.

Figure 6-3: Transit Market Areas



Northwest Hennepin County

I-94

Sub-Area Transportation Study

April 2008

Prepared by:

SRF Consulting Group, Inc.

Engineers | Planners | Designers

NORTHWEST HENNEPIN COUNTY
I-94 SUB-AREA TRANSPORTATION STUDY

APRIL 2008

Prepared for:

CITY OF DAYTON
CITY OF ROGERS
HASSAN TOWNSHIP

Prepared by:

SRF CONSULTING GROUP, INC.
Suite 150, One Carlson Parkway North
Minneapolis, MN 55447-4443

SRF No. 0076059

STUDY PARTNERS

CITY OF DAYTON
Samantha Orduno, City Administrator
Erin Stwora, Assistant City Administrator
Mark Hanson, (Bonestroo), City Engineer

CITY OF ROGERS
Jim Willis, Interim Administrator
John Seifert, Public Works Director

HASSAN TOWNSHIP
Jim Willis, Interim Administrator
Joe Scherber, Town Board Member

HENNEPIN COUNTY
Tom Johnson, PE, Transportation Planning Division Manager
Robert Byers, Transportation Planner

METROPOLITAN COUNCIL
Ann Braden, Senior Planner

MINNESOTA DEPARTMENT OF TRANSPORTATION
Chris Roy, Mn/DOT Metro Division
Kutty Kannankutty, Mn/DOT Metro Division

FEDERAL HIGHWAY ADMINISTRATION
Tim Anderson, PE, Transportation Engineer

CITY OF CORCORAN
Sue Vergin, City Administrator
Ken Guenthner, Mayor

CITY OF MAPLE GROVE
Ken Ashfeld, City Engineer

PREPARED BY: SRF CONSULTING GROUP, INC.
Dave Montebello, PE, Principal
Marie Cote, PE, Principal
Angela Bersaw, Senior Planner

Table 6-2
Short-term Improvements

Reference Number	Corridor	From	To	Miles	Type of Improvement	Rationale	Estimated Cost[a] (Millions)
1	CSAH 30	CR 116	Dunkirk Lane	2.7	Upgrade 4-lane Minor Arterial	Upgrading this segment to a 4-lane roadway will provide better east-west traffic movement from the future TH 610 and existing Dunkirk Lane interchanges.	$20.7
2	CSAH 30 Extension	CSAH 30	I-94	1.0	Realignment 4-lane Minor Arterial	Future arterial will serve as the western leg to the future CSAH 30/TH 610 interchange with I-94.	$7.7
3	CSAH 101/Brockton Lane	CSAH 30	CR 117	1.4	Upgrade 4-lane Minor Arterial	Upgrading this segment to a 4-lane roadway will provide better north/south traffic movements from CSAH 30 to future urbanization in this area and the potential future interchange at CSAH 101/Brockton Lane/I-94.	$10.7
4	CSAH 13	CSAH 81	CSAH 144	2.8	Upgrade 4-lane Minor Arterial	Upgrading this segment to a 4-lane roadway will provide additional capacity for north/south traffic in Dayton that use this roadway as a reliever to TH 101.	$21.4
5	CSAH 101/Brockton Lane	CR 117	CSAH 81	1.3	Upgrade 6-lane Minor Arterial	This part of CSAH 101/Brockton Lane is projected to experience significant future traffic volumes due projected density of future land use in this area. The upgrading of this roadway to a 6-lane arterial will allow enough capacity for access to this urbanizing area as well as service to the future potential interchange at I-94.	$12.2
6	CR 116	CSAH 30	I-94 Overpass	3.5	Upgrade & realign 4-lane Minor Arterial	This upgrade is needed to serve the future CR 116 (Fletcher Lane) I-94 overpass. This route will be important in the future as an alternate route to the CSAH 101/Brockton Lane area for future local circulation across I-94.	$22.1
7	CR 116	I-94 Overpass	CSAH 13	0.4	Realignment 4-lane Minor Arterial	This future connection is needed for local circulation to allow traffic to cross I-94 through the CR 116 (Fletcher Bypass) and connect to CSAH 13.	$3.1
8	Territorial Road Realignment	CR 116	CSAH 101/Brockton Lane	1.5	Realignment 4-lane Minor Arterial	This future roadway will serve as the main traffic route through the proposed Stone's Throw development. Due to the high-density land uses proposed in this area, four-lane arterial roadway is necessary.	$11.5
9	CR 117 Extension	CR 116	CSAH 101/Brockton Lane	1.1	Realignment 4-lane Minor Arterial	This extension of CR 117 is important as it provides access to future development in this area and connects two important arterials. The extension serves to balance traffic volumes on other routes in the area by providing an alternate east/west connection between CR 116 and CSAH 101/Brockton Lane.	$8.4
A	CSAH 101/Brockton Lane/I-94 Interchange	-	-	-	Interchange	The proposed interchange is a part of the future systems plan which promotes additional access to I-94 within the study area.	$42.5
B	CR 116/Fletcher Lane Overpass	-	-	-	Overpass	This overpass is important for local circulation within the study area. The addition of this overpass will provide an alternate route for traffic to cross I-94, keeping this traffic out of the busy interchange areas (i.e., TH 101 and CSAH 101/Brockton Lane).	$3.4
						Total Estimated Costs	**$163.5**

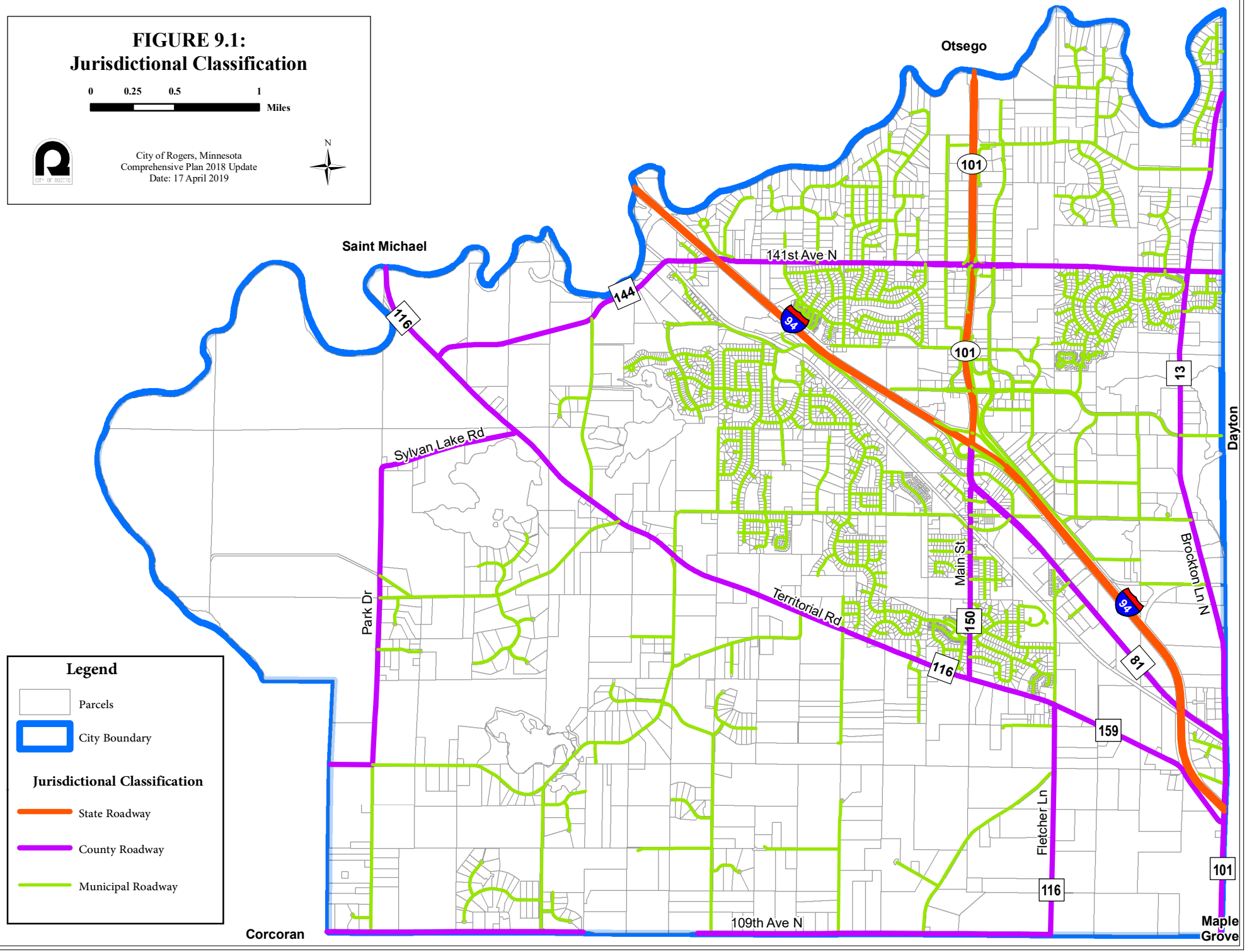
Chapter 9
Transportation

FIGURE 9.1:
Jurisdictional Classification

0 0.25 0.5 1 Miles

City of Rogers, Minnesota
Comprehensive Plan 2018 Update
Date: 17 April 2019

N



Legend

- Parcels
- City Boundary

Jurisdictional Classification

- State Roadway
- County Roadway
- Municipal Roadway

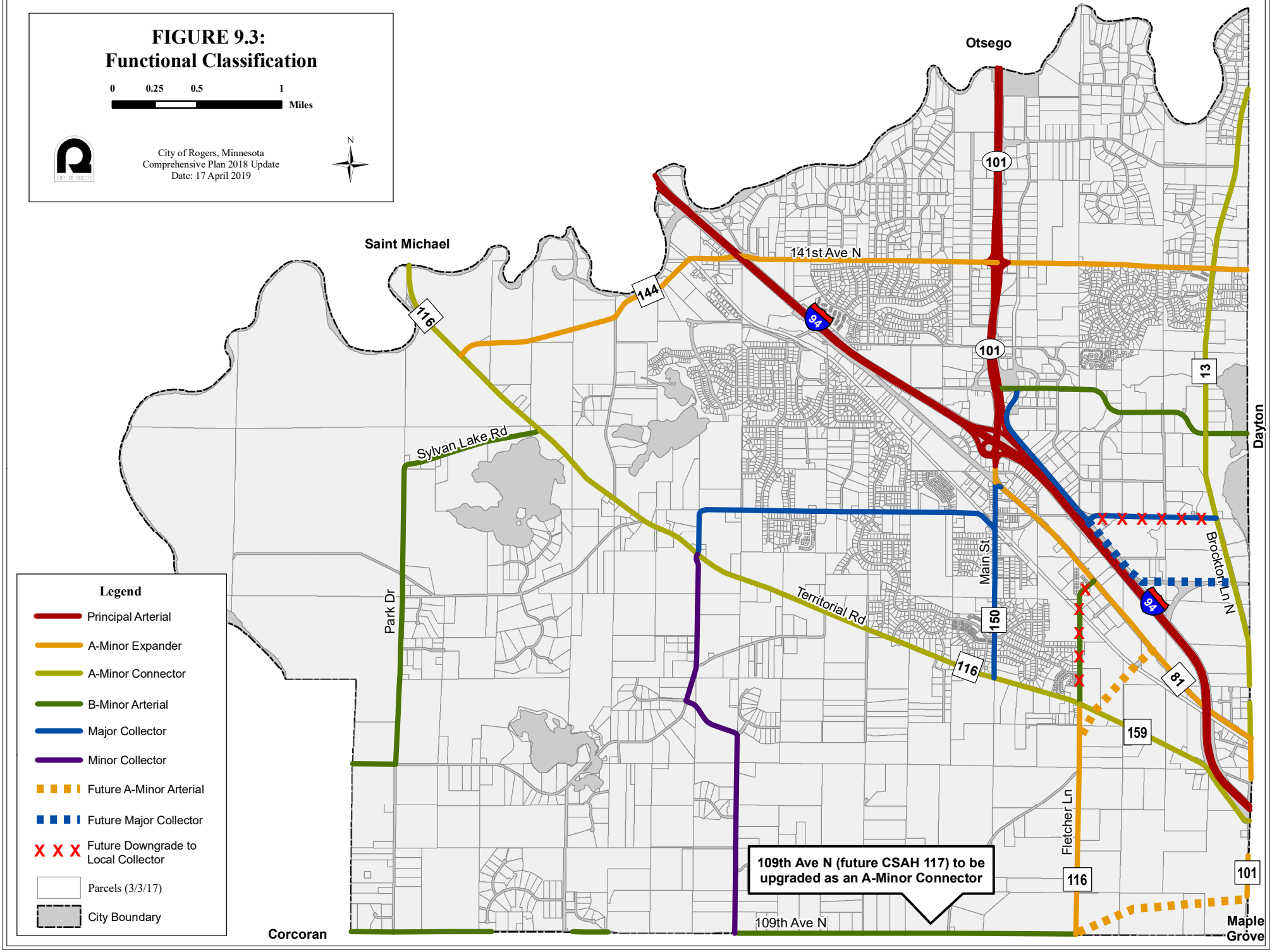
Created by: SRF Consulting Group

FIGURE 9.3:
Functional Classification

0 0.25 0.5 1 Miles

City of Rogers, Minnesota
Comprehensive Plan 2018 Update
Date: 17 April 2019

N



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Programmed & Planned Improvements

Programmed and planned roadway improvements identified in the Rogers Transportation Capital Improvement Program (CIP) or Hennepin County's Capital Improvement Program (CIP) within the City of Rogers include:

- **Fletcher Lane (CR 116) Bypass.** The City has been working with Hennepin County on plans to upgrade and re-route Fletcher Lane to the east, bypassing the Fletcher area to connect with CSAH 81. This rerouting would allow better connection of minor arterials and relocate through traffic from downtown Main Street (CSAH 150) onto Fletcher Lane (CR 116). Ultimately, the Fletcher Lane (CR 116) Bypass will connect to CSAH 13 north of I-94 via an overpass.
- **Downtown Main Street Reconstruction.** In conjunction with the Fletcher Lane (CR 116) bypass project, the City is redesigning Main Street from CR 81 to Point Drive as part of a major reconstruction project that will feature pedestrian and bicycle enhancements and streetscape elements to improve the walkability of downtown and its connection to Triangle Park and adjacent neighborhoods.
- **Extension of 109th Avenue (CR 117).** Movement along the community's southern boundary will be facilitated by the extension of 109th Avenue (CR 117) from Fletcher Lane (CR 116) to Brockton Lane (CSAH 101).
- **Brockton Lane (CSAH 13) Expansion.** The City plans to work with Hennepin County and the City of Dayton to expand Brockton Lane (CSAH 13) to a 4-Lane roadway from CSAH 81 to Rogers Drive. This expansion will add the necessary roadway capacity to support future demand along this eastern boundary.
- **141st Avenue (CSAH 144) Expansion.** To support future land uses and increased demand along the 141st Avenue (CSAH 144) corridor, the City plans to work with Hennepin County to finish building out this corridor as a future 3-lane roadway from the I-94 overpass to Northdale Boulevard. The segment from Northdale Boulevard to Brockton Lane (CSAH 13) plans to be a 4-lane roadway.
- **Industrial Boulevard Extension.** To improve residential access and continuity in the City's roadway system, Industrial Boulevard will be extended from Edgewater Parkway to 141st Avenue (CSAH 144).

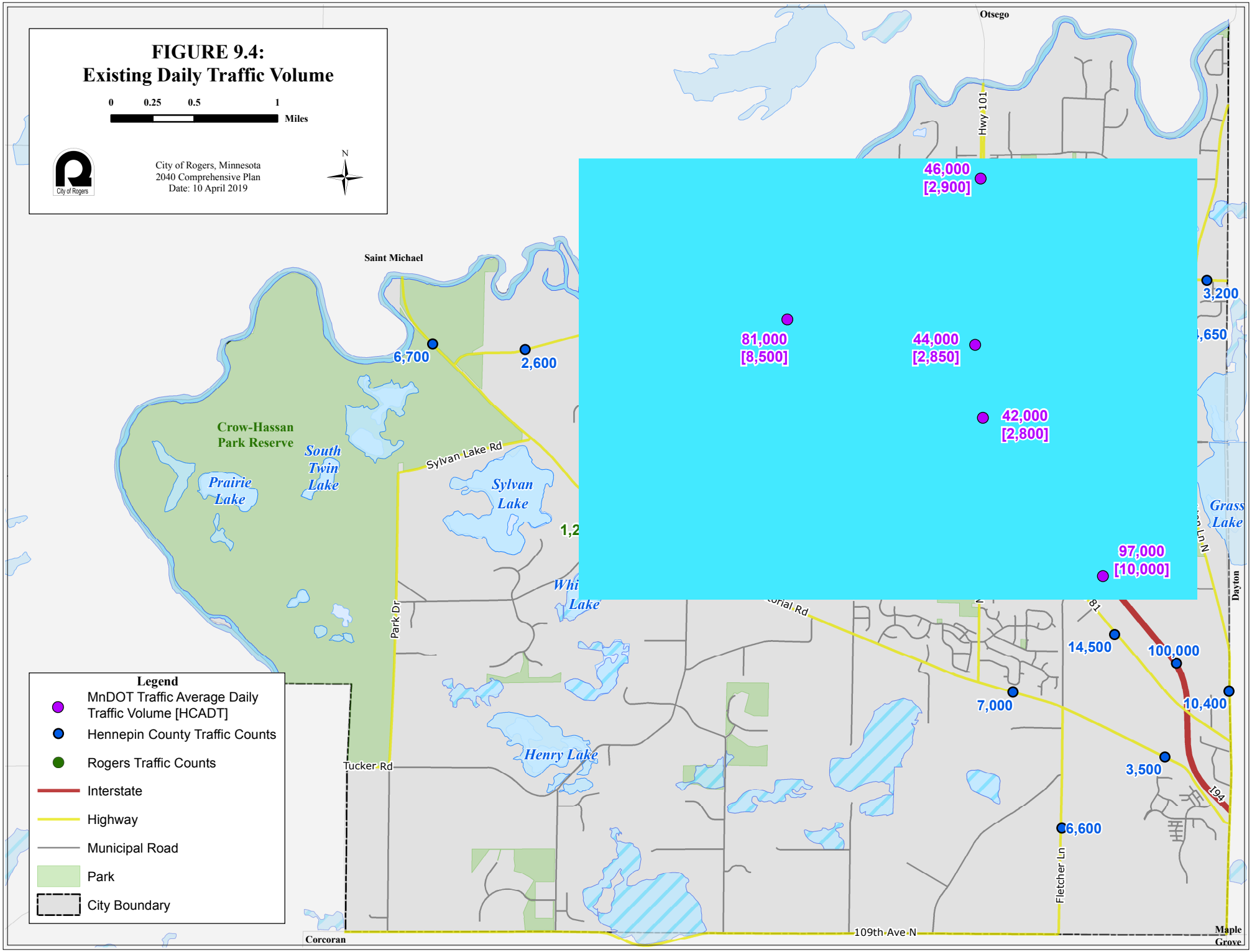
Although not located in the City of Rogers, the Dayton Parkway Interchange is a programmed roadway improvement in MnDOT's Transportation System Plan. This new interchange is located east of Brockton Lane (CSAH 101), within the City of Dayton. Design work continues for this new Interchange, which will benefit the Rogers community by providing an additional access point to I-94 and reduce overall traffic volumes near the existing I-94 and TH 101 interchange area. Improvements to adjacent roadways, such as the extension of 109th Avenue (CR 117), is being planned to facilitate traffic to and from the new interchange.

The City of Rogers will continue to coordinate with adjacent jurisdictions – Dayton, Maple Grove, Corcoran and Hanover – and Hennepin County and MnDOT when planning future improvements. This on-going coordination will result in financial and time savings through economies of scale; such coordination may reduce construction impacts to residents and businesses.

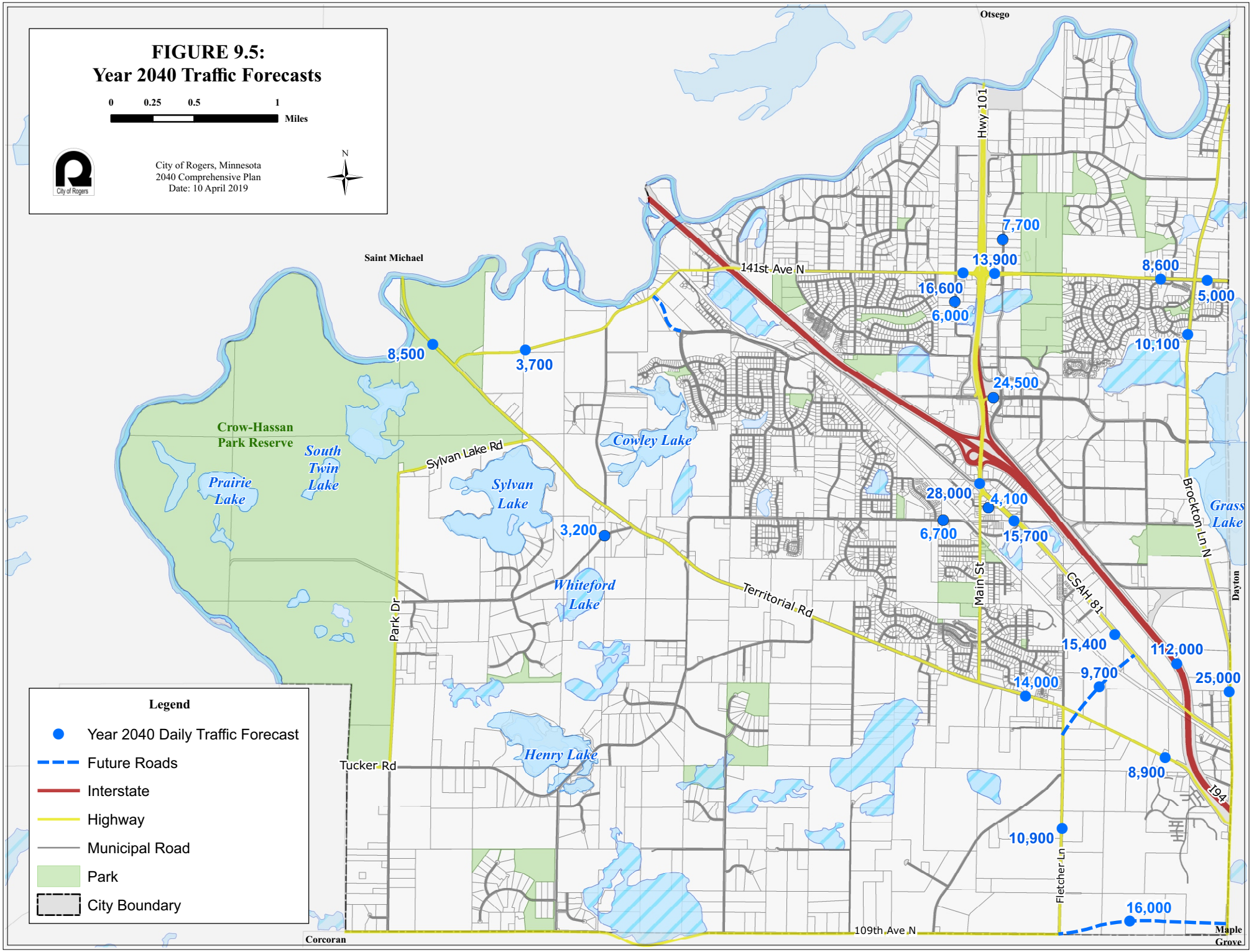
Several Hennepin County roadways border the Crow-Hassan Park Reserve. The City of Rogers will continue to coordinate with Hennepin County and the Three Rivers Park District when considering and planning for any roadway realignments to minimize negative impacts to the park reserve.

2040 Travel Demand Forecasts

The pattern and intensity of travel is directly related to the distribution and magnitude of households, population and employment within a community, neighboring communities, and the larger region. This section provides an overview of the existing land use pattern in the City of Rogers.



Created by: City of Rogers > Public Works > GIS



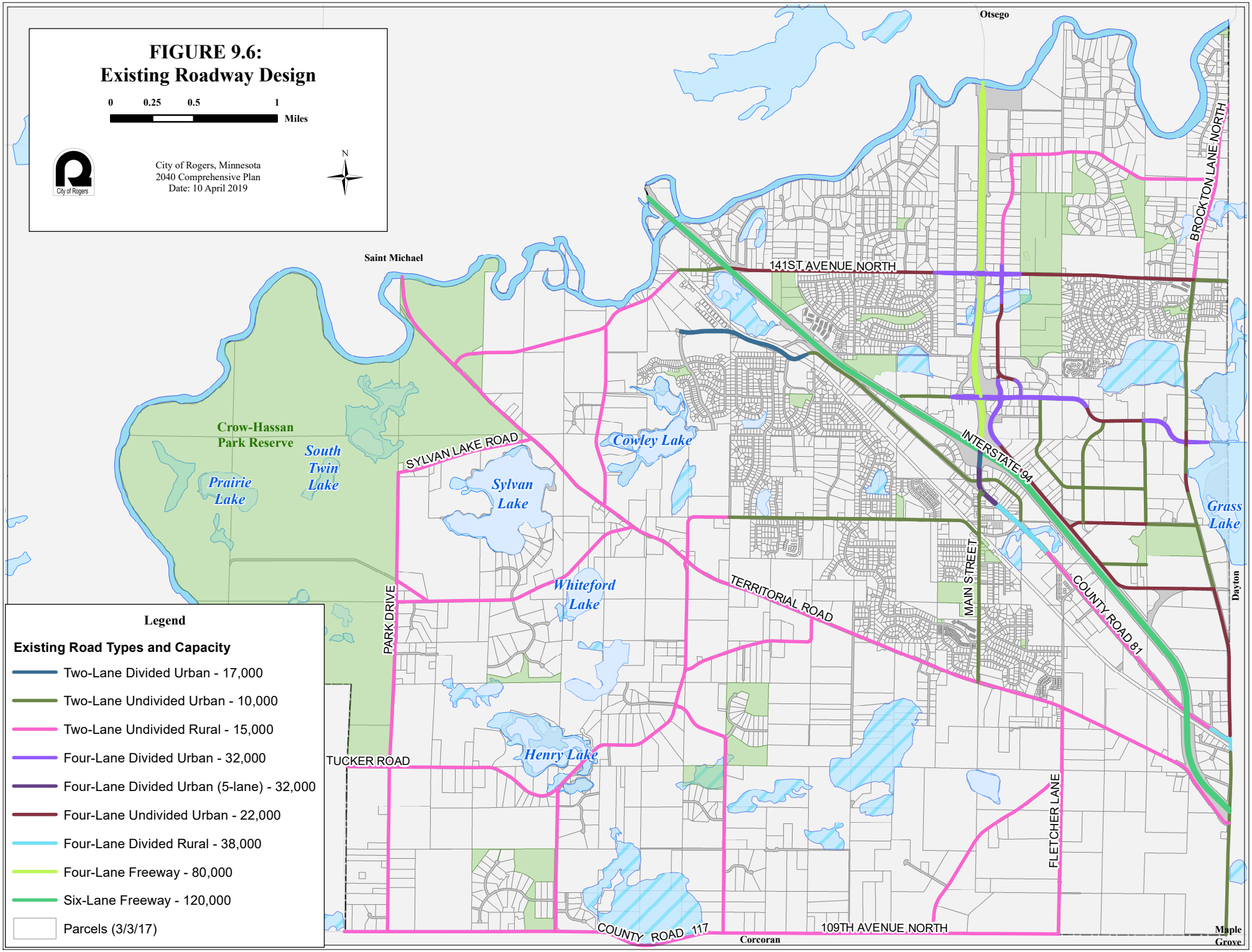
Created by: City of Rogers > Public Works > GIS

FIGURE 9.6:
Existing Roadway Design

0 0.25 0.5 1 Miles

City of Rogers, Minnesota
2040 Comprehensive Plan
Date: 10 April 2019

N



Legend

Existing Road Types and Capacity

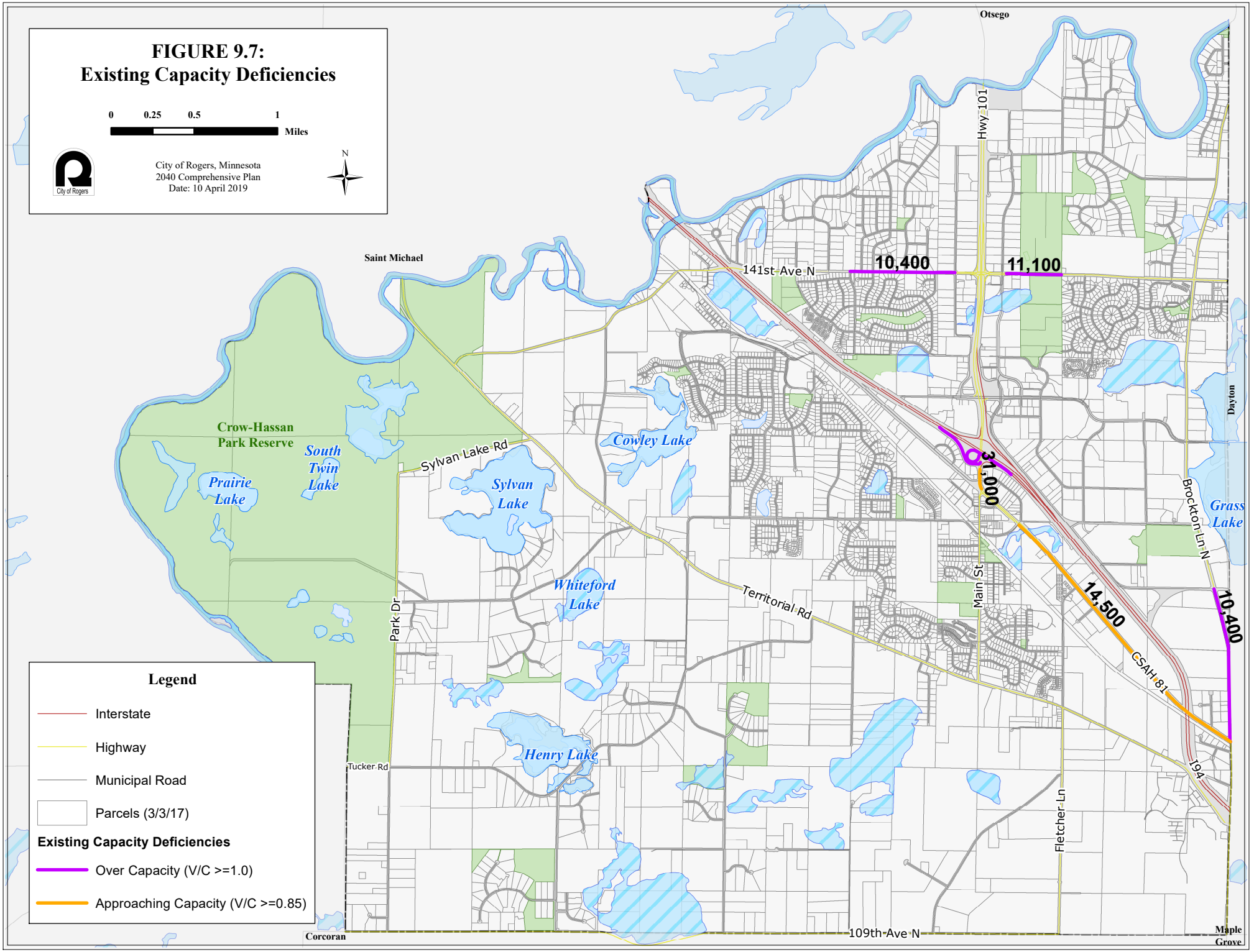
- Two-Lane Divided Urban - 17,000
- Two-Lane Undivided Urban - 10,000
- Two-Lane Undivided Rural - 15,000
- Four-Lane Divided Urban - 32,000
- Four-Lane Divided Urban (5-lane) - 32,000
- Four-Lane Undivided Urban - 22,000
- Four-Lane Divided Rural - 38,000
- Four-Lane Freeway - 80,000
- Six-Lane Freeway - 120,000
- Parcels (3/3/17)

Created by: City of Rogers > Public Works > GIS

FIGURE 9.7:
Existing Capacity Deficiencies

0 0.25 0.5 1 Miles

City of Rogers, Minnesota
2040 Comprehensive Plan
Date: 10 April 2019



Created by: City of Rogers > Public Works > GIS

FIGURE 9.8:
Year 2040 Roadway Design

0 0.25 0.5 1 Miles

City of Rogers, Minnesota
2040 Comprehensive Plan
Date: 10 April 2019

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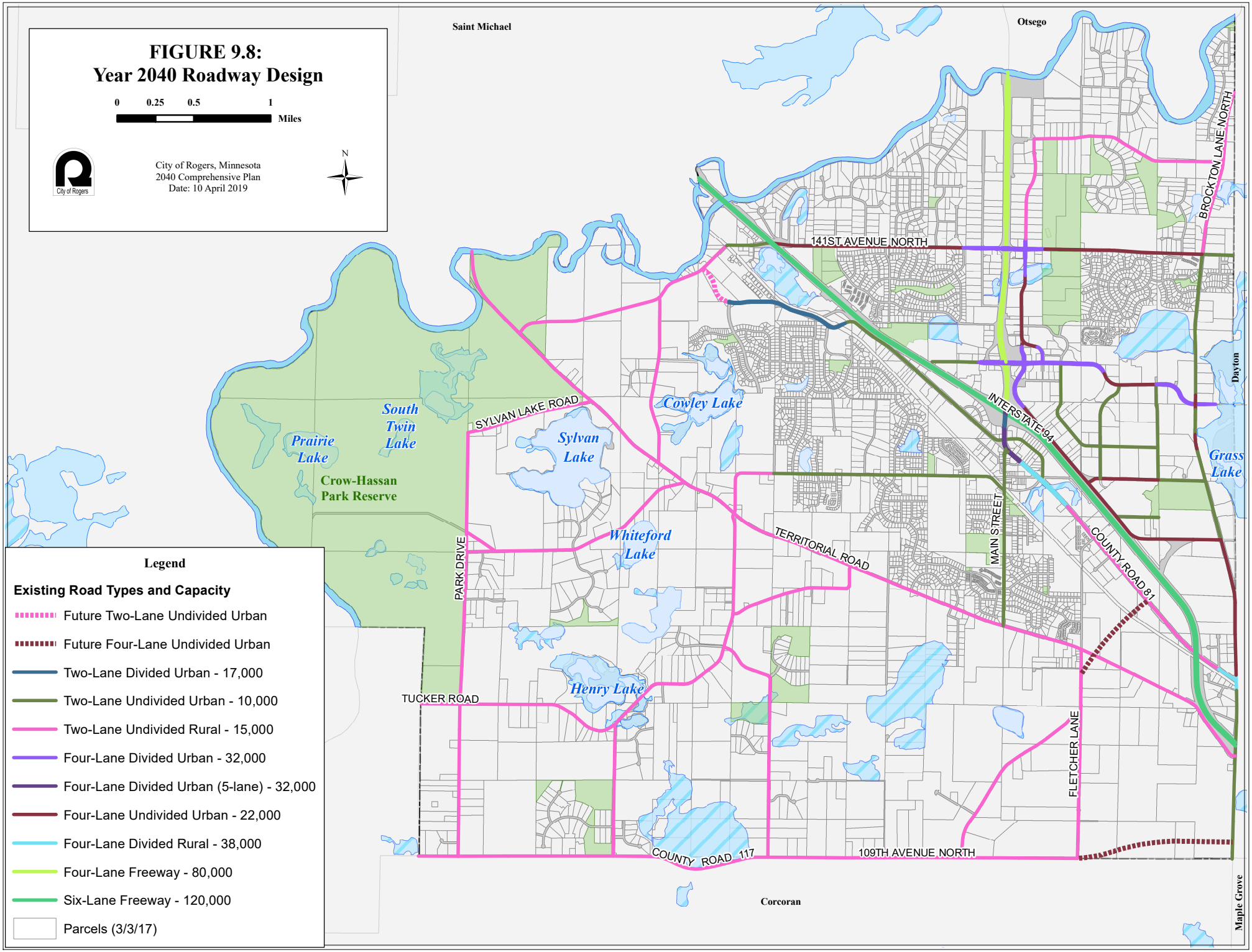

Legend

Existing Road Types and Capacity

- Future Two-Lane Undivided Urban
- Future Four-Lane Undivided Urban
- Two-Lane Divided Urban - 17,000
- Two-Lane Undivided Urban - 10,000
- Two-Lane Undivided Rural - 15,000
- Four-Lane Divided Urban - 32,000
- Four-Lane Divided Urban (5-lane) - 32,000
- Four-Lane Undivided Urban - 22,000
- Four-Lane Divided Rural - 38,000
- Four-Lane Freeway - 80,000
- Six-Lane Freeway - 120,000
- Parcels (3/3/17)

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FIGURE 9.9:
Year 2040 Capacity Deficiencies

0 0.25 0.5 1 Miles

City of Rogers, Minnesota
2040 Comprehensive Plan
Date: 10 April 2019

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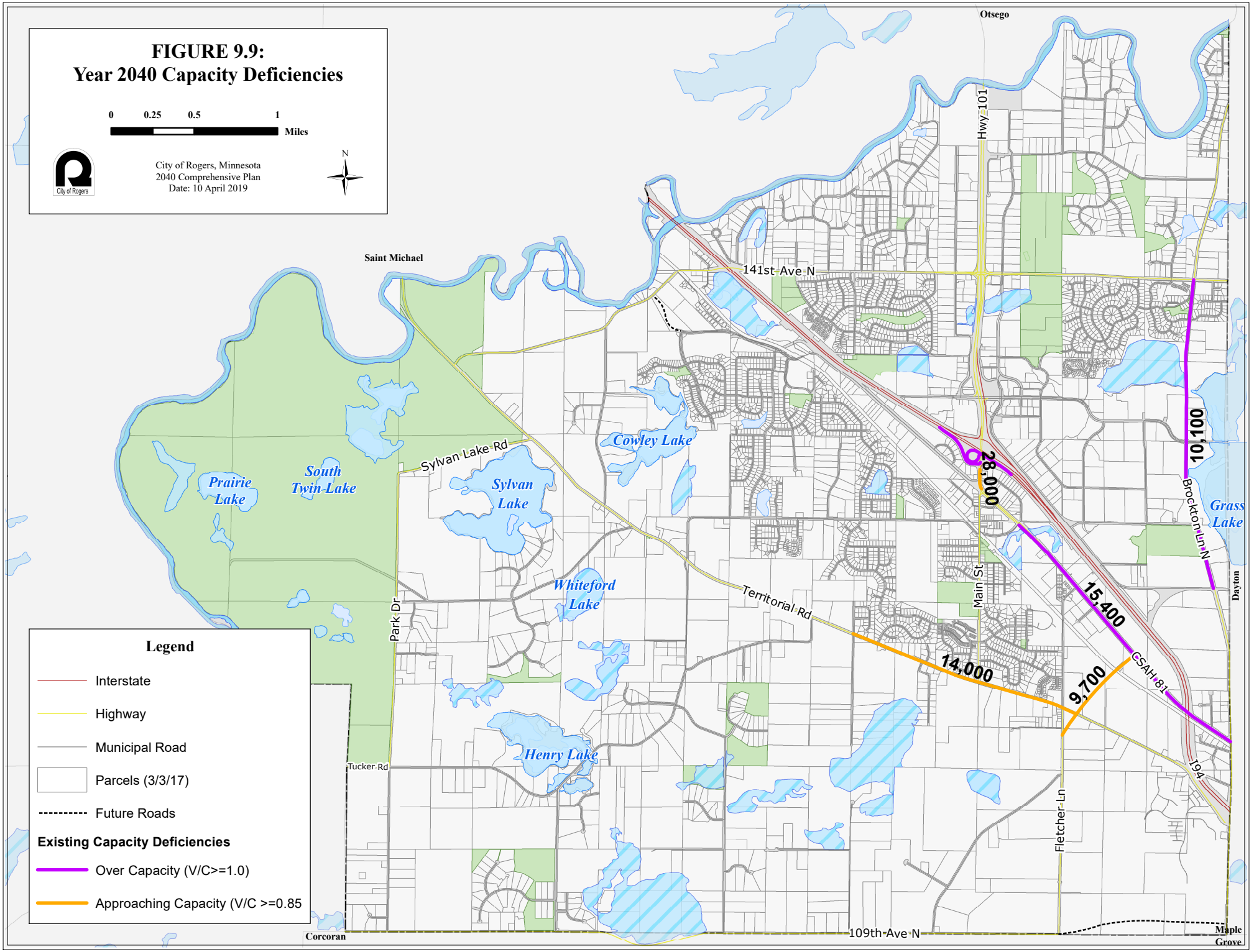

Legend

- Interstate
- Highway
- Municipal Road
- Parcels (3/3/17)
- Future Roads

Existing Capacity Deficiencies

- Over Capacity (V/C>=1.0)
- Approaching Capacity (V/C >=0.85

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The methodology described above is a planning-level analysis that uses average daily traffic volumes and is not appropriate for all traffic conditions. For example, traffic conditions that do not fit the average daily traffic criteria, such as weekend travel, holiday travel, and special events, are likely to produce different levels of congestion. Additionally, factors such as the amount of access and street geometrics may influence capacity, as will additional street features or mobility accommodations – on-street bicycle lanes, shared bicycle lanes, on-street parking, etc.

Future Roadway System Improvements

Future roadway improvements are derived from the combination of future traffic demand, safety, system continuity and connectivity, and the intended function of each roadway as it relates to the adjacent land use.

Regional System Improvements

The Rogers Transportation Plan does not identify the need for improvements to I-94 or TH 101 within City limits. Design work continues for the Dayton Parkway interchange which will reduce overall traffic volumes near the existing I-94 and TH 101 interchange area and provide an additional access point to I-94. In addition, the City will continue to work with MnDOT to address long-term access issues from TH 101 to I-94.

County System Improvements

Currently, there are no additional capacity improvements identified on Hennepin County roadways within the City beyond those mentioned in the previous Programmed and Planned Improvements section.

Local System Improvements

Potential capacity improvements on local roadways in Rogers have not been identified as a need has not been warranted. The City of Roger's local roadways do not have existing capacity deficiencies and are not expected to have capacity deficiencies under year 2040 conditions.

The Rogers Transportation Capital Improvement Program (CIP) does identify residential access improvements, roadway realignments, and intersections improvements to support future development, maintain a connected roadway network, and improve overall roadway safety.

Roadway System Impacts

As the City plans to reconstruct, widen street widths and construct new street segments to meet future connectivity demands or accommodate development projects and anticipated growth, developers of private and public lands will be encouraged to retain natural areas and consider wildlife needs during the roadway design process and after construction to enhance the health and diversity of wildlife populations.

Safety Issues

In addition to a reliable roadway system, roadway safety is a high priority to the Rogers community. A statewide database of crash records identifies the location, severity and circumstances associated with crashes in Minnesota. The most current dataset (years 2011-2015) was analyzed to identify the number, location and severity of crashes on roadways, excluding I-94, in the City of Rogers.

In general, these crashes were widely distributed throughout the City with most locations accounting for only one or two incidents, suggesting that a crash at that location was a random event. However, several crashes were concentrated at a limited number of locations. The ten intersection locations with the highest frequency of crashes between 2011 and 2015 are illustrated in **Figure 9.10** and listed in **Table 9.4**.

Many of the crashes in Rogers were minor incidents with no pattern of reoccurrence. These crashes were widely distributed throughout the City and suggest that the crashes were random events. The intersection locations with a 5-year average of two or more were compiled in **Table 9.4** and illustrated in **Figure 9.10**.

Table 9.4: Top 10 City of Rogers Crash Sites by Frequency (Years 2011-2015)

Location	Number of Crashes		Traffic Control
	5-Year Total	5-Year Average	
1. TH 101 and South Diamond Lake Road	102	20	Signal
2. TH 101 and 141st Avenue (CSAH 144)	64	13	Interchange (Opened 2015)
3. Rogers Drive and South Diamond Lake Road	63	13	Signal
4. 141st Avenue (CSAH 144) and James Road	49	10	All-Way Stop
5. CSAH 81 and Brockton Lane (CSAH 13)	44	9	Signal
6. Main Street (CSAH 150) and Industrial Boulevard	39	8	Signal
7. Northdale Boulevard and South Diamond Lake Road	28	6	Signal
8. CSAH 81 and Memorial Drive	27	5	Signal
9. Main Street (CSAH 150) and CSAH 116 (Territorial Road)	15	3	Side-Street Stop
10. Brockton Lane (CSAH 13) and 124th Avenue	14	3	Side-Street Stop
11. Brockton Lane (CSAH 13) and South Diamond Lake Road	14	3	Signal
12. Brockton Lane (CSAH 13) and David Koch Avenue	13	3	Side-Street Stop
13. CSAH 81 and Main Street (CSAH 150)	11	2	Right-In/Right-Out
14. 141st Avenue (CSAH 144) and Northdale Boulevard	10	2	Side-Street Stop

As shown in **Table 9.4**, two of the intersections with the most crashes are along South Diamond Lake Road (CSAH 49) in an area with high peak hour volumes and truck traffic. The City needs to continue to work with MnDOT to evaluate driver behavior, crash type, crash patterns and severity at these two closely spaced intersections to develop potential strategies to improve overall intersection safety.

One example within the City of Rogers where the number of crashes has significantly been reduced is the TH 101 and 141st Avenue (CSAH 144) intersection. Prior to the construction of a new interchange, this intersection averaged 15 crashes per year from year 2011 to 2014. After the construction of the interchange in 2015, only four crashes have occurred. The City is will continue to monitor and evaluate high crash locations to determine the need for addition intersection improvements.

FIGURE 9.10:
Crash Data (2011 - 2015)

0 0.25 0.5 1 Miles

City of Rogers, Minnesota
Comprehensive Plan 2018 Update
Date: 21 December 2018

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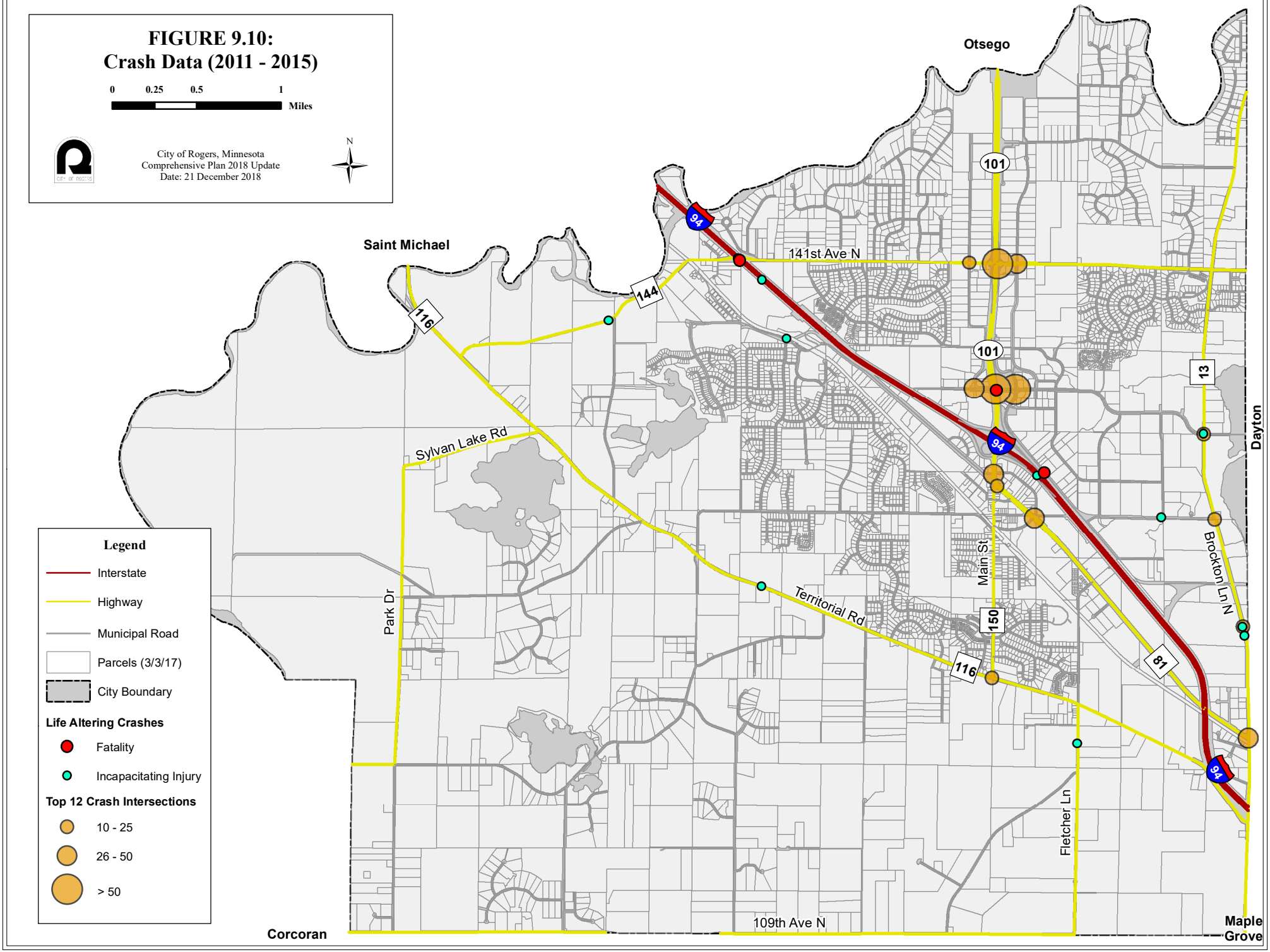


Created by: SRF Consulting Group

Access Management

Roadway access management for both cross-street spacing and driveway placement is critical to maintain roadway safety and the mobility of important transportation corridors. Access management involves balancing the access and mobility functions of a roadway. Access refers to providing roadway access to properties and is needed at both ends of a trip. Mobility is the ability to get from one place to another. Most roadways serve both functions to some degree based on their functional classification. The roadway's functional classification has a direct and corresponding relationship to mobility and access, as described in the Functional Classification section.

The City of Rogers does not currently have its own access management guidelines to guide development or evaluate access requests. However, the City will continue to support and utilize Access Management guidelines established by MnDOT and Hennepin County for roadways in Rogers.

Right-of-Way Preservation

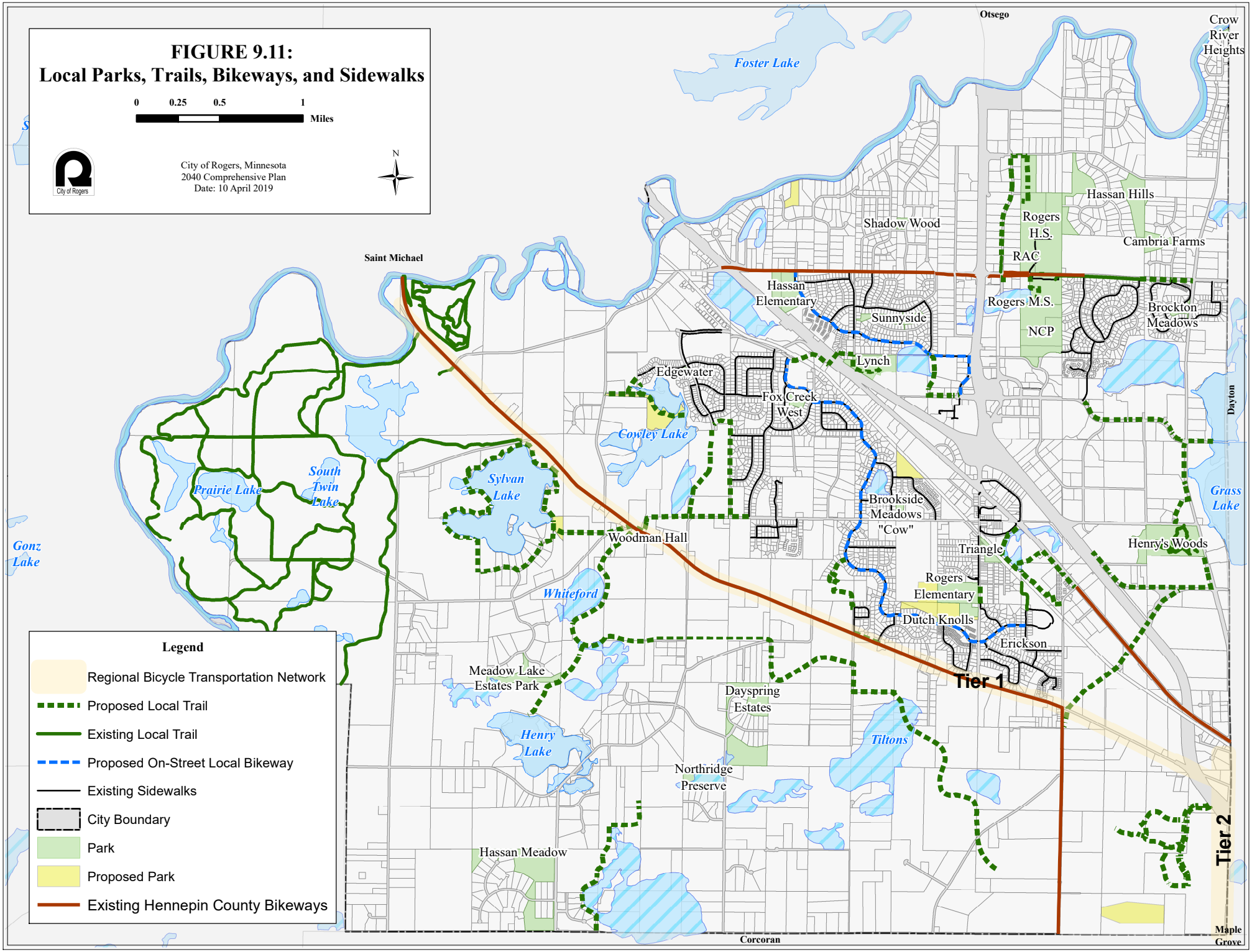
Right-of-Way (ROW) is a valuable public asset. Therefore, it needs to be protected and managed to respect the roadway's intended function, while serving pedestrians, bicyclists, utilities and the greatest public good. Rogers will need to consider that adequate ROW be maintained or secured along with initial design work. The City will also coordinate with MnDOT and Hennepin County for ROW acquisition along County or State routes.

Bicycle & Trail System Plan

It is important for Rogers to expand its pedestrian and bicycle facilities to provide strong connections to schools, parks, public spaces and employment, as well as regional trail corridors. As **Figure 9.11** shows, these facilities focus on serving the local community for multi-modal transportation needs for all people and modes.

The City of Rogers' Park, Open Space and Trails Plan referenced in Chapter 6 provides additional detail on the City's future plans to address gaps in the system and future trail routes throughout the community for a complete sidewalk and trail system. As the community continues to develop, the trail plan should be reviewed to ensure its adequacy as traffic conditions change and to identify new opportunities, such as the connection of trails to commercial nodes, civic campuses, park and recreation areas and possible transit services. The City recognizes the recreational opportunities provided by trails and sidewalks, but also recognizes their ability to provide options for multi-modal transportation.

The City of Rogers currently has 26.6 miles of sidewalks in the City. Sidewalks are primarily used as a means to connect neighborhoods to local destinations and developed areas, as well as to other facilities in the trail system. Sidewalks are an essential part of the trail system, particularly for those who rely on walking as a means of transportation, recreation, or exercise, such as youth, seniors, or non-car owners. It is anticipated that the sidewalk network will grow as the City fills in gaps in the sidewalk network and as new development occurs.



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